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A CLINICAL LECTURE
ON
MINOR EPILEPSY.

Delivered at the National Hospital for the Paralysed and Epileptic, November 15th, 1899.

BY SIR WILLIAM GOWERS, M.D., F.R.C.P., F.R.S.,
Physician to the National Hospital for the Paralysed and Epileptic; Consulting Physician to University College Hospital.

GENTLEMEN,—I propose to-day to ask your attention to some of the features of minor epilepsy. There are diseases which can be demonstrated and described, and there are some which can only be described and cannot be demonstrated. That is the case with very rare diseases, of which an opportunity for observation offers itself seldom, and it is also the case with many paroxysmal diseases, the manifestations of which cannot be produced at will, nor can their occurrence be anticipated. Epilepsy is one of these diseases. Neither the student nor the practitioner has often an opportunity of observing attacks. I have here before you four patients who are liable to epileptic seizures, on the chance—but I fear it is a slender one—that some one of them may present its symptoms for your observation.

Paroxysms of epilepsy differ in severity between extreme degrees. They vary from the most violent disturbances of which the human frame is capable to attacks so slight as to be only noticeable on close observation. It is customary to divide epilepsy, according to the severity of the attacks, into "major" and "minor" epilepsy, major epilepsy being a condition in which the attacks present obtrusive convulsion; minor, those in which convulsion is absent. In the severe attack there is violent, wrenching spasm, fixing the body in some strained position, and slowly changing to vibratory spasm, which becomes more and more distinctly jerky or clonic, until at last the contractions are separated by actual intermission. Tonic spasm, the physiologists have taught us, consists in the superposition of clonic contractions; hence we can understand that the change from tonic to clonic spasm occurs by the contractions which, overlapping, produce the tonic spasm, gathering themselves together, as it were, uniting their efforts, and so producing the more shock-like contractions, which are separated first by remissions, and then by intermissions as they coincide.

ORGANIC AND IDIOPATHIC EPILEPSY.

The slighter forms of convulsive attack in idiopathic epilepsy consist of tonic spasm only, slight general rigidity. But that is not the case in what may be termed "organic epilepsy." In this, the slighter attacks consist of local clonic spasm. By "organic epilepsy" I mean that which is the result of focal disease of the brain, either active disease or an old stationary lesion. In such case the attacks begin by clonic spasm in some one part, in one limb for instance, which remains limited to that particular part, and does not become general.

In idiopathic epilepsy, between the severe fits with obtrusive convulsions and in the slight fits without convulsions, there are others in which there is slight general tonic spasm, not violent not passing into clonic spasm. These really constitute an intermediate class between the major epilepsy, or *haut mal* as it was termed by the French, and the minor epilepsy or *petit mal*. There might well be made a separate class under the name of "medium epilepsy," for Nature ignores our sharp distinctions, and there is every gradation between the most severe and the most slight. We have to classify and distinguish, in order to learn, and we have even to separate, only we must beware of separating too widely.

Epilepsy, from whatever side we regard it, is a mysterious disease. We cannot help being almost startled when we consider the instant violent transition from perfect repose of the centres to energetic release of nerve force without any apparent cause. It is less anomalous, though not less remarkable, if we compare with it the intense activity which the perception of danger induces in an animal, whether the warning sensation is by the sense of sight, or smell, or hearing. The slightest sound will cause the creature to bound away, every muscle in energetic action. This compels us to assume a degree of delicacy of equilibrium in the motor and other centres which lessens our surprise that the balance should be liable to disturbance that is spontaneous, or seems to us to be such, where the elements of nutrition are even slightly imperfect, and the functional susceptibility is too finely adjusted for stability to exist under even tranquil conditions. But an additional mystery is the limitation of the morbid action, the way in which it often is restricted to the slightest motor disturbance, or to a derangement of consciousness or of sensation alone. The affection of consciousness seems indeed to be due to an inhibition, and this may also be true of the motor centres, but we are ignorant of the relation of inhibition to discharge save an apparent difference in degree.

In a severe epileptic fit there is loss of consciousness, whether it be a fit of idiopathic character, or due to organic disease. But distinction between the two classes is that generally the spasm occurs first in organic epilepsy, the unconsciousness first in idiopathic epilepsy. Organic epilepsy consists in the discharge which begins at the damaged spot of the brain, and spreads thence; only after it has spread widely, and often with some deliberation, does consciousness become involved. In idiopathic epilepsy the tendency to discharge is widely spread in the brain. The discharge is extensive from the first, and so consciousness becomes involved often at the very outset, and almost always soon after the onset; so that only some slight sensation indicates the part of the brain in which the initial maximum disturbance occurs. Minor attacks conform to this rule. Loss of consciousness, or at least some impairment of consciousness, is the leading feature in the minor attacks of idiopathic epilepsy. Local limited spasm is a leading feature in minor attacks of organic epilepsy. It is to the minor form of the idiopathic disease that I propose to draw your attention to-day.

"MINOR EPILEPSY."

In perhaps the most typical form of minor attack, although not quite the most common, loss of consciousness is the only symptom. It occurs for a moment, and often without the patient being in the least aware of it. The suddenness of the loss and return are so absolute as to leave no sensation that can be recalled, and of the actual unconsciousness itself the patient is of necessity unaware. The loss of consciousness may or may not be attended by muscular relaxation. It often is; then the patient will fall. One gentleman, for instance, was dressing by the side of his bath, when he suddenly found himself wet all over. He had had a minor epileptic attack, had fallen into the bath, had got out again before regaining complete consciousness, and only realised that something had happened by his wet clothes. (The case illustrates the fact that the muscular relaxation may be instantly followed by ordered movement before consciousness returns.) In other cases of the kind the patient, when talking, will suddenly stop for a moment, and then go on with the sentence he was uttering, or he will suddenly stop any action he is performing, and then go on. Sometimes anything in his hand is dropped. In such cases the loss of consciousness is

sudden and too brief for more than a moment's interruption of what is being done. But it is more frequent for the loss to be more deliberate in its occurrence, so that the patient is conscious of some sensation attending it. To these sensations I will refer immediately.

There is, in these extremely brief attacks of unconsciousness, no change in the aspect of the patient. There is no change, at least in the colour of the face or in the pupils, at the moment of unconsciousness. The patient may look, as it is said, a little "blank," but that is all. I mention this because some years ago great weight was attached to pallor of the face in epilepsy, even in the slightest form, as being an indication that the epileptic attack depended on anæmia of the brain. Pallor of the face would not necessarily indicate anæmia of the brain any more than the blush of emotion indicates cerebral hyperæmia. We are not justified in drawing an inference regarding the condition of the deeper circulation from that of the surface, unless we know that there exists a cause capable of disturbing the two—as a mechanical cause acting on the vessels connected with the whole region. But I have had an opportunity on two or three occasions—it is a very rare opportunity—of observing the state of the vessels of the retina during an attack of minor epilepsy: I was looking at the vessels of the retina by the direct method of observation at the time the attack came on, and on no occasion was any change in the size of the retinal vessels to be discerned. When pallor occurs in connection with these attacks, the pallor occurs as the attack is passing off and not at its onset, and the pallor of the face must therefore be regarded as a consequence of the cerebral discharge and not as its cause.

In addition to the fall which occasionally occurs, another occasional symptom is micturition. Urine may be passed even during the slightest epileptic attack, and it is, I need not say, a symptom of very great diagnostic importance. It occurs even with a loss of consciousness almost too brief to be noticed, and is evidently a special feature of the epileptic discharge, and when it occurs it is usually almost constant. For instance, one patient always first turned her head to the left and then walked back a few steps, then fumbled with her hands for a few moments, and passed urine. Micturition is far more common in females than in males, perhaps on account of greater facility, and may occur with spasmodic energy when there is only the slightest general stiffness. It sometimes seems to relieve the cerebral tension.

When the onset of the attack is less instantaneous some sensation may accompany the onset, when the discharge commences at some part of the brain to which a sensation is related. It may actually constitute the chief part of the attack, although some change in consciousness is usually associated. But an attack of true minor epilepsy may occur without actual loss of consciousness. The statement which is often made, that loss of consciousness is an invariable and essential feature of epilepsy, is certainly erroneous. There is usually, however, some obscuration of consciousness which may have various forms. One of the most frequent is a sense of strangeness. The patient feels for the moment as if in unfamiliar surroundings, does not recognise the place in which he is, even though it may be perfectly well known to him. The various sensations which accompany these attacks are numerous, but some sensation so frequently occurs in the majority of cases as to cause them to be spontaneously designated by the patient as "sensations." Sometimes they are termed "turns," sometimes "faints," and in America "spells," but the word "sensation" is that most frequently employed.

In connection with the names of attacks, let me give you a work of caution never to employ the word "fit" in the presence of a patient, unless you know that the attacks have previously been designated to him as "fits." It is strange what a profound prejudice and dread exists regarding the word "fit." It is thought a painful stigma to fix on the individual. Very often, I am sure, the patient does know, or strongly suspects, the truth; but the friends have an extreme dread lest the knowledge should reach the sufferer. Hence you may easily occasion great distress by the inadvertent use of the word "fit." You can always call the seizures "attacks" or "faints."

The sensation which attends these attacks, if the patient has severe fits, is sometimes the same as that which heralds the major seizures. Sometimes it is quite different. It is often uniform in the same case. But a very important fact regarding minor epilepsy is that the patient, or the patient's friends, in a very large number of cases, have no idea of the connection between the slight attacks and the severe ones; they have no idea that these attacks, "turns," or "sensations" have anything to do with the epilepsy from which the patient is known to be suffering. And if you ask for these slight attacks in a general way you will learn nothing about them. You can only, in the majority of cases, ascertain their existence by putting leading questions; and to do that you must know what are the chief forms which these attacks assume, what are the chief sensations by which they impress themselves on the consciousness of the patient. By asking specially for these you will frequently learn the occurrence of these attacks when they had been denied in answer to a general question. It is not at all uncommon for patients to suffer from these minor attacks for many years before having a severe one, without any suspicion of their nature; and the patient who has occasional severe attacks, for instance at night, will often have many slight ones in the daytime, without anything being known or suspected of their significance. Remember that much more caution is necessary in the use of "leading questions" when the object is a scientific investigation than when the facts are to be ascertained for the treatment of the patient. Yet a little care, discernment, and further questioning will generally eliminate any danger of error from this cause.

Sensations attending Minor Attacks.

Of the sensations which attend these attacks, one of the most common is some form of vertigo. Remember, however, that the term "giddiness," in about half the cases in which it is employed does not mean what we understand by the word. It does not mean a sense of movement, either in the patient or in other objects. It is employed as the only term the patient can find to express some peculiar sensation in the head, or some mental sensation. It is often used when the patient simply experiences the sense of strangeness and unfamiliarity of his surroundings which I just mentioned. Hence it is always necessary to ascertain as minutely as possible the character of the sensation to which the patient applies it. Often there is an actual sense of vertigo. It may be either subjective or objective. The patient may seem to be moving forwards, backwards, or to the right or left, and not infrequently downwards. I saw a patient only yesterday whose attacks consisted in a sudden intense sense of sinking down into the earth, accompanied with an indescribable feeling of anguish, as if she were going to die. Each attack only lasted a moment, but so distressing was the feeling that she had learnt to dread it extremely.

The objective vertigo is sometimes a movement of objects to one side or to the other, usually corresponding in direction to the subjective vertigo if this is also present. Often it is a vague oscillation of objects, and very often it is a movement of objects round and round in a circle or an oval—not a rotation of an object round its own centre, but a movement of the object looked at as a whole. The movement is almost always in the direction in which the hands of a clock move. The cause that determines the direction is mysterious unless it is simply due to association, and ultimately referable to our right-handedness. Vertigo always involves some impairment of consciousness: even in that due to ear disease there is an erroneous perception of the relations of the individual to his surroundings, and such erroneous perception involves some obscuration of perfect consciousness. The degree of obscuration varies much. The patient may have this giddiness and yet know perfectly where he is and who is with him, or the consciousness of environment may be impaired in slight or considerable degree, and he may even become quite unconscious for a moment. We meet with all these degrees in minor epilepsy. Sometimes the vertigo, when subjective—a sense of personal movement—proceeds to actual movement. Vertigo is generally a motor sensation, due to activity of the motor centres, and the patient may always fall in the direction in which he seems to be turning. Sometimes this motor activity may induce actual rotation, but less commonly in minor epilepsy than as the prelude to a severe attack, before which a patient may turn round two or three times and then fall.

Another curious sensation, which, in the mixed use of words, is sometimes described as "giddiness," is a dreamy feeling. It may occur with or without that imperfect recognition of surroundings that I have referred to, but it always involves some degree of obscuration of consciousness. It has been specially studied by Dr. Hughlings Jackson. It is sometimes described as a distressing feeling, sometimes as a positively agreeable sensation. It is, curiously enough, often associated with smacking of the lips, but smacking of the lips often occurs in the moment's unconsciousness of the minor attack without any dreamy feeling being afterwards remembered. In one case which I saw not long ago in which this dreamy feeling was very strongly marked, and in which it was of a definitely pleasurable character, it was always accompanied by spitting. The patient always spat with his lips; he did not smack his lips, but definitely spat. He knew he did it, but he could not help it. He had no sensation of taste accompanying the action. A feeling allied to that of a dreamy state, and sometimes described as such, is a sudden conviction that what is happening has occurred previously. This is very common indeed. Sometimes there is a sensation that the like circumstance occurred long years ago; sometimes that the patient is in a dream which recalls a preceding dream, neither seeming real. Occasionally it is associated with movement of the lips, but in the majority of the cases in which each symptom is present the other is absent. A similar mental sensation is said to occur in health. Some of you may remember the amusing reference to it in the *Autocrat of the Breakfast Table*.

Another class of sensations which attend these minor attacks are those related to the special senses. Loss of sight may occur, sudden inhibition of the visual centre: a moment's darkness may be the only indication of the minor attack. Or there may be a sensory discharge, a visual sensation; a flash of light may pass across the sight, or colours may be seen, or stars. Stars are perhaps the most common, either simply bright lights or coloured lights. It is rare to have an hallucination of definite objects in minor epilepsy, although they are frequent as the warning of severe attacks; and then are curiously associated with vertigo. The objects seem to move towards one side; the patient feels obliged to follow them, turns his head and eyes towards that side, until he inclines and falls.

Auditory sensations are not uncommon, and usually occur in cases in which they constitute also the warning of a severe attack. Some sound is heard, and often it is a musical sound. I remember one case in which such a subjective aura could be at any time brought on by a certain note of the organ. It was the note which is known as the "lower A of the open diapason of the pedal"—an expression which may convey a clearer idea to some of your minds than it does to my own. I believe it is one of the low notes which can be felt as a vibration as well as heard. Whenever the patient heard that note, it produced the warning sound in his head and a sense of strangeness as if an attack were coming on. As with vision so with hearing, more elaborate sensations are not often met with as the warnings of the slight attacks. A gustatory sensation very rarely attends the minor attacks, although smacking of the lips is so common; an olfactory aura is much more frequent. It is usually an unpleasant sensation, something which is compared to sulphur, to burning putrid meat, but sometimes it is a fragrant odour.

General sensations are common in connection with these minor attacks, feelings referred to the whole frame. It is important to remember this, because such sensations are equivocal in suggestiveness. A sudden thrill or vibration passing through the body is described, or a sensation of something rushing through the body. In these cases the sensation seems always to pass upwards, generally to the head, and then there is a moment's unconsciousness. Sometimes the feeling seems to pass up the back. Often it seems to the patient to be a "rush of blood" to the head, and is so described, but it is a sensation only, and too rapid to be of the nature it seems to have.

The occurrence of loss of consciousness when a sensation reaches the head is a curious thing, and is met with also in the case of the epigastric warning, which is a sensation at the pit of the stomach, rarely lower, which ascends to the throat or to the head. If it ascends to the throat it may stop and pass off; if it ascends to the head there is usually momentary loss of consciousness. It is a common warning of severe attacks, as well as of slight ones. Sometimes it is accompanied with a sense of nausea, but not often when it ascends. When it is accompanied by the sense of nausea it usually remains limited to the epigastric region, and is often described as a sensation of something turning over and over.

Emotional states are also occasional accompaniments of the minor attack. There may be a sudden sense of fear, causeless fear, or a sense of fear which seems to induce some peculiar momentary delusion to which, indeed, it is referred. One patient, for instance, was always convinced that the sense of fear was due to a man who was running behind her. She lost consciousness for a moment, and then was better. She knew afterwards that it was an illusion, but she never could avoid the conviction when a minor attack came on.

Perhaps what I may call the lowest form, which we must nevertheless regard as a form of minor attack, is a sudden start, a sudden jerking of the limbs without interference with consciousness. The patient's hands will give a sudden jerk, sometimes such as to throw away anything that is held; the jerk is always symmetrical, and its relation to epilepsy, about which we might otherwise feel doubtful, is shown by the fact that such jerks frequently occur a few days or hours before a severe attack or for a few days after one. The start is sometimes of the whole body, and may even be sufficient to throw the patient down. Such starts, moreover, are sometimes associated with distinct momentary unconsciousness. A more elaborate motor process accompanying minor attacks is an ordered movement. The patient may run a few steps backward or a few steps forward. Sometimes this seems to be the result of fear. One patient, when I was speaking to her, suddenly looked frightened, gave a little cry, ran away down the ward, and then was better. She always did this in her slight attacks, but remembered nothing of it afterwards; the action took place during momentary unconsciousness.

A converse state of the motor system is the sudden muscular relaxation already mentioned. When consciousness is absolutely lost for the moment, there may or may not be muscular relaxation. The patient may go on standing still or walking. In other cases, however, the muscles suddenly give way, and the patient falls, and then is better. I mentioned an instance just now in the case of the gentleman who fell into his bath.

We meet with more prolonged muscular relaxation in organic epilepsy, the result of inhibition of the motor centres similar to that which in the sensory centre gives rise to the loss of sight or loss of hearing. I have mentioned one patient, for instance, whose attacks began by twitching in one hand, passing up the arm, and becoming general, and had also minor attacks, consisting in sudden powerlessness of the arm, lasting several minutes. Such powerlessness in the minor attacks of organic epilepsy is always much longer in duration than the momentary general muscular relaxation which occurs in the idiopathic form of epilepsy.

Many patients have various forms of warning—momentary loss of consciousness, brief vertigo, and a sudden sense of strangeness, may all occur in the same patient. The epigastric sensation, with obscuration of consciousness, may be varied by a rushing sensation through the body or a sensation referred to the special senses. Hence it is impossible to anticipate what diverse forms any patient may experience, and it is essential to be familiar with the chief varieties to ascertain their occurrence. By a little cross-examination on an affirmative answer you can easily eliminate any source of fallacy. If you ask about giddiness, for instance, and a positive reply is given, you must always ascertain the precise character of the sensation which is experienced. In the case of the other forms of minor sensation, I think it is very rare to have their occurrence mentioned, even in answer to a leading question, unless they do actually occur.

After-States.

A very important relation of minor attacks is the peculiar condition in which they frequently leave the patient. Normal consciousness is often regained slowly. The patient for a minute or two is in a somewhat dazed condition; he may fumble with his hands—or, if I may say so, fumble with his mind. One patient of mine invariably takes out his wa

and says, "Oh what is the time"? A more common thing is to say, "Where am I?" And when the recovery of consciousness is deliberate, action in some patients is of a more elaborate character than simple fumbling; action performed automatically in a state of imperfect recognition of surroundings, as a result of some dominant idea, vague or precise. A very common thing is for the patient to begin to take off his clothes. I think that is perhaps conditioned by some obscure sense of illness or indisposition or languor, which suggests to the patient that it would be well to go to bed. It is, however, sometimes an awkward thing, as for instance, in one case which I have mentioned elsewhere. A young man who was accustomed to give lessons on the piano to young ladies, had to give up his profession because he occasionally had a slight attack, so slight as to be unnoticed; and after it would begin to take his clothes off, to the more than astonishment of his pupil.

Many and curious are the incidents which occur in this condition. Some patients have a tendency to put into their pocket whatever is within reach of their hand; and this automatic action may give rise to very inconvenient suspicions. One patient, a draper's assistant, would put scissors, money, or anything which was within reach of his hand, into his pocket after an attack so slight as to attract no attention, and when missing objects were found in his possession it was some time before he received a pathological exculpation. There is no doubt that such post-epileptic appropriation has often given rise to an entirely erroneous suspicion of dishonesty. In the case of the patient just mentioned, who put into his pocket whatever was within reach, the minor attacks were characterised by a nasty smell, and then loss of consciousness. He had, curiously enough, also other attacks, of which he was only aware by being suddenly conscious of a ravenous feeling of hunger, and of an attempt to satisfy it if practicable. If bread and butter was within his reach, he would only know he had had an attack by finding himself cramming it down his throat, and he would be much surprised at what he was doing. This state of automatic action may last for a considerable time after an attack. The action performed in that condition is sometimes most elaborate. It is a condition of apparently voluntary action, only in a curious condition of consciousness which cannot be hitched on, as it were, to the normal consciousness which the patient afterwards regains. A carman had an attack of minor epilepsy when driving through the streets of London; the attack was not sufficient to interfere with his retention of his seat, and about half an hour afterwards he found himself about six miles from the place he wanted to go to, having driven through the crowded streets of London quite safely, but in a wrong direction, and with no power of recollecting the proceeding. A lady playing a piano, having a slight attack, went on playing most elaborate music with perfect correctness, until she suddenly "came to herself" and stopped, unable to understand what she was doing.

Those are examples of extremely organised automatic action. To pass to the other degree, the patient, instead of action of an elaborate character, may pass into a state of the most unelaborate action that can be conceived, namely, that of hysterical convulsion. It is extremely common for a patient after a minor attack to pass into a state of violent hysteroid convulsion, which usually only lasts for five or ten minutes, or, at most, a quarter of an hour. Such hysteroid convulsion may follow a more severe attack, but it never follows an attack of great severity. A violent attack seems to exhaust the motor centres too completely to permit of this unrestrained activity. If the symptom succeeds a convulsion this is slight, and it is more frequent for there to be no preceding convulsion. The patient suddenly becomes still, may fall unconscious, may be stiff for a moment, and then passes into the condition of hysteroid disturbance, throws the arms about, kicks with the legs, may become rigid with arching of the back. It does not last long but is often violent for the time. Such cases are commonly thought to be simple hysteria, but pure hysteria does not recur during a long course of time, as do the attacks of hysteroid convulsion which are post-epileptic. If you make inquiries in such a case you will find a history of the moment's initial stillness, and also a clear history of other minor attacks, apart from those with hysteroid disturbance. The patient has an epileptic "faint" from time to time, or an epileptic "sensation," and only some of these attacks are followed by the hysteroid symptoms. It is frequently said that a patient has had slight faints during childhood, and then at the time of puberty has become liable to severe fits, but you will often find on inquiry that simple minor attacks occurred during childhood, and at puberty, when the peculiar hysteroid temperament became evolved, hysteroid convulsion was superadded to the minor seizure that the patient had had before—a post-epileptic disturbance, mistaken for severe epilepsy.

The automatic action that I have alluded to as a more elaborate disturbance, having the same relation to the epileptic seizure, may assume the form of some act of violence. That is indeed the condition of epileptic mania. One patient of mine, after a slight attack, took her baby, of which she was very fond, and threw it downstairs. In another case a man had a slight attack while crossing a crowded thoroughfare. He stopped dazed in the middle of the traffic. A gentleman, who was also crossing, seeing his condition, took hold of his arm and conducted him across the road. On reaching the pavement the patient, recovering imperfect consciousness, turned on his rescuer and struck him a violent blow. No doubt many crimes have been committed in that condition.

Another accident which may follow a slight attack, as well as a severe one, is vomiting. It is not common after slight attacks, not so common as a sense of nausea. But actual vomiting does sometimes occur, although it is seldom dangerous in slight attacks, because the patient recovers consciousness first. In severe attacks it may involve grave risk to life, because the food brought up (if the patient be lying on the back) is apt to fall into the larynx, and in the state of unconsciousness may give rise to fatal asphyxia. Death from an epileptic fit occurring just after a meal is generally due to this mechanism. It is wise to impress on the friends of a patient who vomits soon after a fit the importance of laying him on his side or in a half-prone position.

Another post-epileptic accident which occurs sometimes after slight attacks, as well as after severe ones, is turning on the face. After a severe attack the patient often turns so that the face is against the pillow. After a slight attack it is rather the result of a half hysterical automatic movement. But it is attended with danger of suffocation after slight attacks, as well as after severe ones, especially when they occur during sleep. It is not very rare for an epileptic patient to be found dead in bed with the mouth against the pillow. It is then certain that such post-epileptic asphyxia was the cause of death—the inference is equally sure in the case of persons not previously known to be subject to epilepsy, for nocturnal fits often occur for years undiscovered.

Diagnosis.

The diagnosis of minor attacks depends upon the suddenness of their onset, their brief duration, and their occurrence apart from obvious exciting causes. The chief difficulty is often thought to be their distinction from syncope, but it is seldom considerable. Patients suffer from cardiac syncope only when there is some obtrusive cause: violent emotion, as at the sight of blood, or fatiguing exertion. In syncope the patient loses consciousness gradually, and recovers with the sense of physical faintness. In minor epileptic fits the patient loses consciousness quite suddenly, and recovers with a sense of mental confusion. The cardiac syncope is never preceded by any of the sensations which I have been describing, except that of nausea, and it is accompanied by failure of the pulse and initial pallor of the face, whereas in epilepsy the pulse is unchanged, and the pallor of the face only occurs as the attack is passing off.

A much more difficult point in diagnosis is the distinction from some forms of vertigo, especially from forms of aural vertigo, in which an attack comes on, as it does sometimes, with great suddenness, accompanied with a distressing sensation in the head. There, however, we have always the evidence of prolonged continuous disturbance of the auditory nerve, persistent tinnitus, and some deafness; the vertigo usually continues after the severe attack is over, and only gradually ceases. But remember that vertigo involves an impairment of the correct perception of the surroundings of the sufferer—that is, impairment of perfect consciousness. That is true of aural vertigo as well as of other forms, and in intense sudden aural vertigo this impairment may amount,

in rare cases, to a moment's actual loss of consciousness; so that, just as epileptic attacks may occur without loss of consciousness, so sudden attacks of simple vertigo may occur with loss of consciousness. Therefore you must not rely absolutely upon such loss as a criterion of epilepsy, any more than of its absence as proof that an attack is not epileptic.

I have already spoken of the combination of minor epilepsy with hysteroid symptoms, which is often perplexing and a fertile source of error, since the spasmodic hysterical disturbance is generally by far the most obtrusive. You will, however, find any difficulty disapppear if you attend to the facts I have mentioned, and especially if you remember the constancy with which such patients occasionally have some form of minor attack, without this accompaniment.

TREATMENT.

I have left myself little time to speak of the treatment of minor epilepsy. It is much less easy than the treatment of the severe form. Bromide exerts an influence on minor epilepsy with much less constancy than it does on the severe attacks. It is common for a patient to have severe attacks entirely arrested by bromide, and for the minor attacks to continue. This is not, however, always the case. Sometimes it stops the slight as well as the severe ones, and it may stop the attacks in a patient who has only the minor form. Unfortunately, we are not able to discern what will happen in any given case. In the case of all drugs and all forms of the disease, it is most difficult to discern "indications" for treatment; conditions which seem to have determined success in one case are found, in others to have no value. We can only try, and see the result. When bromide fails zinc sometimes succeeds, and after trying various forms of zinc—citrate, lactic, sulphate—I think the oxide, on the whole, gives us as good a result as any, and is better borne; although the dose that can be borne varies in different patients. Some patients are nauseated unbearably by three-grain doses, while others will take 8 or 10 grains. Borax is less useful in minor epilepsy than in the inveterate cases of severe epilepsy, in which it is often of marked service, as I pointed out when I introduced it twenty years ago. In such it is often of marked service, either alone or in combination with bromide, though it very seldom arrests attacks altogether. In the case of minor epilepsy among agents which are sometimes clearly successful—clearly so because cases in which there is no change in other elements of their condition have been benefited and even arrested—are nitro-glycerine, given three times a day, and the hydrobromate of hyoscine, belladonna, and Indian hemp. Strychnine is occasionally of service, especially in combination with nitroglycerine.

Perseverance in effort is, above all things, necessary to do good, and especially persistence in treatment for a long time after attacks have entirely ceased. When there have been some months of freedom, the temptation to omit the inconvenient dose is strong, but it is then that the need for its continuance is greatest. The patient is then on the road to a cure, but the tendency to recurrence is then greatest, and even a single attack puts the patient again at the beginning of the long road. When the treatment is discontinued, it should always be by a gradual diminution, and not by sudden cessation. It is must important also to remember that patients who have previously had severe attacks are sure to have an early recurrence, after discontinuance of treatment, if they still have an occasional distinct minor attack, however slight.

THE OLD BECKTONIAN CLUB.—A dinner of the "Old Becktonian Club" was recently held at the Trocadero Restaurant, Mr. L. Mantell in the chair. In proposing the toast of the evening the chairman said Mr. Beckton had performed an important service to the medical profession in his long career as a "coach." The club numbered in its membership both qualified men and students; every hospital was represented in it, and it should prove a valuable link between the different schools. Mr. Beckton, in responsing, expressed the deep pleasure he felt in seeing so many of his old pupils. He had a pride in remembering how many of his former pupils now occupied prominent positions in the profession.

TWO CLINICAL LECTURES
ON
RETENTION OF MENSTRUAL BLOOD FROM ATRESIA OF THE VAGINA

WITH SOME PRELIMINARY REMARKS ON THE INDICATIONS FOR LOCAL EXAMINATION IN THE DISORDERS OF MENSTRUATION.

Delivered at St. Thomas's Hospital November 14th and 17th, 1899.

BY CHAS. J. CULLINGWORTH, M.D., F.R.C.P.,
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LECTURE I.

GENTLEMEN,—One of the constantly recurring difficulties of the conscientious medical practitioner is to know what his duty is in regard to a local investigation in the disorders of menstruation. The difficulty is especially pronounced when the patient is young and unmarried. The medical attendant desires, on the one hand, to avoid unnecessary examinations, and is anxious, on the other hand, not to overlook any serious local lesion, for if he is treating his patient by constitutional remedies alone when all the time the cause of the disorder is an undetected local lesion requiring local treatment for its cure, he will not only be jeopardising his own reputation, but will be doing a wrong to his patient. Is it possible then to lay down any rules for our guidance in this matter?

I have spoken, in a preceding lecture, of what I conceive to be the proper course to adopt in regard to local examination in cases of dysmenorrhœa—namely, to avoid such an examination whenever it is possible, and especially in cases where there is no reason to suspect a tumour, cicatricial contraction, or other definite local obstruction. In all ordinary cases a local examination should only be resorted to when the suffering is extremely severe and disabling, and where the usual methods of treatment have failed to afford relief. In these cases of exceptional severity an examination may be justifiable either in order to exclude, once for all, the possibility of serious local lesion, or as a preliminary to local treatment by dilatation of the uterine canal.

In cases where the menstrual disorder is in the direction of excess—cases, I mean, of menorrhagia or metrorrhagia—a prompt local investigation as to the cause of the hæmorrhage should be the rule. There is no class of cases in which delay is more liable to be dangerous. It is only necessary to remind you that hæmorrhage is almost invariably the earliest symptom of uterine cancer, and that the neglect of it is the reason why so many cases of uterine cancer are only discovered when it is too late to do any good. The neglect is often on the patient's part, but sometimes it is on the part of the medical attendant, who has failed to recognise the need for local examination. Leaving cases of cancer, however, for the moment, out of the question, the rule to institute a local examination wherever there is uterine hæmorrhage is a sound rule, for the simple reason that uterine hæmorrhage is almost always due to a local lesion. And where there is a local lesion all treatment must be haphazard until the nature of the lesion is known.

I am quite aware that the necessity for local examination in these cases is not urged quite so strongly by all teachers, but the greater my experience the more I am confirmed in the rule here laid down. The only exception I would make is in those cases where the hæmorrhage occurs at the onset of the menstrual life. It sometimes happens that the first period is alarmingly profuse. The chances in such a case are against the hæmorrhage being due to a local lesion. If the hæmorrhage, however, were repeated time after time, or if menstruation, after being normal at first, began in a year or two to be excessive, the fact of the patient being young and unmarried would not obviate the necessity for a thorough internal examination.

Only within the last few weeks, I saw in consultation a thin, pale, delicate, nervous girl, aged 18, suffering from menorrhagia. She had seen several consultants, and had had much useless treatment of a general kind. The practitioner in attendance thought that the time had arrived for a local

examination. In this opinion I entirely concurred. The girl had menstruated normally for the first three years, but for the past two years the flow had been excessive, and for the last eight weeks the loss had been almost continuous. We explained our views to the parents, and, with their consent, proceeded, after the patient had been anæsthetised, to make an examination. Finding no lesion in the vagina or cervix uteri, we dilated the uterine canal and explored the interior of the uterus. The result was that we discovered a patch of polypoid adenomata of the endometrium, which we were able to remove then and there, by means of a curette. The patient did well, and is cured of her menorrhagia.

Although in making the above remarks I have had chiefly in mind the hæmorrhages unconnected with pregnancy, the same rule holds good for hæmorrhages occurring during pregnancy, whether in the earlier or later months, and also for abnormal hæmorrhages occurring after abortion and labour. The medical attendant cannot be master of the situation in cases either of threatened or incomplete abortion, or of accidental hæmorrhage, or of hæmorrhage due to placenta prævia, or of hæmorrhage (in excess of what is normal) during the puerperium, unless he makes an internal examination.

I now come to speak of those cases of menstrual disorder which are classed under the head of amenorrhœa. These include two varieties, namely, cases of delayed menstruation, and cases in which menstruation, having been once established, has been arrested. The imperative necessity for a vaginal examination is much less here than in cases of menorrhagia. It may, indeed, be said that the cases of amenorrhœa in which an internal examination is called for are exceptional. Let me, for convenience, first take cases of arrested menstruation. Roughly speaking, such an arrest is usually due either to some obvious disturbance of the general health, or to pregnancy. In the former class the disorder of the menstrual function is secondary to the disturbance of the general health. It is merely a symptom of that disturbance. Local examination in such cases is scarcely ever necessary. It is only when there are symptoms clearly referable to the pelvic viscera that any suspicion of local mischief need be entertained. Where the amenorrhœa has begun suddenly in women or girls in apparently good health, menstruation having been normal and regular up to the time when it abruptly ceased, the medical attendant must always be alive to the possibility of pregnancy, whether the patient be married or unmarried. And if the question cannot be settled by abdominal examination a vaginal examination must be made in order to ascertain the size, consistence, and position of the uterus.

In regard to cases of delayed menstruation, a vaginal examination is to be avoided except when there is reason to suspect that the absence of menstruation is due to obstruction, caused by imperforate hymen or some other congenital malformation of the genital canal. It is of the utmost importance, therefore, to be aware of the symptoms that would justify such a suspicion. These symptoms are the occurrence, in a patient who has never menstruated, of periodical pains in and around the pelvis—the menstrual molimina as they are called—and the presence of a swelling in the lower part of the abdomen. When one or both of these symptoms are present in a girl at or beyond the age of puberty, it is reasonable to suspect that the menstrual blood is retained within the body owing to some obstruction in the passages. In such a case a local examination is imperative. The obstruction may be caused by imperforate hymen, by atresia of the vagina, or by atresia of the cervix uteri. The first of these is much the most common, and as there happens to have been a series of such cases under treatment in Adelaide Ward during the last few months, I propose reading to you the notes of them, and making such comments as the record of each case suggests:

Case I.—The first case of the series was that of E. R., aged 13, a schoolgirl, who was admitted into St. Thomas's Hospital on March 12th, 1899. The notes of the case were taken by Mr. Pern. So far as her parents knew the child was quite well up to March 1st, when she was kept awake all night by pain in her back and abdomen. The pain continued severe up to the 4th inst., when a doctor was called in. On that day she was sick and vomited and for some hours she had retention of urine. The child had never menstruated, and there was no history of periodic pains.

On inspection of the abdomen, there was seen to be a rounded, cylindrical, smooth, elastic, fluctuating tumour rising out of the pelvis and reaching to the level of the umbilicus, a distance of 5½ inches. Immediately above this swelling, and inseparable from it, was a smaller and firmer tumour 3 inches long and about 2 inches wide, with its long axis more or less vertical, but with its upper extremity lying somewhat to the left of the middle line. No fluctuation could be detected in this smaller swelling.

The vulva as a whole was bulged downwards. When the labia minora were separated so as to render visible the vaginal orifice, that orifice was seen to be completely occluded by a somewhat bulging bluish membrane about 2½ inches wide and 1¾ inch from before backwards. The bulging portion of the vulva and adjacent parts involved an area 3 inches by 2½ inches in extent, and gave evidence of fluctuation. The projection beyond the angle of reflection of the thighs was estimated at about 1 inch. The anus was widely dilated, and measured 1 inch by ⅝ inch. There was considerable bulging backwards of the recto-vaginal septum, encroaching seriously on the lumen of the lower bowel.

On March 14th an incision was made in the occluding membrane, and a thick, viscid, dark brown fluid of the consistence of treacle flowed out, to the extent of 31 fluid ounces. No pressure was made on the abdominal swelling. The incision was then enlarged and the finger introduced into the vagina. The cavity was greatly enlarged. Its walls were destitute of rugæ, much thickened, and thrown into longitudinal folds. The os uteri could just be reached at a height estimated at about 2½ inches above the summit of the pubes. The abdominal swelling had meantime so far disappeared as to cease to be visible. The os uteri was dilated and the lips thickened. The vagina was not douched, the remains of the collection of blood being allowed to drain away into absorbent pads bound tightly over the vulva. These pads were changed every three or four hours, according to the quantity of discharge.

On the day following the operation the uterus could be felt wholly above the pubes. Two days later it had sunk so as to be indistinguishable on abdominal palpation. No rise of temperature occurred.

On the seventh day the patient was allowed to get up. The discharge had much decreased in quantity and had become light in colour. On the twelfth day it had entirely ceased. On the sixteenth day examination under anæsthesia showed the vaginal mucous membrane to be quite smooth. Both anterior vaginal and posterior vaginal walls bulged towards the canal. The os uteri remained somewhat patulous. A glass dilator was introduced and maintained *in situ* by a T bandage. Two days later the patient left the hospital, the friends being instructed to see that the dilator was inserted every night and worn till morning. The patient's mother reported a short time ago that everything was satisfactory.

It will be noticed that in this instance the patient had only just reached the average age of puberty; she was not yet 14. Yet the accumulation must have been going on for many months, for it had formed a swelling that extended upwards to the level of the umbilicus, and downwards sufficiently to produce decided bulging of the vulva and neighbouring parts, and that contained more than a pint and a-half of altered blood. The menstrual function must therefore have been established unusually early.

Another noticeable feature in the case was that no periodic pains had been complained of. The child had made no complaint, and had, so far as was known, been quite well up to within a few days of her admission. This is somewhat remarkable in view of the extent of the accumulation, and shows that the periodic occurrence of pelvic pain or discomfort is not, as is usually believed and taught, a constant symptom in cases of retention from obstruction.

With regard to the swelling itself, it is to be observed that it was produced by enormous distension of the vagina, the roof of the vagina being elevated into the abdomen to the level of the umbilicus. The uterus took little or no part. It was simply pushed up by the elevation of the vaginal roof, and was perched on the top of the swelling, a little inclined to the left of the median line. Had the accumulation remained unrelieved the uterus would no doubt in course of time have become distended as well as the vagina, and the expanded condition of the lower end of the cervix showed that this distension had in fact already commenced.

The diagram shows the effect of this variety of menstrual retention. The vagina is seen to be enormously distended, the uterus elevated, the lower part of the cervical canal expanded, the bladder elongated and compressed, the rectum encroached upon, and the anus dilated.

The contents of the swelling retained their fluidity sufficiently to give the sign of fluctuation. There was no clotting of the effused blood, and indeed in cases of retained menses there never is.

It might be expected that with such an extensive accumulation there would be such a bulging of the occluded membrane as to be immediately obvious on inspection of the vulva. This, however, is seldom the case, and was not so here. The membrane was concealed from view by the labia minora, which met over it in the middle line. It was only when the labia were drawn aside that the bluish bulging membrane occluding the vaginal orifice was disclosed to view. This is due partly to the thickness and resisting power of the occluding membrane, and partly to the depth of the hymen from the surface.

As soon as ever it is discovered that menstrual blood is being retained owing to occlusion of the vaginal orifice, means should be adopted to set it free, and to ensure against any reaccumulation. On the face of it, this seems to require but a very simple operation: a free incision, such as one employs in opening an abscess, and the adoption of some contrivance for keeping the wound open. Yet up to comparatively recent times—certainly up to a time within my own recollection—this seemingly insignificant proceeding was not infrequently followed by a fatal septicæmia, and was undertaken with a sense of painful anxiety as to the result. What was the reason of this? The retained blood, from absorption of some of its serum, acquires as it accumulates a consistence like that of thick treacle. If you pour treacle from a jug, the bulk of it will flow off, slowly and without any trouble, but even after you have inverted the jug and held it mouth downwards for some time, there will still remain a quantity of treacle adherent to the walls of the jug. You cannot completely empty it. It is the same with the vagina distended by menstrual blood. The bulk of it will escape through your incision, but some will be left behind and will require days to come away completely. This is the great source of danger. For effused blood is dead animal matter. So long as it is shut up in a closed cavity and is not infected by pathogenic micro-organisms from neighbouring parts, such as the intestinal canal, it undergoes no deleterious change. But the moment you open the cavity the conditions are altered. The slightest contamination of the residuum—that is, the portion that fails to escape at the time of incision, sets up the putrefactive process, and dead blood offers the best possible medium for the development of putrefactive bacteria. Hence it was that in the preantiseptic days, these young patients were painfully liable to succumb to blood poisoning, and hence it is that we now take more than ordinary precautions against contamination.

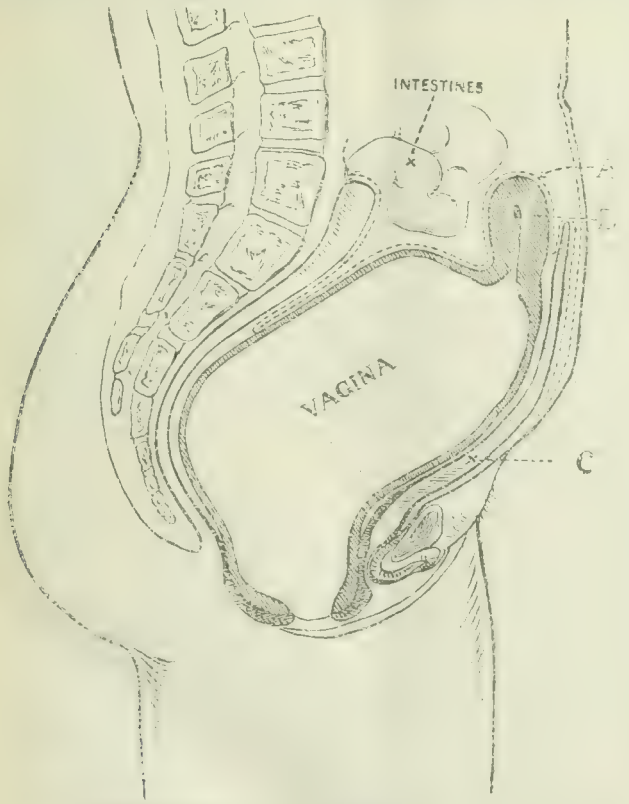


Fig. 1.—Hæmatocolpos from imperforate hymen; A, peritoneum; B, uterus; C, bladder.

The dread of mishap has led some operators to adopt even extreme measures for the sake of securing asepsis, such as letting off the fluid in the first instance by puncture instead of by incision, or burning an aperture by means of the thermo-cautery or galvanic cautery, so as to avoid the raw edges of an ordinary wound. My own practice is to thoroughly disinfect the surface of the occluding membrane and the parts around, and then with a sterilised knife to make a free incision in the middle line in the axis of the vulvar opening. If the contents of the distended vagina do not escape freely, the knife may be turned half round so as to separate the edges of the incision, or a cruciform incision may be made.

There is another source of danger in operating for retention of menstrual blood, a danger perhaps more frequently associated with cases in which the obstruction is above the vaginal orifice, for example, in the vagina itself or in the cervix uteri, than with those I am now considering, but still one that it would be unwise to ignore even in operating for imperforate hymen. In a certain number of cases the Fallopian tubes have been found closed at their abdominal ostia and distended with blood, and probably, owing to the sudden alteration in the relations of the parts caused by setting free the main accumulation, one of these distended tubes has occasionally burst during the operation and discharged its contents into the peritoneal cavity with disastrous results. Nothing is known as to the reason of the tubes becoming filled with blood. Some have maintained that the blood is poured out from the lining membrane of the tubes themselves; others that regurgitation takes place from the distended uterus. But whatever the source of the blood the fact remains, and the danger of rupture must be guarded against. It is best obviated by allowing the fluid to escape slowly. No measures must be adopted to hasten it beyond making a free opening. You would observe in the notes that no pressure was made on the abdomen. This precaution was taken partly to prevent a sudden and undue strain on the tubes if they happened to be distended, and partly to prevent, when the pressure is relaxed, an inrush of air into the vagina.

You will also have observed that no irrigation of the vagina was practised. In this respect my practice differs from that of many operators. It is, I believe, the usual custom to wash out the vagina with some antiseptic solution. My reasons for not doing this are: (1) That in using a douche there is always some risk of the injection of air and of the introduction of pathogenic germs; and (2) that I do not believe it possible for any douche to cleanse all the remaining blood away, and that therefore I consider it best to let it drain away naturally into absorbent pads bound tightly over the vulva by a T bandage. There is no septic material in the cavity at the moment of evacuation, and I am very jealous of any manipulation which may be the means of introducing such material. Besides, there seems to me no indication for disinfecting the interior of a cavity known to be up to that moment aseptic. The one great aim should be to prevent the entrance into it of anything which could possibly contaminate it. I have never had cause to regret the non-employment of the douche.

The after-treatment consists in keeping the patient for some days in bed, insisting on the recumbent posture except during meals (when it is good for purposes of drainage that the patient should assume the sitting position) changing the absorbent pads as frequently as the amount of discharge requires and discontinuing them as soon as it ceases, instructing the nurse gently to draw asunder the edges of the incision if the discharge should suddenly and prematurely cease to flow, and at the end of a week, or as soon as the coloured discharge has entirely ceased, introducing a vaginal rest or dilator of glass or vulcanite, and securing it in position by a T-bandage, so as to allow the raw surfaces to heal without reuniting, and to prevent adhesion of the vaginal walls. In the case before you, the discharge had ceased on the twelfth day and the dilator was introduced on the sixteenth day. When the patient left the hospital her friends were instructed to see that the dilator was worn for at least some portion of every twenty-four hours for a period of one year.

There was no rise of temperature throughout the patient's sojourn in the hospital, showing that our efforts to preserve the parts aseptic had been successful. The uterus gradually descended into its normal position, but the vaginal walls still remained much thickened and hypertrophied, presenting, now that they were collapsed, thick folds of hypertrophied tissue.

NOTE.

[1] When consulting with the artist as to the preparation of this diagram and making sketches for his guidance a difficulty arose that I had not thought of. I did not know how to deal with the utero-vesical fold of peritoneum. I had, when I came to think of it, no definite knowledge as to what became of it under these altered circumstances. I did not know, for example, whether it became lifted off the bladder, leaving the bladder in its normal position, or whether its reflection from the uterus to the bladder was retained by the gradual elongation upwards of the latter. There being no way at the moment of settling the point, I decided to omit the fold altogether rather than hazard a guess, and instructions were given accordingly. By a piece of good fortune another case of retained menses (Case IV) was admitted the very next day, enabling me to clear up the mystery. The distended vagina formed an abdominal swelling, reaching nearly to the umbilicus, and pushing up the uterus to the same level. On introducing a sound into the bladder, I found that it passed vertically upwards to a height of 7½ inches, its point being felt close to the umbilicus in front of the displaced uterus. The bladder had followed the fortunes of the uterus, and risen along with it. The diagram was completed accordingly.

AN ADDRESS
ON THE
POLITICAL ASPECTS OF CURRENT MEDICAL TOPICS.

Delivered at a Meeting of the Aberdeen, Banff, and Kincardine Branch of the British Medical Association on December 20th, 1899,

By R. FARQUHARSON, M.D., M.P.,
President of the Branch.

I DEEPLY regret that political necessity, over which I had no control, compelled me to be absent from our last meeting, where I might have been more formally introduced as your President, and thanked you then, as I thank you now most cordially and sincerely, for the great honour I have received by my nomination to this chair. I will not impugn the wisdom of your choice by breathing the faintest suspicion of personal unfitness, though in some moments of absolutely confidential self-examination I have asked the question whether I can be regarded as a competent successor of the distinguished practising exponents of living and working medicine who have been my predecessors in office. But if extenuating circumstances are needed, I may plead my long connection with the British Medical Association, my intimate knowledge of its methods and its leading men, and the interest I have been able to take in public questions affecting the profession and the public through my position as Chairman of the Parliamentary Bills Committee on the one hand, and member of Parliament on the other. And this gives the clue for a text on which I may found a few brief observations. It would be manifestly absurd for me to discuss from any other point of view than learner the modern developments of our craft as it swiftly advances step by step into new regions of thought and progress; my occasional glances at our periodical literature or modern textbooks show me how hopelessly I am falling into the rear; for new diseases spring up, weird and mysterious words have been concocted to describe them, and the all-conquering bacillus has arrived to remain and disturb many of our preconceived notions. So my only chance of speaking any useful words to you to-night is to take refuge among some favourite subjects of mine—the general bearing of the science and art of medicine and surgery on the welfare of the general community, of the duty we owe to the public and the reciprocity due from them to us; of the influence of hygiene and public health administration, and of the occasional, too occasional, occupation of our rulers with the many wide questions affecting the sanitation and social well-being of the people from our more immediate standpoint.

From this somewhat extended list I think I can pick one or two items worthy of our consideration, and I shall begin with a few words on vaccination, which has recently been so vehemently discussed, and which has been made a stick to beat the backs severely, but I think undeservedly, of those medical men who are compelled by their position to take an active part in public life. We were accused of betraying the profession, playing into the hands of agitators, and practically abolishing compulsory vaccination, and really at first sight there might seem to be some faint justification for these criticisms. I know I had many heart searchings before I threw in my lot with the supporters of the new legislation, for I could not help remembering that after the publication of the interim report of the Royal Commission I had successfully blocked Mr. Asquith's Bill for abolition of cumulative penalties. But we must go with the times, and sometimes change our opinions on the consideration of fresh evidence or a more careful review of facts, and so I somewhat reluctantly came to the conclusion that further legislation was necessary in the interest of vaccination itself. For how did the matter stand when Mr. Chaplin brought in his Bill? We had staring us in the face the report of the Royal Commission, presided over by the late Lord Herschell, and on which sat Sir James Paget, Mr. Jonathan Hutchinson, and other eminent medical men, and which after a seven years' hearing of evidence, recommended the abolition of the cumulative penalties. Then we could not take up a newspaper without seeing that the law was repeatedly and contemptuously set at defiance, that repeated prosecutions for its breach were seldom if ever attempted, and that in various parts of England vaccination had practically ceased until an outbreak of small-pox sent the strongest opponents of the practice flying helter skelter to claim its protection, the result being that in 1898, out of 900,000 children born annually, about 300,000 were being left unvaccinated, an unhealthy state of affairs, which amply justified some attempt at betterment. When the Bill was introduced last year the President of the Local Government Board proposed to leave out the conscientious objector, who had been invented by the Royal Commission, and who, as you know, is to be relieved from penalties for the non-vaccination of his children if he makes a declaration to that effect. As Mr. Chaplin reminds us in a very interesting speech delivered on December 2nd, he thought that a dangerous experiment, but Sir Walter Foster beat him in Committee; he got no support from any of the medical members, and rather than lose his Bill he loyally gave way, and the conscientious objector triumphantly took an inside seat.

Two excellent proposals met with unanimous acceptance. The first was the system of domiciliary visitation, so long adopted in Scotland, and by which a child is operated on amid the familiar surroundings of home, and not exposed to the ordeal of crowding, or shivering with cold, amid a long row of similar victims, waiting for its turn at a hospital or dispensary, and the doctor, talking to the mother quietly by her own fireside, is often able to overcome her scruples, and persuade her to afford her helpless infant an undoubted protection against one of the most terrible of all diseases.

And secondly came the calf lymph, which has at least this enormous advantage, that it is absolutely free from the possible though rare risk of communicating enthetic disease, which careless insertion has once or twice brought about, whilst if the operation is carefully performed under strict antiseptic precautions, the preservative influence of the lymph reduces the chances of erysipelas or inflammatory complications almost to zero.

The ground has, therefore, been most effectually cut from under the feet of the antivaccinationists, who have now nothing to fall back upon but vague declamation about the liberty of the subject and the tyranny of Governments; and in the face of direct physical benefit this kind of argument happily appeals to a very limited circle of minds,

The Act has not been in active operation for much more than a year, but the results are in all respects satisfactory. Mr. Chaplin, in the speech to which I have already referred, tells us that "up to the end of June last 77,000 more vaccinations had been done in the preceding six months than in the last six months before the passing of the Act, which was at the rate of more than 150,000 for the whole year. As 300,000 was the number calculated to go unvaccinated before the Act was passed, half that falling-off had been recovered in the first year of the Act, before even it was in full play. Since June there were no complete returns, but inspectors reported no falling off, with one single exception.

This, of course, is excellent; but the greatest triumph for vaccination has been at Leicester, the stronghold of opposition, with members pledged in its favour, and an elaborate and up to this point successful organisation against Jenner

and all his works. The guardians there refused to appoint a vaccination officer, and swore by all that is holy that nothing would induce them to give way, and that they would go to prison cheerfully if required. But their courage could not stand against Mr. Chaplin's firmness; gradually it oozed away from their finger tips, and, amid the wails and denunciations of the League organs, they surrendered at discretion; the officer has at length been appointed, and, so far as I have been able to hear, things are moving along quietly and comfortably. Two other things are still required to make the working of the Act still more satisfactory.

The first is to place the public vaccinator on the same footing as the vaccination officer as regards the tenure of his office. He should be appointed for a prolonged period or in permanence on good behaviour, and should be made independent of the caprice of guardians by being only removable after appeal to the Local Government Board; and, secondly, that a revaccination clause should be added to the Act. This was practically promised by the representatives of the Local Government Board in the House of Lords last year, so we may live in hopes of something being done before long.

Of course all this has nothing to do with us practically, for the Act does not apply to Scotland, and I see no reason why it should. We sensible people north of the Tweed look into matters for ourselves, and, as we are not led away by the claptrap of the anti-party, we believe in vaccination, and there is no trouble in carrying it out. If there were any feeling the other way, I should be sure to have heard of it; but in nineteen years of political life I have only once been asked questions on the subject; and last year, when an assault was made on the fortress of Jennerism at Woodside, under influential auspices, I do not think that much impression was made upon the minds of the hard-headed people there. So we had much better let well alone, and not complicate matters by following the example of our Southern brethren, whose greater credulity and less independence has obliged us to adopt legislation which is not needed by us.

One matter of very urgent importance is the necessity for giving fixity to tenure of Poor-law medical officers in Scotland. Our Association has worked actively in this, and has induced Mr. Cross to bring in a Bill to add to Section LI of the Local Government (Scotland) Act, 1894, the words, "and that such medical officers shall be removable from office only by and with the consent of the Scottish Local Government Board," thus assimilating the Scottish to the English law, which grants the appeal. If any further argument than that which naturally appeals to all our minds is wanted, it is furnished by the case of Dr. Lamont, which was so effectively brought before the House of Commons by Sir Charles Cameron. This poor man was hounded out of office by his immediate superiors, whose incapacity he had so effectively exposed that they were reprimanded by the Local Government Board, and he would have been ruined had he not luckily obtained a berth in London, as well as a handsome money gift from Government to pay his out-of-pocket expenses, and Mr. Balfour, who behaved with great generosity and fairness, was so impressed by the statement of the case, that he gave Mr. Cross a virtual promise of facilities for and a sympathetic consideration of his Bill when it next came before the House.

Then we want legislation to stiffen up our laws for death certification and legislation. I have lately had the opportunity of going fully into this matter, so I need only remind you that in England and Wales, and more especially in Scotland, thousands of people are annually hurried into their graves without any certificate at all. I rejoice to see that the General Medical Council are preparing a deputation to wait upon the Local Government Board, and urge them to carry out without delay the recommendations of the Select Committee; and such an influential body pleading to practically sympathetic ears must surely bring about the desired result.

The British Medical Association has long taken a deep interest in the welfare of the Army Medical Department, and by agitation inside the BRITISH MEDICAL JOURNAL and outside by deputation and by influence, we have worked steadily on until point after point has been gained; and now that matters are in a fairly satisfactory state, that the condition of pay and retirement are all that can be desired, and that the definite military rank in a Royal Corps rendered necessary by the arrangements for modern service has been conceded, we may fairly, I think, claim some share at least for what the War Office authorities have so considerately granted. But perfection is not reached, and Professor Ogston, in his very able Address in Surgery at Portsmouth, showed defects in organisation which I hope may be soon remedied. It is quite evident that army doctors with their limited field for practice must soon fall behind the rapid progress of medicine and surgery if they are not given facilities for keeping up with the times, and grants should be more liberal in the way of study leave, so that hospitals may be visited, lectures attended, and knowledge and confidence thus given to enable the surgeon to meet the varied emergencies of active service in the field. But even then we cannot expect every holder of the Queen's medical commission to be an expert operator, or to be practically familiar with all the niceties and difficulties of modern surgery, and it is, therefore, good policy on a great and supreme occasion like this to send out experienced civilians, who will give help and confidence alike to doctor and patient in the numerous trying emergencies that must arise; and as Professor Ogston is one of the distinguished band who have gone to the front, we shall hear on his return his direct personal experience of the way in which things are working.

But reading as we have all done with deep interest the details furnished by war correspondents lay and medical, we must be struck by the completeness of the arrangements for the treatment of the sick, and the liberal and judicious way in which all the appliances of modern science are placed at the easy disposal of the army surgeons, and on all hands we hear of the devotion and zeal displayed by the medical staff, of the cheerful alacrity with which they have borne the terrible strain laid upon them, and the way in which, as on many former occasions, they have cheerfully sacrificed their lives at the call of duty.

I have spoken of some accomplished things, and of others that we need, and the only chance of getting them is by pegging away, showing our claims with the importunity of the widow, and confidently in the end by our determination not to be beaten. Governments, of course, have to arrange their business in the most convenient way by adapting to the wishes of their supporters, by working along the lines of least resistance, and not leaving too open a front to the enemy. And their whips and party managers, whom we may call their scouts, have to keep their ears and eyes open, and search for the existence of caves, or splits, or cavities of disaffection which may give trouble, or even cause disaster. Members of Parliament support their own sides on matters of large imperial policy, but they occasionally become independent on smaller social affairs which are usually outside the strict party lines, and in which they may have deep personal feeling, or which vitally affect the interests of their constituents, and on those questions they not only are, but ought to be, squeezable. I do not say that they should accept the hardly dignified position of mere delegates, but whilst holding firmly to their own general principles, they may give way to the views and wishes of those who send them to Parliament on various secondary questions.

For instance, during the vaccination debates last year, I heard two members frankly avow that, whilst themselves in favour of the practice, the pressure of their constituents compelled them to go the other way. Well, we ought to be able to squeeze and press. I do not mean that we are to join any of those small bands of irreconcilable faddists, who see nothing beyond their own narrow circle, make members' lives uncomfortable by their pinpricks, and threaten the direst consequences if we do not swallow their views at a gulp. We can do our work in far safer and more constitutional fashion by quiet argument and persuasion, and the influence which the steady force of cultivated reasoning and up-to-date knowledge must have on public opinion, and then when necessary we can make ourselves nasty, and show that we mean to have our way. Although I often wish that medical men would take a more active part in public life, I hardly think we can expect very many of them to do so. It involves a great sacrifice for anyone in actual practice to enter the House of Commons, and the appearance on party platforms not only absorbs valuable time, but may give the enemy cause to assert that he is neglecting his professional duties,

and offend valuable clients by running counter to their political views. I am proud to say that there are not a few who, regardless of self-interest and the absorbing claims of practice, do take their full share in political life, but the great bulk of the rank and file must content themselves with quiet work behind the scenes, talking, and defining and instructing, and eventually convincing; and then the M.P. will see that he had better join them, and he will bring his pressure to bear on his Government, and these in their turn will see that the time is ripe for action, that they will be backed up by public opinion outside, as well as by their supporters inside, and so the deed will be done.

Of course, scattered as we are, we could not do anything really practical without rallying points and centres of organisation and co-ordination, which knit our forces together, and enable us to march in compact mass to fight our social battles; and this we find ready made in our Association, which, by its Branches and Councils and Committees, and influential annual meetings, gives us just the binding force we need, and which has used its influence and power with great skill and discretion in shaping and helping legislation, instructing members of Parliament, and showing Governments that the time has come for carrying out useful measures of social reform, and that it would not be wise or even safe to resist any longer the popular demand; and finally, I think we should be a little more aggressive. By this I mean that we should not let the propagation of heresies and fallacies go on without effective public protest when active organisations send plausible emissaries about the country to denounce vaccination and vivisection, some well-instructed person should be there to explode their fallacies and refute their arguments, and we see with satisfaction how on some of these occasions a brave and clever doctor has turned the meeting round in his favour, so that those who came to curse remained to pray. Mr. Chaplin had some sensible observations of this point in his speech the other day. He said, "The Antivaccination League was a strong body, and there was nothing like it on the other side. If the people in England were in earnest in favour of vaccination, why did they not start a body to explode the fallacies of that small body of opponents who disseminated all manner of stuff in towns and villages, without there being anything to counteract it, so that it had a very bad effect on the poorer and less informed of the inhabitants."

In this connection you will probably remember that on the occasion at Woodside, when a distinguished pathologist and an able and respected journalist came to preach antivaccination at Woodside, they were met on the platform by Dr. Beveridge, who did not let them have it all their own way, and sent them home probably sadder if not wiser men.

Now, gentlemen, I must pull up my wanderings over the wide field of speculation and inquiry which stretches out before us. Many important questions concerning your interest, medical reform and others, are in the air, and will some day be sufficiently condensed for practical discussion. When they come before us we shall consider them on their merits, without precipitate zeal on the one hand, or overcaution on the other. In the end truth, as usual, will prevail, and good will have been done to ourselves, to the profession, and to the general public at large.

OBSERVATIONS ON GENERAL METABOLISM AND THE BLOOD IN GOUT.

By CHALMERS WATSON, M.B., M.R.C.P.E.,

[From the Physiological Laboratory of the University of Edinburgh.]

From his classical observations on acute gout, Sir A. Garrod, more than 50 years ago, arrived at the following conclusions: During the attack (1) the alkalinity of the blood is lowered; (2) the excretion of uric acid falls, this being associated with uric acid retention in the tissues, depending on a diminution of the excretory capacity of the kidneys; (3) the amount of uric acid in the blood is higher than in the interval. These three conclusions formed the basis of his theory of the causation of the phenomena of an attack of acute gout. Since that time very few detailed observations have been made on the subject, and these conclusions have been generally accepted almost up to the present day. Thus we find Sir W. Roberts[1] in 1897 writes: "The analyses of Sir A. Garrod indicate that in the early days of an attack the daily excretion of uric acid falls rather below the normal average." At the present time it is advisable that these conclusions should be tested in the light of observations made with more recent and accurate methods.

In 1898 the views as to the diminution of the alkalinity of the blood and on the increased amount of uric acid present in the blood during the acute attack were seriously called in question by Magnus Levy. This observer made an extended series of observations in 17 cases of gout, using the most modern and reliable methods, and in no case did he find evidence of a diminution in the alkalinity of the blood or of an increase in the amount of uric acid as compared with the interval between the attacks. Levy's observations on these points appear to be conclusive. Comparatively few observations seem to have been made on the second point—namely, the excretion of uric acid during the attack, and some of these recorded are rather limited in their scope. Pfeiffer,[2] Levy,[3] and Badt[4] have recorded a distinct increase in the uric acid excretions during the attack. On the other hand, Minkowski,[5] in his most recent writing on the subject, adheres to the view that the excretion is diminished.

In the course of the past summer I had an opportunity of making an extended series of observations on a case of acute gout, and I directed my attention to this point among others. Before defining the objects of my investigations it is advisable to refer briefly to some of the unsolved questions and to certain views at present entertained regarding uric acid.

Unsolved Questions regarding Uric Acid.

Among the leading questions of importance from our present point of view the following may be cited: (1) What *rôle* does uric acid play in the development of an acute attack? (2) Is the deposit of urate of soda in the affected joint the cause or the result of the attack? (3) What is the relationship between the increased amount of uric acid in the blood and the local deposit? (4) In what form does the uric acid circulate in the blood in gout?

A final answer cannot yet be given to any of these questions, and it will probably not be forthcoming until we have a fuller knowledge of general and local metabolism in the tissues affected. With regard to the last-mentioned point, Sir Wm. Roberts concluded that uric acid is present in the blood in the form of a quadriurate of sodium, and the view has been generally accepted in this country, while numerous observations have been made on the solubility of this substance under varying conditions, and attempts made to draw deductions therefrom, applicable to the etiology and treatment of the disease. As, however, we know so little of the behaviour of the proteids and also of the acid and alkaline salts of the blood in their relation to uric acid, we must still regard that view as a hypothesis, and not a proven fact.

Uric Acid in the Blood and Tissues in Health.

Any views on the pathological relationships of uric acid should only be formulated after careful consideration of the physiology of that substance. Now as we are not yet in a position to give the complete history of its manner of formation or of its relation to other products of metabolism in health, it is obvious that care must be observed in drawing conclusions from pathological conditions, as these conclusions may have been drawn from inquiries which were really too narrow in their scope to be of any service. Physiologists are almost unanimous in regarding uric acid as a normal constituent of the blood, organs, and tissues of the body, the amount present being, however, exceedingly small. The relative amount present in the different organs is of importance. A series of observations made by the writer and recorded in the British Medical Journal of January 28th gave the following results: (1) The absolute amount in the liver was greater than in the kidneys and spleen; (2) the kidneys contained less than the spleen, both as regards absolute amount and percentage; (3) the spleen contained a higher percentage than the other two organs, this probably depending on its richness in nuclein-holding substance. Further reference will be made to this point later.

Uric Acid in the Blood and Tissues in Disease.

A further point appealing for investigation is the examina-

tion of various pathological tissues and fluids. It is well known that an excess of uric acid exists in the blood in certain diseases which have no known relationship to gout, but it appeared to me advisable to make some detailed observations on the subject. The following are illustrative examples of results obtained:

A.—*Fluids.*

Disease.	Sex.	Age.	Fluid.[a]	$H_2\bar{U}$.
			Ozs.	Gram.
1. Chronic Bright's disease ...	F.	60	10	0.0068
2. Malignant disease	M.	55	30[b]	0.0155
3. Aneurysm (aortic)	M.	40	19	0.0087
4. Ulcerative endocarditis ...	M.	30	26	0.0075
5. Lobar pneumonia	M.	22	10	Qualitative reaction.
6. ,, ,, ...	M.	40	16	0.0075
			17[c]	0.0095

Notes.—[a] This fluid was obtained at the *post-mortem* examination from the pleural cavity after removal of the thoracic viscera, and was usually diluted blood. [b] This was made up of 26 ozs. serous fluid and 4 ozs. diluted blood. [c] Two examinations were made from this case. The second one consisted of the examination of a thinner and more diluted fluid (17 ozs.) which oozed from the organs, and was examined eighteen hours after the previous fluid. The figures would indicate that there does not seem to be any loss of uric acid in the fluids after death, but rather the reverse.

B.—*Tissues.*

	Liver.	Spleen.	Kidney.	Lung.
Aneurysm	0.1064	—	—	—
Pneumonia	—	—	—	0.0130
,, ...	0.1447	—	—	—
Granular contracted kidneys ...	0.0386	—	Qual. reaction	—
Leucocythæmia (weight of spleen 7½ lbs.)	—	0.0195*	—	—

* This observation is of interest in view of the fact that many investigators have failed to find uric acid in a leucocythæmic spleen. Scherer is, in fact, the only observer who has previously found it.

What conclusions are deducible from these figures? Looking especially at the former set, those dealing with the blood, we must bear in mind at least two points. In the first place the amount of blood examined was only a very small part of the total quantity in the body; and secondly, the figures indicate the uric acid present only at the particular time of examination. It seems clear, therefore, that there is no close relationship between excess of uric acid in the blood and gout. The degree of causal relationship is in general over estimated, and writers have failed to sufficiently observe that in gout the error in proteid metabolism which leads to an excess of uric acid in the blood may also induce the presence of other bodies more or less toxic which may be responsible for many of the symptoms of chronic or irregular gout. We have another point of evidence in favour of this, namely, the conditions in leucocythæmia. Here we find a very marked excess of uric acid in the blood, existing for a lengthened interval, without inducing any of the clinical manifestations of acute or chronic gout. This indicates that the nitrogen metabolism in the two diseases is markedly different.

Leucocytosis and Uric Acid Excretion.

Since Horbaczewski showed that uric acid could be formed by allowing blood to digest with splenic tissue under conditions admitting of free oxidation, and also by digesting nucleins and nucleic acid under the same conditions, a great deal of attention has been paid to these tissues which are rich in nucleins, and especially the leucocytes. Of late there has been a growing tendency to the opinion that there is a constant and definite relationship between the number of leucocytes in the blood and the excretion of uric acid and xanthin bases in the urine. Thus we find Ewart, in his recent work on gout, says: "An increased uric acid excretion goes hand in hand with an increase in the number of leucocytes, whether physiological, as in infancy and childhood, and after ingestion of nucleins or pathological, as in leucocythæmia, pneumonia, etc." Such a view doubtless finds some support from the association of the leucocytosis and increase in uric acid excretion during digestion, and also from certain pathological states, but from many other standpoints lends itself to adverse criticism. I shall only refer to one of the points based on observations made by Milroy and Malcolm, and also Hale White and Hopkins. These observers investigated the excretion of urea (nitrogen) and P_2O_5 (the two end products of nuclear destruction) in leucocythæmia. In this disease there is a marked decrease in the phosphorus excretion, while the uric acid may or may not be increased in amount. When we bear in mind that the leucocytes in this disease may amount to 300,000 per c.cm., it is evident that there is no definite and constant relation between the excretion of uric acid in the urine and the number of leucocytes in the blood. Figures given by Milroy seem to conclusive on this point:

	Leucocytes.	P_2O_5 Excretion.	$H_2\bar{U}$.
R. B. (a healthy man) ...	8,000	4.038	0.252
Leucocythæmia	330,000	0.915	0.202

These figures also corroborate the view that the general metabolism in the two conditions is essentially different.

Uric Acid and Nucleins.

Since the publication of Horbaczewski's observations on the formation of uric acid from nuclein-holding tissues, numerous investigations have been made on the effect of the ingestion of nucleins, nucleic acid, and articles of diet rich in nucleins on the excretion of uric acid. So far these investigations have produced discordant results, some observers finding a decided increase, and others a decrease. The subject is a complicated one, and requires further elucidation. The influence of feeding with thymus gland was investigated in this case, with the results indicated.

Personal Observations.

My recent investigations bear on the foregoing, the special points to which I directed my attention being: (1) The condition of general metabolism during the attack and in the interval, as evidenced by the total daily excretion of nitrogen in the form of urea and uric acid and of phosphorus in the form of P_2O_5; (2) a comparison of the ratios of the figures obtained; (3) the influence of the diet and drugs in use on the daily excretion of uric acid, etc.; (4) the state of the blood, as revealed by microscopic examination, enumeration of white blood corpuscles, and by stained films. (The preparation and examination of these films was kindly undertaken for me by Dr. H. S. Ballantyne, late Assistant to the Professor of Physiology.)

The following is a short note of the clinical aspects of the case:

Clinical History.—A. S., male, aged 41, a musician, was admitted to the Royal Edinburgh Infirmary on May 16th, 1899, under the care of Dr. Byrom Bramwell, complaining of "rheumatic gout" in his ankles, knees, and left elbow, of twelve years duration. The first attack, twelve years ago, affected the right great toe; the second, nine months later, the right wrist; a third, a year later, the right great toe, followed in a few days by a similar involvement of the left great toe; and thereafter he had an attack usually once a year. In the intervals the mobility of the joints was unimpaired. The present attack began about a fortnight before admission, and had been of a subacute character.

His father and mother are living, aged 75 and 76 respectively. His grandfather died at the age of 98. There is no history of gout or rheumatism in the direct or collateral lines. He has had syphilis and soft sore. He has always been a fairly large meat eater, and accustomed to take a moderate quantity of alcoholic liquor. He stated that his condition had been diagnosed as "gout" by Sir Alfred Garrod as well as by others.

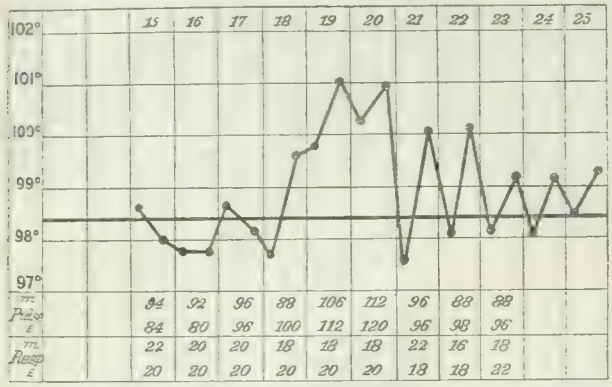
On admission his weight was 11 st. 6 lbs., and his height 5 ft 6 in. The affected joints were swollen, hot, and painful on movement. Marked pain existed on pressure over the right metatarso-phalangeal joint, with distension of the superficial veins.

The condition was regarded as one of subacute gout, and the following dietetic and medicinal treatment was adopted.

Dietetic.—5.30 A.M. Milk, bread and butter. 9 A.M. Porridge, egg, bread and butter, coffee. 1.30 P.M. Fish or chicken, potatoes, occasionally green vegetables, milk pudding; or soup and fish or chicken with vegetables. 5.30 P.M. Bread and butter, egg, tea. 8.30 P.M. Milk, bread and butter.

Medicinal.—Pot. iodid., sod salicylas āā gr. x, t. i.d.

This treatment was in operation prior to the date of my observations, and the diet was maintained till June 20th (see Table I). The drugs were stopped on June 13th, to enable observations to be made for a few days on the fixed diet, without drugs (see Tables I and II). The observations extended over twenty-four days. Every precaution was taken in the collection of the urine and in other details of importance in the inquiry. In this we were assisted by the patient, who took an intelligent interest in the observations. Daily notes were made at the bedside, and as these have some interest a few are appended on the table. Unfortunately for the patient, but fortunately for the purpose of the research a typical acute attack developed during the investigation.



This temperature chart should be studied along with the notes and figures in Table I. There is room for some difference of opinion as to the arbitrary lines drawn between the 19th and 20th on Table I. Initial symptoms set in on June 17th, and a typical acute attack developed on the night of the 18th. On the morning of June 20th it was deemed advisable to administer some medicinal treatment (the drug treatment had been stopped on the 13th), and two 20-grain doses of salicylate of soda were given on that day—one at 12.15 P.M. and one at 5.30 P.M. Thereafter it was discontinued. The acute pain ceased within an hour of the first administration, but from his previous experience of the duration of acute attacks, patient felt quite uncertain as to the special influence of the drug. In connection with the figures on Table I it should be noted that the figures for June 19th include the urine voided up to 8 A.M. on the 20th.

Methods of Investigation.—The urine was collected at the same hour each morning, measured in cubic centimetre measure, and the specific gravity and reaction noted. The reaction was acid throughout. Periodic examinations were made for the presence of albumen.

For the Estimation of Uric Acid (Salkowski-Ludwig).—To 200 c.cm. urine add 50 c.cm. magnesia solution; make up to 300 c.cm. with distilled water and filter quickly. Take 200 c.cm. of the filtrate (equivalent to 133 of the original fluid), and test to see that all the phosphates have been removed, then precipitate the uric acid by the addition of 15 to 20 c.cm. of a 3 per cent. silver nitrate solution, ammonia being added to keep the chlorides in solution. Allow the mixture to stand for half an hour in a dark place, when the uric acid is deposited in the form of a gelatinous precipitate of magnesium silver urate. Filter through a suction pump, and wash the filtrate with weak ammoniacal solution until chlorine free, then put the filter paper with the precipitate into a beaker with distilled water, acidify slightly with hydrochloric acid, and decompose the magnesium silver urate by passing through sulphuretted hydrogen, bring slowly to the boiling point and filter. The clear fluid thus obtained is evaporated on a water bath to a few c.cm., when a few drops of hydrochloric acid are added to allow the uric acid to crystallise out. This is left over night then filtered, the precipitate being washed chlorine free (an allowance being made for wash water 0·5 mg. in 10 c.cm.). Thereafter the nitrogen of the uric acid crystals was estimated preferably to weighing them.

For the estimation of nitrogen and P_2O_5 the Kjeldahl-Weibull method was employed: 20 c.cm. of urine were run into a Kjeldahl flask, then 15 c.cm. of H_2SO_4, 10 grams K_2SO_4, and a few crystals of $CNSO_4$ were added and the mixture incinerated in the usual way. The clear green fluid left after complete incineration was then made up to 250 c.cm., with distilled

TABLE I.

Period.	Diet.	Drug.	Date.	Total c.cm. Urine.*	Specific Gravity.	Urea in Grams.	Uric Acid.	Total Nitrogen.	P_2O_5 in Grams.	Uric Acid to Urea.	Uric Acid to P_2O_5.	Nitrogen to P_2O_5
1	Mixed diet (q. v.)	Pot. iod. sod. salic. āā gr. x, t.i.d.	May 31	1,380	1020	28.772	0.457	13.427	2.714	1 to 62	1 to 5.96	4.94 to 1
	,,	,,	June 1	1,180	1023	24.692	0.368	11.522	2.567	1 ,, 67	1 ,, 6.97	4.48 ,, 1
	,,	,,	,, 2	990	1028	24.426	0.318	11.399	2.739	1 ,, 76	1 ,, 8.61	4.16 ,, 1
	,,	,,	,, 3	1,425	1021	24.687	0.517	11.521	2.042	1 ,, 47	1 ,, 3.95	5.64 ,, 1
	,,	,,	,, 4	1,540	1017	20.558	—	9.594	2.425	—	—	3.95 ,, 1
	,,	,,	,, 5	1,335	1022	21.325	0.307	9.952	2.592	1 ,, 69	1 ,, 8.44	3.84 ,, 1
2	Mixed diet and thymus, 5½ ozs.	,,	,, 6	1,198	1026	22.281	0.419	10.398	2.935	1 ,, 53	1 ,, 7.00	3.54 ,, 1
	Mixed diet and thymus, 11 ozs.	,,	,, 7	1,468	1019	23.432	0.311	10.935	2.469	1 ,, 75	1 ,, 7.93	4.42 ,, 1
		,,	,, 8	1,200	1023	19.890	—	9.282	3.320	—	—	2.79 ,, 1
	Mixed diet and thymus, 9 ozs.	,,	,, 9	1,352	1016	19.062	0.336	8.896	2.591	1 ,, 56	1 ,, 7.71	3.43 ,, 1
3	Mixed diet	,,	,, 10	1,700	1017	20.781	0.327	9.698	2.620	1 ,, 63	1 ,, 8.01	3.70 ,, 1
	,,	,,	,, 11	1,305	1018	19.965	0.319	9.317	2.425	1 ,, 62	1 ,, 7.60	3.88 ,, 1
	,,	,,	,, 12	990	1020	17.522	0.332	8.177	2.161	1 ,, 52	1 ,, 5.50	3.78 ,, 1
	,,	Drugs discontinued	,, 13	1,645	1017	20.337	0.338	9.491	2.796	1 ,, 60	1 ,, 8.27	3.39 ,, 1
4	,,	,,	,, 14	1,235	1018	18.893	0.491	8.817	2.624	1 ,, 38	1 ,, 5.34	3.36 ,, 1
	,,	,,	,, 15	940	1020	16.354	0.435	7.632	2.075	1 ,, 37	1 ,, 4.77	3.67 ,, 1
	,,	,,	,, 16	936	1020	17.830	0.452	8.321	2.566	1 ,, 39	1 ,, 5.67	3.24 ,, 1
5	,,	,,	,, 17†	1,515	1017	24.542	0 513	11.453	1.893	1 ,, 47	1 ,, 3.69	6.05 ,, 1
	,,	,,	,, 18	1,015	1024	22.380	0.682	10.444	1.860	1 ,, 32	1 ,, 2.72	5.61 ,, 1
	,,	,,	,, 19	1.285	1020	30.261	0 768	14.122	1.745	1 ,, 39	1 ,, 2.27	8.09 ,, 1
6	Milk only from 12.15 P.M. on 20th	Sod. salic. gr. xx (*bis in die*)	,, 20	1,440	1020	39.634	0 558	18.244	3.144	1 ,, 71	1 ,, 5.63	5.79 ,, 1
	,,	—	,, 21	775	1028	31.425	9.565	14.665	2.573	1 ,, 55	1 ,, 5.55	5.69 ,, 1
	,,	—	,, 22	815	1028	33.064	0.578	15.430	3.321	1 ,, 57	1 ,, 5 71	4.64 ,, 1
	,,	—	,, 23	1,170	1020	28.692	0.530	13.390	3.334	1 ,, 54	1 ,, 6.29	4.01 ,, 1

* There was practically no variation in the amount of fluid taken from day to day, the amount being small. † Acute attack—onset.

June 1st.—Woke up at 5 A.M. with severe pain in ball of left foot, the joint being swollen, red and painful on pressure. The tenderness remained for three or four days.

June 7th.—Feeling well. Still complains of pain in the left ankle on walking or standing.

June 9th.—More pain in the left ankle-joint, the outer part of which is swollen and tender. The superficial veins on the dorsum of the foot much distended.

June 10th.—The left ankle-joint easier. The right great-toe joint swollen and painful. The right fourth finger swollen and tender, and the seat of stinging pains.

June 13th.—Feels and looks very well. Has only very slight pain on deep pressure over the ankle-joint and toe-joint.

June 14th.—Not so well. Sharp pain in the right foot, the dorsum being swollen, tender, and red, with distended veins. Better on the following day.

June 16th.—Well again. No pain anywhere, and only traces of tenderness on deep pressure. Late at night began to complain of pains.

June 17th.—Pain, swelling, and tenderness on the inner aspect of both knee-joints, which became intensified on the 18th, when the ankles, the great-toe joints, the dorsum of the feet, and the left elbow-joint became involved. Complains also of "gouty" feeling in the hands and left forearm, which were tender on pressure. Condition intensified on 19th, patient unable to move. Tongue heavily coated and yellow. Radial tension increased.

June 20th.—The pains reached their maximum in the early morning. The worst and longest attack experienced. Diet on 20th included an egg, coffee, and bread and butter, but from the 21st onwards milk only. Sod. salicylate gr. xx given at 12.15 P.M., 5.30 P.M., and 8.30 P.M. The very acute pain disappeared on the afternoon of the 20th.



Fig. 1.—St. Thomas's: Cheselden Silver Medal



Fig. 2.—Cheselden Medal—reverse.



Fig. 9.—St. Thomas's: Solly Silver Medal



Fig. 3.—St. Thomas's: Mead Medal.



Fig. 4.—Mead Medal—reverse.



Fig. 10.—King's College: Jelf Bronze Medal.

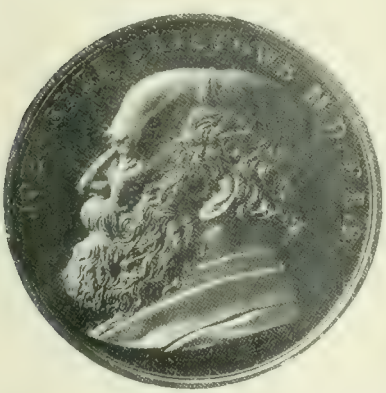


Fig. 5.—St. Thomas's: Bristowe Silver Medal.



Fig. 6.—Bristowe Medal—reverse.



Fig. 11.—Charing Cross: Huxley Medal



Fig. 7. King's College: Robert B. Todd Bronze Medal.

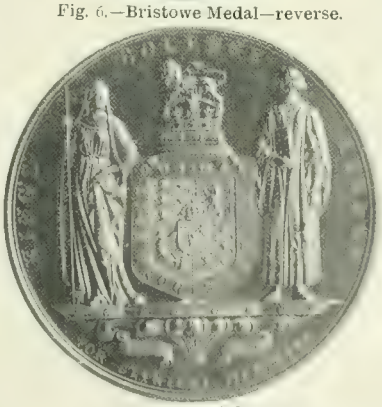


Fig. 8.—Todd Medal—reverse.

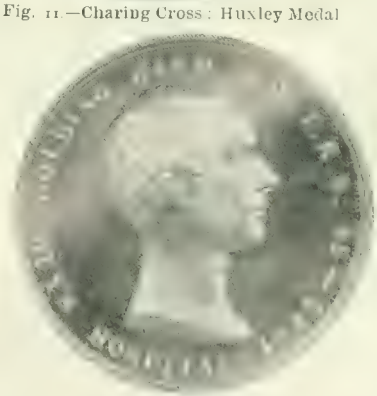


Fig. 12.—Guy's: Golding-Bird Gold Medal.

TO ILLUSTRATE MR. T. E. JAMES'S PAPER.



Fig. 13.—St. Bartholomew's: Lawrence Medal.



Fig. 14.—Lawrence Medal—reverse.



Fig. 21.—University College: Liston Gold Medal.



Fig. 15.—St. George's: Thompson Silver Gilt Medal.



Fig. 16.—Thompson Medal—reverse.



Fig. 22.—University College: Fellowes Clinical Medal.



Fig. 17.—St. Mary's: Cheadle Gold Medal.



Fig. 18.—Cheadle Medal—reverse.



Fig. 23.—Westminster: Bird Medal.



Fig. 19.—Guy's: Treasurer's Gold Medal.



Fig. 20.—Treasurer's Medal—reverse.



Fig. 24.—Middlesex: John Murray Medal.

TO ILLUSTRATE MR. T. E. JAMES'S PAPER.

water, and of this 150 c.cm. were taken for P_2O_5, and 100 c.cm. for nitrogen. The nitrogen was estimated by the ordinary method, the ammonia being distilled over into a known quantity of $\frac{1}{4}$ normal oxalic acid solution, and titrated in the usual manner. The P_2O_5 was estimated as follows: The 150 c.cm. were made alkaline by ammonia, and then acidified by HNO_3, and after cooling, ammonium molybdate solution was added, and the beaker allowed to stand in a warm place over night. The fluid was then filtered, and the yellow precipitate washed with the filtrate on the filter paper, and finally washed with dilute HNO_3. The filtrate was then tested with ammon. molybdate solution to see if all the phosphates were precipitated. The yellow precipitate was then dissolved in dilute ammonia, and a sufficient quantity of magnesia mixture added, and the mixture again allowed to remain over night. The resulting precipate of ammonium magnesium phosphate was then filtered, washed chlorine free, incinerated and weighed. The total P_2O_5 was calculated from the amount of magnesium pyrophosphate obtained. The urea was calculated from the total nitrogen. *Blood*: The points of special investigation were the leucocytes and the blood plates. The former were counted on three separate occasions: On June 7th, 9,000; on June 12th, 12,600; and on June 20th (at the height of the attack), 20,500. In some cases the films were fixed with heat (120° for 15 minutes), and in others with alcohol and ether for an hour. Some were stained with eosin (2 per cent. watery solution for 2 minutes), and hæmatoxylin (Hansen's solution 3 minutes), others with eosin and methylene blue. (Saturated watery solution for half a minute.) In those fixed with heat special attention was paid to the granular leucocytes.

The figures in Table I show the variations in excretion of each substance from day to day throughout the whole period of investigation. Table II gives the averages and ratios in the different periods of investigation.

TABLE II.

Period.			Urea.	Uric Acid.	Total Nit.	Total P_2O_5.	Uric Acid to Urea.	Uric Acid to P_2O_5.	Nitrogen to P_2O_5.
No. 1	Mixed diet	Drugs	24.7	0.393	11.564	2.53	1 : 63	1 : 6.4	4 : 5
„ 2	Mixed diet and thymus	„	21.1	0.355	9.877	2.82	1 : 69	1 : 7.4	3 : 4
„ 3	Mixed diet	„	19.6	0.329	9.170	2.50	1 : 59	1 : 7.5	3 : 6
„ 4	„	—	17.6	0.459	8.256	2.42	1 : 38	1 : 5.2	3 : 4
„ 5	„	—	*25.7	0.654	12.086	1.83	1 : 39	1 : 2.8	6 : 5
„ 6	Milk diet	—	33.2	0.557	15.432	3.09	1 : 59	1 : 5.5	4 : 9

* Acute attack—earlier stages.

Blood A.—During the interval (June 7th) the number of leucocytes was slightly in excess of normal, and there were a few somewhat peculiar cells resembling myelocytes. The blood-plate masses were more irregular in size and shape than those in normal blood. *B.*—During the attack (June 20th) the films showed very marked leucocytosis. There were present a large number of the peculiar myelocyte-like cells previously referred to, these being rather more than half as numerous as the ordinary finely-granular oxyphil leucocytes. Each of these cells contained a large oval or horseshoe-shaped nucleus, poor in chromatin. The nucleus occupied about half of the total area of the cell. It did not stain uniformly, and it was usually situated to one side, coming right up to the cell outline, and occupying from a third to a half of the total circumference. In many of these cells the nucleus was almost round, with but one slight indentation; in others the indentation was pronounced. The whole cell, stained a pale blue, presented a degenerated appearance, and contrasted markedly with the ordinary leucocyte seen in the same film with its brilliant blue nucleus and bright red eosinophil granules. The special cells under description were also remarkable for their size, measuring about 15 μ in diameter, a few being smaller, about 10 μ. Some of them contained vacuoles in the cytoplasm. The general appearance of these cells suggested exhaustion in so far as the cytoplasm did not contain the typical fine oxyphil granules characteristic of the myelocyte. From the character of the nucleus and cytoplasm they were undoubtedly distinct from lymphocytes. The large lymphocytes were scarce, small lymphocytes were numerous. True eosinophil cells were also scarce. The main bulk of the leucocytes consisted of the ordinary finely-granular oxyphil leucocytes and the peculiar myelocyte cells described. *Blood Plates.*—Some of the blood plates were large (4 μ in diameter), and often formed very irregular torn-looking masses. The red cells were apparently normal.

SUMMARY OF RESULTS.

Phenomena Observed during the Attack.—P_2O_5: There are points of importance, both in relation to the total amount excreted and the ratio to the other substances, and especially uric acid. These points are well brought out in Table II. There is a very marked diminution in the excretion of P_2O_5 during the first three days of the attack, followed by an equally marked increase, the former period furnishing the lowest figure, the latter the highest figures of the whole series. It is interesting to note that the diminution in the P_2O_5 excretion was a progressive one for the three days in question. During the acute attack the ratios of P_2O_5 to the urea and uric acid differed very markedly from the ratios in the previous periods. These figures seem to indicate either a retention of P_2O_5 in the body or some alteration in metabolism leading to its diminished production. *Uric Acid*: The increase of uric acid excretion was very marked, and increasingly so during the first three days of the attack. The association with a diminution in the P_2O_5 excretion has already been referred to. The ratio of uric acid to urea was similar to that of the previous period, and is usually regarded as the normal. *Nitrogen*: The total nitrogen was increased during the early period of the attack, but very much more so in the later period—the patient being then on a less nitrogenous diet—there being no proportionate increase in the excretion of uric acid.

After the Acute Attack.—(Here we must bear in mind that 40 gr. of salicylate of soda were administered on the 20th.) The following points are to be noted: (1) A marked diminution in the excretion of uric acid compared with the first three days of the attack, while the total nitrogen was markedly increased. (2) The ratio of uric acid to urea became 1 to 59 instead of 1 to 39, as during the attack. (3) The decided rise in P_2O_5 excretion, which was almost twice as great as in the previous period. In the circumstances of the drug administration it is impossible to speak definitely from these figures, but they are in any case interesting in view of the ideas commonly expressed as to the effect of salicylate of soda, when given alone, in increasing the amount of uric acid excretion. The figures for June 20th in no way bear this out. It would seem as if, after the initial acute attack is over, the condition of metabolism is such as to induce an increased excretion of P_2O_5 and nitrogen without a corresponding increase in uric acid excretion.

The Blood: The point of greatest interest is the presence of the myelocytes in the blood both in the interval and during the attack, but very specially in the latter. I have not seen this referred to previously. Here I merely wish to draw attention to the histological characters of these cells as described, and to the alteration in the P_2O_5 excretion, and to indicate the possibility of there being a close connection between the two conditions. The condition of the blood plates was hardly such as might be expected if, as Balfour believes, thrombosis plays an all-important part in the development of the acute attack.

Remarks on the Observations of the Periods Preceding the Attack.—Here we are, in the first place, confronted with a difficulty, in so far as the patient had been taking, and continued to take, the two drugs in combination during the first three periods. In the fourth period only was no drug administered. The figures are, nevertheless, worthy of notice. The main points may be summarised: *Period 2*: Administration of nucleins in form of sweetbreads. Here the following points may be noted: (1) No increase in the nitrogen excretion, but a slight diminution; (2) no increase of uric acid excretion, but here also a slight diminution; (3) slight increase in the excretion of P_2O_5, the rise on the 8th being very pronounced. These points are of interest if studied along with other observations made by previous observers on the effect of nucleins in varing conditions. *Period 3*: After nuclein period. Here we note a slight fall in the excretion of nitrogen and of uric acid, the P_2O_5 remaining the same as before the thymus administration. *Period 4*: After cessation of drugs. We note (1) the immediate and pronounced rise in the excretion of uric acid after cessation of the iodide and salicylate of soda; (2) the resulting alteration in the uric acid and urea ratio, this becoming practically, and for the first time, normal; (3) that the total nitrogen was not increased, but rather the reverse, the P_2O_5 being practically unaltered.

If we contrast Periods 4 and 5, we find that whereas the uric acid and urea ratio is the same, the uric acid and P_2O_5 shows a very striking alteration. This would seem to indicate that the cause of the acute attack must be sought in some other direction than in that of uric acid to urea ratio, on which so

much stress is laid by some writers, as the all-important factor in the genesis of gouty symptoms.

CONCLUDING REMARKS.

From the results here indicated as to the excretion of uric acid during the attack, in conjunction with the similar results referred to early in the paper, and from Levy's observations as to the alkalinity of the blood and the relative amount of uric acid present in the blood during the attack as compared to the interval, it would appear we must abandon the theory at present based on Garrod's original observations. In other words, the following points would appear to be established: (1) The alkalinity of the blood is not diminished during the attack: (2) the excretion of uric acid is not diminished during the attack but the reverse; there is therefore no ground for the supposition that there is temporary diminution in the capability of the kidneys to excrete uric acid; (3) the amount of uric acid in the blood is not greater during the attack than in the intervening period: and if these points be accepted we must start *de novo* in search of the cause of the acute paroxysm. In this connection it would, I think, be well if much less attention were centred on the excretion of uric acid alone as the all-important factor in the disease, whether in its acute or chronic form. The results obtained by the line of investigations here followed suggest the advisability of more attention being devoted to the histochemical characters of the blood, the ratios of uric acid to other important products of metabolism, and, if opportunity be afforded, an examination of the bone marrow.

Since the foregoing was written, an interesting paper has been published by Bain [6] on the excretion of uric acid and P_2O_5 in a case of gout. One of the concluding statements of that paper is "that the phosphoric acid varies directly with the uric acid excretion, the patient being on a fixed diet." It is I think doubtful if that conclusion can safely be arrived at from the record and figures given in his paper. The figures in this paper would rather tend to negative that conclusion, but much further investigation is necessary before any conclusion can be formulated. I may add that a more recent investigation of another case of gout has revealed the presence in the blood of the peculiar cells referred to, and tends also to indicate that the ratio between uric acid and phosphoric acid is not the constant one referred to by Bain.

In conclusion, I must express my indebtedness to Dr. Bramwell for kindly allowing me to investigate and record the case, to Dr. Ballantyne for the examination of the stained films, and to Dr. Milroy for valued assistance throughout the investigations.

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THE UNIMPORTANCE OF THE PRESENCE OF A TRACE OF ALBUMEN OR NUCLEO-ALBUMEN IN URINES OF EXTREMELY LOW SPECIFIC GRAVITY.

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Physician to the German Hospital, Dalston.

I WILL at once explain that by "urines of extremely low specific gravity" I here refer to urines of practically the same specific gravity, when freshly passed, as ordinary tap water. The urinometer sinks to zero, but when the urine cools it may rise a degree or so. In the case of a "limpid urine" of this kind I believe that no conclusion of any value for diagnostic purposes can be drawn from the detection of a "very faint trace of albumen." The test for albumen which I have regularly employed in these cases is to boil the upper part of the column of the urine in a test tube and to add a few drops of acetic acid. When there is a faint but distinct cloudiness of the boiled portion (the two portions being compared with each other against a dark background) one may conclude, I think, that a trace of albumen or nucleo-albumen is present, for I do not see that the reaction can be due to anything else. Some would even say that nucleo-albumen by itself cannot give rise to the reaction. Anyhow, the presence of such "a trace" is of very frequent if not of usual occurrence in urines of extremely low specific gravity.

I will take an illustrative case of ordinary occurrence. About midday a man hurries from his work in the City to an insurance office and is examined by the medical officer of the company. The applicant feels somewhat nervous; moreover, he may have had no time for lunch, and on the way to the insurance office takes perhaps a small glass of whisky and soda water with a sandwich. When he presents himself for examination the doctor probably finds the pulse rather frequent from excitement and hurry, the heart's action may be forcible, and there may be even a temporary systolic murmur, though possibly only of "cardio-pulmonary" nature. If in such a case I find the urine nearly colourless and the urinometer sink down to about zero, I almost expect to find a very faint trace of albumen (or nucleo-albumen) by employing the common and, as I believe, the most generally useful test, that is, the test which I have previously mentioned.

Has not this man got chronic interstitial nephritis? The urine is of extremely low specific gravity, and apparently contains the very faintest trace of albumen; the heart's action is somewhat violent. Moreover, if the specific gravity of the urine were higher, the "trace" might become a regular "cloud." In many such cases the breath of the person under examination has a faint but distinct smell, as if he had just had some alcoholic drink; but very little alcohol will produce this smell in some people, especially if taken on an empty stomach. I maintain that no positive conclusion of any diagnostic value can be drawn from the examination of the urine in such cases, not even that alcoholic drinks are frequently indulged in.

It seems, in fact, that in healthy persons, under certain more or less temporary conditions, a urine is passed containing hardly any of the ordinary solid constituents, but a faint trace of albumen or nucleo-albumen. In some very different cases, when the urine is of high specific gravity and loaded with urates, a trace of albumen may be discovered, which disappears when, by alteration of diet, etc., the urine becomes of lower specific gravity, and free from precipitate on cooling. These two classes of urine may be contrasted with each other. In the latter class the kidneys, when overworked (from a variety of causes) allow a trace of albumen to pass together with large quantities of urea and uric acid salts. In the former case, under some temporary influence, a large quantity of urine is passed, containing a faint trace of albumen, or nucleo-albumen, but hardly any urea or urates or other solid constituents.

INJURIES PRODUCED BY A SIX-POUNDER HOTCHKISS SHELL.

BY MAJOR J. R. DODD, F.R.C.S., R.A.M.C.
(Communicated by the DIRECTOR-GENERAL, Army Medical Department.)

R. B., a workman in the Royal Laboratory, Woolwich Arsenal, was admitted to the Arsenal Hospital at 3 P.M. on September 14th, 1899, suffering from the effects of the explosion of a six-pounder quickfiring Hotchkiss shell. He was engaged in removing the shells from the cases in some old ammunition which had been returned into the arsenal unused, when one of the cartridges exploded in the extracting machine from some unexplained cause. He was found to be suffering from the following injuries:

The right eye was burned, and the surface of the globe abraded and blackened, but there was considerable power of vision. The left eye was collapsed and absolutely destroyed, evidently by lodgment of a large foreign body. There was an incised wound about 3 inches long extending from the middle of Poupart's ligament on the left side towards the umbilicus. From this protruded about 2 feet of small intestines and a small amount of omentum, and in the intestines were two penetrating wounds, each about 1 inch long, and each about 1 inch from the mesenteric attachment. The semi-solid contents of the gut were escaping from both wounds.

In the middle of the right thigh, opposite the apex of

Scarpa's triangle, was a jagged wound about 1 inch long, through which the finger could be passed to a depth of about 3 inches, and copious venous bleeding at once commenced, showing wound of the femoral vein. Hæmorrhage could be easily stopped by pressure. At the bottom of this wound a piece (about 1½ inch long and weighing 1⅛ oz.) of shell was found and extracted.



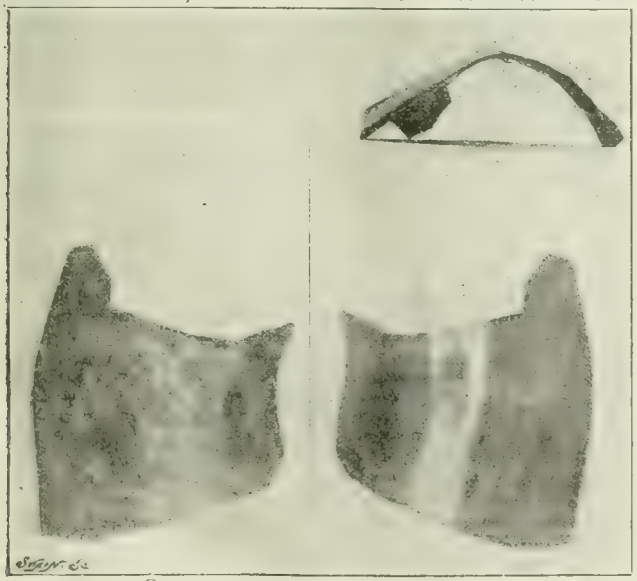
A. B.

Fig. 1.—Fragment of shell removed from wound in thigh; A, concave, and B, convex aspect.

In the right groin was another wound 1 inch long, leading to a large cavity superficial to the fascia lata, but containing no foreign body.

The left hand was blown into a blackened mass of mingled blood, bones, and tendons, and both bones of the forearms were broken about the middle. In addition to these injuries the whole of the face, head, and arms was scorched and blackened, and the moustache was burned off.

The patient was perfectly conscious, the pulse good, and his only complaint was of intense pain in the abdomen. Morphine, one-third of a grain, was given hypodermically, chloroform was administered, and the wounds in the intestines were sewn



C. D.

Fig. 2.—Fragment of brass cartridge removed from abdominal wound; C, concave, and D, convex aspect.

up with catgut Lembert's sutures, about six being required to completely close each. The bulk of the exposed intestines were kept covered with towels wrung out of hot weak perchloride lotion while the intestines were being sutured. The abdominal wound was enlarged upwards and explored, a piece of the brass cartridge case being found deep down in the groin, and evidently being the cause of the injury. The intestines were well washed with water recently boiled and cooled down to 100°, and returned into the belly; the omentum was ligatured and removed, being bruised and dirty, and the wound in the abdominal wall closed by strong aseptic silk sutures, which included peritoneum, muscles, and skin. By this time the pulse was failing, and ether was substituted for chloroform. Ether was injected hypodermically, and large enemata of hot water, salt, extract of beef, and brandy were administered, partly as a restorative and partly as a form of transfusion, patient having lost a good deal of blood. The left forearm was then amputated just above where the bones were broken, but it was considered wiser to postpone removal of the destroyed eye till collapse had passed off. Both eyes were therefore merely cleaned and dressed with iodoform ointment.

The patient was about three hours and a-half under anæsthetics, and on recovery of consciousness expressed himself as fairly comfortable, but very thirsty. The enemata were ordered to be repeated every three hours, and only sips of iced milk allowed by the mouth. The patient gradually sank, and died eight hours and a-half after the accident.

The case illustrates the terrible effects of modern shells even when so small, and filled with black powder, and it shows, also, how vast will be the amount of work thrown upon the medical officers after a serious engagement with modern arms of precision and high explosives.

It also illustrates the almost hopelessness of our efforts to deal successfully with such cases in the field, when all the resources of a well-equipped hospital, to which the patient was removed within half an hour of the accident, were unavailing.

PRIMARY NEPHRECTOMY FOR RUPTURE OF KIDNEY.

By WILLIAM ROGERS, M.D.,
Lamplugh, Cockermouth.

PERHAPS I may be allowed to add another to the short list of primary nephrectomies for rupture of kidney a case that came under my care while I had charge of the Riverton (N. Z.) Hospital in 1894.

History.—The patient, a girl, aged 15, was walking along an unfinished jetty, and while stepping from sleeper to sleeper missed her footing, and fell between two, striking her abdomen on the edge of one of them. Very little discomfort was complained of at the time, and the girl was only brought to the hospital the following morning. As I had left for a long country journey, I did not see her till evening, about twenty hours after the accident. The girl was then in a very serious condition, blanched, with feeble pulse and sighing respiration, and was passing almost pure blood. A fulness could be made out in the right lumbar region, slightly tender on pressure.

Operation.—The lumbar route was the one chosen. The kidney was found surrounded by about a pint of blood clot; this was removed, the renal vessels and ureter ligatured, the kidney cut away, and the wound quickly stitched up, a drain being left. During the operation, brandy and warm water were injected into the rectum. The operation was done under some difficulty with the help of the porter and housemaid (no skilled assistance being available), and by the feeble light of an oil lamp.

After-History.—The patient twice passed urine; the first time slightly tinged with blood, the second time clear, but she never recovered from the shock of the operation, and died the following day.

The kidney was found to have a double rent, diverging from the hilum, the part between being much lacerated.

PROFESSOR MIKULICZ of Breslau, who belongs to the old Polish nobility by birth, has had his nobility recognised in Prussia, and will in future be known by the style and title of von Mikulicz-Radecki.

AN IMPROVED PROSTATIC CATHETER.

By JOHN WARD COUSINS, M.D.Lond., F.R.C.S.,
Senior Surgeon to the Royal Portsmouth Hospital, and Portsmouth and South Hants Eye and Ear Infirmary.

In 1897 I published some practical suggestions on the treatment of stricture of the urethra, and described a special metallic catheter with a tapering and flexible beak and bulbous point. The orifice of the tube is placed at the base of the beak, and the end of the straight stilette exactly fits the bore of the instrument, so that the interior can be readily polished and cleaned.



I now employ a similar metallic catheter in cases of difficult prostatic retention. It is made with a similar bulbous point, but the beak is longer and it has an additional orifice just above its centre. I have found this modification of the tapering catheter of much service. It has been made for me by Messrs. Arnold and Sons, of West Smithfield. In ordinary practice, a vulcanised india-rubber, or a *coudée* catheter is very generally used; but cases of difficult prostatic catheterism occasionally occur which arise from some peculiar irregularity of the passage, or from some injury caused by unsuccessful efforts to empty the bladder. Now, it is just under these conditions that my instrument will be found of great utility. Delay is always wrong, relief must be obtained, and the simplest means are always the best. The patient should be placed under an anæsthetic, and the urethra injected with warm oil. The tapering catheter should now be passed carefully down the urethra in the middle line, and when six or seven inches have been passed the handle must be depressed and the point carried along the upper wall of the passage. In some cases it will not easily enter the bladder from the point, catching in the prostatic sinus or in some irregularity of the enlarged gland. Under these circumstances the instrument should be withdrawn an inch or two, turned upon its long axis, and the point inclined first to one side then to the other, at the same time the handle must be well depressed. Fortunately during this little manœuvre the point will often ride easily into the bladder.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF SODIUM SALICYLATE POISONING.

F. H., a labourer, was suffering from a mild attack of influenza on November 25th, 1899. I prescribed an 8oz. mixture of sodium salicylate, gr.160, with sp. ammon. aromat. ʒijss. The directions were "one tablespoonful to be taken four times a day in water." His sister administered a dose at 10 P.M., but in the early hours of the morning of November 26th the patient, as he now explains, feeling better, thought more medicine would do him good, so he drank all but 1 oz. of the contents, thus swallowing 130 grains at one dose. I was not sent for during the day, as he only complained of palpitation, full feeling in the head, and tinnitus, but during the night of November 27th he became delirious, and I was sent for. I found him suffering from very active delirium, with visual hallucinations and aural illusions (of a pleasant kind), restlessness was very marked, he was inclined to be violent, the face was very flushed, the skin perspiring freely, the pupils dilated and fixed. There was a morbilliform eruption, chiefly over the chest and back, but arms and legs were also covered to a slighter degree: the tongue was clean; there was no vomiting; the reflexes were increased; the temperature was 98.8°, the pulse 125, and the respirations 34; micturition was frequent, urine was very acid; specific gravity 1018 (it contained neither albumen nor sugar). I prescribed mist. alba, and ordered large quantities of liquids to be given, such as milk, beef tea, and cocoa, of which he took very freely, in fact the desire for liquids appeared to be insatiable. After the bowels had been freely opened I gave a mixture of sodium bromide, with senna.

On November 28th no change had occurred, and as no sleep had been obtained I gave tincture of hyoscyamus with the bromide mixture.

On November 29th he was better, the delirium was less active, the pupils were acting, the pulse was 90, and the respirations 24. He had still had no sleep. The rash had disappeared.

On November 30th, at 5 A.M., the patient fell into a deep sleep, which lasted twelve hours, and on awakening he was quite refreshed, and appeared to be in his normal state of health, and has remained so.

I think this case worthy of publication owing to the large dose of the drug taken, the long period of sleeplessness, and the absence of depression.

H. Hilton Heffernan, M.R.C.S.Eng., L.R.C.P.Lond.
Wolston, near Coventry.

SALOL IN SMALL-POX.

Now that the unfortunate epidemic in Hull gives a good opportunity of testing my statements, I am anxious to bring to the notice of the profession the use of salol in treating small-pox, not having seen its use advocated. During a residence of sixteen years and a half in China, I have had a considerable amount of experience in small-pox. My attention was first directed to the possibilities of salol by observing that mosquitos failed to produce their characteristic local reaction of swelling and irritation when they bit a patient, a case of cystitis, who was taking large doses. I then experimented in a few cases of irritable skin disease with marked relief of symptoms, and finally adopted the plan of bringing my small-pox patients under its influence.

My experience is that it absolutely abolished all sense of irritation and the desire to scratch, and prevented the stage of maturation except in a few vesicles which went on the usual course. The last confluent case I treated had only two vesicles, one in either arm, which suppurated; all the rest aborted, the lymph contents of the vesicles drying up and disappearing.

The importance of being able to control the irritation and to prevent suppuration need not be enlarged on to anyone who has seen anything of this disease, and I trust a full trial will be made of the drug and the results made known. I did not find it necessary to exceed ʒj a day given in 15-gr. doses every four hours, nor did I notice any bad results from long-continued use of the drug.

Salol is a most useful drug in many diseases, but in none are its results more striking in my experience than in small-pox.

Bridge of Allan, N.B. Charles Begg.

TREATMENT OF MOLLUSCUM CONTAGIOSUM WITH SODIUM ETHYLATE.

A lady, six months advanced in pregnancy, consulted me on account of the existence of a number of small cutaneous growths of the nature of molluscum contagiosum of the "shirt-button" variety. In her condition it was not advisable to incise them, and therefore I had recourse to the application of sodium ethylate, which I found thoroughly satisfactory. I

made at least twenty applications. Some I covered with a small patch of cyanide gauze, and protected the gauze with plaster. The result in those was not so successful as in those which I left entirely uncovered; for the moisture from the portion of skin covered by the plaster, being unable to escape, interfered with the action of the remedy, and some of these spots required a second application.

Broadstairs. THOS. F. RAVEN, L.R.C.P.

SCARLET FEVER WITHOUT ERUPTION.

WITH reference to the memorandum in the BRITISH MEDICAL JOURNAL of December 16th, 1899, on scarlet fever without rash, the following case attended by me some years ago may be interesting. A girl, aged 18 years, complained of sore throat. There was fever ranging from 102° to 103.5° She lived with her parents in an isolated house, and there was no case of scarlet fever within several miles. There was no rash whatever. As the sore throat did not yield to treatment I obtained a specimen of the urine for examination on the fifth day of her illness, thinking that possibly there might be some diphtheritic infection. The test for albumen was negative, but on microscopic examination the urine was found to teem with kidney and bladder epithelium. A diagnosis of scarlet fever was then made, and verified by the subsequent desquamation of the whole epidermis. In this case desquamation evidently began in the urinary tract, and the case shows the value of a microscopic examination of the urine in suspicious sore throats.

Belfast. H. WARD IRVINE, M.D.

A CASE OF ACQUIRED SYPHILIS IN A CHILD: HUNTERIAN CHANCRE ON EYELID.[1]

THE patient, a boy, in September, 1898, at the age of 6 years, developed a sore on the free border of the right upper eyelid towards its outer side. He was then seen at the Royal Albert Hospital, Devonport, by Mr. J. R. Rolston, who found the sore to be a Hunterian chancre. The boy was treated for syphilis, but did not attend regularly. His mother states that the sore lasted two months, during which time he developed a rash and enlarged glands in the neck. In September, 1899, the boy was brought to me with a large condyloma. His eyelid showed a scar at its free edge, with loss of the corresponding eyelashes. His mouth, owing to carious teeth, was very foul, but contained no definite signs of syphilis. Under hydrarg. c. cret., gr. iij, bis die, the condyloma soon disappeared. The mother was infected with syphilis by her husband in December, 1897, and had well-marked secondary and tertiary sequelæ. In February, 1899, I operated on her for a ruptured right tubal pregnancy, possibly due, as suggested by Dr. Shaw-Mackenzie, to the syphilis having damaged the Fallopian tube. In the summer of 1898, the boy had measles, which left him with blepharitis, causing the eyelids to become adherent during sleep. To relieve this the mother was in the habit of moistening the eyelids with her sputum, hence the infection.

REMARKS.—I decline to accept extragenital sores as Hunterian, unless the diagnosis is confirmed by secondary phenomena. The eyelid is an unusual site for a primary sore.

C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.,
Medical Officer to the Provident Branch of the Plymouth Public Public Dispensary.

DISLOCATION OF THE RADIO-CARPAL JOINT.

SIR,—Dr. Given, in the BRITISH MEDICAL JOURNAL of June 3rd, and Dr. Boys, in the JOURNAL of November 18th, 1899, each record a case of posterior dislocation at the radio-carpal joint, and both refer to its rarity, as stated in an earlier number by Dr. Macalister. Another recent case may be worthy of record.

On September 16th, 1899, a burly youth, aged 16, fell sideways from a horse on soft grass. He broke the fall with his pronated left hand, and when I saw him a few minutes later, presented at first sight the appearance of a fracture of the lower extremity of the radius with displacement backwards. Examination showed, however, that the prominence on the back of the wrist was due to the displaced carpus, the articular surfaces being readily distinguishable. Slight extension readily restored the parts to their proper position. I employed early passive movement, and in ten days' time was able to remove my splints entirely, and to allow him restricted use of the parts. There has been no subsequent trouble.

Edgbaston. GUY J. BRANSON B.A., M.B.Lond.

[1] Read before the Plymouth Medical Society December 2nd, 1899.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.

CASE OF DOUBLE GENERAL EMPYEMA IN A CHILD: OPERATION: RECOVERY.

(Under the care of C. A. MORTON, F.R.C.S.)

[Reported by W. A. MILLIGAN, M.B., F.R.C.S.E.]

DURING the last ten years a considerable number of successful cases of double empyemata have been recorded. The main object in publishing the following case is the fact that these cases open up so many interesting points as to the best and safest way of treating them:

F. W., aged 6, was admitted into the hospital at midnight on July 19th, 1899. She was very much cyanosed, her respirations being at the rate of 86 to the minute. The history obtained from the parents was that fourteen days previously the child had been taken suddenly ill with a violent pain in the right side, and feverishness. A medical man was called in, and said that she was suffering from an attack of inflammation of the lungs and treated her accordingly. Not improving by the fourteenth day, a consultation was held, with the result that she was recommended to be sent into this hospital.

On examination it was found that her temperature was 100° F., her pulse 160 and very feeble, her respirations 86 and very shallow. There was very little movement of the chest on either side. The percussion note was clear, and perhaps slightly hyper-resonant on the right side, in front, as far down as the level of the third rib, and in the axilla as far as the level of the fourth rib, while behind resonance extended only about one finger-breadth below the level of the spine of the scapula. The vesicular murmur was harsh over the resonant area, and was accompanied by rhonchi and coarse crepitations. Over the area of dulness the breath sounds were practically inaudible, except at its upper limit, where they tended to be bronchial in quality. The condition on the left side was much the same as on the right, only not so marked, the area of resonance extending in front as far as the level of the sixth rib, and down to the angle of the scapula behind. All over this area, however, rhonchi and harsh crepitations were very marked. Over the area of dulness the physical signs were as on the right side The cardiac impulse was very diffuse to the left of the sternum, its maximum intensity being just to the left of the ensiform cartilage. There was no displacement of the liver or spleen, and there was no albumen in the urine. From the physical signs the case was diagnosed as probably one of double empyema, and this was confirmed by the insertion of a hypodermic needle.

Immediate operation was considered at this time as quite inadmissible, owing to the risk of administering an anæsthetic to a child so collapsed and whose lungs contained so much intrapulmonary mischief. Aspiration was therefore resorted to, the left side being chosen, so as to try to relieve the embarrassed condition of the heart. Fourteen ounces of thick pus were withdrawn from this side, with the result that the patient's condition very distinctly improved, the respirations falling to 56. On the next morning however the breathing was again very laboured, and as the physical signs showed evidence of a large quantity of pus in the right side this was aspirated and 5 oz. of thick pus withdrawn. This aspiration brought relief. Two days later the cyanosis returning and the respirations again increasing, and there being evidence of an increased quantity of fluid in the left pleura, this was again aspirated and 11 oz. of thick pus withdrawn.

On July 25th (five days after admission), the general condition of the patient having materially improved, and as the temperature still remained high and the respirations rapid, it was decided to open one side of the chest, the right being chosen, as there was a considerably larger collection on this side. The anæsthetic was very badly borne. After a few whiffs of chloroform the patient became very cyanotic and the pulse very feeble, so that the operation had to be very speedily accomplished. An incision was made between the fifth and sixth ribs in the axillary space, the pleura being opened and pus allowed very slowly to escape, the opening being gradually enlarged. The empyema was found to be a general one. A drainage tube was then inserted, the wound dressed, and the patient returned to bed. The result of the operation was a very marked improvement in the character of the breathing and in the temperature.

Two days after the operation, the right side continuing to drain well, there was again laboured breathing, and examination showed an increase in the quantity of the fluid on the left side. This side was accordingly aspirated, and 5 ozs. of pus withdrawn. During the next six days the patient was on the whole better, although she still had a considerable amount of intrapulmonary mischief, which no doubt accounted in part for the rapid breathing (56 to 60). Drainage from the right side went on well, the discharge diminishing, and the lung showing distinct signs of expanding well. On the left side, as there were symptoms of a re-collection of fluid his side was again aspirated, and 16 ozs. of pus evacuated.

The result of this was that the temperature fell, although at night it still had a tendency to go up to 100° and 101° F.

On August 10th—that is six days after the last aspiration—it was considered safe to administer an anæsthetic for the purpose of opening the left side. Chloroform was again administered, and was this time distinctly better borne. An incision was made in the fifth interspace in the axilla, and the operation completed as on the right side. Here, again, the empyema was found to be general.

After the second operation the patient improved very materially. The temperature fell to between 98° and 99° F., the respirations to 40, and the pulse to 110 and 104. The further progress of the case was uneventful, the right tube being gradually shortened, and finally removed twenty days after insertion, the opening closing up well. The left tube was withdrawn eighteen days after insertion; this opening also closed up well. The patient made an extremely satisfactory recovery, both lungs expanding, and the physical condition of the chest becoming absolutely normal.

REMARKS BY DR. MILLIGAN.—During the last ten years many cases of double empyemata have been recorded, of which a list is appended, all presenting many points of interest, but the most interesting point seems to me to be the variation in the modes of treatment adopted. The most usual way has been to operate first on the one side, and then, after a varying number of days, dependent to a large extent on the condition of the patient, on the other. In a considerable number of cases, before operation was resorted to, aspiration was performed, (1) with the idea of trying whether aspiration alone might effect a cure; and (2) for the purpose of relieving pressure to some extent before operation was risked. I can only find two recorded cases where aspiration alone effected a cure; (*a*) Drs. Broadbent and Cheadle recorded a case in the *Medical Press and Circular*, 1878, and (*b*) Dr. Sangster recorded one in the *Lancet*, 1880. Many French surgeons maintain that pneumococci empyemata can be cured by aspiration. The above recorded case, which was proved by bacteriological examination to be pneumococcic, is a case to the contrary. With regard to the important point whether both pleural cavities can be opened at the same time without fatal collapse of lungs, we have in support of this Pollard's classical case of both pleuræ being laid open by a gunshot wound without collapse of the lungs. As to this being actually done at an operation, I can only find two recorded cases, namely, 15 and 22 in the table. In both of these the result was successful. It seems to me that unless the double operation is absolutely called for, by far the safest means is to operate first on one side, and then after an interval on the other. One so often sees that when a pleural cavity is opened the lung on that side only expands, when the patient coughs air being driven into it from the other lung. The main point in waiting is to allow the lung to form adhesions, so that it may in its turn serve to expand the second lung when its pleural cavity is opened. If it is considered absolutely necessary that both sides should be opened at the same operation, then the advice of Dr. Coupland and Mr. Pearce Gould should be followed—namely, to aspirate both sides first. If, of course, one or both empyemata be localised, then the danger of opening both sides together is not nearly so great. Another very interesting point in these cases is the question of the anæsthetic. Administering an anæsthetic in cases of a single empyema is attended with great risk, much more so in cases of double empyemata. Various anæsthetics have been used in these cases, and the A.C.E. mixture and chloroform seem to be the favourite. In double empyemata I cannot speak from experience, but in a single empyema one notices that a few whiffs of chloroform are sufficient to send the patient under enough to deaden the pain of the skin incision, and even to enable one to resect a piece of rib. The rapid recovery from the influence of the anæsthetic is a great advantage. In one of the cases quoted below (No. 8) cocaine was used, and under its influence a piece of rib was resected. I am indebted to Mr. Morton for permission to publish this case.

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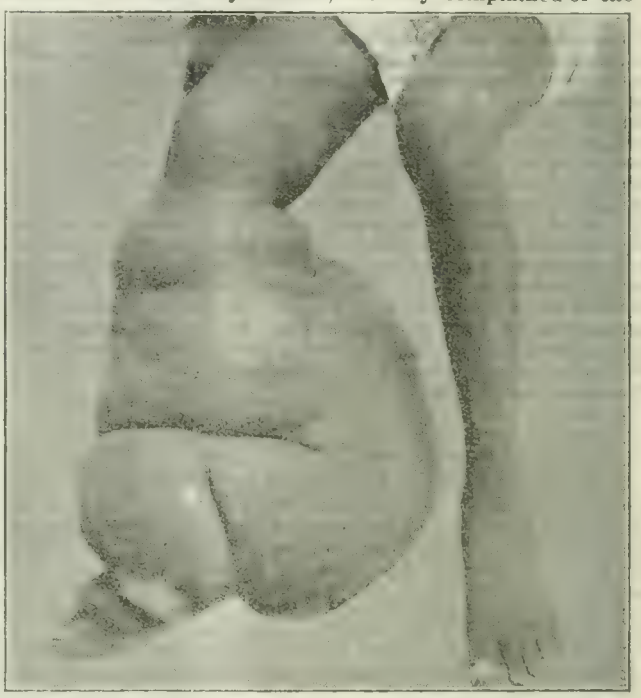
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BARBADOS GENERAL HOSPITAL.

ELEPHANTIASIS OF LEG: AMPUTATION: RECOVERY.

(Under the care of F. B. ARCHER, M.B., C.M.)

S. W., a black agricultural labourer, aged 40 years, was admitted in September, 1899. He says that he had noticed slight swelling over the instep five years earlier. It gradually increased till it attained its present size three years ago. On admission he was very anæmic, but only complained of the



mechanical inconvenience of the leg. He said he had always been a healthy man, and had never had fever; none of his relations ever suffered from such a trouble.

The leg was amputated on October 26th, 1899. The circumference before amputation was forty-five inches. The weight just after removal sixty-eight pounds. The leg was suspended by a block and rope for some time before operation and elastic bandages were applied. He stood the operation well and made an uninterrupted recovery.

The leg was sent to the Secretary of State for the Colonies to be forwarded to the School of Tropical Medicine, Greenwich.

REPORTS OF SOCIETIES.

EDINBURGH OBSTETRICAL SOCIETY.

R. MILNE MURRAY, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, December 13th, 1899.

VAGINAL CŒLIOTOMY.

PROFESSOR KYNOCH (Dundee) read a paper on this subject. The results of the abdominal operation for cancer of the cervix did not yet warrant our substituting it for the vaginal operation. In 1857 Atlee opened and evacuated a collection of purulent fluid, with subsequent separation of adhesions through the posterior fornix. In 1870 Thomas described the technique of vaginal ovariotomy. About the same time Goodall, Davis, Gilmore, and Wing, recorded six vaginal ovariotomies. Goodall urged the advantage of good drainage through the vaginal incision. The operation then fell into oblivion to such an extent that Hegar and Kaltenbach, in their book on *Operative Gynæcology* in 1881, stated that the vaginal operation need only be considered of use in those rare cases where a small ovarian tumour was found associated with

vaginal prolapse. The writings of Müller in 1882, and Fritsch in 1886, indicated advancement in technique favouring the adoption of the vaginal route. In 1887 Gusserow treated pelvic hæmatocele by vaginal incision, and Doyen about the same time recorded 100 cases of pelvic disease so treated. In 1888 Sänger suggested vaginal fixation by making an incision through the anterior fornix, and in 1892 Mackenrodt carried out Sänger's suggestion. In 1893 Duhrssen proposed the name "vaginal laparotomy" for an operation for retroflexion he had performed in 1890, and from 1893 onwards. He reported 182 cases. Martin about the same time wrote in favour of the operation. The English translation of Duhrssen's book made his operation and methods known in this country. Professor Kynoch then described the technique of the operation as consisting of three steps: (1) Opening into the abdomen, (2) removal or examination of diseased organs, (3) closure of the vaginal wound completely or partially to admit of drainage. The opening into the abdomen might be through the anterior or posterior fornix. The former might be transverse or longitudinal, the latter being more favourable for the safety of the ureter. The indications were:

1. Retroflexion of the uterus. Few would admit the necessity for the frequency with which Berlin gynæcologists resorted to this plan of treatment in uterine displacement.
2. Inversion of the uterus. Dr. Struthers last year reported a case which Dr. Berry Hart had successfully treated by posterior colpotomy.
3. Chronic ovaritis with adhesions (perimetric). Professor Kynoch here gave notes of three illustrative cases in which the results were satisfactory.
4. Prolapse of the ovary. If fixed and palliative treatment failed, the removal of the ovary might be justified. Two illustrative cases were cited.

As to extrauterine pregnancy, the route to be adopted depended on the nature of the case. With diffuse hæmorrhage from intraperitoneal rupture without the formation of a hæmatocele abdominal section was the only treatment. If diagnosed before rupture, up to the eighth or tenth week, the intact tube might be removed by vaginal section. In cases first seen after the formation of a hæmatocele, there was diversity of opinion as to the proper line of treatment. In retrouterine hæmatocele, when the pouch of Douglas was distended with blood and caused symptoms, posterior vaginal section was probably the best line of treatment, as approved by Fritsch, Zweifel, and Kelly. The removal of ovarian cysts through the posterior fornix advocated by Atlee in 1857 had now been reintroduced for the removal of ovarian tumours though not with universal favour. Professor Kynoch reported 3 cases. In diseases of the appendages, removal through the anterior or posterior fornix originated with Pean in 1886. In 1891, Lwoff reported 12 cases of tubal disease treated by posterior colpotomy, and Teploff about the same time reported 27 cases. In all the appendages were deep in the pouch of Douglas and adherent. The cases most suitable for vaginal extirpation were (1) those where the tubal swelling was mobile; and (2) adherent but lying low in the pouch of Douglas, and free from adhesions to the lateral pelvic wall. With regard to myoma of the uterus, Professor Kynoch had not yet seen a case which warranted enucleation through the anterior or posterior fornix. The remaining conditions which might be treated by the vaginal route were:

1. In conditions of phthisis, cardiac affections, and other conditions likely to be aggravated by subsequent parturition.
2. For diagnostic purposes, as, for example, cancer of the cervix, to ascertain the extent of glandular infection as recommended by Martin.
3. Cases of perforation of the uterus formerly treated by extirpation by opening either through the anterior or posterior fornix, the wound might be exposed and sutured.
4. Tuberculous ascites.

The advantages claimed for the vaginal over the abdominal route were:

1. Shorter convalescence—14 days as compared with 21 or 28 days.
2. No abdominal cicatrix, therefore no risk of hernia or subsequent formation of intestinal or omental adhesions.
3. Less shock on account of the peritoneum being less exposed.
4. Drainage, if necessary, was best carried out through the posterior fornix.

Its drawbacks were:

1. On account of limited space dense adhesions were more difficult to manage, and consequently there was greater danger of wounding the bladder and rectum.
2. Greater difficulty in rendering the vagina aseptic, an objection probably exaggerated.

Cases suitable for the vaginal route (other means of treatment having failed) Professor Kynoch believed to be:

1. Mobile retroflexion, causing symptoms at or about the menopause.
2. Chronic ovaritis, with adhesions.
3. Prolapse of the ovary, with fixation.
4. Ovarian cysts, small, whether dermoid, simple, or papillomatous.
5. Pelvic hæmatocele.
6. Unilateral mobile tubal swellings.

Cases unsuitable for this treatment were:

1. Large tumours, and
2. Old standing tubal disease, with dense adhesions, where the complete removal of the appendages was necessary.

The paper was discussed by Professor A. R. SIMPSON, Drs. N. T. BREWIS, HAULTAIN, FORDYCE, CHURCH, and the PRESIDENT; and Professor KYNOCH replied.

LAPAROTOMY FOR PYOSALPINX.

The PRESIDENT read a paper on a case of pyosalpinx removed by laparotomy in the early puerperium.

A woman aged 31, when first seen in the autumn of 1895, had been married two years and had never been pregnant, and complained of profuse menstruation and great weakness. Under treatment she became quite well in three months. Early in 1897 she had a daughter. In August, 1898, she again complained of her earlier symptoms, and was similarly treated. Three months later she wrote that she was again pregnant. On July 7th, 1899, she was wakened out of sleep by an excruciating pain in the left side which caused faintness, and was accompanied by rise of temperature. Poultices and laudanum relieved. On July 9th the temperature was still 101.5°, and that evening labour began, but the pains stopped soon. On July 10th and 11th the temperature varied from 100° to 101°, and there was a constant dull ache in the left side with exacerbation. On July 12th she was lying on her back, knees drawn up, complexion usually florid now of a yellow tinge, expression anxious, temperature 101.5°, pulse 98. Pain in the left ovarian region on gentle pressure. Tubal mischief was diagnosed. Labour set in at midnight of July 13th, and a male child born some three hours later. She improved next day. On the morning of July 15th she was very ill, the temperature 103.5°, and the pulse 130; marked tympanites, tenderness on left side of abdomen, thirst, some sickness and retching, and some uterine clots had been passed. The left fornix felt fuller, and pressure caused great pain. The abdomen was opened in the afternoon; fine recent adhesions were found in the pouch of Douglas; the left tube intensely congested, of dark crimson colour, much dilated and empty; the left ovary twice its normal size, and clotted over with recent adhesions; the intestines were much distended with gas. The right tube and ovary were normal, save for a few adhesions. The peritoneal cavity was washed out with a 1 per cent. solution of lysol, leaving a pint in the cavity when the wound was closed. The uterus was washed out with a similar solution, and a large enema given. At 5.30 P.M. the temperature was 101°, and the pulse 100. A good night followed; in the early morning a few spoons of chicken jelly were taken with relish, and at 9 A.M. the temperature was 98.8°, and all pain gone. From this time she made an uninterrupted recovery. A thick pair of catch forceps could be passed along to within a quarter of an inch of the uterine end of the amputated tube, and on stripping it a minute drop of yellow purulent material escaped at the uterine end.

The President said that if he did not wholly misinterpret the attack of acute pain on the 7th on that day an escape of purulent matter took place from the diseased tube. Yet it was remarkable that no profound manifestation appeared till five days later, and then with great suddenness twenty-four hours after labour. It seemed only reasonable to look for an explanation of this phenomenon in some subtle change in the vital processes, or tissue metabolism which followed the passage from the state of pregnancy to the state of the puerperium. The sudden withdrawal of the child, and the change in the physiology and tissue chemistry of the mother which this meant must involve complicated processes of rearrangement which might themselves become disturbed, or in their progress render her less capable of resistance to morbid influences.

Professor SIMPSON, Drs. HAULTAIN and LACKIE spoke; and Dr. MILNE MURRAY replied.

DEATH FROM CARDIAC DISEASE IN LABOUR.

Dr. G. S. PATERSON read a short paper on rapid death following labour, due to cardiac disease.

At midnight on November 5th, 1899, a 2-para, aged 32, who expected to be confined some ten days later, was seen in a state of great breathlessness, with frequent spasms of coughing and expectoration of blood and mucus, with pain and oppression in the region of the heart. There was dulness at both lung bases posteriorly; the breath sounds were marked by coarse crepitations all over the chest. The cardiac action was rapid and tumultuous, so that murmurs could not be determined; there was cyanosis; the temperature was 101°, the pulse 144, and the respirations 50 to 60. There was no œdema of the extremities. Labour had not begun. At 8 o'clock next morning Dr. Paterson was sent for to find child and afterbirth on the floor, and the patient sitting on the edge of the bed gasping. The uterus was firmly contracted. Whisky and strophanthus were given. Dr. Haultain saw the patient in the forenoon, and concluded that the diagnosis was pulmonary thrombosis and the prognosis very hopeless. Venesection was done in the afternoon, 12 ozs. being withdrawn, and $\frac{1}{30}$ gr. of strychnine given subcutaneously. She died at 8 P.M., just twenty-four hours from the onset of symptoms. She had had chorea when a child, had had choreic movements during this pregnancy, had had a child four years before, but never rheumatic fever. Between the second and third months, and at the seventh she had attacks of hæmoptysis and breathlessness. At the necropsy the heart was found to be

affected with old-standing endocarditis; there was both aortic and mitral stenosis; both ventricles were hypertrophied and both auricles dilated. There was congestion and œdema of the lungs, and adherent pleura, microscopically brown induration, chronic congestion, and recent fibrinous pneumonia. The left kidney was cystic, and contained tuberculous pus; the right kidney had chronic nephritis and an adherent capsule, and recent congestion; the liver was fatty and friable. The sudden onset of symptoms seemed to have been due to a pneumonia superadded to already highly-congested lungs. The temperature was only 101°. There had been no opportunity to examine the urine.

Professor KYNOCH, Dr. HAULTAIN, and the PRESIDENT made remarks; and Dr. PATERSON replied.

SPECIMENS.

The PRESIDENT showed a double uterus with a cystic tumour of the ovary, where the patient had died of general tuberculosis: she was a nullipara.—Professor A. R. SIMPSON showed (1) a large fibroid removed by supravaginal hysterectomy; (2) an anencephalic fœtus born at seventh month; the kidneys were normal, showed no evidence of activity, and the bladder had apparently never been filled.—Dr. LAMOND LACKIE showed a tortoise-shell hair pain removed from the female bladder, which had been used to relieve some urethral irritation.—Dr. J. HAIG FERGUSON showed an unusually large cyst of Duverney's gland.

LIVERPOOL MEDICAL INSTITUTION.

W. MACFIE CAMPBELL, M.D., President, in the Chair.

Thursday, December 21st, 1899.

FAMILIES OF SOLDIERS AND SAILORS.

THE following resolution, proposed by Dr. T. M. DAWSON and seconded by Dr. J. J. O'HAGAN, was carried:

Owing to the fact that the present war in South Africa has necessitated the calling out of our reservists and volunteers for active service, many of whom have left behind them wives and families in straitened circumstances, we, the members of the Medical Institution, are willing to give our professional services gratuitously to the said wives and families, provided that the cases are authenticated by some recognised authority, and that our services do not interfere with the relations of such families and their present medical attendant.

DIGESTIVES.

Dr. WM. CARTER read a note on digestives, demonstrating the inutility of many vaunted preparations, and counselling adhesion to the *B.P.* preparations of pepsin.

Drs. LAIRD PEARSON, J. C. M. GIVEN, and J. J. O'HAGAN spoke.

UTERINE FIBROID.

Dr. T. B. GRIMSDALE related a case of fibroid tumour of the uterus.

The patient was a frail old woman of 67 years. The tumour had existed for many years, and the menopause had occurred at 50 years. For twelve months the abdomen had increased in size, and she had difficulty in getting about. The skin of the abdomen was tense and shining, and the girth measurement was 40 inches. The abdomen was opened, liberating 2 gallons of ascitic fluid, and a hard, solid tumour was removed from the uterus, its attachment severed, and the stump sutured by a continuous suture. The patient made a good recovery.

Attention was drawn to the advanced age of the patient, the occurrence of a large amount of ascitic fluid, and the roughened surface of the tumour, which had evidently irritated the peritoneum by friction.

Dr. J. J. O'HAGAN and J. E. GEMMELL spoke.

CHRONIC PARENCHYMATOUS NEPHRITIS.

Dr. CHARLES MACALISTER read notes of two cases of chronic parenchymatous nephritis, illustrating the good results following prolonged treatment.

Dr. WILLIAM CARTER bore testimony to the utility of mercury and morphine in some cases of Bright's disease.

Drs. G. G. GULLAN and F. H. BARENDT also spoke.

ECTOPIC PREGNANCY.

Dr. JOHN E. GEMMELL read a paper on this subject, of which the following is a synopsis:

Classification of the variations which occur, taking as a basis that all cases are primarily tubal. The changes in the walls of the tube itself, typical of the condition, and the formation of a uterine decidua. The methods of termination of tubal gestation other than rupture of the tube, with some illustrative cases. Tubal abortion, its analogy to uterine abortion, partial and complete, the site of implantation of the ovum, and changes in the ostium abdominale, predisposing to abortion rather than rupture. The formation of a tubal mole. Rupture of the tube, extraperitoneal or intraperitoneal, the relationship of the mesosalpinx to the tube being the determining factor. The symptoms and diagnosis, before and after rupture of the tube, and the treatment, expectant and operative commented upon.

Dr. R. J. M. BUCHANAN observed that in the microscopic examination of doubtful specimens he had found nucleated red blood cells when he had failed to demonstrate chorionic villi, and suggested that their presence was of considerable importance, and that they should always be looked for.

The PRESIDENT, and Drs. WILLETT, J. J. O'HAGAN, and T. B. GRIMSDALE spoke.

SOCIETY OF ANÆSTHETISTS.—At a recent meeting Dr. J. FREDK. W. SILK (President) read a communication from Mr. WALTER EDMUNDS describing a paper inhaler for use with Junker's apparatus for the administration of chloroform, the object being to use a new paper to every case.—Mr. COPESTAKE (Derby) read a paper on a new inhaler for ether, chloroform, or mixture, the facepiece of which was made of celluloid; he utilised a portion of the angular tube of Clover's inhaler, to which he attached an india-rubber tube by a short brass one. In giving ether he used a flat thin bottle provided with tubes similar to Junker's, the longer one reaching to the bottom of the bottle and perforated with a number of small holes. He used Krohne's india-rubber bellows. The advantages of the inhaler were in regard to ether that in the early part of the administration there was little or no bronchial irritation, there was less struggling or spasm, no cyanosis, much less sickness after recovery, and considerable saving of ether. When chloroform was used, the action of the inhaler was the same as that of Junker's; when a mixture of equal parts was used, the inhaler combined the action of the two drugs. He had noticed œdema of the lung occur much less frequently since he had used the inhaler described.—Dr. FLUX described a contrivance for use in the administration of chloroform. A small metal cylinder was attached at the upper end to the inlet of a ball bellows, the delivery tube of which led directly to a facepiece. The cylinder contained cotton wick, and chloroform was poured on it through the lower open end. The instrument was light, portable, and easily managed, and possessed the advantage that both the strength and the amount of the mixture were absolutely under control. Mr. RICKARD LLOYD asked how much longer Dr. Copestake took in putting a patient under ether by his apparatus than by Clover's apparatus, and, with regard to Dr. Flux's contrivance, the amount of chloroform taken into the bellows each time. Mr. CARTER BRAINE asked if any stout and plethoric men had been anæsthetised by Dr. Copestake's method, and whether the perforations of the tube got blocked up. Mrs. DICKINSON BERRY asked if Dr. Copestake's apparatus could be adapted for the preliminary giving of gas. Mr. EDGAR WILLETT said that he did not see how the absolute precision could be gained which Dr. Flux claimed for his apparatus. Dr. DUDLEY BUXTON thought Dr. Copestake was employing a principle which was wrong with regard to ether. He did not wish to be ungracious, or to attempt to throw cold water on those who brought new apparatus before them, but he was sure Dr. Copestake and others wanted to hear the candid opinion of the members of the Society. The PRESIDENT said that Dr. Copestake's instrument, if used with chloroform, seemed to be running against one of the primary axioms of chloroform inhalation, in having anything in the nature of a bag attached to a chloroform inhaler. He had found Dr. Flux's apparatus of very great advantage in keeping patients under anæsthesia, but it was rather a difficult matter to work the bellows and to get gross alcoholic patients under. Mr. COPESTAKE said that with his apparatus the time taken was two or three minutes longer than with a Clover, and he could not say that he had had much experience with fat or alcoholic patients. To use his apparatus in conjunction with gas a little tube was merely required to be soldered on to any apparatus which had a facepiece. Dr. FLUX said that the air passing through his apparatus would only convey chloroform to the extent of the temperature of the air as it emerged from the chloroform, and that would not be above the temperature of the medium through which the air passed.—Mr. MCCARDIE read notes of a case of respiratory and cardiac failure during administration of chloroform to a patient probably of so-called lymphatic diathesis, and Mr. RICKARD LLOYD narrated the facts of a case which was under his care. The PRESIDENT, Dr. DUDLEY BUXTON, Mr. CARTER BRAINE, and Mr. GRANT MORRIS took part in the discussion which ensued, and Mr. MCCARDIE and Mr. RICKARD LLOYD replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—On Thursday, December 14th, 1899, the PRESIDENT Dr. Macnaughton-Jones, in the

chair, Dr. E. DOYEN (Paris) gave a demonstration of gynæcological operations by means of the cinematograph. He described how he had set himself to the task of simplifying the technique and of shortening the duration of major operations. He sought to apply to abdominal surgery the established principles of the operative surgery of the extremities as practised by the pre-antiseptic surgeons. He passed on to consider the value of the cinematograph as a teaching instrument, pointing out that the teaching of operative surgery for such operations as could not be demonstrated on the dead body had always been much inferior to the teaching of clinical surgery and of surgical pathology. Too few students could follow with profit the details of such operations in the operating theatre. The cinematograph would fill this blank, and complete the surgical training given to students in the future. Dr. Doyen then proceeded with his demonstration as follows: (1) Fourteen slides showing the steps in an ovariotomy, and the details in the use of Doyen's lever clamp forceps; (2) a complete cinematographic representation of an ovariotomy; (3) twenty-four slides illustrative of Dr. Doyen's method of abdominal hysterectomy; (4) cinematographic reproductions of three abdominal hysterectomies; (5) thirty-eight fixed slides illustrating the technique in vaginal hysterectomy; (6) four vaginal hysterectomies as recorded by the cinematograph, showing the possibility of demonstrating to hundreds what half a dozen could not see so well in an operating theatre. After the gynæcological demonstration, Dr. Doyen showed by special request a cinematograph of a nephrectomy and of a thyroidectomy.—Dr. C. H. F. ROUTH moved a hearty vote of thanks to Dr. Doyen for his demonstration, and for his kindness in coming over from Paris expressly to give it. This was seconded by Mr. W. D. SPANTON (Hanley), supported by Dr. CLEMENT GODSON, and carried with enthusiasm.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—At a meeting of the Section of Medicine on December 15th, 1899, Dr. J. W. MOORE (President) in the chair, Dr. J. LUMSDEN exhibited a case of pseudo-hypertrophic muscular dystrophy. — Dr. O'CARROLL read a paper on the pulmonary second sound, dealing chiefly with the significance of accentuation of the second sound in the pulmonary area.—Dr. LANGFORD SYMES read a paper on the examination of sick children. The organs were taken *seriatim*, and in each case its peculiar diseases set forth in the following order: (1) History; (2) "facies"; (3) head; (4) frame and bones; (5) reflexes; (6) eyes, ears, and nose; (7) glands; (8) abdomen; (9) heart; (10) lungs; (11) spine and neck; (12) mouth and throat; (13) nervous system. In children every organ must be examined, for the discovery of disease could be thus alone secured. Information could not be obtained from the child, its friends were also in ignorance, and so it was entirely dependent on the physician's powers of physical examination. Mistakes were made almost exclusively from want of examination. No branch of practice of medicine entailed such a pitch of refinement in physical examination, and it formed the best, although severest, school for the clinical investigation of disease. Dr. KNOTT referred to the rheumatic nature of growing pains in young children. Dr. DOYLE said that very often in examining sick children it was necessary to resort to an anæsthetic. The possibility of feigned disease should always be borne in mind. Dr. O'CARROLL said that the complaints of children might in many cases be due to the suggestive influence of the parent. Children were also quite as liable to hysteria as adults. He did not consider reflexes of much value in examining children under 2 or 3 years of age, as the lateral tract was then ill-developed. Dr. SYMES, in reply, alluded to the lack of teaching in diseases of children in Ireland. Now that distinct Sections in our Associations, separate hospitals, professors, and lecturers existed in England, the Continent, and America, the subject should no longer be neglected. The frequency of disease, its high mortality, the strangely different diseases peculiar to children, and, above all, the advantage of the study as a training ground for senior students, combined to recommend it as a most profitable course for the fifth year.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this Society was held at Owens College, Manchester, on December 17th, 1899, Dr. DONALD (President) in the chair.—Dr. J. E. GEMMELL showed a fœtus and placental sac, from a case of abdominal pregnancy. The mass was removed by abdominal section, the patient making a good recovery. Microscopic sections of the Fallopian tube were shown. The rupture had occurred close to the uterine end of the tube, and the placenta had developed mainly in the expanded and everted Fallopian tube.—Dr. J. B. HELLIER showed: (1) A uterus with multiple fibroids and double pyosalpinx, removed by pan-hysterectomy carried out by the "combined" method, the patient making a good recovery; (2) a case of vesicular disease of the great omentum.—Dr. D. LLOYD ROBERTS showed a cyst of the kidney. The tumour was the size of an adult head. It was successfully removed by abdominal section.—The PRESIDENT then gave a presidential address on minor gynæcology. He dwelt especially on the following points: (1) The use of pessaries; (2) the use of the uterine sound for diagnosis and treatment; (3) caustics and other irritants in the treatment of cervical catarrh; and (4) the methods adopted in out-patient practice for the management of minor gynæcological ailments. He thought that there was considerable divergence in practice from that which prevailed widely in the early Eighties.

CLINICAL SOCIETY OF MANCHESTER.—At a meeting of this Society, held on December 19th, 1899, Dr. JUDSON S. BURY (President) in the chair, Mr. THOMAS JONES made remarks on flail-like joints (arthrodesis), and showed cases.—Mr. E. STANMORE BISHOP reported a case of a married woman, aged 26, with one child 5 years old, from whom in 1897 he removed an ordinary ovarian cyst, springing from the right side. Recovery was complete, and the patient remained in perfect health until July, 1899, when she was attacked by severe pain in the left iliac region. The menstrual flow appeared at that date, normal in time but excessive in quantity. From July she believed herself pregnant. The periods recurred twice, with great increase of the pain on each occasion. Vaginobimanual examination revealed a small, painful, elastic mass by the side of a normal uterus, and not continuous with it. Abdominal section was performed, and the mass removed. The patient made a good recovery. On and after removal the swelling closely resembled an unruptured ectopic pregnancy, but proved to be a small ovarian cyst, surrounded by the dilated tubal ampulla, which had become firmly adherent to it. Mr. Bishop showed the case as illustrating the difficulties of diagnosis of abdominal tumours, even after laparotomy.—Dr. A. T. WILKINSON read a paper entitled acute pleural effusion, with special reference to diagnosis and treatment.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting of this Society on December 15th, 1899, Dr. H. N. HARRINGTON (President) being in the chair, Dr. STANSFIELD read notes and showed specimens of (1) double aneurysm of aortic arch; (2) glioma; (3) pleura and heart with extensive malignant disease.—Dr. HERBERT DIXON showed a specimen of a fœtus.—A paper on music and medicine considered from a physiological, pathological, and therapeutical standpoint, was read by Dr. HERBERT DIXON, who referred to Handel and Berlioz as the chief musicians who had any relationship with medicine. In considering the physiology of music, he mentioned experiments of his own as having similar results to those of Dogiel on man and animals in the healthy state—rise and fall of blood pressure, increased cardiac action, variations in respiration, etc. He alluded to the Grecian division of music into four forms—Phrygian, Lydian, Æolian, and Doric—according to the effect of different styles on the human body through the emotions. He agreed with Dr. Davison that the human organism tended to vibrate synchronously with music, but showed how different individuals would react to different tones and variations—for example, the lulling effects of quiet rhythmical tones of slight variation, as in the case of a mother singing to her wakeful infant; the exciting effects causing quickened pulse and respiration, as exemplified in the "Patriots Marching from Marseilles to Paris," the "Soldiers of the Queen," etc.; the irritating effects of such music as the repetition of "Ta-ra-ra-boom-de-ay"—the irritation being caused, according to the late Professor Rutherford, by the summation of stimuli. Other physiological effects noticed were: perspiration, desire to micturate, and lachrymation, while laughter was very rare. Under the pathology of music

was mentioned the overpractice of the present-day piano enthusiast, and the state of neurasthenia resulting therefrom; chronic laryngitis of clergymen and singers; emphysema of lungs in players of wind instruments; the hysterical effects of music in the tarantism which broke out in Italy, etc. He next alluded to the different tones and variations elicited from the body in health and disease by percussion and auscultation, stating that in a case of resolving croupous pneumonia there might be a difference from a semitone to four full tones in percussion. Under the heading of therapeutics of music he briefly sketched the results obtained from the time of Pythagoras, mentioning various affections in which music suitably applied had produced beneficial results. In a case in his own experience, a child aged 4 had been cured of night terrors by the singing of nursery hymns. He drew attention to Dr. Hunter's successes in Helensburgh, in which he had noted diminution or cessation of pain and reduction of temperature, and to the Rev. Canon Harford's results in the London Hospital. In conclusion, he divided the patients for treatment into two classes: (1) circulation slow, brain ill-nourished, low state of health as in melancholia, etc., in which cases the music administered should be bright and cheerful; (2) blood pressure high, pulse rapid, delirium, as in fevers, etc., where music of a soft and soothing character should be employed. Drs. STANSFIELD, PINKERTON, and the PRESIDENT joined in a discussion; and Dr. DIXON replied.

REVIEWS.

THE PRINCIPLES OF TREATMENT AND THEIR APPLICATIONS IN PRACTICAL MEDICINE. By J. MITCHELL BRUCE, M.A., M.D., F.R.C.P. Edinburgh and London: Young J. Pentland. 1899. (Roy. 8vo, pp. 630. 16s.)

THIS work is not only remarkable in itself, but it is one sorely needed. Every teacher or examiner who has to do with the advanced student, if he be himself a thoughtful man, must feel that current therapeutics, as represented in the mind of the young practitioner, is a sad muddle. In later life a capable man builds up some sort of illogical and provisional rule of thumb for his own use, but amid the distractions of a practical life it is given to few to think out principles. Here and there a physician of scientific habit of mind, and possessed also of a sense of the value of practical experience and tradition, attains to some clearer apprehension of principles, and in eclectic fashion may build up for himself a system of therapeutics of some extent and coherence; but the vast majority is divided between the mere hand-to-mouth dispensers and the sceptics who turn a cold shoulder to all medicinal means which are not justified in laboratory work. As the sceptic not only ignores clinical axioms, which may be and often are approximately if obscurely true, but also reasons directly from the effects of drugs upon healthy animals to their effects upon variably unhealthy men, he is often a worse help at the bedside than the rule-of-thumb man, who offends him by glib gossip about "alteratives," "tonics," "stomachics," and so forth. And no doubt the use of these terms is so prevalent and yet so loose and inconsiderate that they may well seem scandalous. Examiners, even for the highest qualifications, complain that the papers sent in to them are full of chat of this kind, stuff which it is almost impossible to mark fairly; for such is the phraseology of the handbooks and even of the wards that they must accept it, and, indeed, in this dross there lies some not inconsiderable, though incommensurable, quantity of precious truth.

Yet to endeavour to prune all this traditional overgrowth and to reduce its more useful contents to order is a very difficult task, lest the wheat be torn up and cast into the fire with the tares; the subject is a tangle to which we have no potent clue. As we have said, a direct and merciless application of our present pharmacological results would have too drastic an effect; for instance, if pharmacology can explain the action of quinine in ague, it cannot explain that of iodide of potassium in syphilis. In therapeutics there is, and for a long time there must be, a large proportion of blind traditions, of authoritative and absolute dogma. Still, by the training rather than by the immediate results of pharmacology and by the thoughtful clinical observations of physicians thus trained, and trained also in the art of healing, our therapeutical axioms may get that revision, that orderly dressing, that sifting of which they are sadly in need, although axioms they will in most cases still remain, being far away from the sphere of laws of Nature. Not only so, but the student should be led by a clear-sighted teacher and one herein specially trained to perceive the relative values of his terms and phrases, to recognise the widely various degree of validity which they respectively possess. He will not discard an axiom merely because it is a clinical dogma—such, for instance, as that blue pill is good for biliousness—but he will recognise that such it is and no more, and that it is to be used circumspectly and provisionally. Moreover, he will learn to use words of vague meaning as being vague, and will try to weigh them, and in his use of them to allow for larger and smaller magins of error. All this is scarcely possible to a practitioner who has never learned in a preliminary scientific training to know a law of Nature when he sees it, or thus to realise the difference between such laws and provisional practical maxims; if thus trained this experience will teach him nevertheless how to value practical maxims which come a good deal short of being laws of Nature.

These remarks are scarcely digressive, for such, as it appears to us, are the aims of the work before us, and to such a work there is perhaps no physician of our days who could bring more effective personal qualities than Dr. MITCHELL BRUCE. Throughout its pages we observe the cautious incisive philosophical appreciation of the principles and materials of treatment which can only come of the blend of scientific training with large and open-minded clinical practice. Scotchmen—for in the abstract we suppose we must surrender Dr. Bruce to Scotland—are more apt, as a rule, in the handling of ideas than Englishmen, although their philosophy does seem to us at times to be a trifle formal and old-fashioned; to this advantage the author has added a sound training in the scientific bases of medicine and in clinical experience, while he is widely conversant with disease and with his brother practitioners. Of these great natural and acquired advantages we have here the result, a work, as a perusal seems to show, of long and careful contemplation and orderly clinical work. This is no mere impressionist book; every sentence, be it right or wrong, is deserving of respect as the deliberate and well-founded opinion of a competent author.

His plan is, in the first place, to occupy much of his space in thinking out the "principles of treatment"; these chapters on the indications of etiology, of pathology, of clinical characters, of the personal factor in disease, of the relation of disease to remedial means, of these means themselves, and finally on the art of medicine, fill nearly a moiety of the volume. The remaining portion consists of a thorough and unflinching attempt to apply the principles arrived at in the first division in the management of particular diseases. For instance, if we turn to pericarditis we shall see that Dr. Bruce's method is to apply in the same order first the etiological principles, then the pathological, then the clinical, and so on until the main lines of treatment are sketched out; then the disease being divided under three heads—rheumatic pericarditis, and the pericarditis of acute and chronic Bright's disease—the precise remedies for the first are decided upon, not the pharmaceutical only, but also those belonging to general management, nursing, diet, stimulants, and local means; those for special contingencies again, such as pain, sleeplessness, or effusion, are set forth, the phases of the progress of the malady, including convalescence, are discussed, and appropriate modifications of treatment recommended; and so on for the other two kinds of pericarditis. By cross references the reader is kept in touch with intercurrent or more general factors. All this seems to us to be admirable both in design and in performance.

We shall seem wanting in respect for so serious a teacher if our praise is indifferent, if we paint in high lights only. But the only opening for adverse opinion which occurs to us is to reflect upon the philosophy which in parts we have ventured, with a wholesome fear of Scotch metaphysics before our eyes, to call in some question. Dr. Bruce not only clings to the division of causes into "predisposing" and "exciting," but lays frequent stress also upon this distinction, making

large use of it. Now, this division is that of the scholastic philosophy, the division into *causæ efficientes* and *causæ prevenientes*—a division which belongs to a time when causes were supposed to stand in some sort of parental relation to effects. On this view the causes regarded as more strongly generative were known as the "efficient," remoter causes being regarded as a sort of godparents, scarcely of the family, but not wholly to be ignored. In the modern view of causes as no more than invariable antecedents we see that the causes of a particular case differ only in their order, being respectively proximate, mediate, or remote; and a remoter cause in one case may be proximate in another. For instance, two men are reduced by famine or alcohol; the pneumococcus is active in one of them, and he falls into pneumonia, the other escaping; here the pneumococcus is the "efficient"—that is, the proximate cause: two other men have the pneumococcus active within them; one is chilled, and is thus subdued to the influence of the coccus, the other escaping; here the chill is the *causa efficiens*, or, as we now say, the proximate cause. No distinction of causes into prevenient, or predisposing and efficient or exciting is possible, or lies in the nature of things. In the particular case taken, in one instance some causes were proximate, others mediate, others remote, but the order may be very variously changed, for no two cases are alike.

In other parts of the book, again, we think the author does not speaks clearly on the distinctions between the science and the art of medicine. Strictly there is no science or theory of medicine. Medicine is an art, an art which depends upon the application of certain parts of certain sciences, and these chiefly of the class of inexact sciences. The principles of the art of medicine are but maxims, axioms, or aphorisms, not laws of Nature, and scarcely are to be called theoretical; anyhow, they do not become theoretical by being carried from the bedside into books as the author's words seem to suggest. If, as is often the case, these principles, whether existing by oral or written tradition, lose their touch with life, they do not thereby become "theoretical"; on the contrary, instead of getting nearer to laws of Nature (theory), their remoteness from such a quality becomes more and more manifest. That touch of life which they need would make them not less but more and more theoretical, would correct and widen them as expressions of natural orders of events.

In an ephemeral book it would not be worth while to insist upon these points, important as they are, but the present work is so admirably written, so thoughtful and learned, that we are jealous for its perfection. On most of its pages we find such happy sayings as these: If the practitioner do not order the diet someone else will; it is fortunate that many so-called "strengthening things" are of low nutritive value; in gravel small and frequent meals prevent extreme height and depth of the acid and alkaline waves; in dilatation of the stomach longer intervals between meals are required to complete its evacuation; and many others as pithy and fresh.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London, and Surgeon to the Hospital; and F. F. BURGHARD, M.D., and M.S.Lond., F.R.C.S., Teacher of Practical Surgery in King's College, London, and Surgeon to the Hospital. In six parts. Parts I and II. London: Longmans, Green and Co. 1899. (Demy 8vo, Part I, pp. 300, illustrations 66. 10s. 6d. Part II, pp. 382, illustrations 141. 14s.)

THESE are the first parts of a work which will extend to six volumes. It is not intended to supply a complete summary of all the methods of treatment that have at various times been suggested, but rather to give in detail a full account of the method or methods which are adopted by the authors. In the first volume, inflammation in its various degrees, wounds in their several varieties, syphilis, tuberculosis, and tumours are dealt with. The therapeutics of these injuries and affections are ably discussed, and sufficient information concerning the clinical features and pathological relations of each is given to render these chapters abundantly instructive to the surgical practitioner. To this member of the profession, for whom the *Manual* seems especially intended, it will, we believe, afford much practical help, and at the same time reveal the radical changes that have very recently been effected in the methods and details of surgical treatments.

The condition imposed on themselves by the authors, both of whom are teachers in the same medical school, of discussing at length only those methods of treatment which they have been led to adopt, though very excusable, is likely to cause some disappointment in surgical readers who, under the influence of other teaching or of a wide acquaintance with the diversified practice of Continental surgeons, may be disposed to regard the precepts laid down in this book as being somewhat dogmatic. The grounds for such criticism are most apparent in the chapter on incised wounds, in which a broad distinction is made between the so-called "antiseptic" and "aseptic" methods of treatment. Here the authors go so far as to make the unqualified statement that it has been shown by experience that the results of the latter method are not equal to those of the former. We trust that in future editions of their valuable work the authors will be disposed to take a more liberal view of this question. They have certainly good grounds for favouring a method which, through long experience and skilful application on their part, has afforded them perfect results; but surely they must recognise the fact that many surgeons, probably a majority, hold strongly by the aseptic method, and that those who still practise a purely antiseptic method form a diminishing minority. Most practitioners, however, we believe, are of opinion that one method, when strictly and exclusively observed, is just as troublesome as the other, and that the best results in ordinary practice are to be obtained by a combination of both.

Burns and scalds are fully described, with their various methods of treatment. This chapter contains much new and useful information, but fails to give a very favourable prospect of the application of strict antiseptic treatment to those common and often serious injuries. Many country practitioners will, we imagine, resent the attempt to shake a long established and general faith in "carron oil," and whilst ready to leave the assumed "filthiness" of this application an open question, will certainly question the assertion that "it is responsible for a great deal of the mortality after burns."

A hopeful view is taken of the treatment of tetanus by serum, "which is undoubtedly effectual in a very considerable number of cases," but the method of intra-cerebral injection is not referred to.

The authors are disposed to agree with the Continental plan of withholding treatment in syphilis until the appearance of well-marked secondaries, and give good reasons for such practice which, however, it is pointed out should not be invariably followed. In cases of chancroid attended with glandular inflammation, it is advised that "most careful watch be kept, and if it becomes evident that suppuration is occurring, excision of the mass of glands and the abscess in them should be at once resorted to." and further on it is recommended to make "a clean sweep of the affected glands and neighbouring tissues." The opinion held by some surgeons of experience that where glands are thus freely removed a second infection is attended with serious constitutional disturbance is not mentioned, though the theory that by such excisions one of the chief barriers to the passage of the poison into the general system has been destroyed seems worthy of note.

A chapter on anæsthetics has been written by Dr. Frederick W. Silk, and it is worthy of high commendation. It is a scholarly contribution to the literature of a subject the practical importance of which cannot be too strenuously emphasised; it is succinctly and clearly written, and is the outcome of a large and fruitful experience.

Part II on the whole maintains the high standard of Part I. It is devoted to the treatment of the surgical affections of the tissues. This term seems to be used in a somewhat arbitrary manner, as whilst including muscles, lymph glands, and blood vessels, it excludes the diseases of bone. A considerable portion of the volume, however, deals with the different branches—spinal curvature being excluded—of orthopædic surgery. We cannot commend too highly this section of the work, which we regard as an excellent and valuable contribution to the literature of the subject, full of

instruction on the best and most recent developments of the therapeutics of deformities; and, unlike many treatises on these affections, most interesting reading.

The tendency to ignore certain methods of treatment, supported by high authority and justified by the tests of time and experience, though less evident in this than in the first part, is shown in the section on the treatment of carbuncle, in which no mention is made of the expectant or rather bloodless method, and an unqualified assertion is made that "where suppuration is evidently occurring something in the way of operation must be done." The operative methods recommended by the authors are by no means mild and perfectly safe procedures, and, as they necessitate the administration of an anæsthetic, are likely to cause in nervous patients anxiety and alarm. A very wide range (8 to 30 per cent.) is given of the mortality of large carbuncle, but no mention is made of the death-rate in the frequent instances of small carbuncle in fairly healthy subjects, which, quite independently of active treatment, is, we believe, extremely small.

The descriptions of the ligatures of arteries are of unequal method and not very satisfactory. The operation in some instances is well and fully described, whilst in others the directions are quite insufficient for practical purposes. The two operations for extraperitoneal ligature of the external iliac, which the authors, who favour the transperitoneal method, state may under certain circumstances "be employed with advantage," are described in about twenty lines. The illustrations of these operations are not worthy of a work of this importance. In the descriptions of operations there seems a disposition to make the external incisions too long. Surely the sciatic nerve can be exposed without difficulty by an incision less than 4 or 5 inches in length. We have been led to criticise more closely this portion of the manual by the consideration that as at the present time surgical treatment consists to a very great extent in the practice of operative methods, too much attention cannot be paid to their details and proper performance.

The two parts now published, though needing here and there careful revision, will be found to fulfil the expectations raised by the high standing of its authors, and should future parts attain the same degree of excellence, this manual will certainly merit a prominent and enduring position in surgical literature.

NOTES ON BOOKS.

Lieutenant-Colonel C. J. McCartie, M.A., M.D., I.M.S., in a pamphlet issued by the United Service Institution of India (London: W. Thacker and Co.) entitled *A New System of Field Hospital and Ambulance for Hill Warfare*, presents a praiseworthy attempt at lightening and making more mobile the somewhat cumbrous Indian field hospitals and ambulances. He points out that the hospitals, and the sections into which they are divisible, are always equipped as for a three months' campaign, even although the force may only be going out for a ten days' reconaissance. The consequence is—much unnecessary impediment. He would divide the equipment into "indispensable" and "reserve," and only take the former in short movements. Many of the articles at present carried by mules might be much lightened for men to carry, who could go where mules could not. He would replace the present heavy stretchers and dhoolies by various lighter stretchers and dandies, and use rickshaws where the roads permitted. His recommendations have the merit of common sense. The pamphlet is illustrated by woodcuts of the various bearer ambulances advocated.

A Congress on Tuberculosis in Naples.—A Congress on Tuberculosis, which is intended to be to some extent a continuation of that held in Berlin last May, will take place at Naples in the spring of 1900. The Congress, in connection with which there will be a great hygienic exhibition, is under the patronage of the Queen of Italy. Professor Baccelli, Minister of Public Instruction, will preside. A German Committee has already been formed to assist in making arrangements for the Congress, and a large number of representative German physicians have intimated their intention to take part in the proceedings.

THE BACTERIAL PURIFICATION OF SEWAGE.

[By Our Commissioner.]

I.

THE AËROBIC SYSTEM.

Chemical and Bacterial Aspects.

Whatever bacterial system of sewage disposal is employed primarily, whether anaërobic or aërobic, the final treatment of the sewage before it is allowed to run over land or into a stream must be aërobic. It is a well-known fact that bacteria under certain favourable conditions are capable of infinite multiplication, and that in sewage they break down and liquefy solid organic matter, and resolve these more complex organic forms into others of more simple nature.

The aërobic bacteria act on the organic matter of sewage when in solution, and prepare it by a peptonising process, comparable to that of human digestion, for its final destruction. In the aërobic filterbeds nitrogenous substances are ultimately reduced to NH_3, CO_2, and H_2O, and non-nitrogenous substances to CO_2 and H_2O. At the same time a variable proportion of the nitrogen may also be oxidised to nitrous (HNO_2) and nitric acids (HNO_3).

The purification of all refuse is effected by these micro-organisms; they are literally the scavengers of the organic world, and we are now endeavouring to enlist the services of these bacteria, and under proper control make them solve the problem of the disposal of sewage.

Trade Refuse, Chemicals, etc.

One amongst the many questions discussed in relation to the biological treatment of sewage is whether the acidity due to trade effluents would have a deterrent effect on bacteria, either anaërobic or aërobic?

The answer to this question must depend almost entirely on the comparative proportions of trade effluent and sewage. It is generally understood that even slight acidity impairs the power of growth of bacteria, and that a slight alkalinity is favourable. There can be little doubt that if the whole volume of a sewage intended for biological treatment was acid in reaction it would greatly weaken, if it did not entirely destroy, all organic life. The same might hold good if it were strongly charged with chemical refuse from dye works, etc. As a rule, the greater volume of ordinary sewage (which is alkaline) and the enormous dilution the trade effluent undergoes do away with any risk of the whole body of sewage to be treated being rendered acid. It would, however, be advantageous if manufacturers could be compelled to distribute their waste products as much as possible over the twenty-four hours, and not allowed to turn the whole of their refuse into the sewers at one time. Really dangerous liquids should undergo some process of purification before they are permitted to leave the premises on which they are produced.

Filters and Bacteria.

No effluent from a bacterial system of treatment is bacteriologically pure. No filter bed removes bacteria. Should the effluent be turned into a stream, creek, or any other water which cannot be used for drinking purposes, either because it is brackish or already contaminated, as long as this effluent does not prove a nuisance, it cannot matter whether there are bacteria in it or not. If, on the other hand, the effluent is to run into a stream the waters of which are consumed by human beings, then it is a matter of the most vital importance that the effluent should be bacteriologically free, for it would seem impossible that any method for removing or destroying bacteria would be so discriminating as to exterminate the pathogenic and allow the non-pathogenic to remain. It is rare to find pathogenic organisms in crude sewage. Dr. Houston, in a vast number of experiments with crude London sewage, detected the pathogenic B. enteritidis sporogenes together with the B. coli communis, and numerous other organisms commonly found in the excreta of man and animals. He made no attempt to isolate the bacilli of diphtheria or typhoid fever, since these organisms must be few and rare in crude sewage.

CONSTRUCTION OF FILTERS.

These filter beds are made by constructing artificial banks, faced internally with brick, and with brick bottoms, or simply by digging out an area in the ground, which itself forms the walls. The latter method is, of course, the cheapest, but its success must depend entirely on the nature of the soil; at Sutton, where there is an impermeable clay, it has been employed with economy and success.

At the bottom of the filter are arranged rows of loose-jointed stoneware pipes, leading to an outlet through which the effluent at stated intervals is allowed to pass.

The filter beds are filled with broken granite, burnt ballast, furnace clinker, coke, slate, sand, or pan breeze. Pan breeze is coke which has been taken from the gasworks and heated in a "pan" (hence its name) two or three times to a white heat; it is very efficient, and never breaks up or softens. It is in use at the 1-acre filter at the London County Council works at Barking.

SECTION.

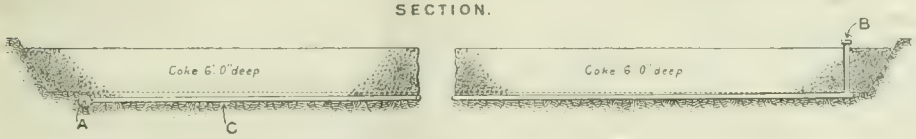


Fig. 1.—Cross section of the sewage filter, London County Council's Barking Outfall Works; A, 2' 0" pipe; B, 6" vent pipe; C, 9" pipes perforated.

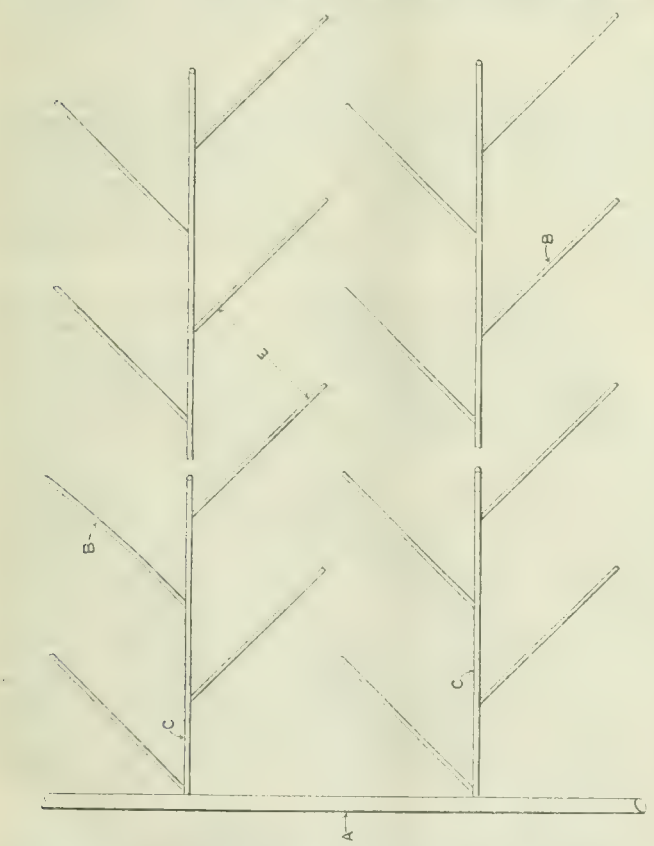


Fig. 2.—Plan of the sewage filter, London County Council's Barking Outfall Works; A, 2' 0" pipe; B, 6" pipes, open joints and perforated, about 18' 0" apart (E); C, 9" pipes perforated.

[For this section and plan we are indebted to Sir Alexander Binnie, Chief Engineer to the London County Council.]

With regard to the size of the filter medium, fragments about as large as a walnut are in general favour and appear to give the best results. The filters are enabled to hold more sewage at a time than they could if the coke was smaller, they do not get so readily clogged, they can be aërated better, can be filled and emptied more expeditiously, and lastly are said to give a purer effluent.

The depth of the filter beds varies greatly; at Sutton they are 3 feet 6 inches, at Barking 6 feet, and at the experimental filter at Crossness 13 feet.

Not only is a greater amount of purification obtained with an increased depth, but a far larger amount of sewage can be treated at the same time, a most important matter where large quantities have to be dealt with as quickly as possible and land in the neighbourhood of a town expensive.

METHOD OF FILLING AND EMPTYING THE FILTER BEDS.

In the aërobic process crude sewage is allowed to run intermittently over open filter beds, and these are considered capable of dealing with raw sewage without any previous treatment by the anaërobic method (septic tank) or by chemicals. The sewage is screened from any coarse filth which would clog the filter, and thereby not only cause a nuisance, but lessen its efficiency by diminishing its holding capacity. The filter is charged from above until the sewage is on a level with the top of the coke. It is allowed to remain for two or three hours; it is then strained off, passing downwards through the coke and running out through the stoneware pipes at the bottom of the filter. The filter is allowed to rest for eight hours, when it is again filled. It takes about four weeks before a filter bed is quite "matured"—that is to say, the filter bed must be filled, emptied, and allowed to rest for that period before the organisms have grown in sufficient strength and numbers to effectually cope with and reduce the constituents of sewage. In some cases the bed is constantly treated with raw sewage during construction.

SECONDARY FILTRATION.

In some cases the effluent from the first bed is subjected to a process of secondary filtration, that is to say, the effluent from one filter bed is allowed to flow through a second. This produces a marked improvement (in some cases nearly 20 per cent.) in the purity of the final effluent. The secondary filter has only to exert its purifying action on the oxidisable organic matter, the suspended matter having been left behind in the first filter.

The great disadvantage of secondary filtration (from one bed to another) on a large scale would be the extra expense, as it would nearly double the cost of construction. Secondary filtration over land would be cheaper, though perhaps not quite so efficient; the land, moreover, would have to be of suitable quality, and this is not always obtainable. Drs. Kenwood and Butler, in their experiments at the Finchley sewage works,[1] have shown that in whatever manner a filter bed may be constructed, as to material and size of the filtering medium, organic matter tends to collect in the filter, and is liable to be washed out from the lower zones when the outflow is rapid, so that under such circumstances the first portion of the effluent is much fouler than that which issues subsequently. They found that, by constructing their filters with a stratum of sharp sand at the bottom, they were able to obviate this difficulty. A secondary filtration of some sort is absolutely essential; in fact the Local Government Board has gone so far as to make it a condition precedent to the approval of any scheme which proposes by chemical precipitation, subirrigation, or by the agency of bacteria, to deal with the disposal of sewage.

PERMANENCY OF COKE BEDS.

It might be imagined that these beds composed of coke, ballast, or clinker would inevitably become foul by the constant passage of sewage. This is so far from being the case that, on digging down to any depth, after three or four years of work with periods of necessary rest—generally one week in six—the filters have been found to be as sweet as on the day they were first laid down. The upper 6 inches is generally scraped once a week, as it is apt to become a little clogged with a film of *débris*.

[1] *Transactions of the Sanitary Institute*, vol. xix.

Experimental Proof of Aëration of Coke Beds.

At the experimental filters at Crossness two vertical pipes were inserted into the coke bed, to the depth of 6 and 13 feet respectively. After the sewage had been allowed to drain off, the percentage proportions of oxygen and carbonic acid were estimated from samples taken at stated intervals from the interspaces between the coke fragments. After the air had been in contact with the lower strata of the coke for seventy hours, it still contained an average of about 75 per cent. of its original oxygen, and the average amount of carbonic acid did not exceed 3 per cent.

Frost.

The fear which has been expressed that a hard frost would seriously interfere with the working of the filter beds has so far not been justified. Sewage is generally at a temperature of 60°F., and I have only heard of one case where it has frozen. This was at Colonel Ducat's system at Sutton, but here the filter was not built or protected as Colonel Ducat wished or designed, the consequence was that its arrangement of open pipes drew the outside cold air into the interior of the filter and proved nothing more or less than a freezing machine.

At the Northern Main Drainage Works at Barking, during the great frost about five years ago, the Thames was frozen and Barking Creek was one mass of ice. Nevertheless the coke filters there continued to work without the slightest interruption, nor was there even a film of ice to be seen on the surface of the filter.

Screening.

In the so-called Septic Tank System, the sewage flows from the sewers directly into the anaërobic tank, deposits its solid matter in suspension, the organic part of which is gradually destroyed by micro-organisms, and only a fluid effluent is allowed to run on to the aërobic filter beds. In the aërobic system, where there is no tank, the paper, straw, rags, offal, etc., must perforce be got rid of before it passes on to the filter beds, otherwise they would become speedily choked. At Sutton this is effected by a "roughing screen," an automatic machine in constant rotary motion, driven by a water-wheel which is actuated by the sewage. This is a somewhat malodorous operation and entails the expense of attendants and the trouble of carting away and burying the filth.

At Crossness the whole of the sewage of the south side of London undergoes sedimentation in tanks, after which a certain portion is allowed to run over three experimental filters, 22 ft. 6 in. long, 10 ft. 8 in. broad; two have a depth of 12 feet of coke and one of 6. But even after this the efficiency of the filters is seriously interfered with by the chaff, straw, cotton, and woody fibre (the latter most probably from the London wood pavements), which clog the filter bed. This gradually lessens the amount of sewage which can be dealt with, and no amount of aëration will restore the capacity of the bed, proving that the deposit on the surface of the coke is not organic matter of animal origin. The capacity of the bed may be reduced in this manner as much as 50 per cent. The question of preventing this deposit reaching the filter bed is somewhat perplexing. No means altogether satisfactory have been found of doing what is wanted, while at the same time allowing the sludge, (which is also in suspension), to pass on to the bed. This is its natural destination, and it is utterly destroyed, whereas the *débris* referred to never undergoes destruction, and continually increases in amount.

A screen to be of any use at all would have to be so fine that it would speedily get clogged itself, unless an attendant was constantly on the spot to rake it clear. In all probability if a large quantity of sewage was being dealt with, and the screen became choked, the sewage would either flow over the top or the pressure behind would break the screen down.

Secondary Sedimentation.

A more satisfactory way of getting over the difficulty is by the use of a sort of "flume," a long open box with transverse partitions reaching nearly to the top of the sides. This flume slopes slightly downwards to the filter bed. The sewage passes slowly over these partitions, the *débris* is caught, and time is given it to settle down at the bottom, whence it is removed when sufficient sewage has been passed into the filter. A certain amount of sludge must be, of course, collected as well, but up to the present no practicable way has been found to prevent this.

AN ACCOUNT OF SOME OF THE MEDALS OF THE LONDON HOSPITALS.

(With Special Illustrations.)

By T. E. James.

Clerk to Assistant Secretary to the Royal Society.

Medal awards form a convenient mode of commemorating personal work and events, and, in spite of the fact that their exact propriety as gifts in the domain of science is sometimes called in question, it is not likely that they will decline to any extent in general estimation.

In medicine and surgery, however, such honorary rewards really require no apology. The discoveries and investigations made in these departments of knowledge, as well as the meritorious performance of duties in the school and hospital, seem deserving of special recognition, and experience goes to show that the medallic method is one of the most suitable that can be adopted. In the first place it offers something tangible; while, further, it expresses the judgment of the time, and the opinion of a class of men not prone to compromise on questions of fact.

Photographs of some of the most interesting of the medals thus open to medical students at the London hospitals are here brought together, while some account is given of the conditions under which they are to be gained.

Although, strictly speaking, the examples refer to the schools of medicine attached to the London hospitals, it cannot be inappropriate to designate them by the more inclusive title. Happily the interests of the hospital and medical school have now a common basis, the alleviating functions of the one being dependent on the teachings of the other.

The hospitals with affiliated medical schools which possess medal endowments are noticed here in the following order: St. Thomas's, St. Bartholomew's, Guy's, St. George's, King's College, Charing Cross, St. Mary's, University College, Westminster and Middlesex. The space placed at my disposal has compelled a selection of examples for illustration, as well as a reduction in size in some cases; but each hospital is represented, while particulars are given of all the foundations.

St. Thomas's.

St. Thomas's is pardonably proud of its gifts, and they not only commemorate eminent physicians and surgeons who practised within its walls in past days, such, for instance, as the noted William Cheselden, and Richard Mead—the man who moved, as Dr. Johnson said, "in the broad sunshine of life:" but the medals are themselves, by reason of their excellence, a pleasing tribute to the achievements of the present recipients. The services of the Wyon family to medallic art are particularly illustrated by these medals. The "Cheselden" (Figs. 1, 2) is given for a special practical examination in surgery and surgical anatomy. An admirable bust occupies the obverse, while the reverse shows an interesting composition distinctly suitable to the foundation. It depicts a subject stretched upon an operating table, adjacent to which are emblems of anatomy. Cheselden was born in 1688, and became one of the principal surgeons of St. Thomas's in 1719. He is famous in surgical annals as the author of new, brilliant, and successful methods which procured for him a European reputation. He was the most successful lithotomist of his own and perhaps any other day. The masses, it is said, regarded him with the highest veneration; while on the other hand, his ability was so admirably linked with amiable social qualities that he was a prime favourite at Court and in the *salons* of the great folk of the period.

Dr. Mead, F.R.S., was appointed Physician to St. Thomas's in 1703. It was he who attended Queen Anne on her deathbed. A medal (Figs. 3, 4) commemorating his name is given annually to a fifth year's student, and, like the preceding, on the results of a practical examination, but in the departments of medicine, pathology, and hygiene. The obverse shows a profile of marked power and character; the reverse bears the figure of Hygeia, her arm with entwined serpent.

The remaining gifts of St. Thomas's are the Treasurer's gold medal and the Solly and Syer Bristowe silver medals.

The first-named is annually awarded at the end of the fifth winter's session to the student who has passed through his

pupilage in the most meritorious manner. Visitors to the hospital will have seen in the grounds near the entrance a brass statue, by Scheemaker, of King Edward VI, its benefactor, which was erected in 1737 upon the hospital's old site near London Bridge. A copy of this representation of the youthful King appears on the obverse of the medal. He is seen wearing a cap and cloak; the right hand is outstretched; below is the date 1553. The reverse bears the hospital arms and the legend, "Bene merito melius merituro" in German letters. It is interesting to note that the late Dr. J. Syer Bristowe, F.R.S., received this prize at St. Thomas's in the session 1847-48.

The Solly medal (Fig. 9) was founded in 1873 and is awarded biennially for the best series of reports of surgical cases coming under the student's personal observation in the wards. The reverse bears an inscription, date of foundation, and name of recipient.

The Syer Bristowe medal (Figs. 5, 6) is St. Thomas's youngest foundation. On Dr. Bristowe's retirement from the service of the hospital in 1894 his portrait was subscribed for and presented to him, the balance being devoted to the institution of this annual award in respect of a practical examination in pathology and morbid anatomy. A pathologist is represented on the reverse who leans forward to the right, facing a bacterial oven: he examines an opened human heart, behind him is a laboratory bench bearing a microscope and other apparatus; in the field appears a shield charged with the arms of St. Thomas's.

St. Bartholomew's.

Passing to St. Bartholomew's Hospital we find that it possesses the Kirkes, Duncan, and Lawrence medals, all struck in gold. It is somewhat curious that the long association of the illustrious Harvey with this ancient "spyttell"—he was appointed physician in 1609, and remained so for thirty-four years—has not been made the subject of medallic celebration, although it should be mentioned that a Harvey money prize in practical physiology exists.

The Kirkes medal is given annually for proficiency in clinical medicine and arose out of a foundation established by the widow and friends of Dr. W. S. Kirkes, sometime physician to the hospital. Third year or later students are eligible and a scholarship of the value of £30 accompanies the medal.

The Duncan medal marks a departure from the line of studies hitherto spoken of, as it is awarded for obstetric medicine; only a high standard of excellence enables a student to win it. This gift was founded by subscription in testimony of Dr. Matthews Duncan's services to the hospital 1877-90.

St. Bartholomew's is fortunate in possessing a cast and chased gold medal (Figs. 13, 14) designed by Mr. Alfred Gilbert, R.A. It takes the place of one which had been in use since the foundation of the medal in 1873 (struck from a die), but of a type which it was considered did not render sufficient justice to Sir William Lawrence, Bart., F.R.S., the eminent surgeon and teacher, whose services to the hospital, covering the period 1824-1865, it was intended to commemorate. Consequently the present medal was founded in 1895 by Sir Trevor Lawrence, the Treasurer, and the Misses Lawrence, in memory of their father. The design was exhibited at the Royal Academy in 1897. The obverse portrays Lawrence facing us, and in so difficult a pose as this, the treatment must be admitted to be strikingly successful. The reverse presents an interesting allegorical composition. A nude youth stands facing, resting his forearms on shields, on which is inscribed in Greek capitals part of the line from Homer—"αἰὲν ἀριστεύειν." Two women personify Wisdom and Science, and whisper words of counsel. This medal, which is associated with a scholarship, value £42, is the senior gift of the school, and very highly prized, while its award recognises quite a late stage in a student's studies. He is examined *viva voce*, and by written papers in medicine, midwifery, and surgery. We are told, in the words of a distinguished living surgeon, that Lawrence's face, "in its expression of intellectual calm, was one of the noblest ever worn by man."

Guy's.

The medallic liberality of Guy's is almost equal to the foregoing, as it makes three gold awards (Figs. 12, 19, 20). The reverse of the Treasurer's medal (Fig. 20) for clinical surgery (of which the same type, it should be noted, does duty for a clinical medicine gift) is of pictorial interest. A robed professor is seen encouraging a sick outcast to enter the adjacent hospital, while in the far corner two men are carrying a patient within on a stretcher. The obverse bears the arms of the hospital within a laurel wreath. The examination for this medal embraces operations on the dead subject. The Golding-Bird gold medal and scholarship for sanitary science was founded by Mrs. Golding-Bird in memory of her husband, who had been assistant-physician, 1843-54.

St. George's.

The effigy of John Hunter is appropriately adopted by St. George's for the obverse of the admirable silver-gilt medal, (Fig. 15, 16) established in 1850 by Mr. Serjeant Thompson, for many years treasurer of the hospital. It is given annually for the best clinical report of medical and surgical cases observed during the preceding twelve months, these to be accompanied by observations not exceeding twenty in each department. The bust on the obverse is after the celebrated picture by Sir Joshua Reynolds in the possession of the Royal College of Surgeons: the composition on the reverse depicts two men bearing a sick woman to the hospital.

King's College.

King's College possesses medals struck from very clear dies (Figs. 7, 8, 10). The friends of the late Dr. Robert Todd, F.R.S., founded a bronze medal to his memory in 1863, to recall long and distinguished services to the College and Hospital. The arms of the College with crest, and supporters appear on the reverse. It is awarded annually in clinical medicine. Similarly, the friends of the Rev. R. W. Jelf, D.D., sometime principal of King's College, subscribed an endowment fund in 1868. A bronze medal is given in this case to the hospital pupil who stands second in order of merit in the award of what is known as the "senior scholarship." The study of botany in the medical curriculum is recognised by a gold medal founded by the late Mr. George Redsull Carter in 1879. Matriculated students of other faculties may also compete for this.

Charing Cross.

In the Governors' clinical gold medal of Charing Cross Hospital we have the smallest award in point of size of any medical school. Students of the fifth winter session are examined in the subjects of certain clinical lectures, and on medical and surgical cases occurring in the wards of the hospital.

The Huxley bronze medal (Fig. 11), with a prize of £10, was founded upon the death and in memory of the late Professor Huxley, who, it may be recalled, received his early medical education at Charing Cross. The examination comprises anatomy and physiology. The design is that of an older and current class medal, to which suitable lettering is applied from time to time to meet the circumstances of the award. The obverse portrays the *façade* of the hospital at the date of its foundation; beneath, the staff of Æsculapius appears.

St. Mary's.

St. Mary's owns an admirable gold medal (Figs. 17, 18) in clinical medicine, recently instituted and permanently endowed by Dr. W. B. Cheadle, whose connection with the hospital is well known. In this instance an essay is made the ground of award, drawings and records of cases being included in its scope. It was given for the first time in 1898.

University College.

University College has four, the Liston (Fig. 21), Fellowes (Fig. 22) and Bruce gold medals, and the Tuke silver. With the exception of the Fellowes medal they are all memorial foundations. The qualification for the Liston is an essay in surgery or pathology containing original observations founded on cases in the practice of the hospital: for the Fellowes, clinical work: for the Bruce, founded by Mrs. Bruce in commemoration of her son, proficiency in pathology and surgery; and for the Tuke, pathology.

Westminster.

The examples awarded by Westminster, Middlesex, and University College, regarded from the point of view of medallic art, are not, it must be confessed, equal to some of those already mentioned, however closely they otherwise fulfil the requirements of modern science.

The Bird silver or bronze medal (Fig. 23) of Westminster Hospital is devoted in chief to obstetric medicine. It was endowed by subscription in memory of Dr. Frederick Bird, obstetric physician, 1861-74.

Middlesex.

Middlesex awards the John Murray [1] gold medal (Fig. 24) triennially for medicine, surgery, and obstetrics, with a *viva voce* examination at the bedside in each department. It is a memorial gift founded in 1874, and connected with a scholarship. The Robert W. Lyell gold medal recognises surgical anatomy and practical surgery. The reverse shows the hospital. The medal was founded in 1882.

London Hospital.

Mention must be made that the London Hospital Medical College at one time had medals in its gift, but none have been given since 1868, this however being due to the fact that £20 prizes were substituted for various gold medals then open to competition. In this respect the College occupies a singular position among the schools.

A word may be said in conclusion regarding the artistic merits of the medallic examples. On the whole, the majority hardly fulfil any mission in this particular. There are exceptions readily apparent, but the lesson that a medal should, as far as possible, denote the purport of its foundation, or at any rate bear some relation to it, is frequently lost. Mere lettering will not in itself appeal successfully to the imagination, and it is certainly regrettable that better types have not long ago replaced weak designs or ill-executed specimens.

It is a pleasing duty to acknowledge the kind help extended by the wardens, deans, and other officials of the London hospitals in regard to the loan of gold, silver, or bronze medals for photographic reproduction.

Thanks are also due to the Misses Lawrence, Dr. Cheadle, Dr. T. J. Horder, Dr. Auden, Mr. Allan Wyon, F.S.A., Mr. J. Pinches, Mr. G. Rendle, and Mr. C. L. Todd, for particular favours.

THE HOUSING OF THE POOR.

Several questions arose at the last meeting of the London County Council before the Christmas recess involving the consideration of the best means of providing adequate house accomodation for weekly wage earners, and of preventing such as exists from falling into dilapidation and insanitariness.

The Public Health Committee has had its attention directed to the need of additional sanitary inspection in that exceptionally unsavoury area of Kensington known as Notting Dale. The report of Dr. Hamer, one of the assistant medical officers of the Council, fully confirmed the ill opinion of the area to be gathered from Dr. Dudfield's reports. Dr. Hamer emphasised the conspicuous contrast presented by rooms in common lodginghouses and tenements in houses let in lodgings, a contrast which is now even more marked than in 1896, when a special committee of the Vestry reported, "It is but right to say that the condition of those houses which are already registered as common lodginghouses is superior to those which are not, or cannot be so registered." The fact that common lodginghouses are subjected to weekly inspections by the Council's inspectors, while it is found impossible to make a single thorough inspection of each of the tenements in the course of a year, is held to account for the difference.

Dr. Hamer refers to the opinion very commonly held among deputies and others interested in property of the furnished-room class that, having regard to the habits of the people for whom such rooms provide shelter, it is useless to attempt to maintain cleanliness, and while pointing out that much remains to be done in the way of promoting habits of personal cleanliness, he states that the condition of rooms such as those found in large numbers in Kensington, can by no means be excused on the ground of the uncleanly habits of the occupants. In his opinion the want of proper supervision and the neglect to enforce the by-laws regulating houses let in lodgings are the factors mainly responsible for the continued existence of these conditions. It is accordingly suggested that three additional male and one female sanitary inspector should be appointed forthwith, and the Vestry of Kensington has been invited to consider the report and suggestions made therein.

Another aspect of the housing question came under consideration upon a report from the Housing of the Working Classes Committee. It appears that in obedience to a widespread belief that the provision of house accommodation in the suburbs *plus* increased tramway facilities for transport would relieve the congested districts of central London, the Housing Committee has been seeking sites outside the county for the erection of dwellings. Sir Samuel Montagu munificently offered to present the Council with land at Edmonton for this purpose, but the Housing of the Working Classes Act unfortunately forbids the acquisition of land by a local authority outside of its own area. A proposal to amend the Act of 1890 by a general statute, for the introduction of which the aid of the Government is to be invited, met with universal approbation. Debate however arose upon an amendment which had in view the conferring upon the authority effecting the purchase the power to lease such land when acquired. This was defeated by 56 to 50 after a lively debate, in which the importance of "managing" the houses erected so as to secure reasonable rentals and good sanitary supervision was especially insisted upon.

A further report by the same Committee recommended the Council to acquire, under Part III of the Housing Acts, some 38½ acres of land at Tooting, at a cost of £44,500 (£1,150 an acre). On this site it is proposed to erect cottages so constructed as to provide for two families each. They will each consist of two self-contained tenements, one of two and one of three rooms. Separate gardens will be provided for each tenement, and on an average not less than thirty cottages will be built to the acre. The rent of the tenements would average about 7s. 6d. a week. There will, it is estimated, be no charge upon the county rate by this undertaking. Means of access to this site will be obtainable by the Council's line of tramways, as well as by railway to Tooting Junction and Balham.

By a series of questions directed to the Chairman of the Housing Committee, Lord Carrington elicited the names of the freeholders of the insanitary property in St. Pancras which has been of late the frequent subject of public criticism. It appears that the Committee are already in communication with the landlords with a view to their setting their houses in order. The County Council has been accused both of feverish activity and deplorable delay in carrying out its housing policy. These criticisms are mutually destructive, and having regard to the difficulties and magnitude of the problems involved, an attitude of forbearance and hopefulness would be not unbecoming, for everyone must be glad to see the Council tackling a question which, it becomes more and more clear, lies at the root of many of the more preventable evils, social and hygienic, under which the poorer inhabitants of London now labour.

[1] It will be remembered by some still living that Dr. John Murray, who died in October, 1873, at the early age of 29, from œdema of the larynx, was up to the time of his death Subeditor of the British Medical Journal. In the words of the obituary notice published at that date, he was "a gifted, energetic, and much beloved young physician," and his death was spoken of as "a public and professional loss." His remains were met at Euston Station—from whence they were sent to Aberdeen, the place of his birth—by an assemblage of the most distinguished members of the medical profession, besides many of his personal friends. This medal was instituted in his memory, and the necessary funds were soon subscribed by his admiring colleagues and friends.

The Notification of Measles.—The Corporation of the County Borough of Wigan have agreed to the voluntary notification of the first case of measles in a household for a further period of three years, in consequence of the recommendation of the medical officer of health, Dr. Wm. Berry, to the Sanitary Committee. The medical officer reported that the experiment of voluntary notification had worked well, and in conjunction with aid rendered by the School Board officers, had been of much assistance during the recent epidemic.

THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

THE Association of Military Surgeons of the United States was founded in 1891 by Dr. Nicholas Senn, now Surgeon-General of Illinois. His original design in founding it was "to organise the surgeons of State forces into an association for mutual improvement and growth." Dr. Senn was elected its first President. Commencing in the National Guard of fourteen States, its membership comprises at the present time representatives from the Army, Navy, Marine Hospital Corps, and the National Guard of over forty States. The army and navy furnish about one-fourth of the membership. The Association has been officially recognised by the United States Government and nearly every State in the Union. It held its eighth annual meeting (of 1899) in Kansas City. On account of the war with Spain, no meeting was held in 1898, as a large percentage of its members were in active service. Several foreign representatives were present, conspicuous among them being Colonel W. C. McWaters, of Halifax, a representative of the English army, and Colonel Z. R. Molina, of the Mexican Army. Surgeon-General Sternberg sent a letter of regret that he was unable to come on account of pressure of business, and Colonel C. H. Alden, Deputy-Surgeon-General, came in his stead.

Colonel J. D. GRIFFITH (President) delivered an opening address, in which he reviewed the history of the Association for the past two years. He alluded to the tremendous strides taken by the United States army during that time, and concluded by saying that "To-day we take our place side by side with Great Britain, and our guns now echo around the world, and the sun never sets on Old Glory."

Dr. J. FRANCIS CALEF (Surgeon-General of Connecticut) read a paper on the Physical Standard of National Guardsmen, in which he contended that if in order to have a body of troops up to the highest standard of excellence, "the exact physical condition of the recruit and his family and personal history must be investigated, and the diseases from which he has suffered considered." With these favourable, said Dr. Calef, one may after careful physical examination and accurate measurement predict what the average youth of 18 will be at 22.

Colonel GRIFFITH gave an account of the power of the Mauser pistol, which fires a 30-calibre ball. On the screen he showed photographs of cadavers which had been experimented upon at ranges of 100, 200, and 300 yards. At the latter distance the Mauser bullet from this pistol easily shattered bones of the legs, and passed entirely through the skull, thus showing its deadly power in the hands of accurate marksmen. This pistol is in use in the German army, and is also in the hands of the Boers.

Colonel LIPPINCOTT gave an account of the hospital service in Manila, illustrated with views thrown upon the screen, which showed that the equipment for hospital work in Manila is modern and up to date.

Several papers dealt with the questions of proper training of medical officers in time of peace, so that they may always be ready for war service. The lack of knowledge of administrative work was found in the war between the United States and Spain to be the weak point in the American volunteer and contract surgeons. Colonel Girard pointed out what the requirements which go to the making of a successful army surgeon are in the following words: "The science of preventive medicine forms a great part of our professional work. We are expected to see that the water furnished the troops is pure; that the food is wholesome and properly cooked; that the clothing is suitable to the climate and of proper texture; that the soldiers' habitations, be they tents or permanent barracks, give a sufficient air space, are properly ventilated, and are kept clean; that the human dejecta and refuse of food are disposed of without danger to human life. These are only a few of the precautions which are the daily, hourly, thought of the trained medical officer." In many of the papers reference was made to the terrible inefficiency of the American Medical Department in the early months of the war—an inefficiency due, not to a lack of knowledge of medicine and surgery, but to want of training on the subjects mentioned by Colonel Girard. As a result of these papers and the discussions upon them, a committee was appointed to obtain legislation. It is proposed to create, equip, and train a corps of medical attendants in connection with the National Guard of all the States.

The election of officers for the Association for the ensuing year resulted in the choice of Colonel C. H. Alden, Assistant-Surgeon-General, United States Army, for President. New York was chosen as the place of meeting in 1900.

THE ANNUAL MEETING AT PORTSMOUTH.

THE members of the medical profession in Portsmouth, including officers of the Army and Navy Medical Services, have presented valuable souvenirs to Alderman T. Scott Foster (who was Mayor of Portsmouth at the time of the meeting in August last), to Mrs. Foster, and to Mr. A. W. White, J.P., in recognition of their special efforts to enhance the enjoyment and convenience of those who attended the meeting, and to promote its success in every way. The presentations were made during a smoking concert given in the Grand Jury Room of the Town Hall. Dr. WARD COUSINS, J.P., occupied the chair, and was supported by the present Mayor (Mr. H. R. Pink), Surgeon-General Cuffe, C.B., many Aldermen and Councillors, and several other members of the two Medical Services, and a large number of the profession resident in Portsmouth and Southsea.

Dr. WARD COUSINS said that the marked success of the annual meeting was due to many residents in the borough, who had worked together for the common good, notably to Admiral Sir Michael Culme-Seymour, General Sir Baker Russell, the Bishop of Winchester, the Vicar of Portsea (the Rev. C. G. Lang), the Corporation of Portsmouth, and the then Mayor and Mayoress, who had worked hard, and done everything possible in the way of entertainment to ensure the success of the gathering. To Alderman Scott Foster he presented a silver vase, and a handsome diamond bracelet for Mrs. Scott Foster. The vase bore the following inscription: "Presented to the Mayor of Portsmouth, Alderman T. Scott Foster, J.P., by the medical officers of the Army and Navy, and the resident members of the profession, as a token of their great appreciation of his kindness and hospitality in entertaining the British Medical Association at the Annual Meeting, 1899. J. Ward Cousins, M.D., F.R.C.S., President."

Alderman T. SCOTT FOSTER, who was very cordially received, said that he was particularly pleased that the annual meeting had been a success, because he was assured that the almost unanimous desire of the medical profession was that he should occupy the position of Mayor during the visit. He had since received several letters from members of the profession residing in different parts of the United Kingdom and the United States expressing delight at their visit to Portsmouth, some stating that they had never before been received in such a hospitable manner. Only a small share in that success should be attributed to him, others had worked as hard as, and even harder, than himself. He and his wife would always look back to the visit of the British Medical Association as one of the most important of the events connected with their year of office as Mayor and Mayoress. Above all, they would always remember the kindness of the President and members of the Association.

The CHAIRMAN said that Mr. A. W. White was unfortunately detained in London. The success of the brilliant entertainment at the Esplanade Pier was mainly brought about through the energy of Mr. White. Dr. R. Emmet would convey to him their present—a handsome silver-chased cigar box—bearing the following inscription: "Presented to Mr. A. W. White, J.P., by the resident members of the medical profession as a token of their appreciation of the kind services rendered by him in connection with the annual meeting of the British Medical Association at Portsmouth, 1899. J. Ward Cousins, M.D., F.R.C.S., President."

MR. WALTER WHYTE POLLOCK, Writer to the Signet in Glasgow, has by his will bequeathed £10,000 to the Royal Infirmary of Glasgow, his native city; £10,000 to the Royal Infirmary of Edinburgh, in which city he lived for seven years; £10,000 to the Victoria Infirmary, in Queen's Park, Glasgow; £5,000 to the Glasgow Western Infirmary, at Partick; and £5,000 to the Glasgow Blind Asylum.

THE NEW YEAR HONOURS.

SIR THOMAS LAUDER BRUNTON.

IN conferring the honour of Knighthood upon Dr. T. Lauder Brunton the Queen has recognised high merit as a physiologist, pharmacologist, and clinical physician. Sir Lauder Brunton received his medical education at the University of Edinburgh, where he had a brilliant career. He graduated M.B., C.M., with honours and gold medal for the Thesis in 1866, became B.Sc. in 1867, D.Sc. 1870, and Baxter Natural Science Scholar in 1868, in which year he took the M.D. degree. He settled in London in 1869, and became a Member of the Royal College of Physicians in the following year, a Fellow in 1876. He was soon afterwards appointed and Assistant Physician to St. Bartholomew's Hospital, and is now Physician to that Hospital and Lecturer on Pharmacology and Therapeutics. He gave the Goulstonian Lectures at the Royal College of Physicians in 1875 on Pharmacology in its Relations to Therapeutics, and the Croonian Lectures in 1889 on the Relation of Chemical Structure to Physiological Action. The subjects chosen for these two courses show the direction in which his scientific studies have been most fruitful, and his publication on clinical medicine and therapeutics are too well known to the profession to call for enumeration here. He is a Fellow of the Royal Society.

SIR HENRY FRANCIS LOVELL, C.M.G.

Mr. H. F. Lovell, upon whom the honour of Knighthood has been conferred, is Surgeon-General of Trinidad and Tobago, and a member of the Executive and Legislative Councils of that Colony. He was born in 1844, the eldest son of the late Henry Hill Lovell, D.C.L., of Apsley, Beds. He received his medical education at St. Bartholomew's Hospital, and obtained the diploma of M.R.C.S Eng. in 1865 and of L.S.A. in 1867. In 1873 he was appointed Colonial Surgeon at Sierra Leone, and in 1878 he was transferred to Mauritius, where he became Chief Medical Officer, President of the General Board of Health, and a member of the Legislative Council. In 1893 he was made C.M.G., and appointed to the offices which he now holds in Trinidad.

ORDER OF ST. MICHAEL AND ST. GEORGE.

The Honourable John Alexander Cockburn, who is made K.C.M.G., is at present the Agent-General for South Australia. He was born at Corsby, near Duns, N.B., in 1850, and received his medical education at King's College, London, graduated M.B.Lond. in 1873 and M.D. in 1874, on the latter occasion taking the gold medal. He settled in South Australia in 1875, and was elected a member of the House of Assembly in 1884. He was Minister of Education in 1885-87, Premier and Chief Secretary in 1889-90, and Chief Secretary in 1892. He was again Minister of Education, with which the portfolio of Agriculture was combined in 1893-98, and was one of the representatives of South Australia at the Federal Conferences in 1890, 1891, 1897, and 1898.

Dr. Patrick Manson, who is made C.M.G., has received this honour in his capacity as Medical Adviser to the Colonial Office. Dr. Manson's scientific work is too well known to readers of the BRITISH MEDICAL JOURNAL to need recapitulation. He first became known to the scientific world by his investigations into the pathology of filarial diseases, and into the life-history and periodicity of the filaria sanguinis hominis. More recently he has done much work and inspired more with regard to the etiology of malarial diseases, and the relation of the parasite to the mosquito.

Dr. John Pringle, who is also made C.M.G., is a member of the Privy Council and Legislative Council of the Island of Jamaica. He graduated M.B., C.M.Aberd. in 1872.

Dr. Wordsworth Poole, who receives the same honour for services as Principal Medical Officer of the West African Frontier Force on the Niger, is at present Principal Medical Officer at Zomba, British Central Africa. The district is that administered by Sir H. H. Johnston and is some 500 miles in length by 200 miles in breadth. Dr. Poole took the B.A.Cantab. in the Natural Science Tripos in 1889, received his medical education at Cambridge and Guy's Hospital, and graduated M.B., B.C.Cantab. in 1894. The *London Gazette* for January 2nd, contains a despatch from Colonel Lugard in which he brings Dr. Poole's name to special notice for his services as Principal Medical Officer of Colonel Willcock's force. Colonel Lugard adds that Dr. Poole's "previous record of service in Nyassaland constitutes an additional claim on the Government."

Dr. Archibald Donald Mackinnon, who receives the same distinction for services in connection with the recent Uganda Mutiny, is the Principal Transport Officer for Uganda. He graduated M.B., C.M.Aberd. in 1887, and M.D. in 1892.

THE LIVINGSTONE EXHIBITION.

THE Livingstone Exhibition was opened on January 1st, by Sir George Taubman-Goldie, K.C.M.G., at St. Martin's Town Hall, Charing Cross.

The exhibition has been organised by the Committee of Livingstone College, with the object of putting before travellers or residents in unhealthy regions specimens of articles of outfit for the preservation of health, for treatment of accident or disease, and for other conveniences of travel. A most interesting collection of Livingstone relics was arranged, and several medicine cases and belts used by Sir H. M. Stanley, Emin Pasha, Nansen, Stairs, and Julian Price, were lent by Messrs. Burroughs, Wellcome and Co. for exhibition. Of special interest to medical men were some surgical instruments used by native surgeons in Persia. Among these were included two rough splints, which together with a wedge and bandage formed an apparatus for the reduction of dislocation. The general exhibits of medicines, clothing, food, and other articles, included a number of more or less familiar articles:

Tabloid medicine cases, made of teakwood for strength and durability, were exhibited by Messrs. Burroughs, Wellcome, and Co. for the students of Livingstone College.

Allenburys Foods, for use in tropical climates and on board ship, were shown by Messrs. Allen and Hanbury, who showed also a portable surgical electric lamp, measuring 4 by 5 by 3 inches, giving light for 500 examinations before requiring recharging.

Messrs. Oppenheimer, Son, and Co. showed some excellent leather medicine cases of convenient sizes for travellers, containing amongst many others palatinoids of quinine and of Warburg's tincture.

Messrs. Howard Lloyd and Co., of Leicester, showed a serviceable "Station" medicine chest, suggested by Dr. Harford-Battersby, forming a load for one man, and so constructed that the lid when opened forms a dispensing table.

Messrs. Howards and Sons, of Stratford, exhibited different preparations of quinine and its salts and other drugs.

The Alione Company, 17, The Broadway, West Norwood, showed an excellent gown for the sick and wounded; the gown when unfastened can be laid quite flat and readily fastened up without fatiguing the patient by any movement.

Bovril, Limited, exhibited the "emergency ration," containing concentrated foods specially made for soldiers and travellers, and used in provisioning troops in the present war in South Africa.

The Berkefeld Filter Company, Limited, showed a traveller's handpump filter, a simple and efficient apparatus for pumping water from any source and filtering it at the same time.

Newton, Chambers, and Co., Limited, showed Izal disinfectants, soap, and other preparations; and Mr. B. Kuhn, of the Chinosol Hygiene Company, exhibited many chinosol preparations, antiseptic powder, dressings, sanitary tablets, soap, etc.

Aerators Limited exhibited "Sparklets," by means of which liquids can be at once aerated. The Nao Food Company presented for inspection soups, essences, paste, and rations. Messrs. Keen, Robinson and Co., Limited, exhibited mustard, patent barley, etc.; and Messrs. Brown and Polson cornflour and Paisley flour. The Frame Food Company showed their preparations, and the Welford and Sons Dairy Company, Limited, milk preparations including humanised, sterilised, and peptonised milk. The Anglo-Swiss Condensed Milk Company exhibited "Ideal" milk, sterilised and unsweetened, and tins of cocoa and milk, coffee and milk, and chocolate and milk. Messrs. McCall and Co., Limited, exhibited examples of the Portable Food Company's consolidated soups and desiccated vegetables which are of such size and weight that a man can carry four or five days' rations about with him with ease. Cosenza and Company also showed a solidified soup put up in gelatine capsules, and known as Maggi's Consommé. The British Preserving Company showed samples of preserved dried and compressed vegetables and herbs.

Mr. Joseph Tucker exhibited many useful articles for tropical climates, among which may be mentioned a large and light solar topee, somewhat like a mushroom in shape. There were also garments made of silk khaki, and a folding combination washstand and bath of Willesden canvas.

The Jaeger Sanitary Woollen Company, Limited, showed many things of value to visitors to the tropics, notably woollen khaki, and sleeping caps and cholera belts,

Messrs. Silver and Co. exhibited double roof rotproof canvas tents and aluminium cooking utensils.

The Military Equipment Stores and Tortoise Tents Company, Limited, showed models of "Tortoise" tents, jointed stretchers, etc.

The Berthon Boat Company, Limited, exhibited several portable folding boats.

Among other exhibits of interest may be mentioned the "Explorers" boot, made by Mr. George Norris; cooking stoves for travellers, shown by Messrs. W. Poore and Company; the "Gem" fountain pen; the Blickensderfer typewriter; the "Ceres" despatch box for travellers; and folding chairs and tables of all kinds. Sextants, compasses, and a theodolite were shown by Mr. James Hicks; and various volumes and handbooks for travellers, published by Smith, Elder, and Company, and John Bale, Son, and Danielsson, were set out for inspection.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY JANUARY 6TH, 1900.

THE OFFICE OF REGISTRAR-GENERAL.

THE rules of the Civil Service regulating the retirement of officials must not long hence create a vacancy in the office of Registrar-General of England, and the medical profession will anxiously await the decision of the Government as to who shall be the successor to Sir Brydges Henniker. While the primary duty of the Registrar-General is to supervise the machinery necessary for securing a permanent register of every birth, death, and marriage in England and Wales, it has long been seen that the system adopted in his department, and the opportunity this system gives for the statistical study of the causes of mortality must play a large and important part in aiding the progress of knowledge of medicine, and especially of preventive medicine. When Dr. Farr was appointed Superintendent of Statistics in 1839, the material for this purpose did not exist, and it is due, no doubt, in the main to his appreciation of the use to which the records of the department could be put that the student of preventive medicine has at the present time so much opportunity for learning the lessons which death teaches to every generation. In Dr. Ogle, and later in Dr. Tatham, have been found worthy successors to Dr. Farr, and it is interesting to observe that both these gentlemen had themselves held important positions as medical officers of health before their selection for the post of Superintendent of Statistics.

The records of the Registrar-General have become increasingly used for the purposes of administrations which have been instituted as the result of the growing desire to ensure the prolongation of life, and to lessen the degree in which disease and death tax the national resources. Especially are the publications of the Registrar-General utilised by the Local Government Board, the central health authority of England and Wales, and the numerous local health services which now exist throughout the country, and undoubtedly as the efficiency of these services grows will there be greater demand that the work of the Registrar-General's department shall keep pace with the requirements of the sanitary administrations of the country.

The time must indeed eventually come when it will be necessary to determine whether the department of the Registrar-General should not be more intimately allied with the central health department of England and Wales than at the present time. Already the relationship between the two is recognised. The department of the Registrar-General is in some respects a sub-department of the Local Government Board, and the Registrar-General addresses his reports to the President of that Board. In England we are as a rule prepared to let such changes as we desire come gradually, being prepared to leave alone machinery which is in any degree working well. There will be, however, opportunity very shortly to make within the department of the Registrar-General some modification of existing conditions, and to give effect to an opinion which has long been held by those who have watched the growing needs of the country in respect of vital statistics.

It is obvious that the civil registration of births, deaths, and marriages needs supervision by a capable administrator. It is equally true that the co-ordination and analysis of the statistics of births, deaths, and marriages must be guided by a man possessing medical knowledge, and intimately cognisant of the needs of those who will use these statistics. There is no reason why these capabilities should not exist in one person; but while the superintendent of statistics, who is necessarily a medical man, may be well expected to show business capacity necessary for the management of the department, the administrator cannot, unless a medical man, be expected to possess the knowledge required for dealing with what are in the main medical statistics. The solution of the difficulty is undoubtedly to be found in the appointment of a medical man as Registrar-General, and to require that he shall exercise such administrative functions as are now vested in that office. At the time of the retirement of Major Graham, the late Registrar-General, some twenty years ago, the necessity for this change was raised, and in view of Dr. Farr's services there seemed a special fitness in Major Graham's succession by the Superintendent of Statistics. But Dr. Farr was already more than 70 years of age, and was not in strong health, and the opportunity of thus recognising Dr. Farr's past work was lost. During the last twenty years the march of events has continued to emphasise the importance of the work of the Superintendent of Statistics, and the desirability of the officer who is the Superintendent of Statistics being the head of the department. The matter is, indeed, largely one of proportion. The Registrar-General is now the figure-head dependent upon the Superintendent of Statistics for the design and discussion of these statistics. There is much reason why the dignity of the office of Registrar-General should be conferred upon the Superintendent of Statistics, and recognition thus given to the officer to whose professional knowledge the department is most indebted for its reputation and for its usefulness.

The time has long since passed when the possession of medical knowledge was deemed to be held in substitution for the knowledge of business required for the purposes of administration. Medical men have made their mark as administrators, and it is only necessary in this connection to refer to the names of Simon, Buchanan, and Thorne, to show the results which are thus obtained by the employment of medical men in administrative capacities.

We may well ask whether these results would have been obtained, whether the sanitary work of the kingdom would have made as much progress if the head of the Medical

Department of the Local Government Board had been selected from the clerical staff with one of the able public servants we have mentioned as his adviser. If it were necessary to go further it would be sufficient to point to the many medical officers of health who have organised the sanitary administration of large communities with admirable success, among whom not the least distinguished is Dr. Tatham, the present Superintendent of Statistics, who was formerly the Medical Officer of Health of Manchester. Or we may refer to the fact that the Registrar-General of Ireland is now a medical man, and that Dr. Grimshaw's services as an administrator as well as a medical statistician are universally recognised.

We are satisfied that if England should now follow the example of Ireland, and appoint a medical statistician to be Registrar-General, such an appointment would be far-reaching in its beneficial results, and would ensure that the vital statistics of the country are well adapted for the practical use of the numerous administrations to whom they are a necessity.

THE ORIGIN OF URIC ACID.

The way in which uric acid originates under normal conditions has always had a direct practical interest for the physician on account of its important pathological bearing. About ten years ago considerable new light was thrown on the subject by the investigations of Mares and of Horbaczewski. Mares showed that the greatest increase in uric acid excretion occurs in a few hours after a meal, whereas general nitrogenous katabolism, as indicated by the amount of urea excreted, increases more slowly, and does not reach a maximum until some hours later. Horbaczewski formulated the now well-known theory that this was due to a digestive leucocytosis, and the consequent increased liberation of nuclein within the body. He supported this view by pointing out the close chemical relations which obtain between uric acid and the so-called nuclein or purine bases (adenine, xanthine, etc.), which are obtained by the decomposition of the nuclear material. He showed experimentally that the spleen pulp in a still living condition is able to oxidise these bases, and so form uric acid, and he recorded numerous observations to demonstrate the connection between the number of leucocytes and the rise in the amount of uric acid excreted. This theory was widely accepted, and it certainly fitted in well with certain pathological phenomena—for instance, the increase of uric acid in the urine in leucocythæmia.

Numerous experimenters, however, questioned the theory, and found that it could not stand all the tests to which they submitted it. For instance, it was shown that a well-marked digestive leucocytosis may occur after a diet of egg white, or even after a non-nitrogenous meal, and yet there is no rise in uric acid excretion. The theory was, therefore, modified by supposing that the acid arose from the breakdown of the nucleins of the food independently of any intermediate leucocytosis; the striking increase of uric acid after a meal of thymus gland lent considerable support to this view. But even then there were sceptics who were inclined to deny the origin of uric acid from nucleins altogether. It was shown that the amount of disintegration of the leucocytes could be measured by the amount of phosphoric acid secreted, for this substance is also a product of the breakdown of nuclein; the proportion of the uric and phosphoric acid does not always run parallel, and in a case of leucocythæmia recorded by Milroy and Malcolm there was even a diminution of phosphoric acid The balance of opinion, however, is distinctly favourable to the view that one source of uric acid is nuclein; it may be the nuclein of the food; it may in other cases be the disintegration of the nuclein of leucocytes; and a third possibility, which does not seem to have been directly investigated, is that the katabolism of other animal cells such as those of secreting glands may also contribute to the formation of the acid.

One of the most recent contributions to this controversy is contained in a paper by Mr. J. Smith Jerome.[1] He adduces further proof of the origin of uric acid from nuclein and its derivatives, particularly from those contained in the food, and answers various objections raised to this view by Hopkins and Hope.[2]

These objections and Mr. Jerome's answers, in each case supported by experiments, may be succinctly stated as follows: (1) The theory depends almost entirely on experiments with calf's thymus. This is not so, for ingestion of pig's pancreas, herring roe, and Liebig's extract also increases the excretion of uric acid. (2) The results of feeding experiments with nuclein itself are contradictory, and so inconclusive. Mr. Jerome gives a series of fresh experiments on himself, which show a distinct rise of uric acid after taking pure nuclein. (3) As nuclein resists digestion with gastric juice, it cannot be expected to supply the uric acid which is excreted a few hours after a meal; and the disproportion between the small amount of nucleo-proteid in muscle, and the relatively large increase of uric acid after a meal of flesh cannot be explained by the nuclein theory of the origin of uric acid. The answer to this is that any disproportion between the excretion of uric acid after flesh diet and the amount of nuclein in muscle is probably to be explained by the presence in such diet of alloxuric or purine bases, especially of hypoxanthine in sufficient quantity to account for the rise produced. The presence of such bases in flesh diet would account also for the early rise in uric acid after a meal, and will further explain the increase found when pepsin hydrochloric acid (that is, nuclein free) extracts of thymus gland are taken.

He therefore considers that there is evidence that uric acid may be formed from nucleo-proteid, nuclein, and one variety at least of alloxuric base, but there is at present no proof that it can arise in man independently of a substance containing a purine group.

It would, however, be rash for us to conclude that this is the final verdict. The conclusion that uric acid may arise from nuclein under certain circumstances appears to be pretty well proved. But this does not preclude other methods by which it may also be formed. Metabolism in the body is much altered from its normal course in various pathological states—for instance, in gout. We publish to-day a very suggestive article by Dr. Chalmers Watson which gives point to this remark. He shows very conclusively that Garrod's original theory of gout needs very consider-

[1] *Journal of Physiology*, vol. xxv, p. 98.
[2] *Ibid.*, vol. xxiii, p. 271.

able modification, and suggests the advisability of devoting more attention to the histo-chemical characters of the blood in searching for the cause of disordered metabolism. This branch of investigation has not been neglected by physiologists. Milroy and Malcolm[3] in their more recent contribution to the subject have realised this, and have already accumulated some evidence from the changes which the granular leucocytes undergo both in the blood and marrow. It is in this direction that we must watch for further important developments which will in time elucidate the difficult problems it has been the object of this brief article to present.

THE POLITICAL ASPECTS OF MEDICAL TOPICS.

THE subjects discussed by Dr. Farquharson, M.P., in his presidential address to the Aberdeen, Banff, and Kincardine Branch of the Association are of interest to the whole medical profession. As Chairman of the Parliamentary Bills Committee of the Association, Dr. Farquharson is well acquainted with the questions which at present engage the attention of that body, and is in full sympathy with the general policy of the medical profession, while as an experienced parliamentarian he has ample knowledge of the limitations which attach to private members, and especially, perhaps, to medical members who have their own constituencies to represent and their own party to support, at the same time that they extend a helping hand to the profession which is glad to look on them as the connecting links between the body politic and the body medical. If these complex relationships were always kept in mind there would be less carping criticism and more generous appreciation of the services which have been so often and so freely rendered to professional organisation and advancement by the small band of medical men who have a place in the national Legislature.

Fortunately, in this matter the best interests of medicine are also the best interests of the public. One of the latest and most striking examples of this fact is to be found in the results which have followed the due recognition of the dignity and status of military medicine, as referred to by Dr. Farquharson. The whole-hearted enthusiasm with which so many civilian members of the profession have offered themselves for service in South Africa is in one of its aspects a most significant response to the new policy of the War Office with regard to matters medical—a policy which it may safely be claimed was the outcome of the education of that body by the persistent aloofness of the profession, backed by the repeated representations of the Council of the British Medical Association.

Dr. Farquharson very naturally referred to recent legislation on vaccination. He sees no reason why the "conscience clause" should be extended to Scotland, and in this we fully agree with him. In England the matter was admittedly one of expediency. The purpose of the Royal Commission was to promote vaccination in England, and they arrived at the conclusion that the carrying out of this purpose would be aided by devising some means to checkmate the Antivaccination League's policy of cheap martyrdoms. In Scotland, however, there is no agitation against the law such as has so long existed in England. Parish councils have not played into the hands of faddists by that unwise persistence in frequently repeated prosecution of individuals which did so much harm in England, and now the Scottish Local Government Board is taking an eminently sensible and discreet course in its advice to local authorities to consider carefully the public effects likely to follow such repetition of legal proceedings as they may be tempted to enter on by the wrong-headed defiance of cranks, who may most appropriately be dealt with by a policy of contempt. When the five years' operation of the Act of 1898 is completed, it will be time enough for Scotland to consider how much or how little may be learned by it from the *experimentum* which has been carried out in the *corpus vile* of her Southern sister.

Other questions touched with a light hand by Dr. Farquharson were security of tenure for Scottish Poor-law medical officers, and reform of the law as to death certification. He holds that the only chance of success in such matters is to keep pegging away at the Government, to take up the attitude of the importunate widow, and to add to the determination not to be beaten an attitude of confidence in ultimate success which will impress the powers that be with the hopelessness of permanent resistance to our demands. All this is very shrewd advice, and will no doubt be taken to heart by those who heard and those who now read Dr. Farquharson's very useful and practical address.

[3] *Ibid.*, vol. xxv, p. 106.

HOSPITALS FOR SOUTH AFRICA.

WE learn that the offer of Lord Iveagh to provide at his own cost a completely equipped hospital for the lines of communication in South Africa has been accepted by the War Office. The hospital will be known as the Irish Hospital, and the chief surgeon will be Sir William Thomson, Surgeon to the Richmond Hospital, Dublin, and lately President of the Royal College of Surgeons in Ireland. The staff will consist of four surgeons, six dressers, and there will be in addition about sixty drivers and orderlies, with the usual train of tents, waggons, etc. The hospital, we are informed, will be provided with its own transport, and it is hoped that everything will be ready to start on January 20th. We also learn that the generous offer of Mr. Langman to equip a station hospital of 100 beds for the lines of communication has also been accepted by the War Office, and that Mr. Robert O'Callaghan, Surgeon to the French Hospital in London, will be the senior surgeon.

THE MEDICAL PROFESSION AND THE WAR.

AN appeal to medical students and to the younger members of the medical profession to take their part in the call which has been made upon the nation is published in another column. It is signed by a medical and a surgical teacher both well known and deservedly popular with medical students, and by three medical men representing the Militia, the Yeomanry, and the Volunteer forces respectively. The medical profession has never shown itself behindhand at moments of national emergency, and it has not failed at the present crisis, for the number of offers of medical service made to the War Office has far exceeded even the large demands of the last few months. It is thought, however, that medical students may at this time offer themselves as recruits to the Militia, the Yeomanry, and the Volunteers, and we have no doubt that the appeal will be responded to. It has become the duty of every citizen capable of

bearing arms to train himself in their use, and with the facilities which now exist this can be done in hours of recreation. Even though no call may be made for actual service, those who respond to the present appeal will have the satisfaction of knowing that they have contributed to place the country in a condition suitable for defence, while at the same time relieving others who may be more suitably employed in South Africa. As was pointed out a fortnight ago, it is particularly desirable that the condition of the bearer companies attached to the brigades of Volunteers should be looked into, and it is probable that they will need strengthening. Medical students joining the corps in the first place as ordinary recruits would, no doubt, from the nature of their special training, soon become particularly competent to join the bearer companies, and it is understood that there will be no difficulty in providing officers to give the necessary instruction. The Artists' Corps, amongst others, has always been very popular with medical students, and we know that its energetic commanding officer, Colonel Edis, will be glad to hear of new recruits.

"RECALL TO SERVICE."

We continue to receive letters from medical officers of the army on the point whether volunteering to serve on invitation means, under the terms of the Royal Warrant, the same thing as compulsory recall. Without pretending to give any authoritative opinion, we can only repeat that we presume that the fact that such volunteers cease to draw retired pay, and receive the full pay and allowances of their rank, would bring them under such conditions regarding future pension, or even promotion, as may exist within the four corners of what seems to us not very explicit regulations. One correspondent declares that voluntary invitation was substituted for compulsory recall in order that certain officers on full pay might not be superseded by the intrusion of their seniors of the reserve list. We know nothing of this, nor of the reasons for substituting voluntary for compulsory recall; but we refuse to believe there has been, or will be, any intentional attempt to twist the substitution of one form of recall for the other to the detriment of those who do their duty by at once coming forward to serve in the present national crisis and emergency.

THE FIRST FELLOWS OF THE COLLEGE OF SURGEONS.

In 1843, when the Fellowship was created, 300 Members were made Fellows. By the death of Sir James Paget the number of survivors is reduced to four. They are Mr. Carston Holthouse (now dwelling in retirement at Richmond, Surrey), Consulting Surgeon to the Westminster Hospital, and a Member ever since 1833; Dr. Dennis Embleton, Consulting Physician to the Newcastle-on-Tyne Royal Infirmary, one of the last of the students of the United Borough Schools, and a Member since 1834; thirdly, the celebrated Professor of Anatomy to University College, Mr. George Viner Ellis, who took the Membership in 1835, and now lives in retirement in Gloucestershire; and, lastly, Mr. Spencer Smith, Consulting Surgeon to St. Mary's Hospital, and a Member since 1837. Thus Mr. Holthouse beats the record, having been nearly sixty-six years a Member, for he qualified on April 3rd, 1833. Sir James Paget took the diploma of Member in 1836, so that he came fourth, after Mr. Ellis. Amongst the first nominated Fellows were Sir Benjamin Brodie, Samuel Cooper, Curling, Sir Prescott Hewett, W. Hey (of Leeds), Hilton, Lane, Liston, Sir W. Lawrence, Sir Richard Owen, Partridge, Richard Quain, Flint South, Syme, and Benjamin Travers. The first in order of Fellows by examination still living is Mr. Luther Holden, whose fame as one of the best teachers of practical human anatomy also lives in the hearts of hundreds of his pupils.

SALE OF FOOD AND DRUGS ACT, 1899.

The Board of Agriculture is active in the matter of circulars. In November it addressed, or at least dated, no fewer than three circulars to authorities on its new Act. A fourth circular on the Act is dated December 30th. The three earlier circulars deal (1) with the special powers of the Board in itself taking samples where it seems to it to the general interests of agriculture so to do, or where the local authority is remiss or half-hearted in the matter; (2) with the restrictions on the sale of margarine, so dear to the agricultural mind, and (3) with the sections of the Act which require the labelling of carts and milk-cans of separated or skimmed condensed milk and of mixtures, with the purchase of articles sold in tins, the division of samples, obstruction of officers, penalties, procedure, warranty and false warranty, and some other matters. In its newest circular the Board is concerned more especially to press upon local authorities their duties. The 1899 Act enables the Board to assume the functions of a negligent authority and act instead of it, but at its expense. It is probable this power will cause a considerable flutter in some local dovecots. The work done hitherto in many districts has been ridiculously small and authorities are urged to make their examinations systematic and efficient. In 42 English boroughs the samples taken in 1898 did not in any case exceed 20, and in other large centres the number taken has been so small as to have little influence in checking adulteration and protecting the honest trader against unfair competition. Too often the efforts of authorities have been confined to the examination of only one or two articles. The Board wisely urges the appointment of trained inspectors for the purchase of samples. "Inexperienced officers are unable to exercise sufficient discrimination, and inconvenience and waste of labour and energy thereby ensue." The Board promises to acquaint local authorities with adulterations discovered at the Custom House, so that it may be on the look-out for the sale by retail of these articles in the districts to which they have been consigned. Additional inspectors are to be appointed by the Board, who will be able to confer with authorities in regard to adulteration and the best methods of carrying out the Acts. Our only serious quarrel with the new Adulteration Act is on account of its feebleness. The powers for preventing the sale of beef fat instead of butter are excellent. Would that the power of dealing with other adulterations more important in their influence on the public health had been equally great.

PHARMACEUTICAL CHEMISTS AND THE COMPANIES ACTS AMENDMENT BILL.

The attitude of the pharmaceutical chemists towards the proposed amendment of the law with regard to company practice appears to be becoming more defined. The President of the English Pharmaceutical Society, who in such a matter cannot be supposed to be speaking for himself alone, has addressed a memorial letter to the Board of Trade in which he "ventures to urge that inasmuch as a limited liability company could not be examined and registered in accordance with the provisions of the Pharmacy Acts, it should be unlawful for any such company to assume or use any title implying registration under those Acts, and that it is not desirable in the public interest that any person not registered under the Pharmacy Acts should be permitted to exercise any control over the retailing, dispensing, or compounding of poisons." This pronouncement, which is stated to represent generally the views of the persons entitled to practise pharmacy in Great Britain, marks the final and definite abandonment of the attempt to prohibit *in toto* the practice of pharmacy by limited companies; and, as a necessary corollary, of the intention once entertained of pressing that pharmaceutical chemists should be included in

the medical clause which does go this length. It is therefore important as clearing the ground for those who are urging the Government to carry forward the medical clause, and we wish the chemists every success in their endeavour.

ALLEGED SAFETY OF CHLOROFORM IN PARTURITION.

THE common use of chloroform to assist in parturition has caused the erroneous assumption that women in childbirth enjoy an immunity from the toxic effects of the drug. Simpson's early dicta upon the safety of chloroform, although unhappily not confirmed by experience, have survived among many when applied to obstetric cases. Kidd, who wrote some of the first papers upon the subject, collected reports of various deaths under chloroform which have occurred in women during childbirth, and, as we have more than once insisted, stated that chloroform has no selective action on persons, and is just as liable to kill during an obstetric as during any other operation. That deaths are comparatively infrequent is due to causes other than an assumed capricious departure from a physiological law. Women in childbirth are seldom brought completely under the influence of chloroform, they are not allowed to pass beyond the second degree of narcosis, in which no paralysis of the respiratory centres can occur. The patient has no fear of the chloroform, but readily takes it, and does her best to breathe freely in order to be rid of her pains. Her mind is set on anything rather than her possible extinction by the anæsthetic; so she does not hold her breath nor struggle, as by so doing she would increase her labour pains and cause herself suffering. However, deaths do occur sometimes through feebleness of the heart and circulation, seldom, if ever, from vasomotor paralysis, and not often from respiratory paralysis, since, as we have pointed out, deep anæsthesia is not desirable and is seldom obtained. In a recent death the medical attendant is reported to have stated that the fatality was due to respiratory paralysis, that is, to profound action of chloroform upon the medullary centres. The patient was a primipara, the wife of a miner, and was at her own request given chloroform, the labour being delayed; 2 drachms were it is said given, and respiration failed. We are not told how the anæsthetic was exhibited, or what posture the woman was in while inhaling it, it is therefore impossible to draw any moral from the case beyond the very obvious one that chloroform is never without danger, especially when, as often happens, the medical attendant has, single-handed, to employ the anæsthetic and deliver the patient.

PERSONAL INFECTION IN TYPHOID FEVER.

DR. JOSEPH PRIESTLEY, the medical officer of health, has recently reported to his authority upon an exceptional increase in the number of cases of typhoid fever in the parish of Lambeth. He has traced the source and spread of three localised outbreaks, and considers the facts noteworthy and interesting from an etiological point of view, as showing that in all probability typhoid fever spreads by actual contact oftener than is generally supposed. The first group of cases commenced in a woman whose condition was not diagnosed until the fever had run a few weeks of its course; largely owing to this circumstance the disease spread (1) to a child living in the same house; (2) to two children living in the opposite house, one of whom communicated the disease to a young man who shared the bed with him; and (3) to a woman, a friend of the first patient, who lived two doors away. The second group of cases commenced in a man who sickened with obscure symptoms which did not admit of diagnosis until some four weeks had elapsed. (1) A lodger in the same house became infected; (2) a sister living in a street close by; (3) a friend living in the same street; (4) another friend in the same street, whose daughter subsequently fell a victim, and (5) possibly two other persons living in the same street. The third group began in a man who probably died of the disease without its true nature being diagnosed. His clothes were sent to his mother-in-law to be washed, and she became infected (1); as did also his brother-in-law (2), his sister-in-law (3), and his wife (4), all of whom lived in the same house. A friend's child (5) living next door became infected through the sister-in-law, and a boy (6) living in the same street, and who was a schoolmate of the patient's brother-in-law, is thought to have contracted the infection from the latter. Careful inquiries failed to trace any of the infection to milk, water, or shellfish, and by a process of exclusion Dr. Priestley is driven to regard the spread of the disease as due to direct contact from person to person or to indirect contact—through infected clothes, food, etc. In conclusion, Dr. Priestley pays a just tribute to the assistance which the Widal reaction affords in making a prompt diagnosis of the disease. It is the experience of all medical officers of health that a large percentage of the notifications of typhoid fever do not reach them until after the patient has been ill for several weeks. It is these cases, which remain unrecognised often for long periods, which are mainly responsible for spreading the disease, and, where gratuitous means are provided to medical men for clearing up the nature of such doubtful cases—as at Lambeth and elsewhere—a serious responsibility attaches to those who do not avail themselves of it.

CELLAR DWELLINGS.

DR. CHARLES PORTER, Medical Officer of Health for Stockport, has presented to the Sanitary Committee for the borough a special report, in which he states that during recent years about 40 of the cellar dwellings in Stockport have been closed and there remain at present some 157 which are used as dwellings. He reports that "whilst it is true that cellar dwellings under the best of circumstances are not desirable places of residence, and that some of those which exist in the borough ought to be closed and are not fit to live in, it must not be supposed that Stockport is alone at fault in this respect, as cellar dwellings exist in most other large towns, and, under the more respectable name of 'basements,' are not entirely unknown even in London (for example, Fulham) in some of the large modern buildings which are let off in flats. It is further to be noted that many of our cellar dwellings, although they may not strictly fulfil the requisitions of the Public Health Act, are nevertheless fairly well lighted and ventilated, and kept creditably clean by the aged single persons by whom, in the great majority of cases, they are inhabited. In cellar dwellings, as in others of a better type, the personal element has much to do with their fitness or unfitness for habitation, for I could take you to cellars where extreme poverty and advanced age have alike failed to overcome instincts of cleanliness and decency which do the highest credit to the inmates. On the other hand, an exactly similar cellar, perhaps next door, may be a foul and filthy den. Our recent systematic inspection has, I regret to say, caused alarm and anxiety to scores of poor worn-out old souls who are finding a last asylum in these cellar dwellings. Many of them have lived there for years in what they consider comparative comfort, and in a surprisingly large number of cases their only apparent means of subsistence is a weekly dole of 2s. 6d. to 3s. received from the Union. Out of this they pay from 10d. or 1s. to even 1s. 6d. per week rent, and how they keep body and soul together on the remainder passes one's comprehension. Some of these poor creatures may have themselves to thank for their present plight. Others, I am convinced, are the victims of age and failing health, and time after time they have assured me that they cannot pay more than the rent of their cellar, and have begged to be allowed, for the short remainder of

their days to enjoy their liberty and such scanty comforts as they can get, rather than be driven to the workhouse they have struggled to avoid. Surely there is something sadly amiss somewhere when age brings such a penalty, and one feels that if in every case the strict letter of the law is to be enforced the sanitary authority and their officials will need to be men totally devoid of the milk of human sympathy and kindness. I therefore venture to ask you to continue to compromise between strict legal duty and other considerations by shutting the cellars where these old people live the next time each tenant leaves and not before. In the meantime I should like to ask the question: 'Is it not possible in any way to provide as an ordinary commercial speculation dwellings in which deserving old people could get a healthy room for 1s. a week?' How much better would it not be if these poor persons could go up two or three steps to a well-lighted room, instead of down twice the number to a dark and often damp cellar." The sentiments expressed in Dr. Porter's report do him credit, and there must be few who will not sympathise with the view, which was shared by the Committee, that the special circumstances under which many of these dwellings are occupied warrant the exercise of some leniency on the part of the sanitary authority.

WASHINGTON'S DEATH.

Dr. S. Solis Cohen, of Philadelphia, a well-known physician and laryngologist, reviews in the December issue of *Lippincott's Magazine* the subject of George Washington's last illness, and makes observations on the treatment of the case. He shows from a careful and critical survey of the various clinical facts and data that the cause of death was acute œdematous laryngitis, a disease that was hardly recognised and but imperfectly understood at the time, but concerning the character of which the diagnosis made by the physicians who attended him at the time—"cynanche trachealis"—was singularly correct. The essential fact that it was a trouble of the tracheal and upper air passage was realised by his physicians, but as the laryngoscope was not invented until sixty years later, a more precise localisation of the mischief could not be made. Intubation, also a recently discovered mode of treatment, was out of the question. "In the absence of knowledge that has since been given to the world," says Dr. Cohen, "what was Washington's trusted friend and attendant, Dr. James Craik, to do? One thing first of all, to bleed the patient freely, in the hope that by mechanical and nervous influence the general emptying of the vessels might bring about the renewal of the obstructed circulation in the larynx. Secondly, to try to drain the water of the blood by means of intestinal discharges and free sweating; hence the calomel and the antimony, which, indeed, served their immediate purpose. Thirdly, to remove serum from the blood in the neighbourhood of the inflamed part; hence the blister. Fourthly, to try to allay the pain and oppose the local effects of cold by heat and sedative applications; hence the inhalation of steam and vinegar." Modern research, he observes, has given no better agents than some of these, but the principles which influenced and guided the treatment were good. It is questionable whether, under modern treatment, Washington's life could have been saved. It is probable that his illness was complicated by septic infection, and the fatality of the affection which carried him off is shown by the fact that of 41 cases of this illness reported in the last ten years, only 29 recovered.

INFLUENZA IN LONDON.

There has been a great increase in the number of cases of influenza in London during the last few weeks, and practitioners in many quarters of the town are extremely busily engaged. The returns of the Registrar-General for last week reflect this prevalence of the disease by a serious increase in the number of deaths from influenza in London. The deaths directly attributed to this disease, which had been 38 and 69 in the two preceding weeks, further rose to 193 during the week ending Saturday last, December 30th, 1899. Of these 193 fatal cases only 24 were of persons under 40 years of age, while 63 were of persons aged between 40 and 60, and 96 were of persons aged above 60 years, of which 30 were of persons aged upwards of 80 years. The deaths referred to diseases of the respiratory organs also showed a marked further increase, and numbered no fewer than 1,172, being more than double the average. The information at disposal is not sufficient to show to what extent influenza is prevailing in other parts of the country, but we hear of wide prevalence, apparently in a rather mild form, in East Anglia.

DENTAL SURGEONS TO GENERAL HOSPITALS.

We learn that a memorial has been presented to the Board of Management of the London Hospital, signed by about four-and-twenty gentlemen who hold, or have held, the office of dental surgeon to metropolitan general hospitals, urging that all candidates for these appointments should be required to be registered both upon the *Medical* and *Dentists Registers*. There seem to be several good reasons why such a course should be adopted; hospitals require of their surgeons the possession of the Fellowship (which is as a matter of fact possessed by several of the dental surgeons), and there seems no reason why in the case of a dental surgeon they should be content with the Licence in Dental Surgery, which is the minimum qualification which entitles a man to practise dentistry. Then again he is concerned much more with the teaching of medical than of dental students, and he will not alone be in a better position to avail himself of cases which lie on the border between surgery and dentistry, but he will teach with more authority and influence if he be qualified in medicine and surgery. The memorial therefore appears to be well timed, and its arguments well grounded. It will without doubt have much weight with the body to which it is addressed.

MATERNAL IMPRESSIONS.

Dr. James G. Kiernan, of Chicago, who contributes a paper dealing with the above subject in the *Journal* of the American Medical Association, December 9th, 1899, points out that maternal impressions have been hitherto considered from one standpoint only, and that is their supposed cause and its mode of action. Dr. Spitzka, who was a staunch disbeliever in the popular theory of maternal impressions, declared that his scepticism had been shaken by a recent demonstration of specimens of "newly-hatched chickens with a curved beak like a parrot and the toe set back as in that bird. The hens in the yard where these monstrosities were hatched had been frightened by a female parrot which, having escaped, fluttered among them before the eggs were laid, and greatly frightened the hens from whose eggs the malformed chickens were hatched." This would seem *primâ facie* to support the theory of maternal impressions, but the fact is that these malformations are simply arrests of development. Birds have many anatomical characteristics in common with the reptiles, whence Huxley has included the two under the general group *Sauropsidæ*. During the period of development within the egg, the fœtal chick passes through a reptilian phase, and at the close of this period begins to assume the more strictly avian characters. The conditions of toe and beak referred to are passed through at this stage, and if owing to some cause or other development is partially arrested, the result may be such as was seen in the abnormal chickens alluded to above. Dr. Kiernan then refers to two cases shown by him at the Chicago Academy of Medicine, one of which was an infant born with a conformation of head and face resembling somewhat that of a calf. Such

cases presented features which might be a "basis for a myth like that of Europa and the Bull, or that of the extravagant antics of Pasiphae, which produced the Minotaur." In one of the cases just referred to the neighbours attributed the peculiar condition of the infant to a fright by a bull, which occurred at the eighth month of pregnancy. The bull-like face in this case is the result of an arrest of development of a much earlier period than the eighth month, and is probably the result of errors of development occurring probably in the first month of fœtal life. In the second instance, namely, the birth of a double-headed monster, the condition was attributed to a fright during the seventh month of pregnancy on seeing a picture of a double-headed monster at a travelling show. It is perfectly clear, adds Dr. Kiernan, that "this fright could have had no influence whatever in the production of the monstrosity." The third case was a cyclops. Cyclopea is the result of arrested development of the ordinary pair of eyes, and undue development of the median pineal eye, the latter condition being still persistent in some lizards. Dareste has shown that the production of such a monstrosity is associated with other important teratological changes, such as atrophy and displacement of the olfactory apparatus, changes in the structure of the mouth, and arrests of development of the cerebral vesicles, the determining causes of which must be exerted very early in the life-history of the embryo. In this case the mother, who was a girl of 17, visited a circus when in the eighth month of pregnancy. This was followed by a dream about animal monsters, and to this dream was ascribed the monstrosity. It is obvious, of course, that the dream exerted no influence whatever in bringing about the fœtal monstrosity, the origin of which must have dated back seven months at least. It must be remembered that profound shock, destitution, and want of food act on the mother, and may influence the fœtus deleteriously. Hence the significance of the fact that of 92 children born in Paris during the siege of 1870-1, 64 had slight mental or physical anomalies; the remaining 28 were all weakly; 21 were weak-minded, and 8 were subjects of moral imbecility. In Berlin the financial crisis of 1875-80 was followed by an increase in the number of idiots born. Not only do poverty and want produce anæmia and malnutrition of the fœtus, but profound shock disturbs the whole bodily metabolism, and it is probable that the nutrition of the mother might thereby be so disturbed as to result in a partial toxæmia, which would tend to check or disturb the healthy development of the fœtus *in utero*. In this way a nexus of cause and effect can be traced, but facts which can be thus explained give no support to the view of mental impressions popularly entertained.

ASEPTIC BARBERING.

THE barber's shop has for a considerable time lain under grave suspicion of being a medium for the transmission of sycosis, syphilis, and other infective diseases of the skin and hair. Many years ago an elaborate antiseptic vitriol was prescribed by law on professors of the tonsorial art in certain parts of Germany. Efforts in the same direction have more recently been made in France and elsewhere. In the United States public opinion on the subject is still more advanced. In Missouri quite lately a new law has come into effect under which barbers must pass an examination and be duly licensed before they are allowed to operate either with the scissors or the razor. They are also compelled to adopt antiseptic precautions in their ministrations. Maryland does better still. An aseptic barber's shop was opened some time ago in Baltimore. The following are the details of the procedure employed in an "aseptic shave" in this establishment as given in the *Philadelphia Medical Journal*: 1. Chair put in position and gown properly adjusted. 2. Razor is stropped and then sterilised before using; cup, shaving brush, hair brush, and combs are sterilised each time after being used. 3. Hands are washed with Castile soap (all soap is removed by rinsing with plain water), then the hands are immersed in an antiseptic fluid, and wiped on a sterilised towel. 4. Sterilised towels are taken from sterilised bag, and towel adjusted around customer's neck. 5. Sterilised cup and brush are used in making the lather, and then the barber proceeds to shave. 6. The face is washed with a sterilised towel taken from sterilised bag. 7. Powder is applied on the face by dipping end of sterilised towel in powder box, and then rubbed on the face and removed with end of sterilised towel; the towel is not to be redipped in powder after being once used. 8. Proceed to dress hair with sterilised hair brush and comb. 9. The barber's sleeve must be tight fitting, and about 3 inches above the wrist.

A CONVERTED "FRUITARIAN."

MR. HECTOR WAYLEN, who not long ago was a militant "fruitarian," and taught that fruits and nuts were the "natural and ultimate food" of mankind, has had his eyes opened to the error of his dietetic ways, and frankly confesses the fact in the *Bradford Truth Seeker*. Since 1894, when he preached vegetarianism in Bradford, he has travelled round the world, has lost his health and slowly recovered it, has studied many things of which he was ignorant—among them, as we gather, the philosophy of food. For about eight years he was a vegetarian of the strictest kind, wore sandals, went without a hat, and tried hard to nibble beech nuts, thinking that by indulging in these eccentricities he was returning to Nature. But in process of time he was given light to see that a man can be natural without doing unnatural things. It dawned upon him that man is physiologically somewhat different from beasts, and that because a monkey can do something it does not follow that it is well for man to go and do likewise. His mental vision improving, he saw things that had been hidden from him before. He discovered, for instance, that "vegetarians as a rule are not a healthy folk. Either they present a wizened and emaciated appearance, or there is a tendency to flabbiness. They have poor circulation, and are liable to chills. They suffer from dyspepsia and anæmia; bad breath and flatulence, proceeding from a foul stomach, are noticeable among them. The liver and kidneys are commonly affected, and altogether there is a marked want of vitality." Mr. Waylen now believes that the Anglo-Saxon race of to-day flourishes best upon a diet of flesh foods, starch foods, dairy products, fresh fruits, and green vegetables. Vegetarians, he says, burden their digestive organs with masses of crude stuff, practically deprive themselves of fats and oils, and then think—while they daily grow thin and nervous—that they are improving in health. Carrying the war into the enemy's country, he goes on to say that when the human body is starved it begins to feed upon itself as a camel does upon its hump, and vegetarians are thus themselves guilty of a species of cannibalism. For nearly a year after his breakdown he used to lie awake for days together from sheer inability to sleep. It was not till his doctor insisted on meat three times a day, with beef-tea in addition, that he took a turn for the better. Life had become a dreary, crawling dream. To think or speak was a pain. Vegetarian advisers had failed to diagnose his condition, and, feeling this to be the case, he sudden determined one morning to give up the whole thing, if not permanently, at least as a temporary measure. Mr. Waylen's experience has led him to the sensible conclusion that we are not called upon to apologise for the cosmic process. What we have to do, he says, is to find out exactly what the laws really are, to conform ourselves to them, and the sooner we can do this the better it will be for us. The practical point is that we have

work to do in this world, and cannot do it without health, and if we find that animal food is essential to health, we must kill and eat. He does not wish to imply that vegetarianism is always and necessarily a mistake. Though unsuited to a normal diet, it may be useful as a course of medical treatment; and this may account for many cases in which it appears to have been beneficial. We congratulate Mr. Waylen on his conversion to sound notions on the important matter of diet, and hope his recantation may have an awakening effect on the "fruitarians" who still entertain the delusions which he has renounced.

THE UNIVERSITY OF LONDON SEAT.

The acceptance by Sir John Lubbock of a peerage causes a vacancy in the Parliamentary representative of the University of London. Several names have been mentioned in connection with the vacancy, and that of Mr. Busk, the present Chairman of Convocation of the University, has been put forward somewhat hastily as a Liberal Unionist candidate. So far as we are aware no steps have as yet been taken to ascertain the wishes of the constituency, but from communications which have reached us from influential sources we have reason to believe that there is a widespread desire that the scanty band of men of science in the House of Commons should not be diminished, but that Sir John Lubbock should be succeeded by a man known to the scientific world. Graduates of the University will probably be well advised not to pledge themselves at present.

THE SEYCHELLES AND QUARANTINE AGAINST PLAGUE.

We notice that recently there has been a debate in the Legislative Council of the Seychelles on the quarantine Ordinance suggested by the Secretary of State for the Colonies. The Ordinance is based on the suggestion made by the Venice Sanitary Conference, and imposes a period of ten days for plague and five days for cholera. It would appear that the unofficial members of the Government of the Colony do not share the views of the Venice Conference. It was objected that under the Ordinance steamers from Bombay which usually take ten days on the voyage would be admitted to pratique on arrival, even should plague be raging there when they left, and that this would be tantamount to the abolition of quarantine, a prospect which seemed to alarm certain honourable gentlemen very much. The fact that the disease had broken out in Tamatave, Mauritius, Alexandria, Portugal, and other places was quoted to prove that a period of ten days was not sufficient, and it was further urged that, though it might be thought advisable to reduce the period of quarantine in Europe, it could not be done in Seychelles, where all means of disinfection, vaccination, and proper isolation were wanting. It was asked that fifteen days and not ten should be imposed, and in support of this the remarkable ground was taken that as fifteen days were imposed for cholera, "plague and all the others" should be placed on the same footing. Further, it was stated that medical opinion as to the period of incubation had changed since the Venice Sanitary Conference. It does not appear from the report of the debate that medical opinion was consulted; had it been, it would have been learnt that, if ten days are not sufficient, neither are fifteen nor forty. The whole protective system is based on the view that man carries the infection, and that ten days are an ample allowance for the incubation of the disease. If the disease is carried in any other way, whether by rats or by cargo, the retention of a ship in a quarantine station for forty days will not exclude infection. Measures in this direction, if they are to be taken, should be taken as soon as the vessel arrives; but if the Seychelles have, as is stated, no means of isolation, vaccination, and disinfection, we are afraid they are in a bad way, for under these circumstances the only safe precaution would be to prevent any communication by ship or boat with any infected locality, which is obviously an impossibility. The sooner, therefore, the Seychelles authorities conform to modern requirements the better it will be for the inhabitants under their charge and for the interests they are there to conserve.

ANTISEPTICS IN VETERINARY PRACTICE.

Professor Hobday advocates vaginal oöphorectomy for mares when they are continually in œstrum and vicious. Racing and hunter mares are said to be improved by oöphorectomy. Strict antiseptic precautions are taken, the parts around the vulva are washed and disinfected about an hour before the operation, the vagina being syringed out a little later. A chain *écraseur* is used to divide the ovarian pedicle. Mr. Lukes, M.R.C.V.S., has performed this operation in America twenty times with success. It does not always cure the mare: the youngest subjects do best. Antiseptics, as Mr. Hobday testifies, have proved a great boon to the veterinary surgeon. He relates in the *Veterinary World* a successful operation for the removal of the undescended testicles in a terrier, abdominal section being necessary as they could not be removed through the inguinal canals. Iodoform-collodion remains the favourite skin-dressing among veterinary surgeons.

INVESTIGATION OF TROPICAL DISEASES AT MANILA.

Dr. E. R. Hodge, Pathologist at the United States Army Medical Museum, Washington, D.C., has recently left for Manila for the purpose of securing that institution such pathological specimens as may result from active hostilities and the occupation of a tropical country; he is also empowered to purchase any articles relating to the practice of medicine or surgery which might be of value to the museum. Dr. Hodge (*Boston Medical and Surgical Journal*) states that he will have his headquarters at the First Reserve Hospital in Manila, making such trips into the surrounding country for material as may appear to be of advantage. He goes equipped with a complete outfit for the preservation of specimens, and will remain in the Philippines for at least a year. This innovation, in having a trained representative of the Museum on the spot, will undoubtedly result in the accumulation of a large amount of valuable material and data which would otherwise have been lost to science. An expedition to the Philippines for the investigation of tropical diseases and the acquirement of museum specimens was planned some time since by Surgeon-General Sternberg, but, owing to recent reports from Manila, which indicate that the insurrection is liable to collapse at any time, it was deemed advisable to send Dr. Hodge in advance. It is understood that the remainder of the party—which includes several expert bacteriologists—will leave Washington this month.

We are glad to learn that Mr. Cadge of Norwich is steadily improving although still very weak after his recent attack of influenza.

Dr. W. H. Thompson, Dunville Professor of Physiology in Queen's College, Belfast, has been elected an honorary member of the Imperial Military Academy of Medicine of St. Petersburg.

Surgeon-General Jameson, C.B., Director-General of the Army Medical Service, who was in charge of the English ambulance during the Franco-German war in 1870-71, has received from the German Emperor the medal which his Imperial Majesty has founded in memory of the Emperor William I.

THE WAR IN SOUTH AFRICA.

From our Special Correspondent in Capetown.

December 13th, 1899.

THE HOSPITALS AT WYNBERG.

SINCE my last letter, wounded and sick have been steadily coming in. As I mentioned, No. 1 General is practically full up. No. 2 has 262 patients to date. The medical patients are still few as compared with the surgical, but a few cases of dysentery and rheumatism are coming in. Happily the R.A.M.C. is proving quite equal to the strain, and every detail is being splendidly carried out. Most commendable of all is the promptitude with which, despite the difficulty of a single line of railway, taxed to the utmost for other purposes, the wounded are brought down to the base. The field arrangements are reported to me as being all that can be desired. In view, however, of the certain prospect of an enormous accession of wounded from Lord Methuen's column, the *personnel* is certain to be overworked, and, to partially provide for this, the Principal Medical Officer at the base is calling for a number of recruits for the Cape Medical Staff Corps, which is acting as an auxiliary to the R.A.M.C. Plenty of men are available who know something about first aid and stretcher drill, but I doubt if more than a mere handful with any ward training can be obtained. However, the men offering are mostly intelligent, and may be of some use in a few weeks.

No. 2 General Hospital.

No. 2 General Hospital is now in full working order. It is established on a gentle sandy slope very near No. 1, the site being suitable in every way. The hospital consists entirely of marquees of the ordinary pattern. Wooden floors are being laid for all the tents, although a few of the first pitched had to be put up without them, owing to lack of time. As occasion offers, however, this deficiency will be remedied. The erection of an operating room has been commenced; in the meantime, a marquee is being used. Every provision is made for the comfort of the patients, and I am quite prepared to find that the results may be even better there than in the permanent No. 1.

THE SANITARY ARRANGEMENTS.

The hygienic arrangements are excellent. Colonel Duke, the Principal Medical Officer in charge, is certainly an enthusiast in sanitary matters, and has left no stone unturned in this respect. There are no drains in the camp except one from the kitchen, all liquid refuse being conveyed by handcart tanks to absorption pits well below the camp. All solid refuse, such as medical dressings and the like, are burnt on a site adjoining the absorption pits. These latter act well in this sandy soil. The contents disappear pretty rapidly, and the surface is "skimmed" daily or oftener. Into the absorption pits refuse from the kitchen is conveyed by a short drain. This drain also collects from a well-arranged, and I should say very useful, scullery behind the kitchen, but reserved entirely for washing cups, plates, and other utensils from the wards. This scullery has a double row of zinc sinks, flushed from hot and cold water taps led on from the kitchen. This struck me as being a very useful adjunct to the hospital. The latrines are to the upper side of the camp, and are airy and well arranged. The contents of the fæces and urine tubs are removed nightly to the town depositing pits, some miles away. The latrines are furnished with a tap and sunk stone sink for washing tubs soiled with dysenteric or enteric excreta.

PROGRESS OF THE WOUNDED.

The class of case in No. 2 does not differ materially from No. 1, although there is a large proportion of perforating abdominal wounds—9 are in at present. Curiously enough, most of them have done well under expectant treatment, a result at variance with most past experience. Colonel Duke attributes this to the fact that most of the men sustained their injuries whilst fasting, and thinks that the punctures inflicted on hollow viscera close up, under these circumstances, before extravasation can take place. Five spinal cases are in the hospital, with complete paraplegia. Laminectomy has been performed on one without result. The perforating chest wounds have done well almost uniformly. One case I saw was interesting. A Mauser bullet had entered just to the right of the thyroid cartilage and emerged slightly to the right of the ligamentum nuchæ, an inch below the occipital protuberance. No symptoms followed. In another case a Mauser bullet had entered the malar bone on one side, and emerged in the temporal region on the other. The result has been anosmia and diplopia, but no loss of visual acuity.

This hospital is just now short of thirty of its non-commissioned officers and rank and file *personnel*, but being only partially occupied the loss is not much felt. The men were sent on to Natal directly they arrived. In two or three days we may, however, expect that the casualties from Magersfontein will fill up the place. Whatever may happen in future, everything is working smoothly now.

The Australian combined Field Hospital and Bearer Company is still here.

Other General Hospitals.

No. 3 General Hospital[1] is being very rapidly erected under the energetic supervision of Colonel Supple, and should be ready early next week. No. 4 has arrived, but its location has not yet been fixed.

THE AMBULANCE TRAINS.

One of the ambulance trains is still being worked (under R.A.M.C. officer and non-coms.) by a crew of St. John men, and I understand they are giving every satisfaction.

VOLUNTARY AMBULANCE AID.

Under the guiding hand of Colonel Young, the chaos of voluntary help has assumed order on this side. He has very wisely proceeded on the plan of doing nothing until he had arranged machinery capable of almost indefinite expansion. As I mentioned before, he has an office in the Houses of Parliament and a store in the basement of the same building. Mr. Nethersole, the Secretary of the Good Hope Society, shares the office, and works in conjunction with Colonel Young. A lady of the Working Committee of the Society, with three friends, attends daily. These ladies, on Colonel Young's instructions, make purchases of comforts, assist in clerical work, sort out material, and the like. Just after the arrival of last mail I saw in the office a mass of mail bags, directed after the postal manner to the various general and station hospitals in South Africa. These contained the newspapers sent out by the Red Cross, sorted into sets by the ladies, a very useful instance of the work they do. The comforts supplied to the various hospitals are of the most varied character—fruit, vegetables, jellies, pastry, fans, couches, chairs, mosquito nets, games, tobacco, clothing, and I know not what besides. Many are, of course, sent direct by donors, but Colonel Young is about to arrange a depôt at Wynberg, where an agent will receive donations and apportion them between the two general hospitals at the base. Hitherto nearly everything has gone to No. 1.

The Lines of Communication.

With reference to the hospitals on the lines of communication, Colonel Young, in a journey from which he returned last week, inaugurated a most excellent system, the main feature of which is that everything is personally delivered. Colonel Young has engaged Mr. H. E. Abbott, Assistant Secretary of the St. John Centre, as travelling agent. This gentleman travels in the same train with all consignments, and wires the approximate time of his arrival to the officer in charge of each hospital. That officer then accredits some one to receive the consignment. This course has been found necessary owing to the great risk, under the present conditions of railway pressure, of consignments never reaching their destination. At several stations small local committees supply the wounded in transit with comforts, the material for which is generally sent up from here and cooked on the spot. These committees also do some work at station hospitals where such exist. One of the most useful things Colonel Young has arranged for is the supply of vegetables to the station hospitals on the lines. These articles, whilst plentiful enough in Capetown, are practically unobtainable up-country. Another very useful gift has been that of 750 suits of pyjamas sent to the Orange River Hospital, the advanced station.

[1] This hospital is, we understand, established at Rondebosch.

These were made at the Countess of Bradford's village homes. The Red Cross has also supplemented some of the surgical appliances at No. 2 General.

Gifts from the Coloured People.

A very touching gift made to the wounded was a sum of money contributed by the coloured lepers on Robben Island. This move was entirely spontaneous.

The Coloured People's Political Union continue sending in large supplies of fruit, vegetables, and the like, from Worcester and other districts round Capetown.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

VII.

Casualties.

The total casualties in South Africa up to December 28th are given as follows:

	Killed.	Wounded.	Missing.	Total.
Officers... ...	82	258	98	438
Men	886	3,266	2,223	6,735
	968	3,524	2,321	6,813

This gives 1 to 3.6 as the proportion of killed to wounded, which is higher than that originally returned as the result of Lord Methuen's engagements; nevertheless, looking to the fact that the campaign in South Africa has been in active progress since October, that large numbers of troops have been employed on both sides, and that many engagements have occurred, these losses, as compared with the losses in European campaigns, are not heavy. The following figures from Sir Thomas Longmore's table are given by Stevenson in his *Wounds in War* in the form of a table:

Table.—*Showing the Losses Per Cent. of Strength in Various Battles.*

Battles and Dates.	Strength.	Total Losses Per Cent.
Blenheim, 1704 { British and Allies	56,000	23.00
{ Gallo-Bavarians	60,000	66.00
Kunnersdorf, 1754, Prussians	40,000	65.00
Talavera, 1809, British	22,000	24.60
Vittoria, 1813 { British and Portuguese	60,486	7.60
{ British alone	35,129	9.40
Leipzig, 1813 { Allies	300,000	16.00
{ French	171,000	36.00
Waterloo, 1815, British	36,240	23.30
Alma, 1854 { English	21,481	9.30
{ Russians	60,000	9.30
Inkerman, 1854 { English	14,000	20.10
{ French...	41,000	4.50
{ Russians	55,000	28.60
Crimean war, English	97,864	15.10
Solferino, 1859 { French...	135,234	12.70
{ Austrians	163,124	13.60
Gettysburg, 1863 { Unionists	117,350	19.70
{ Confederates...	68,352	46.20
New Zealand war, 1863-66, British	7,930	8.60
Prusso-Danish war, 1864, Prussians	46,000	5.30
Weissenburg, 1870, Germans	106,928	1.40
Woerth, 1870 { Germans...	167,119	6.30
{ French	46,000	36.90
Gravelotte, 1870 { Germans	278,131	7.30
{ French	125,000	8.00
Franco-German war, whole German army ...	887,876	13.20
Beaune-la-Rolande, 1870, Germans	91,405	0.95

From these interesting figures it will be seen that in many instances the losses in a single decisive battle, as for instance at Waterloo and Inkermann, were higher than those sustained during the whole length of a campaign. From the methods of fighting adopted by the Boers it is improbable that any conflicts involving the great losses of such battles as those referred to will occur. The veld is wide, and the Boer invariably prefers a retirement and the trial of a new position to facing at all serious losses on his own side. The great majority of assaults on positions have been made by the British troops against the Boers. Whenever the Boers have attempted similar assaults upon the English, whether at Mafeking or Ladysmith, their losses have been as great, if not greater, than ours under the same conditions.

Climate and Clothing.

I pointed out in my last article that the summer was well advanced in South Africa, and a correspondent has written to inquire as to the relation of the summer to the rainy season as many of the telegrams speak of the rainy season in Natal as being about to begin. The fact is the rainy season is the summer season in Natal, and already, as the letters of many war correspondents show, heavy rains have fallen for some two months past in that country. The seasons in South Africa may be divided into summer and winter; spring and autumn scarcely existing. The summer lasts from October to March, the winter from April to September. At Capetown and on the Cape Peninsula the rainfall is heavier during the winter months, but throughout the rest of South Africa in the coast towns to the eastward as well as on the mountains encircling the interior plateau and on the plateau itself the rain falls chiefly or almost entirely during the summer months. The amount varies considerably with the district. As pointed out in Dr. Hillier's article on The Geography and Climate of South Africa (in the British Medical Journal of December 2nd, 1899) the country for meteorological purposes may be divided into (1) coast terraces, (2) the mountains, and (3) the plains of the interior. Thus, to take one of the coast towns, at Port Elizabeth the annual rainfall is about 22 inches, and falls on 49 days of the year. On the coast terraces in such towns as Grahamstown, Estcourt, and Maritzburg, the rainfall is as high as 29.59 inches, and occurs on some 77 days in the year. On the mountains themselves, such as the Hogsback, the Stormberg in the Cape Colony, and the Drakensberg in Natal, north of Ladysmith, the rainfall reaches as high as 40 inches and falls on 91 days. On the interior plateau the rainfall is much less. Thus at Beaufort West, in the Karroo (Cape Colony) during the years 1895-96 the average rainfall was only 9.7 inches, and the number of days of the year on which rain fell was 27. Still further up, on the borders of the German territory, the rainfall was only 1.20 inch during the course of the year, and fell on 2 days.

It will thus be seen that the rainfall varies considerably throughout the different districts. But wherever it falls it comes down usually in heavy storms during comparatively short periods of time, drenching thunderstorms being a common form of rainfall. The question, then, of what clothing may be required varies somewhat with the locality in which the soldier going to South Africa is likely to be engaged. Thus in Natal the rainfall is referred to in several of the letters sent home. We read in an extract from a letter of an officer writing from Estcourt on November 19th, 1899, and published in the *Times*:

> The weather is most uncertain. We have had several miserable days of a continuous drizzle, with cold wind, and then to-day is a ripping day. My kit of 35 lb. was very well chosen for a beginner. I have a thick sweater, which is a godsend, as I carry it in my haversack and put it on at night when sleeping out.

For a period of some hours and sometimes for a day or two after rain even in the summer months the cold is distinctly felt. The rapid evaporation which occurs in the normally dry atmosphere after the earth is saturated with rain largely accounts for this cooling process, and under these conditions the campaigner sleeping in a canvas tent will find the protection of a sweater and warm clothing, especially for sleeping in, invaluable. The woollen nightcap must always be available for use after the rains in the summer and for continuous use through the winter. On the plains of the high veld which are now the scene of Lord Methuen's operations south of Kimberley, and indeed throughout the grass plains extending over the Free State and southern Transvaal, the rainfall, as has already been pointed out, is considerably less and occurs on rare occasions, and although the cooling effect of a storm is felt here, it is not felt to any such marked extent as on the coast terraces. At the present time the heat suffered by our troops on these plains is by far the most trying feature of the climate; thus Mr. Makins, in his letter published in the Journal last week, speaks of the temperature in some of the canvas tents being as high as 115° F.

The question of what clothing will be required will, there-

fore, be seen to present some difficulty. Personally, when consulted on this subject, I have invariably recommended that at least one of the regulation suits should be of khaki-coloured serge, and not of cotton khaki itself. Cotton khaki is a splendid material for the sunshine and dust of the average summer day in the field on the plains, but is not a good material to get wet in. During wet weather the serge would be much safer and more comfortable; flannel shirts, brown leather boots, khaki puttees, with cashmere socks, are the best articles for everyday wear. It is as well to have no hooks on the boots, as they are very apt to get broken, or to get in the way when pressed against the stirrup in riding. Riding breeches are better made of worsted cord.

THE COMMISSARIAT.

In spite of the fact that the troops at Chieveley, Estcourt, and on the Modder River are in touch with the railway, a certain amount of occasional hardship does appear, by the letters from the correspondents, to have been endured by our troops in reference to commissariat. This we may believe has been temporary and accidental, but in view of the tremendous length of our lines of communication and the dependence of our soldiers on supplies from the bases, it is interesting to learn from the *Times* that a feature in connection with the provision of supplies is found in portable rations.

Each 2-oz. tin, although only 2 in. in height and 1½ in. across, contains all the needful ingredients for 1 pint of most nutritious soup, with the addition only of that quantity of hot water, salt, pepper, and all the needful seasoning being included in the tin. In the absence of other provisions the soup thus made is sufficient for a meal, or at least to keep a man going until he can obtain a more solid repast. With his food in this consolidated form a soldier can carry about with him rations enough to last him, if needs be, for four or five days; a mule can carry 1,500 tins, a camel over 2,000, and a Cape wagon will hold about 60,000. In addition to the orders which are being executed for the Government, large quantities alike of consolidated soups and of desiccated vegetables are being sent out for the canteens of various regiments.

SIR JAMES SIVEWRIGHT'S AMBULANCE.

Through the Exchange Telegraph Company we were informed on December 21st that Mr. Kruger had declined Sir James Sivewright's offer of an ambulance for the use of the Boers, on the ground that he does not receive such gifts from an enemy.

Sir James Sivewright is, we confess, a somewhat difficult person to understand. Is it that his heart is too large, or that he believes a fence the most comfortable of seats? He is an ex-Colonial Minister in the Cape Government; he is a member of the Afrikander Bond; he has offered an ambulance party to Mr. Kruger for attendance upon wounded Boers; and he has offered certain farmhouses in the vicinity of Capetown to the Imperial authorities for the accommodation of wounded Imperial officers. This last offer has been declined. The course of the ambulance party since its departure from Aberdeen has been by no means smooth. Many of the gentlemen attached to this ambulance are the sons of South African Boers, whose sympathies, in so far as they have any political colour, are probably more with the Boers than with our men in the present conflict. On the arrival of the ambulance in South Africa, we are told that it was refused permission to go through our lines, and thus overland to Pretoria, and now, unkindest cut of all, Mr. Kruger says he does not receive such gifts from an enemy. That Sir James Sivewright should be accused of being anyone's enemy will, we are sure, hurt him acutely. What has happened to the members of the ambulance since Mr. Kruger's refusal it is somewhat difficult to gather, but it has been stated that disappointed Dutch medicos have now in their individual capacity offered their services to the Transvaal. It is quite possible that if these offers have been made, they will finally be accepted by Mr. Kruger, on the explicit understanding that these gentlemen are willing to take up arms on behalf of the Transvaal. Should this eventuality arise, Sir James Sivewright will have been placed in an unenviable position.

MILITARY HOSPITAL ACCOMMODATION AT CAPETOWN.

The *Times* correspondent of December 23rd states that "complaints have been freely made for some time past about the military hospital accommodation at Capetown. This in no way affects the admirable surgical skill or the care of the medical officers, but there is a want of organisation and foresight in the arrangements and an absence of those minor comforts which are necessarily dispensed with at the front, but are easily procurable at Capetown. The whole establishment of the permanent hospitals was calculated on too small a scale at the beginning and has never been completely recast since, while the standard of comfort, especially for officers, is too low." This telegram, which is continued in the same strain at some length, is not of a satisfactory character, but we have little doubt that the minor defects unavoidable in the hastily-arranged hospital on which the demands have exceeded anticipation, will promptly be remedied. The Army Medical Department have to our knowledge engaged a certain number of experienced civilian surgeons in South Africa, and among the refugees from Johannesburg alone are many capable men, whose services might be enlisted by the department should further occasion for such additional aid arise.

WOUNDED AND SICK AT WOOLWICH.

All the wounded and invalids admitted to the Herbert Hospital, Woolwich, on January 2nd, from the steamer *Garth Castle*, had wonderfully improved by the voyage home from South Africa. The cases, with four exceptions, had become convalescent, and are asking to be sent back to duty. The wounds of all those admitted to the surgical division have closed, and the majority are fit for duty, whilst the gunshot injuries to bones and joints are comparatively trivial and all likely under further treatment shortly to recover the free use of their limbs. Photographs are being taken by the Roentgen rays of the wounds and injuries to joints and bones of the men who have last arrived from South Africa. The choice of foods is varied, and all praise the attention shown to them not only during the voyage home, but since their arrival at Woolwich by the military medical authorities at the Herbert Hospital. At a time when every available bed in the home hospitals is likely to be required, it will probably be thought well to send invalids incapacitated and unfit for further duty to their homes or to convalescent institutes as soon as it is possible for them to pass the Board and to leave hospital. The numerous offers of convalescent accommodation now being made may therefore not improbably soon be taken up.

A BASE HOSPITAL FOR THE IMPERIAL YEOMANRY.

The Princess of Wales has become President of a Committee of ladies formed to raise a fund of £30,000 to establish a base hospital for the Imperial Yeomanry at Capetown. It is proposed that ambulance and stretcher bearers should also be provided. The scheme for providing medical aid for the Imperial Yeomanry in South Africa will have to be carefully thought out, and in any case it is clear that it must be of such a nature as to work easily with the existing medical arrangements for the regular army, upon which in fact it must be grafted.

TRANSFERS AND APPOINTMENTS.

At Aldershot orders were received on December 29th by the R.A.M.C. for the two bearer companies and two field hospitals to be in readiness to embark on January 4th, and one field hospital and divisional medical staff on the 6th. This puts a heavy strain on the executive; a number of men for these units had not joined last week. A number of civilian compounders have joined the R.A.M.C. at Aldershot, where they will undergo preliminary drill. They are all certificated, and will be sent to South Africa at an early date. They have joined the corps under special conditions for twelve months' service. There are also joining a large number of members of the St. John Ambulance Association who are enlisting under special conditions for bearer work in South Africa. From Aldershot the following medical movements have taken place: Majors Hallaran, Geddes, and Pike have left for South Africa; Major Cross for duty in Sierra Leone; Sister Thomas and Nursing Sisters Kitching and Noble embarked in the *Moor* for South Africa. Orders were also received at Aldershot for the following medical embarkations:

January 4th.—14th Brigade Bearer Company in the *Assaye* at Southampton; 15th Brigade Bearer Company on the ss. *Bruemar Castle*; and 14th Brigade Field Hospital on the ss. *Goorka*.

January 7th (about).—Part of the 15th Brigade Field Hospital on the ss. *Britannic* at Southampton.

January 10th (about).—Part of the Divisional Troops Field Hospital in the *Bavarian* at Southampton.

The R.A.M.C. is calling in, it is stated, all available men from Ireland, Malta, Gibraltar, Bermuda, Egypt, and other places for duty either with the South African Field Force or at the Cambridge Hospital, where a large number of the sick and wounded are to be sent.

HOME HOSPITALS AND CONVALESCENT HOMES.

The Countess Brownlow has offered eight beds in a convalescent home maintained by her at Ashbridge for the use of invalided soldiers from the war.

Earl Carrington writes to the War Office that he and Lady Carrington will place Hill Farm House, High Wycombe, at its disposal as a convalescent home for invalid soldiers for a space of two years. Nurses and a doctor have volunteered their services, and all the authorities will have to provide will be daily rations.

The Governors of Newark Hospital have offered the War Office the use of vacant beds for invalid soldiers if they should require them.

The President of the Royal Southern Hospital, Liverpool, has written to the Director-General of the Army Medical Department stating that the committee will allot twelve beds for the use of sick and wounded soldiers and sailors at a charge of 2s. per day for each bed occupied or unoccupied.

The Committee of the Stanley Hospital, Liverpool, will, it is understood, place twenty to thirty beds at the service of the War Office.

Ten beds at the Convalescent Home, Reigate, have been offered by Mrs. Kitto for the use of men from South Africa.

Mr. E. A. Lee has placed a house at the disposal of the committee formed to establish at Torquay a convalescent home for soldiers and sailors invalided from South Africa.

PROPOSED GLASGOW HOSPITAL SHIP.

A fund is being raised in Glasgow to send out a hospital ship entirely equipped for the purpose of bringing back from South Africa sick and wounded soldiers to England.

AN APPEAL TO THE YOUNGER MEMBERS OF THE MEDICAL PROFESSION.

In the crisis through which our Empire is passing, the importance of the Militia, Yeomanry, and Volunteer Forces as a support to the Army is fully evinced. And as it is impossible to forecast the further demands which may have to be made upon them in the near or distant future, it behoves us to strengthen them to the utmost of our power.

Many members and students of our profession are already enrolled in them, and are answering the call now made upon them with patriotic promptitude.

We venture to take the opportunity suggested by the beginning of a new year of appealing to such of the younger members and of the students of the medical and dental professions as are still unattached, yet capable of bearing arms or in other ways of helping in Imperial defence, at once to consider the advisability of joining some branch of the service.

(Signed)

Frederick T. Roberts, M.D., F.R.C.P.,
Physician to University College Hospital.

Edmund Owen, M.B., F.R.C.S.,
Surgeon to St. Mary's Hospital, London.

William Collingridge, M.A., M.D.,
Surgeon-Lieutenant-Colonel Militia Med. Staff; late Commanding Mil. Med. Staff.

William Duncan, M.D., F.R.C.S.,
Captain Middlesex Yeomanry Cavalry.

J. Edward Squire,
Surgeon-Lieutenant-Colonel Commanding Volunteer Med. Staff Corps, London Companies.

London, January 1st.

LITERARY NOTES.

Dr. George M. Gould is reprinting the editorial "Suggestions to Writers" which have appeared during the past year in the *Philadelphia Medical Journal*. The volume will be entitled *Suggestions to Medical Writers*, and will be an octavo of about 150 pages. In addition to the articles which have already appeared in the *Philadelphia Medical Journal*, the book will contain a general introductory chapter on Medical English, a chapter on Medical Paleography, and a new essay entitled History and Psychology in Words.

Among the curiosities of the Oxyrhynchus papyri, which have been edited, with translations and notes, by Messrs. Grenfell and Hunt for the Egyptian Exploration Fund (Part II, London, Henry Frowde, 25s.) is a list of specifics for the earache. They date from about the end of the second century, and are as follows:

Heat an equal quantity of beaver musk and poppy juice upon a potsherd, if possible one of Attic make but failing that of .....: soften by diluting with raisin wine, warm, and drop in. Dilute some gum with balsam of lilies, and add honey and rose extract. Twist some wool with the oil in it round a probe, warm, and drop in. Pound some closed calices of pomegranates, drop on saffron water, and when it becomes discoloured draw the liquor off. When required dilute as much as the bulk of a pea with raisin wine, warm, and drop in. Pound some Egyptian alum and insert into the ear an amount equal to the size of a pea. Anoint a persea leaf and insert. Thoroughly moisten a flock of wool with the gall of an ox, roll up and insert. Pound myrrh and alum in equal quantities and insert. Dilute frankincense with very sweet wine and syringe the ear; or use for this purpose the injections described above. Rinse with warm onion juice. Syringe with gall of a bull or goat or sheep, or other similar kind of gall warmed. The sap of a pine tree, warmed, to be used in the same way.

The first specific must have been something not very unlike the old vinum opii, which not very many years ago was largely used as a local application in various painful affections, especially of the eyes; while "warm onion juice" is a popular remedy, the use of which has by no means died out at the present day. The "sap of a pine tree warmed" shows perhaps some dim striving after antisepsis.

The current number of the *Fortnightly Review* contains a very interesting article on the problems which await solution in South Africa, by Dr. Alfred Hillier. He has given it the title Issues at Stake in South Africa, and the subject is discussed from a point of view slightly different from that usually adopted. He dwells on the influence on the character and political standard of the Transvaal Boers, exerted by their long contact with native races. They have held these races in subjection, and individual members of them in slavery more or less openly avowed. This, he argues, has been the main element in producing certain traits which their warmest defenders cannot profess to admire. He arrives at the conclusions that their true interests are identical with ours, and that British victory now will be to their inestimable advantage in the future. We cannot pretend to trace the steps by which he arrives at this conclusion, but they are closely reasoned, and expressed in temperate and well-balanced language. The article will well repay perusal.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association, at 429, Strand (corner of Agar Street), London, on Wednesday, the 17th day of January next, at 2 o'clock in the afternoon.

December, 1899. Francis Fowke, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting- namely, March 22nd, June 21st, and September 27th, 1900.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

Border Counties Branch: Counties of Roxburgh, Berwick, Selkirk, and Peebles District.—This District will meet in the Railway Hotel, Newtown, St. Boswell's, on Friday, January 26th, at 3.30 P.M., Dr. Blair, Chairman of the District, presiding. Members are requested to send notices of all cases to be shown or papers to be read at the earliest possible date to the Honorary Secretary, Dr. W. Hall Calvert, Melrose, N.B.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District will be held at the Great Northern Central Hospital, Holloway Road, on Wednesday, January 10th, at 4.30 P.M. Dr. Morton will preside. Dr. Sutherland will read a paper on Cyclic Albuminuria and Associated Symptoms. Cases of interest will be shown by Mr. Macready, Dr. Clifford Beale, and other members of the staff of the hospital. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Honorary Secretary.

SOUTH-WESTERN BRANCH.—The winter intermediate meeting will be held on Tuesday, January 16th, at the Athenæum, George Street, Plymouth, at 3 P.M. The Honorary Secretary will be glad to hear from members wishing to read papers or show cases or specimens, that an agenda paper may be issued. Paper already promised: Dr. Gordon (Exeter): On the Policy of the Profession.—H. W. WEBBER, M.S., Honorary Secretary, 4, Woodland Terrace, Plymouth.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of this Branch was held in the Royal Society's Room, Sydney, on Friday evening, October 27th, 1899, at 8.15 o'clock, Dr. E. T. THRING, President, in the chair. There were forty-one members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of New Members.—The PRESIDENT announced the election of Drs. Turkington, Ellis, Bennett, and Wade.

Papers.—Dr. MAITLAND read some notes on three cases of foreign bodies in the œsophagus. Drs. GOODE and CHISHOLM made some remarks upon the paper.—Dr. W. H. O'NEILL read some notes on tuberculosis and its treatment in Australia. A discussion ensued in which Drs. ELLIS, WEST, LAWSON, HANKINS, SINCLAIR GILLIES, GORDON CRAIG, JAMIESON and THRING took part. Dr. O'NEILL replied.

Condemnation of Canvassing.—Dr. WEST moved the following resolution, which was seconded by Dr. SAWKINS:—

That the practice of personally canvassing individual members of lodges, which is now adopted by some members of the N.S.W. Branch of the B.M.A., when applying for lodge appointments is objectionable, and that members so offending should be asked to discontinue the practice.

Drs. LITCHFIELD, GEORGE ARMSTRONG, CRAGO, GLEDDEN, THRING, and BINNEY discussed the proposition. Dr. LITCHFIELD moved an amendment:—

That the consideration of this matter should be postponed until a list of all the medical men prepared to give up the practice of canvassing for lodges be obtained.

This was negatived. Dr. West's resolution was carried.

Proposed Recognition of Friendly Societies.—Dr. LAWSON moved:—

That the B.M.A. should recognise the North Sydney United Friendly Societies and their medical officers, and that their names be erased from the ostracised list of the Association.

Dr. BENNETT seconded the resolution and the discussion was adjourned.

SPECIAL CORRESPONDENCE.

BERLIN.

The Official Century.—Virchow on Medicine in the Nineteenth Century.—Women as Members of Medical Societies.—Proposed Homœopathic Hospital for Berlin.

ALTHOUGH it is clear to every one of us who remembers the "addition and subtraction rules" of his earliest youth that ninety-nine units do not and cannot make a hundred, the decree has gone forth in Germany that the 1st of January, 1900, is to be considered as the beginning of the new century. All German public schools and universities have accordingly been officially requested to hold some sort of solemnity or ceremonial, with appropriate speechifying for the benefit of the pupils. It is gratifying to learn that the Prussian Academy of Science, acting in the proper spirit of scientific independence, has declined to glorify a miscalculation (though sanctioned by the highest power in the land) by any special ceremonial.

In the new year, as in the old, Rudolf Virchow is to the fore; an instructive article from his pen, on New Names and New Notions in Pathology, opens the series of papers on Medicine in the Nineteenth Century, which are to appear week by week in the *Berliner klinische Wochenschrift*. This series, when completed, will form a valuable all-round review of the immense progress which both science and practice have made during the past century, for contributions have been promised by recognised authorities in each special department.

Like most medical associations the Berliner Medizinische Gesellschaft is forbidden by its regulations to admit women as members; but for some time an agitation has been set up for the purpose of enabling women doctors to enter the society and attend its meetings, and members are being privately canvassed to support a resolution which Dr. Zadek purposes to bring in very shortly, and which is to run as follows: "All doctors of medicine—male and female—living in Berlin or its vicinity are eligible for full membership."

A plot of land embracing ten acres, situated in Gross-Lichterfelde (near Berlin), has been bought by a society whose object is the erection of a homœopathic hospital for Berlin.

INDIA.

The Breeding Grounds of the Malarial-bearing Mosquito.—Dysentery in Indian Gaols.—Scarlatina in India.—The Viceroy's Visit to Bombay.

MAJOR ROSS'S work in West Africa is being followed with the greatest interest in India, and already medical officers in this country are studying the haunts of the malarial-bearing species of mosquitos. The question as to whether these only breed in certain kinds of small pools near inhabited houses is of the greatest practical importance. One observer has just recorded in the pages of the *Indian Medical Gazette* that after failing, in spite of prolonged search, in finding the *Anopheles* in small pools near houses, he did meet with them in large numbers in the extensive rice fields around the station. If this statement is confirmed by other people it will be of great importance, although in view of Koch's recent statement that he found the *Culex* and not the *Anopheles* to be the carrier of malaria in the part of Italy in which he worked, further evidence as to the forms which are suitable intermediate hosts for the malarial parasite in different parts of India will be necessary before the destruction of the dangerous forms of these pests can be practically carried out as a preventive measure against malaria.

The annual report on the Indian gaols contains much interesting information on the important subject of dysentery in these institutions. The health as a whole was good, especially when compared to that of the previous famine years. In the Punjab a scorbutic taint was recognised as an important predisposing cause of dysentery, while in the North-West Province the use of barley in the gaol dietary, on account of the difficulty of removing all the husks, was considered to be the most common factor in its etiology. In more than one of the gaols of this Province an increase of the disease coincided with the introduction of boiled water. This was due apparently to the fact that adequate arrangements for cooling it were not provided, so that the inmates were led to prefer the cool bathing water. In the Central Province, where a long succession of years of scarcity and famine have caused great deterioration of the health of the majority of the people, privation is very rightly looked on as the principal predisposing cause of dysentery, and one which is particularly difficult to deal with, although it is satisfactory to see that the terrible death-rate of the gaols of this Province has fallen very greatly from that of the famine year 1897. The same remark applies to Madras. In Bengal the year under review has been one of the most healthy ever known, cholera in particular having never been so little prevalent, and dysentery having also been much less than usual. The gaols have shared in the general improvement in the health of the Province. The free and early admission of all cases, even the mildest, is one of the main causes of the improvement in this respect. In addition to the etiological factors already mentioned, malaria is rightly considered to be the most important, but further research is required to determine if the so-called "terminal dysentery" is not really distinct from the specific tropical disease. Another very important point with regard to this disease, which is testified to by experience in most of the provinces which have been mentioned, is its infectiousness. The belief in this is becoming more and more widespread. In the Punjab, for

example, segregation of dysenteric cases and disinfection of their stools is ordered, while in the North-West and other provinces the same precautions have been found effective in reducing the number of cases of the disease. The figures showing the prevalence of dysentery in Indian gaols last year compare very favourably with those recorded in many asylums of England and Ireland, when the climate and state of health and stamina of the population from which Indian gaols are drawn are taken into consideration.

A recent discussion of the prevalence of scarlatina in India in the pages of the *Indian Medical Gazette* shows that although this disease is certainly met with, more especially in the Hill stations of this country, yet it has little tendency to spread, and when introduced by troopships very quickly dies out, although it does sometimes attack a few natives in a mild form.

During the last few days the Viceroy, who was inoculated against plague before his visit to Bombay and Poona, has been visiting both the new laboratory and all the plague hospitals, seeing and speaking to every patient, while he took the greatest interest in all the processes of the manufacture of the plague prophylactic. His sympathetic interest in the much stricken province of Bombay will afford great encouragement to those who are struggling against both plague and famine, and the medical officers in particular will not soon forget his timely words. Fortunately the returns are much more favourable during the last two weeks, the number of deaths in the whole of India having fallen by nearly one-third, the greatest reduction having been in Bombay, although Calcutta and the Central Provinces have also shared in it.

CORRESPONDENCE.

MEDICINE AND PATHOLOGY.

SIR,—Dr. Lazarus-Barlow seems to use the term medicine of the art of medicine alone. But medicine is a science too. "The science of medicine is the theory of diseases"—pathology is used as a synonym a few lines lower—"and the theory of remedies"[1] are the words of a distinguished writer who is himself a pathologist.

That being allowed, as I think every one allows it, the mere minuteness of a problem in disease is no ground for separating it from the rest of pathology as apart from the science of medicine. Nor do I think that anyone will contend that we who learn and teach medicine do not learn and teach the science as well as the art. We are pathologists so far as we do so.

Whether pathology is an end in itself or is a study whose purpose is to issue ultimately in the cure of disease is a question of little interest. In the past it has certainly kept the latter end in view, and in the future it will do the same. Whether knowledge can be immediately applied or not, to gain it is no doubt a pleasure, and in this sense an end in itself to the pathologist. Both statements are therefore true and do not exclude each other. But if pathology is in search of endowment, it might be worth her while not to lay very great stress upon the "end in herself."—I am, etc.,

Upper Wimpole Street, W., Dec. 27th, 1899. W. P. HERRINGHAM.

RECENT MORTALITY FROM DIPHTHERIA.

SIR,—In the BRITISH MEDICAL JOURNAL of December 16th, 1899, p. 1715, under "Medical Notes," you say: "It is disappointing to realise, after all that has been hoped from the serum treatment of diphtheria, the disease maintains its grounds as a cause of death, even in those places where the new methods of cure might be expected to be most generally practised. This is the case in Paris, where during the whole of the present year the weekly mortality from this cause has almost constantly exceeded that of the year before. Not only has the number of cases been greater, but the deaths have risen from 10 per cent. during the first 43 weeks in 1898 to 11.5 per cent. in the corresponding period of 1899."

These statements do not, in my opinion, give a correct idea of the progress which is being made in the treatment of diphtheria in Paris. Why, Sir, the reduction of the diphtheria mortality in Paris since the introduction of antitoxin five years ago is one of the most remarkable facts in medical history.

The facts are that in 1888, the year which you take as your basis of comparison, there were only 259 deaths from diphtheria and croup in the whole of Paris, with a population of two and a half millions, while the average number of deaths from this cause in nine pre-antitoxin years was 1,465, nearly six times as many.

In 1898 the death-rate from diphtheria and croup per 100,000 living was 10.3 in Paris, while in London it was 39.8. And yet 1898 was a better year in London than any of the preceding ten. 1898 was therefore a remarkably good year in Paris.

In the case of a disease the epidemic prevalence varies as much as does that of diphtheria, it is too much to expect that every year should be better than its predecessor. Though 1899 may not be so good as 1898, yet I think we should not be dissatisfied if its death-rate from the disease in question is only one-fifth of what it was in the days before the introduction of the new remedy.

The mean annual death-rate from diphtheria and croup per 100,000 living in Paris was in nine pre-antitoxin years (1886–1894) 63.9. In the four antitoxin years it was 14.6. This is eloquent testimony of the success which has attended the efforts to combat diphtheria in Paris, and cannot be disappointing even to those whose expectations were most sanguine.

For the annual number of deaths from diphtheria and croup in Paris I am indebted to M. J. Bertillon, Chief of the Statistical Department in that city. The annual rates have been calculated with the aid of the population table given in *Whitaker's Almanack*.—I am, etc.,

Cambridge, Dec. 19th, 1899. LOUIS COBBETT, M.D., F.R.C.S.

MEDICAL ORGANISATION.

SIR,—I see from the correspondence in the BRITISH MEDICAL JOURNAL that the provident dispensaries in Manchester and Salford are regarded as injurious to the interests of the general practitioner, and that some wish to boycott the medical officers of such dispensaries. When these dispensaries were started it was with the view of benefiting the profession as well as the poor, and if they fail in doing so they should either be made to serve the ends with which they were instituted or discontinued. To attempt to boycott their medical officers is likely to injure the boycotters more than the boycotted, and is not a practice which an honourable profession ought to adopt.

From Dr. G. H. Broadbent's letter it would appear that the medical officer receives from the provident dispensary 3s. per head per annum. That certainly is a very small sum for any but the poorest to pay for medical attendance and medicine; and if the doctors would combine, and refuse to attend any whom they knew to be above that class unless they paid a larger subscription, the difficulty would be got over, for I suppose it is still possible for every practitioner in the district to be attached to the provident dispensary.

Having been present at, and taken an interest in, the birth of those dispensaries, and knowing the high hopes with which they were begun, I feel sure that if the doctors in Manchester and Salford took up the question, and discussed it in the proper spirit, they would not fail to settle it in a way that would benefit them as well as their patients.

There can be no doubt that the provident system has come not only to stay, but to spread amongst us, and the sooner it can be established on a satisfactory basis the better it will be both for the profession and the laity.—I am, etc.,

Denholm, Scotland, Dec. 16th, 1899. JOHN HADDON, M.D.

SIR,—The shortcomings of the Medical Guild which Dr. Stewart in his letter to the BRITISH MEDICAL JOURNAL of December 16th, 1899, is pleased to term imaginary are apparent to Dr. Broadbent, who is a member of the Guild, as may be seen in his letter in the same issue, and in previous letters by him on the subject of medical organisation. They are likewise apparent to numbers of practitioners in this district who are aware that the provident dispensary supporters have all along used their best endeavours to keep known opponents of the system off the Council of the Guild.

The remedy which I proposed has commended itself to one member of the Guild, and Dr. Broadbent's proposed addition

[1] *Encycl. Brit.*, article Medicine, by C.C.

to the rules, if carried, would be likely to cause some members of the staffs of the provident dispensaries to reconsider their position—especially those who are not so greatly fascinated with the system as Dr. Stewart is, and who are perhaps somewhat ashamed of it—with the happy result of the severance of their connection with institutions which are conducted in so humiliating and unsatisfactory a manner, and which cause such injury to the practices of their fellow-practitioners.—I am, etc.,

Pendleton, Dec. 18th, 1899. J. Harold Bailey, M.B.

Sir,—I should not dare to encroach again upon your space, but Dr. Stewart's "high ideals" and "golden rule" are too much for me. I know medical men in most of the ten districts where the branches of the provident dispensaries are located, whose chief ideal, which may by poetic minds be considered a low one, is to make a livelihood. The dispensaries snap up the very best of the working class—those who wish to keep out of debt and save money, who know where they can get medical attendance cheap, especially as they are not asked any question as to income or rent, but are waited upon by agreeable collectors (for some are paid commissions on their receipts, I believe) weekly or monthly as desired for their pence. These people are not troubled about "high medical ideals"—they know the cheapest market and they go to it. Practitioners outside the dispensaries are subjected to an unwholesome competition, with the result that they have to take all that come, with all their concomitants, bad debts, etc. Is it any wonder that such men, who have to keep their nose to the grindstone early and late and at all times of the year do not join the Guild, but hurl stones in their anger and annoyance both at it and at the provident dispensaries when they know how closely they are related? I also know many old and well-established practitioners who are especially angry with the dispensaries when they find some of their decent working-class patients who have always paid their bills joining the dispensary round the corner.

How will the first of these two classes of practitioners regard Dr. Stewart's appeal for "goodwill by sinking personal differences for the attainment of high ideals?" I would not like to tabulate their replies, neither do I think they would be admitted in these columns. Some of the more even-tempered would say "High ideals are all right for those who roll in their carriages and have a banking account, but when the shoe pinches what can you do but stick to your work?"

As to the "golden rule" and "sinking personal differences," how can these be heeded when there is such a great gulf, containing 20,000 patients, between the dispensary staff and those outside? It is more than a personal difference; it is a question of finance as well as ethics. It is degrading to those on the staff, and has a degrading influence on their brethren, causing them in competition to do work for which they are little—if anything—paid. They are robbed of patients they expected to have, and to whom they are legitimately entitled, for every man who qualifies as a medical practitioner ought to have a reasonable means of subsistence, and not be deprived of it in an unfair way by his fellow-practitioners.—I am, etc.,

Manchester, Dec. 18th, 1899. G. H. Broadbent.

THE IRISH DISPENSARY DOCTOR'S POSITION UNDER THE NEW LOCAL GOVERNMENT ACT.

Sir,—I am extremely pleased to find that my letter of October 14th last has produced two replies in your Journal, and also a short notice from yourself. I would suggest that all medical officers in future writing on this subject should sign their names in full, as I mean to do now. There is nothing to be ashamed of, surely, in our combining to obtain the justice which has been so long withheld from us; neither do I think that any member of my Board of Guardians would bear me any grudge for my action in this respect, even though we have to fight, as we probably shall, over this question of fees. "Dispensary Doctor No. 2" questions the accuracy of a statement of mine as to the onus of supplying a *locum tenens* falling on Boards of Guardians. What I meant to convey was that if the medical officer gives his Board notice in good time of his wishing to have his vacation at a certain date, and names a properly qualified substitute; then if the Board fail to arrange terms with this substitute, and the medical officer reports the facts to the Local Government Board, they will sanction his holiday, and leave the responsibility of finding a *locum tenens* on the Board of Guardians. I cannot give my authority; but if a "Dispensary Doctor" finds it necessary to try the experiment, I think he will find that my statement is correct.

This same gentleman asks how we are to levy the amount after process from the Board of Guardians. Well, I think no Board will refuse to pay if they are decreed; and I am sure if they did the Local Government Board would take steps to make them pay. "Dispensary Doctor No. 1" seems not to be aware that there is such a place as a court of quarter sessions where those who will not pay their just debts are generally persuaded to do so with costs. In spite of the opinion of The McDermot, Q.C., I am sure the Local Government Board mean us to have our annual four weeks' vacation, and to see our substitutes fairly paid. A hard and fast scale of fees to substitutes can hardly be defined by even the Local Government Board, because if so it might be quite impossible for Poor-law medical officers to obtain leave. Suppose I ask for leave and no medical officer in the union is willing to accept £3 3s. a week. How am I to get leave? The guardians cannot obtain a *locum tenens* from a distance for such a fee. It would not pay his train fare and hotel expenses. It therefore comes to this—that unless our neighbours do our work during vacation we get no holiday. Now, £3 3s. for one district is quite different to £3 3s. for another. In my own case my district is not very large, and I have two dispensary days in the week. My neighbour might possibly do my work at £3 3s. without loss, but, on the other hand, his district is half as large again as mine, and he has three dispensary days. Counting his three dispensary days and allowing for a slightly more than average run of visiting lines during his holiday, my £3 3s. would be more than exhausted in car hire, etc., by the end of the week. What I have asked the neighbouring medical men in this union to do in future in such cases is to agree to do the work at £3 3s. a week *plus* 1s. a mile car hire. This would not only allow the medical officer some fair remuneration for his work instead of his fee being swallowed up in car hire, but it would also prevent the indiscriminate issue of visiting lines.

I regret that neither of those who have replied to my first letter has taken any notice of what I said as to our mode of locomotion, and the injustice to which we are subjected in having, out of £100 a year, to provide a horse and trap, and keep a horse and man. There is no other public servant in Ireland, with districts such as ours to travel over, who is not allowed a reasonable sum to cover expenses.—I am, etc.,

Ramelton, co. Donegal. John Patterson, M.B.

INTESTINAL ANTISEPSIS.

Sir,—Professor Yeo's paper on Intestinal Antiseptics will prove of immense value in general practice. As one of many who have been using antiseptic remedies internally for some time, I can fully endorse all that Dr. Yeo has put forward in his paper.

In enteric fever the use of such drugs as calomel, bismuth, salicylate, and sulphurous acid has a markedly beneficial effect and frequently turns a severe looking case into a mild one. The diarrhœa is checked, abdominal pain lessened, distension relieved, pyrexia decreased, tongue cleaned and moistened, and other satisfactory signs appear which may be maintained throughout. I believe that with increasing experience that it is on these lines, more than on systematic treatment of the pyrexia by cold bathing or otherwise, that the treatment of typhoid fever will in the future be elaborated, and it undoubtedly tends to do what cold bathing admittedly does not do, that is, prevent relapses and shorten the duration of the fever. Within the last year I have had four cases of typhoid pneumonia, that is, typhoid fever in which severe pneumonia was the most prominent condition. I would wish to bear evidence to the striking effects of iodoform gr. j in pill four times daily in these cases. The rapid improvement that took place in all the cases was very striking. For checking diarrhœa with fœtid stools I have found bismuth salicylate a most useful drug. The prevention of the usual formation of ptomaines (or call what we will these various products of intestinal decomposition) will do much to antagonise their action in causing the septicæmia so common in the later weeks of enteric fever. I have found by such treatment that

the dry, baked tongue and constant delirium which used to be the rule in typhoid, are now the exception, and the temperature level is generally a low one.

In chronic dilatation of the stomach, so common in female patients, the use of creosote, thymol, or carbolic acid, is frequently very beneficial. I believe that many cases of chronic dyspepsia are fermentative and septic in origin, and have found similar drugs much more useful than the usual alkalies and bitters. In gastric ulcer I have used boric acid and charcoal, and in some cases resorcin with, I think, better results than by the old orthodox method of "whitewashing" the stomach with bismuth and magnesia.

Dyspeptic ulcers of the mouth and tongue, and many forms of chronic pharyngitis, laryngitis, and post-nasal catarrh, are frequently due to the effects of irritating gases, caused by foul conditions of the stomach. One of the greatest strides in modern therapeutics consists in the fact that physicians have grasped the idea that these antiseptic remedies are just as useful for them to use internally as they are to the surgeons for the external treatment of wounds, and in operations.

In many cases of diseases such as I have mentioned, I have found it valuable to follow on their effects by the use of quinine internally, which, after all, is a remedy of the same class, as well as being so tonic in action. Acute zymotic diarrhœa of young children is, of all diseases, the one best treated by antiseptic drugs; the more freely they are used the smaller the mortality becomes.

It may ultimately be revealed to some medical seer that such widely differing diseases as diabetes, granular kidney, osteoarthritis, general paralysis and tabes, may, in their early stages, be checked by the timely use of remedies of this kind.—I am, etc.,

Enfield. FRED. TRESILIAN, M.D., M.R.C.P.Edin.

FIBROIDS OF THE UTERUS AND FIBROIDS OF THE BROAD LIGAMENT.

SIR,—The observation occurring in my paper on a Solid Intraligamentary Tumour, and referred to by Mr. Alban Doran in the BRITISH MEDICAL JOURNAL of November 25th, is a quotation from Mr. Bland-Sutton's valuable book *Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy*, and occurs at page 350.

I agree with Mr. Doran that in view of treatment the diagnosis between an intraligamentary "fibroid" and a uterine "fibroid" growing between the layers of the broad ligament is most important, but I consider it rather difficult. Both grow between the layers of the broad ligament, both displace the uterus upwards and to the opposite side, and in both cases the consistence may be alike. In the case I recorded there was no vascular *bruit* to be heard, but this sign is often absent in uterine fibroids. The length of the uterine cavity is not a certain guide, as the uterus may be greatly enlarged by a fibroid without any increase in its cavity.

Even when a sessile tumour is enucleated its origin may be doubtful. It may either be an intraligamentary growth primarily, or one which has grown from the side of the uterus and has burrowed between the layers of the broad ligament, and has become detached.

Edinburgh. N. T. BREWIS.

SALT INFUSIONS IN CHOLERA.

SIR,—Your note on this subject in the BRITISH MEDICAL JOURNAL of October 7th reminds me that a large work was published many years ago by a Dr. Stevens on the infusion of saline solutions in the treatment of cholera. I have not seen the book since its publication, but I had a unique experience of the treatment it recommended. When the epidemic was raging in Newcastle and the ports of the Wear, a sailor carried the disease from that port to a small fishing village on the North Yorkshire coast, where I happened to be visiting at the time as a public school boy. The disease was confined to a large square of one-storeyed cottages which accommodated about thirty fishermen's families. The medical man, together with the parson and nearly the whole of the well-to-do inhabitants of the town, having flown, the treatment of the disease fell into the hands of the parish doctor, who lived about three miles distant. I offered to help him in any way I could, and I had a bathing machine dragged into the middle of the square, and in a day or two I had a colleague in the person of a printer with similar accommodation, and a week later a hospital nurse was procured who had had experience of cholera at Newcastle.

There were about 50 cases of cholera, and all the methods of treatment then in vogue were tried, among them Stevens's plan of saline injections. The doctor directed, but left the operation to me, and I employed a fine hydrocele trocar and syringe. The solution was to have been injected into a vein, but in my ignorance of anatomy, and in consequence of the restlessness of the patients from the violent cramps and vomiting, one was glad to get the trocar inserted anywhere, and my practice was practically a subcutaneous injection rather than an intravenous infusion. The result was the same, and was certainly most marvellous. Patients in extreme collapse were restored to consciousness, and the terrible spasms and cramps of the earlier stages were certainly checked. But, unfortunately, the relief was very temporary, and, as far as I remember, all the patients so treated died. Probably in more skilful hands better results might have occurred, and, at any rate, with the introduction of treatment of other diseases by saline subcutaneous injections, Stevens's long-forgotten treatment might be looked into by those who have cholera to treat. I may add that we tried the castor oil treatment, recommended by the late Dr. Fuller, with equally bad results, and the treatment by large doses of calomel (grs. x, xv, and xx) with very fair results. The epidemic was, however, stopped by isolation of the patient as soon as the disease declared itself. The empty vicarage and the schoolhouse were converted into isolation hospitals, and not a single case occurred in the adjoining town of between three and four thousand inhabitants. I had large wood fires burning day and night in the square, and this, if it did nothing to destroy the disease, kept the children in good spirits.—I am, etc.

Eastbourne. CHARLES ROBERTS, F.R.C.S., etc.

ALCOHOLISM IN RELATION TO HEREDITY.

SIR,—Dr. Potter admits[1] that all free nations, which can command abundant supplies of alcohol, are temperate strictly in proportion to their past experience of the poison. I attributed this highly significant fact to alcoholic selection—to the elimination of the innately intemperate and the survival of the innately sober. Dr. Potter attributes it to the "evolution of public opinion. Those nations who have had a long and sad experience of alcohol tend to evolve a public sentiment against its excessive use." But South Europeans, who have had plentiful supplies of alcohol from a time of enormous antiquity, have been comparatively temperate for more than 2,000 years. In other words, they have suffered little from alcohol during that period. During it the English have been exceedingly drunken, the drunkenness beginning with the rich, who alone were anciently able to command much alcohol, and ending, as alcohol cheapened, with the poor. Does Dr. Potter seriously mean us to believe that the sobriety of the Greeks and Italians, etc., is due to a public opinion formed by what happened in pre-historic times, and that 2,000 years of suffering have not been sufficient to form an opinion among us?[2]

He firmly believes "that nine out of ten men would prefer coffee to alcohol if it was procurable at the same price and quality as beer is." Within five minutes' walk of my house are more than a dozen hotels and mean public houses, and one very comfortable coffee tavern. The coffee, I know, is excellent, and is supplied at a penny a cup; the beer I am told is vile, and cannot be got for less than three-halfpence a glass. The coffee tavern is always empty, the public houses are always full.

Dr. Drummond[3] thinks that alcohol circulating in the parents' blood may so damage the germ cells as to render the offspring which arise from them more liable to drunkenness than they would otherwise have been. In that case, races which have longest used drink should be the most drunken, whereas the contrary is the fact. I have dealt with this point and others raised by Dr. Drummond elsewhere.[3]

[1] BRITISH MEDICAL JOURNAL, September 30th, 1869.
[2] *Ibid.*, October 21st, 1899.
[3] *The Present Evolution of Man*, pp. 307 to 370: The *Medical Magazine*, June and July, 1899: The *Lancet*, October 19th, 1899.

Dr. Coley says that if I had a larger practical acquaintance with the subject of alcoholism I should hold different opinions —his opinions. I am curious to hear what he knows of me personally. He then, while ignoring facts and arguments, proceeds to contradict the conclusions founded on them, and caps the whole by various flagrant misstatements. The following are some examples. He says:

> There are no facts to prove that parents, whose whole body has been made unhealthy by the habitual use of a toxic agent, will be none the less likely to produce healthy children. There are facts which make the contrary at least probable.

I have published a large body of evidence on this point.[4] Will Dr. Coley deal with it? For my part I cheerfully undertake to shatter any evidence he may produce. I had stated that men varied in their capacity for enjoying drink, and that an inborn capacity for delighting in excessive indulgence was a necessary factor in every drunkard's crave. My critic says this is true only in exceptional cases. "The vast majority of inebriates had originally an average power of self-control." But if there was self control something was controlled. What was that if not the capacity for delighting in excessive indulgence? If anything, Dr. Coley's statement means that most people who have tasted alcohol crave for drunkenness, but control themselves; mine that in some races at least, only some people crave for excessive indulgence. Has the average reader of this JOURNAL this craving? I know I have not. "Dr. Reid apprehends that the person to whom drunkenness is attractive is in an abnormal condition—which is true." But I do not apprehend it. To me it seems ridiculous to suppose that the greater number of the human race are in an abnormal condition. Moreover, how Dr. Coley can reconcile his belief in this abnormality with his doctrine of nearly universal self-control passes my comprehension. He says It evidently shrink from the only logical effect of my theories. Shrink! I have shouted them from the housetops,[5] but they are not what Dr. Coley supposes. He doubts my "astonishing allegation that we have knowledge of some 5,000 years of temperance endeavour," and thinks it is based on knowledge granted to me, but denied to the rest of the world. I had no idea my knowledge was so exclusive. A papyrus of the Fifth Dynasty (B C. 3566-3333) exists in which there is an exhortation to temperance. He thinks my theory false because the French have lately increased their consumption of alcohol. May I refer him to the BRITISH MEDICAL JOURNAL of August 19th, 1899? He reminds me of one who tries to judge the course of a river by watching an eddy in a backwater.—I am, etc.,

Southsea. G. ARCHDALL REID.

SIR,—Dr. Coley quotes from Roberts and Jonathan Hutchinson with the object of showing that the acquisition of gout by the parent predisposes the child to that disease. Roberts writes: "When gout becomes developed *de novo* in an individual, children born previously are free from the complaint, while those born subsequently are liable to be affected." If this can be definitely proved, it will go far to show that acquired characters can be inherited; but has it been proved by extended and accurate observation? I doubt it much. Hutchinson's observation concerning gout, to the effect that "the younger children in a family are more likely than the elder children to suffer, and to suffer severely," while suggesting that the acquisition of a morbid condition tends to be inherited, does not afford a conclusive proof of this view. The age of the parents at the time of conception exercises an influence on the offspring apart from any characters they may have previously acquired; and it may well be that the later children are more liable to gout than the earlier ones, even though the parents have never been exposed to gout-producing agencies. But whether or not a parent, by leading a gout-producing life, predisposes his subsequent offspring to gout, certain it is that the most malignant types of this disease are met with in people whose ancestors for generations back have been free from it. Among the peasantry in some of the very poor parts of Ireland, where the means of livelihood are the slenderest, gout is practically unknown, and has been for generations. Translate a colony of these people to London, and in a very few years we shall find the most pronounced forms of the disease among them. This shows that the gouty diathesis may exist, just as we know the tuberculous and alcoholic may, quite independently of any specific ancestral delinquency. The view that it has gradually evolved through over-eating and drinking during several successive generations has yet to be proved.

I observe a curious dislike—I had almost said antipathy—among medical men to the view that acquired characters are non-inheritable, a view which Dr. Archdall Reid has so lucidly expounded, and is so strenuously defending. I would suggest that every sceptic should dispassionately examine the question for himself by careful observations over an extended period. Speaking for myself, I may say that for the past ten years I have been on the look-out for the inheritance of an acquired morbid character, and I have not been able to convince myself that I have met with a single instance.—I am, etc.,

Wimpole Street, W. HARRY CAMPBELL.

OCEAN VOYAGES IN PULMONARY PHTHISIS.

SIR,—The observations of Dr. J. C. Thorowgood, which appeared in the BRITISH MEDICAL JOURNAL of November 11th, 1899, p. 1388, are perfectly correct. I have also observed the remarkable benefit that many patients suffering from tuberculous phthisis derive from a sea voyage. The following is an illustration:

I had under treatment, together with my father, a family suffering from tuberculosis. Four sons died at different ages while under my father's treatment and three daughters when under my treatment. The youngest, knowing his family history, consulted me and asked me what to do in order to avoid the terrible disease to which all his brothers and sisters had succumbed. He intended to study medicine, and I advised him to study navigation instead, as by long voyages he might probably avoid the disease. He followed my advice, and passed nearly ten years at sea, always in good health. He is still living, enjoys good health, and has five sons of strong constitution and the picture of health.—I am, etc.,

Malta. E. F. INGLOTT, M.D., D.M.O.

SIR,—I am sorry to see the old idea of sea voyages for phthisis advocated again. Some years ago I made the voyage to Melbourne in a sailing ship with a patient of this kind, who suffered greatly from its effect, and died a month after landing.

We left Gravesend in the month of October, my patient's troubles beginning with sea sickness and inability to sleep on account of the noise on deck from trimming sails, etc., during stormy weather, and this was the case at intervals during the whole voyage.

In storms all ports and skylights having to be closed, the close unhealthy atmosphere of the cabins is intolerable.

We crossed "the line" on November 4th, thermometer 86°, the moist tropical heat debilitating the patient greatly. Towerds the end of November, far south of the Cape of Good Hope, we found ourselves sailing through rough seas, with thick fog and icebergs in sight; my patient was obliged to remain below. From here nearly to December 21st, when we sighted the Australian coast the weather remained cold and stormy.

I returned home *viâ* Cape Horn, which, on account of the wind, almost all sailing ships do, and, as is always the case, we had a very rough time of it, the ship's doctor, who was suffering from pulmonary phthisis, being in bed most of the voyage home. We had many other patients with this disease on board, none of them deriving any benefit whatever.—I am, etc.,

HERMANN JOHNSTON JONES, M.D.

Wallington, Surrey.

MEDICAL CONTRACTS: A SIMPLE SUGGESTION.

SIR,—The most crying evil of the present day without doubt is the payment made to those medical men who unfortunately have to undertake club practice. I write with an experience of nigh twenty years. The annual payment for each adult member is 2s. 6d. to 3s. 6d. according to the club: the visiting radius extends to three or four miles in my district. Within the last few years a more deplorable state of things has arisen. The friendly societies have inaugurated juvenile clubs, these are attached to the

[4] *The Present Evolution of Man*, pp. 199-370.
[5] *Inebriety among the Ancients*, by W. S. Brown.

adult members. These juvenile clubs comprise children, both male and female, from birth to the age of 14 years. The payment for those members, who as we all know demand more attention than the adults, is at the rate of 1s. 6d. per annum; they come into immediate benefit at entrance.

All the children of a family are not entered, only the most delicate members. If an epidemic arises the non-entered members are at once entered if they show any signs of invasion. If the medical man demurs at this, he is instantly reported to the committee, and if the child dies a hue and cry is raised against the doctor. The medical profession at the present day is fair game for the working man.

The medical aid societies paid 2s. 2d. per annum for each child, and now we are told in your last issue by Dr. Glover that the leaders of the friendly societies, think that the sum of 4s. 4d. per annum too small a payment for the professional services (including drugs) of a duly-qualified medical attendant. The practical result, however, is the annual payment of 1s. 6d. per annum from the most exacting of all our clients, the juvenile members of these friendly societies.

I would make a simple suggestion, namely, let the minimum fee for each individual member per annum be 4s. 4d. Let this be adopted by the whole profession. I would make it penal in its consequences for any qualified medical man to undertake club work for a lesser sum. We want union; let us be united on this one point, it will perhaps be the first step to a better state of things in the profession, and cannot interfere with the efficient working of any of the friendly societies.

I regret to say that whilst the cost of medical education and assistants tends to increase, the friendly societies are more and more inclined to starve the doctor, upon whom the whole framework of their societies is built up. The medical attendant is overworked and thrown a mere pittance when they annually publish with pride the account of their rapidly-increasing membership, and the augmentation of their funds.—I am, etc.,

PANIS.

THE CLEANSING OF THE SURGEON'S HANDS.

SIR,—Dr. Lynn Thomas and myself must evidently agree to differ. He prefers the running stream of water, and I prefer water in the domestic hand basins. He says that the use of a nailbrush in the preliminary stage is worse than useless, since it drives the organisms deeper into the skin, and the brush itself becomes infected.

It is perhaps as well, for argument, to go back to the view that the surgeon ought to cultivate a soft smooth whole skin, and before operation wash his hands carefully with a good soap and water and nothing else. Unfortunately the skin and fingernails of surgeons do not agree with these conditions, and consequently stronger means have to be taken, and the use of nailbrushes is one of them. Even if the bristles drive a few germs into the skin, they must sweep away whole masses of septic material from the, relatively speaking, immense inequalities in the cuticular surface; but instead of criticising one another, a statement of my procedure will be more interesting to the reader. My order is as follows:

1. The hands are scrubbed with boiled nailbrushes and loofah and soap in a weak solution of lysol (1 in 200) for five minutes.
2. The nails are carefully cleaned both underneath and at the roots. This cannot be done so thoroughly at an earlier stage, because the parts become looser and softer by maceration and scrubbing.
3. The hands are scrubbed in methylated spirit, and then rinsed in boiled water three successive times. This takes two minutes.
4. The hands are soaked in a hot saturated solution of permanganate of potash, and bleached in a hot saturated solution of oxalic acid. This takes about three minutes.
5. The hands are rinsed in boiled water.

[6. Sterilised thread gloves may be used.]

No method can be short and easy because time and work must be put into the process, and every portion of the hands thought of and operated upon. It may be said that this compound method is tedious and excessive. It can only be put forward that in questions of life and death, as in abdominal surgery, full precautions are essential. An hour's care stands against a week's anxiety and a disastrous termination. One practical point I may mention is to begin cleansing the hands before the anæsthetist gets to work.—I am, etc.,

Wolverhampton, Dec. 18th, 1899. FRED. EDGE.

THE DECREASE OF VENEREAL DISEASE IN THE INDIAN ARMY.

SIR,—In the article under the above heading in the BRITISH MEDICAL JOURNAL of December 30th, 1899, it is stated that there was a decrease in the admissions for venereal from 511 per 1,000 in 1896 to 486 in 1897. This reduced figure was indeed given by Lord G. Hamilton in the House of Commons, but it was obtained by including the troops on active service, who in frontier campaigns, for obvious reasons, are much less exposed to venereal than troops in cantonments. The real figures for troops in cantonments, as given at p. 183 of the Army Medical Report for 1897, was 507.8. It is further shown in a note on the same page that had there not been an alteration in the classification of disease in 1897 (ulcer of penis not classed as venereal), the admissions would have been 509 per 1,000, or hardly any reduction below those for 1896. I am afraid that when the report for 1898 appears we shall find there is not really a very substantial reduction.—I am, etc.,

A. G. WYMAN,
Colonel, late Dorset Regiment.

Junior United Service Club, S.W., Jan. 1st.

PIPERAZIN IN GOUT.

SIR,—With reference to the memorandum on this subject by Dr. William Fearnley in the BRITISH MEDICAL JOURNAL of December 30th, 1899, I desire to enter an emphatic protest against what I consider is an altogther erroneous view of the treatment of gout, namely, that the continuous taking of any drug for the remainder of life is either necessary or desirable for the prevention of gout. I will put on one side any special reference as to the value of piperazin in gout, about which I, in common with many others, have considerable doubt, as I prefer to limit myself to the main point, that for the treatment or prophylaxis of such a disease as gout it is, in my opinion, wrong and dangerous advice in connection with such a drug as piperazin, to "impress on the gouty that it is as necessary for them as their daily bread."—I am, etc.,

Weymouth Street, W., Jan. 1st. ARTHUR P. LUFF, M.D.

INDIA AND THE COLONIES.

BRITISH GUIANA

THE MEDICAL DEPARTMENT.—The report of the Acting Surgeon-General, Dr. J. E. Godfrey, describes the working of the department from April, 1898, to March, 1899. Dr. Daniels had been selected by the Secretary of State for the Colonies as one of the three to investigate and report on the causes and cure of malaria, and had consequently left the colony. The number of in-patients treated in the public hospitals during the year was 14,207 (of whom 1,660 died), that of the out-patients being 75,356. The Leper Asylum consists of seven cottages on 9-foot pillars, exceptionally well ventilated, each cottage accommodating sixteen inmates. The health of the colony was fairly good, in so far that there were no epidemics of a severe type, but the mortality was 34 per 1,000. This was probably due to the fact that the poorer and ignorant classes of the people persist in neglecting the simplest hygienic principles, and continue to live in overcrowded, badly-ventilated rooms, and to use unwholesome food, especially for young infants. There were no deaths from yellow fever or small-pox; but several from influenza and pneumonia due to influenza. For vaccination glycerinated calf lymph was imported; there were 723 successful cases at a cost of 623 dollars. In the public leper asylum 355 males and 118 females were under treatment, of whom 37 males and 11 females died. The "open-air" treatment was pushed in the direction of better ventilation in the wards and cottages as far as the prejudices of the patients would allow, the patients being encouraged to remain out of doors during the day, and to take advantage of the fresh air to the fullest.

COMPULSORY VACCINATION IN ABYSSINIA.—It is stated that the Emperor Menelek has, as an outcome of Dr. R. Wurtz's mission, decreed that vaccination shall be compulsory in Abyssinia. The Abyssinians have been in the habit of practising inoculation, and Dr. Wurtz gives some striking instances of the deplorable consequences that may follow that measure. A rich Abyssinian refused vaccine lymph offered him by Dr. Wurtz, and insisted on having eight young female servants inoculated, with the result that they all died of small-pox. Syphilis, it is said, has been transmitted by inoculation. In 1896 a French trader of Addis-Abada had nine servants inoculated, with the result that each of them soon afterwards had a chancre on the wrist.

OBITUARY.

SIR JAMES PAGET, BART., F.R.C.S.ENG., F.R.S.,

Sergeant-Surgeon to Her Majesty the Queen, and Consulting Surgeon to St. Bartholomew's Hospital.

THE death of Sir James Paget on Saturday last added one more note of mourning to the end of the year. But he died most peacefully, free from even the least pain or trouble of mind or body. For two years he had borne the burden of a feeble and almost helpless life, and had not once complained: he had become, long before he died, too weak to stand or to sign his name: he was 85 years old, and within a few days of 86. We cannot wish that he had lived much longer.

He was born at Great Yarmouth in 1814, and was one of seventeen children, of whom eight died in infancy or childhood. His father was a brewer and shipowner of Yarmouth, and mayor of the town in 1819, an active, prosperous, hospitable, public-spirited man, in the days when Yarmouth was an important town busy with trade and shipping and politics, not spoiled by London; but toward the end of his life he lost heart, and his business failed. His mother had a profound influence on Paget's boyhood: she was full of energy, always at work, not only in her unceasing care for the children and for the affairs of the house, but in writing, painting, needlework, and making collections of autographs, seals, shells, china, and all kinds of valuable things. She was, moreover, active in all the charities, social duties, and politics of the town. From her, Paget got his love of botany, his skill in drawing, and his love of home, and perhaps his love of museums.



His father could not afford that Paget should follow his elder brothers at Charterhouse, and he was sent to Mr. Bowles's school at Yarmouth, where he had a fair education in the elements of Latin and mathematics, such as would now enable a boy to enter with credit at one of our public schools. When his schooldays were over, he had a great longing to go into the navy — the natural desire of a boy born and bred in a seafaring town, whose father was a shipowner and had many friends in the service. He set to work on navigation, geometry, and mathematics; and his father wrote to a friend in the navy asking him to take the boy under his care. But at the last moment the love of home was too strong, the letter was burned, and it was decided that he should go into general practice.

He was apprenticed in 1830 to Mr. Charles Costerton, a St. Bartholomew's man in busy practice in Yarmouth. His first sight of surgery was on February 17th, 1830, and he never again saw a similar case—a double amputation, thigh and arm, for gunshot wounds. It may console present students to know that he fainted at the operation. The routine work of his apprenticeship was less exciting. He was in the surgery from 9 till 1 daily, and again in the afternoon; he dispensed and sent out the medicines, rolled the pills, kept the books, made out the accounts, bandaged and dressed and treated such patients as came to the surgery, and bled many of them, especially on market days, and at the spring and fall of the year. They would do their marketing and then come and be bled, some of them till they fainted, and then go home, perhaps driving their carts back for miles into the country. His work was not hard; he had time to read what books he could get—Cullen, Mason Good, the *Lancet*, and the *Cyclopædia of Medicine*; time to botanise, on Saturday afternoons and at odd hours; time even to write and publish, with one of his brothers, his first book, a *Natural History of Great Yarmouth*. He saw the first epidemic of Asiatic cholera, in 1832; he attended lectures given to surgeons' pupils by Mr. Randall, a young surgeon at Acle near Yarmouth; and he taught himself French and read Bichat and Cuvier. He was Mr. Costerton's apprentice for four and a half years, and was now 21 years old, and had never been more than a few miles out of Yarmouth. He came to London in 1834, and he was entered at St. Bartholomew's because it was his master's old school, and his cousin Dr. Moor had been there, and some Cambridge friends of his elder brother George (afterward Sir George Paget) were there and would help him.

Of his first year at St. Bartholomew's Hospital it is enough to say that he was left without such help and teaching as are now given to students. His best teacher was himself. He worked hard in the dissecting rooms, with the aid of Stanley's *Anatomy*, the *Dublin Dissector*, and a translation of Cloquet's *Anatomy*, which last book he so valued that once, when a fire broke out in the house next his lodgings, he seized Cloquet as the one thing that must at all risks be saved. He followed Lawrence through the wards, and Burrows in out-patient work; and he took a bit of advice sent him by Dr. Clarke, Sir George Humphry's predecessor at Cambridge, "Tell him, whatever he does, to learn German." He taught himself German, and read Hildebrandt and Müller with a dictionary; and Marshall Hall asked him to call on him, and to translate to him what Müller had just published about reflex action. This year, in the dissecting rooms, he made his discovery of the *trichina spiralis*; and at the end of the year he swept the board of all four prizes—medicine, surgery, chemistry, and botany—and was so surprised at his own success that he lay awake all night, one of the only two sleepless nights that he ever had in his life, except in illness. Among his friends this year were Square, of Plymouth; Firth and Master, of Norwich; Meade, of Bradford; Black, and Holden.

In his second year (1835-36), being unable to afford a dresserships, he clerked for Latham, and worked in the out-patient room with Burrows. On May 13th, 1836, he passed at the College of Surgeons. His examiners were Sir Astley Cooper, and Mr. Anthony White of Westminster Hospital. He was asked the branches of the fifth nerve, and gave them a minute account of the otic ganglion, which was at that time a structure hardly known at the College; and Sir Astley claimed acquaintance with his father, and declared that he had fought him when they were at school together; and asked Paget to breakfast.

Then came a holiday at home, and the proposal of a partnership in a Yarmouth practice; but at last it was decided that Paget should try to support himself; if he could not, his father would make him a very small allowance, at all events for the present. This year, to reverse the old proverb, while Poverty came in through the door, Love flew in through the window; he became engaged. But they had to wait more than seven years, before the Wardenship of St. Bartholomew's made it possible for them to be married.

Back in London, he took lodgings in Millman Street, and had a pupil to board and read with him; but the pupil would not work, even with Paget. So Paget, to escape from him, went to Paris for four months, took a little room at two francs a day in the Hôtel Corneille, and saw something of the work of Roux, Lisfranc, Velpeau, Louis, and many more. When he came back he got men to read with him, but few came, and he disliked the work, and it went against the grain with him.

Writing, at this time of his life, was easier to him than coaching; and, by laborious work, he earned by writing between fifty and seventy pounds a year. He was sub-editor of the *Medical Gazette* from 1837 to 1842, he reported for the Medico-Chirurgical Society, reviewed French, German, and Dutch books, and wrote reports and essays for Forbes's *British and Foreign Medico-Chirurgical Review*, the *Penny Cyclopædia*, and the *Biographical Dictionary*. All these years, and for many years afterward, he was poor. Every night, and far into every night, he wrote; every day, and all day long, he was at his work as Curator of St. Bartholomew's Hospital Museum, working there for seven hours a day for forty pounds a year.

In 1839 he caught typhus fever, and nearly died of it; he got the infection by making a *post-mortem* examination in a house in Lambeth, where a child was lying with typhus fever in the next room. This same year he was appointed Demonstrator of Morbid Anatomy at St. Bartholomew's Hospital, and in 1841 he became Surgeon to the Finsbury Dispensary.

With this appointment as Demonstrator of Morbid Anatomy Paget's career as a teacher began. His demonstrations drew crowded classes, for hitherto scientific pathology had hardly ever been taught in British schools, and few if any teachers, excepting Lawrence, knew how to make the subject interesting to the student. So well did Paget succeed that his pupils begged the authorities that he should be made a lecturer rather than a mere demonstrator, and the request was granted. No hospital officer was ever more popular, and at the same time more respected by the average medical student, even from his youth, and when the College for resident students was founded in 1843 Mr. Paget was made the first Warden. He held that office for nine years, resigning in 1851. Thus he gained an intimate knowledge of that often misrepresented young man, the medical student, and wrote on his behalf one of the few really impartial and instructive essays on the subject of medical studenthood which has ever appeared. This essay—"What becomes of Medical Students?"—was published in the fifth volume of the *St. Bartholomew's Hospital Reports*, and is not the least valuable of the products of Paget's pen.

In 1842 Paget, working at first with Stanley, undertook one of his great feats, the preparation of the *Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England*. The earlier *Catalogue* in 1830 had proved very unsatisfactory. In 1844 the Council formally directed him to begin the catalogue which appeared between 1846 and 1849. At the same time Paget prepared a similar pathological catalogue for the museum of St. Bartholomew's Hospital. No man could have been better chosen, for Paget not only knew how to select and how to reject, but he likewise had the art of making a preparation show what it was meant to show, and of explaining just what was meant, in its description in the catalogue, always a model of lucidity and terseness. He set up a model of catalogue literature which is all but universally adopted at the present day, and which by its nature cannot be improved upon. He knew his work and his heart was in it, and as in 1846, so it was in 1878, when he undertook to bring out a new edition of the College catalogue with the co-operation of Dr. Goodhart and Mr. Alban Doran. Such a task implied the close scrutiny of every single specimen as it was described and a second review of each specimen from the proofs of the printed catalogue. Though already elderly, and deeply engaged in practice, Paget displayed a zeal in work of this kind which astonished even his assistants, well though they knew how he loved pathology. To him searching through hundreds of pages of manuscript in order to find a single reference was no drudgery, and when he found it he almost made merry, like a keen sportsman who has made a good shot. To examine and describe an interesting specimen, to go over its clinical and pathological features with his co-operators seemed to him an absolute luxury. Such work was usually undertaken after a heavy morning of professional duties in private, and Paget repeatedly declared that nothing was more refreshing to his mind, after the fatigue caused by the responsibility of several serious consultations, than a couple of hours' work at the catalogue in the museum. Retirement, he would say, is too often an illusion, but it is not so if we condescend to turn back in age to congenial work in which we made ourselves experts in youth.

On February 24th, 1847, two years before he had finished the College Catalogue, he was appointed Assistant Surgeon to St. Bartholomew's Hospital. He was already a Fellow of the College for four years, having been made an Honorary Fellow in 1843, when the higher diploma was instituted. In the same year—1847—Paget was elected Arris and Gale Professor of Human Anatomy and Surgery at the College of Surgeons, following Flint South. He held the Chair till Skey succeeded him in 1852. It was in those years that he delivered his great lectures on surgical pathology, which won him reputa-

tion alike as a scientist, an orator, and a man of letters. Paget, Watson, and Hilton were all men who had a literary style, that is to say, not an affected way of writing, but an individual manner of expressing themselves which was never smothered, as is too often the case with medical authors, under a heavy load of technical terms and clumsy conventional expressions. His pathology of tumours was singularly advanced for his time, when we remember that he could by no possibility have enjoyed the advantages of sound instruction in normal histology in his student days, yet he never ceased to remind his pupils that they must never assume that any tissue seen in a section was morbid or malignant till they were sure on good grounds that it was not normal or innocent.

It was not till July, 1861, that Paget was elected full Surgeon to St. Bartholomew's Hospital. He held the appointment for almost exactly ten years, as he resigned in May, 1871. It cannot be denied that the practice of keeping a surgical officer too long out of his due has spoilt many good men, nor did it prove fair to Paget, who could not, under such conditions, be expected to gain a reputation as an operator; but during his many years as assistant, and almost to the end as senior surgeon, he taught surgery as a science rather than as an art in a manner which has never been surpassed. The mantle of John Hunter had indeed fallen upon Paget. Surgeons like Cooper and Fergusson expedited amputations and the ligature of aneurysms, but the strong point of Paget was ever the management of the patient, clinical research, the application of experience. His intense professional conscientiousness played a strong part in the interest which he took in chronic cases, for nothing was uninteresting to him, least of all any kind of case that hitherto baffled treatment, and he always remembered that the welfare of the patient is the first thing to be considered.

House-surgeons and dressers learnt more than others could from Paget, as they were able to follow him daily in his rounds. The results of his clinical experience was manifested to the outer world, however, chiefly in his *Clinical Lectures and Essays*, delivered at first in the lecture room, then published in the hospital *Reports* and in different medical papers, and, lastly, issued in a collected form, edited by Mr. Howard Marsh, in 1875. The author was as good at his pen as in oratory, just as was the case with him thirty years earlier. These lectures are known all over the world, his observations on nervous mimicry and sexual hypochondriasis proved at the same time his knowledge, his judgment, and his wonderful tact in dealing with difficult subjects. He was likewise at his best in his lecture on Cases that Bonesetters Cure. We feel as we read it that the tendency to neglect chronic and "uninteresting" cases breeds bonesetters. "If we were all Pagets," said one of his dressers, "bonesetters would starve." Paget possessed a deep investigating intellect rather than a smart originality, nevertheless we see a truly original manner of looking on things in his discourses on Quiet Necrosis and Residual Abscesses. His attitude towards strangulated hernia, which relates to those terrible "stock operations" which the practitioner and hospital surgeon cannot shirk, was eminently judicious. He preached intelligence in operating throughout all his lectures, he spoke of operations which fail to cure, and of cure where nothing is done. This reminds us of cases recently recorded where an operation for stricture of the pylorus was intended. "Nothing" was found and "nothing" was done, "only" some adhesions to the liver were accidently broken down. Then all symptoms of stricture of the pylorus disappeared, for the very good reason that the adhesions had caused the obstruction, and the "nothing" was everything, or rather just what ought to have been done. It happens that the able foreign surgeons who report these cases recognised the true cause of cure. So would Paget have recognised it. Unfortunately others might have overlooked it. The patient would recover in spite of the operator's ignorance, but future patients might have suffered through the operator's lack of intelligence, his ignorance of how he had done good. Paget continued to the last to insist on the principles of surgical intelligence. Relatively late in life he published some of his most original work, such as his treatise, in the tenth volume of the *St. Bartholomew's Hospital Reports*, on Disease of the Mammary Areola preceding Cancer of the Gland, and his paper in the *Medico-Chirurgical Transactions* on Osteitis Deformans.

Whilst on the surgical staff Paget was remarkable for his skill in choosing the right man for the right work. He foresaw which of his dressers was fitted for surgery, which for general practice, and which for science or literature, with an almost prophetic eye. He was under no illusions about the gains which are often made by other than the noblest means in our profession. He was not the man to vex himself about the ungodly. One day one of his assistants, alluding to a somewhat self-advertising article written by a very smart man, said to Paget, "That will do him much harm." "No," replied Paget, "unfortunately it will do him much good." But Paget preached and practised another kind of "good," and hundreds of his pupils have profited by his example.

As early as 1858 Paget was appointed Surgeon-Extraordinary to the Queen. He attended H.R.H. the Princess of Wales during her long illness, was made Surgeon to the Prince of Wales, and, on the death of Sir William Fergusson in 1877 he was raised to the rank of Sergeant-Surgeon to the Queen. In 1871 he was made a baronet.

With the Council of the College of Surgeons, as with its Museum, he was for long closely connected. He never, however, was on the Court of Examiners, being one of the only hospital surgeons of eminence in his day who did not hold an appointment on that celebrated and dreaded Court. He was elected a member of Council in 1865, and twice re-elected; in 1874 he became President. Had he been a younger man, suited for selection a decade later, he would undoubtedly have held the Chair for more than a year, as was the case with his junior colleague, Sir William Savory, from 1885 to 1889, but in 1874 there was still much reluctance to depart from the rule of an annual change of President. From 1862 to 1885 no former President was ever re-elected.

In 1876 he was made representative of the College of Surgeons on the General Medical Council. As a member of Council of the College his opinion was, of course, of great weight in all matters relating to surgery and medical education, and it need not be said that he did everything to promote the museum, and to render it useful and accessible to all genuine students of any age. In 1877 Paget had the honour of delivering the Hunterian Oration before the Prince of Wales. He also was the first to deliver both the Bradshaw Lecture (in 1882) and the Morton Lecture on Cancer and Cancerous Diseases (in 1887). Paget chose for the subject of his Bradshaw Lecture "Some New and Rare Diseases." He dwelt on the remarkable fact that such prominent maladies as Charcot's disease and osteitis deformans had been overlooked by the great pathologists of past generations, considered how far such maladies might be really and truly new, so that no cases could be known to Hunter, Cooper, and Brodie, and urged that precise and intelligent clinical research was the surest method of arriving at the truth about new diseases and new forms of old disorders. "We should study all exceptions to rules, never thinking of them as unnecessary or accidental."

In his Morton Lecture Sir James Paget reminded us of the necessity of working at cancer on the same principles which should guide us in investigating suspected new diseases. He of course took care to imply that cancer cures cannot well be discovered by lecturing, and said that "If once the specific morbid material can be found, it may be dealt with as others, generically like, but specifically unlike, it have been. But I will not guess now. I have tried to show by facts a right way to a good end; I will not now by guesses run the risk of pointing to a wrong one."

Paget was President of three of the chief medical societies meeting in London. He held the Chair of the Clinical Society in 1869, succeeding Sir Thomas Watson. In 1875 he was elected President of the Royal Medical and Chirurgical Society. When 73 years of age, well advanced to what Shakespeare would term "arm-chair days," he became the President of the Pathological Society. There was at the time some little hesitation in asking him to accept the office, since his age, and the many distinguished offices he had held, might well have deterred him from undertaking the presidency of a Society the meetings of which were mainly attended by young men. But Paget seemed glad to come back to the work of his youth, and no president ever laboured harder. He was most regular

in his attendance, and not only directed the business of the council and the meetings, but actively taking part in the essential work of the Society. His enthusiasm, which had only just carried him through the labour of preparing a second pathological catalogue for the College, prompted him to make every meeting instructive.

Paget's inaugural address, delivered before the annual general meeting of the Pathological Society in January, 1887, strongly urges the general practitioner to remember that being a doctor he is a man of science. "Practice is full of opportunities for science." "Surely it would be hard to name a discovery in biology which more deserves the name of scientific than does Jenner's discovery of vaccination, and yet it was made in the plainest practical manner while he was a country practitioner." Scientific teachings and appliances are far more at the country doctor's disposal now than in Jenner's days.

In 1884, on the death of Sir George Jessel, Paget was made Vice-Chancellor of London University. He discharged the duties of that office with his accustomed grace and quiet dignity, and his resignation in 1895 was much regretted. In the British Medical Association Sir James Paget always took a great interest. At the London meeting in 1862 he delivered the Address in Surgery on the Management of Patients after Surgical Operations, and in a terse speech proposed the "Health of Her Majesty's Ministers" at the annual dinner in 1873, Mr. Gladstone replying. Paget was President of the Section of Surgery at the Oxford meeting in 1868, and again in 1874 at Norwich, when he gave an address on Norfolk Surgery.

Perhaps one of the most remarkable and original lectures ever delivered by Sir James Paget was his Address on Elemental Pathology, given as President of the Section of Pathology at the Cambridge meeting in 1880. He boldly recommended the pathologist to begin at the beginning in the true biological fashion, that is to say, he recommended him to study the diseases of plants, atrophy, hypertrophy, and traumatism in leaves, branches and roots, so that from the simpler he might gain light which he could turn on more complicated pathology of man. Indefatigable at pathological work, he at the same meeting read an excellent paper on Suggestions for the Making of Pathological Catalogues.[1]

Paget bore more honorary titles than can be given in detail in our columns. He was F.R.S., D.C.L.Oxon., LL.D.Cantab., Honorary F.R.C.S. of Edinburgh and Dublin, and Honorary M.D. of Dublin, Bonn, and Würzburg. The latter degree was conferred on him at the tercenary celebration of the Bavarian University. He was Member of the Institute of France, and Foreign Associate of the Académie de Médecine. On account of the admiration and esteem in which he was held abroad, as well as at home, he was chosen as President of the International Medical Congress in 1881.

But we care for him, not for his honours and titles. He is dead. What was the secret of his life? Men saw him working day and night, through the twenty years of poverty, through the hard work of prosperity; at the zenith of his vast practice, and in the decline of it; and in the years of retirement, till he was so feeble at last that he could do nothing for himself. What was the spirit that made such a life possible?

It is not enough to say that he worked very hard, and finished his course, and kept the faith. Behind his faith and his works, and his courtesy and honourable conduct toward the members of his profession, and his love of home, there was self-restraint, self-judgment, reserve, self-discipline. He had no sympathy for men with eccentricities, hobbies, fancies, and vagrant tastes for things outside their business. To them he seemed an austere man, reaping where he had not sowed; rather hard on soft people, formal with informal people, and narrow in the opinion of men whose breadth was in inverse proportion to their depth. But to all men who were strong enough to feel his strength, and good enough to see his goodness, he was guide and master and friend—a man to live for. And to the little circle that was round him toward the end of his life, he gave the perfect example of that most difficult achievement, a perfect old age.

Sir James Paget is succeeded in the baronetcy by his eldest son, John Rahere Paget, who is at the Bar. His other sons are the Dean of Christ Church, Oxford, the Vicar of St. Pancras, and Mr. Stephen Paget, Surgeon to the West London Hospital. He leaves also two daughters, of whom one, unmarried, has been for many years his constant companion and help. Lady Paget died some years ago.

[1] BRITISH MEDICAL JOURNAL, December 11th, 1880.

We have received the following from an old friend of Sir James Paget:

A close intimacy of more than fifty years with Sir James Paget may justify one who enjoyed his friendship, in writing a very few words concerning his personal and private character. His personal character was essentially a private one, and its most admirable traits were little appreciated by any but his most intimate friends. Being naturally of a shy and retiring disposition he was very cautious in taking any one completely into his confidence, but to those who finally gained it his friendship was one of the chief pleasures of life. He was to those who knew him a most lovable friend and cheery companion, with a keen and kindly sense of humour. From association and conversation with him one could get nothing but good, intellectual and moral. He was known to some of us under most varying and opposite conditions of life, in poverty and adversity, under sore trials of another kind, in prosperity, in sickness and in health, and more than once in the hour when death stared him in the face. His poverty was self-imposed; it was very real, and was endured without complaint, it lasted for some years, and was due to a most honourable, but as his friends believed, to a mistaken obligation to discharge the debts of a near relative—debts for which he was in no way responsible. The very severe trials of his early hospital life were borne manfully and patiently, without complaint or the least trace of resentment towards those who caused them. Finally he vanquished his enemies by winning them over to be his friends. When prosperity at last came, and honours were showered upon him, he was deeply grateful, but in no way elated or ostentatious. Twice before his last illness Paget was desperately ill, so ill that to himself and to those around him this life for him seemed to be at an end. On one of these occasions, being in full possession of his faculties, he took leave of this world, making to a friend at his bedside a remark to the effect that it was like coming home and putting off his court suit. A man of sincere and unostentatious piety, he was never guilty of what has been called spiritual indelicacy. He did not parade his religious convictions or pretend to lay bare his inmost soul to anyone. He avoided the use of shibboleths, and never talked of religious experiences; but, according to human judgment, he was in heart and life a sincere Christian.

When the weight of years bore down his physical strength, his mind remained singularly clear, and his intelligence active. He read a great deal, and was keenly interested in all matters connected with the profession, and in conversing with a few old friends. In spite of the infirmities of age, he was cheerful to the last, and frequently expressed his thankfulness that he suffered from no disease.

Mr. Thomas Bryant, who is now the senior member of the Council of the Royal College of Surgeons of England, sends us the following note on Sir James Paget's services to the College:

At the Royal College of Surgeons of England Sir J. Paget's presence was always acceptable, and in the recent past years his occasional visits have been much missed, for no one connected with the College could forget his work in its interests—that in 1842, the year before he was elected one of the first 300 Fellows of the College, he undertook with Mr. Stanley to write a new catalogue of the pathological section of the Hunterian Museum, and so late as in 1878 to re-edit a second edition; that between 1847 and 1852 he delivered annually as Arris and Gale lecturer to the College a course of lectures on pathology (which the writer of this notice had the pleasure and privilege of attending), which were subsequently published as a book, which, with the lectures, unquestionably laid the foundation of his great future reputation and professional success, for by these lectures a professional educational want was not only well supplied, but the principles of pathology were laid before the profession with a

clearness of thought and expression, and an aptness of illustration which made them most acceptable, and were delivered with a charm of manner which in after-life was so fully recognised and became so attractive.

As a President of the College in 1875, and a Member of the Council from 1865 to 1889 (24 years), he had much influence, and was regular in his attendance. He always held that the scientific object of the College was the important one to be maintained and forwarded, and as its museums increased in size and number, the many questions which cropped up as to how they could be best employed for educational and scientific purposes occupied his first thoughts. In their completed condition, as they are now to be seen, he had great delight.

In the politics of the profession he took little interest. As a colleague upon the Council he was loyal in the extreme, for as soon as he saw the way opinion tended he sometimes changed his vote, although he may have previously done his best to influence the Council another way, and this action was due to kindness and modesty, for he was always ready to believe in the possibility of views differing from his own being correct. In disciplinary matters he was at times weak, being disposed to take the "poor fellow" view of any case—which always tends towards leniency—rather than the public view, which may seem harder. But, whatever Paget did his colleagues knew that no other than the highest motives influenced his conduct.

Paget's name is not likely to be forgotten at the College. May his example live as long.

We are indebted to Mr. Jonathan Hutchinson, F.R.S., for the following notes: Our estimate of the influence which Sir James Paget exercised on the destinies of the profession must not be restricted to any work which bears his name. In countless committees, not a few councils, and several important commissions his was a guiding voice; innumerable were the resolutions, recommendations, and reports which he originated. His calm, clear judgment was always recognised; and whatever he said was sure to be received with the utmost attention by all, and by the majority with acquiescence. Seldom, indeed, was his vote given in the minority, but more often than not it was his speech which had decided the conclusion. I sat with him many years in the Council of the Royal College of Surgeons, in the meetings of the Committee on Leprosy originated by the Prince of Wales and through two long Royal Commissions, and have had abundant opportunities for appreciating his almost unerring skill in the mastery of facts and his unequalled facility in expressing the opinions at which he had arrived. The occasions which I have mentioned constitute but a small part of the work of this kind which he performed, and in various other appointments I doubt not that his colleagues would have borne like testimony to mine.

There is yet another department of silent influence which should be mentioned. Few men had exercised a wider power than he in the nomination of younger men to posts of importance. He was consulted by public bodies on all hands, his appreciation of character was excellent, and his suggestions were always judicious. Not a few of those who in various places now hold high position in the profession were in their early career his nominees.

As a practical surgeon the qualities which Paget brought to his patients' help were cool nerves, keen observation, clear judgment and wide experience. At the time that I knew him first, as an assistant surgeon at St. Bartholomew's, his diagnosis was highly valued by his senior colleagues. It was, I believe, to Mr. Stanley, a man twenty years his elder, that Paget chiefly owed his early appointments, and I well remember that it was a joke amongst the students that Mr. Stanley could not do anything of importance until Paget had approved the step. If a case of any difficulty occurred in the wards, "Where is Mr. Paget?" was sure to be the enquiry. At a later period in his career during the quarter of a century of his most active practice his verdicts were regarded as well-nigh conclusive by the whole British profession.

As an operator he was at no time showy, but at all times safe. He always did what he had set himself to do with unflinching regard to his patient's interests.

Perhaps it might be said that sobriety of mind was the distinguishing feature in Paget's character. He was never excited and never below par, but always in full possession of the same clear intelligence and capacity for open-eyed observation. Never for a moment did his wits fail him, either as regards what ought to be said or the best words in which to say it. His handwriting might perhaps be quoted in illustration of his unfailing balance. It was always, whether written in haste or at leisure and regardless of varying qualities in pen and paper, exactly the same. Readiness of reply and aptness at repartee may probably be taken as good evidence of this most enviable presence of mind. Many good things might be related of Paget in this direction. His retort in the hatter's shop loses much of its point as I see it given in one of the daily papers. In its correct form it was excellent, and could have been produced only by a mind alike vigorous and alert. In case any of your readers may not have heard this anecdote, it may be well to subjoin it: Sir James had called on his hatter early one morning, and was left awhile in the shop alone and hatless, the shopkeeper having taken his hat into the back room to pass his iron over it. There entered a gentleman in a state of some excitement, who, mistaking Sir James, presented his hat with an emphatic statement, "My hat does not fit me!" Sir James looked at him with an assumed critical air, and remarked, "No; and now you draw my attention to it I see that your coat does not fit you either."

A friend of Sir James, to whom I related this story, and who was, I cannot but think, deficient in the sense of humour, said that he could not believe it, since Sir James was "a man much too kindhearted to hurt anyone's feelings by such a remark." So I took an opportunity of asking Sir James whether it was authentic, and received its confirmation. The *Times* of Monday last gave the expression as "I want a new hat," and Paget's reply as, "So do I"; but my version is, I think, the best, and it has besides received authentication.

The query which he addressed to Mrs. A. G. on being told in that distinguished lady's presence that she had gained by a large majority of votes a seat in the School Board, and also that she was about to be married, was of the same significance, "and which," Miss A., he demanded, "do you account the greater honour: to be the elected of two thousand or the selected of one?"

It is perhaps in some place between John Hunter and Sir Benjamin Brodie that we should find a niche for him whom we have just lost. His enthusiasm for Hunter and his methods of thought and work was unbounded; and although not a great collector himself, it was because the need for that kind of work had to some extent passed, rather than from want of zeal. His industry as a museum expounder was proved by the production of his *opus magnum*, the Catalogue of the Pathological Part of the Hunterian Collection. Until his time was absorbed by private practice and public committees he was indefatigable in microscopic research. Yet in his relations to the profession and the public, as, having been for a long series of years the acknowledged head of the surgical calling in Great Britain and Ireland, he more nearly trod in the steps of Brodie than of Hunter, and between these two a very interesting parallel might be drawn.

To the above fragmentary statements, upon which, Mr. Editor, I have at your request ventured, I must not attempt to add anything as to my personal appreciation of my late master and friend. I knew Paget first when he was resident Warden at St. Bartholomew's, now more than half a century ago. To him I owed my first introduction to work which enabled me to remain in London, and for long his relations with me were such that no elder brother could have exceeded him in kindness. Yet no expressions which gratitude might prompt could surpass by one iota what I honestly believe to be due to his intellectual attainments and his moral worth.

Mr. Butlin has responded to our request by sending the following notes: Many years ago, before entering at St. Bartholomew's Hospital, I was conducted round it by my brother, who was then a student. As we crossed the square of the hospital we met one of the surgeons walking quickly towards the wards, accompanied by several students. My brother said, "There, that's Paget; they say he'll be a baronet.

Mr. Paget was at that time about 50 years of age, enjoyed a great scientific reputation, immense popularity as a lecturer,

and a large practice. He was absolutely without a rival among the surgeons to the hospital, so that his daily visits to the wards were attended by a crowd of students, who seldom visited the wards of any other surgeon. I believe that most of the students who were brought in contact with him entertained for Mr. Paget a reverence which amounted almost to veneration. We flocked to his wards, not because we learned much there unless we were actually working in them—for clinical teaching in the wards had really no existence in those days—but simply to see him, to admire him, and to listen eagerly to any observation he might make. If he spoke to a first-year's man, that man was raised in our estimation; and if he praised one of his dressers we envied him the praise. The more so, because Mr. Paget was not prodigal in praise: and, when he praised, did so in the most agreeable fashion. Going round Kenton Ward one day a very nicely-applied plaster bandage caught his eye, and he asked who had put it on. A very young dresser was pointed out, and Mr. Paget's remark was: "Ah, young in years, but old in surgery." I believe there was nothing at that time which would have afforded any one of us more lively satisfaction than to be thus noticed by Mr. Paget.

The causes of his popularity among us were certainly in some measure due to his reputation; but not by any means alone to that. His appearance pleased us, although he was not over careful in his dress: his voice was charming, and his manner was singularly attractive. He had an extraordinary tact in knowing when to speak and what to say, and never seemed at loss for the right expression. No wonder we adored him, and that his influence over us was enormous. Fortunately, it was the best kind of influence, for he regarded his profession from the highest point of view and with a complete absence of selfishness. He said to me one day, in relation to some point of etiquette: "There are occasions on which one must be more than courteous and generous: one must be chivalrous." I believe that exactly expressed his own feeling in all matters concerning his profession, whether in public or private practice.

Men who were very intimate with Sir James Paget during more years than I was will speak of his noble life and influence, and I believe that no one who speaks of them can exaggerate them. But I should like to refer to the one great talent in which he appeared to me to surpass any person I ever met: his extraordinary skill in the use of language. He was not merely a master of our language: he was an artist in words and phrases. Whether he wrote or spoke he used a diction and phraseology peculiarly his own. His thoughts were the thoughts of an original mind, but they were rendered a hundredfold more beautiful by the graceful and original terms in which they were expressed. I never read his works without wondering at the skill and nicety with which he used our language.

In speaking and lecturing, Sir James Paget was never an orator, in the sense that he was ever carried away by his own eloquence. In that respect I always thought Sir William Savory had an advantage over him. Yet he could, on occasion, produce the effect of oratory on his hearers. I well remember one of his clinical lectures on a case in which an operation had directly caused the death of the patient. The case had been much talked of among the students, and the lecture was largely attended. We all left the theatre more grieved for the misfortune of the operator than at the death of the patient.

In some of the obituary notices of the last few days I read that Sir James Paget learned his lectures and addresses, and even his after-dinner speeches, word for word, and that this method has consequently been adopted by some of his successors at St. Bartholomew's Hospital. If it is meant to imply, by this, that he was not able to speak unless he had learned his speech by heart, there can be no greater error. More than once, late on the night before a clinical lecture which was to be delivered early on the following morning, he has sent to the hospital for the scanty notes of some of the cases in the wards. He was at that time exceedingly heavily worked, but the lecture was even then almost a work of art. As to the influence on his colleagues and successors, I believe that many of them, like myself, only knew within the last few years that he had learned by heart most, if not all, of his great orations. The practice, in regard to these, seems to belong to a much earlier period of our surgeons. Sir James Paget told me himself that Sir William Lawrence learned by heart all the surgical lectures which he delivered at the hospital; and I always understood that Sir William Savory had followed Lawrence so far that he committed to memory the lectures and addresses which he delivered elsewhere than in the hospital.

Persons who, like myself, were frequently brought in contact with Sir James Paget in private life, could never have doubted his power of extempore speech. His ability of appreciating slight distinctions and of exactly expressing them was such as a veteran judge might envy. Some years ago he was talking to me of a man for whom he had no respect, and with whom I had had some troublesome dealings. I said: "He is so dishonest, Sir." To which he replied: "No, Butlin, I do not think he is dishonest; he is as honest as he knows how to be." And that, I believe, was absolutely correct.

I have no doubt Sir James Paget's popularity, both in his profession and among the public, was largely enhanced by the tact with which he used this facility of speech. One instance of it struck me very much. Many years ago I was giving chloroform to a young man whose forearm was to be operated on by one of my older colleagues. Sir James Paget was asked to be present. The room in which the operation was performed looked out on Trafalgar Square, and the patient was a young artist. Over his bed hung a long study in black and white. When Sir James entered the room, he at once walked up to the bed, raised his pince-nez and looked, not at the patient, but at the picture. After a rather long scrutiny, he said, "Ah, who did that?" A relation pointed to the patient, and said that it was he who had done it. Sir James then walked to the window, and, looking out on the National Gallery, said: "Indeed! Nurtured in the very midst of art." The pleasure to the patient and his friends could not have been greater, and I am sure the poor young fellow fell into his chloroform sleep far happier for the delightful compliment.

The Funeral.

Sir James Paget was buried on January 4th. The funeral though remarkable both in place and in attendance was characterised by great simplicity. The coffin was carried to Westminster Abbey on a plain open hearse, and was met at the cloister entrance by Canon Duckworth and other clergy. It was carried into the chancel, among the pall-bearers being Lord Lister, Sir William Broadbent, Sir Michael Foster, Sir Thomas Smith, Mr. Howse, Mr. Bryant, Dr. Pye-Smith, and Sir Henry Roscoe. The first part of the funeral service was said and sung, and the coffin was then borne out of the north door of the Abbey and was followed by the members of Sir James Paget's family and a few personal friends to Finchley Cemetery where the interment took place. A very large number of members of the profession were present in the Abbey to pay this last tribute of respect. The Royal College of Surgeons, in the absence of the President in South Africa, was represented by Mr. Howse and Mr. Bryant, and by many members of the Council as well as many Fellows and Members, the Royal College of Physicians, in the absence of the President owing to illness, was represented by Dr. Pye-Smith, the Senior Censor; the University of Edinburgh by Professor A. R. Simpson, the University of Cambridge by Dr. Donald MacAlister, the British Medical Association by Dr. Elliston (President-elect), Mr. Andrew Clark (Treasurer), and Mr. Francis Fowke (General Secretary); the President, Dr. Ward Cousins was unavoidably prevented from being present. Dr. Beverley and Mr. Ballance attended as representatives of the staff of the Norfolk and Norwich Hospital, and it would be impossible to enumerate all the representatives of the metropolitan hospitals even if that were necessary. Suffice it to say that among the large congregation were members of every hospital staff and a large number of practitioners in the metropolis and the provinces.

HENRY THOMPSON, M.R.C.S., L.R.C.P.Lond.,

Surgeon to the Hull Royal Infirmary.

The hand of death has seldom struck with more cruel effect than in the case of the late Mr. Henry Thompson, Surgeon to the Hull Royal Infirmary, who expired at his residence in

Hull on December 28th, at the age of 49. He had the misfortune to contract a chill before he had quite recovered from the effect of a second seizure of influenza, and upon this followed an attack of rheumatic fever, complicated towards the close with pneumonia. Although apparently a healthy man, he had evidently but little recuperative power, and, notwithstanding assiduous attention from medical friends, he gradually sank after less than a fortnight's confinement to bed.

Mr. Thompson was in his early years a pupil of Sir Robert Martin Craven, and afterwards became a student at St. Bartholomew's Hospital. He obtained the diploma of M.R.C.S. and L.S.A. in 1871, and that of L.R.C.P.Lond. in 1874. He held the office of House-Physician to St. Bartholomew's Hospital, and on his return to Hull was appointed House-Surgeon to the Hull Royal Infirmary. At a later date he was appointed Assistant Surgeon, and subsequently Surgeon to that Infirmary, where he did much good work.

He was a skilful and accomplished surgeon, and in addition to his other many admirable qualities always displayed that stirling professional honesty which commands the respect and admiration of even the least friendly of acquaintances. Mr. Thompson was a member of the British Medical Association, and had held the office of President of the East York and North Lincoln Branch. He was highly valued and trusted by his patients, as well as much esteemed by his colleagues, to whom his unexpected death has been a real sorrow. If, however, as has been said, "To live in hearts we leave behind is not to die," in that sense Mr. Thompson's death is still distant.

He leaves a widow and seven children to mourn what is their irreparable loss.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—ALEXANDER L. CHRISTIE, Fleet-Surgeon, to the *Pembroke*, for Chatham Dockyard, January 1st; MICHAEL FITZGERALD, Fleet-Surgeon, Haulbowline Hospital, January 1st; CHRISTOPHER PEARSON, M.D., Fleet-Surgeon, to the *Majestic*, January 1st; ALFRED T. CORRIE, Fleet-Surgeon, to the *Wildfire*, for Sheerness Dockyard and Naval Barracks, January 1st; EVERARD H. SAUNDERS, Fleet-Surgeon, to the *Lion*, January 1st; CORNELIUS BRADLEY, M.D., Staff-Surgeon, to the *Niobe*, January 1st; ROBERT H. NICHOLSON, Staff Surgeon, to the *Durham*, temporary, January 1st; HERBERT W. G. DOYNE, Staff-Surgeon, to the *Centurion*, for Yokohama, January 1st; JOHNSTON H. ACHESON, M.B., Surgeon, to the *Colossus*, January 1st; THOMAS E. HONEY, Surgeon, to the *Caledonia*, January 1st; CHRISTIAN B. FAIRBANK, Surgeon, to the *Speedy*, when commissioned, January 16th; REGINALD ST. G. S. BOND, Surgeon, to the *Pembroke*, additional, January 1st.

Surgeon FRANCIS JOHN ARTHUR WARING, retired Surgeon and Agent at Hove Station, died at Hove on December 12th, 1899, aged 55. He joined the navy as Surgeon in 1869, and retired in 1879. He was Surgeon of the *Ocean* in 1869-70, of the *Leven* in 1870-74, at Plymouth Hospital in 1875-7, and of the *Black Prince* in 1877-9.

Inspector-General GARLAND W. L. HARRISON died at Newton Abbot, Devonshire, on December 30th, 1899, at the age of 62. He was the eldest son of the late Dr. G. F. B. Harrison, of Devonport, and joined the Navy as Surgeon, October 14th, 1858; became Staff-Surgeon, August 19th, 1870; Fleet-Surgeon, December 7th, 1880; Deputy Inspector-General, November 26th, 1890; and Inspector-General, on retirement, December 11th, 1893.

ARMY MEDICAL SERVICE.

ERRATA.—In the BRITISH MEDICAL JOURNAL of December 30th, 1899, it was inadvertently announced that Surgeon-Major-General BRADSHAW and Surgeon-General FRASER had been appointed Honorary "Surgeons" to the Queen. In each case the appointment should have been stated to be Honorary "Physician" to the Queen.

ROYAL ARMY MEDICAL CORPS.

THE names of the undermentioned Lieutenants are as now stated, and not as described in the *Gazette* of December 19th, 1899: ARTHUR MAUNSELL MACLOUGHLIN, M.B., JAMES ANDREW HARTIGAN. (In the *Gazette* referred to these names were given as Wilfred Montagu McLoughlin and James Andrew Hartignan, M.B. Mr. MacLoughlin's appointment had already been announced in the *Gazette* of November 28th.)

Sergeant-Majors JAMES FERGUSON, FREDERICK W. HALL, and ALEXANDER MORRISON are appointed Quartermasters, with the honorary rank of Lieutenant, on augmentation, January 3rd.

Major THOMAS DORMAN died on December 26th, at Havre des Pas, Jersey, aged 43. He was the third son of the late Rev. T. Dorman, of Kinsale, and entered the service as Surgeon, March 6th, 1880, becoming Surgeon-Major twelve years thereafter.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT-COLONEL FRANCIS J. PEARSE, 1st Middlesex Rifle Volunteer Corps, is appointed Surgeon-Lieutenant-Colonel, December 6th, 1899.

Surgeon-Captain R. B. GRAHAM is promoted to be Surgeon-Major, December 30th.

Surgeon-Lieutenant EVAN EVANS, M.B., 1st Volunteer Battalion the Welsh Regiment, is promoted to be Surgeon-Captain, December 30th.

Surgeon-Lieutenant WILLIAM O. EVANS, 2nd Volunteer Battalion the Royal Welsh Fusiliers, is appointed Surgeon-Lieutenant, December 30th.

Surgeon-Lieutenant D. L. HAMILTON resigns his commission, January 3rd.

VOLUNTEER MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT W. E. MILES, the London Companies, is promoted to be Surgeon-Captain, December 30th.

THE MILITARY OPERATIONS IN WEST AND CENTRAL AFRICA.

A DESPATCH has been published from Colonel Woodgate, commanding the troops in the Sierra Leone Protectorate, reporting the operations undertaken during the past year in the suppression of rebellion. After detailing the nature of the operations, Colonel Woodgate brings to notice the names of officers deserving of special mention, among them being Major R. Crofts and Captain C. Dalton, both of the Royal Army Medical Corps.

The *London Gazette* of January 2nd contains despatches from Colonel T. Ternan, who, writing from Kampala on May 31st, 1899, deals with the expedition against Kabarega. He forwards Lieutenant-Colonel Evatt's report on the operations, and favourably mentions the name of Captain Haig, Indian Medical Service.

THE ARMY MEDICAL RESERVE.

A SENIOR OFFICER, A.M.R., writes: Your correspondent "M.A., M.D." does not seem to know that, by Warrant and Regulations, officers of the A.M.R. have "prior claims" to employment to any civil practitioners, no matter what the special terms of his employment may be. But this claim has lately been ignored.

I have during the past ten years from time to time served in a garrison when there was a paucity of regular medical officers; and at the present crisis was asked by the P.M.O. of the district whether I was willing to serve; I assented, and my name was sent up, strongly recommended.

Nevertheless, I have been entirely ignored; and two "special" civil surgeons posted for duty at the station hospital, although entirely ignorant of military duties.

Such treatment after ten years in the reserve is inexplicable, and not likely to popularise the Volunteer medical establishment.

ANOTHER CORRESPONDENT agrees with "M.A., M.D.," that officers of the reserve can, as a rule, be only "partially employed" in charge of troops; and probably be unable to take up orderly duty. Officers of the reserve are only liable to serve at home, under Paragraph 655 of the Royal Warrant.

*** Does the one correspondent answer the other? Was the officer of the A.M.R. able to take up all, including orderly duty? Of course, Volunteers are only liable to serve at home; but, as a large number are going to South Africa, what medical establishments are to accompany them?

RETIREMENT OF FLEET-SURGEON GIPPS: A SEQUEL TO THE "PERSONAL EXPLANATION."

FLEET-SURGEON A. G. P. GIPPS, R.N. Retired (Stevenage) writes: In the BRITISH MEDICAL JOURNAL of October 14th, 1899, at my request, you inserted a "personal explanation" on the causes of my retirement from Her Majesty's navy immediately after my promotion and appointment to Haslar Hospital. In this letter I made a number of statements which I have since ascertained to be either mistaken or without foundation, and involving the good faith of the Medical Director-General of the Navy. Under these circumstances, as my letter was a public one in your JOURNAL, I wish to make an apology for the statements which referred to Sir Henry Norbury, and to withdraw and contradict any other statements made at the time in the same letter. Finding I am mistaken in my ideas, I do not wish this to be a half-hearted withdrawal, but a complete and entire one, of the letter contained in your issue of October 14th, 1899. I shall be glad if you will insert this in your next issue.

*** We are glad to learn from the above letter that the account of the incidents which led to his retirement from the Royal Navy Medical Service given in the BRITISH MEDICAL JOURNAL of September 23rd, p. 818, September 30th, p. 885, and October 14th, 1899, p. 1,049, was founded on misapprehension. We regret that the conduct of the Director-General should have been in any way misrepresented in our columns, but it will be seen that the misunderstanding was shared by the officer chiefly concerned.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following have satisfied the examiners as undernoted:

Part I. Chemistry and Physics.—L. J. Austin, Sid. Suss.; I. G. Back, Trin. H.; D. K. D. Bain, B.A., Trin.; S. Barradell-Smith, Joh.; J. D. Barris, Cai.; E. Beaton, Cai.; H. A. Browning, Joh.; G. H. U. Corbett, King's; G. L. Cox, Christ's; R. G. Elwell, B.A., Trin.; N. C. Fletcher, Queens'; R. E. French, King's; W. B. Grandage, Cla.; H. T. Gray, Trin.; R. E. G. Gray, Pemb.; R. F. V. Hodge, Emm.; G. Holroyd, Christ's; C. L. Isaac, B.A., Joh.; Q. S. Keat, Joh.; B. T. Lang, Trin.; C. S. Lee, Cai.; J. McIntyre, King's; S. M. Mackenzie, Trin.; E. H. Mayhew, Emm.; J. B. Mennell, Pemb.; A. H. Miller,

Trin.; A. R. Moore, Cai.; G. W. de P. Nicholson, B.A., Jes.; F. W. M. Palmer, B.A., Jes.; D. W. Roy, Sid. Suss.; R. B. S. Sewell, Christ's; E. W. Sheaf, Down; C. C. E. Simpson, Joh.; C. Strickland, Cai.; F. J. Thornton, Cai.; W. S. Tresawna, Sid. Suss.; B. Wallis, Trin.; W. H. Williams, Cai.; W. P. Williams, Down; J. L. Wood, Trin.; L. Worrall, B.A., Christ's; F. P. Young, Christ's.

Part II. Elementary Biology.—H. B. Atkinson, Trin.; L. J. Austin, Sid. Suss.; A. L. Baly, Emm.; D. W. A. Bull, Cai.; G. H. U. Corbett, King's; R. A. Cullen, Cla.; G. B. Davis, B.A., Corp. Chr.; N. C. Fletcher, Queens'; R. E. French, King's; L. G. H. Furber, Cai.; J. R. C. Greenlees, Joh.; C. R. F. Hall, B.A., Trin.; O. Heath, Trin.; S. A. Henry, Trin.; R. F. V. Hodge, Emm.; W. R. Honeyburne, B.A., Pet.; Q. S. Keat, Joh.; A. A. H. Lawrence, Emm.; H. Maclean, Cai.; J. B. Mennell, Pemb.; A. H. Miller, Trin.; S. B. Pope, Christ's; W. H. Rayner, Trin.; W. H. Robinson, Down.; E. W. Sheaf, Down.; F. Shingleton-Smith, King's; G. C. E. Simpson, Joh.; C. Stanley-Clarke, Cai.; B. H. Stewart, B.A., Jes.; F. J. Thornton, Cai.; W. S. Tresawna, Sid. Suss.; F. B. Treves, Cai.; C. Tylor, Cai.; C. H. W. Weekes, Trin.; A. Wilkin, King's; R. G. Williams, B.A., Cai.; W. H. Woodburn, Christ's; F. P. Young, Christ's; R. F. Young, Christ's.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the examiners as undernoted:

Part I. Pharmaceutical Chemistry.—E. D. Anderson, Pemb.; H. M. Avis, Down.; J. R. Beale, Cla.; A. R. Brailey, Down.; A. D. Brunwin, Trin.; A. S. Burgess, Cai.; H. C. Cameron, Joh.; M. A. Cassidy, Cla.; R. P. Cockin, Cai.; A. W. D. Covinton, Trin.; W. I. Cumberlidge, Christ's; G. E. Davidson, B.A., Cai.; H. S. Dickson, Christ's; L. Dukes, Trin.; W. G. P. Ellis, M.A., Cath.; H. H. J. Fawcett, Trin.; C. F. Fothergill, Emm.; E. Garnsey, Cai.; W. Hastings, Christ's; G. L. Hodgkin, Trin.; D. Humphrey, Sid. Suss.; H. B. Jackson, Cla.; F. A. Juler, Trin.; J. Lambert, Down.; J. C. Lawton-Roberts, Cla.; E. Lloyd, Emm.; K. Lucas, Trin.; G. H. K. Macalister, Joh.; J. T. Macnab, Christ's; M. McPherson, Cla.; S. A. Owen, Trin.; C. E. Palmer, Cai.; P. R. Parkinson, Cai.; C. F. Parry, B.A., Cai.; C. W. Ponder, Emm.; E. S. Scott, B.A., Pemb.; E. Slack, B.A., Pemb.; W. H. Smyth, Emm.; W. H. Thresher, B.A., Cai.; H. C. Turner, Emm.; G. T. Western, B.A., Pemb.; J. D. C. White, M.A., Trin.; R. E. Whitting, King's; F. Worthington, Joh.; E. A. Wright, B.A., H. Selw.; S. L. O. Young, B.A., Christ's.

Part II. Human Anatomy and Physiology.—L. E. H. R. Barker, B.A., Cai.; E. A. A. Beck, B.A., Cla.; A. S. Bradley, B.A., Cai.; A. R. Brailey, Down.; P. J. Burgess, M.A., Sid. Suss.; C. Burrows, B.A., Emm.; N. C. Carver, B.A., King's; R. B. Coare, B.A., King's; G. H. Colt, Sid. Suss.; C. R. Crowther, B.A., Joh.; W. H. Dickinson, B.A., Trin.; S. Dodd, B.A., Cai.; T. L. Drapes, Sid. Suss.; G. G. Ellett, B.A., Cath.; A. F. Elliott, B.A., Emm.; E. A. Ellis, Down.; H. R. Fisher, B.A., Emm.; G. D. Franklin, B.A., King's; J. D. H. Freshwater, B.A., Trin.; J. H. Fuge, M.A., H. Selw.; E. Gardner, B.A., Cai.; F. W. Goyder, B.A., Joh.; C. H. Gregory, B.A., Emm.; W. L. Harnett, B.A., Joh.; A. G. Harvey, B.A., Joh.; G. P. Hawker, B.A., Cai.; H. D. Hoffmann, B.A., Trin.; D. Holroyde, B.A., Trin.; W. W. Holtzmann, B.A., Christ's; L. B. Hopper, B.A., Cai.; H. M. Joseph, Trin.; F. I. M. Jupe, B.A., Down.; F. S. Kidd, B.A., Trin.; H. D. Ledward, B.A., Trin.; H. B. McCaskie, B.A., Cai.; O. May, Joh.; C. W. P. Moffatt, Cla.; W. M. Mollison, King's; W. V. Naish, B.A., Emm.; C. L. Nedwill, B.A., Trin.; F. D. Nicholson, B.A., King's; J. E. Payne, B.A., Pet.; H. Rischbieth, B.A., Trin.; H. J. Robinson, B.A., Joh.; W. T. Scott, B.A., Cla.; H. J. Shone, B.A., Emm.; J. E. Spicer, B.A., Trin.; H. Statham, B.A., Christ's; S. J. Steward, Down.; G. E. StC. Stockwell, B.A., King's; W. M. Strong, M.A., Trin.; W. B. Swete-Evans, B.A., Cla.; A. W. Wakefield, B.A., Trin.; H. Wales, B.A., Sid. Suss.; E. Ward, B.A., Cla.; G. H. L. Whale, B.A., Jes.; F. Whitaker, B.A., Trin.; A. G. E. Wilcock, Cai.; J. H. F. Wilgress, B.A., H. Selw.; A. F. R. Wollaston, B.A., King's.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the examiners as undernoted:

Part I.—W. H. W. Attlee, B.A., Joh.; F. G. Bowen, B.A., Cai.; G. Browse, M.A., Cla.; F. E. Brunner, B.A., Cai.; T. Burfield, B.A., Emm.; E. R. Clarke, B.A.; Joh.; A. H. Davies, B.A., Cai.; A. B. Dunne, B.A., Queen's; W. M. Fletcher, M.A., Trin.; H. S. Gabb, B.A., Down.; C. H. Glenn, B.A., Pemb.; J. A. Glover, B.A., Joh.; E. V. Gostling, B.A., Cai.; O. F. F. Grünbaum, B.A., Trin.; A. C. Hill, M.A., Trin.; T. E. Holmes, B.A., Cai.; A. C. Ingram, B.A., Joh.; A. W. Izard, B.A., Trin.; G. S. Keeling, B.A., Cai.; C. Killick, B.A., Trin.; W. B. Knobel, B.A., Trin.; G. O. Lambert, B.A., Joh.; J. W. Malim, B.A., Christ's; L. J. Paton, B.A., Cai.; F. C. Shrubsall, M.A., Cla.; W. C. P. Smith, B.A., Down.; H. H. Stiff, B.A. Cai.; W. J. Susmann, B.A., Cai.; T. S. Taylor, B.A., King's; E. D. Telford, B.A., Cai.; H. A. Upward, B.A., Christ's; A. Whitmore, B.A., Cai.; T. Wood, B.A., Cai.; W. H. O. Woods, B.A., H. Selw.; R. T. Worthington, B.A., Trin.

Part II.—R. A. Ainsworth, B.A., Pemb.; W. L. Ascherson, non.-coll.; A. E. Bodington, M.A., Cai.; W. P. S. Branson, B.A., Trin.; J. W. E. Cole, B.A., Corp. Chr.; E. Cox, B.A., Cai.; S. W. Curl, B.A., Down.; F. C. Eve, B.A., Emm.; A. T. Fraser, B.A., Cai.; A. C. Fry, M.A., Pemb.; T. Gillespie, B.A., Joh.; H. Glasier, M.A., Emm.; H. M. Harwood, B.A., Trin.; C. L. Hawkins, B.A., Emm.; E. W. Hedley, M.A., King's; G. H. Hunt, M.A., Cla.; O. Inchley, M.A., Joh.; A. Killick, B.A., Down.; J. E. Linnell, B.A., H. Selw.; N. J. McCaskie, B.A., Cai.; A. E. Martin, B.A., Down.; W. H. Maxwell, B.A., Trin.; W. T. Mullings, B.A., Christ's; J. P. L. Mummery, B.A., Cai.; J. A. Nixon, B.A., Cai.; G. E. Orme, B.A., Cai.; S. V. Pearson, B.A., Emm.; J. C. A. Rigby, B.A., Cai.; R. N. Salaman, B.A., Trin. H.; R. E. Sedgwick, B.A., Cai.; F. Shuffiebotham, B.A., Trin.; J. F. Skrimshire, Joh.; F. T. Talbot, B.A., King's; E. Talbot, M.A., Trin.; R. S. Trevor, M.A., Cla.; B. R. B. Truman, B.A., Trin. H.; R. F. C. Ward, B.A., Joh.; D. P. Watson, B.A., Trin.; E. A. Wilson, B.A., Cai.; W. B. Winton, M.A., Cla.

UNIVERSITY OF DUBLIN.

At the Winter Commencements, held on December 18th, 1899, in the Theatre of Trinity College, the following Degrees and Licences in Medicine, Surgery, and Midwifery were conferred by the University Caput in the presence of the Senate:

Baccalaurei in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—R. S. Dobbin (B.Ch. stip. cond.), J. S. Fleming, St. G. E. Harris, W. M. Houston, D. O. Hyde, P. G. Hyde, H. C. M'Quaide, W. S. Myles, J. C. Pounden, J. L. Powell, L. M. Purser, H. Rogers, W. Shanks, J. G. G. Swan, G. Taylor, J. S. Twigg.

Baccalaureus in Medicinâ.—E. S. Barnard.

Doctores in Medicinâ.—E. S. Barnard, S. J. M'C. Bradshaw, W. V. Coppinger, R. C. Peacocke, E. S. Pollock.

Licentiatus in Medicinâ, in Chirurgiâ, et in Arte Obstetriciâ.—E. A. C. Quin.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted "Fellows," and are arranged in order of seniority as members of the College:

H. J. M. Playfair, M.D.Lond., M.R.C.P.Lond.; H. W. Carson, L.R.C.P. Lond.; E. L. Evans, M.A., M.B., B.C.Cantab., L.R.C.P.Lond.; P. S. Lelean, L.R.C.P.Lond.; J. Howell, M.B.Lond., L.R.C.P Lond.; W. F. V. Bonney, M.D., B.S.Lond., L.R.C.P.Lond.; T. R. H. Bucknall, M.D.Lond., L.R.C.P.Lond.; W. B. L. Trotter, M.D.Lond., L.R.C.P. Lond.; A. M. Cudmore, M.B., Ch.B.Adelaide, L.R.C.P.Lond.; C. R. Kéyser, L.R.C.P.Lond.; G. Smith, M.B.Durh., L.R.C.P.Lond.; R. de S. Stawell, B.A., M.B., B.C.Cantab., L.R.C.P.Lond.; J. W. T. Walker, M.B., C.M.Edin., L.R.C.P.Lond.; H. Mundy, L.R.C.P.Lond.; R. G. Ralston, M.B., C.M.Edin., L.R.C.P.Lond.; F. Mannington, L.R.C.P. Lond.; J. O. Skevington, L.R.C.P.Lond.; E. M. Corner, M.B., B.C.Cantab., M.A., B.Sc.Lond., L.R.C.P.Lond.; T. J. P. Hartigan, L.R.C.P.Lond.; J. L. Adams, M.B., C.M.Aberd.; and A. F. MacCallan, B.A., M.B., B.C.Cantab., L.R.C.P.Lond.

Seventeen gentlemen were referred back to their professional studies, 16 for six months and 1 for one year.

The following gentlemen having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:

W. B. Bacon, Middlesex, and the Dental Hospital of London; H. W. P. Bennette, University College, Dental Hospital, and Royal Infirmary, Liverpool; J. S. Biss and J. Black, Guy's Hospital Dental Department and School; F. J. Blight, University College, Dental Hospital, and Royal Infirmary, Liverpool; C. H. Bubb and H. T. Campkin, Guy's Hospital Dental Department and School; F. R. Carey, Mason College, Queen's, General and Dental Hospital, Birmingham; J. T. Carter, Charing Cross, and the Dental Hospital of London; P. P. Cole, Guy's Hospital Dental Department and School; R. K. Devonshire, Middlesex, and the National Dental Hospital; A. H. Dixon, Mason College, Queen's, General, and the Dental Hospital, Birmingham; G. H. Drake, Guy's Hospital Dental Department and School; H. Frankish, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; W. J. Duncalf, Charing Cross, and the Dental Hospital of London; F. W. Garman, Guy's Hospital Dental Department and School; S. Hargreaves, University College Dental Hospital, and Royal Infirmary, Liverpool; F. W. Horrocks, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; S. H. Jones and W. W. C. Jones, Guy's Hospital Dental Department and School; T. H. P. Kolesar, University College, Dental Hospital, and Royal Infirmary, Liverpool; R. F. Lockett, Middlesex, and the National Dental Hospital; S. H. Longhurst, Guy's Hospital Dental Department and School; F. Mackenzie, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; H. Maurice, Guy's Hospital Dental Department and School; F. W. S. Metcalfe, Charing Cross, and the Dental Hospital of London; R. J. Morrell and J. B. Morrish, Guy's Hospital, Dental Department and School; G. H. New, Middlesex and the National Dental Hospital; H. G. Owen, University College, Dental Hospital and Royal Infirmary, Liverpool; S. L. Pallant, R. Peacock, and F. J. Pearce, Guy's Hospital Dental Department and School; H. G. Perkins, Middlesex and the Dental Hospital of London; C. F. Pitt, Charing Cross and the Dental Hospital of London; G. P. Pollitt, Guy's Hospital, Dental Hospital and School; A. Rice, Charing Cross and the Dental Hospital of London; C. F. Rose, Guy's Hospital Dental Department and School; L. F. V. Sadler, Mason College, Queen's, General, and the Dental Hospital, Birmingham; A. H. Saunders, Guy's Hospital Dental Department and School; G. C. Sawday, Charing Cross and the Dental Hospital of London; J. W. Sidebottom, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; E. Sturridge, College of Dentistry, New York, and University College, London; W. H. Tattersfield, Guy's Hospital Dental Hospital and School; E. Thorne, Middlesex and the National Dental Hospital; S. J. St. H. Tweney, Guy's Hospital Dental Department and School; S. D. Venning, Middlesex and the National Dental Hospital; G. G. Vincent, Charing Cross and the Dental Hospital of London; J. W. Wilkes, Guy's Hospital Dental Department and School; S. J. Willcox, University College, Royal Infirmary, and General Infirmary, Bristol; and J. Workman, Charing Cross and the Dental Hospital of London.

Twenty seven gentlemen were referred to their professional studies, 24 for six months, and 3 for one year.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,784 births and 6,016 deaths were registered during the week ending Saturday, December 23rd, 1899. The annual rate of mortality in these towns, which had

been 18.9, 20.8, and 22.0 per 1,000 in the three preceding weeks, further rose to 27.5 during the week under notice. The rates in the several towns ranged from 17.6 in Huddersfield, 18.9 in Leeds, 19.4 in Burnley, and 19.7 in Blackburn, to 36.4 in Preston, 36.7 in Swansea, 38.9 in Plymouth, and 42.4 in Portsmouth. In the thirty-two provincial towns the mean death-rate was 25.9 per 1,000, being 4.0 below the rate recorded in London, which was 29.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.6 per 1,000; in London the death-rate was equal to 2.3 per 1,000, while it averaged 2.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.3 in Salford and in Sheffield, 5.3 in Hull, and 7.1 in Preston. Measles caused a death-rate of 1.3 in Sheffield, 1.7 in Salford, 2.3 in Birkenhead, 2.4 in Hull, and 4.9 in Preston; whooping-cough of 1.2 in Salford, 1.3 in Bolton, 1.7 in Leicester, and 1.8 in Liverpool; "fever" of 1.1 in Portsmouth and in Nottingham, and 1.3 in Preston; and diarrhœa of 1.4 in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 122 deaths from diphtheria included 54 in London, 15 in Sheffield, 8 in Leeds, 5 in West Ham, and 5 in Portsmouth. Eight fatal cases of small-pox were registered in Hull, but not one in any other of the thirty-three large towns; 5 small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday, December 23rd, 1899. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 3,084 at the end of the five preceding weeks, had further declined to 2,916 on Saturday, December 23rd, 1899; 209 new cases were admitted during the week, against 294, 277, and 180 in the three preceding weeks.

During the week ending Saturday last, December 30th, 1899, 5,040 births and 6,700 deaths were registered in thirty-three of the largest English towns, including London. The annual rate of mortality in these towns, which had increased from 18.9 to 27.5 per 1,000 in the four preceding weeks, had further risen to 30.6 last week. In London the rate was equal to 35.2 per 1,000, and exceeded by 8.3 per 1,000 the mean death-rate in the thirty-two provincial towns, which was 26.9. The lowest rates in these towns were 17.6 in Huddersfield, 19.4 in Burnley, 20.2 in Cardiff, and 21.3 in Halifax; the highest rates were 39.9 in Wolverhampton, 39.5 in Preston, 42.1 in Portsmouth, and 49.7 in Plymouth. The zymotic death-rate in the thirty-three towns averaged 2.4 per 1,000; in London this death-rate was equal to 2.1 per 1,000, while in the thirty-two provincial towns the mean death-rate from the principal zymotic diseases was 2.6, the highest rates being 5.0 in Blackburn, 5.1 in Hull, 5.6 in Sheffield, and 8.4 in Preston. Measles caused a death-rate of 1.3 in Bradford, 1.4 in Salford and in Newcastle, 1.9 in Sheffield, 2.7 in Hull, and 5.8 in Preston; whooping-cough of 1.4 in Salford and in Newcastle, 1.5 in Blackburn, 1.6 in Portsmouth, and 4.1 in Norwich; and "fever" 1.0 in Plymouth. Neither scarlet fever nor diarrhœa showed an excessive fatality in any of the thirty-three towns. Of the 122 deaths from diphtheria in the large towns, 50 were registered in London, 18 in Sheffield, 6 in Leeds, 5 in West Ham, and 5 in Manchester. Small-pox caused 10 deaths in Hull last week, but not one in any other of the thirty-three towns; the number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 5 at the end of the preceding week, had increased to 7 on Saturday last, December 30th, 1899. These hospitals and the London Fever Hospital contained 2,881 scarlet fever patients on Saturday last, against numbers decreasing from 3,578 to 2,916 on the six preceding Saturdays; 161 new cases were admitted during the week, against 277, 180, and 209 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday, December 23rd, 1899, 931 births and 690 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 20.0 and 21.5 per 1,000 in the two preceding weeks, further rose to 22.6 during the week under notice, but was 4.9 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.9 in Aberdeen, and 19.5 in Edinburgh and in Leith, to 24.8 in Greenock and 33.8 in Perth. The zymotic death-rate in these towns averaged 2.8 per 1,000, the highest rates being recorded in Greenock and Perth. The 336 deaths registered in Glasgow included 20 from measles, 5 from scarlet fever, 5 from whooping-cough, and 5 from "fever," and 5 from diarrhœa. Five fatal cases of measles were recorded in Dundee, and 8 in Greenock.

In eight of the principal Scotch towns 944 births and 829 deaths were registered during the week ending Saturday last, December 30th, 1899. The annual rate of mortality in these towns, which had increased from 20.0 to 22.6 per 1,000 in the three preceding weeks, further rose to 27.2 last week, but was 3.4 below the average rate during the same period in the thirty-three large English towns. The lowest death-rates recorded in these Scotch towns were 20.2 in Leith, and 22.6 in Aberdeen; the highest rates being 34.2 in Greenock and 41.2 in Paisley. The mean death-rate from the principal zymotic diseases was 2.8 per 1,000, the highest rates being registered in Greenock and Perth. The 394 deaths in Glasgow included 19 from measles, 4 from scarlet fever, 3 from diphtheria, 11 from whooping-cough, 4 from "fever," and 4 from diarrhœa. Three deaths from measles were registered in Dundee, in Paisley, in Greenock, and in Perth.

M.O.H. ALDERSHOT.

THE Aldershot Council is to be commended for having adopted measures to obtain the services of a fully-qualified medical officer of health who shall devote himself exclusively to the important duties devolving on such a position. Dr. Reece's recent report on the sanitary surroundings of Aldershot—which we summarised on November 11th, 1899—shows distinctly that sufficient work lies before the future nominee of the Council. While all manner of sanitary precautions are taken regarding the health of the camp so intimately associated with Aldershot town, it is but a right step that the latter should have an experienced sanitarian, unshackled by private practice, to look after its interests.

CONVICTION OF PARENT FOR SENDING SCARLET FEVER PATIENT TO SCHOOL.

AT the Sheriff's Court, Stonehaven, a labourer and his wife were charged at the instance of the clerk to the Banchory Sanitary Authority with sending one of their children in the desquamating stage of scarlet fever to school. The father and mother were each fined £1 and £3 modified costs. The *Aberdeen Free Press* describes how the schoolmistress gave evidence that the child had been absent from October 16th to November 6th. On her return on the latter day, finding the girl's hands peeling, she sent for Dr. Cran, who pronounced the case one of scarlet fever. The doctor gave evidence to the effect that the parents had had experience of scarlet fever four or five years ago. Dr. McNaughton, the county officer, confirmed the diagnosis. He visited a second time because he heard milk was being sold from the infected house. Sheriff Robinson told the man he was fortunate in not having been charged with the more serious offence of selling milk from an infected house, for which he might have been fined £10. He looked upon the case as a very serious one indeed. It was said that two other children attending the school had contracted the fever. The schoolmistress seems, however, to have been pretty prompt in her action.

Much of the difficulty medical officers of health find in arresting the spread of infectious diseases would disappear if the teachers, who really stand to the other children brought compulsorily to school *in loco parentis*, would recognise their responsibility and personally examine every child returning from school after even a short absence. We think, also, they should have authority from the Board or Attendance Committee to call in medical aid in any case where the child exhibits any departure from health. Slight attacks of diphtheria are even more frequently overlooked than those of mild scarlatina, and medical help is needed in recognising infective throats even more than peeling fingers. The heavy penalty of £5 will probably act as a wholesome deterrent in Banchory.

DOUBLE NOTIFICATION.

A CORRESPONDENT has lately attended several cases of scarlet fever in which diphtheria has supervened. He has sent—rightly, as we think—second notifications for the second disease. If this is done in *bona fides*, the authority should, we think, pay the second fee for notification of the second disease. Doubtless they would have to do this if the case went into court; but a public body should not require to be compelled to do justly. It goes equally without saying that there should be no mistake about the existence of the second infectious disease. There are, of course, conditions of the throat in scarlet fever resembling and yet not actually diphtheria.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

A MEDICAL PARTNERSHIP DISPUTE.

UNDER this heading the *Manchester Guardian* of December 20th reports the trial of Grimshaw *v.* Fisher, which took place at the recent Manchester sittings of the Chancery of Lancashire. The litigants were two medical men of Great Eccleston, the plaintiff having originally been the defendant's assistant. It appeared from counsel's opening that some time ago a partnership had been arranged between the parties, but had been postponed by the defendant to allow his assistant to take the degree of M.B.Lond., for which he had passed all but the final examination. After the plaintiff had passed disagreement occurred, and the draft deed of a partnership which Dr. Fisher ultimately had prepared could not be agreed to by the plaintiff, and the parties finally separated in August last. Counsel stated that he should be able to show that Dr. Fisher had introduced Dr. Grimshaw to his patients as his partner, and that the bills were sent out in the joint names. The action was for a declaration that a partnership existed between the plaintiff and the defendant, and for an account and for damages for the defendant's alleged wrongful dissolution of partnership.

After counsel for the plaintiff had finished his opening speech, Vice-Chancellor Hall intimated his opinion that the case was one for a compromise, and after a long consultation of counsel for both parties in the Chancellor's private room, the counsel for the plaintiff ultimately announced that an agreement had been come to, the defendant agreeing to pay to the plaintiff £250 in full settlement of his claims, this payment being nominally for medical assistance in defendant's practice from January 1st to August 28th, and the learned judge ordered that each party should pay his own costs.

M.D.—In answer to the questions submitted, we reply to the first, No; to the second, No; and to the third, No.

T. L. W.—Under the circumstances mentioned by our correspondent it is probable that his solicitor may be able to advise him that he would be justified in withholding the whole or a considerable part of the agreed fee.

PRESCRIBING CHEMISTS.

ANNOYED complains of prescribing by chemists and mentions a case where a chemist made up a bottle of medicine for a girl suffering from toothache, and inquires whether there is any means of prevention.

*** It is by no means easy to put a stop to the unauthorised practice of which our correspondent complains, but if any well-authenticated and clear case could be found it would be desirable to bring the fact to the notice of the Society of Apothecaries of London, who possess statutory powers to repress unqualified practice

MEDICAL NEWS.

A SPECIAL Committee has been appointed by the authorities of the forthcoming Paris Exhibition to organise an International Congress Against the Abuse of Tobacco to be held in 1900. Anyone may become a member of the Congress by payment of 5 francs to the Secretary, Dr. Petit. The President is M. Decroix, 20, Rue Saint Benoit, Paris.

THE APPOINTMENT OF A VACCINATION OFFICER AT LEICESTER.—Before sanctioning the appointment of the vaccination officer elected by the Leicester Board of Guardians, as mentioned last week, the Local Government Board required that the new officer should give a written assurance of his readiness to carry out his duties. This has now been given, and the appointment was approved by the Board on January 2nd.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERYSTWITH INFIRMARY.—House-Surgeon. Salary, £150 per annum, with usual residential allowances (stimulants excepted). Applications to the Secretary by January 20th.

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications, marked outside "Applications for the Office of House Surgeon," to the Secretary by January 9th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by January 15th.

BRADFORD CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board, residence, and washing. Applications to the Secretary by January 13th.

BRECON INFIRMARY.—Resident House-Surgeon, unmarried. Salary, £90 per annum, with furnished apartments, board, etc. Applications to the Secretary, No. 6, Bulwark, Brecon, by January 17th.

BRISTOL: CITY AND COUNTY OF.—Workhouse Medical Officer. Salary, £250 per annum, and allowance of £30 per annum for rent. Applications, on forms provided, to the Clerk to the Guardians, St. Peter's Hospital, Bristol, by January 10th.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; must be married. Salary, £50 a year, with board, etc. Applications to the Secretary by January 25th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by January 9th.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Salary, £80 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row, North Chester, by January 27th.

CITY DISPENSARY, 46, Watling Street, E.C.—Physician. Must be F. or M.R.C.P.Lond. Applications to the secretary by January 13th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park.—Second House-Physician. Appointment for six months. Board and residence provided, and salary at the rate of £30 per annum. Applications to the Secretary by January 10th.

DERBYSHIRE ROYAL INFIRMARY.—(1) Resident House-Physician. Salary, £100 per annum with apartments and board. (2) Resident Assistant House-Surgeon. Appointment for six months. Salary, £30, with apartments, board, etc. Applications to the Secretary by January 20th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to House-Surgeon. Honorarium 20 guineas per annum with board, lodging, and washing. Applications to the Honorary Secretary by January 17th.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried, and not over 35 years of age. Salary, £150 per annum, with board, apartments, washing, and attendance. Applications to the Medical Superintendent by January 17th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by January 15th.

HITCHIN: THREE COUNTIES ASYLUM.—Second Assistant Medical Officer; unmarried and under 35 years of age. Salary commencing at £150 per annum, with board, apartments, etc. Applications to F. G. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by January 10th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Assistant Surgeon: must be F.R.C.S.Eng. (2) Two Assistant Physicians; must be F. or M.R.C.P.Lond. Applications to the Secretary by January 23rd.

LEEDS: GENERAL INFIRMARY.—(1) Resident Casualty Officer. Salary, £100 per annum. (2) House Physician, appointment for six months. Board, lodging, and washing provided in each case. Applications to the Secretary of the Faculty by January 16th and 22nd respectively.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Assistant Resident Surgeon. Salary, £52 per annum, with board and residence. Applications to the Secretary at the Offices, 31, Charing Cross, S.W., by January 18th.

MIDDLESEX HOSPITAL.—(1) Assistant to the Director of the Cancer Research Laboratories. Salary, £100 per annum, with honorarium of £50 after second year of office. (2) Physician, must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent.

NEWARK-ON-TRENT HOSPITAL AND DISPENSARY.—House-Surgeon, unmarried. Salary, £80 per annum, with board and lodging. Applications to the Secretary by January 20th.

NORTHAMPTON GENERAL INFIRMARY.—Assistant House-Surgeon, unmarried not under 23 years of age. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary by January 18th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary, £150 per annum, and furnished apartments. Applications to the Secretary.

PORTSMOUTH: ROYAL PORTSMOUTH, PORTSEA AND GOSPORT HOSPITAL.—Assistant House-Surgeon. Appointment for six months, remuneration at the rate of £50 per annum, with board and residence. Applications to the Secretary by January 18th.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Honorary Assistant Medical Officer. Applications to the Superintendent by January 15th.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—(1) Honorary Physician: must be F.R.C.P.Lond. (2) House-Surgeon, appointment for six months. Salary, £50 per annum, with board, lodging, and washing. Applications to the Secretary by January 13th.

ST. MARY, ISLINGTON.—Medical Superintendent for the New Infirmary, Highgate; not less than 35 years of age. Salary, £500 per annum, with furnished residence, etc. Applications, on forms provided to be sent to the Clerk to the Guardians, St. John's Road, Upper Holloway, by January 8th.

SHEFFIELD ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Medical Staff, under cover to the Secretary, by January 24th.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Assistant Resident Medical Officer. Salary, £80 per annum, with board and residence. Applications to Dr. Carry, R.M.O.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, and £30 a year for dispensing, with furnished apartments and attendance. Applications to the Secretary by January 20th.

WOLVERHAMPTON AND STAFFORDSHIRE HOSPITAL.—Assistant House-Surgeon. Appointment for six months, honorarium at the rate of £50 per annum. Applications to the House Governor by January 15th.

MEDICAL APPOINTMENTS.

ALLPORT, Wilfred, M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior House Surgeon to the Birmingham and Midland Eye Hospital.

EDDOWES, Alfred, M.D., M.R.C.P., appointed Honorary Physician to St. John's Hospital for Diseases of the Skin, Leicester Square.

GILES, Arthur E., M.D., B.Sc.Lond., M.B., B.Ch.Viet., F.R.C.S.Edin., M.R.C.P.Lond., appointed Gynæcologist to the Tottenham Hospital.

GOWLLAND, John George Blantyre, L.R.C.P.Edin., L.R.C.S.Edin., L.F.P. & S.Glasg., appointed Resident Surgeon to the Clermont District Hospital, N. Queensland, Australia, *vice* Dr. J. Milne.

HARRIES-JONES, E., M.B., C.M.Edin., appointed Resident Surgical Officer to the Birmingham and Midland Eye Hospital.

JOHNSON, G. Fetgrave, M.D.Glasg., D.P.H.Eng., appointed Medical Officer of Health to the Stoke-on-Trent Town Council.

MAITLAND, Pelham C., M.R.C.S.Eng., L.R.C.P.Lond., etc., appointed Medical Officer to the Brompton and Knightsbridge Provident Dispensary.

PEARCE, F. H., M.R.C.S., L.R.C.P.Lond., appointed Senior Assistant Medical Officer to the Bradford Union Workhouse.

PRIOR, Samuel, M.B., C.M.Glasg., appointed Public Vaccinator of the Kirkheaton District of the Huddersfield Union, *vice* David Robertson, M.D.

ROCHE, Thomas F., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Penarth District of the Cardiff Union.

ROWLANDS, W. H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer of the Bromsgrove Union Workhouse, *vice* H. Cameron Kidd, M.B.Lond., F.R.C.S.Eng., resigned.

SAVILL, Thomas, M.D., M.R.C.P., appointed Honorary Physician to St. John's Hospital for Diseases of the Skin, Leicester Square.

SEACOMBE, A. F., L.R.C.P., L.R.C.S.Edin., appointed Resident Medical Officer to the Tonteth Workhouse.

WORLEY, E. A., M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, *vice* Dr. Archer Brown, resigned, to go to South Africa.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Mr. C. Mansell Moullin: Excision of the Vesiculæ Seminales. Dr. W. J. Gow: Some Remarks on the Operative Treatment of Uterine Fibroids.

TUESDAY.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. Francis Warner: Ophthalmoplegia Externa complicating a case of Graves's Disease. Mr. G. E. Fouler'on and Dr. H. Campbell Thomson: Investigation into the Nature of the Changes produced in the Nerve Cells of the Cerebral Cortex by the Action of Tetanus Toxin.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. James Taylor: Demonstration on Cerebral Tumours.

WEDNESDAY.

Hunterian Society, 8.30 P.M.—Dr. Dundas Grant: Cases illustrating various Conditions giving rise to Deafness (with demonstration of cases).

THURSDAY.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Green: Cases in the Wards.

British Gynæcological Society, 8 P.M.—Specimens will be shown by Dr. Arthur Giles, Dr. F. A. Purcell, and Dr. Fred. Edge. Annual meeting. Election of Officers and Council, etc. President's Valedictory Address.

FRIDAY.

British Laryngological, Rhinological, and Otological Association, 11, Chandos Street, Cavendish Square, 4 P.M.

Clinical Society of London, 8.30 P.M.—Clinical evening. The following cases will be shown: Mr. J. Hutchinson, jun.: Complete Subperiosteal Resection of Os Calcis. Mr. Lunn: (1) A case of Double Facial Diplegia in a Woman. (2) Congenital Luxation of the Right Hip in a Child, with Skiagraph. (3) Paroxysmal Hæmoglobinuria in a Girl of 10 years. Mr. C. J. Symonds: Malignant Disease of the Thyroid after two operations. Mr. Jackson Clarke: Case of Excision of the Neck of the Lower Jaw for Ankylosis. Other cases will be shown. Patients will be in attendance at 3 P.M.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

RUTHERFURD.—At 12, Newton Place, Glasgow, on the 30th December, 1899, the wife of Henry Rutherfurd, M.B., of a daughter.

WHITE.—On December 30th, 1899, at 100, Lewisham Road, Lewisham, S.E., the wife of Malcolm White, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

GILRUTH—BOWIE.—At St. Stephen's Parish Church, on December 28th, 1899, by the Rev. J. F. W. Grant and the Very Rev. J. Cameron Lees, D.D., Dean of the Chapel Royal and of the Thistle, George Ritchie Gilruth, F.R.S.E., to Annie Winifred, eldest daughter of John Tweedie Bowie, Chartered Accountant, Edinburgh.

WILLIAMS—HALL.—On the 8th November, 1899 at Christ Church, Lucknow, India, by the Rev. Harry Menzies, William Richard Williams, F.C.H., Under Secretary D.P.W., third son of the late Captain Williams, of Tower Hill, Fishguard, South Wales, to Amy Pollock, only daughter of Lieutenant-Colonel Geoffrey C. Hall, F.R.C.S., I.M.S., Inspector-General of Prisons N.W.P. and Oudh.

DEATHS.

CURTIS.—On December 20th, 1899, Albert Curtis, M.R.C.S., L.S.A., second son of the late Frederick Curtis, died at his residence, Thanet House, Staines, in his 65th year.

FORD.—December 20th, 1899 (suddenly), at Exmouth, James Ford, M.D., late of Eltham, aged 65.

HARRISON.—On December 30th, 1899, at Fatland Lodge, Clifton, Bristol, Selina, the beloved wife of Alfred James Harrison, M.B., J.P., aged 59.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu.F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1: Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30: Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30: Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophth almic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9: Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attend ances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1: o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 2. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 2.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W.Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. B. asks for suggestions for treating severe and obstinate tinnitus aurium in a lady aged about 65.

EDINBURGENSIS desires to learn what is the usual premium to charge in general medical practice for a pupil who has just left a public school, and whether any charge is made for board and residence over and above that. The probable period would be one year.

TOUTING BY FRIENDLY SOCIETIES.

ALPHA writes to draw attention to a method employed by friendly societies to gain members by offering a special prize to that member who shall gain the greatest number of recruits to the society in one year, and asks whether such a proceeding can be upheld as in accordance with professionel etiquette, seeing that each member is compelled to join the medical department of the lodge, whether he avails himself of it or not. He further asks whether it would not be much better if members were allowed to please themselves as to taking up medical benefits in friendly societies.

*** It must be admitted that our correspondent's complaint is in a measure well founded, but the "touting" he refers to is not exactly the same as that employed by medical aid societies. In the latter case the "touting" is purely for medical benefit, while in the former it is for sick and other benefits rather than medical. It certainly would be a better arrangement if members were not forced to join the medical department of the lodge. If the friendly societies throughout the country are not prepared, as would seem to be the case, to permit the existence of a wage limit, or to increase very considerably the miserable fees paid to club doctors, the profession as it becomes more united will have to make every effort to put the present club system so far as it relates to the medical departments on a totally different footing.

ANSWERS.

INTERESTED.—We are unable to pronounce an opinion upon questions expressed in the hypothetical terms submitted by our correspondent.

RUSTICUS.—The size of the testicles is not of itself sufficient evidence of sterility or fertility. Examination of the semen could alone set the question at rest.

C.B.G.—Our correspondent alone can know fully all the circumstances connected with the request made to him, and it seems to be a matter for the exercise of his own discretion. We do not quite understand the grounds of his reluctance to make a statement of medical facts within his knowledge.

VERAX.—The civilian surgeons have as a rule been attached to base hospitals or hospital ships, with the exception of those who have been appointed to hospital trains, but as our correspondent will observe, the list of the medical staff for the Seventh Division contains civil surgeons appointed to field hospitals.

NOTES, LETTERS, Etc.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of the Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

	£	s.	d.
Amount already Acknowledged	195	17	9
F. Green, M.D.	1	1	0
A. T. Norton, C.B.	1	0	0
Glasgow Companies V.M.S.C....	16	18	8
London Companies:			
No. 2. additional	1	12	0
No. 4, additional	0	7	6
Mr. J. Jackson Clarke	1	1	0

PREVENTION OF INFANTILE DIARRHŒA.

MRS. MARY HAMILTON WILLIAMS, M.B., B.S.Lond., County Council Technical (Pathological) Research Scholar (Woodford Bridge) writes: In Dr. Newsholme's paper on epidemic diarrhœa he mentions many causes which contribute to render this complaint one of appalling frequency and high mortality. Some of the causes are concerned with meteorological conditions, and are in no way under our control; others are connected with good drainage, scavenging, etc., and those by slow degrees we may hope to see altered for the better. But in the opinion of the writer neither he nor any other authority has touched on the practical point around which the best chances of success lie. Dr. Newsholme admits that the most probable immediate source of infection is milk, and that the most common point of infection is most likely during storage in the home. He also states that the mortality is much higher among the poor than among the rich; and yet far more children are fed by hand among the latter. As far as the storage of milk is concerned, the main difference between the rich and the poor is that in the houses of the rich there are invariably larders, in the houses of the poor but rarely. In hot weather it is not possible to keep milk fit for food, even for the few hours necessary, when it has to be kept in the kitchen, where

probably cooking is going on; or in the bedroom, where probably there has been no thorough airing since the night's use. Again and again, when in cases of infantile diarrhœa I have reprimanded the mother for the state of the milk, I have found on further investigation it was futile to blame; the mother could not help it, for she had no decent place in which to keep the milk from heat and from the chances of bacterial contamination. Dr. Newsholme questions why the complaint in question is urban rather than rural; let him question any housewife of his acquaintance as to whether, without a larder, she would have most hope of keeping milk sweet for a few hours in town or country, and I think he will have his answer. Let a by-law be framed declaring no house henceforth "fit for human habitation" unless provided with a suitable small room (larder) for the storage of food, and I think much would have been done towards reducing the mortality which Dr. Newsholme so rightly deplores.

L.S.A. before 1886.

IGNORAMUS writes: In reference to the controversy on the L.S.A. qualification, a large amount of deplorable ignorance exists amongst even the educated public as to its status. For example, I was recently informed by a well-known barrister, who is a retired Colonial Chief Justice, that it was only an ordinary chemist's qualification; and when I asked him to mention one who possessed it, he replied that every qualified chemist and druggist held it. Moreover, his astonishment was great when I told him that now it was a registrable medical and surgical qualification, and that every one possessing it was, strictly speaking, both a physician and a surgeon, although, in consequence of some absurd legal technicality, he could not style himself as such. I am a M.R.C.S. and L.S.A. of thirty-five years' standing, and about ten days ago I wrote to the secretary of the Apothecaries' Company asking him whether or not I was entitled to style myself physician and surgeon. He answered, stating (I quote from his letter):

"As you obtained the L.S.A. diploma previous to the passing of the Medical Act, 1886, you are not strictly speaking entitled to style yourself physician."

Could anything be more absurd? Was the L.S.A. less of a medical qualification before 1885, and, if so, why? I should like to be enlightened.

The Pharmacology of Cannabis Indica.

DR. W. E. DIXON (Research Laboratories, Royal Colleges of Physicians and Surgeons, London) writes: I regret the necessity of being compelled to once again ask permission to occupy your space in order to reply to Professor Marshall's last communication on this subject in the BRITISH MEDICAL JOURNAL of December 16th, p. 1708. He still states that the effects of Indian hemp on the heart are due to embolism, without, however, giving any evidence that his supposition is supported by experimental facts. He supposes that the whole effect is due to a local irritant action. If by this Professor Marshall means a mechanical irritant action, then milk and other coarse emulsions ought to give a similar result, which is not the case. If, on the other hand, he means the irritant to be chemical—that is, through solution—he contradicts himself, for he first says that my experiments are an offence against the first principle of pharmacological procedure because I inject a substance which will not dissolve, and then proceeds to base all his criticism upon the assumption that it does dissolve and thus acts on the tissues. I feel it is useless for me to take further notice of Professor Marshall's criticisms so long as he persists in simply throwing out hypotheses for which he has no warranty in experimental facts.

Judge French and Doctors' Fees.

M.D. writes: I am glad to see you have drawn attention to the treatment received by Dr. Humphries from Judge French at Bow County Court. Some years ago I had experience of this Court, and I then determined to suffer gladly any dishonesty on the part of patients, no matter how well able to pay, rather than attempt to obtain redress by again applying before this judge. I have appeared in many courts of law, but this is the only case in which the judge has taken upon him to attempt to express an opinion on the medical treatment of a case contrary to mine. I am a member of the Medical Defence Union, and had legal aid, so that I was able to get payment for the full amount claimed. But the entire experience was so unpleasant that I formed the above resolution, and when I read such a case as Dr. Humphries's, and learn from other medical men the treatment they receive, I see no reason to change it. I enclose my card, but for obvious reasons I will ask you to withhold my name.

ANOTHER Correspondent writes: With reference to your article *re* Judge French in a recent issue the following may be of interest: I acted as witness in a case tried before him against a chemist for damage to an eye by his treatment. He dismissed the case, and made the insulting remark that if the medical man had a spite against the chemist he could try to get the Apothecaries' Society to have a bat at him. I was merely a witness in the case. I might also mention that the judge acted as expert witness for the defendant in this case, giving his surgical opinion against mine.

Milk and Immunity.

DUM SPERO SPIRO asks whether any attempts have been made to treat tuberculous patients by means of the milk of cows immunised against tuberculosis, and, if so, with what results? He asks this question for the following reasons:

1. It has been shown by Ehrlich, Klemperer, and others that antitoxin, when present in the blood, is present also in the milk, and that a certain degree of immunity can be conferred on animals by feeding them on such milk.

2. Brancati, in the EPITOME of the BRITISH MEDICAL JOURNAL, December 16th, 1899, par. 456, estimates the quantity of antitoxin in milk as being next to serum, if we can take the power of agglutination as a measure of the antitoxin present.

3. Our most satisfactory serum is the diphtheria antitoxin, and it seems more reasonable to expect that antitoxins prepared in the blood of living animals will be more efficacious than those prepared *in vitro*.

4. We are told that Maragliano has been able to produce in six months a high state of immunity to tuberculosis in the dog, ass, and horse. "The serum obtained from these is capable of protecting healthy animals against an otherwise fatal dose of tuberculin." Improvement has taken place in a certain proportion of mild cases of tuberculosis treated with this serum.

5. If young and healthy cows could be immunised, we should have large quantities of a fluid containing antitoxin; in small quantities no doubt, but even though these small quantities had no great action on the lesion, might they not raise the resistance of the other tissues and so prevent extension or generalisation of the disease, while the diseased part was assisted in its recovery by "fresh air treatment"?

6. Roux says that repeated small doses of toxins produce a better immunity than a single large dose. There are numerous cases of people being "cured of consumption" after a few months' residence at a farmhouse and "drinking plenty of milk." As so many cattle are tuberculous, the patients were getting repeated small doses of toxins, antitoxins, and living and dead bacilli, so were practically undergoing a process of immunisation combined with "open-air treatment."

7. As the milk would be serving the double purpose of a food and curative agent, it would be much more economical and probably more effective than the bleeding of old horses. Cows for the purpose could very well be kept at the larger sanatoria.

8. The majority of the antitoxin would be in the whey, so that could be used as a concentrated remedy, or concentrated further *in vacuo* and injected into the subcutaneous tissues.

9. May not the comparative immunity of breast-fed infants to infectious diseases be in great measure due to a conferred immunity from their mother's milk?

LETTERS, COMMUNICATIONS, Etc., have been received from:

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BOOKS, Etc., RECEIVED.

Local Government Law and Legislation for the Year ended September, 1899. Arranged and edited by W. H. Dumsday, LL.B. London: Haddon, Best and Co. 1899.

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A LECTURE
ON
A CENTURY OF SURGERY.

Delivered in University College Hospital on January 8th, 1900.

BY CHRISTOPHER HEATH, F.R.C.S.,
Holme Professor of Clinical Surgery.

GENTLEMEN,—As I address you to-day for the first time in the last year of the nineteenth century, I have thought I might venture a little out of the beaten path of clinical surgery by giving you a sketch of the surgery of the century.

MILITARY SURGERY.

"I would remind you that at the beginning of the century Europe was plunged in war; that Britain was constantly engaged in fighting with Napoleon, either in the Peninsula or elsewhere, and that, lastly, came the final and great victory of Waterloo in 1815; and, therefore, that during the first fifteen years of the century the attention of surgeons was more or less directed to the injuries inflicted on the field of battle.

The surgery of that day was rough and ready. The surgeon followed his regiment to the field of battle. He did his best at the time to arrest hæmorrhage, and then subsequently—either on the field or in adjacent houses, or, if possible, in a hospital, if there were a hospital—he did his best by amputating maimed and shattered limbs to save the patient; but, necessarily, although we have very few statistics of those days, the mortality was exceedingly high. But, still, the Army Medical Service was a very good training for the surgeon.

Samuel Cooper, who was afterwards the Professor of Surgery in University College from 1831 to 1847, and the author of works well known in the early days, but perhaps not so well known at present—namely, Cooper's *First Lines of Surgery* and Cooper's *Surgical Dictionary*—began his life as an army surgeon; he served with the British army for many years, and only on the conclusion of that service did he become a civil surgeon. So also Guthrie, who lived to be thrice President of the Royal College of Surgeons, who was Surgeon to the Westminster Hospital, and founded the Westminster Ophthalmic Hospital, was for many years an army surgeon, and his valuable work upon the surgery of the arteries was based mainly upon the experience he gained in the Peninsular war. So also with the Scotch professor of surgery, Ballingal, who was an eminent man, and who also derived all his experience from the field of battle. Lastly, do not let us forget that most eminent surgeon Baron Larrey, who was so highly esteemed by his master, the first Napoleon, that he said when Larrey was present it was equivalent to an extra army corps, because the soldiers felt that their wounds would be looked after, and that their interests would be considered.

AMPUTATION.

Among the questions which necessarily arose during the period of the wars was that as to how amputation should be best performed. You must bear in mind that in those days all the amputations were circular. They were made as recommended by John Bell, of Edinburgh, by first cutting circularly through the skin and then turning it backwards; then a second section was made through the muscles, which were also retracted, and finally the bone was divided high up. Remember, if you please, that these were the days before anæsthesia, and consider for a moment what such a tedious and necessarily bloody operation must have been for the patient to support

But in the North there was a surgeon growing up named Robert Liston, who saw that an improvement might be made in rapidity and also in getting a better covering for the bone, by what we call the flap method. He practised that first at the Edinburgh Infirmary, and then when he was called to London to be Surgeon to University College Hospital in 1836, he introduced the practice here, and he was the first surgeon who undertook amputations by the flap method in any London hospital.

His method had the advantage of rapidity—being a very powerful man, over 6 feet in height—he would grasp a thigh, transfix it with a long knife, and cut one flap above and another flap below the bone, draw back the flaps with his left hand, saw through the bone, and pride himself on doing it all in less than one minute. Well, that was of course quite a new thing. Surgeons had never before seen such rapid amputations, and I need hardly say that to the unfortunate patient who had to put up with the agony of the operation the rapidity was a great gain.

I am not old enough to have had any experience in surgery before the days of anæsthesia, but I have learned from those who had, that they gave their patients a good stiff glass of brandy and water immediately before the operation, and that it was with that kind of "Dutch courage," if one may so call it, that they managed to submit to these terrible mutilations. I had an opportunity once of talking to a patient who had had his thigh amputated before the days of anæsthesia, and I asked him to tell me what it was like. "Well," he said, "you know what a bad burn is." I said, "Yes, I do." He said, "Well, it was exactly like that; when the knife went through the flesh of my thigh it was exactly as if I was burned as severely as possible." One can easily understand that that does represent very fairly the feeling which would be induced by the transfixion of the living tissues of the limb by a long knife carried rapidly through it.

The flap method having been introduced by Liston, it was found by him and by other surgeons that by adapting it to various parts of the body, it was possible to give a better stump, and to make a longer one than by the circular method.

But it was also found that the fleshy flaps were sometimes very inconvenient, and hence when anæsthetics came in, and the necessity for rapid operating passed away, surgeons found that it was possible to make better stumps by other methods than transfixion of the limb. Foremost amongst those innovators must be mentioned the late Mr. Teale, of Leeds, who early in the Fifties introduced rectangular flaps cut from without inwards, and including the whole of the tissues. Mr. Teale gave strict measurements for his flaps; thus the anterior flap was to measure half the circumference of the limb at the point of section both in length and breadth, and the posterior flap was to be a quarter of this in length. Naturally with such unequal flaps the anterior was folded over the end of the bone, and the cicatrix came behind and far from the divided bone, instead of being, as it often was in the transfixion operations, adherent to it. It was found that Teale's method made stumps which would bear pressure well, but were very short stumps, and then gradually surgeons found that they could get all the advantages of the method without its drawbacks by cutting skin flaps, with little or no muscle, long enough to cover the end of the bone and to meet similar flaps behind, and this is the method universally adopted in the present day.

I would just allude to that very interesting amputation which is generally connected with Mr. Syme's name. He showed that by dissecting a flap off the heel of the foot he could take away the foot and leave a limb very nearly as long as the opposite one, and that the patient was afterwards able to walk upon the stump. We still practise that operation, for it is an exceedingly good one in appropriate cases, and it is one of the best examples I know of the improvement brought into surgery by the flap method.

RESECTION AND ARTHRECTOMY.

Up to the middle of the present century, or very nearly so, amputation was done in all bad cases of diseased joints. Patients were encouraged to bear their diseased joints as long as they could, and when they could bear them no longer, or when their strength was giving way, as a last resource the surgeon recommended and performed amputation. But when anæsthesia came in, in the year 1846, the whole thing was altered. Surgeons found then that they had time during the anæsthesia to deal with joints in a very different way from what they had done previously, and it was then, owing to the efforts of Syme and Liston, and Fergusson particularly, that the operation which we call resection came in. By resection we mean that instead of cutting off a limb where there is disease, the joint was opened, the diseased ends of the bone were removed, and the fresh-cut ends, being brought together, united, and the patient recovered with a straight, stiff, and somewhat shortened limb.

Then again, of late years, upon that even an improvement has been made, and we now have the method of "arthrectomy." In a comparatively early stage we expose the interior of the diseased joint, we clip away all the diseased tissues, we scrape away any diseased bone, we apply antiseptics in the form of iodoform to the interior of the joint, we dress the joint antiseptically, and we find that these patients recover with exceedingly useful limbs, and sometimes with movable joints.

Anæsthetics.

This brings me to the date—that very important date 1846—of the introduction of anæsthetics. We owe the introduction of that beneficent method to America, and particularly to the late Collins Warren of Boston, in whose *clientèle* it was that the first so-called experiment in anæsthesia took place.

There was a dentist named Morton, who lived in Boston, and he had made experiments with nitrous oxide gas, which, as had been known before, from the time of Sir Humphry Davy, produced a certain amount of excitement, and hence was called "laughing gas," but if pushed beyond that produced a temporary anæsthesia. Morton employed this in extracting teeth, and then he bethought him that he might possibly find something which would be a little more potent and more manageable. This he found in sulphuric ether, and then, having been successful in a good many cases of tooth extraction under the influence of ether, he spoke to Warren of Boston, and asked if he might have the opportunity to give ether for some patient upon whom he was to operate.

Accordingly, in October, 1846, a day was fixed on which an operation was to be performed upon a patient to whom Morton was to administer the anæsthetic. Everything was ready for the operation, but for some reason Morton was late, and Warren rather sarcastically said, "The gentleman is not coming," and evidently thought that he had withdrawn and feared the event. However, just as they were going to begin the operation, Morton arrived, and he administered the ether and Warren performed his operation. The patient was perfectly quiet, absolutely insensible, and would hardly believe, when he woke up, that the operation had been performed. Warren's comment upon it was, "Gentlemen, there is no humbug in this," and that was quite a true word, for it was from that date that anæsthesia began.

We have there the commencement of anæsthesia on October 17th, 1846. The news of this was very soon sent across to England, and a dentist, Mr. Robinson, of Gower Street, extracted some teeth under the influence of ether. He invited Robert Liston to come and see a tooth extracted, and then Liston himself, on December 22nd, 1846, performed two operations in University College Hospital—in this very theatre—an amputation of the thigh, and the removal of a toe-nail, both operations, I needly hardly say, being excessively painful ones. The patients were put under the influence of ether by Dr. William Squire, who has only recently died, and with complete success. The news, of course, spread rapidly to Glasgow and Edinburgh, and within a day or two the thing was there repeated, and so anæsthesia became an established fact in Europe.

You will observe that in all these cases ether was administered, and ether held its sway for a few years. But Simpson, the great accoucheur, who afterwards became Sir James Simpson, of Edinburgh, was not quite satisfied with ether, and was making a search for some more portable anæsthetic and one which he could give to women in the pangs of labour. After various experiments, some of which were very dangerous, and were carried out on his own person and on that of Matthews Duncan, who was his assistant, he came upon a fluid which was called chloroform. He found that it was portable; that it easily put the patient asleep, and that it seemed to have some advantages over ether. Accordingly, chloroform came into fashion, and held its sway for a good many years, and then from time to time an unfortunate death occurred; and I think there can be no doubt in anybody's mind that if caution is not used in administering chloroform it is rather a dangerous drug, I mean that an overdose of chloroform administered suddenly to a patient may induce stoppage of the heart.

We did our best, however, and then there was a sort of reaction in favour of ether; and about the same time thirty years ago, it first was brought out rather curiously, that the nitrous oxide gas—the old "laughing gas"—if it was administered pure, without any admixture of ordinary atmospheric air, was a very potent anæsthetic; and it was shown by various demonstrations which were given that teeth might be extracted very readily and without any pain under the influence of the nitrous oxide gas. I need hardly say what a boon that was to dentists, and to the patients who had to resort to dentists. Accordingly, nitrous oxide gas became the fashionable means of producing anæsthesia for dental and other short operations.

But then it was thought that if it was possible to put a patient off quickly with nitrous oxide gas, why should you not go on administering ether afterwards, and so keep up the anæsthesia; and, accordingly, that is what we do nowadays. In the great majority of cases, unless the operations are about the mouth, the patient is anæsthetised very rapidly by being put first under the influence of the nitrous oxide gas, and as soon as he becomes insensible, which will be in something under a minute, the gas is withdrawn, the ether is turned on, and the anæsthesia is prolonged as much as may be necessary for the operation.

There is no difficulty, of course, in keeping a patient asleep for an hour, if necessary; but I think that sometimes surgeons make a mistake in the present day in being too deliberate in their operations. In former days, when there were no anæsthetics, they were obliged to be quick; nowadays, when we have unlimited anæsthesia, I think there is sometimes a tendency for the surgeon to be too deliberate, and, as a result, that his patient gets too much ether. I hear of patients being kept anæsthetised for two or even three hours, and a lady told me not long ago that she herself had been the victim of an operation which took four hours, and I could only say to myself I was surprised she was there to tell it me. When one hears of such lengths as that one cannot but fear that an undue strain is put upon the patient's heart.

Antiseptics.

Let me go on now at once to the other great subject of the century, namely, antiseptics. There can be no question, and no one for a moment disputes it, that Lord Lister is entitled to the whole of the credit of having brought into being what we may call antiseptic surgery.

Mr. Lister, as he was then, was an old pupil and house-surgeon of this hospital, and he made the acquaintance of Syme when Syme came up for a very few weeks to University College Hospital, in order to succeed Liston. Syme, for private reasons of his own, went back to Edinburgh, and Lister followed him there, became his house-surgeon. Then Lister, having settled down in Scotland as it were, was appointed Regius Professor of Surgery at Glasgow; and it was in the old Glasgow Infirmary, a building which was in many respects most insanitary, that Lister was induced first to try whether something could not be done to improve the condition of his unfortunate patients.

He found that, do what he would, all his wounds suppurated, and the great majority of his patients died from infection of the system from the wound; and he happened, more by accident I think than anything else, to employ carbolic acid. Carbolic acid, about that time, was coming into note as an ordinary antiseptic. It was used to throw down drains and to take away offensive smells, and so on, and he used it, and one of his earliest experiments was to take a case of compound fracture and to dress it with carbolic acid, and see what happened. What happened was that, to his very great surprise—and I am told by those who were present at the time and saw it, that Lister himself was perfectly astonished—when he came to open the compound fracture, instead of suppuration there was a clot in the wound organising, there was no inflammation, the part was quiet, and it was healing under the influence of what at first sight would appear to be a great irritant.

I am not going to follow out the details. It is sufficient to say that, thanks to Lord Lister, a system was inaugurated which has been modified slightly from time to time, but which is now put upon a firm basis, by which we are enabled to keep our wounds perfectly sweet by having absolute cleanliness, of the patient, of the surgeon, of the nurse, of the instruments, of all surroundings; and then by applying proper

dressings of either an aseptic or antiseptic nature, according to circumstances, we have such results as our forefathers never could have anticipated. I mean that wounds heal without any inflammation, the patients lie quiet in bed and take their food from the first without any fever, and we are enabled not merely to save a great many lives, but we are are able to undertake operations which we would never have ventured to undertake except with the assistance of antisepsis.

I am old enough to remember what amputation of the thigh came to in Fergusson's practice, and in Erichsen's practice, and in that of other very good surgeons. The patients almost all died. It was quite the exception when a case of amputation of the thigh got well. Nowadays, such a thing as a death from amputation of the thigh is hardly known; and if it does occur, one considers very seriously what could have gone wrong, that a patient with an ordinary amputation of the thigh should have succumbed.

More than this, we are now able to do so much more for patients, the range of surgery has become enlarged, and the amount of surgery is much greater than it possibly could have been before the days of anæsthetics and antiseptics.

VESICAL CALCULUS.

A subject which engrossed a great deal of attention during the century was the treatment of calculus. Calculus, of course, has been known in all countries for many centuries. We have early records of operations for calculus in Egypt and in the East, and we find that operations have been introduced and again abandoned from time to time, so that the whole history of the surgery of calculus in the bladder has been one of constant change.

I would just remind you that there was a great surgeon in England in the early part of the eighteenth century named Cheselden. He was Surgeon to St. Thomas's Hospital, and he had, very rightly, a great reputation for the lateral operation of lithotomy, and, consequently, he impressed upon not only his contemporaries, but also upon those who succeeded him, that the lateral operation was the operation to be performed.

Accordingly, at the beginning of the present century, the operation usually performed was by the lateral method, and with a very fair amount of success. Still, as Sir Benjamin Brodie says in his autobiography, there were no cases which gave him more anxiety than cases of calculus; because he, being in a large fashionable practice in London, necessarily had to do with persons of considerable note, and it was a matter of great importance, of course, that those valuable lives should be preserved. The death-rate of lithotomy was very high, and, accordingly, attempts were made by Civiale in Paris, by Leroy d'Etiolles, by Heurteloup, and by Weiss, the English instrument maker, who gave most important assistance, to devise instruments by which a stone might be broken, and the fragments extracted from the bladder without any cutting operation.

Thus lithotrity was introduced, and I may say that one of the first attempts to break a stone was made with an instrument, consisting of two blades, in which the force was applied by means of a hammer. It seems now a very rough method of proceeding, and no one would think for a moment of adopting it; and when Weiss, the instrument maker, showed that it was possible to adapt a screw movement, he had very much the same instrument that we have nowadays, consisting of a male and female blade, in which the stone was crushed and broken up into fragments.

Sir Henry Thompson, Consulting Surgeon to this hospital, is well known to you all as a surgeon who has distinguished himself in perfecting the operation of lithotrity; and I may say that, having frequently witnessed its performance by his hands, I think he brought the method to as near perfection as was possible.

You will remember that at that time, although the stone were broken up by a series of "sittings," it was left to the natural efforts of the patient to evacuate the fragments. The first attempt to assist evacuation of the fragments was no doubt due to the late Mr. Clover, the anæsthetist of this hospital. It struck him that if some form of exhausting bottle were adapted to a catheter of large size, probably a good many fragments might be extracted; and although at first Sir Henry Thompson only used that instrument for the extraction of the minute fragments remaining at the end the series of sittings, there can be no doubt that that was the beginning of the evacuation system.

But it is really to Bigelow, the eminent American surgeon, who died only a few years ago, that we owe the great improvement of what he termed litholapaxy, or better called, I think, rapid lithotrity. As practised by most surgeons nowadays, it consists in putting the patient under the influence of an anæsthetic, and breaking up the stone into small dust by a series of manipulations at one sitting; and then, by means of a powerful evacuating bottle, drawing out the fluid contained in the bladder and all remains of the stone. This method of Bigelow's has no doubt opened up quite new features in the operation of lithotrity, and has enabled the surgeon to treat cases of stone which he never would have ventured to treat by that method without the instruments which Bigelow devised.

Then, comparatively lately, within the last twenty years, there has been a recurrence to an old operation which dates probably many centuries back, namely, the suprapubic operation of lithotomy; and it is a curious fact that Cheselden, the great lithotomist, undoubtedly at one time performed the suprapubic operation in preference to the lateral, which, as I have said, became his favourite method of proceeding.

Petersen, a Danish surgeon, deserves the credit of having brought this suprapubic method again into practice. He showed, what every anatomist knew, that by distending the bladder with fluid it could be raised up sufficiently to avoid any danger of opening the peritoneum, when an incision was made above the pubes. But he also showed, which was not so well known, that by distending the rectum with an india-rubber bag the tendency would be to elevate still more the bladder, and therefore to keep the peritoneum more out of danger. Accordingly he devised the modern suprapubic operation, which is now recognised by surgeons as being, perhaps, the safest method of lithotomy, so much so that at the present time, in England at least, the perineal operation has fallen into disuse, and I know that students in the London hospitals now hardly ever, if ever, see the old lateral operation performed. No doubt the suprapubic operation has the great advantage of inflicting no injury on very important and vital structures, and it certainly does give, as I know in my own practice, the opportunity of extracting very large stones, which could not by any possibility be removed by any other method.

PROSTATIC DISEASE.

While on this subject let me mention a treatment which came into vogue some twenty years ago, mainly by the efforts of the surgeons of the Leeds Hospital, for the relief of that very common affection of old age—enlarged prostate. It was found by several of the Leeds surgeons that it was quite possible to open the bladder above the pubes and to remove with scissors any prominent portions of the prostate gland, with exceedingly good results. Although this operation for some time had a certain amount of credit, it has fallen somewhat into disuse in Great Britain, and I do not hear of many operations of that kind being done now, nor have I thought it well to do any myself of late.

There is another matter in connection with the same subject to which I must just allude, which has come up of late, and mainly through the influence of an American surgeon, White, and that is the possibility of the operation of castration having a very marked effect upon the development of the prostate. The question is still *sub judice*, but so far as we can tell there is a good deal of truth in it, and I think that in suitably selected cases it is quite a legitimate and proper procedure, and the same may be said of Mr. R. Harrison's proposal to divide the vas deferens.

OVARIOTOMY.

Next I must refer to the operation of ovariotomy. There can be no question that the first ovariotomist was Ephraim McDowell, who was born in Virginia in 1771. He went over to England, as was very much the custom with Americans in those days. At Edinburgh he came into relation with Lizars, who was a surgeon of that city, and who had the notion, though he had never carried it out, that it might be possible to remove an ovarian tumour.

McDowell went back to the United States, and settled down

in a small practice in a mere village (Danville, Kentucky), and there he happened to have a patient come before him in the year 1809—a Mrs. Crawford—who had a large abdominal tumour. The woman, as is so often the case, had supposed herself to be pregnant; but when months went on it became clear that it was not a case of pregnancy, and she applied to McDowell for relief. McDowell, entirely on his own authority, and apparently without consultation with anybody else, performed the first ovariotomy in this country village, and, most providentially, that patient got perfectly well.

There we have the history of the first ovariotomy. It did not make a great sensation. McDowell wrote to Lizars, and told him what he had done, and Lizars had a case or two himself; and then Clay of Manchester, Frederick Bird and Baker Browne of London, had each a few cases; but the operation was a very fatal one, and it did not seem to have been much taken up. In fact, ovariotomy was not really established as a recognised operation until Spencer Wells took it up in the year 1858.

Sir Spencer Wells died in 1896, at a good old age, and he had performed nearly 2,000 ovariotomies in the course of his life. He began as a naval surgeon, he went out to the Crimea as one of the civil surgeons sent to Smyrna, and when he returned at the end of the Crimean war he was appointed one of the surgeons to the Samaritan Hospital, where he was seeing pretty constantly cases of abdominal tumour. At that time nothing was done for these cases except to tap them, and sometimes to inject iodine, which very seldom did any good.

Wells made up his mind that he would perform ovariotomy, and that he would continue to perform ovariotomies until he had ascertained whether or not the operation was a justifiable one; and he pledged himself from the first to publish all the cases and to show all the specimens, and he very carefully carried that out. I need not go into details, but he soon was able to see that, with due attention to the surroundings, with care in the selection of the cases, and with a certain amount of skill, which he soon acquired in the operation itself, it was not such a fatal operation as was supposed.

I may say that McDowell's original operation was to tie the pedicle, and leave the ligature out of the lower end of the wound. Wells adopted the same plan at first, but, finding that was not very successful, he then fell back upon a suggestion of Mr. Jonathan Hutchinson—namely, to pull the pedicle out as far as possible in the wound, and then to clamp it with a sort of callipers outside the wound; and for a very long time, for many years in fact, that was the method which he adopted.

In the course of time, about the year 1873, Lister's antiseptic treatment came in, and Sir Spencer Wells adopted it, and at the same time—because of course it was very important that the abdomen should be closed—adopted the plan of "tying and dropping," as it is called, the pedicle—by which I mean that the pedicle was secured firmly by a ligature—dropped into the peritoneal cavity, and never heard of any more, the whole of the abdominal wound being closed. Now whether Wells was right in attributing the great improvement in his cases to the adoption of the antiseptic method, or, as maintained by some authorities, that his improvement dated from the time when he tied and dropped the pedicle, I do not care to consider. It is quite sufficient to say that his mortality diminished, and that he was, at the time of his death, the most successful ovariotomist that the world has ever seen.

Of course there have been many others. Ovariotomy is now a well recognised operation, and out of it have grown many other operations. I mean that surgical gynæcology has become developed to a very great extent as the result of these successful ovariotomies, and that the removal of the ovaries when they are not enlarged, the removal of uterine tumours, and even of the uterus itself, have followed upon the successful introduction of ovariotomy.

Abdominal Surgery.

There is another subject that I would say a word about, and that is the great advance in abdominal surgery generally; because it is not merely in the pelvic organs that so great an improvement has been made, but the other organs of the abdomen, which were formerly thought to be quite beyond the surgeon's skill, are now reached and relieved with the greatest facility. I would remind you that gall stones can be removed, not merely from the gall bladder, but from the ducts leading from the gall bladder, and that they can be picked out or broken down and extracted with very great success, and of course the relief for these unfortunate patients must be enormous. This applies not only to the liver, but also to the kidney, for it is now a matter of everyday occurrence that stones should be extracted from the kidney itself, and if that organ be extensively diseased it may be removed.

The surgery of the intestinal canal dates from 1839, when Amussat introduced his operation of lumbar colotomy for the relief of malignant obstruction of the rectum. During the last thirty years, not only has the operation been undertaken much more frequently and much earlier than formerly, but the introduction of inguinal colotomy has given us an easier and more certain operation, and one which renders the patient more independent afterwards than the older method. Then, following upon colotomy and to some extent dependent on it, came the removal of the rectum, at first by the anus and latterly by the operation with which Kraske's name is connected, and which you have frequently seen performed here by Mr. Godlee.

The whole subject of what is termed "intestinal anastomosis" has been worked out in the last twenty years, and Mr. Barker is entitled to the credit of much good work in that department, having had one of the earliest cases of gastro-enterostomy. The revival of the Lembert suture, with the various modifications of it, the ingenious contrivances of Senn and others, and last, but not least, the excellent button of Murphy of Chicago, have enabled the modern surgeon to perform operations previously impossible, with very considerable success. Even the operation of gastrostomy, which dates from the present century, and was at one time so uniformly fatal as to be almost abandoned, has been revived with much more hopeful results by the proceeding of Franke.

Nervous System.

Even the head and its contents have been the subjects of surgery, and not only has the diagnosis of brain affections been simplified by the researches of Ferrier and Horsley, but abscesses have been opened and brain tumours have been removed with a certain amount of success.

The same may be said of the spinal cord, where laminectomy has in some cases proved very efficient in relieving the pressure due to accident or spinal caries. In connection with this subject I would remind you of the very successful case of Calot's operation for straightening a distorted spine, which was in my ward last summer.

Conclusion.

Time will only allow me to refer in the briefest manner to the various instrumental aids which surgery has obtained during the century. First comes the microscope, which, at first employed only by the few anatomists who made minute anatomy their study, is now the daily servant both of the physician and surgeon for the diagnosis of disease. About the middle of the century the ophthalmoscope came in and revolutionised the whole of the surgery of the eye. A little later the laryngoscope shed light upon the diseases of the air passages and nose; and still later the endoscope, and particularly the electric endoscope, has enabled the surgeon to investigate the interior of the bladder and urethra, and to diagnose diseases of the kidney by watching the discharge of pus from the orifice of a ureter.

Lastly, let me mention the application of photography to the illumination of the deeper structures of the body. The Roentgen rays, as they are called, are no doubt extremely valuable. They bring into relief parts which are hidden from view by the skin and soft tissues covering them. But I think a little caution will have to be used, because it is not every structure which shows up equally well under the Roentgen rays, and I am afraid, if we do not take care, that we shall get into difficulties over our fractures. I find, as a matter of fact, that the callus or new material which is thrown out in order to unite the fracture does not show at all under the Roentgen rays. You can see the outline of the fracture, and you can see the broken ends of the bone, and to the

unlearned it looks as if the surgeon had made a hash of his business. We must take care that this is clearly understood, or we shall be liable to actions for malpraxis.

TWO CLINICAL LECTURES
ON
RETENTION OF MENSTRUAL BLOOD FROM ATRESIA OF THE VAGINA

WITH SOME REMARKS ON THE INDICATIONS FOR LOCAL EXAMINATION IN THE DISORDERS OF MENSTRUATION.

Delivered at St. Thomas's Hospital November 14th and 17th, 1899.

BY CHAS. J. CULLINGWORTH, M.D., F.R.C.P.,
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LECTURE II.

THE next case illustrates a similar condition in a somewhat older patient. I am indebted for the following notes to my clinical clerk, Mr. Barnicot:

CASE II.—M. A. M., aged 21, single, a laundress, was admitted into St. Thomas's Hospital October 2nd, 1899. She had never had any menstrual discharge. She had felt no pain or inconvenience until the last twelve months. She had suffered during that time from "bearing-down pains," lasting five or six days at monthly intervals. About seven months ago she first noticed some abdominal swelling, which had since gradually increased in size. Her general health had been unaffected. She had had no trouble with regard either to micturition or defæcation.

She was a light-complexioned, healthy, cheerful woman. There was a large prominent swelling situated centrally, in the lower and middle portions of the abdomen, reaching from the symphysis pubis to a line about an inch above the umbilicus, where it was most prominent towards the right. The right upper corner of the swelling was harder and firmer than the rest, and was more or less definitely differentiated from the other part of the tumour, which was elastic and obscurely fluctuating. The tumour was not painful or tender. It was dull all over on percussion. It measured 8½ in. in height, from the crest of the symphysis, and 7 in. in maximum width—namely, 3 in. to left of middle line and 4 in. to right. The temperature and pulse were normal.

On examination, October 10th, 1899, the vulva and neighbouring parts were seen to be bulged downwards, forming a rounded projection. The labia minora were separated to a width apart of about ¾ in. Between them a tense membrane was seen, of bluish colour, entirely closing the vaginal orifice. The tension was evidently due to the presence of a thick fluid. On examining the rectum the anterior wall was felt to be bulged backwards by a globular swelling. The pelvic tumour was shown by bimanual examination to be part of the swelling that was seen in the abdomen. The general health was good.

On October 12th, 1899, the patient was anæsthetised, and the following measurements were taken, namely, transverse diameter of visible portion of occluding membrane, 1 inch; antero-posterior diameter of same, 1½ inch The perineum measured 1⅞ inch from before backwards. The distance from the clitoris to the anterior border of the perineum measured 2½ inches. An incision which, in the then tense condition of parts must have measured about 1½ inch in length, was now made by a scalpel through the thick membrane closing in the lower part of the vagina. The incision was antero-posterior in direction. The withdrawal of the knife was followed by the pouring out of a thick viscid stream of dark reddish-brown chocolate coloured fluid, evidently altered blood. This stream flowed without any abdominal pressure being made by the hand, and continued, with a few pauses, to flow for fifteen minutes. Sickness expedited the flow. The total quantity that had passed when the patient left the table was three pints. No douche was used.

Two fingers were passed into the vagina, but the uterus could not be reached. The vaginal walls were much thickened, and showed no rugæ. On the posterior wall there was a thick semilunar fold of tissue with concavity upwards. The external genital organs had now resumed their normal appearance.

The flow continued into a dry vulvar pad of wood wool somewhat slowly and scantily for three days. On the evening of October 14th, the third day, the patient was allowed to sit up in bed. This resulted in a more copious discharge. The following day the discharge became thinner and less coloured. Two days later (October 17th) it had almost ceased. The temperature and general condition remained normal the whole time.

On October 19th, a week after the operation, the parts were examined. The tissues incised were seen to be of considerable thickness. The free edge of the hymen could not be seen; it seemed to be incorporated with the occluding membrane. On introducing the finger, the walls of the vagina were felt to be of considerable thickness and without rugæ. Across the middle of the posterior wall the tissues were still felt to be thrown into a thick semilunar fold. High up above and in front of this was the os externum of the patulous and funnel-shaped cervical canal. A Sims's glass vaginal rest was passed through the incision and fastened *in situ* by means of a vulvar pad and T-bandage.

A considerable flow of serum commenced on the 22nd and continued, diminishing daily in quantity up to the 26th.

On October 30th the following note was made: "The vaginal walls are still thick, and are even more folded in transverse ridges. The uterus is still high up, only just within reach of the finger, and so irregular and ill-defined that it is not easy to trace out its boundaries. The canal entered by the sound lies to the right of the median line, and the point of the instrument can be felt on that side just below the level of the umbilicus. No thickening of the uterine wall is apparent or elongation of the canal, but the lower part of the canal is irregularly funnel-shaped, with widest part at the os sternum. A little blood-stained serum passes each time the glass plug is removed. The incision is quite healthy, and, with a little difficulty, admits two fingers."

The patient left the hospital on November 1st, and was directed to wear the glass rest either night and day, or night only or day only, as she might find it most convenient, and to present herself for examination in three weeks.

This case differs from Case I, not only in the age of the patients (21 in this case, 13 in the former), but in the length of time during which the symptoms of menstrual disorder had been present. In the younger patient there had been no menstrual molimina, and the first symptoms to attract notice had presented themselves only a week or two before her admission. In the present case the periodic pains and discomforts known as the menstrual molimina had been regular in their occurrence for twelve months. Yet notwithstanding this difference, the accumulation had probably been in course of formation almost as long in the one case as the other, for in both it had formed a tumour, filling the pelvis and rising to a considerable height in the abdomen. It is true that the quantity in the younger patient was only 1½ pint, while in the elder it was 3 pints, but this difference is scarcely more than would be accounted for by the difference in size, age, and development of the two patients.

Another point of difference between the two cases is that while in the one case the bulging membrane was not visible on inspection of the external genitals until the labia minora had been separated, in the other the membrane bulged between the labia, separating them to the extent of about ¾ or 1 inch.

A third point in which the two cases differed was in the length of time that the coloured discharge continued after the operation, in the one case being eleven days, in the other five.

The third case I have to present to your notice is that of a patient still under observation in the ward. For the following notes I am indebted to my clinical clerk, Mr. F. M. Bingham:

CASE III.—F. K., aged 14, an imbecile, was admitted into St. Thomas's Hospital, October 17th, 1899. Seven weeks before her admission she was subject during two or three days to paroxysms of pain, made evident by her screaming and by the clenching of her hands. After a month's interval the symptoms recurred. This time they persisted, and at the end of three weeks she was brought up to the casualty department of the hospital, where occlusion of the vagina and retention of menstrual fluid were diagnosed. She was accordingly admitted.

On October 19th, two days after admission, she was placed under the influence of an anæsthetic. The external genital organs presented the appearance natural to the age of commencing puberty. The pubes were covered with a fair quantity of hair. The hymen was as usual deeply seated and concealed from view by the labia minora, which met as usual in the middle line. On separating them the parts had a normal appearance, except that there was no vaginal ostium. There was no bulging membrane visible, or projection downwards of the perineum or vulva. By the rectum there was felt to be a globular bulging backwards of the anterior rectal wall just above the apex of the so-called perineal body. The lumen of the rectum was not seriously encroached upon.

Bimanually, a recto-abdominal examination showed the swelling felt *per rectum* to be continuous with and to form part of a swelling equal in size to that of an ordinary orange. The upper part of this swelling was perceptible on deep palpation of the suprapubic region, but formed no visible projection there, and did not reach as far forward as the under surface of the anterior abdominal wall. It was central in position. The diagnosis was therefore confirmed.

A scalpel was passed directly upwards through the tissues occluding th vaginal orifice, the blade entering immediately in front of the anterior border of the perineum, with its cutting edge directed backwards. The blade penetrated a fairly thick intervening tissue, and was then felt to enter the cavity of the distended vagina. On rotating the blade through a quarter of a circle so as to separate the edges of the incision, a quantity of thick, dark-brown fluid of the consistence of treacle made its escape. The quantity that escaped on the operating table measured 5 fluid ounces. The opening was enlarged so as to easily admit one finger. The vaginal canal was felt to be distended and its walls smooth. Half-way up on the posterior surface was a thick, semilunar fold. The os uteri was perceived high up as an opening on a level with the roof of the distended vagina. There was no projection of cervix or evidence of distension of the cervical canal.

On the second day the discharge was dark red, on the third chiefly serum, after that it ceased. At the end of a week a glass tube was passed, but it caused much pain and could not be retained; a little discharge followed its introduction, but this soon ceased. A smaller tube was obtained, and from and after November 1st it was passed two or three times a day, and retained a minute or two to keep the opening patent.

Several attempts have been made to keep the track open, by inserting gauze plugs whilst the patient was anæsthetised, but each time she has removed the plug on recovering her consciousness. So feeble is her intellect that she cannot be made to understand that she is not to disturb the dressings. Meantime she is kept under observation, with a view to

securing the non-closure of the orifice by the occasional passage of a glass plug.

In this patient an imperfect cerebral development is associated with imperfect development of the genital organs. The vagina is small as well as being occluded. The occluding membrane was of considerable thickness, and this leads me to point out that cases of so-called imperforate hymen are not infrequently cases where the thickness of tissue between the vagina and vulva is greater than would be accounted for by a merely imperforate hymen however thick. These are instances where the lower end of the coalesced ducts of Müller has failed to reach and open into the deepened portion of the uro-genital sinus behind the vestibule. In proof of this, cases are met with where the normally pervious hymen can be seen lying upon and adherent to the more deeply-placed occluding membrane. In other words, it is the lower end of the vagina that is really occluded. I could not trace the free border of the hymen in the instance before us, and therefore I have reason to regard the occlusion as being caused partly by an imperforate hymen and partly by occlusion of the lower end of the vagina itself.

The symptoms of pelvic discomfort had not been noticed until seven weeks before admission and the quantity of menstrual blood retained was comparatively small, namely, 5 fluid ounces. But even this quantity was sufficient to cause an abdominal tumour, distinctly felt on deep palpation over the hypogastrium.

The fourth and last case of this series, which I have now to read to you, was only admitted on Monday last.

CASE IV.—B. W., a well developed but not very intelligent girl, aged 20, was admitted into St. Thomas's Hospital on November 13th, 1899. The following abstract of the case is taken from the notes of Mr. Barnicot:

The patient has had no menstrual discharge, and had never experienced any periodic pains or discomfort. She sought advice for the amenorrhœa simply in deference to the wishes of her friends, not because she had any symptoms of ill-health. She could only remember one occasion, about seven months ago, when she had any pain on passing urine. The pain lasted only for one day. She had never had retention to the extent of needing the catheter.

The abdomen had a normal appearance. On careful palpation an ill-defined swelling could be felt in the middle line, reaching from behind the pubes to near the level of the umbilicus. The swelling was not tense or fixed; no fluctuation could be detected. On percussion it was uniformly dull up to within an inch of the umbilicus. The dull area was about 4 inches in width, and central. An extension of the dulness at the left upper corner, with increased resistance at that part, suggested that as the probable position of the uterus.

The external genitals were normal in appearance. There was no bulging downwards of the pelvic floor. On separating the labia minora the free border of the hymen irregularly dentate could be traced on both sides, the edges lying in contact. On separating the lips of the hymen the vaginal orifice was seen to be closed by tissue similar in appearance and colour to the parts around. There was no bulging membrane visible. The following measurements were made: Distance from glans clitoridis to fourchette 1½ inch, from meatus urinarius to fourchette ¾ inch, from fourchette to anus 1½ inch.

Per rectum a large globular tense swelling could be felt bulging the anterior rectal wall backwards down to a point about an inch above the anus—that is, to the apex of the perineal body. By combined recto-abdominal examination the swelling was felt to rise above the plane of the pelvic brim, and to equal in size that of a fœtal head at term. The abdominal portion was flaccid and ill-defined; the pelvic portion was more tense and distinct.

A female bladder sound was passed to ascertain the length and position of the bladder. The instrument was found to pass vertically upwards, but was too short to reach the entire length. A uterine sound was thereupon inserted, and passed 7½ inches, the point being felt just below the umbilicus, immediately beneath the abdominal wall.

On November 16th the patient was anæsthetised, and the vulva and parts around were thoroughly cleansed and disinfected. A scalpel was passed between the lips of the hymen, and was felt to enter a cavity after passing through about the same thickness of tissue as in the last case. At first only a few drops of dark fluid escaped. A pair of artery forceps was introduced and the blades separated, when a quantity of thick, ropy, tenacious, dark-brown fluid poured slowly out. It was evident there was no great tension. The finger was now passed in, and with its guidance the opening was enlarged antero-posteriorly. Some retching on the part of the patient expedited the flow, and before she left the table 17 fluid ounces of the fluid had escaped. Firm pads of absorbent wool were bound over the vulva and retained in position by a T bandage. During the next few hours more fluid escaped, to the extent of 6 fluid ounces. As this operation only took place yesterday I cannot complete the account of the case, but I have every reason to hope that the patient will do well.

A specimen of the fluid evacuated is on the table before you. You will observe its peculiar colour and consistence. It is quite free from odour.

This case furnishes another instance of retention of menstrual fluid to an extent sufficient to form a tumour of considerable size, without any history of periodical pains or disturbance of the general health. Thus of the 4 cases, 2 had had no menstrual molimina at all, 1 had had them only for seven weeks, and the only one who had had them for any considerable period was the girl of 21, who had suffered from them for twelve months.

This case illustrates well the condition alluded to in my remarks on the preceding case—the condition, I mean, in which the obstruction was not due to imperforate hymen, for the hymen here was plainly to be seen of normal formation, but to closure of the lower end of the vagina. It indicates a failure on the part of Müller's ducts to reach sufficiently far down to complete the vaginal canal.

The only other special feature of this case was the remarkable absence of tension, as shown by the flaccidity of the abdominal portion of the tumour, by the absence of bulging at the vaginal orifice, and by the fluid being in no hurry to escape when an opening had been made. I am not ready with any explanation of this peculiarity at present. It is possible that when we have an opportunity later on of acertaining the relations of the parts concerned we shall have some light upon it.

I have spoken to you in these lectures of retention of the menses from atresia of the hymen and lower end of the vagina, partly because these are the most common causes of retention, and partly because of the series of cases with which I was able to illustrate them. You must remember, however, that retention may be caused by occlusion of any part of the genital tract from the os uteri internum to the vulva. Thus the whole of the lower part of the vagina may be occluded or absent, causing retention in the upper part of the vagina and in the uterus. Of this I have seen at least two instances.[1] Again, the seat of obstruction may be at the os uteri externum or the os uteri internum, giving rise to retention of blood in the uterus, hæmatometra, the accumulation occupying the body and neck in the one case in the other the body alone. Of this latter variety an example was recently admitted into Adelaide Ward. It is the only case I remember to have seen, and, though not a very well-marked instance, the accumulation having only just commenced, it will serve to illustrate the condition, and I will relate it to you. The notes of the case were taken by Mr. J. C. W. Graham.

CASE V.—C. C., aged 21, was admitted into St. Thomas's Hospital on October 7th, 1899. She had never had any menstrual discharge from the vagina. At the age of 15 she commenced to have every month very severe pains in the lower part of the abdomen and in the back, lasting about three days at a time. Three years ago she passed one period without pain; at the month next following the pains lasted a week. Since that the pains had recurred regularly every month. The patient was married in April, 1899. From that time the monthly pains had been more severe. A series of such pains occurred whilst the patient was in the hospital. They were so severe as to cause her to cry out and writhe about on the bed.

On October 17th an anæsthetic was administered. The vagina was of normal size and empty. An ordinary uterine sound entered the cervical canal readily, but could not be passed through the os internum. A smaller sound, equal in size to an ordinary surgeon's probe, passed without much difficulty. The canal, which was of normal length, was dilated by means of metallic bougies up to No. 11. A little more than a fluid ounce of dark, thick, altered blood escaped during the dilatation. A glass stem was inserted into the uterine canal, and the vagina plugged with iodoform gauze. The gauze was removed next day. The stem came out wholly or partially two or three times, and was replaced. On October 23rd it was finally removed. A slight dark discharge took place from the vagina from October 19th to 21st. The patient has since left the hospital, and has promised to come up after the next period and report herself.

I am not able to tell you whether the imperviousness of the internal os was due to an obstructing membrane or to adhesion, or merely to extreme fineness. Whatever its nature, the obstruction was easily overcome, and I am in good hopes it will not recur. The altered character of the blood that escaped showed that it had been retained, and was not a fresh hæmorrhage due to the manipulations. It was a hæmatometra in an early stage. If it had been allowed to go on unrelieved, the uterus would have become distended and formed a well-defined swelling in the hypogastrium.

Just as we have seen that retention may be going on without the patient having had any of the ordinary menstrual pains and discomforts, we have here a case showing that these menstrual molimina may be repeated month by month for several years, not only without any external hæmorrhage but without any hæmorrhage at all; for it can scarcely be supposed that, if even a slight hæmorrhage into the closed uterine cavity had been going on every month for six years, the total quantity would have been so insignificant. Either the monthly flow must have been trifling in amount or the accumulation must have only just com-

menced. It is possible the patient's future menstrual experiences may throw some light on this subject.

It only remains for me to say a few words about a more rare and more complicated class of cases of menstrual retention—I mean those in which the whole or a portion of the utero-vaginal canal is divided into two parts by a septum or otherwise, and where one side only is occluded. If the unilateral occlusion is at the vaginal orifice, there is formed a puzzling tumour known as a unilateral hæmatocolpos; if at the os uteri, the tumour is a unilateral hæmatometra. I had an instance of this latter condition under my care a few years ago, and published an account of it, together with an abstract of all the cases I could find recorded, in the *Transactions* of the American Gynecological Society, vol. xviii, for 1893, p. 434, to which I must refer those of you who are specially interested in the question.

NOTE.

[1] The details of one of these cases will be found in the *Medical Chronicle* for October, 1887.

DESCRIPTION OF AMBULANCE FOR THE MOUNTED SERVICE.

BY T. F. S. CAVERHILL, M.B., C.M., F.R.C.P.EDIN.,
Surgeon-Major the Lothians and Berwickshire Yeomanry Cavalry.

THE military history of this and other countries shows that, when any new evolution of tactics or war material takes place, we have had the utility of the cavalry arm called in question, but it has always been found that that force enters upon new and more responsible duties. The institution of the cavalry manœuvres in 1890 marked the beginning of the cavalry renaissance, but since the introduction of the magazine rifle, and even since the beginning of the Boer war in October, the supreme importance of the mounted services in modern warfare has been finally established. We see a whole British army, largely owing to its insufficient mobility, checkmated at various points, and the situation cannot be altered until a large mounted force is sent to its relief. It has now been decided to organise a total force of 20,000 regular and irregular cavalry, yeomanry and mounted infantry. With such an enormous addition of mounted men we are naturally led to inquire how the existing medical arrangements will suit such an altered state of things. We are met at once by the fact that the great alterations in the medical regulations which have been made in the past few years in the interests of the infantry have not been adapted to the requirements of cavalry or horse artillery. "The ambulance arrangements for cavalry in war are practically non-existent" (Surgeon-General Evatt).

We have the same medical organisation (and that a dismounted one) for both the infantry and cavalry divisions, and if this system has been condemned by cavalry commanders in the past, how much more will it now prove itself unsuited to such a large, rapidly advancing, widely extending, and rapidly retiring force of mounted men called on constantly to fight (mostly on foot) at great distances from the main body.

When a British army corps takes the field it has attached to its divisions, for the care of its wounded, the bearer companies of the Army Medical Corps. These are entirely non-regimental, and quite distinct from the ambulance detachment in each regiment called regimental stretcher bearers. These bearer companies on foot have to keep up with the cavalry or infantry divisions to which they belong, notwithstanding the widely different conditions under which they act.

The existing medical arrangements of a dismounted bearer company with a cavalry division in the field have been condemned by experienced cavalry commanders, and army surgeons, notably by the late Major-General Sir Herbert Stewart, who, from his experience in Egypt, described the system as "absolutely unsuitable." In a memorandum which he presented to Lord Morley's Committee in 1883 (the Army Hospital Services Inquiry Committee), he suggested the establishment of a mounted bearer company to accompany cavalry, similar to one he improvised in Egypt, and which had done excellent service. Lord Morley's Committee unanimously recommended "that in the medical organisation of cavalry brigades in the field provision be made for mounted bearer companies." No attempt has yet been made to carry out this recommendation; neither in the medical regulations nor in the new Manual of the Army Medical Corps do we find any reference to the subject.

The names of many distinguished officers could be mentioned who have had experience in numerous instances where the wounded were unattended to for hours, and where the movements of troops were hindered. Among them Sir Drury Lowe, who writes:

> I have often heard (Sir) Herbert Stewart say how terribly he was hampered by not having his wounded readily transported.

General Lord Ralph Kerr, late Commandant at the Curragh, states that:

> Cavalry must be sadly crippled when they have only the present organisation to look after their wounded.

Surgeon-General Evatt described how in Egypt he was sent back to the infantry square when toiling with his bearer company on foot miles behind the cavalry force to which he was attached; the wonder was they were not cut to pieces by the enemy. The late Surgeon-General Wolseley was of opinion that no greater boon could be conferred on the cavalry than the suggestion of some efficient way of carrying their sick and wounded.

While on humane grounds alone some new organisation should be established, it has been remarked, especially in savage countries, how the daring of the soldier is increased by knowing that help is at hand. When a soldier is wounded, he is in excruciating pain if a nerve is injured, and faint from the shock and loss of blood; he is in dreadful uncertainty and apprehension as to whether his hurt is mortal or slight. He is tired, cold, hungry, and thirsty, and, after lying many hours unattended, he is haunted with the idea that he has been forgotten or will not be found, and that he will die before relief comes.

Still more serious are the surgical objections. The antiseptic system of dressing wounds has revolutionised civil and military surgery. The epidemics of erysipelas, blood poisoning, and hospital gangrene, which killed hundreds in every campaign, are no longer seen where it can be carried out. But, as Esmarch says: "It is a necessity that the patient should have a dressing applied, and that he is brought to the dressing station to be further treated as soon as possible."

In the Bosnia and Herzegovina war of occupation by Austria in 1878, the writer saw hospitals crowded to excess; there was not a single epidemic of erysipelas or other hospital disease, as in every case a "first dressing" had been immediately applied, and, indeed, sometimes remained on untouched until complete healing resulted.

If it is a necessity for the best results of the antiseptic system in war, not only for the wounded soldier himself, but also for the other wounded amongst whom he is placed, to have an immediate dressing applied, it is equally necessary, in order to diminish the mortality, to have operations carried out, especially in joint injuries and amputations, at the earliest possible moment. Pirogoff[1] narrates how Reyher, in the Bulgarian war, found the mortality rise from 10 to 61 per cent. by the delay of a few hours in joint injuries, and from 18 per cent. to 35 per cent. with gunshot fractures. That in fact the brilliant results of antiseptic surgery cannot be obtained unless it is applied within two or three hours, as it will be found the highest rates of mortality correspond with those seen when ordinary dressings are used. Von Bergmann, in the Russo-Turkish war, showed how important an early application of an antiseptic tampon is in the further progress of the wound. Mac Cormac insists on the importance of treating all joint and gunshot fractures at once antiseptically at the dressing station. Fischer, the greatest German writer on military surgery, lays down that antiseptics must be applied early, and that a greater force of doctors and dressers must be at the dressing station to carry the treatment out fully. The greatest danger to the wounded soldier, then, lies between the fighting line and the field hospital, and it is there that medical aid should be least defective.

Chenu[2] states, in his report of the Crimean war, that we had after every fight 5 or 6 per cent. dying from hæmorrhage, many from trivial wounds. Ledran puts the percentage a little higher. It is evident that many lives would be saved if a sufficiently large staff was stationed immediately behind the fighting line. Fitzgerald states that in the Franco-German year he specially noted the terribly increasing

mortality when the amputations had been delayed more than two or three hours after the receipt of the injury, all died if there was a delay of over eight hours.

It follows from these considerations, tactical, humanitarian, and surgical, that the bearer company should be mounted, and able to follow a mounted force everywhere. It should have conveyances for transporting men sitting or lying down (every fourth wounded soldier requires to be kept flat) either in a regular or improvised manner, and it should have sufficient surgical appliances, as a surgeon without his appliances and dressings is like a battery without ammunition.

To provide an efficient medical service for the mounted forces the following points are suggested:

1. The addition of a second surgeon to all cavalry regiments in the field. For surgical and physical reasons this is necessary.

2. That the regimental ambulance detachment of a cavalry regiment be specially trained and equipped for its duties in improvising rough dressings and means of transport, mounting and dismounting wounded, etc.

3. That a certain proportion of cacolets and litters should be carried in the regimental transport for transporting the sick and wounded sitting and lying down. That these be improved, made lighter and more comfortable, and that they be carried on properly-trained horses.

4. That the detachment be annually inspected by the Inspector-General of Cavalry.

5. That a mounted bearer company be formed to act with mounted infantry companies or cavalry divisions.

6. That where wheeled transport is unsuitable or insufficient for the wounded of an infantry division, the mounted infantry horses specially trained be used to carry cacolets and litters after a great battle. De Préval[3] stated that 750 men with these can do the work of 15,000 stretcher bearers.

7. That experienced surgeons and assistants (with suitable transport and sufficient dressings) be always close in rear of the fighting line in greater numbers to carry out at once the demands of the antiseptic system.

Proposals for the mounted services artillery, cavalry, and mounted infantry may be considered under two heads:

I. Regimental medical aid—that is, that given by the regimental stretcher bearers.

II. Non-regimental medical aid—that is, that given by a mounted bearer company attached to a cavalry division.

PROPOSED MEDICAL AID FOR A CAVALRY REGIMENT.

Personnel.

2 surgeons.
1 hospital sergeant from the Army Medical Corps, who would also be a trumpeter to guide wounded to medical aid.
4 trained bearers per battery, squadron, or company, each carrying a canvas water bottle, pattern as used by Victorian Mounted Rifles, portable stretcher and straw splints, field tourniquets.
1 corporal from the regiment in charge of surgical panniers during an action.
1 private from regiment as orderly, carrying field medical companion, surgical bags, and water bottle.

SPECIAL TRAINING.

In addition to the ordinary training of infantry stretcher bearers, these bearers should be taught to:

1. Dismount wounded from horseback.
2. Improvise rough first dressings (including the manufacture of straw into splints, mats, etc., as also of other substances not naturally suited for such purposes. Application of plaster-of-paris bandages, etc.).
3. Improvise means of transport by horseback or otherwise, and by utilising country carts.
4. Signal (simple code) by flag and lantern.

Materiel.

A light ambulance cart able to follow cavalry everywhere, carryimg small portable cooking or heating stove for wounded.
4 pairs cacolets, with pack saddles complete.
1 pair litters, with pack saddles complete.
4 field stretchers, one altered to carry a man on horseback lengthwise, fixed to a pack saddle by a special contrivance.
4 portable jointed wooden stretchers (own pattern).
4 pairs of clamps for sword stretchers (Naismith's pattern).
Pair of surgical saddle bags or pair of surgical panniers (with pack saddle), chiefly with antiseptic dressings, which can be made into an operating or dressing table, upright transverses fitted to iron frame-work of pack saddle to carry field stretcher in an emergency
2 field medical companions.
4 leather buckets for splints each containing portable McIntyre and jointed long splint, straw splints (straw, twigs, or coarse grass can be had everywhere, is light, clean, and rigid—mats and splints can be quickly made in any quantity).
4 surgical haversacks.
4 canvas buckets for fetching water.
2 leather wallets, containing hammer, long knife for cutting leather, leather punch (assorted sizes) wire nippers, wire pliers, small hand saw in case.
1 tent (surgery) without pole in the centre, whistles for surgeons and non-commissioned officers.
Handflags.
Leather belts for horses standing by themselves. Horses should be trained to stand with their heads slightly turned towards the saddle. The belt keeps them in this position, and it can be instantly applied.
Hobbles are most useful, but heavy; knee haltering is preferable.
Tourniquets carried by bearers, and worn by them as braces,
Revolver. Each man should carry a revolver.

The cacolets at present in use for mule mountain equipments should have the arm-rest jointed where it joins the back, so that it can swing outwards; at present they are unsuitable for high mules and horses, and difficult to load on that account. They might be more comfortable and, like the litters, might be improved by cyclist makers. Horses that step short should be chosen to carry litters and cacolets.

The value of cacolets and litters has been differently estimated, but in consequence of the reports of the excellent work of these contrivances by the French in clearing their wounded off the field in the Crimea, a Board of experienced medical officers convened by the Principal Medical Officer there, reported greatly in favour of their general applicability to the circumstances of warfare.

Surgical haversacks should be carried behind the flap of the saddle in an oblong rigid leather case; when required they should be carried over the shoulder, one belt going over the left shoulder, the other round the waist, thus preventing the haversacks from falling forward when bending down.

PROPOSALS FOR EACH MOUNTED BEARER COMPANY OF A CAVALRY DIVISION.

Personnel.

4 medical officers
1 quartermaster
1 sergeant-major
1 quartermaster-sergeant compounder
4 sergeants
1 trumpeter
4 corporals
4 privates as servants
2 cooks for wounded
2 cooks for company
8 waggon orderlies
8 tipcart orderlies
4 litter orderlies
8 cacolet orderlies (each rides on one horse and leads another)
16 privates
70 men, 56 horses
1 waterman
Batmen not included

The bearers to be trained like the regimental stretcher bearers, and highly exercised in improvising rough first dressings, splints, transport, etc., utilising straw, hay, twigs, wire, wood, leather, reins, etc. Also specially trained in the application of plaster-of-paris for transporting wounded great distances over rough and unsuitable roads. Constant exercise in improvising is necessary, as when few tools are carried for such a service the usefulness and mobility of the force must be enormously increased.

Materiel and Equipment.

Waggons, carts, etc. (see Regulations for Medical Services, Part I).
Waggons should be much lighter, some with two horses. All stores, etc., to be made suitable for pack transport.
Sixteen pairs cacolets (altered like those for the Regimental Aid) with pack saddles complete to fit horses.
Four pairs litters with pack saddles complete to fit horses.
One pair surgical saddle bags or one pair field medical and surgical panniers with pack saddles. All panniers convertible into operating or dressing tables.
One pair surgical saddle bags or one pair surgical panniers, specially for antiseptic dressing.
One field companion and pair water panniers.
Slade-Wallace saws.
Lanterns and flags.
Revolvers for each man.
Sixteen surgical haversacks and canvas water bottles to be carried attached to the saddle.
Four safety bicycles to relieve orderlies in suitable countries, and which can be converted into wheeled stretchers—a great saving of men and horses.
Two field fracture boxes.
Tools in leather wallets for improvising (see Regimental Medical Aid).
Tourniquets carried by bearers and worn by them as braces.
Leather belts or knee halters or
Hobbles for horses standing alone.
Whistles.

REFERENCES.

1 *Krieg's Sanitätswesen*, p. 429. 2 *Rapport au Conseil de Santé*, p. 704. 3 French delegate to Geneva Convention, Chenu, *supra*, p. 694.

CONCUSSION OF THE RETINA.

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SEVERAL years have elapsed since Dr. R. Berlin[1] described a series of cases in which he had observed a peculiar retinal change after the eye had been struck with a blunt object, as, for example, a stick or a stone. Under those circumstances he noticed a cloudiness of portions of the retina, not involving the retinal blood vessels. The milky appearance reached its height in twenty-four to thirty-six hours, and disappeared in two or three days. Berlin pointed out that the rapidity with which the cloudiness developed and the length of time that it persisted stood in direct relationship with the severity of the original injury. This curious condition, which Berlin called *commotio retinæ*, was associated with some reduction of sight, episcleral congestion, and a difficulty in getting the pupil to dilate when atropine was dropped into the eye. Small retinal hæmorrhages were sometimes present. Berlin explained the ophthalmoscopic picture by supposing that a rupture of the choroid was followed by bleeding and œdema of the retina. This theory has recently been opposed by Denig.[2] That observer, as the result of experiments upon rabbits, believes that the blow upon the eyeball causes the vitreous to impinge upon the retina, to tear the internal limiting membrane, and to force the vitreous into the nerve-fibre layer. The alternate elevations and depressions thus brought about in the nerve-fibre layer of the retina are, according to Denig, the cause of the ophthalmoscopic appearances.

Since the publication of Berlin's original paper, few cases[3] of *commotio retinæ* have been recorded. Indeed, the retinal changes are of so fleeting a nature that an opportunity for observing them must occur comparatively seldom. This fact leads me to place upon record brief notes of a somewhat interesting case that has recently fallen under my notice.

E. S., aged 11 years. First seen on July 25th, 1899.

History.—At 6.45 P.M. on July 24th the patient was struck in the right eye with a cricket ball, made of cork and covered with rag cloth.

Present State.—Right eye: Small abrasion of the skin of the lower lid with a surrounding area of redness. Some general conjunctival congestion, with a definite ecchymosis in the ocular conjunctiva opposite the lower-outer quadrant of the cornea. Tension *minus* 1. The pupil distinctly sluggish and a trifle larger than the other one. Anterior chamber deep. A narrow line of blood clot lay at the bottom of the anterior chamber. V. $\frac{6}{9}$ (ii letters). Pupil dilates imperfectly to a mydriatic. With the mirror alone some parts of the fundus oculi were seen to be unduly white. When examined more closely with the ophthalmoscope there was found a wide but defective zone of whitish fundus situated peripherally upwards, inwards, and outwards. No such appearances could be made out in the lower part of the fundus. The retinal vessels, which lay anterior to the affected areas, showed no changes. In most places it was possible to get beyond the whitish patches so as to see the edges of the latter. These margins were irregular, and showed white, tongue-like projections running into normal fundus. Some small islands of cloudiness lay, however, beyond the area of general haziness. Around the yellow spot region was a white radiating appearance, but no definite white mass was present in that place. Left eye: No fundus changes. V. $\frac{6}{6}$ (iv letters). Tension normal.

Treatment.—Vaseline to abrasion of skin of lid; atropine drops (2 grs. to the ounce—to each eye twice a day); rest in bed.

Progress.—July 26th. R.V. $\frac{6}{12}$; tension still rather low. The blood clot present in anterior chamber and also on anterior capsule of lens renders it difficult to see the fundus clearly; but no white patches can be made out in the fundus.

July 27th. A little blood is still present in the lower part of the anterior chamber. The parts of the retina that were milky have resumed almost their natural appearance, and the changes above mentioned are now represented merely by a faint, whitish, ill-defined stippling of the areas in question. Around the yellow spot is a system of fine radiating lines, which extend for some distance into the surrounding fundus. This is doubtless due to œdema of the retina.

July 28th. R.V. $\frac{6}{9}$ (i letter); tension still slightly *minus*. Ecchymosis present in ocular conjunctiva, but the blood has disappeared from the anterior chamber. Pupil not so wide as that of the left eye, although atropine is being used to both. Faint cloudiness lower third of the cornea, made up of almost transparent dots, as may be seen with a +20 lens in certain positions of the eye. Fundus changes have disappeared; faint radiating lines, however, may still be seen around the yellow spot region.

July 29th. R.V. $\frac{6}{9}$ (ii letter) T—I. Pupil now as large as that of the other eye. Yellow spot region still surrounded by a wide band of fine, closely set, radiating grey lines. It may be noted that the corresponding region of the left (unaffected) eye is encircled by an ordinary oval reflex.

August 1st. R.V. $\frac{6}{9}$; (Tn.) A small ecchymosis still present in the ocular conjunctiva on the outer side of the cornea. No blood in anterior chamber; no corneal cloudiness. Radiating appearance still present around yellow spot of fundus.

August 9th. R.V. $\frac{6}{6}$, L.V. $\frac{6}{9}$; (Tn.)

August 12th. Vision unaltered. Radiating lines still present around yellow-spot region of affected eye.

September 5th. The right pupil rather larger than its fellow, but no break in the continuity of the edge of the iris can be discovered to account for this. The action, both to light and to accommodation, of the pupils is equal. The radiating lines formerly present around the yellow spot of the right eye have been replaced by an ordinary oval reflex, like that present in the other fundus. Tn.; R.V. $\frac{6}{9}$ (i letter), L.V. $\frac{6}{9}$ (i letter); No. 1 Jaeger read easily.

September 7th. Under atropine. R.V.$=\frac{5}{15}+$ 1.5 D. Sph.$=\frac{6}{6}$. L.V.$=\frac{6}{12}+$ 1.0 D. Sph.$=\frac{6}{6}$.

REFERENCES.

[1] *Klin. Monatsbl. f. Augen.*, xi, 1873, p. 42. [2] *Arch. of Ophthalmology*, xxvi, 1897, p. 377. [3] Two good illustrations of the condition are given in Haab's *Atlas und Grundriss der Ophthalmoskopie*, an English edition of which has lately been brought out by Mr. Ernest Clarke.

CARCINOMA OF THE ASCENDING COLON AND ITS TREATMENT,

WITH THE RECORD OF TWO CASES.

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THE comparative rarity of malignant disease of the ascending colon causes the publication of every case to be a matter of some interest, and it is on this account that I venture to record the two following cases.

It is a fact that while the cæcum is almost as frequently attacked by carcinoma as is the sigmoid flexure, yet the ascending colon is very much less often affected by the same disease than the descending colon, and only slightly more frequently than the transverse colon with its hepatic and splenic flexures. These general statistics are, however, from the records of published cases, and they may not be so accurate if all the cases that occur were tabulated, but the main statement may be taken as true that the ascending colon is one of the less common sites in which malignant disease begins. In these remarks I have purposely excluded the rectum, which is undoubtedly the region where carcinoma most usually attacks the bowel.

There does not appear to be any very clear reason why the ascending colon, and to a minor degree the descending colon, should be to such an extent exempt from the appearance of a cancerous growth in its walls.

The blood supply of the cæcum is derived from what may be taken as a terminal branch of the superior mesenteric artery, the ileo-colic, but the ascending colon, transverse colon, and descending colon, are supplied by vessels which freely anastomose with one another, the two former by branches from the superior mesenteric, and the last by a branch from the inferior mesenteric. The sigmoid colon with the rectum are on the other hand nourished by arteries which again are of the nature of terminal vessels. Whether such a disposition of the arterial supply has any connection with the determination of the deposit of carcinoma, it is impossible to say, but it may be a factor in the causation of the disease.

It is also significant that the cæcum, the sigmoid, and the rectum are all dependent parts of the intestinal tract, and this, in addition may be another slight factor.

The lymphatics of the ascending colon pass to the meso-colic lymphatic glands, lying between the layers of the meso-colon, and sending their efferent vessels to the glands placed in the proximity of the superior mesenteric vessels. This fact renders it extremely difficult or well-nigh impossible to eradicate the whole of the disease, when once these glands have become infected, in a case of carcinoma of the ascending colon.

The peritoneal investment of this portion of the bowel is, in the majority of instances, a partial one. It is, moreover, usually less complete even than that of the descending colon, thus rendering the ascending colon as a rule more fixed than the corresponding portion of gut on the left side.

In about 26 per cent. of subjects there is a true meso-colon on the right side. The length of the ascending colon is on the average eight inches, while its calibre is larger than that of the descending colon. Its posterior relations are found to be the right kidney, above and externally, the second portion of the duodenum, internally, and the quadratus lumborum, at the lower part. The right colic artery enters it from behind, about the middle of its length. The right colic vein joins the superior mesenteric vein, and thus reaches the portal trunk. The position of the three longitu-

dinal bands of muscular tissue is usually as follows: One on the vascular border, one on the anterior surface, and one internally. It is important to bear in mind these few anatomical details when this part of the intestine is being dealt with surgically.

CASE I. *Carcinoma of the Ascending Colon: Chronic, followed by Acute Intestinal Obstruction: Primary Resection of the Growth: Artificial Anus: Death from Exhaustion.*

History.—A. C., a man, aged 43, was admitted into the West London Hospital on May 3rd, 1897, with the following history: He had been in his usual health until the middle of January, 1897, when he began to have considerable difficulty with the evacuation of his motions, and the constipation was on one occasion so severe that it was accompanied by an attack of vomiting. In March of the same year he commenced to suffer from intermittent paroxysms of pain in the abdomen, and these continued up till a fortnight before admission, when he was again much constipated. On his return home from business one day about ten days prior to admission he had very severe abdominal pain, and began to vomit. He was seen by his medical attendant, who ordered him to remain in bed. He had no passage of fæces or flatus, according to his own statement, and was sick every day for a period of several days. At the end of this time his bowels acted after repeated doses of castor oil, and the vomiting ceased. Four days afterwards, that is, three days before admission, all the symptoms returned with greater severity, and continued right up to the time that he entered the hospital. His past history reveals nothing of importance save the fact that he had enteric fever when 22 years of age.

Condition on Admission.—He was seen by one of my colleagues, and looked ill and anxious, and was in obvious pain in the abdomen. The abdomen was distended, and the patient suffered from attacks of vomiting soon after admission. Careful palpation did not discover any swelling in the abdomen, and examination *per rectum* after the administration of an enema of 1½ pint of soap and water, two-thirds of which were returned with a little fæcal material, did not reveal any growth within reach of the finger.

Operation.—On May 7th he was passed over to my care, and I determined to explore the abdomen without delay. Accordingly, with the able assistance of my colleague, Mr. C. B. Keetley, I opened the abdomen in the middle line below the umbilicus, and found that the sigmoid and transverse colon were undistended. On passing my hand down to the region of the right kidney a hard mass, which was fixed, was discovered. Seeing the impossibility of dealing adequately with this through the original wound, I made another incision in the right linea semilunaris over the growth. It was then clearly seen that it consisted of a malignant infiltration of the ascending colon. The position of the growth was nearer the cæcum than the hepatic flexure, and it extended around almost the whole circumference of the bowel. Several enlarged lymphatic glands could be felt internal to the mass. The bowel above the site of the growth was much distended, and an incision into the cæcum caused the outflow of a large quantity of liquid intestinal contents. This evacuation appeared to so decidedly improve the general condition of the patient that it was determined to proceed to the excision of the carcinomatous stricture immediately. Accordingly, the gut having been clamped above and below the growth, that portion of the bowel that was infiltrated, together with at least an inch of healthy tissue on either side, was cut away with comparative ease, and some of the infected glands removed with it. As the patient's state was now getting distinctly worse, it was not thought advisable to attempt an anastomosis there and then, so the distal portion of the bowel was closed rapidly by Lembert sutures, and the proximal part sutured to the skin. The wound in the middle line was then closed. The whole operation lasted one hour and three-quarters, and at the end of it the patient's condition was not so very much less satisfactory than at the commencement.

Death.—He rallied after his return to bed, but again passed into a state of collapse, in which he died some six hours after the operation. The growth microscopically was a typical adeno-carcinoma.

In this case one had to deal with a patient who had become very exhausted by the long-continued obstruction to which he had been subjected, which at the time of the operation was complete. It is the record of a failure, and I give the history, for it is only from such accounts that it is possible for the surgeon to become fully acquainted with the variety of cases that may fall to his lot to treat. It would have been wiser in this instance to have been content with merely bringing the bowel with its malignant growth out on to the surface of the abdomen, and to have made a temporary artificial anus on its proximal side.

The second case is one that contrasts markedly with the first, in that the patient had not reached that stage of acute obstruction which is so fatal for operative interference.

CASE II. *Carcinoma of the Ascending Colon: Chronic Obstruction: Eventration of the Growth: Secondary Excision and Anastomosis: Recovery.*

History.—M. A. E., a woman, aged 45, was placed under my care by my colleague at the St. Marylebone General Dispensary, Dr. Arthur Giles, and was admitted into the West London Hospital on May 4th, 1899. She gave the following history. About two years ago she first noticed dragging pains in the upper part of the abdomen, to the right of the middle line and on the level of the umbilicus. For the first twelve months the pains had occurred shortly after the taking of food, and have been at times very severe. For three months before admission she had had to live only on slop diet, and had lost flesh very considerably. The bowels had acted frequently and freely, and she did not ever notice the passage of any blood. Menstruation ceased at the age of 36, and she has only had one or two shows since then. Lately there had been increased frequency of micturition. Is married and has had four children, the youngest being 11 years of age. Her family history is suggestive. One aunt on her mother's side had "cancer of the stomach." A brother had a "tumour" in the abdomen, and was operated upon for it, and another brother had "cancer" in the abdomen, and was also operated upon, and both these relatives died from the effects of the operation. A sister had a "tumour" of the uterus, for which an operation was performed, and she died soon after it.

Condition on Admission.—The patient was a spare woman, though not extremely emaciated. The abdomen was slightly distended. In the region of the ascending colon there was a hard, somewhat nodular mass, which could be moved to some extent from side to side, but very little from above downwards. It was tender on pressure, and dull on percussion. There was no dilatation of the stomach, and the mass did not appear to have any connection with that organ. In the pelvis there was a firm elastic swelling to the right of the uterus and in the position of the right ovary. Attached to the anterior wall of the uterus was another hard swelling, somewhat nodular. There was no blood or mucus in the motions, which were passed four or five times a day. The administration of an enema caused considerable pain in the right lumbar region.

First Operation.—On May 19th I made a vertical incision in the right linea semilunaris over the hard swelling in the position of the ascending colon. The hand introduced into the abdomen discovered that this tumour was a malignant one encircling the ascending colon, and that in addition there was a cystic tumour of the right ovary and a fibromyoma of the fundus of the uterus. The cystic ovary was dealt with first, and was drawn out of the lower end of the wound, the pedicle ligatured, and the growth removed. The greater part of the ascending colon was now brought out of the wound, together with the carcinoma that was infiltrating its walls near the middle of its length. Careful examination before this was done failed to detect any evidence of infected lymphatic glands. The colon was fixed by a few points of suture to the deeper parts of the wound, and two guide sutures passed through its serous and muscular coats about one inch from either side of the new growth, so as to act as indicators at the subsequent colectomy. No artificial anus was made in the cæcum, seeing that there was no marked obstruction and no distension. The patient had but few untoward symptoms after this preliminary operation, and the fæcal material found its way freely through that portion of the bowel that lay on the abdominal wall.

Second Operation.—On May 27th, that is eight days after the first operation, I proceeded to excise the annular malignant mass without any anæsthetic. This was easily accomplished, and the cut ends of the bowel were then and there brought together by a row of silk sutures, and that with but little tension. As the intestine had to a considerable extent fallen back, no attempt was made at this stage to replace it within the abdominal wall.

After-History.—There was a slight escape of fæcal material from the site of one of the sutures, and but for this the patient made an uninterrupted recovery, the bowel sinking still further back, and becoming rapidly covered in. The passage of motions remained normal, and all the pain disappeared, and the patient steadily gained weight. The growth proved on microscopic section to be a typical adeno-carcinoma, and it had completely encircled the bowel.

The patient was seen again on December 1st, 1899, and had gained over a stone in weight, and there was no indication of any return of the growth. She had, however, a considerable ventral hernia, for which she had to wear a belt and truss, but was not inconvenienced thereby.

This case is one of great interest, as indicating two points, first, the comparative safety of an operation for the removal of a constricting growth before the signs and symptoms of acute obstruction have put in an appearance, and secondly, the success of dealing with the mass extraperitoneally.

There can be no doubt that for the success of a colectomy it is almost essential that the operation is performed before the chronic obstruction has become an acute one. It should therefore be an axiom that where a patient, and particularly one who has passed 40 years of age, complains of increasing difficulty in the evacuation of the motions, a very careful examination of the abdomen should be made, and this, if necessary, under an anæsthetic. It is not sufficient to endeavour to overcome the presence of constipation by the administration of purgative drugs, but the actual cause of the obstruction should be sought for, and in many instances it will be readily found. If a tumour cannot be palpated, then recourse may be made to the help of large enemata, and while these are being thrown into the bowel both auscultation and percussion should be employed, and by these means it is sometimes easy to determine the position of a constricting growth. I would especially draw attention to the fact that, while the rectum and the sigmoid flexure are the most usual sites for the deposition of malignant disease, yet the other parts of the large intestine must not be overlooked. When a tumour has been discovered, the sooner that it is dealt with surgically the better. I am only alluding here to tumours in the ascending colon, but many of the remarks bear equally well on those occurring in the rest of the great bowel.

An exploratory incision should always be advised, and if the site of the growth has been determined, it should be made, in the instance of the ascending colon, in the right linea semilunaris, and should be a free one, so that all the required manipulations can be readily carried out. It is better that a patient should survive with a traumatic ventral hernia than perish with an unremoved cancerous growth. The mass having been exposed, the method of dealing with it must be con-

sidered. If it is movable, and the intestine in which it lies is not too fixed, it is, I think, the safest and therefore the wisest plan to bring the intestine with its infiltrating growth out on to the surface of the abdominal wall, and to perform the excision at a later stage. If there is acute obstruction at the time of the operation, I am quite sure that this is the best method, and to make, in addition, a temporary artificial anus on the proximal side of the growth. A patient who is exhausted by the presence of complete obstruction is not the one to stand the shock of a colectomy, even if anastomosis is not immediately undertaken.

This method of eventration of the bowel with the growth is a sound one in the case of the ascending colon for several reasons. First, the intestine has no complete covering of peritoneum, therefore its suture is not so safe within the abdomen as is the case with other portions of bowel. Secondly, there is but a short length of gut to deal with, which makes the manipulations difficult. Thirdly, that whereas there is probably the likelihood of a greater amount of subsequent contraction at the site of the excision, if this method is followed, yet this does not so gravely matter, since the contents of the ascending colon are for the most part liquid, and therefore find their way fairly easily through the constriction. In the case of the descending colon and the sigmoid flexure, eventration and excision may be said to possibly have this objection.

There is, I am disposed to think, a very considerable danger in attempting to perform the ideal operation, namely that of primary excision and anastomosis, in the case of the ascending colon; in fact, so great is it, that if there is complete obstruction present, it would seem to be hardly justifiable. Further, I think that if acute obstruction is present, it is safer to merely bring the intestine out on the abdominal wall and make an artificial anus, than to excise the growth and suture the open ends to the skin.

There is a distinct degree of shock attached to the removal of a portion of the intestinal tract, and this superadded, as has been said, to that produced by the acute obstruction, often turns the scale unfavourably for the patient.

In cases where the growth has become so fixed that it cannot be brought outside the abdomen, it may be best to perform an anastomosis between the ileum and the transverse colon near the hepatic flexure, and to leave the excision of the growth to a later operation, when the passage of the intestinal contents has been fully re-established. But these instances are unsatisfactory, for the fixity usually implies that the growth has advanced considerably and that the lymph glands have probably become infected; so that there is but little, if any, possibility of entire extirpation of the malignant disease.

A CASE OF RUPTURED URETER OR RENAL PELVIS.

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Assistant Surgeon to Westminster Hospital, and Surgeon to the Mildmay Hospital, Bethnal Green.

THE case, the notes of which appear below, seems to me of sufficient general interest to be worth recording.

A dustman, aged 36, was admitted into the Mildmay Hospital, Bethnal Green, under my care on April 5th, 1899, with the history that ten hours before admission he had fallen a short distance, striking the left side of his abdomen on a large tin box. He walked home and went to bed; but being in much pain and retching continually, he came to the hospital, walking into the surgery. He was a little faint on admission, the temperature was 100.2°, and he complained of considerable pain in the abdomen, especially on the left side. On examination a fracture of the left twelfth rib was found, the abdomen was not distended, was generally tender, and there appeared to be a slight increase of dulness in both flanks, but this was not marked. The urine, which he passed naturally, contained a little blood, but was otherwise normal. He was given mv of the hypodermic injection of morphine subcutaneously, which relieved his symptoms, but did not make him sleep. I saw him next day, when he remained in much the same condition, with some retching, but he had only vomited twice. The bowels being opened after an enema gave him some relief. The urine now contained no blood. On April 7th the retching and vomiting continued. Pulse 110, temperature under 100°. The abdomen more distended; still some flank dulness, which altered its position on movement of the patient; but so slowly as to suggest coagulated blood. He passed 33⅜ ounces of urine in the previous 24 hours which contained a trace of albumen, but no blood. From this date till the 17th he steadily improved, so much so that on the 14th he was allowed up on the couch for a short time. He had no pain or other trouble, and he was passing an average of about 40 oz. of urine in the twenty-four hours. On the 17th, however, he again complained of pain in the left loin, and on examination, a distinct tumour could be made out which was dull to percussion, elastic in consistency, and extended down the loin into the iliac fossa, the pain of which he complained radiated along the course of the ureter. The urine was normal. Next day (18th) the swelling and also the pain had still further increased, so an incision was made into the loin rather below the level of the usual oblique kidney incision, when on opening the perinephric tissue a considerable quantity (probably from 1 to 2 pints) of almost clean urinous fluid escaped from a cavity, which extended down to the brim of the pelvis and upwards to the kidney, the lower end of which, somewhat roughened by lymph, could be felt, forming apparently part of the wall of the cavity. No opening either into kidney, pelvis, or ureter could be found, and indeed the ureter itself was not seen. A tube was inserted and the wound partially sutured. The patient recovered from the operation satisfactorily, the temperature never rising above 100°; but for the first few days much urine came through the dressings. The urine passed naturally continued normal until April 30th, when it was noticed that there was much less urine coming from the wound (which had now contracted to a sinus) and much more passed *per urethram;* the urine, too, for the first time since the operation was noticed to contain pus and albumen. The sinus had healed by May 4th, but there still continued to be some pus and albumen in diminishing quantities in the urine till he went to a convalescent home on May 17th. He was seen again about six weeks later with the wound soundly healed and with the urine normal.

There can be no doubt I think that the injury in this case was either rupture of the ureter or of the renal pelvis. The diagnosis between these two injuries is, except by a discovery of the vertical tear by operation, impossible, but for purposes of treatment this is of slight consequence. In either case no doubt as Morris[1] points out the ideal treatment would be immediate suture, but as in the few recorded cases like my own there has been no ground for the diagnosis until some time has elapsed after the injury (in three cases reported by R. J. Godlee,[2] Chaput,[3] and Stanley[4] the time was three weeks, six weeks, and twenty days respectively). This method of procedure is obviously not applicable to most cases, hence the treatment adopted in the cases recorded above seems to be the most satisfactory, the opening in the renal pelvis or ureter being dealt with at the time of the lumbar incision if it can be found. That this is preferable to an immediate nephrectomy is, I think, clear from my case, as on the twelfth day after the operation the patient began to pass more urine; and urine which now contained a slight pus, when it had previously been clear, indicating that the kidney on the injured side was functional and was now discharging its secretion along the normal channel. The organ was thus retained to the patient while the severer procedure of nephrectomy could still have been carried out if the sinus in the loin had continued to persist and an attempt to find and close the fistulous opening into the duct had failed. The ultimate history of the case seems to be particularly satisfactory, as when last seen nothing abnormal could be discovered except the healed wound in the loin.

Subcutaneous injuries of the ureter and pelvis of the kidney are very uncommon, and this is hardly surprising when the depth in which they lie is considered. In certain experiments made by Tuffier[5] on the cadaver he found that the most usual seat of rupture was the junction of the ureter and pelvis, and he thought that the injury was probably due to a crush against the first lumbar transverse process; but as Morris[1] points out this point is too high to come in contact with any part of the ureter, though it may be true of the transverse process of the second or third lumbar vertebra, which indeed were fractured in Poland's[6] case.

A last point which may be referred to is the small amount of irritation to which normal urine when extravasated into the tissues sometimes gives rise. At no period during the course of my case did the temperature rise above 100.5°. This, of course, as has frequently been noted, is in very distinct contrast to the severity of the disturbance resulting from the extravasation of urine which has in any way become contaminated.

A very complete bibliography of cases of rupture of ureter and renal pelvis will be found in Morris's published Hunterian lectures for 1898 already referred to.[1]

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[1] *The Progress of Renal Surgery*, being the Hunterian Lectures for 1898, by Henry Morris. [2] *Clinical Society's Transactions*, vol. xx, p. 219, R. J. Godlee, Some Cysts of the Abdomen. [3] M. Chaput, *Bull. et Mém. Soc. de Chir. d Paris*, March 13th, 1889. [4] E. Stanley, *Med. Chir. Trans.*, 1843, vol. xxvii, pp. 1-11. [5] Tuffier, *Arch. Gén. de Médecine*, Paris, 1889, pp. 335-350. [6] A. Poland, *Guy's Hospital Reports*, 1869, 3, 5, xiv, pp. 85 and 98.

ENTERECTOMY FOR GANGRENOUS HERNIA:

WITH AN ACCOUNT OF TWO SUCCESSFUL CASES.

By W. P. MONTGOMERY, M.A.Oxon., B.S., M.B.Lond., F.R.C.S.,

Surgeon to the Crumpsall and to the Ancoats Hospitals, Manchester: late Resident Surgical Officer, Manchester Royal Infirmary.

The interest which the question of the treatment of gangrenous hernia is now exciting makes the following successful cases of resection and primary suture worthy of record. They were both operated on in the Manchester Royal Infirmary, and I am indebted to Mr. Hardie and to Mr. Southam, for whom I was respectively acting at the time, for permission to publish them.

Case I.

History.—Mrs. E., aged 29, was admitted on May 2nd, 1898. She had a femoral hernia on the right side of two years' duration, but it had been always reducible until three days before admission. After an attack of vomiting and diarrhœa which lasted twenty-four hours, the hernia came down and could not be returned. The diarrhœa ceased, but for thirty-six hours the vomiting continued, and twelve hours before admission became fæcal. Taxis had been unsuccessfully tried.

Condition on Admission.—A right femoral hernia was found, 3 inches in its longest diameter, very tense and with no impulse. The tongue was dry and furred, and there was slight abdominal distension. The pulse was fair.

Operation.—The sac contained half an ounce of fæcal, blood-stained fluid, and 3 inches of small intestine, much congested and with sloughy gangrenous patches. The gut was very tightly nipped at Gimbernat's ligament, and a linear perforation was found there. There was no omentum in the sac. The wound was enlarged upwards and the coil brought well into view. The mesentery was in good condition. The gut was clamped widely above and below with rubber tubing, and 7 inches removed with a small V-shaped portion of mesentery. The divided mesentery was first "tacked" with a continuous silk suture, and the same thread was made to unite the peritoneal and muscular coats of the mesenteric half of the circumference of the gut. Then the mucous membrane was sutured with another continuous suture. A third suture was used for the peritoneal and muscular coats of the remaining half circumference. The gut was reduced, the sac ligatured and cut away, and the wound drained by a strip of gauze. The operation lasted fifty minutes.

After-History.—The after-progress was quite uneventful. Flatus was passed during the night, and there was never any abdominal distension nor sickness. Warm water and tea were given during the first twenty-four hours, and then the fluid diet gradually increased. An enema was given on the eighth day, and then bread and milk allowed. The drain was removed on the third and the sutures on the tenth day. The wound healed without suppuration, and the patient was allowed up in three weeks, and went home in four. I saw her nine months later. There was some bulging of the wall near the scar, and she was advised to wear a light truss.

Case II.

History.—Mrs. B., aged 35, was admitted on February 7th, 1800. She had had a small right-sided reducible femoral hernia for six months. Symptoms of strangulation had existed for forty-eight hours, and fæcal vomiting for twenty-four hours. No flatus had been passed for forty-eight hours. Her general condition was fair, but there was considerable abdominal distension.

Operation.—A small knuckle of gut was found, gangrenous and perforated at its apex; the sac also was gangrenous. Four inches were resected and sutured in the way described in Case I. As there was much distension the upper segment was allowed to empty itself as completely as possible before suture. The wound was drained by a strip of gauze. The operation lasted 50 minutes.

After History.—Flatus was passed during the first twenty-four hours. The bowels were moved naturally on the fourth day. The wound healed without suppuration, and the patient was discharged in a month.

The plan of suture adopted in these two cases seemed most convenient. If the mucous membrane is first united there is a little difficulty in accurately suturing the peritoneal coats at the mesenteric angle. As Mr. Barker has lately pointed out,[1] cases of gangrenous hernia fall into three groups. In the worst class of case simple incision of the gut is alone possible. In the others the choice is between primary and secondary suture after resection.

Juillard's secondary suture will be the safer plan if the upper segment of the gut be much distended, or the condition of its walls doubtful. The operation time will be probably eight to ten minutes shorter than if primary suture be attempted. But the mortality of the second part of the operation is considerable. Makins put it at 52 per cent.[2] If the intestine be not much distended, and if the patient can bear a few extra minutes on the table, the suture should be primary.

Wallace,[3] analysing the cases in St. Thomas's for the ten years 1888-97, notes that resection and primary suture was performed eleven times for gangrenous hernia with two successes. Of the nine failures, in only two was the suture line found defective *post mortem*. In the others the death was due either to exhaustion or to gangrene and perforation of the gut higher up.

No doubt more careful selection of the cases with regard to distension and disease of the gut wall of the upper segment will much improve the operation mortality.

During the last two years 9 cases of gangrenous hernia were operated on in the Manchester Royal Infirmary. In 4 the loop was simply incised. They all died within forty-eight hours. One case was successfully treated on Juillard's plan, the secondary suture being carried out eight days after the resection. Four cases were treated by resection and primary suture with three successes. This includes the 2 cases here reported. The one death followed the resection of a gangrenous cæcum.

The button, probably with a certain amount of reason,[4] was not used in any acute case.

References.

[1] British Medical Journal, December 23rd, 1899. [2] *St. Thomas's Hospital Reports*, vol. xiii, p. 181. [3] *St. Thomas's Hospital Reports*; new series; vol. xxvi. [4] Mr. J. Hutchinson, jun., in discussion at Clinical Society (British Medical Journal, December 2nd, 1899) says that 7 per cent. of recoveries followed the use of the button, against 40 per cent. following direct suture.

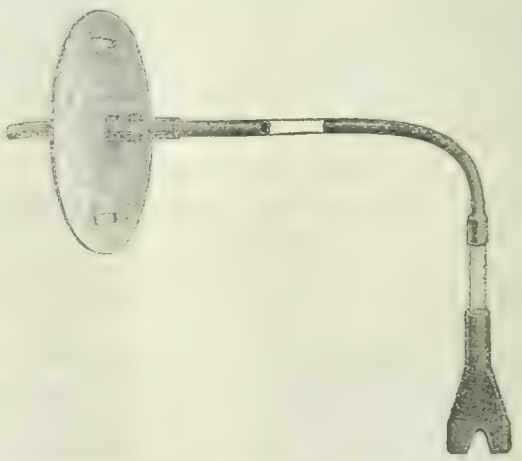
VALVULAR DRAINAGE TUBES IN EMPYEMA.

By WILLIAM WILLIAMS, M.D.,

Physician, Royal Southern Hospital, Liverpool.

The accompanying diagram represents an apparatus for draining or pumping out an empyema which I invented in 1887 with the aid of Dr. R. Jackson, now of St. Helens, but who at that time was house-surgeon at the Royal Southern Hospital.

It is fully described in an article which I published in the British Medical Journal of May 18th, 1889. I have since made a slight alteration, but in detail only, in the air-tight joint at the back of the shield. The sketch shows the modification. A short bit of rubber tubing here overlaps the metal tube at the back of the shield, and also overlaps the drainage tube passing through the shield, so making a very secure joint.



The sketch shows the mechanism put together—complete. When being applied all the parts are, of course, separate; the drainage tube is first introduced into the chest, next the shield is passed up over it—the short rubber tube at the back of the shield already alluded to having been turned back on itself to allow of this being done—next this portion is returned and the joint secured. The best valve is made by flattening a tube of thin rubber, and such a one is that shown above.

I wish particularly to point out that indiarubber valves cannot be depended upon to act properly in these cases unless, when in use, they are immersed in water, the adhesive and the drying qualities of the purulent discharge rendering them liable to be glued up. I consider, therefore, that Drs.

Hutton and Baylor, who have recently written on this subject, err in not immersing the valves they use in some antiseptic liquid. A bottle containing a 2 per cent. solution of carbolic acid in water to the depth of 2 or 3 inches, just to cover the valve, forms at once a handy and cleanly way of disposing of the discharge, while it also ensures the efficiency of the valve; the patient, too, is able to be up and about with the minimum of inconvenience; the bottle he usually deposits in one of his pockets. In my former article on the subject, washing out the chest was advocated; it was, however, only done in a few cases, and the practice is proved to be quite unnecessary, if not hurtful, in ordinary cases.

The following case of tuberculous empyema is, so far as I can ascertain, the only one of the kind that has been cured.

W. W., aged 37, was admitted into the Royal Southern Hospital on December 9th, 1897. He was suffering and in great distress from dyspnœa, which had come on three days previously, though he had been ailing altogether some six weeks. He was unable to lie on the right side. The whole of the left side of the chest appeared fuller than the right; it was motionless, or nearly so, during respiration, and the percussion note was super-resonant above and dull below. The right apex was dull, and there was much increase of vocal resonance, though not enough to prove the presence of a cavity at this point. Some thin watery pus was aspirated from the left base, and the case was entered as one of pyopneumothorax, with tuberculosis of both lungs. The chest was now opened, and the above-described tube introduced, with much relief to the distress. The note next day was, "Temperature 100°; dyspnœa absent; cavity in the left apex." There were numerous whitish flakes in the discharge, and the tube often became blocked by them. Blocking of the drainage tube merely means that something which requires to be removed from within the chest has been sucked into it. All that it is necessary to do on such occasions is to change the drainage tube in use for a fresh one.

He was soon up and about the ward; and steady progress took place in his general condition for four months. Weight, January 3rd, 8 st., 7 lb.; March 28th, 9 st., 3 lb. A fever of a hectic type, however, never left him, the temperature never going beyond 101° except on one occasion, when it reached 103°.

On April 2nd he left for the convalescent home. On April 16th he returned. We now found that the tube had been forced out of the chest, and that the end of it lay doubled up beneath the shield, while the opening in the chest wall was healed. This is an experience generally met with in cases treated by this means. He had very little cough; he was thin, but always declared himself to be well. His empyema was cured, and he left the hospital on April 16th.

From time to time during the following two months I called to see him. Sometimes he would be out; but on each of the occasions on which I examined his chest I found ample evidence in both lungs that the tuberculous mischief was in rapid progress. The drying up of the empyema seemed to have caused this unfavourable change. He died towards the end of June. There was no return of the empyema.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ACUTE ORCHITIS IN AN INFANT ELEVEN WEEKS OLD.

A CHILD, aged 11 weeks, born of healthy parents and itself free from any organic disease, was being hand-fed, and suffered considerably from dyspepsia. In consequence it was fretful, very restless, had bad nights, and required a great deal of the nurse's attention. Circumcision had been performed, and the wound was all but healed. On the morning of October 19th, 1899, the nurse reported that the child had been constantly vomiting throughout the night, had taken little or no food, and had severe crying fits. She also had noticed that morning a "swelling in the groin." The baby looked ill, was feverish, and evidently in pain. On examination I found the right side of the scrotum swollen, hot, and tender to the touch; there were no inguinal glands, and the circumcision wound was all but healed and healthy. The right testicle could be felt at the bottom of the scrotum; it was hard, double its natural size, and exquisitely tender. Above it, surrounding the cord, and extending up to the ring, the swelling felt almost boggy to the touch. The left side of the scrotum was natural.

Being in doubt as to the nature of the swelling above the testicle, I asked Mr. Clinton Dent to see the case with me, and this he did some twelve or thirteen hours after I had seen the child in the morning. The condition of the parts as far as the right side was concerned remained unchanged, but the left side was swollen, and this was due to a hydrocele. Mr. Dent considered the swelling above the inflamed testicle to be due to an œdema of the tissues surrounding the cord, and from the termination of the case this was no doubt the correct explanation.

What was the cause of the orchitis? There had been no acute illness such as influenza or mumps, no injury to the urethral mucous membrane, and there was evidently no infection of the circumcision wound, as it was practically healed, and there were no inflamed inguinal glands.

I think the inflamed testicle was probably due to an injury, either by the infant itself in its restless state, or more probably by the nurse in washing the child or applying its napkins. With opium internally and hot fomentations to the parts, followed up by cold, and support of the scrotum, the whole thing subsided. I saw the child on November 14th, a little over four weeks from the beginning of the attack, and there was no difference between the right testicle and its fellow.

South Kensington, S.W. F. ASHTON WARNER, F.R.C.S.E.

FRACTURE OF BOTH CLAVICLES.

HAVING been interested by the account of the case of simultaneous fracture of both clavicles given in the BRITISH MEDICAL JOURNAL of December 9th, 1899, by Dr. Laing. I think it will be of advantage to record another case which came under my observation during my tenure of office as house-surgeon in the Glasgow Royal Infirmary. A powerful man, engaged in shunting waggons at a pithead, was struck on each shoulder by the buffers of two waggons which were being shunted against one another. He was admitted under Mr. H. E. Clark, senior surgeon, when he was found to have sustained a simple fracture of both clavicles, the obliquity of the fractures being in the usual direction. As far as I have been able to ascertain, the method of production in this case may be regarded as unique.

Glasgow. JAMES BATTERSBY, F.R.C.S.

RECTAL FEEDING IN EXHAUSTION FOLLOWING CHILDREN'S AILMENTS.

DURING the past summer months I have found nutrient injections by the bowel very valuable for children suffering from extreme exhaustion following diarrhœa. I am confident that it has been the means of saving more than one child's life—especially where they were totally unable to take any nourishment by the mouth—and the same treatment will apply to the cases of bronchitis and bronchopneumonia. I attach importance to placing the nutrient enemata as high up into the large bowel as possible, instead of just injecting them within the rectum with a ball syringe, which is the usual custom when these injections are given. They are more likely to be retained, absorption takes place more quickly and readily, and the irritation usually caused is avoided.

Before commencing the injections it is as well, if the child is not too collapsed, to flush out the bowel with 2 or 3 pints of sterilised water at a temperature of about 90° F., to which has been previously added a little medical izal (1 drachm to a quart). The nutrient enemata may be prepared in various ways, but I have found the following answer admirably: One egg beaten up; Valentine's meat-juice, 1 tablespoonful; milk (sterilised), 4 ozs.; brandy, ½ oz. (1 tablespoonful); salt, nearly ½ teaspoonful; sterilised water, 5 ozs. This is mixed and 2 ozs. injected warm every two hours.

I use a Jacques soft red-rubber catheter, Nos. 10 or 12, and a glass syringe of the capacity of 2 fluid ounces. The syringe should first be filled with the injection, the catheter attached, and the piston pressed down until the injection reaches the eye of the catheter to expel all the air. The child should be placed on its back in the nurse's lap with its knees raised and legs separated. A soft towel having been placed beneath the child's buttocks, the end of the catheter is moistened and pushed gently into the rectum as far as it will go; a little of the fluid is injected, and it will then be found that the catheter can be pushed further on. This process is repeated until the catheter cannot well be got any higher. Sometimes the whole length may be introduced into the bowel in this way. The whole of the contents of the syringe is now injected slowly; if necessary, the syringe may be removed and filled again without removing the catheter. After a minute

or two, the catheter is withdrawn slowly, the child laid down gently in bed, with its legs and buttocks slightly raised.

It is wonderful how children revive even after the first injection; as a rule, they generally go off into a calm sleep, and awake quite bright. After the third or fourth injection, they are able to take nourishment freely by the mouth and retain it. However, the injections may still be continued with greater intervals for three or four days, or longer if necessary; but it is well to irrigate the bowel every twenty-four hours.

This may be carried out in the same way with the Jacques catheter attached to the end of a long tube connected with a douche can. The fluid will find a return channel by the side of the catheter and the bowel.

West Hampstead. N.W. CHRISTOPHER A. A. COULTHARD.

A CASE OF EXCESSIVE HÆMORRHAGE FROM A VARICOCELE OF THE LABIA MAJORA.

ON July 25th, 1899, I was called by Dr. A. T. Griffiths to see a case of flooding, to which he had been called about ten minutes before. I found the patient, a young woman about 22 years of age, lying on a couch, and looking very pale and anxious. On the floor there was a large quantity of blood (about a pint), and her clothes were saturated. On examination the blood was seen to flow from a rent in the upper third of the left labium majus. The edges were immediately secured and a catgut ligature applied. When the parts were cleansed a large network of veins was seen surrounding the upper third of the vulva in the shape of a crescent, the limbs extending downwards into the labia majora, and bulging forwards. The mass forming the left limb was very prominent, the size of a hazel nut. It had burst while the patient was stooping to take off her shoe.

This case is the more remarkable as there is no evidence of heart trouble and no trace of varicose veins elsewhere. She stated that she had always been well until that night. She had married about five months ago, and thought she was four and a-half months advanced in pregnancy. She had never felt any inconvenience or trouble about the private parts.

J. E. ROSENSTEIN, M.B., C.M.Edin.

Rowley Regis, Staffs.

HYPODERMIC ADMINISTRATION OF MERCURY IN SYPHILIS.

I WAS much interested in the notes on the intramuscular injections of mercurial cream as advised by Surgeon-Major Lambkin, Dr. Julius Althaus, and Surgeon-Captain Porter, and decided to give it a trial. I got the cream made according to Surgeon-Major Lambkin's formula as given on page 485 of the BRITISH MEDICAL JOURNAL for February 19th, 1898.

The first patient, a young woman, who had a hard chancre on her lip, followed by typical syphilitic symptoms, was given an injection of ♏vj of the cream on August 16th. On August 23rd there was decided improvement in the syphilitic symptoms, but the patient complained of considerable pain after the injection, lasting for two or three days, and there was induration round the puncture. On that date (August 23rd) I gave a second injection of ♏vij, followed by further pain and induration, but improvement as regards the syphilis. Only after some persuasion would the patient submit to another injection of ♏vij on August 30th.

After this the patient would have no further injections, but took a mercurial mixture and then pills of the green iodide till about the middle of October, when she ceased to seek advice. On November 19th she had a female stillborn child at the eighth month.

The second case was a young man with early syphilis complicated by acute Bright's disease, in which mercury was not tolerated at first by the mouth, but on November 5th I gave him an injection of ♏v of the cream, followed on November 12th by ♏vj and on November 19th by ♏vij, when the urine was practically free from albumen.

On November 26th he received a fourth injection of ♏vij. When I next visited him on December 3rd he had some soreness of the gums, so I gave him no further mercury until December 10th, when I injected ♏iv, and on the 17th ♏iv, this (the sixth) being the last injection on account of the mercurialism produced. In this case also the injections caused considerable pain and induration, less marked after the smaller amounts. The patient later on had a further course of mercury by the mouth without untoward effects, and the albumen had quite disappeared.

My reason for giving these details is because the preparation, though effective as regards the syphilis, was evidently too strong, and caused pain and mercurialism; and I notice that Dr. J. Althaus's formula is weaker, being 1 part of mercury to 4 parts each of lanolin and 2 per cent. carbolic oil;[1] and in the review of Major Lambkin's book on the method in the JOURNAL of June 17th, 1899 on p. 1469, the formula is given as ℥j of mercury, ℥ij of lanolin, and ℥iv of carbolic oil (1 in 20). This preparation would therefore be only about half the strength of his previous cream.

I see Surgeon-Captain Porter, A.M.S., in the JOURNAL of May 14th, 1898, advises the use of Ash's pure dental mercury, and gives ♏v instead of ♏x as the maximum dose. The suggestion as to the dental mercury seems good, but (1) how much lanolin and carbolic oil (2 per cent.) should be incorporated with ℥j of the mercury; and (2) what dose should be given at the commencement, and how rapidly increased; and for how long continued after the disappearance of the syphilitic symptoms?

Reading. W. HUBERT S. FOSBERY, M.A., M.D.Cantab.

A CALCIFIED LIPOMA IN A HERNIAL SAC.

A FEW months ago, during an operation for strangulated inguinal hernia, I found a loose body the size of a nut in the sac. It is quite hard and cannot be cut by a knife, and I have no doubt is calcareous. In the *Lancet*, vol. ii, 1888, Mr. J. Hutchinson, jun., describes such a body found in a hernia, and says that in the same subject he noticed an appendix epiploica, which was nearly free and about to form another loose body. I am of opinion there can be little doubt that the specimen I found was derived from a similar source.

The specimen I am sending to the museum of Guy's Hospital.

R. A. MILLIGAN,

Northampton. Surgeon to the Northampton General Infirmary.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CARDIFF INFIRMARY.

NOTES ON A CASE OF ECTOPIC GESTATION.

By THOMAS WALLACE, M.D., M.R.C.S., Surgeon to the Infirmary.

A. M., aged 28 years, a married woman, was admitted to the Cardiff Infirmary on November 16th, 1898, for an abdominal swelling.

History.—She was quite well up to twelve months ago, when she noticed a swelling commencing on the left side of the abdomen. She felt a throbbing pain in the tumour. Her medical attendant thought she was pregnant and she was treated accordingly. The tumour continued to increase in size, reaching its maximum in July, 1898; at the time of her admission it was somewhat smaller. The pain increased in intensity up to March, 1898, but after that it became less acutely felt. Her last menstruation was December 20th, 1897; in June, 1898, there was a slight show. In December, 1897, she had metritis, and was kept in bed for a week, being treated with medicine and poultices. In June, 1898, the womb became prolapsed and her medical attendant replaced it. He then introduced a pessary, which she kept in for two months. The womb did not descend afterwards, and for two months before entering the hospital she was free from pain.

Previous History.—She had an attack of pneumonia about May, 1897, and was in consequence kept in bed for a month.

Family History.—She was married for six years but had no children.

[1] BRITISH MEDICAL JOURNAL, March 26th. 1898, p. 861.

Condition on Admission.—The patient had no pain anywhere, either on being examined or when walking. She had no difficulty in walking. After, however, she had been walking about for some time she had some difficulty in passing water, but none when she lay down. The bowels were fairly regular and the urine was healthy.

External Examination.—The abdomen was distended by a smooth, elastic, slightly fluctuating swelling, lying more in the left side than in the right. The tumour felt harder in some places than in others. The umbilicus was prominent.

Measurements.—The distance from the ensiform cartilage to the umbilicus was 7 inches; from the ensiform cartilage to the symphysis pubis 15¼ inches; circumference of abdomen at level of umbilicus was 30½ inches; at the level of the most prominent part of the tumour (2 inches below the umbilicus), 31½ inches; at level of last ribs, 25 inches. Distances from right and left anterior superior spine to umbilicus equalled respectively 8 and 8½ inches. The sides of the tumour rose more steeply in left iliac and lumbar regions than they did on the right side.

Tenderness on palpation was felt in the hypogastric and left iliac regions. Dulness on percussion was heard over the whole of the front of the abdomen.

Vaginal Examination.—The os uteri was displaced considerably downwards; the lips of the os were soft and moist. The tumour encroached upon the greater part of the vagina and pelvis, occupying more of the left side than the right. There was a herpetic eruption on the right side of the lower jaw, which had been noticed a few days previously. Her temperature on admission was 101°, but it fell to normal the same evening.

Operation.—On November 18th, two days after admission, she was operated upon, the anæsthetic being ether. The abdomen was opened in the middle line between the umbilicus and pubes. The incision was about 4 inches in length. A large cystic tumour was exposed, which was adherent to the parietes all round and also to the intestines. The tumour was tapped with a large trocar, but very little fluid escaped. The trocar was taken out to see if it were blocked, but it was not. A finger was then passed into the cyst, and a full-grown fœtus was found inside together with some dark-brown fluid and caseous material. A sponge was passed into the pelvis below the opening to catch the escaping fluid. The child was delivered dead. The cord was cut and the cyst was then drawn forward. The intestines were gradually dissected off the cyst wall to which they were found adherent. Many bleeding adhesions had to be ligatured. In some parts the mesentery was torn on peeling it off, and several vessels in it had to be ligatured, thus leaving 6 or 7 inches of the gut with a very deficient blood supply. The cyst was seen to be to the immediate left of the uterus and apparently in the broad ligament. It was dissected off the uterus, each portion being clamped and tied as it was cut off, until at last the whole cyst was got free and removed. There was a good deal of bleeding from the outer surface of the uterus from which the tumour had been cut off, necessitating running some stitches into the uterine wall. Douglas's pouch was plugged with a little cyanide gauze. The whole of the rest of the wound was sewn up and sealed.

The patient was a little collapsed towards the end of the operation, requiring two injections of strychnine. After the operation she had considerable retching and vomiting, but not much pain.

November 19th. The patient felt better; not much pain. The tongue was clean; the vomiting continued.

November 20th. She was comfortable. There was no abdominal distension. The tongue was clean and the vomiting had ceased. Food was given by the mouth. The bowels were opened several times during the two previous days. She was dressed, and the gauze plugs were removed. There was considerable discharge after the removal of the plug. She was replugged.

November 21st. She was again dressed. There was still a good deal of discharge, consisting largely of broken-down blood. A tube was put in instead of gauze. The patient was quite comfortable.

November 22nd. Dressed. There was again a great deal of brownish discharge. There was diarrhœa during the night, but it had now ceased.

December 9th. The wound has healed up except for a small sinus in the lower end of the scar. It was dressed daily, and there was scarcely any discharge from it. There was no tenderness or pain on palpation round the wound. The patient has felt generally in better condition, and has been able to sit up in bed for a short time during the day.

January 17th, 1899. The patient has been up and doing well. She has a belt to wear. There has latterly been slight temperature with cough indicating some lung trouble (probably early phthisis). She left on this date for her home, which is situated in the country.

November 22nd, 1899. Dr. O'Donnell, patient's medical attendant, reports the sinus to be completely healed, and that she suffered no inconvenience from it, but phthisis had developed, and seemed to be running a rapid course.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

STRANGULATION OF INTESTINE BY FALLOPIAN TUBE.

By P. CLENNELL FENWICK, M.B. Lond., M.R.C.S., L.R.C.P., Surgeon to the Hospital.

A WOMAN, aged 52, was admitted into this hospital with fæcal vomiting and extreme abdominal distension, the vomiting had been almost continuous for three days, and the patient was in a state of great exhaustion. Half-an-hour after admission the abdomen was opened in the middle line and several feet of purple small intestine immediately protruded; the gut was so distended that it was found impossible to return it into the abdominal cavity or even to introduce the hand to explore the abdomen. A linear incision was therefore made into the distended intestine and many pints of liquid fæces evacuated. This relieved the distension, and the hand was introduced and passed down into the pelvis. Here a tight band was found encircling a mass of small intestine. The band was divided between two ligatures and the intestine liberated and drawn out. The constricted mass consisted of several feet of gut which was almost black in colour. The divided band was gently brought up to the wound and proved to be the left Fallopian tube and ovary, the latter being swollen and of a deep purple colour. The remainder of the intestines were examined and proved to be free from constriction. The intestines were returned to the abdominal cavity, after the distension of another large section of gut had been relieved by evacuation through an aspirating needle. The patient was much exhausted, but rallied well and only vomited once after operation. The next day the condition was the same and the patient passed a large quantity of flatus, but signs of heart failure appeared, and on the third day died. On *post-mortem* examination the intestines were found to be empty and quite free from any constriction. The locality of the strangulation was shown by a deep purple mark round a portion of the gut, but there was no sloughing and both the incisions made to evacuate the fæces were healed and sound. The constricting band was seen to consist of the left Fallopian tube and ovary which had become adherent to the posterior wall of the pelvis and left a circular opening through which the intestine had passed.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, January 9th, 1900.

OPHTHALMOPLEGIA EXTERNA COMPLICATING A CASE OF GRAVES'S DISEASE.

DR. FRANCIS WARNER whose paper was, in his absence, read by the SECRETARY, narrated the case of A. S. Symptoms commenced with diarrhœa in January, 1890, which lasted for nine months. About 1894 there was much weakness, tremor of the hands, prominence of the eyes, and a few months later goitre appeared. She then took thyroid extract tabloids and continued them. In 1898 there was partial loss of power in walking; the goitre seems to have subsided about this time. When seen—January, 1899—there was some palpitation and occasional shortness of breath, but no goitre; weakness, tremor, and pains in the limbs were her

principal complaints. The patient was not aware of the limitation of her eye movements. Both eyes were equally prominent. Von Graefe's sign was well marked, pupillary reactions were normal. Movements of the eyes were very limited, but not equally so in each eye nor in all directions. There was marked tremor, but no inco-ordination. There were no indications of syphilis. No marked change occurred under observation. The author referred to the case of M. H., published in the *Transactions* (vol. lxvi), who was under his care in 1882, in whom the same symptoms existed in more marked degree after subsidence of the goître, accompanied by paresis of the face and muscles of mastication, together with severe gastric crisis and much mental disturbance. M. H. died in St. Thomas's Hospital in 1884, and the sequel of her case is recorded by Dr. Bristowe in *Diseases of the Nervous System*, p. 69. No distinct brain lesion was found. Dr. Arthur Maude published 9 cases of Graves's disease in *St. Bartholomew's Reports* (vol. xxvii, 1891); one of these patients acquired sudden left facial paralysis, and two days later ophthalmoplegia externa of the left eye. Cases of partial paralysis had been recorded as occurring in Graves's disease by several authors in the *Transactions* of the Ophthalmological Society, 1886.

Mr. James Berry wished to ask if there was any evidence that the patient was at all hysterical. He referred to cases of ophthalmoplegia recorded by Ballet in association with Graves's disease, both with and without hysteria. He thought that the pathology of Graves's disease which localised it to the sympathetic was quite erroneous. He deprecated the method of treating it by dividing the sympathetic. The operation was far from being without danger, and was in most cases futile. He alluded to the obvious effect of division of the sympathetic in reducing proptosis, but maintained that such an effect was not in any sense treating the morbid process itself. He rejected the theory that the exophthalmos was due to dilatation of the vessels in the post-orbital fat, seeing that the anterior structures of the eye were not at all hyperæmic. That the enlargement of the thyroid gland was not due to dilatation of its blood vessels was proved by the fact that the vessels were not larger than in parenchymatous goître. He alluded to and disparaged the recent plan emanating from Bucharest of a bilateral removal of the sympathetic nerve in the treatment of exophthalmic goître.

An Investigation into the Nature of the Changes produced in the Nerve Cells of the Cerebral Cortex by the Action of Tetanus Toxin.

Mr. A. G. R Foulerton and Dr. H. Campbell Thomson, who read this paper, said that the investigation had been undertaken with a view of studying the histology of the nerve cells of the cerebral cortex in tetanus. The method employed in their experiments had been to examine the brains of animals at varying periods of time after they had been inoculated with tetanus toxin. The animals employed had been rabbits, guinea-pigs and mice, and the inoculations were made with a sterile toxic broth. The animals were killed at intervals of time ranging from twenty-six hours to nine days and twenty-one hours after the inoculation, and the brains were removed as soon as possible after death. As the result of the experiments they had felt able to formulate the following conclusions: (1) That certain definite histological changes are produced in the motor cells of the cerebral cortex by the action of tetanus toxin; (2) that with efficient doses of the toxin such changes are of constant occurrence; (3) that whilst the occurrence of a change of some kind is constant, the exact histological appearances produced vary with differences in the accompanying factors relating to time and dose. With regard to the specificity of these changes their investigations as to the action of other bacterial toxins did not yet enable them to say whether these changes were specific. The histological changes which they had observed as caused by the action of tetanus toxin on the nerve cells they regarded as representing different stages of one and the same morbid process. They had not found any indication that this particular morbid process was caused by any of the other bacterial toxins with which they had worked. The question as to how far these changes induced by the tetanus toxin might be checked or modified by the administration of the specific antitoxic serum was at present receiving their attention. In the present investigation the action of the toxin on the cells of the motor area of the cerebral cortex had been more particularly kept in view, but they had found similar changes in other regions, both of the cerebrum and cerebellum. Tables giving details of experiments and results, together with figures illustrating the changes found, were included in the paper.

Dr. F. E Batten referred to changes in the cortical cells produced by pyrexia as being very similar to those described by the authors. He emphasised the fact that sensory and psychical phenomena were absent in human tetanus. He had recently examined the cells in the motor cortex of a case of tetanus neonatorum which had been treated with antitoxin; the appearances were absolutely negative. He considered that extended experience of the changes produced in nerve cells by other possible causes coexisting with tetanus, such as pyrexia, was urgently needed.

Mr. Foulerton, in reply, said that the temperature was carefully taken in nearly all the animals, and in no case was there any other rise than that mentioned in the paper. They had, he believed, completely excluded *post mortem* changes, and believed that they had distinguished the changes they had found in tetanus from those produced by other intoxications, as by the pneumococcus and in glanders.

MEDICAL SOCIETY OF LONDON.

Frederick T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, January 8th, 1900.

Excision of Vesiculæ Seminales for Tuberculous Disease.

Mr. Mansell Moullin reported 2 cases in which he had removed one of the vesiculæ seminales for tuberculous disease extending upwards from the epididymis. The patients were young adults. The testis, which in each case had been involved for some time, was removed through an inguinal or an inguino-scrotal incision, and the cord divided as high up as possible. The patient was then placed in the lithotomy position, and the under surface of the prostate and base of the bladder exposed through a modification of Zuckerkandl's incision. The vesicula seminalis and the termination of the ejeculatory duct were then dissected out. In one case a small intervening portion of the vas deferens was left behind. In the other two ligatures were placed upon the cord in the groin, one upon the vas deferens by itself, and the other upon all the other structures, and the whole of the remaining portion of the vas was extracted through the perineal opening. There was very little bleeding in either case. The wounds were packed with iodoform gauze, and the external sphincter sutured to the centrum tendineum. One healed up without any inconvenience. In the other, in which the ejaculatory duct had been torn out from the urethra, a small urinary fistula persisted for some months, a few drops coming through on micturition. There was no fever in either, and the action of the external sphincter was not impaired in any way. Mr. Mansell Moullin strongly advocated complete removal of the vesicula seminalis and vas deferens in every case of tuberculous disease of the epididymis in which the vesicula could be felt distinctly through the rectum, with the view of clearing out the whole disease, and of giving the patient one more chance of recovery before the bladder became hopelessly involved.

Mr. Swinford Edwards said he had seen one operation for tuberculosis of the vesiculæ seminales, but it was by no means a simple one, for it took a long time, and the hæmorrhage was considerable. He suggested that the object might be attained by a modification of Kraske's operation.

Mr. Wallis thought the author had not laid sufficient stress on the technical difficulties.

Mr. Moullin, in reply, said that with the patient in the lithotomy position the parts were readily accessible through a transverse perineal incision. In old men there might be some difficulty, but in the young it was easy because pressure from above the pubes brought the parts well into view. He urged that Kraske's operation was attended with much more shock.

THE OPERATIVE TREATMENT OF UTERINE FIBROIDS.

Dr. W. J. Gow discussed abdominal hysterectomy, with intraperitoneal treatment of the stump, his remarks being founded on 47 cases of this operation performed by him in cases of fibroids. The indications for operation were closely bound up with the mortality. So long as this remained high the operation must necessarily be restricted to cases where life was threatened. There was only 1 death among the 47 cases, giving a total mortality of slightly over 2 per cent. The fatal case was due to secondary hæmorrhage occurring thirty-six hours after the operation. There were in the series 39 consecutive cases of recovery. He advised that after the uterine arteries had been tied, a precautionary ligature including the outer fourth of the stump on either side should be employed. By this means all oozing or spouting from the stump was checked. Such ligatures did no harm; and the real essential to success was complete asepsis and complete control of bleeding vessels. He also urged the desirability of the simplification of abdominal operations. One assistant was all that was necessary, and six sponges and six pairs of pressure forceps were usually amply sufficient. The fewer people engaged within the circle of the operation the better. He considered that it was most desirable to leave one or both ovaries, as in this way the climacteric changes took place slowly instead of suddenly. In 4 of his cases of hysterectomy a pyosalpinx was present on one or both sides, but no bad consequences followed. In only 1 was drainage employed. The presence of adhesions formed the most serious complication at the time of the operation on account of the risk of hæmorrhage when they were torn through. He supported the view that of all the radical operations for fibroids, abdominal hysterectomy with intraperitoneal treatment of the stump was the best, and was an operation which might confidently be expected in the future to give a mortality of not more than 1 or 2 per cent.

Dr. BLACKER urged that as the mortality after hysterectomy had fallen the question of procedure occupied a very different position to that of even a few years ago. He agreed as to the gravity of adhesions, and mentioned a case of his own in which removal of the tumour was rendered impossible by universal adhesions. He especially commended the precaution of placing preliminary ligatures through the cervical tissue.

Mr. WALLIS commended the extreme simplicity of Dr. Gow's methods.

Dr. Gow, in reply, observed that in separating adhesions the uterus was almost sure to be torn, and, as it was often a mere sponge of blood, any laceration in the early stage of the operation would oblige them to operate against time, as they could not check the bleeding at once. When there was perimetritis with extensive adhesions to intestines the operator had to cope with shock as well as hæmorrhage.

HARVEIAN SOCIETY OF LONDON.

H. E. JULER, F.R.C.S., President, in the Chair.

Thursday, January 4th, 1900.

ORBITAL DERMOID.

THE PRESIDENT showed the following case:—

The patient, a young woman had first come under observation in 1892, when there was a small, hard, nodular mass in the inner angle of the left orbit fixed to the nasal process of the superior maxillary bone. It had blocked the nasal duct causing a mucocele, and the lower canaliculus was slit up. At the present time there was a slight proptosis and displacement to the outer side, but there was no diplopia.

Mr. ROUGHTON advised the removal of the tumour by the surgical engine.

COCCYGEAL TERATOMA.

Mr. FRANCIS JAFFREY showed a case of coccygeal tumour:

A female child, aged 6 months, with a large tumour in the coccygeal region, which was partly fluid and partly solid. The skin was very thin in parts, and on grasping the swelling a lobulated mass could be felt. The tumour had increased in size since the infant came under observation in September, and it had been tapped twice; the fluid removed, which was like turbid beer, was examined by the Clinical Research Association, who reported that from chemical analysis it was quite evident that the fluid was not cerebro spinal; it contained none of the albumose characteristic of that fluid, nor, on the other hand, did it correspond to amniotic fluid.

The cyst had probably arisen in the usual manner of congenital cysts in that region, as representative of an attempt at another embryo.

Mr. RAYMOND JOHNSON did not regard the evidence that the tumour was a teratoma convincing. It was probably one of the more common multilocular cystic growths occurring in this region. The tumour probably extended up between the sacrum and rectum, and its removal would involve a more extensive operation than the child could at present stand.

DEFORMITY OF ARM.

Mr. HUBERT PHILLIPS showed a case of deformity of the left arm.

The patient was a youth, aged 17. There was considerable shortening of the humerus, and what appeared to be the upper extremity of that bone was seen projecting on the inner side of the arm when the triceps were called into action. Nothing abnormal was noticed by the parents or others until the patient fractured his right arm about nine years ago. As the arm was most useful he did not think operation advisable.

Mr. ROUGHTON and Mr. JACKSON CLARKE regarded the deformity as the result of a fracture of the upper part of the shaft of the humerus which had united at an acute angle. Mr. PHILLIPS, in reply, agreed with this opinion.

COMPOUND FRACTURE OF LEG.

Mr. JACKSON CLARKE showed a man, aged 37, who sustained a severe compound comminuted fracture of both bones of the left leg in July last.

A segment of the tibia, 3 inches long, quite separated from its periosteal connections and contaminated with dirt from the roadway was removed. An incision was made over the lower part of the fibula and several fragments were removed in order that the two remaining segments of the tibia might be approximated and fixed by a suture of silver wire. The limb was treated by the open method and recovery was uninterrupted; a portion of the silver wire that had been exposed in the inner wound became gradually surrounded by callus. The patient had a useful limb in which of shortening was compensated for by a raised boot. Three months after the accident he was allowed to walk with the help of lateral supports of iron fitted into the boot below and extending to the knee above. Six months after the fracture, when abundant and firm bony callus was present, a skiagraph was taken, but in it only the old bone was shown, no trace of callus being visible.

In reply to Mr. JAFFREY, Mr. CLARKE said that he hoped to have skiagraphs taken from this case at intervals, in order to help to settle the point as to the period at which the consolidating bony callus would become recognisable. Mr. Clarke had no doubt that the union was bony and not fibrous.

SYPHILITIC DISEASE OF BRAIN.

Dr. JAMES TAYLOR showed two cases illustrating the results of antisyphilitic treatment in syphilitic disease of the brain.

The first case was that of a woman whom he had brought before the Society eighteen months previously, and who at that time had right-sided hemiplegia following typical Jacksonian epilepsy. The patient had been treated with potassium iodide and mercury with complete success. The second case was that of a man who was at first believed to be suffering from ordinary epilepsy. The attacks were, however, followed by left-sided hemiplegia, headache, and optic neuritis. Potassium iodide was given internally, combined with inunction of mercurial ointment. After a considerable time the fits ceased and the other symptoms improved, but recurred with cessation of the treatment. It was resumed, and now the patient only presented a very slight degree of weakness, especially in the left leg, and occasional fainting attacks.

The cases were discussed by the PRESIDENT, Mr. CLARKE, Dr. GUTHRIE, and Dr. SUTHERLAND; and Dr. TAYLOR replied.

TABETIC OPHTHALMOPLEGIA.

Dr. LEONARD GUTHRIE showed the following case:

A postman, aged 65, seven months previously had suddenly developed ptosis of the left eyelid, with crossed diplopia and external strabismus. For twelve months he had suffered from weakness and unsteadiness of gait, giddiness, and tremors of the head and right arm. Over two years ago he had had a fit with momentary loss of consciousness. He had had a chancre followed by non-suppurating bubo and severe sore throat at the age of 24. He had been six months under observation, during which time the ptosis had become less marked, but the left eyeball deviated outwards as before, and could not be moved upwards nor inwards beyond the mid-line. Quite recently the right eyeball also could not be moved inwards beyond the mid-line nor upwards, but its movements outwards and downwards were unimpaired. The pupils were moderately contracted and reacted little, if at all, to light. Accommodation could not be tested owing to loss of convergence. The knee-jerks present six months ago had gradually disappeared. His gait had become more ataxic, and Romberg's symptom was now manifest. Sensation was unaffected except that the ulnar nerves behind the inner condyles were abnormally insensitive. He had some difficulty in holding his water. No lightning pains.

Dr. Guthrie considered that the diagnosis of tabes was now obvious. He drew attention to the frequent occurrence of paralysis of ocular muscles as preataxic symptoms. Such cases of ocular paralysis usually came under the notice of ophthalmic surgeons, and were frequently cured, or the paralysis spontaneously subsided perhaps years before other signs of tabes appeared.

The President and Dr. James Taylor discussed the case, and agreed as to the frequency with which ocular paralysis occurred in the early stages of tabes. Dr. Taylor had seen a number of such cases at the Royal London Ophthalmic Hospital, and had usually found the knee-jerks still present. The paralysis was usually transitory, but it might be permanent, and was then probably due to nuclear changes.

Congenital Dislocations of Hips.

Mr. Edmund Roughton showed a man who exhibited the characteristic appearances of a bilateral dislocation.

Mr. Jackson Clarke remarked upon the favourable results obtained in the treatment of this deformity in early life by Lorenz's bloodless method.

Dr. Sutherland and Dr. Taylor also spoke; and Mr. Roughton replied.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, January 3rd, 1900.

Alban Doran, F.R.C.S., President, in the Chair.

Treatment of Rupture of the Uterus.

Dr. Herbert Spencer read a paper on four cases of rupture of the uterus successfully treated by packing the tear *per vaginam* with iodoform gauze. They were the only cases in which he had used this method of treatment, and the only cases which he had known recover. All the others (about 8 in number) had died in a few hours from shock and hæmorrhage, or in a few days from sepsis. Twice he had performed abdominal hysterectomy with a fatal result. Having alluded to the advocacy of gauze packing by others, he expressed his own views for the purpose of discussion as follows: In the treatment of the uterus—

1. Abdominal section is rarely required, and almost solely in cases where the fœtus has passed completely or in great part into the peritoneal cavity. It should be performed rapidly under local infiltration anæsthesia, and should be followed by flushing of the peritoneal cavity with normal salt solution and by suture of the tear, if possible. or if this be not possible, by packing the tear with iodoform gauze and draining by the vagina or abdomen.
2. Abdominal hysterectomy is hardly ever necessary; when the broad ligaments are so much damaged as to endanger the vitality of the uterus vaginal hysterectomy should be performed.
3. All incomplete tears implicating the broad ligament and most complete tears should be treated by packing the rupture *per vaginam* with iodoform gauze after removing clots and fluid blood.

Dr. Peter Horrocks thought that a very strong distinction should be made between cases of laceration of the cervix and rupture of the body of the uterus. In two of Dr. Spencer's cases the laceration had not penetrated the peritoneal cavity. In such cases the chief point was to stop hæmorrhage, and see that everything was done aseptically. He had had several cases in which the peritoneal cavity had been opened by the rupture, and the results had been highly satisfactory in recent years. He attributed this not alone to the packing by gauze, but to the fact that the labours had been conducted aseptically. He gave details of a case in which the rent was sewn up, but the patient died in forty-eight hours. In another case he had put in two stitches so as to draw the gaping wound together somewhat, and then he packed with sal alembroth gauze, which was removed every twelve hours under chloroform for the first few days, and once a day afterwards. The patient made an excellent recovery, but one of the stitches gave trouble, and had to be removed nine months later. She had since had a living child, the labour having been brought about at the eighth month. He gave details of 3 other successful cases, in which sal alembroth gauze was used, and tincture of iodine solution as a douche. He thought Dr. Spencer had left the gauze in too long. The best treatment in cases which could not be treated in the way above mentioned was to open the abdomen and sew up the tear with sterilised silk. He gave details of a case in which this had been successfully done, and the patient recovered, although the abdominal wound burst open and the bowels protruded on the tenth day.

Dr. Herman said that the suture of a ruptured uterus was useless unless the edges of the wound were brought accurately together throughout its whole length; one or two sutures far apart were worse than useless. In cases in which complete suture of the wound could not be done, he thought packing with iodoform gauze was the best practice. If the rent was so situated that packing with gauze was impracticable, he thought vaginal hysterectomy would give the patient the best chance.

Dr. Lewers said he had had a case of rupture of the uterus in which iodoform gauze packing was adopted, and the patient, though very ill for a week, recovered. Unless the less highly iodoformed gauze was employed, there was a good deal of danger of iodoform poisoning; he had of late used carbolic gauze in the peritoneum with satisfactory results.

Dr. Drummond Robinson had had 3 cases of ruptured uterus under his care. In one the patient died within a couple of hours of a complete rupture. In a case of incomplete rupture into the left broad ligament there was very little hæmorrhage at the time or afterwards; no drainage was employed, and the patient recovered. In a third case a multipara, aged about 40, was delivered by forceps. A complete tear through the cervix and lower segment anteriorly was packed with cyanide gauze. The patient was very ill for a fortnight, but made a good recovery, and had given birth to another child quite normally. A few days after the rupture a sinus developed at the umbilicus; this healed up in a few days.

The President said absorption of iodoform caused rapid pulse, which might be taken as a symptom of sepsis. Many foreign authorities objected to iodoform or any other chemical antiseptic agent in packing wounds.

Dr. Herbert Spencer, in reply, said that two of his cases were complete ruptures and two incomplete. The distinction between laceration of the cervix and rupture of the body of the uterus could not be sharply drawn. Most cases of the latter did actually involve the cervix. Slight cases of laceration of the cervix up to or even beyond the vaginal insertion were of small importance; but where, as in his two cases, the cervix and lower segment were lacerated so extensively as to admit the half-hand into the broad ligament, and there was much hæmorrhage and shock, the danger was great. The extent of the laceration in the uterus was of less importance than the extent of the laceration of the vessels and tissue of the broad ligament. He had known death to occur where a cervical laceration was so short as not to involve either os. It was his experience and belief that these severe incomplete lacerations actually killed more women than the complete. He wished again to emphasise the great danger of abdominal section in rupture of the uterus, and agreed with the remarks of Dr. Herman as to the uselessness of partial suture. He considered it undesirable to inject an irritant like iodine solution into the peritoneal cavity, and dangerous to give chloroform and change the gauze every twelve hours; iodoform gauze might be left in for six days or longer. The cases related by other speakers strengthened his belief in the value of gauze packing. Though iodoform gauze was not free from risk, he believed, in anæmic cases like those under discussion, it was less dangerous than cyanide or carbolic gauze, or even sterilised gauze, which would not long remain aseptic in the vagina.

Specimens.

The following specimens were shown:

Dr. Eden: (1) Adenoma of the uterus; (2) cast of uterus. The President: (1) (for Dr. Pawlik, of Prague) Photograph of primary cancer of the Fallopian tube; (2) macerated fœtus successfully removed from abdominal cavity two months after spurious labour. Mr. Malcolm: Bilateral pyosalpinx, communicating.

West London Medico-Chirurgical Society.—A meeting of the Society was held on January 5th, Dr. J. B. Ball, the President, in the chair.—On the motion of Mr. Percy Dunn, seconded by Mr. Swinford Edwards, a vote of condolence and sympathy with the family of the late Sir James Paget, an honorary member of the Society, was carried unanimously.—The Secretary read the report of the Committee appointed to organise a scheme for gratuitous attendance on distressed families of soldiers. The Committee reported that 203 members of the Society had written offering to co-operate in the scheme. Of these replies 44 were from consulting physicians and surgeons, and from men practising in various special departments. The remaining 159 were from men in general practice.—Mr. L. A. Bidwell then read his paper on Surgical Treatment of Dilated Stomach. The principal causes of dilated stomach were: (1) Cicatricial contraction of the pylorus; (2) malignant disease; (3) adhesions outside the pylorus; (4) gastroptosis; (5) spasm of pylorus; (6) floating

kidney of the right side; (7) atony. Only the first three of these various conditions were discussed at length by the author. With regard to diagnosis the following principal methods of examining the stomach were advocated: (1) Inspection; (2) palpation; (3) percussion; (4) auscultation; (5) intubation; (6) artificial distension of the stomach with gas; (7) chemical examination of the stomach contents. The indications for operation on the dilated stomach were: (1) Pain usually localised to the pyloric region and felt in the back; (2) signs of dilatation of the stomach; (3) vomiting of solid food; (4) absence of free hydrochloric acid from the vomit; (5) some examination; (6) obstinate constipation. The surgical procedures which were undertaken for the relief of dilated stomach were: In malignant disease: (1) Pylorectomy; (2) gastro-enterostomy. In non-malignant stenosis: (1) pyloroplasty; (2) gastro-enterostomy; (3) Loreta's operation; (4) pylorectomy; (5) division of adhesions. And in neurotic cases: (1) lavage; (2) massage; (3) gastropexy; (4) an operation for diminishing the capacity of the stomach by folding in a portion of the redundant wall. The paper was illustrated by 16 cases operated on by the author and arranged in tabular form. Eleven were cases of malignant diseases; 5 of these died within a fortnight, the remainder living some months. There were 5 cases of non-malignant stricture which were all cured by operation. Of the malignant cases, 7 were gastro-enterostomies with 3 deaths, 3 were pylorectomies with 1 death, 1 was a case of pyloroplasty and proved fatal. Remarks were made by the PRESIDENT, Messrs. SWINFORD EDWARDS, C. B. KEETLEY, McADAM ECCLES, and Dr. R. BEVAN; Mr. BIDWELL briefly replied.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—At the December meeting of this Society, Dr. C. E. BEEVOR, the President, in the chair, a discussion on the open-air treatment of consumption was opened by Dr. CLIFFORD BEALE, who observed that the highest physiological perfection among human beings was to be found amongst peoples who lived in the purest air. The tuberculous patient suffered from the effects of the toxin produced in the formation of the tubercle, and no remedy short of an antitoxin capable of annulling the effects of the poison within the body could be expected to have any curative effect. To prevent the entrance of the bacillus and to deprive it of the surroundings in which it flourished must be the main aim of treatment. Tuberculous patients should be kept away from crowded spaces, and the living rooms must be kept free from stagnant air and well flushed with fresh air at all times when unoccupied. Exercise, sleep, and food had all to be regulated and systematised, and more attention was paid to such a system if it was written or printed in full for the patient's guidance. Medical supervision to see that the system was adhered to was an essential. Treatment was best carried out away from the home, but banishment to foreign surroundings was not essential. The length of time required was best left indefinite. In view of recent experience the patient should be urged to make the necessary sacrifice of time and money in the early stages. Dr. WALTERS expressed his complete agreement. The open-air treatment did not merely consist in exposure to fresh air while leaving the patient to his own devices, but was a combination of hygienic remedies requiring judgment and experience, and calling for more or less continuous supervision by the resident medical officer. Treatment in a sanatorium had the advantages common to all hospital treatment, those which arose from co-operation and from the supervision of a number of more or less similar cases by one medical man in the same place—greater economy and greater efficiency. The disadvantages were purely sentimental in any properly managed sanatorium. The true function of a chest hospital was to give "first aid" to the consmptive, the bulk of the treatment being carried out in a suitable country place. Dr. EDWARD SQUIRE said that the hygienic treatment could be carried out at home with great advantage, although rarely with the completeness possible in sanatoria. Rules must be drawn up and written out or printed, regulating the daily life of the patient, giving information about ventilating his rooms and disposal of the sputa, stating the times and quantity of his meals, the times for rest and for exercise, etc. To ensure the carrying out of details the personal supervision of the medical attendant was needed, and a nurse who had some experience of the treatment was desirable. He had obtained good results by advising the patient to move from place to place "chasing the sunshine," staying a few weeks in one place and selecting such parts of the country as were likely to be bright and dry at that time of the year. Although it was only in the early cases that cure might be hoped for, advanced cases were the better for hygienic treatment, and attention to hygiene diminished the risk to other members of the household. Dr. CHOWRY-MUTHU referred to the sanatorium treatment as carried on at Ventnor. Though beset with difficulties, the open-air treatment could be successfully carried out in England. The secrets of success were thorough organisation, strict attention to each detail, and the wisdom of the medical attendant in distributing the different elements, as pure air, good food, exercise, rest, etc., according to the needs of the individual patient, in short, in directing and controlling the whole movement.

REVIEWS.

SOME RECENT WORKS ON GYNÆCOLOGY.

MR. TAYLOR'S most complete work on extrauterine pregnancy[1] consists of the Ingleby Lectures for 1898 much enlarged and altered, so as to include important matters of detail too minute for the lecture room, but needful for the student of extrauterine pregnancy, and readily understood when carefully read and re-read in the study. The book itself is handy in form and excellent in type, an important advantage where, as in this case, very careful perusal is needed, for the style is terse and the matter weighty. The drawings constitute its weakest feature, which is regrettable when we remember the excellence of pictorial art in so many current foreign works. The diagrams are, it must be admitted, fairly clear, but the rough sketches of the displacement of the tube bearing a mole are puzzling even to an expert, and all, instead of only the first, should have been adorned with brief explanatory letterpress. There is also a lack of original microscopical evidence, so that the author's difference of opinion from so careful a student as Clarence Webster as to decidual tissue in the tube will hardly convince the reader as much as his authority might otherwise warrant. For authoritative Mr. Taylor certainly is, his care in inspecting naked-eye appearances and his wide operative experience being well recognised. The author believes greatly in want of development of the tube as the most frequent cause of ectopic gestation. The theory that a desquamative salpingitis necessarily precedes tubal pregnancy is rejected, for the affected oviduct may show no sign of inflammation. Mr. Taylor is a staunch adherent of the prevalent theory that extrauterine pregnancy is always tubal in origin. Whilst broad ligament hæmatoma is only due in a minority of cases to tubal pregnancy, intraperitoneal hæmatocele is, in his opinion, almost always due either to bleeding from a hæmorrhagic mole, or, less frequently, to rupture of a tubal gestation sac. Abdominal pregnancy is usually the result of the escape from a tubal sac of the fœtus in its unruptured membranes, a secondary condition. Mr. Taylor admits that in some rare cases that which Tait and Bland-Sutton believe as constant in abdominal pregnancy does occur; that is to say, the ovum escapes from the tube into the broad ligament, and then bursts through the broad ligament into the abdominal cavity, a tertiary, not a secondary, condition. The placenta never changes its position, but often grows marginally far beyond the limits of its original attachment to the tube. Hence the fœtus in abdominal pregnancy tends to develop above the placenta, whilst in intra-ligamentary gestation it develops below it. As to the displacement of the anterior or posterior peritoneal fold in intra-ligamentary gestation, an important matter for the operator, Mr. Taylor suspects that the retroperitoneal variety, verified by operative evidence, is at least as common as the anterior variety verified by frozen sections as well as by operative evidence. The great danger of intra-ligamentary pregnancy lies in the high position of the placenta and its liability to detachment caused

[1] *Extrauterine Pregnancy: A Clinical and Operative Study.* By John W. Taylor, F.R.C.S.Eng., Senior In-patient Surgeon to the Birmingham and Midland Hospital for Women, etc. London: H. K. Lewis. 1899. (Demy 8vo, pp. 205, 65 illustrations. 7s. 6d.)

by the growth of the pregnancy, so that fatal hæmorrhage is possible at any stage of development. In both this and the abdominal form the patient is in great danger during the third or fourth month, as the ovum and its appendages rise into the abdomen, and thus lose the support and shelter of the pelvis; but after this stage there is less danger in tubo-abdominal pregnancy. Mr. Taylor does not consider that the existence of a primary ovarian pregnancy has ever been proved, and he further denies that the delivery of an interstitial or tubo-uterine ovum into the uterine cavity has been positively demonstrated. In both these opinions he will receive the support of the majority of experts. He seems to have overlooked one strong argument against primary abdominal and ovarian pregnancy. Their earlier stages, when all relations would be clear, have never been demonstrated. Mr. Doran notes this fact in a report on Dr. Arthur Beale's specimen of fœtus in the abdominal cavity,[2] and in an article on a case of tubal abortion in his own practice.[3] He observes Museums contain numerous specimens of early tubal gestation where a fœtus and its membranes are to be seen inside a swelling of the tubal canal. There is no need of proof that the ovum lies in the tube, just as at Bournemouth we need not prove the existence of the sea. On the other hand, in the specimens of alleged abdominal or ovarian gestation, pregnancy is usually advanced, and the anatomical relation of the parts hopelessly confused.

The chapters on diagnosis are excellent; the question of the dangers of leaving a case of hæmatocele unoperated upon is discussed, and the author has perhaps less belief in expectant treatment than the experience of others may warrant. All will, however, agree that "the danger of temporising when any symptom of collapse or pain is present should be thoroughly recognised and appreciated." The same may be said of the author's principles and practice in respect to operative interference at any stage of ectopic gestation. His opinions and his directions for operating constitute the part of this work which will most deeply interest his readers, who, it is to be trusted, will not treat lightly its more scientific portions, for operations of this type urgently demand sound pathological knowledge of the parts involved. The passages on operation performed late in pregnancy are of the greatest importance, for the extirpation of a tubal sac before the third month is not always difficult, whilst later on the placenta involves formidable risks of immediate hæmorrhage or sepsis after operation. Mr. Taylor lays down the law that in all cases of true tubo-abdominal pregnancy it is wise to remove the placenta. In tubo-ligamentary pregnancy there is no necessity for the operative removal of that structure, since if the sac be drained the placenta will separate and come away with the discharges, usually without any pyrexia or constitutional disturbance. Though we do not believe in extreme specialism, we must admit that these late operations can hardly be undertaken with any prospect of good results save by operators long experienced in the surgical treatment of the diseases of women. The table of 42 cases by the author is extremely instructive, and concludes a work which will, we feel sure, hold a high place in medical literature.

This second instalment of MARTIN'S work, a "hand"-book,[4] of which the pages number but nine under a thousand, excels in its exhaustive character the first volume, devoted to diseases of the Fallopian tube. The thoroughness and perfect scientific sincerity of contemporary medical authors in Germany deserve not only praise but imitation. In other countries pathology is apt to be held as a stepping-stone to more profitable employments, whilst men more experienced in clinical and surgical work are perhaps too eager to record triumphs. The German writer takes the deepest interest in pathology to the last, long after he has earned a reputation as an operator. The fruits of Teutonic principles are manifest in such a work as this volume. It treats of two hackneyed subjects: ovariotomy and the pathology of ovarian cysts; it also sums up the little that is known about actinomycosis and leprosy affecting the ovary. Ovarian hernia is very fully discussed by Dr. Kossmann, to whom has also been consigned the preparation of the chapters on disease of the parovarium. Hence this scientific worker has shown himself competent to write an instructive clinical essay and also a purely scientific thesis on so difficult a subject as the pathogenesis of papilloma of the broad ligament. The editor and Dr. Orthmann have taken charge of the inflammatory affections of the ovary, to which over a hundred and fifty pages have been rightly allowed, for oöphoritis is a serious affection. Dr. Wendeler has undertaken the development and physiology of the ovary. As might be expected, the editor himself has prepared the section on ovariotomy. It takes up over a hundred and twenty pages, hardly too large a share of the work, for after all it remains the most important subject in relation to the ovary. The observations on mortality tables are prudent and instructive. Professor Martin reminds us that thirty years ago ovariotomy was monopolised by half a dozen world-famed experts; but these heroes of surgery so recently living amongst us had not the resources of aseptic surgery at their disposal. Now the young surgeon has the experience of his predecessors to guide him. We might add that the beginner usually selects a case which appears easy of performance, indeed, he cannot be blamed for hesitating to operate where there are grave symptoms. Hence men with the reputation of being experts in gynæcology are often charged with these severe cases which the neophyte dreads to tackle. The expert is bound to operate, and cannot save every severe case. Hence relative statistics are not in every respect reliable, for 12 per cent. mortality in a few selected favourable cases and the same percentage in several hundred cases, mostly selected, by others than the operator, as severe, does not mean what the similarity in figures appear to imply. Hofmeier, as Professor Martin points out, has compared a large number of series of ovariotomies by experts, down to 1898, and concludes by holding them as of "historical value only." That writer finds great discrepancies in the proportion of complicated cases; he distrusts the irregular manner of reckoning and classifying them and the manner of selection, by which he clearly means the active and passive selection above noted. He challenges even the death or recovery columns on account of "early discharge and like reasons." In fairness to any operator, distinctly malignant cases should certainly be classified apart, though never omitted. The mortality in ovariotomy for malignant disease has mounted to as high as 13, or even 28 per cent. in the hands of experts since 1890, but a precise percentage is impossible, as a cancerous ovary may have a good pedicle and be removed with perfect ease and safety, whilst another with the same pathological appearances may be closely adherent to coils of intestines which it has infected. Professor Martin publishes the statistics of operation for malignant ovarian tumour in his own surgical home; and of 60 operations for carcinoma no fewer than 25 proved fatal; the earlier cases, it must be remembered, were operated upon twenty years ago. In the series of 21 operations for sarcoma, 7 deaths are noted. Such is the experience of an able operator and a reliable pathologist. We feel sure that all the tumours in both series were truly malignant. In the records of others it may happen that the writer, a good operator, may have inadequate experience as a pathologist, so that a soft fibroma of the ovary may be honestly recorded by him as "malignant." It happens that the removal of this kind of tumour is hardly more dangerous than the ablation of a unilocular cyst. There are many other sources of fallacy in the registration of ovariotomies. As to sutures the old deep suture or "mass suture" certainly comes off badly according to statistics. But surgeons can trace such cases to the earliest days of Spencer Wells and Keith, and hernia of the wound may not develop till over ten years after an abdominal operation. Martin has adopted the more recent suture by layers since the summer of 1895, and admits that he prefers it on surgical principles rather than on long experience. He wisely adds the aphorism of Benno Schmidt, one of the best living authorities on hernia, that no cicatrix in the abdominal wall can be expected to resist intra-abdominal pressure so well as could the tissues at the site of the cicatrix before they were wounded by the surgeon's knife. The purely scientific sections of this great work do not permit of cursory criticism. The opinions of the writers who have co-operated with the editor deserve study rather than review, and all the more weight may be attached to them when we find how the opinions of others are respected. A glance at the

[2] *Trans. Obstet. Soc.*, vol. xxxv, p. 222.
[3] BRITISH MEDICAL JOURNAL, vol. ii, 1891, p. 789.
[4] *Handbuch der Krankheiten der weiblichen Adnexorgane.* Herausgegeben von. A. Martin, Band II, *Die Krankheiten der Eierstöcke und Nebeneierstöcke* (Martin's Manual of the Diseases of the Female Appendages, vol. ii, Diseases of the Ovary and Parovarium. Leipzig: Arthur Georgi. 1899. Roy. 8vo, pp. 901. 173 woodcuts and 5 plates. M.28.)

tables of reference, most formidable in their proportions, shows that the editor and his assistants are as cosmopolitan as befits men of science. Anglo-Saxon, French, and Russian are treated as respectfully as though they were pure Teutons. We have said enough to show that this volume is probably the most complete work on diseases of the ovaries that has ever been written.

The second part of the second half of the third volume of VEIT's great literary venture[5] closes the series which makes up a "hand"-book only in the sense that a number of complete treatises by recognised authorities is most "handy" when united in two or three volumes of the same work. The editor must be congratulated on the high value of the essays. Winternitz's article on hæmatocele should be read by those who are of opinion that all pelvic hæmatoceles are due to tubal gestation. It seems agreed that tubal abortion is the most usual course, far more frequently than rupture of the tube. Those who believe that pelvic hæmatocele is usually due to other causes than tubal gestation (Oberer, Spengler, Weiss) seem, in Winternitz's opinion, to depend too much on clinical evidence not verified by an exploratory operation. Winternitz, however, admits several other forms of hæmatocele. Pozzi has observed hæmorrhage from the tube. Martin also in the course of operations has found a hydrosalpinx ruptured by hæmorrhage into its interior. The rupture of an "apoplectic" ovary may also cause hæmatocele. Kleinhans may be congratulated for his very lucid essay on diseases of the tube. He shows conclusively, on evidence collected from every part of the scientific world, that suppurative inflammation of the tube may be primary, and does not necessarily end in pyosalpinx. He also demonstrates that hydrosalpinx may be primary as far as the tube is concerned, being often independent of any inflammation of the tube, and due to sealing of the ostium by peritoneal exudation. Finally, he admits that many so-called "tubo-ovarian" cysts are purely tubal cysts. The labours of several British workers in this field are, we are glad to say, duly recognised. The subject of general peritonitis is well summarised in some twenty-two pages by Döderlein. The distinction between streptococcus peritonitis and other grave types of the disease is well drawn, and it is shown on clinical evidence that gonococcal inflammation of the peritoneum is a distinct variety marked by alarming clinical symptoms which tend to subside and end in convalescence. The statistics quoted demonstrate that "exploratory" incision intended as a cure for tuberculous peritonitis is by no means free from danger to life, and is not rarely followed by tuberculous fistula, sometimes fæcal. He agrees with most practical authorities that exploration and drainage is of little use, or, rather, is useless in septic peritonitis if general septic symptoms be well established. The focus of infection is not always accessible; indeed, one or more of the viscera may already contain foci. When it is accessible, as in perforating ulcer of the stomach, the results of operation are encouraging. It is instructive to compare them with the results of surgical interference in perforating typhoid ulcer where the perforation can be closed, but the typhoid poison cannot be washed out or drained away. The *Handbuch* ends with a very complete essay on sarcoma and endothelioma of the uterus by Dr. Gessner.

Dr. PHOCAS, in his studies in operative gynæcology,[6] publishes his personal experience of a large number of stock operations and of relatively new surgical procedures familiar to the gynæcologist. He has had good results in cases coming under the former class, such as ovariotomy. As to the latter class, he not only claims equally good results, but goes further, and declares, on the strength of his experience, which in each variety of operation is not large, that the operation which he prefers is the best. All surgeons, we presume, select what they consider to be the best procedure, but all, like the present author, are too apt to consider that a successful series proves its transcendent merits and its superiority to any other operation for the same purpose. In the case of vaginal hysterectomy for malignant disease he has operated six times, five for cancer of the cervix, once for cancer of the body. All recovered; the operative mildness (*bénignité opératoire*) of vaginal hysterectomy is recorded as "extraordinary." Dr. Phocas, very rightly, notes that in every case recurrence occurred "after amelioration for a certain time." But other operators of wide experience are beginning to condemn the operation on that very ground. More than one chapter is devoted to a good clinical subject. An instructive case is reported under Post-operative Psychoses. A young lady, brave and reasonable, but nervous, had a husband troubled with fissure of the anus. He was operated upon, and the shock of that event turned her head; four months later she was put under restraint. Supposing that she, instead of her husband, had undergone an operation, the apprehension and subsequent pain would in all probability have produced the same result; then the surgeon would have spoken of the case as representing a special "post-operative mania." Dr. Phocas records two cases of post-operative paralyses, which he is inclined to attribute to the operation and not to the anæsthetic; but he considers that we cannot be sure that there is but one cause for this ugly complication, and admits that in one of his own cases the chloroform might have really been to blame. The medical public are growing weary of endless records of the special merits of new operations, though we listen to the present author with respect. On the other hand, clinical facts such as Dr. Phocas has recorded are matters of permanent interest and value.

The object of Dr. RICHARD LOMER'S monograph[7] is to show that very often pain referred to the sexual organs of women is not due to the condition of those parts, but to a hysterical condition of the patient. This is shown by (1) evidence of hysteria in the patient; (2) absence of local disease; or (3) if local disease, or what is thought such, be present, no effect on the pain is produced by the removal of the local change presumed to be morbid. The author begins by stating that our view of hysteria now is as different from that of a generation ago as is our present view of the infectious fevers from that taken then. The difference is that then we diagnosed hysteria from the history: now we judge from physical examination. The scientific tests for hysteria are the discovery of areas of anæsthesia and hyperæsthesia, of limitation of the field of vision, of hysterogenous zones, of anosmia, of amyosthenia, and so on. Looked for in the light of these tests, hysteria is found to be a very common disease, and one not limited, as has been thought, to civilised races, nor to the higher classes. Nor has it anything to do with the womb, nor with the sexual passion, either with its excitement, suppression, or gratification. There are several degrees of hysteria: (1) Latent hysteria, that is, an inherited tendency to the disease, a hysterical disposition. (2) If in such a patient one or more exciting causes come into action, such as shock, infectious or exhausting disease, hæmorrhage, chlorosis, disease of the sexual organs, intoxication, then the hysterical phenomena develop. Of these exciting causes, the most important from the gynæcological point of view, is hæmorrhage. (3) "Grand hysteria," that is, hystero-epilepsy and allied manifestations. The special clinical feature here studied by Dr. Lomer is the presence of pain with hyperæsthetic zones of the abdominal wall. He relates first some cases in which such pain and hyperæsthesia were present along with disease of the pelvic organs, and persisted unaltered after cure of the disease within the pelvis. He then relates some cases in which such pain and hyperæsthesia were present, and abdominal section was done for the relief of the pain, in each case without producing any improvement, and in some followed by aggravation of the symptoms. In one case a patient first had one ovary removed, and a retroversion cured by ventral fixation. Her pain continued, and a stomach specialist diagnosed gastric ulcer accompanied with spasm of the pylorus. For this gastro-enterostomy was done. The patient died, and on necropsy no disease of the stomach was found. Another patient had been anæsthetised eighteen times, and had had laparotomy done three times without benefit, and a surgeon after this wanted to remove the uterus. Dr. Lomer opposed this, and the patient was

[5] *Handbuch der Gynäkologie* (Handbook of Gynæcology). Herausgegeben von J. Veit, Leiden. Band III, Hälfte 2, 2te Abtheilung. Wiesbaden: F. J. Bergmann; and Glasgow: F. Bauermeister. 1899. (Roy. 8vo, pp. 488; 3 plates and 66 woodcuts. 14s. 3d.)

[6] *Etudes de Gynécologie Opératoire.* Par le Docteur Phocas, Ancien Interne des Hôpitaux de Paris, Professeur Agrégé à la Faculté de Lille, etc. Paris: A. Maloine. 1899. (Roy. 8vo, pp. 208. F. 4.)

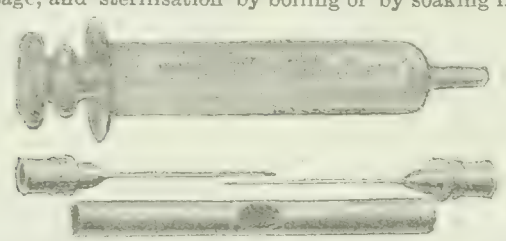
[7] *Zur Beurtheilung des Schmerzes in der Gynäkologie.* Von Dr. Richard Lomer, Frauenarzt in Hamburg. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1899. (Roy. 8vo, pp. 88. 2s. 3d.)

finally cured by travelling. His next set of cases are those in which operations were done for the removal of some disease, but the pain persisted although the disease present had been cured. In many of these cases Dr. Lomer cured the pain, after surgery had failed, by the use of the constant galvanic current. This, he says, should be very weak, so weak that the patient can hardly feel it, or not feel it at all. He admits that this treatment can hardly be distinguished from treatment by suggestion. He lays stress on the importance of taking the patient from home, and putting her under moral discipline. Lastly, in most cases the prolonged administration of iron is important: for anæmia and chlorosis are the underlying conditions of many hysterical developments. Dr. Lomer in the second part of his book considers the different seats and kinds of pain produced by diseases of the female genitalia. It will be seen that Dr. Lomer's book contains much instruction, and deserves careful study by gynæcologists as well as others. We may note that he does not appear acquainted with the observations of one of our English neurologists, Dr. Head, on the association of areas of superficial tenderness with visceral disease.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Luer's Aseptic Syringe.—This syringe is made entirely of glass. The interior of the barrel and the exterior of the solid glass piston are frosted and accurate air and water tight adaptation is thereby secured. The simplicity of construction, the syringe consisting of two pieces only, is of considerable advantage, and sterilisation by boiling or by soaking in anti-



septic fluids is both easy and rapid. Two needles are supplied with each syringe, and are made of steel or of platinum with iridium points. In use the syringe is found to work well. There are two possible disadvantages; one, that continuous use may make the contact between barrel and piston, owing to friction, less intimate, and result in leakage; and the other that the whole instrument, being of glass, breakages may be frequent and costly. Five sizes are made, the smaller for hypodermic injection, the larger for serum and antitoxin injections. As a simple, compact, and easily sterilisable syringe this leaves little to be desired.

MEDICINAL AND DIETETIC PREPARATIONS.

Eucaine Hydrochloride.—Two salts met with in commerce are under the name of cocaine hydrochloride. They are different in constitution, but both are synthetic compounds chemically allied to cocaine, and resembling it also in the production of local anæsthesia. Eucaine α or alpha eucaine is chemically a benzoyl-methyl compound of oxy-piperidine; it occurs in the form of glossy prisms, insoluble in water, and on this account the hydrochloride is usually employed. The properties of alpha eucaine are that of a local anæsthetic like cocaine, but it has an advantage over the latter in that it has no action upon the heart, also that it is not decomposed on boiling with water, which is necessary for sterilisation. It is said to possess the disadvantage that in ophthalmology it produces considerable pain and burning. Eucaine β, or beta eucaine, is benzoyl-vinyl-diaceton-alkamine. The hydrochloride is in small, white opaque crystals. Eucaine β is free from irritating action, far more active, and less toxic than cocaine. It is stated to be 3.75 times less toxic than Eucaine α, and to be more suitable for ophthalmic and hypodermic use. Alpha eucaine hydrochloride is much more soluble than beta eucaine hydrochloride in water, olive oil, glycerine, and alcohol. At ordinary temperatures 100 grams of water will dissolve 10 grams of alpha and 4.5 grams of beta eucaine hydrochloride. In ether, alpha eucaine hydrochloride is very slightly soluble, and beta eucaine hydrochloride quite insoluble. Messrs. A. and M. Zimmermann, 9, St. Mary-at-Hill, E.C., have issued a short memorandum on the relative solubility of these salts.

Protene Preparations.—We have found it to be a matter of very considerable difficulty to arrive at a clear conception of the claims put forward for these preparations, and to decide whether, under all the circumstances, it was desirable to bring them to the notice of the profession at the present time. The substance which is used as the basis of the "protene" products is called "protene or pure proteine" or, again, "pure protene flour." This is a tolerably fine powder, almost insoluble in water, and having the composition of a dried milk "curd," containing 7.68 per cent of fat. The results of our analysis show that the statements made by the proprietors as to the origin and method of preparation of the substance may be accepted as correct, but it is, in our opinion, unfortunate that, in regard to a preparation which may be of very considerable usefulness and value, the claims made, both as to its composition and its applications, should savour of exaggeration, and should not be of such a nature as to ensure that analytical and other investigations will absolutely bear them out. It is claimed, for instance, that "protene" (proteine) "contains 90 per cent. of proteid." The results of our analysis show that the sample submitted to us contained 74.7 per cent. of total proteid matter, and the results of another analysis, put forward in a slip apparently printed by the proprietors, show 80 per cent. of total nitrogenous matters. With reference to the general claims made, we consider that it may properly be said that protene is a substance largely consisting of proteid matter, but not that it "consists of practically pure proteid." We think that protene will keep for a considerable length of time, and will probably not be affected, under reasonable conditions, by climate or temperature; that protene could be added to a food and would increase its nutritive value; and that protene is not unpalatable; but there does not appear to be ground for saying that it is the only food that can be made palatable for diabetics, nor, although protene may be a very useful food for invalids and children, that it is necessarily the best food for these. "Prepared protene flour for solution," or "pure protene flour soluble" is a form of "protene flour" modified by the addition of a small percentage of carbonate of soda. This admixture renders the material in a sense "soluble" to some extent, an emulsion being formed on addition of hot water. "Pure protene biscuits" are shown by our analysis to contain a high percentage of proteid matter—53.43 per cent.—and to be free from starch and sugar, the biscuits being sweetened with saccharin. "Protene medical biscuits" also contain a high percentage of proteid matter, but a lower percentage than that found in the case of the "pure protene biscuits"—namely, 37.93 per cent. The "medical biscuits" are free from sugar, but contain wheat flour, and we are at a loss to understand why the latter addition was considered necessary, especially as the biscuits first referred to are free from it. The idea upon which the preparation of the protene food substances is based is undoubtedly a good one, and it is therefore desirable that that idea should be carried out in a manner which will enable a less qualified approval to be given to these articles. It is plain that some minor improvements in the method of manufacture are required, and that the claims made by the proprietors should be put forward in a more compact and clear form, and in rather a more sober manner than is at present the case.

A French Commission of Hygiene.—At a recent sitting the French Chamber of Deputies, on the proposal of Dr. S. Dubois, one of the members for Paris, voted in favour of the early constitution of a great Commission of Hygiene, analogous to those of assurance and social providence which have been so actively at work during the last two or three years.

THE BACTERIAL PURIFICATION OF SEWAGE.

[BY OUR COMMISSIONER.]

II.

THE SEPTIC TANK.

THE PRINCIPLE OF THE SEPTIC TANK.

IT is only within quite recent years that attention has been drawn to bacterial treatment in the disposal of sewage. In 1895 the first public installation of the septic-tank system was instituted at St. Leonards (not the South Coast watering place, but a suburb of Exeter), under Mr. Donald Cameron, the city surveyor.

This was not by any means the first attempt to utilise the services of bacteria under control for the treatment of sewage, but it was the first example of this particular system. In principle the system has two stages:

1. *The Septic Tank.*—This is a closed air-tight tank or chamber into which the sewage flows direct from the sewers, and where the matter in suspension is thrown into solution under anaërobic conditions.

2. *The Filter Beds.*—The effluent from the septic tank passes through filter beds of coke breeze or clinker, where a further purification of the matter takes place under aërobic conditions.

The idea of the closed tank is in itself no new one, as the somewhat remarkable fact was long ago observed that whereas sewage could be allowed to run for years into properly-constructed cesspools (in which no leakage was allowed to occur), yet the quantity of solid matter only slowly increased above a certain limit. A cesspool, in fact, is nothing more or less than a primitive septic tank. The agency of bacteria was only suspected at this period. It is now well known that certain of these organisms possess the power of breaking up the complex organic compounds found in sewage, and reducing them to simpler and more elementary forms, and ultimately to carbonic acid gas, ammonia, and water.

The septic tank takes advantage of the powers of certain bacteria and their products, which liquefy and digest gelatinous and albuminoid material, transforming this from the insoluble to the soluble condition, and leaving behind only a little mineral grit.

Whether this anaërobic process which occurs in the tank is essential for the effective disposal of sewage is a question upon which various opinions are held, but it undoubtedly has certain advantages, inasmuch as it does away with screening or chemical precipitation.

THE SEPTIC TANK.

The following is a short description of the construction of the septic chamber and filter beds at Exeter (Fig. 3):

The tank is constructed of cemented masonry, built below the level of the ground, covered with a concrete arch carried by brick piers, over which a layer of soil and turf is spread; it is thus absolutely without light or air.

The tank is 64 feet long, 18 feet wide, and varies in depth from 7 feet to 7 feet 9 inches below the water level, and contains some 53,000 gallons (Fig. 4). Before the sewage enters this tank it passes first into what is termed a "grit chamber," which is some 3 feet deeper than the tank. Into this heavy bodies, rubbish, or road detritus fall, and are detained, and may be dredged without disturbing the process going on in the remainder of the tank.

The sewage is turned into the septic tank without screening or other preliminary treatment. It enters by two inlets, which are carried down to a depth of about 5 feet below the surface. The object of this is threefold. First, the scum which floats on the surface is undisturbed; secondly, no air can make its way down with the sewage; and, thirdly, the gases from the tank cannot escape back into the sewer.

The flow through the tank is continuous, and the effluent passes off practically at the same level as the sewage enters. The tank therefore requires no fall. The effluent is drawn off between the scum on the surface and the heavy deposit which lies at the bottom of the tank.

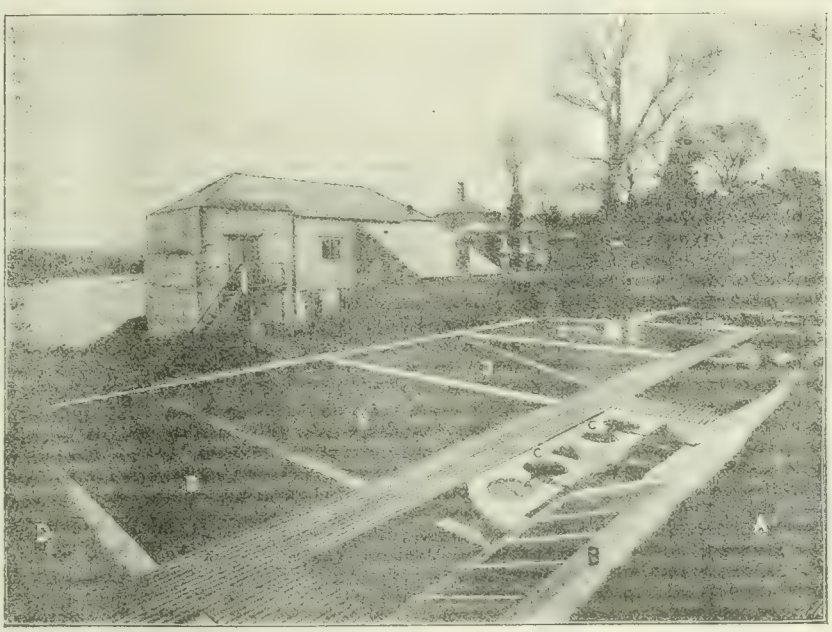


Fig. 3.—General view of Belleisle installation; A, tank; B, aërating chamber, the glass lids of which can be opened or closed; C, C, alternating gear; D, D, D, D, filter beds of clinker; D', filter bed of coke breeze.

If there were only a single opening the effluent would rush out in a strong current, which would be liable to drag down floating matter from the surface. To avoid this, a cast iron pipe in the lower side of which is a continuous slot or opening about half an inch wide, is carried across the whole width of the tank, about 15 inches below the surface. Through this opening the effluent passes off in a thin sheet, the whole width of the tank, with the least possible disturbance of its contents.

The tank itself holds almost exactly one day's average flow, and the rate of flow is therefore exceedingly slow, being in fact almost imperceptible. With a flow of 35,000 gallons, and a tank of the capacity of 54,000 gallons, the sewage remains in the tank in summer time for a maximum of about thirty-eight hours, and in winter, during floods, for a minimum of about ten hours.

The solid matter has plenty of time to settle and be fully operated on by the bacteria, which are not only contained in the crude sewage itself, but also grow and multiply in the tanks.

This bacterial growth is a question of time, and days or weeks must elapse at first before the bacteria on which the septic tank system depends are in sufficient number to put the tank into full working order, but when once started the tanks need no further attention in this respect. There is thus a certain analogy between the septic tank and the filter bed of a water reservoir. The freshly-laid filter bed of a reservoir exercises a purely mechanical action on the water that passes through it, and not until some considerable time has passed, during which a film of bacterial organisms has spread over its bed (together with zoogloea, and the layer of oxygen that is always formed over any mass of finely-divided particles), does any chemical action in the purification of water occur.

So in the septic tank, it takes some time before these special bacteria have, so to speak, stewed in their own juice, and grown in sufficient numbers and activity to perform their appointed work.

THE WORKING OF THE SEPTIC TANK.

In the centre of the main septic tank is an inspection chamber, constructed of brick with thick plate-glass windows, something in appearance like the conning tower of a man-o'-war, from the inside of which a general view of the "working" (for it has just this yeast-like fermentative appearance) of the sewage can be obtained.

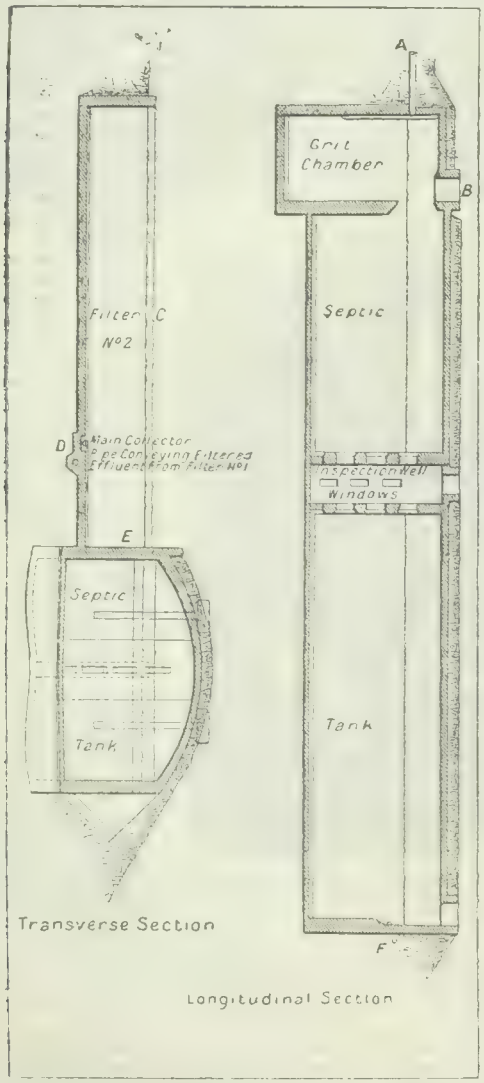


Fig. 4.—Sections of Belleisle installation, Exeter; A, inlet; B, manhole; C, contributing channel; E, tube conveying tank effluent to filter No. 1; F, outlet, slotted pipe.

On the surface is a tough, leathery-looking "scum" of from a quarter to two inches in thickness, with scattered areas, some large and others small, indicating where a process of liquefaction is taking place.

On every side throughout the tank countless small masses of organic matter are to be observed constantly rising and falling. The cause of these movements is interesting. In the first place the masses fall to the bottom by their own weight; here they are pounced upon by bacteria, which in their assault generate numerous gases in the small masses, which are thus caused to rise again to the surface; the pressure being then reduced, the gases expand and burst in bubbles, leaving the particles to sink again and commence a similar cycle.

During the whole period in which organic matter is in the tank the bacteria never cease in their attempts to destroy it, and every occasion on which a small portion is seen to rise or fall it loses some of its bulk by these unceasing erosions, until at last it is entirely consumed and disappears. When it is considered that each of the innumerable masses of organic matter seen in the tank is being attacked in identically the same manner, and at the same time, some conception can be formed of the extensive changes and consequent destruction momentarily taking place, without any artificial aid whatever.

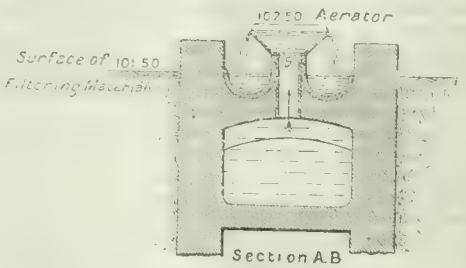


Fig. 5.—Section of Aërator.

On its exit from the tank the effluent has rather the appearance of "dish water." Analysis has shown that, under these anaërobic conditions, the albuminoid or organic ammonia is somewhat reduced in quantity, and to a greater extent the free or saline ammonia (chiefly carbonate of ammonia $CO_2(NH_4O_2)$ resulting from the splitting up of urea (CH_4N_2O), and the reduction to NH_3, CO_2, and H_2O of the more putrescible matter in the sewage. This free or saline ammonia, being an ultimate product, is not a serious factor of pollution in a sewage effluent. The oxidisable organic matter is also diminished, as estimated by Tidy's permanganate process. The whole of the organic matter of sewage is not oxidisable, nor does the amount of the oxidisable matter bear a definite ratio to the total amount of the organic matter. For this reason, organic matter is divisible into that which is oxidisable and that which is not. Drs. Kenwood and Butler[1] observe:

> The oxidisable organic matter, as estimated in two or four hours by Tidy's process, appears to be that of a transitional phase of the organic matter in its passage from that of a more stable organic compound to that of an ultimate product, such as NH_3 or CO_2; it is probably represented both in the free and albuminoid ammonia of Wanklyn's process.

Further:

> The albuminoid ammonia figure does not nearly represent the whole of the nitrogenous organic matter, and the oxygen absorbent figure includes, of course, not only nitrogenous organic matter, but also carbonaceous.

Altogether a process of peptonisation and digestion has taken place, and thrown all the organic matter into solution. At the same time numerous gases, such as H_2S, C_2H_4, CO_2, N, etc., have been evolved.

The amount of sludge, and the difficulty of its disposal has always been the great drawback to systems in which chemical precipitation is relied on; but in the case of the septic tank, through the liquefaction and subsequent almost total destruction of the sewage by bacteria, the sludge is an almost negligeable quantity, and even after three years' experiment the amount at the bottom of the tank, the residue of the excreta of 1,500 individuals during the period, was under 4 feet deep.

Part of this residue is the flint and sand of the mud carried down by the sewers, which is, of course, not acted on by bacteria. Should the sludge in the course of time require removing, this can be accomplished by pumping.

THE FILTER BED.

Up to this point the sewage has undergone a treatment which primarily depends on the absence of light and air, and the presence of certain classes of bacteria (aërobic), which only flourish under these conditions.

Now all this is to be altered, and a diametrically opposite method of procedure is to be henceforth employed, that is,

[1] *Transactions of the Sanitary Institute*, vol. xix.

the utilisation of aërobic bacteria, which flourish in the presence of light and air, and whose value consists largely in their powers of purifying by the oxidation of matter already in solution.

THE AËRATING CHAMBER.

The effluent as it leaves the tank, although containing less matter in suspension, does not contain less in "solution" at this stage; it is of a yellowish-brown colour, and has a distinct odour, which is, however, only appreciable to those in very close proximity. The pipe through which it now flows leads to a small open chamber (an aërating chamber) outside the tank, in one side of which is a V-shaped slot, so cut that with the aid of a gauge the amount of sewage flowing over the V at any time may be easily calculated (Fig. 5).

From this aërating chamber the effluent runs into a trough, closed at both ends, and it is thus compelled to flow over the sides as over a weir; this it does in two thin sheets of water, which necessarily undergoes a considerable amount of oxidation in their fall.

This is the first part of the aërobic (oxidising process), and the result is an artificial aëration which favours the action of the aërobic organisms presently to be encountered in the filter. The effluent now flows by a channel into two valve chambers, from which it is distributed to the filters.

Construction of Filters.—Each filter is 36 feet long by 20 feet wide, and is filled to a depth of 4½ feet with crushed furnace clinker, resting on 6 inches of coarse gravel. In one of the five filters at Exeter coke breeze is used, but it is not considered to give as satisfactory results as the clinker.

EFFECT OF THE FILTERS.

The albuminoid ammonia after this stage is found to have been greatly decreased (it was scarcely affected by anaërobic conditions). It is a fairly reliable index of the amount of organic pollution, and a good effluent should not contain more than 0.1 per 100,000 parts.

According to some statements made by Dr. S. Rideal at the Congress of the Sanitary Institute held at Birmingham, 1898, another test of the purity of an effluent is the ratio of the oxidised nitrogen expressed in "nitrates" and "nitrites" to the "oxygen consumed," for should the amount of nitrogen (as measured by "nitrates" and "nitrites") exceed the amount of oxygen required as measured by Tidy's permanganate test, there will be no danger of any reversion or secondary decomposition of the effluent taking place. He moreover states:

> There is always a distinct loss of nitrogen in both the anaërobic and aërobic processes, the NH_3 of the former reacting with the HNO_3 and HNO_2 of the latter, resulting in the evolution of the oxides of nitrogen and nitrogen gas, and in the oxides of nitrogen there is a large amount of oxygen which burns up and destroys any remaining unoxidised matter which might be present in the filtrate. At the same time, if the stream be many times the size of the effluent running into it, any free oxygen it contained would be utilised instead of the oxygen of the oxidised nitrogen. Urine, which forms by far the greater part of the organic nitrogenous matter in sewage, is rapidly changed into carbonate of ammonia without atmospheric oxygen by the agency of the B. ureæ.

Drs. Kenwood and Butler first drew attention to the fact that the presence and amount of nitrates in an effluent cannot be regarded as in any sense an index or measure of purification. They and others have recorded analyses in which abundant nitrates were obtained from foul effluents, while effluents conforming to a high standard of purity contain no oxidised nitrogen whatever.

In the anaërobic tank no rest is necessary, for the reason that the supply of micro-organisms is unlimited, being perpetually replenished by the inflowing sewage, which, with the "scum" forms an inexhaustible nutrient medium, in which they undergo perpetual regeneration. Not so, however, in the aërobic filter; here there is only a limited amount of oxygen to start with, and a consequent definite limitation to the amount of work the filters are enabled to perform. Hence it is always necessary to allow each filter in turn a rest, in order that the oxygen may be replenished and the filter freshened. In other words, the filtration of sewage effluent in whatever manner it is carried out must be intermittent. This is essential.

AUTOMATIC ALTERNATING GEAR.

No one part of a filter should have more work imposed on it than another, and to avoid this care must be taken in charging it to determine an even uniform distribution of the liquid over the whole area. Unless this care be exercised the filter is very apt to become foul and cause a serious nuisance.

In septic tank installations at Exeter, Barrhead, and Yeovil, an apparatus automatically regulates not only the exact amount of effluent sent on to each filter, but the time at and during which the action of the filter shall take place. At regular stated intervals each filter in turn is filled, the sewage allowed to stand for aëration, and the filter then slowly emptied without any attention or interference. In this way the attendance of a staff of men is obviated, and expense is saved, while the work is performed with precision and regularity. The automatic alternating gear has been in constant operation for over three years at Exeter and Yeovil, and a man looks round the premises two or three times a week to see if all is going on in a satisfactory manner, and to keep the place in proper order. It is stated that the filters during all the period they have been in use have never been changed or renewed.

EFFLUENT.

At Exeter the effluent from St. Leonards, after passing through the filters, and thence through the discharge wells, is bright, clear, and sparkling, and may, it is believed, be drunk by anyone feeling so disposed with impunity, and, according to the testimony of some, even with relish. At the present moment it is allowed to run straight into the river Exe, which at this point is a stream of considerable volume.

At Yeovil a similar installation to that of Exeter deals with a far stronger and more offensive sewage, partly resultant from trade refuse (fellmongers, glove and dye works, etc.). The effluent goes direct into a small stream, not more than a yard broad, and nowhere more than 6 inches deep. No secondary decomposition seemed to occur, at all events in the short length of stream that could be observed.

Many effluents satisfy the requirements of the Rivers Pollution Act (unhappily somewhat of a dead letter) as to their suitability for passing into a stream or river, but nevertheless undergo ammoniacal decomposition, with its attendant consequences of smell and general annoyance to the inhabitants of the district. This is often the case with sewage treated by chemical precipitation, whether allowed to run over land or not.

The Local Government Board insist on the application to land as being necessarily a part of any scheme submitted to them for the disposal of sewage, whether by chemical precipitation, filtration, or any other method in which an effluent is allowed to pass into a river or stream. In this matter it is needless to observe the Local Government Board have shown great judgment, as the effects of an effluent is shown in the stream into which it is discharged, and the real efficiency of a process can only be truly estimated from the result obtained.

In the plan in which Exeter proposes to deal with the sewage of nearly 40,000 inhabitants, on the basis of half an acre to the 1,000 inhabitants, about 20 acres will be required, and this the City Council have guaranteed to obtain for the purpose.

SUMMARY OF THE CHIEF CHARACTERISTICS OF THE SEPTIC TANK SYSTEM.

I. *Gases.*—Numerous gases are generated in the tank, the products of decomposition—carbonic acid, marsh gas, free hydrogen, and perhaps nitrogen. These gases are partly contained in the tank, in which therefore there must be a certain amount of pressure, but its exact amount has not as yet been determined; no doubt a certain proportion filter through the tank walls and even pass away with the effluent. Marsh gas and hydrogen are highly inflammable, and the flame produced is of intense heat. By the aid of an incandescent mantle placed over a burner on a lamp-post these gases are made to give a good light, which serves to illuminate the works at night. It also affords an easy method for the destruction of gases which in large quantities might prove dangerous by their inflammable and explosive qualities. They are at the same time somewhat offensive.

II. *Nature of Effluent.*—It has been contended that the Exeter sewage is very weak, and that the septic tank system, though capable of dealing with this, might be unable to cope with a stronger sewage, especially one containing trade

effluents. In reply to this it is stated that (*a*) the Exeter sewage is of average strength when compared with the domestic sewage of other towns; and (*b*) that the Yeovil sewage, which is of a very foul nature, has been successfully treated by this system for the past three years. Critics, however, still maintain, first, that the Exeter (that is, St. Leonards) sewage must be exceptionally weak, since it is derived from a high-class residential neighbourhood, containing good houses, using a plentiful quantity of bath water, and having a larger superficial ground for the catchment and subsequent drainage of rain water than a poorer district with small houses on a congested area. Secondly, that the chlorine is only 4 to 6 parts per 100,000 as against 8 to 12 parts per 100,000 in that of the sewage of most other towns; the volatile solids under 30 parts per 100,000, and the free and albuminoid ammonia 1.4 and 0.17 respectively. Thirdly, that the effluent of Yeovil and its trade sewage is not at all so satisfactory at a lower point as it is immediately at its point of entry.

III. *Storm Water.*—In many places the overflow or storm water is allowed to run straight into a river or stream without any preliminary treatment whatever. This is extremely undesirable, owing to the fact that the first rush of storm water is far more polluting than ordinary dry-weather sewage, because the old deposits in the sewer are swept away to the outfall. Therefore the entire amount of storm water, or at all events the earlier and fouler portions of it, should be passed into the works before any overflow is allowed to occur. Storm water has no very appreciable effect on the flow of the contents of the tank. Thus, if the velocity of the flow in the tanks, with three times the volume of the dry weather sewage passing through them, is 2 inches a minute, then, with even six or twelve times the dry-weather flow, the velocity would only be 4 or 8 inches a minute respectively; this increase would scarcely be perceptible, and would not, it is believed, interrupt the processes going on in the tank, provided a sufficient length of time were allowed for proper action to take place.

IV. *Effluent.*—The ultimate effluent from the septic system is apparently good; it is clear, bright, and has an almost imperceptible smell, and does not appear to undergo any secondary decomposition; it, morover, stands the "incubator test" fairly well, and it is stated that an ill odour has been detected on rare occasions only.

V. *Sludge.*—The amount of sludge is extremely small, even after the lapse of months or years, and its rate of increase is so slow that the necessity to clear the tanks out can only arise at long intervals. It is probable that when this necessity does arise no difficulty will be found in emptying out the sludge. The sludge consists of a fine black ash. Its small quantity would greatly facilitate its disposal in any manner found most convenient, and this question would only have to be considered at very long intervals. The Septic Tank Syndicate in their prospectus aver that there is *no* sludge, but this statement is one which obviously requires modification. On precipitation works the sludge has to be dug up, pressed into cakes, and dried, before any use can be made of it, and at the best it is a very poor manure, as all the principal manurial agents pass away in the effluent.

VI. *Waterborne Diseases.*—The pathogenic organisms of typhoid fever and other waterborne diseases are generally supposed to be destroyed in the tank on the following grounds: (*a*) That they do not as a rule thrive much below 37° C.; (*b*) that the foul contents of the tank are not suitable for the growth of the organisms of cholera or typhoid fever, requiring as they do a much purer medium for their development; and (*c*) that in all probability the other bacteria are distinctly inimical to their existence and crowd them out.[2] These statements have been called in question by many authorities, but it would be as well, until our knowledge on the subject has increased, not to be too assertive one way or the other.

VII. *Nuisance.*—There has been no complaint of any nuisance arising from the works by anyone in the neighbourhood of Exeter, Yeovil, or Barrhead, since they were first constructed.

VIII. *Cost.*—The initial cost of erection is held to be small as compared with other systems, and the subsequent outlay equally so.

IX. *General Applicability.*—The system seems to be best adapted to small towns, villages, or large country establishments, as for example:

1. Hospitals (general and fever). The Fever Hospital at Exeter employs the system.
2. Country institutions. The system is used at the convent at Great Maplestead, and might be employed at lunatic asylums and workhouses.
3. Schools.
4. Sanatoria.
5. Barracks. The system is in use at the barracks at Tipperary and Dublin.
6. Standing or permanent camps. The system is in use at Okehampton.
7. Cottage homes. Near Manchester there are homes for over 100 children where the septic tank is used.
8. Racing stables.
9. Large mansions where it has been employed with good results in some instances.

At present it would seem that the larger towns and cities would be well advised to wait until a longer experience of the working of the system in disposing of the sewage of smaller communities has been gained.

Finally, with the fear of Sir William Crookes and Dr. Poore before my eyes it must be admitted that though the septic-tank system is theoretically and practically an extremely good one, it is not the last word on sewage disposal.

[2] Some engineers are disposed to urge that if medical men in charge of cases of typhoid fever, cholera, yellow fever, etc., would persuade the patient's friends to have the stools burnt immediately on their evacuation this question with regard to sewage effluent, the pollution of water supplies, and the dissemination of disease, would never arise. It is urged all that is required is a small open space (a back yard), a few bricks, and plenty of sawdust or shavings, and kerosene. A small crematory would be better, and save time and trouble; and it is suggested that municipal councils should keep portable crematories for distribution. It would, however, be necessary in the case of typhoid fever at least to have the urine burnt also, and unless conducted under skilled supervision the process might introduce new risks.

NOVA ET VETERA.

AN OLD DIRECTORY.

By E. MUIRHEAD LITTLE, F.R.C.S.Eng.

AMONG the "books which are no books" (*biblia a-biblia*) Charles Lamb included directories. He looked at them from a literary point of view. No doubt the *Directory* of the current year is not a fascinating study, but one only a generation old has a considerable interest. "The lives of streets are as the lives of men, and shall not the street preacher if so minded take for the text of his sermon the stones in the gutter?" It seems to me that the lives of streets in the sense in which Thackeray used the phrase are written in directories more than anywhere else, and I therefore claim the author of *Philip* as my backer in the opinion that an old directory may be interesting.

The particular one in question is the first issue of the *London Medical Directory*, that for the year 1845, and is a small and slim octavo volume. No definition of "London" is given on the title page or in the preface;[1] but as Stratford-Langthorne, and Deptford in the East, and Kensington and Notting Hill in the West, Stoke Newington and Hampstead on the North, and Brixton and Clapham on the South are included, it would seem to have covered the whole of London and its then suburbs. The number of names in this book is 2,165. There are 6,117 in the London division of the *Medical Directory* for 1899.

The population of London in 1841, according to the Registrar-General's returns was 1,948,369. We may assume that four years later it was 2,000,000 at least. The estimated population of the Administrative County of London in October, 1899, was 4,546,752. Roughly speaking the proportion of medical men to population in 1899 was 1 in 750, while in 1845 it was 1 in 900. The overcrowding of which the medical, like other professions, complains at the present day would thus seem to be greater than it was fifty years ago. Yet probably doctors were, on the whole, better paid in 1845, when the Poor-law infirmaries were few and small, and the out-patients of the general hospitals were few in numbers compared with the enormous crowds who are now treated free. True, there were dispensaries, and the medical journals of the "Thirties" even contain bitter complaints of them, and allegations of wholesale abuse of these charities side by side with accusations of gross carelessness or neglect in their treatment of patients. The iniquity of paying only 4s. a year per pauper was at that time descanted on; now medical aid associations consider

[1] In the 1846 *Directory* 5 miles from G.P.O. is stated as the limit.

that sum a handsome annual payment for those who do not pretend to be paupers.

But to return to our *Directory*. Apparently medical men of that day, being without precedents, were, naturally enough, rather at a loss as to what kind of particulars they should furnish, and consequently, as the entries were not severely edited, some curious statements are to be found in this book, in which more or less modest merit attempts to assert itself and injured worth lifts up its voice and proclaims aloud its grievances.

I must confess that I am fairly "flummoxed" (to use a Pickwickian phrase) by some statements. For instance, I should like to know what the "Chronothermal System of Medicine" is (or was) on which, and on the "Fallacies of the Faculty," Dr. Samuel Dickson, of Bolton Street, wrote, and what on earth was the "General Cemetery Assurance Co." to which Dr. World was surgeon? Did it insure the denizens of cemeteries against fire, or was it a burial club, and in either case what did it want with a surgeon? Again, what was the Erectheum Club in St. James Square to which some gentlemen were so proud to belong that they mentioned the fact? Dr. Brown was equally proud to tell the admiring public that he was one of the first to prescribe minute doses of mercury, and that he was a member of the Marylebone Club. Another practitioner stated that besides being a member of the Ethnological Society, he was a "Candidate at the Athenæum Club." A search through later issues of the *Directory* might show whether he was elected or blackballed. The surgeons to the Honourable Society of Ancient Britons and to the Friendly Boiler Makers jostle the author of a treatise on the Pendulous Belly for a place in the public esteem, while it was the proud boast of a certain ex-naval surgeon that he had invented a sympathetic ink which proved of essential service to the Polish refugees assembled at Plymouth in 1830, and the Secretary of the College of Chemistry recorded the fact that he had discoursed on the connection of diseases and remedies with the truths of revelation. The surgeon to the Duke of Cambridge, Mr. Stafford,[2] must have been a man after the heart of Gilbert's Mikado, for he was not only the inventor of the spine elongator and lateral rocker, which savours of the Holy Office, but he was also the proposer of a plan of pouring melted wax into deep ulcers, a proposal which I am sure would have seemed something humorous and lingering to the father of Nanki Poo. Let us hope he only proposed it.

It is pleasant to think that the inventor of the papier-maché anatomical figures for the education of the native surgeons of India not only supplied the company with forty such, but was paid 2,000 guineas for the same. But what am I say of William Vesalius Pettigrew? In these days it is difficult to believe that any practitioner—and he a graduate of Glasgow University—could be so ignorant of the first principles of the gentle art of self-advertisement as to have published an anonymous medical work. Apparently he saw his error somewhat late, and hence inserted this claim to the authorship of "an anonymous work *On the Diseases of Children, their Clothing, Diet, Education*, etc."

Signs of the dissatisfactions which the exclusiveness of the College of Physicians caused are to be found in the following:

Dr. Mann Burrows was the first to be elected a Fellow of the Royal College of Physicians after having been a member of both the College of Surgeons and the Society of Apothecaries and a general practitioner. The date of his election therefore, was at the period when the College abandoned the previously rigid exclusion from the Fellowship of medical men who had been in general practice. The late Dr. Babington, who was also a Fellow, had been Resident Apothecary to Guy's Hospital, but he belonged to neither of these corporations, nor had he been in general practice.

This Dr. George Mann Burrows, of Upper Gower Street, described himself as "Physician (specially engaged in the treatment of insanity)," and must not be confused with Dr. (afterwards Sir) George Burrows of Queen Anne Street.

Perhaps the longest notice in the book is that following the honoured name of Dr. Grant, who was distinguished as Lecturer on Comparative Anatomy at University College. After stating his grievance in being debarred from practice in London by the Medical Corporations, and enumerating the many learned societies to which he belonged, and some of his works, he "mentions the remarkable fact as connected with the history of comparative anatomy, that in the year 1844 (the seventeenth of his professorship, the twentieth of his lecture-

[2] Jacksonian Prizeman, 1826, on Diseases of Spine.

ship, and the thirtieth of his authorship in comparative anatomy) out of his income amounting in all to £120 6s. 6d., the sum of £110 10s. was earned exclusively by oral lectures on the favourite study of his past life!"

In 1845 consultants had not crowded to the West End of the town to the extent to which they, following their richer patients, have since done. Many of the physicians and surgeons of the more eastern hospitals—St Bartholomew's, London, Guy's, and St. Thomas's—lived in the city or in Finsbury. New Broad Street was favoured by the staff of the London Hospital, and Savile Row, where Brodie lived, by St. George's. Of the other big-wigs, Liston lived in Clifford Street, Hodgkin in Brook Street, Bright in Savile Row, Elliotson in Conduit Street, W. Fergusson—a rising man—in Dover Street, Sir Stephen Hammick, Sir Alexander Morison, and Dr. Joseph Ridge, were the only medical inhabitants of Cavendish Square. In 1845, Old Burlington Street, in which Dr. Akenside, the poet, had lived from 1762 to 1770, was a street much favoured by medical men. It is a street for which I have a great regard, because I am persuaded that it is the Old Parr Street in which the great Dr. Brand Firmin lived. It is thus described by Thackeray:—

Old Parr Street has been a habitation for generations of surgeons and physicians. I suppose the noblemen for whose use the street was intended in the time of the early Georges, fled, finding the neighborhood too dismal, and the gentlemen in black coats came and took possession of the gilded, gloomy chambers which the sacred *mode* vacated. . . . . It is a funereal street, Old Parr Street, certainly; the carriages which drive there ought to have feathers on the roof, and the butlers who open the doors should wear weepers—so the scene strikes you now as you pass along the spacious empty pavement.

Generally speaking the consultants lived in the quadrilateral bounded by Regent Street, Park Lane, Piccadilly, and Oxford Street. Other members of hospital staffs lived in Bloomsbury, and indeed the juniors were scattered about, living either close to their hospitals, or as far away as Myddelton Square is from Guy's or Northampton Square from Charing Cross, for it does not seem that it was incumbent on the struggling consultant to pretend that he was overwhelmed with patients.

On the north side of Oxford Street there were few consultants. Harley Street contained only six medical men, of whom only three were consultants. Now there are 148 brass plates among 150 doors, without counting those dentists who have only dental qualifications; but at that time the late Sir Richard Quain, who was credited with having started the Harley Street fashion, was House-Physician to University College Hospital, and his namesake and cousin the surgeon dwelt in Keppel Street, Russell Square; William Bowman lived in Golden Square; while Albert Richard Smith, who described himself in this *Directory* as "author of a pamphlet against phrenology, and several novels, dramas, tales, songs, burlesques, etc., and contributions to *Punch*," was a surgeon-dentist in Percy Street, Bedford Square; W. Jenner was a general practitioner in Albany Street, and William Gull Resident Medical Assistant at Guy's Hospital.

Up to the date of this *Directory*, the most successful consultants lived, as might be expected, near to their most important patients, that is to say, wherever the wealthy merchants and the nobility were to be found. In the sixteenth century they were still in the city. Thus Linacre lived in Knightrider Street, and bequeathed his house there to the College of Physicians, which he had founded. Dr. William Turner in 1568 dedicated his Herbal to Queen Elizabeth "from my house in Crossed Fryers." He had a botanical garden there, as well as at Kew and Wells.

Harvey, who was Physician Extraordinary to James I and Physician in Ordinary to Charles I, no doubt lived near the Court when he was on duty, for it was from his lodgings at Whitehall that his papers were taken and destroyed during the rebellion, but his permanent dwelling seems to have been with his brothers in the city at Lawrence Pountney Hill and at Cockayne Hall.

Gradually the great physicians followed the Court westward. Sydenham began to practise in King Street, Westminster, but soon afterwards—in 1664—moved to a house in Pall Mall. It was here, as the story goes, that the stout old captain of Cromwellian Horse was sitting at a window with his pipe and silver tankard, when a thief snatched the latter and ran off. He was pursued "as far as Bond Street, where they lost him in the bushes." Radcliffe lived in Bow Street,

from 1687 to 1704, when he moved to Bloomsbury Square, where he entertained Prince Eugene, who hated France and all things French, with a plain English dinner of barons of beef, jiggets of mutton, and legs of pork, washed down by ale seven years old. In this house he was succeeded by Mead, who afterwards moved to Great Ormond Street, where the Hospital for Sick Children now stands. Mead was born and bred at Stepney, and only removed to Crutched Friars when he was appointed Assistant Physician to St. Thomas's Hospital in 1703. It was probably while he was living in the City, either at Crutched or Austin Friars, that he and Dr. Woodward, one of the professors of Gresham College, fell out over a medical question, caned one another in Bishopsgate Street, and then fought with swords in the courtyard of Gresham College. Woodward had the worst of it, and Mead said scornfully to his prostrate foe, "Take your life!" "Anything but your physic!" Woodward retorted. "Other times other manners." Happily the representatives of the profession bandy nothing worse than words nowadays. After he ceased to live in the city, Mead used to go to Batson's Coffee House in Cornhill, against the Royal Exchange, meet all the apothecaries, hear them, and prescribe. This was a common practice in those days, and Batson's was a favourite resort of Sir Richard Blackmore and a house of call for physicians. Sir W. Blizard, Surgeon to the London Hospital, regularly attended Batson's for consultations, and is said to have been the last to observe this custom.

It is recorded that Pope lay ill at Cheselden's house in Queen's Square, Westminster (now Queen Anne's Gate). Soho Square, which was so fashionable at the end of the seventeenth and beginning of the eighteenth centuries, was not invaded by the surgeons till its decline, when Sir Charles Bell and Sir Anthony Carlisle had houses there. Heberden the elder lived in Nell Gwynne's house in Pall Mall. Dr. Douglas (Pope's Douglas of the "soft obstetric hand") accused Smellie, the obstetrician, who lived in the same street, of hanging out a paper lantern bearing the legend "Midwifery taught here for five shillings." William Hunter lived with Smellie when he first came to London in 1741.

Askew, who died in 1774, lived in Queen Square, Bloomsbury. Pitcairn lived in Lincoln's Inn Fields, and died in 1797 in Dover Street. John Hunter lived in Jermyn Street, and afterwards in Leicester Square. Abernethy lived in Bedford Row when he was assistant surgeon to St. Bartholomew's Hospital. Lettsom lived and died in Basinghall Street (1815). Baillie, who succeeded Pitcairn as President of the College of Physicians, practised in Grosvenor Street, and died at 25, Cavendish Square, in 1823. His successor in the Presidency, Sir Henry Halford, had died in Curzon Street the year before that of our *Directory*.

It will thus be seen that until after 1845 there was no medical quarter in London. The names of 120 members of the staffs of ten general hospitals with schools are to be found in this *Directory*. They lived in sixty-four streets, and seven is the largest number to be found in any one street. This was the number in Savile Row and New Broad Street. Of the 255 members of the staffs of eleven general hospitals with schools, who are in active practice, and whose names are in the *Medical Directory for 1899*, I find sixty-six in Harley Street, where there are also fifty-two other consultants and specialists. Probably almost as many may be found in Wimpole Street.

The laws of congregation and dispersion of trades and callings seem to be unknown. Of course everybody knows that in the Middle Ages and the two or three succeeding centuries the members of the same trade were made to dwell together. Thus, in London, on each side of the great market, or Chepe, there are a number of streets the names of which to this day record the trades in which their former inhabitants were engaged. Sir Walter Besant gives the following explanation of this:

> This custom of congregation was useful in more ways than one; it gave dignity to the craft and inspired self-respect for the craftsman; it kept up the standard of good work; it made craftsmen regard each other as brethren, not as enemies; it gave them guilds of which our trades unions, who think of nothing but wages, are the degenerate successors, and it brought each trade under the salutary rule of the Church.

If congregation did all these things for the craftsman, there is small wonder that it flourished. Opinions will differ as to how far the rule of the Church was salutary, at least in the later pre-Reformation years. But even if Sir Walter Besant is right we have yet to find a cause for this congregation itself. Some years ago the coachmakers were crowded together in Long Acre, as—to compare great things with small—the bird fanciers were in Great St. Andrew Street. Both these streets, however, have gradually become less and less specialised at the same time that the doctors have been crowding together within sneering distance of one another near Cavendish Square, and the bicycle makers have established themselves on the Holborn Viaduct. Thus we find centripetal and centrifugal forces acting at the same time in different places.

The bicycle makers, I venture to think, supply a key to the difficulty. Many of us can remember how twenty-five years ago, when the high bicycle, with its steel spider wheels and rubber tyres, was beginning to replace the wooden boneshaker, one of the best known and most enterprising manufacturers, the Coventry Machinists Co., ventured to open a large shop on the Viaduct, where there were then many empty buildings. Their success was marked, and first one and then another of their rivals followed them into the Wilderness until there are now eighteen bicycle shops between Holborn Circus and the Old Bailey, without counting motor car builders and offices without open shops. In like manner the great success of Dr. Quain is said, I know not with what truth, to have started the movement northwards across Oxford Street.

There is no moral that I know of to be got out of this *Directory*, except the old one of nothing new under the sun, for I find various improvements of later years claimed by some of those whose names are here printed. For instance: Sir John (then Mr.) Erichsen ends a long record of his work with the statement, "Inventor of an instrument for the inflation of the lungs with oxygen gas in extreme cases of asphyxia." Not long ago an officer in the Royal Engineers reproved the profession for their ignorance of this "new" means of resuscitation.

Alfred Smee, whose name is so well known as the inventor of a galvanic battery, states that he is also the inventor of an "electro-magnetic apparatus for the detection of needles in the human body," and one modern advance in the surgery of the chest seems to have been forestalled by Mr. Robert R. Storks in a paper on a Case of Tuberculous Cavern Treated by an Opening Made in the Walls of the Thorax. An ancestor of the binaural stethoscope is plainly indicated by Dr. William Stroud, who "claims to have invented the flexible stethoscope."

Is the present congregation of the profession likely to be long-enduring, or will the tide which has flowed so quickly ebb as fast? Who can tell? So little is known of the causes of the flow that its course cannot be prognosticated. Perhaps the year 2000 will find our successors once more scattered or congregated about Shepherd's Bush or Putney Bridge.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on December 29th, 1899.

In the absence of the Chairman, Dr. de Havilland Hall, the chair was taken by Dr. Major Greenwood, and there were also present Dr. J. B. Ball, Mr. J. Brindley James, Dr. W. Knowsley Sibley, Mr. F. S. Edwards, and Mr. Edward Bartlett.

The death was announced of Mr. H. R. Jennings, of 46, Great Ormond Street, London, W.C., who had acted as auditor to the Society since its commencement in 1884. He was one of the public auditors appointed under the Friendly Societies' Act. His successor will be elected at the general meeting of the members to be held in May next.

The claim list presented showed clear signs of an epidemic of influenza, and there is little doubt that during the coming spring the Society will once more have to disburse a large sum in sickness benefit from this cause. The more recent claims from influenza have been for the most part of short duration, but they are rapidly becoming more numerous, and the total expenditure caused by them bids fair to be of large amount.

The final figures for the year 1899 could not be placed before the Committee till the meeting in January, but the accounts

produced showed that during the year the amount of sickness pay disbursed by the Society was the largest that has ever been paid in twelve months since the commencement of the business. This is only what must be expected. The number of the members has steadily grown and with it their average age, and, accordingly, every year the number of weeks of sickness expected and provided for by the tables must increase. During 1899 more than six hundred weeks of sickness benefit had been paid by the Society to members who were incapable of ever resuming practice, and were in this way drawing from the funds a solid and permanent provision.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

INDIA IN 1897.

THE REPORT OF THE SANITARY COMMISSIONER.

THE Report of the Sanitary Commissioner with the Government of India for the year 1897, in which is recorded all the available statistical and sanitary information regarding the general population of the Indian Empire, and the troops and prisoners belonging to the several military commands and civil provinces, gives a comprehensive and instructive view of the events of the year and the health of the country. The data are clearly and summarily set forth, and year by year, as knowledge and experience grow, the comments upon them become more valuable. A notable feature in this and some preceding reports is that on each of the more prominent matters of interest there is a *précis* of the literature of the subject, with references to the original publications, brought down to the date of the issue of the report. These sketches are admirably compiled, and must be of great service to Indian medical men whose opportunities of maintaining their knowledge are necessarily somewhat limited.

FAMINE AND DISEASE.

The year 1897 was for India a very trying and disastrous period. Following a year of drought and famine, which left large areas sterile and multitudes of human beings destitute and starving, dependent on the relief efforts of a humane Government, the first half of it partook generally of the character of its predecessor. It was hot and dry, and afforded no succour to the famishing millions. Generous and abundant rain came with a somewhat retarded monsoon. The fall was copious and well distributed, and in time supplied excellent crops, but, soaking into a parched soil, it occasioned conditions favourable to the evolution of malarious disease, which wrought exceptional havoc upon an enfeebled population, and was accompanied by a heavy onslaught of dysentery and diarrhœa. Cholera in some parts of India is favoured by drought and in others by moisture. Both conditions prevailed, and the disease was rampant. The plague which broke out in the city of Bombay in September, 1896, was extensively spread by fugitives throughout the Western Presidency, and made its appearance in some parts of the Punjab, North-Western Provinces, and Madras. There was a severe earthquake in Assam in June which disturbed the natural drainage of the province, and intensified the malaria always severe in those parts; and a cyclone with accompanying storm wave ravaged the Chittagong district in October, and caused directly and indirectly much loss of life.

BIRTHS AND DEATHS.

Under these circumstances it is not surprising to find that high death-rates and low birth-rates were the rule of the year in most Indian provinces. Birth and death registration are still very defective, and will remain so "as long as the collecting agency in rural areas remains illiterate, and until sufficient pressure is put upon municipal bodies to enforce the by-laws under which registration is legally compulsory in towns." The conditions of 1897 probably intensified these imperfections, and the returns of the year are no doubt greatly below the mark from both habitual and exceptional causes. The birth-rates of 1897 were in every province, except Berar, below those of 1896, and in 6 out of the 10 these rates fell short of the death-rates, the differences amounting in 4 cases to 43, 30, 18, and 13 per 1,000. The death-rates were in every province except the Punjab higher than those of the preceding five years, and in all except the Punjab and Bengal higher than those of the preceding year. The Central Provinces, where the famine was worst, presented the high ratio of 69.34, followed by Assam with 60.61, Berar 52.6, Coorg 50.03, North-West Provinces 40 46, and Bombay 39.84. In some provinces, not themselves famine-stricken, increased mortality was caused by famished fugitives from destitute areas. Infantile mortality was enormous in famine tracts. Cholera, small-pox, fevers, and bowel complaints were all in excess; the death-rates per 1,000 of population being respectively 2.55, 0.77, 23 12, and 1 86, against 2.17, 0.65, 21.05, and 1.10. In the Central Provinces the rates were 6.01, 0.38, 40 98, and 8 53. Both cholera and bowel complaints were no doubt exceptionally aggravated by the coarse food which the people consumed under pressure of the scarcity. Plague caused a large mortality in the Bombay Presidency. Deaths were extensively concealed for fear of domestic interference, but the Sanitary Commissioner considers the death-rate to have been not far short of 5 per 1,000. In other provinces the incidence was limited, and death-rates inconsiderable.

PRISONERS.

Of the three sections of the Indian population under skilled medical observation and management, whose vital statistics are quite reliable—namely, European and native troops and prisoners—the latter might reasonably be expected to participate most in the unfavourable influences affecting the country at large. Numerous releases took place in consequence of the Jubilee, yet the prison population rose from 110,186 to 118,107, the increase being no doubt due to the aggravation of crime always associated with scarcity of food. The death-rate rose from 27.68 in 1896 to 38 75, the rate for the decennium 1886-95 being 32.20. In the Central Provinces the rate was 134 98, an appalling figure, followed—*longo intervallo*—by 52 82 in Madras, 46.23 in Assam, 37.21 in Bombay, and 35.44 in the North-West Provinces. Ague caused 36 per cent. and bowel complaints 17 of the sickness. There was an increase under both heads, and under cholera, scurvy, and debility. Dysentery caused 29 per cent. of total deaths, pneumonia 11, and cholera 10. Both dysentery and cholera caused nearly twice the ordinary mortality Cholera broke out in 75 gaols. In most instances the admissions were single or few; but in some gaols smart epidemics occurred, notably in Coimbatore, where 280 cases were admitted, and in Rajamundry, where admissions amounted to 201. In contrast with these cases plague only occurred in 4 gaols, namely, the Bombay house of correction (33 admissions and 17 deaths), the Bombay common gaol (2.2), Jerrowda central prison (1.1), and Karachi district gaol (1).

THE EUROPEAN AND NATIVE ARMIES.

The health and mortality of the European and native armies were affected by the morbific qualities of the year and by the circumstances of the frontier war, in which 6 per cent. of the former and 9 per cent. of the latter were engaged. The admission-rates for European troops was 1,557, the constant sick-rate 101, and the death-rate 22.93 per 1,000, figures which greatly exceed the experience of recent years. The admission-rate of troops on service was 2,500, and the death-rate 91.62; the admissions on service constituting 9, and the deaths 22 per cent. of the whole. Cholera, fevers, dysentery, and diarrhœa gave increased admissions, and there was an increase of deaths from bowel complaints, cholera, enteric and other fevers, heat stroke, and hepatic abscess. The prevalence and mortality of cholera were higher than in 1896, but lower than in the decennium 1886-95. No new fact of importance is recorded as regards causation and prevention, but fresh evidence was obtained of the advantage of movement in severe attacks among both troops and prisoners. The admission-rate of enteric fever rose from 25.5 to 32.4, and the death-rate from 9 31 to 9.01. The subject is discussed at great length, but no substantial addition to our knowledge of causation and prevention is adduced, and the efforts which have been made to purify water by boiling and salting do not appear to have been productive of much if any benefit. Only 5 non-fatal cases of plague occurred in the European army, 3 in Bombay and 1 each at Poona and Purandhar. The admission rate from venereal diseases fell from 511.6 to 485 7; the reduction is attributed to so many men being on field service.

A pathetic observation is recorded that the famine increased the number of prostitutes. The death-rates of officers of the British and Indian armies were 23.04 and 18.92 respectively, the excess over the preceding year being due to service. Deaths from enteric fever were more numerous. The health of women was better and of children worse than in 1896. In the native army the figures of 1897 are higher than in 1896, but below those of the previous decennium. The admission-rate was 839, constantly sick-rate 31, and death-rate 14.90. The cantonment admission-rate was 798 and death-rate 14 48; the corresponding service-rates being 1,242 and 40.31; the admissions and deaths constituting 22 and 21 per cent. of the whole. Fevers and fluxes were the principal causes of sickness, and pneumonia of mortality. There was no increase of cholera cases or deaths, but there were more admissions from enteric fever, which, however, constitutes a very inconsiderable cause of morbility and mortality among native troops and prisoners. The death-rate of European troops from enteric fever was nearly five times as great as that of native troops from fevers of all kinds: 131 cases of plague with 82 deaths occurred in the native army. The cases occurred in 16 bodies of men mostly in the Bombay Presidency. The severest outbreak was, however, in the 26th Madras Infantry at Belgaum. Interesting details are given regarding these outbreaks, and the information which is recorded on the bacteriological pathology and epidemiology of plague is exceedingly valuable. It is satisfactory to observe that the admissions and deaths from respiratory disease generally and pneumonia in particular were lower than in 1896, notwithstanding the number of men who were employed on frontier service. The admission-rates and death-rates from dysentery were, however, higher. The ratio of venereal admissions (40.8) was somewhat higher than usual; 137 admissions from beri-beri were returned, of which 135 occurred in Madras regiments. There were no admissions from this cause in the European army, and only 60 in prisons. Another remarkable contrast is shown by the admissions for guinea worm, which numbered 563 in the native army and 436 in prisons, while no case occurred in the European army.

The report contains in addition to the information above summarised sections on vaccination, civil and military work, and some special points which have engaged the attention of the sanitary office. The most important of these is Major Ross's work on the malaria parasite, which has already been fully made known in the British Medical Journal.

NOTES ON HEALTH RESORTS.

Mineral Waters of the United States.

Dr. J. K. Crook's work[1] is doubtless the most comprehensive yet published on the mineral waters of the United States. The greater part of the work is taken up by a description of the mineral springs and wells, with the topographical and climatic features of each State and territory. Immense trouble must have been taken in collecting and arranging the information contained in this section of the work, which fills 471 pages. In the analyses of the different springs the solid constituents are expressed as grains per gallon (standard gallon of the United States), and the gases as cubic inches per gallon. The author, who thinks that two-thirds of the analyses of American springs conform to this standard, has had the remaining analyses converted in accordance with recognised rules (a conversion table is given). We are convinced, however, that the results of analyses of mineral waters are best expressed on the decimal system, the solids being reckoned as grams per 1,000 grams, or grams per litre, by which means the quantitative comparison of the active ingredients with those in European springs is greatly facilitated. America is rich in mineral waters, as a glance at the book will show, and fresh springs will doubtless still be discovered, whilst many mineral water stations, as yet little visited, will in time develop into useful and popular health resorts. The first part of Dr. Crook's book relates to balneology and hydrotherapeutics in general. It contains much suggestive information concerning mineral waters, their probable origin, methods of classification, modes of action of their solid and gaseous components on the body, etc. Valuable hints are given concerning the benefit likely to be derived by the use of mineral waters and baths in various diseases and morbid conditions. Two chapters are likewise devoted to hydrotherapeutic methods, mud baths, etc., and their employment for medical purposes. Possibly some of the author's remarks in Chapter VIII are open to discussion, and differences of opinion on many points are likely to exist. For instance, on page 66, we read: "The light alkaline carbonated chalybeates may also be used with advantage in enlarged cervical glands, tabes mesenterica, etc." So, further on: "In chronic lead poisoning the sulphuric acid waters are valuable, forming inert and insoluble sulphates of lead, which are eliminated in this form by the emunctories." Surely, although sulphuric acid is required in certain cases of plumbism, the medical man is hardly likely to select mineral waters in these cases on account of any free sulphuric acid they may contain. On the preceding page (p. 65) we are told: "The iodic waters are esteemed as possessing the power of reducing splenic enlargement, and removing other evidences of the paludal or malarial cachexia." It is certainly open to doubt whether it is the iodine in these waters which brings about the good result in such cases. We hardly think it a probable suggestion (p. 64) that possibly "the borated waters may be found useful in epilepsy and chorea." The author admits, however, that experience as to their utility is lacking. On the whole Dr. Crook is cautious and moderate in his estimates of the therapeutic virtues of mineral waters, as the following passage (p. 35) serves to show: "It is a fact which few will deny that most persons visiting a spa during the summer months experience, almost from the beginning, an improvement in their physical condition, and in many instances return to their homes fully restored to health. This can be accounted for to a great extent by the change of air, food, and surroundings, and the escape from the worry and cares of business. Perhaps numerous cases would do as well at summer resorts where there are no springs; yet, after a liberal deduction for all other assignable influences, we may justly attribute a large share of the good results to the aid rendered by a properly-selected mineral water. An obstinate case of chronic constipation or catarrhal jaundice is not apt to yield readily to a mere change of diet and environment, and the same may be said of protracted cases of rheumatism, uric acid gravel, and numerous other conditions." The book will be found not only a useful reference book for American practitioners, but likewise a volume of great interest to medical men of all countries who are interested in balneology.

[1] *The Mineral Waters of the United States and their Therapeutic Uses.* (New York and Philadelphia: Lea Brothers and Co. 1899. Roy. 8vo, pp. 588, 3.50 dols.)

Assouan.

Egypt will be more and more visited by tourists, and Dr. Kingsford's small book[2] presents in a popular manner the attractions of its southernmost health resort. Assouan has much of the desert influence—warmth, sun, dryness and comparative purity of the air. There is a resident English physician and an English nurse, whilst a new hotel with modern sanitary arrangements is to be opened in the coming season. Dr. Leigh Canney, whose *Winter Meteorology of Egypt* was reviewed in the British Medical Journal of January 29th, 1898, recommends, amongst affections suitable for Assouan, non-erethic cases of phthisis, hæmorrhagic cases, non-acute cases of the first or second stage, chronic quiescent phthisis, and cases associated with bronchitis. Amongst Egyptian resorts, Dr. Canney gives the first place to Assouan in chronic bronchitis and emphysema and in Bright's disease and albuminuria. Many other conditions, such as convalescence from pneumonia, asthma associated with bronchitis, mental overwork, and premature senility, are likely to be benefited.

[2] *Assouan as a Health Resort.* By W. E Kingsford. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1899. (Pp. 52, illustrated with views.)

Post-Graduate Lectures at the University of Greifswald.—The professors, acting with the *Privatdocenten* and Assistants of the University of Greifswald, will hold a post-graduate course towards the end of July. The course will last about a fortnight. Further particulars will be published later.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY JANUARY 13TH, 1900.

INFORMATION v. EDUCATION.

EACH summer some hundreds of our youth returning to their homes gladden their mothers' hearts and the surrounding populace. They are quite clean, many play cricket, and all are well pleased with themselves. Each summer their respective fathers who have paid about a thousand pounds apiece for them, and cannot sell them for five shillings, cry for the blood of the British schoolmaster. The latter about that time of the year seeks the inaccessible heights of foreign mountains. But each autumn the storm has passed, the bills are paid, and in countless introductory addresses the clear glad voice of the returning teacher proclaims with pride that his is no sordid aim of immediate profit, but the discipline which learning gives. He teaches how to learn not how to earn a living.

Yet the medical schools which receive his fatlings, the fruit of six years' labour, and have perforce to get them qualified that the death certificates of the Registrar-General may be satisfactorily signed, view the schoolmaster's work with scant respect. He fails, they say, just in that at which he aims. His boys cannot learn until they have been taught how.

And upon the medical teachers, when at the end of five more years these same boys go out as assistants, exactly the same criticism is passed by their ungrateful employers. They grumble that they have been taught the latest pathological theories, but no common sense; that they are stuffed with knowledge, but cannot learn.

We need not, perhaps, take any of these outpourings quite literally. The most of us find so great a pleasure in another's fault that we must be excused for exaggerating the one in order to increase the other. But there is beyond doubt considerable ground for criticism of all parties concerned, and considerable fault in all stages and forms of education. These are ably stated in an introductory address delivered by Professor Macgregor at Dalhousie College, Nova Scotia.[1] Wise men come from the West nowadays, and the address is one of the best. He maintains, first, that the modern classical education is a worse discipline than the old by just so much as dictionaries are better, cribs more allowed, and masters more helpful to their pupils. The scholar of past times was, he thinks, a man of greater power than the scholar now, because he had wrestled with greater difficulties. With this we cannot wholly agree. Apart from the fact that such reasoning would lead us to abolish dictionaries, cribs, and masters altogether, and, setting a row of small boys before a row of small Homers, swish them till they made it out. It does not seem fair to compare the present, when everyone learns classics, with the past, when such attainments were the lot of few. There is no evidence known to us that great scholars are actually fewer, but memory loses them in the multitude of second-rate men who have a fair knowledge of the dead languages.

Next he claims that the scientific education born in modern times is by no means so good a discipline as that of the dead language. The special exceptions prove the rule. He cites the experience of Germany. After more than ten years' trial the German universities agreed that the training of the *Real Schule*, which is largely scientific, did not fit men for university education, even of the scientific sort, so well as the teaching of the Gymnasium, which is chiefly classical. Some years ago Huxley led an attack upon the classical training of our schools, and maintained that the elements of a liberal education were to be found as fully and as easily in science as in language. The great mass of teachers was dead against him, and remains so, and we are not prepared to deny that the teachers were and are right. Yet we also believe, with Professor Macgregor, that classics require to be completed by some natural study which shall train the senses and the power of reasoning from the facts they give.

Thirdly, he declares that the present systems of science teaching are not a training in common sense, but are mere book work. There is no scope, even in their practical part, for anything but dexterity. The student does not find out things, he is shown them, and he remains as childish and as helpless as before. His real training does not begin till he is delivered from his teachers, and thrown upon his own resources. In this we believe he is very largely right. Examiners are constantly finding the same fault, teachers are constantly lamenting it, and yet no one seems to find a remedy.

Professor Macgregor's remedy is that all teachers should be engaged in research, and that their pupils should be thus brought into contact with common sense, should experience real difficulty, and should find the way out for themselves. It is only thus that what he calls the power of knowledge making, the power of drawing conclusions for oneself, the power which is the great secret of success whether in science or in pigsticking, and which the laity call common sense because it is so very uncommon, can be developed in the mind. His prescription is, we believe, entirely right, but to a great extent impossible to apply. Oxford and Cambridge have made a great stride by requiring some evidence of original work for the degree of M.D. The physician who lets students see the gropings of his own mind after the inner secret of a case of disease is exactly in the desired position. But in chemistry, physics, anatomy, and physiology, the thing is not possible, at any rate for our students. Examiners feel that the public is only saved from indiscriminate slaughter if the student knows the three actions of the pancreatic juice. It matters nothing to them how he has learnt it, nor for how long. And since life is short, and under our effete solar

[1] *Nature*, December 14th, 1899.

system the day contains but twenty-four hours, the student has to sacrifice all original research, all original study, in order to patter glibly the orthodox creed.

It is not surprising, therefore, that lastly Professor Macgregor falls foul of the written examination. As a means of testing information, he allows it to be good; as a means of testing power, at any rate in scientific subjects, he declares it valueless. Here, again, we entirely hold with him. But, alas! the question is not one of simple terms. If the British public, or, say, our own sisters, cousins, and aunts, were asked, Do you wish original clever doctors, with the risk of some remarkable and probably unsuccessful experiments upon your own persons; or do you wish gentlemen who, so far as the strictest examiners can tell, will not deprive you of life in any unorthodox way? Which would they prefer? The laity constantly seek originality, but they do so after it has been certified as safe. There is a certain proportion in all classes who will seek it at the cannon's mouth, and suffer unheard-of things from quacks of all sorts. *Non ragioniam di lor.* But of the great mass it remains indisputably true that they require their doctors to be labelled "safe." Examiners therefore will continue to demand a store of information, and students will in consequence postpone till after their diplomas the acquirement of that common sense whose absence we all deplore in one another.

THE TREATMENT OF CHRONIC SUPPURATION OF THE MIDDLE EAR.

No question of wider importance was brought to the front by the International Otological Congress, which met in London last autumn, than that of the most efficient way of dealing with chronic suppuration of the middle ear. The population continues to increase, and the inefficiently treated or neglected cases of middle-ear disease continue to accumulate.

It is difficult to say how far this accumulation should be attributed to the tendency on the part of the public to neglect a discharging ear so long as no painful symptoms arise, and how far to the fact that aural diseases do not receive in the student's curriculum the amount of attention they demand. It is easier to state the difficulty than to find the remedy. It is no easy matter to influence public opinion, but much good might be done by a systematic investigation of the hearing power of children in the Board schools, more particularly in the schools for "backward" children.

Professor Urban Pritchard, in his presidential address[1] to the Congress, while commenting on the proofs of increased interest being taken in otology, reminded his hearers that in this country there is still room for improvement, and referred especially to the need for the better recognition of otology by our universities and colleges. The subject is not compulsory, and what does not come within the range of a crowded examination schedule, for the time at least, is liable to be put outside the pale of practical medicine.

The post-graduate demand for technical instruction in the methods of investigating diseases of the ear is evidence that men in practice realise the practical importance of otology. The practical bearing of it was emphasised by the discussion on Ear Disease in Relation to Life Assurance[2] held jointly by the Section of Laryngology and Otology with the Section of Medicine in relation to Life Assurance, at the annual meeting of the Association at Edinburgh in 1898.

The International Congress, the largest and most representative gathering of the kind that has been held, devoted a whole morning sitting to the discussion of the indications for opening the mastoid in chronic suppuration of the middle ear. The problem was not discussed in all its amplitude, for the cases in which intracranial complications rendered surgical intervention imperative, and the technique and extent of such intervention, were of necessity almost entirely kept outside the scope of the discussion. The indications in such cases, as Professor Politzer pointed out in his opening address, are generally acknowledged, and in most well-marked cases surgeons were likely to be in perfect agreement. The main point to which he directed attention was whether it was justifiable, without well-marked symptoms, to operate as frequently as some surgeons advocated.

In other words, the discussion resolved itself into a consideration of the questions: first, whether, in the absence of symptoms pointing to intracranial extension, attacking the contents of the middle ear by "opening the mastoid"—to use a phrase which implies an erroneous hypothesis for the development of the antrum—can be held to be a radical cure for chronic middle-ear suppuration; and secondly, when, with that object in view, the operation should be undertaken.

The operation can hardly be regarded as "a radical cure" in the same sense as that for hernia or varicocele; for in these we are dealing with tissues free from pyogenic organisms, nor can it be put on the same footing as that for recurrent attacks of appendicitis. In middle-ear suppuration we have to deal with organisms lurking in osseous tissue. It is impossible to make sure of eradicating them. Yet in a large number of cases the operation undoubtedly places the patient in a position of greater safety. Without wishing to underrate the risks which must accompany the operation in the most skilful hands, nor the inconvenience occasioned by the protracted healing of a wound—the closing of which is a subject upon which opinion is still divided—it must be admitted that these points are of secondary importance when compared with the probability of ensuring the patient from further trouble.

It is satisfactory to note a disposition on the part of a larger section of those who joined in the discussion to accept more conservative methods. Treatment carried on through the external meatus, together with intranasal therapeutics so far as may be necessary, when persevered in has in many cases undoubtedly been productive of results as good as those obtainable by more radical measures. The principle and *rationale* of intrameatal treatment must be thorough antisepsis.

The means by which antisepsis is to be obtained may be briefly summed up as thorough purifying, packing, and, when necessary, curetting. When these remedies are ineffective they must be supplemented by excision of the drum and the extraction

[1] British Medical Journal, 1899, vol. ii, p. 415, line 15.

[2] British Medical Journal, 1898, vol. ii, p. 977.

of the carious ossicles, or the removal of the outer attic wall, the antiseptic treatment at the same time being persisted in. If after a thorough trial of conservative measures suppuration continues the radical post-aural operation can be resorted to.

What is a thorough trial is a question the answer to which in great measure depends upon the progress and necessities of the case. The results obtained by these conservative efforts to promote healing without destroying are far too encouraging to be allowed to fall into disuse through an undue predominance being given to the "mastoid operation." Whatever may ultimately be found to be the effective remedy, the gravity of middle-ear suppuration when left untreated cannot be overrated. It is potentially a bombshell in the patient's head; true it is that it may never explode, but the several ways in which explosion may occur were made only too evident by the classification of the many specimens in the Congress Museum illustrating the extension of suppurative disease from the middle ear.

CONSULTING SURGEONS WITH THE FORCES IN SOUTH AFRICA.

MR. WATSON CHEYNE, Surgeon, and Mr. Lenthal Cheatle, Assistant Surgeon to King's College Hospital, who have been appointed consulting surgeons with the Forces in South Africa, were entertained to dinner at the Hôtel Métropole on the evening of January 4th, by members of King's College. The gathering was large, and the proceedings throughout most enthusiastic. Mr. Cheyne, in an admirable little speech, after expressing his thanks for the compliment paid to him, observed that when the appointment of consulting surgeon was first proposed, some fear had been expressed that it might be thought by the officers of the Royal Army Medical Corps that it involved some slight upon them. That was not intended, and he was glad to know that the appointments had not been taken in that spirit by the officers of the corps. On the contrary, they had welcomed the consulting surgeons most cordially, and the best understanding had been established. All reports agreed that the work of the Royal Army Medical Corps was being thoroughly well done, and he had thought that there might even seem to be some presumption in going out to act as consulting surgeon to such a body of officers. But there was a great deal of work to be done, and he felt that as long as the services of the consulting surgeons were received in the spirit which had been shown by the officers of the Royal Army Medical Corps to his colleagues already in South Africa, nothing but good could result. Mr. Cheatle also returned thanks. The toast of "The Hospital" was given by the Principal of King's College, and acknowledged by Dr. Burney Yeo. Mr. P. T. B. Beale gave "The Health of the Chairman," Professor A. W. Hughes, whose reply brought the proceedings to an end. Sir William Stokes of Dublin, as well as Mr. Watson Cheyne and Mr. Cheatle, left Southampton for Capetown on January 6th.

THE IRISH HOSPITAL.

WE understand that the Irish Hospital, which Lord Iveagh has offered at his sole expense for service in South Africa, will be ready to leave in about ten days, if transport can be provided. Sir William Thomson of Dublin will be the senior surgeon, and we are able to state that Dr. George Stoker of Hertford Street, London, who originated the Portland Hospital, will be director, and will also act as one of the principal surgeons. As is known, he has already served in three campaigns—the Russo-Turkish, the Servian, and the Zulu—and he is one of the few British subjects who were actually present in Plevna and Erzeroum during the sieges of those strongholds. He has acquired, therefore, very special experience in this form of hospital work—and it is gratifying to know that he is again about to undertake like duty. Mr. Alfred Friel, F.R.C.S.I., Surgeon to Waterford City Infirmary, will have charge of the Rœntgen ray equipment. The dressers will be Mr. Counihan, M.B., University of Dublin; Mr. J. Pounden, M.B, University of Dublin; Mr. Percy Stewart, College of Surgeons; Mr. McElwaine, Queen's College, Belfast; Mr. Douglas B. Thomson, University of Dublin; and Mr. Edwardes, University of Dublin. Four come from the Richmond Hospital, Dublin; one from the Royal Hospital, Belfast; and one from Sir Patrick Dun's Hospital, Dublin. As the hospital is to be on the lines of communication, no nurses will be taken. There will be 100 beds for the wounded.

MEDICAL ATTENDANCE ON THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

WE are informed that a large number of members of the South Midland Branch of the British Medical Association, resident in the three county districts of Northampton, Bedford, and Buckingham, have consented to attend gratuitously the families of soldiers and sailors engaged in the war in South Africa. The Honorary Secretary of the Newport Medical Society informs us that that Society has been able to arrange with all the medical men practising in the town to give their services gratuitously to the wives and families of soldiers, sailors, militiamen, and volunteers called up owing to the war in South Africa, and that the Governors of the Newport and Monmouthshire Hospital have decided to honour all prescriptions given by medical men who are attending the families at their homes. We also learn that the members of the Kirkcaldy and District Medical Association have unanimously agreed to give similar free attendance to the dependents of the reservists who have been called to the front, and that the chemists of Kirkcaldy have agreed to supply medicine free of charge to the families of the reservists during the absence of the breadwinner.

AMBULANCE SERVICE FOR MOUNTED TROOPS.

WE publish in another column (page 67) an interesting paper by Dr. T. F. S. Caverhill, Surgeon-Major, the Lothians and Berwickshire Yeomanry Cavalry, containing a scheme of organisation for the ambulance service of mounted troops. As the author points out, the special mobility of a mounted force calls for a like mobility in its field hospitals and bearer companies. The scheme sketched out by Dr. Caverhill is, we believe, practical and good. It would probably be difficult to introduce it at the present juncture in the regular army; but if something of the kind could be started in connection with the Yeomanry left at home, much good might be done. Mounted bearer companies might be formed and drilled in the way suggested, and, when proficient, might follow the Imperial Yeomanry to South Africa. A suggestion for a flying hospital for the Yeomanry has been made by Dr. Horace Manders, who is a Captain and Hon. Major of the 1st Volunteer Battalion Royal Berkshire Regiment. He has designed a hospital car and an ambulance car, each constructed on the principle of the Irish jaunting car; each car would be drawn by two horses, attached to a pole on that modification of the curricle principle adopted in the Cape cart, which allows of great lightness, speed, mobility and facility in turning, combined with safety against the risk of overturning. The car can carry four men sitting on either side, with a non-commissioned officer on a movable seat at the back. The horses are conducted by a postillion. Instead of the usual hollow centre of an Irish car the hospital car has a body 6 feet long, 5 feet wide, and

1 foot 9 inches deep. This well can be reached either from above or at the back, and will afford space for a regulation operation case, sets of splints, dressings, and utensils, while a cylinder of drinkable water is carried outside along the front. At the sides, on the outside of the body, are carried a lever, two picks, and a shovel, with a bucket slung beneath. The car is designed to live with cavalry, and to go wherever horse artillery can go. The ambulance car is built on the same principle, but is 6 feet 6 inches long. In the well will be space for two stretchers, the handles of which fit on to, and can be securely fastened to the ends of a carriage spring, the centre of which is screwed into the floor of the body. The roof is open, but spreads out over the wheels on either side, forming a skeleton platform, on which are screwed carriage springs for stretchers, similar to those inside. The platform will accommodate three stretchers, yet give plenty of ventilation to those below; ventilation will also be provided by the louvred sides of the body. A sixth stretcher will be carried, and in emergency could be placed transversely across the front, above the water cylinder. Seats will be provided at the back for two attendants. The hospital and ambulance cars would work together and in action would have their place in rear of the supports and in front of the reserves. When casualties began to occur the cars would stop in a suitable place and form the centre for a collecting and dressing station, to which the wounded would be brought in on the stretchers taken from the ambulance car. After receiving attention at this station they would be carried by the ambulance cars, and those able to sit up by the hospital car also, to the nearest field hospital. The staff required would be two surgeons, one orderly, and one non-commissioned officer, all mounted; one non-commissioned officer and eight bearers on the hospital car and two on the ambulance car, and two drivers. We are informed that a committee has been formed to carry the plan suggested by Dr. Manders into execution.

INFECTION AND DISINFECTION OF GUNSHOT WOUNDS.

Tavel[1] reports the results of an extensive series of experiments made under his direction with the main object of determining whether infection of a gunshot wound be derived from the bullet, or occur secondarily as a result of an opening in the skin. The experiments, most of which were bacteriological, were made with the bullet used by the Swiss army. This bullet measures 7.5 millimetres in diameter, and has a normal initial velocity of 600 metres a second. It was shown in the first place that neither the heating of a bullet during its discharge, nor the mechanical friction against the barrel with a velocity of 600 metres, is capable of attenuating the virulence of adherent microbes and of thus diminishing the danger of infection of gunshot wounds. Gunshot wounds, it is held, when they are infected, take as a rule a different course to that taken by ordinary incised wounds, the special lesions resulting from the former impairing the resistance of the tissues to a much greater extent than a simple linear incision made by a cutting instrument. The presence of a foreign body in a gunshot wound has not so much importance in itself as in the microbes it has carried into the deeper tissues, and in the special form of traumatism it has produced. The author asserts as a result of some of the experiments here described that soldiers' garments contain germs which, when carried by the bullet into a gunshot wound, may cause infection. The author has been led by these researches to take a very pessimistic view of the prospects of antiseptic treatment in military surgery. The best treatment, he believes, is to do nothing at all. The less one does, he states, the better. Not only the results of experiments but also simple *a priori* reasoning lead to this unwelcome conclusion. The disinfection of a gunshot wound is an impracticable task, and all the chemical or physical agents employed with this object can result only in further damage to the tissues, and in exposing them more to the attack of still active microbes that have been introduced by the bullet.

[1] *Revue de Chirurgie*, December, 1899.

THE NEW HOME OF THE UNIVERSITY OF LONDON.

A general meeting of Convocation will be held on January 16th, at 5 p.m., at the University Building, in Burlington Gardens. The chief business will be the presentation of the report of the Standing Committee, which states that the duties of the London University Commission are nearly completed, and that in all probability the new statutes will be laid before Parliament at the commencement of the next session. If so, it will be the duty of Convocation, in May, to appoint the representatives allotted to Convocation on the Senate of the newly-constituted University. Thenceforth the representation of Convocation on the Senate will be increased to about one-third, as against one-fourth at the present time. In the new Senate the representatives of Convocation will consist of: The Chancellor (elected for life), the Chairman of Convocation, and sixteen members appointed by Convocation (eight of whom will retire every two years). These eighteen representatives of Convocation on the Senate will form the majority of the members of the Council for External Students, to which will be entrusted the duty of advising the Senate regarding the whole of the present work of the University. The Academic Council, which will perform the corresponding function for internal students, will consist almost entirely of representatives appointed by teachers of the University. The graduates, who are members of Convocation, will vote for their representatives on the Senate in Faculties, and graduates who are members of more than one Faculty will have a vote in each Faculty of which they are members. The University will, in all probability, take up its abode in its new home, the Imperial Institute, before May next. The Government has granted the use of the central and eastern portions of the Imperial Institute building to the University. The report contains suggestions as to allocation and furnishing of the several parts of the building for the purposes of the University. It suggests the setting aside of a reading and writing room for the graduates, a graduates' club room, and a third room for conversation or informal meetings, and the housing of the library in rooms of sufficient dignity and importance.

MALARIA AND THE MOSQUITO.

Major F. P. Nichols, B.A., M.B.Cantab., R.A.M.C., in a recent communication informed us that he had found in certain places about Mandalay a mosquito which seemed to him exactly to resemble the description of *Anopheles* given in the British Medical Journal. It took up a vertical position in regard to the structure on which it stood when at rest, and in its larval stage floated horizontally and moved by jerks. He had found the larvæ only in such puddles as those described by our correspondent with the Sierra Leone Expedition, and the barracks near the puddles were particularly haunted by malaria. He showed the insects to a well-known entomologist, who asserted that they were specimens of *Corethra*, a species doubtfully included in *Culicidæ*. We communicated with Major Ross, Lecturer at the Liverpool School of Tropical Medicine, who was at the head of the expedition to Sierra Leone, and he has been kind enough to send us the following note: "I have received specimens of the gnats kindly sent me by Major Nichols. They have been identified at the British Museum and also by Major Giles, I.M.S. They certainly belong to genus *Anopheles*, and are most probably

Anopheles Rossii, (Giles). *Corethra* resembles *Anopheles* only at one point—the larvæ float flat. The *Corethra* larvæ are, however, almost transparent (whence they are called "crystalline larvæ"), and possess no tracheal stigmata, but are believed to breathe dissolved oxygen by the agency of the anal tubercles acting as gills. The adults have no resemblance to *Anopheles*. They are distinguished by having an exceedingly short proboscis—so short as to be scarcely visible to the naked eye. In fact they look much more like midges than gnats (mosquitos, *Culicidæ*). It is doubtful whether they suck blood at all, and compared with *Anopheles* they are rare. Hence it appears that no modification need be made in the popular description of *Anopheles* given by the BRITISH MEDICAL JOURNAL." At a medical *conversazione* held at the Livingstone Exhibition on Thursday, January 4th, Mr. Rees, of the London School of Tropical Medicine, described the life-history of the different varieties of filaria, and Major Ross gave a graphic account of malaria and its relationship to *Anopheles*. After drawing attention to the importance of the subject, he demonstrated the differences between *Anopheles* and certain varieties of mosquito, and stated that it was only the female of the former species that could in any way be associated with malaria; by a series of microphotographs he showed the development within the *Anopheles*, and the transformation into threadlike masses, which he further demonstrated could be found within the salivary gland of the mosquito, the duct of which was in direct communication with the proboscis. Photographs of the sites of malarial puddles were shown, and Major Ross expressed his opinion that with perseverance and method there was no reason why the *Anopheles* should not be greatly diminished if not exterminated.

PROFESSOR J. M. PURSER, OF DUBLIN.

THE completion of the twenty-fifth year of Professor Purser's occupancy of the post of King's Professor of the Institutes of Medicine in Trinity College, Dublin, was seized by his friends and past pupils as an occasion for giving him a complimentary dinner at the Shelburne Hotel, Dublin. Amongst those present were the President of the College of Physicians of Ireland, Surgeon-General Preston, Dr. J. Little, Professor G. F. FitzGerald, Professor L. C. Purser, Professor J. M. Finny, Sir Christopher Nixon, and nearly fifty others. The toast of the evening was proposed by Sir C. Nixon, who said that the twenty-five years of service of Professor Purser in his appointment were to be commemorated by the granting of a medal, the Purser Medal, to be given each year at the half M.B. examination. The provisions of the University statutes did not permit the presentation of an address to any professor, which he thought a wise and prudent policy. But the exceptional course had been adopted with enthusiasm of founding a prize under a special name. From the appointment of Professor Purser to the Chair of Institutes of Medicine dated the commencement of the teaching of scientific medicine in Dublin, though clinical medicine had always been a strong feature of the Dublin School. Dr. Purser was an ideal teacher, and one of the most brilliant lecturers upon the staff of the School of Physic. He woke the spirit of enthusiasm, and was a bright example to his pupils, who desired to testify their respect and affection by founding a medal which should carry through the centuries the traditions of his name, his labours, and his high reputation. Might he be long spared to render to the University those eminent services which had so largely helped to raise the standard of scientific medicine in Ireland. The toast was honoured with great enthusiasm. In reply, Dr. Purser, in heartfelt terms, thanked all for their great kindness to him. The first copy of the medal was then handed to Dr. Purser by the President. It bore on the obverse the profile of Professor Purser, and on the reverse the arms of Trinity College, while around the margin was the following appropriate inscription: "Magistro Discipuli Amico Amici, D.D., A.D., V. Kal. Ian., MDCCCC." The medal is the work of Mr. Allan Wyon, of London, chief engraver of Her Majesty's seals, and not only does it give a splendid likeness of Professor Purser, but it is also a beautiful work of art. Dr. Drury proposed the health of Sir C. Nixon, and thanked him on behalf of the Committee for the assistance he had all through given to the object.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

WE learn that this institution enters upon the second year of its existence under extremely favourable auspices. The number of subscribers and members has steadily increased during the past year; the practical classes have been well filled, and the consultations, which are held daily (except Saturdays) at 4 P.M., have been well attended. During the coming three months special clinical lectures are to be given on alternate Wednesdays at 5 P.M. by the President, Sir William H. Broadbent, Bart., Dr. G. H. Savage, Professor McCall Anderson, Dr. Patrick Manson, Dr. Saundby, and Mr. Jonathan Hutchinson, F.R.S. The builders have undertaken to finish the Museum by March, and it is hoped that when completed this will be an additional source of attraction and interest to the subscribers and members. The College journal, the *Polyclinic*, will in the future be published monthly instead of quarterly. It will be edited by Mr. Jonathan Hutchinson, and it is hoped that it will furnish a complete record of the clinical work of the College. The laboratories and class rooms and the Roentgen-ray and dark rooms have been completely equipped, and we understand that the Medical Superintendent will be glad to afford visitors to the College an opportunity of becoming personally acquainted with the advantages and facilities it offers for post-graduate work.

THE CARDIFF MEDICAL SOCIETY.

AT the monthly meeting of the Cardiff Medical Society, held at their rooms in Queen Street, on January 4th, Sir John Williams, Consulting Obstetric Physician to University College, London, delivered an address on Some Points Connected with the Induction of Premature Labour. The meeting was a large one, between fifty and sixty gentlemen from Cardiff and the neighbourhood being present. The address was of great interest, and of an extremely practical character. The lecturer dealt with various points necessitating the induction of labour, more particularly albuminuria present before or coming on during pregnancy, illustrating his remarks by reference to various cases that had been under his care. A vote of thanks to Sir John Williams was proposed by Dr. C. T. Vachell, seconded by Dr. W. W. Leigh, and carried with acclamation. In the evening members of the Society and friends numbering 35 dined together at the Angel Hotel, Dr. P. Rhys Griffiths, President of the Society, being in the chair. After the toast of "The Queen," the health of Sir John Williams was proposed by Dr. Ebenezer Davies, of Swansea, whose pupil Sir John Williams was in his early days. Sir John suitably replied. Various other toasts followed, and a most enjoyable evening was spent.

THE HISTORY OF SCIENCE.

AMONG the almost innumerable Congresses which are to be held in Paris next summer during the Exhibition is a Congress on the history of science. It is to be known officially as the Fifth Section of the International Congress of Comparative History, but is to have an independent organisation. The object of the promoters is to bring together persons interested in the study of the history of the various sciences, and to prove to them that it will be to their common advantage to work together, so as to render the study of original documents easier. The

Organising Committee, of which M. Paul Tannery is President, has drawn up a long list of subjects which are considered to be ripe for discussion. Among these we notice the History of Hygiene and of Medicine in Antiquity, the History of Medicine in Europe in the Middle Ages, the History of Medicine among non-European Peoples, and the Influence Exercised Reciprocally by Medical and by Scientific and Philosophical Theories. Proposals for schemes for encouraging the study of the history of science are also invited. The Congress will be held from July 23rd to July 28th, and the official language will be French, though papers in German, English, or Italian will be received. Further information can be obtained from Dr. Sicard de Plauzoles, Rue St. Dominique 124, Paris. Among the Committee are Professor Paul Berger, Prince Roland Bonaparte, Professor Brissaud, Professor Hahn, the Prince of Monaco, Prince Henri d'Orleans, Dr. Pozzi, and Professor Charles Richet.

TEACHING OF TROPICAL MEDICINE IN ALGIERS.

Professor Ed. Bruch, Director of the Medical School of Algiers, has issued a pamphlet the main object of which is to insist on the necessity of furnishing the Professor of Tropical Diseases in that school with a suitable laboratory and a ward for clinical teaching. The chair was founded, it appears, in 1889, and its first occupant was M. Alcide Treille. He was succeeded in 1897 by M. Brault, who has a small laboratory, but no beds. The desired improvement has been accepted in principle, but M. Brault has to complain of official dilatoriness which still keeps him waiting for his laboratory and his clinical department.

LECTURES AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The Erasmus Wilson Lectures at the Royal College of Surgeons of England will be given on Monday, Wednesday, and Friday, February 12th, 14th, and 16th, by Mr. E. Treacher Collins, Assistant-Surgeon to the Royal London Ophthalmic Hospital, who has selected as his subject the Anatomy and Pathology of the Eye. The Arris and Gale Lectures, on the Anatomy and Pathology of some Rarer Forms of Hernia, will be given by Mr. B. G. A. Moynihan, Assistant-Surgeon to the Leeds General Infirmary, on Monday, Wednesday, and Friday, February 19th, 21st, 23rd. On February 26th and 28th and March 2nd Dr. Arthur Keith, Senior Demonstrator of Anatomy at the London Hospital Medical College, will lecture on the Results of an Investigation of the Anatomy of Man and Higher Primates to determine more accurately the Relationship of Man to Living and Extinct Forms. Mr. Mayo Robson, Professor of Surgery in the Yorkshire College, Leeds, will give a course of three Lectures on the Surgery of the Stomach on March 5th, 7th, and 9th; and Professor C. Stewart, F.R.S., Conservator of the Museum, a course of six lectures, on March 12th, 14th, 16th, 19th, 21st, and 23rd, on the Protection and Nourishment of the Young in Plants and Animals. The lecture hour is 4 P.M. precisely.

SMALL CULTURE AND THE PUBLIC HEALTH.

Many readers resident in country districts will probably be glad to have their attention drawn to a letter by Sir James Blyth on the agricultural awakening, which he addressed to the *Times*, and has since republished as a pamphlet. While he admits that butter, cheese, eggs, poultry, flowers, fruit, and vegetables have been imported in ever-increasing amount for several years past, yet he believes that, but for a considerable increased production of British-grown commodities, the import of foreign produce would have advanced with much greater strides. The increase in the value of such imports for the twelve months ending June 30th, 1899, was under one million sterling, while in the previous year the increase amounted to nearly three-and a-half millions. After referring to the increased activity of the older and the foundation of new agricultural societies, to the establishment of the Agricultural College for Women at Reading, and to Lady Warwick's Agricultural Association for Women, he mentions the National Association for the Prevention of Tuberculosis among foundations which will be indirectly advantageous to agriculture in connection with the extinguishing of tubercle in cattle, and adds that a good deal of attention has been paid to the purity of our milk supply, concurrently with the subject of tuberculosis in cattle, by a body so representative of the agriculturists of this country as the Farmers' Club. He thinks the facts warrant the conclusion that as the prosperity of the working classes increases, a much larger number could be maintained upon the quantity of wheat at present available, since each individual will require less cereal food owing to the choice he now has at his command from our second line of sustenance of articles no longer regarded as luxuries, such as butter, cheese, eggs, milk, poultry, fruit, and vegetables, which, equally with sugar, have become daily necessities in almost every household, owing to the purchasing capacity being so much beyond that possessed by previous generations. He goes so far as to say that it is generally accepted that since the large majority of our population has nowadays an abundance of food in the form of bread, not an ounce more bread-food will be required by the wage earner who has gained a rise of, say, 2s. a week, and that at least half of this increased wage, or say 1s. a week, will be spent in the additional purchase of more varied articles of sustenance. So far from being wholly dependent upon imports of foreign produce, these new requirements will be met by increased home cultivation. The fact that a third more wheat is used in a highly civilised country like France than in the United Kingdom, the respective consumption per annum being 534 lbs. per head in France and 390 lbs. per head in this country is, he thinks, further proof of the variety and extent to which more appetising articles of produce are used in the British Islands, where the consumption of wheat averages less than 7½ lbs. weekly a head as against 10½ lbs. weekly a head in France, reckoning the population alike of both countries at 40 millions. Sir James Blyth does not enter into the interesting speculations as to the effect on the health of the people to which this change in diet might give origin, but goes on to express the opinion that the revival of British agriculture which must follow its awakening may be looked for in the much larger employment of women in agricultural pursuits, and the greater output of these smaller articles of farming and husbandry so successfully produced and exported by our Continental neighbours. Sir James Blyth perceives that if the awakening is to be real the new departures must be founded on scientific principles. The facts of experimental science must first be tested in practice by the clubs and other local organisations which have either sprung into existence or gathered new life in recent years, and the knowledge thus gained then disseminated by local agencies to the small cultivators who, he believes, are shortly to become far more numerous than in the past. We can only hope that his sanguine anticipations may be fulfilled, for it will not be disputed that it would be more to the advantage of the public health that milk and butter and other perishable articles of food should be produced in this country and supplied to the consumers quickly before decomposition is threatened, and under the safeguards against the dissemination of specific diseases which our laws more or less effectually afford.

MR. PAGE OF NEWCASTLE.

Mr. Page, the well-known surgeon to the Royal Infirmary, Newcastle-on-Tyne, retired from the staff of the hospital on the expiration of his term of office at the close of 1899. He will no doubt be appointed consulting surgeon, but it

is felt that the institution has lost the services of a keen and enthusiastic surgeon and a bold and determined operator; at a time, too, when with his mature judgment and experience he is at his very best. Mr. Page retains his position as Professor of Surgery in the University of Durham, and he will continue to give his lectures on Surgery at the College of Medicine. Mr. Ridley, the Senior Assistant Surgeon, is a candidate for the vacant surgeoncy, and it is thought probable that he will be elected without opposition.

SYMPATHY AND ANTIPATHY FOR CATS.

CASES of antipathy to cats, more or less marked, are not uncommon in persons of both sexes. A correspondent who sends us some notes on the subject states that he has been personally acquainted with three persons, two ladies and one gentleman, in whom the sense of discomfort, comparable only to bodily fear, when a cat was in the room, though unseen, was only appeased when "puss" was found and ejected. Curiously enough, one of our Field-Marshals, holding the Victoria Cross, is an instance of this, and both Wellington and Napoleon are said to have suffered from the same idiosyncrasy. It is related of a certain Dane, described as of Herculean frame, that he had such a horror of cats that when, as a practical joke, a cat was placed in a dish on a table at which he was a guest, he killed his host in a paroxysm of terror. On the other hand, lovers of cats are numerous, and are to be found mostly amongst the fair sex of a certain age. This liking has, indeed, been the cause of jokes innumerable. More rarely one sees a male friend imbued with a somewhat similar liking, but it must be rare for a person of either sex to experience an attraction for cats so marked as that which appears to have characterised the late Dr. A. C. Stark, whose death at Ladysmith was recorded recently in these columns. As was mentioned by Mr. Sclater at the last meeting of the Zoological Society of London, Dr. Stark had been engaged for some time in studying the birds of South Africa, and a volume dealing with the first half of Passerine Birds to form the first of a series on the fauna of South Africa is now nearly ready. Dr. Stark, who had volunteered for service as a civilian surgeon when the war first broke out, was killed almost instantaneously by the explosion of a howitzer shell, but as he fell he exclaimed: "Take care of my cat!" As a general rule ornithologists have no particular love for cats, which in populous districts wage constant war on the feathered tribe, and some have supposed that Dr. Stark's dying thoughts were fixed on his catalogue of birds. When the members of his family in England, however, first read the report of this exclamation, they knew only too well that the naturalist killed was their relation, and that he was indeed thinking of a "cat" and not a "catalogue." The fact that he had a special love of cats was well known to his family. The correspondent from whom we have already quoted writes: "Dr. Stark's fondness for cats is a point worthy of more detailed reference, and I am permitted by two of his brothers to give the following particulars: He had often told them that he was never able to concentrate his ideas satisfactorily unless a cat were in proximity to him; and I gathered from them that, although he always had a feline companion, his feeling was, in manhood, not so much for the individual specimen as of a want of one of the species about him. Accordingly, whenever he was engaged in his favourite study, that of ornithology—or in a game of chess, of which he was very fond—he liked to have 'puss' on his knee. As a boy, even when playing exercises on the piano, he always had a cat on his knee. As an ardent naturalist he was a lover of animals generally, but his particular favourites were cats and birds, and, though friendly with dogs, he did not care for one as a companion. I have never before heard of an instance in either sex where the 'magnetic attraction'—for want of a better term—was so powerful as to influence the man's whole mental life, and should like to know if any such example can be cited by your readers."

INFLUENZA IN LONDON.

THERE was a very serious increase last week in the mortality from influenza in London. The fatal cases of this disease, which had been 38, 69, and 193 in the three preceding weeks, further rose to 316 during the week ending Saturday last, January 6th. Of these 69 were of persons under 40 years of age, and 85 were of persons aged between 40 and 60 years; while no fewer than 162, or more than 50 per cent. of the total deaths, were of persons aged upwards of 60 years, of which 47 were of old people aged upwards of 80 years. The deaths referred to diseases of the respiratory organs in the metropolis last week showed a slight increase upon the high numbers in recent weeks, and numbered 1,221, being nearly double the average. As to the prevalence of influenza in London, there appear to be reasons to suppose that in the West End the epidemic is now waning, the number of cases manifesting themselves during the past week having been less than the number falling ill during either of the four previous weeks.

MICRO-ORGANISMS IN CANCER.

IN a communication to the Royal Society on the Morphology of the Blastomycetes found in Carcinomata, Mr. Keith W. Monsarrat details results in cultivating micro-organisms from carcinomata of the breast and uterus. Growths were obtained on glucose agar. Wort agar and wort bouillon were used for subcultures; on both of these media, the organism grew aërobically at 37° C. The macroscopical cultural characters on different media corresponded with those described by Sanfelice and Plimmer. In the primary growths produced by intraperitoneal inoculation of guinea-pigs the organism was spherical, capsulated, and multiplied by budding. Secondary nodules arose in the viscera, and in these spore-bearing forms were met with. The growths were classed by the author as endothelial. The case stands, therefore, as it did. The production of a true carcinoma has not yet been brought about by inoculation of the organism.

THE WEATHER AT DAVOS.

PHYSICIANS and invalids alike would do well to note the latest reports on this subject. Instead of the dry, crisp cold, combined with bright sunshine, which is usual at this season of the year, and which makes a sojourn in the Swiss highlands at once so pleasurable and so beneficial, the conditions now prevailing at Davos are such as to lead the local *Courier* to sum them up in the word "slush." Not for twenty years has such an extraordinary winter been experienced, and it has been actually raining—a most unusual phenomenon in January. The wide publicity which has been given to the merits of the so-called "open-air treatment" of phthisis has probably accentuated the tendency on the part of the public to flock to Davos and similar "air cures" without proper advice or due consideration of their fitness. That large numbers of people annually visit Davos without any adequate appreciation of the rules which should govern their life there, is insisted on by a writer in the current number of the *Westminster Review*, under the heading of the Invalid Abroad. There can be no question as to the beneficial effects of the dry, stimulating, cold air of these high-altitude resorts on many early cases of pulmonary tubercle. But careful selection is necessary, and even in suitable patients as much harm as good may be caused unless they be properly instructed as to the correct mode of life to follow. The phrase "open-air treatment" has led the uninitiated to attach too exclusive an importance to one feature of the "cure," which, though the most important, needs the aid of strictly supervised diet, regulated exercise, and the like,

as auxiliaries to ensure its due effects. The popularity of Davos, and the extent to which it has been exploited as a pleasure resort for others than invalids, make it a particularly dangerous place for inexperienced patients. There is a risk of their yielding to the temptation of over-indulgence in violent exercise, such as skating and tobogganing, and of frequenting evening entertainments in close and crowded rooms. In many cases the result of such indiscretions has been the occurrence of hæmoptysis, pleurisy, or other serious complication. The need for skilled medical assistance in the choice of climatic resorts should be impressed upon patients, and the most precise instructions given as to the routine, which should be followed under the supervision of a local practitioner.

MEDICAL DEPARTMENTS OF ROYAL HOUSEHOLDS.

THE Czar is said to have the largest medical establishment among the sovereigns of the world. The staff numbers in all twenty-eight, chosen from the leading members of the profession in Russia. At the head of all is a physician-in-chief; then come ten honorary physicians. There are three surgeons and four honorary surgeons, one accoucheur, and two honorary accoucheurs; two oculists, one chiropodist, one honorary chiropodist, and one dentist; besides these there are two physicians to the household. The medical department of the Queen's household, however, is as large, for there are six physicians-in-ordinary, two in England, two in Scotland, and two in Ireland; four physicians-extraordinary, one physician to the household; one sergeant-surgeon, two surgeons-in-ordinary in Scotland and two in Ireland, three surgeons-extraordinary and one surgeon to the household; three surgeon-oculists, one in England, one in Scotland and one in Ireland; one surgeon-apothecary, who is also apothecary to the household; two surgeon-apothecaries to the household at Windsor and two to Her Majesty at Osborne. There are also two surgeon-dentists, one in England and one in Scotland. There is also an apothecary in Ireland. Although not attached to the household, it might be mentioned in this connection that there are four honorary physicians and four honorary surgeons to the Queen chosen from the officers of the Royal Navy Medical Department; four honorary physicians and five honorary surgeons to the Queen chosen from the Army Medical Staff; six honorary physicians and six honorary surgeons to the Queen chosen from the Indian Medical Service.

AGORAPHOBIA.

AGORAPHOBIA, a morbid fear of open places and dread of assemblies, is one of those curious nervous conditions which most people will recognise as, in some of its manifestations at least, an exaggeration of a condition of mind which is very common. Many of the most practised parliamentary hands have indeed confessed that they never altogether got over the dread of at least one assembly, and many a man who is not wanting in courage and self-possession would be ready to admit that he could not get up to make a speech in a big meeting without some quickening of the pulse and respiration and some slight mental disturbance. It is for this reason that so many practised orators commit to memory the opening sentences of any speech which they have to deliver; but in some unfortunate persons symptoms of this kind arise on very small provocation. Bruns, who has made a study of this subject,[1] asserts, indeed, that the causes of morbid agoraphobia are many, but believes that it is nearly always associated with aural vertigo. Immediate causes may be violent emotion, unexpected shock by bad news, prolonged mental strain, abuse of coffee, venereal excess, etc. He analyses the symptom showing that there may be every degree of agoraphobia. It may be impossible for the person so affected to cross the street. He seems to lose all sense of space, objects seeming to recede before his eyes. He cannot stir without the assistance of some other person, and during an attack he may have to lean against a wall or lamp post. There is pallor, acceleration of the pulse and respiration, the face and extremities are covered with cold sweat, there is trembling of the limbs and an overpowering feeling of nausea, often accompanied by severe gastric cramp. If the attack be prolonged there is absolute anorexia, sometimes followed by severe diarrhœa, or by constipation. Bruns believes that the prognosis in such patients depends on the ear condition. When this is amenable to treatment it is as a rule good, and the opposite holds true. But it is probable that he takes too narrow a view, for in a certain, probably a large, proportion of cases the hearing is good and the ear apparently healthy, the symptoms referred to it being subjective.

[1] *Thèse de Lyon*, 1899.

THE FREE SALE OF PISTOLS TO BOYS.

A CASE that occurred on Christmas Day at Dundee, in which a schoolboy accidentally shot a companion in the arm from a small pistol, the bullet having lodged near the elbow, is another instance which exhibits the folly of permitting boys to purchase pistols with which deadly injury may be inflicted. It should be widely known that anyone using such a pistol without a licence is liable to a fine of 10s. Unfortunately there is at present no law to prevent dealers in such weapons from selling them to boys. Several Bills to restrict such sales have at times engaged the attention of Parliament, but none has ever passed both Houses in one and the same session. In 1893 the "Pistols Bill," introtroduced by Mr. Asquith, passed through Committee of the House of Commons, but, meeting with much opposition, failed to reach the final stage. In 1894 a similar Bill, introduced by Lord Hanley, passed all its stages in the House of Lords, but made no progress in the House of Commons; and in 1895 the same Bill, introduced by the Marquess of Carmarthen, passed through the Committee and the House of Commons, but went no further. At the Portsmouth meeting of the British Medical Association a resolution was passed in the Section of Surgery urging "the importance of furthering a Bill for the restriction of the sale of small arms."

THE HOSPITALS OF NEW SOUTH WALES.

THE Royal Commission on Public Charities (N.S.W.) has issued a fourth report addressed to Earl Beauchamp, K.C.M.G., Governor of the Colony, on the subsidised hospitals of New South Wales, which completes the third section of the Commission's investigations. There are in the colony 108 hospitals subsidised by the State, 1 maintained entirely by the State, and 5 not subsidised. There are, in addition, 5 institutions for lying-in cases, 3 of which receive Government aid. The 112 subsidised institutions contain 3,018 beds; the 7 unsubsidised have 404 beds. There is thus provision for about 2½ beds per 1,000 of population; or, with the Government Asylums for the Infirm and Destitute about 3½ beds for each 1,000 of the population. The average annual cost per bed varies enormously—from £35 to £350 and upwards. The amount of information on the cost and support of the hospitals contained in this report is most extensive and will well repay perusal by all who are interested in this wide subject. The evidence given to the Commission shows that the charity of the hospitals is taken advantage of in various ways by a number of persons who have no claims upon it whatever. Among the more flagrant cases of abuse is that of patients from the country who go to Sydney for operations, and who escape medical fees by gaining admission to the hospitals under plea of poverty.

THE WAR IN SOUTH AFRICA.

WITH LORD METHUEN'S FORCE.

By Surgeon C. MARSH BEADNELL, R.N.

Camp, Modder River, South Africa, November 30th, 1899.

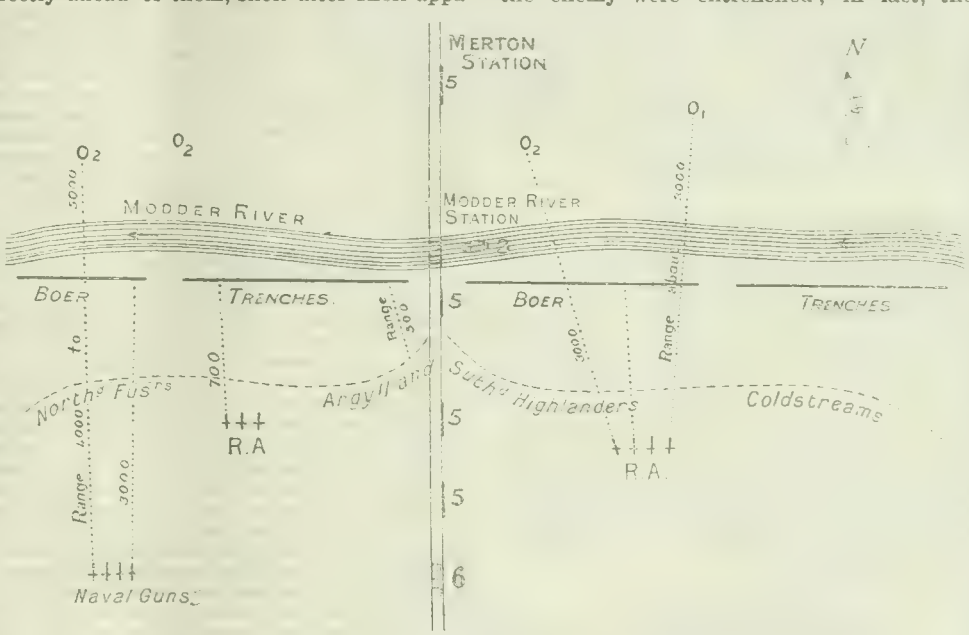
THE BATTLE OF MODDER RIVER.

On Tuesday, November 28th, 1899, was fought the battle of Modder River. It commenced with an interchange of shots between our scouts and the enemy's front line, at 5.30 A.M., and the firing, both artillery and rifle, continued almost without intermission till one hour and a half after sunset, when our troops retired about half a mile.

We, the Naval Brigade, slept in the train the previous night, with our guns in the trucks. At daybreak we detrained, and got our four 12-pounder long range guns into action on the left of the railway, facing N.E.

THE NAVAL BRIGADE.

I have roughly indicated our mutual positions in the annexed sketch. The naval guns endeavoured to silence the Boer artillery directly ahead of them, shell after shell apparently exploding right on their guns, but each time, to our great dismay and diappointment, the enemy again opened fire. They were, however, eventually silenced about 4 P.M. On going over the enemy's position on the other side of the river on the following day, one could see several of our shells and hundreds of shrapnel bullets in the midst of the enclosure that protected the Boer guns, but unfortuately for reasons to be given later on, the enemy got away with the whole of their artillery. The gunners also did excellent work shelling the town and the other guns; so heavy was the fire that not a house escaped being struck, and the hotel was set on fire.



Rough sketch of the position at the battle of Modder River.

To give the reader some idea of the heaviness of the fire I took the following notes: A small stable built of mud walls 4 inches thick, and covered outside with galvanised iron, the front wall—that is to say, the one directly opposed to our fire—20 feet long and 10 feet high, contained the following apertures: (*a*) 10 produced by unexploded shells; (*b*) 3 irregular shaped by burst shells; (*c*) 571 by bullets—7 are the exits of Mauser bullets fired by the enemy, 31 are entrances of Lee-Metford bullets fired by our troops, the remainder 533 are all shrapnel. Most of these latter lay embedded in the mud wall; that is to say, they penetrated the iron but failed to penetrate the mud for more than half an inch. All the Lee-Metford pierced the wall and entered that on the other side but failed to pierce it. The Mauser, in like manner, pierced the front wall and failed to pierce the second. The reason that 7 Mauser bullets pierced the front wall of the house—that is, the wall facing us—was the fact that the rear wall of the house contained an open door, and the bullets that came through it had only one wall to traverse. The unburst shells passed through both walls, entered another house 50 yards beyond, and then exploded. These facts give a good idea of the heaviness and extreme accuracy of our fire, also of the great penetrative power of the Lee-Metford and Mauser bullets and the feeble penetrative power, at all events in this particular case, of the shrapnel bullets.

THE RIVER.

After about two hours' fighting, finding that it was extremely improbable that we should have any casualties, thanks to our long-range guns, I obtained permission to go further up to the front, where I knew there must be plenty of work to be done amongst the wounded. Our fighting line had now assumed the shape of the letter ∧ with its sides extended, the angle of the ∧ resting on the railway line, and held by the Argyll and Sutherland Highlanders. The two sides of the ∧ were stretched out, and more or less parallel to the river, which was lined with Boer trenches all along the south side, the ends of the sides of the ∧ receding slightly from the line of advance. Twice the Guards on our right attempted to cross the river, but failed. On the left, the Northumberland Fusiliers and 9th Brigade made a similar attack, and succeeded in crossing; two men were drowned in the effort. Now, and not till now, did we ascertain how very strongly the enemy were entrenched; in fact, their position was almost impregnable, and it seems a marvel that we were ever able to persuade the Boers to leave it.

Practically the whole of our attacking force was marching across an open plain in full view of the enemy, while they were absolutely and completely hidden. They lay behind trenches which extended along the near bank of the river for a distance of at least two miles. Behind their trenches the ground sank to the level of the river, so that their men, horses, and their largest waggons could travel along the whole of their position on both sides of the river with almost absolute safety from our fire. The river was studded with boats used to ferry men to and fro, and to convey ammunition as required. On the other side of the river the ground gently inclined upwards, and here in strong positions were placed their Hotchkiss and other guns. The enemy's position was, as far as I, a non-combatant, could judge, an ideal one in every respect, but not a man of us knew, as far as I am aware, what a veritable hornet's nest we had got into.

CASUALTIES.

Taking everything into consideration, our 420 dead and wounded, which was the cost of our day's work, was miraculously small. Everything was against us; we had to attack an immensely strong and entrenched position held by a vastly superior force, while advancing ourselves across an open plain. We had anticipated a brief and easy victory, and in consequence the men were not rationed, and a battle was fought and won by stomachs that had not seen food for twenty-four hours. Water was terribly scarce, and every water cart that came near the front had to beat a hasty retreat. The heat was terrific, and last, but by no means least, our chief was

put out of action very early in the day by a bullet wound. I learnt this in a curious manner. On the left of our line I saw a horse bolting riderless; it was evidently an officer's charger, as there was a sword, etc., attached to the saddle. I sent a bugler to catch the horse, and found it had a Mauser bullet wound through the near foreleg, and there was blood on the bridle, stirrup, and saddle. Drawing the sword, one read: "Methuen from Chapman." Fears at once arose that the general was wounded, and so, alas, he was, though luckily the wound was not serious. Firing ceased about an hour and a half after sunset. Next morning at daybreak our guns opened fire, but a few shots sufficed to prove that the enemy had trekked during the night, and thousands must have made a midnight march. We ascertained later from prisoners that the enemy greatly feared a night attack with the bayonet; hence this hurried retreat. They left all their artillery behind them; but shortly after midnight, discovering that we had not crossed the river, they returned and removed the guns to Spytfontein, where they are now encamped. What a chance we lost. Why, the reader may well ask, did we not push home our attack at the close of the fight or shortly after? Because the men were so done up by the heat of the day, the fatigue of the long and hard day's fight, scarcity of water, and want of food, that they were barely able to put one leg before the other. Thus was lost one of the best chances we have had this campaign of capturing the enemy's guns without loss of life. Next morning I went up and down the enemy's lines on both sides of the river, expecting to count the Boer dead by hundreds. After three hours' careful search I was able to count 18 dead Boers and 75 horses; so that, unless they buried or carried away their dead, their loss would appear to have been marvellously small. It is impossible at present to form even an estimate of the number of their wounded.

The Boers and the Red Cross.

There appear to be men whose aim seems to be to underestimate our losses and to grossly exaggerate the losses of the enemy; men who delight to start tales that stretcher-bearers and ambulance wagons are fired upon by the enemy, etc. I fail to understand their motives. Broad-minded soldiers must see that stretcher-bearers cannot help being shot. No Boers would purposely fire on a Red Cross party, is my belief. The Boer Hospital here was struck by shell more than once, and all our ambulance waggons were struck by their missiles, a pure and unavoidable accident on both sides. I can myself give an instance in which the sick-berth steward of my ship was dressing a wounded marine; whilst the dressing was being put on the patient received a second bullet in the other leg, but with bullets dropping all round one it would be unfair to say that the Boers aimed at either the Red Cross or the wounded man. This particular incident occurred during our last battle at Graspan.

The Mauser and the Lee-Metford.

The next morning we quietly marched into the town and occupied it. The day was spent in burying the dead. The field hospital was very crowded this morning, over 400 dead and wounded. The wounds produced by the Mauser bullets are all that could be desired; the entrance and exit are practically of the same size and very minute. Most of the patients make an uninterrupted recovery. It is a more humane bullet than our own Lee-Metford for two reasons: its calibre is less and its velocity is considerably higher. I must have seen some thousand bullet wounds by now, including those I saw in the Filipino-American campaign. My experience includes also some experiments I made this year at Wei-hai-wei, in the course of which I fired over 1,000 rounds of Remington brass-coated bullets and nickel-coated Lee-Metford at all sorts of animate and inanimate objects, including their penetrating power upon various metals, a series of experiments I hope to publish later on. My experience has led me to the conclusion that those wounds which heal up most rapidly and give the least trouble are wounds produced by bullets having the same characteristics.

1. A very high velocity.
2. A flat trajectory, so that they hit apex first and do not keyhole.
3. A hard smooth sheath with a smooth rounded apex.
4. A close range, for the same reason as (2) a bullet at a long range may hit the object side on.

If I were to tabulate these missiles in the order in which the wounds produced by them were progressively more serious from above downwards, the table would read something as follows:

1. Mauser.
2. Krag-Jörgensen.
3. Lee-Metford.
4. Man-stopping Lee-Metford (hollow-headed nickel-sheathed).
5. Any of the first three with the nickel sheaths around the apex removed so that the lead nucleus is exposed.
6. Dum-dum.
7. Remington brass-coated, as used by the Filipinos.
8. Remington lead bullets, or the Martini-Henry.
9. Remington brass bullet, with brass sheathing removed so as to expose the lead nucleus.
10. Shrapnel bullets.
11. Shell or their fragments.

I have no acquaintance with explosive bullets; it is said the Boers have used them, but I think this to be exceedingly doubtful.

Most thoughtful men will agree that the Boers have proved themselves to be brave men, and instances of a violation of the laws of civilised warfare are few and far between.

The Battle of Magersfontein.

December 13th, 1899.

Yesterday we attempted to oust the enemy from their position in the Spytfontein and Magersfontein kopjes, but I regret to say we signally failed; and to-day we are in the same position, but with a loss of 1,000 men; there are about 700 dead and wounded and about 300 missing. The Black Watch lost very severely—21 out of 29 officers. It seems that they advanced in the night in quarter column, and at dawn were still in this formation, and within easy range of the enemy's rifle fire. The Boer losses it is quite impossible to calculate, as the Kaffirs that came in from their camp after yesterday's battle tell the most widely divergent tales—from 6 dead and 40 wounded to 2,000 dead and wounded. Judging from past battles, I do not think their losses are a tenth part of our own.

Our lyddite shell from the 4.7 naval gun has a magnificent effect to the eye, sending up a vertical column of earth and *débris* to a height of about 50 or 60 yards. It is claimed by the inventor to kill by concussion within a radius of 34 yards from the site of the explosion. The shell weighs 46 lbs., and is charged with the high explosive called lyddite—chemically a picrate. I should estimate that quite 20 per cent. of the Boer shells do not explode. The cause of this is doubtful, whether due to a defect in the shell or its fuse or whether to a scanty supply of these projectiles cannot be stated. In the action at Belmont, when our naval guns were shelling the Boer artillery at 3,500 yards' range, we watched shell after shell pass over our heads and strike earth about 700 yards in our rear, sending up a cloud of dust but not bursting; gradually these shell fell shorter, till one landed between our guns. That was the last plugged shell the Boers fired; each subsequent one was a bursting shell, and we very quickly had several of our bluejackets hit; fortunately for us, however, their artillery was soon silenced and they retired. The second theory, therefore, is probably the correct one: having found the range with the comparatively harmless plugged shell, they then use bursting shell.

I have only witnessed the effect of the shock of the explosion once; it was in the person of a Highlander. A shell exploded about ten yards over his head, he was untouched by any fragments, but the concussion must have produced some curious pathological change in his nervous system, as he has never ceased (now ten hours) swaying his head to and fro with a pendulum-like motion similar to that of the china dolls with the nodding head so commonly seen in the London streets. His intellectual faculties have also been considerably disturbed, as he is only half rational.

The Glories of War.

Last night there were hundreds of our dead and dying left in the field; in fact, it has taken two days to collect them, and much suffering has been entailed. One poor fellow walked into our lines with a towel on the end of his rifle, he was raving mad, and had been wandering about for hours with a portion of his frontal lobe protruding through a Mauser exit wound in the fore part of his skull.

The medical men have had a terrible time of it—working incessantly for thirty-six hours. The field hospital presents a

sad but impressive sight: one mass of wounded inside, rows and rows of dead outside; it is a sight, I think, would cure once and for all those worthy individuals who talk of the "glories of war."

THE HOSPITAL TRAINS.

The hospital trains are beautifully equipped, and reflect the greatest credit on the Army Medical Department. It is quite a treat to see the nursing sisters attending to their arduous duties amidst all this blood and thunder with the same zeal and care they are so well known to display in our hospitals at home.

THE HEALTH OF THE TROOPS.

The health of our troops is excellent; beyond a few cases of diarrhœa, sunstroke, and sunburn, there is no sickness. With regard to the latter trouble the Highlanders are chiefly afflicted; why are men sent out into this fierce sun in petticoats? It is all very well to talk about the uniform being the essence of *esprit de corps*, but is not this carrying it too far? Surely they might be allowed to go into action at any rate as other men go. As it is their legs become covered with crops of vesicles; few of the men like their dress for this kind of work; the beauty of the kilt and sporran is masked by a khaki flap, and when these two part company the aspect is both ludicrous and alarming; I saw one man returning yesterday from his brush with the enemy in a pitiable plight; in his own words he had had to "take" a barbed wire entanglement "at the double," and emerged "a bleeding mass, with his kilt hard a starboard, his khaki flap half-left turn, and his sporran dangling on the wire."

WATER SUPPLY AND REFUSE DISPOSAL.

The water supply is bad, being derived directly from the muddy river. Boiling is imperative. The air for a radius of over 2,000 yards from the centre of the camp is tainted with the smell of half-buried horses; there were about 200 dead horses and mules buried after the battle of Modder river, but thanks to the vultures, the ants, and the humble microbe, they are rapidly being reduced to harmless skeletons.

DUST SPOUTS AND LOCUST STORMS.

The latrines are of the simplest; long troughs are dug in the ground and screened off; at night they are filled up with earth. We have had one or two very severe thunderstorms, but the things we dread most are the dust storms, or, as I would venture to term them, dust spouts, for they are analogous to waterspouts. Vertical columns of dust extending to a height of about 150 yards and travelling at a speed of 6 or 7 miles an hour pass through the camp and play havoc with all and everything, making life miserable; rifles are thrown out of gear, food and water rendered nauseous, and clothes spoilt.

We have had one "locust storm" up here at Modder River; for three hours the air was like a snowstorm, but black. One could not walk ten yards without colliding with hundreds of them; every blade of grass was demolished, and every crumb of biscuit or bread on the ground was pounced on by countless numbers. After three hours they had all disappeared as mysteriously as they came. The locust storm was travelling in a N.N.E. direction.

To-night at midnight we take our guns up to their position at the front, and open fire upon the Boers at dawn.

December 14th, 1899.

TOTAL LOSSES AT MAGERSFONTEIN.

Since writing the above some more dead and wounded have been brought in, bringing our total losses in the engagement at Magersfontein up to 1,100 dead and wounded. I have also heard that one of the army medical officers to whom permission was given by the Boers to go up to their lines and attend to our own wounded, has been made a prisoner of war owing to the fact that a revolver was found on his person. The two Generals have communicated with each other concerning him, but General Cronje remains firm, and claims that men and officers wearing the Red Cross should be unarmed. I know the officer personally, and regret his capture, but at the same time all will agree that General Cronje is within his right.

From our Special Correspondent in Capetown.

December 20th, 1899.

THE BASE HOSPITALS.

THE work at the base is now becoming very heavy indeed consignments from Methuen's column arriving in rapid succession. It is satisfactory, however, to report that the service is everywhere standing the strain. As I mentioned last week, No. 1 is now full up, and No. 2 has well over 400 patients. No. 3, at Rondebosch, is ready for occupation. Two days ago, when I was out at No. 2, seven marquees were still in course of erection, the construction of the floors taking some time. Probably they are now complete. The accommodation has been supplemented by the kindness of the authorities of the Claremont Sanatorium, who have placed that institution, which is the property of the Seventh Day Adventists, at the disposal of the authorities as a hospital for convalescent officers. This offer has been accepted, and is somewhat timely, as there is no accommodation for officers at No. 2.

MEDICAL CASES.

Medical cases, as might be expected, are beginning to come in somewhat more freely from Methuen's column, and the medical division of No. 2, which is under Lieutenant-Colonel O'Connell, is still keeping to its proper work. Almost all the cases are either rheumatism or dysentery. The former come down mostly in a subacute condition, with joint pains and slightly elevated temperature. They have, of course, all undergone some treatment above. For the most part they are doing well, and no large proportion develop heart complications. Civil Surgeon Hancock, however, showed me one case under his care with a very loud, long, systolic, basic *bruit*, audible most plainly to the left, and quite localised. Nearly all the rheumatic cases give a history of some days' severe diarrhœa before the onset of the rheumatic symptoms. Probably the connection between the two depends on the depressing effect of the antecedent diarrhœa more than anything else. The dysenteric cases are numerous, and in this connection it may be mentioned that the affection known as "dysentery" has by no means the typical character of the endemic dysentery of India and other tropical climates. The manifestations are not so severe, neither is the prognosis, either as regards death or chronicity, so bad. One sergeant-major of the R.A.M.C. has, however, unfortunately succumbed to the disease in No. 2 General Hospital. As to treatment, one medical officer with whom I conversed is giving pulv. Doveri, and another the magnesium sulphate treatment. The results seem to be fairly good. I saw one case of ordinary hemiplegia, which is doubtless syphilitic, and is steadily recovering under potassium iodide. Two or three dysenteric cases have developed pleurisy, probably rather an accidental concomitant than a pure complication. Following the more recent trend of medical opinion, I notice that the medical officers are not tapping except in the presence of some manifest indication.

SURGICAL CASES.

On the surgical side the cases coming in present much of the routine character to which I have before alluded. The remarkable success obtained with the perforating thoracic wounds is still evident. The pleuritic effusion developed in a few cases generally becoming rapidly absorbed. For this one has to thank the splendid physique of most of the men (a factor largely dependent on the reserve element), the excellent hygienic conditions, and the good and abundant food. The record of cases of perforating abdominal wound continues to improve upon the experience of the speakers at the Portsmouth meeting of the British Medical Association. Civil Surgeon Hanwell pointed out one case which is convalescing steadily with merely a symptom; six cases of this class have so far done well. Under the care of the same civil surgeon is another case of much interest. A bullet had entered the buttock and emerged in the left groin, perforating the lower and posterior aspect of the bladder, going through the attachment of the internal oblique, and smashing the left pubic ramus. Of course there has been external extravasation on the left side, but the exit for the urine has been and is free enough, owing to extensive sloughing of the exit wound. Now there is an aperture large enough to insert three or four fingers, through which the shattered ramus and the opening

to the bladder can be clearly seen. The sloughing appears to be ceasing, and there is some attempt at granulation, but the wound is badly septic, and the patient in a marked septicæmic condition. At first a drainage tube was inserted, but this became so constantly blocked with sloughing fragments that it was discontinued, and Mr. Hanwell is now irrigating through the bladder with boracic lotion.

The spinal cases are the most disheartening things one sees in the hospitals, although they bring out the excellent nursing which is evident everywhere. In one, which became the subject of a necropsy, the cord was found literally smashed for over an inch. Civil-Surgeon Hanwell did an exploratory laminectomy in one of his cases, hit between the second and third dorsal, but found the laminæ intact, and no result followed.

In another case I saw the tibia was splintered by a bullet. The wound had been enlarged, and a number of fragments removed, some as large as one's thumb, and a drainage tube inserted. The wound had not remained aseptic, and effusion into the knee-joint has followed. The joint has been punctured, and the fluid I saw two days ago was distinctly semi-purulent.

Major Lougheed, R.A.M.C., is in charge of the Surgical Division of No. 2, and has under him Major Macdonald, R.A.M.C., and 8 civil surgeons.

THE NEW SOUTH WALES MEDICAL CORPS.

I had an opportunity of inspecting the New South Wales Medical Corps the other day. It is a most smart and serviceable unit, and splendidly trained. The men wear, of course, the distinctive Australian smasher hat. It is organised as a half-bearer company and a field hospital of 50 beds, and 7 officers, with 83 non-commissioned officers and men. Colonel Williams is in command. The equipment is singularly complete, and, what is noticeable, the transport is entirely in the hands of the corps itself. The bearer half company has 5 waggons for sick, a water cart, and 1 waggon and 3 carts for equipment. The hospital has 6 covered carts, 1 Maltese cart, and a water cart. There are 53 horses in the combined transport. The hospital tents are 4, of the tortoise pattern, for 12 patients each. There is another tortoise tent for operations. The corps has come equipped with every requirement, including its own *x*-ray apparatus.

THE STATIONARY HOSPITALS.

At present the 4 stationary hospitals are distributed—1 at De Aar, another at East London, and 2 in Natal; 140 invalids left for England in the *Aurania*, in charge of Civil Surgeon Cochran. The *Trojan* hospital ship is still at East London. The new company of the Cape Medical Staff Corps, which is being raised under the Principal Medical Officer of the base, is being trained as a bearer company. The Capetown Station Hospital at Woodstock has been raised to 250 beds.

THE RED CROSS.

The combined aid societies, under Colonel Young's direction, are doing excellent work, and the hospitals both at the base and on the lines are being well supplied with comforts of all kinds. Colonel Young has appointed Major Lovegrove, a retired officer, to the charge of the depôt at Wynberg, and he distributes the gifts in kind between Nos. 1 and 2. The Committees on the railway lines are helping valiantly in the work of providing for the wounded *en route*. The people in Capetown continue to bestow gifts both in money and kind most liberally; and, as I said before, the patriotism of the Malays and Coloured People is most praiseworthy. There is a little tendency for individual efforts in particular lines. For instance, one boys' school raised over £6 to provide fans for the patients at De Aar, in which dusty hot place they are sorely needed. Without Colonel Young's suave personality this generosity would have run riot, but he has done wonders in bringing order out of chaos.

The irregular Colonial Corps are not behind-hand in providing themselves with regimental ambulances. Brabant's Horse is calling for 48 men, and the South African Light Horse has 4 ambulance men per squadron.

The local civil surgeons engaged to attend to the posts on the lines of communication are receiving £1 per diem.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

VIII.

BELEAGUERED GARRISONS.

TIME passes, and still we regret to see that it has not yet been practicable to relieve any of the garrisons so long beleaguered and so gallantly held in South Africa. Kuruman, which has fallen after holding out for many weeks against overwhelming numbers, is fortunately of no strategic importance, and is chiefly of interest as having been the site of one of Livingstone's first residences and missionary stations in Africa. For some time past disquieting reports of increasing sickness have been sent in from Ladysmith; both typhoid fever and dysentery are apparently carrying off many victims. It is difficult from the short telegrams to arrive at the exact mortality. We are entirely in the dark as to the food supplies in Ladysmith, and it is quite possible that if rations are both low and poor in quantity they may be largely responsible for the dysentery, and would tend to render a man more susceptible to typhoid fever. In addition to these two serious forms of disease, there can be no doubt that a considerable amount of what is commonly known as "camp fever" (one of the "unclassified fevers" of the tropics) exists. Sir George White has himself been reported for a short time invalided with fever, which obviously cannot have been typhoid. Fortunately Ladysmith is well provided with medical men in the Army Medical Department, and also from South African sources. Both Dr. Jameson, who for many years was renowned in medical practice in Kimberley, and Dr. Davies, of equally good repute in Johannesburg, are with the garrison. These two gentlemen have had many years' South African experience of all forms of fever, so common in up-country South African towns during the summer months, and whatever medical skill can do we are convinced will be done. Mafeking from its position will be more liable to "camp fever" even than Ladysmith, and Lord Edward Cecil and other officers and men reported to be suffering from fever are probably for the most part affected with "camp fever," although undoubtedly in both towns typhoid fever has occurred.

CAMP FEVER.

Camp fever, it has been said, is one of those vague terms used to cloak the ignorance of physicians, and it must be admitted that it is difficult of scientific definition; and sometimes is loosely applied to anything from solar fever to the worst form of typhoid. It is, however, usually confined to solar fever and cases of simple continued fever. It is not in any sense of the word a malarious fever, nor is it, as a rule, more than highly inconvenient. From solar fever, which may be taken to be a minor form of sunstroke, and which is produced by prolonged intense heat, the recovery is usually only a matter of a few days. Simple continued fever almost invariably ends in recovery, but is apt to be much more chronic in character. The distinction between these and typhoid fever is often somewhat difficult, especially as the tropical form of typhoid is frequently characterised by the absence of such diagnostic symptoms as the typhoid spots and diarrhœa or hæmorrhage.

SCURVY IN KIMBERLEY.

A Reuter's message from Kimberley, dated January 3rd, states that typhoid and scurvy are somewhat on the increase as, however, the same telegram states that Mr. Rhodes at Christmas provided some forty-two plum puddings, which were cooked at the sanatorium for distribution among the various camps, we sincerely hope we may take it that supplies are still very far from running short in that town. The population shut up in Kimberley is large, probably close upon 20,000, and the question of supplies is no doubt serious. At the same time it is probable that the De Beers Company, which, it is reported, provided themselves with arms, have also liberally provided themselves with stores against the possibility of that siege which has since been realised. Knowing Kimberley and its inhabitants well from having resided there some years, I expect that the scurvy referred to exists principally, if not entirely, among the natives shut up in the mining compounds. There are 8,000 or 10,000 of these natives living on rations, and already attempts have been

made to send them away to their distant homes on two occasions, but on both occasions they have been turned back by the besieging Boers, who probably recognise that their presence in Kimberley will be an additional strain on the resources of the town and embarrass the defenders. Scurvy is by no means, in my experience, uncommon among the natives who go to work in the mines. The native at his own kraal or village is a great vegetable feeder, and is accustomed to young mealies and other forms of fresh green vegetables; of late years these, together with plenty of lime juice, have been supplied by the mines in their various compounds, so that scurvy had become a comparatively rare disease amongst them, but I have little doubt that under the present arduous conditions both vegetables and lime juice are running low, hence the scurvy. At the same time I do not anticipate that the restriction of diet amongst the European inhabitants has yet become so great as to produce the disease to any extent in them.

RELIEF OF MAFEKING.

The relief of Mafeking is a matter of speculation, at least as far as the general public is concerned, but there have been from time to time indications that a force from the north was on its way down the line of railway; it has even been stated that it was in the neighbourhood of Mochudi and Gaberones. It is sincerely to be hoped that this is so, for should the force have to come by Maclutsi, which is in the low country on the Crocodile still further north, at this time of year a good deal of malarial fever among the men, and horse sickness among horses, would, it is to be feared, be encountered. The only districts in which malaria may be suffered by some of our forces during this campaign are those along the valley of the Crocodile to the north-west of the Transvaal, in which both Tuli and Maclutsi are situated.

ARRIVAL OF THE WOUNDED AT SOUTHAMPTON.

A further batch of wounded from the front arrived at Southampton on January 5th on the Cunard liner *Aurania*. She had on board 2 officers and 141 men, most of whom had been wounded in action. Every preparation was made for their reception, and a special train conveyed them to Netley Hospital. The majority of the men improved greatly during the voyage, and appeared to be quite cheerful. Some of the cases were of a serious nature. The majority of these men had served under Lord Methuen, others had been attached to the Ladysmith relief column. The two officers on board—Lieutenant Cameron of the Grenadier Guards, and Lieutenant Carroll of the Munster Fusiliers—were not seriously wounded.

LYDDITE.

With regard to the effect of lyddite as an explosive in warfare we are still rather in the dark. We are told that a lyddite shell exploding will destroy life within a considerable area by the mere force of concussion; on the other hand, a certain Mr. Preller, writing to the *Volkstem*, a South African Dutch newspaper, says:

> We were standing close to Long Tom, which was, as always, attracting the enemy's shell fire. One of the British guns fired at us, and the shell fell close to us with a tremendous noise. It struck just behind our guns, and sank 4 feet into the solid ground, making a hole big enough to bury one horse and one man standing. Everyone expected that he would be the first victim of this wonderful lyddite's terrific power. Well, the fatal smoke cloud arose, and fragments of shell snarled around us in all directions. We stood and looked with bated breath. The smoke cleared way, and we found that not a man of us had been hurt. So there was another bubble burst. The lyddite smoke was proved to be non-fatal, and its general effect altogether less terrifying than we had been led to believe.

THE SIVEWRIGHT AMBULANCE.

In my last letter I referred to Sir James Sivewright's ambulance. As this same ambulance has been the subject of a good deal of criticism in various papers, it is only fair to give Sir James Sivewright's own statement to an interviewer who called on him on behalf of *South Africa*, with reference to this question.

> Sir J. Sivewright said the party was composed of eight Afrikander students, all British subjects and members of the South African Students' Union in Edinburgh, of which he is the President, with Dr. Gray, Mrs. Gray, and Mrs. Bamford, nurses, and Mr. Alan Johnson. The object for which they went to South Africa was to nurse and tend to the sick and wounded, irrespective of creed, colour, or nationality. With this object the War Office fully agreed, and the party left with their approval. On arrival in Cape Town, after an interview with Sir Alfred Milner, the party were forwarded by the *Oongella* to Delagoa Bay, and according to a telegram he had on Sunday morning received from Pretoria, the Afrikanders and Mrs. Bamford had, in the latter part of last week, arrived at the Transvaal capital. There appeared to have been no hitch, except in the case of Dr. Gray, who had apparently been refused permission to cross the border, and Mrs. Gray had doubtless stayed with her husband. Of Mr. Alan Johnson there was no mention, and he might be among the party arrived in Pretoria, or he might have cast in his lot with Dr. and Mrs. Gray. Dr. Gray was known to have carried with him a number of letters from friends to British officers in Pretoria, and this, one of the cablegrams suggested to Sir James Sivewright, might account for his inability to obtain a permit to proceed.
>
> As to the inference (continued Sir James) that the male members of the party had gone to the Transvaal with any motives save those mentioned, I may say that a member of a leading West End club told me the other day he had heard from a fellow member that not only were the party armed, but that the names of the manufacturers who had supplied the arms and ammunition could be given. I immediately offered to give £1,000 to the Lord Mayor's Fund if it could be proved that there was the slightest foundation for such a statement. I am still waiting to hear from that West End club. The lads have absolutely no weapons with them, except such as Mr. Montague, the well-known surgical instrument maker, of Bond Street, supplied them with. They are pledged to me—no matter what their private feelings may be—to give their services solely to the sick and wounded. I know the young fellows, and believe they will be as good as their word.

Such is Sir James Sivewright's explanation, and I confess that it does not seem to me to very much alter the position. Dr. Gray was the responsible and qualified surgeon in charge of this ambulance, and to say that there was no hitch in the affair, except in the case of Dr. Gray, who had been refused permission, etc., is equivalent to the announcement that the play of *Hamlet* will be proceeded with as usual, with the omission of the Prince of Denmark. However cosmopolitan Sir James Sivewright's sentiments may be, it is quite obvious that Mr. Kruger is determined that the ambulance party shall be Boers, and Boers only, the Boer medical student being, in his opinion, better for the nursing and tending of the sick and wounded, "irrespective of creed, colour, or nationality," than the qualified surgeon who was also a Scotchman.

HORSES AND THE CLIMATE OF SOUTH AFRICA.

It has been more and more evident as the campaign proceeds that mounted men are essential to successful operations—as mounted infantry, scouts, and cavalry. The somewhat tardy realisation of this on the part of the authorities has led to the wholesale exportation of horses from England and Australia to the Cape.

While I have no hesitation in saying at the outset that for South African warfare trained South African horses, if obtainable in sufficient numbers, would undoubtedly be the most suitable animals, and that I very much question whether the military authorities have not shown the same mistaken tardiness in securing them as they have in enlisting the invaluable services of British colonists, yet I believe that in the case of the large numbers of horses exported, and still being exported, from Australia and from England to South Africa, all that will be necessary in a large proportion of instances will be that they shall have a sufficient period of time to get over the stiffness and loss of condition entailed by the voyage. A few weeks should be sufficient for this, and the only further risk which the horse would run would be the horse sickness. It is quite probable that the imported horse is more liable to this disease than the native, but the precautions which are necessary against it I have already discussed. Many instances have come under my notice in South Africa where imported English racehorses have sufficiently recovered their condition in the course of a few months in the country to win the best races. It is notorious that no animal adapts himself so readily to a change of climate as man, but nevertheless there is no question that in many instances English or Australian horses soon become thoroughly fit and well in South Africa.

THE LANGMAN HOSPITAL.

We understand that this hospital will probably be ready to sail for South Africa about February 3rd. Dr. Conan Doyle will accompany the hospital in the capacity of Secretary and Registrar. Mr. H. J. Scharlieb, M.B., B.S.Lond., at present Assistant Anæsthetist to University College Hospital, has been appointed one of the junior surgeons.

THE COLONIAL CONTINGENT.

Some particulars with regard to the New South Wales Medical Corps, under the command of Surgeon-Colonel W. D. C. Williams, which has already reached South Africa, will be

found in the letter from our correspondent in Capetown. We learn from a Reuter's telegram that Dr. Alexander MacCormick and Dr. Scot-Skirving will accompany the second New South Wales contingent to South Africa. Dr. MacCormick is Lecturer on Surgery at the University of Sydney, and Dr. Scot-Skirving is Lecturer on Clinical Medicine in the same University. It is stated that these gentlemen will have the rank of major, and that they are accompanying the contingent in a consultative capacity.

The Imperial Yeomanry and Volunteers.

The fund for providing field hospitals for the Imperial Yeomanry now amounts to about £14,000, and it is expected that part of the hospital staff will leave for South Africa or or about January 20th. We understand that Mr. Alfred D. Fripp, M.S., F.R.C.S., Surgeon in Ordinary to the Prince of Wales and Assistant Surgeon to Guy's Hospital, will be the Chief Surgeon to the hospital, and that Lieutenant-Colonel Sloggett, R.A.M.C., will be the military medical officer attached. It is stated that Surgeon-Captain R. R. Sleman, 20th Middlesex (Artists' Corps), and Surgeon-Captain E. W. St. V. Ryan, 16th Middlesex (London Irish) have been appointed medical officers to the City of London Imperial Volunteers.

The Indian Medical Service in South Africa.

We are informed that two officers of the Indian Medical Service are now serving in South Africa. These are Major Elliot, 21st Goorkha Rifles; and Captain Frost, 4th Goorkha Rifles, who embarked from Bombay with the Indian Contingent in September last. Major Elliot was ordered out in charge of 69th Native Field Hospital (for native followers), and has since his arrival been shut up in Ladysmith with Sir George White's force, as is also Captain Frost. Both are doing most excellent work in assisting their colleagues on all sides in their arduous task.

Indian Ambulance Corps.

It is stated that Mr. Ghandi, a native of India, is raising an ambulance corps of Indians in Durban.

Home Hospitals and Convalescent Homes.

The St. George's Hospital Board has had under consideration what help can be given to the War Office for sick and wounded; as a result, steps are to be taken to place temporarily at the disposal of the War Office the whole of their Convalescent Home at Wimbledon, which contains 100 beds, together with the services of the staff.

St. Bartholomew's Hospital, London, has offered 50 beds, and soldiers so admitted to the hospital may be transferred to the Convalescent Home at Swanley, Kent, maintained by the hospital funds.

The Great Northern Central Hospital has placed 20 beds at the disposal of the War Office for the reception of sick and wounded soldiers from South Africa.

The governors of the Norfolk and Norwich Hospital have offered 4 beds in their Convalescent Home at Cromer for wounded British soldiers.

The Committee of the Royal Hants Hospital have intimated their willingness to receive for treatment sick and wounded soldiers from South Africa. The largest number that can be received is 12, and the War Office has been requested to give the preference, if practicable, to men of the King's Royal Rifles, Rifle Brigade, Hampshire Regiment, and the Yeomanry and Volunteers of the county.

The Committee of the Liverpool Royal Infirmary have decided to arrange for the reception of 18 more invalid soldiers and sailors (belonging to the Liverpool district) from South Africa, in addition to the 12 beds previously offered.

The directors of the Warneford and South Warwickshire Hospital at Leamington have decided to place one of the wards of the hospital at the disposal of the War Office for the reception of sick and wounded men of the Warwickshire Regiment at the front.

The Mayor of Blackpool has written to Lord Lansdowne offering 10 beds in the Victoria Hospital.

The Denbigh Infirmary, on the suggestion of Dr. Lloyd Roberts, has agreed to offer 6 beds to the War Office.

The Edinburgh Royal Infirmary has offered accommodation for 100 men.

The directors of the Dundee Infirmary have agreed to offer 50 beds in the institution, with a promise of 20 or 30 more if needed. The directors also state that the adjacent military hospital could be made available for 40 more.

The Paisley Infirmary are reserving the West or Coats's Pavilion of the new infirmary for the treatment of soldiers from the Transvaal.

The Committee of the Surrey Convalescent Home at Seaford has placed 10 beds at the disposal of Lady Knutsford, Vice-President of Surrey for the Soldiers and Sailors' Families Association.

The Committee of the Booksellers' Seaside Holiday Home will be prepared to offer free accommodation at their home at Eastbourne for such members of the trade who may volunteer for the front, and who may be wounded or invalided home.

The Leamington Town Council has agreed to allow the free use of the baths and waters in the cases of sick and wounded soldiers from South Africa likely to benefit by them.

At a meeting at Arundel to devise means of assisting wounded British soldiers and sailors in the Transvaal, the Duke of Norfolk and Lady Mary Howard consented to receive a number of them at Arundel Castle until convalescent. Generous offers from other parts of the country have also been received.

Sir Archibald Edmonstone has offered the managers of the Edinburgh Royal Infirmary the mansion house of Colzium, near Kilsyth.

Lord Hopetoun has offered one of the wings of Hopetoun House for sick soldiers of the Highland Brigade or Scottish regiments.

Mr. A. B. Gilroy has placed Dunalastair House with 60 beds at the disposal of the War Office free.

Mr. R. R. S. Waraker has offered his house (The Hall, St. Nicholas-at-Wade, Birchington) to the Government as a convalescent home for the use of the wounded.

A telegram from Nice says that an important scheme has now been completed in the Riviera by which practically all the leading hotels, besides many owners of villas, have agreed to receive convalescents from the Transvaal as free guests.

Transfers and Appointments.

The following medical officers left Southampton on January 4th in the *Ghoorka* for South Africa: Majors Franklin and Cummins, R.A.M.C.; Lieutenants Davis and Stafford, R.A.M.C.; and Civil Surgeon Collum; also a Field Hospital Detachment of the R.A.M.C. left in the *Kildonan Castle*.

The hospital ship *Princess of Wales* arrived at Cape Town on January 8th.

SCOTTISH POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

The annual meeting of the Scottish Poor-Law Medical Officers' Association will be held at 36, Buchanan Street, Glasgow, Messrs. Ferguson and Forrester's, at 6 P.M. on Friday, January 19th. The annual dinner will be held at the same place at 6.30 P.M.

The report to be presented to the annual meeting states that the Committee met ten times, and regret is expressed that owing to the fortunes of the ballot neither the Association's Bill to amend the Local Government Scotland Act, 1894, introduced by Mr. Alexander Cross, or that introduced by Mr. D. N. Nicol could be taken to a second reading. Mr. Cross has promised to introduce the Association's Bill into the House of Commons next year. Reference is then made to the case of Dr. Lamont, and it is stated that, though he was not a member of the Scottish Poor-Law Medical Officers' Association, the Committee did everything in its power to bring about the successful issue of the appeal to Parliament in his case. The report goes on to point out that at the annual meeting of the British Medical Association in Portsmouth, the grievances in regard to tenure of office were brought prominently before the business meeting, and the Association again pledged itself to assist in the struggle in every possible manner. The meetings of two Branches of the British Medical Association were attended by delegates from the Committee—(1) Border Counties Branch of the British Medical Association, held at St. Boswells; (2) Perth Branch of the British Medical Association, held at Perth. In both instances the delegates had a most courteous reception, and resolutions were passed, in each instance, pledging the members individually to use their influence with their several Members of Parliament, and at the same time authorising their Chairman and Secretary to sign a petition in favour of the Bill when it comes before Parliament next session. The Committee announce with great satisfaction that Sir Charles Cameron, M.P., has consented to become Honorary Vice-President for the year 1900, and thanks are expressed to Mr. Alexander Cross, M.P., Sir Charles Cameron, M.P., and Mr. D. N. Nicol, M.P., and others for their help in Parliament, and to the Council of the British Medical Association, and to the Editor of the British Medical Journal for their assistance during the past year.

The Treasurer's statement shows that the work of the Association is conducted in a very economical manner, and that there is a satisfactory balance in hand. The annual subscription is 5s., and should be paid to the Treasurer, Dr. Martin, 737, Gallowgate, Glasgow.

Harveian Society of London.—The gentlemen proposed by the Council as officers of the Society for the year 1900 will be balloted for at the annual general meeting on January 18th. The President proposed is Dr. W. H. Lamb, and the Honorary Secretaries Mr. Raymond Johnson and Mr. Hubert Phillips. After the meeting, the annual *conversazione* will take place at 8.30 P.M., when the retiring President, Mr. H. E. Juler, will deliver his address, and there will be music.

SICK AND WOUNDED OFFICERS' SURGICAL AND MEDICAL AID FUND.

THE Duke of Abercorn, K.G., has addressed the following letter to the press:

SIR,—I shall be glad to be afforded the opportunity of making an appeal in your columns on behalf of those sick and wounded officers of all services whose means are inadequate to secure that efficient medical and surgical treatment which will often be needed to restore to them after their return home the health they have sacrificed in the service of their country.

Amongst the great number of officers who have unhappily been wounded or are suffering from disease contracted on service, there will certainly be many who have small private means, and who are not in a position to command the skilled assistance they will urgently need. In many cases continuous treatment for long periods will be necessary. Though to offer assistance in such cases will be a matter of considerable delicacy, nevertheless, I feel sure that it will be generally felt that an attempt should be made to do so.

The undermentioned gentlemen have consented to act upon a general committee, and to assist the objects of the scheme in every way within their power.

A fund has been opened to which I earnestly trust many of your readers will readily contribute. The provision of accommodation for convalescent patients is part of our scheme, and I have already received several offers from private persons which I have no doubt that the Committee will be glad to entertain.

Subscriptions may be sent to Messrs. Coutts, Strand, London; the Duke of Abercorn, Hampden House, Green Street, W.; or to the Honourable Arthur Brodrick, 18, Eaton Square, S.W. (Honorary Secretary and Treasurer to the Fund, to whom inquiries may be addressed). Cheques should be crossed "Sick and Wounded Officers' Surgical and Medical Aid Fund."—I am, etc.,

Hampden House, 61, Green Street, W., Jan. 11th. ABERCORN.

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ARTHUR BRODRICK,
Honorary Secretary and Treasurer.

LITERARY NOTES.

SANITARY reform in India has had to contend with determined native opposition, because it almost inevitably runs counter to practices and institutions which are founded on religious beliefs jealously cherished. Reference to ancient Aryan works on medicine, such as those of Manu and the *Azur Veda*, or sacred medical book, discloses a by no means inconsiderable appreciation of the primary principles of hygiene. But whilst the truth and soundness of many of the laws laid down by these ancient writers finds confirmation in the facts of modern science, they are chiefly devoted to personal hygienic measures and are largely counteracted in their influence for good by erroneous doctrines. Praiseworthy efforts are being made by those who know the country and its inhabitants best to disseminate knowledge which will pave the way to healthier public and private life. The Diffusion of Knowledge Agency of Madras is doing good work of this kind by the publication in the vernacular of the facts and lessons of western science in a popular form. In the current number of the *Indian Magazine and Review* is printed a list of native ladies and gentlemen who are "in the west." It contains the names of some thirty-two male and three female practitioners and students of medicine. Many more have been, and are being, educated on modern lines in the universities and colleges of the Dependency, and it is from such compatriot teachers as these, who bring to their task a natural racial and religious sympathy, that the masses will most willingly acquire the enlightenment which is necessary to make India a less fertile soil for disease.

We are indebted to Mrs. H. Arnott of Coventry for the following interesting extract from a letter, dated 5th February, 1844, written by her late great uncle, Dr. Arnott, 20th Regiment of Foot, to the *Edinburgh Weekly Register*:—

My attention has been called to a paragraph in your *Register* of the 24th ult., contradicting, on the authority of General Montholon, the tale which appeared not long since in a London evening paper that the heart of Napoleon narrowly escaped being carried off by a rat. I did not give the story to that evening paper nor to any other. I have no knowledge of it whatever; but as I am the Dr. A —— there alluded to I think it is now not more than proper that I should state the circumstance as it happened, which was, that after the *post-mortem* examination, the governor committed the charge of the heart to me for the purpose of being preserved, and afterwards to be placed in the coffin with the other remains of the late Emperor, with the view that it might be taken out at some future time and sent to France, if permission from the English Government could be obtained to do so. I had the heart in my room until the necessary preparations were made for preserving it, and in the night I was roused by an extraordinary noise, having lights in the room I looked out, and saw rats at the heart—there were more than one! So far the tale is true. But the heart was *not* out of the basin which contained it, nor was it mutilated in the least.

Mr. H. K. Lewis is about to publish a work by Dr. S. A. Knopf, of New York, on *Pulmonary Tuberculosis, its Modern Prophylaxis and its Treatment in Special Institutions and at Home.* The work will contain descriptions and illustrations of the most important sanatoria of Europe, the United States, and Canada.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 17th day of January next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, January 16th, 1900.—2.0 P.M., Arrangement Committee.—2.30 P.M., Premises and Library Committee.—3.0 P.M., Conciliation Board Committee.—3.30 P.M., General Practitioners and Ethical Committee.—4.30 P.M., Public Health Subcommittee.—5.0 P.M., Parliamentary Bills Committee.—8.30 P.M., Medical Acts Amendment Subcommittee at 25, Cavendish Square. *Wednesday, January 17th, 1900.*—9.30 P.M., Medical Acts Amendment Subcommittee. 10 A.M., Journal and Finance Committee.

January, 1900. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on January 17th, April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

BORDER COUNTIES BRANCH: COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.—This District will meet in the Railway Hotel, Newtown, St. Boswell's, on Friday, January 26th, at 3.30 P.M., Dr. Blair, Chairman of the District, presiding. Members are requested to send notices of all cases to be shown or papers to be read at the earliest possible date to the Honorary Secretary, Dr. W. HALL CALVERT, Melrose, N.B.

SOUTH-WESTERN BRANCH.—The winter intermediate meeting will be held on Tuesday, January 16th, at the Athenæum, George Street, Plymouth, at 3 P.M. The Honorary Secretary will be glad to hear from members wishing to read papers or show cases or specimens, that an agenda paper may be issued. Paper already promised: Dr. Gordon (Exeter): On the Policy of the Profession.—H. W. WEBBER, M.S., Honorary Secretary, 4, Woodland Terrace, Plymouth.

THE estate of the late Dr. William Pepper of Philadelphia, formerly Provost of the University of Pennsylvania, has been appraised at 670,888 dollars (nearly £135,000). This includes a life insurance policy of 50,000 dollars (£10,000).

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

Hospital Sunday Fund.—A Medical Centenarian.

AT a meeting of the Hospital Sunday Committee held at the Council House on January 4th, the proceeds of the collection held on October 29th last in aid of the local charities was handed over. The collection takes place every year in October in all the churches and chapels of Birmingham and the neighbourhood, and the sum thus raised is handed over to one of the Birmingham hospitals. Last year the General Hospital received £5,246; this year the Queen's Hospital was the recipient. The gross receipts this year were £5,304, a larger amount than had ever been collected except in 1878, when it reached £6,000. The Lord Mayor, in moving the adoption of the Committee's report, laid stress on the good work which was done yearly at the Queen's Hospital, and expressed a hope that the Fund would grow as the city grew in size. Sir James Sawyer received the cheque on behalf of the authorities of the Queen's Hospital.

The death is announced of Mr. Henry Swinson, M.R.C.S., of Finstall, near Bromsgrove, who was born in Birmingham in April, 1799. He obtained the diploma of M.R.C.S.Eng. in 1825, but owing to delicate health never practised. He was always a very active man, and is said to have preserved his usual health until within a week or ten days of his death. He was unmarried.

INDIA.

The Health of Bombay.—The Improvement Trust and Drainage of Bombay.—The Pilgrimage to Mecca.—Plague and the Mecca Pilgrimage.—The Famine.

ALTHOUGH there has been recently only a slight increase in the number of deaths from plague in Bombay, the mortality from which has varied very little from the figure at which it has now remained for several months, yet the total mortality from all diseases has risen during the last few weeks, and is now higher than it has been since May last. This increase has occurred under several heads, but is most marked in the malarial classes of diseases, which are very rife, although not of a very fatal type. The city seems to be in a very unhealthy state, so that the extensive schemes which are now under discussion or being inaugurated for improving the sanitary state of this terribly overcrowded city are of great interest at the present time.

Of these the most important—which owes its inception to Lord Sandhurst—was started under the most favourable auspices during the recent visit of the Viceroy to Bombay. The foundation stone of the first of the plans of the Improvement Trust was laid in Bombay by the Governor of the Province last month, but it is only one of six large measures which are now being worked out which have for their object the clearing of three very overcrowded areas, and building on more open ground sanitary dwellings for those displaced. The scheme now taken in hand is to accommodate the inhabitants of one of the worst areas of the city, which will be then completely bought up, wide streets run through it, and the condemned houses pulled down and rebuilt. During the year which has elapsed since the trust was started these plans have been worked out, and a loan arranged for to allow of a beginning to be made. It is hoped that by dealing completely with considerable areas at a time the increased value of the part dealt with will go a long way towards the expenses of the operation. It is expected that 2,600 persons will be displaced, and 1,600 will be accommodated in the buildings now begun, which will remain under the control of the trust, so as to prevent the recurrence of overcrowding, while every care will be taken to make them as complete in their sanitary condition as possible. The estimated cost of this scheme is over twenty-six lakhs of rupees, or about £160,000. Calcutta, which is not one whit less filthy than Bombay, might very well imitate this action, without waiting for the ravages of plague to teach the painful lesson which the Western port has learnt by so bitter an experience. Another proposal which has been under discus-

sion for many years is the improvement of the drainage of Bombay. Much of the city has always been waterlogged, and the condition has been rendered much worse since a more ample water supply has been introduced. Nine years ago Mr. Baldwin Latham examined and reported on the subject, and the Corporation have had before them two schemes which were largely based on his recommendations. One was to intercept the storm water from Cumballa and part of Malabar Hill, so as to prevent it augmenting that which finds its way to the flats, while the other was to drain the subsoil water from the flats themselves. It was not, however, known if the nature of the soil was such as to allow of the second part of the plan being efficiently carried out. Mr. Santo Crimp has now reported that the soil of the low area which it is desired to drain contains a large amount of clay, and is therefore not amenable to subsoil drainage such as was proposed, so that this portion of the scheme will have to be abandoned or modified, yet it is admitted that the ground water is much higher in many parts of the city than it should be, and there can be little doubt that much of the unhealthiness of Bombay is due to this fact. He therefore proposes systematic surface drainage to prevent the moisture from sinking into the soil. This will at the same time go far towards stopping the continually increasing saturation of the soil with all manner of filth which now escapes and soaks into it. The cementing of the gullies and side channels in the streets will accomplish much in this direction. He approves of the proposal to carry off the storm waters from the higher levels into the sea, and so to keep them from running on to the low-level area, but proposes some important modifications of the earlier schemes for effecting this purpose, one of the most notable of which is to fill up the insanitary storm reservoir which has been denounced over and over again. If the far-reaching sanitary improvements above sketched are fully carried out, Bombay may yet date her regeneration from the advent of the plague; and just as outbreaks of cholera in England gave a stimulus to sanitation as must have saved by now many more lives than that dread disease claimed, so may the present epidemic of plague awake India to a knowledge of the value of sanitation which may in time lead to a similar recompense.

Regulations with regard to the pilgrimage to Mecca have again been issued by the Indian Government, and the plan of only allowing embarkation from the port of Chittagong after due detention in a camp there is to be continued for another year. The importance of this as a safeguard to Europe is evident, and it is satisfactory that the appearance of the disease in Portugal has not led to any relaxation of the stringent measures adopted in India to prevent the disease being spread from this country, precautions which have been more successful than many thought would be the case with a disease so difficult to deal with as plague in large Eastern seaports.

The prospects as to the famine are not bright, the numbers employed on the relief works having risen to 1,850,000, while cattle are dying by thousands. Rain continues to hold off, and the north-eastern monsoon of Madras has also been a failure so far. As a consequence the area affected has been greatly increased during the last two months, and the northern part of Bombay, which it was hoped would escape with scarcity, is now completely involved in the famine. In fact the outlook is very grave, and large areas are threatened with a water famine, with all its horrors and the difficulty of meeting it. If the winter rains fail the country will be in the throes of a famine which will be far more serious than that of 1897, or of any other on record; but it is not too late to hope that such an awful calamity will be averted by a timely fall, although the weather reports show no signs of its approach at present. However, Christmas is the time when rain often falls, and such a blessing would be as appropriate as seasonal.

HONG KONG.

Beri-beri in Hong Kong.—Bubonic Plague Measures adopted by Sanitary Board for the Destruction of Rats.

DR. CLARK, Medical Officer of Health, has reported that from January 1st to November 20th, 1899, 164 deaths from beri-beri occurred among the Chinese—the greatest death-rate being in October and November. One district—the poorest and dirtiest—seems to have suffered most severely.

A resolution was passed by the Sanitary Board recommending that 600 rat traps be purchased and 8 coolies engaged for three months to attend to baiting of traps, etc.; also that a reward of 2 cents be offered for every rat caught dead or alive.

CORRESPONDENCE.

THE MILITARY MEDICAL ARRANGEMENTS IN NATAL.

SIR,—With reference to your remarks *re* preparations for sick and wounded in Natal prior to Sir George White's arrival, permit me to say that, although as Principal Medical Officer of South Africa, I was, of course, responsible, yet the practical carrying out of the details was entirely in Lieutenant-Colonel Johnston's hands. I found my time fully occupied in attending to the various details of Cape Colony. By inserting this you will greatly oblige.—I am, etc.,

J. F. SUPPLE,
Col. R.A.M.C.

Woodstock, Capetown, Dec. 16th, 1899.

THE EXTERMINATION OF *ANOPHELES*: SOME MORE SUGGESTIONS.

Sir,—This subject is evidently exciting so much interest that I trust you will allow me space to touch on some points connected with it. While it may be possible to diminish or even exterminate *Anopheles* in places where their breeding pools are comparatively few, the task may be impossible or much more difficult where the breeding places are numerous. For instance, in Freetown, Sierra Leone, owing to the hilly nature of the place, the pools seem to be few enough to be manageable; but Drs. Strachan and Fielding-Ould report that in Lagos, a perfectly flat area with a high subsoil water, the pools are innumerable. Dr. Strachan thinks that the *Anopheles* there can be managed, but only by persistently filling up its depressions and constantly using paraffin—both troublesome and costly measures when adopted on a large scale; but Dr. Fielding-Ould is less sanguine, and, it must be confessed, with some reason. The question is, cannot we devise simpler methods of dealing with the insects in such places?

Two such methods suggest themselves; though before we admit that either is practicable, we must make further investigations. The first depends on the question, How do the insects carry on the species from one rainy season to the next? In many places which are nearly flooded during the rains, the country is an arid desert during the dry season, perhaps without a pool suitable for *Anopheles* within several square miles. Are we to imagine that the insects then breed only in such pools as do remain (wells, cisterns, pools in beds of streams), to spread over the country when the first rains fall; or that the eggs lie dormant in the bed of dried-up puddles; or that the adult *Anopheles* "hibernate" all the time in dwellings, woods, etc.? These are most interesting questions which urgently requires investigation, because, if the insects adopt the first course, it may be possible to attack them with great effect during this season—that is, when they are forced to breed in the few places which the dry season allows them.

The other method I refer to depends on the discovery of what may be called the ideal culicicide, if such a thing exist. It should be some substance which kills larvæ without injuring higher animals, which is cheap, and which dissolves so slowly that it will render a depression in the ground uninhabitable for larvæ for a long time. I have suggested tar, because I have seldom found larvæ in tarred vessels, and Dr. Fielding-Ould reports favourably on it as the result of one experiment. Another substance, lime, is suggested in a very interesting manner by a note in the BRITISH MEDICAL JOURNAL of December 9th, 1899, on Dr. Grellet's recent observations. Dr. Grellet states that malaria disappeared from Châtillon-sur-Loing as the result of an extensive application of lime to the soil for agricultural purposes, and gives other instances to show that this substance is inimical to the disease. There can be little doubt that it acts by preventing the breeding of *Anopheles* in surface puddles, that is, if his observations are correct. The use of such substances, if effective, would probably be far cheaper and easier than drainage, dumping, or oil. In the search for the ideal culicicide we are encouraged

by the fact that *Anopheles* are not to be found in many localities where there must be suitable pools, but where we may assume there is some constituent of the soil which is objectionable to them; very little often suffices to determine the propagation of insects.

To save my critics trouble, I should like to point out that I have never expressed the opinion that it is possible to exterminate *Anopheles* throughout the world in a few months. I have only suggested that it may be possible to diminish or suppress them in some localities, especially in some towns, cantonments, and plantations where the conditions are favourable. Even with such a limited application as this the question is still *sub judice*.—I am, etc.,

Liverpool, Jan. 10th. RONALD ROSS, D.P.H., M.R.C.S.

OCEAN VOYAGES IN PULMONARY PHTHISIS.

SIR,—It is a matter of so much importance to the sufferer from phthisis whether he should or should not be sent on an ocean voyage, that it seems to me incumbent on anyone who has had unusual opportunities of forming a correct judgment on this subject to express it.

My own experience has shown that advantage in phthisis from an ocean voyage is restricted to a very limited class of cases, and that these are equally benefited by an open-air life elsewhere. The class of cases I refer to are vigorous young adults with a very limited extent of local lesion, with digestive and nutritive functions active and sound, and with a real liking for life at sea.

The misery attending the prescription of an ocean voyage in many cases that have become known to me has been most deplorable. A very striking instance was that of two young city clerks who were ordered by their medical advisers an ocean voyage. They met in the same cabin, and both died before reaching their destination. Your correspondent, Dr. Inglott of Malta, gives as an illustration of the value of sea voyages in phthisis an instance in which an open-air life at sea may, possibly, have prevented the development of this disease in one with a strong family tendency to it. But this is a wholly different question—that of prevention, not of cure—and I suppose we are all agreed that an open-air life in such cases is most suitable, whether at sea or on land.

But one of my objects in writing this letter is to call the attention of your readers to an opinion on this subject, published in the BRITISH MEDICAL JOURNAL on December 20th, 1890, by the late Sir Andrew Clark, who had altogether exceptional opportunities of forming an accurate and sound judgment on this matter, and who had himself served in Her Majesty's navy. These are his words:

> For my own part, when I now review the experience of the effects of sea voyages upon young invalids, I am more strongly impressed than ever I was before with the necessity of extreme caution in prescribing them.

It is this "extreme caution" which, in my opinion, especially needs to be enforced.—I am, etc.,

Hertford Street, W., Jan. 6th. I. BURNEY YEO.

SIR,—It is a very responsible thing to tell anyone seriously ill to take an ocean voyage. No one should do it who does not himself know what a voyage across the tropics in a quick steamer involves. Even in the best ships of the best lines the conditions of life are almost exactly what would be carefully avoided in a good sanatorium for the open-air treatment of phthisis. On deck there is constantly a violent draught, partly from the pace at which the steamer moves, and partly from the protections put up against the sun. People have, perforce, to spend their days as if they were on a railway platform open at both ends, and moving swiftly through the air. If they take refuge in the saloons and cabins the air they breathe is bad even in the day time and in fine weather, intolerably bad at night time and whenever ports have to be shut. A house with large casement windows facing the south fulfils the conditions required for the open-air treatment of phthisis a thousand times better than the best steamer ever can, especially as to such a house a garden can be added.

When I was in Australia in 1885 there were two people whose names were received with imprecations whenever mentioned. They were the then Prime Minister and his medical attendant. Gordon had just been betrayed, and Sydney was full of stories of the suffering caused by sending consumptive patients across the seas to die alone in lodgings and boarding houses.

An ocean voyage is excellent for tired people if they are good sailors and have nothing organically wrong with them. To order it for anyone really ill is in the last degree cruel. There were many consumptives among my fellow-passengers, and, like Dr. Jones, I saw none of them at all the better for the voyage.—I am, etc.,

ELIZABETH GARRETT ANDERSON.

Upper Berkeley Street, W., Jan. 10th.

SIR,—Having made a voyage to Australia in a sailing ship some years ago in charge of a patient, I can thoroughly support what Dr. Samways and Dr. Hermann Jones have written. Of the 71 cabin passengers, of whom probably about 20 had either active or arrested pulmonary disease, 8 died from phthisis on the voyage or shortly after their return. The disadvantages to the patient far outweigh the possible advantages, when he is at all an invalid. Looking at it from another point of view, a ship is in no sense a suitable sanatorium for cases of contagious disease, and it is not fair that persons suffering from active pulmonary tuberculosis should be crowded up for months with other passengers in stuffy saloons and cabins where precautions are impossible.

However health-giving a sea voyage may be under favourable conditions of weather and temperature, it cannot, under all conditions, compare with a properly situated and specially arranged establishment on land, where indoor life can be passed without detriment to the patient or risk to others with whom he comes in contact.

A sea voyage can only be recommended to those who are fond of the sea, who are not suffering from any active disease, and who are strong enough to be on deck in most weather, and to put up with the discomforts inseparable from life at sea. In such cases there is often marked improvement in general health, and considerable increase in weight by the end of the voyage.

The possibility of a breakdown must be carefully borne in mind. Anyone who has watched a patient bedridden of phthisis at sea, will know how pitiable is his condition, and how sadly he longs for the comforts of home and friends.

As further evidence on this subject, I will quote from a letter from a non-medical friend, giving his experiences of a similar voyage, in a ship carrying some 40 saloon passengers:

> I would not advise anyone, with active disease going on, to try it. I remember L. was bad when he started, and he grew worse and died. Another young fellow spit and coughed all the way and got no better. S., who was also bad, did the same, and died on the return trip. Another man was unable to come back with us, and had to be left in Melbourne, where I heard he died. H. also died, and he was not very ill when he embarked.
>
> A. and C. B., brothers, made the round trip with us, were always coughing, and both, I have since heard, are dead. On the other hand those who, like myself, were healed, but whose general health was run down, derived much benefit.
>
> The different climates and temperatures, fogs, and lack of comforts seemed detrimental to those with active disease.

—I am, etc.,

Croydon, Jan. 9th. HERBERT C. MALE, M.D.

THE MEDICAL PROFESSION AND THE WAR.

SIR,—The appeal for service to our country, which you have just published, voices what is in the thoughts of most of us. Will you publish for our guidance a short note, giving some account of the duties to be performed, and the time to be given, if we join either:

(*a*) An ordinary Volunteer corps, to be trained as bearers; or

(*b*) The Volunteer Medical Staff Corps, as privates?

—I am, etc.,

Belsize Road, N.W., Jan. 9th. W. WINSLOW HALL, M.D., etc.

*** In answer to our correspondent's questions we would say that we do not for a moment take it upon ourselves to advise exactly what steps should be taken in any individual case. We are glad, however, to have received his communication, as it shows—not that we had any apprehensions on that matter — that even members of our profession who are in extensive and active practice are willing and anxious to sacrifice something of their own leisure or comfort in this great Imperial question.

The "Appeal" which drew forth our remarks in the BRITISH MEDICAL JOURNAL of January 6th did not make any definite suggestion as to what should be done; it urged the younger members and students of the medical profession "to consider the advisability of joining some branch of the service," and we have reason for thinking that this appeal is already being acted upon. If our correspondent would put himself in communication with the Commanding Officer of some Volunteer Corps, or with Dr. Edward Squire, of the Volunteer Medical Staff Corps, 51, Calthorpe Street, W.C., or Brigade-Surgeon-Lieutenant-Colonel P. B. Giles, Volunteer Ambulance School of Instruction, 8, Portman Street, W., he would probably discover that there is some useful employment actually waiting for him. We heartily commend the public spirit which his questions evince, and we urge him to proceed forthwith.

THE "DUTY" TO SEND INFORMATION TO THE CORONER.

SIR,—With reference to the article on the above in the BRITISH MEDICAL JOURNAL of December 23rd, 1899, may I point out some difficulties attending this "duty?"

As is well known, in many cases of sudden death the coroner deputes his officer to make inquiries, and on his report decides whether to hold an inquest or not. Unlike the coroner, the coroner's officer depends for his fees upon the number of inquests held, and it is therefore usually to his advantage that an inquest should be held.

I have had more than one case of sudden death from natural causes in which the coroner's officer, on making inquiries after information from me had let out this fact, intimating that though he would do his best with the coroner to avoid an inquest, it meant for him no fee, and expenses out of pocket. The result was as might be expected, money being no object with the relations of the deceased if an inquest could be avoided. They therefore informed him that even if there was no inquest he should not be the loser by it, and in each case no inquest was held.

Surely if it is the "duty" of the medical practitioner to send information to the coroner, the coroner's officer ought to have a regular salary with allowance for expenses, and not be allowed to take fees to avoid inquests. Otherwise, by doing our "duty," we may subject our patients to a system not unlike blackmailing, and place them in a most unpleasant position. As coroners' law now stands, the matter is as follows:

1. If we do not inform the coroner, we run the risk of his censure, and of his even ordering inquests which our information might have avoided; or

2. If we report the case, we may subject our patients to blackmailing.—I am, etc.,

December 25th, 1899. X. Y. Z.

MEDICAL ORGANISATION.

SIR,—The correspondence columns of the BRITISH MEDICAL JOURNAL contain every week abundant evidence of the need for improved medical organisation, and this appears to me to be peculiarly the lesson to be derived from a perusal of the letters which have recently appeared in the JOURNAL relative to the objects and constitution of the Medical Guild, Manchester. I have no wish to enter into this discussion in any recriminatory manner, but there are certain points which, to my mind, deserve careful consideration. There can be no doubt about the evils of the dispensary system, and it is one of the principal objects of the Guild to combat this system. Its want of success is due, not to any fault in its constitution, but to the indifference with which a large section of the profession in Manchester regard it. For any organisation to deal effectively with the evils of the provident dispensaries in any particular district it must have enrolled in its ranks the great majority of the practitioners in that district. Suppose that at the present time the Guild were to attempt to get better terms from the dispensaries, it would probably begin in an amicable manner: terms would be offered, discussion would ensue, and perhaps in the end they would be rejected. What could the Guild do then? Nothing but threaten to withdraw the medical officers. At present the effect would be *nil;* the resignations would be accepted, and the vacancies filled without the slightest difficulty. The profession as a whole would be no better off; certain appointments would have changed hands; certain men would be richer and others would be poorer. Suppose now, that every member of the profession in Manchester had been enrolled, and it is at once evident that the Guild could have opened negotiations with a much better chance of success, but even then there is nothing to prevent men from outside districts coming in and filling any vacancies. This can only be met by a wider organisation, by an organisation with ramifications in all parts of the country, a national organisation, in fact. And this is what the Guild is attempting to supply by the Conference it is convening next May. But it is most obvious that the power of any organisation to mitigate the evils of this system depends upon its ability to withdraw the medical officers, and this it cannot do unless they are members of it. All members must be treated upon an exact equality. To discriminate in favour of one set of men would lead to the exclusion of others, and for the Guild to adopt the suggestion of Dr. Broadbent would deprive it of that very element whose presence is essential, as I have shown above, to effective action. I am sure that if Dr. Broadbent will give the matter a little further consideration he will see that the presence of the medical officers of the dispensaries is the very essence of any power that the Guild possesses to secure reform in this system, while it is also evident that there can be no greater obstacles to reform than those who object to belong to it because of the presence of these men.—I am, etc.,

Ashton-under-Lyne, Jan. 6th. SAMUEL CRAWSHAW, M.B.

THE INCOME OF THE GENERAL MEDICAL COUNCIL.

SIR,—In the BRITISH MEDICAL JOURNAL of December 2nd, 1899, I expressed the view that the income of the General Medical Council is not sufficient to allow of the proper administration of the Medical and Dental Acts. Last week you unknowingly gave support editorially to this by referring to the amount of valuable work left over from the last Council meeting. To meet this overplus of work we know that the Council should meet three times yearly; that is, if practitioners wish it to do *their* work properly. Unfortunately, the income of the Council will not permit of a third session yearly. Whose fault is this?

Dr. Parsons expresses the view that those who pay an annual registration fee are "protected" more than medical practitioners. I feel fairly certain they are not. Take the solicitors. Section XXVI of the Solicitors' Act, 1860, provides a penalty of £50 against persons *who act* as solicitors, but who are not such, while Section XII of their Act, 1874, imposes a fine of £10 upon anyone who wrongfully *pretends to be* a solicitor. Section XLVI of the Irish Act also provides a £50 penalty. I do not think the Scottish Act does. But solicitors complain, just as much as medical practitioners, that a very large number of non-solicitors *act* as solicitors. Last year in this city the solicitors tried to prevent the head constable and his inspectors from appearing in the police-court, to act as prosecutors in police cases. But they were told that they had no remedy in spite of the above Acts. Take, again, county court practice. In such courts the judges nearly always resent the appearance of solicitors. These are the "poor man's court," similar to our hospitals. Take the cases of the secretaries of the Medical Defence Unions, where a large amount of legal advice is given and legal work done by these medical secretaries. These gentlemen even appear before the General Medical Council against defendants, thus acting as solicitors. Take, again, our registration of voters' courts, where each party has an agent to represent them in the due administration of the Registration Acts. Even the agents for candidates at political and municipal elections and the agents at polling booths are not solicitors. Take, again, the large slices of solicitors' work taken from them and now transferred to patent agents, house agents, and chartered accountants, who advise clients in all law matters relating to patents, property, and accounts. Need I refer to the thousands of solicitors' clerks—men who cannot who do not wish to qualify as solicitors, but who give unlimited legal advice to their relations and others. Several solicitors have told me that medical practitioners are the largest patrons of "illegal" law work by their employing collectors, and by allowing these collectors to take out sum-

monses, pay hearing and court fees, and generally telling the doctor what to do in court. A solicitor once said to me, "You are as much protected—and more—than we are," and went on to refer to Section xxxvi of the Medical Act of 1858, which provides that only registered practitioners shall act in the army, navy, hospitals, asylums, gaols, Poor-law or friendly societies, claim fees in court, etc. In a comparative way these correspond to the law courts. Solicitors also can have their accounts taxed by the court registrars, while they are forbidden by law to bring a suit in court for recovery of fees within one month from date of delivery of their bill. My experience and reading would lead me to the idea that it is only a myth when we are assured that solicitors are more protected than doctors. Last year the Chancellor of the Exchequer agreed to hand back to the Law Society yearly £2,000 of the sum received from solicitors' annual fees. Evidently he does not think them protected to as full an amount as some suppose. Even the other callings which pay an annual fee are not more protected than we are. The hawker pays £2, the pedlar 5s. per annum, and a Fellow of the College of Physicians a stamp due of £25; yet none of these are protected, the Fellow cannot recover fees in court.

Each solicitor pays an annual registration of £6 in the provinces, and £9 in London. Each intending solicitor pays when articled a stamp fee of £80, a fee of £25 when he becomes a solicitor, £5 when first registered, and 5s. when applying for the annual certificate, these payments being exclusive of the subscription to the Law Society.

As regards medical practitioners, the following show that those residing in other parts of the empire are willing to supply necessary funds: In the Province of Ontario each doctor pays annually to his Council 8s., in Quebec 8s., in New Brunswick 4s., in Manitoba 20s., in North-West Territories 8s., in British Columbia 20s. This is exclusive of a fee of 20s. for first registration.

Again, as regards chemists, each pays annually—in the the Cape of Good Hope £5, South Australia 10s. 6d., Ontario 16s., Quebec 20s., Nova Scotia 16s., Manitoba 16s., New Brunswick 16s., British Columbia 8s., while in Nova Scotia each dentist pays 20s.

I am fully aware of the fearful overcrowding, destitution, gilded and genteel poverty now existing among doctors, but with all this we must find funds for the proper administration of our Medical Acts. Parliament has practically said to us, "We give you these Acts; administer them or not, as you prefer." One of your correspondents refers to my resignation from the General Medical Council. Let me state that I shall retire or go on the Council as it seems to me best. As to his reference to my "discreet silence," I would only add that I have worked three times as hard in medico-political and medico-ethical work and in opposing the Midwives Bills since I left the Council. His references prove the truth of Pope's couplet—

> A man must serve his time to every trade save censure—
> Critics all are ready made.

—I am, etc.,

Liverpool, Jan. 1st. R. R. RENTOUL.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

SIR,—The Metropolitan Asylums Board are advertising for a junior assistant medical officer at Caterham; having had experience of that Board, I should like to point out for the benefit of intending applicants a few of the conditions under which the assistant medical officers at their asylums work.

On entering upon my duties I was taken to my quarters by the steward, who apologised for the lack of accommodation offered me, explaining at the same time that such conditions were only temporary. My quarters consisted of one room in which I slept; the same room had also to serve me as an office, dining room, as well as for the reception of personal visitors. All that was temporary, as far as I was concerned, consisted in the facts that on committee days a screen was taken from the room so that visitors could see the bed, and the fact that a knob was put on the door after I had occupied it for three weeks. There have, however, been improvements and my successor now shares in a common dining room, and has consequently only to use his bedroom for an office and living room generally.

The Board does not allow its medical superintendents to write testimonials. They do, however, accept testimonials from other superintendents in praise of candidates competing with their own men. Such conditions prevailing, one is not surprised to find that after years of service under the Board promotion is impossible elsewhere; and as the Board is not enamoured with the idea of promoting its own men, their assistant medical officers find themselves in an awkward position. The assistant medical officers are classed with the kitchen maids, laundry maids, etc., as "subordinate officers," to distinguish them from the matron, steward, and chaplain, who are "principal officers," and as subordinate officers are treated as such; indeed, there are other subordinate officers whose quarters are infinitely better than are those of the assistant medical officers.

At other asylums it is the practice to allow the assistant medical officers the use of spare bedrooms in which to lodge a visitor, it being recognised that life in asylums is somewhat monotonous. In my time, when a visitor arrived, his host laid himself down on his couch (if he had one; I had not), and with his clothes on spent the night, happy in the thought that someone had come to see him. The Metropolitan Asylums Board have recently gone a step further, and do not allow their assistant medical officers to have a visitor overnight. The Metropolitan Asylums Board continue to improve, however, and in the fulness of their hearts decided that, London being a wealthy town, they could afford to do what no other Board could afford to do; and so at a time of war and scarcity decided that their assistant medical officers should have a sumptuous repast at the expense of the ratepayers; and to this end, to buy himself champagne, turkeys, etc., each assistant medical officer was presented with a Christmas box of 2s.

If anybody intends entering the service of the Metropolitan Asylums Board, might I suggest that he should apply for particulars, not to their clerk, but to any of their assistant medical officers?—I am, etc.,

January 9th. F. J. S.

MAGNESIUM SULPHATE IN ACUTE DYSENTERY.

SIR,—Now that dysentery is rife in our army in South Africa may I again draw attention to the great value of magnesium sulphate in acute dysentery? Since my memorandum on the subject in the BRITISH MEDICAL JOURNAL of January 29th, 1898, my satisfactory experience of that treatment has been repeated and corroborated by your correspondents in all parts of the world. If ipecacuanha and opium disappoint in Africa, as elsewhere, I hope our surgeons will try magnesium sulphate, say in ʒj doses every two to three hours, with a little aromatic sulphuric acid, and report their experiences. It is only of use in acute dysentery.—I am, etc.,

Reigate, Jan. 8th. F. WYATT-SMITH, M.A., B.C.

THE STATISTICS OF THE SAMARITAN FREE HOSPITAL.

SIR,—The *National Review* for January contains an article above the signature of Miss Honnor Morten, entitled "Hospital Chaos," in which the following sentence appears: "The Samaritan Hospital had the audacity to advertise 1,678 ovarian operations in one year as a plea for funds."

The Samaritan Hospital has never advertised any such thing, and it would be interesting to know where Miss Morten obtained her figures. As a matter of fact, 1,678 represents the total number of ovariotomies performed in the hospital up to the end of 1894. Miss Morten has either quoted an incorrect statement, for which we are not responsible; or she has got into a muddle with the hospital's figures.

The Committee will be obliged by your finding room for this.—I am, etc., W. GUNTRIP KING.

January 10th. Secretary.

THE UNIVERSITY OF LONDON SEAT.—In addition to Mr. Busk, the Chairman of Convocation, who has been nominated by a Committee of Liberal Unionists, Dr. W. J. Collins has been brought forward by the Liberal Association as a Radical candidate for the representation of the University of London in the House of Commons. The Conservative Association met on Thursday afternoon, but no public announcement of its decision has been made.

OBITUARY.

WILLIAM NEALOR THURSFIELD, M.D.EDIN., M.R.C.S., D.P.H.CANTAB.

Medical Officer of Health for Shropshire.

IT is with deep regret that we have to record the death, on December 19th, 1899, of Dr. W. N. Thursfield, of Shrewsbury, the distinguished Medical Officer of Health for the county of Salop. Some six years ago Dr. Thursfield began to exhibit symptoms of locomotor ataxia; these gradually developed, and slowly but surely increased, ending in bulbar paralysis.

Born at Barrow, Shropshire, in 1840, and educated at Grimshill and Marlborough College, young Thursfield entered upon the study of medicine at King's College, London, and afterwards proceeded to the University of Edinburgh. His student's career was most successful throughout, and he gained both the Warneford and the Resident Scholarships at King's College. He qualified M.R.C.S.Eng. in 1861, and in the following year graduated M.D. at Edinburgh. He then entered the Army Medical Department, and was appointed Medical Officer at Fort Pitt, Chatham. In 1863, owing to the condition of his father's health requiring constant medical care, he resigned his commission, and remained with his father until his death. Being desirous of seeing more of the world, Dr. Thursfield sailed for New Zealand, where he had opportunities of studying the manners and habits of the natives during the Maori war. Here he made many observations on arrow-head poison and tetanus, and brought together a fine collection of arms and other native trophies and curiosities.

On his return to England Dr. Thursfield was appointed Medical Officer of Health for Wellington, Shropshire, where he gained much experience in sanitary administration. In 1873 Dr. Thursfield was elected Medical Officer of Health to the Shropshire combined sanitary district, and year by year he became Health Officer to more and more districts, numbering eventually some five-and-twenty, and extending into seven counties. The work now performed was very arduous, and required the constant employment of two assistant medical officers. Dr. Thursfield possessed the happy faculty of choosing good assistants, and many who have held these posts are now amongst the leading men in sanitary science.

Notwithstanding the pressure of daily work and the long distances to be travelled, Dr. Thursfield managed to devote time to original research and literary work. Amongst his published papers were Plain Directions for Preventing the Spread of Infectious Diseases, 1873; The Regulations of the Public Elementary Schools in reference to Sanitary Progress, 1876; On Cow's Milk as a Vehicle of Infectious and Epidemic Disease, 1884; The Etiology of Diphtheria, 1890; On Death of Mothers in Childbed, considered as a Preventable Mortality, 1892; Diphtheria from a Preventive Medicine Point of View; and The Etiology of Goitre in England. Dr. Thursfield wrote and taught in a plain and forcible style, the result of deep thought and sincere conviction, and many of his papers published long ago, especially that on diphtheria in 1878, and goitre in 1885, would well repay study to-day.

M. Pasteur's researches were of the deepest interest to Dr. Thursfield, and he made many visits to Paris to observe for himself the details of the new antirabic treatment. On more than one occasion he conveyed patients thither, mainly at his own expense. In this connection it is interesting to recall the spirited way in which he combated the antivivisectionist views of the late Mr. Lawson Tait at one of the meetings of the Shropshire Branch of the Association. As a member of the British Medical Association Dr. Thursfield made many valuable contributions to the Shropshire and Mid-Wales Branch on varied subjects, including scarlet fever, goitre, typhoid fever, rabies, and diphtheria.

The position of Dr. Thursfield, and the respect in which he was held, was well shown in 1879, when he was elected without opposition to the newly constituted post of Medical Officer of Health for the county. Unfortunately, owing to failing health, he was unable to see the fulfilment of many of his schemes and plans for sanitary improvements, and was obliged to resign his office six months ago. Truly in the early days he was in the advance guard of the sanitary army, and his work in Shropshire must yet bear fruit; that it has not borne more fruit already is not his fault. That his health should give way so soon after his new appointment was a matter of great regret to all who were aware of his immense knowledge, the result of years of toil. Even in his short span of office as County Medical Officer of Health the value of such a post has been proved by the fact that the county council have unanimously resolved to continue the appointment, and are now about to elect his successor.

Of Dr. Thursfield's personal qualities it may be said that he was the friend of all and the enemy of none. He was always alike—kind and considerate, generous and charitable. Of courteous manner he was ever popular with his professional brethren, to whom he was always ready to devote his precious time, explaining this or that technical detail, or giving advice upon numerous difficult points. During his long and painful illness he endured his sufferings with great fortitude and patience. He was buried at his birthplace Barrow, and many members of the profession and some old pupils were present at the funeral.

ALEXANDER GRANT, F.R.C.S.EDIN.,

Surgeon-Major Bengal Army (retired), Honorary Surgeon to Her Majesty the Queen.

SURGEON-MAJOR ALEXANDER GRANT died in London on January 3rd at the age of 82. He entered the Indian Medical Service in 1840, landed in India in April, 1841, was appointed to Her Majesty's 55th Foot, and went with them to join the expeditionary force in China, when his ship was exposed to severe hurricanes off Hong Kong; he was present at the capture of Amoy, the capture of Tinghai, Chusan, and accompanied the regiment in pursuit of the enemy to Sin-kea-mun. In 1842 he joined headquarters at Chinhae, was present at the attempt to take the city by surprise, and at the capture of Chapoo. He was present at the storming of the batteries of Woosung, at the capture of Shanghai and Chin-kiang-foo. He was placed in charge of cholera cases of the 49th Foot, and then served with Lord Saltoun's brigade at Nankin, both duties involving heavy work as sickness was very prevalent. At the conclusion of peace, he returned to Chusan, and remained there with the 55th Foot during 1843. In 1844 he proceeded to Hong Kong, where he took leave of the 55th regiment which was returning to England, when Dr. Shanks, the surgeon to the regiment, paid the following tribute to the value of his services.

> I cannot allow Mr. Grant to depart without expressing to him the deep sense of obligation I am under to him for the very valuable professional assistance he has rendered me on all occasions, and I cannot better record the high opinion I entertain of Mr. Grant's merits than by affirming that during a long course of active service in various quarters of the globe, I consider him one of the very best medical officers I have ever met with.

He was then placed in charge of a wing of the 98th Foot at Victoria, Hong Kong, and subsequently ordered to Madras with the 41st Madras Native Infantry. He returned to Calcutta and was sent on special duty to Madras and Bombay. In 1845 he was appointed Civil Surgeon of Bhagulpore, ordered thence in 1846 to join the army of the Sutlej on the outbreak of the 1st Sikh war, and encountered great hardships on the march. He was attached to the Field Hospital, Ferozepore, until the conclusion of the war, when he returned to Bhagulpore, where he remained till his appointment in 1848 as Civil Surgeon of Chapprah. He was ordered thence on special duty to the North-West Provinces by the Governor-General, Lord Dalhousie, who wrote to him as follows:

> No medical officer in the service has been more strongly recommended than yourself, and I am truly desirous of obtaining the benefit of your services and your skill.

In 1849 he was appointed Surgeon to the Governor-General, Lord Dalhousie, which office he held for seven years, accompanying him in his various tours through different parts of India, Ceylon, and Burmah. He was appointed Secretary to the Medical Board, Calcutta, in 1852, and promoted to Surgeon in 1854.

In 1856 he prepared for the Governor-General a digest of all that had been written about the reorganisation of the Indian Medical Services, and sketched a plan which was adopted by Lord Dalhousie and formed the basis of that memorable despatch to the Court of Directors, which was the first liberal and enlightened acknowledgment of the claims of medical officers by any English statesman. The same year he was

gazetted Presidency Surgeon and Surgeon to the Presidency General Hospital, the most coveted of Calcutta appointments. The following is an extract from the minute of Council on the occasion of that appointment:

The claims of Mr. Grant to this coveted appointment, founded on service in the field, on his standing in the Medical Department, on his personal character and professional reputation, will be questioned by none. I rejoice, before my departure, to have an opportunity by the nomination of Mr. Grant to this office, of placing the future charge of the General Hospital in most capable hands, and at the same time of evincing my own deep sense of the ability and skill and sedulous care which have characterised his attendance for more than seven years on my family and myself.

In the meantime he accompanied Lord Dalhousie, who was in failing health, to England, and when there was examined respecting the Indian Medical Service by the Parliamentary Committee. On taking leave of Lord Dalhousie he received from him a touching letter. He then, *en route* to India, visited the chief hospitals in Europe. In 1857 Grant was appointed by the Governor-General to be Apothecary-General and Opium Examiner to the Government of India: also Member of the Senate of the University of Calcutta, and Government Examiner in the Medical College. In 1858 he was elected President of the Faculty of Medicine, and its representative on the Syndicate of the University. In 1859 he was thanked by the Governor-General in Council for his valuable services during the period of the Mutiny in making provision of medical stores for the army in the field, and by the Secretary of State in the following year for the same services. As Apothecary-General he compiled a code of rules for the Medical Store Department which was adopted by Government. In 1861 he proceeded to England on medical leave, was offered a dinner by his brother officers which he was compelled by failing health to decline, and subsequently was presented by them with a service of plate. He retired as Surgeon-Major.

Mr. Grant made many valuable contributions to Indian medical literature, among which may be mentioned, Medical Sketches of the Expedition to China (*Medical and Physical Journal of Bengal*, 1845): Diary of Chinese Agriculture, with illustrations (*Transactions of the Agri-horticultural Society of Bengal*, 1845). He founded in 1853 the *Indian Annals of Medical Science*, and was, till he left India, its joint editor with Dr. Chevers. He contributed to it the following papers: On Hill Diarrhœa and Dysentery, with some account of Himalayan Sanitaria, 1853; Note on the Preparation of the Bael Fruit, 1854; The Hill Stations, Murree, its Topography and Medical History, 1861; Fragments of the Medical Practice in Calcutta at the close of the last Century, 1st Fever, 2nd Dysentery. These papers owe their value to the fact that they were not only lucid in style and sound in theory, but eminently practical, thus reflecting the mind and character of the author.

The foregoing brief epitome gives but an imperfect idea of the Indian career and services of one of the most distinguished members of the Bengal Medical Service, whose name will long be remembered in India, especially by his brother officers of the Medical Service, for whose benefit he laboured so strenuously. His professional and personal character inspired respect and affection in all who knew him, whilst his unselfish nature, his unquestioned ability, and his calm and dispassionate judgment impressed all, whether in official or private life, with a strong sense of his value as a public servant. To his friends he endeared himself by the genuine truth of his friendship, his modest appreciation of his own merits, and his generous recognition of all that was good and deserving of praise in others.

Mr. Grant was educated at Glasgow and Edinburgh, and became a Licentiate and subsequently a Fellow of the College of Surgeons of Edinburgh. He held many important positions in India, and distinguished himself alike in the military, administrative, and civil branches of the service. He occupied for about seven years the post of Surgeon to the Governor-General, Lord Dalhousie, perhaps one of the greatest Governor-Generals that ever ruled over India; and it is well known how wisely the large influence he exercised over that nobleman was exerted on behalf, not only of his own service, but of all that was deserving of support or commendation. It cannot be doubted that to his influence and advice are mainly due the recognition of and improvements in the Indian Medical Service which resulted from the memorable despatch of Lord Dalhousie in 1856.

Mr. Grant's life was a long and useful one, and its utility by no means came to an end when he left India; for after his return to England he still continued to serve the public in many ways, and especially in connection with the distribution of the Indian Mutiny Fund, whilst his interest in the Service he himself had adorned never slackened.

The only public honour he received, except war medals, was that of being made Honorary Surgeon to the Queen. Had his career in India been prolonged, it is certain that he must have received other honorary distinctions.

Mr. Grant did not marry, but lived always with his sister, whose devotion to the end was unfailing, and for whom his many friends feel the profoundest sympathy.

His life was one of honour and distinction, and it terminated mourned by "troops of friends."

J. Fayrer.

T. BONNICI, M.D.,

Professor of Surgery, Royal Malta University.

It is with the deepest regret that we announce the death of Professor Bonnici of Malta, which took place from malignant tumour on December 11th, 1899, at his residence in Floriana. Professor Bonnici received his early education at the Malta Lyceum, where he always distinguished himself among his fellow students. Following his father's profession, he entered the Malta University as a medical student and obtained the degree of M.D. in 1877. His university career was uniformly successful and his name stood first in the list, thus assuring him the prize usually granted by Government to the first student of each course to enable him to proceed abroad and improve his professional knowledge.

He visited the hospitals of Italy, France, and England, and on returning to Malta he volunteered to join the Company of the Royal Malta Artillery as Surgeon during the Egyptian war in 1880, for which services he received the medals granted in that campaign.

On his return home he was placed on the staff of the Central Civil Hospital as House Surgeon, and on Professor Pisani's appointment as Chief Government Medical Officer in 1885 young Bonnici was chosen to fill the vacancy of Professor of Surgery in the University and Visiting Surgeon to the Civil Hospital. As a lecturer he was very popular with and very much respected by the students, and as a surgeon he was no less beloved and esteemed by his patients for the great care and kindness he showed in treating them. His sound professional knowledge and practical good sense, his unfailing geniality and great activity made him deservedly a favourite both with the public and his colleagues, and had his life and health been spared he would have continued the brilliant career so well begun and formed not only a name in Malta but even on the Continent. Unfortunately, however, he passed away at the early age of 43, leaving numerous friends and a disconsolate widow to mourn his loss.

His remains received the highest honours, his funeral being attended by a large number of friends, colleagues, and people of notable position.

ROBERT ROBERTSON, M.D.Edin.,

Liverpool.

We regret to have to record the death of Dr. Robert Robertson, of Liverpool, which took place rather suddenly on December 22nd, 1899. He received his medical education at the University of Edinburgh, and qualified M.D. in 1863. After serving as House-Physician in the Edinburgh Royal Infirmary, he was elected Resident Medical Officer to the Parish Hospital, Brownlow Hill, Liverpool, in 1865. On settling in practice, he became one of the district medical officers to the parish, and in 1880 was appointed to assist the late Dr. Robert Gee, who had been visiting physician to the workhouse hospital since 1847. On Dr. Gee's death, which happened in 1891, Dr. Robertson became sole physician, and held the office until his death last month. He was also Physician to the Hospital for Consumption and Diseases of the Chest, and to the City Hospital in Netherfield Road.

His services in all these capacities were fully appreciated by the several public bodies under whom he worked, and at the last meeting of the select vestry Mr. W. Crosfield, M.P., the chairman, moved a vote of condolence with the family

and friends of the deceased. He spoke in the highest terms of his services to the hospital, and expressed the hope that the vestry would be fortunate enough to secure the services of someone high in the medical profession as a successor who would maintain the reputation of the hospital. Mr. William Rathbone seconded the motion, Mr. Burke, Chairman of the Hospital Committee, supported it in sympathetic terms, and it was unanimously agreed to. Dr. Robertson was a prominent Freemason. He was the joint author of a paper on Cholera published in the *Medico-Chirurgical Transactions* for 1867, and the author of a paper on Œdema Glottidis which appeared in the *Liverpool Medical Journal* in 1883. He was in the 58th year of his age.

GEORGE ELDER, M.D., F.R.C.P.EDIN.,

Clinical Medicine Tutor, University of Edinburgh.

WE regret to report the death from pneumonia, at Edinburgh, after four days' illness, of Dr. George Elder, one of the Clinical Medicine Tutors in the University and Royal Infirmary of Edinburgh. He was a man of outstanding ability, and of great personal charm. He was not robust. During his term of office as resident physician in the wards under the charge of Professor Greenfield he had a hæmoptysis. Dr. Elder had a distinguished career as a student at the University of Edinburgh and graduated M.B., C.M., with first-class honours, in 1891. He was Vans Dunlop Scholar and afterwards Clinical Tutor at the Royal Infirmary. He became M.D.Edin in 1896, and F.R.C.P. in the same year. He was Assistant Physician to the Leith Hospital and Physician to the New Town Dispensary. He was the author, in conjunction with Dr. J. S. Fowler, of a clinical handbook on *The Diseases of Children*, which was published last June. He contributed various papers to the medical journals, among others one to our own columns on the Intracranial Circulation in some of its Aspects. Towards the experiments upon which this paper was founded he received a grant from the Scientific Grants Committee of the British Medical Association, and the paper was part of his thesis for the degree of M.D. A friend who practised in his immediate neighbourhood writes: "He was sound, accurate, and earnest in his work; and if desirous to excel in his profession, it was the ambition of a noble mind, whence only good achievements could come. He was a true friend, and a most lovable companion. In the district where he practised his death has caused much regret, for alike by acquaintances and patients he was held in the highest esteem. By his friends his loss is deeply deplored."

THE LATE SIR JAMES PAGET.

DR. P. W. MARRIOTT (now of Boscombe) writes: All through my student days, and in after-life, no man more came up to my ideal of perfection than Paget. It is indeed difficult and impossible to express in words all one felt regarding him; respect, admiration, regard, devotion, or any other expression fail to convey a true estimate of him, as he was unlike other men, and I am sure all my fellow-students shared my own feelings, and looked up to him daily as our bright and consistent example and instructor, ever ready to help and encourage us in our studies, and to smooth our difficulties. I had the privilege in my first year at Bartholomew's of being in the College during Paget's last year of Wardenship there, and can bear testimony to the universal high esteem and love we all felt for him; I remember one single exception which occurred on an operation day, when a student who had been drinking, called out something insulting to Paget, whose keen and searching eyes looked up to the higher seats, and having spotted the man, walked quietly out of the theatre, and after a short time returned to his work with calm and unruffled face. Afterwards as we walked across the yard to the wards with him, he quietly remarked, "I have taken measures to prevent any repetition of it."

The most thrilling lecture of the course of physiology was at the conclusion of those on the brain, when there was posted outside the lecture room the day before, "Mr. Paget will lecture on the Soul to-morrow morning." The theatre was crowded with men from other hospitals as well. The Professor entered without gown and without the usual blackboard and chalk and diagrams, and eloquently and earnestly discoursed on the immaterial part of our being, appealing to our highest feelings, and urging us to look on this state on earth as "the poor beginning of an endless life."

Speaking of examiners one day to me Paget said, "If ever I am an examiner I would try to find out what a man knows, and not what he does not know." On taking leave of third-year men he cordially wished them success, and assured them he should always be ready to help them in after-life, and to me at least he was ever faithful to his promise.

In conclusion, I regard my dear friend's whole career in this life as that of "the path of the just, which is as a shining light that shineth more and more unto the perfect day."

ON January 4th Deputy-Surgeon-General DAVID CULLEN, A.M.D., passed away peacefully at his residence, Halsey House, Cheltenham, in the 67th year of his age. Some five years ago he became the subject of prostatic disease; but later he developed symptoms of abdominal malignant disease, which a few months ago became intensified and complicated by ascites. No doubt through a desire to avoid giving anxiety to his family and relatives he maintained a marked reticence respecting his condition, and avoided all reference to his malady. Till some weeks ago Dr. Cullen maintained his general life, enjoying the society of his family and friends, walking out daily, always cheerful and uncomplaining; but then, finding that he needed help, he sent for his friends, Dr. John Bramwell and Dr. Cripps Lawrence, who attended him till he was released. The day before his death, the ascites having increased threatened to add to his suffering, and relief was obtained by paracentesis. Dr. David Cullen graduated M.D.Edin. and L.R.C.S.Edin. in 1854, and served in the Army Medical Department from 1854 to 1869; during that period he was Assistant-Surgeon on the Staff of the 6th Light Dragoons, 3rd Battalion Rifle Brigade, and 17th Lancers. He served in the Crimea from 1854 to 1856, and in the Indian Mutiny from 1857 to 1859. Later he was Surgeon-Major in the 71st Highland Light Infantry, and Registrar at the Royal Victoria Hospital, Netley, 1875-80, after which he retired on a pension. Dr. Cullen was awarded medals for his services in the Crimea, Turkey, and the Indian Mutiny, and clasps for Sebastopol and Lucknow. For the last eighteen years Dr. Cullen resided in Cheltenham.

DR. FREDERICK WILLIAMS LEWIS, who died after a few hours' illness at his residence, Llandovery, on November 25th, 1899, received his medical education at the Middlesex Hospital. After qualifying M.R.C.S.Eng. in 1873, he became house-surgeon to that institution. He afterwards settled at Llandovery, where he became partner with Dr. Thomas, to whose practice he succeeded. He became Medical Officer for the No. 1 District of Llandovery Union, Medical Officer of Health for the Llandovery Urban and Rural Districts, and Surgeon to the Great Western, Vale of Towy, and London and North-Western Railway Companies. He was an accomplished practitioner of the obstetric art, and a courageous and skilful surgeon. By his unceasing kindness, sympathy, and liberality Dr. Lewis had endeared himself to rich and poor alike. The poor especially have lost in him a warm-hearted and most generous helper and friend. The funeral procession was one of the largest ever witnessed in Wales.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE ROYAL NAVY MEDICAL SERVICE.

PROMOTION TO DEPUTY-INSPECTOR-GENERAL.

WITH the object of securing the best surgical skill in the hospitals of the Royal Navy, the Board of Admiralty has, we understand, decided that a larger proportion of promotions to the rank of Deputy-Inspector-General of Hospitals and Fleets shall be made by special selection, with reference to this most important part of the duties of these officers.

PROMOTION TO THE RANK OF FLEET SURGEON.

It has hitherto been a rule for the Royal Navy Medical Service that officers should be promoted to the rank of Fleet-Surgeon after twenty years' full pay service. We understand that in future promotions will be made after eight years in the rank of staff surgeon, irrespective of half-pay time.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Adrien A. Forrester, M.B., Surgeon, to the *Collingwood*, January 2nd; George A. S. Bell, Surgeon, to be lent to assist the Board of Army and Medical Officers in the physical examination of candidates for commissions in the Royal Marines, from January 8th to 13th inclusive; Harry Spicer, M.B., Surgeon, to the *Duke of Wellington*, January 5th; Malcolm Cameron, M.B., Surgeon, to the *Northampton*, for the *Curaçoa*, January 5th; Fred. C. B. Giffings, M.B., Surgeon, to the *Mars*, January 5th; George E. Macleod, Surgeon, to the *Europa*, for medical charge on the voyage to Malta, January 8th, and afterwards to the *Ramillies*, undated; Robert J. Mackeown, M.B., Surgeon, to the *Europa*, for medical charge on the voyage to England, undated.

Deputy-Inspector-General Robert Hay, of the Royal Naval Hospital, Bermuda, died there on December 2nd, 1899, aged 48 years. He was appointed Surgeon, September 7th, 1863; Staff Surgeon, April 14th, 1877; Fleet-Surgeon, November 12th, 1883; and Deputy-Inspector-General, May 7th, 1894.

ROYAL ARMY MEDICAL CORPS.

Captain G. A. T. Bray, from the Seconded List, is appointed Captain, *vice* M. L. Hughes, killed in action, December 21st. [Captain Bray was seconded for service with the Egyptian army in February, 1898.]

Quartermaster and Honorary Lieutenant J. H. W. Beach is granted the honorary rank of Captain, January 8th.

The Christian names of Quartermaster Prentice are Montague John, and not as stated in the *Gazette* of December 12th.

Lieutenant-Colonel B. M. Blennerhassett, who has but recently arrived in India, and is serving in the Bombay Command, has been appointed to officiate in the Administrative Medical Staff of the Indian army, with the temporary rank of Colonel, from November 23rd.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel P. F. O'Connor, M.D., Medical Officer to the Bengal Cavalry, is appointed Principal Medical Officer to the Malakand Force, *vice* Lieutenant-Colonel J. Young, transferred to the Presidency District.

THE VOLUNTEERS.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated December 30th, 1899:—G. P. Barton, 1st Devonshire Artillery (Western Division Royal Garrison Artillery); E. T. Cox, M.D., 1st Sussex Artillery (Eastern Division Royal Garrison Artillery); E. Evans, 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment.

Surgeon-Lieutenant-Colonel W. H. G. Phelps, M.D., 3rd Volunteer Battalion the Prince Albert's Somersetshire Light Infantry, retires with permission to retain his rank and uniform, December 30th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the respective corps specified, dated December 30th: Philip J. Le Riche, 2nd Volunteer Battalion the Royal Sussex Regiment; Hugh N. A. Taylor, M.D., 3rd Volunteer Battalion the Essex Regiment; James Lea, M.B., 1st Volunteer Battalion the Loyal North Lancashire Regiment.

Surgeon-Lieutenant D. L. Hamilton, 4th Volunteer Battalion the Manchester Regiment, has resigned his commission, December 30th.

Surgeon-Lieutenant James H. Murray, 4th (Stirlingshire) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders, resigns his commission, and is appointed Second-Lieutenant, December 30th.

Surgeon-Major J. H. Hay, M.D., 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Lieutenant Colonel, December 30th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated January 10th: Alexander H. McDougall, 1st Volunteer Battalion the Royal Warwickshire Regiment; Thomas W. A. Daman, M.B., 1st Volunteer Battalion the Lincolnshire Regiment; Arthur B. Harris, M.B., 1st Volunteer Battalion the Essex Regiment.

Surgeon-Major R. B. Smith, 1st Volunteer Battalion the Leicestershire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, January 10th

Surgeon Lieutenant-Colonel C. W. MacGillivray, M.D., the Queen's Rifle Volunteer Brigade the Royal Scots, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Forth Volunteer Infantry Brigade, and to be seconded while holding the appointment, January 10th.

THE PAY OF THE INDIAN MEDICAL SERVICE.

We have before us two very lengthy letters, of which we can only give short summaries, on the pay question. They are somewhat contradictory, which, we have before remarked, is not unusual in Indian correspondence.

Eyemes writes: The I.M.S. are grateful to you for giving publicity to their grievances. Inadequacy of pay is the chief one. Supposing the I.M.S. officer enters at 24, his pay at 29, or after five years' service, will have increased from Rs.400 to Rs.550 in the civil department per mensem. If he then marries (his majority is still seven years off) and meanwhile has two children, he will have to pay during these years three donations to the family pension fund, amounting to Rs.788.7.7, or at the rate of Rs.112.10.3 per annum. But he will have to pay further monthly donations to the fund, amounting to Rs.37.9.9, which payments are not optional, but compulsory. A life insurance for £1,000 cost Rs.60 monthly. Meanwhile provision has to be made for second class passage home for family, or trips to the hills, and so a charge of about Rs.159.9.9 per month has to be deducted from the pay of Rs.585, leaving Rs.426 for all expenses of living.

An I.M.S. Man begs to point out errors in the financial statement of our correspondent of November 4th, 1899. The pay of a lieutenant I.M.S. is Rs.350, not Rs 286 per mensem, and when placed in officiating charge of a native regiment Rs.400, provided he has passed the lower standard language test. Substantive charge of a native regiment brings Rs.450, increased after five years' service to Rs.600 per mensem. There is added in addition exchange compensation, bringing the value of the rupee to 1s. 6d. The unmarried subscription to the pension fund is between 4 and 5 rupees a month. Marriage should be avoided. His other statements on pay are correct. The civil surgeons, if they do not hold extra appointments, actually receive less than with a regiment. On the whole the R.A.M.C. are perhaps better off in pay than the I.M.S.

THE DISTINGUISHED SERVICE ORDER.

Among the list of officers appointed Companions of the Distinguished Service Order in recognition of services while employed in Sierra Leone, is that of Major R. Crofts, R.A.M.C. Major Crofts entered the Army Medical Service as Surgeon on January 31st, 1885, was promoted to the rank of Surgeon-Major on January 31st, 1897. He served with the expedition against the Jebus, Lagos, in 1892, was mentioned in despatches, and received the medal and clasp.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From comm ations which we have received r e ent appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

THE ANGLO-AMERICAN INSURANCE COMPANY.

We quote the following report from the *Birmingham Daily Post* of January 6th:

The hearing of the charge against Edward Hopwood, who gave an address at Handsworth, of attempting to obtain £100 from Dr. Lawrie, of Bristol Road, by false pretences, on November 21st, 1899, was proceeded with at the Victoria Courts, before the Stipendiary, yesterday [January 5th].

Mr. McCardie appeared for the prosecution, and Mr. Philip Baker for the defence.

Prisoner is alleged to have gone about the country representing that he was empowered by the "Anglo-American Insurance Company" to appoint medical men in various districts at a salary of £100 for the first year on their investing £100 in the company. He showed Dr. Lawrie a copy of the prospectus of the company, containing names of the directors, solicitors, brokers, etc. He also said that each of the directors had invested £5,000 in the company, and that a gentleman, whose name he could not disclose, had become surety to the Board of Trade for £20,000. On prisoner's statements Dr. Lawrie believed that the company actually existed, but Mr. McCardie said, Superintendent Van Helden had made the necesaary inquiries, and could not find any such name upon the list of registered companies. Prisoner also told Dr. Lawrie that he had received £100 each from ten medical men in various districts.

In reply to Mr. Philip Baker, Dr. Lawrie said that he consulted his solicitor, and was advised to have nothing to do with the company till allotment. At the second interview, the accused stated that the directors had not paid the £5,000 each. Prisoner produced a book containing printed agreements, with the heading, "Anglo-American Insurance Company, Victoria Hotel, Northumberland Avenue, London, E.C."

Edmund Atkin, manager of the Victoria Hotel, stated that the Anglo-American Company had no office there. Prisoner had, however, stayed there occasionally, and when he (the witness) closed the account £17 was owing. The money had not yet been paid, though he believed it had been tendered a week or two ago. Prisoner had previously paid bills amounting to £20 and £30.

Detective-Superintendent Van Helden deposed to arresting prisoner at the Queen's Hotel, Birmingham. Witness asked him to produce the prospectus he showed to Dr. Lawrie. Prisoner thereupon handed him a list of names of medical men. In reply to further questions he picked out ten men from whom he had received £100, or part of such sum. Asked if he had a banking account, prisoner replied in the negative, and said he had spent the money. Mention was made of the directors referred to on the prospectus. Prisoner remarked: "There are no directors. I am the promoter."

Detective-sergeant Goldrick, who charged and searched the prisoner, said he found upon him a prospectus of the Anglo-American Insurance Company, with the space for the names of directors left blank. He found nine pawntickets upon the prisoner, some for 5s. and some for large amounts.

Prisoner was again remanded for a week on the same ail s before.

RECIPROCITY BETWEEN DENTISTS AND MEDICAL MEN.

A correspondent writes complaining that he has been charged for professional service by a dentist to whom his wife and children have been sent. This is one of those matters upon which no hard and fast rule can be laid down, and it is essentially one in which to be guided by the circumstances of individual cases. It is perfectly true that dentists very frequently do not charge any fee to medical men, just as most medical men do not charge any fee to one another. But there are a great many medical men who feel uncomfortable when they have no opportunity of offering reciprocal services, and who feel it incumbent upon them either to insist upon paying some fee or to make a present (oftentimes useless) of roughly equivalent value, whether to dentist or medical brother. The non-acceptance of fees appears to be based upon this idea of reciprocity of service, and it must be remembered that the consumption of the dentist's time is much more considerable on the average than that of the medical man. Modern dental methods entail an even greater expenditure of time than was formerly the case, so that seeing one

patient is, to the busy man, the absolute exclusion of another. It appears to us, therefore, not to be a question of rights, but to be a matter essentially between man and man, in which it is for each to take the course which commends itself to him.

THE COURTESY CALL.

OUTSIDER.—We believe the custom of the newly-arrived practitioner calling upon his well-established colleagues is a survival of old etiquette. In India a few years ago, if not now, it was the custom for each new arrival to call first upon all the old residents.

MEDICAL CARDS.

L. A.—Such a card as that submitted to us is not usual in this country, but we are not prepared to give any opinion upon what may be regarded as customary in the Colonies. We would recommend our correspondent to seek the advice of someone who knows the local conditions.

A QUESTION OF ETHICS.

J. J. A. S. states that the widow of a medical man having two sons being educated for the medical profession is anxious to retain his services until her sons, or one of them, are qualified. Our correspondent has agreed to do so upon being allowed a share of the practice and having entire control of same, in other words becoming a partner. He wishes to know if this is consistent with medical etiquette.

*** Our correspondent does not explain with whom he proposes to enter into partnership, as it is clearly improper for him to enter into partnership with any unqualified person in order to carry on the practice.

YOUNG PRACTITIONER.—It is impossible to give a definite answer without a fuller knowledge of the circumstances of the case. A solicitor should be consulted.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

B.S. EXAMINATION FOR HONOURS.—The following have satisfied the examiners in the subject noted:

Surgery.—First Class: T. R. H. Bucknall, M.D., London Hospital; Mabel G. Stevenson (Gold Medal), Royal Free Hospital; W. B. L. Trotter, M.D. (Scholarship and Gold Medal), University College; Jane Holland Turnbull, Royal Free Hospital. Second Class: P. Turner, B.Sc., Guy's Hospital.

UNIVERSITY OF EDINBURGH.

Reopening of Classes.—The classes in the University and Extra-Academical School of Medicine were reopened after the Christmas recess on Tuesday, January 9th.

ANNUAL REPORT.

Number of Students.—During the past year the total number of matriculated students (including 239 women) was 2,848. Of this number, 836 (including 210 women) were enrolled in the Faculty of Arts, 176 (including 3 women) in the Faculty of Science, and 1,399 (including 9 women) in the Faculty of Medicine. Of the students of medicine, 600, or nearly 43 per cent., belonged to Scotland; 364, or over 26 per cent., were from England and Wales; 106 from Ireland; 75 from India; 216, or about 15½ per cent., from British Colonies; and 38 from foreign countries. The number of women attending extra-academical lectures with a view to graduation in medicine in the University was 85.

Degrees Granted.—Among the degrees conferred during 1899 were: Bachelor of Science (B.Sc.), 22; Doctor of Science (D.Sc.), 5; Bachelor of Medicine and Master in Surgery (M.B., C.M.), 27 (including 8 women); Bachelor of Medicine and Bachelor of Surgery (M.B., Ch.B.), 177 (including 6 women); Doctor of Medicine (M.D.), 72 (including 1 woman). The General Council of the University now numbers 8,667.

Fellowships, Bursaries, etc.—The total annual value of the University fellowships, scholarships, bursaries, and prizes now amounts to about £17,790. Of this £3,500 belongs to the Faculty of Medicine. A number of bursaries are in the gift of private patrons, but the great majority of the University bursaries, prizes, etc., are awarded by the Senatus after competitive examination. In addition to the above, a sum of upwards of £600, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research.

New Lectureships.—Under powers conferred by ordinance, the University Court has instituted two new lectureships during the year, namely, in diseases of tropical climates and in diseases of the skin, the lecturers appointed being respectively Dr. Andrew Davidson and Dr. W. Allan Jamieson. Dr. J. W. Ballantyne, who last spring delivered a short course of lectures on teratology and antenatal disease, has been appointed for one year University Lecturer in these subjects, and he is to deliver a second course in February.

Benefactions.—Among numerous benefactions, of which, as in previous years, the University has to make grateful acknowledgment, the following may be mentioned: A bequest by the late Mrs. M. A. Shaw, Ventnor, of £100, to be designated "The Dr. Shaw Gift;" a bequest by the late Professor Rutherford of the diagrams and microscopical specimens in the department of physiology which belonged to him, and all his books on physiology, histology, anatomy, etc.; a bequest by the late Emeritus Professor Sir John Struthers of anatomical drawings; a bust in marble, by Mr. John Hutchinson, R.S.A., of the late Professor Rutherford, presented by past and present members of the class of physiology, and placed in the physiology class room; a prize of the value of about £26, given by Scottish medical graduates in the Straits Settlements, for a research in tropical diseases.

Library.—Although the University Library has not received during the year any great bequest, it has to acknowledge nearly 2,000 donations, many of considerable value. A portion of the Sir William Fraser Bequest has been set apart to meet a much-felt want, namely, the re-cataloguing of the University Library, and this work is now being carried out by a special staff.

Institute of Public Health.—The John Usher Institute of Public Health, for which the University is indebted to the munificence of Sir John Usher of Norton, Bart., is in course of erection at Warrender Park, and will, when completed, afford accommodation for the Public Health Department of the University and also for the Public Health Department of the City of Edinburgh. When finished it will provide much more complete accommodation for the Public Health Department of the University than it has previously possessed, and will enable it to impart a full laboratory training in the branches of study required by medical officers of health.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

The Reuben Harvey Memorial Prize.—The sixth award of this triennial prize will be made on July 1st, 1900. The competition is open to students of the various schools of medicine in Dublin recognised by the medical licensing bodies in Ireland, and also to graduates and licentiates of these bodies of not more than three years standing. The prize, which is of the value of £25, will be awarded to the writer of the best essay, to be illustrated by drawings or preparations, on a subject to be chosen by the candidate evidencing original research in animal physiology and pathology. The essays, bearing fictitious signatures, are to be sent to the Registrar of the Royal College of Physicians of Ireland, 6, Kildare Street, Dublin, not later than June 1st, 1900.

SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART II.—The following candidates passed in:

Anatomy.—A. T. Barnard, Royal Free Hospital; T. J. M. Clapperton, King's College Hospital; P. S. Cooke, Charing Cross Hospital; A. W. Ellis, Edinburgh; H. R. Grellet, Guy's Hospital; F. H. Hand, St. Mary's Hospital; E. M. Handley, Royal Free Hospital; J. A. Kilpatrick, King's College Hospital; A. R. McEnnery, Bristol; O. Millauro, Charing Cross Hospital; T. Scatchard, Leeds; R. H. Terry, Guy's Hospital; A. Turner, Charing Cross Hospital; F. J. Turner, Guy's Hospital; J. A. W. Webster, St. Mary's Hospital.

Physiology.—A. T. Barnard, Royal Free Hospital; F. G. Bourns, Westminster Hospital; E. M. de Wilton, St. Mary's Hospital; C. D. E. Forbes, St. George's Hospital; E. M. Handley, Royal Free Hospital; F. H. Maberley, Birmingham; O. Millauro, Charing Cross Hospital; H. Morrison, Leeds; T. Scatchard, Leeds; R. H. Terry, Guy's Hospital; A. Turner, Charing Cross Hospital; J. A. W. Webster, St. Mary's Hospital; C. M. Woods, Charing Cross Hospital.

PRIMARY EXAMINATION, PART I.—The following candidates passed in:

Biology.—B. F. Board, Royal Free Hospital; C. Kellgren, Royal Free Hospital; R. V. Khedkar, Bombay; D. Mann, Royal Free Hospital; A. Rogers, Cardiff; J. S. Wilkes, Birmingham.

Chemistry.—C. T. Price, St. Bartholomew's Hospital; G. W. N. Stevens, Charing Cross Hospital.

Materia Medica and Pharmacy.—K. C. Edwards, Cambridge and Glasgow; A. W. Ellis, Edinburgh; F. A. Segreda, Guy's Hospital; P. G. Sheppard, Cambridge and Liverpool; A. D. Sibree, Royal Free Hospital; D. A. Stepney, Royal Free Hospital; J. H. Williams, London Hospital.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE FOURTH QUARTER OF 1899.

IN the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis based upon the Registrar-General's returns for the fourth or autumn quarter of the year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary areas in which the patients had previously resided.

The 32,179 births registered in London during the three months ending December last were equal to an annual rate of 28.4 per 1,000 of the population, estimated at 4,546,752 persons in the middle of the year; this rate was 0.5 per 1,000 below that recorded in the corresponding period of the preceding year, and was 1.7 per 1,000 above the average rate in the fourth quarters of the ten preceding years, 1889-1898. The birth-rates in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the populations. In Kensington, St. George Hanover Square, St. James Westminster, Hampstead, St. Martin-in-the-Fields, and London City the birth-rates were considerably below the average; while they showed the largest excess in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, and Bermondsey.

The 23,657 deaths of persons belonging to London registered during the three months ending December last were equal to an annual rate of 20.9 per 1,000, against 16.7 in the fourth quarter of the preceding year; in the corresponding quarters of the ten years 1889-1898 the death-rate in London averaged 18.9 per 1,000. The lowest death-rates in the various sanitary areas were 11.8 in Hampstead, 13.2 in Stoke Newington, 15.8 in Plumstead, 15.9 in St. George Hanover Square and in Lee, and 16.5 in Paddington; the highest rates were 27.6 in St. George-in-the-East, 27.7 in Bermondsey, 27.9 in St. Luke, 28.6 in Limehouse, 30.4 in St. George Southwark, and 31.4 in St. Olave Southwark. During the quarter under notice 2,794 deaths resulted from the principal zymotic diseases in London; of these, 1 was referred to small-pox, 530 to measles, 131 to scarlet fever, 692 to diphtheria,

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions during the Fourth Quarter of 1899.

SANITARY AREAS.	Estimated Population middle of	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
LONDON	4,546,752	32,179	23,657	28.4	20.9	1.94	2,194	1	530	131	692	215	—	362	—	263	2,316	150
West Districts.																		
Paddington	128,794	710	531	22.1	16.5	0.73	24	—	2	2	12	3	—	4	—	1	37	117
Kensington	172,899	873	821	20.3	19.0	1.07	46	—	8	4	22	—	—	8	—	4	58	149
Hammersmith	108,785	734	502	27.1	18.5	1.18	32	—	2	4	7	—	—	14	—	5	41	158
Fulham	130,720	1,124	671	34.5	20.6	3.46	112	—	53	10	22	8	—	10	—	9	62	167
Chelsea	96,721	551	497	23.3	20.6	1.86	45	—	12	2	5	3	—	8	—	15	51	146
St. George Hanover Sq.	80,876	321	321	15.9	15.9	1.30	26	—	5	3	5	9	—	—	—	4	33	115
Westminster	52,117	284	332	21.9	25.6	1.21	16	—	5	—	2	2	—	5	—	2	60	197
St. James Westminster	21,827	80	101	14.7	18.6	1.65	9	—	2	1	2	1	—	1	—	2	9	175
North Districts.																		
Marylebone	140,139	933	667	26.7	19.1	1.38	48	—	8	6	18	2	—	11	—	3	72	109
Hampstead	80,252	394	237	19.7	11.8	0.70	14	—	1	4	5	2	—	1	—	1	20	107
St. Pancras	244,548	1,556	1,408	25.5	23.1	1.66	101	—	8	4	47	13	—	17	—	12	147	172
Islington	348,085	2,310	1,759	26.6	20.3	1.78	154	—	31	16	51	18	—	24	—	14	140	156
Stoke Newington ...	35,187	201	116	22.9	13.2	0.79	7	—	1	1	3	—	—	2	—	—	8	85
Hackney	222,571	1,521	950	27.4	17.1	1.50	83	—	6	6	25	16	—	19	—	11	91	138
Central Districts.																		
St. Giles	37,196	294	192	31.7	20.7	1.63	15	—	10	—	2	—	—	1	—	2	30	88
St. Martin-in-the-Fields	12,142	35	54	11.6	17.8	1.65	5	—	3	—	—	—	—	1	—	1	6	171
Strand	23,016	124	151	21.6	26.3	0.87	5	—	1	—	2	—	—	—	—	2	23	194
Holborn	29,621	164	174	22.2	23.6	1.22	9	—	2	1	—	—	—	4	—	2	22	183
Clerkenwell	56,068	486	419	29.5	25.4	2.61	43	—	1	6	10	10	—	12	—	4	47	189
St. Luke	40,868	459	284	45.0	27.9	1.77	18	—	2	5	4	2	—	1	—	4	31	109
London City	27,986	101	168	14.5	24.1	1.28	9	—	1	—	3	1	—	3	—	1	14	79
East Districts.																		
Shoreditch	121,071	973	757	32.2	25.1	2.46	74	—	21	6	21	8	—	11	—	7	67	164
Bethnal Green	128,938	1,126	802	35.0	24.9	3.05	98	—	26	1	24	20	—	19	—	8	88	193
Whitechapel	81,391	702	459	34.6	22.6	2.13	43	1	17	1	11	2	—	5	—	6	51	137
St. George-in-the-East	43,560	492	334	40.6	27.6	1.99	24	—	13	—	2	2	—	3	—	4	29	205
Limehouse	58,807	465	420	31.7	28.6	2.32	34	—	—	—	7	6	—	16	—	5	47	200
Mile End Old Town ...	113,161	1,077	661	38.2	23.4	2.09	59	—	9	2	25	6	—	15	—	1	58	126
Poplar	170,606	1,435	1,020	33.7	24.0	2.68	114	—	17	3	29	29	—	23	—	13	103	155
South Districts.																		
St. Saviour Southwark	24,207	170	153	28.2	25.4	1.99	12	—	5	1	2	—	—	—	—	4	20	206
St. George Southwark	60,536	521	459	34.5	30.4	3.46	52	—	20	4	13	1	—	6	—	8	66	161
Newington	124,166	1,046	823	33.8	26.6	2.32	72	—	19	6	23	—	—	11	—	13	109	175
St. Olave Southwark ...	11,038	91	87	32.9	31.4	2.89	8	—	2	1	4	—	—	1	—	—	13	176
Bermondsey	85,835	755	592	35.3	27.7	3.26	70	—	20	2	33	—	—	9	—	6	58	177
Rotherhithe	41,050	313	248	30.6	24.2	4.20	43	—	10	3	19	—	—	7	—	4	24	157
Lambeth	308,108	2,283	1,535	29.7	20.0	1.74	133	—	26	5	46	14	—	22	—	20	130	137
Battersea	174,996	1,228	846	28.1	19.4	3.21	140	—	74	6	20	11	—	24	—	5	80	140
Wandsworth	229,655	1,359	872	26.1	16.7	1.69	88	—	39	2	20	5	—	8	—	14	69	132
Camberwell	284,817	1,825	1,261	27.6	19.1	1.93	127	—	22	6	71	1	—	17	—	10	117	139
Greenwich	132,513	1,410	891	31.0	19.6	1.93	88	—	21	3	27	12	—	11	—	14	74	153
Lee	46,219	233	159	23.2	15.9	1.10	10	—	2	—	5	1	—	—	—	2	11	137
Lewisham	91,027	591	414	26.0	18.2	1.94	44	—	—	3	26	2	—	5	—	8	37	146
Woolwich	41,542	314	256	30.4	24.7	2.23	23	—	2	—	7	4	—	3	—	7	32	169
Plumstead	64,031	505	253	31.6	15.8	1.05	17	—	1	1	9	1	—	—	—	5	31	101

215 to whooping-cough, 362 to enteric fever, and 263 to diarrhœa. These 2,194 deaths were equal to an annual rate of 1.94 per 1,000, against an average rate of 2.23 in the corresponding periods of the ten preceding years, 1889-1898. In the fourth quarter of the three preceding years the zymotic death-rates were 1.59, 2.70, and 1.68 per 1,000 respectively. The lowest zymotic death-rates last quarter were 0.70 in Hampstead, 0.73 in Paddington, 0.79 in Stoke Newington, 0.87 in Strand, 1.05 in Plumstead, and 1.07 in Kensington; the highest rates were 3.05 in Bethnal Green, 3.21 in Battersea, 3.26 in Bermondsey, 3.46 in Fulham and in St. George Southwark, and 4.20 in Rotherhithe. Measles showed the highest proportional fatality in Fulham, St. Giles, St. Martin-in-the-Fields, St. George-in-the-East, St. George Southwark, and Battersea; scarlet fever in Fulham, Clerkenwell, St. Luke, St. George Southwark, St. Olave Southwark, and Rotherhithe; diphtheria in Mile End Old Town, St. Olave Southwark, Bermondsey, Rotherhithe, Camberwell, and Lewisham; whooping-cough in St. George Hanover Square, Clerkenwell, Bethnal Green, Limehouse, Poplar, and Woolwich; enteric fever in Holborn, Clerkenwell, Bethnal Green, Limehouse, Rotherhithe, and Battersea; and diarrhœa in Chelsea, St. Saviour Southwark, St. George Southwark, Newington, and Woolwich. The fatal case of small-pox belonged to Whitechapel sanitary area.

During the fourth quarter of the year 2,316 deaths from phthisis were registered in London, equal to an annual rate of 2.04 per 1,000, against 1.83; and 1.76 in the corresponding periods of the two preceding years. Among the various sanitary areas the lowest phthisis death-rates last quarter were recorded in Paddington, Kensington, Hampstead, Stoke Newington, Wandsworth, and Lee; and the highest rates in Westminster, Strand, St. Saviour Southwark, St. George Southwark, Newington, and St. Olave, Southwark.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 150 per 1,000 last quarter, against 137, 151, and 137 in the corresponding periods of the three preceding years. Among the various sanitary areas the rates of infant mortality were lowest in Marylebone, Hampstead, Stoke Newington, St. Giles, St. Luke, London City, and Plumstead; while they showed the largest excess in Westminster, Strand, Bethnal Green, St. George-in-the-East, Limehouse, and St. Saviour Southwark.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,145 births and 6,870 deaths were registered during the week ending Saturday last, January 6th. The annual rate of mortality in these towns, which had increased from 18.9 to 30.6 per 1,000 in the five preceding weeks, further rose last week to 30.9. The rates in the several towns ranged from 12.5 in Burnley, 17.2 in Cardiff, 17.6 in Gateshead, and 18.7 in Oldham, to 40.5 in Croydon, 40.8 in Nottingham, 42.5 in Preston, and 44.9 in Brighton. In the thirty-two provincial towns the mean death-rate was 26.8 per 1,000, and was 10.3 below the rate recorded in London, which was 37.1 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.3 per 1,000; in London the death-rate was equal to 2.1, while it averaged 2.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.1 in Sheffield, 4.6 in Hull, 5.4 in Salford, and 8.8 in Preston. Measles caused a death-rate of 1.2 in Leicester, 1.4 in Salford, 1.5 in Huddersfield, 1.7 in Hull, 1.9 in Cardiff, 2.1 in Halifax, and 6.1 in Preston; scarlet fever of 1.3 in Burnley; and whooping-cough of 1.0 in Bolton, 1.1 in Portsmouth, 1.3 in Liverpool 2.1 in Salford, and 2.3 in Norwich. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. The 121 deaths from diphtheria in the thirty-three towns included 58 in London, 17 in Sheffield, 6 in Liverpool, 5 in Leeds, 4 in West Ham, and 4 in Leicester. Seven fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns. There were 8 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, January 6th, against 5 and 7 at the end of the two preceding weeks; one new case was admitted during the week, against 5 and 6 in the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had decreased from

3,578 to 2,881 at the end of the seven preceding weeks, had further declined to 2,730 on Saturday last; 186 new cases were admitted during the week, against 180, 209, and 161 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 6th, 881 births and 792 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 20.0 to 27.2 per 1,000 in the four preceding weeks, declined again last week to 25.6, and was 5.3 per 1,000 below the average rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 14.6 in Leith and 18.5 in Perth, to 30.0 in Greenock and 35.2 in Paisley. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 429 deaths registered in Glasgow included 20 from measles, 4 from scarlet fever, 6 from whooping-cough, 2 from "fever," and 8 from diarrhœa. Four fatal cases of measles occurred in Paisley, and 2 in Greenock; and 2 deaths from whooping cough were recorded in Aberdeen.

THE NEW INFIRMARY, LISKEARD.

THE guardians of Liskeard are to be congratulated on having faced their responsibilities and erected a new infirmary. We remember the cries of indignation with which the report of our Special Commissioner condemning the infirmary as a hopeless building were received, that however is a thing of the past, and we are second to none in our appreciation of the business-like way in which the guardians have handled the question. Now that there is a new infirmary we hope soon to hear of a staff of trained nurses superseding the "feeble-minded and imbecile attendants" who at the time of our Commissioner's visit acted as assistants under the one trained nurse. Having provided the infirmary, it is true economy to place in it a staff of skilled officials who will understand the use of the appliances provided at so much cost.

SUPPERS FOR WORKHOUSE INMATES.

E. M. R., who is a workhouse medical officer, says the question has come up as to giving the inmates of his workhouse, who are not in the sick wards, herrings for supper. As many of these are very old he thinks it "wrong," and asks what he is to do?

*** We are not inclined to regard the proposal as wrong, but think it might be tried; if, however, our correspondent really thinks it to be so we should suggest (as it does not refer to the sick) that he should state his views in reference to it only if applied to for his opinion.

MEDICAL NEWS.

THE SANITARY INSTITUTE.—The twenty-ninth course of lectures and demonstrations for sanitary officers at the Sanitary Institute, Margaret Street, Regent Street, will commence on Friday, January 19th. The first part will conclude on February 7th, on which day the second part will commence; it will end on March 21st; and the third part will commence on March 23rd. Further information can be obtained from the Secretary of the Institute.

PRIZES OF THE ACADÉMIE DE MÉDECINE.—At the annual jubilee meeting of the Académie de Médecine on December 12th, the award of the prizes offered for the year was made known. The following are some of the principal awards. The Academy Prize (£40) for an essay on the physiology and pathology of the thyroid gland was divided between MM. Garnier, Enriquez, and Lamy, of Paris. The Argenteuil Prize (£272, sexennial) was divided in varying proportions between MM. Bazy and Chailloux, of Paris, and Escat, of Marseilles (Castration in Hypertrophy of the Prostate); Professors Poncel and Delore, of Lyons (Treatise on Suprapubic Cystotomy in Prostatics); MM. Wassermann and Halle, of Paris (Contribution to the Pathological Anatomy of Urethral Strictures), and several others. The Barbier Prize (£80) was divided among several candidates, M. P. L. Simond, Director of the Bateriological Laboratory at Saigon receiving £60 of it for an essay (The Propagation of the Plague). The Laborie Prize (£200) was divided between MM. Delagénière, of Mans (The Surgery of the Uterus); Jeannel, of Toulouse (The Surgery of the Intestine), Cestan, of Toulouse (The Therapeusis of Empyema), who were awarded £60 each, the balance being distributed in smaller sums among other candidates. The François Joseph Audiffred (£960), Meynot (£104), Amussat (£40), and several other prizes were not awarded.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERYSTWITH INFIRMARY.—House-Surgeon. Salary, £150 per annum, with usual residential allowances (stimulants excepted). Applications to the Secretary by January 20th.

BIRKENHEAD: BOROUGH HOSPITAL.—(1) Honorary Physician; (2) Two Honorary Surgeons. Applications, endorsed "Election of Hon. Medical Officers," to the Secretary by January 24th.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House-Governor by January 27th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with apartments and board. Applications to the Chairman of the Medical Board by January 15th.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum, with furnished apartments, board and attendance. Applications to Mr. P. Kevan, Honorary Secretary, 12, Acresfield Bolton, by January 24th.

BRECON INFIRMARY.—Resident House-Surgeon, unmarried. Salary, £90 per annum, with furnished apartments, board, etc. Applications to the Secretary, No. 6, Bulwark, Brecon, by January 17th.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon; must be married. Salary, £50 a year, with board, etc. Applications to the Secretary by January 25th.

CARDIFF INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Appointments for six months, subject to re-election. Salaries at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by February 6th.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Salary, £80 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row, North Chester, by January 27th.

DERBYSHIRE ROYAL INFIRMARY.—(1) Resident House Physician. Salary, £100 per annum with apartments and board. (2) Resident Assistant House-Surgeon. Appointment for six months. Salary, £30, with apartments, board, etc. Applications to the Secretary by January 20th.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to House Surgeon. Honorarium 20 guineas per annum with board, lodging, and washing. Applications to the Honorary Secretary by January 17th.

DUNDEE COMBINATION POORHOUSES AND HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with board and furnished apartments. Applications to the Clerk to the Council, Parish Council Chambers, Dundee, by January 17th.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried, and not over 35 years of age. Salary, £150 per annum, with board, apartments, washing, and attendance. Applications to the Medical Superintendent by January 17th.

GLASGOW: EYE INFIRMARY.—Resident House Surgeon. Salary, £50, with apartments and board. Applications to the Secretary, 88, West Regent Street, Glasgow, by January 18th.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by January 15th.

GROVE HALL ASYLUM, Bow, E.—Junior Assistant Medical Officer. Salary at the rate of £120 a year, with board, apartments, washing, and attendance. Personal application to the Medical Superintendent.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Registrar and and Pathologist. Honorarium 25 guineas per annum. Applications to the Secretary-Superintendent by January 30th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Assistant Surgeon; must be F.R.C.S.Eng. (2) Two Assistant Physicians; must be F. or M.R.C.P.Lond. Applications to the Secretary by January 23rd.

LEEDS: GENERAL INFIRMARY.—(1) Resident Casualty Officer. Salary, £100 per annum. (2) House Physician, appointment for six months. Board, lodging, and washing provided in each case. Applications to the Secretary of the Faculty by January 16th and 22nd respectively.

LEICESTER INFIRMARY.—House Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by February 3rd.

LONDON HOSPITAL, Whitechapel Road, E.—Assistant Physician, must be M.R.C.P. Lond. Applications to the House-Governor by January 26th.

MARGATE: ROYAL SEA-BATHING HOSPITAL.—Assistant Resident Surgeon. Salary, £52 per annum with board and residence. Applications to the Secretary at the Offices, 30, Charing Cross, S.W., by January 18th.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Imbecile Asylum, Caterham, unmarried, and not exceed 35 years of age. Applications, on forms provided, to be sent to the office of the Board, Norfolk House, Norfolk Street, Strand, London, W.C., by January 2 th.

METROPOLITAN DISPENSARY, Cripplegate, E.C.—Resident Medical Officer, not over 35 years of age. Salary, £220 per annum, with furnished residence and allowance for coal and gas. Applications to the Secretary, Cripplegate Institute, Golden Lane, E.C., by January 20th.

NEWARK-ON-TRENT HOSPITAL AND DISPENSARY.—House-Surgeon, unmarried. Salary, £80 per annum, with board and lodging. Applications to the Secretary by January 20th.

NEW HOSPITAL FOR WOMEN.—Three Female Senior Assistants in the Out-patient Department. Appointments for two years. Applications to the Secretary by January 25th.

NORTHAMPTON GENERAL INFIRMARY.—Assistant House-Surgeon, unmarried, not under 23 years of age. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary by January 18th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of £60 per per annum. Applications to the Secretary by January 30th.

NOTTINGHAM: GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, increasing to £120, with board, lodging and washing. Applications to the Secretary by January 27th.

NOTTINGHAM: GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary, £140 per annum, etc. Application to the Secretary.

PLYMOUTH: BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary, £125 per annum, increasing to £150 with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to Dr. W. H. Bowes, Medical Superintendent, at the Asylum, Blockadon, Ivybridge, Devon, by January 26th.

PORTSMOUTH: ROYAL PORTSMOUTH, PORTSEA AND GOSPORT HOSPITAL.—Assistant House-Surgeon. Appointment for six months, remuneration at the rate of £50 per annum, with board and residence. Applications to the Secretary by January 18th.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square, W.C.—Honorary Assistant Medical Officer. Applications to the Superintendent by January 15th.

SHEFFIELD ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Medical Staff, under cover to the Secretary, by January 24th.

TORQUAY: TORBAY HOSPITAL.—House-Surgeon. Salary, £100 per annum, and £5 for nurses' lectures, with board, lodging, washing, and attendance. Applications to the Secretary by January 18th.

WAKEFIELD: WEST RIDING ASYLUM.—Assistant Medical Officer for one month. Salary, £3 3s. per week, with apartments and board. Applications to the Medical Director.

WEST AFRICAN RAILWAYS.—Two Assistant Medical Officers on the medical staff of railways under construction. Salary, £30 to £35 per month, with free quarters, first-class passage out and home, and four months' leave after eight months' residential service. Applications, marked "Assistant Medical Officer," to Messrs. Shelford and Son, 35A, Great George Street, Westminster, S.W.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY.—House-Surgeon. Salary, £120 per annum, and £30 a year for dispensing, with furnished apartments and attendance. Applications to the Secretary by January 20th.

WOLVERHAMPTON AND STAFFORDSHIRE HOSPITAL.—Assistant House-Surgeon. Appointment for six months, honorarium at the rate of £50 per annum. Applications to the House-Governor by January 15th

MEDICAL APPOINTMENTS.

BAILIS, Norman Christian, M.B., B.Ch.Durh., appointed Resident Surgeon to the General Dispensary, Birmingham.

BATEMAN, F. J. Harvey, B.A.Cantab., M.B., C.M.Edin., appointed Resident Medical Officer to the Hertford British Hospital, Paris.

BLACK, John, L.D.S.Eng., appointed Dental House-Surgeon to Guy's Hospital.

CAMPKIN, Hugh T., L.D.S.Eng., appointed Dental Surgeon to Guy's Hospital.

CHAMPION, S. Gurney, M.B., C.M.Edin., appointed House-Surgeon to the Grimsby and District Hospital.

COLE, George, M.R.C.S., L.R.C.P., appointed Public Vaccinator for North-West District of Nottingham, *vice* J. B. Roberts, M.B., resigned.

DYER, S. Reginald, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., D.P.H.Eng., Barrister-at-Law of the Middle Temple, appointed Medical Officer to H.M. Prison, Stafford.

MCGOWAN, J. S., B.Sc.Lond., M.D., appointed Medical Officer for the Fifth District of the Oldham Union, *vice* J. H. Fletcher, L.R.C.P.Edin., L.F.P.S.Glasg., resigned.

MORRISON, R., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Duffield District of the Belper Union, *vice* F. D. Holmes, B.A.R.U.I., L.R.C.P., L.R.C.S.Edin.

NORTON, J. J., L.R.C.S., L.R.C.P.Irel., appointed Medical Officer for the Alrewas District of the Lichfield Union, *vice* J. J. Spears, L.S.A.

ORTON, John, jun., M.R.C.S., L.R.C.P.Lond., D.P.H.Edin., appointed Medical Officer for the Fourth District of the Coventry Union.

PEARCE, Frank J., L.D.S.Eng., appointed Dental Surgeon to Guy's Hospital.

ROWLAND, Frank, L.R.C.P., L.R.C.S.Edin., appointed Resident Surgeon to the Birmingham General Dispensary.

SCOTT, Norman E. H., M.B., Ch.B.Glasg.Univ., appointed House-Physician to the North-Eastern Hospital for Children, Hackney Road, Shoreditch, N.E.

YOUNG, A. G., M.B., appointed Medical Officer for the Castle Bytham District of the Bourne Union, *vice* J. B. Richardson, M.R.C.S.Eng., resigned.

NEWCASTLE ROYAL INFIRMARY.—The following appointments have been made:
Senior House-Physician—Wm. Simpson, M.B., B.S.Durh.
Junior House-Physician—Jas. Muirhead, M.B., B.S.Durh.
House-Surgeons—Jas. McConnell, M.B., B.S.Durh.; C. J. Blandford, M.B., B.S.Durh.
Assistant House-Surgeon—Edward Gofton, M.B., B.S.Durh.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M. — Dr. Galloway Consultation. (Skin.)

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Seymour Taylor: Consultation. (Medical.)

Chelsea Clinical Society, Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—Dr. F. Vincent Dickinson: Gynæcological Therapeutics.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Dr. Walter Pakes: The Occurrence of the Proteus Vulgaris in a Venous Thrombus. Mr. Shattock: A specimen of Columnar-celled Carcinoma of the Uterus. Mr. Fullerton: Mycotic Tumour from Horse. Dr. Auld: Some results of Experiments with the Toxins of the Pneumococcus. And various card specimens.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Sir W. H. Broadbent, Bart.: Clinical Lecture. 6 P.M.—Dr. Sinclair Thomson: Practical Rhinology and Laryngology. Class demonstration.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Royal Meteorological Society, 25, Great George Street, Westminster, S.W., 7.45 P.M.—Annual general meeting.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Jonathan Hutchinson: Consultation. (Surgical.)

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Stanley Boyd: Surgical Cases.

Harveian Society of London, 8.30 P.M.—Annual general meeting and conversazione.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Clinical demonstration. Dr. Harry Campbell: Cases of Locomotor Ataxy and other Disorders of the Gait.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Penrose: Demonstrations of Selected Cases.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Durdas Grant: Consultation. (Eye, Ear, and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

MARRIAGES.

HART—HAWKES.—On January 8th at the Congress Hall, Clapton, by Commissioner Pollard, International Chancellor of the Salvation Army Exchequer, Arthur Herbert Hart, M.S., M.D., M.R.C.S., L.S.C.P., Medical Superintendent to the International Headquarters, and of Bannockburn, Lordship Lane, Friern Grove, to Kate, eldest daughter of Thomas Hawkes, of Boscombe, Bournemouth.

MORGAN—DOBLE.—December 9th, 1899, by Rev. Dr. Ross at the Parish Church Paignton, Dr. Frederick Morgan, late of Tombarrie, Ulverstone, to Clara Elizabeth Doble, of Holcombe, Paignton, youngest daughter of the late Francis Doble, of Colepark, Kentisbeari, Cullompton.

SEALY—POWELL.—On January 4th, at St. Barnabas South Kennington, by the Rev. J. H. Browne, Vicar of St. Andrews, Stockwell, assisted by the Rev. W. E. H. Sotheby, Vicar of the parish, and the Rev. W. B. Sealy, Vicar of Christ Church, Newark, brother of the bridegroom, Francis Mann Duke Sealy, M.R.C.S.Eng., L.S.A., of Nutterton, Boston, youngest son of the late Rev. W. B. Sealy, Vicar of Gosberton, Spalding, to Harriet Catherine, daughter of the late James Turner Powell, of 29, Guildford Road, S.W. No cards.

DEATHS.

BULTEEL.—At Havilland Street, Guernsey, January 4th, Ellen Grace, the beloved wife of Marcus Henry Bulteel, L.R.C.P.Lond., M.R.C.S., aged 38.

CHEESMAN.—On January 2nd, 1900, at Bitterne Park, Southampton, George Cheesman, M.R.C.S., L.R.C.P., L.S.A., aged 77.

CULLEN.—On January 4th, at his residence, Hatsby House, Cheltenham, Deputy Surgeon-General David Cullen, Army Medical Department, retired.

ELDER.—At 7, Leopold Place, Edinburgh, on January 6th, George Elder, M.D., F.R.C.P. Edin.

GRANT.—At 3, Connaught Square, Hyde Park, London, on January 3rd, Alexander Grant, F.R.C.S., Surgeon-Major, late of the Bengal Service, and Honorary Surgeon to the Queen, aged 83.

MORGAN.—December 25th, 1899, at the Grand Hotel, London, Frederick, the dearly-beloved husband of Clara Elizabeth Morgan, aged 61. Interred at Paignton Cemetery, Friday, 29th.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1 p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 8.30; Skin, M. Th., 1; Dental, M. Th., 9.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 3.

LONDON. *Attendances.*—Medical, daily, 1 p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; 1 p., 1; o.p., 12; Obstetric, 1 p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 3; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu. F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M. asks where an epileptic boy, aged 17, who is improving, having his fits now about every ten days, who reads considerably and whose parents are able to pay about £1 a week, could be received.

GANS'S SACCHAROMETER.

DR. T. C. ASKIN (Woodbridge) wishes to know what objection there is to Gans's saccharometer.

*** The objection is that the amount of sugar is dependent upon the volume of carbonic acid gas measured in a very small tube, and that this reading to be accurate should be corrected for temperature and pressure, of which the former especially is of importance. We do not see how this correction can easily be made so as to avoid this source of fallacy.

ANSWERS.

C. W. M. G.—Our correspondent might consult a *Treatise on the Science and Practice of Midwifery*, by W. S. Playfair, M.D. In 2 vols.; ninth edition (London: Smith, Elder and Co. 1898. 28s.); and the *Diseases of Women*, by J. Bland-Sutton, F.R.C.S., and A. E. Giles, M.D., F.R.C.S. (London: Rebman, Limited. 1897. 14s.).

CLIMATE OF FALMOUTH.

W.—Reference to vol. i of the *Climates and Baths of Great Britain*, a report of a Committee of the Royal Medical and Chirurgical Society of London (London: Macmillan and Co., 1895), shows that Falmouth had during the ten years 1880 to 1889, on an average 1,663 hours of sunshine each year, and that the average annual rainfall during the same period was 44.65 inches. With regard to albuminuria the following extract from the same authority answers our correspondent's question: "Albuminuria would seem to be also in abeyance, notwithstanding the moisture of the climate."

BLENNOSTASIN.

B.—The *Year Book of Pharmacy*, 1898, p. 231, contains the following note on blennostasin, founded on an article in the *Pharm. Centralb.*, 1897, 722: "This name is given to a derivative of a cinchona alkaloid crystallising from dilute solutions in large prisms and from concentrated solutions in the form of needles. It is soluble in water and has a strongly bitter taste. It has a powerful influence on the vasomotor system of the respiratory nerve centres, and though not toxic it sometimes resembles belladonna in its effects. It acts as a sedative on the brain and diminishes reflex action. It is given in capsules or in the form of pills, preferably in the latter. Chappel has employed it with success in hay fever and influenza."

NOTES, LETTERS, Etc.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of the Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

	£	s.	d.
Amount already acknowledged	217	17	11
London Companies:			
No. 1, additional	1	2	6
No. 3, additional	5	2	6
No. 4, additional	7	1	6
Surgeon-Major J. W. Black	1	1	■
Brigade-Surgeon-Lieut.-Colonel J. Duncan, M.B., Manchester Brigade	2	2	0
Surgeon-Major W. M. Roocroft, 1st V.B. Manchester Regiment	1	1	0
Medical Officer, Scottish Border Brigade ...	3	8	0
Mr. H. Haes...	1	10	●
F. Parkes Weber, M.D.	1	1	●
Mr. R. J. Godlee	2	2	●
Surgeon-Lieut.-Colonel J. A. Watson	0	5	■

TUBERCULOSIS: PREVENTION OR CURE.

DR. JOHN HADDON (Denholm, Hawick, N.B.) writes: No doubt many of your readers have noted with satisfaction that a British Congress is to discuss the subject of tuberculosis and its treatment. I take it that there is such a widespread interest in the subject that if I bring before you such a reform in diet as would save us from the danger of contracting tuberculous disease, it will at least be worthy of your consideration.

At a meeting which was held recently Lord Derby said that those interesting in preventing the spread of consumption had to contend against the enemy of ignorance—an assertion which contains a great deal more truth than Lord Derby may realise.

The opening of sanatoria is a step greatly to be applauded, and one which will be most helpful to those persons who have already contracted this fell disease; but they will be of no preventive value, and their establishment is therefore only to be regarded as a laudable attempt to cure, not to prevent disease. But how hopeless this so-called remedy is; while future occupants are being guaranteed by our dietetic habit of partaking of food products from animals tainted with disease. In case I may be accused of exaggeration I will mention that when the Queen's herd was carefully tested it was found that 95 per cent. were tuberculous. If that were the state in the Royal byre what must be the condition of cows kept by the ordinary farmer?

That flesh meat does not form a necessary part of man's diet is a fact which has been proved in the most practical manner by all sorts and conditions of men from time immemorial.

The open-air treatment of cattle (proposed by Lord Templetown, President of the Agricultural Union) is valuable from the fact that it aims at prevention and not cure merely. The great obstacle to his suggestion seems to be one of expense, entailing, as it would, extensive alterations in many farms. But how necessary it is will be realised when it is taken into consideration that a cowhouse in which a single tuberculous cow is stalled is a constant source of danger to all other animals living under the same roof.

Now that the attention of the whole world is fixed on our army, it may be of interest to know that during the years 1880-85, 4,422 men were lost to the State through consumption. Taking the Government estimate of £120 per head, this means a financial loss to the coffers of the nation of £530,640. We have had lately an interesting example of how our army is occasionally fed. Details must be too fresh in the minds of your readers to need repeating. The enormous increase of consumption being a question of national importance, it cannot be lightly put on one side, because of the inconvenience which radical reform in our customs and habits would entail. Let us pause awhile and think this question out impartially; for if thousands of our fellows can exist on a diet which does not include the flesh of animals, and yet enjoy life to the full, why should we continue to eat what scientists tell us not only injures us by its chemical composition, but is also liable to contain disease germs?

If any of your readers think it worth serious consideration and are interested enough to desire information on the subject of vegetarianism, and how it can easily be adopted in the home life, they cannot do better than apply to the Vegetarian Federal Union, 16, Farringdon Street, London, E.C., who will gladly answer inquiries and forward recipes for the preparing of dishes, which by their almost unlimited variety will be a revelation to those who have hitherto considered the diet of the vegetarian as monotonous and insipid.

AMATEUR PRESCRIPTIONS.

DR. J. H. MCGEE (Melbourne) writes: I was consulted this morning by a man from up country who is suffering from cowperitis and a perurethral abscess in the penis. He had been treating himself with the "medicine" and "lotion" which had been prescribed for him by a man up in the back blocks, and to use his own expression: "It was a grand medicine and shifted any amount of inflammation out of the pipe." I enclose a copy of the prescription, and you will note that the dose of the "medicine" is considered so unimportant as not to be mentioned:

[Copy.]

Medicine.

6 Penneth of Balsam of Pivey.
6 do of Sweet Spirits of Nitre.
6 do of Bitter Apple.
made into one pint with water.

Lotion.

2 drachms of Self Rezinc.
½ ounce of Flowery Alum.
made into one quart with water.
use as directed with a 2 drachm glass Syringe.

I take "Pivey" to mean copaiba, and "Self Rezinc" to mean sulphate of zinc.

These misnomers are almost on a par with those of the grocer in the "Old Country," who sent to Dublin for an ounce of "Grocer's Supplement" (corrosive sublimate) and a pound of tartar "eminent" (emetic), or that of the patient in St. Vincent's Hospital here who told me that she drank nothing but "Cypress" water, and that she took as much as two "Cypresses" (siphons of soda water) a day.

A CORRESPONDENT sends us another specimen of an amateur prescription from rather nearer home. It is contained in a letter from Major-General M. W. E. Gosset, District Office, Lower Castle Yard, Dublin published in the *Irish Times*. The gallant officer writes:

"I am able to say, from my own experience, and that of many of my friends, that the following recipe has had a remarkable effect in arresting and preventing the disease: Pure phenol, Calvert's No. 1, prepared for internal use. Twenty-four drops in 8 ounces of water; well mixed. Dose, two tablespoonfuls three times in twenty-four hours (half the dose for children) will arrest the disease; one dose will prevent it."

This prescription has at least the beauty of simplicity. If accused of trenching upon ground which does not belong to him, Major-General Gosset may perhaps reply that military operations in South Africa have been recently subjected to so much amateur criticism that a little incursion by the military may be excused, but we should recommend him to be cautious.

WHOLESALE PRESCRIBING.

MR. A. F. HEALD (Cambridge) writes: Two factors contributing largely to the increasing custom of wholesale prescribing are (*a*) the inability of the medical man qualified under existing conditions to write a compatible prescription on pharmacopœial lines, owing to the insufficient training in pharmacy demanded by the various curricula. (*b*) The existence of wholesale firms who are quick to detect this deficiency, and to supply the necessary requirements. One is bound to admit the elegance of the preparations put up by many of these firms; their combinations are exhibited in such a manner as will be acceptable to the patient and an immense saving of trouble to the practitioner; but one of the chief objections to this style of prescribing seems to be that the medical man is thus made the advertising agent of these manufacturers, for the public, wise in its generation, knows the meaning of tab. antipyrin or Fellows' syrup as well as the medical man who prescribes them, and so is enabled to procure his remedies in bulk from the nearest grocer without further reference to his medical adviser, thereby discounting the trained pharmacist, giving a free advertisement to the proprietary goods, and placing the patient in a position to prescribe

for himself and others on a future occasion. The *Pharmacopœia* is almost a dead letter in medical training, and the average student knows more about the botanical laws which govern potato sowing than he does of the composition of pil. rhei. co. The Committee who are responsible for the compilation of the *Pharmacopœia* might do something to remedy this, but until pharmacy and the art of prescribing are taught as thoroughly as the science of anatomy, wholesale prescribing will be on the ascendant.

THE NATURE OF THE CANCEROUS PROCESS.

WE have received a further letter from Mr. Roger Williams (Clifton), in the course of which he writes: Recent hæmotological studies have proved in the clearest manner possible that the cells of inflammatory new formations are true leucocytes, derived from the blood and not from the proliferation of the fixed connective tissue cells, as Virchow formerly believed. The latter cells take no part in the production of the inflammatory new formation. In true tumour formation, however, it is just the opposite, for these, or such as these, are the very cells that by proliferation originate the neoplasm. When, therefore, your reviewer states that "All inflammatory processes, whether of connective tissue, etc.....are essentially hyperplastic," it is evident that he has fallen into error.

THE PHARMACOLOGY OF CANNABIS INDICA.

PROFESSOR C. R. MARSHALL (University College, Dundee), writes: Dr. Dixon (BRITISH MEDICAL JOURNAL, January 6th, page 60) accuses me of throwing out hypotheses without any basis of experimental fact. This is untrue. I have made careful investigations into this matter, and in my original letter experiments were mentioned, but these were subsequently withdrawn on account of the pressure on your space. As Dr. Dixon declines further discussion I shall make no comment on his letter, except that he has evidently failed to grasp the meaning of mine, and that milk and emulsions of cannabis indica are not comparable.

HÆMORRHAGE THROUGH THE LACHRYMAL DUCT AFTER PLUGGING THE NARES.

DR. R. PAVLOWSKAJA (St. Petersburg) writes with reference to the reports of cases recently published in the BRITISH MEDICAL JOURNAL, that a similar case occured in his practice some time ago. A lady, aged 52, suffering from cancer of the liver with severe jaundice, had, after a small dose of calomel, an abundant hæmorrhage from the nose, to which she was very liable. After the nares had been plugged, blood dropped through the lachrymal duct of the right eye. The patient died a few days later.

STUDIES IN THE PSYCHOLOGY OF SEX.

MR. H. HAVELOCK ELLIS, L.S.A. (Lelant, Cornwall), writes: I learn that on January 5th the bench of magistrates at Watford ordered the destruction of a certain number of copies of my *Studies in the Psychology of Sex*, which, together with the English edition of Dr. Féré's *Pathology of the Emotions*, had been seized by the police, as obscene literature, on the premises of the University Press, Limited, of Watford. I should like to be allowed to state that, so far as I am concerned, I can have no quarrel with the police in this matter. After the unsatisfactory conclusion of the Bedborough prosecution, I resolved not to issue my work in this country, and I have strictly adhered to that resolution. The University Press, so far as they had the handling of my work, were under engagement to issue it only from Germany, and not to advertise it without consulting me. They have, however, evaded the spirit, if not the letter, of their agreement, by stocking a certain number of copies in England, and they issued a circular which though, as I understand, it was only sent out to the profession, I emphatically disapproved of. I addressed repeated protests to the publishers, and I cannot complain if the police have now enforced my protests. I am content to issue my work in America, where a medical publisher is unhampered in distributing a medical work to the profession.

The wider question, unfortunately, still remains where the Bedborough prosecution left it. A work which (both before and since that prosecution) has met with the approval—without a single dissentient voice so far as I am aware—of competent authorities and of medical organs, not in this country only but throughout Europe and America, cannot here be sold even to members of the medical profession. It is, perhaps, significant of the feeble influence which medical opinion possesses in this country. In any case, however, I have no intention of fighting for that recognition which the law, as embodied in the police, refuses to grant. I must be content to devote my energies to doing my own work, and leave the next step to others.

PREVALENCE OF VENEREAL DISEASE.

DR. J. SELL (Hong Kong) writes: Those interested in the above subject must have been grievously disappointed at the lack of anything practical having emanated from the recent conference and correspondence on the subject. Several—the latest Dr. Drysdale—tell us that the periodical examination of women and their segregation till cured has, where carried out, led to an increase in the disease, but no attempt has been made to explain this rather astounding statement. All other contagious diseases (scarlet fever, small-pox, diphtheria, etc.) are treated in a similar manner, and with good results—at least I have hitherto believed so—and some explanation is therefore required to prove why similar methods applied to venereal disease produces such opposite effects. During my fifteen years' wandering I have seen State regulation carried out in foreign towns, and with excellent results when properly enforced, more especially in small towns. In France it is not the State regulation which is at fault, but the want of it. Paris, and I have no doubt other large Continental towns, abound in "sly brothels"; these do away to an enormous extent with the good effects of properly regulated houses. The legal plan suggested must be meant for a joke. If such a scheme is contemplated in Norway it will soon, I think, be a dead letter. How does notification without the name of the person affected do any good? The remedy "early marriage" is a so out of practical politics. For this we would all require a fair bank credit, so as to colonise in comfort or to remain at home under "our own fig tree." Anyone who has had experience of Colonial practice can easily recall numberless instances of soldiers, sailors, tinkers, tailors, etc., all with old and young wives at home who come for treatment. Personally I think that the only sure and certain remedy is to have every woman registered, periodically examined and treated, and every sly brothel promptly squashed. This plan worked here most successfully in days gone by, and would do so equally well again.

MEDALS OF THE LONDON HOSPITALS.

DR. A. W. HARRISON (Mossley), who holds the Bird Gold Medal, writes: May I be permitted to point out an error in Mr. T. E. James's paper on the Medals of the London Hospitals in the BRITISH MEDICAL JOURNAL of January 6th? Referring to Westminster, he speaks of "the Bird silver or bronze medal." The medal, which was founded in memory of the late Dr. Bird, is a gold medal; neither silver nor bronze medals are given at Westminster.

AN EXAMINATION OUTRAGE.

A CURIOUS incident recently occurred at the Hôpital Beaujon, Paris, where the competitive examination for the post of *interne* was being held. One of the male nurses going his round in the early morning found near the door of the study of M. Juramie, the Director, a black cylindrical object which he took to be an explosive machine, and accordingly left it for further investigation by daylight. The Director, on his arrival at 7 o'clock, found the object, which proved to be a dark lantern. On further investigation, it was discovered that one of the panels of the door had been removed by means of a thermo-cautery. The police were summoned, and on opening the door there were found two large drills which had been used to bore holes in three wooden urns in which the answers of candidates in the examination still to be read had been placed under seal by Drs. J. B. Angers and Troisers, Presidents of the Jury of Examiners. By means of a funnel, nitric acid had been poured into two of the urns, evidently with the object of destroying the papers or making them illegible. In this the perpetrator of the outrage had to a large extent succeeded, for the writing on many of the sheets of paper had been obliterated, and no procedure is known by which it can again be made visible. In consequence of this act, the examination has been suspended, and the candidates will have to go through the ordeal again. The final result, which was to have been made known in February, will now not be published till May or June. Inquiries are being made by the police, but no definite clue has yet been found.

LETTERS, COMMUNICATIONS, ETC., have been received from:
A Dr. D. Allan, Evanton; A.B.M.B; Mr. T. Adair, Belfast. **B** Messrs. Burroughs, Wellcome, and Co., London; Mr. H. J. F. Badcock, New Brompton; Mr F. A. Baldwin, London; Mr G. H. Brombabent, Manchester; Dr. A. F. Blagg, Clifton; Mr. W. H. Bennett, London. **C** Mrs. H. A. Collington, Coventry; Dr. W. S. Church, London; Messrs. T. Christy and Co., London; Captain I.M.S.; C. Crawshaw, M.B., Ashton-under-Lyne; Mr. E. Curwen, London; Dr. J. W. Cook, Colchester; Dr. A. H. Carter, Birmingham; Cyclist; Dr. A. E. Cooper, London; Mr. G. Cole, Nottingham. **D** Disgusted Housekeeper. **E** Enquirens; E. A. W., English, M.B., Leicester; Mr. H. H. Ellis, Lelant. **F** R. Forsyth, M.B., Salford; F. J. S.; Mr. W. K. Forbes, Perth; F.R.C.S. **G** T. E. Gordon, M.B., Dublin; C. W. M. Grier, M.B., Mevagissey; Dr. W. J. Gow, London; Mr. J. N. Gorham, London; T. E. Gordon, M.B., Dublin. **H** Mr. W. S. Hensley, Cardiff, H. H.; T. H. Hunt, M.B., Halifax; Mr. R. G. Hebb, London; Dr. J. Hadden, Hawick; Dr. G. Herschell, London; Dr. A. W. Harrison, Mossley; Dr. W. W. Hall, London; J. Harvey, M.B., Edinburgh. **J** Dr. R. Jardine, Glasgow; M. H. J. Johnson, London; R. Johnson, M.B., London. **K** Dr. T. P. C. Kirkpatrick, Dublin. **L** J. D. Leigh, M.B., Scarborough; Mr. H. C. Lawrence, Chiltonham; London Graduate. **M** Member; Mr. J. McKay, London; Dr. W. O. Moor, Rome; Mr. F. G. Martin, Darlington; Dr. J. H. McGee, Melbourne; Dr. C. R. Marshall, Dundee; Mr. H. May, Birmingham; Mr. J. S. Matthews, Leyton; Mr. J. H. Mummery, London; Dr. W. L. Muir, Glasgow; Dr. H. C. Male, Croydon; Dr. P. W. Marriott-Boscombe. **O** Obstetrical Society of London, Secretary of, London. **P** Dr. S. Parlowskaja, St. Petersburg. **Q** Quercus. **R** Dr. A. Roberts, Harrogate. **S** Mr. J. J. A. Sherry, Oswaldtwistle; Mr. E. T. A. Smith, London; Mr. J. Smith, Philadelphia; Dr. J. G. Sharp, Leeds; G. P. Shuter, M.B., London; Dr. H. P. Smith, London; W. Simpson, M.B., Newcastle-on-Tyne; Senior Officer, A.M.R; Dr. T. D. Savill, London; H. A. Scott, M.B., Bolton. **T** Dr. W. B. Thorne, London. **W** Dr. H. W. Webber, Plymouth; Dr. H. White, Birmingham; G. B. M. White, London; Dr. F. Willcocks, London; F. Wyatt-Smith, M.B., Reigate. **Y** W. S. Young, M.B., Garliestown; Young Practitioner; Dr. I. B. Yeo, London, etc.

BOOKS, ETC., RECEIVED.

Edinburgh Medical Journal. Edited by G. A. Gibson, M.D. Vol. ii. Edinburgh and London: Young J. Pentland. 1899.

The Races of Man. By J. Deniker, Sc.D. London: Walter Scott. 1900. 6s.

*** In forwarding books the publishers are requested to state the selling price.

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A CLINICAL LECTURE
ON
ULCER OF THE STOMACH.

Delivered at the General Hospital, Birmingham.

BY ROBERT SAUNDBY, M.D.EDIN., LL.D.MCGILL, F.R.C.P.LOND.,
Professor of Medicine, Mason University College; Physician to the General Hospital, Birmingham.

ETIOLOGY.

ALTHOUGH, for reasons which I shall explain later on, I do not believe gastric ulcer to be so common as is often assumed, it is a sufficiently frequent occurrence, and of such grave importance, that it is incumbent upon you to know all that you can learn respecting its clinical history, diagnosis, and treatment.

I can make no pretension to settle the vexed question of causation. I can only tell you that it has been sufficiently proved that breaches of surface of the mucous membrane of the stomach heal readily enough, so that the notion that the gastric juice erodes such raw surfaces and prevents healing is exploded.

The chief clinical fact which bears upon the point is the much greater frequency of the disease among women than men. It is very much greater, in my opinion, than is usually stated in books where the proportion is given as something like 6 to 4, but it should be nearer 20 to 1. I do not think my statistics err on the side of attributing to women a larger number of cases of gastric ulcer than is really the case, for with very few exceptions all the cases I have tabulated as suffering from gastric ulcer have had recent vomiting of blood, and where this symptom was absent the diagnosis has rested on the solid ground of *post-mortem* observation. They were chiefly young women, more than half being between the ages of 20 and 30; and if we include the years from 18 to 38 we get nearly the whole of them within that period. Another feature which was common to all these women was anæmia, present no doubt in varying degrees, but constant. I believe anæmia to be the really important factor, and as you know, it is an extremely common condition in young women. It is interesting to note that experiments upon animals have shown that while lesions of the gastric mucous membrane ordinarily heal quickly, if the animal has been previously bled so as to produce artificial anæmia a persistent ulcer may result. I do not pretend that anæmia is the only cause of gastric ulcer, but it is by far the most common factor, and is probably responsible in 19 out of 20 of those cases which come under our notice.

SYMPTOMS.

It is a curious fact but abundantly proved by clinical experience, that ulcer of the stomach may exist without producing any symptoms whatever, and from time to time such cases terminate fatally by perforation without any previous warning. But while, in exceptional cases, this is true, in most the symptoms are sufficiently pronounced. The patient, who is generally an anæmic but fairly well nourished young woman, complains of sharp pain in the region of the stomach which comes on very soon after swallowing food, and is generally relieved by vomiting. In most cases there is sooner or later vomiting of blood and I believe the frequency of this important symptom is underestimated by the standard authorities. As a rule the desire for food persists, but the dread of pain makes the patient unwilling to take it. Constipation is frequently present. These symptoms are easily elicited by questioning the patient, and on physical examination there is not very much more to be made out. The signs of anæmia are present, for example, pallor of the skin and mucous membranes, hæmic murmurs over the heart and great vessels of the neck, and considerable diminution of hæmocytes and hæmoglobin. On palpation in the region of the stomach tenderness may be complained of, but this varies greatly in constancy and in character, and the tender spot is sometimes as small as a shilling, at others diffused over the whole epigastric area.

As you are aware, it is my constant practice to determine as far as possible the chemical and motor capacity of the stomach in all patients who are suffering from digestive troubles, but where there has been recent hæmatemesis it is obviously undesirable to pass a stomach tube, and, therefore, in these cases such examinations often have to be omitted, and we have to do without precise information upon these points. But from time to time we have been able to make these examinations and we have learnt that while an excessive amount of hydrochloric acid is often present, in other cases it is normal or even deficient, and the quantity of pepsine is usually adequate. I have abandoned as untrustworthy the various chemical means of determining the motor capacity of the stomach, and I am in the habit of regarding a stomach as normal if after fasting it contains no traces of food, and after distension with air or carbonic acid gas it occupies normal limits and lies in its natural position. But for the reasons already given I have often had to forego attempting to get this information, and I can only state that as a rule the motor capacity is normal. Pyloric obstruction may occur in consequence of the healing or partial healing of an ulcer, or hour-glass contraction of the stomach may result from the same cause, but fortunately these complications are rare.

PROGNOSIS.

I have notes of 59 cases (56 females, 3 males) of undoubted ulcer of the stomach, of which 3 died. Of the 3 fatal cases 2 were admitted with perforation and the third was a very remarkable case described in the *Deutsche medicinische Wochenschrift*, 1891, No. 42, where at the *post-mortem* examination the ulcer was found to be 4 inches long and to have freely exposed the pancreas. This is the only case of ulcer of the stomach which has died while undergoing treatment for the disease under my care. I therefore feel entitled to claim that the usually stated mortality of 1 in 6 or 1 in 7 is too high and that it should not exceed 1 in 20 under proper treatment. The prognosis must undoubtedly be guarded in the presence of grave accidents, and when perforation occurs is almost hopeless in spite of occasional surgical successes, but ordinary symptoms with moderate hæmatemesis are consistent with a reasonably hopeful view and we may look for recovery in all such cases.

DIAGNOSIS.

The low mortality which my series of cases shows is all the more striking because I have excluded from my series many favourable cases which would be generally regarded as ulcer, and a certain proportion of which probably were ulcer but were indistinguishable from those cases of anæmic gastralgia which so closely resemble ulcer of the stomach. Anæmic gastralgia is a disease which occurs in anæmic young women at about the same period of life as ulcer of the stomach. It is characterised by sharp pain occurring immediately after food, which is frequently followed by vomiting with consequent relief to the pain. I have not been able to observe any such want of relation between the taking of food and the occurrence of pain and vomiting as is stated by some authorities to afford means for differentiation. Undoubtedly the occurrence of hæmatemesis does enable us to distinguish between the two, but I should not like to say that all cases of gastric ulcer necessarily vomit blood at some time or other, and at any rate many go for a long time without the occurrence of this symptom, so that if we rely upon this point alone we may often be left for weeks or months without being able to make a decision, and in hospital practice this too often means that the point is never settled. I had some hope that the examination of the chemical functions of the stomach would assist us, as it was found that in many of these cases of anæmic gastralgia the amount of hydrochloric acid was decidedly deficient, but no absolute rule can be based upon this, although the inference from the deficiency is against the presence of ulcer.

I am therefore obliged to recognise—and I wish to impress this upon you—that there are cases of ulcer of the stomach which it may be impossible to differentiate from anæmic gastralgia at a particular period in their course. The diagnosis in the absence of decisive symptoms must be uncertain, but as I am concerned to prove the value of a particular line of treatment I feel bound to exclude from my list all but those in which the occurrence of hæmatemesis has removed all reasonable doubt. In practice no great harm results from our inability to distinguish between these cases, for where hæmatemesis has not occurred you may be perfectly safe in treat-

ing anæmic gastralgia and gastric ulcer in precisely the same way.

TREATMENT.

It is a rule which I would commend to your attention that in the management of stomach disorders obstinate vomiting should be treated by absolute rest in bed and the administration of the simplest food in small quantities at regular intervals. I generally prescribe 1 ounce of milk and lime water every hour with the following mixture:

Sulphate of magnesium	40 grains
Sulphate of iron...	2 ,,
Diluted sulphuric acid	15 minims
Peppermint water to	1 ounce

three times a day. The milk and lime water, if borne without pain and vomiting, as is almost invariably the case, is increased every day or every second day up to 4 ounces every hour, and afterwards the diet is gradually increased by the addition of bread and milk, minced chicken, and minced mutton at intervals, so that about twenty-one days after admission the patient is usually able to eat the ordinary house diet of the hospital. After this has been taken for two or three days the patient is allowed to get up, and at the end of a month is sent to a convalescent home. When the anæmia is marked the mixture may be supplemented by pil. ferri, 5 gr. or more three times a day. Should the patient not be able to tolerate so much milk and lime water in the first instance, half an ounce may be given, or if there be only pain without vomiting, a mixture of bismuth and soda may be substituted for that of iron and magnesia.

In those cases which have recently suffered from hæmatemesis it is desirable to give nothing by the mouth until forty eight hours have elapsed after the vomiting of blood has stopped, and during that time I feed them by the following nutrient enema given every four hours: one egg beaten up with one teaspoonful of brandy, and made up to 4 ozs. with milk. Should there be any irritability of the rectum, twenty to thirty drops of laudanum may be added. While the hæmatemesis persists, I place an icebag upon the epigastrium, although I am by no means certain that it does any good; and I allow the patient to suck small pieces of ice if she wishes. If necessary, to relieve pain or to keep the patient quiet, I order a hypodermic injection of ¼ to ½ gr. of morphine.

It is of great importance to see that the patient is able to eat ordinary food with comfort before she leaves the hospital, and I always try to impress upon each one the importance of continuing to do this after she returns home. Many of these patients have been dieting themselves for so long a time, and have become convinced, partly as the result of injudicious advice, partly from their own experience, that they cannot eat the same food as other people, that they have suffered in health from an insufficient nutrition, and have entered a vicious circle in which the anæmia is kept up by want of food, so that the predisposing cause persists, and recovery is impossible until the circle is broken; it is therefore of the utmost importance to prove to your patient that she can take ordinary food. It is also very desirable that she should continue to take iron for some time after leaving the hospital; and I may perhaps be allowed to mention that the dose of sulphate of magnesium in the mixture should be adjusted to the needs of each case, and may be very properly increased or diminished at different times as required.

These simple rules are all that I wish you to remember in connection with the treatment of ulcer of the stomach, and I hope I have proved that they are as safe as they are successful.

A BRONZE statue of the late Dr. William Pepper, was recently unveiled at Philadelphia, and at the same time the Free Museum of Science and Art was formally opened, and transferred to the University of Pennsylvania. The building and the site cost over 600,000 dollars, towards which Mrs. Pepper gave 50,000 dollars.

EFFORTS are now being made to develop some of the more favoured parts of Jamaica as resorts for invalids. One of the most recent is the opening up of Malvern, in the Santa Cruz mountains, where a hotel has been opened, and where cottages can be rented. The temperature is said to be very equable, the extremes being 64° and 75°, and the climate generally well adapted for cases of catarrh and bronchitis.

REMARKS

ON THE

RESULTS WHICH HAVE BEEN OBTAINED BY THE ANTITYPHOID INOCULATIONS

AND ON

THE METHODS WHICH HAVE BEEN EMPLOYED IN THE PREPARATION OF THE VACCINE.

BY

A. E. WRIGHT, M.D., Professor of Pathology, and MAJOR W. B. LEISHMAN, M.B., R.A.M.C., Assistant Professor of Pathology, Army Medical School, Netley.

BEFORE proceeding to summarise the more important results which have been obtained up to date by the application of the antityphoid inoculations, which were inaugurated at Netley in July, 1896[1] and which were described by one of us in association with Major D. Semple, R.A.M.C., in January, 1897, it will be well to explain in a few words the conditions under which the inoculations, whose results are reported below, were undertaken.

CONDITIONS UNDER WHICH THE INOCULATIONS WERE PERFORMED.

The inoculations in question, with the exception of the inoculations at Poona, which were undertaken by Colonel W. J. Fawcett, R.A.M.C., were done by one of us while on service in India with the Indian Plague Commission in the end of the year 1898, and in the beginning of the year 1899. They were done among the British troops in a series of military stations which lay along the route which was followed by the Commission during its tour of inquiry. Owing to the fact that very little time was available before starting from England, no sufficient supply of antityphoid vaccine could be laid in before departure. It was therefore necessary to manufacture vaccine *en route* during the intervals which occurred in the course of the sittings of the Plague Commission in Calcutta and Agra respectively. In these places the resources of local laboratories, presided over in the one case by Dr. Nield Cook and, in the other case, by Mr. Hankin, were in the most generous manner placed at disposal for the purpose of making the vaccine. The vaccine was standardised on guinea-pigs, which were carried about from place to place for the purpose of keeping them continuously under observation. Inasmuch as the bottles of vaccine had to be opened repeatedly for the purpose of drawing off the material, and inasmuch as it was not possible to carry about an incubator to verify the continued sterility of the vaccine, this last was resterilised at 60° C. previous to undertaking each new series of inoculations.

These particulars will suffice to show that the inoculations were undertaken under conditions which were very far from ideal. In particular there is reason to suppose that the results obtained (this applies notably to the results of the inoculations done in Meerut and Lucknow, which came last in series) may have been unfavourably influenced by a weakening of the vaccine brought about by repeated resterilisation.

CHARACTER OF THE VACCINE EMPLOYED.

The vaccine material which was brought out from England consisted of lysolised (1 per cent. lysol) four-week-old cultures of a virulent typhoid bacillus. These cultures had been prepared about twelve months previously. They had been sterilised by an exposure to a temperature of 60° C. The quantity of culture which was employed for each inoculation varied between 0.5 and 0 75 c.cm. This last was the minimum quantity which was fatal to 100 grams of guinea-pig. This vaccine was employed in inoculations done in Bangalore and Agra.

The additional vaccine material, which was either prepared at Calcutta and Agra, or which was afterwards sent out from Netley, consisted of virulent typhoid cultures which had been grown for twenty-four hours on nutrient agar at a temperature of 37° C. These cultures also were sterilised for the most part at 60° C. In some cases, however, a higher sterilising temperature was employed. The quantity of this agar vaccine which was inoculated varied between 0.3 and 0 5 c.cm., this last quantity corresponding approximately to the quan-

tity of culture which grew on one square centimetre of agar surface. Measured by its effects on guinea-pigs, this quantum was considerably less toxic than the quantum of broth culture which was spoken of above.

Both varieties of vaccine gave, in the doses in which they were employed, fairly severe reactions on man. Unfortunately, it was not in any case possible to undertake two successive inoculations.

STATISTICS.

The statistical material which is presented below has been compiled from information furnished by officers of the Royal Army Medical Corps actually in charge of troops in the various stations. This information has been supplemented by reports received from the commanding officers of the various inoculated regiments.

We desire here to express our acknowledgments of the

Corps in which Inoculations were done.	Station where Troops were Quartered.	Period of Observation.	Numbers under Observation.		Cases of Enteric Fever.				Deaths from Enteric Fever.				Information Received from	Remarks.
					Inoculated.		Uninoculated.		Inoculated.		Uninoculated.			
			Inoculated.	Uninoculated.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.		
West Riding Regiment	Bangalore	December, 1898, to Sept. 22nd, 1899	223	753	1	0.5	8	1.0	0	0	2	0.25	Lieutenant R. W. Clements, R.A.M.C.	Case in inoculated reported to have been so mild as to render diagnosis somewhat difficult.
Bangalore garrison (includes above)	"	December, 1898, to Sept. 22nd, 1899	276	1859	2	0.7	49	2.6	0	0	—	—	Major A. Peterkin, R.A.M.C.	The additional case in inoculated reported to have been extremely mild.
York and Lancaster Regiment	Agra	January, 1899, to May 15th, 1899.	172	Say, 900	*1*	—	20	2.2	0	0	4	0.4	Lieutenant-Colonel Routh, R.A.M.C.	Case in inoculated occurred eight days after inoculation. Number of uninoculated not communicated.
D Battery Royal Horse Artillery	Umballa	January to October, 1899.	105	63	1	1.0	0	0	1	1	0	0	Major Blakeley Russell, R.A.M.C. Lieutenant H. S. Wilson, R.H.A.	Battery had recently landed in India and had lost 1 case by enteric fever. The 63 uninoculated were for the most part men who had been long in India.
2nd Batt. Gordon Highlanders	Umballa and various Hill Stations	January, 1899, to August 13th, 1899	397	614	1	0.2	17	2.8	0	0	—	—	The late Colonel Dick-Cunyngham, V.C. Major Blakeley Russell, R.A.M.C. Captain H. P. Johnson, R.A.M.C. (Solon).	The case assigned to inoculated was in a man whose name is not to be found on the rolls of inoculated. He is said to have had a very mild attack of typhoid.
North Staffordshire Regiment	Umballa and Sabathu	January to July, 1899	317	Say, 700	5	1.6	14	2.0	1	—	1	0.1	Captain G. Stanley Walker, R.A.M.C. (Sabathu).	Numbers of uninoculated not communicated. The inoculated man is said to have succumbed to uræmia.
2nd Queen's Regiment	Rawal Pindi	January to September, 1899	203	756	1	0.5	10	1.3	0	0	1	0.1	Major J. Maher, R.A.M.C.	There was also a case of enteric fever in a man inoculated in 1897
Somerset Regiment	Rawal Pindi and Upper Topa	January to September, 1899	233	727	3	2.1	13	2.3	0	0	2	0.5	Major Maher, R.A.M.C. (Rawal Pindi).	66 men who had previous entries for enteric fever have been deducted from the number of uninoculated.
					2		4		0	0	2		Major Zimmermann, R.A.M.C. (Upper Topa).	
3rd Batt. Rifle Brigade	Rawal Pindi	January to September, 1899	205	693	0	0.0	15	2.2	0	0	2	0.3	Major Maher, R.A.M.C.	42 men who had previous entries for enteric fever have here been deducted from numbers of uninoculated.
11th Hussars	Meerut and Chakrata	January to September, 1899	234	357	2	1.3	10	2.8	2	1.3	4	1.1	Major S. J. Rennie, R.A.M.C. (Meerut).	—
					1		0		1		0		Colonel Dempsey R.A.M.C. (Chakrata).	
South Wales Borderers	Meerut and Chakrata	January to September, 1899	41	1069	0	—	1	1.9	0	—	0	0.3	Major S. J. Rennie, R.A.M.C. (Meerut), Colonel Dempsey (Chakrata).	—
					3		19		0	—	3			
3rd Hussars	Lucknow	February to November, 1899	303	281	4+5	1.3	16	5.7	—	—	—	—	Major S. Macdonald, R.A.M.C. (Lucknow).	Four men who had previously suffered from enteric fever have been deducted from the number of uninoculated. The cases among the inoculated include 5 cases (2 fatal) which were admitted into hospital within nineteen days of inoculation.
Scottish Rifles	Lucknow and Ranikhet	February to November, 1899	177	591	2	1.1	10	2.3	—	—	—	—	Major S. Macdonald, R.A.M.C.	30 men who had previously suffered from enteric fever are excluded from numbers of uninoculated.
			31	71	0		4		—	—	—	—	Lieut.-Col. P. Ellis, R.A.M.C. (Ranikhet).	
Royal Scots	Poona	January to November, 1899	172	Say, 850	0	0.0	11	1.2	—	—	2	0.2	Lieutenant-Colonel Blennerhassett, R.A.M.C. Lieutenant H. Herrick, R.A.M.C.	Number of inoculated in regiment has not been communicated.
Totals* ...	—	—	2,835	8,460	27	0.95	213	2.5	5	0.2	23	0.34	—	—

* The totals for the number of men under observation are arrived at by excluding the first and the penultimate rows of figures. This first row of figures is excluded, inasmuch as it is included in the figures of the second row; the penultimate one because it is included in the previous row. The totals for the number of cases are arrived at by excluding from consideration the figures printed in italics. These represent cases which were incubating typhoid fever at the time of inoculation. The percentages of deaths are calculated not upon the whole number of inoculated and uninoculated, but on the numbers of these regarding whom the necessary information as to the issue of the attacks is available.

kindly assistance which was afforded, not only in carrying out the inoculations, but also in the task of collecting these statistics. This last task has not been free from difficulty owing, among other things, to the fact that the various regiments are, in the hot season, broken up into detachments which are dispersed in the various hill stations.

The whole of the information which has as yet come to hand with regard to the results of the series of inoculations referred to above, is summarised in the table on p. 123.

Taken as a whole, the statistical material given in the table, though it cannot, from the nature of the case, be assumed to be either complete or free from errors, would appear to show conclusively that a certain measure of protection was conferred by the inoculation of the quantities of dead typhoid culture which have been specified. In appraising the amount of that protection from the data which are given, the following facts must not be lost sight of:

1. The inoculated men in the above units were, taken as a whole, in practically every case men who were much more likely to contract typhoid than the uninoculated men; for, in practically every case, the inoculated consisted to a large, and sometimes to a preponderating, extent of young men who had only recently come out to India, while the uninoculated consisted to a very large extent of older and more seasoned, in other words of less susceptible, individuals. It was in every case pointed out in the preliminary lecture, in which the facts regarding the antityphoid inoculation were laid before the men, that the young and susceptible newcomers were more particularly in need of the protection which it was hoped would be afforded by the inoculations. The commanding officers and the company officers, further, in many cases used their influence to get, so far as this was possible, all the young and unseasoned soldiers to volunteer for inoculation.

Read in the light of the above facts, many of the results appear under a much more favourable aspect than that in which they appear on a mere inspection of the figures given in the table above. Thus, for instance, in the case of D Battery, Royal Horse Artillery, a consideration of the facts will show that the results of inoculation are not fairly gauged by the fact that the sole case of typhoid which occurred in the battery was a case which occurred in an inoculated man.[2] The following were the circumstances under which the inoculations were done. The battery in question had only arrived from England a few months previous to the date of inoculation. On the previous day the battery had lost its first man from enteric fever. Owing to this and other favouring circumstances more than half of the battery, including most of the men who had come out from home, volunteered for inoculation. Those who did not volunteer for inoculation consisted in large part of seasoned men who had been transferred to this battery after its arrival in India. In view of this it will be manifest that the fact which deserves notice here is not so much the fact that one case of enteric occurred in the inoculated, while no case occurred in the uninoculated it is rather the fact that a battery consisting in large part of men newly arrived from home has, in the eleven months subsequent to the institution of the inoculations, only had one case of enteric.

The same thing holds true of the inoculations done in the 2nd Battalion of the Gordon Highlanders. Here again we have a body of inoculated consisting in predominant part of men who had just come out from home, while we have a body of uninoculated in which there was a large element of seasoned soldiers who had been taken over from the battalion which had just returned to England. The figures given in the table for this regiment, which are already very favourable to inoculation, become much more strikingly so when they are considered in connection with the circumstances which have just been detailed.

2. It must further be borne in mind in connection with the statistics which have been given above that the inoculations were, in certain cases, undertaken in the actual presence of a typhoid epidemic. These were the conditions in the case of the Gordon Highlanders at Umballa, and, more particularly, in the case of the 3rd Hussars in Lucknow. In the case of the Gordon Highlanders, 30 cases of enteric had occurred during the three months which had elapsed between the arrival of the regiment from England and the institution of the inoculations. In the case of the 3rd Hussars, some 10 deaths from enteric fever had occurred in the interval of a few months which had elapsed since their arrival in India. In like manner a few cases of typhoid were occurring in the York and Lancaster Regiment at Agra at the time of inoculation. In conformity with the fact that inoculations were done in these cases in the presence of a typhoid epidemic it was only to be expected that some of the inoculated would prove to have been incubating typhoid at the time of the inoculation. This turned out to be the case in the 3rd Hussars, 5 cases of enteric—occurring among the inoculated men—being admitted to hospital within the first nineteen days after inoculation. In 2 of these cases there was a definite history of the men having been ill previous to inoculation. One similar case occurred among the inoculated in the York and Lancaster Regiment within a few days after inoculation. These cases have been distinguished by italics in the above table, and they have not been reckoned in the general summary of cases contracted subsequent to inoculation.

3. Lastly, it is to be borne in mind that the results given above apply to men as distinguished from officers. In the case of officers no accurate statistical materials are available, as the conditions under which individual officers live differ very considerably. From India, up to the present, among a number of inoculated officers who, counting only the subalterns, must now amount to several hundreds, there have, so far as we have been able to ascertain, been only 5 cases of enteric fever. Those that have come to my knowledge include 2 cases in the subalterns of the South Wales Borderers (of whom 6 were inoculated), and 1 in the subalterns of the Queen's Regiment in Rawal Pindi (of whom 10 were inoculated). A further case occurred in a subaltern at Quetta, and a fifth case occurred in a subaltern of the Royal Army Medical Corps at Kirki. All these are reported to have been very mild cases.[3] In the 2nd Gordon Highlanders, while no cases of enteric occurred among the inoculated officers, who numbered (the list containing the names of the inoculated officers in the regiment has been mislaid) some 10 or 12, 2 cases, both fatal, occurred among uninoculated officers.

Before briefly summarising the effects of antityphoid inoculation, it may be permissible to refer to the fact that our attention has been called from several different quarters to the possibility that the antityphoid inoculation may confer a certain protection against malarial fever. In the case of one particular regiment, we have been furnished by the commanding officer with lists personally prepared by the company officers giving with respect to each inoculated man particulars as to whether he had suffered from "fever and ague" (*a*) before inoculation, and (*b*) after inoculation. These lists, compiled six months after the date of inoculation, show that of 121 men who had previously suffered from "fever and ague," 111 declared themselves to have been quite free since, the remainder declaring themselves to have been practically free. Only 2 men who had not previously suffered from "fever and ague" declared themselves to have suffered slightly since. In view of these statements, the question as to whether any protection against malarial fevers is in reality afforded by an injection of a dead typhoid culture may, in spite of the *a priori* improbability of such being the case, perhaps be deserving of attention.

Before dismissing the question of these results, we may, though we are not certain that it is not premature to do this, turn for a moment from the scientific to the practical aspect of these inoculations. With regard to this last, it will suffice to point out that even on the assumption that no greater amount of protection could be conferred in the future than that which appears to have been conferred in these preliminary inoculations, the result obtained would in the aggregate be a significant one. Taking the figures just as they stand in the summary of the table, assuming, in other words, that there would be a reduction of cases from 2.5 per cent. to 0.9 per cent., and a diminution of mortality from 0 35 per cent. to 0 2 per cent., such as is evidenced above, and calculating on the figures 1800 and 460, which represent in round numbers the average number of cases and deaths from enteric fever in the British army in India as deduced from the figures for the last three years, there would, on the assumption that the whole army, or the susceptible portion of it, were inoculated, be an annual saving of over 1,000 cases of enteric and of nearly 200 lives.

PREPARATION OF VACCINE.

Having thus briefly considered the statistical results of the first large batch of inoculations which have been done among the troops, we may pass to consider certain questions in connection with the technique of preparing and sending out the vaccine.

These questions seem to us to have a very considerable importance, inasmuch as it is manifest that the best results will only be obtained from a system of inoculation, when, on the one hand, the perfect asepticity of the vaccinating material, and when, on the other hand, the accurate standardisation of the vaccine shall have been secured. It will only be when this last desideratum has been secured, and when the results obtained by the inoculation undertaken with different quanta of vaccine shall have been studied, that it will be possible to be sure that the antityphoid inoculation is giving its best results. This said, we may proceed to consider the above-mentioned questions of technique.

Virulence of the Typhoid Organism which is employed in the Preparation of the Antityphoid Vaccine.

The virulence of the micro-organism which is employed in a vaccination process would appear to be of absolutely fundamental importance only in cases where the vaccinating material which is employed consists of a living culture of micro-organisms. We have there, on the one hand, to guard against the introduction into the organism of an over-virulent culture, and we have, on the other hand, to guard against the introduction of a culture whose virulence is so low that it will be unable to cultivate itself in the organism and to produce there that quantum of toxins which will call forth the production of a sufficiency of immunising substances. These considerations do not directly apply in the case of antityphoid inoculation where the vaccinating material consists only of dead bacteria and of the specific poisons which have been elaborated by these bacteria in the course of their cultivation on artificial media. None the less, inasmuch as toxin-producing properties probably do, in the case of the typhoid bacillus, stand in some relation to the virulence of the cultures, we have been careful to employ only virulent cultures in the preparation of our anti-typhoid vaccine. The virulence of our cultures has been kept up by a series of intraperitoneal passages through guinea-pigs.

Medium Employed for Cultivation of the Typhoid Bacillus.

After experimenting with various culture media we have not found any which offers distinct advantages over the ordinary 1 per cent. peptone broth. The most luxuriant cultivations appear to be obtained when the medium which is employed has been accurately neutralised.

Cultivation Flasks.

We have found it convenient for the purpose of cultivation to employ flasks of some $2\frac{1}{2}$ litres capacity of the pattern shown in Fig. 1. These flasks are, as will be seen, furnished with a lateral tube, to which is fitted a piece of perfectly sound vulcanised rubber pressure-tubing. The orifice of this last is blocked with a piece of glass rod, and is fitted with a pinch cock (see figure) in such a manner that the distal end of the tube remains free from fluid.

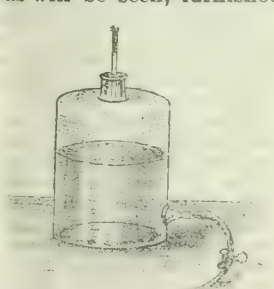


Fig. 1.—Cultivation flask.

The advantages which are associated with the employment of cultivation flasks fitted in this manner are the following:—The flasks can easily and rapidly be inoculated by puncturing through the pressure tubing with the needle of a syringe which has been filled with a pure culture of typhoid. In doing this, as a precaution against the introduction of contaminations, the outside of the tubing is first sterilised by the application of undiluted carbolic acid. After withdrawing the needle the minute puncture hole can readily be sealed up. To do this the carbolic acid is first washed off with alcohol followed by ether, a drop of rubber solution is then pressed out from the flamed orifice of a collapsible tube of rubber solution, such as is supplied by any bicycle agent for mending punctures in pneumatic tyres.[4] Further advantages which are associated with the use of these flasks are (*a*) the possibility of withdrawing samples at any time with a view to controlling the purity of the cultures, and (*b*) the possibility of transferring, without exposure to the air, the contents of the cultivation flasks to the larger jars (Fig. 2) which are employed in the processes of preparation which are described below.

Period during which the Cultures are Incubated.

The flasks, after having been inoculated, are transferred to an incubator, which is kept at blood temperature. The cultivation is continued for from fourteen to twenty one days. After the expiration of that period, there is little if any further proliferation of the bacteria.

Mode of Fitting up the Mixing Jars in which the Cultivations are Sterilised by Heat.

After the purity of each flask has been ascertained by culture, the contents of the cultivation flasks are transferred to the larger jars (Fig. 2). This transference is undertaken first with a view to mixing together the contents of a series of cultivation flasks, so as afterwards to standardise them in bulk; secondly, it is undertaken with a view to eliminating the possibility of the vaccine becoming spontaneously reinoculated with living bacilli after it has been exposed to heat. This possibility would exist if there were to be found on the sides or neck of the flask, when it is transferred to the water bath, any typhoid bacilli which had been rendered by desiccation less sensitive than they would otherwise be to the heat which is there brought to bear on them.

Before describing the process of transferring the typhoid

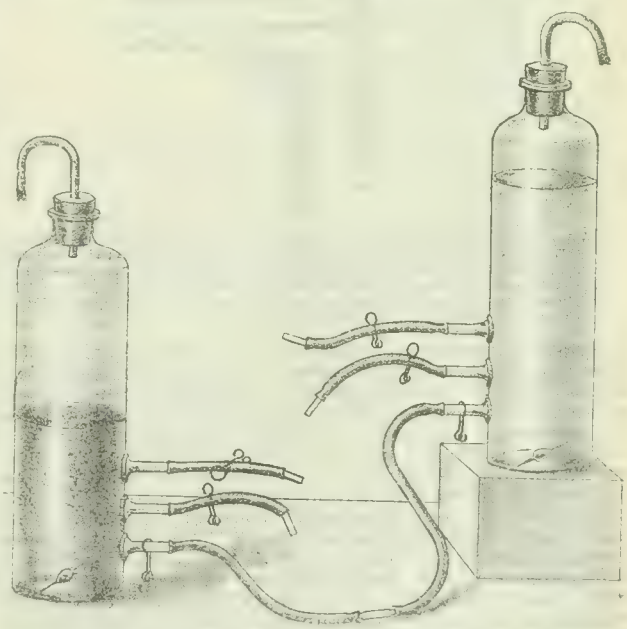


Fig. 2.—Large jars connected together for the purpose of mixing the vaccine. Paraffin thermometers which have sunk are shown at the bottom of each mixing jar.

culture from one flask to another, and the subsequent processes of heating and mixing, it will be necessary first briefly to describe the manner in which the larger "mixing" jars are fitted up.

As will be seen from Fig. 2 the lateral tubes are fitted with vulcanised rubber pressure tubing. The ends of the two lower rubber tubes are fitted with glass nozzles, which are plugged with cotton wool. A clamp is further placed on each tube. Through the lowest of these lateral tubes the contents

of the cultivation flasks are introduced into the mixing jar. The upper tube is appropriated to a paraffin thermometer which is employed for the purpose of notifying the point at which the internal temperature of the typhoid culture has reached 60° C. The principle and the mode of using these thermometers require a word or two of explanation.

Principle and Mode of employing the Paraffin Thermometers.

This will readily be understood from a consideration of Fig. 3 which represents the thermometer in position in the mixing jar. It will be seen that the thermometer consists essentially of a glass bulb or float which is left open at the top. This glass bulb runs out below into a hollow glass stem, which is filled in with paraffin through its lower end. When the thermometer is brought into use the bulb floats on the surface of the fluid, the stem, the paraffin receptacle, acting as a sinker causes the thermometer to stand up in the fluid somewhat like a fisherman's float. When the temperature of the surrounding fluid rises to 60° C. (or to such other point as corresponds to the melting point of the particular paraffin which is employed), the paraffin is pressed upwards against the upper part of the containing bulb by the pressure of the fluid. Owing, however, to the fusiform shape which is given to this bulb (Fig. 3, C), the fluid cannot pass up into the stem until the paraffin actually melts. As soon as this occurs the fluid enters the upper bulb or float and the thermometer sinks to the bottom. These thermometers having been devised, the only difficulty which presented itself was that of so disposing matters as to allow of the thermometer being sterilised *in situ*. This object is effected by sealing up the lower end of the thermometer (Fig. 3, E) so as to prevent the paraffin escaping during the process of sterilisation. The further problem of snapping off the sealed end of the thermometer without opening up the sterilised jar is satisfactorily solved by the following device. When the jar is being fitted up, previous to sterilisation, a noose of fine brass wire is passed in through the rubber tube which is connected with the uppermost lateral tube of the mixing jar. This noose is brought up to the neck of the jar, and the sealed capillary end of the thermometer is engaged in it in such a manner that the noose fits into a constriction which is marked in the diagram (Fig. 3 D). The noose is now drawn gently home until the thermometer becomes fixed, as is shown in the diagram opposite the orifice of the upper lateral tube (Fig. 3, G). It only remains to fasten the free extremity of the wire. This is done by inserting a piece of tightly-fitting glass rod into the end of the tube in such a manner as to engage the wire between the rod and the wall of the tube (Fig. 4). This done, a rubber bung, which is perforated by a glass tube plugged with cotton wool, is inserted into the neck of the jar and is tied in tightly. The jar is now ready for autoclaving.

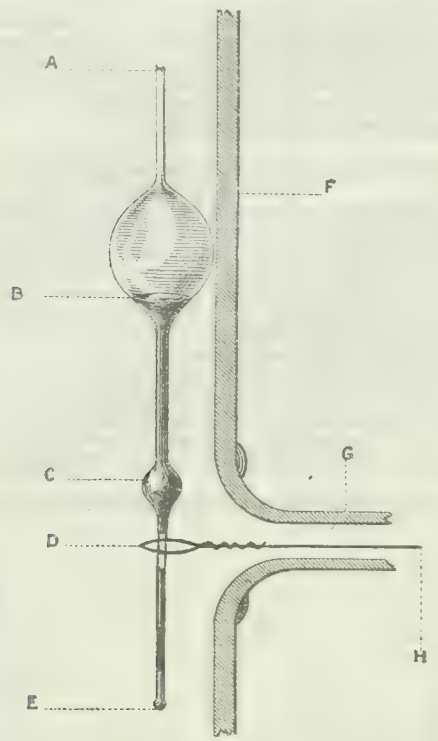


Fig. 3.—Paraffin thermometer in position against inner wall of mixing jar. A, Upper end of thermometer, left open; B, bulb; C, fusiform enlargement; D, constricted portion of tube engaged in wire snare; E, lower sealed end of thermometer; F, wall of mixing jar; G, upper lateral tube of mixing jar; H, distal end of wire snare passing through uppermost of the lateral tubes.

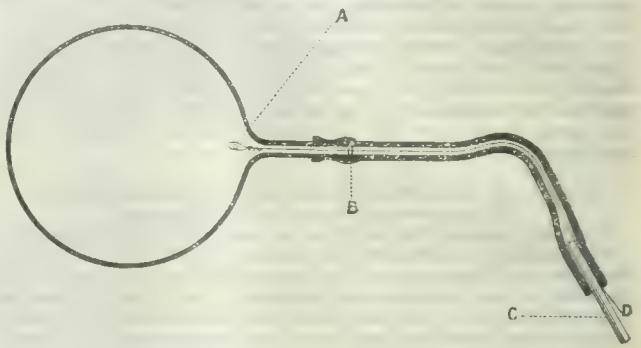


Fig. 4.—Transverse section of mixing jar at the level of the uppermost lateral tube, showing method of fixing the paraffin thermometer. A, Noose of brass wire engaging the constricted part of the stem of the thermometer; B, end of lateral tube; C, glass rod plugging the end of the rubber tube; D, free end of the wire clamped in position by the rod C.

Method of Killing off the Cultures and of Mixing Together the Contents of a Series of Cultivation Flasks.

When the jar has been autoclaved, and when the bung has afterwards been duly luted with sterilised paraffin, the subsequent procedure is as follows: A cultivation flask is taken in hand, the end of the attached rubber tubing is sterilised in the flame, and the glass rod which blocks the orifice is withdrawn in an aseptic manner. At the same time a flame is passed over the outside of the glass nozzle which is fitted into the lowest of the three lateral tubes of the mixing jar, and the contained cotton-wool is aseptically withdrawn. This done, a connection is established between the two tubes, the clamps are withdrawn and the fluid passes out from the cultivation flask into the mixing jar. As soon as a certain amount of fluid has entered the mixing jar, and at any rate before the fluid has reached the level of the uppermost lateral tube, the pressure tubing which is attached to this side tube is gently pulled. This causes the wire noose which is round the capillary end of the paraffin thermometer to snap this off by a guillotine action. The released thermometer then drops into the fluid, ready for use. The glass rod is now removed, the extremity of the brass wire grasped with a forceps, and withdrawn from the tube.[5]

When the contents of a cultivation flask have passed into the mixing jar, the clamp belonging to the mixing jar is replaced upon the rubber tube at a point somewhat nearer to the jar than the glass nozzle which connects the two tubes. The needle of a syringe which has been filled with undiluted carbolic acid is then inserted into the lumen of the tube at a point between the clamp and the glass nozzle which was referred to above. The syringeful of carbolic acid is then driven through the tube into the cultivation flask. This done, the cultivation flask may be disconnected without risk. The next cultivation flask in the series is now taken in hand in the same manner. When the process of filling in the mixing jar has been completed, the side tubes are blocked with pieces of sterilised glass rod. These are luted with rubber solution.

The next proceeding is to transfer the mixing jar or jars to the water bath. This is to be done without delay, and the jars are to be carried in such a manner as to avoid all splash-

ing up of the vaccine on to the sides and neck of the jar. The water bath must be deep enough to allow of the water coming well over the shoulder of the mixing jar. This last is not to be filled within 2 inches of this level. If the jar, when it is introduced into the water bath, is found to be buoyant, it is weighted down by passing a heavy leaden collar round its neck. The jars having been securely placed in position, heat is applied to the water bath, and the condition of the thermometers in the separate jars is noted from time to time. This is best done by lowering a piece of ordinary looking-glass below the surface of the water in the water bath. The heating is continued for 10 to 15 minutes after the paraffin thermometers have sunk.

The next step is to mix the contents of the whole series of mixing jars so as afterwards to obtain for standardisation a representative sample of the whole brew of vaccine. The mixing is effected by connecting up the mixing jars with each other by means of their rubber tubes (Fig. 2). These rubber tubes are of such length as to allow of any one of the jars being freely raised above or lowered below the level of its companion jars. By these means complete mixture of the contents is readily effected. In cases where the mixing jars are so full as to place a difficulty in the way of the satisfactory mixture of their contents, an additional empty sterilised mixing jar is introduced into the circuit. Mixture having been duly effected, samples of the vaccine are withdrawn in the manner described above in connection with the control of the purity of the contents of the cultivation flasks. As before, the sterility of the samples of vaccine is tested by introducing them both into tubes of broth and into tubes of nutrient agar.

After this has been done further samples of the vaccine are drawn off for the purpose of determining the strength of the vaccine. An addition of antiseptic is now made to the vaccine with a view to preserving it against risk of subsequent contamination. We have found that an addition of one-tenth of its bulk of a 5 per cent. solution of lysol or carbolic answers this purpose very well. A simple method of making this addition is to take the required quantity of water and to sterilise it in a Kitasato flask fitted with a length of vulcanised pressure tubing. After sterilisation the appropriate quantity of carbolic acid is introduced by puncturing through the pressure tubing. After solution has been effected the Kitasato flask is connected up with the series of mixing jars which contain the vaccine and the antiseptic is throughly mixed up with the vaccine. We have found that it is inexpedient to add undiluted carbolic acid directly to the vaccine, inasmuch as it causes the bacteria to run together into large masses.

Process of Standardisation.

The problem as to how to obtain an absolutely accurate standardisation of a bacterial vaccine is still unresolved. We propose in another communication to dwell on certain facts bearing on this question, which we have elicited in the course of a very considerable number of experiments made with a view to resolving this problem. For the present it will suffice to detail the process of standardisation as it is actually carried out by us.

In each case we estimate the strength of the vaccine in two different ways. We determine, by a process which is described below, the degree of opacity of each sample of vaccine. We take it that in the opacity we have a criterion of the number of undissolved bacteria which are contained in the unit of volume. We in each case superadd to the determination of the opacity of the vaccine a direct test of the toxicity of the dead culture. This last test is carried out by the subcutaneous inoculation into guinea-pigs of measured quantities of the sterilised vaccine.

Method of Determining the Opacity of a Sample of Antityphoid Vaccine.

After casting about in many directions for a method of determining the opacity, which could be carried out without the assistance of any complicated apparatus, we have devised the following method, which is of very easy application, and which seems to us to give very accurate results.

Description of the Method.

We take, in the first place, a definite test object. We have selected as suitable for this purpose a system of alternate dark and bright lines, such as can easily be constituted by gumming two strips of black paper 0.5 cm. wide, at distances 0.5 cm. apart, transversely across an ordinary microscopic slide (Fig. 5, F).

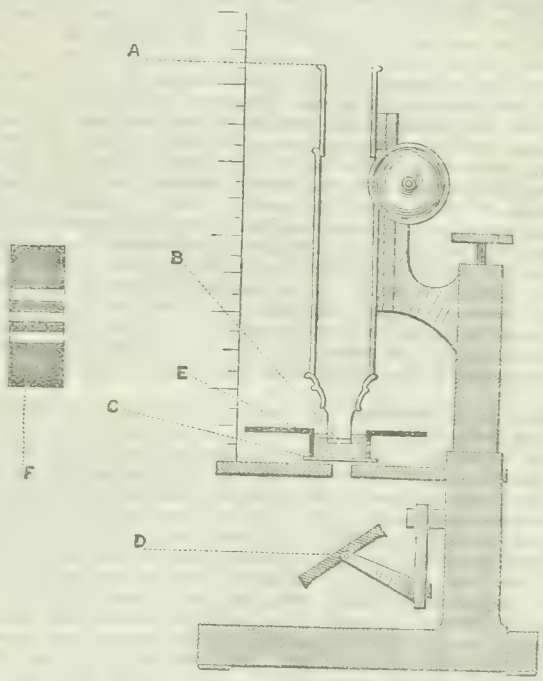


Fig. 5.—Diagram of a microscope arranged for the estimation of the opacity of the vaccine. A, Top of the body of the microscope, and point from which readings may be taken on the scale; B, plane glass cemented on the end of an old objective; C, plane glass at bottom of vaccine receptacle; D, plane mirror by which the image of the test object is thrown up through the vaccine to the eye at A; E, "live box," serving as receptacle for vaccine; F, test object.

Having thus obtained our test object we have to determine what is the minimum thickness of the stratum of vaccine which will, when interposed between two plane glass surfaces, suffice to effect the obliteration of our pattern of lines. With a view to making this determination we set up our test object in the window, at a distance of 1.5 metre from a microscope which has been dismantled of all its lenses. By means of the plane mirror we then reflect up the pattern of lines upon the transparent lower surface of a receptacle containing the vaccine, which is placed on the stage of the microscope. We have improvised a suitable receptacle out of an inverted "live box" (Fig. 5, C). Any similar receptacle which has opaque walls and a floor of plane glass would serve equally well.

We have next to make provision for lowering into the pool of vaccine a plane glass surface in such a manner as to displace a stratum of fluid of such thickness as to allow of the pattern of lines just becoming visible through the layer of vaccine. Further, we have to make provision for measuring the exact thickness of this interposed layer of vaccine.

These objects can be readily achieved by removing the lenses of any old objective and by cementing on in the place of the front lens a disc of glass whose surfaces have been ground plane (Fig. 5, B). We screw this transformed objective on to our microscope, and having, as said before, removed all the other optical parts, we rack down our plane glass objective into the pool of vaccine, until we find, on looking down the empty tube of the microscope, the point at which the pattern of lines is only just obscured by the interposed layer of fluid. We now set up a centimetre rule on the stage of the microscope, and take a reading of the height at which the microscope tube stands. This gives us a height corresponding to the upper surface of the stratum of interposed fluid.

We now have further to determine the height which corresponds to the lower surface of the interposed layer. We do this by racking down the body of the microscope until the lower

surface of our plane glass objective comes into contact with the plane glass surface which constitutes the floor of the vaccine receptacle. We now take a second reading of the height of the microscope tube, and by deducting this height from the height as determined at the first reading, we arrive at the thickness of the interposed layer of vaccine which just suffices to blurr our test object. We may note in passing that by this method we take cognisance, not of the greater or less amount of light which is transmitted, but only of the degree to which the transmitted rays are deflected by the interposition of the bacterial particles. Measured in this manner, the opacity of the antityphoid vaccine which we have prepared works out on an average as 1 cm. In other words, a layer of vaccine, 1 cm. deep, will obscure the detail of the test object. The highest value which we have obtained for this opacity is 0 65 cm. and the lowest has been 1.3 cm. It must be noted that the opacity of the vaccine is influenced by several different circumstances. It is obviously influenced in the first place by the solution of bacteria which gradually takes place as the vaccine is kept. It is further influenced in a very marked manner by the addition of the antiseptic. With a view to diminishing so far as possible the operation of these disturbing causes, we make it a rule to determine the opacity of the vaccine immediately after it has cooled down.

Method of Determining the Toxicity of the Typhoid Vaccine.

It has been explained above that, in addition to determining the opacity of each brew of vaccine, we resort also in each case to a direct determination of the toxicity of the vaccine by the subcutaneous inoculation of measured volumes of the vaccine into guinea-pigs. We have generally employed for this purpose the completed carbolised vaccine, as we find that the small amount of antiseptic which is added does not sensibly affect the result obtained. Inasmuch as the susceptibility of guinea pigs is, like that of men, subject to considerable individual variations, we make it a practice to test the effect of each separate quantum of vaccine on a series which consists of at least two guinea-pigs. We generally begin with 8 guinea-pigs, giving doses of 0.5, 0 75, 1 c.cm. and 1.5 c.cm. We prefer, when possible, to employ for our toxicity-estimations guinea-pigs weighing 250 to 300 grams. When death occurs it may take place as early as twelve hours after the incorporation of the vaccine. As a rule, however, it does not take place till the second or third day. The *post-mortem* signs usually found are the following: œdematous infiltration of the subcutaneous tissue round the site of inoculation, marked congestion of the suprarenals, slight enlargement and congestion of the spleen, distinct enlargement and occasional congestion of Peyer's patches. Fluid is occasionally found in the peritoneum, pleura, and pericardium, and hæmorrhagic patches on the surface of the lungs are frequently present. The intestines are also frequently full of watery discharges. Generally speaking, the toxicity of a brew of vaccine stands in close relation with its strength as determined by the estimation of opacity. The maximum toxicity which we have found our vaccine to possess is represented by a minimum lethal dose of 0.5 c.cm. per 100 grams of guinea-pig's body weight. The minimum toxicity of the vaccine which we have sent out is represented by a minimal lethal dose of 2 c.cm. per 100 grams of body weight. Where the toxicity of the vaccine is less than this, the method of determining it by inoculations on guinea pigs would appear to be inadmissible, inasmuch as we find the 1 per cent. peptone broth (Witte's peptone), which we employ as a nutrient medium in the preparation of our antityphoid vaccine, is lethal to guinea-pigs in doses which little if at all exceed 3 c.cm. per 100 grams.

We propose, as we have said above, to reserve for a future communication the discussion of the uncertainties which are thus imported into the method of standardisation.

Determination of the Dose to be Employed on Man.

In fixing the dose of each separate brew of antityphoid vaccine we have been guided in each case by a consideration of the results of each of the above methods of standardisation, Where, for instance, the opacity of the vaccine was great, and where the toxicity, as determined on guinea-pigs, was represented by a minimal lethal dose of 0.5 c.cm. per 100 grams of body weight, we fixed the dose of vaccine at 0.5 c.cm. Where, on the other hand, the toxicity and the opacity test alike indicated that the vaccine was weaker, we have fixed the dose as high as 1.5 c.cm. We do not think it is necessary ever to employ larger injections than these, for, where we are dealing with a vaccine which is unduly poor in bacterial elements, it is a matter of no difficulty, given that time is available, to allow the bacteria to sink down to the bottom of the mixing jars and to decant off the clear supernatant fluid through the uppermost of the lateral tubes, in such a manner as to concentrate the vaccine to any desired degree.

Finally, we have to describe the methods of bottling the vaccine and of putting it up in sealed capsules.

Bottling the Vaccine.

In order to reduce to a minimum the possibility of any contamination occurring during this operation we have, after trying various other methods, devised the following method by which the vaccine is run from the large jars directly into small bottles without being at any time exposed to the air. We have satisfied ourselves that the bottles filled by the process now to be described retain their contents in a perfectly sterile condition for an indefinite period.

In the first place a number of small bottles, of a shape and capacity best suited to the requirements of the case, are plugged with cotton wool and autoclaved. Those which we have found most convenient have a capacity of 25 c.cm., but, for special purposes we also use bottles of other sizes, of not less than 10 c.cm. and not more than 75 c.cm. capacity.

When the autoclaved bottles are cool the cotton-wool plugs are replaced under antiseptic precautions by strong rubber caps, which have been soaked in a saturated solution of perchloride of mercury, and which have been specially made to fit each size of bottle. The use of these rubber caps, in preference to any form of cork or stopper, presents many advantages, chief among them being the fact that they admit of all fluids being introduced into or withdrawn from the bottle by means of a syringe and hypodermic needle—an obvious gain when we consider the danger of contamination which occurs every time a bottle is corked or uncorked.

A sufficient number of bottles having been prepared in this manner, one of the mixing jars is now taken in hand. If the jar be connected in series with others, we must first disconnect it. This we do—as described before—by clamping all the rubber tubes in connection with it, then withdrawing the glass joints aseptically and replacing them by solid rods. In the case of the jar which is to be bottled off, the lowest tube of all is connected by means of a glass nozzle with a further length of sterilised rubber tubing fitted with a hypodermic needle. To the plugged air tube which passes through the top of the jar is now attached an ordinary hand bellows, such as belongs to any spray-producing apparatus. This is done with a view to accelerating by air pressure the flow of the vaccine as it passes out through the small bore of the hypodermic needle. In order to prevent the paraffin with which the rubber bung is luted from yielding to air pressure when this comes to be applied, it is well to coat over every part of the bung with a layer of collodion, which should be allowed to set before pressure is applied. The hypodermic needle is now withdrawn from the sterile test tube or antiseptic solution in which it has been resting, and we proceed to fill in the bottles. The first operation is to get up a slight amount of air pressure in the interior of the jar by working the bellows. This done the bottles are dipped in a strong solution of carbolic acid or lysol. A vent is now provided for the air, which will be displaced by the vaccine by piercing the cap of each bottle as it is dealt with by a very fine hypodermic needle, which has just been removed by means of a forceps from a vessel of oil at a temperature exceeding 100° C. (Fig 6, p. 129). The clamp on the rubber tubing which leads off from the mixing jar is now taken off, and the pressure of the fingers is substituted for it. The flow of the vaccine is now under perfect control, the hypodermic needle is introduced through the cap into the bottle, and the vaccine is then allowed to flow in (Fig. 6). In this manner any number of bottles of vaccine can be quickly filled, without the fluid ever coming in contact with the external air. The contents of the mixing jar are shaken up from time to time during the course of the operation.

When the bottles have been filled, it remains to repair

the microscopic punctures in the rubber caps and to coat them with a protecting envelope of paraffin. For this purpose we again employ the solution of rubber which is sold for the purpose of repairing bicycle tyres. Before applying it, the remains of the antiseptic solution are first cleaned off by absolute alcohol, and then the rubber is freed from all traces of grease by means of ether. When the rubber solution has hardened, each bottle is further protected by coating the whole cap with paraffin, which has been previously raised to a temperature of 160° C. A paraffin with a high melting point is selected if the vaccine is to be sent to a tropical climate. In dipping the bottles into the melted paraffin it is well to immerse the whole cap, so that the paraffin may fill up the interspace between the base of the cap and the neck of the bottle.

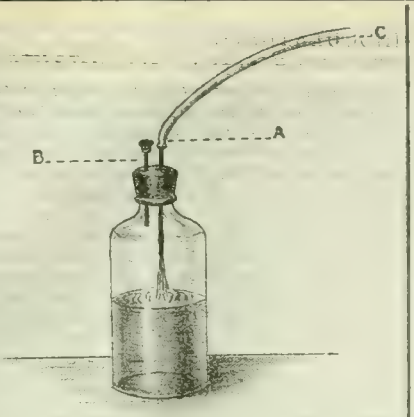


Fig. 6.—Method of filling small bottle from the mixing jar. A, Hypodermic needle connected with the tube C leading from the mixing jar; B, second hypodermic needle forming air valve.

The bottles are now labelled, each label giving the number of the vaccine, its date, and that on which its sterility was tested, the nature and amount of the antiseptic added, and the dose for an adult in cubic centimetres and minims.

To withdraw the vaccine from one of the bottles for inoculation it is only necessary to sterilise the cap in hot oil, or, better, in a hot antiseptic solution, and insert a sterile syringe—preferably graduated in tenths of a centimetre, and of a capacity of 5 c.cm. through the rubber cap. After the first puncture the needle is withdrawn and then reinserted and the syringe filled. The first perforation is made for the purpose of acting as an air valve to permit the entrance of air to replace the fluid withdrawn.

Should the entire contents of a bottle not be required at one time for the purpose of inoculating a series of persons, the cap may be again sterilised and the punctures sealed with rubber solution and paraffin as before.

With a view to providing for cases where isolated inoculations are undertaken, the vaccine is filled into glass capsules, each containing a single dose. These capsules are very simply made by drawing out pieces of glass tubing in the flame. The tips of these are broken off aseptically. They are then filled from a syringe with a measured dose of vaccine, and are sealed up again in the flame. The contents are readily drawn off, after breaking off the tip with antiseptic precautions, by inverting the capsule over the end of the needle of a sterilised hypodermic syringe.

Instructions describing the method of drawing off the vaccine, the method of performing the injections, and detailing the clinical symptoms which may be expected to ensue, are sent out with the vaccine.

NOTES AND REFERENCE.

[1] *Lancet*, September 19th, 1896. [2] The case in question was a somewhat anomalous one. It was the case of a man who, while in hospital for an injury to the foot, suddenly developed a high temperature and died within twenty-four hours. The *post mortem* examination revealed ulceration of the intestine, which was diagnosed as typhoid ulceration. [3] In connection with the question of the results of the inoculations done on officers, reference may be made to a batch of twenty-two officers inoculated by Major Firth, R.A.M.C., on the troopship *Dilwara*, in October, 1897. It appears from inquiries which were instituted by Major Firth, which were supplemented by some further inquiries made by one of us, that none of these officers have suffered from enteric, whereas two uninoculated officers who came out in the same troopship have succumbed to that disease. [4] We have invariably found this rubber solution to be perfectly sterile. [5] If this precaution is neglected the contents of the flask may be found to drain away at this joint by capillary attraction.

MAJOR-GENERAL LEONARD WOOD, who, as will be remembered, began his medical military career in the United States army, has now been gazetted Major-General of Volunteers, and appointed Governor of Cuba.

AN ADDRESS

ON THE

INSANE AND THEIR TREATMENT.

Delivered before the Staffordshire Branch of the British Medical Association.

BY J. B. SPENCE, M.D.,

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THE insane and their treatment have from the earliest times excited the sympathy and interest of all who felt for the afflicted and sorrowing of the human race, and many efforts are chronicled as having been made to alleviate the sufferings of those who in the distant past were supposed to be either possessed by evil spirits, or who were said by an old writer to be affected by

a disease of the soul resulting from a special habit of body, producing in some simple ignorance, and in others madness, of which latter there are two kinds, namely, that arising from human disease, and the other from an inspired deviation from established custom.

Whatever may have been the causes which produced aberration of intellect in prehistoric days there is little doubt that two great factors with which we are confronted in this nineteenth century—drink and heredity—operated, though probably not in so marked a manner as among ourselves. Intoxication was not unknown to the ancient Egyptians, and without doubt exerted, in conjunction with other vices, its baneful influence in the development of various forms of mental disorder; and heredity, while perhaps not so widespread in its influence as with us, claimed its due share in the causation of brain troubles. Ancient Egyptian papyri describe the existence of a condition similar to our senile decay, while the treatment of madness, or sadness as it was sometimes called, by the employment of music appears to have been recognised centuries before the time

when the evil spirit from God was upon Saul, that David took a harp and played with his hand, so Saul was refreshed and was well, and the evil spirit departed from him.

Indeed, as early as the days of Moses the Children of Israel, in the event of any departure from the due observance of the commandments and statutes which were laid down for their guidance, were admonished, that "the Lord shall smite thee with madness," to say nothing of the long category of other troubles which the 28th chapter of Deuteronomy appears to delight in holding over the heads of possible delinquents. Doubts have been expressed as to whether the madness which David was said to have feigned was not really an attack of epileptic mania, which Adam Clarke, the celebrated commentator, says was sent by God to save him from Achish, as one whose defection from his master and union with the Philistines was of no serious import. That the illness which separated the great King Nebuchadnezzar from the company of his fellows for so long a period seems to have been one which not only affected his physical but also his mental state is generally admitted; and it is remarkable among other things for the fact that complete return to a healthy condition appears to have taken place after an illness of such a long duration, that nowadays one would give a more than doubtful prognosis as to the probability of complete recovery were one consulted under circumstances of a like nature.

Among the Greeks Ulysses is said to have feigned insanity when compelled to join the army against Troy. Bellerophon gave a name to melancholia—morbus bellerophonteus. Ajax, afflicted by madness at the instigation of Minerva, sword in hand attacks oxen in the dead hour of the night, and exhausts his maniacal passion upon them in mistake for men; and Hercules, who is said to have suffered from epileptic insanity, appears to have indulged in conduct which would in more modern days, in his own interest and that of the general public, have insured his speedy transference to some such establishment as that which is so conspicuous an object in the landscape as one enters Stafford by railway from the south.

Hippocrates, writing five centuries before Christ, says:

I see men become mad or demented from no manifest cause, and at the same time doing many things out of place..... Who first referred these diseases to the gods appear to have been just such persons as the conjurors, purificators, mountebanks and charlatans now

are. Such persons, using the Divinity as a pretext and screen for their own inability to afford any assistance, have given out that the disease is sacred, and have instituted a mode of treatment which is safe for themselves—namely, by applying purifications and incantations, and enforcing abstinence from baths and many articles of food which are unwholesome to men in disease

Great was the man who at so early a period could write:

From nothing else but the brain come joy, despondency, and lamentation, and by the same organ we become mad and delirious.

Plutarch's knowledge of insanity would appear to have been of a very intimate nature, as his descriptions are lifelike in their word-painting. Caligula, the Roman emperor, who from his youth was subject to epilepsy, appears to have owed the condition of mind which resulted in the commission of such horrible crimes and excesses to the influence of that terrible disorder, which in his case is said to have been hereditary.

As to the treatment to which the ancients resorted little is really known. Nebuchadnezzar appears to have been so impossible that he was driven out and compelled to herd in the fields with the lower animals. Mechanical restraint was in all probability employed in controlling such furious homicidal impulses as have been attributed to Hercules. Plato directs that

if anyone is insane let him not be seen openly in the city, but let the relations of such persons watch over him at home in the best manner they know of, and if they be negligent in doing this let them pay a fine.

The practice of enchantments, the use of hellebore to purge the patient of his melancholy humour; compulsory abstention from eating and drinking in order that the subsequent gratification of the senses should be all the more delightful to the patient; phlebotomy in company with a liberal diet; baths and the application of stripes, blows, and chains were some of the means employed to relieve the symptoms of one suffering from insanity. Celsus recommended that the patient should be startled suddenly so as to greatly terrify him, and a starvation diet with an emetic and smart purgative were remedies in his practice, while among the Romans the insane, or their friends for them, specially worshipped the Household Gods, sons it was believed of the Goddess of Madness.

Sufficient, however, has now been said to show that insanity was well known to the writers of antiquity and in all probability was of not infrequent occurrence, judging by the numerous and in many instances most accurate descriptions of mental disorder to be found scattered throughout the writings which have been handed down to us from those who lived and laboured long ago. Perhaps indeed more was known by the Greeks and Romans of the nature of insanity, and certainly more judgment appears to have been exercised in its treatment in remote periods than in the early days of Christianity and what is known as the Middle Ages.

A passing reference to the strange and varied forms of endemic insanity such as the lyncanthropic madness of the Arcadians and the tarantism of the Scythians, brings us to a period concerning which there are numerous records of the existence of what has been denominated witchcraft, but which in many instances were undoubtedly extraordinary manifestations of insane disorders of a character with which we are happily not now familiar. That witchcraft was in the majority of cases a form of melancholia with loss of personality, delusions of guilty conscience, morbid self-accusations and a desire to expiate their imaginary offence, is proved by the confessions of so-called witches and sorcerers at their trials—confessions which, even to their judges, seemed exaggerated and impossible. The descriptions which have been handed down to us of the midnight meetings, and the horrors of the orgies and revels carried out by those accused of witchcraft indicate a condition of things which can only have been produced in persons with diseased imaginations, as the grossest crimes and the most abominable acts of cruelty appear to have been practised. Young children were massacred, and their flesh, boiled with toads, serpents, etc., made into an ointment, which was supposed to possess certain mysterious qualities. In some cases an impious form of the Mass was celebrated at these orgies, and the most fearful blasphemies uttered over the consecrated wafer, which was used afterwards as an ingredient in their powders, ointments, and other medicaments; the diabolical proceedings generally terminating with a banquet, at which it is stated that infant's flesh was a prominent dish. Witchcraft was for a time tolerated as an error which had been produced by religious fanaticism, but later on the French punished by fire those who attended the witches' revels, and when in the eighth and ninth centuries the Devil was supposed to take an active share in these unholy festivities, the Church commenced to take serious notice of the practices carried on, and the institution of the Inquisition in 1183 had the effect of not only bringing to trial those who were rightly accused of witchcraft, but many sane persons were made victims of the Inquisitors, who, to satisfy their private revenge, or to please those who were in power, condemned not only the guilty but the innocent to the stake.

For many years epidemics of demoniacal and impulsive forms of insanity appear to have broken out throughout England, and in order to check these, witch trials and executions became so common that thousands of persons are said to have suffered the death penalty in consequence; but the spread of civilisation and of the reformed religion had more to do with the improvement of affairs, which dates from the end of the seventeenth century, than the rigorous enactments of the Church, which failed lamentably to distinguish between crime and madness. To the members of religious brotherhoods, however, should be given the credit of whatever slight redeeming features there may be found in the treatment of the unfortunate beings who in the Middle Ages suffered from insanity; and as the monks could never quite free themselves from the belief that those who were mentally afflicted were in reality possessed with devils and evil spirits, the treatment which their religious fervour and gentle compassion suggested was of a more kindly nature than the stones, sticks, and death by fire which was the common mode of treatment at that period, so that in course of time churches, monasteries, and holy wells furnished a refuge for the insane, who were there protected in some degree from the results of the popular abhorrence and dread of men and women who were held to be of a different species to the rest of mankind—"a set of animals, or positive incarnation of devils who had taken on human guise."

The remedies prescribed in the treatment of the insane in those early days were both numerous and curious. The mugwort which is still employed in country places as a cure for falling sickness was largely used in the early Saxon times, while henbane formed one of the many ingredients of what was somewhat inelegantly called a "spew drink," much in vogue in cases where a demon was supposed to possess a "fiend-sick" man. The combination of priest and physician, which held good for centuries in the treatment of diseases, is manifested in the directions given for the proper administration of remedies which were to be drunken out of a church bell, while seven masses were to be sung over the herbs of which the concoction was composed, and to the lunatic himself was assigned the singing of psalms, while the priest completed the mystic circle by the intonation of certain supplications which added to the value of the medicaments to much the same extent as the placing of a cipher before a sum expressed in decimals. For epilepsy in a child the brain of a mountain goat was to be drawn through a golden ring, and then given to the child to swallow before it tasted milk. Wolves' flesh, if well cooked, was effectual in hallucinations, while for mental vacancy, bishops wort, lupins, betony, fennel, cat mint, and agrimony, when well mixed with ale, were highly extolled.

In temptations of the fiend and for nocturnal visitations

Seek in the maw of young swallows for some little stones, and mind that they touch neither earth nor water or other stones; look out three of them, put them on the man on whom thou wilt—him who hath the need—and he will soon be well: or, better still, use a salve composed of ewe-hop, wormwood, bishops wort, and lupin: put these worts into a vessel, set them under the altar, sing over them nine masses, boil them in butter and sheep's grease, add much holy salt, strain through a cloth, and throw the worts into running water.

The salve thus produced was to be smeared on the forehead of the afflicted person, and also on his eyes and wherever his body was sore; he was further to be censed with incense, and signed frequently with the sign of the Cross; the result can scarcely be considered doubtful; "his condition," says the old writer, "will soon be better."

The influence of the moon in the production of insanity was recognised in those far-off days, for, says Giraldus of Wales, "those are called lunatics whose attacks are exacerbated every month when the moon is full," and it is the same writer who refers to the holy well of St. Winifred in Flintshire, which retains to the present day, in the opinion of some,

many of the miraculous powers which were ascribed to it in the twelfth century, although unlike many other wells of which I have yet to speak, among them is not mentioned the cure of those afflicted with mental disease.

One of the remedies employed in Cornwall was called "bowssening" or ducking, and is so curious that a short account of it[1] may prove interesting. The custom was observed in many places. At Altarnun, about eight miles from Launceston, was a church near which was situated a pool, from which water was allowed to fall into an enclosed space. On the surrounding wall of this space the patient was made to stand with his back to the water, and was then, by a sudden and unexpected blow, thrown backwards into it, after which

A strong fellow took him and tossed him up and down alongst and athwart the water until the patient, by foregoing his strength, had somewhat forgot his fury. Then was he conveyed to the church and certain masses sung over him, upon which handling, if his right wits returned, St. Nunne had the thanks, but if there appeared small amendment he was bowssened again and again while there remained in him any hope of life or recovery.

Scotland is celebrated for, among other things, the number and potency of its lunacy healing wells, and the extraordinary superstitions which attach thereto. St. Fillan's well, in Perthshire, has long been extolled as possessing sovereign virtue in the cure of madness; and as late as the year 1793 a writer observes that about 200 people afflicted by a disorder of the mind are annually brought to try the benefit of its salutary influence; the patients being conducted by their friends thrice round a neighbouring cairn, on which is deposited a small offering such as a bunch of heather, or may be a bundle of clothes, then after being thrice merged in the sacred pool the sick man is bound hand and foot, and left for the night in the chapel which stands near. If the maniac is found loose in the morning good hopes are entertained of his recovery, if still bound his cure remains doubtful, while—and this is not the most astonishing portion of the narrative—it sometimes happens that death relieves him during his confinement from the troubles of life. St. Ronan's well, the well of Inch Maree, and one in Stirlingshire are also noted as having been credited with the possession of remarkable healing virtues; while in Ireland, in the valley of the lunatics near Tralee are two wells the waters of which, when taken internally at the same time that the cresses which grow on the margin are eaten, are believed to effectually restore a madman to mental health. To effect a similar purpose lunatics were frequently bound to holy crosses, and to the pillars of churches. Says an old writer, those "labouring under various disorders, especially the furious and those vexed with demons, are bound in the evening, and in the morning are often found sane and whole, and are restored to their liberty." Burton, in his *Anatomy of Melancholy*, published in 1621, gives a graphic, though painful, account of the appearance and treatment of the lunatic in his day, and attributes the disordered condition of the mind "to the presence of certain peccant humours in the body affecting the brain which required elimination," and so the physician of that day, influenced by his belief in the connection between the liver and insanity, recommended the use of emetics, purges, opening the veins under the tongue, blisters, issues, shaving of the head, and (most efficient of all) the anointing of the backbone with a choice balsam composed of earthworms or bats.

It will be seen that the treatment of the insane in the seventeenth century was certainly no whit better than that described by the writers of antiquity, such as Hippocrates, Plutarch, and Cœlius Amelius. Indeed, the state of mind of the unhappy wretches who were stoned, half drowned, wholly burned, and generally neglected and ill-treated, was completely misunderstood, and where anything approaching considerate treatment was employed it was due, either to the religious fervour of the monks or to the opinion that had descended from generation to generation, from very remote periods, that in persons suffering from insanity there was an excess of bile in the blood, and that emetics and purges of no gentle description were necessary for its due elimination.

That something more, however, was done for the insane even in the early days now under consideration is evident from the fact that at the commencement of the fifteenth century lunatics were confined in Bethlem Hospital, which had been founded a century and a half previously on the site now occupied by the huge Liverpool Street terminus of the Great Eastern Railway Company, and in 1598 there existed a religious house "wherein sometime were distraught and lunatik people," near to the junction of Charing Cross and St. Martin's Lane, the probable position of the building being near the spot where now stands the Havelock Statue in Trafalgar Square.

The treatment of the poor creatures confined in these establishments was of a rigorous description, and this is evident from accounts we have left us by eye-witnesses of the scenes which took place. Evelyn says that he "stepped into Bedlam, where he saw several poor miserable creatures in chains." Another writer states that "the men and women in the old Bethlem were huddled together in the same ward," while the account books of the asylum record the expenditure of various sums in the purchase of fetters and straw. As lately as the year 1815 evidence was given before a Committee of the House of Commons that a person was restrained in the following effectual manner:

A collar encircling the neck was fastened by a chain to a pole fixed at the head of the patient's bed; an iron frame, the lower part of which encircled the body, the upper part being passed over the shoulder, having on either side apertures for the arms which encircled them above the elbow, and a chain passing from the ankles of the patient and fastened to the foot of the bed.

Horrible as all this is, one cannot feel surprised when it is known that to control a body of patients which sometimes exceeded the average number of 122 there were only employed three male and two female attendants, or keepers as they were called, and that it was the duty of the male attendants to assist the female when the women patients, owing to their refractory conduct, required additional strength in order to coerce or control them.

That no particular attempt at concealing the condition of affairs existed is evident from the fact that for years Bethlem and its inmates were one of the sights of the metropolis, and visitors were admitted upon payment of a small sum of money. This custom however was discontinued in 1770 not long before the second Bethlem in Moorfields was condemned, and the building which is known to many of us in St. George's Fields was decided upon, but even in this, the third and best of the Bethlems, at its commencement the windows of the patients' rooms were not glazed, nor were the rooms warmed in any way; there was no provision for lighting the rooms at night, and the window openings were placed high up in the walls so that patients could not possibly see out. Bethlem was not the only institution in which such regrettable practices as I have very briefly detailed were in vogue. St. Luke's Hospital in London and an asylum in York—not the Retreat—were subsequently shown to have quite as bad a record, and indeed the condition of affairs in the private asylums which were numerous and abominable, and in the workhouses of the kingdom, was so very dreadful that at the present time one marvels at the opposition which arose against any alteration in or addition to the law which would enable other and better and properly supervised accommodation to be provided for the helpless creatures who suffered indignities which nowadays it makes one shudder even to think of.

The lunacy of King George III and the mental incapacity of Lord Chatham had directed the attention of the public to the way the insane were treated, but it was not until the days of Pinel in France and of Tuke in England, followed as they were by the practical and philanthropic efforts of Lord Ashley, better known to a later generation as Lord Shaftesbury, that any attempt was really made to alter the sad condition of affairs which had existed for so long a period. Germany had also been aroused to the necessity for according to the mentally afflicted greater protection than they had up to this period enjoyed, and we find that as early as 1773 certificates of admission from medical men were required in Berlin, that in 1785 a fairly managed hospital for the insane existed at Frankfort, and a few years later at Lubeck and Brunswick; but as far as this country is concerned no doubt the influence of Pinel and Tuke predominated in producing the results which have since followed their introduction of a more enlightened and generous mode of treatment. In 1783 the Revolutionists were all-powerful in France, the Salpêtrière and Bicêtre were huge prisons for the insane in Paris, and Pinel, a physician to the latter establishment, was one of those apostles of science, who, filled with energy

and courage to defend his beliefs, determined that an effort should be made to afford the insane not only freedom from the barbarous treatment to which they had been subject, but also that they should be looked upon as human beings afflicted with a disease of the brain, and requiring medical care and treatment in hospitals just in the same way as other human beings afflicted with maladies in various parts of the body. In this Pinel forecast the modern hospital for the insane, of which I shall have something to say later on.

When Pinel applied to Couthon, one of the leaders of the Revolution, for authority to take the irons off the insane—

He ran the risk of attracting the distrust and suspicions of men always disposed to find everywhere plots against themselves. Couthon replied: "Citizen, I shall go to-morrow to the Bicêtre to inspect it, but woe to thee if thou hidest the enemies of the people among the lunatics."

So he did on the following morning to examine the insane; but he soon tired of the pandemonium of screams and yells, and the clanking of chains which echoed from the dark, damp and filthy cells, and turning to Pinel he said: "Look here, citizen, art thou insane thyself that thou wilt unchain such animals?"

"Citizen," replied the courageous and practical philanthropist, "I am convinced that these lunatics are so unmanageable only because they are robbed of their liberty, and I dare hope much from the opposite means of treatment." "Well," said Couthon, "do with them what thou likest, but I fear thou wilt be the victim of thy presumption."

Without delay Pinel commenced the stupendous task, for which he had previously made adequate and necessary arrangements, and in less than a week he had freed more than fifty lunatics from their manacles. "Some," says the narrator of the tale, "were exceedingly dangerous, and among them were patients who had been in chains for ten, twenty, and even thirty years."

Pinel followed up his great work at Bicêtre by similar efforts at the Salpêtrière; but, like pioneers in every age, he met with opposition on all hands—not only from the ignorance of the public, but also from the self-interested resistance to his efforts of those in official positions. Indeed, although much was accomplished, much remained to be done, as Esquirol—another great name on the list of enlightened and humane physicians—writing in 1819, laments that

these unfortunate people are treated worse than criminals, and are reduced to a condition more miserable than that of animals.

Simultaneously with the great work which was being carried on in France, William Tuke, a member of the Society of Friends, had commenced a similar crusade in this country, stimulated by a knowledge of the state of affairs which prevailed in a certain asylum in York to which I have before referred. Tuke, who had also, at a visit which he paid to St. Luke's Hospital,[2] seen the inmates bound in chains and lying in straw, was filled with sympathy, and, more than that, fired with zeal to improve such a miserable state of affairs. He consulted with other members of the religious body with which he was associated, the result being that, having overcome many difficulties which were suggested and others which arose in practice, he had the satisfaction ultimately of seeing a house known as the Retreat erected in the neighbourhood of York, and a system of treatment adopted which was the direct antithesis of what had gone before. The Retreat was a place

in which the unhappy might obtain a refuge—a quiet haven in which the shattered bark might find the means of reparation or of safety.

Tuke had at times his moments of despair. "All men seem to desert me in matters essential," he writes; while his biographer wonders

that the proposal should have met in the first instance with considerable opposition, and that the institution had to struggle through many difficulties into existence.

But if the sane and healthy ignored and opposed this great and good work, the unfortunate beings for whom Tuke was labouring appreciated fully the changed condition of affairs.

A patient was admitted to the Retreat who had nearly lost the use of his limbs from being chained, and for some time it was necessary to lead him about like an infant. He was found to require no restraint, and was after a while able to walk without assistance. When one of his friends visited him, and asked him what he called the place, he replied with intense earnestness, "Eden! Eden! Eden!"

A book written by Mr. Samuel Tuke, entitled a *Description of the Retreat*, by the great interest which it evoked in the experiment being carried on at York, proved the means of arousing the attention of the public, first to the abuses of the old asylum at York, and then to others of a like nature in different parts of the country, especially in and about the metropolis, the result being that, while the defenders of the old system fought vigorously on behalf of their views, a strong public opinion was developed, which pressed for and ultimately obtained the appointment of a Select Committee of the House of Commons, before whom many witnesses were examined and much evidence taken; and finally, owing to the report presented by this Committee, legislation was called for, which by successive enactments has produced the marvellous change which has been since effected throughout this kingdom, and by its influence and example throughout the civilised world in all that ministers to the comfort and care of the mentally afflicted.

Several Bills, having for their object the better regulation of madhouses, were introduced in the early part of this century, some of which, though successful in one House, were rejected in the other; others were withdrawn, owing to the opposition with which they were met; but, to shorten this portion of my subject, let me briefly say that in the years 1747, 1763, and 1773 various Bills were introduced, which were of no practical value, and were consequently rejected. The illness of King George III, which commenced with a slight attack of insanity in 1765, and his public thanksgiving for recovery on April 23rd, 1789, no doubt kept the subject well before the public; but not even the recurring attacks from which the King suffered in 1801 and 1804, nor his final attack in 1810, were sufficient to induce Parliament to pass a compulsory measure, although in 1808 an Act known as Wynn's Act was passed, rendering it lawful for justices in every county in England and Wales to take into consideration the propriety of providing a lunatic asylum for the reception of patients within the county. This enactment, not being compulsory, failed to accomplish the object of its promoters, as only nine out of fifty-two counties took advantage of the powers conferred upon them; but among these it is of local interest to notice was the county of Stafford, which in 1818 opened an asylum in this town (Stafford) for 120 patients at a cost of £36,500—a very different establishment, no doubt, from that which is now administered with so much sympathy and consideration for those under his care by my colleague and much esteemed friend, Dr. Christie. Lord Shaftesbury's Act of 1845 and the amending Act of 1853, introduced by Lord St. Leonards, constitute what have been well called the Magna Charta of the liberties of the insane, as these laws enacted the establishment of a permanent Commission of Inspection, the compulsory erection of suitable buildings throughout the kingdom, and specified in detail the method of certification which with certain slight modifications was applicable to private and pauper patient alike. In the year 1845, when the office of Commissioner in Lunacy was first instituted, there were 20 893 persons ascertained officially to be insane in England and Wales, and for the duty of visiting and inspecting this large number of lunatics three medical men and three barristers were ordered to be appointed. On the 1st day of January in this current year there were 81,258 lunatics under treatment in asylums alone in England and Wales, and it appears somewhat anomalous that with this enormous increase of certified lunatics requiring inspection the visiting staff of the Commission should remain of exactly the same strength as in 1845.

The practical result of all this legislation was that the searchlight of inspection was turned upon the dark places which had existed for so long, and the influence of such men as Conolly of Hanwell, Gardiner Hill of Lincoln, Gaskell of the Lancaster Asylum, and others became a factor which, combined with the energy displayed by the new Commissioners and the interest taken by a large section of the public, soon brought about changes which converted the madhouses of the past into the hospitals for the mentally afflicted of the present day.

In that wonderful old book, William Cullen's *First Lines of the Practice of Physic*, published in 1784, the chapters on mania or madness afford a very clear idea of the strange method of dealing with the insane even of so advanced and clear-sighted an exponent of our art as the celebrated Professor of Physic in the University of Edinburgh, and First Physician to His Majesty of Scotland:

Angry passions are always rendered more violent by the indulgence of the impetuous motions they produce, and even in madmen the feeling of restraint will sometimes prevent the efforts which their passion would otherwise occasion. It is never desirable to confine the patient to a horizontal position, but the restraint employed requires confinement within doors, and it should be in a place which presents as few objects of sight and hearing as possible.

He also directs that, "fear being a passion that diminishes excitement," the patients should be inspired "with the awe and dread of some particular persons, especially of those who are to be constantly near them; this awe and dread is therefore by one means or other to be acquired; in the first place, by those in charge of them being the authors of all the restraints that may be occasionally proper, but sometimes it may be necessary to acquire it even by stripes and blows; the former," he is careful to observe, "although having the appearance of more severity, are much safer than strokes or blows about the head." Cullen also recommends the use of the surprise bath, which, he says, consists "in throwing the madman into the cold water by surprise, by detaining him in it for some length of time, and pouring water frequently upon the head, while the whole of the body except the head is immersed in water, and thus managing the whole process, so as that, with the assistance of some fear, a refrigerant effect may be produced."

The employment of restraint in the treatment of the insane might well by itself form the subject of a paper; suffice it to say that in this one particular vast advances have been made, the use of muzzles, leather gloves, straps, handcuffs, strait-waistcoats, and the many other modes of applying restraint to an unruly patient are now unknown except in very special cases, and then usually practised for surgical reasons only; seclusion—a very valuable and necessary method of treatment in some extreme cases—is reduced to a minimum, while anything in the shape of harsh usage towards a patient is so rare that its occurrence gives rise to the same amount of painful surprise and public animadversion as is occasioned when the superintendent of a Sunday school is found guilty of some abominable offence towards one of his scholars quite incompatible with the blameless life he was supposed to be leading.

The general surroundings of the lunatic have also been changed for the better, the wards of a modern asylum—such as the County Council of Stafford, with far sighted and enlightened liberality, has provided at Cheddleton, in the north of this county—are provided with every comfort and convenience, a good library, daily papers, amusements of various kinds, occupation suitable to the requirements of each patient, and a liberal dietary are some of the changes which have been brought about. The persons employed in the direct charge of the patients are of a much superior type to the keepers—hateful word—of the beginning of the century; and the amount of freedom which is now enjoyed by the inmates in all well-managed asylums renders these institutions most desirable places for a short period of retirement from a world which does not appreciate the morbid miseries of the melancholic or the noisy and violent conduct of the acutely maniacal. Even in the workhouses, especially those belonging to the large unions—such as Dudley, Walsall, Stoke, and many others—the accommodation provided for the epileptic and imbecile inmates has been much improved of late years, and a manifest desire to still further brighten the existence of these chronic unfortunates is evinced by those whose duty it is to look after their interests.

About five years ago the Medico-Psychological Association of Great Britain and Ireland introduced a system of training the nurses and attendants of asylums with a view of improving their position by giving them the same opportunities of acquiring a knowledge of nursing as their hospital analogues have had for some years. A secondary but none the less important effect of this innovation must be that the fact of having trained attendants will prove of incalculable advantage and benefit to the inmates themselves, as it substitutes the hospital for the prison feeling, provides prompt and competent attention in case of emergency, and the unmixed blessing of skilled nursing when acute illness has to be encountered. To the members of the medical staff of an asylum the knowledge that their instructions will be fully and carefully carried out, and that the patients are in the hands of properly educated men and women is a source of the greatest comfort; and to you, gentlemen, who have at times to undertake the treatment of mental disorder in private houses, the knowledge that you can procure the services of a trained mental nurse to assist you in your trying work must be of the greatest importance.

It is not my purpose this afternoon to give to you an account of the advances which have been made in the investigation of insanity from the scientific side of the question, but let it not be supposed that while development has taken place in the attention paid to the material welfare of the insane, the building of mental hospitals, increased medical care, and more civilised methods of treatment, nothing has been done to encourage and cultivate the special scientific study of insanity.

In the majority of the larger asylums a pathological department exists, where good and useful work has been done in the past; but a still more important step has within the last few years been taken, at first in Edinburgh, and soon after in connection with the London County Council asylums, by establishing a laboratory presided over by a pathologist of eminence, whose sole work consists in the investigation of the cause and course of the disease in the cases which are studied clinically in the asylum wards during life, and in which, after death, opportunity is afforded for a careful and complete attempt to unravel some of the specific problems with which insanity abounds.

During the past few months a movement has been set on foot with a view to direct the attention of the committees of the asylums of the Midland counties to the importance of establishing a similar laboratory in Birmingham or some other convenient centre, so that valuable material, which at present is practically wasted, may be utilised in such a way as not only to promote the cause of scientific research, but to benefit both patients and ratepayers by opening up new and successful methods of treatment, and by investigating causes, the prevention of which would tend to diminish the number of those attacked by mental disorder, and thus reduce the outlay, which is rapidly becoming a much too prominent feature in the accounts of the county and of the National Exchequer.

In conclusion, let me say a few words as to the duty which medical men who practise their profession outside asylums owe to the insane. Even in the scientific aspect of the question of which I have just been speaking, the study of the symptoms which point to an attack, the early identification of functional and the more curable phases of mental disease, the education of the public in those preventive measures which may have a tendency to minimise the extension of insanity, and above all, the study of the sane person from a psychiatric point of view, are all of them more in the province of the hospital physician and the general practitioner than of their specialist brother who sees little else but well-marked manifestations of damaged brains, and in only too many instances has but little chance given him of doing permanent good, as progressive degeneration with destructive changes in the neuron have usually stamped the case as hopeless before he has had an opportunity of examining into the condition of the patient.

Now and then cases come before the general practitioner in which an early recognition of symptoms might lead to such treatment as would probably prevent a more serious development into insanity; and, above all, those cases of drink madness which are sent to asylums in such considerable numbers might in many instances be just as well looked after either in their own homes or in the wards of the workhouse as in an institution, a residence in which for however brief a period, or for however transient an attack, has unfortunately in the eyes of the public the effect of stamping a man or woman as one who from that time forth should be looked upon with suspicion, and deprived of many of the privileges which he or she would otherwise enjoy.

The influence which members of our profession can bring to bear upon those who have the making of our laws, and upon others who owing to their social position are able to assist in the initiation of reforms, might well be exercised to facilitate the passing of a short Bill entitled "An Act to Amend the Lunacy Acts," which was introduced by the Lord Chancellor in the last session of Parliament, but which, owing to the pressure of other business, had to be sacrificed to important, though not less urgent, measures. Especially would I direct your attention to the necessity for supporting one of the clauses in the Bill referred to, which was designed to legalise the placing of single patients under the care of medical practitioners without the certification which in many instances proves a barrier to arranging for the private care of cases of incipient or slight forms of insanity. Relatives and friends often shrink from the publicity of the present method of certification, and prefer to leave the patient without that care which is so essential in order to promote recovery rather than call in the aid of the judicial authority whose intervention is now a necessary part of the proceedings. A deputation consisting of members of the Parliamentary Committee of the British Medical and of the Medico-Psychological Associations waited upon the Lord Chancellor with a view to

press upon his notice the advantage which would arise from a modification of the present system. The interview was a very satisfactory one, as the Chancellor, after full consideration of the various points which were placed before him, agreed to the wishes of the deputation, the result being that a clause was drafted and inserted in the Bill which, while removing the objection alluded to, would give the patient and the public an ample guarantee that no man or woman would be placed under care without having the advantage of proper supervision by the Commissioners in Lunacy, who, as matters now stand, have no authority over, nor indeed cognisance of, the many cases who, either in their own homes or in unlicensed premises, are secluded in such a way as to lead some to think that we are reverting to methods of dealing with the mentally afflicted, which, to put it mildly, are not consonant with modern ideas.

The suggestion that has been made, if duly legalised, would enable a patient suffering from a mild attack of insanity, or, as the clause puts it, "suffering from mental disease, but that the disease is not confirmed," to be placed in private care for a period of six months, provided that a medical practitioner certifies to the necessity for such treatment, and that the certifying practitioner and the person who undertakes the management of the case should notify the fact to the Commissioners in Lunacy, who would have the power of visiting and observing whether all that their experience has taught them to be necessary in such cases is done in the interests of the patient. In this way many who would otherwise be neglected, or if certified would be classed as "a lunatic or person of unsound mind," might be given a chance of recovery before the termination of the six months, while at the worst, if improvement had not taken place, the transfer to an asylum would in all probability be then recognised by the friends as a painful though unavoidable necessity.

The establishment of a clinic at asylums adjacent to large towns has had excellent results in the treatment of the incipient forms and early stage of insanity, and a like department in every large general hospital would doubtless after a time be recognised as of inestimable value in many cases which at present drift on to that point when nothing is left to the medical man when consulted but to advise the asylum and nothing but the asylum.

I have now to thank you for your presence here, and to say that my colleagues and myself are at all times most desirous of giving our medical brethren an opportunity of seeing all that goes on within the wards of our asylums and of replying to any questions respecting patients in whom you may be interested. We want to do away with the bad old system of not only locking our patients in but of locking the public out, as we believe that the more the outside world knows of the work done in asylums the less we shall hear of the suspicions and complaints which are happily becoming fewer and fewer every year, and the sooner will the time come when the aversion towards bringing a patient to a hospital or home for the insane will have passed away for ever, even from the minds of those who at present harbour memories of the time, now long gone by, when it might be said of those who had the misfortune to require treatment in such an institution, "Abandon hope all ye who enter here."

Enough, I trust, has been said to show that the subject of the insane and their treatment occupies at the present day a very different position in the mind of the public to that which it held at the beginning of the century, and that the large sums of money which have of late been spent in the provision of asylums, and in otherwise caring for the insane, have not been wasted nor, indeed, expended before they were required; but, in this, as in everything else, progress is the watchword of the day, and, while those who are in close touch with this special branch of our professional work, whether laymen or doctors, feel that much has been effected, yet they freely admit that much still remains to be done. We therefore ask for your sympathy in what is at times a trying and difficult position, for your co-operation in elucidating some of the problems in which we are interested, and for your active support in pressing forward any measures of reform which may from time to time be considered advantageous on behalf of those who are often looked upon as being of little account in this world, mere cumberers of the ground, and past all human help.

NOTES.

[1] Abbreviated from a *History of the Insane in the British Isles*, by the late Dr. Hack Tuke, to whose valuable works I am indebted for much information upon the subjects treated of in this address. [2] The late Dr. Arlidge, who was for many years a member of the Staffordshire Branch of the British Medical Association, and whose death was mentioned with expressions of the deepest regret at the meeting before which this address was delivered, was at one time associated with St. Luke's Hospital. According to a biographical notice in the BRITISH MEDICAL JOURNAL of November 4th, 1899, Dr. Arlidge, in his early days, "gave much attention to the subject of lunacy, and attended at Hanwell Asylum the lectures of Drs Conolly and Hitchman, whose friendship he enjoyed throughout their lives..... He became Resident-Superintendent of St. Luke's Hospital for Lunatics where he brought about the abolition of mechanical restraint.... ...In 1859 he wrote a work on the *State of Lunacy and the Legal Provision for the Insane*, which was dedicated to the Earl of Shaftesbury, Chairman of the Commission in Lunacy, and in 1857 he wrote for the *Psychological Journal* a series of reports on the Lunatic Asylums of France, Italy, and Germany."

THE BROMIDE SLEEP: A NEW DEPARTURE IN THE TREATMENT OF ACUTE MANIA.

By NEIL MACLEOD, M.D.,
Shanghai.

To have to consign a case of acute mania to a padded room in a gaol, and to have to treat it there without skilled attendants, there being no proper provision for such a case within some thousands of miles of Shanghai, naturally reconciles one to adopt an alternative which may appear, or actually be, heroic, but which promises to deal with the case successfully *in the patient's own house*.

I have not met with anyone who has seen the condition which I have termed "the bromide sleep" apart from those cases in which I have induced it, nor can I find any reference to such a state intentionally produced as a therapeutic measure. An approach to it has been made in the treatment of epilepsy, but neither have such doses of bromide been given, nor such a condition produced as I have described in recent papers[1] on the treatment of various drug habits, etc. By "the bromide sleep" I mean a condition lasting from five to nine days, in which the subject sleeps day and night, and from which he cannot be roused. He cannot walk, stand, sit, speak, or carry on any of the higher cerebral functions. If left to himself he will not feed or drink; indeed, he cannot even ask for food or drink, being unconscious of these needs, but can be sufficiently nourished with milk during that time. He will pass urine and stools in bed if left to himself, but can be prevented from doing either by timely suggestion of these needs on being placed on a commode and held there for a few minutes every six hours. The loudest sound, the strongest light will not disturb him. During this period the higher nerve centres are rested to an extent so complete as cannot be attained in any other way, so far as I am aware. Following this sleep is a gradual recovery of the powers of locomotion, speech, thought, etc., the progress being daily visible, lasting about a fortnight—in all about twenty-one to twenty-four days. This fortnight is also a period of comparative rest, there being a gradual awakening of mental power and a passage from a disordered to an ordered state as regards that function. This bromide sleep I have produced nine times, and, so far as I can judge, safely and with advantage in the treatment of the various maladies for which I have used it, with one exception. This was a case of morphine and cocaine habit, in which a double pneumonia supervened and led to a fatal result.[2] This case was the first of an epidemic of pneumonia, numbering more cases and deaths in a few months than had occurred in the previous twenty one years of my residence in Shanghai. Apart from this case, and even here before the intercurrent pneumonia, I have not seen any interference with respiratory or circulatory function sufficient to give rise to anxiety. With perseverance, care, and a tumberful of milk every two hours to seven tumblers, little loss of weight need occur except from wasting of muscles. After recovery in no instance has any indication of interference with nervous function been observed.

Manifestly, more cases will have to be observed before it is possible to estimate the full advantage and danger, if any, of this sleep, and as, in the natural course of things, I shall have but few opportunities here of seeing many such cases, I

present the subject at what may be regarded as a premature stage, with the expectation that others may put the matter to the test.

The fully developed sleep is a rather alarming condition to anyone seeing it for the first time, and especially so to the friends of the patient. They should be forewarned of the state and its duration. For two or three days there may be difficulty in feeding, when swallowing is somewhat slow, and milk should be given by the spoon, the lower jaw being pushed downward a little as the milk is being poured into the mouth, the head being held half between the upright and the lying down positions, and closure of the mouth by pressure on the chin, accelerating and aiding the act of swallowing. The best method of giving the bromide is probably yet to be worked out, but, so far, I am inclined to give it only in the daytime, two drachms in a half tumbler of water every two hours until an ounce is given the first day. On the second day a similar amount is given in the same way, and, as will be seen in the case described later, this may suffice to effect the result desired which, it should be remembered, is not at its deepest till the fourth or fifth day—that is, more than twenty-four hours after the administration of the last dose. Possibly it may be better to give a less amount in larger doses more quickly, say, on one day. I must emphasise the fact that the full effect of the drug is not manifest for at least twenty-four hours after the administration of the last dose, and when it is developed that effect may continue for several days. A safe rule, therefore, is to cease administration of the bromide for twenty four hours when drowsiness is so profound that the patient cannot be roused, or if when roused talk is incoherent. If the sleep continues or becomes deeper no more bromide will be needed.

Precautions should be taken to protect the patient from cold by proper bed and night clothes, the room should be kept at a proper temperature, and he should be prevented from injuring himself by falling as he is emerging from the sleep, when he is incapable of taking proper care of himself.

A short sketch of the circumstances under which I first made acquaintance with this effect of bromide, and subsequently made use of it, may interest those who have not had the opportunity of reading what I have already written on the subject: Early in 1897 a neurasthenic lady, addicted to the morphine habit for nine years, by accident had administered to her 2½ ounces of sodium bromide in between two and three days, resulting in the bromide sleep described above, with the result that when she got over the effect of the bromide she had no craving for morphine, and had ceased to suffer from the various symptoms which had led to its use. Within a few months thereafter, a pilot, a morphine *habitué*, also addicted to alcoholic excess, was sent to me and expressed himself as willing to try the effect of the bromide sleep, the condition having been fully described to him, its risks being, so to speak, unknown. In this case no suffering was experienced during deprivation, and the morphine and alcoholic cravings had both disappeared on recovery from the sleep. A third time I induced the sleep in a condition of acute mania to expedite the transport of the patient from the interior of Japan to Shanghai, without the use of constraint, and to get rid of the excitement associated with travel, in the hope also of benefit to the nervous condition, which hope was completely fulfilled. The fourth case was a Chinaman, a chloral *habitué* of two years' standing, who placed himself in my hands with the result of loss of the craving for chloral without suffering during deprivation. In the fifth case, the bromide sleep succeeded in stopping uncontrollable vomiting in a neurasthenic lady with benefit to the neurasthenia from the rest to nervous functions. Sixthly, a morphine and cocaine maniac after the sleep lost the craving for both drugs, having escaped the suffering of deprivation, with great improvement to the general health brought to a low ebb by the drug habits. The seventh case a lady, was relieved of a nine years' morphine habit, also without suffering from deprivation, spread over three days, with improvement to the general health. The eighth case, a doctor, addicted to morphine and cocaine, desired to be relieved of the drug habits without the suffering of deprivation of which he had had two previous experiences. On the seventh day of treatment he succumbed to an attack of double pneumonia which supervened.

The success attending this treatment in these cases led me to have recourse to it in the next, the ninth, case, one of acute mania, after an experience of forty-eight hours of incessant exaltation and excitement, with the certainty of obtaining absolute rest, sleep and a cutting off of all surroundings more completely than is possible in the best regulated asylum and providing at the same time against the possibility of injury to self or others.

CASE VIII.

A married lady, aged 40, two years past the menopause, early in 1897 received by wire unexpected news of a family affliction, giving rise to a great nervous shock. This was followed by signs of nervous disturbance, culminating, in the hot weather of that year, in an attack of acute mania (referred to in a paper published in the April 15th, 1899, issue of the BRITISH MEDICAL JOURNAL at page 898). Since September, 1897, she has appeared to be quite well, though less able for her usual exertion, having been previously a hard rider to hounds. In March last another shock gave rise to slight signs of nervous disturbance, and in the end of June, again on the approach of hot weather, sleeplessness, headache, loss of appetite, needed an attack of watery diarrhœa to cause great prostration, slowness of speech, forgetfulness, use of wrong words, irritability, passing into a state of incoherence, exaltation, and incessant speech activity with delusions of fear in the night, and the desire to escape from the house, neither it nor its inmates being recognised. This was the condition on June 30th and July 1st, during which time she was in charge of a trained nurse.

First Day of Treatment.—No drug of any kind having been taken for a week, and milk only for some days, the diarrhœa having ceased, bromide of sodium in 2-drachm doses were given in half a tumbler of water at 8.30 A.M., 10.30 A.M., 12.30 P.M., and 3.30 P.M., that is one ounce in all. Milk every two hours to 7 tumblers, the same quantity being given daily until otherwise noted. The patient wandered about the house talking nonsense incessantly nearly the whole day. Fell asleep at 9 P.M.

Second Day.—Slept till 7 A.M. without waking, and also during part of the forenoon. Condition as yesterday, full of delusions expressed quite distinctly. Somewhat shaky and feeble on foot. Bromide given in 2-drachm doses at 8.30 A.M., 1.30 P.M., 3.30 P.M., and 6 P.M. (last dose). Slept in the afternoon. Plantar reflex active, patellar reflex exaggerated as it was before bromide was given.

Third Day.—Slept all night, muttering when roused with an occasional distinctly uttered word, swallowing from the cup with difficulty; cannot stand or walk without help.

Fourth Day.—Cannot be roused: no speech, muttering or otherwise; swallows from the cup with great difficulty. Muscles of the neck twitching when any of them are put on the stretch.

Fifth Day.—Cannot be roused; cannot drink from the cup, fed with a spoon. An occasional cough, clears the throat with difficulty. Breathing shallow and quickened. Temperature not over 99°.

Sixth and Seventh Days.—No cough; condition as on the fifth day.

Eighth Day.—Has evidently caught cold; has been sleeping day and night under the punkah. Temperature, not previously over 99°, 100° at 2 P.M.; pulse also quickened to 100. Swallowing better; breathing shallow and quickened at times, quiet and natural at other times. 9.30 P.M. Temperature in bowel 101.2°; face a little flushed; plantar reflex confined to very slight flexion of the toes; patellar reflex exaggerated.

Ninth Day.—12.30 A.M. Bowel temperature 99.4°; opens the eyes on being called and makes an inarticulate noise. 12.20 P.M. Temperature 98.4° in bowel; perceptibly more easily roused; plantar reflex slowed, but stronger, the whole limb being drawn away when the tickling of the sole is continued, not done two days before; fails to understand the order to put out the tongue, but does so on seeing it done. Temperature 99°.

Tenth Day.—Coughing a little in the night; tries to put out the tongue on being ordered; swallows and sits up better; can stand alone. Highest temperature 99.4°.

Eleventh Day.—Still very sleepy; fails to put out the tongue when asked to do so, muttering inarticulately, moving more forcibly, eyes open while feeding from the spoon; tongue hitherto foul, now cleaning. Temperature 100.2°.

Twelfth Day.—Crying; trying to blow the nose; now puts out the tongue, which is quite clean; a few distinctly-uttered words followed by inarticulate muttering; this is noticed nearly every time she speaks. Temperature 99.4°.

Thirteenth Day.—A restless night for the first time, talking quietly, no excitement; the eyes open spontaneously, smiles in response to smiles, chattering nonsense fairly distinctly, feeding from the cup again, walks with assistance; hands very shaky; tea, bread, and butter in the afternoon; trying to get out of bed.

Fourteenth Day.—Does not recognise anyone yet; talking quietly, but indistinctly all the time she is awake; hand grasp feebie.

Fifteenth Day.—The first few words of sentences are quite distinct and sensible, the later ones being less distinct and apparently nonsense.

Sixteenth Day.—A bad night, talking and restless; slept in the early part of the day and from 11 P.M., 7½ hours.

Seventeenth Day.—Short sentences quite sensible and to the point, longer ones still ending in chatter.

Eighteenth Day.—A bad night, not excited, but slept little, talking quietly; eating ordinary meals, sitting at table; coherence of talk good in the morning, defective in the afternoon.

Nineteenth Day.—Slept fairly well; short sentences in conversation quite sensible; can read a few words, but cannot hold the book, wrist drop; memory very fair.

Twentieth Day.—Slept badly; a typhoon blowing; very quiet all day; occasional incoherence in the afternoon. It is remarkable how little noise of any kind seems to disturb her, hearing being quite natural.

Twenty first Day.—Good night; delusions still apparent, though manifestly less and not at any time fixed.

Twenty-second Day.—A bad night; manner quite natural, rather muddled about the identity and locality of the house (of recent occupation).

Twenty-third Day.—A good night; the faintest trace of mental disturb-

ance. From this day no departure from the normal mental state could be detected; walking in the garden and downstairs at meals as usual; easily tired.

Note.—The alternate good and bad nights refer to sleep only, the alternation being a marked feature in several of the previous cases dealt with. A loss of one night's rest during the period of recovery need be looked on without anxiety.

CASE IX.

On August 18th, 1899, I saw, in consultation with Dr. Reid, Shanghai, a married woman, aged 30, who had been nursing an 8 months' old child till the 13th. She was suffering from acute delirious mania, which had then lasted seven days, was refusing food and being fed by the bowel, under forcible restraint to prevent injury to herself, had had only one night's sleep in six, and was occupied incessantly in noisily talking, singing, and on the move as far as the restraint allowed. By my advice, on the 18th 7 drachms of sodium bromide were given in three doses before 7 P.M by a catheter through the nose. That day she had had 30 gr. chloral hydrate and 1 drachm bromide.

Second Day.—She slept the greater part of the night, but still refused food, was restless and talkative all day; 7 drachms of bromide were given before 4 P.M. by the nose.

Third Day.—She slept all night; talked quietly through the day, no longer needing restraint; took some milk by the mouth and ate a little bread; 7½ drachms bromide were given before 4 P.M.

Fourth Day.—Slept all night, and could not be roused to wakefulness; she puts out the tongue on being asked to do so, and is muttering indistinctly; before 9 A.M. she had drunk 16 ounces of milk readily; at 3 P.M. temperature 105,° pulse 100. The left parotid region was much swollen and the left breast when touched caused her to wince; a set of false teeth were removed from the mouth, which was found in such a state as to evidently account for the swelling on the left side of the head; the mouth was ordered to be regularly cleansed with boric acid solution.

Fifth Day.—She cannot be roused, and takes no notice of the order to put out her tongue. Temperature 104° to 105° all day, except when sponged. Evident cellulitis of the left carotid, submaxillary, and neighbouring regions. She takes abundance of milk.

Sixth Day.—Still asleep; 7 A.M., temperature 105°, pulse good. Swelling somewhat less; the mouth looks cleaner. No disturbance of respiration or cough; no physical signs of abnormal character in the chest. Temperature at 4 P.M. 108°. Died at 8 P.M.

No *post-mortem* examination was made. Death was obviously due to septic poisoning starting in the condition of the mouth, overlooked from the fact that she had had no food by mouth for over a week, and that the false teeth had been previously removed, but replaced by patient about the time the bromide treatment commenced.

In this case within eight hours of the commencement of administration of the bromide sound sleep was procured; in thirty-six hours the incessant excitement of emotional, mental, and motor nerve centres was quieted, and restraint no longer needed; in sixty hours complete rest of these centres was established, and food was no longer refused. Had the septic mischief not supervened, these results should have tended towards recovery of a condition difficult to deal with in private, and serious in proportion to the duration of the exhausting manifestations.

By removal to an asylum, thus cutting off impressions from the surroundings to which a patient is accustomed, and in which an acute mania may have arisen, it is hoped that the receptive side of the nervous system will be rested to some extent. It is also hoped by this cutting off of accustomed stimuli that some rest will be secured for the regulative and executive side of that system, in which in all probability the greatest part of the disturbance is taking place, and more especially in its relation not to direct impressions, but to registered ones—memory. The only means of procuring complete rest for these higher parts of the nervous system, as well as for lower centres, is through sleep, natural and artificial. It will be conceded almost on every hand that the production of artificial sleep hitherto by hypnotics leaves much to be desired in the presence of states like acute mania. In the bromide sleep there is the certainty of rest to both receptive and executive sides of the nervous system, and also of the region concerned with memory, a rest so complete and prolonged as can be obtained by no other means as safely. If future experience goes to show, as I venture to hope it will do, that this bromide sleep can be induced without or with little danger, it ought to prove a powerful and effective means of dealing with all maladies of the nervous system in the treatment of which there is need for deep sleep, and a profound and prolonged rest of the higher centres.

REFERENCES.

[1] BRITISH MEDICAL JOURNAL, July 10th, 1897, p. 76; and April 15th, 1899, p. 896. [2] *Ibid.*, p. 897.

A CASE IN WHICH 300 GRAINS OF SULPHONAL WERE TAKEN IN TWO DOSES.

BY R. PERCY SMITH, M.D., F.R.C.P.,
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IN the BRITISH MEDICAL JOURNAL for November 4th, 1899, in a paper by Dr. A. H. Bampton, on The Toxic Cumulative Effect of Sulphonal and Trional, the following passage occurs: "It is lamentable that such powerful drugs as sulphonal and antipyrin in bottlesful are allowed to be sold to the public for secret self-drugging purposes." The matter was also referred to in an editorial article in the JOURNAL of December 9th. The following case, which recently came under my notice, is of importance with reference to the question of the easy way in which patients can obtain large doses of drugs which, though harmless in small doses, and under proper supervision, yet are toxic if taken in sufficient quantities.

On April 27th, 1899, I was asked to see and if necessary sign a medical certificate of unsoundness of mind in the case of a lady suffering from melancholia. Depression had been intermittently present since the birth of her third child some two years before, and she had already been under care in two asylums, with only partial improvement. Two days before I saw her she had taken 150 grains of sulphonal, which she had obtained from a chemist's in the form of six powders of 25 grains each. Her husband, a medical man, on learning this, gave her apomorphine hypodermically, and a purgative by the mouth, and these drugs acting efficiently, no toxic effects of the sulphonal followed. She had, however, another 150 grains, which she had obtained in the same way, and had secreted in her stocking, and this she took the day before I saw her. Resort was again had to emetics and purgatives, and nothing but drowsiness resulted from the large dose. She was very depressed; thought her soul was lost, and that God told her so, and had visions of the "dead and dying." She said she had taken the two enormous doses of sulphonal for "no reason." She acknowledged that she did not want to live, but said she had merely taken the sulphonal to produce sleep. Her husband told me that she had often taken poisonous doses of drugs, and on one occasion took lin. chloroformi. At one time also she suffered from hæmatoporphyrinuria from taking sulphonal. There was no difficult in certifying her as insane.

On inquiry at the chemist's where she said she had obtained the drug as to whether it was possible for a patient to obtain such a quantity without a prescription, I was assured that there was no difficulty about the matter, and that no suspicion would be excited by a patient asking for six powders of 25 gr. each. Moreover there is no difficulty in buying bottles containing tabloids of 5 gr. each, which would easily mount up to any dose a patient might think fit to take. Fortunately in this case no evil results followed, but it is quite conceivable that the case might have ended very differently, and although the toxic effects of sulphonal are usually produced slowly, and as the result of taking the drug in ordinary doses for a long time, yet it would appear that there ought to be some restriction on the possibility of patients purchasing large amounts.

It is worthy of note that in this case the drug was not obtained in the form of a proprietary article, but in the form of a standard *B.P.* preparation without a prescription.

A CRITICISM OF THE MECHANICAL HYPOTHESIS OF THE ORIGIN OF CARCINOMA,

WITH A DESCRIPTION OF A SPECIMEN OF "SPONTANEOUS" CARCINOMA OF THE UTERUS IN THE RABBIT.*

BY SAMUEL G. SHATTOCK, F.R.C.S.,
Pathological Curator of the Museum, Royal College of Surgeons.

THE specimen which I exhibit is a highly marked one of carcinoma in the rabbit, and was from an animal upon which no kind of experiment had been performed. Both uteri are the seats of multiple and extensive tumours. Histologically the growths are of the columnar-celled kind, in places papilliferous.

Between the growths the mucosa is nearly everywhere raised in complex papillary processes, and from such areas the growth of the carcinoma can readily be traced. The mode of formation exactly resembles that of the columnar-celled carcinomata of the rectum, many of which are also papilliferous. There were a certain number of disseminated peritoneal growths.

The interest of this specimen relates almost exclusively to the bearing it has upon the experiment put on record by Dr. Lambert Lack in the *Transactions of the Jenner Institute*, vol ii, and the *Journal of Pathology*, August, 1899.

The experiment was carried out by laying open the ovaries of a rabbit, scraping the surfaces, and allowing the milky juice containing free epithelial cells to diffuse into the peritoneal cavity, the laparotomy wound being, of course, afterwards closed. The particular animal remained well for nearly

* Read at the meeting of the Pathological Society of London, January 16th.

a year; it then became thin and weak, and commenced to suffer from dyspnœa; two months later it was killed. The abdominal cavity was studded with carcinomatous foci, and there were other foci in the thorax. The condition of the ovaries is not stated. The uterus was greatly thickened; its mucosa papilliform, and at one place in its wall was a tumour as large as a cherry.

This is the experiment, and the hypothesis is that the displacement of normal epithelium into a lymph space or lymph cavity is sufficient to bring about the growth of a carcinoma.

The most ominous feature in the *post-mortem* finding is the condition of the uterus, for the state of the uterine mucosa is precisely like that in the specimen exhibited, in which it is easy to trace the source of the carcinoma of the uterine wall from the morbid mucous membrane; the size again of the uterine tumour exceeds that of the peritoneal growths, nor is a sufficient histological account of the uterine changes furnished to judge whether the tumour noticed was the only carcinomatous formation present in the uterus, or one of others that may have escaped notice because less prominent. The author, it is true, speaks of the structure of the various tumours as corresponding with that of "ovarian carcinoma," as though there were something unique and diagnostic in the latter; but this cannot be allowed, for similar carcinomata are met with not only in the thyroid, breast, rectum, kidney, etc., but, what is most to the point, in the uterus of the rabbit itself.

In coming to his conclusion as to the causal relationship between his experiment and the disease found after death, Dr. Lack was influenced largely by the statement of Professor J. McFadyean that he (Professor McFadyean) had never seen or heard of carcinoma in the rabbit. The specimen exhibited not only shows that carcinoma occurs in the rabbit, but the uterine changes and the structure of the carcinomata are so alike in the two cases that a repetition of Dr. Lack's experiment is rendered imperative. And, unless this striking result can be repeated, it must be passed by as a coincidence, remarkable enough, but not without parallel, as the historical error of Hunter on the identity of gonorrhœa and syphilis suffices to show.

One is tempted to reverse Morgagni's aphorism, *Non numerandæ sed perpendendæ sunt observationes*. Everything depends in this case upon the number of observations, or, rather, their number constitutes their weight.

Were the rabbit in Dr. Lack's experiment the subject of primary uterine carcinoma, no essential relationship would, of course, exist between the scraping of the ovary and the appearance of the peritoneal growths. There is, however, another possible source of fallacy in a repetition of the experiment as planned by the author. Such an injury as that inflicted upon the ovary might be followed by a carcinoma of the ovary itself, not from the dislocation of normal epithelium into the ovarian tissue, but as the sequence of an infective process set up at the injured spot, and due either to the direct implantation of a contagium vivum or to an indirect transference to it.

This possible source of error may be eliminated by adopting the method of intraperitoneal injection, and I have recently carried out such a modification of Dr. Lack's experiment upon a series of rabbits. As the results of these experiments, whether negative or positive, will be recorded on a future occasion, their details need not be now given, except to state that scrapings of the ovaries of freshly killed rabbits were suspended in warm sterilised salt solution and injected intraperitoneally into a second set of animals.

In another series a similar suspension of testicle scrapings was injected; and in a third series a suspension of ovary and testicle scrapings combined. As a yet further modification, injections of such suspensions were made subcutaneously.

What collateral evidence is forthcoming in support of what may be designated the mechanical hypothesis of the origin of carcinoma, namely, that the mere traumatic dislocation of epithelium into a lymph space is itself sufficient to bring about the growth of a carcinoma? The well-known dissemination of peritoneal papillomata which takes place after the intraperitoneal rupture or spontaneous opening of a papilliferous ovarian cyst does not really belong to this class of phenomena, seeing that such a cyst is distinctly a pathological new formation, and normal characters cannot be safely ascribed to the epithelium investing the growths within it. Similar papillomata are at times met with arising from the surface of one or both ovaries, apart from the perforation of papilliferous cysts; and doubtless their histological characters are in this case to be explained by their origin in connection with the columnar-celled germ epithelium which normally invests the ovary, and which, indeed, originally furnishes by its ingrowth the lining of the ovarian cysts in which similar papillary formations may arise.

Such papillomata have the general features of contagious warts, and are comparable to those which arise in other positions. Setting aside the popular view as to the contagiousness of cutaneous warts, for which there is some experimental evidence, the most interesting and striking proof of this contagiousness is furnished by the papillomata occurring in the mouths of dogs. Not only is the contagiousness of such shown by the wide spread of the disease amongst dogs kennelled together (J. Penberthy, F.R.C.V.S.), but Professor J. McFadyean and Mr. F. Hobday have proved the inoculability of these growths by experiments which have sufficient general interest to justify their citation.

A series of four experiments were made. One such wart was excised from the buccal mucosa of the mouth of a young fox hound, and its cut surface was used to rub a small area of lightly scarified mucous membrane on the right upper lip of each of three dogs, namely, a pug and two fox-terriers. About a month afterwards a slight ridge of growth appeared at the site of inoculation. After attaining in the fox-terrier a size and appearance almost identical with the natural warts in the mouth of the fox-hound, they began to shrink, and eventually almost entirely disappeared. The pug was killed with chloroform, and one of the experimental warts was cut off and rubbed against a small area of scarified mucosa on the left side of the upper lip of each of the fox-terriers of the preceding experiment, and on both sides of the upper lip of a bull-terrier. The attempts to reinfect the mouths of the two fox-terriers were entirely negative in results, but on each side of the lip of the bull-terrier papillomata formed at the scarified spot.

The spontaneous disappearance of cutaneous warts in the human subject is well known, and equally so amongst obstetricians is the retrogression of the disseminated papillomata of the peritoneum which follows removal of the ovaries bearing the primary growth. This latter phenomenon is one that has excited much surprise (a striking instance is cited by Dr. Cullingworth in the *Obstetrical Transactions*, vol. xxxiv, p. 154), but, like the spontaneous disappearance of external warts, it is possibly due to the acquisition of immunity. The tumours, that is to say, may lead to their own disappearance in consequence of the elaboration of some substance antidotal to the action of another produced within the growth, and without which the growth itself would not take place, the auto-immunisation being too feeble to effect a spontaneous disappearance of the whole, but enough to bring about that of the disseminated growths after the voluminous parent masses have been removed.

Whether certain of the cases of spontaneously disappearing sarcoma in man may not come within the same class of phenomena is a speculation not unworthy of consideration. The foregoing papillomata are instances of neoplasms arising from the transplantation of abnormal epithelium. But to turn to the case of normal epithelium. The most recent work in this direction is that of Lubarsch and his pupils, Krückman and Lengemann.[1] Emulsions of various glandular organs were injected into the jugular vein of rabbits. No growth ensued in any part of the body as a result.

The list of organs used, though it comprises testicle, does not include ovary, a notable omission which needs making good. In another series of experiments small portions of glandular organs were mechanically detached and allowed to remain *in situ*, or implanted into the organs of other animals of the same kind. The fragments, even in cases where a small degree of growth ensued, before long shrank and disappeared. The history of tissue fragments detached and displaced within a glandular organ by injury in the human subject must be assumed after these experiments to be similar in kind.

In the case of the injection experiments the vascular and not the lymphatic system, it is true, was chosen.

Yet that this does not weaken the argument appears in the metastasis which regularly occurs by way of the blood stream in the course of sarcoma, and is not unknown, too, in carcinoma, as exhibited in the secondary hepatic growths that may arise in connection with columnar-celled carcinoma of the intestinal canal or rectum, or in Sir James Paget's classical case of "malignant chondroma" of the testicle, which, as proved by the late Professor Kanthack and Mr. S. Pigg, was really a chondro-carcinoma infecting the lungs by way of the spermatic veins. It follows as a corollary that, in order for an embolus to proceed to the growth of a tumour, some morbid character must be impressed upon the epithelium so transplanted.

But apart from such metastasis in malignant disease, the epidermal cysts of the palm and palmar aspects of the fingers furnish an instructive object-lesson of the results that follow the traumatic dislocation of epidermal cells into or beneath the corium, and one to which I referred on the occasion of Dr. Lack's bringing his experiment before the notice of the Medical Research Club in July of last year. I have had opportunities of examining three or four such cysts, and quite recently one which was removed by Mr. E. C. Stabb from the palm of a woman, aged 50, who three years previously had run a pin into the palm; the wound bled, and a week or two afterwards a small swelling appeared which slowly increased in size.

The cyst, as now studied, lies altogether beneath, and separated by the fibrous tissue of the corium from, the general epidermis. Its lining has, as in other examples, all the characters of true epidermis, presenting most inwardly a thick laminated layer of horn, beneath this a well-pronounced stratum granulosum, and still more deeply a rete Malpighii with a vertical set of cells set upon the fibrous tissue, which cells, though parallel, are somewhat displaced from the vertical as a result of the oblique incidence of pressure. The rete of the cyst has about the thickness of the general rete where this lies on the summits of the papillæ. The cyst has an ill-defined wall of fibrous tissue, not differentiated in its more superficial or uppermost part from that of the corium, and it is completely devoid of papillæ or glandular structures. Such cysts remain of small dimensions, the implanted tissue behaving in its after-growth much as in the experiments already cited.

After a certain amount of proliferation, growth ceases, but though epithelial cells are here displaced into the lymph spaces of connective tissue, no formation of a carcinoma ensues.

Amongst the same class of phenomena must be ranged the multiple formation of cysts which may follow the rupture of an ovarian dermoid. Here, again, there ensues a production of simple circumscribed cysts, and not a carcinomatous infection of the peritoneum such as should arise were the mechanical hypothesis of the origin of carcinoma a true one.

REFERENCE.

1 *Geschwülsten und Infectionskrankheiten*, and in the *Verhandlung der Deutschen pathologischen Gesellschaft*, 1899, p. 97.

SPASMODIC CLOSURE OF THE LARYNX DURING THE ADMINISTRATION OF ETHER,

PRECEDED BY NITROUS OXIDE: MITRAL STENOSIS: ALTERNATION OF MURMURS.

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IT is known that some patients with compensated mitral stenosis are unable to take ether as an anæsthetic; the following is a case in point:

On February 6th, 1899, an undersized and very nervous youth, aged 16, a patient under Mr. Gilbert Barling, at the General Hospital, Birmingham, was brought into the anæsthetic room to be anæsthetised for the removal of the vermiform appendix. He was markedly cyanosed, especially about the nose and inner parts of the cheeks, and the finger ends were clubbed, but there was no œdema or ascites. There was no history of recent cough nor any evidence of disease found in his lungs. The heart's apex beat was diffuse, and accompanied with a marked rough thrill. A loud presystolic murmur was heard, leading up to a greatly-accentuated first sound. The second sound was reduplicated, and there was a soft diastolic murmur preceding the presystolic, and separated from it by a short interval. The pulse was of small volume, and rapid but regular.

I gave the patient gas and ether by Hewitt's apparatus and method, using about three-quarters of a bagful of the former. After turning on the ether, I allowed a breath of air at three or four separate intervals to obviate any additional heart strain. There was no excitement or struggling, only just a little movement of the limbs; the colour of the face was unchanged. When he was almost under, that is, when the conjunctival reflex had nearly disappeared, and without any warning, the quiet breathing suddenly ceased, though the chest movements continued. I removed the apparatus, pushed forward the lower jaw, but could neither hear nor feel any air current. Meantime the colour of the face was slowly becoming an ashy grey colour, while the pulse continued regular and of fair volume. Then I depressed the lower jaw, whose muscles were quite lax, and pulled the tongue well out with forceps; still no entry of air. I also passed my finger to the back of the throat, but found nothing that could obstruct the air passage. Concluding that there was spasmodic closure of the glottis, I hastily sent the attendant nurse into the theatre for Mr. Barling and for tracheotomy instruments. Mr. Barling explored the pharynx with the forefinger, but found nothing until with some effort pushing his finger beyond the epiglottis he felt its tip entering the larynx, which was firmly closed. After a little steady pressure the spasm relaxed. He withdrew his finger, air entered, and the patient very quickly recovered colour, and began to show every sign of rapidly-returning consciousness. All this happened in two or three minutes at the most, and all the while the chest movements continued. When the patient had regained colour the back of the throat was swabbed out, but only a small plug of mucus was removed. There had previously been no evident secretion.

Waiting until the patient had practically recovered consciousness I administered the A C E mixture on Silk's metal hospital inhaler, and had very little trouble afterwards. Early in the operation I tentatively added some ether to the mixture when the patient was not very deeply under, and he at once began to breathe stridulously. Thereafter I kept him generally deeply under the influence of the A.C.E. mixture until the end of the operation, the pupils being moderately dilated, with pulse and respiration regular. Once or twice only was there a little very slight phonation. The colour was as before the anæsthetic. When the operation, which took about three quarters-of-an-hour, was finished, the patient came round very slowly, and as he showed no sign of consciousness in about 15 minutes, I opened the mouth with the gag and put my finger down his throat and about the epiglottis. This excited some reflex straining and some laryngeal spasm for a minute or so and then he vomited a few ounces of dark green bilious fluid and frothy mucus. It was more than one hour before he came properly round. As regards the operation, his wound healed by first intention and he did excellently. On February 11th, after he had been quietly recumbent in bed for a few days. I examined his heart with Dr. Bernard Bostock, the House Physician, and we found no thrill or presystolic murmur, but a well marked, soft, mid-diastolic murmur.

On March 1st, when the patient was up and about the ward. I examined him again. He said he felt "quite well," denied having had rheumatism, or anything else the matter with him that he knew of, but admitted that he was "short of breath" at times, and tired On examination in the erect position (he had previously been sitting) I found his heart condition as on February 11th, but after getting him to walk about a dozen yards sharply I found a well-marked thrill and presystolic murmur. After he had been standing still for two or three minutes this was replaced by the mid-diastolic murmur. Thus the mid-diastolic murmur was indicative of less heart strain and better compensation. The patient eventually left the hospital cured of his appendicitis.

Curiously enough, Mr. Barling two or three days before this event had said that in a large experience of operations and anæsthetics he had never yet seen a case of really serious laryngeal spasm during the administration of an anæsthetic. I myself have never before or since observed any condition like this. I had, in choosing the anæsthetic for this case decided to give either the A.C.E. mixture—having in mind the below-mentioned cases quoted by Dr. Hewitt—or gas and ether; but unluckily I preferred the latter. To my mind the laryngeal spasm in this case might have been due to one of two causes. Either a direct irritant effect of the ether vapour of a certain strength, acting on a perhaps particularly sensitive laryngeal tract; for later on in the narcosis the addition of ether to the A.C.E. mixture caused stridor. Whether the sensibility of the mucous membrane to irritation was at all due to the cardiac condition is doubtful. Dr. Frederick Hewitt, in his admirable book on anæsthetics, quotes three cases of mitral stenosis recorded by Mr. Penberthy in which the A.C.E. mixture had been given with the best results. In one of these cases it is noted that "the patient had formerly taken ether with a nearly fatal result." I do not understand why certain patients with compensated mitral stenosis should not be able to take ether, unless their tendency to bronchitis has possibly something to do with it. In another case of mitral stenosis, a girl aged 18, whom about six months later I had to anæsthetise, I gave the mixture of ether 2 parts, chloroform 1 part ($E_2 C_1$), by means of a Clover's inhaler without the bag, and had no trouble. Or the laryngeal spasm might have been due to a plug of mucus suddenly inspired into the glottis. Mr. Barling rather favoured this view, though personally I incline to the

former theory. Perhaps had I not given so much air, which prolonged the induction of anæsthesia, the spasm might not have happened.

Regarding the difficulty of getting the finger down the throat and into the larynx, I have tried the experiment on several cadavera, and have found that in children it is easy to pass my forefinger, which is rather short, past the epiglottis, and push its tip into the larynx. In a woman of ordinary type, by well depressing the lower jaw, and by pushing up the larynx from outside, as in putting on the finger of a glove, I can well get down to the glottis. In the ordinary man or big woman I cannot with the finger by any means touch the vocal cords. They are beyond reach. Hence, in cases of laryngeal closure occurring in full-sized adults, when the finger cannot reach the larynx, tracheotomy would be necessary.

FORMIC ACID AND THE INHALATION OF FORMALIN AS A PREPARATION FOR AND AID TO THE OPEN-AIR TREATMENT OF PHTHISIS.*

BY J. LARDNER GREEN, M.R.C.S.ENG., L.S.A.,
Salisbury.

FORMALIN is the name given to the saturated aqueous solution of 40 per cent. of formic aldehyde obtained from wood spirit by oxidation, the dilute 1 per cent. of formalin in water has no corrosive action; it is harmless to warm-blooded animals. One tablespoonful in one quart of water suffices for the disinfection of rooms, clothing, etc. Aronsohn found that 1 part of formic aldehyde to 20,000 parts of water destroyed the typhus and anthrax bacilli. It has the great advantage that it can be used in a vapourised condition and so available for the disinfection of perishable material without destroying them. Formalin is valuable as a disinfectant and deodorant cleansing septic wounds; it destroys bacteria and combines with the fibrous tissues, so promoting rapid healing.

Dr. Mitchell[1] says that formalin is often useful in the treatment of malignant growths; but to the physician it is useful when inhaled in a fine spray in catarrhal and tuberculous affections of the lungs. Diseased mucous tissues are more tolerant of the vapour than are healthy mucous tissues. Formalin has been successfully used in skin diseases, notably in epidermycosis decalvans and E. tonsurans.

Years ago when in search of the best means for preserving cut flowers in their pristine colours by destroying the microbes causing the fermentative changes (whereby their colours become lost) I found formalin the best for the purpose. Flowers thus retain all their brilliancy and are in strong contrast with the ordinary dried flowers of the hortus siccus. This germicidal property led me in 1895 to experiment with formalin in the treatment of catarrh and influenza, with the hope of destroying the microbes accompanying those diseases. The success was immediate and decisive, as reported in my paper read before the meeting of the Southern Branch, November 25th, 1896. I then recommended a trial of the inhalation of formalin in the early stages of tuberculous consumption, stating that formalin diminished the number of the bacilli in the sputum, as was afterwards confirmed by Dr. Murrell early this year. Dr. Cervello of Palermo has experimented in a similar way. In 1895 the inhaler used by me was not equal to the production of very fine mist-like spray of the dilute solution: subsequently various forms of inhalers were tried, the vapour of formalin issuing forth was almost invisible.[2]

The most satisfactory mixture for the inhalation has been: ℞ Formalin ℥j, glycerin ℥ivss, aq. pur. ℥v. M. To be used with an inhaler four to six times in the twenty-four hours, as may be suitable. Should there be more than usual sensitiveness in the air passages, aromatic spirit of ammonia ♏x may be added to the above mixture.

The following cases illustrate the benefit derived from these inhalations:

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association, held at Portsmouth, August, 1899.

CASE I.—G. P., a gentleman over 30 years of age, went in 1878 to South Italy for the purpose of securing a milder climate—there he had hæmoptysis with continued feeble health—during each subsequent winter spent in England the cough and catarrh returned. In 1895 he used the inhalation of formalin with great relief; since that date he has been free from chest complaints.

CASE II.—B., a young woman, aged 21, had always suffered from winter cough and bronchitis, with symptoms of the first stage of phthisis. In 1897 she inhaled formalin, and has not since suffered from any severe cold or cough.

CASES III AND IV.—Two cases reported to me this year by a physician in Harrogate. He writes: "The first patient said after using the formalin a few days it had given her more relief than anything she had previously tried." The second: "W.C., aged 40 years. Illness began with pleurisy of both sides, May 25th, 1899. On June 5th there was a second attack, with congestion of both lungs. Temperature was normal for three days (June 16th to 19th), then it gradually began to rise a little each day until it reached 104° F. The consolidation of lung tissue continued especially of the left lung. The cough was very troublesome. Angier's petroleum emulsion was given, but the temperature remained at 102° F. I began," my correspondent continues, "with your prescription of formalin; in two days the temperature became normal and has remained so for a fortnight. July 25th: The patient is gaining flesh, the lungs are slowly recovering, and the breathing has become normal."

These cases, my own personal experience, and the numerous cases reported in the European and American journals, prove how bright a prospect is opened up by the inhalation of formalin when given to suitable subjects of phthisis. This being so, I conclude from the proofs of the very excellent results of the open-air treatment that the question arises, Would it not be best to combine these two effective methods for each to supplement the other?

Cases of phthisis in their early stages may, in the first instance, be treated by the inhalation of formalin together with suitable dieting, so as to kill or weaken most of the bacilli before the patient starts upon the open-air treatment, and during that time he is still to continue the inhalation, as may be thought advisable; in this way the length of the sojourn in the sanatorium would be shortened by probably one-third. We may deem the benefit derived from the open-air method arises chiefly from the strength and hardiness conferred upon the patient who thus becomes able, on leaving the sanatorium, to resist the invasion of the tuberculous bacilli. By these combined methods of combating the inroads of phthisis we not only relieve the patient more quickly from suffering, but by shortening the time spent in the sanatorium we diminish the outlay, and shall thereby be able to meet more fully the needs of the poorer patients, who form, both absolutely and relatively, the majority of consumptives, for more of them could thus be accommodated.

The combination of both these tried and successful lines of treatment is earnestly recommended to those who have many opportunities to carry out in a wide field for observation the suggested mode of treatment in the confident hope that we shall greatly lessen the number of the unhappy victims of the greatest scourge of the civilised world; we know that at present "of every seven persons who die, one of them dies of some form or other of tuberculous disease."

NOTE AND REFERENCE.

1 BRITISH MEDICAL JOURNAL, February 11th, 1899, p. 337. 2 (*a*) Messrs. Oppenheimer's "Vapouriser." (*b*) The Formalin Hygienic Company's "Atomiser." (*c*) Messrs. Slater Brothers' "Cloudiser." (*d*) Messrs. Burroughs, Wellcome, and Co.'s "Atomiser."

A CASE OF JACKSONIAN EPILEPSY CURED BY OPERATION.

BY H. DRINKWATER, M.D., C.M., M.R.C.S.,
Wrexham.

THE following case is of interest because at the present time, more than four and a half years since the operation, the man is well and able to work as well as ever he could. The case was a severe one, for the man at the time of the operation was almost helpless, and was rapidly losing his mental powers.

T. W., a joiner, aged 38, first seen in the summer of 1894, had complained of severe and almost constant pain in the left temple for several months, and had occasional "fits" with loss of consciousness. He had been a heavy drinker, but said he had not suffered from venereal disease. The pain in the left temple was soon followed by pain in the right arm, with some loss of power, so that he could not put on his coat without assistance. In August, 1894, he fell down in the street; he "suddenly turned round," dropped down, and frothed at the mouth. He recovered in a few minutes. The next fit occurred six weeks later, whilst at work. He kept well for six weeks, and

then had three fits in a fortnight. The last was the most serious of all, for it was followed by absolute paralysis of the right arm and leg, but without any loss of sensation. During the fits it was observed that the right arm was always more convulsed than any other part of the body, and sometimes was the only part so affected. The paralysis passed off in three weeks. On March 12th, 1895, he had a still more severe fit whilst standing in the house; he "fell down, was convulsed in the right arm, turned blue in the face, and then breathed very hard." It was followed by complete loss of the use of the right arm and leg lasting three days. The next fit occurred on April 12th, 1895. He fell down, turned very red in the face, but did not lose consciousness. Another fit occurred as he was going to bed at night, and on April 21st he had another.

On April 23rd I explained to him and his friends that he was losing ground, for his mental faculties were certainly getting duller, and he was now never free from pain in the head, and as no treatment hitherto adopted (including, for instance, potassium iodide and mercury in large doses) had proved of any benefit, I proposed trephining the skull, and they readily gave their consent.

Seeing that the convulsions were most marked in, and sometimes actually confined to, the right arm and leg, it seemed pretty certain that their cause was situated in the neighbourhood of the ascending frontal convolution of the left side, and most probably near its lower part, as the speech was affected. During the last three weeks the patient had noticed, every evening after going to bed, a twitching of the right arm and hand, which he was often unable to arrest.

The pain in the head was always much worse immediately after the fits than at any other time. I had repeatedly asked the patient whether he had ever sustained any injury to his head, and he always declared most emphatically, and so did his mother, his brothers, and sisters, that he never had been hurt about the head, and on examining it I failed to find any evidence of injury.

For the last week I found that on pressing firmly over the region of the left ascending frontal convolution, about its middle portion, he complained of pain, and so also on percussing the same spot. On April 25th I operated (he had a fit early in the morning). On shaving the scalp a linear cicatrix an inch long was discovered just half an inch above the point at which I had intended to trephine. It was an old scar, proving that my suspicion of injury was well founded. The patient can tell us nothing about it. On dissecting a rectangular flap down a portion of the bone was laid bare that had evidently been fractured in a radiating manner, the fracture being limited to the outer table, as the rounded portion of bone showed no sign of fracture on the inner aspect. The depressed portion, that removed by the trephine, was exactly over the area which I thought was being irritated, and half an inch below the cicatrix. The bone had evidently suffered from inflammation, as it was of similar structure throughout its entire thickness. The appearance of the dura mater was quite healthy.

On changing the dressing the day after the operation, primary union was found to have occurred throughout the whole extent of the wound. Up to April 30th he had had no sensations since the operation, such as were of daily occurrence before it.

By May 16th all discharge from the wound had ceased. Before the operation he had had very little control over the right arm and hand; for example, he could not use a knife and fork. But from May 6th he had been able to use the knife a little, and his grip was rapidly becoming stronger. On this day he laced his boots himself for the first time for some months. His articulation had improved, though it was still not quite distinct; the most noticeable defect being with the labials, especially *f*, and *v*.

On May 19th I was called to him at 8 30 A.M. He had passed a bad night. His brother, who was sleeping with him, was awakened at 5 o'clock by hearing him breathing heavily. He found him "lying on his face, and he soon after began to tremble all over." He thought he had had a fit. His temperature was normal, wound looked all right, and there was no return of pain in the head. On the previous day a pedlar had called at the door, and wanted to fight. This had upset the patient very much at the time.

On May 20th the wound was completely healed. In the evening he had "two faints" like the old feelings, but very much milder, and again on the 23rd, 27th, and 30th. The administration of potassium iodide was recommenced.

On June 7th he felt much better, and had no pain in the head. His mother said that he now joined in conversation, whereas before the operation all he said was "Yes" or "No," or "I don't know." He had not had any feeling of "faintness" since May 30th.

On June 8th the optic discs were found to be normal.

On June 22nd, whilst walking, he "felt his face flush;" he rested against a wall for a few seconds, and then walked on. He had no feeling of falling. He was now very much sharper in every way. Before the operation the shortest time he took to count 20 was seven seconds, and many numbers were very indistinct. Now he says the same distinctly in four seconds.

On July 15th he resumed work.

On August 8th, whilst at work, he fell down, and bruised his forehead. This was the first attack since May 30th.

In April, 1896, he complained of pain above the site of operation. As I was doubtful about his habits as to alcohol, I sent him to the Northern Hospital, Liverpool, to be under observation. He remained there eight weeks.

The man is now (December, 1899) in good health, and working regularly at his trade, and has had no return of the old trouble for which the operation was performed, more than four years and a-half ago.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting held on January 11th, Mr. Edgar A. Browne, F.R.C.S.Edin., was elected President; Mr. H. Briggs, F.R.C.S., Hon. General Secretary; Dr. J. E. Gemmell, Hon. Librarian; and Mr. F. C. Larkin, one of the Hon. Secretaries to Ordinary Meetings and the Pathological Section.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF IMPERFORATE VAGINA.

A GIRL, aged 17, unmarried, was seen by me about eighteen months ago, owing to the non appearance of menstruation. As there was a family history of delayed menstruation—her mother not having menstruated before 17 years of age—I advised waiting until the same age before submitting her to an examination. Hysterical seizures having appeared in a severe form, I was again consulted, and decided on an examination.

She was slim and very tall for her age. The breasts were firm and well developed. The abdomen showed no swelling above the pubes, but was sensitive to the touch in the ovarian region. The mons veneris was normal, and the vulva seemed normally developed. In the position of the vaginal orifice was a small round aperture that did not admit the little finger. A sound was passed in, but only entered to about half an inch into a very small *cul-de-sac*. On passing the finger into the rectum the point of the sound could be felt. Passing beyond this nothing could be felt like the cervix or body of the uterus. The most careful recto-abdominal examination failed to demonstrate the presence of a uterus. With a sound in the bladder the septum between the urethra and rectum was felt to be exceedingly thin, and no trace of a vagina could be found. The ovaries were next searched for, and an elongated thickening could be felt on the two sides in the ovarian region, and more marked on the right side. There was some sensitiveness on pressure, especially on this side. The patient was examined by two other medical men, one of whom entirely agreed with my diagnosis of complete absence of vagina, uterus, and tubes, with slight hypertrophy of the ovaries. While concurring in the absence of uterus and vagina, the other failed to find any trace of ovaries.

Such is the brief statement of the physical condition found by examination.

In cases like this *post-mortem* examination has sometimes shown that the absence of the uterus has been apparent and not absolute, the organ being represented by a muscular band closely applied to the posterior bladder wall. Hence it can here only be asserted that the uterus is not discoverable by clinical examination.

An interesting point in this case is that, although there is apparently complete absence of the uterus and vagina, there is a perfectly normal development of vulva, mons veneris, and mammæ. This fact inclines me to think that the thickenings felt at the sides are really ovaries, especially as the patient is possessed of the ordinary amorous feelings, as evinced by her manner of acceptance of the attentions of a suitor who has since offered marriage. As marriage is impossible and surgical interference not warranted, the question of the presence of ovaries is important, as, if the hysteria—which has already caused the loss of her situation—be persistent and incapacitates her for work, removal of the ovaries must be considered.

Port of Spain, Trinidad. STEPHEN M. LAURENCE.

TWIN PREGNANCY WITH CENTRAL PLACENTA PRÆVIA.

ON October 17th, 1899, at 5 P.M., I was urgently summoned to attend C. W., aged 26, suffering from severe flooding. She had borne one full-term child two years previously. There had been more or less hæmorrhage for three weeks, but the sudden and severe attack rendered immediate aid necessary. The patient was in the eighth month of pregnancy. On vaginal examination the cervix admitted three fingers, and the placenta only could be felt lying over the centre of the internal os. The pains were feeble and irregular, and with each pain there was a considerable loss of blood. Forcing two fingers of the right hand through the presenting body (the placenta), whilst pressure was maintained over the abdomen with the left, the fœtal head was reached enclosed in its membranes. These were punctured and internal podalic version performed with difficulty. The right hand being again passed

into the uterus the placenta was peeled off, when a second fœtus was felt, lying high up and to the right enclosed in its membranes, and presenting by the feet. These membranes were punctured and the child brought down and delivered. After applying restoratives expression of the placenta was attempted, but not maintained for long owing to continued hæmorrhage and the collapsed state of the mother. The hand was reintroduced, and could feel the placenta freed and lying in the uterus. This was pushed up, when a second placenta, firmly attached to the right side of the lower segment of the uterus, was felt. This was peeled off and the uterus emptied.

The placentæ were both well formed, the first one showing where it had been broken by the hand, the second intact. There were two distinct cords. The children, male and female, were both dead. The mother made an uninterrupted recovery.

The case is interesting, inasmuch as it presents a condition of double placenta prævia, both complete and partial in its characters.

COLLINGWOOD FENWICK, M.R.C.S., L.R.C.P., L.S.A.
Clapham, S.W.

IMPERFORATE ANUS.

I WAS interested in the case recorded in the BRITISH MEDICAL JOURNAL of November 11th, 1899, and discussed at the meeting of the Liverpool Medical Institution, having had a similar case a dozen years ago, of which the following is the history: The patient, a male child, was found the day after birth passing fæcal matter by the urethra. The anus was imperforate. A deep incision was made on the fourth day, after giving time for the rectum to become distended with the hope of finding the bowel. This did not succeed. A large-eyed probe was passed through the urethra and its point cut down upon in the anal wound; a narrow strip of green silk was threaded into the eye of the probe, drawn through the anal wound, and the ends tied. This was allowed to remain for a week. The anal wound was plugged to keep it open. The fæcal matter passed by the urethra gradually diminished and after a time ceased. The child was under observation for more than a year, since which time I have lost sight of it. It would be interesting to speculate why the two passages opening into a common receptacle each selected its own proper excretion; but I have no time to enter into it. The result of the operation was to make a sort of cloaca, which was less objectionable than an artificial anus.

Workington F. ORMROD, L.R.C.P. and S.Edin.

A CASE OF BRAIN TUMOUR SIMULATING MYXŒDEMA.

A MAN, aged 56, consulted me in February, complaining of weakness in his lower limbs, some loss of memory, and slight general headache. As a young man he had lived in China, but was not sure whether he had ever suffered from malaria. Venereal diseases were denied, and I was unable to find any signs of syphilis. His eyegrounds were normal, and there was no history of sickness or vomiting. The patellar reflexes and sensation were normal. His speech was slow, articulation poor, and at times he seemed to fail to grasp the meaning of ordinary conversation. I could not arrive at a definite diagnosis, and prescribed a tonic containing small doses of strychnine.

About three months from this time he complained of having fallen in the street twice within a week, and on particular inquiry I found that on both occasions he came down on the outer and posterior aspect of his right shoulder, that is, he fell backwards and to the right.

A second opinion was obtained, and as now his bodily weakness had much increased, and the headache had become more located in the occipital region and right side of the neck, I mentioned the possibility of cerebral tumour, but finally acceded to my friend's view that myxœdema was perhaps the trouble. It must be confessed that the condition of skin, slow perception, cold, spade-like hands, slow pulse, and general weak condition of body, pointed in that direction. Optic neuritis and vomiting were never found. Our patient was at once put on tabloids of thyroid extract. After six weeks' treatment he had so far recovered that from a condition of inability to walk alone, he was able to journey by himself to Wales, where he spent another six weeks. On his return in September he expressed himself as "feeling remarkably well," although it was easy to see that he was still weak; moreover, his headache, which had completely disappeared, now troubled him a little at times. Shortly after this he suddenly became ill, developing signs of paraplegia, with loss of function of the bladder and rectum, and died about the middle of October.

The necropsy revealed a large glioma, $3\frac{1}{2}$ inches by $2\frac{3}{4}$ inches, situated superficially in the right occipital lobe. The thyroid gland was normal.

The uselessness of the thyroid extract as a therapeutic test in the diagnosis, as is in so many cases potassium iodide in the diagnosis of syphilis is apparent.

Brunswick Square, W.C. DAVID SOMMERVILLE, B.A., M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

A SUCCESSFUL CASE OF CHOLECYSTOTOMY.

By G. P. NEWBOLT, F.R.C.S., Honorary Surgeon to the Hospital.

C. M., aged 47, married, was admitted on April 29th, 1889, suffering from severe pain in the right hypochondriac region and slight jaundice.

Previous History.—She had been married twenty-one years, and, with the exception of bilious attacks, had always been healthy. About the middle of March, 1899, patient was washing, when quite suddenly she felt a very severe pain shooting from the right hypochondriac region through to the back. Thinking it was indigestion she rested. The next day she had similar pain, felt very sick, and vomited a large quantity of bile, and finally was laid up in bed for two weeks. Getting no better she consulted a medical man, and as the attacks of pain got more frequent and more severe she was sent to the hospital.

She remained in the Royal Southern Hospital three weeks under observation, and during this time had eight attacks of biliary colic. These were relieved by morphine to a certain extent, but on one occasion chloroform had to be administered before relief was obtained. After the attacks bile appeared in the urine and the patient became jaundiced. Her temperature ran up to 102°, but there was no rigor. During the attacks of colic the pain was most intense and agonising and the vomiting distressing, but no stones were detected in the fæces.

On examination the patient, who looked older than her years, was in fairly good condition. A distinct resistance was felt in the right hypochondriac region, but no definite tumour could be made out. There was some tenderness over the region of the gall bladder.

On May 23rd an exploratory incision was made over the region of the gall bladder, extending from the margin of the ribs downwards for $3\frac{1}{2}$ inches in the right linea semilunaris. On opening the peritoneum it was found that the omentum was adherent to the liver, and covered the gall bladder. After some trouble the latter, which was only slightly enlarged, was exposed, but it lay tucked up and bound down to the liver, and was almost inaccessible. Having failed to free and bring up the gall bladder, I packed in sponges to shut off the peritoneal cavity, opened the fundus and extracted some seventy small stones, the largest of which was about the size of a pea. These stones could be felt from the outside packed into the neck of the gall bladder. A little muco-pus was also evacuated. I next examined the interior of the bladder with my finger, but finding nothing more, the cavity was packed with a sponge, and the cystic and common bile ducts were examined from outside. Nothing, however, was detected in them; so I proceeded to shut off the peritoneal cavity by suturing the gall bladder to the peritoneum, using omentum in some places to fill the gaps. After some trouble this was satisfactorily carried out. The sponge was now removed, a tube inserted, and the gall bladder washed out, the tube remaining in. The rest of the cavity was packed with gauze, except above

and below where the skin and deeper parts were sutured. The after-progress of the case was most satisfactory, the pain and vomiting ceased, bile flowed freely from the tube, and the patient was comfortable. She had retention of urine for ten days, the jaundice faded, and the stools became of a natural colour, the constipation disappearing. Her temperature reached 99 8° on the fourth day after operation, and was never above normal afterwards. The tube was kept in for about three weeks, and then the sinus gradually closed. On June 6th, when changing the tube, two other gall stones came away. The patient left the hospital on July 5th, perfectly well in every way.

REMARKS.—The interesting points to my mind were: (1) The matting together of the omentum, forming a tumour which quite obscured the gall bladder; (2) the fact that it was so difficult to get at the gall bladder, the wound being quite 2½ inches deep, though the incision was a fairly long one; (3) the impossibility of bringing the gall bladder up into the wound at any time during the operation; (4) the stones were quite black, crumbled under pressure of the fingers, and consisted of bile pigment. The patient was shown before the Liverpool Medical Institution on November 2nd, 1899. She was then in very good health, and had had no further trouble.

MANCHESTER ROYAL LUNATIC HOSPITAL, CHEADLE.

A CASE OF RUPTURE OF THE HEART.

By JOHN SUTCLIFFE, M.R.C.S., Assistant Medical Officer to the Hospital.

A YOUTH, aged 17, was admitted into the hospital on May 15th, 1863, suffering from mania. He had delusions that people were stealing from him and he was considered dangerous to others. He remained in this condition for some years. In 1872 he was described as being demented, generally quiet, but with occasional attacks of excitement, during which he continuously walked about talking loudly and swearing. The last attack of any moment was in 1892. Since then his condition has been one of quiet dementia; he was very reticent, when he talked it was usually about some great wrong that had been done. He never had any physical illness, and it was generally noted that he was in robust health. In 1880 he was said to be "very stout." He was five feet six inches in height and weighed, at the time of his death, about 14 stone. He was always very willing to assist in any kind of work and formed one of any party engaged in digging or wheeling. On the evening of October 29th, 1899, when 53 years of age, he was seen to go into the lavatory, and within five minutes he was found dead seated on a watercloset. His head had fallen forward, and there were no signs that he had struggled. He had not complained of feeling ill, and nothing unusual had been noticed in his appearance. A *post-mortem* examination of his chest and abdomen was made next day. Fat was deposited everywhere in large quantities. The stomach and intestines were distended with flatus; the various abdominal organs and the lungs were healthy; the pericardium was filled with very dark-clotted blood; the heart was pale and anæmic, and showed much fatty deposit. About the middle of the left side of the left ventricle a rupture of the wall was discovered, through which blood had escaped into the pericardial sac; ruptured vessels in the wall itself had also bled. The Clinical Research Association gave the following report:

"Sections made of the wall of this heart show infiltration of the muscular tissue with blood, and this condition is evidently due to rupture of the heart. The muscle has undergone much fatty degeneration, and there is also inflammatory change in it: hence there may have been a primary focus of inflammation, which caused fatty degeneration and softening of the wall, and this rupture occurred at a weakened spot on straining. No signs of syphilis or fibroid degeneration have been found in the cardiac substance."

THE RESEARCH UNIVERSITY OF INDIA.—The choice for the site of this university is now practically restricted to Bombay or Bangalore. The *Times of India*, in a leading article, leans towards Bombay, stating that the peculiar character of the proposed university invests with special force the argument in favour of establishment at a commercial centre.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

S. COUPLAND, M.D., Vice-President, in the Chair.

Tuesday, January 16th, 1900.

THE OCCURRENCE OF THE BACILLUS PROTEUS VULGARIS IN A VENOUS THROMBUS.

MR. W. C. C. PAKES described a case of thrombosis of the right and left iliac and femoral veins occurring in a patient suffering from phthisis and tuberculous enteritis. The clot in the left iliac vein was examined *post mortem*, and a pure culture of the B. proteus vulgaris was obtained therefrom. In spite of the fact that this organism was frequently associated with *post-mortem* decomposition, Mr. Pakes did not think that this would explain its presence in the case he described, since these organisms were present in the clot in considerable numbers without any obvious decomposition. He pointed out that an organism like the B. proteus vulgaris, which was not pathogenic to the human subject in good health, might be so to a patient whose vitality had been reduced by a wasting illness such as phthisis. He thought that in view of the slight knowledge possessed concerning the causation of thrombi, it would be well if every case of thrombosis were examined bacteriologically.

THE BACTERIOLOGICAL EXAMINATION OF A THROMBOSED RIGHT OVARIAN VEIN FOLLOWING HYSTERECTOMY.

Dr. T. G. STEVENS recounted the above case:—J. S., 47, was operated on by Dr. Galabin for a large fibromyoma of the uterus. Abdominal hysterectomy by Baer's method was performed. The patient survived the operation eleven days, and eventually died of a subacute form of septicæmia. At the *post-mortem* examination the right ovarian vein was found to be thrombosed from the ligature up to its entrance into the vena cava. Cultures were taken from the interior of the vein in the following manner:—The peritoneal cavity having been emptied of its contents—liver, stomach, intestines, etc.—the vein was exposed, and its surface, as well as the peritoneum around, was seared with a hot iron. The vein was then opened with a pair of sterilised scissors, the edges held apart with sterilised forceps, and a broth tube inoculated at once with a sterilised platinum loop from the breaking-down clot in the vein. The broth tube was placed in an incubator at 34° C. for twenty-four hours. After the interval the broth was uniformly clouded with growth, which, on examination in a hanging drop, showed short bacilli, long bacilli, and streptococci. Gelatine plates were inoculated from the broth tube in the usual way and incubated at 18° C. Plate No. 2, at the end of twenty-four hours, showed three kinds of colonies: (*a*) Typical colonies of the bacillus coli communis group; (*b*) streptococcus-like colonies; (*c*) a liquefying fluorescent organism. When transplanted on to agar and broth, (*a*) and (*b*) showed only growths indistinguishable from bacillus coli communis; no streptococcus colonies were found. On agar (*c*) produced a white growth with a brilliant green fluorescent coloration of the medium. In milk, coloured faintly with litmus, it gave proof of intense acid reaction, and completely clotted the medium; on gelatine, white liquefying colonies, with the fluorescent green pigment in the medium; in broth, a yellowish-green turbidity. All these growths microscopically were made up of short bacilli. From these cultures and the microscopic appearances the organism was judged to be the bacillus pyocyaneus. Could this condition have been diagnosed as one of thrombotic pyæmia, Dr. Stevens felt sure that, from the *post-mortem* appearances, the vein could have been easily dissected out, and possibly the fatal result have been averted. He put forward this suggestion tentatively, and with every regard to the desperate condition that this patient was in, in the hope that thrombosed veins in accessible positions might be more frequently examined bacteriologically as a help to the surgeon in performing operations for the relief of such desperate cases.

MYCOTIC TUMOUR FROM THE HORSE.

Mr. ALEXANDER G. R. FOULERTON showed a mycotic tumour which had occurred in the maxillary sinus of a horse. The

tumour was irregularly oval shape, measuring 10 cm. in the longer and 8.5 cm. in the shorter diameter. It consisted of a central core of soft caseous material, enclosed within a mass of dense fibrous tissue, the latter measuring from 2 to 4.5 cm. in thickness. The core contained a large quantity of the mycelium of a mould fungus. The pathology of the tumour was supposed to be as follows: The dense outer fibrous layer probably represented the overgrown wall of a suppurating cyst which had been connected with the fang of a carious tooth. The caseous core represented the inspissated contents of the cyst cavity which had been infected by the mould fungus from the mouth. The mycelium was arranged in star-shaped masses; individual threads differed considerably in their thickness; there was no evidence of sporulation. The mycelium stained well by the ordinary aniline dyes, but not by Gram's method. As there had been no opportunity of making cultures, it was impossible to give an opinion as to the exact species of the fungus. It was, however, probably not streptothrix actinomycotica, the common ray fungus of horses and cattle; nor could it be confounded with the aspergillus moulds which also infected horses. From the nature of the specimen it seemed clear that the fungus had existed within the tumour during the life of the animal, and did not merely invade the tissues after death.

THE MECHANICAL THEORY OF THE ORIGIN OF CARCINOMA.

Mr. S. G. SHATTOCK showed a specimen of "Spontaneous" Carcinoma of the Uterus in the Rabbit, and read the paper, which is published on page 136.

Mr. C. A. BALLANCE emphasised the difference between normal epithelium and that of a carcinomatous lesion, in which latter it had acquired a practically unlimited capacity for growth. The selection of the ovary by Dr. Lack was worthy of attention, by reason of the high potentiality of its cells. Nevertheless, he was inclined to think for the present that Dr. Lack's result was a coincidence, and that the carcinomatous formation bore no essential relation to the scraping of the ovaries.

SOME RESULTS OF EXPERIMENTS WITH THE TOXINS OF THE PNEUMOCOCCUS.

Dr. A. G. AULD, in the following remarks briefly embodied some of the main results of an investigation extending over two years, in which nearly two hundred animals had been experimented upon. Finding the published results of those who had experimented with regard to immunisation against the pneumococcus to be extremely diverse and even in many points contradictory, the author carried out, in the first place, a prolonged series of experiments on the production and action of the toxins formed by the organism. In a previous paper[1] he pointed out that in broth, the pneumococcus quickly produced lactic acid, which apparently inhibited its further growth. To counteract this, (1) some precipitated chalk—sufficient to form a thin layer at the bottom of the flask—was sterilised with the beef broth. The other media used were (2) decalcified broth together with 5 to 10 per cent. sterile horse's blood plasma, (3) ordinary broth with 5 to 10 per cent. red layer of horse's blood, (4) ordinary broth with 10 per cent. Loeffler's serum, (5) broth with plasma and corpuscles combined. 1. First, these media were inoculated with cocci from the blood of rabbits infected with pneumococci derived from the human subject. After two to five days' growth the cultures were filtered, and varying quantities of the toxins (2 to 20 c.cm.) injected subcutaneously, and also into the peritoneum of rabbits. The result of injecting 10 to 20 c.cm. was merely a slight and transient elevation of the temperature. 2. The same toxins were again injected into a number of rabbits, beginning with 2 to 5 c.cm. and gradually increasing the dose to 15 c.cm. These injections were made twice a week, until by the fourth week 40 or 50 c.cm. had been administered. During this time the animals gained considerably in weight. To others larger doses, both subcutaneous and intravenous, were given, 10 to 20 c.cm. at an injection, until 50 or 60 c.cm. had been given. In some of these the weights fell after about a week, then in the course of another week or so the weights would begin to rise again. In one animal injected with the blood-broth toxin the weight fell 300 grams by the eighth day, it gained 50 grams and then remained stationary for twenty days, when a complete paralysis of the extensors of the legs set in. The animal became very ill, temperature 140°, hair rough, and it seemed like to die. It continued ill for many weeks, but slowly recovered from the paralysis, until in about three months it seemed quite well again. All the animals, together with two controls, were tested with living pneumococci four weeks after the last injection (except in the case of the paralysed one). The day after inoculation all except three and the controls were dead. On the third day all except one of the controls were dead. On the fourth day this control was dead. After the paralysed rabbit had completely recovered, it and a control were tested with virus. Next day the paralysis had returned exactly as before. Two days afterwards it died, the control surviving it by about eighteen hours. 3. The organism was carried over in rabbits to three generations, when its virulence was much increased. [The cultures were preserved in blood in sealed glass bulbs at the ordinary room temperature]. After four days' growth in the same media the toxins were filtered off and injections made as before. The results were again disappointing even when doses of 30 c.cm. were employed. A curious effect of the toxins began to come out, namely, that sometimes the animal somewhat suddenly died after two to four weeks or longer without showing any signs of previous illness and without any discoverable *post-mortem* changes. 4. The culture was carried over by inoculation into the pleural cavities of rabbits for six generations. It then became intensely virulent, so much so, that a single small loopful of the infected blood killed in eight hours, without producing any local lesion, the blood teeming with capsulated cocci. Finding the media somewhat disappointing, Dr. Auld confined the cultivations to veal broth with chalk, and veal broth with 20 per cent. horse's serum. This highly-virulent organism grew very richly. It continued growing for ten days, forming a thick deposit, and also numerous large flakes and strings suspended in the medium. After a fortnight it was filtered. The results of injecting this toxin were as follows: In doses of 10 to 20 c.cm. an illness was induced with rise of temperature, from which the animals recovered, the serum toxin producing the stronger effect. In doses of 30 c.cm there ensued illness with a high temperature (104° to 106°), loss of weight, and generally death from the tenth to the fourteenth day. When the toxin was heated for an hour at 65° C., the effect seemed to be distinctly more marked. In these cases, also, diarrhœa was a not uncommon feature. This dose proved fatal to animals weighing 2,700 grams. Experiments were also made with this serum toxin with a view to immunising. Graduated doses were given up to 30 c.cm., and also moderate doses, subcutaneously. The animals were tested with virus at varying periods from the twenty-first to fifty-seventh days. In all cases they succumbed before the controls. From the fiftieth to sixtieth days, some of the animals were again treated with large doses of serum toxin. They showed increased susceptibility to its action, and in one case foreleg paralysis supervened, as was found in a former case. They were also treated with virus of medium strength, together with a control. A local hard swelling formed at the site of inoculation in the abdomen. They all died within a week except the control, in whom the swelling turned into an abscess discharging pus externally. It ultimately recovered. 5. The broth was again modified by the addition of a considerable quantity of blood obtained from rabbits infected with the virulent organism. The lethal dose was in this case also about 30 c.cm. to animals weighing from 2,500 to 3,000 grams, but it was found impossible to measure this accurately, as the animals showed slightly different degrees of susceptibility. Injections were again made in graduated and also in large doses. The animals were subjected to virus at varying periods from the fourteenth to twenty-seventh day. In every case death occurred sooner than in the controls. 6. The toxin was injected in very small and gradually-increasing doses, beginning with $\frac{1}{2}$ c.cm. subcutaneously, increasing by $\frac{1}{2}$ c.cm. every third day until the twelfth day, then 2 c.cm. and so on, until the dose reached 10 c.cm. One or two of the animals died quite suddenly during this period—a circumstance already alluded to. All the others gained in weight. They were tested by virus at varying periods from the twenty-first to the forty-second day. The result was the

[1] BRITISH MEDICAL JOURNAL, March 27th, 1897, p. 775.

same as in the others—they succumbed before the controls. It should be mentioned that the organism was grown by Dr. Cartwright Wood in veal broth rendered considerably alkaline, being standardised in this respect with phenolphthalein, for the purpose of serving as a medium for the diphtheria bacillus. Growth occurred extremely well in this medium, and the results of a limited trial were not very materially different from those produced by the serum toxin. The most notable result of these experiments was undoubtedly the increased sensitiveness to the pneumococcus produced by inoculation of its toxins—in rabbits at least. Under all circumstances of dosage this supersensitiveness was manifest, and, consequently, any attempts to immunise in this way seemed to be contraindicated, unless some other method of administering the toxins happened to be successfully found. These results, however, harmonise to some extent with what had been found in the case of plague toxin, and it might be noted that this phenomenon of hypersensitiveness was to be found under many other conditions. This harmful action of the toxin would indicate the intracellular poisons of the bodies of the micro-organisms to be probably the most suitable immunising agents, and this view was borne out by the experiments of Foà and Scabia,[2] who state that a watery glycerine extract of the dead bodies of the pneumococci forms a much better immunising medium than the diluted virus itself. Presumably, therefore, this result might be regarded as due to the production in the latter case of the more soluble toxins. The lethal dose of toxin obtainable in these experiments was about $\frac{1}{1000}$th part of the weight of the ianmal, which corresponded to the lethal dose of the filtered extract of the blood and tissues of rabbits dead of pneumococcal infection, as was found by Isaeff. The occurrence of foreleg paralysis in two cases was noteworthy, and, so far as Doctor Auld knew, hitherto undescribed. It would appear that the poison had a selective affinity for the nerves and their centres supplying these parts. In this research the author had had the valuable assistance of Dr. Cartwright Wood, to whose active participation and guidance the work was largely due.

Dr. J. EYRE referred to the importance of having the culture broth alkaline, as the formation of acid by the pneumococcus almost annihilated its toxin-producing capacity.

Mr. PAKES observed that the author had remarked that there were several micro-organisms the toxins of which increased the susceptibility to the organisms. He doubted, however, whether there was an organism against which an animal could be immunised by successive doses of the living or dead bacterium which readily yielded a toxin that increased the susceptibility of the animal to the same particular micro-organism.

ACCESSORY CENTRE OF OSSIFICATION IN THE PATELLA, WHICH HAD FAILED TO UNITE WITH THE REST OF THE BONE.

Mr. CORNER exhibited a skiagram illustrating this rare condition. The picture suggested at first the traumatic detachment of portion of the upper margin, but there was no history bearing out this supposition, nor was the size of the patella below diminished.

CARD SPECIMENS

Dr. A. E. LEDIARD: (1) hydatid cyst in muscle; (2) loose cartilages from the elbow.

CLINICAL SOCIETY OF LONDON.

CLINICAL EVENING.

Sir R. DOUGLAS POWELL, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, January 12th, 1900.

COMPLETE SUBPERIOSTEAL RESECTION OF OS CALCIS.

MR. J. HUTCHINSON, jun., showed a young man, aged 17, on whom he had performed complete subperiosteal resection of the os calcis for osteomyelitis with excellent results, the patient being now able to walk and bear his weight upon the new bone. The only drawback was some retraction of the great toe.

Mr. HERBERT PAGE remarked that the operation was not a novel one, his father having done it in 1840.

Mr. HUTCHINSON, in reply, disclaimed any claim to originality, observing that though not new the operation was sufficiently rare to make it of interest in view of the result.

PAROXYSMAL HÆMOGLOBINURIA IN A CHILD.

Mr. LUNN showed a girl, aged 6, the tenth of twenty-four children, of whom fourteen were living, in whom the peculiarity was noticed when 1 year of age. From time to time she passed port wine urine containing normal red cells. The proportion of red corpuscles to white in the blood was about half the normal. Her sister was suffering from interstitial keratitis, which pointed to syphilis.

Mr. W. G. SPENCER recalled the case he had shown of a boy with paroxysmal hæmoglobinuria, who had had several attacks of dry gangrene, the first attack dating from his sleeping out one summer's night. Professor Osler had noted cases of Raynaud's disease with high arterial tension associated with apparently congenitally thickened arteries. Many such cases ended early in life by uræmia or apoplexy.

Dr. VOELCKER commented on the interest of the evidence of syphilis in the connection with hæmoglobinuria, adding that in a large proportion of these cases there was a definite history of syphilis. In 1 case to which he referred there was a history of acquired syphilis. On examining the blood he had noted an undue tendency of the red corpuscles to cohesion forming snake-like coils and the corpuscles were elongated or lemon-shaped.

Dr. SUTHERLAND recalled that paroxysmal albuminuria and hæmoglobinuria had been described as alternating manifestations of the same condition. Another condition often present in these cases was an excess of oxalates, this excess persisting for a considerable time after the hæmoglobinuria had passed off.

Mr. LUNN said that the patient usually had a rise of temperature with chill and collapse when the attack was imminent, but in the intervals her health was good. Heightened tension had been suspected. Oxalates had been found in the urine, but the intermediate urine appeared to be normal.

CONGENITAL LUXATION OF RIGHT HIP.

Mr. LUNN exhibited a child, aged 5, with this deformity; and a skiagram of the case.

In reply to Mr. JACKSON CLARKE, Mr. LUNN said that he had not adopted any treatment, fearing to make matters worse.

DOUBLE FACIAL DIPLEGIA.

Mr. LUNN exhibited a man and a woman both suffering from double facial diplegia.

MALIGNANT DISEASE OF THYROID AFTER TWO OPERATIONS.

Mr. CHARTERS SYMONDS showed a woman, aged 58, who came in September, 1897, with a growth in the left lobe of the thyroid. The enlargement had been noticed nine years before, but had remained stationary until eighteen months previously. There was a large fixed swelling pushing the windpipe over to the right, and causing a good deal of dyspnœa. He removed a large portion of the growth, and then performed tracheotomy in November, 1897. In the spring of 1899 the pressure returned, and he then extirpated the whole of the left and the major portion of the central lobe of the gland, leaving only a portion too deep behind the sternum for safe removal. The operation was almost bloodless. She had paralysis of the left vocal cord, but could speak distinctly. There was no longer any discomfort. He called attention to the comparatively small amount of blood lost, as was usual with purely epithelial growths of the gland, and he insisted on the peculiarity of the growth remaining unilateral, and on the not unprecedented supervention of malignancy on long-standing enlargement of the gland.

Mr. A. BARKER remarked on the fact that malignant growths of the thyroid often ran a very chronic course, and he alluded to a case of his own which had lasted eighteen years and for twelve under his own observation.

Mr. SYMONDS, in reply, said that in one of his cases the history extended over ten years but in another only twelve months.

[2] *Gaz. Med. de Torino*, 92, 13, 14, 16.

ANKYLOSIS OF TEMPORO-MAXILLARY JOINT.

Mr. JACKSON CLARKE showed a girl, aged 8 years, who had had complete fixation of the lower jaw for over three years, dating from soon after an attack of scarlet fever with "diphtheria." She was first taken to a London hospital, where, after an unsuccessful attempt to break down adhesions, the molar teeth on the left side were removed in order to allow her to be fed. Her appetite during the three years had been very large, but she remained very thin. At the North-West London Hospital in November last, Mr. Clarke cut down over the right temporo-maxillary joint through an incision planned to avoid the trunk of the facial nerve, the parotid duct, the superficial temporal artery and other structures near the joint, and removed the neck of the bone. The result of the operation was entirely satisfactory. After a few days the patient could masticate food. On leaving the hospital fourteen days after the operation she had gained 6 lbs. in weight, although satisfied with a smaller quantity of food. At present she could open the mouth for more than an inch and close it perfectly. Mr. Clarke referred to another case in which he had performed similar operations on both sides in an adult for bilateral ankylosis, and in which an equally good result was obtained. Now, nine months after the operation, the patient had improved rather than otherwise, having by exercise obtained a greater power of moving the jaw.

Mr. BARKER remarked that it used to be taught that such operations were useless because the condition was sure to recur, probably because the wounds did not heal aseptically. He added that some interference with growth affecting the symmetry of the face was to be apprehended after these operations.

ARTHRECTOMY OF KNEE FOR TUBERCULOUS DISEASE.

Mr. F. EVE showed a girl, aged 13, who had had tuberculosis of the knee. As the usual treatment was not followed by improvement, he performed arthrectomy through an incision over the patella, which was divided, the capsule being opened by lateral incisions, care being taken to spare the lateral ligaments. The semilunar cartilages were removed, and one crucial ligament had to be cut through, but was afterwards refixed to the bone. The lower end of the internal condyle was ulcerated, and had to be scraped, and the capsule was then carefully sewn up, union running an aseptic course. Very free movement, almost to a right angle, resulted.

Mr. BARKER expressed the hope that such a case as this might become the rule instead of being the exception.

Mr. SYMONDS recalled a case of his own in which he had performed a similar operation six years ago, but the patient had recently complained of pain.

Mr. HUTCHINSON, jun., said that in two cases of arthrectomy he had obtained 30 degrees of flexion, but still not as good a result as in this case. In cases of extensive disease it might be risky to try to obtain this result instead of being content with obtaining a perfectly stiff limb.

Mr. JACKSON CLARKE said he had never seen such a good result. He usually applied Thomas's splint with results, on the whole, encouraging. If the cases could be chosen the arthrectomy might be the operation to be preferred.

Mr. EVE, in reply, said he hoped to show the patient again at some future date. He admitted that the case was from the first distinctly of a subacute nature. Where there was much caseation and ulceration he would not attempt the operation.

RESECTION OF RADIUS FOR SARCOMA.

Mr. EVE also showed a young woman who after an injury developed a tumour presenting the symptoms of myeloid sarcoma of the radius. In March, 1897, he removed the lower thirds of the radius and ulna. The tumour was encapsuled in bone. He shortened all the flexor tendons except the flexor carpi radialis. He defended the removal of the lower portion of the ulna, on the ground that otherwise the hand would ultimately have assumed a position at right angles to the limb. When, however, the ulna was the bone involved it was not thought necessary to remove the radius. There was very good movement of the hand and the patient could even write.

A CASE OF HEREDITARY ATAXIA.

Dr. VOELCKER showed a boy, aged 12, under observation for four years. After an attack of German measles (?) at 5 years of age he developed trembling which was diagnosed as chorea. He was brought to the hospital in 1896 on account of the unsteadiness of gait, which increased when the eyes were closed, and the knee-jerk was absent. Recently sight had begun to fail, and Mr. Gunn had reported that there was well marked retino-choroiditis with atrophy of the nerves and sclerosis of the retina, changes which were regarded as syphilitic. There was no disturbance of sensation or involvement of the sphincters, and no muscular wasting, but some amount of lateral curvature of the spine. He had been treated with iodides, but without benefit.

Mr. HUTCHINSON, jun., asked whether the ocular changes *per se* could be taken to justify the diagnosis of syphilis.

Dr. VOELCKER, in reply, read Mr. Gunn's report, but admitted that he had failed to discover any other evidence of congenital syphilis.

LYMPHATIC ŒDEMA (?).

Mr. SHAW showed a man, aged 40, who, after an injury to the wrist ten years ago, followed by formation of abscesses, had developed a curious condition of the hand, which was swollen, livid, very tender, and painful, the condition tending to spread up the arm. The hand was cold, and movement was greatly impaired. He remarked that it might be a case of lymphatic œdema or erythromelalgia.

EXCISION OF TONGUE FOR MALIGNANT GROWTH.

Mr. BARKER showed an elderly man, whose tongue he had removed five years ago for epithelioma, without recurrence.

DETECTION OF FRACTURE OF PATELLA.

Mr. BARKER showed a man who had sustained a slight blow to the knee on the ice. On examination no special injury could be detected, but in a skiagraph a distinct fracture of the patella was evident. Even with that knowledge, however, it was difficult to detect.

EDINBURGH OBSTETRICAL SOCIETY.

R. MILNE MURRAY, M.D., F.R.C.P.E., F.R.S.E., President, in the Chair.

Wednesday, January 10th, 1900.

SPECIMENS.

PROFESSOR A. R. SIMPSON showed specimens removed from a patient who on admission to the Maternity Hospital had crepitation in the left groin; the vagina and cervix were severely torn, the vulva swollen, the brim narrow, and the fœtus alive. Cæsarean section was done. The child died from fracture of the frontal bone caused by forceps, and the mother a few days later of general peritonitis.—Dr. J. W. BALLANTYNE showed an abdominal teratoma removed from an infant 2 months old, containing skin, fat, pieces of intestine, etc.

THE HYDATID MOLE.

Dr. BERRY HART read a paper on the cause of the differentiation of connective tissue in the human fœtus with reference to the essential nature of the hydatid mole. He first discussed the development of connective tissue, especially in the myxomatous stage and on to the fully-developed type. He pointed out that the myxomatous stage was permanent for the umbilical cord; that the tissue in the villi fell short of fully-developed connective tissue, while that in the rest of the fœtus went on ultimately to the higher forms. He believed that the relations of the thyroid to myxœdema in the adult, as well as the structure and the evidence of activity of the thyroid in the fœtus, made it highly probable that Sir F. Semon's theory was applicable in fœtal life, that in fact the thyroid secretion favoured the development of connective tissue from the myxomatous to the higher type. He pointed out that the umbilical cord was not vascularised; that the thyroid secretion did not affect it, and thus it remained of a mucous type. He applied the same reasoning to explain the condition of the connective tissue in the villi and in the vitreous humour. He summed up as follows: (1) There is anatomical and clinical but not as yet experimental evidence that the thyroid is functionally active in the human embryo; (2) it begins to develop in the fœtuses of 4 mm.—that is, about the third week; (3) it probably causes

the development of connective tissue to pass from the myxomatous to a higher stage; thus (*a*) the cord, without vessels and presumably without thyroidisation, remains myxomatous; (*b*) the adult vitreous, under the same conditions, remains allied to myxomatous tissue; (*c*) tissues like the villi are also more or less myxomatous according to their age and length of exposure to vascularisation; (4) the free covering of somatopleure is also probably affected by the thyroid; (5) the hydatid mole may be regarded as acute myxœdema of the chorion; (6) thyroid extract should be administered after hydatid mole abortion. In the hydatid mole there was a mass of tissue of a myxomatous type, with, in almost every case, no fœtus. He believed, therefore, from the evidence he had brought forward, that this view of the myxœdematous nature of the chorion was a highly probable one.

Dr. Berry Hart's paper, which was illustrated by many microscopical preparations, was discussed by the President, Professor A. R. Simpson, and Dr. Ballantyne; and Dr. Berry Hart replied.

Albuminuria of Pregnancy.

Dr. James Ritchie read a paper on a case of albuminuria, multiple pregnancy, papyraceous fœtus, and placenta prævia. A woman, aged 32, in earlier life rheumatic and subject to gastro-intestinal catarrh and consequent anæmia, was delivered in January, 1896, at full term of a healthy female child. She nursed ten and a half months. Menstruation then recurred regularly. She became pregnant again early in March, 1899. On July 22nd she had headache, shortness of breath, debility, œdema of face, feet, legs, thighs, scanty urine, much albumen, poor appetite, squeamishness, and sleeplessness. The blood was not examined. Under rigid treatment for ten days the œdema and headache disappeared, and there only remained a trace of albumen in the urine. On September 17th slight hæmorrhage occurred. It recurred on September 20th. Early on September 21st a third and fourth hæmorrhage occurred, the os became partially dilated, and soon filled by a triangular hard wedge of placenta which checked further hæmorrhage. Two hours later a macerated fœtus, about 5½ months from size, was delivered, and soon after, without hæmorrhage, the secundines apparently complete. There was no appearance of a probable site of a succenturiate portion of placenta. The subsequent history showed this to have been an error, because on the following and subsequent days portions of placenta came away. Careful examination showed a single chorion with two amniotic sacs, the smaller one near the os uteri contained a small flattened fœtus whose umbilical cord had a velamentous insertion, in consequence of which its vitality had been impaired; it was a so-called papyraceous fœtus. It was the portion of placenta belonging to this fœtus that presented. It was functionless, exsanguine, and hence the small subsequent hæmorrhage. In albuminuria of pregnancy, even though the amount of albumen might be small and not accompanied by any signs of organic renal disease, the nutrition of the child was often gravely affected. The occurrence of such albuminuria was a coincident and consequent fact of pregnancy. There was some unusual toxic condition of the blood. In such conditions two dangers existed—danger to the mother from eclampsia, and danger to the child from malnutrition. For eclampsia three conditions were requisite: (1) A certain quality of the nervous system, (2) a toxæmia, (3) some peripheral irritation. In such cases the principles of treatment would appear to be: (1) Reduce the amount of nitrogenous food, (2) limit the production of toxic matter, (3) favour elimination. Rest in bed, moderate purgation, diuresis by means that did not raise arterial tension, limited feeding, seemed to be the main points. As albumen lessened in quantity the nourishment might be cautiously increased. How often did non-albuminuric eclampsia occur in pregnant women was one of the questions suggested by a case like this. Here the albumen had gone before delivery, there was no eclampsia, and the patient made a good recovery. The cause or causes of the occurrence of albuminuria was one of very great difficulty. What was "functional" albuminuria?

The paper was spoken to by Professor Simpson, Drs. Berry Hart, Church, Ballantyne, Keppie Paterson, McVie, and the President; and Dr. James Ritchie replied.

Demonstration.

Dr. Berry Hart then gave a demonstration on the early changes at the caudal end of the primitive gut in human embryos, and its bearing on a case of persistent end gut in an infant and on extroversion of the bladder.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

W. H. Horrocks, M.B., F.R.C.S., President, in the Chair.

Tuesday, December 19th, 1899.

Cases.

Dr. Kerr showed a case of extensive wound of the eyeball extending through the ciliary region. There had been sympathetic irritation of the opposite eye, but this had subsided, leaving good vision. The injured eye had not been removed, but the prolapsed iris was snipped off, and the lens washed out immediately after the accident.—Dr. Eurich showed a series of microscopic sections illustrating the commoner diseases of the breast.—Dr. Hime showed a specimen of the bacillus of bubonic plague.—Mr. Althorp showed a patient who had been treated by laparotomy when suffering from tuberculous peritonitis. The patient was in good health.

The History of Contagion.

Dr. Miall read a paper on Contagion in Modern Times, which was a continuation of one previously communicated to the Society on the ancient ideas of contagion. In the Middle Ages many diseases were considered contagious, but some of them were also traced to other causes. Epidemics, for instance, to poisoned air, which idea did not tend to promote ventilation; to putrefaction from internal causes, what was now sometimes called auto-infection; to the influence of stars, planets, eclipses, earthquakes, and volcanoes; to famine or too great plenty, and to supernatural beings. Sometimes there was a strange mixture of natural and supernatural causes. There was little attempt to define the influence of the various agencies. Diseases were equally indefinite; but Rhazes, in his description of small-pox and measles, had introduced the idea of a specific element which ultimately altered the whole aspect of the matter. Leprosy was a prominent example of contagious disease, but it diminished in importance after the epidemic of syphilis at the end of the fifteenth century. No doubt the two had often been confounded. The great plague of 1348, since known as the Black Death, drew much attention to the subject of contagion. Many fevers which would now be called typhus, and considered contagious, were then looked upon as caused by chills or other causes. Small-pox was by no means thought to be infectious at all times and places, and even plague was doubtful to some authorities. What appeared to be an extreme reluctance to admit contagion was sometimes shown, some preferring to attribute a large mortality to fear alone. In this matter there had always been sceptics, their minds continually asking "How?" and "Why?" not being satisfied with mere contact as a cause, in the absence of some far-reaching theory to explain the *modus operandi* of contagion.

Tuberculosis of the Great Trochanter.

Mr. Basil Hall read a paper on tuberculous disease of the great trochanter, and reported three cases.

British Gynæcological Society.—The annual meeting was held on January 11th, 1900, the President, Dr. Macnaughton-Jones, in the chair. The Treasurer presented his annual report. A vote of thanks to the Treasurer was proposed by Mr. Stanmore Bishop (Manchester), seconded by Dr. Herbert Snow, and carried unanimously. A vote of thanks to the retiring officers was moved by Dr. Heywood Smith, seconded by Dr. T. M. Dolan (Halifax), and carried unanimously.—The scrutineers reported that the officers and Council for 1900 had been elected in accordance with the list proposed by the retiring Council. W. J. Smyly, M.D., F.R.C.S.I. (Dublin), was chosen President; Mr. H. Macnaughton-Jones, jun., M.B. (London) was appointed one of the editors of the Journal; and Mr. Charles Ryall, F.R.C.S. (London), one of the Honorary Secretaries.—The President then delivered his valedictory address on the Correlation between Sexual Function and Insanity and Crime. He inquired how far the process of menstruation affected a woman by originating morbid impulses in the

various groups of her pelvic nerves which found their response in reflected neuroses in other organs, and thus influenced the coherence and stability of her nervous acts? Or again, in what directions and to what extent the normal fulfilment of ovulation with menstruation developed for the time being erotic impulses, encouraged the state of neurosis generally, or so lowered the psychical and physical inhibitory control as to lead to a hyper-exaltation of the entire nervous system, with increased susceptibility to slight irritations and a weakened will control that permitted of distorted mental visions and erratic moral acts, vulgarly called crimes, that the woman was helpless to evade or subdue? Was there evidence that menstruation, both normal and abnormal, did so influence the woman, and under what conditions it was most likely to do so? and how far was disease of the sexual organs in women correlated with symptoms of alienation, from slight interferences with their mental equilibrium to more profound disturbances, such as melancholia, dementia, or mania? This led to the consideration how far removal of the diseased organs by operation was salutary or otherwise to the woman, and to what extent the operation in itself might on the one hand mitigate, or on the other hand increase, the mental trouble. After discussing these points from the physiological, clinical, and statistical sides, he summed up his conclusions as follows: (1) That the correlation of insanity and disordered sexual function arising out of affections of the generative organs is a factor to be taken into serious consideration in the treatment of the mentally afflicted. (2) That where there is ground for the suspicion that some physical condition of the uterus or adnexa exists, which may produce or aggravate the mental affection, a careful examination, under an anæsthetic if necessary, should be made. (3) That in the investigation of criminal acts committed by women, either during the menopause or while the menstrual function is either active or suppressed, due weight should be given to the influence exerted by its irregularity or abeyance on the mind of the woman; in doing this her previous history and temperament should be considered. (4) That the special dangers of the climacteric period should be remembered and the symptoms indicative of threatening climacteric mania recollected. The principal of these are moroseness and depression of spirits, attacks of hysteria, occasional hallucinations, delusions with regard to relations, unjust dislikes, unfounded apprehensions of some grave crime committed or injury inflicted on them, suicidal tendencies. (5) That in operations on the female generative organs there is a greater predisposition to mental disturbance than after other operative procedures. (6) That women who have been previously insane are predisposed to a relapse by the development of disease in their sexual organs, and especially to such recurrence of insanity after operation on these organs. Under all such conditions, and in the face of these warnings, the greatest supervision and care are required to anticipate the insane impulse, and to prevent suicide or crime in the case of women who manifest symptoms that are due to a correlation between disorders of sexual organs and mental instability.—A hearty vote of thanks was accorded to the retiring President for his interesting and important address, on the motion of Dr. C. H. F. ROUTH, seconded by Dr. W. J. SMYLY, and supported by Mr. E. STANMORE BISHOP.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting held in the Library, New Hospital for Women, on January 9th, Mrs. SCHARLIEB, M.D., M.S., President, in the chair, Miss THORNE, M.D., read a short paper on Cysts of the Anterior Vaginal Wall, and drew attention to the clinical and pathological methods of diagnosis of dilatations of the terminal part of Gärtner's duct.—Miss THORNE also read a paper by Mrs. STANLEY BOYD, M.D. (who was prevented from being present) on a case of Cyst on the Anterior Wall of the Vagina, dwelling especially on the surgical treatment of the case.—Miss BOYLE, M.D., read a paper on Early Insanity in Women. This was followed by a discussion in which the PRESIDENT, Mrs. GARRETT-ANDERSON, Mrs. KEITH, and others, took part.

BRISTOL MEDICO-CHIRURGICAL SOCITY.—The fourth meeting of the session was held in the Medical Library, University College, Bristol, on January 10th, at 8 p.m., Mr. W. H. HARSANT, President, in the chair. Dr. G. PARKER showed a specimen of aneurysm of the aorta. Dr. SHINGLDTON SMITH, Dr. P. W. WILLIAMS, Dr. T. FISHER, Dr. MICHELL CLARKE, and Mr. J. L. FIRTH discussed the subject.—DR. T. FISHER showed the following specimens:—(1) Intestine from a case of idiopathic intestinal hæmorrhage; (2) two cases of congenital dilatation of the colon; (3) ulceration in a strangulated portion of small intestine; (4) enlarged spleen and cirrhotic liver; (5) cirrhosis of the liver; (6) fibroid disease of the heart due to syphilis.—Drs. STACK and Dr. MICHELL CLARKE discussed the specimens.—Mr. W. H HARSANT showed a large fibroid of the uterus recently removed by abdominal section.—Dr. A. E. AUST LAWRENCE read a paper on Cases of Vascular Caruncle of the Female Urethra. Dr. W. C. SWAYNE, Dr. W. H. C. NEWNHAM, Mr. EWENS, Dr. STACK, and the PRESIDENT spoke on the subject.—Dr. W. SWAYNE read Notes of a case of Symphysiotomy. Mr. PAUL BUSH, Dr. AUST LAWRENCE, and Dr. J. G. SWAYNE made some remarks on the operation.

REVIEWS.

RECENT WORKS ON OPHTHALMOLOGY.

THE essay of the late Professor DONDERS on the Nature and the Consequences of Anomalies of Refraction[1] is one of the classics of medical literature, and anyone who will read it with attention will realise how great an advance was made in ophthalmic science by the researches of the author, who reduced the many problems of refraction to a scientific basis. How valuable and true his results were can be at once seen. The essay consists of seven sections, in which are described the errors of refraction and all kindred subjects bearing on the acuity of vision and the movements of the eyeball. Each section is subdivided into paragraphs, of which there are 139. The present edition contains a portrait of the author as well as several illustrations in the text. The essay as presented by Dr. Oliver would be far more easy to read if the numerous abbreviations, which abound in every page, were omitted, and the words they are intended to represent were printed in full. As it is one has constantly to refer to a page on which these are translated to find out what they mean, and in addition, some of them are incorrect. Nothing but the highest praise can be given to the work itself, which will for years to come continue to reflect the highest honour on the great man who wrote it.

We welcome with pleasure the second English edition of Professor FUCHS's well-known textbook.[2] The book has proved so useful to both surgeons and students that the new edition has been looked out for with considerable impatience by many. It is impossible to mention in detail the many ways in which this edition is superior to its predecessor, but as five German editions have been brought out since the original translation was published, it is no wonder that improvements are met with on almost every page. Recent researches in pathology have considerably modified our views of many diseases of the cornea and conjunctiva, and under these headings much new material will be found. The translator as before adds a fair amount to the original and there are two sections on cycloplegics and the correction of errors of refraction which he has entirely written. A vast improvement is to be noticed in the illustrations, and eighty new cuts have been added, all of which serve to illustrate the subjects under discussion very well. For completeness and thoroughness as a textbook this present work of Professor Fuchs has no equal in the English language. It is lucid and very well written, while there is but little in ophthalmic literature worth reading to which reference will not be found. The book is a great improvement on its predecessor, and is one that will be found invaluable to ophthalmologists and workers in ophthalmic science.

[1] *The Nature and the Consequences of Anomalies of Refraction.* By F. C. Donders, M.D., late Professor of Physiology and Ophthalmology in the University of Utrecht. Revised and edited by Charles A. Oliver, A.M., M.D.Univ. Pa., Surgeon to the Wills Eye Hospital, and Ophthalmic Surgeon to the Philadelphia Hospital, etc. London: H. Kimpton. 1899. (Royal 8vo, pp. 80. 6s.)

[2] *Textbook of Ophthalmology.* By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Second American Edition. Translated from the seventh German edition by A. Duane, M.D., Assistant Surgeon to the Ophthalmic and Aural Institute, New York. London: H. K. Lewis. 1899. (Roy. 8vo, pp. 876. 21s.)

Mr. Shelford Bidwell's book[3] is based upon notes of several lectures delivered at the Royal Institution and other places. It contains five chapters only, in which are discussed Light and the Eye, Colour and its Perception, Some Optical Defects of the Eye, Some Optical Illusions, and Curiosities of Vision. In the description of the eye that organ is well explained, and very appropriate similes are applied when treating of the rods and cones of the retina. In the chapter on Colour and its Perception, the theories of Young-Helmholtz and of Herring are discussed, and although neither are considered very satisfactory by themselves, yet the author favours the former. The spectrum is, as a rule, taken as the standard of colour with which most of the experiments are made. The optical defects of the eye are discussed at length, and in a most lucid manner. These statements are for the most part supported by various conclusive experiments, many of which have been introduced by the author. This is especially the case when speaking of irregular astigmatism, and it may be remembered that some of these were noticed in the British Medical Journal some few months ago when considering a paper by the author published in the *Proceedings of the Royal Society*. The Optical Illusions and the Curiosities of Sight are intensely interesting and clearly described. The book is one which will be welcomed as a popular volume on Light and Sight, and although it does not aim at being a complete treatise on the subject, yet it will be found extremely interesting to the scientist, and as a popular exposition on a subject keenly appreciated by many laymen it will take a high place and will be deservedly popular.

Dr. Praun's work[4] is a systematic treatise covering the whole field of eye injuries. The author has not confined himself to German authorities, but has made free use of the ophthalmic literature of this and other countries, and the result is a volume of great merit, which cannot fail to become a standard work of reference. The general section deals with the different typical kinds of eye injuries, their etiology, mechanism, complications immediate and remote, diagnosis, prognosis, prophylaxis, treatment, and statistics, also with the legal aspects of injuries. In the special section injuries of the component parts of the eye are considered in detail; of the eye as a whole, of the optic nerve, orbit, ocular muscles, lachrymal apparatus, and lids. It is surprising that the author makes only scant reference to the necessity for the employment of the Roentgen rays in the detection and exact localisation of foreign bodies, and does not seem to appreciate their great value in this respect. There is a useful table of contents and full indices.

Professor Greeff's little guide to the microscopical examination of the eye[5] gives a very concise account of the methods used by the author in the preparation of histological specimens, both in the fresh state and after hardening. It is a manual of technique for laboratory use, and embodies a brief, though sufficient, account of the different processes of hardening, embedding, staining, and injecting the ocular tissues; the decolorising of the uveal pigment, and the preservation and mounting of macroscopic eye specimens.

Dr. Seligmann's work on the methods of microscopic examination of the eye[6] covers the same ground, though in a much fuller manner, its scope being more comprehensive. It will thus be more helpful to the advanced laboratory worker, especially as full references are given to original authorities.

The test cards introduced by Dr. Nagel, with the text translated into English by Dr. Breuer,[7] are twelve in number, and the colours are shown in dots 4 mm. in diameter, and arranged in a circle on a white ground, each containing about two dozen dots. "By means of these cards," it is asserted, "all the congenital anomalies of colour perception which are of any practical importance can be easily and accurately diagnosed." The test is carried out in two ways: 1. The patient stands with his back to the window, and the cards are passed before him at a distance of from 1 to 1½ metre. As each card is shown, he is asked if red spots are visible. Should no mistake be made, he is certainly neither red nor green blind. 2. The cards are all spread out on a table, and with the patient about ¾ metre from them he is asked to pick out the cards in which there is only one colour, though the dots on them differ in shade. In the same sort of way the differential diagnosis between red and green blindness is made. Dr. Nagel does not recommend Holmgren's wools, as he holds that that test exaggerates the number of colour-blind individuals. The tests are simple and cheap, and easily applied. There is always some difficulty when using pigments, and in the absence of spectral colours we prefer the wools, though the cards before us are certainly very handy, and very accurate results may be obtained with them.

The first part of the fifteenth volume of the Moorfields *Reports*[8] contains a paper on Retrobulbar Optic Neuritis, by Mr. Nettleship, in which the clinical features of the disease are well brought out; only idiopathic cases are dealt with though incidentally they are contrasted with the symptomatic cases, which are much less numerous. The mischief is limited to one optic nerve, or should the other become become affected it is after some interval. Symmetrical toxic (for example, tobacco) amblyopias are excluded from consideration. The paper is based on the notes of 120 cases, 88 being idiopathic. Mr. Treacher Collins has a note on the Elastic Tissues of the Eyeball, as shown by sections stained with acid orcein. Elastic tissue takes on a reddish-brown colour, and its distribution in the various structures of the eye can be readily followed. Descemet's membrane stains deeply, but Bowman's membrane does not, and the term "anterior elastic lamina" applied to the latter is probably a misnomer. Mr. Arnold Lawson reports a case in which ligature of the right common carotid for traumatic pulsating exophthalmos gave great relief though for nearly a year there were partial relapses. Finally, Mr. Devereux Marshall gives a careful summary of the cases of sarcoma of the uveal tract which have been treated at the hospital since December, 1891, and also the further history of some of the cases dealt with in Lawford and Collins's paper on the same lines in 1891. He finds that whereas in 1891 32.9 per cent. of the cases traced had died of recurrent disease, the percentage of recurrence in these cases now amounts to 58.62 per cent.

The last fasciculus of the reports from Professor Widmark's Eye Clinic at the Caroline Institute, Stockholm[9] comprises three papers. Dalén has made investigations into the action of holocaine on the corneal epithelium, and finds that its repeated instillation is more prejudicial to the cells than is cocaine. Like the latter, it gives rise to unevenness of the corneal surface and slight superficial clouding, and its prolonged use causes epithelial necrosis, the cells, however, being soon regenerated. Neither holocaine nor cocaine has any disturbing influence on the healing of corneal wounds. Holocaine is very suitable for removing foreign bodies from the cornea and for the cauterisation of ulcers, its action being quick and sure even when the eye is injected. For cataract extraction cocaine is to be preferred, as the tendency to hæmorrhage from the conjunctiva and iris is less. Helleberg describes and discusses a case of new growth in the iris, which from the microscopical appearances he thinks may have been a myoma or a myosarcoma. Widmark has an elaborate paper, with many valuable statistical tables, on the distribution and causation of blindness in Scandinavia, Denmark, and Finland.

[3] *Curiosities of Light and Sight.* By Shelford Bidwell, M.A., LL.B., F.R.S. London: Swan Sonnenschein and Co. 1899. (Demy 8vo, pp. 238. 2s. 6d.)

[4] *Die Verletzungen des Auges: ein Handbuch für den Praktiker.* [Injuries of the Eye: a Handbook for the Practitioner.) Von Dr. E. Praun, Augenarzt in Darmstadt. Wiesbaden: J. F. Bergmann; Glasgow: F. Bauermeister. 1899. (Roy. 8vo, pp. 530. 12s.)

[5] *Anleitung zur mikroskopischen Untersuchung des Auges.* Von Professor Dr. R. Greeff, Berlin. Berlin: August Hirschwald. 1898. (Crown 8vo, pp. 78, 5 illustrations. M.2.40.)

[6] *Die mikroskopischen Untersuchungsmethodes des Auges.* Von Dr. S. Seligmann, Hamburg. Berlin: S. Karger; and Glasgow: F. Bauermeister. 1899. (Demy 8vo, pp. 256. 6s.)

[7] *Test Cards for the Diagnosis of Colour Blindness.* By Dr. W. A. Nagel, Lecturer in Physiology in the University of Freiburg. Translated by A. Breuer, M.D. London: Th. Wohlleben. (Fcap.8vo, pp. 8. 2s. 6d.)

[8] *The Royal London Ophthalmic Hospital Reports.* Edited by William Lang, F.R.C.S.Eng. Vol. xv, Part i. May, 1899. London: J. and A. Churchill. (Demy 8vo, pp. 80. 5s.)

[9] *Mitteilungen aus der Augenklinik des Carolinischen Medico-Chirurgischen Institute zer Stockholm.* Herausgegeben von Dr. J. Widmark, Professor der Augenheilkunde aus Carolinischen Institut. Part II. Jena: Gustav Fischer. 1899. (Roy 8vo, pp. 110, 14 illustrations. M. 4.50.).

The volume containing the papers read at the meeting of the American Ophthalmological Society in 1898[10] is full of excellent material. Among the most important contributions we find papers by Dr. C. S. Bull on gunshot wounds of the eye and on some unusual tumours of the orbit, eyelids, and its vicinity. Fridenberg reports a very successful operation for exostosis of the frontal bone, and gives photographs of the patient before and after. Dr. de Schweinitz gives an account of 2 cases of metastatic carcinoma of the eyeball, and refers to the recent literature on the subject. There are numerous other subjects which cannot be mentioned here for want of space, but the volume is rich in excellent material which will prove useful to many a worker.

The report of the meeting of the German Ophthalmological Society in 1898[11] contains thirty-one papers, together with an account of the cases, preparations, and instruments there exhibited. The same high standard of excellence is shown as in former years. Among the many papers of interest are: Bacteriological Investigations into the Origin of Eye Inflammations in the Newborn, by Groenouw; a Simplified Procedure in the Operative Treatment of Myopia, by Sattler; the Diagnosis and Significance of Endothelial Corneal Changes, by v. Hippel; Rodent Ulcer of Cornea, by Schmidt-Rimpler.

THE RABIES QUESTION.

IMMEDIATELY after the withdrawal by the Board of Agriculture of the Muzzling Order of 1897, to which reference was made in our issue of November 4th, 1899, the London County Council issued a notice reviving its regulations as to the control of dogs issued in February, 1897, but suspended by the Order of the Board of Agriculture issued in 1897. The regulations are prefaced by the following explanatory notice:

Any unmuzzled dog found by the police in any public place in the County of London *not under the control of any person and not wearing a collar upon which the name and address of the owner are legibly inscribed, will be seized by the police, and the owner will be liable to a penalty not exceeding £20.*

Before launching a manifesto which was certain to evoke no little hostility from irascible dog owners the Council might well have gone to the trouble of framing their notice in more intelligible language. The dormant regulations which have "again come into force" are not marked by any excess of perspicuity, but they are luminous in comparison with the present explanatory introduction which appears to be partly addressed to the dog and partly to the dog's owner.

Is it possible to discover, with any approach to certainty what are the negative conditions an unmuzzled dog must fulfil in order to qualify itself for seizure by the police? The notice says, "not under the control of any person *and* not wearing a collar," etc. Leaving aside for the moment the question as to what constitutes "*control*," are we to conclude that any dog not under control may be seized, or must it be without a collar also? Again, if it is wearing a collar and not under control, what will be its fate under those circumstances? It is clear enough that if the animal is not under control, and is not wearing a collar, it will be seized, but here we are involved in a further dilemma as to what is to be understood by "control." We are informed that the Council's own interpretation of the word is that the dog must be in charge of some person but need not be led. This, however, is directly at variance with the decision in Hay *v.* Bennett.

In this case, which came before the Court of Queen's Bench in November, 1886, the plaintiff, Sir Hector Hay, had been fined at one of the metropolitan police-courts for being on a public highway accompanied by a dog which was not under control. It was admitted that the dog was neither muzzled nor led. The Court was asked to grant a rule calling on the magistrate to state a case on a question of law. In refusing the application the Court expressed its agreement with the magisterial decision, the Lord Chief Justice observing, "The control intended to be exercised is a control to prevent a dog from biting. The control must be an effective control—not a moral control."

That this was also the view taken by the London County Council in framing the Regulations of 1897 may be inferred from Subsection (*c*) of Clause 3, wherein it is provided that dogs on their way to or from exhibitions, if unmuzzled, must be confined in cages, etc., "so constructed as to render it impossible for them *to bite any person or animal*." This was the alternative for Subsection (*a*), and it must therefore be assumed that the intention of the latter must also have been the restraint of the animal by actual mechanical means.

We cannot believe that the futility of the regulations as they are now interpreted has been realised by the Council. How are the police to determine whether a dog is or is not under moral control? A policeman espies a dog trotting along Park Lane or the Whitechapel Road. Is he also to trot in the wake of the animal until the dog responds to a signal of ownership emanating from some source in the passing crowd? We already lay a sufficiently heavy burden on the police in expecting them to capture the horde of muzzleless, collarless vagrants which wander through the streets of the metropolis without introducing an altogether new and limitless task such as the London County Council's present view of control would impose. If we are to have control at all, let it be a definite and effective control, otherwise let every dog found at large without a collar bearing its owner's name and address be seized, and, if unclaimed, destroyed.

Since we last commented on the necessity for stringent quarantine measures in respect to dogs landed from Ireland, a disastrous outbreak of rabies has occurred in the kennels of Mr. T. Lewin of Castlegrove, Master of the Tuam Foxhounds. One of the pack appears to have been bitten by a strange dog when out hunting. Rabies supervened, and very soon another hound was attacked by the disease. It was then felt that in the interests of public safety no other course remained than to sacrifice the entire pack. Until a radical change is effected in the whole system of dog control in Ireland, the extirpation of rabies in that part of the United Kingdom will be rendered impossible, and hence the transmission of the disease to this side of the Channel will undoubtedly occur from time to time. The dog tax in Ireland being only 2s., it is not surprising that the number of licensed dogs should reach the astonishing total of over 400,000, or about 1 to every 11 of the entire population of the country. This, however, probably represents but a small fraction of the canine community. In Ireland all dogs born after March 31st in any year are exempt from taxation until the same date in the following year. The result is that when the licensing day approaches large numbers of dogs are turned loose to save the duty, and thus go to swell the legion of wandering curs which constitute an ever-increasing source of danger both to the canine and human population.

We have recently been favoured with a communication from the National Canine Defence League, an organisation whose mission is apparently conceived on lines which do not belie the modesty of its title. We should perhaps better earn the gratitude of the ladies and gentlemen who figure on the list of its supporters by consigning to a kindly oblivion the utterances for which they have made themselves responsible. But we cannot blind ourselves to the pathetic position in which the "Chairman and Honorary Treasurer" finds himself placed as the result of his "humanity and enthusiasm." The League is in pursuit of no mean prey, since nothing but the sacrifice of a Cabinet Minister can appease the outraged liberty of the 101,511 signatories "to the most representative and largest (*sic*) protest that has ever been raised by the people against the methods of a Government Department and its responsible Minister." But, alas! neither the magnitude of the enterprise, nor even the names of a princess, two countesses and a viscountess, to say nothing of the Lord Bishop of Ely and Sir Edward Lee, as Vice-Presidents, have sufficed to replenish the empty exchequer. The melancholy fact must be recorded that the National Canine Defence League is in debt to its treasurer to the extent of £461 13s. 2d. Mr. Long may breathe again. The Prime Minister would scarcely feel justified in taking the field in support of a league which has shown itself so lamentably lukewarm in providing the sinews of war. But deficiency of funds does not appear to diminish the audacity of its militant

[10] *Transactions* of the Ophthalmological Society, New London, Conn., in 1898. Hartford: Published by the Society. 1898. (Royal 8vo, pp. 228.)

[11] *Bericht über die siebenundzwanzigste Versammlung der Ophthalmologischen Gesellschaft*, Heidelberg, 1898 [Report of the Twenty-seventh Meeting of the Ophthalmological Society, Heidelberg, 1898]. Edited by W. Hess and T. Leber. Wiesbaden: J. F. Bergmann, and Glasgow: F. Bauermeister. 1899. (Royal 8vo, pp. 404, 28 illustrations. 8s.)

supporters. At a special meeting of the "executive and members," held to celebrate the withdrawal of the muzzling order, the following resolution (italics and all), was proposed by the Viscountess Harberton, seconded by Mrs. James, and unanimously passed:

That this meeting desires to reiterate its conviction as to the desirability of the retirement from office of the Minister responsible for such useless, cruel and irritating measures for the extirpation of a disease *whose existence in the metropolis and elsewhere has never been adequately attested*, the figures adduced to prove such existence having been collected by means of a test which the department last year condemned and discarded as unreliable.

It must be presumed that the framers of this resolution are not ignorant of the fact that in 1887 a Select Committee of the House of Lords was appointed to inquire into and report upon the subject of rabies in dogs, and that the very first of the recommendations made by the Committee was, that "when rabies is prevalent the muzzle should be enforced." They must also be aware that in 1896 a Departmental Committee was appointed to inquire into and report upon the working of the laws relating to dogs. This Committee was unanimously of opinion that "muzzling is not only an efficient, but the only, means which is now practicable for the extermination of rabies."

That persons of education and position, without even the excuse of an axe to grind, should be willing to lend their names to such publications as the National Canine Defence League purveys is amazing.

NOVA ET VETERA.

A GREEK PHYSICIAN.

Dr. John Karageorgiades of Cyprus has recently published at Athens two little collections of poems, entitled Ποιήσεις, Λυρικαὶ καὶ Μεταφράσεις and Κύπρος Δούλη Δράμα εἰς πράξεις πέντε. We have read these poems with pleasure and interest. The author makes a skilful, if at times unconventional, use of the Greek language, of which he is a perfect master. His verse flows naturally and easily, and his style is characterised by a remarkable elevation of tone both as regards diction and substance. But an element of sadness pervades all his imaginings. His retrospect of the past reminds us of certain of Goethe's lyrical strains. Dr. Karageorgiades seems to have extensively read the poetry of Western Europe, and his translations from Victor Hugo, Theophile Gautier, Ariosto, Dante, Tasso, Goethe, Schiller, Longfellow, Shelley, Byron, Scott, Milton, and Shakespeare are all very well rendered, though naturally falling short of the flow of expression which marks his own verse. It is a pity that these poems were not published at the time they were written, over thirty years ago. The tone of modern Greek poetry has since undergone change, and the popular taste now is somewhat out of harmony with the lyrical verse which was in vogue in the last generation, when poets like Rangaves, Soutsos, Paraschos, Paparegopoulos, Tantalides, Zalokostas, and others were idolised by the Greek public. Dr. Karageorgiades is scarcely surpassed by any of them in point of poetical feeling, mastery of language, rhythm, and gracefulness of expression. The first part of his Ποιήσεις consists of original poems only. Light little outbursts of lyrical sentiment they are, but although they all deal with love as their fundamental theme, no trace of joyfulness is to be detected in any of them, in spite of the evidence that his earlier models were French and Italian poets. Later in life he seems to have come under Anglo-Saxon influences, and the muse to have inspired him with a certain new element of solemnity, and at the same time of "larger hope." Apart from this, his general bent is towards the spiritual conception of life, and he constantly shows a yearning for another world than ours, a world of joy. Thus in Ecstasis, p. 15:

Τρισευδαίμων ὁστις θνήσκει
Κόσμον πλάνον διεκφεύγων 'ς ἄλλον τήν χαράν εὑρίσκει.

That is the keynote of all his songs. Great thoughts form no large part of his work, perhaps because it was almost all produced in early youth; but there is evidence that had he not abandoned literature for medicine, he would have been one of the foremost poets of modern Greece. His study of English poetry dates only from 1894, while his translations from Continental authors date from 1880. His mind took a fresh stimulus in his later years, and turning once more to original effort he wrote a historical drama entitled *Cyprus Enslaved*. This piece calls for much praise for the dramatic power exhibited in it, as well as for the wealth of its vocabulary, its purity of language, and its metrical perfectness. It is noteworthy that the metre is the dactylic hexameter, which is rarely used by modern Greek poets, having been first introduced by Alexander Rangaves. Like nearly all modern Greek poets Dr. Karageorgiades is a patriot and an ardent lover of freedom. In the *Cyprus Enslaved* he gives us a vivid picture of the tyranny of the Templars in the twelfth century. The hero of the drama is James, the champion of Cyprian freedom, and his beloved Louise is the daughter of the Grand Master, which seems to ignore the celibate state, too great a poetical licence, of the Order. This historical inexactness necessitated by the plot does not lessen the value of the poem as a dramatically told chapter of the history of mediæval Cyprus. For English readers the subject has a peculiar interest, due to the fact that it relates to the period when Richard Cœur-de-Lion took possession of Cyprus, selling it soon after to the Templars. These soldier-monks proved tyrannical and inhuman, and in the result were forced to leave the island two years later, getting, however, their money back from Richard. The circumstance which forced their departure was an armed insurrection headed by James. A fierce battle was fought, in which he was mortally wounded, but had the consolation of seeing his fatherland freed from the tyrants. As the lover of his enemy's daughter he is faithful to the last, but his patriotism is stronger than his love, and when Louise puts before him the prospect of marriage and happiness at the sacrifice of his country's cause, he rejects it. The rejection only renders him still dearer to her heart. On hearing that he is dying she takes poison, hastening to his deathbed ere the fatal effect, in the hope they may expire together. She dies first, and his death cry is, "Louise, I come to thee! Farewell, my country!"

THE MEDICAL PROFESSION AND THE WAR.

Surgeon-Lieutenant-Colonel J. Edward Squire (Commanding London Company Volunteer Medical Staff Corps) writes: In your comment to the letter of Dr. Winslow Hall in the British Medical Journal of January 13th, you refer inquirers about the Volunteer Medical Staff Corps to me. May I ask you to suggest that inquiries be addressed to "The Officer Commanding," or to "The Adjutant," Volunteer Medical Staff Corps, 51, Calthorpe Street, W.C.? Letters addressed to Dr. Edward Squire are naturally taken to be private, and are forwarded to me with consequent loss of time. I have already received several letters, and shall be glad to give all information in my power.

"Medical Student" writes to suggest that the Ambulance Corps for the Imperial Yeomanry should be formed almost exclusively (the exception being a few lay orderlies) of medical students and members of the profession. It could be a mounted corps, and might be made the most efficient ambulance corps in existence.

Influenza in London.—There was a further increase last week in the mortality from influenza in London, 340 fatal cases of this disease being registered, against 38, 69, 193, and 316 in the four preceding weeks. Of the 340 deaths directly attributed to influenza in the metropolis during the week ending Saturday last, January 13th, only 37 were of persons under 40 years of age, and 95 were of persons aged between 40 and 60 years; while 186, or more than half of the total deaths from the disease, were among persons aged upwards of 60 years, of which 38 were of persons who had attained the age of 80 years. On the other hand, the deaths referred to diseases of the respiratory organs in London last week showed a marked decline, although they still considerably exceeded the average.

At the annual meeting of the Royal Meteorological Society on January 17th, Mr. G. J. Symons, F.R.S., was elected President for the ensuing year.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY JANUARY 20TH, 1900.

ANTITYPHOID INOCULATION AND ITS RESULTS.

IT is interesting to note how prominently the war brings before the popular mind a number of questions which, under ordinary circumstances, would scarcely be considered interesting, and even Professor A. E. Wright's method of performing protective inoculation against typhoid fever has, in the daily papers, been treated as an item of war news. Thus we are told by a "Correspondent who knows," that "the Imperial Yeomen are receiving their first wounds for their country. . . The doctor makes the wound a good-sized one (*sic!*), and then pumps in some new South African serum from 'a diseased animal' (*sic!!*). . . It is all supposed to inoculate them against enteric fever or typhoid, or something of the kind. . . It would be interesting to know what this new serum is, and whether its effects have really been scientifically proved, for it is evidently a very potent lymph. At any rate, is it right to inoculate a man with such stuff after he has been shooting in the cold all day, and is tired and chilled?"

The article of Professor Wright and Major W. Leishman on the results which have been obtained by the antityphoid inoculations, and on the methods which have been employed in the preparation of the vaccine comes as a most timely answer to a question which has for some time been on the lips of medical men, and which now is being put by the public. When we receive the news from Ladysmith that many of our brave soldiers, whose services are now so urgently required, are prostrated and even slain by typhoid fever, the question arouses a degree of public interest which the deaths of thousands from typhoid fever under ordinary conditions could scarcely engender. No more fitting opportunity could have been chosen to publish particulars as to the results of this protective inoculation, and to describe the methods of procedure concerned in the preparation and application of the material inoculated. In the first instance, it must be understood that the protective substance used is not a serum or a lymph, that in its production living animal fluids or tissues are at no stage required, and that the only use made of animals is to test the strength of the fluid to ensure that it always attains and does not exceed the desired standard. The protective material, which corresponds very closely in general characters to that used by Haffkine in his cholera inoculation experiments, consists of a pure cultivation of the typhoid bacillus in broth or on agar-agar. Working on the assumption that a mild attack of the disease, or rather the introduction of the toxins formed by, and contained in, the typhoid bacilli, causes such changes in the tissues of the patient as render him more resistant to the action of virulent infection introduced into the alimentary canal in the ordinary fashion, Drs. Wright, Semple, and Leishman take this pure cultivation, with its contained toxins, and subject it to a temperature of 60° C., thus destroying the typhoid bacillus, or in some cases merely so lowering its vitality that it cannot produce any fresh poison, or can produce it only in such quantities and of such a character that introduced into the tissues with a hypodermic syringe it can never prove fatal, although it may set up marked and in some cases even rather violent local reaction. As the result of this reaction the patient passes through what may be called a modified attack of typhoid fever, an attack modified both in degree and in kind. If the bacilli are killed the reaction, however smart it may be, is usually temporary; if the bacilli be not dead then the process is more prolonged and it is probable that the protection is also greater and more prolonged. For the present, however, it is perhaps more advisable that general inoculation should be carried out with the "killed" culture, though it is possible that, as the process becomes better understood and the necessity for a greater degree of protection becomes evident, the living but modified virus may be more generally used.

As bearing on the practical value of this method of inoculation, it is interesting to note that evidence that the effect is prolonged for a considerable period—eighteen months or two years—has already been obtained. It has been found that the serum of persons who have not suffered from ordinary typhoid fever, but have been injected with this antityphoid vaccine, has given the characteristic agglutinative action with virulent typhoid bacilli—the serum reaction of typhoid—a reaction usually obtained only in patients suffering or having suffered from typhoid fever. This evidence in itself, of course, is not conclusive, but it is corroborative of the statistical evidence put forward by Professor Wright and Major Leishman as to the protective influence exerted against enteric fever by the exhibition of this typhoid vaccine subcutaneously injected.

The significance of the figures summarised by Professor Wright and Major Leishman is really far greater than would at first sight appear, though they are in themselves sufficiently striking. Whilst Professor Wright was in India he had the opportunity of injecting a considerable number of men (2,835 out of about 11,000 troops) with his protective material. In most cases he had to operate on the young unseasoned soldiers, who are far more liable to attacks of typhoid fever than are their more seasoned comrades. It is now fully recognised that when troops are attacked by typhoid fever in barracks or in the field, a much larger proportion of the men fresh from England are affected than of those who have run the gauntlet of typhoid under various conditions and in various parts of the world. From the facts put forward, it is evident that of the uninoculated patients a large proportion were seasoned troops, whilst of the inoculated a considerable number were "unseasoned." In spite of this, we find that of 2,835 men inoculated, only 27, or 0.95 per cent., took typhoid fever, and 5 or 0.2 per cent. died, whilst of 8,460 uninoculated

men—many of whom had already run the gauntlet and had escaped the disease on previous occasions—213, or 2.5 per cent. contracted the disease and 23 or 0.34 per cent. died. These figures are all in favour of inoculation.

The next feature which will strike the impartial observer is that so many of the attacks which the inoculated patients did suffer appear to have been of a comparatively mild type. Too great stress should not be laid upon this point, as it is well known that in certain epidemics the prognosis is much more favourable throughout than in others, and it may be that a comparatively mild type of the disease had in this instance to be dealt with. Indeed, so far as can be gathered from the figures before us, the difference in percentage mortality is not quite so great as the difference in mortality amongst the uninoculated as compared with the inoculated troops. Our deductions from this table may not be quite accurate, as the table is somewhat incomplete; this is a point, however, on which some light might be thrown by a careful study of the records of the cases. The authors point out that results obtained under the conditions which limited Professor Wright's work in India will in all probability be greatly improved when the conditions of work are more favourable.

It is possible that the frequent heating of the vaccine may have a marked effect in diminishing its activity, and therefore in interfering with its efficiency as a vaccinating agent. In the case of most toxins continuous or intermittent heating, even at comparatively low temperatures, exerts a notable attenuating effect, and, although the intracellular poisons may suffer less than the extracellular, there can be little doubt that the latter are as a rule considerably affected by such treatment.

Other and more complete statistics on which to found more definite conclusions will no doubt soon be forthcoming. For the present, however, there appears to be little reason to suppose that this preventive treatment against typhoid fever, even when carried out under the unfavourable conditions mentioned in the paper, does not exert a distinct effect on the morbidity and therefore on the actual mortality from typhoid amongst troops in India. The conditions in South Africa are such that typhoid fever may break out in epidemic form at any time, especially where troops have to be concentrated. The results now supplied are certainly sufficiently satisfactory to encourage those who are responsible for sending out soldiers to have them vaccinated during the period of training before they go out to the seat of war. It means that they may have to be excused from drill for a few days; but it may mean efficiency instead of incapacity at a later period. Officers, nurses, and members of the Army Medical Corps, except those who have passed through an attack of typhoid, should undoubtedly be inoculated. It must be remembered that upon the health of the officers the efficiency of the army largely depends, and anything that can be done to prevent the death or temporary incapacity of a single officer, on whom so many men depend for guidance and encouragement, should certainly not be left undone.

If the treatment can be extended to the rank and file of both "regulars" and "volunteers" so much the better, and so much the more efficient would the army become and remain. With the tough work which lies before our army every man requires to be at his best, and every case of sickness prevented is not only a man saved for other work, but it is a setting free of transport, of medical staff, and hospital accommodation required for other and more inevitable work.

Professor Wright and his staff at Netley will have their hands full with the regulars, but the Jenner Institute of Preventive Medicine, or the laboratories of the Royal Colleges of Physicians and Surgeons might, in this time of need, undertake the preparation of the vaccine, and no doubt a small corps of surgeons—say from the Volunteer Medical Staff Corps—might undertake the actual work of inoculation of the volunteers. We have no authority for stating that Professor Wright would be prepared to give necessary information and assistance, but we are thoroughly convinced that he would be most willing to do all in his power to help in carrying out this most important work.

THE RECENT ABNORMALLY HIGH DEATH-RATES.

During the last few weeks some of the towns which usually have a low death-rate have been returning death-rates of an altogether different character. The towns in question are the four southern towns—Plymouth, Portsmouth, Croydon, and Brighton, along with the metropolis, to which they may all be regarded more or less as appanages, having close commercial and social bonds with it. Judging by the weekly death-rates, Portsmouth suffered slightly earlier than the other four, reaching its maximum of 42.4 in the week ending December 23rd. Plymouth came next with a maximum of 49.7 in the week ending December 30th, while it was not until the week ending January 6th that the three others reached the maximum attained up to that date, namely, 37.1 for London, 40.5 for Croydon, and 44.9 for Brighton. In Brighton there was a rapid fall from the above maximum to 29.0 in the week ending January 13th. It is not surprising that Plymouth, the smallest of the above towns, should have shown the highest death-rate of the whole number—namely, 49.7 per 1,000 per annum. Small towns are more violently influenced by a temporary cause of increased mortality than large towns. It is well known that the chief if not the sole cause of the abnormal death-rates is influenza. London is rather a province of houses than a single town. Hence, while influenza is epidemically present in one district of the metropolis, it is only just commencing in another distant district; and in the latter it is raging when it has subsided in the former. It follows from this fact that the metropolitan death-rate during the prevalence of influenza never reaches so high a figure as that of smaller towns; but it differs from the latter in remaining at a somewhat lower but still abnormally high figure, for more weeks than in them. Were it practicable, it would be interesting to trace the course of the travels now being taken by epidemic influenza. The preceding figures show that the metropolis has been the centre of a vast mass of infection, giving infection to and receiving it from the southern towns already mentioned, and doubtless a large number of other towns

and districts round about London, which do not appear in the weekly returns of the Registrar-General; but as to the town in which it first became epidemic, the embers of the now endemic disease being fanned into greater activity, there is little or nothing beyond the earlier maximum at Plymouth to guide us.

The weekly returns of the Registrar-General indicate that the southern group of towns already mentioned are not alone in having this unpleasant visitant. Liverpool has suffered heavily for some weeks; in Nottingham the death-rate was 40.8, and in Preston 42.5 during the week ending January 6th.

Why should the above towns have suffered earlier than the rest of the thirty-three great towns? This is an interesting question, and we cannot pretend to answer it completely. The main fact is, however, undoubtedly the facilities for the convection of infection on a sufficiently large scale. The history of influenza in each town attacked by it is that for some weeks there has been a rapidly increasing number of cases and that the final explosion, in which a large part of the whole population appears to be almost simultaneously "down" with it only occurs after several weeks of this preliminary skirmishing.

It is not without significance therefore that London and our great seaport towns, and the largest health resort in the kingdom should at an early period of the epidemic suffer with exceptional severity. Climatic conditions even if they do not—and we should be the last to think that this may not be the truth—favour the origin of as well as increase the fatality from influenza and its respiratory complications, probably play an important part; but on this point there is still room for accurate investigation. What a pity it is that the weekly returns of the Registrar-General do not state the number of deaths from this disease in each great town. Influenza during its epidemic prevalence kills its thousands, while the "seven chief zymotic diseases" only kill their tens; but we are left, owing to the inelasticity of our official tables, in the dark as to the waves of mortality of the former, notwithstanding its immensely greater social and national importance in our death returns. Ideally, the notification of cases of influenza would greatly help our knowledge of this disease; but it may be surmised that, in view of the difficulties of diagnosis, deaths would give us a more accurate notion of the incidence of the disease than a record of cases.

The case of Brighton is particularly interesting, and we note that in last Saturday's *Brighton Herald*, Dr. Newsholme, the Medical Officer of Health, states that of all the persons who, during last week, died in that town, 35 per cent. had passed their 70th birthday, their average age being 76 years. When he remarks that: "The large proportion amongst the deaths of those who had exceeded the allotted span of life needs emphasising, on account of the erroneous impressions which are apt to be created by a temporary high local death-rate. In one sense of the expression there is no such thing as 'lowering the death-rate,' a process of which some people seem very fond of talking. All that can be done is to postpone death so that deaths which formerly occurred prematurely should not happen now until a ripe old age. The main object of the science of public health is to prevent premature death." In another part of the same report the following remarks are added, after reference to the large proportion of the population of Brighton, who are invalids and aged: "A high rate of mortality at a time when influenza is so widely prevalent is the penalty which Brighton necessarily pays for the fact that it is the largest health resort in the kingdom."

The subsequent course of the present influenza epidemic in the remaining great towns which have hitherto partially escaped will be watched with some degree of anxious interest. Let us hope that when they are attacked the weather conditions will be more favourable to recovery than those of the last two weeks of 1899 and the first two weeks of the present year; and that, furthermore, the sharp and painful experience of the towns which have already suffered will warn prospective sufferers in other towns that the only line of safety is in prompt and persistent treatment, and that the bedroom ought not to be left, however far convalescence appears to be advanced, until this is pronounced by the strictest of doctors to be safe.

THE MEDICAL SERVICE OF THE UNITED STATES ARMY.

AT a time when the defects in our own army organisation, equipment, and armament are being severely tested, and even rudely revealed, it behoves us, in taking steps for their removal, to profit, if possible, by the recent experience of others under similar circumstances.

As the Boer war to us, so the war with Spain speedily brought home to the people of the United States the lamentable insufficiency and weakness of their military organisation.

In none more were these defects acutely revealed than in the utter inadequacy of their army medical establishments. The 192 regular medical officers, who had proved insufficient for a peace establishment of 25,000 men, of course entirely failed to meet the necessities of four times that number of troops engaged in tropical warfare. About 700 "acting assistants" or "contract surgeons" had to be suddenly got together; and it is needless to say that many in such a vast scratch body proved, if not broken reeds, very inadequate supports. Even at the present moment 400 of these acting surgeons are still employed, serving under such anomalous military conditions as loudly demand legislation for the entire medical service.

Herein the Government of our army presents great contrast to that of the United States, in which all change in army establishments, designations, and pay has to be fixed "by law," or, as we would say, statute. Such changes with us would be made on ministerial responsibility, by Royal Warrant or Army Order, to which effect would afterwards be given by provision in the Annual Estimates.

We learn from the *Boston Medical and Surgical Journal* that a Bill, in three parts, for the reorganisation of the Army Medical Service has been prepared by Surgeon-General Sternberg, its official head, for submission to Congress. The Bill provides, first, for increased establishments of all ranks up to a total of 316, which is said to be a very moderate demand; and decrees that acting assistant surgeons shall undergo six months' probationary training and

testing before receiving commissions; secondly, for the relief of acting assistant surgeons from certain service conditions found to be intolerable; and thirdly, for improving and safeguarding the position of assistant surgeons of volunteers.

In commenting on these reforms our contemporary makes some pertinent observations, applicable in degree to our own Army Medical Service. It shows that, since the United States have entered on a policy of an oversea empire, additional establishments are, of course, inevitably and urgently needed. More medical officers are required for a large number of recently equipped stations for home coast defence, and for 11 independent garrisons in Porto Rico, and 30 in Cuba; additional medical officers are required also for the Philippines, in numbers not yet fixed, but indicated by the fact that no fewer than 307 medical officers, regular, volunteer, and acting, are at present serving in the islands.

The Americans recognise the fact that an extended empire requires additional army medical officers: an obvious truth which has been absoluely ignored in our own case for the past thirty years. Certain safeguards in the Surgeon General's Bill against the entrance of medical men of "undesirable personality," a leaven which would vitiate and discredit the whole service, are applauded, and from this we infer that undesirable men have found admission during the late war. We trust our own service is at present carefully protected in this respect, for there must be danger, in the existing pressure, of civil medical men not adapted to a military career, being appointed to military hospitals both in the field and in garrisons.

It is an old argument in favour of nomination as against open competition for commissions that it does afford some guarantee for the personal character of the nominee; for it must be recognised that, altogether apart from professional qualifications, there are moral endowments in the ideal officer and gentleman which cannot be gauged by competitive examination alone.

In urging the Bill upon Congress, our contemporary laments the want of "political push," otherwise, we presume, what is known as "log-rolling," in such a small body as the Army Medical Service. It therefore urges the medical profession at large to apply the requisite pressure to the Washington legislators.

Lastly, it makes admissions as to the status of the medical service in the United States army which really astonish us. Notwithstanding the long possession of *bonâ-fide* military rank and titles, and a very wide measure of even financial autonomy, it is still in a most unsatisfactory social position. Can it be that the admission of men of "undesirable personality," whose exclusion is now desired, has had something to do with this? We quote the following: "It (the medical service) stands alone in the military service without share in the rewards and preferments so freely bestowed upon other departments, either neglected or the target for ill-directed censure, satisfied to deserve well of the profession it represents. It asks no favours and wishes but justice. That its needs are positive and that present conditions are productive of inefficiency cannot be gainsaid." This is not a pleasing picture; our own Army Medical Service, now we hope and believe entering on better times, has long suffered from military neglect and social indifference of a kind similar to that in America, but we should be indignant to think still to a like degree.

THE BACTERIAL PURIFICATION OF SEWAGE.

THE two articles published in the BRITISH MEDICAL JOURNAL on January 6th and 13th dealing respectively with the aërobic and anaërobic systems for the disposal of sewage now being extensively tested in this country contained what we believe to be an impartial statement of the relative merits of these systems. The septic-tank system, though doubtless more expensive at the outset than the purely aërobic scheme, whether with or without roughing screens, seems to promise to render precipitation or sedimentation unnecessary. The septic tank may not be absolutely necessary from a biological point of view, but paper, rags, corks, feathers, all seem to disappear in it. This is, of course, a question of time, but such substances are at all events prevented from escaping with the effluent, and thus blocking the filter beds.

In the articles which have been published, the question of the applicability of the septic-tank system to the special case of the sewage of manufacturing districts containing chemical refuse has not been discussed. In such sewage bodies may be present, as, for instance, derivatives of arsenic, which, it might be supposed, would tend to check or arrest the operations of the septic tank. The tests which have been made in various places appear to indicate that this anticipation is not well founded, but the information at disposal at the present time has not been sufficient to enable our Commissioner to express any opinion upon this point. It would appear, however, that if the sewage of a town or district be not of a very foul nature, not subject to excessive variations in quantity or quality, and the amount to be dealt with not out of proportion to the capabilities of a tank, then the septic-tank system is undoubtedly likely to be found both useful and convenient.

On the other hand, where, from the excessive foulness of the sewage and the enormous and variable quantities to be dealt with, "screening" or "precipitation" become an absolute necessity, a septic tank appears to be superfluous. The aërobic filter beds give as good and according to the testimony of many authorities, much better results, than a combined anaërobic and aërobic system.

Further, it may be observed that, though the septic-tank system may do very well for villages and small towns, to attempt to utilise it for dealing with, say, even half the sewage of London would be beset with difficulties which would probably prove to be insurmountable. At Barking, without a moment's warning, as much as 500 and 600 tons of gravel will, we have been informed on good authority, arrive after a heavy rainfall.[1] No tank, or system of tanks, would stand this. Moreover, it seems doubtful whether they would be able to deal with the London sewage quickly enough to avoid being completely choked up.

As far as it is possible to judge, the anaërobic system is not essential to the bacterial treatment of sewage; the chief service the anaërobic or septic tank renders seems to be to detain and destroy the coarser matter contained in

[1] This gravel is supposed to be that which is placed on the London streets for the sake of the horses. The mass of gravel does not come down the sewers slowly, it arrives like an avalanche.

sewage, allowing the resultant effluent to pass on to, and be purified by the aërobic filter beds. It is these latter which seem to exert the ultimate and most powerful purification, and it is upon the quality of the effluent that the final test of any system for the disposal of sewage depends.

It may be observed that it would be well if analytical chemists came to an understanding as to a definite standard of purity of effluent. It is useless to compare effluents when every chemist has his own idea of what constitutes a standard of purity. Each one sets up a different unit of value, and uses a different method of procedure in his analysis, with the consequence that not only does the conflict of so many opinions cause loss of faith in analytical chemists, but it becomes impossible for municipal authorities or any independent inquirer to discover on what lines or from what basis they have drawn their deductions.

THE IMPERIAL YEOMANRY HOSPITAL.

THE Imperial Yeomanry Hospital for South Africa will contain 500 beds for sick and wounded, and the work of organisation is therefore a task of great magnitude. The staff of the hospital will number altogether about 230 persons, including 15 qualified medical men, an adequate force of dressers, all of whom will be medical students from various hospitals, and 35 nurses. The staff of surgeons and physicians has not yet been completed, but the number of offers of service has been very large, and the public as well as the profession will be glad to know that the only difficulty which the Committee has had in this respect has been to make a selection from a list of suitable applicants, every one of whom would be fully competent for the post which he seeks. As already announced Mr. A. D. Fripp, M.S., F.R.C.S., Assistant Surgeon to Guy's Hospital, has been appointed Chief Surgeon to the hospital, a selection which will, we believe, have the hearty approval of the profession. The selection of Dr. J. W. Washbourn, Assistant Physician to Guy's Hospital and Lecturer on Bacteriology in the Medical School, which we are now able to announce, conveys the assurance that the staff will be equally strong on the medical side. Mr. Raymond Johnson, F.R.C.S., Assistant-Surgeon to University College Hospital, has been appointed one of the Surgeons to the hospital, and Mr. F. Newland-Pedley, F.R.C.S., Senior Dental Surgeon to Guy's Hospital, and Lecturer on Dental Surgery, has been appointed Dental Surgeon. This latter appointment has been made in view of the fact that a large number of wounds of the face and jaws have been reported to be occurring in which his special knowledge and skill are likely to be of service. Other appointments are about to be made, but have not yet been finally approved. They will include a number of junior qualified men, who have recently held the office of house-surgeon or house-physician in large hospitals, and who will discharge similar duties in the Yeomanry Hospital. The number of applications for employment received from nurses has also been very large, and a careful selection is being made. No nurse will be accepted who has not gone through the full course of three years' hospital training, and the more responsible posts will be entrusted to ladies who have already had experience in similar capacities. Lieutenant-Colonel A. T. Sloggett, R.A.M.C., who, as already announced, has been appointed the military medical officer of the hospital, entered the Army in 1881, and has seen much service in Egypt. He was Senior Medical Officer of the British troops with the Dongola Expeditionary Force under Lord Kitchener in 1896, and was present at Firket and Hafir. For his services during this expedition he was promoted, and received the medal with two clasps. He was Senior Medical Officer with the First Brigade British Division in the Soudan campaign, and was dangerously wounded at the battle of Khartoum. He was again mentioned in despatches and promoted. The hospital, it will be seen, will make up altogether about 730 beds (500 for patients and 230 for staff), and will probably be provided with tents to meet all requirements, but it is possible that it may be, in part at least, established in permanent buildings, which will probably be placed at the disposal of the Committee. It will have its own laundry, bakery, and kitchen, and will be provided—probably as gifts—with plant for electric lighting, electric bells, and telephones. It will be a permanent base hospital, complete in every respect, and the present intention is that it shall be established in the neighbourhood of Capetown. The staff will be ready to sail on February 3rd.

MOUNTED AMBULANCES AND FIRST AID TO MOUNTED TROOPS.

IN the last issue of the BRITISH MEDICAL JOURNAL (page 93) we drew attention to an important article (page 67) on this subject by Surgeon-Major Caverhill, the Lothians and Berwickshire Yeomanry Cavalry. We now have much pleasure in praising two admirable little pocket-books by the same author[1], with advanced proofs of which we have been favoured. They will be published in a few days, and we trust that they will speedily be placed in the hands of every yeoman and volunteer proceeding to South Africa. They are, concise and lucid in language and style, and convey just the information which every officer and soldier new to campaigning wants. They are chiefly compiled from German sources and from the *Manual* for the Royal Army Medical Corps, but the writer has added original matter. The illustrations are excellent, and the price most moderate. The first book is intended for the soldier, and gives most useful hints on wounds and field hygiene; the second is intended for stretcher bearers and those employed in first aid. In the article published last week Surgeon-Major Caverhill dwelt with much emphasis on the supreme importance of efficient first aid in the antiseptic treatment of wounds; on that largely hangs the subsequent issue, as has been abundantly proved during the present war. It is, therefore, of the highest importance that first aid on the field of battle itself, or at all events in the front line, should be at once prompt and efficient. Such aid can be, and undoubtedly is, afforded to slow-moving foot soldiers; but the difficulty is to give it to swift-moving mounted troops, which it seems probable will have to be provided for more and more as modern tactics are developed. Mounted ambulances, or ambulances to keep up with mounted troops and flying columns, have hitherto presented exceeding difficulties in medical field organisation. They have been recommended by Commissions and often discussed, but never formed; we suspect the element of expense has been the chief reason for this delay. Efficient bearers must not only be mounted but taught to ride, with special mounting and dismounting drill, and they must be taught also how to carry wounded men astride their horses. We hope that it is not too late to organise such a body for the Yeomanry in the present war. Some temporary expedient at least will have to be adopted when flying columns with horse artillery take the field. The nearest approach to flying ambulances we have are the cacolets and litters for mountain warfare; but even in them the leaders and bearers, being unmounted, cannot keep up with flying columns. Besides, horse or mule carriage for wounded men has not hitherto been satisfactory, largely on account of defective training of the animals employed. To use untrained or restive brutes in such a

[1] *Self Aid in War* and *Hints for Help to the Wounded*. Williams and Norgate 14, Henrietta Street, Covent Garden.

service is both cruel and dangerous. Hitherto we have been content to attach ordinary unmounted bearer companies and field hospitals to our cavalry brigades; but the futility of this will be made absurdly apparent when our flying columns come to scour the wide open veld of South Africa. The present war will largely revolutionise our present army organisation, and among many points that will come up for consideration will be those in connection with mounted ambulances.

DISCIPLINE IN MILITARY HOSPITALS.

A CORRESPONDENT of a military contemporary draws attention, as we have several times lately done, to the very serious question of maintaining discipline in military hospitals at home on the withdrawal of regular medical officers for South Africa. The writer, who has been employed as a civil surgeon in a large military hospital, asserts that he has noticed a marked change for the worse in the discipline of the hospital since regular commissioned officers were withdrawn and replaced by civilians. Patients disregard with impunity regulations framed in the interest of themselves as well as of the service, and even the hospital orderlies are not slow to take advantage of the absence of efficient military control. Such statements will be read with regret though hardly with surprise. There is no complaint, so far as we understand, regarding the manner in which these gentlemen perform their professional work, but their ignorance of military conditions and want of official status lead to much friction and trouble generally. Soldiers render obedience to those placed in authority over them in proportion to the power those so placed have for enforcing that authority, and it is well remembered that when "relative rank" was abolished for medical officers, and undefined "status" attempted to be substituted, the respect of the soldier for the medical officers diminished, and hospital discipline grew more difficult to maintain. The present is a parallel case. Civil surgeons, without any military training or authority, are suddenly placed in military hospitals to perform military medical duties. How can it be expected that such duties can be carried out by gentlemen who have no means of enforcing discipline? The analyses which we have lately given month by month of the distribution of army medical officers shows that their numbers are quite insufficient to cope with a serious war; and that it is only by stripping the home establishments, and risking efficiency and discipline therein, that mobilisation has up to date been effected. No doubt retired medical officers will, if possible, be placed in charge of home hospitals, but one man cannot be at the end of everything in a large establishment. During the Crimean war a number of civilians were engaged and given commissions as "acting assistant surgeons," and many of these gentlemen had permanent commissions bestowed upon them at the end of the war as a reward for good service. In a similar way it would seem advisable now to give these civil surgeons, employed in lieu of the officers of the R.A.M.C. on foreign service, commissions as "acting surgeon-lieutenants," and at the termination of the war a certain number of commissions might well be offered to the most deserving. We are advised, also, that these "acting surgeon-lieutenants," while employed and on duty in hospitals, ought to wear a uniform, simple and inexpensive, but distinctive, so that the patients and orderlies could at once recognise them as officers. A blue serge jumper with the badges of a lieutenant, a pair of plain blue serge trowsers, and a "service" cap with the R.A.M.C. badge, would be simple and distinctive, and would not cost more than £3 or £4, which sum should be paid by Government. We regret also to learn that in some hospitals serious deficiencies of stores have been detected; but this, we fear, is inevitable, owing to the denuded establishments and inexperienced non-commissioned officers in charge taken from the ranks of the militia reserves, pensioned soldiers, civilian dispensers, etc. We do not wish in any way to add to the embarrassments of the War Office, but we think it right now, when the mind of the nation is alive to the evils of underestimation and want of preparation, to take note of the pass to which, notwithstanding abundant warnings, long-continued indifference to undermanned army medical establishments has brought us.

THE BOGEY OF MEDICAL ETIQUETTE.

THERE is a widespread opinion amongst the public that a rule of conduct obtains in the medical profession the object of which is to protect the profession and individual members thereof against the consequences of their ignorance or mistakes. Probably opinions differ as to the extent to which we are prepared to go in this direction, and perhaps few believe that we would go so far as to commit perjury or to sacrifice human life, but we certainly are supposed to be capable of suppressing the truth in order to avoid exposing the mistakes of a colleague. We admit that there are members of the medical profession who regard their patients as their property, and we believe that the petty tyranny sometimes exercised is responsible for the opinions upon medical etiquette which are undoubtedly entertained by the laity. But these extreme views are not endorsed by any representative body in the medical profession, and we are quite certain that we are expressing the general view when we say that the profession recognises no other rules of medical etiquette than are consistent with the best interests of our patients and with courtesy and consideration for our colleagues. There is probably no profession whose members in their daily life are so frequently confronted with circumstances which try their tact and discretion to the uttermost in deciding what should or should not be said—not, be it noted, in the interests of the medical profession, but in the interests of their patients. No one would tolerate a doctor incapable of wholly or partially suppressing the truth on certain occasions, and if it be admitted that this is justifiable under any circumstances, we must be trusted to decide what those occasions may be, on the understanding that the interests of our patients take precedence of every other consideration. We regret very much that these reflections have been called forth by an obituary notice in the *Times* of such an eminent member of the medical profession as the late Sir James Paget, who was justly placed upon the topmost pinnacle of the medical profession as much for his character as for his scientific attainments. The leading journal seems to be at least unfortunate in the choice of its medical contributors, for this is neither the first nor the second time that it has blundered. The writer of the obituary notice, no doubt desiring to praise Paget, relates a story of how as a young man he received a piece of tissue from a *post-mortem* examination, with a request to say whether it was cancerous or not. "His examination," writes his biographer, "showed it to be a piece of healthy natural structure, only capable of being mistaken for a tumour by a very unusual degree of ignorance. A man of less tact would have said what it was and would have made an enemy. Paget was content to reply that he had examined the specimen and that it was not cancerous." In a leading article the *Glasgow Herald* comments upon this passage as showing the influence of medical etiquette upon the character of even such an honourable man as Sir James Paget, making him prefer to tell a polite half-truth rather than give offence by exposing his correspondent's ignorance. We think such a comment is justified by the way in which the writer of the obituary notice singles out the reply for special praise on the ground of its tactfulness. But as Sir William Gairdner and another correspondent, whose letters have been published in the

Glasgow Herald, have pointed out, the answer was the only one which could have been given. It is difficult to know what the healthy natural structure was that could only have been mistaken for a tumour, according to the writer in the *Times*, "by a very unusual degree of ignorance." Fat, connective tissue, muscle, tendon, bone or gland may form part of a tumour, and no microscopist could say from the examination of such a piece of tissue that it had not, nor is it easy to see what Sir James Paget could have added to his answer. As Sir William Gairdner says, "Sir James very wisely and properly confined himself to answering the question put to him, and did not go beyond it into facts on which he had no secure information." The point has been so well discussed by the representatives of the medical profession who have written in the Glasgow newspapers that we need only remind our readers that at the time when this incident is alleged to have happened very few members of the medical profession were familiar with the use of the microscope, or could interpret the true nature of naked-eye *post-mortem* appearances. It is, therefore, quite a mistake to think of the want of such knowledge in those days as ignorance of which any man need have felt ashamed.

THE LONDON POLYCLINIC.

A STANDING Committee for the Investigation of Tuberculosis of the Medical Graduates College and Polyclinic has, we are informed, held its first meeting during the past week, and Dr. Heron was elected chairman. The Committee proposes to commence its labours by the examination of the facts as to the nature of the several forms of skin disease which are held to be connected with the tubercle bacillus. Of these the various forms of lupus will take the first place. A list of questions and statements has been drawn up to guide a discussion which it is proposed to hold on Wednesday next, January 24th, at 5.15 P.M. Those who may desire to obtain a copy of the questions should apply to the Medical Superintendent, at 22, Chenies Street. The meeting is open to all members, and a classified collection of drawings will be displayed. Another of the Committees of the same College has for its subject the collections of evidence as regards climate and geographical pathology. Its Chairman is Sir William Kynsey, and its Secretary Dr. Hillier. This Committee will begin by a discussion on the climate and prevailing diseases of the different districts of South Africa, and its first meeting will take place on Wednesday, February 7th, at 5.15. The Committee will gladly receive books, pamphlets, or manuscript information bearing on the subject. All interested in it are invited to communicate with Dr. Hillier at the College. The first number of the second volume of the *Polyclinic*, the journal of the College, has appeared this week. It is henceforth to be issued monthly, and is edited under the superintendence of the Library and Museum Committee. We gather from an editor's address that it is intended to be chiefly, but not quite exclusively, a chronicle of the work of the College and a record of the cases which are brought forward in the clinical lectures and consultations. Its price to non-members of the College is 12s. a year; members receive it free.

THE BIRMINGHAM CONSULTING INSTITUTE.

Forward, the organ of the Birmingham Hospital Saturday Committee, says: "The Committee of the Birmingham Medical and General Consultative Institute, under the chairmanship of Mr. Arthur Chamberlain, J.P., are making progress with their arrangements. A few weeks ago an advertisement was prepared notifying the vacancy in connection with the post of consulting physician to the institution. Certain members of that section of the medical profession in Birmingham which has shown hostility to the institution made it their business to arrange with the medical press for the boycotting of the advertisement, and the same was accordingly refused by certain official journals. This was, however, in effect of little moment, beyond demonstrating once again the peculiar good taste and dignified methods employed by this section of the local medical profession, for the daily press of some of the leading cities proved itself a quite sufficient medium, bringing in response a very gratifying number of applications from highly-qualified medical men throughout the country, and as a matter of fact it was no light matter to make the selection. We understand, however, that after interviewing those finally selected, the committee have unanimously made an appointment, and they have every confidence that it will give entire satisfaction to all concerned. A suite of consulting rooms will shortly be taken in a central position, and it is hoped that the institution will begin its operations in the early spring." It may be added that Alderman Cook, the President of the Birmingham Hospital Saturday Fund, has resigned the chairmanship of the above-mentioned committee and appears to have been succeeded by Mr. Arthur Chamberlain. The Institute by its new title appears to some to embrace other than medical work; it is now the Medical and *General* Consultation Institute, so probably its promotors will add a few other departments for the public benefit. The profession will be curious to see who is the Phœnix who "will give entire satisfaction to all concerned."

PROTOTYPES OF GIDEON GRAY.

DR. JOHN YOUNG, the Keeper of the Hunterian Museum in the University of Glasgow, gives an interesting account of three English medical MSS., 1550-1660, in the current number of the *Glasgow Medical Journal*. The first manuscript was written by Henry Fowler, an Oxford graduate, and rector of Minchinhampton, who took as his counsel of perfection the aphorism:

> It is a greate folly to prescribe a cure
> Before that thou dost knowe the cause full sure.

It is needless to say that he does not appear to have acted up to his own advice; nor could he, for the science of pathology had not yet been born. He quotes, too, another aphorism, which, if less true than the previous one, has yet a grain of truth in it, *Nullum medicum esse peritum nisi triginta homines ad Orcum dimisserit* (no physician is skilled until he has sent thirty patients to Hades). The University of Oxford, no doubt, had this aphorism in mind when it required of its medical graduates that they should only produce evidence of having wrought three cures before the licence to practise was conferred upon them. The proverb remains with us in the degraded form that "No one can become an oculist until he has spoilt a hatful of eyes." The second manuscript is by John Beckenham, the last Abbot of Westminster, who received a hundred florins for signing the deed of surrender which allowed of the secularisation of the abbey at Evesham, his Alma Mater. He entitles his work a *Book of Soueraigne Medicines against the most common and known diseases both of men and women . . . . chiefly for those who have not alwayes the learned Physitian at hand.* He recommends only those remedies which have a reasonable prospect of doing some good, makes sparing use of strong drinks as the vehicles of his drugs, and is singularly modest as to the result, leaving to God the success or otherwise of the remedy, and thus reminding us of the formula so often employed by Ambroise Paré, "I dressed him, God cured him." The third manuscript was written by Mr. Philip Hunton, pastor at Westbury, Wilts, and is a collection in which the theological is greater and more interesting than the medical element. Hunton was a schoolmaster at Avebury, and afterwards provost of New College, Durham, an institution revived by Cromwell, and suppressed again at the Restoration. Hunton was ejected from his living as a non-juror in 1662, and thereafter

"preached privately," as Calamy courteously phrases it. He died in 1682. Dr. Young concludes an interesting article with a regret that "so little survives of the personal history of the ancient Gideon Grays, who toiled in the acquisition of experience, and are now remembered only by the cheap witlings who read their receipts with the contempt born of imperfect knowledge."

INFLUENZA AND POLITICS.

The open-air treatment of tuberculosis is a public recognition of a hitherto somewhat neglected factor in the production of infectious disease. Certain researches have reduced this factor to working terms. For example, it has been shown that if rats and rabbits are kept in cages placed in an atmosphere of sewer gas, they succumb to a dose of the bacillus typhosus, which is powerless to hurt similar animals that have been kept in pure air. A corresponding susceptibility to infection may be induced in rats by allowing them to fatigue themselves in revolving cages, and it is well known that fowls, which are usually immune to anthrax, cease to be so if their feet have been chilled in cold water. How much influence the depressing effect of some of the more recent war news on the community has had in increasing the prevalence of the present epidemic of influenza can only be conjectured; but practical lessons may at any rate be derived from these known experimental facts, leading one to avoid, as far as may be, both for oneself and for others, all causes of depression, whether from over-exertion, or underfeeding, or the undue fear of the malady itself, or inordinate apprehension for the immediate or remote results of the present war. The Palace of Westminster has in each epidemic been a centre of influenza, and it would be interesting to know whether those responsible for the cleansing and ventilation of the chamber itself, as well as of the lobbies, Committee rooms, tea room, library, and so on propose to take any special means to prevent the dissemination of infection when the House of Commons meets again. The air of the chamber and its dependent rooms and passages is subjected to various processes which make it dry and at the same time enervating; the difference between the temperature of various parts is often very considerable, owing, as it is asserted, to a division of authority. The matter is well worthy of the consideration of the First Commissioner of Works. The contemplation of the possibility of a House of Commons having to decide on the momentous issues now at stake in South Africa while the majority of its members were suffering from the mental depression produced by influenza is not one which can be contemplated with indifference.

TUBERCULOSIS IN CATTLE.

An extremely interesting report of observations made upon some cattle which had given a decided reaction to the tuberculin test, is furnished to the Canadian Minister of Agriculture by Professor J. G. Adami and Drs. C. F. Martin. The animals had reacted so definitely to the test that it was expected they would afford a valuable object lesson upon the development and the dangers attendant upon the presence of tuberculosis in cattle. A study extending over nine months revealed many instructive points, but not wholly in the way that was anticipated. Although the observations confirmed the generally-accepted view of the infectiveness of the milk and tissues of such animals, they demonstrated that the milk of an animal suffering from extensive tuberculous lesions is by no means continuously infectious. Whilst sometimes few bacilli were present in the milk, and inoculation of even large amounts of this milk into susceptible animals produced tuberculosis, yet without any obvious change in the general condition of the affected cow the number of bacilli in the milk might be temporarily increased greatly, so that the milk then became a most dangerous product. Another most important fact established in this series of observations was that bacilli might appear in the milk of cattle which were free from disease of the udder, or in fact from any evidence of tuberculosis in the mammary gland. The obvious conclusion is that where an animal has reacted to tuberculin the unsterilised milk should never be used for food. In all the ten cows which had reacted distinct evidence of tuberculosis was found on *post-mortem* examination seven months later, but in three of them the amount of tuberculosis was extremely small, being confined to latent disease in the peribronchial glands. This fact demonstrates the delicacy of the tuberculin test, and since in these animals repeated injections had been made, there is reason to infer that tuberculin has some curative effect. The report concludes that animals like those above alluded to, presenting no clinical symptoms and free from mammary tuberculosis, are relatively harmless so long as they remain in such a state; but that if tuberculosis is to be stamped out it is imperative that such cattle be either destroyed or segregated, and thus prevented from spreading the disease.

ALIMENTARY GLYCOSURIA AND TRAUMATIC NEUROSES.

It has been long known to surgeons that after severe injuries sugar may be present in the urine, and every now and then cases of true traumatic diabetes are observed in which the condition is not merely transient, but leads to permanent disease. Even where the injury is confined to what we call shock the glycosuria may occur, and this association has been studied by Dr. H. Strauss in order to determine its frequency and value as an additional means of diagnosis in functional disorders of the nervous system. As to its frequency Dr. Strauss has collected from the experience of himself and others 109 cases of traumatic neuroses, of which 33—that is, 30.3 per cent.—presented glycosuria. The method of examination employed was to cause the patient to take in the morning upon an empty stomach 100 grams of dry grape sugar dissolved in 500 c.cm. of water or tea; this dose was taken during about ten minutes. The urine was examined before the experiment and afterwards for at least four hours; it was collected hourly and kept in separate glasses. The examination for sugar was made not only by the reduction of copper, but by fermentation or polarisation as well, for reducing substances other than sugar may be present. The diagnostic value of the condition when ascertained should not be rated too highly. In the first place, the experiment must be repeated several times in order to show that the occurrence is not transient or accidental; in the second place, we have to exclude the possibility of the action of various agents which diminish the natural assimilating capacity for grape sugar, such as poisoning by opium, morphine, atropine, thyroid gland, the presence of psoriasis, chronic alcoholism, gout, obesity, etc. Moreover non-traumatic functional neuroses also exhibit this phenomenon, although with less frequency. Strauss met with it in 3 out of 31 cases of neurasthenia and hysteria, while Arndt found it to be present in 14.4 per cent. out of 125 similar cases. All that we can say is that it is twice as frequent in the traumatic as in the non-traumatic cases, and that without affording any very positive information its presence may constitute an aid to diagnosis.

THE INCREASE OF CANCER.

The Massachusetts State Board of Health has instituted an inquiry as to the increase and infectiousness of cancer. It has issued a circular which states that: "Every year there is an increase in the reports to the State of the number of deaths from cancer, even when allowance is made for age and greater population. By some it is alleged that this is due to an increase of the disease itself; by others, that better diagnosis and more careful registration will account for it. Furthermore, the infec-

tious nature of this disease, caused by a possible parasite, and its contagiousness have been strongly urged. It is with a view of helping to procure more accurate information upon these points that this inquiry is undertaken, and co-operation is asked to that end." The circular contains twelve questions, but unfortunately the information which they are intended to yield cannot go beyond generalities. The recipient is asked to state, in percentage if possible, whether the number of cases of cancer in proportion to the total number of all cases coming under his observation is greater within the last few years than at an earlier date. Inquiry is also made as to whether a number of cases have been known to originate about the same time so as to warrant the application of the term epidemic; whether any instances are known in which several members of the same family living together have been affected, and whether cases of cancer have been observed in parts of the body which might come into contact as in married people. Questions are asked also as to "cancer houses" so-called, and as to the nature of the soil or geological formation of any district in which cancer is believed to be specially prevalent.

GENU VALGUM AND GENU VARUM.

IN reply to a correspondent who is puzzled by the fact that in the *Nomenclature of Diseases* genu valgum is taken to be knock-knee and genu varum bow leg, while in the Latin dictionaries genu varum is translated knock-knee and genu valgum bow leg, Dr. J. F. Payne has been good enough to send us the following note upon the subject which will be read with interest: "Your correspondent is quite right in saying that the meaning of these two words in the *Nomenclature of Diseases* is in contradiction to that given in Latin dictionaries. The definitions and synonyms in the *Nomenclature* are founded on the modern usage of surgeons; the dictionary definitions on the usage of Latin classical writers and of grammarians. The modern usage is found not only in English surgical works, but in French and German textbooks. But there is some confusion on the subject, for Mayne's *Lexicon* (last edition) says that G. valgum is incorrectly used for "knock-knee," but leaves the erroneous use of G. varum untouched. When or how this erroneous use of these terms originated it is difficult to say, but I find that Ambroise Paré in the seventeenth century used them in the classical sense. The compilers of the Latin version of the *Nomenclature* did not correct the error, and I suppose for this reason that their object (as defined by the learned Dr. Greenhill) was not to supply classical equivalents for modern words, but to give the Latin terms current in medical literature, which are often used in a sense altogether different from their original meaning. If it were thought desirable to revert to the original meaning of the terms here criticised, the reform would have to begin with the surgical textbooks."

TRICHINOSIS.

THE extensive importation of American pork and bacon into this country lends importance and interest, from an English point of view, to the last report issued by the microscopist of the United States Department of Agriculture. He shows that this disease continues to exist to a considerable and undesirable extent amongst the pigs slaughtered in the great transatlantic abattoirs, trichinæ being found in 13,325 out of 1,881,309 specimens of swine flesh examined. A similar examination, made in 1883 by Osler and Clement, disclosed a proportion of 4 infected carcasses in 1,000. It would appear, therefore, that the prevalence of disease has remained fairly constant. This will probably continue to be the case until the life-history of the parasite is fully understood and rational measures can be adopted to prevent its access to the animals. The idea that swine derive the infection from rats frequenting the pigstyes and slaughterhouses does not seem to be supported by adequate evidence. It is somewhat surprising that cases of trichinosis are of such rare occurrence in England, despite the large consumption of American produce, and the fact that they are so very infrequent serves to emphasise the great importance of thorough cooking as an effectual prophylactic measure. Salting and smoking the flesh are not sufficient to destroy the trichina, as has been conclusively shown by the Havre experiments, in which animals were found to be readily infected with trichinous flesh which had been subjected to these processes only. A thorough microscopic examination of the meat, such as is carried out in Germany, is very desirable, but it is not absolutely reliable. The presence of the parasites may not cause any very appreciable symptoms in the affected animals before death; the capsules of the worms, from want of calcification, are not always readily visible *post mortem*, and may therefore, even where a systematic examination of the flesh is the rule, be passed over, especially if not present in large numbers. English immunity from the disease must be chiefly due to efficient cooking, but there is some evidence that slight cases may occur more frequently than is suspected, being mistaken perhaps for typhoid fever.

THE HIGH DEATH-RATE OF DUBLIN.

HIS Excellency the Lord Lieutenant of Ireland, K.G., is much concerned at the continued unhealthiness of the Irish capital as evidenced by the unfavourable "bills of mortality." He has proposed an inquiry into the health of Dublin under Section CCIX of the Public Health (Ireland) Act, the inquiry to be conducted by a committee consisting of representatives of the Local Government Board of Ireland, the Corporation of Dublin, the Royal College of Physicians of Dublin, and the Royal College of Surgeons of Dublin, with an inspector of the Local Government Board of England.

LEAD POISONING IN PARIS.

AN interesting report upon the risks incurred by workpeople employed in industries wherein lead and its compounds are handled has recently been presented to the Prefect of Police by M. Armand Gautier. In Paris alone upwards of 30,000 workpeople are in one way or another exposed to the fumes, dust, and combinations of lead. As the hospitals in the French capital are municipalised the victims of plumbism cost the city annually a considerable sum of money. Gautier's first report presented to the Conseil d'Hygiène Publique included cases extending over the period 1870 to 1880; the expense corresponded to that incurred by a residence of 11,000 days in a hospital. In 1881 a Commission was appointed by the Government to lay down the precautions necessary to be observed in factories and workshops where the manufacture and manipulation of lead and its compounds were carried on. Satisfactory results almost immediately followed the enforcement of the regulations. From 1881 to 1883 the number of patients fell from 552 to 421, and the number of days spent by lead-poisoned patients in the hospitals was reduced by almost one-half. It is interesting, however, to note that while for a period after the introduction of the new rules the total of days spent in the hospitals at first declined, the decrease has not been maintained. On the contrary, there has been a slight rise. These results have been somewhat disappointing, especially since the Clichy White Lead Works, which used to supply almost half the number of patients to the hospitals, were closed a few years ago, and new methods of manipulating white lead introduced. It is known that the substitution of the moist for the dry method of dealing with lead carbonate has materially diminished the number of saturnine patients, and yet all over Paris there has been an increase in lead-poisoned workpeople. Clearly, there-

fore, other trades that use the metal or its compounds must have receded rather than advanced from a hygienic point of view. The number of deaths, too, from plumbism has increased. Of 552 patients ill between 1877 and 1880, 5 died; of 248 ill between 1887 and 1889, 16 died; of 302 ill between 1890 and 1893, 15 died; and of 314 ill between 1894 and 1898, 17 died. In other words, since 1881, when the regulations were enforced, the number of patients and the number of deaths from lead poisoning have been, without interruption, slowly but continuously rising. The severity of the malady has to some extent subsided in individual cases, and yet the number of deaths due to plumbism has increased, despite improvements in the manufacture of white lead. Other industries, therefore, must have contributed to this unexpected and somewhat disappointing result. Of these, house-painting has produced the largest number of victims. Taking the years 1894-1898 the following is the average number of saturnine patients supplied by certain trades in Paris alone: painters and colour-grinders 223, plumbers 22, whitelead makers 4. Before the regulations were introduced whitelead operatives occupied the second line in the list of dangerous trades; to-day it is sixth on the list of trades supplying lead-poisoned patients. Of all the industries that bring workmen into contact with lead the most dangerous are lead smelting, type making, the manufacture of solder, the recovery of lead from pewter, and other small industries, that expose the workpeople to the fumes and dust of the metal. As regards the severity of type of illness, colour grinders occupy the fourth place in Gautier's list of trades. While dusty occupations do not give the largest number of patients they yet supply the most serious cases. After these come those industries in which lead compounds are handled (painters), and finally those that bring the individual into contact with the metal itself. Of 86 fatal cases reported between 1894-1898, 43 were painters, 2 mechanics, 2 plumbers, 2 tin workers, and 2 type makers, whereas not one fatal case occurred among whitelead makers. The large number of casualties among house painters lends support to Gautier's contention that it would be well to bring this trade under Government supervision. In Paris it is apparent that greater precaution will have to be exercised in those trades we have specially mentioned, since in them lead poisoning is undoubtedly on the increase.

HYGIENIC EXHIBITION AT NAPLES.

The King of Italy has promised to open a hygienic exhibition at Naples in April, and it will remain open till September. We hear that the construction of the buildings is being pushed on with great zeal, and, what is equally if not more important, that funds are assured partly by direct donations and partly by redeemable shares. Several conferences will be held. The most important will be those on the prevention of tuberculosis, a subject which is attracting very general attention in all parts of Italy, and on the promotion of physical education. Amongst the most interesting "side shows" will be an exhibition of works of "Sacred Art." The Minister of Public Instruction (G. Baccelli) has directed that objects of this description at present located in public museums and buildings shall be lent. There will also be a "Pompeian Pavilion," in which will be reproduced the public and private baths of Pompeii and other objects of interest. The wealthier portion of the British public take so great an interest both in hygiene and in sacred art that many English visitors may be expected to take advantage of the lovely spring season in Naples.

FIFTEENTH CENTURY QUACKERY.

It is clear that there could be no unqualified practitioners of medicine until qualified practitioners came into existence, and the date at which the regulation of medical practice became a care of the State varied in different countries. But there can be no doubt that in all there was great difficulty in enforcing laws and regulations against pretenders, not only when special powers and privileges were first granted to universities and corporations, but also continuously ever since. We know that it was so in this country and that it is so still. The difficulty would appear to have existed in an acute form in Vienna in the fifteenth century. An interesting note by Dr. E. T. Withington in the last number of *Janus* gives an account of a paper by Dr. Leopold Senfelder, in the *Wiener klinische Rundschau* (44-45) describing the efforts made by the Vienna medical faculty of that age to defend its rights against unqualified practitioners. These efforts were viewed with careless contempt by the secular authorities, and imperfectly seconded by the spiritual arm with the clumsy and expensive weapon of excommunication. Indeed, on some occasions spiritual persons were themselves the offenders. Thus, in 1469 the faculty threatened the Minorites and Dominicans to refuse them all medical assistance if they did not refrain from unqualified practice. The chief offenders, however, were women and Jews, and Dr. Senfelder relates several anecdotes of struggles between them and the Faculty. In 1442 a baptised Jew, John Gabriel, was, at the request of the Burgomaster, admitted to examination. He failed to pass, but requested another opportunity which was granted, and he was even permitted to choose the questions himself. Instead of appearing, however, he declared he was a surgeon and not a physician, and therefore required no examination, and the Faculty had to content itself with proclaiming him a "*perfidissimus Judæus, inimicus et blasphemator domini nostri Jesu Christi et omnium Christianorum.*" Bachelors of Medicine were permitted to practise in the country but not in the city of Vienna; though sometimes a special licence was granted on condition that they did not examine anyone suspected of leprosy, or accused of *impotentia coeundi*, or in any way interfere with the practice of doctors or licentiates.

It is calculated that when the hospitals now being organised are in working order, 6,000 medical and surgical beds will be available for the forces in South Africa.

At the Herbert Hospital, Woolwich, preparations for the reception of a large number of invalids and wounded from South Africa have been completed, and full equipment has been issued in anticipation of their arrival.

We regret to learn that Sir William Priestley, M.D., who is the parliamentary representative of the Universities of Edinburgh and St. Andrews, was taken seriously ill some five weeks ago and that his condition is still such as to cause grave anxiety.

The *Annual Report of the Medical Officer of Health of the Administrative County of London* dealing with the year 1898 has just been issued. In addition to the statistics for London and a review of the administrative measures which have been taken, it contains a number of extracts and observations on reports of medical officers of health of the various districts in so far as they deal with special matters, such as, for example, the relation of the prevalence of scarlet fever and diphtheria to elementary school, and notes upon complaints to the London County Council as to nuisances, and on the manner in which the complaints were disposed of. The report is illustrated by a large number of diagrams and charts, and there are nine appendices containing reports on a variety of subjects, to most of which reference has already been made in these columns. We shall hope on some future occasion to deal at more length with this volume of Mr. Shirley Murphy's valuable series of reports upon the sanitary affairs of the County of London.

THE WAR IN SOUTH AFRICA.

THE BATTLE OF COLENSO.

[FROM A CORRESPONDENT IN NATAL.]

THE PLAN OF THE ATTACK.

AT the battle of Colenso, which was fought on December 15th, 1899, there were, roughly, about 20,000 British troops engaged. These included about 16,000 infantry, 3,000 cavalry and artillery, and some 1,000 irregular cavalry. The plan of attack was that the Fifth Brigade, under General Fitzroy Hart, should force its way across the Tugela river and try to turn the right flank of the enemy. At the same time General Barton's Brigade was to endeavour to cross the river further down, and to seize a steep hill on the left flank from which they could enfilade the Boer lines. General Hildyard's Brigade were to make a front attack on the position, whilst General Lyttelton's was held in reserve.

The Boers were strongly entrenched amongst the steep kopjes around Colenso, the centre of the position being Fort Wylie, which stands just behind the village of Colenso.

The battle was begun at 5.35 A.M. by a shell from one of the naval guns. This was immediately followed by a terrific fire from our guns, which was maintained throughout the action. At times Fort Wylie appeared as an actual sheet of fire from the bursting of our shells. The Boer artillery fire was comparatively ineffective, and many of their shells failed to burst. Their musketry fire was reserved until our infantry were little more than 500 yards from their position, when they were assailed by a perfect tempest of bullets. The Fifth Brigade, under General Hart, being most exposed to the fire, suffered severely.

NATURE OF WOUNDS.

The Fifth Brigade Field Hospital, under the command of Major G. H. Younge, R.A.M.C., had quickly 24 officers and 285 non-commissioned officers and men admitted with bullet wounds. The following analysis of these wounds, according to the region involved, is interesting: Head 19, face 7, neck 3, back and spine 20, upper extremity 76, lower extremity 118, other wounds 6.

From this it will be seen that wounds of the lower extremity greatly predominated. Of the 309 only 8 were returned as shell wounds; the remainder were without exception caused by Mauser bullets. The wounds caused by these bullets were humane in the extreme. The wounds both of entrance and of exit were small, and presented a clean punched-out appearance, being almost entirely free from contusion or laceration. Amongst the cases brought to hospital hæmorrhage was conspicuous by its absence.

In Major Younge's field hospital only 4 cases of gunshot fracture were admitted—1 of the femur, 1 of the humerus, and 2 of both bones of the leg. In none of these were the bones extensively comminuted, and it is more than probable that all 4 cases will recover with useful limbs.

Many of the wounds were curious and interesting. One man presented symmetrical Mauser bullet wounds one inch below the centre of each clavicle. Both bullets passed directly backwards, but no wounds of exit could be found. In another case a man was struck whilst lying down. The bullet entered near the centre of the parietal bone, passed downwards and forwards through the brain, the orbit, and the hard palate, and was found projecting beneath the skin behind the symphysis menti, from which region it was removed without difficulty by Major F. T. Wilkinson, R.A.M.C. There was extensive effusion of blood within the orbit, which caused marked protrusion of the eye and lids. The patient was perfectly conscious, could give an accurate account of how he was wounded, and on the following morning was able to walk without difficulty to the stretcher on which he was carried to the hospital train.

TREATMENT IN THE FIELD HOSPITALS.

In only a few cases was it found necessary to perform operations in the field hospitals. As the cases arrived the wounds were washed with perchloride lotion and dressed with double cyanide wool and gauze. Long before night fell the whole of the wounded, exceeding 600 in number, were comfortably lodged in the field hospitals.

On the day following the battle the wounded were transferred to the stationary and base hospitals with a celerity which was absolutely marvellous. In effecting the transfer the greatest assistance was given by the Volunteer Ambulance Corps of 1,000 men, which was organised at Maritzburg by Colonel T. J. Gallwey, C.B., R.A.M.C.

THE CONDUCT OF THE R.A.M.C. UNDER FIRE.

During the action many acts of heroism were performed by both officers and men of the R.A.M.C. Conspicuous amongst these was that of Major W. Babtie, C.M.G., R.A.M.C., who rode through a tempest of bullets to succour a number of men of the Royal Artillery, who lay wounded and exposed to the enemy's fire. Wherever the fire was hottest there were to be found medical officers attending to and dressing the wounded with as much coolness and skill as if they were in the wards of a hospital.

In all I saw 3 cases which were brought to the field hospital without dressings, and in almost every case the dressings were applied with a neatness and precision which would have done credit to any hospital. The rapidity with which the wounded were dressed and removed from the field by the bearer companies was the subject of favourable comment on all sides. The ambulances were several times fired on by the enemy's guns and several of them were damaged by fragments of shell, yet the medical officers worked steadily on with a devotion and heroism which was beyond all praise.

THE MEDICAL ASPECTS OF THE WAR.

BY A SOUTH AFRICAN CAMPAIGNER.

IX.

HEALTH OF LADYSMITH.

THE thrilling news of the splendid defence made by the garrison at Ladysmith at least shows that whatever condition a certain number of the garrison may be in, the healthy and fighting men are as good as ever they were. Nevertheless, reports now make it certain that the epidemic of typhoid among the garrison is of a serious character. Thus, on January 8th and 9th no fewer than 16 deaths from dysentery and typhoid were returned. One correspondent, writing early in December, says that of his battalion of 550, 90 were down with typhoid fever. In the face of this heavy mortality there is little doubt that the water supplies used by the troops have become contaminated. Probably the heavy rains, which invariably mean surface drainage into wells and streams, have contributed to this contamination. We can scarcely suppose that the latrines themselves are so placed as in any way to imperil the purity of the water supply. At any rate, from some cause or another it is evident that this pollution has occurred, and in this connection it is of interest to note that the troops are all supplied with filters. For protection against typhoid filters cannot be relied upon under conditions of camp life. The best remedy against an infected water supply is boiling the water, and we fear very much that considerable difficulty may be experienced in a camp in inducing soldiers to use this precaution, but at the same time, looking to the heavy losses now entailed, it is certain that vigorous measures to enforce this practice wherever practicable should be used.

The British losses in the engagements on the 6th and 7th are fortunately smaller than we had been led to anticipate, 13 officers and 135 men are reported killed, and 28 officers and 244 men wounded. Here the proportion of killed is unusually high, and is doubtless due to the hand-to-hand character of the fighting which occurred on Wagon Hill and elsewhere. The Boer losses are stated differently in every report which reaches us, so that it is impossible to arrive at any accurate information, but we may rest assured that the forces engaged in attacking our positions must have lost very heavily.

ORANGE RIVER.

From the Orange River, which may be taken as the base for the operations on the western border of the Free State, it is interesting to learn that the health of the troops is thoroughly good, and a Reuter telegram of January 8th states that during the present lull in the fighting the hospitals there are almost empty. All the serious cases have been sent to the field hos-

pitals at Wynberg. Large quantities of medical comforts including mineral waters, preserves, fruits, tobacco, and furniture and clothing, are stored in each of the hospitals, and are much appreciated by the men, who are keenly sensitive of the great kindness shown them by the donors. The inhabitants of Cradock, a town on the Karoo, forwarded over £200 worth of goods for the sick and wounded. This is satisfactory on every ground, as there are a number of Dutch in the Cradock districts whose loyalty has sometimes been called in question.

Physique of the Yeomanry and Volunteers.

One of the questions which has been raised in reference to the various yeomanry and volunteer corps now going to South Africa, apart from their military qualifications for the work in hand, is as to their physical fitness for the task before them. On this ground I do not think much anxiety need be felt. The climate of South Africa is, on the whole, healthy and invigorating; and men accustomed to outdoor exercises, such as are enjoyed by our town middle classes and yeomanry, have all the qualifications for this outdoor life. In many respects the volunteers and yeomanry now proceeding to South Africa will have the same qualities as the colonists who have been of such excellent service in the field, although they cannot, of course, compare with the colonists in experience of the country and the peculiarities of South African life. Nevertheless, this knowledge will be gradually acquired by them, and the yeomanry and volunteers will form excellent material out of which most valuable forces for warfare in South Africa will soon be made.

Field Ambulance for Mounted Troops.

In the British Medical Journal of January 13th is an interesting article by Dr. Caverhill, Surgeon-Major to the Lothians and Berwickshire Yeomanry Cavalry, describing an ambulance scheme for the mounted service. In this article the writer argues with considerable force that on tactical, humanitarian, and surgical grounds the bearer company, with cavalry or mounted infantry, should itself be mounted, and that it should be provided with fittings for transporting men sitting or lying down, either in a regular or improvised manner, and should have sufficient surgical appliances. The special mobility and rapid movement of a cavalry force obviously require equal facilities for movement in its surgical staff and bearer companies. The flying hospital, suggested by Dr. Horace Manders, is, as stated in the Journal of January 13th, to consist of a hospital car and an ambulance car, constructed on the principle of the Irish jaunting car, each to be drawn by two horses attached to a pole, on the same modification of the curricle principle as that adopted in the Cape cart. The Cape cart is a hooded four-seated vehicle on two wheels. Any wheeled ambulance which could be moved rapidly about the field and was capable of following the movements of cavalry must undoubtedly be of advantage, and in many respects the proposed car is excellent. At the same time, I would point out that a long experience of driving over all sorts of roads and over the veld itself in South Africa has convinced me that no two-wheeled vehicle in the world can compare for a moment in either comfort or safety with one having four wheels. In driving over the veld at anything but a walk, two dangers are constantly presenting themselves, the ant heap and the ant-bear hole. Both of these occur over almost the whole of the South African veld, and either of them is capable of readily upsetting a two-wheeled vehicle. It might be urged that a careful driver or postillion would naturally avoid both these obstacles. But a man who, whether as postillion or coachman, is driving a vehicle across the veld has his attention constantly distracted to some distant object. In warfare, I take it, he would have to keep his eye to some extent upon the enemy's lines. In hunting of all sorts, where the Cape cart is frequently used, and in which I have had some experience of its use, the driver's attention is constantly taken up by watching the troop of buck or other object of the chase, and one of the wheels is very apt to run over an ant heap or drop into the grass-covered, and almost entirely concealed ant-bear hole without much warning. In this way many capsizes occur. On the other hand, if a strongly-built, four-wheeled American "spider" be used, a capsize is almost impossible. The Americans are a practical and ingenious people, they have had the problem of the settlement of pathless tracts of country to deal with, and I have no hesitation in saying that they have solved the question better than the South African Boers. An old American engineer and pioneer once remarked to me on the subject of the Cape cart, that it had fallen to his lot to travel in many countries, and that he always went with an open mind prepared to discover that the peculiar institutions and appliances of various sorts adopted by any particular country, had some special fitness for the purpose designed. For a long time he had applied this principle to the Cape cart, and racked his brains to discover its peculiar virtues and fitness for the work required of it, but he confessed finally that he had completely failed in this instance, and that the preference for a four-wheeled vehicle either in the shape of a buck-board, "spider," or waggon over a rough and pathless country which obtains universally in America, was undoubtedly rational. The four-wheeled vehicle is invariably safer than a two-wheeled, and one wheel of an American "spider" can be dropped into a hole or cross an ant heap, or almost any other obstacle, without absolutely capsizing the vehicle. On these grounds I have no hesitation in saying that a spider-built ambulance would be safer and more comfortable.

In conclusion, I will merely add that personally I have twice been pitched out of a two-wheeled vehicle in South Africa, but never out of an American "spider," which latter vehicle of later years I invariably used for all sorts of work.

Snakes.

An article in the *Spectator* of January 13th contains the statement that among the casualties at Modder River were several cases of snakebite. The snakes of South Africa, it is added, are both common and deadly, cobras of all sizes, pale yellow to black being the most active and dangerous. One the Boers call the "spitting snake," because they believe that it can spit the venom which oozes from its fangs. I have not seen the reports of casualties from snakebite referred to, although I admit that it is possible they may have occurred. At the same time it must be pointed out that the number of deaths from snakebite in South Africa during a year are extremely small. I have myself spent months on the veld, and have been through a campaign, yet during the whole of my South African experience I have only seen some three cases of snakebite. In the column in which I served through a campaign lasting some three months not a single instance of snakebite occurred, in spite of the fact that the operations were conducted in the coast districts where snakes are most abundant. The fact is that in South Africa the country is so bare that there is little cover for the snake, which almost invariably makes for its hole on getting sight of man. Snakes are fairly plentiful, but they seldom attack unless trodden upon, and they usually avoid being trodden upon by escaping in the manner described. With regard to the "spitting snake" I can testify that this is no mere legend. There is a small active snake which does squirt a poisonous fluid in this way, and a case came under my notice in which a personal friend, while stooping to pick up a stone with which to destroy one of these reptiles, had this fluid squirted into his eye by such a snake, a "ring hals." Fortunately he was near a stream, to which he rushed and in which he at once bathed the eye. When I saw him the whole of the conjunctiva was acutely inflamed and remained in this condition for several days, although the eye eventually returned to its normal condition.

The Red Cross Organisation.

The need for a permanent central organisation for the control of voluntary relief was recognised by the formation early in 1899, under the auspices of Lord Lansdowne, of the Central British Red Cross Committee, under which the British Red Cross Society, the St. John Ambulance Brigade, and other voluntary bodies, are federated. When the war broke out Colonel J. S. Young was sent out by the Central Committee to act as its Commissioner, with instructions to make use of the ample funds and materials at his disposal as seemed best on the spot, in co-operation with the Principal Medical Officer of the Field Force and with the local aid societies. Lord Wantage, who is chairman of the National Society for the Aid of Sick and Wounded in War, has given some interesting de-

tails of the work recently accomplished. He refers to the excellent services rendered by Colonel Young, who is working in touch with the Army Medical Service and with the local branch at Capetown, under the auspices of Sir Alfred Milner. He is also supplying warm clothing for invalids on their return journey.

The Society is engaged in equipping a convalescent home at the Cape for both officers and men; a large extent of ground, with suitable houses, belonging to Sir James Sivewright, has been generously placed by him at the disposal of the Society at Somerset West, a beautiful and healthy site thirty miles from Capetown and eighteen from Wynberg, with railway communication. It can provide 200 beds, which can easily be increased by huts or tents. The Society is also establishing a convalescent hospital, consisting of Doecker huts, in the near vicinity of Netley Hospital. The Society acts in connection with the military medical authorities both at home and at the seat of war, and thus forms the recognised channel for providing "comforts," etc., for the sick and wounded beyond what are supplied by the Army Medical Service. The Commissioner of the Red Cross Society has assured the executive at home that complete harmony exists between him and the officers of the Army Medical Service. The promptness shown by them, Lord Wantage adds, in bringing the wounded down from the battefields to the hospitals at the base deserves the highest commendation. Indeed the excellence of the hospital field organisation in this campaign seems to be greatly in advance of that in any previous war.

One of Colonel Young's letter from South Africa, dated November 30th, states that he had inspected the trains fitted up under the direction of Colonel Supple, P.M.O. These trains have been proved, in the transport of the wounded from the engagements at Belmont and Graspan, to be very efficient for the conveyance of the wounded over the long distances usual in the country. He says:

> One train carries 92 and the other 96 officers and men lying down in five carriages with passage down the centre, all communicating with one another, and with carriages fitted, one for carrying arms and kits, one fitted as kitchen and pharmacy, and a saloon carriage accommodating eight first-class and 15 second-class passengers, two medical officers and two nursing sisters being provided for in this saloon with a portion of the other male attendants on the wounded.
>
> The ventilation is admirable, and I was only able to suggest the provision, which I agreed to pay for, of movable bed trays for the patients, who could sit up, to eat their food from. I also provided an ice chest for one train at the request of Colonel Supple.

Further on Lord Wantage comments on the numerous applications for employment under the Red Cross which are made in many instances by fully qualified and trained nurses. He points out that 40 qualified nurses were forced by the Boers to quit Johannesburg and are now in Capetown earnestly desiring to be employed. Their case certainly seems a hard one, and deserving of consideration should occasion arise for supplementing the navy or army nursing staff in South Africa.

THE DISAPPEARANCE OF THE NON-COMBATANT FICTION.

The following appeared in the *Morning Post* of January 12th:

"R.A.M.C.

"'It is most necessary here to say a word in praise of the Royal Army Medical Corps, who faced a hot fire all day long, going close up to the firing line to bring back our wounded. It seems almost incredible that during the day five hundred wounded men should have been brought back by the Medical Corps, though to get them back stretcher bearers and searchers had to cross and recross a zone of fire at least a mile wide.'—War Correspondent of the *Morning Post* at Magersfontein.

"He marches with the rest of us, he swaggers all the way,
His step ain't right, but his boots is bright, and he draws a soldier's pay,
He wears a kit of a perfect fit, and his figure is just the one
To go ahead when the ranks outspread and the bayonet's red on the gun;
But when its "Charge!" he stays behind—he doesn't swarm no kop—
But don't you think that his morning drink is a basin o' dribblin' sop,
He doesn't shy when the shots whizz by, nor he doesn't shake when a shell
Splits over his head, and his friend falls dead who was sound as a bloomin' bell.

Look at the doctor! We don't look at him,
Not till a bone's disarranged in a limb;
What he is doing ain't nothing to us,
What he is thinking, now, who cares a cuss?
We must go fighting, and he must stand still,
Bust all the doctors until a chap's ill!

"But when our leg is broke in half, and, truth, we must go sick,
He joins the strife with his long lean knife, and cuts at the wounded quick,
His words are short, but you can't pay court to one of a hundred such,
And we don't grouse when he wastes his nous on some of them groaning Dutch;
O his hand it kind o' soothes the pain, when the eyes see only red,
He stays behind, but he stays to bind a regular splitting head,
And if we die of our scratches, why, it isn't his bloomin' fault
Who stays behind (which is very kind) while we carry the hot assault.

Go for the doctor, and mind where you tread,
Tell him I'm feeling that bad in my head,
Tell him the pills as I've swallowed ain't good,
Tell him I've lost lots o' flesh, likewise blood,
Go for the doctor, and tell him come quick,
Fetch up old Sawbones, a Tommy's gone sick.

"In barracks, morning stables done, on Saturday he comes,
We have to show our chests in a row, and he looks between our thumbs,
We don't go sick for a horse's kick, but a bite when you're bending down
Will make you feel as your goin' to peel from the ball of your foot to your crown;
And so we go to hospital, and if he orders port
A man lies low. "Are you better?" "No," you ought to hear us snort!
But it's hard to stick when another's sick—there's a empty bed in the room,
And worser still, when we've finished drill, there's another old hoss to groom!

But, here's to the man of the R.A.M.C,
Buzzing about on the field like a bee,
Tending the wounded where lead's flying hot,
Biting his lip when he gets hisself shot;
Brave as the best of us, hurt and not tell,
Doctor he may be—he's soldier as well."

CASUALTIES IN LADYSMITH.

In the list of casualties reported from Ladysmith is the name of Major C. G. Woods, of the R.A.M.C., who is returned as wounded. Major C. G. Woods entered the Army Medical Service in 1885, and was promoted Surgeon-Major in 1898. He served with the Hazara expedition, and received the medal and clasp. He was on general duty with the medical staff in Natal.

The name of Lieutenant Hornabrook, Medical Officer of the Local Forces, is also returned as wounded. This gentleman is, we believe, Dr. Hornabrook, who was for some time engaged in plague duty in India.

HOSPITALS AND CONVALESCENT HOMES.

Charing Cross Hospital hopes to provide 20 beds for the sick and wounded soldiers. At the Convalescent Home at Limpsfield, Surrey, 30 beds will be available for convalescents.

The Committee of the Royal Orthopædic Hospital have offered to place two wards (10 beds) at the disposal of the War Office.

The Nicolson Mackenzie Memorial Hospital at Strathpeffer Spa, N.B., has offered 4 beds for the treatment of sick and wounded soldiers, specially those of the Highland Brigade.

The Paisley Eye Infirmary has offered to place 8 beds at the disposal of the War Office.

The proposal to place the Atkinson Morley Hospital at Wimbledon at the service of the War Office for the reception of the sick and wounded from South Africa is uncertain of fulfilment owing to legal difficulties in connection with the trust.

The Glasgow Corporation has offered to set aside 8 wards in the new hospital at Ruehill for the use of the wounded. The Glasgow (St. Andrew) Ambulance Society also offer to supply, free of charge, a full staff of surgeons and nurses.

The Committee of the Syracuse Convalescent Home at Torquay, for wounded soldiers, sailors, and marines, appeal for funds to support 50 sufferers—the accommodation which the home can afford. The War Office has approved the scheme, and it is proposed to apply half the accommodation to wounded men from the Devon Regiment and the remainder to other urgent cases.

The scheme which is being organised by the *Anglo-American Gazette* of Nice for bringing wounded officers to the Riviera is meeting with great success. Almost every hotel owner between Marseilles and Mentone has offered to take in guests free of charge. It is computed that already accommodation for 200 or 300 officers can be found. It was hoped that the War Office will see its way to send a hospital ship to Villefranche.

An appeal to the residents of Hampstead has been made for £1,000 to equip Golders Hill as a convalescent home for the Brigade of Guards and Household Cavalry, and place it at the disposal of the military authorities.

The Marquis of Zetland has given his residence, Kerse House, Falkirk, for the use of the sick and wounded from South Africa.

Mr. G. R. Vernon, of Auchano House, Kilmarnock, has given the house to be used as a hospital for convalescent soldiers from South Africa.

The Kent and Essex General Investment Company have offered to the War Office the use of Purrock Hall, Gravesend, rent free for twelve months, as a home for sick and wounded from South Africa.

Rules have been promulgated by the War Office directing the conditions of the work entrusted to the Soldiers' and Sailors' Help Society in arranging accommodation for convalescent soldiers and sailors.

There is a movement in Capetown to raise from £20,000 to £30,000 by public subscription, with a view to establishing a South African Field Hospital on similar lines to the Portland. It is proposed that the hospital should be staffed wholly by South African colonists.

TRANSFERS AND APPOINTMENTS.

The *Nubia* having been tranformed into a hospital ship the local authorities at Durban are placed in a position to undertake the care of wounded officers and men from the Tugela battle who have had to be kept in the hospitals at Frere and Estcourt. They were brought down in the ambulance train and arrived at Durban on January 10th.

General Buller's call for the European and British Indian Ambulance Corps to proceed to the front was very promptly responded to. The two corps aggregate 1,400 trained men, and all have arrived in Frere camp.

The Bearer Company of the South Midland Brigade also includes members of the 2nd Volunteer Battalion Royal Warwickshire Regiment, the 1st Volunteer Battalion Worcester Regiment, and the 1st Volunteer Battalion Leicester Regiment. Surgeon-Major Freer, who commands the Bearer Company, offered to the army medical authorities his own services at the front, and stated that if desired he could provide at least a section from the Birmingham volunteer contingent. He has received from the Director-General A.M.S. a communication thanking him, and stating that should any of his officers, non-commissioned officers, and men desire to volunteer for active service in South Africa he should take proper action. Twenty-two men have given in their names and expressed their willingness to serve in South Africa. The number included Surgeon-Major Freer, Surgeon-Captain Whitcombe, and Surgeon-Lieutenant Macdougall.

THE FLITTING OF THE UNIVERSITY OF LONDON.

A MEETING of Convocation of the University of London, probably the last in the present University Buildings, was held on January 15th. Mr. E. H. BUSK, Chairman, presided.

THE LATE SIR JAMES PAGET.

The CHAIRMAN, after the suspension of the standing orders had been adopted, spoke of the conspicuous service rendered to the University by Sir James Paget, as Vice-Chancellor. His sympathetic apt words and singularly clear voice had given acute pleasure to very many persons in that hall, and would never be forgotten by the students whom he had addressed. He moved a vote expressive of the grief entertained by the House at the great loss they had sustained in the death of their late Vice-Chancellor. This was duly seconded and carried unanimously.

THE RECONSTITUTION OF THE UNIVERSITY.

Mr. BLAKE ODGERS, Q.C., presented the report of the Standing Committee (an abstract of which was published in the BRITISH MEDICAL JOURNAL of January 13th, page 94), and moved its adoption. He congratulated Convocation on the termination of the conflict of nearly twenty years, which had, however, done good in various ways, especially in exciting a wide interest in the University. The scheme for the reconstruction, which was a compromise, promised to be productive of great good; its final shape was largely due to the Chairman of Convocation and the Special and Standing Committees of Convocation. Under the new statutes, Convocation would elect about one-third, or eighteen members, of the Senate, all of whom would be members of the Council for External Students, whose duty it would be to keep up the high standard of the degrees for those students. The election of members of the Senate would for the future be through the various faculties; the next election would be in May next, when Convocation would probably meet in its new home in the Imperial Institute. The University, however, was in no sense the successor of the body called the Imperial Institute; it had its title to the building direct from the Government. The portion of the building allotted to the University was the centre with the eastern wing, and the accommodation provided was ample, far in excess, indeed, of anything the University had ever had before. The library should become worthy of the University, and the graduates would have three other excellent rooms for writing, reading, and for meetings. The first election to the Senate was of great importance. Convocation should elect only men who were loyally devoted to the new scheme, and all should forget the differences that had parted them whilst the scheme was being perfected.

Dr. R. M. WALMISLEY, D.Sc., seconded the proposal. As regarded the past, he begged Convocation to "bury the hatchet," and hoped all would now do the best possible for the development of the University on the lines of the new charter, especially in the advancement of learning on post-graduate lines. In regard to research, too, he trusted that many of the needs of the University might be filled by donations from various public-spirited citizens. Lastly, he trusted that the transference of the University to its new home might be the occasion for some kind of public ceremony.

In the discussion which followed, the CHAIRMAN, in reply to Mr. G. EASTES, M.B., stated that the new building would accommodate under its own roof more than 2,000 candidates for any single examination.

Dr. SILVANUS THOMPSON earnestly appealed to the members to sink former party differences, and to elect upon the Senate the best men to be obtained, whose only pledge should be to do their best for the reconstituted university.

Mr. COTTON protested against the University being turned out of its present building, but the motion was carried with one single dissentient.

THE NEW HOME OF THE UNIVERSITY.

Mr. ODGERS, Q.C., moved the following resolution recommended by the Standing Committee:

That the Chairman of Convocation be requested to place before the Senate the report of the Standing Committee of Convocation on the accommodation at the Imperial Institute, and to respectfully request that the matters referred to therein may be favourably considered, and the recommendations contained in it carried into effect.

Going into detail he dealt with three matters of importance in respect to the new building: (1) The accommodation for graduates, (2) the housing of the library, which he trusted would be in the three handsome rooms on the ground floor under the charge of a librarian, whose only business it should be to attend to the library; (3) the lavatory accommodation for graduates and for students attending examinations respectively, together with a refreshment room. He expressed a hope that all these apartments would be furnished in an appropriate manner by the Government. He particularly hoped their statue of the Queen, which adorned the present building, might find an appropriate space in the new home.

Mr. SPRATLING, B.Sc., seconded the resolution, which was carried.

VOTE OF THANKS TO THE CHAIRMAN OF CONVOCATION.

Sir PHILIP MAGNUS was then voted to the chair, and Mr. A. BASSETT HOPKINS, M.A., moved a resolution expressing Convocation's deep sense of indebtedness to its Chairman for his inestimable services to the University during the past eight years. Especially during the last few years, in connection with the reconstitution of the University, extraordinary demands had been made upon his time, patience, and skill, which demands he had always fully and liberally met, to the great and lasting benefit of the University. When his motion was sent in, he explained, about the middle of December, he had no suspicion that Sir John Lubbock was on the threshold of the House of Lords. Still less did he expect that their Chairman would emerge as a Parliamentary candidate. Mr. Busk had asked him, in these circumstances, to withdraw his motion. He saw, however, no reason for such a course, and though he could not support Mr. Busk as their candidate, he had the greatest pleasure in moving this resolution. This was a unique opportunity, and through trying years and heated discussions, now happily ended, the tact, judgment, impartiality, and firmness of their Chairman had been beyond all praise.

Mr. H. A. NESBITT seconded the resolution.

Sir P. MAGNUS heartily endorsed all that had been said of Mr. Busk, and testified to the value of his services on the Senate, where he had always vigorously supported the rights and privileges of graduates.

The resolution was carried unanimously.

The CHAIRMAN, who had withdrawn, at this point returned, and was informed by Sir P. Magnus of the resolution carried in his absence.

Mr. E. H. BUSK said he had never felt such difficulty, he might say impossibility, in expressing what was in his mind. The service of the University and of Convention was near to his heart. It was the special distinction of this University to have raised the banner of freedom from religious and all other restrictions. For such a University it was indeed an honour to work. In future he believed its work would be still more glorious, seeing that they were going to undertake the tremendous task of organising higher education in the metropolis and its neighbourhood, partly by the affiliation of certain colleges which would be called schools of the University in the area known as the administrative County of London, and partly by the recognition of teachers in educational establish-

ments within a wider area, within a radius of thirty miles of London. Opportunities would be given for university training and teaching, as well as for examinations. There would also be a sphere for post-graduate learning and research. From the information which had come before the Commission, it was anticipated that as many as a thousand students might be expected to attend the University in its new abode, from our Colonies and from the United States of America, for purposes of research. At the present time a great many went to one or another of the German universities, and without in any way reflecting on the German system he thought we should all prefer to see the students in question imbued with British rather than German ideas. He anticipated great results from the facilities which would in the future be afforded to students in the metropolis with its national galleries, museums, and collections. From the bottom of his heart he thanked all present for their vote.

CONVALESCENT HOMES FOR SOLDIERS.

I.

In view of the improbability of an early termination of the war, the question of the provision of military convalescent homes has come to occupy a position of greatly increased importance. Until very recently no convalescent list in military life was sanctioned by regulation. During 1898 the advisability of reform in this matter was strongly urged upon the Government, particularly in the columns of the *Morning Post*, and in February last Mr. Wyndham announced, in answer to a question in the House of Commons, that the Secretary of State had decided to provide accommodation for convalescent soldiers in existing barracks at ten selected stations, and that there would be room in all for some 3 500 men.

It is perhaps true that the urgency of the need for such institutions in ordinary times of peace has been somewhat exaggerated. Much exception has been taken to the system whereby soldiers on the sick list are, on the completion of their stay in hospital, either sent back to duty or granted sick furlough "in care of friends." Apart from the pecuniary hardships to the men, it may reasonably be questioned how far it is wise or desirable, from a medical point of view, to send them to spend their period of convalescence amidst surroundings which are often undesirable in many ways, and it has been alleged that the result of this system has been to unduly raise the "invaliding out" rate, whilst the men have often been sent back to duty before they were physically fit to resume work. Many army medical officers of large experience, however, do not altogether confirm these views, and it is pointed out that, except for having to pay their own expenses, soldiers mostly prefer to go to their homes for convalescence. But, taking the question of their health only into consideration, there can be no doubt that it would be preferable for them to pass the intermediary stage between sickness and absolute recovery in properly-managed and suitably-situated convalescent homes; and the utility and advisability of such establishments is testified to by the fact that they are a regular institution in connection with the large Continental armies. In time of peace such homes are most required for troops invalided from abroad. These are numerous, and include many cases which would derive the greatest benefit, and often their only chance of returning to the service as efficient men, from a sojourn in a carefully-conducted convalescent hospital.

The difficulty of hastily providing such accommodation in time of war is very considerable. That there is, and will be to an increasing extent, need for its provision in the immediate future is beyond doubt. For whilst the reports from the front afford gratifying evidence of the rapidity and ease which is characterising the healing of a large proportion of all wounds in the present campaign, there must of necessity be many serious surgical cases, such as severe bone and joint injuries, which will require not only protracted hospital treatment but a long period of rest afterwards. The number of cases of enteric fever and dysentery, especially the former, is already large and is not at all likely to diminish. There will be great pressure on the base hospitals in South Africa, and it is most necessary that cases should not be detained in them longer than is absolutely necessary if they are to cope with the constant relays of sick and wounded from the front. The number of soldiers invalided home will therefore be very large. Already they have begun to arrive, and there is every reason to anticipate that they will continue to do so in increasing numbers. Whatever accommodation is available in existing barracks and military hospitals can at once be utilised, but the difficulty will be to establish additional convalescent homes owing to the scarcity of officers of the R.A.M.C.

When the Government promised to institute convalescent homes, it was decided, as has been already said, to utilise for the purpose existing buildings as far as possible, the places chosen being Scarborough, Yarmouth, Sandown, Shorncliffe, Pembroke Dock, Tynemouth, Fleetwood, Ayr, and Aberdeen. At these stations there is a great deal of available space, and whilst some of them are not well suited at this time of year for men coming from South Africa, others could be substituted or added to the list. At Plymouth, for instance, there are a number of healthily situated old forts which could well be employed for the purpose, and both here and at Falmouth the climatic conditions are favourable. When the authorities announced their intention of providing convalescent homes it was proposed to do so experimentally, and the plan was, if successful, to be more widely adopted. As was pointed out in the BRITISH MEDICAL JOURNAL of September 10th, 1898, such homes, if properly organised and managed, need not prove very costly, as is shown by the financial statistics relating to civil institutions of the kind.

For several weeks past the War Office has been inundated with offers from private individuals, societies, and the authorities of convalescent institutions, to provide convalescent homes, large and small, for the sick and wounded from the war. The military authorities have been blamed for not accepting these with alacrity. But there are important questions to be considered in regard to them. For the Government to undertake the equipment and organisation of numerous small and scattered establishments would be a very costly and difficult matter. Larger homes or hospitals—say of 50 beds and upwards—especially if provided with all necessary equipment and the requisite staff for nursing and service, could, on the other hand, be very advantageously utilised. One of the greatest difficulties in connection both with private homes and with those belonging to Government, is the question of providing the necessary medical officers. The number of officers of the Royal Army Medical Corps at present in England is very small. Every available man is at the seat of war, and there are no reserves on which to draw, even to fill vacancies in South Africa.

That a mistake seems to have been made when the militia surgeons were abolished in April, 1877, and is now only too apparent, and the difficulty in the way of utilising the "Army Medical Reserve" is that its members can only be called upon to take medical charge of troops that may happen to be quartered in their immediate neighbourhood. It is absolutely necessary to provide for the maintenance of discipline in any home or institution where a number of convalescent soldiers are to be congregated together, and the absence of properly trained military medical officers makes this a very difficult matter. It is not possible for civilian doctors to fill the gap adequately, and it is quite likely that more harm than good might result from the hasty establishment of numerous privately provided institutions of the kind unless provision were made for due disciplinary authority. Whatever hospital and convalescent quarters the Government can possibly provide will be required to the full, and both for these and for such private homes as may be usefully accepted, the services of civilian surgeons must necessarily be utilised. The value of their services would, in the opinion of those well qualified to judge, be greatly enhanced by granting them temporary commissions as Acting Surgeon-Lieutenants, with the appropriate uniform, and in the case of private homes arranging for resident military control. If it be found impossible to organise sufficient accommodation in existing or improvised institutions, the offers which have been generously made in many quarters of taking one or more men on sick furlough into private houses is one that might be accepted without any hesitation, as far as the welfare of the soldiers is concerned.

There is too much reason to fear that the promise made by the Government to provide regular convalescent homes has

been, as the *Morning Post* declares, only very imperfectly fulfilled, and that they are not to any important extent available, chiefly on account of the deficiency of medical officers. It is very necessary that energetic steps should be taken without delay to ensure the provision of adequate asylums for the wounded and convalescent soldiers invalided from South Africa; and such steps as are being taken in this direction will be considered in a subsequent article.

MEDICAL OFFICERS TO SCHOOL BOARDS.

A CORRESPONDENT has raised the question of the duties of medical officers to School Boards, and of the basis upon which their remuneration should be fixed.

We understand that medical superintendents have now been appointed by School Boards in a considerable number of places, and that the matter is under consideration by other Boards. The duties of the office are very various in the case of different Boards. We are indebted to Dr. James Kerr, Medical Superintendent to the Bradford School Board, who has held that office for some years, for some valuable observations on the duties which it will probably be found advantageous to schedule in any arrangement made with a School Board.

1. To visit each department not less than once every three months, reporting on the sanitary condition of the premises and general health of the scholars. To attend when requisite any meetings of the Board or its committees. There ought to be a regular item on the agenda of the School Management Committee, "Quarterly Report of Medical Superintendent." He should advise with the Superintendent of Schools as to courses of study in any special classes (defective, blind, deaf, etc.).
2. To confer with head teachers at regular or special visits to schools as to whether any children presented are physically capable of proceeding to a higher standard or class. To examine and test eyesight, hearing, or other physical condition of any scholars.
3. To examine all plans for new buildings or alterations to buildings and report as to their sanitary arrangements, ventilation, lighting, etc.
4. To examine candidates for employment under the Board, or employees when required by the Board, and make out certificates.
5. To examine candidate monitors and pupil teachers at the end of the second year, and make out certificates required by the Education Department.
6. To visit when required by the Board any employee who is absent from duty on account of illness, and report in writing.
7. To examine when required by the Board any child who is stated to be physically unfit to attend school, and to make out a certificate.

With regard to remuneration it is more difficult to speak, because the conditions vary so much in different places, according to the number of schools and scholars, and the distance which would have to be travelled by the medical superintendent. The salaries paid and the basis upon which they are paid vary. Some Boards pay a small retaining fee, and extra fees to their officers for certificates. On the whole, it is probable that this is not a good arrangement, and that an inclusive salary is better. The work to be done for a small Board may, and probably would, be proportionately more troublesome than that to be done for a large Board, and, as a matter of fact, a small school may give as much trouble as one three or four times as large. Probably a basis for fixing a scale of remuneration might be found in a rate of £5 a year for each school; but it would be well that it should be understood that the rate would be subject to revision as experience showed the amount of work to be done. Such experience would also probably tend to impress the School Board with the value of the work done, and cause them to see the wisdom of paying adequate remuneration for it.

LITERARY NOTES.

AFTER a useful existence of more than half a century *La Settimana Medica* ceased to appear at the close of last year, but only to reappear under a new name and a new organisation. The old journal was managed exclusively by the officers of the Florence Medical Clinic. The new *régime* includes the heads and important members of the Clinics of Bologna, Florence, Naples, and Turin, from schools which hold a leading position amongst Italian faculties of medicine. The first numbers contain an able and interesting introductory lecture delivered to the students of the Bolognese School entitled, "Common Sense in Medicine." It may be summed up in the statement: "All discoveries in physiology or therapeutics must, before they are adopted by the physician, be tested and proved by bedside experience. Practitioners cannot accept for use any discoveries, however interesting from other points of view, which do not satisfactorily pass such an examination." The doctrine is not new, but it is most desirable that it should from time to time be restated, as it is here, in eloquent but measured language by Professor Murri. The *Revista Critica di Clinica Medica* will be, like its predecessor, published in Florence, and will have the services, as editor, of Dr. Giovanni Nesti, who unites a sound and sober judgment to an extensive knowledge of Italian and foreign medical literature.

Janus, a periodical devoted to the history of medicine and to medical geography, which is published at Haarlem by Dr. H. F. A. Peypers of Amsterdam (London: Williams and Norgate), is probably the only medical journal which possesses among its regular editorial staff a number of Chinese doctors officially appointed by the Tsung Li Yamen. We need not reproduce the names of these gentlemen whose fame, we fear, has not reached this quarter of the globe, but they number thirteen, and reside in most of the principal districts of China.

A foolish letter from Mr. Maurice L. Johnson, published, under the heading "Spoiling our Soldiers," in the *Saturday Review* of January 6th, has elicited a delightful retort from Mr. Oswald Crawfurd, whose letter in the same journal on January 13th chaffs the egregious Mr. Johnson admirably. It would indeed be difficult to treat him seriously. He gravely demands that the Government should "stop this risky farce" of prophylactic inoculation of soldiers for typhoid, because "a more than possible explanation of the unsuccess of our men in the South African war is doubtless to be found in the fact that they are subjected to inoculation with antityphoid serum," which, he states, has the effect of dulling and poisoning their brains, impairing their mental acumen, and depriving them of their serenity! Mr. Oswald Crawfurd, jokingly adopting the same kind of "reasoning," suggests that, on the contrary, in the absence of any other explanation, the splendid valour and achievements of our troops, in spite of unusual difficulties and against heavy odds, must be ascribed to the action of the vaccine. We may safely leave Mr. Johnson to Mr. Crawfurd, who answers his "arguments" in the only possible way. The *Saturday Review*, no doubt, only published Mr. Johnson's letter that it might have a pretext for inserting Mr. Crawfurd's capital skit on faddist "logic," which it anticipated; that is, unless we are to assume that Mr. Maurice L. Johnson has been experimenting at the office of that journal with this terrible "serum."

A correspondent sends us the following extract from Sir Walter Scott's *Tales of a Grandfather* (chap. lxxi), which he thinks may be found interesting at the present time when, he says, "we are hearing travellers' tales from South Africa":

After the surrender of Preston in 1715 a gentleman who fought as a trooper in one of the Scottish squadrons was shot through the body at the barricade. He was conceived to be mortally wounded and lay stretched in a pew in the church, an affectionate comrade supporting his head and expecting every moment to receive his last sigh. After much sickness the wounded man's stomach is said to have relieved itself by discharging a piece of his scarlet waistcoat which the ball had carried into his body. The assistant, much amazed at such a phenomenon, being also one of that class of men who cannot forbear a jest even in the most melancholy circumstances, observed, "Heigh, Walter, I am fain to see you have a stock of braid cloth in your bowels; and since it is sae, I wish you would exert yourself again and bring up as much as would make a pair of breeks, for I am in mickle need o' them." The wounded man afterwards recovered.

THE PLAGUE.

PROGRESS OF THE DISEASE.

PORTUGAL.

Oporto.—During the week ending December 31st, 1899, and during the first week of 1900, 6 cases and 2 deaths, and 3 cases and 1 death respectively occurred. Since the commencement of the outbreak 295 cases and 107 deaths have been recorded. In no other part of Portugal, nor anywhere in the Peninsula generally, is any case of plague reported. There has been no fresh case of plague and no death from the disease during the week ending January 14th.

INDIA.

The total mortality in Bombay is increasing, and plague deaths figure largely in the returns. For the four weeks ending December 30th, 1899, the average total mortality has exceeded 1,300 per week, whilst for the corresponding week of 1899 the death-rate was 700 per week. The registered plague mortality for the same period was, in 1898, 388, whereas in 1899 the deaths from plague numbered 954. In Bombay, however, there is quite as much anxiety over the mortality from general diseases, apart from plague, as there is about the purely plague mortality. Diseases of the respiratory system, excluding those from phthisis, are returned for the four weeks under notice as 280; and it is possible that pneumonic forms of plague add to the number of so-called general diseases. Famine and

its attendant diseases no doubt contribute to swell the death-rate in the Presidency.

For all India the total reported plague deaths fell, for the week ending December 23rd, 1899, from 1,686 to 1,384.

Plague has slightly increased in the Madras Presidency; in Calcutta for the week ending December 23rd, 1899, the death-rate from the disease fell from 81 to 50.

NEW CALEDONIA.

Between December 25th, 1899, and January 9th, 1900, 18 cases of plague and 10 deaths from the disease occurred in Noumea and neighbourhood. Active steps are being taken by the Governor of the island to isolate and disinfect the quarter of the town in which plague is rife. One European and some of the Kanaka immigrants have died of plague.

PHILIPPINE ISLANDS.

From Washington a telegram dated January 8th conveys the information that 3 cases of plague have occurred amongst natives of the Philippines. The information is supplied by the Surgeon-General of the American forces at Manila, and there consequently seems very little hope that there can be any error

HONOLULU.

Between December 26th, 1899, and January 1st, 1900, 5 Chinese immigrants and 1 native of Honolulu died of plague. How Honolulu has become infected has not been ascertained; in all probability from Hong Kong or some of the southern Chinese ports, as the American Pacific steamers call at Honolulu on the way from China to San Francisco. The Americans have thus two centres of plague, one at Manila the other at Honolulu.

MAURITIUS.

The epidemic of plague is abating in virulence. For the week ending January 11th, 7 fresh cases of plague occurred in the island, and during the same period but 5 deaths are recorded from the disease.

AUSTRALIA.

Adelaide.—A death from plague is reported to have occurred in the Adelaide Hospital. The patient was a runaway sailor from a ship which did not touch at any port between New York and Adelaide. The information is supplied by the correspondent of the *Daily Mail*, and is dated Sydney, January 15th.

JAPAN.

Kobe.—Plague is said to be devastating Kobe (*Daily Mail*, January 15th).

PRECAUTIONS IN SCOTLAND.

The Local Government Board for Scotland has issued a circular letter to all local authorities calling attention to the recent Customs Order requiring that all officers of Customs shall give every possible assistance to medical officers of health in carrying out the regulations of the Local Government Board. The procedure will be as follows:—

The officers of Customs will look to the medical officer of health to inform them from time to time of any particular ports or countries, the vessels arriving from which the medical officer of health may desire to visit; and, in this connection, it is observed that the earliest information which would usually be available to this end is that which would be obtained by a regular examination of the news telegraphed from abroad for the purposes of the daily press. The officers of Customs, having thus been communicated with, will then, on their part, give the medical officer of health any information they may possess respecting the arrival, or impending arrival, of any ships from the ports or countries indicated.

The circular goes on to request the local authority to consider whether their existing sanitary staff is adequate for the prompt performance of the duties thus devolving on the medical officer of health in connection with the supervision of shipping generally in the district. It will be remembered that under Article 1 of the Board's Order of January 1st, 1898, the term "medical officer of health" in that Order includes any duly qualified medical practitioner appointed or employed by a local authority to act in the execution of the Order.

The circular in conclusion reminds medical officers of health of the peculiar facility given for the importation and dissemination of plague by the circumstance that it affects the lower animals, and most especially rats, mice, and, by natural sequence, cats and of the inquiries which ought therefore to be made as to evidences of disease among those animals on board ship, and the special importance of measures for their extermination, which may form a proper part of the directions authorised to be given by medical officers of health under Article 16 of the Order.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting of this District will be held at the Lambeth Infirmary on January 25th, at 4 P.M. Dr. Hector Mackenzie will read a paper on the Treatment of some Forms of Hysteria. Cases of clinical interest from the wards of the infirmary will be shown by Dr. Quarry.—THEO. B. HYSLOP, Bethlem Royal Hospital, S.E., District Secretary.

BORDER COUNTIES BRANCH: COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES DISTRICT.—This District will meet in the Railway Hotel, Newtown, St. Boswell's, on Friday, January 26th, at 3.30 P.M., Dr. Blair, Chairman of the District, presiding. Members are requested to send notices of all cases to be shown or papers to be read at the earliest possible date to the Honorary Secretary, Dr. W. HALL CALVERT, Melrose, N.B.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A MEETING was held at the Great Northern Central Hospital on January 10th; Dr. MORTON in the chair. The minutes of the last meeting were read and confirmed

Attendance on Soldiers and Sailors.—A communication from the Metropolitan Counties Branch, inviting members willing to attend gratuitously upon the families of the soldiers and sailors on active service in South Africa, to send in their names to the Secretaries, was circulated.

Cyclic Albuminuria.—Dr. SUTHERLAND read a paper on cyclic albuminuria and associated symptoms. This was discussed.

Varix.—Mr. MACREADY showed a man with an enormous varix in the thigh in an unusual situation, associated with extreme varicose veins in the leg.

Mammary Tumour.—He also showed a woman, aged 43 years, with a hard tumour of the left mamma, movable, quite painless, and unaccompanied with enlarged axillary glands, the diagnosis of which was uncertain.

Ulcerative Endocarditis.—Dr. CLIFFORD BEALE showed a young woman, aged 22 years, who had been ill for some months from fever, general pains, and presented a condition of septic intoxication associated with disease of the heart. At the cardiac apex there was a thrill and loud systolic murmur, which had varied markedly in character. Attacks of sudden pain had occurred in the left side, suggesting infarct of the spleen, and at one time she had had pain in the palm of the hand (? embolus). The history pointed to the diagnosis of ulcerative endocarditis arising from septic infection in the house of the patient (other inmates had been ill, etc.), and on this account the patient had been recently treated with ℥j doses of liquor hydrargyri perchloridi with apparent slight improvement.

Votes of Thanks.—A hearty vote of thanks to the authorities of the hospital and to Dr. Clifford Beale and Mr. Macready was passed.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE regular monthly meeting of this Branch was held in the Royal Society's Room, Sydney, on Friday evening, November 24th, 1899, Dr. E. T. THRING, President, in the chair. There were forty-three members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of New Members.—The PRESIDENT announced the election of Drs. Rowlands and Lipscomb.

Proposed Recognition of Friendly Societies.—The PRESIDENT called upon Dr. Bennett to continue the discussion on Dr. Lawson's resolution with reference to the North Sydney

Friendly Societies. In the discussion which ensued Drs. NEWMARCH, KYNGDON, MEGGINSON, CLARENCE, READ, and GOODE took part.—Dr. NEILL raised a point of order as to whether the motion was in order, and the PRESIDENT ruled that the motion was not in order.

Communications.—Dr. JENKINS exhibited a patient suffering from obscure nerve disease.—Dr. GORDON MACLEOD exhibited a patient and explained the case.—Dr. HANKINS exhibited some appliances used in the treatment and diagnosis of aural cases.

Friendly Societies.—Dr. GOODE gave notice that he would move the recision of the resolution passed on the 25th November, 1898, with reference to medical men holding positions in certain societies.

SPECIAL CORRESPONDENCE.

BERLIN.

Deficient Hospital Accommodation.—The Lung Sanatoria.—University Extension Lectures.

HOSPITAL accommodation in Berlin has not kept pace with the large increase of its population. For years there have been complaints on the subject of overcrowding. In the Charité Hospital, for instance, there used to be beds in the attics and corridors, and the overcrowding in all the wards was so great that it was quite impossible to give each patient sufficient air space, or to keep up proper ventilation. When in 1894 the rebuilding of the Charité was decided on, this state of things was publicly discussed and pronounced untenable, and the number of beds was at once reduced from 1,956 to 1,450. Here then was a sudden deficiency of 500 beds, at a time too when the hospital accommodation available in Berlin only just sufficed for the demand. To meet the emergency energetic measures should have been taken at once, more especially as the Charité Rebuilding Committee gave notice that the new building (which of course will be arranged in accordance with modern hygienic principles), when completed, would not contain more than 1,250 beds. Contrary to all expectation the Berlin municipality fell short of the energy required for meeting such a crisis. It is true that a new municipal hospital in the north of Berlin (see Strasse) was proposed, that after many delays, the plans were passed, and the funds (£500,000) voted. But the work of building is not yet begun, and at best, it will be five or six years before the hospital can be opened. Extra wards have been added to two of the municipal hospitals, but both of these together contain no more than 280 beds, so that, to sum up, the public hospitals of Berlin are at present worse off by 220 beds than they were six years ago. The Moabit municipal hospital contains 900 beds. Half of these were for years kept empty, as a reserve in case of sudden epidemics But of course of late years such a reserve has been quite impossible, and as a rule the Moabit hospital is now quite as full as any of the others. Public opinion is at last becoming alive to the dangers that might arise from such a state of things. In an article on the subject the *National Zeitung* (one of the leading papers) asks: "What would happen if Berlin were threatened by an epidemic of cholera or of typhus?" and comes to the conclusion that there would be no adequate provision, and that the consequences might be disastrous.

The Berlin Brandenburg Society for the Establishment of Lung Sanatoria held its annual meeting at the beginning of the month. Though its august patroness, the German Empress, was unable to be present, there was no lack of brilliant names, both among speakers and listeners. The report showed an advance not only quick but steady, in the building of sanatoria, and proved Germany to be in the van of the great movement.

This year's "University extension' courses of popular lectures will be opened by Professor O. Liebreich, who has chosen Modern Remedies and their Effects as the subject of his course of six lectures. Further medical subjects will be treated by Professor Grawitz (How Diseases are Caused by Harmful Things in Daily Life), by Professor C. Guenther (Bacteria, Causes of Diseases, and the Means of Combating Them), and by Dr. Laeler (On the Origin and Prevention of Nervous Diseases).

CHICAGO.

The Drainage Canal and the Water Supply.—Hospital for Consumptives.—Action by a Patient against a Hospital.—Suicide and Homicide.

THE opening of the great drainage channel, which is to connect Lake Michigan with the waters of the Mississippi River, practically took place on January 2nd. It is intended that this drainage channel, which is forty miles long, has cost 33,000,000 dollars to construct, and which has taken eight years to build, shall effectually carry, in a rapid flow to the Gulf of Mexico, all the sewerage of the present city of Chicago; and not only to serve the interests of the present population (estimated to be 1,800,000), but also to meet the requirements of an increasing population for many years to come. The effectual removal of all sewerage by means of this flow to the Mississippi absolutely ensures a perfect domestic water supply from the lake, for the lake water is naturally wholesome, and will remain so if all contamination is prevented. The health of the city has suffered long and severely because of an impure general water supply, but from now on conditions should decidedly change, and Chicago's mortality returns from waterborne diseases should be comparable with those of any other large city in the world.

Subscriptions are being solicited and received for a special hospital for consumptives. Those in charge are much encouraged at the outlook, and believe such a building will be provided for in the future. An institution of this character for the poor is now in existence at the Dunning Infirmary, and during 1899, 940 patients were admitted thereto. It is a thoroughly adequate and well-constructed building, but it is entirely for the county charges, and is located a few miles out of the city. What is wanted and what sought by the new movement is an institution, partly charitable it may be, that will appeal to the middle and artisan classes, and that will be conveniently located and attractive. Such a place should not be at all repellent—indeed, the very opposite.

Speaking of hospitals reminds me that one of our large institutions has recently been proceeded against by a former inmate, who claims large damage for a mistake in a dose of medicine. The patient holds that a poisonous dose of mercury was administered to her by direction of, and through the error of the hospital authorities. She claims that her alimentary canal was much damaged and her general health injured—estimated at many thousands of dollars. The hospital officials do not deny that a mistake occurred, but contend that at no time was the patient's life jeopardised, that she was promptly relieved, and while she remained in the hospital—some weeks after the accident—she neither complained nor showed signs of any effect of the overdose, and that she left the hospital in better condition than upon entering. The case has not yet come to trial.

Some seemingly interesting facts are brought out in the statistical summary report from the coroner's office covering the year 1899. The most startling feature of this report is that the coroner was called upon to investigate 1,543 more cases in 1899 than in 1898. This means, upon examining the figures, a large increase in homicide and suicide. Without going into a review of the criminal returns it is found that the suicides increased somewhat over the preceding year, the number returned being 384 as against 367. It is significant that of the cases of self-destruction by the use of poisons one-half resorted to the swallowing of carbolic acid. The modes of death employed by suicides may be tabulated as follows:

Shooting	64	Jumping from buildings	7
Drowning	21	Jumping under trains	5
Cutting	18	Burns	1
Hanging	46	Poisoning	166
Asphyxiation by gas	26		

The total number of cases investigated by the coroner during the year was 4 780, a necropsy being required in 1,033.

INCINERATORS IN INDIA.—It is proposed by the military authorities in India to spend about Rs 25,000 during the year in further experiments in incinerators. From the health point of view there can be no question of their utility in military cantonments in India, and it is to be hoped they will be extensively adopted.

CORRESPONDENCE.

DR. W. J. COLLINS AND THE UNIVERSITY OF LONDON.

SIR,—Before the medical graduates of the University of London are induced to promise their support to Dr. Collins, it will be well for them to ascertain what his views are on the subject of vaccination. He is claimed—and with good reason—by those who so frequently write in the public press in the interests of the Antivaccination League, as forming, with Drs. Creighton and Crookshank, the medical triumvirate upon whose authority as scientific and medical experts the case against vaccination rests. He was placed on the Royal Commission on Vaccination in order that full justice might be done to the case against vaccination, with which he and his father had unquestionably identified themselves. His cross-examination of all the pro vaccinist witnesses, as well as the ultimate statement in which, in company with Mr. J. Allanson Picton, an avowed antivaccinist, he expressed his dissent from the conclusions of his colleagues, and sought to whittle down the effect of them, amply justified the choice of the Government of the time in their selection of him. Since then Dr. Collins has carefully avoided committing himself to any statement which would lead his medical fellow-graduates to believe that he has in any way changed his views, and he has given good reasons for thinking that he has not done so by associating himself with avowed antivaccinists; for example, in the Royal Statistical Society and at Leicester recently, in depreciating vaccination.

This may be a very defensible position so long as Dr. Collins only represents himself; but when he seeks to represent a large number of the most distinguished members of the medical profession, the public will naturally, if he should be successful, infer that the medical profession are as divided in their opinions on the subject of vaccination as the supporters of the Antivaccination League are so fond of stating that they are.—I am, etc.,

January 17th. M.D.LOND.

ATTEMPTED AMALGAMATION OF DEFENCE SOCIETIES.

SIR,—Once more, and for the third time, an effort has been made to bring about amalgamation of the two existing defence societies—the Medical Defence Union and the London and Counties Medical Protection Society; and for the third time, unfortunately, the attempt has failed in its object. It would appear that the movement was, on the first two occasions, initiated by the former Society, and on the third by the latter. It therefore seems strange that amalgamation, much desired by both bodies, should not have been effected. Evidently there are reasons for regarding such a union as desirable, amongst which not the least in importance is the fact that, as long as the two remain separate, and in open competition, so long will a proportion of our numbers (and probably not a small proportion) remain unattached to either; whereas there are few who will dispute that every qualified man should regard it as a duty to himself and to those dependent upon him to belong to a defence society. I myself hold this opinion, and yet I am not a member of either society, and to my knowledge not a few of my colleagues are in the same position.

As a profession we are (still tardily) awakening to the fact that the public will play havoc with our interests unless and until we present an undivided front and complete unanimity prevails within our ranks. Much has been done by well-directed effort in different parts of the kingdom to improve our financial position, more particularly in regard to payments from clubs and friendly societies; though unfortunately the profession is not undivided in its opinion as to the need for reforms which have been effected, for this would surely appear to be so when we find gentlemen (I use the word advisedly) members of an educated and honourable profession accepting positions which have been vacated by their fellows in obedience to high principle and honourable dealing.

Surely difference of opinion should find no place amongst the causes of the regrettable hindrance to the organisation of one comprehensive body having for its object the defence of its members against injustice in its varied forms.

I am convinced that if such an organisation were unfettered by competition (from which no good can come) the result would be a powerful body with a membership showing a large increase beyond that of the two societies now in existence taken together. When such a desirable end shall have been brought about I shall myself be amongst the first to apply for membership.—I am, etc.,

Shotley Bridge, co. Durham, Jan, 15th. E. W. DIVER, M.D.

AN OLD DIRECTORY.

SIR,—Your clever and witty contributor who moralises over an old—indeed the oldest—*London Medical Directory*, instances as the first of a series of shocks which a perusal of it had occasioned him, the entry referring to Dr. Samuel Dickson, of Bolton Street. This gentleman's book (of which your contributor quotes the title, *Fallacies of the Faculty*) used to be announced with great punctuality in the advertisement columns of the *Times;* but he became even still more widely known from the fact that a popular novelist—I think it was the late Charles Reade—conceived a strong admiration of him, and introduced him, although not by name, as a leading personage in a very popular novel, and with him the *Chronothermal System of Medicine*, which has so much perplexed the writer of your article. The great Thackeray—for whom your contributor has evidently a special admiration—conferred the same advantage on the great Dr. Elliotson, to whom he dedicated one of his novels, and who was the original of the "Dr. Goodenough," who is contrasted with Dr. Brand Firmin in the *Adventures of Philip*. I think your contributor has solved the problem of Thackeray's "Old Parr Street;" it must refer to Old Burlington Street.

"Dr. William Vesalius Pettigrew" occasions wonder because he was so late in claiming "the authorship of an anonymous work," but it was his habit to be late. My father used to refer with some feeling to a lecture on an Egyptian mummy, delivered by Dr. Pettigrew at the Royal Institution, at which lecture my father was present. It was the longest evening lecture ever delivered in the institution. Dr. Pettigrew, always on the point of unbandaging the mummy, did not actually do so until the night was far advanced.

The learned and estimable Dr. Grant is quoted as stating his income in the *Medical Directory*—namely, "£120 6s 6d." I was a member of his class of comparative anatomy in University College, London; we were only three, and the fee a very small one—I think only 2 or 3 guineas—so that I am astonished that his income was so large.

I notice that Liston is mentioned as having "lived in Clifford Street." This he did, not only as surgeon, but as sportsman also, to the great economy of his time. His ground floor premises were of considerable length, and by causing a series of doors to be made in them he was able to station himself at one end of them and divert himself by practising with an ordinary rifle at a target placed at the other end. My father, who was a good shot, used occasionally to join him in this sport. As to "W. Fergusson—a rising man—in Dover Street": it must have been about this time that Fergusson, disheartened by his failure to acquire practice, resolved to leave London and return to Edinburgh. I have this on the authority of the late W. F. Tervan—a vast repository of information of this kind. "W. Jenner," who is mentioned in your article as being at the time referred to, "a general practitioner in Albany Street," was, much later in his career, no less discouraged than Sir William Fergusson had been. At a time when he was on the staff of University College Hospital and of the Children's Hospital, indeed less than a year before he was appointed Physician to the Queen, and thereby leapt at once into an immense practice, he made up his mind to resign his appointments and to endeavour to establish himself in practice at Brighton.

Albert Richard Smith, who is referred to as "a surgeon-dentist in Percy Street, Bedford Square," and who moreover was a M.R.C.S., was, like "W. Fergusson"—a rising man—but not in his profession. It was about the time in question that he went up in a balloon with another surgeon-dentist, a Mr. Coxwell, and from a considerable altitude let off about 60 lbs. weight of fireworks on a public occasion, with the result that the balloon burst, and the occupants narrowly escaped filling a cavity in the surface of the earth. This, their first ascent, determined the future career of each. They

both of them left the profession, Coxwell becoming a famous aëronaut, and Albert Smith scarcely less celebrated by his popular entertainments at the Egyptian Hall, Piccadilly, which consisted of a lecture (illustrated by views and trophies and relieved by humorous anecdotes) describing how this adventurous member of "the College" had effected the ascent of the then almost inaccessible Mont Blanc.

Frequent reference is made in the article to Harley Street and Cavendish Square, which have, during the latter half of the present century, become famous as medical centres. To these may be added Henrietta Street and Holles Street, which in quite recent times were equally well known in the same capacity. Probably but few of those who live at these addresses know the origin of the names which they have thus caused to be so widely known. These places, as well as the still more famous Oxford Street, take their names from Harley, Earl of Oxford, and his wife, Lady Henrietta Cavendish Holles.—I am, etc.,

Weymouth Street, Jan. 13th. BALMANNO SQUIRE.

THE DUTY TO SEND INFORMATION TO THE CORONER.

SIR,—The letter of "X. Y. Z." in the BRITISH MEDICAL JOURNAL of January 13th, with reference to your recent leading article on the above subject appears to me to call for some reply, as it is apparently written under misapprehension, as well as being inconsistent with the view taken by yourself "that it is to say the least doubtful whether the duty (of sending information to the coroner) is imposed by the common law on anyone."

May I point out in the first place that the coroner (like the coroner's officer) does depend for his fees upon the number of inquests held, for he is paid (like magistrates' clerks) by salary quinquennially revised, and based exclusively upon the number of inquests held within that period?

But that is by the way. I will accept the statement of "X. Y. Z." that "it is usually to the coroner's officer's advantage that an inquest should be held," though this is not universally the case.

"X. Y. Z." then goes on to say, "I have had more than one case of sudden death *from natural causes*, in which the coroner's officer, on making enquiries *after information from me*, had let out this fact, intimating that it meant for him no fee and expenses out of pocket"—(the italics are my own)—with the result that the officer obtained a bribe from the relatives of the deceased.

Now, Sir, there is an evident misundertanding here. If "X. Y. Z." is a medical practitioner (as I assume from his writing in our JOURNAL), though of course this cannot necessarily be inferred from his signature, I entirely fail to understand how he came to give information to the coroner's officer at all in the circumstances. Inasmuch as he expressly states that the sudden deaths "were due to natural causes," he had no duty whatever to perform in the matter beyond giving the usual certificate for the Registrar, and this duty *is* imposed upon him under penalty, as you observe. It does not prejudice the cause of public safety to issue his certificate, for the coroner can, if he thinks needful, set such certificate aside, and act as though it had not been granted.

Further, I venture to think that if the coroner's officer, to the doctor's knowledge, makes use of information obtained from him in order to obtain a bribe, it is the duty of the doctor to report such conduct, not, perhaps, in his medical capacity, but because otherwise he would seem to be conniving at an impropriety, to use no stronger word.

In conclusion, "X.Y.Z." says: "As coroner's law now stands, the matter is as follows: (1) 'If we do not inform the coroner we run the risk of censure'; or (2) 'If we report the case we may subject our patient to blackmailing.'" But "as coroner's law now stands," neither of these conclusions follow, for:

1. There is no duty to inform the coroner of deaths which the doctor conscientiously can certify to be due to natural cause.

2. If the case is not one (to the doctor's knowledge) of death from natural cause, he cannot certify it, and it will inevitably come to the knowledge of the coroner through the registrar of the police, and the doctor incurs no risk of subjecting his patients to blackmail.

One other point: The weight attaching to the leading articles of the BRITISH MEDICAL JOURNAL is naturally great, and I therefore desire to make allusion for one moment to the leader on this subject in the JOURNAL of December 23rd, 1899, which I think may otherwise create an erroneous impression. It is this: The resolution of the Coroners' Society (of which I am a member) is by inadvertence inadequately quoted in your article as follows: "The Coroners' Society for England and Wales has recently passed a resolution that 'In cases of death from violence or from any unnatural cause it is a common law duty imposed upon the practitioner in attendance, among others, to report to the coroner.'" The resolution consequently appears to be the enunciation of a fact, whereas in the original it only states "that it is the opinion of the Council in cases," etc., which makes a material difference.

With great respect for the opinion expressed in your leading article (quoted above), that "it is, to say the least, doubtful whether this duty is, or is not, imposed by the common law on anyone," I desire to say (speaking as an individual member of the body politic, and also as a medical practitioner of thirty-six years' standing) that I cannot assent to your view. In all cases of deaths which to the knowledge of the practitioner in charge are attributable to violence or other unnatural cause, or are attended by suspicious circumstances, I share the view of the Council of the Coroners' Society that this duty is incumbent (whether by common law or in the general interest of the public matters not) "on medical practitioners amongst others," and this is what the Society contends. Many a crime would go unpunished had it not been always thought that there was no incompatibility between the duty of revealing a criminal act which may come to our knowledge in the course of our professional work and the highest regard for the ethics of a noble profession.—I am, etc.,

January 14th. MEDICAL CORONER.

SIR,—In the BRITISH MEDICAL JOURNAL of December 23rd, 1899, you say that coroners are paid by salary and not by fees. Just so; but this salary is revised every five years, on the basis of the number of inquests held by them during this period. *Ergo*, the greater the number of inquests the better for the coroner, and, I may add, the coroner's officer.—I am, etc.,

January 16th. W. H. P.

THE USE OF OPIUM IN CHINA.

SIR,—In a review of a small book, entitled *Opinions of Over 100 Physicians on the Use of Opium in China*, that appeared in the BRITISH MEDICAL JOURNAL of December 23rd last (pp. 1753-4) the following sentences occur:

"In all inquiries of the kind bias is always a dangerous element; remarks calculated to throw doubt upon the integrity of those who differ in opinion are not likely to bear good fruit. We quote a paragraph from an article headed, The Opium Habit, the Opinions of a Hundred Experts. The paragraph refers to the work done by the Royal Commission on Opium in India and runs as follows: 'The day will come when the bulky report of the Commission will be looked upon as a costly and stupendous monument of sordid bias, special pleading, and outrageous discrepancy. If the "hundred experts" wish the scientific world to take their "opinions" seriously into consideration, the less they indulge in such language the better.'"

Your criticism of those who approach a subject from a biased standpoint, and of those who attempt to throw doubt on the integrity of men who hold different opinions is very just; and had the "hundred physicians," whose opinions on various questions regarding opium—its use by, and effects on, the Chinese—are recorded in this book, given expression to any such wholesale condemnation of the Report of the Commission on Opium as is contained in the above quotation, the weight of their evidence would no doubt be seriously lessened in the scientific world.

No such wholesale condemnation of the report, however, comes from the "hundred physicians," for only two of them even refer to the report at all. The opinions of each are given separately above his, or her, name, and no one of three doctors must be held responsible for statements other than those contained in his, or her, answers to the questions asked.

I am, moreover, at a loss to know from what part of this small book of 95 pages you take the above paragraph; for the compilation contains no article headed Opium Habit, the Opinions of a Hundred Experts, and I have searched in vain through the main part of the book, and through the Essays and Letters—all of which are signed—for any such paragraph as the above, which you give as a quotation in your review.—I am, etc.,

ELIOT CURWEN.

Hampstead, Jan. 5th. One of the "Hundred Physicians."

*** The facts are as follows:—On December 9th we received from Mr. George A. Wilson, Secretary of the Society for the Suppression of the Opium Trade, a letter as follows:

I have pleasure in enclosing you a summary of the valuable and unique work recently issued in China, entitled, *Opinions of over One Hundred Physicians on the Use of Opium in China*. I should esteem it a very great favour if you would kindly insert in your paper the whole, or part, of the summary, which has been carefully prepared.

The summary referred to was headed *The Opium Habit: the Opinions of a Hundred Experts*, and the quotation to which Dr. Curwen refers was taken from this summary, which ends as follows: "Dr. Park, in putting the two evils" [opium smoking and opium eating] "upon precisely the same level, will probably be proved right, and a day will come when the bulky report of the Commission will be looked upon as a costly and stupendous monument of sordid bias, special pleading, and outrageous discrepancy."

AMBULANCE FOR THE MOUNTED SERVICE.

SIR,—There is one point in connection with Surgeon-Major Caverhill's interesting paper of which no mention is made, and that is the increase of mobility possible with the transport now authorised by carrying the bearers in ambulance waggons.

The plan of increasing the mobility of troops by carrying them in waggons has already been made use of by one of our generals in South Africa, and I believe that a similar plan for increasing the mobility of a bearer company is in the minds of the officers of the R.A.M.C.

The dismounted *personnel* of a bearer company consists of 57 non-commissioned officers and men, and the ambulance transport consists of 10 waggons, each drawn by four horses or an equivalent number of mules. Each ambulance waggon of the present pattern (Mark V) is capable of carrying 12 men seated.

If half-a-dozen bearers were carried in each waggon, a bearer company ought to be able to keep reasonable touch with cavalry in all places where the use of wheeled transport is possible. I am not in any way wishing to discuss the scheme of Surgeon-Major Caverhill, or the vehicles invented by Major Manders, but as any alteration—on a large scale, at all events—of methods already in existence seems hardly feasible in the present campaign, I only desire to call attention to what may be possible with the establishment and transport now in use.—I am, etc.,

VALENTINE MATTHEWS,

Suffolk Street, S.W., Jan. 17th. Surgeon-Major V.M.S.C.

COLONEL LAWRIE ON MALARIA.

SIR,—Colonel Lawrie, I.M.S., of Hyderabad, India, has long distinguished himself as the inventor of a new "fad"—he is a violent "antiplasmodist." Victim of the fixed idea that scientific men have wickedly conspired to pass off an altered blood corpuscle as the parasite of malaria, he accuses us all round of manufacturing evidence, and so on. My observation—now fully confirmed by Koch, Grassi, and others—that these "altered blood corpuscles" can be cultivated in gnats has naturally annoyed him extremely; but he has lately been able to gratify himself with recording an experiment which—of course—"does for us all" at a blow.[1]

The parasite of birds which I cultivated in gnats, and which I showed to be communicable to healthy birds by the bite of these insects is the one which Labbé called *Proteosoma Grassii*, and which is sometimes found in sparrows, larks, etc. Colonel Lawrie's revolutionary experiment was as follows: Observing that very young birds are generally free from parasites, he kept a number of healthy young pigeons for a long time carefully preserved from the bites of mosquitos by placing them within mosquito nets; nevertheless, after certain periods, a large percentage of these young pigeons were found to have acquired *Proteosoma*. He concludes that *Proteosoma* is acquired by pigeons whether they are bitten by mosquitos or not, and adds: "Ross's manifest ignorance of this fact entirely vitiates his inoculation experiments."

This result was the more surprising, since I had never found *Proteosoma* in *pigeons* at all, and had never heard of anyone else doing so, while my control *sparrows*, which I had kept preserved from the bites of gnats in a manner similar to that used by Colonel Lawrie, never acquired infection. But here one of Colonel Lawrie's frequent little fallacies crops up. He has been good enough to publish photographs of the "Proteosoma" found by him. Will it be believed that it is not *Proteosoma* but quite another parasite—the common parasite of pigeons, crows, etc., called *Halteridium Danilewskii*—which neither Koch nor myself have been able to communicate by mosquitos at all!

Some of my own observations have suggested that *Halteridium* may be carried by lice, ticks, etc. Were Colonel Lawrie's experiment to be repeated and confirmed by reliable workers it may tend to support this view.

It is surprising that the *Indian Medical Gazette* should support Colonel Lawrie by talking of his "careful experiments" and "intelligent criticism."—I am, etc.,

January 6th. RONALD ROSS, D.P.H., M.R.C.S.

[1] *Indian Medical Gazette*, November 1899

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

SIR,—The BRITISH MEDICAL JOURNAL of January 13th contains a letter signed "F. J. S.," which the writer professes to have composed with the object of deterring others from following his example by entering the service of the Metropolitan Asylums Board. The tone of the letter is one of sweeping unqualified condemnation and complaint. To the ordinary reader it would appear that the letter embraces the entire system of hospitals governed by the Board; the writer does not name the hospital or hospitals in which he served, and does not even specify the particular hospital which lacked a door-knob.

Caterham Asylum, pilloried in his letter because it is advertising for a medical officer, is one of the four asylums proper under the Board, that is, it is devoted to the care of imbeciles. In addition to these four imbecile asylums, the Board has under its charge twelve large fever hospitals and the small-pox ships.

"F. J. S." condemns "the Board" and all its works without distinction. This is hardly fair. He should confine his complaints within the limits imposed by facts.

My experience of the treatment accorded by "the Board" to its assistant medical officers is very different, and I wish as a matter of justice and from feelings of personal gratitude to record it. My remarks apply to the fever hospitals only. Seven years ago I served as assistant medical officer in two of these fever hospitals for a total period of some eight months. Throughout my term of office the assistant medical officers were comfortably housed, well fed, and well paid. We had each a bedroom and a sitting room, and for our joint use we had a dining room. In one of the two hospitals the feeding was more than good, it was first-rate in quality, variety, and in the manner of its cooking and service.

While at this hospital I was laid up for two months with a very serious attack of scarlet fever, attended by all the usual complications, and followed by most of the common sequelæ and one rare sequela. For three weeks I was in a very critical condition. I owe my complete recovery, first, to my medical attendant's skill and care, and secondly to the liberality of "the Board." "The Board," through its Committee, enabled me to have special nurses night and day, the best champagne and brandy, and invalid comforts generally. "The Board" granted me full pay throughout my two months of illness, and then allowed me a month's holiday on full pay.

Will intending candidates for posts under the Board place this liberal treatment to the Board's credit? They will, perhaps, think that such kindness to "subordinates" atones for the absent door-knob which hurts the susceptibilities of "F. J. S."—I am, etc.,

Folkestone, Jan. 15th. CECIL LATTER, M.D.Cantab.

MEDICAL ORGANISATION.

SIR,—The medical profession of Manchester and Salford are very much indebted to Dr. Broadbent for his zealous efforts in the cause of medical reform.

His proposal, therefore, to exclude from the Council of the Medical Guild all members who are in any way connected with the provident dispensary is one which calls for some consideration and comment.

No one can possibly speak or write more authoritatively on the irregularities and failings of this Society than your correspondent, seeing that for many years he was an active member of the medical staff, and must have amassed during his protracted stay with the institution a very considerable amount of evidence impugning the semi-charitable basis of this Society. Seeing that there are no fewer than 20,000 members out of a population of three-quarters of a million, it would be well, indeed, if the profession, under the leadership of Dr. Broadbent, fortified itself in every way against the encroachments of the provident dispensaries. At the same time, there is a society known as the Warehousemen and Clerks' Provident Society, whose members are composed of well-to-do clerks and business men, whose social and financial position are immeasurably above that of the ordinary provident dispensary member. These people are entitled to medicine and attendance for the payment of one penny a week to the doctor. They have also the privilege of consulting many of our eminent specialists at a very reduced fee. Dr. Broadbent is understood to be a member of the medical staff of this institution. No one, except his opponents, could for a moment by any stretch of imagination believe that he was a beneficiare for selfish purposes. He must know that the Society robs the medical profession in Manchester and Salford of its legitimate fees more than any other institution, with the exception possibly of some of the hospitals.

From his correspondence one must believe that his connection therewith is only for the purpose of grasping thoroughly the whole bearings of the situation, and thus to prepare himself for a mighty attack on the medical aspect of an institution otherwise useful and indispensable.

It took Dr. Broadbent ten or eleven years only to ascertain that the position of the provident dispensary medical officers was untenable, and to prepare himself for the present assault. The sufferers by the Warehousemen and Clerks' Provident Society are anxiously hoping that before many decades are past they will find him arraigning at the bar of professional opinion all those who are party to the weak, shortsighted, but grasping pursuits of the general and consulting staff of this Society.

At the same time it would, I think, be wise for the doctor to explain why he refused to sign the club pledge, a pledge which if universally taken and acted upon would, in the opinion of many, considerably strengthen the profession here in its dealings with friendly societies. From his untiring energy, sound judgment, and superior sagacity in everything appertaining to medical reform, one must consider that there is some strong reason why he prefers to be one of the weak links in an otherwise strong chain, but his friends and supporters would like him to explain what his opponents term an anomalous position.

If Dr. Broadbent at the next annual meeting of the Guild will include in his resolution not merely the medical officers of the Provident Dispensary Association, but also all those who are connected with the more dangerous Society of the Warehousemen and Clerks, all surgeons to friendly societies who remain satisfied with an annual rate of 3s. a member, and also all members of the staff of those hospitals who under the guise of charity give advice to many who could afford to pay; if he will broaden his resolution thus and succeed in carrying it, the Guild will become a really select body, to which it will be an honour to belong.

Trusting Dr Broadbent's efforts at removing abuses will be extended in the direction advocated, and meet with the success it deserves.—I am, etc.,

January 7th. AN INTERESTED MEMBER OF THE GUILD.

SIR,—Dr. John Haddon's letter is interesting inasmuch as he was present at the birth of the provident dispensaries in Manchester, and took an interest in that event. He tells us that they were started for the benefit of the poor. This is quite true, but they have got beyond the poor; it is the thrifty, such as innkeepers, shopkeepers, and even property owners, who are catered for now. Dr. Haddon can see that the amount a head paid to the doctor "is a very small sum for any but the poorest to pay for medical attendance and medicine." To this we quite agree. What we are aiming at at the present time is that there should be no suspicion of complicity on the part of the Medical Guild with the dispensaries. We want to protect normal practice, and to get normal practitioners to band together in the Guild, and we wish to protest against the dispensaries as at present conducted.

To Dr. Haddon's suggestion, that those above the very poorest should pay a larger subscription, we object *in toto*. I took the opportunity of severing my connection—which was little more than nominal—with the dispensaries two years ago on this very point. A resolution was proposed at the annual general meeting of the whole of the branches to raise the charge from 1d. to 1½d. per bottle of medicine at one of the poorest of the branches. I objected to this lest it should be a tax on the very poorest, for whom the dispensaries were intended, and said that if it were passed I should resign. It did pass, and I left the room and resigned forthwith, as was reported in the Manchester papers at the time.

Dr. Haddon alludes to the early history of the dispensaries, and hopes that "it is still possible for every practitioner in the district to be attached to the provident dispensary." This was exactly how the dispensaries were first started. A splendid bait was held up before the medical men of the district, to use Dr. Haddon's words, "with a view of benefiting the profession as well as the poor." With what result? The bait took and seventeen men in one district joined the staff. Very soon differences arose as to improper admissions between the lay committee and the staff, which resigned in a body. Two medical officers were then imported, guaranteed a certain income for a certain time with probable additions, and thus the men who had given the start of the grand mutual beneficent institution were set at defiance. The staff now only consists of three!

These, sir, are hard facts, and if it be true what Dr. Haddon says in his last paragraph that "the provident system has come not only to stay, but to spread amongst us," I trust all those districts or bodies of medical men who hold this idea will take warning from the early history of dispensaries in Manchester, namely, once give it a start by your prestige, once get it established and the lay committee gain possession, then they will snap their fingers at you. If you resign they will advertise, and import a man who will take the livelihood out of any two or three young practitioners' hands, and injure that of several old ones too. This is what we have learned in Manchester, for that which was born in Dr. Haddon's presence twenty-one years ago has arrived at manhood's estate, and has about £2,000 of profits—increasing annually—in the bank, and in buildings accumulated out of the hard earnings of successive staffs, which the medical men cannot now touch.

It is generally useless, if not unsafe, to prescribe for a patient at a distance. We are greatly obliged to Dr. Haddon for his good intentions, but as we are on the spot we think we know what we are about, but everyone will agree with his self-evident proposition that "if the dispensaries fail in the object for which they were started, namely, with the view of benefiting the profession as well as the poor, they should be made either to serve the ends with which they were instituted or discontinued."—I am, etc.,

Manchester, Jan. 8th. G. H. BROADBENT.

P.S.—These dispensaries were established by public charitable subscriptions, and now they are competitors with neighbouring practitioners, and recently £250 has been left by will to one branch—the Openshaw.

THE HEALTH OF KIAO-CHAU.—A report on the German settlement and garrison of Kiao Chau has been presented to the Reichstag. The report ascribes the numerous cases of typhoid fever and dysentery which were registered during the past year to bad drainage and bad water, and to the want of proper barracks for the garrison, drawbacks for which remedies are being devised. The climate is not, on the whole, unfavourable, and there have been comparatively few cases of malaria. The health returns have been satisfactory since the middle of November.

OBITUARY.

MAJOR CHARLES POPE WALKER, M.B., R.A.M.C.

WE regret to notice the announcement of the death of Major C. Pope Walker from dysentery at Ladysmith on January 5th.

He was the youngest son of the late J. N. Walker of Bedford and was born in 1859. He obtained his medical education at Guy's Hospital. He became M.R.C.S.Eng. in 1883 and graduated M.B.Durh. in 1885. He took also the degree of M.S. and the L.S.Sc. in the same University.

In 1886 he entered the medical service of the army. In 1887 he went to India and was attached to an English regiment serving at Quetta and afterwards in the North-West and Central Provinces. In 1892 he returned to England and was then attached to the Guards in Ireland. In 1895 he went out to the Mauritius, where he remained until 1898, when he went to the Cape and afterwards to Natal. In November, 1899, he proceeded with the troops to the front and had charge of the hospital at Dundee. He was present at the battle of Elandslaagte, afterwards retiring with the forces from Dundee to Ladysmith, where he rendered most valuable medical services. He obtained the rank of Major in July, 1898. He married in 1895 the third daughter of the late Colonel W. Tamplin of Brighton. He was a keen, fearless, and most successful sportsman with big game, and during his Indian career he was noted for the number of tigers and bears which fell to his rifle.

SAMUEL ROBERTS MASON, M.D.DUBL., F.R.C.S.IREL.

THE death of this estimable member of the profession occurred with startling suddenness in the early morning hours of January 8th at his residence, 22, Merrion Square North, Dublin. Dr. Mason had not been in good health for some time, but his indomitable courage enabled him to resist the inroads of ill-health, and he may be said to have died literally in harness, for on the day before his death he saw his patients, outdoor as well as indoor, as usual. Hence the tidings of his unexpected death came as a complete surprise to his many friends and clients.

Samuel Roberts Mason was born in York Street, Dublin, on November 5th, 1852. He was the eldest son of Thomas Peter Mason, M.B.Lond., sometime Physician to Mercers' Hospital, Dublin, Lecturer on Anatomy and joint proprietor of the Ledwich School of Medicine, which was amalgamated with the School of Surgery of the Royal College of Surgeons and with the Carmichael College of Medicine about ten years ago. Dr. Mason survives his son in a hale old age, he was born in 1817.

Dr. Samuel Mason, or as his many friends delighted to call him, "Sam Mason," was educated in the Academic Institute, Harcourt Street, Dublin, and afterwards in Trinity College, Dublin. He graduated in the University of Dublin, in Arts in 1873 and in Medicine in 1874. He took the higher degree of Doctor of Medicine in 1883, in December of which year also he was chosen Master of the Coombe Lying-in Hospital, in succession to the late Dr. George Hugh Kidd.

In 1877 Mason was appointed Lecturer on Midwifery and on the Diseases peculiar to Women and Children at the Ledwich School of Medicine, Peter Street, Dublin. When that school was amalgamated with the Royal College of Surgeons' School he became Joint Professor of Midwifery, sharing the Chair with Dr. William Roe.

In 1882 Dr. Mason married Mary Elizabeth, eldest daughter of Mr. J. Shine, of Ballymacrease, County Limerick. There was one son issue of the marriage, but he was unfortunately killed some years ago by a fall over the balusters on the staircase of his father's house. This great sorrow was nobly borne by Dr. and Mrs. Mason.

Dr. Mason was descended from an English officer in the army of William III, who settled in the Barony of Forth, co. Wexford. One of his descendants joined the Society of Friends, and his great-grandson, Peter Mason, married Mary Schwartz, a lady of German extraction. Their son was Thomas Peter Mason, father of the subject of this memoir.

GEORGE CHEESMAN, M.R.C.S., L.R.C.P., L.S.A.

ON January 2nd passed away after a short illness, at his residence, Bitterne Park, aged 77 years, George Cheesman, the oldest medical practitioner in Southampton. He became M.R.C.S.Eng. in 1845, L.S.A.Lond. in 1846, and L.R.C.P.Edin. in 1860.

As a student he gained first prizes in surgery, medicine, and midwifery at Charing Cross Hospital, where he had as fellow-students Professor Huxley, Dr. Livingstone, and Sir Joseph Fayrer. After qualifying he held the post of House-Surgeon to the hospital, and later that of Resident Medical Officer to the West London Lying-in Institution. He then became House-Surgeon to the Royal South Hants Infirmary. He practised in Southampton with skill and success for over fifty years, being till 1891 Medical Officer to No. 1 District, Southampton Union, Public Vaccinator, Civil Medical Officer for Recruits, Certifying Factory Surgeon, Surgeon to the Oddfellows and Court Sir Bevis A. O. Foresters, besides having an extensive private practice. For many years he was President of the Southampton Medical Society, and Consulting Physician to the Southampton Provident Association.

During the cholera and small-pox epidemics in 1852 and 1864 he rendered to the town signal service, for which he was publicly thanked; a tablet placed in the board room of the Union records his services on those occasions. He published reports of many cases, amongst others one of Retroverted Gravid Uterus (*Medical Times*, 1856), and another of Extra-uterine Gestation Continuing to Full Term without Suspicion of Pregnancy (*Lancet*, 1861).

He was a staunch Conservative, and later in life interested himself in the affairs of the town, being returned as Town Councillor at the head of the poll for the All Saints' Ward by a very large majority. The office of Sheriff was filled very efficiently by him in 1887. The poor will miss him sadly, as he was much beloved by them.

He leaves behind him four sons, three of whom are members of the medical profession. He was interred at the Southampton Cemetery on January 6th.

JOHN GARDNER DUDLEY, M.A., M.D.CANTAB., M.R.C.P.Lond.

WE regret to announce the death of Dr. Dudley, at his residence, Hova Villas, Hove, Brighton, on January 2nd, in his 72nd year. He was educated at St. John's College, Cambridge, where he graduated B.A. in 1852, and subsequently at St. Bartholomew's Hospital and Paris. He became M.A. in 1856 and M.D. in 1860, having been admitted M.R.C.P.Lond. in 1859. He was for some time House-Physician to the Consumption Hospital, Brompton, and Physician for twenty-four years, and subsequently Consulting Physician, to the Metropolitan Free Hospital. He was also Consulting-Physician to the North London Consumption Hospital. He had also been Physician to the Surrey Dispensary and to the Chelsea, Brompton, and Belgrave Dispensary. About four years and a half ago Dr. Dudley had an attack of cerebral effusion, and was consequently compelled to retire, after practising for thirty-two years at Belgrave Road, London. He leaves a widow and one son; his younger son having died of malarial fever in 1897 while serving with the Umtali Rifles in South Africa.

ONE of the oldest and most respected of the members of the profession, Mr. JOHN GORHAM, has fallen a victim to influenza, and after a week's illness passed peacefully away on December 13th at Tonbridge, Kent. He was born in 1814 near that town, and had consequently completed his 85th year. He was educated at Tonbridge School, and received his medical training at Guy's Hospital. He passed "the Hall" in 1835, and became M.R.C.S. in 1839. He then settled at Tonbridge, and joined Dr. West, a surgeon of whom it is reported that he performed ovariotomy several times before it was even attempted in London. Mr. Gorham contributed many papers to the medical journals, all characterised by a pure classical style of writing. Amongst these were papers on Intussusception in Infants, Ovarian Dropsy, Respiration and Pulse in the Infant, and the Leverage of the Lower Jaw. He was also the author of a Manual on the Proper Mode of Extracting Teeth, the third edition of which appeared in 1889. But science was the real bent of Mr. Gorham's clear and well-balanced mind, and it is understood that a Fellowship of the Royal Society was long open to him had he cared to accept it. Crystallography was one of his special hobbies; and the science of colour

equally interested him. He was thus often brought into contact with the late Sir William Herschell and other leaders of science, and was elected a Fellow of the Physical Society of Guy's and of the Royal Botanical Society, and a Member of the Mineralogical Society. Amongst other papers between 1854 and 1889 he wrote the following: Unfrequented Paths in Optics, Part I; Light from a Pinhole, Part II; Light from a Fissure; A System for the Construction of Crystal Models on the Type of an Ordinary Plait; The Rotation of Coloured Discs; Mode of Calculating Hexagonal Facets in Cornea of the Eye in Insects; The Diascope, a New Optical Instrument; Rudiments of Colour by Rotation; The Stereograph, for Delineating Solids in Space; Venation in Leaves of Umbelliferæ; On the Composite Structure of Simple Leaves; The Tubular Balance; On the Blending of Colours by the Sole Agency of the Sensorium; The Pupil Photometer; etc. He was also the inventor of the entoscope, an instrument for measuring the size of our own pupil from within.

Inspector-General Edward Townsend Mortimer, of the Royal Navy (retired), died of pneumonia, following influenza, at Cromwell Houses, Southsea, in the 66th year of his age. He joined the medical service of the navy in March, 1836, and served as Assistant-Surgeon during the China war from 1857 to 1862, being specially mentioned in despatches for his services at the capture of Canton. He was also present at the capture of the Peiho Forts, and at the attack on the same in 1859, on which occasion he was thanked by the Commander-in-Chief for his services to the wounded, and specially promoted (Staff-Surgeon, April 25th, 1862), and received the medal with three clasps. He had another medal for his services in the *Daphne* during the Abyssinian war, and was specially promoted in 1876 to be Fleet Surgeon for the part he took at the capture on the East Coast of Africa of 18 slavers and the release of nearly 400 slaves. Later, as Medical Officer in charge of the Embassy, he accompanied Rear-Admiral Gore Jones, C.B., on a diplomatic mission to the Queen of Madagascar, and as Deputy-Inspector-General in charge of the Royal Naval Hospital, Hong Kong; received the thanks of the Government of that colony for acting as Chairman of a Commission to inquire into the prevalence of fever in the colony. He was President of the Medical Society of Hong Kong in 1888, and Inspector-General, which rank he reached in May, 1899, in charge of Haslar Hospital from April, 1892, to January, 1894, when he was placed on the Retired List.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

In continuation of previous analyses for November and December, we now give the following distribution of army medical officers, as disclosed in the Army List for January:

Distribution in the January Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks: Seconded.
Surgeon-General	5	1	4	—	10	—
Colonels	7	8	12	—	27	3
Lieutenant-Colonels...	18	15	41	—	74	1
Majors	34	165	220	4	423	7
Captains	15	58	99	1	173	5
Lieutenants	5	99	46	3	153	7
Total	84	346	422	8	860	23

There is an increase of fifteen officers, from recently gazetted lieutenants, all of whom have been promptly sent to South Africa.

The number of seconded officers, who may or may not be available for general service, remains practically the same.

The number of all ranks at home has fallen from 123 to 84, owing to the mobilisation of two new divisions.

The number in South Africa has increased by 78, and is now 346 in place of 268.

The number at other foreign stations remains practically unaltered; but those not yet posted have fallen to a minimum of 8. The distribution of such a large body must, of course, be constantly varying; but the broad fact remains that, of the total 90 per cent. are abroad, and only 10 per cent. are left at home for all contingencies. Of the 90 per cent. 40 are in South Africa, and 50 elsewhere abroad.

The executive remnant now at home may, by seizing every available man, suffice for the mobilisation of an Eight Division; but after that nothing more remains either for further mobilisation or reliefs. Had the available numbers been 1,000, as they ought and soon must be, a fair margin of about 200 officers would still have been left, while there would have been no need to attach civilians to field hospitals, a proceeding which, if unavoidable under the circumstances, is none the less inimical to sound military organisation.

Little information is given in the list as to the employment of retired pay officers, and even that is not always up to date. The usual number of about 90 is employed under Article 487 of the Royal Warrant, and apparently only 18 have responded to the invitation to return in place of compulsory recall.

We give the following as samples of defective editing of the *List*: Lieutenant-Colonel W. Johnston, retired pay, has been Assistant Director for some weeks, yet his name is not given at page 5 of the *List* in the Military Departments of the War Office. Nor is his employment indicated as it ought to be, p. 1411, Non-effective Officers. Again, Lieutenant-Colonel L. A. Irving, retired pay, recently appointed to the staff of the London Recruiting District, is duly shown in the Home District list, p. 9, but there is no indication of his employment at p. 1409, Non-effective Officers. It is evident such details want working up, in order to make the *List* as it ought to be—complete and reliable.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

Captain R.A.M.C., now serving in India, and whose tour of service expires trooping season 1900-1901, wishes to exchange to remain in India a year or two longer. Apply, "Indicus," care of King, King and Co., Bombay.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Samuel Keays, Fleet-Surgeon, to the *Ramillies*, undated; Humphry M. Hart-Smith, B.A., M.B., to the *Europa*, for duty on the voyage to Malta, January 12th, and afterwards to the *Ramillies*, undated; Cyril Shepherd, Surgeon, to the *Nile*, temporary, January 15th; Percy H. Boyden, Surgeon, to the *Woodlark*, January 18th; John A. L. Campbell, Surgeon, to the *Vernon*, January 18th.

ROYAL ARMY MEDICAL CORPS.

Major Arthur E. J. Croly, F.R.C.S.I., is seconded for service on the Staff, September 19th, 1899.

Major Henry Martin, M.B., is restored to the establishment, from the Seconded List, *vice* A. E. J. Croly, seconded, September 14th, 1899. [Major Martin was Surgeon to Lord Sandhurst, Governor of Bombay, and was succeeded in that position by Major Croly.]

Major Fausset M. Baker, M.B., is placed on temporary half pay on account of ill-health, December 18th, 1899. Major Baker joined the service March 6th, 1880.

ARMY MEDICAL RESERVE.

Surgeon-Lieutenant-Colonel W. H. G. Phelps, M.D., having attained the limit of age, is removed from the Army Medical Reserve, January 17th.

Surgeon-Lieutenant-Colonel G. P. Bate, M.D., having resigned his commission in the Militia, ceases to belong to the Army Medical Reserve, January 17th.

Surgeon-Major W. C. James M.D., F.R.C.S.Eng., Honourable Artillery Company of London, late Army Medical Reserve of Officers, is reappointed with the rank of Surgeon-Major, January 17th.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel J. Young, M.B., Bengal Establishment, in medical charge of Bengal Sappers and Miners, and Principal Medical Officer of the Malakand Force, is appointed to officiate as Principal Medical Officer Presidency District, with the temporary rank of Colonel, November 20th, 1899.

The promotion of the undermentioned Majors to be Lieutenant-Colonels, dated October 31st, 1899, which has been already announced in the British Medical Journal, has received the approval of the Queen:—*Bengal*: G. W. P. Dennys, J. W. U. Macnamara, M.D.; Joseph Sykes, J. F. Tuohy, M.D. *Madras*:—J. C. Marsden, F. C. Reeves, J. L. Poynder. *Bombay*:—C. F. Willis, M.D.

Lieutenant-Colonel F. C. BARKER, M.D., Bombay Establishment, has retired from the service from January 3rd. He was appointed Assistant Surgeon, October 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, August 31st, 1895.

THE VOLUNTEERS.

SURGEON-LIEUTENANT J. CROMIE, the Tynemouth Artillery (Western Division Royal Garrison Artillery) is promoted to be Surgeon-Captain, January 17th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated January 17th: JOHN H. TEACHER, M.B., 1st Lanarkshire Artillery; HARRY ROBERTS, 1st Volunteer Battalion the Duke of Cornwall's Light Infantry; THOMAS THOMPSON, 1st Volunteer Battalion the South Staffordshire Regiment; JOHN G. FRASER, M.B., 19th Middlesex Rifles.

Surgeon-Lieutenants H. S. HUGHES, 1st Volunteer Battalion the South Staffordshire Regiment, and A. GRANT, M.B., 6th Volunteer Battalion the Gordon Highlanders, have resigned their commissions, January 17th.

Surgeon-Lieutenant-Colonel P. F. ROBERTSON, M.D., 1st Dumbartonshire Volunteer Rifles, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Clyde Volunteer Infantry Brigade, January 17th.

VOLUNTEER MEDICAL STAFF CORPS.

FIRST-CLASS STAFF-SERGEANT EDMUND W. HERRINGTON is appointed Surgeon-Lieutenant in the London Companies, January 17th.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Surgeon-General G. J. H. Evatt, M.D. ...	Hong Kong ...	Devonport
Lieut.-Col. J. A. Gormley, M.D.	Shorncliffe ...	South Africa.
,, J. C. Dorman, M.B.	Dublin	,,
,, M. R. Ryan, M.D	Gosport ...	Hong Kong.
,, J. F. Williamson, M.B.... ...	,, ...	Cork.
,, J. L. Peyton, M.B.	Limerick ...	,,
,, R. Drury, M.D.	Bengal	Curragh.
,, R. T. Beamish, M.D.	Punjab ...	Colchester.
,, J. J. Falvey...	Weedon ...	South Africa.
Major F. R. Barker, M.B.	Shorncliffe ...	,,
,, J. D. Day, M.B.	Chester ...	,,
,, P. M. Carleton, M.D.	Kinsdale ...	,,
,, D. F. Franklin	Gibraltar ...	,,
,, R. W. Ford	Gosport ...	,,
,, J. Gibson, M.B....	Netley	,,
,, T. B. A. Tucke	Cork	,,
,, J. R. Yourdi, M.B.	—	Madras.
,, R. H. S. Sawyer, M.B.	Dublin ...	South Africa.
,, R. J. L. Fayle	Devonport ...	,,
,, J. W. Jerome	Malta	Aldershot.
,, W. W. Pike	Aldershot ...	South Africa.
,, G. T. H. Thomas	Woolwich ...	,,
,, C. E. Faunce	,, ...	,,
,, R. J. Geudes, M.B.	Bombay ...	,,
,, G. Wilson, M.B....	Chatham ...	,,
,, J. I. P. Doyle	Kilkenny ...	Limerick.
,, L. R. Colledge	Gosport ...	South Africa.
,, R. Crofts...	Aldershot ...	Sierra Leone.
,, S. E. Duncan	Londonderry .	South Africa.
,, S. Hickson, M.B.	Devonport ...	,,
,, R. E. Molesworth	Aldershot ...	,,
,, D. R. Hamilton, M.B...	Bengal	,,
,, M. O'Halloran, M.D.	Colchester ...	,,
,, W. H. Pinches	Curragh ...	,,
,, A. A. Sutton	Devonport ...	,,
,, J. F. Burke	—	York.
,, C. H. Melville, M.B.	Aldershot ...	Punjab.
,, T. G. Lavie	Dublin	South Africa.
,, H. T. Baylor	Tipperary ...	,,
,, J. Moir, M.B.	Nova Scota ...	Esquimalt, B.C.
,, J. Fallon	Leeds	South Africa.
,, A. A. Cummins, M.D....	Woolwich ...	,,
,, R. N. Buist, M.B.	Half Pay ...	Netley.
,, T. du B. Whaite, M.B.	Dublin	South Africa.
,, B. H. Scott, M.D.	Portsmouth ...	Tower of Lond.
,, G. Raymond, M.B.	Cahir	South Africa.
Captain G. S. McLoughlin, M.B., D.S.O...	East Africa ...	Aldershot.
,, J. D. Ferguson, D.S.O.	,, ...	South Africa.
,, A. Pearse	Aldershot ...	,,
,, E. C. Anderson	Bengal	,,
,, C. O'C. Hodgens	Dublin	,,
,, T. P. Jones, M.B.	Bombay ...	Colchester.
,, R. C. Lewis	,, ...	Kinsale.
,, H. W. H. O'Reilly, M.B.	Madras... ...	Aldershot.
,, B. W. Longhurst	Punjab... ...	South Africa.
,, A. J. Chambers	Aldershot ...	,,
,, G. E. F. Stammers	,, ...	,,
,, M. M. Rattray, M.B.	Colchester ...	,,
,, J. G. Berne	Cork	,,
,, F. Ashe...	Aldershot ...	,,

The undermentioned newly appointed Lieutenants have proceeded to South Africa: L. W. Harrison, M.B., F. S. Irvine, M.B., H. M. Morton, M.B., M. H. Babington, F. G. Richards, E. B. Knox, H. S. Roch, F. Harvey, C. E. Trimble, J. Matthews, W. M. McLoughlin, E. W. Siberry, B. F. Wingate, P. S. O'Reilly, F. H. Merry, M.B., A. M. MacLaughlin, M.B., J. A. Hartigan, M.B., J. F. Martin, M.B., C. S. Smith, M.B., A. H. Safford, A. J. M. Cuddon-Fletcher, J. M. Buist, M.B., R. L. Davis, C. R. Evans, W. C. Croly.

Of the newly-appointed Quartermasters, E. P. Moss is stationed at Devonport; B. E. Essex, S. Duffield, and J. Glennon have proceeded to South Africa.

Lieutenant-Colonel W. Temple, M.B., V.C., retired pay, has relinquished the medical charge of troops in London, and been succeeded by Lieutenant-Colonel W. Johnston, M.D., retired pay.

POPULARITY OF THE ARMY MEDICAL SERVICE.

Our contemporary, *Truth*, says that the effect of the war has been a remarkable growth in the popularity of the Army Medical Service in the army at large, and that a sanguinary campaign was the one thing needed to effect that. There is no word of sitting on the "doctors" now. We are delighted to hear it; the medical service is nobly doing its duty in South Africa and deserves every recognition. But our contemporary hopes there will be no revulsion or such services forgotten when the war is over. Was the writer thinking of the proverbial effect of sickness on a certain historical personage?

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

FIRST EXAMINATION FOR THE DEGREE OF M.B.—The following have satisfied the examiners as undermentioned:

Organic Chemistry.—G. D. Allen, Non-coll.; G. H. Almond, Hertford; L. T. Burra, University; E. Burstal, Trinity; D. Davidson, Brasenose; H. R. Dean, New; J. Freeman, University; R. C. Jewesbury, Christ Church; H. A. Philpot, New; E. Whitley, Trinity; A. R. Wilson, Wadham.

Materia Medica and Pharmacy.—T. E. C. Cole, Christ Church; W. L. M. Day, Exeter; A. C. Le Rossignol, Exeter; A. J. Wigmore, Non-coll.

Human Anatomy and Human Physiology.—E. L. Farncombe, St. John's; A. H. Hogarth, Christ Church; C. M. H. Howell, Trinity; L. D. Neave, Merton; P. F. Tinne, Magdalen; H. M. Turnbull, Magdalen.

FINAL EXAMINATION FOR THE DEGREE OF M.B.—The following have passed the examination:

Entire Examination.—A. C. Goodwin, B.A., Keble; F. P. T. Hilliard, B.A., Magdalen; F. O. Stocks, B.A., Trinity; J. A. Willett, B.A., University.

Pathology only.—E. D. Bond, B.A., Keble; J. D. Rolleston, B.A., Brasenose; J. E. Sawyer, B.A., Christ Church; W. V. Shaw, B.A., Christ Church; F. J. Stevens, M.A., Exeter; A. E. Thomas, B.A., Merton; R. Warren, B.A., New.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on January 11th; Mr. H. G. Howse, Senior Vice-President, in the chair.

COURT OF EXAMINERS.

Mr. William Anderson, Mr. Herbert W. Page, and Mr. Bernard Pitts made declarations in the terms of the oath prescribed by the Charter of 1800, and were admitted Members of the Court.

THE LATE SIR JAMES PAGET.

The Council adopted a resolution expressing deep regret at the death of Sir James Paget, Bart., D.C.L., LL.D., F.R.S., and sincere sympathy with his family in their loss. The Council gratefully remember the many services rendered to the College by Sir James Paget during his long association with it, and they desire to record their appreciation not only of his eminence as a surgeon, his ability as a teacher, and his grace and eloquence as a speaker, but also of his admirable personal character, which won for him the warm regard of all who knew him. The Council believe that no member of the surgical profession more fully enjoyed the confidence and esteem of his colleagues, and they are assured that his loss will long be felt, and that his name will ever be placed in the foremost rank of those who have done good in their time, and brought honour to their profession.

COOKE'S SCHOOL.

The Council recognised this school for the performance of the extra six months' dissections required for the Primary Fellowship Examination for one year.

RESOLUTIONS PASSED AT THE MEETING OF FELLOWS AND MEMBERS.

Resolution 1.—"That this meeting of Fellows and Members of the College would respectfully urge on the Council the desirability of due notice of the annual meeting of Fellows and Members being given by the College to each Fellow and Member by post or otherwise, together with a copy of the report from the Council."

The answer to this resolution is

"That as the date of the annual meeting of Fellows and Members is announced in the College Calendar, and regularly advertised in the principal medical journals, and as it is made known that any member of the College may on application receive a copy of the annual report, the Council are of opinion that sufficient notice is given of the meeting, and that it is not necessary or desirable to further notify the date of the meeting, or to send a copy of the report through the post as suggested in Resolution No. 4 passed on November 16th, 1899."

Resolution 2.—"That in the opinion of this meeting no Fellow or Member of the College ought to be allowed to act as medical officer to any association (whether a registered friendly society or not) which has for one of its objects the provision of medical attendance, and which in pursuance of that object advertises and canvasses for patients; and the Council is once more urged to announce that the holding of such appointments is contrary to the declaration made by Fellows and Members on their admission."

The Council formally expressed their disapproval of Fellows and Members of the College associating themselves with medical aid institutions which systematically canvass and advertise for the purpose of procuring patients.

USE OF MISLEADING TITLES BY UNQUALIFIED REGISTERED DENTISTS.

The following resolution was adopted:

The Council of the Royal College of Surgeons of England have to inform

the General Medical Council that their attention has from time to time been called to the conduct of certain persons whose names are entered on the *Dentists Register* with the description "In practice before July 22nd, 1878."

The persons in question adopt such titles and descriptions as "R.D.S., R.C.S. Eng.," "R.D.S Eng.," "L.D.S.E.," "Registered by the Royal College of Surgeons," thereby causing it to be inferred that they are connected with this College or the Scotch or the Irish College of Surgeons, and thus infringing the privileges of the Licentiates of Dental Surgery of these Colleges.

The Council are of opinion that such conduct would be "disgraceful in a professional respect," and that the persons in question should be deemed to have rendered themselves liable to removal from the *Dentists Register* under Section XIII of the Dentists Act 1878.

BOARD OF EXAMINERS IN DENTAL SURGERY.

Mr. William Anderson was elected to fill the vacancy occasioned by the retirement of Mr. Edmund Owen.

RESIGNATION OF MR. J. N. C. DAVIES-COLLEY.

The resignation of Mr. J. N. C. Davies-Colley of his membership of the Court of Examiners was accepted, the Council at the same time expressing sympathy in his illness which necessitated his resignation. The vacancy will be filled up at the ordinary Council on February 8th next.

HUNTERIAN ORATION FOR 1901.

Mr. MacNamara was appointed to this office.

SUPPLEMENTAL CHARTER.

The Secretary placed before the Council the new supplemental charter under the Great Seal, dated December 22nd, 1899.

GENERAL MEDICAL COUNCIL.

The thanks of the Council were given to Mr. Bryant for his services as the representative of the College on the General Medical Council.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen passed the Second Examination of the Board, at the January quarterly meeting of the Examiners, in Anatomy and Physiology:

Messrs. J. B. Albury, St. Mary's Hospital; E. W. Alment, St. Bartholomew's Hospital; O. F. H. Atkey and H. Balme, King's College, London; F. Barton, University College, Liverpool; A. J. Beadel, Guy's Hospital; S. Bennett, Cambridge University and St. Bartholomew's Hospital; C. R. Bradley, St. George's Hospital; G. R. H. Chell, Mason College, Birmingham; G. M. Clowes, London Hospital; R. H. L. Cordner, St. George's Hospital; T. R. Couldrey, St. Bartholomew's Hospital; H. J. Cundall, St. Mary's Hospital; H. S. C. Darbyshire, University College, Sheffield, and St. Thomas's Hospital; E. D. Davis, University College of South Wales, Cardiff; H. B. Day, King's College, London; W. F. L. Day, Cambridge University; P. T. Drabble, University College, Sheffield; R. M. Grogons, London Hospital; C. W. C. Harvey, St. Bartholomew's Hospital; P. A. Hendley, King's College, London; V. Hetherington, St. George's Hospital; J. Howard, Owens College, Manchester; E. C. Hodgson and G. Hughes, St. Bartholomew's Hospital; W. Ibbotson, University College, Sheffield; R. L. Jones, Cambridge University and Middlesex Hospital; E. H. Kenderdine, Mason College, Birmingham; C. S. Kingston, St. Bartholomew's Hospital; J. L. Lewis, London Hospital; J. D. S. Lloyd, Mason College, Birmingham; A. D. Low, N. Low, O. L. Lowsley, W. T. McCowen, and E. H. Milner-Moore, St. Mary's Hospital; L. H. Moiser, Yorkshire College, Leeds, and Guy's Hospital; C. M. Murray, Cambridge University and Guy's Hospital; J. P. Nettell, London Hospital; E. Newton, Cambridge University and St. George's Hospital; G. B. Norman, Cambridge University and St. Mary's Hospital; L. Orton, Cambridge University and St. Bartholomew's Hospital; T. H. Ollerhead, A. F. Pilkington, and E. A. Price, St. Mary's Hospital; F. Payne, Middlesex Hospital; J. D. Pearson, Guy's Hospital; J. H. Porter, London Hospital; G. H. Richards and P. J. Robbins, St. Mary's Hospital; E. A. Roberts and J. L. Rushton, King's College, London; F. E. Roberts, St. George's Hospital; R. P. Sephton, Cambridge University and Owens College, Manchester; E. B. Smith, St. Bartholomew's Hospital; F. N. V. Smith, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; D. J. Thomas, University College of South Wales, Cardiff; J. H. Timothy, King's College, London; F. J. Turner, Guy's Hospital; H. Waddell, Queen's College, Belfast; H. J. D. Walker, London Hospital; C. M. Woods, Charing Cross Hospital.

Passed in Anatomy only.—Mr. J. Wilding, St. Bartholomew's Hospital.

Passed in Physiology only.—Messrs. J. Ewing, Yorkshire College, Leeds; and G. L. Wilson, St. George's Hospital.

Forty-four gentlemen were referred in both subjects and 1 in Physiology only.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

At a stated business meeting of the President and Fellows held on Friday, January 12th, the President admitted to the Membership of the College the following candidates, who were successful at the examination held on Tuesday and Wednesday, January 9th and 10th:

Edmund Joseph McWeeney, M.B., M.Ch., M.A.O., R.U.I., 1887; M.D., R.U.I., 1891; L.R.C.P.I., 1896.

William Arthur Winter, M.B., B.Ch., B.A.O.Univ.Dubl., 1891; M.D. Univ.Dubl., 1895; L.R.C.P.I., 1898.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

MR. ARTHUR CHANCE has been elected a member of the Council of the above College.

THE occurrence of dengue in epidemic form is reported in Cuba, especially among the United States troops.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,128 births and 6,474 deaths were registered during the week ending Saturday last, January 13th. The annual rate of mortality in these towns, which had increased from 18.9 to 30.9 per 1,000 in the six preceding weeks, declined again to 29.1 last week. The rates in the several towns ranged from 15.6 in Burnley, 16.1 in Cardiff, 17.5 in Huddersfield, and 17.7 in Oldham, to 34.6 in Liverpool, 37.4 in Croydon, 43.6 in Norwich, and 44.9 in Nottingham. In the thirty-two provincial towns the mean death-rate was 26.3 per 1,000, being 7.0 below the rate recorded in London, which was 33.3 per 1,000. The zymotic death-rate in the thirty three towns averaged 2.0 per 1,000, and corresponded with the death-rate from the same diseases in London; while the mean rate was 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.8 in Blackburn, 3.9 in Preston, 4.0 in Salford, 4.3 in Sheffield, and 4.7 in Wolverhampton. Measles caused a death-rate of 1.2 in West Ham and in Wolverhampton, 1.3 in Bradford, 1.4 in Sunderland, 2.0 in Hull, 2.1 in Salford, 2.4 in Sheffield, and 2.6 in Preston; scarlet fever of 1.1 in Blackburn; whooping-cough of 1.1 in Leeds 1.2 in Wolverhampton, 1.3 in Newcastle, and 1.6 in Portsmouth; and "fever" of 1.2 in Wolverhampton. The mortality from diarrhœa showed no marked excess in any of the large towns. The 89 deaths from diphtheria in the thirty-three towns included 49 in London, 7 in Sheffield, 4 in Leeds, and 3 in Portsmouth, in Bristol, in Swansea, in Leicester, and in Blackburn. Three fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns. There were 18 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, January 13th, against 5, 7, and 8 at the end of the three preceding weeks; 10 new cases were admitted during the week, against 5, 2, and 1 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 2,578 to 2,730 at the end of the eight preceding weeks, had further fallen to 2,560 on Saturday last; 180 new cases were admitted during the week, against 205, 161, and 186 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 13th, 1,022 births and 711 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 27.2 and 25.6 per 1,000 in the two preceding weeks, further declined to 23.0 last week, and was 6.1 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 20.5 in Dundee and 20.6 in Greenock, to 24.5 in Leith and 34.6 in Paisley. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 334 deaths registered in Glasgow included 12 from measles, 3 from scarlet fever, 3 from diphtheria, 8 from whooping-cough, 4 from "fever," and 7 from diarrhœa. Four deaths from measles occurred in Dundee; 2 from measles and 2 from whooping cough in Paisley; and 2 from measles in Greenock.

ENGLISH URBAN MORTALITY IN THE FOURTH QUARTER OF 1899.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending December last, 83,574 births were registered in the thirty-three towns, equal to an annual rate of 29.4 per 1,000 of the aggregate population, estimated at 11,404,408 persons in the middle of the year. In the corresponding periods of the three preceding years the birth-rates in these towns were 31.3, 30.1, and 29.7 per 1,000 respectively. In London the birth-rate last quarter was 28.4 per 1,000, while it averaged 30.1 in the thirty-two provincial towns, among which it ranged from 21.1 in Halifax, 22.3 in Bradford, 22.9 in Huddersfield, and 23.4 in Burnley to 34.9 in Sunderland, 35.1 in Sheffield, 35.4 in Liverpool, 36.5 in Wolverhampton, and 36.7 in Gateshead.

During the quarter under notice 59,213 deaths were registered in the thirty-three towns, corresponding to an annual rate of 20.8 per 1,000, against 18.8, 19.0, and 18.1 in the fourth quarters of the three preceding years. In London the rate of mortality was 21.4 per 1,000, while it averaged 20.5 in the thirty-two large provincial towns, among which it ranged from 14.7 in Huddersfield, 15.5 in Derby, 15.8 in Croydon, and 16.1 in Cardiff to 22.6 in Portsmouth and in Wolverhampton, 23.0 in Salford, 24.7 in Preston, and 26.6 in Liverpool. The 59,231 deaths registered in the thirty-three towns last quarter included 6,182 which were referred to the principal zymotic diseases, equal to an annual rate of 2.18 per 1,000, against 1.47, 2.34 and 2.14 in the corresponding periods of the three preceding years. In London the zymotic death-rate last quarter was equal to 1.96 per 1,000, while it averaged 2.32 in the thirty-two provincial towns, among which it ranged from 0.60 in Derby, 0.85 in Huddersfield, 0.91 Croydon, and 0.99 in Bristol, to 3.65 in Salford, 4.02 in Preston, 4.63 in Hull, and 4.65 in Sheffield. The 6,182 deaths referred to the principal zymotic diseases in the thirty-three towns during the quarter under notice included 100 which resulted from small pox, 136 from measles, 458 from scarlet fever, 1,521 from diphtheria, 761 from whooping-cough, 1,014 from "fever" (principally enteric), and 962 from diarrhœa. The fatal cases of measles, which had been 1,529 and 1,226 in the two preceding quarters, rose again to 1,366 during the three months ending December last, and were equal to an annual rate of 0.48 per 1,000: in London the death-rate from this disease was equal to 0.47 per 1,000; while it averaged 0.49 per 1,000 in the thirty-two provincial towns, among which measles was proportionally most fatal in Burke head, Salford, Preston, Bradford, Sheffield, and Hull. The deaths from scarlet fever, which had been 337 and 359 in the two preceding quarters, further rose to 458 during the three

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Fourth Quarter of 1899.

Towns.	Estimated Population middle of 1899.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	11,404,408	83,574	59,231	29.4	20.8	2.18	6,182	100	1,366	458	1,521	761	1,014	962	159	1.2
32 Provincial Towns	6,857,656	51,395	35,029	30.1	20.5	2.32	3,962	99	836	327	825	545	633	697	165	1.8
London	4,546,752	32,179	24,202	28.4	21.4	1.96	2,220	1	530	131	696	216	381	265	151	0.5
West Ham	300,241	2,217	1,252	29.6	16.7	2.14	161	—	33	6	50	13	43	16	160	1.8
Croydon	127,759	816	503	25.6	15.8	0.91	29	—	2	—	5	8	8	6	131	—
Brighton	123,226	734	613	23.9	20.0	1.50	46	—	—	2	27	1	7	9	132	0.5
Portsmouth	190,741	1,205	1,076	25.3	22.6	2.58	123	—	7	3	46	20	24	23	183	0.7
Plymouth	100,637	748	584	29.8	23.3	1.12	28	—	[illegible]	—	8	2	4	8	131	0.2
Bristol	320,911	2,332	1,710	29.1	21.4	0.99	80	—	15	6	13	10	11	25	161	0.4
Cardiff	185,826	1,286	747	27.8	16.1	1.23	57	—	9	3	18	10	5	12	173	0.3
Swansea	103,722	659	485	25.5	18.8	1.47	38	—	12	1	18	1	2	4	172	1.0
Wolverhampton	88,821	809	501	36.5	22.6	2.03	45	—	—	1	6	8	16	14	178	0.4
Birmingham	514,956	4,205	2,681	32.8	20.9	2.19	279	—	61	6	48	54	54	56	162	2.6
Norwich	113,266	783	466	27.7	16.5	1.57	44	—	—	1	16	18	5	4	166	1.1
Leicester	213,851	1,530	1,037	28.7	19.5	3.07	164	—	19	16	62	31	15	21	188	1.7
Nottingham	239,384	1,639	1,188	27.5	19.9	2.63	157	—	28	20	8	2	72	27	175	1.3
Derby	106,401	744	411	28.0	15.5	0.69	18	—	5	2	—	—	5	6	142	—
Birkenhead	115,162	851	527	29.6	18.4	2.47	71	—	45	1	2	1	16	6	156	0.4
Liverpool	634,212	5,596	4,208	35.4	26.6	2.93	464	—	85	45	62	121	65	86	170	4.4
Bolton	162,221	1,173	782	29.0	19.3	1.92	78	—	6	11	1	15	24	21	169	0.8
Manchester	543,902	4,216	2,894	31.1	21.3	1.57	213	—	47	19	34	30	22	61	157	0.8
Salford	218,244	1,846	1,250	33.9	23.0	3.65	199	—	54	16	25	45	23	36	170	0.6
Oldham	150,772	943	706	25.1	18.8	1.42	53	—	10	16	3	7	5	12	163	0.3
Burnley	113,081	659	484	23.4	17.2	2.40	68	—	19	20	6	2	4	17	211	1.4
Blackburn	135,154	858	669	25.5	19.9	3.21	108	—	13	9	33	18	13	22	177	3.6
Preston	117,622	837	725	28.5	24.7	4.02	118	—	42	6	16	4	15	35	251	4.0
Huddersfield	103,464	590	379	22.9	14.7	0.85	22	—	6	1	—	5	4	6	127	3.2
Halifax	97,721	515	403	21.1	16.5	1.19	29	—	8	2	4	—	8	7	146	3.7
Bradford	236,241	1,311	1,095	22.3	18.6	2.08	122	—	47	28	10	7	13	17	155	0.3
Leeds	423,889	3,172	2,009	30.0	19.0	2.48	262	—	35	14	112	52	24	25	155	0.1
Sheffield	361,169	3,162	1,960	35.1	21.8	4.65	418	—	90	24	174	8	78	44	148	3.8
Hull	234,270	1,965	1,250	33.7	21.4	4.63	269	99	86	19	6	18	19	22	165	2.9
Sunderland	145,612	1,267	755	34.9	20.8	1.63	59	—	5	15	2	—	19	18	160	2.3
Gateshead	106,352	975	513	36.7	19.3	1.43	38	—	5	3	2	12	4	12	171	—
Newcastle-on-Tyne	228,625	1,752	1,166	30.7	20.5	1.79	102	—	36	11	8	22	6	19	184	1.0

months under notice, and were equal to an annual rate of 0.16 per 1,000; in London the scarlet fever death-rate was 0.12 per 1,000, while it averaged 0.19 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Nottingham, Oldham, Burnley, Bradford, Hull, and Sunderland. The fatal cases of diphtheria, which had been 1,128, 889, and 1,013 in the three preceding quarters, were 1,521 during the three months ending December last, and were equal to an annual rate of 0.53 per 1,000: in London the death-rate from this disease was 0.61 per 1,000, while it averaged 0.48 in the thirty-two provincial towns, among which diphtheria was proportionally most fatal in Brighton, Portsmouth, Leicester, Blackburn, Leeds, and Sheffield. The deaths from whooping-cough, which had been 1,417, 1,289, and 878 in the three preceding quarters, further declined to 761 during the three months under notice, and were equal to an annual rate of 0.27 per 1,000; in London the death-rate from whooping-cough was 0.19 per 1,000, while it averaged 0.32 in the thirty-two provincial towns, among which this disease showed the highest proportional fatality in Norwich, Leicester, Liverpool, Salford, Blackburn, and Leeds. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had been 499, 352, and 607 in the three preceding quarters, further rose to 1,014 during the three months ending December last, and were equal to an annual rate of 0.36 per 1,000; in London the "fever" death-rate was 0.34 per 1,000, while it averaged 0.37 in the thirty-two provincial towns, and was highest in West Ham, Wolverhampton, Nottingham, Birkenhead, Bolton, and Sheffield. The 962 fatal cases of diarrhœa were equal to an annual rate of 0.34 per 1,000; in London the rate of mortality from this disease was 0.23 per 1,000, while it averaged 0.41 in the thirty-two provincial towns, among which diarrhœa showed the highest proportional fatality in Wolverhampton, Liverpool, Salford, Burnley, Blackburn, and Preston. One death from small-pox was registered last quarter in London, and 99 in Hull, but not one in any other of the thirty-three large towns.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births was equal to 159 per 1,000 during the three months ending December last, against 150, 160, and 159 in the corresponding quarters of the three preceding years. In London the rate of infant mortality was equal to 151 per 1,000, while it averaged 168 in the thirty-two provincial towns, among which it ranged from 127 in Huddersfield, 131 in Croydon and in Plymouth, 132 in Brighton, and 142 in Derby to 183 in Portsmouth, 184 in Newcastle, 188 in Leicester, 211 in Burnley, and 251 in Preston.

The causes of 736, or 1.2 per cent., of the deaths in the thirty-three towns during the three months ending December last were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.5 per cent., while it averaged 1.8 in the thirty-two provincial towns. The causes of all the deaths during the quarter were duly certified in Croydon, Derby, and Gateshead, and only one was uncertified in Plymouth; while the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Preston, Huddersfield, Halifax, and Sheffield.

MEDICAL NEWS.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the Society was held on January 10th, Mr. Christopher Heath, Vice-President, in the chair. Two new members were elected, and the death of Sir J. Paget (President) and Mr. Gimson (a director) reported. Mr. Christopher Heath from the chair proposed the following resolution: "The quarterly court of directors of the Society for Relief of Widows and Orphans of Medical Men desires to record its great regret at the death of Sir James Paget, Bart., the President of the Society, who has for many years taken the greatest interest in the Society's welfare, and until recently has regularly taken the chair at the meetings of the court." There were no fresh applications for grants, and the death of a widow was announced, who had received since January, 1875, £1,333 10s. from the funds. It was resolved that £1,205 10s. be distributed among the 48 widows, 11 orphans and the 6 recipients from the Copeland fund. The Christmas presents—£531—had been given on December 18th, 1899. The expenses of the quarter amounted to £77 14s. 6d. The nomination of a President was postponed to the April court.

OSTEOPATHY, one of the new 'pathies invented in the United States, does not seem to find much favour with the authorities of its native country. We learn from the *New York Medical Journal* that the Medical Council of the State of Pennsylvania has declared the practice illegal, while the Governor of Georgia has vetoed a Bill passed recently by both Houses of the General Assembly to provide for the practice of osteopathy in the State of Georgia.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary by February 5th.

BIRKENHEAD BOROUGH HOSPITAL.—(1) Honorary Physician; (2) Two Honorary Surgeons. Applications, endorsed "Election of Hon. Medical Officers," to the Secretary, by January 24th.

BIRMINGHAM GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. Residence, board, and washing provided. Applications to the House-Governor by January 27th.

BIRMINGHAM: MASON UNIVERSITY COLLEGE.—Lecturer on Osteology and Chief Demonstrator of Anatomy. Applications to the Secretary by February 24th.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £20 per annum, with furnished apartments, board and attendance. Applications to Mr. P. Kevan, Honorary Secretary 12, Acresfield, Bolton, by January 24th.

BRIXTON DISPENSARY.—Resident Medical Officer; unmarried. Salary, £150 per annum, with furnished apartments, etc. Applications to the Secretary at the Dispensary, Water Lane, Brixton, S.W. by January 31st.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon must be married. Salary, £50 a year, with board, etc. Applications to the Secretary by January 25th.

CARDIFF INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Appointments for six months, subject to re-election. Salaries at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by February 6th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon. Salary, at the rate of £50 per annum, with board and residence. Applications to the Secretary by February 6th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Applications to the Secretary

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Salary, £80 per annum, with residence and maintenance. Applications to the Chairman of the Board of Management, 29, Eastgate Row North, Chester, by January 27th.

CROYDON.—Medical Officer of Health for the Borough. Salary, £500 per annum, increasing to £600. Applications, on forms provided, to be endorsed, "Applications for appointment of Medical Officer of Health," and sent to the Town Clerk by February 3rd.

DUBLIN: NATIONAL HOSPITAL FOR CONSUMPTION FOR IRELAND.—Resident Medical Officer and Registrar. Salary, £100 per annum, with apartments, board etc. Applications to the Honorary Secretary, 5, Leinster Street, Dublin, by January 22nd.

DUBLIN: NATIONAL MATERNITY HOSPITAL.—Resident Surgeon. Salary, £100 per annum. Applications to the Secretary by February 6th.

GLASGOW UNIVERSITY. Three Examiners for Degrees to examine in Midwifery, Medical Jurisprudence, and Botany respectively. Salary, £30 per annum each. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow by February 3rd.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Registrar and Pathologist. Honorarium, 25 guineas per annum. Applications to the Secretary Superintendent by January 3th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Assistant Surgeon: must be F.R.C.S.Eng., (2) Two Assistant Physicians; must be F. or M.R.C.P.Lond. Applications to the Secretary by January 23rd.

LEEDS: GENERAL INFIRMARY.—House-Physician. Appointment for six months. Board, lodging, and washing provided. Applications to the Secretary of the Faculty by January 22nd.

LEICESTER INFIRMARY.—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by February 3rd.

LONDON HOSPITAL, Whitechapel Road, E.—Assistant Physician, must be M.R.C.P. Lond. Applications to the House Governor by January 26th.

LONDON LOCK HOSPITAL, Harrow Road, W.—House-Surgeon to the Female Hospital. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by January 24th.

METROPOLITAN ASYLUMS BOARD.—Three Assistant Medical Officers at the Fever and Small-pox Hospitals unmarried, and not exceeding 35 years of age. Salary, £160 during the first year, £180 the second, and £200 the third and subsequent years, with board lodging, attendance, and washing. Applications on forms provided, to the Officer of the Board, Norfolk House, Norfolk Street, Strand, W.C., by January 25th.

NEW HOSPITAL FOR WOMEN, Thrawl Street.—Two Female Senior Assistants in the Out-patient Department. Appointments for two years. Applications to the Secretary by January 25th.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of £60 per annum. Applications to the Secretary by January 30th.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer; unmarried. Salary, £125 per annum, with board, apartments, and washing. Applications to the Medical Superintendent.

NOTTINGHAM: GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, increasing to £120, with board, lodging, and washing. Applications to the Secretary by January 27th.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—House-Surgeon from February 1st to May 7th. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by January 27th.

PLYMOUTH: BOROUGH ASYLUM.—Assistant Medical Officer; unmarried. Salary, £125 per annum, increasing to £50, with furnished apartments, board, and washing. Applications endorsed "Assistant Medical Officer," to Dr. W. H. Bowes Medical Superintendent, at the Asylum, Blockhouse, Ivybridge Devon by January 26th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners. Applications to the Secretary by January 31st.

ST. GEORGE'S HOSPITAL, S.W. (1) Curator of the Museum. (2) Assistant Curator. Salary, £10 and £50 a year respectively. Applications to the Secretary by January 24th.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—House-Surgeon, must be M.R.C.S.Eng. Salary £80 per annum, with board, lodging, and washing. Applications to the Secretary by January 29th

SALISBURY INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by February 2nd.

SHEFFIELD ROYAL INFIRMARY.—Junior Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, and washing. Applications to the Medical Staff, under cover to the Secretary, by January 24th.

TRURO: ROYAL CORNWALL INFIRMARY. House-Surgeon, unmarried. Salary, £80 per annum, with board and apartments. Applications to the Secretary.

UNIVERSITY COLLEGE, LONDON.—(1) Assistant Physician. (2) Assistant Surgeon Applications to the Secretary by January 30th.

WALSALL AND DISTRICT HOSPITAL. Resident House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Chairman by January 20th.

WESTERN DISPENSARY, Rochester Row, S.W. Resident Medical Officer: unmarried. Salary, 100 guineas per annum, with furnished rooms, etc. Applications to the Secretary by January 27th.

WEST HERTS INFIRMARY.—Locum tenens. Salary at the rate of £100, with board, etc. Applications to Percy Hall, Holy Grove, Boxmoor.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Acting Assistant Surgeon. Applications to the Secretary-Superintendent by February 7th.

WORCESTER GENERAL INFIRMARY.—Assistant Surgeon, and Dispenser. Salary £70 per annum, with board, residence, and washing. Applications to the Secretary Worcester Chambers, Pierpoint Street, Worcester, by January 27th.

MEDICAL APPOINTMENTS.

BRAMWELL, Edwin, M.B.Edin., appointed Senior House-Physician to the National Hospital for Paralysed and Epileptic, *vice* Dr. Collier appointed Registrar.

BUZZARD, E. Farquhar, M.A., M.D.Oxon., M.R.C.P., appointed Junior House-Physician to the National Hospital for the Paralysed and Epileptic, *vice* Dr. Bramwell, promoted.

DOWLING, Arthur, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Haycock District of the Warrington Union.

FORSTER, Laura, M.D.Berne, L.R.C.P., & S.Edin., appointed Medical Officer to the Cutler Bounter Provident Dispensary, Oxford.

JAMES, M. B., M.B., Ch.B.Vict. appointed Assistant Medical Officer of the St. Mary Islington Workhouse and Infirmary, *vice* M. G. Dyson, M.R.C.S., L.R.C.P.Lond., resigned.

LEADER, Harold, M.B., appointed House-Physician to the East London Hospital for Children, Shadwell, E., *vice* Mr. Percy S. Blaker, resigned.

ROSSITER, C. B., F.R.C.S.Ed., etc., appointed Clinical Assistant to St. John's Hospital for Diseases of the Skin, Leicester Square.

SAUNDERS, E. Symee, M.D., C.M.Aberd., appointed Medical Officer to the Dispensary, Royal Albert Hospital, Devonport, *vice* Dr. Alonzo Rider, resigned.

SAXBY, T. Edmonston, L.R.C.P., L.R.C.S.E., etc., appointed Medical Officer of Health for the District of Unst, Shetland, N.B.

SLADER, G. W. B., L.S.A., L.R.C.S.I., reappointed Medical Officer of Health to the Gainsborough Rural District Council.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—A discussion on the Pathology and Treatment of Appendicitis will be opened by Mr. C. B. Lockwood and Dr. W. H. Allchin. Mr. Lockwood's remarks will be illustrated by a series of lantern slides from micro-photographs.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. F. Payne: Consultation. (Skin.)

TUESDAY.

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. C. A. Ballance: On the Conduct of the Mastoid Operation for the Cure of Chronic Purulent Otorrhœa. Sir William Dalby will make remarks on the Cases requiring the Mastoid Operation. Mr. A. E. Cumberbatch: The Complete Mastoid Operation for the Cure of Chronic Suppurative Disease of the Middle Ear. Observations on the Selection of Cases for Operation.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent: Consultation. (Medical.)

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. H. Lloyd Williams: Some Dental Lesions.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Informal exhibition of cases at 4.30 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Mr. E. W. Roughton: Consultation. (Surgical.) 5.15 P.M.—Discussion on Skin Diseases produced by the Tubercle Bacillus.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Jonathan Hutchinson: Consultation. (Surgical.)

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Mr. Swinford Edwards: Common Affections of the Rectum and Anus.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Garrod: Demonstrations of Selected Cases.

British Balneological and Climatological Society, 20, Hanover Square, W., 8.30 P.M.—Dr. Harry Campbell will introduce a discussion on the Treatment of Nervous Diseases and Affections by Baths and Climate.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Dr. T. D. Savill: Cases of Infantile Paralysis and other Amyotrophies.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Bruce: Medical Cases.

Ophthalmological Society of the United Kingdom.—Patients and Card Specimens at 8 P.M. Chair at 8.30 P.M. Papers.—Dr. W. Edmunds: Experimental Exophthalmos and Enophthalmos. Mr. Arnold Lawson: Corneal Burns. Mr. C. H. B. Shears: Acute Glaucoma following a Single Application of Homatropine. Mr. W. M. Beaumont: Family Tendency to Ophthalmoplegia Externa.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Sinclair Thomson: Consultation. (Eye, Ear, Nose, and Throat.) 2 P.M.—Dr. Harry Campbell: Clinical Examination of the Nervous System. Class demonstration II.

Clinical Society of London, 8.30 P.M.—Mr. J. Hutchinson, jun.: Two cases of Successful Primary Resection of Gangrenous Small Intestine. Mr. Pearce Gould: A case of Bullet Wound of the Abdomen, with four Wounds of Small Intestine and two of the Mesentery; Operation; Recovery. Dr. Rolleston: A case of Fatal Hæmopneumothorax of Unexplained Origin.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CULHANE.—On January 14th, at Glin House, Hastings, the wife of Frederick William Slater Culhane, of a daughter.

MARTIN.—At 8, Fernwood Road, Jesmond, Newcastle-on-Tyne, on January 9th, the wife of William Martin, M.A., M.D. M.S., of a son.

PARSEY.—On January 12th, at Glenavon, King's Norton, the wife of B. W. Parsey, M.A., M.B.Cantab., of a son.

MARRIAGES.

EDDOWES—ATKIN.—On January 9th, at St. Augustine's, Sheffield, by the Rev. A. Pearson Alfred Eddowes, M.D., M.R.C.P., of London, to Ellen, daughter of the late George Atkin, surgeon, of Sheffield.

HUGHES—BOLDERO.—On January 10th, at St. Michael and All Angels, Penkridge, Staffordshire, by the Rev. H. H. Jevons, M.A., assisted by the Rev. W. Tichenhurst Corfield, M.A., Vicar of the parish, Robert Hughes, M.B.Lond. M.R.C.S., L.R.C.P., M.P.C., of Fenton, Staffordshire, youngest son of Arthur Hughes, of Walton-on-Thames, to Ella, eldest daughter of Frederick Boldero, M.R.C.S., of the Ivy House, Penkridge.

JONES—BURMAN.—On January 16th, at St. Matthew's Church, Upper Clapton, by the Rev. J. Cullin, M.A., William Black Jones, M.D., B.S.Lond., of Llangammarch Wells, Breconshire, elder son of the late Rev. William Mead Jones, D.D., to Elizabeth Ada, third daughter of William Kimin Burman, of Clapton, N.E.

ROGER SMITH—WOODD.—On January 10th at the Parish Church of Hollington, St. Leonards-on-Sea, by the Rev. Trevor Basil Woodd, of St. Peter's, Eaton Square, assisted by the Rev. T. W. Adam Rector of the Parish, Hugh R. Roger Smith, M.D., M.R.C.P., third son of Professor T. Roger Smith, of University College, London, to Dorothy Eugénia, third daughter of the late Rev. Basil Woodd, of Leckby, Hollington Park, St. Leonards.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1 p., Tu., 2.30; o p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Laryngx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M., Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. P. asks for informations as to a suitable light, and cheap instrument or of any institution that would render assistance in obtaining a more costly appliance for the following case: A single woman, aged 27 years, is the subject of infantile paralysis, with about 4 inches' shortening. Out of doors she wears a high cork sole, indoors she declines to wear this thick sole on account of the fatigue incurred. She cannot afford an expensive instrument, as she now earns about £18 a year indoor.

J. R. asks for hints as to the pathology and treatment of the following case: A gentleman, aged 56, married, with no history of syphilis, has been troubled for twelve months past with an upward curve of the glans penis upon erection. The curvature is so great as to render connection impossible. A hard knotty cord can be felt upon the dorsum of the penis corresponding to the dorsal vein. Painting with iodine, inunction of iodine valsol and mercurial vasogen, both locally and at the same time in the groin, have been tried. Iodide of potassium has been given, but had to be discontinued on account of coryza

TREATMENT OF TÆNIA IN AN INFANT.

M.B would be glad of advice as to the treatment of tapeworm in a child 6 months old. She has passed the segments twice in the last eight weeks. She is a rather weakly infant, but has been steadily improving in health for the last two months.

TREATMENT OF ACNE ROSACEA.

M. writes: I have a patient—a youngish lady—who for years has suffered from a gradually increasing acne rosacea. I think the case is one which accords with the form to which Mr. Balmanno Squire has given the name of vespertilio. There are large triangular patches on each cheek, a few spots between the eyebrows, and the end of the nose is very red, swollen, and vascular. Acneiform pimples often form here, which I have incised, and the flow of dark thick blood is astonishing. I should be obliged to any member who will tell me of a successful plan of treatment. I have greatly improved the cheeks, but I have been rather afraid of meddling with the nose.

MEDICAL PARTNERSHIP.

X.Y.Z.—A correspondent asks the following question: A. and B. are general practitioners practising in partnership. Should fees obtained for (1) examining ambulance classes, and (2) lecturing to School Board ambulance classes, be treated as personal, or should they go to the partnership?

*** Generally speaking such fees would be personal, and a partner could not claim to share them. One partner, however, might object to the other undertaking such work unless the remuneration were shared if neglect of the partnership practice was likely to arise from it

ANSWERS.

INQUIRER.—We are informed that the report of the Committee is approaching completion. No part of it has yet been published.

E.—We do not think that our correspondent would be justified in issuing the advertisement which he submits.

KIRIN.—There is no doubt that a competent young man could be obtained for the post at the salary named, and we know of no rule of medical etiquette against it. But we do not recommend the arrangement. When the "clever young doctor" ceased to be young he would cease to be satisfied with the salary named. Further, he would soon get rusty. What is called a "clever doctor" is only made by constant practice, and the larger his field of practice, other things being equal, the "cleverer" he will be. The best plan would be to point out the grounds of dissatisfaction and to mention the possible, but, as we think, undesirable alternative. Probably an arrangement could be made under which a partner or assistant could undertake the special duties required with the desired promptitude. In large places of business employing many persons who reside on the premises it is often found advisable to arrange for a daily visit at a fixed hour.

NOTES, LETTERS, ETC.

ERRATA.

IN Dr. E. Percy Paton's article on a Case of Ruptured Ureter or Renal Pelvis, in the BRITISH MEDICAL JOURNAL of January 13th, p. 71, col. 2, line 30, "vertical" should read *actual.* There should be no point after the bracket in line 37: on line 39 "cases" should read *case;* and on line 45 "slight pus" should read *a little pus.*

In the second line of the notice of eucaine hydrochloride published in the BRITISH MEDICAL JOURNAL of January 13th, p. 82, the word "cocaine" was in error printed for "eucaine."

OPEN-AIR SANATORIA.

A HOME called Brinklea Sanatorium has been opened at Bournemouth under the medical direction of Dr. A. Kinsey-Morgan for the application of the open-air treatment of consumption on the Nordrach system. The nursing is under the supervision of a lady who was for some considerable time with Dr. Walther at Nordrach. Further particulars can be obtained on application to the matron.

Volunteer Medical Staff Corps Relief Fund.

Surgeon-Major Valentine Matthews, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of the Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

	£	s.	d.
Amount already acknowledged	243	14	5
Edinburgh Company V.M.S.C.	7	0	0
Professor A. W. Hughes	5	0	0
Bearer Company Scottish Border Brigade ...	1	1	0
Surgeon-Captain W. F. O'Grady, 1st V. B. Manchester Regiment	0	10	6
Medical Officers South Wales Infantry Brigade	1	11	6

The Pistoja Gout Powder.

Dr. Arthur Roberts (Harrogate) sends us the following extract from a volume with the title *Secret Nostrums*, compiled by C. W. Oleson, M.D., and published at Chicago: "Pistoja Powder.—This powder, used extensively as a protective against gout, is made in a convent near Pistoja, Italy. It is said by Mr Chastaing to have the following composition: Take of bryonia root, gr. 154; gentian, gr. 154; chamomile, gr. 154; colchicum root, gr. 308; betony, gr. 15. Mix the powdered drugs and divide into 365 powders, one of which is taken each day of the year in a full glass of water."

A Snake Nursling.

Dr. Malboux relates in the *Lyon Médical* the following curious story: In 1869, when serving in Algiers, he had charge of a number of workmen employed in making a tunnel, and their families who lived in mud huts in a region where snakes abounded. One morning he was called to a young woman whom he had attended in childbed two months before; she showed him her baby which was wasting, and told him that for some time her milk had been poor, and that often in the morning her breasts were empty and flaccid. This happened after certain nights, during which she had felt an indescribable discomfort—a kind of nightmare consisting in the sensation of a great weight on the chest with chilling of the whole body and inability to move or even to cry out. She added, "It is as if a beast came and lay upon me and drew my milk." The doctor observed that the milk was in fact diminished in quantity and impoverished in quality, but was not prepared with an explanation. Two days later he was called in great haste and found the woman in a half-fainting state, her limbs shaken by convulsive movements. Her husband told him that having had to knock off work during the night owing to an accident, he had come home and found his wife as it were paralysed in bed; on pulling down the clothes he had found an enormous snake coiled upon her chest. He had killed the animal and showed it to the doctor, who cut it open and found milk in the stomach. The woman quickly recovered, and was able to nurse her child as before. Snakes are well known to be fond of milk, and they have the power of suction. Dr. Malboux thinks the evidence conclusive that the snake had robbed the baby in this case of its natural food.

The Decrease in Venereal Diseases in the Indian Army.

Observer writes: May I suggest one small omission in your interesting article on the above subject? Professor Fournier has recently stated that there are three lines of defence against syphilis; first, and most efficacious, come moral and religious scruples; secondly, administrative measures, as to which he himself seems to have become doubtful; and thirdly, medical methods, especially careful and continuous treatment, seeking the intelligent co-operation of the patient. Your article deals with the second and third only.

In July, 1897, Sir George White, then Commander-in-Chief in India, issued a general order of an unprecedented kind, calling on regimental officers to do their utmost to lessen this cause of inefficiency by measures similar to those by which drunkenness has been so much decreased in the Army; that is, by encouraging games and other counter attractions, by friendly advice given privately or in lectures, as well as by example. Some months later came a still stronger memorandum from Lord Wolseley, pointing out that men tainted with this disease are "a source of weakness to their regiments and discredit to their comrades if employed in war."

These utterances, appealing to the loyalty and *esprit de corps* of officers and men alike, cannot have been altogether without effect, and it is known that many officers, both combatant and medical, have welcomed the suggestions of the commanders-in-chief, and carried them out conscientiously. It is as impossible as ever to make men moral by Act of Parliament, but we are surely not so sunk in Materialism as to deny to these efforts all share in the improvement perceptible in 1898?

The Examiner Abroad.

Captain ——, I.M.S., Professor of Hygiene, —— Medical College, India, sends the following as an example of a strangely confused answer given by a student in an examination on hygiene: Q. Describe the construction of a deep well from start to finish. A. *The Construction of a Good Deep Well.*—This depends (1) on the soil; (2) its relation to the neighbourhood; (3) vegetation. In starting the construction of a deep well, it will be considered free from pollution if it is situated external to a cone of half a mile radius, and should not be more than 100 feet deep. The sites of a well should be either at the foot of a hill or the dry courses of nullahs and ravines, etc. To commence with, the dry hours of the day should be selected. See how far the level of the ground water is, and construct it with reference to this. The area should be $D^2 \times 0.7854$. The well should be constructed of stone, lined with bituminous to prevent contamination. There should be no drains or sewage near; all excrementitious matter should be avoided near the entrance. The soil near and around the well should be free from inorganic or organic matter. It should be guarded by a rail. After the construction of the well it should not be used for some time as it is likely to contain impurities. When using tubs they should not be made of leather, as this is likely to cause contamination. Animals should be prevented from coming to this place. The strata near the well should not be permeable, as it is likely to carry impurities to the water.

Nasal Feeding in Exhaustion following Children's Ailments.

Dr. Chas. W. Chapman (Weymouth Street, W.) writes: The useful note by Mr. Coulthard on the above subject induces me to write on another method of feeding children in an almost hopeless state of exhaustion which has in my hands been of great service. The plan is one I believe adopted for feeding lunatics. A rubber tube (of a not easily collapsible make), to which a small glass funnel has been attached, is passed a little distance down one of the nostrils, the child lying on its back during the operation. Liquid nourishment of a bland nature is slowly poured down the funnel. A striking instance of the value of this plan of feeding may be given in illustration. An infant under a year old was sinking from exhaustion from diarrhœa. On my suggesting to use further efforts to save the child, the worn-out mother protested against "any more torturing of her child." I, however, got my way, and by means of small sulphate of copper injections into the rectum and nasal feeding the patient was brought round, to the inexpressible joy of the mother. The form of food most suitable for nasal feeding is raw meat juice and plain or peptonised milk.

LETTERS, COMMUNICATIONS, Etc., have been received from

A Mr. W. T. Archdall, Ipswich; Association of Registered Medical Women, Secretary of, London; Dr. W. Aickin, Belfast; Mr. R. S. Anthony, Claremont, O.C. **B** Mr. H. J. F. Badcock, New Bromoton; J. Biernacki, M.B., London; Mr. G. H. Broadbent, Manchester; Dr. J. Braithwaite, Leeds; A. H. Burgess, M.B., Manchester; Mr. J. P. Bush, Clifton; Mr. J. B. Blackett, London; Mr. L. A. Bidwell, London. **C** Mr. W. Cuteliffe, North Tawton; Dr. E. F. Cordell, Baltimore; Mr. F. R. R. Chapman, Chewton Mendip; Mr. A. Coleman, London; Mr. A. Carter, London; Dr. C. W. Chapman, London. **D** Dr. C. E. Drysdale, London; Dr. E. W. Diver, Saltley Bridge; E. S. Dukes, M.B., Derby. **E** Engineer; E. A. S.; Eycmes. **F** Mr. S. T. Fairland, London; Mr. W. T. Freeman, Reading; Mr. J. T. Fox, Strathpeffer Spa; Dr. W. E. Foggie, Dundee. **G** Mr. T. P. Gaskell, London; Dr. T. W. H. Garstang, Knutsford; Dr. A. E. Giles, London. **H** Mr. T. J. Horder, London; Dr. T. B. Hyslop, London; Dr. J. Haddon, Denholm; Æ. Henderson, M.B., Perth. **I** Mr. B. S. Ingram London; Ixion; Infantile Paralysis; Messrs. Innes, Smith and Co., Birmingham. **K** Kirn; Dr. R. Kennedy, Glasgow; Mr. P. Q. Karkeek, Torquay. **L** Dr. Constance E. Long, London, E. B. Lush, M.B., London; Liverpool Medical Institution, Secretary of, Liverpool; Mr. J. Lawrence-Hamilton, Brighton; Mr. P. G. Lodge, Bradford; Dr. C. Latter, Folkestone; L.R.C.S.I.; Lady Member of the National Health Society. **M** Mr. J. W. Morris, London; M.B., M.A.; M.B.; S. Mahannah, M.B., Hyderabad; Dr. H. J. Macvoy, London; Medical Coroner; Mr. F. Martin, Darlington; Dr. I. G. Modlin, Sunderland; Member; Mr. J. R. McGee Bradford; Member B.M.A.; Medical Student; Dr. C. F. Moore, Dublin. **O** One Who Knows; Dr. E. H. L. Oliphant, Glasgow; J. P. O'Hea, M.B., London. **P** Mr. W. C. Pakes, London; Dr. E. P. Paton, London. **R** Mr. G. H. Radford London; W. Ramsden, M.B., Oxford; Dr. H. Rennoy, Sunderland; Dr. J. B. Ridley, Bromley; Retired, Mr. D. C. Rees London; Messrs. Reynolds and Branson, Leeds. **S** Dr. A. W. Sheen, Cardiff; A. J. B. Squire, M.B., London; Mr. A. Smith, London; Dr. S. Sunderland, London. **T** Mr. J. Taylor, Chester; Mr. M. B. Taylor, South Petherton; Mr. J. L. Thudichum, London. **W** Dr. H. L. Williams, London; F. Wyatt-Smith, M.B., Reigate; Dr. H. W. Webber, Plymouth; Dr. A. McJ. Weir, East Sheen; Dr. T. J. Wood Bradford; Dr. F. Willcocks London; Mr. F. C. Wood, Ripley; Dr. J. W. Washburn, London; Mr. W. F. W. Wilding, Wigan; W. W. Wagstaffe, M.B., Sevenoaks; W. H. P.; Mr. F. E. Williams, Buckden; Mr. H. Wilson, London. **Z** Messrs. A. and M. Zimmermann, London; etc.

BOOKS, Etc., RECEIVED.

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Leçons de Clinique Médicale faites à l'Hôpital Général de Mons par Dr. J. Vires. Paris: Masson et Cie; and Mons: Poulet et Fils. 1900. Frs. 7.

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Lessons in Prescription and the Art of Prescribing. By W. H. G. Griffiths, Ph.D., L.R.C.P.S. New Edition. London: Macmillan and Co. 1899. 3s. 6d.

The Passage of Two Buried Cities. By J. F. Horne, M.D., F.R.S.E. London: Hazell, Watson, and Viney. 1900.

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A CLINICAL LECTURE
ON
PERICARDITIS.

Delivered at the Manchester Royal Infirmary,

BY GRAHAM STEELL, M.D.EDIN., F.R.C.P.LOND.,

Physician to the Manchester Royal Infirmary, and Lecturer in Clinical Medicine, Owens College.

RHEUMATIC PERICARDITIS.

GENTLEMEN,—We had recently in the wards a case of rheumatic pericarditis in a young man who had been the subject of acute rheumatism three years ago, and who had again suffered from slight arthritis of the knees about a fortnight before admission to hospital on November 17th last. He had gone about his work, however, till November 10th. He did not seem to have had any chest pain till the 9th, when he had severe pain on the left side, specially on taking a deep breath, and he noticed that he was short of breath. He had had attacks of chorea at the ages of 8, 9, and 11 respectively. There could be no doubt, then, that he was a thoroughly rheumatic subject, and had had endocarditis in all probability.

When I examined him on November 18th, the day after admission, I was surprised to find, besides the physical signs of a moderate left pleural effusion, not so extensive as to prevent the left border of the cardiac dulness being defined so far, a huge precordial dull area, and such a dull area as would imply enormous enlargement of the heart, were it due to the size of the heart, and of the shape that is assumed by a true cardiac dulness only in rare cases, as Sir William Gull long ago pointed out, of general dilatation of the heart, in which the dilatation of the left ventricle, and that of the right auricle and of the infundibulum of the right ventricle are all extreme. But this lad's history pointed to his cardiac disability being comparatively recent. When I listened over the heart what struck me most was the feebleness of cardiac sound of any kind. All I could make out, in fact, was the presence of a slight systolic murmur in the mitral and tricuspid areas. I could hear no friction.

We had then a remarkable degree of silence over the heart, a greatly increased area of dulness, and a very feeble systolic murmur in the tricuspid and mitral areas. The natural inference to be drawn from this condition, of course, was that there was pericardial effusion. The absence of friction sound was of course remarkable, as there was every reason to believe that if pericardial effusion were present it was of inflammatory origin in view of the rheumatic but otherwise good history of the patient.

It was on Saturday (November 18th, 1899) that I examined the case with the result related. On the following Monday on my arrival I was informed that our resident medical officer, Dr. Melland, had detected pericardial friction sound, an observation most creditable to his acuteness of observation, because the sound, as some of you can bear me out in saying, was of the feeblest, and, moreover, was limited to a small area, I should think about an inch and a half in its vertical and an inch in its transverse diameter. This area was situated at the left border of the lower part of the sternum. During the following couple of days the friction increased in loudness and extent of area of audibleness, and then it declined and ceased. But if any doubt had remained as to the diagnosis of pericardial effusion, it was soon dissipated by the rapid diminution of the precordial area of dulness till it approached practically normal limits. The pleuritic effusion—which in this case was evidently genuine—moreover soon likewise receded. (You will see the meaning of my use of the word "genuine" later.) The mitral murmur remained, and became associated with a reduplicate diastolic sound. Evidently the murmur was old, and the result of the first rheumatic attack, or more likely of the earlier chorea. The tricuspid murmur was no doubt due to the debility of the cardiac muscle only. Unfortunately the patient absconded four days ago, but, to do him justice, he took this action in a good cause: to join his militia regiment.

PERICARDIAL EFFUSION WITHOUT FRICTION.

Sometimes, though rarely, you have to make the diagnosis of pericardial effusion without any assistance whatsoever from auscultation, that is to say, pericardial friction may never be heard from first to last. Again, paradoxically, I shall relate to you a case in which friction was audible over the heart, and yet in which it could hardly be said there was pericarditis present at all, so trivial evidently was the process that temporarily annulled the smoothness of the gliding surfaces.

First, as to pericardial effusion without friction sound. When I was resident medical officer here, an old woman with chronic Bright's disease, but without any general dropsy, was admitted to the wards. It was noticed that she always sat up in bed, leaning forwards, and was evidently unable to lie down owing to the dyspnœa it occasioned her. Percussion of the chest showed a precordial dull area of enormous size, extending upwards and to both right and left sides. The heart sounds were feeble, but there was neither friction sound nor murmur audible. There was no febrile disturbance. In a few days the dull area had become greatly diminished, while neither friction nor murmur had been heard. The patient could now lie down comfortably. Evidently this was a case of one of the copious effusions into sacs or loose tissues that are so apt to occur in the course of Bright's disease. So much for effusion into the pericardium without any evidence of inflammation whatsoever.

I next relate to you a case to show that there may be severe pericarditis with great effusion and fibrinous exudation, and yet, again, there may be no friction sound audible throughout the period of observation, extending over weeks, while the debility of the heart muscle in consequence of the contiguous inflammation and the embarrassment of its movement occasioned by the effusion may determine the ordinary effects of heart failure on the general circulation.

History.—Mrs. M. A. T., aged 27, was admitted to the Manchester Royal Infirmary on September 24th, 1891, suffering from dyspnœa, dropsy of the lower extremities and of the right upper extremity, and from ascites. Her illness, which had commenced several weeks before admission, had followed recent confinement. She had never had rheumatic fever or chorea. The temperature was moderately febrile.

Condition on Admission.—The upper right extremity was found to be much swollen, and the swelling was stated to have been preceded by pain referred to the region of the corresponding clavicle and shoulder. The area of precordial dulness was enormously increased, but its extension upwards was proportionately less than that to the right and left sides, especially the latter, the left border of the dull area passing in a slanting direction across the axillary region, the base of the left lung being at the time resonant. Both sounds of the heart were audible and free from murmur. There was no trace of friction sound. The liver was enlarged and tender—no doubt from venous stasis—and there were moist sounds at the bases of the lungs. There was no albumen in the urine. The patient was anæmic and cachectic-looking.

After-History.—Slight hæmoptysis occurred from time to time, and the pulmonary bubbling sounds became more abundant, while the bases of the lungs became impaired.

Post-mortem Examination.—The pericardium was hugely distended with light amber-coloured fluid. Both the visceral and parietal layers were the seat of diffuse hæmorrhagic fibrinous pericarditis. The heart itself had a patchy, shaggy, rough, brownish appearance, due to the irregularly deposited flaky lymph which, adherent below, had its upper layers blood stained. This lymph was deposited on both surfaces of the pericardium, and was particularly marked around the origin of the large vessels at the base of the heart and over the auricles and around the pulmonary veins. The fibrinous deposit was fairly firmly adherent and had evidently been of some standing. The heart was small and presented no valve lesion. There was some fluid in both pleuræ and infarcts in both lungs. The pelvic organs were matted together and surrounded by inflammatory material. Thrombi were found in several veins, including the right subclavian. The abdomen contained ascitic fluid, the liver was enlarged and presented appearance of well-marked passive congestion. Kidneys normal in size and general appearance, except for slight congestion.

This case, then, was an instance of the fact that even fibrinous pericarditis may be present, run a subacute course, and occasion great effusion and yet be unaccompanied by any friction sound. In the case narrated the septicæmic source seemed to lie in the pelvis.

The next fact with regard to pericarditis to which I wish to call your attention is that cases of the worst type of pericarditis not rarely run their fatal course without a trace of friction sound from first to last. I refer to suppurative cases of septicæmic origin.

When I was House-Physician in the Fever House of the Edinburgh Royal Infirmary a convalescent from typhus, a man about 40 years of age, abruptly developed an extreme degree of irregularity of his pulse along with some pyrexia and *malaise*. His cardiac dulness coincidentally increased, though it hardly assumed the characteristic pyramidal form of the dulness of pericardial effusion. No friction sound or

murmur was ever audible, and the heart sounds, though remarkably weak, were quite pure. He died, and necropsy revealed purulent pericarditis.

But here is another case of the kind from our own records.

History.—A man, aged 41, was admitted to the Manchester Royal Infirmary on October 29th, 1892, suffering from arthritis of the right ankle and wrist, dyspnœa (evidently not of laryngeal origin though the patient was hoarse), delirium, and great prostration. He was too ill to give any account of his illness, but we afterwards ascertained from his friends that ten days before admission he had struck his right ankle against a piece of iron without, however, breaking skin. He thought little of the injury at the time, but later the ankle became painful and swollen, and a week before admission he complained of feeling unwell, of aching pains over his body, and of shortness of breath. For three weeks before the accident he had been troubled with diarrhœa: thus had been ailing.

Condition on Admission.—When I saw him on October 31st the right wrist and right ankle were swollen and red, and in the neighbourhood of the latter there was fluctuation, and a thrombosed superficial vein could be traced up the leg. The temperature was normal and never rose above 100° while the patient survived. The pulse was extremely weak and very irregular; respirations 46 per minute. There was more or less cyanosis. The area of cardiac dulness was much enlarged both in the right and left directions, and less so in the upward direction. Both heart sounds were weak though plainly audible and free from murmur. There was no friction sound. The impulse of the heart could not be determined. There were small bubbling sounds at the bases of the lungs with some impairment of resonance. The liver was enlarged, and its edge could be easily felt below the ribs in the mammary line. Laryngoscopic examination revealed œdema of the ary-epiglottidean folds. The patient died on October 31st, 1892.

Post-mortem Report.—No sign of external injury. Right ankle and right wrist much swollen. Thorax: Pericardium much distended with puriform fluid, and both layers, particularly the visceral one, coated with thick, soft flocculent lymph. Heart: Cavities, orifices, and valves normal. The jugular veins contain a distinct clot, and there is also a slight clot in the lower part of the right internal saphenous vein. Pleuræ: Both seat of acute pleurisy. Lungs: right intensely congested, but crepitant throughout; lower lobe presents several hæmorrhagic patches. Left lung in similar state. Larynx much congested, marked œdema of ary-epiglottidean folds. On making the median incision over the larynx a quantity of creamy pus flowed out from the cellular tissue of the right side of the neck. Abdomen: At the lower part of the ileum there were several hæmorrhagic patches. Liver considerably enlarged and intensely congested; no suppuration; many of the hepatic veins contained clot. Spleen enlarged, presented near the centre a patch of softened pulp, but no distinct foci of suppuration. Joints: Both right ankle and right wrist contained creamy pus; no erosion of cartilages or disease of bone. No ear disease.

The fact of the injury that seemed to be the origin of the septic condition not having broken the skin and the evidence of preceding ailing for three weeks are worth noting.

SECONDARY PERICARDITIS.

Then there is the form of pericarditis that is often met with in cases of granular disease of the kidney with enlarged heart. In them there is often no effusion although the friction sound may be well marked for days. Again, there is the pericarditis that often complicates acute pneumonia. A tuberculous pericarditis occasionally occurs with tuberculous lesions of other organs. I had a case I believed to be of this nature a few years ago. The only case of leprosy that has been in this infirmary for many years died of pericarditis. In scarlatina, pericarditis is not very rare, but the relationship between scarlatina and true rheumatism is not quite settled. Certain it is that joint affections that are not true rheumatism are frequent in the disease, but on the other hand, scarlatina seems to have the power of predisposing to an attack of true rheumatism. At least, one sees during convalescence a multiple arthritis that corresponds to true rheumatism with pericarditis and endocarditis during convalescence from scarlatina, the patient generally having had true rheumatism before. Beware of putting every multiple joint affection down to rheumatism, even if there be pericarditis or endocarditis present. Septicæmic processes are often accompanied by joint pains, as we have seen in the cases referred to to-day.

I must refer lastly to the most trivial forms of pericarditis to be met with—indeed, it is doubtful if they should be regarded as cases of pericarditis at all, but unquestionably there is some temporary nutritive disturbance in the pericardium that interferes with the smoothness of its opposed surfaces.

Here is a good example of the condition. A few years ago a patient of mine who had been under treatment for bronchitis and emphysema was about to be discharged from the infirmary convalescent. He was sitting by his bedside ready to go out when I was going round the ward. For some reason or another I placed my stethoscope over his heart, and to my astonishment found a very distinct double grazing friction sound. His discharge was of course cancelled, to his great indignation, for he had neither pain nor fever, and felt quite well according to his standard of well-being. In a day or two the friction disappeared, without there ever having been any evidence of effusion, and the patient soon obtained his discharge, anything but grateful for the care that had been taken of him.

PHYSICAL SIGNS OF PERICARDITIS.

Inspection.

Fulness and obliteration of the intercostal depressions corresponding to the effusion and interference with the movement of the left side of the chest may be noticed on inspection. The apex beat has seemed to be elevated in large pericardial effusions, but one must be careful not to assume that any visible pulsation there may be must be the apex beat.

Palpation.

In a case of rheumatic fever, especially a first attack, one should always take pains, however, to determine the situation of the apex beat by palpation and inspection, although there be no indication of heart implication at the time, so that if pericardial effusion were to occur, any change in the position of the impulse might be noted. Often one fails to detect any cardiac impulse when there is effusion, and the inference then is that interference with impulse is not simply the result of the effusion intervening between the heart and chest wall, or mechanically embarrassing the heart, but more especially of the heart muscle being debilitated by the inflammation surrounding it. Sometimes a friction rub is easily felt on placing the hand over the cardiac region, but this usually occurs in cases of some standing, and when it occurs the effusion is usually not great. It will naturally be more likely to occur in cases of hypertrophied heart, as in Bright's disease (granular kidney), and in such cases the effusion is often scanty or absent.

Percussion.

Percussion is a very much more important method of examination in pericarditis than either inspection or palpation. When the pericardial sac is distended, the dull area which represents the heart in health becomes much enlarged, and the increase takes place first of all upwards. The fluid would seem to collect about the large vessels, and the upper part of the sac to be the part most prone to yield. As the effusion collects, the right and left boundaries of the heart dulness, however, soon extend laterally below, so that the whole dull area assumes a more or less pyramidal form, the base of the pyramid being below. If you use the method of percussion which I employ, these changes will be readily discerned. Instead of extending to the third cartilage, 1 inch to the left of the sternum, the precordial dulness will be found to reach to the second cartilage, or even above it. To the right of the sternum, again, above the level of the liver, considerable dulness will be found, and to the left of the sternum the lowest part of the left boundary of the dull area will be found situated at a very much greater distance from the middle line than under normal circumstances. Now the rule is that extension of the cardiac dulness to the right indicates enlargement of the right auricle, and to the left enlargement of the left ventricle. It is extension in the upward direction that is characteristic of pericardial effusion; but when such extension is found we must be careful to map out the whole area of dulness, and to note if there is extension laterally below. There is another condition which occasions extension of cardiac dulness in the upward direction, although practically it very seldom causes any confusion in diagnosis. This other condition, I have already said, is enlargement of the infundibulum of the right ventricle, from which you will remember the pulmonary artery arises, and at the extremity of which the pulmonary valves are situated. Although a part of the right side of the heart, bear in mind that the infundibulum or conus arteriosus, as it is often called, if dilated will extend to the left of the sternum above the third costal cartilage in the second space, where not infrequently it occasions a visible impulse.

Cases in which dilatation of the infundibulum is so great as to give rise to extension of cardiac dulness above the third left cartilage are necessarily chronic, and have usually long before developed symptoms of disturbed circulation—dyspnœa, dropsy, and enlarged liver; while pericarditis is an

acute disease in the majority of instances. In cases of enlarged infundibulum one usually feels the thud of the closure of the pulmonary semilunar valves easily as they lie superficially, and are closed too forcibly. The general rule then is that if you find extension of the cardiac dulness in the upward direction suspect pericardial effusion, and if such effusion be at all abundant you will find the shape assumed by the dull area as a whole to be more or less pyramidal, the apex of the pyramid above, the base below.

When an enormous quantity of effusion is present the dulness may encroach considerably upon the area of the left lung, and there is a possibility of the effusion being mistaken for a pleuritic one. If care is taken to examine the back this can hardly happen. Mention of this possible confusion in diagnosis reminds me to call your attention to certain pulmonary physical signs which are occasionally present at the base of the left lung behind the pericarditis, and which may simulate the signs of pneumonia. They are a change in the percussion resonance characterised by a diminution in the volume of the sound, with sometimes an approach to tympanic quality, and even the presence of a few crackling sounds like crepitation with inspiration. In some cases even bronchial breathing is heard. These signs appear to be the result of encroachment of the effusion on the base of the left lung, and are therefore naturally limited to cases accompanied by a very considerable amount of effusion. I mention these signs simply to put you on your guard against being led to a diagnosis of pneumonia by them. True pneumonia is often associated with pericarditis, but the pneumonia is generally the primary disease, and affects, as a rule, the left lung. In simple pericardial effusion, however extensive, although the resonance of the left lung at the base may be interfered with, there is not likely to be absolute dulness behind, and though the pericardial dulness may approach the posterior axillary line, it will hardly pass beyond it.

Of course, given pericardial effusion, there is no reason why there should not also be in certain cases left pleuritic effusion, when the dulness at the left base would be absolute, as happened in the case of our patient recently in the wards, and in his case it would seem to have been the pleurisy rather than the pericarditis that occasioned the pain on the left side on November 9th.

Auscultation.

Auscultation in most cases of pericardial effusion reveals to us the presence of a friction rub. This is usually double, to and fro, and varies greatly as regards quality of the sound, being sometimes fine and grazing, at other times very harsh and rough. When friction sound is fully developed it completely covers the heart sounds or murmurs that may be present. It gives an unmistakable suggestion of its cause, conveying a distinct impression of the rubbing of two surfaces together. Moreover, it is generally increased by pressure with the stethoscope, and is little conducted beyond the pericardial region, although there are exceptions to this rule. If in the undeveloped or receding stage of pericarditis one or other or both the cardiac sounds are heard with a friction rub or graze, such friction bears no definite relation to the cardiac sounds, but seems to occur independently of them. This is, as you know, very different from that which is the case with regard to endocardial murmurs, for they bear definite relationship to the sounds they accompany. An endocardial murmur runs off from or runs up to a cardiac sound.[1] A friction sound is generally fairly uniform and continuous in its course, but at times it is more or less interrupted, so that a triple rhythm may seem to be assumed. Sir George Johnson believed that he had recognised a triple rhythm due to the contraction of the auricle producing a rub, as well as the systole and diastole of the ventricles. However, I doubt if this was the explanation of the triple rhythm. We must remember that the systolic and diastolic cardiac sounds fall very far short of representing in duration the systolic and diastolic movements of the heart. For instance, in mitral regurgitation it is common to hear the first sound followed by a systolic murmur, the murmur showing that the contraction of the ventricle is still proceeding after the sound has ceased. We may consider that friction may be heard at any time of cardiac movement, and when we reflect that practically as soon as systole is over diastole begins, it is no wonder that in most cases a friction rub is an almost continuous to-and-fro sound.

As already stated, friction is usually first detected at the base of the heart, in the vicinity of the great vessels, for it is here probably that the greatest amount of movement takes place; otherwise the site of the maximum intensity of friction sound varies infinitely, not only in different cases but in the same case at different times of its course. In the small triangular area where the heart is uncovered by lung friction is apt to be specially distinct. No amount of effusion will necessarily annul friction sound, as the heart has free movement.

Pleuritic friction sound occasionally takes on cardiac rhythm over the heart; but when the stethoscope is moved off the lung to the small triangular area in which the heart is exposed it is usually no longer heard, and the heart sounds are pure.

Usually friction sound gives to the observer an unmistakable impression of the mode of its production, and this is true even of the fine grazing varieties of the sound. But there are two endocardial murmurs that together may occasionally be mistaken in a hurry for friction sound or *vice versâ*. I refer to a double aortic murmur unaccompanied by any cardiac sound in the technical sense of that word. But the history of the case, the arterial condition, and the other physical signs of aortic incompetence will always prevent error, unless the two pathological states—aortic incompetence and pericarditis—should coexist.

NOTE.

[1] A very rare variety of diastolic murmur in mitral stenosis is the only exception to this rule that I am aware of.

REMARKS ON THE PURE-AIR TREATMENT OF PHTHISIS AT HOME.

BY ARTHUR RANSOME, M.D., F.R.C.P., F.R.S.,
Bournemouth.

DURING the last few months many papers have been written giving high praise to the sanatorium treatment of phthisis, and, in my opinion, these laudatory notices have been fully justified by the results. These institutions for the "open-air" treatment have, in truth, many advantages. They are expressly adapted for their purpose; with all the needful appliances, shelters, galleries, or verandahs, and their windows open fully to the ceiling of the rooms. Most of them are newly-erected upon healthy sites, on dry, pure, and porous subsoils; and they are appointed and furnished with a view to the avoidance of dust; hence they have a minimum of microbic impurity in the air. Special attention is paid to the food of the patients; and systematic supervision is kept up by both nurses and doctors. The example of the inmates, and their general well-doing, makes it easy to carry out the otherwise unpleasant discipline, and, in most of these places there is an air of general contentment. All these circumstances renders the treatment in sanatoria more perfect than it can be in most private houses.

But there are many persons who cannot or will not be treated in sanatoria. There are fathers and mothers whose cure would be greatly interfered with if they were separated from their children; sons and daughters who are unwilling to leave their parents; delicate persons who shrink from the public life of a sanatorium, or even of a nursing home. There are also large numbers of persons who, having been "greatly improved" by a residence of from three to six months in sanatoria are yet susceptible to reinfection, and who must, for many months, continue to pursue the open-air treatment at home. Add to these the many patients who, owing to the present deficient accommodation, are unable, for many months, to obtain an entrance to any well-equipped institution; all these persons need efficient open-air treatment, and most of them greatly desire that it should be carried out at home.

Under certain stringent conditions, I think that it is quite possible to do this, and it may be of some service to point out in what ways it may be accomplished.

CLIMATE.

Sanatoria are for the most part placed in carefully sheltered situations, yet fully exposed to the air and sunshine. Our

homes are planted wherever the convenience of the chief inmates is best served. Only in the case of the rich, or of those who have entirely retired from all kinds of business, is the healthiness of the site the chief object in view. Can we then neglect entirely the circumstance of climate and site, and at once attempt to begin our treatment at any home? I think that most of us would answer this question in the negative.

Our views in regard to climate have indeed undergone considerable modification in recent years. Not long ago our records of cases of cured phthisis would chiefly have included the names of those favoured persons who had been able to go to Egypt, the Riviera, or to some other fashionable health resort; and a medical man who neglected to recommend to a consumptive some such place would have been regarded as entirely wanting in medical knowledge. Since this time a distinct change has come over the opinions of most medical men. Some now regard the question of climate as of quite secondary importance; others, "that the favourable influence pertains to the change, rather than to the particular climate chosen" (Austin Flint); others, again, limit the advantages of climate to the opportunities for comfort, exposure to air and sunshine, for good feeding, and for a total change of the habits of life. The number of those who take extreme views in regard to climate is, however, fortunately still small.

Although it may be acknowledged that phthisis occurs in all climates, and that cures of the disease also occur occasionally under the most adverse meteorological conditions, it yet cannot be admitted that all climates are equally suited to its open-air treatment. In the first place, we have to remember that, for the open-air treatment, abundance of sunshine and a perfectly pure atmosphere must be sought for; hence all places on low-lying, damp, impure subsoils are unsuitable. In the next place, the patients we have to deal with are, for the most part, delicate, tender beings, who have to be carefully guarded at the outset from the sensation and even from the idea of draughts. After a few weeks of treatment they usually become inured to much stronger currents of air than they can bear at first; but, owing to the initial delicacy, they require shelter from strong winds.

Any homes, therefore, in which the treatment is to be carried out, should be protected from strong winds, and especially from strong sea breezes. They should never be close to the seashore. We may add to these requirements the importance of a low degree of humidity and a small rainfall, and, though not strictly connected with climate, we may put in a plea for some æsthetic advantages.

It is of great importance that a patient's mind should be kept bright and cheerful by pleasant surroundings, and we might even put in a plea for euthanasia in hopeless cases. As a patient once said to Dr. Walshe, with reference to Madeira:

> I know I go there to die, but to die amid the glories of beautiful Nature, cradled in an atmosphere as balmy, as redolent of flowers, as its sun is glorious. Here, too, I should die, but die cribbed and confined in a room narrow as sunless, smoky, foggy, cheerless.

It will thus be seen that the climate, or perhaps rather the locality, in which the home is situated, cannot be neglected in considering its fitness for home treatment. Let us suppose, however, that the home is placed in a perfectly desirable locality; that it is sheltered from strong winds; that it is somewhat raised above the level of the surrounding country; that the air is dry and pure, and not polluted from any source, especially by manufactures, by human or animal emanations, manured fields, etc.; that the subsoil is dry and pure, and well drained; and, lastly, that its outlook is not too uninteresting, and that there are the means of simple amusements in its immediate vicinity.

THE HOUSE.

Notwithstanding all these advantages, before we decide that the residence is entirely suitable, we have to ask whether this house is the same as that in which the patient lived before the open-air treatment was adopted.

I have elsewhere expressed my conviction that many of the cases of cure of phthisis, supposed to be due to change of climate, were really due simply to change of residence. In an old house, it is well known that there is a great excess of microbic life floating about in the atmosphere; and, in a house that has been inhabited for some time by a phthisical patient, there are probably lurking in some dark corner active colonies of the bacillus of tubercle, nourished by the organic vapours of the house, and ready to float into the atmosphere, and to settle in the susceptible lungs into which they may be breathed.

A consumptive person has already proved himself to be vulnerable by the specific microbe; and his damaged lungs must present many suitable nests in which it can incubate and start a fresh attack of the disease. On account of the danger of reinfection, therefore, it is most desirable that, before commencing the new method of treatment, the patient should either change into a new house, or that the old one should undergo renovation from top to bottom, and that all surfaces should be well brushed over, after Professor Delépine's method, with a 1 per cent. solution of chloride of lime. In old houses, also, I have been in the habit of recommending a thorough disinfection by atmospheric ozone, which is easily carried out. In some cases it would be sufficient to restrict these cleansing and disinfecting operations to the rooms and passages which will be visited by the patient; but in all cases the cellars, if any, should be thoroughly cleansed and ventilated, as impure air from this source is often drawn up into the house. The drainage of the house must also be ascertained to be thoroughly efficient.

The "shell" of the dwelling being thus rendered so far satisfactory, it will then be necessary to turn our attention to the plenishing and decoration; at any rate, of those portions of the house likely to be visited by the patient. The main object to be kept in view must be the prevention of the formation and the harbouring of dust. The walls should be distempered or covered by washable materials, whether paper or paint; the floors waxed or prepared with paraffin, or, if old, covered with "cork carpet;" and all angles or insetting corners should be carefully rounded off, so as to prevent any accumulation of dust. There should be no heavy hangings, nor carpets; only strips of matting or drugget, or small mats, which could be daily put out-of-doors.

The furniture should all be of the simplest pattern consistent with comfort; and should be chosen with a special view to prevent the lodgment of our chief enemy, dust. Hence pictures with projecting frames should be banished, and, if possible, there should be no cornices which cannot be wiped over with a damp cloth. Light and easily cleansed screens should form part of the furniture of each room; and the windows must be made to open widely, and as near the ceiling as possible. Ready means of summoning an attendant, by an electric bell, must be provided, and it would be well if some one, whether a servant or a member of the family, could be told off to look after the patient.

In certain cases, in which it would not be practicable to carry out all these directions, the difficulty might be overcome by adopting Dr. Johns's method of erecting a sleeping hut, in which the patient could entirely take up his abode. The important conditions in this arrangement would be that it should be placed on a raised platform, on pure, dry soil; and that it should be in a sheltered situation.

INDIVIDUAL TREATMENT.

When our patient has been suitably housed, the principles of the treatment to be pursued may be considered. They may, perhaps, be advantageously grouped under the following heads:

1. *Aseptic Treatment.*

I trust that it is unnecessary again to insist upon the fact that phthisis is a "filth disease," that its specific cause, the tubercle bacillus, is nourished, and retains its virulence, only in presence of organic impurity, especially such impurity as is to be met with in dirty, ill-drained, badly lighted, overcrowded tenements. Professor Delépine and I have also shown that it rapidly loses all infective power in pure air and sunlight. These facts explain the first necessity in the treatment of the disease; namely, pure air and abundance of sunshine.

We have seen the arrangements relating to the residence, which are deemed necessary in order to secure these requisites; but the patient will have to take measures to prevent the pure home from becoming contaminated by his presence in it. Hence the absolute need for all the well-known precautions with reference to the disposal, disinfection, and destruction of all bacillary excreta.

There is a further reason, apart from the bacillus itself, for insisting upon a germ-free atmosphere; that is, the danger to a consumptive of all kinds of septic organisms. It is well known that among the worst and most rapid cases of phthisis are those in which there is a mixed infection, and in which various micrococci assist the tubercle bacillus to gain an entrance to fresh parts of the frame or to intensity its morbid action.

The modern treatment of phthisis is in truth simply a branch of what might be called "antiseptic or aseptic medicine," in analogy with "aseptic surgery." Just as the surgeon takes the most elaborate care to cleanse his hands, instruments, and dressings from all possible contamination, and wards off from wounds all septic organisms, so must the physician purify the atmosphere surrounding his patient and guard his lungs from all danger of admitting to their recesses any pathogenic organism.

Hence the importance of the adoption of measures directed against all kinds of septic organisms. Fresh air and sunshine have probably some power over these organisms as well as over the tubercle bacillus; but I believe that the chief natural agent arrayed against them is atmospheric ozone. In such a climate, and in such a situation as I have described, there is usually an abundance of this agent in the air outside the house, and though in an ordinary bedroom with its carpets and upholstery it is scarcely ever present, I have ascertained that it is to be found even in the centre of a room furnished and ventilated as I have described. Notwithstanding this, however, in some cases when the patient has been confined to his room by fever or hæmorrhage I have thought it well artificially to impregnate the air of the room with ozone.

But the aseptic treatment of phthisis need not be limited to the purification of the atmosphere. It should extend to the body of the patient, hence the need of insistance on baths, washing of hands before meals, clean clothing, etc. There are some practitioners, especially some who profess the open-air method, who entirely neglect the use of drugs; but I venture to assert that they are wrong. Doubtless it is right to relegate these agents to a second place in comparison with pure air and sunshine, but it is impossible to resist the evidence of the good effects of such medicines as creosote and iodoform. These drugs undoubtedly do much good in many cases, and it is highly probable that they do so by their antiseptic power, not necessarily by their power over the bacillus itself, but perhaps by their efficiency in cleansing the intestinal canal, and perhaps by increasing the resistance of the tissues to attacks of the specific microbe. In any case they are often useful, and should not be cast altogether aside.

2. *Rest.*

The importance of rest to the injured organ has so recently been insisted on that it is only necessary to briefly recapitulate its advantages.

(*a*) In repose there is scarcely any motion of the ribs; there is little or no disturbance of the underlying inflamed tissues, and no dragging upon any adhesions which may have been formed between the two layers of the pleura. In the semirecumbent posture, therefore, on a cane deck chair, is afforded the best chance of subduing inflammation, of preventing cough, and preventing extension of the disease.

(*b*) The continuous warmth of the body during exposure to the open air is better kept up in the recumbent position than in any other.

(*c*) It conduces to gain in body weight. During repose in a semirecumbent posture digestion is more easily carried on, and absorption and assimilation are better performed. In most cases the patient puts on flesh with more or less rapidity.

(*d*) It greatly assists the blood-making organs, and leads to an increase in the hæmoglobin. One of the results of rest, combined with fresh air, is the speedy improvement in the complexion of our patient.

3. *Graduated Exercise.*

Complete rest in bed has its dangers as well as its remedial power. It is acknowledged that in phthisis our aim must be to raise the bodily powers to the highest point we can consistently with safety. This is not possible in absolute rest, hence, as Dr. Walters remarks in his excellent work on Sanatoria (p. 38):

In all cases [in which it is safe, which he specifies] exercise is needful according to an ascending scale. We may begin with passive motion or very gentle massage, followed by resisted movements in the recumbent position. After this very gentle walking exercise may be tried, at first restricted to a few yards at a time on level ground. As the invalid gets stronger the length of his walk is gradually increased.

In the BRITISH MEDICAL JOURNAL of July 22nd, 1899, I have ventured to point out that the degree of rest that must be imposed will depend (1) upon the presence or absence of fever, and (2) upon the digestive and assimilative powers. The degree of exercise (1) upon the muscular and bodily vigour of the patient; (2) upon the extent of movement allowed by the disease to the ribs in forced respiration, and especially to the bones over the site of the injured parts of the lungs.

4. *Full Feeding.*

Careful feeding of our patient can be carried out just as well in a private home as in a sanatorium, and very often his individual tastes can be better consulted. It is important, however, that the amount of food taken should be as methodically ascertained and recorded. It is admitted by all that full feeding is a necessity, but there are various opinions as to "fattening" our patients. In my opinion it is, in truth, not a question of fattening, but of strengthening our patients. If the fattening gives more power of resistance against the advance of the microbe, which it often does, then the fattening is good; but it is certainly not the mere putting on of adipose tissue which is of importance, but the general increase of bodily vigour by massage and passive exercises, the improvement of the blood, and the general growth of muscular and nerve power.

The method of feeding also must be adapted to each individual. It is absurd to insist upon the procrustean method of applying the same measure to all patients, and the attempt to do so savours too much of quackery, and of the Continental mode of turning each special form of treatment into a "cure." For many persons doubtless the regulation of three large meat meals a day, with nothing between, may serve a good purpose, but to dragoon everybody into the same line is assuredly not physiological feeding. While there are some who cannot take anything between the three larger repasts, there are others who are much the better for a tumbler of milk and a biscuit in the interval.

5. *Increase of the Power of Resistance.*

There is not much to be said on this head. All the means already mentioned may be regarded as tending towards this end, and, if we must single out any as especially important towards it, it will be to the feeding and judicious rest and exercise that we must look.

6. *The Prevention and Treatment of Accidents.*

This is of great importance, and needs all the skill and constant attention of the medical attendant. The chief accidents we have to fear are, (*a*) perforation, (*b*) hæmorrhage, (*c*) inflammation.

Every patient in whom ulceration is going on, or who has aneurysmal sacs, is exposed to these risks. The first two usually occur without warning; and it might well be supposed that they would be inevitable; yet something may occasionally be done to ward them off. By means of as much rest as is possible to the injured parts, and by the general nourishment of the body, and plentiful supplies of oxygen and ozone, we may often arrest the ulceration, and may minimise the danger of the breaking down of tissue.

In hæmorrhagic cases, by careful dieting we may prevent too heavy a strain being thrown upon the vascular system; and we must limit to the utmost all over-exertion and all forms of excitement. In such cases we should diminish the supply of strong animal foods, and should encourage the use of nourishing vegetable and farinaceous and milk foods, and should limit the amount of fluid to be taken at any one time. It has also been shown that something may be done to increase the coagulability of the blood by the persistent use of calcium chloride.

Inflammatory attacks usually give some warning by rise in temperature, and by some degree of *malaise*. By watchfulness on these points, therefore, we may often stave off an attack, or may prevent its passing from under our control. Many of these seizures, also, are toxic in their nature; and, under the pure-air treatment, their occurrence is rendered less likely. It is remarkable how seldom any of those who pass their days in the open air fall victims to catarrh.

It must not be forgotten, however, that in the lungs of most consumptives there is an abundance of organisms, many of them of a septic character, which lie in wait for a suitable opportunity for attacking the system when it is at its weakest. Nothing gives so favourable an opening to these micro-organisms as a sudden chill or an unequal exposure of the

body to cold. It depresses the vital powers, and gives a nervous shock, such as will often precipitate an attack upon the weakest portion of the frame. It is on this account that it is so important to guard our patients from unequal draughts of cold air; and, though one cannot but look with interest upon the experiments in hardihood which are being made in some sanatoria, it is also with much misgiving, and, for my own part, I would rather take the experience of Drs. Brehmer and Dettweiler as my guide. It is not necessary to say anything here as to the treatment of an attack of inflammation; but we shall do well not to neglect some of the traditions of our predecessors.

Suitable Amusement.

This is not the least important of the requirements. If the family are willing to help efficiently this can be carried out even better at home than in a sanatorium. Most forms of *al fresco* entertainments are admissible; always provided that the patient does not become excited, increase the rate of breathing, nor get overtired.

CONCLUSION.

In conclusion, I would repeat that it is impossible to carry out all the stringent conditions of successful "pure-air" treatment without the constant supervision of a medical man; and the services of a well-trained nurse, or an intelligent and trustworthy attendant specially detailed for the purpose; but I venture to submit that none of the conditions which have been mentioned are unattainable except in the homes of the very poor, and for these persons suitable asylums should be provided at the public expense.

THE APPLICATION OF BACTERIOLOGY TO PUBLIC HEALTH.*

By WALTER C. C. PAKES, D.P.H.CAMB.,

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[ABSTRACT.]

THE examinations which may aid the public health service are those in connection with the diagnosis of diphtheria, enteric fever, tuberculosis, anthrax, glanders, pneumonia, erysipelas, tetanus, influenza, cholera, and various septic disorders.

As medicine may be divided into curative and preventive, so the bacteriological examination may be either for diagnostic or for preventive purposes. Mr. Pakes therefore divided his paper into two parts: (1) Diagnostic examinations: and (2) preventive examinations.

1. DIAGNOSTIC EXAMINATIONS.

(a) Tuberculosis.

Concerning this disease he said: We can speak of at least three races of the tubercle bacillus—human, bovine, and avian. It is, perhaps, doubtful whether this last-named is really pathogenic to man, but there is little doubt that human and bovine tubercle are merely varieties differing chiefly in virulence. Theobald Smith[1] has shown that, at least for guinea-pigs, the bovine tubercle bacillus is distinctly more virulent than the human. This great virulence of bovine B. tuberculosis is of vast importance, because it is children who are the great milk consumers. The young of all animals are, *cæteris paribus*, more susceptible to bacterial invasion than adults, and therefore we have the conjunction of a more virulent bacterium and a more susceptible subject.

The peculiar staining reaction of the B. tuberculosis—the difficulty with which it takes up the stain, and its power of retaining the stain in spite of treatment with decolorising agents—appears to be shared with only two other bacteria, B. lepræ and B. smegmæ. The former is practically unknown in this country; the latter can be, and perhaps often is, mistaken for the true B. tuberculosis. It is of far wider distribution than has been supposed, having been found in sputum by both Pappenheim[2] and A. Fraenkel,[3] and by several observers in urine and even in milk. It differs from the B. tuberculosis in its pathogenicity, not being pathogenic to guinea-pigs; in its cultural reactions; and, finally, in its failing to resist the decolorising action of absolute alcohol after being stained with warm carbol-fuchsin.

Several methods of staining have been suggested in order to eliminate the smegma bacillus in the diagnosis of tuberculosis. Perhaps the simplest is merely a modification of the well-known Ziehl-Neelson method. If this method leaves any doubt, then that of Honsell[4] will certainly clear up any doubt.

Modified Ziehl-Neelson Method.

1. The material (whether it is sputum, pus, milk, or the centrifugalised deposit of urine) should be spread very carefully, so that a not too thin but even film is obtained.
2. The film is then dried in the air, and passed three times through the flame of a Bunsen burner.
3. The preparation is stained for five minutes in hot (60° C.) carbol-fuchsin, and washed well in water.
4. Wash in absolute alcohol until every trace of stain which can be removed from the coverslip has been removed, and wash in water.
5. Immerse in 25 per cent. sulphuric acid for about five or six seconds, and again wash in water.
6. Counter-stain for about three seconds in carbol methylene blue, wash dry, and mount.

Honsell's Method.

1. The film is prepared and stained with warm carbol-fuchsin, as in the first method, but after washing in water it is dried.
2. It is then immersed in acid alcohol (absolute alcohol 97 per cent., HCl 3 per cent.) for ten minutes, and washed with water.
3. Counter-stained for several seconds in equal parts of a saturated alcoholic solution of methylene blue and water, washed in water, dried, and mounted.

As we know, therefore, that these smegma bacilli will under certain conditions be evident under the microscope, it behoves us to adopt some such method as above suggested, in order to eliminate the danger of mistaking them for tubercle bacilli.

There are two or three points in connection with the diagnosis of tuberculosis which should be emphasised. In early cases of phthisis, when the lesions are very small, and only a few tubercle bacilli are present in the sputum, it sometimes becomes a matter of difficulty to find them. When this is so, the first sputum coughed up after waking should be examined. Secondly, in these very early cases it is essential to be sure that one is really examining material which has come from the lung. It not seldom happens that there is some inflammation of the fauces, which leads to an erosion of the faucial mucous membrane, and a specimen of sputum may consist entirely of squamous epithelial cells and mucus. In such a case it is the rarest thing to find any tubercle bacilli in the specimens. In examining the urine it is absolutely necessary in nearly every case to submit it to the action of the centrifuge, for it very seldom happens that tubercle bacilli are in sufficiently large numbers to be able to find them without the greatest difficulty in the ordinary urine. Whenever possible, it is advisable to examine a catheter specimen, and, as in the case of the sputum, the urine which has collected in the bladder overnight should be drawn off. It is in urine chiefly where the danger of mistaking the smegma bacilli occurs.

In tuberculosis of the intestines it is sometimes possible to find the bacilli in the fæces. If a very careful inspection of tuberculous fæces be made with the naked eye, small masses consisting of mucus and pus will be found. These masses should be picked out, washed gently in water, and then spread upon a coverslip, stained *secundem artem*, and examined. It is not worth the trouble of examining fæces for tubercle bacilli unless these masses can be found; not because it is impossible that the case can be one of tuberculosis, but because it is impossible to decolorise the fæces without decolorising any tubercle bacilli which might be present.

(b) Diphtheria.

[Since 1894, 1,836 cases have been examined at Guy's Hospital. When the routine examinations began, Mr. Pakes made a long series of examinations to determine whether it was possible to diagnose the growth by the naked-eye appearances. After making some 200 such observations, he came reluctantly to the conclusion that a naked-eye examination is all but useless. He now relied entirely upon the microscopic appearances of the organisms in stained specimens.]

The method of preparing the specimens is as follows: The culture is examined with the naked eye to see if there be present more than one kind of colony. It sometimes happens that there is a very characteristic growth upon the blood

* Read before the Incorporated Society of Medical Officers of Health, January 12th, 1900.

serum, as of the staphylococcus pyogenes aureus, or the B. subtilis, or the B. mesentericus vulgatus. When this happens, all these colonies are avoided, and only the remaining sampled. When there are no such obvious colonies, a fair number of the colonies present are taken off with a platinum spatula and mixed together, and a fair sample of the mixture is spread upon the coverslip.

Table of Suspected Diphtheria Cases.

	Organism Found.	Years. 1894-96.	1897.	1898.	1899.	Total.
Klebs-Loeffler Bacillus. Present.	Klebs-Loeffler bacillus..	74	95	85	35	289
	K. L. B. and Hoffmann..	4	10	3	1	18
	K. L. B. and Str. or Staph.	15	16	4	1	36
	Hoffmann	20	44	23	2	89
	Hoffmann and Str. or Staph.	1	5	4	3	13
Not found.	Str.	32	39	24	22	117
	Str. and Staph.	13	17	5	10	45
	Staph.	22	58	59	38	177
	Cocci...	34	74	48	23	179
	Oidia...	10	3	7	3	23
	Friedländer	2	3	2	1	8
	B. pyocyaneus	0	0	1	1	2
	No Klebs-Loeffler bac....	84	220	262	225	791
	No growth	6	12	5	26	49
	Total	317	596	532	391	1,836

From the above table it will be seen that, out of a total of 1,836 cases examined, only 343 were found by bacteriological examination to be diphtherial—that is, containing the B. diphtheriæ. This means that only 18.6 per cent. were diphtheritic. At first sight this would appear to be a very small proportion, but it must be remembered that a very large number of cultures are taken simply with the object of excluding diphtheria, a procedure which the department has always encouraged.

As no test in medicine can be considered infallible, it may be well to consider the value of the bacteriological examination in cases of suspected diphtheria. If a patient is suffering from a sore throat, and the Klebs-Loeffler bacillus is found, it was right to assume that that patient was suffering from diphtheria, and, further, that any patient so diseased was a source of danger to his fellows. Since we know that any organism may vary greatly in virulence and that the patient may be only slightly or very susceptible, and, further, that we can determine the value of neither of these factors beforehand, every doubtful case should be considered as infectious.

What is the value of a negative result—that is, where we cannot find the Klebs-Loeffler bacillus upon the cultivation?

(*a*) The Klebs-Loeffler bacillus may be present on the throat, but not found on the culture, because:

1. Other organisms are present which crowd it out.
2. No growth has taken place in the medium.

(*b*) The Klebs-Loeffler bacillus may not be the cause of the condition.

When there is a too good growth of some organism in addition to the Klebs-Loeffler bacillus on the blood serum, the latter may really be crowded out. Fortunately, the number of times when such other organism is present is small. In my experience, the most commonly occurring organisms on blood serum inoculated from the throat are streptococci both short and long, staphylococci, other cocci, Hoffmann's bacilli, and torulæ. Occasionally we find the B. coli communis, mesentericus, subtilis, and other such organisms which are likely to overgrow the medium. If the first-named are present, the Klebs-Loeffler bacilli can and do grow alongside them.

If any of the members of the second group are present, the absence of the Klebs-Loeffler bacillus may be that it has really been outgrown. If, therefore, the blood serum is seen to be overgrown with a mycoderma or diffuse moist growth, the inability to discover the Klebs-Loeffler bacillus helps one in no way, and further cultivations must be taken from the suspected growth. There may be no growth on the serum from one of several reasons:

1. An antiseptic may have been used just prior to taking the cultivation.
2. The serum may not have been really inoculated.
3. The serum may be too old, and so too dry.

The first of these alternatives may appear absurd, but is not. There may be enough antiseptic left on the throat for many minutes after the application to prevent the growth of the bacteria on the serum. In the directions issued by the department an interval of two hours is recommended to be allowed to elapse between the application of the antiseptic and taking the culture.

If the serum is old and dry—the last of a batch—then nothing will grow on it. A negative result, because there is no growth on the medium, is therefore of no value whatever.

(*b*) If the condition is not really set up by the Klebs-Loeffler bacillus, but by some other organism, this other organism will most probably be found upon the serum after inoculation.

The micro-organisms which produce conditions of the throat simulating atypical diphtheria are, in my experience, the bacillus of Hoffmann, streptococci, staphylococci, and oïdia. Placing the bacillus of Hoffmann in a group with streptococci and staphylococci, rather than with the Klebs-Loeffler bacillus, is perhaps debatable. Several workers have classed these two organisms together, and consider that the presence of either upon the throat should be sufficient to diagnose the case as one of diphtheria. Two workers claim to have converted Hoffmann's bacilli into Klebs-Loeffler bacilli.

Mr. Pakes's opinion, based upon facts which he quoted, was that Hoffmann's bacillus caused a sore throat, and more—an infectious sore throat, but not diphtheria.

The conclusion which he drew from his experiences of this disease was that still more use should be made of the test tube and microscope for the purposes of diagnosis. He considered that it would tend to check the spread of the disease, and, what was also important, decrease the expenditure of the ratepayers, if the sanitary authorities would have every suspicious throat occurring in any of their public institutions, schools, etc., within their district examined bacteriologically. When one saw the way children in schools cleaned their slates, which were often common property, exchanged sweets, borrowed handkerchiefs, and so on, it was very easily explained why diphtheria spread so well in schools. Further, if a case had occurred in any school or institution, it would be most desirable that every person in that school or institution should be examined, and cultivations taken from their throats, whether they showed signs or no. If this were done, many small epidemics could be aborted, for it not seldom happened that the first few cases of an epidemic were so mild that diphtheria was never suspected until it had got a considerable hold.

Enteric Fever.

After detailing the difficulties attending the isolation of the B. typhi abdominalis from the fæces, etc., he said that since Gruber and Durham introduced their reaction we had been supplied with a test for enteric fever which was easy and fairly certain. Gruber, in first publishing an account of the reaction, suggested that it might be taken advantage of in the diagnosis of enteric fever and cholera. Subsequently Widal applied the reaction, and published a series of cases showing the value of the phenomenon. From that time not only had the reaction for the diagnosis of enteric fever been known as Widal's reaction, but several textbooks spoke of doing Widal's reaction for the identification of the B. typhi abdominalis. More than this, the serum diagnosis for Malta fever was often known as Widal's reaction. It was now too late to endeavour to call Widal's reaction by any other name, but in fairness to other observers one should limit the term to what Widal really did, and that was to diagnose enteric fever by the application of Gruber's reaction.

In the first place it could not be too well understood that this reaction was a quantitative and not merely a qualitative one, the value of the reaction for diagnostic purposes depending upon the percentage of serum which was present in the mixture of serum and cultivation. Secondly, it was very inadvisable to try the reaction with a mixture of serum and red discs, because it was necessary to get a reaction with a dilute serum, and the material in the hæmatocytes had a greater agglutinating power than the serum.

in 1897[5] he published the methods adopted at Guy's for the collection of the blood and the dilution of the serum, and they were still used practically unaltered.

Three examinations were made of mixtures containing respectively 50 per cent., 5 per cent., and 0.5 per cent. of serum. These were made in the following manner: The 50 per cent. mixture was made by adding equal loopfuls of the serum and a broth cultivation of the B. typhi abdominalis on a cover slip. The 5 per cent. was made by diluting 10 c.mm. (measured by a graduated pipette) of the serum with 90 c.mm. of sterile broth, in a small test tube. After thoroughly mixing, one loopful of this diluted serum (now containing 10 per cent. of serum) was mixed with the same loopful of the cultivation. The 0.5 per cent. was made by first diluting 10 c.mm. of the 10 per cent. serum with 90 c.mm. of sterile broth in a small test-tube, and then mixing equal loopfuls of this diluted serum and of the cultivation. The pipettes were quite easy to make and graduate, and when they were once made the method was extremely simple.]

After the mixture is made on the cover slip, this is inverted on to the ring of a hanging-drop slide, the upper surface of the ring having been well smeared with vaseline. The microscopic examination was the one usually employed, though occasionally advantage was taken of a naked eye precipitation in the little test tubes, or in sedimentation tubes similar to those described by Wright. There was one precaution to be observed in the macroscopic sedimentation, and that was that capillary tubes must not be used, since, as pointed out by Durham, these prevented the proper precipitation.

Touching the value of the reaction he said: Taking all three dilutions, we may get the following series of reactions:

50 per cent.		5 per cent.		0.5 per cent.
1. +	.....	+	.....	+
2. +	.....	+	.....	o
3. +	.....	o	.....	o
4. o	.....	o	.....	o

(+ means a complete reaction within 30 minutes.)

The first is undoubtedly that of enteric fever; the fourth may rightly be said to give no reaction. The second, according to my experience, is enough to be able to diagnose enteric fever; but the third is of no value for diagnostic purposes.

If there is a reaction with the 0.5 per cent. there is no doubt that the case is one of enteric fever, and one would describe such a reaction as a strong one.

A positive reaction with the 5 per cent. serum is sufficient to enable us to diagnose enteric fever because the serum is not in sufficient proportion to clump the bacilli if the patient is not suffering from this disease. It must be remembered, however, that this reaction is only sufficient for the examiner to say that the patient is suffering or has suffered from enteric fever. In order, therefore, to be enabled to say that the patient is suffering from this disease, we must be certain that the patient has not previously suffered from it, at least during the past few years.

If the 5 per cent. serum gives no reaction, it will be necessary to know the day of the disease, because the day on which a reaction can be first obtained varies greatly. If a second negative result is obtained with the serum of a patient towards the end of the second week, we are entitled to say that it is unlikely that the case is one of enteric fever, but in such a case the effect of the 50 per cent. serum may be a great help to us. If a third examination with the 5 per cent. serum is made well in the third week, then it becomes very improbable that the case is one of enteric.

The result of the 50 per cent. serum upon the bacteria may or may not help. If no reaction were obtained it would be of very great value in confirming the absence of reaction with the 5 per cent. When dealing with a case which, say, on the tenth day of the disease, gave no reaction in any of the three strengths, one could say with great confidence that the case was most probably not one of enteric fever. If a second series of negative results was obtained, say, on the fifteenth or seventeenth day, then the chances of the patient having the disease were very small. There was, unfortunately, the inevitable exception to this test. There were cases of enteric fever in which the body made no attempt to combat the disease, and although the case was clinically typical, the serum failed to react. These would be found to be most severe and generally fatal cases. Fortunately, the very severity of the case would in most of these cases point to a correct diagnosis, and the danger of infection through a wrong diagnosis would be small.

2. PREVENTIVE EXAMINATION.

By this term he meant the examination of air, soil, water, milk, etc., for evidence of the organisms which are transmitted to man from these sources. Only milk, including ice creams and water, were described.

(*a*) *The Examination of Water.*

Two different kinds of examinations of water are made in order to determine its suitability or safety for drinking purposes: (1) The quantitative, and (2) the qualitative for certain specified organisms.

1. *Quantitative Examination.*—This examination is made in order to get an idea of the approximate number of living bacteria present in the sample. As the quantitative examination is chiefly for purposes of comparison, great care must be taken to have all the conditions as nearly alike as possible. This necessitates attention being paid to (α) the collection; (β) the media; (γ) the inoculation and plating; (δ) the temperature of incubation; (ε) the period of incubation; and (ζ) the enumeration. The sample should be collected in a sterile bottle, and kept in an ice box until it can be examined; the gelatine should be made from lean beef and distilled water, and should contain 4 c.cm of $\frac{N}{1}$ NaOH per litre after neutralisation to litmus; the water should be sufficiently diluted if it is suspected to contain many bacteria. The plates should be incubated at 20° C. for three days, and counted with a hand lens. From the results of the examination of upwards of 800 samples of water, he drew the following conclusions: It is well known that the chemical composition of a good and safe water is very constant, and this is also the case in the number of bacteria present. One sample of water examined six times during a period of fifteen months, gave on these six occasions 52, 24, 55, 61, 48, and 60 colonies respectively.

One of the first signs of sewage pollution in a water supply is the increase in the number of bacteria. This increase can be detected before the chemical analysis shows any detectable difference. Unfortunately the pollution of the source is not the only factor in the increase of the number. Any water supply which is affected by the summer temperature will show more organisms during the warm weather than during the cold weather But when the water is at a depth sufficient to maintain it at the same temperature all the year round, then it will be found that the first sign of danger detectable is the increase in the number of bacteria. This increase is almost always quickly followed by the presence of organisms (such as the B. coli communis) which were previously undetectable. Any sample of water which shows a great variation in the number of bacteria present from time to time must be considered just as unsafe as one which shows variations in the chemical composition.

[After pointing out the unsatisfactoriness of the usual qualitative methods he described as follows:]

A NEW METHOD FOR THE DETECTION OF THE B. COLI COMMUNIS AND B. TYPHI ABDOMINALIS IN WATER.[6]

1. *The Medium.*—The medium I use is glucose formate broth, the medium described by Kitasato for the growth of anaërobic bacteria. To ordinary meat infusion are added 1 per cent. peptone, 0.5 per cent. NaCl, 2 per cent. glucose, and 0.4 per cent. sodium formate. When these have been all dissolved by heating, the medium is neutralised, and after neutralisation 2c.cm.of $\frac{N}{1}$ NaOH are added. The broth is then boiled in the steam steriliser for twenty minutes, filtered, poured into the test-tubes, and sterilised for twenty minutes on the day it is made and the two succeeding days.

2. *The Anaërobic Conditions.*—After inoculation the tubes are placed in Buchner's tubes with alkaline pyrogallol.

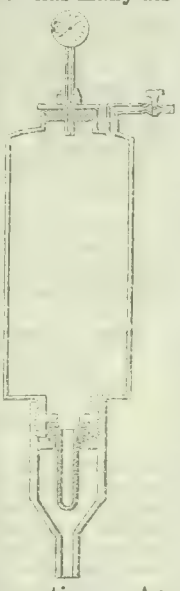
3. *The Subsequent Procedure.*—After a certain quantity of the water has been added to the broth the test tube is placed in a Buchner's tube, which is placed in the incubator at 42° C. for from eighteen to twenty-four hours. At the end of this time the tubes are examined, and any which show signs of growth are taken out of the tubes. Those which show no growth are

replaced for a further period of twenty-four hours, and if at the end of this time there be still no growth, for a third twenty-four hours. If there be no growth after seventy-two hours the tube is thrown away. The tubes which show any growth are further cultivated. Ordinary gelatine and agar are used for making plates.

The glucose formate broth cultivation should be examined microscopically, and if it appears to be pure, agar, gelatine, broth, and milk tubes may be inoculated directly from it. It often happens that the tubes inoculated directly in this manner show only one kind of colony. The gelatine plates are carefully examined from day to day, and any suspicious colonies are sub-cultivated and worked out.

4. *The Quantity of Water added to the Broth.*—In examining a sample of water for the B. coli, it is necessary to examine both large and small quantities. I therefore collect samples of the water in one ounce bottles and place them in the ice-box until they are in the laboratory, and also a sample in a sterile Winchester quart bottle.

As it is obligatory that the water should be concentrated, in order that is may be easily handled. It is usually done by filtering through a porcelain bougie, and the method generally described is one in which the water is filtered from without inwards, and the bacteria which are arrested on the outside are brushed off into sterile water. This method has many disadvantages. The bougie must be fairly large or else the filtering takes such a long time; the brushing of the bacteria off is clumsy, and the amount of water necessary to make the subsequent emulsion considerable. If two litres are filtered and the bacteria washed into 50 c.cm. of water the concentration is only fortyfold.



The following method is employed: A small bougie is used, and the filtration is from within outwards. The apparatus, of which the appended figure is a section, was made for me by Messrs. Baird and Tatlock. The pressure is kept at forty-five pounds. The tube at the bottom of the box carrying the bougie is connected by pressure tubing to an aspirator. Two litres take rather less than twenty-minutes to come through. When all the water has run through, the bougie is removed and the mouth plugged with sterile cotton wool; 10 c.cm. of sterile water or broth are now poured into the bougie and the bacteria are brushed into the broth with a special sterile test-tube brush. When this is completed the brush is removed and the cotton-wool plug reinserted. The organisms originally present in 2,000 c.cm. are now contained in 10, that is, the water has been concentrated 200 times. Any fixed volume of this emulsion will therefore represent 200 times its volume of the original water; 0.1 c.cm. will represent 20 c.cm., and so on.

At this stage, therefore, we have an ounce of the original water and the emulsion representing two litres. A series of glucose formate broth tubes is then inoculated as follows:

The 1st	contains	1.0	c.cm.	of the water	=	1 c.cm. water.
,, 2nd	,,	1.0	,,	,,	=	1 ,,
,, 3rd	,,	5.0	,,	,,	=	5 ,,
,, 4th	,,	5.0	,,	,,	=	5 ,,
,, 5th	,,	0.1	,,	emulsion	=	20 ,,
,, 6th	,,	0.2	,,	,,	=	40 ,,
,, 7th	,,	0.5	,,	,,	=	100 ,,
,, 8th	,,	1.0	,,	,,	=	200 ,,
,, 9th	,,	1.0	,,	,,	=	200 ,,
,, 10th	,,	2.0	,,	,,	=	400 ,,
,, 11th	,,	2.0	,,	,,	=	400 ,,
,, 12th	,,	remainder.				

The tubes are then placed in the Buchner's tubes and incubated. One advantage of this method is that it is more delicate than the well-known methods.

I have tried this method on about 300 different samples of water, and in about 50 per cent. of the cases where I have found the B. coli I have found it all but pure on the gelatine plates. Very occasionally something else has grown, and it has become necessary to really examine the plates in order to pick off the colonies of B. coli. The following table gives a few of the positive results obtained:

No. of Bacteria per c.cm. by Gelatine Plates.	Smallest Quantity of Water in which B. coli was found.
1,312	1 c.cm.
2,144	5 ,,
1,904	1 ,,
874	5 ,,
320*	5 ,,
130	100 ,,
215†	5 ,,
88	12 ,,
8,000	1 ,,
5,200	1 ,,
40,000	1 ,,
17,408	1 ,,

* Known to have been contaminated.
† The usual number for this well was 10 per c.cm.

The result of these examinations has led me to the following conclusions:

Drinking water, not from a deep well, which contains the B. coli in 20 c.cm. or less should be condemned; that which contains the organism in any quantity between 20 and 50 should be looked upon as suspicious, between 50 and 100 as slightly suspicious, and only in greater quantities than 100 c.cm. as probably safe. If no B. coli can be obtained from the whole two litres it may be considered absolutely safe. The presence of the B. coli in the water from a deep well in any quantity is sufficient to condemn it.

[It had been often urged that the chemical examination was more delicate than the bacteriological for detecting both recent and oxidised sewage contamination. He did not wish to decry the chemical examination, because he thought that both examinations should be made, but he wished to insist that a bacteriological examination brought us nearer to the kind of contamination than the chemical. It was obvious that oxidised organic matter, as evidenced by nitrates in the chemical examination, was absolutely undetectable by the bacteriologist.

The Examination of Milk.

Milk, like water, might be examined both quantitatively and qualitatively, the latter examination being, of course, by far the more important.]

Quantitative Examination.—Milk is an excellent medium for the growth of bacteria, and in consequence, as it is usually sold, it is teeming with them. For the purpose of enumeration milk must, therefore, be treated as sewage. My experience of the ordinary London milk had been very unfortunate, the average of many samples being between 3,000,000 and 4,000,000 per c.cm.

[Mr. Pakes had made experiments from which he drew the following conclusions: (1) That ordinary milk does not contain spores in any but the smallest numbers; (2) that it is questionable whether pasteurisation at 65° C. does really sterilise the milk, and when it is asserted that it kills everything but a few harmless spores, the assertion must be doubted; (3) that undiluted milk should be kept at 100° C., or even a few degrees higher, for some considerable time—perhaps half an hour; (4) that watered milk, such as is given to infants, is more easily sterilised than undiluted milk.]

The Qualitative Examination.—Bacteria, he continued, which are pathogenic to man may be present in milk, and may be derived directly from the cow, or may have been allowed to get into it accidentally. The most important of these are tubercle bacilli and streptococci from the cow, and typhoid and diphtheria bacilli accidentally. In order to determine the presence of the tubercle bacillus, one of two methods may be adopted: (1) Microscopic examination; (2) inoculation.

Microscopic Examination.—The sample of milk should be well shaken, and a certain quantity of it poured into a proper sterile tube furnished with an indiarubber stopper. This should then be well centrifugalised so that the cream is in a stiff layer. By a little careful manipulation, the cream may be removed and placed in a sterile dish. The tube is then quickly inverted so as to allow what is now the skimmed milk to run away and leave the deposit as a layer in the bottom of the tube. The sediment and the cream should now be spread as evenly as possible on clean coverslips and allowed to dry. After they are dry they are "flamed" and immersed for at least five minutes in absolute alcohol. They are then washed in ether for a further five minutes, and the ether removed by

a second immersion in absolute alcohol. The alcohol having been removed by washing in water, they are stained by the modified Ziehl-Neelson method previously described. Unless the fat is removed by ether or some similar solvent, it will be found almost impossible to decolorise the specimens without danger of decolorising the tubercle bacilli. The prepared slides should now be examined carefully and thoroughly under the microscope, care being taken that all the slide is examined. (I do not think that this can be satisfactorily done without some form of mechanical stage). When the slides are examined several things may be seen: 1. Tubercle bacilli may be present. 2. No tubercle bacilli may be found, but (*a*) a fairly large number of some other bacterium; or (*b*) a great excess of leucocytes, often amounting to pus; or (*c*) a considerable amount of vegetable matter and *débris*. 3. Nothing but a few leucocytes may be seen.

1. *Tubercle Bacilli may be Found.*—If these are found there can be no doubt the milk is totally unfit for human consumption.

2. *Tubercle Bacilli cannot be Found.*—As a rule the milks one has to examine are mixed, and may be derived from several cows, of which perhaps only one is diseased. When this is the case it will be evident that in our examination we shall have only included a very small portion of the milk of this diseased cow, and although we may find some evidence of a lesion in the form of an excessive number of leucocytes, we may not be able to find any tubercle bacilli.

(a) Another Organism may have produced the Lesion.—I believe that quite a considerable proportion of cattle suffer from a form of simple (that is, non-tuberculous) mastitis. In a great number of these the streptococcus of bovine mastitis can be found, which has not been shown to be pathogenic to man, and therefore it may be argued that the milk would not be harmful. To this two things may be urged in objection: First, several cases of streptococcal enteritis, occurring in children, have been recorded, and the simplest explanation certainly would be that the milk has been the cause; secondly, the condition of the udder, which gives abundant streptococci and pus, is an acute mastitis, and surely the secretion from an acutely diseased gland is totally unfit for consumption, especially by children.

(*b*) *An Excess of Leucocytes may be found.*—Normal milk contains leucocytes, as does every normal secretion. The number of these cells in the centrifugalised deposit of normal milk is small. In the field of a one-sixth objective one or two may be seen, sometimes none. When there is a considerable excess—for instance, twenty or thirty—in the field of the one-sixth, the milk, in my opinion, becomes very suspicious. This increase of leucocytes, and even the presence of pus, may occur even when it is impossible to find either tubercle bacilli or any such excess of a particular organism (as the streptococcus) which would suggest it as the cause. This condition is a more chronic form, and it may be either tuberculous or simple. It is well known how difficult it is to demonstrate the presence of tubercle bacilli in the pus from a discharging tuberculous sinus, and I think that one would be justified in condemning any sample of milk which contained pus on the ground that it was possibly tuberculous. Even if it were a chronic simple mastitis the milk came from a diseased udder, and should therefore be condemned.

(*c*) *The Sediment may contain much Vegetable Matter and Débris.*—In itself it is of little import, but in connection with the spread of disease, such as enteric fever, it is of some importance in pointing to carelessness in the handling and collection of the milk.

3. *Nothing but a few Leucocytes may be found.*—This may occur when the milk is normal, or where it has been impossible to centrifugalise the milk. It is impossible to examine milk which has clotted with satisfaction. One would therefore never trouble to examine a sample which had obviously clotted. But before this takes place there is a preliminary stage which I should designate as microscopic clotting. The milk is apparently quite fluid, but when it is examined after having been centrifugalised, it is found that the three layers—that is, cream, skim milk, and sediment, are wanting, and that the contents of the tube are in a sense jelly-like. If under these circumstances what remains at the bottom of the tube after the contents have been quickly poured out be examined, often nothing more than a few leucocytes can be seen. In order to be able to say that the milk appears to be normal, therefore, one must be careful to eliminate this microscopic clotting; it follows that if it is present none of the previous conditions can be diagnosed.

B. Typhi Abdominalis.—In searching for this organism the procedure described in the section on water is to be adopted, but the enormous number of bacteria present in milk makes the examination extremely laborious, and one is generally doomed to disappointment.

The Klebs-Loeffler bacillus has been found in milk by taking advantage of its rapid growth on good inspissated blood serum. The sediment from the centrifugal tubes as well as the cream is inoculated on to the serum in series. A loopful of the sediment or cream is rubbed all over the surface of the serum in one test tube, and without reinoculation rubbed over another tube, and also over the third tube of serum. Every portion of the surface of the serum should be covered with the loop in order to separate the colonies as much as possible. Six or eight of these sets should be inoculated from the sediment, and a like number from the cream. The tubes are then incubated at 37° C. for from eight to twelve hours, and inspected. Any colonies which can be seen with the naked eye should be examined microscopically, and subcultures made. The tubes are then returned to the incubator for further incubation, and examined at the expiry of eighteen and twenty-four hours.

Every endeavour should be made to obtain a pure culture, and its pathogenicity should be determined.

If this organism be isolated, there can be no doubt as to the harmfulness of the milk, and it should be condemned. Unfortunately, the milk will have been consumed long before the bacillus is isolated, but it will probably enable the medical officer of health to localise the source of the infection. Owing to the difficulties attending this examination, a negative result is no evidence of the absence of the organism from the milk.

REFERENCES.

[1] *Journal of Experimental Medicine*, vol. iii, p. 451. [2] *Berl klin. Woch.*, 1898, p. 809. [3] *Ibid.*, 1898, p. 880. [4] *Arbeiten aus dem path.-anat. Inst. zu Tubingen*, N. V. Baumgarten. (Bd. ii, 1898, Heft 2, p. 317. [5] *Lancet*, May 20th, 1899. [6] Part of the expenses of the research in connection with this method was defrayed by a grant from the British Medical Association.

THE CONTINUITY OF THE TOXIC PROCESS IN FATAL CASES OF DIPHTHERIA.

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IN a previous paper[1] I have stated that the symptoms of uncomplicated fatal diphtheria are sufficiently constant to justify a general definition. Among such symptoms are pallor, progressive weakness and irregularity of the pulse, coldness of the surface of the body, oliguria probably leading to suppression, oppressive cardiac pain, a subnormal temperature, sickness, and jactitation. Attention has also been called to the fact that the mind remains clear until the end.

That the effects of diphtheria toxin, as experimentally evidenced, resemble those observed in the human subject is generally admitted, and it is sufficient to mention the changes in the tissues, including the blood; but the dilatation of the blood vessels, noted some years ago by Roux and Yersin[2] after subcutaneous injections of the toxin, is of special interest at present owing to the researches of Dr. T. G. Brodie.[3] He injected a broth solution of the toxin into the external jugular vein of cats, the result being an immediate relaxation of the blood vessels, with a consequent fall in pressure. A slower recovery followed, and, in cases dying within forty-eight hours, the blood pressure was almost at the normal level, when a second relaxation led to death. In these cases the heart was not involved, and continued to beat strongly until the end.

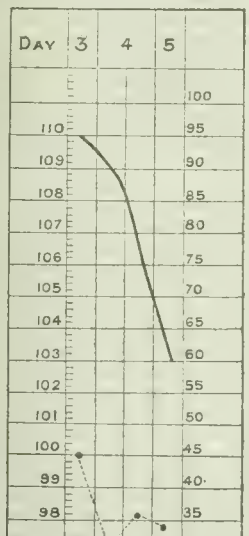
These facts suggested to me the study of the blood-pressure curve in cases of diphtheria. For this purpose the pocket form of the Hill-Barnard sphygmometer was employed. Although preferable when objections exist to the repeated constriction of a limb, it gives a less definite record than the aneroid instrument. The curves obtained from successive records are therefore to be regarded as only approximate, and minor gradations accepted with caution, two observers working together when possible. As all the fatal cases examined were

under 10 years of age, it may be noted that, while the normal blood pressure as recorded in adults by the Hill-Barnard sphygmometers is about 110 mm., I have frequently found that the pocket instrument registers a somewhat lower point in children, even when applied to the femoral artery.

With a larger number of blood-pressure curves available a greater diversity is manifested than was anticipated from the resemblance existing between the first six, upon which a previous report was based. Nevertheless, they are all roughly divisible into three parts. In the first stage the pressure is maintained at or near the normal level; then follows a period during which there is a slight decline; while the last stage is marked by a rapid fall, beginning more or less abruptly and persisting until death. The absolute and relative periods occupied by these three stages varies widely. In protracted cases it is the second stage which is generally most prolonged, and there may then be a partial recovery preceding the final depression. If the third stage is exceptionally lengthy the fall usually becomes gradually less until a condition of equilibrium at a low level is apparently maintained until the approach of death. Certain considerations, however, suggest that the fall is continuous, and might be registered by another form of instrument.

The excursion of the oscillating fluid in the graduated tube of the sphygmometer shows no change in the first stage, and in the second only a doubtful diminution, but in the third it becomes less in proportion to the fall in pressure, until it is a mere flicker, and finally disappears. This is significant if the maximum obtainable excursion, although obviously affected by other factors, is accepted as some indication of the heart's output during successive beats, since the maintenance of the blood pressure depends not only on the contraction of the blood vessels, but on the output of the heart.[4] It is a reasonable inference, amply confirmed by clinical examination, that, while the lowered pressure in the second stage is due to relaxation of the blood vessels, in the third heart failure is added as a more potent factor. Whether early death is ever associated with a rapid and extreme secondary relaxation of the vessels, without the heart being affected, as might be anticipated from Dr. Brodie's experiments, remains to be proved. When heart failure occurs, it is no doubt caused by the direct action of the toxin upon the muscular tissue. Possibly the altered blood, also, has a prejudicial effect.[5]

The symptoms ascribed at the outset to lowered blood pressure are absent in the first stage, and few of them are well marked until the second is advanced. With the incidence of the third stage they undergo a marked aggravation. In prolonged cases they are more fully develcped, and, as they become prominent towards the end, when the pressure is lowest, are interpretable as the expression of some secondary toxic condition. That such a condition—namely, uræmia—appears in a modified form as an intercurrent element may be admitted; but its supervention is not apparently necessary to the evolution of the symptoms described as essential. For if such symptoms are secondary in origin, they should differ in kind as well as degree from those manifested in rapidly fatal cases. The latter form of the disease is uncommon in hospital practice, and so far I have only been able to secure the blood pressure curve in a single instance. It shows the same pressure curve and symptoms as the longer type of case.



Morning and evening chart of case. In the uppermost transverse column is shown the duration of the disease in days. In similar columns below are given the urine in ounces and the pulse-rate. The thinner line in the body of the chart indicates the temperature in accordance with the Fahrenheit scale on the left, and the thicker one the blood pressure in mm. of mercury, as shown by the figures on the right.

H. F., aged 6, was admitted on the afternoon of the third day of an attack of diphtheria. The vital organs were healthy, and the urine—tested next day—contained no albumen. Typical thick membrane covered both tonsils, the uvula, and the sides of the pharynx. There was a profuse, slightly blood-stained discharge from the nose, and both sides of the neck were considerably swollen. The usual local treatment was adopted. At 11.40 P.M., 18,000 units of antitoxin were injected. At this time sickness was reported. The patient was restless during the night and obtained very little sleep. In the early morning he passed 4 ounces of urine. During the day he was much quieter and the sickness ceased. At 1 P.M. a second dose of 18,000 units was given. During the night sickness became persistent, jactitation was marked, and the patient could not be kept warm. He passed half an ounce of urine in the early morning. The pulse, which had steadily weakened from the time of admission, could not be counted towards the end, and the sphygmometer only showed an occasional flicker. The patient was conscious until death, which occurred at 10.30 A.M.

In maintaining that the symptoms of fatal diphtheria, as the outcome of a fall in blood pressure, do not vary radically with the duration of the disease, no exception need be made of the cases in which they are masked by the extreme cardiac distress. Even if it be admitted that paralysis is sometimes the chief cause of late heart failure, the fall in blood pressure, when not too rapid, is followed by the appearance of the related symptoms. Marked dyspnœa is common in this type of case, especially when the cardiac distress is paroxysmal, but is less obvious, although frequently present, in the ordinary type. The form of dyspnœa resulting from paralysis of the respiratory muscles may be regarded as an extrinsic cause of death, and the same statement applied to sudden syncope, which I believe to be adventitious and always the result of exertion or change of position. Reference to the pulse-rate has been omitted because it is very variable, and, although generally rapid in the earlier stages, may become abnormally slow before death.

The gravity of diphtheria may be in part explained by the diverse action of its toxin, which, in the first place, causes a fall in blood pressure, and, in the second, a change in certain tissues, of which the cardiac and renal are most important in the present regard. One result of the lowered blood pressure is a diminution in the quantity of urine passed. As the urine contains the toxin,[2] the latter accumulates in the blood, and determines a further fall in pressure, aggravated by heart failure. An active part in this process may be taken by sickness and diarrhœa. The latter, stated to be frequently associated with sickness,[6] is, however, extremely rare in my wards. No doubt the toxic change in the renal tissue in some degree prejudices excretion, bnt it is apparently not a main factor in the development of anuria. In this relation it is noteworthy that albuminuria is not always present in fatal cases. Reference has already been made to the question whether uræmia may not appear as an intercurrent lethal factor. I believe that, even when the duration of a fatal case is short, oliguria supervenes and is followed by suppression. When, however, the patient is within a few hours of death the latter condition can have but little effect if the fact that a healthy subject does not show symptoms of uræmia until suppression has existed for at least two days is accepted as a criterion.[7] In prolonged cases, however, with a final period of suppression lasting for several days, the presence in the blood of uræmic poisons in sufficient quantity to produce secondary symptoms appears inevitable. One of these symptoms—namely, myosis, is almost invariably present under such conditions. It is possible that the final aggravation of sickness has in part a similar source. On the other hand, there is a striking absence of headache, stupor, coma, and convulsions. Admitting that the uræmic poison is complex, it is probable that the specific toxin counteracts the effect of some of the elements, and thus maintains the continuity of the primary symptoms.

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[1] BRITISH MEDICAL JOURNAL, December 30th, 1899, p. 1787. [2] *Annales de l'Institut Pasteur*, June, 1889. [3] BRITISH MEDICAL JOURNAL, November 4th, 1899, p. 1282. [4] *Lancet*, June 10th, 1899, p. 1552. [5] BRITISH MEDICAL JOURNAL, April 2nd, 1892, p. 608. [6] Tirard's *Diphtheria and Antitoxin*, p. 19. [7] Oliver's translation of Bouchard's *Autointoxication in Disease*, p. 113.

BRADFORD AND DISTRICT MEDICO-ETHICAL SOCIETY.—The annual general meeting of this Society was held on January 17th, when Dr. J. H. Bell was elected President for the ensuing year; Dr. D. Goyder, Vice-President; Dr. F. K. March, Honorary Treasurer; and Dr. W. Horrocks and Dr. A. Manknell, Honorary Secretaries. Certain alterations were made in the rules of the Society.

THE PATHOLOGY AND TREATMENT OF APPENDICITIS.

Abstract of Remarks Made in Introducing a Discussion at the Medical Society of London on Monday, January 22nd, 1900.

BY C. B. LOCKWOOD, F.R.C.S.,

Assistant Surgeon and Lecturer on Surgical and Applied Anatomy, St. Bartholomew's Hospital.

MR. LOCKWOOD began by referring to the discussion which had already taken place before the Medical Society of London on the Prognosis of Appendicitis and Notes of 200 Cases. Dr. Cayley in his very thoughtful communication, and some of those who spoke, had to a large extent made use of clinical statistics. This method of inquiry was obviously of value, but had not hitherto carried conviction to the minds of the physicians and surgeons. The reason for this was simple. Taking Dr. Cayley's class of 99 cases of simple appendicitis and perityphlitis which were said to have recovered it was reasonable to ask how this was known to be true. A certain proportion of them must have had concretions in the appendix. The attack might have subsided. But they had not recovered, and the appendicitis was sure to recur. It would be just as reasonable to say that a patient with stone in the bladder had recovered because after rest in bed an attack of cystitis had subsided. Without doubt some of the 99 cases relapsed and went to other hospitals and were there included amongst the severe cases with perforation, gangrene, or septic peritonitis.

Mr. Lockwood ventured to think that appendicitis could not be correctly prognosed until it was possible to infer from the clinical symptoms the pathological changes proceeding within the appendix. He did not intend to discuss the nomenclature of diseases of the vermiform appendix. Much confusion prevailed, and the classification adopted by many authors was illogical. When the inflammation originated in the vermiform appendix he intended to speak of appendicitis, and add terms to indicate the effects the disease had produced, such as ulceration, perforation, gangrene, the various inflammations of the peritoneum, of the broad ligament of the uterus, of the portal vein, and so forth. Mr. Lockwood's remarks were based upon histological examination of 53 cases of appendicitis, ranging from the slightest to the most acute. The specimens had been obtained from cases which he himself had operated upon, and of which he knew the histories. Mr. Lockwood proposed to illustrate his remarks with a few typical photomicrographs made from the histological specimens of these cases. He felt deeply indebted to Mr. Ernest Shaw for the beautiful sections which he had made, and to Mr. Albert Norman for his exquisite photomicrographs. It was needless to say that the specimens, after hardening in Müller's fluid, were cut in paraffin, and stained and mounted after the best modern methods.

Mr. Lockwood began by referring to the group of cases in which suppuration was absent. Some of these came under the head of appendicular colic. In these, so far as was known, no clear attack of appendicitis had ever occurred. They were characterised by slight tenderness on pressure over some part of the iliac fossa, by disorders of digestion, and by occasional attacks of transient pain, not infrequently mistaken for renal colic. Before placing on the screen the photograph of the sections of such a case as this, photographs of the normal anatomy of the appendix were shown. Special attention was directed to the lymphoid follicles and the lymphatic system of the appendix. The continuity of the submucous and subperitoneal tissues through numerous gaps (hiatus muscularis) in the muscular coats was pointed out, and the paths by which inflammatory and infective inflammations of the mucosa spread to the peritoneum were demonstrated.

In a case of appendicular colic, such as described by Talamon, a healthy young woman suffered for eighteen months from abdominal pains. During the last six months she had been unable to follow her occupation. The pain was referred to the right side of the abdomen and to the right iliac fossa. It had been diagnosed as appendicular colic. The appendix was removed. To the naked eye it appeared normal. Microscopical section showed that the lumen was filled with epithelium mucus, granules, and crystalline bodies. This fluid was crowded with cocci, diplococci, small ovoid bacilli, single and in pairs, small clumps of staphylococci, and streptococci in chains from 4 to 6, also some long slender bacilli. In the photomicrograph the mucosa of the appendix was seen to be ulcerated, and these various bacteria had penetrated for perhaps half a millimetre into its substance. One might be reluctant to advise the removal of the appendix for a disease designated appendicular colic. Such a designation conveyed but little idea of danger. Few would hesitate to remove an appendix the mucosa of which was ulcerated and invaded by bacteria. Other photomicrographs illustrating so-called appendicular colic were shown.

Catarrhal appendicitis was next referred to. Amongst the cases which had been included under this term until the result of the histological examination had been ascertained, the following had been considered a typical case of catarrhal appendicitis. A young gentleman, aged 29, had his first attack of appendicitis at the age of 19. During the next ten years he had so many attacks that he could not recall the number. They usually confined him to bed for a day or two, and prevented him from going to business. Perhaps an operation had been deferred because he suffered from mitral disease. The appendix was removed in the usual way, and was not adherent. It was engorged with blood and felt very hard. It was constricted about three quarters of an inch from the intestinal end. The photomicrograph showed that the mucosa was ulcerated, that the lumen was filled with granules, crystalline bodies, shreds of organic matter, irregular pieces of semi-transparent substance, and quantities of bacteria. These include many morphological varieties: Cocci, diplococci, short ovoid bacilli, single and in pairs, long slender bacilli, short thick bacilli with rounded ends, long thick bacilli, leptothrix and spores, and spore-bearing bacilli. Many of the tubular glands had shed their epithelium, which had been replaced by plugs of bacteria projecting from the lumen. In some places these bacteria were penetrating the lymph canulicular system of the mucosa. The term catarrhal appendicitis did not perhaps convey to the mind a very clear sense of impending danger, but no one who was aware of the pathological state of such an appendix as this would hesitate for a minute in advising its removal.

Some of the other pathological conditions associated with clinical signs of appendicitis were next illustrated; the effects of stenosis being taken first. The appendix of a young woman who had had four attacks of appendicitis was removed. During the attacks the temperature rose. She had pain in the right iliac fossa, which was so severe as to cause collapse, with constipation, but without vomiting. Between the last two attacks pressure in the iliac fossa was painful, so that it was obvious that although appendicitis had subsided it had not got well. The appendix was not adherent, was nearly 4 inches long, and constricted an inch from the cæcum. The constricted part was shown in the photomicrograph. The mucosa beyond the constriction still possessed an epithelial lining. The lumen contained pus full of streptococci. It was hardly necessary to point out the danger of this condition, but to render it clearer, photomicrographs of another case were shown. A man had had six attacks of appendicitis and was advised to have his appendix removed. The operation was deferred until after his wife had been confined. When next seen he had no signs whatever of appendicitis, but was obviously suffering from hepatic abscess. An attempt was made to discover this abscess from behind, but without success. A second attempt was made in front. No abscess could be discovered, but inflamed glands were felt about the cæcum. The appendix was therefore removed. The photomicrograph showed that the interior contained pus full of streptococci with a few bacteria of other types. The lymph on the surface of the appendix was also full of streptococci. The patient survived this operation, but ultimately died of portal pyæmia with a number of abscesses in the liver. The delay in this case was evidently a matter for the keenest regret, and would never have been permitted had the pathological condition of the appendix been accurately diagnosed. Some of the effects of ulceration of the mucosa and subsequent infection of the appendicular wall were next illustrated. Also the dangers of fæcal concretions. Fæcal concretions were shown to be bacterial masses, a point which, strangely enough, had not been demonstrated by any investigator. The speaker regretted

that he had not time to demonstrate the various steps in the formation of fæcal concretion. These specimens showed that fæcal concretions were always associated with general ulceration of the mucosa; that the concretion was not necessarily the cause of the ulceration; that the concretion and the ulceration both owed their origin to the same cause—bacterial accumulation within the appendix. Specimens were shown to illustrate this point. The presence of concretion in the appendix was evidence of extensive ulceration of the mucosa and bacterial invasion. A large concretion was in itself a mechanical peril when owing to the application of cold to the surface of the body the appendix became engorged. It might cause a perforation of the appendix in its vicinity, or gangrene of the part beyond.

If it were true that many of the cases of appendicitis which were said to have recovered did as a matter of fact contain concretions, it was easy to imagine their peril.

The so-called process of natural cure was next mentioned. The accounts given by authors were fanciful. It was impossible to say when the so-called process of natural cure had been achieved. The appendix had been removed from a man who had had at least twenty attacks of appendicitis. He had twice been in large London hospitals, once under a surgeon and once under a physician. As they sent him out again without operation it was reasonable to suppose that they anticipated that the natural process of cure would eventually take place. The appendix was removed. A histological examination showed that the mucosa had been destroyed by ulceration, and that the lumen was occupied by a concretion which seemed calculated to prevent any supposititious natural cure from taking place. An appendix which had once been inflamed might inflame again after long intervals. An appendix had recently been removed for repeated and violent attacks of appendicitis, which had recurred after a period of quiescence of nine years. Another case had a violent attack of appendicitis, then an interval of fifteen years' quiescence, followed by another violent attack, after which the appendix was removed. It did not seem reasonable to lay down rules as to how many attacks should be suffered before the appendix was removed. Mr. Lockwood was inclined to wait for some time after the first attack of non-suppurative appendicitis, and see what supervened. But on several occasions the appendix had been removed after the first attack because it was still painful and could be felt. Under these circumstances the general health of the patient was seldom good, and the functions of the alimentary tract were improperly performed, indigestion, flatulence, constipation and diarrhœa being frequent accompaniments. After a second attack of non-suppurative appendicitis most patients preferred to part with an organ which appeared to be of no physiological importance and when diseased an actual source of danger.

The question of diagnosis was next referred to. It is usually possible to say that the appendix was inflamed, but hitherto the histology of appendicitis had hardly been sufficiently investigated for anybody to surmise with accuracy the actual pathological state of the appendix. The usual sequence of events, as shown by the histological examination of 53 specimens, was destruction of the epithelial lining of the lumen, ulceration of the mucosa, bacterial invasion of the mucosa and submucosa, extension of the inflammation through the muscular gaps to the peritoneum. This process might be complicated by the formation of cicatricial strictures, by inflammatory obliteration of the whole lumen after removal of the mucosa, by the presence of fæcal concretions, by perforation, by gangrene, by inflammation of the appendicular lymphatics, and by portal pyæmia. It was also important to note, as Clado was the first to point out, that the inflammation in females not infrequently spreads along the lymphatics to the right broad ligaments of the uterus, so that appendicitis was sometimes mistaken for inflammation of the ovary or Fallopian tube. Three cases of this kind had been operated upon. In addition, it was important to observe that appendicitis sometimes occurred as a complication of other diseases. Primary tuberculosis of the appendix was probably a rare disease. Although every specimen had been carefully examined for tubercle it had but once been discovered. But on one occasion in operating for the removal of an inflamed appendix general tuberculosis of the peritoneum was met with, the inflammation of the appendix being a complication of that disease. In another case of appendicitis a hard mass was found at the base of the appendix. When a portion of this was submitted to histological examination it was found to be cancerous. The cancer, which involved the ileocæcal valve, was removed, and the intestine united by circular enterorrhaphy. The patient recovered, but ultimately died of a recurrence of the cancer in the pelvis. As regarded cases of appendicitis in which perforation or gangrene had occurred, there could be little doubt as to the propriety of evacuating and draining the abscess as soon as diagnosis could be effected. The cases showed that the safety of the patient depended mainly upon the stage at which the operation was performed, and something, too, upon the position which the appendix occupied. When the appendix was beneath the cæcum, and in the iliac fossa, the chances of the abscess being localised were fair. Likewise when the appendix lay to the outer side of the cæcum and colon. But in females especially the appendix often hung over the brim of the pelvis into Douglas's pouch, when such a one perforated or became gangrenous the danger was vastly increased. Moreover, collections of pus at the bottom of Douglas's pouch were most difficult to drain.

As regarded the operation, Mr. Lockwood advocated the oblique incision parallel to the outer half of Poupart's ligament, because it could be extended to reach an appendix which lay outside the cæcum, or which was adherent within the pelvis. In non-suppurative cases the appendix might be most difficult to discover. It might be laid down as an axiom that the organ was never absent except as the result of disease. Cases were mentioned in which the organ had only been discovered with the greatest difficulty because it was hidden away in either the subcæcal or the ileocæcal retro-peritoneal fossa. Doubtless surgeons who had failed to find the appendix had not infrequently been deceived by this abnormality.

In cases complicated with suppuration and peritonitis a determined endeavour should be made to remove the appendix. It was worth while to run considerable risks rather than leave behind an appendix which was profoundly septic and might contain concretions. In some cases in which the abscess had merely been opened and drained and the appendix left behind, subsequent attacks of appendicitis have been known to occur. In others a septic sinus had persisted requiring a formidable and ofttimes fatal operation for the removal of the appendix. In one such fatal case the sinus led to a perforated appendix which contained a large concretion. Nevertheless, the patient's condition sometimes forbade an attempt to remove the appendix. A case of this kind was under observation in which the origin of the appendicular abscess had been followed at intervals by three others of the most formidable and dangerous type. As regarded the closure of the wounds after the removal of the appendix in cases without suppuration, it had been found inadvisable to insert buried sutures of silk, because infection was likely to occur when the lumen of the appendix was cut across. Good results were obtained with a single row of fishing-gut sutures. The wound seldom exceeded 3 inches in length, 2 to 2½ inches being common.

Operations for the removal of the appendix varied greatly in their gravity. The simple operation was comparable to the radical cure of non-strangulated inguinal hernia, but occasionally, after violent appendicitis, the most formidable adhesions were met with, and might test all the courage and dexterity of the operator before they were overcome.

Mr. Lockwood's cases of operation for the removal of the vermiform appendix, in which suppuration was absent, had recovered more quickly since they had lain upon their side, and quickly been put on solid food. In cases of appendicitis with perforation or gangrene and acute abscess, the after-treatment required the greatest skill and watchfulness.

THE X RAYS IN LIFE INSURANCE EXAMINATIONS.—F. H. Williams (*Boston Medical and Surgical Journal*, December 28th, 1899) points out that the chief organs for examination in life insurance are the kidneys, lungs, and heart, and that the question is not so much what the disease is as whether or not there is an abnormal condition of the chest. By using the fluorescent screen, tuberculous foci, emphysema, thoracic aneurysm, or enlarged heart can be visibly demonstrated.

CASES COMPLICATED WITH MENTAL DISORDER TREATED BY THYROID EXTRACT.

BY RICHARD R. LEEPER, L.R.C.P.I., F.R.C.S.I.,
Medical Superintendent of St. Patrick's Hospital, Dublin.

THE first case in which I used thyroid extract was one of myxœdema complicated by mental symptoms.

T. R. P., aged 24, was admitted on February 24th, 1888, in a maniacal condition. She had been very troublesome at home, and latterly had developed symptoms of myxœdema. She had after some time passed into a condition of apathetic delusional insanity, with occasional outbursts of excitement, in which she was noisy and obscene in her language. Her features were expressionless, her speech thick, and her movements slow and deliberate. No thyroid gland could be felt in her neck. Her catamenia were irregular, and she was obstinately constipated. The temperature and pulse were subnormal. Thyroid treatment had been tried, but had been abandoned as of no use. On March 22nd, 1899, I ordered her to bed and again commenced thyroid treatment. In this case I used the liquor thyroidii of the *B.P.*, as recommended by Dr. Murray, and gradually increased the dose to m15 per day. There was an interval of nearly two months between the commencement of the treatment and the period of reaction. From this period she gradually gained ground. The tachycardia was at no time great, and the treatment had but to be once suspended owing to an attack of syncope. Her bowels resumed their action, the catamenia became regular, and the mental symptoms entirely disappeared, the patient becoming bright, cheerful, and ladylike. As no thyroid gland could be felt in the neck I ordered her to continue the treatment at home. When last heard of she was doing well, and taking 5 grs. of the extract daily with small doses of iron.

J. B., aged 23, was admitted to the hospital I then had charge of on July 22nd, 1897. The family history was very bad; the father had been a drunkard, and subject to attacks of mania, the mother had also been intemperate. The patient's mental condition was one of acute mania, being boisterous, violent, and hilarious. She had been eccentric in her conduct for about three days, the attack coming on suddenly. Her eyeballs were exceedingly prominent; the carotids and indeed the entire front of the neck was visibly pulsating. The thyroid gland was considerably enlarged, and a loud *bruit* could be heard all over it. The pulse was too rapid to count accurately, and the excitement being continuous I feared she would die from exhaustion. She was with difficulty kept in bed. A mixture of bromides, digitalis, and diffusible stimulants was ordered, and she was carefully watched for symptoms of cardiac failure. She remained for seven days in this condition, when the pulse-rate became slower, and she gradually quieted down. All medicinal treatment was now discontinued, and she gradually sank into a semi-stuporose condition; she could be induced to speak with difficulty, and she was apathetic and apparently demented. Her temperature was subnormal. She remained in this condition for over a month, when, as she was becoming dirty in her habits and showing no signs of improvement, I commenced to treat her with thyroid extract. She rapidly responded to the treatment: 5 grs. of the extract had been given for a week daily, when tachycardia commenced to return, and with it came back her intelligence. She steadily improved, and was discharged on November 15th of the same year completely recovered mentally. The period of her illness was a complete blank to her. At the time of her discharge the neck tumour was slightly decreased in size. When last heard of she was still doing well and had no return of her mental symptoms. In this case it would appear that the condition of apparent dementia was directly due to thyroid hunger, and the smallness of the dose of the gland substance which produced the reaction was noteworthy.

C. L., aged 20, was admitted in 1897. Her case was one of delusional stupor, apparently passing into dementia. It rapidly yielded to treatment by thyroid extract and iodide of potassium in 10-gr. doses. She belonged to a neurotic family, and was highly educated and accomplished. Her illness was of six months' duration, and she had been apathetic and semi-stuporose from the first. There was no organic disease. She suffered from delusions of unseen agency, and had hallucinations of sight. From this condition she at one time recovered, but relapsed almost immediately into her former state, and became dirty in her habits, resistive, and dumb. She had to be carried to and from the grounds, and required to be forcibly fed at times. I commenced thyroid feeding on June 4th, 1899, when no thyroid body could be felt in her neck. She had been gaining in weight but the mental condition seemed to steadily grow worse. From the commencement of the treatment the dose of thyroid extract was increased to 20 grs. per day. In August she had reacted well, had become brighter, and had developed a thyroid body, the lobes and isthmus of which could be distinctly felt. The tachycardia, owing to the long period the treatment was persisted in, was considerable. The dose of extract was gradually lessened as the patient got better. She was discharged on September 11th, 1899. Iron and strychnine were ordered in completion of the medicinal treatment of the case. She remembered all the events which occurred during her stuporose state, and told me the reason she would not speak or sit down or walk was to express her disapproval of mesmeric influences exercised upon her and her fellow patients. This influence was shown, she said, by the changing colours—red, yellow, and violet—in which the patients were dressed, and which changed rapidly before her as "the result of witchcraft."

This treatment is, I consider, an imperative one in all cases of insanity showing a steadily downward course in which there is reason to suspect thyroid insufficiency. No drug has hitherto produced in so speedy and safe a manner such remarkable results. Bearing in mind the cumulative property of the substance, its effects must be carefully watched, but the risks should be small if the patient be free from organic disease at the commencement of the treatment and if it be conducted under careful systematised observation.

The administration of thyroid extract owes its remedial results to its direct stimulation of the cortex and the increased metabolism thereby induced amongst its elements. The rise of temperature is, however, not the most constant symptom of reaction. To the increased pulse-rate and quickened circulation must presumably be attributed most of the good effects of the treatment.

If conditions of mental exaltation and depression are due to alterations in the cerebral circulation, then in thyroid substance we possess a remedy capable of influencing mental symptoms in no small way. Its usefulness in melancholia has been widely proved, and its action in reducing blood pressure must not be lost sight of in this affection. With an increase of our knowledge of the functions and mode of action of the secretions of the ductless glands, will be found a solution to many of the problems of psychiatry.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

POISONING BY SODIUM SALICYLATE.

MR. HILTON HEFFERNAN'S instructive and interesting case showing the effect of 130 grains of sodium salicylate taken at one time calls for comment.

This patient voluntarily performed a useful experiment for us, and it has been shown by Mr. Heffernan that the salicylate produced no depression. Somehow it has crept into the textbooks that sodium salicylate is a depressing agent, and each author has handed it on to his successor. Now I hold that the salicylate within reasonable limits is not a cardiac depressant, but on the contrary is often a calmative of the greatest usefulness. Sodium salicylate is one of our most useful remedial agents, and can even be prescribed in such a depressing malady as diphtheria with the utmost safety.

Leeds. GORDON SHARP, M.D.

POISONING BY OLEUM EUCALYPTI.

AT 4 P.M., a child, aged 3 years, swallowed between two and three teaspoonfuls of oleum eucalypti. Two hours afterwards it was violently sick, and as drowsiness supervened, and it was was unable to keep its eyes open, I was sent for shortly after 8 P.M.

I found the child lying upon its mother's knees in a state of stupor and insensibility; the conjunctivæ were almost insensible to touch; both pupils were contracted to pin point and insensible to light; the temperature was subnormal, respirations were quick and shallow but not stertorous, the pulse frequent and weak; the extremities were cold and clammy, cyanosis being well marked.

The child remained in this condition until 4 A.M. next morning, when she rapidly recovered consciousness, and when I called at 11 A.M. she was running about the house.

The symptoms were identical with those of opium poisoning, with one single exception, namely, absence of stertorous breathing.

Ripley, Derby. FREDERIC C. WOOD, L.S.A.Lond.

FORMALIN IN RODENT ULCER.

ON June 17th, 1899, E. H., aged 76, labourer, had a rodent ulcer the size of a sixpence on the right cheek, for which he refused operation. Acting on suggestions which had lately appeared in the BRITISH MEDICAL JOURNAL, I packed the ulcer with a 20 per cent. solution of formalin in glycerine and water on a pledget of cotton wool, kept in place by strapping over protective, the sound skin having first been guarded by a coating of liquid guttapercha. Two days later the granulations were white and friable, and I picked their tops off with dissecting forceps and repeated the dressing. This process was repeated every other day. On reaching the lowest layer of malignant cells the tissues below bled freely, but at the next dressing these tissues would be found to be protected by a firm scab of blood clot unaffected by the formalin. On

July 6th, after seven dressings, the wound appeared to be completely filled by organised clot. On October 19th the patient returned with a small spot of recurrence in one angle of the wound. This was dressed as before on three occasions.

On January 11th I had an opportunity of examining the wound. It was firmly healed by a thin, smooth, perfectly supple, white scar, the margin of which shaded off quite smoothly into the surrounding normal skin, and the whole lesion would scarcely be noticeable on the cheek of a woman. The dressings smarted sufficiently to bring tears to the eyes for a moment, and the pain could be felt for an hour. The patient is very satisfied with the result, as is

Reigate. F. WYATT-SMITH, M.B.

FRACTURE OF BOTH CLAVICLES.

IN the BRITISH MEDICAL JOURNAL of December 9th, 1899, Dr. Henry W. Laing reports an interesting case of fracture of both clavicles, and this has led me to look over my notes of a somewhat similar case which came under my care in 1896.

The patient was a little boy, aged 6. He was standing in a cart which was being taken from a field to the farm steading, and just as the horse approached the stable the little lad pulled one rein tightly. As a result the cart collided with the wall, and was at once overturned.

The boy was found under it, with one edge resting across the upper part of his chest. He was released from his position as soon as possible, and I was at once sent for. On my arrival I found the boy delirious, and the curious spasmodic movement of the arms attracted my attention. It was as if the patient wanted to raise them to his shoulders, and could not do so. On examination I found that both clavicles were fractured. The boy did not recover consciousness until the next morning.

I placed the bones in the best position possible, crossed the hands over the chest, put cotton-wool pads in the armpits, and secured all in position by means of straps of Mead's adhesive plaster. Over all I applied a roller bandage, which I carefully stitched so as to retain it in position. The patient was a very good one, and I had little difficulty in treating the case in the recumbent position. After three weeks all strapping, etc., was removed, and I then found that the bones had united well.

While treating this case I noted a peculiarity which I have never seen before. The boy never had any teeth on the left side in the upper jaw during the first dentition. All his other teeth, however, came quite normally.

Garliestown, N.B. WM. SEMPLE YOUNG, M.D.

A CASE OF ENTERIC FEVER WITH ACUTE NEPHRITIS.

E. E., aged 30, was first seen by me on November 4th, 1899. He had been feeling "out of sorts" for about a fortnight. He had some "shivering fits" on October 30th, and since then had felt ill. He complained of severe headache, with pain in the back and limbs. There was no diarrhœa, abdominal tenderness, or pain, and no splenic enlargement or rash. The tongue was foul, and red at the edges. The urine was scanty, and contained much blood, numerous tube casts, and over 20 grams per litre of albumen. Strange to say, he had not taken to bed. On the next day the temperature was 105° morning and evening, and diarrhœa had set in. He was delirious at night. On November 6th typical typhoid spots made their appearance. His temperature remained at from 104.5° to 105° till the 9th, when it remitted to 103.5° in the morning. His condition was worse, however; his pulse was weak, and he had delirium. This condition continued on the 10th and 11th, when he died comatose. There were no convulsions.

The only treatment seriously attempted was by the hot pack and intestinal antiseptics; strychnine, strophanthus, and alcohol were all tried cautiously, but all produced violent vomiting. Citrate and acetate of potash were, however, given, along with milk and aërated water. Free diaphoresis was kept up, and any treatment by cold was avoided for fear of checking this.

As the complication is, I believe, a rare one, it would be interesting to hear of other cases of enteric with acute nephritis, and of suggestions as to treatment.

Maldon. H. REYNOLDS BROWN, M.B., C.M.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

GLEN INNES HOSPITAL, NEW SOUTH WALES.

TWO CASES OF GANGRENOUS APPENDICITIS.

(Reported by JOHN MACPHERSON, M.A., B.Sc., M.B., Ch.M.Sydney, Surgeon to the Hospital.)

THE two following cases possess features of interest, and illustrate a remarkable degree of endurance in patients suffering from a most severe physical disorder:

A young and strong labouring man, aged 20, who had suffered at times from pain in the right iliac region, but had never been really disabled by it, began four days before admission to have severe pain in the left iliac region, and the hypogastrium, finally becoming localised to the right iliac region, where there was great tenderness. The bowels were confined, and there was bilious vomiting. The urine was dark red and scalding. He did not consider himself very ill, and rode on horseback to Glen Innes, a distance of sixteen miles. When I saw him shortly after his arrival his temperature was 104.6° F., and his pulse 134. On examination of the abdomen there was no actual dulness, but its normal resonance was everywhere slightly impaired, except in the right iliac region, where the tympanitic note was greatly exaggerated. There was extreme tenderness about the area of McBurney's point. The tongue was coated, but moist. No rheumatic personal or family history was elicited. Nothing was found on rectal examination. I ordered his admission to the hospital, where he arrived on the following morning. The tongue then was becoming drier. The pain had diminished, and the vomiting was but slight. The bowels had not been opened. The pulse varied between 86 and 94, and the temperature ranged from 98.4° to 98.8° until 8 P.M., when it reached 101.8°. Opium and belladonna were administered. On the following day the temperature again descended irregularly, but the pulse increased in frequency, attaining a rate of 120 at 8 P.M. The bowels were very well opened by turpentine enema. Vomiting persisted, and great tympanites supervened. Next day, at 8 A.M., the temperature was only 98° F., but the pulse was 130. At 10 A.M. the temperature was 100.4° F., and the pulse 124, and the abdomen was greatly distended. Under chloroform I made the usual incision in the abdominal parietes. Recent flaky adhesions covered the intestines, which were dark and congested. Portions of adherent omentum were ligatured and removed. The appendix was found dipping down over the brim of the pelvis; it was about 4 inches in length, bound down by adhesions and enveloped in foul pus. It was gangrenous towards the tip. The appendix was removed, disturbing as little as possible the surrounding structures, for I hoped that the abscess cavity was circumscribed. Having gently irrigated it, I left a large loretin gauze drain well down towards the bottom. At 3 P.M. the temperature was 99°, the pulse quick, full, soft, and dicrotic. The patient was vomiting. At 8 P.M. dark, bilious, vomiting persisted, the feet were warm, but the hands very cold, and the pulse small.

On the next day the temperature, which had been almost constantly elevated since the operation, varied between 100.4° and 101.6°; the pulse was rapid (138 to 140), and soon became very feeble; while vomiting persisted. The abdomen was distended, but was quite lax, and not tender. He was bathed in profuse perspiration. Brandy, with strychnine and ether (hypodermically) was exhibited plentifully, but he died at 7.30 P.M., wildly delirious, not having had a moment's sleep since the operation, although morphine, subcutaneously, was administered in considerable doses.

The morphine seemed to allay his pain, but produced no rest; in fact, it appeared only to excite him. Again, in spite of lesions so severe, the patient did not appreciate the fact that he was desperately ill, and rode in sixteen miles. Lastly, it should be noted that the initial pain was in the *left* iliac region.

The second case was that of a well-built girl, aged 16. Six months previously she had swallowed a pin which, however, had caused no trouble. Two months later she had an attack of vomiting with pain in the right iliac region. Her present illness dated four days back, when she fainted, was then seized with vomiting and suffered from pain in the region of the appendix. The bowels were well opened. She resided forty-one miles away, and set out on horseback to reach the town. After riding sixteen miles, she overtook a vehicle, in which she was conveyed for the remainder of the journey. When I saw her about 4 P.M., her pulse was regular and of fair tension, the tongue thickly coated the abdominal muscles rigid, with definite dulness and tenderness over the right iliac region. I had her removed to the hospital, but was unable to operate upon her until the second morning afterwards. In the meanwhile I prescribed opium and had a turpentine enema administered with good result.

Under chloroform I made an incision in the right iliac region. The peritoneum was greatly thickened and the intestine coated with thick lymph adherent to the parietal peritoneum. Fœtid pus was evacuated, the abscess cavity extending downwards into the pelvis and upwards behind the cæcum towards the kidney. After flushing out the abscess cavity thoroughly, loretin gauze drains were inserted in both directions. The appendix could not be found, and fearing to break down adhesions limiting the abscess cavity I made no prolonged search for it. The operation caused no remission of her symptoms, except that the vomiting ceased. The pulse became more rapid, the tongue more thickly coated, and the abdominal distension increased. The bowels were slightly moved and flatus passed *per anum*. With the exception of tenderness about the

abdominal wound all pain had ceased. Pus was draining away freely along the gauze.

I then operated again, encountering another collection of pus around the appendix in which a small scybalous mass lay free. The appendix itself was directed upwards behind the cæcum. It was about 2 inches in length and gangrenous. The omentum was closely adherent to the intestines. The peritoneum was freely washed out.

After the second operation the temperature assumed a lower level, but the pulse-rate continued very high (up to 160°). Slight retching supervened. Pus discharged profusely, but with greatly diminished fœtor. Digitalis, opium, and brandy were administered by the rectum, and strychnine hypodermically. No improvement, however, was manifested, and portions of a nutrient enema appeared through the abdominal wound. There was very little pain, but the restlessness was very great; as in the previous case, opium in large doses appeared only to increase the excitement. The tongue never became dry, but she gradually sank, and, after several profuse perspirations, died on the eleventh day subsequent to her admission.

No necropsy was permitted, but, on enlarging the abdominal wound, numerous collections of pus were encountered scattered through the abdomen. The pin which had been swallowed was not discovered.

In this case the temperature was irregular, but of a type altogether different from that recorded in the first case, being much lower after the second operation. Shortly before death it rose somewhat, and then rapidly fell below the normal; whereas in the other case it remained elevated until the fatal termination.

I realise that in both instances operation should have been undertaken much earlier, but circumstances did not permit of it.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, January 23rd, 1900.

THE MASTOID OPERATION FOR THE CURE OF CHRONIC PURULENT OTORRHŒA.

MR. CHARLES A. BALLANCE, who dealt with this subject with reference to the immediate healing of the cavity in the bone left by the operation by means of epithelial grafts, pointed out: (1) That the progress in the surgical treatment of suppurations in the temporal bone during the last twenty years was due (*a*) to an increase in anatomical and pathological knowledge, and (*b*) to the adoption of true surgical principles; (2) that the selection of cases for the complete mastoid operation was surrounded with difficulty; and that large experience rather than rigid rule was the best safeguard against, on the one hand, the risk of delay, and, on the other, the performance of an unnecessary operation; (3) that the cure of chronic otorrhœa could not be effected by a simple opening into the antrum; (4) that the complete mastoid operation which involved surgical damage to the tympanic structures was inapplicable to and unjustifiable in acute cases. It was proposed that typical intractable cases of chronic otorrhœa should be treated by two operations: (1) the operation for the removal of the disease—namely, the complete mastoid operation; (2) the operation for the healing of the wound—namely, by the epithelial grafting of the raw bone cavity. Lastly, the operations were described, and notes of 20 cases were appended.

Sir WILLIAM DALBY, in his remarks, dealt chiefly with the selection of cases of long standing for the complete operation, with skin-grafting. It was undoubtedly necessary in: (1) Cases in which septicæmia had commenced; (2) cases in which there was dead or carious bone in the tympanic cavity, accompanied by ominous symptoms often repeated; (3) whenever there was evidence of mastoid disease of long or short standing; as open to question were: (4) a certain proportion of cases where although there was evidence of dead or diseased bone, there was no reliable history of ominous symptoms; (5) cases of intractable otorrhœa without bone disease or ominous symptoms. Cases were also discussed in which a less complete operation (which, however, included free posterior drainage), was necessary.

Mr. A. E. CUMBERBATCH, in remarking on the selection of cases for operation, said it was now much easier than it was some time ago to decide when it was advisable to expose the mastoid antrum, and throw the iter, attic, and tympanum into one cavity for the cure of chronic suppurative disease of the middle ear. Theoretically the operation should be performed in every case of chronic discharge in which all simpler means of treatment had been fairly tried and had failed. For what length of time these simpler means should be first tried would depend largely on the temperament and experience of the surgeon, and on the special conditions of the individual ear; but although theoretically the question of an operation seemed easy enough to answer, yet practically it was not so easy. Hence, in the present state of knowledge, it might be useful to mention certain groups of cases in which it appeared to him, speaking generally, that radical measures were either inexpedient or should not be undertaken too hastily: (1) A group in which the whole or greater part of the membrana tympani had been destroyed, and the mucous lining of the tympanic cavity was greatly hypertrophied (polypoid, in fact), but there was no obvious bone disease: (2) another group in which there was frequent recurrence of the discharge on slight provocation, although the discharge was on each occasion readily arrested—sometimes there was a permanent perforation of the membrana, in others the perforation closed as soon as the discharge ceased; (3) another group, in which the question for or against an operation was a difficult one to decide, and should not be too hastily answered in the affirmative—these were cases of discharge from both ears, in which the hearing was excellent, and there were no symptoms calling for operative interference beyond the discharge. Cases in which a complete mastoid operation should be performed were: (1) Cases of the second group in which the onset of the discharge was invariably preceded by *malaise*, slight headache, and rise of temperature, and occasionally mastoid tenderness or discomfort; (2) "spoilt ears," which having given no trouble for many years, comparatively suddenly developed marked symptoms of labyrinthine vertigo, as it was evident that either inflammation was spreading to the labyrinth, or some accumulation was exerting undue pressure in that region; (3) cases of intermittent discharge, in which inspection of the meatus revealed masses of sodden epidermis, often hiding the presence of small granulations, and in which syringing constantly removed white shreddy patches, the usual methods of treatment failing to effect a cure; (4) cases of periodic attacks of mastoid pain, commencing some time after all signs of active mischief in the ear had ceased, and where, by the exclusion of superficial neuralgia, it was possible to determine that sclerosing ostitis existed. The operation performed by Mr. Ballance was so nearly perfect, it seemed so easy in skilled hands, it was so safe, and the results were altogether so admirable, that it was certain to widen the area of cases suitable for operation.

It was decided to adjourn the discussion of the papers to the next meeting.

MEDICAL SOCIETY OF LONDON.

FREDERICK T. ROBERTS, M.D., F.R.C.P., President, in the Chair.

Monday, January 22nd, 1900.

THE PATHOLOGY AND TREATMENT OF APPENDICITIS.

MR. C. B. LOCKWOOD read a paper on this subject, an abstract of which will be found on page 194.

Dr. ALLCHIN remarked that in years not so long ago the knowledge of the disease might be described as exceedingly vague and mostly incorrect, days when the peritoneum was looked upon as a structure not to be touched if it could possibly be avoided. The treatment in those days might be described as an attitude of ill-regulated expectancy, in which the surgeon had little part. The present tendency was all the other way; but with every admiration for what the surgeons had accomplished, he declined to acquiesce in the view that cases should at once pass under the surgeon. He described four groups of cases: (1) The acute, severe, fulminant cases, with a rapidly fatal issue; (2) less acute but still acute cases, which terminated in suppuration; (3) still less acute cases, lasting from twelve to fourteen days, which made up the bulk of cases which found their way into the medical wards; These cases mostly ran their course to apparent cure, and he had yet to be persuaded that it was necessary, or even justifiable, to insist upon an operation in these cases; (4) recurring or relapsing cases. The surgeon alone was of use in the first group, as also in the second when there were obvious signs of suppuration. In the third group he hesitated to regard an operation as necessary, but he admitted that such cases might

suddenly become grave, or recover only to relapse after a short time. With regard to prognosis he attached most significance to variations in the pulse-rate. Apart from rest in bed and relief of the bowels, he advocated small doses of opium, which he thought were distinctly beneficial. It was only in large doses that opium would mask the symptoms. He admitted that there was great difficulty in deciding what to do with the relapsing cases, but he deprecated dogmatic rules as to how many days or how many relapses should intervene before deciding the question of operation.

Mr. BARKER observed that the author's researches, which had resulted in his tracing the septic organisms into the lymphatic system, provided an explanation of some difficult classes of cases, cases in which the appendix was normal to the naked eye, as well as cases in which there was more or less extensive cellulitis or subphrenic abscess. He himself had explained this on the assumption that the lymphatics were the channels of infection, though this had not been actually demonstrated. He pointed out that the peritoneum possessed vast powers of controlling the action of septic organisms and was largely able to take care of itself. He himself interfered as little as possible with the omentum and peritoneum. He agreed that opium was beneficial in these cases and held that there was a great deal for physicians to do. Even now, however, it was very possible to be tripped up over these cases.

Dr. F. J. SMITH remarked that in the majority of cases of ulcerated appendix there was a curious absence of a history of previous pain, just as in cases of ulceration of the stomach. It had occurred to him in the *post-mortem* room, when he had accidentally torn the intestines, to try and cleanse the peritoneum; but even with a hose under pressure and plenty of time he had never yet succeeded in doing it, and he doubted whether any surgeon could do it on the operating table, whence he inferred that he who tried least would probably do least harm. With regard to Dr. Allchin's expression, "obvious signs of suppuration," he observed that, while in nine cases out of ten the presence of pus would be obvious even to the third year's student, it was in the two intermediate groups that the difficulty presented itself. He regarded sweating at night as a valuable sign of suppuration. He recommended sodium salicylate and icebags as useful in cases of the second and third groups. With regard to the exact anatomical position of the appendix, careful observation for several years led him to regard the position tucked up behind the colon as the most common, which he thought might suggest to the surgeon the propriety of making his incision at a point where he would be able to get at the back of the cæcum and ascending colon. When the appendix hung down into the pelvis pain or difficulty in micturition was usually a symptom.

The further discussion was adjourned to February 24th.

HARVEIAN SOCIETY OF LONDON.

H. E. JULER, F.R.C.S., President, in the Chair.

Thursday, January 18th, 1900.

ANNUAL MEETING.

THE annual meeting was held on January 18th, at the Stafford Rooms, W. Mr. Thomas Bryant was elected an honorary member of the Society, to fill the vacancy caused by the death of the late Sir James Paget. The report of the Council and the Treasurer's statement were read and adopted. The officers for the ensuing year proposed by the Council were elected.

PRESIDENTIAL ADDRESS.

The PRESIDENT delivered a valedictory address on The Value of Eye Symptoms in the Diagnosis of General Diseases. He said that the eye being intimately connected with the other organs and structures of the body, sympathised not only with its fellow eye but with many other organs. The retina, for instance, might almost be regarded as a diminutive brain, and was in closest connection with the various nerve centres of the brain. The iris, ciliary body, and choroid were in intimate connection with the blood vessels of other parts of the body. The eye contained a complete lymphatic system; and its muscles and their nerves were concerned in some of the most important diagnostic studies. Disease of the conjunctiva might be indicative of other diseases in the system. He gave notable instances in which gonorrhœa in the patient or those living with him was the source of the inflammation. The microscope in all such cases revealed the presence of gonococci in the discharges. Gonorrhœa was also a cause of iritis, occurring even many years after the urethritis, usually in males, sometimes alternating with attacks in the joints. Diphtheria also, though rarely, occurred on the eye; it had been quickly cured by injections of antitoxin. The paresis of the ciliary muscle, producing failure of accommodation, was most frequent after pharyngeal diphtheria; it generally began about two weeks after the attack had run its course, and lasted from four to eight weeks; was always bilateral, and the sphincter pupillæ was seldom affected. The extra-ocular muscles were occasionally affected by diphtheria, with or without loss of accommodation, and caused further visual trouble by the diplopia thus produced. The eye might be the point of entrance of the infection of syphilis. In chancre of the eyelids the preauricular gland was always enlarged, firm, and painless, not tender unless manipulated roughly, and the chancre might, but should not, be mistaken for rodent ulcer, tertiary syphilitic ulcer, epithelioma, lupus, chalazion, hordeolum, or tuberculous ulcer of the palpebral conjunctiva. Only one ulcer of the conjunctiva, the tuberculous, was liable to be mistaken for a chancre, but it was never indurated at its base. It was well, therefore, to defer the constitutional treatment of suspected chancre of the eyelid until the diagnosis was confirmed by the secondary manifestations of syphilis, for mercury was liable to act injuriously in tuberculous cases. Syphilitic iritis was also common; it was accompanied by little or no pain, but usually by other signs of syphilis, and was rapidly cured by mercurial treatment. Interstitial keratitis most frequently arose from inherited syphilis. It generally appeared about the age of puberty. The proof of inherited syphilis was not always easily established, but much might be discovered by a kind of "Sherlock-Holmes" method of observation of the parents and their offspring. The information obtained should be used solely for the better treatment of patients, never for their exposure. After influenza he had met with paresis of the external rectus muscle, acute glaucoma affecting one eye only; hyperæmia of the conjunctiva, with or without discharge (many cases), and paresis of accommodation, which recovered slowly. Cases of embolism of the arteria centralis retinæ, pronounced optic neuritis, and neuro-retinitis, single and double, had also been recorded. The albuminuric affections of the retina were occasionally found in all forms of nephritis, but were most frequent in the later stages of contracted kidney, and indicated an early fatal termination. Lastly, eye symptoms were of the greatest possible value in the diagnosis of diseases of the nervous system, both intracranial and other.

VOTES OF THANKS.

A vote of thanks to the retiring President for his address and for his services to the Society was proposed by Mr. HENRY POWER, and carried with acclamation. Votes of thanks to the retiring Vice-President, Dr. Ernest Gee, and the retiring members of Council, and to the retiring senior Secretary, Dr. Leonard Guthrie, were proposed by Mr. EDWARD BARTLETT and Dr. SIDNEY PHILLIPS.

CONVERSAZIONE.

The meeting was followed by a *conversazione*, which was very largely attended. Instrumental music was provided, by permission of Colonel Lord Binning, by the string band of the Royal Horse Guards (Blue).

PATHOLOGICAL SOCIETY OF MANCHESTER.

W. THORBURN, F.R.C.S., President, in the Chair.

Wednesday, January 17th, 1900.

TUMOURS OF BLADDER.

MR. SOUTHAM showed two specimens of papilloma of the bladder, removed by suprapubic cystotomy from male patients, aged 45 and 64 years. In both cases the only symptom was a painless hæmaturia, in one instance continuous, in the other intermittent. The patients made a good recovery from the operation, and in both instances the removal of the growth was followed by a complete cessation of the hæmaturia.

MYELOPATHIC ALBUMOSURIA.

Dr. WARRINGTON described the case of a man, aged 60, who suffered from anæmia. His condition gradually got worse, and he developed kyphosis of the vertebral column. Spontaneous fracture of the ribs also occurred. The urine contained large quantities of the body known as albumose, first described by Bence Jones in 1848. The necropsy showed that the ribs were remarkably affected, the bony substance being reduced to the thickness of paper, and the lumen being filled with a reddish mass similar in appearance to splenic pulp. The sternum and vertebræ were affected in a similar manner. The substance present in the bones of the thorax gave the reactions of albumose.

SPECIMENS.

Dr. CRAVEN MOORE showed a series of specimens illustrating the various types of lymphadenoma, and briefly referred to their morbid relations.—Dr. FOTHERGILL described examples of exomphalos and pseudo-anencephalus.—Other preparations were shown as card specimens.

EPIDEMIOLOGICAL SOCIETY.

FRANKLIN PARSONS, M.D., President, in the Chair.

Friday, January 19th, 1900.

BACTERIOLOGICAL DIAGNOSIS IN SCHOOL EPIDEMICS OF DIPHTHERIA.

MR. KENNETH GOADBY said that about Christmas, 1898, an outbreak of sore throat, culminating in diphtheria, occurred in the Poplar Union Schools at Forest Gate, which, built on the barrack system, accommodated about 600 children. Between March and October 27 cases of scarlatina had occurred in the school, and 17 more between November 27th and December 31st. On December 15th the epidemic of sore throats commenced, following 3 cases of diphtheria in November, 5 more appearing during December. In the week January 21st-26th, 1899, a bacteriological examination of the throats of the whole of the 586 children was made by inoculating blood serum gelatine in tubes with mucus taken from the pharynx and fauces by sterilised cotton-wool swabs. The tubes were inoculated for twenty-four hours at 37.5° C., and the growth examined by cover-slip preparations stained with methylene blue. Of the 386 children 190 showed the Klebs-Loeffler bacillus, and 99 that of Hoffmann, giving percentages of 34.1 and 16.9 respectively. It being impossible to make inoculation experiments on animals with such a number, the morphological appearance of the B. diphtheriæ, as described by Washbourn and Garratt[1] and Eyre were relied on. Meade Bolton had stated that of 214 healthy persons exposed to the infection of diphtheria 45 per cent. showed the Klebs-Loeffler bacillus; Parke and Beebe found it in 50 per cent. of 48 apparently healthy children in 14 families in which cases of diphtheria had occurred. Müller found that among 100 children in the general wards of the Charité Hospital, Berlin, 6 showed the Klebs-Loeffler bacillus on admission, and it appeared in 14 others two days later, without any symptoms of the disease. Between November, 1898, and January 15th, 1899, 21 cases of clinical diphtheria appeared in the school at Forest Gate; the children showing the bacillus were placed in separate wards; school work was suspended, and the infected children met the healthy only at meals at separate tables. The structural arrangements of the school precluded complete isolation, but all plates, cups, and spoons were boiled after use. Notwithstanding the imperfect character of the isolation the number of cases of clinical diphtheria, as well as of sore throats, at once declined. Five cases of diphtheria occurred in February, and though 30 per cent. of 100 children taken at random from the apparently healthy in March were found to have Klebs-Loeffler bacillus in their throats, the attempt at isolation was abandoned and school work resumed. This was followed by a rise in the number of cases of diphtheria as well as of sore throats, those of diphtheria from 1 in March to 9 in April, and of sore throats from 9 to 19, while of 18 children ascertained to be free from the bacillus at the time 6 showed it ten days later. Of 7 "strumous" children who, on their return from a long stay at a seaside "home," were placed with the apparently healthy, 3 contracted diphtheria in a severer form than any. Examination of 90 children in June and of 50 in September showed a persistent proportion of 30 per cent. of "microbics" A school where no case of diphtheria had been known for two years was examined for comparison, and 18 in 100 found to present the Klebs-Loeffler bacillus. But at Forest Gate schools the number of unhealthy throats was very great. Of the 586 children 262 had enlarged tonsils, 161 more or less hyperæmia and 35 some exudation, percentages of 44.7, 27.4, and 6 respectively, whereas amongst 100 children in the "control" school the percentages were 31, 11 and 0. At Forest Gate of the 190 microbics, 20 had enlarged tonsils and 58 some other throat effection; in the other school, among 41 unhealthy throats, 18 were microbic, and of these 9 had enlarged tonsils and 5 hyperæmic. Examinations of water supplies gave negative results, but the milk contained virulent Klebs-Loeffler bacillus, pure cultures of which were fatal to guinea-pigs. The treatment had been spraying of the actual cases with 2 per cent. lysol night and morning, and of all suspicious ones with 0.5 per cent. of formalin. None were of so severe a character as to suggest anti-toxin. Since June the whole of the milk had been sterilised, and there had been no cases of autumnal diarrhœa though it was very prevalent in the district.

A paper narrating a similar experience at the London Orphan Asylum was read by the SECRETARY in the absence of the writer (Dr. F. H. BERRY, of Watford). Here the 360 boys and 200 girls had little intercourse with the outer world, except during the Christmas and Midsummer holidays, and were kept entirely apart, never seeing one another except in the dining hall and the chapel, when they were separated by wide gangways. The cases occurred amongst the girls only, though the milk supply was the same. There had been no outbreak of diphtheria, and few if any cases for many years; when in January, 1898, after the holidays, several cases of feverish follicular tonsillitis appeared. On February 25th a case of diphtheria was noticed so typical that antitoxin was at once used before the Klebs-Loeffler bacillus had been demonstrated. A series of mild sore throats was followed on March 27th by a case of diphtheria (clinical and bacteriological), and three sore throats with the Klebs-Loeffler bacillus, which were at once isolated. A succession of "throats" lasted till April 30th, when after an interval of a week 4 cases of typical diphtheria and 3 suspicious throats, 1 of which developed into diphtheria, occurred between May 7th and 10th. All the cases were of a severe type but, being treated promptly with antitoxin, made rapid recoveries. It was then resolved to isolate all children with sore throats in a vacant house in the grounds; but since these numbered 76, and the accommodation was not sufficient for more than 50, they were divided into dark red and pale red throats; the former, as presumably the worst, were isolated and the latter sent back to the school. Dr. Washbourn was then asked to examine the resident mistresses and all the girls whose throats presented anything amiss. These were 142 in number, 8 being mistresses. Diphtheria bacilli were found in 3 mistresses and 14 girls, and Hoffmann's bacillus in 33; 2 of the mistresses were teachers of music, who gave their lessons in glass-walled compartments just large enough to hold the piano, teacher, and pupil, which may have assisted in the spread of the infection. All who, though not ill enough for the infirmary, presented Klebs-Loeffler bacillus were detained in the isolation building for a fortnight, their throats being sprayed with a disinfectant night and morning. A fresh examination showed only 2, 1 mistress and 1 girl, still infective, but these, after another week's treatment, were pronounced free, and no more sore throats had appeared in the school from that time, or, indeed, from the exclusion of those in whom the Klebs-Loeffler bacillus was found.

[1] BRITISH MEDICAL JOURNAL, April 15th, 1899, p. 893.

MANCHESTER MEDICAL SOCIETY.—The following gentlemen were, at the annual meeting of the Society, elected office-bearers for the year 1900:—*President:* Dr. Railton. *Vice-Presidents:* Mr. Coates, Dr. Donald, Dr. Milligan, and Dr. Wild. *Treasurer:* Dr. Glascott. *Secretary:* Dr. Reynolds. *Committee:* Dr. Brazil, Dr. Brockbank, Dr. J. C. Clegg, Dr. J. J. Cox, Dr. Harris, Dr. Ledward, Dr. F. C. Moore, Mr. J. E. Platt, Dr. Skinner, Dr. G. Thomson, Dr. Williamson, and Mr. Wilson. *Library Committee:* Dr. Kelynack, Dr. Lea, and Mr. Smith. *Auditors:* Mr. Ray and Dr. Walls.

REVIEWS.

SOME RECENT WORKS ON THERAPEUTICS.

THE wide publicity which has been given by its advocates to the Nauheim method of dealing with heart disease would appear to have led to a strong demand for literature on the subject, and, as one of the first in the field, Dr. THORNE has reissued and amplified in many ways the work which he produced in 1895[1]. His account of the method and its application, its advantages and its results, are set forth with commendable brevity and precision. The main object both of baths and exercises being to equalise and regulate circulation, and by that means to remove unequal strain upon the heart, it is obvious that their use must be guided by individual judgment in individual cases. General principles alone can be laid down in books, although on such a subject the door is obviously open to endless theoretical speculation. Dr. Thorne's book is not overburdened with theories, and will be found a useful guide in daily practical work. Many successful cases are recorded and well illustrated by sphygmographic tracings. The presentation of the successful side of any new treatment without reference to the relative number of failures is one of the weak points of therapeutic teaching, and invariably leads to reaction. While most careful observers will be prepared to admit that with graduated exercises and superficial stimulation a change is manifest in the point of maximum cardiac impulse, many have found that these changes are not lasting, and that in some cases none of the effects of improved arterio-capillary circulation can be made out. Other patients again have experienced not only no benefit but apparent harm. Dr. Thorne warns his readers against the promiscuous use of these methods, and doubtless speaks from experience of their failure in some instances. A few records of unsuccessful cases, illustrated with tracings of the pulse, would greatly add to the value of the work. There is no magic in resisted movements, as he rightly observes. Elastic expanders have been in use as a means of maintaining muscular integrity for the last forty years. The stimulating effects of salt water bathing have been recognised for almost as many centuries, but it is due to the Schotts of Nauheim that these well-known therapeutic agents have been put under control, and employed with a better understanding of their mode of action. The graduated resistance of the human hand is a far more controllable power than the uniform resistance of an elastic expander. The saline and effervescing bath must needs be controlled with a precision that is impossible in sea bathing. The Schott method, like the sanatorium method of dealing with consumption, consists in the scientific application of treatment which was formerly prescribed without any instruction to the patient how it should be carried out. "Sea bathing" and "gentle exercise" have now to give place to effervescing baths, and graduated movements and the measure of their success will be proportionately greater as experience proves the class of case to which they are inapplicable.

Sufferers from asthma will doubtless be anxious to find out what the recent developments in treatment may be that Dr. KINGSCOTE suggests in his title.[2] In the first twelve chapters they will not find much reference to asthma proper, but a good deal about dilatation of the heart and the changes in other organs that are likely to be associated with it. These are dealt with in a somewhat fragmentary manner, but each section contains a good deal that is suggestive over and above the well-recognised theories and descriptions that find a place in most textbooks. The author takes exception to the usual accounts of the anatomy of the heart, and gives a detailed description of his own, which he describes as "immensely more complex" than that in vogue. His reader will doubtless agree with him on this point. The main object of the book, however, is to put forward the suggestion that dilatation of the heart is a prime factor in the production and maintenance of asthma. The author does not wish, he tells us, to be reckoned among those who confuse cardiac dyspnœa with true asthma, but at the same time he asserts that in all cases of asthma which he has examined he has found the heart to be dilated. He has devised a special pleximeter by which he maintains that he is able to detect dilatation of the heart when the organ is overlapped by emphysematous lung, and upon which he has evidently placed implicit reliance in many of his diagnoses. Assuming, then, that in most cases of asthma the heart is dilated, he proceeds to show how such dilatation may exercise mechanical pressure upon the trunks of the vagi, and thereby give rise to spasm of bronchial muscles. These latter, in their turn, may become hypertrophied, and may further acquire a habit of contracting, by which attacks of dyspnœa are apt to be set up without apparent cause. Admitting that irritation of any part of any branch of the pneumogastric nerve may be a cause of bronchial spasm, he very properly insists that all such starting points for reflex irritation should be sought for and removed if possible, but that the dilatation of the heart should in all cases be suspected. He is sceptical as to the relation between nasal abnormalities and asthma, and rightly observes that the asthma is prone to return when the effect of the nasal operation has worn off. In the treatment of asthma he practically adopts the treatment of the dilated heart by means of baths and exercises, especially the latter, and the occasional use of oxygen inhalations. A series of cases, 37 in all, is appended, which will serve to illustrate the practical side of the arguments which he puts forward. The book is excellently got up and printed. A coloured plate to show the common condition of dilated venules along the lower costal margins is dignified as a representation of "Cingula Athletica," and stated to be a pathognomonic sign of hypertrophic emphysema in the gouty, described by Dr. Blake, in the year 1877. It may cause some astonishment to older practitioners who have been taught by the traditions of the past to associate it purely with nervous irritability.

Dr. ODILON MARTIN'S little handbook on a practical subject,[3] one of the volumes of the Encyclopédie Scientifique des Aide-Mémoire, gives in seven chapters a common-sense account of the ordinary lines of treatment of typhoid fever. In describing the clinical features of the disease, it is set down that myocarditis is a very frequent change; to this statement some qualification is required, for, although the muscular fibres may show cloudy swelling as a result of exposure to the typhoid poison, any further change in the heart is so rare that the bald statement that myocarditis is common rather overstates the case, and is at first sight misleading. In the remarks on the dietetic treatment stress is laid on the desirability of washing out the tissues, and so getting rid of the poisons by means of the kidney; for this purpose the diuretic properties of milk are very useful. In considering the ways in which the poisons may be removed from the system, the rise and fall of the practice of bleeding is referred to, and its use in combination with transfusion is recommended in severe cases. As to purgatives, sodium or magnesium sulphate, or preferably, from its antiseptic action, calomel should be employed every three days up to the end of the second week; while the impossibility of establishing a really aseptic condition of the intestines is fully admitted, an account is given of the various drugs that can be given for this purpose. After calomel, benzo-naphthol is the most satisfactory, inasmuch as it is superior to salol in not affecting the kidneys. The treatment by cold sponging and baths is minutely described and its effects carefully tabulated. Under the heading of injections of artificial serum the procedure of transfusion with saline solution is described. The injection may be made into the substance of muscles as well as on the usual intravenous plan; but the latter method is nearly always adopted as the more rapidly produced. The vein can be put into communication with the injecting apparatus by plunging a trocar into it through the skin, as suggested by Dr. Mayet, or the vein can be exposed in the ordinary manner. As already mentioned, transfusion and bleeding are usually combined. It is, perhaps, rather disappointing

[1] *The Schott Methods of the Treatment of Chronic Diseases of the Heart.* By W. Bezly Thorne, M.D., M.R.C.P. Third Edition. (London: J. and A. Churchill. 1899. Demy 8vo. pp. 132. 6s.)

[2] *Asthma: Recent Developments in its Treatment.* By Ernest Kingscote, M.B., C.M., L.R.C.S. Edin. London: Henry J. Glaisher. 1899. (Demy 8vo, pp. 196. 5s.)

[3] *Thérapeutique Clinique de la Fièvre Typhoïde.* [Treatment of Typhoid Fever.] By Dr. Odilon Martin. Paris.: Masson et Cie. 1899. (Cr. 8vo, p. 174. Fr. 3.)

not to find any account of the protective injections against typhoid fever that have been practised by Professor A. E. Wright, of Netley, but in other respects the book contains a good summary of the treatment of this common disease.

Dr. LOCKHART GILLESPIE has dedicated his book on *Modern Gastric Methods*[4] to Dr. Claud Muirhead, of Edinburgh, who, has deeply influenced an important group of active workers. Beginning with a description of the gastric conditions present in healthy digestion, and the methods by which the contents of the stomach may be obtained for the purpose of examination, including the use of test meals, it describes at considerable length, and with perhaps even too minute detail, the methods of examining the gastric contents, particularly those for determining the presence and amount of the different acids. It then tells how the degree of the activity of the gastric juice, and the motility, size, and position of the stomach may be determined. Later chapters are devoted to the mechanical methods used in the treatment of diseases of the stomach. Special mention should be made of that by Dr. John Thomson on the indications for and methods of forced feeding and stomach washing in children. The book contains, in addition to much original matter, an expert's choice of the more valuable processes of a difficult, ever-widening and increasingly important part of practical medicine, presented in a moderate compass. We would recommend Dr. Gillespie's work to those practitioners in particular who are determined to treat, as far as possible, their cases of gastric disorder on a definitely ascertained basis.

In a small volume, Dr. SYMONS ECCLES[5] has recorded some cases of gastroptosis and general enteroptosis, treated for the most part by massage. The majority of cases have apparently occurred in private practice, and no *post-mortem* records are available. The author points out that although the general treatment by rest, uptilting, and diet, with manipulations and exercises, is applicable to all the various displacements, each case demands modifications in detail. This may be so, but we are bound to admit that the author gives us very little practical information, and that some of his statements seem to stand in need of further evidence.

It is probable that few books published in the English language during the last ten years have exerted so powerful an influence on the treatment of common diseases as MURRAY'S *Rough Notes on Remedies*.[6] It is a small book, and contains comparatively few observations, but they are strikingly original and bear the impress of a practical mind. There is no attempt at theorising, but each of the eleven short articles is a therapeutical gem. Dr. Murray has taught us many useful things, amongst others the value of massive doses of calomel in many acute diseases, the utility of large doses of arsenic administered for short periods in chorea, and the use of belladonna for the expulsion of renal calculi. His energetic protest against a prolonged course of mercury in the treatment of syphilis has not been without effect, and he has argued strongly against the prejudice as to the employment of nitrate of silver in epilepsy, locomotor ataxy, and many other diseases of the nervous system. His lucid exposition on the employment of old brandy in the adynamic diseases of old people is a valuable contribution. He speaks of forty-year-old brandy; but probably this is a counsel of perfection, though even better results might be obtained from yet earlier vintages—say that of 1820!

When Dr. MOOR'S original article on the treatment of opium poisoning by potassium permanganate was published in the BRITISH MEDICAL JOURNAL of June 22nd, 1895, it at once attracted attention. Since then this antidotal treatment of opium and morphine poisoning has been generally adopted. The present work[7] contains records of a large number of cases derived from various sources. The author complains that his method has been generally misunderstood, or that it has not been followed with strict accuracy. As this is a matter of some importance, we recapitulate his salient points: (1) One grain of potasssium permanganate dissolved in an ounce of water should be administered by mouth for every grain of morphine, and for every ten grains of opium; (2) the same dose should be given for every grain of laudanum; (3) if the quantity of poison taken cannot be ascertained, eight or ten grains of the antidote dissolved in a wineglass of water should be given at once, and repeated once or twice at intervals of half an hour; (4) a weak solution of the permanganate, about a grain to the tumblerful of water, should be administered by the mouth every thirty minutes during the entire stage of the opium narcosis, and for some time afterwards at intervals of an hour; (5) a grain of the permanganate in a teaspoonful of water should be injected hypodermically every thirty minutes; (6) in the case of children a proportionately smaller dose of the antidote may be given. It is added that codeine is neutralised by the permanganate just as effectually as morphine.

Miss WALKER had reprinted, with additions,[8] an article from a recent number of the *Practitioner*, giving the result of her experience of treatment at her two homes, or sanatoria, in Norfolk. The total number of cases treated during the seven years is 78, of whom 26 are still under treatment. The number returned as "recovered" is 26, whilst 6 more were improving, 9 died, 4 were going back, and 7 were lost sight of. The numbers are, of course, too small to be of value by themselves, but, so far as they go, they are satisfactory.

Mr. GADD'S useful *Synopsis*[9] contains a great deal of information about tests for chemicals, volumetric solutions, thermometer scales and weights and measures arranged, for the most part, in a tabular and easily accessible form. Mr C. G. Moor, Public Analyst for Exeter, has added a series of notes on analytical methods and suggested standards, which cannot fail to be of use both to chemists and medical officers of health. Many original papers have been consulted, and the work is well and carefully done.

The new edition of the *Pharmacopœia of University College Hospital*[10] contains the various formulæ in use there, and also a quantity of matter useful to the student on the testing of urine and blood, the use and preparations of stains, the treatment of acute poisoning, the preparation of poultices, mustard and cold baths, the wet pack, icebag, etc. The size of the book is convenient for the pocket, the binding is flexible, and there are blank pages for notes.

[4] *A Manual of Modern Gastric Methods, Chemical, Physical, and Therapeutical.* By A. Lockhart Gillespie, M.D., F.R.C.P.E., F.R.S.E. Edinburgh: Oliver and Boyd. 1899. (Crown 8vo, pp. 175. 15 illustrations. 5s.)

[5] *Difficult Digestion due to Displacements.* By A. Symons Eccles, M.B. London: Baillière, Tindall and Cox. 1899. (Demy 8vo, pp. 138. 4s.)

[6] *Rough Notes on Remedies.* By William Murray, M.D., F.R.C.P. Third Edition. London: H. K. Lewis. 1899. (Cr. 8vo, pp. 142. 3s. 6d.)

[7] *The Permanganate Treatment of Opium and Morphine Poisoning.* By Dr. William Ovid Moor, New York City, St. Petersburg, New York, and Rome. Published by the Author. 1899 (Demy 8vo, pp. 74. 2s.)

[8] *Open-Air Treatment of Consumption: Seven Years' Experience in England.* By Jane H. Walker, L.R.C.P., L.R.C.S., M.D.Brux. London: J. and A. Churchill. (Demy 8vo, pp 10. 1s.)

[9] *A Synopsis of the British Pharmacopœia, 1898.* By H. W. Gadd. Fourth Edition. London: Baillière, Tindall, and Co. 1899. (32mo, pp. 224. 1s.)

[10] *The Pharmacopœia of University College Hospital, 1899.* Edited by Harold Wilson, Pharmaceutical Chemist, Dispenser, and Teacher of Pharmacy to the Hospital. London: James Truscott and Son. (Fcap. 8vo, pp. 63. 1s. 6d.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Poison Bottles.—We have received a sample of a poison bottle called "The Practical," which perfectly fulfils the requirements of the poison regulations as regards form and touch. The bottle is of blue glass, and one side is made rough by means of diamond-shaped projections; the form is a combination of the flat and octagon poison bottle. It is a strong bottle, all the corners being rounded, and the smooth side allows the use of a full-sized label. It can be obtained from Messrs. Maw, Son, and Thompson.

THE REMOVAL AND TRANSPORT OF CAVALRY WOUNDED.

By T. F. S. CAVERHILL, M.B., C.M., F.R.C.P.Edin.,
Surgeon-Major the Lothians and Berwickshire Yeomanry Cavalry.

IN a previous article in the BRITISH MEDICAL JOURNAL of January 13th I referred to some defects in the medical organisation of our army in regard to the wounded of our cavalry and other mounted branches of the service. It was stated that over 20,000 mounted men (now to be increased to 35,000) would shortly be constantly engaged at the front in South Africa, and that for the special needs of that force a sufficiently mobile ambulance service was not in existence. A cavalry division had to depend on a bearer company *on foot* to look after its wounded. It was further pointed out that the greatest danger to the wounded soldier was immediately behind the fighting line—between the fighting line and the field hospital—and that, in the case of the cavalry soldier, that danger was enormously increased by his receiving his hurt at a great distance from the main body, called, as he now is, to fight in force, often on foot, ten, twenty, or thirty miles in advance; that as a result of delay in bringing him to a field hospital, the wounded cavalry soldier was deprived to a great extent of the advantages of the antiseptic system, that the mortality would thereby be unduly raised; and that, if antiseptic dressings were not efficiently applied at the proper time, a constant stream of septic cases would flow from the front through our hospitals on the lines of communication, and at our base, a danger to others and a heavy tax on the medical staff.

A plea was therefore advanced for a more mobile ambulance organisation to follow cavalry and other mounted troops, to render efficient first aid, and to collect and bring their wounded as speedily as possible for treatment at a field hospital.

In the campaign in South Africa it has been decided that all Red Cross Society and other auxiliary help must be confined to the lines of communication and to the base of operations. We must therefore be content to see the wealth of the country poured out without stint to provide every comfort and luxury to the wounded cavalry and infantry soldier on his journey homewards; but at the time when his life and the future progress of his case depends on immediate and efficient surgical aid, the cavalry soldier must trust exclusively to a rigid and inelastic official system which has broken down in the past, and will, when applied to the 35,000 mounted men in South Africa, result in a heavy mortality and an untold amount of mental and physical suffering.

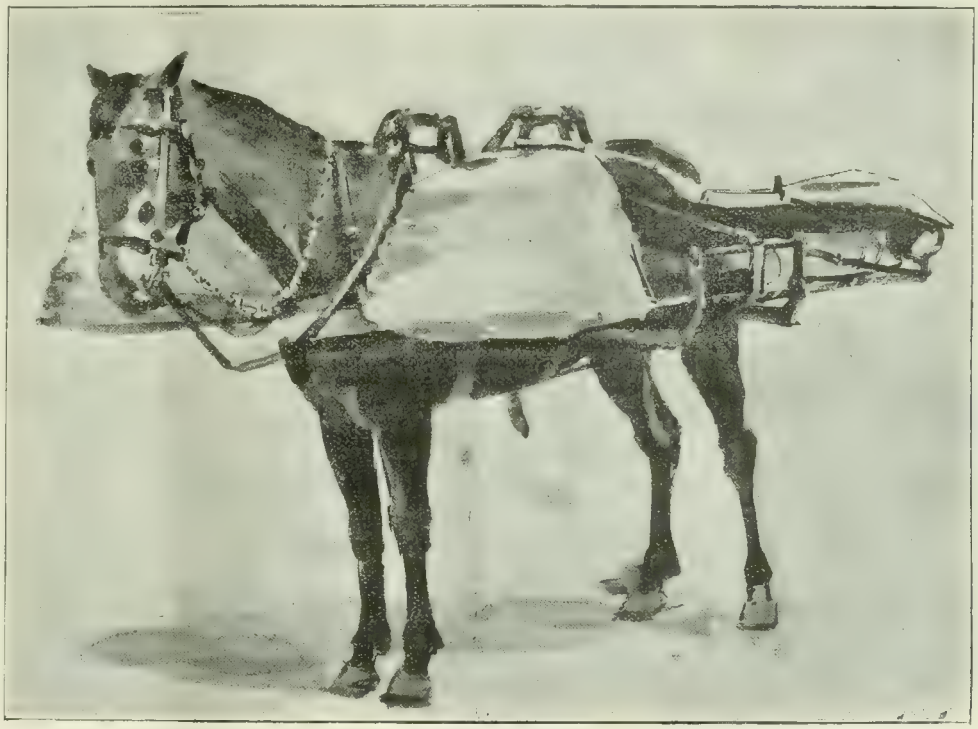


Fig. 1.—Horse Litters (from a drawing by Mr. Arthur Melville).

The first step for the relief of the injured cavalry soldier, if still on horseback, is to lift him off; if dismounted and bandaged, to lift him on his horse so that he can ride back by himself, or with some support. It is of great consequence that all mounted soldiers should be able to render such assistance. It will increase their self-reliance, and to some extent make them independent of regular organised help.

Such instruction is now laid down in the new *Manual* of the Royal Army Medical Corps. Three bearers only are there given, but when four soldiers are available the dismounting can be more comfortably carried out.[1] Nos. 1 and 3 look to the wound, and if necessary apply a first dressing. No. 2 relieves the wounded man of his accoutrements. No. 4 holds the horse.

Removal from Horse.

(*a*) In case of injured lower limb, Nos. 1, 2, and 3 approach on the wounded side; on the command "lay hold" No. 1 from behind catches hold of the pelvis and the sound leg. No. 2 is held round the neck and shoulders by the wounded man. No. 3 holds the wounded leg. On the word "ready, lift off," the wounded man is taken off and held over the stretcher standing near, and on the word "lower wounded" is laid on it (Fig. 10).

(*b*) In case of injured upper limb, the wounded man is approached on the sound side. No. 1 supports pelvis and legs. No. 2 is held round the neck by the sound arm. No. 3 supports the wounded arm. Commands, the same as before.

It is of great consequence in all field work to know how to tie up a horse so that he cannot move from the spot. Pass the reins over the head, then push them under the girth under the saddle flap or under the surcingle; pull the horse's head round towards that side; keep it in that position by making two half hitches on the reins. The horse may describe a small circle, but he cannot break away. Knee haltering is generally used in South Africa; a strap fastens the head collar stall to the foreleg above the knee, the leg is thus kept in advance of the other.

THE REMOVAL AND TRANSPORT OF THE WOUNDED CAVALRY SOLDIER.

When a soldier is wounded, the greatest benefit, next to staunching a dangerous bleeding, that a comrade can render him, is to remove him to a place of safety, to protect him from further rifle or shell fire, to prevent him being ridden down or run over, and to bring him to the dressing station, or to a place where he may be readily found by the Army Medical Corps.

Removal by One Man.

If conscious and able to hold on, a wounded man can be

carried pick-a-back, or in front, with one arm round the back below the shoulders, the other underneath the thighs. If, however, the wounded man is insensible, the "fireman's lift" can be used to raise and carry him unaided.[2] Lay him on his face, arms to the side; stand at the head, place your hands beneath patient's shoulders, and raise him to the kneeling position (unless the legs are broken, when you must kneel); place your hands under the armpits, raise him up, stoop, place your head beneath his body, bring his right arm around your neck, put your right hand around patient's right thigh, bring his weight well on to the centre of your back, grasp his right wrist with your right hand, and rise to the erect position. The left hand is thus free to use a revolver.

Removal by Two Men.

If able to sit up, a patient can be carried a short distance by a two, three, or four handed seat, or by two rifles, with his arms round the necks of the two bearers.

With an insensible man, one bearer kneeling behind passes his hands under the armpits, and clasps them in front of the chest; the other bearer carries him feet first, with a leg on each side. If, however, a leg is broken, both the legs will be tied together and carried in a horizontal position.

Transport by Hand.

The regulation army stretcher is carried in the regimental waggons, but the want of a portable stretcher with cavalry has been much felt, and many have been invented. I had one made in 1886, and it has been in constant use since. Each pole has two joints, and metal tubes keep them rigid. When folded up each pole lies flat, and it is fastened behind the carbine bucket. The canvas is divided transversely, and one-half carried with each pole. If each pole is carried in a canvas cover to keep out fine dust, the objections usually urged against metal tube joints in sandy regions will disappear (Fig. 9).

The sword stretcher invented by Surgeon-Lieutenant-Colonel Naismith, Ayrshire Yeomanry, is strong and efficient for short distances, and readily put together. Only two clamps and the canvas are carried. Four swords in their scabbards are clamped by their points; there is an opening on each side of the canvas to allow of this being done.

A blanket or horse cover, to be carried by two men, can be utilised as a stretcher by tying loops of leather or a rope to each corner with a stone rolled up in them to prevent slipping of the rope (Fig. 6). A surcingle may be used to lighten the weight by passing it through the end loops and then round the neck.[3] The shoulders thus bear most of the weight. The horse blanket alone, if rolled up close to each side of the wounded man, can be carried by four men, two on each side, each man grasping the rolled up blanket at the middle and end. If bundles of twigs and branches or poles and lances are available, an improvised stretcher can readily be prepared by pushing them through several slits cut in the horse blanket, four on each side. A rifle stretcher formed by two rifles and a blanket, as described in the *Manual* of the Army Medical Corps, is efficient and reliable.

IRREGULAR MEANS OF TRANSPORT.

I shall now speak of the various means of transport by animals, confining my remarks to the use of mules and horses. The subject may be considered under four headings:[4]

TRANSPORT BY HORSES.

(*a*) Without any special arrangement, either in sitting or lying position, supported by a comrade either walking or riding alongside.
(*b*) With some support for the back, arranged behind the rider, when the patient is weak or unconscious.
(*c*) With some contrivance for carrying a man lying down by either one two horses.
(*d*) With a stretcher along the back of a horse.

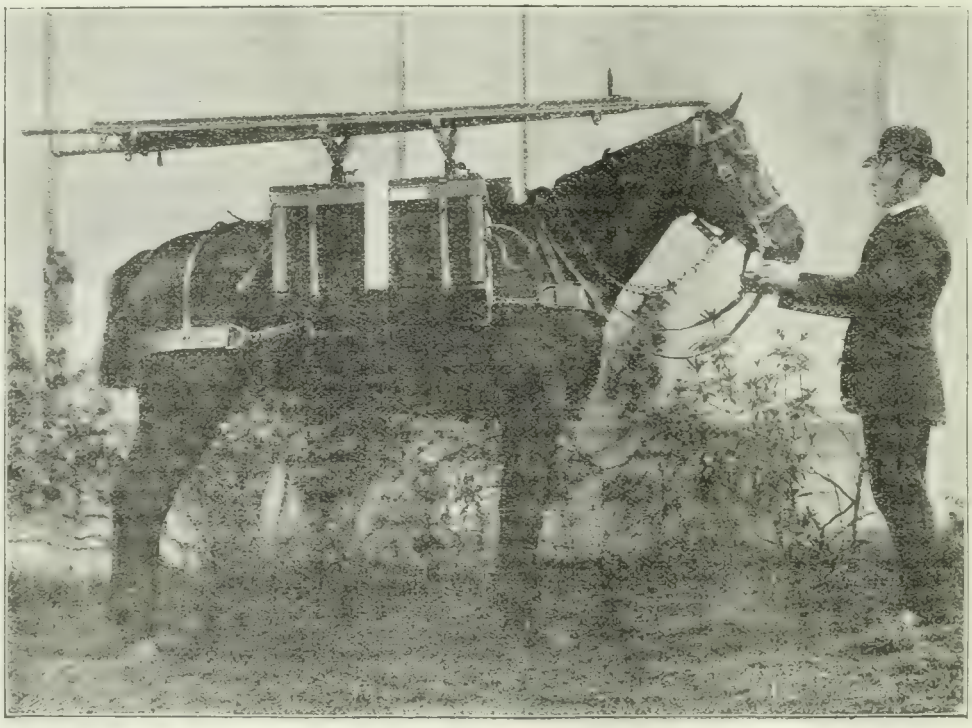


Fig. 2.—Surgical panniers on horseback, with stretcher. Panniers can be made into dressing or operating table.

(a) *Without any special arrangement, either in sitting or lying position; supported by a comrade either walking or riding alongside.*

Schmucker[5] relates how, after the battle of Leignitz, 500 soldiers wounded in the arm were brought to Breslau riding on the troop horses of a dragoon regiment, whose riders had dismounted. Larrey[6] mentioned that on raising the siege of St. Jean d'acre Napoleon commanded all mounted officers to give up their horses for transport of the wounded. Longmore[7] states that not only was this carried out by the English in Spain, but that fractures of the thigh after being suitably splinted were carried on mules in a sitting position.

Dr. Huntingdon,[8] of the United States Army, wrote in an army circular: "During the last war I saw a wounded soldier brought back from an expedition who lay across the saddle with his face downwards and supporting himself with one foot in the lengthened stirrup."

To Carry an Insensible or Dead Man on a Horse.[9]—Lay him flat on his face on the ground. Get two head ropes; tie one round his body below his shoulders, stretch both his arms out to the front, and with the same rope tie his wrists together, having the tail of the rope free. Tie the second rope round his waist, and continue it round his ankles with a tail free. Cross the stirrups over the saddle of the horse on which you are going to carry him. Lift him on to the horse so that he lies face downwards across the saddle-head to the offside of the horse. Pass the tail of the rope from the wrists under the horse's belly and tie it to the stirrup which hangs over the near side; similarly pass the tail of the rope from his ankles under the horse's belly and tie it to the stirrup that hangs over the offside. You can then lead his horse at a gallop if necessary to get him away from danger.

General Sherman[10] recommended that where a wounded man could not keep himself in the saddle a comrade should mount behind him to support him and guide the horse.

Dr. Patzki[11] mentions the general use of this kind of transport in expeditions against the Indians. Persons slightly wounded can often be carried sitting on horseback, when there is no saddle, in the following way:

To Carry a Wounded Man Sitting on a Horse.—With a regimental blanket or piece of clothing make a sort of stuffed seat without folds. Prepare a stirrup from a rope or strap, which is made fast to the horse's girth. A girth is necessary, however, as you cannot improvise a saddle or seat without it. The string binding the two together should not be too thick, so as not to chafe.

If in a patrol of three one man is so wounded that with some support he can still sit on, he can be transported back by the other two on horseback.[12] They place the wounded man in the middle, and each takes a half of the snaffle rein, the curb is still held by the wounded man or else attached to the saddle. If the wounded man is exhausted he can be supported by the left rider with his right arm, by the right rider with his left arm under the arms. If the wounded man is obliged to dismount it can be carried out by one man, the other holding the horses.

(*b*) *With some support for the back, arranged behind the rider, when the patient is weak or unconscious.* Longmore[13] mentions the chair arrangement of old times. Pillows behind the saddle were made often with backs, but horses, in his estimation, will usually be too enfeebled to carry two men far.

For severely wounded a saddle must be so prepared that both of the man's legs can hang down one side of the horse. Specially suitable is a chair with its legs cut short just leaving, however, a small stump at each corner. Round these stumps straps or ropes are lashed, and then made fast to the girth.

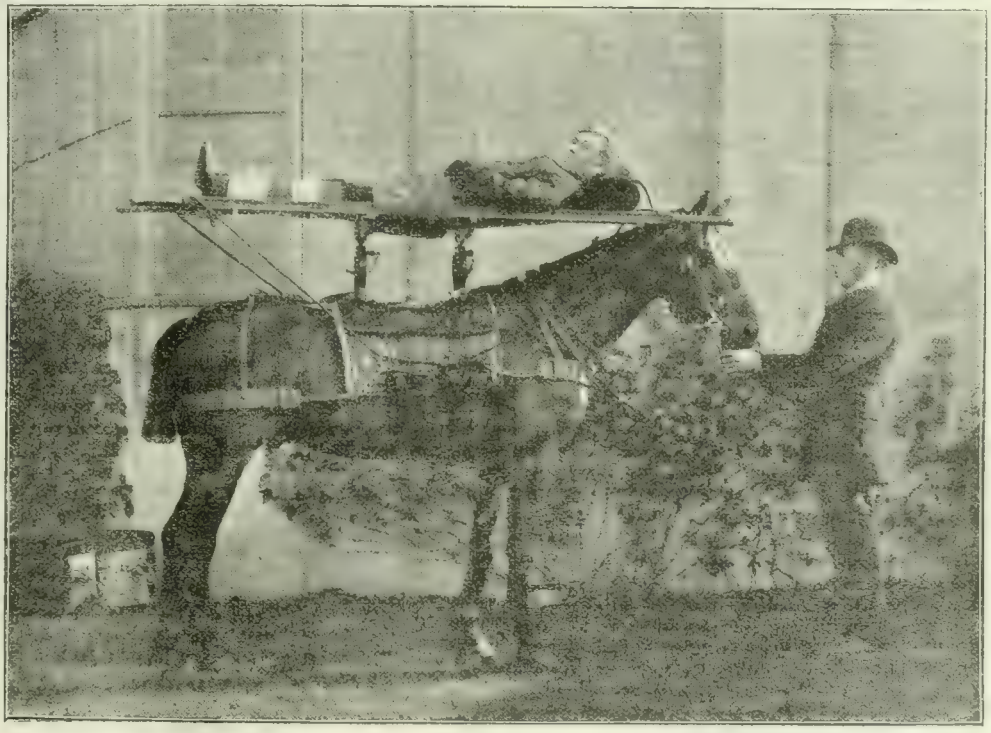


Fig. 3.—Pack saddle on horse; ironwork altered to receive the iron pedestal of the wooden transverses; these can be raised or lowered for ascents or descents. Motion is more pleasant than hand carriage. Can be made 6 inches lower than in photograph.

The girth or surcingle going round the horse must be lengthened by the addition of a second. To make the position more agreeable to the patient, one or two loops may be made to hang down for the feet to rest on. The patient must, of course, be firmly tied to the chair. Pads must be put in to keep the chair level if there is a dipping to one side or other.

Such a seat can also be constructed from boards, branches, or pieces of wood, if nails can be obtained.

Dr. Crane, U.S.A.,[14] relates how an injured man was carried a twenty-five hours' journey with a flesh wound in the thigh, half lying in a box which had the lid and one end knocked out; the whole was tied on to a pack saddle.

Longmore states:[15]

In the early part of the Crimean war, when the sick accumulated in large numbers, and it was necessary to remove them from the front at all hazards, the heavy ambulance could not be used. The horses of the cavalry were sometimes employed for transporting the patients to Balaclava on ordinary saddles. Under these circumstances it has happened that a weak man who had been carried from the tent in which he had been lying, and then lifted into his seat on the horse, has died even before the line of the several regiments of the division could be got together for the cavalcade to leave the ground. Deaths also occasionally took place during the journey. These fatal events were manifestly due, in a great degree, to the effects produced on the very enfeebled frames of the men by the change from the horizontal to the upright position. Unfortunately the evil was unavoidable, for there were no other means available for the removal of the sick from camp, where to remain under the circumstances of the time was almost certain death for such patients.

Lieutenant Sherman,[16] of the United States Army, was so severely wounded in an affair in Texas that he could not remain on horseback, and the difficulty was how to get him back to the nearest fort. This was solved by some Tonkawa Indians, who placed him on the saddle, to which two bent branches were bound at an angle of 50°. Lieutenant Sherman was firmly bound to this, while his legs were tied to the branches in an extended position on each side of the horse, the branches in turn being made fast to the saddle. The arms were bound to the body.

It is evident that an arrangement like this could be of the greatest service, either by using branches or a chair made from pieces of wood, and hoop iron or other material to give the necessary stiffness at the back.[17]

(*c*) *Transport by One or Two Horses with Some Contrivance for carrying a Man lying down.*

Lord and Baines[18] mention that, where fighting savages, it is necessary to carry away all wounded at any cost; they show how, by knotting the ends of a blanket together and placing two men in the bights, the central part might be laid across the back of a horse, with one man hanging on each side and secured with the best means available at the moment. The



Fig. 4.—Sledge stretcher. Used by North American Indians and by Union troops in Indian war. Litter can be made as double inclined plane for fractured thigh.

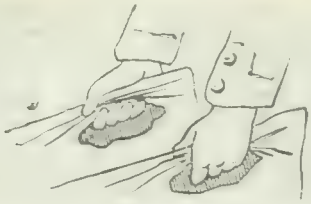


Fig. 5.—Improvised stretcher. Slits cut at corners of horse blanket. (Horse blanket is worn on service as saddle cloth.)

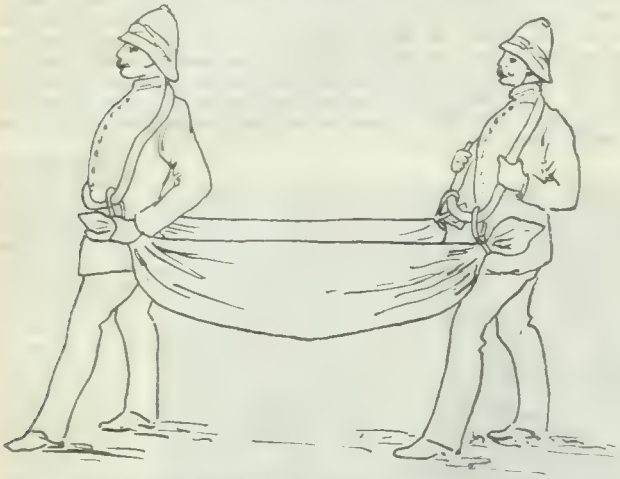


Fig. 6.—Horse blanket utilised as stretcher; surcingle used to lighten weight.

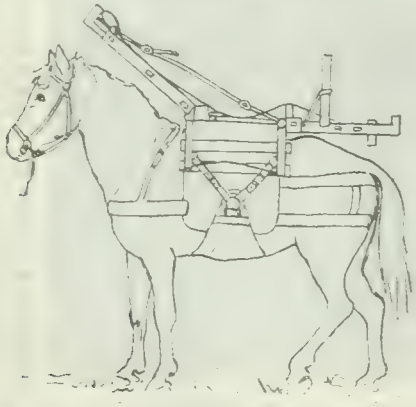


Fig. 7.—Mule stretcher: limbs lie on double inclined plane. Invented by Dr. McElderry, U.S.A.

Kaffirs and most other savages carry off not only their wounded but also their dead—not from any motives of humanity, but simply to deprive the enemy of a trophy. The French have constantly remarked on the rapid and sure manner in which the Arabs manage to carry off their wounded during their contests with them in Algeria and Kabylia. They use mules or horses without any regular mechanical conveyance, and with the aid only of the common pack saddle, sacks, and cords which are used in carrying stores.

Dr. Bertherand,[19] Director of the School of Medicine in Algiers, has described at some length the manner in which the transport is effected. The same method might be adapted anywhere with transport mules in case of the absence or of insufficiency in number of the regular and authorised contrivances for removing wounded. It is briefly as follows:

The mule being ready saddled, two large sacks are stuffed full of straw, leaves, or grass. One of these sacks is then firmly corded on each side of the pack saddle, and this is done in such a manner that the convexities of the two sacks, and the upper surface of the pack saddle, are all on the same horizontal plane. Any depressions between the saddle and the bags are made level by stuffing in hay and grass. This forms the litter. All that remains is to throw over all a cloak, so as to make the support soft and even for the patient, who is then placed upon it in a recumbent posture across the animal, not parallel with the line of his walk. The litter formed in the manner described has quite length enough from side to side to carry the patient crosswise. Afterwards, as opportunity occurs, branches are arched over it, so as to protect the patient, in case of need, from sun or rain.

Dr. Bertherand states that Europeans, as well as natives, who have travelled long distances in this fashion declare that this mode of transport is very easy, and almost entirely free from jolts. Sometimes in very severe injuries, and to prevent local displacement, the patient is securely tied to the litter, and when thus fixed he can be carried away at a gallop without risk or excess of pain from the movement. The objection to such a mode of transport would be its bulk in passing along narrow, winding footpaths, or through crowded places, but on occasion it might render great service.

Dr. M'Elderry,[20] U.S.A., has invented a mule stretcher (Fig. 7) for use in mountainous districts with narrow and deep defiles. The patient lies in a half-recumbent position, and the limbs lie on a double inclined plane. Where wood and nails are to be obtained it could be very easily imitated.

Two horse-stretchers or litters (two long poles with a litter in the middle, one horse or mule going in front, the other behind) are dangerous to use on account of the last horse being apt to stumble, and they involve the use of two horses for carrying one man—a great waste of transport. They have been used by the Americans, and by the Russians in the Caucasus.

A sledge-stretcher was used by the North-American Indians, and by the Union troops in the Indian war. Two long poles, not too thick, were fastened by their front ends on each side of the pack saddle. The free ends rest on the ground, and the patient lies on a litter made by transverse pieces of wood or raw hide, or horse blanket. (Fig. 4.)

(d) Transport by a Stretcher along the Back of a Horse.

The French surgeon, Gouchet,[21] in his review of his recollections of medicine and military surgery, relates his experiences in an American field train in carrying ordinary loaded stretchers on mule pack saddles. (Fig. 8.)

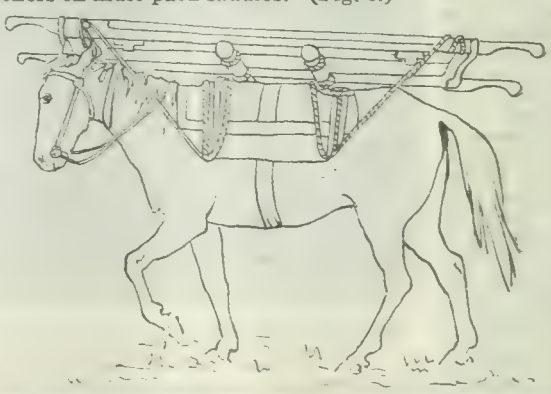


Fig. 8.—Stretcher on mule pack saddle. Improvised arrangement preferred to hand carriage. Stretcher rests on two crosspieces of wood lashed to pack saddle. Used in American war.

Strong and tractable mules were sought out, and to the anterior and posterior bend of every pack saddle a cross piece of wood was tied on. At each end of the cross piece two other pieces were attached lengthways, and on this the field stretcher was bound. In addition, the handles of the stretcher and the rings at the side of the pad were joined by ropes. The head of the injured man lay above and behind the head of the animal. No complaints were made of a side-to-side movement, only dipping lengthways; those carried on this plan preferred it to stretchers carried by hand. My experience of this mode of transport is most favourable.

The "aparejo" of the Spanish Mexicans, described by Lord and Baines,[22] I have also tried successfully. It can be quickly made by any saddler, and carried in the regimental transport. When required it is stuffed with straw, hay, twigs, etc. A man

can be carried on a stretcher lashed on to two cross pieces of wood. The motion is more pleasant and smooth than hand carriage.

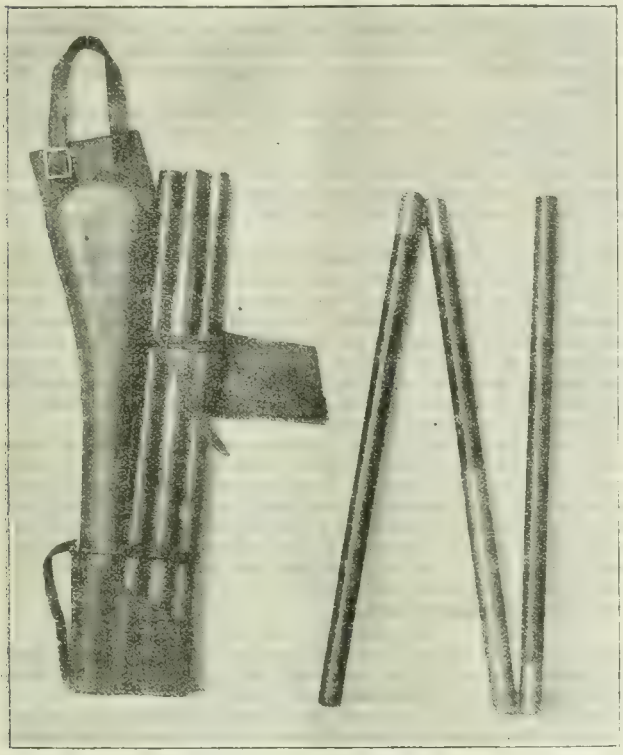


Fig. 9.—Portable stretcher; one pole attached to carbine bucket; 4½ lbs. weight. Half of canvas also carried.

I have made a simple alteration on the iron work of an army pack saddle, by which a loaded stretcher can be carried safely on it lengthways, and with great comfort even to one severely wounded. Two curved pieces of wood have each a square iron pedestal made to fit into a hole in the iron work of the pack saddle. They are placed crosswise, and can be raised or lowered in order to keep the stretcher level on uneven ground. The front transverse of the stretcher itself is curved sufficiently to clear the neck of the horse (Figs. 2 and 3).

The stretcher must be loaded before being put up and bound to the pack saddle (Fig. 3). It is always well to keep the horse steady by blindfolding him.



Fig. 10.—Dismounting by four men. Injured right leg, approach on wounded side; with arm injury, approach on sound side.

REGULAR MEANS OF TRANSPORT.

Cacolets and Litters.

These have been adopted by France since the beginning of their wars in Africa, and form part of the usual ambulance equipment of a French army.



Fig. 11.—Cacolets on horseback. The arms are jointed at +; there is a button arrangement at the foot of the arm rest. Cacolets can thus be loaded from the side instead of from the front, which presents great difficulty if the mule or horse be tall.

In each army corps 10 litters and 20 cacolets are given to the ambulance of the *quartier général*, and 10 litters and 20 cacolets to that of each division of infantry.

Undoubtedly the French have brought their cacolets to great perfection, and ours have been modelled on their pattern, but as yet they are only served out for use with mules on mountainous expeditions, and were adopted after the good work they did in the Crimea had been seen. The use of litters has now been given up in our army, owing largely no doubt to the reasons stated later on. The French officers who served in Africa have always spoken in high praise of the use of mule cacolets and litters. Marshal St. Arnaud[23] wrote as follows:

> The use of a mule with a cacolet or litter was first adopted in Algeria. By means of these ingenious equipages hundreds of wounded, amputated, and sick soldiers have been transported in safety to our base of operations.

Marshal Bugeaud[24] warmly advocated the mule litter; he compared the good they effected with what he saw in Spain in 1814, when, in consequence of the want of transport suited to the ground, whole divisions had been obliged to leave their wounded in the field. So strongly did he feel the bad effect which such neglect must produce that he went so far as to say, "Perhaps the courage of our troops would not have sufficed for the conquest of Algeria if we had not been able to save our sick and wounded from the Arabs." Marshal Bugeaud was led to recommend that the ambulance equipment of all the divisions of the French army, cavalry and infantry, should be exactly similar to that of the army of Africa, and that wheeled carriages should be attached to the reserves alone.

It was not without full inquiry and mature consideration that mule cacolets and litters were introduced among the conveyances of the British army. At an early period of the Crimean war it was reported home that the ambulance transport sent out with the troops had failed from various causes, and at the same time it was stated by numerous army surgeons and others that the mule cacolets and litters were acting very efficiently. Kinglake mentions that, after the battle of Alma, the French cleared their wounded off the field so quickly that they came to the assistance of the English.

In consequence of these reports the Director-General, Dr. A. Linster,[25] sent out instructions to the P.M.O. in the field to

convene a Board of experienced medical officers to report on the subject of mule ambulance conveyances. That Board reported greatly in favour of the conveyances under consideration. They stated that they considered the merits of the French cacolets and litters consisted chiefly in their general applicability to the circumstances of warfare, in their admitting of the removal of sick and wounded from every description of ground and over every kind of road where mules and litters can travel, and to the rapidity with which the removal couid be effected over roads where wheeled carriages could not travel. On the other hand, the only demerits which they noticed were their uneasy motion in cases of serious gunshot injuries, and the liability of some of the animals to stumble and fall. Colonel Blaine, Assistant-Adjutant-General and Commandant at the headquarters of the army, at the same time reported

That the cacolets and litters now in the French service appear to be by far the most perfect system which has yet been devised for the transport of sick and wounded with an army on the field.

Patterns were obtained from Paris, and a supply of 200 more sent to the Crimea, and later a favourable report was sent to headquarters at home (Longmore).

The French, then, have used cacolets and litters in Algiers, in Crimea, in Mexico, and in the Franco-German war of 1870-71. We have used them in the Crimea and in Egypt. The Austrians have used them in Mexico. The Italians in the Tyrol and Locatis. Both, but the litters especially, were made so as to pass along narrow rocky paths and through wooded tracks.

The value of mule cacolets and litters has been differently estimated. Fischer, in his great work on military surgery, says:

On every hand favourable reports were made of this form of transport. The transport goes on without shaking, and on every kind of ground, more quickly and more certainly than by any other means. One could not wish a cheaper method.

According to Legouest, transport by cacolets is one of the most disagreeable methods, and that by litters not much less so. Neudorfer says:

Many animals have such an unpleasant gait that, whether sitting or lying, one feels as uncomfortable with the rolling as if he were in a small screw steamer. Even with an animal who goes well the constant dipping is unpleasant. Sometimes the strongest animals break down under the load, and they may take some hours to recover strength.

Leon Lefort describes cacolets as a horrible kind of transport, which causes the patient pain; lay him in the litter again and he finds the undulating motion pleasant. The mules push occasionally against one another, and sometimes lie down. He narrates how an officer who was wounded in both feet was thrown down in the streets of Metz.

It is quite true that the Americans, in their great war, set out with a great number of litters and cacolets, and soon discarded them; but it must be remembered that they fought on great plains, when other forms of transport were more suitable, and that, moreover, their litters and cacolets were not so portable as the French. It should not be forgotten also in this connection that in South Africa fighting usually takes place on advantageous heights and in hilly districts, from which the wounded have to be carried.

The opinion of Sir Vincent Barrington,[26] who has been out in several campaigns as Commissioner under the Geneva Red Cross Convention, is most valuable. The most important of his duties was to assist in the transport of the wounded. Speaking in a discussion at the United Service Institution he said:

In my personal experience of actions, where I happened to be near the front, I found the great mass of those who first required removal had wounds in the hands or arms, and I could see what an advantage it would have been had there been a greater number of cacolets or mule litters at the disposal of the ambulance staff in the early part of the action. This was recognised in the Carlist war, and a great number of cacolets were used. I know very well that for serious wounds they are not desirable, but for the large number of slight wounds in hands and arms which are so common when fighting behind embankments, these cacolets are exceedingly useful.

I have made several improvements on our cacolets and litters, by which the sick and hurt are loaded with greater ease and comfort. They are also altered to fit horses so that band horses and those of the mounted infantry can be used; only good tempered, docile horses with good shoulders, and that step short should be chosen. (See Fig. 1.)

Our cyclist makers could make these much lighter and more generally useful than the present patterns issued for mountain expeditions. Though the gait of mules is more pleasant, yet, considering the careful training which animals require for such transport, it is too risky to trust to get mules ready at the last moment. Besides, they cannot gallop well, are stubborn, and are often not equal to the weight, for animals strong and robust enough are difficult to get. The American war proved that tall mules were deficient in stamina. Even for them the weight they carry is almost prohibitive, for the cacolets weigh 56 pounds, the pack saddle almost 62 pounds, and two British soldiers 320 pounds, a total weight of 438 pounds.

When carrying litters the load is increased by 50 pounds, and if the equipment be wet then 20 per cent. may be added all round (Longmore).

Not only for the removal of wounded cavalry soldiers are these litters and cacolets admirably suited if carried on horses, but they have been found invaluable for the transport of wounded infantry.

De Préval,[27] French delegate at the Geneva Convention in 1863, described their ambulance service. He stated that each conductor has two mules, these being able to carry four sick or wounded, and as he makes five journeys in two hours, in that time he conveys twenty to the ambulance waggons; 750 conductors, with 1,500 mules, could do the work of 15,000 of the hospital staff, as experience proves it takes four men to carry a stretcher 1,000 metres, supposing that these men are able to make four journeys in two hours.

With our small staff of stretcher bearers—the minimum standard of height for whom is 5 feet 3 inches—available for such severe and exacting labours, it becomes our duty to see that we are provided with some more expeditious method than hand carriage for infantry. After a great battle our injured soldiers ought to have the assurance that they will not die unrelieved, and that they will, as soon as possible, be brought to the field hospital under the care of the surgeons of the Royal Army Medical Corps.

WAGGON TRANSPORT.

The Commander-in-Chief in his remarks on last year's manœuvres, stated "that a special pattern of light ambulance is desirable to accompany mounted troops."

Country carts can be used partially filled with hay, straw, or grass. With framed hay carts an upper tier can be formed by lacing and interlacing from side to side with a straw or ordinary rope. Stretchers can be suspended in ordinary country carts. They are tolerably comfortable if French spiral spring hooks are made use of. Horses for these do not require any special training, and if the country is suitable, two should be able to transport five men, either sitting or lying down. Such an ambulance would be able to carry, in addition to water, a heating apparatus for soup or beef tea, as well as antiseptic dressings, and thus bring to the wounded cavalry soldier an amount of relief impossible by any other system.

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THERE are now eight Pasteur Institutes in France; arranged according to the dates of their establishment they are those of Paris, Algiers, Tunis, Montpellier, Marseilles, Bordeaux, Lille, Lyons. The last was opened on the first day of this year. There are five like institutes in Italy (Bologna, Milan, Naples, Palermo, Turin), two in Austria-Hungary (Vienna and Buda-Pesth), seven in Russia (St Petersburg, Moscow, Samara, Kharkof, Warsaw, Odessa, Tiflis), two in the Ottoman Empire (Constantinople, Aleppo), one in Roumania (Bucharest), and one in Malta.

CONVALESCENT HOMES FOR SOLDIERS.

II.

IT is not yet possible to speak finally or definitely as to the plan on which adequate convalescent accommodation for our soldiers will be provided. Official plans and intentions in the matter appear to be as yet unfixed. Doubtless the fact that a recognised convalescent list is a very recent military institution renders difficult even an approximate calculation of the amount of accommodation likely to be required, and there is an absence of guiding precedent. Under these circumstances the War Office apparently thinks that the steps taken must be largely determined by, and adapted to circumstances as they arise. The officials of the Army Medical Department state that the promise made by the Government in February last to provide convalescent quarters for the troops has been fulfilled to a considerable extent, and that these are now available. It must be remembered, however, that these establishments, even if they had been fully organised to the extent announced, were only intended to be experimental and partial, and were never represented as being sufficient to meet the full demands, even in times of peace. So far as they have been tried they have proved a great success, and doubtless, in accordance with original intentions, this result would have led to their being generally adopted and permanently organised on a large enough scale to cope with ordinary, and even extraordinary, requirements. But war broke out at a time when the whole enterprise was in little more than an embryonic state, and it may be regarded as certain that the time is too short, and the Army Medical Department too handicapped by want of officers, to allow of rapid development.

Military convalescent homes have been established at several of the selected stations mentioned in our last article. Among these it would appear that there is room nominally available at Yarmouth, Scarborough, Fleetwood, Pembroke Dock, Sandown, and Eastbourne. But not very much of this can really be utilised. Yarmouth and Scarborough are, from their situation, ill-adapted for men coming from South Africa, and will be so for some months to come. This is particularly unfortunate, because they were the first to be used, and are in a greater state of preparedness than many of the others. If the war is of long duration they should prove of service later. Climatic considerations make it useless to include—in an estimation of available quarters—some of the other stations, such as Aberdeen, Ayr, and Tynemouth; and Sandown is not considered to be a desirable place at the present time, Not only is it windy in winter, but the accommodation at present available is unsatisfactory, consisting only of "huts," which proved unsuitable for convalescents in the summer, and have, indeed, been condemned by the War Office. Fleetwood and Pembroke Dock both have a mild climate, but the same objection applies to the quarters at the latter as to those at Sandown. The home at Eastbourne, which has been established since 1892, is in good working order, but has only 20 beds, whilst Fleetwood, which appears on the whole to be the most promising for immediate use among those established last year can, at a pinch, take in 50 men. It was recently stated by the *Morning Post* that these existing Government homes were without orders with reference to receiving convalescents from the war, but we are informed that where the homes are already organised such special orders are unnecessary, and that such accommodation as exists can be utilised for this purpose when required.

It is quite obvious, however, that nothing like the room for 3,500 men, mentioned in Mr. Wyndham's statement of February last, is available, and that the existing Government homes will be a mere drop in the ocean of what will be required if the old system of sick furlough with friends is not to be followed. The great military hospitals at Netley and Plymouth have at present a large number of spare beds; but these will probably soon be occupied by those who need active hospital treatment. Such accommodation as existing military homes can offer will probably be fully required for the men who will be invalided from India and other foreign stations, apart altogether from the war, and rightly or wrongly, therefore, recourse must—and in point of fact will—be had to institutions privately provided. Such offers will be accepted by the War Office to the extent necessary, and, as they have been very numerous, the task of sorting them and considering their relative merits has been entrusted to the Soldiers' and Sailors' Help Society, working in conjunction with the War Office.

They may be divided into four classes: (1) Complete existing convalescent homes; (2) entire buildings for use as homes exclusively for soldiers; (3) existing civil homes, offering a certain number of beds; and (4) private houses, in which hospitality is offered to convalescents. No definite reply seems as yet to have been sent to the majority of these, but the society mentioned is engaged at present in ascertaining which may most advantageously be recommended to the War Office. Particulars of the accommodation which appears most suitable is sent to the officer commanding the corresponding military district, who has it inspected as to its sanitary and general fitness. We are given to understand that the larger homes, constituting the first and second classes above mentioned, would be most useful, and that preference will be given to those which are provided complete with equipment and the necessary nursing and service staff. Medical control of such homes will be placed in the hands of civil practitioners, as there are no officers of the R.A.M.C. available. The question of maintaining discipline in such establishments is considered a very important one at the War Office, and can be met, in the opinion of the officials, by the appointment of a resident non-commissioned officer; whilst the military authorities of the district will inspect the men from time to time.

The officials of the Soldiers' and Sailors' Help Society state that no offers of large homes have so far been accepted, but it would appear that there is no reason why this step should not be taken without further delay, and much excellent convalescent accommodation thereby ensured at once. Procrastination has already resulted in the loss of one of the best chances of the kind—the offer of Mrs. Montague Fowler to provide a home for 150 men with all necessary equipment and staff, close to Woolwich and the Herbert Hospital, the cost of maintenance of the inmates being promised by the trustees of Lloyd's Patriotic Fund. She states that she received no reply to this offer from the War Office. But others are still available, and it is to be hoped that they will be utilised. A few of the most important may be mentioned. The London County Council has granted permission to the Hampstead authorities to use Golders Hill House (formerly the residence of the late Sir Spencer Wells) as a temporary military convalescent home for the Brigade of Guards and Household Cavalry. Mr. A. Cooper has offered the private theatre in his grounds at Surbiton, fully equipped for 35 to 40 patients; steps are being taken to organise a similar home at Windsor, with accommodation for 80 patients; and one is offered at Torquay of 50 beds.

Numerous also are the offers by existing homes of a certain number of beds. Thus, the committee of the Metropolitan Convalescent Institution have expressed their willingness to set aside 50 beds for soldiers in their fully-equipped homes at Walton and Bexhill-on-Sea, for five months from December 1st last. Separate wards were to be allotted, and all expenses, save only those of travelling to the homes, borne by the institution. The beds are vacant and ready now, but the Secretary informs us that he has had as yet no definite reply.

Many of the London hospitals, in response to the circular addressed to them by the War Office, have agreed to reserve some of their beds for the sick and wounded requiring active treatment. Soldiers treated in the wards will be sent to the affiliated convalescent homes, when sufficiently recovered. It has been stated that St. George's Hospital has placed the whole of its home at Wimbledon, with 100 beds, at the disposal of the Government. But the Secretary informs us that they have been reluctantly compelled to withdraw this offer, since they find that they are legally prevented, under the terms of the will by which the home was provided, to put it to this use. They hope, however, to be able to send to the home, when convalescent, such men as may be taken into their wards for active treatment. Where soldiers are thus received among other patients in established homes, it is thought that the ordinary administration of the institution will suffice to secure adequate discipline if aided by periodic inspection by the local military authorities.

Many people have generously volunteered to take convalescent soldiers, as well as officers, into their houses as

guests. Such offers as appear suitable are being considered, but we understand that the authorities in Pall Mall have misgivings as to the advisability of accepting them, unless it be in the homes of officers or others accustomed to the management of soldiers. Numerous small homes are not considered practicable on account of the impossibility of providing for proper discipline and military supervision. The distribution of the men among such homes as may be ultimately accepted will be arranged on the territorial system, the soldiers being sent to such establishments as are in proximity to their usual military depôts.

It is clear that ample accommodation can be secured by the authorities to supplement their own, which is utterly inadequate; and that private generosity, backed by the numerous public funds, will provide the necessary means. But so far no very decided action would seem to have been taken to secure the advantage of this humane and practical patriotism, and to ensure that the accommodation for convalescent soldiers shall be ready in good time. At the moment, it is true, the demand for such quarters for those invalided from the front is very small, and the War Office does not seem to anticipate the need of even extra hospital beds for two or three months to come. But the sick and wounded are already arriving, and the period of grace for preparation will be short. It is very greatly to be hoped that it will not be allowed to slip away, but that the War Office will lose no time in definitely accepting and organising such of the numerous privately offered convalescent homes as are most suitable. The suggestions which have been made of providing accommodation of the kind at Cape Town itself, and the offer by Messrs. Elder, Dempster and Co. of beds in their hotel at Las Palmas, are well worthy of careful consideration. There is not much time left, however, which can be legitimately devoted to mere consideration, and whatever is going to be done in the matter should be done promptly.

As regards officers, the Duke of Abercorn has initiated a "Sick and Wounded Officers' Surgical and Medical Aid Fund," which includes among its objects the provision of convalescent accommodation, and promises to afford much needful help in a quarter where it will be almost as much required as in the case of the rank and file. The Committee recognise that the task of dispensing this aid will require much tact and discretion. The work of this fund will be supplemented by the generous offers of accommodation not only at home but in the Riviera, Madeira, and elsewhere.

ARMY MEDICAL REFORM.

THE long-continued and bitter opposition in past years to reform in the status of medical officers left a deep distrust which has delayed that rehabilitation which its friends believed would have speedily followed the granting of genuine army status and title in a Royal Medical Corps. Distrust, easily engendered, is difficult to remove; so that even if the concession of due status to medical officers has silenced, if not shamed, their more aggressive opponents, it has as yet not been entirely successful in inducing young medical men to select the army as a suitable professional career. But we cannot doubt that great and far-reaching reform will yet do so; provided certain much-needed reforms, consecutive to the creation of the Royal Corps, are now promptly taken in hand.

The coming wave of general army reform which must follow the Boer war will doubtless include the medical service; and it is fortunate for it that its old opponents may have little say in its new reorganisation. The time for formulating the reforms wanted is distinctly propitious, and to this end we welcome the able and temperate article which Major Cockerill has published recently.[1] He enumerates many obstacles to the attractiveness and popularity of the service which must be removed before it can become a truly efficient or contented body.

We take no objection to any of his strictures, but think his statement of them somewhat diffuse; and for the benefit of those who may have to handle practically the reforms it would be well to group them under a few inclusive heads, such as the following: (1) Undermanned establishments; (2) questions of pay; (3) honours and rewards; (4) revision of regulations.

The increase of establishments is the first and most pressing. The medical service must be made at least numerically sufficient for all average duties. This it certainly is not at present. Further, from undermanning flow many of the worst disabilities from which it suffers.

An establishment of 1,000 medical officers has been suggested as a minimum. Whether sufficient or not they would still be much under the total strength of the department of thirty or forty years ago. Of course such an increase, like the increase of cavalry or artillery, means money; but we greatly misjudge the present temper of the country if it permits clamant Army reforms to be sacrificed to a false economy, or to mere budget balancing.

As Major Cockerill demonstrates, it may be easier to vote an increased establishment than to fill it, unless the War Office faces, squarely and fairly, the question of medical supply and demand. It is believed by many that the available supply of medical men will be lessened in the future by the extension of an expensive curriculum to five years.

It is urged further that the prohibition of unqualified assistantships has so increased the salaries of assistants in civil practice, that they now equal or surpass in value the pay of a lieutenant, Royal Army Medical Corps; due allowance being of course made for unavoidable outlay in the service. The Army has also to compete with the Indian Medical Service, which, despite drawbacks, offers a more varied career, more fixed appointments and higher pensions, with scarcely greater tropical service. From all these considerations it is clear that considerable amelioration in the terms of Army service will have to be effected, especially in the junior ranks, before it can successfully compete in the open market.

Undermanning of the medical service is the fruitful source of drawbacks and hardships, and is thus the indirect cause of much of its unpopularity. To it may be traced the grievous inequality between home and foreign tours; the worry and expense attendant on incessant movements; the drudgery, irksome, and irritating, of perpetually recurring orderly duty; the difficulty in getting private, and the impossibility of obtaining "study" leave.

In short, through undermanning the medical service is overstrained at home and abroad; overworked everywhere, and hustled and worried to an intolerable degree.

It is at present at least 30 short of an arbitrary nominal strength of 890; and that number is about 20 per cent. under the strength deemed necessary thirty or forty years ago, when our empire and our army were much smaller than now. It has thus been allowed to dwindle down, while its duties increased, until it is now numerically unequal to the work, whether in peace or in war.

Questions of pay must obviously be considered in relation to those of supply and demand in the medical profession at large, to which we have already alluded; but they can be viewed on their merits; in which sense we assert without hesitation that an increase is necessary both in the home and Indian rates in the ranks of lieutenants and captains.

Neither scales of pay are sufficiently above those now given to civil assistants, and are indeed insufficient to meet the necessary expenses of the officer. The junior ranks spend a large proportion of their total service under the Government of India, which benefits much by such a facile arrangement; yet it has treated the financial parts of several Royal Warrants affecting medical officers with a neglect which absolutely amounts to a scandal.

Army medical officers are still paid in India according to the provisions of warrants which have been cancelled and obsolete for more than twenty years. Successive Secretaries of War and for India have been often entreated to put an end to such an injustice, but have failed to do so. It remains for Parliament to insist that the Indian Executive must and shall respect the financial provisions of Royal Warrants.

Not only does the Government of India pay the officers of the R.A.M.C. less than their own medical officers, but also less than those of any scientific or kindred branch—the Veterinary for instance. While we by no means consider that branch overpaid, yet a veterinary lieutenant receives many more rupees a month than a medical lieutenant; showing that

[1] Reorganisation of the Royal Army Medical Corps. By Major J. W. Cockerill, R.A.M.C., *Journal* of the United Service Institution, vol. xliii. December 15th, 1899.

greater store is apparently set on the horse than on the man who rides him.

The distribution of honours and rewards to medical officers has long been in most scanty proportions compared with other officers, as the present war again demonstrates, although medical officers share in all the hardships, and many of the risks, of their combatant brethren, their allotment of the mystic letters C.B., K.C.B., C.M.G., etc., is merely nominal compared with other branches. Nor, as far as known, has the Indian Government, which makes so great on economy out of the services of the army medical officers, ever recommended one of them even for the lowest class of the Star of India.

The attitude of the dispensers of honours is clearly exemplified in the omission of the name of the principal medical officer of the last Soudan expedition (notwithstanding that he was absolutely the senior officer present) from the big list of those to whom the thanks of Parliament were tendered; and worse still, when the omission was challenged, a Minister was put up, not to apologise, but to defend in the lamest way such a grossly indefensible thing.

As to tangible rewards, they are non-existent to the vast bulk of the medical service. The few good service pensions (on the principle of the confided talents) are carefully reserved for the senior rank only, chiefly we suppose because it is senior.

Revision of the Regulations is necessary in two directions: first, all obsolete or unnecessary paragraphs and articles which assert or imply the bad old supposed inferiority of medical officers should be expunged; secondly, new regulations which shall define the position of medical officers on parade and ceremonial occasions, and their position on Courts, Boards, etc., should be inserted. Even commissions in the R.A.M.C. are still not worded in corps or regimental form, but in that of an extinct department.

The Regulations Branch of the War Office want waking up to such anomalies.

We have not in this review been able to go into details: but we trust we have sufficiently indicated, broadly, the reforms which demand speedy attention by those who may desire to take effective action towards the rehabilitation of the Army Medical Service.

THE ST. JOHN AMBULANCE ASSOCIATION: STOCKPORT CENTRE.

AN account of the difficulty which had arisen at Stockport with regard to the administration of the St. John Ambulance Association centre there, and of the action which the Stockport Medical Society had felt itself compelled to take, was published in the BRITISH MEDICAL JOURNAL of April 22nd, 1899. We then observed that the honorary secretary of the local centre appeared to have mistaken the relation in which the St. John Ambulance Association stands to the medical profession, and observed that it was intolerable that members of the medical profession should be treated with the discourtesy shown to them by the representatives of the St. John Ambulance Association at Stockport. As we were able to announce last October the matter was finally referred to arbitration, and a brief report of the proceedings before the arbitrators was published in the BRITISH MEDICAL JOURNAL of November 4th, 1899. We have now received the following award of the arbitrators.

St. John Ambulance Association,
St. John's Gate, Clerkenwell, London, E.C.

AWARD OF THE ARBITRATORS.

SIR JAMES N. DICK, K.C.B., Colonel C. Bowdler, and Inspector-General Belgrave Ninnis, M.D., R.N., were the arbitrators appointed by the Central Executive Committee to inquire into certain differences of opinion at the Stockport Centre.

In the summer and autumn of last year the Committee of the St. John Ambulance Association, being the Ambulance Department of the Order of the Hospital of St. John of Jerusalem in England, were asked by both the Stockport and District Medical Society and by the Executive of the Local Centre of the St. John Ambulance Association at Stockport to entertain and arbitrate upon a question which had arisen between these two bodies out of the management by Mr. Ferns, the Honorary Secretary and Treasurer of the Local Centre.

Neither the Order itself nor the Ambulance Department of the Order have any function to arbitrate upon such a question, but, the two parties having agreed in writing to refer the matter to three gentlemen appointed by the Committee of the St. John Ambulance Association as arbitrators, and we, having been appointed by the Committee in that behalf, and our appointment having been assented to by both sides, proceeded to Stockport with a view to hearing what was to be adduced by each side, and to make such an award, determination, or decision in the premises as, after hearing the evidence and arguments, we should think fit.

Two prolonged meetings were held at the Stockport Courthouse at Stockport on October 30th and 31st last. At these the following parties were represented, and in the following manner:

The Earl Egerton of Tatton, Chancellor of the Order of St. John of Jerusalem in England, and President of the Stockport Centre, by Mr. Boydell Houghton, Barrister.

Mr. A. E. Ferns, Honorary Secretary and Treasurer of the Stockport Centre, also by Mr. Houghton.

Mr. A. H. Sykes, J.P., Chairman of the Stockport Centre, by Mr. William Cobbett, Solicitor; and

The Stockport and District Medical Society, by Mr. C. H. M. Wharton, Barrister.

After a patient hearing of all that was to be said, and an expression of opinion on both sides that nothing further remained, we have taken into consideration the whole circumstances of the case, with a view to arriving at an award, determination, or decision.

At the very commencement of the hearing it appeared that there was no question between the Stockport Medical Society and the Stockport Centre of the St. John Ambulance Association, and Mr. Wharton so stated. It became apparent then that the question was going to resolve itself into a personal one between Mr. Ferns and the Stockport Medical Society, and the only manner in which the Centre was interested in the proceeding was that Mr. Ferns was the Honorary Secretary and Treasurer of the Centre, and the Medical Society had resolved to abstain from lecturing in connection with the Local Centre, and threatened to form an independent ambulance association.

With the last of these two suggestions the arbitrators do not intend to interfere. If it was intended as a threat it should not have been made, as it can have no influence. The former of these suggestions does affect the Order, and it was upon that ground that the arbitrators thought it within their province to continue the inquiry.

They wish, however, at the outset to express their great regret that having regard to the position occupied by the Medical Society and Mr. Ferns, some way had not been found to compose this personal question without having to resort to the extraordinary method of referring it to a public hearing.

As the case proceeded, the official aspect of the question between the Executive Committee of the Stockport Centre and the Medical Society still further disappeared, and the personal one only remained. If this could have been anticipated we are not sure that the Ambulance Department would have undertaken the reference at all; but having done so, and the parties having undergone the expense of the proceeding, we think it would not be fair to them not to record our decision and determination.

Mr. Ferns's own account of himself is that the Committee was formed and he was appointed Local Secretary so far back as the year 1883, and certain instruction were given him by Sir (then Mr.) John Furley. In a short time meetings of the Committee were held, but difficulties arose in this out of the non-attendance of members, and Mr. Ferns considered that the authority given to him by Sir John Furley justified his future proceedings, which were practically to carry on the Centre without the attendance of a Committee. We think that Mr. Ferns has, at all events since 1888, been acting under a misapprehension. We do not think Mr. Ferns understood the change that had taken place in the constitution of the St. John Ambulance Association in the year 1888.

At that time the Association became a department of the Order, subject to the rules and regulations of the Order, and although considerable latitude in carrying on a voluntary institution must always be allowed, still there are certain definite duties which Mr. Ferns seems entirely to have lost sight of. We wish to put on record that we think in this matter Mr. Ferns is to be blamed, because he himself is an esquire of the Order, a member of the body, and therefore has a special duty to the Order, and to see that as far as in him lies everything is done for its glory and utility, and that he will never act contrary to its dignity.

We think if Mr. Ferns had found that he could not maintain the Centre he should have so reported, and not have left the Centre to be practically himself, particularly in the light of subsequent events.

It seems to us to have been alleged and hardly disputed by Mr. Ferns that he discharged the duties of secretary and afterwards treasurer of the Stockport Centre in a somewhat arbitrary manner, and that accounts were not rendered by him, nor were subscriptions collected by him in the district. It seems also admitted that the Stockport Centre was more or less in a state of paralysis, Mr. Fearns calls it quiescence, and we cannot help feeling that Mr. Ferns was to some extent responsible for this.

It further appeared that there was a rumour—although the rumour was a floating one and could not definitely be traced—that some ill-defined charge had been made against Mr. Ferns of having acted improperly with regard to the funds of the Centre. The existence of such a rumour was, particularly with regard to a charge of £5 5s. for classes, admitted by both sides. If the Committee had met such a rumour would have been impossible. We wish here to state that the charge of £5 5s. to the classes, referred to in the course of the inquiry, was a proper charge.

It seems clear to us that Mr. Ferns was under the impression, erroneous as we believe it to be, that this rumour originated from some medical gentlemen of position in the town. We are satisfied that Mr. Ferns has in all his dealings with regard to the funds of the Centre acted with the utmost integrity, and this cannot be questioned. We also feel assured that the impression in Mr. Ferns's mind as to the origin of the rumours we have mentioned was unfounded.

It appeared to us that Mr. Ferns did, in his dealings with various medical men in the town in connection with his secretaryship, comport himself in a manner which cannot be said to have been courteous or conciliatory, or to have been for the dignity or utility of the Order, and for this we consider that Mr. Ferns is to blame. In whatever way Mr. Ferns might have considered himself in his private capacity justified in treating the medical men in respect of whose conduct he had this suspicion, Mr. Ferns should have remembered that he was a member of the Order, and holding an important and responsible official position in connection with the ambulance department of the Order, and what he

might do as a private individual he could not do as a member of the Order,

On the other hand, we fail to see in the negotiations between the Stockport and District Medical Society and the Local Centre which were brought to our notice that conciliatory spirit which we should have hoped to have witnessed in a body of distinguished gentlemen; and in this connection we wish specially to mention the threat to start an independent ambulance association, which we do not approve of. We further desire to place upon record our belief that if the Pendlebury meeting had been conducted in a more orderly and regular manner, Mr. Ferns might have had the opportunity of giving such explanations as would have rendered the present inquiry unnecessary. For the disorderly proceedings at this meeting we think the medical gentlemen were in a measure responsible

We have thought it right to give expression to the effect which the evidence and the statements of counsel produced to our minds, and, having said this, we proceed to give our determination.

We award, direct and determined, as follows:

1. We determine that the Stockport Centre has not discharged its duties in a satisfactory manner or in a way calculated to promote the best interests of the Ambulance Association or the Order of St. John of Jerusalem.

We are unable to apportion the blame among the members of the Committee of this Centre, but do not find that any blame attaches to the Chairman.

2. We determine that Mr. Ferns, though in our opinion not always acting in a manner calculated to promote the dignity of the Order of which he is a member, has carried on the work of the Stockport Centre under great difficulties with perfect integrity, and with a zeal which has outrun his discretion,

3. We do not feel ourselves at liberty to express any determination as to the course of action of the Medical Society of Stockport, that body being altogether independent of the Order of St. John of Jerusalem, but we wish to record our sense of the liberality of the members of the medical profession at Stockport generally in lecturing to ambulance classes gratuitously in the past, and our belief that the difficulties which have recently arisen will prove to be ephemeral.

4. We direct the Chairman of the Centre to summon a meeting of those gentlemen whose names are on the list of members of the Committee, and to consult with them as to the best method of reviving the Committee with a view to its efficiency.

5. We recommend that this Committee should at once proceed to the election of a secretary and treasurer, and recommend the reappointment of Mr. Ferns provided the Committee are reasonably satisfied by Mr. Ferns that this can be done consistently with preserving satisfactory relations with members of the medical profession at Stockport.

6. If Mr. Ferns is unable or unwilling so to act as in the opinion of the Committee to make satisfactory relations with the members of the medical profession possible, we recommend that a new secretary and treasurer be appointed.

JAMES DICK.
C. BOWDLER,
BELGRAVE NINNIS.

January 13th, 1900.

A perusal of this award shows, we think, that the medical profession in Stockport were justified in protesting against the manner in which the local ambulance centre had been conducted. The arbitrators state that Mr. Ferns "hardly disputed" the allegation that he discharged the duties of secretary, and afterwards of treasurer in a somewhat arbitrary manner, and that he was to some extent responsible for the state, variously described as one of more or less "paralysis" or "quiescence," into which the Centre had fallen. The arbitrators further state that the unfounded rumour that Mr. Ferns had acted improperly with regard to the funds of the Centre had not originated with medical men in the town, and could not have been originated had the committee of the Centre met. The arbitrators also state that in their opinion Mr. Ferns did in his dealings with various medical men in the town in connection with his secretaryship, comport himself in a manner which cannot be said to have been courteous or conciliatory.

On the other hand the arbitrators express the opinion that the Stockport and District Medical Society did not always show as conciliatory spirit as was desirable, and that if the Pendlebury meeting had been conducted in a more orderly and regular manner, Mr. Ferns might have had the opportunity to give explanations which would have rendered the arbitration unnecessary, and that the medical gentlemen present were in a measure responsible for the character of his proceedings. This is a minor detail upon which there would, therefore, seem to be room for difference of opinion, for from a consideration of the report of the meeting we were led to take the view that the medical men present were not responsible for the irregular proceedings.

The arbitrators, it will be seen, while recognising that Mr. Ferns had acted with perfect integrity, but with a zeal which outran discretion, record their sense of the liberality of members of the medical profession in Stockport generally in lecturing to ambulance classes gratuitously in the past.

We are glad to have this public statement of the debt of gratitude which the St. John Ambulance Association owes to the medical profession. We ventured to say when commenting on this matter last April that this Association sometimes appears to be in danger of mistaking the relation in which it stands to the medical profession.

It may be well to add an observation upon a matter of general application. The arbitrators express their disapproval of the proposal to start an independent ambulance association. We do not wish to say anything which may tend to falsify the arbitrators' hope that the difficulties which have recently arisen in Stockport may "prove to be ephemeral," but we are strongly of opinion that in these matters the medical profession, with full knowledge of all the special circumstances of the locality, can claim to judge for itself. The essential part of every course of ambulance lectures is the knowledge and skill of the lecturer, who is a medical man. Without the medical profession the classes could not be carried on, and we think that the medical profession has a right to demand a much larger share in the conduct of the local centres, and in the general organisation of the work of the St. John Ambulance Association.

THE PLAGUE.

PROGRESS OF THE DISEASE.

PORTUGAL.

DURING the week ending January 21st only one person succumbed to plague in Oporto. As during the week ending January 14th there were recorded neither any fresh cases nor any deaths, it would appear as if the outbreak were really over. This has however seemed so probable more than once within the last few months that it is to be hoped the present decline is not transitory. The total number of plague cases officially recorded in Oporto since the commencement of the outbreak amounts to 296 cases with 108 deaths from the disease.

MAURITIUS.

For the week ending January 15th 13 fresh cases of plague occurred in the island and 9 deaths from the disease.

HAWAII.

The Chinese quarter in Honolulu has been burned. It will be interesting to observe the effect of this drastic measure.

AUSTRALIA.

Since the death of the sailor in the general hospital at Adelaide it is announced that several rats have been found infected by the plague bacillus, and Adelaide has been declared an infected port.

ACCIDENT TO MAJOR MANIFOLD, I.M.S.—We regret to have to announce that a most serious accident befell Major Manifold, I.M.S., when out tiger shooting at Christmas. It appears there was a large party present in the Dun to see some Kheddah operations for capturing a herd of wild elephants, and a few days beforehand a beat for tigers was organised. During the beat a large tiger was wounded and when being followed up by the line, he charged home and sprang on Major Manifold's elephant. Unfortunately he was on a pad and not in a howdah, so that the infuriated brute was able to get at both the mahout and Major Manifold, and pulled both to the ground. Colonel Clibborn (who was accompanied by his wife in the same howdah) made over instantly to the spot, and drove off the tiger, not, however, before he had severely mauled both Major Manifold and the mahout, the former, in addition to several severe wounds from the brute's claws, having had one of his hands severely lacerated by the tiger's teeth. The mahout was also greatly injured. The unfortunate officer bore his injuries with the greatest fortitude. The wounded men were taken into Rurki, where they were progressing favourably by last accounts; and though Major Manifold was suffering intense pain, there were no symptoms of blood poisoning. This is the second tiger adventure Mrs. Clibborn has met with, as on a former occasion a wounded tigress sprang on her elephant, but with great pluck she shot the tigress while its claws were actually buried in the elephant's back within a few inches of a coolie who was sitting behind the howdah.

THE will of the late Sir Richard Thorne, K.C.B., has been proved. The estate has been valued at £8,371 6s. 3d., including personality of the net value of £4,621 13s. 2d.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY JANUARY 27TH, 1900.

THE WAR AND THE ROYAL ARMY MEDICAL CORPS.

In the present moment of tension, when it is impossible to take the mind altogether away from the thoughts of what is or may be happening in South Africa, it is something of a relief to let it dwell for a time on the admirable arrangements which have been made for the comfort of the wounded and sick. War is an illogical business at best, only a shade less illogical than the duel, the full absurdity of which we in this country have, during the century which is coming to an end, learned to perceive. Its redeeming feature is that it is a school of courage and compassion. The century may claim this credit, that if it has made war more deadly—a point on which there is room for difference of opinion—it has made it also more merciful. The wounded suffer less because their wounds are less cruel, and they are more quickly and more skillfully treated. The modern rifle carries further than its predecessors, but the bullet it throws, does not produce so much suffering immediate and remote. This is clearly brought out in the large number of interesting letters from the seat of war, which we have been able to publish during the last two months, and is fully confirmed by the graphic letter which Mr. Frederick Treves has contributed to our pages this week.

Mr. Treves wrote with the impressions of the battle—which he calls the Battle of the Tugela, but which we in in this country have learnt to know as the battle of Colenso—fresh upon him. No one, we imagine, can read unmoved his description of the sufferings endured that day, of the courage displayed by the Royal Army Medical Corps in seeking out and tending and comforting the wounded during the battle, and of the splendid fortitude of the wounded after the battle.

The country is content to give its best and noblest to maintain our cause, but it demands that when struck down they shall have the best succour that the skill of the surgeon, and the material resources of a wealthy country can supply.

The testimony of many independent witnesses puts it quite beyond doubt that this work is being well done, and that the foresight and hard work given by the administrative medical officers in South Africa to the organisation of the system for the prompt treatment and speedy transport of the wounded has been rewarded by the most gratifying success.

The sufferings of many of the wounded on the day of the battle of Colenso must have been very great, but they were due to circumstances which were inevitable under the conditions of the battle. In certain parts of the field it would not have been possible for the bearers to carry the stretchers through the field of fire, it would not indeed have been justifiable to permit men, whose progress must necessarily be slow and who could take no advantage of cover, to make the attempt, for it would probably have led to the destruction alike of the wounded and of his bearers. Perforce, therefore, in certain places men had to lie under the best cover available close to where they fell until the battle was over. But even so, all that surgery can do to alleviate suffering or to save life under such circumstances was done, for the medical officers made their way to the wounded, and both Mr. Treves and the correspondent whose letter we published last week, tell of the cool courage displayed by Major Babtie, R.A.M.C., who had his horse shot under him, in riding through a hail of bullets to reach the donga where the wounded from Colonel Long's battery had taken refuge.

But from other parts of the field it was possible to move the wounded to the field hospitals earlier in the day. The battle began at 5.35 A.M. on Friday, December 15th; within a very short time wounded men from some parts of the field reached the field hospitals, and nearly all had already been dressed on the field itself "with a neatness and precision," to quote our correspondent whose letter was published last week, "which would have done credit to any hospital." The first field dressing is carried by each soldier in a pocket in the skirt of his frock, and Mr. Treves tells us not only that it answers its purpose admirably, but that the soldier takes every care that he has it on him.[1] That the confidence, both of surgeon and patient is well grounded appears to be proved by the remarkable results reported both by our correspondent in Capetown, and by the correspondent whose account of a visit to the Royal Victoria Hospital, Netley, a few days ago is published in another column.

With regard to the removal of wounded men from the field, Mr. Treves tells us that, thanks to the foresight of Colonel Gallwey, C.B., R.A.M.C., the working of the field hospitals was perfect, and that the strong volunteer ambulance force organised by this officer not only conveyed the seriously wounded by hand stretchers from the field to the field hospitals, thus avoiding the inevitable jolting of ambulance waggons on rough ground, but also, working all through the night, carried them on to the stationary hospital at Chieveley or straight to the ambulance train which Major Brazier-Creagh had on the field at daybreak on Saturday, December 16th.

Again, Mr. Treves tells us that Colonel Gallwey's organisation for the transfer of the wounded to the base in Natal and to the hospital ship at Durban was tested to the utmost, and proved efficient and admirable. Mr Makins, in his letter from the Orange River, told very

[1] It consists of an outer cover of sewn cloth, within each are two safety pins. The inside cover is of thin waterproof, cemented, airtight. The package contains: (1) A piece of thin waterproof (mackintosh), 12 inches by 6 inches, which can be torn in half, and folded over the dressings, if necessary; (2) a gauze bandage 4½ yards wide, folded flat; (3) A piece of gauze 17 inches by 13 inches, folded to suit the size of the package; (4) a compress of compressed charpie of flax between layers of gauze (like Gamgee's dressing), capable of being teased out into a thick pad. The antiseptic agent used is corrosive sublimate, 1 in 1000.

much the same story of the arrangements for the removal of the wounded from the Modder River. The arrangements at the base hospitals at Wynberg, near Capetown, carried out under the direction of Colonel Supple, R.A.M.C., are, it is clear, equally complete and successful, and the number of empty transports returning from Capetown which have been available have rendered it possible to send home a large number of wounded men who, it was judged, were likely to be benefited by the voyage. It is clear, therefore, that Mr. Treves's statement that "those in England who have friends among the army in Natal may rest assured that the wounded are well looked after, and that the arrangements for their comfort leave little to be desired," will apply with equal truth to the army in Cape Colony.

Let us hope that all this will be remembered, and let us not forget that there are other officers of the medical service of the army who, though they are not serving in the field, have to discharge duties as essential to the efficient working of the service. The Director-General and the officers serving in his office have had a gigantic task, and they have had to face it with a service numerically deficient. Their organisation has been subjected to a terrible strain, and it has withstood it. We make no doubt that, when the day comes for reckoning up our gains and losses, our successes and our failures, the country will not permit these things to be forgotten.

THE UNIVERSITY OF LONDON SEAT.

SIR MICHAEL FOSTER has accepted an invitation, addressed to him as the result of a meeting of some influential members of Convocation held last week, to become a candidate for the Parliamentary representation of the University, about to be rendered vacant by the elevation to the peerage of Sir John Lubbock, who has held the seat since 1880. It is clear that this action is approved by a large number of electors, and a committee has been formed with Mr. J. F. Rotton, M.A., Q.C., as chairman.

We understand that Sir Michael Foster is in politics a Liberal Unionist, but the University of London Conservative Association, at a meeting held on January 23rd, unanimously adopted the following resolution: "That, having regard to the distinguished position amongst the graduates of the University of Sir Michael Foster, who was Chairman of Sir John Lubbock's late Election Committee, and to his great eminence in the world of literature and science, this general meeting of the University of London Conservative Association is of opinion that he will be a most fitting representative in Parliament of the University of London, and accordingly resolves to give his candidature the hearty support of the Association, and to recommend all Conservative members of Convocation to vote for his election."

Dr. W. J. Collins is the candidate of the University of London Liberal Association, and has issued an address in the course of which he says that "the exceptional character of the University franchise justifies, and indeed compels, a broader and more academic view of political problems than that which appertains to the generality of constituencies," and with this sentiment all graduates of the University will, we do not doubt, heartily concur. It is the more to be regretted, therefore, that the election will, apparently, have to be fought on party lines. We are informed that Sir Michael Foster has decided to go to the poll, and he would be an admirable representative of the University, whilst his addition to the small body of men of science now sitting in the House of Commons would be of great service.

Mr. Busk, LL.B., the Chairman of Convocation, who is in politics a Liberal Unionist, is also a candidate. He has not, so far as we are aware, issued an address, but various letters by him have been circulated to the members of Convocation. Mr. Busk is a retired solicitor, and the House of Commons already, in the opinion of many, contains a sufficiently large proportion of members of the legal profession. Indeed, Mr. J. Bourne Benson, Honorary Secretary to Mr. Busk's Committee, stated in the *Times* directly after the announcement of Mr. Busk's candidature, that "Mr. Busk would be the first to desire that those who propose to vote for him should transfer their support to the better man," in the event of an eminent candidate being found who would be more likely to hold the seat. It is surely evident that this has come about. It is true that since Sir Michael Foster's appearance in the field Mr. Benson seems somewhat reluctant that Mr. Busk should adopt the policy of retirement, but the repudiation of his earlier attitude has not been uncompromising. There are further good grounds for the hope that Mr. Busk may continue to hold Mr. Benson's earlier view as to his contingent retirement from the contest.

While fully recognising the excellent public work which Dr. W. J. Collins has done as a member, and, for the usual period, as Chairman of the London County Council, many medical graduates feel, politics apart, that he is not quite the right man for this particular constituency. His address contains no reference to the subject of vaccination, but from a correspondence which is published in another column it would appear that he retains the opinions which led him, with Mr. Picton, M.P., to sign the dissentient report. It would seem, therefore, that on this subject he is out of harmony with the majority of members of the medical profession. The medical graduates form a large part of the constituency, and those who hold the same political views as Dr. Collins are thus placed in a difficult position. It would be very satisfactory to learn that arrangements could be made to avoid a contest.

ROYAL NAVY MEDICAL SERVICE.

THE promotions of staff-surgeons to the rank of fleet-surgeon in Her Majesty's fleet, notified in the *Gazette* of January 16th, remove a naval medical disability, long recognised, but hitherto not rectified.

Owing to the half-pay time common to all ranks of the navy, naval medical officers, whose promotion to the rank of fleet-surgeon was formerly dependent on twenty years' full-pay service, suffered a disadvantage from which their brother officers in the army are exempt, owing to an almost total absence of half-pay in that service, and who consequently retain the seniority obtained on entry, when promoted to the rank of lieutenant-colonel, from which the

higher promotions are made by seniority, if otherwise qualified. Naval medical officers, on the contrary, by the unequal incidence of half-pay dependent on non-employment arising from the necessities of the service, or due to sickness contracted in the service, formerly frequently lost their seniority on entry, and junior officers, more fortunate in obtaining employment, arrived at fleet-surgeon rank before their seniors, and consequently became earlier eligible for promotion to the administrative ranks.

This disadvantage, as compared with the army medical officer, was fully recognised by the Admiralty Committee of 1880, which, however, could only suggest that "the loss of full-pay time should be reduced to the lowest possible amount by administrative care to give such cases special consideration." This, however, having proved ineffective, the Admiralty have now sanctioned promotion to the rank of fleet-surgeon at twenty years from the date of entry, or at eight years from attaining the rank of staff-surgeon, which for special services may be arrived at earlier than the regulation period of twelve years from the date of entry.

The present Naval Medical Administration has already effected many notable reforms in that department, among which we would note instruction at Haslar in the diseases of warm climates and bacteriology in connection therewith, and in Roentgen ray work. The necessity for study leave has been more fully recognised. A surgical instrument outfit for H.M. ships and all naval medical establishments has also been sanctioned.

The hope may therefore be expressed with confidence that further necessary reforms of the *personnel* and equipment of the Royal Navy Medical Service will follow under the present able administration.

"COMFORTS" FOR THE R.A.M.C.

A COMMITTEE of ladies is being formed in London for the purpose of collecting contributions of money and in kind to enable comforts to be sent to the non-commissioned officers and men of the Royal Army Medical Corps in South Africa, now numbering 3,000. Princess Christian has consented to be the Honorary President, and the following is a first list of ladies who have joined the Committee: Lady Broadbent, Lady Brunton, Lady Coventry, Lady Duckworth, Viscountess Knutsford, Lady MacCormac, Lady Douglas-Powell, Lady Rothschild, Lady Wantage, Lady White, *Mrs. John Anderson, Mrs. T. Barlow, *Mrs. Bourke, Mrs. T. Bryant, *Mrs. Charlton, Mrs. Clutton, Mrs. Fripp, Mrs. Goodhart, Mrs. Pearce Gould, *Mrs. J. B. Hamilton, Mrs. Vesey Holt, *Mrs. Jameson, *Mrs. Johnson, Mrs. Percy Kidd, Mrs. David Lees, *Mrs. McPherson, *Mrs. Skey Muir, Mrs. Reynold Ray, *Mrs. J. B. C. Reade, Mrs. Pye-Smith, Mrs. Charters Symonds, Mrs. F. Taylor, Mrs. Walsham, *Mrs. C. White, Mrs. Hale White, Mrs. Dawson Williams. (Those marked with an asterisk are wives of officers of the Army Medical Service, active and retired.) Miss Maxwell-Müller, R.R.C., late Lady Superintendent, Indian Nursing Service, will act as Honorary Secretary, and receive subscriptions and donations at the office of the Fund, 100, Victoria Street, S.W. The corps agents, Messrs. Holt and Co., have very kindly offered to receive subscriptions, and cheques should be made payable to "R.A.M.C., South Africa Fund." Surgeon-General Preston, Principal Medical Officer, Ireland, is forming a corresponding committee in Dublin, and it is hoped that the Principal Medical Officers of other districts will also form local committees.

BIRMINGHAM UNIVERSITY.

AT the annual meeting last week of the court of governors of the Mason University College, Birmingham, Mr. Chamberlain observed that the report was fairly satisfactory and encouraging, both as to the increase in the number of students and also as to the result of the examinations which had been held and the honours gained by the college. But he observed that its most interesting passages were those which dealt with the development of the teaching equipment. There was a school of brewing and a school of engineering, but there ought to be a school of railway engineering, of electric lighting, and of railway management. Every large trade in the town ought to be represented, especially towards the termination of the educational or University course, by such specialised instruction as would enable the students to leave the college fully equipped to take a proper part in the work for which they were destined. He regarded with unalloyed pleasure and satisfaction the munificent gift by Dr. Rickards which had rendered possible the establishment of a laboratory for bacteriological investigation. That was a wise as well as a munificent gift, for there was no branch of knowledge or research which was more pregnant with possibilities of good to the whole community than that which had been fairly started in the new University by Dr. Rickard's gift. The world, he believed, was on the eve of discoveries which might be more important to the human race than any that had been made in centuries past, and he hoped that Birmingham was going to take its full share in the research and the study which might lead up to those discoveries. Lord Iveagh had given a magnificent gift of a quarter of a million sterling to establish a school of medical research in London. He could but hope that the time might come when some local magnate in the Midlands might give a proportionate sum for carrying out such work. The charter for the new University was prepared. It had passed through its preliminary stages satisfactorily, and would be laid on the tables of both Houses of Parliament. At the same time a Bill was to be presented which would merge Mason College in the University. Of the endowment fund of a quarter of a million asked for, £225,000 had already been provided by Birmingham and district, but an unsatisfactory aspect of the list was that it contained the names of less than a thousand donors. Mr. Chamberlain said that in Birmingham there were 50,000 persons who might, without any material sacrifice, give at all events two or three pounds a-piece to the promotion of the University, and he was convinced that if the new University was to have a fair start it must have a much larger sum than even that already named. Mr. George Kenrick, Professor Poynting, and Professor Burstall, had visited the principal universites in the Eastern States of America and some of the Western universities, and also the principal universities of Canada. They found in all classes of the community an enthusiasm which showed itself in most magnificent gifts, and in the case of persons who had not much means, in an active and zealous desire that all should avail themselves of the education which was thus afforded. It was not merely the competition of the Continent with which Great Britain would have to deal in the future. It would have to deal also with the still more keen competition of our American kinsmen. Unless this country kept up at least to their level, unless arrangements were made to take advantage of the latest improvements in every department of scientific work, he was quite certain that we should fall behind in the race, and if we once did that it would be very difficult indeed to retrieve our position. He held that it was on the University of Birmingham that the responsibility fell of sustaining the commercial and industrial position of the district. In many respects, no doubt, the University could only imitate, perhaps at a distance, the lessons which had been taught and the

example which had been set by the older Universities. But in one particular he hoped an example might be set to all our Universities—in the distinctive application of knowledge to the advantage of science and of commerce.

HOUSING WITHOUT EVICTION.

AT the first meeting of the London County Council after the recess further debate arose on the proposal, already referred to in these columns, to purchase 38½ acres of land at Tooting with a view to the erection by the Council of working men's cottages. This is the first instance in which the County Council has embarked upon a large housing scheme under Part III of the Housing of the Working Classes Act—that is to say, a scheme for augmenting the supply of house accommodation without the evictions necessitated by clearance schemes under Part I of the Act. The resolution which committed the Council to the scheme was passed with only three or four dissentients after leaders of both parties in the Council had expressed full approval of the new departure. It is clear that the urgency of the housing question in the metropolis is such as to justify municipal action under the statutory powers conferred by Parliament, while the demand for housing accommodation is so great that it is scarcely reasonable to suppose that private enterprise in the same direction will be seriously crippled by the action to which the County Council is now committed.

PROFESSOR VIRCHOW ON QUACKS.

OUR Berlin Correspondent writes: Two articles on the New Century by Professor Rudolf Virchow, published in his *Archiv für Pathologie*, have been reprinted separately, with an interesting introduction by the author. The general public, he says, has a violent desire for "something new" in the new century. The medicine of the schools is represented as effete, and "folk-medicine" hailed as the great desideratum of the future. It is interesting, says Virchow, to study the writings of the "nature doctors." Has any one of them, he asks, succeeded in establishing a new principle by which light could be thrown on the nature of disease? The answer must be in the negative. On the contrary, they all walk in the paths first opened up by the medicine of the schools. But they are blindly believed in by the masses, as magicians and "medicine men" were (and are still) believed in by uncultured races. The medical man of our day finds himself in a difficult position through circumstances brought about by the ever-increasing complication of our civilisation. In the struggle for existence he has more and more difficulty in earning his bread honestly. Hence self-advertisement, and hence, too, the sad competition between doctors and quacks, which embitters the life of so many of the profession. But, Virchow concludes, the greatest mistake that can be made is to clamour for State help for legislation against quackery. No penal law would succeed in driving those that seek help from quacks to the consulting rooms of regular practitioners. This can only be hoped for from better education, greater enlightenment of the masses; for superstition is the true source of these misguided practices.

AN ANTIVIVISECTION BILL IN THE UNITED STATES.

DR. W. W. KEEN, President of the American Medical Association, has issued an appeal to the medical profession of the United States with regard to a Bill which has again been introduced into Congress for the Further Prevention of Cruelty to Animals in the District of Columbia. In his appeal, which has been published in the *Philadelphia Medical Journal*, Dr. Keen says that "the Bill is speciously drawn to seem as if it were intended only in the interest of prevention of cruelty to animals," but that the "real object of the Bill is twofold: first, to prohibit vivisection and, secondly, to aid the passage of similar Bills in all the State Legislatures." He then points out "that this would seriously interfere with, or even absolutely stop, the experimental work of the Bureau of Animal Industry, and the three medical departments of the Government, the Army, the Navy, and the Marine Hospital Service. The animals themselves might well cry out to be saved from their friends. No more humane work can be done than to discover the means of the prevention of diseases which have ravaged out flocks and herds. All those who raise or own animals, such as horses, cattle, sheep, pigs, chickens, etc., are vitally interested in the preservation of their health and the prevention of disease." He adds that it is superfluous to point out the inestimable value of scientific researches as to the prevention and cure of disease among human beings, for "modern surgery and the antitoxin treatment of diphtheria alone would justify all the vivisection ever done." Dr. Keen therefore appeals "to the entire profession of the country to exert themselves to the utmost to defeat this most cruel and inhuman effort to promote human and animal misery and death, and to restrict scientific research." We venture to express the hope that the profession in America may be again successful in their opposition to this mischievous product of a foolish and ignorant agitation. In this country medical science has for many years laboured under the disadvantage that all experimental inquiries must be conducted under a vexatious Act, which though it is administered without bias, has yet seriously hampered the progress of pathology and bacteriology in the United Kingdom.

SANITARY WORKS AND RATEABLE VALUE.

A PAPER was read before the Society of Arts on January 24th by Mr. W. O. E. Meade-King, M I C.E, on Local Government and its Relations to Parish Water Supply and Sewerage. Poverty, though often pleaded as a reason why no scheme should be carried out, he very rightly considered no excuse, for good sanitary conditions in a parish have as a rule the effect of increasing, ultimately at all events, the prosperity and well-being of both inhabitants and district. Inquiry appeared to show that the rateable value of parishes throughout the country is rather on the decrease than otherwise, though it is gratifying to find that those parishes having good sanitary conditions form a large majority of those which can show an increase in rateable value. It is very evident, therefore, that the disastrous results anticipated by opponents of sanitary measures are seldom realised, and that such measures, on the contrary, seem to improve the financial status of the parish. Mr. Meade-King pointed out that parishes and individuals dissatisfied with the water supply or sanitary state of their parish can always take steps to improve the existing conditions if they wish to do so. Under the Public Health Act, 1875, anyone who thinks he has sufficient grounds of complaint, can make an application to the Local Government Board, stating that the authority responsible for the sanitation of the district in which he resides, or has property, has made default in providing that district with insufficient sewers, or that the water supply is unwholesome or liable to pollution. On receipt of such a complaint a public inquiry may be held at the place in question. The great difficulty is, however, to get the people in the district to make a complaint. What has done for their fathers and grandfathers is good enough for them, and they will not understand that improved drinking water and sanitation means a better health-rate, a lower death-rate, not only for themselves but for their children, and an increase in the value of the property they hold in the district. Good sanitary conditions enrich rather than impoverish a community, and an analysis of the conditions of some 200 villages taken at random throughout the United Kingdom showed this to be the case. In a large majority of cases those

parishes which obtained their water from waterworks and were properly sewered had increased considerably in rateable value and general and commercial prosperity, whereas those which had, so to speak, let things slide had distinctly decreased not only in rateable value but even in population.

MUNICIPAL DUTY AS TO TUBERCULOSIS.

THE decline during the past thirty years in the death-rate for consumption and other forms of tuberculosis may fairly be attributed to the improvement in the general sanitary condition of the country, and to the better conditions of living. Few, if any, special measures directed against tuberculosis have even yet been instituted in the United Kingdom. In opening a discussion by the Civic Society of Glasgow, Dr. John C. McVail expressed the opinion that improved house accommodation was the main factor in the diminution of tuberculosis. The measures of general sanitation as applied to streets, dwellings, schools, factories, and workshops have undoubtedly a very direct influence in the prevention of consumption, and this fact should encourage health authorities to persevere in requiring and in maintaining a high standard of sanitary efficiency. But more is required, and Dr. McVail states some of the more important directions in which municipalities may take the lead. These may be summarised under the following headings: (1) The abatement of the smoke nuisance in towns, to ensure as much sunlight as possible penetrating into the streets and houses; (2) watering and flushing the streets and pavements in dry weather to prevent the desiccation of expectorated matters; (3) the provision of sufficient air space and ventilation in elementary schools; (4) regular meat inspection by qualified veterinary surgeons in every city; (5) adequate supervision of the milk supply to ensure as far as possible freedom from tubercle bacilli; (6) the municipal provision of sanatoria for consumptives; (7) notification of tuberculosis, voluntary until such time as the education of the public made it possible to introduce compulsory notification; (8) the extension and cheapening of travelling facilities by which even the comparatively poor workers in our great towns can establish their homes, and rear their families outside the central zones of smoke, fog, and foul air. These headings serve to indicate the directions in which municipal authorities may assist in the diminution of tuberculous diseases. It is in the town rather than in rural districts that tuberculosis finds its victims, and systematic attempts at prevention should begin in the municipalities. It is satisfactory to know that some at least of the larger towns in the kingdom are alive to their responsibilities in this matter, and are actively organising measures for the prevention of tuberculosis.

THE HIGH DEATH-RATE OF DUBLIN.

IN accordance with the suggestion of His Excellency the Lord Lieutenant of Ireland, K.G., the Local Government Board of Ireland has undertaken to hold an inquiry into the health of Dublin, under Section CCIX of the Public Health (Ireland) Act. The Committee of Inquiry will consist of the following gentlemen: Mr. Charles P. Cotton, M.I.C.E., late Chief Engineering Inspector to the Local Government Board of Ireland, who has been appointed as representative of the department; Dr. J. W. Moore, President of the Royal College of Physicians, who represents his College; Mr. R. L. Swan, President of the Royal College of Surgeons, who has been nominated by the Council of his College; Right Hon. Alderman Meade and Alderman Dowd, who have been nominated by the Corporation. The name of the representative of the English Local Government Board has not yet been announced, but when his name appears the list will have been completed. It is improbable that the services of two representatives of the Corporation will be accepted. The action of the College of Physicians in adopting the resolution which appears elsewhere has been severely commented upon. It is thought by some that the College was not well advised to express any opinion on the cause of the high mortality in the city or to condemn the Corporation seeing that their President was about to act in this inquiry in conjunction with a member of the Corporation and with the others in a judicial sense. However, it is certain that the President was made clearly to understand that his hands were in no way tied by the terms of the resolution.

FLIGHT.

THE first Friday evening discourse before the Royal Institution for the present session was given by Lord Rayleigh on January 19th. His subject was Flight. He began by inquiring what was meant by the term "flying machine," and succeeded in convincing some of his audience, at least, that they had not attached any very precise idea to the term. After discussing the light which might be thrown on the problem of flight by the study of kites, including the modern box-shaped kite, he turned to consider the question, What was the nature of the "soaring" or "sailing flight" by which a big bird maintained itself with but little flapping of the wings? It could be laid down with certainty that a bird could no more maintain itself without motion of the wings in a uniform wind moving horizontally than in air at perfect rest. It was entirely a question of relative motion. If, then, a bird was seen to be maintaining itself without flapping, it was certain that the air was not moving horizontally and uniformly. Rising currents of air, which were much more common than was often supposed, would give the necessary mechanical advantage. In other cases an explanation might be sought in the non-uniformity of the wind, for it was mechanically possible for a bird just at the point of transition between two different strata of wind to maintain its position by taking advantage of the different velocities. The albatross, he believed, did so. Again, as Langley had pointed out, the bird could turn to account the internal work of the wind by taking advantage of its gustiness. Lord Rayleigh then considered the physics of an aëroplane. He said that if a plane surface were falling vertically at the rate, say, of four miles an hour, and also moving horizontally at, say, twenty miles an hour, it had been argued that the horizontal motion made no difference to the pressure that existed at the under surface of the plane. The argument was fallacious, and the truth was that the horizontal motion much increased the pressure, and the possibility of flight, natural and artificial, depended to a large extent on this fact. He then went on to show that in addition to this pressure on the under surface of the bird's wing or an aëroplane, there was an actual suction on the upper surface. All this led up to the question—Was it possible for a man to raise himself from the ground with his own muscular power only? He did not believe it would ever be possible. As the weight to be lifted increased, the power necessary to be exerted increased more rapidly, and it was thus beyond man's unaided physical power to fly. If he were to fly he must use a flying machine, and power would be applied by some sort of screw. Lord Rayleigh was disposed to agree with Mr. Maxim, that the construction of such a machine was mainly a question of some time and much money; but when such a machine had been successfully constructed the difficulty of alighting would remain. On the whole, therefore, it would seem that in Lord Rayleigh's opinion—and few men can be more competent to speak on the subject—the present generation, at any rate, must be content to look forward to travelling by single-rail railways and turbine-driven boats and must forego all hopes of flight.

THE EDUCATION OF PAUPER CHILDREN

AT a recent representative conference of metropolitan Boards of Guardians and of school managers, the subject of the inspection of pauper schools by the Education Department was discussed. It was pointed out by Mr. R. Evans, of Hanwell, that both as regards children and teachers much benefit would result by Her Majesty's inspectors visiting these schools in the same way as they visited the other elementary schools of the country. A wider curriculum than that now presented by the Local Government Board would be an advantage to the pupils in pauper schools, while the teachers would be in a better position for competing for other professional posts, and, in consequence, a better class of candidates would be forthcoming for vacancies in the teaching staff. These views were generally accepted, and it was agreed to approach the Lord President of the Council upon the subject. There can be no question that the separate education of pauper children under conditions dissimilar from those of the ordinary population is a grave evil, tending to perpetuate the pauper taint in the rising generation. In many provincial unions, even in some large centres of population, it has been found practicable to send children from the workhouse to neighbouring public elementary schools, and the result has been eminently satisfactory. Whatever helps to break down the wall of partition between pauper and ordinary children is a distinct gain to the community, and pending the long contemplated but too long deferred abolition of the huge district schools which have grown up around the metropolis, it would seem very desirable that the education of pauper children should be supervised by the same officers as supervise that of other children. From the nature of the case the Local Government Board inspectors of schools can but compare one pauper school with another without reference to the general conditions of elementary education throughout the country. Royal Commissions and Departmental Committees have repeatedly recommended the inspection of pauper schools by H.M. Inspectors, but so far it would seem that the Local Government Board and the Education Department have not been able to devise a *modus vivendi* which would render this practicable. It is to be hope that the problem may be satisfactorily solved by the new Board of Education.

VACCINATION PROSECUTIONS.

IT has been found necessary at Bolton to make an example of some antivaccinationists who have persisted in their neglect alike of the "conscience clause" and of the vaccination of their children. The prosecution explained that it had been found necessary to bring a few cases into court in order to influence a number of other persons who were ignoring the law. In the first case the defendant is reported as having said that "he did not agree with vaccination." Another defendant said that he was opposed to vaccination because he had paid a doctor's bill of £12 for one child and had buried another child. Holding such opinions as these it is surely extraordinary that the parents would not take the trouble to obtain a certificate of exemption. Why, in the latter case especially, where there was the allegation that £12 had already been lost, should the man have placed himself in a position in which he was liable to have to pay a fine, with costs, and the fee for the medical witness, all which would have been saved by his getting a magistrate's certificate under Section 11 of the Act of 1898? In another case in the same court the charge was withdrawn because since the summons had been taken out the parent had called on the public vaccinator and asked him to vaccinate the child. It is to be hoped that such prosecutions will lead the public to understand that the present Vaccination Act is not to be regarded as a dead letter, but is to be enforced even where antivaccination is largely represented in Local Boards.

GENUS HOMO, VAR. BOY.

THE headmaster of a well-known school once said—in committee—that he considered that the human race should be divided into male, female, and boy. And the Bishop of London seems to be very much of his way of thinking, for when speaking the other day to a meeting of teachers he drew a lurid picture of the British boy. While schoolmasters are continuously advancing in the theory and practice of education, the boy is with equal resource and with even more endurance fortifying himself against their attack. While they are ever inventing new weapons and practising new wiles, he as busily entrenches himself behind an inborn dislike and contempt of knowledge for its own sake. Their skill would educate a gatepost, but the boy in passive fortitude reserves his fire until at close quarters he can bring ruin on the insidious foe. Bishops must know boys. They have been, if we may say so without irreverence, boys themselves, and many of them have met the boy in fair field later on in life. But we cannot bring ourselves to accept all the Bishop's charges against this race. He did not claim to speak *ex cathedrâ* on this occasion, and we make bold to take this excuse for doubt. That the boy is, as a rule, a being hated of the gods and feared of man none can well deny. Women like him, but that is because they are by nature subservient. Yet even in boy there are exceptions, and, as it were, lights in this dark and dangerous nature. It must not be forgotten that the occurrence of good boys has been recorded from time to time, and still more must we remember that of a million boys who were living twenty years ago at least five hundred thousand are now at this moment actually We. There is no valid excuse possible for boy, but we cannot choose but pause ere we destroy him. So far as we can at present see, though the subject is yet unripe for dogmatism, the final end of boy is to pass examinations. Those who do not pass either become crossing-sweepers or peers, or else go into the militia and get into the army that way. There remain a few who have not passed because they have not had the chance. These usually become great men, and make bridges, and fortunes, and such things. Of those who pass, some arrive into the higher regions without any great disruption of Nature. In these some enamoured goddess planted a divine spark which softens their manners and does not allow them to be ferocious. They work steadily, and they take the examination in their stride. Others go for several months to purgatory, or even lower, before they get through. Unhappy souls who refused learning may here be seen chained to desks, while information is continuously forced into them under a pressure of several atmospheres. The doorkeeper of the upper regions requires only proof that they contain a certain amount, and arrives at his result by a process of rough cubic measurement. But it is easily understood that, the pressure once taken off, the ingested matter is speedily extruded. Pity is not wasted on such persons, since it is their own idleness which has brought the suffering, nor do their happier fellows of the former class evince disgust, for the process of measurement is held in such contempt that "cramming" is thought fair play. But it is fair to say that some burst; and as not only is this itself a lamentable ending for a boy, but also, in many other cases, injury of less severe character is produced. It is to be hoped that development may proceed upon lines which will eventually supersede written examinations. This, however, can only take place in some post-historic age long æons hence. Meanwhile, "*So wird der Fuchs ein Bursch.*"

OLD MEDICAL BRISTOL.

A VERY interesting paper published recently in the *Bristol Medico-Chirurgical Journal* by Mr. Harsant raises the question whether the time has not come when it would be to

the interest of the Bristol Royal Infirmary to publish, under the supervision of a competent editor either the whole or a part of Richard Smith's *Biographical Memoirs*. The volumes are fifteen in number, and are so full of interesting gossip about the medical profession in Bristol during the latter half of the eighteenth century that a volume compiled from them would be sure of a public demand, and as the author died in 1843 there could be but few persons now living whose susceptibilities would be hurt by what he noted. Little more than a hundred years ago the profession in Bristol was very clearly divided into the three grades of physicians, barber-surgeons, and apothecaries. The physicians were easy to be distinguished from the common herd, if they were all like Dr. William Logan, of whom Smith say, "He was a strict observer of professional costume, and never stirred abroad or was visible at home unless in full dress; that is to say, his head covered by the immense flowing wig of George II's time, a red *roquelaire* hanging from his shoulders to his heels, his wrists graced by a gold-headed cane, and his side furnished with a long French rapier." The *roquelaire* was a red cloak, which continued in use until 1798. Physicians were called in chiefly when the sick person was *in extremis*; in fact, says Mr. Harsant, as they then complained, "they came only to administer musk and to close the eyes of the patient." The practice of giving musk began to decline about the year 1790. Richard Smith could remember when it might be smelled in the street as you passed the house of a dying person, as very few who could afford to pay for it were allowed to depart without having it administered. The surgeons, however, were not to be outdone by the physicians, for it is related of William Thornhill—the first surgeon to the infirmary—that he was a handsome well-grown man who took care to show his person to advantage by constantly wearing an entire suit of black velvet with an elegant steel-handled rapier. But Thornhill was no mere fop, for he was one of the earliest English surgeons to adopt and improve the operation of suprapubic lithotomy. One of his pupils—John Townsend—was as boorish as Dr. Johnson, whom he somewhat resembled in appearance; but he had some reputation for wit, as is clear from the tradition handed down of him, that, walking down Broad Street during an illumination, he observed a boy breaking every window which had not a light. He asked him how he dared to injure people's property in that way. "Oh," said the boy, "all for the good of trade; I am a glazier." "All for the good of trade, is it?" growled Townsend, lifting his cane and breaking the boy's head; "get that mended, you rascal, for the good of my trade; I am a surgeon." The surgeons made considerable sums of money owing to the frequency with which the physicians ordered their patients to be bled, for Mr. Metford used to say that he had bled thirty patients a day at the infirmary by order of Dr. Paul, whose first question to every male patient he saw in the admission room was, "Are you a Bristol man?" If the reply was in the affirmative he regularly wrote in his book "V.S. (Venesectio) ad oz. xx" by way of beginning. Mr. Metford requested to know why without further inquiry into their complaints he ordered them to lose so much blood. "Because, sir," said Dr. Paul, "if he is a Bristol man, I know that he sits of an evening smoking tobacco and drinking your abominable fat ale; the first thing to be done therefore is to let some of that run out, and then we shall see what else is the matter."

THE WEST LONDON POST-GRADUATE COLLEGE.

WE are glad to see that the West London Post-Graduate College appears to be making steady progress. In an interesting summary of the work of the College, the Dean (Mr. L. A. Bidwell)[1] points out that although systematic teaching at the West London Hospital has only been carried out during the past three years, the fact remains that already upwards of 160 members of the profession, from all parts of the world, have taken part in the courses. Mention, too, is also made of two officers of the Royal Army Medical Corps, recently members of the College, who are now at the seat of war—namely, Colonel Allin, the Principal Medical Officer of the Sixth Division, and Major Lougheed, who is in charge of a field hospital. A list is given of the names of forty-two practitioners who are now attending the practice of the hospital, the demonstrations and lectures. The West London Post-Graduate College possesses the distinct advantage that it can afford abundant facilities for seeing hospital practice. The opportunities for clinical observation are numerous, and the tuition is confined solely to qualified men.

[1] *West London Medical Journal.*

THE ROYAL COMMISSION ON LONDON WATER SUPPLY.

THE important report issued by Lord Llandaff's Commission on the London Water Supply calls for careful and detailed consideration in view of the grave sanitary and financial considerations involved. Meanwhile those who looked for an additional supply from the hills of Wales to augment the sources of the valleys of the Thames and Lee must receive the findings of the Commission with keen disappointment. It is true the Commission favours purchase of the existing companies' undertakings by a public authority, though the terms of purchase recommended being those usually applicable to compulsory purchase under the Lands Clauses Act are scarcely consolatory to the overburdened ratepayer. The proposed composition of the purchasing authority appears to be calculated to continue the opposition of all the parties concerned to such purchase. But we propose to examine in detail the conclusions at which Lord Llandaff and his colleagues have arrived.

THE EFFECT OF ANÆSTHETICS ON THE KIDNEYS.

THE relative merits of the several anæsthetics is a question for almost endless discussion. Experience naturally provides the weightiest arguments. Kemp,[1] however, furnishes some interesting and useful evidence in his results of experiments on dogs in the object of observing the effects produced by the usual anæsthetics. His method was to take tracings of the carotid blood pressure, and simultaneous oncometric kidney tracings, collecting from the ureter the urine secreted, and noting its quantity, quality, and abnormalities. When ether was administered there was a continued rise in carotid blood pressure; the oncometric tracing showed a slight rise at first but afterwards a marked fall. The secretion of urine was very small, and the interval between the drops gradually increased; albumen was present almost immediately after the commencement of inhalation. With chloroform the carotid blood pressure rose at first slightly and then fell continuously, the oncometric tracing corresponding entirely with the carotid effect; secretion was copious and continuous, and only diminished when the general circulation was much depressed. Albumen was present only in small amount, and at a late stage. Nitrous oxide caused a rapid and marked rise in blood pressure, coupled with struggling and asphyxial movements. The oncometer revealed several kidney changes. At first there was a fall, but then the respiratory waves became very pronounced, but the kidney tracings very short, pointing to a distinct contraction of renal vessels. The secretion rapidly diminished in quantity; there was some albumen in complete narcosis. Ethyl chloride chiefly affected the respiratory changes causing stertor, respiratory difficulties and convulsions. Mixtures (A.C.E., etc.) differed in effect according to the method of administration. When used "closed" or "semiclosed,"

[1] *New York Med. Journ.*, November, 1899.

the carotid blood pressure was the same as with chloroform alone, the oncometric tracing the same as with ether alone. If the open method, both the carotid and kidney tracings were the same as with chloroform. The secretion of urine was more copious than with pure ether, but less than with chloroform. The albumen appeared earlier than with chloroform, but later than with ether. The indican was increased in the urine in all cases, but the quantity was largest after ether. Ether evidently produces a special contraction of the renal arterioles, and damages the secretory cells of the kidney. Therefore the presence of renal disease, albuminuria, or pulmonary œdema is considered to be a sufficient contraindication to its use. A hypodermic injection of trinitrin is recommended before giving nitrous oxide to old people in order to reduce the high tension caused.

CITY OF DUBLIN HOSPITAL.

THE vacancy in the City of Dublin Hospital caused by the death of Mr. Wheeler has been filled by the unanimous election of Mr. Henry Moore, Surgeon to Mercer's Hospital. Mr. Moore, immediately on being elected, obtained leave of absence in order to fulfil his engagement with the War Office, which had accepted the offer of his surgical services for the troops in South Africa. He sailed last week. A vacancy now exists in Mercer's Hospital, for which no doubt there will be considerable competition among the younger surgeons.

THE DIAGNOSIS OF UTERINE CANCER.

THE importance of early diagnosis of any form of cancer of the uterus is generally recognised, but clinical symptoms are apt to be extremely misleading. Thus, in old women, pyometra and senile endometritis may cause as fœtid a discharge as ever is seen in cancer. The sound, however skilfully employed, is no sure guide in the detection of cancer of the body; even after dilatation of the cervix it may fail to touch a patch of incipient cancer or to prove to the investigator that the patch, should it be touched, is really cancerous. Gessner[1] insists that the curette, followed by microscopic examination of the material which it brings away, is the only trustworthy instrument for diagnostic purposes. Relics of ova or of broken-down mucous polypi, when carried away on the tip of the sound, are often taken for cancerous tissue, so that he says we must know how to use the microscope, even when we know how to scrape. He relates the case of a single lady, aged 58, who consulted him on account of a watery discharge which had become sanious, but without any distinct hæmorrhage. Her sister had undergone operation for cancer of the uterus within three years previously, therefore Gessner's patient came to him very early after the beginning of the discharge. The patient, who was corpulent, was placed under chloroform, as the hymen was tight, and the vagina very narrow. The first things thus detected were two small myomata projecting into the uterine cavity. The sound could, indeed, be passed to the fundus, but neither softening nor any rough passage could be detected. The impediments which may be encountered when the sound is relied upon were well seen in this case. The curette was used, and some of the tissue scraped off examined; it was clearly malignant. After hysterectomy a patch of adeno-carcinoma half an inch in diameter was discovered in the posterior and upper part of the endometrium; it had hardly reached the muscular coat. By a fortunate combination of circumstances this patient has received all the benefits of a timely operation. In a second case a woman, aged 59, was the victim of very complex pelvic lesions—old ruptured perineum and cystocele, deep fissure of the cervix, retroversion, and, above all, definite senile pyometra. The uterine cavity was dilated, and the sound showed that the entire endometrium was smooth and atrophied, not thickened. The dilatation was at once followed by improvement in the discharge, which was no longer purulent; but streaks of blood were observed in it, so five days later the curette was used. The endometrium was still smooth throughout, but at one point in the cervical canal some suspicious tissue was detected and scraped. It proved to be pure carcinoma. The uterus was at once removed; the cervix was found infiltrated with cancer so as to be brittle to the touch. Neither the eye, aided by the speculum, nor the sound revealed the fact that the old fissure in the cervix had undergone malignant degeneration.

[1] *Münch. med. Woch.*, No. 52, 1899.

THE GERMAN MEDICAL CONGRESS.

THE eighteenth German Medical Congress will be held at Wiesbaden from Wednesday, April 18th, to Saturday, April 21st, under the presidency of Professor v. Jaksch of Prague. The principal topics selected for discussion are the Treatment of Pneumonia, to be introduced by Professor v. Korányi, of Buda-Pesth, and Professor Pel, of Amsterdam; and Endocarditis and its Relation to other Diseases, to be introduced by Professor Litten of Berlin. The subscription to be paid by members of the Congress is 15 marks, and the Secretary is Dr. Emil Pfeiffer, Parkstrasse 13, Wiesbaden. An exhibition of new medical apparatus, instruments, and preparations will be held during the Congress, and particulars as to this also can be obtained from Dr. Pfeiffer.

DR. BURNEY YEO has been appointed by the Council of King's College, on his resignation of the Chair of Medicine, Professor Emeritus and Consulting Physician to King's College Hospital.

A MUNIFICENT donation of £40,000 has been given to the Edinburgh Royal Infirmary by Mr. Thomas Aitken, of Nivingston, and of 5, Grosvenor Crescent, Edinburgh, the manager of the London and Edinburgh Steam Shipping Company, in memory of his two wives. The managers have resolved to name a ward the Aitken Ward.

THE annual general meeting of the Neurological Society of London will be held on Thursday, February 8th, 1900, at 8.30 P.M., at the rooms of the Medical Society, 11, Chandos Street, W., when the President-elect, Dr. A. D. Waller, F.R.S., will deliver an address on the Excitability of Nervous Matter, with special reference to the Retina.

THE annual discussion at the West London Medico-Chirurgical Society will take place on Friday, February 2nd, at 8.30 P.M. The subject selected is the Treatment of Primary and Secondary Syphilis, and the discussion will be opened by Mr. Alfred Cooper. Visitors are invited to be present, and to take part in the discussion. The annual dinner of the Society will be held at the Café Monico on February 14th.

WE regret to record the death of Dr. T. W. Grimshaw, C.B., Registrar-General for Ireland, which took place at his residence, Priorsland, Carrickmines, co. Dublin, on Tuesday morning last (January 23rd). Dr. Grimshaw fell a victim to the prevailing epidemic of influenza. He was confined to his bed for barely a week; four days before his death symptoms of pneumonia appeared, and in the end he sank rapidly.

THE President of the Local Government Board has appointed Mr. William Henry Power, F.R.S., the Assistant Medical Officer and Medical Inspector for General Sanitary Purposes of the Board, to the office of Medical Officer of the Board, in the room of the late Sir Richard Thorne, K.C.B. Dr. H. Franklin Parsons has been appointed Assistant Medical Officer and Medical Inspector for General Sanitary Purposes, and Dr. R. Bruce Low has been appointed an Assistant Medical Officer of the Board.

THE WAR IN SOUTH AFRICA.

THE BATTLE OF TUGELA (COLENSO).

By Frederick Treves, F.R.C.S.,

Consulting Surgeon with the Forces.

Frere Camp.

It was from Frere Camp that the army under General Buller started for the Tugela River. Frere is merely a station on the line of rail which traverses Natal, and as it consists only of some four houses it can hardly be dignified by the name of hamlet. These few single-storey houses had been very thoroughly looted by the Boers, and in one of them —the stationmaster's house—the General had his headquarters. Frere is simply a speck—a corrugated iron oasis—in the vast undulating plains of the veld. On the way to Ladysmith are a few large kopjes, from any one of which the line of the Tugela River can be seen, with the hills beyond occupied by the Boer entrenchments, and over them again the hills which dominate Ladysmith. There was no shade of any kind, and as the weather was exceptionally hot the camp was not precisely comfortable. The inconvenience of a continued sun-glare was intensified by constant clouds of brown dust and by the scarcity of water. On the other hand, the evenings were cool and the early mornings delightful.

The river which is reputed to "run" through Frere had long since ceased to run. The water was retained by certain dams, and the pools thus formed were not over numerous. The water was the colour of peasoup, and when in a glass was semi-opaque and of a faint brownish colour. It soon blocked a Berkefeld filter, the pencil of which had to be cleaned after each water bottle had been pumped full. The filtered water was pleasant enough to the taste. In the lowest pool, immediately above the iron railway bridge which had been blown up by the Boers, Tommy Atkins could bathe in what seemed to be a light-coloured mud. Here also he washed his socks and his shirts.

We came up to Frere—I, and my two nurses—with No. 4 Stationary Field Hospital. This hospital was under the very able direction of Major Kirkpatrick, and did splendid service. The other officers were Major Mallins and Lieutenant Simson, of the R.A.M.C., than whom none could be more efficient. We reached the camp on the Monday before the battle, when it was reputed that 30,000 men were under canvas. A camp of this size of necessity presented an endless scene of bustle and movement. Nothing seemed to be at rest but the interminable array of white tents and the rows of baggage waggons. Cavalry would be moving in one direction and infantry in another. Here a mounted patrol would be riding out or a couple of scouts coming in. Gallopers would be seen in all directions, and everywhere would be a struggling team of oxen or of mules enveloped in clouds of dust, and urged on by sweating men and strange oaths. The camp during the day lay dry, dusty, parched, and restless under a blazing sun, but at night there was a cool wind and cheery camp fires, and a darkness which blotted out the dusty roads, the dried-up river, the dismal piles of stores, and the general picture of a camp in a desert of baked earth. Every night a searchlight was at work sending despatches to Ladysmith, and almost every morning could be heard the Boer guns thundering over that unhappy place. Tommy Atkins looked very smart in his khaki suit when leaving Waterloo Station, or when embarking at Southampton, but at Frere he showed the effects of wear, and his tunic, his belt, his pouches, his boots, and his face had all toned down to one uniform tint of dirt colour. He was of the earth earthy. Even his brown face and red neck were well powdered with the common dust, but nothing seemed to have blotted out his cheerfulness and his determination to make the best of even a camp on the veld.

Before the Battle.

On Wednesday the army began to move forward to Chieveley, and on Thursday the whole camp had nearly vanished, and little remained but smouldering fires of camp refuse, the inevitable dust, the inevitable sun, and the inevitable Kaffir.

From a kopje some three miles beyond there—the kopje from which the Boers fired upon the ill-fated armoured train—the new camp at Chieveley could be seen. The baggage train which followed the army was eight miles in length. This train was made up mainly of waggons drawn by teams of oxen—eighteen to each waggon. The last bearer company was well out of sight in the new camp before the last waggons—carrying pontoons—had started. The course of this enormous caravan across the veld was marked by a line of brown dust which gave one the idea that the very road was smoking under this unwonted burden.

From the kopje we could see the firing of the great naval guns and the clouds of dust sent up by the exploding shells, and now and then from the weary road would come an attenuated sound, which was all that reached us of the shrill yells of the nigger drivers, whose dust-dried throats gave out noises like the shrieks of parrots.

During the Battle.

On Friday morning No. 4 Stationary Hospital moved up hurriedly to Chieveley. To our numbers had been added two Netley sisters, whose skill, devotion and unselfishness were soon taxed to the utmost. On the way up it was evident that the battle was raging. The roar of the big guns was incessant, and rising above their solemn boom was the sharp, irritable crack of the quick-firing ordnance. When I reached Chieveley Station, where the hospital was to be pitched, a message arrived asking me to go down to the field of battle at once. I went down in a mule waggon immediately, Our hospital was about three and three quarter miles from the Naval Hill on which our big guns were pitched. Close behind the ridge formed by this hill were four field hospitals. The scene presented at this spot was beyond description. The men were coming in as fast as the ambulances and bearers could bring them. Some were dead, some were dying, all were parched with thirst and baked and blistered with heat. The men were lying on all sides on stretchers—amidst tents, piles of rifles, accoutrements, battered helmets, and blood-stained tunics. It was a sight no one would wish to see again, and the blazing sun added to the miseries of all.

Some 800 wounded were passed through the field hospitals and dealt with by sixteen surgeons. Those who harshly criticise the Army Medical Department should have seen the work done on that memorable Friday on the Naval Hill before Colenso. No work could have been done better. The equipment was good, the arrangements elaborated, and the officers worked on hour after hour without rest or food under the most trying possible conditions. No greater strain could have fallen upon a department and all concerned met the brunt of it valiantly and well. One could not be other than proud of one's profession.

The system of dealing with the wounded had been very carefully worked out by the Principal Medical Officer, Colonel Gallwey, C.B., and to his foresight and preparation the perfect working of the hospitals on the day of the battle is due. In addition to the ordinary bearer companies Colonel Gallwey had organised a volunteer ambulance corps of some 2,000 tmen disposed in the proportion of twelve men to a stre cher. It was intended that these bearers should convey the more seriously wounded from the field, so that they might be spared the jolting of the ambulance waggons over the somewhat rough ground. Not only did the bearers do this and so save infinite suffering, but all Friday night and Saturday they were carrying the graver cases from the field hospitals to the stationary hospital at Chieveley. So

admirably was the stretcher work done that not a single wounded man was left upon the field after dark on Friday.

After the Battle.

Our hospital at Chieveley was crammed to its utmost, and very many wounded men had to lie all night in the open. Fortunately the nights on Friday and Saturday were very fine, and there was a bright moon.

The work on Friday and Saturday was the heaviest I have ever experienced, and we all suffered a good deal from thirst. The nurses worked not only all day, but also all night. Some hundreds of wounded soldiers will have reason to remember their devotion that day, and how well they succeeded in rendering a little more tolerable a state of misery which was horrible to contemplate.

In the Donga.

After a heavy afternoon on the field I returned to Chieveley Field Hospital in the evening, but had hardly got in when a galloper arrived to ask me to see Lieutenant Roberts, who had just been brought back. I returned at once with a full equipment of instruments, and much regret that that valiant soldier was from the first quite beyond the reach of surgery. In addition to a penetrating wound of the abdomen, his forearm was shattered by a Mauser and his knee wounded by a shell. He was pulseless. I slept outside his tent that night, and saw him up to Chieveley on Saturday morning. He never rallied nor regained a pulse, and died on Saturday at midnight. Before he was brought in he had been lying for seven hours in the sun in a donga. Here he was attended to by Major Babtie, R.A.M.C., who rode into the donga through a hail of bullets, and whose horse was killed under him. Major Babtie kept by the many wounded men in the donga until the battle was over, and as he alone had water in his water bottle he doled out water to each man in a minim measure, 1 drachm to each. The courage and daring of Major Babtie on this occasion calls for some recognition from the medical profession, if not from the military authorities.

The Heat.

On Sunday we had to leave Chieveley as the hospital was within reach of the Boer shells. We therefore retired to our previous "pitch" at Frere. The hospital tents at Chieveley were admirably situated, but the work was much hampered by want of water. The temperature on Friday and Saturday was up to 100° F. in the shade. On Monday the temperature rose to 104° F. in the shade. A clinical thermometer in a bag and under cover of a tent registered 104.5° F.

Death of Captain Hughes.

One very sad episode of the battle was the death of Captain Hughes, R.A.M.C., Surgeon to General Buller. He was riding to the aid of the wounded when he was shot through the root of the neck, and died in 30 minutes. He was an able surgeon, a charming companion, and a most amiable and popular man. He was beloved by everyone in his corps, and had a distinguished career before him.

The Hospital Trains and Ships.

The method of dealing with the wounded in the Natal Field Force is as follows: The railway—a single line—is open as far as Chieveley, and on it are two admirably equipped hospital trains in charge of the indefatigable and ever-obliging Major Brazier-Creagh, R.A.M.C. The hospital train was on the field before daybreak on Saturday morning, and was soon filled with wounded. Some few of these were landed at the No. 4 Stationary Field Hospital at Chieveley, the rest were taken on to Estcourt and Maritzburg. At both these towns, but especially at Maritzburg, there is very excellent hospital accommodation. The base hospital alone at Maritzburg can take in 1,100 patients, and besides, there is the large military hospital at the College, Grey's Hospital, and the hospital for volunteers established at the Legislative Assembly.

From Maritzburg the patients are sent down to Durban by the hospital train, and are then conveyed to Cape Town by the hospital ship *Spartan*, which is under the charge of Major Woodhouse, R.A.M.C. From the careful examination I made of her when I boarded her at Durban, I should think she was the best-equipped and best-managed hospital ship afloat.

Colonel Gallwey's organisation has now been tested to the utmost, and has been proved to be efficient and admirable. Those in England who have friends among the army in Natal may rest assured that the wounded are well looked after, and that the arrangements for their comfort leave little to be desired. The wounded placed upon the hospital train by the Naval Hill below Chieveley could have—as soon as they were placed in their berths—iced soda water and whisky, iced milk, hot soup, or even champagne and seltzer. It is no matter of wonder that Major Brazier-Creagh is proud of his train, to which he has devoted so much labour and thought.

The strain of the work at Durban falls upon Major Mc Cormack, R.A.M.C., who has charge of the base depôt medical stores, and who—after weeks of hard work—has brought his department to a perfect degree of business-like efficiency.

Mauser Bullet Wounds.

The great majority of the wounds are by Mauser bullets, some few are due to fragments of shell, and a still less number to shrapnel. The Mauser bullet is a very merciful one, and in no instance have I met with a case in which the head of the bullet had been cut off, as had been asserted by some. The damage done by the Mauser depends mainly upon the range. At 1,500 to 2,000 yards it penetrates like a needle. At 500 yards or less it will smash a femur or a humerus to fragments. When a bone is fractured the bullet—if retained—is generally found to be much distorted or broken up into many fragments. The shell generally peels off the leaden core.

As an instance of the fine hitting of the Mauser, I may mention a case (from the armoured train) in which the bullet went through the middle phalanges of the ring and little fingers, making four small wounds which healed kindly and neatly. The two bones were fractured but the man recovered with sound union and mobile joints. On the other hand, I have seen a fracture of the humerus in which the bone was broken into twenty-three small fragments. Many gunshot fractures of the thigh heal by first intention.

Abdominal Wounds.

The point of entry of the Mauser is very small—often, as Tommy says, like a bugbite; it is not difficult to overlook. The point of exit is also often very small, but is more apt to be slit-like. Several patients have been shot through the abdomen without inconvenience following. In some of these the bowel has been penetrated, as shown by blood in the motions. The hole made in the bowel by the Mauser is very small, and can be closed by from three to five Lembert's sutures. Several penetrating wounds of the liver and kidney have been followed by no symptoms. One distinguished officer had a shrapnel bullet pass through his liver and kidney. He had little collapse, and beyond some temporary tympanites and hæmaturia he had no trouble of any kind.

Bullet Wounds of the Head and Spine.

In several instances the bullet has passed through the brain without causing marked symptoms, and perfect recovery has followed. For example, a bullet entered near the vertex, passed through the brain, hard palate, and buccal cavity, and escaped at the root of the neck on the opposite side. No discomfort followed except headache and some strabismus. Speaking generally, operations upon the skull for gunshot wound have done exceptionally well

and such operations have been numerous. I met with 4 cases of paraplegia on Saturday, the bullet having in each case apparently passed through the cord.

BULLET WOUNDS OF THE EXTREMITIES.

Amputations have been comparatively few. I have seen a Mauser go through the centre of the patella and out at the centre of the popliteal space, and lead to no trouble in the joint. In another case the bullet went through the popliteal space from side to side, and left the bone and joint untouched but led to an arterio-venous aneurysm.

BULLET WOUNDS OF THE CHEST.

After penetrating wounds of the lung there may be no symptoms beyond an immediate hæmoptysis, which is not repeated. In other instances there has been surgical emphysema or hæmothorax, a pneumothorax, and an example or two of empyema. On the whole, gunshot wounds of the chest do well.

Some cases are hard to understand, as, for example, one in which the bullet entered above the clavicle, and came out on the inner side of the opposite thigh, there being no symptom except temporary shock.

THE FIELD DRESSING.

The field dressing carried by each soldier answers its purpose admirably. Tommy has a great regard for it, and takes every care that he has it on him.

THE SPIRIT OF THE WOUNDED.

On all sides there is evidence that our soldiers behaved splendidly on the field, and I can say that when brought back wounded they were plucky, patient, and uncomplaining. Their unselfishness was many times very marked. An orderly was bringing some water to a wounded man lying on the ground near me. He was shot through the abdomen, and he could hardly speak owing to the dryness of his mouth, but he said, "Take it to my pal first; he is worse hit than me." This generous lad died next morning, but his pal got through and is doing well.

FREDERICK TREVES.

[FROM OUR SPECIAL WAR CORRESPONDENT.]

THE MEDICAL SITUATION AT THE BASE IN CAPE COLONY.

Capetown, December 30th, 1899.

THE BASE HOSPITALS AFTER LORD METHUEN'S ACTIONS.

THE news—the rather scanty news—that we get from England chiefly refers at present to the additional reinforcements that are coming out. With military matters I am in no way concerned; but it is at least possible that the idea may obtain at home that the non-combatant departments may also stand in need of further augmentation, and it is tolerably safe to assume that to the medical branch thoughts will be turned.

It may save disappointment to many if the medical situation is explained. At the moment of writing there are in round figures some 1,100 patients in the three base hospitals. No. 1 and No. 2, as the readers of the BRITISH MEDICAL JOURNAL are aware, are at Wynberg and No. 3 at Rondebosch. The latter hospital has rather over 100 cases, which were brought down a day or two ago in the hospital ship *Spartan* from Natal; No. 3, therefore, has at present more medical and nursing staff power than is required. It is likely to fill up gradually and without any sudden strain being thrown on it. After the engagements in the neighbourhood of the Modder River, in which General Lord Methuen's force took part, there was for a time very great pressure on the base hospitals Nos. 1 and 2. The nursing staff was hardly up to the strength calculated to meet such a sudden and serious strain. In some respects the hospitals were incomplete; thus, the operating theatre of No. 2 is still a marquee tent, the building being still in the hands of the workmen. Notwithstanding the severe pressure, and in spite of the fact that in minor details the absolutely smooth working that can only be looked for when the machine has been running for a little time was hard to secure, these base hospitals met the emergency with comparative ease. Hard work was entailed; but that was precisely what every member of the staff was burning with anxiety to give, and they asked for nothing better.

Meanwhile No. 4 Hospital, at present under orders to proceed to Natal, has not as yet been called into requisition, and there are two additional hospital ships, the *Lismore* and the *Nubia*, which have been fitted here. There is, therefore, a large margin allowed. The wounded at all the three base hospitals, broadly speaking, do well, and a large number of convalescents will shortly be ready to leave. On all these grounds, therefore, it does not seem probable that any increase of the medical or nursing staff will be called for.

A WARNING TO VOLUNTEER NURSES.

Yet every steamer from England appears to bring ladies who seek in vain to obtain nursing employment in the hospitals. To such as are unacquainted with the methods of a military hospital and its manner of working, the nursing staff appears inadequate. Judging only by their experience (when they have any) of civil hospitals, there appear abundant openings for more women workers. The outflow of sympathy is strong, and it seems almost cruel to point out that the resentment felt when applications are declined is highly unreasonable. The long and short of it is that the R.A.M.C. is not in any need of more nursing power. Were there any desire to appoint extra nurses, of which there is not the slightest indication, it is possible that the claims of the many nurses who, under normal conditions, exercise their vocation at places like Kimberley and Johannesburg would be first considered. Among these are many fully-trained nurses fully qualified to do any work to which they might be set. Their lot is a hard one, for prices at Capetown are high and civil employment is not easily obtained.

No one here would doubt the readiness with which the nurses at home would volunteer for service, but they are not wanted. At some future date the question of the employment of nurses to a greater extent than now obtains in military hospitals may come again to the front, and the experience derived from this campaign will be of much value; but this sort of question is one that it would be most improper to discuss at present and most unprofitable. No sane person would seriously argue, however strong the views he held, that any grave change of system should be made during a time of stress and trial.

The feeling that animates so many at home is just as strong at Capetown. Everyone is desirous of giving practical aid, of being useful in some capacity. It is to be feared that a formidable amount of thankless work devolves on the officials of the medical department in answering the numerous applications made.

NOS. 1 AND 2 HOSPITALS AT WYNBERG.

The hospitals at Wynberg are very easily accessible from Capetown, and, when strong south-easterly winds blow, Wynberg is a much pleasanter place than Capetown. It has been found necessary to restrict rigidly the granting of passes to the hospitals, which otherwise would have been inundated with visitors, many of whom would have gone out of pure curiosity. It is not easy to convince people that the essential business of a hospital is to get the patients well as quickly as possible, and move them away to make room for others, and that anything which interferes in the least degree with this end is highly undesirable.

NO. 3 HOSPITAL AT RONDEBOSCH.

No. 3 Hospital, charmingly situated at Rondebosch, with a magnificent view of Table Mountain, was opened on December 24th for active work, some 100 wounded and sick brought down in the hospital ship *Spartan* being the first occupants. The only objection that can be made against the site chosen is that it is rather exposed to wind. The trees that surround the tents are at some distance. The sandy soil gives but poor hold for tent pegs, and if the "Cape Doctor" blows with great force there may be anxious moments. The water supply is abundant and good, and the Water Company has undertaken to keep the roads watered. When the tent

ropes are secured by long iron pegs, which are immediately to be provided, the airiness of the situation will be an advantage and not an anxiety. The hospital is about a mile from Rondebosch Station, and the road leading to it is a good one. Still, the journey that has to be made from the docks in the case of sick and wounded brought by sea from Natal is rather a trying one.

The Work Done in the Field Hospitals.

It speaks volumes for the excellence of the work done in the field hospitals that the patients arrive in such excellent condition. In my next letter I hope to particularise some of the cases under treatment, and it will then be seen that praise of the work done at the front is thoroughly well merited.

[Our correspondent informs us that he was leaving Capetown for Durban on the day this letter was despatched.]

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

X.

Field Ambulances.

In my last letter I referred to the question of wheeled ambulances for use with the cavalry column, and in doing so said that I believed a spider-built vehicle would be more adapted for the purpose in South Africa than any two-wheeled cart could be, not excepting even the Irish jaunting car. Since writing, an illustration of one of these "spiders," as used in South Africa, appeared among the excellent snapshots from the field of operations published by *South Africa*, and by the kind permission of the Editor of that journal I am able to reproduce it here. A glance at this vehicle will show how



Spider cart used for the transport of wounded. From a photograph taken in Pietermaritzburg College Grounds by the special correspondent of *South Africa* with the force in Natal.

extremely difficult it would be to capsize it, with its wide axles and light wheels standing well out from the machine. Any one of these four wheels could go almost anywhere without actually capsizing the ambulance. Various patterns of arriages are mounted on wheels such as these; the one shown, with a little modification, would not be a bad one for ambulance work. The centre of the cart could be used either for 3 men lying down side by side or for 4 or more men sitting; in front at least 2 more men might be accommodated with the driver. For rapid movement over a rough country two good horses would be used in a vehicle of this description.

Dress for Soldiers.

The question of dress for troops in South Africa is still receiving the attention of experienced campaigners. The volunteers recently sent out are, it is satisfactory to see, provided with the wide-awake felt hat instead of the helmet, but puttees continue to be very much in demand, and although comfortable to the wearer are not entirely suitable for rough work in South Africa. The spear grass of India or "stick" grass of South Africa are equally liable to get into the puttees and cause considerable annoyance, while the various thorns abundant in the bush of South Africa will undoubtedly tear and penetrate them. On the whole, there can be little doubt that some form of leather legging, either as a puttee or an ordinary legging, should be provided, especially for the mounted men; such leggings are being made for the South African contingent of the Imperial Yeomanry. The latter has the further advantage of being a protection against snakes, which, although not a great danger, cannot nevertheless be entirely ignored. One officer, at least, it has been pointed out to me since writing my last letter, lost his life from the bite of a cobra during the Zulu war.

Ticks and Natal Sores.

The following letter from a lady, who is herself an experienced traveller, has been received:

When seeing a lady friend of mine (an experienced traveller) off to the Cape for the fourth time, last week, she begged me, in the interests of our soldiers, to ascertain if our medical men and surgeons who were accompanying them were aware, or had been duly warned, as to one of the plagues of Natal—(as bad as some of the plagues of Egypt)—and for which the season was just now approaching—namely, the prevalence in the grass of myriads of bloodthirsty ticks, which attack both man and beast indiscriminately. She herself, having made light of her father's injunction to keep off the grass, and going to look at some particular shrub, found herself covered with them one day. Most of these miniature leeches she managed to remove safely, but one failure resulted in one of the dreadful Natal sores, from which she suffered agonies, and so speaks from experience.

The danger is that in hastily tearing off the loathsome little creature the head should be left, when a so-called Natal sore results—an ulcer sometimes deep, which if multiplied indefinitely, may probably invalid many of our brave men, as can easily be imagined.

She told me of a simple local remedy—some kind of oil, as far as I remember—mixed with tobacco ash, which, if applied at once, makes the insect, as she expressed it, "kick out backwards, intact, of its own accord." I think that this information—the remedy (which I could more accurately verify if you wished)—cannot be too widely known, for we surely have enough to contend with as it is in this arduous campaign, and the root of evil at the bottom of many a mysterious sore may thus be discovered and removed.

The evil is undoubtedly a real one, as I can testify from personal experience; fortunately, however, the ticks are most abundant and troublesome in the immediate vicinity of the sea coast, and at altitudes of 3,000 or 4,000 feet they are much less numerous. I am not acquainted with the remedy referred to in this letter, but I have personally found carbolic oil to be absolutely reliable both as a preventive and as a cure. I can well recall a night spent in ambush near the Kei river, in the eastern provinces of the Colony. We lay in long grass, awaiting the arrival of a Kaffir marauding party who never appeared, but the torture of that night I shall never forget. We were literally devoured by swarms of these ticks, which infest the long grass of the coast.

It is curious that with ticks, as with other parasites, some sort of immunity appears to become established in the host; thus a newcomer suffers much more severely from the tick bite than the salted colonist. The reason would appear to be a double one, for while the veteran colonial campaigner suffers less from the effects of the bites, the tick itself appears to prefer fresh blood, and these parasites invariably attack in greater numbers the newcomers. Whether the tick is really responsible for the Natal sore referred to is not quite certain, some medical men maintaining that they are the result of a different parasite.

The Last Hours of the Fatally Wounded.

A very admirable letter on this subject was published the other day in the *Morning Post* by Colonel Wyndham Murray, M.P., a soldier of wide experience, who has served through no less than five campaigns. In the majority of instances he was on the staff of the commander, and his opportunities of observation have therefore been ample. He has already spoken with no uncertain voice in the House of Commons on

the question of offering additional facilities for rifle practice among our troops. He has seen that for those whose sad lot it may be to die in a far country, it is a great solace to be enabled, before death actually occurs, to send a last message to those best loved on earth; and to the recipients a communication of this sort mitigates, in a measure, the bitterness of the blow which they have to sustain.

Colonel Murray says that there are no persons whose special duty it is to collect the last words of the wounded in battle, and that many men die in a state of mental agony which would be considerably relieved if they were assured that their last words of farewell would be faithfully carried to their kith and kin. Colonel Murray therefore suggests that

Of the Medical Department with each force a few persons should be carefully selected for tact and other such qualities, who should make this their special duty immediately after an engagement, and that an officer in the hospital of each force should collect and make a careful record of every such case, transmitting the messages as required, so that the matter be on an organised footing instead of being carried out in, no doubt, the kindly but chance manner that must be the case at present.

In reference to this we may at once say in justice to our profession that we believe this office is invariably performed when the opportunity arises, but at the same time it must be admitted that the first duties of a medical officer are often so urgently of a purely surgical character that he has but little time for the performance of a duty which requires both delicacy and time. Where big armies are engaged, as in the present campaign, Colonel Murray's suggestion appears well worthy of attention, though possibly the task is one which should be shared, at least, by the chaplain's department. Death, of course, not infrequently comes suddenly and swiftly on the field of battle, but there are many cases where life lingers, it may be for an hour or even less, and in such opportunity for this last act does occur.

Rapid Recovery of Wounded.

In the last issue of the *Polyclinic*, the journal of the Medical Graduates College in London, Mr. Jonathan Hutchinson observes that never before in the history of the world were wounded soldiers more rapidly restored to the combatant ranks. The term "wounded," he thinks, will soon cease to have the fearful significance which it once had, and all those coming under it will hardly be counted as losses, when we realise that two-thirds will probably be back in the ranks within a fortnight. Mr. Hutchinson concludes his article by pointing out what great interest would attach to statistics collected by those who have the opportunity as to the precise nature of the injuries of those killed on the modern battle field. Experience of the present campaign would apparently show that the only absolutely fatal part is the heart, and this, as has been suggested by more than one writer, may eventually be protected by a breastplate. Even penetrating wounds of head, although of course usually fatal, we have seen in the present campaign are not invariably so.

THE WOUNDED AND SICK AT NETLEY.

[By our own Correspondent.]

During the past few weeks detachments of sick and wounded from South Africa have been arriving at Netley. The empty transports returning from the Cape afford ample and luxurious accommodation to convey to the military hospitals in England a considerable number of men. There are now at Netley a total of 450 soldiers returned invalided, of which number 358 are surgical cases.

On Thursday, January 18th, by the kind permission of the Principal Medical Officer, Colonel Charlton, I visited the hospital at Netley in order to see some of these men. A winter's sun shone brightly over the fine buildings, trim lawns, and playing fields of the hospital. From the water's edge the jetty ran out into the rippling surface of Southampton Water, and across the water lay the wooded slopes of Hampshire, covered by the perennial haze of England, the whole presenting a scene both beautiful and tranquil. It was a grateful change from the murk and gloom of a winter's day in London. It was the scene that formed the soldiers' last glimpse of England as he embarked for the South, and it was this scene which he gladly welcomed again on his return for a period of convalescence and rest. The excellent accommodation which the empty transports are able to offer, together with the fine weather voyage from South Africa, evidently exercised most beneficial effects on the invalids. Thus of the 136 cases recently landed from the *Aurania* only one had to be carried into the hospital, the others all having sufficiently recovered to walk. As my time was limited I confined my visit to an inspection of some of the extremely interesting surgical cases, the result of gunshot wounds; of these the great majority have been inflicted by the Mauser bullet.

Surgeon-Captain Steele, of the Militia Medical Staff Corps, who was orderly officer for the day, took me to Major Dick, R.A.M.C., in whose charge most of the surgical cases had been placed, and who kindly took me round some of the wards. Among the cases were men who had been pierced by bullets in almost every direction. Thus, there were cases in which the head had been wounded, and apparently even the brain traversed; others were shot through the thorax, while several had been wounded in the abdomen, groin, and buttock, and both upper and lower limbs. Shoulder and elbow-joint had in turn been pierced. In one or two cases, of which I give brief notes, the body had been traversed literally from one end to the other. The wounds, with the exception of a very few, had almost entirely healed, and in a large number of cases had left no symptom whatever behind them. Most interesting of those with appreciable after-effects were cases of nerve injury, in which a degree of either pain or paralysis, or both, remained.

I will now give a few notes of the cases I actually saw in the order in which I saw them:

Case I.—*Bullet Wound of Humerus.*

Lance-Corporal W. R., of the 3rd Grenadier Guards, took part in the engagement at Belmont. He received a bullet wound in the arm, which fractured the humerus and apparently had involved the shoulder-joint, the wound had completely healed; the wound of entrance had healed before leaving Capetown, that of exit on the voyage home. When hit, he was standing close to Lieutenant Fryer. The Grenadiers, R. says, were advanced out of their camp at 1.30 A.M., and subsequently took part in the successful engagement at Belmont, the first of Lord Methuen's brilliant series of actions previous to Magersfontein.

Case II.—*Bullet Wound of both Thighs without Fracture; Probable Injury of Sciatic Nerve.*

Private E., of the Argyll and Sutherlandshire Highlanders, was wounded at Modder River by a Mauser bullet, which traversed both thighs, passing posterior to and clearing the femur in both legs. The second bullet had traversed the left deltoid muscle. The wounds had all healed, but a good deal of pain was still felt in the right foot. The patient himself attributed this pain to rheumatism, acquired from exposure subsequent to the wound, as he lay in pelting rain for many hours. There can, however, I should imagine, be little doubt that in this case the sciatic nerve had been lacerated by the passage of the bullet, and that the pain referred to was due to this.

Case III.—*Bullet Wound of Elbow-joint.*

Private K., of the same regiment, had received a wound in the elbow which had fractured the bones of the joint. The wound had been entirely healed for some time past, and the splints had recently been removed. There was still a good deal of thickening, but the patient was making excellent progress.

Case IV.—*Perforating Bullet Wound of Thorax: Paraplegia.*

Private K., of the King's Own Yorkshire Light Infantry, was engaged at Grasspan; in his case the bullet traversed the thorax. It had entered below the tenth rib on the left side in the midaxillary line, crossed in front of the spinal column, which, presumably, it had grazed, and came out in the mid-axillary region on the right side below the seventh rib. The shot was from a rifle at 600 yards distance, and made a perfectly clean wound both of entrance and exit. Major Dick, in commenting upon this case, said that the cleanest wounds were those from a Mauser bullet fired at from 400 to 1,000 yards; below 400 and over 1,000 a more explosive effect is produced. The patient explained that after the wound the effect he was principally conscious of was a loss of power in

both legs. Power had gradually been returning, and with it a certain amount of pain; the pain had increased slightly as the power returned. As this patient was one of those cases requiring a recumbent position during the whole of his journey, I asked him how he had fared. He said that the journey had been comfortable from start to finish, first of all by train to Capetown, and then by ocean steamer to good quarters at Netley. He felt that he had been well treated and cared for, and that every provision practicable had been made for his comfort.

CASE V.—*Perforating Bullet Wound of Chest: Pleural Effusion.*

Private W., of the Grenadier Guards, was wounded at Belmont. The bullet had entered 2 inches to the left of the nipple of the left side, where a rib had been fractured. The bullet came out to the immediate left of the spine below the seventh rib. Three weeks afterwards a certain amount of fluid had apparently collected in the pleura and had been drawn off through a trocar. All the wounds had healed, and he was rapidly regaining his normal condition. The wounds of entrance and exit, as well as the site of the puncture of the trocar, were all visible. The patient stated that the fluid drawn off consisted of blood and water. There was, at any rate, no reason to suppose that an empyema had formed.

CASE VI.—*Bullet Wound of Arm: Paralysis of Extensors.*

Lance-Corporal R., of the 1st King's Royal Rifles, was wounded at Lombard's Kop, near Ladysmith. In his case the bullet had traversed the back of the right arm, and presumably had severed the musculo-spiral nerve. The wound had healed completely, but there was entire loss of power in the extensor muscles. R. had taken part in the march of General Yule from Dundee to Ladysmith, and two days afterwards was engaged at Lombard's Kop, where he received his wound.

CASE VII.—*Wound of Face: Fracture of Nasal Bones.*

Private E. K., of the 1st Battalion Scots Guards, took part in the storming of the Kop at Belmont. He had received a bullet in the face, fracturing the nasal bones and destroying the right eye. He was not unconscious after the injury and said that he had not suffered any great degree of pain.

CASE VIII.—*Bullet Wound of Ischium.*

Private E., of the 2nd King's Royal Rifles, was engaged at Lombard's Kop on October 30th. He had a wound of entrance over the ischium, and the bullet had remained lodged in the body. It is hoped that it will be definitely located with the aid of Roentgen rays; at present the wound has completely healed and all that he is suffering from is a certain amount of pain in the right knee and groin.

CASE IX.—*Shell Wound of Muscles of Forearm.*

The next case was one of a wound from a shell. Of these some 6 or 8 had been received at Netley. Private J. S., of the 3rd Grenadier Guards, was engaged at Modder River, where he received his wound. A fragment of shell had torn out a portion of the muscles of the forearm; the wound had healed, but there was a good deal of contraction of the flexors.

CASE X.—*Bullet Wound of Foot: Cellulitis.*

Private H., of the 2nd West Yorkshire Regiment, formed one of the few exceptions to the general rule, and had a bullet wound of the foot, still unhealed. In this case sloughing and cellulitis had occurred, and on admission to the hospital his temperature was still elevated. Since his stay at Netley his temperature has gone down to normal; the wound is in a perfectly healthy condition and doing well.

CASE XI.—*Perforating Bullet Wound of Cranium.*

This was a very interesting and astonishing case of a man who had a bullet pass through his head behind both orbits. I was unfortunately unable to see him, as he was taking a walk somewhere in the extensive grounds. Major Dick assured me that the man was practically well, that he had never shown any special symptoms. He is probably the same case as that referred to in the letter of the Capetown correspondent of the BRITISH MEDICAL JOURNAL published some few weeks ago.

CASE XII.—*Bullet Wound of Pelvis and Abdomen: Injury to Bladder.*

Private S., No. 10 Mountain Battery, was shot in the right buttock during the engagement at Reitfontein, near Ladysmith, while serving his gun. The bullet entered about 2 inches to the right of the anus, and came out slightly below the umbilicus and within 3 inches of it to the left. He passed blood in his urine for some six days, and then steadily recovered. The bullet he believes was a ricochet off a stone close by. If this was so the wound was unusually clean, for as a rule a bullet which ricochets from a rock is rendered jagged and dangerous. But both the wound of entrance and that of exit in this, as in all the other cases, simply showed after healing up small purple marks about the size of the top of the little finger.

CASE XIII.—*Perforating Bullet Wound of Neck and Thorax.*

Private L., of the 2nd Coldstream Guards, took part in the fight at Magersfontein. The bullet entered on the left side of the neck, low down, and came out below the tenth rib on the right side of the midaxillary line. What course this bullet could have taken without wounding one of the larger vessels is difficult to conceive.

CASE XIV.—*Perforating Bullet Wound of Thorax, Abdomen, and Pelvis.*

Private M., of the Argyll and Sutherlandshire Highlanders, took part in the fight at Magersfontein. The bullet entered on the left side below and in front of the outer end of the clavicle, and it came out an inch below the crest of the right ileum. In this instance the bullet must have traversed the thorax, the abdomen, pelvis, and finally the iliac bone, literally from one end of the body to the other. The patient said that he had a good deal of abdominal pain for the first six days, but after that he was soon all right again. Both wounds had completely healed, and the wound of exit was very little, though slightly, larger than that of entrance.

Time would not allow of a further inspection of cases, although a large number would have repaid careful examination. If some of the surgical lecturers at the Polyclinic could get a dozen or two of these cases—now practically convalescent—to come to London for their demonstrations, they would certainly be conferring a favour upon a large number of the profession, who would be delighted to have an opportunity of seeing some of the extraordinary results of the Mauser bullet wounds. The patients now at Netley are in good hands and should do well. In addition to the officers of the R.A.M.C., several of the militia medical staff corps have been called up for service, and Surgeon-Captain Steele informed me that from his own corps he had taken a company of 50 men, who were assisting in various capacities about the hospital.

HOSPITALS FOR SOUTH AFRICA.

THE YEOMANRY HOSPITAL.

THE organisation of this hospital has made satisfactory progress, and it will probably be ready to leave on February 3rd should transport be at that time available. This matter, which is in the hands of the Transport Department of the Admiralty, is not yet settled, and it is possible that a special steamer may be chartered for the purpose. The hospital will be provided both with tents and huts, and the beds will probably be equally divided between these two forms of shelter. It is proposed that the operating theatre should be established in one of the huts. Special attention is being given to all the sanitary arrangements and a Pasteur-Chamberland installation to supply filtered water for seven hundred and fifty persons will be provided. A Washington-Lyons steriliser for infected clothing, and an incinerator for dressings will be taken out. It has been resolved to increase the staff of nurses to forty, all fully trained and carefully selected. The superintendent of nurses will be Miss Fisher, who was trained at Guy's hospital, and the night superintendent will be Miss Brereton, lately a sister of the Bright Ward at Guy's Hospital. The medical staff will include nineteen fully qualified medical men, including Lieut.-Colonel Sloggett, the military officer in command, and there will be in addition ten dressers. The surgical and medical staff of the hospital, so far as appointed, are:

Alfred D. Fripp, M.S.Lond., F.R.C.S.Eng., Assistant-Surgeon to Guy's Hospital; John Wichenford Washbourn, M.D.Lond., F.R.C.P.Lond.,

Physician to and Lecturer at Guy's Hospital, and Physician to the London Fever Hospital; Raymond Johnson, M.B., B.S.Lond., F.R.C.S.Eng., Assistant-Surgeon to University College Hospital and to the Victoria Hospital for Children; F. Newland Pedley, F.R.C.S.Eng., L.D.S., Senior Dental Surgeon to Guy's Hospital, and Lecturer on Dental Surgery in the Guy's Hospital Dental School; Hamilton A. Ballance, M.S., M.D.Lond., F.R.C.S.Eng., Assistant-Surgeon to the Norfolk and Norwich Hospital; Wm. Turner, M.B., B.S.Lond., F.R.C.S.Eng., Assistant-Surgeon to the Westminster Hospital; Wallace C. G. Ashdowne, F.R.C.S.Eng., Surgical Registrar of St. Mary's Hospital; J. B. Christopherson, M.D., B.C.Camb., F.R.C.S.Eng., Demonstrator of Anatomy St. Bartholomew's Hospital; Andrew Elliott, M.D., C.M.Edin., D.P.H., Medical Registrar, West London Hospital; H. W. Saunders, M.B.Lond., F.R.C.S.Eng.

THE IRISH HOSPITAL.

Dr. J. B. Coleman, F.R.C.P.I., has been appointed to the staff of Lord Iveagh's Irish hospital for South Africa. Sir William Thomson, the chief surgeon, will, we learn, sail on February 3rd, for Capetown, so as to arrive a few days in advance of the remainder of the staff of the hospital and its materials.

THE LANGMAN HOSPITAL.

We understand that the staff of this hospital, the gift of Mr. John L. Langman, has been completed as follows:

Robert O'Callaghan, F.R.C.S.I., Surgeon to the French Hospital, London, *Surgeon*. Charles Gibbs, F.R.C.S.Eng., Assistant Surgeon to Charing Cross Hospital, *Surgeon*. H. J. Scharlieb, F.R.C.S., Anæsthetist to University College Hospital, *Assistant Surgeon and Anæsthetist*. A. Conan Doyle, M.D., *Physician*. The Army Medical Officer in command of the hospital will be Major O'C. Drury, R.A.M.C. Five senior students from University College Hospital as surgical dressers. Mr. Archie Langman, son of the donor, will act as treasurer and secretary.

THE PRINCESS CHRISTIAN HOSPITAL.

Mr. Alfred Moseley, of Hadley Wood, Middlesex, has offered to equip and support a base hospital for wounded at Capetown and the War Office has gratefully accepted the offer.

Mr. Moseley, a merchant connected with South Africa, proposes to erect four principal buildings one storey high, built of wood and covered with corrugated iron. Each will contain twenty-five beds. One will be reserved for cases of fever. There will be separate buildings for stores. The staff will consist of five Surgeons and Major H. B. Mathias will be the officer of the R.A.M.C. in charge. The Princess Christian has consented to the hospital bearing her name, and the Red Cross Society has associated itself with the undertaking.

NO. 6 GENERAL HOSPITAL.

No. 6 General Hospital, mobilised at Portsmouth under the command of Lieut.-Colonel B. Somerville-Large, R.A.M.C., was inspected on January 20th by Surgeon-General Cuffe, C.B., Principal Medical Officer Southern District, who expressed himself highly pleased with the excellent appearance of all on parade.

The personnel of the Hospital, in addition to the R.A.M.C. largely drawn from Section D of the Army Reserve of the Corps, included a fine body of 50 supernumerary officers and men provided by the St. John Ambulance Brigade. The inspecting officer specially complimented these men, whom he, as an old member of the Order of St. John, felt assured would maintain the grand traditions of the Knights Hospitallers of old, who went to the East to succour the sick and wounded in war, as they, the English modern representatives, would surely do in the South, in friendly emulation of their comrades in the Royal Army Medical Corps, whose motto, *In arduis fidelis* (faithful in difficulties) had from all accounts been well adhered to in spite of the asperities which stimulate rather than deter. The Surgeon-General concluded by wishing them every success and a safe return after a successful campaign. They embarked at Southamption in the ss. *American*, on January 21st, for South Africa.

THE BATTLE OF MAGERSFONTEIN.

A correspondent in this country sends us the following details which he has received, describing the gallant conduct of Lieutenant H. E. M. Douglas, R.A.M.C., to which reference was made in the BRITISH MEDICAL JOURNAL of December 23rd, 1899:

Lieutenant H. E. M. Douglas was in medical charge of the Black Watch. During the morning, having lost touch with the Black Watch, he was attending the wounded under fire in front of our own guns, when he received a message from the front line of fire that a doctor or stretcher was required or a wounded officer of the Gordons (Captain Gordon). He at once made his way there—that is to say, to within about 250 yards of the Boer trenches—under a heavy fire all the way, and attended to a number of wounded, and continued to do so until a general retire was ordered. He was wounded subsequently whilst procuring water for men of the Black Watch.

THE SICK AND WOUNDED OFFICERS' FUND.

A preliminary meeting of the Committee of the Sick and Wounded Officers' Surgical and Medical Aid Fund was held at Hampden House, under the presidency of the Duke of Abercorn, K.G., on January 22nd, and was attended by, among others, Sir Thomas Smith, Bart., Surgeon-General J. B. Hamilton, Dr. Thomas Barlow, Mr. Christopher Heath, Mr. Alfred Willett, Mr. Edmund Owen, Dr. G. S. Beatson (Glasgow), Mr. Alfred Cooper, Mr. Clutton, Dr. Newton Pitt, and the Honourable Arthur Brodrick, Honorary Secretary. The executive committee was elected, and a small subcommittee of medical men to make a report upon the manner in which the surgical and medical aid should be organised was appointed.

THE EIGHTH DIVISION.

The Principal Medical Officer for the Eighth Division, which will be under the command of Major-General Sir H. M. L. Rundle, K.C.B., is Lieutenant-Colonel W. A. May, R.A.M.C. Lieutenant-Colonel May entered the Army Medical Service in September, 1874, was appointed Surgeon-Major in September, 1886, received the rank of Lieutenant-Colonel in September, 1894, and was appointed Brigade-Surgeon-Lieutenant-Colonel on December 15th, 1897.

The medical officer appointed to the Staff of the Division is Major J. W. Jerome, R.A.M.C., who entered the service in February, 1882, and was appointed Surgeon-Major in February, 1894.

THE LATE MR. JOHN RUSKIN.

MR. RUSKIN'S ILLNESS DESCRIBED BY HIMSELF.

WHEN, some time ago, I was on a visit to Mr. Ruskin at his house at Coniston, he received me with that genial, almost tender, kindness and hospitality for which he made Brantwood famous, and not only Brantwood, but any other house which for the time being had been his home. He talked in his charmingly frank and naïve manner, which, considering the delicacy of some of the subjects upon which he touched, was at once delightful and, even to a friend, a little surprising. Ruskin—as everyone knows—was an admirable talker. A rich vein of playful humour, when he was not in too serious and earnest a mood, underlaid his conversation, which, when accompanied with the merry twinkle of his deep blue eyes and the smile that on such occasions was ever playing prettily about his mouth and lighting up his expression, possessed a fascination peculiarly his own. One morning, as we sat at the breakfast-table—Mr. Ruskin and I—and after he had served me standing—as, with a pretty old-fashioned courtesy, he insisted upon doing—the sudden crowing of a bantam cook just outside the window behind me—that overlooking the lake—caused me to turn my head quickly that way.

"Do you object to that noise?" inquired my host with some solicitude. "Some people do. Now I like the sound of poultry very much in moderation, but it always serves to bring me back to a very painful incident which I will tell you about. It may be of some psychological interest one of these days.

"During my first illness of wild delirium—for I have had several such attacks, but the first was by far the worst—the voice of the fowls was an inexpressible terror to me. Ridiculous as it may seem, my madness took the form of my ever being in conflict, more or less personal, with the Evil One. I had at that time an old peacock who was good for nothing—and bad for very much; for at that season of the year the weather was abominable, and he was for ever foretelling rain with his ugly croaking voice. I was lying ill upstairs, and so quickly flew my thoughts (I have since in my subsequent attacks, which were much less severe, been able to verify this extraordinary psychological fact, which proves how the Creator of all can subdivide time infinitesimally) that every time he croaked I thought I was in a farmyard, and that I was impelled by the tyrant Devil to do some fearful wrong, which I strove with all my might and main to resist. But my pas-

sionate efforts were of no avail; and every time I did the wrong I heard the voice of the Demon—that is the peacock—give forth a loud croak of triumph. And this was more terrible than I can express in words.

"In the first instance, when the illness first came upon me, I seemed to be aware of what was about to happen. I became powerfully impressed with the idea that the Devil was about to seize me, and I felt convinced that the only way to meet him—if efficient way there was—was to remain awake waiting for him all through the night, and combat him in a naked condition. I therefore threw off all my clothing, although it was a bitterly cold February night, and there awaited the Evil One. Of course, all this now seems absurd and comical enough, but I cannot express to you the anguish and torture of mind that I then sustained. I walked up and down my room, to which I had retired about 11 o'clock, in a state of great agitation, entirely resolute as to the approaching struggle. Thus I marched about my little room, growing every moment into a state of greater and greater exaltation; and so it went on until the dawn began to break, which, at that time of year, was rather late—about half-past 7 o'clock. It seemed to me very strange that that of which I had such a terrible and irresistible conviction had not come to pass. I walked across towards the window in order to make sure that the feeble blue light was really the heralding of the grey dawn, wondering at the non-appearance of my expected visitor. As I put forth my hand towards the window, a large black cat sprang forth from behind the mirror! Persuaded that the foul fiend was here at last in his own person, though in so insignificant a form, I darted at it, as the best thing to do under the critical circumstances, and grappled with it with both my hands, and gathering all the strength that was in me, I flung it with all my might and main against the floor.....

"A dull thud—nothing more. No malignant spectre arose which I pantingly looked for—nothing happened.—I had triumphed! Then, worn out with bodily fatigue, with walking and waiting and watching, my mind racked with ecstasy and anguish, my body benumbed with the bitter cold of a freezing February night, I threw myself upon the bed, all unconscious, and there I was found later on in the morning in a state of prostration, and bereft of my senses.

"I lay like that for a fortnight, during which I was in a state of wild delirium, and when at last I began to regain consciousness the most fearful thoughts took possession of me. Demons appeared to me constantly, coming out of the darkness and forming themselves gradually into corporeal shapes, almost too horrible to think of. But even worse and more torturing than these were the fantastic, malignant, and awful imps and devils and witches that formed themselves out of various articles in the room. The knob on the top of one of the bedposts of my little bedstead, which you know upstairs in my room, was continually turning into a leering gibbering witch; and so forcibly did the likeness burn into my mind that I have since sketched the Old Lady. I will show her to you later on.

"There is a marvellous fact in connection with my illness which I believe is common to all who have suffered from the same disease; while all ugly things assume fearfully and horribly hideous forms, all beautiful objects appear ten times more lovely. Thus my Turner drawings, of which there is about a score upon the walls, and which are absolutely perfect as they are, seemed a thousand times more lovely, the colours brighter, and they looked in their splendour more like pictures of heaven than of earth. The same applies to pretty patterns in materials, such as the borders on my window curtains, or the wall paper."

"May not this have been in some degree due to your æsthetic sense being more highly developed than most people's?" I asked.

"No; I am now persuaded it is not," he replied. "It affects everyone alike. In the other attacks which, as I told you before, were not so severe, I always knew what was coming; and whilst they were upon me I could examine and analyse their nature as if I were carrying out an independent investigation; and, observe, in every case these illnesses have been brought on, not by overwork, as many have supposed, but by acute mental suffering or misfortune."

"I have sometimes wondered," proceeded Mr. Ruskin, more slowly, and seeming to weigh his thoughts as he spoke: "I have sometimes wondered whether the peculiar habit of some persons, who are for ever striving to find a resemblance, or fancy they do, between what they see and something quite different, which they ought not to be thinking about at all, if they would only rightly understand what they are looking at, can be a variation in a mild form of this disease, or whether it is merely the natural perversity of their foolish dispositions. Shakespeare evidently understood the symptom when he placed that wonderful touch of Nature in poor Hamlet's mouth. Yet entirely healthy persons sometimes make a practice of it. Why, when I took my two little wards on a tour through Switzerland, many years ago, there was nothing they saw—neither leaf, nor stone, nor pool, nor mountain—but what in their eyes bore resemblance to some other thing which had no sort of connection with them. So strong and continuous and unbearable did this habit become, that I was obliged, for my own comfort's sake, to silence my little fairies, and positively forbid them to make any more comparisons whatever. Under great and almost irresistible temptations (for them) they obeyed my order until our arrival at the Rhine Falls, at Schaffhausen, when they broke into a merry peal of laughter on instantly recognising—as indeed we all three did on the moment—the extraordinary likeness of the centre rock to *Mr. Punch;* and as I had joined in their laughter, they forced me to rescind my order."

The conversation was thus turned from gloomier thoughts; and other subjects soon absorbed "the Master's" attention, and turned his talk into brighter channels.

II.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

BATH AND BRISTOL BRANCH.—The third ordinary meeting of this Branch will be held at the Medical Library, University College, Bristol, on Wednesday, January 31st, at 7.30 P.M., Mr. A. J. Harrison, M.B., President, in the chair. The following communications are expected: Mr. C. A. Morton: A case of Successful Drainage of a Large Abscess of the Lung. Dr. J. O. Symes and Mr. J. P. Bush: A Case of Abscess of Seven Years' Duration, due to the Typhoid Bacillus. Mr. W. Roger Williams: Inversion of the Myomatous Uterus. Mr. W. H. Harsant: Some cases of Acute Intestinal Obstruction treated by Operation. Dr. A. E. Aust Lawrence: Midwifery Reminiscences.—J. MICHELL CLARKE, Clifton; W. M. BEAUMONT, Bath, Honorary Secretaries.

DUBLIN BRANCH.—The annual meeting of this Branch will be held in the Royal College of Physicians, Kildare Street, on Tuesday, February 6th, at 4.30 P.M. The officers and council for the ensuing year will be elected by ballot, and any other necessary business transacted. Sir Charles A. Cameron, C.B., M.D., will deliver an address On the Rôle of the Municipality as regards the Prevention of Disease. The annual dinner will take place on the same evening in the College Hall at 7.30 P.M. —JAMES CRAIG, M.D., 35, York Street, Dublin, Honorary Secretary.

PROCEEDINGS OF COUNCIL.

AT a meeting of the Council held in the Council Room of the Association, 429, Strand, on Wednesday, January 17th, 1900. Present:

Dr. J. ROBERTS THOMSON, President of the Council, in the Chair.
Dr. J. WARD COUSINS, President.
Dr. W. A. ELLISTON, President-elect.
Mr. ANDREW CLARK, Treasurer.

Dr. E. G. BARNES, Eye.
Dr. JAMES BARR, Liverpool.
Dr. THOMAS BEATTIE, Newcastle-on-Tyne.
Dr. J. BRASSEY BRIERLEY, Old Trafford.
Mr. HENRY T. BUTLIN, London.
Mr. JAMES CANTLIE, London (Hong Kong Branch).
Dr. ALFRED H. CARTER, Birmingham.
Dr. H. RADCLIFFE CROCKER, London.
Dr. G. W. CROWE, Worcester.
Dr. P. MAURY DEAS, Exeter.
Dr. T. M. DOLAN, Halifax.
Brigade-Surgeon-Lieutenant-Colonel E. F. DRAKE-BROCKMAN, London (South Indian and Madras Branch)
Dr. W. DYSON, Sheffield.
Mr. GEORGE EASTES, M.B., London.
Dr. FREELAND FERGUS, Glasgow.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. A. GODSON, Cheadle.
Dr. BRUCE GOFF, Bothwell.
Dr. C. G. GOODING, London (Barbadoes Branch).
Dr. J. GROVES, Carisbrooke.
Dr. HENRY HANDFORD, Nottingham.
Dr. T. A. HELME, Manchester.
Dr. HOLMAN, London.
Mr. T. R. JESSOP, Leeds.
Mr. N. C. MACNAMARA, London.
Dr. JOHN C. MCVAIL, Glasgow.
Mr. H. J. MANNING, Salisbury.
Dr. J. W. MILLER, Dundee.
Dr. JOHN WILLIAM MOORE, Dublin.
Dr. C. G. DRUMMOND MORIER, London (Adelaide and South Australia Branch).
Dr. JAMES MURPHY, Sunderland.
Dr. ISAMBARD OWEN, London.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. H. PHILLIPS-CONN, Reading.
Dr. FRANK M. POPE, Leicester.
Dr. A. BROWN RITCHIE, Hulme.
Mr. H. BETHAM ROBINSON, M.S., London.
Dr. JOHN ROLSTON, Stoke, Devonport.
Dr. WILLIAM RUSSELL, Edinburgh.
Dr. L. W. SEDGWICK, London.
Dr. ALFRED SHEEN, Cardiff.
Dr. G. E. SHUTTLEWORTH, Richmond.
Dr. E. MARKHAM SKERRITT, Clifton.
Mr. HENRY STEAR, Saffron Walden.
Mr. C. S. TOMES, F.R.S., London.
Dr. A. R. URQUHART, Perth.
Mr. T. JENNER VERRALL, Brighton.
Dr. W. L. WINTERBOTHAM, Bridgwater.
Dr. S. WOODCOCK, Old Trafford.

The minutes of the last meeting having been printed and circulated, and no objection received, were taken as read and signed as correct.

Read letters of apology for non-attendance from:

Dr. T. Bridgwater, Dr. G. H. Philipson, Dr. Henry Barnes, Dr. R. W. Batten, Dr. M. Beverley, Mr. Langley Browne, Mr. T. H. Cheatle, Professor D. W. Finlay, Dr. D. Goyder, Dr. Ogilvie Grant, Mr. J. D. Harries, Mr. T. Vincent Jackson, Mr. Evan Jones, Mr. R. H. Kinsey, Mr. Jordan Lloyd, Dr. R. Maclaren, Mr. W. Jones Morris, Surgeon-General T. F. O'Dwyer, Dr. C. Parsons, Dr. R. W. Philip, Dr. R. Saundby, and Dr. R. Somerville.

Read reply to the resolution of condolence passed by the Council on the death of the late Mr. Joseph White.

Read reply to the resolution of condolence passed by the Council on the death of the late Dr. Cuming.

Read letter from the Public Health Department of Melbourne, thanking the Council for giving them permission to reprint the Association's pamphlet on Vaccination.

Read reports from Dr. Spottiswoode Cameron and Dr. Handford on Food Preservatives, in accordance with minute of Council 4766 (October, 1899), namely:

Resolved: That Dr. Spottiswoode Cameron and Dr. Handford be nominated witnesses to tender evidence before the Departmental Committee appointed to inquire into the use of Preservatives and Colouring Matters in Food.

Abstract of evidence given by

JAMES SPOTTISWOODE CAMERON, M.D., C.M., B.Sc.Edin., M.R.C.S.Eng.

Hospital appointments (resident) Edinburgh and Bradford, 1868-71; private (general practice), Huddersfield, 1871-1876. Latter part district officer; consulting practice, Huddersfield, 1876-1889; Physician to Huddersfield Infirmary, 1876-1889; Medical Officer of Health, 1877-1889 (Huddersfield); Medical Officer of Health, Leeds 1889-1899 (ceased practice); speak as practitioner as well as Health Officer; asked by British Medical Association; was President Yorkshire Branch; was formerly member of Council; am still member of Parliamentary Committee of Association; was President Leeds and West Riding Medico-Chirurgical Society; was President Huddersfield Medical Society; was President Yorkshire Branch Society Medical Officers of Health.

Thinks presence of foreign colouring matters, especially mineral, of chemical preservatives in food should be declared. Public ignorant of use of these articles in their foods; really cheated into buying by *suppressio veri*.

Adulteration by colouring matters and preservatives on the increase Glacialine sold in shops (borax and boric acid); fine powdered boric acid freely sold, probably about Leeds quarter ton a year.

Reported now frequently by analyst; report of analyst not sufficient index because (1) specimens of milk not more frequent in hot weather; (2) examination barely sufficient formerly.

Danger of use of boric acid—(1) a poison; (2) amount uncertain. Dairyman, milk vendor, householder may each add amount prescribed on label, say of glacialine, unknown to each other and child may get a treble dose.

Difficult to account for persistency of infantile diarrhœa notwithstanding (1) better sanitation of houses; (2) better scavenging of houses; (3) more attention to boiling of milk.

Antiseptic ingredient limits protoplasmic action; medical man called in; (1) is ignorant agent has been used; (2) might even increase quantity unknowingly. All preservatives dangerous from interfering with digestive process. Salicylic acid, etc., poisonous, should not be permitted even declared. Boric acid might be allowed in small quantities if declared, not otherwise. Better without.

Copper to Colour Peas.—Amount of copper varies $\frac{1}{5}$ grain to 5 grains per lb. (counted as $CuSO_4$). Made experiments (when Dr. Wilson was my assistant) as to digestibility of copper by (1) Liq. Pepticus; (2) Liq. Pancreaticus (Benger), as follows: our own experiments—copper in peas. Alleged Cu (as found in peas) insoluble, by Professor Fraser (1) treated peas known to contain Cu with HCl (filtered, etc., no Cu); (2) digested with Benger's Liq. Pepticus and acid (filtered) Cu found in fluid passed through filter; (3) digested with Benger's Liq. Pancreaticus, plus alkali (filtered), found Cu again; (4) digested remainder from (2) with alkali and pancreatic liq., found Cu. Thus imitated gastric and intestinal processes and found copper perfectly soluble.

Copper admitted generally to be a poison (Christison and others); Lehman, of Wurtzburg, alleges not, because students took peas with impunity; (1) they were healthy persons; (2) who knows they were not injured? Dr. Lehman not medical doctor.

Analogy of lead poisoning—undetected till known that lead present in drinking water; hundreds of unrecognised cases before. Evidence from Huddersfield (personal), etc. Ought, therefore, in any case to be declared, and quantity, if permitted, strictly limited.

Hardwicke House, The Park, Nottingham,
January 4th, 1900.

To the Chairman of the Council.

DEAR SIR,—On November 22nd last I went up to London and gave evidence before the Departmental Committee on Food Preservatives as one of the representative witnesses of the British Medical Association. So far as possible, I confined myself to the clinical side of the question, and referred to the symptoms which had been noticed in the children's ward of the General Hospital, Nottingham, which led to an analysis of the milk being made and boric acid being found. The steps taken to prevent a recurrence of the mischief were detailed, and the new form of contract put in. Under the present contract, which has been readily taken up at the ordinary price, no preservative or added substance of any kind is allowed.

Full details were given of the usual symptoms of discomfort and gastric disturbance frequently met with when boric acid is given for cystitis; and the opinion was expressed that persons vary much in their susceptibility, some 20 or 30 per cent., or even more, being readily affected.

Reference was made to the cumulative effects when boric acid is consumed in a majority of the articles of diet during the day, even though the dose in any one article should not be excessive.

Objection was taken to the habitual and dietetic use of any drugs. The serious injury that might arise in the case of infants, invalids, or fever patients on exclusive milk diet was pointed out.

It was also suggested that after a certain time boric acid masks decomposition rather than prevents it.

The remedies suggested were greater cleanliness and considerable extension of the use of cold storage.

In the case of milk it was suggested that much might be expected from a better enforcement of the Dairies, Cowsheds, and Milkshops Orders, which in many districts are little better than a dead letter.

I was examined by each member of the Committee present, and treated with the greatest courtesy.

Believe me, yours very truly, H. HANDFORD.

Resolved: That the thanks of the Council be conveyed to Dr. J. Spottiswoode Cameron and Dr. Handford for the trouble they have taken in giving evidence on behalf of the Association in connection with the question of food perservatives:

Read reply from Mr. Chamberlain to the resolution of Council thanking him for his efforts in forwarding the study of tropical diseases:

Downing Street,
November 16th, 1899.

SIR,—I am directed by Mr. Secretary Chamberlain to acknowledge the receipt of your letter of November 6th, enclosing copy of a resolution passed at the annual meeting of the British Medical Association in August last, thanking him for the interest he has shown in forwarding the study and teaching of tropical diseases in Great Britain, and I am to state that Mr. Chamberlain is much gratified to hear of this resolution.

I am, sir,
Your obedient servant,
H. BERTRAM COX.

The General Secretary,
British Medical Association.

Read memorandum on revaccination from Dr. McVail, in accordance with minute of Council 4764 (October, 1899):

Resolved: That Dr. McVail be requested to prepare a memorandum on the subject of revaccination for presentation to the next meeting of the Council, prior to being issued to the Branches.

Draft Letter on Revaccination to be addressed to the Branches of the Association.

DEAR SIR,—At the annual meeting of the British Medical Association, held at Portsmouth in August last, the following report by the Parliamentary Bills Committee was unanimously adopted:

"In the debate on the Vaccination Bill in the House of Lords on August 4th, 1898, Lord Lister spoke as follows: 'Personally I should like, if the Bill could be withdrawn this year, and brought in again next year, with this question of revaccination attended to. . . . But I fear that is a hope-

less suggestion. However, as regards revaccination, the members of th Government who have been approached on the subject have given us good reason to hope that a Bill dealing with revaccination may be brought in next session. Such a Bill would, I think, be sure to pass the House of Commons, the great majority of which, however they may differ on other questions, are at one as regards the importance of revaccination. The medical members of Parliament are certainly at one on this point. The Bill would, therefore, readily pass, and by introducing it the Government would do untold benefit to the community. The confident hope that the Government will see their way to take this course next session makes me the more readily acquiesce in what I confess is a tremendous experiment.' This 'confident hope' was immediately strengthened by a speech by Lord Harris on behalf of the Government. He said: 'Lord Lister had referred to the fact that the Government would consider the possibility of introducing a Bill next year with the object of encouraging revaccination. If the noble lord had not indicated that fact, he had authority to state that the Government were prepared to consider during the recess whether it would not be possible to bring in such a Bill next session.'

"The Committee greatly regrets to have to report that notwithstanding the statements above mentioned, the Government did not introduce a Revaccination Bill in the Session 1898-99, and made no reference whatever to the subject in the Queen's Speech or subsequently. The Committee recommends the Council of the Association to call the special attention of the Branches to the facts, and to request the Branches to do all in their power to influence members of Parliament in favour of a Revaccination Bill.

It is in accordance with this recommendation, that is, the recommendation of the Parliamentary Bills Committee, as adopted by the annual meeting, that I now address you on behalf of the Council.

The Bill of 1898 referred only to the primary vaccination of infants, and took no cognisance of the revaccination of adolescents. This defect in the Bill was repeatedly brought before Government in the course of discussion, and in the end, as a reference to the above quoted Report of the Parliamentary Bills Committee shows, a promise was given by Lord Harris on behalf of the Government that the question of introducing a Revaccination Bill in the next session of Parliament would engage the earnest and favourable attention of Her Majesty's Ministers. That session has now passed and the Government have made no statement of any kind, and have introduced no Bill, on the subject of revaccination.

Any legislation for revaccination has to be considered in the light of the Vaccination Act of 1898. The Council gladly recognise that under this Act the number of infants vaccinated in England and Wales has increased as compared with immediately preceding years. For these years, however, there was very great default, amounting in 1897 to about one-third of the total children born. The improvement which has taken place is not believed to nearly approach to the wiping out of this default, and it is not to be doubted that very many thousands of the children born even in 1898 remain unprotected against death or disfigurement by small-pox. It is also to be borne in mind that the great bulk of the enormous arrears of default belonging to the immediately preceding years still exists so far as vaccination is concerned.

Moreover, with regard to those who are primarily vaccinated in infancy, the Royal Commission has concluded that the full amount of protection against attack by small-pox lasts on an average for probably not more than ten years, though of course it continues much longer in a diminished degree, whilst protection against death by small-pox is likely to endure to a greater or less extent throughout life. The fact that so many infants remain primarily unvaccinated suggests that in their case the offer of primary vaccination by the State should be formally and officially made, with due pressure towards its acceptance, at the time of their entrance into school life; while the Royal Commission's conclusion that the full effect of primary vaccination is likely to diminish after ten years suggests similarly that the State should bring pressure to bear on all parents and guardians with regard to revaccination (or primary vaccination, as the case may be) of all children previously to leaving schools.

By Section 11 (usually known as the Conscience Cause) of the Act of 1896, parents and guardians can, by a procedure which involves little trouble, relieve themselves of the obligation to have their children vaccinated within the first six months of life. The Council is not instructed to make any observations on the policy of the Conscience Clause as applied to infantile vaccination; they desire, however, to animadvert very strongly on the very serious blunder of failing to take the opportunity which the Conscience Clause offers of introducing, with the least possible difficulty and friction, a national system of revaccination. The application of this Clause in the case both of primary vaccination of unvaccinated children entering on school life, and of revaccination (or primary vaccination) of children about to leave school, would remove any reasonable allegation as to undue interference with the liberty of the subject. Now that the law has in this respect been relaxed as regards infants, the Council holds it a matter of the first importance that the relaxed law should be applied to unvaccinated children entering school and to un-revaccinated (and unvaccinated) children about to leave school. It is only in this way that anything approaching to logical completeness can be given to a national system of small-pox protection such as we may assume is intended by the passing of Vaccination Acts.

It may be urged that the present law is to be in operation for only five years, and that the experimental legislation of 1898 should not be interfered with by any addition to it during that time. That contention, however, was quite open to the Government at the time that they made the promise above referred to, and as it was not then adduced it cannot consistently be brought forward by them now. It is, moreover, open to urge on the other side that it would be distinctly valuable to have before the end of the five years some experience of the working of a revaccination Act on the lines here suggested, so that a more permanent law might then be passed both for primary vaccination and revaccination.

The Council wishes it to be understood that in their opinion a revaccination Bill is not the only requirement in connection with the legislation on this subject. The existing Acts have various defects—relating, for example, to want of security of tenure for public vaccinators, who have no protection against summary dismissal by local authorities; to the conduct of prosecutions in cases where vaccination has not taken place and relief under the Conscience Clause has not been asked; to the definition of successful vaccination as regards area and number of marks; to the payment of private medical practitioners for certificates of successful vaccination performed in accordance with the regulations of the Local Government Board; and to the transference of the administration of the Vaccination Acts from Poor-law authorities to sanitary authorities. The Council hold that all these questions are already ripe for legislation (in so far as legislation may be found to be the only way of successfully dealing with them), and that such legislation would not interfere with the five years' experiment, excepting in the direction of making its lessons more valuable. On none of these points, however, have the Government made any promise, while as regards revaccination a promise has been made. That promise ought now to be fulfilled, not only in the letter but in the spirit, by the Government introducing at the beginning of next session of Parliament a Bill for the promotion of systematic revaccination.

Resolved: That the Memorandum on Revaccination and draft letter be adopted, subject to any abbreviation Dr. McVail or Dr. Dawson Williams thinks desirable, and sent round to the Branches.

The President of Council reported that since the last meeting of the Council counsel's opinion had been obtained upon the question as to how far the Council were bound to carry into effect resolutions of the annual meetings.

After some discussion the opinion was referred back to Counsel for a more definite statement of his views on the question.

Read acknowledgment from the War Office to the resolutions passed at the annual meeting held at Portsmouth, on (1) Physical Examination for the Army; (2) Service in the Tropics; ((3) Admission to the Services:

War Office, London, S.W.,
December 2nd, 1899.

SIR,—I am directed by the Secretary of State for War to acknowledge the receipt of your letter of 8th ultimo, forwarding copies of resolutions passed at the annual meeting of the British Medical Association at Portsmouth in August last.

In reply, I am to acquaint you that Lord Lansdowne will take note of the views expressed by the Association in regard to the important subjects dealt with in the resolutions, and I am to state also that it may be of interest to the Council to know that he has appointed a Committee to report upon the question of the physical standards for admission to the Service.

I am, Sir, your obedient Servant,
R. H. KNOX.

The General Secretary,
British Medical Association,
429, Strand, W.C.

Read letter from the Solicitor to the Association announcing his retirement:

14, Austin Friars, London, E.C.,
December 27th, 1899.

MY DEAR SIR,—I am retiring from practice as a solicitor at the end of the year. This, to my great regret, necessitates my severing my connection, which has lasted over twenty-seven years, with the British Medical Association.

I have to thank the members of the Council for the courtesy and kindness which they have always shown me during a very eventful period in the history of the Association, commencing with a time when it had not become an incorporated body, and ending with its acquisition of a permanent and suitable home.

I sincerely wish that the great prosperity shown in the increase of members, the large addition to its funds, the influence of its JOURNAL, and in other ways too numerous to mention, may long continue.

Yours very faithfully,
JAMES R. UPTON.

The President of the Council
of the British Medical Association.

Resolved: That this Council has received with great regret the resignation of Mr. James Richard Upton, as Solicitor to the Association. The Council desire to express their sense of the services Mr. Upton has rendered to the Association for the period of twenty-seven years, during which he has acted as their legal adviser. He has shown tact, courtesy, and firmness, while his decisions have invariably been the outcome of good judgment. The Council desire to express the hope that he may be long spared to enjoy his well-earned retirement.

Read extract of letter from Dr. E. Lloyd Jones, Hon. Sec., Cambridge and Huntingdon Branch, with draft by-laws of the Branch:

59, Trumpington Street, Cambridge,
November 5th, 1899.

.....Further, may I ask for your approval of the enclosed draft of by-laws for our Branch?

Yours faithfully,
E. LLOYD JONES.

1. That the area of the Branch shall comprise the counties of Cambridge and Huntingdon, portions of Lincolnshire and Norfolk up to the south shore of the Wash from the river Welland to the River Ouse, and the western portions of Suffolk and Essex.

2. Members of the Association may be elected members of the Branch provided they be duly proposed, seconded, and balloted for at the annual meeting. The names of the candidates, with those of their proposer and

seconder, shall appear on the agenda paper convening the meeting at which the ballot is to take place.

3. There shall be a President, President-elect, Honorary Secretary and Honorary Treasurer, and an Executive Council.

4. The President-elect shall be appointed at the annual meeting of the Branch every year, and he shall enter upon his office of President at the next annual meeting.

5. The retiring President shall be elected Vice-President for life, or for such time as he remains a member of the Branch.

6. The Honorary Secretary and Honorary Treasurer shall be elected annually, and shall be eligible for re-election.

7. The representative of the Branch upon the Council of the Association shall be elected annually, and shall be eligible for re-election.

8. The representative of the Branch upon the Parliamentary Bills Committee shall be elected annually, and shall be eligible for re-election.

9. The Executive Council of the Branch shall consist of the President, past and present Vice-Presidents, President-elect, Honorary Secretary and Honorary Treasurer, and three ordinary members; these last shall be elected annually, and shall be eligible for re-election.

10. The annual meeting shall be held in the summer (June or July) at the place and time determined at the last annual meeting, or at a subsequent meeting of Council. Additional meetings may be arranged by the Executive Council.

11. At each annual meeting the Executive Council shall, through the Honorary Secretary, submit its report for the year; the Honorary Treasurer shall submit the accounts; the members shall then proceed to elect officers for the ensuing year, to transact all necessary business, and to discuss the subjects brought before them.

12. No alteration shall be made in the by-laws except at a general meeting, nor unless due notice shall have been given to the Honorary Secretary, and such notice published, with the names of the proposer and seconder, on the agenda paper convening the meeting.

13. Any alteration that may be suggested must be in accordance with the by-laws of the British Medical Association.

14. The annual subscription to the Branch shall be two shillings and sixpence.

15. A special meeting may be called at any time, and shall be convened by the Honorary Secretary either by a requisition from the President or by one signed by at least ten (10) members. A notice of such meeting shall be duly circulated among the members at least seven days previously, and the object for which it is called shall be stated thereon.

16. If a member be found guilty, after due investigation, of professional impropriety or misconduct, a majority consisting of not less than two-thirds of those present at an annual or special general meeting may determine that such person shall cease to be a member of the Branch of the Association; but no measure of this kind shall be adopted unless the accused has had one month's notice in writing from the Honorary Secretary of the charges to be brought against him, and unless twenty or more members be present at the meeting.

Resolved: That the proposed By-laws of the Cambridge and Huntingdon Branch be approved and confirmed.

Read letter and Programme from the Thirteenth International Congress of Medicine, Paris, August, 1900.

National Committee for
Great Britain and Ireland.
October 23rd, 1899.

DEAR SIR,—We beg to enclose a programme of the 13th International Medical Congress, and also some forms of application for membership. May we ask you kindly to bring these under the notice of your staff or members?

The forms of application, when filled up, should be returned to either of us; whereupon a formal receipt, and later a ticket of membership, will be sent.

We shall be happy to forward to you additional forms if required.

We are, yours faithfully,
ARCHIBALD E. GARROD, M.D.,
9, Chandos Street, Cavendish Square, W.
D'ARCY POWER,
10A, Chandos Street, Cavendish Square, W.

The Congress will be divided into the following sections:

1.—BIOLOGICAL SCIENCES.
1. Descriptive and Comparative Anatomy.
2. Histology; Embryology and Teratology.
3. Physiology; Biological Physics and Chemistry.

2.—MEDICAL SCIENCES.
1. General Pathology and Experimental Pathology.
2. Bacteriology; Parasitology.
3. Pathological Anatomy.
4. Internal Pathology.
5. Hygiene and Medical Pathology of Infancy.
6. Therapeutics and Pharmacology.
7. Neuropathology.
8. Psychiatry.
9. Dermatology and Syphilography.

3.—SURGICAL SCIENCES.
1. General Surgery.
2. Surgery of Infancy.
3. Urinary Surgery.
4. Ophthalmology.
5. Laryngology; Rhinology.
6. Otology.
7. Stomatology.

4.—OBSTETRICS AND GYNÆCOLOGY.
1. Obstetrics.
2. Gynæcology.

5.—PUBLIC MEDICINE.
1. Legal Medicine.
2. Military Medicine and Surgery; Naval Medicine; Colonial Medicine.

Read communication from the International Congress of Professional Medicine:

Paris, July 23rd, 1899.

International Congress of Professional Medicine and of Medical Deontology.

[From 23rd to 28th July, 1900.]

DEAR SIR AND HONOURED COLLEAGUE,—We beg to inform you that in virtue of the Ministerial decision dated June 11th, 1898, an International Congress of Professional Medicine and Medical Deontology has been instituted, which is to take place during the Universal Exhibition of 1900, in Paris, from Monday, July 23rd, to Saturday, July 28th, 1900, inclusively.

By a decree dated December 19th, 1898, the Commissioner of the Universal Exhibition has appointed the Organising Committee for the above Congress.

On behalf of this Committee we invite you to take part in the Congress, during which will be discussed a great number of questions concerning medical practice, the relations of medical men with one another, as also with the public authorities and public bodies.

The International Congress of Professional Medicine is entirely independent of the International Congress of Medicine. Owing to the special nature of questions relating to the medical profession which will constitute the only subjects of discussion and investigation at this Congress, it was decided that it could not be a section of the Medical Congress, the work of which will be of a purely scientific nature.

As many doctors take an interest in the evolution of medical science as well as in the investigation of questions affecting the profession of medicine, it has been decided that the two Congresses shall be held one immediately after the other. The Congress of Professional Medicine will be held before the Congress of Medicine. In this way those medical men who stay a fortnight in Paris will be able to attend both Congresses.

Annexed to this letter you will find a list of questions forming the subject of some of the reports, which will be printed and distributed beforehand, and a list of questions proposed for the special consideration of the Congress with regard to which the Committee, relying on your assistance, desire to invite communications.

These various documents will, we trust, show you the importance which an International Congress of Professional Medicine may have for the entire medical body.

The members of the Congress to which we invite you will participate in the advantages accorded to all those appointed by the learned Academies or Societies, or who have been individually admitted to take part in the official Congresses.

The Committee has done its utmost to afford both to French as well as to foreign gentlemen taking part in the Congress facilities for attending the meeting in Paris, particularly by applying for reduced fares on French railways. A circular giving the necessary information in this respect, as well as the complete programme of the work of the Congress and of the receptions, will be forwarded at a later date to those medical men who shall have duly intimated their desire to participate.

We therefore request you, dear Sir and honoured colleague, to be good enough to sign and forward to the Treasurer of the Congress with all possible speed—at the latest before July 1st, 1900—the annexed notice of your desire to participate.

This notice will not become finally valid until the fee of 15 francs in the case of titular members, or 10 francs in the case of participating members, has been paid.

With the object of giving greater publicity to the approaching opening of the International Congress of Professional Medicine, we earnestly request those of our colleagues who control any medical journals, or who belong to any syndicate or medical society, to be good enough to give all possible publicity to this circular and to the documents it contains. We should be exceedingly obliged to the editors of medical journals if they would kindly insert this circular, and thus bring to the notice of the entire medical body a work which is of interest to all medical practitioners.

Accept, dear Sir and honoured colleague, the assurance of our distinguished sentiments.

L. LEREBOULLET, President.
JULES GLOVER, General Secretary.

Read communication from the National Association for the Prevention of Consumption and other Forms of Tuberculosis asking for the appointment of delegates to their Congress, in 1901:

BRITISH CONGRESS OF TUBERCULOSIS.
20, Hanover Square, W.

DEAR SIR,—The movement recently initiated for the prevention of tuberculosis has already been so widely taken up, and has received the active support of so many public authorities, societies, and private persons in this country, that the time appears to be at hand when a Congress of all those engaged or interested in the matter in Great Britain and Ireland might profitably be held.

The Council of this Association have resolved to take the initiative in promoting such a Congress, to be convened in London in the spring of 1901, and they are gratified to say that H.R.H. the Prince of Wales has graciously accepted the Presidency of the Congress, and has expressed his intention of opening it in person.

The Council earnestly trust that they may have the co-operation of your Association in making the proposed Congress a thoroughly representative one. With this view they beg leave to respectfully invite you to take such steps as may be necessary for the appointment of persons to represent your Association at a preliminary meeting to be held on December 18th next at Gray's Inn Hall.

The Earl of Derby will take the chair at 3.30 P.M.

In order that adequate provision may be made for the representatives attending this meeting, we should be glad to be informed of the names of

those who will be present on behalf of your Association not later than December 10th.

Cards of admission will be sent upon receipt of the names.

We have the honour to be,

Obediently yours,

W. H. BROADBENT, Chairman.
HERBERT MAXWELL, Vice-Chairman.
MALCOLM MORRIS, Treasurer.
STCLAIR THOMSON, Hon. Secretary.
G. SEYMOUR FORT, Secretary.

N.B.—Kindly address Secretary, National Association for Prevention of Consumption, 20, Hanover Square.

To the President,
British Medical Association.

It was moved and seconded: That the number of delegates to the Tuberculosis Congress be three.

Whereupon an amendment was moved and seconded:

That the number of delegates to the Tuberculosis Congress be five.

The amendment having been put from the Chair, the same was declared to be carried.

Resolved: That the delegates to the Congress on Tuberculosis be the President for the time being, the President of Council, Dr. James Barr, Dr. Handford, and Dr. Markham Skerritt.

Read letter and resolution passed by the Yorkshire Branch:

Yorkshire Branch,
38, Manor Row, Bradford,
November 11th, 1899.

The Secretary of Council of B.M.A.

DEAR SIR,—I beg to enclose a copy of the resolution adopted unanimously at a meeting of the Yorkshire Branch of the British Medical Association, held on November 1st, and which I am sending to you at the request of that meeting.

Yours truly,

ADOLPH BRONNER, M.D.,
Honorary Secretary, Yorkshire Branch of B.M.A.

That the Yorkshire Branch of the British Medical Association expresses its strong disapproval of unauthorised societies or other organisations of registered medical practitioners arrogating to themselves the right to grant diplomas or certificates of proficiency in any branch of medicine, surgery, or midwifery, as being contrary to the Medical Acts, and opposed to the interests of the public and of the medical profession.

Resolved: That the communication be received and entered on the minutes.

Read letter and resolution from the East York and North Lincoln Branch, and the Hull Medical Society:

84, Wright Street, Hull.
November 13th, 1899.

DEAR SIR,—I am requested by the Councils of the above-named Societies to forward you the enclosed [extract of a] report of a meeting of the members of the medical profession in this district, on October 20th, 1899, and to ask you to be so kind as to bring it before the Council of the British Medical Association at the next meeting.

Our Councils invite the active co-operation of the Council of the Association in strenuously opposing the passing into law of any Bill for the registration of midwives, and its support in obtaining a useful measure of medical reform.

I am, dear Sir, yours truly,

ALFRED G. FRANCIS,
Honorary Secretary.

That we, the members of the medical profession in East Yorkshire and North Lancashire, view with grave concern and alarm the attempts to create an inferior order of practitioners as contemplated in the Midwives Bills already drafted, and we are of opinion that the passing into law of any such Bill can only be disastrous to the welfare of the general public, and will still further open the door to all sorts of irresponsible medical practice.

That, as regards the issue of certificates in midwifery referred to in the memorials, the Council is of opinion that, as the Midwives Bill is now before Parliament, it should, at present, refrain from taking any action.

As regards the certificates granted to spectacle makers, the Council exercises no jurisdiction over such opticians, but will be prepared to consider any properly substantiated charge of improper conduct made against a registered medical practitioner with reference to this subject.

Resolved: That the communication be received and entered on the minutes.

Read extract of letters from Sir Charles Cameron, Bart., M.D., M.P., respecting the work of the Inebriates Legislation Committee:

Your letter of the 24th instant, addressed to me at St. George's Square, has just reached me. With respect to the minutes of the Psychology Section of the British Medical Association and the remit by the Council of the Association to the Inebriates Legislation Committee, as I told you at our interview on Friday, I don't see that anything practical in the direction indicated can possibly be done before the meeting of Parliament.

As I mentioned, the Habitual Drunkards Bill as originally introduced contained provisions intended to deal with the class of cases referred to in the resolution, and the report of the Scottish Departmental Committee on Habitual Offenders, Inebriates, etc., also contains recommendations having the same object. Lord Herschell's Bill also, if I remember right, proposed to deal with it, and that detail it was, I think, which led to its rejection.

In 1898, when passing the last of the Inebriates Acts, strong pressure was brought to bear on the Home Secretary, but in vain, to deal with this particular branch of the question.

Read communication from the Medical Guild of Manchester asking the Council to appoint a delegate to their proposed Conference.

Moved by Dr. BRASSEY BRIERLEY, of which he had given notice, seconded by Dr. BROWN RITCHIE, *pro formâ*:

(1) That, in view of the great advance in the science and art of midwifery and the diseases of women during the last few years, this Council is of opinion that 20 cases of labour required by the General Medical Council to be seen by the student is wholly inadequate, and determines to urge the General Medical Council to increase the number to 30, and insist that every case shall be attended under the personal direction of a duly-qualified medical practitioner.

Whereupon an amendment was moved and seconded:

That this Council urges the General Medical Council to insist that the obstetric cases required to be attended by medical students shall be attended under the personal direction of a duly qualified medical practitioner.

The resolution was then withdrawn by consent.

Whereupon a second amendment was moved and seconded:

That in view of the great advance in the science and art of midwifery and diseases of women during the last few years this Council urges the General Medical Council to insist that wherever possible medical students should learn practical midwifery in a lying-in hospital or in the extern midwifery department of a general hospital, and failing this that every case of labour shall be attended by them under the supervision of a duly qualified medical practitioner.

The first amendment was then withdrawn by consent.

Whereupon a third amendment was moved and seconded:

That the matter be referred to the General Practitioners and Ethical Committee.

The third amendment having been put from the Chair, the same was declared to be lost.

The second amendment was then put as the substantive motion, and declared to be carried.

The election of candidates was then considered.

Resolved: That the 119 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain a resolution refusing to entertain the question of the payment of the railway fares for attendance of members of Council at the annual meeting; certain arrangements with regard to war correspondents, and the adoption of a memorandum with regard to the proceedings of the Sections of the annual meeting. The accounts for the quarter, amounting to £8,611 12s. 5d.; and a resolution empowering the Treasurer to pay them, and Auditor's report.

Resolved: That the minutes of the Premises and Library Committee of the 16th inst. be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Premises and Library Committee contain the report of the Librarian, and a resolution authorising the purchase of certain books for the Library suggested by members, the accounts for the quarter amounting to £27 5s. 7d.; also reports on the ventilation of the offices, and a resolution empowering certain parts of the ventilation to be carried out.

It was moved and seconded: That the minutes of the Conciliation Board Committee of the 16th inst., be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Conciliation Board Committee contain a letter from Dr. Glover respecting medical aid questions and the British Medical Association.

Whereupon an amendment was moved and seconded: That the report of the Conciliation Board Committee be referred back for the details of the proposed Board before the Council is pledged to the principle.

The amendment having been put from the Chair was declared to be carried.

Resolved: That the name of Dr. F. M. Pope be added to the Conciliation Board Committee.

Resolved: That the minutes of the Arrangement Committee of January 16th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Arrangement Committee contain communications from some of the officers of the Sections, resigning their appointments on account of their going out to the war in South Africa, and recommendations for filling their vacancies.

Resolved: That the minutes of the General Practitioners and Ethical Committee of January 16th be received and approved, and the recommendations contained therein carried into effect, with the exception of the resolution referring to St. John's Hospital for Diseases of the Skin.

The minutes of the General Practitioners and Ethical Committee contain many medico-ethical complaints with their respective resolutions.

Resolved: That the minutes of the Parliamentary Bills Committee of October 11th, 1899, and 16th inst., be approved, with the exception of the resolution relating to the minutes of the Subcommittee of the Parliamentary Bills Committee on the Medical Acts Amendment Bill contained in the minutes of the 16th inst.

The proceedings of the Parliamentary Bills Committee will be found below.

Resolved: That the minutes of the Contagious Diseases Committee of October 25th, 1899, be received and approved, and the recommendations contained therein carried into effect.

Resolved: That the minutes of the Decay of Teeth Committee of November 10th and December 15th, 1899, be received and approved, and the recommendations contained therein carried into effect.

Resolved: That the sum of £25 be voted to the Committee on the Decay of Teeth.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, January 16th, 1900. Present:

Dr. J. ROBERTS THOMSON, President of Council, in the Chair.
Dr. J. WARD COUSINS, President.
Dr. W. A. ELLISTON, President-elect.
Mr. ANDREW CLARK, Treasurer.

Dr. R. L. BOWLES, London.
Dr. T. R. BRADSHAW, Liverpool.
Mr. GEORGE BROWN, London.
Mr. COLIN CAMPBELL, Saddleworth.
Mr. J. CANTLIE, London.
Dr. ALFRED COX, Gateshead-on-Tyne.
Dr. P. MAURY DEAS, Exeter.
Dr. W. DOUGLAS, London.
Mr. GEORGE EASTES, London.
Dr. R. ESLER, London.
Dr. BRUCE GOFF, Bothwell.
Dr. MAJOR GREENWOOD, London.
Dr. J. GROVES, Carisbrooke.
Dr. A. J. HARRISON, Clifton.
Dr. HOLMAN, London.
Dr. J. C. MCVAIL, Glasgow.
Dr. C. W. MARRIOTT, Reading.
Dr. W. J. MICKLE, London.
Dr. JOHN W. MOORE, Dublin.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. F. M. POPE, Leicester.
Mr. A. BROWN RITCHIE, Hulme.
Dr. JOHN ROLSTON, Devonport.
Dr. G. E. SHUTTLEWORTH, Richmond.
Mr. C. R. STRATON, Wilton.
Dr. J. C. THRESH, Chelmsford.
Insp.-Genl. ALEX. TURNBULL, R.N., Emsworth.
Dr. A. R. URQUHART, Perth.
Dr. DAWSON WILLIAMS, London.
Dr. S. WOODCOCK, Old Trafford.

It was proposed by the PRESIDENT-ELECT, seconded by Dr. WOODCOCK, and resolved:

That the President of Council take the chair.

Letters of apology for non-attendance were read from: Dr. R. Farquharson, M.P. (Chairman); Dr. Batten, Dr. Bridgwater, Dr. C. G. Gooding, Dr. David Goyder, Dr Ogilvie Grant, Mr. J. D. Harries, Mr. Evan Jones, Dr. J. W. Miller, Mr. W. Jones Morris, Dr. W. Newman, Surgeon-General O'Dwyer, and Dr. R. Somerville.

The minutes of the last meeting having been printed and circulated were taken as read and signed as correct.

NURSING IN NAVAL AND MILITARY HOSPITALS.

Inspector-General TURNBULL and Dr. GROVES presented the following reports on the nursing in naval and military hospitals:

Naval.

The nursing in naval hospitals is performed at Haslar, Plymouth, Chatham, Malta, and in the sick quarters for naval cadets at Dartmouth, by sisters of the nursing staff and by male nurses of the sick berth staff.

In the other naval hospitals, at home and abroad, the male nurses specified are alone provided.

The sick berth staff is recruited from the shore, the age for entry being from 21 to 25 years. The recruits must possess a fair knowledge of reading, writing, and the simple rules of arithmetic, and be considered physically fit; but at present there is no fixed standard for height or chest measurement.

On entry they undergo at Haslar a course of instruction in nursing by the nursing sisters and senior sick berth staff; in "first aid" and ambulance drill by a naval surgeon; in compounding by the senior dispenser; in cookery for the sick by a lady cook; in physical drill by an instructor.

When qualified to pass an examination in these subjects, they are confirmed in the rating of sick berth attendants, and advance by seniority, efficiency, and good conduct to sick berth steward and to chief sick berth steward rank, namely, that of a chief petty officer in the Navy.

They are eligible for pensions after twenty-two years' service, and may, if considered desirable, serve to the age of 50, indicating continuous service as contrasted with short service in the army.

As regards messing, all naval ratings have rations, or an equivalent money payment in lieu; provision is made for the usual three meals a day; there are no special arrangements for refreshments when on night duty.

Night duty when required is, as a rule, in watches of three hours, from 9 P.M. to 6 A.M., and in addition to day duty.

Such are some of the present regulations for nursing in naval hospitals, but the subject is now under special consideration by the Admiralty, and it is understood that great reform and improvement, both in the case of the nursing sisters and the sick berth staff regulations, have been recommended, and may shortly be carried out with a view to make these services more attractive than at present, the necessity for which being recognised by the Admiralty.

ALEX. TURNBULL,
Inspector-General of Hospitals and Fleets (retired).

Military.

In some of the larger military hospitals, as Netley, the nursing is done, in part at least, by sisters of the nursing staff. In station hospitals the privates—known as orderlies—under the superintendence of the sergeants and corporals of the R.A.M.C. do the nursing.

The recruits of the R.A.M.C. receive instruction in nursing, "first aid," and ambulance work, dispensing, and in cooking for the sick during a probationary period in one of the larger military hospitals, and they are drilled in a military sense. The orderlies are promoted after examination.

The non-commissioned officers dispense, do all the clinical recording, and act as clerks to the hospital, their duties as such absorbing a large amount of time. Many of them are superior men, and some of them are said to have been trained as pharmaceutical chemists, and others for the medical profession, before they entered the service.

The regulations provide for three meals a day, the first of which is taken about 7.30 A.M., the last about 5.30 P.M. When on night duty the orderlies are not allowed nourishment or money in lieu of it. Night duty commences at 5.30, 6.0, or 6.30, according to season, and is taken two hours on and four off, or three hours on and three off. The men on night duty take the day duty until 5 P.M., and are liable to be called upon to assist in cases of emergency, or if assistance is needed by the night nurses through the evening and night. In times of pressure—as during epidemics or when the staff is reduced by drafts—the strain upon the orderlies and non-commissioned officers is often very great.

The military conditions which obtain in these hospitals oppress the whole system of nursing and hinder its efficiency. Everything is made subordinate to "drill." Attention to the equipment—furniture, utensils, and so forth—takes precedence of attention to the patients. The hospital orderly signs for and is made responsible for the equipment of his ward; and if at the weekly or monthly inspection any portion of it is broken or deficient, it must be replaced at his private cost. Each morning there is "parade" in hospital, with general inspection, which occupies much time and hinders attention to cases of acute disease.

The nursing system in military hospitals would appear to be singularly defective from the civilian's point of view. It is possible that after the war sweeping reforms in the army may occur; but, in any case, the whole subject of administration, and more particularly the question of nursing in military hospitals, should be inquired into and reform pressed for.

J GROVES, M.D.

It was proposed by the CHAIRMAN, seconded by Dr. HOLMAN, and resolved:

That this Committee tenders its warm thanks to Inspector-General Turnbull, R.N., and Dr. Groves, for their valuable reports; that the reports entered on the minutes and published in the BRITISH MEDICAL JOURNAL, and that Inspector-General Turnbull, R.N., and Dr. Groves be asked to continue as a watching Subcommittee in regard to this matter.

REGISTRATION OF MIDWIVES.

On the resolution of the Council referring this matter to the Parliamentary Bills Committee being brought up,

Mr. COLIN CAMPBELL said it appeared to him that the resolution adopted by the annual meeting was or ought to be conclusive. As far as they were concerned, they knew now more clearly than they had ever known before, the real aim and object of the people who were pushing forward the midwives' registration. A pamphlet—the *Transactions of the Midwives' Institute*—had recently been circulated, and in the *Daily Mail* an advertisement was inserted urging married people to at once write to their local members of Parliament asking them to support the Bill put forward by the Midwives' Institute. The object of that Bill was to prevent man midwifery. The fundamental principle of the Medical Act of 1886 was that everyone who attempted to practise any one branch of medicine should qualify in all three subjects—medicine, surgery, and midwifery. By licensing and registering midwives, thereby allowing them to practise midwifery, the Medical Act of 1886 would be nullified. Dr. Woodcock had once said in a speech that as long as strength and power of speech remained with him he would never desist from opposing those people who were attempting such

a ridiculous and preposterous thing as to register any one single qualification. He would propose:

That the Parliamentary Bills Committee regards the proposals to register midwives as such as a direct attempt to nullify the Medical Amendment Act of 1886, enacted in the interests of and for the protection of the public. The Committee therefore urges upon the Council to take immediate steps to induce the General Medical Council to take prompt and effectual measures to stop the issue of all certificates of competency in medical subjects to others than *bonâ-fide* students of medicine, the issue of such certificates, or so-called diplomas, creating and constituting the only claim for registration.

Dr. COX said that it had been argued that it was no use fighting against the registration of midwives, that the General Medical Council had given way to it, and that the Council of the British Medical Association had done the same, but he had great pleasure in seconding the resolution, and hoped that the Committee would send it to the Council, showing that the Parliamentary Bills Committee thought that the subject, as far as they were concerned, should be dropped. They should drop any attempt to push registration of midwives themselves, and severely discountenance any other attempts at legislation coming from other people.

Dr. WOODCOCK said that Mr. Colin Campbell, no doubt unintentionally, had very much misrepresented his expressions and his views upon the subject. He had condemned—and condemned strongly—the action of those irresponsible members of the profession, who, without authority, were giving what professed to be diplomas to women to practise midwifery, and he certainly urged strongly that some sort of legislation was necessary to prevent that irregularity continuing. At the same time, he had stated that he did not think that legislation on the question was beyond the reach of statemanship, and he was perfectly prepared to give whatever assistance he could to bring about if possible a reasonable solution of the question, which would not interfere with the rights of the profession, and sufficiently protect the interests of the public. Years ago he came to London with the object of calling upon members of Parliament with the view to influencing them to do something to prevent legislation on the lines of the Bill then before the House of Commons. That Bill was different to the one now submitted to the House of Commons. When he spoke to members of the Legislature on the subject they asked him what he proposed, as legislation would have to take place. He had no suggestion to make. Do away with midwives altogether? He would like to say that they could not legislate in defiance of public opinion. He then began to consider the best way out of the difficulty, and spent a good deal of time with others in devising a scheme. A Bill was prepared by a Subcommittee, which, after a good deal of criticism, had been amended again and again, and finally adopted by the Council of the Association. That was the position of affairs. Obstinate opposition to all attempts at legislation was unwise. Before they could pass a resolution such as that proposed, they were bound to alter the position of affairs by removing the resolution of the Council adopting the Bill from the minutes.

Mr. GEORGE BROWN recognised that there were a number of deaths annually from the action of incompetent midwives, but he had yet to learn that giving certificates to midwives would prevent that mortality in any degree. He was satisfied that what was wanted was a class of obstetric nurses who would be able to see the mother daily, and call in medical assistance when it was required.

Dr. WARD COUSINS said he was astonished at the debate. He thought that there was a Bill already adopted by the Council of the Association.

The CHAIRMAN said the position was perfectly clear as laid down by Dr. Woodcock, and he was informed by the General Secretary that the Council had adopted the Bill prepared by the Subcommittee, which was to be brought up if and when a Bill was brought before the House of Commons. It seemed to him that the matter before the meeting was only a continued minute, and he would rule that the resolution did not arise out of the business before the meeting.

AMENDMENT OF THE MEDICAL ACTS.

On the minutes of the Subcommittee on the Medical Acts Amendment Bill being submitted,

Dr. J. W. MOORE, on a point of order, said that there were certain resolutions put down for consideration, and certain modifications stated. The Council had struck out bodily the clause of the Medical Acts Amendment Bill relating to any revision of the representations of the universities and corporations on the General Medical Council; and as a member of the Council, he personally considered that for a Subcommittee, within nine months of that solemn decision being arrived at by the Council of the Association, to deliberately send up the same proposition was *ultra vires*. The Council had dealt with the matter exhaustively. The only alteration in the interim was that a vote had been taken by the general meeting at Portsmouth, at which he was informed there were about 33 members present. The resolution adopted at Portsmouth read:

AMENDMENT OF THE MEDICAL ACTS.

That any draft Bill for the amendment of the Medical Acts shall contain *inter alia* provision for further direct representation of the profession on the General Medical Council, and for the establishment of a one-portal system of qualifying examination.

The resolution asked for two things—increased direct representation on the General Medical Council, and a one-portal system. Very wisely it did not ask them to restore that clause altering the representation of the universities and corporations, and if any such attempt was made he would oppose it as being *ultra vires*. He had no objection to the one-portal system. He thought a State examination coming after the licensing examination would be a very good thing indeed, and that was the direction in which the Association might safely and properly move, but to interfere with the work of the existing bodies would be a very retrograde and and unfortunate step for the British Medical Association to take. He would propose:

That the minutes of the Subcommittee of the Parliamentary Bills Committee on the Medical Acts Amendment Bill be now received, but that the Subcommittee be informed that any proposal to alter the representation of the universities and medical corporations on the General Medical Council cannot be entertained by this Committee, inasmuch as the Council of the Association has already, on May 12th, 1899, struck out the clause providing for such amendment.

Dr. WARD COUSINS said he was, equally with Dr. Moore, astonished to see the recommendation as to the reconstruction of the General Medical Council. The Council had unanimously cut out of the Bill that part which dealt with the question of representation of the universities and corporations, and it seemed to him an astonishing thing that the matter should be introduced in the minutes of the Subcommittee. He certainly hoped that it would be ruled *ultra vires*. He had pleasure in seconding the resolution.

Dr. WOODCOCK said that what was submitted were the minutes of the Subcommittee on the Medical Acts; it was merely a statement of some preliminary business which took place at a meeting held on December 12th, 1899.

After some further discussion, the resolution was adopted by 15 voting for, and 5 against.

PUBLIC HEALTH SUBCOMMITTEE.

Dr. THRESH, in presenting the report of the Subcommittee, said that it would be necessary to refer only to one or two of the subjects referred to the Subcommittee. One had reference to the control of schools, giving medical officers greater powers with regard to the sanitary conditions of schools; a second had reference to the inspection of scholars. It was felt that many outbreaks of disease might be prevented if medical officers had power to inspect the children attending public elementary schools. At the present time they could not do this without technically committing a trespass. The third had reference to a Bill for the security of tenure of office of medical officers of health which had been drafted and considered by the Subcommittee, and which they would ask the Committee to pass with some slight alterations which the Subcommittee had been led to make at their meeting that day.

Dr. GROVES stated that the Bill which had been drafted had been submitted to the Society of Medical Officers of Health, who suggested the inclusion of inspectors of nuisances. It was desired that the men who worked under the medical officers should have security of tenure and the power of providing themselves with a pension. The Society of Medical Officers of Health had made other suggestions, some of which had been adopted by the Subcommittee, and they also sug-

gested that that title of the Bill should be altered to Medical Officers' of Health and Sanitary Inspectors' Bill.

It was proposed by Dr. THRESH, seconded by Dr. GROVES, and resolved:

That the minutes of the Public Health Subcommittee of January 16th be received and adopted.

It was proposed by Dr. GROVES, seconded by Dr. THRESH, and resolved:

That the Parliamentary Bills Committee proposes that the Public Health Subcommittee be authorised to introduce the proposed amendments into the Medical Officers of Health and Sanitary Inspectors' Bill and take steps for the introduction of the Bill into Parliament.

THE VACCINATION SUBCOMMITTEE.

Dr. MCVAIL stated that the purpose for which the Subcommittee was appointed was limited to the watching of any legislation bearing on vaccination, but a question arose which did not refer to legislation about to be introduced into Parliament, but which was of considerable importance, and that was the question of remuneration of public vaccinators. Under the Vaccination Act and Order there were two officers called respectively the Vaccination Officer, who was a layman, and the Public Vaccinator, who was a medical man. The layman had absolute security of tenure, but the medical man was theoretically not a medical officer under the Act, but only a contractor, and as a contractor his contract might be terminated at twenty-eight days' notice. This had acted most prejudiciously in one respect. It was laid down in the Order by the Local Government Board that there was to be a minimum scale of fees which should form the basis of a scale to be arranged between the Boards and the Public Vaccinators. Failing agreement the matter had to be determined by the Local Government Board. In a number of cases the Local Government Board had to be referred to to determine what fees should be paid, but some Boards of Guardians had refused to pay the fees determined, and had only paid the minimum fees. The Local Government Board had had their attention called to the matter, and had stated that the only remedy was that the Public Vaccinator should take the Board of Guardians into the law courts, and compel it to pay the fees determined upon. But as regards that remedy there was the fact that the Board of Guardians had power to dismiss the officer at twenty-eight days' notice. The Subcommittee therefore thought it proper to take action in the matter. They did not suggest new legislation, for they had been informed by the solicitor to the Association that the best remedy would be to ask the Local Government Board to alter the form of contract, as they had the power to do, so that no contract could be terminated without the consent of the Board. He would, therefore, propose:

That the minutes of the Vaccination Subcommittee, as amended, be received and adopted, and the recommendations contained therein carried into effect.

The resolution was seconded by Mr. C. R. STRATON, and carried.

SPECIAL CORRESPONDENCE.

PARIS.

Lucas Championnière on Massage and Passive Movements in Joint Affections.—Recognition of Ophthalmology at the Paris Hospitals.—The Académie de Médecine.—The Prophylaxis of Syphilis.—The Hospital Medical Society.—National Commission on the Prevention of Tuberculosis.—The "Examination Outrage."—Influenza.

DR. LUCAS CHAMPIONNIÈRE took for the subject of the inaugural lecture of his second annual series of lectures on clinical surgery, at the Hôtel Dieu, the general treatment of affections of the joints. He called attention to the fact that the treatment by rest and immobility, which had been the practice during centuries, had become still better established owing to the introduction of numerous types of apparatus to secure this complete immobility. The first innovation was by the introduction of massage and passive movements as accessory means at a late stage in the treatment. He recalled the long and heated discussions which took place between the partisans of the two methods—those who defended prolonged and strict immobility of the joint or fracture, and the newer school who advised early recourse to massage and passive movements. In support of the latter he gave some of his personal observations showing that not only does cure take place in spite of movement, but that under certain conditions it is even helped by such movement. Dr. Lucas-Championnière laid stress on the difficulty the surgeon had in deciding the extent of movement advisable; on the necessity of such movement being only of a slight range; on the beneficial influence, from the point of view of maintaining the nutrition and the usefulness of the joint, of what he describes as *petites courses articulaires*; and on the danger of too early use of extensive movements. He then mentioned the various joint affections which could be benefited by the use of passive movement, used either alone or in conjunction with massage, enumerating contusions, sprains with or without fracture, dislocations, arthritis, wounds in joints, accidental or from surgical interference, infected or not, after such operations as resection and white swelling. He summed up the indications and contra-indications of this method of treatment, and the precautions necessary to ensure the most beneficial results without danger or accident.

Dr. Napias, the Director of the General Administration of the Assistance Publique, has recently published a decree instituting a new order of hospital practitioners, who will receive the honorary title of "Ophtalmologistes des Hôpitaux." They will have exclusive charge of their special department in the various hospitals in Paris, or such additional ones as may be formed. These "ophtalmologistes des hôpitaux" will be elected, as are the physicians, surgeons, and accoucheurs of the hospitals after a special competitive examination. The examination will be divided into two parts—(1) Eliminative, consists of (*a*) the consideration of the qualifications and published scientific work of the candidate; (*b*) a written examination, for which three hours will be allowed, on the anatomy and physiology of the eye; (*c*) an oral examination on some question in the pathology of the eye, twenty minutes being allowed for reflection, and twenty minutes to give the reply. The selected candidates will then pass to the second and final part of the competition, which consists of (*a*) the operative surgery of the eye, being an operation on an anæsthetised animal, or on the cadaver; (*b*) a special clinical examination of two patients. Each candidate will have twenty minutes for the examination of the patients, ten minutes for reflection, and half an hour in which to give his opinion of the cases, orally, to the examiners. The candidates for this post, as for the post of physician, surgeon, or accoucheur to the hospitals under the direction of the Assistance Publique, must show that for at least five complete years they have been Doctors in Medicine, the diploma having been obtained at a French faculty. Such candidates, however, as shall have been for four years *internes* in the hospitals of Paris need only have held their diploma of Doctor for one year to be eligible.

At the first meeting of the Académie de Médecine for 1900 the retiring President, Professor Panas, gave his valedictory address, reviewing the important work and communications of the past year. Professor Marey, the new President for 1900, then took the chair, and Professor Guyon the vice-chair. The President, after thanking his colleagues for electing him to the post, and observing that the coming Exhibition would attract numbers of medical men to Paris, referred in sympathetic terms to the death of Sir James Paget, a foreign Associate of the Académie.

As a result of the recent communication to the Académie by Professor Fournier on Prophylaxis in Syphilis by Means of Treatment, the following were appointed to a special commission to examine and report on the question, namely, Professors Fournier, Brouardel, Guyon, Panas, Pinard, Drs. Napias, Colin, H. Monod, Hallopeau, and Fernet.

Professor Raymond, who succeeded Professor Charcot in the Clinical Chair for Diseases of the Nervous System at the Salpêtrière, has now been absent through illness for more than three months, and was unable to give the customary

address at the conclusion of his term of office as President of the Société Médicale des Hôpitaux. M. Troisier, who succeeds him, made suggestions as to the best means of increasing the vitality of the society. He suggested that the society should become accessible to all who are working, and more especially to the rising generation, that *internes*, for instance, should be eligible. He also suggested that once a quarter the society should hold a joint meeting with the Société de Chirurgie for the discussion of medico-chirurgical subjects.

The Minister of the Interior has appointed a Commission to draw up a report on "The practical means of combating the spread of tuberculosis." The Commission consists of the following members: Drs. Bouillet, Calmette, Goujon, Kelsch, de Lavarenne Letulle, Leudet, Marfan, Piettre, and Thoinot.

The candidates for the post of *interne*, to the number of 78, whose written papers were recently destroyed by means of nitric acid, as described in the BRITISH MEDICAL JOURNAL, January 13th, are to be permitted to have a special competitive examination for a number of posts proportional to those allotted to their more fortunate friends whose papers had already been corrected or were legible. This extra competition which was to have been held on March 1st, has now been fixed for February 10th. The culprit has not been discovered.

During the week ending January 13th the total number of deaths in Paris was 999. Of these, 9 were returned as due to influenza, 67 to broncho-pneumonia, and 56 to pneumonia.

BERLIN.

Hygiene and Morals.—Ladies as "Guest Hearers" of University Lecturers.—The People's Lung Sanatorium at Belzig.—Folk-Hygiene.

THE Berlin Branch of a Society called "International Federation," a short time ago proposed to hold two courses of lectures on hygiene in one of the chief public schools of Berlin, for the benefit of pupils in the more advanced classes. The lectures were to be gratis, and were to be delivered by a male doctor for a public of boys, and a lady doctor for a public of girls. So far so good: there seemed nothing to object to, and the magistrates granted the use of the required class rooms. Invitations to attend the opening lecture were then sent out by the Society to all the Berlin clergymen who prepare for confirmation, to the directors of youthful gymnastic courses, and to head-masters of the Berlin secondary schools (Fortbildungs-schulers). These invitations contained the announcement that in the lectures sexual hygiene would be touched upon with all tact, and the necessary enlightenment given, the "International Federation," whose object was the improvement of morals, considering it a duty to give the growing youth of both sexes enlightenment from the standpoint of hygiene, and thus to add an effective support to the doctrines of religion and morality. An answer to this declaration came in the shape of a municipal order, withdrawing the permission previously granted to use the class rooms, "as it was feared that such lectures would be extremely dangerous to the moral sense of an audience of children."

Fräulein Schirmacher, one of the champions of woman's right to learn and study, has written to the Rectors of the twenty German universities requesting authentic information on the subject of female students. The answers received by Fräulein Schirmacher seem to show that female students, even where they are allowed to hear lectures, are admitted only on sufferance. In Breslau, for instance, the philosophical and medical schools admit ladies as "guest hearers" of lectures, and the same custom obtains in Bonn, Kiel, Marburg, Greifswald, Königsberg, etc. In none of the German universities are women students officially recognised or admitted to the university examinations, nor have the teaching bodies seen fit to take up any official position in the question.

The people's lung sanatorium in Belzig (a description of which was given in this JOURNAL last summer) has been opened, and its chief promoters—Professors v. Leyden and B. Fraenkel at their head—have received decorations from the Emperor in honour of the occasion. An appeal for contributions has been generously met by a number of well-known Berlin philanthropists, so that the new establishment will, it is hoped, be starting work almost, if not entirely, free from debt.

The new German Society for Hygiene for the Masses (Volks-hygiene) held its first public meeting last week in the town hall, Berlin. Dr. Boediker took the chair, and there were delegates present from the German Ministry of the Interior, from the municipalities of Berlin and Charlottenburg, and from the government of the Province. Professor Fuchs, Rector of the University, and Professor Riedler, Rector of the Technical High School, were also present, and many medical men of distinction, among them Professors v. Leyden, Jolly, Ewald, Rubner, and Lassar. In his introductory address, the President described the objects of the new society. By aid of meetings, he said, by popular writings, and by personal intercourse with the sanitary authorities, by always keeping in touch with modern technical improvements, it hoped gradually to spread knowledge of hygiene, and to make applied medical-hygienic science a blessing for the masses. Other speeches on subjects connected with the aims of the society followed, and finally Professor Rubner made some interesting remarks on mortality statistics. He said that we were all inclined to think the state of health in Germany more favourable than was actually the case. It was true that mortality had gone down from 26 per cent. to 21 per cent., but every effort should be made to bring it as low as 17 or 15 per cent. He spoke of disease from the point of view of political economy, and said that the decline of small-pox, typhus, and consumption was a proof of the efficacy of hygienic measures. A short discussion followed, in which Frau Morgenstern (the well-known foundress and organiser of the Berlin people's dining-rooms) demanded that women should be allowed to participate in the new work, and Herr Messmer pleaded for recognition of "natural medicine" by the society.

CORRESPONDENCE.

THE REPRESENTATION OF THE SOCIETY OF APOTHECARIES OF LONDON.

SIR,—I am directed by the Court of Assistants to inform you that Sir Hugh Reeves Beevor, Bart., M.D., F.R.C.P., was this day elected the representative of the Society on the General Medical Council for one year from February 6th.—I am, etc.,

JAMES R. UPTON.

Blackfriars, E.C., Jan. 23rd.

AMALGAMATION OF DEFENCE SOCIETIES.

SIR,—May I ask whether the members of the two existing defence societies—the Medical Defence Union and the London and Counties Medical Protection Society—have been appealed to *re* the question of their amalgamation? Speaking for myself, I cannot see the wisdom or the prospective benefit of the suggested union. May I ask this question—If at the present time amalgamation is considered so important and vital that it has three times been sought, why was the last-mentioned society initiated?

In medical defence, as in other matters, competition is a useful feature, and without it a possible monopoly has to be dreaded. Each of these two societies presents variable features, and to some extent they work on different lines—both are successful financially and in what they strive to accomplish. I am a member of the latter society, and I trust that the executive will not repeat the efforts they have lately made to allow themselves to be swallowed up by the older and original Medical Defence Union.—I am, etc.,

Wolverhampton, Jan. 24th. T. VINCENT JACKSON.

DR. W. J. COLLINS AND THE UNIVERSITY OF LONDON.

SIR,—Your correspondent "M.D Lond." writes in your last number, pointing out that it would be advisable for all medical graduates of the University of London, before promising their support to Dr. Collins, to ascertain his views on the subject of vaccination.

Before "M.D.Lond.'s" letter appeared, the enclosed correspondence had passed between Dr. Collins and myself. It will be seen from Dr. Collins's letter that his present position does

not differ from that recorded in the Parliamentary report issued by Mr. J. A. Picton and himself in 1896. Unfortunately I have not access to that report, so that I cannot support my remarks by quotations; but, if I remember rightly, the general conclusions were such that very few medical men could support them.

The subject of vaccination has very little bearing on University politics, but Dr. Collins having, as most of your readers think, done much harm as an antivaccinator, we medical graduates, who otherwise would welcome him as our representative, must hesitate before placing him in a position which will enhance the weight of his views.

Dr. Collins, with his present social, scientific, and political position, is very potent, but as M.P. he would be much more so, and as representative of the University of London his opinions and teachings would receive a stamp which would be widely used in the propagation of the antivaccination gospel.

In spite of Dr. Collins's eloquence, ability, and industry, and in spite of his valuable services to the University, I think it is the duty of all medical graduates of our University to record their votes against him.—I am, etc.,

GEO. H. SOWRY, M.B., B.S.Lond., F.R.C.S.Eng,

Jersey, Jan. 22nd.

[COPY.]

January 15th, 1900.

DEAR SIR,—Being a member of Convocation of the University of London, I have to day received a copy of your address as Parliamentary candidate, and a circular issued by your Committee.

As a medical man I am anxious, before deciding how I shall vote, to have a definite statement from you as to your *present* position on the subject of vaccination. It is a subject of great moment to all the graduates, but particularly to the medical section, and I am sure they, like myself, would like to know your views.

With your consent I shall send your reply to the leading medical papers for publication. Thanking you in anticipation, I am, sincerely yours,

GEO. H. SOWRY, M.B., ETC.

[Copy.]

Albert Terrace, Regent's Park, N.W., Jan. 18th, 1900.

DEAR SIR,—I gladly reply to your note. I have paid a good deal of attention to vaccination. I took the old D.P.H. at our University, which included an examination in the subject, and I was awarded one of the only two gold medals ever given at that examination.

In 1889 Her Majesty did me the honour to appoint me a Royal Commissioner on the question of vaccination, etc., and in 1896 in the report [C. 8,270], along with Mr. Picton, I set out the conclusions to which the evidence led.

My "present position" is as it was then. The whole subject is there dealt with fully, and I must respectfully refer you to that raport.—I have the honour to be, yours very faithfully, W. J. COLLINS.

THE DUTY TO SEND INFORMATION TO THE CORONER.

SIR,—In the BRITISH MEDICAL JOURNAL of January 20th "Medical Coroner" expresses his opinion that it is the duty of a medical man to give the usual certificate for the registrar in cases of sudden death which are due to natural causes. This he cannot do if he is called to see a patient and finds him dead on arriving at the house, though from an examination of the body, and from information received from the friends, he may be convinced that the death was due to natural causes; it then becomes his duty to communicate with the coroner. At any rate, this is what I do, and I receive an acknowledgment of my letter from the coroner (a medical man), who then directs his officer (a constable) to make investigations, and, according to his report, the coroner decides whether it is necessary to hold an inquest; if an inquest be considered advisable the medical attendant is rarely called upon to give evidence, as the coroner, being a medical man, suplies it himself.

Until the preliminary investigation of all sudden deaths is placed in the hands of a medical man instead of a constable, and until medical evidence is required at all inquests, the "crowner's quest" will continue to be as unsatisfactory as it always has been.—I am, etc.,

January 20th. REFORM.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

SIR,—Having formerly spent a considerable time as temporary assistant medical officer in one of the Metropolitan Asylums Board's imbecile asylums, I have read with interest the letters on this subject in your last two issues. How assistant medical officers are treated in the fever hospitals is another question. I can speak from experience of life in one of their asylums, and entirely concur in the description given by "F. J. S."

The Board seems to consider service in their asylums a species of minor crime, to be punished by severe treatment and petty annoyances. The unfortunate culprit is not allowed to have a visitor remain on the premises overnight, and this, to anyone who knows the depressing monotony of living in an asylum, is no small punishment. Again, he is ranked with the attendants and kitchen maids as "subordinate officers," and by the refusal of a testimonial from the medical superintendent is not even allowed a fair chance of escaping to a better position. Lately the "Board" have preferred to fill higher positions with men from outside asylums, thus cutting off the few chances of promotion open to their assistant medical officers. The Committees certainly grant a testimonial, and the average medical superintendent values it accordingly, when the assistant medical officer applies for a post in another asylum. It is but humane that men thinking of service under the Metropolitan Asylums Board should know these facts which speak for themselves.—I am, etc.,

January 22nd. A. M. O.

AN OLD DIRECTORY.

SIR,—May I correct one thing in Dr. Balmanno Squire's letter. Dr. William Vesalius Pettigrew was the son of "Mummy" Pettigrew, and practised in Chester Street, Grosvenor Place. Thomas Joseph Pettigrew, F.R.S., was a much better known man. He was surgeon to the Charing Cross Hospital, but later was better known as the Treasurer of the British Archæological Association, of which he was an ardent supporter. He was surgeon to the Duke of Kent, and author of various works, among others, *Lives of Eminent Physicians and Surgeons*. When I knew him, he lived in Savile Row.—I am, etc.,

Wimpole Street, W., Jan. 20th. G. F. BLANDFORD.

SIR,—Permit me to point out that Dr. Balmanno Squire is at fault in identifying Dr. William Vesalius Pettigrew with the deliverer of the lecture on an Egyptian Mummy at the Royal Institution. This latter was Thomas Joseph Pettigrew, F.R.S., F.S.A., who derived his title of "Dr." from the Ph.D. of Göttingen. The lecture, a copy of which lies before me, was certainly a long one, for it included an epitome of "the manners, customs, and religion of the ancient Egyptians," besides the unrolling of the mummy which entailed the removal of 900 yards of bandages.

After the death of Thomas Young, Pettigrew was foremost among English Egyptologists, and himself published *The History of Egyptian Mummies* in 1834. But in addition to this special study he was well known as a bibliophile, was at one time Librarian to the Duke of Sussex, and was the author of *Bibliotheca Sussexiana*. Other works from which his name is remembered are *The Medical Portrait Gallery*, *Superstitions Connected with Medicine and Surgery*, *A Collection of Epitaphs*, and *Memoirs of the Life, etc., of Dr. Lettsom*. He was Surgeon to H.R.H. The Duchess of Kent, founder of the Philosophical Society, and one of the founders of Charing Cross Hospital. For many years he lived and practised in Savile Row, but afterwards removed to Kensington where he died in 1865.—I am, etc.,

Brightwalton, Wantage, Jan. 22nd. GEORGE C. PEACHEY.

MEDICAL ORGANISATION.

IN our issue of last week a letter appeared under the above heading, signed "An Interested Member of the Guild." The solicitors of Dr. Broadbent, of Ardwick Green, Manchester, have written to us, complaining of the statement that their client is a member of the medical staff of the provident society therein referred to, and stating that he is not in any way connected with that society. We willingly publish this correction, and regret that the inaccurate statement should have appeared in our columns.

We have also received a letter from our correspondent of last week, who states that he finds that he was in error in making the statement above referred to, and intimates his regret for the inaccuracy into which he had fallen.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE date of promotion of Fleet-Surgeon W. G. JACK, which appeared in the *London Gazette* of December 12th, 1899, should be October 1st, 1899, and not November 20th, 1800.

Deputy Inspector-General JAMES H. MARTIN, D.S.O., has been promoted to be Inspector-General, January 1st. His previous commissions are thus dated: Surgeon, February 20th, 1865; Staff-Surgeon, September 6th, 1877; Fleet-Surgeon, May 21st, 1884; and Deputy Inspector-General, November 7th, 1894. He was Surgeon of the *Nassau* during encounters with Sulee pirates, and was present at the destruction of Carang, 1872. Staff-Surgeon in charge of transports during the Zulu war, 1879 (mentioned in despatches medal with clasp). Staff-Surgeon of *Thalia* during Egyptian war, 1882; Senior Medical Officer in charge of transports (received thanks of the Admiralty, Egyptian medal, Khedive's bronze star). He was Principal Medical Officer to the Royal Marine Battalion in the Eastern Soudan, 1884; present at the battles of El Teb and Tamaai; mentioned in despatches; wounded; promoted to Fleet-Surgeon for these services (Suakin and El Teb-Tamaai clasps). He landed with the Naval Brigade under the command of Vice-Admiral Hon. Sir E. R. Fremantle, K.C.B., C.M.G., Commander-in-Chief on the East Indies Station, for the punitive expedition against the Sultan of Vitu, in East Africa, October, 1890; mentioned in despatches; D.S.O. for this service (medal with clasp).

Fleet-Surgeon G. J. IRVINE is promoted to be Deputy-Inspector-General. He was appointed Surgeon March 7th, 1871; Staff-Surgeon, March 7th, 1883; and Fleet-Surgeon, June 14th, 1891.

Fleet-Surgeon H. T. COX is also promoted to be Deputy-Inspector-General. His previous commissions are as follows: Surgeon, March 30th, 1872; Staff-Surgeon, September 30th, 1883; and Fleet-Surgeon, November 12th, 1892. He served on shore throughout the Ashanti war of 1873-4 (medal), and was in the *Amethyst* during the engagement with the Peruvian rebel turret ship *Huascar* of Ylo, May 29th, 1877.

Staff-Surgeons R. E. BIDDULPH, B.A., M.B., G. KIRKER, M.D., W. TAIT, M.B., and J. CROWLEY, M.D., are promoted to be Fleet-Surgeons. Fleet-Surgeon Biddulph was appointed Surgeon March 31st, 1879, and Staff-Surgeon twelve years later: Fleet-Surgeons Kirker, Tait, and Crowley were first appointed October 1st, 1879, and to be Staff-Surgeons twelve years therefrom. Fleet-Surgeon Kirker was Surgeon of the *Iris* during the Egyptian war of 1882 (medal and Khedive's bronze star), and received the Parks memorial bronze medal in 1886 and Sir Gilbert Blane's gold medal for 1892. Fleet-Surgeon Tait was Surgeon of the *Temeraire* during the Egyptian war and has the medal and Khedive's bronze star.

The following appointments have been made at the Admiralty; WILLIAM J. COLBORNE, Staff-Surgeon, to the *President*, for Medical Department, February 1st; HENRY B. BEATTY, Staff-Surgeon, to the *Boscawen*, for the *Agincourt*, February 1st.

ARMY MEDICAL STAFF.

SURGEON-GENERAL W. S. M. PRICE, Principal Medical Officer in the Bombay Command, has been appointed Honorary Surgeon to the Governor-General of India.

ROYAL ARMY MEDICAL CORPS.

SERGEANT-MAJORS JOSEPH ATTWOOD, WILLIAM DUNCAN, and RICHARD O ROBERTS, are appointed Quartermasters, with the honorary rank of Lieutenant, on augmentation, January 24th.

ARMY MEDICAL RESERVE.

SURGEON-MAJOR EDWARD CURETON resigns his commission, January 24th.

Surgeon-Captain T. TINLEY, M.D., 1st East Riding of Yorkshire Volunteer Artillery, is promoted to be Surgeon-Major, January 24th.

INDIAN MEDICAL SERVICE.

AMONG the new year honours published in India appear the following: Lieutenant Colonel WILKINS, D.S.O., and Captain RAINIER, both of the Indian Medical Service, to be Honorary Associates of the Order of St. John of Jerusalem.

THE VOLUNTEERS.

SURGEON-LIEUTENANT-COLONEL J. J. DUNCANSON, M.D., 1st Edinburgh (City) Artillery, resigns his commission, retaining his rank and uniform, January 24th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated January 24th:—HORACE C. COLMAN, M.B., 1st Forfarshire Artillery; JOHN C. R. ROBINSON, 1st Norfolk Artillery (Eastern Division Royal Garrison Artillery); JOHN C. JACKSON, 1st London Engineers.

Surgeon-Captain J. W. JESSOP, 1st Volunteer Battalion the Lincolnshire Regiment, resigns his commission, and is appointed Captain, January 11th.

Surgeon-Lieutenant M. RICHARDS, 10th Middlesex Rifles, has also resigned his commission, January 24th.

RECALL TO SERVICE.

WE continue to receive letters calling attention to the undefined position of those officers who responded to the "invitation" to return to duty. Are they to be treated as regards pay, service, and pension as if recalled, or are they not? One correspondent argues that as they returned voluntarily they must come under Articles 487 and 488 of the Pay Warrant, and only receive £150 extra a year while serving; if they get full pay and allowances, is it not hard upon those serving voluntarily before the war on £150 a year? Another correspondent declares the Royal Warrant has been clearly set aside or evaded by the "invitation" method. A third says, with civilians drawing £270 a year, and the "invited" men full pay, where does the old retired pay men serving on £150 come in?

A CORRESPONDENT suggests that explicit regulations should be issued to meet the cases of those medical officers who have returned to service on "invitation." It would remove doubts which still exist as to their exact position. He asks the following questions:

1. Why do those officers not appear in the *Army List*? (*Vide* page 1,290 January *Army List*.)
2. Why have their postings not appeared in the *Gazette*?
3. Can they throw up their present appointments and go back to retired pay should they so desire?
4. Drawing full pay and allowances. What are they and what is their position in the army?
5. How do they stand as regards seniority?

NATIVE WARD ORDERLIES IN INDIA.

THE Government of India having sanctioned the enrolment of ward orderlies of regiments of native infantry and corps of sappers and miners into the reserve, it has been notified that the reserve training of such men should consist entirely of hospital work with a short course of musketry.

THE ARMY MEDICAL RESERVE.

SENIOR OFFICER, A.M.R., writes: In the instance I previously gave of refusal to employ me there was no question of "orderly duty." So long as the present regulations are in force the A.M.R. have an unquestionable "prior claim" to employment over civilians; nor can they tacitly allow the claim to be passed over or ignored, after giving the best years of their lives to the military service of their country. I am quite aware that it has been necessary to employ civil practitioners to a large extent but that is not a justification for setting aside the rightful claims of those of the A.M.R. who have offered their services.

Another Correspondent writes: As a volunteer officer and an A.M.R., may I ask what can be the reason for the authorities ignoring the A.M.R.? I applied twice, through recognised official channels, for service in South Africa, but was told that having reached the advanced age of 39 I was too old. Nevertheless, numbers of civilians both younger and older than I am are proceeding to the front. This is not encouraging, and I mean to resign my commission directly the war is over.

*** We do not know the reason why the War Office are employing civilians rather than the A.M.R. in military hospitals at home, but presume there must be sufficient reasons. The A.M.R. have undoubtedly a "prior claim" to such employment at "contract rates," etc. But it may be the whole time of civilian practitioners was required, and that the disputed matter of "orderly duty" was really an element in the decision. As to Volunteer officers, medical or other, proceeding to the front in South Africa, that raises a distinct issue. It may be that in the present crisis the possibility of Volunteer mobilisation has to be considered. Where would mobilised Volunteer corps be if their medical officers were detached in South Africa? We have long and earnestly pointed out the extremely weak element in the so-called A.M.R. that national emergency they would have to be in two places at once; they cannot do duty with regular troops and be mobilised with their corps at the same time. When this war is over among the many questions of reorganisation, those connected with the A.M.R. will undoubtedly come up for consideration.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

THE ANGLO-AMERICAN INSURANCE COMPANY.

A REPORT of the hearing of the charge against Edward Hopwood of attempting to obtain £100 from Dr Laurie, of Bristol Road, by false pretences, before the Birmingham stipendiary magistrate on January 5th, was published in the *Birmingham Daily Post* on January 6th, and reprinted in the BRITISH MEDICAL JOURNAL of January 13th. The case was resumed on January 12th, when the prisoner was committed to the sessions, bail being renewed.

The case was tried at the Birmingham Quarter Sessions on January 20th, before the Recorder, Mr. J. S. Dugdale, Q.C., and we extract the following from the report in the *Birmingham Daily Post* of January 22nd:

Mr. McCardie (instructed by Messrs Hargreaves and Heaton) was for the prosecution, and Mr. Kemp, Q.C., and Mr. Stubbins (instructed by Mr. Philip Baker) were for the defence. Counsel stated that on November 21st prisoner called upon Mr. Laurie, and represented that he was authorised by the directors of the Anglo-American Insurance Company to appoint in the principal towns of the country medical officers to the society at a salary of £100, guaranteed on their agreeing to take shares to the extent of £100. He said the company was registered, but this was afterwards found to be untrue. He produced a prospectus, on which the names of the directors were typewritten, and he said that they were not mere paper directors, as each had invested £5,000 in the company. He offered Mr. Laurie an appointment, and wanted £100 down, but Mr. Laurie objected, and it was arranged that a second visit should take place after March. In the mean-

time prosecutor saw his solicitor and was advised to have nothing to do with the matter. Prisoner subsequently stated that there were no directors, and that he was the promotor of the company. Hopwood, said counsel, had discovered another easy way of making a living, and without authority had placed names of gentlemen upon his prospectus as directors, the name of Sir William McCormac, among other medical men, being included. On one copy of the prospectus the name of Mr. L. Carr appeared as a director, but a firm of solicitors wrote to the prisoner that Mr. Carr had entered into no such agreement. When arrested prisoner stated that he never intended to float the Anglo-American, but to amalgamate it with the Castle Insurance Company. Altogether, prisoner and his agent had collected £2,490. He had no banking account, and when in custody several pawntickets for small amounts were found upon him.

Mr. Laurie related the incidents connected with the interview with the prisoner, and

Frederick William Wrackham, insurance agent, said the prisoner asked him to act as his agent for a new company he was proposing to bring out, and he consented.

Detective-Superintendent Van Helden stated that he arrested prisoner at the Queen's Hotel. He asked him who the directors were, and he said that there were no directors.

Mr. Kemp, Q.C., submitted that there was no case to go to the jury. The accusation against prisoner was that he had made a false representation to Mr. Laurie that the company was registered. No evidence had been called to prove that the company was not registered, or that the proposed directors were imaginary. They would not have allowed their names to be placed upon the prospectus unless they had had some faith in the suggested company's prosperity. There was much substance in the scheme, which was only wrecked by one of his agents, who tried to levy blackmail.

Mr. McCardie called attention to the statements made by the prisoner to the police that no directors had been appointed. He had also stated that the company was registered, and that he had been authorised by the directors to appoint the medical men. In view of the police evidence these statements were obviously false.

The jury, without hesitation, found a verdict of guilty, and the Recorder passed a sentence of fifteen months' imprisonment, with hard labour. He stated that the prisoner had been convicted on the clearest evidence, and that it was a most barefaced attempt to defraud.

THE COURTESY CALL.

M.—It would be in accordance with the custom of the profession for the newcomer to call upon a practitioner who had been resident for some years.

FRIENDLY SOCIETIES AND CONFINEMENT CERTIFICATES.

A CORRESPONDENT asks the following question: He attended a patient in her confinement, who as a member of a Foresters' Court is entitled to twenty-eight days' sick pay on such occasions. The court refuses to accept his certificate of the confinement, and declines to pay his patient without a certificate from the club surgeon. Is the court justified in doing this?

*** We are advised that, unless the registered rules of the court make such payment conditional on a certificate from the club surgeon, our correspondent's patient can insist on being paid on the production of the certificate of any duly-qualified practitioner, and, if refused, proceedings could be taken in the county court.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees in Surgery.—At the congregation on January 18th the following were admitted to the degree of *B.C.*:

E. W. Hedley, King's; A. T. Fraser and R. E. Sedgwick, Caius; R. N. Salaman, Trinity Hall; and J. E. Linnell, Selwyn Hostel.

UNIVERSITY OF LONDON.

SIR MICHAEL FOSTER, K.C.B., has accepted the invitation to become a candidate for the University seat in Parliament. Mr. J. F. Rotton, M.A., LL.D., Q.C., 3, The Boltons, South Kensington, S.W., is the chairman of his committee, and we are informed that Mr. H. J. Waring, F.R.C.S., secretary of the Conservative Association, will act as one of the secretaries.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Charles Murchison Scholarship in Clinical Medicine.—An examination for this Scholarship, which is of the value of twenty guineas, and is tenable for one year, will be held at the Royal College of Physicians of London, on Monday, April 2nd, 1900, and two following days. The Scholarship is open to any student of medicine who has been a registered medical student during a period of not less than five, and not more than seven, years at a hospital in London or Edinburgh, recognised by the Royal College of Physicians of London, or by the medical faculty of the University of Edinburgh, and whether holding a medical qualification or not. The examination will be conducted both orally and in writing, and will include: (*a*) Examination of patients, with reports on their cases; (*b*) questions on pathology and treatment; and (*c*) examination on specimens. Intending candidates are required to send in their names to the Registrar of the Royal College of Physicians, Pall Mall East, London, not later than March 19th, with evidence of the duration of their medical studies from the deans of their respective schools.

THE ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

The Health of Dublin.—At a special meeting of the President and Fellows of the Royal College of Physicians of Ireland held on January 15th, the President (Dr. J. W. Moore) was nominated to represent the College upon the Committee of Inquiry into the Health of Dublin.

The following resolution was also adopted:

That the President and Fellows of the College reiterate the deliberate opinion expressed in the Conjoint Report of the Royal College of Physicians and the Council of the Royal College of Surgeons (Ireland) on the death-rate of Dublin, 1881, that the city of Dublin is, and has been, unhealthy in an excessive degree, and its extraordinary death-rate is attributable—not to errors of computation, or irremediable circumstances—but to long-continued disregard of sanitation, and the omission to enforce the legal means provided for a remedy. The President and Fellows are further of opinion that the excessive mortality within the city demands from the civic sanitary authority the most firm, energetic, and persevering execution of the powers entrusted to it, to secure even a partial amelioration of the existing evils; and the health of the city will be likely to deteriorate still further unless dealt with by a new and radical method much more vigorous than that which has hitherto been adopted.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST. January, 1900.—The following candidates passed in:

Surgery.—T. P. Allen (Sections I. and II.), Manchester; J. R. Bentley (Sections I. and II.), Middlesex Hospital; C. H. Brookes (Sections I. and II.), Durham and St. George's Hospital; A. McC. Dallas (Section II.), Guy's Hospital; J. M. Edwards (Section II.), Charing Cross Hospital; W. St. G. G. Hill, St. Mary's Hospital; D. T. C. Jones (Section I.), University College Hospital; E. C. Scarlett (Section II.), Royal Free Hospital; H. E. Weston (Section II.), St. George's Hospital; T. R. Wilshaw (Section I.), Birmingham.

Medicine.—F. G. Aldrich (Section II.), Charing Cross Hospital; A. St. J. Bateman (Section I.), King's College Hospital; C. H. Brookes (Sections I. and II.), Durham and St. George's Hospital; P. Cator St. Bartholomew's Hospital; D. T. C. Jones (Sections I. and II.), University College Hospital; E. C. Scarlett, (Section II.), Royal Free Hospital.

Forensic Medicine.—C. H. Brookes, Durham and St. George's Hospital; A. McC. Dallas, Guy's Hospital; D. T. C. Jones, University College Hospital; L. G. W. Tyndall, St. Mary's Hospital.

Midwifery.—A. H. Bell, Cork and Guy's Hospital; P. C. Burgess, Middlesex Hospital; A. A. F. Clarke, St. Thomas's Hospital; J. S. Goodall, Middlesex Hospital; K. Grube, Bonn; D. T. C. Jones, University College Hospital; E. R. Risien, St. Bartholomew's Hospital; J. Waters, Middlesex Hospital; H. Whittaker, Cambridge.

The Diploma of the Society was granted to Messrs. J. R. Bentley, P. Cator, J. M. Edwards, K. Grube, W. St. G. G. Hill, E. C. Scarlett, H. E. Weston, and H. Whittaker.

PUBLIC HEALTH

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,29 births and 5,552 deaths were registered during the week ending Saturday last, January 20th. The annual rate of mortality in these towns, which had been 30.9 and 29.1 per 1,000 in the two preceding weeks, further declined to 24.9 last week. The rates in the several towns ranged from 11.2 in Oldham, 14.5 in Cardiff, 15.3 in Plymouth, and 17.0 in Huddersfield, to 30.4 in Sunderland, 31.8 in Norwich, 32.0 in Liverpool, and 32.2 in Nottingham. In the thirty-two provincial towns the mean death-rate was 23.7 per 1,000, and was 3.2 below the rate recorded in London, which was 26.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the death-rate was 1.7 per 1,000, while it averaged 2.2 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Wolverhampton and in Liverpool, and 3.8 in Blackburn, 4.0 in Sheffield, and 8.3 in Preston. Measles caused a death-rate of 1.1 in Hull, 1.4 in Salford, 1.7 in Wolverhampton and in Sheffield, and 4.4 in Preston; scarlet fever of 1.0 in Halifax and 1.8 Preston; and whooping-cough of 1.2 in Salford, 1.3 in Portsmouth and in Newcastle, and 1.6 in Liverpool and in Bolton. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. The 96 deaths from diphtheria in the thirty-three towns included 40 in London, 14 in Sheffield, 8 in Liverpool, 5 in Leeds and 4 in Manchester. One fatal case of small-pox was registered last week in Liverpool, and one in Hull, but not one in any other of the thirty-three large towns. There were 21 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, January 20th, against numbers increasing from 5 to 18 at the end of the four preceding weeks; 5 new cases were admitted during the week, against 2, 1, and 10 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had decreased from 3,578 to 2,560 at the end of the nine preceding weeks, had further declined to 2,441 on Saturday last; 208 new cases were admitted during the week, against 161, 186, and 180 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 20th, 1,006 births and 721 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 25.6 and 23.0 per 1,000 in the two preceding weeks, rose again to 23.3 last week, but was 1.6 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 19.3 in Paisley and 21.7 in Dundee, to 26.6 in Greenock and 27.0 in Perth. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Paisley and Perth. The 340 deaths registered in Glasgow included 19 from measles, 4 from scarlet fever, 3 from diphtheria, 4 from whooping-cough, 3 from "fever," and 3 from diarrhœa. Three fatal cases of scarlet fever, and two of diphtheria were recorded in Edinburgh; 8 from measles and 2 from diarrhœa occurred in Dundee; 4 from measles in Paisley, and 2 from whooping-cough in Perth.

MEDICAL NEWS.

MEDICAL MAGISTRATE.—Dr. George Gavin Morrice, Consulting Physician to the Salisbury Infirmary, has been appointed to the Commission of the Peace for the county of Kincardine.

DR. ALTHAUS has been elected an honorary member of the International Congress of Electrology and Radiology, which will be held, as part of the International Medical Congress, at Paris, in August next, and will give an address on the general indications of galvanisation and faradisation.

INFLUENZA IN LONDON.—There was a marked decline in the fatal prevalence of influenza last week in London. The deaths directly attributed to this disease, which had increased in the seven preceding weeks from 17 to 340, declined to 208 during the week ending January 20th. The proportion of influenza deaths among elderly persons was even greater than before, for of the 208 deaths recorded last week no fewer than 120, or nearly 60 per cent., were of persons aged upwards of 60 years. The mortality in London from diseases of the respiratory organs also showed a considerable decline from recent weekly numbers, and only slightly exceeded the average.

BATHING IN EAR DISEASE.—Danzoger (*Rev. de Laryngologie*, 1899, and *Journ. de Med.*, December 25th, 1899) records the case of a patient who, while swimming on his back, was suddenly troubled with such severe vertigo that he was at once obliged to leave the water, and was only able to do so with difficulty. The patient was aware that some water had entered his right ear. The vertigo lasted two days, and was only relieved by catheterisation. The effect of water in the tympanic cavity appears to be due to compression exerted on the labyrinthine fluid, which is in turn propagated to the cerebro-spinal fluid. The author is of opinion that several cases of sudden death or drowning while bathing may be accounted for in this manner, and he cautions persons having any form of disease of the tympanic membrane against risking rupture or sudden entrance of water into the cavity.

LIFEBUOYS ON THE THAMES EMBANKMENT.—Cases of accidental or suicidal drowning in the Thames, along the Embankment, are by no means infrequent, and very little provision has been made hitherto to render rescue easy, or even possible in many cases. We are glad therefore to note that the Highways Committee of the London County Council proposes that a trial should be given to the plan of placing lifebuoys at intervals along the face of the wall bounding the Victoria Embankment. Thirty buoys, with lines attached, are to be provided at an estimated cost of £100, and the expense of maintenance and cleaning is expected to amount to about 7s. a year for each buoy. The majority of Londoners are not good swimmers, and though the Royal Humane Society's apparatus is provided here and there, few people know where to find it in an emergency. The provision of these buoys would give to many who are willing, but at present powerless, to proffer assistance to the victims of such mishaps a ready and obvious means of doing so.

OPENING OF URMSTON COTTAGE HOSPITAL.—This hospital, which has been erected in commemoration of Her Majesty's Diamond Jubilee, was formally opened on Saturday, January 6th. The building—which has cost upwards of £1,200—was commenced in February, 1899, from designs prepared by Mr. Edward Hewitt, F.R.I.B.A., of Manchester. Accommodation is provided for 9 patients, but this number can be slightly exceeded in case of necessity. The wards—to the ventilation of which special attention has been devoted—are two in number. They are 22 feet by 14 feet by 13 feet high, and each contains three beds and a cot. A sanitary block communicates with each ward by means of a cross-ventilated passage, which can, if necessary, be entirely enclosed in winter. Operating and bath rooms, with a small isolation ward, and the matron's room and the day room are also provided on the ground floor; whilst the nurses' and servants' bedrooms occupy the first floor, where also the kitchen is situated. In the construction of the hospital economy in administration and convenience of intercommunication between different parts of the building have been among the chief aims kept in view; and the structure has been so planned as to allow of extension, if necessary, at small cost. The opening ceremony was largely attended. Mr. S. W. Cocks, Chairman of the Committee of Management, in declaring the hospital open, was able to make the satisfactory announcement that the hospital started free from debt, but further subscriptions were required to provide for its maintenance. Drs. Clegg, Quayle, and Walls have consented to act as honorary medical officers, and Miss Stork has been appointed matron.

MEDICAL VACANCIES.

The following vacancies are announced :

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary by February 5th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by February 10th.

BRISTOL ROYAL INFIRMARY.—Resident Officer. Salary, £40 per annum, with board, lodging and washing. Applications to the Secretary by February 8th.

BRIXTON DISPENSARY.—Resident Medical Officer; unmarried. Salary, £150 per annum, with furnished apartments, etc. Applications to the Secretary at the Dispensary, Water Lane, Brixton, S.W., by January 31st.

CARDIFF INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Appointments for six months, subject to re election. Salaries at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by February 6th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon. Salary, at the rate of £50 per annum, with board and residence. Applications to the Secretary by February 6th.

CROYDON.—Medical Officer of Health for the Borough. Salary, £500 per annum, increasing to £600. Applications, on forms provided, to be endorsed, "Applications for appointment of Medical Officer of Health," and sent to the Town Clerk by February 3rd.

DUBLIN: NATIONAL MATERNITY HOSPITAL.—Resident Surgeon. Salary, £100 per annum. Applications to the Secretary by February 6th.

EASTERN DISPENSARY.—Physician. Honorarium £50 a year. Applications to the Secretary at the Dispensary, Leman Street, Whitechapel, E., by February 7th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Surgeon to Outpatients. Applications to the Committee of Management by February 16th.

GLASGOW UNIVERSITY.—Three Examiners for Degrees to examine in Midwifery, Medical Jurisprudence, and Botany respectively. Salary, £30 per annum each. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by February 3rd.

GRAVESEND HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary by February 9th.

GROVE HALL ASYLUM, Bow, E.—Junior Assistant Medical Officer. Salary at the rate of £120 per annum, with board, apartments, and washing. Applications to the Medical Superintendent

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Registrar and Pathologist. Honorarium, 25 guineas per annum. Applications to the Secretary-Superintendent by January 31th.

HULL ROYAL INFIRMARY.—Honorary Surgeon. Applications to the Chairman, Committee of Management, by February 7th.

HULME DISPENSARY.—House Surgeon. Salary, £130 per annum, with apartments, etc. Applications to the Honorary Secretary, Medical Committee, by February 6th.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon, unmarried. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary, by January 30th.

LEEDS: GENERAL INFIRMARY.—Resident Ophthalmic Officer. Salary, £50 per annum, with board and lodging. Applications to the Secretary to the Faculty by February 7th.

LEICESTER INFIRMARY.—House-Physician. Salary, £100 per annum, with board, apartments, and washing. Applications to the Secretary, 24, Friar Lane, Leicester, by February 3rd.

LIVERPOOL.—Assistant to the Medical Officer of Health. Must not exceed 35 years of age. Salary, £350 per annum. Applications endorsed "Assistant to the Medical Officer," to be sent to the Town Clerk, Municipal Offices, Liverpool, by February 14th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary by January 30th.

METROPOLITAN ASYLUMS BOARD.—Junior Assistant Medical Officer at the Asylum at Caterham; unmarried, and not exceeding 35 years of age. Salary, £120 per annum, rising to £150, with board, lodging, etc. Applications on forms provided, to be sent to the Office of the Board, Norfolk House, Norfolk Street, Strand, W.C., by February 3rd.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead.—Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of £60 per annum. Applications to the Secretary by January 30th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary, £140 per annum, and all found except board. Applications to the Secretary.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Member of the Court of Examiners. Applications to the Secretary by January 31st.

ST. MARK'S HOSPITAL FOR FISTULA, City Road, E.C.—House-Surgeon, must be M.R.C.S.Eng. Salary £80 per annum, with board, lodging, and washing. Applications to the Secretary by January 29th

SALFORD UNION.—Assistant Resident Medical Officer at the Infirmary, Hope, near Eccles. Salary, £130 per annum with furnished apartments and attendance. Applications, endorsed "Assistant Medical Officer" to the Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by February 6th.

SALISBURY INFIRMARY.—House-Surgeon; unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by February 2nd.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £120, per annum, with board, lodging, and washing. Applications to the Medical Staff, care of the Secretary, by February 19th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—Assistant House-Surgeon. Appointment for six months. Salary at the Rate of £50 per annum, with rooms, board, and washing. Applications to the secretary by February 10th.

SOUTHPORT BOROUGH: Medical Officer of Health. Salary, £500 per annum. Applications endorsed "Medical Officer" to be sent to the Town Clerk, Town Hall, Southport, by February 10th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Salary, £2 per mensem, with board, washing, and residence. Appointment tenable for six months. Applications to the Secretary by February 6th.

TUNBRIDGE WELLS: EYE AND EAR HOSPITAL. House-Surgeon. Appointment for one year. Salary, £60 per annum, with board and residence. Applications to the Honorary Secretary by February 10th.

UNIVERSITY COLLEGE, LONDON.—(1) Assistant Physician. (2) Assistant Surgeon. Applications to the Secretary by January 30th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Acting Assistant Surgeon. Applications to the Secretary-Superintendent by February 7th.

MEDICAL APPOINTMENTS.

BAILEY, Bernard E. G., M.R.C.S., L.R.C.P., appointed Second House-Physician to the City of London Hospital for Diseases of the Chest, Victoria Park.

BARLOW, John, M.D., F.R.C.S., appointed Additional Examiner in Clinical Surgery for the University of Edinburgh.

BLAIR, A. B., M.B., appointed Medical Officer for the Banwell 1st District of the Axbridge Union, *vice* D. Lowson, M.D., resigned.

FRASER, S., M.B., appointed Medical Officer for the Edmonton District of the Edmonton Union, *vice* J. Hudgell, M.R.C.S.

HEDLEY, W. T., M.B., C.M.Edin., appointed Medical Officer for the Hallaton District of the Uppingham Union, *vice* H. Brutnell, L.R.C.P., L.R.C.S.Edin., resigned.

HOPE, A. A., M.B., appointed Medical Officer for the Fifth District of the Daventry Union, *vice* F. W. Fowke, M.R.C.S.Edin., M.R.C.S.Eng., resigned.

MCCALL, Anthony, M.D.Glasg., appointed Surgeon to the Throat and Ear Department of the Boscombe Hospital, Bournemouth.

MCKIE, G., M.B., appointed Assistant Medical Officer to the St. George's in the East Infirmary and Workhouse, *vice* M. K. Tebay, M.R.C.S., L.R.C.P.Lond., resigned.

PERCIVAL, A. S., M.B.Camb., appointed Honorary Surgeon to the Newcastle Eye Infirmary.

REED, W. H., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health to the Westbury Urban District Council.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Saunders: Method of Testing for Diphtheria and Typhoid.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Galloway: Consultation. (Skin.)

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. W. Miller Ord: Consultation. (Medical.) 6 P.M.—Dr. Seymour Taylor: Class. Applied Anatomy and Physical Diagnosis. Demonstration III.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Dr. G. H. Savage: Clinical Lecture

THURSDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Saunders: Clinical Bacteriology.

Harveian Society of London, 8.30 P.M.—Clinical Evening.

Roentgen Society, 20, Hanover Square, W., 8 P.M.—Dr. Hugh Walsham: Roentgen Rays in Diseases of the Chest. Mr. A. Hastings Stewart, M.A., C.B., will show a small Egyptian Mummy and Skiagrams of the same.

Charing Cross Hospital Post-Graduate Course, 4 P.M.—Dr. Eden: Demonstration of Gynæcological cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Barlow: Some points on the Hygiene of Children.

West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Clinical Demonstration. Mr. James Cantlie: On the Surgical Treatment of Paralytic Deformities, with illustrative cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Jonathan Hutchinson: Consultation. (Surgical).

FRIDAY.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, 8.45 P.M.—Dr. Sapsford Sunderland: On some Forms of Pelvic Pain in Women in which the Diagnosis was Difficult. Dr. Herschell will demonstrate an apparatus for Intra-gastric Inhalation, and the Three-way Tap for Lavage of the Stomach.

Society of Anæsthetists 20, Hanover Square, W., 8.30 P.M.—A Discussion on the After Effects of the Inhalation of Ether on the Respiratory System will be opened by Mr. Sydney Rumbold (Leeds).

West London Medico-Chirurgical Society, West London Hospital, Hammersmith, W., 8.30 P.M.—Discussion on the Treatment of Primary and Secondary Syphilis, to be opened by Mr. Alfred Cooper.

Laryngological Society of London, 20, Hanover Square, 4.30 P.M.—Discussion and Note upon the desirability of having separate sections for Laryngology and Otology at congresses and Association meetings.—5 P.M. Cases will be shown by Drs. Lambert Lack, Johson Horne, and Cathcart, and Messrs. Wyatt, Wingrave, and Waggett.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Treacher Collins: Consultation. (Eye, Ear, Nose, and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

APLIN.—On January 22nd, at Hill House, Sneinton, Nottingham, the wife of Dr. Aplin, Medical Superintendent Notts County Asylum, of a daughter (Alys Arundel).

WAKEHAM.—On January 13th, at Redcliffe, 74 Harrow Road, W., the wife of C. Henry Wakeham, M.R.C.S., L.R.C.P.Lond., of a daughter.

MARRIAGES.

BRIDGEFORD—CUMBERLAND.—On December 13th, 1899, at St. George's Church, Queenscliff, Victoria, by the Rev. H. Williamson, Walter Bridgeford, M.R.C.S.Eng., and L.S.A., C.P.Hdin., of Boulder, West Australia, to Florence Lonlade, daughter of the late Captain R. F. W. Cumberland, Her Majesty's 96th (Manchester) Regiment.

MEAKIN—BALL.—On January 6th, at St. Giles' Church, Cambridge, by the Rev. F. Buxton, Vicar, assisted by the Rev. Arthur Cooke, M.A., of King's College, Harold Budgett Meakin, M.D.Lond., of the Indian Medical Service, son of the late Edward Meakin, of Basingstoke, to Frances Amelia, elder daughter of Sir Robert Ball, F.R.S., Lowdean Professor of the University of Cambridge.

WALKER—GREEN.—On January 18th, at St. John the Baptist's, Paignton, by the Rev. Wilfred C. Walker, M.A., and the Rev. J. T. Rees, D.D., Cyril Hutchinson Walker, M.S., F.R.C.S., youngest son of the Rev. John Walker, Rector of Bradwell, Suffolk, to T. Caroline Green, M.D., second daughter of the late Rev. J. H. B. Green, Rector of Normanton, Ashby-de-la-Zouch, and of Mrs. Green, Eastbourne, Paignton.

DEATHS.

BOND.—On January 14th, 1900, at Greenwich Infirmary, Harry Bond, M.R.C.S., L.R.C.P., B.S. (St. Bartholomew's Hospital), of pneumonia after a short illness, aged 25 years.

DUNBAR.—January 19th, Robert Pearson Dunbar, M.D., Park House, Blackburn.

VERNON.—On January 15th, at "Edgecrook," Cambridge Road, Southport, Henry Hannotte Vernon, aged 63 years. For twenty-seven years Medical Officer of Health for Southport.

WINDLE.—On January 22nd, after a premature confinement at 77, Harborne Road, Madeline Mary, dearly-beloved wife of Bertram C. A. Windle, M.D., F.R.S. R.I.P.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu.F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 2.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Laryngx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; 1.p., 1; o.p., 12; Obstetric, 1.p., Tu. F., 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Tu., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Th., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 3.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 3.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M. M. desires to hear of an institution which would receive as an in-patient an elderly lady crippled by rheumatism. She could pay from £2 10s. to £3 per week. The north of England would be preferred.

ANSWERS.

IXION.—The charges made to chemists should be the same as to other tradesmen.

W.S.—We believe that the only institution in London where instruction in midwifery like that at the Rotunda Hospital, Dublin, is to be had is Queen Charlotte's Lying-in Hospital, Marylebone Road, N.W.

E.S.D.—Surgical instruments especially for a hospital, where many operators use the same instruments, should be of the best possible kind, otherwise they will be continually out of order. The best are the cheapest in the end. Messrs. Millikin and Lawley, 165, Strand, W.C., are a firm dealing in second-hand instruments.

ENQUIRER.—A speciality sold under the name of hydronaphthol is recommended as a non-poisonous antiseptic in solution or dusting powder. Experiments as to its antiseptic value are recorded in the BRITISH MEDICAL JOURNAL, vol. i, 1889, p. 1047. Hydronaphthol appears to be of indefinite composition, but when purified by repeated crystallisation a substance corresponding to beta-naphthol is obtained. An absolutely reliable non-poisonous antiseptic, compact, and not spoiling instruments is still a desideratum.

TREATMENT OF ACNE ROSACEA.

P.M. writes: M. should restrict his patient's diet to 24 ounces of solid food (calculating it uncooked), or less; it should be taken at two meals or three at the most, and should not contain more than four ounces of animal food. I have sometimes found this plan very successful.

THE MANUFACTURE OF INDIARUBBER.

G.—The dangerous processes in the manufacture of indiarubber goods are the use of (1) naphtha, and (2) bisulphide of carbon. The vapour of naphtha is extremely penetrating and irritating alike to the eyes and respiratory mucous membranes. It is a cause of headache and deranges the appetite. The taste of naphtha lingers long in the mouth after the worker leaves the factory. Bisulphide of carbon used for vulcanising indiarubber is by far the more harmful. Further information on the subject will be found in the Report of the Dangerous Trades Committee of the Home Office, published three years ago and obtainable from Messrs. Eyre and Spottiswoode, of East Harding Street, E.C. The Home Office is in possession of all the facts relating to the industry, and has issued regulations which, if faithfully carried out, should go far to minimise the danger. Probably the matter will receive further attention in the next factory Bill which the Government will probably bring forward this year.

PAINLESS CHORDEE.

DR. PHILIP MIALL (Bradford) writes: J. R.'s case somewhat resembles two that I have now under treatment. The symptoms appear to be connected with prostatic enlargement, which is marked in one of the cases. In both the contracture is downwards and in the body of the penis, not the glans. The patients are aged 65 and 66. I have not attempted any local treatment, or, indeed, any treatment directed to the particular symptom named.

Sir Theodore Mayerne, the French physician of James I. of England, in his *Opera Medica* (London, 1700) describes at length the case of Isaac Casaubon, the eminent scholar, who had this symptom and whose disease, which ultimately killed him, was prostatic. I do not know any other author who mentions it.

DR. DAVID ROSS (Kingsland Crescent, N.E.) writes in answer to the query of "J. R." (BRITISH MEDICAL JOURNAL, p. 179): The condition is most probably that of "gouty penis," and the thickening is due to the deposit in the sheath of the corpora cavernosa of sodium biurate, together with subsequent chronic fibrous induration. The treatment is not very hopeful, but I suggest the occasional administration of pil. colch. c. hydrarg. at night, followed by a saline in the morning, and the trial of a uric acid solvent—for example, piperidine tartrate grs. x, b. vel. t.d.s. The iodine painting may be continued.

NOTES, LETTERS, Etc.

SOCIETY OF ANÆSTHETISTS.

At the next meeting of the Society to be held on Friday, February 2nd, at 8.30 P.M., at 20, Hanover Square, a discussion on the After-effects of Ether Inhalation upon the Respiratory System will be opened by Mr. Sydney Rumboll, F.R.C.S.Edin. The following is the scheme suggested for the discussion by the Council: but it is not expected, nor is it advisable, that each speaker should refer to every point.

I. Frequency with which such after effects are met with:
   (*a*) In the larynx and bronchi.
   (*b*) In the parenchyma of the lungs and in the air cells.
   (*c*) In the pleura.

II. Limit of time during which there is a liability to the occurrence of such complications.

III. Precise nature of such complications, for example, bronchitis, bronchopneumonia, pneumonia, pleurisy, etc.
   (*a*) Details of the several complications, for example, age, previous history (especially former respiratory troubles), onset, course, termination (necropsies).

It is most important to cite cases, with particulars as to temperature, clinical signs, etc.

IV. Actual time of occurrence of the several types.

V. Contributory causes:
   (*a*) Pre-existing disease or auto-infection from disease of the jaws, mouth, tongue, throat, pharynx, and abdomen.
   (*b*) Amount of anæsthetic used, and the method of its administration. Possibility of infection from inhalers.
   (*c*) Nature and duration of operations.
      1. Extensive breast operations.
      2. Operations involving considerable hæmorrhage.
      3. Operations on the mouth and upper air passages, with aspiration of blood, mucus, or organisms.
      4. Operations in the deep cervical region leading to trophic changes.
      5. Exposure during operation.
   (*d*) Exposure after operation.
   (*e*) Influence of time of year, surrounding temperature, etc.

VI. Prophylaxis.

Practitioners who have met with cases of the kind will be specially welcomed.

EXTRAUTERINE PREGNANCY.

DR. JOHN W. TAYLOR (Birmingham) writes: Will you kindly allow me to correct what I think must be a slight mistake in the review of my book on *Extrauterine Pregnancy*, which appeared in the BRITISH MEDICAL JOURNAL for January 13th. Your reviewer states (Mr. Taylor) "believes greatly in want of development of the tube as the most frequent cause of ectopic gestation." What I believe I have said, and what I have always intended to say, is that want of development or atrophy of the tube is one of the causes of tubal pregnancy, and that it is the most frequent cause of earliest rupture of the tube—not that it is the most frequent cause of ectopic gestation.

*** We are obliged to Mr. Taylor for this explanation. At page 27, however, he speaks of "the view I have advanced regarding the association of tubal pregnancy with atrophy of the tube," not of his view regarding the association of early rupture of a tubal pregnancy with atrophy of the tube.

LETTERS, COMMUNICATIONS, ETC., have been received from (A) A.M.O.; Dr. J. Althaus, London. (B) Dr. P. L. Benson, Winslow; Dr. L. A. Baine, Luton; Dr. F. W. Burton Fanning, Norwich; Dr. G. F. Blandford, London; Dr. T. Buzzard, London; Dr. G. S. Brock, Rome; Mr. L. A. Bidwell, London; Mr. W. M. Beaumont, Bath; Mr. W. H. Brooks, Leicester. (C) Dr. W. S. Colman, London; Dr. T. F. S. Caverhill, Edinburgh; F. W. Clark, M.B., Hong Kong; Cincinnatus; Messrs. Crotton, Craven, and Worthington, Manchester. Dr. J. G. Clegg, Manchester. (D) Mr. F. Deane, Barbados; D. and B.; Dr. A. Duke, Cheltenham; Disgusted; Dens. (E) W. McA. Eccles, M.B., London; Dr. J. Eyre, London. (F) Mr. J. S. Fairbairn, London; Dr. W. E. Fothergill, Manchester; Mr. G. F. Forster, London; F. J. S.; Messrs. Francis and Co., London. (G) Gray's; Rev. G. Griffiths, M.R., Shillong; W. R. Gore, M.B., Whitchurch, Salop. (H) Dr. J. F. Horne, Barnsley; Dr. J. F. Henry, London; Dr. A. W. Harrison, Mossley; Mr. H. Holmes, Pontefract. (I) Interested Outsider; Messrs. Innes, Smith, and Co., Birmingham; Dr. G. F. Inglott, Malta. (J) R. Johnson, M.B., London; J. S. (K) Knob-Kerrie; F. T. Keyt, M.B., British Honduras. (L) F. H. Low, M.B., London; Dr. E. Liveing, London; Locum Tenens; Miss F. Lankester, London. (M) Dr. T. Milne, Aberdeen; Dr. L. J. Minter, Uxbridge; A. Mankell, M.B., Bradford; B. G. A. Moynihan, M.B., Leeds; Member; Mr. H. May, Birmingham; Dr. W. Millikan, Manchester; Dr. A. M. Mitchell, Guildford; M.B., B.S. Lond.; Dr. W. Murray, Hessle. (N) R. H. Norman, M.B., London; D. H. A. Nicholson, Edinburgh. (O) Oculist. (P) Mr. F. T. Paul, Liverpool; Mr. B. B. Pitcher, London; Public Health; F. L. Pochin, M.B., Fakenham, Norfolk; Dr. G. C. S. Perkins, London; P. M.; Dr. R. J. Probyn-Williams, London; Pro Bono Medico. (R) Mr. J. N. Rae, St. Kitts, W.I.; Mr. F. H. Reeve, Glasgow; Dr. G. D. Robinson, London; Dr. D. Ross, London; Reform; Mr. R. H. Reines, London; Mr. T. P. Roberts, St. Albans. (S) A. M. Sheild, M.B., London; Mr. J. H. Spitzly, London; Mr. B. Sexton, Bedford; G. P. Sauser, M.B., London; Dr. H. G. Smeeth, Stockport; Mr. H. Swithinbank, Uxbridge; Scotia; Dr. R. H. Steen, Chichester. (T) Mr. J. Tucker, London; Mr. J. W. Taylor, Birmingham; Dr. E. F. Trevelyan, Leeds; Mr. T. Thatcher, Bristol. (V) Mr. W. Van Praagh, London. (W) W. S.; Dr. F. Willcocks, London; W. J. Weir, M.B., Strabane; Mr. A. Walker Glossop; Mr. W. Walker, Nottingham; E. B. Waggett, M.B., London; Mr. H. W. S. Williams, Holywell; Mr. C. H. Whiteford, Plymouth. (Y) Mr. W. N. Yarrow, London; etc.

BOOKS, ETC., RECEIVED.

Traité Pratique des Maladies des Pays Chands et Tropicaux. Par Dr. J. Brault. Paris: J. B. Baillière et Fils. 1900. Frs. 10.

Vorfragen der Biologie. Von Dr. E. Albrecht. Wiesbaden: J. F. Bergmann. Glasgow: P. Bauermeister. 1900. 2s. 6d.

Das Trainieren zum Sport. Von Dr. H. Roole. Autorisierte und für deutsche Verhältnisse bearbeitete Uebersetzung von Dr. C. A. Neufeld. Wiesbaden: J. F. Bergmann. Glasgow: P. Bauermeister. 1899. 2s. 3d.

Conty's Practical Guides. Paris to Nice. Paris: Conty's Guides Office. London: A. Nion. 2s. 6d.

Experiments on Animals. By Stephen Paget. London: T. Fisher Unwin and Baillière. Tindall and Cox. 1900. 6s.

What a Young Boy ought to Know. By S. Stall, D.D. London: Vir Publishing Co. 4s.

The Scientific Valuation of Alcohol in Health. By Captain P. W. O'Gorman, M.A., I.M.S. Edinburgh: W. F. Clay. 1900.

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A CLINICAL LECTURE

ON SOME CASES OF

DILATATION OF THE STOMACH CONSIDERED FROM THE SURGICAL ASPECT.

Delivered at St. George's Hospital.

By WILLIAM H. BENNETT, F.R.C.S.,

Surgeon to the Hospital; Joint Lecturer on Surgery in the Medical School; Member of the Court of Examiners of the Royal College of Surgeons: etc.

Gentlemen,—In the course of the last few years I have been fortunate in having had an experience of the surgery of the stomach which is possibly above the average; I have therefore thought that the present lecture might be usefully employed in the consideration of some points connected with gastric dilatation from the surgical point of view. I suppose that had any hospital surgeon deliberately set himself to lecture upon dilatation of the stomach ten years ago or thereabouts, it would have—with some reason—been considered an unjustifiable encroachment upon the domain of his medical colleagues. It is, indeed, not more than four years ago that a question upon dilatation of the stomach suggested for the paper on surgery in an examination at one of our universities, was rejected by the supreme authority, because the subject was held to be medical, and therefore inadmissible in a surgical examination. Fortunately, a change has by this time come over the matter, and it is pretty generally admitted that dilatation of the stomach, although it may—and indeed generally does—come under medical treatment in the early stage of the condition, is for practical purposes a surgical complaint.

Non-malignant Pyloric Stricture.

The subject has been rather prominently brought before us recently by a case (No. 1) upon which some of you saw me operate recently. The patient, a woman aged 35 years, had suffered from various symptoms which seemed to show that she was the subject of gastric ulcer. There had been for many months pain after taking food, which was intensified just to the right of the middle line below the ribs; from time to time she had vomited blood, and sometimes blood had been passed in the stools. Two of these attacks had been very severe, and had left her exhausted, anæmic, and short of breath for weeks afterwards. Upon coming under my care here, the last of these attacks had passed away, and her case then presented, so far as I could judge, the symptoms only of extreme dilatation of the stomach. Just to the right of the middle line, midway between the umbilicus and the ensiforme, was an acutely tender spot, the gastric dilatation was excessive, and any attempt at taking food, although it may not have been actually swallowed, led to retching and often to vomiting. No blood was, however, seen in the vomit after her admission into the hospital. The case, so far as the symptoms went, was a severe one, and, although careful dieting for a time gave her temporary relief, the moment the taking of solid food was resumed the symptoms recurred with full intensity. The dilatation of the stomach varied from time to time, and could be reduced practically to *nil* by a week of rectal feeding. As her station in life rendered it necessary that she should make a living by her personal efforts, which she was quite unable to do under existing circumstances, an exploratory operation was decided upon.

Abdominal section was therefore performed, the only abnormality found being extreme gastric dilatation. I examined the stomach carefully. There was no induration or other unnatural condition manifest outside the viscus; the veins were not even unnaturally varicose, although this condition has been often mentioned in such cases; there were no adhesions, and the viscus had not dropped from its natural position. The pylorus was minutely handled, but I could find nothing positively wrong, although the pyloric ring seemed (to my imagination, perhaps) a little more objective than usual. For reasons to be presently explained, I opened the stomach by an incision in its long axis, commencing about 1 inch to the cardiac side of the pylorus. By the finger introduced through this opening I examined the internal surface of the organ, which, by a little management with the opposite hand, is easily brought within reach of the finger inside it, and nothing abnormal could be detected. Upon examining the pylorus, it was found to be so small that it admitted only the tip of my little finger, and that with some difficulty, a marked contrast to the normal condition, which admits from two to four fingers, according to their size, with ease. I forcibly passed my two index fingers through the contracted pylorus, and stretched it until the two fingers lay quite loosely in its canal.

Before the stretching the pyloric ring was almost knife-edged and very prominent; nevertheless, until the stomach was opened, it had been impossible to say that any abnormal pyloric condition was present; herein for my present purpose lies the great interest of this case. In point of fact, the case was one of extreme gastric dilatation due apparently to spasm of the pyloric sphincter, the cause of which was not plain, and I have no reasonable doubt, in the light of other cases which have come under my notice, that, if by chance the patient had died prior to the operation, no *post-mortem* evidence would have been forthcoming of pyloric obstruction of any kind, hence the case would have been classified as one of simple or "idiopathic" dilatation; in other words, dilatation of the stomach without obvious cause.

The effect of the treatment in this case was the complete relief of all symptoms; in ten days the patient was taking soft solid food without pain and with no sign of nausea or other discomfort. As a natural sequence to a case like this, the following question would arise in the mind of any intelligent person: Does dilatation of the stomach ever occur in the absence of some gross cause, that is to say, without actual obstruction on the one hand, or without adhesions or other abnormal conditions on the other hand, which interfere with its natural power power of contraction? If the evidence of *post-mortem* examinations alone can be accepted as final, there is no doubt that in a certain number of cases of dilatation of the stomach during life, there is no evidence whatever of obstruction or other unnatural condition after death. The pylorus in some cases in which the stomach is very large cannot be shown *post mortem* to be altered in any material degree. This absence of *post mortem* evidence is, however, I am sure, no proof that obstruction has not been present during life. For example, I have no doubt that in the case which I have described an examination after death—supposing a fatal result had ensued before my operation—would have shown no evidence of anything abnormal with the pyloric sphincter. In other words, there is, I believe, without doubt, a form of active gastric obstruction resulting mainly from spasm of the pylorus the evidence of which disappears with the death of the patient.

"Idiopathic" Dilatation of the Stomach.

From a surgical point of view this question of the existence of dilatation of the stomach without some obvious cause is one of much moment. It was formerly supposed—and the idea is, I am led to believe, still prevalent with some people—that "idiopathic" dilatation of the stomach and other hollow viscera is not only possible, but not uncommon. To produce evidence of the correctness of this notion *post-mortem* examination is the only resource, but such evidence is merely negative and has in the light of such a case as I have referred to little or no value. It is true that in certain ptomaine poisonings from the ingestion of unwholesome food, notably oysters in some conditions of disease, an extraordinarily rapid and extreme gastric dilatation ensues, in which obstruction has no part, which if not immediately relieved by Gargantuan belchings may end in death. Again, gastric dilatation, together with general intestinal distension, may occur, I need hardly say, in other conditions without objective obstruction—for example, in certain cases of fracture of the spine. These are, however, beyond the scope of the present lecture, which deals exclusively with subacute or chronic dilatation of the stomach alone.

The following case (No. 2) is interesting in connection with the state of affairs shown in the example already related: A man of middle age was a patient of Dr. Ewart's in this hospital on account of extreme gastric dilatation. As medical means, stomach lavage, etc., gave inadequate relief, it was

determined to make an exploratory laparotomy, with a view to the better examination of the case and to the removal of any abnormal conditions should they exist. Upon opening the belly, I found, beyond the mere dilatation, nothing abnormal; there were no adhesions; the pylorus felt perfectly healthy and entirely free from thickening; in fact, no cause for the dilatation could be ascertained. For the time being, therefore, the case was regarded as an example of simple or idiopathic dilatation of the organ. Without having opened the viscus, it was therefore decided to perform the operation of "gastroplication"—that is to say, to reduce the organ to something like its normal capacity by turning in a large fold of its anterior wall and fixing the fold by a series of Lembert sutures, an unscientific operation, but one which it was stated had been performed with benefit in two cases on the Continent. For a time remarkable relief followed; but later on the dilatation recurred, and finally the patient died, apparently of cardiac failure, independent, so far as could be judged, of the gastric condition. At the *post-mortem* examination the pylorus, instead of being healthy as we had assumed when handling it during life, was distinctly contracted, with a lumen not larger than a No. 14 (English) bougie. There had, in fact, been in this case distinct obstruction, although manipulation of the external surface of the pylorus had failed to detect any unnatural condition. Had I opened the stomach, as I now should do, there is, I submit, no room for doubt that the obstruction would have been easily detected, and a curative operation have been performed in the place of the ultimately useless measure which was adopted.

Here is another case (No. 3) bearing upon the same point: A woman about 27 years of age was sent to St. George's Hospital by one of the most acute physicians in London with a view to immediate operation for perforating gastric ulcer, from the symptoms of which she appeared to be suffering, including the much over-valued absence of liver dulness. I was called to the patient at night, and found her collapsed and nearly pulseless, the illness having commenced with a sudden onset of epigastric pain a few hours before. The stomach appeared to be distended; the liver dulness was wanting, and there was acute pain with tenderness over the normal region of the pylorus. Abdominal section was performed; upon opening the peritoneum a little serous fluid escaped, but beyond this nothing wrong was found save a greatly-distended stomach; there was no sign of perforation or peritonitis, nor was there any other unnatural condition in the belly generally. The stomach was, as I have said, much dilated, and upon examination the pylorus felt thick and hard. The patient's condition was so critical that nothing beyond the examination was proceeded with. The abdominal wound was brought together as quickly as possible, and she was put back into her bed with the shortest possible delay. She rallied from the operation, and for a time seemed relieved by it. She died, however, a short time later after a similar attack to that which led to the operation, produced apparently by some cardiac affection. The stomach at the *post-mortem* examination was found little if at all dilated, and the pylorus was, so far as could be felt and seen, perfectly normal.

These cases are very instructive on two accounts. First, as is shown by two of them, it is quite clear that a condition of the pylorus which is productive of grave obstruction to the outflow of the gastric contents may exist without its being appreciable upon manipulation of the exterior of the stomach; and, secondly, as is shown by the last case, it is certain that a well-marked induration about the pylorus which is obvious upon manipulation during life may disappear and be quite undiscoverable immediately after death. The nature of the pyloric conditions under the circumstances detailed must of necessity be somewhat uncertain, but there is, I submit, strong reason for assuming that the condition is one of spasm of the pyloric sphincter.

The following case (No. 4) is of some value in corroboration of this view. A young married woman, who was four months pregnant, complained of occasionally feeling great distension with flatulence, which was always associated with acute crampy pain to the right of the middle line under the ribs: the distension and pain usually continued until vomiting occurred, upon which the symptoms disappeared; at times, however, they disappeared gradually without vomiting. Upon examination, during one of the attacks the only abdominal abnormality perceptible was great gastric dilatation. An investigation was made under the influence of an anæsthetic, and although the stomach was extremely dilated before the commencement of the administration it was found, upon examining the abdomen after full anæsthesia had been effected, that the dilatation had entirely disappeared, the stomach having regained what was, so far as percussion, could show, its normal size. No vomiting had happened, so that the only means which could have effected the emptying of the organ was the passage of its contents through the pylorus. The bearing of the points emphasised by the cases referred to upon the question of treatment I shall attempt to explain presently.

Persistent and Intermittent Dilatation.

For practical purposes there exist two main classes of gastric dilatation—the persistent and the intermittent. The former is continuous, although it may vary in degree from time to time if periodical vomiting occurs, which of necessity mitigates the symptoms of the condition for the time being, although no actual diminution in the stomach capacity need result. In the latter—that is, the true "intermittent" dilatation, the organ is at times dilated, and at times, so far as extra-abdominal examination is concerned, of normal size. In the persistent form the gastric walls have lost their natural power of contraction in the true sense; in the intermittent variety the contractile power is for long periods retained, although in course of time it becomes impaired or altogether wanting. Speaking generally, it may be held as true that persistent dilatation is the result either of continuous pyloric obstruction or of adhesions or other gross pathological conditions, which prevent the stomach walls contracting in the normal manner. Intermittent dilatation depends upon recurrent temporary pyloric obstruction (*a*) from spasm of the pyloric sphincter, or (*b*) from the occurrence of intermittent mechanical obstruction in the lumen of the pylorus.

The cause of persistent dilatation will, I believe, for practical purposes be always found to lie either in permanent pyloric obstruction, in adhesions, or in some other condition outside the stomach interfering with its power of contraction. In the last case the cause is at times so remote as to be in danger of escaping attention altogether as the following case (No. 5) shows. A native of Italy, about 40 years of age, had for many years suffered from abdominal discomfort. The principal symptom was a feeling of great distension, which had usually been relieved by copious belchings; for a year prior to his coming under my observation vomiting had from time to time occurred. His stomach had been occasionally washed out, with great temporary benefit, but latterly the distress had become greater; and a dragging pain about the umbilicus, which had always been present to some extent, became much intensified, and was sometimes very acute.

Great gastric dilatation was found to exist; frequent very offensive eructations occurred, and upon every third day or thereabouts copious vomiting happened, the ejected material being frothy and very ill-smelling. The attitude of the patient was peculiar, as, whether he sat or walked, he supported his abdomen by the hands tightly clasped across the umbilical region, about which he stated there was constant pain, which became exaggerated as the time for vomiting approached. At first sight there was nothing abnormal to be noticed about the umbilical region; but a further examination revealed a small omental hernia at the navel, not larger than the top of an ordinary collar-stud. Pressure upon this, he declared, was very painful, and caused a crampy feeling as if he were about to vomit. Although it seemed hardly likely that this small umbilical hernia was the cause of the dilatation of the stomach, I thought it worth while in the first instance to get rid of it. It was, therefore, removed, and proved to be, as was expected, a small nodule of omentum with a very thin stalk, which was quite tense and sprang back into the belly after its division. Remarkable relief to all the patient's symptoms followed; the vomiting ceased first, then the eructations gradually disappeared; constipation, which was previously marked, was replaced by a regular habit; finally, the evidences of gastric dilatation in the course of about a month had almost gone, and when the patient was last heard of—six months

after the operation—no sign of recurrence of any of his troubles had shown itself. In this case, therefore, treatment had been carried out for a long period with a view to the relief of the discomfort of dilatation of the stomach, the cause of the condition having escaped notice altogether.

Intermittent dilatation, although it may be caused by pathological conditions—for example, ulceration or growth actually involving the stomach—is more commonly due to irritation from abnormal conditions outside the viscus, but not implicating it. Intermittent dilatation, due to blockage of the pylorus by growth, must be very rare, and the following case (No. 6), which is the only example I have met with, must be almost unique:

A gardener, aged 35, was admitted into St. George's Hospital on June 8th, 1899, with the following history: Until four years prior to his admission he had always enjoyed good health, but then began to notice some discomfort in the situation of the epigastrium after taking food. For two years he regarded this as indigestion, and took medicines of various kinds without obtaining any relief. For eighteen months he had suffered frequently from vomiting after taking food; if he ate slowly or took fluid in small quantities, no vomiting occurred; but if a meal were taken quickly, or if a large quantity of fluid was swallowed rapidly, vomiting very soon followed. For a year, in addition to the vomiting, he became rapidly distended, excepting when very small quantities of fluid nourishment were carefully taken. Pain, some time after food passed into the stomach, always occurred in about the situation of the gall bladder, and this pain was immediately followed by vomiting if any considerable quantity of food or fluid was previously taken. There had been no hæmatemesis, and, excepting when the food seemed to be passing out of the stomach, there was no pain, so that in the intervals of taking food he was quite comfortable until two or three weeks before his admission, when during the intervals between the taking of food a continual gnawing pain persisted over the epigastrium.

On admission the patient was anæmic and thin, and complained of crampy abdominal pain a short time after taking food. Upon examination the abdominal muscles were a little resistant over the upper segment. The stomach was dilated, but not excessively so. Two days later the dilatation had greatly increased, and the stomach was very large. On June 12th the pain had greatly diminished, and although no vomiting had occurred the stomach appeared to be of normal size. The intermittent attacks of dilatation continued in spite of careful dieting, being much more marked after the taking of anything solid than when entirely liquid food was used.

On June 29th he was examined under ether; no tumour was detected, but the stomach, which was previously greatly dilated, regained apparently its natural size during the administration of the anæsthetic.

The symptoms continued unchanged, and on July 13th exploratory abdominal section was performed. The stomach, when exposed, was considerably dilated, but during manipulation was seen to slowly contract to a size about the normal. At first no tumour could be found, but subsequently, upon careful examination of the pyloric region, a flattened mass could be detected inside the viscus about 1 inch to the cardiac side of the pylorus, and quite free from it. The stomach having been laid open on the cardiac side of the mass, it was found to be a pedunculated growth, resembling a simple papilloma, which sprang from the antero-inferior gastric wall, the pedicle being long enough to allow of the body of the tumour being driven into the pylorus (Figs. 1 and 2), which was quite normal. This without doubt explained

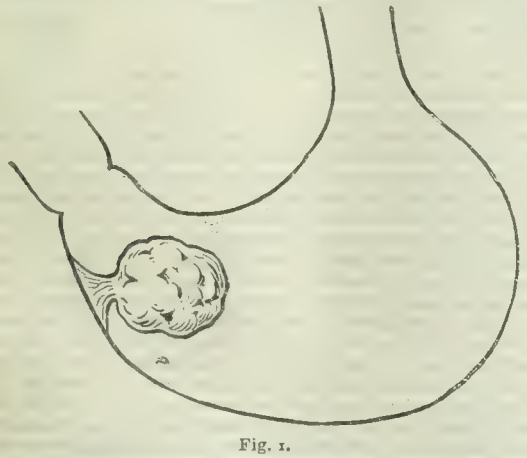


Fig. 1.

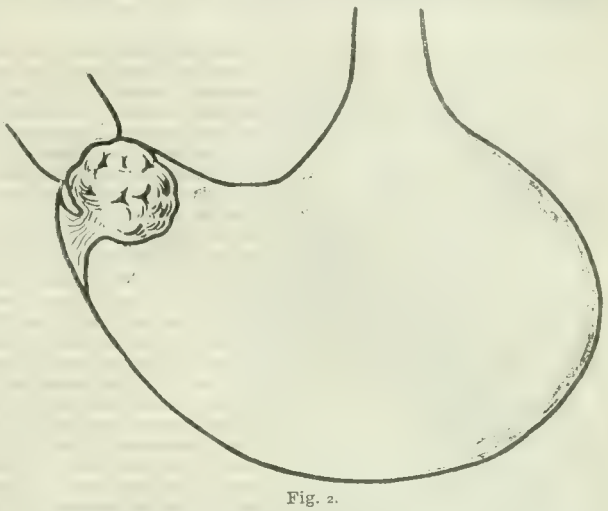


Fig. 2.

the peculiarly intermittent character of the dilatation. The growth was removed, and the wound in the stomach closed by Lembert sutures in the usual way.

No further dilatation followed after the operation, and all pain upon taking liquid food disappeared; any solid food, however, was followed by pain, as if it were "passing over a sore place." He left the hospital on August 30th, when liquid and soft food could be taken with comfort, no dilatation having recurred, and his general condition being considerably improved. The tumour, upon microscopical examination, was reported to be either a degenerated papilloma or a colloid carcinoma.[1]

The commonest cause of intermittent dilatation is probably movable kidney, but any floating abdominal tumour, especially if occurring on the right side, may give rise to the requisite irritation. Dilatation due to movable kidney appears to be confined to cases in which the affected kidney is on the right side. A good illustration of this cause is afforded by the following case (No. 7):

An anæmic woman, aged 35, had occasionally, for at least ten years, suffered from repeated attacks of pain and flatulence, the pain as a rule being limited to the sub-hepatic region, and at times liable to great exacerbation. On a few occasions, after an unusually severe attack of pain, vomiting had occurred. For two years, or rather longer, she had felt continually distended, so much so, that the size of her clothes at the waist had to be increased; the discomfort became greatly exaggerated by the occurrence of frequent sour eructations over which she had no control. The occasional exacerbation of pain continued, and her condition became intolerable. Medicinal measures having failed to afford any material relief, the possibility of surgical aid was considered. Upon examination the whole abdomen was sensitive, the sensitiveness being most intense under the left lobe of the liver. The stomach was very large, and a coarse splash was elicited by succussion. The liver dulness was greatly modified, but not altogether absent. Manipulation, although pushed almost to the point of roughness failed to reveal any growth or other abnormal condition which could account for the gastric trouble; firm pressure, however, over the area of extreme sensitiveness caused an acute radiation of pain into the right loin. Examination under an anæsthetic, after at first seeming likely to prove abortive, led to the sudden discovery of a very freely movable kidney on the right side. Having regard to the points in this relation to which I have already referred, I

thought it right, before dealing with the stomach itself, to fix the kidney by suture; this was therefore done through the loin by four stout strands of kangaroo tendon passed deeply through the organ. The result was the complete relief of the pain and the disappearance of the general abdominal sensitiveness; in addition the abnormal size of the stomach gradually diminished, and the organ at the end of three months from the date of the operation appeared to be of the normal capacity so far as that is determinable by external examination.

DIAGNOSIS.

On this part of the subject I do not propose to say much. For the intelligent appreciation of gastric dilatation, the fact of its being, for practical purposes always, secondary to some gross cause must be ever present in your minds. It must in fact, if the welfare of the patient be considered, be regarded merely as the symptom of some underlying disease or abnormality. Every case of gastric dilatation should therefore be approached with a view to ascertaining its cause. Should a marked tumour about the pyloric region be present, the case is obvious. In the absence of tumour of this kind the abdominal parietes should be carefully examined for the purpose of eliminating certain peripheral causes, such, for example, as the umbilical hernia in the case I have just described. Careful search should be made, especially on the right side, for floating kidneys or any other movable abdominal tumour. For this purpose no truly adequate investigation can be made without an anæsthetic; not only is the anæsthetic necessary sometimes for the discovery of conditions which in the conscious state of the patient may escape notice, but in certain cases it leads to the rapid disappearance of the dilatation in consequence of the relaxation, I suppose, of the spasmodic condition of the pylorus, resulting from reflex irritation. One of the commonest causes of reflex cases of this sort is, as I have already mentioned, movable kidney, but I have seen dilatation disappear after the removal of a suppurating (chronic) ovarian dermoid, and in another case (No. 8) an attack of appendicitis was followed by all the symptoms of gastric dilatation of moderate extent, which persisted for more than six months, varying in degree from time to time, and only disappearing altogether after the removal of the appendix which became necessary later.

There is one symptom to which attention is so constantly called as being practically pathognomonic of gastric dilatation that I cannot help warning you against accepting it as conclusive without careful investigation. I mean the well-marked "splash" which is felt upon succussion in many cases of dilatation of the stomach when the organ is flabby and contains much fluid contents. This splash is not confined to cases of gastric dilatatation, as one would be almost led to believe by the emphasis which is continually laid upon the symptom, but is equally manifest in some cases of distension of the colon. Moreover, the diagnosis between the splash of gastric distension and that of colic distension is sometimes extremely difficult; so much so is this at times the case that very recently in a patient upon whom I subsequently had to operate a physician, whose astuteness in matters of this kind is second to none, was by no means certain until the belly had been opened whether the splash which was perceptible was colic or gastric. In all cases, therefore, excepting perhaps those of the most obvious kind, it is wise to clear up any doubt of this sort by emptying the stomach as completely as is possible by siphonage, which, as a rule, although not quite always, removes the possibility of a gastric splash. This is a more reliable plan than that of noting the way in which, upon placing the patient so that he or she lies on the right side, the succussion splash remains localised to the stomach area or sinks in colic cases towards the dependent loin. It may not be amiss here to warn you against the danger of over-rating the value of any single symptom as diagnostic of a given disease. So far as abdominal matters are concerned, I do not suppose there is anything which leads to so many errors in diagnosis as the exaggerated value which is placed by the generality of practitioners upon (1) the splash as evidence of dilatation of the stomach; (2) the absence of liver dulness as indicative of perforated gastric ulcer; and (3) the tenderness over what is called McBurney's point as a certain sign of appendicitis. Concerning the first of these I have already said sufficient. Absence of liver dulness, although present in some cases of perforating gastric ulcer, is, of course, found in other conditions, one of these being extreme gastric dilatation. Here is a case (No. 9) in evidence:

A coachman, 50 years of age, was sent to me at St. George's from the country with a view to operation for what was thought to be a subphrenic abscess following gastric trouble. For years he had suffered from digestive worries, the principal of them being flatulence and distressing distension after food. About a year before his admission he had been seized with vomiting and acute pain under the liver due, it was thought by an expert on the subject, to gall-stone mischief, which it was proposed to treat by operation. This proposal was for some reason negatived by either the patient himself, who seemed to have been very ill, or by his friends acting for him. By degrees he improved, and for a time was able to get about a little. The abdomen, however, remained distended; there was constant pain in the epigastric region, and emaciation became extreme. Upon examination after his admission, there was great dilatation of the stomach, the liver dulness was entirely absent, being replaced by a hyper-resonant area. Pressure over this region of hyper-resonance caused pain. The patient was weak, complained of nausea, and begged for some relief.

After a consultation with my medical colleague Dr. Isambard Owen, who corroborated my conclusions as to the physical signs, I performed abdominal section. The stomach was of great size, and under the left lobe of the liver, which was pushed far away upwards beyond its natural situation were some adhesions tying the stomach to the left lobe and to the under surface of the diaphragm. There was no abnormal cavity of any kind about the liver, which was in accurate contact with the diaphragm; no gas or fluid was found in the abdomen, and it was evident that the hyper-resonant note which had replaced the liver dulness was provided by the adherent and distended stomach. The gall bladder was normal, it contained no gall stones, and was quite free from any matting. The adhesions were very dense, and were freely divided, with the exception of some at the back part, which were too dangerously situated to be dealt with safely in a patient so feeble who had already been under prolonged anæsthesia. The division of the adhesions allowed the stomach to drop considerably, and on the following day the liver dulness had to a great extent reappeared.

The unreliability of the tenderness over McBurney's point must, by this time I suppose be recognised by all the surgeons who see much of abdominal work. I have, for example, operated in four cases during the last few months, in each of which a positive diagnosis of apprendicitis had been already made by others in consequence of the existence of this symptom. In all of these cases the appendix and cæcum were perfectly healthy. The conditions found at the operations were as follows:

1. Suppurating ovarian dermoid.
2. Acute ovaritis in a case of early frequency.
3. Sarcoma springing from the right side of the lower lumbar vertebral bodies, and
4. Suppurating salpingitis.

(Nos. 2 and 3 were in the hospital, 1 and 4 occurred in private practice.)

A discussion in a lecture of this kind of the merits of some of the most recently devised methods and instruments, such as those of Einhorn and Turck, for the diagnosis and treatment of dilatation of the stomach, would, I venture to think, be out of place. These methods are as yet on their trial, and the instruments are hardly likely at present to form a part of the armamentarium of the ordinary practitioner. Moreover, I cannot help feeling that the main purpose of these is to deal rather with the symptoms than the cause of the condition. Further, the application of some of the apparatus, for example, the gyromele, although it may sometimes be of service, is at the same time occasionally productive of so much exhaustion for the patient that it must be doubtful whether the benefit derivable is in proportion to the bad effects that may ensue. In a case, for instance, of gastric dilatation, apparently due to pyloric obstruction, under the care of Dr. Ewart in St. George's Hospital, in which it was decided that abdominal section should be performed, the use of the gyromele and needle douche was followed by so much exhaustion that the operation had to be postponed for a period, and was subse-

quently performed under the most adverse conditions, the patient never having recovered entirely from the exhaustion which followed upon the use of the apparatus.

Treatment.

In considering the treatment of the condition now under discussion, the following points—which may, I suppose, be considered to be elementary—must be held in view. For clinical purposes gastric dilatation, to whatever cause it may be due, consists of three stages.

The first stage is that of irritation. Any hollow organ the contents of which meet with resistance in their escape becomes in the first instance irritable; it, in fact, resents the obstruction to the performance of its natural functions. The result of this irritability is pain, occurring at first only when the functions of the organ are most active, that is to say, in the case of the stomach immediately after taking food. At this stage, then, the symptoms of commencing gastric dilatation are merely those of irritative dyspepsia.

With the increase of the dilatation comes the second stage, in which one of two conditions follow, that is, either a state of tolerance in which, although the viscus may contain a great quantity of material, the patient, beyond a sensation of general abdominal fulness and distate for food, complains of nothing, or a condition in which the dilatation is associated with continual pain under the liver, which becomes intensified after taking food. As digestion proceeds or not, as the case may be, the pain may subside or become more intense; in the latter case vomiting follows, the ejected material consisting for the most part of imperfectly-digested food.

The third stage is that of advanced dilatation with recurrent irritability, the result of fermentation of the stomach contents which produces periodical vomiting of sour offensive material in great quantity.

The first of these three stages from the nature of things suggests nothing in the direction of surgical interference, since the symptoms are those of dyspepsia only. In the second stage, however, the question of surgical treatment becomes important, and in this connection the cases may be usefully divided into two categories, (*a*) those in which the symptoms amount to mere discomfort, and (*b*) those in which there is acute pain mainly in the sub-hepatic region which is increased by the taking of food.

In the cases coming under the first of these classes there is no doubt that discriminating medical treatment, especially the administration of antispasmodics, notably the almost forgotten sumbul of one's student days, combined with stomach lavage and abdominal massage, can do much for the comfort of the patient, although a cure may not be thus effected. In the painful cases on the other hand, I have no doubt that surgical measures are directly indicated in the form of an exploratory abdominal section, it having, of course, been previously ascertained by careful examination that no hernia or other abnormal condition about the parietes exists which may possibly exercise a harmful effect upon the function of the stomach. The number of cases, of the kind now in view, which cannot be permanently relieved if they are not actually cured by proper surgical measures must, I am sure, be very small.

In respect to surgical interference in cases of gastric dilatation generally, a point which cannot be too strongly emphasised is this—to effect the greatest benefit the treatment should be undertaken before the dilatation has been followed by organic changes—such as atrophy, for example—in the walls of the organ, which may and probably have so impaired its functional power that a return to a normal condition would be impossible, even if the mischief which originally led to the dilatation were rectified or removed.

In other words, it is most important in this, as in other conditions, that the surgical treatment should not be delayed too long. It is quite clear that in the third stage of the complaint, as described in this lecture, the chances of a cure in the true sense must be comparatively small. Such cases may fairly be left to be managed by lavage and massage, unless such a line of treatment fails to make life tolerable in which case surgical interference is clearly indicated.

With regard to the actual surgical proceeding in dealing with cases of dilatation, the first essential is to ascertain whether there is any abnormal condition about the parietes, such, for example, as the small umbilical hernia to which I have before referred, which may exert a harmful effect upon the stomach. The possible existence of movable kidney and other abnormal intra-abdominal conditions should be borne in mind. The examination necessary for the investigation of the belly from this point of view being made preferably under an anæsthetic. Any abnormal condition, outside the stomach itself, must in fact be first dealt with when it exists.

Failing the discovery of any abnormal condition like those just mentioned, the causes of the dilatation may be fairly assumed to be in the stomach itself or to immediately involve its external surface in the form of adhesions or something of that kind. An obvious tumour apparently connected with the stomach may or may not exist. Under any circumstances the only surgical measure at this stage is an exploratory laparotomy; should this reveal a growth, it must be dealt with by removal or not, as the circumstances of the case indicate, the alternative being gastro-enterostomy.

Should there be pyloric thickening, pyloroplasty is probably the best measure to adopt. Adhesions of the stomach to surrounding parts must of course be divided.

So far I have said nothing concerning the surgical measures which is not perfectly obvious. I now come to the class of case to which I wish in conclusion to especially call your attention. In a considerable percentage of cases of gastric dilatation in which exploratory abdominal section has been performed no evidence of obstruction of any kind can be made out by manipulating the organ from its external surface, yet in many of these I have reason to know (an example is quoted at the commencement of this lecture) pyloric obstruction, sometimes to an extreme degree, exists and is remediable. In all cases, therefore, after abdominal section for dilatation of the stomach, the viscus should be opened on the cardiac side of the pylorus, even if previous manipulation has failed to detect any sign of thickening or other abnormality, in order that the condition of the pyloric sphincter may be examined.

If upon examination in this manner any contraction of the lumen of the pylorus is found, the sphincter should be forcibly stretched until it will allow two or three fingers to lie loosely in it. Such a measure is, I believe, curative in the true sense, but, as I have already said, it should be adopted not as a last resource, but before the stomach walls have undergone degenerative changes which may render their return to a healthy state impossible.

Note.

1 This patient has recently been readmitted into the hospital and is now under observation. There is no sign of gastric dilatation; continued soreness is, however, felt after taking solid food. No tumour can be felt, but the growth is probably recurring.

TWO CASES OF COLECTOMY.*

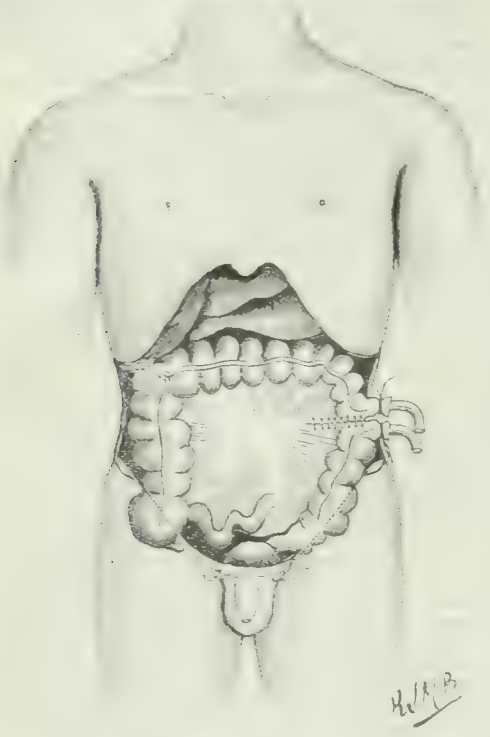
By F. T. PAUL, F.R.C.S.,
Surgeon, Liverpool Royal Infirmary.

In 1895 I read a paper on colectomy at this Society, which was published in the British Medical Journal, p. 519. It described the 7 cases on which at that time I had operated, and, based upon an experience of those cases, an operation involving the establishment of a temporary or permanent artificial anus was recommended to be usually done in preference to any of the various methods in vogue for immediately restoring the continuity of the bowel. The operation designed was only employed in the 6th and 7th cases, and though successful for the time being in both, the early recurrence in the 6th case, and the onset of uræmia in the 7th due to chronic Bright's disease, prevented these patients from reaping the benefit they might otherwise have obtained.

The operation is performed as follows: The site of the stricture having been located, a sufficiently free incision is made over it, and the bowel exposed. The mesentery is then divided well beyond the growth on each side, after first clamping or ligaturing all the vessels contained in it, when the loose piece of bowel including the tumour will readily hang out of the abdominal wound, the mesentery is now sewn together in the opposite direction, leaving the cut stump on the under side, and the sutures are continued in the

* Read at the Liverpool Medical Institution.

outer coats of the upper and lower portions of the freed bowel in such a manner as to cause them to lie in contact for not less than 3 inches, like the two barrels of a double-barrelled gun (see Fig.). Small incisions are next made in the gut



above and below the growth. Through the upper a large glass colotomy tube is introduced and ligatured, and through the lower a small tube. Finally, the loop of bowel containing the tumour is cut away, a proceeding which is, of course, quite bloodless, owing to the division of the mesentery and the ligatures round the bowel. It is not necessary to suture the bowel to the wound, and I never do so; but if the wound is at all longer than is required to accommodate the two cut ends, part of it should be closed with fishing-gut sutures passed through all the layers of the abdominal wall. It will be seen that in this way all stages of the operation after opening the peritoneal cavity are bloodless, and that there is not the slightest risk of fouling the peritoneum with fæcal matter; hence when the growth is small this operation is really very little more serious than an ordinary colotomy, whilst the benefit accruing to the patient is considerable.

The tubes remain in usually from seven to ten days, and as soon as the wound is clean after their separation long dressing forceps are introduced in all suitable cases after the manner of Dupuytren's enterotome, and the handles fastened together with fine rubber tubing. In a few days the forceps will have cut through the spur for the full depth they were introduced, say 2½ inches, and the lumen of the bowel is restored. When this has been successfully accomplished the artificial anus is easily closed by separating the mucous membrane and turning it in with Lembert sutures, and then bringing together the skin edges above it.

Since publishing the paper referred to I have only met with two cases in which the operation described was feasible, and in only one of these was it desirable to attempt restoration of the continuity of the bowel. For the first case I am indebted to my friend Dr. Charles Barlow, of Prescot, who called me one day in July, 1898, to relieve an old man of 66, who was in an urgent condition from intestinal obstruction. The patient was well nourished and of the hale constitution and firm character so frequently met with in the rural districts of Lancashire. For some months past he had suffered from gradually increasing constipation, which had culminated in absolute obstruction a week previously. Dr. Barlow had tried various remedies without effect, and it was only at the last moment that the patient, recognising his hopeless condition, consented to have an operation done. The abdominal distension was now excessive, the vomiting becoming fæcal, and his strength failing rapidly. As the whole of the large intestine appeared to be distended, and as he could not retain a larger injection than half a pint, and other minor details pointed in the same direction, I concluded he had a malignant stricture of the sigmoid flexure. Owing to the extreme distension of the abdomen, it would have been necessary to introduce the entire hand through an incision in the middle line, if one decided to explore there first with the object of localising the stricture, and as such a proceeding would add much to the gravity of the operation in his then condition, it was decided to abide by the diagnosis, and make the incision over the sigmoid flexure. Dr. Barlow gave the anæsthetic, and with the only assistance available, that of the man's son—another specimen of the hard Lancashire constitution—I cut down in the left iliac region, and with considerable difficulty drew into the wound a malignant growth in the sigmoid flexure. The mesentery was of the shortest variety, so that it was quite impossible to prepare the bowel for subsequently cutting down the spur; I therefore contented myself with putting in the tubes, and excising sufficient bowel to be well clear of the growth, A very large quantity of motion flowed away during the first twenty-four hours, and his condition at once improved. The tubes separated on the tenth and eleventh days respectively, and his subsequent recovery was uneventful. Since the operation he has remained in excellent health, except that, as is usual in colotomies when the mesentery is very short, there has been a great tendency for the bowel to drag in, and for the orifice to contract. Of course I do not propose to do more than keep the opening patent in such a case as this; in fact, a man of 66 who enjoys full health and vigour a year and a half after colectomy, and with nothing worse to complain of than a tight artificial anus, is much to be congratulated.

The second case is more recent, and at present is more successful; but I am doubtful of the ultimate issue as the growth was larger, some glands were involved, and the patient was younger; all conditions suggesting a higher degree of malignancy.

The patient, a woman aged 45, was admitted into the Shaw Street Hospital for Women, under the care of Dr. Briggs, on June 6th, 1899. He successfully performed ovariotomy upon her, removing a dermoid tumour, and, when doing the operation, discovered a malignant growth in the sigmoid flexure. He decided it would be better not to complicate the ovariotomy by so serious an addition as a colectomy at the same time, and had her carefully removed to my wards at the Royal Infirmary on June 23rd, a fortnight after the ovariotomy. I at once arranged to excise the tumour, and operated on June 26th, Dr. Briggs being present. The growth, though freely movable when previously seen, was now fixed by recent adhesions, and was much larger than it had appeared a fortnight before, whilst in the mesentery there were unfortunately several small malignant glands. The operation was conducted exactly on the lines described, and no special difficulties were encountered. She recovered rapidly and well, the highest temperature recorded being 99.5°. The dates of the different stages were as follows:

June 26th. Bowel and glands excised.
July 4th. Both tubes removed.
July 11th. Spur compressed with forceps, which came away on the 17th.
July 18th. Motions passed *per anum*, and, on examining the artificial anus, the spur was found to be entirely removed almost to the depth that the finger could reach.
July 20th. Artificial anus closed, and all motion in future passed naturally.

Thus from the excision of the bowel to the restoration of the natural passage an interval of only twenty-four days elapsed. Subsequently the patient gained strength, and was discharged on August 18th. Since returning to her place, she has had a tendency for the wall of the colon to herniate through the wound, so it is supported by a belt and pad. I do not know that it could protrude to the extent of doing any great harm, but it might be as well in future cases to try and bring together the muscles as well as the skin over the bowel when closing the artificial anus.

In contrasting this operation with, for instance, any button or tube method, there is, I think, little that could be urged against it except that its different stages might be expected to occupy more time and prolong convalescence. Here, however, is a case showing such a view to be unfounded, for all the stages were completed in a little over three weeks. Button operations are no quicker than this, whilst any form of intraperitoneal approximation must of necessity be more dangerous to life than an operation in which the ends of the bowel are brought outside, and which by a sufficient experience has been shown to be not much more serious than an ordinary colotomy.

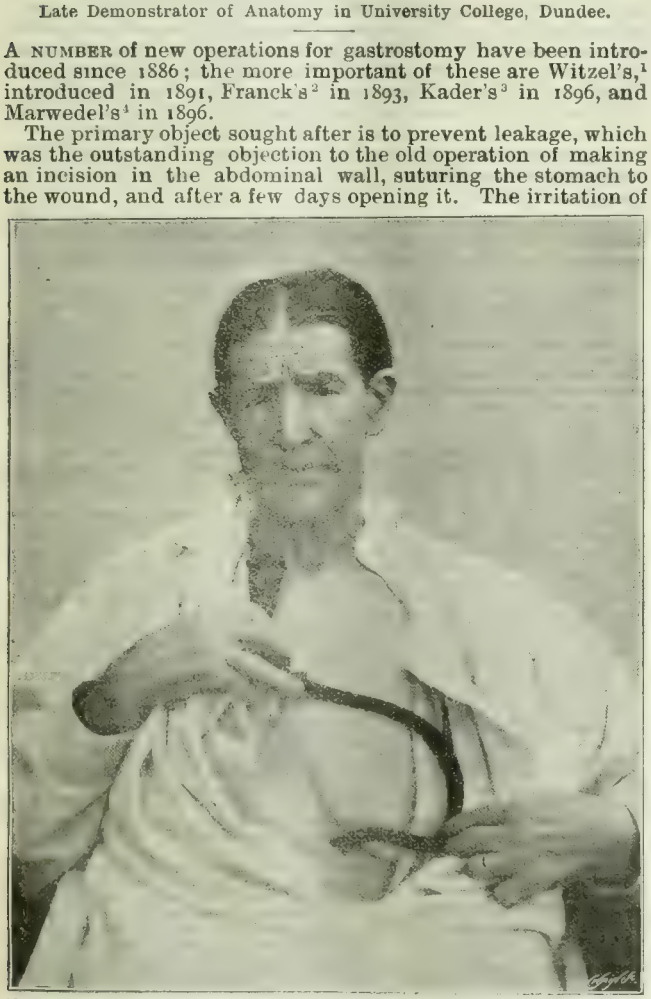
In regard to the present condition of these two patients, Dr. Barlow reports that Mr. S., who is now bordering on 68, "is very well; he is in good flesh, and has a healthy look." Dr. Briggs's patient is here, and you can judge for yourselves as to the condition of her general health and comfort. She will tell you that she has no trouble whatever with her bowels, an assurance one is glad to get, because one naturally had a slight fear that when continuity was restored in this way the calibre might not remain of the normal dimensions.

A CASE OF GASTROSTOMY TREATED BY FRANCK'S METHOD.

By COLIN MACVICAR, M.A., M.B., C.M.Edin.,
Late Demonstrator of Anatomy in University College, Dundee.

A number of new operations for gastrostomy have been introduced since 1886; the more important of these are Witzel's,[1] introduced in 1891, Franck's[2] in 1893, Kader's[3] in 1896, and Marwedel's[4] in 1896.

The primary object sought after is to prevent leakage, which was the outstanding objection to the old operation of making an incision in the abdominal wall, suturing the stomach to the wound, and after a few days opening it. The irritation of



the skin by acid gastric fluids was usually so great that the patient was glad when the end came. The methods of Witze and Kader are probably more suitable for cicatricial cases where one desires a temporary fistula, as the opening soon closes on withdrawal of the tube.

The methods of Franck and Marwedel are probably better for malignant cases where a permanent fistula is desired, and where the tube may be removed easily after each meal.

In Witzel's method the insertion of the tube when once removed is said to be sometimes accomplished only with great difficulty, and is usually allowed to remain in. The least complicated method is that of Marwedel, which on occasion has been performed under cocaine anæsthesia, and this, no doubt, is an advantage, as in exhausted cases septic pneumonia usually supervenes after the exhibition of chloroform. The methods of Witzel and Franck are only practicable where little or no cicatricial contraction of the stomach exists.

In the case to be described, in which Franck's method was adopted, there was no contraction at the time of the operation, but in my opinion considerable secondary contraction from the invasion of the cardiac end of stomach with growth took place, and from the traction considerable pain resulted, so that to her at least the operation was a questionable gain. For malignant cases, therefore, where the tumour in the œsophagus is placed close to the cardiac portion of the stomach, Marwedel's operation will probably give more satisfactory results than Franck's. My patient lived four months after the operation, two or three months longer than the average expectation in malignant cases.

Very few complete records of cases of gastrostomy are to be found in medical literature, and this case presents several interesting features.

The patient, aged 63, consulted me in June, 1898. She was one of a large family; three brothers being dead, one of whom died at the age of 53 from cancer of the stomach. Of her own family, eleven in number, four died in infancy, and the others enjoy good health. The patient two years previously nursed a man who died with cancer of the larynx; it was her opinion this had something to do with her own disease.

Till fifteen months previously she led an active and hard life, often being engaged as a midwife in her native village. At that time, however, she began to experience some difficulty in swallowing, and since May, 1898, she could only swallow semi-solid food and fluids. In January of the same year she began to complain of pain in swallowing over the lower end of the sternum. Pain under the left breast had been a fairly constant symptom. She had lost flesh rapidly, and had no appetite for food for three months before coming to me. I prescribed ¼-grain doses of opium and belladonna to be taken for the pain, but had afterwards to increase the dose of opium to ½ grain before she became at all comfortable.

On her next visit I passed a soft rubber stomach tube gently, which was stopped immediately above the cardiac end of the stomach; with gentle but steady pressure it was passed into the stomach, but during its passage she complained of great pain. The point of the tube on withdrawal showed some streaks of blood and some colloid material. There was no suspicion of syphilis. She took alcoholic stimulants, but not to excess.

The operation, after the method of Franck, was performed on August 5th, 1898. An oblique incision about 2 inches long was made below the left costal margin, and after blunt dissection of the muscles the peritoneum was incised and a cone of healthy stomach, 1½ inch long, was drawn in the wound, its base being fixed to the parietal peritoneum by means of catgut. A second incision, ¾ inch long, was made about 1 inch above the first, and the bridge of the skin between the two incisions bluntly undermined, and the drawn-out portion of stomach was passed under the skin and out at the wound above, and fixed there by two or three catgut sutures. The first wound was closed with silkworm gut. After opening the stomach I syringed into it ʒiij of a mixture of brandy and raw egg. On her recovery from chloroform there was no shock. The tube was left in for three days, and during that time she was fed thrice daily with milk and raw eggs, and was occasionally given whisky. She was in good condition, with no rise of temperature, but as sickness and retching were persistent I decided on the third day to inspect the wound. The dressing was soiled with stomach contents, which had leaked out along the side of the tube, doubtless while retching. The wound, however, looked well. A new dressing was applied, and the tube removed. Thereafter till the tenth day she was fed by the mouth. On the fifth day a localised peritonitis set in with a temperature of 101°, which, however, fell to normal on the ninth day.

After the third day I dressed the wound daily as there was always some, though a diminishing, amount of leakage on each occasion. The stitches were removed on the ninth day. The wound had healed by first intention. Feeding was renewed by the tube, at first by a quarter inch tube and afterwards by one the thickness of an ordinary stomach tube. Her diet consisted of thin porridge, milk, eggs, beef tea, and soups. No leakage occurred when she coughed or retched, but on withdrawal of the tube there was a certain amount of overflow. Four meals were given daily, and after each the tube was removed.

All went well. She put on flesh, and pain (which was before the operation a marked feature in the case) was completely absent, due probably to the rest ensuing from doing away with the act of swallowing. At the end of a month Dr. Mowat kindly photographed her, and the photograph is here reproduced.

From this time onwards she complained of pain, at first slight, and only during the passage of the tube, but later also when the stomach received a full meal. I tried a 10 per cent cocaine ointment, a small amount being applied to the opening a quarter of an hour previous to a meal, but her pain seemed as great as before.

Frequent lavage of the stomach with a weak solution of common salt

and bicarbonate of soda brought no improvement. The opening looked healthy. When the tube was pressed to overcome the resistance of the sphincter, peristaltic movements of the stomach could be observed, and at these times she screamed with pain. The substitution of a tube of smaller calibre for the ordinary stomach tube made no difference. The tube was then allowed to remain in, but the benefit from this procedure was counterbalanced by the annoyance from the regurgitation fluids from the stomach, which set up eczema round the opening. Some evidence of hæmorrhage at times was observed during the last month of her life, when lavage was resorted to. A fœtid odour proceeded from the opening during the last week or two. She lost flesh rapidly, which might be attributed to the increased rate of growth of the tumour and to the impairment of the digestive function of the stomach. For the last six weeks of her life the œsophagus was totally obstructed. Death occurred on December 10th, 1898. No *post-mortem* examination was allowed.

The pain, in my opinion, was due to an invasion of the stomach wall by the growth, and probably not to any adhesions arising from the localised peritonitis. Early operation was advised, and was warranted in this case by the ease with which the operation was borne, but it is probable that had the operation been delayed until total obstruction had taken place, Franck's or Witzel's method could not have been performed owing to the cicatricial contraction, and either the old operation or Marwedel's would have been alone possible. The present mortality, according to Keen,[5] is about 25 per cent. in malignant cases, and probably 10 per cent. in non-malignant cases. The operation before the introduction of asepsis and the employment of recent methods had a heavy mortality, reaching as high as 81 per cent. The most favourable situation for a malignant growth is probably the lower portion of the œsophagus, and with a slow growth one might expect, as in cases of colotomy for malignant obstruction, a patient to live two years, but as a matter of fact only one[6] has been recorded to live more than a year. So far as my patient was concerned, at the end of the first month after the operation, it was no gain for her to live, and this particular operation for her at least only prolonged the agony.

REFERENCES.
[1] *Centralbl. f. Chir.*, 1899. [2] *Wien. klin. Woch.*, 1893. [3] *Centralbl. f. Chir.*, 1896. [4] *Beiträge zur klin. Chir.*, 1896. [5] *New York Medical Journal*, May, 1898. [6] BRITISH MEDICAL JOURNAL, 1888.

RENAL PAPILLECTOMY:

A CONTRIBUTION TO THE STUDY OF PAINLESS UNILATERAL RENAL HÆMATURIA IN THE YOUNG ADULT.

By E. HURRY FENWICK, F.R.C.S.,
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THAT a persistent, painless hæmorrhage can emanate from one kidney, unconnected with any specific cause such as renal stone, tubercle, or cancer, and unaccompanied by any symptom which might enable the practitioner to localise the site of the bleeding or ascertain its origin, has only been recognised since the introduction of the electric cystoscope. Operative interference before this time was impossible, for there was no guide as to whether the bladder or the kidney or which kidney was affected, and without exploration of the latter, no thoroughly reliable facts about the disease could be collected. Although the diagnosis of the site of the bleeding is now easy, and operations for its cure (nephrotomy and even nephrectomy) have proved successful, our knowledge of its cause is still unadvanced.

Kidneys which have been bleeding freely, even persistently, have been laid open; have been even ablated and subjected to microscopical examination by experts, and yet "nothing has been found." The absence of any definite cause for the hæmorrhage is expressed in the nomenclature.[1] Such cases have been described as "renal hæmophilia" (Senator, Broca, Passet); as hæmorrhage of anatomically unchanged kidneys (Piqué and Reblaud, Groslik); as hæmaturia from a healthy kidney (Klemperer); and the bleeding has been ranked as due to an angioneurosis.

I have been attempting to study these puzzling, unilateral, painless, renal hæmorrhages in the young adult for ten years. They form a class by themselves, and are distinct from that painless, renal hæmaturia of the early stages of malignant kidney met with in middle and later life.

No pus was found in the urine of any of my cases, except, of course, in those whose bladders had been washed out. In some of the urines granular casts were discovered, and in these the bleeding seemed to be more under the control of drugs. But in other cases in which no renal elements were detected the hæmaturia was occasionally so profuse as to necessitate exploration of the kidney. I have usually examined such cases by cutting through the convexity of the cortex, and by introducing my finger into the pelvis. I admit that this has generally proved curative, but at the expense of some risk and probably some subsequent loss of renal function. At the same time, I regret to say I have learnt nothing about the cause of the bleeding in any of my cases by the procedure, for I have detected nothing abnormal or amiss.

The two last cases of unilateral, painless, renal hæmaturia in the young adult[2] necessitating exploration of the kidney, have convinced me that our ignorance of the actual cause of the hæmorrhage is entirely due to a faulty operative technique. I have been forced to conclude that an examination with the finger is futile; and that if we propose to ascertain the origin of the bleeding we must open the pelvis itself, and examine every part of it by means of a strong light (renal pelvoscopy).

I submit that in some at least of these cases the bleeding emanates from one of the renal papillæ and the mucous membrane clothing it: that the papillary part of the Malpighian pyramid is engorged and that its papilla is covered with a plexiform mesh of dilated vessels (varicosity of the papillary plexus). I suspect this vascular change is due to a localised patch of interstitial nephritis impeding the circulation in the boundary layer of the pyramid, and thus preventing venous drainage of the papillary plexus. It may be that the vessels are actually altered in the same way that the entire circulation becomes affected in the advanced stages of bilateral interstitial nephritis. Be that as it may, the site of disease is apparent, and only apparent on opening the renal pelvis. A vivid red papilla assuming the aspect of a tiny villous growth stands out in strong contrast to the pale papillæ around.

I assert that the removal of this vascular papilla with a sharp scoop is sufficient to arrest a renal bleeding which no drug can control.

The cases upon which I changed my line of operative attack and built the foregoing statements are as follows. I have watched the first for eighteen months before reporting it.

CASE 1.—*Intermittent Hæmaturia for Five Years, occasionally persistent, latterly profuse: Marked Anæmia: Cystoscopy: Renal Exploration: Renal Pelviscopy: Papillectomy: Cure.*

History.—Miss L., aged 18, was sent to me in March, 1898, by Dr. Albert Davis, of Liverpool, to ascertain the site and cause of an intermittent hæmaturia of five years' standing. Dr. Davis wrote that attacks came on suddenly when she was in good health, lasted for several weeks or months, and ceased suddenly. She had been under the care of several medical men, and the diagnosis of hysterical hæmaturia had been made because of the attack ceasing as soon as she entered the hospital. Astringents had had no effect. Bacteriologically and microscopically there was no evidence of the nature of the disease. "I send her to you," Dr. Davis concluded, "to examine the bladder with the light, and if that is normal to catheterise the ureters."

Result of Cystoscopic Examination.—When the girl came under my care she was lethargic and markedly anæmic. The urine was maroon-coloured. No casts, tubercle bacilli, or renal pelvic cells could be found by the Clinical Research Association. I examined cystoscopically, and although on each occasion my catheter drew off dark bloody urine, I could see no ureteral efflux. I tried twice or thrice, but always failed, though bloody urine was passed soon after I left.

Progress.—As she had a suspicion of rigidity and tenderness in the right loin, I sent her home with the diagnosis that both ureters were healthy, but that I believed the cause was stone in the right kidney, and in view of the extreme pallor and uncontrolled hæmorrhage right renal exploration, possibly nephrectomy, should be carried out. But I was not satisfied. I remembered that on several occasions I had examined other cases for undoubted painless renal hæmorrhage, and had found the ureters "off work."

Second Cystoscopic Examination.—The patient was brought back in a few weeks; her hæmaturia and pallor were more pronounced. One morning I appeared quite unexpectedly, and examined her in bed. The left ureter was rapidly pumping jets of dark bloody urine: the right ureter was working slowly and sluggishly, but the urine from it was clear. Evidently by taking the girl unawares I had gained my object. The bleeding and renal secretion were under nervous control.

Operation.—Instead, therefore, of cutting on to the right kidney, as I had proposed because of its tenderness, I brought the left kidney out on to the loin. It was healthy both to sight and touch. I therefore turned it over, and examined its pelvis and ureter. Both were healthy. Hoping to find a simple solitary ulcer of the mucous membrane of the renal pelvis analogous to that condition, which I have described in the bladder,[3] I incised the pelvis, separated the edges and threw the electric light inside. After swabbing away a little blood, I saw to my astonishment what I believed to be a villous tumour of a papilla. A tuft or congeries of vessels surrounded the extreme apex of a papilla about the middle of the sinus, just within the margin of the hilum (Fig. 1). My assistant and Mr. Woodhouse Braine, who was anæs

thetising the patient, both examined the papilla. Every other papilla was pale and healthy, but this one was bright red and fleecy. I now took a Volkmann's spoon and cut the papilla and fully half the Malpighian

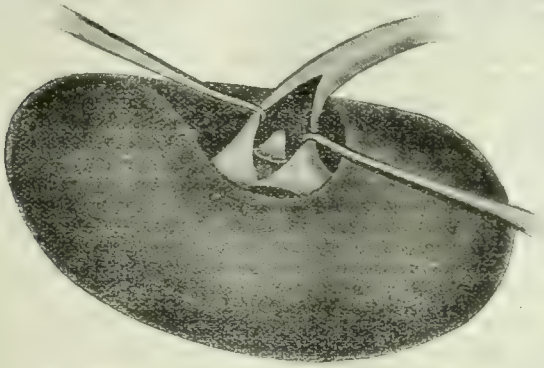


Fig. 1.—Angioma of a papilla in Miss L.; removal; cure of a five years' hæmaturia.

pyramid out. The wound leaked urine for a couple of weeks and then firmly and finally closed. No blood was seen after the first dressing of the operation wound and the urine at once became brilliantly clear. The tenderness in the right loin disappeared. She has remained well ever since, becoming stout and active.[4]

Description of Papilla.—On examining this papilla under water I saw that it was not villous as I had supposed, but that the vessels of the mucous membrane clothing the papilla were markedly varicosed. Mr. Targett kindly examined the specimen for me and reported there was no evidence of growth, but there was a congestion of the vessels with extravasation of blood and an increase in the cellular stroma. This might be, suggests Mr. Targett, an early stage of a fibromatous condition such as is not uncommon in the tips of the papillæ.

Case II.—*Alarming Hæmaturia: Profound Anæmia: Cystoscopy: Renal Pelviscopy: Papillectomy: Cure.*

History.—I was asked in September, 1899, by Dr. Wigg, to examine a lady, aged 30, suffering from profuse hæmaturia. The hæmorrhage had apperred fourteen days previously without any apparent cause and without any symptom to mark the origin of the blood. No renal cells, nor growth-fragments, nor tubercle, nor casts could be discovered (Clinical Research Association). Cystoscopy showed streams of bloody urine to be issuing from the left ureter, the bladder was healthy, astringents were powerless.

Operation.—The hæmorrhage became so violent and the patient so exhausted that I operated a week later, bringing the left kidney out on to the loin. It was absolutely healthy, likewise its pelvis and ureter. I opened the common pelvis and washed away the collected blood. The mucous membrane was healthy, but as fast as I washed away the dark blood, more issued from the lower branch of the pelvis. I therefore slit it up through the kidney substance, separated the incision by means of retractors, swabbed out, and threw in the electric light. (Fig. 2.) I now saw a

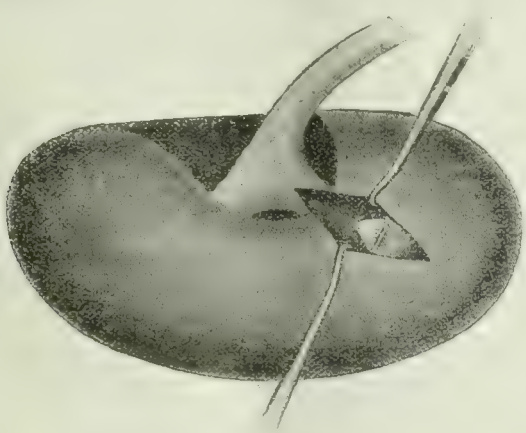


Fig. 2.—Angioma of papilla in Miss B.; removal; cure of profuse hæmaturia.

bright red varicosed papilla precisely similar in appearance to that which I encountered in my first case. Eight or ten medical men examined the papilla with me, and I was able to assert that this small point was the source of the hæmorrhage, and that by cutting it out the hæmorrhage would be arrested. My statement was received with much reserve, for it was hardly credible that so dangerous a hæmorrhage could originate from so small an area. I scooped out the papilla, and I am glad to say my prognosis was verified. No blood has appeared since, and the loin has healed. Mr. Targett reports that "the vessels in this part of the kidney are distended with blood, and there is some extravasation."

These are the bald facts of my two cases. They demonstrate the reality and power of nerve control over the renal blood supply, for both secretion and bleeding ceased in my first case (and in several others, male and female) directly I examined with the cystoscope. They show, therefore, the value of an unexpected cystoscopy. They point to the importance of examining the renal pelvis by the aid of a strong light; to the extremely small source of an uncontrollable hæmorrhage; to the precision and ease with which such a source can be removed; and to the needlessness of mutilating the cortex for this purpose. Finally, I submit the subject as a probable clue to a cause for those painless unilateral renal hæmaturias which have so long puzzled and baffled the physician by their obscurity, persistency, and danger.

Notes and References.

[1] Rovsing: British Medical Journal, 1898, vol. ii. p. 1547. [2] It is necessary to repeat the special designation of this class. In these days of hurried reading the false impression may be obtained that I am here referring to all classes of painless renal hæmaturia. [3] Author: Solitary Ulcer of the Bladder, British Medical Journal, May 6th, 1896, p. 1133. [4] Patient had a very slight relapse a few weeks ago, that is, eighteen months after the operation, but is again well.

A CASE OF ABDOMINAL NEPHRECTOMY FOR RENAL SARCOMA IN A YOUNG CHILD.

By CHARLES A. MORTON, F.R.C.S.,

Professor of Surgery in University College, Bristol, and Surgeon to the Bristol General Hospital and to the Hospital for Children and Women.

The mortality of nephrectomy for sarcoma of the kidney in young children has been so high that it is encouraging to be able to add another to the list of cases of recovery from the operation:

History.

The child, 18 months old, was seen, in consultation with Dr. Cotton, on August 4th, 1898. She had been taken to Dr. Cotton some weeks before because her mother discovered blood trickling down the inside of the thighs from the vaginal orifice. Later distinct hæmaturia was noticed and an abdominal swelling appeared.

Clinical Characters of Tumour.

On August 6th an examination of the abdomen was made under chloroform, and a large, hard, lobulated mass was felt on the left side. It consisted mainly of two parts, one coming forwards to the middle line in the region of the umbilicus, the other extending downwards into the left iliac fossa, but both connected with another mass in the renal region. The whole mass was movable and could be easily pushed backwards into the loin. I could not make out any resonant area in front of it or feel any band lying over it like an empty contracted portion of colon. It was possible to get my fingers between its upper border and the costal margin. There were no signs of any enlargement of the other kidney. The urine at this time was found on microscopic examination to contain a few red corpuscles. The position of the growth, in association with the hæmaturia, left little doubt as to its nature. The great risk of the operation and the great probability of recurrence after operation were described to the parents; but they decided to give the child the chance of benefit from removal of the growth, and they were fortunate in this decision, for the child lived for five months after the operation.

Operation.

The child was admitted into the General Hospital on August 15th, and I operated on the 18th. When examined under the anæsthetic, the tumour was found to be distinctly larger than on August 5th, and extended slightly across the middle line in the region of the umbilicus. The free mobility of the growth in the left side of the abdomen was very striking. I exposed the growth by a small incision in the left semilunar line and found the empty descending colon lying across it. I could readily feel the other kidney, and failed to detect any enlargement. I then enlarged the incision, so that it extended from the costal margin to an inch above the pubes. When thus fully exposed, the tumour was found to consist of numerous lobules of various sizes and very soft and elastic, with the exception of one small nodule at the lower part, which was as hard as cartilage. Numerous large veins were seen ramifying over the growth, under the posterior layer of the meso-colon. I divided the posterior layer of meso-colon and pushed the colon towards the middle line, and then shelled the growth out of the surrounding connective tissue, until I came to the pelvis of the kidney and the large vessels entering at the hilum. I ligated the ureter in two places, and divided it between the ligatures; but the renal vessels were too much on the stretch to be dealt with in this way, and I had to secure them with pressure forceps before division, and ligate them after. I tied the renal veins separately, and then all the vessels together in one ligature. Then, after ligature of some vessels passing between the tumour and the surrounding connective tissue, I was able to shell out the mass. I made a small opening from the loin for the insertion of a drainage tube. The meso-colon was not sutured. The incision in the abdominal wall was sutured in three layers. There was very little blood lost during the operation and but a slight amount of shock was present.

Description of Tumour after Removal.

The growth was as large as a good-sized cocoa-nut, and consisted of three main masses. One had projected across the median line of the

abdomen, another had extended into the iliac fossa, and the third into the pelvis, and, had a rectal examination been made, might have suggested a pelvic origin of the tumour. The upper half of the kidney projected from the mass, and the whole of the posterior aspect of the kidney could be recognised spread out on the tumour, which seemed to have started in the lower and anterior aspect of the kidney. The tumour consisted of a dull yellow, very soft tissue. In one incision made into it a cyst, the size of a marble, containing a viscid yellow clear fluid, was found, probably a degeneration cyst. There was over every part a well-marked capsule.[1] Microscopic examination showed the tumour to be a round and spindle-celled sarcoma mixed with well-formed gland tissue here and there—an adeno-sarcoma. The gland spaces were not degenerating renal tissue but clearly new formations.



Posterior aspect of the growth. A, growth; B, upper part of kidney; C, large round mass of growth.

Progress after Operation.

With the exception of a temperature of 100° for a few days directly after the operation she had no symptoms. The drainage tube was removed on the third day, and the wound healed by primary union and the stitches were removed on September 4th. She was discharged shortly after in good health.

After-History.

In November, Dr. Cotton reported emaciation, loss of appetite, and a few crepitations at the base of the lungs, and she gradually failed, and died on January 16th, 1899. Dr. Cotton made the *post-mortem* examination, and kindly informed me that there was no local recurrence, but the lungs were full of minute tubercles, and the mesenteric glands were enlarged and caseous in parts. The right kidney was about the size of the adult organ.

How long the child would have lived without recurrence had she not been attacked by tuberculosis is, of course, impossible to say. I did not urge operation, in fact, I did not even recommend it, but as it gave a slight chance of recovery, the parents were glad to have it done notwithstanding its risks and the great chance of recurrence of the disease.

Dr. George Walker, of the Johns Hopkins Hospital, published in 1897[2] a very important paper on sarcoma of the kidney in children, based on the collected records of 145 cases. He could only find 4 cases on record in which the child had lived for three years after the removal of the growth, that is, four cases of cure according to the three years rule. Two of these were cases operated on by Abbe, of New York, and in one of them the growth was so large as nearly to fill the abdomen. The other two cases of cure were operated on by Israel and Schmidt.

Concetti,[3] from a study of published statistics, estimates that there are 7 per cent. of cases in which there has been no recurrence for two years, and states that not more than 9 or 10 cases of absolute cure after operation are known at present. Dr. Walker gives the mortality of nephrectomy for renal sarcoma in children as 38.25 per cent., and says that most of the deaths were from shock. The removal of the growth is said to prolong life from 8.08 months—the average duration without operation—to 16 77 months. Concetti gives a mortality from operation of 40 per cent., but both he and Walker advise operation. Walker says: "Although the cures are very few, still, in consideration of the invariably fatal termination of this malady without interference, I unhesitatingly advise operation, for it offers the only hope; and at worst it means only an accelerated death." With this I cannot altogether agree. It means the chance of immediate death in about 1 case in every 3 operated on, a prolongation of life by some months in those patients who survive, and a so-called cure in only 4 cases out of 145 recorded. I think it is a matter for the parents' decision whether the risks incurred are worth the chances of benefit if the child survives the operation. Some parents would no doubt take the chance, others would rather not run the immediate risk. Except in the very early stage, we could, I think, hardly recommend operation. In Kelynack's book on renal tumours will be found the various opinions expressed by surgeons in the past as to the desirability of operating in these cases. There is one hopeful fact, and that is that the mortality has diminished of late years.

References.

[1] The specimen was shown at a meeting of the Bristol Medico-Chirurgical Society, December, 1898. [2] *Annals of Surgery*, 1897, vol. xxvi, p. 529. [3] *Rif. Med.*, May, 1898; Epitome, British Medical Journal, 1898, vol ii, par. 66.

CASES OF OPERATION FOR INTESTINAL OBSTRUCTION.

By James Taylor, F.R.C.S.,

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I think that the following cases of operation for intestinal obstruction possess sufficient points of interest to warrant publication in the pages of the British Medical Journal.

Case I.—I saw Mr. E., aged 33, on July 15th, 1897, with Drs. Williams, of Oswestry, and Richmond, of Overton. Always had good health up to present illness, except slight attacks of lumbago and indigestion. On June 10th of this year, in the forenoon, he had been struggling with a cow, trying to dress its feet, then went to market, returned, had a good tea. About 7 P.M. he was reaching up to a shelf, when he had a sudden violent pain in the abdomen, over the region of the stomach, great tenderness, no vomiting, skin cold and clammy, pulseless, temperature 97°. Dr. Richmond gave him ether and strychnine, and by the following morning he had somewhat recovered. On the 13th an enema was given; a good evacuation resulted, but there was at once a repetition of the pain, cold surface, and pulselessness. After a few days of tolerable comfort there was an inclination to have the bowels moved, a small amount of fæcal matter passed, and at once the same prostration, pain, and tenderness. These symptoms occurred again and again at intervals of a few days. The last time anything fæcal passed was on June 26th. During the other attacks there was only the great inclination, a little mucus, great abdominal pain, and prostration. On June 23rd the abdomen was seen to be slightly distended, and the knees were drawn up. The day before I saw him stercoraceous vomiting was added to the other symptoms. On the 15th he was feeling better, although the stercoraceous vomiting continued, and he had severe pain at times. Operation was proposed, but as he was easier it was not done. Afterwards the pain increased, the fæcal vomiting continued, accompanied by great restlessness, and he decided to submit to operation. On July 19th I performed a laparotomy; on opening the peritoneal cavity, a quantity of dark fluid blood escaped; no intestine was seen at first, only omentum, which was adherent across the front of the pelvis. After separating these adhesions, the pelvis was found to contain a quantity of blood clot, which I removed in handfuls; adherent to the omentum and behind it the sigmoid flexure was bent sharply over into the pelvis, and was held down by the omentum adherent to it and to the walls of the pelvis; these adhesions were easily broken down. I brought the bent part of the bowel up to the wound, where I stitched it to the skin; as it was considerably inflamed and very œdematous, I deemed it wise to open it. He was slightly sick and restless on the two days following the operation. On July 22nd Dr. Williams reported that the patient was doing well, passing flatus by rectum. Later the same day, Dr Richmond records that a small motion was passed by the rectum: wound healthy, no pain. 26th: All satisfactory. 30th: Dr. Richmond reports that a scab over the lowest stitch came away, and a quantity of dark-brown discharge: he put in a drainage tube On three occasions a large quantity of fæcal material came from the wound in the bowel. After this the patient slowly recovered, the wound in the bowel closed, and the last I heard of him was that he was at Rhyl quite well.

Case II.—Mrs. L., aged 60, under the care of Mr. Moreton, of Kelsall. I saw this patient on August 2nd, 1897 She had been suffering from symptoms of acute intestinal obstruction for several days. Operation was proposed, but consent was not given until the following day On the 3rd I opened the abdomen. Distended small intestines presented themselves. After examining the usual places—left and right iliac regions and hernial apertures—and not there finding anything, I began passing the distended bowel between my fingers inch by inch. At length the bowel ceased to come. I traced it down to somewhere near the brim of the pelvis, where it was adherent. Whilst examining its connections I felt the adhesions giving way under the gentle pressure, and, continuing to separate these adhesions, the bowel in a few seconds became free, coming forwards to the wound. The bowel exhibited a curious nipple-like projection at the part constricted; this projection, even whilst we were looking at it, began to lose its form; the wound was then closed. She made a good and tolerably rapid recovery.

Case III.—Mrs. P., aged 66. I saw this patient with Dr. Tisdell, of Liverpool, on September 10th, 1897. She had been ailing for some months, had suffered greatly from diarrhœa; for the last five or six weeks very little had passed by the rectum, some scybalaa week before, and at times a quantity of clear boiled sago-like fluid. The abdomen was greatly distended, and the movements of the small intestine could be seen and felt through the abdominal walls. In the right side of the abdomen hard lumps were to be felt, giving the impression somewhat of masses of fæces, pain at the epigastrium, vomiting of foul-smelling material. At 10 A.M. on the 11th, Dr. Mann giving chloroform, assisted by Dr. Tisdell, I opened the abdomen. Small intestine, much congested, bulged at once; on examining the right side the hard lumps were found to be the gall bladder and liver. The colon was empty. I traced the distended bowel down until I came to the obstruction, which was a hard mass surrounding and almost obliterating the bowel like a tight ring, evidently malignant. This mass continued into the mesentery towards the spinal column, the mesentery being much contracted. As it was impossible to remove the disease I made an opening immediately above the stricture, and stitched the intestine to the skin. At 4 P.M. she seemed to be progressing favourably, but at 7 P.M. she died suddenly.

Case IV.—Miss A., aged 47. I saw this patient with Drs. Roe and Glasson, of Ellesmere, on the 16th September, 1897. She had an attack of jaundice many years ago, otherwise has enjoyed fairly good health until last February, when she had a severe domestic affliction. Since then she has not been well, complaining frequently of pain in the right side of the abdomen. Four days ago she was in violent pain in the same place, and sent for Dr. Roe, who ordered an enemawhich brought away a quantity of small fæcal masses. Neither fæces nor flatus has passed since. The temperature has at no time been higher than 99·4°, pulse 90; the pain is intense at times, the abdomen is extremely tympanitic—it appears to bulge a little more to the right of the middle line. I opened the abdomen just above the right inguinal region as if for colotomy. An enormously distended intestinal wall was exposed, and at first it was impossible to discover its extent; it appeared like a huge bladder, on the point of bursting. There were two or three black spots on the surface. It was clearly a distended cæcum. A little searching showed the ascending colon quite empty, and a strong band across its commencement. I divided this band, and then opened the distended bowel, letting out a large quantity of gas, and half a chamber utensil full of liquid and semi-solid fæces. This distended cæcum was at least 8 inches across its longest diameter, and 5 to 6 inches across its smallest diameter. Temporarily closing the opening I examined farther, and found the small intestines as empty as the colon. I stitched the opening into the bowel to the skin. She progressed very favourably for several days, her pulse varying from 90 to 112; on the third day the temperature was normal both morning and evening; she was free from pain, and had had many hours sleep. On the fifth day Dr. Roe writes that he found her pulse stronger and better, her general appearance good, no sickness for thirty-six hours; but later in the day at 4 P.M. she said that something had cracked; she had great pain; a hypodermic injection of morphine relieved the pain; she fell asleep, and died about 9 P.M.

Case V.—Mr. D., aged 67. Seen with Dr. Trubshaw, of Mold, and Dr. Williams, of Flint on October 7th, 1897. On the previous Friday, the 1st, he was attacked suddenly with pain in the lower part of the back; as he had been eating freely of mushrooms, it was at that time thought that this might in some way have caused the pain. On the 3rd he was much better, and on the 5th he was up, and had his bowels well moved, but late on the evening of the 5th he suddenly became faint, cold, and pulseless. His abdomen was distended, he passed no flatus, the surface of the abdomen was very much inflamed from the application of turpentine. A lotion of carbolic acid was applied, and we decided to wait until the next day. 8th, abdomen not so distended; both he and the nurse say that he passed flatus last night and this morning; temperature normal, pulse 96. 9th, pulse weaker, hands clammy, breathing irregular. abdomen very tense. I opened the abdomen, and a loop of distended colon protruding, I opened it and stitched it to the skin. He gradually became weaker, and died the following morning.

Case VI.—H., a fireman, aged 33. I saw this man on January 15th, 1898, with Dr. G. Harrison. On January 10th he went very hurriedly to the fire station. During the day he had violent pain across the abdomen above the navel. Since then the bowels have been moved slightly with enemata. He is doubtful as to passing flatus; there is great rumbling at time; abdomen is very tympanitic and tender; has been vomitingfor two or three days, brown material, but not fæcal. I advised operation, so he was removed to the infirmary. At 9 P.M. the same evening I opened the abdomen. Small intestine very much distended and deep red in colour, at once protruded. Not detecting at once where the obstruction was, I began passing the bowel through my fingers: shortly there was a check, and then a coil came forwards with a tense projection on it, and empty bowel beyond; in a few seconds this projection began to disappear. I stitched the most distended portion of the intestine to the skin, made an opening into the bowel letting out a quantity of brown fluid. I then washed out the stomach. On January 16th, thirteen hours after the operation, there had been no more vomiting, no tympanites; temperature 99°, but the pulse was very feeble. He had a fairly comfortable day, quite free from pain, but in the evening he became delirious, vomiting again came on, and he died late in the evening.

Case VII.—Mr. T., aged 22. I saw this patient on December 21st, 1898, with Dr. Purdon, of Connah's Quay, late in the evening. He had had a severe attack of diarrhœa some days before; the diarrhœa stopped suddenly on the 19th, severe pain coming on at the time the motions ceased. He has been in great pain since, the abdomen is very tense, no motion nor flatus has passed since the 19th, As his pulse was good and his general condition not bad we decided to wait until the following morning, applying carbolic lotion to the abdomen so as to have the skin clean in case operation were necessary. On the morning of the 22nd he was no better and the pain was very severe. I opened the abdomen. After failing to find the obstruction at once, I began to pass the distended intestine through my fingers and soon met with a check. Some brown purulent fluid appeared close to the bowel. This I found to come from an abscess lying in the angle between the mesentery and intestine; the bowel was bent over this collection of pus, distended up to it and empty beyond. The pus was very foul smelling. I cleared it all away, cleansing well the surfaces which had enclosed it. No perforation could be found. Before closing the abdominal wound I washed out the peritoneal cavity. He recovered rapidly without a single unfavourable symptom.

REMOVAL OF A SUBMUCOUS FIBROID BY SECTION OF THE UTERUS (MYOMECTOMY).

By JAMES BRAITHWAITE, M.D.Lond.,
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The idea of removing a fibroid in the manner adopted in the following case was originated in my mind by the ease with which a Cæsarean section is done, but I have subsequently read what has been written on the subject. I find that Martin of Berlin first removed an internal fibroid in this way, and his case is about the only one published. He also enucleated intramural fibroids by abdominal section. Curiously, however, he seems to have recanted and abandoned the plan.

Mrs. R., aged 41, was sent to me by Dr. Percy V. Fry, of Haworth, near Keighley; married two years; nulliparous. The symptoms complained of were hæmorrhage and dysmenorrhœa. The sound passed 3½ inches point forwards. Bimanually there was no marked irregularity of outline, but the uterus was enlarged. The cervix was dilated with great difficulty, and at the fundus a sessile tumour could be touched. Enucleating this and removing it by *morcellement* was out of the question, as the cervix was so undilatable, even with Reid's powerful screw dilators. I therefore determined to remove it by abdominal section and section of the uterine wall.

This operation was done on December 26th, 1899, and I was assisted by Dr. Oldfield of Leeds. A median incision was made in the abdominal walls, the lower end being nearer the pubes than usual in abdominal sections. The uterus was brought up to the wound, and its rounded anterior surface came well into view. It was packed round with sponges to protect the peritoneum, and a rubber tourniquet applied tightly round the cervix, so that the operation was almost bloodless. A central perpendicular incision in the uterine wall, about 2 inches in length, exposed the attached surface of the tumour, which was recognisable by its glistening white colour.

The incision was prolonged a little, so as to open the cavity of the uterus below the tumour. The tumour was pushed out by the finger with its mucous surface entire and removed. A drainage tube was then passed from the uterine cavity into the vagina, and the wound closed by strong catgut sutures, three to the inch. These all missed the mucous surface of the interior except two, which were passed just within the cavity to loop up tags of the capsule of the tumour. The tourniquet was then removed, and hæmorrhage from the needle pricks stopped by sponge pressure. There was no bleeding or oozing from the wound itself. The abdominal wound was closed as usual. The patient has made an uninterrupted recovery. The drainage tube was removed from the vagina in twenty-four hours.

With the exception of two cases, to be mentioned, the case just related is, I think, the first which has been done in this country—that is, the first in which the womb has been deliberately opened in order to remove a solid internal tumour.

The two cases referred to are related by Dr. Alexander, of Liverpool, in a most interesting paper read before the British Gynæcological Society in April, 1898, upon enucleation of external and intramural fibroids. In only two of these the cavity of the uterus was opened, accidentally I think in one, and a small pedunculated polypus being found, it was snipped off. In the other case, only a thickening of the wall of the fundus was found, and it was "shaved down," so that my case remains the first fibroid removed by section of the uterus. (I say this open to correction.)

An earlier paper than Alexander's was one by Dr. Howard A. Kelly, of Baltimore, U.S., published in the *Journal* of the American Medical Association on October 2nd, 1897. This paper, however, like Dr. Alexander's, is upon enucleation of intramural and external tumours. In Kelly's magnificent work, however, on *Operative Gynæcology* (Henry Kimpton; 1899) will be found a full description of the operation just as I have described it, but no cases are related. I had not read this description at the time of performing my operation.

This operation is not recognised as yet as the proper mode of removing tumours which cannot be removed *per vaginam*, or which, on the other hand, are so large as to require the uterus, or part of it, to be removed along with the tumour. I think, however, that a little time and experience will show that it is the best means of so removing them. Why should such a case as the one I have related lose her ovaries or part of her uterus instead of merely the tumour. She will leave the private hospital where the operation was done with all her organs perfect. Moreover, the operation is not one attended with any particular danger or difficulty, provided complete antiseptic precautions are used.

ON REMOVAL OF THE CANCEROUS UTERUS BY THE ABDOMINAL ROUTE.*

BY T. HENDERSON POUNDS, F.R.C.S.,
Surgeon, Derbyshire Hospital for Women.

EXCISION of the uterus, historically considered, is of ancient date. Soranos of Ephesus, in his book on *Diseases of Women*, published a century before Christ, mentions the operation, but there can be no doubt that it was subsequently forgotten. Coming to the present century, Langenbeck in 1813 successfully removed the whole uterus (by the abdomen) for cancer: followed by Sauter, of Constance, who in 1822 had the first successful vaginal extirpation for cancer. In the following years Blundell, Récamier, Siebold, Delpech, and others performed the operation, but with very little success, so that the operation fell into disuse until 1879, when Czerny successfully reintroduced it. Billroth, Mikulicz, Schröder, Freund, and others soon followed, and the operation now took its place amongst the established proceedings in surgery.

Freund struck out a new path for himself by removing the uterus by the abdomen. His mortality was, however, prohibitive (about 72 per cent.), and it has now been universally discarded for the vaginal operation, an operation which by improved technique and antisepsis has now been performed with a general mortality of 10 per cent., and, in the hands of especially skilled operators, such as Schröder, Sänger, and Leopold, has even been reduced to between 4 and 5 per cent.

Although the vaginal operation for the removal of the cancerous uterus is the one universally adopted at the present time, we occasionally meet with a small percentage of cases which are not to be dealt with by this method, owing either to the bulk of the uterus or to extreme narrowness of the vagina, or, as in the specimen which I am about to show you, from fixity from old peritonitis due to diseased appendages: fixity due to malignant infiltration would, of course, make any operation unjustifiable.

During the last two years five such cases have come under my care, in which, removal by the vagina being practically impossible, I removed the cancerous uterus by the abdomen. All the patients recovered: four of these cases were suffering from epithelioma of the cervix: the fifth was a case of malignant degeneration of a uterine fibroid, the uterus being the size of a three-months' pregnancy, and the vagina extremely narrow. The age of the oldest patient was 60 years, and the youngest 32.

In the last case the patient had suffered for some five or six years from frequent attacks of pelvic peritonitis, originating primarily in a severe attack of septicæmia following abortion induced by herself with a knitting needle. I found the cervix stuffed with malignant growth (epithelioma), but movable, the Fallopian tubes being felt bimanually distended (pyosalpinx), and fixed high up by adhesions.

The operation itself differs in no respect, except in minor detail, from that of total extirpation of the fibroid uterus. the broad ligaments being tied off, and the stumps, with the uterine arteries, turned into the vagina: drainage I consider absolutely necessary in these malignant cases.

I prefer to operate in the Trendelenburg position, a position which renders the operation comparatively easy. and as a ligature material have abandoned silk for very stout catgut, specially prepared with ether, sublimate, and spirit of juniper, and have designed a special broad ligament needle which I have found very useful in this operation.

With regard to the question of recurrence, two of these cases are absolutely free after twelve and nine months respectively, two died at the end of twelve months (one of deposit in the lungs, the other of local recurrence), one died at six months, apparently of growth in the lumbar glands pressing on the ureter. May we not ask, Do we go far enough in our methods of operating on these unfortunate cases? Why not open up the connective tissue of the pelvis, and thoroughly eradicate all infected glands, if any are found, with the contiguous tissue, as in cancer of the breast, where we do not confine ourselves to the removal of the infected organ, but thoroughly clear out the axilla? This could only be properly carried out through the abdomen, but, with modern improvements as to technique and antisepsis, I believe with a mortality not much greater than by the present vaginal operation. I venture to predict that the operation of the future will be an abdominal one on these lines: an operation with perhaps a slightly higher immediate mortality than the present, greatly counterbalanced, however, by a much longer respite to the patient.

In conclusion, it may be asked, Is the removal of the cancerous uterus a justifiable operation? To which I would reply, that it is both justifiable and proper in carefully selected cases, and for the following reasons: First, the immediate mortality does not forbid it; secondly, recurrence is not more rapid than after other operations for cancer: and, lastly, death after recurrence is not attended with so much suffering. the rectum and bladder being seldom perforated.

* Read before the Midland Branch of the British Medical Association.

ON SUTURE OF FRACTURED PATELLA BY AN IMPROVED METHOD.*

BY R. GLASGOW PATTESON, B.CH.UNIV.DUB., F.R.C.S.I.,
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THE inadequacy of the various methods of suturing the patella after recent fracture, and the subsequent risk incidental to some at least of them, led me to review at length the whole subject of the operative treatment of fracture of this bone; and to try to arrive at definite conclusions as to wherein lay the causes of failure; and to endeavour to ascertain how best to obviate it.

It appeared on an analysis of recorded cases that the causes of failure might fairly be classified under two heads: (1) The adoption of a subcutaneous method, in which no effort is made to relieve the tension in the joint due to the extravasation of blood and serum, and in which accordingly no certainty of accurate approximation of the bony surfaces can be secured: and (2) the use of unsuitable materials for suturing the fragments together, and a faulty method of performing the operation in cases where the open treatment was selected.

1. In many cases, and especially where the separation of the fragments is extensive, free hæmorrhage takes place into the knee-joint, large clots form, the torn fibrous expansion of the quadriceps and the periosteum fall like a curtain over the edge of the upper fragment, and very marked tilting of the broken parts occurs, due partly to muscular contraction and partly to the pushing forwards of the free edges of the fragments by the fluid distending the synovial spaces. Under such conditions the application of a circumferential suture will tend only to increase the tilting of the fragments, and, though it may help to approximate the posterior borders, will almost certainly cause divergence of the anterior borders of the broken patella. In other words, it will tend to increase the angle of divergence between the fractured surfaces. Another objection to the method is that, being applied while distension of the joint is still present, the suture undergoes relaxation and becomes useless when the effusion has undergone absorption. This was very marked in one case in which I employed the circumferential suture, as at the end of ten days I had to remove the silk, which was quite lax and absolutely unsupporting.

2. The methods of direct suture of the fragments by drilling, and of circular antero-posterior ligature, either with silk or silver wire, were also open to grave objection. Silver wire, while theoretically perfect, was, in the size generally adopted, apt to cut through the drill holes, or when used circularly, as in Mr. Barker's method, was open to the risk of dividing a transverse into a quadrate fracture, as has happened in the practice of more than one surgeon. Another objection was the method employed of twisting the silver wire so that a large knob was finally left which often caused irritation to the underlying tissues, and necessitated subsequent removal. While silk was free from the latter objection it presented this grave defect, that if any failure took place in the chain of asepsis, serious risk occurred of infecting the joint cavity along the track of an absorbent material. This applied to both methods, but more especially to Mr. Barker's, where the silk passed between the articular surfaces of the patella and

* Read in the Surgical Section of the Royal Academy of Medicine in Ireland

the femoral condyles, and remained constantly as a foreign body in the joint.

In two previous cases I employed the method of drilling the fragments obliquely through the two-thirds of their depth on either side of the median line, and then obtaining approximation by means of two silk sutures. In the first case the result was all that could be desired; but in the second case a prepatellar abscess formed at the end of ten days, and though by that time fortunately the joint was shut off from danger, infection of one of the silk sutures took place, and it was only by its removal after a considerable time that a troublesome sinus became closed. However, in that case also the ultimate result was excellent, and the man is now, two years after, earning his living as a car-driver with perfect movement in the joint.

I could not, however, shut my eyes to the grave risk to which the latter patient had been exposed, and I determined accordingly in future cases to use some suture material incapable of absorbing septic germs, and easily rendered sterile before operation. Of all the various materials silver wire seemed to offer the most advantages in this respect. It appeared also that if a single drilling of each fragment only were practised, and some means of apposition employed which afforded a broader surface, and so reduced the liability to cut through the broken bone, that an important advance in the method of direct suture would be attained.

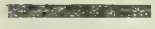


Fig. 1.—Exact size of wire used showing sectional surface.

After consideration I finally decided on a D-shaped wire, No. 16 gauge, made of the softest silver, which, being flat on one surface and very broad, would be free from the tendency to cut through the drill hole, and would be strong enough to admit of only a single suture being inserted. This wire was specially drawn for me by Messrs. Fannin, and I found experimentally that it was of sufficient strength for one suture to hold together, under considerable strain, the sawn surfaces of a patella, and also that, on account of its shape and strength, a single loop of each end, interlocked as in the accompanying photograph, was quite sufficient to secure the suture, and the ends could be readily flattened down without forming any appreciable foreign body which could irritate the surrounding tissues. An opportunity was afforded me of putting theory to the test of practice last session, and in giving a brief account of the case, I wish to emphasise those points which seem to be of importance in carrying out the procedure.[1]



Fig. 2.—The loop *in situ*.

G. E., aged 24, was admitted into the Meath Hospital on November 11th, 1898. On the previous day he had fallen, and at the same time had felt something give way in his knee. He suffered great pain all night; and on admission next day his knee was found to be greatly distended, extremely tense, and with a transverse fracture of the patella in the lower third, an interval of about an inch separating the upper and lower fragments. The limb was kept elevated, a posterior splint fitted to the knee, and evaporating lotions applied for three days without any effort being made to bring the fragments into apposition. On the 14th—four days after the accident—the swelling had considerably subsided, active pain had gone, and, operation being determined on, the joint was opened by a large U-shaped flap having its convexity downwards just below the ligamentum patellæ, and extending laterally well away from the margins of the fractured bone. I adopted the U-shaped flap for two reasons: it gives much freer access to the broken fragments; and, should a suture abscess or other accident to the skin wound occur, the joint wound is farther removed from the seat of infection. On opening the joint, a large number of firm and partly decolorised clots were freed and washed out with sterilised water, and it was then found that the line of fracture was very low down, running obliquely from above downwards towards the apex of the patella, and that the lower fragment was so tilted that its articular cartilage was the part presenting to the fractured surface of the upper fragment. It was evident, therefore, that without operation only the weakest form of fibrous union could have taken place. Both bony surfaces were covered with dense fibrinous exudation and blood clot, and a torn fringe of periosteum was firmly embedded in that attached to the upper fragment. By means of a blunt periosteal elevator, the bony surfaces were cleared. The torn periosteum and aponeurosis were preserved for a future important step in the operation, being divided in the middle line to a point about half an inch above the upper margin of the fracture, and then reflected laterally to either side. Much difficulty was experienced in drilling the lower fragment owing to its small size, but at last this was successfully done, and the upper fragment was then also drilled obliquely exactly in the same median vertical line. The D wire was then passed without the intervention of any instrument, and, having been placed *in situ*, the joint was again thoroughly washed out with sterilised water. Accurate approximation of the fragments was then secured, the wire looped, and the divided aponeurosis and periosteum closely sutured with fine silk over the underlying wire. In this way the fractured surfaces were completely protected. I regard it as one of the most important steps of the operation. The skin flap was then closed with salmon-gut sutures, and when in position no trace of the wire loop could be detected with the fingers. Aseptic dressings were applied, a light posterior splint fitted, and the limb kept elevated on a couple of pillows. The dressing was reapplied on the third day as some slight serous oozing had shown through. The wound was perfectly dry. On the eighth day the sutures were removed, the skin incision being soundly healed. It was dressed again on the fourteenth day, and the splint removed in order to admit of passive motion being carried out. A few days later the patient was allowed to get up, and began to walk on crutches. A skiagraph kindly taken by Dr. Lane-Joynt at this period, three weeks after the operation, shows such accurate approximation of the fragments, that the oblique line of fracture can only be faintly recognised. The following week the man was brought to the Dublin Biological Club, and was able to walk into the room without the aid of a stick. Eight weeks after the operation he was able to walk over two miles on the level, and the only remaining evidence of his injury was a slight feeling of weakness on going up stairs.

In young and healthy subjects the ideal operation is primary suture; and with care and strictly aseptic precautions it offers no more grave risks than many of the forms of so-called subcutaneous suture, while in relative accuracy and efficiency no reasonable comparison can be established. Among the important points connected with the operation I would desire to specially emphasise the following:

1. The advisability of delaying operation for a few days after the injury until the subsidence of the more acute symptoms in the joints.

2. The thorough clearing out of the joint; all the recesses of the synovial membrane being completely freed from clots, and the broken surfaces of the bone thoroughly cleaned. This can only be secured by the open operation.

3. The use of an easily-sterilisable suture, strong enough to secure apposition by a single drilling, and so shaped as to render splitting of the bone an impossibility, and to prevent in fastening it the formation of a large and irritating loop.

4. The elevation, and not the resection, of the fibrous curtain, and its subsequent accurate suturing over the embedded wire, forming an additional barrier underneath the skin flap against infection or irritation.

5. The early commencement of passive movement, which is thus rendered feasible, and undoubtedly greatly shortens the period of disability following the fracture—a point of paramount importance to the class of persons most subject to the injury.

Note.

[1] For the photograph and notes of the case I am indebted to my late clinical clerk, Mr. F. G. FitzGerald.

THE DISPOSITION OF THE UTERO-VESICAL POUCH OF PERITONEUM IN CASES OF DISTENSION OF THE VAGINA AND UTERUS.

By W. McADAM ECCLES, M.S.Lond., F.R.C.S.Eng.,

Assistant Surgeon to the West London Hospital, and to the City of London Truss Society, and Examiner in Anatomy to the Society of Apothecaries.

In his first lecture on Retention of Menstrual Blood,[1] Dr. Cullingworth has raised an interesting question concerning the disposition of the utero-vesical pouch of peritoneum in cases in which the vagina becomes distended with fluid.

He was able to answer the query with the statement that the bladder rises as the vagina distends, and the uterus remains perched on the summit of the vagina, and thus the fold retains its normal anatomical relations. This, it would appear, is the constant result where the vagina is the cavity that suffers the distension.

In 1892, I presented to the museum of St. Bartholomew's Hospital, a specimen (No. 3016A), which tends to confirm abun-

dantly the opinion of Dr. Cullingworth. A female infant, aged 7 weeks, had an abdominal swelling associated with retention of urine, for which the child was brought to me. The tumour in the abdomen had not attracted the attention of the mother, and there had been no difficulty during the birth of the child. The little patient was in a very weak condition, and died a few days later. It was then found on *post-mortem* examination that the abdominal swelling consisted of a greatly distended vagina, surmounting which was the diminutive uterus, itself also somewhat dilated. The vagina measured $4\frac{1}{2}$ inches in length, $2\frac{1}{2}$ inches antero-posteriorly, and $1\frac{3}{4}$ inches from side to side, and contained some 8 ounces of flaky mucus. Both kidneys were hydronephrotic from the pressure that had been exercised by the distended vagina, each of the ureters themselves being much dilated. But the chief interest in the specimen in view of Dr. Cullingworth's case is the fact that the distended vagina had raised the uterus above it, and at the same time had caused an elongation of the urinary bladder, and particularly of the urethra, which latter was some 2 inches in length. (Other instances of similar distensions from occlusion of the vaginal orifice will be found in the following records.)[2]

It would seem from this and other cases, that when the vagina is distended with fluid, the bladder is drawn up out of the pelvis, the uterus also rising on the summit of the vagina, and thus that the natural relationship of the utero-vesical reflection of peritoneum is preserved. It is usual in this class of case for the urethra to be elongated, and for it to be pressed upon between the distended vagina and the pubic bones, and this may cause retention of urine.

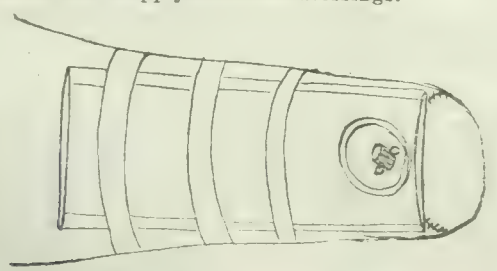
In instances of distension of the uterus, apart from the vagina, as in normal pregnancy, the bladder is not raised, and the utero-vesical pouch of the peritoneum therefore becomes considerably stretched and flattened out.

REFERENCES.
[1] BRITISH MEDICAL JOURNAL, January 6th, 1900, p. 8. [2] *Trans. Obstet. Soc. of London*, vol. v, p. 284; vol. xix, p. 5.

NOTE ON A SPLINT FOR USE AFTER AMPUTATION.

BY A. MARMADUKE SHEILD, M.B., F.R.C.S.,
Assistant Surgeon and Lecturer on Practical Surgery, St. George's Hospital.

AFTER amputations, especially of the thigh, it is customary to support and bandage the stump upon a suitable splint. This is removed at each dressing, and the shifting and readjustment causes sometimes pain and annoyance to the patient. The painful quivering so often seen when the support is suddenly withdrawn is familiar to most of us. To meet this inconvenience I have devised a simple plan, which has seemed to me of great utility. The opening for the tube is made through the posterior flap, or in the case of lateral flaps, the tube is brought out posteriorly. In the end of the splint a large circular hole is cut, and the anterior end of the splint round this aperture is thickly padded with soft iodoform gauze. When the flaps have been accurately sutured the splint is applied next to the limb, and secured with adhesive strapping and gauze bandages. The tube appears through the centre of the large circular opening in the splint. Nothing now remains but to apply the usual dressings.



Posterior surface of a thigh stump with splint applied.

The opening in the splint is padded with strips of iodoform gauze and a thick layer of salicylate wool. At the early dressings this can be constantly renewed. Here alone oozing will take place. The tube can be flushed and slowly withdrawn in the usual manner, without the least disturbance of the splint. In most of the cases I have left the splint in through the whole healing process. If there is any soiling, it can easily be changed, but this only has to be done once. Should the stump suppurate, of course this method is not so applicable. I have now adopted it in a sufficient number of cases to feel sure of its use, and I hope surgeons will give it a trial. It is essential that the splint be broad, of a good length, and that the aperture be large; also the fixing to the stump must be carefully executed.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A CASE OF SODIUM SALICYLATE POISONING.

MISS B., on December 26th, 1899, complained of feeling "bilious," and at night she was feverish and had a slight cough. When I saw her at 9 P.M. her temperature was 99.2°, her pulse 88, her tongue was coated, the breath sounds were harsh over the front of the chest, but there were no adventitious sounds. Her head and limbs ached, and she was evidently having "her annual attack of influenza." I gave her some compound ipecacuanha powder, and on drinking some hot liquids she perspired freely. She was restless in the early morning and fancied she saw a face at the window, but had no other mental disturbance.

On December 27th her pulse and temperature were normal, her tongue was cleaner, but the pains in the limbs were more marked and the cough more troublesome. She remained in bed, and was given a mixture containing sodium salicylate in 10-grain doses with carbonate of ammonium, to be taken every four hours. At 3.30 P.M., when she received the medicine, she purposely took a double dose: an hour afterwards she heard people, well known to her, making libellous remarks about her outside the bedroom. She made a complaint, but on investigation it was proved that the remarks were imaginary. She was left alone, and again heard the remarks and whispering; later she imagined she saw people outside creating a disturbance, and opened the window to send them away, but was persuaded to return to bed. Following this, ornaments in the room became distorted and converted into hideous faces; then she imagined she heard people singing, bands playing, bells ringing, and later the whole of the hallucinations were mixed up together without cessation. She had no sleep whatever.

On December 28th, I found her in a very excited state, but apart from the hallucinations she was perfectly sensible. She had got up and was performing her ordinary duties in a perfectly rational manner, and felt bodily well. Her temperature was normal; her pulse 100, full but soft; her eyes were staring, the pupils being normal; her tongue was clean and her urine scanty. She suspected the medicine as the cause of her hallucinations, and had taken none since 6 A.M. When she told me about the double dosage the bottle showed that she had taken about 80 gr. of sodium salicylate in fourteen hours. I stopped the medicine, told her to take plenty of warm drinks, and gave her some potassium bromide with aromatic spirit of ammonia. Her bowels were well moved with sulphate of magnesia; her urine was acid, contained plenty of urates and phosphates, but no albumen or blood, and gave a marked reaction with perchloride of iron. During the day, along with the other visions and noises, she saw rats, dogs, and cats, all more or less distorted and hideous. She heard, and repeated to bystanders, elaborate conversations taking place between two people on the telephone, although she was perfectly cognisant that there was no telephone in the room; people appeared to her and gave her perfectly rational messages which she would have obeyed had she not been prevented, and all this after I had told her what was the matter and she had made up her mind to ignore the "animals" until the drug had been eliminated, which I told her would be in about

two days (twenty-four to forty-eight hours, Farquharson). The night was an exaggeration of the previous one, and she had no sleep.

On December 29th her general condition was good, but the hallucinations were persistent, although not so terrifying. The afternoon urine was loaded with urates and phosphates, but did not contain albumen or give any reaction with perchloride of iron. Judging that the salicylate was now eliminated, I ordered a glass of hot stout at night, to be followed in half an hour by a draught containing chloral gr. x, and potassium bromide gr. xv; she fell asleep ten minutes afterwards, and slept soundly for eighteen hours, with two breaks of a few minutes when roused by someone entering the room.

On December 30th she woke up quite well, and except that on the next day when sitting alone she heard people singing in a low tone, she has been quite well since.

Exactly twelve months ago she took sodium salicylate in 10 gr. doses for the same condition, and although the drug was from the some stock she felt no ill-effects whatever. It would seem that before the treatment was commenced she had been in a feverish condition, with a tendency to delirium, and that this tendency was aggravated by taking over-doses of the drug on a disordered stomach. She had no rash, palpitation, or tendency to violence; and after being assured that the condition was due to the drug and would pass off, she performed her ordinary duties for two days without mistakes.

Bolton. H. Ainslie Scott, M.B., M.R.C.S., D.P.H.

KERNIG'S SYMPTOM IN MENINGITIS.

The British Medical Journal recently[1] published a case of mine of cerebro-spinal fever in which I called attention to the very great diagnostic value of Kernig's symptom[2] in cases of meningitis. I have found it a very early symptom in 4 cases of the disease which I have met with in the last few months. I wish now to call attention to what I think must be regarded as the occurrence of the symptom in connection with the upper extremities. In a case admitted to hospital under my care on December 28th, 1899, the patient complained of excessive pain in the forehead and back of the neck; he was partially unconscious. Kernig's symptom was present very distinctly in both legs when the patient sat up; but it was also found that both forearms were held in a position of extreme flexion across the chest, and on attempting to straighten the arms it was found impossible to do so. The tense state of the flexor muscles exactly resembled that of the hamstring muscles in this symptom as usually described. This condition of the arms continued till a late period of the illness, when they became relaxed, whereas the leg symptoms continued to the very last. The appearances found *post mortem* were typical of the disease. I have not been able to find any allusion to this symptom appearing in the arms in any of the numerous writings on this disease that I have been able to come across.

W. J. Buchanan, B.A., M.B., Major, I.M.S.

Bhagalpur, Bengal.

HÆMORRHAGE THROUGH THE LACHRYMAL DUCT AFTER PLUGGING THE NARES.

E. S., aged 23, domestic, suffered from a severe attack of enteric fever. About the 21st day of the illness the temperature suddenly fell from 104° to 98° F. This was accompanied by severe hæmorrhage from both nostrils. Ordinary remedies having failed to arrest the flow, I plugged both anterior and posterior nares on each side. A short time afterwards blood appeared in the left lower eyelid. On sponging this away it could be seen welling up from the lachrymal duct. Next morning the right lower eyelid was found full of blood, and here again it was found flowing from the lachrymal duct. On the third day I had to make the posterior plugs larger, and a very short time afterwards blood appeared in the left ear. As I found afterwards, the drum was perforated from some old mischief, so here I presume the blood travelled up the Eustachian tube. In each case the blood continued to flow during the first four days, after which it ceased, and I was able to dispense with the plugs.

I report this as another case in which continued fever was present, as would seem to have been the case in the case reported by Major Cottell in the British Medical Journal of December 16th, 1899.

Rochdale. D. Richmond, M.B.

[1] British Medical Journal, November 18th, 1899, p. 1412.
[2] *Berl. klin. Woch.*, December 29th, 1884.

COMPLETE ATRESIA VAGINÆ.

The following case is of interest in connection with Dr. Cullingworth's recent article, and also with the case described by Dr. Lawrence in the British Medical Journal of January 20th.

The patient, who is 21 years of age, has never menstruated; but for the last year has had pelvic pain and discomfort once a month. She is tall and well developed. The breasts are full sized and firm, the pelvis is capacious, the pubic hair is arranged in the manner usual in female subjects. Mons veneris, labia majora, labia minora, clitoris, fourchette and hymen are all seen to be complete, but there is no opening visible or palpable in the hymen. On rectal examination a firm body could be felt having the position, form, and size of the cervix uteri. Careful bimanual examination failed to reveal the presence of any uterine body, of tubes or of ovaries. The presence of ovaries may, however, be surmised from some of the details mentioned above, and from the fact that the patient is engaged to be married. On passing a sound into the bladder, the finger in the rectum was separated from the sound by a thin layer of tissue. An artificial vagina will be made, should the patient care to undertake the trouble of keeping it open during cicatrisation.

W. E. Fothergill, M.A., B.Sc., M.D.,
Director Clinical Laboratory, Royal Infirmary, and Assistant Physician, Clinical Hospital, Manchester.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THIRTY-SEVENTH NATIVE FIELD HOSPITAL, KHAR CAMP, MALAKAND FORCE.

A CASE OF GUINEA-WORM CAUSING SUPPURATION OF THE KNEE-JOINT.

By Lieutenant H. Innes, M.B.Lond., I.M.S.

A sepoy, aged 26, was admitted to the hospital on July 18th, 1899, complaining of pain and swelling in the right knee, and giving the following history.

He had just returned from eight months' furlough at Bannu, but had spent most of his service at Hyderabad, Sindh. He had when a boy suffered from a guinea worm in his left leg. The present illness began on July 16th, when the patient noticed itching over the right knee coming on quite suddenly and rapidly followed by pain. His attention being thus attracted to the joint, he noticed for the first time the presence of a guinea-worm just protruding from a small orifice below the knee. He had not been sick and had had no rigors.

On admission the right knee-joint was slightly flexed and attempts to straighten it caused severe pain. The skin over the joint was red, hot, and slightly œdematous; there was fluid in the joint and great tenderness and pain were complained of. From a small orifice on a level with and slightly to the inner side of the tubercle of the right tibia about one inch of a guinea-worm was protruding. The portion of worm visible was flat, devoid of lustre, and looked dead. Douching with water failed to induce it to extrude any embryos. A small quantity of pus could be squeezed out from the aperture of exit, around which the skin was red and œdematous. The temperature was 102°, rising to 103° that night, the pulse was rapid, the tongue foul, and the bowels confined. The limb was placed on a back splint, lead and opium lotion applied to the joint, and antiseptic dressings were placed over the worm. During the next few days the temperature ranged between 99° and 101°, but the condition of the patient showed no improvement, the local symptoms becoming aggravated, the worm was gradually being withdrawn, but pus escaped with it at each dressing and the knee became more swollen and the skin more œdematous. A small abscess formed at the aperture of exit.

On July 23rd the patient was anæsthetised, and the skin having been sterilised, the joint was explored with a hypo-

dermic syringe and pus found. It was then decided to open and drain the joint. The small abscess was first opened and about 8 inches of worm withdrawn. A probe passed up along the track of the worm, towards the inner side of the knee, and pressure on the joint caused an oozing of pus from the track. The joint was next opened by four incisions, two above and two below the level of the patella; much thin dirty yellowish pus was evacuated, and a piece of guinea-worm four inches long was picked out of the joint cavity, which was then well irrigated with a 1 in 3,000 solution of perchloride of mercury, and two large drainage tubes were inserted crosswise under the patella. Carbolic gauze dressings were applied, and the limb placed upon a modified Mackintyre's splint.

The after-progress of the case was rapid and uneventful; the temperature gradually became normal. One tube was removed on July 28th, and the other on July 31st. The discharge, copious at first, became speedily less in quantity and clear and serous in quality. The wounds were dressed every day, and the joint washed out. A strapping extension was applied on July 29th. By August 17th all the wounds were soundly healed with the exception of a small sinus in connection with the upper and outer one, not, however, communicating with the joint cavity. This was plugged with gauze and rapidly diminished in size. The splint was removed on August 20th and massage and passive movements regularly carried out. The patient left for the base hospital at Nowshera on September 4th, 1899. He could nearly semiflex the knee. The patella was freely movable and there was but slight thickening of the synovial membranes.

From the history, the sudden onset would suggest that the worm in the course of its journey down the limb, having unfortunately found its way into the knee-joint, was there snapped across by the movements of walking, thus setting free the embryos into the joint cavity, where they acted as violent irritants, and set up inflammation and suppuration. It might, however, be looked upon as an aseptic suppuration, the embryos acting merely as irritants, and neither by their life nor death setting free toxins having any specific action upon their host. This may be inferred from the temperature, which was never high, with the exception of one day, varying between 99° and 101° with the greatest regularity, and gradually coming down to normal after operation instead of showing the great ranges of temperature and rigors of an arthritis due to septic micro-organisms; therefore, the embryos being incapable of multiplication in the tissues were soon got rid of, partly no do doubt by the frequent irrigation of the joint, and upon their removal the synovial membranes began at once to return to their normal condition, thus allowing of the very early removal of the tubes and the rapid recovery of the patient.

(For permission to publish this case I am indebted to Lieutenant-Colonel Griffiths, I.M.S., P.M.O.)

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

INTESTINAL OBSTRUCTION PRODUCED BY LARGE GALL STONE.

(Reported by P. Clennell Fenwick, M.B.Lond., M.R.C.S., L.R.C.P., Surgeon to the Hospital.)

A female patient, aged 65, was seen by me in consultation with Dr. Brittin, and the diagnosis of intestinal obstruction was easily made. Fæcal vomiting had been constant for three days, and no flatus had passed. Twelve years previously the patient had had a very severe attack of jaundice with colic. As the patient's house was unsuitable for any operation she was sent to the hospital, and two hours later the abdomen was opened. On passing the hand down into the pelvis a large hard mass was felt in the intestine, and after some difficulty was brought up into the wound. The mass was the size of a large walnut, and was movable in the intestine. A linear incision was then made into the intestine, and a large gall stone was removed. The wound in the intestine was closed by a double row of silk sutures and a row of Lembert sutures, and finally a piece of omentum sewn over the whole length of the incision as an extra precaution. The patient has made an uninterrupted recovery, passing flatus shortly after being replaced in bed, and having a natural motion on the fifth day.

A curious point about the case was that for many months the patient had been under medical treatment with intense irritability of the bladder with every symptom of calculus, except hæmaturia. From the position in which I found the stone I can only conclude that it had been pressing on the neck of the bladder as it was lying between the uterus and bladder at the time of operation, and since its removal there has not been the slightest symptom of any bladder irritability. The stone consisted of a large core of bright, yellow, crystalline substance, with an outside covering of fæcal matter. Its weight was 252 grains.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, January 26th, 1900.

Resection of Gangrenous Intestine in Cases of Hernia. Mr. J. Hutchinson, jun., related two cases of successful primary resection of small intestine during herniotomy, both operations being performed by simple enterorrhaphy without mechanical aids.

One was a woman with a strangulated femoral hernia on whom he had operated in 1893, removing 5 inches of damaged gut; she was in good health six years later. The second case was a man with strangulated inguinal hernia; in this it was necessary to excise 10 inches of intestine. This was done by Maunsell's method—that is one in which an artificial intussusception was made. The patient made a perfect recovery, but died three years later from ulcerative colitis, and the specimen was fortunately obtained for Mr. Hutchinson by Mr. H. L. Barnard. It was shown at the meeting, and proved that there had not been the slightest narrowing at the site of the resection.

Mr. Hutchinson remarked that it was probably the general impression that the use of Murphy's button had rendered resection of intestine not only quicker but safer. To test this belief he had collected from hospital records (including all the cases he had himself operated on both with and without this apparatus), 15 examples of primary resection for gangrenous gut performed with Murphy's button, and 16 cases in which suturing alone was employed, Of the former only 1 (7 per cent.) had recovered, of the latter 6 (40 per cent.). This was a very striking comparison, but besides this the fatal cases treated by suturing alone had lived on an average twice as long as those in which Murphy's button had been used; in other words, they had given so much more promise of survival. Three out of the 10 fatal cases of simple suturing would probably have recovered but for accidental complications (multiple strictures of small intestine, obstruction of intestine by an omental band, and tuberculous phthisis causing constant cough). Moreover the *post-mortem* records showed, on the whole, better union of the divided ends after suturing than after the use of Murphy's button. The latter was apt to cause acute congestion by its bulk; its weight was also a disadvantage, and even should the patient recover it was probable that a stricture might result. At any rate, the openings made by operations with Murphy's button in gastro jejunostomy sometimes showed a marked tendency to contract. The greater time required for the accurate performance of suturing did not appear to be of much practical importance—it had probably been a little exaggerated. The after-shock had not been dangerous in his experience. Whilst primary resection of gangrenous, perforated, or irretrievably damaged intestine in a hernia must always be attended with high mortality, it yet offered the best chance of recovery. Of 11 such cases treated by other so-called conservative methods—formation of an artificial anus, etc.—every one had died. This agreed with the results previously brought forward by Mr. Kendal Franks, Mr. C. B. Lockwood, and other surgeons. Turning to the details of the operations, in performing resection it was of great importance to excise enough of the damaged intestine so that the sutures might be placed in healthy tissues, and it was nearly always advisable to do it through a median abdominal wound. Special care had to be taken with the mesenteric ends at the excision, for leakage most readily occurred at this point. Maunsell's method was probably one of the best to employ. If the intestine could be emptied and made to contract this would favour sound union and tend to prevent infection of the stitch apertures by the septic contents. It was probable that the administration of an aperient immediately after the operation would lead to better results

than in the past. The author had operated on 140 cases of strangulated hernia, with a total mortality of 25 per cent.; 65 were inguinal hernia, of which 54 recovered; 54 were femoral, and of these 40 recovered; whilst 21 were umbilical, and of these 12 recovered; the fatal cases were 34 altogether, or 25 per cent. The great majority were due to the gangrenous or acutely inflamed condition of the intestine and omentum at the time of operation. Five of 10 fatal cases were possibly due to the employment of too conservative methods.

Mr. Barker had for a long time used simple sutures, which he considered the best method for joining the two ends of the gut after resection of intestine. He thought Murphy's button had come not to stay. The time occupied in using the button was said to be less than that taken for the ligature, but he doubted this. The condition of the intestine was the important point; not how, but what, one sutured. Hitherto surgeons had removed too little intestine; it mattered very little how much was removed within a foot or two, provided the two ends to be sutured were quite healthy and had not been distended. In that direction improvement in their results was to be sought. Forceps to hold the intestine during the suturing simplified the operation. He related three recent cases of his own:

A woman had gangrenous intestine, for which he resected the bowel, using the button. All went well for six days, when she had acute obstruction and collapse. The abdomen being reopened, it was found that the weight of the button had dragged down the bowel and had kinked it, causing death. In the other two cases he used simple suture and both recovered. In one case he resected 35 inches of gut, and in the other case, which was one of femoral hernia, he resected from 9 to 12 inches.

For gastro-enterostomy and all similar cases he now used simple suture alone. Of his last 11 cases, 3 had been treated with the button with 1 death, 2 were pylorectomies, both sutured, of which 1 recovered and 1 died, and all the 6 other cases were sutured and all recovered. He inquired what kind of suture Mr. Hutchinson used.

Mr. Howard Marsh considered that the great difficulty after all was to know whether to return a doubtful piece of intestine or not; and when it was returned, with grave anxiety on the part of the surgeon, sometimes recovery, sometimes death, ensued. Frequently vasomotor paralysis ensued, and a piece of intestine having lost its peristaltic action, obstruction occurred. Evidently excision of the bowel was not nearly so dangerous an operation as it had appeared to be. It was advisable to remove the damaged bowel, as Mr. Barker had said, up to the quite healthy part. He believed that continuous suture was far better than Murphy's button; so many accidents of various kinds had attended the use of the latter.

Mr. Symonds thought that statistics would improve as more cases came under operation. His difficulty was in the emptying of the intestine at the time of operation, so as to prevent continuance of the obstruction from subsequent paralysis of the bowel. He preferred the suture to the button.

Mr. Hutchinson, jun., in reply, said he had employed continuous sutures of fine silk going through all the coats. In one case, where death occurred from other causes three years after the operation, all traces of the silk had absolutely gone, nor were there any adhesions at that part of the intestine or peritoneum, and the scar was absolutely smooth. He could not suggest any new method of emptying the bowel; if some means of doing so were devised it would much simplify the operation. He was also convinced of the advantage of direct suture over the button in gastro-jejunostomy and similar operations, as the opening exhibited no tendency to contraction.

Penetrating Bullet Wound of Abdomen.

Mr. A. Pearce Gould read a case of bullet wound of the abdomen, with four wounds of the small intestine and two of the mesentery: operation: recovery.

The patient was a young German, aged 20, who was accidentally shot with a small revolver on the evening of October 30th, 1899. A doctor who was at once called to him found him in great pain, and administered a hypodermic injection of morphine, and took him to the Middlesex Hospital, where he was seen by Mr. Pearce Gould about an hour after the accident. The wound in the abdomen was 2 inches below the navel and 1 inch to the left of the middle line. There was still some pain; the respiration was easy, and the abdomen moved freely; pulse 96. The liver dulness was not obliterated; there was no dulness in either flank. No paralysis; 6 ounces of clear normal urine were drawn off by catheter. Under an anæsthetic the wound was explored and found to extend into the peritoneal cavity. This was freely opened and blood flowed out from it, but neither gas nor intestinal contents were observed. The intestine was examined, and four wounds apparently in the jejunum were found; three of these were perforating, the other involved the serous and muscular coats only. There was no visible escape of intestinal matter. These wounds were closed with Halsted's sutures of sterilised silk, and two wounds of the mesentery which were close by were also sutured. No other lesion was found. The peritoneal cavity was cleansed, the bowel returned, and the abdominal wound closed. The man made an uninterrupted recovery, and left the hospital well on December 4th. The bullet was found lying deep in his left buttock, and was left alone.

In commenting on this case Mr. Pearce Gould drew attention to the following points: (1) The multiple lesions produced by a single bullet; (2) the absence of symptoms of the lesions; (3) the necessity for exploration, even in spite of the absence of all symptoms, to determine whether the wound was perforative, whether any viscus or large vessel was injured, and, if so, to treat them. He emphasised the importance of the hypodermic injection of morphine immediately after the accident, both in relieving pain and shock, and in controlling the movements of the intestine and so lessening the chance of fouling of the peritoneum with germ-laden intestinal contents. The case illustrated the necessity for careful and thorough exploration of the abdomen (by operation) in all cases of perforating wound and severe contusion of the abdominal wall.

The President said that, although the routine administration of opium in these cases had, with reason, been discarded, it was quite a different thing to use the drug before the diagnosis was made and after it was made. In a case of abdominal injury by a bullet, for instance, it might be taken for granted that the intestine had been injured, and opium was most valuable, in view of the relief to suffering which it procured, especially on the battlefield. The absence of shock observed by Mr. Gould in his case was probably due to the fact that the patient was under the influence of morphine.

Mr. Barker remarked that the state of the patients, as to collapse, when first seen varied enormously even with the same kind of injury: some were absolutely "shocked," others not at all so. He related a case of his own in which one hour after the wound was received the patient was without shock; and he believed in Mr. Gould's case the man would not have shown any collapse even if no opium had been given. The results of operation depended largely on the time that had elapsed before treatment. If the case were seen at once he presumed that every surgeon would explore; but if some time had elapsed doubts as to the value of operation might be entertained. Small bullets with high velocity might pass through the abdomen without inflicting fatal injury. As to the use of opium in such cases he believed there was a tendency at the present time to keep it too much in the background.

Mr. Howard Marsh had lately seen two cases of abdominal injury:

(1) A boy, run over by a cab, exhibited no symptoms of injury when seen soon afterwards. Consequently no operation was done. Death ensued next day, and the necropsy revealed a ruptured colon. (2) A gentleman hunting fell on a heap of stones and was severely shaken. He remounted, rode home, and went the two following days to London. On returning home he became collapsed and died. *Post mortem* he was found to have ruptured the superior mesenteric artery causing gangrene of the bowel.

He thought exploratory operations would come to be done far oftener than in the past. A saline injection also was frequently a valuable procedure after the operation, to overcome shock.

Dr. Newton Pitt commented on the fact that veterinary surgeons punctured the large intestine through the abdominal wall with a large trocar without bad results ensuing. The human intestine also had been so punctured without causing fatal injury. Cases had occurred in the war of men having the abdomen perforated by the small Mauser bullets and yet recovering without any surgical operation. He believed such bullets might even wound the intestine without a fatal result necessarily ensuing.

Mr. Gould, in reply, said the patient had been in great pain before the morphine was injected, when the pain was quickly lessened without the production of narcotism. There was probably some special point which determined the difference in the amount of shock produced in various cases. In his own case the large plexuses of nerves in front of the spine were not hurt; this, perhaps, was the cause of the absence of shock. Saline injections might often be of service, but in this case they were not required. He considered it unsafe to puncture the human intestine with a trocar and cannula. In cattle, as he was informed, the puncture was sometimes made in the loin, where the intestine might possibly not be covered by peritoneum. As to the practice to be

followed in cases of bullet wounds of the abdomen, he thought the balance of advantage was rather on the side of making an exploration in every case.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. ANDERSON CRITCHETT, F.R.C.S.E., President, in the Chair.

Thursday, January 25th, 1900.

EXPERIMENTAL EXOPHTHALMOS AND ENOPHTHALMOS.

DR. WALTER EDMUNDS read a paper in which he remarked that there were three ways in which prominence of the eyes could be affected experimentally: (1) By acting on the sympathetic, either stimulating it or dividing it; (2) by the administration of certain preparations or drugs; (3) by operations conducted on the thyroid gland. With regard to the first, stimulation of the cervical sympathetic produced: (1) prominence of the eye; (2) widening of the palpebral fissure; (3) at first increase and later decrease of the intraocular tension; (4) erection of the hairs of the head. Division of the sympathetic produced the opposite effect. Cocaine was one of those drugs which produced proptosis, widening of the palpebral fissure, dilatation of the pupil, and decrease in the intraocular tension. Cunningham had shown that feeding a healthy animal on thyroid extract produced similar results. The author then showed photographs of monkeys and rabbits both before and after feeding on this substance. Exophthalmos after the administration of thyroid had once been observed in man by Beclère, where it appeared after excessive doses had accidentally been taken by a patient suffering from myxœdema. The third method of affecting the prominence of the eyes was by operations on the thyroid. Removal of the thyroid might produce either exophthalmos or enophthalmos, but in the monkey usually the latter. Numerous lantern slides were shown of animals in which this had been done, as well as drawings of animals in which the sympathetic had been divided. The author summed up his results by saying that the discussion of these phenomena was particularly interesting in its bearing on the pathology and treatment of Graves's disease; the fact that the most important eye symptom of Graves's disease could be produced by the administration of thyroid preparations certainly suggested that the eye affection was secondary to the goitre. He had not tried the effect of division of the sympathetic in feeding with thyroid extract, but with the administration of cocaine it diminished the effect produced. It therefore suggested itself that the exophthalmos might be benefited by division of the cervical sympathetic, and indeed the operation had been tried several times in man. The results were said, however, not to be very satisfactory, at least as far as the general disease was concerned.

MR. LAWFORD had reported one case of exophthalmos due to thyroid feeding; it occurred in a woman, aged 34, who had suffered from myxœdema for five years. She was treated with thyroid extract, and had greatly improved. Four years and a-half later she had some recurrence, and was again put on thyroid, and this time she developed severe exophthalmos, but her subsequent history was unknown.

MR. G. MACKAY mentioned a case he had seen of enophthalmos following an operation on the glands in the neck in which the sympathetic had evidently been cut or injured. He also had a case of extreme exophthalmos in which half the thyroid was removed and a good result followed.

MR. JESSOP mentioned a case in which a fatal result followed division of the sympathetic.

MR. JULER had seen in Paris a case of glaucoma in which the sympathetic had been divided; it produced many unpleasant symptoms without enophthalmos.

DR. BRAILEY made some remarks, and DR. EDMUNDS briefly replied.

A CASE OF A CICATRIX HORN GROWING FROM THE CORNEA.

MR. ARNOLD LAWSON read a paper on this subject. He said that a careful search through ophthalmological literature had failed to discover another example of this curious condition.

The patient was a female child, aged 8 years, a hydrocephalic idiot. The history given was that about one year previously a white spot had appeared on the right eye, and that the eye began to project. Six months later a growth was first noticed on the right cornea, and this had constantly increased in size. Latterly a white spot had appeared on the left eye. On examination of the eyes, there was seen a large conical tuberculated excrescence protruding between the lids of the right eye. It was half an inch in length, and its base attached to the cornea covering about four-fifths of its surface. The left cornea exhibited a yellowish infiltration just below the pupil over which the cornea was bulging; the anterior chamber was deep, the iris immobile, the tension slightly raised, and the eye quite blind. Both globes were very anæsthetic, and there was considerable muco-purulent discharge from a chronic inflammation of both conjunctival sacs. The growth upon the right eye was accidentally detached a few days after admission into the hospital, and it was then seen to have been attached to the cornea at the apex of a central staphyloma which was left covered by a fleshy soft core which had formerly been embodied in the centre of the growth. The cornea was entirely opaque, and the eye quite blind. After removal of the right eye a few days later, examination of the globe revealed a detached retina with evidences of chronic degenerative changes in all the various structures. The anterior chamber was completely abolished, the iris throughout its extent being firmly adherent to the back of the cornea, which was bulging centrally. The apex of the corneal staphyloma had evidently been the site of a large perforation which was closed by the fleshy granulations which formed the core of the growth. The growth itself measured ¾ inch from apex to base, and 1½ inch round its base. The interior portion was soft and crumbling, but the external layers were hard and horny, and cut with difficulty. A wedge-shaped piece was cut away from the growth, and specimens cut and stained with carmine. The microscope showed that the external layers consisted of several faintly-fibrillated strata of a dense homogeneous nature. The layers occupied about one-quarter of the entire thickness of the walls, the rest being entirely composed of small nucleated cells, those most external being stratified.

Adopting Mr. Bland-Sutton's classification of human horns, this growth would be an example of a cicatrix horn, the rarest of all varieties of horn, and which had been usually found in connection with the cicatrices of burns and scalds. The probable etiology in this case was an overgrowth of granulation tissue closing the perforation in the cornea, and which, owing to an unhealthy condition of wound and eye, which was anæsthetic and atrophic, had become exuberant, simulating exactly the condition known as "proud flesh" elsewhere. By a process of accumulation and heaping up the granulations gradually formed a cap over the cornea, whilst the external layers gradually became stratified and horny from the pressure of new growth from the central core and by the action of the air. The nature of the growth was evidence that the corneal epithelium bore no share in its production, and discounted the possibility that it might be due to a huge crust of inspissated conjunctival discharges.

Remarks were made by Dr. GRUBER, Mr. TREACHER COLLINS, and Mr. DEVEREUX MARSHALL.

GLAUCOMA FOLLOWING THE USE OF HOMATROPINE.

MR. SHEARS read notes of a case of acute glaucoma following a single application of homatropine:

A woman, aged 52, came to the Liverpool Eye and Ear Infirmary in October, 1899, for reading glasses. With her hypermetropia corrected her distant vision was nearly ⅔ of normal. One or 2 drops of homatropine, 4 gr. to the ounce, were put into the right eye. When she came again to the hospital a week later she had all the signs of acute glaucoma in this eye, and she could only just count fingers. Pain and vomiting and great loss of sight came on the same evening that the homatropine was used. Eserine and leeches were tried for two hours but without benefit. Iridectomy was then performed, with the result that the tension and sight were quite restored in ten days, and had remained satisfactory.

Mr. Shears was of opinion that no mydriatic should be put into the eyes of persons over 30 without careful consideration; that if homatropine were used it would be well to instil eserine before the patient left the hospital; cocaine followed by eserine was usually quite sufficient for ophthalmoscopic examination or the new pupil dilator—euphthalmine—would be found very satisfactory for this purpose. Very few cases were published of glaucoma after homatropine, and the accident appeared to be very rare.

CARD SPECIMENS.

The following card specimens were shown:—Mr. E. E. HENDERSON: Microscopic sections of growth from the upper palpebral conjunctiva.—Mr. A. Q. SILCOCK: Persistent hyaloid artery arising from a central coloboma of the choroid.—Mr. W. T. HOLMES SPICER: (1) Detachment of the choroid; (2) primary optic atrophy associated with diabetes insipidus.—Mr. L. V. CARGILL: Fibromata in eyelids.—Mr. DOYNE: (1) Peculiar appearance in cornea; (2) extreme case of essential shrinking of conjunctiva; (3) unusual case of striated keratitis.—Dr. STILL: Infantile cerebral degeneration with symmetrical changes in the macula.—Mr. JULER: Case of pemphigus of the conjunctiva.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.

At the general meeting on January 12th, Dr. BARCLAY BARON, the President, who was in the chair, showed an obscure naso-pharyngeal case.

A middle-aged man, after having a discharge of pus and blood from the naso-pharynx and deafness for several months, began to suffer from severe paroxysmal pain in the right side of the head, becoming gradually worse and more extensive. Later there was numbness of the skin of the same side of the face. Examination revealed a small, hard, circumscribed swelling, with a smooth surface in the upper part of the naso-pharynx.

After a few remarks by Mr. Mayo Collier, Mr. Wyatt Wingrave said that he detected a hard swelling apparently on the internal pterygoid plate, which was suggestive of a new growth.—Mr. J. Bark (Liverpool) related a case of painful spasm of the muscles on one side of the face cured by removal of a naso-pharyngeal polypus.—Mr. Wyatt Wingrave showed a case of lupus of the fauces with extensive ulceration extending down to the larynx, and much destruction of tissue. Dr. R. Woods (Dublin) expressed a doubt as to the case being lupus, and advised specific treatment. Mr. Mayo Collier gave reasons for similar views; and Mr. Wyatt Wingrave replied.—Dr. Dundas Grant showed (1) a case of emphysema of the orbit in a labouring man due to blowing the nose; (2) a case of laryngitis secondary to rhinitis; (3) a case of bridge-like synechiæ between the septum and the inferior turbinal body without ascertainable cause; (4) a case of lupus of the inferior turbinal.—Dr. Furness Potter showed (1) a woman, aged 47, with postnasal growths which he considered to be persistent adenoids; after giving his reasons for this view, he mentioned other cases of postnasal growth in adults which had proved to be malignant; (2) a case of a growth on each ventricular band in a man aged 39; (3) a case of extensive papillomatous growth of the vocal cords.—Mr. Atwood Thorne showed (for Dr. William Hill) a case of stammering in a youth. Dr. Dennis Vinrace thought that, the cause being neurotic, the treatment indicated was careful tuition, with avoidance of attempts at conversation when excited, and attention to the general health. Mr. Mayo Collier advised the removal of the adenoids present, and exercise for the thickened palate. Mr. St. George Reid observed that in some cases where the velum was sluggish and pendulous, and articulation indistinct, it was advantageous to remove a small piece of its posterior edge.—Dr. Brown Kelly (Glasgow) read a paper upon epistaxis from the ethmoidal veins. He reported several cases of severe epistaxis in which the stream of blood had been traced to the septum above the anterior end of the middle turbinal. He showed that the vessels ruptured were probably the anterior ethmoidal veins, and that these were closely connected with the intracranial circulation. The absence of valves in the veins and the pressure in the longitudinal sinus would allow of a profuse flow in a backward direction. Hæmorrhages from this source were easily checked by packing gauze between the middle turbinal and the septum anteriorly. Mr. J. Bark (Liverpool) observed that recurrent epistaxis in adults usually occurred in the position indicated by Dr. Kelly, and that a small plug inserted between the middle turbinal and the septum was effectual and caused little discomfort. Dr. R. Woods (Dublin) alluded to the constitutional treatment of such cases, supplemental to local measures. Mr. Mayo Collier and the President also joined in the discussion.—Dr. R. Woods showed a skiagraph of a foreign body in the œsophagus of a child, which was successfully removed.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Bennett May, F.R.C.S., President, in the Chair.

Thursday, January 11th, 1900.

Amputation at Hip-Joint.

Mr. Jordan Lloyd showed a thigh stump successfully removed by amputation at the hip-joint for rapidly recurrent periosteal sarcoma of the femur. The patient was a woman, 22 years of age, whose thigh had been amputated at its upper third four months previously for localised periosteal sarcoma of the internal femoral condyle. The amputation was done with a scalpel and no tourniquet was applied.

Enlarged Thyroid.

Mr. Jordan Lloyd showed a lateral lobe and isthmus of a parenchymatous glandular bronchocele successfully removed by thyrotomy from a woman 26 years of age for the relief urgent respiratory symptoms, occurring paroxysmally during more than a year.

Plague in Bombay.

Dr. Watkins-Pitchford read a paper on the second epidemic of plague in Bombay, and showed a number of lantern slides.

Monster.

Mr. Christopher Martin showed a monster (acardiacus and acephalus).

CLINICAL SOCIETY OF MANCHESTER.

Tuesday, January 16th, 1900.

Judson S. Bury, M.D., President, in the Chair.

The Prevention of Tuberculosis.

Dr. James Niven, who opened a discussion on this subject, said that the great reduction in the mortality ascribed to phthisis during the last fifty years, especially in the earlier decades of life, had been attributed to improved conditions of dwelling, drainage of the soil, improved standard of cleanliness, diminution of overcrowding, improved ventilation, lighting and cleansing of workshops, and diminution of the hours of work. To these factors might be added others, certainly no less important, such as the abolition of child labour, contrivances for the removal of injurious dusts, better and cheaper food, and cheaper clothing. Another set of indirect conditions making for betterment were those pertaining to the knowledge of disease, and especially to a knowledge of this disease. Although the influences just enumerated might confidently be expected to continue to exercise an effect on phthisical mortality, that influence would be limited, and there would be always counteracting forces at work, tending to the production of overcrowding, alcoholism, and dirt—each of them potent factors in maintaining the disease. It was certain that the indirect means of prevention were inadequate to reduce tuberculosis to a negligible quantity. Could we do better by direct means of prevention? The answer was that we could. The all-essential condition in the direct campaign against tuberculosis was an educated rigorous cleanliness. By the side of this condition, others fell so completely into the background, that they might for the present purpose be neglected. This educated cleanliness implied two sets of operations: (1) Those directed against allowing sputum (or other infective discharges) from consumptive or bronchitic persons to be dried and broken into dust; (2) those directed towards preventing the possible accumulation of such dust, should the direct interception of discharges fail through ignorance or inadvertence. How, then, were all ranks of society to be pervaded with a working belief in the necessity and efficacy of such measures, and in particular to bring them home to consumptive people and their relatives? For this purpose there might be said to be three main forces. Of these, probably the most powerful was the medical profession. No medical man should now be allowed to leave any medical school or to pass his final examination without a working knowledge of the measures by which he was obliged to counteract the propagation of tuberculosis from any person who might consult him. Further, the sooner the nature of an attack was perceived, the sooner would effectual measures of prevention be taken. Hence every medical practitioner should know how to examine discharges for tubercle bacilli, and he should also know how to diagnose obscure illnesses by the use of minimal doses of tuberculin. It was necessary to recognise, at the same time, that busy practitioners in the poorest quarters of our large towns would not have the time to give the instruction required, much less to see that it was carried out. In the poorer districts, then, the work of prevention would have to be done by other agencies. It was at this point that our second force came in—namely, the sanitary authority. The work of the sanitary authority was chiefly concerned with instruction and cleansing. The work of instruction had been carried on by the Manchester Corporation on a tolerably large scale. In three different years handbills had been distributed to every house in the city giving instructions in the precautions to be taken in presence of phthisis. The Ladies' Health Society had also given a great amount of instruction in the poorer districts. A great work of education had been carried on by

the medical staff of the Consumptive Hospital for many years, aided by leaflets prepared by Dr. Ransome. Not a few popular lectures had been given, and the subject had been of late frequently mentioned in the newspapers. There was no doubt that the general public were beginning to know more about it and to take precautions, although this would not apply to the poorest class. Young medical men ought to instruct the people by suitable lectures, which would render their own ideas precise and do much good. The sanitary authority was extending its sphere of instruction. Voluntary notification of phthisis had now been in force in Manchester for four months, and Dr. Harold Coates, was carrying out the administration which had ensued. In order to establish their methods and to advance with a sure foot they had requested notifications, so far, from public institutions only. During the four months they had had some 450 notifications. In each case reported, Dr. Coates visited the house, and saw that the requisite measures of disinfection were carried out, gave precautionary instructions, and investigated the etiology of the case when possible. Generally disinfection was carried out in their usual manner. When the patient could not be shifted from his room, the bedclothes all changed, and the bedclothes, etc., disinfected with steam as usual, the room was disinfected with solution of lime, and not with solution of chloride of lime. Fortnightly visits were generally paid by the visitors of the Ladies' Health Society, who saw that strict cleanliness was kept up. In this way the rooms and patients were started fresh, as regarded infection, all that was subsequently necessary was, not successive disinfections, but a sustained cleanliness. There had been no real difficulty, nor did he anticipate any if the present organisation were extended. Not only so, but what had really surprised him was that with, he thought, one exception the agents of house property had readily acceded to his request that they should agree to the disinfection of the house or of particular rooms. As they had to re-paper and sometimes to repair the rooms disinfected, the expense entailed was not inconsiderable. In the instance in which exception was taken, an explanation was found sufficient to remove all objection. The third force at their disposal was treatment in hospital. The difficulties in the way of this resource lay in the great expense which it would involve. A sanatorium for consumptives was of great value in the way of educating patients in the means and habits of personal prevention. What was even more wanted for direct prevention was an isolation hospital, which would receive not early cases but patients in a more advanced stage. Patients who were bedridden had a considerable objection to go to any home for dying cases—naturally, although they went, but very reluctantly. It would be an excellent thing if, with the sanatorium about to be provided for the treatment and cure of Manchester consumptives, there could be combined at the public expense, an isolation hospital in the same hospital grounds. There would then be no difficulty in getting suitable cases admitted. These would be selected as the result of notification from among those households in which the greatest benefit in the way of prevention could be conferred. There was now a strong feeling growing up, largely in consequence of the action taken at Liverpool, that the guardians of the poor should make suitable provision for consumptives. Such provision would necessarily be largely in the nature of isolation blocks, but might usefully be subdivided into a sanatorium and an isolation hospital. If this movement extended it was to be hoped that there would be no idea of pauperisation attached to the tuberculous poor, so that the benefit of these institutions might be extended to those who had not sought relief. Meanwhile it was to be hoped that a full response would be made by the medical profession to the request of the corporation for a notification of cases, so that they might know what hospital provision would be required, and on what shoulders it might best fall. This was, of course, only one of the results of notification, but it might prove to be one of great importance. He would, again, repeat that, in the interests of prevention, hospital provision for consumptives would, in his opinion, most usefully take the shape of a joint sanatorium and isolation hospital.

The President, Drs. T. C. Railton, H. R. Hutton, A. Wahltuch, T. Harris, W. J. Sinclair, E. Vipont Brown, took part in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

A. V. Macan, M.D., President, in the Chair.

Friday, January 5th, 1900.

Deciduoma Malignum.

Dr. W. J. Smyly read a paper on this subject. Having reviewed the literature of the subject, he said that observers were now almost unanimous in believing that this was a disease sufficiently distinct to merit separate consideration. They also agreed as to its clinical features, pathological appearances, and treatment; also as to its connection with pregnancy, and differed only as to their views concerning its histogenesis. He inclined to Veit's opinion that the disease was a sarcoma modified by pregnancy. He also described a case which had come under his own observation.

The patient, a multipara, was delivered of a hydatiform mole in December, 1898. She had repeated hæmorrhages until May 10th, when she had so profuse a hæmorrhage that she was reduced to a condition of profound anæmia. The uterus was dilated, and a quantity of material resembling placenta removed, which on microscopic examination proved to be deciduoma malignum. Putrefaction and septic fever followed, with pulmonary symptoms and empyema preceding radical measures. She lingered two months, and then died. There was no *post-mortem* examination. Dr. Smyly showed the microscopic specimens at the Edinburgh meeting of the British Medical Association, when they were pronounced by Dr. Sänger to be typical examples of the disease which he had described.

Dr. Purefoy said that the mole structure removed on the first occasion was of a nature not commonly seen in these cases. He thought it was mixed fleshy and hydatidiform mole. Scattered through it were distinct vesicles, evidence of vesicular degeneration being also present.

Dr. Smith was inclined to regard it as an ordinary sarcoma influenced by pregnancy.

The President referred to Pick's case, in which the metastasis of the ordinary hydatid mole was found not to be malignant. Pick considered that the fœtal structures were only accidental, and they might even form embolisms without being malignant. Opposed to Veit's opinion (which most people would agree with) was that which regarded it as carcinoma of the outer layers of the epithelium covering the villi.

Dr. Smyly, in reply, said the point about metastasis in cases of hydatidiform mole was one of extreme practical importance, because anyone who had not learned otherwise would think that when metastasis occurred the case was hopeless. But the metastasis might not be malignant; a woman might have benign metastasis in her lungs and recover after operation. Of course, if there were malignant metastases the case would be perfectly hopeless.

A Rare Form of Ulceration in the Female Urethra.

Dr. Purefoy said the close resemblance in aspect and clinical history between some forms of chronic syphilitic disease and others of a malignant nature had long been recognised—indeed, sometimes the effect of treatment by drugs must be observed before the differential diagnosis could be safely established. Especially was this observable in regions where cutaneous and mucous structures coalesced, and hence the external female genitals, as might be expected, furnished some of the best illustrations of this fact.

A young woman who recently was under treatment in the Rotunda Hospital complained of pain and soreness in the vagina, and on examination the following conditions were observed: The greater labia were of normal size, and healthy. On the inner surface of the left nympha a circular excavation existed, the edges sharp cut and overhanging, the base white cicatricial tissue. The entrance of the vaginal canal was closed by a morbid growth, with nodulated surface of a deep-red colour, which, on close examination, proved to be an outgrowth hanging from the edge of an enormously-dilated urethra; indeed, the lower third of this passage was so widened and distorted that considerable difficulty was experienced in passing a catheter into the bladder. Strange to say, the patient, in spite of this, did not suffer from incontinence of urine. In the vestibule and adjoining parts an indolent shallow ulceration was observed, alternating with patches of white cicatricial tissue marking its former course. The late Dr. West had observed cases closely resembling, if not identical, with the one related. West said: "The affection has come six times under my observation, twice in married women, who acknowledged to having suffered from venereal disease, and four times in women of unchaste life, one of whom was at the time suffering from a secondary syphilitic eruption. In each instance the patient alleged that she had either been aware of the ulceration or had for some time suffered from painful and difficult micturition. Twice the disease was associated with excrescences from the mucous membrane of the urethra. The ulceration appears to begin at the orifice of the urethra, extending thence inwards towards the bladder, producing in its course a great widening of the canal and a patulous condition of

its orifice, so that the finger tip can easily enter it, while the surface is the seat of large indolent granlations which secrete a small quantity of muco-purulent fluid, are not generally very tender to touch, but highly sensitive to the passage of urine.

Dr. Purefoy had met with this ulceration independently of any other disease in these parts, but also in cases where previous ulceration had destroyed the clitoris and the nymphæ, and had seen it associated with unhealthy ulceration about the posterior commissure of the labia and the entrance to the vulva, as also with those small condylomatous growths about the vulva often met with in cases of vascular tumour of the urethra. When the disease had advanced far or had been of long standing, the cellular tissue beneath the urethra usually became considerably thickened, and he had seen the lower wall of it represented by a dense cartilaginous substance, not unlike one of the lips of a hypertrophied and partially procident cervix uteri, while on two occasions he had been able to carry his finger along the whole length of the canal into the bladder. Even when not far advanced this disease caused difficulty in the retention or actual incontinence of urine, while, when it had extended along the whole canal and left its aperture permanently patulous, the sufferer might be afflicted with complete incontinence.

In one such case he had seen, the patient, aged 22, had suffered from the infirmity for many months. She was afforded some slight relief and comfort by wearing a pessary, which, by pressing against the urethra, partly closed it. In another such case the ulcerated canal was so widely open that two fingers could be easily passed into the bladder.

In its earlier stages this distressing affection admitted of some amelioration by local measures—the application, for instance, of oxide of zinc in the form of ointment, or lotion with liquor plumbi; and, even in the advanced stage, attended with widening of the urethra, the use of strong nitric acid, or the actual cautery, might bring about such cicatrisation and attendant contraction of the diseased parts that control of the bladder might be regained. Some facts in the history of his patient, as well as some scaly patches on the face and neck afforded such presumptive evidence of a syphilitic taint that he prescribed a combination of bichloride of mercury and iron in mixture, and its use was followed by marked improvement, though he could not be sure of its permanence. In many points these cases bore a close resemblance to that formidable disease of the female genitals first described in 1849 by M. Huguier, and to which he gave the name "lupus hypertrophicus, and perforans." This affection was very rare. Dr. Purefoy had himself only once seen it, and medical literature did not afford records of more than about 40 cases in all. In the admirable *Memoirs on Diseases of Women*, by Dr. M'Clintock, excellent illustrations of some of them would be found.

Dr. Smith asked what was the difference between this condition and prolapse of the mucous membrane of the urethra?

The President asked whether the orifice of the urethra was in the centre, because the same idea had occurred to him as to Dr. Smith. The ulceration seemed to be very much like the ulceration that took place in prolapse.

Dr. Purefoy, in reply, said that the disease had no character in common with prolapse. Some of the tissue was whitish, and of almost cartilaginous hardness. The outline of the urethal canal was perfectly distinct. The tissue was entirely different from the ordinary mucous lining of the urethra, and was associated with and continuous with cicatricial tissue.

Specimens.

Dr. Purefoy showed a case of ectopic gestation removed by vaginal cœliotomy with microscopical section showing chorionic villi.—Dr. Alfred Smith showed a multilocular ovarian tumour which he removed from a patient aged 35. The patient was seized with severe abdominal pain and acute distension, with much distress. Examination under ether demonstrated uterus free, and a tumour the size of a full-term uterus, which would not come down to the pelvis; no pedicle could be made out. Diagnosis doubtful. Operation revealed a tumour distended with blood, pedicle acutely twisted. No adhesion had formed. Recovery.—Dr. Heard (Monkstown) exhibited a specimen of syphilitic placenta. Dr. Montgomery proposed that the specimen be referred to the Committee of Reference for decision as to whether it was syphilitic or not. After a discussion in which Drs. Purefoy, Smith, and Jellett took part, the proposition was seconded by Dr. Knott, and adopted.—Dr. Glenn exhibited a specimen of intraligamentous myoma removed by cœliotomy.

Dermatological Society of Great Britain and Ireland.—At a meeting on January 24th, Dr. H. Radcliffe Crocker in the chair, the following cases were shown by the President: (1) A boy of 8 years of age with prurigo, the disease being limited to the face and hands; (2) a case of alopecia in a girl aged 7; the disease followed an attack of microsporon ringworm.—Dr. J. H. Stowers showed a woman with a dermato-syphilide of nose and adjoining parts of face. He brought the case forward to exhibit the difference between lupus vulgaris of the nose and a dermato-syphilide affecting the same part.—Dr. D. Walsh sent a case of nail disease in a woman; the symmetry of the condition was remarkable.—Dr. F. Rufenacht Walters sent a case of psoriasis in a child.—Dr. Arthur Shillitoe brought a man with a widespread symmetrical eruption which was diagnosed as a discoid form of eczema seborrhoicum.—Dr. P. S. Abraham sent (1) a young woman suffering from leuconychia. Together with the condition of the nails she exhibited a band of alopecia running along the margin of the forehead; (2) a case of lichen planus in a girl 10 years old.—Dr. T. D. Savill brought forward a case of macular leprosy in a boy. It had been exhibited at a previous meeting. The pigmentation had increased. In connection with the chaulmoogra oil treatment of leprosy, Dr. Crocker remarked that the drug should be given in large doses before it could benefit the patient; up to 100 minims or even in larger amounts per diem. Friction with the oil seemed in itself to have a good effect.—Dr. Graham Little showed (for Dr. Still) a case of psoriasis in a girl.—The cases were discussed by the President, Dr. J. H. Stowers, Dr. Campbell Williams, Mr. Pernet, Dr. T. D. Savill, Dr. Arthur Shillitoe, and Dr. W. B. Warde.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

A. G. Barrs, M.D., Vice-President, in the Chair.

Friday, January 12th, 1900.

Fœtid Expectoration.

Mr. Stanley Dodgson read a paper on this subject.

He related the case of a woman, aged 30, who had cough, fœtid expectoration, and occasional hæmoptysis. It was of seven months' standing, and dated from an extraction of teeth under ether. The patient had a temperature of 102° F., and was expectorating about ℥xx of very foul sputum daily. The only physical sign was impairment of resonance at the left base. Creosote inhalations on alternate days were given for two months. At the end of that time the temperature was normal, and the cough and fœtid expectoration had disappeared, while the patient had put on weight. She had remained in good health during the three succeeding months.

A discussion followed, in which Dr. H. J. Campbell, Dr. Chadwick, Dr. Solly, Dr. Trevelyan, and Dr. Barrs took part. The chief points raised were (1) the value of creosote given by the mouth as against the so-called creosote chamber, and (2) the difficulties of diagnosis in some cases of fœtid expectoration.

Mr. Stanley Dodgson replied.

Removal of a Submucous Fibroid by Section of the Uterus.

Dr. Braithwaite read a paper on this subject, which is published at p. 251.

Dr. E. O. Croft and Dr. Hellier made remarks; and Dr. Braithwaite replied.

Volvulus in Association with Hernia.

Mr. Lawford Knaggs said that four distinct groups could be recognised, namely: (1) Cases in which the neck of the volvulus was within the sac or close to the ring; (2) cases in which the hernial contents were implicated in a volvulus, but where the neck and some of the affected coils lay within the abdomen; (3) where the volvulus was produced within the abdomen upon the reduction of the hernia; (4) where a volvulus occurred within the abdomen from some predisposing condition more or less directly connected with a hernia. All the groups possessed features of much interest, but Mr. Knaggs only dealt with the second group, in which the cases were of unusual gravity and importance.

Mr. Littlewood discussed the paper, and Mr. Knaggs replied.

Cases and Specimens.

The following cases and specimens were shown: Mr. Edward Ward: (1) Ruptured spleen and kidney; (2) Ovarian tumour.—Dr. Barrs: (1) Cases of amyotrophic lateral sclerosis (specimen); (2) cancer of liver; (3) case of hydropneumothorax with typical succussion splash.—Mr. W. H. Brown: (1) Mediastinal growth; (2) unusual fracture of clavicle; (3) rupture of common femoral (patient shown).—Dr.

HELLIER: Carcinomatous uterus removed *per vaginam*.—Mr. LITTLEWOOD (1) Case of suprapublic lithotomy with prostatectomy (patient aged 70) (2) case of compound depressed fracture of skull (patient violent and delirious for a month); (3) tonsil and glands removed for squamous epithelioma.—Dr. GORDON SHARP: Four cases illustrating after-effects of diphtheria.—Mr. B. G. A. MOYNIHAN: Case of extensive tuberculous disease of ankle and foot treated by iodoform injection.—Dr. TREVELYAN: A specimen of hæmorrhage into the pons causing sudden death.—Mr. MAYO ROBSON: (1) Papilloma of small intestine causing intestinal obstruction; (2) sarcoma of the soleus muscle; (3) tuberculous kidney.—Mr. LAWFORD KNAGGS: A case of erosion of ankle for tuberculous disease by four vertical incisions (Clutton's method).

THE LONDON POLYCLINIC.

THE VARIOUS FORMS OF LUPUS IN THEIR RELATION TO TUBERCULOSIS.

THE second meeting of the Standing Committee for the Investigation of Tuberculosis was held at the Medical Graduates' College, 22, Chenies Street, on Wednesday, January 24th.

Mr. JONATHAN HUTCHINSON, who made the first communication, said that their main subject for consideration was whether and to what extent external tuberculosis of the skin was connected with tuberculosis of the internal organs, and what light the visible processes in the one could throw on the concealed processes of the other. It was assumed that the morbid process known as lupus had a direct connection with the tubercle bacillus. The differences in the several recognised forms of lupus were, he believed, to be explained by differences in the particular structure of the skin which was implicated, the bacillus first beginning its action in the perivascular spaces in lupus erythematosus, in the sebaceous glands in lupus sebaceus, and in the corium in lupus vulgaris. The conformity to type of the different forms probably depended on a symbiosis between the tubercle bacilli and some special elements of the skin. The relation of lupus vulgaris to tubercle had been made abundantly clear by many experiments; for example, the setting up tuberculosis of the skin by inoculating it with the apple-jelly substance. On the other hand, the evidence of the tuberculous nature of lupus erythematosus was far less complete. The bilateral symmetry of lupus erythematosus seemed to depend on the fact that it began in the middle line, on the nose, and spread equally on both sides. Its spread was limited to the head, upper extremities, chest, and shoulders, apparently because its exciting cause—the tubercle bacilli in the perivascular spaces—could not reach far beyond their position of origin. Cases of lupus erythematosus always lasted many years, spreading all the time; but it tended to die out in the end, in this respect contrasting with lupus vulgaris. While lupus erythematosus was often associated with tuberculosis in near relatives and with other manifestations of tuberculosis in the patient, those afflicted with lupus vulgaris very rarely exhibited such manifestations and scarcely ever died of phthisis. Both forms of lupus seemed to have a distinct relation with chilblains, and he had observed that injections of tuberculin had caused the chilblains of patients to inflame. In cases of multiple lupus the multiplicity of the foci was always developed during the first six months of the disease, old standing patches seldom if ever showing any infectivity, although they usually continued to spread at their borders. It was probable that the infection of different parts was not by the blood, but external through the agency of insects or the patient's nails. The temporary character of the infective power might depend on the co-operation of some other organism with the tubercle bacillus. There was a remarkable aggresiveness of lupus vulgaris in the senile periods of life. It was a matter for debate whether tuberculous infection always occurred in lupus or that some mechanical or other injury to tissues holding latent the tubercle bacilli caused them to become active. The majority of the cases of lupus erythematosus, according to his experience, began with a sunburn of the bridge of the nose, and the direct cause seemed to be a chemical irritation, the lupus spreading from the erythematous patch so produced. The recurrence of lupus in parts which for possibly twenty or thirty years had appeared quite sound might be taken to indicate that the tubercle bacilli could take on a resting or latent existence.

The discussion was adjourned until Wednesday, February 7th.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—At a meeting on January 15th, Mr. HENRY E. CLARK, Vice-President, in the chair, Drs. T. K. MONRO and CHARLES WORKMAN showed a heart with stenosis of the mitral, tricuspid, and aortic valves, with an old abscess in wall of right ventricle.

The patient was a woman, aged 27, who eight years before had suffered from "cold in the chest" followed by rheumatic pains in the legs. From that time she had continued liable to winter cough, while breathlessness on exertion and later palpitation of the heart had supervened. She was admitted to the Royal Infirmary on account of breathlessness and swelling of the abdomen and legs. She died three weeks after admission, apparently through weakness brought on by vomiting. In addition to the widespread lesion of the endocardium, a small abscess cavity was found on the posterior wall of the right ventricle. This contained greenish caseous pus and some calcareous material. The contents of the abscess presented Fraenkel's diplococcus on cultivation. The lungs presented some passive congestion, and the liver, spleen, and kidneys were similarly effected.

The case seemed to Dr. Monro to be one of recovery from ulcerative endocarditis, death being due to cicatricial valvular lesions.—Drs. R. BARCLAY NESS and ALEC. R. FERGUSON showed a heart in which mitral and tricuspid stenosis existed; also the brain from the same case, in which the right internal carotid artery was occluded by embolism.

There was a history of the patient having suffered from breathlessness and palpitation on exertion since the age of 9 years. She was aged 28 years when she died. Ten days before death she had a splenic infarction, and death was due to cerebral implication. The embolus was found near the termination of the internal carotid artery at the base of the brain.

—Dr. BEATSON showed (1) multilocular cystoma of left ovary from a patient, aged 67. The tumour on section appeared to have the characters of a carcinoma; (2) a similar tumour from right ovary of a patient aged 35. This growth consisted of smooth-walled cysts, with cylindrical epithelial lining.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 18th, the President, Dr. BURGESS, in the chair, Dr. ARTHUR HALL introduced a case showing remains of vaccination pustules on "chapped hands" in a girl aged 15 who had not previously been vaccinated. The patient had been nursing a recently vaccinated baby about a month previously.—Dr. VINCENT showed a specimen of adenoma of the kidney from a patient who had died of apoplexy.—Dr. RISELEY read notes of a case of abscess of the brain following injury to the eyelid.

The patient was a boy aged 1 year, who was admitted to the Royal Hospital, Sheffield, on October 20th, suffering from an abscess in the left upper eyelid; the lid was very prominent, dull red and glazed looking, and there was a small wound with sloughy edges and distinct fluctuation. Three weeks previously the child had run a rusty sharp-pointed file-maker's tool into the eyelid for about an inch. The wound did well for a time and then began to swell up. The wound was incised transversely, and an excessive amount of pus escaped, and on introducing the finger bare bone was felt. The wound was plugged with iodoform gauze. The temperature remained subnormal, and the child apparently well till the second night, when meningitis set in; the temperature rose to 100°, and the child died within twelve hours of the onset of symptoms. Towards the last the eyeball could be seen apparently normal. There was escape of cerebro-spinal fluid from the wound. On *post-mortem* examination a fracture of the orbital surface of the frontal bone was found. Lymph covered the brain on the upper and under surfaces. There was an abscess on the under surface of the frontal lobe the size of a walnut communicating through the fracture with the wound of the lid. The abscess cavity contained a little pus and some iodoform crystals, and was lined by pyogenic membrane.

—Dr. N. BARDSWELL read a report on eight months' trial of the sanatorium treatment of phthisis at the Sheffield Royal Infirmary. Accommodation had been made for twenty patients, but the conditions under which the trial had been made were disadvantageous. In the grounds hammock chairs protected by screens, etc., were provided for the patients and a revolving shelter had been erected for accommodation in bad weather. The routine treatment had been for the most part modelled on that followed at Nordrach. Apyrexial cases spent the whole day in the grounds; those with pyrexia lay by open windows, the wards being well aired throughout the night. Three chief meals were given, namely, at 6 A.M., 12.30, and 7 P.M. Extra butter, milk, and eggs being added to the infirmary "full diet," the diet being modified for individual cases when necessary. Carefully regulated walking exercise was allowed in cases with a temperature neverabove 100.2°. Pulmonary gymnastics were also employed in convalescing cases, systematic massage replacing exercise in bad cases. Practically no medicines were given, except bitter tonics and cod liver oil and malt. Temperature was taken every four hours in the axilla, the pulse and respiration rates were recorded night and morning, the sputum was measured and recorded daily in drachms,

and the weight was recorded weekly. In all 30 patients had been treated, 18 of them being still in the infirmary. The cases were unselected. By far the best results had been obtained in patients with a small amount of active disease and good general condition. Out of 17 such cases 5 had been nearly cured and had returned to suitable work, and the rest were very much improved in every respect. Cases with extensive active disease and severe constitutional disturbance and those with phthisis laryngea had done badly, half of them dying and the rest improving in the summer to remain stationary and to relapse in the winter. As far as the Sheffield Infirmary was concerned nearly all patients improved considerably under treatment from April to September, but during the winter months all cases, except those with small lesions or those who were well advanced towards convalescence either ceased to improve or became worse.

Birkenhead Medical Society.—At a meeting on January 12th, Dr. H. Nazeby Harrington, President, in the chair, Dr. T. B. Grimsdale, of Liverpool, read a paper on peritonitis in the female. After briefly discussing the symptoms and diagnosis, cases were related in which operation had been performed.

The conditions found at the operation were: Solid ovarian tumour with twisted pedicle, localised collection of pus containing pure culture of staphylococci, tuberculous pyosalpinx with tuberculous peritonitis, large localised peritoneal blood cyst, ruptured ovarian cyst with four months' pregnancy, ruptured tubal pregnancy at tenth week, subperitoneal fibroid tumour of uterus in an old woman of 67. In all but the last case the symptoms led to a clinical diagnosis of acute peritonitis being made; in the last case chronic serous peritonitis was diagnosed. The evidence of peritonitis at the time of operation was either the presence of adhesions or the intense red colour of the peritoneum.

If the presence of microbic infection were insisted upon as a *sine quâ non* of peritonitis, it was possible that some of these cases should not be considered peritonitis at all from a pathological standpoint. The clinical diagnosis, however, was the important point from the side of treatment. In cases of peritonitis the importance of rectal or vaginal examination was insisted upon as a point of great importance in helping to discover the underlying condition which gave rise to the attack of peritonitis.—A discussion ensued, in which Dr. W. Floyd-Temple and the President took part; and Dr. Grimsdale replied.

Forfarshire Medical Association.—At a meeting held in University College, Dundee, on January 10th, Dr. Templeman, Vice-President, in the chair, Professor Kynoch showed a child from whom he had removed a renal sarcoma three years before by laparo-nephrectomy. Six other cases of laparo-nephrectomy on children under 2 years of age had been reported as alive and well three years after operation. Although only 5 per cent. of all reported cases had recovered, the chance of a cure ought to be offered. Drs. Buist and MacVicar also spoke.—Dr. McGillivray showed (1) a boy with rupture of the choroid; (2) a patient who after injury had suffered from a dilatation of one pupil which he was inclined to consider as due to irritation—an irritation mydriasis.—Dr. MacVicar showed a patient with a large cystic swelling which extended from the anterior border of the sterno-mastoid to the middle line, with branching processes under the same muscle and up into the floor of the mouth. The fluid was viscid and clear, and when it escaped by the mouth had a sweetish taste. It appeared to be a branchial cyst, and was of interest, as such cases had been known to assume an epitheliomatous character.—Dr. Gray showed, for Professor McEwan, specimens of (1) fracture, base of skull; (2) epithelioma, tongue; (3) limb from a case of senile gangrene.—Dr. Gray showed a cast of an arm with lipomata.—Professor Kynoch illustrated by a painting an unusual pigmentation of the central linear cicatrix, as well as the stitch scars of a case of ovariotomy he had performed during pregnancy. A scar of two years' duration on the breast had remained unaffected. He asked whether the condition was due to the ovariotomy or to the delicate skin, and in relation to this mentioned that Boxall had reported a case in which the scar left after removal of a dermoid had become pigmented during a subsequent pregnancy.—Dr. Buist had seen a like scar pigmentation during a pregnancy following immediately after the removal of one ovary.—Professor Kynoch showed a multilocular ovarian cyst, and remarked on the few adhesions present, notwithstanding the fact that part of the cyst had been ruptured by an accident some time previously.—Professor Marshall and Dr. Buist added some comments.—Dr. MacVicar showed: (1) An ovarian cyst which, in view of the clinical history and the naked-eye and microscopic appearance, seemed to be an abscess of the ovary; (2) a vermiform appendix with the lumen practically occluded.—Drs. Buist and Kynoch discussed some of the points raised.

North of England Obstetrical and Gynæcological Society.—The annual meeting was held on January 19th at the Owens College, Manchester. Dr. Hellier (Leeds) succeeded Dr. Donald (Manchester) as President.—Dr. Lloyd Roberts described a case of suppurating intraligamentous cyst, successfully removed by abdominal section. He discussed the technical difficulties of enucleating such tumours, and the manner in which they might become aseptic. Remarks were made by Drs. Donald, Walter Martin, Briggs, Davies, and the President.—Dr. Fothergill showed specimens of exomphalos, pseudo-anencephalus, ovarian cyst with unusual history, and a drawing of hæmatoma vulvæ. Remarks were made by Dr. Roberts.—The President showed a microscopical section of epithelioma vulvæ.—Dr. Walls related a case of expulsion of a dermoid cyst *per rectum* during labour. He showed the specimen, with microscopic section, as an ovarian dermoid. The tumour had apparently been forced downwards by the advancing head till the rectum gave way before it, thence it was delivered through the anus. When Dr. Walls saw the patient, a few days after labour, the longitudinal slit which the tumour had made in its passage to the rectum was distinctly apparent to the finger. The patient made an excellent recovery. Remarks were made by Drs. Buckley, Briggs, Donald, Roberts, and Walter.—Dr. Rumboll read a paper entitled One Hundred Cases of Opening the Abdominal Cavity. He specially described several cases of gynæcological interest, and concluded by discussing the questions of (*a*) the removal of "cystic ovaries," (*b*) abdominal drainage, (*c*) closure of the abdominal wound, and (*d*) after-treatment. Remarks were made on these points by Drs. Roberts, Fothergill, Donald, Davies, Briggs, Walter, and the President.

Glanders in Cuba.—We learn from a paper by Drs. Acosta and Davalos published in the *Medical Record* of New York that for years past glanders has been very prevalent in Cuba, and that all attempts to diminish its prevalence were defeated owing mainly to bribery of inspectors and others. As many as twenty or thirty deaths occurred among human beings annually, and it seems that the measures as yet taken by the new masters of the island do not appear to have been very effectual. There is indeed a competent and honest inspector, and a very good set of municipal ordinances, but the inspector has not sufficient power and the ordinances are not enforced. There is a hospital, which the authors from whom we quote prefer to call a lazaretto, to which infected or suspected horses can be sent, but the building is utterly unsuited for its purpose, and the inspector declares that it is the greatest focus of infection.

The Société de Biologie, Paris, recently celebrated its jubilee at a special meeting at the Sorbonne, over which the Minister of Public Instruction presided. The first President of the Society was Pierre Rayer, the first Vice-Presidents were Claude Bernard and Charles Robin, and one of the four Secretaries was Brown-Séquard. At the jubilee meeting the present President of the Society, M. Bouchard, gave an address upon the work and character of the founders of the Society. He was followed by M. Gley, the Secretary of the Society, and by M. Leygues, of the University of France. Addresses were then given by the foreign delegates, who were Professor Blumenthal, of Berlin; Dr. Heger, of Brussels; Dr. Prévost, of Geneva; and Dr. Augustus Waller, of London. Representatives of the provincial faculties of France also spoke.

Presentation.—Dr. N. J. M'Kie has been presented with a silver rose-bowl by the pupils of the ambulance class which he instructed at Newton-Stewart.

REVIEWS.

SOME RECENT BOOKS ON NEUROLOGY.

DR. WILLIAMSON'S work, in which he endeavours to present a more detailed account of spinal syphilis than is generally to be found in textbooks of medicine,[1] is modest in its scope. The account is limited to spinal affections resulting from acquired syphilis; the rarer forms of spinal diseases following congenital syphilis are not dealt with. It is now recognised that two pathological schools exist which are in a sense opposed to one another; for the one the syphilitic lesions of the central nervous system are primary, and start in the neuron; for the other the morbid process starts from the non-nervous tissues—blood vessels, membranes, or neuroglia. Dr. Williamson places himself in the latter class, and believes that the more carefully the morbid anatomy of spinal syphilis is studied the more clearly is it shown that the morbid changes begin in the blood vessels and connective tissues. The statistics quoted show that spinal syphilis in its pronounced and recognisable forms is usually met with within five years of infection, 17 out of 27 cases occurring within this period. In two cases the onset of symptoms began in less than twelve months. The description of symptoms under such headings as syphilitic disease of the vertebræ, pachymeningitis and leptomengitis, arteritis and thrombosis, myelitis, etc., is careful and concise. "In all cases of spinal syphilis, before concluding that sensation is unaffected, it is important to examine the sense of temperature very carefully, especially the sensation of cold." The account given of Erb's syphilitic spinal paralysis is excellent. The concluding clinical chapter deals briefly with the interesting subject of "syphilis and tabes and pseudo-tabes," on which detailed and accurate knowledge is still wanting. Judicious observations on treatment bring the work to a conclusion. This little volume is evidently the outcome of careful and prolonged clinical observation, and the illustrations accompanying it, though small in size and somewhat lacking in fineness of detail, fulfil the needs of an elementary work of this description.

DR. ALEX. MORISON has reprinted the six lectures which he has given before the College of Physicians in Edinburgh (1897-98) in a handy volume.[2] The opening chapters deal concisely with the anatomy and histology of visceral nerves, and much of the recent work of Dogiel, Kölliker, and others made with Golgi's method is rightly laid under contribution. Dr. Morison has worked at the histology of the nerves in the heart and the uterus, and reproductions of microphotographs are given in illustration of the text. The lectures are rather unequal in character. The third lecture, for instance, on the physiology of visceral innervation, is too discursive. A tendency to indulge in rhetoric and poetry is observed in this and in some subsequent lectures. Lectures IV and V deal with the pathological side of the subject, and travel over a good deal of ground; thus, among other points, they refer to such subjects as visceral nerve endings, cardiac pain, vasomotor innervation, respiration, Graves's disease, etc., from which it will be seen that the scope of the lectures is wide. A systematic and more thorough treatment of a few subjects would probably have proved more valuable. The illustrations reproduced from microphotographs constitute a valuable portion of the work, and are on the whole good, and several pulse tracings are given. The concluding lecture deals with the subject of body and mind, which lends itself well to psychology and metaphysics. The brain is looked upon as a viscus—a view which would be hard to reconcile with the teachings of modern neurology—and the relations of function to cortical structure are expounded elaborately. "Cerebral memory," we are told, may be impressional and conclusional, that is, the automatic record of impressions received through the senses, or the records of the results of that inward digestion of such impressions by the recepto-retento-motor process we call thought or reasoning, in the exercise of which more cerebral organules than one take place." And again: "The polymorphous cell with its universality of axonic direction and equal universality of dendritic receptivity is the type of that retractive and connective organule the repletion and utilisation of which is the mainstay of mental life." In a brief appendix reference is made to the subject of the innervation of the cranial vessels. The work as a whole has fair merit, and displays ability, though to a very unequal extent, in its various parts.

The work of Drs. SACHS and FREUND on traumatic neuroses[3] is based upon the records of several thousand cases of accident which have come under their observation. It is a work of very unequal merit. The classical work of Kocher has been very largely drawn upon, and many of his conclusions, which are still open to debate, are tacitly accepted. Many diseases of great importance, such, for instance, as that interesting condition to which Mr. Betham Robinson has recently called attention, traumatic birth palsy, are dealt with in a brief and wholly unsatisfactory manner. A feature of the work worthy of special commendation is that dealing with the relation of various psychical disturbances to injuries of the brain and spinal cord. The subject is difficult, but full of interest, and the account given by the authors is complete and satisfactory. It is, moreover, illustrated by reference to many cases of considerable interest. The drawings are altogether trivial, and the index is inadequate, occupying barely four pages of large print. An appendix contains a copious and very useful list of references.

Among the people of highest intellectual and moral development who, because of that development, present the greatest variety of nervous disease, there is much reserve, and properly so, in speaking of the sexual functions. Many patients are very ignorant as to those functions; many others will not speak the truth about them. From these causes it results that our knowledge as to the effects of sexual irregularities is based more upon the opinions of individuals than upon collected facts. Our knowledge is certainly not so ample as to justify Dr. LÖWENFELD[4] in devoting so many pages of print to its display. His work is a collection and discussion of opinions. The author has been at great pains to bring together the views of many who have paid attention to the subject, and had special opportunities for forming a judgment. He compares and criticises them, and expresses his own views, which seem to us generally in accordance with common sense and experience. Broadly speaking, he thinks that sexual excesses and irregularities are not common in well-developed and robust persons; and that when such persons do fall into such excesses or irregularities, they seldom carry them to any great extent, and therefore seldom suffer much in health from them. But in badly-developed subjects, who inherit tendencies to functional nervous disease, sexual aberrations are common, and in them often do much harm by further weakening an already feeble nervous organisation. Dr. Löwenfeld's advice as to the prevention and treatment of sexual divagations is on the whole sound and rational; quackery, electrical and other, is condemned, and stress is laid on moral discipline and a healthy mode of life. Although, as will be inferred from what we have already said, the subject is very diffusely treated, we must add that the author does not descend into pornographic detail. Those who want to find out the opinions of specialists on the matter in question will find this work useful.

Professor W. VON BECHTEREW has been long known as one of the most energetic workers in neurology, and as a voluminous writer on nervous anatomy, pathology, and therapeutics. His new volume[5] is not less than double

[1] *Syphilitic Diseases of the Spinal Cord.* By R. T. Williamson, M.D.Lond., Medical Registrar, Manchester Royal Infirmary, etc. Manchester: Sherratt and Hughes. 1899. (Demy 8vo, pp. 134. 4s. 6d.)

[2] *On the Relation of the Nervous System to Disease and Disorder in the Viscera.* By Alex. Morison, M.D.Edin. Edinburgh and London: Young J. Pentland. 1899. (Demy 8vo, pp. 132. 7s. 6d.)

[3] *Die Erkrankungen des Nervensystems nach Unfällen, mit besonderer Berücksichtigung der Untersuchung und Begutachtung.* [The Traumatic Diseases of the Nervous System.] Von Privatdocent Dr. Heinrich Sachs and Dr. C. S. Freund, Nervenärtze in Breslau. Berlin: H. Kornfeld. 1899. (Roy. 8vo, pp. 580, 20 illustrations. M.15.)

[4] *Sexual-leben und Nervenleiden: Die nervösen Störungen sexuellen Ursprungs* [Sexual Life and Nervous Diseases: The Nervous Disturbances of Sexual Origin). Von Dr. L. Löwenfeld, Specialarzt für Nervenkrankheiten in München. Zweite Auflage. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1899. (Royal 8vo, pp. 270. 5s.)

[5] *Die Leitungsbahnen in Gehirn und Rückenmark.* [The Conducting Tracts in the Brain and Spinal Cord.] Von W. v. Bechterew, Professor in the Royal Medical Academy, Director of the Psychiatric Clinic at St. Petersburg. Second Edition, completely revised and enlarged. German translation by Richard Weinburg. Leipzig: Arthur Georgi. 1899. (Roy. 8vo, pp. 692, 583 illustrations and 1 large coloured plate. M. 17.)

the size of the first edition, and the amount of original work embodied in it is wonderful. Much of the work is based on researches which have been carried out by the author himself or by his pupils. But the claims and discoveries of others are not ignored. Indeed, Bechterew is singularly catholic and comprehensive in his scope, and admirably just to his fellow-workers. The book is not one for the general student of neurology, but is rather a volume to be consulted by the specialist and the original worker. In these respects it is more advanced and the details and facts more minutely dealt with than in the familiar *Anleitung* of Obersteiner. The early chapters deal with the spinal cord, and cover 112 pages. The pathways and destinations of the posterior spinal roots and the tracts and fibres related to the intrinsic cell groups of the spinal cord are minutely dealt with. Many facts elucidated by comparative anatomy are laid under contribution. This part of the work can only rank second to the corresponding volume in the classical *Gewebelehre* of Kölliker, with which it possesses many features in common. The minute anatomy of the tracts in the bulb, pons, cerebellum, and basal ganglia are successively dealt with. This is a field of neurology which has been elaborately explored and cultivated by Meynert and von Gudden, Forel and von Monakow, Flechsig and Edinger, Kölliker, Déjerine, and the author himself, while more recently the genius of Ramón y Cajal has served to bring many fresh facts to light concerning both the centres and tracts in these regions of the encephalon. While availing himself of all this and more, von Bechterew has not slavishly followed others; on the contrary, every page bears the stamp of careful and independent observation. The valuable results of degeneration methods possible since the publication of the technique of Weigert and Marchi are incorporated. To mention only a few special instances, we may observe that excellent accounts are given of Cajal's discoveries on the optic and bulbar tracts; of Henschen's researches on the visual paths and centres; of Held's studies on the acoustico-visual connections; of Kölliker's and Edinger's work on the olfactory and mammillary areas; and of Flechsig's and Déjerine's researches on the fillet. The connections of the cerebellum, the olivary bodies, and the auditory nuclei are perhaps points on which Bechterew's observations have special value and authority. Where the field of work is so vast, it is a matter of necessity that many figures and illustrations should be borrowed from recognised authorities, and the selection has been on the whole wise and judicious. There is hardly an illustrated work or memoir which has not been laid under contribution. The author has not hesitated to offer us a "scheme" of the encephalo-spinal system. To those familiar with the "plans" of Meynert and of Flechsig, the illustrations on the plate (especially Fig. 6) may seem bewildering, yet there can be no doubt of their value. In the concluding pages he discusses such subjects as the doctrine of the neuron, the significance of dendrites and axon-terminals, the contact theory, and the theory of nerve currents, the meaning of differentiation of sensory and other tracts and collateral subjects. This work is one that must find its place on the shelves of every neurologist. For the advanced student and the original worker it will long remain invaluable. A point worthy of note is the remarkably low price of the work.

Few have done so much to elucidate cerebral mechanism as the distinguished Spanish neurologist, Ramon y Cajal, who, with a genius alike wide and comprehensive, has already brought to the study and investigation of the most fundamental neurological subjects a rare philosophic insight and a thorough practical and technical knowledge. The essay translated into German by Dr. Bresler,[6] deals with the subject of complete and partial decussation of the optic chiasma, and correlates structure with function. The doctrine of projection, first clearly taught by Meynert, is here carried to its logical and practical conclusion, and it is shown how (in different classes of vertebrates from the amphibia, reptiles, and birds, and up to mammals and man) the end is attained of projecting a retinal image on the cortex in such wise that confusion is eliminated, and a marvellous degree of correspondence—point for point retinal and cortical—is secured. All this is further explained and shown to harmonise with the general principles of cutaneous sensory localisation (in the cortex), and the parallel localisation of muscular movements. The differences between panoramic vision, in which each eye acts, as it were, independently (for example, fishes), and binocular vision as in man and many mammals, are clearly described and its significance pointed out. The re-representation of visual images in secondary visual areas, the significance of commissural fibres (corpus callosum), and the connection of the visual areas with other (sensorial and kinæsthetic) centres all find appropriate mention. The meanings of these tracts and their functions in the general cerebral economy are dealt with in a brief but masterly manner. It is impossible to discuss details, but it may be observed that the work is an example of that comprehensive and philosophical neurology which has during the last decade been growing up as practically a new science, and promises to bear most valuable fruit. Professor Flechsig contributes a preface, in which he briefly draws attention to the significance of the discoveries contained in the work, both from a neurological and a psychological standpoint.

Dr. Wolfstein's pamphlet[7] is a prize essay which was presented to the Trustees of the Fisk Fund, at the Rhode Island Medical Society, in June, 1898. Whether the author has been wise in publishing it is questionable. It is an attempt to cull from the works of other investigators in the fields of neuro-pathology and histology. The work is in no sense original, nor does it bear the stamp of independent thought and reflection, whilst it shows unmistakably signs of superficial and even hasty preparation. After a short and not very accurate historical summary, the writer passes into the region of the newer discoveries in neurology, beginning with the work of Golgi. Of the figures in the text, we note that three (diagrams) are taken from Kupfer, five from Cajal, and five from Andriezen. The references given to these and other original authorities are not always accurate, and much of what is reproduced textually is presented with such looseness as to be misleading. There is much vagueness about neurons and vibrations, and an attempt to present an account of the pathology of the neuron, for which the writer does not seem well qualified. The microphotographs seem to be the only evidences of independent work, and four-fifths of these are not good.

Dr. Thomson's little book[8] was written to provide "an introduction to the study of diseases of the nervous system.....in as simple a manner as possible." The opening chapter deals with the general structure of the central nervous system, and is fairly accurate as far as it goes. The statement that the axon (or nerve fibre) from a cell does not break up into branches immediately it leaves the cell body like the dendrons is inaccurate, as witness such cells in the spinal cord (posterior cornua), cerebral cortex (Golgi's cells with short branching axons), and cerebellum. In the following chapter the pathways of sensation *viâ* the posterior spinal roots to the cerebral cortex are touched upon, but the absence of reference to their terminations in the thalamus and the repetition of the practically obsolete theory of the *carrefour sensitif* in the posterior part of the internal capsule detract from its accuracy. The "motor" pathway described and illustrated should take account of the discoveries of Pick, Schäfer, and others, showing that the pyramidal fibres end among cells at the base of the posterior cornu and not directly among the motor cells. The "motor" impulse thus traverses at least two sets of cells in the spinal cord. Nervous affections of the facial muscles, and of those of the tongue, larynx, etc., are briefly dealt with in a rather discursive and non-systematic way. The treatment of the ocular muscles

[6] *Die Structur des Chiasma-opticum nebst einer allgemeinen Theorie der Kreuzung der Nervenbahnen.* [The Structure of the Optic Chiasma, and a General Theory of the Decussation of Nerve Tracts.] Von Dr. S. Ramón y Cajal, Professor der Histologie an der Universität Madrid. Translated from the Spanish by Dr. J. Bresler, with a Preface by Dr. P. Flechsig, Professor at the University of Leipzig. Leipzig: Johann Ambrosius Barth. 1899. (Demy 8vo, pp. 66. M.3.)

[7] *The Neuron Theory as Related to Brain and Nerve Disease.* By D. J. Wolfstein, M.D., Cincinnati. Providence, U.S.A.: Snow and Farnham. 1899. (Demy 8vo, pp. 102, 85 illustrations. $0.75.)

[8] *An Introduction to the Diseases of the Nervous System.* By H. Campbell Thomson, M.D., M.R.C.P., Physician to Out-patients to the Hospital for Epilepsy and Paralysis, Regent's Park, etc. London: Baillière, Tindall, and Cox. 1899. (Demy 8vo, pp. 123, 25 illustrations. 4s.)

(Chapter vi) is more systematic and instructive. Clinical observations on the muscles of the upper limb, abdomen, and lower limb next follow, and the subject of "reflexes"—superficial and deep—is briefly expounded. The account of the reflexes is clear and concise. The localisation of disease in segments of the spinal cord also is presented in an interesting way. A short chapter on disorders of gait closes the work, which is a modest and unambitious production intended for elementary instruction in some of the clinical symptoms resulting from diseases of the nervous system.

The *Bulletin of the Laboratory of Mount Hope Retreat*[9] contains three articles. Dr. Richardson deals with the subject of the Secretions in the Insanities, and presents a careful series of studies on the conditions of the stomach and digestion in simple and agitated melancholia, and after refusal of food in mania. Valuable analyses and data are also given on the urine in these conditions. The next paper, by the same author, deals with the clinical significance and estimation of indol, and concludes from observations made by him that it is found in excess in many forms of insanity and in epilepsy, as well as in carcinoma of the stomach and in association with renal disease. The pathological significance of this is as yet doubtful. In the concluding paper, Dr. Chas. Hill, after going over many views and theories propounded regarding the pathogeny of epilepsy, gives the results of a large number of analyses of urine made (during three years), concluding with an account of the treatment of the disease by suprarenal extract—a new departure in therapeutics.

The new part of vol. iv of the *Handbook of Human Anatomy*, now being published under the editorship of Professor von Bardeleben,[10] commences with a very full and systematic account of the macroscopic anatomy of the spinal cord, including its membranes and blood vessels, by Dr. TH. ZIEHEN. An outline of the comparative anatomy is given, some of the most recent data in this connection being the fruit of the author's own researches. The minute anatomy of the spinal cord is next dealt with, and in a manner that entitles the author, already distinguished as an exponent of modern psychology and psychiatry, to the credit of having here produced the most elaborately systematised and comprehensive exposition of the subject that has yet appeared. In conjunction with the results obtained from his extensive histological studies, he brings under review nearly all the leading work that has been contributed to the subject. He assumes a knowledge of histological technique, but at the same time he describes briefly the principal methods now used for demonstrating the several constituent elements of the spinal cord. Each of the white columns of the cord is first described under the subheadings nerve fibres—their approximate number at different levels, calibre, grouping as seen on cross section, course, collaterals, period of myelination, glia cells, ganglion cells, and comparative histology. The grey substance is then treated on a similarly thoroughgoing plan. The consideration of the anterior cornual nerve cells is the occasion for much vigorous criticism of the numerous views respecting nerve cytology that have been advanced in recent years. Perhaps the author will be considered to be unduly pessimistic when he announces his conviction that at least nine-tenths of the descriptions of the structure, and modifications of structure, of nerve cells that have appeared during the last decennium are highly questionable. He is sceptical as to the preformation of the tigroid bodies, yet admits that they are in a sense basophile. It is, however, difficult to conceive why the areas of cytoplasm, which by suitable treatment appear as tigroid bodies, should manifest any elective affinity for certain dyes if they possess no inherent difference of chemical constitution. The concluding section on the microscopical anatomy, covering more than 100 pages, treats of the connection of the nerve fibres with the ganglion cells and of the conducting paths. The fact that the description of the latter comprises an account of 7 fibre systems in the anterior column, 9 in the latter, and 4 in the posterior column may be mentioned as an indication of the progress attained in resolving the minute structure of the cord. In the highly instructive discussion on the methods available for determining the fibre tracts, attention is drawn to the remote degenerations resulting from increased general pressure produced by tumours of the central nervous system—for example, posterior root degeneration in cerebral tumour. The histological relationships of the spinal membranes to the nerve roots will be considered in a later portion of the work. Description of the macroscopic anatomy is commenced in the remainder of this part. The completion of the treatise is to be carried out with the collaboration of Professor Zander.

[9] *Bulletin of the Laboratory of Mount Hope Retreat.* Baltimore: J. Murphy Co. 1899. (Royal 8vo, pp. 58. 50 cents.)

[10] *Nervensystem.* [The Nervous System.] Von Professor Dr. Th. Ziehen. I Teil, I Abschnitt. Jena: Gustav Fischer. 1899. (Royal 8vo. pp. 402, 94 illustrations. M. 14.)

NOTES ON BOOKS.

DR. J. SANDERSON CHRISTISON has written a small book entitled *Crime and Criminals*, now, it would appear, in its second edition (Chicago: J. S. Christison. 1899. Cr. 8vo., pp. 178. 1.25 dol.), which does more honour to his heart than to his head. It shows him to be an amiable enthusiast, with very confused notions about crime and criminals and a good many other things. He disapproves altogether of punishing criminals, holding that the "severest and only just penalty that can be inflicted on any criminal is a full realisation of the nature of his crime." This is not always true; for if we could inflict upon Dr. Christison the full realisation of the nature of his book the punishment would be inordinately severe. So long as he sticks to facts, however, he is very interesting. We learn that there is a "neurotic pulse," and a "neurotic smell," which is a combination of the smells of urine and fæces. We learn that a type of the normal upper jaw contains fourteen teeth, and is asymmetrical. We learn that there is a thing called bad "body tone," which is revealed by the heart sounds and a depraved appearance. There are plenty of other novel and interesting facts in the book, and we can recommend it to the virtuoso in quaint pathological doctrines.

REPORTS AND ANALYSES AND DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A Surgical Dressing Box.—Dr. C. Graham Grant, 523, Commercial Road, E., sends us the description of a box which he has designed with an eye to the special requirements of the police surgeon, but he has at the same time carefully considered its utility in general practice. It is 12 inches square (exactly fitting the police surgeon's regulation cupboard) by $3\frac{1}{2}$ inches deep, and has spaces for a roll of Leslie's soap plaster, a roll of cyanide gauze, one dozen bandages, some cotton wool, an iodoform duster, a bottle of mercuric chloride soloids (B. and W.), a tube of carbolic acid soloids (B. and W.), a pair of hair clippers, a pair of scissors, two pairs of artery forceps, one pair of bulldog ditto, a packet of curved needles, a needle in a handle, a roll of sutures in a bottle, a catheter (soft indiarubber), a pair of dissecting forceps, a probe and a director, a box of safety pins, a nail brush and piece of antiseptic soap. All of these are so fitted that the box may be carried by any constable, however elephantine in his movements, without shifting their relative positions. The lids are made to fit so accurately that the box is dust-proof, if not air-tight, and if it has no other recommendation it is at least a convenience to have everything ready to one's hand. Mr. Frame, of 8, West Arbour Street, E., is prepared to make these boxes in American pine (stained) for the modest sum of 10s. each, or in mahogany at an advance of 3s. The slots are made a little large to accommodate the possible variation in the size of the instruments.

PROFESSOR MAX VON PETTENKOFER, the veteran sanitarian of Munich, has been elected a Knight of the Prussian Order Pour le Mérite in the Section of Science and Arts.

NOVA ET VETERA.

"JAMES COOKE OF WARWICK, PRACTITIONER IN PHYSICK AND CHIRURGERY."—1614-1688.

By William Sykes, M.D., F.S.A., Torquay (late Gosport).

In the number of the British Medical Journal for October 21st, 1899, p. 1121, you write of James Cooke of Warwick, "that he was probably himself a Roundhead." To those who have read his delightful work, *Mellificium Chirurgiæ*, which is full of quaint and interesting autobiographical details, there can be no doubt that although primarily attached to the household of Lord Brooke, he was surgeon to that nobleman's forces during his campaign of 1643, subsequently serving the cause at Warwick Castle during the rest of the Civil War. "The Epistle to the Young Chirurgeon," which precedes the fourth edition, is dated 1647, but as the Epistle Dedicatory to Lord Brooke is dated 1675, this is probably a misprint for 1674, when the first edition of *The Marrow of Chirurgery* was printed. In this epistle dedicatory to "The Right Honourable Robert Lord Brooke, Baron Brooke of Beauchamp Court," he speaks of "the inexpressible favours I have received from your noble family ever since I had the undeserved honour to retain thereto as servant and chirurgeon for near this forty year." This would bring the date of his entry in the family to about 1635, when he was, if born in 1614, only 21 years old. In writing of ruptures he speaks of himself as "being now near 63 praised be God." This would doubtless appear in the edition of 1675 or an edition of two years later. In 1643 he accompanied Lord Brooke, the predecessor of the patron to whom he dedicated his book, to the Siege of Lichfield, and when that nobleman was shot dead from its walls by dumb Dyott, Cooke embalmed the body for removal to Warwick. He writes: "Then follow the next course, which I took with the bowels of the Right Honourable Robert Lord Brooke. I caused a cooper to make a strong tite barrel fit to contain them, and to pitch it within very well, into which I put all the bowels with good store of bran and some salt, after the head being put in it, was pitch'd very well, after which I besmeared it with the oyls after prescribed, and so it kept for a month or six weeks, till the body was interred without any offence."

In 1645 he was back at Warwick, as appears from the following anecdote: "They (that is, wounds of the heart) are known by much blood gushing out, universal tremblings, pulse small and weak, cold sweats, oft swooning; and when the limbs grow cold death is near. The knowledge of these led me to predict rightly, that one Moses Lander, servant to Captain Bridger, was wounded in the heart. This being worth observing, take it here."

"The Scots under Lesly in their march from Hereford to Newark past through Warwick, there being guards set at several places to prevent disorders. A Scots trooper, quarrelling with one of the Guards, the said Captain and his man passing by, the man intreated him to be quiet, for they did but discharge their duty. The Scot, immediately leaving them, did with his Tuck run him in at the left side, which passed between the ribs into Mucronata. The man, finding himself wounded, set spurs to his horse and rid from St. John's Brook to the Castle, the best part of half a quarter of a mile. As he came riding up, I with others standing at the outmost gate of the Castle, seeing him making such haste, with a wan countenance (that always had been ruddy) and the horse side bloody, scarce my thoughts of his wounding being perfected, before he came near me by twenty yards, he fell from his horse. I with another ran and carried him within the gate, laying him on a form without, at the porter's lodge upon his back, by which time an unusual coldness had seized him; his pulse was gone, and so to all appearance past recovery. I used frictions till a handful of salt came which I sent for, with which rubbing his lips for a quarter of an hour his colour came, and he began to look up. Being after carried into the Castle I prescribed this: ℞ aq. borag. buglos. julap. Norimberg āā ℥j, aquæ cinnamomi ℥vj, confect. alker. ℥j, syr. caryoph. ℥j M. Having taken six or eight spoonfuls at several times, he seemed to revive more, and his pulse got up a little. About two hours after, coming to him with my wife, speaking something to him to prepare for heaven, he understanding, cried out for all or most part of that night, 'Heaven! heaven!' The next morning, finding him in a fever, after I had dressed his wound, which was very small, I opened a vein. Towards the afternoon he spoke pretty plain, and knew me. This day I was sent to by the Commissioners to know the state of the man, that so General Leven with a Council of War might try him. I returned answer that I conceived he was wounded into Mucronata, and that he could not long continue. The next morning, finding the fever again increased, I repeated V.S. as also the next morning after that, yet in the afternoon he died. The next day I opened him, there being present his Captain, Mr. Trap, minister, and several officers and soldiers; I found the Tuck through the diaphragm into the point of the heart, almost to the right ventricle, and the stomach drawn up above the midriff. He was a Congregational member, meeting then in Warwick Castle. He made a very sweet and comfortable end."

The succeeding anecdote probably belongs to the preceding year 1644, when he was still apparently at Warwick: "William Rose, scouting towards Banbury with some others, met near to Amwell a party of horse much greater than themselves. Thinking them enemies (but deceived) those with him fled. The other, thinking them Cavaliers, pursued; and therein overtaking Rose, bestowed on him a leash of bullets, to speak Huntsmanlike, two of which together, and the third at a small distance, passed in near the spondyls, and taking their way transverse, came forth on the inside of the right arm at three several places. He being carried by them to Compton Garrison, then for the Parliament, I sent my mate to open a vein, to dress him, and to see him brought to Warwick. For six days or more after he came, he seemed to be hopeless, could have no sleep; although I gave laudan, to grs.iij, increasing by degrees to six, that only procured ordinary sleep. His cough was seldom, but great, and then the wind breaking out of his wound [this, although not specifically stated, was a wound of the lung, secondary to the joint wound] was so great, that its report astonished people; yet by ordinary dressing without injection, by God's help he became well, and I saw him alive, 1672."

His next military recollection may refer to the campaign of 1643 (as most certainly the anecdote of the purchase of the MS. from Shakespeare's daughter-in-law, given in the British Medical Journal for October 21st does). It is dated in that paragraph 1642, but was really early in 1643, the Old Style of reckoning, making the new year begin in March, and it was in February, of 1643, that Lord Brooke ("fanatic Brooke" as the old Lichfield distich calls him) captured Stratford-on-Avon, on his march to his death at Lichfield, which occurred on March 23rd. It was as surgeon to him and his army that James Cooke was "an attendant to parts of some regiments to keep the pass at the bridge of Stratford-on-Avon, when he was introduced to Mistress Hall." It is, as I say, probable that the following anecdote refer to the same campaign.

"At the taking of Sir Thomas Holt's house near Birmingham by storm, amongst the rest, there was a soldier wounded in the back. If we may credit our diligent search, the back bone was wholly divided, so that we saw the lung's motion. He was desired to prepare himself for death. I only applied to the wound *Liniment Arci* and in that *Parascel.* The next morning, coming early to dress them, I asked if he was dead, but, to my amaze, I found him taking a pipe of tabacco. I bid him make ready for dressing. As soon as the dressing was removed, we found to admiration flesh had filled the wound near to the brim. After being cured he went from Warwick Castle, whither he had been carried, to Dudley Castle, there continuing a soldier. Captain Randal, of Coventry, no mean esteemed chirurgeon, was with me at the first and second dressing."

Cooke gives only one more instance of his Civil-War surgery—namely, an incident of the siege of Banbury (probably 1644): "A soldier of Warwick Castle, having received a wound on the eye-lid, at Banbury Castle siege, it being not art-like dressed, the eye-lids grew together, and he delivered hopeless as to sight. Coming to Warwick, I viewed it, and after forced a small probe by degrees in on the corner next the nose, and bearing it up, divided the lids from together all along; the man seeing was overjoyed."

We catch glimpses of him in later times. Of 1666 he writes: "Being commanded by the Lady Dowager Brook to wait on her to London, to take the consult of physicians,

in the way before we came to Tossiter, we met with the tidings of that fatal Fire of London, which caused her honour to resolve for Hackney. After some time of her being there, I was desired by Mrs. Hatton to go visit one near her time of her first child, who was aged. She begged of me to come to her if there was need. I told her there were several much abler than myself, and fitted with instruments (which I wanted), that might be had from the City. After two or three days, in the night she sent for me. I being very much indisposed, and the night tempestuous, I deny'd; but being much importuned by a gentlewoman I went; when come, I made tryal, and found the child come right but without advantage, though pains were strong. I made use of what came next my thought, getting it a little better fitted at a smith's shop hard by, with which I brought away the child, though with much difficulty, which being done, I put up my hand presently to bring away the secundine. I met in the way a great bunch, at first thinking it another child's head, but having felt it considerately, I found it a bunch very hard, distinct from the womb. Being in the morning had to Mrs. Hatton in a coach, I then told her (being with me) if ever her kinswoman had another child, if great care were not taken, both might die, which came to pass, for though on the next child she had (as we are called) a man midwife from London, both of them dyed. They sent me word after to Warwick, she greatly desired me."

He seems to have had some fame as an accoucheur. In one case of this kind he draws an amusing picture, when, being summoned to the aid of one Goodwife Elliot, at the Asps, near Warwick, and essaying to leave the house in order to go for "somewhat to provoke pains," the two midwives present "took him and brought him by violence to the bedside, telling him they were sure the child was dead, and he should not stir until he had delivered her." He unwillingly used his instrument at their request (apparently some kind of a hook), and caused a wound in the child's skull, which was duly healing under his care—for the child was by no means dead—"when a careless servant, having the child on her lap, being asleep dropped it into the fire, and there it was suffocated and burnt to death."

We find him familiar with the waters of Bath, which he declares were brought into fame by his patron the Right Honourable Robert Lord Brooke.

There is no doubt that James Cooke of Warwick was what his portrait and his book assure him to have been, an intelligent, high-minded practitioner, and a simple pious man; one of the men who in all ages raise the reputation of our profession by their scientific, pious, and manly life. I should be glad if some of your Warwickshire readers could give us any more particulars of him than those given above.

THE REPORT OF THE MEDICAL OFFICER OF HEALTH FOR LONDON FOR 1898.

I.

THE report of the Medical Officer of Health for the administrative county of London for the year 1898 has been issued. To the uninitiated its appearance will seem somewhat belated, but those who can fully appreciate the enormous amount of labour which is entailed by the mass of statistical and other evidence brought together in Mr. Shirley Murphy's report, and who are, moreover, sufficiently acquainted with the actual facts to know that some of the information for which he is dependent upon metropolitan medical officers of health did not reach him until last autumn, will feel more disposed to wonder at its prompt issue.

The volume is bulky, comprising 86 large pages and 9 appendices of special reports. Most of the latter have already been dealt with in the columns of the BRITISH MEDICAL JOURNAL as the reports were separately presented to the authority. The mass of valuable and interesting material in the body of the report is so large that it is only possible here to touch upon some of the more important points.

THE MARRIAGE-RATE AND THE BIRTH-RATE.

The administrative county of London, with an estimated population in the middle of 1898 of 4,526 508, furnished a marriage-rate of 18.7 per 1,000 living. This represents a slight increase over the preceding year (1897) and is the highest recorded for twenty-one years; it may doubtless be accounted for by the increased prosperity of the past few years. The birth-rate, notwithstanding the favourable marriage-rate, shows a decrease—29.4 as against 30.0 in the preceding year. It is disquieting to recognise that it is the lowest on record, and that it serves to maintain the steady decline which has set in during recent years. The highest birth-rates recorded in the administrative county are furnished by the most poor and densely-populated sanitary areas, the eastern group of districts having a rate of 36.7 and the western group the low rate of 24.5. As in the preceding year, the district having the highest birth-rate was St. Luke (45 2), and that having the lowest was St. Martin-in-the-Fields (14 4), a truly remarkable contrast.

THE DEATH-RATE.

The deaths in the metropolis furnished an annual rate of 18.2 per 1,000 living, as against 17.7 in the preceding year. By comparing London with those other English towns having a population which exceeded 200,000 at the census of 1891, it is seen that London had (comparing the corrected death-rates) a lower rate than any of those towns except Bristol (17.8), Nottingham (19 0), Hull (19.3), and West Ham (16.6).

The district of St. Luke, as in the preceding year, had the highest death-rate (27.8) of all the forty-three sanitary areas in London, and the district of Hampstead (13.5) the lowest.

Mr. Shirley Murphy has shown in previous reports that a more accurate estimate of the effect on a community of fluctuations of mortality can be obtained by the use of a "life-table," by taking the mean future lifetime of males and females in different age-groups, and ascertaining what gain or loss in life, in terms of "life capital," has taken place at each age-group during any given period. He thus shows that during the years 1891-8, as compared with the decennium 1881-90, there has been a mean annual saving of 4,161 lives, and this represents a mean annual saving 161,331 years of "life capital." Bearing in mind the fact that the amount of "life capital" saved is not proportionate to the number of lives saved, but is dependent upon the ages of the lives saved, it will be understood how it can happen that while the tables show a progressive increase during recent years in the mean annual number of lives saved, the amount of "life capital" in proportion to the number of lives saved has decreased.

INFANT MORTALITY.

For every 1,000 births in 1898, 166 died before the first year of life was completed; which is the highest rate obtained for several years. Compared with the other English towns of over 200,000 inhabitants, London has a lower infantile mortality than any except Bristol. Of the London sanitary districts, Holborn had the highest rate (221), and Stoke Newington the lowest (108).

ZYMOTIC DISEASES.

The deaths from the principal zymotic diseases (small-pox, measles, scarlet fever, diphtheria, typhus, enteric and ill-defined fevers, and diarrhœa), furnished a rate of 2.77 per 1,000 living, as against 2.56 in the preceding year. The eastern group of districts had the highest mortality, namely, 3 59, and the western and northern the lowest, while among the sanitary districts Limehouse had the highest zymotic death-rate (4 26), and St. Martin-in-the-Fields the lowest (0.88). From the different diseases included in the zymotic rate, the eastern group of districts furnished the highest mortality from each of them, with the sole exception of scarlet fever, which, strange to say, was lowest in the eastern group, and highest in the western and central.

Small-pox.

There were only two deaths registered from small-pox during 1898 among the 33 cases notified; the amount of error in diagnosis of small-pox is, however, so great that one is prepared for the information given on a subsequent page of the report, that only 5 were eventually found to be genuine cases of small-pox. With reference to the Vaccination Act, 1898, Mr. Shirley Murphy observes that:

It is too early to judge whether this Act will attain its object of better securing the vaccination of the population, with less friction than has attended the enforcement of the vaccination law in recent years. In any

case, it may be pointed out that the present position of the vaccination law gives opportunity for further legislation, such as will provide a system of revaccination of the population. The experience of England and other countries of Europe shows such a system to be necessary for the protection of the community against small-pox.

Measles.

The death-rates from measles (0.68), whooping-cough (0.48), and diarrhœa (0.97), were all somewhat higher than in the preceding year; whereas those from scarlet fever (0.13), diphtheria (0.39), enteric fever (0.12), and puerperal fever (0.04) were somewhat lower; and that from erysipelas was precisely the same.

With reference to measles, a letter was received during 1898 from the London School Board, proposing that measles should be declared a dangerous infectious disease, in order to give facilities to sanitary authorities to proceed, if necessary, against persons who send their children to school while suffering from the disease. We are told that the subject is still under consideration.

Scarlet Fever.

As in previous reports, the weekly notifications from scarlet fever are expressed in three age-groups, representing generally the pre-school age (0-3), the school age (3-13), and the post-school age (13 and upwards), and it is again shown that the decrease in the number of cases notified during the period of holiday influence, and the subsequent increase in the following period of school influence, is most marked at the school age (3-13). The figures prove most incontestably the school influence in disseminating this disease.

Diphtheria.

Discussing the table given in the Report of the Metropolitan Asylums Board for the year 1898, which indicates the reduced mortality from diphtheria treated at the Board's hospitals since the antitoxic serum was generally used in the year 1895, Mr. Murphy expresses the view that there is a possibility that some part of this reduction in fatality may be due to natural causes. He points out that there has been a reduction, coincident in point of time, in the case-fatality of scarlet fever in these hospitals, but that in the period 1895-98 the fatality of diphtheria cases treated in hospital is practically the same as the fatality obtaining among notified cases not so treated, whereas in the case of scarlet fever the fatality among cases treated in hospital is greater.

Moreover, certain circumstances have no doubt affected these figures, apart from any question of treatment:

1. Notification has probably been more general in the later than in the earlier period.
2. The proportion of the total cases of diphtheria in London admitted into the hospitals has been greater in the later than in the earlier period.

The first of these changes would probably have tended to reduce the fatality in London as a whole, the second to have reduced the fatality of the cases in hospital.

Other Infective Diseases.

Three deaths were ascribed to typhus fever during 1898; the deaths directly ascribed to influenza nearly doubled those of the preceding year; and those from bronchitis, pneumonia, and cancer were slightly in excess. The phthisis death-rate was precisely the same as that for 1897—namely, 1.77—and in the distribution of phthisis mortality in London as a whole the central group of districts had the highest death-rate and the western group the lowest.

THE CLASSIFICATION OF DEATHS FROM DIARRHŒA.

The Royal College of Physicians of London on July 27th, 1899, in response to a representation made by the Incorporated Society of Medical Officers of Health, appointed a Committee to consider the certification and classification of deaths from diarrhœa. The Committee consisted of Dr. Payne (Chairman), Dr. Corfield, Dr. Seaton, Dr. F. W. Andrewes, and Dr. J. F. W. Tatham.

This Committee presented the following unanimous report to the meeting of the College on January 25th:

Report.

1. We find on inquiry, and especially from evidence furnished by Dr. Tatham, of the General Register Office, and by other members of the Committee, that many different terms are employed to designate the disease officially known as "epidemic diarrhœa," whereby its specific character is in danger of being ignored, and great confusion ensues.

2. The results of this confusion are serious and important, since this form of diarrhœa causes a large portion (about one-fourth) of the deaths attributed to zymotic diseases.

We gather, from a statement furnished to us by Dr. Tatham, that his main difficulty lies in the impracticability of picking out, from the long list of fashionable but unauthorised synonyms, all the deaths which in their nature are indistinguishable from deaths by diarrhœa, and which ought to be called by the authorised name. At present he classes as diarrhœa (and therefore under zymotic disease) deaths certified as follows:

Diarrhœa.
Epidemic diarrhœa.
Dysentery and dysenteric diarrhœa.
Intestinal (or enteric) catarrh.
Gastro-intestinal (or gastro-enteric) catarrh.

But the following he classes not as diarrhœa, but as diseases of the alimentary canal, thus excluding them from the zymotic class:

Gastro-enteritis.
Muco-enteritis.
Gastric catarrh.

This second group of cases ought, he points out, for the most part, to be regarded as identical with epidemic diarrhœa, inasmuch as their age incidence, fatality curves, and general epidemiological characters correspond closely with those of that disease.

In London, during the thirteen weeks ending with September last, the deaths medically certified as due to diarrhœa numbered 3,798; but in addition there were registered 2,289 deaths from enteritis, of which 1,880 were from gastro-enteritis, the bulk of which ought certainly to be attributed to epidemic diarrhœa.

The different counties of England vary very widely in the proportion of deaths returned respectively as due to diarrhœa and to enteritis, presumably in accordance with local fashion. Thus, for England and Wales as a whole, the diarrhœa death-rate amongst infants appears as 25 per 1,000 births, the enteritis death-rate as 12 per 1,000. But in East Yorkshire the proportions are 35 per 1,000 from diarrhœa, and 9 per 1,000 from enteritis, while in Cumberland they are 10 per 1,000 from diarrhœa, and 14 per 1,000 from enteritis.

Dr. Tatham further points out that the fashion of discarding the familiar name "diarrhœa" in favour of such unsatisfactory and unauthorised names as "gastro-enteritis," "gastric catarrh," etc., is of comparatively recent growth. But during the last fifteen, and especially during the last ten years, the fashion has prevailed so extensively as entirely to vitiate the diarrhœa mortality returns, which, for sanitary purposes, are of exceptional importance.

We therefore consider that the present confusion of terms renders it impossible to determine accurately the prevalence of the disease in special places or at special times, the extent to which it influences public health in general, and the effects produced by sanitary measures.

3. We find that there is a widespread objection on the part of medical practitioners to the employment of the term "diarrhœa" in certifying the cause of death. The term is generally held by the public to imply a mild disease, insufficient by itself to cause death. This fact explains the reluctance of the practitioner to employ it on the death certificate, since it may be conceived to imply a stigma upon his own capacity. It is therefore desirable, if possible, to substitute for it some name equally accurate, but conveying to the public the idea of a more serious affection. But we regard it as essential that the idea of specificity, intended to be conveyed by the term "epidemic," should be retained.

4. Hence we would recommend the College to authorise the use of the term "epidemic enteritis" (or, if preferred by the practitioner, "zymotic enteritis") as a synonym for epidemic diarrhœa (*Nomenclature of Diseases*, p. 9, ed. 1896). And we would further recommend that the College should urge the entire disuse, as synonyms of epidemic diarrhœa in medical certificates of death, of such terms as "gastro-enteritis," "muco-enteritis," or "gastric catarrh."

The report of the Committee was adopted by the College.

THE NORWEGIAN BILL FOR THE PREVENTION OF VENEREAL DISEASES.

By C. R. Drysdale, M.D.,
Formerly Physician to the Rescue Society of London.

The results of the debates at the Brussels Congress on Venereal Diseases held in September, 1899, seem to prove that all future legislation in the direction of the prevention of these dangerous contagions must be based on principles which do not violate the ordinary laws of civilised countries. The Bill recently introduced into the Norwegian Storthing contains some sections which appear to me to be worthy of consideration by our legislators. This Bill was drawn up by a Committee of statesmen and physicians, and was presented for discussion to the members of the Brussels Congress. Many of its sections are quite unsuited to a country so little accustomed to paternal Government as ours; but the following sections, I think, might serve as suggestions for some future Bill to be drawn up for the United Kingdom.

Section xi.—Every practitioner who examines a person affected with a venereal disease is required to inform his patient of the contagious nature of his disease; and at the same time must seriously explain to the patient his legal and moral responsibilities, in case he shall communicate the disease to another person, or expose others to contract it from him. The practitioner must, above all, call the attention of the patient to the danger of contagious relapses of his malady; and of the consequences of it to his children, and at the same time inform him that he should frequently have himself examined in case such a relapse may occur. [The practitioner must also tell the patient what means he should employ to prevent such contagion to others.] The Minister of Public Health may cause printed instructions to be drawn up, and given by the practitioner to his venereal patients.

Section xiv.—Every practitioner who treats a venereal patient and who knows that the patient by his conduct is exposing others to contagion, must immediately make this known to the President of the Health Commission.

This section would not, I believe, commend itself to English practitioners, although the law of Norway which has recently existed might be agreed to. That law required practitioners to notify the existence of any case of venereal disease to the medical officer of health, but without giving any name. I can see no objection to such a law.

Many practitioners who treat venereal diseases in London do not ask the names of the patient from humane motives and to prevent scandal; and such practitioners would object to giving any information which might annoy their patients; but the simple notification of the case to the medical officer of health could offend no one, and would, for the first time in the history of these contagious, afford a basis for calculation of the extent to which they prevail among the population of the United Kingdom. At present statistics in this point are of little value, since deaths from syphilitic brain diseases and other consequences of syphilis and gonorrhœa are rarely registered as such by practioners who desire to spare the feelings of relatives.

Eventually, I believe that the danger to public health caused by these extremely prevalent contagions will result in punishment of persons who, knowing themselves to be infected, carelessly, or even without any compunction, are heartless enough to put themselves in the way of infecting other persons with their contagion.

At the town of Liége, Dr. Desfontaines in his hospital practice has for some time given to all venereal patients a printed paper warning them of the danger of relapses, and as to the responsibility they assume by any close relationship with other persons.

There is, I hear, a Society in London which has been formed to introduce some Bills into Parliament, and I sincerely trust that it may adopt such measures as those I have mentioned, and not try the French plan, which has proved such a signal failure throughout Europe.

In the words of M. Jules Lejeune, Minister of State of Belgium, President of the Brussels Congress on Venereal Diseases of September, 1899:

It is the duty of the public authorities to protect the public health against the contagion of infectious diseases, but their legitimate action in this matter, as in every other, is circumscribed within limits which the science of law must determine. Legislative enactments, the utility of which is affirmed by medical science, but of which the science of law does not recognise the legitimacy, are only theoretical ideals which must be abandoned as unattainable.

The secrets of private life and respect for liberty which is rooted in human nature are barriers which medical science can overpass, but which are totally opposed to any intervention of law. The lawgiver may pronounce the fact of communicating a venereal disease to another person a felony, for which the perpetrator may be punished at the demand of the victim; or it may qualify it as a misdemeanour and sanction, with respect to the victim, the obligation of repairing the damage which an intentional or wicked act, or an imprudent act, may have caused. He may attach to the communication of a venereal disease the penalty of a dissolution of marriage if the victim demand it. That is all, or almost all, that it is permissible for the legislator to accomplish in this direction. It is not his province to formulate as legal prohibitions, the warnings which medical science may pronounce and morality give sanction to, on the subject of the transmission of venereal disease, and which relate to marriage. And still less does it lie in the province of the legislator to translate into legal injunctions the advice of medical science concerning debauchery in general. Prostitution is a product of poverty. The children and women whom it causes to be outcasts in this world are the victims of a legislation which ill protects, amidst the perils of poverty, the morality of children and poor women; the idea of making of it by legislation a regular traffic, medically supervised, for the sake of its customers is the height of social selfishness.

The legislator who proposes to regulate criminal debauchery as a trade dangerous to the public health must desire that the quality of the thing which is sold and bought in this traffic, and which he subjects to control and guarantees, shall be duly verified. The regulations indicate in what manner this legislator proposes that, in order to be able to serve the turpitudes which he authorises and pretends to preserve from venereal infection, the female sexual organs shall be submitted to inspection, and a certificate destined to accompany the merchandise shall be delivered. The principles of law do not permit the legislator to assume the opprobrium of such operations, which make him the accomplice of the abominations of venal debauchery.

Dr. J. L. Vanderstraaten.—In the library of the Medical College, Colombo, Ceylon, on December 12th, 1899, a life-sized photograph of Dr. J. L. Vanderstraaten, late Colonial Surgeon of the Western Province of Ceylon was unveiled, and a handsome purse was presented to him, which had been subscribed to by members of the medical profession, most of whom had been his pupils at one time or another. The presentation was made by Dr. Perry, Principal Civil Medical Officer, on Dr. Vanderstraaten's retirement from the public service after an honoured and popular career. The address was signed by 179 members of the profession, and alluded to the high esteem which they entertained for him. Dr. Perry and Dr. Gavin expressed their great admiration and personal regard for him, the latter pointing out that Dr. Vanderstraaten's career was an instance of what might be accomplished by perseverance and unfailing attention to duty, and unswerving loyalty to the best traditions of the profession. He had commenced life as an apothecary. After a student's career at Calcutta and in England he had settled in practice at Colombo, and, making children's diseases a speciality, had achieved a remarkable success. Dr. Vanderstraaten, in the course of his reply, thanked the donors from his heart for their kindness, and alluded feelingly to his connection with the many eminent men whose portraits also adorned the walls of the library, and who had been at various times associated with the Medical College during its embryonic stage, which started in 1858, and since its foundation by Sir Hercules Robinson twelve years later (1870). He also described his own career in the College from his studentship till its close in April, 1899, when he retired from the post of Principal. He spoke encouragingly of the good work achieved by the College in the training of its students; and was thankful to say that his own life since his retirement had been one of perfect peace and comfort.

Meteorology and Influenza.—Some observations by Dr. Anders (*Boston Medical and Surgical Journal*, September 7th, 1899) have recently been published concerning the influenza epidemic in Philadelphia during the winter of 1898-99. He has made a careful study of the atmospheric pressure, mean monthly temperature, the mean daily range, and mean variability, the relative humidity, the precipitation, the prevailing direction, total movement and velocity of the wind during the months of October, November, December, and January for the years 1895-99. During November and December 1898, there were constant exacerbations and remissions in the virulence of the influenza. Numbers of people became suddenly extremely ill for three or four days, and then rapidly recovered. The periods in which the disease assumed a virulent type were almost invariably preceded by sudden thaws, accompanied by thick fogs, and relatively warm, moist, calm weather. The virulent type was apparently ushered in with cold, clear, windy weather. The changes of temperature during November and December were unusually sudden.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 3rd, 1900.

A MILITIA MEDICAL SERVICE.

Lord Wemyss, in a circular letter which he has forwarded to us, denounces in trenchant terms our military shortcomings and administration. More especially does he express indignation that, through what he characterises as political "cowardice," the existing but dormant law of "compulsory service for home defence," by which we presume he means the militia ballot, has not been put in force long ago.

His criticism on the militia suggests that it may be well to make some observations on the extraordinary condition of the Militia Medical Service, if it be permissible to use such a term, seeing that practically no such service now exists, a fact which the public will probably hardly credit.

The truth is, that the 120,000 men of the militia, our second line, are with few exceptions entirely dependent for medical aid, in quarters, camp, or in the field, on the Royal Army Medical Corps, a body which the present war demonstrates is so short in officers as to be numerically insufficient for the medical service of the regular army at home or abroad.

To this extraordinary state of things our rulers must have been deliberately blind for years, seeing that attention has been repeatedly called to it in past years in these columns and elsewhere.

It is not our business to comment upon the want of field artillery, cavalry, commissariat, and transport in the militia. We will confine our remarks to the want of an adequate medical department. It is well to inquire how this state of things has come about.

Down to the time of army medical unification, between twenty and thirty years ago, the militia, like the line battalions, had regimental medical officers, but upon that great change, and in order, no doubt, to assimilate both branches to each other, as well as to save money under the station hospital system, the militia medical officers were condemned to extinction, and thenceforward allowed to die out. That process has gone on so steadily that, from a former total of about 250 medical officers, they have sunk to a poor remnant of 24, still serving, but of course now elderly men, bound naturally soon to disappear through age-retirement. That is, the entire militia medical service has at present about one officer to 5,000 men.

It must not be supposed that the so-called and comparatively recently-formed Militia Medical Staff Corps has taken the place of the extinct medical officers, because that body is organised more for ambulance than for hospital work in a strict sense. The militia regimental surgeons and assistant surgeons of former days turned out when their battalions were embodied, and at other times looked after the headquarters staff of their corps and inspected militia recruits. For such services they received very scanty pay, but even that was grudged and retrenched by the economists of the day, until gradually the entire medical duties of the militia were thrown upon an already undermanned "unified" Army Medical Staff.

Let it be remembered that forty years ago the Army and Militia Medical Staffs together numbered about 1,350 officers, and although the duties have much increased, that total, through mismanagement and mistaken economies, has sunk to under 900!

We readily admit that a unified medical service has conserved force and thereby lessened expenditure; but the theory has been carried to such an extreme in practice as to strike at the root of efficiency. The evil is now exposed, the day of reckoning come, and the time for recrimination past. One of many army reforms, the need for which is now perceived, must be the resuscitation of an efficient militia medical service.

We do not at present discuss the exact form of such a revival, whether it should be regimental or unified, or a combination of the two. But events are moving fast, and even while we write the need for the re-establishment of a militia medical service, apart from that of the regular army, has become more urgent. The shortsightedness of politicians has allowed the old body to die out. We have now to face this question at a moment when our military resources are strained as they have not been for over forty years. We would strongly urge that the matter should be taken in hand at once.

THE OFFICE OF REGISTRAR-GENERAL.

In a recent article the strong reasons which make the appointment of a medical statistician to the office of Registrar-General in succession to Sir Brydges Henniker, who has retired from that office, desirable, were pointed out. Since that article was published the lamented death of Dr. Grimshaw has rendered vacant the office of Registrar-General in Ireland also. The qualifications required in the incumbent of the office of Registrar-General have been discussed in three interesting letters in the *Times*—the first by "A Sanitarian," who gives most excellent reasons for the adoption of the course we advocated; the second from "One Who Knows," who claims that the office should be held by "a man of good administrative ability and knowledge of affairs," and that if a professional man is needed he should be a lawyer rather than a member of the medical profession; and a third from the President of the Institute of Actuaries, who submits that the technical training of an actuary includes some knowledge of law as well as of nosology, and that the fact that he is in the habit of dealing with figures and the deductions therefrom specially fit him for such a post.

As between the man of affairs, the lawyer and the actuary, we confess our preference for a professional man. The claim of the man of affairs for recognition is one well known in this country. Having a knowledge

of "public business," he assumes that the technical knowledge possessed by the professional man must be in substitution for the knowledge he himself possesses, and that a check is required "upon the possibly unpractical and unbusiness-like opinions" of a scientific man. Why a knowledge of science should be deemed to render a man unpractical and unbusiness-like is not explained. The belief no doubt finds a refuge in the breast of the clerk who has no technical knowledge to offer to his employer, and who soothes himself with the thought that a man will probably be unpractical and unbusiness-like if he possess knowledge beyond his own. Fortunately the country is coming to understand the value of this view. The management of our medical institutions is being increasingly placed under medical control. The efficiency of our army medical administration has made vast strides since its organisation and control have been more largely undertaken by professional officers, and we anticipate that when army administration generally receives the full investigation which is promised, we shall find "the man of affairs," which is merely another name for the amateur, will have to play a much smaller part than he has done in the past. No doubt a man of business capacity is needed for the office of Registrar-General, but there are many who are thus endowed and who possess technical knowledge in addition.

The question which really has to be considered is what that technical knowledge should be. We can see no especial reason for the appointment of a lawyer to this office. The occasions in which legal aid is needed in the General Register office are not sufficiently numerous to make such an appointment in any way necessary. We confess to a preference for the lawyer over the mere "man of affairs," or the soldier as in previous appointments, simply on the ground that the lawyer would be man of affairs and something beyond, but it is obvious that something better may be done than this, and an ability to understand and use statistics is the additional knowledge we should choose instead of that of a knowledge of law. Here we are face to face with the consideration of the fact that statistics need to be understood and used. If they consisted of units of constant value there would be less need for medical knowledge for this purpose than is the case; if, the statistics to be dealt with were financial in which a penny represents a pennyworth's value and a shilling a shillingworth's value, a statistician pure and simple would in large degree supply the additional knowledge which is required. But the statistics with which the Registrar-General deals are not simple in this sense; they must be considered and interpreted in accordance with the growth of medical knowledge The statistics are largely based upon the certificates of medical men, and the officer must be fully cognisant of the position of medical knowledge to interpret these with accuracy. He must know when the knowledge upon which the certificates are based is accurate, and when it is less trustworthy; he must know the trend of custom in the medical profession, and when change in nomenclature is governing an alteration in the certification of the cause of death. He must, and this is not the least important, be able to prepare his tables on lines which will make the vital statistics of the country available to meet the increasing demand for better administration for the prevention of disease and death. He must undoubtedly be a statistician, but with a knowledge of the actual value of the units which his statistics comprise. If with this knowledge he is a capable man of business, able to organise and control, he will make the best Registrar-General who can be found.

In conclusion, we have only to add that such men, with the necessary knowledge both of medical statistics and of affairs, are to be found. It is unnecessary to do more than point to the fact that the possession of these qualities is now being demonstrated by a number of medical men who are at the head of the public health administration of large English communities, and it will merely lead to waste of public money by the appointment of some respectable gentleman who will not have the knowledge necessary to do more than sign reports prepared by others, to assume, as "One Who Knows" does, that they cannot exist in the same individual, and that business capacity will only be found in those who are wanting in the required technical knowledge.

THE PREVENTION OF INFECTIOUS DISEASES IN ELEMENTARY SCHOOLS.

The advisability of appointing "school doctors" was suggested by Professor Virchow in 1888, and since then the idea has gained ground in Germany. At the present moment medical inspection of schools is actually in operation in such towns as Wiesbaden, Königsberg, Nürnberg, Darmstadt, Frankfurt, Dresden, and Leipzig. Berlin, for some mysterious reason, still lags behind.

The medical inspectors of schools are always appointed by the town in Germany, and never by the State. The great advantage of this arrangement is apparent when we consider that men living in a particular district are best acquainted with the local conditions, and therefore more competent in tracing infectious diseases to their origin.

The medical school inspectors are of great assistance to the medical officer of health in the efficient discharge of his duties, though this assistance has the immediate effect of increasing rather than diminishing the work of the health officer on account of the fresh material discovered. In cases of difficulty the inspector can refer to the medical officer of health or the magistrate of the town.

The teachers were at first opposed to the appointment of medical inspectors, as they imagined that their authority in the school would be lessened; this, however, has not been the case. The medical man is not allowed to interfere in the discipline of the school, and consequently the relationship between the teacher and medical officer is perfectly harmonious.

Leipzig has appointed eighteen medical inspectors who supervise 67,000 children and receive a salary of £25 annually. Dresden has seven medical inspectors who look after 5,000 children—salary £25. Wiesbaden employs six inspectors. One large school with 1,100 to 1,500 children is under the care of one inspector, who receives a salary of £30. Königsberg has ten medical inspectors with a salary of £30. Nürnberg six inspectors with the same salary. Frankfort heads the list by paying its inspectors a salary of £50 a year.

The duties of the inspectors chiefly consist in visiting the schools at regular intervals about once a month and

inquiring into the health of the pupils and teachers. Their chief duty is to examine the methods employed for lighting, warming, and cleansing the class rooms, also the system of ventilation. The inspector is allowed to make "surprise" visits in Dresden and Nürnberg, but in the other towns notice has to be given of the approaching visit to the director. The separate class rooms are only inspected once or twice in every half-year. Instruction in general hygienic laws is given in the school every fortnight, lasting two hours. The first part of the time is devoted to the inspection of the various class rooms; during the second hour children who are said by the teachers to be suffering from some bodily infirmity are examined by the medical man. The medical opinion is taken as a guide in estimating the amount of work the child is capable of doing. If an abnormality is discovered requiring treatment, an official note is sent to the parents informing them of the fact, and of the desirability of calling in their general practitioner, who should have entire control over the treatment.

It was feared at the outset that the duties of the school inspector would not harmonise with the work of the general practitioner. An excellent rule was adopted of never giving a diagnosis until after a consultation with the general practitioner, the case being subsequently left under his care. The school authorities do not require a full diagnosis, or in fact any diagnosis, from the medical inspector; they merely wish to know whether the child is fit to do his work at the school. It is a great satisfaction to know that no unpleasant complications have occurred between the inspectors and the practitioners.

Parents who receive the official documents may be divided into three classes—(*a*) Those who are grateful and thank the teacher for the information; (*b*) those who are offended and return the official document; (*c*) those who say that they already know that their child has suffered from the particular complaint mentioned.

A large proportion of the cases belong to Class (*b*) and (*c*). This fact, however, cannot be used as an argument against the usefulness of the system. If only a few cases are benefited, the existence of medical inspectors may be said to be fully justified. The question whether the requisite treatment will be carried out rests entirely with the parents. No law of compulsory treatment can be enforced even in Germany.

The examination of every child entering the school is of use to the teacher, and may be of great value to the parents, especially in early cases of tuberculosis. When contagious diseases make their appearance, the medical inspector has to attend frequently, and decide when the class room should be closed and disinfected. An examination of the healthy children coming from an infected class room is a point of great importance. In cases of small-pox, scarlet fever, and diphtheria, the pupils are not allowed to return to the school until six weeks have elapsed, and in the case of measles four weeks.

There are no official documents to be obtained in Nürnberg, Königsberg, or Frankfort, as the scheme only started at the beginning of 1899. In Dresden the schools have had inspectors now for some years; they seem to give satisfaction. In Leipzig the results are also satisfactory; in Wiesbaden still more so; medical inspectors were appointed in 1896, and after the first year the experiment was so successful that the Prussian Minister of Education proposed starting a similar system of medical inspection in other German towns. He considered it to be of great value to the community in helping to prevent the spread of infection.

THE NURSING ARRANGEMENTS AT WYNBERG.

A number of ladies—impelled by a desire to give help to the sick and wounded soldiers and sailors in Africa, and perhaps, also, may we say, by a love of excitement—have been going to South Africa during the last few months. Some of them are trained nurses, others have some little nursing experience, others again none at all. It would perhaps have been better had they stopped to reflect, before buying their "uniforms" and booking their passages, whether it was likely to be possible to make use of their services in the military hospitals in South Africa. The army has its own Nursing Service, and in addition an efficient Nursing Reserve. When the war broke out, many of the Nursing Sisters of this Reserve were called up, and some are now in South Africa. These ladies had patriotically joined the Army Nursing Reserve in times of peace after their capabilities and qualifications had been carefully investigated, on the understanding that they would be called upon for service if any emergency arose which rendered it necessary to supplement the Army Nursing Service, and subject to an undertaking by them to respond to such a call. It is obvious that in this emergency they had a right to expect that they would be called upon, and that no one has any right to consider herself slighted because they were preferred. It was resolved, very wisely and justly we think, that, should it become necessary to supplement the Army Nursing Reserve, preference should be given to the nurses who before the war broke out were following their vocation in Johannesburg and other towns in the Republics. They have been expelled by the Boers, and, as our special war correspondent wrote in his letter published last week, "their lot is a hard one, for prices at Capetown are high, and civil employment is not easily obtained." He told us further that when wounded from the engagements at Belmont, Enslin, and the Modder River arrived the No. 2 Base Hospital at Wynberg was not yet complete, but that "notwithstanding the severe pressure, and in spite of the fact that in minor details the absolutely smooth working that can only be looked for when the machine has been running for a little time was hard to secure, these base hospitals met the emergency with comparative ease." We may state that our War Correspondent who wrote this is Mr. Clinton Dent, Surgeon to St. George's Hospital, London, and we are confident that the medical profession will attach much weight to his opinion, both as a surgeon and as a man of much experience in hospital administration. The Red Cross Commissioner had previously reported home that there were available in Capetown some forty nurses engaged in civil work in South Africa; and we understand that the Principal Medical Officer received authority some time ago to employ them as needed. But of course the more or less trained nurses and the benevolent but untrained ladies who went out in the hope of finding employment are disappointed that their services have not been required, and their disappointment would seem to have found expression in two letters sent home by the correspondent of the *Times* in Capetown. He has asserted that there is friction between the Royal Army Medical Corps and the Red Cross Society. We are in a position to say that there is no foundation for this statement. He has also made various reflections upon the administration of the base hospitals at Wynberg. Our correspondent at Capetown, who is a medical man, and our special war correspondent,

whose name has been mentioned above, have both expressed the contrary opinion; and we have reason to know that General Sir F. Forestier-Walker has stated that the working of the hospitals is perfectly satisfactory, and was so at the date when the letter to which we have referred was despatched from Capetown. We observe further that on January 28th Reuter's Agency in Capetown was authorised by Lord Roberts to state that he has made a most careful inspection of all the hospitals at Capetown, and is perfectly satisfied that everything is done that can be done, or that medical skill can suggest, for the benefit and comfort of the sick and wounded. At the time of his visit there was some question of asking for additional nurses; but he found that the request in this sense which he had conveyed had already been anticipated by the home authorities.

"COMFORTS" FOR THE R.A.M.C.

WE are glad to learn that the committee of ladies which, as we announced last week, is being formed in London for the purpose of collecting contributions of money and in kind to enable comforts to be sent to the non-commissioned officers and men of the Royal Army Medical Corps in South Africa, now numbering 3,000, has made good progress in the interval. We are informed that already a good many subscriptions have been received, and that many more ladies have joined the Committee, amongst whom may be mentioned Lady Burdon Sanderson, Lady Russell Reynolds, Lady Curzon, Lady Hanbury, Lady Kennedy, Lady Michael Foster, Lady McGregor, Mrs. Godlee, Mrs. Butlin, Mrs. Berkeley Hill, Mrs. Meredith, Mrs. Willett, Mrs. Buzzard, Mrs. Arbuthnot Lane, Mrs. Davies-Colley, Mrs. Field, Mrs. Lauriston Shaw, Mrs. Knox Shaw, Mrs. Bradford, Mrs. Clement Lucas, and Mrs. Cooper Perry. The first meeting of the Committee will be held on Monday, at 5 P.M. Lady Dyce Duckworth has kindly consented that the meeting should be held at 11, Grafton Street, Piccadilly. An executive committee will be formed at this meeting, and we hope next week to publish a list of the committee and of the subscriptions. We understand that arrangements have been made through the Army Medical Department for the immediate despatch of a number of flannel shirts which have been already sent in. Inquiries and offers of service should be addressed to Miss Maxwell-Muller, Honorary Secretary of the Royal Army Medical Corps Fund, 100, Victoria Street, S.W.; but subscriptions may be sent to the Corps Agents, Messrs. Holt and Co., 3, Whitehall Place, S.W.

THE ARMY MEDICAL EXAMINATION.

WE regret to learn that the number of candidates for the examination for commissions in the Royal Army Medical Corps, which begins this week, is not satisfactory. Thirty commissions are offered, but only twenty-five candidates have passed the physical examination. As has been pointed out in these columns for some years past, and on several occasions quite recently, the Royal Army Medical Corps is at the present time distinctly below the strength which it ought to have, even in times of peace. We believe that an increase of a hundred is immediately desirable. No doubt the failure of the present examination may be made up by nominations, but we should have preferred to see suitable candidates come forward to enter the service by examination.

MEDICAL ATTENDANCE ON THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

DR. W. F. FARQUHARSON, Honorary Secretary of the Border Counties Branch of the British Medical Association, informs us that, in response to the circular recently issued, replies have been received from 165 medical men resident within the area of the Branch, expressing their willingness to give their professional services gratuitously to the families of soldiers and sailors now on active service in South Africa. A deputation representing the practitioners in Carlisle who have agreed to co-operate in the movement lately conferred with a Subcommittee of the Cumberland Relief Committee, and a system of medical attendance on necessitous cases in Carlisle was arranged.

THE RECENT ABNORMALLY HIGH DEATH-RATES.

THE weekly death-rates for the thirty-three great towns have, since the subject was discussed in these columns a fortnight ago, served to prove the accuracy of the comments then made. The group of southern towns which were then conspicuous by the magnitude of their death-rates have now resumed an approximately normal condition. Thus, in Brighton the death-rate has fallen in three weeks from an annual rate of 44.9 to 17.2 per 1,000. London, in accordance with our forecast, shows a slower return towards a normal condition. Its annual death-rate, which was 37.1 in the week ending January 6th, had only fallen to 26.9 per 1,000 in the week ending January 20th, and to 22.2 in that ending January 27th. This is not surprising, when we remember that in different districts of the great province of London semi-independent epidemics are rising, culminating, and declining at dates which may be separated from each other by days or even weeks. London, unfortunately, is the only great town for which the weekly number of deaths from influenza is stated. The slowness of the improvement in the metropolis is shown by the fact that in the week ending January 27th the deaths attributed directly to influenza were 152, having been 193, 316, 340, and 208 in the preceding four weeks. Cannot the General Register Office be induced to supply an additional column in its statistical tables, giving for all the thirty-three great towns the number of weekly deaths from influenza? Reviewing the remaining great towns, and judging of the incidence of influenza by the death-rate from all causes, it is clear that Liverpool is still suffering severely, the epidemic declining slowly in the same manner as in London. Manchester and Salford have not yet suffered very severely, but Preston had a death-rate of 42.5 in the week ending January 6th, declining to 28.1 in the week ending January 20th, but rising again to 30.7 last week. Up to the present time the returns of Bradford for the present year are less favourable than those of Leeds; Halifax appears to have been affected much more than Huddersfield; Sheffield is worst of all the Yorkshire towns, but a considerable share of its excessive mortality appears to be due to measles and diphtheria. In Hull, again, it can only be surmised that a portion of its excessive death-rate of 27.5 in the week ending January 20th, and of 28.0 last week, is caused by influenza. Of the Midland towns, Nottingham shows a death-rate of 44.9 in the week ending January 13th, of 32.2 in the week following this, but of 19.1 only last week; in Derby there is a similar sequence of events (33.3, 25.6, and 24.6); while in Leicester the maximum of 30.0 was reached in the week ending December 30th, a decline to 16.4 in the week ending January 27th having occurred. Norwich evidently suffered severely, a maximum of 43.6 being reached in the week ending January 13th, though the return for last week shows a decline to 26.8. Birmingham (27.2) and Wolverhampton (29.7) are apparently suffering to a somewhat less extent than some others of the large towns. The preceding statements, which are necessarily incomplete, indicate the difficulty of tracing the course and incidence of epidemic influenza with the present imperfect data. It is clear, however, that it is now widespread in many parts of the country. Such a familiar guest does not cause the alarm which the importation of plague or cholera would produce, though it is unlikely that either of these diseases will ever obtain such a hold upon the community as influenza has secured. During the last month influenza has killed more persons than the South African

war up to the present moment, though not in such a manner as to appeal to our imagination and sympathy as do deaths on the battlefield. The importance of avoiding public and social gatherings while influenza is prevalent in a locality cannot, however, be too strongly urged, particularly upon the aged and semi-invalid members of the community, as it is among these that influenza claims a large proportion of its victims.

INFLUENZA RISKS.

It is again being demonstrated that a great danger in epidemic influenza is from its so-called "slight attacks." The danger to the individual patient is due to his underestimating the lethal power of his ailment; the danger to the community from his continuing to pursue his usual avocation, spreading infection the while. The risk in the one case is from ignorance, in the other from thoughtlessness, or worse. When one of a household becomes indisposed with a slight degree of fever during the prevalence of this epidemic disease, his family, while suspecting that he has the malady, hope that it is not so, and inasmuch as he is not absolutely incapacitated, it is debated whether or not their medical attendant should be called in. The patient says no, lest he should be kept in bed or confined to his room, and his friends, from mixed motives, may acquiesce. If the patient is "fortunate" he does escape this confinement, and shortly returns to his work to endure an unnecessarily protracted convalescence. If he is unlucky he contracts pneumonia and dies. That is the risk to the individual. But the risk to the community is much graver. If the infective person, although willing to remain at home, persists in leaving his room, he may give the disease to other members of his family less able to cope with it; or if he leaves the house he may give it to the more susceptible of his fellow railway travellers or to the frequenters of offices, concert halls, theatres, churches, and other places of public resort. The greatest cruelty of this plan of procedure is doubtless to the aged, because if they are not more liable to take the disease than others, they are at any rate more vulnerable when they have taken it. It cannot, therefore, be too strongly urged that however slight the attack, or however doubtful its nature may be, medical advice should be promptly sought. As regards the individual there should be enjoined the strictest rest in bed in an even temperature, with the avoidance of all conditions that would tend to reduce his power of resisting the toxin; and as regards the health of the community measures for the isolation of the infected person should be taken. Those who have hitherto escaped the disease would be wise to avoid chances of infection by shunning rooms or buildings relatively small for the number of persons they contain, and other conditions involving the concentration of the poison. It is not long since the malady was popularly considered to have a humorous side, but now that it has earned the name of the "old man's death," there will be more likelihood of loyal co-operation between the public and the guardians of the public health. In any case an epidemic that can double the death-rate is a sorry joke.

THE UNIVERSITY OF LONDON SEAT.

The chairman and secretaries of Sir Michael Foster's Committee have issued a letter, in which they point out that it is "now generally admitted that university constituencies should send to Parliament men distinguished in learning, science, or literature, and qualified, therefore, to strengthen the Legislature in dealing with those questions which most nearly concern the intellectual interests of the community. This has been recognised of late years in the election of Sir George Stokes, Professor Jebb, Mr. Lecky, and Sir William Anson, in which cases the example set by the University of London in its election of Mr. Lowe and Sir John Lubbock was followed by the older universities." The letter goes on to state that "Sir Michael Foster, K.C.B., M.D.Lond., Senior Secretary of the Royal Society, and now President of the British Association, has, at our earnest request, consented to be nominated for the vacant seat. He holds, in the estimation of the public, as well as in that of scientific men, such a distinguished position—not only among the graduates of the University but among the leaders of scientific thought in Europe—that it is altogether unnecessary for us to dwell on his qualifications in this respect. We may say, however, without fear of contradiction, that there is no one whose opinion on questions affecting scientific education and research or the study of medicine would have greater weight in the House of Commons. His long academical experience, first at University College, London, and subsequently at Cambridge, together with his full knowledge of University questions, will enable him to be of the greatest service in Parliament. The election of so distinguished a graduate will be an honour to the University." A letter is also transmitted from Sir Michael Foster, in the course of which he states that should his candidature prove acceptable to the majority of members of Convocation he will "enter the house, not with a mandate to support this or that political party, but for the purpose of placing at the disposal of the House the experience gained by many years' service in the courts of learning and science, and in more than one university." With regard to his political views he states that had he been in the House of Commons some years ago he would have voted against the Irish policy of Mr. Gladstone, and at the present moment he thinks not only that the present war should be vigorously prosecuted until the results so essential to the welfare of the empire are attained, but that the nation is justified in having entered into it. So far he would support the present Government. "At the same time," he adds, "I wish to state plainly that on many other questions my views, and perhaps still more my sympathies, are those which used to be denoted by the term "liberal." Not having, however, looked forward to the honour of entering into Parliament I have never attempted to integrate my opinions into a compact whole capable of being marked with a party sign; and even now I feel a great difficulty in attemping to do so." As regards the affairs of the University of London itself, he says that he has been guided by a desire to promote the interests, not so much of teachers as of teaching and of learning. "Though a somewhat long experience as an examinee and an examiner," he continues, "has shown me the weak points of examinations, I owe too much to the University of London in its old form as an examining University not to feel deeply how much good it has done. When called upon as a witness before the Cowper Commission the only evidence I ventured to give was to emphasise the desirability of enlarging the old University as against setting up a new one. I thought then, and I think now, that the changes which it is proposed to make, so far from doing any one part of the University harm, will do good to the whole; and that he whom it is proposed to call an 'external student' will share with the 'internal student' the benefit which must follow upon the recognition of the principle that the true function of a university, whatever else it may be called upon to do, is not to grant titles, but to develop learning and to promote the advancement and spread of knowledge. If elected I should regard myself as the representative of the educational interests of external students and internal students alike."

THE DEATH-RATE OF DUBLIN.

It is understood that the Local Government Board of Ireland has arranged that the Committee suggested by the Lord Lieutenant to inquire into the health of Dublin shall get to work almost immediately, and its first sitting shall be held during the coming week. Mr. C. P. Cotton, M.I.C.E., will, it is said be the Chairman, and the

dual representation asked for by the Corporation is to be granted. The English Local Government Board has nominated Dr. Theodore Thomson one of the Medical Inspectors as its representative. The Corporation has protested against the resolution of the Royal College of Physicians of Ireland which would fix the blame for the existing high mortality on the shoulders of the municipal authorities. It has declared that the present state of affairs is in no way due to incompetency on its part, and it courts the fullest inquiry into the sanitation of Dublin with confidence that the finding of the Committee will be in its favour. It has done more than protest, for it has claimed two representatives on the Committee. It is feared in some quarters that the majority of the Committee will enter the inquiry prejudiced in favour of the Extension of Boundaries Bill, and that a result in favour of this extension as being beneficial to the public health of the city is likely to be arrived at. It is to be hoped that every side of the question will be thoroughly gone into in the public inquiry, and that the evidence of experienced and impartial men will be obtained, so that, whatever the nature of the report, the public may be in a position to understand the nature of the evidence given. Meanwhile the deate-rate for the week ending January 27th has fallen to 37.9, as compared with an average of 43.96 for the five preceding weeks. Though no comparison of the mortality in other cities can alter the fact that an abnormal death-rate exists in Dublin, still it is of some interest to know that in Cork the average death-rate was 51.74 for the five weeks, during which it was 43.96 in Dublin. Sir Charles Cameron, C.B., whose evidence during the inquiry will be looked forward to with interest, has selected for the title of his presidential address at the annual meeting of the Dublin Branch, to be held on Tuesday next, "The *Rôle* of the Municipality as regards the Prevention of Disease."

A LADY AS HOSPITAL INQUIRY OFFICER.

As the recent appointment of a lady almoner at St. George's Hospital has attracted a certain amount of attention it may be of interest to state that the appointment of an inquiry officer was determined upon last year in order to meet the requirements of the Hospital Sunday Fund. The officer who held the post temporarily not finding himself equal to the difficulties of the work, Miss Mudd, who is a lady of independent means, on hearing of this, volunteered to undertake the office, and offered to devote six months to special training for its duties. The Board of St. George's having accepted her offer, Miss Mudd spent six months in studying the methods of inquiry practised at the Royal Free Hospital, where a similar office has existed for some years past, and has now taken up her duties at St. George's Hospital. Miss Mudd is peculiarly fitted for the office, for, being both the daughter and sister of members of our profession, she is in an exceptional position to understand the delicate relations between medical charity and medical practice.

A CHISEL IN THE PHARYNX.

A VERY remarkable case of the successful removal of a chisel embedded in the naso-pharynx and post-pharyngeal wall is recorded by Drs. Gamble and Tiffany in the *Philadelphia Medical Journal* for January 6th. A man, aged 39, was working at a machine which consisted of a frame in which were fastened two chisels revolving 3,200 times a minute. While at this high speed the frame broke, and the chisels were set free. The patient was struck by one chisel, and when found after the accident was bleeding profusely from a cut across the thyroid cartilage which, with the cricoid and trachea, was torn open. There was also a cut which extended from the inner side of the right eye upwards to the bridge of the nose, which was fractured. This wound was apparently trivial, the wound in the throat being considered more serious. Only one chisel was found, the second was supposed to have been lost. The patient soon complained of dysphagia, and food regurgitated through the nose. The head and neck were held stiff, and a purulent discharge from the right nostril was noticed. On careful examination, it was ascertained that the chisel was embedded in the naso-pharynx. An *x*-ray examination confirmed this. Dr. Tiffany operated. The rigidity of the neck prevented the dependent position of the head being assumed; preliminary tracheotomy was performed, and on the following day the chisel was removed. An incision was made through the upper lip to the right of the median line around the ala of the nose, and then by the side of the nose nearly to the inner canthus; the right cheek and lip were reflected, the nose separated from the right upper jaw, the septum of the nose and the vomer were divided, and the nose laid upon the left cheek. The upper end of the chisel was exposed, but could not be grasped by strong forceps until the nasal border of the right upper jaw was chiselled away. By vigorous traction and rotation, the foreign body was removed. There was a good deal of bleeding, but recovery was never in doubt. When the patient was last seen, dysphagia and the neck stiffness had largely disappeared.

DOCTORS AND FRIENDLY SOCIETIES IN BELGIUM.

THAT the difficulty of arranging fair terms for contract medical practice is not confined to this country is shown by an article in *Le Scalpel* of Brussels for December 31st, 1899, in which an account is given of the failure of negotiations carried on for a long time between a representative Committee of the medical profession in Liége and a federation of "mutualistes," or friendly societies, composed of working men. According to this article the doctors being dissatisfied with the existing arrangements agreed among themselves to demand better terms, and obtained the signature of every medical practitioner in the neighbourhood to a promise not to become a candidate for any of the offices should the present holders be dismissed from them in consequence of their action in endeavouring to raise the tariff. Negotiations were opened with the leaders of the federation, and it was understood that the latter had accepted the propositions of the doctors, had admitted the justice of their claims, and had promised to bring the revised tariff before the general meeting of the federated societies, and to support the alteration. But, far from this being done, the revised tariff was not even submitted to the meeting. Under these circumstances the doctors have declared a general suspension of medical service, dating from December 26th, 1899, and have called upon all the signatories to remember their engagement. We shall be interested to see how this struggle terminates, our sympathies being entirely with the medical profession. The proposed charges—from our standpoint—are ridiculously low, being only 5 francs—or 4s. 2d. a year—for each family, with 25 per cent. reduction on the fees of specialists.

EARLY BIOLOGICAL TEACHING IN AMERICA.

PROFESSOR W. KEITH BROOKS[1] has recently pointed out that scientific laboratories are a product of the most recent times, for it has only been of late years that all the books and apparatus, and appliances and material needed for the advancement of great departments of natural knowledge have been brought together in buildings constructed for the purpose, and placed under the supervision and direction of investigators, who are qualified to use all these great advantages and opportunities for the promotion of knowledge, and for the instruction and training of students. The last quarter of the nineteenth century is emphatically the birthday of laboratories, although the needs of the different departments of knowledge were not

[1] *Bulletin of the Johns Hopkins Hospital*, November, 1899.

all recognised or provided for at the same time. The chemical laboratory has come down to us from the days of alchemy, and there have been astronomical observatories in Europe for five hundred years, but most of the scientific laboratories which are so characteristic of our days are very modern. Professor Brooks related the beginnings of the first to organise laboratory instruction in Cleveland. As is so often the case with new departures it was due to the personal enthusiasm of a few men, backed up by the generosity of one or two wealthy citizens. The venture began, he tells us, in 1875, when three young men who had begun to train themselves as naturalists, came together for their summer vacation at their homes in Cleveland. They were Theodore B. Comstock, afterwards President of the University of Arizona; Albert H. Tuttle, Professor of Biology in the University of Virginia; and Professor Brooks himself. The three were filled with enthusiasm for their work, and, like all ernest students from Chaucer's day to this, were as glad to teach as to learn, and they determine to organise a summer class for laboratory instruction in zoology and botany. Money for their expenses was liberally supplied by Mr. R. K. Winslow, Mr. Leonard Case, and other citizens; the authorities granted the use of an old high-school building, and notices were issued of the undertaking, with invitations to all who wished to join the class, asking them to do so without the payment of any fee. Some twenty-five were soon enrolled, most of them teachers, and some from a distance; work was begun with a class which shared all the earnestness and enthusiasm of their instructors. There were daily lectures or demonstrations followed by four or five hours of work in the laboratory, while two afternoons a week were given to excursions to places favourable for the out-of-door study of Nature. As a small steamboat had been placed at the service of the school, excursions were also made upon the lake to give the class an opportunity of learning the use of the naturalist's dredge. The work was partly the study of the animals and plants which were obtained on those expeditions, but a supply of marine animals was also employed.

THE MENTAL STATE OF AUGUSTE COMTE.

Dr. William W. Ireland has published[1] an interesting study of the mental state of Auguste Comte. Delicate in health, and with a weak digestion, he was from the beginning fond of study, and at the age of 24 had begun to plan that system of philosophy which embraced so wide a view of the sciences. He married at the age of 27, and was at that time a teacher of mathematics and a writer on scientific subjects. He held no theological belief at the time. The following year he commenced a course of lectures in Paris to a distinguished audience, but after three lectures the course was interrupted "by an attack of mania, said to be caused by excessive mental work and quarrels with the St. Simonians." The attack seems to have been ushered in by a period of unusual irritability, and to have culminated in an attempt to drown himself and his wife by dragging her with him into a lake, from which he was saved by her strength and courage. He was then placed under the treatment of the celebrated alienist, Esquirol; but, after having been under care for seven months and a half without improvement, he was removed by his wife. Her treatment, which was to humour his every whim and gratify his every wish, did not succeed, and on one occasion, during her temporary absence from the house, he succeeded in getting away, and attempted to drown himself in the Seine but was rescued. His marriage, in the first instance a purely civil function, was now solemnised by a priest, and after the ceremony he added to his signature the title "Brutus Bonaparte." At the end of the year he completely recovered his health and vigour. At the age of 34 he was appointed Examiner in Mathematics for the Ecole Polytechnique. This gave him an assured income but the duties were not light, and yearly re-election was necessary. He now devoted all his leisure to his great work, and was able to publish the various volumes of his system, six in number. The last, which appeared in 1842, contained in its preface reflections upon the physicist Arago and others so distasteful to the Council of the Polytechnic School that he failed to secure re-election for 1814, "and thus, on the completion of the work which was to change the social condition of mankind, the author found he had lost the greater part of his income." During the intense application of mind required for the composition of his great work he was several times subject to crises which threatened a return of the brain excitement of 1826, and suffered much from sleeplessness and irritability of temper. He had been frequently in the habit of quarrelling with his wife, and in August, 1842, there was a complete separation. Dumas asserts that the causes of Comte's insanity were excess of work and domestic chagrin, and the infidelity and licentiousness of his wife. "His wife deceived him; four times she quitted his house (to live with a lover), and she made his home life hard and jangling." In one of Comte's letters to Littré occurs a veritable *cri du coeur*: "During seventeen years of married life I have often conceived thoughts of suicide, to which I should probably have yielded had the bitterness of my home life not been neutralised by the increasing sentiment of my social mission." Two years after his separation he conceived a passion for Madame Clotilde de Vaux, a delicate languid beauty of thirty summers, whose husband was in prison. Her love, if warmer than friendship, was platonic; not so his. There was a "crise d'amour" during which he kept his bed for eight days. The lady was an invalid and died of consumption, her invalidism having destroyed all hopes of marriage. Comte's passion for her made him sentimental and even silly, and this was reflected in his writings at the time. "His political philosophy showed a great falling off, which his enemies ridiculed, his more critical admirers deplored, and scarcely any of his disciples entirely followed." A large element of mysticism, with some pomposity, tinged his "religious" conceptions and his writings. He devised a crude speculative phrenology, and declared that all scientific pursuits should be treated as an idle waste of time if they could not be proved to have a direct bearing on the welfare of humanity. He prayed before the tomb of his lost one and saw visions of her and heard voices. He remained for the rest of his life a neuropath and died at the age of 60.

[1] *Journal of Mental Science*, January 1900.

CAMBRIDGE SUMMER SCHOOL OF MEDICINE.

The success of this gathering in 1894 was so great that arrangements are, we understand, being made in Cambridge to renew the invitation to qualified medical men to visit the University. It is hoped that arrangements can be made at about the end of June to demonstrate in the laboratories to the visitors the latest advances in the medical sciences. The colleges are being approached in the hope that they will afford accommodation to a certain number of visitors, as before, at cost price. When the arrangements are complete due notice of them will, we are informed, be advertised in the British Medical Journal.

LIVE CHILD DELIVERED BY FORCEPS AFTER DEATH OF MOTHER.

Dr. Fleischmann, of Buda-Pesth, reports a case of some medico-legal and obstetrical interest, the third instance only of the successful use of the forceps after the death of the mother. The patient was a primipara, aged 30, the subject of mitral and aortic incompetence. Dr. Fleischmann first saw her when she had been in labour at term for over twenty-four hours; the membranes had ruptured on the previous evening. The fœtal head presented in the

first position, its heart sounds were normal. The os was rigid, so an hourly hot douche was ordered. A few hours later Dr. Fleischmann was called again to the patient, who was clearly dying of severe dyspnœa. Just as he had introduced one blade of the forceps the mother's pulse and respiration ceased. For about ten minutes his attention was turned entirely to the mother, the blade being left in its place. All attempts to revive her proved useless; then he introduced the second blade, and at once extracted an asphyxiated female child, who was resuscitated and successfully reared. The first case of successful *post-mortem* delivery of a child by the forceps is recorded by Heinricius, of Helsingfors; the mother died suddenly at term of rupture of the aorta; immediately afterwards a large healthy male child was delivered by the forceps, and reared. In the second case recorded by Piskacek, the patient, a woman, aged 28, died during her second delivery of advanced heart disease. An asphyxiated child, weighing a little under 5 lbs., was delivered and revived, but died in 36 hours; in this instance, however, the pelvis was extremely kyphoscoliotic, so that delivery was not easy. Dr. Fleishmann publishes these interesting cases in the fourth number of the *Centralblatt für Gynäkologie* for this year. In a general or abstract sense the duty of the obstetrician seems clear in cases of this kind, but very natural objections are almost sure to be raised against any handling of the body of the mother.

THE BACTERIOLOGICAL INSTITUTE OF CONSTANTINOPLE.

In the *Revue Générale des Sciences* of October 15th there is an interesting account of the Bacteriological Institute of Constantinople. The Institute dates its origin from August, 1893, when on the outbreak of cholera the Sultan invited Pasteur to send one of his pupils to organise sanitary measures. Dr. Chantemesse was selected, and having discharged his task urged upon the Turkish Government the necessity of establishing a bacteriological institute. The Sultan approved the idea, and Dr. Nicolle was appointed Director. He began his work in November, 1893. The work of the Institute was at first carried out in the chemical department of the School of Medicine, and it was a considerable time before it had a home of its own. But the establishment is still insufficient, and efforts are being made to get a large one built. The work of the Institute consists in the technical and practical instruction of doctors and veterinarians, military and civil, and the carrying out of analyses, public and private. It also manufactures diphtheria serum, which is used throughout the whole Ottoman Empire with excellent results, the serum being sent to all vilayets on request being made by the Governors. The Institute also prepares serum against cattle plague, which is delivered to the Minister of Agriculture; he gives it out to the veterinarians on his staff, who have all been instructed in the Institute. Cattle plague is a veritable scourge in Turkey, and the results, preventive and curative, of the serum treatment have been so satisfactory that farmers often express their gratitude in telegrams to the Sultan. This is natural, seeing that sometimes in a single district more than 30,000 head of cattle used to be carried off in two or three weeks. The Institute includes a department for the treatment of rabies, of which, by a recent irade, Dr. Marie, of the Pasteur Institute, has been appointed Director. Contributions from the laboratory on cholera, diphtheria, Aleppo boil, cattle plague, pneumonia of goats, bovine malaria, etc., have appeared from time to time in the *Annales* of the Pasteur Institute. With the exception of Drs. Nicolle and Marie, the scientific staff of the Institute consists of Turkish physicians and veterinarians. The Sultan has always taken the greatest interest in the Institute, and has never refused any request made on its behalf. The Institute is directly under the Director-General of Military Schools, Zeki Pacha, who has always shown himself well disposed. The Institute is in daily communication with the Minister of Agriculture, at whose suggestion investigations on cattle plague were undertaken. Altogether the Ottoman authorities in their dealings with the Institute have shown an enlightened appreciation of the usefulness of scientific research, by which some more advanced countries might profitably take example.

HOW TO MAKE SHORT CHILDREN GROW.

The subject of stunted men and women is always of importance, even in this country, where the rising generation promises to be well above the older averages in height. Statistics of the stunted and the causes of arrest of growth are difficult matters to handle scientifically. M. Springer has published his researches in the form of a monograph read before the French Académie de Médecine, a very strict tribunal. He traces shortness in children mainly to taint in their parents, especially alcoholism, morphine habit, chronic lead poisoning, and, above all, syphilis. Gastro-intestinal trouble, whether secondary to these influences or primary, is another potent factor in stunting growth. Congestion of the liver specially interferes with nutrition; it may be the result of disease of the stomach and intestine, or may be directly caused by auto-intoxications. Drink, as a vice in the child itself, directly causes liver disease. We may here add that about twenty years ago, during a discussion on hepatic cirrhosis in childhood, at the Pathological Society, it was suggested that large doses of steel wine meant alcoholism. Adenoma of the respiratory tract is now well known to check growth, as, after removal of the morbid structures, the child usually takes to growing. Thyroid insufficiency also arrests growth. The treatment for stunted children should consist, in the first place, of rational measures directed to the relief of the maladies which produce arrest of development, combined with improved hygiene and gymnastics. M. Springer, however, goes further. Remembering that there is always one primary factor rendering the child short, he attempts its direct remedy. He tries to stimulate the growth of the bones. He induces local excitement of the epiphysial cartilages. This may be done by applying saturated salt or brine compresses around the joints at night. M. Springer believes that electricity, locally applied, is even more efficacious, and almost any kind of current seems to be a sufficient stimulant to the epiphyses. He claims rapid results by applying to the muscles surrounding the lower epiphysis of the femur static electricity, combined with faradisation.

SECRETION OF BILE AFTER FOODS.

Experiments made at the Physiological Institute of the University of Bologna on the secretion of bile (in dogs) after various kinds of food had been taken, are published by A. G. Barbera (*Archives Italiennes de Biologie*, Tome xxxi, Fasc. 3, 1899). The following were the results obtained; (1) The elimination of bile increases considerably after the ingestion of proteid substances; (2) there is a moderate increase after taking an equal quantity of fatty substances; (3) the ingestion of hydrates of carbon (sugars) produces only a very slight elimination of bile into the intestine; (4) mixed foods containing two or more of the above constituents produce proportionate effects; (5) the elimination of bile remains unaltered after drinking water. As regards the duration of the bile flow under the above five conditions, it is longest in two after fats, and long in one after proteid foods. It is of very short duration in three. The bile-flow attains its maximum in two to three hours after ingestion of sugars, in three to four hours after proteids, and in five to seven hours after fatty foods. The elimination of urea, uric acid, and extractives after ingestion of the same, takes place partly in the bile. As the results of numerous experiments he concludes that extractives are

transformed into urea in the animal body; that the elimination of bile increases in proportion to the quantity of extractives ingested, and especially during the passages of such substances through the liver. Their transformation into urea takes place probably in the hepatic cells. Urea passes through the liver unchanged. Uric acid after ingestion is transformed into urates in the stomach. The urates absorbed and passed into the liver do not increase the flow of bile or modify it in any way.

ADDENBROOKE'S HOSPITAL AND THE CAMBRIDGE MEDICAL SCHOOL.

Certain important reforms affecting the relations of Addenbrooke's Hospital and the Medical School of Cambridge were approved at a recent Court of Governors of the hospital. The University is to increase its annual contribution from £50 to £300 a year, in consideration of the appointment as members of the staff of the Regius Professor of Physic and the Professor of Surgery. Various rearrangements of the staff are to be made as vacancies occur, which will place a suitable number of beds at the disposal of these professors; and a proportion of the students' fees, amounting ultimately to one-fourth, will then accrue to the hospital. The present staff has co-operated in forwarding these changes, which will include provision for the proper conduct of clinical teaching and examination in the wards. An Advisory Council, composed of representatives of the Town, County, and University respectively, will be appointed to guide the Governors in administrative and financial matters.

We regret to have to record the death, on January 29th, from influenza of Sir William Miller, M.D., surgeon to the County Derry Infirmary, and five times Mayor of Londonderry.

Mr. R. Clement Lucas has been appointed by the Treasurer and Governors of Guy's Hospital, on the unanimous recommendation of his colleagues, to the Lectureship on Surgery in the Medical School, rendered vacant by the resignation of Mr. N. Davies-Colley on account of ill-health.

The first report of the Liverpool School of Tropical Medicine, which has just been issued, describes the organisation of the School and its inauguration by Lord Lister last April, and gives a sketch of the great amount of satisfactory work which has been done. We shall hope to give some further account of the report in a future number.

We understand that Colonel Young, the Red Cross Commissioner, is returning to this country, as his services can no longer be dispensed with by the Patriotic Fund Committee. Sir John Furley, Director of the Ambulance Department of the Order of St. John of Jerusalem, and a member of the Central British Red Cross Committee, who went out to Capetown about a month ago in charge of the Princess Christian Hospital Train, will probably take up the duties of Chief Red Cross Commissioner in South Africa.

Dr. E. P. Manby, who has for some years been Assistant Medical Officer of Health to the City of Liverpool, has been appointed a Medical Inspector under the Local Government Board. The Health Committee of the Liverpool Corporation at its meeting held last week passed a resolution congratulating Dr. Manby on his appointment, and placing on record their regret at losing his services, and their high appreciation of the manner in which he has discharged the responsible duties committed to him during the four years he has been in the service of the Corporation as Assistant Medical Officer of Health.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Queen's Speech referred to two Bills which contain clauses dealing with matters of interest to the medical profession. The Companies Act Amendment Bill, which is mentioned first among those which the Government would seem to intend to pass, will no doubt contain the clause laying it down that it is unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife, and providing a penalty against any company contravening this enactment. The clause regulating the carrying on the business of a pharmaceutical chemist, or chemist and druggist, will also doubtless appear in some modified form. Much lower down in the list of Bills to be introduced by the Government is the Lunacy Acts Amendment Bill, which will, it is to be assumed, contain the clause providing for the temporary care of cases of incipient or unconfirmed insanity. Reference is also made to further proposals for the amendment of the Factory Acts.

The Midwives Bill is again to try the fortunes of the ballot. The Midwives Bill Committee has prepared the draft of a Bill to secure the better training of midwives, and to regulate their practice, in which most of the suggestions made by the General Medical Council have been embodied. The words "natural labour" do not occur in the draft, but the last paragraph of Clause 3 of the Bill, as published in the British Medical Journal of January 7th, 1899, p. 46, is enlarged by the addition of words forbidding a midwife to grant "any certificate of death or of stillbirth, or to attend cases of abnormal labour, or of disease of or danger to the mother or child." The same clause contains also a paragraph forbidding a midwife to employ as her substitute or assistant an uncertified person. As the Bill, however, is still subject to modification, it will be better to defer its consideration until it has been ordered to be printed by Parliament.

THE MIDWIVES BILL.

We have received a letter from the President of the Midwives Institute, 12, Buckingham Street, Strand, W.C., with regard to the report of the remarks made by Dr. Colin Campbell at the meeting of the Parliamentary Bills Committee on January 16th, published at p. 331 of the British Medical Journal of January 27th. The President desires to state that "no pamphlet or transactions of the Midwives Institute has been printed or circulated, nor has the Institute anything whatever to do with the objectionable advertisement referred to, nor is the Bill put forward by the Midwives Institute."

We have communicated with Dr. Colin Campbell, who states (1) that he referred to the following advertisement in the *Daily Mail*:

> In Parliament.—All married people should agitate to secure the passing of "The Midwives' Registration Bill." Write your M.P., urging him to vote for it. This Bill will practically abolish the present system of man-midwifery (which was only began in England about 90 years ago), by creating a class of properly trained, qualified, and "Registered" Midwives, who will be employed with perfect confidence in fill cases.

(2) that the *Transactions of the Midwives Society* afforded a further object lesson in the same direction.

The Bill is put forward by the "Midwives Bill Committee," 12, Buckingham Street, Strand, W.C.

Antirabic Inoculation in Berlin.—During 1899 the number of persons treated in the Berlin Antirabic Institute was 384. All these had been bitten by rabid dogs and cats. Of the whole number 6 died. Among these were three men who came to the Institute after the disease had already developed.

Dengue at Barcelona.—An epidemic of dengue is reported at Barcelona. The disease is of a serious character. The number of sufferers so far is estimated at 8,000. The death-rate has increased from 25 per day, which is the normal verage, to 170.

THE WAR IN SOUTH AFRICA.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XI.

The Hot Dry Summer.

Mr. Frederick Treves's letter from Frere Camp, which appeared in the last issue of the British Medical Journal, has been read with the greatest interest both by the medical profession and the public. His graphic descriptions of the little town and the parched brown veld of the African summer are admirable, and bring before us, as scarcely any other correspondent has done, a picture of the camp, "dry, dusty, parched, and restless under a blazing sun." The heat both at Frere Camp and in Ladysmith itself appears to have been great, even for an African summer. Thus Mr. Treves says that on one day it was 104° in the shade, and that a clinical thermometer in a bag lying in the tent registered 104 5°.

A despatch from Ladysmith by runner, dated January 21st, states among other things that the heat was 107° in the shade. A heat of this degree does, however, not infrequently occur during the summer months in the up-country towns of South Africa. Thus in Kimberley I have known the temperature over 100° F. in the shade daily for weeks together. With such weather as this it is of course usual, and in fact almost necessary in the normal condition of life, that people should remain almost entirely under shelter during the middle hours of the day; yet we read of our soldiers in one engagement after another exposed to the blazing sun throughout the entire day. Fortunately in the dry atmosphere of South Africa these extreme temperatures are not so oppressive as in moister climates; nevertheless a temperature of 100° in the shade means something a great deal higher in the actual sun, and where the sunlight actually falls on the body it produces a sensation almost as if one were being hit by a stick.

In the neighbourhood of Frere and the Tugela about Colenso the season would appear to have been unusually dry, a condition which is usually accompanied in the summer by excessive heat. Thus, Mr. Treves speaks of the river which is reputed to "run" through Frere as not running at all, but consisting of a series of dams full of brownish water. As a matter of fact, this is the normal condition of African rivers for about nine months in the year. It is only during the rainy season that they are actually full and flowing. We have read several accounts of the Tugela being in flood; but it must be remembered that the Tugela flows out of the main range of the Drakensberg, and that it is from rainfalls higher up that these floods are usually produced. It is a common feature of South African rivers to be flooded in this way by rainfalls in the mountains near their source, and to flow afterwards, it may be for hundreds of miles, in a roaring torrent 10 to 20 feet above their usual height through an arid, parched, and rainless country.

The spot where the Tugela emerges from the Drakensberg is but little known or visited, but it is of exceptional wildness and beauty. Emerging high up on the mountains, the river flows in a large body over the side of a precipice, and down this it falls broken by occasional ledges for 4,000 feet, until at last in the valley below it descends literally in the form of spray. The stream is thus changed during its downward course from a solid column of water into what is little more than vapour. The floods that occur in South African rivers frequently come suddenly down a dry river bed without warning, and it is by no means uncommon for carts and horses, or even waggons and teams of oxen, to be swept suddenly away in crossing by a flood of this description.

Kimberley.

From both Ladysmith and Kimberley heliograms of considerable length have recently been published; and whatever depression may exist outside, there is no expression of this tone in the messages flashed forth by the garrisons. We are assured from Kimberley *viâ* Modder River on January 24th that both people and garrison are in good health and are going about their tasks cheerfully. An earlier heliogram of January 19th is equally satisfactory in its purport. Thus it says the De Beers Company has undertaken the work of the sanitation of the town since the failure of the former contractors through the capture of mules, carts, etc., by the enemy. Readers of my letters will perhaps remember that this was one of the dangers I anticipated to the health of the town, but it has evidently been grappled with satisfactorily. The ordinary water supply having been cut off, that now in use is evidently pumped from the mines.

Owing to the wisdom and forethought of the authorities in regulating supplies, the community is still enabled to obtain the absolute necessaries of life at normal prices, although eggs, fowls, vegetables, etc., are at famine rates. From these reports we may reasonably infer that Kimberley with a population of over 20,000 can continue to hold out for some considerable time, and we cannot allow ourselves to believe that, in spite of some of our reverses, this community will not eventually be relieved.

Ladysmith.

The one item of intelligence which must be held to be satisfactory, whatever be the military course of events in Natal, is that the general health of the garrison is much better. From this we may infer that the typhoid epidemic is on the wane. Some people write as though the relief of Ladysmith were the only step necessary to terminate this epidemic, but it must be borne in mind that typhoid fever is not dependent on a state of siege, nor would it vanish at the raising of the siege. It will continue so long as men susceptible to its attacks continue to drink a polluted water supply without boiling it.

The entire evacuation of the town would of course terminate an epidemic dependent on local causes, but should occupation in any form continue it is obvious that the radical cause of this epidemic must be traced and grappled with. A Reuter's telegram of January 21st says that the fever has abated in the garrison doubtless owing to the dry weather. This may possibly afford some explanation, for as I indicated in my last letter one of the dangers of these tropical rains is that surface drainage, and occasionally even flooded latrines, flow into the river and springs, or other sources of water supply; thus every thunderstorm, unless careful precautions are taken, may be the cause of fresh poisoning of the supply. The question of the commissariat in Ladysmith now becomes, if possible, of deeper interest than ever, and remembering the reason assigned for the change in the original plan of campaign, it is as gratifying as it is surprising to read messages so late as January 24th speaking of the supplies still spinning out splendidly.

Mafeking.

Again an interesting letter appears in the *Times* of January 29th, dated "Mafeking, December, 1899," in which the writer states that "immense stocks of food supplies had been stored in the town. It is the knowledge of the valuable stores which are lying here which has inspired the Boers to court us so assiduously." From this we may fairly assume that Mafeking, at least, can hold out very much longer if necessary; and, on the other hand, if it has been reinforced by the troops from Southern Rhodesia, as is stated from Transvaal sources, it may prove a valuable base.

This statement, though unconfirmed, is not in itself improbable. As I pointed out in my last letter, one of the difficulties which a force from Rhodesia coming south would have to contend with would be a certain amount of malarial fever, and probably a considerable amount of horse sickness in the low country, but apparently the greater portion of this low country must have been traversed early in the summer, and at Gaberones the force would be already emerging into the higher veld.

Typhoid at Modder River.

Although the health of Lord Methuen's force has been reported to continue good, it is to be noted that on January 18th, 20th, and 22nd three deaths from typhoid have been reported. It is strongly to be hoped that energetic measures will be taken to arrive at the cause, and that prevention of further attacks will be found practicable.

Lyddite.

A letter has been received from a correspondent asking as to the physiological causes of death after the explosion of a lyddite shell. I have raised this question already in one of my

letters, and had hoped that some of the readers of the British Medical Journal would have offered explanations. Judging from the published accounts, it would appear that the main effects of lyddite are due to shock produced by the concussion, such as is caused, for instance, by the explosion of dynamite. The effect of the explosion of dynamite on man I have observed on many occasions. The most terrible explosion that ever came under my notice, and probably the most terrible that ever occurred, was that in 1896 of three trucks laden with dynamite which were standing in Johannesburg outside the goods station. The dynamite was of inferior quality, being of Transvaal manufacture, and the Hollander officials were shunting the trucks. The result was an explosion which blew to powder every house within a radius of some 200 yards, which wrecked houses for a further radius of 600 yards, and which partially wrecked some buildings three quarters of a mile away. Thus I can well remember that one side of the Wanderer's Pavilion, which was afterwards used as a temporary hospital, three quarters of a mile from the scene of the disaster, was blown in. The effect on men, women, and children in the neighbourhood was terrible. Fortunately the houses were scattered and the population not dense, but some hundred were killed and another hundred more or less seriously injured. Of those killed, some showed actual injury from falling stones and timber, others showed no visible sign of external violence. Among the wounded were many cases of ruptured tympanum with hæmorrhage from the ears. The effects, I take it, were due to concussion, or, in plainer English, were the result of an actual blow from the surrounding atmosphere. The tremendous development of gas produced, as in the case of all explosives, an instantaneous and terrific increase of pressure in the atmosphere immediately surrounding the explosion. It is in this way that lyddite acts, and it is presumably in this way that sheep within an acre of the explosion of one of our largest shells are said to have been nearly all killed.

Boer Medical Corps.

The *Globe* of January 25th contains interesting details from a letter written to a friend in Berlin by Dr. Schneider, surgeon in chief to the Transvaal forces, which I trust Sir James Sivewright has read. He (Dr. Schneider) says that the needs of the Boers with regard to surgeons, bearers, bandages, and other appliances are better provided for than is generally supposed. In 1896 to 1897, he remarks incidentally, enormous stores of arms and ammunition, both from England and Germany, were imported into the Transvaal, and Germany's chief share in the work of preparation consisted in supplying the Transvaal with surgical instruments, drugs, and hospital appliances. To this end £500,000 have been spent for the Boer Army Medical Service, which is now thoroughly equipped. He says: "We have some English surgeons who are old settlers in the Transvaal, and who have volunteered for service in the Transvaal army, but the Boer troops show no confidence in them."

Referring apparently to the operations around Ladysmith he states that the severely wounded are sent by rail to Harrismith or to Glencoe as quickly as possible, where the Boer women have gathered themselves together, and friend and foe are most carefully attended. The writer says that wounded Englishmen fall so frequently into their hands that the surgeons are most busily engaged with them. The wounded have, as a rule, almost the same treatment; there is always ready for them a supply of fresh milk, bread, meat, and wholesome soups. "It is only natural that we German surgeons should give our first attention to the Boers, but so far we have never forgotten the Englishmen." In case of a great battle where many on both sides would have to be attended to, the writer says that "the Boer surgeons would not suffice to meet the claims made upon their services, and, as a matter of course, would have to leave the wounded English to their sufferings." This necessity might, we suppose, arise, but it must be a painful one for any surgeon with a proper sense of the duties of his vocation to anticipate, One of the honourable traditions of our profession is that such succour as we can offer is freely given to friend and foe alike, and that a surgeon holding a high position, even with the Boer forces, should think it necessary to make the statement quoted above causes a somewhat painful impression.

THE DESPATCHES.

The despatches published in the *London Gazette* of January 26th, dealing with the operations in South Africa down to December 28th, 1899, contain some references to the work of the Army Medical Department which are eminently satisfactory.

Belmont.

In the action at Belmont on November 23rd, in which the first movement was made at 3 A.M., and which terminated at about 6.10 A.M. by the capture of the heights and the retreat of the enemy, the casualties, it will be remembered, were 54 killed and 238 wounded. In addition 20 of the enemy's wounded were taken into the British hospital. Lord Methuen in his despatch of November 26th, written from Enslin on November 26th, writes as follows with regard to the medical arrangements of this fight:

"By 10.30 my division was in camp; by 1 all my wounded were in a comfortable house being carefully tended; by 5 P.M. next day the hospital train conveyed the less severe cases to Orange River, the graver cases to Capetown. This is the most perfect work I have ever heard of in war, and reflects the highest credit on Colonel Townsend."

Enslin.

In this action the force under Lord Methuen started at 3.30 A.M. on November 25th, and was in action at 6.30 A.M. Lord Methuen describes the fight as far harder than at the previous engagement. The Naval Brigade and the Ninth Brigade were left to protect the guns, or assault a position if necessary; the Guards Brigade and two companies of the Munster Fusiliers were left to defend Belmont Station. The main idea of Lord Methuen's operation was to march a division at once to Swink's Pan, to work one battery round each flank, and to send cavalry and mounted infantry well forward with the object of capturing the eastern force. The operation was successful, but the casualties were 24 killed and 166 wounded. In addition to his own wounded Lord Methuen found over 30 wounded in the Boer hospital at Enslin. He makes the following observation with regard to the arrangements carried out by Colonel Townsend, R.A.M.C.:

"I again draw attention to the exceptional organising power of Colonel Townsend at Swink's Pan. At 11.30 P.M. I was informed that, owing to all the ambulances having been used for taking the wounded to the train at Belmont, I had scarcely a field hospital mounted officer, only three ambulances, and three stretchers. I knew I had to fight next morning, so got together fifty blankets in order to carry wounded with the help of rifles. I also sent to Colonel Townsend to make arrangements for wounded by 3 A.M., a messenger having to ride seven miles to him. He met me on the field with a full supply of ambulances, and I never saw anything more of him or the wounded, because he had a train ready for them between Grass Pan and Belmont. His only complaint is that there is not much of his mules left, an observation which applies equally to men and animals."

Modder River.

In this action, which was fought on November 28th, beginning at 4 A.M., the number of casualties was 72 killed and 396 wounded, Lord Methuen concludes his despatch by the following observation of the work of the Royal Army Medical Corps:

"Again I call attention to the splendid hospital arrangements, for at 4.45 P.M. on the day after the fight all my wounded were on the way to Capetown. I am glad to have been slightly wounded, because in no other way could I have learnt the care taken of the wounded, and there was nothing officer or private soldier required that was not provided at once, and the medical officers never tired in their endeavour to alleviate suffering."

The despatch also contains the following mention:

"He (Colonel Paget) draws attention to Captain Moores, R.A.M.C., who, although wounded in the hand, said nothing, but continued his duties."

Natal.

Sir Redvers Buller's despatch with regard to the reverse at Colenso does not contain any reference to the work of the Royal Army Medical Corps or of the hospitals, but Major-General Hildyard, in his report on the night attack on Beacon Hill, near Estcourt, Natal, on November 19th, states that

"Major Rickets commanded the bearer company, and did good service both at the time and in connection with the removal of the wounded."

It will be remembered that the force by which the attack was made was under the command of Colonel Kitchener. Early in the night there was a storm of extreme severity, and the men lying out in it amongst the rocks were exposed to its full force. The hill was successfully taken and some thirty horses captured, but, in accordance with instructions, was at once evacuated. Owing to the nature of the ground, it would appear that there was considerable difficulty in removing our wounded. The cavalry, under Lieutenant-Colonel Martyr, assisted in the work of getting the wounded of the 2nd Battalion West Yorkshire Regiment down the hill.

THE CLASSIFICATION OF WOUNDED.

The casualty lists issued by the War Office usually contain indications of the severity of the wounds received. As the system of classification followed is probably not generally understood, it may be of interest to explain it.

"Wounded" is used as an inclusive term, and gives no indication of the severity of the injury. It is used only in preliminary statements forwarded home before the medical officers have had time to examine all the wounded and make a classified term.

Three classes of wounds are recognised: "Dangerous," "severe," and "slight;" but if a man is dangerously wounded and likely to die it is usual to state that his wound is "probably mortal." The actual classification is of course made by the medical officer on the spot.

It is impossible to attempt to specify the nature of the wounds which would fall into these several classes, but it may be said that a simple flesh wound would be entered as slight, a wound implicating bone or joint would be entered as severe, and a wound penetrating the abdomen, chest, and brain would be entered as dangerous.

THE YEOMANRY HOSPITAL.

ALL the arrangements for the despatch of the Yeomanry Hospital to South Africa are now in an advanced state. The entire male *personnel*, 150 in number, including the medical officers and ten dressers, will go by the *Majestic*, which is expected to reach England very shortly. She will take some days to coal and clean, but it is hoped that she may be ready to sail on February 10th or 12th. The nurses will follow on February 10th on a liner, as neither the *Majestic* nor any other transport has accommodation for ladies. With the nurses will go about ten female servants and ward maids. The *matériel* of the hospital is timed to arrive before the staff, who will find sufficient accommodation in the form of huts and tents already erected.

The site of the hospital has not yet been quite definitely settled: there seems to be some possibility that it will be established at De Aar, or some other advanced point on the lines of communication of the strong force which, it is believed, will now be pushed forward through the southern border of the Free State, according to the original plan of campaign. Of course the ultimate site of the hospital will be determined by the Commander-in-Chief, Lord Roberts, and the Principal Medical Officer, Surgeon-General Wilson. In any case this hospital will be of the nature of a base hospital, as is sufficiently shown by the fact that it has a staff of lady nurses who are not employed in field or stationary hospitals near the actual front.

There is a proposal to provide a Yeomanry Field Hospital, but this, we understand, has not yet taken definite shape The medical staff, which has been selected from a very large number who have offered their services, is very strong and efficient, and Mr. Fripp is to be congratulated on the successful completion of this somewhat difficult initial task. He has been presented by the Princess Christian with a very complete dressing case filled with instruments for his personal use,

Mr. L. Vernon Cargill, F.R.C.S.Eng. (Assistant Ophthalmic Surgeon to King's College Hospital) will be in charge of the ophthalmological department and the Roentgen ray department will be under the direction of Mr. J. F. Hall-Edwards, L.R.C.P. (Surgeon Radiographer to the General Hospital, Birmingham), who has authority to obtain all the necessary appliances.

The staff of nurses has been carefully selected, and we understand that Lieutenant-Colonel A. T. Sloggett, R.A.M.C., the military medical officer in command, is very well satisfied with the non-commissioned officers and hospital orderlies who have been attached to the hospital.

The public has responded generously to the appeal for funds, and in addition a very large proportion of the equipment of the hospital has been given. The various firms that cater for the wants of the medical profession have been second to none in their generosity, and Messrs. Down Brothers, who are supplying the instruments at prices very advantageous to the hospital, have presented a quantity of enamelled metal furniture for the operating theatre, including a "raise and lower" operating table.

The following additional appointments completing the medical staff have been made:

Mr. L. Vernon Cargill, F.R.C.S.Eng. (Assistant Ophthalmic Surgeon to King's College Hospital); Mr. John F. Hall-Edwards, L.R.C.P. (Surgeon-Radiographer and Photographer to the General and Royal Orthopædic Hospital, Birmingham); Mr. A. P. Parker, M.B., B.Ch.Oxon. (Middlesex Hospital); Mr. H. W. Bruce, M.D.Lond., B.S. (Guy's Hospital); Mr. L. E. C. Handson, M.B., B.S Lond. (Guy's Hospital); Mr. G. E. Richmond, M.B., B.S., B.Sc.Lond. (Guy's Hospital); Mr. R. T. Fitzhugh, M.B., B.S.Lond. (Guy's Hospital); Mr. Barclay Black (Auckland, New Zealand).

The following senior students have been appointed dressers to the hospital:

Mr. J. Atkins, Mr. A. Ayre Smith, Mr. C. W. Breeks, M.B., C.M.Edin., Mr. A. de V. Blathwayt, Mr D. J. Greenfield, Mr. W. B. Hay, Mr. A. Pearson, Mr. A. C. Ransford, Mr. Owen Richards, M.A.Oxon. (Fellow of New College), Mr. E. N. Thornton.

CAPTAIN C. DALTON, R.A.M.C.

Captain Charles Dalton, R.A.M.C., who was severely wounded during General Barton's operation at Chieveley on January 23rd, obtained the commission of Surgeon-Captain in January 1891. He received his medical education in Carmichael School, Dublin.

THE IRISH HOSPITAL.

The first parade of the staff of the Irish Field Hospital given by Lord Iveagh for service in South Africa, took place on January 29th at the Royal Barracks. Sir William Thomson, Surgeon-in-Chief, inspected the men and was greatly pleased with their appearance. The men were inspected at the Royal Barracks, Dublin, on January 31st by Major-General Gossett, C.B., Commanding the Dublin District. They leave Dublin on Friday morning for the East India Docks, London, where they embark on the ss. *Montford*, which has been specially chartered to convey them to South Africa. On Saturday they will be inspected by His Excellency the Lord Lieutenant of Ireland and Lord Iveagh on board the vessel. Sir William Thomson leaves Southampton this day (Saturday) by mail steamer, so as to arrive in Capetown a little in advance of the remainder of the staff, with the view of making the necessary arrangements for its departure to the front.

HOSPITAL ARRANGEMENTS.

Captain E. G. Powell, R.A.M.C., now doing duty with the Coldstream Guards, has been selected for service with Mr. Van Alen's hospital about to go to South Africa.

The three bearer companies and three field hospitals to be attached to the 8th Division will be a heavy drain on the remaining resources. The units will concentrate at Aldershot.

The draft of St. John Ambulance Association members who joined at Aldershot has been distributed as follows: 5c to No. 6 General Hospital, Portsmouth; 20 to No. 5 Stationary Hospital, Woolwich; 10 to No. 20 Field Hospital; and 8 to No. 20 Bearer Company, both at Aldershot.

A general hospital with accommodation for 520 patients has been established at Mooi River, and sick and wounded have begun to arrive.

The New South Wales Medical Corps provided a whole bearer company for the recent Sunnyside expedition. Its field hospital at Orange River has been in great request, and extra accommodation has been provided. Three of the ambulances and two medical officers are kept at Belmont, and two ambulances at Zoutpansdrift. The health of the corps was said to be excellent.

The Belgian Ambulance Corps, numbering about 60 persons, including a dozen nurses, has arrived at Lourenço Marques. The party left by special train for Pretoria on January 9th.

Civil Hospital Accommodation.

The following hospitals and convalescent homes, in addition to those already announced, have, in response to a circular from the War Office, undertaken to provide the number of beds indicated for the use of the sick and wounded returning from South Africa:

University College Hospital	20
Middlesex Hospital	30
St. Thomas's Hospital	25
London Temperance Hospital	10
Hospital for Consumption, Brompton	10
Royal Orthopædic Hospital (London)	10
Lewisham Union Infirmary	28
Royal South Hants Infirmary	26
Hunstanton Convalescent Home	40

Claremont Medical and Surgical Sanatorium, Cape Colony, three floors of the new wing of the building (now occupied by wounded officers).

THE ARMY NURSING SERVICE AND RESERVE.

In view of the interest taken in all matters affecting the welfare of the sick and wounded at the present time, it seems well to give the following particulars as to the qualification of candidates for the Army Nursing Service and the Army Nursing Reserve, and of their conditions of service.

The Army Nursing Service.

The Nursing Service of the army is classified as follows: (1) Lady superintendent of nurses, (2) superintendents, (3) nursing sisters. The two former classes are as a rule, but not necessarily, each filled up from the grade below it by selection, on grounds of experience, administrative capacity, and personal fitness.

Qualifications of Candidates.

A candidate for the appointment of superintendent or nursing sister must not be under 25 or over 30 years of age, and must have had at least three years' preliminary training and service combined in a civil general hospital. She must also be of British parentage or a naturalised British subject, and will be required to produce

a. Evidence of age.

b. A recommendation from a person of social position (not a member of her own family) to the effect that the candidate's family is one of respectability and good standing in society, that she is in every way a desirable person to enter a service composed of ladies, and that she possesses the tact, temper, and ability qualifying her for appointment to the Army Nursing Service.

c. A statement, signed by the candidate, showing whether she is single, married, or a widow; whether a member of a sisterhood or society, and giving particulars of the place and duration of her hospital training, which must have been undergone for at least twelve months of the time in a civil general hospital where adult male patients receive medical and surgical treatment, and in which a staff of nursing sisters, under a matron, is maintained.

d. Certificates of efficiency in medical and surgical nursing from the medical officers under whom she has served.

e. A recommendation from the matron of the civil hospital at which she was trained.

f. A certificate from a qualified medical practitioner that she is in good health.

A candidate must state in addition (1) what experience she has had in hospital supervision; (2) what she personally understands by the duties of a superintendent and the execution of medical orders.

The certificates of age, qualification, and character in original must accompany the declaration form, which will be supplied to candidates by the Director-General, Army Medical Department.

On being nominated for an appointment a candidate will be required to undergo a period of six months' probation at the Royal Victoria Hospital, Netley, for the purpose of further testing her suitability for the Army Nursing Service.

The Army Nursing Service Reserve.

The Army Nursing Reserve is formed for the purpose of supplementing the regular nursing service of the army in the event of war on any extended scale. In time of peace it is under the control of a specially constituted Committee, of which H.R.H. Princess Christian of Schleswig-Holstein is President, but in time of war the nursing sisters are entirely under the control of the War Department.

The Army Nursing Reserve consists of 100 or more nursing sisters, a certain number of whom may be detailed by the military authorities as acting superintendents. As a rule, the sisters are only expected to replace in military hospitals at home those members of the regular army nursing service ordered abroad, but, in case of pressing emergency, a certain proportion (selected from volunteers) are called upon to proceed on service at short notice.

A candidate for the appointment of nursing sister must not be under 25 or over 35 years of age, and must have had at least three years' preliminary training and service combined in a civil general hospital. She will be required to produce:

a. Evidence of age.

b. A recommendation from a person of social position (not a member of her own family) to the effect that the candidate's family is one of respectability and good standing in society, and that she is in every way a desirable person to enter a service composed of ladies.

c. A statement, signed by the candidate, showing whether she is single, married, or a widow, and whether she is a member of a sisterhood or society. The statement should also give particulars of the place and duration of her hospital training, which must, for at least three years, have been in a civil general hospital.

d. Certificates of efficiency in medical and surgical nursing from the medical officers under whom she has served.

e. A recommendation from the matron of the civil hospital at which she was trained, who must certify that she possesses the tact, temper, and ability qualifying her for appointment to the Nursing Service Reserve of the army. Ability to speak and write one or more foreign languages will be considered an additional qualification, and will give preference in selection.

f. A certificate from a qualified medical practitioner that she is in good health.

The certificate of age, qualification, and character must accompany the declaration form which will be supplied to candidates by the Secretary, Army Nursing Service Reserve, 18, Victoria Street, S.W.

Pay and Allowances.

The regulations as to the pay and allowances for the Army Nursing Service and Reserve may be briefly stated as follows:

Superintendents and nursing sisters are supplied with public quarters (or with lodgings at the public expense) and with fuel and light.

Pay.—A nursing sister receives £30 for her first year of service, and an increase of £2 after every year of satisfactory service until she receives £50 yearly. When a member of the Army Nursing Service Reserve is called up for duty she receives pay at the rate of £40 a year. A senior nursing sister or a member of the Army Nursing Service Reserve called up for duty, when appointed superintendent, receives in addition pay at the rate of £20 a year.

Allowances.—A special allowance, in lieu of board and washing, at the rate of 12s. a week at a home station, or of 3s. a day at a station abroad when rations in kind are not supplied and of 3s. 6d. a week when they are supplied, will be granted to such nursing sisters, and a special allowance for the provision of clothing. Annual clothing allowance: abroad £4 7s., at home £4; triennial winter cloak allowance £2; triennial summer cloak allowance £1 5s. An allowance of 10s. 6d. a week for board, etc., will be granted to the servant appointed to attend on nursing sisters. The other allowances at stations abroad, including the allowance for servants, will be at rates not exceeding those of a departmental officer of subaltern rank.

Pension.—A superintendent or nursing sister of the Army Nursing Services, retired owing to attaining the age of 60, or owing to having been rendered unfit for hospital duty through disease or injury after ten years' service, receives a pension equal to 30 per cent. of her pay for the preceding year *plus* 2 per cent. of her pay for each additional year's service, to a maximum of 70 per cent. Special pensions and gratuities may be granted under exceptional circumstances.

LITERARY NOTES.

The new German *Pharmacopœia* will probably not be published till March or April.

For many years Greek practitioners have had no *Pharmacopœia* to guide them in prescribing. Dr. A. Damberghis, Professor of Pharmaceutical Chemistry in the University of Athens, has now supplied this want. His work has been recognised, by decree of the Minister of the Interior, as the official Greek *Pharmacopœia*.

We are glad to learn that Sir Joseph Fayrer, Bart., K.C.S.I., has written his *Reminiscences*. They ought to form a very interesting book. Sir Joseph Fayrer is, we believe, one of the very few men who have held a commission in the medical services of the navy and of the army and in the Indian Medical Service. The greater part of his service, however, was in India, and the story of his life contains many stirring episodes. He was in Rome in the troubled times of 1848 49; saw service in the first Burmese war; and was one of the beleaguered garrison in Lucknow all through the memorable siege of that town during the mutiny. The volume, which will contain some twenty or thirty illustrations, will, we understand, be published very shortly by Messrs. Blackwood.

Dr. S. G. Zervos of Athens claims for Hippocrates the honour and glory of having discovered the therapeutic usefulness of the wet compress, which is generally attributed to Priessnitz, the apostle of the water cure. In proof of this claim he cites the following passage from the Father of Medicine (Littré, *Œuvres Complètes d' Hippocrate*, t. ii, p. 269):

> In pain of the side.....it is not inappropriate to use in the first instance fomentations with the object of relieving it. Of fomentations, the most potent is hot water enclosed in a leather bottle.....It is well also to apply a large soft sponge steeped in hot water, and squeezed out; the fomentation should be covered with cloths; in this way the heat will be longer maintained.

The late Dr. William A. Hammond, like that other eminent neurologist Dr. Weir-Mitchell, took to the writing of fiction in his later years. His first novel, entitled *Lal*, achieved considerable success. It was followed by four or five others, which were not equally appreciated by the reading public.

The late Dr. Evans, the famous American dentist, of Paris, who assisted the Empress Eugénie to escape from France in 1870, was the author of a narrative of the events of that stormy period, entitled *The Fall of the Second French Empire*. Only a small number of copies of this interesting record were printed. The manuscript was left in the hands of M. Symonds, a bookseller in Paris. On the death of Dr. Evans, his heirs laid claim to the manuscript, which M. Symonds refused to give up. A lawsuit followed, and judgment was given against M. Symonds, who, according to the *Temps*, was condemned to eight days' imprisonment, a fine of 100 francs, and 500 francs damages.

THE PLAGUE.

PARAGUAY.

DR. WILLIAM STEWART, the President of the National Council of Hygiene, Paraguay, has written an interesting account of the plague in Asuncion (Paraguay) in 1899. It appears that the disease was traced to four sailors who arrived from Rio la Plata in April, 1899. Two died in Asuncion, one and four days respectively after their arrival, the third died in a village some distance from Asuncion and the fourth went to his village up country, was taken slightly ill there and recovered. In this man buboes were still found when he returned to Asuncion in September. The interesting point is that none of these cases were diagnosed as plague. The first one had a bubo, but seemed to die from a lung affection. The second was thought to be suffering from yellow fever by one doctor and from acute gastritis by another.

The *post-mortem* examination made by several distinguished physicians did not confirm the diagnosis of yellow fever. There was general congestion of the internal organs, a hæmorrhagic swelling in the spleen, an enlarged liver, and an acute gastro-enteritis. The physicians were unable to say what the disease was. No one suspected plague. It was only six months after, when a new disease with which the medical men of the town were unfamiliar broke out in the barracks and in several parts of the town, that suspicion was gradually aroused as to its true nature, and it was found that this new disease presented the classical symptoms of plague and corresponded in *post-mortem* appearances with the earlier cases in May. The first fatal case in the barracks was a sergeant, and the necropsy showed all the internal organs in a state of congestion, especially the spleen, liver, kidneys, and lymphatic glands. There were also external buboes. In some cases there was fever and bubo, in others severe pneumonia, and in a large number of cases simple fever and bubo, in which the patients moved about and took no care of themselves. These latter cases were not fatal. Some of the doctors diagnosed the disease, by which the rich were not attacked, as malarial fever, infectious fever, and typhus, and it was not until the middle of October that it was discovered to be plague. This discovery was afterwards confirmed by the isolation of the bacillus. The symptoms usually observed were shivering, malaise, severe headache, not localised in any part of the cranium, nausea, and occasionally vomiting, fever (104° to 105° F.), quick pulse, severe pain in glands, with infiltration of the periglandular tissue, injected conjunctiva, coated tongue, no appetite, much thirst, constipation, and suppression of urine; petechiæ and boils were observed in some, but not in all cases. The general state of the patient usually got worse in the afternoon, and if death did not occur delirium set in, and pulse became imperceptible, with or without coma, on the fifth or sixth day. The pneumonic cases were always fatal. The mortality seems to have been exceptionally low; of 28 cases in the barracks, only 14 died, and this in a place where no Yersin serum was procurable. It is estimated that to the end of November some 230 cases occurred altogether.

PERSONAL PLAGUE PRECAUTIONS.

Mr. Joseph Benjamin, medical practitioner, Ahmedabad, India, sends us for publication a paper containing a series of hints to the native public as to precautions to be taken during a plague epidemic. They may be summarised as follows:

1. Baths in warm water daily, and afterwards rub with olive or other oil.
2. Keep clothes and bedding clean.
3. Whitewash house and remove rubbish to a distance.
4. Prevent overcrowding.
5. Ventilate apartments freely.
6. Keep gutters, cesspools, etc., clean, using a disinfectant.
7. Boil drinking water.
8. Avoid chills and keep indoors after dark.
9. Boil milk, and eat fresh vegetables and sound grain; do not fast.
10. Burn benzoin or other disinfectant for a time every evening.
11. Take 2 grains of quinine and 5 grains of sodium bicarbonate in water every morning.
12. Use eucalyptus or camphor freely about clothes, etc.
13. Avoid "vice" and intoxicants.
14. Keep bowels free, but avoid strong purgatives.
15. Avoid mental excitement.
16. Sleep in a cot and not on the floor.
17. Do not walk barefooted.
18. Persons coming from infected districts should bathe and have their clothes watched in solution of mercury perchloride, and then boiled in hot water.
19. Vacate the street or house in which plague occurs, and live in the open outside the city.
20. Vacate a house in which rats are dying.
21. When a case of plague has occurred in a house the floor should be dug up, a fire made of the turned-up earth, and fresh earth laid. The walls of the house should be washed with solution of corrosive sublimate, and then whitewashed; a few tiles ought to be removed from the roof to allow the sun to enter.

He further recommends general hygienic measures (in all there are 56 recommendations) which, if printed in the vernacular, would be useful for distribution.

PROGRESS OF THE DISEASE.

PORTUGAL.

Oporto.—During the week ending January 28th no fresh cases of plague occurred, and no deaths from the disease amongst those previously attacked.

INDIA.

The number of deaths in all India from plague during the week ending January 11th was 1,386. This is practically identical with the numbers recorded during the previous week. In the city of Bombay the death-rate from plague has decreased slightly, but increase in the Presidency of Bombay as a whole. The public health in the city of Bombay is so bad at the present moment that no fewer than eight diseases are said to prevail; they are small-pox, measles, remittent fever, plague, phthisis, respiratory diseases, diarrhœa, and dysentery. The total mortality has reached the enormous proportion of 114 per 1,000. The assumed normal mortality may be taken as 546, whereas it is, at present, 1,870 per week, or an excess of 1,324.

MAURITIUS.

For the week ending January 25th 11 fresh cases of plague were recorded; 9 deaths occurred from the disease during the same period.

AUSTRALIA.

No further cases of plague were reported from Adelaide down to January 23rd. The strictest precautions have been taken to prevent an outbreak. The plague bacillus has been found in dead rats in the house where a plague patient has been isolated. Adelaide has been declared an infected port. A telegram to the *Daily Telegraph* from Sydney, New South Wales, dated January 25th, states that a wharf labourer has been seized with a mild attack of plague. The patient has been inoculated.

NEW CALEDONIA.

Between January 17th and 23rd 4 fresh cases of plague are reported from Noumea. No deaths from the disease occurred during the period.

SOUTH AMERICA.

Buenos Ayres.—On January 27th it was reported that plague has existed in Rosario—probably the large city of Rosario some 150 miles up the Plate River—for three months in a mild form. A close sanitary cordon has been established round the infected locality. A few fatal cases have been reported.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

BRITISH MEDICAL ASSOCIATION.

SIXTY-EIGHTH ANNUAL MEETING.

The sixty-eighth annual meeting of the British Medical Association will be held at Ipswich on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1900.

President: John Ward Cousins, M.D.Lond., F.R.C.S.Eng., Senior Surgeon Royal Portsmouth Hospital.

President-Elect: William Alfred Elliston, M.D. Senior Surgeon East Suffolk and Ipswich Hospital.

President of the Council: John Roberts Thomson, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

Treasurer: Andrew Clark, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery.

An Address in Medicine will be delivered by Philip Henry Pye-Smith, M.D., F.R.S, Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by Frederick Treves, F.R.C.S., Surgeon-in-Ordinary to H.R.H. the Duke of York.

An Address in Obstetrics will be delivered by William J. Smyly, M.D., F.R.C.P.I., Examiner in Midwifery, Royal College of Physicians, Ireland.

The Scientific Business of the Meeting will be conducted in Thirteen Sections, as follows, namely:

A. Medicine.

President: Thomas Buzzard, M.D. *Vice-Presidents:* Mrs. E. Garrett Anderson, M.D.; Samuel J. Barton, M.D. *Honorary Secretaries:* Frederick William Burton-Fanning, M.D., 1 St. Faith's Lane, Norwich; Thomas Warner, M.D., 12, Museum Street, Ipswich.

B. Surgery.

President: Howard Marsh, F.R.C.S. *Vice-Presidents:* Samuel Herbert Burton, F.R.C.S.; Thomas Herbert Morse, F.R.C.S. *Honorary Secretaries:* Walter George Spencer, M.S., 35, Brook Street, W.; Herbert Henry Brown, M.D., F.R.C.S., 3, Museum Street, Ipswich.

C. Obstetrics and Gynæcology.

President: Walter Spencer Anderson Griffith, M.D. *Vice-Presidents:* Michael Beverley, M.D.; Mrs. Mary Ann Dacomb Scharlieb, M.D. *Honorary Secretaries:* John David Malcolm, M.B., F.R.C.S., 13, Portman Street, Portman Square, W.; Samuel Oliver Eades, L.R.C.P., Manor House, St. Peters, Ipswich.

D. Public Medicine.

President: John Clough Thresh, M.D., D.Sc., D.P.H. *Vice-Presidents:* Henry Handford, M.D., D.P.H.; Harry Cooper Pattin, M.D., D.P.H. *Honorary Secretaries:* George Vincent, M.D., D.P.H., North Lodge, Anglesea Road, Ipswich; Edward Petronell Manby, M.D., D.P.H., Public Health Department, Municipal Buildings, Liverpool.

E. Psychology.

President: R. Percy Smith, M.D. *Vice-Presidents:* Edmund Lewis Rowe, L.R.C.P.; William Aldren Turner, M.D. *Honorary Secretaries:* Cecil Anthony Perrier Osburne, F.R.C.S.Edin., The Grove, Old Catton, Norwich; James Richard Whitwell, M.B., County Asylum, Melton, Suffolk.

F. Physiology.

President: Professor William Dobinson Halliburton, M.D., F.R.S. *Vice-Presidents:* Edward William Wace Carlier, M.D.; Professor Charles S. Sherrington, M.D., F.R.S. *Honorary Secretaries:* W. H. Thompson, M.D., Queen's College, Belfast; William Legge Symes, M.R.C.S., Physiological Department, St. Mary's Hospital Medical School, W.

G. Pathology.

President: Edward E. Klein, M.D., F.R.S. *Vice-Presidents:* William Miller Crowfoot, M.B.; Professor Robert Muir, M.D. *Honorary Secretaries:* Alex. Grant Russell Foulerton, F.R.C.S., "Dunsdale," Mulgrave Road, Sutton, Surrey; Sydney Herbert Long, M.B., 46, Prince of Wales Road, Norwich.

H. Ophthalmology.

President: William Arthur Brailey, M.D. *Vice-Presidents:* Haynes Sparrow Robinson, M.R.C.S.; Henry Work Dodd, F.R.C.S. *Honorary Secretaries:* Charles Devereux Marshall, F.R.C.S., 10, Devonshire Street, Portland Place, W.; Walter William Sinclair, M.B., 16, Museum Street, Ipswich.

I. Diseases of Children.

President: Frederick Taylor, M.D. *Vice-Presidents:* Richard William Brogden, M.B.; John Thomson, M.D. *Honorary Secretaries:* William Soltau Fenwick, M.D., 8, Devonshire Street, Portland Place, W.; Alfred M. Gossage, M.B., 54, Upper Berkeley Street, W.

J. Pharmacology and Therapeutics.

President: Professor Walter George Smith, M.D. *Vice-Presidents:* Edward Liveing Fenn, M.D.; Charles Robertshaw Marshall, M.D. *Honorary Secretaries:* Alan Reeve Manby, M.D., East Rudham, Norfolk; Walter Essex Wynter, M.D., 30, Upper Berkeley Street, W.

K. Laryngology and Otology.

President: Scanes Spicer, M.D. *Vice-Presidents:* Herbert Tilley, M.D.; William Milligan, M.D. *Honorary Secretaries:* Harry Lambert Lack, M.D., 48, Harley Street, Cavendish Square, W.; Arthur Young Pringle, L.R.C.P., 64, St. Matthew Street, Ipswich.

L. Tropical Diseases.

President: Colonel Kenneth McLeod, M.D. (ret. I.M.S.). *Vice-Presidents:* Surgeon-Lieutenant-Colonel Oswald Baker, M.D., I.M.S.; Major Ronald Ross, I.M.S. *Honorary Secretaries:* Andrew Duncan, M.D., F.R.C.S., School of Tropical Diseases, Albert Dock, E.; Guthrie Rankin, M.D., 4, Chesham Street, Belgrave Square, S.W.

M. Navy, Army, and Ambulance.

President: Inspector-General Belgrave Ninnis, M.D., R.N. *Vice-Presidents:* Surgeon-General Henry Skey Muir, M.D., A.M.S.; Brigade-Surgeon Lieutenant-Colonel G. S. Elliston, V.D. *Honorary Secretaries:* James Harper, M.D., 25, Rosary Gardens, South Kensington, S.W.; Francis Augustus Brooks, M.D., St. Felix, Felixstowe, Suffolk.

Programme of Proceedings.

Tuesday, July 31st, 1900.

9.30 A.M.—Meeting of 1899-1900 Council.
11 A.M.—Church Service.
2 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2 P.M. President's Address.

Wednesday, August 1st, 1900.

9.30 A.M.—Meeting of 1900-1901 Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Address in Medicine.

Thursday, August 2nd, 1900.

9.30 A.M.—Meeting of Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

Friday, August 3rd, 1900.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Address in Obstetrics.

Saturday, August 4th, 1900
Excursions.

BRANCH MEETINGS TO BE HELD.

Edinburgh Branch.—The winter meeting of the Edinburgh (Lothians and Fife) Branch, in conjunction with other Branches, will be held in the Royal Infirmary, Edinburgh, on Friday, February 23rd. A Medical Congress for Clinical Demonstrations will be held at 3.45 P.M. Members are invited to exhibit patients. The Museum (Pathological and Apparatus) will be open from 3 P.M. onwards. Members are invited to exhibit specimens, drawings, etc. Dinner in the Royal Hotel, Princes Street, at 6.15 P.M.; morning dress; dinner ticket, 5s. Members of the Branch who can be present at the meeting and dinner, and have patients, specimens, or apparatus for exhibition, are requested to intimate accordingly to Jas. Hodsdon, M.D., 6, Chester Street, Edinburgh, or R. W. Philip, M.D., 45, Charlotte Square, Edinburgh.

Dublin Branch.—The annual meeting of this Branch will be held in the Royal College of Physicians, Kildare Street, on Tuesday, February

6th, at 4.30 P.M. The officers and council for the ensuing year will be elected by ballot, and any other necessary business transacted. Sir Charles A. Cameron, C.B., M.D., will deliver an address On the *Rôle* of the Municipality as regards the Prevention of Disease. The annual dinner will take place on the same evening in the College Hall at 7.30 P.M. —JAMES CRAIG, M.D., 35, York Street, Dublin, Honorary Secretary.

SOUTH-WESTERN BRANCH.

AN intermediate meeting was held at Plymouth on January 16th. Dr. MARK JACKSON of Barnstaple (the President) was in the chair, and thirty-one members were present.

Confirmation of Minutes.—The HONORARY SECRETARY read the minutes of the last meeting, which were confirmed.

Papers.—Dr. GORDON read a paper on the policy of the profession.—Dr. G. YOUNG EALES read notes of a case of mitral disease with embolic hemiplegia, in which Cheyne-Stokes respiration, accompanied by pupil phenomena, occurred.—Dr. F. BUSHNELL read a note on a clinical laboratory. — The HONORARY SECRETARY read (for Dr. F. W. KENDLE) a paper on the treatment of chronic rheumatism by salts of gold ("Bromaurum").

Vaccination in One Place.—Mr. GEORGE JACKSON moved the following resolution:

That inasmuch as it has been proved that vaccination in one place only, producing a small cicatrix, is a very insufficient protection against small-pox, this meeting strongly deprecates such practice.

This was seconded by the HONORARY SECRETARY, and carried unanimously.

Public Vaccination by Private Practitioners.—Dr. SHAW moved:

That this meeting is of the opinion that all registered medical practitioners should be empowered to vaccinate at public expense, provided the requirements of the Local Government Board are complied with.

This was seconded by Dr. RUSSELL COOMBE, and carried unanimously. It was resolved that the Honorary Secretary draw the attention of members of the South-Western Branch to the passing of the foregoing resolutions.

Specimens.—Dr. BUSHNELL showed a series of pathological specimens and microscopic slides.—The Bayer Company (Limited) exhibited specimens of their pharmaceutical specialities.

YORKSHIRE BRANCH.

A MEETING of this Branch was held at the Eye and Ear Hospital, Bradford, on January 24th; Dr. KILNER CLARKE, President, in the chair.

New Members.—The following gentlemen were elected members of the Association and Branch: Drs. and Messrs. Wightman, Cross, Etches, Seaton, Milne, Crawford, and Martin.

The Midwives Question.—Communications from the East York and Lincoln Branch, the Wood Green Medical Society, and Lancashire and Cheshire Branch were read and discussed.

Election of Delegates.—Drs. Campbell, Dolan, and Kilner Clarke were elected delegates of the Branch to the British Congress on Tuberculosis; and Dr. Dolan to the Conference on Medical Organisation to be held in May.

Attendance on Families of Soldiers and Sailors.—A communication from the Secretary of the Association as to attendance on the families of soldiers and sailors was read. As local societies had already taken the matter in hand it was decided not to send out any circulars. The opinion was expressed that all members of the Branch would be willing to give their services gratuitously.

Next Meeting.—It was decided to hold the March meeting of the Branch at Sheffield.

Headache.—Dr. GIBSON read notes on headache. Dr. MAJOR made remarks upon the headache associated with brain tumour, referring especially to the views of Benedikt that the pain was not due to intracranial pressure (seeing that it might be present in an intense form with an extremely small growth), but depended upon the fact that every morbid irritation within the brain had a corresponding area of irritation in the meninges. Hence the pain of tumour might have all the characters of that due to lesion of the bones or meninges. Further, the pains due to organic brain disease, especially tumour, might be influenced by measures not necessarily directed to the original disease, the iodides being thus often useful, even in non-syphilitic cases.—Drs. MYRTLE, JESSOP, and HIND also joined in the discussion.

Surgical Treatment of High Myopia.—Dr. KERR in a paper on this subject spoke of the great success of the removal of the lens in these cases and recorded the results of 28 cases which had been operated at the Bradford Eye and Ear Hospital. Dr. BRONNER advocated the removal of the lens in all cases of high myopia in which the patient with the help of glasses could not see well enough to follow any ordinary occupation. There were a very large number of old people in every town with high myopia who were practically blind and who could obtain useful vision by the simple operation of extraction of the lens.

A Case of Gout.—Dr. MYRTLE read notes on a unique case of gout.

Diphtherial Stomatitis.—Dr. TREVELYAN made remarks on a case of diphtherial stomatitis without implication of the fauces, which will be published later. A lengthy discussion by Drs. BLACK, CHADWICK, BRONNER, SHARPE, and MYRTLE followed. Dr. CLARKE recommended the use of mercury perchloride, chlorine, and iron. Dr. RABAGLIATI praised sulphate of magnesia.

Dinner.—After the meeting the members inspected the new operating theatre of the Eye and Ear Hospital, and subsequently twenty-three members dined at the Midland Hotel.

SPECIAL CORRESPONDENCE.

BERLIN.

The Medical Courts of Honour.—The Position of District Medical Officers.—Memory for Spoken and Written Words.—The late Professor v. Langenbeck.—Professor Virchow and the Giant.—Professor v. Bergmann's Ambulance Work.—New Lunatic Asylum.

THE Prussian "Cultus-Minister," Dr. Studt, has issued a schedule for the organisation of the new medical courts of honour. It is laid down in this that their jurisdiction is to commence on April 1st next. The Berlin-Brandenburg Court of Honour is to hold its sittings in the building of the Prussian Cultus-Ministerium. The elections have already taken place.

After all the wearisome discussions on the overworked and underpaid condition of the district medical officers in Prussia; after the debates in the Diet, and the final passing of the Bill for more liberal arrangements, it is disappointing to find that the Act remains, as yet, a dead letter. It appears that no date was fixed for its coming into force, and probably the Minister of Finance—taking advantage of the omission—has for the present refused the necessary funds. No doubt the session will not pass without the subject being reopened.

In the course of the first meeting of the new Society for Child Psychology, Dr. Kemsies, a headmaster of one of the Berlin public schools, gave an account of some interesting experiments on memory which he had made in the classes under his care. He took three sets of ten two-syllable words of a language unknown to the children, all the words being totally dissimilar, both in sound and in spelling, from the translation, which in each case was given. The first set of words was spoken five times to the children, the second set shown them in print or writing, and the third set both shown and spoken. The results proved that the children's hearing memory was considerably better, not only than their seeing memory, but also than the combined method; the spoken words were reproduced 13.1 per cent. better than those printed or written, and 8.3 per cent. better than those taken in by eye and ear simultaneously. Similar experiments were carried on in the other classes, upon schoolboys of every age, and similar results obtained. Dr. Kemsies added that the case was different for adults; a number of university students had been submitted to trials of memory under very exact and carefully arranged conditions, the result being that eye and ear both retained impressions equally well.

A bust of Bernhard von Langenbeck, the eminent surgeon, who was at the head of the University Clinical-Surgical Institute from 1848-1882, is to be placed in the great hall of the University.

An amusing incident took place last week in the Pathological Institute when Professor Virchow was seen "looking up" to a Mr. Wilkins, the tallest man in the world, who had come to consult him on the abnormal osseous development of one side of his skull.

Luckily, Virchow was able to assure the giant (he measures 2 metres 45 cent.) that no dangerous consequence need be feared, and characteristically enough he illustrated his prognosis by exhibiting a skull found in an ancient Roman theatre which showed a similar malformation.

The Berlin doctors—in a body—have decided to hold a grand "*Kommers*" (that peculiarly German function borrowed from student life) in honour of Professor von Bergmann "to show the world their gratitude for his labours in the cause of city ambulance work, and for the advancement of the medical profession."

A third municipal lunatic asylum for 1,500 patients is to be erected at Buch, near Berlin, on a site bought some time ago for the purpose by the city. The building plans have been worked out, and the building costs estimated at M.10,249,000 (£512,450). The plans have been submitted to a committee of fifteen town councillors for deliberation and approval.

CORRESPONDENCE.

AMALGAMATION OF DEFENCE SOCIETIES.

Sir,—You will perhaps kindly allow me to state in your columns, in answer to the letter of Mr. T. Vincent Jackson, published by you on January 27th, that it was in response to what was, I understand, a unanimous, or a practically unanimous vote of a general meeting of the Medical Defence Union, that a second proposal was made by the Union for amalgamation with the Medical Protection Society.

On several occasions, at annual meetings of the Society, members have inquired about the prospects of this proposed amalgamation. Owing, however, to the breakdown of negotiations this question of amalgamation has never been formally been brought before the members of the Protection Society. Had there ever been a definite prospect of amalgamation with the Medical Defence Union on terms at all fair to the Protection Society, the council of the Society would, as a matter of course, have asked the members to meet in special general meeting and decide, so far as the Society was concerned, whether amalgamation with the Medical Defence Union was or was not to take place.

Mr. Vincent Jackson asks why, if amalgamation is now "considered so important and vital," the Protection Society was founded? The answer is, it was founded because of widespread dispeace amongst the members of the Medical Defence Union. This was the important circumstance which brought about the founding of the Medical Protection Society, and which alone actuated the men whose influence with the medical profession has given to the society the high position it now holds—a position made all the stronger by the presence among the Society's members of such men as Mr. Vincent Jackson.

Mr. Vincent Jackson may rest well assured that the Executive of the London and Counties Medical Protection Society never have had the faintest intention of allowing "themselves to be swallowed up" by the Medical Defence Union.—I am, etc.,

G. A. Heron,
Treasurer and Chairman of Council of the London and Counties Medical Protection Society.

Harley Street, W., Jan. 29th.

GRIFFIN v. PEIRSON (OTHERWISE KNOWN AS "LENNOX").

Sir,—As the solicitors for the Medical Defence Union, Limited, acting upon their instructions for Dr. Griffin of Banbury in the libel action of "Griffin *v.* Peirson," which was entered for trial at the present Oxford Winter Assizes, we beg to hand you a retraction and apology, signed by the defendant and witnessed by his solicitor, for publication in the press.

May we therefore ask you to be good enough to insert it with this letter in the next issue of the British Medical Journal?—I am, etc.,

35, King Street, Cheapside, E.C., Jan. 30th. Hempsons.

Apology.

Whereas I, the undersigned Alfred Mellett Peirson, otherwise known as "Lennox," of No. 3D, Blenheim Mansions, Edgeware Road, London, spoke, published, and caused to be circulated in the months of May and July, 1899, certain slanderous and libellous statements concerning Dr. Innes Griffin, of Banbury, Oxfordshire, in relation to an operation which he had performed upon a patient for a mastoid abscess in the month of October, 1898, and by which I imputed to Dr. Griffin a want of professional care and skill in connection with the operation. And whereas Dr. Griffin has taken action against me for libel in the Queen's Bench Division of the High Court in consequence of the statements published and circulated by me as aforesaid, but has kindly consented to forego such action on my withdrawing each and all of the said statements, and making the apology herein contained, and paying a certain agreed sum for costs. Now I the said Alfred Mellett Peirson, otherwise known as "Lennox," hereby declare that the said statements so published and circulated by me as aforesaid are each and all of them without any foundation whatsoever in fact; and I hereby apologise fully, freely, and unreservedly to Dr. Griffin for having published and circulated them, and desire to express my sincere regret and contrition to him for any pain and inconvenience which I may have caused him for having so acted as aforesaid, and I am grateful for the leniency shown to me by Dr. Griffin. And I hereby authorise Dr. Griffin to publish this apology in such manner as he may think fit.

Dated this 29th day of January, 1900.

A. M. Peirson.

Witness: Jno. E. Clay, Solicitor,
185A, Marylebone Road, W.

RECENT MORTALITY FROM DIPHTHERIA.

Sir,—With reference to the letter of Dr. Cobbett in your issue of January 6th as to the mortality from diphtheria in the city of Paris, the enclosed statistics may be of interest to your readers. The return was compiled by me whilst working at the Pasteur Institute in the month of January, 1898, from the returns of the Registrar. It covers the whole of the ground from 1890 to 1898 inclusive, and is correct.—I am, etc.,

Uxbridge, Jan. 23rd. Harold Swithinbank.

Diphtheria.

Mortality Statistics of the City of Paris from 1890 to 1898.

Month.	Yearly Average, 1890-94.	1894	1895	1896	1897	1898
January	144	153	46	55	34	20
February...	148	*117	43	53	40	34
March	170	133	42	45	35	33
April	157	127	51	62	37	28
May	128	130	34	46	21	15
June	104	79	13	30	21	20
July	98	72	30	36	14	18
August	94	71	16	26	11	15
September	78	29	19	15	10	15
October	76	24	33	25	24	19
November	101	36	34	16	19	20
December	134	37	62	45	35	28
Totals	1,432	1,008	423	454	301	255

* The Roux serum treatment of diphtheria commenced during this month—February, 1894.

EXPERIMENTS WITH THE TOXINS OF THE PNEUMOCOCCUS.

Sir,—I attended the last meeting of the Pathological Society in the hope of obtaining valuable information from Dr. Auld's account of his experiments with the toxins of the pneumococcus, and perhaps discussing with Dr. Auld some of the points raised by his experiments. As, however, Dr. Auld flatly declined to answer my inquiries, I have no option but to seek through the medium of the British Medical Journal an explanation of some of his data, which appear to me inexplicable or inaccurate.

Media.—Early in 1895 Washbourn stated[1] that unless the reaction of the medium used for the cultivation of the pneumococcus was distinctly alkaline no growth took place; later Washbourn and myself[2] found that the optimum reaction for the development of the virulent races of the pneumococcus was attained in media to which had been added 0.5 per cent. of normal soda after neutralising (rosolic acid being used as the indicator). Dr. Auld, however, adds an excess of

[1] Washbourn, Experiments with the Pneumococcus, *Journal of Pathology*, April, 1895.

[2] Eyre and Washbourn, Further Researches on the Pneumococcus, *Journal of Pathology*, January, 1898.

precipitated chalk to his media after neutralising, and then calls attention to the high alkalinity of his media. The fallacy is obvious; the chalk merely serves to neutralise any acid produced by the organism in the course of its growth, but being itself insoluble is powerless to alter the reaction of the medium.

The Coccus.—Next as to the "pneumococcus" to the toxins of which Dr. Auld ascribes his results. Of its morphology Dr. Auld makes but one mention, and that is where he refers to "blood teeming with capsulated cocci." This one character is hardly sufficient to convince me of its identity with the diplococcus pneumoniæ of Fraenkel, especially when read in conjunction with the very next sentence, which states that "this highly virulent organism grew richly," and "continued growing for ten days, forming a thick deposit, and also numerous large flakes and strings suspended in the medium." In the first place, the experiments of Washbourn and myself[3] show that the higher the virulence of any particular variety of pneumococcus the less is its capacity for luxuriant growth upon laboratory media and the less its power of prolonged life under such conditions, while ten days may be considered an extremely long period for a pneumococcus to exhibit vitality in a fluid medium. Secondly, although I have used media similar to that prepared by Dr. Auld, I have never observed naked-eye cultural characters such as he describes.

Toxins.—With regard to the administrations of toxins, I note that no mention is made of the manner in which these experiments were controlled. "Controls" are mentioned, but that is all. Toxins—or, as I would prefer to call them, "killed cultures"—appear to have been prepared at varying temperatures. Exposure to a temperature of 55° C. for one hour was that first mentioned; this, in reply to a question asked at the meeting, was raised to 60° C.; and finally, from the abstract published January 20th, 65° C. would seem to be correct. Dr. Auld's experiments with the toxins give results totally at variance with those recorded by other observers, and he himself states that "the increased sensitiveness to the pneumococcus produced by the inoculation of its toxins—in rabbits at least," is the most noteworthy result of these experiments.

With this opinion I quite agree; and in this connection I may say that I almost invariably commence the immunisation of a rabbit against the pneumococcus by two or three preliminary injections (intraperitoneal) of 10 c.cm. or 20 c.cm. of the "killed culture" before passing on to the injection of doses of the living virulent organism, and I have certainly never observed any increased susceptibility on the part of rabbits so treated.

Dr. Auld also stated that many other organisms gave similar results, but when asked by Mr. Pakes for further information upon this point, instanced the reaction which follows the inoculation of a tuberculous subject with tuberculin.

Again, Dr. Auld refers to a control rabbit inoculated with a virulent pneumococcus, which developed an abscess at the seat of inoculation and subsequently recovered. I will not comment upon the so-called virulence, but will merely point out that in the previous paper[4] which Dr. Auld referred to, but which the President ruled should not be discussed by other speakers, it is definitely stated that "it (that is, the pneumococcus) never produces pus." How are we to reconcile these two statements?

Finally, as I am interested in varieties of the pneumococcus, I would be happy to give Dr. Auld a highly virulent one in exchange for a subculture of the one he has been working with.—I am, etc.,

JNO. EYRE.

The Bacteriological Laboratory, Charing Cross Hospital Medical School, Jan. 23rd.

THE DEFECTS OF THE CLUB SYSTEM.

SIR,—May I urge upon the medical profession once more the following points:

1. A penny a week produces 4s. 4d. a year. As a working man can buy a halfpenny paper every day at a cost of 3d. a week, and 2 ozs. of tobacco at a cost of 6d. a week, and a pint of beer a day at a cost of 1s. a week, there is no reason whatever why he should not find 3d. a week for medical attendance; and, being in his way a man of business, he would do so if he thought he was to get value for his money. Now 3d. a week is 13s. a year, and for that sum proper attention could and should be given to all patients not requiring to be kept in bed under the observation of a trained nurse; it would also permit eye, throat, and skin patients to be properly seen and treated, by proper arrangements for consultations.

2. No one now will pay more than a penny a week because he does not think any "club doctor" can be found to give him more than a pennyworth of treatment. I have been engaged as a clinical assistant in various out-patient rooms for some years past, and I have no hesitation in saying to patients who complain that their club doctors have not examined their chest or looked at their throats:—"You pay them a penny a week, and they have given you a pennyworth of treatment; the bargain is fair, if you have not got all you wanted, you have had all you have paid for." Many have admitted the justice of this.

3. The lost time of a well-paid artisan who waits in an out-patient room may be estimated at 8d. an hour; the average duration of each "wait" must be two hours, that is, 1s. 4d. His journey will probably account for another hour, and his railway or 'bus fares to at least 3d., and now many hospitals charge 3d., for each visit. This comes to 2s. 6d. a visit. I suppose that I see old patients at the rate of twenty an hour—three minutes each. The working man then pays at the rate of 10d. a minute for seeing a clinical assistant who has been qualified only eight years. And why is this? Solely because he believes that he is getting value for his money. To my great sorrow I am coming to think he is right. I have said, "Haven't you been to a doctor for this?"—"No." "What! not at all?"—"Oh yes, I went to my club doctor." "Does'nt he count?" No answer.

4. Now, Sir, this whole system is open to a still more serious objection, for it leads to a suppression of the truth by patients as to the causes of their diseases if those diseases are such as to disqualify them for going on their clubs. It is hopeless to get a patient with hyalitis and iritic adhesions to admit that he has had recent syphilis, because he wants to go on his club and recent syphilis would disqualify him. The alcoholic reeking of liquor will declare himself a teetotaler to get on his club. If I signed truthful certificates these people would never get a farthing of club money. If I signed a false certificate there are legal proceedings possible against me. I consequently refuse to sign at all nowadays.

The whole system is quite hopeless. The club money is wasted so far as the patient goes; it is not enough to pay expenses on the side of the doctor. It is not charity and it is not commerce. The moment you attempt to combine these two you get formed a *tertium quid* which resembles neither, and never can and never will benefit any body at all.—I am, etc.,

January 20th. GRAY'S.

A PLAGUE LABORATORY AT CRONSTADT.—The St. Petersburg Institute of Experimental Medicine has established a laboratory for the study of plague and for the manufacture of plague serum at Cronstadt. The laboratory is surrounded on all sides by water, so that it can be completely isolated at any moment. Besides stalls for twelve horses, the laboratory contains apartments for the medical officers and their assistants and servants, with a lazaretto for any case of infection that may occur. Communication with the town is by a special steamer.

DEATH BY HANGING.—According to the New York *Medical Record* a scientific study of the results of death by hanging has been begun under the auspices of Jefferson Medical College. In the case of a murderer hanged recently in Philadelphia it was found that death had not resulted either from fracture of the vertebræ or from asphyxia, but from injury to the structures of the neck, which were much lacerated. The crystalline lens was intact. Life persisted for eighteen minutes after the falling of the drop, although it is believed that consciousness was lost at once.

[3] Eyre and Washbourn, Varieties and Virulence of the Pneumococcus. *Lancet*, January 7th, 1899.

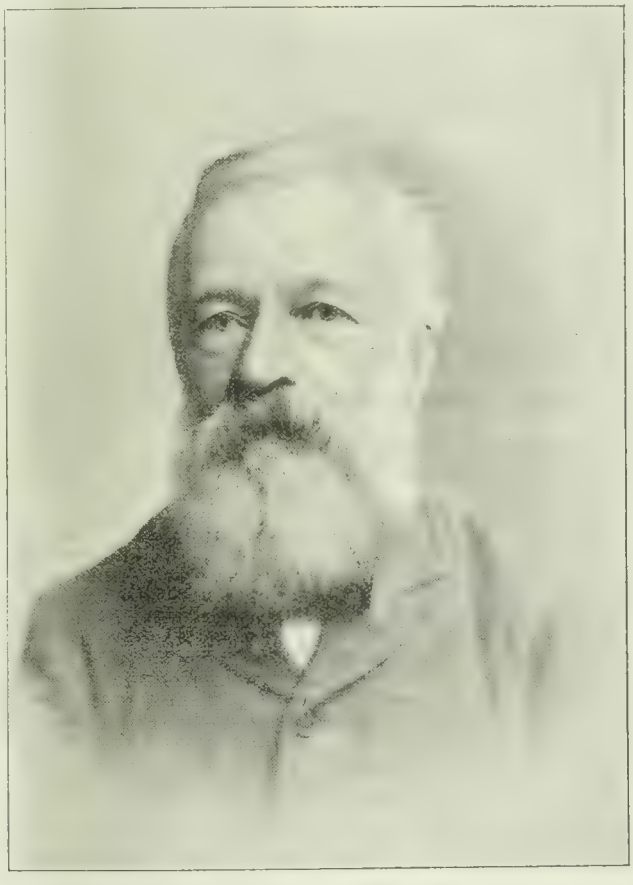
[4] Auld, The Diplococcus Pneumoniæ, etc., BRITISH MEDICAL JOURNAL, March 27th, 1897.

OBITUARY.

THOMAS WRIGLEY GRIMSHAW, C.B., M.D., M.A (Stip. Con.) Univ. Dub.,

Fellow and Ex-President Royal College of Physicians of Ireland; Registrar-General for Ireland.

The announcement on Tuesday, January 23rd,* that Dr. Grimshaw, the Registrar-General for Ireland, had died that morning from the effects of post-influenzal pneumonia came with a painful surprise to the public, who were wholly unprepared for the melancholy news. He had not been in his usual good health for some weeks, but had persisted in attending to his duties in his office until barely a week before his death. Even at that time he considered himself to be suffering merely from a cold, and, in order to shake off the effects of it, he had obtained leave of absence for some weeks. However, the illness proved to be influenza, and on the Saturday preceding his death broncho-pneumonia developed, to which he rapidly succumbed. He died in his home at Carrickmines, co. Dublin, from whence his remains were removed for interment in Mount Jerome Cemetery on the following Thursday morning; and, although the funeral was to have been strictly private, a goodly number of the Fellows of the College of Physicians were present to pay a last tribute of respect to one who had been much esteemed by the College.



(From a photograph by F. T. D'Arcy, Dublin.)

Thomas Wrigley Grimshaw was born at Whitehouse, co. Antrim, on November 16th, 1839. His ancestors were of Lancashire origin, and his great-grandfather, on settling near Belfast, founded the calico-printing industry in Ireland. His father, who was a Fellow of the Royal College of Surgeons in Ireland, was Dental Surgeon to Steevens's and St. Mark's Hospitals, and commanded a lucrative practice in his profession as a dentist.

Young Grimshaw received his early education in Newry; Carrickfergus; the Academic Institute in Harcourt Street, Dublin; and at the School of Dr. Hare in Stephen's Green, Dublin. He finished his undergraduate career in Trinity College, Dublin, by obtaining from the University in 1860 the degree of B.A., with a Moderatorship in Experimental and Natural Science. During the course of his medical studies in the School of Physic he won various honours in Chemistry, Botany, etc., and obtained the M.B. and M.Ch. degrees in 1861. He proceeded to the M.D. degree in 1867, and to the Diploma of State Medicine of the University in 1873, after which, on account of distinguished answering at that examination, the University conferred upon him the degree of M.A.Stip.Con. In 1862 he was enrolled as a Licentiate of the Royal College of Surgeons in Ireland, and in 1867 he obtained the Licence of the Royal College of Physicians of Ireland, of which he was elected a Fellow in 1869. Having been Censor and Examiner in Medicine on several occasions in the College of Physicians, he was finally elected to the Presidency of that body for one year on St. Luke's Day, 1895. Three years later he was one of the recipients of the first Honorary Diplomas in State Medicine, conferred conjointly by the two Royal Colleges in Ireland.

In 1897—the Diamond Jubilee of Her Majesty the Queen—he received the well-earned distinction of a Companionship of the Bath.

Dr. Grimshaw was for several years a Physician to Steevens's Hospital, and held in succession the Lectureships on Botany, Materia Medica, and Medicine in the school formerly attached to that hospital. He was Physician to Cork Street Fever Hospital, to the Coombe Lying-in Hospital, and to the Dublin Orthopædic Hospital. When he succeeded Dr. Burke as Registrar-General, in 1879, he became Consulting Physician to Steevens's and Cork Street Hospitals. In his position as Registrar-General he effected considerable improvement in the reports issued from his department, and his multifarious duties were discharged with singular ability and tact, and to the satisfaction of the public. His reports are of great value. They extend over a period of twenty years, and deal with births, deaths, and marriages in Ireland, with agriculture, emigration, crime, judicial banking, and railway statistics. He superintended the census of 1881 and of 1891, and had been working hard for some months prior to his death in completing the arrangements for taking the census next year.

The confidence which the public reposed in Dr. Grimshaw was exemplified by the numerous important offices which he was called upon to fill from time to time. He was President of the Statistical Society of Ireland in 1888-90, and of the Dublin Sanitary Association 1884-86. He sat on several Commissions, notably on that which was appointed in 1880 to inquire into the Dietary of Irish Prisons, and later in 1887 on the Commission of Inquiry into the Sanitary Condition of the Royal Barracks, Dublin. His interest in the Dublin Branch of the British Medical Association was of the keenest nature. He occupied a place on the Council from the inauguration of the Branch in 1877 until 1895; was President in 1887, when the Association held its annual meeting in Dublin; and was the representative of the Branch on the General Council for the five succeeding years. He was President of the Section of Public Medicine at the annual meeting in Cork in 1879, and was present at the annual meeting of the Association in Carlisle, and there moved the important resolution in reference to the prevention of tuberculosis. His work as Chairman of the Subcommittee which was appointed by the Council of the Association to draw up a report on this subject is well known, as is his valuable paper dealing with the statistics of tuberculosis, which was read at the annual meeting of the Dublin Branch last year.

His share in the establishment of the Consumptive Hospital at Newcastle, co. Wicklow, and his interest in that institution may be readily gathered from the following quotation taken from a resolution of sympathy with his family, adopted by the Board of Governors:

He was one of the original promoters of the project for the establishment of a hospital for consumption, and from the first took an active part

in the foundation and management of the hospital. His great professional and official experience made his opinion upon all matters that concerned tuberculosis and the treatment of consumptive patients valuable and weighty, while his close and unremitting attention to the business of the Board, and the readiness with which his personal assistance and co-operation were always available, made him a colleague whose loss the other members of the Board will long and deeply deplore.

Only a few months ago he was elected President of the Dublin Branch of the National Association for the Prevention of Tuberculosis, which, had he been alive, he would have ably represented at the Congress which it has been arranged to hold in 1901.

His loss will be keenly felt by the Society for the Prevention of Cruelty to Children, in which he took an active interest, but probably in no other sphere of his unrivalled usefulness will his death be more sincerely felt than in the College of Physicians. If his reserved manner engendered a feeling of awe among some of the younger Fellows, his independence, his clear-sightedness, his unswerving adherence to what he considered to be right secured for him an enviable regard which few of his colleagues could have hoped to eclipse. By his intimate friends he was beloved, by his acquaintances he was esteemed, and there is no one in the College who can quite fill the vacant place which his too early removal has left. During his earlier years as a practising physician Dr. Grimshaw made numerous valuable contributions to medical literature.

In 1865 he married Sarah Elizabeth, daughter of the late Rev. Thomas F. Thomas, of Broadlands, Newport, Isle of Wight. By her he had twelve children, nine of whom survive him—seven sons and two daughters. His eldest son and eldest daughter died many years ago. Five of his sons have already reached manhood. Three of them joined the Royal Dublin Fusiliers, and one of them—Lieutenant Cecil Thomas Grimshaw—is now a prisoner of war at Pretoria.

HENRY HANNOTTE VERNON, M.D.EDIN., M.R.C.S., J.P., F.S.S., F.R.S.E.,

Medical Officer of Health for the Borough of Southport; former President of the Lancashire and Cheshire Branch of the British Medical Association.

IT is with deep regret that we record the death of Dr. Vernon, which occurred on January 16th at his residence, Shipbrook, Cambridge Road, Southport.

Though for some years Dr. Vernon had not been in robust health, being subject to attacks of winter cough and emphysema, he was able to continue his professional work up to a week before his death, which was due to bronchitis and heart failure following influenza. A representative of the oldest branch of the Vernon family, which was specially connected with the services, and descended from a distinguished Admiral Vernon, to whom were granted estates in the West Indies in recognition of his loyalty to the Crown in the time of Charles II, Dr. Henry Hannotte Vernon was the son of a clergyman of the Church of England, the Rev. William Vernon, M.A., and a member of a family of twenty children. He was born at Chatburn, near Clitheroe, on March 25th, 1831, and was consequently in his 69th year.

As a child he was weak and ailing, and up to 13 years of age was almost constantly ill. He was brought up at Mildenhill, in Suffolk, under the care of an uncle, who supervised the boy's education, grounding him well in the classics and encouraging his literary tendencies. As a boy he was a voracious reader, and while lying ill had read the works of Hume and Smollett several times before he reached his 13th year. He possessed a wonderful memory and power of imbibing information, faculties which remained with him almost to the last.

At 17 or 18 years of age he went to Preston as an apprentice to Dr. Halden. He afterwards became a student in the University of Edinburgh, and graduated M.D. in 1853; in the following year he became M.R.C.S.Eng. From Edinburgh he proceeded to London, where he held the appointments of Physician to the Great Northern Hospital, Resident Accoucheur to St. Mary's Hospital, and Physician to the Blenheim Dispensary. Leaving London, he took up a partnership with the late Dr. Hunt, of Ashton-under-Lyne, and for twelve years held the leading practice in that neighbourhood.

He had a great reputation as an obstetrician, and his services were largely called upon by other practitioners of the district. At this time he took a very active interest in public and political matters, holding strong Conservative views, and being a strong speaker and leader in his party. He was elected a member of the Town Council, and was a Justice of the Peace for the borough. But his health was indifferent, and in 1868 he removed to Southport, residing at first in Hoghton Street and afterwards in Birkdale, where he took an active part in public affairs, and was one of the earliest chairmen of the Birkdale School Board. In 1873 he was appointed Medical Officer of Health, continuing his private practice until March, 1888, when he relinquished his practice in order to devote the whole of his time to the duties of his office, in which he took an enthusiastic interest, and which were faithfully carried out. It was during the early years of his official connection with the borough of Southport that the main scheme for the drainage of the town, a difficult matter owing to the flatness of the district, was carried out against great opposition, and there is no doubt that Southport owes its present enviable position, in respect of its low death-rate, largely to the care and energy with which Dr. Vernon discharged his duties as its medical officer of health.

Dr. Vernon was considered an authority on sanitary science, and his opinion and advice were asked on many schemes and on many occasions; but he was not only enthusiastic on sanitary matters; his sympathies were broad, and he took keen interest in general educational questions, in music and in literature. He was one of the founders of the Southport Grammar School and High School for Girls and held the position of chairman of directors from their establishment in 1885 until his death. For nineteen years he was chairman or member of the local committee of Trinity College, London, an evidence of his ever-anxious desire for the progress and advancement of the young and of his personal interest in music. But literature was, perhaps, his chief delight; he had a wide acquaintance with general English literature and had accumulated a considerable library; he had read widely, especially in theology and moral philosophy: he was a fluent speaker, a brilliant conversationalist, and wrote with grace and literary skill. In his early days in London he was, we are informed, on the staff of the *Lancet*, a period of his history which it was a source of pleasure to him to recall. About this time being recommended by Dr. Matthews Duncan to Dr. Tyler Smith, he assisted the latter in the preparation of his *Manual of Obstetrics*, published in 1858, which became the leading text-book, and in which much of his own work was embodied. In 1857 he had published in the BRITISH MEDICAL JOURNAL a series of well written and carefully-thought-out papers on The Physiology, Pathology and Therapeutics of the Motor Functions of the Uterus. At one time he was co-editor of the *Leicestershire Chronicle* and did a good deal of literary work. He was one of the founders, and formerly president, of the Southport Literary and Philosophical Society, to which he contributed papers: he has also lectured in Southport upon sanitation and other kindred subjects.

Dr. Vernon had held the office of President of the Lancashire and Cheshire Branch of the British Medical Association, of the North-Western Branch of the Society of Medical Officers of Health, and of the Southport Natural Science Society, and was a Fellow of the Statistical Society and of the Royal Society of Edinburgh, and a Justice of the Peace for the Borough of Southport. He was also Vice-President of the Southport Infirmary, and, when the Medical Society of Southport was recently formed, the universal respect felt towards him by his professional brethren found expression in his election as their first President. His was a high ideal of professional duty and conduct, an ideal which he consistently carried out in his own professional life, and the profession is to-day the poorer by the loss of one who endeavoured to maintain its dignity and honour, and succeeded in his aim. In his social and private life his manner was marked by a genial courtesy which endeared him to all; and many homes, among rich and poor alike, will mourn his loss while cherishing his memory. Possessed of that kind of ability which forces recognition, even his whilom opponents came to be his friends, for he was a man of the strongest moral courage. He had a most affectionate nature. His home was ever to him the most desirable place, and the haven where he would be. It would, indeed, be hard for anyone to describe the depth and character of his affection for those who belonged to him

and for those who were admitted to his friendship, and the sorrows and anxieties of his patients were as though they were his own.

Dr. Vernon leaves a widow, two daughters, and two sons, both of whom are members of the profession.

The funeral took place on Saturday, January 20th. The service, which was held at Holy Trinity Church, was conducted by the Vicar (Rev. C. S. Hope) and Canon Denton Thompson. The Mayor and Corporation, many members of the medical profession and friends, the borough police, and a large number of the general public were present. The interment took place in Southport cemetery.

Dr. Robert Collum, M.D.Glasg., M.R.C.P.Lond., M.R.C.S. Eng., is another of the veterans of the profession who has fallen a victim to the prevailing epidemic. He died at his residence, Surbiton, on January 12th, in his 84th year, from pneumonia following influenza. He was born at Enniskillen, co. Fermanagh, and obtained his medical education in Dublin. He became M.R.C.S.Eng. in 1836, M.D.Glasg. in 1837. He entered the East India Company's service, Bombay, and was attached to Sir C. Napier's staff during the conquest of Sind. The vessel in which he set out for Sind carried 200 soldiers. Virulent cholera at once appeared, and 64 soldiers died. Dr. Collum not only attended to the sufferers, but also acted as pilot of the vessel. He was mentioned in despatches at the end of the campaign, and acted as interpreter to the forces in Arabic, Hindu, and Persian. After the war he was appointed Surgeon to the Ameers of Sind, and held the post for seven years. He was Superintendent of the Medical Department at Aden, and Assay Master to the Bombay Mint. In 1857 he retired from the service, and went into practice at Surbiton. He was elected Physician to the Western General Dispensary, and was President for seven years of the Society of Members of the Royal College of Surgeons. He was a frequent speaker at the meetings of Fellows and Members of the College. The funeral took place at Kensal Green Cemetery.

The late Dr. Burger, who died suddenly at his residence, Finsbury Square, London, of cerebral hæmorrhage, on January 21st, was born at St. Goar on the Rhine in 1839. He studied medicine at the University of Bonn, and took the degree of M.D. in 1863. He then became Assistant to the Professor of Ophthalmology, and later to the Professor of Medicine, and served some time as Resident Physician to the Government Asylum at Siegburg. In 1865 he came to London, and was elected House-Surgeon to the German Hospital, a post which he retained for four years. In 1869 he passed the examination for the M.R.C.S.Eng., and settled in practice in London. In 1870, at the beginning of the Franco-German war, he returned to Germany to serve his country as a surgeon, and was appointed Superintendent of a large military hospital at Treves. Here his skilful use of the newly-introduced Listerian treatment gave excellent results, which he published in 1872 in a paper on the Carbolic Acid Treatment of Wounds after Suppuration has Commenced. Returning to London after the war he was appointed Honorary Surgeon to the German Hospital, and retained the post until 1895, when he resigned. He was also Honorary Medical Officer to the Society of Friends of Foreigners in Distress, and Surgeon to the German Consulate. He was a careful observer, an excellent surgeon, and had many friends in London and elsewhere.

The death of Surgeon-Major A. C. A. Alexander, of the 1st Coldstream Guards, on January 23rd, has occasioned great regret to his many friends. He was educated at Trinity College, Cambridge, and St. George's Hospital, and became M.R.C.S. and L.S.A. in 1881. He held a commission as Surgeon-Captain in the 3rd Battalion Royal Scots Fusiliers, and afterwards in the 1st Battalion Coldstream Guards, with which regiment he served in the Suakim expedition in 1885. He was promoted Surgeon-Major in 1888, and was appointed Principal Medical Officer to the Royal Military Tournament for three consecutive years. Last year he returned from Gibraltar on sick leave, having had a slight sunstroke, from which, unfortunately, he never entirely recovered. It was a source of great grief to him that he was unable to accompany his regiment to South Africa, where it is now serving. Surgeon-Major Alexander succeeded to the estate of Boydstone on the death of his father some twelve years ago. He was a Justice of Peace for the counties of Ayr and Lanark, in each of which he owned property. He was a man of splendid physique, and in the prime of life. He was unmarried.

Mr. Thomas Stevens Gimson, M.R.C.S.Eng., of Fitzroy Square, W., died suddenly, aged 59, on January 1st, whilst visiting a patient. The deceased gentleman received his medical education at St. Bartholomew's Hospital, and became a Member of the College of Surgeons in 1865.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. W. A. Hammond of New York, formerly Surgeon-General of the United States Army, and a well-known neurologist, aged 72; Dr. Charles Delstanche of Brussels, a distinguished otologist; Dr. Chambard, Medical Superintendent of the Clermont Asylum, and author of numerous writings on mental diseases and the pathology of the nervous system; the Marquis del Busto, Senator of Spain, Professor of Obstetrics and Gynæcology in the University of Madrid; and Dr. Stefano Regis, Surgeon-General in the Italian Army, aged 64.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Henry B. Beatty, Staff-Surgeon, to the *Gladiator*, for medical charge on the passage to Australia, February 15th, and afterwards to the *Royal Arthur*, for the *Katoomba*, and for medical charge at Sydney Reserve Depôt, undated; Edward R. D. Fasker, Staff-Surgeon, to the *Medusa*, February 1st; John McElwee, Surgeon, to the *Boscawen*, for the *Agincourt*, February 2nd; Edward Ferguson, Fleet-Surgeon, to the *Rodney*, February 20th; James L. Smyth, Staff-Surgeon, and Edward C. Sawdy, Surgeon, to the *Ocean*, February 20th; William Hacker, M.D., Surgeon, to the *Pique*, February 15th; Thomas D. Halahan, B.A., M.B., Surgeon, to Plymouth Hospital, February 21st; Kenneth H. Jones, M.B., Surgeon, to the *Pembroke*, January 27th; Henry E. Raper, Surgeon, to the *Repulse*, January 27th; James M. G. Swainson, Surgeon, to the *Trafalgar*, January 27th.

ARMY MEDICAL SERVICE.

The death is announced of Surgeon-Lieutenant-Colonel William Cameron Grant, M.B., which event took place on November 5th last at Banagher, Parsonstown, King's County, Ireland. His commissions were thus dated: Assistant-Surgeon, September 30th, 1871; Surgeon, March 1st, 1873, Surgeon-Major, September 30th, 1883; and Surgeon-Lieutenant-Colonel, September 30th, 1891. He quitted the service on retired pay, May 18th, 1892.

INDIAN MEDICAL RESERVE.

The reorganisation scheme for the offices of the Principal Medical Officer in India and the Principal Medical Officers Madras and Bombay Commands, have been finally sanctioned by the Government of India. The first-named office will include 17 clerks on pay ranging up to Rs.400 monthly, and the last two, each 7 clerks, ranging in case of Madras up to Rs.200 monthly, and in that of Bombay to Rs.150 monthly.

ROYAL ARMY MEDICAL CORPS.

Captain Charles Dalton is among those reported as severely wounded in the fighting at Chieveley, Natal, on January 23rd.

CITY OF LONDON IMPERIAL VOLUNTEERS.

Surgeon-Captain R. E. Sleman, 20th Middlesex Volunteer Rifle Corps, to be Medical Officer, with the temporary rank of Captain, January 9th.

Surgeon-Captain Atwood Thorne, M.B., 2nd Middlesex Volunteer Artillery, to be Medical Officer to the Field Battery, with the temporary rank of Captain, January 12th.

Surgeon-Captain E. W. St. V. Ryan, 16th Middlesex Volunteer Rifle Corps, to be Infantry Medical Officer, with the temporary rank of Captain, January 6th.

THE VOLUNTEERS.

Surgeon-Lieutenant W. G. Owen, M.B., 1st Cheshire and Carnarvonshire Artillery, resigns his commission, January 31st.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated January 31st: Thomas F. Devane, 1st Volunteer Battalion the Queen's Royal West Surrey Regiment; William J. Heslop, 3rd Volunteer Battalion the Lancashire Fusiliers; Hubert Williams, 1st (Brecknockshire) Volunteer Battalion the South Wales Borderers.

Mr. A. C. Elliman is appointed Acting Surgeon to the 1st Cadet Battalion the Queen's Royal West Surrey Regiment, January 31st.

Surgeon-Captain J. P. Simpson, M.D., 1st Tower Hamlets Rifles, resigns his commission, January 31st.

THE DEFEAT AND DEATH OF THE KHALIFA.

THE *London Gazette* of January 30th contains a despatch from Sir Reginald Wingate, commanding the troops on the White Nile, describing the defeat and death of the Khalifa on November 24th last. After entering at some detail into the nature and progress of the operations undertaken, Sir R. Wingate singles out the names of officers under him deserving of special mention, and speaks thus of the medical arrangements: "Lieutenant Stallard (Royal Army Medical Corps) was in charge of the medical arrangements, and was ably assisted by Lieutenant Nickerson (Royal Army Medical Corps). These officers did all that was possible, not only to alleviate the sufferings of our wounded, but were also indefatigable in attending to the Dervish wounded, large numbers of whom passed through our hands."

Lord Kitchener, in transmitting the report, "freely endorses Colonel Wingate's remarks on the good services of the officers and men he has mentioned."

MAJOR MANIFOLD, I.M.S.

WE are glad to be able to state that the last report from India is to the effect that Major Manifold is progressing favourably, and that no bad symptoms have occurred. There was still intense pain in the lacerated hand, but it will be saved, and will probably remain a useful limb. The mahout who was injured at the same time is also recovering.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

UNQUALIFIED PRACTICE.

AN inquest (which had been adjourned the previous week for the purposes of a *post-mortem* examination) was resumed at Snydale, near Pontefract, on January 23rd, by Mr. Maitland, one of the West Riding coroners, upon the body of Thomas Leadbeater, a miner.

It appeared that the deceased had been attended by "Dr." Tempest, of Pontefract, who had given a certificate stating that death was due to phthisis primarily, and secondarily pneumonia; but the Registrar had refused to accept it, and an inquest had been ordered.

Dr. Cameron now stated that death was due to phthisis, and that there was no indication of improper feeding or medicine, nor could he say the patient had been neglected by want of proper skilled attention. Dr. Cameron had examined some ointment which it was alleged had been supplied by a man named Wilson, of Castleford, and said it was as harmless as it was useless.

According to the report in the *Leeds Mercury* of January 24th, the coroner said that it appeared clear that the deceased was a phthisical subject, and had died from consumption; but to his mind it was most unwise for people to employ unqualified men, for by doing so they ran a very great risk. Gentlemen of the medical profession spent a good portion of the early part of their lives and a large amount of money in qualifying themselves, and it seemed to him to be unjust and un-English that persons should turn up in various parts of their districts totally unqualified, with a knowledge picked up in a harum-scarum manner, and hold themselves out as qualified men. He should report the case to the Registrar-General, who would take what steps he thought fit.

The coroner added that Mr. Tempest had given a certificate, which was an illegal thing altogether, because it was misleading; and if a registrar were not fully aware of his duties, he might pass such cases over, and a good deal of harm might be done.

ANTIVACCINATORS AND THE DIVISIONAL COURT.

ON January 26th the Court of Queen's Bench dismissed the appeal of an antivaccinator (Over *v.* Harwood) against a conviction by a country bench of magistrates for not having his child vaccinated, or otherwise complying with the requirements of the Act. It appears from the report in the *Times* that the appellant had been convicted on the evidence of the vaccination officer that no certificate of the child's successful vaccination had been received, nor any that the child was unfit for or insusceptible to vaccination. For the appellant it was not contended that he had, as a matter of fact, complied with the law, but argued by Mr. Schultess-Young that the evidence given by the respondent was not sufficient proof that the appellant was guilty of the offence charged. The appeal was dismissed. Mr. Justice Channell said that it was the province of the Court to find whether there was any evidence, not as to the weight of that evidence, that was entirely a question of fact for the magistrates. In this case there was no doubt *prima facie* evidence that the law had not been complied with. Mr. Justice Bucknill concurred.

SALE OF PRACTICE.

COUNTRY DOCTOR.—A correspondent asks what is the usual procedure during the introduction of the buyer after the sale of a practice where half the purchase money has been paid. Does the buyer receive all income and pay all the expenses from the beginning of the introduction?

*** Directly the sale of the practice is complete—and no vendor would introduce his patients to a successor till it was completed—all income from it belongs to the buyer, who likewise must pay all expenses incident to its being carried on. Income of course does not include money paid to discharge debts due to the vendor before sale, which in the absence of agreement to the contrary belong to him. If the whole price of the practice is not paid at the time of the purchase, it is usu for the buyer to pay interest on what is unpaid, but this, as well as what the vendor is to receive while he is introducing the buyer, is usually settled in the agreement for the sale.

THE SUPPLY OF ALCOHOL ON SUNDAYS.

A. R. M. B., who resides in Scotland, asks whether, if in a case of emergency, he can legally order a certain amount of stimulant on a Sunday; and whether, if he gives an order to that effect the innkeeper can refuse to supply the stimulant.

*** The Public House Act Amendment (Scotland) Act, 1862, is the Act under which the innkeeper holds his licence. Under this Act he is allowed to supply drink to no one on Sunday, "with the exception of refreshments to travellers or to persons requiring to lodge in said house or premises." Thus evidently the innkeeper was within his legal rights in refusing to supply stimulant. We are informed, however, that it is the common practice, dictated by ordinary rules of humanity, for innkeepers to supply a limited amount of stimulant to persons who bring a certificate from a doctor that it is required for medical purposes. Not infrequently this note is taken first to a police officer, who accompanies the applicant to the inn. A justice would not be likely to convict an innkeeper of a breach of his licence for doing so.

R. W. D.—We are of opinion that the whole of the circular beyond the intimation of the change of address is open to objection.

MR. O'HEA.—The circular appears to be of the nature of an advertisement, and as the person in question is a member of the Association, we will, unless our correspondent objects, refer the matter to the Ethical Committee of the Council.

F. E. W.—C. is not justified in giving any information to B., but if called as a witness under subpœna he will be compelled to answer such questions as the Court may direct.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Chair of Pathology.—Lord Lister has been appointed a member of the Board of Electors to this professorship, in the room of the late Sir James Paget.

Allen Studentship.—This term an appointment will be made to the Allen Studentship (£250 for one year) for research in some branch of science, including medicine. The studentship is open to graduates of the University who are not more than 28 years of age. Application must be made to the Vice-Chancellor by February 20th.

University College, Cardiff.—The Faculty of Medicine of this College has been included in the list of schools recognised by the University for the purposes of medical study.

UNIVERSITY OF LONDON.

M.D. EXAMINATION.—The following candidates have passed this examination in the subjects noted:

Medicine.—*C. W. Alford, Middlesex Hospital; Frances Armitage, B.S., London School of Medicine for Women; R. H. Ashwin, Guy's Hospital; C. Banting, B.S., University College; C. H. Benham, University College; E. B. Bostock, B.S., Mason University College and General Hospital, Birmingham; S. L. Box, St. Bartholomew's Hospital; H. W. Bruce, B.S., Guy's Hospital; C. W. Buckley, St. Mary's Hospital; A. Burn, St. Mary's Hospital; A. J. Cleveland, Guy's Hospital; S. Cornish, B.S., St. Bartholomew's Hospital; J. M. S. Coutts, University College; T. V. Cunliffe, B.S., Owens College and Manchester Royal Infirmary; J. Currie, St. Bartholomew's Hospital; F. J. Fielder, B.S., King's College; E. G. L. Goffe, B.S., University College; F. R. Greenwood, Mason University College; A. G. Gullan, University College, Liverpool; C. P. Harris, London Hospital; J. C. Hibbert, University College; C. R. Hodgson, B.S., Guy's Hospital; T. J. Horder, B.S., St. Bartholomew's Hospital; W. E. L. Horner, B.S., University College; E. H. Houfton, Yorkshire College; S. P. Huggins, St. Bartholomew's Hospital; J. D. Jenkins, B.S., London Hospital; J. T. Leon, B.Sc., St. Mary's Hospital; J. L. Maxwell, B.S., St. Bartholomew's Hospital; R. W. Mayston, Guy's Hospital; D. N. Nabarro, B.Sc. (gold medal), University College; R. H. Norman, B.S., Westminster Hospital; S. H. Perry, Mason University College; J. W. Pugh, London and St. Bartholomew's Hospitals; F. W. Robertson, B.S., St. Bartholomew's Hospital; G. N. O. Slater, St. Bartholomew's Hospital; H. J. Starling, Guy's Hospital; Florence Ada Stoney, B.S., Royal Free Hospital; P. G. S. Williams, B.S., University College.

State Medicine.—R. C. Gully, M.D., St. Bartholomew's Hospital; H. W. Jackson, University College; A. N. Weir, B.Sc., St. Bartholomew's Hospital.

* Obtained the number of marks qualifying for the gold medal.

ROYAL COLLEGE OF PHYSICIANS.

AT the ordinary Comitia held on Thursday, January 24th, the President, Dr. W. S. Church, in the chair:

MEMBERSHIP.

The following gentlemen having passed the required examination, were admitted as Members: E. Bramwell, M.B.Edin.; W. L. Brown, M.A., M.B. Camb.; A. Duncan, M.D.Lond.; C. O. Hawthorne, M.D.Glasg., R. Jones, M.D.Lond., L.R.C.P.; J. McL. H. Macleod, M.A St. And., M.D.Aberd.; C. Riviere, M.B.Lond., L.R.C.P.; A. E. Russell, M.D.Lond., L.R.C.P.; A. E. Sikes, M.D.Lond., L.R.C.P.; L. A. Smith, M.B.Lond., L.R.C.P.; R. H. Vincent, M.B.Durh., L.R.C.P.

LICENCES.

One hundred and twelve gentlemen having conformed to the by-laws and regulations and passed the required examinations, had licences to practise physic granted to them at this meeting.

DIPLOMAS IN PUBLIC HEALTH.

Diplomas in public health were granted (jointly with the Royal College of Surgeons), to the following:—J. Allison, M.D., M.S.Edin., F.R.C.S. Edin.; A. D. Cowburn, L.R.C.P., M.R.C.S., M.D.Brux.; H. E. Finch, M.B., B.C.L.Oxon.; H. P. Foulerton, L.R.C.P., M.R.C.S.; S. B. Gadgil, L.M. & S. Bombay; H. W. Henshaw, L.R.C.P., M.R.C.S.; J. N. Martin, L.R.C.P., M.R.C.S.; W. D. Murray, M.B., M.S.Glasg.; E. J. Smyth, L.R.C.P., M.R.C.S., M.D., B.S.Lond., A. Spitteler, M.B., C.M.Madras; D. J. Thomas, L.R.C.P., M.R.C.S.; R. E. G. Tilleke, L.R.C.P. & S.Edin., L.F.P. & S.Glasg., M.D.Brux.; F. H. White, L.R.C.P., M.R.C.S., L.S.A.

APPOINTMENT OF LECTURERS

The President announced that the annual Harveian Oration would be delivered by Dr. T. Clifford Allbutt, Regius Professor of Physic in the University of Cambridge, that Dr. Archibald Garrod had been appointed Bradshaw Lecturer, and Dr. John Sykes, M.O.H. St. Pancras, Milroy Lecturer for the ensuing year (1901).

COUNCIL.

Upon the nomination of the Council, Dr. Frank, Sir Wm. R. Gowers, Dr. Barlow, Dr. Coupland were elected Councillors in the room of Dr. Sansom, Dr. Mitchell Bruce, Dr. Allchin, and Dr. Frederick Taylor, retiring by rotation.

LABORATORIES COMMITTEE.

Dr. Sidney Martin, F.R.S., was elected a member of the Laboratories Committee in the place of Dr. Payne, who has resigned.

COMMUNICATIONS.

Communications were received from the Secretary of the Royal College of Surgeons reporting certain proceedings of their council on November 2nd, 1899, and January 11th, 1900; from the General Medical Council (November 30th), recommending the Royal Colleges to join with the Society of Apothecaries to hold qualifying examinations; from Mr. J. N. Davies-Colley, resigning on account of illness his appointment as Examiner in Surgery; and from a Committee of the Local Government Board (December 27th), asking the College to appoint two representatives to give evidence on the question how far certain preservatives and colouring matters added to food are injurious to health. Sir T. Lauder Brunton, M.D., F.R.S., and Dr. Vivian Poore were appointed.

SUSPENSION OF PRIVILEGES.

In pursuance of a recommendation of the Censors Board, July 25th, to provide for the suspension as well as the final revocation of a diploma under By-law 188, it was moved for the second time, and resolved:

That the following words, approved by counsel, be substituted for those in the by-law commencing "may declare such Fellow" to the end, namely: "may declare such Fellow not to be a Fellow or a Member of the College, or such Member not to be a Member of the College, or such Licentiate not to be a Licentiate, for a limited period of time or altogether as the College shall determine; and such Fellow, Member or Licentiate shall forfeit all the rights and privileges which he does or may enjoy as a Fellow or as a Member or as a Licentiate as the case may be, either for such limited period of time or altogether as the College shall determine; and his name shall be expunged from the list of Fellows or from the list of Members or from the list of Licentiates, as the case may be, either for such limited time or altogether as the College shall determine."

NOMENCLATURE OF DIARRHŒA.

Reports.—A report, dated November 20th, 1899, from the Committee on the Nomenclature of Diarrhœa, appointed July 27th, 1899, was received. After some discussion, in which Dr. Hunter, Dr. D. MacAlister, Dr. Norman Moore, Dr. Tatham, and Dr. Payne took part, the report was adopted by the College. (See p. 269).

REPORT OF COMMITTEE OF MANAGEMENT.

A report, dated December 11th, 1899, from the Committee of Management, was received and adopted.

D.P.H. Examination.—The Committee recommended that a revised syllabus for the examination for the Diploma in Public Health as now assented to by the examiners, should be adopted and come into force on July 1st next.

Cooke's School.—The Committee further reported that they had considered an application for the renewal of the recognition of Cooke's School of Anatomy as a place of instruction in Anatomy and Physiology for candidates referred at the Second Examination, and had decided to recognise the school on the same conditions as heretofore for the ensuing year, and to recommend that the course of Operative Surgery at Cooke's School be recognised for the ensuing year.

Cornell University.—The Committee recommend that Cornell University be added to the list of institutions recognised by the Board at which the whole curriculum of professional study may be completed, and whose graduates in medicine are admissible to the Final Examination.

A Report, dated December 8th, 1899, from the Laboratories Committee was also received and adopted:

Work of the Bacteriological Department.—The Superintendent of the Bacteriological Department reports that there has been a large demand for diphtheria antitoxin for the hospitals of the Metropolitan Asylums Board. During the past quarter 774 doses of antitoxin each containing 4,000 units, and 7,211 doses each containing 3,000 units, have been supplied, making a total of 24,729,000 units. Under the grant from the Goldsmiths' Company 50 doses of antitoxin containing 4,000 units, 124 doses of 3,000 units, and 250 doses of 2,000 units have been supplied to the general and children's hospitals in or near London since the 5th of October last. The Committee have under consideration certain further researches which it is intended to commence with help from this fund. During the quarter further batches of antitoxin supplied by Messrs. Parke, Davis and Co. have been tested in the laboratory, and a certificate granted showing its strength, sterility, and freedom from excess of antiseptic.

A list of books and other publications presented to the Library during the past quarter was presented by the Librarian, and the thanks of the College accorded to the donors.

Such gifts have during the present quarter been unusually numerous and valuable: The Governors of the Bedford General Infirmary have presented 23 volumes of old medical works belonging to the 17th and 18th centuries; Dr. Coates of Bath, a fine copy of Cowper's *Anatomy*, splendidly bound; Dr. Vivian Poore, an interesting medical MS. of the 17th century, entitled Remedies for the Universall Parts of the Body; Dr. Stevenson, three medical books of the 17th century; Dr. Osler, Sir T. Browne's *Christian Morals*; Dr. Davidson of Liverpool, *The Life of Dr. Walker*; Mr. Arthur Denman, Boyle's *Philosophical Works*, in three volumes.

Several new publications by Fellows of the College and others have also been received.

CONJOINT BOARD IN SCOTLAND.

THE quarterly examinations for the Triple Qualification in Edinburgh were concluded on January 27th with the following results:

First Examination, Four Years' Course.—E. H. Smyth, D. C. Williams, Honorine Forbes, J. Levack, E. A. J. Ersser, B. C. Trull.

One candidate passed in the division of Chemistry.

First Examination, Five Years' Course.—A. B. H. Pearce, A. W. Hall, W. Fleming, W. S. Batten, L. P. M. Alexis, S. J. Graham, W. T. Nicholson.

Two candidates passed in Elementary Biology and 1 in Chemistry.

Second Examination, Four Years' Course.—A. C. Campbell, W. D. Lawton, H. E. Blackwood, D. C. Williams, J. A. Campbell (with distinction), T. J. Evans, J. M. Campbell, W. E. MacManus, T. Dow.

Second Examination, Five Years' Course.—J. J. Adrien, T. W. McGubbin, Mary Lytie Lynes, W. Bates, J. Boyd, R. P. H. Blackstock, D. G. Dingwall, T. Gibbons, S. L. G. D. Madaine, R. L. Williams, S. J. Mathewson, J. MacLean, H. Doig (with distinction), and J. W. Cross.

Five candidates passed in Anatomy.

Third Examination, Five Years' Course.—J. S. Colquhoun, J. Cotter (with distinction), D. McIntyre, A. J. Hewitt, J. D. J. Bruce, J. Flanagan, A. B. Laidlaw, W. H. Ferguson, J. Crawford, W. Deery, R. G. Campbell, C. H. Farquharson, W. Turner, O. F. McCarthy, H. O. Pomme di Mirimonde, P. Carroll, A. H. Wilson, Jeane Newton, J. Stewart, C. H. Nash, and Sarah Harper Smith.

Two candidates passed in Anatomy and 3 in Materia Medica.

Final Examination.—Winifred Hill, E. Burr, J. W. Dow, W. Aston, T. Duff, J. McElroy, G. F. Beacher, F. Jeeves, Isabella Anne Watson, M. A. Alabone, A. J. Hewitt, W. Cunliffe, Hilda Maud McFarlane, T. S. Logan, S. W. Morton, A. J. Morkill, R. Girdwood, A. E. Whitehead, T. Holmes, F. A. Georgeson, M.A., G. F. Stoney, F. P. Maitland, Matilda Coutinho, K. Eapen, C. K. Pillai, J. T. K. Thomson, C. A. Vogwell, J. B. Thorburn, G. H. F. Graves, W. B. Heagerty, M. Sullivan, D. Jeaffreson, J. A. Maclardy, W. H. A. Raffel, J. G. Gray, C. C. C. Beling, A. Bryans, T. Harrison, J. E. Boon, C. F. Brears, G. H. L. Hammerton, C. Bharadwaja, T. F. H. Blake, W. E. Cuthbertson, R. W. Perry, and H. O. Pomme di Mirimonde.

Seven candidates passed in the division of Medicine and Therapeutics, 3 in the division of Surgery and Surgical Anatomy, 11 in the division of Midwifery, 10 in the division of Medical Jurisprudence.

CONJOINT BOARD IN IRELAND.

FINAL EXAMINATION.—Candidates have passed this examination as undernoted:

In all Subjects.—F. G. FitzGerald, H. W. Spaight.

Completed the Examination.—R. J. Cane, R. J. Franklin, R. H. Moffit, T. D. Sullivan.

In Medicine.—W. J. Anglim, C. C. Meeke, P. J. McGinn.

In Surgery.—L. A. Hare, C. C. Meeke, J. H. O'Connell.

In Mental Disease.—W. J. Anglim, W. S. D. Bird, C. C. Meeke, P. J. McGinn, J. H. O'Connell.

In Midwifery.—W. J. Anglim, W. S. D. Bird, M. M. Goldfoot, N. P. Kirby, C. C. Meeke, P. J. McGinn, J. H. O'Connell, D. Power.

In Ophthalmology.—W. J. Anglim, N. P. Kirby, J. H. O'Connell, D. Power.

In Forensic Medicine, etc.—C. J. D. Odevaine, D. Power.

A MEDICAL CLUB IN PARIS.—A medical club has recently been founded in Paris. Its objects are to form a professional centre for Parisian practitioners, and to offer hospitality to provincial and foreign doctors when they visit the French capital. A Special Committee has been formed to arrange for the provision of lodgings at suitable prices for members of the profession visiting Paris during the forthcoming Exhibition, and to supply them with information as to the various medical and scientific congresses to be held in connection therewith, and as to lectures, hospitals, clinics, etc. The President of the club is Dr. Pozzi, the General Secretary Dr. Doléris. Among the members of the Committee are MM. de Ranse, Desnos, Brissaud, Huchard, Maygrier, and Richelot. Communications should be addressed to Dr. Doléris, 5, Avenue de l'Opéra, where the club is housed.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

THE Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the fourth or autumn quarter of 1899, and to the marriages during the three months ending September last. The marriage-rate was equal to 18.0 per 1,000, and was higher than that recorded in the corresponding quarter of any preceding year.

The births registered in England and Wales during the quarter ending December last numbered 226,241, and were equal to an annual rate of 28.3 per 1,000 of the population, estimated by the Registrar-General to be nearly thirty-one and three-quarter millions in the middle of 1899. This rate was 0.9 per 1,000 below the mean rate in the corresponding quarters of the ten preceding years. The birth-rates in the several counties ranged from 22.2 in Sussex, 22.5 in Westmorland, 22.8 in Oxfordshire, and 22.9 in Somersetshire, to 31.5 in Warwickshire, 33.1 in Northumberland, 34.2 in Staffordshire, and 34.7 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 29.4 per 1,000, and exceeded by 1.1 the general English rate. In London the birth-rate was equal to 28.4 per 1,000, while it averaged 30.1 in the thirty-two provincial towns, among which it ranged from 21.1 in Halifax, 22.3 in Bradford, 22.9 in Huddersfield, and 23.4 in Burnley, to 35.1 in Sheffield, 35.4 in Liverpool, 36.5 in Wolverhampton, and 36.7 in Gateshead.

The births registered in England and Wales during the three months ending December last exceeded the deaths by 77,251; this represents the natural increase of the population during that period. From returns issued by the Board of Trade, it appears that 48,459 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 48,459 emigrants, 18,838 were English, 3,325 Scotch, and 6,249 Irish, while 20,047 others were of foreign nationality. Compared with the averages in the corresponding quarters of recent years, the proportion of English and of Scotch emigrants showed a decline, while that of Irish emigrants exceeded the average.

During the fourth quarter of last year the deaths of 148,990 persons were registered in England and Wales, equal to an annual rate of 18.6 per 1,000 of the population, the average rate in the corresponding quarters of the ten preceding years having been 18.1 per 1,000. The lowest county death-rates last quarter were 11.9 in Westmorland, 13.6 in Rutlandshire, 13.9 in Cambridgeshire, and 14.2 in Bedfordshire, while the highest rates were 20.2 in Lancashire and in South Wales, 20.5 in Gloucestershire, 21.4 in London, and 21.7 in Monmouthshire. In the urban population of England and Wales, estimated at twenty-one and three-quarter millions of persons, the rate of mortality during the quarter under notice was 19.5 per 1,000; while in the remaining and chiefly rural population of nearly ten millions the rate was 16.8 per 1,000. These urban and rural rates were 0.4 and 0.6 per 1,000 above their respective averages in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 20.8 per 1,000, or 2.2 in excess of the general English death-rate during the same period. In London the rate was 21.4 per 1,000, while it averaged 20.5 in the thirty-two provincial towns, among which the rates ranged from 14.7 in Huddersfield, 15.5 in Derby, 15.8 in Croydon, and 16.1 in Cardiff to 22.6 in Portsmouth and in Wolverhampton, 23.0 in Salford, 24.7 in Preston, and 26.6 in Liverpool. In sixty-seven other large towns, with an estimated aggregate population of more than four millions, the mean death-rate was 18.0 per 1,000, or 2.8 below the rate in the thirty-three great towns.

The 148,990 deaths registered in England and Wales during the three months ending December last included 2,983 which were referred to measles, 2,898 to diphtheria, 2,566 to diarrhœa, 2,539 to "fever" (including typhus, enteric, and ill-defined forms of continued fever), 1,597 to whooping-cough, 1,161 to scarlet fever, and 117 to small-pox; in all, 13,681 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1.70 per 1,000, which was 0.22 below the average rate in the corresponding quarters of the ten preceding years. The mortality from small-pox, diphtheria, and "fever," showed an excess, while that from each of the other principal zymotic diseases was below the average. Of the 116 deaths from small-pox registered in England and Wales during the quarter under notice, 99 belonged to the borough of Hull, 7 occurred in Doncaster registration district, 6 in other parts of Yorkshire, and 3 in Lincolnshire.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 144 per 1,000, and was 7 per 1,000 below the average rate in the corresponding periods of the ten preceding years. In London the rate of infant mortality was 151 per 1,000, while it averaged 165 in the thirty-two large provincial towns, among which it ranged from 127 in Huddersfield, 131 in Croydon and in Plymouth, 132 in Brighton and 142 in Derby, to 183 in Portsmouth, 184 in Newcastle, 188 in Leicester, 211 in Burnley, and 251 in Preston. The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to an annual rate of 9.6 per 1,000 of the estimated population at this group of ages, and was 0.1 per 1,000 above the mean rate in the ten preceding fourth quarters. In the thirty-three great towns the mortality at this age-group averaged 11.7 per 1,000, and ranged from 7.2 in Croydon, 7.3 in Norwich and in Huddersfield, and 7.4 in Derby to 13.0 in Preston, 13.3 in Sheffield, 14.3 in Salford, and 16.4 in Liverpool. Among persons aged 60 years and upwards, the death-rate in England and Wales last quarter was equal to 79.5 per 1,000 of the estimated population at this age-group, against an average rate of 69.6 in the corresponding quarters of the ten preceding years. In the thirty-three great towns the rate was 90.7 per 1,000, ranging from 60.9 in Norwich, 67.4 in Hull, 68.9 in Halifax, and 72.1 in Cardiff to 98.8 in Preston, 98.9 in Liverpool, 106.6 in Portsmouth, and 108.7 in Bristol.

The mean temperature of the air at the Royal Observatory, Greenwich, was 44.7°, and was 1.0° above the average in the corresponding quarters of 128 years; it showed an excess of 5.5° in November, but in October and December it was 0.4° and 2.0° respectively below the average. The rainfall during the quarter amounted to 7.54 inches, and was 0.45 of an inch above the average.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,790 births and 5,025 deaths were registered during the week ending Saturday last, January 27th. The annual rate of mortality in these towns, which had been 30.9, 29.1, and 24.9 per 1,000 in the three preceding weeks, further declined to 22.6 last week. The rates in the several towns ranged from 8.9 in Cardiff, 10.7 in Croydon, 14.7 in Birkenhead, and 15.3 in Swansea, to 29.5 in Liverpool, 29.7 in Wolverhampton, 30.1 in Sunderland, and 30.7 in Preston. In the thirty-two provincial towns the mean death-rate was 22.8 per 1,000, and exceeded by 0.6 the rate recorded in London, which was 22.2 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the death-rate was 1.8 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.1 in Burnley, 4.6 in Sheffield, 5.7 in Salford, and 7.9 in Preston. Measles caused a death-rate of 1.2 in West Ham, 1.3 in Hull, 1.4 in Bradford, 3.3 in Salford, and 3.9 in Preston; scarlet fever of 1.3 in Burnley and in Preston; and whooping-cough of 1.0 in Birmingham and in Liverpool, 1.3 in Preston and in Leeds and 1.7 in Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 94 deaths from diphtheria in the thirty-three towns included 37 in London, 26 in Sheffield, 4 in Leeds, and 4 in Liverpool. One fatal case of small-pox was registered last week in Hull, but not one in any other of the thirty-three large towns. There were 24 cases of small-pox under treatment in the Metropolitan Asylums Hospitals on Saturday last, January 27th, against numbers increasing from 5 to 21 at the end of the five preceding weeks; 4 new cases were admitted during the week, against 1, 10, and 5 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had decreased from 3,578 to 2,441 at the end of the ten preceding weeks, had further fallen to 2,287 on Saturday last; 190 new cases were admitted during the week, against 186, 180, and 207 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, January 27th, 941 births and 723 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 23.0 and 23.3 per 1,000 in the two preceding weeks, further rose to 23.4 last week, and was 0.8 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.2 in Leith and 15.9 in Paisley, to 26.7 in Dundee and 27.6 in Aberdeen. The zymotic death-rate in these towns averaged 2.6 per 1,000, the highest rates being recorded in Dundee and Perth. The 349 deaths registered in Glasgow included 19 from measles, 6 from scarlet fever, 3 from diphtheria, 5 from whooping-cough, 3 from "fever," and 13 from diarrhœa. Two fatal cases of whooping-cough were recorded in Edinburgh; 8 deaths from measles, and 2 from diphtheria occurred in Dundee; and 2 from measles in Greenock and in Perth.

ZYMOTIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during the fourth or autumn quarter of the year 1899. The fluctuations of each disease and its fatal prevalence, as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

Small-pox.—One fatal case of small-pox was registered in London last quarter, the corrected average number in the corresponding periods of the ten preceding years being 4; eight small-pox patients were admitted into the Metropolitan Asylums Hospitals during the quarter, and 7 remained under treatment at the end of December last.

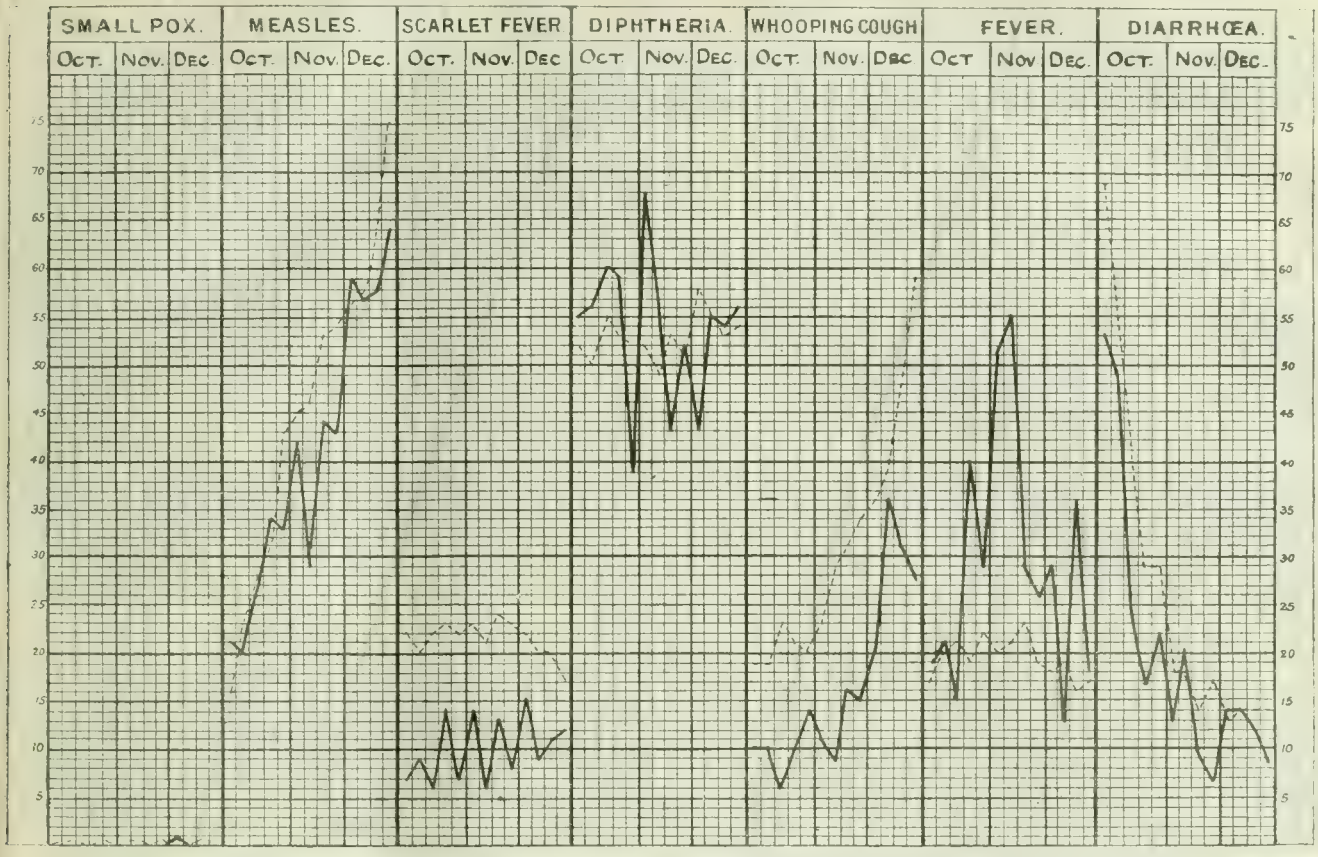
Measles.—The deaths referred to measles, which had been 696 and 530 in the two preceding quarters, were again 530 during the three months ending December last, and were 65 below the corrected average number. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in Fulham, St. Giles, St. Martin-in-the-Fields, St. George-in-the-East, St. George Southwark, and Battersea.

Scarlet Fever.—The fatal cases of this disease, which had been 84 and 87 in the two preceding quarters, further rose to 131 during the three months under notice, but were less than half the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease was proportionately most fatal in Fulham, Clerkenwell, St. Luke, St. George Southwark, St. Olave Southwark, and Rotherhithe. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had increased from 2,272 to 2,836 at the end of the three preceding quarters, had declined again to 2,797 at the end of December last. The number of new cases admitted into these hospitals, which had increased from 2,880 to 3,760 in the three preceding quarters, had further risen to 4,011 during the quarter ending December last.

Diphtheria.—The deaths referred to diphtheria in London, which had been 357 and 438 in the two preceding quarters, further rose to 696 during the three months under notice and were 17 above the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Mile End Old Town, St. Olave Southwark, Bermondsey, Rotherhithe, Camberwell, and Lewisham. The number of diphtheria patients in the Metropolitan Asylums Hospitals at the end of December last was 1,679 against numbers increasing from 1,159 to 1,479 at the end of the three preceding quarters; 2,980 new cases were admitted during last quarter, against 1,953 and 2,651 in the two preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had declined from

Deaths from Zymotic Diseases in London during the Fourth Quarter of 1899.



Note.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted line shows the *average* number of deaths in the corresponding weeks of the ten preceding years, 1888-97

681 to 295 in the three preceding quarters, further decreased to 216 during the three months ending December last, and were 185 below the corrected average number; among the various sanitary areas whooping-cough was proportionately most fatal in St. George Hanover Square, Clerkenwell, Bethnal Green, Limehouse, Poplar, and Woolwich.

Fever.—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had 88 and 177 in the two preceding quarters, futher rose to 381 during the three months ending December last, and were 129 above the corrected average number. No death either from typhus or from simple continued fever was registered during the quarter under notice. Among the various sanitary areas the mortality from enteric fever was highest in Holborn, Clerkenwell, Bethnal Green, Limehouse, Rotherhithe, and Battersea.

Diarrhœa.—The 265 fatal cases of diarrhœa registered in London during the three months ending December last were 79 below the corrected average number in the corresponding periods of the ten preceding years; this disease showed the highest proportional fatality in Chelsea, St. Saviour Southwark, St. George Southwark, Newington, and Woolwich sanitary areas.

In conclusion it may be stated that the 2,220 deaths referred to the principal zymotic diseases in London during the fourth quarter of the year 1899 were 331, or nearly 13 per cent., below the corrected average number. The mortality from diphtheria and from "fever" exceeded the average, while that from each of the other principal zymotic diseases showed a decline. Among the various sanitary areas, the lowest zymotic death-rates were recorded in Paddington, Kensington, Hampstead, Stoke Newington, Strand, and Plumstead; and the highest rates in Fulham, Bethnal Green, St. George Southwark, Bermondsey, Botherhithe, and Battersea.

TUBERCULOSIS AND POOR-LAW AUTHORITIES.

At the seventeenth annual Poor-law Conference of the Yorkshire District, held at Harrogate, Dr. J. Gordon McCandlish, a medical member of the Leeds Board of Guardians, read a paper on Phthisis, which is an excellent example of the kind of educational address so much needed at the present time. In simple language the salient points in the etiology of tuberculosis which specially bear on its prevention were shortly put forward, and the measures which might advantageously be initiated by Poor-law guardians were indicated. The dangers of public houses, music halls, workshops, and common lodginghouses arising from the habits of the frequenters of these places, and the evil influence of overcrowding in the dwellings of the poor might well be attacked by the municipal authorities, but the most important work of the Poor-law guardian consists in taking steps for the isolation of all cases of phthisis coming under their charge. Only a small proportion of these would be benefited by residence in a sanatorium, the greater number of cases are too advanced for cure. These two classes should be separated, and all should be kept away from the general wards of the infirmary. For the incurable cases the removal to farms or cottage homes would not only make their sufferings lighter, but their disease would then be less of a menace to the health of others.

THE SANITARY INSPECTORS' EXAMINATION BOARD.

At the ninth annual general meeting of the Association of Directors and Organising Secretaries for Technical and Secondary Education, held on January 17th at the Imperial Institute, the following resolutions were agreed to:

"That the Sanitary Inspectors' Examination Board, having no representatives upon it of either local authorities or educational institutions, is unworthy of public confidence."

"That this Association is unable to understand the action of the Local Government Board in declining to place on the above-sanctioned Board representatives of the City and Guilds Institute, the Association of Technical Institutes, and this Association."

CELLAR DWELLINGS.

M.O.H. sends us part of the plan and elevation of a tenement house. The room "B," at the rear, is entered from the yard, the floor of the room being about the level of the yard. The room "A" towards the street, is is reached only through "B." Room "A" is lighted only by a window opening into an area, such area not extending along the whole frontage of the room, and not being carried to a depth of 6 inches below the floor. He asks, "Is room 'A,' on the ground plan and section, a 'cellar dwelling'?"

*** Certainly, if it is used as a sleeping room. Section lxxi of the Public Health Act, 1875, includes in the expression "cellar" "any vault or underground room," while Section lxxiv says that "any cellar in which any person passes the night shall be deemed to be occupied as a dwelling within the meaning of this Act." It is not, perhaps, necessary to remind our correspondent that the penaltics attached to the occupying and letting of all cellar dwellings (first so occupied since 1848), and of

cellar dwellings built and lawfully occupied before 1848, but which do not comply with certain conditions laid down in Section lxxii, can be imposed upon persons occupying or allowing the cellar to be occupied "separately." If, for instance, "A" and "B" are let together, and *both* occupied only by the person hiring them—not sublet—it might be better to proceed for a closing order as for a house unfit for habitation.

INDIA AND THE COLONIES.

INDIA.

[FROM OUR SPECIAL CORRESPONDENT.]

The Tata Research Institute for India.—Deaths from Poisonous Snakes.—Serious Outlook of the Famine.—Decrease of Plague.

A YEAR ago Mr. Tata, of Bombay, offered a large sum of money for the endowment of a university of research for India, and more recently he has, at the request of the Government, acceded to their wishes to withdraw the connection of the fund with a family endowment, so that he has now placed 30 lakhs of rupees unconditionally at their disposal for this purpose, a sum which will be available as soon as the necessary legislature is passed. The Government, in a resolution of the subject, adopted after the provisional scheme had been considered and approved by a strong Committee in Simla, declare that "they are confident that the proposed university will meet a great need, and will contribute to the advancement of higher education and the development of the resources of the country." In January last the provisional scheme was sent to selected educational experts and men of affairs throughout India, and abridged opinions of seventy-six of them have recently been published. The Simla conference has decided that the university, when fully constituted, shall consist of (1) scientific and technical, (2) medical and hygienic, and (3) philosophical and educational departments, which will be started in the above order, as sufficient funds for the whole of them are not at present available. It is proposed to locate the university in Bombay, with Bangalore as an alternative site, the latter having been favoured at the Simla conference on account of its climate being much less trying to the European staff which will be required. As might have been expected very divergent opinions have been expressed as to which subjects should be represented by professors. The difficulty of deciding which will be of the greatest service is very great when the funds available only allow of a limited number being represented; but it is useless to speculate on this part of the subject. The growth of the institute will necessarily be slow at first, but that it will fill a great want and be of immense value to science and industry in India is certain.

The suggestion made in the leading article in the BRITISH MEDICAL JOURNAL of November 25th, 1899, that a special department should be started for the destruction of snakes and dangerous animals which cause such a great annual loss of life in India has been criticised by the lay press of this country. The *Pioneer* thinks that the post of imperial snake killer would be a very pleasant one, but fears that the only result would be another long annual report and further worry for the over-worked district officer. The present policy does at least appear to have checked any very marked increase in the loss of life from these causes; although, on the other hand, it seems to be powerless to bring about any decided decrease. When the vast area of waste land in India and the habitual carelessness of the native is considered it is thought to be unlikely that any measures which are not prohibitively costly could be expected to have much effect. Good might be done by a systematic attempt to supply all dispensaries with antivenene, so that when the natives learn the value of this treatment they may lose no time in resorting to it, and as by this means many lives could be saved annually, and another triumph of modern medicine would find an ever-widening field.

In my last letter I pointed out how serious the present famine would become if no winter rain soon fell. Unfortunately the last few weeks have been as dry as ever, and the outlook has become very serious indeed. During the last month the numbers on the relief works have more than doubled, and now stand at over two and a half millions. Even in Bengal, which was counted on to furnish supplies to the other provinces, the outlook has changed for the worse, and only 70 per cent. or a normal crop is now expected. The most serious factor is the very early and rapid increase of the numbers on the relief works, for the number must be expected to increase for several months to come, while if the winter rains continue to hold off, no decrease can be expected until the rainy season has well set in about next July. At present the weekly increase is a quarter of a million, and the Government are so alarmed at the prospect that Lord Curzon has just issued a circular to all the Local Governments directing attention to the rapid increase, and requesting that an inquiry should be made to ascertain whether all necessary precautions are taken to ensure that only really needy persons are employed on the relief works. The necessity for this step is due to the fact that the famine code is constructed on the basis that at the height of the worst famine imaginable not more than 15 per cent. of the population of the affected tracts are likely to need relief, and yet at the present time this proportion is already exceeded in some parts, and at the present rate half the population of some districts will be on the relief works by the month of May. If, then, the present rate of increase continues, the famine code will break down both in its financial and administrative aspects. It is therefore quite necessary that proper care should be exercised to confine relief to the absolutely destitute sections of the population. As I have already pointed out, the present famine is the most serious that has been known for a century, and owing to the war in South Africa it is attracting little or no attention in England, although it is more extensive than that of 1897, in which such great help was forthcoming from Great Britain.

It is pleasant, on the other hand, to be able to report continued improvement in the plague. Bombay city, which is now passing through its fourth epidemic, is, however, an exception; the weekly deaths have once more mounted up to nearly 300 a week, being more than double what they were only a month ago. In the whole of the Presidency, however, the number has decreased to only 800 in the last weekly report, although two months ago it amounted to over 3,000. The returns from Calcutta still remain about stationary at 50 a week, while with the exception of Mysore the disease is nowhere else very marked.

CEYLON.

MEDICAL REPORT FOR 1898.

DR. ALLAN PERRY, Principal Civil Medical Officer and Inspector General of Hospitals, has submitted an exhaustive and interesting report of medical and sanitary administration and events in the island of Ceylon during the year 1898. The birth-rate of the year was 38.2 and the death-rate 26.2 per 1,000 against 36.9 and 23.2 in 1897. The increased death-rate was due to a severe outbreak of malarious fever in the Northern and North-Western Provinces during the last quarter of the year. Cholera is not epidemic in the island, but importations take place from India through the agency of coolies and pilgrims. Several such occurred in 1898, but were restricted by vigorous sanitary measures. Only 54 cases of small-pox with 12 deaths occurred. The island is said to be well protected by vaccination, and whenever an outbreak occurs, segregation, vaccination and revaccination are promptly resorted to. Enteric fever prevails in the town of Colombo, but has been on the decline since the introduction of a pure water supply. Leprosy, anchylostomiasis and "paranghi" are very prevalent in many parts of Ceylon.

Arrangements for medical relief continue to receive attention. There are 64 hospitals and asylums, including 31 civil hospitals, 1 lying-in home, 7 field or "paranghi" hospitals, 6 immigrant hospitals, 17 district hospitals, 1 leper hospital, 1 lunatic asylum and 1 leper asylum. There are, in addition, a large number of district dispensaries, estate dispensaries, police hospitals and branch hospitals. The medical requirements of every section of the population are thus provided for, and the number of patients treated in each class was very considerable.

The Ceylon Medical college continues to do excellent work. Precautions were taken against the importation of plague, which were successful, although two cases were detected in steamers arriving at Bombay.

THE STRAITS SETTLEMENTS.

Medical Report for 1898.

The Straits Settlements, comprising Singapore, Penang, Province Wellesley, and Malacca, present the very curious condition of a growing population associated with a low birth-rate and a high death-rate. The explanation is that immigration largely exceeds emigration, and, the immigrants being mostly adult males, the birth-rate remains low. The figures for 1898 were 21.57 and 30.43 per 1,000.

The year was on the whole a healthy one and free from epidemic disease. There were 48 deaths from cholera, and small-pox was rather prevalent in Singapore and Malacca. There were 25,345 admissions into the hospitals of these Settlements, with 4,139 deaths, or 16.33 per cent.; they include 1,329 admissions from beri-beri, with 420 deaths, or 31.6 per cent. This disease constitutes a very prominent feature in the pathology of these places, and a large proportion of the deaths which took place in the Singapore lunatic asylum and gaol was due to it. Dr. Leask gives a detailed report of a severe outbreak which took place in the latter institution. Venereal diseases are very rife, and apparently on the increase. There were 2,594 admissions and 121 deaths, indicating great severity, and the numbers of admissions entered under the terms "phagedæna," "anæmia," and "debility" evidence a low state of public health; 14,416 vaccinations were performed during the year, and Dr. Max F. Simon, Principal Medical Officer, Straits Settlements, considers that the population is fairly well protected against small-pox.

MEDICAL NEWS.

A League against Tuberculosis has been founded at Rio de Janeiro, on the initiative of Dr. Cypriano de Freitas.

We regret to learn that Mr. Brodhurst, formerly Surgeon and Lecturer on Orthopædic Surgery at St. George's Hospital, died at the age of 77 on January 30th.

Dr. J. Wright Grant, Woodfield, Woburn Sands, has received for the third time in succession the Government grant for efficient vaccination.

The Director of the new Antirabic Institute at Lyons is Professor Arloing, who is assisted by Dr. Jules Courmont, Dr. Nicolas, M. Lesieur, and M. Arloing, jun.

The report made to the sixth annual meeting of the Massachusetts Cremation Society showed that the number of cremations had increased from 167 in 1898 to 230 in 1899.

The subject for discussion at the annual clinical debate, which will be held at the Chelsea Clinical Society on March 13th and 20th, is the Treatment of Rheumatism with special reference to Prophylaxis and Cardiac Complications.

The Rev. John Filmer Anstey has made a donation of £200 to the funds of the Middlesex Hospital out of funds at his disposal as sole executor to the will of the late Rev. Charles J. Morgan, of Hove.

The Turin Academy of Sciences has awarded the Bressa Prize of 10,000 lire (£400) for the best scientific work published during the past four years to Professor Ernst Haeckel, of Jena.

The New York Academy of Medicine, which not very long ago moved into a fine new building which cost nearly a quarter of a million dollars, has now paid off the whole of the debt on the building.

Arrangements are being made for army medical officers to address personally all men of the Militia, Yeomanry, and Volunteers going to South Africa on the importance and advisability of submitting to inoculation against typhoid before embarking.

The Institute of Chemistry.—At the examination held this month 10 candidates passed the Intermediate Examination, 3 the A.I.C. Examination (old regulations), 8 the Final A.I.C. Examination, and 2 Branch E of this examination (Analysis of Food and Drugs, including an examination in therapeutics, pharmacology, and microscopy).

Leprosy in Crete.—At the invitation of Prince George of Greece, the Governor-General of Crete, Dr. E. Ehlers, of Copenhagen, and Dr. O. Cahnheim, of Dresden, will proceed to Crete next month to study the incidence of leprosy in that island. The inquiry is expected to last three months, and will, it is hoped, result in the adoption of regulations for the prevention of the disease.

Congresses at Naples.—The Queen of Italy, at the instigation of Professor Baccelli, has consented to be the Patroness of the Tuberculosis Congress which is to be held at Naples in April. Congresses of the Italian Medical Association, of the Medical Officers of Health of Italy, of the Sanitary Press Association, and others on Physical Training, etc., will be held at the same time.

Tuberculosis in Greece.—The Queen of Greece has expressed her intention of founding a hospital for sufferers from tuberculosis. For that purpose she has acquired the Petraki convent, which is situated in a healthy region outside Athens. The institution is intended for the tuberculous patients who have hitherto been received into the general hospitals of Athens, and for tuberculous inmates of State prisons.

Medical Club in Birmingham.—We are asked to state that a social club has been started in connection with the Birmingham and District General Medical Practitioners' Union. A room has been taken at the Colonnade Hotel, and is being refurnished and decorated, and will shortly be ready for use. Membership in the social club is limited to those who have joined the Union. An inaugural dinner was held at the Colonnade Hotel on January 26th, and was well attended. Some fifty members of the Union have already joined the social club.

The Yarrow Convalescent Home.—We are asked to state that during the winter months accommodation is provided in the Yarrow Home for Convalescent Children, at Broadstairs, for a limited number of children requiring active treatment, and a lengthened stay is granted when there is a prospect of a permanent benefit. The trustees of the Home have placed at the disposal of the Officers' Families Fund thirty beds for the reception of the convalescent children of officers who have been killed or wounded in the war in South Africa. The London offices of the Home are at 73A, Queen Victoria Street, S.W.

Decrease of Medical Students in Hungary.—While elsewhere the rush of young men into the medical profession cannot be checked, in Hungary it appears to be necessary to attract students by the offer of free education. The Hungarian Minister of Education, in view of the yearly decreasing numbers of students entering the medical faculty of the University of Buda-Pesth, has ordered that the fees for lectures and classes be remitted on a more liberal scale than has hitherto been the case. The Senate of the University has accordingly recommended a considerable number of students for exemption in the second semester of the present academic year. If this measure fails to accomplish the desired object, it looks as though the Hungarian Government may be driven to offer a bounty to induce men to enter the profession.

Limiting the Output of Doctors in Russia.—The Russian Government has grappled with the question of the overproduction of medical practitioners in a drastic manner peculiarly its own. By a recent decree of the Minister of Education the admission of first-year students by the several medical faculties throughout the empire is restricted to a fixed number. The University of Moscow is limited to 250, Kieff to 200, Charkow to 175, Dorpat to 150, Warsaw to 100, Tomsk to 120, and Kasan to 100. The total number of first-year medical students in the dominions of the Czar must therefore not exceed 1,095. This number does not include the students of the St Petersburg Medico-Military Academy, which is allowed to admit 250 first-year students.

Cancer Research.—The sum of 98,000 dollars left by Mrs. C. B. Croft for the furtherance of the systematic study of cancer has now been paid to the Harvard University, and will be administered by the Department of Surgery of the Medical

School of that University. We learn from the *Boston Medical and Surgical Journal* that Dr. E. H. Nichols has been appointed to an office under the trust, and will shortly visit English and Continental laboratories for the purpose of investigating the work now being done in them.

CATS AND INFLUENZA.—The cat has no doubt many sins to answer for, but there is no good ground for the last charge brought against this necessary animal, which is that it is a disseminator of influenza. It is possible that a cat, if slobbered over by a person suffering from the catarrhal form of influenza, might carry the infection in its coat; and the habit of kissing animals—whether cats, dogs, or horses—is not free from danger of various kinds, and is certainly disagreeable to the witnesses, if not to the animals who have to endure it. We are advised, however, by an eminent veterinary authority that there is no foundation for the belief that the cat is ever the subject of influenza if left to itself.

COMPULSORY NOTIFICATION OF PLAGUE IN BELGIUM.—A Royal Decree has been issued which renders the immediate notification to the burgomaster of any case of plague, or suspected plague, obligatory upon the physician attending the case, and upon the householder, or, failing him, the nearest relatives of the sick person. If the case occurs on board ship the obligation is laid upon the captain. The burgomaster is required to transmit the notification as rapidly as possible to the President of the Medical Commission of the district. Further the medical man in attendance is required to send an immediate notification by telegram to the director of one of certain bacteriological institutes or laboratories which are enumerated in the decree; these laboratories are those of the Universities of Ghent, Louvain, and Liége; the bacteriological institutes of Brussels and Mons, and the laboratory of the Hospital Commission of Antwerp. Upon receiving such notification the director of the laboratory is required at once himself, or by some person under his direction, to obtain materials for making a bacteriological diagnosis, and to communicate the results of his inquiry to the Government and to the physician treating the case. Materials for such bacteriological examinations must not be forwarded by post or by railway; they must be collected by the director himself, or by a person nominated by him.

NEW WING OF THE WARNEFORD HOSPITAL, LEAMINGTON.—The new wing of the Warneford Hospital at Leamington Spa, which has been erected as a memorial of Her Majesty's Diamond Jubilee, was opened on January 17th by Princess Christian. The Princess first paid a brief visit to Lady Warwick's Home for Cripples at Emscote, and then proceeded to the Warneford Hospital, where she was received by the Chairman and Committee of the hospital, the medical staff, and others. After the new wing had been inspected, the two wards which it contains were named "Victoria" and "Helena" respectively. It is hoped that this addition, whilst rendering the accommodation of the hospital equal to present demands upon it, will enable several rooms in the old building to be used for administrative purposes. The hospital was founded in 1832 by the Rev. Dr. Samuel Warneford, who contributed £3,000 to the building fund, and on his death bequeathed a further sum of £10,000 for its maintenance. Since that time more than £30,000 has been expended on improvements and enlargements. A commodious out-patient department, separate from the main building, was erected in 1879, and about the same time a nurses' home was built. In 1884 the Herbert Beaumont Cottage Hospital, containing eight beds for cases requiring isolation, was established in connection with the Warneford Hospital, and several new wards and a well-equipped operating theatre were added in 1891. The hospital is also provided with an excellent pathological laboratory, the gift of a Warwickshire gentleman, and known as the Gibbin's laboratory.

MEDICAL VACANCIES.

The following vacancies are announced:

ALDERSHOT URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £300 per annum. Applications, marked "Medical Officer," to the Clerk to the Council by February 14th.

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary by February 5th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by February 10th.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum, with furnished apartments, board, and attendance. Applications to Mr. Peter Kevan, Honorary Secretary, 12, Acresfield, Bolton, by February 7th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer; unmarried, and under 30 years of age. Salary, £30 per annum, with board, washing, and residence. Applications to the Secretary by February 28th.

BRISTOL ROYAL INFIRMARY.—Resident Officer. Salary, £40 per annum, with board, lodging, and washing. Applications to the Secretary by February 8th.

BRIXTON DISPENSARY.—Resident Medical Officer; unmarried. Salary, £150, with furnished apartments, etc. Applications to the Secretary at the Dispensary, Water Lane, Brixton, S.W., by February 6th.

CANCER HOSPITAL (FREE), Fulham Road, S.W.—Assistant House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by February 12th.

CARDIFF INFIRMARY.—(1) Assistant House-Surgeon; (2) Assistant House-Physician. Appointment for six months, subject to re-election. Salaries at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by February 6th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road.—House-Surgeon. Salary, at the rate of £50 per annum, with board and residence. Applications to the Secretary by February 6th.

DUBLIN: NATIONAL MATERNITY HOSPITAL.—Resident Surgeon. Salary £100 per annum. Applications to the Secretary by February 6th.

EASTERN DISPENSARY.—Physician. Honorarium, £50 a year. Applications to the Secretary at the Dispensary, Leman Street, Whitechapel, E., by February 7th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Surgeon to Out-patients. Applications to the Committee of Management by February 16th.

FRENCH HOSPITAL AND DISPENSARY, Shaftesbury Avenue, W.C.—Resident Medical Officer. Salary, £80 per annum, with full board. Applications to the Secretary.

GLOUCESTER: GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by February 13th.

GRAVESEND HOSPITAL.—House-Surgeon. Salary, £80 per annum, with boar a residence. Applications to the Honorary Secretary by February 9th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. Assistant Physician. Application to the Secretary by February 14th.

HULL ROYAL INFIRMARY.—Honorary Surgeon. Applications to the Chairman, Committee of Management, by February 7th.

HULME DISPENSARY.—House-Surgeon. Salary, £130 per annum, with apartmen etc. Applications to the Honorary Secretary, Medical Committee, by February 6th.

LEEDS: GENERAL INFIRMARY.—Resident Ophthalmic Officer. Salary, £50 per annum, with board and lodging. Applications to the Secretary to the Faculty by February 7th.

LIVERPOOL.—Assistant to the Medical Officer of Health. Must not exceed 35 years of age. Salary, £330 per annum. Applications, endorsed "Assistant to the Medical Officer," to be sent to the Town Clerk, Municipal Offices, Liverpool, by February 14th.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Resident Surgeon. Salary, £100, with board and residence. Applications to the Secretary, 30, Charing Cross, S.W., by February 20th.

METROPOLITAN HOSPITAL, Kingsland Road, N.—(1) Assistant Physician and Pathologist; must be F. or M.R.C.P.Lond. (2) Surgeon for Diseases of Women. (3) Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by February 19th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £40 per annum, with board, attendance, and washing. Appointment for six months, with prospect of re-election as Senior. Salary, £60. Applications to the Secretary by February 6th.

POPLAR HOSPITAL FOR ACCIDENTS.—Senior House-Surgeon. Salary, £120 per annum, with board and residence. Applications to the House-Governor by February 16th.

SALFORD UNION.—Assistant Resident Medical Officer at the Infirmary, Hope, near Eccles. Salary, £130 per annum, with furnished apartments and attendance. Applications, endorsed "Assistant Medical Officer," to the Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by February 6th.

SEAMEN'S HOSPITAL SOCIETY: BRANCH HOSPITAL, Royal Victoria and Albert Docks, E.—(1) Senior House-Surgeon. Salary, £75 per annum, with board and residence, and additional £25 per annum if certain clinical work is performed satisfactorily. (2) House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary by February 19th.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications to the Medical Staff, care of the Secretary, by February 19th.

SOUTHAMPTON: ROYAL SOUTH HANTS INFIRMARY.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with rooms, board, and washing. Applications to the Secretary by February 10th.

SOUTHPORT BOROUGH.—Medical Officer of Health. Salary, £500 per annum. Applications, endorsed "Medical Officer," to be sent to the Town Clerk, Town Hall, Southport, by February 10th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Salary, £2 per mensem, with board, washing, and residence. Appointment tenable for six months. Applications to the Secretary by February 6th.

TUNBRIDGE WELLS: EYE AND EAR HOSPITAL.—House-Surgeon. Appointment for one year. Salary, £60 per annum, with board and residence. Applications to the Honorary Secretary by February 10th.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. Application to Dr. Parry, R.M.O.

WEST LONDON HOSPITAL, Hammersmith Road, W.—Acting Assistant Surgeon. Applications to the Secretary-Superintendent by February 7th.

WORKSOP DISPENSARY.—Resident Surgeon. Salary, £120 per annum, etc. Applications to Mr. Charles A. Whall, Worksop.

MEDICAL APPOINTMENTS.

ARBUCKLE, M.D.Aberd., D.P.H.Camb., reappointed Medical Officer for the Stainforth District of the Thorne Union.

BUNCLE, T. M., M.B.Edin., appointed Medical Officer for the Second District of the Morpeth Union, *vice* F. W. Skrimshire, M.R.C.S.

DUKE, Edgar, M.D.Durh., M.R.C.S., appointed Honorary Physician to the Police Convalescent Home, Hove, *vice* F. J. Waring, deceased.

FORREST, J. S., L.R.C.P.Edin., L.F.P.S.Glas., appointed Medical Officer for the Amble District of the Alnwick Union.

GOLDIE, W. H., M.D., C.M., appointed Clinical Assistant to the Chelsea Hospital for Women.

HARRIS, H. G., M.B., B.S.Dur., M.R.C.S., L.R.C.P., appointed Assistant House-Surgeon to the Derbyshire Royal Infirmary.

HAWTHORNE, C. O. M.D., M.R.C.P., appointed Examiner in Materia Medica and Therapeutics in the University of Edinburgh.

JONES, P. T., M.R.C.S., L.R.C.P., appointed Medical Officer for the Coleford District of the Frome Union, *vice* T. C. Lawson, M.R.C.S., resigned.

MESSITER, A. F., M.R.C.S., L.R.C.P., reappointed appointed Medical Officer for the Belton District of the Thorne Union.

MILLS, H. H., M.B.Lond., appointed a Clinical Assistant to the Chelsea Hospital for Women.

MORLEY, G. F., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Portsmouth District of the Portsea Island Union, *vice* F. Morley, M.R.C.S.Eng., resigned.

PALMER, C. S., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the First District and the Workhouse of the Reigate Union, *vice* A. Kelsey, M.R.C.S.Eng., resigned.

RIDLEY, Walter, M.B., M.S.Dunelm, F.R.C.S.Eng., appointed Surgeon to the Royal Infirmary, Newcastle-on-Tyne, *vice* Professor Page, retired.

RIDSDALE, A. E., M.R.C.S., L.R.C.P., appointed Medical Officer for the First District of the Newhaven Union, *vice* F. Dalton, M.R.C.S., L.R.C.P., resigned.

ROBSON, F. W. H., M.B., C.M.Edin., appointed Medical Officer for the Burscough District of the Ormskirk Union, *vice* A. J. Partridge, M.B.Vict., resigned.

SAVAGE, Smallwood, M.A., M.B.Oxon., F.R.C.S., appointed Surgeon to the Wolverhampton Hospital for Women.

SUTTON, C. R. A., M.D.Camb., appointed Medical Officer for the Seventh District of the Bromley Union, *vice* F. Shapley, M.R.C.S.Eng.

SCOTT, W. J., L.R.C.P., L.R.C.S.Irel., appointed Medical Officer for the Windsor District of the Windsor Union, *vice* S. Wyborn, M.R.C.S.Eng., resigned.

SOUTHWELL, C. E., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glas., appointed Medical Officer of Health for the Stoke-upon-Trent District of the Stoke-upon-Trent Union, *vice* S. Johnson, M.D.

VALENTINE, William, L.R.C.P., L.R.C.S.Edin., appointed Medical Officer and Public Vaccinator to the No. 4 District of the Warrington Union, *vice* Dr. J. W. Watkins, resigned.

WIGGINS, H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Second (B.) Worthing District of the Preston Union, *vice* B. H. Lees, M.B., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Mr. Claud Woakes: Examination of Nose.

Otological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 4.30 P.M.—Introductory Address by the President. Professor Urban Pritchard: On Antiseptics in Aural Surgery. Cases and specimens will be shown by Dr. Milligan, Professor Urban Pritchard, Dr. Dundas Grant, Dr. Tilley, Dr. StClair Thomson, Dr. Richard Lake, Mr. L. A. Lawrence, Dr. Jobson Horne, Mr. Arthur Cheatle, and Mr. Ernest Waggett.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Mr. Victor Horsley: Surgery of the Nervous System.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. T. Williams: Consultation. (Medical.)

Pathological Society of London, Pathological Laboratory, University College, Gower Street, 8.30 P.M.—Dr. Nuttall: Recent Investigations on Malaria with microscopic demonstration. Dr. Strangeways Pigg (for Dr. Alan Greene): Experimental Production of Amyloid Disease in Animals. Dr. Myers: Hæmolysis especially in connection with Snake Poison. Mr. Spencer and Dr. Risien Russell: Experiments relating to Nervous Disturbances of Respiration, of the Larynx, of Mastication, and of Deglutition. Dr. Bertram Abrahams: The Cortical Changes in Acute Chorea (lantern demonstration).

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Drs. Amand Routh, Griffith, and others. Annual meeting: The President (Mr. Alban Doran) will deliver the Annual Address.

Hospital for Consumption and Diseases of the Chest, Brompton, 4 P.M.—Dr. J. K. Fowler: The Symptoms and Treatment of Cardiac Failure in Mitral Stenosis and Mitral Regurgitation.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Bidwell: Minor Surgery.

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Mr. J. G. Turner: Antral Catarrh and Suppuration. Communications and specimens by Mr. H. Lloyd Williams and Mr. W. S. Holford.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation. (Skin.)

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr Guthrie Rankin: Consultation. (Medical.) 5 P.M.—Dr. StClair Thomson: Class. Practical Laryngology. Demonstration IV. 5.15 P.M.—Discussion on the Climate and Prevailing Diseases of Different Districts of South Africa.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical).

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Voelcker: Treatment of Whooping-cough.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr Dunn: Glaucoma.

Hospital for Diseases of the Skin, 5 P.M.—Clinical Demonstrations. Dr. T. D. Savill: Cases illustrating the Symptoms of Vasomotor Disorders and their Treatment.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Waterhouse: Demonstration of Surgical cases.

Neurological Society of London, 11, Chandos Street, W., 8.30 P.M.—Annual General Meeting for Election of Officers. Dr. A. Waller: Presidential Address: The Excitability of Nervous Matter with special reference to the Retina.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Professor McCall Anderson: Clinical Lecture.

Clinical Society of London, 8.30 P.M.—Dr. Rolleston: A case of Fatal Hæmopneumothorax of Unexplained Origin. Mr. Robert Jones and Mr. Tubby: Further Experience of Cases of Spinal Rectification. Dr. J. J. Perkins and Mr. C. S. Wallace: A Case of Perforated Duodenal Ulcer: Operation: Recovery.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

CARTER.—On January 24th, at Elm House, Chapel Allerton, Leeds, the wife of Eustace G. Carter, M.R.C.S., of a daughter.

HOWDEN.—At 24, Burdon Terrace, Newcastle-upon-Tyne, on January 29th, the wife of Professor Robert Howden, of a son.

MARRIAGES.

BENNETTS—GOWING.—On January 24th, at Bolsterstone Church, Yorkshire, by the Rev. Canon Wilson, assisted by the Rev. G. K. Cassels, F. Bennetts, M.R.C.S., L.R.C.P., Lond., to Maggie, youngest daughter of B. C. Gowing, M.R.C.S., of Stocksbridge, Yorkshire.

MCGEAGH—RYDER.—On January 31st, at St. Mary's, Crumpsall, Manchester, by the Rev. J. Falconer, Vicar of Dunstead, Stacksteads, and the Rev. R. Catterall, Rector of the Parish, William McGeagh, M.D., Liverpool, to Eliza Jane, only daughter of the late W. B. Ryder, J.P., of Gransden Hall, Hunts.

DEATH.

BRODHURST.—On January 30th at 21, Portland Place, W., Bernard Edward Brodhurst, F.R.C.S., in his 78th year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1 p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. W. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 3.30; Skin, W., 2.30; Dental, W., 2. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, M. Tu. Th. F., 1.30; Ear, Tu., 1; Skin, Tu., 1; Dental, daily, 9; Throat, F., 2. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—Th., 3.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, Tu., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, M. Tu. W. Th. F., 1.30; Surgical, M. Th., 1.30. *Operations.*—M. Th., 4.30.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, W., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. W. F., 3; Tu. F., 9.30 and 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9; Throat, Nose, and Ear, W., 9. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—M., 2.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2 o.p., W. S., 9; Eye, M. Tu. W. Th. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9; Larynx, Tu. F., 2.30; Orthopædic, M., 2.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, F., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, Tu., 2; Skin, W., 2.45; Throat, F., 2; Orthopædic, F., 12; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, M. Th., 2.30; Children's Medical, Tu. F., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, S., 1.30; Electro-therapeutics, o.p., Tu., 2; Mental Diseases, o.p., Th., 10; Dental, Tu. F., 10. *Operations.*—M. W. Th. S., 2; Tu. F., 8.30; (Ophthalmic), Th., 2; (Gynæcological), Th., 2.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 3; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, Tu. Th., 2; Ear, Tu., 2; S., 10; Orthopædic, W., 3; Diseases of Women, W. S., 2; Electric, M. Th., 2; Skin, M. F., 2; Throat and Nose, Tu., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. Tu. F., 1.30; Eye, Tu. F., 9.30; Ear, Tu., 1.30 Skin W., 1.30; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

IS SODIUM SALICYLATE DEPRESSING?

DR. T. H. GODFREY (Finchley, N.) writes: Mr. Hilton Heffernan's case and Dr. Gordon Sharp's comment thereon are interesting. I should like to ask if any members can give evidence on the other side, that is, in favour of the depressing effect of sodium salicylate. I used this drug largely in influenza and in the early epidemics. Remembering the text-books, I was rather afraid of it when there was much depression, but for the last few years I have used it much more boldly in such cases, usually adding spir. ammon. aromat., and, so far, I have seen no reason to regret doing so.

ANSWERS.

A MEMBER.—A READER.—No notice can be taken of communications unverified by the author's name.

S. T. F.—We sympathise with our correspondent's indignation, but we do not see how we can give any other advice than to keep clear of the institution in question in future, and as a first step in that direction to get rid of the nurse.

W. M. B.—The rules of the Jubilee Nurses Association forbid the nurses from attending infectious complaints: but we have always understood that this applied to diseases that came under the Notification Act. We advise that in this and similar cases, the medical men of the district should agree upon and notify to the committee the cases which in their opinion should not be visited by a visiting nurse. The question is one for them to decide.

D.P.—If all our correspondent alleges it true, the person of whom he complains acted in a very injudicious manner. We do not understand that the patient did get up and go out as advised, and if this were not the case we do not see that the fatal result can be attributed to the advice given. Our correspondent's last question is one upon which he might consult his solicitor; but while we can understand that he feels indignant, we do not think that it would be wise for him to go to law.

A. D. H. L.—1. The provisions of the Dentists Act, Sec. III, do not apply to legally qualified medical practitioners, so that a registered medical practitioner is fully entitled to practise as a dentist. 2. It would appear that a Licentiate of the Society of Apothecaries has the legal right to keep an open shop if he pleases. It is this, perhaps, more than any other one circumstance which has stood in the way of the admission of the Apothecaries' Society to the Conjoint Board in England. In former days great numbers of licentiates did keep open shop, and the Society of Apothecaries itself does so at the present moment. The Apothecaries Act, 1815, Sec. V, laid it down as one of the duties of an apothecary, which he could not refuse without incurring a penalty, to make up the prescriptions of legally qualified physicians, and to sell medicines ordered by a physician, and this obligation does not appear to have been removed by any later legislation, though it has fallen into disuse, as the licentiates have claimed to be recognised as fully qualified medical practitioners. The Pharmacy Act, 1868, Sec. XVI, says that nothing in this Act "shall extend to or interfere with the business of any legally qualified apothecary."

THE LITERATURE OF ASTIGMATISM.

OCULIST.—The subject is fully treated by Donders, in his work on refraction (see BRITISH MEDICAL JOURNAL, January 20th, 1900, p. 147), and also by Helmholtz, but the literature is far too wide to treat of in a note.

PAINLESS CHORDEE.

Mr. S. OSBORN, F.R.C.S. (London), writes: I had once under my care a case of this description in a groom, the result of a bite from a vicious horse. The contraction was to one side, and was undoubtedly due to a deposition of inflammatory material in the corpora cavernosa of the one side. This, under the use of mercurial inunction, materially improved, but some induration remained permanently.

NOTES, LETTERS, Etc.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

	£	s.	d.
Amount already acknowledged	258	17	5
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Surg.-Capt. G. H. Darwin, 2nd V.B. Manchester Regiment	1	1	0
Surg.-Lieut A. Hilton, 3rd V.B. Manchester Regiment	0	10	6
Surg.-Capt. S. Nesfield, 5th V.B. Manchester Regiment	0	10	6
Lieut. A. Goodridge, 2nd Devon V.A.	0	5	0
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Band, London Companies (additional)	0	5	0
Prof. E. M. Crookshank ...	1	1	0
Glasgow Companies (additional)	0	11	0
Surg.-Lieut.-Col. T. Fort, V.D., 6th V.B. Manchester Regiment	2	2	0
Surg.-Maj. R. L. Sparrow, 6th V.B. Manchester Regiment	1	1	

AN OLD DIRECTORY.

DR. BALMANNO SQUIRE (Weymouth Street, W.) writes: I beg to thank Dr. Blandford and Dr. Peachey for their courteous correction, and to apologise to you for my error in putting Dr. Pettigrew *fils* in the place of Dr. Pettigrew *père*. I referred in my letter to Thackeray's Dr. Good-enough—as flattering a tribute to the profession in words as Mr. Luke Fildes's picture is in oil paint. It is quite possible that in the choice of this name Thackeray may have been influenced by the fact that at the time when the *Adventures of Philip* was written there were two London physicians whose names were somewhat suggestive, namely, Dr. Good-fellow and Dr. Thorowgood, both of them connected with the Middlesex Hospital. My father, who sometimes detected himself calling the one by the name of the other, came down to calling both Thoroughgoodfellow, a name which neither of them ever repudiated.

INCINERATORS IN INDIA.

WITH reference to the statement as to experiments about to be made in India as to the value of incinerators, which appeared in the BRITISH MEDICAL JOURNAL of January 27th, p. 168, Messrs. Goddard, Massey, and Warner ask us to state that they have incinerators already at work at Karachi and Madras.

LETTERS, COMMUNICATIONS, ETC., have been received from **A** Mr. R. B. Anderson, London; Dr. W. Aickin, Belfast; ANXIOUS; A. H. C.; Messrs. Arthur and Co., London; Mr. W. R. Alexander, London; Professor T. Clifford Allbutt, Cambridge. **B** W. Buchanan, M.B., Glasgow; Mr. A. W. Bodger, London; Dr. A. Bronner, Bradford; Mr. F. Brocklehurst, Ladybarn; R. L. Brander, M.B., Aspley Guise; Dr. R. E. Burges, Chester; Mr. L. A. Bidwell, London. **C** Country Doctor; Dr. J. M. Clarke, Clifton; Mr. A. H. Cheatle, London; L. M. F. Christian, M.B., Stockport; W. Carling, M.B., Southsea; C. M. C.; Dr. A. Cooper, London; J. M. Cotterill, M.B., Edinburgh. **D** D. P.; Mr. P. J. Dufly, London; D. G. M. N. **E** Dr. G. H. Edington, Glasgow; E. R. K. **F** F. C. Ford, M.B., London; F.R.C.P.; Mr. W. T. Freeman, Reading; F. McF. Fellows, M.B., Altrincham; Fair Play. **G** T. H. Godfrey, M.B., London; W. H. Goldie, M.B., London. **H** Highland Parish Dr.; C. O. Hawthorne, M.B., London; Dr. G. A. Heron, London. **I** Inquirer. **J** J. K. C. **L** W. Leask, M.B., Birkenhead; R. C. Lucas, M.B., London. **M** Mr. J. W. Mains, Stirling; Dr. C. K. Millard, Birmingham; Mr. W. C. Monckton, Portishead; Member; Messrs. J. Martin and Co., Leith; C. Martin, M.B., Birmingham. **N** Mr. J. Neal, Birmingham; Dr. D. Newman, Glasgow; Newcastle-on-Tyne Clinical Society, The Secretary of the, Newcastle-on-Tyne. **O** Mr. S. Osborn, London; Mr. J. R. O'Brien, Great Yarmouth. **P** Messrs. Paté, Burke, and Co., London; Practitioner; Dr. T. L. Pennell, Bannu; Mr. T. Partridge, Stroud; Dr. W. H. Packer, Cressage; L. D. Parsons, M.B., Bodmin. **Q** Mr. J. F. Rotton, Q.C., London; A. J. B. Squire, M.B., London; Mr. J. Robertson, Edinburgh. **S** Dr. E. M. Shirtliff, Eyde; Sheffield Medico-Chirurg cal Society, The Secretary of the, Sheffield; Mr. F. W. Stoddart, London; Dr. T. Sinclair, Belfast; Sivrup; Mr. P. L. Sclater, London; Messrs. Street Bros., London. **T** Mr. J. L. W. Thudichum, London; A. D. Turner, M.B., Felixstowe; Dr. E. F. Trevelyan, Leeds; Dr. H. Tilley, London. **V** Miss M. J. Vernon, Southport; Mr. J. W. Vickers, London. **W** W. K. Walls, M.B., Manchester; W. M. B.; Messrs H. K. Wampole and Co., London; Dr. Helen M. Wilson, Sheffield; Dr. H. W. Webber, Plymouth; Mr. W. F. W. wilding, Hindley; Dr. F. Willcocks, London; Dr. R. Williamson, Manchester; W. R. W. **Y** Young Practitioner, etc.

BOOKS, ETC., RECEIVED.

Verhandlungen des Congresses fur innere Medicin. Herausgegeben von Dr. E. V. Leyden und Dr. E. Pfeiffer. Siebzehnter Congress Wiesbaden: J. F. Bergmann. Glasgow: F. Bauermeister. 1899. 12s.

Jabrbuch fur Kinderheilkunde und physische Erziehung. Unter Redaction von O. Heubner, A. Steffen, und H. v. Widerhofer: Heft I. Band I. Leipzig: B. G. Teubner. 1900.

The Treatment of Diseases of the Nervous System. By J. Collins, M.D. New York: W. Wood and Co. 1900.

Purulent Nasal Discharges: Their Diagnosis and Treatment. By H. Tilley, M.D., B.S., F.R.C.S. London: Medical Publishing Co.

Notions de Laryngoscopie utiles au Médecin. Par Dr. F. J. Collet. Paris: Masson et Cie. F. 3.

Die Technik der speziellen Therapie. Von Dr. F. Gumprecht. Zweik Auflage. Jena: Gustav Fischer. 1900. M. 7.

Taschenbuch der Untersuchungsmethoden und Therapie für Dermatologen und Urologen Herausgegeben von Dr. A. Freiherr von Notthafft Munich: Seitz and Schauer. 1900. M. 4.

Laboratory Note Book for Chemical Students. By V. B. Lewes and J. S. S. Brame. London: A. Constable and Co. 4s.

Common Sense Health Reform. By T. Thatcher. London: Simpkin, Marshall, Hamilton, Kent, and Co. 2d.

The Student's Handbook of the Practice of Medicine. By H. A. Hurband M.B., C.M. Fifth Edition. Edinburgh: E. and S. Livingstone. 1900. 10s. 6d.

The Pathological Statistics of Insanity. By F. O. Simpson, L.R.C.P., M.R.C.S. London: Baillière, Tindall, and Cox. 1900. 10s. 6d.

The Grammar of Science. By Karl Pearson, M.A., F.R.S. Second Edition. London: A. and C. Black. 1900. 7s. 6d.

The British-American Guide to Carlsbad. By S. A. Arany, M.D. London and Carlsbad. 1899.

A Textbook of Physiology. By W. S. Hall, Ph.D., M.D. London: Rebman Limited. 1900. 20s.

The Gross and Minute Anatomy of the Central Nervous System. By H. C. Gordinier, A.M., M.D. London: Rebman Limited. 1900. 25s.

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REMARKS
ON
THE EPIDEMIOLOGY AND PROPHYLAXIS OF MALARIA IN THE LIGHT OF RECENT RESEARCHES.

By Professor A. CELLI,
Director of the School of Hygiene, University of Rome.

At this prolific time, when in various parts of the world malaria is occupying the attention of many eminent men of science who frequently are not aware of, or at least do not mention, what the others have said on the question, I deem it advisable briefly to summarise what I have stated with regard to the new epidemiology and prophylaxis of this disease in my book published on July 15th, 1899,[1] and have further discussed in successive publications—one on September 1st,[2] the other in the same month.[3] To these I would refer those who desire to know the details and the history of the several etiological and epidemiological questions, stating once for all that I shall follow principally what—following the remarkable discovery of Ross in the life of the malarial parasites in the body of the mosquito—the Italian Society for the Study of Malaria has done, especially through the work of Grassi, Celli, Bastianelli, Bignami, Dionisi, Casagrandi, Santori, during the past eighteen months.

Epidemiology of Malaria.

A. Sources of Infection.

Man is the temporary host, and the mosquito the definitive host, of the malarial parasite. These parasites complete their asexual life and prepare their sexual forms in the human blood, while they complete the sexual cycle of life, that by which the species of the parasites external to man is assured, in the middle intestine of the mosquitos.

It follows, therefore, that man and mosquitos are the sources of malarial infection which circulates, so to speak, from man to mosquito and from mosquito to man, and so on. In this circulation of the contagion the presence of malarial man is indispensable, inasmuch as down to the present time the hereditary transmission of malaria from mosquito to mosquito has not been demonstrated experimentally or morphologically, nor have resisting parasitic forms been found in the environment external to the body of the mosquitos. Malaria is, therefore, a typical contagious disease.

Where there is malaria mosquitos abound, but malaria does not exist in every place where mosquitos abound. This is explained by the fact that in malarious regions particular species of mosquitos live (Grassi). Those capable of lodging the specific parasites and of infecting man appertain to the genus *Anopheles*. All the four species (*A. claviger or maculipennis*, *A. bifurcatus*, *A. superpictus*, and *A. pseudopictus*) of this genus which exist in Italy are injurious. It is not probable that the species of *Culex*, or other blood-sucking insects, which are found in malarious places, can also transmit malaria. Consequently all the palustral mosquitos are not malarial. And since, as far as is at present definitely known, the specific germs external to man live not in the soil, but in the body of the mosquito, it follows that malaria can no longer be cited as a classic example of a disease of the soil. The soil plays only a secondary indirect part, in so far as it is favourable or not to the life and development of the malarigenous mosquitos. The same may be said of water. It may be, and in fact is, the habitat of the eggs, larvæ, and nymphæ of the mosquitos, which eventually become malarigenous. Therefore soil and water pass into the number of the indirect epidemic causes, that is to say, those which we term predisposing or immunising.

B. Life of the Malarial Germs in the Environment.

These mosquitos of the genus *Anopheles* lay their eggs in sequestered places in clear, slowly running or stagnant waters, where the eggs and larvæ of the genus *Culex* are rarely if ever found. In general the so-called ground waters that appear at the surface and run slowly (trenches, canals, etc.), or are slowly renewed (lakes, ponds), contain the best *pabulum vitæ* for the larvæ of the *Anopheles*.

These waters, which freely nourish the so-called marshy vegetation, are relatively cool in summer and warm in winter, and consequently the larvæ live very well in them in certain climates throughout even the whole year.

The resistance of the immature forms to natural physico-chemical agents varies; the larvæ offer slight resistance to desiccation, the nymphæ much resistance; freezing, especially if the ice be continuous, is injurious, as is also putrefaction after a time. In sea water, and still more in saline waters and in very strong sulphurous water, they cannot live. Movement of water, if beyond a certain velocity, is also hostile to them.

In Italy the mosquito season, that is the season in which the perfect insects develop up to ovivification, extends from the first warm days of spring to the first cold days of autumn or winter, and has its maximum in the hot months. The new mosquitos begin to bite man towards the second half of June and continue to do so till they hibernate. Three of the four species of *Anopheles* are very domestic insects which pass much of their life within or near human habitations; malaria, therefore, formerly considered a typical miasmatic disease must now be considered as a rule one of the domestic epidemics.

C. Carriers of Malarial Infection.

Popular experience in Italy has given a name to this disease which has been universally adopted, and which tells us that the vehicle is the air. As to the mode of this propagation the following axioms may be stated:

(*a*) The hours in which the infective agents are most plentiful in the atmosphere are those of the evening, sunset, and night.

(*b*) These agents rise from limited foci and spread to a limited distance in the horizontal, oblique, and vertical directions.

(*c*) The winds do not transport these agents; on the contrary, they tend to diminish their amount in the atmosphere.

(*d*) Woods, instead of filtering the malarial agents may be foci of this infection.

These axioms are strictly connected with the new theory that the malarial germ is cultivated, carried, and inoculated through the agency of mosquitos.

1. By day these insects lie hidden and sequestered, while they issue forth in the evening and night to bite man.

2. They do not fly far from the spot where they are born, and in particular do not fly to a considerable height in the air.

3. When the wind blows they do not generally leave their hiding places.

4. Shady or damp woods and trees in general are the homes of mosquitos. The mosquito, therefore, besides being the source, is also the carrier of malarial infection. Of all the vehicles of infection of malaria hitherto suggested, the mosquito is the only one which has yet been directly and undoubtedly demonstrated.

Water, for example, is not the vehicle of malarial infection. The data of epidemiology prove this, and a long series of direct experiments confirm it. We may likewise exclude the suggestion that the malarial infective agent lives directly in the soil, and consequently the theory that it is breathed with the dust raised from it cannot be accepted.

Neither can the theory that the alimentary substances used in malarious places are the vehicle be accepted. Therefore, the undoubted carrier, and at the same time the source of malarial infection, are special mosquitos, and the air is the carrier of malaria, inasmuch as it is the vehicle of the malarial mosquitos.

D. Path of Penetration of the Malarial Germs into the Organism.

The only indisputable path by which the infective agent penetrates is that of the skin bitten by the proboscis through which the infected mosquito inoculates its sporozoites. The same mosquito in a single night may bite and infect many persons.

The biting apparatus is so powerful that it can penetrate a very tough skin, and bite through fairly thick clothing. It is remarkable also that the *Anopheles* mosquitos do not make

the humming sound and are not so annoying as the *Culex*, so that very frequently people are not aware of their presence or of having been bitten by them. There is nothing to prove that the specific germs penetrate by way of the stomach, and the results of recent investigations make it necessary to exclude the respiratory path also, at least until it has been demonstrated that resisting spores of the hæmosporidia live free in the environment.

E. Causes of Predisposition and of Immunity.

No epidemic can be thoroughly understood unless the enormous importance of the indirect causes, that is to say, the causes which are favourable or inimical to the development of an epidemic are recognised to the full. These very complex causes I divide into organic or individual, physical or local, and social.

1. *Organic Causes of Predisposition of Immunity.*

It is generally admitted that chilling of the body predisposes both to the onset of the primary infection and to relapses. It is equally certain that children are most attacked, and that in Italy the highest mortality from malaria occurs in individuals between 5 and 30 years of age.

Concerning immunity from malarial infection it may at present be stated that no race, not even the black, has *per se* a congenital or hereditary immunity against malaria, nevertheless both the black and the white races may become more or less adapted to resist it. This is sometimes brought about, in part at least, by the habits of life, which by traditional experience has wisely been directed against malaria. There are, however, even in regions where malaria is very severe, individuals who are naturally immune; and this immunity in some seems hereditary, in all it does not depend on their habits of life. On the contrary, it persists in spite of ill-usage, excessive work, insufficient food, the bites of mosquitos very probably malarial, and even, in some cases, in spite of repeated inoculations of malarial blood. It must therefore be a true and proper organic immunity.

There is also an immunity due to malaria suffered, and which is generally a result of malarial cachexia, rarely after an infection of not long duration; it is independent of treatment with or without quinine, and is always less stable and durable than congenital immunity. Neither the mechanism of this immunity, nor the genesis of the fever, of its defervescence, and of its spontaneous cure can be explained by the principles of serumtherapy.

Artificial immunity against experimental malaria cannot be produced, either by the morbid products of the malaria of the lower animals, or with the serum of the blood or the organic juices of animals immune to their malaria. On the other hand, it can be produced by drugs. Potassium iodide and bromide, carbolic acid, antipyrin, phenocol, and arsenic have given negative or uncertain results; euchinin, on the other hand, has prevented mild quartan and tertian fevers, and medicinal methylene blue severe tertian, even after enormous doses of blood loaded with parasites (1-2 grams of blood) have been inoculated. It is probable that the same can be said for the natural infection.

2. *Physical or Local Causes of Predisposition or of Immunity. Conditions of Place.*

Soil.—There is no quality of soil which can be said *a priori* to be incapable of favouring the development of malaria, inasmuch as in this sense the soil does not act *per se*, but only so far as it is or may become a reservoir of water.

Water.—This is necessary for the development of malaria, inasmuch as it is necessary to the life of the larvæ of the malarial mosquitos.

The waters in which they prefer to live or live exclusively have already been described, and it has been pointed out that all mosquitos are not malarial. Thus the new investigations confirm the fact that neither extensive marshes with their effluvia, nor the putrefaction of waters, nor the mixture of fresh with salt waters are conditions indispensable for the production of malaria. These may to a certain extent be conditions which do not obstruct the life of the related mosquitos, and, consequently, the development of malaria. The true essential condition is that the ground water appears on the surface of the soil, even though its area is small, and then remains stagnant or runs very slowly. The Roman Campagna teaches and demonstrates this in an indisputable way.

Air.—This also is indispensable to the existence of the malarial organisms in the environment, inasmuch as it is indispensable to the life of the larvæ and nymphæ in water. Any kind of soil is capable of becoming malarious when the water and the air and certain conditions of vegetation, which will be mentioned presently, combine to enable the malarial mosquito to live there.

Agriculture and Malaria.

It can now no longer be admitted that the simple stirring up of the soil in malarious places determines the liberation of the germs of this infection. On the other hand, any movement which in any way alters the hydraulic conditions of a given area may really become a local cause predisposing to the development of malaria.

Marshy vegetation, composed of canes, rushes, water lilies, cresses, and *Confervæ*, is very favourable to the life of the larvæ, and is, therefore, also favourable to and a concomitant of malaria. Irrigation may favour the development of malaria by favouring the existence of the larvæ of *Anopheles*. Thus irrigated meadow lands in malarious places, whenever the water becomes quite or almost stagnant in the afferent or efferent channels, and still more rice fields, with their clear and almost still water and typical palustral vegetation, constitute the best habitat of these larvæ. Hence, as is known, the formation of rice fields causes the reappearance of malaria where it had become extinct, and where it already exists they are a very active focus of production.

The maceration of textile plants has been considered as supplying another active focus. During maceration, however, the waters while they are the cradle of the larvæ of *Culex* are the grave of the *Anopheles;* it is probable, therefore that the dread they have inspired as a source of malaria is th effect of the belief in the putrido-palustral theory as a caus of disease in general, and of malaria in particular, which has so long dominated medical schools.

Aboriculture of a malarious territory is favourable to the development of malaria. The old epidemiology had already proved this. The new etiology teaches us that some mosquitos prefer to sojourn in shady woods rather than in any other place; and amongst these wood lovers is the *Anopheles bifurcatus*, which lives preferably in woods, so that a person sleeping in them by day, and, speaking generally, sleeping under trees in malarious places, very readily takes the fevers in the season when they prevail. At the present day we know of no plant inimical to malaria—that is to say, to the mosquitos—though the eucalyptus, the coniferæ, and the ricinus communis have been the subjects of groundless praise on this score. Among the many odoriferous plants only a single species of wormwood has the power of killing mosquitos when it is in flower, and this only in a closed chamber. High cultivation may partly correct the local predisposition to malaria, but it does not destroy it, because the larvæ of the *Anopheles* are found in streams of clear, slowly-running water under the conditions already described.

Other Industries and Malaria.

Fish ponds of fresh or slightly salt water near the sea coast are, as is known, sources of malaria; on the other hand, saline waters and sea water in various degrees of concentration are never places where the larvæ of the *Anopheles* flourish. Peat bogs instead, with their pools of ground water and their rank vegetation, offer the most favourable local conditions for the production of mosquitos, and consequently of malaria. Frequently, also, the railways in Italy are fomites of malaria, either because they alter the hydraulic conditions of a district, or owing to the excavation of the so-called borrowing pits (pits from which soil is obtained for making embankments) with a deep bottom and without discharge, so much used and abused by railway constructors.

Influence of Season.

That these have an influence on the production of malaria has long been known, so that the malarial fevers are named after the seasons. The statistics of about 93,000 cases of malaria admitted during thirteen years into the hospitals of

Rome appear at first sight to show that malaria is endemic during the whole year. With some oscillations, however, it always remains in the first six months relatively low, with the maximum in January, the minimum in June; in the first or second decade of July there is a sudden change; the true epidemic bursts forth. Its maximum generally occurs in August, sometimes in September, and even in October.

Nevertheless, in order to exactly follow the annual course of malaria it is necessary to distinguish carefully the primary forms from the recurrents, and the three principal forms of malarial fevers—the spring and quartan, tertian, and summer tertian. It is then seen that the true malarial season—that is, the season of primary infections—is in the second six months of the year. Its sequels with the recurrent fevers are prolonged through all the first six months of the following year, gradually declining from January to June. The fevers, therefor, of the first half of the year are generally recurrents of the infections contracted in the second half of the preceding year. By means of these recurrents the seed of contagion is maintained. In the summer season it is transmitted by the agency of the mosquitos, and opens the subsequent epidemic year. The epidemic year of malaria extends, therefore, from the July of one year to the June of the following year. It is remarkable that the quartan is the last to appear, and also the last to recur; the mild tertian, and the severe, have a similar but not identical annual course, the second, in summer and autumn, notably prevailing over the first; hence the name æstivo-autumnal tertian. This tertian is the first to cease recurring, and consequently in the spring mild tertian and quartan prevail, and have therefore *a fortiori* been called spring fevers.

The life of the *Anopheles* is in direct and intimate relation with the annual epidemic course of malarial fevers. The new generations begin to bite in the second half of June, and in the first half of July. Toward the end of June the first infected mosquitos are observed, and their number increases in July and August.

Therefore it is now more than ever necessary thoroughly to study in malarious districts the season of the malarial mosquitos,and to investigate the course and the oscillations of the disease. The ultimate cause of the periodic course of this epidemic, and of its different annual course in various climates will thus be explained.

It is equally necessary to study the relations between the weather and malaria. These relations are not yet clearly defined. We can say, however, in a general way, that a temperature of from 20° to 30° C. is necessary for the development of the hæmosporidia in the body of the mosquito (for those of the quartan a lower temperature is perhaps sufficient, hence the later appearance of this infection). Certainly the temperature influences the sudden appearance of the fevers in July, and their prolongation in the autumn and sometimes to the beginning of winter if cold weather set in late.

In the same way the difference of temperature between the day and night, so characteristic of malarious places, must produce that predisposing cause termed above chilling of the body; and the winter colds and frosts also perhaps concur in regulating the annual quantity of the mosquitos, and therefore also of malaria.

Relations have likewise been asserted to exist between the rains and malaria, that is to say, a heavy rainfall in the spring is said to be followed by much malaria in the summer, and *vice versâ*, and the heavy showers of the summer are also said to be followed by the sudden appearance of the fevers. The constancy and the certainty of these relations are, however, now seen to be doubtful. No relation can be shown between the winds and malaria, nor between fogs and malaria.

All these relations between meteorological conditions and malaria, however, need to be better studied and brought into concord with the new etiological researches.

3. *Social Causes of Predisposition or of Immunity.*

Unfortunately on the human race still weighs that fate by which avoidable diseases and the duration of life essentially depend on economic conditions. I will therefore analyse briefly the social and economic causes of predisposition and immunity to malaria—food, housing, clothing, work, education.

Alimentation.—The food of our poor peasants for almost all the year consists chiefly of maize with a deficiency of nitrogenous and an excess of triple substances. The effect in nitrogenous constituents manifests itself in the inevitable and enduring physical deterioration which causes the starved appearance of our rural labourer, and his predisposition to malaria. Wheaten bread he eats only during the period of excessive work in summer, and not always then. This poor pariah, who works infinitely more for others than for himself, is frequently the slave of masters not always humane or disposed to give him sound maize, and almost always the slave of the so called *caporali* (foremen), who rob him with impunity of his wage and food, or give him the latter damaged.

Housing.—As we have said very often malaria is a domestic epidemic. The enormous importance of this social factor is therefore evident. The most common type of habitation of the peasantry in our malarious places is the reed hut—a true habitation of primitive man. There is nothing good about such a hut except the smoke given off by the fire in the middle of the floor, which drives aways the mosquitos. Some of these people sleep in caves, and in summer, during the period of heavy work, the greater number sleep in the open air. The houses, besides being scarce, are generally constructed without regard to the prophylactic rules against malaria, except that they are frequently built on high ground. Thus in the low-lying malarious places the population have for centuries taken refuge on the neighbouring hills and mountains, and along the ancient roads one frequently sees mediæval cottages built on ancient monuments.

Clothing.—The clothing of all the miserable peasantry of the Roman Campagna is, for the most part, very insufficient, either to prevent chills or to protect them from the bites of insects. The children especially, who swarm in the huts, are during the whole year more naked than clothed, and it is they who pay the heaviest tribute to malaria.

Work.—In the seasons when there is much agricultural work to do casual labourers come in crowds from the neighbouring provinces. Those who come in May or June for the haymaking never or hardly ever bring the fevers with them. Of those who come at the end of June for the reaping, some contract fevers, while of those who remain in July and August for the threshing the greater part, in some years or places even all, fall ill with the fevers. Work, excessive either in intensity or duration, readily leads to the recurrence of the fevers; sleeping in the open air exposes the workers to the bites of the mosquitos, and so to infection. The enormous difference between the day and night temperatures is also an organic predisposing cause. The importance of agricultural work in determining the appearance of the epidemic in July and its great prevalence in August is thus readily understood.

Education.—When through poverty this is wanting all the most baneful prejudices as to the sources and vehicles of the infection, and also as to the means of protection, arise and flourish. Fortunately traditional experience in malarious places has taught many useful prophylactic rules, and nowadays the old prejudices against the specific remedy, quinine, and the mode of taking it have almost disappeared.

Prophylaxis of Malaria: Means directed against the Infective Cause.

A. For Destroying the Malarial Germs.

1. *Verification of the Diagnosis.*

As is usually the case, rational prophylaxis depends on accurate diagnosis, and in this case what is necessary in order to verify the diagnosis is to examine the blood either in fresh or stained preparations. To make an examination of fresh blood the lobule of the ear is pricked with a needle in order to avoid pain, and the stratum is made so thin that by pressing with a handkerchief the cover-slip against the slide the red corpuscles, though close to one another, are not superimposed, and the superabundant blood is removed. This examination, made by an experienced person, enables him not only to verify the diagnosis of malaria, but also to determine its clinical variety and the stage of the febrile period, that is, whether the paroxysm is about to begin or is at an end, and to do this with so much precision that with the microscope he can frequently correct the anamnesis of the patient. This examination is also useful in making the prognosis, and for the treatment especially in severe cases of pernicious fever.

When the blood cannot be examined microscopically within half an hour after it is obtained, dry preparations of it must be made with suitable stains. The blood is allowed to spread itself out between two cover glasses in a very thin stratum, and is fixed by placing the slips for 15 or 20 minutes in absolute alcohol. The staining is done by the Tiemann-Romannowsky method.[1]

A.—A saturated watery solution of very pure medicinal methylene blue (Meister Lucius) at 25° to 30° C. for 3 days.

B.—An aqueous solution 1 per cent. of eosin A, G, or B (Meister Lucius).

Take of A parts 1 to 3
" B " 3 to 5 and mix.

This mixture must act on the preparations for from 20 to 30 minutes.

The red corpuscle is stained (pink) by the eosin; the hæmosporidium by the methylene blue, and its chromatic substance is coloured purple by a third stain formed by the above mixture.

2. *Isolation.*

This is the first prophylactic measure, and should be taken directly the diagnosis is verified. In a malarious place a person affected by the fever is very dangerous to others, and should therefore be isolated, malaria being a true and proper contagious disease. To the patient one must give the order *fuge cœlum in quo ægrotasti* as much for himself as for others; for himself because in an unhealthy place he is always liable to be bitten by infected mosquitos and frequently therefore to mixed infections, that is, to contemporaneous infection by various malarial parasites; for others because he with his sexual parasitic forms is the source of infection of the mosquitos, and consequently of man.

Malarial patients can be isolated in any place where there are no malarial mosquitos. If later on, as is to be hoped, a mode of using substances to prevent the biting of mosquitos be discovered, it will be possible to isolate without removing the patient: for example, by the application of an inhibiting stratum, so to speak, on the uncovered parts of the body, of any substance which drives away mosquitos.

The best place for isolation, however, would be special sanatoria situated in healthy elevated regions. Inasmuch as the sexual forms of the parasite are the most dangerous sources of contagion, and they unfortunately remain for a long time in the blood, the convalescents should not be sent back to the infected places until the absence of the parasitic forms most dangerous socially has been verified by repeated examinations of the blood and perhaps also of the spleen.

3. *Disinfection.*

Disinfection must be directed against the sources and against the carriers of the infection.

Destruction of the Blood.—Quinine, as is well known, is the specific disinfectant for amœboid organisms, and consequently for the malarial parasites in their amœboid stage. It is better, therefore, when possible, to give it after the paroxysm, when the hæmosporidia are young and amœboid within the red corpuscles. Unfortunately, however, quinine does not act on the parasitic forms which prepare the recurrents, nor on the gametes which ensure the sexual cycle in the mosquito. Consequently, it is not easy to obtain a thorough sterilisation of the blood. The quinine must be given at once at the beginning of the fever and in large doses, 2 grams, for example; it should be repeated in doses of 1-2 grams for several days, and then at intervals of five, six, or seven days. But even this treatment, if the patient remain in the infected place, does not always prevent recurrences, and an intolerance for a drug which disturbs the stomach and nervous system so much is easily produced. In all these cases, which are unfortunately very frequent, it is a mistake to believe that the treatment by means of quinine is sufficient to ensure the complete prophylaxis of malaria, and to cause it to disappear from the face of the earth.

Destruction of the Source and Carrier of Infection, that is of the Malarial Mosquito.—This problem practically consists in destroying the larvæ in the water and the mosquitos in the air. For the destruction of the larvæ and consequently for the disinfection of the waters which contain them, vegetable powders (unexpanded flowers of Dalmatian chrysanthemums) certain aniline dyes (larvicide of the house of Weiler-Ter-Mer of Uerdigen) and petroleum are the best, taking into consideration the dose, practicability, and price. By cultivating chrysanthemums on a large scale it is very probable that the malarious place itself will produce that which will rid it of the mosquitos which infest it. Larvicide acts even in the small dose of 0.00031 per cent., and its cost per c.cm. of water may be as low as lire 0.0056 to 0.0012; it is very diffusible, remains active for a long time in water, and is not poisonous to plants nor to animals. Petroleum, which acts mechanically by asphyxiating the larvæ and nymphæ, must form a stratum which covers the whole surface in the proportion at least of 0.20 to 0.10 c.cm. per 100 c.cm.; it has the defect of evaporating and therefore its action is of short duration. The selection of one or other of these means will depend upon circumstances. It should be remembered, however, that the most suitable time for destroying the larvæ is the winter or the beginning of the spring, when they are in least number in the waters, and when the new generations have not yet made their appearance. The knowledge of the place and the season in which they nest will very much aid this destruction, which on a large scale will never be very easy, and it will be difficult as long as the health of man who suffers from malaria is not protected. Still, after the efforts that have been made by nations and private individuals to protect vines from the oïdium, peronospera, and phylloxera, surely something should be done to save the life of man from malaria. In any case, it is necessary to insist on the destruction, especially in the winter, of the aërial mosquitos in houses wherever they hibernate, inasmuch as the death of each mosquito means the non-appearance of from 200 million to 20 milliard descendants the subsequent season, the former number being produced by four generations in a season, and the latter, as frequently happens, by five (Ficalbi). The destruction of the aërial mosquitos inside houses in the malarious months is also a valuable prophylactic measure. For this purpose the fumes given off by an ignited powder composed of the unexpanded flowers of chrysanthemums, valerian root, and larvicide is the best of all the odours and all the fumes tested and retested in the laboratory and on a large scale. It is sold by the Italian "Chemico"-Pharmaceutical Society of Rome under the name of zanzolin. Consequently the problem of the destruction of mosquitos as a means of antimalarial disinfection can and ought to be brought into practice.

B. For Impeding the Penetration of the Malarial Germs.

Numerous prophylactic means have been used for this purpose, some long prescribed by popular experience; they are:

Habits of life, such as not sleeping in the open air, not leaving the house from sunset to sunrise, or, better, living when possible in a healthy place during these hours: not keeping a light in the room with the windows open and unprotected.

Mechanical means, such as clothing. For those who have to be out at night a mask to cover the face and neck, such as is used by bee-masters, and gloves. A close network for windows and doors of houses, a mosquito net for the beds, and, when electricity can be obtained, electric ventilators.

Chemico-mechanical means, such as culicifugal perfumes for the person and of the dress, culicifugal washes, pomades and soaps; among the most efficacious odours are essential oil of turpentine, iodoform, and menthol; a pomade of valerianic acid also acts well, but its smell is objectionable; soaps made with extracts of tobacco and with turpentine act fairly well. The latter soap is more useful, more practical, and cleaner. It has been used in some of the signalmen's houses along the railways; the men soap the face and other uncovered parts of the body with it; on returning to their homes after work they wash it off, and it cleanses the skin like ordinary soap. This soap prevents the mosquitos biting a person in the open air for one or two hours. All the other odours have no effect in the open air, and in closed rooms they must saturate the air.

MEANS DIRECTED AGAINST THE PREDISPOSING CAUSES.

1. *Against the Organic Predisposing Causes.*

Clothing again makes its appearance as a prophylactic

means, inasmuch as it protects the body from chills, which may be a cause of predisposition.

For obtaining artificial immunity most is at present to be hoped from methylene blue. I am now experimenting with it on a large scale. Arsenic as a prophylactic has on a large scale given uncertain results.

2. *Against the Local Predisposing Cause.*

If man can do nothing against the local predisposing conditions of time he can do much against the local predisposing conditions of place. Among these it is necessary to remove and lessen the principal predisposing causes, which are stagnant or almost stagnant water and the air.

To correct the first of these causes of predisposition it is necessary to provide for the systemisation of the superficial water (rivers, lakes, ponds) and the ground water. To correct the second there are coverings with healthy soils, and eventually also with water.

The length of this article does not permit me to enter into particulars of these various means of hydraulic sanitation. We can, however, on the basis of modern researches form an opinion as to its effects.

The essential condition in any scheme for the sanitary improvement of a malarious place is that it should prevent the eggs, larvæ, and nymphæ living in that place. Covering with healthy soil and the drainage of the ground water, inasmuch as they remove at the same time both the water and the atmospheric air, the two indispensable elements of life, are the best modes of destruction of mosquitos, and in fact are also the best and most infallible systems of hydraulic sanitation.

All the other systems with surface and open channels, or with water that remains on the surface, will be efficacious in proportion to the velocity of the water, for the eggs and larvæ can live only in water which is moving slowly. It is in fact known that the hygienic results of these hydraulic improvements are under different circumstances and in various places good, mediocre, or *nil*. The biology of the malarial mosquitos affords an explanation of this, as we know the rate of velocity of the waters incompatible with the presence of these mosquitos.

Any of these systems of hydraulic sanitation, however, must be associated with agricultural improvements, such as levelling of the soil, ploughing, etc., which are indispensable complements of the most extensive works of hydraulic sanitation. The local predisposing conditions will undergo change according to the system of cultivation adopted.

Naturally, dry cultivation is the best against the mosquitos, and consequently against malaria, but unfortunately it is not remunerative. Nevertheless, even high cultivation has sometimes attenuated, sometimes suspended, and sometimes perhaps even suppressed the production of malaria. Everything depends on this, that the clear and stagnant or almost stagnant spring waters which as we have repeatedly seen are the habitat of the malarial mosquitos, are not left uncovered even in narrow channels as one sees them in the market gardens round Rome.

In malarial places the irrigation of meadow lands should not be recommended, or at least it should be conducted under certain rules, so that the water does not become stagnant in the channels, which should have a sufficient fall and section to allow the water to run alternately in the various channels in such a way as to prevent the growth of marsh vegetation and to sweep away the eggs and larvæ deposited there.

Until a cheap larvicidal substance which is not injurious to the growth of the rice plants is found, ricefields should on no account be permitted in severely malarious districts.

The planting of trees in malarial places is injurious for the reasons already given; and in fact in many places disforesting has been or would be a true hygienic improvement.

Urban Sanitation against Malaria.—It is very easy to immunise a town against malaria. This has been done in Rome, from the epoch of the kings, and afterwards during the Renaissance by conveying away the surface water in a system of sewers, which were later on used for the true and proper sewage; by the paving and covering of the streets the air has also been subtracted; with the walls the entrance of insects from outside has to a certain extent been prevented; and therefore one understands how this city remains perfectly healthy in the midst of a pestilential territory.

Moreover a town may be healthy even in a malarious district if it be built at an elevation which the insects from the plain do not reach. This is the case in the villages and small towns in the province of Rome.

Sanitation of Malarious Industries (fish ponds, peat bogs, railways, salines).—The sanitation of fish ponds will become possible when a very cheap culicidal substance not injurious to fish is found; the sanitation of peat bogs can be carried out by means of pumping machines, or by putting the water of the pits in motion. For saline waters no sanitation is necessary; on the contrary, sea water may be utilised for the sanitation of the neighbouring fresh waters when they are fomites of malaria. There is much to be done, on the other hand, for the sanitation of railways so constructed as to cause the reappearance or increase of malaria, and the drawbacks already mentioned should in the future be avoided as much as possible in the construction of railways in malarious districts.

3. *Against the Social Predisposing Causes.*

The removal of the terrible causes of epidemic predisdosition, that is, the improvement of the clothing, housing, labour and education of the workers in malarious places is a task for social reformers and the Legislature.

The Romans in their best epoch regulated with much equity and wisdom the treatment in respect to feeding, clothing, and housing of the slaves who worked in the Campagna. Even in the Middle Ages the provisions made with this object were much better than they now are; for 300 years the daily wage of the workers has remained the same, if, indeed, it has not been diminished, and the habitations have certainly not been increased or improved.

Among us there is much to be done to prevent the organised spoliation of the peasants. It is necessary to reform and amplify the laws as to labour in malarious places, to reform completely the law on the cultivation of rice (June 12th, 1866), to modify the laws on agrarian sanitation in general and of the Agro Romano in particular, and to regulate by new laws the colonisation of unhealthy places.

For example, the reclaiming of malarious places should be regulated in such a way that prophylactic rules be precisely established in relation to the most healthy seasons and hours, the habitations, and the selection of the workers. These should be selected from families most habituated and resistant to malaria, and by means of examination of the blood those infected, and therefore dangerous to the others, should be immediately eliminated.

The workshed should be situated in the most healthy spot, and the land around it rendered healthy. A minimum wage should be established, and should be convertible into food and clothing without the intervention of middle men. The cases of fever contracted in service should be included in the cases of misfortune through work, and the patients sent to healthy places till their health is completely re-established. This would also be a useful general prophylactic disposition. Schemes of colonisation with people from healthy districts should be prohibited, unless hydraulic sanitation has preceded, inasmuch as a colony of people transported directly from a healthy region to a very pestilential one could not endure it.

Unfortunately, however, all this social prophylaxis against malaria is very difficult to carry out, and will be so as long as capital impoverishes with impunity the life and health of man, and private property remains the greatest enemy of public hygiene.

Finally, a word must be said on education as a prophylactic measure against malaria. It is certain that when of this, as of every other preventable disease, the sources of infection, the life of the infective germs in the environment, the vehicles, the mode of penetration, and the various prophylactic means are generally known much will have been done.

It is clear, therefore, that the diffusion by means of education of the facts of the new epidemiology and prophylaxis, the combating of the old prejudices will be so many preventive measures directed against this scourge, which it is necessary to combat by every means. Certainly the individual prophylaxis of malaria is very often practicable and efficacious, nevertheless, the popular prophylaxis of a whole working

population of a whole region is always an arduous undertaking, and one must not place confidence, after what we have said, in those who believe that this scourge, so old and so diffused, can be curbed by one only of the many means I have mentioned. In the future, if and when a mode of immunising man even in countries where malaria is severe is found, then the task will be much simplified.

At present to him who asks us how public prophylaxis is to be effected in a complete manner, we can reply by indicating the means above described, and adding *unum facere et alterum non omittere*.

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THE SALINE TREATMENT OF DYSENTERY:

WITH NOTES OF 555 CONSECUTIVE CASES WITH 6 DEATHS.

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IN an article published in December, 1898,[1] I gave details of 102 consecutive cases of dysentery treated by a saturated solution of sulphate of magnesium, with only 1 death. I now give an account of 453 more cases of the same disease, with only 5 deaths. This makes a total of 555 cases of dysentery treated by salines, with only 6 deaths, or a percentage case-mortality of only 1.08. The 453 cases here referred to I have met with in Bhagalpur. They are of all types and forms, just as they occurred from day to day. The monthly distribution of these cases is as follows:

	Cases.		Cases.
1898, November	39	1899, June	31
,, December	18	,, July	48
1899, January	11	,, August	63
,, February	16	,, September	36
,, March	29	,, October	37
,, April	34	,, November	50
,, May	27	,, December	24

Total, 453.

Duration of Treatment.

The number of days in hospital for the whole of these cases was 4,894, an average of 10 days for each case. The period in hospital varied from 7 to 90 days. In the vast majority of the cases of acute dysentery the period of the stay in hospital was from 8 to 12 days.

Relapses.

I made a careful nominal roll of all cases admitted to hospital during a period of fifteen months in order to determine to what extent relapse occurred. I find on checking this roll that out of 453 cases there were only 69 relapses, or 1 in every 6.5 cases. Moreover, of these 69 relapsing cases, 47 had only two attacks during the period, 15 had three attacks, and 7 had four attacks; all the rest, 384 in number, had only one attack each—a fact which of itself speaks for the efficiency of this method of treatment. I may add that the majority of these patients were long-term prisoners, and mostly under observation during the whole of this period.

As regards the interval between the relapses, I find that there were 9 relapses within two weeks of the discharge from hospital as apparently cured; 10 relapses within one month, 25 within two months, 9 within three months, 9 within four months, 4 within six months, and 3 at periods over six months. Of course it is well nigh impossible to say that the cases here called "relapses" were not sometimes reinfections, but my experience is that dysentery is essentially a relapsing disease. This is shown not only by the same patient coming back to hospital with the same complaint, but I have been able to see cases *post mortem* who died of other diseases in which partially healed-up ulceration remained, which must have dated from a former known attack some months previously.

Etiology.

In such a case it is easy to understand that any slight irritation could start another attack of dysentery. This paper does not attempt to deal with etiology, but I may mention that, though I have very frequently found the amœba coli, yet there was not a single case of liver abscess among them.

Mode of Administration of Saline.

I now turn to the main purpose of this paper—the saline treatment of dysentery. The 102 cases I reported over a year ago were all treated with magnesium sulphate, which I found to act admirably, promptly, and efficiently. It happened that I ran short of that drug and took to sodium sulphate, and was so pleased with the results that I have continued its use ever since. The following mixture will be found satisfactory for general use:

℞
Sodii sulphatis ℥j
Aquæ fœniculi ad ℥iv

Of this mixture ℥ss is given three or four times a day. Purgation should be free but gentle, and when bright yellow stools without a trace of blood or mucus are passed, then the drug should be stopped, but resumed at once if blood or mucus reappear in the stools. It is usually found that after five or six stools all blood and mucus have disappeared from the stools, but in many cases they reappear in a day or so; in such cases sodium sulphate must again be given.

This highly yellow "bilious" stool is characteristic of this drug. The only other drug I know which produces such stools is one, of unknown name, which was sent to me by Dr. Maberly, of Capetown. I used it in a few fever cases, and found that it produced copious yellow bile stools, to the great relief of the patients.

For chronic and relapsing cases I tried olive oil for some time, but gave it up as of no special value; now I treat these cases chiefly by dieting and patience. On their first coming to hospital I gave them sodium sulphate for one, or at most two, doses, and then bismuth and soda or other intestinal antiseptics. For every exacerbation—that is, for every return of blood and mucus—a dose of sodium sulphate is given, or if scybala are passed a dose of castor oil and laudanum. Intestinal worms are not infrequent in chronic cases, and when such are seen or suspected santonin or male fern should be given. I have come to consider salines (except in the limited doses mentioned above) as harmful in cases where there is ulceration of the great intestine. In ordinary cases the acute stage under this treatment is over by the third or fourth day, and if the stools remain free from dysenteric products I give a tonic of iron or nux vomica and quassia.

Diet.

Important and useful as is the saline treatment, yet dieting is equally so. For native patients (to whom alone the above figures refer) I have used the following diet during the past fifteen months, and can strongly recommend it:

For new acute cases I give what is known in India as *mar* and *dahi* 8 ounces of each two or three times a day. *Mar* is made as follows: 1 lb. of fine well-cleaned rice is thoroughly boiled with 3 pints of water, and then strained. There should then result a white starchy substance of the consistence of porridge. *Dahi* is only "tyre," and is made daily from the milk. The two are mixed together by the patient, and eaten. This is given at 10 A.M. and 5 P.M. At 7 A.M. half the quantity is also given, except when bael fruit is in season, when bael is given instead of the *mar*. All the above patients were kept on this diet for two or three days, till the stools become semisolid, when rice milk and soup is added. Full rice diet is only given when the patient has passed solid-formed stools for one or two days.

When bael fruit is obtainable it is good to give it along with the *dahi* for the early morning meal. This is especially necessary for chronic cases, to whom also mango pickle or other antiscorbutic is also given. The bael is given in the form of a sherbet, with sugar, in the form so well known in India.

REFERENCE.

1 *Indian Medical Gazette*, vol. xxxiii, No. 12, December, 1899.

PRESENTATION.—Mr. Lennox Browne has retired from the active staff of the Central London Throat and Ear Hospital, but will continue to be identified with the institution as Consulting Surgeon. His colleagues on the Committee and medical staff have in the past week presented him with an illuminated address recording the high appreciation of the energy, devotion, and skill which he has exercised on behalf of the hospital since its foundation in 1874. Accompanying the address was a gift of old English furniture for use in his country home.

A NOTE ON SPECIES OF ANOPHELES FOUND AMONGST MOSQUITOS SENT FROM SHANGHAI AND JAVA.

By GEORGE THIN, M.D.

The demonstration that all the species belonging to the genus of mosquito known as *Anopheles* which have been found in Italy are potential hosts of the parasite of malaria renders it interesting to inquire regarding the distribution of *Anopheles* in various parts of the tropical world. Major Ross, who had observed the first stage of the development of the parasite in a "dapple-winged" mosquito—a species of *Anopheles*—in India, has recently found that *Anopheles* is also the host of the parasite in Sierra Leone.

Through the kindness of two friends I have had a number of mosquitos sent me from Shanghai and from Java. Dr. Marshall, of Shanghai, sent me about 150 mosquitos, and out of this large number I found only two *Anopheles*. These mosquitos were collected in a house in which a patient was suffering from tertian ague.

My friend, Mr. Stephen, of the Hong Kong and Shanghai Bank at Batavia, had mosquitos collected for me in a fever district about 15 miles from that town. Out of about 800 mosquitos I only found nine *Anopheles*. The two *Anopheles* in the lot sent by Dr. Marshall had the like external characteristics of wings and head, and the nine sent by Mr. Stephen also resembled each other in the head and wings. The *Anopheles* of both lots were all females. It is probable that both these mosquitos belong to undescribed species.



FIG. 1.
Anopheles Claviger.
(Spain).

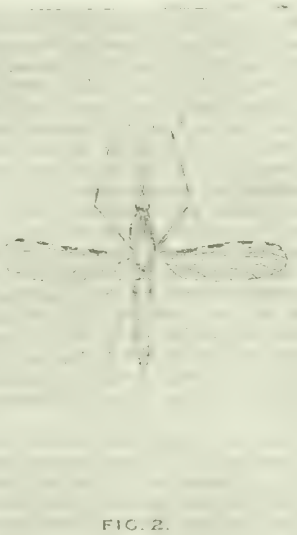


FIG. 2.
Anopheles pictus.
(Spain)

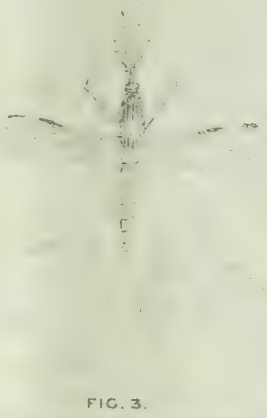


FIG. 3.
Anopheles *from Shanghai.*
(pictus ?)

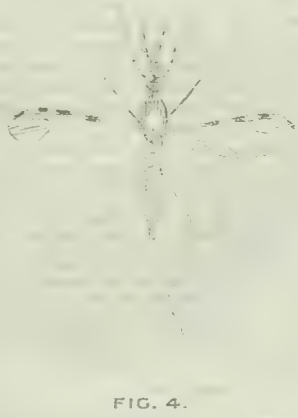


FIG. 4.
Anopheles *from Java.*
(pictus ?)

For purposes of classification entomologists desire to have mosquitos mounted dry, and as these mosquitos came to me in solution of chlorate hydrate and in alcohol, I did not think it would be of any use to trouble entomologists with their examination. On the whole, they have not suffered so much in transmission as might have been supposed considering the delicate structure of these insects. A good many legs had become detached, and some scales had been loosened from the body and wings. My description of these mosquitos cannot, therefore, be satisfactory to entomologists, and my own knowledge of entomology is of such a rudimentary nature that even if the mosquitos had been in a state of perfect preservation I should not have attempted their description. But if with the little knowledge of insects I possess I have been able to identify specimens of *Anopheles* amongst many other mosquitos, it is evident that any practitioner of medicine who chooses to take a little preliminary trouble will be able to acquire sufficient superficial knowledge of the subject to be able to know *Anopheles* when he sees the genus, and it is clear that to any medical man practising in the tropics this small amount of knowledge may be of interest and importance.

Both the Shanghai and the Java mosquitos are evidently species of *Anopheles pictus*, and, as will be seen by the accompanying figures, they differ from each other. The four figures of mosquitos which illustrate these notes will convey to the reader what the points of difference and resemblance are better than any description which I can give.

It should be noted that the only parts of these figures which are drawn from Nature are the appendages of the head and the markings on the wings. The head, abdomen, and legs have been drawn after the same pattern, simply as the framework on which the head appendages and wings are placed, and are copied from a drawing of *Anopheles claviger* which appeared in the British Medical Journal of July 1st, 1899.

Fig. 1 is a drawing of *Anopheles claviger* made from a specimen sent me by Dr. Macdonald of Rio Tinto, and is placed beside the others for the purpose of comparison. I draw attention specially to the spots on the wings, which represent very faithfully the characteristic appearance of that species. With a little familiarity and the use of an ordinary hand lens, this species is easily made out by these marks.

Fig. 2 is a drawing of *Anopheles pictus* from Spain, this specimen being also kindly sent me by Dr. Macdonald. Dry mounted specimens and specimens preserved in alcohol were compared, and found to present exactly the same appearances. There are four well-marked spots on the upper border of each wing, the two outer spots being smaller than the two inner ones. The

palpi have four characteristic markings produced by the absence of pigment at four points on their length. These colourless spaces divide each of the palpi into four clear divisions, and the striking appearance they produce affords a point of distinction between this mosquito and that from Java.

Fig. 3 shows the appearance of the wings and head of the Shanghai *Anopheles*. The two black spots on the wings will, I believe, warrant its being considered a species of *Pictus*. In the two specimens I examined the palpi seemed to be very slightly longer than the proboscis, and were characterised by being closely covered with very minute hairs, which were distinctly thicker in the proximal third.

Fig. 4, the *Anopheles* from Java, is also a species of *Pictus*, but differs from the Shanghai *Pictus* by having four spots on the wings, the outermost one on each wing being smaller than the three inner ones, and being situated in the curve of the wing, in this respect differing from the Spanish *Pictus*, in which all the four markings on each wing are on the upper border. The difference between the Java *Pictus* and the Spanish *Pictus* was most marked in the head appendages. The palpi in the Java mosquito are comparatively thick, very hairy, particularly in the middle and proximal third. The minute hairs at the end of the palpi are white, and also at a part about the middle and at the proximal end, giving the appearance of alternated dark markings broken with white. The segments of the antennæ appear to be rounder than those of the Shanghai *Pictus*, in which they are fairly cylindrical. The palpi of the Java and the Spanish *Pictus* differ considerably. In the Spanish species the palpi are more delicate and marked by three colourless intervals, and are not covered densely with hairs like the Java *Pictus*. These differences are well shown in the drawings.[1]

No notice has been taken in the drawings or descriptions of the relative size of these mosquitos. The figures represent a magnification of about 5 diameters. The appearances drawn can be distinctly seen with an ordinary hand lens, and can be still more readily and better discerned under a very low power of the microscope, when the head appendages and wings can be well observed.

Under the microscope it is at once seen that the spots on the wings are due to the minute hairs which outline the nervures being at these spots darker in colour, thicker, and more closely set. The intermediate double marking in *Claviger* is caused by these thickened and dark patches being situated on two nervures which almost touch each other.

The very small proportion of *Anopheles* amongst the mosquitos caught at Shanghai and near Batavia is striking, especially as regards Java. Malarial fevers are not severe nor widely prevalent in Shanghai, although mosquitos are very numerous, but in the part of Java in which the mosquitos were caught Mr. Stephen informs me that malarial fevers are frequent and severe.

NOTE.

[1] My friend, Dr. Copland, who during the past summer devoted a considerable amount of time to examining the external characters of the numerous mosquitos sent me from various parts of the world, has left the following note regarding the Java mosquitos. Size: With the exception of one which was larger than the others, all were medium-sized mosquitos, and were dark brown or blackish in colour. Proboscis: Of good length, dark brown in colour. Palpi: The same length as the proboscis, and very hairy, the hairs being specially thick on the lower one-third of the palpi. Antennæ: Slender, nodular, or segmented with scanty hairs at the division of the segments, light in colour. Head: Well-defined from body by a slender neck. Thorax and abdomen: Dark brown or black in shade, the segments of the abdomen well defined, especially towards the tail. Legs: Long, slender, and light brown in colour.

A CASE OF MALIGNANT MALARIAL FEVER WITH CEREBRAL SYMPTOMS TERMINATING FATALLY IN ENGLAND:

WITH A RECORD OF BLOOD EXAMINATIONS AND NECROPSY.

BY D. C. REES, M.R.C.S., L.R.C.P.,
Medical Tutor to the London School of Tropical Medicine.

I AM indebted to the kindness of Dr. Manson for permission to publish the notes of the following case:

C. R. T., aged 60, a ship's master, was admitted to the Seamen's Hospital, Royal Albert Dock, on the evening of November 15th, 1899, under the care of Dr. Manson. He was said to be suffering from malaria. He was not quite conscious, and only a very imperfect account of the patient's illness was obtainable. The following facts were ascertained. He had always enjoyed good health. He was not a heavy drinker, and there was no evidence of syphilis. He had never suffered from malaria before. He left England on September 13th, in charge of a ship for Dakar, Senegal, West Africa. He reached this port on October 20th, and remained there for five days. He embarked on the ss. *Chiswick* on October 25th in perfectly good health; but some days after (the exact date could not be ascertained) he became ill. He arrived at Hull on November 8th, and was then suffering from fever; he came to London the following day. His wife states that she called in a local practitioner, who thought he was suffering from influenza, but on November 12th he was treated for malaria. Whilst at home he had no rigors, or vomiting, or hæmoglobinuria. He had severe headaches, was "feverish" and on one occasion delirious. His mental condition was not satisfactory, and he hardly ever spoke.

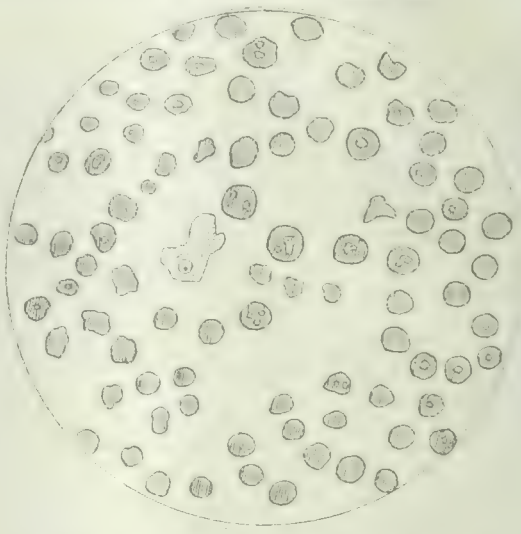


Fig. 1, from blood taken about two hours after admission, November 15th, 1899.

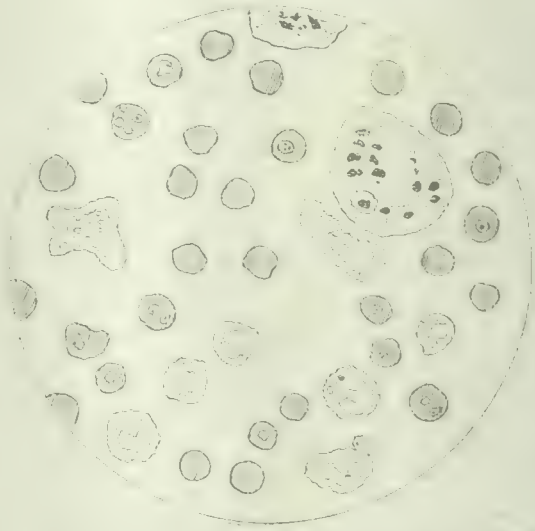


Fig. 2, from blood taken about six hours before death, November 16th, 1899, showing the leucocytosis which occurred.

(These drawings were made by Staff-Surgeon Bassett-Smith, R.N., whilst working at the London School of Tropical Medicine, and by his courtesy I am permitted to reproduce them. They represent typical fields, not selected ones.)

On admission his temperature was 102.4°. He was not quite sensible, but could be got to answer a question with difficulty; articulation was indistinct. Respiration was a little laboured. The pulse was weak and rapid; the skin and conjunctivæ icteric. The pupils were contracted and equal, reacting imperfectly to light and on accommodation. The tongue was furred and dry. The liver was enlarged, and could be felt three fingers-breadth below the costal margin. The spleen was just palpable but not tender. A blood examination was made immediately on admission, and revealed an extreme degree of malarial infection. The parasites were very numerous, some fields containing 50. They were of the malignant type, and multiply-infected corpuscles were the rule,

many containing four parasites and a few five. They were mostly small, amœboid, and non-pigmented, but a fair number of more advanced forms were found containing pigment. In a dry film which was taken at this time an imperfect sporocyte (rosette) was found. Leucocytosis was not noticed, but many of the polymorphonuclear leucocytes contained pigment. The red cells varied very much in size and shape. No crescent bodies and no parasites of the benign types were found. Hypodermic injections of 10 grs. of the acid hydrochlorate of quinine were administered every four hours. Periodic examinations of the blood were made, but the number of parasites in the peripheral circulation did not diminish appreciably. At noon on the day after admission they were fewer, but at 4 P.M. they had increased considerably in number, and at this time a very definite leucocytosis was observed. There was an increase of the small lymphocytes, and some of these had apparently become phagocytic, for they contained pigment. Some very large cells, having the characters of myelocytes, were also present; they contained enormous masses of pigment, and a few had taken up red cells which were infected with advanced forms of the parasite. The patient's temperature fell to normal on the morning after admission, November 16th, 1899, and remained normal until death. He gradually became more deeply unconscious, breathing stertorously, with the face congested and a little cyanosed. No definite localised paralysis was noticed. He passed urine under him; it was free from albumen. The quinine was continued, stimulants and ozone were tried, but the patient died at 12 midnight on November 16th. Blood was drawn from the spleen directly after death, but nothing but what had been already seen in blood from the finger was observed.

The *post-mortem* examination was unfortunately delayed for thirty-six hours. The liver was enlarged, weighing 5 lbs.; it had a blackish-leaden appearance, and was soft on section. The spleen weighed 5½ ozs., was extremely soft, the central portion being almost diffluent, and was black on section. In the brain, the leaden hue characteristic of a chronic malarial subject was not present, the cortical vessels were somewhat congested, and the venous sinuses at the base of the brain were full of dark blood. It was firm in consistence. The heart muscle was a little pale and fatty. The kidneys appeared normal.

Microscopical Appearances.—Sections of the brain were made from the motor area, including Broca's convolution; the capillaries in every section contained red cells infected with parasites, mostly advanced and sporulating forms; large white cells were also present, containing masses of black pigment. The liver contained a considerable amount of black and yellow pigment; there was no cirrhosis. The spleen contained much black pigment in large masses, for the most part in the splenic cells; no parasites could be demonstrated. The blood vessels of the kidneys, including the Malpighian tufts, contained blood cells with much pigment.

It is noteworthy that the patient was only five days in a malarious country. We know, however, that probably the bite of a single infected *Anopheles* may be enough to induce an attack of fever in man. The date on which the patient was at Dakar was about the end of the rainy season, a time when pools suitable for breeding of *Anopheles* would exist, and consequently an unhealthy time. I have recently had an opportunity of examining a specimen of *Anopheles* which was caught at Dakar; it has the characters of the *Anopheles costalis* which is to be found all along the West African Coast. It can be readily distinguished from the *Anopheles claviger*, which is found in Italy by having four rod-like spots along the anterior margin of the wings, and not on the upper surface. The fatal result was no doubt due to the want of proper treatment early in the disease; there appears to have been no doctor on the ship, and the patient had had no experience of treating himself for fever. No doubt the enormous accumulation of parasites in the blood was due to the same cause. The failure of quinine in a case such as this is hardly to be wondered at; the patient came under treatment too late.

The importance of blood examination in such a case cannot be over-estimated; the patient was not sensible; no reliable history of the illness was forthcoming; he had practically no pyrexia, no rigors, and no sweating; without a blood examination a diagnosis of malaria would have been hardly justifiable.

In no case of malignant malaria that I have examined—either cases ending fatally or in those that recovered—have I seen such an enormous number of parasites in the peripheral circulation.

Influenza in Italy.—Influenza is widely prevalent in Italy. In Turin half the population is suffering from the disease, and the public services are seriously interfered with in consequence. At Genoa it has been found necessary to open the lazaretto, and the elementary schools have been closed. The death-rate has risen to double the average. In the Riviera the scourge is rife. In Florence few households have escaped, but the disease is of a mild type. At Parma there have been some 14,000 cases. At Ferrara it is estimated that 20 per cent. of the inhabitants have suffered so far; all the schools are closed.

AN ACCOUNT

OF

SOME RESEARCHES INTO THE NATURE AND ACTION OF SNAKE VENOM.

By Captain ROBERT HENRY ELLIOT,
M.B., B.S.Lond., F.R.C.S.Eng., D.P.H.Camb.,
Indian Medical Service, Madras.

[The work dealt with in the following pages was carried out with the aid of a grant most generously made to the writer for the purpose by the Madras Government, and it seems fitting that this record should be prefaced with an acknowledgment of the author's indebtedness to that Government for the large-hearted policy which has enabled him to carry out these researches; he is all too conscious of how little has been done in return for their generosity.]

I.—Preliminary Remarks on the Methods Employed.

Method of Collecting and Storing Venom, Bile, etc.

In order to collect and store venom, bile, etc., the snake is first chloroformed and nailed on to a deal table; the blood is then collected by manipulations to be described later on, and the gall bladder is removed by making a long median ventral incision over it, cutting out the bladder together with the surrounding fat, and then making an incision into the most dependent part of the sac with a sharp pair of scissors; the bile flows into an evaporating dish, which is at once removed to a water bath kept at a temperature of 100° F.; as soon as the contents of this dish have dried the vessel is placed under the receiver of an air-pump, over concentrated sulphuric acid, and the air is exhausted; after twelve hours in the receiver the dish is removed, and the now dry bile is easily separated from the bottom of the dish, with the aid of a spatula or knife; it is at once placed in a dry glass tube, and tightly corked till required for use.

After removing the gall bladder the poison sacs are next dissected out, and their contents squeezed into a dry watch-glass, which is placed in a cupboard for a few hours till the poison dries into scales; if the atmosphere is damp, as is the case in the monsoon, the venom is dried by floating the watch-glass on a water bath at 100° F. for a couple of hours. The ease with which the poison separates from the glass when dry is remarkable; tapping the bottom of the glass is enough to separate the whole amount of venom from it in a few seconds. The dry poison is removed without delay into glass tubes previously dried at a high temperature, and allowed to cool before use; the tube is tightly corked as soon as filled. When undertaking a series, or a number of series of experiments, the total stock of poison which it is intended to use is transferred to a glass mortar, finely pounded, and intimately mixed; it is then stored as before in a well-corked bottle and kept in the dark.

Every manipulation is carried on with the strictest attention to the prevention of the introduction of septic matter, all vessels being sterilised by heat beforehand, carbolic lotion 1-20 being used for such instruments as cannot be safely made hot; all corks used undergo a prolonged baking on a tin plate above the flame of a spirit lamp.

I have had frequent occasion to notice the correctness of a statement, made to me by Professor Fraser, that the poison of the Russel viper dries in long needle-shaped crystalline-looking masses unlike the shorter fracture of the dried poison of the cobra.

While working with live snakes a tourniquet of india-rubber tubing, a sharp knife, a cautery of some handy form, and a stock of crystals of potassium permanganate should always be kept handy. It is well, when possible, to have another medical man present; accidents occur when least expected, and the means to combat them should be ready at moment's notice. I should be wanting in gratitude if I failed here to acknowledge the debt I owe to Captain Samman, R.A.M.C., whose prompt action saved me from the very unpleasant consequences which might have followed a serious accident with which I met whilst handling a Russel viper. Captain Samman at once applied a firm ligature, and followed the fang puncture down to the bone with a knife; he then

sucked the wound dry, and finally filled it with crystals of potassium permanganate. The result was that I escaped with nothing more than a painful sloughing wound. In the future a stock of Calmette's antivenene will always be kept at hand.

Standardisation of Solution and Mode of Administration.

When it is intended to perform a series of experiments, a rough calculation is first made of the total quantity of poison likely to be required, and a quantity in excess of this is carefully weighed out in decimals of a gram, on a scale showing $\frac{1}{10}$ mg. In order to minimise any possible error in weighing the writer never weighs out less than 20 mg. of poison at a time; each milligramme of venom is then dissolved in 1 or in 10 c.cm. of freshly boiled and cooled water, according to the strength of solution required. It will be noticed that these two solutions are respectively of the strength of 0.001 gram and 0.0001 gram of venom per c.cm. of water; the weaker solution is only used when the doses to be given are so small as to render their calculation difficult otherwise.

While conducting a series of experiments the solution is frequently stirred with a glass rod in order to ensure the evenness of the strength of solution. For each dose some solution is drawn up into a 10 c.cm. syringe, and the air having been expelled, the exact amount which it is required to inject is marked off by the aid of the revolving button on the piston axis; the dose is then given, either subcutaneously, or otherwise as may be desired. The syringe is sterilised by filling it several times in succession before operation from a beaker of rapidly boiling water.

Parallel series of experiments were conducted to ascertain whether the degree of dilution of the venom in the above-named two strengths influenced the lethal properties of the dose. The length of this article forbids the publication of these tables here; but the result showed most clearly that the influence of the 10-fold dilution was inappreciable. It will be noticed, however, that in the various series of experiments one or other strength has been rigidly adhered to.

Preparation of Animal.

The animal is prepared for the injection by cutting off fur or feathers, and carefully washing the skin with 1-20 carbolic lotion.

Before undertaking any series of experiments it is necessary that all preliminaries should be carefully arranged beforehand in order to avoid confusion. Each animal of the series is therefore first weighed in pounds, ounces, and quarter-ounces; the result is converted into kilogrammes.

Means for subsequent identification are next taken; rabbits are branded in one ear with a serial number, care being taken to brand deep enough to destroy the fur and fur-bearing skin and no more; if less is done the mark wears out, while if more is done the result is sloughing, cicatrisation, and confusion; the animals scarcely seem to feel the branding. Fowls are marked by means of a wooden tally tied on under one wing. In all cases the colour, sex, etc., of the animal is noted.

The weight in kilos. being known, and the dose per kilo. having been decided on, a simple multiplication gives us the total dose the animal is to be given; and knowing the strength of our solution of venom, another easy calculation gives us the actual dose required in cubic centimetres and fractions of a centimetre.

The following columns in the experiment book can now be entered:

Serial No. of Experiment.	Date.	Hour.	Identifying Marks.	Weight in Kilos.	Dose per Kilo.	Actual Dose in c.cm.	Remarks.	Course of Events.

The first seven columns should be entered before starting to work on the series, the others subsequently.

The preparation of the mongoose requires a separate paragraph. These animals are so vicious, so wonderfully agile in their movements, and so strong and active, that it is advisable to weigh them, calculate their dose of poison, and administer it at one and the same time; they were brought in cages by the men of a caste who spend their lives in such occupations; in order to catch them, a running noose was passed through a hole in an iron rod, and this was insinuated over the animal's neck through the slightly opened door of the cage, the noose was then quickly pulled tight, and the animal was dragged out, securely tied, weighed and dealt with at once. In spite of every precaution, both I and one of my assistants received severe bites; these were delivered down to the bone in the fraction of a second, and were extremely painful.

Calculation of Dose: Idiosyncrasy of Animals.

Before starting to work on any species of animal, a long series of experiments was first undertaken to ascertain the dose of the poison to be used which would be certainly fatal in a limited period of time. At first an effort was made to work with the minimum lethal dose per kilo., but it was soon found that this method introduced many difficulties. It was found, for example, that a dose of cobra venom corresponding to 0.0004 gram was the lowest dose per kilo. fatal to a rabbit; on the other hand, higher doses than this from time to time proved non-lethal, and rabbits occasionally recovered from doses as high as 0.0007 per kilo., though this was very rare.

If one fact stood out in bolder relief than any other it was this: that the personal element (if one may be excused the term applied to animals) is a factor never to be forgotten. Granted that the greatest care is taken to weigh the animals under the same conditions, that the poison is from the same stock, and most carefully weighed and apportioned, that every effort is made to inject the venom into the same tissues in all experiments, and to keep all known conditions as even as possible, granted all this, there still remains an element of uncertainty as to the fate of the subject which I can only attribute to "the personal factor." In order to eliminate this factor as far as possible, the dose chosen has always been one capable of certainly causing death, or at least of producing serious symptoms of snake poisoning.

In order to impose a further check on results, no series of experiments was undertaken without putting aside one or more animals as control snake-poison subjects. By this means the standardising of the lethal dose was kept as accurate as possible. This was the more necessary, because it was noticed that certain batches of animals presented a greater resistance than others, possibly due to the method of feeding, etc.

Lethal Dose for Various Animals.

Rabbits will often appear to get over the first effects of the venom, and will look as if on the way to recovery, but loss of weight continues, and after a longer or shorter period animals will succumb which at first sight one hoped would survive; their lower resistance to these secondary effects of venom poisoning renders them very inferior to fowls as subjects; the latter make a better fight to begin with, and do not suffer to anything like the same extent from remote sequelæ. Rabbits in the hills of India are also very susceptible to the influences of the frequent and trying changes of climate which prevail.

Rabbits.

All doses of cobra venom below, and including 0.0003 gram per kilo. of body weight proved non-lethal: doses of 0.0004, 0.0005, and 0.0006 gram per kilo. were lethal in most cases, but could not be certainly relied on; even 0.0007 gram per kilo. occasionally failed to kill, but it never failed to produce grave and well-marked signs of cobraism; doses of 0.0008 and 0.0009 were fatal in a very few hours. A dose of 0.0007 gram per kilo. killed in from six to eighteen hours as a rule, but life might be prolonged for days; it was accordingly selected as the dose for most of the experiments. The above conclusions appear to harmonise well with Professor Calmette's observations on dosage in his lecture delivered in the laboratories of the Royal Colleges on July 27th, 1896.

Daboia venom in doses of 0.0004 up to 0.0009 took a fortnight or more to kill; even so high a dose as 0.001 took twelve days to kill, and one of 0.002 took seven days; a dose of 0.003, however, killed with very fair uniformity in under twelve hours; 0.004 killed in four hours and a-half. The dose of 0.003 gram per kilo. was, therefore, chosen for daboia poison experiments.

Fowls.

Cobra venom in doses up to and under 0.001 proved non-lethal; 0.0015 gram per kilo. killed in fifty hours; 0.002 and 0.0025 killed in over twelve hours, and 0.003 in between six and twelve hours; these latter doses were therefore selected.

Daboia venom in doses of and above 0.003 gram per kilo. of body weight proved fatal; 0.003 gram killed in about twelve hours; all higher doses also proved lethal.

THE UNIVERSITY OF HEIDELBERG AND FEMALE MEDICAL STUDENTS.—The Medical Faculty of the University of Heidelberg has, after conference with the German Government, decided to admit to matriculation women provided with the necessary certificates of "maturity."

REMARKS
ON
PREVENTIVE INOCULATION AGAINST BUBONIC PLAGUE.

BY
Professors A. LUSTIG and G. GALEOTTI,
Royal University of Florence.

Preventive inoculation against the plague is the only means by which this disease may be rationally combated when it has manifested itself in an epidemic form. The numerous preventive measures suggested by the general rules of hygiene are not sufficient to overcome the epidemic, especially in India, where it is difficult to apply such measures with all due rigour and precision. Now that the plague has so widely and obstinately established itself in India, there is little hope of being able to eradicate the disease otherwise than by preventive vaccination. Of the truth of this the Government authorities and all intelligent people in India are so firmly convinced that very many energetic means are adopted to this end.

Experiments on animals show that it is comparatively easy to produce immunity from the plague. Those made on man show that it is possible also in the case of man himself after spontaneous infection. In fact, the results obtained by Haffkine are to a great extent satisfactory and lead us to hope that if for his method were substituted one more easily applicable on a large scale these results would be completely satisfactory, and the average mortality due to plague would be reduced to an absolute minimum.

Two years ago we proposed a method of preventive vaccination which gave excellent results upon animals. This method was brought under the notice of the public through various publications in different European periodicals, and also through the columns of the British Medical Journal of April 24th, 1897. After the experiments made by those who first turned their attention to the subject, we very soon came to the conclusion that it was possible to confer immunity from the plague by means of lifeless vaccines, that is, by means of toxic substances extracted from the bacteria themselves or from their products. And since we immediately foresaw the inconveniences arising from the employment of cultures of plague bacilli—inconveniences which have been afterwards verified in the practical application of the method on a large scale, as we shall have occasion to show—we directed our attention to the isolation of their active substances, to which immunity is due. And this object, based on the experiments made on animals, seems to us to have now been fully attained.

After numerous preliminary experiments, which it is unnecessary here to record, we succeeded in extracting from the plague bacilli a substance belonging to the group of the nucleo-proteids. This substance, which is decidedly poisonous, was shown to be capable of conferring considerable immunity on animals of different species, even though injected in very small doses. Although the method of preparation of the vaccinating substance used by us for preventive inoculation against plague was made known to the public through the above-mentioned publications, still we think it desirable to describe this method here in a few words.

We cultivate the plague bacilli in large glass dishes containing a stratum of common agar-agar. After some days' development we scrape with a bone spatula the colonies which have formed, and dissolve the mass in a 1 per cent. solution of caustic potash. We then add a very dilute solution of either hydrochloric or acetic acid until a slight acid reaction is introduced, and we collect in a filter the precipitate form. After careful washing the precipitate itself is dried *in vacuo*, and in the presence of sulphuric acid, or else immediately redissolved in a 0.5 per cent. solution of carbonate of soda. The dried substance, which has lost none of its chemical and biological properties, is easily redissolved in a solution of carbonate of soda when required. The solution of this substance may also be passed through a Chamberland filter for greater guarantee of sterility. The precipitate is composed solely of a nucleo-proteid in a state of relative purity. It possesses all the general reactions of nucleo-proteids, is soluble in alkalies, insoluble in dilute acids, gives on digestion an insoluble product and a peptone, and on dissociation by sulphuric acid gives nucleinic bases. It is extremely toxic for several animals, and is able to produce the intravascular coagulation of the blood.

The experiments made during the year 1897 in the Laboratory of General Pathology in Florence were directed to proving the immunising efficacy of the above-mentioned nucleo-proteid. According to the publications already mentioned, they were performed on black rats, white rats, and mice to the number of 110, on 30 rabbits, and 15 guinea-pigs. The nucleo-proteid was injected (dissolved in a solution of carbonate of soda), sometimes under the skin, and sometimes into the peritoneal cavity of the animals under experiment. These injections were in some cases given only once, in others they were repeated two or three times in order to give greater certainty of immunity. The infection of the vaccinated animals was carried out only when they had quite got over the local effects of the injection, and we adopted sometimes the peritoneal sometimes the subcutaneous method, but more frequently the former, for reasons which we have stated elsewhere, and which would take too much time to repeat here.

The cultures adopted were always highly virulent, and capable of killing rats in 18 to 24 hours. The results were constant. The animals vaccinated always resisted the infection produced by large doses of virulent cultures, whilst the control animals always died. The experiments left us no doubt as to the method proposed by us for producing immunity.

In July, 1897, whilst at Bombay, we had occasion to repeat along with Dr. Malenchini similar vaccination experiments on monkeys. We employed the grey monkeys so common at Bombay, and sufficiently sensitive to the plague. In this set of experiments 6 monkeys were vaccinated as follows:

No. 1	received	1.705 cg.	of active substance.
No. 2	,,	1.705	,,
No. 3	,,	1.470	,,
No. 4	,,	1.410	,,
No. 5	,,	1.750	,,
No. 6	,,	1.750	,,

Two monkeys were vaccinated twice, and received altogether 1.41 cg. each of active substance: and finally in two other monkeys, only one injection with 1.88 cg. of active substance was made. In these two latter experiments the dose injected at one time was too large; both monkeys fell ill, and one died in a short time (before infection); the other revived slowly, but completely. All of the remaining nine monkeys sustained very successfully, without becoming even slightly ill, the intraperitoneal or subcutaneous injection of a considerable quantity of virulent plague bacilli, small quantities of which killed the animals kept for control. The infection was made three times in the peritoneal cavity and six times under the skin. In 2 cases we infected the inoculated animals eighteen days after the last vaccination, in 1 case twenty-four days after, in 3 cases twenty-two days after, and in 3 others sixteen days after. These experiments show very strikingly that the immunising substance employed by us as a preventive against plague is effective also in the case of monkeys. It confers a few days after its injection an active immunity, and it is effective also if the infecting germs are introduced in considerable quantities into the animals under experiment, and if the conditions of the experimental infections are so serious that without this preventive treatment a rapidly fatal issue would result.

Finally, other similar experiments, producing immunity by means of the nucleo-proteid prepared as above, were recently repeated by us on rats and monkeys in the municipal laboratory of Parel at Bombay. The object of these was to establish the maximal duration of the immunity and to determine the minimal doses of active substances necessary, and to compare the different methods of producing immunity suggested for the purpose of combating the plague. These experiments are not yet, however, complete, and therefore the problems now propounded are not yet solved. They, however, clearly set forth what we have said, and we may now with sufficient certainty affirm that the nucleo-proteid extracted by us from the plague bacilli is capable of conferring on the animals experimented upon by us a complete immunity from bubonic infection.

Notwithstanding our desire to experiment largely on man by means of this method of vaccination it was not possible, owing to the numerous obstacles which we were unable to surmount and which only allowed us to try the vaccinating substance in question upon ourselves and on the operators in the Laboratory of General Pathology in Florence. We injected the nucleo-proteid, of which we have already spoken, after having dissolved it in a solution of carbonate of soda, under the skin of the arm and in quantities varying from 1 to 2 mg. In all the persons thus treated fever, general discomfort, headache, and a strong local reaction (hard swelling, redness, and pain) at the point of injection set in. The general disturbances passed away after twenty-four hours, the local reaction lasted four or five days and then disappeared without leaving any trace.

In February, 1898, when Dr. Polverini and one of us (Dr. Galeotti) had to go to Bombay, we were anxious to repeat the experiments. Dr. Polverini, who had never been inoculated before, was injected with 3 mg. of nucleo-proteid, dissolved in the usual alkaline solution. The injection was made in the morning, and as the day advanced he began to shiver and to feel generally uncomfortable. During the night the temperature rose to 101.3° F. By the following morning all these disturbances had come to an end and there only remained a strong local reaction, which lasted three or four days, which however did not in any way prevent him from pursuing his usual occupations. At the same time Dr. Galeotti was inoculated under the skin of the arm with 3 mg. of the same substance. The general and local reaction was in him much less, and his temperature scarcely reached 100.1° F. After three days he received another injection of other 3 mg., and this time the reaction was still less: and finally after seven days a last injection was made containing the same dose, and the reaction was absolutely insignificant, inasmuch as no elevation of temperature was observed.

The facts which these few experiments disclose are the following: First of all, it follows that the nucleo-proteid prepared by us, though endowed with strong toxic properties, is, within certain limits, innocuous even in the case of man, and produces only general disturbances of a transitory character. The local reaction, which manifests itself by infiltration and inflammation of tissues, disappears quickly and spontaneously, and does not give rise to suppuration or necrosis. Secondly, the phenomena observed after the injections show that man is very susceptible to the action of the nucleo-proteid in question, inasmuch as a dose of even 3 mg.—an extremely small one in comparison with the weight of the human body—is sufficient to produce a notable general reaction, sufficient to raise the temperature to 101.3° F., as in the case of Dr. Polverini. Man is, with regard to this substance, infinitely more susceptible than all other animals. In order to obtain in monkeys a reaction similar to that obtained in us after the injection of 2 or 3 mg., we had to inject 1 to 2 cg. of nucleo-proteid. This sensibility leads us to presuppose a greater facility in man for acquiring immunity. If the degree of immunity is in proportion to the reaction produced during the process of immunisation, it is a very favourable fact that we obtain strong reactions with small quantities of toxins. This is specially advantageous in the present case, in which the nucleo-proteid used by us is endowed with necrotic properties when injected in very large doses. Thirdly, we must note that the diminution of reaction in successive injections—a fact which was sufficiently well shown in the case of Dr. Galeotti—speaks well in favour of the capacity which the human organism would have of acquiring insensitiveness against the toxins of the plague bacilli.

And now, after having set forth the results of these experiments of ours, which demonstrate the efficacy on animals of the method of vaccination suggested by us and its complete innocuousness in man, we wish to compare this method of ours with Haffkine's.

We must first record some experiments made in the Municipal Laboratory of Parel (Bombay) with the object of comparing the efficacy of the various methods proposed for producing immunity from plague. The result of one set of these effected on monkeys, with the object of determining the immunising value of Haffkine's liquid, as used on man, shows:

(1) That considerable quantities of lymph (40 to 60 c.cm.) for a monkey weighing 2 kilog. are necessary to produce a sufficient degree of immunity. (2) That this state of immunity lasts about one month. (3) That in Haffkine's liquid only the deposit—to a large extent composed of bacteria—is active, whilst, if filtered, it has no toxic or immunising power. (4) That in any case the toxic power of Haffkine's liquid, even if injected in its entirety, is, in the case of monkeys, very slight, since we were able to inject in monkeys weighing 2 kilog. as much as 160 c.cm. without their suffering from it.

On the other hand, experiments made with filtrates of bouillon cultures gave results different from the above. About a litre of culture, a month old, was taken, made in ordinary broth containing only a very small quantity of albumoses. The culture was very virulent for rats and monkeys. This culture was filtered through a Chamberland candle, and the filtrate, which was decidedly alkaline, was divided into two portions, one of which was used just as it was, and from the other we obtained, by acidification, a substance identical with the nucleo-proteid extracted by us from the plague bacilli. Leaving aside this precipitate of nucleo-proteid, the toxic properties of which were known, the toxic power of the two liquids, that is, of the original alkaline filtrate, containing some nucleo-proteid in solution, and of the acid filtrate deprived of the nucleo-proteid, was tried on rats and monkeys. These experiments, which have been described in detail elsewhere, and need not be repeated here, show that the toxic power of the plague germ filtrates is mostly due to the nucleo-proteid, which such filtrates, being alkaline, contain in greater or less quantities in solution, which proceeds from the partial decay of the dead and degenerating bacteria. Unfortunately such researches could not be carried out, whereas the intention of the experimenters was to see if the immunising properties of the cultural liquids had the same lot as the toxic properties, and especially to see if they were inseparably connected with the existence in the cultural liquids of quantities of nucleo-proteid in solution, but we may with every probability give an affirmative answer to such a question. Taking this into consideration, and also the fact that the nucleo-proteid, which goes to constitute the body of the plague bacilli, is very capable of producing by itself an active immunity, it is allowable to conclude that, if the cultures attenuated or filtered, or killed (therefore also Haffkine's liquid) possess some immunising property, this property is due to the nucleo-proteid dissolved or still contained in the bodies of the microbe, a nucleo-proteid which was isolated by us by means of a chemical process.

Haffkine, too, concurs in this, when he tries to test the strength of his liquid by the quantity of deposit produced in the cultures during the development of the micro-organisms.

After this we may readily see the advantages to be derived from the use of an active substance in a state of relative purity, in comparison with the use of liquids, which contain the substance, mixed with many heterogeneous elements, which have nothing to do with the production of immunity, and by their presence create a considerable amount of reaction in the organism, a reaction in itself hurtful to the individuals injected, and possiby interfering with the specific reaction due to the vaccinating substances, to which alone the establishment of immunity is due.

In the broth used by Haffkine for the cultivation of the plague bacilli there are considerable quantities of albumoses and products of the further disintegration of the elements which constitute muscular fibres, all substances decidedly toxic and endowed with a considerable pyogenic power. To these must be added the substances produced by the proteolytic action of the bacteria upon the albumose itself, and to all these substances, which have nothing to do with the immunity, must be attributed the numerous inconveniences which are observed with more or less frequency after a Haffkine's inoculation—inconveniences which represent a general intoxication of the organism, and sometimes attain a considerable intensity. Such facts have in a great measure contributed to the unpopularity of this method of prophylaxis.

We must also note that if we inject into the tissues of the organism the entire bodies of the plague bacilli with the idea that the bodies may become dissolved, and its component substances (nucleo-proteid) utilised in order to produce immunity, we are proceeding by a more slow and difficult way than when we inject these substances themselves already

separated and dissolved, and ready to be immediately absorbed. We may understand how in this second case the reaction of the organism under such bacteric poisons (in proportion to which the immunity is all the more assured) is more rapid, intense, and efficacious, inasmuch as immunity is all the more certain in proportion to the amount of this reaction. In order to kill the bacilli contained in his cultures, Haffkine heats them to 65° or 70° C. Now it is certain that at such a temperature the very delicate proteic substances to which in general is due the immunising power change very considerably, and may become entirely inactive. And nucleo-proteids especially (on which we have seen depends the power of the cultural liquids) suffer from the action of a temperature which almost reaches the point of coagulation of albuminoids, and lose after heating many of their chemico-biological properties. In fact all the experiments already mentioned show that the filtrates obtained from Haffkine's lymph are infinitely less toxic than the filtrates of cultures similar to those used by Haffkine, but not heated.

Another disadvantage, and a purely technical one, of the Haffkine method is the facility with which its prophylactic fluid may become contaminated. One would think at first sight that in so simple a matter it would be possible to eliminate entirely this danger, but in reality this is not so when it is a question of preparing hundreds of litres of culture and submitting this liquid so easily contaminable to several processes, of which one of the most dangerous is that of bottling. In many bottles of Haffkine's liquid were found micro-organisms of different kinds, and also sometimes pyogenic germs still capable of producing suppurations and pyæmia in the animals inoculated. In consequence sometimes abscesses and necrosis set in in the case of man, and these facts, when they came to the knowledge of the public, increased the general diffidence in regard to preventive inoculation.

With our method these difficulties are entirely eliminated, since we can reduce the immunising nucleo-proteid to the dry state, and in such a form it may be kept indefinitely and with perfect certainty of sterilisation. The most scrupulous care has to be taken only in the preparation of the cultures. The later operations may indeed be carried on with a certain amount of freedom (naturally only objects and liquids perfectly sterilised must be used), since even if it happens that some saprophytic germ gets in contact with the substance in preparation, it has no means of developing in the dried substance, and remains absolutely innocuous. It must also be noted that the nucleo-proteids possess, at least until disintegration sets in, a certain bactericidal power. In short the preparation of this immunising substance requires no greater antiseptic precaution than is necessary in the chemical preparations of other substances (such as alkaloids) destined for subcutaneous injections, and the dangers of infection liable to present themselves in the inoculations with our vaccine dried and redissolved in a sterile liquid are not greater than those which present themselves in the administration of ordinary remedies hypodermically. Besides, one of the most serious objections which have been made to the method recommended by Haffkine is that there is no dose criterion. The cultures of the plague bacilli develop in a very irregular manner, and sometimes very slight differences in the composition of the "cotton mediums" are sufficient to considerably alter the development and the virulence, and consequently also the immunising power of the prophylactic agent to be produced. Haffkine attempted to estimate the strength of the liquid contained in each series of bottles by the deposit which these bottles contained, but that this method of measurement is fallacious is self-evident. Instead, however, the dose of the immunising nucleo-proteid prepared by us in a state of considerable purity may be exactly determined by weight, since it is in the dry state, and thus we can obtain quantitative solutions just as with other medicines, and once the fundamental dose is established it may be reasonably varied according to age, sex, and constitution, and we may inject in any individual the precise quantity of active substance necessary to produce immunity without any of the inconveniences arising from an excessive dose of the toxic substance.

One other advantage, due to the fact of it being possible to preserve the immunising substance in the dry state, is the facility with which it may be distributed and sold; and this advantage ought not to be neglected in the event of preventive inoculation requiring to be performed on a very large scale. Another great advantage which our method possesses in the event of its being applied in India, is that it in no way offends the religious sentiments of the native population of India. The difficulties which Haffkine encountered in this respect are well known, as his liquid was considered to be impure owing to its being composed, in the first place, of peptone and flesh, and even after the modifications made by him in the preparation of the broth the mistrust has not diminished. In our case, however, no objection can exist, as the active substance adopted by us contains nothing of the culture medium, and is an extract of the bodies of the bacteria, which, as is well known, are vegetable elements. Consequently, inoculation by our method would in no way offend the Vedic prescriptions. What is more, the suspicion (unjustly entertained against Haffkine's method) that the immunising liquid contained living micro-organisms could not occur. To sum up then:

1. The efficacy of our method of preventive inoculation against the plague by means of the nucleo-proteid extracted by us from the plague bacilli has been proved from the experiments made on animals—rats, rabbits guinea pigs, monkeys.

2. The immunising substance used by us is innocuous in the case of man. No troubles of any kind arise from its use, either local or general.

3. If the cultural liquids used in their entirety possess an immunising power, they owe this power to the nucleo-proteid which they contain and we have isolated.

4. The advantages of using an active substance isolated and pure in place of liquids (cultures) which contain this substance, mixed, however, with heterogeneous elements of different kinds, are at once evident.

5. The advantages which our method of inoculation possess in comparison with Haffkine's method are the following:

(*a*) In using Haffkine's liquid along with the active substance are injected other toxic substances, which produce a reaction harmful to the organism and useless for producing immunity; with the use of the pure nucleo-proteid prepared by us, all the reaction produced is specific and useful for the production of immunity.

(*b*) Haffkine's liquid has a very low toxic and immunising power, since it has to undergo heating so that the active substances contained in the cultures are, to a certain extent, altered. With our method this does not take place, and the active substance retains its highest immunising power.

(*c*) Haffkine's liquid easily becomes contaminated, and there is no guarantee of the sterility of each separate bottle, while the active substance used by us is prepared in a thoroughly sterilised condition, and is perfectly preserved in the dry state.

(*d*) It is impossible to determine an approximate dose of Haffkine's liquid; the nucleo-proteid prepared by us can be administered in perfectly well defined doses.

(*e*) By the use of our method the religious feelings of the native population of India are in no way offended.

AN UNDESCRIBED FORM OF PLAGUE PNEUMONIA;

WITH FIVE CASES.

By W. C. HOSSACK, M.D.Aberd.,
Government Plague Hospital, Calcutta.

I desire to bring to notice an indefinite and obscure form of plague, which, if attention is not called to it, may readily escape the recognition of the most careful and experienced physician. The ordinary classical form of plague pneumonia is known to all: its clearly marked physical signs; its rapid onset and course; its initial gravity; the severity of its general symptoms; and its rapidly fatal termination render its diagnosis all too easy. Its character, in short, is fulminant.

But there is a plague pneumonia which presents quite a different clinical character, quite another combination of general and local symptoms. Its onset is not fulminant, but

insidious, and at the end of some five to ten days the general symptoms may be little more marked than they would be in, say, a slight attack of simple bronchitis or of bronchitis complicated by a trace of broncho-pneumonia, while the lung symptoms may be so slight and vague that they are with difficulty recognised at all. The breathing may be little, if at all, quickened or laboured. On auscultation and percussion one makes out a few *râles* and rhonchi, but for the first two or three days one may fail altogether to make out any definite physical signs of pneumonia. Then one gets a small patch,—perhaps towards the apex, perhaps towards the base—where faint dulness is to be elicited, with a slight increase of vocal resonance, and occasionally a few fine crepitant *râles*. There is little if any cough, and with it very slight expectoration, clear and mucoid, or occasionally faintly mucopurulent. Expectoration at times may be almost wholly wanting. Speech and intelligence may be unaffected throughout, or if they are it is only in the latter stages; head symptoms are wanting; the eyes are not congested; the white tongue coating, may be very slight; and death, when it comes, on the fifth to the tenth day of illness, as a rule, is apt to be quite unexpected. In fact it was this unexpected death that first led me to think those cases to be plague. In addition to the culmination in death, the most striking characteristic of these cases is the pulse: it is a pulse presenting grave characters quite uncalled for by the short duration of the illness or the limited amount of lung mischief, a pulse that indicates the presence of some acutely toxic condition. In almost every case I saw it was quick out of proportion to the local or general condition, and wherever it was not found at the time of examination to be weak and running, its rapidity and general character indicated the probability of its quickly becoming so. This rapid feeble pulse, then, is an important diagnostic point. As a rule there are no enlarged glands, but if there are, they come late in the illness and are ill-developed. Every case I have seen or heard of has ended in death.

So far only 5 cases have been directly under my observation, but from the results of the 20 to 30 cases of investigations of death which passed through my hands every day, and from conversation with native practitioners I am convinced that it was far from an uncommon type in the Calcutta epidemic of the early months of 1899. In numerous cases of suspicious death, where the history obtained was reliable, it was one of seven to ten days fever, not particularly high; no delirium, no pain in the chest, no glandular swelling, and very slight cough, with almost no expectoration. Exact figures as to the number of these cases I shall not attempt to give, for it is impossible to fix the boundary line between reliable and unreliable information, and in numerous cases some such colourless history as that above was originally given with a view to concealment, when the true history, as subsequently elicited, was that of typical acute plague with well-defined buboes.

I must plead for indulgence if the record of these cases that follow is incomplete, if clinical details that ought to have been present are absent, if the ultimate scientific test of cultures and *post-mortem* examinations is altogether wanting. So manifestly deficient is the record that I do not attempt to cast my description on systematic lines; all I can do is to call attention to this undescribed variety. I feel the more justification in doing so because the cases are such that from their nature they are not likely to be removed to hospital, and so come under accurate European observation; and even were they to come under hospital observation, they would probably escape recognition as plague owing to the false histories that would be given, and the absence of that essential local knowledge, the knowledge of previous contact with plague cases, the knowledge of removal from an infected house, that knowledge so carefully withheld by relatives, that knowledge that only a district medical officer, constantly working in the huts and houses of the infected localities, can possibly obtain. The time and labour necessary to acquire that knowledge are the excuse put forward for the deficiencies of the records; only those who have worked in Calcutta can realise the difficulty with which even those were procured, scanty as they are.

In reply to the self-evident objection that the cases I give were not cases of plague at all but cases of simple bronchitis or broncho-pneumonia, I can only call attention to their clear connection with plague, the fact that they occurred in series with indisputable plague cases, and the fact that every case proved fatal. Had they not been plague there was no reason why death should have occurred when it did.

CASE I.—Moti, female, aged 30, Chapkar, was discovered during the course of a thorough search in this bustee just as she was walking out into the street to avoid observation. The search was in consequence of repeated deaths in the bustee, of cases which before death were invariably concealed, and in which after death only vague and unsatisfactory information could be obtained. Two of the deaths were certainly plague, and the others probably so.

Condition on Examination.—The patient was well nourished, and in her general condition there was little to indicate anything seriously wrong. She answered all questions quite rationally, and her speech, if a little weak, was otherwise normal. The tongue was slightly coated with white at the back and down the middle. The eyes were not injected. Temperature 101°, pulse 140, respiration 32. The pulse, though so quick, was fairly full and strong: its rate was probably accelerated by the exertion of getting up and trying to get away. Respiration was a little laboured but not much. Fine *râles* distinctly heard at both bases and a few rhonchi, but no dulness or percussion could be made out. Vocal resonance perhaps a little increased. Very little cough and very little sputum; what there was was clear and mucoid. There were no enlarged glands present anywhere. This was the condition on the seventh day of illness, March 8th, 1899. The diagnosis was bronchial catarrh, with probably a little broncho pneumonia. I suspected it might be plague, but did not report it as there was so little to go upon. Dr. H. P. Bannerjee saw her next day and found her in much the same condition. The pulse was slower and better. He made out a little dulness at the bases. We were both surprised when the Vigilance Committee reported her death on the morning of March 11th—that is, after ten days' illness. There was no opportunity of making a culture.

Remarks.—There had been no actual plague case in this particular hut, but from what has been said it will be seen that the plague connection, though not absolutely certain, had been highly probable. If the case had been simple broncho-pneumonia there was nothing to explain her sudden death. She was a healthy well-nourished woman. The pneumonia was very slight; there was nothing grave in the symptoms unless the pulse.

CASE II.—Dulal M., female, aged 52, a Hindu residing in a hut. The practitioners in charge of the case—Dr. N. L. Dey and Dr. N. Chatterjee—took me to see this woman on the morning of March 12th, 1899.

She had then had fever for three days. She was a thin, old, grey-haired woman. The pulse was 110. The temperature 101°, respirations 30. The tongue showed a thin white coat all over it. *Râles* and rhonchi were heard distinctly over both bases. I thought I could make out a little dulness about the point of the left scapula, but it was extremely doubtful. The diagnosis given was bronchial catarrh in an old and probably malarial subject. The other doctors failed to make out any pneumonia at all, and I could only say I had a faint suspicion of it, with nothing definite on which to state a diagnosis. No enlarged glands were detected. To the surprise of all concerned, she died the evening of the same day—that is, after three days' fever.

Remarks.—There have been suspicious deaths all round the immediate neighbourhood of the hut, and though definite connection with previous cases is not made out, it is highly probable. The subsequent death of the grandson from plague pneumonia is still more convincing.

CASE III.—Hari C. S., male, aged 8, a Hindu, grandson of Case II, living in the same hut. It turned out afterwards that he had been suffering from fever for four days until, on March 14th, two days after the death of the grandmother, he was removed to the ward hospital.

Dr. Das reported on this date as follows: Temperature 103°. Has got slight cough. No pain in any part of the body. No glandular swelling. Is quite sensible; no delirium. Pulse rather feeble. Is under treatment of Dr. N. L. Dey and Dr. D. M. Chatterjee. Hut is tiled; room on ground floor.

When see by myself on March 17th—that is, on the seventh day of illness, his condition was as follows: Lies collapsed on the bed. Respiration 60, nostrils dilated; temperature 104°; pulse 120, very weak. Low moaning cry. In the left groin there was slight tenderness, and a raisin-like gland was indistinctly felt in the inguinal region. There was no other enlarged gland. The lungs were examined only from the front. On percussion faint dulness could be made out here and there all over. It was distinct only at the right base. Auscultation gave fine moist *râles* at both bases. Towards the apices breathing was distinctly bronchial, and vocal resonance was greatly increased. Dulness there, however, was indistinct. Though rhonchi were heard, there were no moist sounds.

He lingered on for nearly a week before he died.

CASE IV.—Kanai, male, aged 32, caste Tantee, coolie employed in molasses shed.

History.—He became ill on March 15th, 1899. His is the eighth case in a series of 10 all hailing from the same hut, as will be detailed below. He was discovered on March 18th.

Condition on Third Day of Illness.—Lies in bed almost quite indifferent, but answers on being spoken to loudly. Haggard, drawn look on face. Speech is slightly affected, being rather thickened. The tongue is characteristic, that is, it is covered with a white coating, but the tip and edges are free from it. Respiration is 36, slightly laboured. Pulse 104, regular, and fairly strong.

Physical Examination.—No dulness made out on percussion. On auscultation moist *râles* at both apices, particularly in the right lung. The *râles* are fine. Towards the bases the breath sounds are rather bronchial, but no moist sounds are to be heard. The bases themselves seem to be clear. Cough, if any, is very slight and occasional, as is also the expectoration. No enlarged glands could be found. It was arranged by means of money compensation that the patient should be removed to the Ward Plague Hospital, and that the hut should be evacuated. The patient was, however, surreptitiously removed to 7, Joga Mohun Saha's Lane, and died March 10th, 1899, while being removed from this house to hospital by his friends.

Previous and subsequent cases from the same hut; the total population of the hut was not over twenty persons:

1. Durga, male, aged 18, Kahar, died March 5th, 1899, after five days' illness.

2. Mookta, female, aged 60, Brahmin, died March 13th, 1899. Pneumonia began March 7th, 1899.

3. Bassuntia, female, aged 11, Bindee, became ill morning of March 9th, 1899, and died 1 A.M. March 10th, 1899.

4. Agnassia, female, aged 55, Brahmin, got ill on March 10th, 1899; found with pneumonia March 13th; surreptitiously removed and died in a day or two.

5. Bindsor, male, aged 15, Kahar, became ill on March 14th, 1899, and died on March 17th, 1899, with right femoral bubo in the Medical College Hospital.

6. Soomaria, sister of Agnassia, had nursed her, and became ill on March 16th, 1899, and was sent to the Campbell Hospital, but could not be traced.

7. Name not known, male, aged 9, Sankar, was attacked on March 16th, 1899, at noon, and died at 9 P.M. the same day.

8. Kanai, above described (Case IV).

9. Dukhee, father of Kanai, was found with pneumonia and incipient right axillary bubo on March 20th, 1899: he died in Ward Plague Hospital on March 22nd, 1899.

10. Jogoo, male, aged 8, Tantee, grandson of Dukhee; he developed pneumonia on April 14th, 1899, and died on April 19th, 1899.

CASE V.—Chumroo, male, aged 40, Kurmi.

History.—The hut is one in which two plague deaths had occurred shortly before. Hari Lal G. died with a left inguinal bubo on March 27th, 1899. Chumroo, who was a coolie in a grain shop, became ill on March 24th, 1899.

Condition on March 31st, 1899.—He was fairly nourished, but presented leucoderma on the scalp, upper and lower extremities, and several patches on the chest. He talked freely, speech not being at all affected. He could move about and sit up with ease. The tongue was dry and coated, the temperature 102.5°, the pulse 140, and the respirations 52. The eyes were not injected.

Chest.—Bronchial breathing, with increased vocal resonance, was found over both bases behind. No moist sounds were heard at bases, except one or two doubtful *râles* on the right side. Two inches below the point of the left scapula was a patch about 2 inches in diameter, of distinct dulness on percussion, with fine crepitant *râles*. Dulness was fairly marked over bases.

Raisin-like glands could be felt in both groins; these were not tender: probably they were of old standing. He was being nursed by his son in a room about 4 feet by 6 feet by 7 feet. He died quite suddenly the same night.

THE SERUM DIAGNOSIS OF MEDITERRANEAN FEVER.*

By T. ZAMMIT, M.D.,
Government Analytical Chemist.

THE object I have in discussing the bacteriology of the Mediterranean fever, is mainly to bring once more to the front the importance of having a clear and definite idea of the fever and its cause.

Knowledge of the etiology of this disease is far from being complete. Major David Bruce in 1886 discovered the micro-organism of the fever, and described its principal characters—morphological and biological. The micrococcus described by him was invariably taken from the spleen. Captain Hughes repeated the researches of Major Bruce, and added observations on the growth of the micrococcus. In his book on *Mediterranean, Malta, or Undulant Fever*, published in 1897, he gathered together all that was known about the fever. This was a step in the right direction, but the bacteriological facts were of little aid in the practical question of the causation and treatment of the fever. The micrococcus could only be discovered on the *post-mortem* table unless the spleen had been punctured during life, an operation not free from danger.

If bacteriology is to aid us in diagnosis it is imperative that we should find out a method by which the specific micro-organism can be demonstrated as soon as the patient is attacked by the fever. Everyone knows how difficult it is to give an opinion as to the nature of a fever when the patient is in the first week of his illness, and every practitioner understands the importance of a rapid diagnosis with a view of establishing a proper treatment.

Happily a practical method of diagnosis has been suggested based upon the well-known agglutination of specific micro-organisms in a solution of the blood serum from the corresponding disease. After Widal's discovery of the reaction of the typhoid bacillus when in contact with the blood serum of enteric fever patients, the method was applied to a number of diseases, among others to Mediterranean fever. In the annual report of the Public Health Department for 1898, I have endeavoured to give a summary of our attempts to use the serum reaction as a help to practitioners to come to an early diagnosis in doubtful cases of enteric and Mediterranean fever. Our experiments were quite successful in so far as the technique was concerned, for we were able to obtain the reaction in a very short time after the sample of blood had reached us, but I am sorry to say that our enthusiasm was by no means shared by our medical colleagues, and very few of them responded to our appeal. Although this first attempt was discouraging, still the question is of such importance that I venture to repeat the appeal.

During the year 1898 the cases of fever reported to the Public Health Department were as follows:

Enteric fever	162
Mediterranean fever	510
Febricula	125
Total	797

Is it probable, I venture to ask, that these numbers would be the same under each heading if a bacteriological examination had been resorted to in each case? I must confess that I have grave doubts about it.

If the bacteriology of the Mediterranean fever has not been advanced further than this, I think we have at least something to work upon. Of course, not every practitioner has the time to apply himself to bacteriological researches, but everybody is able to help in his own way. Malta fever is not peculiar to our island, but the number of cases throughout the year is, most unfortunately, more than is desirable. If an effort were made by the medical community with a definite aim and purpose, I am confident that important facts would be gathered which would be of great service to us and to our patients. Knowledge of the pathology of the fever is not complete, its morbid anatomy is merely outlined, its treatment uncertain, its bacteriology in its very infancy. It is difficult, if not impossible, for a single student to grapple with these different questions, but our united efforts are bound to triumph.

In every case of fever the method of serum reaction should be used in diagnosis. It is a simple operation, easily made in the most modest laboratory. Cases with distinct reaction should then be followed closely, and some definite treatment carefully applied and recorded. In fatal cases, bacteriological and anatomo-pathological researches should be made whenever possible.

In my efforts to contribute my share to the knowledge of the fever, I submit the following facts which I have gathered during the past year:

1. The micrococcus of Bruce can be grown successfully from a culture seven months old.

2. Cultures of the micrococcus 2 years old give a clear serum reaction.

3. The micrococcus does not grow on sea water solidified with agar, not even when the sea water was taken from a sewage outfall, and was of a distinct brown colour.

4. The micrococcus grows on an agared solution of normal human fæces.

Having no connection with a hospital, I could not obtain suitable materials for further researches, but I am quite willing to help any colleague who is in a position to obtain material at *post-mortem* examinations.

* Read before the Malta and Mediterranean Branch of the British Medical Association.

A CASE OF VESICAL CALCULUS IN SIERRA LEONE: LITHOTOMY.

By W. RENNER, M.D.,
Assistant Colonial Surgeon, and Medical Officer of the Royal Colonial Hospital.

I WAS called to see Mr. P., aged 63, in May, 1899. He had recently arrived in the colony from Accra in the Gold Coast Colony, where he had been the resident keeper of the gaol for twenty-four years.

History.—His son, a druggist, informed me that his father had been suffering from hypertrophy of the prostate for some years, and that he was suffering from severe pain in the penis, and after micturition, which was very frequent both day and night, and that at times retention of urine took place suddenly. He had been passing a gum elastic catheter to relieve retention and also to wash the bladder.

Condition when First Seen.—I examined the old man *per rectum*, and found that the pelvis was occupied by a large indurated mass. On passing a large silver prostatic catheter I experienced a slight difficulty on entering into the bladder, and felt that my instrument was grazing on some hard and rough mass immediately behind the prostate, which was also en-

larged. With a sound I could only make out a thud instead of the sharp click of a hard calculus. I also made out that the stone was very large and must be phosphatic, and the bladder was contracted owing to the long cystitis from which he had been suffering. The urine drawn was very offensive, and about an ounce or two was passed very frequently, with severe pains in the penis and bladder, which lasted an hour or two after each micturition, which was always dreaded. Examination of the urine recently passed showed the presence of albumen, due to the existence of large quantity of pus which it always contained. He had slight fulness of the face, but no œdema of the legs.

Diagnosis.—I informed the son of my discovery of stone, and the necessity of immediate operation to relieve the patient. To this both father and son gave half consent, and thought that, owing to his age, an operation of any kind might probably end in serious consequences. I informed them that this was true, but that operative treatment was the only means likely to be of any good, I did not see the case again until November, when, owing to the son having failed to dissolve the stone by medicinal treatment, and as his father was going from bad to worse, they consented that I should operate, no matter with what result.

Operation.—In the colony there was not a single lithotomy or lithotrite instrument to be obtained in any of the hospitals—Royal Colonial, Military, and Princess Christian. I therefore had to import the necessary instruments from Messrs. Down, Bros., of London, which were promptly sent out in about five weeks, and on December 12th I performed the operation of lithotomy with the assistance of Dr. Easmon and my friend, Mr. R. May. On cutting into the bladder I found a large stone occupying it and the bladder wall contracted on it. On passing the forceps to grasp it a portion of the stone got broken, and I found that I had to remove the entire stone piecemeal This I did carefully, and the whole operation lasted two hours. Bleeding was general but not profuse. I placed a Buckston Brown's dilatable tampon in position and all hæmorrhage was arrested. Digital examination of the wall of the bladder showed it to be rough, and that the calculus had occupied nearly the entire cavity. The patient was placed in bed, and the usual after-treatment was carried out. The temperature recorded on the day of operation and subsequently ranged between 99° and 101° F. The total weight of the broken pieces of calculus was 1,120 gr. On January 3rd, 1900, patient passed urine naturally, and he has been doing well up to the present.

This case is of interest from the fact of the rare occurrence in this colony of a case of stone in the bladder. So rare, that even in the military hospital attached to the garrison, over 1,000 men strong, no instrument for the operation of lithotomy or lithotrity could be obtained, nor in the two other public institutions.

The water supply of this colony is from the mountain iron-rock, and it is absolutely free from all saline or organic impurities. This, however, could not be said of some of the waters obtained in certain districts of the Protectorate, and yet it is remarkable how free as a whole the people are from gravel and stone in the bladder.

This patient, residing as he did in various stations in the Gold Coast, probably laid the foundation of the calculus there; and yet the official class and principal inhabitants of the Gold Coast obtain their drinking water from tanks into which the rain water has been collected during the rainy season.

One fact is apparent, and that is the immunity to a large extent of the coloured race in the West Coast of Africa from gravel or stones in the bladder when compared with the dark races of certain parts of India.

An interesting fact in the case was the presence of hypertrophy of the prostate. This condition is occasionally met with only in the very aged in Sierra Leone, and such cases are very few as compared with the number encountered in England.

A CASE OF "BEEF WORM" (DERMATOBIA NOXIALIS) IN THE ORBIT.

By FREDERICK T. KEYT, M.B., C.M.ABERD.,
Assistant Colonial Surgeon, British Honduras.

P. C., an Indian, aged 10, was admitted to the Orange Walk Hospital, British Honduras, on December 24th, 1899, suffering from what appeared at a cursory glance to be epiphora of the right eye, due to occlusion of the nasal duct and inflammation of the lachrymal sac. There was conjunctivitis, and the eyelashes were gummed to the lids, which were reddened and inflamed.

On more careful examination the eyeball tension was found much increased, and the ball projecting more than its fellow and displaced externally; the lachrymal sac was bulging forward, the upper and lower ducts showing plainly under the skin. A small orifice was found in the caruncle (Fig. 1), and within the orifice a small opalescent body the size of a pin's head, protruding sometimes and then disappearing. The symptoms, combined with the intense intermitting boring pain of which the boy complained, led me to believe that the parasite locally known as the "beef worm" was deposited and lay concealed in its sac at the inner angle of the eye.

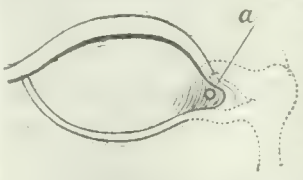


Fig. 1.—Right eye; *a*, position of worm; the lachrymal ducts and sac are shown in dotted outline.

As the slightest pressure caused intense pain I administered an anæsthetic, and opened the orifice inwards as far as the angle of the two upper and lower nasal ducts, and seizing the head of the worm extracted it with ordinary dressing forceps. The recurved hooklets arranged in zones around the worm (Fig. 2) rendering this proceeding tedious, as there was some danger of leaving a portion of the worm within the sac.

The "beef-worm" is the larval form of the dermatobia noxialis described by Dr. Manson in his work on *Tropical Diseases*.[1] The Indian name is *Cormollote*, and the name of the fly *Anal coshol*. The chief point of interest in this case is the unusual locality of the parasite, and the danger of suppuration affecting the eyeball, if timely treatment had not been resorted to.



Fig. 2.—"Beef worm" larva of dermatobia noxialis, actual size.

The "beef-worm" is commonly met with in British Honduras and Central America generally in dogs and cattle, and very frequently in human beings. The usual mode of treatment adopted by the natives is the application of tobacco leaf over the swelling and occluding the orifice; the worm is narcotised or killed, and its expulsion is easily effected by squeezing. Occasionally, however, it gives rise to serious and extensive inflammation of the subcutaneous tissues, demanding prompt surgical treatment, liberal incisions, and free drainage.

REFERENCE.

[1] Art. "Ver Macaque," p. 591, where the adult fly also is figured.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CINNAMON IN THE TREATMENT OF TROPICAL DIARRHŒA.

IN the Section of Tropical Diseases held at Portsmouth, Dr. Henderson of Shanghai in his address on Sprue or Psilosis mentions cinnamon as a remedial agent and also that he has found it useful for chronic diarrhœa; but I and also Dr. Myers of Takow, South Formosa, who first mentioned it to me, go further and use it in the powdered form systematically in all cases ranging from ordinary diarrhœa to severe cases of dysentery. But it must be recognised that at any rate in Formosa diarrhœa is a concomitant or perhaps a symptom of true malarial fever, and in severe cases of dysentery with the regular dysenteric stools there is also high fever, and I have found the plasmodium malariæ in the blood of all. I always take quinine when I have slight looseness of the bowels, and I consider it a premonitory symptom of the disease, the diarrhœa stopping immediately after a few doses.

The first severe case of diarrhœa was in a lady seven months pregnant, which later became true dysentery. She was first treated with the ordinary astringent remedies and quinine, when the stools became so frequent and dysenteric, accompanied with tenesmus, that it gave rise to grave fear of premature birth, and the treatment was changed to ipecacuanha with the preparatory opium. Full term was safely reached, but four to five days later the old trouble recurred with fever. Large doses of quinine (30 grs. in the day) and ipecacuanha were again tried, but failure resulted; then cinnamon in teaspoonful doses was given, mixed with a little milk to mould it into the shape of a bolus, and chewed night and morning. A mixture of quinine sulphate, potassium bromide, and antifebrin was also given three times a day, combined with starch enemata containing opium and chloral. In a few days the patient was

practically out of danger, though consecutively the liver, spleen, and ovaries became inflamed; in a few weeks she had quite recovered.

Another case is that of a Chinese boy, aged 18, who was having twenty to thirty motions containing blood in the day, accompanied with malarial fever. After taking the above quinine mixture with catechu and cinnamon, he was in three days quite recovered.

I use nothing but the above mixture here now for fever, as I cannot rely on quinine alone, and it also has a very beneficial action on the temporarily enlarged spleens one meets with in the course of fever, and even in the chronically-enlarged spleens if used in conjunction with small quantities of mercurial ointment.

A. Norris Wilkinson, M.R.C.S., L.R.C.P.

Twatutia, N. Formosa.

POISONING BY CASTOR OIL SEEDS.

J. F., aged 26 years, dock labourer, teetotaller, and in good health, ate while at work on January 23rd a couple of castor-oil seeds imported from Brazil. That evening he complained of griping pains in the abdomen, and vomiting and purging followed. No medical assistance was solicited until the morning of January 26th. When seen then he was in a state of great agony and restlessness, tenderness and pain in the epigastric and umbilical regions being especially marked. There was incessant purging and vomiting; his extremities were cold, his brow bathed in perspiration, his pulse weak, very compressible but regular. The stools and vomited matter were watery, sanguineous, and slimy. Portions of the shell of the seed were found in the vomited matter. While under treatment the purging stopped but the vomiting persisted, though less frequent, and he expired on January 29th from exhaustion.

Necropsy.

A necropsy was made on January 30th.

Head.—The meninges and brain were congested, and there were numerous petechiæ.

Thorax.—The lungs were congested; there was no pleuritic effusion. The heart was pale, its cavities containing clots. There was a fair amount of effusion in the pericardial sac.

Abdomen.—The general peritoneum was healthy—no effusion. The stomach was highly congested, contents being watery and sanguineous. The mucous coat was much attenuated, and there were scattered round erosions with a pale, greyish base, varying in size from that of a millet seed to that of a small pea.

Intestines.—Contents were watery, slimy, and sanguineous, not very fœtid. There was extreme congestion of the small intestine and great attenuation of the mucous coat. The duodenum and cæcum were less affected, the large intestine least of all. The other viscera were congested, especially the kidneys.

W. P. Meldrum, M.B., Ch.B., B.Sc.Edin.

North Dispensary, Liverpool.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE STATION HOSPITAL, POONA, INDIA.

A CASE OF HÆMOGLOBINURIC FEVER: RECOVERY.

By Captain R. F. E. Austin, R.A.M.C.

Private H., aged 25, who had been in India since February, 1896, and had suffered from many attacks of malaria since his arrival, came to the hospital on the morning of August 31st, 1899, suffering from an attack of ague. The next day he was transferred to my care. His temperature was 100°; his pulse 80, full and bounding; and his respirations 24 to the minute. The voice was weak, and the tongue covered with yellowish white fur. The spleen was very much enlarged, and the skin and scleræ were tinged a saffron yellow. He complained of headache, thirst, and severe pains in the stomach, loin, and over the liver, and vomited frequently, the matter vomited being nearly pure bile. Later in the day he passed a large bilious motion tinged with blood. Urine was frequently passed, and resembled port wine in colour. By the evening his temperature had risen to 103.6°, the pulse was 108, the respirations 28, and the urine passed was thin, scanty in amount, and almost black. Next morning he was in an exhausted condition, having passed a very restless night owing to almost incessant vomiting. His temperature had dropped to 100°; the pulse was quick, very feeble, and 112 to the minute; bilious vomiting was still present and distressing, and the voice was very feeble. The thirst, and pain over the liver and in the loin had somewhat abated, but the urine had not greatly changed in colour, although it was passed more abundantly.

During the next eight days fever of a remittent type persisted, the highest recorded evening temperature being 101°, and the lowest morning 99°. In spite of this, however, he progressed favourably. The tongue cleaned, vomiting and other symptoms ceased; the urine gradually got clearer and clearer until it was normal in colour, appearance, and constituents; the yellowness of the skin and scleræ, which had been deepening for some few days, also disappeared.

On September 11th, the twelfth day of the disease, he had a typical ague fit with well-marked cold, hot, and sweating stages; there was a return of the bilious vomiting, and yellow tinging of the skin and scleræ, but no hæmoglobinuria. By noon that day his temperature reached 103°, and sweating commenced shortly after. From this time on pyrexia disappeared, and he made an uninterrupted recovery. His strength, however, returned very slowly.

The urine during the height of the hæmoglobinuria was full of albumen, turning almost solid when boiled, and for some days after it had become normal in appearance it still contained it in gradually diminishing amounts. The urine on standing for some time separated into two well-marked layers, an upper one clear and port-wine tinted, and a lower earth-worm coloured and sedimentary, which on microscopic examination showed brownish granular material, epithelium, enormous numbers of hæmoglobin and hyaline tube casts, with a few blood corpuscles. The blood was not examined for the malarial parasite, the nature of the case being evident. The following treatment was adopted: Whilst vomiting persisted 15 grains of quinine sulphate were hypodermically injected morning and evening, thereafter 5 grains of sulphate of cinchonidine were given three times a day by the mouth. After the sixteenth day of the illness an iron tonic was administered thrice daily, with a dose of sulphate of cinchonidine once a week, until he was discharged on October 18th, 1899. For vomiting, ice pills, champagne, hydrocyanic acid, and morphine were tried in turn, the morphine appearing to control it the best. Hot fomentations were used for the epigastric, liver, and loin pain, His strength was kept up during the fever stage with milk, brandy, and Brand's essence.

This case is of interest in that it was severe, and recovered, and might at first sight suggest an attack of yellow fever. The following points in connection with that disease, however, exclude it. Yellowness of the skin and scleræ is a late and not necessary symptom. Black vomit may be a feature, but not copious bilious vomiting. There is no marked splenic enlargement. Hæmaturia is sometimes present, but no true hæmoglobinuria; and, moreover, it does not concur in point of time with the icteric tinging of the skin.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

A. Pearce Gould, F.R.C.S., Vice-President, in the Chair.

Tuesday, February 6th, 1900.

[The meeting was held in the Pathological Laboratory of University College.]

Recent Investigations upon the Part Played by Insects in the Spread of Malaria.

Dr. George H. F. Nuttall gave a lantern exhibition illustrating the above subject.

The Experimental Production of Amyloid Disease.

Dr. Alan Greene recounted the results of some experiments he had carried out with a view of testing the statements made by Krawkow upon the above subject. The author used rabbits and chickens. Broth cultures of staphylococcus pyogenes aureus were injected subcutaneously and

intravenously, beginning with 1 c.cm., and increasing the dose. The results obtained were, in the speaker's opinion, negative, except in the case of a hen. None of the organs showed macroscopically amyloid changes, and though microscopic sections (prepared without the use of alcohol) when stained with methyl violet showed a pink coloration, this was not permanent; the colour was, moreover, discharged in acid solutions. What the coloration was due to he did not know, but it did not appear to him to show amyloid change. In the case of the hen, the pink was permanent, and iodine solution gave the typical deep mahogany stain.

THE NEUTRALISATION OF THE HÆMOLYTIC POISON OF COBRA VENOM (COBRALYSIN) BY ANTIVENOMOUS SERUM.

Mr. WALTER MYERS read a paper on this subject. After giving reasons for considering the cobralysin to be distinct from the nerve poison, he described the method employed. The minimal hæmolysing dose for human blood was first ascertained. A large multiple of this dose was then taken, and the amount of antivenomous serum necessary for complete neutralisation determined. The same multiple was again taken, and a less quantity of antitoxin. The hæmolytic powers of this mixture were then tested. In this way the amount of toxin that remained unneutralised could be estimated. Thus using one-thirteenth of the antitoxin necessary for complete neutralisation, he found that as much as four-fifths of the toxin had been neutralised. With one-sixth of the antitoxin required for total neutralisation, nine-tenths of the toxin had been made inert. He showed by diagrams the course of this neutralisation for two venoms derived from different sources and the similarity of their main features. He pointed out that the peculiarities of this neutralisation could in part be explained by the action of the products of the reaction of toxin and antitoxin in reversing this chemical process. In the case of complete neutralisation of a large quantity it would therefore be necessary to add more than the chemically equivalent amount of antitoxin, but in partial neutralisation, the excess of free toxin that was present made the presence of free antitoxin impossible, because under these circumstances the two would interact and the antitoxin disappear. He then showed the changes that dilute solutions of the poison exhibited at certain temperatures. They consisted in a diminution of the toxic power, which, however, was not accompanied by changes in the power of combining with the antitoxin. Toxoids were produced, that is, bodies which interacted with the antitoxin, but which were non-hæmolytic. As bearing on the nature of these substances he gave the results of his experiments, which showed that the toxoids of diphtheria did not, even in large quantities, affect the union of cobralyin with its antitoxin, nor of tetanolysin with antitetanolysin. Within these limits at any rate the toxoids were specific. He further showed that the toxoid that was first produced was characterised by its great affinity for the antitoxin (prototoxoid), but he maintained that this fact was not proof of the existence of several kinds of toxin in the cobralysin. It was unnecessary to assume that part of the toxin had a greater affinity for the antitoxin than the rest, was specially susceptible, and gave rise to prototoxoid. The hypothesis of the presence of one toxin only, the first change in which was the formation of prototoxoid, would explain the neutralisation charts. It was at present impossible to measure the amount of toxoid present, as there was no evidence how far the reaction between equivalent parts of toxin and antitoxin was complete.

THE CORTICAL CHANGES IN ACUTE CHOREA.

Dr. BERTRAM ABRAHAMS showed a series of lantern slides and microscopic specimens illustrating the changes in the parietal cortex of a woman, aged 28, who died on the thirty-seventh day of an attack of chorea gravidarum. The movements were at first confined to the left side, the right being unaffected till shortly before death. There was fairly constant but moderate pyrexia throughout the illness. The cortex of the left hemisphere was very little altered, there being only a moderate exudation of leucocytes, and a slight increase in size of the perineuronal lymph spaces. The condition was evidently a very early stage of that seen on the right side. Here Meynert's columns were obliterated by a profuse exudation of small cells which appropriate staining showed to be mononuclear leucocytes. These were shown in the act of exuding from the smaller blood vessels. The perivascular and perineuronal lymph spaces were much dilated, and the cortex generally distinctly œdematous. The pyramidal cells were seen to be considerably altered in appearance. They were frequently bulged laterally, and many of them had their processes "broken off." The nuclei were often swollen and pale, but the nucleoli stained with unusual distinctness. The Nissl bodies, on the other hand, were seldom well marked, and the pigment was much diminished in amount. In the enlarged spaces around the cells a large number of the mononuclear leucocytes were shown to have accumulated. The changes were on the whole similar, though in less degree, to those described by Dr. Mott in cases of status epilepticus, and, as in them, the alterations in the cells appeared to depend upon modifications in the chemical condition of their lymph environment. It was obvious, moreover, that their nature and extent were perfectly compatible with complete recovery. With regard to the general question of the pathology of chorea, the appearances tended to support the view that the inflammatory changes in the cortex were not due to local causes, but arose secondarily to toxic alterations in the blood.

EXPERIMENTS RELATING TO NERVOUS DISTURBANCES OF RESPIRATION, OF THE LARYNX, OF MASTICATION, AND OF DEGLUTITION.

Mr. W. G. SPENCER and Dr. RISIEN RUSSELL gave a demonstration of the above.

HARVEIAN SOCIETY OF LONDON.

W. H. LAMB, M.B., President, in the Chair.

Thursday, February 1st, 1900.

INWARD DISPLACEMENT OF THE LOWER EPIPHYSIS OF THE HUMERUS.

MR. D'ARCY POWER showed a case of inward displacement of the lower epiphysis of the humerus, and illustrated it with skiagraphs.

The patient was a girl, aged 6 years, who fell upon her left arm in September, 1899. It was impossible to obtain details of the accident, which happened in Cornwall, but the arm had been kept in splints for six weeks. She was admitted to the Victoria Hospital for Children on January 1st, 1900, on account of a deformity of the elbow. The arm was in a state of cubitus varus—that is to say, the long axis was directed inwards at the elbow, but there was neither shortening nor wasting. The movements of flexion, extension, pronation, and supination were unaffected, and the patient only complained of a little pain over the projecting external condyle. Mr. D'Arcy Power had hesitated therefore to perform any operation, thinking that if he did so the last state of the arm might possibly be much worse than the first. The skiagraph showed that it would be quite easy to chisel away the projecting angle of the shaft of the humerus. He thought, however, that it would be better to do this when the developmental processes at the elbow were completed.

Mr. D'Arcy Power pointed out that that the case belonged to a very obscure class of injuries to the elbow whose exact nature was only now becoming known by the application of the Roentgen rays. The skiagraph showed that the separation of the lower epiphysis of the humerus had been subperiosteal and had resulted in a shifting of the whole epiphysis towards the inner side. The displacement had led to the external condyle of the humerus losing its cartilaginous covering, whilst the cavity of the olecranon had its long axis oblique instead of vertical. The epiphysis appeared to be fixed in its new position by an ossification of the periosteum which had probably been injured at the time of the accident and by an increased width of the internal condyle which served to support the epiphysis in its new position.

SPINAL SUPPORT IN CERVICAL AND DORSAL CARIES.

Mr. JACKSON CLARKE demonstrated the method he employed for supporting the spine in cases of the cervical and upper dorsal regions, as applied to a patient aged 8 years in whom the disease was situated about the fifth and sixth dorsal vertebræ. The child had been treated in the out-patient department for over a year, and she had gained greatly in general health and the local spinal trouble had also much improved. The support used was a form of Chance's splint furnished with an occipital horseshoe-shaped piece to which was added a chin strap. The principle of antero-posterior support in spinal cases was approved by the late Sir John Erichsen in the shape of Taylor's splint, introduced in America in 1870. Mr. Clarke found that Chance's

splint, introduced in London in 1850, was simpler and in some ways better. After a long, careful comparison with the various forms of corsets he had no hesitation in deciding in favour of the method of antero-posterior support.

In reply to Mr. Drew Mr. Clarke said that he based his judgment on an extensive clinical experience.

Acne and Eczema.

Dr. Whitfield showed a boy, aged 16, suffering from acne vulgaris combined with marked seborrhœic eczema.

The patient was in the grocery trade and worked very late at night in hot rooms, but his general health had never suffered in any way. For about three years he had suffered from acne on the face, and for about a year he had noticed that his head had become very scurfy and that red spots occasionally came out on his chest. During the last month the condition of the head and chest had become much more marked, and red spots had come out on his back and face. On examination one was at once struck by the presence of enormous numbers of comedones on the face, especially on the forehead and cheeks. Most of these were large and prominent, but few only were much inflamed, pustulation being present only in slight degree. The skin of the face was noticeably greasy, a condition which might be partly accounted for by insufficient washing, but was undoubtedly more than a mere accumulation. The whole of the scalp was covered with a very thick greasy scale, which extended downwards in a gyrate manner on the left side of the forehead. Where the rash reached the forehead it was seen to be of a florid red colour with very defined outline and covered with a yellowish scale. On the chest and back a considerable number of comedones could be seen without any inflammatory areola around them, and in addition to these there were a number of discoid patches, varying in size from that of a small lentil to that of a sixpence. These patches could be traced from single follicular papules, and when they had extended centrifugally became bright red hyperæmic spots without infiltration, and were covered with an adherent and rather greasy scale. The condition thus strongly simulated psoriasis at the edge of the hairy margin of the scalp and on the chest and back. There were, however, no other lesions on the elbows or knees, and the facts that the disease was associated with a general seborrhœic condition of the skin, and that these psoriasis-like spots took origin from small follicular papules would seem to justify the diagnosis of seborrhœic eczema.

Dr. Whitfield alluded to the fact that some observers were inclined to identify seborrhœic eczema with psoriasis as the same disease, and said that he himself believed them to be distinct, and that, while admitting that the differential diagnosis was occasionally very difficult between the two, he saw no reason for therefore believing them to be identical. He had ordered the boy an ointment containing 2 per cent. of salicylic acid and 3 per cent. of sulphur, and if the disease did not yield to this he should add some oil of cade to the ointment.

Frontal Sinus Empyema.

Dr. Herbert Tilley showed two cases of chronic frontal sinus empyema on which the radical operation had been performed.

In both cases the disease was bilateral, and relief was sought for nasal obstruction and profuse purulent discharge. He had operated on both sinuses in the female, and on one only as yet in the male subject. Both patients were now practically cured, except the young man, who still had a discharge from the left nostril as yet untreated. In neither case was headache a prominent symptom. In both cases the maxillary antra also contained pus.

Great stress was laid on the importance of removing intra-nasal pathological conditions before proceeding to the external operation. His usual line of treatment was to remove the nasal polypi or unhealthy granulations from the region of the middle meatus, and also, in all cases the anterior half of the middle turbinate bone, which was nearly always diseased in chronic cases and formed an obstruction to free drainage from the frontal sinus. If the antrum contained pus it should be drained by the alveolar method. When the middle meatal and anterior ethmoidal cell region was healthy then the external operation might be undertaken with every prospect of success. This consisted in making an incision down to the bone along the inner third of the line of the eyebrow, terminating just above the internal palpebral ligament. The anterior wall of the sinus was removed entirely if the sinus was only of moderate size, otherwise only a portion of the wall. The diseased mucous membrane was then thoroughly curetted, and a large opening made into the nose (an enlargement of the normal fronto-nasal canal) which should be sufficient to admit the tip of the little finger pressed up from the nose. A drainage tube was then inserted in cases where the sinus had not been entirely obliterated. The wound was closed at the end of the operation by one or more stitches, and the resulting scar was hardly noticeable.

In reply to Mr. Power, Dr. Tilley said that the dangers of operative interference in this region was much minimised by careful preliminary study of, and acquaintance with the anatomy of, the parts involved, and as the frontal sinuses did not develop till 7 years of age, and remained small till after puberty, such treatment as had been described would very rarely be called for in young people.

Tachypnœa with Upward Dilatation of the Stomach.

Dr. William Ewart showed an upholstress, aged 18, who had suffered from infantile bronchitis and from habitual cough, and for four years from shortness of breath on exertion. She had recently been laid up for three weeks with rapid breathing, orthopnœa, oppression across the sternum, and discomfort at the left thoracic base. On admission the suspicion that the case might be one of hysterical tachypnœa was not confirmed by the aspect or history. Scattered wheezes were heard in the chest, and the dyspnœa was genuine. The tachypnœa, which was not complicated with any increase of the pulse-rate or of the depth of the respirations, suggested the likelihood of upward dilatation of the stomach as a cause. This was also rendered probable by the patient's distension and oppression at the lower sternum and regurgitation of bitter-tasting food after meals. On examination the stomach was found to be dilated upwards as far as the level of the fourth costal cartilage rising above the level of the cardiac apex, which was in the normal situation. The tympanitic note encroached upon part of the cardiac dulness and replaced the dulness of the left lobe of the liver. The chest did not present the usual signs of emphysema, and subsequently gave respiratory movements as the patient recovered under appropriate gastric treatment. The tachypnœa was never extreme (53 per minute); on the day when the tachypnœa and respiratory distress were relieved a further examination showed that the upper boundary of the gastric resonance had returned to the normal level. Additional features of interest in the case were the liability to pseudo-rheumatic pains in the joints, the decayed condition of several of the teeth, and the presence of a tapeworm which had been allowed to remain without treatment for the last four years.

Mr. Sefton Sewill said that a point of interest was raised by Dr. Ewart's paper, inasmuch as Professor Arkövy had some time ago described a bacillus constant in the pus of abscesses of dental origin, especially those of a chronic nature. This was named B. gangrenæ pulpæ, and Dr. William Hunter, in a paper before the Odontological Society, had ascribed to its presence in the stomach several troublesome affections of that organ. The point was the importance of bringing the mouth into a thoroughly healthy state in all cases of disease of the stomach.

Cases.

Dr. Alfred Eddowes showed: (1) Alopecia areata in a boy aged 16, rapidly recovering.

The patient had been treated by several medical men, and owing to its extension had been almost given up as hopeless. Thyroid extract was given, and lysol solution applied locally, with the result that the hair was rapidly returning, of normal colour, and the boy was growing fast and improving in every way. He believed the case was essentially leucoderma of hairy parts.

Dr. Eddowes said that too many cases of alopecia occurred with leucoderma for the association to be merely accidental. He looked upon alopecia as a condition produced by several causes, and not as a separate single disease. He had seen leucoderma recover, and he now had greater success in treating alopecia than formerly. (2) Coccogenic sycosis, which had begun on the centre of the upper lip, apparently from infection from discharge from the nose, which in turn was thought to have been infected from discharge passing down the lachrymal duct from sore eyes. He had seen three similar cases in one afternoon at the Skin Hospital. He applied yellow ointment on lint with a bandage for the eyes at night, as he considered it almost useless to attempt to cure the sycosis without treating the eyelids. (3) Lupus vulgaris in a condition like scrofuloderma. (4) A woman suffering from xeroderma of palms and ichthyosis of legs, improving under thyroid extract.—Mr. Douglas Drew showed a case of large fibro-adenoma of breast.

The cases were discussed by Drs. H. Tilley, Alf. Eddowes, A. Whitfield, and Messrs. Edmund Roughton, D'Arcy Power, J. Jackson Clarke, Douglas Drew, and M. Sefton Sewill, and the President.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

Ivor Murray, M.D., F.R.S.E., President, in the Chair.

Thursday, January 25th, 1900.

Balneological Treatment of Nervous Diseases.

Dr. Harry Campbell opened a discussion on the treatment of diseases of the nervous system and nervous affections by baths and climate. He remarked upon the beneficial influence of mere change of air, which he connected with the wandering habits of primitive man. The open-air treatment, he contended, was beneficial in other diseases than phthisis, notably in nervous diseases. He referred to the large part which toxins played in neuropathology, and to the potent influence of climate and baths on metabolism, and therefore on the toxicity of the blood. It was often advisable to put nervous patients through a preliminary treatment before sending them away, otherwise they might not benefit by the change. British health resorts were not so well equipped for the treatment of neurasthenia as some of the Continental ones. He referred to the advantage of reducing high arterial tension in some nervous affections, and concluded by inviting discussion regarding the climatic and balneological treatment of sleeplessness, neuralgia, Graves's disease, epilepsy, chronic alcoholism, and morphinomania.

Dr. Symes Thompson spoke of the importance of change of environment in functional and organic nervous diseases. Besides alteration of climate, diet, avocation, etc., one could secure at spas and health resorts the watchful supervision of trained physicians with special experience in the application of mineral waters, baths, hydropathic methods, diet and exercise. He contrasted the effects of Alpine health resorts for those capable of enjoying vigorous exercise, with Egypt for persons with organic diseases for whom the restful life on the Nile was often strikingly beneficial.

Dr. Risien Russell, in illustration of the good to be obtained from baths in the treatment of chronic organic affections of the nervous system, instanced their ameliorating effect on certain troublesome symptoms in some diseases of the spinal cord. Peripheral neuritis was chosen to exemplify the beneficial effects of this mode of treatment in certain acute affections of the nervous system, but he insisted on the deleterious consequences to be expected from the indiscriminate use of baths in many other acute organic diseases. On turning to the consideration of functional affections, neurasthenia was selected as an example of an affection the different varieties of which call for very different forms of bath treatment. The neurasthenic who required stimulating might derive much good from the cold bath properly given, while another class of neurasthenic might be injuriously affected by this measure, and might nevertheless obtain benefit from the indifferent bath. He alluded to the advantage of baths as a means of administering general faradism or galvanism, and referred to the different effects produced by the two forms of bath.

Dr. Kingscote said that by long experience in the High Alps he had observed that high altitudes tended to a high-tension pulse, and were therefore unsuitable to hyperæsthetic conditions such as neuralg a and inflammatory states, whereas anæsthetic conditions benefited largely, always provided that the heart were sound. For instance, severe neuralgia often subsided immediately on the patient seeking a lower level, whereas the pains due to atrophied muscles often disappeared equally quickly on seeking a higher level. Further, toxicity was apt to be reduced owing to increased elimination at high elevations.

Dr. Bezly Thorne, with regard to climate, thought that the condition alluded to as "bracing" depended more upon the hygrometric condition of the atmosphere than on its mere temperature, and that as dryness was the essential element, the presence of humid conditions and the influence of the Gulf Stream should be borne in mind in coming to a decision as to climatic treatment. It was also to be remembered that a moderate altitude in an open situation, such as might be found at Malvern, Buxton, and in parts of Yorkshire, might be far richer in health-restoring conditions than an Alpine height of, say, 3,000 feet surrounded by mountains. He believed that the influences of climate and of baths in relation to insomnia depended on whether they raised or lowered intra-arterial pressure. He had observed that in certain cases in which baths increased high tension insomnia was aggravated and *vice versâ*. He had frequently observed that migraine was relieved by baths and climatic change in consequence doubtless of their influence in improving digestion and promoting the elimination of toxins. As to Graves's disease, he had long been of opinion that it was mainly the result of auto-intoxication, and he had observed that suitably-administered baths exercised a powerful influence for good. Likewise their good effects in epilepsy were very striking, as they tended to maintain the balance between the venous and arterial pressure, diminished auto-intoxication, which was the most frequent cause of the rise of high pressure, and tended to eliminate the cardiac element in the causation of accesses.

Dr. Karl Grube (Neuenahr) had often been struck by the small attention that had been paid in England to the balneological treatment of nervous diseases. This seemed all the more remarkable as some forms of nervous disease which were particularly benefited by bath treatment seemed to be very frequent in this country, as, for instance, neuritis. He had always found baths very effective in neuritis, especially of those forms of neuritis with a great deal of pain. With regard to the various methods of bath treatment in nervous diseases, he had found one rule of the greatest importance, and which might be expressed in the words "Avoid extreme temperatures." Neither very hot nor cold baths seemed to do much good; on the contrary, they very often did harm by increasing the symptoms by their irritating influence. Indifferent baths, that is, baths of a temperature of about blood heat, were most beneficial. The nature of the water used, that is, its chemical constituents, was only of very secondary influence.

Dr. Fletcher Beach said that two cases, one of lateral sclerosis and one of tabes, which had been under his care, had been much benefited by residence at the seaside. The first had considerably improved and the lightning pains of the second had much diminished. Open-air treatment was especially desirable for mental as well as for nervous diseases, and in all asylums patients were given as much open air as possible. Thus all asylums had large airing courts, and those patients who were fit for it were employed in the garden or on the farm. The nervous system was thereby strengthened and recovery assisted. In some cases of neurasthenia rest was desirable, and travelling or touring round the world did more harm than good. The effect of altitude on nervous disease varied. Some cases improved, while others, especially those in whom sleeplessness was produced, deteriorated, and had to live at a lower level. The absence of a complete system of baths attached to hospitals was a defect.

Dr. Fortescue Fox remarked on the unanimity of previous speakers as to the benefit to be derived in many nervous affections from both climate and baths. It might be contended, with some reason, that the effect of baths was exerted almost wholly on and through the nervous system, and undoubtedly all chronic disorders had an inseparable nervous element. Baths were of advantage, not in advanced disease (sclerosis), but in the early stages of such disease, and in many nervous disorders, especially those manifested by irritability and exhaustion. A sedative climate and sedative baths, such as those of Schlangenbad, etc., at or a little below blood heat, were valuable in such cases. He also referred to the good effect of douche and peat baths in peripheral neuritis and in non-inflammatory sciatica.

Dr. Leon (Sidmouth) remarked that with regard to the effect of climate, high altitude and a dry bracing air had a vaso-constrictor influence, the opposite applied to a low-lying humid situation, arterioles were dilated, and the blood pressure low. With regard to bath treatment, valuable results were obtained in the treatment of local neuralgia, various post-influenzal neuroses, for example, tachycardia and sciatica were often much relieved by douches. In the treatment of neurasthenia, change was an important aid, the overworked should be given rest, the neurotic and invalid never well enough to go out should be stimulated by baths suitably graduated with massage and exercises, and could often be induced to throw off the neurasthenic habit.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Monday, February 5th, 1900.

Sir William Dalby, M.B., F.R.C.S., President, in the Chair.

President's Address.

Sir William Dalby, after thanking the members for the honour they had done him by appointing him the first President of the Society, observed that as it comprised amongst its members the aural surgeons attached to all the metropolitan hospitals and very nearly all the provincial hospitals, as well as those of Scotland and Ireland, it could not fail to succeed and exercise a very important influence on the progress of British aural surgery, for it would represent and record year by year the work of the aural surgeons. The objects of the Society as detailed in its rules were:

a. The exhibition and demonstration of patients, models, drawings, and specimens (microscopical or otherwise), illustrating the anatomy, physiology, pathology, and therapeutics of the ear.

b. The reading of papers and the discussion of questions in otology, previously approved by the Council.

c. The investigation by committees (1) of matters of public importance relating to otology; (2) new methods of investigation or treatment of the diseases of the ear.

He was inclined to agree with the general view which was, he thought, held by the members, and especially by the Subcommittee which drew up the rules, that the time of the meetings should not be occupied quite so much in the reading of papers as in demonstrations and discussions of questions which dealt with treatment. This opinion perhaps owed its origin to an idea that papers sometimes tended to be too discursive, or to go over ground that had already been explored, and thus to repeat what had been said by others, and was therefore within the knowledge of the members. The essential difference between the Society and one composed of general surgeons would be that whatever was brought forward was certain to be of great interest to every individual member, for the subject was sure to be one upon which every member was working. It had been felt that to bring before a society composed of physicians and surgeons a paper on a subject essentially one of aural surgery was to obtain for it very little attention and imperfect discussion. It was in this that the great utility of the Society would, it was hoped, consist. Not only rare cases which perhaps few had seen before would be welcome, but more ordinary cases in which if the exact counterpart had not been seen, something so like it had been observed that the comparison would throw new light on the disease, for it was by incessant mental comparison that knowledge slowly but surely became more complete. The remarkable history of the progress of otology would be within the memory of the elder members, and, looking back twenty-five years, the contrast was very striking. Then three or four London hospitals only had aural surgeons on the staff; the ear cases at other hospitals were distributed amongst the surgeons, or perfunctorily attended to by an assistant surgeon. Comparatively few cases attended, for the public had not learned to apply for aural surgery except at one well-known institution. During the past twenty years there had gradually been established out-patient departments and aural clinics at every one of the London general hospitals, and in most large provincial towns there had arisen special hospitals for diseases of the throat and ear. No earnest student now considered that he had properly qualified himself till he had attended for some time in the aural department, and he gained there a very considerable knowledge of ear disease and its treatment, so that when he commenced practice he considered himself, and often rightly so, competent to treat ordinary cases which some years ago he would have sent for advice to an aural surgeon. If he now sought the help of a consultant, it was only to obtain his assistance in the complete diagnosis of the case, and the future treatment, unless it were a case of a serious nature, he himself carried out. Inasmuch as treatment often involved manipulations in which the practised hand of the specialist might be more beneficial, some might say that patients would be more successfully treated if they had throughout been solely under the care of the specialist. That was a very narrow view; for one person who might possibly make a more rapid recovery in this way, there were thousands who by timely and judicious treatment by their medical attendant, who had acquired his knowledge in the out-patient department, were saved from those conditions which followed inflammatory processes within the middle ear, if these processes were allowed to proceed unchecked even for a few days. By the light which otologists had turned upon diseases of the ear at their clinics, they had burned away, or melted away the areas of quackery which some years ago imposed upon the public to a degree unknown by the present generation. Sir W. Dalby then referred to the operations now undertaken for suppuration within the middle ear. On this intensely interesting question surgery was going through a crisis, or revolution. Not so many years ago it was a recognised rule in surgery, and taught at every hospitals to students, that the mastroid antrum should not be opened unless there was some redness, pain, œdema, or tenderness on pressure, or all these symptoms. The mortality from cerebral abscess and meningitis was terrible, Sir W. Dalby recalled how in 1878 seeing a patient with a recent perforation of the membrane and a profuse discharge with a high temperature and three severe rigors within twenty-four hours, with no symptoms of mastoid abscess, he made what he now considered to have been a wretchedly small opening into the antrum letting out pus, and how the patient made a rapid recovery. Otologists must confess that the operations for cerebral and cerebellar abscess, which since that date had come into practice, were initiated and performed by general surgeons such as Mr. Barker, Mr. Victor Horsley, Mr. Ballance, Professor Macewen, and others, so that on this great question the general and the aural surgeons met on common ground. He believed that during the period yet to be expended in the perfection of these operations there would be no feeling of jealousy as to the encroachment of one into the domain of the other—there would be some aural surgeons who would gladly avail themselves of the skill of the general surgeon, as, indeed, had been largely done in the case of such men as he had mentioned, and they on the other hand would be equally glad to obtain the help and opinions of aural surgeons whose experience in the local condition and history of these cases would carry great weight in the selection of cases suitable or unsuitable for operation.

SOCIETY OF ANÆSTHETISTS.

J. F. W. Silk, M.D., President, in the Chair.

Friday, February 2nd, 1900.

The After-Effects of Ether Inhalation upon the Respiratory System.

A discussion on this subject was opened by Mr. Sydney Rumboll (Leeds). In 1,500 cases of the administration of ether preceded by gas he had only met with one case of bronchitis, one of pneumonia, and four of slight bronchial irritation, but in 60 per cent. of his earlier cases, and in 30 per cent. of the last 400 the salivary and bronchial secretions were considerably increased, though this was quickly relieved after the first or second act of vomiting. These 1,500 cases included every variety of surgical operation, and were not specially selected. Some had albumen in the urine, four had small quantities of sugar, and several had cardiac disease. Mr. Rumboll always used his own inhaler, which was carefully disinfected before each administration; and in the earlier cases "anæsthetic ether," specific gravity 1017, was employed, but latterly "ether purissimus," specific gravity 1020. He considered that in every sense the less ether used the better. The operating theatre was always kept at a temperature of 70° F., and every care was taken to prevent undue exposure of the patient. The time of year did not seem to make any appreciable difference to the amount of bronchial irritation; but catarrhal conditions were allowed to subside before any operation was undertaken. Of the 6 cases quoted, Mr. Rumboll believed that the case of bronchitis was due to the cold operating room, and the pneumonia was attributed partly to septic infection.

The President thanked Mr. Rumboll for his paper, and read a letter of regret from Dr. Macnaughton-Jones, in which he stated that in his experience of ether of thirty years he had not noticed a single case of serious respiratory trouble following its use.

Mrs. Stanley Boyd read notes of 6 cases of respiratory trouble which had occurred in her experience during the four

years 1895-8. Of these one was a case of lobar pneumonia, one of broncho-pneumonia, and four of more or less severe bronchitis. Five of these cases were abdominal sections.

Mr. EDWIN STARLING drew attention to the fact that, of the cases referred to, the majority occurred after abdominal operations. He related a case of ovariotomy in which a fatal result followed in thirty-six hours from bronchitis and pulmonary œdema.

Miss ALDRICH BLAKE stated that at the Royal Free Hospital from 1895 to 1898, 1,250 ether administrations were recorded, and of these only 3 developed any serious pulmonary trouble. One of these was a case of operation for injury to the chest wall, which was followed in three days by pneumonia; in another the pre-existing physical signs of phthisis were considerably increased; and in the third, a case of radical cure of hernia, rusty sputum was noticed three days after the operation.

On the motion of Dr. DUDLEY BUXTON, seconded by Mr. NOBLE, the discussion was adjourned; and the PRESIDENT expressed the hope that, at the next meeting of the Society, on March 2nd, further facts in elucidation of this very important and interesting subject would be brought forward.

REVIEWS.

THE WESTERN RAJPUTANA STATES: A MEDICO-TOPOGRAPHICAL AND GENERAL ACCOUNT OF MARWAR, SIROHI, JESALMIR. By Lieutenant-Colonel ARCHIBALD ADAMS, I.M.S., M.D., M.Ch. London: Junior Army and Navy Stores. (Royal 8vo, pp. 454, 78 plates. 21s.)

THE region described in this handsome and interesting volume is included in that extensive area of desert which lies to the north and west of the great Indo-Gangetic plain. The dry rocky and sandy surface, the small rainfall, the scarcity of water, the scantiness of vegetation, the climate with its trying alternations of temperature, its great heat and piercing cold, present conditions that might seem to be unfavourable to agriculture, industry and commerce, social prosperity, racial robustness and health. Yet Marwar is the home of one of the most intelligent and enterprising races in India; and the inhabitants of this inhospitable tract contrive to turn it to advantage, live contented, prosperous and healthy lives, and enjoy under native rule, watched and guided by British influence, a large measure of civilisation.

Lieutenant-Colonel ADAMS, of the Indian Medical Service, who has served in Rajputana for eighteen years, is well qualified to draw a picture of the conditions and characteristics of life in these States, and he has done so in this book in great detail, and with marked ability. He has dealt with the geology, physical geography and meteorology of the country; its resources, mineral and agricultural; its fauna and flora, with the population, its composition, distribution, occupations, customs; and manners of life and livelihood; with its administration, government, religion and education, capitals and villages; with its institutions and temples; its dynasties and their history; with its diseases, endemic and epidemic, and with its sanitation and vaccination. These and cognate subjects are set forth with accuracy and amplitude, and illustrated by beautiful reproductions of excellent photographs. The work is therefore well fitted for general information, and for the special purposes of the politician, sociologist, scientist, sanitarian and sportsman.

The chapters on health matters are specially interesting to medical readers. Registration of births and deaths has been introduced, but is still imperfect and untrustworthy. Epidemics of cholera, plague and small-pox occur from time to time, but malarial diseases are the principal cause of sickness and mortality. They are limited to the rainy months, and more severe in low-lying parts subject to river inundations. In Jesalmir, the driest of the three States described, there is a proverb that "neither mud, mosquitos nor malaria" exist, which is interesting in view of present doctrines regarding the genesis and propagation of malarial fevers.

The visitation of Pali plague in 1836-37, and the recent importation of plague from Bombay in 1897-98, are described, and the measures adopted for preventing the spread of the disease, aided, no doubt, by the peculiar geographical and climatic conditions of the locality, appear to have been successful. Vaccination, which was introduced in 1887, has been successfully pushed, and has, it is stated, reduced the incidence and mortality of small-pox. Enteric fever is said to be very prevalent among children—a fact which, if confirmed for India generally, would explain the immunity from that disease of adult natives of India. Interesting details are given regarding indigenous medical practitioners and medical practice. Among ailments requiring surgical operation, stone, mycetoma and lenticular cataract are common. Sanitation and medical relief have, under the initiative and efforts of British officers and medical men, made good progress. The book, as an account of orderly, useful and beneficial administration, is pleasant reading.

OUTLINES OF BACTERIOLOGY: A PRACTICAL HANDBOOK FOR STUDENTS ON THE BASIS OF THE *Précis de Microbie*. By Dr. L. H. THOINOT and E. J. MASSELIN. Translated and adapted for English use, with additions by WM. ST.CLAIR SYMMERS, M.B.Aberd. London: Charles Griffin and Co., Limited. 1899. (Cr. 8vo, pp. 330. 98 illustrations. 10s. 6d.

ONE of the great objections to most of our textbooks on bacteriology is that they are far too bulky to be readily carried about by the student, or, if not too bulky, that they are far too sketchy in character. Neither of these objections can be urged against the capital little work published in France by THOINOT and MASSELIN, and now translated and adapted for English use, with additions by Professor ST.CLAIR SYMMERS, of the Government Medical School, Cairo. It is small in bulk, but is a perfect mine of information in a form handy and accessible, not only to the laboratory student, but also to the practitioner.

The first part of the work, dealing with methods and apparatus, is both full and clear, and is very practical; whilst the second part, which deals succinctly but accurately with microbial diseases, has been well brought up to date and carefully edited. This part is divided into three chapters: the first dealing with microbial diseases common to man and to the lower animals; the second with those found specially in certain of the higher animals; and the third with microbial diseases peculiar to man. In the second part of the work, the coloured illustrations supplement most admirably the value and clearness of the descriptions.

Altogether we can strongly recommend this little pocket-book to those who wish to have in handy form a large amount of accurate bacteriological information.

NOTES ON BOOKS.

THE first edition of *The Carlsbad Treatment for Tropical and Digestive Ailments, and How to Carry it Out Anywhere*, by Major LOUIS TARLETON YOUNG, M.D., B.Ch., B.A., of the Indian Medical Service, was reviewed in the BRITISH MEDICAL JOURNAL of January 26th, 1895 (page 204). The second edition (London: W. Thacker and Co., Cr. 8vo, 224 pages, 4 plates) has been greatly enlarged and amplified, and the topics indicated by its title are more fully dealt with in the light of added knowledge and experience. The conditions of ill-health, arising from tropical residence, which are not likely to be benefited by the Carlsbad treatment, or which may be actually aggravated thereby, are clearly indicated. The book is throughout practical, and constitutes a valuable treatise on the regimen—preventive and curative—which is best adapted to preserve health in the tropics, or to restore health which has been damaged by tropical conditions or disease. It is written in a plain, simple style, and may be profitably consulted both by practitioners and patients, and the subject matter is carefully arranged and indexed, rendering reference to its contents easy.

A MALARIA CONFERENCE IN ROME.

Some weeks ago a party of English physicians on their way to Palermo, where they were invited to inspect a new sanatorium for tuberculosis, stayed a few days in Rome. Among them were Dr. Patrick Manson and Mr. Cantlie, of the London School of Tropical Medicine; Sir Lauder Brunton, of London; Professor Clifford Allbutt, of Cambridge; and Dr. G. A. Gibson, of Edinburgh.

It had been arranged beforehand that the opportunity should be taken to hold an informal conference with the Italian investigators who have been working to such good purpose at the problem of the etiology of malaria. In arranging the conference Dr. Luigi Sambon, formerly of Rome, and now lecturer at the London School of Tropical Medicine, acted as the intermediary between the British and the Italian workers, and the success of the meeting was largely due to his tact, courtesy, and infinite capacity for taking trouble.

The conference took the form of demonstrations in the laboratories of Professors Grassi, Celli, Bastianelli, and Bignami, who showed their British fellow workers in the fullest detail their methods of research and their result. A visit was also paid to a spot in the Campagna where malaria may be said to be the *genius loci*, and which has accordingly been chosen as the most suitable place for experiments in prophylaxis. The visitors had thus every opportunity of seeing for themselves what the Italian investigators have done and are doing for the dissipation of the mystery that till lately hung about the origin of malaria. Such personal conference between men working at the same subject tends to clear away misunderstandings, and to generate sparks of thought that may brighten to beams of new light, and the meeting between the British and Italian workers in Rome can scarcely fail to help the final solution of a question which is of the most far-reaching importance for the progress of civilisation and the welfare of the human race.



Hovels in malarious district of the Campagna.

For the notes on which the following account is based, we are indebted to Dr. Manson and Dr. Sambon.

Visit to Professor Grassi's Laboratory.

On December 30th the party visited the laboratory of Professor Grassi, which is situated in the attics of the buildings of the University of Rome. Here, among other things, they were struck by the contrast between the scanty equipment of the laboratory and the importance of the results achieved in it with the simplest apparatus. Professor Grassi's humble workshop would be at once a revelation and a useful object lesson to those who explain our backwardness in the higher departments of biological study by the poverty of laboratory accommodation and the lack of endowments. The rough, but perfectly efficient, means by the aid of which Professor Grassi, guided by Ross's work on *Proteosoma*, tracked out the malarial parasite through *Anopheles*, form in their crudeness a striking contrast to the beautiful drawings, each in itself a work of art, by which he illustrated his results.

It may here be stated that Professor Grassi has all but completed a work on the malaria parasite, which we understand will be published simultaneously in English and Italian within the next few months. The principal chapters will deal with the history of the subject, methods of research, malaria and blood suckers, the systematic anatomy of *Anopheles*, life-history of *Anopheles*, development of parasites in *Anopheles*, prophylaxis, etc. Professor Grassi, in the course of an hour's conversation, gave his visitors many interesting pieces of information. Amongst others he showed them a species of *Culex*, *Culex mimeticus*, which has dappled wings, and on this account might readily be confounded with *Anopheles*, and very likely has been so confounded. He further threw out the suggestion that the rapidity with which blood is digested by *Anopheles* may be correlated in some obscure way with the development of the malarial parasite. Blood is digested in *Anopheles* about twenty hours sooner than in *Culex*. The black spores of Ross he regards as deterioration forms of the sporozoits which remain within the zygote capsule after the great mass of sporozoits have escaped. The main ground for this opinion was stated to be that in some instances these black bodies are not elongated and cylindrical, but large and spherical, representing corresponding degeneration forms of the residual bodies. Professor Grassi also showed the British physicians an interesting schematic presentment of the anatomy of *Anopheles*, which it is to be hoped he will reproduce in his forthcoming work. Amongst other novelties we understand that he will give in his work in detail drawings of the specific features of the larvæ of different mosquitos.

Certain questions were put to the Professor, which he answered with no uncertain voice. These statements, coming from so famous and skilled a biologist, must carry great weight in adjudicating on the question of the relation of the mosquito to malaria. The following is a brief report of the interrogatory:

Can a man contract malaria without being bitten by the mosquito?

No.

Can a mosquito infect a mosquito?

No.

How, then, do you account for the prevalence of malaria which is reputed to follow on the turning up of fresh soil in malaria countries?

When you dig the ground you make holes in which water is collected, and there *Anopheles* breed. Where men go, there *Anopheles* comes.

How is malaria in uninhabited countries to be accounted for?

We have no perfectly authenticated examples of such. In fact, Sarrasin, in his recent interesting work on the Celebes, states that malaria is not contracted in the jungles, but only near the villages.

No man, no malaria; no mosquito, no malaria. Is that your creed?

Yes, most decidedly.

What have you noted about the conditions which determine the presence of *Anopheles*?

Small pools; confervoid growths in the water, but not too abundant; particularly the presence of *Lemna*.

This, it may be remarked, is what Ross found in West Africa.

Professor Grassi went on to say that he fed his *Anopheles* principally on human blood, sometimes on *eau sucrée*, sometimes on green Indian corn. He could get them to live about

twenty days, during which time they would deposit their ova several times.

Professor Grassi is quite positive as to the existence of a fourth form of malaria parasite in man, *Hæmamœba immaculata*. As to this, Marchiafava and Bignami agree. In Grassi's experiments, he had no difficulty in getting *Anopheles*, even when enclosed in test tubes, to bite his malaria patients; on the other hand, *Culex* was in this respect extremely refractory.

These and many other observations of great interest Professor Grassi set forth in detail to his visitors. Their feeling on parting from him was that they had seen a genuine workman and a genuine workshop. He told them that for eighteen months he had laboured for sixteen hours a day at this question of the relation of mosquitos to malaria. So important did he think the subject that everything else had been laid aside for it. He added that unless a man gives all his time and all his energy to the solution of such problems the problems will remain unsolved.

A MALARIA FARM.

On December 31st Professor Celli conducted a party to the farm which is being used by the scientific members of the Società per gli Studii della Malaria for observations on the epidemiology of malaria and experiments on its prophylaxis. Cervelletta, a station on the Tivoli Railway, about 8 kilometres from the gates of Rome, is probably one of the most malarial spots in the neighbourhood of the Eternal City. Everyone, without exception, who stays even a short time there during the summer months, contracts the infection. The natives are all anæmic, with large spleens, and are in appearance types of malarial cachexia. There are about 100 inhabitants in the area under observation; half of these live in the wretched reed hovels which are the dwellings of peasants of the Campagna; the other half live in a large and substantially-built farmhouse, dating from the last century. Professor Celli informed the visitors that in the commencement of the experimental observations, that is to say, from March 15th to June 30th, there were in all 21 cases of malaria, 12 of quartan, and 6 of the benign tertian type, but only three of æstivo-autumnal malaria, and these probably cases of relapse. From July 1st onwards to the summer and autumn the type of disease underwent a complete change and malignant infections predominated greatly, quartans and benign tertians being relatively few. The following are the figures:

	Æstivo-autumnal.	Benign Tertian.	Quartan.
July	10	3	0
August	26	7	1
September ...	18	3	1
October	10	2	3
November ...	2	1	0
December ...	0	0	0

Professor Celli and his accomplished wife make a daily visit to this station, and record meteorological and microscopic observations of the blood. He gave some interesting and important information bearing on the prevalence of malaria in the district and its relation to the different genera of mosquito, *Anopheles* and *Culex*. All the employees on the Tivoli Railway have been personally examined by Professor Celli; those who have been protected by mosquito nets have enjoyed an absolute immunity from malarial disease, those who have not been so protected have all suffered. One interesting instance the visitors had an opportunity of personally examining. A small house near the station is occupied by a surfaceman, his wife, and child. Since the construction of the railway ten years ago, with the exception of this woman and her child, every occupant—and there have been many—of this house has suffered severely from malaria. In consequence of his duties taking him abroad at night the surfaceman himself has suffered from malaria, but the door and window of the cabin all through the malarial season have been carefully guarded by mosquito nets, and to this fact the woman confidently attributed her immunity and that of her child.

Close to the station there is a puddle of stagnant water which was probably formed during the construction of the railway. Professor Celli sent his servant with a net and bottle to collect *Anopheles* larvæ; in a few minutes abundant evidence of their presence in the puddle was collected. Here and there throughout the Campagna similar puddles, each with a stock of *Anopheles*, can readily be found. A circumstance, which is probably in direct relation with the peculiar abundance of malaria in the Campagna, is worth recording. The water supplying these pools evidently comes from the volcanic region of the Alban Hills, and its temperature during the cold months is considerably above that of the atmosphere, and thereby undoubtedly favours the multiplication of these dangerous insects. It is six months before rain affects the level of the water in the Campagna, this time being occupied probably in the passage of the rainwater through subterranean passages where it becomes heated.

It would seem that *Anopheles* during the warm season is capable of producing five generations in one season, 40 days being the time occupied from *ovum* to *imago*. Alongside the station were considerable numbers of eucalyptus trees. Professor Celli being asked his opinion about their prophylactic value, replied that it was *nil*. On the contrary, the eucalyptus foliage affords an excellent shelter for *Anopheles*. Such cold as occurs in the Campagna during winter does not kill the *Anopheles* larva; it merely checks its development. It seems, therefore, that *Anopheles* may hibernate both in the *imago* and in the larval forms.

The large farm in which Professor Celli's laboratory is located with its 50 occupants has not yet been protected by mosquito netting, but when the knowledge of the epidemiology of the local malaria is complete, attempts will be made to protect the occupants from infection, the result of which will be awaited with great interest. This farm supplies an admirable illustration of the power of knowledge to give protection in disease. The farmer is a Lombard, a man evidently of enterprise and energy. In common with his neighbours, who are also Lombards, he brought with him a herd of Lombard cattle. The cattle were allowed to graze in the neighbouring pastures, and a large proportion of them sickened and died from the hæmoglobinuric fever of cattle (Texas fever). They contracted the sickness from inoculation by the ticks which are common in the pastures. When Professor Celli showed the farmer the nature of the disease which was decimating his herd, and pointed out the means by which the germ was introduced, he removed the cattle during the summer months from the pastures, and confined them to the stables. Here they were no longer bitten by the ticks, the blackwater disappeared, and the cattle are now a thriving and profitable herd. His Lombard neighbours who have not had the benefit of Professor Celli's advice still suffer from loss of cattle due to this disease. The native cattle are immune, as in all other regions in which the disease occurs.

On the road to Tivoli there is a large spring of water strongly impregnated with sulphur, called the "Acque albule." For a little distance around the spring there is no malaria. This undoubtedly is due to the fact that, although *Culex* can thrive in the sulphurous water, *Anopheles* cannot do so.

It is satisfactory to record that the importance of these labours of the Roman malariologists is beginning to be appreciated by the Italian Government, the railway companies, and other large commercial bodies. The results obtained by Professor Celli on the Tivoli Railway are so encouraging that the directorate have determined to extend the system of mosquito net protections to all the houses of their employees along the line. The Adriatic Railway, on a line 1,500 kilometres in length, with 6,417 employees, spent in one year on quinine, in hospital treatment, and in loss of service in connection with malaria, no less a sum than 1,050,000 lire (£42,000), and they are determined, on purely commercial as well as philanthropic grounds, to enforce a mosquito prophylaxis next year. The means suggested include Professor Celli's system of mosquito net protection, fumigating the houses, and the prophylactic use of euquinine and methylene blue. If the experiment proves successful, the railways all

through the malarial districts of Italy, Sicily, and Sardinia will doubtless follow suit. It may be hoped that India and our malarial colonies in East and West Africa will not lag behind in the practical application of the mosquito-malaria theory.

In Professor Celli's laboratory, as in that of Professor Grassi, the British visitors were struck by the simplicity and, indeed, crudeness of the apparatus and methods by which these important results have been obtained.

Demonstrations in the Institute of Hygiene.

Professor Celli showed experiments at the Institute of Hygiene with certain insecticide and larvicide substances which have been suggested as prophylactics against *Anopheles*. The insecticides are intended to destroy such mosquitos as may find their way into a room before the mosquito nets have been spread in the afternoon, or later through imperfections in the net. The larvicides are intended to be used for the destruction of mosquito larvæ and pupæ in pools and ditches. Two preparations seem to be particularly in favour both as insectides and as larvicides—cinneraria and an aniline body of German manufacture known as "Larvicide III." As neither of these preparations is toxic to domestic animals or to plants they can be used freely in the neighbourhood of drinking ponds and pastures, Professor Celli placed some larvæ of *Anopheles* in infusion of cinneraria; others in solution of "Larvicide III." In the course of an hour all the larvæ were dead. There is some idea that good might result from extensive planting or sowing of cinneraria in and about the haunts of *Anopheles*. "Larvicide III" is equally, if not more, active as a poison to *Anopheles*, but the cost of the preparation would interfere with its employment on a large scale.

When either of these substances is used as an insecticide it is mixed with a little nitre and ignited. This mixture burns readily, producing a dense unirritating smoke, in which, though man is not seriously inconvenienced, mosquitos rapidly perish. A demonstration was given showing the substance in operation. A large number of *Culex* were liberated in a glass case; into this the insecticide was then introduced and set fire to. As soon as the case became filled with the smoke the insects, which before were lively enough, dropped down dead from the glass walls to which they had clung. Professor Celli informed his visitors that about three teaspoonfuls of powdered cinneraria sufficed to kill all mosquitos in a room of 30 c.m. in capacity. The cost is about one farthing. It appeared to some of the visitors that the use of these substances as larvicides, although giving satisfactory results in the laboratory, is not practicable on a large scale. On the other hand, as an insecticide the fuming of cinneraria, combined with the closing of doors and windows with mosquito netting, is not only a theoretically efficient measure, but is of real practical value.

"Larvicide III" throws off a dense smoke when ignited, filling the air not only with its fumes but also with large flakes of soot, which would probably be found objectionable on the score of cleanliness, and would militate strongly against its general adoption.

Dr. Bastianelli showed some exquisite microscopic preparations of the malaria parasite in *Anopheles*. The series was complete, and include the flagellated body in the lumen of the stomach, the travelling zygote, the sporozoit-filled capsule, and the free sporozoits.

Dr. Dionisi showed the three species of endocorpuscular parasites which he has recently discovered in bats. About 20 per cent. of the bats in some places are thus affected. Morphologically the parasites appear to correspond with the quartan, the benign tertian, and the æstivo-autumnal parasites of man. Unfortunately bats, it seems, do not live in captivity; the full cycle of these parasites, therefore, has not been ascertained, neither are the sporulating nor the gamete phases known.

Deputation to the Minister of Public Instruction.

Before leaving Rome a deputation from the British party waited on His Excellency, Professor Guido Baccelli, the Minister of Public Instruction, by whom they were most courteously received. His Excellency, who is Professor of Medicine in the University of Rome, expressed great interest in the conference which had taken place between the Italian and the British workers. On being asked whether he would be disposed to grant facilities for experiments on the prophylaxis of malaria in the Campagna by British observers, he promised to do all in his power to further this object.

The representatives of the London School of Tropical Medicine then invited Professor Baccelli to be present at the ceremonial opening of the school in the spring. His Excellency graciously accepted the invitation.

PROFESSOR KOCH'S INVESTIGATIONS ON MALARIA.

SECOND REPORT TO THE GERMAN COLONIAL OFFICE.

The *Deutsche medicinische Wochenschrift* of February 1st publishes a second report from Professor Robert Koch on the work of the Malaria Expedition conducted under his direction in the Dutch Indies. The report is dated Batavia, December 9th, 1899. The following is a translation:

The Malaria Expedition arrived, as I have already announced, at Batavia on September 21st, and was able without delay to proceed with its researches. The Chief of the Military and Civil Medical Department in the Dutch Indies, Colonel de Freytag, placed work tables in the laboratory of the Military Hospital at Weltewreden at our disposal, assigned us a military medical officer, Dr. Kunst, as collaborator, and arranged for the supply of research material by sending malaria patients to the military hospital. By the receipt of information from all parts of the Colony and of supplies of gnats, I was posted as fully as possible as to the position of affairs in regard to malaria in the Dutch Indies. For the trouble thus taken by Colonel de Freytag in furthering our labours, the sincere thanks of the expedition are due to him. I am also greatly indebted to Dr. Kunst for the indefatigable zeal with which he assisted us. For the rest the expedition was favoured with the support of the authorities, and in particular of the medical profession; in this connection I feel it my duty to mention with grateful acknowledgment the help given us by Drs. Grijns and de Does of Batavia, Van Haafden of Ambarawa, Vorstmann of Soekaboemi, and Van Barmen't Loo of Tosari.

Decline of Malaria in Batavia.

The first investigations on the malaria cases in the military hospital, and the result of the inquiries addressed to the medical practitioners of Batavia, made it clear that malaria now plays a far smaller part in Batavia than was formerly the case, and than I, from what I had heard and read on the subject in Europe, had presupposed. Not only in Batavia, but in the other principal places in the colony, malaria has in recent times considerably abated. In Batavia itself we were in the course of five weeks able to discover only 30 cases of malaria suitable for the purposes of our research. In other hospitals in Tjimahi, Magelang, and Oenarang, to which also malaria patients had been sent, we found only single characteristic cases. All the other cases—and these were not numerous—were under treatment with quinine, or were already cured of malaria proper, and were suffering only from its sequelæ.

The decrease of malaria was most marked in the colonial army, in which the number of cases has diminished by 50 per cent. in the last fifteen years. This is believed, and with justice, to be partly due to hygienic improvements, such as the judicious care for the health and welfare of the troops, the abandonment of stations recognised as especially dangerous, such as Tjilatjap, and the quartering of recruits fresh from Europe in the healthiest possible garrisons.

With regard to Batavia itself, it is believed that a marked influence is to be ascribed to improvement in the drinking water supply, but there is no warrant for this belief. The city has certainly, by means of artesian wells which have been recently bored, obtained a drinking water which is quite free from infective material, and as a consequence of this dysentery has almost disappeared from Batavia. But this can have no influence on malaria, as in the malaria-haunted harbour of Batavia, at Tandjonk Priok, which is surrounded by marshes, it has not abated, although that district also gets its water from artesian wells.

The Gratuitous Supply of Quinine.

Among the factors which I am convinced have had a special influence in bringing about the abatement of malaria here, I

consider that the gratuitous supply of quinine to the people should be included. To what an extent this has been done may be estimated from the fact that during the last ten years an average of 2,000 kilos. of quinine have been supplied from the State drug store of Batavia. Part of that amount has served for the treatment of the troops, but by far the larger part has been distributed gratuitously to the civil population, especially the natives. In the year 1899 up to the beginning of October 2,394 kilos. of quinine were consumed. Countless foci of malaria which might have been productive of mischief by transmission of the disease to healthy persons must by this means have been annihilated. Especially has this been the case in the European settlements and their environs, where quinine was distributed in largest quantity.

The gratuitous supply of quinine is in any case a measure well worthy of trial, and all countries infested with malaria cannot be too urgently recommended to follow the example of the Dutch East Indies as soon as possible.

Malaria not Transmissible to Apes.

The clinical material so scantily procurable in Batavia was not sufficient for exhaustive etiological researches, but it could be used for the solution of another important question, whether malaria is transmissible to animals. In the Malay Archipelago opportunities, which are scarcely to be had elsewhere, are afforded for experiments on animals most suitable for the purpose, inasmuch as they resemble man, namely, the higher apes. I accordingly procured partly by purchase, partly by loan—three ourang-outangs, and three specimens of hylobates agilis, and one of hylobates syndactylus, and on these animals I made as many infection experiments as possible. They received injections of malarial blood drawn from patients suffering from tertian and tropical fever. But, in spite of all endeavours, we did not succeed in conveying malarial infection to these apes. Thermometric observations were regularly made, and during each rise of body temperature the blood was examined, but the periodical fluctuations of temperature so characteristic of malaria never occurred, and malaria parasites were never found.

If even the higher apes are insusceptible to human malaria, as is proved by these experiments, it cannot well be supposed that other animals more remote from man can harbour human malaria parasites in their blood. Man therefore remains the only bearer of this parasite—a fact of the greatest importance in regards to the prophylaxis of malaria.

Malaria and Rice Fields.

Among the places in Java which at the time were more affected with malaria than Batavia, only Ambarawa came under our observation, as there is a military hospital there, and the accommodation necessary for microscopical work was available. As after a somewhat long stay in Batavia, and in spite of the oncoming of the rainy season, malaria did not increase, we began our journey to Ambarawa on October 28th, and on the way we were able to pay a short visit to several health stations which were used particularly for convalescents from malaria.

Ambarawa is situated in mid-Java, to the south of the well-known seaport Semarang. Adjoining Ambarawa are two fortified places, Fort Willem I and Banjoe Biroe, which together have a garrison of a little more than 2,000 men. Formerly recruits used to be sent by preference to Fort Willem I, and then the troops suffered severely from malaria. But since only older soldiers have been sent thither, the state of things has greatly improved.

In the space of two weeks we were able, in spite of diligent search, to discover only 21 cases of actual malaria, of which 11 were newly infected. Nevertheless here the conditions were as favourable as possible for the development of malaria. The district of Ambarawa, which is inhabited by more than 80,000 persons, has the form of a deep cauldron-like valley, surrounded by several active volcanoes, with intervening hills. In the bottom of the valley, which also appears to be the crater of an extinct volcano, there is an extensive marsh about 4 5 kilometres in length and breadth. Water plants, which grow with tropical luxuriance, cover it almost completely and only here and there are small clear spaces of water to be seen. Where the natural marsh ends there artificial marsh-making begins, as everywhere, where it is possible, ricefields with artificial irrigation are laid out.

Rice culture has insinuated itself even into the recesses of the hills, and it climbs upwards, particularly on the Oenarang Mountain above Ambarawa. It was therefore improbable that there should be so little malaria here as we were able to find.

Children as Tests of Malarial Prevalence.

But how was one to learn the peculiar malarial conditions of this region? As it was possible that we had here to do with a population which in the course of time had acquired a certain degree of immunity, and as from my own researches in East Africa I knew that children are particularly susceptible of malarial infection, I determined to examine a large number of children, in a place which appeared especially favourable for malaria. For this purpose we chose a village lying island-like almost wholly in the swamp, and to which we had to go in boats. In this village we found the adults apparently healthy, and they stated that they suffered little or not at all from fever. But among 86 children whose blood was examined for malarial parasites in 8, that is, 9.2 per cent., parasites were found; of the children under 1 year of age 16 per cent., and of those above that age 4 per cent. were malarious. Thus malaria was proved to be present in the population in a previously unexpected proportion. The rapid diminution in the frequency of malaria with increasing age can be explained only in this way: that men in these malarious regions where they are constantly exposed to infection go through it in early youth, and if they do not succumb to it acquire a greater or less complete immunity. In harmony with this is the empirically-known fact that recruits from those districts very seldom suffer from malaria, while recruits from Europe and from the almost non-malarious island of Amboina hardly ever escape infection. The older men, however, show a certain power of resistance.

After arriving at this interesting result we extended our researches to the other villages of the Ambarawa Valley. We began with a large village lying close to the edge of the swamp. Here, of 141 children, 18 were malarious—that is, 12 per cent. (under one year 15.5 per cent., over one year 7 per cent.). Then followed a third, lying high on the edge of the valley (about 1,000 metres above the sea and about 500 above Ambarawa, on the Oenarang Mountain). In this village, among 189 children examined, 43—that is, 22.8 per cent.—were found with malaria parasites (under one year 41 per cent.; above one year 14.6 per cent.).

To the results of these researches I attach great importance. In the first place, they have placed in our hands a method by which one may in the shortest time obtain an absolutely trustworthy knowledge of the malaria conditions of a population. Moreover, they afford a plausible explanation of the fact that the children of Europeans in the tropics, where malaria exists more or less everywhere, thrive so ill; namely, that in regard to malaria they are obviously in a much more disadvantageous position than native children born of immune parents; when the latter become infected with malaria, they have it in a milder form than the highly susceptible European children. Finally, the prophylaxis of malaria, as far as it has to do with diseased men, may derive the greatest advantage from this discovery.

In the Ambarawa Valley, therefore, we learnt how to recognise a population radically infected with malaria; the next step was for purposes of comparison to make similar investigations in a region free from malaria. Such a locality was indicated to me in Tosari situated in the Tengger Mountains at an altitude of 1,777 metres. Another reason for visiting Tosari was that it is the only place in Java where no mosquitos are to be found, while, nevertheless, cases of malaria are met with there.

On November 26th, we arrived at Tosari, and on the 28th we examined 82 children of ages up to 2 years. In not a single one of those children did we find malaria parasites. From this it could be inferred that malaria is not present in the Tosari region in an endemic form, and yet we were able to convince ourselves that malaria is not entirely absent in Tosari. We came across an adult man who had been ill for sixteen days, and had consequently become very weak. Malaria parasites were found in his blood. This patient, however, about twelve days before the beginning of his illness, had gone down from the mountain to the coast, and had stayed a night in Passoeroean, where malaria is endemic.

Here he must have become infected, since, although he left the malarious region the next day, the disease had come on after the usual incubation period. As the result of further inquiries, we found that such cases are not infrequent, but they never occur except in persons who go down to the plain and there contract malaria. As we were able to satisfy ourselves that there are no mosquitos in Tosari, the conditions are perfectly analogous to those which I had formerly met with in the Usambara Mountains of East Africa, that is to say, a mosquito-free region without endemic malaria, but with sporadic cases introduced from without.

The climatic and telluric conditions of the Tengger Mountains form a complete contrast to those of Ambarawa: here natural and artificial swamps and numerous mosquitos; there a dry climate with little water, no rice cultivation, and no mosquitos.

It appears also that it is to these conditions far more than to its high altitude that the absence of malaria in Tosari is due, for in Poespo (630 metres high), which lies more than 1,000 metres below Tosari, we did not find among 35 children a single one with malaria. Like Tosari, Poespo has no rice fields, and scarcely any mosquitos. At least, we did not succeed in obtaining a single specimen.

As the examination of children had in both these cases shown itself so valuable a means of determining the malaria conditions of a region, on the way back from Tosari to Batavia we collected preparations of children's blood at different places, such as Oenarang, Magelang, Sindanglaia, and Soekaboemi, which are of special interest as health stations. Blood from children was also obtained on the following days in villages adjoining the notorious Tandjong Priok. I can only report on the results of these last-mentioned researches later, as the examination of the abundant material—nearly 1,000 specimens of blood—will take a considerable time.

In connection with this subject I think it right to mention that in these extensive examinations of the children of natives we never met with any opposition from the people, as would certainly have been the case in other regions. One does not know which to wonder at most, the ready compliance of the people or the authority of the ruling powers and the righteous manner in which it is used. For instance, in Soekaboemi 780 children were brought to us, of whom we selected about 200 who appeared especially suitable. Many mothers had come a great distance and were dismissed only after long waiting; nevertheless all went in the most peaceful and orderly manner, mainly because the Patti, the chief native official, was present and exerted the great influence which these officials have over those under them.

Mosquitos and Malaria.

One of the objects of the Expedition was to test how far the oft-repeated assertion, that there are places in Java where there are no mosquitos while nevertheless malaria occurs, is well founded. For this purpose I obtained information from many old and experienced practitioners; Colonel de Freytag instituted an inquiry among the military medical officers, and I succeeded in getting the question brought before the Medical Society of Batavia. But no one could point to a malarious district in Java where there are no mosquitos. All previous statements to this effect are found on close examination to be erroneous. Where no mosquitos were said to have been met with, they were found after more careful search in small and often in large numbers. These statements clearly come from persons who have formed an opinion only on hearsay evidence, without taking the trouble to look for themselves, or who have not known how to find the mosquitos. In several places where it was said that there were no mosquitos, or very few, we were able after a brief search to collect a large number, among them the suspect *Anopheles*.

The only region which is actually free from mosquitos but not from malaria is the Tengger Mountain with the Tosari and Poespo districts. The state of things in these places, however, has already been fully described.

These researches have therefore brought to light nothing against the so-called mosquito theory; on the contrary, they have supplied a complete confirmation of the law: Where there are no mosquitos there is no endemic malaria.

Anopheles and Rice Fields.

As regards the mosquitos themselves, I have by my own collections, but principally through consignments sent by military surgeons by permission of Colonel de Freytag, procured very abundant material for research, which has already in part been dealt with. At present I can only state that the mosquito fauna of the Dutch East Indies is of a very multifarious character. Of *Anopheles* alone I have obtained at least five different varieties. Apart from some few kinds of mosquitos the larvæ of which live in the water reservoirs in the immediate vicinity of houses, the occurrence of mosquitos in Java is connected with the extension of rice culture. The more rice fields there are in the neighbourhood of a place and the nearer they are, the greater is the abundance of mosquitos there. This holds good especially in regard to *Anopheles*.

We did not succeed in finding the *Anopheles* larvæ themselves in the rice fields, but the conditions of water and soil here are such that they find the conditions suitable to them only on these artificial marshes.

In any case, if the proposal recently made to destroy *Anopheles* larvæ is carried into effect, it will meet with insuperable difficulties in Java.

Neither did we succeed in the numerous *Anopheles* and other mosquitos which were found in malarious districts, for instance in Tandjong Priok, in finding the known coccidia in the stomach or the crescent germs in the poison glands. They are absent always in the kinds of *Anopheles* which have sucked blood with malaria parasites, and especially with those of the semilunar form.

Forms of Malaria in the Dutch Indies.

It is noteworthy, however, that in the Dutch East Indies we met with no other forms of malaria but the three already known—quartan, tertian, and tropical fever. It is a remarkable fact that the more dangerous tropical fever occurs here considerably less frequently than in other tropical countries, especially in tropical Africa. Among 51 cases of malaria in Batavia and Ambarawa they were 8 per cent. of quartan, 45 per cent. of tertian, and only 47 per cent. of tropical fever. In East Africa, on the other hand, there were 89 per cent. of tropical fever, and in West Africa it seemed to be in still larger proportion. In the district of Ambarawa the quartan fever is particularly frequent.

Blackwater Fever.

Blackwater fever appears to occur seldom here; I have only seen one case, which was in the stage of convalescence. In that case the onset of hæmoglobinuria was undoubtedly brought about by a subcutaneous injection of quinine which had been given shortly before.

Sanatoria for Malaria.

I may conclude with a few remarks on the sanatoria for malaria which exist here. We visited a number of these—namely, Soekaboemi, Sindanglaia, Oenarang, and Tosari. Buitenzorg, which is also a health station, may be counted among them. About Salatiga I have obtained information by letter.

Buitenzorg is the lowest in situation (263 metres); then follow Oenarang at 500 metres, Salatiga at 580, Soekaboemi at 602, Sindanglaia at 1,074, and Tosari at 1,777. In all these places, even in Tosari, imported cases of malaria are met with, and convalescents relapse even after many weeks. The altitude climate, therefore, gives no protection against the disease, nor can it prevent relapse.

In none of these sanatoria is the cure of malaria left to the sole influence of the climate, but it is vigorously treated with quinine. From my previous researches I have formed the conviction that altitude has no specific effect on malaria parasites; this conviction has been strengthened by these observations. Nevertheless, I consider the sanatoria very useful institutions, which may be of the greatest service to convalescents from the most diverse diseases, and to soldiers in poor health.

The Expedition Proceeds to Dutch New Guinea.

As I believe that the Malaria Expedition has fulfilled the purpose for which it came to the Dutch East Indies, it will proceed to Dutch New Guinea by the next ship, which sails on December 12th.

NOTES

ON

THE PART PLAYED BY INSECTS AS CARRIERS OF INFECTION.

THE LIFE-HISTORY OF FILARIA BANCROFTI IN THE BODY OF THE MOSQUITO.

I DESIRE to call attention to the latest experimental researches on the life-history of *Filaria Bancrofti* (Cobbold) in its intermediary host the mosquito, and to make some remarks on them. These researches are due to Dr. Thomas L. Bancroft, of Devastation Bay, Queensland, whose last publication was communicated to the Royal Society of New South Wales in June last.[1] The facts given by this accomplished observer as a result of his experiments are very interesting and important. Though they confirm those of previous observers, of Manson particularly and of myself, as to the passage of the embryo filaria from the blood of man to the body of the mosquito, and strengthen Manson's theory that the mosquito is the intermediary host of the parasite, yet they tend to modify this in one respect. According to Bancroft the parasite, instead of passing through a stage of free life in water by which it would be reintroduced into the human body, may pass directly from mosquito to man, either in the act of haustellation or by being swallowed together with the intermediary host. The results of Bancroft's experiments point very clearly to the possibility of the truth of one or other of these hypotheses. But to ascertain the truth it still remains to be proved, as Bancroft observes, that the young filaria which is the last stage of the metamorphosis of the parasite in the body of mosquito (Manson's the sixth stage) becomes sexually mature when introduced into the human body.

The chief novelty in Bancroft's experiments is that by prolonging the life of the insect by feeding it with banana he has succeeded in rearing the parasite to the last stage of its metamorphosis in mosquito (*Culex ciliaris*, the house mosquito of Australia) fed with filariated blood. He thus secured the time necessary for the accomplishment of the complete metamorphosis which, he states, is in favourable conditions of temperature at least sixteen or seventeen days. Previous observers had thought that only seven days were required. Indeed, it was formerly believed that the duration of the natural life of the mosquito was within this latter time-limit and that the mosquito fed on blood only once in its short life. It now appears, however, that the filariated mosquitos which have yielded previous observers this last stage of the parasite must have attained a greater age and must have fed several times.

The idea of feeding captured mosquitos so as to prolong their lives and the period of experiment is not quite new, for Ross had previously done this in his experiments on rearing the *Proteosoma* of birds.[2]

Bancroft has thus been led to modify Manson's theory on the life cycle of filaria by excluding the passage of the parasite through water and suggesting direct infection from mosquito to man, in the same manner as Bignami, in 1896, had modified Manson's theory concerning the parasite of malaria. Whatever the value of this modification may turn out to be, to Bancroft belongs the merit of having cleared up one part of the life-history of *Filaria Bancrofti*: (1) By demonstrating that the embryo filaria in the last stage of its metamorphosis in the body of the mosquito is not capable of very prolonged free life in pure water; (2) by the conjecture that the cycle of life is more simple than that previously suggested by Manson; and (3) by ascertaining that *Culex ciliaris* is, at least in Australia, a very efficient—perhaps the only efficient—intermediary host of the parasite.

In my last paper on experiments in Egypt on the life-history of this parasite,[3] I reported that in October, 1883, I succeeded on one occasion in obtaining the final stage of the metamorphosis of the embryo filaria in *Culex pipiens*, or in a *Culex* very akin to it, captured in the house of a filarious woman in Cairo. I noted that I could not fix in any manner at what distance of time this mosquito had imbibed the filarious blood. I then inferred, according to Manson's theory, that *Filaria sanguinis hominis* (Lewis in Egypt) must have for its intermediary host *Culex pipiens*, or an allied species; but that in Egypt it was at least probable that the metamorphosis of the embryo filaria in *Culex* was accomplished only in the month of October, having never met the last stage in my experiments in the other months of the year. This I suppose depended on peculiar circumstances of temperature and humidity, which were not commonly met with in other months of the year.

Bancroft gives some details in which his observations differ from those of others who have worked at this subject. I will not dwell on all of them, because they are not of great importance: but on one, the ecdysis of the peculiar sheath with which the embryo *Filaria Bancrofti* is provided when in the blood of man, I must make a few remarks. Manson, who believes that the embryo undergoes this ecdysis as soon as it has arrived in the stomach of the mosquito, ascribes great biological importance to it on the ground that it is in accordance with the final destiny of the parasite. I would refer those who are unacquainted with Manson's theory on this point, and with the observations and experiments corroborating the theory, to the original article in the BRITISH MEDICAL JOURNAL of April 15th, 1893, or to Manson's article on the Filariæ in Davidson's *Hygiene and Diseases of Warm Climates*. Bancroft is not disposed to endorse Manson's views on the ecdysis of the filaria in the mosquito because he has been unable to satisfy himself that the embryo filariæ cast their sheaths before leaving the insect's stomach. Bancroft states that the filariæ when seen in the insect's thorax appear to have lost the long collapsible sheath; but he adds that the sheath may have shrunk or may have been filled out by the worm, which has grown longer and thicker; and adds that the tail of the worm is peculiar in these early stages, and that this peculiarity may possibly be due to retention of the sheath.

Although I cannot reconcile myself to the teleological view of Manson as explaining why it happens that the embryo filaria re ains its sheath while it is living in the human blood, and abandons it as soon as it enters the mosquito's stomach, yet I am not at all inclined to accept Bancroft's conclusions against the facts of ecdysis observed by Manson and described by him with painstaking detail.

Above all, Bancroft's arguments are all rather of a negative than of a positive character, and are therefore not sufficient to disprove what has been observed by so accurate and scrupulous an observer as Manson. I was, moreover, already disposed to accept the ecdysis of the embryo filariæ, as it helped to explain a fact observed by me in some slides of filarious blood, in which, as I had announced in 1882,[4] I had remarked on several occasions the presence of a histological element resembling a cast of an embryo. This was a simple amorphous membrane, which corresponded in length to that of the embryo, although greater in diameter. At that time I supposed that this form of ecdysis was a normal feature in the life of the parasite while in the circulation. It may be that my slides had undergone a process of chilling in the night, as in the case of Manson's experiments for procuring artificial ecdysis; but it is also possible that with time ecdysis may happen even after the simple cooling of the blood abstracted from the human body and exposed to the air. Having observed these empty sheaths only exceptionally, I now believe that it is more probable that they are the results of an ecdysis accomplished out of the human body according to Manson's observations than within it, as I first thought. I must add that when I was in London in May, 1893, Manson was kind enough to show me some of his experiments on chilling filariated blood. I can assert that I then verified for myself all the facts as to artificial ecdysis described by him. In this discrepancy about the ecdysis I am convinced that Manson is in the right, and that Bancroft has been too hasty in arriving at a contrary conclusion.

I share entirely Bancroft's opinion that man is generally infected by a good number of specimens of *Filaria Bancrofti*, and I agree with him, as I have already hinted in my last publication,[5] that the number of embryos found in a drop of

[1] *Journal and Proc. of the R. Society of N.S. Wales*, vol. xxxiii. and *Journal of Tropical Medicine*, January, 1900.

[2] See Laveran's article in *Janus*, 1899, p. 170.

[3] *Giornale della R. Accademia di Medicina di Torino*, 1884, p. 376-79.

[4] *Medical Times and Gazette*, 1882, May 27th, p. 554.

[5] *Giornale della R. Accademia di Medicina di Torino*, 1884, p. 374.

blood is some criterion of the number of adults in the subject of the infection. If the embryos are scarce it is likely that there are few adult females, but if plentiful it is probable there are many females.

Bancroft is correct in stating that it is not known how long the embryo filaria lives in the human blood; he thinks that probably it may survive for several months. I do not know the grounds on which Bancroft bases his belief, and I must adhere to the opinion expressed in my paper already cited, that its life must be shorter—a few days only; otherwise in those subjects of filariasis who do not suffer from loss of lymph or blood the number of the embryo filariæ would necessarily increase in a notable way every few days. Such an increase has not happened in the patients under my observation.

The first patient in whom I discovered this form of parasitism in Egypt in 1874, to whose case I have referred in several publications, was a native Jewish boy, then 15 years old. He always presented only a very few embryo filariæ in his blood, even during the hours of rest, and he had never suffered any disturbance of the nature of lymphorrhagia, nor any other symptoms that might with certainty be referred to filarial infection. I followed him for ten years, visiting him from time to time, and I saw him again when I returned to Egypt in 1897 after twelve years' absence. I can thus say that 23 years after my first detection of the embryo filariæ, I found him in very much better health, but still with embryo filariæ in his blood, although perhaps in even smaller numbers than formerly. This improved condition was, perhaps, ascribable to his being entirely free from the hæmaturia due to bilharzia, to which he was subject during a long course of years in youth. It is probable that in Morad Dayan, for such is his name, the number of adult filaria with which he has been infected was large, and that some of them with time had died without giving him special trouble and without reinfection having taken place.

Bancroft says that the adult worm probably lives several years. This is generally the opinion entertained among helminthologists. I think that there is no observer who can invalidate or contradict this conjecture by positive facts. It is generally known that there are many filarious individuals who remain filarious for a long number of years after they have left the place of infection and have gone to a country in which the infection is not known. But this fact in truth is not so convincing a proof of the long life of the adult filaria as may seem at first sight. In fact, wherever there is *Culex pipiens*, or *Culex ciliaris*, or other species of the same genus of mosquito capable of acting as efficient intermediary host, reinfection may take place.

Culex pipiens and its allied species are so widely distributed that I do not know that there is any case of a filarious individual having lived a great number of years constantly in a country where *Culex* is absent, so as to be assured that the persistence of the embryos in the blood is due to the prolongation of the life of the adult filaria of the original invasion, rather than to reinfection. On what grounds Bancroft conjectures that provided a filariated subject could prevent reinfecting himself it is very likely that in the course of five years he would be entirely free from the parasite, he does not say, neither do I understand.

Notwithstanding my criticism upon certain particulars of Bancroft's paper, I would say in conclusion that helminthologists must be grateful to this accomplished observer for work which has really advanced our knowledge of the life-history of *Filaria Bancrofti*.

Pisa, Italy. Professor P. Sonsino.

MALARIA AND MOSQUITOS.

Practical Guide to the Destruction of Mosquitos.

The Liverpool School of Tropical Diseases has just issued a pamphlet entitled *Instructions for the Prevention of Malarial Fever for the Use of Residents in Malarious Places*. Within the compass of fourteen pages it sets forth in concise terms which cannot fail to be understood facts of practical importance concerning the parasitic nature of malarial infection, its connection with a special kind of mosquito, and the means which hold out the best hopes of ridding a house or a neighbourhood of these insects and of the malaria which they are believed to convey.

The readers of the British Medical Journal are well acquainted with the course of reasoning, observation, and experiment which has led to the conclusion that the malarial parasite is carried by the mosquito of the species *Anopheles*. What we now require, and what we confidently hope to see, is that the methods recommended for the destruction of *Anopheles* should be thoroughly put into practice in some decidedly malarious town or district. The difficulties in the way of carrying out such a crucial test are undoubtedly great, for the destruction of *Anopheles* and their larvæ, and the clearing out of the pools in which the eggs are laid, can only be effected by conscientious and intelligent endeavour, either on the part of many individuals in the community or of some one armed with the necessary powers.

In a community in which natives form the great bulk of the population, it is obvious that intelligent co-operation on a large scale can hardly be looked for, and it may be some time before a large settlement can be induced to appoint a trustworthy official with an adequate salary who can be given a free hand to take whatever measures may be called for to bring about the end in view. In the meantime, however, much may be done by individuals to rid their houses of these pests, and the tract published by the Liverpool School of Tropical Medicine will inform them how they can best employ their energies in this direction. The authorities of the school, with praiseworthy public spirit and liberality, are about to send copies of the tracts to all parts of the world, and it should need no pressure to induce residents in malarious regions to adopt the simple measures indicated to rid their houses of the unwelcome mosquitos with which they are infested, a result which in itself would be worth taking some trouble to attain.

Though no name appears on the title page of the pamphlet which has given occasion for these remarks, its authorship is an open secret, and it proves that the distinguished investigator who has done so much to throw light on the origin of malaria possesses a lucidity of style which is scarcely less remarkable than his brilliant powers of investigation. The pamphlet, which is issued from the Liverpool University Press, and has been designed and prepared entirely in Liverpool, is stated on the title page to be memoirs of the Liverpool School of Tropical Diseases.

COLLECTION AND DIFFERENTIATION OF MOSQUITOS AND THEIR LARVÆ.

Captain S. P. James, M.B., I.M.S., contributes to the *Indian Medical Gazette*, December, 1899, a criticism of the instruction issued recently in a pamphlet from the British Museum, and gives many practical points as to the collection and identification of *Anopheles* and their larvæ. He recommends that adult mosquitos should be captured by merely placing the mouth of a test tube or small bottle over the insect as it rests on the walls or curtains. Mosquitos caught in this way may be killed by a few whiffs of tobacco smoke or a drop of chloroform.

When going to search for mosquito larvæ, Captain James takes an ordinary white saucer and several wide-mouthed bottles. On finding a pool in which *Anopheles* larvæ are to be seen, the saucer is scooped underneath the larvæ, and the contents transferred to one of the bottles. The mouth of the bottle is now covered with a piece of coarse muslin, and the development of the larvæ to the perfect insect is found to take place in a day or two. The four stages of the metamorphosis of the mosquito (*Culex*) may be seen in any barrel of water standing near a habitation in the tropics:

1. The raft-like nest of eggs is to be seen floating on the surface.
2. The larvæ of the mosquito floating below the surface with the head down.
3. The pupæ of conical shape floating with its head upwards.
4. The perfect mosquito resting on the water before taking flight.

Anopheles do not breed in barrels or tubs of water, but in pools of stagnant water in fields or open areas, and even in the water in rice fields, in the furrows of a potato field, or in the pools left by rain in newly-turned-up soil.

Captain James states clearly the well-known difference between the larvæ of the *Culex* and *Anopheles* as they lie in

water. The former have their heads downwards, whilst *Anopheles* larvæ lie parallel to the surface of the water, looking like little bits of brown stick or thorns floating on the surface.

Captain James describes also the "filaria-carrying" mosquito and its larvæ, although he does not venture to assign to it a specific name. The malarial-bearing and the filarial-bearing mosquitos are, however, capable of being distinguished from each other and from the innocuous forms of the *Culex* species. He is of opinion that the extermination of disease-provoking mosquitos will not prove so simple a matter as many would have us believe.

FLEAS AND THE PLAGUE.

IN October, 1898, Dr. P. L. Simond published in the *Annales de l'Institut Pasteur* a paper in which he argued that the infection of plague, as conveyed from rat to rat and from the rat to man, was effected by means of the flea's parasites on the rats. Professor Bruno Galli-Valerio, of Lausanne, has recently disputed this theory,[1] on the ground that Dr. Simond failed to distinguish between the *Pulex irritans* which attacks man, and the *Tyvhlopsylla musculi* and the *Pulex fusciatus* which attack rats and mice. Dr. Galli-Valerio does not deny that Dr. Simond was able to cause plague in rats by inoculating them with the fleas filled with the blood of rats which had died of plague. This was done by Ogata in 1897, but this is very different, he contends, from experimental proof that the fleas of rats and mice transmit the disease to man. As a matter of fact, from a number of his own observations Professor Galli-Valerio was unable to get the flea of the rat to bite his skin, and thinks that when removed from its natural host it does not bite.

PROTECTIVE INOCULATION AGAINST TICK FEVER.

DR. Ashburton Thompson, the Principal Medical Officer to the New South Wales Government, has submitted a report by Dr. Frank Tidswell relating to some further observation on protective inoculation against tick fever. In his first report Dr. Tidswell pointed out, among other things, that inoculation gave protection against a second attack of illness when the attempt to excite it was made within a few weeks of recovery from the first attack; that the protection afforded by a single attack was transitory, whether it had been excited by inoculation or by exposure to virulent ticks in the field; and that the approximate duration of the protection given by a single attack had never been fixed.

The present communication is made in continuation of that report. Further experiments were made on three cows which had suffered severely from inoculated tick fever, caused by inoculating 10 c.cm. of virulent blood into each. After their recovery each was put to the test of further inoculation by doses of 50 c.cm. and 100 c.cm., which they resisted without any appreciable effect, whereas the injection of 10 c.cm. into a clean cow caused a smart attack of the fever. It was on these tested animals, insusceptible to a further attack at the time, that three months and a half later further experiments were made. They were placed in a well-grassed and watered paddock which was known to be grossly infected by virulent ticks. In a short time the three became infested with ticks in enormous numbers, developed fever, and had a blood destruction greater than that which followed their inoculation. One died, a second had a severe attack, and the third had a slight attack. It appears, therefore, that the protection of inoculation is not effective after three and a-half months. Dr. Thompson thinks that the protection afforded by inoculation is in the nature of tolerance rather than of what is commonly understood by immunity, and, while recognising that further observation and research are required on these points, he thinks, at a time when some practical guide is urgently required by stock owners on the northern frontier near the coast, that the following provisional statements are warranted by present knowledge:

(*a*) Protective inoculation is a valuable precaution against fatal tick fever.

(*b*) The protection it affords is not durable but transitory; it passes off at different dates in animals inoculated at the same time.

(*c*) It is most serviceable when it can be soon followed by continued exposure to the attacks of virulent ticks.

(*d*) If done long before continued exposure to virulent ticks becomes impossible, it must be repeated. The interval which may be safely allowed to elapse cannot be fixed for the present. In view of the need for some advice on this head, and of the expense and difficulty of inoculating large herds, six months may be mentioned as an interval which probably should not be exceeded. If experience shows that the march of the tick can be safely watched until it has got close; then perhaps inoculation might be deferred with a view to doing it but once. But at the least this course must be full of risk. In face of a probable calamity the practical rule should be to inoculate when the tick has arrived within thirty or forty miles, and to be prepared to reinoculate not more than six months later at most if by that time the tick has not reached the threatened herd.

[1] *Centralblatt für Bakteriologie, Parasitenkunde und Infektions-Krankheiten*, January 6th, 1900.

THE PLAGUE.

PROGRESS OF THE DISEASE.

PORTUGAL.

FOR now two weeks in succession there have been no fresh cases of plague and no deaths from the disease at Oporto. In no other part of Portugal are there any cases of plague.

INDIA.

Plague is on the increase in Bombay according to the official returns of January 20th. During the seven weeks antecedent to this date the general mortality increased at almost an average of 200 a week. Influenza and relapsing fever have been added to the ailments during the last week, and the rate of mortality is 136.23. Plague gives the largest individual mortality returns, amounting in all to 428 out of a total of 1,748 deaths; but respiratory diseases are so prevalent and so fatal that they are believed to include many cases of pneumonic plague. In Calcutta 11 fresh cases of plague were recorded on January 12th, and from 10 to 20 cases occur daily. At Secunderabad fears are entertained of an early recrudescence, as rats have been found dead of plague in the market place and in several other localities of the town.

HONG KONG.

Although plague is no longer epidemic in Hong Kong, sporadic cases occurred as late as January 5th.

JAPAN.

The fact that the city of Kobe, in Japan, was severely attacked by plague, seems to have escaped general attention. During December H.B.M.'s Consul states that two cases of plague had occurred within the jurisdiction of the British Consulate. The Japanese have dealt with the epidemic most actively, and general plague inoculations have been freely practised in the infected districts.

HONOLULU.

There seems no abatement of the epidemic in the Sandwich Islands, despite the extreme measures adopted by the local Government.

NEW CALEDONIA.

Fresh cases of plague have occurred in Noumea, not only amongst the native population, but also amongst the European residents.

AUSTRALIA.

There have been no fresh cases of plague in Adelaide, nor have any cases occurred in other Australian ports during the last week.

MAURITIUS.

During the week ending February 1st 7 fresh cases of plague and 6 deaths from the disease occurred in the island.

THE ARGENTINE AND BRAZIL.

At Rosario and Santos plague exists in a mild form. The authorities seem to be active in the measures they are adopting to combat the disease. In Buenos Ayres several supposed cases of plague have occurred, of which 1 proved fatal. An official regulation has been issued in Buenos Ayres prohibiting the foreign ministers and consuls from communicating news regarding plague unless the disease has been officially recognised. At a meeting of foreign ministers, held at the British Legation on January 20th, the British Minister was commissioned to request the Government to explain the meaning of the regulation.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on January 26th.

Dr. DE HAVILLAND HALL, the Chairman, presided, and there were also present Dr. J. B. Ball, Mr. J. Brindley James, Dr. J. Pickett, Mr. F. S. Edwards Dr. M. Greenwood, Dr. Alfred S. Gubb, Dr. W. Knowsley Sibley, Dr. J. W. Hunt, Mr. William J. Stephens, Dr. F. J. Allan, and Mr. Edward Bartlett.

The accounts presented showed that the sickness claims at the end of 1899 were as usual at a much higher rate than in the autumn and summer, but that the total sickness experience of the year was under the amount expected and provided for. A large proportion of the winter claims had been caused

by influenza, but there is reason to hope that the epidemic is subsiding.

The Committee examined special reports on the chronic sickness cases. Nearly 20 of them are now on the books, and from the reports now and previously furnished it is clear that in very few of them the members will ever be able to resume professional work. In such cases the Society allows each member a pension till age 65 of from 150 to 50 guineas per annum.

The auditorship of the Society having become vacant through the death of Mr. H. R. Jennings, the Committee decided that the accounts should be audited for the present by Mr. George Harben, one of the public auditors under the Friendly Societies Act. The election of an auditor will be part of the business of the general meeting of the members in May next.

The Committee heard with great regret that Mr. J. R. Upton, of 14, Austinfriars, one of the original Trustees of the Society, was retiring from professional work and would consequently be unable to act as Trustee for the future. Mr. Upton's great legal experience, combined with his close connection with the medical profession, has made his advice and assistance to the Medical Sickness and Accident Society simply invaluable.

Prospectuses and all information on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

THE R.A.M.C. SOUTH AFRICA FUND.

The Need for the Fund.

As we have already announced, steps have been taken to form a Central Committee in London to send out to South Africa presents of suitable clothing and other comforts for the men of the Royal Army Medical Corps now serving with the force in South Africa. For this purpose contributions in money as well as in kind are asked for.

As some misapprehension seems to exist as to the nature of the duties of the non-commissioned officers and men of the Royal Army Medical Corps, as to their relation to other parts of an army in the field, and as to the way in which they are recruited, it may be well to offer some brief explanations, in view of appeal now being made in their behalf. The corps has an organisation which, like that of, for instance, the Royal Engineers, is entirely independent of the brigade or division with which a detachment may be serving. It supplies men for the service of the hospitals at the base, on the lines of communication, and for the field hospitals, and it supplies also bearer companies, under the command of officers of the corps, in the proportion of two companies to each division. One of these companies is attached to each of the two brigades of which a division is composed. Each division has also three field hospitals attached to it. Each bearer company has three officers of the Royal Army Medical Corps—a major in command and two junior officers (captains or lieutenants). When a brigade goes into action, the bearer company R.A.M.C. attached finds its place immediately in rear of the second line. As soon as the action commences the major in command of the bearer company selects the best place for a collecting station, to which the wounded are brought, and from which they are conveyed in the ambulances belonging to the company to the dressing station, and thence to the nearest field hospital. It is the duty of the men of the bearer company to search out the wounded, to tend them where they have fallen, and as soon as may be to convey them on stretchers, if they cannot walk, to the collecting station. The medical officers of the bearer company of course take their part in the work of tending the wounded, and may readjust the dressings which have been applied by the surgeons in the fighting line, if it appear desirable to do so, before a man is removed to the collecting station. So far the organisation is simple and plain enough; the only complication which may give rise to confusion, and no doubt has given rise to confusion, is with regard to the regimental arrangements. Each regiment or battalion has an officer of the Royal Army Medical Corps attached to it. He goes into action with the battalion, and gives first aid to the wounded. In each company two men (of the battalion) are specially trained to act as stretcher bearers. It is their duty to carry or help their wounded comrades to the collecting station, but they remain part of their battalion, and the present appeal does not contemplate assistance for them, since they will share in the benefits ("comforts" as they are called) supplied to the battalion by the county fund, or by subscriptions collected by ladies connected with the territorial regiment. But the Royal Army Medical Corps has no territorial connection. The men are not the children of any one county, and run the risk of finding themselves "nobody's children," unless the medical profession will mother them. The men for whom help is asked are these men of the bearer companies, of the field hospitals, and of the other less mobile hospitals; but especially for the two first, who have to share every hardship of the fighting force, and of which they form an essential part. The number will amount shortly to nearly 3,000 men, but it will be augmented by men of the Militia and Volunteer Medical Staff, and also by men of the St. John Ambulance Brigade. It is hoped that the contributions received will allow all the fellow-workers to participate (including the Indian dhoolie-bearers who are now with the besieged force in Ladysmith).

Meeting in London.

A meeting of ladies and others who have taken an interest in the proposed fund was held at the house of Sir Dyce and Lady Duckworth, on Monday last, February 5th, to organise a Central Committee. Among those present were Lady White, Lady Russell Reynolds, Lady Douglas Powell, Mrs. Jameson, Mrs. Muir, Mrs. Charlton, and the wives of many medical men in London. The chair was taken by the Director-General of the Army Medical Department, Surgeon-General Jameson, C.B., Q.H.S., who was accompanied by Surgeon-General Muir, Deputy Director General.

Mr. Charters Symonds made a statement of the objects of fund, and pointed out that it seemed only right that the medical profession at home should look after the welfare of the men who were serving under the medical officers of the Royal Army Medical Corps in South Africa. The Committee had resolved to ask for contributions both in money and in kind. He announced that H.R.H. Princess Christian had graciously consented to become Honorary President of the fund, and had named Lady White as her Deputy.

The following ladies were elected Vice-Presidents: The Countess of Coventry, Viscountess Knutsford, Lady Wantage, Lady Rothschild, Lady Georgiana Curzon, Mrs. Jameson, Lady White, Lady MacCormac, Mrs. Church, Mrs. Muir, Lady Broadbent, Lady Duckworth, Lady Douglas Powell, Mrs. Frederick Taylor, Mrs. Barlow, Mrs. Treves, and Mrs. Clutton.

Mr. Charters Symonds was elected Honorary Treasurer of the Fund, and Miss Maxwell-Müller, R.R.C., Honorary Secretary.

The following were elected the Executive Committee of the Fund: The President, Treasurer, and Secretary (*ex officio*), Mrs. Pye-Smith, Mrs. Berkeley Hill, Mrs. Butlin, Mrs. Frank Howard, Mrs. Cole Reade, Mrs. Meredith, Mrs. Charlton, Mrs. Garrett, Sir Dyce Duckworth, Surgeon-General Muir, Mr. Charters Symonds.

Some discussion took place as to what contributions in kind would be most desirable; and flannel shirts and sweaters of khaki colour, cholera belts, knitted helmets, and socks appeared to be considered likely to be most useful. It was decided that all such contributions should be sent direct to the Honorary Secretary, Miss Maxwell-Müller, at the offices of the Fund, 100, Victoria Street, London, S.W.

Votes of thanks to the Director-General for presiding (moved by Dr. Dawson Williams and seconded by Lady Russell Reynolds), and to Sir Dyce and Lady Duckworth (moved by Surgeon-General Muir, and seconded by Lady D. Powell) brought the proceedings to a close.

Proposed Special Subscription.

As the object of the fund is to provide comforts for the non-commissioned officers and men of the R.A.M.C. now at the seat of war, it is obvious that money is required. We shall be most happy to receive subscriptions, and to acknowledge their receipt in these columns. It has been suggested that if every member of the profession were to contribute half-a-crown, the fund

would very soon mount up to a respectable sum, and with this object it is hoped that similar Ladies' Committees will be formed in all the cities and county towns in the kingdom.

Although subscriptions of several or many half-crowns will naturally be eminently useful, yet it is hoped that a large number of small subscriptions representing an equal number of separate subscribers will be sent in, as this will show that the profession as a whole is in sympathy with those who are carrying out, in the mountains and on the veldt of South Africa, the great object of the medical art, namely, the relief of human suffering.

Such subscriptions may, if desired, be sent to the Editor of the BRITISH MEDICAL JOURNAL, and will be forwarded to the Treasurer of the fund. All postal orders and cheques should be crossed "Messrs. Holt and Co.," and made payable to "R.A.M.C. South Africa Fund."

LITERARY NOTES.

AN English translation of Professor Celli's work, *La Malaria secondo le Nuove Ricerche*, published by the Società Editrice Dante Alighieri of Rome in 1899, will be issued by Messrs. Longmans, Green and Co. very shortly. The translator is Dr. J. J. Eyre of Rome.

The substitution of flats and model buildings for separate houses, and the tendency which is manifest at present to build houses of the better class in London in an antique style, are questions of importance in relation to the public health. As Dr. Gee pointed out some little time ago, however artistic such a style of architecture may be, the small windows which accompany many varieties of it are prejudicial to health, as interfering with a due supply of both air and light. The *Leisure Hour* has addressed a series of questions on subjects of this kind to several representative men, and the answers which appear in this month's issue are interesting. Dr. A. T. Schofield, who was one of those whose opinions were invited, says:

> I view the increase of huge blocks of model buildings with considerable suspicion, as by no means fulfilling a high sanitary ideal, save in the better class. Where built they should be set back, so as to give increased width to the street to correspond to the increased height of the building.

He advocates the ventilation of flats by warmed fresh air from a central furnace in the basement, and lays stress upon the dark and insanitary condition of the servants' accommodation in flats. Dr. Schofield undoubtedly touches upon an important question here. Even in the best flats the servants' quarters are small and gloomy as a rule. This is particularly undesirable, considering that as a class domestic servants get little opportunity for exercise in the open air, and that they are so much more cooped up in a flat than in an ordinary house.

Some curious extracts are given in the *Westminster Review* for February from an old book on diet, *The Nature, Method, and Manner of Preparing all Sorts of Food used in his Nation*, by Thomas Muffet, Doctor of Physic in Queen Elizabeth's reign, corrected and enlarged by Christopher Bennet, Fellow of the College of Physicians in London, in 1655. It would appear that our predecessors took no narrow view of the functions of the physician, for Dr. Bennet, in his preface, speaks of "my profession to keep men alive, and when gone to recover and revive them." Little as some of his recommendations conform to modern theories of alimentation, he was evidently deeply impressed with the importance to health of proper diet, though he appears to have been a bit of an epicure to boot. He mentions Galen as one who benefited from dietetic treatment:

> Galen, that famous physitian, who, being three or four times sick before he was twenty-eight years old, looked more strictly afterwards to his diet, in such sort that a hundred years following he was never sick but once, and died only through want of radical moisture. . . . Wherefore, let us neither with the impudent call diet a frivolous knowledge or a curious science, but embrace it as the leader to perfect health.

According to this author "hedghogg's" flesh was much eaten in those days, and he appears to have regarded it as a veritable panacea.

> It nourisheth plentifully, procureth appetite and sleep, strengtheneth travailers, preserveth women with child from miscarrying, dissolveth knots and kernelly tumours, helps the lepry, consumption, palsy, dropsie, stone and convulsion.

Altogether, there is much in these extracts from an Elizabethan treatise on dietetics that is both amusing and interesting.

An article in the current number of the *Cornhill Magazine*, entitled Manners and Customs of Yesterday and To-day, refers to the rapid advances which have been made in sanitation, and points out how great is the contrast from a hygienic point of view between the conditions of life at the present time and those existing only some forty years ago. Speaking of the royal palace of Versailles, the writer says: "In all these vast piles of buildings, with all their gorgeous magnificence, bath rooms were an unknown quantity," and England was no better off in this respect than her Continental neighbour. The sanitary conditions common even beyond the middle of the century can be well gauged from the report on Windsor Castle by the late Sir Robert Rawlinson, made shortly after the Prince Consort's death. This experienced sanitary official spoke of drains of the worst description; of no fewer than forty-eight cesspools beneath the basement; of windows, even in the royal apartments, of which only the lower casements could be opened; of vitiated air comparatively stagnant. Such was the state of things in the two chief palaces of the world less than forty years ago.

SOME INDIAN SANITARY REPORTS FOR 1898.

MADRAS PRESIDENCY.

THE year was meteorologically favourable, both monsoons having brought a copious and well-distributed fall of rain. The prices of food grains, though better than in 1897, were above the average. The registered birth-rate was 27.4 per 1,000, against 28.7 in 1897; the depression is attributed to deferred marriage and the prevalence of famine in some districts in the preceding year. The death-rate fell from 25.4 to 21.0, a restoration to about the normal rate. Registration of births and deaths is still very defective. Cholera was very prevalent all over the Presidency, but less so than in 1897, which was a very bad cholera year. Small-pox was also severe, though there was also some abatement. There was a considerable fall in fevers, and a more decided decrease of bowel complaints, in consequence of restored vigour and improved feeding of the population. Plague, which had prevailed in the Mysore country, was imported towards the close of the year into 96 localities in 11 districts. The disease spread more or less in 20 of these places. No statistics of attacks and deaths are given. A careful system of inspection of passengers by road and rail was instituted, and measures of isolation and disinfection adopted when any detection was made. Over 5,500 persons were inoculated with Haffkine's serum in the town of Madras, and over 10,500 in the Presidency. No information is given regarding results. Praiseworthy efforts are being made to train and certify sanitary inspectors for general and special work. The Sanitary Board, seconded by the Sanitary Commissioner and Sanitary Engineer, promoted many sanitary works for water supply and drainage during the year. The report, as a whole, indicates sound and active sanitary effort in Madras.

HYDERABAD ASSIGNED DISTRICTS.

The year was characterised by low birth-rates and death-rates. The depressed birth-rate—31.3 against 39.7 in 1897—is held to be due to the unfavourable sanitary condition and high death-rate of the preceding year. The low death-rate—23.4 against 52.6—is attributed to "exceptionally favourable climatic conditions, to cheap and abundant food, and most of all to immunity from epidemic disease." There was no cholera in the province—an experience so rare that it had not occurred since the year 1873; although plague prevailed in adjacent districts of Bombay, the Central Provinces, and the Nizam's dominions, the disease did not appear in Berar. This immunity is said to be due to efficient precautions against importation. Small-pox mortality was below the average. The disease seems to be on the decline in this province, the mean mortality of the decennium 1871-80 being 1.47, of 1881-90 0.323, and of the eight years 1891-98, 0.16. The deaths caused by habitual disease—fevers and bowel complaints—were about one-half and one-third of those registered in 1897. The report, which has been completed by Lieutenant-Colonel C. L. Swaine, I.M.S., the Sanitary Commissioner of the province, does not indicate any large sanitary works in prospect or progress, but shows that the municipalities and district boards are spending a considerable amount on drainage, water supply, conservancy, and other sanitary purposes.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 10TH, 1900.

THE ETIOLOGY AND PROPHYLAXIS OF MALARIA.

THE paper by Professor Celli, the Director of the Institute of Hygiene in Rome, which is published at page 301, is an interesting application to a particular case of the theory—put forward in these pages some five years ago by Dr. Manson—that certain species of mosquito are the carriers of the malarial parasite. For Professor Celli indeed, and, as will be seen from the report of a recent conference in Rome on page 323, for Professor Grassi also, and as it would seem for Professor Koch also, this is no longer theory but established fact, and Celli and Koch both assert that the essential link in the life cycle of the parasite—the means by which its existence is assured from year to year, in Italy at least—is malarial man. His paper contains a great mass of facts, carefully marshalled, with the main object of enabling the reader to judge how far what is known as to the prevalence of mosquitos of the genus *Anopheles* in the Roman Campagna agrees with, or differs from the facts long known as to the prevalence of malaria in that notoriously malarious region.

Cases of malarial fever are never altogether absent, but they are far less numerous during the first and second than during the third and fourth quarters of the year. The actual minimum is in the early summer (June). This minimum is followed not by a gradual but by a very sudden rise, and the maximum of the year may be attained in August, though it may be postponed to September or even to October.

Now, it would be admitted to be a striking coincidence—if it were nothing more—that it is in the third and fourth weeks of June that the mosquitos begin to bite, and that the insects become numerous in July and August; when we learn that the first mosquitos infected with the malarial parasite are found towards the end of June, and that their number increases rapidly in July and August, the coincidence becomes still more striking.

So far as Java is concerned, Professor Koch states, in his second report to the German Colonial Office, a translation of which is published at page 325, that he found that the assertion that there were districts in the island in which there were no mosquitos, but in which malaria prevailed, could not be sustained. In some districts where malaria prevailed the mosquito, said to be absent, was found on more careful search. In others, where th insect was absent, a study of the way in which the fe cases of malaria met with were produced was found t throw an important light on the whole question. Thoug the mosquito was absent from these districts, yet th insects were present in neighbouring regions. Koch ha found a similar district in East Africa, and he has no investigated carefully the region in Java. Malaria is no endemic there, and the cases observed within it were thos of individuals who, shortly before they began to suffer, ha visited a district infected by mosquitos.

Again the older observers had noted, what is indeed part of the folk-lore of malarial districts of Europe, tha malaria was most likely to be contracted about sunset an at night. *Anopheles* lies hid by day, and issues forth i quest of human blood at sunset, and pursues its searc through the night. Again, the old observers noted that th malarial "miasm" was often very limited, and did no extend to any great elevation, so that residence on the to of a rock or in the highest storey of a lofty house was som protection. It is known that the mosquito does not fly fa from its birthplace, nor mount high in the air. Again, th older observers knew that the malarial "miasm" was no carried by high winds, and it is notorious that the mosquit does not fly on stormy nights.

Professor Celli thus traces the cycle, for the mainten ance of which, in Italy at least, man is essential. Be ginning with the great multiplication of mosquitos at th end of June or the early part of July, it is found that some of these are infected by the malarial para site. They convey the infection to man, thus bringing about the great increase in the number of attacks of malaria observed in July and August, but sometimes continuing into the fourth quarter of the year. During the first and second quarters of the following yea the malarious cases met with are generally recurrents of the infections contracted in the third or fourth quarters of the preceding year, and it is by these recurrent cases occurring even as late as June, when the mosquito once more becomes active, that the infection is again transmitted to the insect, and a new epidemic started.

Professor Celli observes incidentally that in Italy children are more affected by malaria than adults, and Professor Koch lays great stress upon this point, making it indeed the test of the extent to which malaria prevails in a population, since he finds evidence that adults in a malarial district having survived the infection in early youth have acquired a more or less complete immunity. This observation Koch believes may be of great importance in prophylaxis.

Both Celli and Koch lay great stress on the part which the cultivation of rice plays in favouring the multiplication of mosquitos. "The more rice fields," Koch reports, "there are in the neighbourhood of a place and the nearer they are, the greater the abundance of mosquitos;" and Celli observes that it is well known that "the formation of rice fields causes the reappearance of malaria where it had become extinct, and where it already exists they are a very active focus of production." Rice is best cultivated on low lands subject to occasional inundation, but where inundation cannot be depended upon very copious artificial irrigation is resorted to.

Celli pays a just tribute to the work of Ronald Ross

who, by his laborious observations of the life of the malarial parasite in the body of the mosquito, has supplied the firm foundation upon which a great superstructure has been rapidly erected by the labours of many observers. It is impossible not to admire the zeal with which Italian men of science have thrown themselves into the investigation of a question of so much practical importance to their country, nor the statesmanlike views to which Professor Celli gives expression in the article which we print to-day. He shows that the researches of the laboratory are already beginning to bear fruit, and sketches with a broad brush the main features of the methods which must be followed in order that the inhabitants of malarious districts may protect themselves from one of the greatest scourges of the human race.

ETIOLOGY OF YELLOW FEVER.

SOME two years ago Dr. Wasdin and Dr. H. D. Geddings, of the Marine Hospital Service, Washington, were deputed by the Supervising Surgeon-General to study the etiology of yellow fever, with special reference to Sanarelli's claim to the discovery of the specific bacillus of that disease. The result of the inquiry is embodied in a report now issued, which fully confirms Sanarelli's observations, and at the same time adds some very important information on the relationship of the bacillus icteroides to yellow fever.

There can be no doubt that the bacillus icteroides is the causal agent of yellow fever. This is proved by the observation that in nearly all the cases of yellow fever examined the specific bacillus was isolated, cultivated, and experimentally tested on animals, and that the disease could be specifically produced on animals by a process of natural infection. From a number of specimens taken at the necropsy of cases seen by one of the members of the Commission in the yellow fever epidemic at New Orleans in 1897, the bacillus was isolated in the proportion of 83.3 per cent., which is a larger proportion than that attained by Sanarelli, whose percentage was only 56. But this proportion was raised to a still higher percentage in a very thorough investigation into 14 cases of yellow fever in the Havana Hospital, Cuba. There the bacillus icteroides was isolated by the Commission in 13 out of the 14 cases, and in the case in which they failed it was isolated by an independent observer for whom tube cultures had been taken at the necropsy conducted by the Commission. In 12 of the cases the bacillus was isolated from the blood during life. In the 2 other cases only at the *post-mortem* examination. In 8 other hospital cases which had been diagnosed by the native physicians as yellow fever, but which were not considered to be such by the investigators no bacillus icteroides could be found. Nor could it be found in a single instance in patients suffering from other diseases than yellow fever.

Coincidently with these observations the Commission studied the natural history of the organism as to its mode of entering the body, its colonisation therein, its toxic possibilities, and its distribution in the organs after death. A series of most important facts were in this connection obtained. As previously shown by Sanarelli, mice, rats, dogs, cats, guinea-pigs, rabbits, and monkeys were found susceptible to artificial infection produced by inoculation under the skin, intraperitoneally and intravenously; but Dr. Wasdin and Dr. Geddings found that similar results could be produced in the same manner by other organisms, such as the bacillus χ of Sternberg, the bacillus of Havelburg, and the bacillus coli communis, so that the previous experiments of Sanarelli could not be taken as proving any specificity on the part of the bacillus icteroides. It was therefore determined to place the experimental animals under natural conditions of infection. Thus by feeding them and causing them to breathe the bacillus icteroides, the bacillus χ of Sternberg, and the bacillus coli communis, it was established that while the others are innocuous, the bacillus icteroides is naturally infectious to animals. The degree varies with the species, thus in some rodents local infection is quickly followed by blood infection; in rabbits and dogs no evidence of a subsequent invasion of the blood was obtained, but monkeys reacted to the infection in the same way as men.

Probably next to the confirmation of Sanarelli's bacillus as the cause of yellow fever, the most important observation made by the Commission is that the infection of yellow fever takes place by the respiratory tract, and not, as has generally been held, by the alimentary canal. In every case of natural infection in animals the bacillus was found lodged in the lungs previous to its invasion of the blood. It could not be isolated from the intestinal canal except in those cases in which there was a hæmorrhage; nor could the disease be produced by inserting quantities of the specific bacillus into the bowels. The clinical symptoms of yellow fever, it is pointed out, agree with the view that there is first a primary colonisation of the microbe in the lungs, giving rise, by its toxin, to fever, pains, and other symptoms characteristic of the disease, and that later an invasion of the blood itself by the microbes from the lungs takes place, giving rise to the secondary paroxysm which is so characteristic of the disease. The Commission disagrees with Sanarelli's views that yellow fever is essentially a septicæmia. It believes the disease, on the other hand, to be primarily a lung affection, which in mild cases and in those in which rapid recovery occurs, never goes beyond the lung, and that it is only secondarily a septicæmic malady.

Other experiments of the Commission prove that the bacillus icteroides is very susceptible to the process of disinfection. Short exposure to heat, to a 5 per cent. solution of carbolic acid, or to mercuric chloride of the strength of 1 in 10,000, speedily destroy its vitality; so does exposure for twelve hours to the fumes of sulphurous acid or formaldehyde. Sunlight also is particularly inimical to the vitality of the bacillus, but natural drying and cold have very little effect, so that the microbe may retain its vitality in dust for nearly a fortnight.

The report covers an investigation which we think may be taken as completely and carefully conducted. The results arrived at are such as to bring yellow fever much more within the range of those diseases which can be practically prevented. The confirmation of the fact that Sanarelli's bacillus is the real cause of yellow fever will no doubt give a stimulus to further researches with the object of preparing a prophylactic as well as a curative serum. We congratulate the Marine Hospital Service on this excellent piece of work.

THE RARITY OF SCARLET FEVER IN THE TROPICS.

Various articles and letters which have recently appeared in the *Indian Medical Gazette* and the *Journal of Tropical Medicine* drew attention to the fact, well known we believe to most of those who have practised in India, that scarlet fever, one of the most common of European infectious diseases, is so seldom met with as to merit a position amongst the rare affections of that country. This fact becomes more curious when we call to mind that others of the infectious disorders frequent at home are also very prevalent in India. Small-pox and enteric fever have always been rife; while according to Major Buchanan, I.M.S., measles, epidemic rose-rash, chicken-pox, and mumps are all common among the natives. As the subject is of some interest, we propose to make a few observations upon the facts and their possible explanation.

In the first place climate appears to have a considerable influence on the prevalence of the disease. There is evidence that scarlet fever is rare not only in India, but also in Southern China, Cochin China, Tonquin, Annam, Jamaica, British Honduras, and the Southern States of America. Forchheimer observes of its rarity in the latter that "it is very common to find the inhabitants of the Southern States very much more alarmed over a single case of scarlatina than over an epidemic of yellow fever." Such evidence as is forthcoming goes to show that, to quote Mr. Cantlie's words, as the Tropic of Cancer is approached from the north the disease disappears from the nomenclature. It is impossible, with our present lack of data, to estimate the effect of each of the different meteorological factors, temperature, rainfall and the like, which combine to constitute a climate. But that they may exert an influence, individually or collectively, we know from what has been observed with respect to measles and epidemic diarrhœa in England, and to diphtheria in many parts of the world.

There is another question to be considered which underlies and must be separated from that of climate. In remarking upon the lowness of the mortality from scarlet fever in the Southern States of America, Billings speaks of the coloured population as being a class in which the mortality from this disease appears to be very low; and the figures obtained in the tenth and eleventh censuses of the United States go to show that the disease is less prevalent and less fatal among the negroes and Red Indians than among the whites. The racial influence is certainly present in India. According to figures furnished by the Sanitary Commission for the Government of India, there were during the twenty years 1877 to 1896, 20 cases with 1 death from scarlet fever among 235,000 native troops and prisoners; while among 60,000 European troops, with 4,000 women there were 63 cases, with two deaths, and among 7,000 children 124 cases with 10 deaths. Though we have not before us any statistical evidence as to the prevalence of the disease among the native children, yet the testimony of those of our profession who have a personal experience of India is that it is rare compared with its frequency among European children. From these facts we may conclude that the influence of race is partly the cause of the infrequency of the disease amongst the population as a whole. For some unknown reason the natives are highly immune.

But even in the population of European parentage scarlet fever is rare as compared with its prevalence in European countries. From the figures given above we find that the annual mortality among the European children was about 71 per million living, taking the number 7,000 to represent an average annual population. This rate is extraordinarily low. It would be interesting, however, to know the conditions under which these children live. It appears that scarlet fever is not indigenous to the country. Outbreaks are nearly always to be traced to some recent arrival from Europe. Hence, if the children are distributed through a vast extent of territory in many small groups, the risk of the disease spreading would be made smaller than if the groups were few and large. Some circumstance of this nature may be the explanation of the statement made by Professor Kenneth Macleod that the outbreaks are always limited, but "appear to be more substantial and protracted in hill stations than on the plains."

As scarlet fever is introduced into India through the British population, we should expect the character of the disease at home to have some influence on its presence in that country. Now, it is a well-known fact that of recent years the virulence of scarlet fever in the United Kingdom has been steadily diminishing. The mortality rate per million living has for fifteen years past been below 300, and it has only once since 1870 reached 1,000. In 1870 the rate for England and Wales was upwards of 1,400, the second highest on record. Curiously enough, according to an editorial article in the *Indian Medical Gazette* for 1873, there were amongst the European troops in India during 1871 110 admissions and 17 deaths from scarlet fever, a large number compared with recent years. Whether this is a mere coincidence or not could not be determined without an examination of the figures for a large series of years But we suggest that the mildness of this imported disease at the present time prevents it getting a hold upon the European population, and is therefore one of the reasons for its rarity. We may add in this connection that though for many years past scarlet fever has been (according to Dr. Izett Anderson) rare in Jamaica, yet it was stated in the report of the Central Board of Health for 1852 to be occasionally prevalent; while in May, 1841, a severe epidemic started in Spanish Town, and spread over the whole island.

Mr. Cantlie raises the question whether the disease is not present in tropical climates in some other form. This is a point that can hardly be settled as long as the essential cause, presumably a micro-organism, remains undetected. The hypothesis thrown out by another writer that some of the sporadic cases, the origin of which cannot be traced, are due to milk obtained from cows suffering from the so-called "Hendon cow disease," is not supported by any evidence.

THE OFFICE OF REGISTRAR-GENERAL.

It is announced that Mr. Reginald MacLeod, C.B., recently Queen's Remembrancer for Scotland and Registrar in the Joint-Stock Companies Registry Office of Scotland, has been appointed Registrar-General of England, in succession to Sir Brydges Henniker, who has retired. This announcement will be received with surprise and regret

by all in this country who had recognised the opportunity which the Government possessed, in the making of this appointment, of ensuring that the central administration of registration of births, deaths, and marriages in England should be under the guidance of a man of competent technical knowledge. We do not doubt that Mr. MacLeod is an excellent official, but it is no disrespect to him to assume that he can have no knowledge of vital statistics such as we believe to be necessary for the proper performance of the duties of Registrar-General. It will hardly be suggested that his experience of "registration" affords reasons for his selection. It would be as easy to claim that familiarity with the Book of Numbers justified the appointment of a clergyman. We are forced to the conclusion that the Government has failed to appreciate the nature of the office, and that just as a retired soldier was in past years deemed to be qualified to perform the duties of Registrar-General, so it has been thought that at the present time no special qualification is necessary. This decision is especially to be regretted at the present moment, because it will impress many with a sense of the ineptness of a Government whose actions are, rightly or wrongly, in respect of other matters, now the subject of close and severe criticism. It will create in the minds of such persons the doubt whether a Government, which can fail so egregiously in respect of an office with the bearings of which they are familiar, will not equally fail in respect of other matters—such, for instance, as the reconstruction of our military organisation on lines which will make the army a skilled force in the true sense of the word. They will not be consoled by being told that it is due to faults in our Constitution that our machinery of administration is always imperfect, and they will conclude that the Government does not understand what efficient administration means, and is influenced by other considerations than those of efficiency and economy. If the offices of Superintendent of Statistics and Registrar-General had been combined the necessary efficiency would have been secured, and the saving of £1,000 per annum effected. It would be difficult for the Treasury to justify this failure to save public money. It will be interesting to watch the course of events. It is open to the new Registrar-General to regard the office as a practical sinecure, and to leave the work to others who are qualified to do it. This, indeed, is now the best that can be done in the public interest, for nothing could be more mischievous than activity without knowledge. We shall soon know what course will be adopted in the appointment of a successor to Dr. Grimshaw, late Registrar-General of Ireland. We cannot assume that any greater wisdom, or greater ability to recognise the requirements of a technical office, will be shown than has been shown in connection with the appointment of Registrar-General of England, but we may remind the Government that it is questionable policy to supply material to their critics and to create doubt in the minds of many of their more thoughtful supporters. It is by such actions Governments are judged.

THE VACANT POST OF REGISTRAR-GENERAL FOR IRELAND.

The post of Registrar-General for Ireland, rendered vacant by the lamented death of Dr. Grimshaw, C.B., has not yet been filled, but considerable discussion has arisen in professional circles as to his successor. When the vacancy occurred the name that at once suggested itself to the minds of the medical profession as being in all respects the most suitable to fill this responsible position was that of the President of the Royal College of Physicians of Ireland, Dr. J. W. Moore. In him the Government and the public alike would have secured an official whose training and ability to understand and use statistics would have guaranteed the maintenance of the high traditions of his predecessor in office, and whose devotion to duty would have been relied on with confidence. It soon became known, however that Dr. Moore would not seek the position owing to the many sacrifices which his acceptance of the post would have entailed. It therefore became a subject for wider discussion, and although Mr. Matheson, the second in command, has had a long experience, and is thoroughly conversant with the work of the office, the fact that he is not a medical man, and is therefore unable to consider and interpret statistics in accordance with the growth of medical knowledge, makes his promotion doubtful. The prevailing opinion in the medical profession is that one selected from their ranks should occupy this position, which requires an official who is possessed of administrative and business capacity, as well as of the important technical knowledge of the value of medical statistics which only an education in medicine and in public health could ensure. Dr. Ninian Falkiner, who is a Fellow of the Royal College of Physicians of Ireland, and a Diplomate in State Medicine of the University of Dublin, is the candidate whose claims are generally recognised as being most likely to meet with the approval of the Government. Dr. Falkiner has been for a number of years Registrar of Births, Deaths, and Marriages in the district of which he is Dispensary Medical Officer. He has also been for a lengthened period Secretary of the State Medicine Section of the Royal Academy of Medicine in Ireland, and is at present an Examiner for the Conjoint Diploma in Public Health of the Royal Colleges of Physicians and Surgeons, Ireland. In the discharge of his duties he is one of the most conscientious dispensary medical officers in Dublin. Dr. Martley's name has also been mentioned in connection with the appointment, and in addition to his qualifications of Fellow and Diplomate in Public Health of the Royal College of Physicians he has shown his ability to deal with statistics in his communications to the Royal Academy of Medicine in Ireland on the distribution of cancer in Great Britain. Sir Acheson McCullagh and Dr. Edgar Flinn, Local Government Board Inspectors, have been mentioned as probable candidates. The former had the advantage of thrice filling the office of Mayor in the city of Derry previous to his translation to the Local Government Board. Dr. Lombe Atthill's name has crept into the daily papers, but without the slightest justification.

THE CENSUS OF 1901.

The circumstance that during its present session Parliament will have to pass the Census Act, giving the necessary powers for the taking of the census in 1901, lends interest to a pamphlet on this subject which we have recently received from Mr. W. Buchanan of Glasgow. This pamphlet contains much information from the registrar's standpoint, and, as the taking of the next census will devolve upon registrars and their assistants, it is useful to consider the question from their point of view. Thus we are informed that "when the Census Bill has been passed, the Registrar-General sends on to each registrar the various enumeration plans of his parish or district used at the census of 1901." This is a point in which medical officers of health are much interested. There is obviously a strong likelihood that divisions into enumeration areas which now frequently overlap ward or sanitary areas will be repeated. It is of the utmost importance that each medical officer of health should be brought into official touch with the registrar of his district, and have a voice in securing that enumeration areas shall not cross the boundary lines of sanitary divisions of the district; and we hope that official sanction to such consultations will be given from the General Register Office. In Glasgow we are informed by Mr. Buchanan that a satisfactory arrangement holds good. "It is next to impossible for the registrar to subdivide his district into these enumeration areas satisfactorily. Only

the assessor can do that with exactitude, as he alone has intimate knowledge of the Parliamentary, burghal, municipal, ecclesiastical, School Board, and other maps and subdivisions of the city. Our Corporation have long recognised that, and obtained for us the valuable assistance of our city assessor." There is much room for reform in assimilating the boundaries under the headings enumerated above; and we cannot, therefore, view with complete favour the memorial sent in by the London County Council asking for additional boundaries and areas to be included—namely, police and county court district, water and gas areas, and so on. The difficulty in securing intelligent, active, and trustworthy enumerators for wages which are officially acknowledged to be "not much more than that of a labourer" is discussed by Mr. Buchanan. Among the suggestions which have been made under this head, the proposal to give a special imperial census medal to those enumerators deserving it does not appear to him to meet the requirements of the case. He thinks it would need to be a golden one to please the average Scotsman. The proper method is to pay the enumerators better fees. As bearing on the difficulties of obtaining accurate information as to occupation, Mr. Baines, the Census Commissioner of India, is quoted as having said that he had tried various methods of tabulating occupation, but was not sure yet which was the worst. On the whole, he preferred the German method of a separate industrial census, even though it cost as much as in Germany—namely, £60,000.

GROWTH OF THE PROFESSION.

The yearly issue of that useful publication, the *Medical Directory*, has just appeared, after a delay of about a month caused by a fire in the printer's premises. This issue has been corrected well up to date; the death of Sir James Paget, for example, which occurred on December 30th, 1899, is notified in the obituary. The total number of members of the medical profession whose names appear in the present volume is 35,651, or an increase of 534 on the number for 1899. The practitioners in the London list are 15 fewer than those who were enumerated in last year's volume. All the other seven lists under which practitioners' names appear are, however, increased; the provincial list for England exhibits an increase of 297, that for Scotland 72, and the number of practitioners in the naval, military, and Indian medical services has increased by 177. The members of the profession at the present time are actually 6,127 more than they were ten years ago.

MALARIA AND EPILEPSY.

It has been recognised for a long time that certain infective diseases have a curious and beneficial influence on epilepsy. This subject has been carefully investigated by Pélissier (Toulouse) and Marchand. It has been recognised, however, that in very many cases the influence is the reverse. Thus, Marandon de Montyel and Maurice Dide have recorded a case of epilepsy supervening in the course of typhoid fever. The question, therefore, of injecting certain toxins as a means of treating epilepsy, as has been recently suggested, requires a very considerable amount of investigation before being put to clinical proof. Marandon de Montyel has investigated this subject in reference to malaria.[1] The subject is by no means new. It has been supposed that Hippocrates himself observed cases of epilepsy disappearing on malaria being contracted. The author does not deny that in some instances under his own observation there has been considerable improvement, but he has been able to collect 14 cases of epileptics in whom malarial infection was followed by very grave results. An existing epilepsy became worse, epilepsy which had been in abeyance for a long time revived, and in other instances patients who presented no history of seizure of any kind became markedly epileptic. In these cases, however, the author admits that there was a distinct family neuropathic proclivity. In the cases under his observation the time required by the malarial attacks to manifest their influence on the epileptic condition varied in each of the three directions already quoted. In existing cases of epilepsy the results were manifest from the first onset of the fever. On the other hand, to revive dormant epilepsy it seemed that the organism had to be considerably charged by malarial infection before seizures appeared. In one case only did epilepsy appear with the first attack of malaria. In no instance was the author able to observe the disappearance of epilepsy with that of the malaria. A curious fact was noticed in two cases, that the seizures appeared with the rise of temperature; generally the epileptic attacks appeared in the intervals of the malaria. The result of the author's observations is that while in some instances no doubt there may be a change for the better so far as the epilepsy is concerned, the effects are too uncertain, and he therefore agrees with Féré that the chances of amelioration are too uncertain, and that at present there seems to be little prospect of utilising bacteriological products in the practical therapeutics of epilepsy.

[1] *Rev. de Médecine*, December 10th, 1899.

EAST AFRICAN ARROW POISONS.

Professor Brieger[1] has investigated the nature of the arrow poison used by the Wagago tribe of German East Africa, and which is said to be originally prepared by the Wafiomis. The juice collected from incisions in the bark of at least two kinds of trees, one of which, according to Schellmann, is the *Candelaber euphorbia*, is evaporated down to a black tarry mass, and is packed in maize leaves. The toxin principle, a crystalline body, is obtained by extracting the broken mass with hot absolute alcohol, evaporating to drynesss, purifying with acetate of lead, treating the filtrate with H_2S, and evaporating *in vacuo*. These crystals are identical chemically and physically with those obtained from the Wakamba arrow poison by simply treating it with hot alcohol and evaporating. They resemble closely the crystalline glucoside, ouabaïne, obtained by Arnaud from ouabaïo wood, and which is the active principle of the Somali arrow poison. These three East African tribes, therefore, use the same poison for their arrows, though each has its own method of preparation. The three poisons agree also in their physiological action, being cardiac poisons of great power, 0.00005 gram of the Wakamba glucoside killing a guinea-pig weighing 300 grams in twenty minutes, the heart being arrested in systole. The other symptoms are dyspnœa, convulsions, and vomiting. Direct application of a solution to the cornea of rabbits produces local anæsthesia and dilatation of the pupil. Brieger[2] also obtained the same symptoms with an "amorphous ouabaïne" extracted by Lewin and Merck from acocanthera plants, especially the *Acocanthera Schimperi* tree, and with an amorphous strophanthin, which however does not give the reactions of a glucoside obtained by Thoms from *Strophanthus hispidus*. Experiments with a small quantity of crude euphorbia juice proved that it was strongly toxic, though the symptoms did not resemble those produced by the Wagago poison sufficiently to prove the juice to be its chief source of origin. Possibly further research on the acocanthera plants will clear this point up.

[1] *Deut. med. Woch.*, January 18th, 1900.
[2] *Deut. med. Woch.*, September 28th, 1899.

CINNAMON IN TROPICAL DIARRHŒA AND DYSENTERY.

We publish in another column an interesting communication from Formosa on the value of cinnamon in the treatment of all forms of tropical diarrhœa, including dysentery.

The long-standing custom of prescribing powdered cinnamon in combination with other drugs for relaxed states of the alimentary tract affords presumptive evidence that it has some special value in these conditions. Inasmuch as empiricism in medical practice may be provisionally defined as experimental pharmacology in the human subject, we should do well not to ignore the results of experience, and if a drug does good to use it whether not we can explain its *modus operandi*. Why ipecacuanha should be of especial service in dysentery, supposing it to be due to the amœba coli, is not clear, although it is well known that its alkaloid, emetine, has a direct irritant action on the intestine, while it augments the secretion from mucous membranes generally. It is not improbable that cinnamon has some corresponding specific effect in tropical diarrhœas, as Mr. Norris Wilkinson suggests, in addition to its carminative and astringent action. Surgeon-Major Avetoom, of Baluchistan, narrated in the BRITISH MEDICAL JOURNAL (March 9th, 1895, p. 530) that, adopting this means of treatment of acute dysentery from a Persian medical work he had in a little over two years cured thirty cases of the disease. He gave the powder moistened with water in drachm doses. He considered that this method was vastly superior to the ordinary ipecacuanha treatment, in that it did not cause nausea or vomiting, and was more speedy in its action. As Mr. Norris Wilkinson remarks, Dr. Henderson, of Shanghai, has more recently recommended its employment in sprue. The volatile oil of cinnamon is certainly germicidal, and it is suggestive that the laurus cinnamomi belongs to the same family (the *Lauraceæ*) as coto, an agent which is acknowledged to have a curative effect in diarrhœa, probably through its action on the circulation, an action said to be exerted by cinnamon when given in large doses. It is curious to note at the present juncture, in a letter to one of the daily papers, the recommendation that sticks of cinnamon placed in a bottle of rectified spirit should be sent out, as a remedy for diarrhœa and dysentery, to our soldiers at the front.

OYSTERS AND DISEASE.

WE have received from Professors Herdman and Boyce, of the University College, Liverpool, a beautifully-illustrated memoir, which they have drawn up under the auspices of the Lancashire Sea Fisheries.[1] In order to elucidate the connection of the oyster with infectious diseases, they first investigated in minute detail the histology of the gills and mantle lobes and of the alimentary canal and liver of the mollusc, thus basing their later investigations on a firm foundation. On the vexed question of the "greening" in oysters, they concluded that there are several distinct varieties of this phenomenon; some oysters, like the green oysters of some rivers on the Essex coast, are healthy; while others, such as some Falmouth oysters, contain copper. The greatest interest attaches to the fact that the two observers did not find the bacillus typhosus in any oysters obtained from the sea or from the markets, though in their experimental oysters inoculated with typhoid they were able to recover the organism from the body of the oyster up to the tenth day. Professors Herdman and Boyce would doubtless be the first to state that they do not regard the negative result thus obtained as disproving the carefully investigated cases in which typhoid fever has been traced to the eating of presumably infected oysters, any more than the comparable failure to find the bacillus typhosus in the water of Maidstone and Worthing proved that their great epidemics of typhoid fever were not waterborne. The experiments made by Professors Herdman and Boyce show that the typhoid bacillus does not increase in the body or in the tissues of the oyster. They also arrived at the conclusion that sea water is inimical to the growth of the typhoid bacilli, for "although their presence was demonstrated in one case on the twenty-first day after addition to the water, still there appeared to be no initial or subsequent multiplication of the bacilli." Here, again, the fallacies involved in implicitly accepting negative results must be borne in mind. The results obtained by washing infected oysters in a stream of clean sea water were definite and uniform, there being a great diminution or total disappearance of the typhoid bacilli in from one to seven days. We cannot agree with the final recommendation in this report—that the periodical inspection of oyster layings, which all admit to be required, should be "assumed by the various Sea Fisheries Committees around the coast." Such inspection is a matter affecting the public health, and should be undertaken by the Public Health authorities either central or local. On the contrary, we strongly commend the action of the Local Government Board, who withdrew their Oyster Bill in the last session of Parliament rather than authorise official inspection by bodies whose chief interest is one of trade rather than of sanitation.

[1] Lancashire Sea Fisheries Memoir. No. 1.—Oysters and Disease: an Account of Certain Observations upon the Normal and Pathological Histology and Bacteriology of the Oyster and other Shellfish. By W. A. Herdman, D.Sc., F.R.S.; and Robert Boyce, M.B. With 8 plates. 7s. 6d. nett. (Geo. Philip and Son, 32, Fleet Street, E.C.)

"HOSPITAL CHAOS."

A LONG letter from Mr. Timothy Holmes appears in this month's *National Review* in reply to the article on "Hospital Chaos," contributed to the January number by Miss Honnor Morten. Miss Morten took exception to the view expressed by Mr. Holmes that the most important use of a hospital was as a place for medical education. He now reiterates this opinion, and it is the object of his letter to explain and justify it. He points out that the medical education derived from hospital practice is the great source from which spring, and have sprung, those advances and discoveries which render the relief of disease and suffering possible to an ever-increasing extent; and he urges that this is of even greater ultimate importance to humanity than the successful treatment of present patients, whilst as a general rule these two desiderata are simultaneously achieved. Mr. Holmes cites as examples the first ligature of the femoral artery for popliteal aneurysm performed at St. George's Hospital by John Hunter, and the inauguration by Lister of antiseptic surgery as the result of his experience in the hospitals of Glasgow and Edinburgh. In both instances, whilst relief was afforded to the patients under treatment at the time, the more important results have been the institution of new therapeutic methods, which have saved the lives of thousands and spared an immeasurable amount of pain and suffering. Miss Morten declared in her article that "doctors look upon their patients (in hospitals) as so much material for their use," and after quoting some remarks by Sir William Priestley on certain "crazes" in gynæcology, and referring to the treatment of inoperable mammary cancer by oöphorectomy and other recent therapeutic measures, expressed the opinion "that such experimenters should be under some form of control." Mr. Holmes considers that there have been "disgraceful quackeries in gynæcology," but thinks that "the perfect freedom of criticism and trial which the experience of a medical school affords is the appropriate means for the exposure of such iniquities, and the means by which, in fact, they are usually exposed." Miss Morten strongly advocated the public control of hospitals, and considered that the hospitals of Paris, and other Continental cities where such a system is in vogue, compare favourably in many ways with ours. Mr. Holmes recalls the fact that in 1863 he went to Paris in company with the late Dr. Bristowe, to report to the Privy Council upon the system and management of the hospitals there. They found that, in spite of the far larger sums spent on them, and notwithstanding certain points of superiority, they were, on the whole, inferior to English hospitals as places

for the treatment of disease. He admits, of course, that they have greatly improved since then; but what, he asks, has caused the improvement so much as the medical education furnished in British hospitals? Mr. Holmes might have added that the charge of experimenting on hospital patients which Miss Morten brings against medical men finds its justification, if anywhere, in Continental hospitals under public control, and not in England. Doubtless the voluntary system has its disadvantages, but, as Mr. Holmes rightly insists, the "chaos" which Miss Morten criticises has served to produce a "cosmos" of which there is no reason to be ashamed—the noble fabric of English medicine and surgery. "This," says Mr. Holmes, "has been built up by the medical education which I say it is the chief function of hospitals to promote."

HOW SURGERY BECAME A PROFESSION.

Mr. D'Arcy Power, who made a most important contribution to the history of surgery in the volume entitled *Memorials of the Craft of Surgery in England*, which he founded on the mass of materials gathered by Mr. South in the last year of his life, has reprinted[1] from the *Medical Magazine* a series of articles entitled, "How Surgery became a Profession in London," in which he briefly but clearly sketches the origin and career of those associations which controlled, or attempted to control, the education of surgeons and the practice of surgery in the past and gives some account of the lives of eminent surgeons from the fifteenth century onwards. A Guild of Surgeons, distinct from the Barbers, existed in London before 1369, but it was not until 1423 that an attempt was made to organise medicine and surgery by the formation of a Faculty of Physicians and Surgeons independent of the already existing Company of Barber-Surgeons. The attempt seems to have been well directed and the scheme well arranged, but for some reason that is not known the Association came to an end after a very few years. Perhaps it was too ambitious. It had, or was to have had, three houses—one for the Surgeons, one for the Physicians, and one in common "fitted with desks for examinations and disputations." Its chief officer was a physician, the "Rector of Medicine." The Barbers evidently opposed the new Association, which seems to have tried to interfere with their surgical privileges. Soon after this a Fellowship of Surgeons was established, which obtained a charter of incorporation and a grant of arms, but was amalgamated with the Barbers in 1540. At about this time an Act of Parliament was passed throwing open the practice of surgery to all and sundry. It may well be believed that surgery was then at a low ebb. The surgeons long struggled to escape from the thrall of the physicians, who treated them as mere handicraftsmen whose business it was to carry out their directions, and they strove to prevent their giving internal remedies, and in 1632 even obtained an Order in Council forbidding major operations except in the presence of a learned physician. Until surgery was freed from the barbers on the one hand, and from the physicians on the other, the social status of the surgeon must needs have been low. Men of education did not often choose surgery as a calling. Guthrie describes apprentices as often not having "that preliminary education that would qualify them to take a proper and respectable place in their profession." Credit for having made an attempt to set up a standard of general culture belongs to the Society of Apothecaries, but it was long before the College of Surgeons followed the excellent example set them. The movement thus started by the Apothecaries' Act of 1815 has not yet been carried far enough. Space forbids a more detailed notice of Mr. Power's pamphlet, which will well repay careful study.

[1] *How Surgery Became a Profession in London.* By D'Arcy Power, M.A., F.S.A., F.R.C.S Eng. Reprinted from the *Medical Magazine*, May-October, 1899. London: The Medical Magazine Association, 62, King William Street, E.C. 1899. Price 6d.

INTERNATIONAL CONGRESS OF MEDICINE, PARIS, AUGUST, 1900.

The Paris Executive of the International Medical Congress has issued a notice to the effect that, at the request of the French Society of Electrotherapy and Radiology, the International Congress of Medical Electrology and Radiology is to be held in connection with the International Congress of 1900. A commission, composed of M. Weiss, Professor of the University of Paris, President; MM. Apostoli and Oudin, Vice-Presidents; M. Doumer, Professor at the University of Lille, General Secretary; M. Meutier, Secretary; M. Boisseau du Roche, Treasurer; and M. Bergonié, Professor at the University of Bordeaux; M. Bouchacourt, M. Branly, Professor in the Catholic Institute of Paris, and other distinguished medical men in Paris have been asked to assure its organisation. This Congress will take place in Paris from July 27th to August 1st, 1900. All inquiries for further information should be forwarded to Professor E. Doumer, General Secretary, 57, Rue Nicolas Leblanc, Lille. Notices of intention to join the Congress are to be sent to Dr. Moutier, 11, Rue de Miromesnil, Paris.

SCIENTIFIC RESEARCH IN DENTISTRY.

The Odontological Society of Great Britain has now issued a formal notice to the effect that it is prepared to receive applications for grants in aid of the furtherance of scientific research in connection with dentistry. In coming to this resolve the Society has followed the example some twenty-five years ago by the British Medical Association, and the conditions upon which it has been resolved that the grants shall be made are modelled upon those of the Scientific Grants Committee of the British Medical Association. A special subcommittee has been appointed to receive applications, and in deciding between them the committee will take account of the nature of the investigation, the general character of the proposed method of spending the grant, the proportion of the sum asked for to the whole expenses of the investigation, and the applicant's previous work and record. The recipients of the grants will be required to make annual reports to the committee as to the progress of the investigation, and to indicate the transactions or periodical in which the results of the research have been published. The Odontological Society is to be congratulated on having taken this step. It has been well said that every man is a debtor to his profession, and no more effectual manner of discharging this debt can be found than to contribute to the increase of the scientific knowledge upon which the art is founded.

THE SURGEONCY IN MERCER'S HOSPITAL, DUBLIN.

The vacancy on the surgical staff of Mercer's Hospital, created by the transference of Mr. Henry Moore to the City of Dublin Hospital will be filled in a few weeks by the Managing Board of the hospital. With a wisdom born of experience, the lay Board will doubtless be guided by the selection made by the majority of the medical staff. This institution, which occupies a central position in a thickly populated district, was for a long period, down to about fifteen years ago, one of the most important centres of medical and surgical education in the city. Sir Dominic Corrigan, with a few beds at his command, was able to instruct an enormous class of students; and Mr. Butcher, Dr. Wm. Moore, and Sir George Duffey, among a host of other distinguished physicians and surgeons, acquired their reputations as able clinicians within its walls. In later years the hospital fell on evil days, and from various causes, among others, the building of additions which its funds were unable to support, the class of students declined. The authorities of the hospital incurred the displeasure of the Corporation, who forthwith withdrew their annual grant, and actions at law between the lay and medical

Boards as to their respective rights to elect to the staff led to a want of confidence on the part of the public, which almost culminated in the extinction of the institution. Within the past few years the death and resignation of, in many cases, an individually able staff, gave the hospital an opportunity of regaining its former position in public esteem. A new staff of younger men were elected, the majority of whom are thoroughly competent to carry on the traditions of an institution in which the treatment of the sick was only equalled by the scientific instruction given to its class of students. The present opportunity afforded to the Managing Board of selecting a surgeon whose competence is assured cannot be too highly estimated. From the many names of the candidates who seek the honour of election, it is sincerely to be hoped that the best will eventually be selected. Among probable applicants for the post are Dr. Graves Stoker, who is surgeon to the Drumcondra Hospital; Dr. Lane Joynt, who has been for a number of years assistant-surgeon to the Meath Hospital, and who has already attained to a considerable reputation in skiagraphy; Dr. George Burbidge White, who was formerly surgical pathologist to the Meath Hospital; Dr. Burgess, who was formerly assistant surgeon at the Richmond Hospital; and Dr. Harry Croly, son of Mr. Henry Gray Croly.

PLAGUE IN CALCUTTA IN 1898

THE report of Dr. Nield Cook, the Health Officer of Calcutta, on the plague which prevailed in that city from April to July, 1898, is an interesting document. Beginning with the statement that it was emphatically asserted by some of the oldest inhabitants that plague has never been in Bengal, and that for some occult reason it could not take hold if it was imported, he proceeds to show that there are no records on the subject. In 1770 a very destructive epidemic occurred in Calcutta, which carried off 20 per cent. of the population in eight weeks, but there is no description of the disease, and as it followed on the wake of a famine Dr. Cook thinks that it might have been typhus fever, relapsing fever, or small-pox. Passing over without comment the earlier cases in 1896 and 1897, about which there was so much dispute, Dr. Cook deals with the outbreak which occurred during his tenure of office. The first case reported to the Health Officer occurred in the centre of the town in a man who had not left Calcutta for some time. He was seen when dead, and had a left femoral bubo presenting the characteristic appearance of a plague bubo. The necropsy showed large extravasations of blood extending from the infected gland upwards and downwards, also small extravasations on the heart, bowels, etc. One of the *domes* who assisted at the necropsy, and who accidentally scratched his finger, was two days after found to have a temperature of 102° and a pulse of 105; later he was attacked with unmistakable plague, and died on the fourteenth day. Bacteriological examination of the first case gave cultures which, on being sent to Mr. Haffkine, were stated by him to be undoubted plague bacilli. Though this was the first case reported, there had been others treated previously in hospital whose clinical history showed that they were plague cases. From April 14th to July 31st, 190 cases with 155 deaths were reported. One of the earliest phenomenon observed was a high mortality among rats. This occurred about the same time as the first case was reported, and probably was the cause of attention being drawn to the subject. It could hardly be said to be the cause of the first cases, for, as stated, cases obviously of plague had been admitted into hospital before the alarm about the rats was raised. Great difficulty appears to have been experienced in the administration, owing to the panic which seized the inhabitants, and a very graphic account is given of the stampede from the city of men and women, and of attacks on ambulance parties and on the doctor. In one of these a medical man had to shoot two of his assailants in self-defence. Superstition leading to distrust and suspicion of all plague officers was at the foundation of these frenzies on the part of the populace. One of these superstitions is stated to be that the Viceroy had met a Yogi in some remote spot in the Himalayas, and made a compact with him to sacrifice 2 lakhs of lives to the goddess Kali, from whom the city of Calcutta takes its name, to save the British Government in India which she would otherwise overthrow. During the sixteen weeks 2,490 persons were inoculated against plague. Dr. Cook and his assistants, European and native, are to be congratulated on the excellent services which they rendered to the Corporation at a time of great emergency.

COTTON-SEED OIL IN COOKING.

AT a time when so much attention is being very properly paid to the question of food adulteration, it would be well if more energetic steps were taken to ensure the purity of those substitutes which are intrinsically harmless, when themselves of good quality. Cotton-seed oil is a case in point. The extent to which it is employed at the present time in this country is probably but imperfectly realised by many. It is very largely used in fish frying, the making of cheap pastry, the manufacture of margarine and lard, and in place of olive oil in the preparation of sardines destined for our markets. This, though too often fraudulent, would be in no way prejudicial to health, if only the use of the prime product, properly prepared and refined, were generally enforced. The oil, which consists chemically for the most part of the glyceryl salts of oleic and linoleic acids, is, after expression, subjected to a process technically known as "purging," in which the grosser impurities are separated by treatment with caustic soda. The dark colour, unpleasant odour and taste, and tendency to rancidity which remain should be removed by a careful process of refining. But this is too often only imperfectly carried out, and chemicals are employed for the purpose which merely mask these faults temporarily, and are frequently themselves of a deleterious nature. The odour of such improperly-prepared oil is painfully familiar in the vicinity of fried-fish shops, and its familiarity is evidence of the widespread use of inferior oils. Whilst good cotton-seed oil is harmless, and might be legitimately employed in preference to animal fats of doubtful quality, the consumption of large quantities of the substance in a semicrude state, and often loaded with injurious acids and bleaching agents, cannot but exercise a pernicious influence upon health.

THE NUCLEO-PROTEID OF THE BRAIN.

P. A. LEVENE publishes[1] an account of a research made on the above subject. Cytologists have long ago observed that, when a cell is divided into two parts, one of which contains the nucleus, the nucleated part lived and was able to recuperate itself, while the other part died after a brief period, during which it failed to digest or assimilate food. Biologists have further concluded that the chromatin is the most important substance for the life of the cell, and that most functions are connected with some changes in that substance. The nucleo-proteids possess special characteristics, the chief of which are that they contain phosphorus, and possess the property of acids combined with proteids. Those compounds which contain a relatively high percentage of phosphorus, and whose acidity is but little neutralised by proteids, possess a marked affinity for certain basic aniline dyes, and, owing to the readiness with which the substance can thus be recognised, it has been called chromatin. In the nerve cell, in distinction from many other cells, chromatin is found not only in the nucleus, but also in the cell body in the form of Nissl's

[1] *Archives of Neurology and Psychopathology*, 1899, No. 3.

granules. To determine the nature of the nucleo-proteids of brain, the brains of calves freshly killed were used, and a nucleo-proteid of considerable purity was obtained by one of two methods which are detailed. An analysis gave the following result: C, 42.28 to 42.44 per cent.; H, 5.82 to 5.99 per cent.; N, 15.46 per cent.; S, 1.28 per cent.; P, 0.573 to 0.577 per cent. The nucleo-proteid thus contains very little phosphorus, resembling in this respect the nucleo-albumins of Hammarsten. Testing for the xanthin bases showed the presence of both guanine and adenine, and but the barest trace of xanthin. Thus it was established that the substance is a true nucleo-proteid. The larger proportion of the phosphorus was found as a constituent of the nucleic acid radicle, which with a proteid radicle forms the nucleo-proteid. There was no inorganic phosphorus. From the above facts it appeared that the nucleo-proteid of brain was characterised by its high proportion of proteid and low proportion of phosphorus, and by the nature of its guanine and adenine bases. It appeared from further experiments that there was but one nucleo-proteid in brain tissue (nerve cells), and that the nature of the chromatin of the nucleus did not differ essentially from that of the nerve cell body. Levene, however, points out that the full elucidation of this question demands a comparative chemical study of the nerve tissue under different physiological and pathological conditions, that is, in conditions in which the chromatin nearly disappears from the nucleus, and is then located only in the cell body, and *vice versâ*.

TRANSPLANTATION OF THE OVARIES.

The great success which has attended the therapeutic use of preparations of the thyroid gland has led, perhaps, to somewhat wild and unscientific hopes as to the effects of derivatives from other animal tissues. Certainly there is as yet no convincing evidence that real benefit can be expected from the employment of ovarian extract, though it has been extensively tried for menstrual disorders, anæmia, epilepsy, and the like, and some observers have alleged good results in isolated instances. There is reason to fear that in estimating the progress of these cases the wish has been too often father to the thought. Very interesting and suggestive experiments have, however, been made during the past year by several workers on the effects of transplantation of the ovaries. Knauer of Vienna has just reported the results of his researches in this direction, and he has arrived at conclusions very similar to those recorded a few months ago by McCone in the *American Journal of Obstetrics*. It appears that ovaries grafted from one part of an animal to another part will continue to grow and remain functionally active, and in some cases these observers assert that pregnancy can and does occur. The best results are obtained when the raw pedicle of the transplanted ovary is attached to a denuded surface. The American experiments are also said to have demonstrated that ovaries, grafted from one animal to another of the same or even of a different species, retain their functions, and that the atrophy of tubes and uterus, which usually follows castration, is by this means prevented. Recently an astonishing case has been recorded—the authority for which is again transatlantic—in which a human ovary was implanted in a patient, for the relief of untoward symptoms following oöphorectomy, and with complete success. A good deal of confirmatory evidence would be necessary before these statements could be accepted as fact. There are many points in connection with the anatomy and functions of the ovary which would suggest that, if its influence in the economy, which must be a potent one, can be artificially supplied at all, this end is most likely to be achieved by a grafting of the intact and living organ. If results should be found to justify such an expectation, a most important and useful addition would be made to the resources of the gynæcologist. But if pregnancy might follow such a procedure, as is alleged to be the case in rabbits and guinea-pigs, many serious and delicate questions of a social and medico-legal nature would demand earnest and anxious consideration before the operation could be pronounced justifiable.

LONDON UNIVERSITY ELECTION.

The following was the condition of the poll for the election of Parliamentary representative of the University of London when the polling was suspended on Thursday:

Sir Michael Foster	903
Dr. W. J. Collins	662
Mr. E. H. Busk	439

The poll remains open from 8 A.M. to 4 P.M. on Friday and Saturday, and the official declaration will be made on Monday. It is desirable that all medical graduates who wish to record their vote should do so at the earliest possible opportunity. Mr. Busk's position appears to be hopeless, so that votes given to him seem likely to be thrown away.

MILITARY HOSPITALS IN NATAL.

The following telegram, despatched by our Special War Correspondent from Pietermaritzburg on Tuesday, January 30th, but delayed in transmission, is understood to refer to statements which have appeared in the Natal newspapers: "Unfavourable reports Natal hospitals quite unjustifiable." (A statement by Mr. Wyndham will be found at page 342.)

The anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on Thursday, March 8th.

Dr. Charles Porter, Medical Officer of Health for the Borough of Stockport, has been appointed Medical Officer of Health for the County of Shropshire, in the place of the late Dr. W. N. Thursfield.

The discussion on the Mastoid Operation for the Cure of Chronic Purulent Otorrhœa will be resumed at the next meeting of the Royal Medical and Chirurgical Society. A lantern demonstration of the operations described by Mr. Ballance at the meeting on January 23rd will be given.

We are glad to see that Mr. Chamberlain in his great speech on Monday night spoke with satisfaction of the work of the Royal Army Medical Corps. Never before, he said, had so large a force been manœuvred and at the same time the commissariat and the medical service worked so smoothly.

The preliminary sitting of the Committee of Inquiry into the health of Dublin took place on Wednesday, February 7th. The Council Chamber of the Corporation in the City Hall has been granted to their use, and the first meeting for actual business has been fixed for February 15th.

The annual Oration of the Hunterian Society will be delivered by Dr. F. J. Smith, in the Theatre of the London Institution, Finsbury Circus, on February 14th, at 8.30 P.M. The subject selected is The Influence of Modern Surgery on Medicine. Members of the profession are invited to attend.

Regulation of the Sale of Cigarettes in New York.—According to the *Medical Record* a Bill has been introduced into the New York State Legislature for the regulation of the sale of cigarettes. Dealers must obtain a tax certificate, and must make oath that the cigarettes offered for sale contain no narcotics or injurious drugs. The application for a certificate must be signed by five reputable citizens of the place where the applicant resides. No cigarettes must be sold to persons under 18 years of age.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Military Hospitals in South Africa.—Dr. Farquharson on Thursday afternoon asked the Under-Secretary of State for War whether his attention had been called to statements as to the defects in the military hospitals in Cape Colony and Natal; and whether he had any information which he could communicate to the House with a view of relieving the anxiety of those who had relatives or friends among the sick and wounded in South Africa.—Mr. Wyndham: Perhaps the hon. member will allow me in reply to quote from two telegrams dealing with this matter which have been received from Lord Roberts. His lordship telegraphs on January 22nd: "There is no real foundation for report in *Times*, December 29th, 1899, reflecting upon hospitals at the Cape. I am perfectly satisfied with all arrangements for reception and treatment of wounded. The quality of cooking was indifferent for the first week; nothing more can be complained of, and this was rectified as soon as possible." Lord Roberts telegraphed a portion of a telegram he had received from General Buller, dated January 30th, to this effect: "One of the Natal papers is attacking the military hospitals, and as some of the false and ridiculous statements may cause anxiety at home, I think it right to say that Mr. Treves assures me that there is no possible ground for complaint, and that I may rest satisfied that all the medical arrangements are completely satisfactory to him. I pressed him if he could suggest improvement, and he said he could not. I have given the matter every consideration, and can only express my admiration of the arrangements made by Colonel Gallwey and the Royal Army Medical Corps, and Mr. Treves assures me that he entirely agrees with me."

The Royal Army Medical Corps has its officers distributed as follows, according to a statement made in the House last Tuesday by the Under-Secretary for War, in answer to Sir W. Foster: Three hundred and sixty-eight are in South Africa, and 133 civil medical officers are associated with them there; 377 are employed at other foreign stations, and 111 are at home. The Under-Secretary stated that 28 more civil medical men are to go out to the seat of war, and that 112 retired pay officers are employed at home.

The Ballot for Bills to be introduced by private members was less exciting this session than usual, as it was generally felt that the war and discussions on it must take up a large share of the time of the House. Two hundred and ninety-eight members nevertheless put down their names, but several as usual balloted for one Bill. Between 20 and 30 went for the Miners (Eight Hours) Bill, which won the sixth place. The Bills introduced on Friday were, however, of little interest to the medical profession, only two—namely, the Midwives Bill and the Public Health Acts Amendment Bill—having any direct bearing on medical interests.

The Midwives Bill was supported by an influential group of members, and had exceptional luck in drawing—through the name of one of its most prominent supporters, Mr. Tatton Egerton, M.P. for the Knutsford Division of Cheshire—the eighth place. The Bill was duly brought in and ordered to be printed on Friday last week, and the other backers announced were Sir William Hart Dyke, Mr. Schwann, Mr. Hazell, Mr. Heywood Johnstone, Mr. Bonsor, Mr. Flower, and Mr. Tennant. These preliminaries over, there remained the most important point of all—the selection of a day for the second reading. In this the previous good luck of the promoters deserted them, for the choice of February 28th has put the Bill down for a day on which the Miners (Eight Hours) Bill has the first place. Why some day later was not chosen, on which a first place could have been secured, it is most difficult to understand. As the Eight Hours' Bill for Miners is always a contentious measure which excites the opposition of coal owners on both sides of the House, and is opposed by the representatives of the miners in Durham and Northumberland, its discussion is sure to occupy most if not all of the time on February 28th. The chances of the Midwives Bill, unless the unexpected happens, are therefore made less favourable than might have been expected from its high position in the ballot.

The Health of Gibraltar was the subject of a question by Mr. Stevenson, and he elicited from the Colonial Secretary that the death-rate in 1898 was only 17.79 per 1,000, and that the remodelling of the whole drainage of the fortress was finished last year. The Sanitary Commissioners have sufficient powers to deal with insanitary houses, and are exercising these functions satisfactorily. There appears to be no space on the Rock left over from military uses which could be used for recreation purposes.

The Post Office and Dr. Oswald formed the subject of a complaint by Mr. Steadman on Monday last. It appeared that the medical officer of the Western District had stated that a female telegraphist could perform her duties although suffering from a severe cold. Dr. Oswald, her medical attendant, thought otherwise, and afterwards certified for increased leave of absence. The telegraphist was fined two days' pay for remaining from office, and Mr. Steadman wanted to know why the Post Office refused to recognise the certificate of a well-known practitioner, and obtained a statement from the Financial Secretary to the Treasury that the two days' pay would be allowed.

The Food and Drugs Act of last session gave power to the Board of Agriculture to make regulations after inquiry for determining the composition of genuine milk or cream, and what addition of extraneous matter or proportion of water in any sample of milk (including condensed milk) or cream shall, for the purposes of the Acts, raise a presumption that milk or cream is not genuine. To report and advise on these regulations, a Departmental Committee has been appointed by the President of the Board, which will consist of Lord Wenlock (Chairman), Mr. George Barham, Mr. George Cowan, Major P. Craigie (an Assistant Secretary of the Board of Agriculture), Mr. S. W. Farmer, Mr. Shirley Murphy, Professor Thorpe (of the Government Laboratories), and Dr. Augustus Voelcker. Mr. R. H. Rew will act as Secretary to the Committee.

The Vaccination Acts.—The Lord Chancellor presented a petition to the House of Lords on Tuesday from the guardians of Wandsworth and Clapham, praying that the Vaccination Acts might be amended so as to secure that no proceedings should be taken by vaccination officers under the Acts without the consent of the guardians. The Lord Chancellor expressed his strong dissent from the prayer of the petition. Petitions have also been presented in the Commons from Camberwell, Wimborne, Yeovil, Barnstaple, Freebridge, Lynn, and Cranborne, asking for alteration in the law.

The University of Birmingham.—A copy of the charter and statutes of the new university has been laid on the table of the House of Commons. It contains the names of the honorary and other officers covered by the terms of the charter, and names Mr. Joseph Chamberlain as the first Chancellor, Mr. Robert Samuel Heath, M.A., D.Sc., as the first Vice-Principal, and Dr. B. C. A. Windle as the first Dean of the Medical Faculty. The Principal is to be appointed by the Crown through the Lord President of the Council.

The "Jelunga" Transport obtained an unenviable notoriety recently on account of the neglected condition of 500 wives and children of soldiers which she brought home from the Cape. Mr. Wyndham explained on Tuesday that six children died in the course of the voyage, and that there was no nurse on board. The Secretary of State was of opinion that there was not a sufficient staff to look after the women and children, and although it might have been difficult for the general officer commanding at Capetown to provide an adequate staff, that proper care had not been taken. The Minister for War regarded the incident as most regrettable, and care has been taken to impress on those concerned the necessity of avoiding such mistakes in the future.

THE WAR IN SOUTH AFRICA.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

[From our Special War Correspondent.]

GENERAL OBSERVATIONS ON SMALL-CALIBRE BULLET WOUNDS.

The Hospitals at Wynberg.

During my stay at Capetown I had an opportunity of seeing Nos. 1 and 2 General Hospitals, established at Wynberg, in full work. A large number of wounded and a few—remarkably few—sick had been brought down from the field hospitals at the Modder River and Orange River, and the staff were busily engaged. Later on some 180 were brought in the hospital ship *Spartan* from Natal and accommodated at No. 3 General Hospital at Rondebosch, the officers being taken into the permanent hospital forming part of No. 1. There is no need for me to describe the hospitals, as your readers have already had full accounts of them, but a few impressions derived from a study of the cases may prove of interest.

Through the courtesy of Colonel Anthonisz, Colonel Duke, and Colonel Wood, in charge respectively of the three hospitals, I was enabled to study the cases minutely, and the R.A.M.C. officers and civil surgeons vied with each other in drawing attention to all the more remarkable cases. It is of course early to speak positively about patients who have only been a short time under treatment, but the general impression of their progress is decidedly favourable. The sanitary efficiency of both hospitals is so far unquestionable and the water supply good and abundant. At present the dry season is firmly established, and the doors and windows everywhere, in huts and tents alike, are perpetually open, to an extent indeed that at first rather amazes those unaccustomed to the climate and unaware of the slight risk that appears to be incurred by operating on patients and dressing wounds almost in the open air.

Wounds inflicted by the Mauser bullet heal very kindly, as favourably indeed as, we are assured by those who ought to know, do wounds caused by the Lee-Metford. If a Mauser bullet has merely inflicted a flesh wound through the shoulder, arm, or thigh, healing throughout by primary union can with certainty be looked for. It is uncommon to find any portions of clothing, buttons, etc., carried into the wound. In some cases, however, this does happen, and I was assured that in not a few that came under treatment at the field hospitals at the Modder River, portions of the Highlanders' kilts were embedded in the wounds, and were removed.

Wounds by the "Sporting Mauser" Bullet, and by Ricochet.

The vast majority of the wounds are inflicted by the Mauser bullet proper—that is, the familiar conical bullet sheathed completely in nickel. But wounds inflicted in our men by three other kinds of bullets have to be taken into account The sporting Mauser bullet is of the same size and weight as the other, but the nickel does not entirely enclose the lead, being deficient at the fore part for about half an inch. The posterior point of the lead bullet being enclosed and tightly gripped in its nickel sheath, the lead on striking any hard substance—bone, for example—spreads out, or "mushrooms," as it is usually expressed. This involves much laceration of soft parts. There is yet a bullet occasionally used which is practically identical with the "Dum-dum," and in a very few instances the ordinary "Express" bullet has been extracted. To this list should be added the Mauser bullet as a ricochet shot. Not many of these are met with. Some that I have seen show bending of the bullet, or it may be twisted on its long axis. The nickel top may be intact, but the nickel sheath will probably be split and stripped off the lead core to a greater or less extent, so that the bullet resembles a moth with closely folded wings. Such missiles would be likely to deflect in their course, and they would obviously lacerate the parts through which they passed. An intact Mauser bullet nearly spent may be twisted and bent, and the nickel sheath split in a somewhat similar fashion if it strikes a hard bone. In such cases the entrance wound is small and there is probably no exit wound, thus showing that the bullet was of normal shape when entering.

Shell and Shrapnel Wounds.

A few of the patients have injuries from shell splinters, one or two injuries from the 116 Nordenfelt projectile, and once in a way wounds inflicted by shrapnel are met with.

The Small Proportion of Septic Cases.

It must be borne in mind that all the patients in the base hospitals have travelled far. When fit to be sent down from the field hospitals in the western frontier, or when the pressure necessitated their being moved away, they had a journey of at least twenty-eight hours in the hospital train to Wynberg; then the drive up to the base hospital is about a mile. Wounded sent down from Natal have their journey to Durban, and then the transit in the hospital ship to Capetown. After that they have about half an hour's journey by train from the docks to Wynberg or Rondebosch, followed in either case by a drive of about one mile. If the conditions, therefore, are considered, and it be remembered that many of the men had lain for hours on the field of battle before the ubiquitous bearer companies had access to them, it is not surprising that in a few cases the wounds had become septic before they reached Wynberg. Once there, however, and at rest, the septic condition as a rule rapidly mended. At one time during my stay at Capetown there were about 1,100 patients in hospital. The proportion of septic cases was marvellously insignificant.

The Surgical Work at the Front.

The mere mention of septicity seems to imply criticism if not censure. Nothing could be further from justice. The plain fact is that one and all are agreed that never perhaps in the history of warfare has better work been done at the front by the Medical Department than in this campaign. The bearer companies and ambulance department have already received the praise so well their due. I desire to bear witness also to the evidence of the excellent surgical work done at the front, examples in proof of which will be cited later on.

Nature of Wounds in Relation to the Nature of the Fight.

It is noteworthy that the different engagements were to a considerable extent characterised by particular classes of injuries. Thus at the action of Belmont, when our troops were for a great part of the fighting hours on their feet, the cases of wounds of the trunk and in particular of compound fracture of the thigh were numerous. At Magersfontein especially wounds of the head and shoulder and long tracking wounds were in the ascendant. These facts seem to imply not only good shooting on the part of the Boers but also opportunity for deliberate aim. Wounds about the shoulder, usually the left, were common, and I saw quite a number where the bullet had entered near the acromion process and passed out through the axilla. Many of these were complicated with nerve injury and of much interest, and I shall write more at length on them in my next letter.

Wound of Knee by Lee-Enfield Bullet: Convalescence: Fresh Injuries: Amputation.

The following are the notes of a case in which a Lee-Enfield bullet wound of the knee-joint appeared likely to do well, when an accident altered the progress of the case very much for the worse.

The patient was a field cornet, wounded at Elandslaagte by a Lee-Enfield bullet and taken prisoner. It entered the left popliteal space, and passed out through the patella, fracturing that bone transversely about the middle. The wound did well, and he was sent round to Capetown, and moved to No. 1 Hospital at Wynberg, He was a big, heavy man, weighing probably 16st. or 17st., but not very healthy-looking; in fact, his appearance rather suggested renal disease, and the action of the heart was feeble. Wiring the patella was suggested, but not performed. He recovered sufficiently (with a movable knee-joint) to leave his bed, and to move about on crutches. One day, however, he fell, tearing the anterior wound open. Extravasation occurred into the knee, and suppuration followed. When I saw him (about December 22nd

openings had been made in various places about the joint, and there was œdema of the back of the thigh. The knee was flexed, and acutely painful. He was very hysterical, and though at first afraid of chloroform would not afterwards allow the dressings to be changed without an anæsthetic. The temperature was irregular, high, and obviously septic. He has wasted, having probably lost 3st. or 4st. in weight.

About December 24th the knee-joint was freely laid open and irrigated; commencing erosion of cartilages was observed. The temperature improved for a few days, but then began to rise and grow irregular again. He asked for amputation, and this was done by Mr. Makins about December 27th in the middle third of the thigh. The after-progress was satisfactory, and the prospect of rapid recovery almost certain.

SOME IMPRESSIONS OF MILITARY SURGERY IN SOUTH AFRICA.

By G. H. Makins, F.R.C.S.,

Consulting Surgeon to the Forces in South Africa.

I.—The General Characters of the Wounds inflicted by the Mauser Rifle.

Wounds inflicted by the Mauser rifle possess very special characteristics, due in part to the velocity attained by, in part to the smallness of, the bullet. These characteristics are in a great measure shared by the wounds produced by the Lee-Metford, but the slightly greater size and weight, together with the blunter extremity of the Lee Metford bullet, give rise to a slightly more serious injury than that resulting from the regulation Mauser. In all essentials, however, the wounds produced by the two rifles may be regarded as identical in nature.

The first striking physical peculiarity is the direct course of the wound track, due to the fact that the bullet, by reason of its small size and the great velocity at which it travels, is never materially diverted in its course through the body; indeed, there is no reason why the entire length of the body should not be traversed by a bullet fired from a short distance. The question of a wound track travelling around the wall of the thorax or abdomen has scarcely to be considered. The same conditions responsible for the directness and length of the tracks naturally explain the frequently multiple character of the visceral injuries sustained, for example, lung, stomach, liver; neck, thorax, and abdomen; and the common infliction of two or more separate tracks by one bullet, for example, arm and forearm with the elbow in a flexed position, both lower extremities, head and trunk, or one upper extremity and trunk.

The direction of the track is naturally dependent on the position of the body at the time of the reception of the injury, and the frequent assumption of the prone position in the present campaign has led to the occurrence of a large proportion of longitudinal tracks in the trunk, or trunk and head, which will be referred to later. Certain battles, in fact, have been characterised by the nature of the wounds sustained: thus, at Belmont and Graspan, where rapid advances were made in the erect position, fractured thighs were particularly numerous, while at Modder River, where the men for a great part of the time lay on the battlefield in the prone position, glancing wounds of the uplifted head or longitudinal tracks of the trunk and limbs were especially frequent.

Secondly, the tracks are of very small calibre, and hence produce remarkable individual injuries of narrow structures such as nerves and vessels, to be later remarked upon; while, on the other hand, the force of the bullet seems to be mainly exerted on the tissues immediately before it, so that only the area of tissue immediately surrounding the track is condensed as well as contused, and vital structures lying but a very short distance away escape any serious injury in a most surprising manner.

Thirdly, the apertures of entry and exit are extremely small, and in uncomplicated wounds of the soft parts often differ little in appearance. The apertures, however, present considerable variations in character, according to the angle at which the bullet impinges upon the surface, or if the bullet has been deformed by striking against some hard substance before entering the body; or, again, the distal portion of the track and the wound of exit are materially modified when the bullet strikes a bone in its course.

When the bullet impinges on the surface at approximately a right angle the aperture of entry is circular and clean punched out, about a third of an inch in diameter, and the margin is slightly depressed and contused. The exit opening is usually more slit-like, and the surrounding contusion less marked, the size in uncomplicated cases not exceeding that of the aperture of entry, and there is rarely any appearance of starring.

When the bullet impinges obliquely the aperture of entry is oval, that side of the entrance hole on which the bullet has rested sloping down in a shelving manner to the track; when such openings are supported by a firm floor, as the chest wall, or a bone, they are often of considerable size.

The most important modifications in the nature of the apertures in cases uncomplicated by bone injury are due to alterations in the shape of the bullet, consequent on its striking against a stone or some hard substance prior to entering the body.

In some instances the bullet is simply bent or curved; in others it is shortened, the unbroken sheath forming folds on the shortened lead core; in others the casing is torn or broken, forming a ragged envelope, projecting more or less widely. Several variations of the last condition occur: thus (1) the bullet may simply have the casing broken from the tip and be little altered; it has been suggested that this may, in some instances, have been done by the soldier before firing, with a view to the production of explosive effects. (2) The broken casing may be rolled back so as to form an irregular fringe, and this condition may reach such a degree that after entering the body the leaden core may entirely escape from the case and travel onwards, leaving the jagged case entangled in the deep part of the track. (3) The casing may be fissured longitudinally, the broken portion projecting from the side of the bullet like a knife edge.

In either of the latter instances the apertures both of entry and exit lose all special characteristics; they are large and irregular and the wound track is modified in a corresponding degree.

MEDICAL NEWS AND NEEDS IN NATAL.

[From our Special War Correspondent.]

Pietermaritzburg, Natal, January 12th.

Fire at a Hospital at Maritzburg.

A somewhat serious fire occurred on the evening of January 8th, at the Lower Barrack Hospital at Maritzburg. Two wards, containing 50 beds, were completely burnt out. The building was of the usual type of wood and galvanised iron. Fortunately the patients were got out smartly, and no harm whatever has resulted to any of them. The local papers stated that the wards were unoccupied at the time; this is incorrect. Some of the bedsteads were lost. Had there been a strong wind blowing the extension of the fire would only with difficulty have been prevented, for although there is a fire station within two hundred yards, the fire hose could not be got to work, owing to lack of water, until the huts were destroyed. There were plenty of empty beds in other parts of the hospital, and no serious inconvenience was occasioned. The result of inquiry as to the cause has not been made known, but the fire, as usual, is ascribed to the upsetting of a lamp.

The Garrison Church as a Hospital.

Steps are now being taken to convert the garrison church into a hospital. The building will accommodate 50 or 60 beds. It is doubtful whether church buildings are ever, in a warm climate, well adapted for hospital purposes. The ventilation is not good, the windows being placed high and not opening freely enough, and there is no through current of air. Nor is the light all that could be desired. Moreover, it is a distinct disadvantage to mass so large a number of sick or wounded in one ward. Tents are only in use in the College Hospital at Maritzburg. So far the rainfall has been unusually light for the rainy season here, but doubtless during the summer months in Natal, where tremendous downpours of rain are as a rule frequent, hospital patients would be better off in huts. The progress of wounds here, speaking generally, is as satisfactory as could possibly be wished.

Convalescent Homes for Officers.

There would seem to be a good opening for more convalescent homes for wounded officers, but apparently the necessary funds are not forthcoming. Should any pressure occur, the supply of beds for officers will hardly be adequate. At present the only convalescent hospital for officers is that under the management of Mrs. Gunning and Mrs. Graham, which accommodates but 6. Another similar institution to take 10 or 12 is talked of, but not yet established, and, if started, it will be by private enterprise. The officers are exceedingly keen to get back to the front the moment they are pronounced well enough, and it is to be feared that in some instances their chance may be lost owing to the necessity of providing a sufficiency of hospital beds and the absence of suitable provision for cases not well enough to return to duty, and yet too far advanced in convalescence to justify detention in hospital.

THE HOSPITAL SHIP "NUBIA."

By George Ashton, M.B.Vict.,
Surgeon P. and O. S. N. Co.

Conversion from a Transport.

The conversion of the ss. *Spartan* from an ordinary passenger ship into a hospital ship, with accommodation for 130 patients, in Southampton last October, elicited favourable comments from the home papers. However, in the fitting-up of the transport *Nubia* for hospital purposes in Durban, with accommodation for nearly 500 patients, it may fairly be claimed that this young colony has shown its aged parent "how the thing ought to be done." The ss. *Nubia* belongs to the Peninsular and Oriental Steam Navigation Company. She is 430 feet long, 49 feet broad, and her registered tonnage is 5,914. She has a sea speed of 14 knots. The *Nubia* was engaged last summer in the conveyance of the company's mails to China, but in October she was chartered as a transport, and brought the Scots Guards to the Cape. She then proceeded to Durban, where she will remain until the present campaign is over.

The Work of Eight Days.

On December 25th, 1899, a telegram was received by the naval authorities from the General Officer Commanding the Forces in Natal, requesting them to select and fit up a large steamer as a hospital ship with all possible speed. On the following day the *Nubia* was inspected, and, being deemed suitable, 130 carpenters, plumbers, painters, and electricians, most of whom were refugees from the Transvaal, were at once placed on board. By working day and night the ship's whole aspect was changed, and her interior completely rearranged, and in eight days she was converted into a floating hospital, replete in every detail, and was ready for the reception of patients on January 4th. The *Nubia* had been fitted for the carrying of 2,000 troops, and this entailed an additional amount of labour, as all the extensive troop fittings had to be removed ere the work could be begun. It speaks well for the resources of Durban and for the energy of those to whom the work was entrusted, that the change was completed in eight days, as the magnitude of the task will be fully appreciated when it is known that every fitting, every cot, etc., had to be procured or constructed locally.

The Wards.

Altogether there is accommodation for 474 sick, wounded, or convalescent patients. These are distributed into seven wards, named A to G, beginning in the fore part of the ship with Ward A, and finishing in the stern with Ward G. A Ward contains 100 convalescents; B, 26 cot cases; C, 32 cot cases; D, 200 convalescents; E, 28 cot cases; F, 30 cot cases; G, 30 cot cases; whilst 28 convalescent officers have the use of the passengers' cabins, in which only the lower berths will be used, the upper ones having been removed to make more room. The convalescent men will sleep in hammocks. The wards are all between decks, and can be completely separated from one another by closing the watertight doors. In Wards F and G, which will be used for the most serious cases, swinging cots are provided, so that when the ship proceeds to sea the motion will be reduced to a minimum, thereby conducing to the comfort of these patients. The ward floors have all been varnished and the sides matchboarded and painted white, which adds an air of brightness and cleanliness to their appearance. The vessel throughout is ventilated by steam ventilators and electric fans; as a result the wards are always delightfully fresh and cool, even in the middle of the day when the heat is sometimes oppressive.

The Operating Theatre and Administrative Offices.

The operating theatre is situated on the main deck aft, and is provided with all the latest appliances for the proper pursuit of antiseptic surgery. Further aft still a mortuary is situated, where *post-mortem* examinations will be conducted, and the plentiful supply of fresh water which is so necessary has been provided. The dispensary is attached to Ward E, and a washhouse and laundry are situated on the main deck amidships. The approaches to the wards from the upper decks have been made easier and more adapted to the needs of invalids by having the steps broader and less perpendicular than is usual on board a ship. Two lifts have also been fitted for the use of helpless patients. They are worked by hand, and are so contrived as to be free from jerking.

The Staff.

The medical staff consist of 6 doctors, 7 nursing sisters, and 35 attendants. A guard of 10 marines and a corporal are attached; they are from H.M.S. *Terrible* stationed here, and their duties consist in keeping sentry at the gangway, seeing that due order and discipline are maintained, and that no convalescents leave the ship without permission. During the conversion of the ship Sir William MacCormac paid a visit. He expressed his satisfaction with the excellence of the work, and gave several hints and suggestions.

Comforts for the Patients.

The ladies of Durban came forward with their usual munificence and supplied numbers of deck chairs, small tables and screens, as well as many hanging ferns and palms; these enormously enhance the general comfort and cheerful aspect of the wards. Every day baskets of flowers and fruit, together with bundles of newspaper and illustrated periodicals, arrive. These contributions show that Tommy has won a large circle of sympathetic friends who are only too pleased to avail themselves of this opportunity to tender him a token of their appreciation.

Climate.

The patients will be brought down from the base hospitals at Maritzburg and Frere, and will travel in trains specially fitted up for the purpose. These trains are made conspicuous by having the Red Cross painted on the carriages. The soldiers will be kept on board until able to resume their duties at the front, or if incapacitated from further service they will be sent home when they are fit to travel. Cloudless blue skies from week's end to week's end, with now and then an occasional shower of rain to relieve any possible monotony, cool breezes from the south-west, the fresh salt smell of the sea, and an equable temperature day and night, may be trusted soon to bring back health and strength to these invalids, who, having been shedding their blood in their country's cause, are now justly entitled to every care and comfort that a grateful country can provide.

Durban, January 13th, 1900.

SICKNESS AT THE MODDER RIVER.

[From a Correspondent.]

Typhoid Fever and Diarrhœa.

There has been no severe fighting since my last communication to you. In that letter I stated that the troops were in excellent health; I regret to be unable to send such a good report this mail. Typhoid fever has broken out and many men have already died of the disease. In addition the troops are much troubled with a very severe form of diarrhœa. The illness begins very suddenly, the stools are quite liquid and of a light green colour, the liquid is very acid and very frothy, showing rapid fermentation. At the commencement as well as at the close of the disease a little blood and much mucus are often passed. The patient complains of severe scalding about the anus for ten minutes after defæcation. The malady seldom lasts more than a week, but leaves the patient very weak. The temperature is seldom or never raised. I

have found the best treatment to be rigid milk diet and a daily injection into the rectum of cold boiled water in which have been dissolved a tabloid of ipecacuanha and 10 minims of chlorodyne. I can speak well of the above treatment, which I have practised on myself, having had the malady twice and been invalided with it once.

The cause of the diarrhœa I believe to be a subacute enteritis following the ingestion of particles of sand. Seldom a day passes without the camp being attacked by a "devil." This is the popular name for a dustspout or sand storm. These storms may last from a quarter of an hour to a whole day and make life a perfect misery. The quantity of silica one is compelled to breathe and to swallow is enormous, and it is to the irritation of the bowel membranes by these particles of silica that I attribute a large percentage of our cases of diarrhœa.

Modder River, January 12th.

THE PORTLAND HOSPITAL.

Mr. Anthony A. Bowlby has sent to the *St. Bartholomew's Hospital Journal* a letter dated January 9th, describing the establishment of the Portland Hospital at Rondebosch, about six miles from Capetown. The staff arrived at Capetown on December 29th, 1899; the whole of the equipment and stores did not reach Rondebosch until January 3rd, but five days later the tents were pitched, including one tent for operations, one for a dispensary, and one for an office. The site chosen for the hospital is a sandy soil on an open piece of ground, and is described as "perfect both from a scenic and a sanitary point of view."

The first cases were admitted on January 8th. They comprised 3 officers and 30 men, mostly from the cavalry and artillery of General French's column at Colesberg. In most cases the wounds had been received on January 4th, but in some on January 1st and 2nd. All had been dressed with the field dressing, or at the field hospitals, or in the train by which they were brought down. Mr. Bowlby states that "most of the wounds were quite aseptic, though the skin was often as dirty as dust, powder, and sweat could make it, and in spite of much oozing in many cases."

In concluding his letter, Mr. Bowlby writes: "I should like to say that the general arrangements for the dressing of wounded men on the field of battle, and for their transference by train, are probably better than anything ever before achieved by any nation, and reflect the greatest possible credit on the R.A.M.C., who have saved our soldiers untold sufferings and many lives."

The Honorary Secretary of the hospital has this week received a telegram stating that "the hospital is now full of patients and in thorough working order, doing excellent work."

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XII.

Camp Sanitation.

From the Modder River during the past week information with reference to the sanitary condition and the health of both camps has reached us. Thus Reuter's telegram of Sunday, January 28th, states that "our medical officers here believe from various indications that the Boers are suffering from enteric and dysentery owing to the insanitary condition of their trenches, which are reported to be reeking with disease. In addition to this the general demoralisation caused by the heavy shelling, which is sufficiently erratic to keep the enemy always on the *qui vive*, together with the scarcity of food and the difficulties of transport, make the existence of the Boers at Magersfontein one of abject misery." It will be interesting to know what the indications referred to may be, but we have little doubt that diseases which are causing such havoc among our troops at Ladysmith are thinning the ranks at Magersfontein. Magersfontein is well known to me, and knowing both this position and our own position on the Modder, I have no hesitation in saying that that held by our troops is much healthier, and in every way more desirable for a camp than that occupied by the Boers. The water supply at Magersfontein is limited, and no doubt has to be carried for considerable distances to various portions of the Boer lines. The Boers as a rule are very slovenly in their camp arrangements, and when they come to be massed in large numbers I have little doubt that their sanitation is extremely deficient. From our own camp on the Modder we learn that instructions have been issued that in future wells must be sunk to supply water for drinking purposes, while the river water is to be used only for washing and watering the horses, mules, and oxen. This is doubtless an admirable precaution, and one most likely to be effectual in checking the typhoid fever which already threatens that camp. The water of the river, which is practically stationary, being held in large dams or reaches, is almost bound to be polluted from the camp on its bank.

Losses in General Buller's Second Attack.

The total losses from General Buller's second attack on the position held by the Boers north of the Tugela have been compiled from various sources by the *Daily Mail*, and are given as follows:

Date.	Officers.		Non-commissioned Officers and Men.			
	Killed.	Wounded.	Killed.	Wounded.	Missing.	Totals.
January 18—Acton Homes (Dundonald)	—	1	2	1	—	4
January 17, 19, 20—Venterspruit, etc ...	1	17	31	274	2	325
January 20th—Lyttleton (Potgieter's Drift)	—	1	2	13	1	17
January 21—(Hart, etc.)	2	7	22	216	4	251
January 22—(Hart)	—	1	1	19	—	21
January 23—(Hart)	1	—	1	14	—	16
January 24—Spion Kop, etc.	30	33	157	532	310	1,062
January 25—(Hart)	—	—	—	10	—	10
January 26—(Hart)	—	—	—	3	—	3
January 27—Miscellaneous casualties	—	1	1	33	—	35
	34	61	217	1,115	317	1,744

This gives a total of 251 actually killed and 1,176 wounded; of those returned as wounded we may take it that about 8 per cent. will die and the rest recover. Judging from previous experiences of wounds from the Mauser bullet, two-thirds of the men will be able to rejoin the forces within three weeks, and for the remaining third the period of healing is not likely to be a very prolonged one. The proportion of killed to wounded is again shown in these engagements to be apparently very small, many of our men having been sniped by the Boers at long ranges. The Boers hid themselves in all sorts of positions among the rocks on the Tugela heights. The ultimate result, then, of this attack will probably be the loss of between 300 and 400 lives. Considering the duration of the fighting, the number of men engaged, and the fierceness of the contest, we must admit that these losses cannot be regarded as unduly large.

General Botha and Our Ambulance.

After the battle of Spion Kop the Maritzburg correspondent of the *Daily Mail* tells us that one of our officers who asked permission to remove the wounded and bury the dead was directed to General Botha, the Boer commander, who refused to give permission. He said that previous to the war it had been said that England was going to meet a nation of barbarians, whereas the reverse had been the case. He mentioned instances of the Red Cross flag having been disrespected in Cape Colony by the British, and added that now he had the opportunity he would insist upon some guarantee being given that these acts should be discontinued before he surrendered the wounded. Our officer expressed ignorance of the instances mentioned, and pointed out that some of our ambulance men had been killed that day. Botha replied that the bearers had no right on the battlefield until two hours after the cessation of hostilities. Subsequently Botha gave up the wounded. If this be an accurate description of what occurred after the fight, I submit that the action of General Botha was both inhuman and unwarranted. His

statement that the bearers had no right on the battlefield until after the cessation of hostilities is not borne out by any clause in the Geneva Convention, and it is obviously a flagrant violation of all the dictates of humanity and the requirements of ambulance work. The Geneva Convention is short and simple; it contains only nine articles, and the whole spirit of the instrument is to facilitate aid to the suffering in every possible way. Article 2 is the one most directly bearing on the question, and reads as follows:

Persons employed in hospitals and ambulances, comprising the staff for superintendence, medical service, administration, transport of wounded, as well as chaplains, shall participate in the benefit of neutrality whilst so employed, and so long as there remain any wounded to bring in or to succour.

The original Geneva Convention, to which all the civilised Powers of Europe are signatories, came into force in 1864; a supplementary one was signed in 1868. The latter part of the first article in this reads as follows:

"When they"—that is, the persons referred to in Article 2 of the 1864 Convention already quoted—"request to withdraw, the commander of the occupying troops shall fix the time of departure, which he shall only be allowed to delay for a short time in case of military necessity."

The restrictions which any combatant officer may put upon the ambulance staff are thus clearly and sharply limited, and I think there is no question that General Botha exceeded the rights of a civilised combatant when he said that bearers had no right on the battlefield until two hours after the cessation of hostilities. There is certainly no mention either in the convention or the supplementary convention of such a restriction as he referred to. With regard to the alleged charges of disrespect to the Red Cross flag by the British in Cape Colony we must await further information, but it may be borne in mind that cases have been reported in connection with the hostilities on the western border of the Free State where the Boers are said to have fired upon our troops from waggons carrying the Red Cross. Such attacks may have drawn forth retaliation in kind, though it is to be hoped they have not. The final attempt of the Boer leader, as reported by the *Daily Telegraph* correspondent, to make the ambulance party on Spion Kop prisoners until we returned 25 Boers, who were taken as prisoners of war by our cavalry, is pretty conclusive evidence that good faith was not the guiding principle of General Botha's interference with our succour to the wounded.

Khaki Suits.

The *Pall Mall Gazette* of February 1st has a statement that khaki suits have been found not of sufficient protection for men when sleeping on the field, and the Government have placed extensive orders with Glasgow manufacturers for woollen khaki uniforms. It may be observed that the word "khaki" signifies a colour (that of mud) and not a material. In one of my previous letters I took occasion to point out that cotton khaki, although excellent material in a blazing sun, was very poor protection in cold weather, and more particularly when wet. I wore khaki for many years off and on in South Africa, but latterly never used it without having it lined with flannel, and never used it at all in wet weather. The soldier, to my mind, should always be provided with woollen or serge suits in addition to his cotton khaki. In selecting equipment for a corps recently formed for South Africa, a committee of which I was a member provided all tunics of khaki-coloured serge. If men have their shirts made of khaki-coloured flannel they can in hot weather march or patrol in their shirtsleeves—an excellent fighting costume.

Cape Meteorological Returns.

I have been favoured by Surgeon-Major Black with some notes on the weather of 1898, as observed by the Meteorologist of Cape Colony. From this it appears that the mean temperature in the shade at all the meteorological stations was 69.8°, with the comparatively small mean range of 19.1°. As showing the great variations of temperature in the summer months, it may be noted that in January, 1898, the maximum temperature at Graaf Reinet was 108°, the minimum for the same month was 40°. At Kenilworth, which is the De Beers village outside Kimberley, and the site of Mr. Rhodes's famous siege avenue recently laid out, the maximum black bulb in the sun was 159.8°, the highest shade temperature being 94.7°; the minimum black bulb on the grass was 39.1°, the lowest shade temperature being 44°. Here, again, the great difference between the noontide temperature and the temperature at night is very marked. Similar observations are recorded for February.

A Posthumous Letter.

G. W. Steevens's letter to the *Daily Mail* of February 3rd has a pathetic interest for readers to-day. Apart from its military and deep human interest, it throws a lurid light on the conditions which doubtless played a great part in the production of dysentery and typhoid among the garrison. If the siege seemed a long one in November, how much longer is it to-day! Yet even then men had to dwell "where no people should be—in the clefts at the river bank," "in overgrown ditches,"—all were alive with men and beasts. "The place that a month ago was only fit to pitch empty meat tins into is now priceless stable room." "The most worthless rock heap below a perpendicular slope is now the choicest of town lots." What chance had sanitation here?

Letter from Base Hospital.

I have just received a letter from one of the civil surgeons attached to the field force, from which I take the following extracts:

No. 5 General Hospital, January 11th, 1900.

I arrived, on board the British India steamship, in Table Bay on the evening of January 7th. I need say little about the voyage. The news we received at St. Vincent, the capital of the Cape Verde Islands, was that Buller's reverse amounted to 1,100 casualties and that Roberts and Kitchener were to sail immediately for the Cape. The other civilian surgeon on board and myself had little to do; a great many men, however, suffered from a low epidemic form of influenza characterised by pains in the back and head, general prostration and coryza. At least 50 per cent. of the troops, including the officers and surgeons, were victims. The troopers had an opportunity of being inoculated against enteric fever. Some twelve or so out of over 1,400 men only were done. Apart from slight *malaise* for twenty-four hours, local tenderness, swollen and painful inguinal and axillary glands (inoculation into the flank) and a rise of temperature from 100° to 102° F., on the evening after the operation nothing noticeable occurred. Lord Roberts and Kitchener arrived yesterday. I met them driving about town to-day. The destination of No. 5 General Hospital, to which I am attached, is at present unknown, and meanwhile those members belonging to it who are in the Cape are temporarily attached to No. 2 Hospital at Wynberg. Both No. 1 and No. 2 Hospitals are stationed among the pine trees at Wynberg; the wards of the former being the old tin wards (lined by wood) of the Wynberg Permanent Hospital, while the wards of the latter are simply marquee tents.

The medical officers of No. 1 live in small tin shanties, while those of No. 2 are under canvas. Hence the present moment (I am in the interim attached to No. 2), finds me sitting in my solitary bell tent writing on a collapsible table. A tent to one's self makes quite a pleasant and cheery chamber (well furnished, too, with chair, table, and bed) for camp life. Wynberg is thickly wooded with high pine trees (Pinus sylvestris) which flourish luxuriantly, and the wards composed of marquees and tin sheds are scattered about between the trees. The arrangement of the hospital is hence an ideal one; any proximity of the wards being avoided. The atmosphere at Wynberg, situated high up on the side of the mountains, is delightfully fresh and exhilarating, as evinced by the rapid improvement of the patients. The administration is good. The patients, both Tommies and officers, are well cared for and fed on the fat of the land.

Sir William MacCormac and Mr. Makins are at present out here. Mr. Treves assisted at the operation at Wynberg when Mr. Knight, the war correspondent, had his right arm amputated at the shoulder joint.

To-day I was taken on to the staff, for temporary duty only, of No. 2 Hospital; two marquee wards have been allotted to me on the medical side. I was told to-day that I would have to be attached to No. 1 Hospital in the place of one who is taking a trip home in the *Majestic*; he may be away for two months. This is rather annoying, as I was hoping to go further inland when the remainder of No. 5 Hospital had arrived.

I have only seen a few of the old cases—the results of Magersfontein—so can say little about the injuries inflicted by the Mauser bullet. Those cases, however, which I have seen show very small entrance and exit wounds, the former often only the size of a threepenny bit or smaller, and the latter a little larger. The injury to bone is at times considerable, for by the time the bullet has penetrated some distance into such a hard structure the metal expands, and so the posterior portion of the bone is considerably shattered and splintered, while usually the entrance wound into the bone is round and cleanly-cut. The long Mauser bullet, unless it impinge mathematically perpendicular to the surface of the bone struck, is very apt to become deflected and so skid off the surface of the bone. Examples are found in the cases out here; thus, in several cases where the bullet has impinged on a rib it has failed to perforate the bone, but has instead slid over it and reappeared even at the other side of the body. Again, in several instances the bullet has struck the smooth skull and travelled over its surface for some distance and then made its exit. Injury to the brain from concussion and fracture of the inner table from the great force of impact are not uncommon complications of such head injuries.

Work is quiet in hospital at present, as there are no big engagements at the front. Roberts will possibly make matters somewhat more lively. May the articles on the war, in the British Medical Journal, by "An Old Campaigner" long continue to appear! The news we get at the Cape is scrappy, scanty, and unreliable.

VOLUNTEER BEARER COMPANY AND MEDICAL STAFF.

We learn that the War Office has approved of the employment of the Volunteer Brigade Bearer Company and Volun-

teer Medical Staff Corps, both in South Africa and for home service, and an army order will be issued immediately, upon which men will be enlisted for South Africa, and then despatched to Aldershot for instruction previous to sailing. Those for home service will assemble at their headquarters, and be detailed to home stations. In either case the respective units will be kept as much together as the exigencies of the service will allow.

TRANSFERS AND APPOINTMENTS.

Major Blenkinsop, R.A.M.C., has been ordered to Aldershot for duty with No 20 Field Hospital, and Captains Waring and Kelly are to do duty with No. 7 General Hospital.

Lieutenant-Colonel R. T. Beamish, R.A.M.C., has been selected for the charge of No. 8 General Hospital.

Army orders at Capetown, dated January 24th, state that Colonel Williams, Principal Medical Officer of the New South Wales Contingent, has been appointed Principal Medical Officer for all the Australian contingents at present in South Africa. Colonel Williams is a brother of Mr. Campbell Williams, F.R.C.S., of Queen Anne Street, W.

THE REPORT OF THE MEDICAL OFFICER OF HEALTH FOR LONDON FOR 1898.

II.

OVERCROWDING.

By representing "overcrowding" as the proportion of the population of each district occupying tenements of one, two, three, and four rooms, in which there were more than two persons to a room, according to the census of 1891, Mr. Shirley Murphy shows graphically how the phthisis mortality at each age increases with overcrowding. The figures, however, do not suffice to show whether the overcrowding caused phthisis, or whether the disease by adding to family expenditure or by diminishing the wage-earning power left less money available for rent and thus led to the overcrowding, or whether, again, overcrowding may not be associated with some other condition or conditions which are favourable to disease. In order to determine whether overcrowding bears a similar relationship to the mortality from diseases other than phthisis, and, if so, whether the increase of mortality from these diseases in association with overcrowding especially manifests itself at the same ages as in phthisis, a comparison is made between phthisis and tabes mesenterica, tuberculous meningitis, diarrhœa, the principal zymotic diseases excluding diarrhœa, and cancer. Mr. Shirley Murphy shows that the mortality from tuberculous meningitis does not correspond to the extent of overcrowding so closely as phthisis, and that from tabes mesenterica still less so; the relation of overcrowding to mortality from diarrhœa and the principal zymotic diseases is not particularly apparent; while the mortality from cancer does not appear to have any relation whatever to overcrowding.

THE SPREAD OF INFECTIOUS DISEASES BY SCHOOLS.

The sufficiency of the various measures which can be taken for the limitation of the spread of infectious diseases at schools are critically reviewed, and Mr. Shirley Murphy advocates a step the value of which many of those connected with the public health service have recognised for some years. Like many others, he is satisfied "that inasmuch as attendance at school is a considerable cause of spread of infectious disease, the examination of school children should be undertaken in any school attendance at which is suspected to be causing prevalence of disease." This examination becomes necessary at school, because it is not practicable to examine numerous school children quickly in their own homes. It is contended that the medical officer of health, or some medical man acting on his behalf, should make these examinations, since the health officer is more acquainted with the behaviour of infectious disease in the neighbourhood of the school, and the knowledge of the condition of children in the school would be of material value to him in determining what action is required by his authority to limit the extension of the disease. Mr Murphy observes that "London school children have not yet had extended to them this protection which they so urgently need."

BACTERIOLOGY AS AN AID TO DIAGNOSIS.

The employment of bacteriological methods for the diagnosis of obscure cases of diphtheria and typhoid fever is shown by the report to be on the increase; nearly one-half of the sanitary areas in the metropolis afforded facilities for such diagnosis in 1898, and no doubt the provision is already much more general. At Westminster an incubator, steriliser, and microscope are provided for the use of those practitioners who have the leisure or the special knowledge and training to make a satisfactory examination for themselves.

SMOKE NUISANCES.

Among a mass of information upon various nuisances, the subject of smoke nuisances may be selected for brief reference, for all will be anxious to learn whether local authorities are maintaining the serious attempt to deal with the offence which the past two years have given some promise of. It appears that considerable smoke nuisance arose in London during 1888, and the circumstance is attributed to the use of inferior coal, which resulted from the failure of the supply of Welsh coal. The steamboats on the river seriously contributed to the nuisance, and the Medical Officer of Health of the Port of London states that 265 notices were served, and in two instances the defendants were prosecuted and fined. The Chief Officer of the Public Control Department of the Council reports that in the twelve months beginning April 1st, 1898, no fewer than 1,338 cases of smoke nuisance were brought to the notice of sanitary authorities.

HOUSE REFUSE.

The results of the Council's efforts to secure a weekly collection of house refuse throughout London by means of the dust cart calling at each house has been attended with considerable success. By degrees the old fixed dustbins of an unlimited size are being replaced by movable receptacles, and a frequent and complete removal is thereby much facilitated. The need for better vehicles as dustcarts, and for the exercise of greater care in the removal of house refuse, is appreciated by the Council, who offered a prize of £25 for the best designed dust-cart which would enable house refuse to be removed without nuisance. The result of the competition brought out several suggestions for improvement. The ultimate disposal of this house refuse is becoming a serious question with most London sanitary authorities; the days of "shoots" are numbered, as the available sites for many miles round the metropolis are becoming fewer each year, and the necessity of the adoption of the method of destruction by fire is gradually being recognised.

HOUSING OF THE WORKING CLASSES.

During 1898 the work of carrying out various schemes for the improvement of unhealthy areas was proceeded with, and several schemes were undertaken by the Council under Part I of the Act. The Housing of the Working Classes Committee also instructed the officers to report on the desirability of the Council acquiring large plots of land and building cottages thereon in the outskirts of London. The decision at the time was adverse to the proposal, for the reasons that such action was calculated to check the work of private persons who built for profit, and the Council, by undertaking the construction and management of such cottages, would incur a far greater expense; that the amount of provision required is so great that the demand could only be very partially met by such a measure; and that the best results towards the housing of the working classes would be obtained by the development of means of communication between Central London and the outskirts.

DISINFECTION.

The subject of disinfection, as practised in the different sanitary areas within the metropolis, is fully set out in a report by Dr. Young, which appears in the appendix. In several districts the use of formic aldehyde for the disinfection of rooms, either as a gas or a spray, has superseded the use of sulphur dioxide; in the large majority of London districts, however, sulphur is retained, though chlorine is employed in exceptional cases. The Cleansing of Persons Act had been put in force in a few districts, and only in Marylebone, where special provision under this Act has been made, has there been any real demand for baths and other facilities for cleansing.

WE regret to learn that Mr. Jameson Johnston, Surgeon to the City of Dublin Hospital, is suffering from diphtheria contracted while performing tracheotomy.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

Edinburgh Branch.—The winter meeting of the Edinburgh (Lothians and Fife) Branch, in conjunction with other Branches, will be held in the Royal Infirmary, Edinburgh, on Friday, February 23rd. A Medical Congress for Clinical Demonstrations will be held at 3.45 P.M. Members are invited to exhibit patients. The Museum (Pathological and Apparatus) will be open from 3 P.M. onwards. Members are invited to exhibit specimens, drawings, etc. Dinner in the Royal Hotel, Princes Street, at 6.15 P.M.; morning dress; dinner ticket, 5s. Members of the Branch who can be present at the meeting and dinner, and have patients, specimens, or apparatus for exhibition, are requested to intimate accordingly to Jas. Hodsdon, M.D., 6, Chester Street, Edinburgh, or R. W. Philip, M.D., 45, Charlotte Square, Edinburgh.

West Somerset Branch.—A meeting of this Branch will be held at the Taunton and Somerset Hospital on Tuesday, February 20th, at 3 P.M. Business: Minutes of last meeting. Letter from Secretary of Conference of Delegates on Medical Organisation. Appointment of delegate. Letters and circulars from other Branches. Clinical notes on cases and specimens. (Any member intending to read notes should send information as soon as possible.) There will be a lunch at the London Hotel from 1.30 to 2.30, price 2s. 6d. Members intending to lunch should send notice before February 16th to R. Liddon Meade-King, M.D., Taunton, Honorary Secretary.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held at Leyton Town Hall on Thursday, February 15th, at 8.30 P.M., Dr. F. J. Smith in the chair. Mr. Alban Doran will read a paper on the Medical and Surgical Treatment of Uterine Fibroids. Visitors are invited.—C. J. Morton, 56, Orford Road, Walthamstow, Honorary Secretary.

Staffordshire Branch.—A meeting of this Branch will be held at the North-Western Hotel, Stafford, on Thursday, February 22nd. The President, Dr. Spence, will take the chair at 4.40 P.M. Business:—Minutes of the last general meeting. The following gentlemen will be balloted for: Geo. Heaton, M.A., M.B.Oxon., F.R.C.S.Eng., Birmingham; Geo. L. Lefevre, M.B. C.M.Glas., Longton. Correspondence. Appointment of delegate to British Congress on Tuberculosis. Report of Council advising against any alteration of Rule 6. Exhibition of living cases. Papers:—Dr. C. M. Allan: Septicæmia; Dr. F. Edge: A Note on Hysterectomy for Myoma causing Paroxysmal Bladder Trouble. Exhibition of pathological specimens, etc. Dinner at 7 P.M.; charge, 5s.—F. Milnes Blumer, Stafford, Honorary Secretary.

Border Counties Branch.—The next meeting of this Branch will be held at Hawick in the afternoon of Friday, March 2nd. Members intending to read papers, etc, and gentlemen desirous of joining the Branch, are requested to communicate as early as possible with W. F. Farquharson, M.D., Garlands, Carlisle, Honorary Secretary.

BATH AND BRISTOL BRANCH.

The third ordinary meeting of the session was held at Bristol on January 31st, when the chair was taken by Dr. Markham Skerritt. Forty-eight members were present.

New Member.—Mr. E. F. Clowes, M.R.C.S., L.R.C.P. (Wotton-under-Edge), was elected a member.

Letters, etc.—Communications from the Lancashire and Cheshire Branch, the Wood Green Medical Society, and from Dr. Crawshaw were referred to the council of the Branch.

(A report of the papers read will be published subsequently.)

BORDER COUNTIES BRANCH: SECTION FOR THE COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES.

A meeting was held at Newtown, St. Boswells, Dr. Blair (Jedburgh) presiding, on January 26th.

Expenses of Section.—In the absence of Dr. Sturrock (Jedburgh), Dr. J. Carlyle Johnstone (Roxburgh District Asylum) moved:

That the Secretary be instructed to inform the Secretary of the Branch that, in the opinion of the Section, the expenses ought to be paid out of the Branch funds, but the Section is prepared to restrict its claim to a sum not exceeding 1s. per head of the members of the Branch residing in the area of the Section, and that the Secretary of the Branch be asked to have this resolution placed on the agenda, so as to have it discussed at the next meeting of the Branch at Hawick, with a view to its ultimate settlement at the annual meeting.

Dr. Young seconded, and the motion was unanimously carried.

Elimination of Animal Products from Diet.—Dr. Haddon read a paper on the effect of the elimination of all animal products from the diet. These were in his own case: (1) Improved digestion, (2) ability to sleep, (3) increased vigour, (4) no thirst, (5) improved tone of the nervous system, (6) cessation of intermittent action of the heart, (7) rise of bodily temperature, (8) a higher moral tone, brought about by the self-denial required in giving up all animal foods. The paper gave rise to considerable discussion, few, if any, of the members agreeing with the views expressed.

Midwifery Forceps.—Dr. Young gave a very interesting demonstration of the different varieties of midwifery forceps, and spoke of the cases in which each was specially useful. The varieties demonstrated were: (1) The short straight forceps, (2) the double-curved, Simpson's, (3) axis-traction, Milne Murray's, (4) McAlister's, (5) More Madden's.

Next Meeting.—It was agreed to meet next at Earlston in the end of April.

NORTH OF IRELAND BRANCH.

The winter meeting of this Branch was held in Belfast on January 25th. Dr. J. C. Martin (Portrush) occupied the chair, and forty members were present.

Confirmation of Minutes.—The Honorary Secretary (Dr. Calwell) read the minutes of the last meeting, which were confirmed.

Reports and Correspondence.—The Honorary Secretary also read the reply of the Local Government Board; the reply of Mr. F. Cuming to the vote of condolence on the death of Professor Cuming; and the report of the Special Nursing Committee, of which Dr. Darling (Lurgan) had undertaken the duties of Secretary.

Medical Attendance on Families of Soldiers and Sailors in South Africa.—It was proposed, and passed unanimously:

That this meeting of the Branch approve of the gratuitous medical attendance on the families of soldiers and sailors on active service in South Africa, and directs the Secretary to intimate the resolution to the Soldiers' and Sailors' Families Association, and to the Local President of Districts of that Association.

Communications from Other Bodies.—The communications from the Wood Green and District Medical Society, and from the Lancashire and Cheshire Branch of the British Medical Association were referred to a special meeting of Council.

The Journal and Licentiates of Medical Colleges.—Dr. A. B. Francis drew attention to the manner in which the Journal of the Association is addressed to Licentiates of the Medical Colleges, and proposed a resolution. This was also referred to the Council.

Specimens.—Dr. Lorrain Smith (Belfast) showed some specimens of the *Distoma crassum*, found by Dr. Close (India) adhering to the intestine of a man found dead on the wayside, and sent with notes of the *post-mortem* examina-

tion by him to Dr. Smith. He also showed the lung, spleen, kidney, and colon of a case of pyæmia due to the staphylococcus albus without any apparent site of entrance; culture tubes from the spleen gave pure growths. Dr. CALWELL said said the total duration of illness was only two weeks, and that the disease closely simulated at first bronchitis and then broncho-pneumonia of typhoid.—Mr. KIRK (Belfast) showed a tuberculous kidney which he had successfully removed; the patient had up to the present enjoyed good health. Also a patient suffering from large cystic kidneys.

Anthrax.—Professor SINCLAIR read notes of a case of anthrax, which will be published.

Pernicious Anæmia.—Dr. THOMAS HOUSTON showed some film preparations of the blood from a case of pernicious anæmia in a man, aged 34. The red blood corpuscles numbered 1,200,000 per c.m., and white at first 8,000 but later on 13,000; hæmoglobin 25 per cent.; megaloblasts, normoblasts, and poikilocytosis were found.—Dr. CALWELL said the case was a very typical one of the disease.

It had lasted already over a year, improved with rest, and markedly so in the last month, when arsenic, iron, medulla tabloids, and sandwiches of fresh marrow were all pushed; arsenic alone had apparently failed: his temperature was uneven; he had slight retinal hæmorrhages, and his urine showed at times excess of colouring matter, in which indican was present.

Superficial and Deep Reflexes.—Dr. JOHN M. MACCORMAC read a paper on the superficial and deep reflexes as an additional means in the diagnosis of the principal forms of mental disease. He stated that careful observations for many years led him to conclude that the formulæ, which he described in relation to the superficial and deep reflexes in their connection with the modifications of painful sensibility in mental disorders, are of importance in the diagnosis of these diseases. He also pointed out how very differently tendon reflexes and cutaneous reflexes act, and that this could be understood when it is remembered that the acts of the two reflexes are represented in the spinal cord by separate systems, one of which may be affected while the other remains normal.

Coal Gas Poisoning.—Dr. R. M. FRASER (Belfast) read notes of a case of coal gas poisoning, in which one patient succumbed, but another and a canary escaped.—Dr. LORRAIN SMITH said it was important to get all particulars, especially as to dimensions of room, etc., in such cases, and pointed out that patients die, probably from a nervous lesion, after coal gas poisoning, when no trace of carbonic monoxide is present in the blood.

Other Communications.—Mr. ROBERT CAMPBELL read notes of a case of lymphatic varix in the groin containing chyle. The problem was to account for the presence of this substance in the lymphatics of the groin.—Dr. CALWELL read notes of the results of 100 sittings for electrolytic treatment of hirsuties. He was surprised it was not more used by ophthalmic surgeons for ingrowing eyelashes. He also showed a peculiar hour-glass-shaped contracted stomach for Dr. CRAIG, and some hydatid skins sent by Dr. ESLER (Australia). He read short notes of a case of hepatoptosis which had been explored for him by Mr. Kirk.

HONG KONG AND CHINA BRANCH.

THE annual meeting of this Branch was held at the Government Civil Hospital, on Thursday, December 14th, 1899, Dr. G. P. JORDAN in the chair.

Financial Statement.—The balance sheet for the year 1899 having been audited for the Council by Dr. Jordan, Vice-President, and found correct, was adopted. It showed a balance in hand of $88.25, the number of subscribing members having been twenty-six.

Election of Officers.—The following elections were made for the ensuing year: *President*: Dr. Francis Clark, M.O.H.; *Vice-President*: Dr. J. C. Thompson; *Council*: Dr. Atkinson, P.C.M.O.; Dr. Hartigan; Dr. Jordan; Major Whitty, R.A.M.C.; *Secretary*. Dr. G. M. Harston. Dr. James Cantlie was re-elected to represent the Branch on the Council of the Association and on the Parliamentary Bills Committee.

Traumatic Tetanus.—Dr. ATKINSON showed some interesting cases, including one of transposition of the heart, and a case of traumatic tetanus which was being treated with antitetanic serum (in powder). A discussion ensued on the subject of tetanus in which Drs. ATKINSON, BELL, CLARK, HARTIGAN, HARSTON, Staff-Surgeon HOWE, R.N. and Dr. KRIEG took part.

Lupus.—Dr. CHENG sent notes of a case of lupus treated by him with liq. hydrarg. ammon., and sent photographs of the patient.

Election of Members.—The following members of the Association were elected members of the Branch: Fleet-Surgeon Vasey, R.N., Staff-Surgeon Biden, R.N., Surgeon Reid, R.N., Surgeon Price, R.N., and Dr. Preston Maxwell.

Induction of President.—The President elect having been inducted to the chair, and having thanked the members for electing him to that office, the proceedings then terminated.

SPECIAL CORRESPONDENCE.

PARIS.

Professor Terrier on the Organisation of a Surgical Clinic.—Asepsis and Antisepsis.—"Waggon Bars."—Spitting in Public Places.—Small-pox.—Influenza and Pulmonary Diseases in Paris.

PROFESSOR TERRIER, who has been for some years Professor of Operative Surgery, on January 30th gave the inaugural lecture on his appointment to the Chair of Clinical Surgery at the Pitié Hospital. Professor Terrier, who criticised very severely the present state of the department he has just taken over, took up as his subject some general considerations on the installation of a surgical clinic as it should be understood at the present time. To be suddenly called upon to create and organise a surgical clinic on modern scientific lines, following the doctrines of Pasteur, is not an easy matter, but Professor Terrier, who has visited many surgical clinics in Europe and America, and has written his views on the construction and organisation of hospitals, has felt encouraged in his attempt to solve the problem at the Pitié. The Assistance Publique has recently built the Boucicault Hospital, and the new female surgical wards at the Cochin Hospital, on the lines indicated by Professor Terrier. In both these hospitals the septic are methodically separated from the aseptic cases. Last year the Municipal Council decided in principle on the necessity of constructing new hospitals to replace the old ones, which had become inadequate and imperfect. A commission was appointed, of which Professor Bouchard was president and Professor Terrier a member, to decide on the types of the new hospitals, and more particularly the types of their component departments—medical, surgical, and obstetric—the laboratories, etc. It was decided unanimously, without discussion, that in the surgical departments there should be separate wards and separate operating theatres for the septic and aseptic cases. The architect's plans will shortly be laid before the members of the commission.

Professor Terrier is a strong partisan of strict asepsis. In a large hospital everything required for dressing wounds, excepting perhaps the ligatures, can be sterilised by means of the boiler. This arrangement, which is in use at the Stuyvenberg Hospital at Amsterdam, where it works perfectly well, in fact almost automatically, is very economical, and will be adopted in the new hospitals in Paris. Professor Terrier pointed out that the use of antiseptics is not, as so long believed, essential in the treatment of septic cases. When he visited the wards of Dr. Traktenberg, in St. Petersburg, they were divided for septic and aseptic cases, the former being treated by antiseptic methods, the latter by pure aseptic methods. Now, however, all the cases, septic or not, are treated aseptically. Professor Terrier, however, admitted that there are cases in which antiseptics should be employed, and called attention to the excellent results he had obtained by the use of oxygenated water in infections produced by anaërobic microbes, which are easily destroyed by oxygen. The simplification to the utmost of the material employed, and the methods of surgical dressings, will be the constant aim in the clinical teaching of Professor Terrier, who insisted on the necessity of the minutest attention to cleanliness in the wards, operating theatres, and apparatus, a point which is unfortunately not the dominating note in the Paris hospitals, though it is obtainable even in such old hospitals as the Boston City Hospital in the United States.

In the Chamber of Deputies recently Dr. Chassaing addressed a question to the Minister of Public Works with regard to the report that contracts had been given permitting the establishment of bars for the sale of alcoholic drinks to be attached to the trains on the State railways. These "waggon bars" already exist on the trains of the Western Railway Company, but the Northern and Eastern Companies have always refused their introduction on their respective systems. Dr. Chassaing hoped that the State did not wish to become an accomplice in the progressive poisoning of the country by alcohol. The Minister stated in reply that a certain number of contracts had been passed, but affirmed that these contracts would never be renewed with his authority. The Minister however did not state for what periods the contracts had been granted.

Among the notices of motion laid before the House for the extraordinary session in the Chamber of Deputies is one for a law "prohibiting spitting in the streets or other public places."

A few cases of small-pox were recently admitted to the isolation hospital at Aubervilliers. Dr. Napias, the Director of the General Administration of the Assistance Publique, has consequently issued a circular to the directors of the hospitals to be communicated to the medical staffs, calling attention to the fact, and, although the cases are very probably solitary ones, requesting the immediate vaccination of the entire *personnel* in the hospitals. All the patients also are to be vaccinated or revaccinated, except those whose condition will not allow of immediate action.

During the week ending January 20th the total number of deaths in Paris was 1,043. Of these 7 were returned as due to influenza, 64 to broncho-pneumonia, 51 to pneumonia. During the week ending January 27th the total number of deaths was 1,075, influenza causing 20, broncho-pneumonia 59, pneumonia 67.

MONTREAL.

The Second Canadian Contingent and the Medical Profession.—The Royal Victoria Hospital.—Dominion Registration.—The Toronto Medical Society.—The Lister Laboratory Club.—Medical Students at the University of Toronto.

Much interest is manifested in Canada over the departure of the second Canadian contingent for the Transvaal. The first portion of the contingent left Halifax January 20th amidst great enthusiasm. They are expected to make the passage to Capetown in twenty-five days. A number of medical men are among the officers, and the medical schools of the various universities have contributed largely to the rank and file. This is especially true of Winnipeg, Toronto, and Montreal. Dr. Norreys Worthington, of Sherbrooke, a graduate of McGill University of several years' standing, goes with the contingent as Surgeon-Major of Artillery. Lieutenant F. Vaux is additional medical officer, and Veterinary-Major J. Massie veterinary officer. Dr. John McCrae, for three years Fellow in Biology of the University of Toronto, and at present holding a Research Fellowship in Pathology in McGill University, has been granted leave of absence from his duties till October 1st, 1900, in order that he may take his place as Second Lieutenant of D Battery Royal Canadian Artillery.

At the annual meeting of the Board of Governors of the Royal Victoria Hospital, Mr. R. B. Angus was re-elected President for the ensuing year. New appointments were made as follows: Assistant Gynæcologist, Dr. W. W. Chipman, of Edinburgh, at present assistant to Professor Simpson and Dr. Barbour; Clinical Assistants in Medicine, Dr. W. S. Morrow; in Neurology, Dr. D. A. Shirree; in Gynæcology, Dr. A. E. Robertson; in Ophthalmology, Dr. H. P. Harvey. During the past year 2,537 patients were admitted to the hospital. The total number of deaths was 111, giving a death-rate of 4.41 per cent. In the out-patient department there were 16,720 consultations, as compared with 14,681 during the preceding year.

At a special meeting of the Kingston Medical and Surgical Society held in December, 1899, Dr. Roddick, M.P., of Montreal, gave an address on the subject of Dominion Registration, and copies of Dr. Roddick's proposed Bill were distributed. At the regular meeting of the Society in January this Bill was discussed. During the same evening Dr. R. W. Garrett read a paper entitled Serumtherapy in Puerperal Infections.

At the regular meeting of the Toronto Medical Society on January 4th, Dr. A. Primrose and Dr. C. L. Starr read a paper entitled Notes of a Case of External Urethrotomy for Impermeable Stricture. This was followed by a discussion on Fractures of the Humerus, opened by Dr. G. A. Peters. Dr. N. A. Powell spoke on the Positions and Methods of Fixation, and Dr. E. E. King on Anomalous Positions as shown by the Skiagraph. On January 18th the Society gave up the evening to a discussion on Expert Medical Evidence, especially in Criminal Cases. Judge Macdougal and Mr. B. B. Osler, Q.C., presented the legal aspects of the question, while the medical side was spoken of by Drs. J. H. Cameron, N. A. Powell, and B. Spencer.

The Lister Laboratory Club of McGill University held its regular meeting in the Molson Pathological Laboratory on January 15th. Dr. W. W. Ford spoke on Bacteria in the Tissues. Dr. Finley and Dr. MacTaggart presented a case of Extensive Ulceration of the Bowel in Typhoid Fever, where the Widal reaction was given by the blood during life, but a pure culture of B. typhosus obtained from the spleen *post mortem*. Dr. Nichols read a paper on Pancreatic Conditions.

The registration of medical students for the current school year is: University of Toronto, 311; first year, 103. McGill Medical School, 451; first year, 132. Trinity Medical College, Toronto, 300.

LIVERPOOL.

The School of Tropical Diseases: Annual Report: Origin and Progress of the School: the Number and Variety of Tropical Diseases Treated: the Prospects of Full Government Recognition.—Departure of Mr. R. Craig Dun for South Africa.

The first annual report of the School of Tropical Diseases has just been issued, and indicates that the undertaking has made an amount of progress and attained to a position which, having regard to the short time it has been in existence, are not a little remarkable, and point to a determination on the part of all concerned to leave nothing undone which is likely to make it a success. The formation of a school of tropical diseases was first suggested at the annual dinner of the Royal Southern Hospital on November 12th, 1898, the idea was warmly taken up by the members of the leading shipping and commercial houses in Liverpool, and in a short time an influential Committee was formed, under the chairmanship of Mr. A. L. Jones, with whom the proposal originated. The financial support accorded to the School has been liberal from the first, and Mr. Jones's initial promise of £350 a year was quickly followed by a number of subscriptions and donations which brought up its income for 1899 to more than £3,000. The promoters were fortunate in at once securing a staff of teachers who command the confidence of the medical profession and the public, and it was a happy coincidence that Major Ross was free to undertake the duties of lecturer at that particular time. The early part of the year was of necessity spent in organising the school and in fitting up and furnishing the laboratories; but so little time was wasted that the formal opening by Lord Lister took place on April 22nd, and some pupils entered for the summer session. During the vacation the expedition for the investigation of malaria in Sierra Leone took place, a full report of which is in preparation, and the school reopened for the autumn term on October 11th, when among the students on its roll were Professor Ribbing, of Lund, and M. Lemaire, assistant to Professor Blanchard, of Paris. Excellent as is the provision for scientific work, the usefulness of the school to the practitioner who is about to settle in the tropics must in the main depend on the facilities it offers for the clinical study of tropical diseases, and the section of the report which deals with the special ward in the Royal Southern Hospital shows that the cases there treated were numerous and typical. The total number of patients in the tropical ward was 176. The majority suffered from ordinary malarial fever, but there were also cases of blackwater fever malarial neuritis, dysentery, sprue, Malta

fever, tropical diarrhœa, beri-beri, hepatic abscess, scurvy, and bilharzia disease. The establishment and progress of the school reflect the highest credit on the community, and the work which it has already accomplished fully justifies its existence and the wisdom of its founders. It is felt that it would be a misfortune if such an undertaking, in other respects worthy of support, were to be handicapped by the want of official recognition. So far, full recognition by the Government has not been extended to the school, and, until that recognition has been given, the class of students most desired, namely, medical officers about to enter the service of the Government in tropical colonies, will not be attracted to it. The authorities of the school, however, being convinced that the opportunities for study provided in Liverpool will be found to be in no respect inferior to those which exist in any other place in the British Isles, are confident that it will not be long before full recognition is obtained.

Mr. Robert Craig Dun, F.R.C.S., Surgeon to the Infirmary for Children, with the approval of the Committee of that institution and of his colleagues, has started for the seat of war in South Africa in the capacity of Surgeon-Captain to the Lancashire Hussars.

SHEFFIELD.

The Epidemic of Diphtheria.—Hospital Sunday.—University College.

DIPHTHERIA continues to be prevalent in the city, and at the request of the Local Government Board Dr. Robertson, the medical officer of health, has made a special report. During the first half of last year the disease was more or less localised, but during the latter half it showed a tendency to become more widely distributed over the city, with a corresponding increase in the number of cases. An abatement took place when certain schools were closed, but, notwithstanding this, the disease extended by involving new districts and by becoming more prevalent in those districts which had already become infected. Dr. Robertson has tabulated 2,235 cases, of all ages, with 455 deaths, or 20 per cent., and the much greater fatality in children under 5 years is well exhibited in his tables. The main cause of the spread of diphtheria in Sheffield is probably, he thinks, the great number of mild cases which are unrecognised. There have been no definite insanitary conditions in the majority of the houses. All possible accommodation for diphtheria was made by the Hospitals Committee, but the amount at their disposal was never in the smallest degree adequate. The percentage of mortality in home treatment was 22, and in hospital treatment 17 cases.

Hospital Sunday was held on the last Sunday in January. The total collected at the first announcement was £1,765 15s. 4d., being a small decrease as compared with the sum last year. The weather was most unfavourable, but, considering the many urgent calls recently made upon the public, the total of the first return is not unsatisfactory, and the sum finally announced is hardly likely to be less than last year.

Under the will of the late Mr. Joseph Kaye, the Medical Department of the University College of Sheffield has received £1,000 for the purpose of founding a scholarship for second-year students. The Dental Department of the College has now been recognised by the Royal College of Surgeons.

CORRESPONDENCE.

THE *MEDICAL DIGEST*: PROPOSED TESTIMONIAL TO DR. NEALE.

SIR,—No doubt most of your readers are aware that Dr. Neale has recently published the supplement to his *Medical Digest*, which completes and brings down to date that admirable guide to the British medical literature of the last fifty years; but it is not likely that they have any idea of the enormous and unremitting labour this self-imposed task has cost the compiler. The work of making his index and preparing it for the press has involved an average of four hours a day for more than fifty years! This labour has not only been without remuneration—for the publication of the *Digest* has never been profitable—but it has been carried on year after year at great cost to Dr. Neale, who with rare determination has cheerfully persevered in a task which he originally undertook for the benefit of science and of his profession rather than for his own peculiar advantage.

It seems to the undersigned that it would be unbecoming to the profession he has worked for if Dr. Neale's labours were allowed to pass unrecognised, and they have, therefore, decided to invite the members of the profession throughout the British Empire to contribute to a fund which will enable them to present Dr. Neale with a suitable testimonial, as a recognition by his professional brethren of his long-continued and invaluable labours on their behalf. Obviously it would be premature to discuss the form of the testimonial until the amount of the contributions can be ascertained, but all the subscribers will be communicated with before a decision is arrived at.—We are, etc.,

W. S. CHURCH, President of the Royal College of Physicians.
WM. TURNER, President of the General Medical Council.
H. G. HOWSE, Senior Vice-President of the Royal College of Surgeons.
THOMAS BRYANT, President of the Royal Medical and Chirurgical Society.
R. DOUGLAS POWELL, President of the Clinical Society.
W. WATSON CHEYNE, President of the Pathological Society.
FREDERICK T. ROBERTS, President of the Medical Society.
ALBAN DORAN, President of the Obstetrical Society.
W. H. BROADBENT, President of the Medical Graduates' College and Polyclinic.
HENRY POWER, President of the New Sydenham Society.
JONATHAN HUTCHINSON, Hon. Secretary of the New Sydenham Society.

[Subscriptions may be sent to Mr. J. Y. W. MacAlister (Librarian of the Royal Medical and Chirurgical Society), 20, Hanover Square, London, W. It will save him much trouble if cheques are made payable to "Bearer" and crossed "National Provincial Bank—Neale Testimonial Account."]

THE MIDWIVES BILL.

SIR,—In reference to your note on the Midwives Bill in the BRITISH MEDICAL JOURNAL of February 3rd, may I be allowed to answer Dr. Colin Campbell's communication by stating that the Incorporated Midwives' Institute (founded in 1881) has no connection, official or otherwise, with the Midwives' Society, whose transactions Dr. Campbell alludes to? The society to which he refers is a small and quite recently constituted body in Manchester, whose sphere of work is entirely limited to that part of the country.

Further, I should be glad to state that the Midwives Bill Committee is not a Committee appointed by the Midwives' Institute. The latter institution has, indeed, no connection with the Committee beyond having a representative upon it.—I am, etc.,

JANE WILSON,
President, Incorporated Midwives' Institute.
12, Buckingham Street, W.C., Feb. 6th.

SIR,—May I inform your readers, through your columns, that the Midwives Bill Committee, which is introducing the Midwives Bill, is unconnected with the Midwives' Institute, except in so far that the Institute is represented on the Committee. The curious proximity in which you have placed our name and address with a disclaimer from the Midwives' Institute on a matter totally unconnected with the Bill Committee might otherwise lead to a misunderstanding on the subject of the promoters of the Bill in question, and possibly lead to unfounded surmises, although I believe the Midwives' Institute has repeatedly had occasion to refer to such surmises in the BRITISH MEDICAL JOURNAL.—I am, etc.,

F. R. HUMPHREYS,
Honorary Secretary, Midwives Bill Committee.
12, Buckingham Street, Strand, W.C., Feb. 5th.

THE DEFECTS OF THE CLUB SYSTEM.

Sir,—Will you allow me to express my approval of every word of "Gray's" letter in the British Medical Journal of February 3rd, and—if your correspondent will excuse my vanity in saying it—his are the very sentiments I have publicly tried to express? But in this case, as in that of the National Deposit Society, which undoubtedly goes to work on true principles, will you and your correspondent pardon me when I ask, What is the use of pious opinions when things have gone so far in an opposite direction—too far to make any sudden turning back possible? The old and firmly-established friendly societies will not change their ways at our dictation; and I think the profession does not quite grasp in its mind the amount of political power wielded by these associations and their representatives.

There is only one hope of producing any impression on the lay opinion of our (?) opponents, and that is by meeting their leaders in a frank way on a Board of Conciliation. The present warfare is injurious to both interests. Let us try to come to terms—terms, let me say, it is hopeless to formulate beforehand. If the effort fail—which I feel sure it will not, but if it fail, can the profession suffer from the attempt having been made in the interests of peace?—I am, etc.,

Dingwall, Feb. 5th. William Bruce.

SHELLFISH AND TYPHOID FEVER.

Sir,—You are no doubt aware that we had in the city of Belfast in 1898, what might have been considered an epidemic of typhoid fever, and if now the number of cases reported have fortunately very materially decreased, we still have more cases amongst us, compared with the other parts of the United Kingdom, than would be considered normal.

Notwithstanding the most diligent inquiries of the local authorities and local medical profession, they failed to trace the origin of the epidemic. I suggested from time to time that the sale of cockles, collected on the shores of estuaries, contaminated by sewage, is perhaps one of the sources which would account for the prevalence of typhoid fever in Belfast. Cockles are mostly consumed here by the poorer classes, and these classes seem to furnish more than their proportion of typhoid cases.

We have in Belfast about 700 Jews, mostly of Russian origin, and poor, who all strictly adhere to the Mosaic code of diet, discarding, amongst other food, all animals living in the sea not covered by scales. As President of the Hebrew community here, I have made inquiries, and no case of typhoid fever has been reported amongst the members of the congregation for many years past.

My object in bringing the matter before you is to draw attention to this fact, and if similar experience is recorded elsewhere, you will no doubt use your powerful influence in connection with the other members of the medical press to obtain some legislation to prohibit the collecting of cockles and oysters from any estuary that might be contaminated by sewage.—I am, etc.,

Belfast, Feb. 5th. Otto Jaffe.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

Sir,—I have followed with interest the correspondence on this subject in the British Medical Journal. I congratulate Dr. Cecil Latter on his experiences, and sympathise with "F. J. S." in his. If I correctly read the letter of "F. J. S.," it refers to service as an assistant medical officer in the Imbecile Asylums under the Metropolitan Asylums Board; and in this case I affirm that the letter of "F. J. S." is true in substance and in fact. I have held the office of assistant medical officer in an imbecile asylum under this Board, but have no knowledge of the conditions which prevail in its fever hospitals.

May I point out to Dr. Cecil Latter that while the average medical man enters a fever hospital with no intention of remaining permanently, the average assistant medical officer in an asylum means to make lunacy his life-work? After a few years of asylum life a man loses the qualities—bedside manner, commercial aptitude, and the like—most essential to success in private practice. This spells ruin to him if these few years have been spent as an assistant medical officer in an imbecile asylum under the Metropolitan Asylums Board.

The Metropolitan Asylums Board does forbid its medical superintendents to grant testimonials to the assistant medical officers. When one remembers how absolutely essential strong personal recommendations are to a man in these days of hard competition, it is not difficult to see that the result of this policy is to raise an insuperable barrier to the professional advancement of the assistant medical officers. So far as the imbecile asylums are concerned, the Metropolitan Asylums Board will not promote its own assistant medical officers, for good service rendered to other Boards is in its eyes a greater recommendation to a man than is good service rendered to itself.

It is true that, being dubbed subordinate officers, assistant medical officers rank as the inferiors of the steward, chaplain, and matron; and, by implication, with kitchen maids, laundry maids, etc. This, to the outsider, may appear only a nominal matter; but the assistant medical officers are made to feel their subordinate position in the most galling manner. To serve well as an assistant medical officer is to "plough the sands of the sea shore." To become an assistant medical officer in an imbecile asylum under this Board is as straight a road to professional ruin as a medical man can find. I write this letter without passion, and challenge anybody connected with the Board to dispute the truth of my statements.

It is very distasteful to me to write under a *nom de plume*, but any past or present assistant medical officer will appreciate my reasons for so doing.—I am, etc.,

January 20th. Cincinnatus.

THE INCOME OF THE GENERAL MEDICAL COUNCIL.

Sir,—In my two previous letters[1] I have tried to prove that the income of the General Medical Council is so lamentably small that it is an impossibility for it to administer with due efficiency the Medical and Dental Acts; and that to meet this deficit we should accept a scheme of annual registration with an annual registration fee of £1 per practitioner.

I have collected a table of statistics from the minutes of the General Medical Council for ten years. I take ten years so as not to select any particular year, and to avoid a seeming selection with a view to prove my contention.

In the ten years 1888 to 1898 the income of the Council was £101,821, and the expenditure £104,920. Not only is the expenditure greater than the income, but the Branch Councils of Scotland and Ireland—Councils which were meant by the framers of the Medical Acts to do very important duties—are practically bankrupt and unable to do any efficient work. The General Medical Council owes a large sum of money, advanced to it by the English Branch Council—about £25,000. It is unable to repay this sum at once, and it has been proposed that a sinking fund be formed so as to repay it *in fifty years!*

There are two other items which show practitioners must contribute more money. Take, first, the "law expenses" of the Council. We frequently grumble that the Council does not sufficiently look after those who "wilfully and falsely" use medical titles. How can it? I find that in the ten years 1888 to 1898 the "law expenses" of the Council were £6,572 only. It should spend at least this amount each year. I have obtained statistics from the Incorporated Law Society which show that during the same ten years it spent no less than £31,508 in law and parliamentary expenses. Yet doctors grumble.

Secondly, take the present plan by which the General Medical Council refers almost all its work to Committees. It may be stated fairly that the General Medical Council at its two yearly sessions confines itself to receiving and discussing the reports of its Committees. This is done largely to save the expense of the General Medical Council when in session. The last issued minutes of the Council show the following Committees: (1) Executive, (2) Business, (3) Pharmacopœia, (4) Finance, (5) Examination, (6) Education, (7) Public Health, (8) Dental Education, (9) Dental, (10) Students Registration,

[1] British Medical Journal, December 9th, 1899, p. 1647; January 13th, 1900, p. 109.

(11) Penal, (12) Medical Aid, (13) Fines, (14) Midwives Bills, (15) Companies Acts, (16) Personation, (17) Ventilation, (18) Apothecaries Society, and (19) Special Finance. Eleven of these are standing Committees; these Committees generally sit from 10 A.M. to 2 P.M., and frequently on the days upon which the General Medical Council meets, with the result that when the General Medical Council meets from 2 to 6.30 P.M. members become tired and sometimes irritable, work is "rushed," and even reports from Committees are postponed until the next session. So far as I can find, only the General Medical Council and the Executive Committee are paid. When a member of the Council I proposed that the Penal Committee (one of the most important), should be paid; but this motion was not carried. From 1888 to 1898 the fees paid to members of the Council and to the Executive Committee amounted to £34,137. This is apparently a large sum, but it means that each member of the General Medical Council receives the magnificent sum of about £75 to £80 per annum.—I am, etc.,

Liverpool, Jan. 21st. ROBERT R. RENTOUL.

THE DUTY TO SEND INFORMATION TO THE CORONER.

SIR,—In reply to the letter in the BRITISH MEDICAL JOURNAL of January 20th of "Medical Coroner" on this subject, I should like to point out that no medical practitioner would think of reporting a case of sudden death which in his opinion, and in that of everybody else, could only be due to natural causes, and about which no one could have any suspicion. Certainly no cases reported by me were of this description.

"Medical Coroner" says: "In all cases of death which to the knowledge of the practitioner in charge ..... are attended by suspicious circumstances," a report ought to be sent to the coroner. How can we tell what circumstances the coroner may consider suspicious?

In the cases I reported, I considered that though I was quite prepared to issue the certificate, there were ample grounds for the suspicions of the coroner who could not know the facts of the case as well as I did, and his communications to me subsequently justified that view. That is to say, if it had not been for my report my patients might have had to submit to an unnecessary inquest, but, in consequence of the same report, to avoid the threatened inquest they had to tip the coroner's officer.

It may be that such conduct on the part of the officer ought to be reported, but it is hardly fair that one man should be made to suffer for a system so objectionable. If the coroners are really anxious that these cases should be reported to them, the sooner they see to the matter themselves the better.

Naturally, where notwithstanding the circumstances we are prepared to issue our certificate, we do not wish our patients to be submitted to the trying ordeal of an inquest; but if our explanatory letter to the coroner involves our patients paying blackmail to his officer, we had better issue the certificate at once and take our chance.—I am, etc.,

January 31st. X. Y. Z.

SIR,—There are points which occur to me in connection with the discussion upon the above subject opened in the BRITISH MEDICAL JOURNAL. Supposing that the coroner declines to order an inquest after the receipt of information from the medical attendant. The position of the latter with reference to the friends of the deceased is, to say the least of it, an awkward one.

For myself, until the Coroners' Society can quote some judicial decision or produce some rule, principle, or custom which, by virtue of equity, would support their "common law" contention, I shall continue to believe that it is not incumbent upon a medical practitioner to inform the coroner of a death which, for one reason or another, he declines to certify. The mere fact that he does so decline should result in bringing the case to the coroner's notice.

But the whole question of the extent of a coroner's powers and jurisdiction requires investigation. To me it seems that until a medical man receives his "subpœna" he is outside the coroner's jurisdiction altogether. After its receipt he is bound by statute to obey the order or suitably account for his failure.

Whence, then, do coroners derive their authority for censuring a medical witness so long as he is innocent of anything strictly illegal or of improper conduct, either in carrying out the order or in court? That they do claim such authority is evident from the not infrequent use they make of it. The law cannot make a man discreet, though it allow him almost unlimited discretion.—I am, etc.,

January 22nd. DISGUSTED.

THE CONDITION OF THE ULCER IN CASES OF PERFORATING GASTRIC ULCER.

SIR,—Having had an opportunity of seeing some 6 cases of this affection operated on in the last couple of years, I was struck with the absence of attempt to ascertain the exact condition of the mucous membrane immediately adjacent to the perforation. Writing from memory this seems to be the general custom with surgeons; I cannot recollect any advice or direction given on the subject, and records are dumb. As all the cases had adhesions, sometimes very extensive and firm, and as in two—both from the history of the case and from the appearance—I suspected that the so-called perforation might really be a tear, it seems a pity that our knowledge could not be rendered more accurate on this point, by slightly enlarging the opening already there, and either everting the edges, or using a laryngoscopic mirror, which I have tried on the dead body, and which seems to answer very readily to the purpose.

In the infolding of the stomach at the operation it is surely of importance to know whether the sutures are passing through healthy structure or through an ulcerated surface. The records of *post-mortem* examinations are also silent on this point, although it seems of vital importance to know every cause of sutures giving way.—I am, etc.,

WILLIAM CALWELL, M.A., M.D.,
February 4th. Physician to the Royal Victoria Hospital, Belfast.

AMALGAMATION OF DEFENCE SOCIETIES.

SIR,—I am very much obliged to Dr. Heron for the letter which he has written, and which was published in the BRITISH MEDICAL JOURNAL of February 3rd. It clearly states the position of the Medical Protection Society in reference to the proposed amalgamation with the Medical Defence Union. Reading between the lines, I think I gather from Dr. Heron's letter that the question of amalgamation has practically dropped, and there does not seem to be any forward tendency to renew negotiations. The Medical Defence Union is, I believe, a powerful organisation, and doubtless has quite as much defence work as it can undertake, so that I sincerely hope that nothing more will now be done in the matter of amalgamation between it and ourselves. Perhaps I may be allowed to state that the members have an unbounded confidence in the executive of the Medical Protection Society. We know that they are gentlemen of the highest professional position and of proved business capacity. Dr. Heron, as Treasurer and Chairman of Council, stands out as an official of great energy and capability, and who is, as such, much respected, and has earned our gratitude.—I am, etc.,

Wolverhampton, Feb. 3rd. T. VINCENT JACKSON.

THE SERJEANT-SURGEONCY.

SIR,—In looking over the new *Medical Directory*, I find under the head of "Medical Department of the Queen's Household" no mention of the ancient office of Serjeant-Surgeon, recently held by Sir James Paget. When Sir Prescott Hewett died a few years back the second Serjeant-Surgeoncy became vacant and for some reason was not filled up. Now it appears that the office has lapsed altogether, which I venture to think is to be regretted, as it is an ancient and honourable office, the modest salary of which (£280) was a retainer to secure the services of the serjeant for the King on the field of battle. *Tempora mutantur*, but I cannot suppose that the Queen would knowingly inflict a snub on the surgical profession.—I am, etc.,

February 5th. MACHAON.

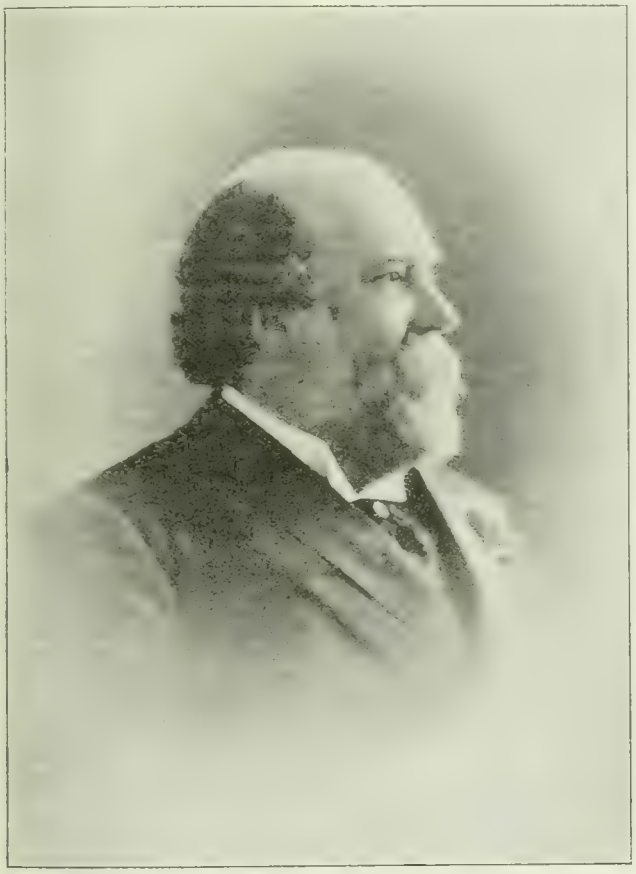
OBITUARY.

Sir THOMAS GRAINGER STEWART, M.D., F.R.C.P.E., F.R.S.E., LL.D., Etc.,

Physician-in-Ordinary to the Queen for Scotland, Professor of the Practice of Physic, and one of the Professors of Clinical Medicine in the University of Edinburgh, Senior Physician to the Royal Infirmary of Edinburgh.

We regret to announce the death, on the morning of Saturday, February 3rd, at his house in 19, Charlotte Square, Edinburgh, of Sir Thomas Grainger Stewart.

Sir Thomas Grainger Stewart was born in the city of Edinburgh on September 23rd, 1837, the year of the accession of Queen Victoria. He was thus 62 years of age. He was educated at the High School of Edinburgh, at the University of Edinburgh, where he graduated as Doctor of Medicine in 1858, and at the great medical schools of Berlin, Prague, and Vienna. In these latter schools he was a pupil of Virchow, Schönlein, Traube, Joseph Mayer, Rokitansky, Oppolzer, Skoda, Hebra, and Siegmund.



While yet an undergraduate he was elected one of the Presidents of the Edinburgh Royal Medical Society, the highest honour that can be conferred on a student or young graduate by his compeers. The Royal Medical Society, it may be noted in passing, was founded in the year 1737, and has had among its Fellows and Members a very large number of the most renowned members of the medical profession in the British empire.

On his return to Edinburgh Dr. Grainger Stewart was appointed Resident Physician in the University wards of the Royal Infirmary, under Professors Bennett and Laycock. During his tenure of office he began the work which later made him famous—to wit, the differential diagnosis of the various forms of nephritis. At this early period he made a communication to the Edinburgh Medico-Chirurgical Society, parts of which speedily passed into some of the classical works of medicine of that day. He laid the foundation of his future success on the surest of all foundations, a careful and accurate study of pathological conditions, in the *post-mortem* department of the Royal Infirmary, as well as in connection with one of the dispensaries, and one of the charities of Edinburgh.

He began his career as a teacher by lecturing for one year on Materia Medica and Dietetics. In the following year—1862—he was appointed Pathologist to the Royal Infirmary, and simultaneously became a Lecturer on Pathology in the Extra-Academical School of Edinburgh, where so many of the greatest British teachers of medicine have been trained. A year or two later he was put in charge of a ward in the Royal Infirmary, where he was able to pursue his clinical studies, as well as to begin that course of clinical teaching in which he later became so supreme a master.

In those early years he worked incessantly, and wrote papers on various kidney conditions, on dilatation of the bronchi, on acute atrophy of the liver, on a case of dilatation of the lacteals, on waxy or amyloid degeneration of the liver of syphilitic origin, and on many other subjects. In 1869 he published the first edition of his work on *Bright's Diseases of the Kidney*, which has had two editions in England and two in America. In addition to his hospital work Dr. Stewart had a large practice as a family physician.

In 1869 he was a candidate for the Chair of General Pathology in the University of Edinburgh, which, however, he failed to obtain. On this he resigned his pathological appointments after holding them for seven years, and was made Junior Ordinary Physician to the Royal Infirmary. Four years later he became a Lecturer on the Practice of Physic in the Extra-Academical School, and such was his reputation that he had in this year a class of sixty students. Two years later he had a class of one hundred students, and at this time he gave up general family practice and became a purely consulting physician.

In 1876, on the death of one of his masters, Professor Laycock, he was appointed Professor of the Practice of Physic in the University of Edinburgh, a chair which had been made famous by Cullen, the two Gregorys, and Alison. In virtue of his position as Professor of the Practice of Physic he simultaneously became one of the Professors of Clinical Medicine with wards in the Royal Infirmary, of which he was for many years the Senior Physician. Despite the vigour of the Extra-Academical School, and the number of able lecturers on medicine, Sir Thomas Grainger Stewart continued to have very large classes, and his clinic in the infirmary was also large. Nor was this due merely to his position as Professor and as Examiner in Medicine for Degrees. It was in great measure due to his signal ability as a teacher. He had a marvellous faculty of throwing aside superfluous detail and going straight to the main point in each case. True his students were taught to go categorically through the various systems, respiratory, circulatory, renal, and so on but their attention was immediately called to that implicated in the central lesion, and next, to those secondarily involved. Thus the true clinical picture was got and the details gradually worked in. He was one of the most brilliant lecturers in the University of Edinburgh. He had a great gift of ready and attractive and charming speech, and this was enhanced by his tall, commanding, and dignified presence.

At the meeting of the British Medical Association at Bath in 1878 he was President of the Section of Medicine, when he gave an opening address on some of the subjects which he had studied most closely, namely, glomerulo-nephritis, the true nature of the cirrhotic process, the stages in the transformation of Bright's disease, puerperal eclampsia, and other associated conditions. At the International Medical Congress in London in 1881 Professor Stewart introduced the discussion in the Section of Medicine on The Morbid Histology of the Different Forms of Bright's Disease, basing his remarks on the careful study of the renal cases that had come under his observation during the preceding twenty-one years.

On the death of Sir Robert Christison in 1882, Professor Grainger Stewart was appointed Physician-in-Ordinary to Her Majesty the Queen for Scotland. In that year, under strain of work, his health broke down, and he had an attack of acute rheumatism. After seven months' rest he appeared to recover without permanent injury.

During the twenty-two years of his occupancy of the Chair of Practice of Physic—curiously the same time as his master and predecessor, Laycock—he has written many papers and published several lectures. He was one of the first in this country to draw attention to the deep reflexes, and under the title of Paralysis of the Hands and Feet from Disease of the Nerves, he described the condition now known as multiple neuritis. In 1884 he published a course of fourteen lectures which he had delivered in the University of Edinburgh during the tercentenary year, under the title of *An Introduction to the Study of the Diseases of the Nervous System*. These lectures clearly illustrate the methods of clinical teaching which, with such success, he used in the hospital and lecture room. He in the same year—1884—issued the first of a series of *Clinical Lectures on Important Symptoms*, giving in this work three lectures *On Giddiness*. These were republished with emendations and additions in 1898.

In 1888 a second fasciculus was published, consisting of fifteen lectures *On Albuminuria*. Some of these two series of lectures have been largely quoted on the Continent, and have been translated into French, German, and Russian. The fasciculus *On Albuminuria* is to-day used as a textbook in some of the German universities.

In 1887 he had conferred on him (*honoris causâ*) the degree of M.D. of the Royal University of Ireland; and in the same year he was elected an Honorary Fellow of the Royal College of Physicians of Ireland, and had the degree of M.D. (*honoris causâ*) conferred on him by the University of Dublin. In 1892 he was elected an Honorary Fellow of the College of Physicians of Philadelphia. In 1897 the University of Aberdeen conferred on him the honorary degree of LL.D. In addition he was a member of various scientific societies at home and abroad.

He was for two years President of the Edinburgh Medico-Chirurgical Society. He was President of the Royal College of Physicians of Edinburgh from the autumn of 1890 to that of 1892.

In 1894, on the suggestion of Lord Rosebery, he received from Her Majesty the honour of knighthood. Later in the same year he gave the Address on Medicine at the annual meeting of the British Medical Association at Bristol on the subject of Influenza. At the Edinburgh meeting of the British Medical Association, in 1898, he was chosen President, and discharged the many and arduous duties of that office with signal efficiency. The condition of his health forbade his appearance at the Portsmouth meeting in 1899 to hand over the Presidency to his successor. In the early part of 1899 he went as the representative of the University of Edinburgh to the Berlin Congress on Tuberculosis, and made one of the opening speeches, a speech which brought him the special commendation of the Empress of Germany. At this Congress Virchow introduced him to the various notable persons present as "*Mein berühmtester Schüler*." Virchow, too, used often to point out to his students the seat where Grainger Stewart as a student sat.

Sir Thomas's abilities and interests were not confined to medicine. He was a wide and keen reader in many departments of literature. In particular he devoted much of his spare and holiday time to the study of Scotch history and archæology. He was a writer of no mean order; he wrote as he spoke, in a vigorous and incisive style. His greatest effort in pure literature was *The Good Regent: a Chronicle Play*, published in 1898, and commented on favourably by the leading journals in this country and America. This, however, was not his first essay in poesy, for he had published various fugitive verses and translations (from Heine and others) during the preceding ten years.

For many years Sir Thomas has held a foremost place as a consulting physician throughout Scotland and the North of England.

He was a deeply religious man, an elder in Free St. George's Church, Edinburgh, and interested in all schemes for the furtherance of the religious life of students. He gave warm support to the Edinburgh Medical Missionary Society, of which he was for several years President. He gave liberally of his means to the aid of all religious and philanthropic purposes. For many years he held in his own house a series of Bible readings for students, which were greatly appreciated by those privileged to be present. He was a warm-hearted, kindly, and generous man, who will be missed for many a day in a wide circle.

He was twice married, and he leaves behind him to mourn his loss Lady Grainger Stewart, four sons and four daughters, to whom deep sympathy will be given. His eldest son is a rising member of the Scotch Bar, while his third son is about to complete his curriculum in Medicine at the University of Edinburgh.

Dr. James Ritchie writes: At the age of 16 Sir Thomas Grainger Stewart suffered from a severe attack of acute rheumatism, which left permanent organic change in the heart. During the winter of 1882 he was laid aside by an attack of rheumatic fever with severe pericarditis, but his power of recuperation was such that he was able again to resume all the duties of his position. In 1891, during the first epidemic of influenza, he had an apparently mild attack, but it was afterwards found that the innervation of the heart was so seriously troubled that cessation from work for some months was necessary. Sir Thomas entered with great zest into the preparations for and the work connected with the meeting of the British Medical Association in Edinburgh in 1898, without apparent injury to his health. In the spring of last year he was delegated to represent the University of Edinburgh at the Tuberculosis Congress in Berlin. He greatly enjoyed the various functions of that meeting; on his homeward journey he visited friends in the South of England, and on his return to Edinburgh bore no evidence of having suf-

fered from his travels. In June, during a journey to the country, he got a chill, developed pleurisy with effusion on the left side, which increased to such an extent as to demand paracentesis. From that time his condition caused grave anxiety. During the month of September, which he spent at Dunbar, he made such marked improvement that, in view of his former recoveries from serious illnesses, the hope was entertained that after prolonged rest he might again be able for some professional work. This was not realised. The condition of the pleura on the left side combined with physical conditions due to lesions of both mitral and aortic valves caused re-accumulation of fluid which made it necessary to perform paracentesis on several occasions. Since September there have been periods of aggravation of symptoms, brightened by intervals of improvement, but during the past three weeks increasing evidences of heart failure caused grave anxiety. On Friday afternoon Sir Thomas was able to sit in the drawing-room for a short time, and enjoyed reading at intervals, but early on the following morning (Saturday, 3rd February) the heart failed rapidly, and he passed away peacefully. Under very trying conditions, Sir Thomas's patience, fortitude, resignation, and even cheerfulness were an evident expression of the higher hope which characterised his life.

We are indebted to Sir Dyce Duckworth for the following note:

My recollections of Grainger Stewart go back to well-nigh forty years. He had just settled in Edinburgh after completing his studies in Germany. My first impressions of him related to his recent contact with Virchow, whose pupil he had been, and to his large equipment of knowledge relating to things histological, and to the new doctrine of cellular pathology in particular. From the post of Resident Physician in the clinical wards of Bennett and Laycock, he had virtually gone over to the enemy's camp, and sat under the influence of Bennett's great opponent. We were "molecularists," and duly taught to abominate the doctrine of *omnis cellula e cellula*. Something—I hardly know what—brought us into friendship and sympathy. Stewart was full of energy, and keenly set on winning his spurs by doing big things in medicine. He early began to teach in the extra-academical school, and acquired readiness and precision in his lectures. Haldane's retirement from the office of Pathologist to the Infirmary made an opening which Stewart filled, and he was in his element as a demonstrator and teacher of the latest achievements in his department, using his large opportunities to the full, and carrying on original work. Renal pathology especially attracted him, and the nature and clinical features of waxy or lardaceous degeneration were very fully worked out by him. Laycock's death created a vacancy in the chair of Practice of Physic which it had long been his ambition to fill, and he was duly installed in it, proud of its traditions from Cullen's time, and ready to take up with enthusiasm the clinical duties in the infirmary which are so wisely associated with that position. Others can tell of his career as a Professor. He worked assiduously and attracted large classes of pupils. I became again associated with him as an Examiner in the University in Medicine after Laycock's death, and for three years large numbers of men passed through our hands. Nothing marred our friendship, though he sometimes thought me unduly severe. Since those days we have often met, and I have been his guest in the kindest of homes. His health was at times precarious, but his energy and strong will never flagged. He was devoted to his work, and intent on doing nothing less than his best.

He acquired a large consulting practice, and was ambitious to make it worthy of his academic position. The measure and quality of this in a centre such as the Scottish metropolis affords are unlike those of other centres. The particular shade and variety of ecclesiastical opinion has a significance in this respect which is happily unknown, or almost unrecognised, in England. Grainger Stewart was an ardent Free Churchman, though without the acerbity or aggressiveness that formerly characterised such adherents. Many of the prickles of Free Church dogmas had been rubbed off by contact with men of larger views, and he had wide sympathies with other members of the Holy Catholic Church. He had, too, the saving grace of a strong sense of humour which so often deflects men from narrowness and bitterness, to say nothing of that which pertains to all of us in virtue of our solemn daily duties as "priests of the body," which take us to minister to "all sorts and conditions of men."

I feel sure that Grainger Stewart will be largely missed and regretted by many in Edinburgh, and by large bodies of old pupils whom he has trained and interested himself in. His work was solid and honest, his teaching minute and careful. He was a kindly man, a warm friend, and enjoyed much domestic happiness and sympathy. It will be hard for his successor to follow him. He has left his mark on his time, and brought honour to his University. That he accomplished what he did in spite of bodily frailties indicates the measure of his strong will and ambition. To state that he was not universally popular or liked would be to affirm that which could be honestly said of most men in any public or prominent position, and it entails nothing of discredit. For myself, bearing my testimony to my recollections of the man, I recall nothing but happy memories, and can only regret the early loss of a kind old friend. May he rest in peace!

Professor John Chiene, when he met his class of Surgery on Monday morning, February 5th, made reference in the following words to the loss which the University of Edinburgh has sustained by the death of Sir Grainger Stewart:

We meet to-day under a deep sense of the great loss which the Edinburgh School of Medicine has sustained in the death of the Professor of Practice of Physic. This is not the time or place to refer to the good work he did in various departments of medicine. I would only make one remark: that the foundation of his researches on kidney disease was begun when he was Resident in the Royal Infirmary. Surely in this there is an encouragement. To-day I would rather think of him as one who, proud of his chair, proud of his school, always upheld and worthily represented the best traditions of our Alma Mater. For twenty-three years he was a worthy successor of the Gregorys, Cullen, Alison, and Laycock. A kind friend, many of his old students will long miss his wise advise and encouragement. A kindly chief, as all his old students and residents will cordially endorse; a genial colleague, with a strong individuality always tempered with an earnest desire to look on every side of any question; but who, when he had once made up his mind as to the right course to pursue, was both able and willing, in debate and by his writing, to uphold the view he had adopted. An able man of grand presence, of many sides, with a deep love for his country and its past history, proud of its city and its traditions, proud to be a citizen of no mean city, he bore with manliness and fortitude a long and trying illness. We deeply sympathise with his wife and family, and we feel that a strong man we could ill spare has left this world so much the poorer. I feel the imperfection of these remarks, but it is hard—the loss is so recent—fully to estimate all that Grainger Stewart was to those who knew him best. To me he was a staunch friend and a wise adviser, and I say, and I am sure you all join with me in all reverence—*Requiescat in pace.*

One who knew Sir Grainger Stewart intimately writes:—Although the state of Sir Thomas Grainger Stewart's health had caused anxiety to his physicians and friends for long, the news of his comparatively sudden death came as a severe shock. By the removal of Sir Thomas the practice of medicine has lost one of its most distinguished exponents, the University of Edinburgh one of its best known professors, and the Royal Infirmary of Edinburgh its oldest officer.

Richly endowed by Nature, Sir Thomas was all his life an indefatigable worker. This was the prevailing impression he left with those who were brought into closest contact with him. Till his last illness he seemed not to know what it was to take things easily. It was a hard business to persuade him to take a holiday; and when on holidays the ever-active brain was occupied with the elaboration of some fresh scheme of work or with the prosecution of some extra-professional study.

As a physician his strong point seemed to lie in his power of rapidly seizing on the salient features of a case and elucidating them with as much precision and sharpness of outline as he could command. At the bedside his striking presence and genial confidence produced their natural effect. As a teacher of medicine, whether in the class room or in the ward, his distinguishing characteristics were methodical arrangements of his thought and clearness of diction. Whatever his

view of the subject in hand happened to be, it was not Sir Thomas's fault if his audience failed to grasp his meaning. He had a fund of happy anecdote, and had a way of his own of enlivening a dull chapter by a flood of pleasantry which he used to admit he cultivated for the purpose.

His sense of duty towards his patients and his students was deep. When busiest with consulting practice he grudged much an hour's absence from his class. I have known him start before five on a winter morning from some out-of-the-way part of the country in order that he might meet his students at nine o'clock. He often engaged in teaching when as a physician he would have enjoined rest on another.

Possessed of a high ideal of professional life he interested himself in all movements affecting the education and status of the practitioner. He was prepared to fight strenuously on behalf of the just rights of doctors, but he had a wholesome dread of all that savoured of trade-unionism. He recognised that the public had a right to expect more from the profession than mere individual advice. He played his part as a citizen gallantly in relation to questions concerning the interests of the community, whether national or municipal.

On many a delicate matter his advice was eagerly sought and unstintedly given. Sir Thomas was passionately devoted to his native town. Nothing pleased him more than to descant on its beauties and history to a sympathetic listener. He was much attracted to archæological research. He wandered into many little-frequented paths of Scottish history. His devotion to this line of work was fitly crowned by the production of *The Good Regent*, which was favourably received by those best able to judge of its merits.

Till his last illness he wore his years lightly. His colour and gait and manner were not those of an old man. His keen activity and most admirable conduct in the chair as President of the British Medical Association during the Edinburgh meeting seemed to promise many years of further service. He himself enjoyed the prospect of continued work. Even when gravely ill he spoke cheerfully of the re-establishment of compensation and a return to harness. But it was not to be. His carriage has rolled into the University quadrangle and his portly figure has tramped up the quaint spiral staircase to his retiring room for the last time.

Dr. Argyll Robertson writes: I avail myself of the opportunity you offer to pay a tribute of sincere and affectionate respect to the memory of my dear friend, Sir Thomas Grainger Stewart.

From the time we were fellow-residents in the Edinburgh Royal Infirmary to the day of his death we were united in the bonds of intimate friendship and good fellowship. During the whole of that period, of forty years, in all circumstances of doubt or difficulty, I had ever the benefit of his sound judgment, assistance, and support, while in like manner he at times brought matters in which he was interested under our mutual consideration. I can thus, from most intimate personal knowledge, testify to the intense regard he had for his profession, his thorough devotion to duty, and his ardent desire for the advance of medical science.

Sir Thomas possessed in rare degree the power of rapid acquisition and assimilation of knowledge, and that even more valuable faculty of discerning and appreciating the novel and valuable data, while rejecting the useless and inconsequent, in the vast mass of literature with which the profession is flooded. He delighted above all in his university work, and as a teacher he was universally respected and esteemed, his clear and lucid method of teaching being fully appreciated by the students. In him the University has lost one of its ablest teachers, while medical science is deprived of one who by accurate investigation and acute reasoning added his share to its advance.

Not medicine alone but literature in general is the poorer by his death. His addresses and papers were always marked by literary grace, while his interest in and knowledge of the history of our country, especially about the period of Queen Mary, were well illustrated by a very interesting and learned communication he made to *Blackwood's Magazine*, and particularly by his recently-published historical drama, *The Good Regent*.

Sir Thomas made an admirable president of meetings, showing great tact and business knowledge in the discharge of the duties of the chair. I think I am justified in saying that much of the success of the meeting of the Association in Edinburgh was due to his presidency.

Sir Thomas took the warmest interest in medical missions, and more particularly in the prosperity of the Edinburgh Medical Missionary Society, of which he was president. He exerted all his influence, in some instances with the best results, to improve its finances and to extend its operations. He had deep religious convictions, and honestly strove on all occasions to act in accordance with them. He was a firm and trusty friend, considerate and kind-hearted, full of love and sympathy. Such to me was the man we have lost.

An old friend and colleague writes: Sir Thomas Grainger Stewart was a many-sided man, and his death implies the disappearance of a notable figure from Edinburgh society and from British medical circles. On the basis of his Scottish nature he had built up a very cosmopolitan character, so that whilst his life flowed on in the central current of Scottish history, his name was known throughout all the world of medicine. He was keenly patriotic, took a special interest in the history of the Reformation in Scotland, was greatly attracted to the good Earl of Moray, and in his chronicle play, *The Good Regent*, skilfully delineated the character of that beneficent ruler in lines that never falter and pages that display distinct poetic power. He could use his mother tongue to good purpose, and when one came in reading one's *Spectator* on a version of the Lorelei that reproduced the spirit of Heine's weird song in the Scottish dialect, one was not surprised to see at the end the initials T. G. S. He was proficient in German, and sometimes loved to make what he called an international joke, as when the *lead* fell out of his golf club and he had to stop his round, saying *Das Lied ist aus*. His sunny disposition, his fine imagination, his happy gift of song, and his brilliant conversational powers made him a welcome guest in many a social gathering. It was a rare treat to hear him sing Robert Chambers's ballad of *Willanslee*, or relate the history of the Highland gamekeeper for whom he got a post as keeper of another kind in Morningside Asylum. When the British Medical Association met in 1898 for the third time in Edinburgh, he was called to fill the high position that on the first and second Edinburgh meetings had been assigned respectively to Alison and Christison. The troubles that eventually carried him off had already begun to tell on him, but in that busy July week he was the cynosure of every eye, his presence seemed to brighten every function, and whatever other impressions visitors carried away with them they carried home a profound admiration of the splendid style in which the profession, the University, and the City of Edinburgh had been represented in the person of the President. It would be difficult to say which of the various institutions that claimed his services engaged his deepest interest, but it is certain that the Royal Infirmary had a quite peculiar place in his affections. In appointing him as Pathologist it gave him the first lift in his professional career, gave him also a field for the exercise and development of his professional talents. From the office of Pathologist it raised him to the status of ordinary physician and when he became a Professor of Medicine he moved from one set of wards to another, to work on there till all the medical staff which he had joined nearly forty years before had become completely transformed it its *personnel*. The very stones became dear to him. When the new infirmary was built he missed from over the doorway the so appropriate words that he had often looked at as he entered the old. And he got leave from the managers to place, at his own expense, over the central entrance, with its noble motto "Patet Omnibus," two tablets bearing the inscriptions, "I was a stranger, and ye took me in," "I was sick, and ye visited me." They are a fitting monument of a great and good physician. For he received with the simple faith of a little child and the trained intellect of a strong man the revelation which God has given of Himself in Jesus Christ. He belongs to the great cloud of witnesses, from St. Paul's beloved physician to Sir Thomas Browne and Sir James Paget, whose lives have been transformed and whose characters have been irradiated by that apocalypse. The *ja* of the "life indeed" that possessed him led him, when young men began to look up to him as a teacher, to gather some of them to his house for study of the

Bible. Out of these meetings grew the Medical Students' Christian Association, which for more than thirty years has been a rallying centre for many of the men who desire to conform their lives to the highest ideal. When he first began to practise he took a share in the work of the Medical Mission in the Cowgate; and the Edinburgh Medical Missionary Society, which has trained men and women who are serving as medical missionaries in all quarters of the globe, laments in his death the loss of its most beloved and honoured President.

The funeral took place at noon on Wednesday, February 7th, from Free St. George's Church, in which a short Presbyterian service of simple but impressive dignity was conducted by the Rev. Dr. Whyte and the Rev. Hugh Black. At the grave the service was concluded by the Rev. Dr. Scott, of St. George's Parish Church. The University was officially represented by the Principal and almost all the professors, preceded by the Bedellus bearing the draped mace and by the Students' Representative Council; and the Royal College of Physicians by the President, Council, and many of the Fellows. The Kirk Session of Free St. George's Church and the Edinburgh Medical Missionary Society were also officially present. There was a great gathering of the medical profession from Edinburgh and elsewhere. St. Thomas's students were present in large numbers, as were also the general public, including many clergymen.

WILLIAM ADAMS, F.R.C.S.,

Consulting Surgeon to the Great Northern Central Hospital, etc.

Mr. William Adams, who died on February 3rd, in his 80th year, was the last of the old staff of the Royal Orthopædic Hospital, having survived his former colleague Mr. Brodhurst by a few days. A student of St. Thomas's Hospital, he became a Member of the College of Surgeons in 1842, and a Fellow in 1851, and held the office of Demonstrator of Morbid Anatomy at St. Thomas's for a time. He was an original member of the Pathological Society, and in its early years was a frequent exhibitor of morbid specimens. Adams early joined the staff of the Orthopædic Hospital, then in Bloomsbury Square, and devoted a good deal of attention to the treatment of deformities. In 1854 Adams delivered a course of lectures on the pathology and treatment of clubfoot at the Grosvenor Place School of Medicine, and in 1864 he gained the Jacksonian Prize for his essay on *Clubfoot*, which was published in 1866, and contained the result of his investigations into the method of union of divided tendons, and other papers relating to the subject in the Pathological Society's *Transactions* and the Medico-Chirurgical *Transactions*. A second edition of this appeared in 1873. Adams also published a work on the *Pathology and Treatment of Lateral and other forms of Curvature of the Spine*, a second edition of which appeared in 1882. In 1869 he delivered the Lettsomian Lectures before the Medical Society of London, taking for his subject the rheumatic and strumous diseases of the joints, including hip-joint disease.

From an early period his practice became mainly connected with the treatment of deformities, which necessarily came before him in large numbers at the Orthopædic Hospital. He was not content, however, to become a mere mechanician, but took office at the Great Northern Hospital, and did good work in general surgery. It was here that he carried out the two surgical proceedings with which his name must always be honourably connected, namely, the division of the neck of the femur in cases of rectangular ankylosis of the hip, and the subcutaneous division of the fibrous bands in Dupuytren's contraction of the palmar fascia. By long association he had the greatest faith in subcutaneous surgery, on the principles and practice of which he had published an essay in 1857, and his object in both the operations referred to was to exclude the admission of air. "Adams' saw" was specially contrived for the subcutaneous division of the neck of the femur, and is still employed by many surgeons, who prefer it to the chisel or osteotome. The introduction of antiseptics has made surgeons less careful about the rigid exclusion of air, but the principle of the operation remains the same. Some twenty-five years ago there was a hot dispute between the staff and the authorities of the Royal Orthopædic Hospital, which ended in the retirement of Mr. Adams. This probably did him little harm, for there was a strong feeling in professional circles that he had been "jockeyed." He continued to practise in Henrietta Street, Cavendish Square, until about ten years since, when he retired to St. John's Wood.

One of his last public appearances was at the funeral of the late Dr. Hare, when his friends were shocked to see how bent and decrepit he had become. He was always more effective as a writer than as a speaker, and with old age he developed a tendency to garrulity, but he retained his mental powers to the end.

CHARLES BRODIE SEWELL, M.D.Lond., M.R.C.S.Eng. We regret to announce the death of Dr. Brodie Sewell, at his residence, Barton Fields, Canterbury, on January 28th, at the ripe age of 82. He had for years a most extensive practice in London, at first in Walbrook and Fenchurch Street in the City, subsequently in Guilford Street, and finally in Cavendish Square. About five years ago he retired from practice and went to reside at Canterbury. There he greatly enjoyed his daily carriage exercise, and took much interest in his garden. For some months his health had been growing feeble, and soon after Christmas his final illness began, and he gradually sank and died peacefully.

He was born in 1817, and was the youngest surviving son of Samuel Sewell, who married Miss Margaret Brodie. When 14 years of age, at the Pimlico Grammar School, he passed such a good examination, conducted by two Fellows of St. John's College, Cambridge, that they offered him a scholarship; his mother's Presbyterian principles, however, which led her to object to the Test Act which was then in existence, caused the offer to be declined.

In 1833 he went to Glasgow University for one session, and attended classes in Greek and Logic, and was a member of Lord Cockburn's Committee for his re-election as Lord Rector. He began his professional education in 1834, in the customary manner of those days, by an apprenticeship, which he served under Mr. Holmes, of Linton, Cambridgeshire.

In 1837 he entered University College Medical School, where began the friendship of his fellow-student and future brother-in-law, John Philips Potter. He became dresser to Mr. Liston, who accorded him his personal friendship; and subsequently the General Committee appointed Sewell and Potter joint clinical clerks to Dr. C. J. B. Williams, making the appointment for six instead of the usual three months. In 1840 he became M.R.C.S. and L.S.A., and passed the first M.B.Lond. In 1841, at the final examination for the M.B. degree, he obtained the scholarship and gold medal in Medicine, his rivals including Drs. J. T. Francis, Edmund A. Parkes, and William Withey Gull. He obtained the M.D. degree in 1854. For years he was Assistant Physician to the Royal General Dispensary. He was a Fellow of University College; a member of the Obstetrical, Medical, and Hunterian Societies, and was President of the Metropolitan Counties Branch of the British Medical Association in 1888-89.

At one time Dr. Sewell was probably one of the best known practitioners in the metropolis, his professional services being much in request by all classes of the population. Working hard in those days for ten months in every year, he regularly took a holiday in August and September, and visited America, Norway, Sweden, all parts of Britain, Switzerland, and the chief European holiday resorts. He had volumes of interesting notes of these excursions taken at the time, and subsequently completed during the winter evenings. He was bright and cheerful, and his robust appearance must have excited the confidence if not the envy of his many patients. He was an excellent *raconteur*, and in his long life had amassed a very large fund of general information. He was generous and kindly to all about him, and truly hospitable. A very large circle of friends mourned the loss occasioned by his death.

Mrs. Brodie Sewell died many years ago, and since then his constant and devoted companion has been his daughter, for whom much sympathy is felt.

The funeral took place on February 2nd, at Highgate Cemetery, where the remains of his wife also repose.

L. B. writes: There appears to me one point in your very interesting obituary of the late Dr. Hannotte Vernon which

requires correction. Dr. Vernon became Resident Accoucheur at St. Mary's Hospital in 1853 or 1854, and he occupied that post for some considerable time. It was during this period that Dr. Tyler Smith, Physician Accoucheur of the hospital, would have become acquainted with Dr. Vernon's qualifications to assist him in the preparation of his *Manual of Obstetrics*, and the recommendation of Dr. Matthews Duncan was presumably unnecessary.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—GEORGE W. BELL, Fleet-Surgeon to Haslar Hospital, January 21st; FRANCIS A. JEANS, Fleet-Surgeon to the *Ramillies*, February 7th; JOHN D. HENWOOD, Fleet-Surgeon, to the *Benbow*, February 7th; HENRY B. BEATTY, Staff-Surgeon, to the *Diana*, for medical charge on the voyage to Australia, February 15th, the appointments to the *Gladiator* being cancelled; JOHN H. THOMAS, Staff-Surgeon, to the *Diana*, for medical charge on the voyage home, undated; ROBERT F. BOWIE, Staff Surgeon, to the *Europa*, for medical charge on the voyage home, undated; JOHN H. STENHOUSE, Staff Surgeon, to the *Edgar*, for medical charge on the voyage home, undated; ARTHUR E. KELSEY, B.A., M.B., and WILLIAM W. KEIR, M.B., Surgeons, to the *Royal Arthur*, for the *Ringarooma*, February 2nd; PERCIVAL M. MAY, Surgeon, to the *Mildura*, February 2nd; FRANK BRADSHAW, B.A., Surgeon, to the *Wallaroo*, February 2nd; JAMES A. FORREST, M.B., Surgeon, to the *Howe*, February 2nd; WILLIAM B. MACLEOD, M.B., Surgeon, to Haslar Hospital, March 12th; ROBERT S. BERNARD, Surgeon, to the *Torch*, additional February 2nd; WILLIAM L. MARTIN, Surgeon, to Haslar Hospital, February 2nd; JAMES W. W. STANTON, Surgeon, to the *Algerine*, February 20th, lent to the *Edgar* for medical charge on the voyage out; ELYSTAN G. E. O'LEARY, Surgeon, to Haslar Hospital, February 25th; FRANCIS J. M KENNA., M.B., Surgeon, to the *Lion*, February 25th; KENNETH H. JONES, M.B., Surgeon, to the *Waterwitch*, additional, February 20th; ALFRED H. JEREMY, B.A., M.B., to the *Phœnix*, undated.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANTS G. E. F. STAMMERS, C. F. WANHILL, W. E. HUDLESTON, M. P. CORBERY, F. J. GAINE, L. ADDAMS-WILLIAMS, M. M. RATTRAY, M.B., J. H. POWER, R. E. G. PHILLIPS, T. H. M. CLARKE, M.B., D.S.O., and E. W. P. V. MARRIOTT, having completed three years' full pay service, are promoted to be Captains, January 28th.

Sergeant-Majors FORBES BRUCE, WALTER G. HOLWAY, EDWARD P. OFFORD, and HENRY J. F. ANDUS, are appointed Quartermasters, with the honorary rank of Lieutenant, as augmentation, February 3rd.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT A. MACDONALD, M.B., is promoted to be Surgeon-Captain, February 3rd.

Surgeon-Captain S. LINTON, M.B., 1st Fifeshire Volunteer Artillery, to be Surgeon-Captain, February 7th.

MILITIA MEDICAL STAFF CORPS.

SURGEON LIEUTENANT-COLONEL C. B. STONEY, M.B., 3rd Battalion the Prince of Wales's Leinster Regiment (Royal Canadians), resigns his commission, retaining his rank and uniform, February 7th.

THE IMPERIAL YEOMANRY.

THE undermentioned gentlemen are appointed Medical Officers, with the temporary rank of Captain, dated February 3rd: Surgeon-Lieutenant-Colonel W. J. NAISMITH, M.D., Ayrshire Yeomanry; H. MANDERS, M.D., Captain and Hon. Major 1st Volunteer Battalion Princess Charlotte of Wales's Royal Berkshire Regiment; H. A. LOWNDS, Captain 2nd Volunteer Battalion the York and Lancaster Regiment; ROBERT CRAIG DUN, M.D., DOUGLAS PERCIVAL, CHARNLEY SMITH, M.D., R. MERVYN WILSON, M.D.

Mr. J. A. LEA, M.B., is appointed Medical Officer at the Base Depôt, with the temporary rank of Captain, February 3rd.

Mr. A. C. FRY, M.R.C.S., and Mr. E. T. VINT, M.B., are also appointed Medical Officers to the force, February 7th.

THE VOLUNTEERS.

SURGEON-LIEUTENANT GEORGE MARTIN, 1st Cumberland Artillery, resigns his commission, and is appointed Captain, February 7th.

Surgeon Lieutenant C. H. D. MORLAND, M.B., 2nd Glamorganshire Artillery, resigns his commission, February 7th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated February 7th: ROBERT A. NESHAM, 1st Northumberland Artillery (Western Division, Royal Garrison Artillery); HENRY HALTON, M.B., 1st Lancashire Engineers; DANIEL MOWAT, M.D., 3rd Volunteer Battalion the Essex Regiment; THOMAS C. CUMMINS, 2nd Volunteer Battalion the Duke of Cambridge's Own Middlesex Regiment.

Second-Lieutenant BERNARD H. WOODYATT, 3rd Volunteer Battalion the Cheshire Regiment, resigns his commission, and is appointed Surgeon-Lieutenant, February 7th.

Surgeon-Lieutenant A. W. SHEPERD, 2nd Volunteer Battalion the Welsh Regiment, is promoted to be Surgeon-Captain, February 7th.

VOLUNTEER MEDICAL ASSOCIATION.

THE next class of instruction for the Proficiency Examination will commence on Tuesday, February 20th, when the first lecture will be given at the headquarters of the Volunteer Medical Staff Corps, 51, Calthorpe Street, Gray's Inn Road, W.C. The correspondence class will commence in the same week. The classes are open to all members of the Volunteer Medical Association. All information can be obtained from Surgeon-Captain Harper, 25, Rosary Gardens, South Kensington, S.W.

DEARTH OF ARMY CLERKS.

EVERYBODY has been drafted to South Africa, and we understand so scarce are competent army clerks that much confusion and inconvenience have been experienced in many Government departments, the medical among others. It is a source of complaint that the censors of returns, etc., make no allowance for this state of things, and visit mistakes on the heads of officers just as if they still had a trained and efficient staff instead of incompetent old pensioners. Under the press of circumstances, over which officers have little or no control, some allowance for mistakes ought to be made.

THE ARMY MEDICAL RESERVE OF OFFICERS.

FAIR PLAY writes: I have noticed the letters in the columns of the BRITISH MEDICAL JOURNAL on the Army Medical Reserve, but think neither you nor your correspondents have quite grasped the Royal Warrant or regulations on that subject. You admit the "prior claim" to employment, but are utterly wrong in your addition at "contract rates." These rates are intended only for outlying stations for troops without hospital work to do or without the supervision of a superior officer of the R.A.M.C. The contract system of payment has been the source of much muddle and trouble, as I have found when employed under an officer in charge of a station hospital.

You will find the conditions of service in the A.M.R. clearly defined in the Royal Warrant of March, 1888. The A.M.R. are there declared to be liable to take the place of the medical staff on active service in great national emergency, and shall then receive pay and allowances of their rank.

You seem to think whole time, orderly duty, and the possibility of volunteer mobilisation have had to do with the present setting aside of the A.M.R.

As regards orderly duty, I know several young civilians employed in a station hospital near me, and, except the one man on orderly duty, they have nothing to do after one o'clock. The contingency of mobilisation is provided against by Royal warrant.

*** As previously stated we do not know why civilians are now employed on special rates in preference to the A.M.R. on contract or any other rates. But in face of our correspondent's somewhat contradictory statements, we must still suppose that "whole time," "orderly duty," and "possibility of volunteer mobilisation" are among the probable reasons. We have always regarded contract rates as an undesirable method of payment for professional services by a great Government department; head money savours too much of club practice. We could not suppose that such contract rates, even if up to the £1 maximum a day, could command the whole time of anyone in good practice, therefore special rates for whole time of those not in such practice may have been found necessary, even to the extent of passing over the prior claim of the A.M.R.

If Instruction 4 of the Royal Warrant of February 18th, 1888 (See BRITISH MEDICAL JOURNAL of March 17th of that year) be read, it will be found that officers of the Reserve shall be liable to be called in times of national emergency to take the place of the Medical Staff on active service, and when so called out shall receive the full pay and allowances of their rank; but they have never yet been called out compulsorily, and so receive only contract or special rates when employed voluntarily. We were not utterly wrong, therefore, in mentioning contract rates, for the Pay Warrant of 1898, which reformed all royal warrants, legislates only for these or special rates, and, so far as we can find, does not specify as to full pay and allowances.

If our correspondent will consult Article 659 of that Warrant, he will find it refers to Article 375, which treats only of contract and special rates; the present employment of civil practitioners seems to come under Article 375 A. Our correspondent's admission that he had not been called upon to do orderly duty in a station hospital because he was on contract rates, invalidates his assertion that such rates are only for outlying stations where there is no hospital work.

We know that contract rates have been attempted in station hospitals where a civilian was called upon to assist our army medical officers, but that the counting of half the heads to the former's credit only proved a a muddle and a futility. A special daily fee would have been infinitely preferable.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the congregation on February 1st, the following medical and surgical degrees were conferred:

M.B.—F. Shufflebotham, B.A., Trinity; R. Ainsworth, B.A., Pembroke: G. S. Keeling, Caius; R. N. Salaman, M.A., Trinity Hall; F. C. Eve, B.A., Emmanuel.

B.C.—F. Shufflebotham; O. Inchley, B.A., St. John's; J. F. Skrimshire, St. John's; G. Browse, B.A., Clare; R. S. Trevor, B.A., Clare; G. S. Keeling; F. C. Eve; S. V. Pearson, B.A., Emmanuel.

UNIVERSITY OF LONDON.

INTERMEDIATE EXAMINATION IN MEDICINE.—The following candidates have passed this examination as undernoted:

Entire Examination.—First Division: K. Anderson, Guy's Hospital; W. A. Rees, Middlesex Hospital. Second Division: J. Acomb, Yorkshire College; F. Barker, Mason University College; E. A. Bell, King's College; Dora Elizabeth Lidgett Bunting, London School of Medicine, Royal Free Hospital and University College; W. W. Campbell, King's College; G. A. Charter, Edinburgh School of Medicine; R. A. Eastmond, London Hospital; Mary Gertrude Edis, London School of Medicine and Royal Free Hospital; J. W. Evans, University College, Cardiff; D. Gray, Charing Cross Hospital; P. A. M. Green, London Hospital; G. S. Hughes, Middlesex Hospital: O. Ievers, St. Mary's Hospital: H. C. Jonas, St. Thomas's J. D. Judson, Owens College; F. S. Langmead, St. Mary's Hospital; R. H Lee, King's College; Jessie Augusta Lewin, London School of Medicine and Royal Free Hospital; A. T. Marshall, King's College; C. J. A. N. Mercier, Charing Cross Hospital; Mary Eva H. Morris, London School of Medicine and Royal Free Hospital; W. S. Page, St. Mary's Hospital; A. E. Pinniger, Middlesex Hospital; F. B. Pinniger, Charing Cross Hospital; E. G. Pringle, St. Bartholomew's Hospital; Enid Marian Smith, London School of Medicine for Women; Alice Taylor, London School of Medicine for Women; H. Tipping, Guy's Hospital; W. E. J. Tuohy, Guy's Hospital; G. S. Ward, London Hospital; Lucy Wellburn, London School of Medicine and Royal Free Hospital; H. V. Wenham, St. Bartholomew's Hospital.

Excluding Physiology.—First Division: E. C. Williams, St. Bartholomew's Hospital and Birkbeck Institution. Second Division: W. Ball, University College, Liverpool, Anderson's College, and Westminster Hospital; H. E. Barnes, St. Mary's Hospital; A. Cameron, Middlesex Hospital; Anne Fenton Cleaver, London School of Medicine and Royal Free Hospital; P. C. T. Davy, University College; Jeanette Rachel De Pass, London School of Medicine for Women; J. W. Fox, Sheffield Medical School and London Hospital; A. W. Iredell, Guy's Hospital; H. S. Jones, Guy's Hospital; J. Jones, London Hospital; G. H. Low, St. Bartholomew's Hospital; G. H. H. Manfield, Guy's Hospital; W. W. Nock, Mason University College; G. S. Robertson, Guy's Hospital; E. B. Smith, St. Bartholomew's Hospital; W. B. Vaile, London Hospital; R. J. Waugh, St. Bartholomew's Hospital.

Physiology only.—First Division: Ruth Balmer, London School of Medicine and Royal Free Hospital; Emily Marie Beverley, London School of Medicine for Women; T. S. Dudding, London Hospital; Lætitia Nora Eade, Durham College of Medicine; J. P. Ellerington, University College: G. Evans, Guy's Hospital: C. M. Heanley, St. George's Hospital; L. F. Lovell-Keays, Middlesex Hospital; C. B. Penny, Guy's Hospital; E. F. Reeve, Guy's Hospital; D. H. Trail, Guy's Hospital; F. C. Wetherell, Guy's Hospital. Second Division: S. M. Banham, University College; R. M. Barron, Guy's Hospital; O. J. S Damian, St. George's Hospital; R. V. Dolbey, London Hospital; J. E. Francis, University College: C. de Z. Marshall, St. Thomas's Hospital; H. R. F. Nattle, University College; A. W. Penrose, Guy's Hospital; F. H. Pickin, Bristol Medical School: C. W. Rowntree, Middlesex Hospital; L. C. A. Savatard, Owens College; J. W. S. Seccombe, St. George's Hospital; J. E. S. Smith, Owens College; J. A. Smyth, University College.

PRELIMINARY SCIENTIFIC EXAMINATION.—The following candidates have passed this examination as undernoted:

Entire Examination.—Second Division: J. S. Avery, Grammar School and Merchant Venturers College, Bristol; W. G. Aviss, Mason University College; Rachel Hicks Butler, Brighton Technical College; Ethel Craske, Kensington High School and Battersea Polytechnic: Delia Davies, University College, Aberystwith, and Alwyne Institute; F. W. Higgs, St. George's Hospital and University Tutorial College; H. A. Kirsch, City of London School and St. Thomas's Hospital; F. C. McCombie, King's College; Sophia Seekings, private tuition and Gloucester Municipal Schools; H. H. Warren, Mason University College; T. F. Wilson, Nottingham High School.

Chemistry and Experimental Physics.—*A. W. Baker, Kingswood School and Chesterfield Science and Art School; *E. H. Bennett-Bailey, Epsom College and Westminster Hospital; *W. F. Corfield, University College; *W. H. A. Elliott, Yorkshire College and private study; G. J. Langley, Merchant Taylors' School; *G. Laurence, University College, Liverpool; *W. N. May, Reading College; *R. Milne, London Hospital; *B. E. Moss, St. Bartholomew's Hospital; *Irene Helen Moss, University Tutorial College; *N. B. Powell, St. Bartholomew's Hospital; *F. D. Roberts, London Hospital; *J. L. Schilling, Yorkshire College; G. M. Simpson, University Tutorial College; *G. A. Soltau, London Hospital; E. J. Sunnucks, University Tutorial College; W. S. Sweet, University Melbourne and University Tutorial College; *A. G. Sworn, Epsom College; Bessie Weldon Symington, private tuition; J. R. R. Trist, St. Bartholomew's Hospital; *F. N. Walsh, Birmingham School of Medicine; *E. D. Whittle, University College; *Lilian Ethel Wilson, Bedford College, London, Birkbeck and Alwyne Institutions, and private tuition; *A. R. Wright, Owens College; *S. Zobel, University Tutorial College.

Biology.—W. Chesters, University College, Cardiff; E. V. Dunkley, St. Thomas's Hospital; F. Gooding, St. Bartholomew's Hospital; M. F. J. J. McDonnell, St. Paul's School; Mabel Gwendoline Mordey, University College, Cardiff; *J. H. Nixon, University Tutorial College and University College, Nottingham; E. L. R. Norton, Guy's Hospital and University Tutorial College; A. B. O'Brien, Guy's Hospital; Enid Orange, University College and Alwyne Institute; *T. Pratt, University College, Bristol; W. P. Purdom, Guy's Hospital and University Tutorial College; Mona Dew Roberts, Bedford College, London; *A. M. Roome, Guy's Hospital and University Tutorial College; *F. O. Spensley, Kingswood School and King's and Carlyon College; *A. G. Tresidder, London Hospital; F. T. Turner, King's College; S. W. J. Twigg, University College, Sheffield.

* These candidates have now completed the examination.

PUBLIC HEALTH

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,711 births and 4,719 deaths were registered during the week ending Saturday last, February 3rd. The annual rate of mortality in these towns, which had declined from 30.9 to 22.6 per 1,000 in the four preceding weeks, further decreased to 21.2 last week. The rates in the several towns ranged from 12.6 in Derby, 13.9 in Croydon, 14.3 in Burnley, and 14.4 in West Ham, to 29.5 in Halifax, 29.8 in Preston, 31.4 in Wolverhampton, and 35.4 in Sunderland. In the thirty-two provincial towns the mean death-rate was 22.3 per 1,000, and exceeded by 2.7 the rate recorded in London, which was 19.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the death-rate was equal to 1.8 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Preston, 3.8 in Salford, 4.1 in Wolverhampton, and 5.6 in Sheffield. Measles caused a death-rate of 1.0 in Plymouth, 1.2 in Wolverhampton, 1.4 in Sheffield, and 1.8 in Preston; scarlet fever of 1.0 in Halifax; and whooping-cough of 1.0 in Oldham, 1.6 in Liverpool, 2.1 in Salford, and 2.3 in Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. The 110 deaths from diphtheria in the thirty-three towns included 46 in London, 21 in Sheffield, 5 in Leicester, and 4 in West Ham. Two fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns; 21 cases of small-pox were under treatment in the Metropolitan Asylums Hospitals on Saturday last, February 3rd, but no new case was admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 2,287 at the end of the eleven preceding weeks, had further fallen to 2,179 on Saturday last; 174 new cases were admitted during the week, against 180, 207, and 190 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 3rd, 1,002 births and 733 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 23.0 to 23.4 per 1,000 in the three preceding weeks, further rose to 23.7 last week, and was 2.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.6 in Paisley and 20.5 in Leith, to 30.7 in Dundee and 40.5 in Perth. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Perth. The 299 deaths registered in Glasgow included 21 from measles, 9 from scarlet fever, 3 from diphtheria, 3 from whooping-cough, 5 from "fever," and 5 from diarrhœa. Two fatal cases of whooping cough were recorded in Edinburgh; 2 deaths from measles were registered in Dundee, 2 from diphtheria in Aberdeen, and 2 from whooping-cough in Perth.

INSANITARY AREAS AND THE HOUSING OF THE WORKING CLASSES.

DR. J. PRIESTLEY, the Medical Officer of Health for Lambeth, has placed in the clearest manner before the Vestry of that parish the methods he has for many years employed in dealing with this difficult question. His views on the subject were received with unanimous approval. Dr. Priestley holds that the wholesale displacing of persons consequent upon the clearing of a large insanitary area under Part I, or upon the closing of large numbers of separate houses under Part II, of the Housing of the Working Classes Act, 1890, should be avoided.

When a sanitary authority decides to take action under this Act, there are practically two ways of doing so. The medical officer of health may condemn, on the ground of danger to health, (1) a large-sized area; (2) an individual house or collection of houses forming a smaller area.

Proceedings under No. 1 result in permanent improvement of large areas, but only at the expense of increasing the squalor and destitution of other already over-congested districts.

What happens is this: These authorities condemn a large area with a considerable population, on account of its insanitary condition, with a further view of erecting a better class of houses, in most cases "workmen's dwellings." The unfortunate people who are thus turned out wholesale from their homes must find some other place to live, possibly in the immediate neighbourhood, where rents are low, and accommodation very similar to that which they have just vacated. They thus by their invasion increase the crowding and consequent insanitation of another district, which, although previously congested, might just have passed muster. This district becomes another nest of rookeries, and is in its turn probably dealt with in the same drastic fashion.

Dr. Priestley has endeavoured in Lambeth to deal with houses singly, or in the form of courts or streets, and condemn them under Part II of the Act as unfit for habitation. Such condemnation leads to the houses in question being ordered to be either put into proper order and condition to the satisfaction of the Vestry, or closed and afterwards demolished by the owners. The owners, who probably have not less than a twenty-one years' interest in their property, prefer the former alternative, with the result that the houses are put into a sanitary condition, and the inmates are not permanently disturbed.

Dr. Priestley argues that it is far better for the houses in which poor people live to be made habitable and sanitary than for such houses to be closed and pulled down, and the tenants turned out and left to themselves to get accommodation anywhere. A constant inspection of the houses of the working classes keeps them in a fairly sanitary state, and also improves the condition of the tenants very considerably.

VITAL STATISTICS.

THE following are the rates for England and Wales, 1899:

Birth-rate	29.26	per 1,000
Death-rate	18.3	,,
Zymotic rate	2.19	,,
Infant mortality...	163	,, births.

MEDICAL NEWS.

INFLUENZA IN EDINBURGH.—During the month of January, at least 47 deaths were reported as having been caused by influenza and its complications and sequelæ. Most of the deaths were in patients over 60 years of age, and they seem largely to have occurred in the southern districts of the city—Morningside and the Grange. The cases were distributed thus:—The deaths in the first four weeks of January were 5, 11, 13, and 11 respectively, and in the remaining days of the month 7; in February, up to the 6th, 10. The poor appear to have escaped. No death has occurred in any common lodging house. So large a mortality from influenza has not occurred since the great outbreak of the winter of 1891-92.

CHILD STUDY.—Dr. Francis Warner delivered an address on Child Study—its Scope, Aims, and Usefulness, on January 25th, at University College, Liverpool. Professor Woodward occupied the chair. Dr. Warner said that the study of child life had been actively carried on for years in America, Germany, and England, and had given most interesting records of the sayings, doings, and thoughts of young children. The hopeful signs of mental aptitude and capacity for educational training in children were (1) plenty of spontaneity capable of momentary inhibition; (2) control of sensory impressions by co-ordinated action under guidance; (3) indications of retentiveness (memory). A knowledge of children, based upon scientific principles, was, he considered, of primary importance in the training and preparation of teachers. Referring to the Liverpool Branch of the British Child Study Association, Dr. Warner expressed his anxiety to further its objects, and he trusted that his visit to Liverpool would result in enhanced membership. The Society performed a work of much social utility. A vote of thanks to Dr. Warner was passed at the conclusion of his address on the motion of Professor M'Cunn.

AT MODDER RIVER.—An Association calling itself the South African General Mission has forwarded us a little pamphlet entitled *At Modder River*, which is described as a record of a few incidents of mission work amongst soldiers whilst fighting in South Africa. Two representatives of this mission, Mr. Percy Huskisson and Mr. Darrol, describe their arrival at the great camp, where they were kindly received and encouraged by Colonel Northcote, who, it will be remembered, was one of the first officers to fall in the fight. These gentlemen do not appear to have confined their efforts to administering to the spiritual wants of the soldiers, but busied themselves in obtaining food and drink for those exhausted from the battlefield, or long patrols, and founded what they term a schoolhouse described as the "Soldiers' Home." Their tea, they say, held out for about four days. They were enabled to offer facilities for writing letters and forwarding them home, which appear to have been appreciated by the troops, and every night meetings were held in the little home, and the building was packed. Chaplains of all denominations were invited to take part and speak, and the Salvationists also. When the fight was going on they marched forward to the zone of fire and availed themselves of opportunities for helping the wounded. Doubtless a few men of this sort may be of service to an army on the march. But too many camp followers may cause serious embarrassment to the movement of troops.

MEDICAL VACANCIES.

The following vacancies are announced:

ALDERSHOT URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary, £300 per annum. Applications, marked "Medical Officer," to the Clerk to the Council by February 14th.

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer: unmarried. Salary, £100 per annum, with board and apartments. Applications to the Registrar by February 19th.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Physician. Appointments for six months. No salary, but residence, board, and washing provided in each case. Applications to the House Governor by February 20th.

BIRMINGHAM: MASON UNIVERSITY COLLEGE.—Lecturer on Osteology and Chief Demonstrator of Anatomy.—Applications to Secretary by February 24th.

BRECON INFIRMARY.—Resident House-Surgeon: unmarried. Salary, £90 per annum, with furnished apartments, board, etc. Applications to the Secretary by February 15th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer: unmarried, and under 30 years of age. Salary, £60 per annum, with board, washing, and residence. Applications to the Secretary by February 28th.

BRISTOL EYE HOSPITAL.—House-Surgeon. Salary, £120, without residence. Applications to the Secretary by February 20th.

CANCER HOSPITAL (FREE), Fulham Road, S.W.—Assistant House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by February 12th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant.—Applications to the Secretary.

DUBLIN: MERCER'S HOSPITAL.—(1) Resident Medical Officer. (2) Vacancy on the Surgical Staff. Applications to the Registrar by February 26th.

DUNDEE ROYAL INFIRMARY.—Fourth Resident Medical Assistant. Appointment for six months. Salary at the rate of £40 per annum, with board and washing. Applications to Dr Fraser, Medical Superintendent, by February 21st.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—Surgeon to Out-patients. Applications to the Committee of Management by February 16th.

FAREHAM: HANTS COUNTY ASYLUM.—Third Assistant Medical Officer: unmarried, and not exceeding 30 years of age. Salary, £125 per annum, increasing to £150, with furnished apartments, etc. Applications, endorsed "Application for appointment of Medical Officer," to the Committee of Visitors at the Asylum by February 21st.

GLASGOW LUNACY DISTRICT BOARD.—Assistant Medical Officer for Woodilee Asylum, to act as Pathologist. Salary, £100 per annum, with board, apartments, etc. Applications to the Clerk by February 26th.

GLOUCESTER: GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by February 13th.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—House-Surgeon: unmarried. Salary, £75 per annum, with residence, board, and washing. Applications to the Secretary by February 28th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Physician. Application to the Secretary by February 14th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two House-Surgeons to Out-patients. Appointments for six months, but eligible for re-election. Salary, 25 guineas each. Applications on forms provided to be sent to the Secretary by February 27th.

HULME DISPENSARY, Dale Street, Manchester.—House-Surgeon. Salary, £130 per annum, with apartments, etc. Applications to the Honorary Secretary of the Medical Committee by February 24th.

KENT AND CANTERBURY HOSPITAL. Assistant House-Surgeon; unmarried. Salary, £90 per annum, with board and lodging. Applications to the Secretary by February 20th.

KING'S COLLEGE.—Sambrooke Medical and Surgical Registrarships. Applications to the Secretary.

LIVERPOOL.—Assistant to the Medical Officer of Health. Must not exceed 35 years of age. Salary, £350 per annum. Applications, endorsed "Assistant to the Medical Officer," to be sent to the Town Clerk, Municipal Offices, Liverpool, by February 14th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by February 22nd.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary.

LONDON COUNTY ASYLUM, Hanwell, W.—Junior Assistant Medical Officer, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications on forms provided to be sent to the Asylum Committee Office, 6, Waterloo Place, S.W., by February 17th.

MAIDSTONE: KENT COUNTY OPHTHALMIC HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to Mr. M. A. Adams, F.R.C.S., Honorary Surgeon to the Hospital.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Resident Surgeon. Salary, £100, with board and residence. Applications to the Secretary, 30, Charing Cross, S.W., by February 20th.

METROPOLITAN HOSPITAL, Kingsland Road, N.—(1) Assistant Physician and Pathologist: must be F. or M.R.C.P.Lond. (2) Surgeon for Diseases of Women. (3) Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by February 19th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £140 per annum. Applications to the Secretary.

OXFORD: RADCLIFFE INFIRMARY.—Honorary Assistant Physician. Applications to the Secretary by March 5th.

POPLAR HOSPITAL FOR ACCIDENTS.—Senior House-Surgeon. Salary, £120 per annum, with board and residence. Applications to the House-Governor by February 16th.

ROYAL EYE HOSPITAL, Southwark.—House-Surgeon. Emolument, £50 per annum, with furnished apartments and board. Applications to the Secretary.

SEAMEN'S HOSPITAL SOCIETY: BRANCH HOSPITAL, Royal Victoria and Albert Docks, E.—(1) Senior House-Surgeon. Salary, £75 per annum, with board and residence, and additional £25 per annum if certain clinical work is performed satisfactorily. (2) House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary by February 19th.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications to the Medical Staff, care of the Secretary, by February 19th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Appointment for six months. Salary, £2 per mensem, with board, washing, and residence. Applications to the Secretary by February 20th.

TOTTENHAM HOSPITAL.—Honorary Physician to Out-patients. Applications to the Chairman of the Joint Committee by February 19th.

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. Applications to Dr. Parry, R.M.O.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—House-Surgeon; unmarried. Applications to the Honorary Secretary.

WINCHESTER: ROYAL HANTS COUNTY HOSPITAL.—House-Surgeon; unmarried. Salary, £65 per annum, rising to £75, with board, residence, etc. Applications to the Secretary by February 17th.

MEDICAL APPOINTMENTS.

AMBROSE, A. P., M.R.C.S., L.R.C.P., appointed Clinical Assistant to the Chelsea Hospital for Women.

BEGGS, J. E., B.A., M.D., D.P.H.Camb., appointed Medical Superintendent to the Grove Fever Hospital, Tooting, S.W.

BROCKWAY, Archibald B., M.R.C.S., L.R.C.P., appointed Honorary Visiting Physician to the Lady Bowen (Lying-in) Hospital, Brisbane, Queensland, *vice* Dr. Wm. Kebbel, appointed Honorary Consulting Physician, resigned.

COLES, A. C., M.D.Edin., B.Sc., reappointed Medical Officer of Health to the Winton Urban District Council.

FLOYD, E. W., M.B., Ch.B.Vict., appointed Resident Medical Officer to the Guest Hospital, Dudley.

GREENWOOD, T. Parker, M.B., C.M., B.Sc.Edin., appointed Assistant Medical Officer at the Three Counties Asylum, Hitchin.

GREGG, James, M.B., B.Ch.Dub., appointed Health Officer for the Shire of Mansfield, Victoria, *vice* Dr. P. H. Liddle, resigned.

JACOBSEN, G. Oscar, M.R.C.S., L.R.C.P., appointed Medical Officer and Public Vaccinator for the No. 4 District of the Chipping Norton Union.

MACGOWAN, Ernest T., M.B.Melb., appointed House-Surgeon to the General Hospital, Hobart, *vice* E. J. S. Spark, M.B., Ch.M.Syd., resigned.

NOBLE, H. Percy, M.B., B.S.Lond., M.R.C.S., L.R.C.P., appointed Assistant Anæsthetist to the Middlesex Hospital.

PASTEUR, William, M.D., F.R.C.P.Lond., appointed Physician and Lecturer in Medicine at Middlesex Hospital.

PORTER, Charles, M.D., D.P.H., appointed Medical Officer of Health for the County of Shropshire, *vice* W. N. Thursfield, M.D., deceased.

PUTNAM, P., M.B., appointed Assistant Resident Medical Officer of the Hospital, Bendigo (Victoria), *vice* A. W. Connelly, M.B., resigned.

VINCENT, E. H., M.B., B.S., appointed a Clinical Assistant to the Chelsea Hospital for Women.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation. (Skin.)

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Beddard: Transfusion and Vivisection.

Medical Society of London, 8.30 P.M.—Clinical Meeting. Patients in attendance at 8 P.M. Cases, etc., will be shown by Mr. F. C. Wallis, Mr. F. Jaffrey, Sir Hugh R. Beevor, Bart., M.D., Mr. A. J. Barker, Dr. W. Ewart, Mr. W. H. Battle, Dr. W. J. Hadley, Mr. McAdam Eccles, Dr. C. W. Chapman, Dr. S. Mullick, Dr. E. Cautley, and Mr. J. Lynn Thomas.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Cathcart: Impaired Movements of Vocal Cords.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Buzzard: On Hysteria.

Royal Medical and Chirurgical Society, 8.30 P.M.—Adjourned discussion on the Mastoid Operation for the Cure of Chronic Purulent Otorrhœa. Lantern Demonstration of Mr. Ballance's operation.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. T. Williams: Consultation. (Medical.)

WEDNESDAY.

Sanitary Institute, Parkes Museum, Margaret Street, W., 8 P.M.—Discussion on the Insanitary Condition of the London Streets, to be opened by Mr. Wm. Nisbet, M.I.C.E.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. F. Payne: Consultation. (Medical.)

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical).

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Beddard: Nature and Treatment of Shock and Collapse.

Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Clinical Demonstration. Dr. Harry Campbell: Cases of Facial and other Cranial Nerve Paralysis.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Galloway: Dermatological Demonstration.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Lees: Demonstration of Selected Cases.

Harveian Society of London, 8.30 P.M.—Dr. S. F. Blacker: Experiences in Feeding Delicate and Premature Children with Modified Milk. Mr. Francis Jaffrey: Calculous Suppression of Urine treated by Operation.

FRIDAY.

Epidemiological Society of London, 11, Chandos Street, W., 8.30 P.M.—Dr. E. W. Hope (Liverpool) on Insanitary Property and Workmen's Dwellings in Liverpool.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 2 P.M.—Dr. Harry Campbell: Class. Clinical Examination of the Nervous System. 5 P.M.—Demonstrations. 4 P.M.—Dr. Dundas Grant: Consultation. (Eye, Ear, Nose, and Throat.)

ERRATUM.—In the "Diary" of last week, under Thursday's heading, Dr. T. D. Savill was announced in error to give a Demonstration at the Hospital for Diseases of the Skin, instead of the West End Hospital for Diseases of the Nervous System.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

LAMPLOUGH.—On the 2nd inst., at Chatteris, Cambs., the wife of Charles Lamplough, M.D., of a daughter.

POTTS.—On the 6th inst., at 160, Hagley Road, Edgbaston, Birmingham, the wife of W. A. Potts, M.D., of a son.

VAN DER PANT.—On January 15th, at 46, Seymour Street, Portman Square, W., the wife of F. H. Van der Pant, of a son.

MARRIAGES.

EAST—TRIGGS.—On the 3rd inst., at Holy Trinity, Bishop's Road, Paddington, by the Rev. Edwin Allwright, M.A., William Norwood East, M.B.Lond., M.R.C.S., L.R.C.P., of Portland, Dorset, son of W. Quartermaine East, to Linnie, only daughter of Mrs. Triggs, of 123, Westbourne Terrace, W.

HEMMY—DAVIDSON.—At the Cantonment Church, Mooltan, on February 3rd, by Rev. H. Bush, M.A., Arthur Stanley Hemmy, B.A., M.Sc., Professor, Government College, Lahore, to Evelyne, youngest daughter of Andrew Davidson, M.D., F.R.C.P., Lecturer on Tropical Diseases, University of Edinburgh.

LE GEYT—ARIS.—On February 3rd, by special licence, at Bridport, Edward Le Geyt, M.R.C.S.Eng., L.R.C.P.Lond., of 56, David Place, Jersey, to Elsie, daughter of Captain R. A. Aris (late of the Cheshire Regiment), of Birkdale, Southport.

STABB—HUNTLEY.—At the Church of S.S. Philip and James, Cheltenham, William Wilking Stabb, M.D., of Torquay, to Mary Gertrude, only daughter of the Rev. Osmond C. Huntley, of Boxwell, Gloucestershire.

WARDEN—M'KENDRICK.—In the Bute Hall, University of Glasgow, on Saturday, February 3rd, by the Very Rev. Principal Story, D.D., and the Rev. Joseph Vickery, Castle Street Congregational Church, Dundee, uncle of the bride, Archd. A. Warden, M.A., M.D., Paris, to Rachael Mary, elder daughter of John Gray M'Kendrick, Professor of Physiology in the University of Glasgow. At home after 20th inst., 60, Avenue de Jena, Paris.

DEATHS.

MYDDELTON-GAVEY.—On the 4th inst., at 16, Broadwater Down, Tunbridge Wells, after influenza, Frances Caroline, the dearly loved wife of E. H. Myddelton-Gavey, M.R.C.S.Eng., and daughter of the late Charles Catt of Summerhill, Lindfield, aged 41 years.

TURNER.—On February 2nd, Francis Charlewood Turner, M.D.Cantab., F.R.C.P., Physician London Hospital, at St. Leonards-on-Sea, of 15, Finsbury Square, and Warren Wood, Wrotham, Kent, aged 56.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 3. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30; F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th., 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., M. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9. Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, M. Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

ALOPECIA.

ENQUIRENS asks: Would accidental alopecia be classed under No. 12 of rules of Medical Examinations issued by Civil Service Commission? Would it be considered a barrier to a candidate going up for Civil Service examination?

*** Probably not.

INHALATION OF OXYGEN.

W. R. W. would like to know how oxygen is used by inhalation, apparatus necessary, precautions, etc. Would be glad to be referred to any literature on the subject.

*** Oxygen can be obtained in cylinders from the Central Oxygen Works, Sheffield Street, Lincoln's Inn Fields, and Brin's Oxygen Company, 69, Horseferry Road, S.W. All that is necessary is a large india-rubber bag and a mouthpiece.

ANSWERS.

C. M. C.—We are informed that classes for ladies preparing for the Assistant's Examination of Apothecaries' Hall are held at the City School of Chemistry, 27, Chancery Lane, E.C.

LUER'S ASEPTIC SYRINGE.

G. P. B.—Luer's aseptic syringes are made by Messrs. Mackey, Mackey and Co., 175, Grange Road, Bermondsey, S.E.

IS SODIUM SALICYLATE DEPRESSING?

DR. P. O'CONNELL (Stillorgan Castle, co. Dublin) writes: In reply to Dr. T. H. Godfrey's query in the BRITISH MEDICAL JOURNAL of February 3rd, p. 300, I would reply, Yes, if the acid employed be the synthetic variety (made from carbolic acid). I once came very near to losing a powerful young man from that kind of salicylic acid; but I believe if salicylic acid made from oil of winter green be employed, the drug is perfectly safe. Since the accident mentioned I have invariably used acid made from oil of winter green, and never saw any depressing action from it.

NOTES, LETTERS, Etc.

DR. A. JEFFERIS TURNER (Brisbane), writes: Will you allow me to correct a misprint in my paper on the diphtheria mortality of the Australian Colonies? In the table given in the BRITISH MEDICAL JOURNAL of November 18th, 1899, p. 1411, top of column 2, one of the figures has been accidentally repeated in the wrong column. The table should read as follows, the corrected figures being italicised:

Table Showing Mean Annual Death-rate from Diphtheria and Croup per 100,000 Living during the Four Years preceding and following the Introduction of Antitoxin, together with the Proportionate Reduction in Mortality:

—	Mean Annual Death-rate per 100,000 for Four Years 1891 to 1894.	Mean Annual Death rate per 100,000 for Four Years 1895 to 1898.	Reduction in Death-rate per 100,000 Living.	Proportional Reduction in Death-rate (Death-rate for 1891 to 1894=100.)
				Per Cent.
Queensland ...	41.2	16.4	24.8	60.2
New South Wales...	45.1	18.4	26.7	59.2
Victoria	27.2	19.7	7.5	27.6
The three Colonies taken together...	37.0	18.7	18.4	49.6
		Three years only, 1895-97.		
England & Wales..	32.9	31.3	1.6	4.9

THE MIDWIVES BILL AND ITS FRIENDS.

A CORRESPONDENT sends us the following advertisement, which he states he has cut from the *Lincolnshire Echo*. It appears to be a slightly expanded version of an advertisement which has appeared in other papers, and was quoted from the *Daily Mail* in the BRITISH MEDICAL JOURNAL of February 3rd, p. 279:

"In Parliament.—All married people should agitate to secure the passing of 'The Midwives Registration Bill.' Write your M.P., urging him to vote for it. This Bill will practically abolish the present system of man midwifery (which was only begun in England about ninety years ago) by creating a class of properly trained, qualified, and 'Registered' Midwives, who will be employed with perfect confidence in all cases. This practice as an everyday practice is not humanitarian. Women suffer more physically when attended by man than when attended by qualified women."

SYMPATHY AND ANTIPATHY FOR CATS.

DR. N. C. SMILLIE (384, Green Avenue, Montreal) writes: In the BRITISH MEDICAL JOURNAL of January 13th I notice some remarks anent the fondness of the late Dr. A. C. Stark for cats. A little incident which occurred last summer may be of interest to your readers and some of the late doctor's friends. It was my privilege to spend several months under the same roof with Dr. Stark last season in London. We became quite intimate. His wide knowledge of the world, his great store of anecdote and experience were always at the call of his friends. The incident I refer to was the fact that Dr. Stark risked his own life to save that of a cat. He was returning one night up Shaftesbury Avenue, when he saw a bewildered kitten under the wheels of an omnibus. Springing into the street, which was crowded with vehicles, he managed to extricate "puss" and brought her home. It was a most disreputable specimen, covered with blood and bruises, but the Doctor made arrangements with the head of the culinary department for the care of his *protégé*, and the last words I heard him utter, when leaving for South Africa were "take care of my cat." A curious coincidence that these same words should be his last on earth also.

THE ANTIVACCINATION PROPAGANDA.

DR. FRANCIS T. BOND, Hon. Secretary, Jenner Society, Gloucester, writes: I observe from reports in the provincial press that a leading member of the Antivaccination League has resumed, I presume for the winter season, the lectures which he gave last year, illustrated by an exhibition of lantern slides of what is truly called in the advertisement of the lecture "a painful character" to general audiences. I should be glad if any of your readers who may be aware of the proposal to give such lectures in their own immediate neighbourhood would kindly communicate with me as early as possible, in order that some effort may be made to meet this mischievous propaganda, and to place the lecturer and his misrepresentations in their proper light before the public.

LETTERS, COMMUNICATIONS, ETC., have been received from

A A. J. Anderson, M.B., Ashford; A. F. T.-W.; Dr. W. E. Abbersen, Newcastle-on-Tyne. **B** Mr. T. Bowen, Barbados; W. Butler, M.B., London; R. C. Bailey, M.B., London; Mr. A. B. Brockway, Brisbane; G. P. Best, M.B., Twickenham; Mr. F. Broadbent, North Collingham; Dr. W. Bruce, Dingwall; Mr. L. A. Bidwell, London; Dr. R. du Bois-Reymond, Charlottenburg. **C** Correspondent; Dr. J. M. Clarke, Clifton; C. M. B.; Captain I.M.S.; Dr. W. Calwell, Belfast; Cincinnatus; Dr. W. H. Calvert, Melrose; Central London Throat and Ear Hospital, The Secretary of the, London. **D** Mr. D. D. Donovan, Cork; Sir W. B. Dalby, London; Sir D. Duckworth, London; Dr. W. R. Dawson, Dublin. **E** Essy; Mr. E. V. Eames, Heanor; Messrs. Evans, Gadd, and Co., Exeter; Mr. B. P. Edwards, Valley. **F** Dr. T. Fisher, Clifton; Dr. W. F. Farquharson, Carlisle. **G** P. R. Griffiths, M.B., Cardiff; Mr. P. B. Giles, Bletchley. **H** Mr. J. H. Hadwen, London; Mr. C. R. Hodgson, London; Mr. N. B. Harman, Cambridge; Mr. G. B. Hicks, London; Mr. J. Harper, London; Dr. J. P. Henry, London; Mr. T. C. Humphreys, London; Dr. S. S. Habershon, London. **I** Messrs. Innes, Shuttleworth and Co., Birmingham; Inecmito; Italian Hospital, The Secretary of the, London. **J** J. R.; Mr. H. H. Jennings, London; Mr. T. J. P. Jenkins, London; Mr. O. Jones, Belfast. **K** Knock-pervance; Dr. J. H. Keay, London. **L** Mr. R. E. Lyon, London; L. B. **M** Mr. A. Mercer, London; G. B. Muriel, M.B., Whitehaven; Mr. W. P. Meldrum, Liverpool; Dr. R. L. Meade-King, Taunton; Dr. C. J. Morton, Walthamstow; Machaon; Mr. J. Y. W. MacAlister, London; Mr. H. May, Birmingham; Dr. P. W. Marriott, Boscombe; Dr. J. McNamara, London; M.D.; Dr. C. F. Moore, Dublin. **O** Dr. P. O'Connell, Stillorgan. **P** Mr. G. C. Peachey, Wantage; Dr. G. C. S. Perkins, London; Mr. A. Powell, Cachet; Mr. H. C. Phillips, London; Mr. S. W. Preston, London; Mr. C. C. Preston, Hove; Dr. R. J. Probyn-Williams, London; Parish; Dr. F. C. M. Piggott, Teignmouth. **R** Mr. C. S. Redmond, London; Mr. A. D. Roberts, Lincoln; Dr. W. Renner, Sierra Leone; R. W. D.; I. C. Riviere, M.B., London. **S** "South Africa," The Editor of, London; F. A. Southam, M.B., Manchester; Mr. M. Scott, London; Dr. N. C. Smillie, Montreal; Dr. A. Stewart, Manchester; Mr. L. A. T. Steele, Southend-on-Sea; Mr. J. Snowman, London; Messrs. Street Brothers, London; Sanitarian; S. H. C.; Dr. A. W. Sheen, Cardiff; Subscriber; Sheffield Medico-Chirurgical Society, The Secretary of the, Sheffield; S. Stephenson, M.B., London. **T** Dr. A. J. Turner, Brisbane; Dr. E. F. Trevelyan, Leeds. **W** Mr. H. L. Williams, London; Dr. F. Willcocks, London; Dr. R. Wise, London; W. H. C.; Miss J. Wilson, London. **X** X. Y. Z. **Y** Yeoman, etc.

BOOKS, ETC., RECEIVED.

The Local Government Annual and Official Directory, 1900. Edited by S. E. Rogers. London: "Local Government Journal" Office. 2s. 6d.

The Story of Life's Mechanism. By H. W. Conn. London: George Newnes. 1899. 1s.

The Treatment of Pelvic Inflammations through the Vagina. By W. R. Pryor, M.D. London: Rebman, Limited. 1899. 8s. 6d.

Mentally-Deficient Children: their Treatment and Training. By G. E. Shuttleworth, B.A., M.D. Second Edition. London: H. K. Lewis. 1900. 5s.

Dod's Parliamentary Companion. Sixty-eighth Year. London: Whittaker and Co. 1900. 4s. 6d.

St. Bartholomew's Hospital Reports. Vol. 35. London: Smith, Elder, and Co. 1900.

Training of the Young in Laws of Sex. By Rev. the Hon. E. Lyttelton. London: Longmans, Green, and Co. 1900. 2s. 6d.

Textbook of Palæontology. By K. A. von Zittel. Translated and edited by C. R. Eastman, Ph.D. Revised edition, vol. 1. London: Macmillan and Co. 1900. 25s.

Le Lesioni Traumatiche dei Centri Nervosi. Per Dr. S. Salmari. Rome: Presso il "Giornale Medico." 1900. L. 5.

Transactions of the American Gynecological Society. Vol. 24. Philadelphia: W. J. Dornan. 1899.

Journal of Researches. By Charles Darwin, M.A., F.R.S. London: Ward, Lock, and Co. 2s.

Lehrbuch der Histologie und der mikroskopischen Anatomie. Von Dr. L. Szymonowicz. Lief. I and II. London: Williams and Norgate. 1900. 3s. each part.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

AN ADDRESS
ON
THE RÔLE OF THE MUNICIPALITY
IN
PUBLIC HYGIENE.

Delivered before the Dublin Branch of the British Medical Association.

By Sir CHARLES A. CAMERON, C.B.,
Medical Officer of Health, Dublin; President of the Branch.

[Abstract.]

Sir Charles Cameron, in a presidential address on this subject, first expressed his thanks for the compliment which the Branch had paid him in electing him President. He was the first President whose duties were altogether devoted to preventive medicine. Being a sanitarian, and occupying the position of Chief Medical Officer of Health for the City of Dublin, it had occurred to him that the *rôle* which municipalities played in relation to public health would be a suitable subject for his address. The power of municipal authorities to promote measures for the improvement of the public health, formerly very limited, had been greatly increased in the latter half of the nineteenth century, and at present was very extensive. Many of the authorities used these powers almost to their full extent, others in a moderate degree, and not a few only so far as they were compelled to employ them. Many so-called sanitary authorities had not adopted the Notification of Infectious Diseases, the Open Spaces, the Housing of the Working Classes, the Shop Hours, and other useful Acts. They had not established abattoirs, baths and washhouses, or disinfecting chambers, nor carried out efficiently the provisions of the Sale of Food and Drugs, the Margarine, and the Contagious Diseases (Animals) Acts.

Port Sanitary Authorities.

One of the most important functions of municipal sanitary authorities was the adoption of measures most likely to prevent the invasion of these islands by exotic diseases, such as Asiatic cholera and plague, and also to prevent other diseases, such as small-pox, from gaining an entry into towns. Until the passing of the Public Health Act of 1896, special provisions to guard against the entry of only three foreign diseases were adopted. When any one of those diseases existed in any part of the world from which it might be imported into an Irish port, the Local Government Board framed orders in reference to ships coming from infected ports, which were carried into effect by the Boards of Guardians whose districts abutted on the ports and adjacent sea. The Boards of Guardians acted not only for their own districts, but also for various municipal authorities and for other Boards of Guardians. For example, the South Dublin Board of Guardians was the sanitary authority for their own union, the North Dublin Union, the City of Dublin, and Clontarf and Pembroke Townships. It always occurred to him that it was extraordinary to make a Board of Guardians, unprovided with a disinfecting depôt or proper disinfecting staff, practically a port sanitary authority instead of the city sanitary authority, who were well provided with the means of disinfecting ships and the clothing of their crews and passengers. The Board of Guardians in Dublin, however, did their duty thoroughly, and the city authorities gave all the assistance the Board required. Until the Act of 1896 was passed there was no power to constitute a permanent port sanitary authority, nor was such a term made use of in any Act or in any Order of the Local Government Board. The only permanent duty of the South Dublin Board of Guardians was the maintenance of a hospital ship in Dublin Bay, at the joint cost of all the sanitary authorities for whom the Board acted, in times of threatened invasion of cholera, etc. The Act of 1896 enabled the Local Government Board to constitute permanent port sanitary authorities, with power to inspect ships even when cholera, plague, or yellow fever were not threatening Europe. Other diseases than those might be introduced by ships, and the hygienic conditions of the ships themselves might be investigated by officials of the port sanitary authority. The Corporation of Dublin had petitioned the Local Government Board to constitute them the port sanitary authority for the Customs Port of Dublin, which includes all the minor ports of the coast from Balbriggan to Courtown. Belfast Corporation was at present the only port sanitary authority in Ireland, and they acted for the whole of Belfast Lough. He would go so far as to say that the expenses incurred by port sanitary authorities—at least in epidemic times—ought to be borne by the country at large.

Dangerous Shellfish.

It was incumbent on the sanitary authorities, whose jurisdiction extends to the coasts, to exercise whatever powers they possessed to prevent shellfish from being used as food when they had been obtained from places contaminated by sewage. Unfortunately their powers were neither extensive nor properly defined. A Bill, having for its object the preservation of oyster beds from sewage contamination, which was introduced into the House of Lords last session, had to be abandoned, he trusted only temporarily. There was a serious defect in that Bill, which he trusted would not appear in its successor, should there be one, namely, not entrusting the carrying out of the provisions of the proposed statute to the local sanitary authorities. If a stringent Act for the protection of oysters from sewage were vigorously administered by the sanitary authorities these delicious molluscs would be eaten with greater confidence by the lovers of them, and by many others who now refrained from them because they might possibly be infected.

Hospital Accommodation for Infectious Diseases.

One of the duties which now devolved upon municipal and other sanitary authorities was the establishment of fever hospitals. In England and Scotland all the more, and most of the less, important municipalities had provided fever hospitals. In London this duty was entrusted to a body having the rather curious name of the Asylums Board, and which represented the various municipalities of the great metropolis. This Board had made special provision for small-pox cases, as had also many of the English municipalities. It was important to note that the fever hospitals were in no way associated with pauperism. The most respectable persons entered them, and the inhabitants of the district in which they were situated were entitled to be admitted to them as matter of right, and not of concession. In Ireland the Poor-law Boards of Guardians were bound to provide hospital accommodation for the sick poor, and in many parts of Ireland fever cases were received into workhouse hospitals. Unquestionably the patients in such hospitals must be regarded as paupers. The county infirmaries, which were in the last century established in Ireland, by grants from the grand juries and private subscriptions, still, with one or two exceptions, existed. They were, no doubt, charitable institutions, but the patients were not regarded as paupers. It was to be hoped that the new county councils would maintain these infirmaries as public institutions, and that, so far as the fever wards or fever infirmaries were concerned, the general public would have a right of admission to them.

At present the position of affairs in Dublin as regards accommodation for fever patients was most unsatisfactory. Why it was so should be made clear. The guardians of the South and North Dublin Unions had never provided fever hospitals, because they relied upon the Hardwicke and Cork Street Fever Hospitals. Into these institutions they sent the inmates of the workhouse when they became affected with fever. The guardians also arranged with these hospitals for the reception of patients who were not inmates of the workhouse. Cork Street Fever Hospital was maintained by means of an annual Parliamentary grant, a yearly grant from the Corporation, a contribution from the Hospital Sunday Fund, private subscriptions, and revenue from funded property. The Hardwicke Fever Hospital was chiefly supported by a Government grant. In the financial year ended on September 29th, 1898, the South Dublin Board of Guardians paid to Cork Street Hospital £2,763 4s., and in the year ended September 29th, 1897, £3,000. In the year ended on March 25th, 1899, the North Dublin Board of Guardians paid the hospital £450 5s. 6d. The Hardwicke Hospital received, in the year ended March 23rd, 1899, £1,128 3s. 6d. from the North Dublin

Union. Thus it would be seen that these two fever hospitals received, in one year, £4,341 13s. for the treatment of fever patients who were inmates of the workhouses, or were admitted from the tenement houses. The Local Government (Ireland) Act divested the Boards of Guardians of all their sanitary powers; and in the opinion of The MacDermot, Q.C., and Mr. Mattheson, Q.C., they were not empowered to pay for the maintenance of non-pauper patients in other than the workhouse hospitals. Their sanitary functions were in part transferred to the district rural councils and in part to the Corporation of Dublin.

Under the provisions of Sections CLV and CLVI of the Irish Public Health Act of 1878 a sanitary authority could construct a hospital and maintain it, or could contract with hospital authorities for the maintenance of patients. Of course it was only for fever or cholera patients that such a contract would be made.

Power of Corporation to Pay for Patients.

The guardians being debarred from making contracts with the fever hospitals for the treatment of patients other than the workhouse inmates, the Corporation were now the only sanitary authority legally empowered to take their place. But in their case this duty was permissive, not mandatory. It was a deplorable state of things that even if an epidemic of small-pox were raging in Dublin, it was not obligatory on any authority to provide hospital accommodation, unless the Local Government Board declared that an epidemic prevailed. It was to be hoped that immediate legislation would remedy this serious defect in the sanitary code.

The Accommodation for Fever Patients.

Fever cases were treated in two special and six general hospitals, and in ordinary times these hospitals afforded sufficient accommodation for the wants of the city and suburbs. During epidemics there was not by any means a sufficient number of beds in the fever hospitals and fever wards of the general hospitals. During the severe epidemic of measles now nearly come to an end, there was a lamentable want of accommodation for the patients, as every dispensary physician in Dublin could testify. Children were allowed to remain in tenement houses, every room in which was occupied by a whole family. Had the dispensary physicians the means of promptly sending every child affected with measles to hospital, the mortality caused by that disease would have been much less than it proved to be, and the cases fewer. Like the vast majority of sanitarians, he held to the opinion that infectious diseases, except, perhaps, enteric fever and pathogenic pneumonia, should be treated in special hospitals isolated as far as practicable from other buildings. Still he recognised the great importance of the general hospitals as clinical schools, and also the fact that many of the greatest physicians, such as Graves, Marsh, and Stokes, who had enlarged so much the knowledge of fever and its treatment, were students and teachers in those general hospitals which had fever wards. The patients in general hospitals had the advantage of being under the care of the ablest physicians in Dublin. The same observation applied to the fever hospitals. If for the first time special fever hospitals were about ot be established, they would not be placed within the city limits; but two hospitals of the kind had existed for many decades in the city, and had rendered incalculable services to the poorer classes of the population. He had never proposed that they should be abolished, though he thought their positions altogether suitable. He, however, asserted that during epidemics they did not, even with the aid of the general hospitals, provide sufficient accommodation. The Corporation had the power to provide both hospitals and homes for convalescents. In view of the opposition offered to the proposal to establish isolation hospitals, it might be more politic for the Corporation to establish a home for convalescents from infectious diseases, to which the various hospitals could send their convalescing patients. Were this home provided the accommodation in the hospitals for acute cases would be largely increased. For example, scarlet fever patients were on the average kept six weeks in hospital, but they could with safety be removed to a convalescent home in three weeks.

Small-Pox.

When small-pox appeared in Dublin in 1886 he addressed a circular letter to the authorities of the general hospitals, begging of them not to treat cases of that disease. They promptly agreed not to admit such cases. A large number were admitted into the two fever hospitals, which very soon were filled, and after considerable and dangerous delay sheds were erected by the South Dublin Board of Guardians, and a large number of small-pox patients received into them. He thought few would venture to deny the desirability of treating small-pox in a special hospital, and few would also be found to regard the precincts of a workhouse as a proper place for a hospital, which must necessarily be used by persons far above the pauper class. If small-pox were to become epidemic in Dublin there was no proper hospital to receive the patients. They should not be treated in the ordinary fever hospitals, nor in workhouse sheds. The Corporation, as the sanitary authority of Dublin, were morally bound to provide a site on which sheds for small-pox patients could be erected when required, and which sheds should be burned after the epidemic had ceased.

The Influence of Schools in Spreading Disease.

There was very little doubts as to scarlet fever and measles being spread by means of the primary schools. In England the sanitary authorities had the power of closing schools during epidemics; in Ireland they had no such power, but he hoped that the next general Public Health Act for Ireland would give it to them. There seemed to be little benefit obtained by closing schools when an epidemic was far advanced; the proper time to close them was at the beginning of one. Notifications of the occurrence of infectious diseases were sent to the managers of schools as confidential documents, but upon which they might act to prevent children from infected houses attending their schools. He was bound to say that many school managers closed their schools at the request of the Public Health Committee during recent infantile epidemics.

Notification of Infectious Diseases Act.

It was to be regretted that this Act was one which might or might not be adopted by the sanitary authorities. Like every other permissive Act relating to the public health, it was at once adopted by the Corporation of Dublin, and soon after by the Pembroke and Rathmines Township Commissioners. It ought to be a mandatory Act, as undoubtedly its provisions were calculated to arrest the spread of infection. The medical profession had achieved great success in the domain of preventive medicine, and although their professional *raison d'être* depended upon the existence of diseases, they did their very best to stamp out all that possibly admitted of extinction. He regretted, however, to be obliged to admit that as regarded the notification of infectious diseases many physicians not only neglected to notify, but were utterly opposed to the principle of notification. In the year 1899 there were about 350 medical men in Dublin, and of these 168 sent notifications of various infectious maladies. Of the 350 medical men some were not engaged in private practice, others might not have had any fever patients, and perhaps a few surgeons and gynæcologists did not treat fever cases, still it was evident that a large number of practitioners did not notify. When it was first proposed that medical men were to give certificates as to the cause of death, much indignation was excited, and authorities from the time of Hippocrates were quoted to prove that to issue such certificates would be a gross breach of medical etiquette. No medical man now objected to give a certificate of cause of death, and he trusted, in the fulness of time, the same would be the case as regarded notification of infectious diseases. He could not quite understand why the general public did not universally see the great benefit to the community resulting from notification, and the infinitesimal injury which it caused to them. Notifications were regarded as confidential documents, were seen by two or three officials, and were only communicated, as regarded infectious diseases of children, to the managers of the primary schools, who were requested to regard them as confidential. If the medical man marked on the notification form that "no immediate attention" was necessary, no action was taken for some days by the sanitary authority. Then a letter was sent to him, asking whether or not disinfection of the infected dwelling could be performed, and if he replied that he would see that process performed himself, that was the end of the case. If persons did not desire their dwellings to be disin-

fected during the day, as it might attract attention, it was performed at night or very early in the morning. He might mention that the following cases were notified in Dublin in 1899:

Typhoid fever	1,727
Continued fever	342
Erysipelas	579
Scarlet fever	515
Typhus fever	39
Puerperal fever	7
Croup	14
Measles	5,554
German measles	11
Diphtheria	174

The medical men, notably the dispensary physicians, who always notified, were placed at a disadvantage, because many persons knowing that they complied with the law consulted those practitioners who continually broke it.

Housing of the Very Poor.

It was upon the reading of a report of his that the Municipal Council, nearly twenty years ago, adopted and put into force the Artisans' and Labourers' Dwellings Act. Since then he had repeatedly pleaded the cause of the very lowest strata of the population. It was, of course, desirable that the artisan class should have healthful and sufficiently commodious dwellings, but if the municipality did not provide them, building societies and private builders must supply to a great extent the want. In the case of the very poor, who could afford no higher weekly rents than from 1s. to 2s. a week, their dwellings were, with few exceptions, in a deplorable state. Many of their landlords were but little superior in pecuniary resources to their tenants, and were unable to make costly improvements in their wretched tenement houses, of which they were merely leaseholders or yearly tenants. Of the 375 separate dwellings which the Corporation had erected on cleared ares, which had once been insanitary, only 23 were let at 1s. 6d. per week. As the dwellings of the poorest classes were the hotbeds of the seeds of infectious diseases, and as the vitality of their inmates was lowered by the unhealthy conditions of their homes and environments, they could not wonder that the very poor readily succumbed to constitutional diseases, and were peculiarly susceptible to infection. The high death-rate of Dublin was due, not to an undue amount of infectious diseases, but to the great mortality of the poorer classes, more especially of the adults. In 1898 the death-rate amongst the professional and independent classes (population 15,579) was 20 per 1,000 persons living, whilst it was no less than 31.8 amongst the 83,472 "hawkers, porters, labourers, etc." What was urgently required in Dublin was the improvement of the dwellings of the very poor, without increasing, except perhaps to a small extent, the rents which they now pay. No doubt this improvement would involve a considerable expenditure of money—certainly not less than a quarter of a million—but if the money were judiciously expended there would be a fairly good revenue from rents of the houses. The Corporation had provided 375 dwellings, occupied by 1,544 persons; the Urban Council of Rathmines 58 dwellings, inhabited by 277 persons; and the Pembroke Urban Council 115 dwellings, accommodating about 500 persons. The Dublin Artisans' Dwellings Company had provided for nearly 10,000 persons, the City and Suburban Artisans' Dwellings Company had 284 dwellings, and the Industrial Tenements Company 46 dwellings. A large number of dwellings for the working classes would soon be erected by the Corporation on the Bride's Alley area, and by Pembroke Urban Council at Donnybrook and Ringsend. Lord Iveagh was completing the clearance of the unhealthy Bride's Alley area, and upon the cleared site dwellings for working classes would be erected. This noble work would cost at least a quarter of a million. The Company for the Housing of the Very Poor, of which the Right Hon. Joseph Meade was chairman, would soon be in a position to provide forty-eight families with dwellings at rents not exceeding 2s. a week. The families in the Dublin tenement houses and other dwellings regularly inspected by the sanitary officers numbered 32,000, and of these a very large proportion required better lodgings. It was inexpedient to add to the enormous number of insanitary dwellings already closed until provision was made for the reception of the occupiers of the unhealthy houses that still remained. In concluding this part of his address he pointed to Edinburgh as a pattern for Dublin. The former high death-rate in that city had been brought to a very low one, and this improvement, it was stated, was chiefly due to the fact that £560,000 was expended in improving the dwellings of the working classes.

Tuberculosis.

Tuberculosis of the lungs was a peculiarly fatal disease in Dublin; about 34 persons per 10,000 perished annually from it. That it was an infectious disease was now generally admitted, but that it should be included amongst those that were notifiable was hardly expedient. Information as to its infective character should be diffused as widely as possible. After the death or removal of a consumptive patient the apartments which he or she had occupied should be disinfected. This purification was performed by the Dublin sanitary authority, but only occasionally, as the deaths from tuberculosis were rarely notified for the purpose of disinfection. He was of opinion that the dairy cows of Dublin were not much affected with tuberculosis—much less than were the cows of the large English towns. This was due to the fact that the latter were kept in the cowhouse until they ceased to give milk, whilst the former were depastured for six or seven months in the year. He trusted that the influential Committees which had been formed in London, Dublin, and other towns, with the object of investigating the causation and prevention of tuberculosis would be able to grapple with this scourge of mankind and lessen its terrible ravages. It would be within the *rôle* of the municipalities to assist those Committees by carrying into effect their recommendations, if it were in their power to do so.

AN ADDRESS

ON

MEDICAL PRACTICE IN EUROPEAN COUNTRIES.

Delivered before the Yorkshire Branch of the British Medical Association.

By THOMAS KILNER CLARKE, M.A., M.D., F.R.C.S.,
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When thinking over the possible subjects for an address, it occurred to me that it might perhaps interest you to hear something of the course of medical study and the position of medical men in other countries of Europe. For many years I have taken my annual holiday abroad, sometimes in France, but usually in the northern countries of Europe, and there I have generally made friends with the local medical man or men, if there have been any, and if there has been a hospital I have endeavoured to see something of its working and its practice. Invariably I have met with the greatest kindness and hospitality, and desire to give me every information. Some of this information I propose to put before you. My choice of this subject was influenced, too, by the fact that though there are openings for English medical men abroad, there is not much information readily obtainable how to make use of these openings.

France.

As France probably offers the most numerous openings for the English medical man I will take that country first.

The French medical student has five examinations to pass. The first is in physics, chemistry, and zoology. I may mention that this examination must be passed before the student is allowed to join a medical school. He is obliged to spend a year in a school of science studying exclusively the subject of the first examination.

II. (1) Practical dissection or dissections, anatomy of histology; (2) physiology.

III. (1) Practical examination in surgery (elementary), external pathology, surgical midwifery; (2) internal and general pathology.

IV. Hygiene, medical jurisprudence, therapeutics, materia medica, pharmacy.

V. (1) External and obstetrical clinics. (2) Internal clinics, examinations in practical pathological anatomy, also a thesis consisting of a printed dissertation on a medical or surgical subject chosen by the candidate, who must also reply to questions put to him on the different parts of medical education. In bacteriology, pathology, and also in medicine and surgery, these examinations are very practical.

There are very few medical schools in France not under State control. The students of those which exist are not numerous, and they must go before the official examiners for their degree.

The degree of M.D. is now the only degree in France, and embraces surgery as well as medicine. The degree of *officier de santé*, under which formerly English medical men used to practise at Cannes, etc., is abolished. Every student must do five years of hospital work. The hospital appointments are those of *externe* and *interne* (corresponding to our dressers and house-surgeons), and *préparateur de clinique*, or ward clerks. Lectures are optional, and there is very little control over the students.

A student's expenses for board and lodging run from 90 to 150 francs per month, that is, roughly speaking, from £4 to £6 per month. Speaking generally, a minimum sum of £400 represents the cost of obtaining the right to practise as an M.D. or surgeon in France. In England, a fair estimate at the present time of the total cost of hospital fees (say at Guy's) for instruction and materials, for textbooks, instruments, and examination fees, might be computed at 50 guineas for each of the five years of the curriculum. The examination fees are a heavy item, and will be more after this year. In addition to these is the expense of living—say £10 a month—so that the total minimum cost of obtaining the M.R.C.S. and L.R.C.P. is something over £850.

The fees of general practitioners are not high. It is usual to be paid for each visit, but it is by no means unusual to contract by the year. For consultation with prescription, the fee ranges from 1 franc to 2 francs, generally 2 francs (1s. 8d.) in the country and from 3 francs to 5 francs (2s. 6d. to 4s.) in the town. As a medical man's name becomes known, he charges 10 francs; consultants charge from 20, 40, or even 60 franks; the average is from 40 to 60 francs. Operation fees vary, and, as in this country, the surgeon cuts his coat according to his cloth, but they are very high—higher than here. In the centre and the south of France the income of a general practitioner in the country is from £200 to £240 a year; in the industrial centres, the north of France, and the suburbs of Paris, perhaps £800; £3,000 is the highest income of any general practitioner in Paris. There are no assistants. Mileage is charged at 1 franc a kilometre. No medical man is allowed to dispense his own medicines, unless he lives at least 4 kilometres from a chemist. The social position is much what it is here, dependent entirely upon the individual.

Obstetric work, except in the largest towns, is mostly done by *sages femmes*, that is, midwives, and even in the largest towns the midwife attends some of the best people. The midwife's fees vary from 2 francs to 100 francs in the country, and from 100 to 1,000 francs in the towns. The midwife is recognised by the State.

Unqualified practitioners are forbidden by law, but it is not worth while putting the law in motion, for if convicted, only a small fine is imposed. The Syndicate of Masseurs and Magnetisers of France are petitioning that a law should be passed giving them a legal right to practise their art, as they modestly put it, on the sick; and certain Socialist deputies are demanding that all quacks should be registered as medical practitioners. Medical aid societies do not exist in France.

The proportion of doctors to population for the whole of France is 3.48 per 10,000, or say 1 to 2,800. The proportion in England is 1 to 1,400 so that medical men are just twice as numerous in England.

Pursuant to decrees passed on July 25th, 1893, medical men who possess a foreign degree of Doctor of Medicine, and who wish to obtain the French diploma of M.D., may obtain a partial or total exemption from the quarterly registrations ("inscriptions"), and a partial exemption from the examinations required for this diploma. The exemption can only apply, however, to three out of the five examinations required.

BELGIUM.

Belgium is of some interest to us because of the facilities afforded to foreigners in the attainment of the degree of M.D. Brussels. The Examining Board of Brussels is most obliging; no foreign language is required, as the examiners will examine the candidate in English if he so wishes it, and the candidate may take anatomy and physiology at one time, materia medica and therapeutics at another, and pathology at a third, or be examined in the whole range of medical study at one examination.

The examinations are practical. The candidate must dissect and operate before the examiner, and state his diagnosis and treatment at the bedside. The examination is rather stiff in pathology, materia medica, and therapeutics, but there is no microscope work and no museum specimens. Most of the candidates go to Brussels for a month or two before the examination and coach.

Lodging and board (the best) costs some £2 a week; coaching from £5 to £10 the month, and the fee for the combined examination is 22 guineas. The native student must pass at least six years in medical and allied studies before he can take his degree, and two of these years must be spent in hospital work. He has seven examinations to pass, of which two are in natural sciences. He is examined in logic, moral philosophy, elementary zoology and elementary botany, experimental physics, general chemistry, elementary mineralogy, geology, and physical geography; the other five examinations relate directly to medical and surgical subjects, including, amongst many others, embryology, pharmacodynamics, mental diseases, and ophthalmology. The hospital appointments are two—*aide de clinique* and *chef de clinique*—but they are not compulsory. The lectures and examination fees, which include admission to hospital attendance, amount to 1,500 francs (£60). In addition to this the student pays for courses of practical instruction fees varying from 15 francs to 30 francs, and amounting altogether to 200 francs. A student's expenses outside board and lodging, which amounts to £1 a week or less, and textbooks, are thus some £68, not a large sum compared with our corresponding fees in England, which, as I have mentioned, amount to something over 200 guineas. He is not obliged to remain at one school or one university; only the examination is central. When qualified he commences practice on his own account. The medical assistant is unknown in Belgium; few medical men could afford one, for medical fees and income are very low. Socially he ranks with the other professions.

The fee for a visit ranges from 1s. 3d. in the country to 2s. 6d. and 4s. 2d. in the town, and consultations from 10 francs (8s. 4d.) in the country to 20 francs or even 50 francs in town. The fees for operations vary, of course, from £20 to £40, or even £80 or more. Mileage is reckoned in Luxembourg, where the distances traversed are great. The average incomes of a country medical man run from £160 to £240 a year and in the towns from £240 to £400. Doctors do not as a rule dispense their own medicines. Permission to practise can only be obtained by foreign practitioners from a Central Board appointed for the purpose. The duty of this Board is not only to inquire into the facts of the case with a view to ascertain that applicants hold proper diplomas, but it has also to test their knowledge. It is necessary further that the Board should be convinced that such applicants possess an exceptional degree of knowledge, and that there are grounds justifying the Government in giving them special permission for the good of the country.

ITALY.

In Italy authorisation may be granted by one of the Royal Universities to foreigners, who, however, can practise without this when called in from abroad to attend special cases, or if they confine their practice to foreigners.

SPAIN.

The Spanish student of medicine seems to have rather a harassing time. The medical course consists of twenty-two series of lectures in medicine proper and four series of preparatory lectures on natural history, natural science, and chemistry. These lectures are divided into seven terms of eight months each, beginning with anatomy and ending with hospital work and clinical lectures. University students during their two final courses are bound to attend for two hours each day at the hospitals. House-surgeons are appointed after competitive examination, and have, in addition to the ordinary work, to compile data for statistics and look after the instruments.

The student's fees amount to 30 guineas. Except in the large towns it is usual for the family attendant to have a yearly contract—sometimes he is paid in money, more often

at harvest time in corn, etc. Fees vary (with the size of the town and the status of the medical man) from 10d. to 8s. 4d. a visit. The consultant's fee varies from 7s. 6d. to 37s. 6d. There is no mileage tariff, but a minimum fee for an out-of-town visit from Cadiz within a radius of 25 kilometres (14 miles) is £3 15s., provided the medical man is able to return to Cadiz the same day: the maximum fee is £7 10s. From 3,000 to 4,000 pesetas, that is, £120 to £180, is the usual general practitioner's income in towns: in the country districts the man who makes £100 a year is well off.

Sweden.

I do not think any of you would choose Sweden as a place for medical study for the reason that the curriculum extends over eight years, but as a playground Sweden has no equal. If you are fond of fishing and shooting, or boating in the midst of beautiful scenery and amongst some of the most hospitable people in the world, go to Sweden. You will get it all there; you will also find scrupulous cleanliness and generally good cooking, and all at about one-third of the cost for which you would get the same in the British Isles. The language is not difficult: anyone could very quickly learn enough to travel out of the beaten tracks. In the beaten tracks nearly every well-dressed man you meet speaks English. The Swedes say they can learn our language in four weeks, and from my own personal experience I can believe them. Anyone who speaks Swedish can travel with comfort in the neighbouring countries of Denmark and Norway, the three languages are so much alike. He may travel also on the coast line of Finland, where most of the people use Swedish as their native tongue.

I have visited the Swedish hospitals a good deal, and have seen as good surgery there as I have seen anywhere—aseptic and antiseptic surgery is carried out with great detail and care, for time there seems to be no object. There is no word in the language corresponding to our "immediately"; "*strax*," which is the nearest equivalent, means anything from ten to thirty minutes.

The students' course is a severe one; the duration of the course of study is over eight years. From one to one and a half years are given to natural science, another three and a half to four years are spent over anatomy, physiology, histology, general pathology, and history of medicine. After passing in these he must spend another four years in the higher branches of his profession, including ophthalmology, syphilology, psychology, and forensic and State medicine, and these examinations are both practical and theoretical.

There are three examinations. After passing the second, which is called "the Medical Candidate Examination," he begins hospital attendance, which is compulsory. I need not, I think, go into details, but it would be impossible for a medical student in Sweden to present himself for his final examination without a very practical experience of the different branches of his profession.

Medical education is very cheap. There are no fees for lectures or hospital attendance, but for each of the three examinations the student pays an entrance fee of 20 kroner, amounting to 22s. He also has to pay from 12 to 25 kroner a year as entrance fee, and subscription to the "Students' Association." Board and lodging are also extremely cheap. As soon as the student is qualified he goes into private practice. Assistantships are unknown. Midwifery is mostly done by women who are qualified and recognised by the State. The fee of the private midwives ranges from 3 to 5 guineas. The village midwife has a salary paid by the State, and she is obliged to make an annual report of her work to the State. Any cases of puerperal fever are looked into, and if she should have had, I think, three cases in the year, her certificate is withdrawn (for a time).

The medical men never dispense their own prescriptions. As regards fees, I think I may say that the custom of contracting by the year is very general; in cases where there is no contract the usual fee for a visit in the towns is 5 kroner, and for a consultation 10 kroner; in the country the fee is 5 kroner within a 3-mile radius, over that radius mileage is always paid at the rate of 6d. a mile. The average income of a general practitioner in the country is from 6,000 to 8,000 crowns, that is, roughly £300 to £400; in the town from £500 to £650.

Medical aid associations are beginning to appear. In Sweden the only facility granted to foreigners is that licensed practitioners may possibly be granted by the Chancellor of the University a certain reduction of the time required of native students before they can obtain a licence. The authorities do not, for the moment, see any reason for according further further facilities in this respect.

Norway.

In Norway all students, whether for law or medicine or any other profession, are required to pass two matriculation examinations, one in arts, the other in philosophy. The student of medicine has three other examinations to pass: the first, after from two years and a half to three years study, is the usual examination in botany, zoology, chemistry, theoretical and practical anatomy, physiology, etc. The second examination, which is passed three years and a-half to four years after the first, is severe. The subjects are pharmacology and toxicology, general pathology and pathological anatomy, special medical pathology and therapy, skin diseases, syphilis and leprosy, and ophthalmology. In addition the candidate has to write an essay discussing some question connected with one or other of these subjects. The third examination is passed half to one year after the second, and embraces practical medicine and surgery, the diseases of women and children, obstetrics, surgical operations (on the cadaver) and surgical anatomy, hygiene, and medical jurisprudence. An essay must also be written on some given text taken from the subjects included in this examination. Hospital attendance, which does not count until after the student has passed his first examination, extends over four or five years. Generally the student spends the whole of his course of study at the University and at the hospital in Christiania, but residence is not compulsory until after he has passed his first examination. Occasionally a student is appointed as assistant to a a surgeon or physician at the hospital, but that is not often the case now; it happens now and then that in the time between the second and third examinations a student may act as assistant to a general practitioner, but this is rare.

The only fee the student has to pay is 20 kroner on putting his name down for the first examination. There are no fees for lectures or hospital attendance. Books, entertainments, clothes, etc., cost about £26 a a year, and board and lodging another £40—say £70 a year for everything. Medical men take a very high social position in Norway. In the country a fee is generally paid for each visit, but in the towns the custom of yearly contracts is more common, from 50 kroner to 500 kroner, that is, roughly speaking, from £3 to £25 a year being the usual rates. A general practitioner's usual fee for seeing a patient at his own rooms in the towns is from 2s. 2d. to 5s. 6d. (some specialists ask half a guinea), and in the country from 2s. 2d. to 3s. 3d.

Operation fees in towns are from half a guinea to 25 guineas; in the country 5 guineas is the maximum fee. The country practitioners have large districts, and there is a recognised mileage tariff, a visit at a distance of

1	kilometre	is charged	4	kroner (4s. 4d.)
5	,,	,,	5	,,
7	,,	,,	6	,,
8.5	,,	,,	7	,,
10	,,	,,	8	,,

beyond 10 kilometres 2 kroner for each 5 kilometres.

The average income of the general practitioner is in town 5,000 kroner—£280 in the country £200 or a trifle more. Only in country districts where there are no chemists do medical men dispense their own prescriptions. Midwifery is very much, I believe almost exclusively, practised by women, qualified and recognised by the State. The fee varies from 5 kroner to 40 kroner in the town: in the country it is selseldom more than 5 kroner, but the country midwife is subsidised by the State. She receives from 160 kroner to 240 kroner a year, half paid by the *Amt* (county or district), and half by the *Hexed* (parish).

Quacks are allowed to practise under slight restrictions; they must not call themselves doctors; they must have lived in the country at least three years, and must not have been roaming about, and they must have a clean record as far as the police-court goes. They are not allowed to attend people suffering from any acute infectious disease, nor to use such medicines as can only be prescribed by qualified men;

poisons, I suppose, such as strychnine, etc. In the north of Norway—in the Trondhjem district—there are some bone-setters. Patent medicines can be sold by the chemists, but if containing poison only on the production of a doctor's prescription.

There are 800 medical men in Norway, 650 of whom are members of the Norwegian Medical Association. The Association has many local divisions, and its object is to keep up the standard of the medical profession and secure its interests. There is also—and this is rather sad—a doctors' burial club. The club system is prevalent.

There is no general permission to foreigners to practise in Norway without passing the prescribed examinations, but the Government has the power of giving permission in individual cases to those who produce satisfactory evidence that they possess the requisite knowledge.

FINLAND.

The student of medicine in Finland has a prolonged course of study; two years (if the student is diligent, as my informant remarks) are usually spent in preparing for the first examination, called the Medico-Philosophy Examination; during this time he does some months' practical work in the chemical, physiological, zoological, and botanical laboratories. He then passes on to prepare for his second examination, the examination for the Bachelorship of Medicine; he attends a course of dissection and physiology, and a three months' course at the Physiological Chemical Laboratory. Two years are generally thus occupied; and then comes the final stage, that of preparation for what is called the Licentiate Examination. During this stage the student (who has already the title of M.B.) attends the usual hospital practice and various clinics—three months at the venereal clinic, three months at a lunacy hospital for the mental diseases clinics, and so on—in all thirty-seven months in eight different hospitals.

It usually takes the M.B. four years to pass the Licentiate Examination, which is very practical. He is now allowed to practise, and is eligible for any town or State appointment. To obtain the title of Doctor of Medicine and Surgery he need only write some scientific essay, and be examined on it; altogether the student has to pass some eight years as in Sweden before he is allowed to practise in Finland.

Attendance at a foreign university or school of medicine is accepted, but foreign degrees do not exempt from any part of the examination. There are no hospital fees, and no examination or lecture fees after passing the M.B., and living costs from £2 to £5 a month in the university town.

Once he has taken his degree he holds a very respected social position. Assistants are unknown. The fees in the town are not bad. Visits are charged from 2s. 6d. to 12s. 6d., and operations from 12s. 6d. to £31 5s. or more. In the country when journeys are very long (the nearest doctor to the place where I have been fishing the last three years lives some fifty miles away), 10 marks (8s. 4d.) for 10 kilometres is the usual tariff. It is only in the very largest towns that the general practitioner pure and simple exists; over the rest of the country every doctor has some appointment, either State, town or country, or in connection with some large manufactory, and gets a yearly salary of from £80 to £400; £1,200 a year marks the maximum income of any general practitioner; a very few specialists reach £2,000.

Medical men never dispense their own prescriptions. Midwifery is done by women, though in intricate cases the physician may be called in. Midwives are recognised, and have to pass a State examination; they are allowed to use instruments. Midwifery fees range from 1s. 8d. to £4.

Unqualified practice is illegal, but of course in the sparsely populated country districts there are many quacks, and against them the law is not put in force except for malpractice. No patent medicine can be sold except such as have been analysed and passed by the State. Medical aid associations are unknown, and for the most part there is a high standard of medical etiquette.

RUSSIA.

Of the medical profession in Russia I have been able to obtain very little information. Students are obliged to remain at the university and hospital during the whole of their student career, and, if they have the means, usually take some post-graduate course, either at home or abroad before practising. It is much the custom in Russia for the family doctor, who is usually the confidential friend of the family, to contract by the year for his services; there is no fixed tariff of fees. Only in widely-scattered districts where there are no chemists do doctors dispense their own prescriptions. Midwives are State examined, and are compelled by law to call in a medical man if the confinement is requiring instrumental help. Quacks are strictly repressed; on the other hand, medical aid associations have recently become very numerous.

SERVIA.

The Servian who desires to practise medicine goes to some neighbouring country—Russia, Germany, Austria, or even France and Switzerland—to take his degree there. Those who have only obtained the degree of M.D. without having acquired at the same time the right to practise in the country where they have obtained their M.D., are obliged to undergo an examination before a Medical Board at Belgrade, only after they have passed this second examination are they allowed to practise medicine in Servia. Socially they take a high position. The usual custom is to be paid by the visit, but occasionally an annual payment is agreed upon. In the towns the usual fees are, for general practice, 2 to 5 dinars (a dinar is 9½d., practically a franc); consulting fees 10 to 12 dinars; in the country 1 to 2 dinars, and 8 to 10 dinars for consultations; operation fees from £1 to £12, with mileage fees of about 1 dinar a mile. The average income of the general practitioner in the country varies from £240 to £400, and is a trifle higher in the town, but very rarely indeed over £400. Doctors only dispense their medicines in the very rare places, where there is no chemist available. Nearly all midwifery is done by medical men; 20 to 80 dinars is the usual fee. Unqualified practitioners are very severely dealt with, and medical aid associations are unknown. In the whole of Servia there are but 184 medical men, and of these 122 are paid by the State, having some official position either in the army hospitals or prison staff or on the railways; 32 are *medici de communité*, that is, Poor-law doctors, and only 30 rely exclusively on private practice. There is one doctor to every 12,567 inhabitants.

GREECE.

The Grecian student of medicine is, I believe, almost if not quite the only medical student in Europe who is not required to pass a preliminary examination in arts and classics. Perhaps as a consequence of this, the standard of professional etiquette is not high, and advertising in the daily papers prevails to a deplorable extent.

The duration of medical studies is four years and nine months. At the end of his second year the candidate is examined in chemistry, physics, zoology, and botany; at the end of the fourth year there are two examinations for the diploma of M.D., the first written, the second *viva voce*, and these examinations extend over the whole range of medicine, surgery, and midwifery. These examinations are not practical, that is, there is no clinical or laboratory work, no operations on the dead body. In his third year of study the student is obliged to follow the hospital work as a simple spectator; in his fourth year the professors of clinical medicine and surgery give him patients to examine and treat under their directions. Hospital appointments for students are very few; each surgeon has his *interne* (resident house-surgeon), whose emolument is from £4 to £6, or less, and seven *externes* (dressers) who receive no pay. After the student has got his diploma, he is obliged before he can practise to spend nine months in practical work in the out-patient department under a special professor and four assistant physicians. There are no hospital or lecture fees. The student pays the Government study tax (διδακτικά τέλη) £40. The examination fees are £4, and for the diploma £4 is paid. The only other expenses in addition to those of board and lodging are expenses for medical books, etc. In Athens the average expenses of a student are from £6 to £10 a month. The student is obliged to spend the whole of his four years and nine months' study at the University and in hospital work.

There are no assistants to medical men as in England. Generally medical men are considered as belonging to the best class of society. Sometimes they make yearly contracts, but they are usually paid for each visit; from 3s. to 6s. is the

usual fee in general practice, but there are some who are satisfied with a couple of drachmas, that is, 1s. 3d. for each visit.

The consultant's fee for a consultation at his own house is 10 drachmas—that is, about 6s. Private operations are well paid, but they are few; patients prefer the hospitals because they can go there gratis, or pay very little. In the large towns—for example, Piræus (60,000 inhabitants)—£250 to £300 is as much as any general practitioner can make. In the country medical men make much less, but, as my informant says, "they belong to the country and do not depend solely on medicine for a living." The law forbids the general practitioner to dispense his own medicines except where there is no pharmacy. Midwifery is mostly practised by ignorant midwives; some of them are qualified, by a six months' course of instruction, and recognised by the State; but their knowledge and practical ability are very poor, and puerperal disease is of very common occurrence. In difficult labours the obstetrician is called in and gets a fee of from £3 to £9, according to the social standing of the patient. There are some laws and restrictions against unqualified practice, but they are never enforced by the State. Foreigners holding a diploma other than Greek are allowed to practise after passing a practical examination at the hospital, and those who speak French or German are allowed to be examined in these languages; the fee is 100 drachmas, but no foreigner could possibly practise in Greece without a knowledge of the Greek language.

There is one characteristic common to the medical men of all countries I have visited, and that is their good fellowship—always ready to do anything for one's comfort, to show one anything they have to show, and give one any help or information in their power. I owe them my thanks for numberless acts of kindness, and am glad to make this acknowledgement before a body of their English *confrères*.

AN ADDRESS

ON

RECENT LEGISLATION IN RELATION TO THE MEDICAL PROFESSION.

Delivered before the Thames Valley Branch of the British Medical Association.

By FLETCHER BEACH, M.B., F.R.C.P.,

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Lunacy Acts Amendment Bill.

The great majority of the clauses affect those who have the management and treatment of patients in asylums, but there are two clauses with which it is well that general practitioners should be acquainted. The first is Clause 1, which deals with "urgency orders." You are of course aware that any patient who is not a pauper may be placed under control by means of an urgency order; it is a temporary method to obtain the control of the patient while the usual order is being obtained. Circumstances may arise, such as suicidal and homicidal tendencies, which render it expedient that the patient should be put under control at once, while the order by petition is being procured. Under the Act under which we now work, the urgency order remains in force for seven days, but in the new Bill, unless the clause is amended, the urgency order is to remain in force for only four days. This reduction in time no doubt will cause difficulties in obtaining the order. In Paragraph 2 of Clause 1 it is stated

> that every urgency order shall be accompanied by a statement, to be made and signed by the person who signs the urgency order and by the medical practitioner who signs the medical certificate on which the urgency order is founded, that it is necessary for the safety and proper treatment of the alleged lunatic, or for the safety of others, that he should be forthwith placed under care and treatment, and showing fully and specifically the reasons why an urgency order is required

The urgency order has only to be accompanied by one medical certificate, instead of the two which have to be presented with the usual order. A statement accompanies the urgency order now in force in which the practitioner has to certify "that it is expedient for the welfare of the said A. B. (or for the public safety, as the case may be) that the said A. B. should be forthwith placed under care and treatment," and he has to give his reasons for this conclusion. There is a slight difference in the wording of the statement accompanying the two urgency orders. In the one at present in force the medical man has to notify that it is expedient for the welfare of the patient or for the public safety, as the case may be, that the patient should at once be detained; while in the new Bill the statement has to be made and signed by the person who signs the urgency order, as well as by the medical man who signs the certificate, that it is necessary for the safety and proper treatment of the alleged lunatic or for the safety of others that he should be forthwith placed under care and treatment. He has, of course, to give his reasons why an urgency order is required. This new urgency order will only remain in force for four days, at the end of which time the patient must be liberated, unless steps have been taken during this interval to obtain an order on petition. It is not necessary to have the order made during the interval if the petition has been presented to the judicial authority. There is, I know, an objection on the part of many practitioners to sign certificates, for fear of an action being subsequently brought against them by the patient. The Act protects the signer of the certificate if he "has acted in good faith and with reasonable care;" but, as this was not considered sufficient protection, a subsection was added, providing that if any proceedings are taken against a person for signing a certificate,

> such proceedings may, upon summary application to the High Court or a judge thereof, be stayed upon such terms as to costs and otherwise as the court or judge may think fit, if the court or judge is satisfied that there is no reasonable ground for alleging want of good faith or reasonable care.
>
> The action must be commenced within twelvemonths next after the release of the party bringing the action, and shall be laid or brought in the county or borough in which the cause of action arose and not elsewhere.

These sections of the Act protect the medical men who sign the certificates in good faith and with reasonable care. If the medical practitioner is not satisfied with these provisions for his protection, his best method will be to require a guarantee of indemnity from the friends of the patient, for which purpose a form is recommended by the Medical Defence Union.

The other clause (XXIII) is concerned with the temporary care of incipient lunatics. This clause has been introduced as the result of frequent conferences between the Parliamentary Committee of the Medico-Psychological Association of Great Britain and Ireland, of which I have the honour to be Honorary Secretary, and the Parliamentary Bills Committee of the British Medical Association. After the clause was drawn up a deputation to the Lord Chancellor was arranged, and he, with slight alterations, accepted the sections of the clause as they stood. The chief reasons, among others, why we wished this clause to be introduced were that supervision should be exercised over those persons who receive incipient mental cases, and that the friends of patients should be induced to put the patients under proper care. At present, persons without any knowledge of asylum treatment open homes for the care and treatment of these cases, with the result that they are not treated properly, and in some cases suicide follows. Again, owing to the fact that the petition, particulars of the case, and the medical certificates have to come before a magistrate before the patient can be received, it has been found by experience that friends will do everything in their power to escape this magisterial order, going so far as to take the patients into remote districts under the care of nurses, with the result that the patient does not have the medical treatment which is so requisite in the early stages of insanity when the disease is most curable. This clause does away with the magisterial order, and it is hoped that friends of patients will avail themselves of it. Clause XXIII commences thus:

> 1. If a medical practitioner certifies that a person is suffering from mental disease, but that the disease is not confirmed, and that it is expedient, with a view to his recovery, that he be placed under the care of a person whose name and address are stated in the certificate for a period therein stated, not exceeding six months, then during that period the provisions of Section CCCXV of the principal Act shall not apply.

No magisterial order is required. The Section CCCXV of the principal Act, that is, the Act of 1890, says that every person who, except under the provisions of that Act, receives or detains a lunatic in an institution for lunatics, or for payment takes charge of a lunatic in an unlicensed house, shall be guilty of a misdemeanour, and shall be liable to a penalty not exceeding £50. By this clause a patient can be taken

into an unlicensed house without any penalty on the part of the person who receives him, provided that:

2. The certificate must not be signed by the person under whose care the patient is placed.

3. Where a medical practitioner signs any such certificate he shall, within one clear day after signing it, send a copy of it to the Commissioners, and the Commissioners may visit the patient to whom the certificate refers.

4. The person who receives a patient under any such certificate shall, within one clear day after receiving the patient, give notice to the Commissioners of his reception, and if the patient dies, or the residence of the person receiving him is changed within the period mentioned in the certificate, shall within two clear days give notice of the death or change of residence to the Commissioners.

5. He shall also, within two clear days after the expiration of the period mentioned in the certificate, or if he ceases to have the care of the patient at an earlier date then within two clear days after that earlier date, send a report to the Commissioners stating whether the patient recovered, and, if not, in what manner he was dealt with when the person making the report ceased to have the care of him under the certificate.

6. If default is made in sending any notice or report required by this section, the person in default shall be guilty of a misdemeanour and be liable to a penalty not exceeding fifty pounds.

7. No person shall under this section receive more than one patient at the same time.

8. After the expiration of the period mentioned in the certificate, another certificate under this section in respect of the same patient shall not be given within two years from the date of the expiration.

If these provisions are complied with no fault will be found with the person giving the certificate or receiving the patient, but if default is made in sending any notice or certificate which is required, the person in default will be liable to a fine of £50. There are a few criticisms which I should like to make. The period of six months during which the certificate holds good is too short, and a further period of three months might with advantage be given. More than one patient should be allowed to be received, and the period of two years during which no further certificate may be given is too long.

The Elementary Education (Defective and Epileptic Children) Act, 1899.

For some years the London School Board and some School Boards in the provinces have provided special classes for defective and epileptic children. The National Association for Promoting the Welfare of the Feeble Minded and other institutions affiliated with it have also defective children who are, like those under the School Boards, specially educated, and it has been thought only right and proper that an Act should be passed by which the Education Department shall be able to give aid from a Parliamentary grant to a school in which defective or epileptic children are educated in the same way as is done in the case of the blind and deaf children. The Act contains very interesting provisions, but the parts in which medical practitioners are likely to be most interested are Clause 1, Subsection 1, which declares that

a school authority may, with the approval of the Education Department, make such arrangements as they think fit for ascertaining (*a*) what children in their district, not being imbecile and not being merely dull or backward, are defective, that is to say, what children by reason of mental or physical defect are incapable of receiving proper benefit from the instruction in the ordinary public elementary schools, but are not incapable by reason of such defect of receiving benefit from instruction in such special classes or schools as are in this Act mentioned; and (*b*) what children in these districts are epileptic children, that is to say, what children, not being idiots or imbeciles, are unfit by reason of severe epilepsy to attend the ordinary public elementary schools.

This is a question which can only be decided by a medical man, more especially as the school authority has to make provision for the examination from time to time of any child, in order to ascertain whether such child has attained such a mental and physical condition as to be fit to attend the ordinary classes of public elementary schools, and for such examination in the case of any child whose parents claim such examination of this child. Previously to the passing of this Act my friends, Dr. Shuttleworth and Mrs. Dickinson Berry, had been appointed by the London School Board to carry out this work, and some medical officers were appointed in those provincial towns which had established special classes. Any School Board can now appoint a medical officer for this purpose, and this Act may, perhaps, bring this fact more prominently before the local authorities who have to do with the education of the children in their towns.

Clause 1, Section III, states that for the purpose of ascertaining whether a child is defective or epileptic within the meaning of the Section, a certificate to that effect by a duly-qualified medical practitioner approved by the Education Department shall be required in each case. The certificate has to be in such a form as may be prescribed by the Education Department. This is a most important provision, as medical evidence only, and very rightly, is depended upon to decide whether a child is defective or epileptic or not.

The Act is only permissive, but we may hope as time goes on school authorities may become more and more enlightened on the subject, so that they will consider themselves behindhand if they do not take advantage of its provisions.

An Act to Amend the Inebriates Act, 1898.

This has chiefly to do with the payment of the expenses of prosecutions, and power to deal summarily with offences. The Inebriates Act, 1898, to which this refers, is, however, important to medical men. A few words about the Act will be useful.[1] In 1879 the Habitual Drunkards Act was passed in order to make the control and curative treatment of habitual drunkards more easy. According to the Act a habitual drunkard is "a person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself, or herself, or others, or incapable of managing himself or herself and his or her affairs." Local licensing authorities were created and empowered to licence retreats, but the Act did not make habitual drunkenness *per se* an offence nor give power to compel a drunkard to enter a retreat. If the habitual drunkard wished to do so, it was necessary for him to sign a form of application for admission into the retreat for any period not exceeding twelve months, in presence of two justices of the peace having jurisdiction under the Summary Jurisdiction Acts. After ten years' experience it was found that the Act did not work well. Persons did not care to admit in the presence of two justices of the peace that they were drunkards, and it was thought that the term "inebriate" would be better. Then people would not establish retreats under an Act which was to expire at the end of ten years, besides which the licensee of a retreat had no power to appoint a deputy during his temporary absence. In consequence a short Act, intituled the Inebriates Act, 1888, was passed; this enabled the licensee to appoint a deputy, allowed any two justices to attest a form of application for admission to a retreat, and made the Habitual Drunkards Act perpetual. This Act was to be read and construed with the amending Act, and the two Acts could be cited together as the Inebriates Acts 1879 and 1888. These Acts again proved a failure, and owing to this fact and the scandal caused by the repeated appearance before magistrates of persons charged with offences under the influence of drink, Mr. Matthews, when Home Secretary, appointed a Departmental Committee to inquire into the best method of dealing with drunkards. The Committee met and presented a report, and ultimately last year a third Act was passed which came into operation on January 1st of this year. By this Act habitual drunkenness was made an indictable offence, and the habitual drunkard could be punished by detention up to three years in a State inebriate reformatory or a certifiable inebriate reformatory if the court was satisfied that the offence was committed under the influence of drink, or that drunkenness was a contributing cause of the offence, and the offender admits that he is or is found by a jury to be a habitual drunkard.

Also any person who has been convicted summarily at least three times of an offence, and who was a habitual drunkard and who committed a fourth offence, being still a habitual drunkard, was punishable by three years' detention in a certified inebriate reformatory. The only other sections which are of importance to those who have private retreats are: (1) That a licence may be granted to a retreat for two years instead of thirteen months; and (2) a habitual inebriate may volunteer to enter a retreat for two years instead of for twelve months. Unfortunately, owing to the fact that county and borough councils have not exercised their power to establish inebriate reformatories certified by the Home Secretary, many habitual drunkards who commit offences have still to be sent to prison instead of to an inebriate reformatory. The reformatories which have been certified in England are quite insufficient to meet the demands on their accommodation. There are at present only three—the Royal Victoria Homes at Bristol certified for 60 women, Lady Henry Somerset's Homes at Duxhurst for 12 women, and St. Joseph's Homes at Ashford for 56 female Roman Catholics. There is at present no

reformatory for men, but the London County Council is about to build an institution for the accommodation of 40 male inebriates at Charlwood, near Horley.

A medical attendant has to be appointed to attend to the patients at the certified inebriate reformatory, and for his guidance certain rules have been laid down. The most important of these are :

1. He is responsible for the general care of the health of the inmates, and has to report to the managers and make known to the superintendent any circumstance connected with the reformatory or the treatment of the inmates which appears to him to require consideration on medical grounds.

2. He must visit the reformatory once every day, and see every inmate at least twice a week, except in the case of inmates complaining of illness or who are under punishment or special discipline, and these must be visited every day.

3. Every inmate must be examined on reception, and the state of his health and such facts as are connected therewith recorded.

4. He must frequently examine the washing places, baths, etc., and inspect the food, provisions, clothing, and bedding, reporting to the superintendent any deficiency or defect which he may find, not only with respect to the above-stated clothes, food, etc., but any other cause which may affect the health of the inmates.

5. He has to keep forms which he must fill up, giving an account of the state of health or disease of each sick inmate, and the treatment which he orders, as well as statistical records relative to the health and treatment of the inmates and the sanitary condition of the buildings.

6. He must give notice to the superintendent when the illness of the inmate becomes dangerous in character, and in case of death inform the superintendent.

7. He has to report in writing to the superintendent the case of any inmate to which he thinks it necessary to call attention, and give directions in writing for separating from the other inmates those who are suffering from infectious, contagious, or mental diseases, and take steps to prevent the spread of any contagious or infectious disease.

8. He must examine any inmate before he is placed in close confinement or subjected to dietary punishment to certify whether or not he is fit for punishment.

In the case of voluntary retreats no rules are laid down except that in case of death the medical man must himself draw up and sign a statement of the cause of death of a patient with the name of the person present at death, and give it to the licensee, who must transmit it to the coroner, the registrar of deaths, the clerk to the local authority, and the person by whom the last payment was made for the deceased.

There is no compulsory law with regard to rich inebriates, but as a result of a paper read in the Section of Psychology of the annual meeting of the British Medical Association at Portsmouth by Dr. J. F. Sutherland on the Urgency of Legislation for the well-to-do Inebriate, the following resolution was carried :

The Psychology Section respectfully suggests that the Council of the Association be asked to consider the advisability of procuring early legislation for the well to-do inebriate, and to refer the question to the various Branches of the Association for their opinions.

This resolution was duly brought before the Council on October 11th, 1899, and was referred to the Inebriates Legislation Committee, to report at the next meeting of the Council.

The Vaccination Act.

To this Act, which came into operation January 1st, 1899, I may briefly refer. The chief alterations made by it are that the child has to be vaccinated within six months of his birth, and he is not required to be taken to the public vaccinator for vaccination. Instead of this the child is vaccinated at home at the request of the parents, and the use of glycerinated calf lymph is for the first time made compulsory. Repeated penalties on parents for not having their children vaccinated are prevented by a clause, and this, I think, is a right procedure, for however misguided parents may be, no good, I am convinced, can come from persecuting them because they have conscientious objections to vaccination. Parents are also exempt from penalties if they satisfy two justices or a stipendiary magistrate that they conscientiously believe that vaccination will be prejudicial to the health of their child. The great fault of the Act is that no reference is made to re-vaccination, but as it only remains in force until the first day of January, 1904, we must endeavour to get it introduced into the next one.

The Midwives Bill.

The only remaining Bill with reference to which I shall say a few words is the Midwives Bill, which was brought before Parliament in the last session but one of this year. The chief object of this Bill was to carry into effect the recommendations of the Select Committee of the House of Commons relating to the training and practice of midwives by promoting the training of women as midwives, and by providing for the regulation of their practice. Under this Bill no woman could call herself or practise for gain as a midwife unless she had obtained a licence. The Bill provided for the constitution of a central midwives Board whose duties were "to organise examinations, regulate, supervise, and restrict within due limits the practice of midwives, and to investigate charges of malpractice, negligence, or ignorance against midwives." A Bill on similar lines was introduced into Parliament last year without success. The result of a conference between a committee of the General Medical Council and delegates from the Midwives Bill Committee has been that some alterations have been made in this Bill, namely, the substitution of licensing for registration, the liability of women not licensed and who habitually practise midwifery for gain to a fine not exceeding £5, and the limitation of the area within which a midwife may practise to that of the supervising authority from which she obtained a licence to practise. This, being a contested Bill, did not pass. There is no doubt that medical men believed that the Bill would create an inferior order of practitioners who would not limit themselves to midwifery alone, but would endeavour to treat diseases which should be attended to only by properly-qualified medical men.

Note.

1 For much of the information as to this Act I am indebted to a book on *The Inebriates Acts, 1879-1888*, by George Blackwell, LL.B., Barrister-at-Law.

AN ANALYTICAL ACCOUNT OF FIFTY-SEVEN CASES OF PUERPERAL INFECTION.

By W. EDGAR MACHARG, M.D.,
Late Senior Assistant Physician, Belvidere Fever Hospital, Glasgow.

The subject of the fever of childbed has at the present moment attained to considerable prominence, and much discussion is taking place concerning its exact pathology and its treatment. Serumtherapy is on its trial, and the question of surgical interference is becoming more and more a matter for serious consideration. Occasions for observing this class of cases will for any individual always be but few outside of hospital work, and much difficulty must necessarily be encountered in following out any which may occur, more especially in respect to *post-mortem* examinations. Only, however, by a thorough knowledge of its clinical features and *post-mortem* appearances can any advance be made in the treatment of a disease whose terrible mortality so urgently calls for such. The writer has accordingly ventured to give an account of these cases, which came under his personal observation while senior assistant physician in Belvidere Fever Hospital, Glasgow, during the eighteen months between October 30th, 1897, and June 4th, 1899. Of the 57 cases of puerperal infection 31 proved fatal, and in 21 a *post-mortem* examination was obtained.

Classification to any extent has not been found to be feasible, and the cases have been arranged simply as to result—fatal or non-fatal.

The object of the present article is to bring into relation and prominence the chief points of interest in the total number of cases. At the same time, as being more worthy of note, particular attention is given to such as came to *post-mortem* examination ; and appended is a table (p. 374) showing as concisely as possible the more salient features of these.

The writer is fully conscious that from time to time many similar cases have already been published ; yet he trusts that the results below, being founded on a consecutive series in the practice of one observer, will be found to be not without value.

It will be noted that, of the 57 cases, 31 ended fatally, while 26 recovered. In proceeding with an analysis it is proposed to deal first and most fully with the fatal cases. Concerning these, the following points are taken up in order—incidence, nature of labour, injuries during labour, *post-mortem* appearances, complications, bacteriological examination.

Incidence.—Primiparæ were affected fourteen times. The illness in 4 cases followed premature labour, and on two occasions occurred *post-abortum*.

Nature of Labour.—Some departure from the normal was noted on 13 occasions. Instrumental interference had taken place in 8 cases, 6 being primiparæ. Labour thrice was complicated by hæmorrhage. Twice the children were stillborn, without other complication.

Cases.	Labour. Nature of.	Injuries during.	Illness. Onset.	Duration.	Post-mortem Appearances.	Bacteriological Examination.	Remarks.
1	Normal	Rupture of perineum into rectum; laceration of cervix uteri	4th day	18 days	Endometritis. Septic thrombosis of uterine sinuses and left ovarian vein, with infarcts in lung and metastases in spleen and kidneys. Thrombosis of femoral and external iliac veins	Uterine discharge and pus from ovarian vein yielded streptococcus pyogenes, bacillus coli	Antistreptococcus serum administered with no appreciable result. (Four doses of 20 c.cm. at intervals of twelve hours).
2	Normal	Slight rupture of perineum	3rd day	12 days	Endometritis. Septic thrombosis of uterine sinuses and right ovarian vein, with infarcts in lung	—	—
3	Instrumental	Slight rupture of perineum; bilateral laceration of cervix uteri	4th day	26 days	Endometritis. Septic thrombosis of left ovarian vein, with metastases in spleen and kidneys. Meningitis. Old-standing endocarditis. Fibrous adhesions at apex of left lung	—	Thrombosed vein was readily detected by examination under chloroform. Much delirium noted during illness.
4	Miscar. in 4th month; hæmorrhage	—	14th day	21 days	Parametritis. Septic thrombosis of left uterine and iliac veins. Thrombosis of femoral vein. Enteritis (slight)	Bacillus coli (pus from iliac vein)	—
5	Child still-born at term	—	3 days ante-partum	11 days	Endometritis. Salpingitis. Peritonitis. Oöphoritis. Septic thrombosis of uterine sinuses and left ovarian vein. Enteritis, acutely affecting the ascending colon. Healed tubercle in lungs	Bacillus coli, staphylococcus pyogenes albus (uterine discharge)	A rigor occurred three days previous to confinement, followed by persistent *malaise* and prostration. Lochia fœtid from the beginning.*
6	Natural	Slight rupture of perineum	9th day	73 days	Small encapsuled abscess in left broad ligament. Thrombosis of left ovarian and femoral veins. Spleen coated with organised lymph. Large white kidney. Enteritis (general, but most marked in lower part of ileum)	—	Marked hæmaturia and albuminuria during latter part of illness. Death due to asthenia.
7	Natural	—	4th day	14 days	Endometritis. Septic thrombosis of uterine sinuses and left uterine veins, with metastases in kidneys. Pelvic peritonitis. Parametritis. Acute general enteritis, associated in the large intestine with extensive ulceration. Healed tubercle in lung	Bacillus coli, streptococcus pyogenes, staphylococcus pyogenes albus (uterine discharge)	Peritoneal infection due to extension from small abscess in uterine wall.
8	Instrumental, complicated by hæmorrhage	Bilateral laceration of cervix uteri	2nd day	8 days	Endometritis. Salpingitis. Pelvic peritonitis. Septic thromboses of uterine sinuses and left ovarian vein, with metastases in spleen and kidneys. Parametritis. Enteritis (well marked in ascending colon)	Bacillus coli (pus from ovarian vein)	—
9	Natural	Rupture of perineum; extensive bilateral laceration of cervix uteri	2nd day	22 days	Endometritis. Septic thrombosis of uterine sinuses. Rupture of three small abscesses in uterine wall into peritoneal cavity. Pelvic peritonitis	Streptococcus pyogenes (uterine discharge)	Antistreptococcus serum administered with no result.
10	Natural	—	7th day	40 days	Endometritis. Salpingitis. Pelvic peritonitis with abscess in Douglas's pouch. Parametritis. Large white kidney with cardiac hypertrophy	—	Patient suffering from chronic nephritis, with secondary cardiac changes.
11	Natural	Bilateral laceration of cervix uteri	2nd day	28 days	Endometritis. Salpingitis. Ovarian abscess. Pelvic and general peritonitis	—	Ovarian condition diagnosed and removal attempted *per vaginam*.
12	Instrumental	Rupture of perineum into rectum; extensive laceration of vagina and cervix uteri	1st day	6 days	Endometritis. Salpingitis. General and pelvic peritonitis. Septic thrombosis of uterine sinuses, with metastases in lungs, liver and kidneys. Enteritis	Streptococcus pyogenes, bacillus coli (uterine discharge); streptococcus pyogenes (pus from abdomen)	—
13	Instrumental, adherent placenta	Rupture of perineum into rectum; extensive laceration of vagina and cervix uteri	2nd day	6 days	Endometritis. Salpingitis. General and pelvic peritonitis. Parametritis	—	—
14	Natural	—	3rd day	37 days	Large intra-abdominal abscess. Pelvic organs not examined	—	Abscess pointed through the umbilicus. It was opened and drained; but patient died shortly after the operation.
15	Prolonged instrumental, retained placenta	Rupture of perineum. Extensive laceration of vagina and cervix uteri	1st day	25 days	Endometritis. Septic thrombosis of uterine sinuses, with infarcts in lung, and metastases in spleen and kidneys. Enteritis (general, best seen just above cæcum)	Streptococcus pyogenes (uterine discharge)	Antistreptococcus serum in three doses of 20 c.cm. Slight fall of temperature after injections, but no improvement in general condition.
16	Natural	Slight laceration of perineum	9th day	14 days	Endometritis. Salpingitis. Septic thrombosis of uterine sinuses. Enteritis (confined to ascending colon)	—	—
17	Natural	—	4th day	7 days	Endometritis. Salpingitis. Thrombosis of uterine sinuses, with metastases in kidneys and liver. Patches of enteritis throughout whole length of gut, slight in duodenum, more in ilium, very marked in large intestine, and extreme in sigmoid, where it was associated with hæmorrhage into the submucous layers, with here and there slight erosion. Sigmoid greatly distended, filling up the whole lower part of the abdominal cavity. Meningitis.	Bacillus coli, staphylococcus pyogenes aureus (uterine discharge)	Much pain complained of in lower abdomen. Considerable distension present. Diagnosis of peritonitis. Marked delirium throughout whole course of illness.
18	Miscarriage in 6th month	—	6th day	8 days	Endometritis. Double salpingitis. Infarcts in lung. Enteritis (general; ascending colon most affected)	—	—
19	Natural	—	6th day	13 days	Endometritis. Metastases in kidneys. Enteritis (slight, general)	Bacillus coli (uterine discharge)	—
20	Natural	—	2nd day	12 days	Endometritis. Enteritis (general; most marked in large intestine). Old tubercle in left lung	—	—
21	Instrumental.	Large rupture of perineum. Bilateral laceration of cervix	1st day	8 days	Endometritis. Septic thrombosis of uterine sinuses. Parametritis. Meningitis.	—	Violent delirium occurred during life.

* This patient suffered from a chronic tubal condition; tube thickened and convoluted.

Injuries during Labour.—These occurred in all degrees, ranging from slight wounds to the most extensive lacerations of the soft parts. Well-marked traumatism was present in all in 17, and was severe in 9 cases. Large ruptures of the perineum were encountered five times, the rectum being thrice involved. The vagina four times, and the cervix uteri six times, has sustained serious damage. In connection with vaginal lacerations much undermining and paracolpitis were observed on several occasions. As might be expected the more severe injuries were found in primiparæ, or accompanied the use of instruments.

Onset of Illness.—The largest number of cases for any one day (8) arose on the second day *post partum*. Twenty-one times (67 per cent.) the illness began from the first to the fourth day inclusive. In 5 cases the onset was delayed past the seventh day; and in one case, which finally proved fatal, symptoms did not appear until the nineteenth day. The history of one case (Case v) pointed definitely to an infection three days previous to delivery.

Duration of Illness.—Nearly one-half of the fatal cases lived for two weeks after the first appearance of symptoms; and a large proportion survived for three weeks or over. The sixth day was the earliest period at which death occurred. On two occasions a fatal termination did not take place until the fortieth and seventy-third day respectively. In both of these cases, however, the illness was accompanied by chronic nephritis; and a question may be raised as to the possibility of their recovery, apart from this complication.

The following is a short numerical statement:

Died during 1st week	4 cases
Died during 2nd week	12 cases
Died during 3rd week	5 cases
Survived 3 weeks or over...	9 cases

Post-mortem Appearances.

We come now to describe in detail the pelvic lesions discovered in the 21 cases in which a *post-mortem* examination was made. These chiefly comprise endometritis and salpingitis, peritonitis, oöphoritis, septic thrombosis of the uterine sinuses and large veins, and parametritis.

The term endometritis in the present article is meant to express the condition which old writers designated, not unfitly, diphtheritic inflammation of the uterus. In these cases, the endometrium and superficial layers of the muscular coat are found to be in a softened infiltrated state; and in the severer types, extensive superficial sloughing may frequently be observed. Ulceration also sometimes occurs, with occasional deposit of that fibrinous pseudo-membranous material which at one time suggested the relation of the process to diphtheria. These conditions where the disease is less advanced may be practically confined to the placental site, where indeed they are invariably most apparent in all, and where, in cases further advanced, the uterine tissue, along with the thrombi pouting from the sinuses, is often absolutely necrotic and purulent.

Such appearances as those above described were apparent to a greater or lesser degree in all the cases which came to *post-mortem* examination, with the exception of 3. Of these, in 1 the uterus was not examined, and in another the illness had lasted for 73 days.

In 8 cases (40 per cent.), one or both Fallopian tubes contained pus, and in 6 of these peritonitis had ensued. One case (Case v) showed evidence of a chronic tubal condition, anteceding and very probably exciting the acute puerperal mischief. Here alone was the tube found thickened to any appreciable degree.

An ovary was affected in two of the cases. In both the ovarian lesion was concurrent with purulent salpingitis and peritonitis. The organ in one (Case v) was simply enlarged and injected, but the lesion had in the other (Case xi) progressed to suppuration and extensive necrosis.

Peritonitis was proved to exist in nine cases. As mentioned above, it was associated on six occasions with purulent salpingitis, and twice it was clearly due to extension from abscess in the uterine wall, arising in connection with septic thrombosis of the sinuses. The course of infection was not traced in the remaining case.

The process was naturally always most acute in the lower regions. In four cases, indeed, it was entirely limited to the pelvis, although here being of a very widespread nature. In five cases it was purulent, pus occurring in three of these as numerous small foci between the adherent peritoneal surfaces, and in two collecting in considerable amount in Douglas's pouch. Though sometimes present in the peritoneal cavity, fluid was never in large quantity. Extensive fibrinous adhesions were usually in evidence.

Septic thrombosis of the uterine sinuses appeared as softening thrombi in these vessels, or more frequently as small collections of pus running through the muscular wall of the uterus, in the vicinity of the placental site. In the large veins, also, although actual thrombus was occasionally seen, yet more frequently the vessel was filled with fluid purulent material. This was sometimes very widely distributed, as where we find it (Case viii) throughout the whole length of an ovarian vein, or occupying (Case iv) the uterine and internal and external iliac veins and the lower part of the inferior vena cava.

Thrombosis of the uterine sinuses *per se* is noted in six of our cases, and had thrice given rise to metastases. The lungs and kidneys were thus affected in all three, and the liver and spleen in two respectively. Of the 7 cases which occurred of venous thrombosis, 5 affected the ovarian and 2 the uterine veins. Metastases had resulted in 5, involving the kidneys in 4, the spleen in 3, and the lungs in 2. Thus septic thrombosis was found in all 13 times, and was 8 times connected with metastases in the organs.

During the course of the *post-mortem* examinations parametritis was discovered on 7 occasions. The inflammatory mass in more than half of these contained numerous small abscesses. Traumatic injuries of the genitalia 4 times only coincided with the pelvic cellulitis. In 1 case a small encapsuled parametritic abscess was present, possibly antecedent in origin to the puerperal condition.

From even a superficial examination of the *post-mortem* notes, it will appear that almost always the pelvic mischief had extended, not in one only but in several directions, so much so that occasionally we find in 1 single case most of the above lesions. The summary below shows their actual concurrence:

Endometritis	2 cases
Endometritis, peritonitis	2 ,,
Endometritis, peritonitis, oöphoritis ...	1 ,,
Endometritis, peritonitis, parametritis ...	2 ,,
Endometritis, peritonitis, oöphoritis, thrombosis ...	1 ,,
Endometritis, peritonitis, thrombosis	2 ,,
Endometritis, peritonitis, thrombosis, parametritis ...	2 ,,
Endometritis thrombosis	7 ,,
Endometritis, thrombosis, parametritis	1 ,,
Intra-abdominal abscess...	1 ,,

Complications.

A large proportion of the cases which came to *post-mortem* examination showed evidence of inflammatory changes in the intestine, in the presence of areas of congestion in the mucous membrane. These varied both in size and number. While sometimes but slight and insignificant, at others the injection was of a most intense character, and might involve for several inches at one place the whole lumen of the gut. These lesions, although not infrequently present throughout the extent of the intestine, were generally most apparent in the lower parts, and especially affected the caput cæcum and ascending colon. In less advanced cases congestion only was visible, but in those more severe small hæmorrhages occurred in the submucous layers, and rarely some slight erosion was detected. Once however (Case vii), the process was associated with great ulceration of the large intestine throughout its length. Enlargement of the Peyer's patches or solitary follicles was never demonstrable.

Enteritis was altogether noted in 12 of the 21 *post-mortem* examinations. It concurred 8 times with septic thrombosis. During life abdominal distension and tenderness were more or less present; so much so, that in one case, where the sigmoid flexure was acutely affected, a diagnosis of peritonitis was made. Only the worst cases were associated with diarrhœa, but in every case where diarrhœa had been a prominent symptom, enteritis was discovered *post mortem*.

Injection and œdema of the membranes of the brain was proved to exist in 3 cases. In all these much delirium had occurred.

The other chief complications were as follows in nature and frequency:

Pneumonia	8 cases
Acute nephritis	5 ,,
Diarrhœa	6 ,,
Delirium	5 ,,
Acute mania	1 case
Phlegmasia	3 cases
Septic arthritis of knee-joint	1 case

Confirmatory examination was possible in 3 of the cases of pneumonia; and in these the complication was due to septic infarction. Superficial abscess in the affected limbs followed in two of the cases of phlegmasia.

Bacteriological Examination.

A bacteriological examination was not made in every case, and anaërobic methods were attempted in none. For these reasons it is not desired to lay much stress on this department. The fact, however, would again appear to be established that, while the streptococcus pyogenes is the most common exciting cause of puerperal infection, yet other organisms play an only slightly subordinate part.

A positive result was obtained 16 times; streptococcus, in pure or mixed culture, was found 10 times, and it is interesting to note that in like manner bacillus coli occurred 9 times, thrice where rupture of the perineum into the rectum was present. Staphylococcus pyogenes aureus and albus were also frequently cultivated.

Other Fatal Cases.

With regard to the 10 fatal cases in which a *post-mortem* examination was not permitted it may be here remarked: That in 4 the lochia were purulent, but bimanual examination showed nothing abnormal beyond an enlarged and softened uterus; that in 1 case, complicated by pneumonia, a rounded thickening was detected in the upper part of one of the broad ligaments, due in all probability to a thrombosed ovarian vein; that 1 case showed presumptive evidence of peritonitis; that parametritis was present in 3 of them.

Cases Terminating in Recovery.

We pass now to analysis of the 26 cases which terminated in recovery, reviewing as before what appear to be the chief points of interest.

Incidence.—Primiparæ were attacked 12 times. Regarding period of pregnancy, in 5 cases labour was premature, and thrice the illness followed abortion.

Nature of Labour.—Abnormality occurred in 10 cases. Labour four times was instrumental, two of these patients being primiparæ. In 2 cases it was complicated by hæmorrhage, and in 4 the children were stillborn.

Injuries during Labour.—Traumatism was present in 8 cases, but in 5 of these was slight. Severe injuries had twice followed the use of instruments.

Onset of Illness.—In 18 (69 per cent.) the onset occurred from the first to the fourth day. The illness on two occasions did not begin till after the seventh day. As with the fatal cases the greatest number for any one day arose on the second day *post partum*.

Results of Pelvic Examination.—Fully one-half of the patients who recovered were suffering from parametritis. This in 6 cases advanced to suppuration. In 5 of these spontaneous rupture of abscess occurred, once into bladder, once into bladder and vagina, and thrice into rectum. The abscess in the remaining case was evacuated by incision *per vaginam*. Once, in addition to parametritis, an ovary was found to be enlarged and very tender. The other cases showed no signs of pelvic mischief beyond a fœtid or purulent uterine discharge, and a large soft and occasionally tender uterus.

Complications.—The following were noted:

Phlegmasia	3 cases
Phlegmasia and periphlebitis	1 case
Acute nephritis	1 ,,
Diarrhœa	1 ,,
Delirium	1 ,,
Gluteal abscess	2 cases
Osteitis of ilium	1 case
Acute synovitis of shoulder-joint	1 ,,
Septic arthritis of knee-joint	2 cases

In neither of the cases of gluteal abscess was any connection made out with the pelvis. As to those of septic arthritis: in one, one joint, and in the other, both joints, were involved. The joints were opened and drained, and in each case the patient made a good recovery.

Bacteriological Examination.—Nine cases yielded results. Streptococcus occurred five times in pure and once in mixed culture. Bacillus coli was detected only once, and that in mixed culture.

Diagnosis and Treatment.

Septic thrombosis was sometimes demonstrable directly, where an ovarian vein was thus affected; of much more importance is the fact that its existence could be confidently inferred by the persistence, and more especially by the advancement, of general symptoms, in the absence of any apparently adequate local condition. Simple endometritis, as evidenced by purulent discharge, and possibly uterine tenderness, gave rise to an illness of a comparatively slight and passing nature. Where in addition parametritis was present, pyrexia might be prolonged and considerable; but the constitutional disturbance seldom or never assumed that progressively grave character which indicated the involvement of the venous channels. The presence or absence of rigors came to be considered of but little diagnostic value. They occurred in all classes of cases, and in connection with pyæmia were at times trifling, or altogether wanting.

Even when the disease had become widespread, it was sometimes difficult to arrive at a definite diagnosis of peritonitis. Where this was limited to the pelvis, tenderness and distension of the abdomen were not greater than was frequently found with endometritis alone, and once all local signs were entirely absent. When peritonitis had become general, the classical symptoms were more or less in evidence, but in one case particularly were very slight.

It was not found possible to affirm clinically the presence of purulent salpingitis. Swelling of the tube, as has been shown above, did not occur, nor did any tenderness sufficiently diagnostic.

The routine treatment in each case consisted in the administration twice daily of antiseptic intrauterine douches, and in drainage of the uterine cavity by loosely packed iodoform gauze. Complications were dealt with as they arose. Quinine in large doses (20 grains every four hours) was essayed in a few cases; but, to say nothing of the gastric irritability frequently produced, the results were not encouraging. In some of the earlier cases curettage of the uterus was performed. This procedure, however, was so often followed by rigor and increased pyrexia that its use was entirely discontinued, excepting in those cases where there was retained tissue in the uterus. It is remarkable to find that only two such occurred, both of which recovered.

The treatment by antistreptococcus serum requires special notice. The serum employed was that supplied from the laboratory of the British Institute of Preventive Medicine. It was injected into the subcutaneous tissues of the abdominal wall in doses of 10 to 30 c.cm., repeated at intervals of 12 hours, as might be judged necessary. Observations of the temperature and rate of pulse and respiration were made every two hours in a patient under treatment; and in addition also at the time of injection, and then every half hour, until two hours had elapsed. Serum was only given where the bacteriological examination had shown streptococci to be a factor in the case. It is quite superfluous to point out the absolute futility of its use otherwise.

Nine patients in all received serum treatment. Seven of these were cases of pure streptococcus infection, and 2 of mixed infections of streptococcus and bacillus coli. In 6 there was no apparent result. Of the remaining 3 a slight fall of temperature followed the injections in one (which, however, finally proved fatal), the result in another was doubtful; in the third distinct improvement followed. Six of the cases died. A post-serum rash was once observed; but no other ill-effect was seen.

In conclusion, it seems hopeless to expect any real advance in the treatment of puerperal infections, except in the direction of surgical interference.

This would appear to be more especially indicated where there was reason to believe that involvement of the venous sinuses had taken place. If this were so nothing whatever could be gained by an expectant policy; but, on the contrary, an early operation, before the large veins had become affected or pyæmia had resulted, would offer the best prospect of success. As to the nature of the proposed procedure, anything short of total extirpation of the uterus would clearly be

worse than useless. Where the septic process has invaded the ovarian vein—and this is evidently the most common course—there seems to be no reason why the affected section of the vessel should not be removed during the operation, if this were done by the abdominal method. In a case so far advanced, however, the danger would be much greater of septic deposit having already occurred in the organs.

Two facts may be pointed out. Owing to the comparatively protracted nature of many of the cases, time is not wanting for observation and decision as to action; and in the earlier stages the general condition of the patients is not such as to forbid operation.

The whole question is doubtless a very difficult one, and the outlook, perhaps at the best, not very hopeful. But in dealing with conditions, which if left to run their course must inevitably prove fatal, we are surely justified in seizing almost any chance of cure.

A CASE OF PUERPERAL SEPTICÆMIA,

IN WHICH A FAVOURABLE RESULT WAS OBTAINED FROM ONE INJECTION OF ANTISTREPTOCOCCUS SERUM.

By H. W. WEBBER, M.S.Lond.,
Assistant Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

Mrs. H., aged 30, was seen by me on December 11th, 1899. She had been attended by a midwife in her confinement on December 4th, and on December 9th the midwife left her, as everything was in her opinion quite satisfactory. I found her with a temperature of 105° F. and a pulse of 120; the secretion of milk was entirely arrested, and there was a profuse vaginal discharge of a rusty brown colour and peculiar foul pungent smell. The bowels had not been open for two days. The uterine cavity was well irrigated with a solution of carbolic acid (1 in 40), 4 grs. of quinine bisulphate ordered every four hours, and 10 grs. of colocynth and henbane pill at bedtime. A diet of milk and brandy (a drachm of the latter to each half pint of the former), and of beef-tea was ordered. In the evening the temperature had fallen to 103°. The uterus was again irrigated.

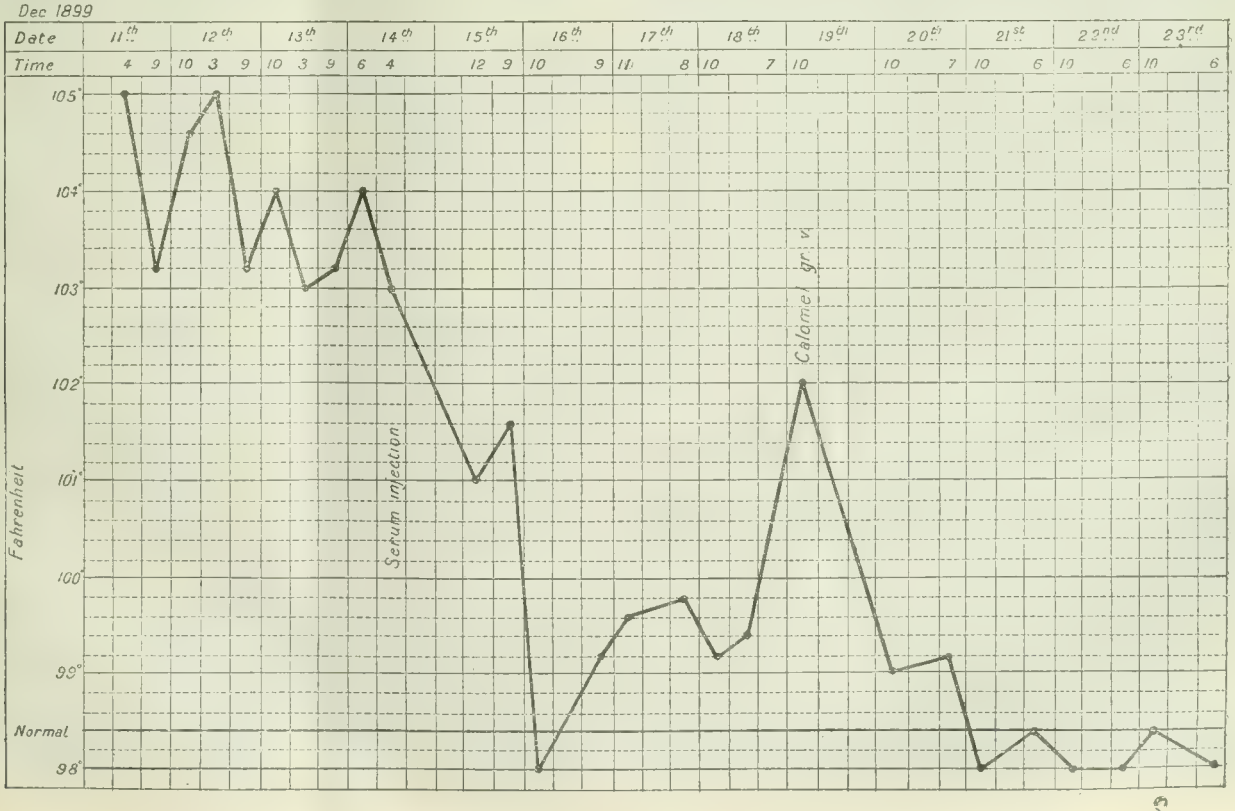
On December 12th the temperature in the morning was 104.6°, and the amount and character of the vaginal discharge were unaltered. Irrigation was carried out as before, and a closer examination disclosed that the os uteri was badly lacerated on the left side, the edges of the tear being thickened, evidently from recent inflammation. An icebag was ordered to be constantly applied to the head. On December 13th the patient seemed a little better, the temperature was 103°, but the same brown foul discharge came from the vagina.

On December 14th at 6 A.M. I was hurriedly summoned, and found her in very bad condition; she was only partly conscious, and brownish frothy material was issuing from the mouth. Later in the day I procured 10 c.cm. of antistreptococcus serum (Burroughs, Wellcome and Co.) and injected it into the subcutaneous tissue of the anterior abdominal wall. At this time her temperature was 103°, and pulse 130. She was in a delirious condition, and resented interference; no medicine and very little nourishment was taken.

Next morning (December 15th) the temperature had fallen to 101° F, and the pulse to 100. The patient's aspect and general condition were much improved, but the most satisfactory change was found in the vaginal discharge, which had decreased in amount, had lost its foul pungent smell, was much cleaner, and, for the first time, purulent in character. Intrauterine irrigation was again carried out, and some shreddy material came away.

On December 16th the temperature at 11 A.M. was 98° F. and pulse 85; the condition of the vaginal discharge was satisfactory. The patient, however, was becoming troublesome and morose, and would take food with only the greatest difficulty. For the next two days the highest temperature was 99.6°, and one irrigation daily sufficed to keep the discharge sweet; the inflammatory condition of the os uteri had now subsided.

On December 19th the temperature rose to 102°; but this was found to depend on constipation of three days' standing, and on being relieved by calomel it fell next day to 99°.



After this the temperature ran a normal course, and the vaginal discharge gradually lessened in amount. Her mental condition, however, did not improve, and she lost control of the bladder and rectum.

In consequence of this I sent her into the Plymouth Infirmary. I heard on January 1st from the medical officer, Dr. C. J. Cooke, that she had greatly improved in the latter respect; and on January 10th that her mental state, which had been for some days verging on melancholia, was also much better.

Note.—January 27th: I have to-day seen the patient, who is perfectly recovered, both mentally and bodily.

ON THE USE OF ANTISTREPTOCOCCUS SERUM IN PUERPERAL SEPTICÆMIA AND ERYSIPELAS.

By ALEX. J. ANDERSON, M.B., C.M.Edin.,
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The first of the following cases impressed me very much with the value of the antistreptococcus serum treatment. I tried the older methods for a time, and then used the serum as a last resource with excellent results.

Case I.—Puerperal Septicæmia.

History.—E. R., aged 32, primipara, was admitted to Staines Workhouse Infirmary on September 20th, 1899. She had been confined a fortnight before her admission. Before, during, and after her confinement she had been in extremely unfavourable surroundings, and had not been able to have proper nursing or sufficient nourishment. She informed me her temperature had been up to 104° and 105° F. before admission in spite of treatment and the use of the intrauterine douche.

Condition on Admission.—The temperature was 100.6°, the tongue foul, the pulse very weak and fluttering and 120 to the minute. She had a good deal of diarrhœa and complained of pain in the region of the right ovary. *Per vaginam* I found the uterus very soft and friable, and a considerable amount of exudation in the region of the right ovary—in fact, she was suffering from pelvic cellulitis. There was no offensive discharge.

Treatment.—To commence with I exhibited antifebrin, but as I found her circulation could not stand it I resorted to quinine on the second day after admission. She had 10 grs. of the sulphate night and morning for five days, but as her temperature went up to 104.4° I resolved on September 27th to try the antistreptococcus serum. I would have used the serum treatment from the first had I not seen it written by the makers of the serum that "in the present state of our knowledge of the subject, it may be questioned whether the serum treatment of streptococcal infection should be continued, although some apparently encouraging results have been obtained in this country." I may say here in passing that during the first week she had a diet of 3 pints of milk, 6 ozs. of brandy, and 3 eggs per diem, with a little mutton broth, as well as soda water and ice for the sickness. The diarrhœa was checked by the use of astringents, and the circulation helped by the use of digitalis, strophanthus, and strychnine. She was douched night and morning with 1 in 2,000 corrosive sublimate. Some pus and uterine mucosa came away during the first few days.

First Injection.—On September 27th, a week after her admission and three weeks after her confinement, feeling that nothing could save her unless it was the serum, at 8.30 P.M. I injected between the scapulæ 10 c.cm. of Burroughs, Wellcome, and Co.'s antistreptococcus serum. The temperature, which was falling, fell to 99.4° an hour and a half after, but three hours and a half after the injection rose to 102.2.°

Second Injection.—Next day, September 28th, I injected another 10 c.cm. at 6 P.M., when the temperature was 101.8°; in two hours it had risen to 103.8°, but was subnormal by 10 the next morning. However, the temperature had risen to 99.8° by 3.30 P.M.

Third Injection.—In the afternoon I gave her an injection to try and cut short the rise; in spite of this the temperature rose, but this time only to 101.4° two hours and a half after.

Fourth Injection.—The next day her temperature was 103.2° at 2 P.M., and I injected 10 c.cm. at 5.30 P.M. Instead of the temperature rising after this injection it fell to 99°.

Fifth Injection.—Next day at noon it was 99.4°. She was very weak; as I knew she could not stand more fever, with a great deal of misgiving I injected 10 c.cm. In six hours and a half her temperature was normal, and it remained subnormal for three days.

The makers of the serum state that 10 c.cm. should be given every twelve hours. I have seen it stated that the dose might be 10 to 30 c.cm. two or three times a day in acute cases; but in my hands I found the serum a most potent remedy, with a powerfully depressant effect on the circulation, and I dared not give more than one injection in the twenty-four hours. During the time of the injections she had no antipyretics whatevers. After each injection the pulse got markedly slow, irregular, intermittent, and she complained of faintness. I relied on large doses of iron and strychnine, and the exhibition of ammonia and hypodermic injections of ether when required, I noticed after the second injection that the tongue began to clean, and the pain in the region of the right ovary to subside. By the time she had the fifth injection the tongue was clean, the pain had gone, the diarrhœa stopped, and she seemed better in every way. After her temperature ceased to be subnormal, on October 5th it rose once to 99.8°, but under 2-grain doses of quinine every four hours it was normal in two days' time, and remained so during her convalescence. A day or two after the fifth injection, vaginal douches of 1 in 4,000 corrosive sublimate were used for a day or two, and then stopped. There was no discharge for a few days, but twelve days after the last injection there was sufficient lochia for a bacteriological examination, the report of which stated that the organisms found were streptococcus, staphylococcus, and a large bacillus. In another case I should have a bacteriological examination of the lochia made as soon as possible, as that seems to help to focus the indication for using the serum more precisely.

As to the after-effects of the serum, the skin over the scapula desquamated, and she had three or four small pustules on the back, and one developed into a good-sized carbuncle over the region of the right sacro-iliac synchondrosis. The injections were carried out with strict antiseptic precautions, and none of the pustules or carbuncle were caused by the injections. The patient was in such a desperate state; she had petechiæ here and there in the skin, and the skin of the forearm sloughed through pinching, while ether was injected hypodermically. In this case the skin was peculiarly tough to the sharpest needle, the other forearm swelled at the site of the ether injections, and remained hard for some time, but gradually yielded to treatment. The patient improved steadily, and was discharged cured, well and strong on November 18th, having been two months all but two days under treatment. I am of opinion that the effects of the serum should be watched from hour to hour, night and day, on account of its depressing effect on the circulation, which lasts for several days after all injections have been stopped. In this case I was unable to find out the cause of the septicæmia and sapræmia, whether due to measles, scarlet fever, gonorrhœa in the husband, or sewer gas; fortunately for her, whatever the cause, she only had a small dose of poison, though its effect was intensified by her weak state.

Case II.—Erysipelas.

S. L., male, aged 54, was admitted to Staines Workhouse Infirmary at 12 30 P.M. on November 9th, with a temperature of 102.1°. Next day at 2 o'clock his temperature was 103°. He had it severely on the face when he came in, then afterwards extensively over the face, head and neck, hands and arms; he was delirious off and on during the first fortnight after his admission. For the first nineteen days after his admission I treated him in the usual way giving him quinine every four hours, and opening all abscesses, of which he had a number on the scalp and two on the hands; these formed from time to time, and were opened in turn at the earliest indication of pus. As I found in spite of treatment his temperature rose to 101° or 102° daily, I resolved on November 28th to try the antistreptococcus serum. At 2 P.M. on that day his temperature was 99.8°. At 4 o'clock I injected 10 c.cm. to try and cut short the evening rise and the temperature, instead of rising to 102°, as on the evening before, fell slightly, and at 10 P.M. on the night of the injection was 99.8°. On November 29th, as the temperature was 100.8°, I injected at 4 P.M. 10 c.cm. of the serum, that night at 10 P.M. the temperature rose to 101°, but next day at 2 P.M. was 99.8°. At 5 P.M., 10 c.cm. of the serum was injected, the temperature fell gradually, in less than two days was normal, and the man made an uninterrupted recovery.

Case III.—Erysipelas.

W. W., male, aged 46, was admitted on November 27th with facial erysipelas, and a temperature of 100.6°. As this case appeared to me likely to be as severe as the other, I resolved to try the serum treatment at once, to see if it would shorten the attack, and turn the severe into a mild case; the serum succeeded far beyond my expectations. On the evening of his admission I injected, at 8.45 P.M., 10 c.cm., and at 6 A.M. next morning his temperature was 102°. At 2 P.M. on the day after his admission, as his temperature was 101.4°, I injected 10 c.cm. Again it gradually fell, but as it was 99.6° at 2 P.M. I injected another 10 c.cm.; the temperature fell to normal in 20 hours, but as there was a slight rise to 99.4° I injected, for the fourth time, 10 c.cm. In twelve hours the temperature was normal, and the man practically cured, and the temperature remained normal until his discharge.

In this case there was only one collection of matter in the left lower eyelid; this was opened at once, and soon healed up. What struck me was that here was a case of erysipelas with its chief incidence in the region of the left temple, eye, and side of face, much relieved in 36 hours, and practically cured in four days by this treatment; while in the other case, where the orthodox and older methods were used, I had no improvement whatever for 19 days, in spite of the very free use of the knife and antipyretics. In the second case, the convalescence was very rapid, as the man had only to suffer for a few days; in the former the man was in a dangerous state for about three weeks, ran grave risk of complications, and had a longer convalescence and felt pretty sharply the effects of all he had gone through.

A CASE OF PLACENTA PRÆVIA AND RUPTURE OF THE UTERUS: RECOVERY.*

By JAMES PEARSE, M.D.,
Trowbridge.

The following case is instructive from several points of view:

Mrs. F., aged 45 years, had had twelve previous full-time pregnancies and one miscarriage. Her previous confinements have been normal, except that she has always lost a considerable quantity of blood. I was summoned on the evening of December 6th, 1898, and found that the patient had been losing blood continuously during the afternoon, though not to any great extent. There had been no true labour pains. On examination the os was found very high up, the finger could just be introduced within it and could detect placental tissue, the head lying above. On realising the state of matters I sent for Dr. Wise, who kindly administered chloroform for me. I then digitally dilated the os till the hand could be passed through, occupying about a quarter of an hour in so doing, brought down a foot, and delivered a living child. On introducing the hand to remove the placenta I found the uterus ruptured, my hand passing readily into the peritoneal cavity. The rent was evidently on the posterior aspect of the uterus, and low down, as I had to withdraw my hand and pass it again forwards and upwards into the body of the uterus to remove the placenta, which was now lying free there. The loss of blood had not been excessive, and none occurred, at least externally, after delivery was affected, but the patient was by this time extremely collapsed and apparently moribund. She was very pallid, with sighing respiration, and no pulse could be felt at the wrist. However, she was surrounded with hot bottles, ether was freely injected and reaction shortly set in, so that after the lapse of an hour the patient was quite conscious, with good regular pulse. When seen four hours later the rally was fully maintained. On the following morning I found that the patient had slept slightly; she had no abdominal pain or tenderness; there was no elevation of temperature. The pulse was 80, regular, and of fair tension.

I need not go into details of the subsequent history of the case. The highest point reached by the temperature was 100.8° F., the pulse never exceeded 102. The patient complained slightly for some time of pain in the left iliac region, and there was slight tenderness here on pressure. The case progressed steadily, and the patient was allowed up on December 29th. My last note was taken eleven weeks after the labour. "The patient makes no complaint except that her strength has not fully returned, and she is not fit for her household duties, but is about all day and able to go out." I have not seen the patient professionally since this date, but frequently meet her in the street apparently in good health.

There was practically no treatment followed. The patient was fed regularly and carefully, and her appetite throughout was good. With the object of doing nothing to disturb the union which had taken place the bowels were kept locked for week. During the same time douching was avoided for the same reason. Douches of biniodide of mercury were then employed as the lochia were very slightly offensive.

This case is worthy of comment in that the patient recovered so uneventfully from the double complication of placenta prævia and rupture of the uterus. I find, however, on hastily looking up the literature of the subject, that recovery after uterine rupture is not so rare as one might imagine. The opinion has indeed been expressed that cases may not infrequently pass unnoticed and be labelled as peritonitis or cellulitis where this is the real lesion. I have been able to find records of 13 other cases in British literature, and in some of these the recovery was even more uneventful than in my case; thus I find "return to occupation in six weeks;" "quite well in thirty-seven days;" "recovery in a month." Norris gives the percentage of cases of recovery thus: Complete rupture of uterus without treatment, 20 per cent.; with drainage, 36 per cent.; with laparotomy, 44.7 per cent.

Undoubtedly laparotomy is the ideal treatment of this complication, but the circumstances and surroundings of the patient may render this impossible, and such cases as I have recorded serve to show that even then the outlook is not altogether hopeless.

With regard to placenta prævia, this case illustrates the danger of too rapid delivery. My impression at the time was that the rupture was caused by the passage of the head, and that the accident was assisted by an atonic condition of the uterine wall induced by the frequent pregnancies. In another case I should, after bringing down a leg, leave the case to be completed naturally. This involves the sacrifice of the child, but in such a complication as placenta prævia this is a secondary consideration.

* Read before the Bath and Bristol Branch of the British Medical Association.

A CASE IN WHICH A PULMONARY ABSCESS WAS SUCCESSFULLY DRAINED.*

By CHARLES A. MORTON, F.R.C.S.,
Professor of Surgery in University College, Bristol; and Surgeon to the Bristol General Hospital, and the Hospital for Children and Women.

I first saw this patient on April 14th, 1898, in consultation with Dr. Carter, with a view to operation. Four days before I saw him he began to expectorate very fœtid pus, and had coughed up about half a pint each day. There was dulness at the right base behind up to a little above the angle of the scapula, with faint and slightly tubular breath sounds over the dull area. I introduced the needle of an exploring syringe into the dull area, and at once withdrew offensive pus. His illness started with an attack of hæmoptysis seventeen days before I saw him, and he had suffered from severe pain with inspiration on the right side of his chest. His temperature at the time of our consultation was 104°. The diagnosis lay between an abscess in the lung and a localised empyema which had opened into a bronchial tube. The discovery of pus at the first puncture seemed almost too fortunate an occurrence for a case of abscess in the lung, and I was, therefore, rather inclined to think we probably had to deal with a localised empyema which had ruptured into a bronchial tube.

On the following day (April 15th) I operated. Chloroform was very carefully administered by Dr. Freeman, and the patient was never very deeply under. I again passed an exploring syringe needle into the dull area and withdrew pus, and then proceeded to resect a portion of one of the ribs a little way below the angle of the scapula, and lying between the two needle punctures. On removal of this portion of rib air was heard rushing in and out of the pleural cavity through a small opening made during the removal of the piece of rib. I therefore freely divided the parietal pleura, and on passing in my finger failed to detect any pleural adhesions. It was clear that the lung would have to be very carefully stitched to the parietal pleura before the pus could be safely evacuated, but this was not by any means easy to accomplish. With every inspiration the chest wall moved away from the collapsed lung, and I was obliged to hold the lung up against the opening in the parietal pleura with forceps which grasped the pulmonary pleura before I could get it sufficiently fixed to suture. The portion of rib which had been excised was very broad, and therefore without removal of part of another rib the opening allowed sufficient room to suture. When the pleural cavity had been shut off around an area of lung the size of a shilling, by suturing the two layers of pleura together, I put the exploring syringe needle into this area of lung and again withdrew pus. Up to this time the patient had been lying on his left side, but he was now turned on to his back, and then by passing a pair of sinus forceps for an inch or two along the needle track and expanding the blades, I liberated about half an ounce of very thick pus. A rubber drainage tube was inserted into the abscess cavity, and around it, and against the circle of pleural stitches, a mass of cyanide gauze was packed. He was none the worse for the operation.

The amount of pus expectorated at once greatly diminished, and a free discharge took place through the drainage tube. On the day after the operation there was no sign of air in the pleura, no friction sound had developed, and there was less pain in the chest than before the operation. In a few days the expectoration lost its fœtid odour, and a little later the discharge from the drainage tube, though still profuse, became sweet. The temperature went up to 101° or 102° at night for a fortnight after the operation, and the dulness at the base behind extended round into the axilla, and a probe entered the abscess cavity for several inches. It was evident that after the abscess was opened extensive breaking down of the lung continued, until quite a large cavity had formed. If a long drainage tube was left in this cavity it greatly increased his cough; care had to be taken that it should only just reach the cavity.

The expectoration ceased a month after the operation, but the discharge from the drainage tube was then considerable;

* Read before the Bath and Bristol Branch of the British Medical Association.

but when discharged from the hospital at the end of June—that is, two months and a-half after the operation—although a sinus persisted, there was hardly any discharge from it. At this time he was free from cough, and had gained flesh, the dulness at the base of the lung had diminished. The sinus closed five weeks later, but when seen on August 16th there was still some dulness at that base, but much more air entry. He had gained flesh, and had no cough. I did not see him again until January, 1900. He is now very well, actively engaged in work, and has no cough. The air entry at the right base is not quite as good as on the left, but the resonance is remarkably good.

As I did not see him until he had been ill for more than a fortnight, I cannot say much about the cause of the abscess; but it seemed to me most probable that he had had an attack of acute pneumonia, with rapid breaking down of the lung. There may have been actual gangrene of the lung, and by that I mean necrosis of a large mass of pulmonary tissue, but although the pus he at first expectorated and later discharged through the drainage tube was very offensive, I do not think it was quite as bad as we generally get in extensive gangrene of the lung.

The safe evacuation of the pus from a pulmonary abscess through the unobliterated pleural cavity is well illustrated by this case. There is no evidence that any infection of the pleura occurred; indeed such infection would have been almost impossible, after the two layers of pleura had been securely sutured together around the area of lung punctured.

A few years ago Dr. Clark and I published[1] another case of pulmonary basic abscess on which I had operated, and had the patient not died from an epileptic fit his lung would probably have recovered, for at the *post-mortem* examination we found that a small abscess had been satisfactorily drained, and the patient's condition had improved up to the onset of the fit. In that case there were dense adhesions between the lung and pleura, and after excising portions of the ribs I was able to cut into the adherent lung and freely open up the abscess.

In some cases in which the patient is discharging large quantities of pus from the lung the abscess is in the liver, and has eroded the diaphragm and lung and discharged into a bronchial tube, or formed another abscess in the lung which has opened into a bronchus; and in such a case, if no bulging of the liver is present, it may be very difficult to locate and open the abscess. In 1896 I published a case of this nature.[2] It was only after repeated explorations that at last the abscess was found and drained. But even in an abscess limited to the lung it is not often that one is fortunate enough to hit off a small cavity at the first insertion of the needle of the exploring syringe, as happened in the case which I record this evening.

REFERENCES.

BRITISH MEDICAL JOURNAL, 1897, vol. ii, p. 800. [2] *Ibid*, 1896, vol. ii, p. 1097

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

DOUBLE MONSTER: THORACOPAGUS: SINGLE HEART.

A DOUBLE monster with two complete male bodies joined laterally from axilla to hip was brought to me recently. On dissection it proved to consist of two complete sets of bones and organs, with these exceptions: (1) A single sternum; the outer ribs were very long, and joined the sternum in front; the inner ribs were short, about 1½ inch long, and touched mesially; (2) one pair of nipples; (3) one umbilicus placed centrally; (4) one heart.

CIRCULATORY SYSTEM.

The Umbilical Cord is single and normal, with two arteries and one vein, the maternal blood flowing straight into portal vein.

Venæ Cavæ.—Each fœtus is provided with a vena cava superior, the right vessel pouring its blood into the right auricle, the left vessel into the left auricle. The two inferior venæ cavæ unite to form a common mesial inferior vena cava. This vessel is very short (half an inch long), is attached to the middle line of the liver, and pours its blood into the right auricle.

The Heart, which is common to both fœtuses is mesially placed, and consists of two auricles and two ventricles, situated normally in relation to each other. The left ventricle is larger than the right. The two ventricles together are much broader in proportion to their length than in a normal heart.

The Right Auricle.—The walls are normal. The right superior and common inferior venæ cavæ, the right pulmonary veins and large thymus veins pour their blood into the right auricle. The foramen ovale is large, and communicates freely with the left auricle. The right auriculo-ventricular opening is tricuspid.

The Right Ventricle.—The walls, etc., are normal; contraction causes the blood to be expelled from its cavity through an opening guarded by three cusps. The blood is thence driven at once into two large arteries; the smaller of these supplies the five pulmonary lobes of the right fœtus, while the larger forms an aorta.

The Right Aorta.—The vessel is short (½ inch) and wide, giving off an innominate artery, and a second branch which divides to form the right carotid and right subclavian of the right fœtus. The innominate artery bifurcates and forms the left carotid and left subclavian of the right fœtus. The aorta arches to the right.

Ductus Arteriosus.—Absent.

The Lungs of both fœtuses alike: the five lobes massed together, the set of two lobes lying above the set of three.

The Left Auricle receives the left superior vena cava and large thymus and pulmonary veins from left fœtus; the foramen ovale is large and patent, larger than right auricle. The left auriculo-ventricular valve (mitral) is tricuspid, as also is the aortic. Thus all the valves of the heart are tricuspid.

The Left Ventricle, with very thick and strong walls, drives the blood into the left aorta, a vessel about ½ inch in length, before it gives off at right angles, a large pulmonary branch. It then ascends for ½ inch and gives rise to the innominate; it then arches to the left, giving off a large artery which divides into left carotid and left subclavian of the left fœtus. The arch gives place to the descending aorta. The innominate divides at once to form right carotid and right subclavian of left fœtus.

Other Viscera.—The two livers are joined mesially by what would be normally their "posterior surfaces"; otherwise normal. The spleens are normal except in position, that of the left fœtus being on the left and that of the right on the right. Other organs normal. The thymus glands are large.

An interesting point about the case is that the right child is extremely thin and emaciated, while the left child is plump and well clothed with fat. The left child is said to have lived for half an hour after birth, while the right child was said to have been born dead. When they came into my hands they were both dead, but the colour of the skin differed remarkably in the two children, the left being a rosy red, and the right a venous purple. This is readily explained by the patency of the foramen ovale, all the maternal blood going direct into the left heart, and hence to the left child. This double monster caused dystocia.

DE VERE CONDON, I.M.S.,
Agency Surgeon.
Deoli, Rajputana.

TWIN PREGNANCY WITH CENTRAL PLACENTA PRÆVIA.

THE case of central placenta prævia recorded by Dr. Collingwood Fenwick in the BRITISH MEDICAL JOURNAL of January 20th, p. 140, induces me to describe a somewhat similar one which occurred in my practice at Kirkcaldy in November, 1899.

The patient, a hard-working multipara, about 38 years old, a sufferer from chronic bronchitis and in poor general health, was probably well into the ninth month of pregnancy. Several days before I saw her she had had slight pains and some hæmorrhage accompanying them, but one morning a sudden and very profuse gush of blood rendered medical assistance necessary. The patient presented a distressing appearance; the pulse could not be counted; the skin was cold and clammy, and she had frequent syncope. A stimulant was given, and the patient gently placed in the usual obstetric position. There was slight uterine action, always attended by fresh discharge. The left hand was introduced into the vagina, and, after removing a large amount of blood clot, the os uteri was reached, situated very high, and dilated to about four-fifths of its size. The placenta was presenting, and engaged the whole diameter of the os, but, on pushing the hand upwards, one edge was found to have become partially separated by the previous contractions of the uterus, and it was possible, by detaching still further, to convert what was probably never an absolutely central implantation into a partial one. This manual separation almost entirely controlled the hæmorrhage, and the membranes were ruptured, the head presenting. The patient having rallied considerably, and being under chloroform to a very slight degree, I decided to use the forceps in preference to turning, as the os was so well dilated. The invaluable axis-traction instrument of Milne-Murray was easily applied, and the child delivered without undue haste, the placenta remaining in the uterus, which was still of large size. The hand being reintroduced, a second set

of membranes were presenting, and, on rupturing them, the feet of a second child were seized, and the rest of the body slowly delivered. Hæmorrhage was now more profuse but the uterus seemed fairly well contracted, and the placenta of the first child was found to be in the vagina. It was removed, and after eight or ten minutes, as the bleeding was not ceasing, the left hand was again introduced into the uterus and the second placenta—which was partially unseparated, and whose attachment extended into the inferior zone of the uterus—was carefully extracted. The patient was now very much exhausted, so 30 minims of ether were injected hypodermically along with $\frac{1}{60}$ of a grain of ergotinin, and a firm binder applied. Meat juice and brandy were afterwards administered at intervals and the patient was apparently steadily recovering, when, on making a movement to turn in bed, she suddenly expired, about six hours after the termination of the labour.

Obstetricians differ somewhat as to the rarity of this condition. Angus Macdonald puts it at 1 in 44,500 cases of labour. Barnes says it is not uncommon, and Winckel states that plural pregnancy predisposes to placenta prævia, the accident in his experience being relatively four times more frequent in plural than in single pregnancy. The risks to the mother must be much more grave when the condition coexists with a plural pregnancy, as one could not always adopt a mode of treatment which, under certain circumstances, must be very satisfactory—that of separating the placenta entirely, and giving the patient time to react from the effects of hæmorrhage before emptying the uterus.

Edinburgh, H. Oliphant Nicholson, M.B., C.M.Aberd.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

MANCHESTER ROYAL INFIRMARY.

A SUCCESSFUL CASE OF ENTERECTOMY FOR GANGRENOUS HERNIA.

By Arthur H. Burgess, M.B., M.Sc.Vict., F.R.C.S.Eng., Resident Surgical Officer to the Infirmary.

J. B., aged 15, was admitted into the infirmary on December 13th, 1899, with a strangulated inguinal hernia on the right side. He had noticed the existence of the rupture for the past four months, but, as he had always been able to reduce it easily, he had never worn a truss. Four days previous to his admission the hernia suddenly came down and he found it impossible to replace it. He suffered severe pain in the swelling and in his abdomen for two days, then commenced to vomit. A medical man was called in, who attempted taxis, but without success. Next day the pain began to abate, but the vomiting became fæcal in character, and continued until his admission the following day.

On admission, his general condition was extremely grave, all the chief features of acute intestinal obstruction being present. In the right inguinal region was a small tense swelling, without impulse on coughing, the skin over it being dusky red and pitting slightly on pressure. Under chloroform the sac was opened and about 1 ounce of fæculent fluid escaped. A knuckle of small intestine, about 2½ inches in length, was found tightly strangulated and in a gangrenous condition, a perforation about the size of a threepenny piece at the convexity of the loop having allowed the intestinal contents to escape into the sac, the lower part of which was also in a sloughing condition. On dividing the constriction at the neck of the sac, and drawing down the coil of gut, a second but smaller perforation was seen on the entering limb of the loop opposite the constriction. The wound was enlarged upwards, and the coil drawn out as far as possible. Clamps were applied on either side, and about 4 inches of intestine, including the gangrenous portion, were excised, along with a wedge-shaped piece of the mesentery. The divided ends of the gut were then united by direct suture, the mucous membrane being first joined by a continuous suture of the finest silk, and afterwards the peritoneal and muscular coats by a continuous Lembert suture, special care being taken to ensure accurate apposition at the mesenteric attachment. The divided mesentery was also sutured with fine silk. The gut having been reduced, the hernial sac was isolated near its neck, ligatured and divided, and a radical cure performed by Collier's method. The upper part of the wound was closed entirely, and gauze packing inserted into the lower part opposite the gangrenous portion of the sac. The operation lasted forty-five minutes.

The patient has since made an uninterrupted recovery without an unfavourable symptom, the temperature of 99° F. on the second night being the highest recorded. The bowels acted slightly two hours after the operation, again six hours later, and again after an interval of fifteen hours. Flatus was freely passed, the abdominal distension rapidly disappeared, and the vomiting ceased entirely. Warm water only was given for the first thirty-six hours, after that warm tea, milk, and soda-water. Benger's food was allowed on the twelfth day, chicken jelly on the fifteenth, and then a gradual return to ordinary diet. The wound healed without suppuration, all the sutures were removed on the fourteenth day, and the patient was allowed to get up at the end of three weeks.

For permission to publish the foregoing case I am indebted to Mr. Southam, for whom I was acting at the time. I am further indebted to Mr. Anderton, the house-physician, for his careful administration of the anæsthetic, and to Mr. Rayner, the house-surgeon, for his assistance at the operation and in the after-treatment.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. Bryant, M.Ch., F.R.C.S., President, in the Chair.

Tuesday, February 13th, 1900.

The Complete Mastoid Operation for the Cure of Chronic Purulent Otorrhœa.

The discussion of the papers of Mr. Ballance, Sir William Dalby, and Mr. Cumberbatch on this subject, adjourned from the last meeting of the Society, was resumed by

Mr. Lucas, who said that in regard to the plan advocated of covering over the raw bone surface with a cuticular graft reopening the healed wound, the defect of the operation consisted in that reopening, with possibly a third operation for the removal of the gold leaf. It was a desideratum that the whole object should be attained by one operation, particularly in the case of non-hospital patients. It might be possible that some means of closing the cavity could be applied at once. For the treatment of human ulcers frog's skin was said to be efficient and possibly a similar tissue might be employed in this operation. With regard to the selection of cases, the rule might be—when in doubt, operate. Reference was made to a case of otorrhœa in a child in which there was headache, vomiting, and stupor, with a slight ptosis on the same side and optic neuritis. A cerebral abscess was diagnosed, but none was found on trephining. The symptoms progressing, the mastoid was opened and the suppurating tympanum was cleared out. At the necropsy there was found tuberculous meningitis and general tuberculosis, arising from a caseating bronchial gland.

Dr. Milligan (Manchester) remarked that the disease being of such vital importance any improvement of the technique was to be heartily welcomed. The cardinal indications for operation were generally recognised, but there were some cases with less obvious indications, and in these the difficulty was especially great. If the view of an insurance company were adopted one had a valuable guide. It would either reject or heavily load the life of a patient with suppurative otorrhœa. Acute intracranial symptoms and even sudden death occasionally followed, but in other cases the general health was deteriorated alone, and in these surgical interference should not be delayed too long, but even before the disease could be called chronic, when it was merely in the subacute stage. In purely chronic cases the operation that had been advocated, placed as it was on the grounds of general surgical principles, was a distinct advance on previous opera-

tions, lessening as it did the period of after-treatment. He had himself employed small grafts, applied to a portion of the raw surface, but intended to use the larger as advised by Mr. Ballance.

Mr. A. E. BARKER entirely concurred with the views advanced in the papers. It was impossible to formulate fixed rules for the selection of the cases, and experience must be the chief guide, the special indications being derived from any particular case itself; and for the appreciation of these indications a long apprenticeship was necessary. The operation described was, he thought, an admirable operation, but required the experience of general surgery—particularly in the matter of epithelial grafting. The difficulty of manipulating grafts was proverbial; he had found it advisable to lubricate the blade of the knife, and to transfer the graft from it to a soft sponge with which it was applied to the cavity. He suggested that the covering of the grafts with gold leaf was unnecessary, a sheet of many-fold gauze was, he thought, sufficient; it might be allowed to stick to the graft and left there for five or six days. The deeper layers of the graft would by that time have adhered to the granulations, and these were alone essential.

Dr. WALKER (Leeds) observed that the great difficulty of the operation was during the recovery of the patients after they had passed from under the direct care of the surgeon. If the operation advocated shortened the convalescence, as it appeared to do, it was a great advance. He advocated a free incision in the first case and the complete removal of the bridge of bone passing from the antrum to the attic. An electric search light was useful to explore all the crannies of the middle ear. The management of the flap as described was admirable, but he questioned whether it would not be better to remove the cartilage from it altogether. Until lately he had always left an opening behind the pinna, and later he had used small skin grafts, cut with scissors. He had used the burr only for finishing off the operation achieved by the chisel.

Dr. DUNDAS GRANT said that pain and vertigo were strong indications for the operation unless explained by visible removable causes as they often were. Caries also was an indication unless involving the outer wall of attic or the ossicles. Cholesteatoma, unless limited to the outer wall of the attic, was also an important indication. Facial paralysis, nerve deafness, and general ill health were grave signs. An examination of the urine was important, as albuminuria was sometimes an indication, not against, but for the operation. The degree of hearing power preserved was often an encouragement to non-intervention. The faculty of hearing a whisper at 3 feet showed that the tympanic cavity was of some value, if less acute, the operation would not make the hearing worse. The persistency of suppuration, in spite of meatal treatment, was an important point; if coming from the posterior and upper part of the attic the indications were more urgent. Many cases were certainly cured without operation, but, on the other hand, disasters sometimes occurred when operation was postponed. Statistics showed that the operation was a successful one, but these were open to fallacies. The responsibility was greater in deciding against than for the operation. In the lower social grades the operation was more necessary, as the toilet of the cavity was less easily attained. The tendency would undoubtedly be to operate more and more frequently. The operation converted a narrow, flask-shaped cavity into an open basin. Whether it was always necessary to graft the inner wall of the tympanum was questionable; the effect on the mobility of the stapes was a point for consideration.

Dr. WILLIAM HILL asked what the proportion of cases of success was in this operation, and what were its indications in cases with good hearing.

Mr. BALLANCE, in reply, said that the suggestions he had made were not at all final. The objection of giving chloroform a second time was met by the fact that the operation was performed in cases where life was in danger. The patient was quite unconscious of the withdrawal of the gold leaf. In the cases of babies the grafts were taken from adults, but in others they were taken from the patients themselves, and this he thought was better than taking them from other persons or animals. No other structure was so useful as the epithelium of the patient. He thought the use of sponges meant the removal of the graft with the sponge. The gold leaf might be unnecessary, but he could not see his way to dispense with it. The dissection out of the cartilage from the conchal flap was a good suggestion. In children he was accustomed to cut the conchal flap away. There were, he considered, great disadvantages in using the mallet. Complete exposure of all the cavities was necessary for doing the operation satisfactorily.

Sir WILLIAM DALBY stated that the operation of Mr. Ballance had great advantages over every method of procedure with which he was acquainted. It had been truly said that this operation was not so easy as it seemed, requiring great delicacy of touch as well as very accurate knowledge of anatomical relations. It might be well to remember that Mr. Ballance had been operating on these cases for fifteen years before he was satisfied with the details in his procedure. In his portion of the paper Sir William Dalby had attempted to formulate the conditions and symptoms which led to the selection of cases for operation, and it was noticeable that in 3 of Mr. Ballance's cases in which he had advised the operation he had twenty or nineteen years before seen the cases and given his opinion as to possible dangers in the future. In one he had opened the antrum for urgent symptoms. This was at a period when existing knowledge did not permit of the operation now under discussion. There were also many cases in the past in which he had opened the mastoid cells, and saved life by so doing, but which would have been far better treated if it had been known how a complete operation like that of Mr. Ballance was possible, and how it would at once and for ever protect against risk of septicæmia.

Mr. CUMBERBATCH said that his feelings in the matter were more radical than his teaching or even his practice, but the operation in wrong hands left the patient in a condition worse than his original state.

CLINICAL SOCIETY OF LONDON.

Sir R. DOUGLAS POWELL, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, February 9th, 1900.

FATAL HÆMOPNEUMOTHORAX OF UNEXPLAINED ORIGIN.

Dr. ROLLESTON read notes of the case of a man, aged 21, whose past history showed nothing but some dyspepsia.

After diarrhœa and abdominal pain for two days, he was suddenly seized with intense pain in the right hypochondrium radiating to the umbilicus and right shoulder. When admitted twenty-five hours later to St. George's Hospital he appeared moribund, but subsequently rallied, and next day had signs of right pneumothorax, with considerable displacement of the heart. Some doubt existed as to whether the collection of gas was above or below the diaphragm. Paracentesis of the right side of the chest brought out air and blood at considerable pressure. Death occurred from exhaustion and bronchitis eight days after the acute onset of pain. At the necropsy the right pleura contained 60 ozs. of blood; the chest was first punctured under water, and the absence of air in the right pleura thus proved. No cause for either the blood or the gas in the right pleura was found. Except for collapse the lung was healthy; microscopically there was no evidence of tubercle or of pleurisy. There were no signs of traumatism, aneurysm, hæmophilia, cirrhosis of the liver, or scurvy.

RAPIDLY FATAL HÆMOPNEUMOTHORAX, APPARENTLY DUE TO RUPTURE OF AN EMPHYSEMATOUS VESICLE.

Dr. NEWTON PITT reported the following case:

The patient was a young man, aged 18, who had always enjoyed good health. On September 15th he had a sore throat, vomited three times, and had his bowels opened twice, but he was only confined to the house for a day. He went out for a walk at 4 P.M. on Sunday, the 19th, but had to return on account of pain in the right chest and shoulder. This increased during the night, and at 4 A.M. he was extremely ill, with intense pain and collapse; at 8 A.M. he was cold, pulseless, and had vomited. When seen in consultation with Dr. Stokes, of Highbury, at 3 P.M., there was evidence of an acute pneumothorax, with dulness over the right base; the heart was pushed over, so that the impulse was 2 inches to the left of the nipple line. The heart rate was 150; there was no pulse at the wrist.

In order to relieve the intense pressure a Southey's tube was inserted in the sixth space in the axilla, with the intention of allowing the fluid and gas to gradually escape into a large antiseptic dressing, which was the most satisfactory method of dealing with a pneumothorax. It caused surprise to see some ounces of blood escape, after which the tube became blocked with clot. It was reinserted further forwards, when blood and air bubbled out. The pain and distress increased, and were not at all relieved by the operation; it was therefore concluded that the hæmorrhage was continuing. An in-

jection of morphine was given to quiet him, with the intention of again attempting to relieve the tension next day should the hæmorrhage cease. He died, however, the same night at 8 P.M. At the inspection the right pleura was found to contain 8 pints of fluid blood, with as much clot as filled the hands three times, and also a considerable quantity of air. The lung was tightly compressed, the heart pushed over to the left. A careful examination was made for the source of the air and blood. No perforations or injuries could be found, nor was there any trace of a tuberculous, inflammatory, or necrotic lesion in the lung. The heart, aorta, pleura, and lung were normal, with the exception that there was an emphysematous bulla, about half an inch in size, torn open, situated near the apex of the lung, and attached to this was a ruptured adhesion, the size of a knitting needle, from which the blood might have come, but no aneurysmal pouch or large patent vessel was visible. The lesion was undescribed in medical works. Punctured wounds of the lung and chest might produce this condition, which it might be supposed must also occasionally result from any acute process, which destroyed both the wall of a blood vessel and also the lung tissue near the pleura, such as a caseous pneumonia, gangrene, or abscess; but cases due to these causes did not appear to have been recorded, with the exception of a reference by Saussier. Replying to the PRESIDENT, Dr. PITT said that there were 8 pints of fluid blood and two or three handfuls of clots.

Dr. KINGSTON FOX mentioned the case of a man, aged 44, healthy and robust, who was seized with symptoms of pleurisy, with a temperature of 101.0°.

He had effusion, and was tapped on the tenth day, when about 15 ounces of dark blood were taken away. Three days afterwards the fluid had increased and pneumothorax was present; he was accordingly tapped again, and 44 ounces of blood, with much air, came away, the air bubbling up through the water into which the drainage tube discharged. The subsequent treatment was expectant, and the patient quite recovered after a journey to the Cape and back. There was no family or personal history of tubercle: but the patient worked in an ill-ventilated City office, built on the site of an old church. Settlements had occurred, the concrete of the foundation was faulty, and sewer air found entrance to the office, and three of the clerks broke down with lung trouble within six months, so that it looked as if the cause were septic.

Sir DYCE DUCKWORTH thought the sequence of events in these cases was rupture of lung, pneumothorax, hæmorrhage, all due to tuberculosis.

Dr. S. WEST referred to a case of pyo-pneumothorax, the pus being evacuated by operation, and this followed by hæmoptysis. After death it was found that an aneurysm had broken into an old tuberculous cavity, and as the cavity communicated with the pleura, hæmorrhage occurred both ways.

Dr. PERCY KIDD asked if the bacillus capsulatus aërogenes was to be excluded, seeing that in neither case was any trace of tubercle discovered.

The PRESIDENT alluded to the large amount of fluid drawn off. He had made experiments years since upon the cadaver, and found that he could not pump more than 6 or 7 pints into the chest.

Dr. ROLLESTON, in reply, said his patient had had diarrhœa, which might have been of toxic origin.

Dr. PITT, in reply, stated that he had expected to find tuberculous lesions *post mortem*, but could discover none. Cases had been recorded in which 11 or 12 pints of fluid had been withdrawn from the chest by operation.

Operation for Perforating Duodenal Ulcer.

Dr. J. J. PERKINS and Mr. C. S. WALLACE reported the following case:

The patient was a man, aged 52, admitted to St. Thomas's Hospital complaining of epigastric pain of three days' duration, with a violent exacerbation six hours before. There had been no vomiting. The abdomen was tense, rigid, almost motionless, with complete absence of liver dulness in the nipple line. Ten hours after the onset of acute pain the abdomen was opened through the right rectus; the age and sex of the patient, the history and the absence of liver dulness, making it probable that a duodenal ulcer had perforated. A perforation was discovered at the junction of the first and second parts of the duodenum: the edges were clean cut, and showed no sign of induration. The intestines showed some points of injection, but there were no very evident signs of peritonitis. The perforation was closed with two rows of sutures, and the abdomen cleaned with evisceration and flushing with sterilised water. The abdominal opening was closed with silkworm sutures and by a row of buried sutures. A gauze wick was left in, passing down to the seat of the ulcer without further drainage. Convalescence was uneventful. The plug was removed on the second day, the bowels were opened by enema on the third day, and milk first given by the mouth on the tenth day.

Operation on these cases was favoured by the site of the perforating ulcer, which in 29 out of 37 reported cases was on the anterior wall. The condition of the abdomen when seen early was that of early peritonitis, rigidity, contraction, and loss of movement. Paroxysmal exacerbations of pain due to peristalsis increased the resemblance to colic. The complete absence of liver dulness internal to the nipple line was to be taken as a guide. In locating the perforation to the duodenum the previous history of the patient was an aid in perhaps half the cases, though perforation in many cases occurred without the slightest previous warning. The site of the pain caused by the perforation at its onset was of great help, though occasionally misleading. From statistics it was clear that duodenal could hardly be diagnosed from gastric ulcer. The resulting peritonitis was sometimes diffuse from the first, but often the great omentum shielded the mass of the intestines and directed the extravasation to the pelvis. The right lobe of the liver on its upper aspect and the parts around the duodenum were especial sites of the inflammation in these cases, and particular care should be taken in cleansing these regions. The whole abdomen, however, should be irrigated, the intestines being turned out and flushed. Drainage was not required, but a gauze wick should be left in the abdominal wound running down to the site of the ulcer. The collapse, which was a marked feature of these perforations high up, should be met by saline infusion, and operation proceeded with as quickly as possible.

Mr. BATTLE thought the diagnosis of these cases was difficult, and their treatment delicate; and cited instances.

Mr. BARKER disputed the authors' statement that the proper treatment was irrigation of the abdomen and removal of the intestines therefrom for the purposes of cleansing. He congratulated the authors on their success, but feared that in many cases the surgeon would only accomplish the reduction of the intestine to see the patient die of shock. In cases of perforating ulcers of the stomach it was sufficient to soak out the fluids that were effused, and trust to the reparative power of the peritoneum, which could dispose of a large amount of septic matter. Even with a great extravasation of fluid this could usually be done, and the abdomen left comparatively clean, by the passing in of gauze and sopping up of the extravasation.

Mr. PEARCE GOULD doubted if anything coming from the stomach was septic; it was extremely acid and irritating, and it was well to remove it as early as possible, lest it should become septic.

Dr. POYNTON had made necropsies on 8 cases of duodenal ulcer at St. Mary's Hospital, and had seen other cases diagnosed as such in the wards. Of the 8 cases, 6 were males, 2 females. The ages ranged from 28 to 56. One case showed no symptoms during life, and that case was associated with cirrhosis of the kidneys. Four of the cases were admitted with acute perforation. All the ulcers except one were extremely chronic, and all except one had made their way through the intestine, and had formed a new floor by adhesions. Except for 2 cases all were single ulcers, and all were in the first part of the duodenum. The severity and long duration of the pain was an important feature of the disease, though it resembled the pain that occurred in erosion of the vertebræ or in abdominal aneurysm. In one case there was not much pain by day, but excessive pain at night. The diagnosis was difficult during life, so that one hesitated to advise recourse to morphine. In one of the cases there was great dilatation of the stomach without any duodenal stricture. The association with kidney disease was shown in 5 of the cases. Probably some underlying cause produced both the renal and the duodenal disease. The firm adhesions to other organs localised the disease, and should warn the surgeon that in breaking them down he might be the unwilling cause of a surgical calamity.

Mr. CHARTERS SYMONDS considered that evisceration was an unnecessary procedure; but between that practice and Mr. Barker's small manipulation with gauze and without any fluid there was a middle course—flushing and sponging—which he thought was the best. In one case of his own done six hours after perforation the man recovered. In 2 cases of duodenal ulcer he had divided the duodenum for the relief of gastric dilatation; one patient recovered, the other died from hæmorrhage.

Dr. PERKINS, in reply, said that the absence of adhesions in

the perforating ulcers might be contrasted with the adhesions present in chronic ulcers.

STRICTURE OF THE SMALL INTESTINE FOLLOWING STRANGULATED HERNIA.

Mr. T. H. KELLOCK related this case.

The patient, a youth, aged 16, was admitted to the Middlesex Hospital with strangulated left inguinal hernia. Two years previously he had been operated on for hydrocele in connection with an imperfectly descended testis. He had had a hernia some time, but had always been able to reduce it easily; he had not worn a truss. He had strained himself on the morning of admission; the hernia came down and he could not reduce it. On admission he was collapsed and vomiting. The swelling in the left inguinal region was as large as an orange. At the operation there was no fluid in the sac, which contained a piece of discoloured omentum and about 4½ inches of small intestine, very dark in colour, but still retaining a shiny appearance, and after the stricture had been divided and a little more intestine drawn down, the colour improved a little. The intestine was therefore returned to the abdomen, and then the testicle was found lying internal to and behind the hernial sac. It was surrounded by a tunica vaginalis, which contained a good deal of clear fluid, but which did not communicate either with the sac of the hernia or the general peritoneal cavity. The testicle and tunica vaginalis were removed, and the operation completed by closing the inguinal canal and skin with sutures. For three weeks the patient did well, and the wound healed by first intention. Then he began to suffer from slight pain in the abdomen, some vomiting, and occasional slight distension of the abdomen. On one occasion he had a rigor lasting 15 minutes; when the temperature rose to 102.2°, but with this exception, the temperature was normal throughout. By the use of medicines and enemata these symptoms were relieved, and the patient was sent to a convalescent home five weeks and a-half after operation. The bowels were then acting regularly, and he was free from pain. During his stay of three weeks at the home he had occasional pain in the abdomen, constipation, vomiting and some distension of the abdomen, and these symptoms continued more or less till his readmission to the hospital six weeks after his discharge. They were always relieved by aperient medicines, but tended to increase in severity rather than decrease. He was readmitted complaining of great pain in the abdomen, vomiting, and profuse diarrhœa. For a few days he improved under treatment, but then the symptoms returned, so the abdomen was opened in the middle line below the umbilicus. A coil of small intestine was found in the right iliac fossa, which was considerably constricted; the gut above it was hypertrophied and dilated; that below was about normal size; while a piece of omentum containing rather large vessels was attached to the front of the coil. This piece of omentum was ligatured and divided, and a lateral anastomosis made by Halsted's method, uniting the intestine above and below the strictured portion. The abdominal wound was then completely closed. For two or three days the patient made fair progress, but then the abdomen became distended and tender, showing evident signs of general peritonitis: vomiting recommenced, and the general condition became very grave. The wound was reopened, and a drainage tube inserted leading down to the seat of operation. Death occurred about 15 hours subsequently. At the *post-mortem* examination general peritonitis was found, the anastomosis was found to be firm and watertight, with a good opening between the portions of bowel united. There was gangrene and perforation of the coil of small intestine, which had been put out of action by the anastomosis, and the mesentery attached to it was hard and puckered. In this portion a stricture was found, extending about half an inch in the long axis of the bowel, and almost completely obstructing the lumen.

Attention was called to the rarity of stricture of the small intestine to a degree calling for operative treatment, as a result of strangulated hernia. The association of inguinal hernia and imperfectly descended testicle was common, but in this case the hernia was not of the congenital variety, as the tunica vaginalis was separate from the sac of the hernia. The bowel was returned to the abdomen at the first operation rather than resected, as it was thought it would recover, more especially in a patient of this age. At the second operation the chief interest was in the piece of omentum which was adherent to the bowel; it was noticed at the time that this contained large vessels, but the importance of this fact was not recognised till later. What had apparently occurred was that at the time of the strangulation the mesentery had been severely constricted, and after the return of the bowel it (the bowel) had become adherent to the omentum, and, nourished in this way and not by means of its mesentery; the division of this piece of omentum had cut off the blood supply of the coil of intestine, which had therefore become gangrenous and perforated, setting up a general and fatal peritonitis.

Mr. BATTLE had during the last two years seen four cases of stricture of the intestine, either secondary to inflammatory changes or of a fibrous nature. One case was caused by caseous glands in the mesentery, and the patient recovered after lateral anastomosis. The second case came with acute obstruction after operation for appendicitis two years before. There was cicatricial contraction about the ileum. The operation was unsuccessful. Another case was that of a man, aged about 60, with cicatricial contraction of the small intestine, two or three coils of which were adherent and twisted. He undid the twist, and the man recovered; but eighteen months afterwards he returned with acute obstruction, when Mr. Battle did a lateral anastomosis, "short-circuiting" the bowel by three or four feet. There was no adhesion between the intestine and omentum in either of the four cases.

Mr. SYMONDS commented on the author's observation that the blood supply of the strangulated loop was derived from the omentum, and asked if the gangrene was limited to the part above the anastomosis, or if it involved the stricture and the part below.

Mr. KELLOCK, in reply, said that nearly the whole piece of bowel below the anastomosis was discoloured, with a perforation at its apex. The piece of bowel had been nourished through the abnormal adhesions instead of by the usual mesenteric supply, and the division of the former had caused gangrene of the bowel.

THE LONDON POLYCLINIC.

Wednesday, February 7th, 1900.

THE CLIMATE AND DISEASES OF SOUTH AFRICA.

DR. ALFRED HILLIER opened a discussion on the climate and prevailing diseases of different districts of South Africa. He followed in his remarks somewhat closely the facts and their grouping as contained in his article contributed to the BRITISH MEDICAL JOURNAL on December 2nd, 1899. He pointed out the relation of the climate of South Africa, in the first instance to its latitude, being principally south of the Tropic of Capricorn; and, secondly, to the physical configuration of the country. There was a more or less continuous chain of mountains running concentrically with the coast, at an average distance from it of 125 miles, giving the region of coast terraces, the region of the mountains themselves, and the region of the extensive inland plateaux. He drew attention to a subsidiary range of mountains running at right angles from the eastern part of the former, and ending in the Transvaal gold fields, which separated a northern river basin, where the bilharzia was prevalent, from a southern basin where the parasite did not occur. The towns on the coast had the ordinary littoral climatic characters, but they were subject to dust storms which seemed to have a causal relation with epidemics of pneumonia. Their average rainfall was very nearly that of London, while the humidity of the inland towns, as Johannesburg, was much less, and the climate of these towns was in other ways more bracing. The winter was certainly the pleasantest and most healthy time of the year. The same subsidiary range of mountains divided the malarial from the non-malarial districts. The prevalence of respiratory diseases in the more temperate portion of South Africa, and of alimentary diseases in the subtropical districts was discussed, and the reasons were suggested in the one case as an indoor life, and in the other the contamination of food and water with micro-organisms. The factors concerned in the remedial effect of the climate on phthisical patients were the altitude, and the dry bracing air, together with the open-air life pursued. Reference was also made to typhoid—the bane of subtropical countries—to so-called camp fever and other unclassed tropical fevers, also to dysentery, bilharzia, and diphtheria.

Mr. JONATHAN HUTCHINSON described the experience of a personal friend in regard to the hygienic conditions of the Pietermaritzburg neighbourhood, and especially to the prevalence of dysentery, so-called, but which was of so slight a form as rather to merit the name "dysenteric diarrhœa." He suggested that the prevalent intestinal complaints depended rather on indiscretions in diet, particularly in fruit and other vegetable comestibles, than on climate. He asked if enterica was not limited to the towns, thus depending on defective sanitation. In the district named the unclassified fevers were generally considered to be associated with the blasts of hot air coming from the interior during certain months of the year. He referred to the cases of leprosy in Cape Colony and to its possible relation with fish-eating habits. He described how the Boers had taken a colony of Malays as slaves whose industry was the salting of fish, and how this became an important article of diet with the navvies working on the railways in the interior. He had had one patient, a Welshman, suffering from leprosy in whom it had developed under these conditions. Contributions from personal experi-

ence of diseases peculiar to South Africa were invited, such as the diseases of the aboriginal tribes, the prevalence of yaws, and of particular forms of syphilis. He asked whether tuberculous complaints existed among the Dutch population.

Dr. Hillier, in reply, said that dysentery in South Africa seemed to be independent of diet—to be rather climatic. Cases of typhoid were rare in isolated farms, while cases of diphtheria were common. He thought there was an important relation between altitude and diphtheria. Tuberculosis hardly ever affected the Boers; cases which did arise in the plateaux were imported.

Medical Society of London.—At a clinical meeting on February 12th, Mr. G. R. Turner, F.R.C.S., Vice-President, in the chair, Mr. F. Jaffrey showed a case of urticaria pigmentosa in a male child, aged 18 months.—Dr Chapman showed a girl of 18 suffering from congenital cyanosis without discoverable morbus cordis.—Sir Hugh Beevor showed a man, aged 23, with cardiac and arterial symptoms of aortic regurgitation and stenosis who exhibited in a marked degree the phenomenon known as pulsus bisferiens.—Mr. A. Barker showed a girl, aged 4, with congenital dislocation of the hip, and showed skiagraphs, from which it appeared that the head was rotated forwards and not, as usual, backwards. He discussed the results of operative treatment in the hands of Lorenz (360), Hoffa (170), and Mikulicz (100), observing that he not think the method of forcible reduction could commend itself to surgeons in this country in view of the large proportions of mishaps which occurred. Mr. Wallis said he had seen a good many of these cases after more or less formidable operations, and had been struck by the fact that the patients did not walk as well as certain others who had been left untreated. Mr. Lynn Thomas (Cardiff) mentioned a case of double congenital dislocation in which, after operation, the waddling gait had disappeared, although a skiagraph showed that the head was still on the dorsum.—Dr. W. Ewart showed a man whom he was treating by a waistcoat or corset designed to exert a pressure on the thorax during expiration with apparently satisfactory results in the relief of emphysema. Dr. Willcock showed a more elaborate apparatus which he had devised with same object in view.—Mr. W. H. Battle showed a patient, aged 29, who had suffered for upwards of two years from pain in the left femur, which had gradually bent backwards with the formation of a large swelling over the convexity. There was a history of syphilis seven years ago. He diagnosed the case as one of osteitis deformans affecting only one bone.—Dr. W. J. Hadley showed (1) an example of osteoarthritis in a girl; (2) a girl who had had an attack of chorea three years before followed by mitral regurgitation. She had had attacks of pain in the right foot and elsewhere without swelling; after the last attack an increase of cardiac trouble had been noted. After an attack of pain in the left axilla the left arm had become blanched and cold. The spleen was enlarged and hard.—Mr. Lynn Thomas, of Cardiff, showed a pair of forceps designed for compressing the artery in amputation of the hip-joint, though applicable in any situation. It was provided with two long blades, one of which was smooth and probe-pointed; this was thrust behind the artery and pressure exerted.—Mr. McAdam Eccles showed three cases of inguinal hernia, each of which had been modified by the abnormal descent of the right testis.—Dr. E. Cautley showed the heart of a boy, aged 14, previously shown as a case of congenital heart disease, probably aortic. The boy died suddenly. The left ventricle was much hypertrophied, and the aortic valves were much thickened and adherent at their edges, leaving only a small slit like orifice.—Dr. S. Mullick showed a man, aged 22, in whom the apex beat was felt on the right side in the sixth space, 9.5 cm. from the mid-sternal line. The upper border of the heart was opposite the third right rib. There was no cardiac murmur. The liver and stomach were also transposed to the left and right sides respectively.—Mr. F. C. Wallis showed a boy in whom he had performed enterectomy. (This case will be published in full.)

Obstetrical Society of London.—The annual meeting was held on February 7th, Mr. Alban Doran, President, in the chair.—The reports of the Treasurer, the Honorary Librarian, and the Chairman of the Board for the Examination of Midwives were received and adopted.—Sir William Overend Priestley and Dr. James R. Chadwick were elected Honorary Fellows of the Society.—The President delivered the annual address, reviewing the work of the past year.—The officers and other members of Council were appointed for the year 1900 as follows:

President: Alban Doran, F.R.C.S. *Vice-Presidents:* John W. Byers, M.A., M.D. (Belfast); William Radford Dakin, M.D.; John Phillips, M.A., M.D.; Jamieson Boyd Hurry, M.A., M.D. (Reading). *Treasurer:* James Watt Black, M.D. *Chairman of the Board for the Examination of Midwives:* Percy Boulton, M.D. *Honorary Secretaries:* Herbert R. Spencer, M.D.; Amand Routh, M.D. *Honorary Librarian:* Montagu Handfield-Jones, M.D. *Other Members of Council:* Augustus W. Addinsell, M.B., C.M.; A. H. Freeland Barbour, M.D. (Edinburgh); George Francis Blacker, M.D.; Robert Boxall, M.D.; Francis Henry Champneys, M.A., M.D.; Thomas Vincent Dickinson, M.D.; Angus Fraser, M.D. (Aberdeen); Arthur Edward Giles, M.D.; George Ernest Herman, M.B.; Thomas Robert Lombe, M.D. (Torquay); John Dysart McCaw, M.D.; Ewen John Maclean, M.D.; Hugh James Moon Playfair, M.D.; William Loudon Reid, M.D. (Glasgow); George H. Drummond Robinson, M.D.; William Japp Sinclair, M.D.; Arthur Francis Stabb, M.B., B.C.; John William Taylor, F.R.C.S. (Birmingham).

The following specimens were exhibited:

Dr. Amand Routh: Conjoined twins.—Dr. W. S. A. Griffith: Cancer of ovary.—Mr. Cuthbert Lockyer: Intraligamentary oöphoritic cystoma.

West London Medico-Chirurgical Society.—At a meeting on February 2nd, Mr. Alfred Cooper, in opening a discussion on the Treatment of Primary and Secondary Syphilis, placed no reliance either in excising the indurated sore or attempting to destroy it by any cauterant. It was now an established fact that mercury was the best agent to be relied upon for treating the indurated sore, and its use should be commenced as soon as the diagnosis was made. The application to local sores should be, he thought, black wash or equal parts of mercurial ointment and vaseline. In the case of a sore running into phagedæna, it would be unwise to use any mercury at all. The local treatment would consist of putting the patient into a hot bath until the sore assumed a healthy character. It had been stated by Gowers that syphilis was incurable; he did not agree with that dictum. He had found tannate of mercury to possess great advantages over other drugs. It was quickly absorbed and quickly eliminated, and it did not produce stomatitis to such a degree as other preparations of mercury. It could be given in doses of one to two grains in pill three times a day. Treatment should be continued for two years. He had found intramuscular injections of mercury most successful. Since 1894 he had used injections of sozoiodol of mercury, one-eighth of a grain once a week with great success. At the present time at the Lock Hospital they were treating patients by intravenous injections of mercury, as originally suggested by Baccelli. Cyanide of mercury was considered the best preparation to use.—Mr. Swinford Edwards said that in the treatment of primary and secondary syphilis he was a believer in small doses of mercury continued over long periods. When mercury upset the gastro-intestinal canal, intramuscular injections of sozoiodol of mercury were of great use.—Dr. J. A. Shaw-Mackenzie thought that the external methods of administration of mercury better fulfilled the theories of elimination of virus through the skin, phagocytosis and leucocytosis apparently underlying natura cure, and from long association with the late Mr. Henry Lee, he advocated the method of calomel fumigation.—Dr. Phineas Abraham suggested that arrangements might be made for the reception of syphilitic patients into sanatoria where they could be properly watched and treated. He used small doses of hyd. c. cret., with pulv. ipecac. co., given frequently for at least a year, with mild mercurial ointments for the cutaneous manifestations.—Mr. L. A. Bidwell gave a brief account of Continental methods of treating syphilis as practised at Aix-la-Chapelle.—Mr. McAdam Eccles, Mr. Herbert Paterson, Mr. Rickard Lloyd, Mr. C. B. Keetley, Mr. G. E. Twynam, Mr. H. de Méric, Dr. Rayner Batten, Mr. A. R. S. Douglas, and Mr. Percy Dunn also took part in the discussion.

North London Medical and Chirurgical Society.—At the January meeting of this Society, Dr. C. E. Beevor in the chair, a discussion on syphilis took place. Mr. Ehrmann showed a typical case of primary syphilis. He said that

in the treatment of syphilis by inunction, as carried out at Aix-la-Chapelle, the skin was usually considered to be fit for the absorption of mercury on the third or fourth day after the arrival of the patient. The dose used (mainly the unguentum hydrargyri cinereum) was from 2 to 3 grams daily; this might be increased to 4 or 5 grams if the process were well borne. The parts of the body where the mercurial ointment was to be rubbed in from day to day were five in number: the two legs on the first day, the two thighs on the second day, chest and abdomen on third day, back on fourth day, both arms on fifth day. Irregular and hairy parts were to be carefully avoided, for in these acne and eczema were easily induced by the rubbings. It was not advisable to perform inunction at bedtime, nor when the skin was moist. The morning was the most favourable time. Every day the patient took a half-hour's bath at 96.5° F., and every morning he drank two to five glasses of thermal water. After the twentieth day of treatment, a steam bath of ten to fifteen minutes' duration was taken on alternate days, or every second or third day. After the steam bath, an ordinary bath was taken for ten minutes, followed by cold douche. As to the manner in which the mercury entered the system, Wings thought that there was a direct transit of mercurial vapour, while Fürbringer said that a chemical change occurred in the metal by combination with the secretions of the skin. The value of the thermal sulphurous waters in aiding specific remedies in syphilis was due partly to their effect on general nutrition and in part to their direct action on the skin. Neisser said that during the inunction treatment the sulphurous baths converted some of the mercury into the inactive sulphide; and he suggested that sulphurous waters might help to ward off mercurial enteritis.—Dr. WHITFIELD said that he should be inclined to give mercury directly he was certain of his diagnosis. In those cases in which the chain of symptoms was not well marked he would prefer to wait for the early rash before committing his patient to a long course of mercury. As regards the preparation of mercury, he preferred using grey powder in small doses (gr. j) two or three times a day. It was a good plan also to prescribe a chlorate of potash mouthwash in every case. In some cases he gave iodide of potassium quite early in the disease, usually merely to relieve symptoms; or if the throat condition was severe and appeared to be aggravated by mercury, then it was as well to cut off the latter and use iodide and local gargles until the throat recovered. In late syphilis of the skin he relied to a greater extent on local remedies. Lastly, he called attention to Zittmann's decoction, in which the medicinal treatment consisted mostly of a mixture of alum, senna, and sarsaparilla with minute quantities of calomel. Dr. Whitfield showed two cases illustrative of late syphilis and irritation:

Case I, a woman infected five years ago, and now suffering from two patches of grouped papules below the left patella where kneeling would irritate the skin. It was pointed out how like this form of eruption was to lupus, but the superior hardness and the more rapid formation of the syphilide cleared up the diagnosis. Case II, a man with a subcutaneous gumma on his arm. This had formed just where a strap chafed him. His original attack occurred more than three years before.

—Dr. DAY, who advised circumcision for Mr. Ehrmann's patient, Dr. BLACKER, and Messrs. ELWORTHY and MOWER WHITE also took part in the discussion.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting held on February 6th, Mrs. SCHARLIEB, M.D., M.S., President, in the chair, Miss COCK, M.D., showed two cases of intracranial disease: (1) Jacksonian epilepsy in a girl, aged 15; (2) a girl, aged 10, in whom the cerebral condition was due probably to congenital syphilis.—Miss GARRETT ANDERSON, M.B., read a paper on two cases of infective endocarditis; the first being of especial interest from the fact that the disease was associated with gall stones and suppurative cholangitis.—Miss STONEY, M.D., showed a specimen of diverticula of the œsophagus, already shown at the Anatomical Society.

NEUROLOGICAL SOCIETY.—At the annual meeting, held on February 8th, the following were elected officers for the ensuing year:—*President:* Augustus Waller, M.D., F.R.S. *Vice-Presidents:* W. Julius Mickle, M.D., Herbert William Page, M.A., F.R.C.S. *Council:* C. A. Ballance, M.S., W. H. Gaskell, M.D., F.R.S., R. Marcus Gunn, F.R.C.S., Henry Head, M.D., F.R.S., D. B. Lees, M.D., C. Mercier, M.B., F. W. Mott, M.D., F.R.S., Sir Felix Semon, M.D., James Taylor, M.D., W. Hale White, M.D. *Treasurer:* Charles E. Beevor, M.D. *Editor (ex officio):* A. de Watteville, M.D. *Secretaries:* J. S. Risien Russell, M.D., W. S. Colman, M.D. —Dr. A. WALLER delivered his presidential address on the excitability of nervous matter, with special reference to the retina, which was illustrated by numerous tracings and diagrams.

BATH AND BRISTOL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

E. MARKHAM SKERRITT, M.D., F.R.C.P., in the Chair.

Wednesday, January 31st, 1900.

DRAINAGE OF PULMONARY ABSCESS.

MR. C. A. MORTON read a paper, which is printed at p. 379, on a case of a large abscess of the lung successfully drained, and showed the patient.

Dr. CARTER endorsed Mr. Morton's account of the case.

Dr. MICHELL CLARKE alluded to the importance of fœtor of the breath and expectoration in confirming the diagnosis in cases in which the general condition and the physical signs in the chest pointed to abscess in the lung, and to bronchiectasis and chronic bronchitis in the previous history of these patients; and also to the signs which would indicate the presence of gangrene too extensive for operation.

Dr. CARRUTHERS described a case following influenza in which the patient expectorated a quantity of pus, and in which there was also serous effusion into both pleuræ.

Mr. HARSANT pointed out the difficulty of distinguishing bronchiectasis from abscess, and gave cases in illustration.

Mr. MONRO SMITH remarked on the great rarity of collapse of the lung in opening the pleural cavity.

Dr. FISHER thought that cases such as Mr. Morton had described were the only ones in which operation was likely to be successful; other cases complicating phthisis and bronchiectasis were generally unsuitable for operation on account of extensive broncho-pneumonia around the abscess. Abscess of the lung was very rare as a result of pneumonia.

Dr. MARKHAM SKERRITT considered that the chief difficulty in the operative treatment of abscess of the lung lay in successful localisation; operation had been undertaken for abscess where the actual condition present was a bunch of dilated tubes. Fœtor of breath might be present in fœtid empyema.

TYPHOID ABSCESS OF TIBIA.

Mr. PAUL BUSH and Dr. SYMES reported a case of abscess in the upper third of the tibia in a woman, the result of an attack of enteric fever seven years before. The chief symptom was the extreme tenderness of the swelling in the tibia. Living typhoid bacilli were found in the pus from the abscess, and the patient's blood gave Widal's reaction. Remarks were made on the remarkable length of time that the bacilli had remained alive in the abscess, and other examples of the same kind were quoted.

Mr. ROGER WILLIAMS quoted an instance in which the infection of measles was carried by a ship whose voyage long exceeded the incubation period of the disease.

Dr. FISHER spoke on the importance of the typhoid bacillus as a cause of suppuration. Abscesses in bone as sequelæ to typhoid fever were chiefly or only due to this organism, abscesses in the joints to others; he also mentioned the remarkable variety of the lesions produced by the typhoid bacillus in the intestine, a fact not sufficiently noticed in the textbooks.

Dr. EWENS gave some examples of suppuration following an epidemic of typhoid fever in which suppuration was unusually frequent.

Dr. MARKHAM SKERRITT, in discussing the variations in degree of the local lesions in typhoid fever, did not consider that this disease differed in this respect from the other specific fevers.

INVERSION OF THE MYOMATOUS UTERUS.

Mr. ROGER WILLIAMS read a paper in which he gave statistics of the frequency of myomata and of inversion of uterus, the most urgent complication, which especially occurred in case of intramural or submucous growths near the fundus. The symptoms were severe although the tumours

were generally small. Two causes especially tended to produce inversion: (1) thinning of the uterine wall near the growth; (2) contractions of the uterus excited by the myoma in the cavity of the uterus acting as a foreign body. Sarcoma was the only other growth which caused inversion, which might take place suddenly or gradually. Mistakes in diagnosis were obviated by a rectal examination. Removal *per vaginam* was the only necessary operation, and the simplest plan was enucleation of the growth with reposition of the uterus. He also gave instances of more severe cases, in which the tumour had become gangrenous and the uterus was removed with it.

Dr. Aust Lawrence said that it was necessary to remove the uterus as well as the tumour in cases in which the mischief extended into the uterine wall. Hæmorrhage might be very great in cases of inversion. As a rule there was no need for an anæsthetic in these operations.

Dr. Newnham remarked on the difficulty which might be met with in diagnosis, and mentioned a case in which very extensive sloughing occurred.

Dr. W. Swayne alluded to inversion of the uterus in sarcomatous tumours, and said that anæsthetics were only required in these operations for dilatation of the cervix.

Intestinal Obstruction.

Mr. Harsant read a paper on three cases of intestinal obstruction. The first was one of a large gall stone, weighing 160 grs., impacted in the jejunum; in the second obstruction was due to a band constricting the intestine, and the third was also due to a band. The second patient died, the other two recovered. Mr. Harsant attributed death in the second case to the fact that the operation was undertaken too late. Although the band was quickly found and divided and the obstruction relieved, the patient never rallied and died two hours later. He attached great importance to the opening at the operation of the distended and paralysed gut above the seat of stricture, as the patient was thus relieved of a large quantity of toxic matter.

Dr. R. G. P. Lansdown narrated two cases of obstruction due to gall stones. In one there was a definite history of cholelithiasis. The stone lodged at the ileo-cæcal valve, and the patient refused operation; in the other there was no such history, and, after an operation had been decided upon, the patient spontaneously passed the stone.

Drs. Fisher, Firth, Michell Clarke, Markham Skerritt, and Mr. A. Prichard continued the discussion.

Some Midwifery Reminiscences.

Dr. Aust Lawrence first narrated three cases of detachment of the placenta, and then some cases of concealed *post-partum* hæmorrhage, saying that a most important symptom of the latter was the occurrence of pains in the back, like those of the first stage of labour, and that it could not be too strongly emphasised that a woman who was pregnant and bleeding should always be considered to be in a dangerous condition. He then described the faintness due to *post-partum* nausea and vomiting, a condition in which the patient might appear to be extremely ill, and in which it was sometimes difficult to make the differential diagnosis from hæmorrhage or shock. He advocated the use of strychnine hypodermically.

LIVERPOOL MEDICAL INSTITUTION.

Edgar Browne, F.R.C.S.Edin,, President, in the Chair.

Thursday, January 25th, 1900.

Muscular Atrophy.

Dr. T. R. Bradshaw showed a boiler maker, aged 24, with extreme atrophy of the right trapezius, biceps, and brachialis anticus. The wasting had come on gradually, and its distribution suggested the commencement of the facio-scapulo-humeral form of idiopathic muscular atrophy, but it was possible that it was due to overuse of the affected muscles.

Pathology and Treatment of Pneumonia.

Dr. Nathan Raw read a paper on The Pathology and Treatment of Pneumonia, based on the observation of 1,047 cases occurring during a period of 12 years. The general death-rate of the whole of the cases was 23.4 per cent. During the last two and a-half years 317 cases of pneumonia had been admitted into Mill Road Infirmary (including all forms of pneumonia, and those dying shortly after admission), with a total death-rate of 34 per cent. With regard to the pathology of the disease there could be no doubt it was caused by a specific micro-organism, the diplococcus of Fraenkel, influenced to a very great extent by rapid changes in climate and a low-resisting power in the individual. This low-resisting power he had noticed most frequently in the chronic alcoholic, who rarely recovered from a bad attack of pneumonia. No specific treatment influenced the progress of the disease, or in any way cut it short. He was of the opinion that the treatment of the future would be antitoxic, the anti-pneumotoxin being either procured by removing serum from a patient who had just recovered from pneumonia, or experimentally from immune animals.

Dr. Waters spoke of the statistics of other hospitals. The mortality in pneumonia varied, and the percentage would differ according as complicated cases were included or not. Dr. Waters had tabulated all the cases occurring in his hospital practice to the number of 151, with a mortality of 7.28 per cent. He had no doubt of the effects of chill and exposure as an exciting cause. With reference to treatment, he thought many cases would do well without much active interference, and attached great importance to nursing, dieting, and the surroundings of the patient. He had never practised venesection. He attached great value to carbonate of ammonia, and in many cases gave varying quantities of alcohol. In certain adynamic cases he thought quinine was useful, and in extreme cases had seen good results from the inhalation of oxygen and injection of strychnine with free use of stimulants. He was in favour of mild counter-irritation, but did not approve of blistering in the early stages.

Dr. Carter thought that on clinical grounds one must recognise two different forms of pneumonia—(1) simple and tending to recovery, (2) septic and very dangerous. He noted the variation in intensity of the disease in different years, and thought that there was a general epidemic influence that gave undue intensity to the disorder, instancing small-pox in 1881 and influenza at the present time. Referring to treatment, he believed that where the cardio-pulmonary mechanism was seriously disturbed by the sudden invasion, as evidenced by gasping, small pulse, ashy colour, orthopnœa, etc., the abstraction of a few ounces of blood gave relief and favoured recovery. There was one stage where opium was useful—namely, where there was a sudden fall of 6° to 8° of temperature at the period of crisis with the onset of active delirium. Physically, except for this fall in temperature, the patient seemed the same, the same amount of exudation being present, but vitally he was different, and a good sleep, which then might safely be produced, was most restorative. In all other conditions opium was injurious. In hyperpyrexia he had seen marked improvement by a single cold bath or the application of cold cloths.

Dr. Glynn considered that the mortality from pneumonia in Liverpool had been higher in recent years than it was twenty years ago; that deaths now were not infrequent in young people, whereas Barther had only met with 2 deaths in 212 cases of pneumonia in subjects under 16. The rate of mortality was also influenced by the length of time elapsing between the onset of the illness and the commencement of treatment. Grisolle's figures emphasised this statement; he found that the mortality amongst patients admitted to the hospital on the first and second days of disease was 1 in 15, on the fourth day 1 in 8, and on the sixth day 1 in 4. The pneumococcus often associated with other organisms had been found in the sputum in all of his cases of pneumonia. He discussed the value of leucocytes as an aid to prognosis, and referred to the various theories advanced to explain the crisis. In treatment he often resorted to physical measures for reducing the temperature, to large doses of digitalis for procuring sleep, or hypodermic injection of atropine, and believed in the efficacy of salicylate of soda and ammonia.

Dr. Barr having made some remarks, the discussion was adjourned.

Paper.

Dr. Max Lowenthal read notes of a case of fibrinous bronchitis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Professor A. C. O'SULLIVAN, M.D., President, in the Chair.

Friday, January 12th, 1900.

FRACTURED PELVIS.

PROFESSOR E. H. BENNETT submitted a united fracture of the pelvis involving the brim or inlet of the true pelvis, the lines of fracture being placed in the oblique diameters of the pelvis and obliquely through the sacrum. He presented this specimen to establish the fact that patients even suffering so grave an injury might recover. He had dealt with such a case in the living also. He showed a specimen of this form of fracture that was fatal. He showed two specimens of the form of injury which results in the displacement of the head of the femur, either incompletely or completely, inwards through the acetabulum into the pelvis. Referring to the double vertical fracture of the pelvis, he exhibited an enlargement of Voillemier's plate of this lesion, and stated that in three cases they had come under his care recovery had been complete.

Mr. H. G. CROLY related three cases:

The first was that of a man thrown off a dray, and the wheels of it passed over the pelvis. He was found collapsed, with the symptoms of laceration of the urinary bladder. After death he found the anterior part of the bladder torn, and the os pubis fractured. The specimen was in the museum of the College of Surgeons. The second case was that of a gentleman whose horse fell and rolled over him. On catching hold of the crest of the ilium he could rock the ilium backwards and forwards. The patient got phlebitis of the veins of the lower extremity, but ultimately recovered. The last case occurred in a lady who fell on her coccyx. It was fractured, as could be diagnosed by inserting a finger into the rectum By a push backwards the bone went into its place.

Professor BENNETT replied.

EPIPHYSARY FRACTURES OF LONG BONES.

Dr. KNOTT showed a number of these specimens.

Professor BENNETT, in explanation of an opinion which Dr. Knott had ascribed to him and to his teacher, R. W. Smith, that in cases of compound separation of the lower epiphysis of the humerus the synovial cavity remained unopened, observed that the periosteum of the humerus was practically inserted into the epiphysary cartilage. The real point that should be made was that the lesion was a dislocation of the lower end of the diaphysis, not of the epiphysis. This might be thought to be hair-splitting, but this part was displaced out of its periosteum like a finger out of its glove, so that there was interposed between the synovial membrane and this diaphysis the tough periosteum of the bone, and the synovial membrane thereby escaped being opened.

Dr. KNOTT, in reply, said that, having formerly seen the ligaments of the elbow-joint only in adult subjects, he always found the anterior and posterior ligaments attached above their respective fossæ. When he heard at that time the statement of Professor Bennett that epiphysary disjunction—which he knew took place well below the level of where he found the ligaments attached—was still extra articular, he could not then comprehend it; but when he procured the specimen which he had shown them, it showed the attachment of the anterior and posterior ligaments of the elbow-joint just at the margin of the articular surface.

SUDDEN DEATH FROM OCCLUSION OF PULMONARY ARTERY.

The PRESIDENT related this case:

The patient was a woman, aged 48, who was admitted to Sir P. Dun's Hospital, under the care of Dr. Kennan, for umbilical hernia, on December 4th, and who died suddenly on December 17th, no operation having been performed. The symptoms preceding death were complete unconsciousness, heavy stertorous breathing, contracted pupils, slight frothing at the lips, which were open; the tongue was quite colourless, the face of a dull leaden colour; the pulse imperceptible, and the heart sounds barely audible. Death took place in about five minutes. At the *post-mortem* examination an embolus was found plugging the pulmonary artery at its bifurcation, consisting of a clot 7 inches long, ⅝ inch wide at one end and tapering to ¼ inch at the other, bent three times upon itself so as to form an S. A tumour was found in the pelvis, which consisted of the uterus, distended by a large myoma growing in the cavity of the uterus, and completely filling it. This pressed upon both external iliac veins, and caused thrombosis, with œdema of both legs. The thrombosis, which caused death, probably came from the left long saphena vein.

Professor BENNETT confirmed the observations on the appearance of the patient.

Mr. H. G. CROLY thought that if intrapelvic tumours, which were so common, could produce this effect of sending a clot up to the pulmonary artery, it was a remarkable thing that death was not more common from this cause in such cases.

Professor E. J. MCWEENEY inquired as to the condition of the portion of lung supplied by the occluded branch of the pulmonary artery. Was it infarcted with blood or obviously anæmic, or in what condition was it? As far as his reading went, he believed the enormous length of the embolus to be unique.

Professor O'SULLIVAN, in reply, said that, as he had mentioned, the condition of the lungs was that they had rather more blood in them than usual. It was the entire pulmonary artery that was blocked, as the clot went into the left branch, and blocked the right by projecting into the main trunk across the opening. He had omitted to mention that there was great œdema of the legs, and the superficial veins were tortuous and varicose. He had seen recently in Thoma's *Pathology* a picture of a case almost identical with what this must have been when lying in the pulmonary artery. This clot, however, was twisted twice, and lay in the pulmonary artery. It was this picture, perhaps, which led him to recognise the condition so readily.

EXHIBITS.

Mr. HENRY GRAY CROLY showed (*a*) larynx and trachea of child, showing œdema of glottis with tracheotomy tube *in situ*; (*b*) unusual foreign body (shawl pin with large glass bead) removed from the male urethra.—Dr. KNOTT exhibited a series of specimens of a hitherto undescribed fracture of the patella.—Professor MCWEENEY (the Secretary) showed (*a*) a series of cultures to illustrate the effect of certain variations of the nutrient medium on the growth of the typhoid bacillus; (*b*) sections to illustrate certain points in the morbid histology of a case of extensive tuberculous disease of the intestines, followed by acute miliary tuberculosis of the liver.

MIDLAND MEDICAL SOCIETY.

E. RICKARDS, M.A., M.B., F.R.C.P., President, in the Chair.

Wednesday, January 17th, 1900.

CHRONIC INTESTINAL OBSTRUCTION.

MR. BARLING showed a man, aged 52, who had suffered from chronic intestinal obstruction, which he had relieved by the formation of a fæcal fistula and subsequent intestinal anastomosis.

For 15 months the patient had suffered from attacks of abdominal pain of great severity. During the last four months before he came under observation he had suffered much from constipation, and his abdomen had during this time increased steadily in size, while he had lost in weight. Later he only passed flatus *per rectum* and no motion at all. Finally there was no escape of flatus. The abdomen at that time (October 24th, 1899) was extremely and generally distended and was very tense; no tumour could be felt, and there was nothing in the rectum. Vomiting was entirely absent, and had been so all along; the pulse was about 90, and the temperature was 100°. As it seemed probable that the sigmoid flexure was distended, an opening was made with the intention of performing sigmoid colotomy, but this part of the bowel was found to be empty, as was the small intestine. The finger in the wound, however, detected a huge coil of distended bowel towards the middle line of the abdomen, but this could not be brought into the wound. This incision was therefore closed, and another made between the middle line and the first incision, exposing the distended coil of gut, and to it by a complete circle of sutures the peritoneum and transversalis fascia were secured. A small opening was now made into the gut, and a huge fæcal escape took place for days. On November 10th the abdomen was opened in the middle line below the umbilicus, and the cause of the obstruction sought. It was found to exist in the large intestine just below the splenic flexure: the exact nature of the obstruction could not even then be determined, but there was extreme narrowing of the bowel for about 3 inches in length, and the intestine was firmly bound down to the posterior abdominal wall, and there were some enlarged glands in the meso-colon. The piece of intestine which had been opened proved to be the transverse colon, which had made a V-shaped bend downwards towards the pelvis. An anastomosis was made between the transverse colon and the sigmoid flexure with the largest-sized Murphy button. A very good recovery followed, and in a few days the fæcal fistula had healed. The patient was passing a satisfactorily-formed motion every day, and had gained weight to the extent of 10 lbs. The button was still retained.

The patient was shown to illustrate how complete a barrier the ileo-cæcal valve formed, preventing any regular regurgitation from the distended large intestine into the small, and as an example of the advantage during the period of obstruction in chronic cases, of simply giving relief by fæcal fistula, leaving more radical treatment to a later period, when the obstruction had been throughly removed.

SCLERODERMA.

Dr. KAUFFMANN showed a man, aged 37, suffering from scleroderma.

The patient had been exhibited to the Society on October 11th, 1899, and

was now again shown because the sclerotic condition was improving markedly in the thigh, whilst in the leg it appeared to be at a standstill. Some doubtful fresh patches had meanwhile appeared in the neck. The general health had remained perfectly good.

Uterine Myoma.

Mr. J. Furneaux Jordan showed two specimens of uterine myoma. The first specimen was an interstitial myoma about the size of a tangerine orange.

It had been removed by vaginal hysterectomy in August, 1899, from a woman, aged 51. The menopause had taken place three years previously, but, although there had been no hæmorrhage, the uterus had given her more and more trouble. It had become retroverted, by which change the growth was certainly felt more distinctly, and it had caused increasing pain and difficulty in defæcation, so much so that she was unable to work. She had been so relieved by its removal that she was now working hard as a charwoman and did not suffer at all. The second specimen was a uterus with a large subperitoneal fibroid growing from the fundus, and with three smaller nodules in the uterine wall. The patient had suffered very little from pain and hæmorrhage, but for some weeks had had the most obstinate vomiting. The vomiting came on soon after food was taken, and did not yield to any form of treatment. She was losing flesh rapidly. The uterus was removed by that form of hysterectomy known as the combined method, in which the vaginal portion of the separation is done from below, and the separation from the broad ligaments done from the abdomen. The operation was performed in October, 1899, and the patient made a good recovery.

Paper.

Mr. Leonard Gamgee read a paper on the Treatment of Mastoid Abscess and the Radical Cure of Suppurative Otitis Media in Children.

Glasgow Obstetrical and Gynæcological Society.—At a meeting on January 24th, Dr. Alex. Miller, President, in the chair, Dr. Lindsay showed the fœtus and decidua of a tiger, of a large fruit eating bat, and of a marmoset.—Dr. Edgar showed a ruptured hæmatoma of the left ovary, the cause of a pelvic hæmatocele.—Dr. Alex. McLennan read a paper on the involution of the puerperal uterus. The conclusion was arrived at that the lochia were rather the effect than the cause of involution. The following points were also noted: (1) The method of measuring and the precautions required to avoid fallacies; (2) the physiological circumstances influencing involution such as age, parity, lactation, time of taking measurements, posture, whether woman in bed or going about, drugs, etc.; (3) the pathological lesions affecting involution, with charts to demonstrate the various conditions; (4) diagnosis, treatment of prognosis; (*a*) diagnosis, the observation of involution aids in separating minor from major cases of fever and is especially useful in differentiating the minor cases; (*b*) treatment. The measurement of the uterus gave indication for the administration of ecbolics and cathartics, etc., the time when it was best to allow the puerpera to rise; when the intrauterine douche should be employed, etc. (*c*) prognosis, diagnosis of cause aids the prognosis.—Dr. W. L. Reid showed the child from a case of ectopic pregnancy and read notes on the subject.—Dr. Jardine read notes of three fatal cases of puerperal septicæmia of unusual origin:

(1) A woman who while pregnant poisoned her finger with a splinter of wood. (2) Woman admitted to the maternity hospital moribund. She had been five days in labour and was septic to the last degree. A dirty old woman had been attending her. (3) Infection had occurred from an old retroperitoneal abscess.

Newcastle-on-Tyne Clinical Society.—At a meeting on January 18th, Mr. H, B. Angus (President) in the chair, Dr. W. P. Richardson showed a male child, aged 20 months, with symmetrical gangrene of the feet of one week's duration, the result of Raynaud's disease.—The President showed a miner, aged 44, who was admitted to the Royal Infirmary with a round, well-defined elastic swelling, the size of a tangerine orange, on the right side of the neck behind the angle of the jaw; it was of two months' duration. It was diagnosed to be a dermoid cyst, and this was confirmed on removal.—The President showed a man aged 66, with a large irregular swelling, chiefly involving the right lateral lobe of the thyroid reaching down to the clavicle and sternum. It was of four years' duration, and had increased more rapidly during the last two years. He had lost 3 stone in weight during the last two years. Diagnosis rested between malignant disease of the thyroid and a simple adenoma. The former was considered the more likely and surgical interference not thought advisable.—Dr. Alderson showed a man, aged 55, with Dupuytren's contraction in both hands. It was proposed to perform Adams's subcutaneous operation.—The President showed a middle-aged man who had suffered from Dupuytren's contraction of both hands for four years. During the last two years Adams's subcutaneous operation had been performed on three occasions and the hands splinted at nights. In spite of this contraction reappeared, and last year an open operation was performed on one hand, and the tense cicatricial band dissected out. The result was excellent, although pressure on the scar caused pain.—Dr. A. H. Hobbs showed a well-developed girl, aged 16, from whose left breast he had removed three sewing needles, which she had herself inserted. On examination several more were to be felt, both subcutaneously and buried deep in the gland.—Mr. Clay read a paper on Cæsarean section. The incision should be commenced high in the middle line (above the umbilicus); the bladder should be seen or felt, failing which distension by hydrostatic pressure should be practised. The uterus should be turned completely out of the wound. Hæmorrhage should be controlled by an assistant grasping the lower part of the uterus with both hands. The incision in the uterus was best made vertically in front. Should the placenta be found under the incision, it should be separated rather than cut through. In the former case the hæmorrhage would occur at the expense of the mother (and was under the control of the assistant); in the latter case it was at the expense of the child, and might jeopardise its life. When the uterus was emptied, one hand was sufficient to control the hæmorrhage. In closing the uterine wound, bedded sutures, not reaching to the mucous membrane, should be employed, and the peritoneum sutured by Lembert's method. Mr Clay considered Porro's operation advisable when, the membranes having been ruptured for some time and the case treated by a midwife, the uterine cavity might be regarded as septic.

Ulster Medical Society.—At a meeting on February 1st, Alderman J. Graham, M.D. (President) in the chair, Dr. Cecil Shaw showed a case of fistula auris.—Dr. A. B. Mitchell demonstrated the use of a splint which he had introduced for the treatment of club foot, and showed a case treated with it.—Mr. Kirk exhibited two cases of excision of the wrist.—Dr. Lorrain Smith gave an account of recent views of the pathology of primary cystic kidney. A specimen shown by Dr. Darling was, he said, a remarkable example of a condition of kidney frequently described by clinical pathologists.

The organ was transformed into a mass of cysts. The prominent clinical sign of the disease was abdominal ascites. The urine contained no abnormal constituents, and the patients died from failure of the heart. The cysts presented the usual appearances. They were of variegated colour, the contents being of a semi-transparent colloid character, more or less stained by modified blood pigment. On microscopical examination there was found a large quantity of cholesterine crystals in the contents of the cysts.

The problem, which was difficult of explanation, was how the organ maintained its functional integrity in the presence of such extensive structural changes. These changes were originally regarded by Virchow as of inflammatory origin. The inflammation was supposed to arise in the medulla of the kidney. The cysts were looked upon as due to detention of the secretion in the collecting tubules. While there was undoubtedly evidence of extensive inflammatory changes in the remains of glandular tissue, it had more recently been pointed out that in many respects the mass resembled a tumour growth. In this case there was a slight formation of cysts in the liver.—Remarks were made by Drs. Strafford Smith, Tennant, Calwell, and John Campbell.

West Kent Medico-Chirurgical Society.—At a meeting on February 2nd, Mr. C. J. Parke, President, in the chair, the House-Surgeon of the Miller Hospital exhibited (for Mr. Poland) a case of tumour of the scrotum.—Dr. Septimus Sunderland read a paper on some cases of pelvic pain in which the diagnosis was difficult. This paper was discussed by the President and Drs. Toogood, Joscelyn, Leonard Williams, G. C. Williams, F. J. L. Hart, and Keay.

Presentation.—Dr. William H. Croly on the conclusion of his term of office as Resident Medical Officer in the City of Dublin Hospital, was presented with a handsome gold watch and silver-mounted surgical bag by the medical and surgical staff, the students, and the nurses.

REVIEWS.

HEART DISEASE. By Sir WILLIAM BROADBENT, Bart., M.D., F.R.S., and J. F. H. BROADBENT, M.A., M.D., M.R.C.P. Third edition. London: Baillière, Tindall and Cox. 1900. (Demy 8vo, pp. 434. 12s. 6d.)

ALTHOUGH little more than two years has elapsed since our last review, we are now able to record the appearance of a new and enlarged edition of this eminently practical and useful book. Unaltered as regards outward form, it is enlarged by about 100 pages and enriched with a few good illustrations from photographs and a coloured frontispiece of considerable artistic merit by Dr. A. W. Saunders, drawn from a case of acute aortitis.

The increase in bulk is due to the introduction of special chapters on various cardiac conditions which were not dealt with in the earlier edition. The subject of acute and infective endocarditis, considered apart from its effects upon valves, is one of no small importance and the very clear and definite account given as to the probable nature of the disease and the limits of therapeutic powers with respect to it will serve to clear up in the minds of many readers a good many of the doubts and uncertainties which attend the treatment of an insidious and fatal infection. Until recent years it has not been clearly recognised that a serious infective inflammation of the endocardium may arise from very simple causes and without any premonitory evidence of aseptic conditions elsewhere in the body, and even without any alteration of the sounds of the heart, if the valves be not attacked. The occasionally slow progress of the disease, sometimes lasting for many months; the gradual exhaustion, by the constant action of the septic poison on the system generally and the marked anæmia produced by the gradual destruction of the spleen by septic infarction, are all fully dealt with, and the difficulties of effective treatment duly emphasised. The use of antistreptococcus serum is not advocated unless it can be shown that the disease is actually due to the streptococcus. Where several micro-organisms may be at work, it is not advisable to use a serum which has been prepared from one form only. Examination of the blood in cases of undoubted disease has often led to disappointment, and therefore the presence or absence of septic organisms cannot be trusted as a sure sign, but only as an adjunct to diagnosis.

Pericarditis and diseases of the heart muscle are also made the subjects of special chapters, and the work concludes with an account of diseases of the aorta and aortic aneurysm. The new portions of the book are contributed by Dr. JOHN BROADBENT, but the whole work has passed under the careful supervision of Sir WILLIAM BROADBENT, who accepts full responsibility for the statements made, and the opinions expressed throughout the book. While much of the former work is reproduced without change, we notice many minor additions, especially in the form of records of clinical cases, which greatly add to the perfection of the new edition. Appearing as a third edition, it contains no reference in preface or elsewhere to the second edition. It must be assumed that the latter has been issued as a simple reprint, without special attention being called to it.

A COURSE OF ELEMENTARY PRACTICAL PHYSIOLOGY AND HISTOLOGY. By M. FOSTER and J. N. LANGLEY. Seventh edition. Edited by J. N. LANGLEY, D.Sc., F.R.S., and L. E. SHORE, M.D. London: Macmillan and Co. 1899. (Crown 8vo, pp. 414. 7s. 6d.)

THIS manual, familiarly known as "Foster and Langley," first made its appearance in 1876, but a new edition has not been written since 1888. Eleven years is a long time in physiological history, so that it is not wonderful that it has been necessary to rewrite most of the lessons. The appearance of Dr. SHORE's name on the title-page is also a new departure. The general arrangement of the book, which was first planned by Sir MICHAEL FOSTER, has, however, been retained. From the theoretical standpoint this arrangement has much to recommend it; from the practical point of view it has great disadvantages, at any rate, for the majority of our medical schools. Instead of keeping the three main branches of practical physiology (microscopical, chemical, and experimental) separate, they are all purposely jumbled up together; the subdivision of the subject is not based upon the methods employed, but upon the tissues or organs treated of. Thus, in connection with the contractile tissues, their histological structure is first given; this is followed by the chemistry of muscle, and of proteids in general, then by the physiology of muscle and nerve; after this comes another histological section dealing with nerve fibres, nerve cells, and nerve endings; and, lastly, the phenomena of reflex action. This is a typical example of the way in which a subject is treated, but it is not uniformly adhered to; for instance, the mammary glands come under the organs of reproduction, but milk, and, curiously enough, nucleo-proteids are studied with the stomach; the structure of the blood is given in the first two chapters; this is followed by the chemical study of the serum and blood clotting, and another section dealing once more with proteids, but the colour of the blood is dealt with under respiration in Chapter XXVIII.

The many editions and reprints of the book show, however, that there is at any rate something to be said for a book which some teachers and demonstrators find troublesome and think confusing to the student. It no doubt suits the special exigencies of the Cambridge School. The laboratory there possesses a large number of rooms and a considerable staff of teachers; the students also devote a larger portion of their day to purely physiological work than they are able to do in most centres of teaching; after hearing a lecture on the stomach they can therefore pass to the practical histology room, look at microscopic specimens of the stomach, and make some for themselves; after that the chemical physiology room is open for them to examine the properties of gastric juice, and in the experimental room they can study practically what is meant by peristaltic action. But such a course of study is not possible except in large laboratories, and in London at present we doubt if any teacher would find it practicable to carry it out. This no doubt accounts for the fact that although the material provided in the book is unquestionably good, it has up to the present never been in general use except at Cambridge. London is now eagerly awaiting the stimulus of its new university, but even if physiological laboratories are provided which will equal those of Cambridge, we do not think that it would be desirable to introduce the scheme of teaching advocated by this book. The other plan of keeping the students at one time of the year at histology, at another time at physiological chemistry, and for a third period at experimental work is more methodical, and so likely to lead to better results.

ON FRACTURES AND DISLOCATIONS. By Professor Dr. H. HELFERICH, of Greifswald. Illustrated with 68 plates and 126 figures in the text drawn by B. Keilitz. Translated from the third edition (1897), with notes and additional illustrations, by J. HUTCHINSON, jun., F.R.C.S., Surgeon to the London Hospital. London: The New Sydenham Society. 1899. (Demy 8vo, pp. 162.)

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THERE is a little mystery about the two editions of a translation by Mr. JONATHAN HUTCHINSON, jun., of the well-known work *On Fractures and Dislocations*, by Dr. H. HELFERICH, of Greifswald. The one issued by the New Sydenham Society contains an index and a number of valuable additions by Mr. Hutchinson, some inserted in the text and others printed as footnotes. As an instance of the value of this we may mention the reference on pp. 45-46 to Thorburn's work in connection with trephining the spinal column in cases of fracture dislocation, the description on pp. 39 40 of fractures of the hyoid bone and thyroid cartilage, and the various paragraphs on the subject of separation of epiphyses, in which much important additional information will be found. In a few cases descriptions of the methods of minor manipulations

have been omitted. The other edition, which is published by Baillière, Tindall, and Cox, and is marked on the cover as vol. viii of the Hand Atlas Series, contains all the plates, 68 in number, and all the illustrations (126) but does not contain the brief note by the translator, nor an index nor the additions, all of which appear in the New Sydenham Society's edition. Mr. Hutchinson's translation, which is made from the third German edition, that of 1897, is well done, and the illustrations are excellent; but the work issued by the New Sydenham Society is certainly the better worth possessing.

The Use of the Ambulance in Civil Practice. By Reginald Harrison, F.R.C.S. Third issue. London: John Bale, Sons, and Danielsson. 1899. (Demy 8vo, pp. 16. 1s.)

This is the third issue of an important inaugural address at the Liverpool Medical Institution (session 1881-82), of which Mr. Harrison was formerly President. Although the demand for this pamphlet goes on, we fear the system of hospital ambulances which it ably and tersely advocates is still far from having been realised. The admirable system of civil ambulances managed between the police and the hospitals in even comparatively small towns in America puts even the greatest of our cities to shame. The system is briefly this, as exemplified in New York. The city is divided into police precincts, to which are assigned different hospitals, having an ambulance always ready. When an accident or other emergency occurs, the police communicate by telephone with the hospital, and an ambulance, with due surgical assistance, is at once despatched to the point indicated; the person is thus removed with the greatest expedition and ease. Contrast this with our barbaric police stretchers, or wheelbarrows, where the poor patient, often supposed to be drunk has to endure not only physical but mental torture at the hands of a ribald crowd. Can nothing be done to remove this reproach from us?

The Resources of the Sea, as Shown in the Scientific Experiments to Test the Effects of Trawling and of the Closure of Certain Areas off the Scottish Shores. By W. C. M'Intosh. London: Cambridge University Press. 1899. (Demy 8vo, pp. 248, plates and tables. 15s.)

If there be any man in this country who by reason of wide and accurate zoological knowledge, a thoroughly scientific mental attitude, and a long-continued and conscientious study of the question, has a right to be heard in regard to fish and fisheries, that man is Professor M'Intosh of St. Andrews. When, therefore, he publishes a work of upwards of 200 pages, bristling with facts and figures, no one who is interested in the subject can afford to neglect it, and though the pages of the British Medical Journal are not the place for an elaborate analysis of its contents, yet the fish supply of the country is of so great importance in relation to dietetic problems that it is desirable to acquaint the medical profession with its conclusions. The work is, in fact, neither more nor less than an indictment of the policy of the Scottish Fishery Board in closing certain extensive waters surrounding North Britain against the access of trawlers.

The author's main thesis, as appears abundantly in the introductory chapter, is that "marine animals and plants have such extraordinary powers of reproduction as to be practically unaffected by the influence of man" He deals in succession with the investigations in St. Andrews Bay, the Firth of Clyde, the Firth of Forth, and the Moray Firth for periods of ten years, and draws the conclusion that neither by diminished destruction of spawn, or of food, or of immature fish, or by increase in the size of the individual fish, or the quantity of the takes is there any evidence to show that the closure of these areas has been productive of any good results whatever. Taking a broad view of the question, it would seem that while Professor M'Intosh is probably right in his conclusions, still for the present "non-proven" must be the verdict. Many of the experiments on which reliance is placed are vitiated by the fact that the hauls were made at different times of the year, and we are constantly reminded of the small size of the Fishery Board's steamer *Garland* and the inadequacy of her trawl, whilst the word "uncertainty" occurs more than once in Professor M'Intosh's discussions.

One very striking matter brought prominently forward in the concluding chapter is that similar indictments to those now urged against the trawlers have been brought forward against different modes of fishing from the time when in 1376 a petition was presented to Parliament, praying that a new fishing instrument called the "Wondrychroum" might be prohibited, and that fish have continued ever since to spawn and fall into the nets regardless of parliamentary procedure. The book is pleasantly written and illustrated with reproductions of photographs depicting the St. Andrews laboratories and characteristic scenes in the fishing industry.

A Record of Indian Fevers. By Major D. B. Spencer Indian Medical Service. Calcutta: Thacker, Spink, and Co. London: W. Thacker and Co. 1899. (Demy 8vo, pp. 36 16 charts. 6s)

The fevers dealt with in this pamphlet are simple continued fever, intermittent and remittent fevers, typho-malarial fever, "tropical fever" and enteric fever. The treatment of, the subject is clinical, and thermic phenomena are assigned a leading position; pathology and bacteriology being only casually mentioned or omitted. The thermograms, which are bound under separate cover, have been taken from individual cases; but as complications existed in several, and treatment was resorted to in all, they can hardly be considered typical or illustrative of the natural history of uncomplicated or untreated cases. The observations were recorded night and morning, at what hours is not stated; intermediate elevations and depressions are thus lost sight of, and the real maxima and minima, the fluctuations, and chronology of pyrexia are not shown by such plottings. Correlated records of pulse and temperature are not given. In the malarial cases no search seems to have been made for plasmodia, nor does the serum test, which is so valuable an aid to the diagnosis of enteric fever, appear to have been resorted to in any instance. The thermograms are in fact of very little value for the purpose of differentiating various forms of Indian fever, whether of malarial causation or otherwise, nor does the letterpress which accompanies them contribute any substantial aid in that direction. The author claims to have established a definite variety of fever, which he calls "tropical fever," the causation of which he attributes to the absorption of the products of fermentation and putrefaction from the intestinal canal, and the weakening of protective and eliminative arrangements by climatic influences. The data on which the position is based are vague, and the illustrative cases and charts ambiguous. Indian enteric fever is held to be mostly of this nature, the intestinal lesions supervening in cases in which eliminative and antiseptic treatment has not been resorted to at an early stage. This suggestion finds little real support even in the facts and arguments recorded by the author.

The Pathologist's Handbook. By T. N. Kelynack, M.D., M.R.C.P. London: J. and A. Churchill. 1899. (Fcap 8vo, pp. 198, 126 illustrations. 4s. 6d.)

This work contains a considerable amount of information in a small compass. The title is unhappily chosen. It might be concluded from this, that the manual dealt with pathology in the sense in which this term is now universally used, whereas it deals only with morbid anatomy, and, what is still more, its chief concern is with the method of carrying out *post-mortem* examinations. The various apparatus required are excellently shown by illustrations, and the methods of examining the different organs well and fully given with one exception, namely, the brain. It is true that references are given to works on the examination of the brain, but with such a handbook the use of other works should not be necessary, especially as the inclusion would not have materially increased its size.

Of the many illustrations some are useful, but for some of those which represent the morbid conditions of the organs not so much can be said; they do not succeed in recalling the natural appearances to those for whom the work is chiefly intended, who are, we apprehend, those engaged in practice, and to whom the making of a necropsy is a comparatively rare

event. For recalling such appearances pictorially, no small work yet published compares with that of Böllinger in Lehmann's Atlas series.

Dr. KELYNACK'S manual would profit, in short, by the substitution of figures depicting the parts seen in different sections of the central nervous system for those above referred to. The work comprises a notice of the various points to be borne in mind in connection with necropsies made for medico-legal purposes.

NOTES ON BOOKS.

DR. OSCAR LIEBREICH, who is one of the best known pharmacologists in Europe, has recently published a research on the *Effects of Borax and Boracic Acid on the Human System*. This paper has been translated into English.[1] It is beautifully printed, and is elaborately illustrated. Dr. Liebreich apparently arrives at the conclusion that borax and boracic acid have no injurious or toxic effect, and his observations, so far as they go, may appear to support his conclusion. It has been maintained in this country that the introduction of boracic acid and similar preservatives into food is adulteration within the meaning of the Act, and it is difficult to avoid a suspicion that this paper is intended to be used and quoted by the defence in any prosecutions which may be instituted. The weak point about the paper is that it is purely pharmacological and that the author has apparently had no clinical experience of the action of these remedies. For example, he speaks of the "psoriasis eruption" of borax as an idiosyncrasy, and is evidently under the impression that it is of very rare occurrence. As a matter of fact, the group of symptoms included under the term "borism" is very well known, and is fully described in many of our text-books on materia medica. The rash is usually furfuraceous in character, and commonly attacks the head and face. It is quite characteristic in appearance. The habitual use as an article of diet of borax or boracic acid is not unattended with danger, and it seems undesirable to encourage the sale of food materials the decomposition of which is arrested by preservatives and antiseptics. Dr. Rideal, in introducing the discussion on food preservatives at the last Congress of the Sanitary Institute, observed that recorded cases of the toxic effect of boric acid showed that 15 grs. a day might in a fortnight produce skin eruptions in susceptible individuals, and expressed a strong opinion that the presence of any foreign addition to milk should be declared by the vendor. Dr. Liebreich has done excellent work, but the present paper must be taken with limitations.

DR. DAVID WALSH has prepared an *X-Ray Case Book*. London: Baillière, Tindall, and Cox. 1899. (Demy 4to; 25 cases 2s., 50 cases 3s.), which contains spaces for the particulars which seem essential to a proper report of any case examined by the Roentgen rays; notes of the patient (name, address, etc.) of the apparatus and methods employed, and the results, can be made, and diagrams of the human body are printed in outline on each report, which can be filled in, and thus save many words in the description of a case. Each leaf of the book contains 14 diagrams. Altogether, the author appears to have omitted no item that is necessary for the attainment of a thorough and reliable description of the appearances which the x-rays may depict in any given instance.

The first volume of *Progressive Medicine*, "a quarterly digest of advances, discoveries, and improvements in the medical and surgical sciences," is edited by Dr. HOBART AMORY HARE (London: Henry Kimpton. 1899. Roy. 8vo. pp 490, 3 plates and 28 figures; 12s. 6d.) It contains the following sections: the surgery of the head, neck, and chest, by Dr. J. Chalmers Da Costa; diseases of children, by Dr. Alexander Blackader; pathology, by Dr. Ludvig Hektoen; infectious diseases, by Dr. W. S. Thayer; laryngology and rhinology, by Dr. A. Logan Turner; and otology, by Dr. Robert L. Randolph. The idea which distinguishes *Progressive Medicine* from similar works is, as we are informed in the introduction, severe discrimination in the selection of papers to be epitomised. On the whole, the eclecticism has been happy and the actual digesting good, but we are bound to state that the writing which connects the different portions of certain sections is in some places slipshod. Referring to the embarrassed condition of the medical man of to-day from an excess of mental pabulum, the editor writes: "Often the technical appearance of an article staggers his mental digestion." We cannot help thinking that the psychical state he has thus described, which he and his colleagues have set out to relieve, has been treated, in places at least, on the principle of *similia similibus curantur*. When the author of perhaps the most valuable section writes, "the complicated interplay of biological and chemical functions of living cells results in the evident manifestations of immunity," he somewhat "staggers" our mental "digestion," and although this gives rise to no "evident manifestations," we are for the moment disposed to exclaim "Digest me no digestions." The articles on the diseases of children, on pathology, and on infectious diseases are good. We do not doubt, moreover, that with the complete index provided, the consultation of this first instalment of *Progressive Medicine* will prove a real boon to "progressive" practitioners.

Dr. W. ROBERTSON, in his volume entitled *Practical First Aid* (Perth: Scottish News Agency. 1899. Fcap. 8vo, pp. 142, 59 illustrations. 1s. 6d.), gives us an addition to the books on first aid, which, as it comes from the pen of one who has had considerable experience in teaching the subject, possesses a value of its own. He lays special stress, as he indicates in the preface, on such points as are frequently missed or improperly understood by pupils. The book is very readable, and the explanations are clear and concise, and nowhere complicated with technical terms. The illustrations are numerous, well executed, and many of them original. The last section is devoted to some very useful hints on the lifting and transport of the injured, matters the importance of which is equal to that of the application of splints, bandages, and dressings, though not infrequently badly carried out.

[1] *Effects of Borax and Boracic Acid on the Human System*. By Dr. Oscar Liebreich (Berlin). London: J. and A. Churchill. 1899. Royal 8vo, pp. 46. 2s.

REPORTS AND ANALYSES
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IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

Chloretone.—We have received from Messrs. Parke, Davis, and Co., 451, Oxford Street, W., a specimen of a synthetical compound, chloretone, for which it is claimed that it possesses hypnotic and analgesic properties, and that it can be used as a local anæsthetic like cocaine. It is a white crystalline compound having a camphoraceous odour and taste. It is soluble in cold water, very soluble in strong alcohol, and is not affected by dilute acids or alkalies. The dose is from 6 to 18 grs. administered in cachet or tablet form. As a local anæsthetic an aqueous solution is employed, the solution being prepared by saturating luke-warm water with the crystals.

Byno-Glycero-Phosphates.—Glycero-phosphoric acid was discovered by Pelouse in 1846 by acting upon glycerine with phosphoric acid. Shortly afterwards it was obtained from lecithin of egg by decomposition with acids. Glycero-phosphoric acid is said to be a method of introducing phosphorus into the system in an organic compound as closely related as possible to that in which this element exists in the nervous system. Glycero-phosphoric acid in the form of sodium, potassium, and calcium compounds is administered in solution by the mouth and also hypodermically. We have received from Messrs. Allen and Hanburys, Plough Court, Lombard Street, E.C., a sample of byno-glycero-phosphates, a solution of the glycero-phosphates of potassium, sodium, magnesium, and calcium in liquid extract of malt (bynin). The preparation has a pleasant taste and possesses diastasic power, and appears to be a convenient method of administering the glycero-phosphates.

THE Organising Committee of the Congress on Tuberculosis to be held at Naples this year has decided that the opening meeting shall be held on April 18th.

ANNUAL REPORT OF THE CHIEF INSPECTOR OF FACTORIES AND WORKSHOPS FOR THE YEAR 1898.

Part II.

In April, 1899, Dr. Whitelegge presented the statistical records of the Factory Department as Part I of this report. The present is the second and concluding part, and contains a summary of the Third Annual Return of Persons Employed in Factories and Workshops. Considerable improvement has been made of late in the fencing of dangerous machinery, protection of circular saws, and the provision of shuttle guards. In consequence of the special rules issued for the earthenware and china industries, arbitration became necessary. Within the last few years the work of the Home Office has enormously increased; not only have additional inspectors of factories, male and female, been appointed, but in July, 1898, a medical inspector was added, and from the manner in which Dr. Morrison Legge has discharged his duties he has more than vindicated the necessity for the appointment and the choice made by the Home Secretary.

Accidents.

During 1898 the reported accidents exceeded 57,000, and there were 1,300 cases of poisoning by lead, etc. There was a distinct increase in the number of reported accidents upon those of the previous year. It is interesting to note that the maximum was reported in the month of December, and as to be expected the number of males affected is greater than females. Both sexes show an increase, males to the extent of 21.5 per cent., and females 13.2 per cent. There were fewer accidents among children than in 1897, but against this must be placed the fact that there were fewer half-timers and there were also shorter hours of work. Taking all the fatal accidents, there was an increase of 10.5 per cent., the increase largely coming from the ship-building and engineering trades, which were at this period unusually busy. In dealing with the textile trades of Lancashire and Yorkshire, the Inspector of the Leeds division again draws attention to the fact that fully 15 per cent. of the accidents ought never to occur, and that they are due to the cleaning of machinery while in motion. To some extent, too, the increase in the number of reported accidents may be due to "over-certifying," many trivial accidents being now brought within the knowledge of the Home Office that need scarcely be reported. This is consequent upon a desire on the part of factory managers to err so to speak on the right side. No doubt the greater pressure of work and the increased speeding of machinery are responsible to some extent, as also the operation of the Workmen's Compensation Act. Workers are more disposed to report injuries than formerly, even although trivial. The influence of the Act, however, will ultimately be to diminish the number of accidents, for insurance companies will only issue policies conditional on all necessary safeguards being provided and maintained by employers. In the Manchester district it would appear that 27 per cent. of the accidents caused the workpeople to be absent from their employment for less than one week; 24.5 per cent. caused absences of over a week and under a fortnight, so that 51.5 per cent. of all the accidents in this district would not come under the Workmen's Compensation Act; 21.5 per cent. caused absences of over a fortnight and under a month, leaving 27 per cent. of the whole to cause absences over a month. The fatal cases amounted to 1.4 per cent. of the whole. Unprotected hoists are responsible for several of the accidents and in the textile trades flying shuttles. The injuries which may be inflicted on the eyes of workers by flying shuttles has long been known, but it is only recently that in several of the factories shuttle guards have been provided.

Dangerous Trades.

For the manufacture and decoration of earthenware and china special rules were drawn out. These were submitted to arbitration at Stoke-upon-Trent in October, with the result that the amended code, slightly modified by the arbitrators, became established in the works of the objecting firms. The investigations of Dr. Thorpe and Dr. Oliver belong to the history of the current year, and as the questions raised by these gentlemen in their report are not yet settled, they do not find more than passing notice. The sorting of foreign and dry East Indian hides and skins was certified in 1898 as a dangerous process, many cases of anthrax having been traced to their handling. The rules issued have met with considerable opposition, and at present are still under consideration.

Employment of Children.

During 1898 there were in England and Wales 68,502 half-timers. In the North of Scotland (Aberdeen district) half-time employment is on the decrease, and is said to be approaching the vanishing point; so, too, is it in the Eastern Counties of England, and in such places as Leicester and Birmingham. The question as to whether the half-time system impairs the physique and health of children is discussed at some length, and the inspector for the Bolton district publishes tables and gives statistics to show that, after all, men who began life in the factory as half-timers are not much, if at all, inferior in weight or height to the average men engaged in other occupations, and who began work later.

Lead Poisoning.

The number of cases of plumbism reported during the year 1898 was 1,278, as compared with 1,124 for 1897. By the Act of 1895 all cases of industrial lead poisoning have to be notified, and since then there has been an increase in the number of cases reported consequent upon the greater attention by medical men to the requirements of the Act, rather than to any increase in the number of cases of plumbism. The china and earthenware trades still supply the largest number of cases, and of the 457 cases of lead poisoning occurring in these trades, 429 (192 males and 237 females) were reported in the Potteries district. It is interesting to note the effect of this industry upon females. Dr. Morrison Legge draws attention to the fact that, of the total number of females, 69 per cent. were attacked before their thirtieth year, and 31 per cent. after, while in males the reverse holds good, the numbers being respectively 46 and 56 per cent. Chronic plumbism is more frequent among males than females, owing in some measure to the fact that females give up work in lead after a first attack of poisoning more frequently than males. Men are apparently able to work in lead processes for a longer time than women without suffering. Females, in other words, are more susceptible, and in them the graver forms of plumbism are met with more frequently. Twice as many females as males suffered from saturnine encephalopathy, followed in many cases by optic neuritis or death. The report bears testimony to the good result of the monthly medical examination of women and young persons which was begun in August, 1898. There have been fewer of the severer cases of plumbism. Enforced suspension from work has therefore been a blessing in disguise to the workpeople themselves. White lead works, file cutting, and glass polishing are also dealt with. So far as white lead works are concerned, there was a relatively greater number of cases of encephalopathy among females, and a smaller number of cases of paralysis among males noted than in china and earthenware.

Phosphorus Poisoning.

It was in May, 1898, that the attention of the Home Office was drawn to the fact that in one lucifer match works at least certain cases of phosphorus necrosis had occurred which had not been notified to the department. As the circumstance at the time created a good deal of adverse public comment, and formed the subject of numerous questions in Parliament, the Home Secretary invited Professor Thorpe, of the Government Laboratory, and Dr. Thomas Oliver, Physician to the Newcastle upon-Tyne Royal Infirmary, to carry out an inquiry into (1) the nature and extent of the dangers attending the use of yellow phosphorus; (2) the means whereby these dangers can be lessened; (3) the practicability of discontinuing the use of yellow phosphorus. Dr. Cunningham, Senior Dental Surgeon to the London Hospital, was subsequently added to the Committee, and the reports received from these gentlemen were published in a Blue Book last February, further reference to which will more fittingly be made in the next annual report. The number of cases of phosphorus poisoning notified in 1898 was 21. Of these, 20 occurred in lucifer match works, and 1 in the manufacture of yellow phosphorus itself; 15 of the cases occurred in one factory. Factory Acts

are not less observed in our own than other countries. In Belgium, for example, the law allows of only 8 per cent. of phosphorus to be used in match making, and yet of 80 samples removed by factory inspectors, 51 contained more than 8 per cent. In one instance the paste contained as much as 16.85 per cent.

ANTHRAX.

The number of cases of anthrax reported in 1898 was 28, as against 23 in 1897; 16 were connected with the woollen industry, 8 with the handling of hides and skins, and 3 with horsehair. The Bradford district, as might be expected, supplied the largest number of cases, namely, 13 out of the 16, in the woollen industry; of these, 5 proved fatal.

LADY INSPECTORS.

The reports of the lady inspectors are valuable contributions. Many of them traverse ground already gone over by their male colleagues, but there is an earnestness and enthusiasm exhibited in their reports which make them interesting reading. Lucifer match works, potteries, and dusty occupations are dealt with at considerable length. The pages devoted to "china scouring" in the Potteries are particularly well worthy of perusal.

THE BIRTH-RATE OF 1899.

STATISTICS of natality do not possess nearly so many points of interest as mortality statistics, and they have not the practical value which belongs to the latter by virtue of their intimate relations with life assurance and preventive medicine, but the one class of statistics is complementary to the other, and those relating to births have claims of their own upon the attention of the medical profession which are very strong at the present juncture. They supply a key to the solution of some of the puzzling social problems of the time, and neither sanitarians, sociologists, nor statesmen can afford to disregard the lessons which they convey.

The vital statistics for the fourth quarter of 1899 completing the returns for the year, have just been issued by the Registrar-General for England and Wales, and they contain many topics worthy of careful consideration, but none of them are more deserving of attention than the low annual birth-rate. The birth-rate for 1899 is only 29.26 per 1,000 of the estimated population, and approximates closely to that of 1898, namely, 29.4. There is nothing to call for special attention in these figures taken by themselves, as they are by no means the lowest birth-rates among European countries. Their significance lies in this: they are the lowest rates on record in this country, and they come upon a long period of antecedent almost continuous decline. There is reason to anticipate that these rates will drop lower this year as a consequence of the disturbing influence of the present great war, and the absence from home and losses by death and from other causes of so many male adults in South Africa. This effect was noticed in France, in Germany, and in the United States during their great wars.

The registration of births has been effectually carried out since the beginning of 1875, in consequence of the amendment of the law in 1874, and the position the rate occupied in 1876, namely, 36 3 per 1,000, may be considered as fairly representing the relation in which the births stood to the general population at that period. If the consecutive low birth-rates of these last two years be accepted as fairly representing this relation at the present time, it must be evident that a very remarkable decline has been established in it within the experience of a generation, amounting to nearly 20 per cent. as applied to the whole country, and much more in the large towns, in several of which the fall has reached 40 per cent. *A priori*, there was no reason why our proverbial Anglo-Saxon fertility should decline in the last quarter of this century; there was no physiological cause to account for it and no apparent necessity for it. The parish exterminator which Carlyle[1] grimly suggested had not been required, and the fields of emigration had not been circumscribed. But at that epoch a new school of philanthropists (male and female) began to actively teach that infant prevention was the proper and a necessary means of alleviating the burdens of poverty, and their followers have bettered the instruction in the midst of prosperity and plenty. It has even found favour in some of the colonies.

The lower degree of marriage fertility which has ensued was accompanied (during 1873 90) with some increase in celibacy, and it is possible that the more frequent custom which prevails of rearing infants by hand is an outcome of the same sentiment of "individualism." The high marriage-rate which prevailed in England and Wales during the second quarter of 1899, and upon which we commented in November last (page 1380), was almost equalled during the third quarter of the year, when the marriages of 143,858 persons were registered. This was equal to an annual rate of 18.0 persons married per 1,000 of the estimated population, and was 2.0 per 1,000 above the average rate in the third quarters of the ten years 1889-98. So high a rate has not occurred in the corresponding quarter of any year since civil registration began. It is certainly a curious anomaly to witness in these prosperous times divergent marriage and birth-rates extending contemporaneously over a series of years.

The description of the "malady" with which his country is afflicted which M. Dumont, a French sociologist, has given us,[2] in consequence of the unwillingness of French parents to have posterity, is not without its interest on this side of the Channel. M. Delcassé, the Minister for Foreign Affairs in France, has recently pointed out to his countrymen in a memorable statement the incompatibility between a population which does not augment and an expansive colonial policy. It is obvious that colonial expansion is not a matter of such great concern to Great Britain as it was a generation ago, but for the German Empire, with a birth-rate of 36 in 1897, it is a matter of vital importance.

While the yearly perturbations in the birth-standard remain on the down-grade, the aggregate disturbance they occasion in the age-constitution of the population keeps on the increase, although the means we have for measuring its extent are unsatisfactory and inadequate. The intercensal periods of the decennial census are too long and their incidence unsuitable for the proper estimation of the effects of this unique prolonged birth-fall on the age distribution, and as to how far the general death-rates have been modified in consequence. The statistics for the 1881-91 decade are available, but only show a portion of the total increase since 1876 in the numbers at those periods of life which have the lowest mortality,[3] and the almost parallel decline in the general death-rates (interrupted during the influenza epidemics, 1890-93), which has accompanied the fall in the birth-rate, affords a large amount of compensation for its depopulating influence.

Some of the far-reaching economic effects of this prolonged stage of transition are visible already to those who watch the signs of the times, and perhaps the most patent of these is the falling-off in the number of school children. The high average of the birth in the 1871-81 decade was succeeded by a decade which was characterised by great school activity, and the present one in its turn by an abundance of persons of marriageable tendencies under modern conditions. On the other hand, the short supply of children of school age is a very noticeable feature of the present decade, as well as a curtailment of the number of young persons seeking urban and agricultural employment. The chairman of one of the largest extra-metropolitan School Boards has had cause recently to deplore the stationary condition of the lists of scholars, although the population was increasing and greater pressure was put upon absentees. The report of the Committee of the Council for Education for 1898 shows that the 5,576,866 children then on the registers of the public elementary schools of England and Wales were only 1¼ per cent. more than in the previous year, and this occurs in spite of the efforts to bring the "derelict million" into school. There exists at the same time, in our towns at least, an urgent demand for adolescents of the pupil teacher type, of whom there was an overflowing offer fifteen years back.

It has been deemed necessary for many years to estimate the infantile mortality in proportion to the number of births rather than to the general population, and the plan (adopted by Dr. Newsholme) of considering the actual and comparative incidence of infantile or epidemic diarrhœa

[1] *Vide* last chapter on Chartism.

[2] *Natalité et Démocratie*, Paris, 1898.

[3] Dr. Tatham, *Decennial Supplement*, 1895, p. 8.

in terms of births has much to recommend it. The fact that this age is unprolific calls for the best efforts to preserve infant life, but the indisputable evidence of the infantile death-rate for 1899 affords very little satisfaction in this respect. The present birth-rate might furnish a text for so many discourses that it can scarcely be considered uncalled for to make one practical application. The family medical attendant might surely put the weight of his influence more strongly than he has hitherto done on the somewhat unfashionable side, of inducing mothers to fulfil the duties of maternity and suckle their infants.

It is quite possible that the Registrar-General may shortly have a different story to tell from the present one, and 1901 may prove to be a critical year. There are signs in France not merely of a realisation of the non-progressive position in which it stands among civilised countries, but of a reaction. M. Zola's latest novel, *Fecondité*, is written with a purpose, and not only shows the author's detestation of the celibate lives of priests, monks, and nuns, but preaches the doctrine that the natural and best outcome of humanity lies, to use a phrase of the English marriage service, in "the procreation of children," or, as Zola would put it, salvation lies in large families. The nauseous details of the book render it unsuitable for English translation, but its publication is a significant fact. With altered sentiments the rising generation may during the first quarter of the twentieth century recover its ascendency, in contrast with the place it takes in the last quarter of the nineteenth, and under any circumstances natality statistics, though not able to compete with those which relate to mortality in interest and importance, cannot fail to take a higher place in the estimation of the medical profession.

NOVA ET VETERA.

A MEDICAL WORK OF THE FOURTEENTH CENTURY.

The Rev. Professor George Henslow[1] has recently published a very interesting middle English medical receipt book, taken from three separate works. The first (A) is in the possession of the transcriber, who obtained it from the late J. Johnstone, proprietor of the *Standard*. The second, third, and fourth parts are transcripts from selected manuscripts in the British Museum.

The first MS. is perhaps the most interesting, and in a preface to it Professor Skeat expresses the opinion that it was written out before A.D. 1400. He thinks that it is nearly all of the same date, though there seem to have been more scribes than one. The writer of the English portion from p. 159 onwards displays some peculiarities. He evidently copied from another manuscript, and not from dictation, and he could not always read the copy before him, as he sometimes leaves a blank space where a word is wanting. Occasionally he lapses into Southern dialect, probably Surrey, Hants, or Sussex, with just a trace of a likeness to Kentish, though doubtless the copy before him was in the ordinary Midland dialect. Thus he speaks of vyngres (fingers), voxis (fox's), vifle (five-leaf or cinquefoil), and he almost invariably prefixes *y-* before the past participles of his verbs as y-sprad for sprad (spread), and suffixes *y* to the infinitive mood, as in fester-y, to fester, and kever-y, to recover. There is evidence, too, that the scribe spoke Anglo-French or was of a Norman family, for he was unacquainted with the true pronunciation of many English words: thus he had the old difficulty with the pronunciation of *th*, so that he wrote hat for hath, elepit for elepith, grindet for grindeth, sed for seethe. He failed also to pronounce final sounds distinctly when a word ended with two consonants: for example, he has hal for half, bren for brend (burnt), and hos for host (a cough). Conversely, he often inserts an *h* where it was quite unnecessary, as in hende for end, hopene for open, and hox for ox. Another difficult English sound was the old guttural denoted by *gh* in such words as light, then pronounced like the German *ch* in such words as *licht*, or as the Scothern Scotch pronounce it at the present day. The *ght* was pronounced by the Normans as *st*, and such spellings as "list" for "light" were very common in the MSS. of the thirteenth century. In the fourteenth century the guttural was weak, and was often dropped, so that the MS. contains at least one instance where the word "might" is denoted by "mist." Professor Skeat thinks that it is clear from these indications that the MS. was written in the South of England, not in Kent, but, at the same time, not far from that county, most likely in Sussex, Surrey, or Hampshire; and that the scribe of the English portion was one of Norman birth, who was equally conversant with Anglo-French and English, but never quite succeeded in gaining the correct pronunciation of the latter.

The work is evidently a common-place book, as it contains an immense number of entries on very different subjects from various sources. It is thus not unlike the collection known as "The Secrets of Alexis."[2] It begins: "Incipit liber de aquis, et primo de aquâ preciosa herbarum, etc." Then follow methods of making colours, both in Latin and English; geometry, with diagrams; the making of specula; how to see the stars at night; the best kind of ink; ars metrica or arithmetic, with problems in the Rule of Three; the measuring of superficial areas; the calculation of altitudes by means of a very primitive form of quadrant; the measurement of the capacities of vessels; astronomy; chemical processes with illustrations; descriptions of herbs, stones, and animals, with their medicinal uses; more chemical descriptions, for example, how a candle goes out in a vacuum, with illustrations, etc.

The English medical recipes, of which the book before us contains the transcript, begins on the 159th page and continues to the 211th, occasional recipes in Latin being intercalated. All the rest to the end of the book is in Latin. This latter part contains charms; a discussion on the tetragrammaton, with diagrams; additional medicinal uses of plants; and indications of the conditions of health from observations on the colour of the eyes, the ears, the voice, etc. The last entry but one has spaces left blank, apparently for diagrams, and one of the spaces has been utilised by the person who owned it in 1464 to keep his accounts.

The receipts give an interesting picture of the folk-medicine of the time, with some insight perhaps into the practice and theory of contemporary regular practitioners. There are many cures for coughs, dyspepsia, and toothache which was then attributed to the presence of worms. Some of the remedies were charms pure and simple; others would seem to forecast modern improvements. Thus on page 202 there is a method for healing broken legs or broken arms or any other bone, which seems to foreshadow the use of starched bandages, though there is an element of white witchcraft in the proceedings. The recipe runs:

> Take first when thou cometh thereto, and make a cross thereon. In nomine patris: and take then a plaster of wheat flour and white of an egg or of the flour of cockel and the seed of wood wex [genista tinctoria]; make the plaster right thick and lay it in a clean linen clout; take then and lay the plaster upon an even board and lay them into a linen cloath and bind it to the sore; et id est optima medicina.

The treatment of soft sores was very simple, but the heading is unusually quaint. It runs:

> Whoso is scalded on the pyntal that men call the Ape's gall: Take some cloth and burn it and take the ashes and lay them into a linen cloath and bind it to the sore; et id est optima medicina.

Gout was treated with an ointment of which three receipts are given, the first two with animal and the second consisting of vegetable ingredients.

The second manuscript is copied from the Harleian MS. 2,378 in the British Museum. It is interesting because it contains at the beginning an epitome in English of a book of Hippocrates. The MS. is of Northern origin, though the copy was written in the South, and it seems to have been derived from the same source as the one just described, though the transcript is different.

The third MS. is derived from the Sloane MS. 2,548, and Professor Skeat thinks that its date is probably not far from 1400. It contains an odd charm said to have been brought by the angel Gabriel to Sanctus William to charm "Christian men from worm, from venom, from gout, from fester, and from rankyl," which recognises many forms of

[1] *Medical Works of the Fourteenth Century, together with a List of Plants recorded in Contemporary Writings, with their Identifications.* By the Rev. Professor G. Henslow, M.A., F.L.S., etc., with a facsimile as frontispiece. London: Chapman and Hall. 1899. 4to, pp. 294. 21s.

[2] Archæologica Medica, xxxii, British Medical Journal, ii, 1897, p. 90.

gout as "the gout errant, the gout ardent, gout festered, and all manner of gout." The charm concludes in the ordinary ecclesiastical manner of the time:

Dead is the gout: dead is the sciatic: dead is the fester: dead is the worm: dead is the canker: dead it is and dead it now be, if it be God's pleasing of this man or this woman.

The directions for using the charm are also both interesting and explicit.

Name the sickness' name: then say thou and the sick (man) also a Pater Noster and an Ave. Say this charm thrice on three sundry days over him and her that suffereth any of these maladies: and lay thy right hand upon the sick place, while thou sayest this charm: and defend (caution) him that he use none other medicine and that he forsake no manner of meat for his sickness. And for certain he shall be whole within nine days.

The book ends with an interesting and valuable vocabulary containing the names of plants or vegetable products mentioned in the transcripts with their identifications, a task for which Professor Henslow is peculiarly fitted. The identification is by no means easy, for many changes, transpositions, and additions had been made in plant nomenclature before the commencement of the seventeenth century. Hence the credited modern equivalents of plants in the botanical works of the sixteenth century do not by any means always tally with those of the fourteenth; it is only by a careful comparison with names mentioned in previous centuries, and in the fifteenth especially, that one can treat the supposed synonyms from the sixteenth to the present time as applicable to a fourteenth-century vocabulary. Thus potentilla was a synonym of valeriana, whilst the primula veris was the primrose in the seventeenth century, though the name was appropriated by the cowslip in the eighteenth century.

THE BRITISH MEDICAL BENEVOLENT FUND.

The annual general meeting of subscribers was held on February 13th at the residence of Sir William Broadbent, Bart., who occupied the chair.

The Honorary Secretary for Finance presented the report of the Committee and the Treasurer's financial statement for the past year. In the grant department subscriptions amounting to £892 1s. 9d. and donations amounting to £399 10s. 9d. had been received, and £1,539 10s. had been distributed in sums varying from £5 to £20 to 161 out of 216 applicants. In the annuity department the interest on invested capital had yielded £2,334 1s. 1d., of which £2,203 5s. 10d. had been paid to recipients of the age of 60 and upwards, whilst the capital had been increased by legacies amounting to £1,457 6s. 9d. Ten vacancies caused by death had been filled, and one new annuity created, bringing the number of annuitants up to 109.

The accounts of the fund had as usual been audited by a chartered accountant, who drew especial attention to the extremely small working expenses, which for the past, as for many years, had been less than 5 per cent.

The death of Sir James Paget, Bart, for many years the honoured President of the Fund, was sympathetically referred to, and Sir William Broadbent unanimously elected to the vacant office, Dr. Samuel West being appointed Treasurer.

Special attention was drawn to the serious decrease of subscriptions and donations which had occurred during the year, and a hope was expressed that fresh effort would be made by all interested in the charity to remedy the deficiency.

The meeting concluded with thanks to the Chairman and to the medical press for the support always given to the Fund.

MANCHESTER MEDICAL GUILD.

The sixth annual meeting of the Medical Guild, Manchester, was held on January 23rd, F. H. Walmsley, J.P., M.R.C.S., President, in the chair. Fifty members were present. The annual report of the Council, which was received and adopted, stated that the Council had held fourteen meetings during the year, and had dealt with many matters of professional interest, including club practice reform, hospital reform, advertising and "underselling," preliminary education, medical aid societies, direct representation on the General Medical Council, alleged secret commissions, the suggested Board of Conciliation, medical organisation, the International Congress of Medical Ethics at the forthcoming Paris Exhibition, district nursing, the collection of blood and other specimens for bacteriological examination, points of etiquette, etc. Three members had died, 4 had resigned, and 29 new members had joined during the year, the number of members at this date being 222. Special emphasis was laid upon the need of more localised organisation in order freely to carry out the objects of the Guild; every Parliamentary division in the Manchester district should have at least one convener, and nearly every practitioner a member of the Guild. The districts of Eccles and Harpurhey were held up as examples to be followed in this respect. The statement of accounts showed a balance in the bank of a sum of over £37. The election by the Council of the President, Alderman F. H. Walmsley, J.P., and the following Hon. Vice-Presidents was approved: Henry Ashby, M.D., F.R.C.P.; C. H. Braddon, J.P., M.D.; Samuel Buckley, M.D., M.R.C.P., F.R.C.S.; William Crosby, M.R.C.S.; J. Dreschfeld, M.D., F.R.C.P.; C. E. Glascott, M.D., F.R.C.S.E.; Alfred Godson, M.A., M.B., J.P.; A. M. Edge, M.D., M.R.C.P.; James Hardie, M.D., F.R.C.S.; Francis Hepworth, J.P., M.R.C.S.; Thomas Jones, J.P., F.R.C.S.; David Little, M.D., F.R.C.S.E.; J. Dixon Mann, M.D., F.R.C.P.; D. Lloyd Roberts, M.D., F.R.C.P.; Henry Simpson, M.D., M.R.C.S.; F. A. Southam, M.A., M.B., F.R.C.S.; Graham Steell, M.D., F.R.C.P.; Walter Whitehead, F.R.C.S.E., F.R.S.E.; Sam Woodcock, M.D., J.P.; G. A. Wright, B.A., M.B., F.R.C.S.; A. H. Young, M.B., F.R.C.S. The following officers and Council were elected:—*Chairman:* Geo. Arthur Wright, M.B., F.R.C.S. *Vice-Chairman:* R. H. Wolstenholme, M.R.C.S. *Honorary Treasurer:* C. G. L. Skinner, M.D. *Honorary Secretary:* Arnold W. W. Lea, M.D., F.R.C.S. *Ordinary Members of Council:* Samuel Bagley, L.R.C.P.I.; Isaac Blore, M.D.; William G. Booth, L.R.C.P.I.; G. H. Broadbent, M.R.C.S.; Alfred Brown, M.D.; Samuel Crawshaw, M.B.; Alexander Fraser, M.B.; John H. Godson, M.B.; William Graham, M.D.; J. Wilson Hamill, M.D.; John C. Nichol, M.D.; David Owen, M.R.C.S.; Alec Phillips, L.R.C.P.E.; J. Ratcliff Gaylard, M.D.; A. Brown Ritchie, M.B.; F. Leyland Roe, M.R.C.S.; Arthur W. Senior, M.R.C.S.; Alexander Stewart, M.D.; John W. A. Wood, M.R.C.S.; F. H. Worswick, M.D. *Auditors:* Drs. J. Staveley Dick and J. W. Moore.

Paradoxical Temperature.—M. Soullier, of Lyons, reports in the *Lyon Médical* for January 7th, 1900, a case in which the temperature rose to 44° C., or over 111° F., for three successive days, without fever or rise of pulse. The patient was a young woman between 25 and 30 years of age. One morning, when in great trouble, she suddenly fell into a state of narcolepsy or sleeping fit. There was no history of any similar attack or of hysteria. The patient had had three healthy children. The sleep was very deep, the pupils contracted, the limbs quite lax, the pulse normal. The skin did not feel abnormally hot, but in the vagina the temperature registered 107.5° F., a few hours later 109° F. The patient was placed for twelve minutes in a bath at 82.4° F. Half an hour later the temperature had fallen to 103.6° F; but a few hours later it reached 111.2° F. in the axilla as well as the vagina, M. Soullier and a sceptical colleague each using their own thermometers. The skin merely felt a little hotter than usual; the pulse was 84. The patient was placed for fifteen minutes in a bath at 82.4° F. The temperature fell to 100.2° F. On the second day there was another rise to 111.2° F., and on the third the same temperature was obtained. Not till after thirty-six hours did the patient wake up; she then seemed forgetful of the troubles which had caused the sleeping fit. She soon fell asleep again, but could henceforth be roused with ease. She never complained of feverishness, and the urine was normal. On the third day no bath was given; the last was administered on the fourth, when the temperature reached 106° F. On the fifth day the patient was well, with a subnormal temperature. The narcolepsy has never returned. M. Soullier publishes this case in relation to a valuable monograph on hysterical fever, or more properly pure hyperthermia without the other signs of fever by M. Cuzin, published in the *Lyon Médical* for December 3rd, 1899. One case under M. Cuzin's own observation simulated several diseases, paludal chill, pelvic peritonitis, meningitis, etc., always with a very high rise of temperature, but the beginning of the attack was a fit of hæmoptysis followed for a short time by subnormal temperature.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 17TH, 1900.

THE LUNACY BILL, 1900.

The Lunacy Bill has reappeared in the House of Lords for the fourth time at a rather earlier date than usual. Whether it is to remain a "tender annual" or become a perennial in the fulness of time depends, so it is said, on its being treated in a contentious manner or the reverse. For many reasons we should be glad to see it pass, but there are points in it which if not corrected tend to turn the balance of our opinion the other way.

We are glad to see that the Lord Chancellor adheres to the clause which was introduced last year on the representation of a Joint Committee of the Association and the Medico-Psychological Association. This gives facilities for placing incipient and non-confined cases of insanity in private homes for six months without the irksome and forbidding formalities required under ordinary circumstances. There is no doubt whatever that however desirable removal from home surroundings may be, the dread of intervention of a magistrate tends to prevent relatives of a patient from consenting to it. The consequent loss of time and the evils arising therefrom will in future be obviated, while, on the other hand, irregular and undesirable reception of patients into homes where they should not be will be rendered more difficult and hazardous.

There are several beneficial provisions to which no exception can be taken. The powers of various authorities are by some judiciously extended, while by others obvious inconveniences and inequalities are remedied. But as these have been reviewed before, there is no occasion to say much about them now.

There are matters, however, about which a good deal will have to be said in Parliament. The extension of the Commissioners' powers in regulating the management of registered hospitals and pauper asylums has called forth in the past, and will undoubtedly call forth in the future, considerable opposition from the interested parties. About these we have no reason to express an opinion.

But there are two points on which we feel bound to renew the protests made by us in previous years. In the first place we take strong exception to the reduction in the valid duration of an urgency order from seven to four days. It has been repeatedly pointed out by those whose daily and continued experience of the difficulties surrounding the certification of patients gives them the best authority to speak, that this is a most hazardous proposal. Even with the seven days' grace it sometimes happens that the permanent order can hardly be obtained in time. If the order is not so obtained, the patient must be released, however dangerous he may be, unless the undesirable alternative of handing him over to a policeman is adopted. If there is this difficulty with a seven days' order, what will be the case when only four days are allowed? Even if the patient be not dangerous, a large amount of unnecessary inconvenience and pain may be caused to his relatives.

It is stated that this amendment has been rendered necessary in the interests of the liberty of the subject, in consequence of the present facilities being abused. If for the sake of argument we were to admit this to be the case (which we certainly do not), we fail to see the logic. In the hands of designing persons mischief could be done as easily with a four days' order as with one of seven days' duration, for such persons would assuredly take good care to obtain the permanent order in proper time. If we have doubts as to the propriety of trusting a person with a knife, considerations of safety will hardly be satisfied by reducing the length of the weapon by one-half. The logical remedy for the alleged evil is the withdrawal of the urgency order altogether. This, of course, could hardly be done, since it would necessitate rearranging the whole machinery for placing patients under control. The proposed alteration will, in our opinion, bring about a maximum of inconvenience, if not of risk, without adding a particle of safety to the liberty of the subject.

We deeply regret that for the first time in all its vicissitudes the Bill is introduced without the provision for a compulsory grant of pensions to the officers of pauper asylums. On former occasions the Government has expressed a desire—even a determination—to see that the intentions of the Lunacy Acts should be observed. Now it has turned its back on the matter, and has thereby enormously increased the difficulties experienced in seeking redress for a palpable injustice. It appears that as far as the Government is concerned the asylum service will be left in the position of being the only public service in which it is possible for an officer, after long and faithful service, to be set adrift without any provision for old age other than the savings from a not too liberal income. It is a fact that in regard to average remuneration the asylum service offers less than any other in which the arduous and disagreeable nature of the work, the wear and tear, the responsibility, the ever-present anxiety, and the invidious evils attaching thereto, and the personal risks are at all comparable. Can it be said that the need for efficient and faithful service is less in the asylum than elsewhere? Can it be expected that smaller present remuneration and complete uncertainty as to the future will not have their effect in inducing seekers after employment to look at other work first? There is no comfort in the argument that many asylums avail themselves liberally of the provisions of the Lunacy Act in giving pensions. Others give none, while others again only award inequitable amounts in a capricious and uncertain manner. Even where the best intentions prevail at present no one can say in what mood a claim will be considered in years to come, when those now entering have served their full time. We

believe that there is much dissatisfaction as to this matter and that it is increasing rapidly. The asylum service labours under an important disability. It is hid away in a corner, screened of necessity from the public gaze. The people know nothing of its work and needs except by hearsay. Were it not so the matter would be speedily set right, for the public demands smart and efficient police, the best of roads, and so forth, and is prepared to pay the price, knowing that in the end it will not be the loser. Some day it will come to recognise the fact that the comfort and well-being of insane persons are entirely dependent on the efficiency and character of the staff, and that, therefore, it is its duty to see that its asylum officers shall meet with at least as much justice as others. If these matters are amended the Bill will, we believe, be a valuable addition to the law of the land.

THE RELATIONS OF SHOCK TO DIABETES.

There is no relation which rests upon a wider range of observation and on better established clinical facts than that which exists between accidents in the widest meaning of the term and the occurrence of diabetes, both saccharine and insipid. As Professor Senator, in an article in the *Monatsschrift für Unfallheilkunde*, 1900, No. 1, has pointed out, the connection holds good not only where the accident has led to an injury in the strictest sense, but where from its suddenness and shock the higher functions of the nervous system have become involved.

The classical illustration of diabetes following injury to the nervous system is afforded by Cl. Bernard's famous diabetic puncture. But in addition to lesions of the medulla oblongata, diabetes, or at least glycosuria, may result from injuries of other parts of the nervous system such as the sympathetic ganglia or the cervical cord. Blows and contusions of organs such as the pancreas and liver may set up diabetes, but it must not be assumed that an injury of the head or spinal column alone causes diabetes due to nervous lesions, or that a blow upon the abdomen is needed to give rise to pancreatic or hepatic diabetes. In fact, the seat of the injury may be quite remote, and yet diabetes undoubtedly follow from it. It may often follow general shock where no trace of mechanical lesions can be detected, and this "psychical" injury is of the highest etiological importance. Such a relation is, of course, insusceptible of experimental proof, but abundant clinical observations have shown that diabetes may follow serious emotional disturbance, such as fear, anxiety, anger, and deep grief, when they occur in predisposed individuals, and this predisposition may be either a neuropathic tendency, or be due to the existence of certain pathological conditions, such as gout and obesity.

In these cases the psychical shock brings out the diabetes. This being true, it is obvious that where the psychical shock is combined with a bodily injury the effect may be very much greater, as we see when the accident is one in which the patient is very much frightened as well as hurt. Professor Senator quotes, as an illustration of this, a case in which diabetes came on fourteen days after lightning stroke.

The third condition under which shock may produce diabetes is when it gives rise primarily to a traumatic neurosis, in which the power of assimilating sugar becomes greatly reduced. According to observations made in Senator's wards, this occurs in about a third of all such cases.

As is well known, alimentary glycosuria occurs in all persons when the limits of capacity for assimilating sugar are exceeded. These limits vary in different individuals, and in the same individual at different times, under known and unknown conditions. For example, they are lowered by acute poisoning by alcohol or carbonic oxide, and in the presence of acute diseases.

Professor Senator thinks that no hard and fast lines can be drawn between *glycosuria e saccharo* and *glycosuria ex amylo*, and that the latter must be regarded as a commencing or slight diabetes. He admits that he has not been able to follow the development of such cases into true diabetes on account of the length of time required, but he believes that such an evolution is probable. As to the frequency of trauma as the determining cause of diabetes he quotes Cantani, who met with such a relation in 10.25 per cent. of all cases of diabetes, but states that his own experience is more in accordance with that of Seegen, who recognised this cause in 1.4 per cent. only. Professor Senator's own figures for 1,090 cases show only 11 examples, or a little over 1 per cent. Diabetes insipidus is a disease so much rarer that he has only been able to collect 76 cases, of which three—that is, 4 per cent.—followed falls or injury to the head. This, it will be noted, is a much higher percentage than that in the case of diabetes mellitus.

These points are of considerable interest, and are worthy of being made the subjects of further clinical investigation. The suggestion that neurasthenia from shock may be expected to be followed by diabetes in a considerable proportion of instances is hardly in accordance with general clinical experience, and, if true, we should have expected that Professor Senator would have been able to trace the relation in certain cases of diabetes, even though he might not have had time to follow his neurasthenic cases into their ultimate stages.

THE PRINCE OF WALES'S HOSPITAL FUND.

In another column will be found a brief report of the annual meeting of the Council of the Prince of Wales's Hospital Fund, and we are glad that its tenour is such as to justify us in congratulating the managers of this great undertaking on a certain measure of success. That measure is not great, but it is something in a year so abnormal to have made any progress at all. The Council considers the result highly satisfactory, and to quote the words of the report, "this is more especially the case, seeing that in view of the exceptional claims upon the public the Committee decided not to make the usual autumn appeal." That appeal was intended to raise the income to £50,000. It has amounted to £48,536, an increase of more than £9,000 on the year 1898, and after the distribution of £42,000 and the payment of the necessary expenses it has left a balance of £4,683 to carry forward. We recognise in these figures distinct progress and promise of ultimate success. To talk as if the Fund had already succeeded seems to us,

however, quite wrong. That it will succeed we not only hope but believe; but it can only do so by continuous well-directed effort, and by tapping the lower social strata from which at present, as far as we can see, no adequate supply has been obtained. We fear that the rather too confident note of success sounded in the report may tend to hide from possible subscribers the fact that the Fund is still struggling to attain its end, and that its success is dubious and depends still on increased popular support.

Yet there are many good features in the report which ought to be more widely known to the public than appears to be the case. Some of them may be enumerated. In the first place, the Fund is managed with great economy, the working expenses being only $3\frac{3}{4}$ per cent., against $6\frac{1}{4}$ in 1898. Then the system of personal inspection by members of the Committee has enabled the managers to allot deserved praise to various hospitals which the smallness of their income did not allow them to help more substantially, and to rule out certain institutions as not deserving the title of hospitals, which is, perhaps, an even greater benefit. Again, everyone will be gratified that the report can announce that "45 more disused beds will be reopened and maintained, making a total of 287 reopened in the last three years through the help of this Fund." This is indeed a substantial boon to London —almost as if another large hospital had been added to the city.

It is satisfactory also to learn that the executive of the Fund has backed up the petition which is being prepared by the Central Hospital Council for the exemption of the London hospitals from rates. Such an exemption would be equivalent to an addition of many thousands a year to the income of the hospitals at the cost of an imperceptible addition to the percentage of the rates on other ratepayers.

For all the good work, then, that the Prince's Fund has done, it deserves our hearty acknowledgments; but the balance sheet is sufficient to show how far it is still from its goal, which was to raise a secure income of between £100,000 and £150,000 annually. In the present year, under the competition of the War and Famine Funds, the Council will no doubt think themselves lucky if they can get to £50,000 clear in subscriptions and donations, and if to this we add the income on the £170,000 invested, it would not amount to one-half of the income contemplated at the inception of the Fund; and even this income is not clear gain, for it has been obtained in a considerable proportion from those who previously subscribed to individual charities, and who now either subscribe less or not at all. Nor can we doubt that the demands on the Fund will be greater than ever this year, for it must be a "lean year" for most, if not all, charities, and there are many which can ill sustain the scarcity. As the report says, with only too much truth, in speaking of the obstacles to throwing open fresh wards of beds now closed, there are some very hard cases "in which the debts of the hospitals must be liquidated before any fresh liabilities are incurred." The present year, then, ought to be one of special effort for all friends of hospitals, amongst whom we rank the Prince of Wales as the first, and his Council as his worthy coadjutors.

RIFLE SHOOTING AS A NATIONAL PASTIME.

At the present time the British people are in committee on the war and its lessons. One of the lessons which it appears we must take to heart beyond all others is that when the whole of the men throughout the States of Europe are armed with the rifle, it is necessary that our youth, if only for the purpose of national defence, should increase their acquaintance with this weapon. The scheme for increasing our territorial army put forward by the Government comprises the raising of additional regiments of regulars, the embodiment of the militia, the embodiment and increase of the Yeomanry, and an increase of the volunteers. It is evident, therefore, that for the young Englishman some knowledge of the rifle and rifle shooting bids fair to become a public duty. Under these circumstance we may consider whether this duty may not be made a pleasant pastime and a source of health to those fulfilling it. The National Rifle Association has recently issued an interim report to the members of both Houses of Parliament, to the Lords Lieutenants of counties, Chairmen of County Councils, Mayors of boroughs, and to the secretaries of rifle associations, as well as the commanding officers of the Yeomanry and Volunteers. This report discusses difficulties of expenditure and the provision of ammunition and ranges, which we need not here enter into beyond observing that none of them are insurmountable, and that if the nation requires rifle practice for its youth, there is little doubt that they could soon be overcome. Experience shows that rifle practice can be made a pleasant and healthy pastime, as well as a patriotic duty. It is true that shooting at the butts is not a very agreeable experience during a British winter, but throughout the spring, summer, and autumn practice might be carried out without any hardship, and there can be very little doubt that if facilities for conveying the youth of our towns at nominal rates to country ranges were offered, and liberal supplies of rifles and ammunition furnished, an enormous number of young men would take up rifle shooting for its sporting as well as its national interests. Why should not the golf clubs establish rifle ranges near their links. Among the Teutonic races of the Continent, in Switzerland, Austria, and Germany, where rifle practice is a national sport, difficulties as to ranges have been overcome by not attempting to make the ranges too long, and the testimony of experts appears to prove that marksmanship can be perfectly well acquired at shorter ranges. The *Daily Graphic* of February 13th contains a very instructive sketch of a protected short range, such as is used in or near many Continental towns. It is only 200 yards in length and can be safely erected, if need be, in the outskirts of a town. A man who can acquit himself well at this distance will hold his own at any range. The Boer, whose markmanship we have reason to respect, seldom fires even at springbok at distances over 300 yards, and most of his big game is killed at distances considerably less than 200 yards. Sites for short protected ranges on the Continental pattern could be obtained in the near suburbs of most towns in Great Britain, and in addition to providing ranges easily reached from the centre of the town at all seasons of the year for those who have not the time or the money to go far afield they would afford opportunities of practice in the winter months. It has been truly said that sport brings men together where business tends to separate them, and the formation of rifle clubs or corps establishes amongst the members a feeling of comradeship such as only sport in some form is able to do. Rifle practice trains the sense of sight, the co-ordinations of eye and hand, and that individual self-reliance which competition invariably engenders. The love of field sports has done much to maintain and improve the physique of the nation, and it is to be earnestly hoped that it may never wane, but a good many of the young townsmen who take a vicarious part in football by crowding to see much-advertised matches

between professional or semi-professional teams, might with advantage to their own character and bodily training employ their leisure afternoons in rifle practice. We have received a vast heritage in the British Empire, and we owe it to ourselves and to our children to be able to defend it if called upon.

THE MIDWIVES BILL.

The Bill to secure the better training of midwives and to regulate their practice, which was introduced by Mr. de Tatton Egerton on February 2nd and ordered to be printed, has not been printed up to the time we go to press. We have received from the Midwives Bill Committee a draft copy of their Bill which is upon the same lines as that introduced last year, but contains certain modifications to meet the criticisms of the General Medical Council. The suggestion that the document granted by the Central Midwives Board shall be termed a "certificate" entitling the possessor to be placed on the midwives roll, while the terms "licence" should be restricted to the local permit granted to practise within a particular county or county borough, has been adopted throughout. The Midwives Bill Committee further proposes to modify the constitution of the Central Midwives Board by providing that it should contain one person to be appointed by the Association of County Councils, and that one of the two persons to be appointed by the Lord President of the Council should be a woman. It is suggested, as before, that the county council or council of a county borough should be the local supervising authority, but there is a draft clause empowering a county council to delegate its powers to a district council. The term "midwife" is defined to mean "a woman who undertakes for gain, and in accordance with the provision of this Act, to attend women in childbirth." The General Medical Council advised that the term should be defined as meaning "a woman who undertakes for gain to attend cases of natural labour and who is not registered under the Medical Acts." The fourth paragraph of Clause III of the Bill introduced last year,[1] which set out that the Bill would not confer upon any woman any right or title to be registered under the Medical Acts, or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner, or that she is qualified to grant any medical certificate, has been modified by the addition of the words "or any certificate of death or of stillbirth, or to attend cases of abnormal labour, or of disease or of danger to the mother or the child." The Committee's draft contains a provision authorising a county council to make good deficiencies in the funds of the Central Midwives Board, and we are informed that a paragraph will be inserted providing that such expenses as the Treasury may certify to have been necessarily incurred by the General Medical Council in the execution of duties proposed to be imposed upon it shall be defrayed out of moneys provided by Parliament. It may be added that the new draft contains a provision directing that the General Medical Council shall act by the English Branch Council, which, for all purposes of the Bill, would occupy the place of the General Medical Council. The Bill is put down for second reading on February 28th, but it is generally understood that there is extremely little probability of its being taken, as the House does not as a rule sit until 2 o'clock on Ash Wednesday, and the first order of the day is the Mines (Eight Hours) Bill, a contentious measure which is certain to give rise to prolonged discussion.

THE VALUE OF INFECTIOUS DISEASE HOSPITALS.

Though the population of London has ceased to increase by leaps and bounds, the outgrowth of the province of houses in various directions continues. Thus Enfield, which not many years ago was a rural parish, now has a population of 40,000. The Urban District Council wisely resolved to make adequate provision for the isolation and treatment of infectious diseases, and on February 10th Sir Walter Foster, M.D., M.P., late Parliamentary Secretary of the Local Government Board, opened a new infectious disease hospital which stands on a site on Winchmore Hill. The building, which consists of three pavilions for scarlet fever, enteric fever, and diphtheria respectively, and an administrative block with the necessary offices, has cost £30,000, and is capable of extension. Each pavilion comprises two wards of six beds each, and two wards with single beds. The cubic space amounts to 2,253 for each bed. In declaring the hospital open, Sir Walter Foster congratulated the Urban Council and the ratepayers on having a hospital so admirably designed and built, and in a situation which assured plenty of fresh air, which was so essential a requisite for the recovery of the inmates. He observed that Dr. Farr had shown that every life lost cost the community £150, so that if the hospital only saved nine lives a year the district would see its money back with a nice margin for investment. The total local indebtedness of the country was £252,000,000, of which £1,500,000 had been spent on hospitals. Sir Walter Foster expressed the wish that the whole of the money was as wisely invested. In illustration of this he said that in 1888 the deaths among cases of scarlet fever amounted to 9 per cent., but this had been reduced in 1888 by isolation to 4½ per cent.; deaths among cases of diphtheria were one half in 1888 but had fallen to one sixth in 1898; deaths from enteric fever remained stationary because science had for the present reached its highest point in the management of this disease. Both danger and suffering were minimised by infectious hospitals, and therefore the people of Enfield had shown themseves both provident and prudent in erecting this hospital. Dr. Ridge, in thanking Sir Walter Foster, referred to the remarkable success achieved in the treatment of infectious disease at the temporary hospital, a success which he attributed largely to the non-use of alcohol.

INFLUENZA IN IRELAND.

From recent returns it is clear that Ireland has been suffering severely from epidemic influenza. The high death-rate of Dublin has formed the subject of frequent comment for some months past, and it appears that enteric fever, measles, and influenza have all had a share in causing an exceptionally high mortality, reaching an annual rate of 50.3 per 1,000 in the week ending January 6th, and only falling to 35.5 in the week ending February 3rd. In other parts of Ireland a similar course of events has appeared. Thus, in the City of Cork, the annual death-rate was about 51 per 1,000 in December, and 58 in January, the chief cause of the excess being influenza. When such excessive death-rates as these occur, it is natural for the lay mind to think that some official must be made responsible, and the medical officer of health is generally selected. Possibly these officers, and the sanitary pioneers who preceded them, have themselves to thank in a large measure that this is so. They have preached with such vigour the doctrine that improved sanitation would herald a lowered death-rate, that a temporary rise of this rate to 50 per 1,000 not unnaturally is regarded not only with dismay, but also with some measure of resentment. It is difficult to make the public understand the difference between an occasional sudden rise in the death-rate due to the intrusion of an additional and at present largely uncontrollable infectious disease, and the steady trend of the death-rate, when considered for a sufficiently long period, which is in the downward direction. Even on the last point it will not be amiss for statisticians to trim their sails a little, and prepare the public for some measure of

[1] British Medical Journal, January 7th 1899, p. 46.

disillusion in the future. Lowering the death-rate must in the end cease, and it is well to emphasise the fact that the object of public health is to prolong life to old age, not to secure immortality of terrestrial life. We have spoken of influenza as a largely uncontrollable disease. This statement requires, perhaps, some limitation; but it is substantially true, unless the public will accept a higher standard of ethical conduct, each member of it submitting to temporary isolation for what in many instances may appear to be only a severe catarrh. At the same time there can be no doubt that the advice issued to the public of Cork by Dr. Donovan, its medical officer of health, will be of considerable value, emphasising as it does the importance of isolation, of avoidance of depressing influences of cold and fatigue, and of unnecessary congregations of people.

APHASIA AND WILL-MAKING.

A case which raised in a very interesting form some of the questions that may arise as to the testamentary capacity of an aphasic patient was heard in the Probate Court before the President, Sir Francis Jeune, on Monday last. The testator was a lady who had a slight stroke of paralysis and became aphasic in July, 1899. Her medical adviser, Dr. James Edmunds, intimated to her that it was desirable for her to make her will, and she thereupon sent for her solicitor. She was able to express assent or dissent, but was unable to name things, and it does not appear to have been disputed that her mental condition was such as to enable her to discriminate perfectly between her relatives, and to form an opinion as to the mode in which she wished her property, which was of considerable amount, to be distributed. The difficulty was that she was unable to communicate her wishes by speech. Dr. Edmunds then hit upon the ingenious device of writing upon one set of cards the items of her property, and upon the others the names of her relatives. There were thus two packs of cards—a pack of relatives, and a pack of property. The solicitor then, to quote the evidence of Dr. Edmunds as reported in the *Times*, "put down a card bearing the name of a certain estate, and the testatrix after looking through her pack of relatives played a name, and the solicitor then turned the trick." This was continued till the whole of the property was disposed of, and no difficulty arose until it came to the selection of executors. Various names were written down, but she rejected them all, and finally selected a card bearing the name of one of her relatives. The will was then prepared in accordance with the instructions thus given, and on the following day was read over to the testatrix, who executed it by making her mark. The only question raised on behalf of the defendants, who alleged that the will was not duly executed, and was not in accordance with the deceased's instruction, was that it was not clear that the instructions given by the cards represented the whole wishes of the testatrix. The President in his judgment made certain remarks which show the errors which must be avoided in any like case in the future. He said that nothing could have been more fair and skilful than the manner of ascertaining her real wishes, but had it appeared that all her relatives had not been named on the cards, and had there been anything to lead the Court to suppose that all her wishes had not been carried out, the decision might have been different. As it was, and as the will had been carefully read over to her afterwards, and as she had shown no signs of any disapproval, which undoubtedly she could have done had she wished to do so, the will was admitted to probate. The subject of aphasia and will-making was discussed in two very interesting lectures by Dr. Byrom Bramwell published in the British Medical Journal in May, 1897, and again at a conjoint meeting of the Sections of State Medicine and Psychology at the annual meeting of the Association in Edinburgh[1] by Sir William Gairdner and Dr. William Elder. The testatrix in this case appears to have suffered from complete motor aphasia with agraphia and word-deafness, though the visual speech centre was unaffected. Dr. Bramwell, in referring to cases of complete motor aphasia, observes that after the physician has satisfied himself that the patient is mentally capable of making a will, it is in some cases extremely difficult to ascertain the exact way in which he wishes to dispose of his property. So far as we know, the expedient for overcoming this difficulty devised by Dr. Edmunds is novel.

[1] British Medical Journal, 1898, vol. ii, p. 581.

SPEECH AS A SEPTIC INFLUENCE.

George Fox, the founder of the Quakers, who looked upon smoking as a grievous sin, justified his condemnation of it by the words of St. Matthew: "Not that which goeth into the mouth defileth a man; but that which cometh out of the mouth—this defileth a man." If Professor Flügge were given to similar eccentricities of exegesis, he might quote the same text in support of the doctrine which he preaches that speech is a means of distributing disease germs. He has shown that from the mouth of a person who is speaking come bacteria contained in little bubbles of saliva, which after remaining suspended some time in the air are scattered through the surrounding atmosphere. Hubener has made experiments on the subject. Placing a man at a distance of 50 cm. from four agar plates representing a total surface of 200 square centimetres, he made him to count aloud for ten minutes. During that time from 100 to 1,500 germs, expelled from the mouth of the speaker, were deposited on the plates. Hubener draws from this fact the practical inference that a surgeon explaining the steps of the procedure during an operation might infect the wound by means of the germs expelled from his mouth in the act of speaking. To guard against this source of sepsis he has constructed a sort of filter consisting of a metal cage covered with gauze. This apparatus, which covers the mouth and nose, is fixed to the ears like spectacles. Not long ago Hubener raised his voice in warning as to the infective possibilities of the surgeon's beard, and recommended that ornamental appendage to be enclosed in what may be called a bacterium net. One may conjure up a prophetic vision of the twentieth-century surgeon with antiseptic mask, beard-bag, gloves, and sterilised robe, operating within a glass sanctuary into which no one is admitted except after the fullest disinfectant lustration. But Flügge's doctrine has a much wider application than he has indicated. If speech has these hitherto undreamt-of dangers for the audience, Parliamentary and pulpit orators will have to wear germ-catching muzzles; this, besides protecting their hearers, will doubtless have the further advantage of making their eloquence less copious as well as more sanitary. Society would find in the same sanitary appliance an effective safeguard against bores.

THE CHAIR OF MEDICINE IN EDINBURGH.

We understand that the following candidates are already in the field for the Chair of Medicine in the University of Edinburgh, rendered vacant by the death of Sir Thomas Grainger Stewart: Dr. Byrom Bramwell, F.R.C.P.E., F.R.S.E., Lecturer on Medicine in the Extra-Academical School of Edinburgh, Morison Lecturer to the Royal College of Physicians of Edinburgh; Dr. John Wyllie, F.R.C.P.E., LL.D., Consulting Physician to the Edinburgh City Hospital for Infectious Diseases; Dr. Alexander James, F.R.C.P.E., F.R.S.E., Lecturer on Medicine in the Extra-Academical School; Dr. George Alexander Gibson, D.Sc., F.R.C.P.E., F.R.S.E., Lecturer on Medicine in the Extra-Academical School of Edinburgh, and Editor of the *Edinburgh Medical Journal;* and Dr Robert Alexander Fleming, M.D., F.R.C.P.E., one of the Pathologists of the Edinburgh Royal Infirmary. The appointment is in the

hands of the Curators of Patronage. As the composition of that Court may be altered before the appointment is made, that need not now be given. It is believed that the appointment will be made in the month of April next. As far as the Edinburgh candidates are concerned, it is stated in the best-informed quarters that the serious contest will lie between the two first named Dr. Byrom Bramwell is 52, and Dr. Wyllie 56 years of age.

BACTERIOLOGY IN THE IRISH PUBLIC HEALTH SERVICE.

FOR many years it has been considered desirable that the Irish Public Health Service should be able to command the services of an expert bacteriologist, but for various reasons it has not until within the last week proved feasible to supply the long felt want. This has now been done by the appointment of Professor E. J. McWeeney, M.A., M.D., D P.H., to the post of Bacteriologist to the Irish Local Government Board. Dr. McWeeney is the Professor of Pathology and Bacteriology at the Catholic University School of Medicine, Dublin, and has published several meritorious contributions to the literature of his special subjects, amongst others a detailed bacteriological report on the water supply of the several military barracks in Dublin, undertaken a few years ago at our instance, and published in the BRITISH MEDICAL JOURNAL. The state of public health in many Irish towns, and more especially in Dublin, will no doubt afford Professor McWeeney an ample field for his investigations. Professor McWeeney will also supervise the preparation of the vaccine lymph to be made at the vaccine institution at Sandymount. On and after April 1st this lymph will be exclusively used for official vaccinations.

THE LATE PRINCIPAL SIR W. GEDDES

OUR Aberdeen correspondent writes: The sudden death on February 9th, of Sir W. Geddes, Principal of Aberdeen University, was a great shock to the community and the news must have been received by Aberdeen men in many countries with a sense of real sorrow. The Principal was a dignified scholar, conscious of the academic importance of his office. But there was far more than that in his character. The story of his life—with its beginning in an out-of-the-way village in Aberdeenshire, its progress as parochial schoolmaster at Gamrie, later as classical master, and then as Rector of the well-known old Grammar School of Aberdeen, its advance with his election to the chair of Greek in the University, and after thirty years of successful and distinguished work in this chair, his promotion to the office of Principal—presented to each student who has looked up to him as the head of the Alma Mater an ideal, worked out indeed in the peaceful lines of an educational career, but, at the same time, worked by those powers of whole-hearted concentration in his work, and with that high-minded courage to persist in the face of difficulty of which Scotch students may so justly claim a sympathetic knowledge. With his success in elevating the standard of Greek learning in the University, with his elaborated additions to the literature of his subject, and with the distinction which so many of his students have gained in that branch of study, this is not the place to deal; but we may truly believe that of the several thousands of students who have come under his influence either as teacher or as Principal, there will not be one who will not have a real sense of mourning and a new feeling of sadness in his memory of what was fine, and dignified, and true in his University life, when the news of the death of the Principal reaches him.

PHYSICAL TRAINING IN ELEMENTARY SCHOOLS.

LORD BALFOUR OF BURLEIGH has, in a circular addressed to the school authorities of Scotland, drawn attention to the importance of physical exercises both as a means of education of mental as well as physical faculties, and particularly in the form of military drill, of imparting "habits of comradeship, of responsibility, and of individual resource." There is no doubt that in children, town-bred especially, attending elementary schools, the need of physical exercise as an integral part of the school curriculum is very marked. Often living within a few yards of the school, they have but little call upon their muscular powers in their walks to and fro; and asphalted playgrounds do not offer the same facilities for active exercise as do the playing fields of our public schools. Of late years increasing attention has been paid to drill of a rational character, and many excellent manuals are in the hands of schoolmasters containing exercises for various parts of the body based more or less on physiological principles. Lord Lansdowne, in his statement of the military proposals of the Government, referred to correspondence in progress between the Education Department and the War Office on the desirability of giving some form of military education in our public (elementary) schools; and a voluntary association, under the presidency of Lord Meath, has been formed for promoting that object. With children of school age the exercises should be such as will aid in the normal and harmonious development of their growing bodies. Certain kinds of drill—musical drill, for instance, which is much liked by young children—and those forms in which there is a combination of gymnastic exercises with mere formal drill are to be recommended; but how far, and at what age, such exercises should be superseded in the case of boys at elementary schools by drill of a more strictly military type is a matter which requires some consideration. It is at least open to doubt if in the case of boys under 14 it would be an advantage to substitute the drill sergeant for the gymnastic instructor. The proper time for these more purely military exercises seems to be at a later age, and facilities might well be given in connection with the continuation schools.

A NATIONAL ANTITUBERCULOUS INSTITUTE IN FRANCE.

M. FLEURY-RAVARIN, Member of the Chamber of Deputies for the Rhône Department, has brought in a Bill providing for the creation of a national antituberculous institute. The proposed institute is to be devoted to the study of the treatment of tuberculosis and experimental researches on the means to be employed for that purpose. The Société Lyonnaise des Tuberculeux Indigents has undertaken to build the institute at its own cost, and proposes to make it an annexe of the free sanatorium which it is about to open at Hauteville, in the mountains of the Bugey district. M. Fleury-Ravarin asks the State to associate itself with this philanthropic work by conferring on the institute the title of "National," and granting it an annual subvention of £600.

A DANCING DISEASE OF MADAGASCAR.

M. LASNET has published in a recent number of the *Annales d'Hygiene et de Médecine Coloniales* some ethnological and medical notes on the Sakalavas, or West Coast Malagasies. He gives an interesting description of a curious epidemic nervous affection met with amongst the natives. It appears to be a kind of nysterical chorea, commencing suddenly and characterised by incessant shaking of the body, accompanied by irregular movements, incoherent speech, and delirium. The sufferers indulge in wild bacchanalian dances, finally falling to the ground panting and foaming at the mouth. Some clamber up the rocks, while others pass whole days in pools or rivers, declaring that they are forced to remain there by spirits. They present, meanwhile, a most wild appearance, and, if not dancing, walk straight before them with head erect and eyes constantly rolling. The malady is very communicable; often the mere sight of, or contact with, a person

afflicted with it is sufficient. In former times it was exceedingly common, and the victims used to collect in groups of fifty or a hundred and execute their wild dances, whole villages being sometimes afflicted in this way. The sufferers were objects of awe to the other inhabitants, and the native authorities did not dare to take any steps to control them or to check the spread of the trouble. Since the French occupation, however, the disease is very rarely seen, those affected with it hiding in their huts. The subjects of it are called *Velonandrano* (dwellers in the water), or *Ramanenjana* (the restless ones) by the natives, who believe that they are possessed with the spirits of Hovas, the neighbouring and hostile tribe. No special treatment is adopted. As a rule the best plan appears to be to exhaust the patients by making them dance from morning to night. The native witch doctors administer a decoction of some native herbs as a remedy, and it is customary to smear the faces and bodies of the sufferers with white clay. The curious neurosis described by M. Lasnet is of particular interest, owing to its apparently close resemblance to the "pandemic chorea" of the Middle Ages. An interesting account of this is given in Professor Hecker's work on the *Epidemics of the Middle Ages*. During the fourteenth and fifteenth centuries, and to a less extent in the sixteenth and seventeenth, the so-called "dancing sickness" prevailed in various parts of Europe to an extraordinary extent. Following closely in the wake of the "Black Death," an epidemic arose in Germany which was known as the "Dance of St. John." In reference to this, Professor Hecker says: "Those affected with it formed circles hand in hand, and, appearing to have lost all control over their senses, continued dancing regardless of the bystanders for hours together in wild delirium, until at length they fell to the ground in a state of exhaustion." Enormous numbers were affected, and the mere sight of the sufferers served to set up the malady in fresh victims. The same affection was known in 1418 and the following years as "St. Vitus's Dance," pilgrimages to the shrine of that saint being organised by the authorities, who became seriously alarmed at the extent and results of the epidemic. Identical hysterical manifestations characterised the epidemic in Italy, known as *Tarantism*, the malady being popularly ascribed to the bite of the tarantula, or ground spider. It reached its height in the seventeenth century. In all these cases the symptoms, though presenting slight variations in different localities, were essentially the same; wild excitement, gesticulations, and dancing. In many places the sufferers exhibited a horror of anything of a red colour, and in almost all cases the influence of music, in exciting the maniacal dancing, was marked. Tympanites is very frequently referred to as a sequela of the seizures; and nausea, vomiting, tremors, loss of voice, temporary blindness, vertigo, and fits of causeless laughing or weeping are mentioned as symptoms in different cases, and serve to emphasise the hysterical nature of the malady. Epidemics practically identical have been recorded in Abyssinia, Russia, Java, and, in more recent times, in America; while a curious widespread neurosis, which occurred in the Shetland Islands in the middle of the seventeenth century, would appear to be of closely allied nature. In this case the occurrence of an epileptic fit in a women one Sunday in church gave rise to an epidemic of hysterical paroxysms among the women throughout the islands, which lasted more or less for many years. In the Middle Ages the sufferers were, of course, supposed to be possessed with evil spirits, as in the case of the Sakalavas, and treatment was left entirely to the priests. Paracelsus was the first physician who made the malady the subject of medical research, and he appears to have recognised the importance of strong mental impressions in its treatment. He distinguished three forms. The first he termed *chorea imaginativa*, and he cured it by causing the patient to make an image of himself in wax or resin, and, by an effort of imagination, to concentrate "all his blasphemies and sins" in it, and then burn it. Another variety (*chorea lasciva*) he treated by drastic remedies such as solitary confinement, castigation, and immersion in cold water; and for the third, which, as arising from corporeal causes he called *chorea naturalis*, he prescribed various medicines. There can be no doubt of the hysterical character of all these remarkable epidemics, and it would not seem that race had much to do with susceptibility to them. The close resemblance of the *Velonandrano* of the Malagassy people (who are of Malayo-Polynesian stock with some Melanesian, African, and Arab admixture) to the epidemics which were the scourge of Europe in the Middle Ages is of great interest.

THE PHYSIOLOGY OF ENJOYMENT.

DR. C. LANGE, of Copenhagen, who is well known by his contributions to the psychology of the emotions, has published a memoir on the *Physiology of Enjoyment as a Basis for a Rational Æsthetic*.[1] This study attempts to establish, on the basis of natural science, conditions and phenomena which have hitherto been regarded as purely intellectual. The main thesis is in some degree a continuation of the author's book on emotion. The means of enjoyment may be regarded under two divisions—the means of enjoyment in general, and the arts as a special means of enjoyment. Dr. Lange devotes his attention largely to the latter. The criterion that a given sentiment is an enjoyment for anyone is the fact that he seeks to experience it. Dr. Lange points out that the emotions are largely vasomotor phenomena, and therefore the factors which can cause such phenomena are eagerly sought after or as eagerly avoided. Of the greatest importance are those emotions which are caused by vaso-dilatation, and next the joy of those which are caused by vaso constriction, as, for example, the enjoyment of the feeling of being kept in suspense. Ecstasy is not quite the same as the other emotions, but is the purest and most intense, the most abstract enjoyment as it were, and undoubtedly the highest of the pleasurable sensations which the human organism can experience. A lower degree of ecstasy is admiration, perhaps the most important of the sensations because it is so common. Its objects are to be found in abundance in the world around, and man is also capable of creating them himself in the arts. The long protraction of joy can be explained as due to a paresis of the muscular coat of the blood vessels in the brain, which may persist some time, while anger and sorrow are associated with spasmodic vaso-constrictions which can last for a little while only, and are succeeded by weariness. Only one emotion—disappointment—never seems to show itself as a feeling of enjoyment, and the physiological explanation is perhaps to be sought in its being accompanied by a feeling of atony. The means of enjoyment may be classed biologically into three main groups. In the first group the nervous impulses reach the vasomotor centres either by short routes through the nerves of sensation, or by more indirect routes emanating from the "psychical" centres of the brain. The pleasurable feelings aroused by alterations of temperature, by smell and by taste belong to the group of enjoyments aroused by single sensations, while those aroused by colours and sounds require a co-operation of sensations. The southern races of Europe are characterised by duller senses, and therefore require stronger impressions than those of the north. The means of enjoyment of the second main group operate in the form of physical and chemical substances entering into the circulation *viâ* the alimentary canal or otherwise; for example, substances such as coffee, alcohol, tobacco, and opium. The third main group com-

[1] Abstract from the Danish, by Dr. Friis, *Journal of Mental Science*, January, 1900.

prises mechanical movements, This includes dances and movements of various kinds, in which children instinctively enjoy themselves. Anger, however, can also be excited as by war dances, while ecstasy is promoted by religious dances. Besides the different types and means of enjoyment, there are two conditions which are of the greatest importance in producing and enhancing pleasure, change, and sympathy. Rhythm is closely associated with change, but introduces an element of method. As strengthening the enjoyment of change and rhythm we have "surprise"—a sudden breach of rhythm. This constitutes "comic art." Sympathy has very deep roots in human nature, and is closely bound up with the instinct of imitative reproduction. Dr. Lange quotes instances from painting and poetry, architecture and decoration, and the dramatic art, to illustrate his points as to the fuller meaning of sympathy, of change and of admiration as conditions for enjoyment. Men instinctively have recourse to these three expedients to satisfy artificially their need of enjoyment when the natural means are insufficient. The productions of man to satisfy these conditions constitute works of art—a sober but a very practical conclusion.

NAPOLEON'S SURGEON AT ST. HELENA.

Barry O'Meara, who was surgeon of the *Bellerophon* when Napoleon gave himself up to his British conquerors in 1815, and who afterwards accompanied him to St. Helena, made his illustrious patient, as is well known, the subject of a book which excited such interest in England that the publisher's office had to be guarded by police. The book was founded on a journal kept by O'Meara during the three years he was at St. Helena, but a large part of the material contained in this journal was of such a nature that its publication was deemed inadvisable by the author, at any rate during his lifetime. He bequeathed the MS. of the journal, forming nineteen volumes, to Louis Mailliard, the private secretary of Joseph Bonaparte. Members of Mailliard's family settled in the United States, and the journal has remained in the hands of their descendants. The conductors of the *Century Magazine* have succeeded in gaining access to the MS., and have had it deciphered, and in the February number a first instalment of this historic document is published. There is not much of medical interest in it. The diary begins on April 18th, 1816, and on May 5th the captive Emperor asked O'Meara to tell him frankly whether he was there as a surgeon or as a spy. O'Meara replied that his position was simply that of a medical attendant on himself and his followers, and that he had received no other orders than to make an immediate report in case of his being taken seriously ill, in order to have the advice and assistance of other physicians. After obtaining an assurance that no one would be called in consultation without his consent, Napoleon laid on the surgeon the following injunction, which shows that he had very definite ideas as to professional secrecy: "If I have the misfortune to have any trifling illness, or a boil or a scratch, do not mention it to the Governor or anybody else. If he asks you anything about me tell him that you are my surgeon and not my confessor, and that it would be a breach of confidence. If I am taken seriously ill, then acquaint me and ask my consent to call in others, and tell Maréchal Bertrand of it or report it yourself. The English Government, of course, would be anxious to show that I was well taken care of if I was to die. That is all right." By-and-by the patient confided to the surgeon that he was afraid he was getting the gout, and mentioned some symptoms which appeared to afford ground for the suspicion. O'Meara told him he ought to take a great deal more exercise than he did, whereupon Napoleon peevishly answered: "What can I do? They send me here to this execrable isle, where you cannot ride a mile without being wet through!" At a later date we find the Emperor again reviling the climate of St. Helena, and asking questions as to the situation of the heart, liver, and lungs, apparently with the view of finding an explanation of a slight pain in the right breast from which he suffered. On another occasion the Emperor delivered himself of some sensible opinions on valetudinarians. He said it was folly for a man to be always dosing himself with drugs in every trifling illness. "Let him," said he, "eat nothing, and drink plenty of barleywater and no wine. That is my way, or sometimes I ride for several leagues, and get into a perspiration." Again, he remarks how seldom the English made use of baths or unguents. O'Meara told him that "in the first houses" there was always a bath, and ointments were used in serious illness. Whereupon the great man made the sage reflection, "Your climate is too humid." O'Meara, who was an Irishman, thereupon applied some of his native blarney as a flattering unction to his august patient, telling him he was like the ancient Romans, who were accustomed to eat in a bath, "at which he smiled and assented." The Emperor sometimes doctored himself; we hear of him taking a "pediluvium" when suffering from headache. On O'Meara presenting Dr. Baxter, inspector of hospitals, to him, he genially asked how many men he had murdered in his time. Baxter might with much more point have retorted the question on his interrogator. The continuation of O'Meara's journal will be awaited with interest.

LATENT PHTHISIS AND ITS RELATION TO INSANITY.

J. Chartier (*Thèse de Paris*, 1899) has studied the psychoses which appeared among individuals afflicted with "latent tuberculosis," at the Roche-sur-Yon Asylum, under Dr. Cullere. Knowing that the toxins produced by the tubercle bacillus are capable of giving rise to cerebral symptoms (such as mental confusion, delirium, etc.), as is sufficiently shown after the administration of tuberculin to some subjects—the question suggested itself whether, in some individuals, there is a predisposition which renders them prone to undue cerebral reaction, just as in other cases present there appears to be a tendency to dyspepsia or albuminuria. Chartier finds that degeneracy of brain and a hereditary tendency to insanity increase the liability to suffer from the cerebral symptoms produced by tuberculin as well as to other cerebral toxins also. He finds that there is no form of insanity peculiar to tuberculous individuals. Every kind of delirium has its own special feature, and numerous observations are cited in support of this statement. It is only in advanced stages of phthisis that any coexistent mental alienation may receive a particular impress, as it were, from the degree of toxæmia in the system consequent upon the advance of the tuberculous lesions. The fact that a parallelism may be noticed in some patients between the progress of the tuberculosis and the progress of mental alienation and dementia affords no sufficient ground for counting a "tuberculous insanity." So-called alternating cases of phthisis and insanity are exceedingly few in number, and the interpretation put upon such cases must be received with caution. The morbid conditions to be taken into account are many and complex, and it is quite possible that at certain times during the progress of the tuberculosis toxins may be formed and liberated into the circulation in large quantities, thus giving rise to periodic exacerbations—attacks of cerebral toxæmia. An alternation of insanity and phthisis in the strict sense cannot be maintained on such evidence, and the hypothesis put forward by Ball to the effect that "insanity replaces phthisis in tuberculous families by a sort of transformation of the morbid heredity," found no support in the cases observed and studied by Chartier, who concludes that between tuberculosis and insanity attacking the same family there exists only the very general bond of degeneracy. Chartier deals very fully with the subject of diagnosis, and refers at length

to the signs which indicate tuberculosis in its incipient state, signs which, he urges, should be carefully looked for by the alienist.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS, 1900.

The Paris Executive of the International Medical Congress give notice that, as there has been some misunderstanding about the sectional arrangements, every member may join as many sections as he pleases for a single subscription, but that the expense will prevent every member receiving a copy of the whole twenty-four volumes of the *Proceedings* of the Congress. Each member of the Congress will receive therefore in due course (1) a general summary of the work of the Congress, (2) a volume of the acts of the Congress, (3) a volume containing the works of the section to which he chooses to affiliate himself. If a member has joined several sections he will receive the *Proceedings* of the section which he has placed first on his form of application for membership. Members of the Congress who wish to receive the whole set of *Proceedings*, should communicate with M. Masson, the editor, 120, Boulevard St. Germain, Paris.

ANGLO-AMERICAN NURSING HOME IN ROME.

Reference has been made more than once in the British Medical Journal to a project set on foot not long ago by some medical practitioners resident in Rome for the establishment of a nursing home, in which persons of British or American nationality who have the misfortune to fall ill in the Eternal City could be received. The scheme met with opposition in certain quarters, but all difficulties have been successfully overcome. A *villino* excellently adapted for the purpose was found in the Via Nomentana, a little way outside the Porta Pia. The building is charmingly situated, standing well back from the road, in about half an acre of ground. Round about it are pretty villas, each isolated in its own ample garden, and there is no fear of the surrounding open spaces being built over. The house has twenty-seven rooms, and can conveniently accommodate six or eight patients, who have the use of several comfortable day-rooms. The walls and ceilings are artistically painted, and all the rooms have a cheerful outlook. On the roof is a terrace commanding an extensive view of the Campagna, with the whole range of the Alban and Sabine Hills in the distance. The situation and arrangement of the home make it well suited for the open-air treatment of tuberculous cases. Ordinary patients pay an inclusive charge of 20 francs a day, but two beds are set apart for patients who cannot afford more than half the usual rate, and two are entirely free. In the other institutions which receive cases of the kind for which the home is intended there are, we believe, no free beds. The Anglo-American Nursing Home, which was opened in the early part of January, is at present partly dependent on subscriptions, but it is hoped that it will soon be self-supporting. Miss Gibbons, who was formerly matron of the Tewkesbury Cottage Hospital, has accepted the post of directress, without salary. Patients can be sent in by any medical practitioner in Rome, and remain under his charge while in the home. The new institution appears likely to fulfil a useful purpose.

The Queen formally conferred the honour of knighthood upon Sir Thomas Lauder Brunton, M.D., F.R.S., at Osborne on February 9th.

A meeting of the Organising Council of the British Congress of Tuberculosis will be held at the house of the Royal Medical and Chirurgical Society on Thursday next, February 22nd, at 4 P.M.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Supplementary Army Estimates, which contain among other items an increased vote for the medical service, were the subject of remarks by Sir Walter Foster and Dr. Farquharson. In answer to the former Mr. Wyndham stated on Tuesday that it was intended to offer 100 commissions instead of 30 to medical officers, and to increase the corps by 250 non-commissioned officers and men. Dr. Farquharson later in the debate congratulated the Army Medical Corps on the fact that it had received general praise for its efficiency.

The Lunacy Bill is being pressed forward, and was read a second time in the House of Lords on Monday. The Lord Chancellor reminded the House that it had twice previously passed the House of Lords, and that it involved questions of serious public importance. The provisions with reference to urgency orders were specially referred to, as it had been found that the facilities instituted by the Act of 1890 had been abused, and amendment was necessary in the interest of the liberty of the subject. Clause 1 of the Bill deals with urgency orders, and provides that an order shall remain in force four days only instead of seven, and that every urgency order shall be accompanied by a statement from the person who signs the order, and one from the medical man who signs the certificate, that it is necessary for the safety and proper treatment of the alleged lunatic, or for the safety of others, that he should be forthwith placed under care and treatment. In Clause xxiii provision is made for the temporary care of incipient lunatics by placing them under care for a period not exceeding six months. [The text of this clause is quoted in Dr. Fletcher Beach's address, pp. 371, 372.]

The Companies Acts Amendment Bill was introduced and read a first time in the Commons by Mr. Ritchie on Monday last. The President of the Board of Trade, in presenting the Bill, said it was, with the exception of a verbal amendment, exactly as it came from the House of Lords last year. The clause referring to medical practice is as follows:

3. *Companies not to Act as Doctors, etc.*—It shall be unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife; and if any company contravenes this enactment it shall be liable, on summary conviction, to a fine not exceeding five pounds for every day during which the contravention happens.

The clause touching pharmacy is as follows:

2. *Application of Pharmacy Act to Company.*—No company may carry on the business and use the description of a pharmaceutical chemist or chemist and druggist unless the business is *bonâ fide* conducted by a manager or assistant being a duly registered pharmaceutical chemist or chemist and druggist, as the case may require, nor unless the name of the person so qualified is conspicuously posted in the shop or other place in which the business is carried on, but, subject to this provision, anything which would be an offence under Section xv of the Pharmacy Act, 1868, if committed by an individual, shall be an offence if committed by a company.

Colonial Military Surgeons and the Medical Acts.—The Under-Secretary for War has made a statement with regard to the position of Colonial military medical officers. The Medical Acts prohibit the appointment as army surgeons of practitioners who are not registered in the United Kingdom, but they do not prevent non-registered surgeons from rendering assistance under the orders of the Medical Staff. The surgeons attached to the Colonial forces are therefore able to attend the wounded regulars under the superintendence of the army medical officers. General Laurie, who raised the question, seemed to think these conditions unsatisfactory, but the Under-Secretary said the general question of reciprocity with the Colonies as regards medical qualifications was too broad a question for the War Office.

The Clothing for the Troops was the subject of a question by General Russell, who was informed by the Under-Secretary for War that flannel belts are issued to the men, as is the case in India. Two belts of flannel or worsted are issued to every man in South Africa, and a reserve supply has been sent out. A considerable reserve of warm clothing has also been despatched, and more will follow.

THE WAR IN SOUTH AFRICA.

[From our Special War Correspondent.]

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

BULLET INJURIES OF NERVE TRUNKS AND OF THE SPINAL CORD.

In my last letter I mentioned that I had seen in the hospitals at Wynberg, Cape Colony, a number of interesting cases of bullet wounds in which nerve trunks had been injured, and in this letter I propose to discuss these and also certain cases of injury of the spinal cord.

In most of the cases in which nerve trunks were injured by bullet wounds of the limbs the track of the bullet healed readily, but when the patients were seen at Wynberg they were found with the limb partly or wholly paralysed over the area corresponding to the distribution of one or more of the nerve trunks. Even when the symptoms appeared to indicate complete division of the nerve, this was aftewards found not to be the case. In some no doubt the division was complete, and from the direction of the wound a large extent of the nerve must have been utterly destroyed. But presumably in some the nerve trunk was merely grazed. Such an injury, however, when inflicted by a bullet travelling at a very high velocity, not only damages the nerve seriously, but leads secondarily to changes of degeneration that ensue with great rapidity. The pain usually is very severe in the limb, and in proportion to the gravity of the wound as regards life these cases are distressing. Yet they seemed hopeful, and the symptoms varied with such rapidity that in not a few instances operations proposed were postponed on account of improvement. There were few injuries in the hospital that will better repay careful watching at home. The majority of these men will be invalided back to England, the rule now in force being that no man unlikely to be fit for duty within two months is to be retained in hospital unless too ill to admit of removal.

Injury of Musculo-spiral Nerve.

A man in No. 2 Hospital, shot through the back of the arm at the level of the mid-point of the musculo-spiral groove, had a marked zone of hyperæsthesia, anæsthesia over the area supplied by the musculo spiral, and paralysis of extensors. The man was wounded about December 10th, 1899, but I am unable now to refer to the exact date. The humerus was uninjured. The symptoms were held to be due to partial—possibly total—division of the nerve below the level at which the nerve supply for the triceps comes off, for this muscle could act. The question of operative interference was raised, but it was decided to wait and watch the development of the case. A week later the condition had materially altered for the better. Some power of extending the fingers returned, almost suddenly, according to the man's account. The extensors of the forearm could be felt to contract, but there was still marked wrist drop. Supination was performed by the action of the biceps alone. The hyperæsthesia, which had been a marked feature, was notably diminished. Pain, which had been severe in the palm of the hand (a phenomenon difficult of explanation, but which seemed genuine, and which I have noted in another case of the same sort), was improved. Altogether the improvement was so decided that the question of operation was further postponed. The wound in this instance was at a right angle to the course of the nerve, and, as the bone appeared uninjured, the actual damage to the trunk could hardly have been deep.

Lesions of Distant Tissues in Perforating Wounds of Limbs.

I have cited this case at some length as it is a fairly typical example of a rather common injury. So far as present experience goes (and it must be admitted that the experience is so short that one must speak very guardedly), the main points of these cases appear to be three.

1. The first is that the hyperæsthesia is very marked, comes on early, and alters rapidly.

2. The second is that profound nerve symptoms may occur without the nerve being severed.

These may be due to bruising or grazing of the nerve trunk, but it would seem that they may even be present where the nerve is not touched at all. The small bore projectile, travelling at high velocity, drills a perfectly clean passage through the tissues, often through bone, but the effects are widely felt by the tissues. Ecchymosis, for instance, often appears far from the bullet track in places where it is doubtful if the extravasated blood can possibly have extended. Distant parts seem violently stretched by the passage of the bullet as the fascia of the thigh is often stretched in sprains of the ankle. The bullet might therefore entail what the Germans call a violent *Erschutterung* of the nerve trunk by passing in its immediate vicinity without directly injuring the cord.

Thus in one case I saw the ulnar nerve carefully exposed in the lower part of the axilla in the hope of relieving symptoms of a similar nature to those described above. The cicatricial track of the missile was seen, but it did not affect the ulnar or any other of the nerve trunks, nor was the ulnar nerve other than perfectly normal in appearance.

In another case a large nerve trunk was involved in the cicatricial track of a Mauser bullet which had perforated the ilium, and, judging by its direction, had injured the nerve a little below the sciatic notch. It may be observed incidentally that the almost undeviating track of these bullets, whatever the tissues they meet with, renders the task of the surgeon to some extent easier. The patient suffered extremely from pain along the course and distribution of the sciatic nerve. The hyperæsthetic area was extensive and most marked. In this case, as in some others, the tenderness of the tibia was marked. There was foot drop. The diagnosis made was bruising of the sciatic nerve and involvement in cicatricial tissue. This diagnosis was borne out to the letter. Some two inches below the exit of the nerve trunk it was found caught in cicatricial tissue as tough and dry as that following a burn. This cicatricial tissue compressed the nerve and grooved it as a fibrous ring compresses a strangulated hernia. All this tough material was dissected off and the nerve set free. The immediate after-results as regards the pain were satisfactory, but the foot drop persisted, and the greatly wasted flexor muscles of the thigh acted only in the feeblest manner. The further progress of this case I hope to detail later.

3. The third noteworthy point in connection with these nerve cases is the astonishing power of recovery and the extent to which the diagnosis of the precise amount of injury may be mistaken.

Bullet Wounds of the Spinal Cord.

In some degree, injuries of the spinal cord present the same features as those of minor nerve trunks. None of the cases in hospital seem more hopeless, and none are, on that very account, more distressing than gunshot wounds involving the cord. The most remarkable feature of these cases is the astonishing rapidity of the degenerative changes. In a day or two in many instances deep sloughing sores have formed over the sacrum, and others where there is not the slightest pressure. Cystitis sets in early, and in three or four weeks perhaps the patient has run through all the changes that in civil hospitals we see, in traumatic cases, accomplished only in months. An intensely acute sharply-limited zone of hyperæsthesia is a usual symptom. The level of this varies almost from day to day. If there is any grave lesion of the cord from a bullet or from the driving of fragments of bone into the vertebral canal, the wound may be set down as mortal as far as can be judged at present. If the bullet has travelled down the long axis of the spine the amount of destruction is enormous. Even when the wound is transverse, affecting but a small extent of the cord, the area of damage may be very great, as the following case will show: A private was wounded at Magersfontein, the bullet (a Mauser judging by the wounds) entering the back about the level of the sixth dorsal spine, about 4 inches to the side of the middle line, and passing out transversely at a corresponding point on the other side. Complete paraplegia and loss of sensation ensued. Sores rapidly formed over the sacrum and elsewhere, and the man died some three weeks after the injury; all the usual trophic changes have succeeded one another with great rapidity. The

bullet wounds healed kindly. As the Mauser bullets seldom or never deflect it is possible to judge very closely of the structures likely to be injured. At times, it may be remarked, the most difficult, but still straightforward, problems of surgical anatomy confront the surgeon. In this case it seemed impossible that the bullet could have done more than skirt the back of the vertebral canal, and the symptoms were therefore attributed either to hæmorrhage compressing the cord, a graze of the cord, or injury from fragments of bone. The condition of the patient rendered the idea of operation hopeless. At the *post-mortem* examination the laminæ of the dorsal vertebra were found fractured. A mass of finely comminuted bone, the size of a large pea, was driven into it, but did not perforate the dura mater. Some of the fragments of bone were exceedingly sharp, and seemed to pin the meninges to the cord. The membranes were adherent over an area the size of a shilling, and extremely congested over an area the size of a five-shilling piece. As soon as the loose pieces of bone were removed the compressed cord rose up and, save for the area of congestion, looked normal. On slitting up the membranes, however, some three inches of the cord below the site of compression was found reduced to a complete pulp, entirely disintegrated and diffluent. No other injury was found.

No case could have seemed more promising for operation. With the utmost ease the comminuted bone compressing the cord could have been removed, and the operator would doubtless have congratulated himself on a probable success. Operation, however, would not, it was evident, have done the slightest good, even though it had been performed immediately after the receipt of the injury. The wound was mortal from the first. The condition of the cord was almost certainly due to the immediate consequences of the injury, and not to any secondary degenerative changes. These might have been possibly stayed by operative interference, but the ultimate issue would have been the same, and probably life would not have been in the least degree prolonged or rendered less painful.

The case is a fairly typical one. When the cord is actually traversed (and *a portion* injured in its long axis) or grazed, the prognosis is of the gravest nature. In some instances, where the bullets have passed close to the cord, symptoms similar to actual lesion show at once; but after a while—a few days, perhaps—some sensation returns, or some little power of movement is noticed. Such cases are difficult of explanation. Extravasation of blood into the canal may be the cause, but it is more than doubtful whether this common explanation is often the true one. Similar symptoms as already mentioned occur when the bullets travel near nerve trunks, in which dissecting operations have revealed no naked-eye changes.

To attribute the symptoms in these cases in which the cord or the large nerve trunks are not actually implicated, to "nerve shock," is really rather to beg the question. Terms of this nature do not really either advance knowledge or assist in treatment. However great the velocity of the bullet as it traverses the tissues, and however clearly it may appear to perforate the structures, there is yet good evidence that remote structures may be violently stretched or lacerated. Extravasations are often seen at points remote from the line of the bullet wound which are not to be explained by the tracking of the blood extravasated about the injury. The "nerve shock" is more probably, as in the case of the nerve trunks, essentially due to a direct "commotion" or "*Erschutterung*." Possibly it may be said that "shock" is quite as good and scientific a term as those given. I will yield the point at once, if it be allowed that the symptoms are actually produced by mechanical injury. The term "shock" is so often employed to explain conditions in which it is assumed that the changes are physiological rather than anatomical that I desire to avoid it. It is perhaps still too theoretical to assume that the passage of the projectile through the tissues in the close neighbourhood of important structures, such as spinal cord or large nerve trunks, produces vibratory effects sufficient to account for their disorganisation; but certainly such an hypothesis furnishes a fairly satisfactory explanation of the effects actually observed.

A case bearing out the above remarks, now in the hospital at Maritzburg, may be briefly cited. The bullet (a Mauser) entered 2 inches below the acromion process of the left shoulder at the posterior border of the deltoid. There was no exit wound. There was from the first complete paralysis of movement of both lower limbs. The probable direction of the bullet was towards the dorso-lumbar spine, but the condition of the man precluded skiagraphy. There had been no hæmoptysis, and the resonance on the left side was natural, so that in all probability there was no wound of the pleural cavity or lung. The wound was received at Colenso on December 15th, 1899. The condition on January 10th was as follows: There was no power of movement whatever in either leg. The reflexes were absent. The abdominal muscles moved normally in respiration. As regards sensation: Over the skin area supplied by the anterior crural trunk sensation was impaired, but not absent. Over that supplied by the small sciatic it was normal. Over that supplied by the great sciatic it was much impaired, and in places hyperæsthetic. Sensation over the distribution of the genito-crural nerve was normal. There was extreme tenderness of the left testis, but the gland itself was normal. Sensation over the abdomen was natural. There was a sharply-limited band of hyperæsthesia at the level of the ensiform cartilage. Above and below this the sensation was normal. The skin over the sacrum was red, and a sore was threatened, but there were no sores elsewhere. Control of bladder was almost complete, but some cystitis had begun. There was constipation. There was no evidence of fracture of the spine.

It is, of course, possible that in this instance one or more of the vertebræ had been broken up to some extent, but it seems impossible that the cord was directly injured by the bullet. Yet the symptoms were bilateral. There was no indication of progressive myelitis. The man's condition generally was bad, and the case seemed likely to drift slowly to a fatal issue.

In one or two other cases, in which the bullet had passed close to the cord, the symptoms of actual lesion were present for a time, but then rapidly altered for the better, and there was a fair prospect of recovery.

Clinton T. Dent.

SOME IMPRESSIONS OF MILITARY SURGERY IN SOUTH AFRICA.

By G. H. Makins, F.R.C.S.,
Consulting Surgeon with the Forces.

II.—Clinical Signs and Course of the Wounds.

The actual infliction of the wound gives rise to little pain—usually a sharp burning sensation—and is followed by remarkably little shock; severe shock is, in fact, uncommon, even when vital organs are struck. Omitting the cases in which a large vascular trunk is struck in a limb or in the body, external hæmorrhage is slight, and even when a large trunk is implicated, it more often gives rise to intermediate or secondary hæmorrhage than to severe primary bleeding. In fact, such evidence as can be obtained points to but few deaths taking place on the field from primary bleeding. Although, however, external hæmorrhage is slight, interstitial bleeding into the limbs or into the cavities of the trunk during the first few hours after the injury is common, and may be severe or fatal. As will be remarked later, traumatic aneurysms are comparatively frequent. Again, the scoring or contusion of nerve trunks gives rise to more or less complete paralysis or to severe neuralgic pain during and after the healing of the wound.

The tendency to run an aseptic course is very marked, and deep suppuration or diffuse cellulitis is distinctly rare. This depends on the smallness of the wound, the aseptic nature of the bullet, and the fact that foreign bodies, such as pieces of clothing, are comparatively rarely introduced.

The asepticity of the bullet is, I think, clearly demonstrated, and is probably due to the fact that the bullet, in travelling through the barrel of the rifle, obtains a completely fresh surface, and with such enters the body. As to the frequency with which portions of clothing are carried into the wound, it should be remarked that this varies considerably with the nature of the material traversed. The opening in the khaki jacket, for instance, from the hardness of the material, is usually a clean slit; but, if the bullet has to traverse a flannel shirt, loss of substance and transference of this to the wound is more common, while in the case of the highland kilt, where

several layers of cloth have to be traversed, portions are comparatively frequently found in the wounds.

The slight tendency to suppuration exhibited by the tracks is, however, I think due to some inherent character of the tissue, probably explained by the condensation and surface destruction of the tissue resulting from the force and velocity of the bullet, since the tracks neither bleed freely at first, nor do they furnish any material amount of serous discharge during the process of healing. They remain, indeed, dry throughout, and their slight tendency to suppuration is well instanced by the fact that if for any reason a deep part of a track becomes infected and suppurates, the inflammatory process shows no tendency to spread by the original wound, but comes to the surface locally.

During the process of healing the apertures, and with them the track, gradually contract, the aperture of entry is closed by dry clot, and diminishes in size, the contused margin becoming a small black depressed spot in the centre, while the aperture of exit often closes with an ordinary reddened cicatrix. When fully healed the ends of the contracted track can be felt as two small indurated spots, often so hard as to give the impression of an included foreign body. The extreme density of the resulting cicatrix in the deeper parts of the wound is a factor of much importance, since if it involves tendons or nerves, considerable impairment of movement, or signs of nerve pressure are produced. Again, a track through the muscles of the leg, for instance, will more or less tie the whole thickness of the traversed structures together from the aperture of entry to that of exit, both of which may be seen to be drawn in as dimples when the muscles are put in action. This condition naturally gives rise to much subsequent stiffness and pain on movement, and forms one of the most troublesome after-consequences in simple flesh wounds. The scars left in the situation of the two apertures are not more apparent than those resulting from a large acne pustule.

The above description of uncomplicated flesh wounds shows that the treatment of these injuries is simple in the extreme, It has consisted almost entirely in the application of pads of dry bicyanide gauze and a little wool after the parts surrounding the openings have been washed with an antiseptic lotion, either a solution of carbolic acid or of perchloride of mercury. Fixation, beyond that resulting from the bandaging on of the dressing, has rarely been needed. In the foregoing remarks concerning the aseptic course of the wounds, considerable stress has been laid on the aseptic character of the bullet and the nature of the injury to the soft parts; but I should not neglect to add that the purity of the atmosphere and the apparently innocuous nature of the dust on the high veld, when the camp is a fresh one, must also be credited as important factors in the happy results which have been attained up to the present. It will be noted that no remark has been made as to the treatment of retained bullets, and this for two reasons: first, retained Mauser bullets are uncommon; and, secondly, if not causing trouble, they are best left alone, unless they lie in very superficial positions.

Pietermaritzburg, January 20th.

THE MILITARY HOSPITALS AND HOSPITAL SHIPS IN NATAL.

Suspense.

Here in Natal we have been living for some time past in almost daily expectation of hearing of severe fighting up at the front, and of a fresh influx of wounded. The suspense has been so long, however, and the scanty amount of news so trying, that already some degree of mental reaction is apparent. To-day comes the information, apparently well authenticated, that the relief forces have crossed the Tugela, and the long-expected engagement cannot now be far distant. Nearly all the men wounded at Colenso who have been under treatment in hospital here have been moved away, and the hospitals are fairly empty.

The Hospital Accommodation in Natal.

The opportunity is therefore a good one for reviewing the hospital accommodation in Natal, and considering how far it is adequate to meet an emergency that has long been foreseen.

General Hospital at Mooi River.

No. 4 General Hospital is now established at Mooi river, distant, by rail, some two or three hours from this place. It is, of course, a tent hospital, similar in all respects to Nos. 2 and 3, at Wynberg and Rondebosch, near Capetown. Fully 500 patients can be accommodated.

The Barrack Hospitals at Pietermaritzburg.

The main hospitals in Maritzburg are the barrack buildings at Fort Napier, and are two in number, containing beds for about 600 cases. At the moment of writing 400 of these beds are empty. They are placed on sloping ground, well above the town. The wards are the usual type of barrack hut, with the invariable verandah or "stoep" running along the whole length in the lower aspect. Each ward contains about 25 beds, rather too large a number. Many of the huts are old, and have the usual disadvantages of modern buildings that have been in use for some time. The floors are hardly perfect, and the visitor—accustomed to the glazed bricks, the marble, and the tiles of modern civilian hospitals—would find much to criticise, and perhaps much to be surprised at, as regards the eminently satisfactory progress of wounds and operation cases under treatment in them. The huts burnt down on January 10th have been rapidly rebuilt, and are already nearly complete.

The Church and Legislative Assembly Hospitals.

The garrison church has been cleared, and it is intended to use it—if necessity arises—as a hospital ward. The floor space will allow of 36 to 40 beds. This building is lofty, and being of brick, has the great advantage of being cool, a feature of no little value in the treatment of the sick and wounded in a hot climate. The temperature in the town for some days past has during the day averaged over 80° F. But the fact is that a church does not make a very good hospital. The church is rather dark, and the amount of window quite insufficient. Moreover, in each light only about one third of the window can be opened. All the patients are unnecessarily congregated in one ward, and however continuously the doors are kept open the air is likely to be stagnant in the corners. Probably the milder cases, especially such as are not confined to bed, will be relegated to the Church Hospital. In the centre of the town the fine and lofty building of the Legislative Assembly has been converted into a hospital for the Volunteers, and is excellently suited for the purpose. The sole objection that can be urged against it is that the number of patients in the main ward is too large. The hospital fittings are excellent. The bedsteads have wire-wove mattresses (those of the Fort and Lower Barrack Hospitals are of sacking), and the whole place has the right stamp of neatness and good order upon it. The colonists of Natal have evidently determined to do the thing thoroughly well, and they have succeeded. This building is fitted with electric light. The church has the same advantage.

On the slope of a hill just outside the town, overlooking the Park, are the tents of the College Hospital, similar to the other tent hospitals. There is ample space, and the number of beds could be almost indefinitely increased, but it is to be feared that there would be difficulty in providing a proportionate increase in the medical and the nursing staff.

The Spirit of the Colonists.

In addition to these hospitals the two ships now at Durban must be reckoned. The *Lismore Castle* furnishes a very remarkable instance of the energy of the people of Natal and of the Durban workmen in particular. In four days and-a-half the vessel was entirely converted from a transport for troops to a floating hospital. The old fittings had to be removed and the entire ship practically rearranged. The swing and fixed cots were made and put in place, dressers set up, and operating theatre constructed between decks, the electric lighting altered, ventilation arrangements modified, and a thousand other minor details considered and completed in this astonishingly short time. Two things were necessary for so successful a piece of work. One was an energetic chief with a power of organisation. This requisite was more than fully supplied by Captain Holland of the Indian Marine. Secondly, the men entrusted with the actual work had to set to their task with

real keenness and with a spirit that is not to be called up by mere offer of increased wages. Fortunately this spirit is just now very conspicuous in Natal. Nothing is more striking to the stranger, thrown for the first time into this colony during the stress of a crisis like the present, than the extraordinary spirit of loyalty and determination shown by the inhabitants. It is shown by the eagerness with which men enlist; it may be shown by the sacrifices of every kind which everyone seems ready to make; and it may be shown by the carpenter or plumber or other workman who does his very best and works continuously his very hardest at anything connected with the welfare or advantage of the troops. Natal, so far, has had to bear the brunt of the campaign, and the people of Natal, so far as a casual visitor is enabled to judge, have "faced the music" in a spirit worthy of a great race. They have not been demonstrative; they do not wave flags or sing borrowed sentiments, but they have put their shoulders to the wheel and, high and low, shown a grim determination to look their misfortunes in the face, to bear trouble and loss with equanimity, and to bide their time with patience—with obstinacy, if the term be preferred—till the issues are resolved. Such a colony must go far, and it is to be hoped that their patriotism will be fully appreciated. From this digression, which is less of a divagation than it may appear, I may return to the hospital ship.

The Hospital Ships.

In the *Lismore Castle* the ventilation seemed adequate if not quite as free as could be wished. But the ship was moored to the wharf in the channel, as far up the bay as it could possibly be got. The rise and fall of the tide, sweeping strongly along the narrow channel, carried, I was assured, all the drainage well out to sea—a satisfactory condition of affairs from the sanitary point of view, though rather unexpected. Access, however, to ships moored beyond the bar in the outer anchorage is difficult, and the sea at times runs uncomfortably high. The *Lismore Castle* accommodates 250 patients. Here, again, there were too many beds in one ward, the forward one having 56 cots. It was satisfactory to find that some of the trained nurses who had been thrown out of work by having to leave Johannesburg had found employment in the ship. Dr. Brodie (of Johannesburg) was in chief medical charge with a staff of civil surgeons.

The *Lismore Castle* seems now to occupy a rather indefinite position. The beds are no longer to be reckoned as part of the general hospital here. The reason for this change, which has been made within the last few hours, I have not yet been able to ascertain. Possibly the ship is to be used for the transport of sick, a duty for which it is not nearly so well adapted as the *Nubia*. The latter ship has a reputation for steadiness in a sea, which her breadth of beam would seem to indicate. I hope it is no libel on the shipping companies to hint that however carefully their vessels are designed some roll more than others, and that a ship that rolls badly is never well suited to be a hospital ship. This consideration does not seem always to have been kept in view.

Orders were given to fit the P. and O. steamship *Nubia* as a hospital ship on December 26th. When I visited the ship on January 5th the work was all but complete. Allowing for the season of the year the rapidity of this work was as creditable as in the case of the *Lismore Castle*. Through the courtesy of Captain Henning, R.N.R., and of Captain Holland, who was in charge during the alterations, I was enabled to make a very thorough inspection. It could hardly have been possible to select a ship more admirably adapted for the purpose than the *Nubia*, and it may reasonably be questioned whether there is a better hospital ship out here. Probably no ships have been fitted up at less cost, but real efficiency has not on that account been sacrificed. The ingenuity of the naval man is apparent at every turn. Thus I noticed that glass storage cells of an accumulated battery had been utilised as receptacles for the inevitable perchloride of mercury solution in the wards. The non-professional visitor, seeking makeshift contrivances of the sort, might have drawn unfavourable comparisons, being impressed by the elaboration of costly detail in the sumptuous ships fitted out in England; but the medical man would ask for no better place to treat sick and wounded than the *Nubia*. The ventilation is admirable, and depends but little on special contrivances, such as electric fans, though in every ward two fans were fixed, which could at will be used as electric punkahs. The whole of the air in any ward, too, could be renovated whenever desired by an exhaust arrangement. By opening the watertight doors a passage right fore and aft can be secured.

The *Nubia* could accommodate about 470 patients, 300 of these being convalescent and provided with hammocks. The number of cots in the wards varied from 32 to 20. There were 136 cots, 60 of these being swinging; ten of these, screened off by hanging curtains, were for officers, who could also be accommodated in the ordinary state-rooms.

Provision had been made for septic cases, which could be practically isolated in certain of the state-rooms provided with their own bathrooms. Finally, the *Nubia* has the advantage of abundant deck space, a luxury rather apt to be curtailed in the most modern liners.

Colonel Hodder R.A.M.C., is in medical command, with a staff of civil surgeons. The nursing staff consisted of 7 sisters—far too small a number, seeing that 1 or 2 would be required for night duty.

To the list of available hospital beds already enumerated should be added 50 in Gray's Hospital, the civil hospital in Maritzburg.

Summary of Base Hospital Accommodation in Natal.

All told, therefore, the number of hospital beds available now in Natal is rather under 3,000, not at all too large a number, for it is to be feared that if Ladysmith is relieved a large number of sick will be brought, and it seems almost hopeless to suppose that the relief can be effected without the hospital resources being fully taxed to find place for the wounded.

At present convalescent patients are sent down to Durban, and lodged in the hospital ships until moved into Capetown, or back to the front. A large number of these cases require the very slightest medical treatment, and the available beds are therefore occupied, to the exclusion of any fresh cases that may come down. Great relief would be given by the establishment of a tent convalescent hospital at Durban, and few more suitable places could be found than the high ground behind the town known as the Berea.

MEDICAL NOTES FROM CAPETOWN.

[From our Special Correspondent.]

January 24th, 1900.

The Base Hospitals in Cape Colony.

There has been a temporary lull in the arrival of wounded from Lord Methuen's column, but the hospitals are very full all the same, and, even with the Portland Hospital, the accommodation will be in no way in excess of the certain demands that will be made, even allowing for the fact that invalids and convalescents are being steadily sent off to England. Advantage has been taken of these latter drafts to transfer some of the patients from the Capetown Station Hospital to the General Hospital at Wynberg. The Station Hospital was becoming inconveniently crowded. It and two non-dieted station hospitals, at Green Point and Maitland respectively, have to provide for all the medical needs of the base, which are considerable. Owing to political exigencies it is impossible to denude Capetown of troops, whilst the heavy staff employed in Army Service and other administrative duties have to be provided for.

Sick from the Transports.

But the greatest demand upon the station hospital comes from the transports arriving from home. Every vessel lands a somewhat ominous number of sick, many of whom are not likely to convalesce in time for this war, and if the ratio is kept up by the Seventh and Eighth Divisions, some external additional accommodation will be required. The vast majority of the cases landed from the transports are venereal. For this of course no one can be blamed except the faddists who have only too successfully cried down the Contagious Diseases Acts. The reasons why a large number of cases of this class should appear on an outward voyage, and be in full swing on arrival at the port of destination, are obvious. Yet in some cases there appears to have been some lack of due precautions taken at home. I have seen quite a number of cases landed here with secondary symptoms, at a stage show-

ing that the probable consequences of the primary sore can hardly have been sufficiently considered. Then, again, in the case of reserve men and the militia, some cases of men suffering from chronic neglected gonorrhœa, not gleet but profuse purulent discharge, reported to have lasted for weeks or months, have been landed here and sent to the hospital, without doubt to be returned without going near the fighting line. Very wisely an order has been issued that all men not likely to be fully fit for duty within two months are to be invalided home. Now it is hardly probable that a case of secondary syphilis in an early stage or a case of chronic neglected gonorrhœa, such as I have mentioned, can be fit for campaigning in that time. Net result: the expense of bringing a man out, maintaining him at Capetown, and sending him back again. Of tertiary manifestations not many are in hospital, but one class of case causing very much trouble are those with indolent enlargement of the inguinal glands, which appear to be very obstinate, dragging on for weeks, in spite of potassium iodide internally and all varieties of local treatment. A notable fact is the number of cases of pneumonia landed from the transports, mostly at a stage showing that the disease appeared in the warmer latitudes. These as a rule do fairly well when once landed, but one of the transports just arrived had seven deaths from this cause during the voyage. A large number of cases of influenza appear to occur on the transports. They are mostly in the convalescing stage when landed, but very weak, and take a long time to build up for service fitness. Of scarlet fever only one case has been landed for weeks. No spread of this affection really has occurred.

Convalescents from the Eastern Districts.

Another cause of pressure upon the Station Hospital here has been the sending of a number of convalescents from Port Elizabeth to Capetown, for the benefit of the more bracing climate of the Cape Peninsula, as it has been found impossible to get a complete return to health in the summer climate of the Eastern districts. As the war goes on, it becomes more and more evident that the Cape Peninsula should be the sole sick base. The enervating climate of the Eastern Ports is very detrimental at this time of year, and the difficulty in procuring fresh vegetables, milk, fruit, and the like, up country, militate very strongly against the utilisation of inland towns for this purpose. This is especially so on the Western line.

Medical Cases.

Of the medical cases at the Station Hospital the most serious appear to be pneumonia and dysenteric diarrhœa. Cases of typhoid fever have not been particularly numerous either in the Station or general hospitals.

The Situation and Staff of the Capetown Station Hospital.

This hospital is badly situated on a flat stretch of beach close to the city and wedged in between the sea and the railway line. The fact that the railway has to be crossed renders it somewhat difficult of access. Moreover the foreshore is not of the cleanest, and the Town Council in its wisdom has constructed the city sewage outfall in the immediate neighbourhood. And—a great disadvantage where tent accommodation has to be largely resorted to—it lies in the teeth of the prevalent south-east winds, which churn up clouds of dust, often compel the keeping down of tent flaps all day, and at times wreck the tents. The building itself is an old double storey one, but fairly well constructed and ventilated. It has two wings and an administrative block in the centre. Each wing contains two wards of twenty beds each—one upstairs, one down. There are besides smaller wards for ophthalmic cases, infectious diseases, and for immunity and observation purposes, making up a total normal accommodation of somewhat over a hundred beds. But this has been supplemented by the utilisation of sundry corridors and small rooms, and by the erection of fourteen marquees and bell tents in the yards and on the ground between the hospital and the sea, so that at present about 250 patients are in the hospital.

The institution is extremely well managed and the patients on the whole very comfortable, although, as I mentioned before, the "Cape doctor" at times almost renders the marquees untenable. The medical officer in charge is Major Tube, R.A.M.C., a most courteous and attentive officer, who appears to have secured the goodwill of his subordinates in a remarkable manner. The sanitation is as good as it can possibly be considering the situation of the hospital. The staff consists at present, besides the commissioned officer, of 4 civil surgeons, locally engaged. One of these is entirely occupied with outside work. A civil surgeon from England joined a couple of days ago, but has now been ordered to Natal, so that for weeks the wards and marquees have been under the care of 3 medical officers—not at all too many considering the continuous to and fro transfers that are taking place. Captain Connor, R.A.M.C, an officer properly belonging to medical store work, is quartered on the place, and, although he does not take charge of any beds, relieves the staff of certain miscellaneous duties, and takes his share as orderly medical officer. The newly-arrived civil surgeon mentioned above is Dr. Martin, a former house-surgeon to Mr. Dent, at St. George's. The remainder of the last batch of 16 civil surgeons have been posted to the general hospitals.

This hospital has no accommodation for officers, but one or two are occasionally taken in. The dietary is excellent. This applies to all the hospitals, and it is only fair to mention that absolutely no restrictions are placed upon any of the staffs in the way of ordering extras. There need be no anxiety whatever at home as regards both officers and men being fed to the fullest extent which the medical officers consider suitable. I have carefully inquired into this, and am satisfied upon the point. The dietary in all the hospitals is indeed far more liberal than it would be at the average civil hospital in the colony. *Apropos* of diet, it is to be hoped that military rules will obtain at the portion of the Claremont Sanatorium which is being used as a hospital for convalescent officers, under the charge of the Superintendent, who has been engaged for that purpose as a civil surgeon. His creed, and that of the institution under normal conditions, is strict non-alcoholic, non-nicotine vegetarianism. The relaxation of this regimen is due to the fact of the sanatorium being for the nonce a military hospital, not to the military hospital being at the sanatorium.

Nursing.

The nursing at all the hospitals continues to be excellently performed by the R.A.M.C., assisted by a few of the Cape Medical Staff Corps, with, of course, at the general hospitals, the co-operation of the army nursing sisters. All are, of course, very much overworked at times when large consignments of wounded arrive. This also applies to the medical staff, and although both medical and nursing staffs are ample for normal conditions, they certainly are somewhat insufficient for the pressure caused by the arrival of train after train of wounded within a few hours. It would be going too far, however, to expect the authorities to keep the *personnel* fully up to high-pressure gauge, involving, as it would, enforced idleness for long periods. There has been a good deal of grumbling about the supposed mistake of the authorities in not largely employing Colonial female nurses at the base hospitals, and releasing R.A.M.C. people for the front. Speaking purely as a civilian and a Colonial practitioner, I cannot go altogether with this. It is a great mistake to suppose that the ordinary civil nurse is fit for military work. At the station base hospitals, owing to the large preponderance of venereal cases, it would obviously be impossible to employ them, whilst even at the general hospitals there are great difficulties in the way. Women submit far less kindly to discipline than men, and the Colonial nurses—albeit many of them are most excellent women—have in most cases never been under even the same discipline as that to which their British sisters have to submit. The Colonial period of probation has hitherto been only two years, and only a limited number of women are registered even under that probation. Moreover, in the Transvaal there is no official regulation of nurses at all, and a large number of the Johannesburg "nurses" have never had any proper training in their lives. Moreover, it is a matter of common repute (and in saying this I make no reflection on the general body) that to put the case mildly, only too many of the nurses from the Golden City are not so staid as the requirements of military discipline demand. To avoid friction between Colonial nurses on the one hand and the R.A.M.C., and still more Army Nursing Sisters, on the other, would be a difficult task. I know that the

latter ladies hold this view, and, after many years of experience as a hospital administrator in the Colony, I can endorse it. Of course a few suitable Colonial nurses could be selected, but the task of selection would be very difficult. By far the better method would be to raise more bearer companies from Colonial men, and leave the R.A.M.C. more at liberty for hospital work. Numbers of good class young men, many of them St. John pupils, are available for the purpose, and in a couple of weeks could be fitted for bearer work, which requires far less training than ward duties. I have noticed some complaint somewhere as to lack of co operation between the general hospitals. I have carefully gone into this, and do not think the complaint well founded. Of course, as each general hospital is a self-contained unit, a little unit *esprit de corps*—call it "jealousy" if you like—may come out in conversation at times. But I am convinced that this never operates to the detriment of the service. The Principal Medical Officer and the Principal Medical Officer of the Lines keep so constant a personal supervision over the general hospitals that I am certain no overlapping or clashing exists.

Health of the Troops.

Apart from illness contracted at home or on the voyage the health of the troops at Capetown, Maitland and Green Point has been remarkably good, far better than that of the civil population around. The contrast is particularly notable as regards enteric fever and influenza, both of which affections are fairly rife in the city, while very few have occurred amongst the military. The health of Lord Methuen's column has also been remarkably good, very little medical illness beyond the usual limited number of rheumatic and dysenteric diarrhœa cases being in evidence.

Whilst on this subject I may mention one deficiency upon which all the civil surgeons I have conversed with are emphatic—the very limited range of drugs kept in the hospital dispensaries. I do not mean to say that this is a local defect. The available pharmacopœia is, so far as I can gather, the same as at other stations, but it is limited, and the civil surgeons complain about the consequent hampering of their prescribing. One man told me that there was not a single intestinal antiseptic in his hospital dispensary, not even salol, and that even so common a drug as citrate of potash was not in stock. This is in strong contrast with the surgical equipment, which, as I have said before, is very complete.

Appointments.

Lieutenant-Colonel Hodson, in charge of one of the divisions in No. 1 General Hospital, and Major Sylvester, Secretary to Colonel Stevenson, have exchanged appointments, the latter, an enthusiastic surgeon, being anxious for clinical work.

Dr. Hornabrook, a civil surgeon in Natal, has been greatly distinguishing himself at Ladysmith, being hit no fewer than four times during the late assault by the Boers.

Another medical man, Dr. Fryer, lately civil surgeon at the Station Hospital, has relinquished the lancet for the sword, having accepted a subaltern's commission in the South African Light Horse.

Mr. R. E. Drake-Brockman has been appointed medical officer of the newly-raised Railway Pioneer Regiment. A gentleman with a German name, but of doubtful nationality, was appointed at first, but, on representation from the Intelligence Department, was, for reasons entirely unconnected with professional status, superseded.

The greatest care is necessary in making medical appointments both as regards officers and men, as there is too much reason to believe that the Red Cross is sometimes used to cover widely different objects.

A medical store depôt has been established at Capetown in charge of Major Tyacke, R.A.M.C.

Sickness at Kimberley.

Kimberley is suffering great straits during the siege. The death-rate for December for children under 1 year reached the appalling figures of—for whites 671.1 and for coloured 912.1 per 1,000 per annum. The adult rate was 60 for whites and 138 for coloured. The causes of death are mostly in children "marasmus" and gastro-enteric catarrh, and adults scurvy, both of course due to want of milk, vegetables, and proper food generally. The adult rations have been reduced to ¾ lb. of meat daily, of which horse flesh constitutes three-fourths. Curiously enough, under the conditions, enteric cases have done well, only 3 deaths out of 52 cases occurring during the month. These figures are from Dr. Stoney's report. The Red Cross machinery is working extremely well, and comforts of all kinds are being plentifully supplied to Methuen's and French's columns. As yet Colonel Young has not been able to deal personally with Gatacre's column, although much is being done locally for that section of the forces.

ACCOMMODATION FOR CONVALESCENTS AT MADEIRA.

We have received from Dr. Michael Grabham, F.R.C.P., of Madeira, for the following account of the arrangements made or in contemplation at Madeira for the reception of sick and wounded from South Africa.

Several villas standing in spacious grounds have been offered to the British Government for the reception of the sick and wounded convalescents from South Africa, and Senhor Rocha Machado has munificently placed at the disposal of the War Office his well-known Mount Quinta for the reception of officers during the next six months.

The Mount Quinta is one of the show places of Madeira, standing on a mountain spur over Funchal about 2,000 feet above the sea, in many acres of ornamentally-planted gardens. The air at this altitude is invigorating, and the temperature, though 10° F. lower than at Funchal, has a small diurnal variation only, and admits of the open-air lounging sort of life which is so characteristic of the winter season in the environs of Funchal below. The equipment of Senhor Machado's villa is entrusted to an adequate staff, who are expected to arrive this week from England.

Accommodation in other regions has also been prepared, but our chief reliance rests upon the experienced efforts of the hotel proprietors, who are quite equal to the supply of any demand which may suddenly arise, and who will readily avail themselves, if need be, of a selection from the numerous quintas in which these mountain slopes abound in every variety of situation. I have long since communicated in detail to the Principal Medical Officers at the Cape the various points of interest in the climate, accommodation, and food supplies of Madeira, and also the peculiar facilities which here exist for the out-of-door life and passive exercise of convalescents, specifying sufferers from dysentery, enteric fever, loss of blood, and pulmonary disorders as those likely to derive speedy benefit, as well as the actually wounded.

Of late years I have advocated Madeira for many varieties of Bright's disease and albuminuria, and have had excellent recoveries, especially where improvement had been arrested by intercurrent inflammatory attacks due to chill and temperature changes.

The summer months in Madeira are spent in the pine-clad hills, from 2,000 to 3,000 feet above sea level, in one or two districts where English people have from time to time built commodious houses in spacious grounds, and it would be hard to give any adequate description of the matchless beauty of these mountain regions. Two years ago I spent a part of the summer at a much higher altitude (over 5,000 feet) engaged in magnetic and atmospheric electrical observations in a climate of marvellous dryness, and reflected upon the varieties of climate which are to be found in the small space occupied by Madeira.

The sunshine in Funchal during January registered about 6¼ hours a day. The island is now singularly healthy. Certain improvements have been made in the water supply to the town, and the municipality are engaged in bringing down spring water from a great altitude for general distribution. For this and other sanitary purposes it has been my privilege to persuade the Government at Lisbon to devote annually a large sum of money.

Madeira is about 1,300 miles distant from Southampton, and, travelling by a fast steamer, is now reached in a little more than three days; the steamers, moreover, have grown in my time from 500 tons to 13,000 tons.

I will only add that Field Marshal Lord Roberts received with much interest my information as to the availability of this island for the sick and wounded, and took personal charge

of my letters to the Cape. Truly it would be difficult to devise circumstances more potent to accelerate convalescence.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XIII.

Care of Our Wounded.

WHATEVER may be the defects in our artillery transport arrangements and other purely military details which we leave for military experts to decide, and in reference to which the public who so freely criticise must bear in mind the unusual conditions to be faced and the erroneous estimates which Colonial as well as Imperial authorities made at the outset of the Boer forces, there can be no question as to the admirable work done by both the ambulance and hospital corps. The answer given by the Under-Secretary of State for War to the question addressed to him by Dr. Farquharson on February 8th was published in the BRITISH MEDICAL JOURNAL of February 10th, but it appears that Mr. Wyndham did not read the whole of the telegram sent by Sir Redvers Buller. The remaining portion was published in the *Daily News*, February 9th, and as it is of such an interesting character it may here be reproduced:

"We have been fighting here for a week, 33 miles from the railway, and 500 to 1,200 feet above our wheeled transport, and it was only on the 24th that every wounded man was not admitted to the hospital the day he was wounded." Then follow figures showing that on the 20th January 2 men were admitted to the field hospital; on the 21st, 155; on the 22nd, 299; on the 23rd, 73; on the 24th, none; on the 25th, 558; on the 26th, 4; and on the 27th, 1, the total being 1,038. At the same time the transfer of wounded men from the field hospital to the base hospital at Mooi River was going on. It began on the 21st January, when 2 patients were transferred. Next day there were none, but on the 23rd there were 117; on the 24th, 162; on the 25th, 67; on the 26th, 75; on the 27th, 172; on the 28th, 177; on the 29th, 115; total, 861. Then comes a passage showing how tenderly the injured men are cared for: "A hundred and seventy-six cases in hospital here. These are the dangerously wounded, and as (? when) they are fit to move they will be carried by hand on stretchers the whole way to Frere, as I fear the ambulances are too rough."

With regard to the complaints as to the hospital at Capetown sent home by the *Times* correspondent, an officer, Colonel Featherstonhaugh, who was himself a wounded patient in the Wynberg hospital, and who has recently returned to his home in the Isle of Wight, has written a letter to that journal, in the course of which he says that he desires distinctly to deny that complaints have been freely made by officers and men in the military hospital:

There is no want of organisation or foresight in the arrangements made for the comforts of the patients; the standard of living is very good, convalescent officers are sent to Claremont, and the serious cases are kept at No. 1 Hospital, where every care is bestowed upon them. I cannot speak too highly of the attention of the nursing sisters, who day and night are in attendance.

In my last letter I quoted extracts from the letter of a civil surgeon attached to the base hospital at Capetown, speaking in the highest terms of the comforts provided for both officers and men. By the last mail a further letter has been received from this correspondent from which I may quote the following passages:

Nos. 1 and No. 2 Hospitals are at Wynberg; conjointly they can accommodate about 1,000 to 1,200 patients; the soldiers are well provided with excellent food, drinks (wines, stout, ale, aerated waters), books, papers, etc. The library, I may mention, is under the direct supervision of Mrs. Dick Chamberlain; it is called "Mrs Dick Chamberlain's Hospital Library." Each ward has a box of books with a catalogue, and periodically the wards exchange boxes; thus Tommy is supplied with unlimited novels of the latest date. Charitable workers send instalments of flowers, fruit, and other luxuries.

The operating theatre is large and lofty and well lighted, has a marble tiled floor which slopes to one corner, the walls and ceiling being lined by enamelled tin. It is kept spotlessly clean and white.

Each 2 or 3 huts (a hut is equivalent to a ward; each ward contains about 20 beds) is under the direct control of one surgeon; thus I have three huts. The whole of No. 1 General Hospital is divided into, A, the surgical, and B, the medical division; superintending the surgical division is one R.A.M.C. officer, and similarly the medical side has one R.A.M.C. The R.A.M.C. officer visits the huts of his division daily, but never interferes with the treatment adopted by the surgeon in charge.

Each day an orderly medical officer is appointed; he has to remain in or near the orderly tent during the afternoon and night in case of emergencies. Each civilian surgeon is supposed to commence his work at 9 A.M., and he may not leave camp till 1 P.M. He is again to visit his wards in the evening. No. 1 Hospital is at present occupying the permanent military barracks of Wynberg; No. 2 Hospital is under canvas, and the cases do remarkably well. No. 1 Hospital is nearly full up; half the cases have come from the transports direct from Southampton. Pneumonia and pleurisy are very common; this may be accounted for by the men, while on board ship, being required to go without boots and socks.

As my patients are chronics—as, indeed, are all at present in the hospital—I will not give particulars about them, but later on, when fresh cases arrive from the battlefields, I will endeavour to communicate what is interesting.

Lords Roberts and Kitchener have visited the hospital. "Bobs" appears quiet and reserved. He takes quite an interest in the cases, inquiring most earnestly into the circumstances whereby each patient was injured. "Bobs" is a great favourite with our Tommies.

This correspondent, therefore, clearly thinks that the hospital accommodation for the men is good, and it is possible that some of the complaints and criticisms which have found their way into the press emanate from some of the numerous well-meaning visitors whose offers were referred to in an article in the BRITISH MEDICAL JOURNAL of February 3rd. The lady with no nursing experience but with a patriotic desire to nurse the wounded appears to have been rather strongly in evidence; and inasmuch as her services have been declined in favour of her trained sister, it is possible that disappointment may occasionally give rise to somewhat harsh criticism. A story which I heard the other day will illustrate this. One of these ladies having been admitted to a ward asked a patient, an Irish soldier, if she might sponge his face for him. The patient replied, "Yes, my dear lady, you may sponge my face; five other ladies have already washed it this morning, but you may wash it too."

Nursing in the Military Hospitals.

At the same time, the one point which does seem open to question is whether trained nurses have really been employed to a sufficient extent, at any rate at the base hospitals at Capetown. The opinion of the medical correspondent from whom I have already quoted is, at any rate, to the effect that "more qualified nurses are required." Thus he says: "At the best of times one day nurse has at least 40 beds, and at night time one nurse has 9 huts to take charge of—that is, over 180 beds, for each hut has 20, or in some cases more beds." This appears on the face of it rather unsatisfactory; but it must be borne in mind that male orderlies or nurses are employed, not only in hospitals at the front but also in military hospitals at home. Thus my correspondent says that each hut has a male orderly, and I would point out that even at Netley a very large amount of what is usually regarded as nursing work is done by these same orderlies. I confess, from personal experience, that I am by no means enamoured of the male orderly as a nurse. I have had charge of a hospital where none but male orderlies were used, and I have no hesitation in saying that nursing duties are not as a rule so well performed even by trained men of this sort as by trained women nurses. But, these views notwithstanding, it is only fair to remember that we are asked to condemn an old system and not merely a temporary arrangement for a campaign.

R.A.M.C. South African Fund.

Lady Randolph Churchill despatched the other day a cablegram with reference to the work being done on the *Maine*, which will have been read with great interest. In this she said that among the wounded from Colenso and Spion Kop were stretcher bearers and Army Medical Corps men. This confirms what we have already learnt from other correspondents — namely, that the men engaged as stretcher bearers and ambulance work generally on the field of battle are exposed to very considerable danger. Under these circumstances, the appeal made by the R.A.M.C. South African Committee in the BRITISH MEDICAL JOURNAL of February 10th has a special interest, and it is earnestly to be hoped that members of the profession will contribute their half-crowns, for in this way a respectable sum might quickly be collected. It is to be hoped, also, that the suggestion to form Ladies' Committees in the cities and county towns of the United Kingdom will be taken up by the wives of medical men. Subscriptions, as will be seen, may be sent to the Editor of the BRITISH MEDICAL JOURNAL.

Medical Attachés.

In the last number of the *Lancet* an interesting letter from Sir William Mac Cormac appeared, in which he stated that two German medical attachés, Stabsarzt Dr. Schmidt and Stabsarzt Dr. Krummacher, had just returned to Capetown from the Modder River, where they had been working in the field

under the medical officer to the brigade of Guards. These attachés, it appears, are the first accredited medical attachés which have been sent to the front by a foreign State to observe what may be learned by the campaign. The services and observations of these two gentlemen are thus referred to by the correspondent from whose letter I have already quoted:

I had visiting me to-day two captains of the Army Medical Corps of the German army, who were sent out by the German Government to report on the injuries of modern weapons, the systems employed in our military field and base hospitals, and our ambulance work. It so happened that in the pursuance of their duties they were present at the Magersfontein battle; here, as you are aware, our surgeons were particularly busy, so the two Germans lent their ready aid, and were employed treating both our wounded and those of the enemy who were captured. They have twice visited my wards and made numerous notes about the cases, such as the exact injury, the bullet, the range, etc.

NURSES IN THE HOSPITALS AFTER COLENSO.

Mr. Frederick Treves, in a letter which he has addressed to the *London Hospital Gazette* from Frere Camp, writes as follows with regard to the services rendered by four lady nurses—his own two nurses and two army nursing sisters—after the battle of Colenso:

When we reached Frere these two ladies [Mr. Treves's own nurses] found themselves in the distinguished position of being the only two European women in a camp of 30,000 men. They were treated with the very greatest possible kindness and attention by Tommy, who is the most chivalrous of men.....The nurses were at it all Friday night and all Saturday. They had no sleep, and the splendid work they did is beyond any praise. How they managed to keep about I don't know.....I should have said that two Netley Sisters—one an old "London" nurse—joined us just before we left Frere, and better nurses and more devoted women I never met. They worked night and day, and their work was of the very best. Poor Tommy may not think much of the "Orspittle" at Chieveley, but I know he will never forget the four women who stood by him after Tugela, and tried to make him comfortable. They never rested. They give him all they had—their water bottles, their handkerchiefs, and even their mattresses to lie on. Their very presence among the dead and dying was something, and they thought of means of giving relief that would not have occurred to us men. I suppose they are the only women who have been really "at the front" in this war.

A Scottish Hospital for South Africa.

A Scottish hospital for South Africa is to be provided, funds to be raised by public subscription. The Lord Provost of Edinburgh has already received more than half the sum required (£12,000). The doctors and nurses will be Scottish, but the hospital will not be confined to the treatment of Scottish soldiers.

The Medical Service on the Field of Battle.

The *Daily Mail* of February 5th, in an interesting special article by Julian Ralph on "The War as it is To-day," depicting "scenes and sounds of modern battles," alludes to the medical aspects in the following terms: "The bravery of our stretcher-bearers is as much beyond question as it is beyond praise. When all of us lesser and immediate historians of the moment have told of the valour of all the generals, colonels, majors, captains, and "Tommies" of the army, we shall still have, in common justice, to describe how the chaplains, doctors, and stretcher-bearers go in and out of the most hellish fire, not once or twice, but all through every battle."

The Yeomanry Hospital.

The staff of the Imperial Yeomanry Hospital was inspected at Devonshire House on February 9th by His Royal Highness the Prince of Wales. Lieutenant-Colonel Sloggett, R.A.M.C., the Medical Officer in Command, Mr. A. D. Fripp, the Senior Civil Surgeon, and the ambulance men and supernumeraries, left Southampton in the ss. *Norman* on February 10th. The remainder of the medical staff left on February 12th by the *Majestic*.

MR. BALFOUR ON SCIENTIFIC LABORATORIES.

A dinner given by the Council of King's College in aid of the funds for new scientific laboratories was held on Wednesday, February 14th, at the Hall of Lincoln's Inn, under the chairmanship of the Right Hon. Arthur James Balfour, M.P. After the usual loyal toasts had been duly honoured, Lord Glenesk proposed "The Naval and Military Forces of the Empire," and in the course of his remarks referred in terms of the highest praise to the medical men serving in South Africa and to the nurses with the troops. The toast was replied to by Lieutenant-General Kent and Sir John Cockburn, K.C.M.G.

Mr. Balfour, in proposing the toast of "King's College," said: I rise to propose what is called the toast of the evening. I rise, in other words, to recall your attention to the central interest which has brought us all together this evening to this hall to enjoy the splendid hospitality of King's College, but I feel that I do so under circumstances of very peculiar difficulty. The toast of the evening, if it is estimated by the nearness in point of interest to the hearts of each one of us, is not and cannot be the toast that I am about to propose. It is the toast to which you have just listened. At such a time it is difficult for us to withdraw attention from the topics so eloquently dealt with by the proposer of the last toast, by the gallant general who responded on behalf of "The Army," and by the eloquent and admirable exponent of Colonial feeling whom you have just listened to, I doubt not with the emotions which stirred my own heart whilst he was speaking.

Technical Education.

I must ask you for a moment to turn your thoughts from these great military and imperial interests to interests far removed from them indeed, but perhaps in a sense not less intimately and permanently connected with our greatness and our prosperity as a nation. For the toast, reduced to its narrowest limits, which I have to propose to you is the advancement of scientific research in this great metropolis of ours, in the University which we have recently remodelled, and more especially in that College where I hope and trust your liberality will enable the interests of science to be pursued in the future with an even greater success than they have been pursued in the past. We have all probably been concerned either in making speeches or in listening to speeches in recent years on the subject of technical education; a very loose phrase, sometimes used or misused to mean education in manipulation or dexterity of hand treatment, sometimes—and I think more probably—used to mean that application of the principles of science to industrial life which we are more and more beginning to recognise as an increasing need of the age in which we live. Now it has been found easy, and I hope it always will be easy, to enlist popular sympathy in anything so obviously useful as the application of scientific method to industrial pursuits. And it will be all the more easy from the fact that we have before us in certain foreign countries striking and admirable instances of the method, and of the success which attends or may attend such application of scientific method to industrial pursuits that everybody can understand. An appeal for that purpose is an appeal which touches the heart of everybody nearly or remotely connected with the industries on which this nation as a whole lives, and on which it must continue to live if it is to live at all.

Research in Pure Science.

I appeal for something not less necessary, but something perhaps more remote from the ordinary everyday popular educational interest, for I appeal on the present occasion not so much for anything in the nature of technical instruction or applied science as for aid to carry out that instruction in science itself, and those researches in pure science which lie at the base of that instruction, which, from the very nature of the case, can only appeal indirectly and remotely to the great mass of mankind. And yet, after all, science is the essential method that we have got to consider. Its applications will come and must come, will come almost of themselves, must come in the course of time, but you cannot have applied science without having science in the first instance; and if you do not cultivate scientific research and scientific education, it will be in vain that you multiply your technical schools, and it will be in vain that you labour to erect a great superstructure where your foundations have been so inadequately laid. I feel it the more incumbent upon me to urge upon you the claims and the glories of science pursued for itself from the very fact that they cannot directly appeal to the general interest of the mass of mankind. We ought not to wonder, we ought not to criticise, and we ought not to be surprised that among the great number of persons deeply interested and astonished at, for example, so interesting and sensational a discovery as wireless telegraphy, should number the inventions which have made that telegraphy possible, which could neither know of nor take an interest in the speculations of a Maxwell or of the experiments of Hertz, which after all are at the base of the whole thing, without which no such discovery as wireless telegraphy would have been possible, but whose discoverers had indeed fame and reputation among those scientific men and people of understanding in their work, but who have not, perhaps, even now that world-wide reputation, that currency in the mouths of men which fall to inventors much less than themselves, and who have built their work (and rightly and properly built their

work) upon the foundations laid for them by others. Now, according to my view, it is the bounden duty of every great place of University education that they should keep before them not merely the immediately practical needs of technical or other education, but that they should never permit the ideal of scientific investigation to be for one moment clouded in their eyes, or to lose interest, or cease to be the object of worthy effort and endeavour.

The Teaching of Science.

That great object must require, and must increasingly, in my judgment, require the generous and liberal co-operation of all classes in the community, whether they be immediately interested in science, intimately acquainted with scientific details, or whether they be merely part of the general public. Men of science themselves are not always in a position to give that pecuniary aid necessary to build the modern laboratory, and to equip it with modern appliances, and they are right to call upon all those who take any interest in their subjects to aid them with that pecuniary assistance which in some other countries—many other countries—is extended to them by the Government, which in this country, rightly or wrongly, by an almost immemorial tradition, has been left chiefly to the energy of private enterprise. King's College will, without question, be one of the great teaching centres of the new London University. It requires at this moment, to enable it to carry out that great function, the assistance of the public to supply it with adequate scientific accommodation, especially, I am informed, in the matter of bacteriological and physiological laboratories and lecture rooms. And it may be some consolation to those who take little interest in scientific investigation, unless they can immediately perceive its practical application, it may, I say, be some consolation to them to reflect that both bacteriology and physiology have a most immediate and direct bearing upon the health and the happiness of mankind. In both branches of study King's College has proved itself rich in teachers of eminence. I am not going to discuss—it would be almost impertinent for me to even touch upon—the enormous interests which are bound up in the successful prosecution of those two branches of scientific research. But I may, perhaps, remind you of the enormous practical importance to us, of all people in the world, of some of these more recent researches in bacteriology. Bacteria are a very humble class of organisms, very unjustly abused, as far as I can discover, by ordinary public opinion; they suffer, as other classes have suffered, by having among them a certain number of black sheep. But for the most part they are not only innocent but most useful allies—most useful allies of industry, and almost necessary co-operators in some of those great functions which have to be discharged if the health of great cities is to be maintained.

Bacteriology of Tropical Diseases.

But apart from that, no doubt our chief interest in them lies with the pathogenic members of the group; and we, of all people in the world, are especially interested in dealing with those forms of tropical disease which they produce; for we, of all people in the world, are most interested in maintaining a large number of our population in countries where these diseases born of bacteria are the greatest scourges. And it is, I believe, to a distinguished professor in King's College, more perhaps than to any other man in the country, that some of the most useful researches in this great department are due; and as the last speaker called attention to Mr. Chamberlain's great work in joining together the bonds of empire, and knitting in closer unity various elements that make up that empire, so I may be permitted, in the widely diverse subject with which I have to deal to-night to remind you that he as Secretary of the Colonies, has done his best to encourage these bacteriological investigations from which I, at all events, entertain such great hopes that science will soon be able to combat by its discoveries the inherent difficulties which have hitherto so greatly militated against the efficient use of Europeans in the tropical climates of the world.

The Duty of London.

I do not know that it is necessary for me at greater length to impress upon you the theme which has been committed to my charge, but I confess that I cannot conclude without admitting that I think this great city has been somewhat remiss in the support which it has hitherto given to scientific investigations in the commercial metropolis of the world. Technical education, if I may revert to that subject for an instance, has in it almost necessarily some element of competition. You hear it said, Germany is doing this, France is doing that, some other country is doing the other; unless you keep abreast of them in your methods of education, you will fall behind them in your industrial enterprise. That is a very proper argument; it is a very patriotic argument, it is an argument which I myself have used before, and it is an argument which I should think myself justified in using again. But I am appealing to you on behalf of the cause which has in it none of this element, this inferior and lower element of competition whatsoever. Every scientific discovery wheresoever made, be it in Berlin, Paris, London, New York, Vienna, wherever it be made, as soon as it is made it is the common property of every man of science. Nations may erect against each other some barrier of tariff; they may engage in some absurd rivalry animated by I know not what spirit of suicidal jealousy; but men of science, wherever they live, to whatever nation they belong, have a cause which is common to humanity at large, which knows no provincial boundaries and which is not interfered with by any sectional rivalry. To that great common fund of knowledge, the basis after all of your civilisation as it is, the basis after all of the industrial progress you hope to make, I think London should contribute its full share. London takes the tribute—a well-earned tribute—from every discovery made throughout the world, from every advance of civilisation, from every encroachment of civilisation upon barbarism, and from all these London, or some section of it, gets the benefit. Let us, then, who are dwellers in London feel that we have some obligation to the world at large corresponding to the great position, the international position, which we occupy. Let us do what we can as a community to further that investigation into the secrets of Nature, that storming of the citadels of natural knowledge in which all civilised men are, and ought to be, co-operators. Let it not be said that while there are great centres of scientific teaching in every other great metropolis, we have allowed ourselves for one moment to fall behind in the race in which we of all people ought to be leading. It is as contributors to that great end that I ask you for assistance to-night. It is because we know in King's College we have an organisation ready made to our hand which has shown us what it can do in the way of scientific investigation, and has given us therefore an earnest of what it can do in the future in the same great cause; but if it is to do all that it is capable of it demands your assistance and the assistance of others like-minded to you. It is only by that help liberally offered that this great metropolis can fulfil the duty it owes to the scientific bodies in its midst. I ask you now to drink with me the toast of the evening—Prosperity and success to the future scientific investigations of King's College.

The Hon. W. F. D. Smith, M.P. (Treasurer of King's College) and the Rev. A. Robertson, D.D. (Principal of King's College), responded.

Sir Michael Foster, K.C.B., M.P., F.R.S., in replying to the toast of "Science," proposed by Mr. Justice Byrne, said that if his presence in the House of Commons would be of any use in affording an immediate supply of scientific information for the judgment of that House it would be at their dispoaal. Mr. Balfour's speech would carry gladness into the heart of every man of science in this country. It had been said abroad that science did not hold the position in this country that it did in others, but from that evening onwards the speech of Mr. Balfour could be appealed to as an answer. Science had several aspects—there was the science militant, tilting against every known tradition; there was the extreme wing of the science militant, the science blatant, always making pretension for science to which science itself made no claim. The science blatant was preached by men who had taken no part in the fight, but had stolen the trumpet from some one and simply blown it. There was the science vigilant, which was the proper adjective, the science which was always seeking occasions for advance. There was the science mendicant. A leech was in old time a term for the man of learning; it held good still for

they were always crying, "Give, give!" because they were never content with anything but the best instruments and tools, and as in the case of guns they must have the very best. Sometimes contrary to preconceived ideas Government helped them, giving an example to those who are really more wealthy than the Government. Mr. Balfour appeared to him more or less in the position of Paul; gold and silver, as a member of the Government, he had none, but he gave that which was worth more than mere gold and silver, and his words that evening would be of enormous value to the hard-working men of science, and after a while would be of still more value to the nation at large.

The proceedings terminated with the toast of "The Chairman," proposed by the Right Rev. the Lord Bishop of London.

THE R.A.M.C. SOUTH AFRICA FUND.

The Special Subscription.

Last week we made an appeal to the members of the medical profession to show their personal interest in the work of the Royal Army Medical Corps in South Africa by contributing to a special subscription fund to provide those comforts in the way of warm clothing and so on for the non-commissioned officers and men which, in the case of ordinary regiments, are being so generously given by the men and women of the counties to which the regiments are connected under the territorial system which now prevails in the British army.

From the nature of the case, since the men of the Royal Army Medical Corps are not recruited from any particular district, but from all parts of the United Kingdom, it seems right that the medical profession throughout the United Kingdom should do for the men of that corps what the counties are doing for the county regiments.

We ventured to suggest that it would afford great encouragement to the men of the corps if it were shown that they had the active sympathy and support of the medical profession at home, and that this might best be shown by the gift of small sums by a large number of medical men and women rather than by a few subscriptions of larger amounts.

It should be added that the benefits of the Fund will be extended to the native Indian stretcher bearers and ambulance men who have done such admirable service, especially in Natal.

In accordance with a suggestion made by the Deputy Director-General of the Army Medical Department (Surgeon-General Muir) an appeal is made for subscriptions of half-a-crown, and we hope that this appeal will be widely responded to. We give below a list of subscriptions already received, and, as will be observed, these come chiefly from a few centres. It is suggested that this system might be extended, and we shall be glad to hear from any member of the British Medical Association who may be willing to receive subscriptions of half-a-crown from medical men in his neighbourhood.

We are informed that at a meeting of the Executive Committee of the Fund on February 12th subscriptions to the amount of £285 5s. were announced, in amounts varying from 5s. to £20, and that the Honorary Treasurer, Mrs. Charters Symonds, 58, Portland Place, had also received several half-crown subscriptions from medical men. Gifts in kind have been received and purchases have been made, and already 1,200 parcels have been forwarded through Mrs. Charlton to the front.

Gifts in kind should be sent to Miss Maxwell-Muller, R.R.C., Honorary Secretary of the Fund, 100, Victoria Street, S.W. Subscriptions to the half-a-crown fund may, if desired, be sent to the Editor of the British Medical Journal, and will be forwarded to the Treasurer of the Fund. All postal orders and cheques should be crossed "Messrs. Holt and Co." and made payable to "R.A.M.C., South Africa Fund."

The Half-Crown Subscription List.

	Half Crowns
Surg.-Lieut.-Col. Andrew Clark, A.M.R. (London)	1
Dr. Holman (London)	1
Dr. StClair Thomson (London)	1
Mr. L. Andrew (Northwood)	1
Mr. Robt. O'Callaghan (London)	2
Col.C.F. Pollock R.A.M.C.(Ruthwell, N.B.)	40
Mr. Francis Fowke (London)	2
Dr. Dawson Williams (London)	1
Per Sir W. M. Banks (Liverpool):	
Dr. Taylor	1
Dr. Fingland	1
Dr. Briggs	1
Mr. Permewan	1
Mr. Murray	1
Mr. Dunn	1
Mr. Quinby	1
Mr. G. Hamilton	1
Dr. Cameron	1
Dr. Finegan	1
Dr. Gemmell	1
Mr. Paul	1
Dr. Th. Grimsdale	1
Mr. Edgar Browne	1
Sir W. M Banks	1
Dr. Anderson (Liscard)	1
Per Mr. A. W. Mayo Robson (Leeds):	
Mr. A. W. Mayo Robson	1
Mr. Farquhar Macrae	1
Mr. H. Littlewood	1
Mr. B. G. A. Moynihan	1
Mr. T. R Jessop	1
Dr. C. M. Chadwick	1
Mr. Walter Thompson	1
Mr. A. L. Whitehead	1
Dr. T. Wardrop Griffith	1
Dr. T. Churton	1
Mr. H. Secker Walker	1
Dr. E. F. Trevelyan	1
Mr. Edward Ward	1
Miss March	1
Miss C. March	1
Mrs. Mayo Robson	1
Per Mr. Simeon Snell (Sheffield):	
Mr. Snell	2
Dr. Dyson	1
Dr. Martin	1
Mr. Pye Smith	4
Mr. E. Skinner	1
Dr. E. Thomas	1
Dr. Wilkinson	1
Dr. Cocking	1
Dr. Porter	1
Dr. Keeling	1
Dr. Burgess	1
Dr. Young	1
Mr. W. Dale James	1
Mr. C. Atkin	1
Dr. Cooke	1
Mr. R. Favell	1
Mr. G. K. Thorpe	1
Mr. Leach	1
Dr. E J. Adams	2
Dr. E. W. Adams	2
Dr. R. H. Matthews	1
Dr. Samuel Matthews	1
Dr. Hargreaves	1
Dr. Sinclair White	1
Dr. Dugnid	1
Mr W. Longbottom	1
Mr. Barker-Barber	1
Mr. Reckless	1
Dr. A. J. Hall	1
Dr. Ryan	1
Dr. G. Johnston	1
Dr Somerville	1
Mr. Coombe	1
Dr. Inkster	1
Dr. Wilks	1
Mrs. Hunt	1
Mrs. Foster	1
Dr. Robertson	1
Dr. Milner	1
Dr. Laver	1
Per J. J. L.:	
J. B., E.C., L.C., E.S.B.E., C.E.C.S., M.B., T.H., and J.J.L.	8
Dr. C. H. Cattle (Nottingham)	4

We have also received a cheque for one guinea from Dr. George Elam (London), a postal order for 3s. from Dr. C. R. Salisbury (London), and a cheque from Dr. G. J. Robertson for £6 14s. collected at the Oldham Medical Society's annual dinner.

THE HEALTH OF DUBLIN.

The Committee appointed by the Local Government Board for Ireland to hold a public inquiry and report to them as to (1) the cause of the high death-rate in Dublin, and (2) the measures which in their opinion should be adopted with the view of improving the health of the city, held a preliminary sitting on February 9th. The first public sitting was held on Tuesday, the 13th.

Statement by Sir Charles Cameron.

Meanwhile a great deal of the ground to be covered by the inquiry has been already gone over in the statement which Sir Charles Cameron, C.B., the Superintendent Medical Officer of Health for the City, presented to the Local Government Board at their request.

The conclusions arrived at in this report are that the extraordinary mortality during the latter half of 1899 was due to epidemics of measles and influenza, and that the ordinary excessive mortality in Dublin is due to the following causes:

1. An undue proportion of the population being very poor, and among the poor in all cities the death-rate is high.
2. The bad condition of so many of the dwellings of the working classes.
3. The great density of the population in certain localities.
4. The excessive number of slaughterhouses and dairy yards in the city.
5. The want of sufficient accommodation for fever cases and for convalescents from infectious diseases.
6. The want of a system of daily removal of filth.
7. The storage of sewage in the main sewers
8. The existence of a large number of insanitary areas.

He considers that the sanitation of the city would be greatly improved by the clearing of insanitary areas, the erection of a large number of dwellings for the working classes, and especially for the very poor; an increase in the number of open spaces; a diminution in the density of the population by the location of a larger proportion of the working classes in the suburbs; the abolition of many private slaughterhouses; the

removal of dairy yards from within the city except where the district is thinly populated; and the systematic inspection of dairy cows by veterinary surgeons. He considers that legislation is required to enable the sanitary authority

1. To enact more stringent by-laws in reference to the occupiers of tenement houses.
2. To make it mandatory on some authority to provide hospital accommodation for fever cases.
3. To facilitate the acquisition of derelict sites by the sanitary authority.
4. To control more fully the supply of milk from rural localities, and to inspect such dairies.

If all these recommendations were carried out still there would remain the economic problems to be considered which obtain in a greater or less degree in every large town—the inability to withstand disease in a population where the abuse of strong drink is prevalent among the poorer classes, and where, as a consequence, the people are poorly fed, badly clothed, badly housed, and universally dirty.

At the meeting of the Commission on February 13th all the members were present. Evidence was not taken on oath, and counsel were excluded pending the decision of the Local Government Board.

Mr. Matheson, Acting Registrar-General, who was first examined, said the density of the population in Dublin in 1801 was 65.6 persons per acre, which was greater than in any other part of the United Kingdom, the next being West Ham with 63 and London with 60. The greatest congestion was in the parts occupied by the lower classes. The upper and middle classes formed 22.5, and the lower classes, including the inhabitants of workhouses, 77.5 per cent. of the population. The mortality in 1899 was 36.6 per 1,000, which was exceptionally high owing to measles, influenza, chest affections, and diarrhœa. The zymotic death-rate for the same period was 5.4. The death-rate of the poor was 50 per cent. above that of the upper classes in the Dublin registration district. The death-rate of 1894-98 among persons from 1 to 60 years of age was 75 per cent. above English rates. In Dublin it was 18.1 per 1,000, in London 10.4, and in thirty-three English towns 10.5. But for an epidemic of measles and whooping-cough in 1897 the average rate for the four years named would have been below that of English towns. The principal diseases other than zymotic which contributed to the high mortality were phthisis, other forms of tuberculosis, inflammatory diseases of the chest, and diseases of the nervous system. The congestion was great in the tenement houses where even the rooms were each divided up into dwellings for several families. Poverty, want of clothing, and intemperance were serious causes of mortality. Increased accommodation should be provided for the artisan and labouring classes. Further legislation was required to deal with the tenement houses. Licences to sell drink should be limited and children should not be supplied.

Sir Francis McCabe, ex-Medical Commissioner of the Local Government Board, detailed the evidence given before the Royal Commission of 1879, on which he sat. This went to show that yards were not paved, domestic scavenging was neglected, as also were tenement houses. The streets were not cleaned, and the drainage was defective. Recommendations for improvement in these directions were made; also that the water supply to tenements should be increased, and the slaughterhouses diminished and inspected. The Corporation had applied for loans amounting to £178,000, in order to carry some of these recommendations into effect. The condition of the Liffey was a source of danger to health, and the cleansing of it would improve the public health. He believed at the time the Royal Commission sat that the condition of the tenements was the prime cause of the high death-rate. The congestion could only be relieved by transplanting many of the working classes to the suburbs. The density of the population was only exceeded by Bombay. Notification of infectious diseases was necessary.

Dr. Newell, Dispensary Medical Officer, next stated that he had treated 13 cases of measles in one house for want of hospital accommodation. The tenement houses were overcrowded, in bad repair, and dirty.

LITERARY NOTES.

DR. WILLIAM W. IRELAND is preparing a new edition of his work, *The Mental Affections of Children*, which was published in 1898.

An international bibliography of the medical sciences entitled *Bibliographia Medica*, modelled on the defunct *Index Medicus*, is to appear in Paris under the direction of Professors C. Potain and Charles Richet. The editor will be Dr. Marcel Baudoin. The *Bibliographia Medica* will be published monthly.

Professor Friedrich von Esmarch is said to be engaged in writing his reminiscences. He has been through half a dozen campaigns, and has been a conspicuous figure of the surgical world in Germany for half a century. The story of his life should, therefore, prove interesting reading.

In Professor Koch's report on his malaria researches, a translation of which was published in the BRITISH MEDICAL JOURNAL of February 10th, the distinguished author stated that the authorities in Java had ordered the medical officers of the Colony to hunt mosquitos for him. A writer in the *Singapore Free Press* finds something so humorous in this that, like Mr. Wegg, he drops into poetry on the subject. His effusion, which we give, as quoted in the *Indian Medical Record*, may perhaps amuse some among our readers:

Koch has settled down Java land to find a febrifuge:
I fancy these Dutch doctors find the joke exceeding huge,
Trotting round the swamps malarious, laying in a buzzing stock
Of the Javanese mosquito for the famous Doctor Koch.

I have oft gone butterflying for the beetle in his lair;
Even hunted "irritations" in my puppy's curly hair;
But these pleasurable pastimes all must go into the shade,
When compared to catching skeeters to find how fever's made.

In my mind's eye I can picture each Dutch doctor setting out
For the hotbeds of the fever where the skeeters fly about;
Having tended to their dying and interred their dead, *en bloc*
They troop out to catch mosquitos for the festive Doctor Koch.

Well! I fancy, if *our* Governmental medicos were told
To undertake such duties, that they'd quickly quit the fold;
That e'en though it *were* for science, they'd be likely thus to mock—
"Go and catch your own mosquitos, and be blowed to you, Old Cock!"

THE PLAGUE.

PREVALENCE OF THE DISEASE.

PORTUGAL.

No fresh cases of plague have occurred at Oporto, and no deaths from the disease have been reported during the last three weeks. The sanitary authorities have, in consequence, relaxed the rigid rules which have obtained hitherto, and there seems every prospect that the present outbreak, at any rate, has ended. Although it is quite possible that sporadic cases may occur during the subsequent months, there would seem to be every justification for hoping that plague, which never attained a serious hold on Portugal, or even in Oporto, may be permanently stayed in its progress in Western Europe.

INDIA.

The total reported plague mortality in India rose slightly for the week ending January 27th. During this period the number of plague deaths increased from 428 to 478 in the city of Bombay. As, however, 100 deaths daily is popularly held to mark a severe epidemic in Bombay, the numbers as yet fall short of that maximum. The mortality from general diseases, small-pox, measles, fever, phthisis, respiratory diseases, diarrhœa, and dysentery is increasing nearly three times as fast as the plague mortality. Plague has thus become a comparatively insignificant factor in the health record. The plague limit of duration, judged by former experience of the epidemic, has yet six or seven weeks to run, but the comparative smallness of the present epidemic renders it possible that the end of the present outbreak will be reached at an earlier date. In the Bombay Presidency, exclusive of the city itself, the total reported plague mortality shows signs of diminution, as the mortality fell during the week ending January 27th from 609 to 486. In Calcutta the number of plague deaths indicate but slight fluctuations, between 50 and 70 deaths occurring every week. In the Salem District of the Madras Presidency the epidemic has increased somewhat in virulence.

HONG KONG.

A telegram received at the Colonial Office from the Governor of Hong Kong states that during the forty-eight hours ending February 9th, 1 case of plague had been reported. As mentioned in last week's issue of the JOURNAL, sporadic cases of plague have occurred during the last few weeks in Hong Kong. It was in 1894 that the first outbreak occurred, and for six years now the disease has continued. This fact affords but meagre hopes of getting rid of the disease in other localities where it has obtained a serious hold.

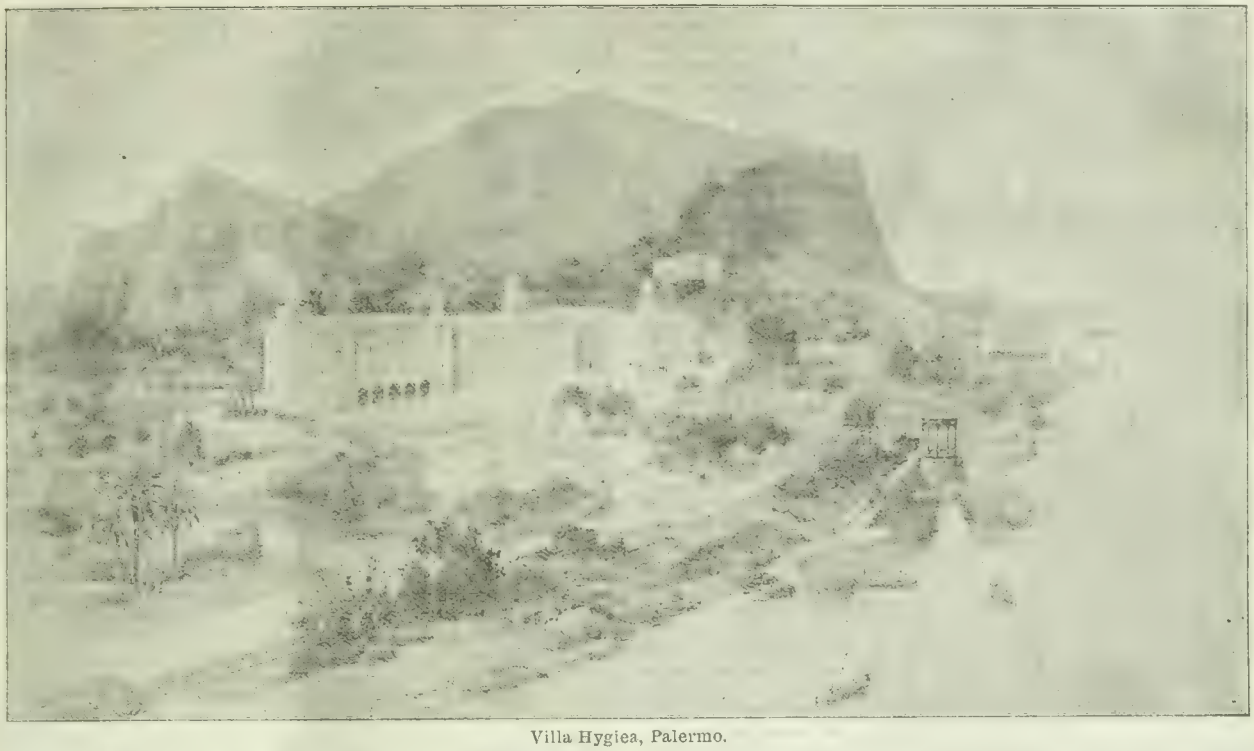
MAURITIUS.

For the week ending February 8th, 7 fresh cases of plague are reported in the island, and 6 deaths. The present epidemic is evidently approaching its end; Mauritius has been visited by plague with marked severity, and, judging by the experience of Hong Kong, there seems little hope that recurrences are not to be expected. It behoves the authorities to proceed with all vigilance. The passenger traffic in Mauritius can be much more easily regulated than in Hong Kong, where proximity to the mainland renders it well-nigh impossible to check and inspect the arrivals from the plague-stricken district in and around Canton.

SIBERIA.

Some time ago we drew attention to the presence of a separate form of plague in Eastern Siberia. It now appears, according to Dr. Frank Clemow's recent report, that there are two foci of plague in this region, one in Manchuria the other in Mongolia. There seems ample proof that the disease is carried by a species of marmot named locally the turbagan (*Arctomys bobac*). One peculiarity of the disease in Eastern Siberia is the severity of the outbreak in individual households, and its frequent limitation. It is not known that plague is endemic in these regions, but for many years the missionaries have noticed an illness which agreed with none of the ordinary ailments, and it was not until plague appeared in Southern China that they were able to trace the resemblance between the local disease and that obtaining in China and India. At Moukden, the capital of Manchuria, the officers of the Imperial Chinese Maritime Customs have reported plague as existing there during the past two years. The infection is believed to have come from the South by way of imports from Southern China. It would now appear, however, that the infection may have come from the North, as Manchuria has evidently been infected for years.

THE Italian Government has decided to establish a bacteriological laboratory for the study of bubonic plague in the island of Pianosa.



Villa Hygiea, Palermo.

A NEW SHRINE OF HYGIEA IN SICILY.

Palermo is little known in this country as a health resort. Its natural advantages are admittedly unsurpassed, but till lately man has done little or nothing to make the lavish gifts of Nature generally available for the benefit of invalids from less favoured climes. Of Sicily many a sufferer pining under a bleak northern sky for the sun which he knows would give him fresh life might have sung with Mignon:

> Know'st thou the land where lemon trees do bloom,
> And oranges like gold in leafy gloom;
> A gentle wind from deep blue heaven blows,
> The myrtle thick, and high the laurel grows?
> Know'st thou it, then?
> 'Tis there! 'tis there,
> O, my beloved one, I with thee would go!

This is all very well in poetry, but to the invalid the finest climate is useless unless he can be comfortably housed and properly fed, and in these prosaic requirements Palermo was sadly deficient. The fear of the brigand had also a disturbing influence on the unromantic British mind.

A first step has recently been taken towards the establishment of a new order of things. Commendatore Ignazio Florio, a merchant prince who has done much to develop the natural resources and industries of Sicily, has built a sanatorium for consumptives in the neighbourhood of Palermo. This establishment is intended for the reception of private patients, and the aim has been to make it, both in construction and in equipment, a model of sanitary perfection combined with luxurious comfort. It was expected that the sanatorium would have been formally opened at the beginning of January, and accordingly Signor Florio invited a party of leading members of the medical profession of this country to be present at the ceremony and inspect the building. The party included Professor Clifford Allbutt; Sir Lauder Brunton; Sir Walter Foster, M.P.; Mr. Malcolm Morris; Dr. StClair Thomson; Dr. G. A. Gibson, of Edinburgh; Dr. Patrick Manson, C.M.G.; Mr. James Cantlie; and Dr. Sambon. Mr. Watson Cheyne, who had also accepted the invitation, was at the last moment prevented from joining the party by a request from the Government to proceed to South Africa.

Unfortunately His Excellency Professor Baccelli, the Italian Minister of Public Instruction, who had promised to open the sanatorium, was at the last moment prevented from keeping his engagement. The ceremony was therefore postponed till the spring, when it is hoped that it may be performed by King Umberto, and that Queen Margherita may grace the occasion with her presence.

The English visitors were entertained with splendid hospitality by Signor Florio, and had the amplest opportunities afforded them of inspecting the sanatorium in every detail. Special acknowledgment should be made of the courtesy of the manager, Baron Fassini, who did all in his power for the comfort of the guests

The Villa Igiea.

The Villa Igiea, as it is called, is beautifully situated on the coast of the Mediterranean, in the famous "Conca d'Oro," to the north of Palermo, beyond the Acquasanta suburb. It stands at an average height of sixteen metres above the sea level, on a site measuring more than three hectares in superficial area. The long axis of the building is parallel to the coast, and lies east and west. It faces south, and is sheltered at the back by Monte Pellegrino, which protects it from the north wind. The apartments for the patients are all in the front of the building, looking on the sea. Each apartment has its own bathroom and sanitary conveniences. On the ground floor are reading, writing, and billiard rooms, drawing rooms, etc. Some of these have large porches in front, which form comfortable shelters; all open into the garden. There is accommodation for 120 patients. A lift enables invalids to use a terrace at the top of the building, which measures 3,000 square metres in extent. This terrace, with its towers and shelters, is one of the chief attractions of the sanatorium. Advantage has been taken of the conformation of the coast, which slopes down to the water edge, to construct a series of terraces joined by easy steps with balustrades; these lead down to the sea, where there are small piers for boats. In the gardens, which are plentifully stocked with fine indigenous and exotic plants, pavilions, and kiosks—one of these being for musical performances—are scattered about. Some small separate buildings, with all necessary offices, provide accommodation for patients who may wish to live with their families. Arrangements are made for religious services adapted to the different sects. There is a post and telegraph office on the premises. Carriages are provided for drives in the surrounding country; for those who like the sea, sailing and rowing boats, and a yacht (*Igiea*) of 320 tons are available.

The whole building is constructed of fireproof material, with iron and concrete flooring. The flooring of the apartments is of cement mixed in the Venetian style with minute fragments of marble and polished with wax. The corners of the rooms are rounded, and the walls are varnished, so that they can easily be washed and disinfected. There are no mouldings and no projecting decorations; the walls are perfectly smooth, and are painted with oil colours. The floors are covered with linoleum. The fullest provision is made for ventilation, and the building is heated, according to climatic conditions, either by majolica stoves and fireplaces, by hot water or steam. The laundry and disinfecting services are housed in a separate building a considerable distance from the sanatorium. The drainage system has been constructed with particular care, and excrementitious matter is repeatedly and completely sterilised before being discharged into the sea.

The sanatorium is under the medical direction of Dr. Vincenzo Cervello, Professor of Materia Medica and Pharmacology in the University of Palermo, who is helped in his work by a staff of some half-dozen assistants. In a separate building there are chemical and bacteriological laboratories for the service of the sanatorium. In addition to the open-air system, with the dietetic and hygienic measures which modern science has shown to be useful, Professor Cervello uses a special therapeutic method for which he claims good results. This, briefly stated, consists in keeping the patient for two or three hours daily in an atmosphere impregnated with formalin vapour. He states that, after some experimentation he obtained a product which if placed on the vaporiser, "develops as much formic aldehyde as would be furnished by a little more than three fourths of its weight of paraformaldehyde, and also small quantities of iodine vapour." He began to treat cases of phthisis by this means in the Guadagna Hospital, Palermo, on January 15th, 1899, and on April 29th, 1899, he reported to the Palermo Royal Academy of Medical Science that he had treated 26 patients in more or less advanced stages of pulmonary phthisis. Of these 10 are said to have been cured, 9 nearly cured, 2 somewhat improved, 1 remained stationary, and 2 became worse. There were 2 deaths.

Professor Cervello's criteria of "cure" are the complete disappearance of fever, cough, and nightsweats; the reduction of expectoration to *nil* or to an infinitesimal amount of simple mucus; the disappearance of objective symptoms of pulmonary lesion; the absence for a considerable time of tubercle bacilli in the sputum; gain in weight and strength; good appetite, natural complexion, and capacity for work. Details of the cases and of the method of applying the remedy were given by Professor Cervello in the *Archivio di Farmacologia e Terapeutica* for May and June, 1899. Since that time, as we learn from him, he has continued to use the treatment with ever-growing confidence in its efficacy. His experience has led him to the conclusion that the remedy is not contra-indicated in any stage or in form of tuberculosis; but he has not tried it in acute miliary tuberculosis. Cases of "mixed infection" are, we understand, admitted to be beyond the therapeutic sphere of influence of the remedy.

The visitors had more than one opportunity of seeing cases under treatment in the Guadagna Hospital. The hospital itself is unsuited for the purpose and is overcrowded. The windows are closed early in the evening, and remain closed all night; there seemed to be no provision for ventilation in the wards, not even a fireplace. The cases did not appear to be selected in any way, and a large proportion of them were severe. The patients themselves were satisfied with the results of the treatment. The visitors could, of course, form no definite judgment as to its value from what they saw. Before a positive verdict can be given the treatment will have to be tried on a much larger scale than it has yet been, and must, moreover, stand the crucial test of time.

As to the healing virtue of the climate of Palermo, however, and the special fitness of Signor Florio's sanatorium for the successful carrying out of the open-air treatment, they were unanimous. At the time of their visit (the first week in January) the weather was like that of a pleasant June in England. Overcoats and wraps were discarded and some of the party bathed in the sea.

It should be added that although the sanatorium is not a philanthropic institution, it is intended to apply 75 per cent. of the profits to the maintenance of one or more sanatoria for the poor. Signor Florio is a philanthropist of a highly practical kind. He devotes a portion of each day to visiting the hospitals, and the visitors heard from the patients many proofs of his benevolence. One instance of his philanthropy may be commended to other charitably-inclined millionaires. He has established a clinic for eye diseases where poor patients are treated gratuitously, but the medical staff are paid by him the same fees they would be entitled to receive from private patients.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD

South-Eastern Branch: West Kent District.—The next meeting of this District will be held at Rochester, on Thursday, March 1st, T. Eastes, M.D., in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to communicate with T. T. Brunyate, M.D., 46, Maidstone Road, Rochester.

Border Counties Branch.—The next meeting of this Branch will be held at Luff's Central Hotel, Hawick, on Friday, March 2nd, at 3.45 P.M. A meeting of the Council will be held at 3.20 P.M. Business:—Minutes of last meeting. Election of new members. Dr. Graham (Carlisle) will move "That at each annual meeting of the Branch the number of attendances of each member of council at council meetings held during the preceding year be formally announced." To consider resolution of section of the Branch for the counties of Roxburgh, Berwick, Selkirk, and Peebles, re payment of expenses of section. Dr. Haddon (Denholm) will open a discussion on The Necessity for Preventing the Spread of Influenza and the best way to do so. Dr. Hamilton, President, invites the members to afternoon tea at Elm House, Hawick, before the meeting. Dinner will be served at the hotel after the meeting. Members intending to dine are requested to notify Dr. Dixon, 25, Bridge Street, Hawick, of their intention by February 28th at latest.—W. F. Farquharson, M.D., Garlands, Carlisle, Honorary Secretary.

Edinburgh Branch.—The winter meeting of the Edinburgh (Lothians and Fife) Branch, in conjunction with other Branches, will be held in the Royal Infirmary, Edinburgh, on Friday, February 23rd. A Medical Congress for Clinical Demonstrations will be held at 3.45 P.M. Members are invited to exhibit patients. The Museum (Pathological and Apparatus) will be open from 3 P.M. onwards. Members are invited to exhibit specimens, drawings, etc. Dinner in the Royal Hotel, Princes Street, at 6.15 P.M.; morning dress; dinner ticket, 5s. Members of the Branch who can be present at the meeting and dinner, and have patients, specimens or apparatus for exhibition, are requested to intimate accordingly to Jas. Hodsdon, M.D., 6, Chester Street, Edinburgh, or R. W. Philip, M.D., 45, Charlotte Square, Edinburgh.

West Somerset Branch.—A meeting of this Branch will be held at the Taunton and Somerset Hospital on Tuesday, February 20th, at 3 P.M. Business: Minutes of last meeting. Letter from Secretary of Conference of Delegates on Medical Organisation. Appointment of delegate. Letters and circulars from other Branches. Clinical notes on cases and specimens. (Any member intending to read notes should send information as soon as possible.) There will be a lunch at the London Hotel from 1.30 to 2.30, price 2s. 6d.—R. Liddon Meade-King, M.D., Taunton, Honorary Secretary.

Staffordshire Branch.—A meeting of this Branch will be held at the North-Western Hotel, Stafford, on Thursday, February 22nd. The President, Dr. Spence, will take the chair at 4.40 P.M. Business:—Minutes of the last general meeting. The following gentlemen will be balloted for: Geo. Heaton, M.A., M.B.Oxon., F.R.C.S.Eng., Birmingham; Geo. L. Lefevre, M.B. C.M.Glas., Longton. Correspondence. Appointment of delegate to British Congress on Tuberculosis. Report of Council advising against any alteration of Rule 6. Exhibition of living cases. Papers:—Dr. C. M. Allan: Septicæmia; Dr. F. Edge: A Note on Hysterectomy for Myoma causing Paroxysmal Bladder Trouble. Exhibition of pathological specimens, etc. Dinner at 7 P.M.; charge, 5s.—F. Milnes Blumer, Stafford, Honorary Secretary.

DUBLIN BRANCH.

Annual Meeting.

The twenty-third annual meeting of this Branch was held on February 6th. The chair was taken by the outgoing President, Dr. F. T. Heuston.

Report of Council.—The Secretary, Dr. James Craig, read the report of the Council, which contained the following: Your Council record with deep regret the death since the last annual meeting of two of your past Presidents, Dr. Edward Hamilton, ex-President of the Royal College of Surgeons, and Dr. Grimshaw, C.B., ex-President of the Royal College of Physicians and Registrar-General for Ireland. Among the many important subjects considered by your Council throughout the year the most important was the Medical Acts Amendment Bill, for which a section of the Parliamentary Bills Committee have been vainly endeavouring to secure the sanction and approval of the Council of the Association. Your representative on the General Medical Council and on the Parliamentary Bills Committee (Dr. J. W. Moore) has given his assent to the introduction of a one-portal system in the form of a State examination coming after the licensing examinations of the various Universities and Corporations, with a provision that the examiners would be selected on equitable lines, but the alteration in the representation on the General Medical Council as proposed by the above-mentioned Bill he has continued to oppose most strenuously, as also the proposition that the General Medical Council should undertake the final qualifying examination to the exclusion of the existing licensing bodies. Your Council reiterate in the strongest manner the representations made by them to the authors of the Local Government Act, 1899, that in the interest of the public health superintendent medical officers of health should be appointed who would be independent of private practice, and who would supervise the sanitation of a county or a group of counties.—Professor Bennett moved, and Dr. E. J. McWeeney seconded, the adoption of the report.

The Death of Dr. Grimshaw.—The President of the Royal College of Physicians moved the following resolution:

That this Branch of the Association desire to record their sense of the grievous loss which the unexpected death of Dr. Grimshaw, Registrar-General for Ireland, and former President of this Branch, of which he was an active and distinguished member, has entailed upon the country; and particularly upon Dublin; and they desire to convey to his family an expression of sympathy in their affliction.

Sir George Duffey seconded the resolution, which was unanimously passed.

The late Mr. Edward Hamilton.—On the motion of the President of the Royal College of Physicians, seconded by Dr. Henry Fitzgibbon, a similar vote of condolence with the relatives of the late Surgeon Edward Hamilton was adopted.

Installation of New President.—The President announced that Sir Charles Cameron, C.B., had been elected President for the ensuing year. Sir Charles Cameron thereupon took the chair.

Vote of Thanks to Retiring President.—Dr. Oulton moved a vote of thanks to Dr. Heuston for the manner in which he had filled the office of President during the past year.—Dr. Delahoyd seconded the motion, which was passed with acclamation.—Dr. Heuston expressed his thanks.

Presidential Address.—Sir Charles Cameron then delivered his presidential address, which is published at p. 365.—Dr. Kidd proposed a vote of thanks to the President for his extremely comprehensive and able address. He would have liked Sir Charles Cameron to have referred to the question of the adulteration of food. In Dublin the poor succumbed to diseases principally because of intemperance, because of being ill-clad, and because of having to use adulterated food. With regard to this matter, he did not think the law was enforced strongly enough in Dublin. He saw contractors of the North and South Dublin Unions frequently fined small sums. He would send such people to prison. With regard to hospital accommodation, he was opposed to having fever wards in connection with general hospitals. Concerning the Notification of Diseases Act, it was a question extremely hard to deal with. In one of the suburbs of Dublin—Drumcondra—it was actually not enforced at all. He agreed that great benefit had been done for the poor by the erection of so many artisans' dwellings.—Dr. Browne seconded the vote of thanks, which was adopted.—Sir Charles Cameron, having acknowledged the vote of thanks, said that on the point of food adulteration some time ago he got an important return. For breaches of the Margarine Act he found that the convictions in Dublin exceeded the convictions in the whole United Kingdom, and the convictions for the adulteration of food were 40 per cent. of the whole number of convictions. He agreed with what Dr. Kidd said about small fines. If they were made heavier the result would be better.

Election of Officers.—The election of the officers for the ensuing year was announced as follows: *President:* Sir C. Cameron, C.B. *President-Elect:* Sir George Duffey, M.D. *Vice-Presidents:* H. C. Tweedy, M.D.; C. B. Ball, F.R.C.S. *Council:* E. H. Bennett, F.R.C.S.; F. T. Heuston, F.R.C.S.; E. J. McWeeney, M.D.; J. W. Moore, M.D., President R.C.P.I.; J. F. O'Carroll, M.D.; J. M. Redmond, M.D.; W. G. Smith, M.D.; W. J. Smyly, M.D.; Sir Wm. Stokes, F.R.C.S.; J. B. Storey, F.R.C.S.; R. L. Swan, President R.C.S.I.; W. J. Thompson, M.D. *Representative on the Council of the Association and on the Parliamentary Bills Committee:* J. W. Moore, M.D., President R.C.P.I. *Hon. Secretary and Treasurer:* James Craig, M.D., F.R.C.P.

Annual Dinner.—The annual dinner was given in the evening in the College of Physicians, Sir Charles Cameron, President, in the chair. After the usual loyal and patriotic toasts, Professor Fitzgerald proposed the toast of "The British Medical Association." He expressed the hope that in the medical, as in other professions, more attention would in the future be paid to scientific education than had been the case in the past. He coupled with the toast the name of Dr. Moore, President of the Royal College of Physicians.—Dr. Moore, in responding, said the British Medical Association was a great medical power, and also a very important Parliamentary power in the country. If they had a full representation of members in the Dublin Branch, they should have probably three representatives on the Council of the central body, whereas at present he (Dr. Moore) was the only representative of the profession in and about Dublin on the Central Council of the Association.—Dr. James Little proposed the toast of "The President," Sir Charles Cameron, who replied, and proposed "The Guests."

PERTHSHIRE BRANCH.

A clinical meeting of this Branch was held in Perth Infirmary on February 9th. Dr. Niven (Newburgh) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read, approved, and signed by the Chairman.

New Member.—J. Dalrymple, L.R.C.S. and P. Edin., L.F.P.S. Glasg., of Pitlochrie, was admitted a member.

Communications from other Bodies.—The Secretary intimated communications from other bodies—

From the Scottish Poor law Medical Officers' Association.—The annual report. It was received by the Branch.

From the Lancashire and Cheshire Branch.—It was resolved to approve of their resolution (1) that the agenda of council meetings should be received by the members thereof at least fourteen days before the Central Council meetings, if that be found practicable; and that meetings of the Branches be held as far as possible within the same fourteen days; (2) that railway expenses should be paid to members of important committees of the Association, if the expenses of the same is not too burdensome on the Association; (3) The Branch expressed the opinion that fuller reports of Council and general meetings were not desirable.

From the National Association for Prevention of Tuberculosis.—After explanation by the Secretary, the Branch approved of delay until a more favourable opportunity of holding a public meeting, and remitted the arrangements to Dr. Parker Stewart, the medical officer of health for Perth and the Secretary.

From the Soldiers' and Sailors' Families' Association and the General Secretary.—Members present willingly agreed to give attendance *gratis*, and approved of the Secretary sending out circulars to those who were not present.

Certification of Deaths in Scotland.—Dr. Urquhart read a note on this subject. He said the law demanded that they should grant certificates of death in the form familiar to all practitioners under a penalty not exceeding forty shillings in

case of failure. They need not consider how it came to pass that the medical profession had been laden with this gratuitous duty. It was extorted for the benefit of the lieges, and should be paid for just as the notification of infectious diseases was paid for. The remedy lay in the thorough organisation of the profession, which was being slowly perfected by the British Medical Association, for the fortuitous protests of individuals were powerless in a legislature. Penalties should be imposed on registrars accepting notices of deaths not accompanied by a medical statement as to the cause of death as ascertained by rigorous scientific methods. That did not necessarily mean a *post mortem* examination in every case. It should, however, carry with it power to review imperfect statements by Crown officials appointed from the medical profession. The present system stood condemned by the medical profession. It was ineffective in protecting the lives of the lieges from malpraxis, crime, and errors in sanitation. More stringent regulations at headquarters ought to remedy much of this evil, but the pressure of public opinion must be brought to bear upon Parliament before it could be entirely abolished. Passing from the larger question to the special point to which he desired to direct attention, Dr. Urquhart said the position was well-defined. In case of a person dying not in a house, it was laid upon the occupier or inmates of his house to inform the registrar; and if his home were not known, the person present at death, or the person finding the body, or any person to whom the body should be brought, was in like manner bound to inform the registrar. The registrar in turn was bound to inform the Procurator-Fiscal, whose business it was to communicate the particulars required to be registered to the registrar. It was not the duty of the medical man or the private person indicated to communicate with the police. No doubt, in case of death in suspicious circumstances, or in case of an unknown person, time would be saved and evidence might be gained, by a timeous message to the police; but the intervention of the police with a show of authority which they did not possess was not called for in everyday practice. Their duty as citizens and as medical men was to press for amendment of the Registration Act, to make it impossible that a single death should go uncertified. It was resolved to remit consideration of the subject to a committee, consisting of Dr. Kennedy (convener), Dr. Norwell, Dr. Parker Stewart, and Dr. Urquhart, for report to next meeting.

Bone Lodged in Lung.—Dr. Kennedy showed a case and specimen of a bone which had lodged in the right lung.

The man had swallowed a small angular piece of bone, about the size of a hazel nut, on June 17th, 1898, and developed a subacute pneumonia next day. He did not tell Dr. Kennedy of the accident. For some weeks he was compelled to lie, complaining of pain, shortness of breath, and the usual rusty-coloured sputum. The physical signs of pneumonia were obscure, but extended over the outer and lower part of the right lung. In four weeks he was well enough to go for a change of air, but he continued to complain of shortness of breath and inability to lie on the right side. In the beginning of February he had an attack of pleurisy, which was relieved by treatment. In the end of February the patient had a violent fit of coughing, expectorated much pus and some blood, together with the fragment of bone. He immediately felt relieved, and at once found that he could breathe naturally, and lie comfortably on his right side. The recovery was complete, and almost immediate.

Cerebral Surgery.—Dr. Norwell (for Dr. R. Stirling, prevented by illness) gave an account of two cases of cerebral surgery—one an operation for mastoid disease, the other for replacing detached fragments of the frontal bone; both successful.

Next Meeting.—The next meeting was fixed to be held at Trinity College, Glenalmond, by kind invitation of the Vice-President (Dr. Simpson).

CORRESPONDENCE.

NURSING IN MILITARY HOSPITALS.

Sir,—In the British Medical Journal of January 27th, p. 231, I observe that Inspector-General Turnbull and Dr. Groves presented reports on the nursing in naval and military hospitals to the Parliamentary Bills Committee.

As regards that of Inspector General Turnbull I have no remarks to make, as no doubt the officer in question is quite correct in his statements, and is well qualified to report on the subject. As regards Dr. Groves's report on the Nursing in Military Hospitals, I wish, with your permission, to offer some remarks.

Dr. Groves asserts that in station hospitals "the privates do the nursing." This statement is quite erroneous, and may be accepted as a measure of value of the report in question. In all the larger station hospitals the nursing is carried on by the army nursing sisters, assisted by orderlies of the R.A.M.C., who are trained by the sisters. Dr. Groves does not seem to have mastered the system of work of the R.A.M.C., and apparently does not know that the men of the corps are divided into classes—for example, ward orderlies, cooks, and clerical, and that each branch has its own particular duties allotted to it.

The report further states that "the non-commissioned officers dispense, do all the clinical recording, and act as clerks to the hospital." This statement is also inaccurate. The dispensing is performed by men specially trained in pharmacy, and who may be privates or non-commissioned officers; these men pass a very stiff examination indeed, and are thoroughly efficient compounders. The clinical recording is not carried out by non-commissioned officers, but is invariably performed by the medical officers. The "clerical branch" is responsible for the clerkly duties.

Dr. Groves goes on to comment on the system of nursing as follows:

The military conditions which obtain in these hospitals oppress the whole system of nursing and hinder its efficiency. Everything is made subordinate to "drill." Attention to the equipment—furniture, utensils, and so forth—takes precedence of attention to the patients. The hospital orderly signs for and is made responsible for the equipment of his ward; and if at the weekly or monthly inspection any portion of it is broken or deficient, it must be replaced at his private cost. Each morning there is "parade" in hospital, with general inspection, which occupies much time and hinders attention to cases of acute disease.

The nursing system in military hospitals would appear to be singularly defective from the civilian's point of view. It is possible that after the war sweeping reforms in the army may occur; but, in any case, the whole subject of administration, and more particularly the question of nursing in military hospitals, should be inquired into and reform pressed for.

It is difficult to understand how such statements could have been written by anyone having the smallest knowledge of the subject, and it would be interesting to know from what source Dr. Groves obtained his "facts." Apparently he would have the R.A.M.C. an undisciplined body entirely devoted to nursing, and knowing nothing of "discipline," "drill," "care of equipment," or any military duty.

I suppose he would be horrified to know that the men of the R.A.M.C. are put through a course of musketry, and know how to load and unload rifles, etc.; yet a little knowledge of their duties would show the necessity for this.

Finally we read that the Parliamentary Bills Committee accepted a report as full of inaccuracies as it well could be, and asked the author of it to continue as a member of a "watching subcommittee in regard to this matter."

Now, on reading over the names of the Parliamentary Bills Committee who were present on the occasion, I find there was not a single representative of the Army Medical Service present, so that the report in question was accepted by a body of civilian practitioners absolutely ignorant of the subject.

Why, may I ask, was not a retired medical officer, with some knowledge of the service, asked to undertake this investigation, and report, as was done in the case of the navy?

I think I need say little more regarding this misleading and inaccurate report than to refer to the statements of Sir William MacCormac, Mr. Treves, Sir William Stokes, and the other eminent surgeons at the seat of war, who have one and all given the highest praise to the organisation and nursing in the military hospitals in South Africa.

J. B. Hamilton, Surgeon-General, R.P.

Cromwell Mansions, S.W., Feb. 12th.

THE MIDWIVES BILL.

Sir,—I do not know what the object of the letters signed by "Jane Wilson" and "F. R. Humphreys" can be, if it be not to confuse the very simple issue raised by me at the recent meeting of the Parliamentary Bills Committee.

The facts are very simple. I urged the Committee to decline to further assist the hands of the agitators for registration, on the ground that two recent developments—that is, the advertisement in the *Daily Mail re* "man midwifery" (reprinted in the British Medical Journal of February 3rd) and the publication of the *Transactions of the*

Midwives' Society (to which attention was recently directed by you) proved to a demonstration, and out of their own mouths—the real meaning of the whole got-up agitation.

The *Transactions* teem with insults to the medical profession, and the advertisement clearly states the objects of the Registration Bill. "This Bill will practically abolish the system of man midwifery in England." It is inconceivable how medical practitioners can be found ready and willing to help this programme, and to place in the hands of midwives those certificates of competency which constitute and create their sole claim to registration.

These are the important points, and, if their importance be not realised now, the future must show a sorry degradation.

The letters of your correspondents are in no way pertinent. One says that the Midwives Institute is not the Midwives Society, the other says that the Midwives Bill Committee is unconnected with the Midwives Institute. Vastly interesting information no doubt, yet the similarity of names, and the common address—12, Buckingham Street, Strand—suggests some community of interests. But please observe, Sir, that the responsibility for the *Daily Mail* advertisement is not disclaimed.

I would not suggest that any blame lay at the door of these offsprings from the parent Obstetrical Society, but a heavy responsibility lies at the door of that officious body.—I am, etc.,

February 15th. COLIN CAMPBELL.

TESTS FOR DIABETIC BLOOD.

SIR,—In the BRITISH MEDICAL JOURNAL of February 10th there appears in the EPITOME (page 21, art. 100) a reference to a test for diabetic blood which I introduced a few years ago, and published in the JOURNAL of September 19th, 1896. May I point out that, owing to a misprint, the quantities of blood and liquor potassæ given in the EPITOME last week are 1,000 times too much? The correct proportions are as follows: 20 c.mm. of blood, 1 c.cm. of a 1 in 6,000 watery solution of methylene blue, 40 c.mm. of liquor potassæ. The fluid should be placed in a very narrow test tube, which is immersed in a hot-water bath for four minutes. At the end of this time the blue solution will be decolorised by diabetic blood, but it will not be decolorised if non-diabetic blood be used.

Bremer has introduced another test for diabetic blood, in which, after special treatment of a cover-glass preparation, the corpuscles of diabetic blood are stained green by a carefully-prepared mixture of eosin and methylene blue, whilst those of non-diabetic blood are stained madder on purple.

The results in these two tests are quite different, and I think that further observations will show that they depend on two different peculiarities or abnormalities of diabetic blood.—I am, etc.,

Manchester, Feb. 13th. R. T. WILLIAMSON.

THE DEFECTS OF THE CLUB SYSTEM.

SIR,—The letter written by your correspondent "Gray's" in the BRITISH MEDICAL JOURNAL of February 3rd is all right enough. I showed it to a member of a club I have to do with and he said to me, "Well, sir, if the doctors are dissatisfied with their pay why don't they all unite?" That is just the thing that is wanted—"unity,"—but it seems a thing impossible to get. There are some men I know who would take clubs at even less than 4s. a member per annum in order to cut other candidates out of the field.—I am, etc.,

February 13th. MUNICEPS.

OBITUARY.

FRANCIS CHARLEWOOD TURNER, M.A., M.D.CANTAB., F.R.C.P.LOND.

WITH much regret we have to record the death of Dr. F. Charlewood Turner, on February 2nd, at the age of 56. He was born at Fenton House, Hampstead, on October 20th, 1843; being the youngest son of Mr. Thomas Turner, barrister, once Fellow of Trinity College, Cambridge, and subsequently Treasurer of Guy's Hospital. He was educated at Clapham School under the Rev. Charles Pritchard, became a scholar of Trinity College, Cambridge, and took his B.A. degree in 1866, when he was seventeenth Wrangler. He proceeded M.A. in 1869, and took the degree of M.D. in 1874. He studied medicine at Cambridge and afterwards at Guy's Hospital, where he had the reputation of being an indefatigable worker. He obtained the M.R.C.P.Lond. in 1875, and was advanced to the F.R.C.P. in 1881.

From Guy's he went to St. Thomas's Hospital as Resident Assistant Physician. In 1876 he was elected Assistant Physician, and in 1891 full Physician to the London Hospital.

Early in his career he turned his attention to pathological anatomy, in which department he accomplished a large amount of excellent work. For many years he was one of the Demonstrators of Morbid Anatomy at the London Hospital, in association with the late Dr. Sutton and other colleagues. He succeeded the late Mr. James Adams in 1878 as Curator of the London Hospital Museum, worked hard in that department, and in 1883 succeeded Mr. Jeremiah McCarthy as one of the Pathologists to the hospital, and held the office for years. He never held any lectureship at the school; but was promoted to the in-patient staff on the death of the late Dr. Sutton. Dr. Turner made numerous contributions to medical science, of which the following are the most important: On Fibroid Degeneration of the Heart (*Transactions of the International Medical Congress, 1881*); On the Functions of the Vessels in Relation to the Circulation of the Blood; The Presystolic Murmur, both published in the *St. Thomas's Hospital Reports*. In the last-named paper he ranged himself on the side of the late Dr. Barclay and Dr. Dickinson. His paper on a case of Anterior Poliomyelitis, published in the *Transactions of the Pathological Society*, was an important histological study of the early stage of this disease. Many other communications from Dr. Turner appeared in the *Transactions of the Pathological Society*. He was Secretary to the Society from 1891 to 1893, and at the time of his death he was Vice-President. He was also a Fellow of the Royal Medical and Chirurgical and Hunterian Societies, member of the Clinical Society, and Consulting Physician to the North Eastern Hospital for Children and the London Orphan Asylum, Watford. In 1899 he was appointed Examiner in Medicine at Durham University and was given an honorary degree of M.D. in that University.

His clinical and pathological work alike were characterised by extreme attention to detail and accuracy. In the discharge of his hospital duties he was regular and punctilious to the last degree. He was the most loyal and staunch of colleagues, and his habits of precision and accuracy made him a most useful member of the Medical Council of the hospital. His enthusiastic devotion to his duties was shown to the last, for when struggling with a mortal disease he persisted in his intention of delivering a set of clinical lectures even after he had yielded to the advice of one of his oldest colleagues, and had determined to send his resignation to the House Committee of the hospital.

His health, which had been failing for over twelve months, rapidly deteriorated, and he resigned his position on the staff in December, 1899.

Dr. Turner died at St. Leonards on Friday, February 2nd.

He was a singularly silent and self-contained man, and his reserve prevented intimacy even with his own colleagues.

In 1886 he married a daughter of the late Bishop McDougal of the Straits Settlements. This lady was niece of Bishop Colenso. Dr. Turner's only surviving brother was appointed Suffragan Bishop of Islington two years ago, and his only surviving sister has been for many years wife of Mr. Davies-Colley, until recently Surgeon to Guy's Hospital.

The funeral took place at Hastings Cemetery, on February 6th.

GEORGE A. TURNER, M.D.GLASG.,

Dispensary Physician, Western Infirmary, Glasgow.

THE death of Dr. George A. Turner, of Glasgow, on January 26th, after a short illness, at the comparatively early age of 54, has occasioned great regret amongst his many friends. He studied at Glasgow University, where he graduated in medicine in 1867, taking his M.D. three years later. He was a son of the late Dr. Turner, of Samoa, and was brought up in a missionary atmosphere, and spent the earlier part of

his medical career abroad, gaining special experience in some of the rarer tropical diseases. Returning to Glasgow, he settled down to private practice, but devoted his attention principally to obstetrics and diseases of women, and at the time of his death he was one of the Dispensing Physicians for Diseases of Women at the Glasgow Western Infirmary. In addition to his medical work, Dr. Turner naturally took a particular interest in geographical and missionary work, being Secretary of the local branch of the Royal Scottish Geographical Society. He made important contributions both to medical and to geographical literature. Much sympathy is felt for his widow and family, of whom more than one have entered their father's profession.

Professor LUDWIG MEYER,
Göttingen.

Professor Ludwig Meyer died at the Provincial Asylum of Göttingen on February 8th. He was for many years the Director of that institution, and of the clinical wards for psychiatry in the University. In early life he was attached to the Hamburg Asylum, where he enthusiastically upheld the non-restraint system of treatment in face of much opposition. On being called to superintend the newly-erected asylum at Göttingen in 1866, he had free scope for the development of principles which he ever afterwards carried out in a truly enlightened and progressive fashion. Of late years the original building was enlarged by the addition of separate villas, and he made the clinical department of the University no less successful than the ordinary asylum.

Professor Meyer wrote many notable articles on subjects relating to mental and nervous diseases, and to the last kept abreast of the times in the scientific work of his profession. He was specially commissioned to report on psychiatry in Germany, and gave a lucid account of his own work in 1891. A remarkable instance of his independent and original thinking is his declaration that for over a quarter of a century he had discontinued forcible feeding of obstinate patients, with better results than are generally obtained. These could only be achieved by intense personal interest in the daily life of individual patients, and by unwearying efforts to ameliorate their condition.

In many other directions Professor Meyer made his influence felt, and his loss will be deeply regretted not only in Germany, but wherever psychiatry is the subject of serious study.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

VOLUNTEER STAFF CORPS AND BEARER COMPANIES FOR SOUTH AFRICA AND AT HOME.

A special Army Order dated February 5th sets out the conditions under which the services of members of the Volunteer Medical Staff Corps and bearer companies of volunteer infantry brigades will be accepted for duty in South Africa or at home.

In South Africa.

Every volunteer must enlist into the Royal Army Medical Corps for one year or for the war. In the event of the war being over in less than one year, he will have the option of being discharged at once, or of completing his one year of service. Every applicant must be between the ages of 20 and 25, must have been returned as efficient during 1898-99, must be of good character, must be up to the physical standards of an infantry recruit, and must be medically fit for active service. Preference will be given to unmarried men or widowers.

Applications for enlistment will be forwarded by officers commanding companies of the Volunteer Medical Staff Corps to the officer commanding the Royal Army Medical Corps in the district, who will have the applicant medically examined. In the case of a brigade bearer company, the senior medical officer of the brigade will apply to the brigadier-general commanding. After attestation recruits will join the Royal Army Medical Corps depôt at Aldershot.

Persons selected for commissions who do not hold commissions in the regular forces or militia will be granted temporary commissions in the R.A.M.C. Officers and non commissioned officers and men will wear the uniform of the R.A.M.C. as laid down for service in South Africa, but will retain the distinctive badges of their own corps. A volunteer will receive the pay and allowances of their rank in the Royal Army Medical Corps, with rations and clothing from the date of enlistment, and on completing the period will receive a gratuity of £5, and in case of discharge in consequence of wounds, injuries, or disability received or contracted while on service, will be entitled to a pension.

At Home.

Members of the Volunteer Medical Staff Corps, and of bearer companies of volunteer infantry brigades desiring to volunteer their services, may be called out for service in the hospitals in the United Kingdom. They will be called out for six months or for such shorter period as their services may be required, and will be attached for duty to the various hospitals. Two guineas will be paid to the officer commanding in respect to each officer and volunteer called out to meet the cost of providing necessaries, including undress uniform, and on the release of any detachments or individual one guinea will be paid to each. They will wear the uniform of their respective corps except when on duty in the wards, when they will wear fatigue dress.

A meeting of brigade-surgeons of the metropolitan and home counties brigade was held last week shortly after the issue of the Order, and it was decided that a volunteer bearer company should be formed for service in South Africa, and another for home service. It was decided that inquiries should be made among all the regiments of the district as to the number of medical officers and trained certificated bearers available. It was understood that there would be no difficulty in forming the two companies, and that, in fact, the number of applications would certainly be in excess of the requirements.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Alan G. Eastment, Surgeon, lent to the *Rodney* until February 20th, from February 6th; Percy H. Bannister, M.B., Surgeon, to the *Benbow*, February 9th; Henry W. Stephens, Surgeon, to be in medical charge of the ratings on the passages in the Dominion liner the *Vancouver*, leaving Liverpool, March 8th; Richard S. Osborne, Surgeon, to the *Tamar*, additional, and to the *Robin*, on commissioning, to take passage in the *Edgar*, and for duty if required, February 20th; Alexander J. J. Johnston, Fleet-Surgeon, to the *Edgar*, for medical charge on the voyage to England, and afterwards to Plymouth Hospital, undated; Alexander F. Harper, Staff-Surgeon, to the *Edgar*, for medical charge on the voyage to China, February 20th, and afterwards to the *Victorious*, undated; Joseph H. Whelan, Staff-Surgeon, to the *Diana*, February 15th.

ARMY MEDICAL SERVICE.

The Queen has approved of the grant of a good service pension of £100 a year to Surgeon-General Wm. Taylor, M.D., C.B., the Principal Medical Officer on the staff of the Commander-in-Chief in India. This officer has been serving for upwards of thirty-five years in the army, during which period he has been no fewer than seven times on active service—namely, the Jowaki expedition of 1877; the Burmese expedition, 1885-86; the Hazara expedition, 1888; the Burmese expedition, 1888-89; the Ashanti expedition, 1895-96; the Nile expedition, 1898; and he was attached to the headquarters of the Japanese army during the war between Japan and China in 1894-95. He has been on three occasions mentioned in despatches, especially for his services as Principal Medical Officer of the expedition to Khartoum in 1898, for which he received the honour of a C.B. and the Order of the Medjidie. Among his other decorations for these numerous campaigns, he wears the Japanese war medal, awarded him, with thanks, for his valuable services to the Japanese army in 1894-95.

The following is a list of successful candidates for commissions in the Royal Army Medical Corps at the recent examinations in London:

	Marks.		Marks.
T. Biggan	2,554	W. J. P. Adye-Curran	2,185
H. Richardson	2,532	J. Powell	2,156
C. H. Carr	2,490	R. L. Argles	2,099
W. L. Baker	2,462	J. G. Foster	1,975
F. W. Cotton	2,329	F. P. Lauder	1,970
E. Bennett	2,275	E. G. Ford	1,803
F. M. Parry	2,248	F. S. Walker	1,802
B. R. Dinnis	2,221	L. M. Purser	1,800
J. S. Twigg	2,185		

ROYAL ARMY MEDICAL CORPS.

Captain Henry A. Berryman, from half-pay, to be Captain, with precedence next below K. M. Cameron, M.B., *vice* A. L. Borradaile, M.B., promoted, January 24th. Captain Berryman was placed on half-pay on account of ill-health in February of last year.

Sergeant-Major Hugh Bradley is appointed Quartermaster, with the honorary rank of Lieutenant, on augmentation, February 10th.

Major A. M. Rose is reported as having been slightly wounded at Potgeiter's Drift, Natal, during the fighting there on February 5th to the 7th. Major Rose went to South Africa in October last.

ARMY MEDICAL RESERVE.

Surgeon-Majors J. H. Hay, M.D., and T. Fort are promoted to be Surgeon-Lieutenant-Colonels February 14th.

INDIAN MEDICAL SERVICE.

Colonel G. W. R. Hay, M.D., Bombay Establishment, Principal Medical Officer Bombay and Aden Districts, while on privilege leave, is transferred to Quetta as Principal Medical Officer, Quetta District, from November 15th.

Lieutenant-Colonel Andrew Duncan, M.D., Bengal Establishment, has retired from the service, which he entered as Surgeon, March 30th, 1878, becoming Surgeon-Lieutenant-Colonel, March 30th, 1898. He was in the Afghan war in 1878-80, and was present in the engagements at Mattoon and at Charasiah on October 6th, 1879, at the latter of which he was severely wounded (medal with clasp). He was also with the Nazara Expedition in 1891, and received the Frontier medal with clasp.

Lieutenant-Colonel F. C. Barker, M.D., Bombay Establishment, has also retired from the service. He entered as Assistant-Surgeon,

October 1st, 1860, and became Brigade Surgeon-Lieutenant-Colonel, August 31st, 1895.

The following candidates for Her Majesty's Indian Medical Service were successful at the competitive examinations held in London on February 2nd and following days :

	Marks.		Marks.
J. D. Graham	3,640	J. C. S. Oxley	2,615
C. A. Sprawson	2,936	H. R. Macnee	2,560
W. H. Cazaly	2,928	W. Lapsley	2,524
W. V. Coppinger	2,812	W. D. A. Keys	2,497
P. A. Browne	2,785	A. Chalmers	2,459
A. Spitteler	2,768	J. Good	2,453
M. MacKelvie	2,651	W. M. Houston	2,402
L. J. M. Deas	2,621	G. J. G. Young	2,363
W. G. Hamilton	2,620	S. R. Godkin	2,262

RETIREMENT FROM THE ROYAL NAVAL MEDICAL SERVICE.

STAFF-SURGEON writes : Referring to the article on Royal Navy Medical Service, in the BRITISH MEDICAL JOURNAL of January 27th, pp. 212 and 213, I should be obliged if you could inform me if a medical officer could retire after 20 years' service from date of entry ; otherwise one desirous of retiring would be obliged to go to the expense of having his uniform altered at a considerable expense for perhaps one month's service.

*** Twenty years' full pay service has always hitherto been required to secure retirement, both by naval and military medical officers. Naval medical officers specially promoted to Fleet rank could no claim retirement until they had completed twenty years' full pay service.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Board of Electors.—Dr. D. MacAlister has been appointed an Elector to the Chair of Anatomy ; Sir T. Lauder Brunton an Elector to the Downing Professorship of Medicine ; Dr. Gaskell an Elector to the Chair of Physiology ; Mr. T. Holmes an Elector to the Chair of Surgery ; and Dr. L. Humphry an Elector to the Chair of Pathology.

Examination for Degrees.—Parts I. and II. of the third examination for the degrees of M.B., and B.C. will commence on Tuesday, April 24th. The examination for the degree of M.C. will commence on Friday, April 27th. Names of candidates must be sent to the Registrary on or before Saturday, March 31st.

UNIVERSITY OF ST. ANDREWS.

Graduates' Association.—At the last meeting of the Council of this Association, which was held at 11, Chandos Street, Cavendish Square, the following resolution was unanimously adopted : "That action be taken with a view of restoring to the University the right which it so long possessed of granting the degree of Doctor of Medicine to registered practitioners of fifteen years' standing, who are not under 40 years of age, on their passing a full and satisfactory professional examination. The Council in so doing are only seeking to place the University in the position which the University of Durham now holds, and they desire to act without prejudice to the other Scottish Universities which may wish to exercise the like power of graduation."

ROYAL UNIVERSITY OF IRELAND.

AT a meeting of the Senate of the Royal University of Ireland held on Thursday, February 8th, the following appointments were made :

Medical Fellows (for three years).—A. Birmingham, J. P. Pye, J. Symington, J. J. Charles, D. J. Coffey, J. I. Lynham, P. J. Hayes, and Sir Thornley Stoker.

Examiners (for the year 1900).—A. J. M. Blaney, J. F. O'Carroll, J. A. Lindsay, W. H. Thompson, E. J. M'Weeney, J. L. Smith, J. W. Byers, A. J. Smith, C. Y. Pearson, A. Roche, F. J. B. Quinlan, W. Whitla, A. W. Sandford, L. Werner, and Sir C. A. Cameron.

UNIVERSITY OF DUBLIN.

IN connection with the School of Physic in the University of Dublin, the Board of Trinity College have made the following appointments of University Examiners for the present year. In Medicine : Dr. James Craig, Physician to the Meath Hospital ; and Dr. H. C. Drury, Physician to Cork Street Fever Hospital. In Surgery : Mr. F. T. Heuston, Senior Surgeon to the Adelaide Hospital. In Midwifery : Dr. Henry Jellett, ex-Assistant Master of the Rotunda Hospital. In Ophthalmology : Mr. J. B. Story, Surgeon to the Victoria Eye and Ear Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on February 8th, Mr. H. G. Howse, Vice-President, in the chair.

Court of Examiners.—Mr. W. H. A. Jacobson was appointed Examiner in Surgery in the vacancy of Mr. J. N. Davies-Colley, resigned from ill-health. Mr. H. W. Page was appointed a Member of the Board of Examiners in Dental Surgery, in the vacancy caused by the retirement of Mr. J. N. Davies-Colley.

Food Preservatives.—The Vice-Presidents reported that, in pursuance of the resolution adopted by the Council on January 11th, they had nominated Dr. W. D. Halliburton, F.R.S., and Dr. E. H. Starling, F.R.S., to give evidence before the Committee appointed by the Local Government Board to inquire into the use and effects of food preservatives and colouring matters. This was confirmed by the Council.

Cartwright Trust.—The Vice-Presidents reported that Mr. S. Hamilton Cartwright had ascertained that the Charity Commissioners were prepared to consent to the alteration of the Cartwright Trust for the purpose of giving effect to the scheme proposed by the Council, provided that the Fund were invested in the name of the Official Trustee by whom the dividends would be paid to the Trustees, who, they suggested, should be the Presidents and Vice Presidents of the College *ex officio*. The Vice-Presidents stated that they had agreed to this proposal. This was confirmed by the Council.

Medical and Dental Students in South Africa.—A letter was read of January 20th from Mr. F. Newland-Pedley, F.R.C.S., stating that he is going to South Africa as a dental surgeon, and would greatly need the help of several dental students to make splints and act as assistants, and asking that the service of such students in the Imperial Yeomanry Hospital might count as part of their hospital curriculum. The Council resolved that Mr. Newland-Pedley be informed that, on production of satisfactory evidence, the service rendered by dental students in the Imperial Yeomanry Hospital shall be reckoned as part of the hospital curriculum for a period not exceeding six months, in such a manner as the Board of Examiners in Dental Surgery may recommend. The Committee of Management was desired to report to the two Colleges on the recognition of the services rendered by medical students at the seat of war as part of the hospital curriculum.

Midwives Bill.—A letter was read from Mr. F. Rowland Humphreys, Honorary Secretary of the Midwives Bill Committee, forwarding a copy of the Midwives Bill, 1900, which it is proposed to introduce into Parliament in February. A Committee was appointed to consider and report upon it.

Medical Congress in Paris.—A letter was read from the President and General Secretary of the Thirteenth International Medical Congress to be held in Paris from August 2nd to 9th, 1900, inviting the College to send a representative to the Congress. Sir William Mac Cormac was chosen to represent the College at the above Congress.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Tuesday, February 6th, Dr. James Andrew, President, in the chair.

Obituary.—The President referred in sympathetic terms to the loss which the College had sustained through the death of Sir Thomas Grainger Stewart, a past-President of the College, one of its most distinguished Fellows, and the accomplished Professor of Medicine in the University of Edinburgh. He also referred to the untimely death of Dr. George Elder, a Junior Fellow, who had given promise of a bright future.

Admission to the Fellowship.—Dr. Richard Carter, Bath, was admitted by ballot to the Fellowship.

Admission to the Membership.—On a ballot the following candidates were admitted to the Membership of the College after examination—namely : Thomas Wilson Smith, M.D., Bath ; William Thomas Ritchie, M.D., Edinburgh ; and John William Simpson, M.B., C.M., Edinburgh.

New Licentiates.—The Registrar reported that since the last quarterly meeting 46 persons had obtained the Licence of the College by Examination.

The Laboratory.—The Curator submitted his report for the past year regarding the research and reporting work undertaken in the laboratory during the year and the expenditure incurred. The report showed that 26 workers had been engaged in research, that 1,366 specimens had been reported on, and that the total expenditure had amounted to £801 5s. 8d. The report was adopted by the College.

Recognition of Lecturer on Bacteriology.—Dr. James Taylor Grant, M.R.C.P.Edin., was, after examination, recognised by the College as a Lecturer on Bacteriology, and the President conferred on him the certificate of qualification.

Parkin Prize.—Intimation was made that no essay had been submitted for the Parkin Prize in the gift of the College. It was agreed to announce it as open for competition during the present year.

Tercentenary of Faculty of Physicians and Surgeons of Glasgow.—A letter was read from the President of the Faculty of Physicians and Surgeons of Glasgow, thanking the College for their address of congratulation on the tercentenary of the Faculty.

Award of Freeland Barbour Fellowship.—On the recommendation of the Prize Committee, the Freeland Barbour Fellowship, in the gift of the College, was conferred on Mr. Walter William Chipman, M.B., C.M., Edinburgh.

ROYAL COLLEGE OF PHYSICIANS OF RELAND.

Licentiateship in Medicine and Midwifery.—Messrs. R. J. Cane, F. G. Fitzgerald, R. J. Franklin, C. C. Meeke, R. H. Moffit, H. W. Spaight and T. D. Sullivan have passed this examination.

Mr. H. J. Dean, L.S.A., has obtained the Licence in Medicine.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

A MEDICAL Students' Guide for the coming session has just been issued by the College. The Preliminary Examinations are held in March and September. The Conjoint Professional Examinations are held in the months of April, July, and October.

The Conjoint Diploma in State Medicine.—Held the first Tuesdays in February, May, and November. Fee, £10 10s.

The Fellowship Examination.—Held the third Mondays in February, May and November. Fee, £26 5s.

The Licence in Surgery for Registered Practitioners.—Held the first Mondays in February, May, and November. Fee, £26 5s.

The Licence in Dentistry.—Held second Mondays in February, May, and November. Fee, Primary, £10 10s., Final, £10 10s. Entries for all examinations must be made fourteen days previously.

The *Guide* can be had free on written application to the College, Stephen's Green, Dublin.

CONJOINT BOARD IN IRELAND.

Diploma in Public Health.—Messrs. Louis G. Godinho, L.M.,S., Bombay, J. W. H. Jessett, M.D. Univ. Dub., and Nicholas Cullinan, L.R.C.P.&S.Edin., L.F.P.S.G., have passed this examination, the two former in honours.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VACCINATION FEES.

THE Wigan Board of Guardians has passed the following resolution:

That in the opinion of this Board the minimum charge fixed by the Local Government Board, by the Vaccination Order, 1898, for vaccination is too high, and requires revision; and that a copy of this resolution be sent to all unions in England and Wales, also the Poor-law Unions Association, with a request that the Executive Council take steps to remedy this defect.

We do not know whether, in sending a copy of this resolution to the Boards of Guardians throughout the country, the Wigan Board has given any reason for the conclusion at which it has arrived. Of course the payments for work done under the recent Vaccination Act are higher than under the old Act, but then the work is greater, and the question remains, Is the work overpaid? In many cases it is underpaid, and indeed the minimum scale of the Local Government Board's scale is intended merely as a basis for agreement between local bodies and their officials. Boards of Guardians are very properly desirous of keeping down the rates, but they have no right to do so at the expense of the public vaccinator. It need not for one moment be supposed that there is any chance of the Local Government Board issuing a new Order as a result of the action of the Wigan Guardians, or of any support which that action may receive from other guardians throughout the country. It is easy for local Boards to agree off-hand to any resolution for the lowering of rates, but the central authority which is responsible for the minimum scale of fees would require to be satisfied that a good case had been made out before it could dream of considering the revisal of its recent determination. It is satisfactory to note that not every Board of Guardians supports the Wigan resolution. At Honiton the chairman very sensibly pointed out that house-to-house visitation made a vast difference in the work as compared with the old system, and his Board upheld the view.

THE NOTIFICATION OF INFECTIOUS DISEASES IN DUBLIN.

DR. FLINN, one of the Inspectors of the Local Government Board for Ireland, held an inquiry a couple of months ago in reference to an outbreak of enteric fever which occurred during the autumn in the Castleknock District, which is in the North Dublin Union, outside the City of Dublin boundary. One of the earliest victims of the epidemic was a dairyman, who was a private patient of Dr. Cullen, the medical officer of health for the district. The case had not been notified, and it was generally believed that the milk coming from this particular dairy was responsible for numerous cases of enteric fever in the localities supplied with it. The result of the inquiry was that Dr. Cullen and two minor health officials were called upon to resign by the Local Government Board. The guardians of the North Dublin Union protested against this, and in the end a supplementary inquiry was directed to be held, in order to give the health officers, whose resignation had been called for by the Local Government Board, "an opportunity of giving any further evidence or explanation they might desire to offer with regard to their alleged neglect of duty."

The inquiry took place on Tuesday, January 30th, and was productive of somewhat startling evidence—evidence which, if substantially correct, not only renders the statistics as to infectious diseases practically useless, but shows a regrettable laxity in enforcing the law in regard to notification on the part of the sanitary authorities in Dublin. Dr. Cullen, at the second inquiry in defence of his having failed to notify, is reported to have stated that from inquiries amongst professional men in the city, he was satisfied that it was not the practice to report isolated cases. In support of this statement the evidence of three hospital physicians in Dublin went to show that the rule as to notification of infectious diseases in the city was more honoured in the breach than in the observance, and that it was carried out in the case of the masses rather than of the classes.

The Council of the Dublin Sanitary Association met on Thursday, February 1st, and expressed their views on the subject in the following resolution:

That the Council of the Dublin Sanitary Association are much surprised at the evidence given by certain physicians practising in Dublin at an inquiry into the recent outbreak of enteric fever in the Castleknock Dispensary District held on January 30th, 1900, by Dr. Edgar Flinn, Inspector of the Local Government Board. The Council cannot but think that the statements made as to the neglect of their public duties under the Notification of Infectious Diseases Act by prominent members of the medical profession are much to be regretted, and are particularly unfortunate at a time when public attention is being drawn to the abnormal death-rate in Dublin, and when an inquiry as to its causes is about to be held. In the opinion of the Council the provisions of the Notification Act are of the first importance, and should be carried out without respect of persons in a spirit of loyalty to the public weal. The Council hold that a very serious responsibility devolves on any physician who neglects to notify all cases of notifiable diseases which come under his observation, and they are of opinion that the sanitary authorities should prosecute the offender in every case of the kind which may come within their cognisance.

Sir Charles Cameron in his presidential address to the Dublin Branch, published in this issue of the BRITISH MEDICAL JOURNAL, regrets to be obliged to admit that many physicians not only neglect to notify but are utterly opposed to the principle of notification. Sir Charles Cameron may be reminded that if the legal powers entrusted to him as Medical Superintendent Officer of Health for the city were occasionally brought into effect the laxity might be checked. It is a sorry admission for those who continually break the law to hear that the dispensary physician and others who are known to notify always are placed at a disadvantage in the practice of their profession by the known law-breakers being more readily consulted.

VITAL STATISTICS OF ENGLAND AND WALES, 1899.

THE quarterly return for the last quarter of 1899, issued this week by the Registrar-General, contains the following table:

Annual Death-rates per 1,000 from All Causes, and from several Zymotic Diseases, during the Year 1899.

	All Causes.	Principal Zymotic Diseases.	Small-pox.	Measles	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Deaths under 1 Year per 1,000 Births.
England and Wales	18.3	2.21	0.01	0.31	0.12	0.29	0.30	0.20	0.98	163
33 great towns	20.2	2.81	0.01	0.46	0.13	0.40	0.38	0.22	1.21	181
67 other large towns	18.0	2.45	0.00	0.28	0.12	0.28	0.32	0.23	1.22	178
England and Wales, less the 100 towns*	17.1	1.71	0.00	0.21	0.10	0.21	0.25	0.18	0.76	124

* That is, the rural districts.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,115 births and 5,082 deaths were registered during the week ending Saturday last, February 10th. The annual rate of mortality in these towns, which had declined from 30.9 to 21.2 per 1,000 in the five preceding weeks, rose again to 22.8 last week. The rates in the several towns ranged from 12.6 in Cardiff, 14.4 in West Ham, 15.8 in Swansea, and 16.5 in Nottingham, to 32.3 in Blackburn, 34.2 in Salford, 34.3 in Wolverhampton, and 35.1 in Preston. In the thirty-two provincial towns the mean death-rate was 24.4 per 1,000, and exceeded by 4.0 the rate recorded in London, which was 20.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the death-rate was 1.8 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.2 in Liverpool, 4.1 in Wolverhampton, 5.0 in Salford, and 6.1 in Preston. Measles caused a death-rate of 1.0 in Plymouth and in Leicester, 1.7 in Wolverhampton, 2.6 in Halifax, and 3.9 in Preston; scarlet fever of 1.1 in Sunderland and 1.4 in Oldham; and whooping-cough of 1.6 in Croydon and in Newcastle, 1.8 in Liverpool, and 4.5 in Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 115 deaths from diphtheria in the thirty three towns included 51 in London, 12 in Sheffield, 11 in Leeds, 8 in Leicester, and 5 in Liverpool. Three fatal cases of small-pox were registered last week in Hull, and one in Leeds, but not one in any other of the thirty-three large towns. There were 17 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, February 10th, against 24 and 21 on the two preceding Saturdays; 4 new cases were admitted during the week, against 5 and none in the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had

declined from 3,578 to 2,179 at the end of the twelve preceding weeks, had further fallen to 2,089 on Saturday last; 157 new cases were admitted during the week, against 207, 190, and 174 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 10th, 953 births and 836 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 23.0 to 23.7 per 1,000 in the four preceding weeks, further rose to 27.1 last week, and exceeded by 4.3 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.9 in Leith and 22.6 in Aberdeen, to 31.3 in Dundee and 57.3 in Perth. The zymotic death-rate in these towns averaged 2.0 per 1,000, the highest rates being recorded in Paisley and Perth. The 384 deaths registered in Glasgow included 15 from measles, 3 from scarlet fever, 6 from whooping-cough, 4 from "fever," and 6 from diarrhœa. Two fatal cases of "fever" were recorded in Edinburgh, 2 of whooping cough in Aberdeen, 3 of measles in Paisley, and 4 of whooping-cough in Perth.

NON-RESIDENCE IN PARISH OF DISTRICT MEDICAL OFFICER.

PARISH writes, saying: I am contemplating moving into a different parish, as a more suitable house is available. The medical man who holds the parochial appointment for the parish in which I am going does not reside in it. Am I right in supposing that a man residing in a parish has a legal preference to a man who does not reside in it as far as the parish appointment is concerned?

*** It is not likely that residence in the parish in question would be held to constitute a preferential claim for the medical appointment even were a vacancy to be declared.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

LIABILITY FOR PAYMENT OF MEDICAL FEES.

A CASE of some interest to the medical profession came before Judge Stonor on Tuesday at Marylebone County Court. The plaintiff was Mr. J. Quartley, M.R.C.S., etc., 19, Stanhope Terrace, Gloucester Gate, Bayswater, W., and he claimed £19 5s. 6d from Mr. E Smith, proprietor of the Queen's Arms Hotel, St John's Wood, N.W., the claim being for professional attendance on the defendant's wife and other persons. The main question before the Court was whether the defendant should be held liable except in the case of the attendance on his wife.

Mr. Quartley stated that he was called to attend the defendant's wife, and his fees with respect to this case amounted to £14. In reply to the judge, the plaintiff said that his usual fee for a visit, with medicine, was 5s. Continuing, plaintiff explained that the remaining £5 5s. 6d. was for attendance upon the defendant's manager—at Mr. Smith's own request—also upon the defendant's sister-in-law, his mother-in-law, and this lady's sister. All these persons were staying in defendant's house except the sister-in-law, who resided close by.

The Judge: You did not inquire at the time, I presume, as to whom you should look for your fees?

The Plaintiff: No, nothing was said about the fees.

In cross-examination, plaintiff denied having delivered the accounts to the persons separately. When he was called to attend a person in any house he took it for granted that the gentleman of the house would be responsible for the fees.

The Judge: Was the defendant aware of the fact that you were attending the other persons?

The Plaintiff: Yes.

The Judge: I think that the item for the manager must come out, but the defendant is evidently liable for the fees with respect to the attendance on the other persons.

The defence was that the defendant was only liable for the item relating to attendance on his wife, but it was also suggested that the fees were excessive.

The Judge found that the fees were not excessive, and that the defendant was liable for the whole of the account with the exception of the item relating to the manager.

Judgment for the plaintiff for £17 with costs.

FALSE PRETENCE TO BE A MEDICAL PRACTITIONER.

ON February 14th, at the Central Criminal Court, before the Common Serjeant, Lionel George Peyton Holmes pleaded guilty to an indictment charging him with having committed perjury in an action tried in the City of London Court on December 12th, 1899. Mr. Muir prosecuted and Mr. Overend appeared for the accused. It appeared that Holmes, in giving evidence in the action in the City of London Court, swore that he was a Licentiate of the Society of Apothecaries, and qualified to give medical advice.

Mr. Hempson, solicitor, who was watching the action in question on behalf of the Medical Defence Union, having ascertained that Holmes was not a Licentiate of the Society of Apothecaries, communicated with the Treasury, with the result that proceedings were taken against Holmes, who was committed for trial.

Mr. Overend, on behalf of the accused, stated that he had acted as a dispenser to many medical men and pleaded for a lenient sentence.

The Common Serjeant said he could not imagine a more mischievous class of offence than for a man to go about representing that he was qualified to give medical advice when he was not. He sentenced the prisoner to three months' imprisonment in the second division.

FEE FOR EVIDENCE GIVEN BY ASSISTANT.

ENQUIRER asks to whom the fee belongs, where an assistant gives evidence in a civil court in a case of which he had charge, and in which he signed the death certificate. Is the principal entitled to it, or the assistant?

*** The Court will only pay such fee to the assistant, but it is the duty of the latter to hand it over to the principal. All the profits derived from work done by an assistant in the course of his principal's practice, in the absence of any special agreement to the contrary, belong absolutely to the principal. If the evidence of the assistant is given after he has left his principal's service, he might then legally claim the fee, but even in that case the proper course is to share it with the principal.

HONORARY SECRETARY (Portsmouth Medical Union).—We do not think that a medical man ought to allow a nurse to advertise from his address and give his name in the advertisement. The plea that the medical man is unable to prevent this use of his name appears to be insufficient.

R. W. D.—Our correspondent is raising the whole question of advertising. It may be taken for granted that the person who advertises is publishing information which he would have a perfect right to give verbally, and the objection is to the means taken to make it public. In a family practice information regarding its sale or purchase, partnerships, change of address, etc., may legitimately be sent to the regular patients who make up the practice, but there would be at once an outcry if such circulars went to the patients of other men. But our correspondent is a consultant, and in the course of a year must have the names of a large number of persons in his casebook who have only seen him once or twice, and who will probably never see him again. His patients are therefore an ill-defined class, and necessarily include the patients of other practitioners. Moreover, he is not like other consultants if many of the people who consult him have not in the course of twelve months consulted several other specialists. It is clear that our correspondent does not intend to confine the circular to those who have been quite recently his patients because he anticipates that some of them will have changed their addresses. We must therefore repeat the opinion that to send out the latter part of the circular as suggested would be objectionable; if sent at all it should be very carefully limited to persons who are actually under our correspondent's care and treatment.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE annual meeting of the General Council was held on February 13th at Marlborough House, the President, H.R.H. the Prince of Wales in the chair.

The report stated that the general policy adopted at the inauguration of the undertaking had been continued, and while money had not been hoarded unnecessarily, the total distributed had left a balance on the right side. The receipts for 1899 were £48,536 15s. 4d., as against £39,272 3s. 5d. of the previous year. This result the Council considers highly satisfactory, more especially seeing that in view of the exceptional claims upon the public the Committee decided not to make the usual autumn appeal. The total sum distributed for 1899 amounted to £42,000. Of this sum, £26,250 had been given as annual grants, and the balance as donations. The cost of management and collection had been about 3¾ per cent., as compared with above 6½ per cent. for 1898. The promise that there should be no clashing with the work of either the Sunday or Saturday Funds had been kept. The effect of the work for the year was that in addition to improvements in operating theatres or rooms, nurses' accommodation, sanitary and other requirements, 45 more disused beds will be reopened and maintained; making a total of 287 reopened in the last three years through the help of this Fund. Rather more still remained closed, but in some hospitals the vacant wards were used for pay patients, and thus fulfilled a useful purpose, and in others they were used for nurses, and if they were devoted to their intended purposes fresh accommodation must be provided for nurses In still harder cases the debts of the hospitals must be liquidated before any fresh liabilities were incurred. A petition had been presented to Parliament supporting that of the Central Hospital Council, calling attention to the heavy rating of hospitals, and expressing a desire to see the rating of all recognised London hospitals abolished. The report pointed out that demands must shortly be made on the hospitals not only for their increasing number of patients, but especially this year for soldiers and sailors returning from South Africa in need of good nursing and tender care, and an appeal was therefore made to all interested in the cause to support the Fund in this present year.

The adoption of the report was moved by the President, seconded by the Bishop of London, and carried unanimously.

Mr. Cragg (in the absence of Lord Rothschild) presented the account of receipts and expenditure and the balance-sheet for the year ending December 31st, 1899, which was adopted, and Mr. J. P. Morgan and Mr. W. T. Fry were added to the General Council.

The President expressed his most hearty and sincere thanks to the General Council, the Honorary Treasurer, the Honorary Secretaries, and the Honorary Auditors for the valuable services that they had rendered. He observed that one of the members of the Council, the President of the Royal College of Surgeons, Sir William MacCormac, was now at the seat of war. At his time of life the performance of the arduous duties that this necessitated reflected great credit on him and gave the utmost satisfaction to all who knew him.

Lord Lister proposed a vote of thanks to His Royal Highness, which was seconded by Lord Rowton and briefly acknowledged by the Prince of Wales.

MEDICAL NEWS.

THE Prince of Wales, deputed by the Queen, has promised to lay the foundation stone of the new buildings of the Newcastle Royal Infirmary during the week beginning June 18th.

VACCINATION GRANT.—Mr. Philip Hill, public vaccinator to the Crickhowell District of the Crickhowell Union, has been awarded the Government grant for successful vaccination for the eleventh time in succession.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Sir Philip Smyly, Surgeon to the Queen in Ireland, and Senior Surgeon to the Meath Hospital, Dublin, has been re-elected by the Council of Royal College of Surgeons in Ireland as the representative of the College on the General Medical Council for the ensuing year.

INFLUENZA AT LEGHORN.—Influenza is raging as a veritable pestilence in Leghorn, where the average number of persons suffering from it in the week ending January 27th was estimated at 15,000. The Company of the Misericordia and the Public Help Association have their hands full. In the Civil Hospital it has been found necessary to double the number of beds, and a large *succursale* has provisionally been established at Cotito.

UNIVERSITY OF DORPAT.—The report of the Russian University of Jurjew, better known as Dorpat, for 1899 shows that in that year there were 38 ordinary, and 21 extraordinary professors. The total number of students was 1,265, of whom 547 were students of medicine. During the year degrees and licences were granted to 440 persons, of whom 380 belonged to the medical faculty. The bulk of this number, however, is made up of dispensers, dentists, and midwives. The degree of doctor of medicine was conferred on only 10 candidates, while the title of medical practitioner was granted to 125.

MEDICAL SENATORS IN FRANCE.—At the recent senatorial elections in France twenty one members of the medical profession were successful. The following are the names of the new senators, with the departments which they represent: Drs. Bataille, Puy-de-Dôme; Béraud, Vaucluse; Bontemps, Haute-Saône; Boularan, Tarn; Collinot, Yonne; Contancin, Vienne; Francoz, Haute-Savoie; Guillemaut, Saône et-Loire; Guyot, Rhône; Léon Labbé, Orne; Legludic, Sarthe; Lordereau, Yonne; F. Martin, Saône-et-Loire; Parisot, Vosges; Pédebidou, Hautes-Pyrénées; Petitjean, Nièvre; Pierre, Seine; Quintaa, Basses-Pyrénées; Rolland, Tarn-et-Garonne; Sigallas, Var; and Vagnat, Hautes-Alpes.

THE VACANT POST OF REGISTRAR-GENERAL FOR IRELAND.—In addition to the gentlemen mentioned last week in connection with this appointment, Dr. Langford Symes is also a candidate. He is a Fellow of the Royal College of Physicians of Ireland, Physician to the Orthopædic Hospital, and for some years was Registrar of Births, Deaths, and Marriages while Medical Officer of one of the largest districts in Ireland, when he published an exhaustive report of the statistics of public health for his district (one of the few ever compiled), and an Epitome of the Laws of Public Health for the National Health Society. He is additional Examiner in Medical Jurisprudence and Hygiene for the Royal College of Physicians, and has investigated the mortality of children in Ireland, bringing the cause of infantile mortality before the Royal Academy of Medicine.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer: unmarried. Salary, £100 per annum, with board and apartments. Applications to the Registrar by February 19th.

BIRMINGHAM GENERAL HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Physician. Appointments for six months. No salary, but residence, board, and washing provided in each case. Applications to the House Governor by February 24th.

BIRMINGHAM: MASON UNIVERSITY COLLEGE.—Lecturer on Osteology and Chief Demonstrator of Anatomy.—Applications to Secretary by February 24th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Clinical Assistant. Applications to the Secretary, John Bright Street, Birmingham, by March 3rd.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer; unmarried, and under 30 years of age. Salary, £30 per annum, with board washing, and residence. Applications to the Secretary by February 28th.

BRISTOL EYE HOSPITAL.—House-Surgeon. Salary, £120, without residence. Applications to the Secretary by February 20th.

BURTON-ON-TRENT INFIRMARY.—House-Surgeon. Salary, £150 for the first year, £170 for the second year, with furnished rooms, coals, and gas. Applications to the Secretary by February 21st.

CARDIFF: UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Demonstrator and Assistant Lecturer in Anatomy. Salary £120. Applications to the Secretary by March 10th.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer; unmarried. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary by March 3rd.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by March 6th.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided; no salary. Applications to the Secretary of Medical Committee by March 1st.

DUBLIN: MERCER'S HOSPITAL.—(1) Resident Medical Officer. (2) Vacancy on the Surgical Staff. Applications to the Registrar by February 26th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer; unmarried. Salary, £140 per annum, rising to £160, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Winterton, Ferryhill, by March 6th.

FAREHAM: HANTS COUNTY ASYLUM.—Third Assistant Medical Officer; unmarried, and not exceeding 30 years of age. Salary, £125 per annum, increasing to £150, with furnished apartments, etc. Applications, endorsed "Application for appointment of Medical Officer," to the Committee of Visitors at the Asylum by February 21st.

FARRINGDON GENERAL DISPENSARY.—Resident Medical Officer. Salary, £100 per annum, with apartments and attendance. Applications to the Honorary Secretary, 17, Bartlett's Buildings, Holborn, E.C., by March 10th.

FRENCH HOSPITAL, 172, Shaftesbury Avenue, W.C.—Resident Medical Officer. Must speak French. Salary, £80 per annum, with full board. Applications to the Secretary.

GLASGOW LUNACY DISTRICT BOARD.—Assistant Medical Officer for Woodilee Asylum, to act as Pathologist. Salary, £100 per annum, with board, apartments, etc. Applications to the Clerk by February 26th.

GREAT NORTHERN HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by March 12th.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—House-Surgeon; unmarried. Salary, £75 per annum, with residence, board, and washing. Applications to the Secretary by February 28th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two House-Surgeons to Out-patients. Appointments for six months, but eligible for re-election. Salary, 25 guineas each. Applications on forms provided to be sent to the Secretary by February 27th.

HULME DISPENSARY, Dale Street, Manchester.—House-Surgeon. Salary, £130 per annum, with apartments, etc. Applications to the Honorary Secretary of the Medical Committee by February 24th.

KENT AND CANTERBURY HOSPITAL. Assistant House-Surgeon; unmarried. Salary, £50 per annum, with board and lodging. Applications to the Secretary by February 20th.

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to Matthew A. Adams, F.R.C.S., Honorary Surgeon to the Hospital.

KING'S COLLEGE HOSPITAL.—(1) Senior Medical Registrar and Tutor. (2) Senior Surgical Registrar and Tutor. Applications to the Secretary, King's College, by March 5th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium £10, with board, residence, and washing. Applications to the Secretary by February 26th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by February 22nd.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Resident Surgeon. Salary, £100, with board and residence. Applications to the Secretary, 30, Charing Cross, S.W., by February 20th.

METROPOLITAN HOSPITAL, Kingsland Road, N.—(1) Assistant Physician and Pathologist; must be F. or M.R.C.P.Lond. (2) Surgeon for Diseases of Women. (3) Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by February 20th.

MIDDLESEX HOSPITAL.—Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent by March 1st.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Salary, £40 per annum, with board, attendance, and washing. Appointment for six months, with prospect of re-election as Senior. Salary £60. Application to the Secretary by February 23rd.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—Clinical Assistant at Out-patients' Department, 41, Fitzroy Square, W. Appointment for six months. Honorarium £17 10s. Applications to the Secretary by February 28th.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £150, with board, apartments, and washing. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Appointment for twelve months. Salary, £50, with board, lodging, and washing. Applications to the Secretary.

OXFORD: RADCLIFFE INFIRMARY.—Honorary Assistant Physician. Applications to the Secretary by March 5th.

ST. THOMAS'S HOSPITAL.—Physician. Must be F. or M.R.C.P.Lond. Applications to the Treasurer's Clerk by February 27th.

SALFORD ROYAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. Junior House-Surgeon is a candidate, and if appointed there will be a vacancy for Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary by March 10th.

SEAMEN'S HOSPITAL SOCIETY: BRANCH HOSPITAL, Royal Victoria and Albert Docks, E.—(1) Senior House-Surgeon. Salary, £75 per annum, with board and residence, and additional £25 per annum if certain clinical work is performed satisfactorily. (2) House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary by February 19th.

SHEFFIELD ROYAL INFIRMARY.—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing. Applications to the Medical Staff, care of the Secretary, by February 19th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Appointment for six months. Salary, £2 per mensem, with board, washing, and residence. Applications to the Secretary by February 20th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by March 26th.

TOTTENHAM HOSPITAL.—Honorary Physician to Out-patients. Applications to the Chairman of the Joint Committee by February 19th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.—Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by March 3rd.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and attendance. Applications to the Secretary.

WESTERN GENERAL DISPENSARY, Marylebone Road.—House-Surgeon; unmarried. Salary, £75 per annum, with board and residence, and 10s. a month for washing. Applications to the Honorary Secretary.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, N.W.—Assistant Surgeon. Applications to the Secretary.

WINDSOR ROYAL INFIRMARY.—House-Surgeon; unmarried. Salary, commencing at £100 per annum, with board and attendance. Applications to the Secretary, 13, High Street, Windsor, by February 21st.

MEDICAL APPOINTMENTS.

AUNGIER, Mark, M.B., Ch.B.Vict., appointed Senior House-Surgeon to the Bootle Hospital, Liverpool.

ARBUCKLE, John H., M.D.Glasg., D.P.H.Camb., appointed Medical Officer of Health for Kilmarnock, *vice* D. Lawrie, M.B., resigned.

BAXTER, Stephen E., M.R.C.S., L.R.C.P., appointed Medical Officer and Public Vaccinator for the Wollaston District of the Wellingborough Union, *vice* J. W. Orr, M.R.C.S., L.R.C.P., deceased.

BERRY, H. Poole, M.B.Lond., M.R.C.S., reappointed Medical Officer of Health for the Borough of Grantham.

CHATELIER, Eugene J. A., M.B., C.M.Edin., appointed Medical Superintendent of the City Hospital, Birmingham, *vice* C. K. Millard, M.D., D.Sc., resigned.

HARRIS, S. C., L.F.P.P.Glas. L.M., L.S.A., appointed Medical Officer of the St. Mary's District of the Ely Union, *vice* F. M. Beckett, M.R.C.S.Eng., resigned.

HUTCHINSON, George Arnold, M.R.C.S., L.R.C.P., appointed Assistant Medical Officer to the Glamorganshire County Asylum, Bridgend.

KIDDELL, R., M.B., C.M.Edin., appointed Medical Officer for the Workhouse and the Sandbach District of the Congleton Union, *vice* C. Latham, M.R.C.S.Eng., resigned.

ROBINSON, Arthur Henry, M.D.Durh., M.R.C.S., D.P.H.Camb., appointed Medical Superintendent of the Islington Infirmary, Highgate Hill, N.

STAUNTON-CAHILL, Chas. J., L.R.C.P., L.R.C.S.I., appointed Junior House-Surgeon to the Bootle Hospital, Liverpool.

WEBBER, Wm. W., L.R.C.P.Edin., M.R.C.S.Eng., reappointed Medical Officer of Health to the Crewkerne Urban District Council.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Keetley: Congenital Dislocations.

Royal College of Surgeons of England, 4 P.M.—Mr. B. G. A. Moynihan: The Anatomy and Pathology of some Rarer Forms of Hernia. Arris and Gale Lecture I.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. M. Morris: Consultation. (Skin.)

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Mr. Waggett: Middle-Ear Suppuration and its Consequences.

TUESDAY.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Professor Halliburton, F.R.S., will open a discussion on the Forms and Significance of the Proteids met with in the Urine. Papers on this subject will be read by Dr. Bradshaw of Liverpool, Mr. Hopkins of Cambridge, and Dr. Hutchison of London. The following gentlemen and others are expected to take part in the debate: Drs. Parry, Vaughan Harley, Acland, Lee Dickinson, Arthur Luff, and Parkes Weber.

Chelsea Clinical Society, Holy Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—Cases:—Dr. Wm. Ewart: (1) A case of Pernicious Anæmia, with remarks on the treatment by mercury and iron; (2) a case of Vertical Displacement of the Liver and Stomach, with remarks. Paper:—Dr. Vincent Dickinson: Gynæcological Therapeutics.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. T. Williams: Consultation. (Medical.)

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Sir W. Gowers: Clinical Lecture.

WEDNESDAY.

Royal College of Surgeons of England, 4 P.M.—Mr. B. G. A. Moynihan: The Anatomy and Pathology of some Rarer Forms of Hernia. Arris and Gale Lecture II.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Royal Meteorological Society, 25, Great George Street, Westminster, 7.30 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Dr. Patrick Manson: Clinical Lecture.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.) 6 P.M.—Mr. James Cantlie: Class. (Applied Anatomy and Physical Diagnosis.) Dem V.

Hospital for Diseases of the Nervous System, 73 Welbeck Street, W., 5 P.M.—Clinical Demonstration Dr. Fletcher Beach: Cases of General Paralysis of the Insane and Allied Disorders.

West London Post-Graduate Course, West London Hospital, Hammersmith, W., 5 P.M.—Dr. Abraham: Treatment of some Skin Affections.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Kellock: Rickets in its Surgical Aspect.

Charing Cross Hospital Post-Graduate Course, 4 P.M.—Dr. Willcocks: Medical Cases.

FRIDAY.

Clinical Society of London, 8.30 P.M.—The following cases will be shown:—Dr. StClair Thomson: Primary Tuberculosis of the Nasal Septum (shown at the Society in October, 1897). Mr. Jackson Clarke: A case of Lateral Curvature of the Spine in an Infant. Mr. Battle: (1) Patient after removal of portion of Skull for Malignant Disease; (2) Patient after Open Section of Knee-joint for Irreducible Traumatic Dislocation. Mr. Kellock: A case of Achondroplasia. Dr. Charles W. Chapman: Two cases (father and son) of Congenital Deformity of the Hands, with absence of Radius in the child. Other cases will be exhibited. Patients will be in attendance at 8 P.M.

Royal College of Surgeons of England, 4 P.M.—Mr. B. G. A. Moynihan: The Anatomy and Pathology of some Rarer Forms of Hernia. Arris and Gale Lecture III.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. StClair Thomson: Consultation. (Eye, Ear, Nose, and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FULLER.—On February 9th, at 95, Tollington Park, N., the wife of John Reginald Fuller, M.B., B.S., etc., of a daughter.

JOHNSTON.—At 7, Wellington Place, Leith, N.B., on the 11th inst., the wife of George Minto Johnston, M.D., F.R.C.P.E., of a daughter.

MARRIAGE.

GIBB—ISON.—On February 1st, at St. Helen's Church, Ashby-de-la-Zouch, by the Rev. Canon Denton, M.A., Vicar and Rural Dean, John Rees Gabe, M.D., M.R.C.S.Eng., of 16, Mecklenburgh Square, London, to Grace Winifred, second surviving daughter of Edward Ison, Esq., of Westwood, Ashby-de-la-Zouch, Leicestershire.

DEATH.

SMITH.—On the 11th inst., at his residence, Malvern Lodge, Southport, William John Smith, L.R.C.P., L.R.C.S., L.S.A., in his 69th year. No cards.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30: o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Tu., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Tu., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Tu., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 8; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th. 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Attiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

QUERIES.

M. would be glad to know of any book or books by which he could obtain a general summary of the advance of science during this century.

OPHTHALMOSCOPE FOR A BEGINNER.

YOUNG PRACTITIONER asks to be recommended an ophthalmoscope to begin with.

*** Morton's ophthalmoscope, made by Curry and Paxton, of 195, Great Portland Street, may be recommended as a suitable instrument.

PHYSICAL EXAMINATION FOR THE PUBLIC SERVICES.

EASY asks whether a candidate otherwise in good health would be accepted for the Indian Medical Service if he had simple chronic epididymitis (both sides), the left of over three years' standing and the right a year's, without any atrophy of the testes or loss of virility.

*** The question cannot be answered definitely. The decision would depend on the degree and probable causation.

BROMIDROSIS.

M.D. asks for advice in the following case, as no treatment he has tried has been successful. A housemaid, aged 20, a brunette, in perfect health, gives off from her whole body as well as her feet a most sickening smell when she gets warm doing any active work. This smell lingers after her in a room for an hour and makes it most unpleasant for anyone having to remain in it. She takes frequent baths, but they have no effect. Is there any internal remedy or external application that will effect a complete cure in this case?

ESTIMATION OF VALUE OF PRACTICE.

H. asks what would be the cash value of a half share in an old and respectable general medical practice in the north-east of London. Whether the valuation would be on the gross receipts or the net profits?

*** The valuation of a medical practice is nearly always reckoned on the gross annual receipts, an average of several years being taken. On the data furnished by our correspondent it would be impossible to estimate with any accuracy the value of this particular practice, but it may be said that the average value of such a class of practice varies from one to one and a-half year's purchase.

ANSWERS.

C. C. P. will find that his first and second questions are answered in the reply to A. D. H. L., published in the BRITISH MEDICAL JOURNAL of February 3rd, p. 300. As to his third question, it would be necessary for him, in order to render himself efficient, to attend the practice of a dental hospital for a period which would depend upon his own manipulative dexterity, and also to gain acquaintance with the mechanical aspect of the work, which may be done either at a dental hospital or in a dentist's workroom. The dental hospitals offer facilities to qualified medical men desirous of taking out limited courses of this kind. Attendance upon a course of lectures on dental surgery would also be desirable.

NOTES, LETTERS, Etc.

UTERINE FIBROIDS.

MR. G. STANMORE BISHOP (316, Oxford Road, Manchester) asks us to state that, in response to a letter addressed to the medical superintendents of workhouse infirmaries in London, he has received a list of 4 cases of uterine fibroids without any name or address attached. He asks that the gentleman who sent the cases should communicate with him.

THE OPEN-AIR TREATMENT.

DR. P. W. MARRIOTT (Boscombe, late of Mentone) writes: The term "open-air treatment" appears to me to be misunderstood, and to be somewhat misleading to the general public, who seem to imagine that all the consumptive patient has to do is to expose himself to air indiscriminately, regardless of the weather, temperature, and climate; whereas in the method carried out at Nordrach the principal factors are: (1) Cramming the patient with a certain amount of food daily, with or without appetite on his part; (2) a judicious exposure to air sufficient for the process of oxidation; (3) regulated exercise after the patient has gained in strength and weight.

Air alone would be useless, and exercise without food would do more harm than good. At Mentone access to air is more readily available by day and night than in England, but at the same time I remarked that those who fed well fared the best, and that those whose digestive function had been impaired by drink were hopeless cases for treatment by any other method.

I may say, in short, that the natural and scientific treatment of consumption resolves itself into three agents, that is, food, air, and exercise, rigidly but judiciously enforced. Therefore, granting the above to be true and effective, all the former much vaunted physic specifics for consumption may be "thrown to the dogs."

SYMPATHY AND ANTIPATHY FOR CATS.

MR. BALMANNO SQUIRE (Weymouth Street, W.) writes: The fondness for cats evinced by the late Dr. A. C. Stark, as described by Dr. Smillie, of Montreal, in the BRITISH MEDICAL JOURNAL of February 10th, and referred to by you in your article of January 13th, is not so rare, even in men, as the writer of your article supposes. The great Liston, who in the middle of this century was the leading surgeon of London, was passionately attached to his cat, and used to introduce it to his guests at the dinner parties he gave to his medical friends. On these occasions the cat would gravely walk round on the dinner table during dessert to be admired by the guests in detail; and it happened once that the tip of the cat's tail got into the wineglass of Dr. Anthony Todd Thomson (Liston's colleague at University College Hospital), who promptly struck the animal. Liston was so angered by this that he started from his seat, and rebuked Thomson in forcible language for his "brutal" conduct. The late Mr. Bellamy, of Charing Cross Hospital (one of the examiners at the Royal College of Surgeons), was fervently attached to cats in general and to his own in particular. Cardinal Richelieu's devotion to his cats is a matter of history; so also is that of the poet Tasso, who has written a sonnet to his cat, in which he begs her to grant him the light of her eyes to write by, as he was too poor to afford candles. The record of men distinguished in the literary and other learned professions who have evinced a special admiration of and attachment to cats is a long one, and to come down to the rank and file I "admit the soft impeachment" for myself and several of my male friends. To those who are "without the pale" this partiality seems a strange eccentricity, but all whom accident has induced to study the ways and win the confidence of a cat have gained for themselves one of the most charming, most fascinating, and most devoted of friends. To all these Dr. Stark's last words are perfectly intelligible. The methods of this sort of courtship are the same as those which are so potent with ourselves, gentleness of manner and of touch, the observance of what we find to be pleasing, the avoidance of anything like even momentary forcible restraint, and abstention from teasing even in sport. The giving of food in person, so important an incident of amity with ourselves, is not at all necessary to winning the affection of a cat.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Messrs. Arnold and Sons, London; Mr. H. G. L. Allford, Hastings; Dr. W. E. Alderson, Newcastle-upon-Tyne; A. G. P.; Mr. T. A. Alexander, Watton; Association of Registered Medical Women, Secretary of, London; Messrs. C. Ash and Sons, London. B A. C. Barron, M.B., Dailly, N.B.; C. S. Brebner, M.B., Durham; D. Biddle, M.B., Kingston-on-Thames; Dr. T. T. Brunyate, Rochester; Miss L. Browning, London; Mr. H. E. Belcher, West Bridgford; Mr. W. L'H. Blenkarne, Worthing. C O. P. Crouch, M.B., Weston-super-Mare; D. R. G. Corrigan, M.B., High Barnet; Mr. J. Collinson, London; Dr. J. Colville, Belfast; R. Campbell, M.B., Belfast; Messrs. Crossley and Co., London; Dr. A. F. Cooper, London; Dr. C. H. Cattle, Nottingham. D Dr. A. Duke, Cheltenham. E E. A. W. English, M.B., Leicester; Dr. G. Elam, London. F Dr. W. F. Farquharson, Carlisle. G Messrs. Gilbert, Kimpton, and Co., London; J. E. Gemmell, M.B., Liverpool; Dr. A. E. Giles, London; Glasgow Obstetrical and Gynæcological Society, Secretary of, Glasgow; Mr. T. W. H. Garstang, Knutsford. H Mr. J. B. Hickman, Brislington; Messrs Hull, Blythe, and Co., London; Mr. P. E. Hill, Crickhowell. I Dr. W. W. Ireland, Polton; Messrs. Innes, Smith, and Co., Birmingham. J Mr. W. H. Jalland, York. K Dr. R. Kennedy, Glasgow; Khaki Cycle Co., Manager of, London; Mr. F. Kinton, London. L Mr. C. F. Little, Bala; Dr. A. E. Larking, Folkestone; Mr. C. S. Leadbetter, Manchester. M Messrs. J. Martin and Co., London; Dr. J. L. Maxwell, London; Mr. P. O'D. Moloney, Beaufort West, S.A.; Dr. C. M. Moullin, London; Dr. E. J. McWeeney Dublin; Mr. J. M. Menzies, London; Municeps; Messrs. J. Martin and Co., Leith. N Dr. D. Newman, Glasgow; Mr. J. H. Nicholson, London. O Dr. P. O'Connell, Stillorgan; Mr. W. Odell, Torquay; Obstetrical Society of London, Secretary of, London. P Colonel C. F. Pollock, R.A.M.C., Ruthwell; Mr. C. C. Preston, Hove; Dr. J. E. Platt, Manchester. R Mr. G. A. Richardson, London; Dr. Register, Charlotte, U.S.A.; Dr. J. J. Ridge, Enfield; Mr. E. Ringrose, Newark-on-Trent. S Dr. J. E. Squire, London; Society for Training Teachers of the Deaf, Secretary of, London; A. J. B. Squire, M.B., London; Mr. C. R. Salisbury, London; Mr. W. E. Sargant, London; W. W. Sinclair, M.B., Ipswich; Dr. G. E. Scholefield, Aughton; Dr. C. J. Symonds, London. T T A W. W Dr. R. T. Williamson, Manchester; Dr. F. J. Waldo, London; F. C. Wallis, M.B., London; Dr. T. J. Wood, Bradford; G. B. F. White, M.B., London; Mr. O. Williams, London; Mr. A. Watts, London; West London Medico-Chirurgical Society, Secretary of, London; Dr. A. McC. Weir, East Sheen; Dr. T. A. Wood, Douglas, Isle of Man. Y Dr. R. R. Young, Leicester; Dr. M. Young, Crewe.

BOOKS, ETC., RECEIVED.

A Handbook of Nursing. By M. N. Oxford. London: Methuen and Co. 1900. 3s. 6d.

Die Pest. Von Dr. H. F. Müller und Dr. R. Pöch. Wien: A. Hölder. 1900. M. 8.40.

The Municipal Year Book of the United Kingdom for 1900. Edited by Robert Donald. London: "The Municipal Journal" Office. 2s. 6d.

Consumption and Chronic Diseases. By E. Densmore, M.D. London: Swan Sonnenschein and Co.

Transactions of the Royal Academy of Medicine in Ireland. Vol. xvii. Edited by J. B. Story, M.B., F.R.C.S. Dublin: Fannin and Co. 1899.

A Book of Whales. By F. E. Beddard, M.A., F.R.S. London: John Murray. 1900. 6s.

The Pasteurisation and Sterilisation of Milk. By A. E. Bell, F.I.C., F.C.S. London: Rebman Limited. 1899. 1s. 6d.

Mitteilungen aus der medizinischen Klinik zu Upsala. Von S. E. Henschen. Zweiter Band. Jena: Gustav Fischer. 1899. M.8.

The Early Days of the Royal College of Physicians, Edinburgh. By R. P. Ritchie, M.D., F.R.C.P.E., F.R.S.E. Edinburgh: G. P. Johnston. 1899.

A Textbook of Physiological Chemistry. By O. Hammarsten. Translated from the Fourth German Edition by J. A. Mandel. Third Edition. London: Chapman and Hall. 1900. 17s.

*** In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restante* addressed either in initials or numbers.

AN ADDRESS
ON THE
ORGANISATION OF ASEPTIC OPERATIONS AND SOME OF THE CAUSES OF FAILURE.

Delivered before the Leamington Medical Society

By C. B. LOCKWOOD, F.R.C.S.,
Assistant-Surgeon and Lecturer on Surgical and Applied Anatomy at St. Bartholomew's Hospital.

When you did me the honour to invite me to deliver an address to this Society I had reason to think that it would meet with your approval if I took aseptic surgery for my subject. I propose, therefore, to speak about the organisation of an aseptic operation, and in doing so to lay stress upon some of the causes of failure. I am sure you will pardon me if I repeat what I have said elsewhere; for, as you are aware, this is not the first time I have dealt with this topic.

It is hardly necessary to begin with a defence for the manner in which the term aseptic will be used. In what follows it will be applied to the end, not to the means.

There can, of course, be only one kind of asepsis—that in which bacteria are absent; the means by which this end can be attained are of almost infinite variety. To endeavour to limit the use of the term aseptic to a method which relies entirely upon heat is doomed to end in inconsistency. Chemicals have to be used for the sterilisation of the hands of the surgeon and of the skin of the patient, and thus the domain of so-called "antiseptic" surgery is invaded. As soon as we admit that the end of aseptic surgery is the absence of bacteria we have at once a simple test of success or failure, and a test which is very easy to apply. I have from time to time during the past ten years published reports in the British Medical Journal,[1] in which I have detailed the success or failure of the methods which I have been in the habit of using, and I now propose to give what is practically the substance of a further report.

The Standard of Excellence.

Since the earliest attempt the standard of excellence has become higher. For some time it has been my endeavour to attain sterility of the skin of the patient and everything brought in contact with the wound, and lastly, of the wound itself. No one who has not made this endeavour knows how difficult the task is to accomplish or what careful organisation is required. Consider the matter in detail. What care has to be exercised by the house-surgeon or dresser who disinfects the skin of the patient; in the sterilisation of the instruments and utensils; in the sterilisation of the sutures and ligatures, and especially in the sterilisation of sponges and towels; in the performance of the operation to prevent contamination; and lastly, in the dressing and closure of the wound to prevent infection from without. This all implies the greatest care, not only on the part of the surgeon, but of all concerned; in other words, the organisation of the operation has to be perfection.

It is obvious that with so many possibilities of error asepsis must be difficult to attain. I myself have been able to record but few cases which have come up to the standard of excellence which I have adopted. With the help of Mr. Pollard, the House-Surgeon, I succeeded in the operation for the removal of a goitre and in a case of appendectomy. Also, helped by Mr. Borrow, the present House-Surgeon, I have succeeded in a case of radical cure of hernia and in another appendectomy. In this the skin of the patient, the skin of the hands of the surgeon and of his assistant, the silk, the fishing gut, sponges and towels were all sterile, and, finally, nothing grew in culture tubes inoculated from the wound on the eighth to the tenth day. I believe that other surgeons are working on similar lines, and it would be interesting to learn their results.[2]

To my mind one of the leading characteristics of aseptic surgery is its extreme simplicity. I do not know of any detail which cannot be carried out in a private house as well as in the most elaborate and expensive operation theatre. In truth I have sometimes thought the elaborate equipments of some theatres rather overwhelming. The use of foot taps which often get out of order seems rather superfluous if the surgeon does not know when his hands are sterile, never having tested the skin. Nor can I see the advantage of marble slabs if the sponges have not been submitted to investigation. Recently I had a striking instance of the value of the simple test which I am advocating. At the end of a hysterectomy it was suggested that I should put some sterilised water in the abdomen with a view of combating the distressing thirst which so frequently follows an operation which is attended with some loss of blood. Before acceding to this request I inquired whether the so-called sterilised water had been tested, and was informed that it had been tested twice, and in both cases contained bacteria, whereupon I declined to use it. Perhaps I ought to say that I may have been rendered suspicious by some serious cases of sepsis which had followed operations performed in the same place.

[After mentioning the details of the organisation of an operation the preparation of the patient was discussed.]

Disinfection of the Patient's Skin.

Everyone is well aware of the extreme importance of the disinfection of the skin within the field of operation. It used to be the custom to begin the preparation many hours before the operation and usually over night. After shaving and thoroughly washing with soap and water, the fat is removed from the skin with turpentine, a chemical disinfectant applied, and then a dressing adjusted with the view of preventing further infection, and of continuing the process of disinfection. A comfortable night is not likely to be passed by a person wrapped up in a moist and unaccustomed dressing. Happily our later methods of disinfecting the skin, if not perfect, are so efficient that the old method can be dispensed with, much to the comfort of the patient. Therefore, I am now in the habit of having the preparation and disinfection of the skin performed an hour or so before the operation, and in the case of a lady or of a child it is deferred until they are under the anæsthetic. Obviously the cleansing of the skin of the cleanly gentle folk is not such a difficult problem as that of the hospital patient.

The disinfection of the skin is performed as follows:

1. It is, if necessary, shaved.
2. It is thoroughly washed with soap and water to remove all dirt, superfluous epithelium, and sebaceous matter.
3. As much as possible of the remaining fat is extracted with ether, or turpentine, or benzine; of these turpentine is probably the most convenient and perhaps the best; it can be obtained in almost every house, and besides being an excellent grease extractor has some powers of disinfection.
4. After the thorough extraction of the grease the skin is saturated for not less than two minutes with a solution of biniodide of mercury in methylated spirit (1 in 500).[3]

The disinfection of the skin by this or any other process requires practice and minute attention to details. Some house-surgeons are very much more successful than others, and a good deal depends upon the region. The skin of the limbs is easy to disinfect, especially that in front of the knee, a point of some importance when we consider how often arthrotomy is performed. The skin of the front of the abdomen is likewise easy, also the skin of the breast. The skin of the groin, scrotum, and scalp are difficult, especially the last. During the last two months we have tested the skin of the patient in some cases at the beginning of the operation, and in some at the end. In twenty-four tests made at the beginning of the operation it was septic five times, and in twelve tested at the end of the operation it was septic twice. It is natural to inquire whether these results have been obtained at the cost of much dermatitis. I perhaps am not an unbiassed observer, and the question is not quite so easy to answer as might be thought. I should say myself that dermatitis was rarely caused by the disinfection of the skin by this method, provided that it was applied without unnecessary violence. When dermatitis has occurred, it has most frequently been caused by iodoform, by carbolic acid, or by one of the mercuric dressings. The idiosyncrasies of patients are very remarkable. Not long since a little finely powdered iodoform dusted upon the patient's face caused a violent dermatitis with large bullæ. She said that iodoform had had the same effect before. I have seen dilute carbolic acid lotion act in the same way.

Disinfection of the Hands.

There cannot be a more important question than the disinfection of the "principal instrument" of the surgeon, and perhaps I ought to add of the obstetrician and gynæcologist. When we make allowances for the infirmities of human nature, it will be readily conceded that the fewer the hands engaged in an operation the fewer the chances of error. The surgeon, however, must in most cases have an assistant, and the nurses must touch some of the appliances. It is quite clear that the method ought to be simple, and not necessitate elaborate appliances, several sorts of chemicals, or complicated methods. Therefore, after the nails have been cut close and all outside dirt and grease removed, we use the solution of biniodide of mercury and methylated spirit which was used for the disinfection of the patient's skin. Not less than half a pint of this fluid should be placed in a capacious sterilised bowl. It is to be remembered that for many abdominal operations it is necessary to disinfect not only the hands but also the wrists and forearms.

Our last tests of the results of this method are as follows: The skin of my own hands tested 24 times at the beginning of the operation was septic once; it was tested 12 times at the end of the operation and was septic thrice. The skin of the house-surgeons was tested 24 times at the beginning of the operation and was septic once, and 13 times at the end of the operation and was septic once: the skin of the nurse was aseptic on 6 occasions. I think I may claim that these results are good. Improvement has been steady, since everyone has learned to realise the difficulty of the task. It is interesting to observe that the hands which were used the most in operative manipulations were oftenest septic at the end of the operation. I think this fact will have to be taken into consideration, and that it may lead to some alteration in our methods.

As to the effects which this method of preparation has upon the skin of the hands, here again idiosyncrasy comes in. My own hands at once become rough and inflamed when brought in contact with strong solutions of carbolic acid or of sublimate. During the years that I have used spirit and biniodide of mercury I have hardly suffered at all from these inconveniences. Should the skin become rough during inclement weather a mixture of glycerine and eau de cologne applied at night brings about a speedy cure. The house-surgeons and sisters likewise favour this method of disinfection, and it is not without significance to remark that since I introduced the use of the solution of biniodide of mercury and methylated spirit at the Great Northern and St. Bartholomew's Hospitals, it has been adopted by nearly all my surgical colleagues.

Sterilisation of Instruments and Materials.

I now return to the remaining portion of the organisation of an aseptic operation. As far as possible each step should be carried out under the direct supervision of the surgeon. Before proceeding to an operation the necessary instruments are chosen and sterilised by boiling them for fifteen to twenty minutes in a solution of ordinary washing soda and water (1 drachm to the pint). They are taken out of this solution, and wrapped in antiseptic gauze, and securely folded in an outside dressing. After the patient has been anæsthetised, it is a simple matter to place the instruments into a basin of 1 in 60 carbolic lotion ready for use.

I have not time to discuss the various materials which may be used for sutures and ligatures. For all ordinary cases it is necessary to provide fishing gut, and one or two sizes of twisted silk. For the neatest and most accurate closure of skin incisions the finest trout gut is best, and when it is fine the sutures may be placed very close together, with a correspondingly neat and accurate closure of the wound. A very accurately-closed wound heals with extreme rapidity. In a few hours this may have gone far enough to prevent deep infection should the wound by any mischance become exposed to the air. It is hardly necessary to remark how much the patient appreciates a scar which is almost invisible. For the ligature of small vessels such as are met with in amputation of the breast, No. 00 twisted silk is quite strong enough, and I have never seen it reappear. Moreover, it is expeditious. Catgut, in the use of which I have had considerable experience, is apt to slip or break.

Of late years, where suppuration has occurred, it has almost invariably been due to a collection of blood in the depths of the wound. The blood has, I think, escaped from the small arteries of cut muscles, and these are difficult to secure even with silk. For abdominal wounds thicker fishing gut, and for pedicles thicker silk must be provided. The sterilisation of these materials is very simple: they are boiled for twenty minutes in water, and then placed in a jar of 1 in 20 carbolic acid for conveyance to the operation. Some time ago I was greatly troubled by the brittleness of the silk provided for my hospital operations, and I discovered that the house-surgeons were in the habit of boiling it along with the instruments in the solution of washing soda and water. The effect of the soda is to remove an element from the silk upon which its strength depends. The remedy for brittle silk is obvious. The results of this method of preparation are perfect. Our tests show that the silk was sterile 18 times before and 10 times after use; the fishing gut 15 times before and 10 times after use.

Buried Silk Sutures.

The success of many operations on the abdominal wall depends upon the precision with which the surgeon is able to introduce buried sutures. This remark applies especially to operations for the radical cure of hernia, to the closure of wounds in the abdominal parietes, to nephrorrhaphy, and to the closure of gaps left by the removal of tumours. In my last series of 50 cases of radical cure of non-strangulated inguinal hernia, there were 2 cases of suppuration. Doubtless the day will come when this will be improved upon, although I regret to say that the present series does not promise to be quite so good. Here I propose to refer to one of the difficulties I have met with in the practice of aseptic surgery. It is clear that if the silk extrudes it is not the fault of the silk. Now, in operations for the removal of the vermiform appendix it is an obvious advantage to close the abdominal wound with layer upon layer of buried silk sutures. In this way we may hope to allow the patient to resume his occupation at an earlier date, and at the same time be free from the risk of ventral hernia. With these objects in view, I have on ten occasions sutured the small abdominal wound after the removal of the appendix with four layers of sutures. First, a layer in the peritoneum; secondly, a layer in the internal oblique and transversalis; thirdly, a layer in the aponeurosis of the external oblique; and fourthly, a row in the skin. Now, although cases were chosen in which no pus was found, nevertheless, out of the 10 cases treated in this manner 3 suppurated with extrusion of some, if not all, of the sutures. A percentage of nearly 30 per cent. was, to say the least, somewhat disconcerting. The proportion of suppuration in 33 similar cases closed with a single row of fishing gut sutures was 4, slightly over 12 per cent. But even this proportion is high when compared with the radical cure of hernia in which nearly as much silk is buried. I soon came to the conclusion that some of these failures were attributable to the nature of the operation, and that as a matter of fact the wounds became infected during the removal of the appendix. At that moment the interior of the appendix is opened, and in spite of the most careful precautions septic contents escape. Furthermore, I have now histological evidence that even in non-suppurating cases the inflamed tissues around the diseased appendix are often infested with bacteria. It is not to be wondered therefore that after appendix operations buried silk sutures are apt to be extruded. In support of the truth of this contention, I would add that whilst these operations were being performed large quantities of silk were buried in wounds in the abdominal wall in operations for the cure of ventral hernia (6 cases), removal of tumours of the abdominal wall (4 cases), nephrorrhaphy (5 cases), and that none of these were followed by suppuration or by the reappearance of a suture. With regard to the 4 cases of suppuration in which single rows of fishing-gut sutures were used one occurred in a case of tubercle of the appendix and some time after the wound had healed, another was due to hæmorrhage from the abdominal wall, another in a gentleman who was suffering from dysentery and malaria, and the last in a man with formidable adhesions, in whom a small laceration of the intestines occurred. I have not abandoned hope that we shall learn how to bury silk in the abdominal wall in appendix operations.

Fine silk has also been successfully buried for the obliteration of cavities after the removal of innocent tumours of the thyroid body and of the breast. This is the most effectual way of stopping hæmorrhage and shortens the time necessary for repair.

Catgut Sutures.

It is clear that it is unsafe to use silk to secure septic pedicles, such, for instance, as the meso-appendix in gangrenous appendicitis, or in perforation of the appendix with acute pertionitis. Under these circumstances bacteria abound in the appendix and its mesentery, and likewise, I might add, in the omentum should it happen to be involved. Therefore it is desirable to have at hand sterilised catgut. Inasmuch as this substance is made from the intestines of sheep, it abounds in bacteria, and as sheep sometimes die of anthrax its dangers can easily be imagined.

Many of the methods for sterilising catgut are complicated, and require special apparatus. The following is simple and reliable. The raw catgut is bought from the manufacturer or surgical instrument maker. The first step, as Reverdin pointed out, is to extract the grease which has been rubbed upon it to give it a smooth surface; this is the only troublesome part of the process. The catgut is wound upon a flat board and thoroughly scrubbed with soap and water, next it is placed in a quantity of ether for not less than twenty-four hours, indeed the soaking in ether should be continued until globules of oil cease to appear, the catgut is transferred from the ether to a watery solution of biniodide of mercury 1 in 250, in which it can be preserved indefinitely, but is not used until it has remained in the solution for at least 72 hours. Catgut treated in this way is quite strong after a lapse of many months. Different samples of it were sterile on the last five occasions on which we tested it; the fewness of the tests is due to the fact that catgut is so seldom used. I may add that catgut prepared in this way is most useful in cases of circumcision, and for suturing the wounds of children, who are so apt to be terrified at the extraction of sutures of silk or fishing gut.

Operations on the Genito-Urinary Tract.

Some other of the septic conditions which are present when the operation is performed seem to me not always adequately recognised. I know of no part of the body in which the results of operations are more influenced by pre-existent sepsis than those which are performed upon the genito-urinary tract.

Last year I had two striking instances. I had under my care at the same time two cases of urethrotomy which were almost identical in all respects but one. Both were men of about the same age. Both had narrow strictures in the penile urethra and impassable strictures in the perineum. In both the same operation was performed but with very different results. I divided the anterior strictures by internal urethrotomy and the posterior after the admirable method of Wheelhouse. In the first case the urine was septic and contained a quantity of pus. The operation was followed by the usual signs of sepsis, the temperature ran up, the pulse quickened, the patient became exceedingly ill, and the large soft catheter which had been left in the bladder had to be removed on the third day because the internal urethrotomy wound was septic. After having been very ill the patient ultimately made a good recovery. In the second case an instrument had never been passed, the urine was clear, and was retained all night. The anterior stricture was divided from within, and the perineal stricture from without, and a full-size soft catheter left in the bladder. The patient, who had had malaria, had a slight attack after the operation. The bladder was thoroughly washed out twice a day with boracic lotion. The urine remained clear and acid throughout. The catheter was removed on the ninth day perfectly clean. A coudé catheter was inserted for a few days longer. It is doubtful whether any urine ever escaped from the perineal wound, which was healed within three weeks. I cannot help attributing this remarkable result to the absence of sepsis.

Last year also 2 cases of cystotomy for papillomata afforded a similar contrast. A man whose urine was septic was seen with the cystoscope to have a papilloma near the neck of the bladder. This was exposed by suprapubic incision. Owing to hæmorrhage a clamp had to be applied to its pedicle. Immediately the ammoniacal urine began to deposit phosphates, and it was only with the greatest difficulty, and after the abundant use of acid lotions, that this was got rid of and the closure of the wound ultimately secured. The second case was that of a woman whose urine was clear and whose bladder was healthy in spite of several small papillomata which could be seen with the cystoscope around its neck. Suprapubic cystotomy was performed and the papillomata destroyed with scissors and cautery. The abdominal incision and the opening into the bladder were closed with a single row of fishing-gut sutures. The urine never escaped from this wound, which was soundly healed within three weeks, although on one occasion shortly after the operation, some pus and perhaps sloughs escaped with the urine. The decision to close the bladder in this last case was entirely based upon the absence of sepsis. In the first it would have been unwise to close the wound because of the presence of sepsis, even if the clamp had not been applied.

Fishing-Gut.

Fishing-gut is such excellent material for skin sutures and abdominal incisions that it is used by most surgeons. It is easily sterilised with heat and is boiled along with the silk. Some time ago we had to note an occasional failure, but the last 15 specimens tested before the operation were sterile, and likewise 10 tested after the operation. The thicker sizes ought to be boiled for at least 20 minutes. Perhaps I may refer here to one of the difficulties of aseptic surgery. With the finest kind of fishing-gut skin incisions can be closed with such accuracy as to be almost invisible. Last year I removed an innocent tumour from the thyroid body of a woman. It was globular and had a diameter of about 2½ inches, and required an incision of corresponding length. The cavity left by its removal was obliterated with buried silk sutures and the skin incision brought accurately together with the finest fishing gut. At the end of three weeks I remember asking my class if they could discover what had been done, for hardly any trace of the operation could be discovered. Alas! within a month she returned with a thick line of red and obtrusive keloid. I do not know to what extent surgeons used to be troubled by the growth of keloid. I remember the late Sir James Paget telling me that he was always anxious lest it should follow operations upon the face. I cannot help thinking that keloid is especially prone to complicate wounds treated with chemicals. Therefore, in performing plastic operations upon the face, I have of late used 1 in 10,000 biniodide of mercury lotion, and contented myself with painting the wound with a little collodion. Should further protection be necessary, a little sterilised wool or gauze is applied.

Sponges and Towels.

I now come to the question about which there are differences of opinion. I have experience of various materials for clearing the wound of blood, but no swab that I have ever seen is as good as a sponge of good quality. I suppose those who eschew sponges do so because they have doubts as to their asepticity, and in my opinion the gravest doubts ought always to be entertained unless the sponge has been prepared and disinfected by the surgeon himself, or by someone upon whom he can implicitly rely. Furthermore, by whomsoever the sponges are prepared, they ought to be submitted to frequent tests. It is hardly necessary for me to describe at length this most important part of the organisation of an aseptic operation. An ordinary round sponge of suitable quality costs about one shilling. The sand should be beaten out of it, the shell and coral dissolved with a dilute solution of mineral acid (sulphuric or hydrochloric). Next, the sponge is treated with a solution of washing soda to neutralise the acid and remove any albuminous material; lastly, the sponge is disinfected and bleached by being submerged in a 1 in 5 solution of sulphurous acid in water.[1] Our last results of this sulphurous acid method of disinfecting sponges show that 20 tested before the operation were all sterile, and likewise 11 tested after the operation. The credit of such good results is due to Nurse Carson, who has never yet had a septic sponge or septic towel. The towels which are used to surround the field of operation and to prevent the ligatures, sutures, hands, or instruments being contaminated by contact with the clothing or undisinfected parts, are sterilised by boiling for half an hour in a boiler or saucepan. In hospital practice

Lautenschläger's sterilisers are used because they are convenient; 18 towels tested before the operation were sterile, as were 11 tested after the operation. We have often exposed plate cultures of gelatine to the air of our operation theatre, and know that vast quantities of bacteria fall from it upon the towels and field of operation. But they are not necessarily pathogenic. Dr. Drysdale kindly exposed culture media whilst operations were being performed. He found on each occasion a growth of yellow sarcinæ, and of other common coloured organisms of the air. The sterile results after the operation seem therefore to be contradictory, but it is to be remarked that the sterilised towels are usually transferred from the steriliser into 1 in 40 carbolic lotion, and in addition during the performance of the operation they are continually wetted with the biniodide of mercury lotion 1 in 2,000, used for the sponges and for the hands of the surgeon and of his assistant. Presumably these chemicals suffice for the destruction of the organisms. Biniodide of mercury lotion possesses many advantages—first, it is perhaps the most powerful germicide; secondly, it is unirritating; and thirdly, it does not combine with albumen. Owing to this last peculiarity it is often employed when other chemicals would be unsafe.

Not long since I operated upon a case in which a suppurating ovarian cyst had burst into the peritoneal cavity. The abdomen was full of pus, and after removal of the cyst its interior was thoroughly washed out with biniodide of mercury solution, 1 in 4,000. The patient made an uneventful recovery, without any sign of mercurial poisoning. Had sublimate or carbolic lotion been used in this manner, it may safely be assumed that some of the chemicals would have remained in the abdomen in combination with the tissues and albuminous fluids. For similar reasons biniodide of mercury lotion is most efficacious for cleansing sponges. At the beginning of the operation a single sponge is handed to the assistant in a bowl of lotion, in which from time to time it is wrung out, the lotion merely requiring to be renewed.

For any operations a single sponge will suffice, and at the end is so free from blood and albumen that one often wonders whether it is really necessary for it to pass through the elaborate sulphurous acid method before being used for other operations. I have reason to be familiar with the use of sublimate lotion for cleansing sponges. After a little while albuminate of mercury collects in the sponge and it becomes inelastic and sodden, and incapable of taking up blood or any other fluid. It adds to the safety of the patient to be able to perform abdominal operations with a small number of sponges, four round and one flat suffice, and with so few it is difficult for any to be lost. In the choice of antiseptics I have learned to look with extreme suspicion upon the various patent preparations; many of them are mixtures of an efficient germicide with some kind of diluent; the germicide is dear, the diluent is cheap: the result can be imagined when it is remembered that profits are to be earned.

In conclusion various occlusive dressings for wounds of the groin, scrotum, abdomen, and breast, and which Sister Paget had very kindly prepared, were shown and described.

NOTES AND REFERENCES.

[1] BRITISH MEDICAL JOURNAL, October 25th, 1890; May 28th, 1892; January 27th, 1894; July 11th, 1896; and September 17th, 1898. The methods are given in these and in *Aseptic Surgery*, by C. B. Lockwood, 2nd edition, London, 1899. [2] The method of testing is exceedingly simple. A piece of skin, sponge, ligature, towel, and so forth, is cut off and dropped into a tube of nutrient broth, which is placed in an incubator, at the temperature of the body, for a week, and the result recorded. Inasmuch as chemicals are used for keeping the instruments and ligatures aseptic, it is obvious that a little chemical is introduced into the broth with each test. To some this may seem a source of error, but this is easily put aside. I have added 30 drops of 1 in 1,000 sublimate solution, and 60 drops of 1 in 20 carbolic lotion to the broth in a culture tube, and then grown ordinary skin bacteria in it; next the largest quantity of chemical is carried into the broth by bits of sponge, but I have inoculated some which remained sterile, and obtained a rapid and abundant growth. [3] Although the term biniodide of mercury is not quite correct; nevertheless, it is in general use, and cannot easily be displaced. The solution of biniodide of mercury and methylated spirits is easily made by using soloids. [4] BRITISH MEDICAL JOURNAL, vol. ii, 1898, p. 802.

THE biennial dinner of the Metropolitan Branch of the British Dental Association will be held on Saturday, March 3rd, at 7.15 P.M., at the Hotel Cecil, when Mr. Ashley Barrett, M.B.Lond., M.R.C.S., L.D.S., will be in the chair.

NOTES
ON
SOME CASES OF GUNSHOT WOUNDS FROM SOUTH AFRICA.

BY MAJOR WILLIAM DICK, M.B., F.R.C.S.EDIN.,
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THE following notes of some cases of gunshot wounds from South Africa which have passed through Netley Hospital may prove interesting. They have been mostly caused by Mauser bullets, and the majority of them seem to have done little injury. I have been in the habit of teaching that in gunshot wounds of the abdomen the diagnosis of penetration was sufficient ground for performing a laparotomy, on the hypothesis that when there was penetration of the abdominal cavity there was probably injury to some of its contained viscera, and that this demanded active operative interference.

Since, however, seeing these men with wounds by Mauser bullets, my opinion has become modified. Both the exit and entrance wounds are small, and from the track of the bullet, as determined by the position of these wounds, the abdomen must have been penetrated, and one fails to see how the bowel, etc., could have escaped. The manner in which these wounds heal is a matter for future investigation—possibly the wounds being small extravasation is prevented by contraction—the shock not being so great as that caused by large bullets, so that there is no paralysis of the intestinal wall, and this contraction being rapidly followed by plastic effusion, resulting in permanent occlusion of the openings.

Some of the cases of injury to the head, neck, and chest are also interesting. Perforations of bones seem to be accompanied by little or no fissuring, and heal up as rapidly as wounds of the soft parts, and the great vessels have escaped in many cases. Perforations of the lung seem to have healed rapidly and to have given rise to very few acute symptoms; probably here also contraction has immediately taken place round the narrow track of the small-bore bullet, rapidly followed by permanent occlusion.

WOUNDS OF THE HEAD, NECK, AND CHEST.

Private H. L. was wounded at Elands Laagte by a Mauser bullet on October 24th, 1899. The entrance was in the middle of the right cheek, and the bullet was cut out below the left eye. He arrived home on December 25th. He has been discharged to duty. In this case there were no pieces of bone to be taken away.

Private J. L. was wounded by a Mauser at the Modder River on November 28th, 1899. The bullet made its entrance at the anterior border of the left trapezius and its exit in the right mid-axillary line over the tenth costal interspace. This man states that beyond a little pain he never had any urgent symptoms indicating implication of the lung, although it is difficult to see how it could have escaped. The man arrived home on January 5th, and has been discharged to duty.

Private P. V. was wounded at Nicholson's Nek on October 30th. The bullet entered behind the middle of the posterior border of the left scapula, and made its exit 1½ inch below the middle of the left clavicle. He spat at first a little blood. No bones seem to have been injured. He arrived home on December 25th, and has since gone out of hospital fit for duty.

Private F. A.'s case was almost identical, except that the bullet perforated the infraspinous portion of the left scapula.

Private W. B. was shot at Elands Laagte. The bullet perforated the middle of the sternum, and made its exit in the eleventh costal interspace. This was followed by hæmothorax, which was incised. He had, of course, dyspnœa and hæmoptysis. He had perfectly recovered on arrival home.

Corporal S. C. was wounded at Estcourt on November 23rd, 1899. He arrived home on January 5th, practically fit for his duty. In his case the bullet had entered below the spine of the right scapula, and came out at the anterior border of the trapezius. In this case another bullet entered the middle of the left sterno-mastoid, and came out at the inner canthus of the left eye.

In one case which occurred at the Modder River the bullet entered in front of the right sterno-mastoid, fractured the spine of the right scapula, and was there excised.

The next case is very interesting. The bullet entered above the left zygomatic arch (the scar of this wound is small), and came out 1½ inch behind the left mastoid process (the scar of this wound is large). It is stated that fragments of bones were removed. There is here a depression of the occipital bone. No history of definite symptoms could be elicited from the man. The wound was received at Elands

Laagte. The man arrived home on January 5th, 1900, and he has since been discharged fit for duty.

One man was injured at Grasspan November 25th, 1899. The bullet entered at the insertion of the right deltoid, and made its exit at the left side of the tenth dorsal vertebra. Of course, in this case the man's arm was extended over his head when he received the wound. Nothing of importance was injured, and the man has returned to his duty.

A soldier was wounded at Grasspan. The bullet took the following course:—Entrance over the middle of the sternum, exit in the left axilla, then entered inside of left upper arm, and came out behind left elbow-joint. The left pleura is stated to have been aspirated. The man arrived home on January 17th perfectly recovered.

J. McG., wounded at Colenso December 15th, had a Mauser bullet enter the right side of his chest in the first intercostal space, and make its exit ½ inch to right of fourth dorsal spine. He does not seem to have had any special symptoms, and was quite well on arrival home on January 22nd.

F. C., wounded at Colenso. The bullet entered 2 inches to the left of the seventh dorsal spine, and made its exit 3 inches above the left nipple. He had some hæmoptysis for forty-eight hours, and pain on inspiration for ten days; he then recovered.

M. L., was wounded at Magersfontein on December 11th by a Mauser bullet, which entered 2 inches below the middle of the right clavicle, and made its exit over the fifth dorsal vertebra. He had hæmoptysis for twenty-four hours but no other symptoms. He arrived home on January 25th. He has gone out fit for duty.

R. T. was wounded at Magersfontein; the bullet entered 2½ inches internal to and below the right nipple, and passed out 2 inches from the spine of the eleventh dorsal vertebra. He had hæmoptysis for seven days after the wound, and rapidly got better.

The next case—a penetrating wound of the chest—never had any symptoms whatever. The bullet entered to the right side of the ensiform cartilage, and made its exit behind over the twelfth rib on the right side, 4 inches from the spine.

T. A. was wounded at Magersfontein. Bullet entered 3 inches above left nipple, and came out at the inferior angle of the left scapula; he had spitting of blood for a few hours, and states that he had no other symptoms.

J. J. was wounded at Magersfontein. The scar of entrance is just above the right nipple, and that of exit an inch and a-half to the right of the first lumbar spine; he had hæmoptysis for three days, and some pain in the right side of the chest for ten days. He has now recovered without any further symptoms.

W. P., wounded at Colenso on December 15th, arrived at Netley on January 25th quite well and fit for work. He had a scar on the third right costal interspace in front, and another over the ninth dorsal spine; he had pain for about a week, but no other symptoms.

WOUNDS OF ABDOMEN.

H. T. was wounded at Lombard's Kop on October 30th, 1899. There is a small scar at entrance in the left buttock, and a larger scar of exit over the angle of the right scapula. Of course this may have been altogether subcutaneous, but it is difficult to see how the spines of the vertebræ escaped.

J. S. was wounded near Ladysmith on October 24th, 1899. The bullet entered the right buttock, and came out below the umbilicus. For six days he passed blood in his urine, so in all probability the bladder was injured, possibly extraperitoneally. He is now fit.

D. H. was wounded at Ladysmith on October 24th, 1899, and arrived home quite well on December 25th. The bullet entered over the left sacro-iliac synchondrosis, and made its exit above and to the right of the umbilicus. For three days he passed bloody urine, but had no other symptoms of abdominal injury. On examining the positions of the two scars in this man, his abdominal cavity would appear without doubt to have been penetrated, yet he is now quite well, and no operation has been done, not even for the removal of bone.

J. R., wounded at Elands Laagte, has a wound of entrance, fairly large, over the right sacro-iliac joint, and a scar of exit over the twelfth left rib in the mid-axillary line. The bullet, after passing out, was found under the man's clothing lying over the seventh left rib in the anterior axillary line, where it had caused a blister. This man gives no history of any symptoms. This bullet passed from side to side across the abdomen, usually a more dangerous direction as regards wounding of the intestine than if it had passed antero-posteriorly.

J. S., wounded at the Modder River on November 28th, 1899, arrived home perfectly recovered from his wound on January 5th. He has a small scar 5 inches to the left side of the umbilicus representing the wound of entrance, and another small scar just on the right side of the spine, at the level of the tenth dorsal vertebra, representing the wound of exit. He passed blood in his stools and also in his urine for some days, and was supposed to have wounds both of bowel and kidney. All his wounds were healed on arrival in this country, and in fact there was nothing wrong with the man. This case certainly points to a modification of one's views with reference to operation.

J. Mc. arrived home on January 5th, having been wounded in the abdomen at the Modder River on November 28th, 1899. On examining him the wound of entrance was found to be represented by a small scar immediately below the point of the twelfth right rib, and that of exit by a small scar near the middle line in front about the same level. This man had vomiting of blood and blood in the stools and urine for about two days, yet he has perfectly recovered without operation.

G. B., wounded at Rietfontein on October 24th, 1899, has a small entrance scar below the crest of the right ilium, and a larger scar of exit just in front of the left great trochanter. This bullet evidently passed through the pelvis. He states he had no symptoms, and is quite recovered.

A. K., wounded at Grasspan November 25th, arrived home on January 17th. The entrance wound is shown by a scar 3 inches below the crest of the left ilium in a line posterior to the great trochanter. Exit 1 inch below the fold of the right buttock, no symptoms of any pelvic organs being injured.

P. F. was wounded at Belmont on November 23rd, and arrived at Netley perfectly recovered on January 17th. He has a scar of entrance very small, just below the left costal margin behind, and a linear scar of exit 3 inches below the right nipple. The track of the bullet would appear to pass through the liver. With the exception of blood in the urine at first he has had no other symptoms.

A. H., wounded at Colenso on December 15th, arrived home on January 22nd. Said to have had a wound of the stomach. He has a scar of entrance to the left of the tenth dorsal spine, and a scar of exit midway between the ensiform cartilage and the umbilicus. He states that he had no symptoms.

A. K. was wounded at Magersfontein on December 11th. He has a wound of entrance in the middle of the left buttock, and a scar of exit just above the root of the penis. He is quite well, and says he had no symptoms.

J. R., wounded at Colenso December 15th, arrived home quite recovered on January 25th. There is a scar of entrance 1 inch below the apex of the right scapula, and one of exit 3 inches to right of umbilicus. Some dyspnœa at first was the only symptom he had.

R. K., wounded at Elands Laagte, arrived home on January 22nd, quite recovered. He has a scar of entrance in the right groin above the root of the penis, and a scar of exit near the middle of the right buttock. He has had some diarrhœa, supposed to be due to injury of the bowels.

T. C. was wounded at the Modder River on November 28th, and arrived at Netley, fit, on January 25th. He has a scar of entrance 2 inches to the left of the first lumbar spine, and a scar exit about the tip of the twelfth right rib. He has had no symptoms.

All the above cases are men who have been returned to their duty. The history of the cases, except from the men's own statements, is very meagre. None of them have had any operative interference. When their histories arrive they should be interesting. The results of operative interference in abdominal cases as compared with the results in those cases in which expectant treatment has been followed will be interesting reading when the surgical history of the war is written. One thing is evident—that Mauser bullets do not seem to carry with them septic infective material.

A CASE OF BULLET WOUND OF THE CHEST.

By Major F. A. SAW, M.B.,
Royal Army Medical Corps.

Lieutenant S. was wounded by a bullet fired from a Mauser rifle on December 10th, 1899, at the action at Stormberg. He was half turning to look to the men of his company when he suddenly felt as if he had received a violent blow between the shoulders. Immediately he felt as if all his limbs were paralysed, and he fell back in a sitting posture. He thought he had been shot from behind, and that his spine was injured. After about half a minute he was surprised to find that he could get up and run about 150 yards to take cover. He noticed shortly after this that blood ran from his mouth, though he did not cough it up. Later on he had a sensation as if the right lung was filling with blood, and he had to breathe with the left lung. He appears to have walked, assisted by two officers, about a quarter of a mile, and then was carried in a two-handed seat, then in a blanket, and lastly on a stretcher until he reached the ambulance wagon. He was then carried, lying down in the wagon, to Molteno, a distance of twelve miles, and arrived there at noon. He was wounded at about 6.30 A.M.

I examined him there, and found two bullets wounds, one situated on the right side at a point four fingers' breadth below the anterior axillary fold, and about midway between the anterior and posterior axillary lines, the other situated at a point four fingers' breadth below the inferior angle of the left scapula, about three fingers' breadths from the spine. The patient thought that the bullet entered from behind. I found, on examining his coat, that there was a small round hole with inverted edges, the margin of the aperture being slightly blackened, corresponding with the wound in the right side, and a hole somewhat larger, with edges a little frayed out and not inverted, and showing no signs of blackening corresponding with the wound behind. I therefore think the wound of entrance was that situated on the right side. The wound had been dressed with a "first field dressing," and I dressed it again with a dry antiseptic dressing at

Molteno. He was removed to the train at 2.30 P.M., but the train did not leave till 5 P.M. I accompanied him to Queenstown, where we arrived at 12 P.M. He was taken to the frontier hospital, and placed under the care of Drs. Berry and Tannahill, as I had to return to the field hospital.

He made a rapid recovery. He suffered first from retention of urine, and a catheter had to be passed for four days. He experienced also some pain, chiefly in the right hepatic region, extending up to the point of the right shoulder. There was no cough or hæmoptysis. He was up in two weeks' time, and now—a month after the date of the injury—he is practically well, except for a little dyspnœa on exertion and slight pain on taking a deep inspiration. He is said to have suffered some years ago from pericarditis and has always suffered from some dyspnœa ever since on exertion.

The case is a remarkable one. If an imaginary line be drawn between the wounds of entrance and exit, it will be seen that both lungs must have been traversed by the bullet, but as to the exact course it took and how the large structures in front of the vertebral column escaped it is difficult to explain. More careful measurements show that the wound of entry is 9 inches from the median plane in front and on the horizontal plane of the right nipple, about midway between the anterior and posterior axillary lines in the sixth and seventh intercostal space. The wound of exit is on a level with the ninth dorsal spinous process and 2½ inches to the left of that point. The wound of exit is about 1 inch below the level of the wound of entry. The bullet passed between the ribs on both sides.

The sensations he felt—as if his limbs were paralysed, which, though only temporary, was followed by retention of urine—would suggest that the bullet grazed the body of a vertebra, and by means of shock caused these symptoms. Pain felt at the point of the right shoulder, from which he suffered considerably at first, is generally associated with lesions occurring in some portion of the liver.

Queenstown, South Africa, January 16th.

REPORT ON THREE CASES OF GUNSHOT WOUND.

BY MAJOR A. P. BLENKINSOP, M.R.C.S., L.R.C.P.,
Royal Army Medical Corps.

THE following three cases of self-inflicted gunshot wounds have many points of resemblance, and are perhaps worthy of record, as they demonstrate the effects of small calibre bullets and cordite ammunition. These effects are markedly different from those produced by the older forms of rifle, and open up interesting questions both from a surgical and medico-legal point of view.

I am indebted to the records of the Royal Infirmary, Dublin, for the account of Case I, which is taken from the reports of Major G. B. Russell, R.A.M.C., and my thanks are due to Major E. O. Milward, R.A.M.C., for the notes of Case III.

CASE I.

J. S., a non-commissioned officer, was found lying in his sitting-room in Linenhall Barracks, Dublin, at 9 A.M. on July 20th, 1897, with a discharged Lee-Metford rifle underneath him. He was much collapsed, and bleeding from an extensive wound on the left side of the face. He is supposed to have put the muzzle of the rifle into his mouth, and to have pulled the trigger with his toe.

Nature of Injury and Progress.—On examination the greater part of the left malar bone appeared to have been blown through the cheek. The tissues were much lacerated, but there was little loss of substance. The hæmorrhage was not great, and only one small artery had to be tied. The wounds were cleared of loose fragments of bone, and the edges, which were fairly clean cut, brought together with sutures. The man was then conveyed to the Royal Infirmary in an ambulance. On arrival at the hospital his position was found to be very critical. There was severe shock, and the extremities were cold and pulseless. The man was semiconscious, and frequently called for water, which he drank eagerly. His face was greatly swollen, but there was no blackening of the divided tissues. Two hours after admission, in spite of free stimulation, he collapsed completely, and died at 1 P.M. on the same day.

Post-mortem Examination.—The left side of the face and head showed much disfigurement. The skin from the upper lip to the middle of the temple was divided and lacerated by the explosion. The point of exit of the bullet was a narrow slit about half an inch long by one-eighth of an inch wide in the middle of the left temporal region. On turning back the integuments the track of the bullet could be traced through the temporal muscle to its point of exit. The upper jaw and malar bone on the left side were found to have disappeared almost completely. The base of the skull was intact. There was some congestion of the meninges, but the brain was uninjured. All other organs appeared healthy.

CASE II.

J. W. was admitted to the Royal Infirmary, Dublin, on May 2nd, 1898. At about 9.30 A.M. on that date I was called to the Marlborough Barracks, and found him in his store suffering from a very severe gunshot wound of the left side of his face. He was in a prone position, resting on his extended arms, and a Lee-Metford carbine was lying on the ground about a yard from his right side, with the muzzle directed towards his head. There had been extensive hæmorrhage, but this had almost entirely ceased, and, though there was considerable general oozing, no special artery was seen to be spouting. After the lacerated flaps of tissue had, as far as possible, been brought into position, the wounded side of the face was wrapped in lint soaked in 1 in 40 carbolic lotion, which was fixed in position with a triangular bandage. The patient was then placed on a stretcher and carried to the Royal Infirmary, a distance of about a quarter of a mile.

Nature of Injuries.—When more careful examination could be made at the hospital, the man was found to have sustained the following injuries. The bullet had entered the submaxillary region to the left of the middle line, making a transverse lacerated wound about 2½ inches long. In the middle of this wound was a small punched-out area corresponding to the size of the bullet. The skin, and deeper tissues of the chin and lower lip were completely divided. The lower jaw, from the canine tooth to the last molar tooth, was destroyed, and several loose pieces of bone were found embedded in the surrounding tissues. The fragments of the jaw were widely separated, and the tongue fell forward in the interval between them. The left side of the tongue was slightly torn. The bullet had passed through the hard palate internal to the alveolar process. The cheek was split from the angle of the mouth nearly to the angle of the jaw. There was a curved wound extending from the angle of the mouth to above the ala of the nose, and which laid bare the bone throughout its course. Separated from this by a narrow bridge of sound skin, and corresponding in position to the left orbit, was a large irregular cavity, in which the remains of the globe of the eye could be made out with some difficulty. The lower eyelid was nearly entirely destroyed, and the upper much lacerated. From this cavity a clean-cut wound ran upwards through the centre of the eyebrow for a distance of 2½ inches, exposing the frontal bone below, but becoming gradually more superficial at its upper extremity. The superior maxilla was extensively fractured, and the antrum was freely opened in front. The inferior orbital plate was perforated, and the malar bone comminuted. The nasal bones were fractured, and the whole nose considerably displaced to the right side of the face. There was no blackening or charring of the wound, which looked perfectly clean. On admission the patient was suffering from severe shock. His extremities were cold, and his pulse feeble and running in character. He was, however, not perfectly unconscious, and made several efforts to speak.

Treatment.—While preparations were being made for the dressing the patient was put into bed with hot-water bottles, and brandy was given by the mouth. A hypodermic injection of 2½ minims of morphine was also administered. The man was then put under the influence of chloroform, and several fragments of loose bone having been removed, the lacerated tissues were brought together by means of hare-lip pins, which were passed as deeply as possible, so as to bring the deeper parts of the wounds into apposition. The skin was afterwards united by silk sutures. The torn edges of the eyelids were trimmed, and the anterior two-thirds of the globe of the eye removed. A drainage tube was passed from the lower wound, along the track of the bullet, into the mouth. The orbit was packed with iodoform gauze, and the other wounds were dusted with iodoform and dressed with sal-alembroth wool. It was not necessary to take up any arteries during the dressing, but the hare-lip pins were passed as far as possible in the position of vessels, so as to guard against the occurrence of secondary hæmorrhage. At the conclusion of the dressing 1 ounce of brandy was given by the rectum.

Progress of Case.—The patient was given nourishment by the rectum for the first twelve hours, but after that managed to swallow liquid food in small quantities, and the nutrient enemata were subsequently entirely discontinued. On the morning following the injury the dressing was soaked with blood-stained serum, and was therefore changed. The drainage tube was then removed, but at a later dressing it was found necessary to plug the track of the bullet into the floor of the mouth with iodoform gauze, as food made its way into it and delayed healing. The face was afterwards dressed daily and the mouth cleaned and insufflated with iodoform at frequent intervals. On May 8th the hare-lip pins and sutures were removed. The wounds were firmly united by first intention wherever the edges could be brought into apposition. On May 11th a light perforated metal splint was applied to the lower jaw. The patient became extremely morose and depressed, and his convalescence was delayed by an ulcerated sore throat. The large wound left by the partial destruction of the contents of the orbit healed slowly, cicatrisation being retarded by the formation of a lachrymal fistula. When the patient was apparently quite convalescent a small abscess made its appearance in connection with the wound in the left cheek, and this was opened on June 27th, and healed rapidly.

Condition on Discharge.—The man left the hospital on August 19th. He was then in robust health. A small lachrymal fistula at the inner side of the orbital cicatrix persisted. The movements of the lower jaw were limited, but the patient could chew soft food and was eating chicken diet. Beyond the destruction of the eye and a slight irregularity at the angle of the mouth, there was remarkably little deformity, and the linear cicatrices formed by the healing of the wounds were concealed by the growth of a beard. The left descending ramus of the jaw was somewhat displaced towards the middle line, and new bone appeared to have replaced the piece of the jaw which had been carried away at the time of the injury.

CASE III.

Private G. H. S. shot himself in his barrack room with a Lee-Metford rifle and cordite ball cartridge at about 8.15 P.M. on June 24th, 1898. He tied one end of a boot lace to the trigger of his rifle and twisted the other

end round his hand. He then apparently leant forward over the muzzle of the weapon, which he discharged by pressing on the loop of the boot lace with his foot. The other men in the barrack room saw none of the preparations for the deed, but, on hearing the report and turning in the direction from whence the sound came, saw Private S. fall forward. Death must have been instantaneous.

Post-mortem Examination.—At the *post-mortem* examination the bullet was found to have entered about an inch behind the symphysis menti and slightly to the right of the middle line. The wound of entrance, from which there had been considerable hæmorrhage, was irregularly triangular in shape, each side measuring about an inch in length. Immediately above it was a lacerated cavity 2 inches in depth. The skin was torn up in ragged flaps, but there was very little loss of substance. There was no blackening or charring of the tissues. The wound of exit was in the middle line, about half an inch above the bregma. It was a clean-cut, circular opening, the diameter of which corresponded to that of the bullet. There was no protrusion of brain substance, and only enough hæmorrhage to stain the hair immediately around the aperture. On tracing the course of the projectile, the lower jaw was found to be much comminuted for a considerable distance on either side of the symphysis. The bullet passed upwards and backwards through the floor of the mouth and root of the tongue, and behind the soft palate to the base of the skull. The basilar process of the occipital bone and the body of the sphenoid were broken up, and the upper half of the medulla oblongata destroyed. There was a narrow track leading upwards and backwards through the median lobe of the cerebellum. The tentorium was perforated, and the occipital lobes of the cerebrum torn on either side of the great longitudinal fissure. The skull round the aperture of exit showed a series of fissured fractures radiating in every direction and shattering the vault of the cranium. The sutures were burst asunder, and there were several fractures of the frontal and other bones altogether unconnected with those described round the opening through which the projectile left the skull.

The chief interest in these cases from a medico-legal point of view rests in the fact that there was no scorching or tattooing of the tissues, although in each case the rifle must have been very close to the skin, if not actually touching it. It would appear that in gunshot wounds where the new cordite ammunition is employed it is no longer possible to judge by the presence or absence of these features at what distance from the surface of the body the muzzle of a rifle may have been at the time of its discharge. This is a matter of considerable importance, as conclusions based on the appearance of the wound of entrance have more than once influenced the decision as to whether an injury was homicidal or suicidal.

In Case II it will be noticed that 2½ minims of hypodermic solution of morphine were injected on the arrival of the patient at the hospital. No bad effects were found to follow its administration; on the contrary, it appeared to be distinctly beneficial, as, after it was given, the man became less restless and there was marked improvement in his general condition. It is also of interest in this case that the whole of the lower wound, except where the tissues were carried away by the passage of the bullet, healed by first intention.

Case III is remarkable from the absence of the extensive pulping of the brain, which is so frequently described as resulting from a Lee-Metford bullet being fired into the skull of a cadaver at a short range. Possibly the comparatively small amount of injury may be accounted for by the bullet having taken a course through the great longitudinal fissure; but, even so, one would have expected to have found more extensive destruction of the cerebellum, which was completely traversed by the projectile. It is also noted that no brain substance protruded at the wound of exit.

When it is proposed to transfer a case of gunshot wound involving much shock to hospital for further treatment, it is probably advisable to do as little as possible to the wound beyond arresting hæmorrhage until the patient arrives at his destination. Any extensive surgical interference would only intensify the shock, which would be further aggravated and prolonged by the journey.

PENETRATING WOUND OF THE BLADDER AND RECTUM FROM THE BUTTOCK: RECOVERY.

By Major J. R. DODD, F.R.C.S., R.A.M.C.

[Communicated by the Director-General, Army Medical Department.]

R. D., a workman in the Royal gun factory, Woolwich Arsenal, was admitted to the Arsenal Hospital on April 10th, 1899, bleeding profusely from a punctured and lacerated wound in the right buttock, also from the urethra. He had been hauling on a rope with another, raising some heavy weight, when the rope broke, and he fell, with the other man upon him (both being heavy men), upon the end of a bar of iron, about seven-eighths of an inch in diameter, and several feet in length, which was lying on the ground, the last few inches of the bar, which was used for opening the doors of furnaces, being bent at right angles to the remainder, and sticking up perpendicularly from the ground. On examination the finger passed into the wound in the buttock, entered the rectum about 2 inches above the anus, then passing through the anterior wall of the rectum, it entered the substance of the prostate gland, impinging directly upon a large silver catheter which had been passed into the bladder, and had evacuated nothing but pure blood. A foreign body was felt in the rectum, which on removal proved to be four small pieces of cloth rolled up together, being, in fact, pieces of the patient's trousers, drawers, shirt, and underflannel, which the bar of iron had carried in before it.

The wound of the buttock was opened up into the rectum as in the operation for fistula; the catheter was tied into the bladder, and the usual measures for checking hæmorrhage were taken such as torsion of spouting arteries, hypodermics of ergotin, application of ice and mixtures of gallic and sulphuric acid, opium, turpentine, etc. It was, however, several days before the bleeding entirely stopped. The urine speedily became very offensive, fæces and flatus being mixed with it, and the tying in of the catheter had to be discontinued three days after the accident owing to its causing so much irritation. After that most of the urine came through the anus on voluntary efforts at micturition, which were discouraged as much as possible, the catheter being passed three times a day, and after the urine had been evacuated the bladder was first washed out with boracic lotion, and then injected with iodoform in sterilised mucilage. With the exception of a severe attack of epididymitis in the left testicle, the patient made an uninterrupted recovery.

On April 20th the sphincter ani was so far healed that the escape of fæces involuntarily ceased. On April 28th the urine was clear, acid, and free from smell, and the patient was able to pass a soft catheter for himself. On May 2nd the rectum wound was healed externally, and urine had almost ceased to pass *per anum*, while no flatus came through the catheter with the urine. On May 16th he left hospital on sick leave.

On June 28th I examined him and found his wound soundly healed; there was no bladder or rectum trouble, and a full-sized silver catheter passed without difficulty. On July 25th I again saw him; his urine was normal, and a No. 12 silver catheter passed easily. He believed, however, that he had passed a small piece of cloth with his urine a few days before.

ABSTRACTS OF

THE ARRIS AND GALE LECTURES

ON

THE ANATOMY AND PATHOLOGY OF THE RARER FORMS OF HERNIA.

Delivered before the Royal College of Surgeons of England.

By B. G. A. MOYNIHAN, M.S.Lond., F.R.C.S.Eng.,

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Lecture I.

BILOCULAR HERNIA, INCLUDING INGUINO-PROPERITONEAL AND CRURO-PROPERITONEAL HERNIA, AND INTERSTITIAL HERNIA.

Mr. President and Gentlemen,—I propose to deal, in the lectures which I have the honour of delivering, with some of the rarer forms of hernia. In my first lecture I shall consider that form which is commonly called pro-peritoneal. My second lecture is concerned with the variety first described by

Sir Astley Cooper as "encysted." In the third lecture I shall discuss hernia of the bladder.

The term "pro-peritoneal hernia" is reserved for those cases which fulfil the following conditions:

1. The hernial sac has two loculi.
2. The inner loculus lies between the peritoneum and the fascia transversalis. (Fig. 1).



Fig. 1.—Pro-peritoneal hernia. Backward and outward diverticulum of the sac. An inguinal hernia was strangulated; operation was performed, and the hernia was found to be congenital. Reduction was effected. After death it was seen that reduction had occurred into a sac, shown on the figure, below the internal abdominal ring, outside the peritoneum. The specimen is labelled "Reduction in Mass." The testis is retained. (St. Bartholomew's Museum, 2,117.)

3. The outer loculus lies in the inguinal or crural ring, or in rare cases between the layers of the abdominal wall.
4. Both loculi open into the abdomen by a single orifice, the "ostium abdominale."

By an interstitial hernia is understood a hernia which fulfils the following conditions:

1. The hernial sac has two loculi.
2. The inner upper loculus lies (*a*) between the internal and external oblique (Fig. 2), or (*b*) between the external oblique and the skin. (Fig. 3).



Fig. 2.—The inguinal region of a patient who suffered from right interstitial hernia. The rod leads to a large diverticulum from the sac, lying under the external oblique. The sac can be seen in the upper cut edge of the specimen. (St. Bartholomew's Museum, 2,157.)

3. The outer lower loculus lies in the inguinal canal.
4. The upper loculus opens into the lower, in some cases close to, in other cases a little distance from, the internal abdominal ring.

I think that all these forms of hernia might with advantage be included under the title "bilocular hernia.' The name is appropriate and accurate. The term "bilocular" is applied to a form of hydrocele which is probably very closely related, from the developmental point of view, with these forms of hernia. The apt terms "intraparietal," "interparietal," and "extraparietal" for the sacs within, between and outside the muscles, are employed by Rose and Carless.



Fig. 3.—Interstitial hernia. Extraparietal form. The sac is hour-glass in shape, the constriction being situated at the external ring, close below which, in the lower sac, is seen the undescended testis. The upper sac extends upon the anterior abdominal wall for a distance of 2 inches above the widely dilated internal ring. "T. S., aged 36, was admitted under Mr. Cock with symptoms of strangulated hernia of twenty-four hours duration. He was found to have one tumour in the scrotum and another in the groin. The scrotal tumour was reduced by taxis. On the following day the patient died, and at the necropsy nearly a foot of ileum was found strangulated in the upper sac." (Guy's Museum, 1,120.)

The inguino-properitoneal and cruro-properitoneal forms were first described in 1851 by Parise. Streubel, in a well-known monograph, referred to 14 cases, but the chief work is without question that of Krönlein, published in 1880. He collected and analysed 23 cases recorded up to that time, and very carefully described and defined this ill-understood form of hernia. W. Breiter, a pupil of Krönlein, collected in 1895 a further series of 36 unquestioned cases.

In pro-peritoneal hernia the inner sac may have one of three positions:

I. It may pass upwards and outwards from the internal abdominal ring to the anterior superior spine (Fig. 1).

II. It may pass directly backwards and occupy the inner part of the iliac fossa near the brim of the pelvis (Fig. 4).

III. It may pass downwards and inwards into the true pelvis lying by the side of, or in front of, the bladder (Fig. 5).

Variety I has been described as hernia inguinalis intrailiaca, Variety III as hernia inguinalis antevesicalis (St. Bartholomew's Museum. 2118).

The outer or lower sac may be within the inguinal canal, or have reached the scrotum, or in rare cases may be interstitial. The right side is more commonly affected than the left. In the 59 cases of Krönlein and Breiter, 33 were on the right side, 20 on the left, and in 6 no mention of the side was made. Now Engel, Krönlein, and others have shown that the descent of the testicle is later on the right side than on the left, and that the right processus vaginalis remains unclosed for some time after the fusion process is complete on the left side. In a proportion, which is certainly striking, of the recorded cases there has been more or less imperfect descent of the testicle. In Breiter's 36 cases there was retention in 14, nine times on the right side, four times on the left; in one case the side is not mentioned. In one case (making 36 in all) the hernia occurred in a woman. In Krönlein' 23 cases retention was observed in 9; so that in a total of 59

patients, an imperfect descent of the testis was recorded in 23, a proportion which must surely indicate some causal relationship.



Fig. 4.—Pro-peritoneal hernia. Backward diverticulum from the sac. A congenital inguinal hernia, which was strangled and reduced. After death it was seen that reduction had taken place into a sac lying between the peritoneum and the transversalis fascia. The case is labelled "Reduction in Mass." (Guy's Museum, 1,134.)

The age of the patients in Breiter's and Krönlein's series varied from 18 to 74. That, however, is merely the age at which the hernia was recognised. The history of some of the cases shows that at birth, or very shortly afterwards, a hernia



Fig. 5.—Pro-peritoneal hernia. Ante-vesical form of diverticulum. The orifice is the "ostium abdominale;" one sac passes down the inguinal canal, and the diverticulum, seen opened, extended "downwards into the pelvis, by the side of the urinary bladder to which it was attached." (St. Bartholomew's Museum, 2,118.)

was noticed, and many of the patients had, for months or years, been accustomed to the wearing of a truss. Most frequently the hernia on examination has been found to be congenital. In 59 cases the sac was congenital in 36; in 13 no mention is made of this point. In 10 only is it definitely asserted that the position of the testis was normal.

Etiology of Pro-peritoneal Hernia.

The fact that but little is accurately known of the precise mode of origin of these forms of bilocular hernia is evidenced by the multitude of theories which have been suggested in explanation. Before recalling them I may mention certain facts with regard to the anatomy of the inguinal canal which are possibly of importance.

Eppinger has shown that the inguinal canal may be arbitrarily divided into three portions. The first extends from the anatomical internal abdominal ring to the point where the infundibuliform fascia enters the transversus abdominis. In this portion the interspace between the peritoneum and the fascia transversalis is filled with very loose and lax cellular tissue, containing fat. The fascia transversalis is very much more firmly attached to the transversus than it is to the peritoneum. The second section is surrounded by the transverse and the internal oblique muscles, closely embraced by them, and approximately 10 to 12 mm. in length. The third extends from the internal oblique to the opening in the external oblique, the external abdominal ring. In this portion the surroundings are again lax and soft, yielding and distensile. In Parts 1 and 3 the adventitious sacs are found. Part 2 is, so far as we know at present, never the seat of a diverticulum from the sac.

The various theories which have been suggested as explaining the development of these forms of hernia may be tabulated, for the sake of clearness, in the following manner.

A.—1. The scrotal sac is first developed, the interstitial sac being secondary, and arising from the loosening and progressive bulging at the nec of the sac. This may result from (1) Cicatricial narrowing of the ostium abdominale, whereby the return of the bowel is impeded (Gosselin: Streubel). "Cicatricial narrowing" of the neck of the sac is freely spoken of in the description of cases and operations. I am disposed to doubt whether it ever occurs, and I am convinced that if it does occur it is only very rarely. Since the introduction of Bassini's, Halsted's, and other operations necessitating the opening up of the inguinal canal the precise conditions existing at the upper part of the intra-canalicular portion of the sac have been more readily and more closely studied. It may I think be said that dense induration at the neck of the sac is never observed.

2. Repeated, indiscriminate, and unrestrained taxis on the part of the patient (Streubel).

3. The wearing of inefficient and ill-fitting trusses, which make pressure not upon the whole canal, but upon the external ring only (Streubel).

4. Irregularity of the developmental process owing to incomplete descent of the testis (retentio iliaca, retentio inguinalis, retentio pubo-scrotalis) whereby the descent of the gut is barred. Impulses from above continuing, the bowel is forced laterally (Streubel: Krönlein).

5. Narrowing of the external ring, while the canal is wide. The bowel readily enough enters the canal, but cannot pass the external ring, and therefore insinuates its way between the layers of the abdominal wall (Mosetig v. Moorhof).

6. Through traction of the omentum when adherent to the neck of the sac (Janzer).

B.—The scrotal sac develops first. Owing to the uncontrolled application of taxis the whole sac is returned between the peritoneum and the facia transversalis. Later intra-abdominal pressure or other cause leads to the development of a second hernial sac from the parietal peritoneum in the neighbourhood of the internal abdominal ring (Tessier).

C.—The pro-peritoneal sac is first developed as a diverticulum from the parietal peritoneum. A secondary bulging of a part of this sac may extend down the inguinal canal into the scrotum (Linhart: Baer).

D.—The scrotal sac and the pro-peritoneal sac are two originally distinct pouches from the parietal peritoneum. The gradual enlargement of either causes its encroachment upon the other, until the two sacs eventually unite and open into the abdomen by a single orifice (Baer). In this connection it is worthy of remark that in an inaugural dissertation, written in 1883, Wagner relates a case where an ordinary oblique inguinal was found. On the outer side of the hernia, opening into the peritoneal cavity by a separate orifice, was a pro-peritoneal hernia.

E.—The hernia results essentially from an outward dislocation of the internal abdominal ring. As a result of this displacement the cord would be insufficient in length to reach the

bottom of the scrotum, retention of the testicle would result and a hernia would be formed in the displaced upper portion of the inguinal process. To account for this dislocation a "faulty insertion of the inguinal band of the primordial kidney on the abdominal wall" is supposed (M. Schmidt).

F. The pro-peritoneal sac results from the dilatation of the funicular process between its origin and its entrance into the canal ("first portion" of Eppinger), at which point there is generally a more or less well-defined constriction; the interstitial sac results from the dilatation of that part inside the canal (Ramonède).

It is probable that many causes are at work leading to the development of this variety of hernia. There is no doubt that in certain cases, probably the majority, a congenital defect is at the root of the matter. Many years ago Rokitansky pointed out that in the inguinal region, in the immediate neighbourhood of the internal abdominal ring small pouches or diverticula were not uncommon. These can occasionally be seen even in the adult or in the aged, but I have seen them at their best in the fœtus. I find that the most effective method of examination is to lay the subject on the face, remove the sacral, lumbar, and lower dorsal vertebræ, and all the abdominal contents, and expose in this way the anterior abdominal wall from behind. If this be done a fossa or fossæ can be seen clearly defined in at least 20 per cent. of bodies. Moreover, a fossa can occasionally be found (I have seen two striking examples) along the outer side of the hypogastric artery, which in such cases raises up a well-defined fold of peritoneum, a sort of mesentery. It is at least probable that these pouches offer facilities for the involvement of omentum or bowel in them.

With regard to the origin of these small pouches of Rokitansky, it has occurred to me that the explanation given by Lockwood for the origin of the sac of an infantile hernia may be applicable here. As is generally known, this author considers that an aberrant attachment of the gubernaculum is responsible for the abnormal descent of the peritoneum forming the sac. If the gubernaculum can cause the descent of a peritoneal tube into the scrotum, it seems reasonable to suppose that, acting with less completeness, the mere pouching seen in fœtuses might very readily result. The area of peritoneum bearing these pouches is precisely that which is intimate connection with the gubernaculum, and this fact is, to say the least, suggestive.

There are a few cases in surgical literature illustrating the snaring of omentum or bowel in these fossæ. They are recorded by Brunner, Havage, Englisch, Wagner, and others. It may, then, I consider, be taken for granted that the congenital defect leading to the formation of the pouches described by Rokitansky, and possibly also the pouches developed by the side of the obliterated hypogastric, is in some degree responsible for the onset of pro-peritoneal hernia.

A further congenital defect commonly associated, as I have mentioned, with pro-peritoneal hernia is imperfect descent of the testis. This may be the primary defect, and give rise to the development of the necessary sac by acting as a barrier to the further descent of the hernial swelling, or it may be secondary and result from the cause, outward dislocation of the internal ring, or another, of the hernia.

The "reduction in mass" of a hernia has been supposed by Tessier and others to be capable of laying the foundation of a pro-peritoneal hernia. Theoretically there is no objection to this suggestion, but practically it lacks sufficient confirmation. I shall presently endeavour to show that it is not unlikely that the condition known as "reduction in mass" is in one of its forms very closely allied to, if not identical with, some forms of pro peritoneal hernia. The evidence as to the causation of inguino-pro-peritoneal hernia may be thus stated:

1. The hernia arises most frequently as the result of some congenital abnormality in the inguinal region; as an added factor there may be a loosening, congenital in origin (Linhart), of the peritoneum in this region.

2. In some examples a more or less complete "reduction in mass" may be the original and responsible factor.

3. In a few cases the inner sac may be first fully formed, and the inguinal sac is then a secondary diverticulum; or possibly two sacs originally distinct may, by gradual enlargement and mutual encroachment blend at or near the ostium abdominale.

Cruro-pro-peritoneal hernia may, almost or quite without exception, be said to be dependent upon the existence of congenital peritoneal pouches. The case of Mr. Knaggs is a most admirable example of this.

Etiology of Interstitial Hernia.

Much that has been said of pro-peritoneal hernia applies with equal weight to interstitial hernia. The pouches of Rokitansky cannot, of course, stand in any causal relationship. The portion of the funicular process from which the diverticular sac is formed is either the "third portion" of Eppinger or the portion immediately outside the external oblique.

The anomalies of the testis are noticed with even greater frequency in interstitial than in pro-peritoneal hernia. Of 129 cases tabulated by Macready, in 73.4 per cent. there was some abnormality of the testis, and in 67.1 per cent. the testis was either completely retained or had only partially descended. In 28 cases the testis could not be found at all. This form of hernia is, however, of decidedly greater relative frequency in females than in males; Macready gives the percentage as 0.13 per cent. for males and 0.61 per cent. for females. The same preponderance of cases on the right side is also noticeable.

The most satisfactory explanation of the development of interstitial hernia is, I venture to think, founded upon the connection of the hernia with retained testis. The testis bars the way to a further descent of the hernia, and the inguinal portion of the sac bulges out in the direction of least resistance. This explanation is strengthened by the observation, which is almost universal, that the scrotum is hardly ever fully occupied by a sac containing bowel or omentum. As a general rule the lowest point reached by the descending hernia is at or just outside the external abdominal ring. An exquisite example of this is found in the Guy's Museum, No. 1,120. The bulging sac behind the barrier-like testis held "nearly a foot of ileum."

In some cases, however, the testis is normal in position, and the explanation just given is therefore inapplicable to them and to the cases occurring in women. There is one explanation, however, which, although I do not think it adequately accounts for these cases, is still deserving of recognition. In the earlier records there is occasional mention of the "thinness" of the abdominal wall in the inguinal region, of "obliteration of the layers," and so forth; but, so far as I am aware, it is to Macready that we owe the assertion of the importance of this condition. He has shown that

> the wasting or congenital defect of the muscles is chiefly noticeable below a horizontal line through the anterior superior iliac spine. It concerns sometimes the external oblique as well as the deeper muscles. In a greater or less degree it seems to be a constant feature in the interstitial hernia now under consideration.

I cannot do better than quote the following passage from Macready's *Treatise on Ruptures*:

> If we seek for the principal difference between interstitial and those herniæ with anomalies of the testis, we find it in the condition of the parietes. I have drawn attention to the delicate membranous state of the abdominal walls about the inguinal region. Here is a difference between interstitial and other herniæ which is common and which is real. If the imperfection of the abdominal wall, so often noticed with these herniæ as existing in greater or less degree, is their original cause, it does not militate against the supposition that a large proportion are attended with anomaly of the testis. On the contrary, when that organ is defective, it is very probable that the parts through which it passes, and with which it is so intimately related, will be likewise deficient, more especially as the anomaly of the testis in these cases is generally of a high grade.

It must, however, not be forgotten that this muscular atrophy and thinning may in some cases be the result rather than the cause of the hernial formation. The weight of a large hernial mass, constantly pressing unduly on the muscular wall, may lead to its wasting or disappearance. Macready does not bring forward any arguments which seem to me convincing in support of his view. I should certainly be disposed to consider the wasting of the muscles which undoubtedly exists rather as an effect than as a cause of the hernia.

In that class of case in which the mural sac lies between the external and internal oblique, if the external muscle be firm and the internal and transverse be thin and atrophied, the resistance met with at the external ring would cause a bulging beneath the aponeurosis of the external oblique. The

condition in which the sac lies upon the external oblique may be caused by a testis retained immediately outside the canal, or possibly by the misapplied pressure of a truss, apart altogether from any irregularity, congenital or otherwise, in the muscular layers.

The records of the cases show that in almost all the internal and external rings are opposite one another, forming practically one large opening. The sac can readily enough leave the canal therefore. The obstruction to its downward tendency must then arise external to the ring in one or other of the ways suggested.

A study of the peritoneal conditions existing in pro-peritoneal hernia suggests a close relationship between this form of hernia and the condition described as "bilocular hydrocele" (Fig. 6). If we suppose that the ostium abdominale be-



Fig. 6.—Bilocular hernial sac. Two thin membranous sacs, communicating with each other, and having a common opening at what appears to be the internal abdominal ring. The sac contained a hernia and a quart of "ascitic" effusion. The identity of this condition with bilocular hydrocele is at once apparent. (Guy's Museum, 1,159.)

comes closed (by the normal process of "physiological agglutination"), and that fluid collects in the inguinal and pro-peritoneal sacs, we should have then a hydrocele of the tunica vaginalis communicating with a serous cavity lying in the abdomen, between the peritoneum and the fascia transversalis. That is precisely the condition found in bilocular hydrocele. A reference to the recent case of Felix von Winiwarter shows that the conditions found in the removal of the sac of this form of hydrocele are the same as in pro-peritoneal hernia, save that in the former the mouth of the sac (ostium abdominale) has closed and fluid has collected in the serous cavity, and in the latter the mouth has remained open and a hernial descent has occurred.

Symptoms and Signs.

Pro-peritoneal Hernia: Inguinal.

With the rarest exceptions cases of pro-peritoneal hernia are first seen when symptoms of acute or subacute strangulation are present. A patient who for years has had a hernia, for which perhaps a truss has been worn, begins acutely to suffer from symptoms of obstruction. The hernia may be found on examination by the surgeon, taxis may be applied, and the hernia with little difficulty reduced. Symptoms of strangulation persist and steadily increase, and operation is resorted to, or the patient dies, and the condition is revealed. In some cases—a minority certainly—some swelling may be noticed after the reduction of the hernia. A "sausage-shaped swelling reaching the anterior superior spine" has been more than once reported. But in most cases no swelling is seen, and an examination of the specimens in the London museum explains that. As I have already described, the pro-peritoneal sac may pass outwards, backwards, or inwards and downwards. If outwards, a swelling or an indefinite though appreciable tumefaction may be caused; if backwards, there will be probably no swelling; and if inwards and downwards, there will certainly be none.

Krönlein figures one case in which the tumour on the outer side of the canal is well shown. Since this author drew special attention to this point more accurate examination has revealed a tumour in the majority of cases. Thus in Breiter's 36 cases a "tumour or tumefaction" was present in 22. In only 8 of the cases is it definitely asserted that careful, purposeful examination revealed no bulging. Judging from museum specimens, I should decidedly say that in the great majority no swelling could have been revealed during life. The cases where swelling is absent are less likely to be correctly diagnosed; the result, therefore, is that such cases are more likely to die and the specimen reach the museum. Breiter's proportion of 22 out of 36 is therefore very considerably in excess of the truth.

Strangulation of the contained omentum or bowel may occur in one of three places:

1. At the ostium abdominale, the common orifice of the two sacs into the peritoneal cavity.
2. At the neck of the pro-peritoneal sac.
3. At the neck of the inguinal sac.

If at 1, the bowel or omentum may be "reduced" from one sac to the other remaining strangled at the ostium abdominale. If at 2, there may be no signs and symptoms but those of acute obstruction, and attention may never be specially called to the inguinal region. If at 3, the case, clinically, is a strangulated bubonocele or scrotal or femoral hernia. In some few cases, according to Breiter, it has been observed that when two sacs are clearly present, reduction of the hernial content from the outer one causes an immediate and concomitant bulging of the inner sac, and *vice versâ*.

The symptoms of strangulation are, one gathers from the record of the case, neither so sudden in onset nor so swift in their increase as in the ordinary strangulated hernia. As a result operation has frequently not been resorted to till the sixth, eighth, or tenth day. In some of the records I have noticed that "vermicular contraction" of the intestine, "coiling," and "hypertrophy" are mentioned. This would seem to indicate that some obstruction has been of long duration. The sudden stoppage of the intestine by any cause, internal strangulation or strangulation in a hernial sac, never, in my experience, causes any such condition of hypertrophy as is here referred to. A hypertrophied intestine the contraction of which can be seen through the abdominal wall, giving rise to "coiling" and "vermicular contraction," must inevitably be the result of long-standing and either intermittent or incomplete obstruction.

In pro-peritoneal hernia the ostium may be the cause of the partial or temporary obstruction. Almost all the museum specimens that I have examined are to be found not under the heading "pro-peritonial hernia," but under "reduction in mass." The symptoms, therefore, are in a large number of cases those of the latter condition. To this point I shall refer again.

So far as the contents of the sacs are concerned there is little to remark. In three-fourths of the cases small intestine alone is present; the omentum, large intestine, and, in one case, the cæcum, have all been noticed. Three of the cases are said to have been examples of what is commonly, though unreasonably, termed "Richter's hernia."

Cruro-pro-peritoneal hernia is much rarer than the former. Breiter records only nine cases, four on the left side, three on the right, and two undertermined. The average age of the patients is higher by several years than that of the inguinal variety. The external swelling is invariably small, and the obstruction has always been furnished by the ostium abdominale.

Diagnosis.

As can readily be understood the diagnosis of pro-peritoneal hernia before operation is sometimes a matter of difficulty, or even impossible. In cases where a swelling, bulging, or tumefaction is noticed the diagnosis can be and has been accurately made. Such cases should offer no difficulty to a carefu

observer. The frequency of the association of testicular anomalies should make the surgeon prompt to investigate the precise nature of any hernial swelling where the testis is not in its normal position, especially on the right side. If, however, there is no inguinal swelling the symptoms are those of "reduction in mass," of acute obstruction, not as a rule of the most violent type.

Symptoms and Diagnosis of Interstitial Hernia.

In interstitial hernia the mural sac is always capable of being recognised. At one time or another the sac can be seen distended with the usual hernial contents, and no difficulty can be experienced in the recognition. The symptoms are generally inconspicuous and strangulation is infrequent.

Treatment.

Only one treatment can possibly deal effectively with pro-peritoneal and interstitial hernia—operation. The wearing of a truss is useless, and in most cases must also be a source of positive harm. The whole of both sacs should be excised, an undertaking which will involve a certain amount of division or separation of muscular and tendinous fibres. The "radical cure" can be afterwards carried out by any of the methods suited to the occasion.

REDUCTION IN MASS.

I have already remarked that my observations have led me to conclude that many cases of "reduction in mass" are in reality cases of pro-peritoneal hernia. "Reduction in mass" has been described as being the result either of a complete return of the hernia, sac, and contents, undisturbed so far as their mutual relations are concerned, within the abdomen but outside the peritoneum, or of a rupture at the neck of the sac by which the hernial contents escape from the sac into the lax subperitoneal tissue, still strangled at the neck. I have once operated upon a man suffering from strangulated inguinal hernia, who, I believed, suffered from a reduction in mass. On cutting down to the sac, I found it quite flaccid and loose, and I discovered a rupture in the sac near the neck through which all the fluid of the sac had escaped, leaving the bowel a mere knuckle lying undisturbed within the sac. I have found that Birkett describes three similar cases, Streubel refers to three, and Maydl has observed two. If the hernia be small and the patient stout the dispersion of the fluid will give an appearance of reduction, whether the fluid has escaped subcutaneously or into the subperitoneal tissue. A rupture of a vaginal hydrocele under pressure applied too vigorously by the patient has been not infrequently recorded.

In searching the museums of London for examples of pro-peritoneal hernia I was at once struck by the fact that the great majority of the specimens were described as "reduction in mass." Thus in the Guy's museum, specimens 1,134, 1,135, and 1,143, and in St. Bartholomew's museum specimens 2,117 and 2,118, are so labelled. Specimen 2,118 (St. Bartholomew's) is a remarkable example of the inward and downward projecting pouch which reaches the bladder. A careful examination of each of these specimens shows indubitably that there is no rupture at the neck of the sacs, but that the bowel, strangled at the ostium abdominale, has passed from an inguinal sac to the pro-peritoneal one, the serous lining of which is quite clearly recognisable. A similar example in a case of crure-peritoneal hernia is shown in specimen 1,143 of the Guy's museum. The impression gathered from museum specimens alone is that the very great majority of examples of "reduction in mass" are in reality no other than cases of pro peritoneal hernia in which the bowel has been reduced from the one sac to the other. An attempt to gauge the relative frequency of these conditions based upon museum preparations alone is necessarily unsatisfactory. Only the severer cases are there represented. Cases successfully dealt with by operation may be recorded by the surgeon; but his account, however precise, reveals a lack of that intimate acquaintance with the circumstances which a careful dissection is alone capable of giving.

Reduction in mass may therefore be described as of the following varieties:

1. Reduction into a sac lying between the peritoneum and the transversalis fascia (Fig. 7D.) This sac has probably received the bowel on many previous occasions. It exists in both the inguinal and femoral regions, forming the special class of hernia known as pro-peritoneal or bilocular. This sac

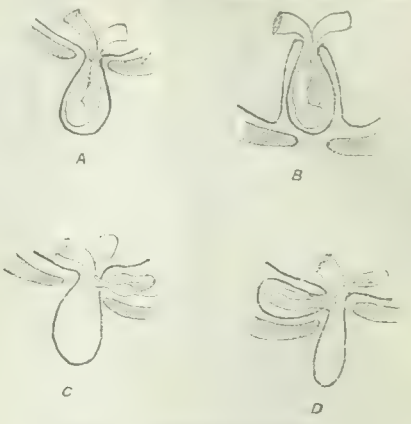


Fig. 7.—Reduction in mass.

may pass (*a*) inwards to the bladder, (*b*) backwards to the iliac fossa. (*c*) outwards towards the anterior superior spine. This form is probably by far the most frequent. In a very few cases—not five in all—the apparent reduction has occurred into one of the interstitial sacs, beneath or superficial to the external oblique; such a case is that of Mr. Cock (Guy's Museum, No. 1.120).

2. Reduction of the whole sac within the abdomen, but outside the peritoneum, the relations of sac and contents to one another being unaltered, and strangulation at the neck still persisting (Fig. 7B). It is probable that the loosening of the sac is of long duration, and is the result of vigorous and ill-regulated taxis. This variety is rare. It was first described by Saviard, after by Le Dran, Lafaye, and Richter.

3. Rupture of the neck of the sac, and escape of the contents of the sac through the rupture into a cellular space outside the peritoneum (Fig. 7C). The rupture generally occurs at the back of the sac just below the neck. This form of reduction has been well described by Birkett. If fluid alone escapes while the bowel remains an illusory appearance of reduction will be presented. It might be worth while to emphasise this condition as "false reduction in mass," for clinically the two conditions of "false" and "true" reduction may be precisely similar. If in "false" reduction the rupture is at the distal extremity of the sac and the discharge of fluid subcutaneous, it is impossible of course, for bowel to escape.

As a variety of this form may be mentioned the passage of the strangled intestine through a cut made near the neck of the sac when a hernia knife has been introduced to divide the "stricture at the neck of the sac." Maydl has observed this accident. After the supposed division of the strangling band pressure is applied to the bowel, and reduction apparently occurs. The neck of the sac is however untouched, and the strangulation consequently persists. A very beautiful example of this kind is recorded by Farabœuf. This form also is rare.

A fourth form of "reduction in mass" is described and figured by Roser, and mentioned by Pick. It consists in the reduction "into the inguinal canal" of the bowel that has formerly occupied the scrotum. A wide dilatation of the canal is considered as permitting this partial reposition. I have not been able to discover a museum specimen of such a condition, nor have I found any unequivocal case in the literature of this subject, though mention of the condition is made by several of the earlier writers on hernia. Chelius considered that in herniæ of moderate or large size, when reduction was apparently complete, a small segment of gut, thick with inflammatory products and paretic, might lie inert in the canal, and undergo a later secondary strangulation.

Reduction of the strangulated contents of a hernial sac into a second underlying sac in the scrotum have been recorded by Armand, Horn, Sandyfort, and Scarpa. It is possible that these second sacs are pulled down into the scrotum by gubernacular bands in the same manner as the sac of an

infantile hernia. Demmeaux has suggested that whether the sac first present in the scrotum be congenital or acquired, the press of intestine on a weak and loosely supported neck may cause a diverticulum slowly to develop. Such pouch may be in front or behind, to the inner or outer side.

If rupture of the neck of a femoral sac occurs the bowel may pass into the subperitoneal tissue. Callisen recorded in 1777 a case where, owing to rupture of the sac below the neck, the bowel had escaped and made for itself a lodgment between the pectineus and psoas muscles.

These conditions may be represented in tabular form thus:

REDUCTION IN MASS.

True.	*False.*
1. Reduction into a pro-peritoneal sac; rarely an interstitial sac.	1. Rupture of the sac at the neck or elsewhere, with escape of fluid only. The hernial swelling becomes considerably smaller, but the bowel remains strangled.
2. Reduction of the whole sac, with contents, within the abdomen, outside the peritoneum, the mutual relations of sac and contents being undisturbed.	2. Reduction of part of the hernial contents. A small portion remaining in the canal, paralysed and stiff with inflammatory products, undergoes a "secondary" strangulation.
3. Rupture of the neck of the sac or its division during operation and extravasation of the hernial contents into the subperitoneal tissue.	

A CASE OF EXPLORATORY OPERATION FOR DILATATION OF THE STOMACH.

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IN connection with the question of operative interference in cases of gastric dilatation which form the subject of Mr. Bennett's admirable clinical lecture, published in the BRITISH MEDICAL JOURNAL for February 3rd, the following case, which has lately been under my care, may be of interest.

History.—A woman, aged 38 years, consulted me on January 5th of this year, giving the following history. For five years she has suffered from attacks of vomiting, with occasional remissions. During the attacks absolutely nothing could be retained by the stomach, and the patient would be reduced to a state of complete exhaustion At no time between the attacks of vomiting has she been able to take ordinary diet, her food being administered in the form of soups and farinaceous messes of various kinds. She has been an in-patient of two of the metropolitan hospitals, and has undergone every variety of medical treatment, prolonged rectal feeding, lavage, etc. At the last hospital the question of exploration was considered, and the patient was prepared and placed on the operation table, but at the last moment it was decided not to operate. The patient was a dark, neurotic-looking woman, with an aspect of constant suffering, considerably wasted, but not extremely so. She told me that for a fortnight she had been unable to keep anything down, and that she had been using rectal feeding. An examination of the abdomen revealed a certain amount of tenderness about 2 inches above the umbilicus and a little to the right of the middle line, the area of stomach resonance was much increased, but there was no tumour to be felt. As every kind of treatment short of an operation had already been tried, I advised this latter, and sent her home with instructions as to rest and rectal feeding until I had a bed vacant for her.

Operation.—On January 11th, however, she had become so much worse that I saw her at home in consultation with her medical attendant, Dr. Banning of Shoeburyness. She was then in a state of extreme exhaustion, and retching about once an hour. The nutrient enemata were not being retained so well, and it was evident that unless something could be done for her relief without delay she would die very shortly, so on the following morning she was moved up to St. Mary's Children's Hospital, Plaistow, and admitted into one of my beds for women. The same evening (January 12th) I opened the abdomen. The stomach was much dilated, but contracted visibly after exposure; the great omentum was slightly adherent in the right iliac region, and thus formed a band which, extending from the iliac region to the pyloric end of the stomach, tended to fix that portion of the organ in an abnormal position, and might possibly have led to kinking under certain conditions of distension of the stomach. These adhesions having been separated, palpation of both anterior and posterior surfaces of the stomach revealed nothing abnormal. The pylorus was thicker than normal, so I decided to examine it from the interior. The stomach was accordingly opened about one and a-half inch from the pylorus, the orifice of which just admitted the tip of the little finger. The pyloric opening having been dilated, the remainder of the stomach surface was examined for any further abnormality, but nothing else was discovered. The stomach and parietal wounds were then closed in the usual way. The patient stood the operation remarkably well, and kept a good pulse throughout.

After-Course.—So far as the operation was concerned the case was promising, as the vomiting and retching entirely ceased, and there was no pain. On January 15th she took peptonised milk and a prepared food by the mouth, and retained it without trouble, but her condition was one of intense exhaustion The next day slight diarrhœa occurred, which just seemed to turn the scale against her, and she died somewhat suddenly, with symptoms of cardiac failure, on the morning of January 17th.

I feel sure that if the operation could have been undertaken before the patient became so worn out by the constant retching, the result would have been entirely favourable. I much regret that permission for a necropsy could not be obtained.

A MODIFICATION OF THE OPERATION OF INGUINAL COLOTOMY.

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IN the following case I adopted a novel method of performing inguinal colotomy, and, as the result realised my expectation, I think I am justified in publishing the case, though an isolated one:

S. A. D., aged 47, spinster, was admitted into the Metropolitan Hospital under my care on February 18th, 1897, suffering from carcinoma of the rectum. The growth was removed in the ordinary way, and she was discharged convalescent on April 7th. She was taught to pass a bougie, and instructed to do so three times a week; but in spite of this considerable trouble was caused by contraction of the scar. On May 23rd, 1898, she was readmitted with a tightish stricture, above which a mass of recurrent growth could be felt.

Description of Operation.—Before again attempting removal it was decided to perform inguinal colotomy, which was done on May 30th in the following manner: The abdomen was opened by a 2-inch incision at right angles to a line drawn from the left anterior superior iliac spine to the umbilicus, at its outer point of trisection, and a loop of sigmoid flexure drawn out. So far the operation had been conducted in the usual way. The proximal arm of the U-shaped sigmoid loop was then stitched all round to the edges of the incision in the external oblique muscle by a row of sutures which penetrated the external coats of the bowel only. A second incision a little over 1 inch in length was then made, parallel with the first and about 2 inches below it. This, which was placed just above Poupart's ligament, exposed the surface of the external oblique. The band of skin and subcutaneous tissue between the two incisions was next freed from the subjacent structures with the handle of the scalpel and the loop of intestine drawn out through the lower wound, where it was subsequently kept in position by a glass rod passed through the mesentery. The upper skin wound was closed.



After-History.—On June 8th, the bowel was opened, and the patient did uninterruptedly well. June 15th, the patient was examined under an anæsthetic with a view to removing the growth, but this was found to be so extensive that nothing was done. Owing to the irritation caused by the passage of fæces being now removed, the local condition improved so much that, after consultation, a further operation was decided upon.

Operation for Removal of Growth.—Accordingly on July 9th a clean sweep of everything was made, including the lower part of the sacrum, the coccyx, and the posterior vaginal wall. Into the details of this latter operation I need not enter, as I only wish at present to call attention to the manner of performing the colotomy.

After-History.—On August 23rd the patient was discharged convalescent, wearing an instrument, designed somewhat after the shape of a left inguinal truss, which made pressure over the colotomy wound and also over the bowel lying between the skin and the external oblique.

The photograph on p. 441, taken at the end of August, 1899 (15 months after the operation) shows well the position of the two incisions. The object of the operation as described was to allow the pad to make pressure upon a portion of the length of the wall of the viscus as well as upon the opening itself, and thus to obtain more efficient control, as in Frank's method of performing gastrostomy.

The aponeurosis of the external oblique seems to be a sufficiently resistant structure to afford efficient counter-pressure, but should this not prove to be the case, I see no reason why, in suitable cases, the gut should not be brought out below Poupart's ligament, or even over the crest of the ilium, except, perhaps, that the situation of the opening would be more inconvenient than the ordinary one. If greater control were obtained, however, a little extra inconvenience would be amply compensated. Of course in some cases the meso-sigmoid will not be long enough to allow of the procedure, but in most, if the intestine is first drawn well down and then well up, a sufficient length will be available.

If it were thought desirable to open the intestine immediately, the extra undermining of the skin would perhaps render the wound more liable to contamination than after the usual operation.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

FREQUENT DISLOCATION OF THE RIGHT SHOULDER.

THE following case, if not unique, is so unusual as to be worth recording. On February 24th, November 9th, 1894, March 26th, August 8th and 10th, December 2nd, 1895, April 1st, July 7th, 1896, I reduced a dislocation of the right shoulder joint in a man, aged 54. The same joint was dislocated and reduced at least four times by other surgeons. The first time the accident happened he refused to give the joint sufficient rest. The capsular ligament is very lax, and there is possibly a shallow glenoid cavity. He is a stout, well-built man, and the muscles of the shoulders are well-developed, large, and powerful. The only time I ever succeeded in effecting reduction, without anæsthesia, was on the first occasion, when he was too drunk to offer any resistance to my efforts. If he throw his hand above his head, or if he receive a slight blow on the shoulder, out goes the head of the humerus, sometimes into the axilla, at other times under the pectoral muscles. In June, 1896, I was called to reduce it, but before reaching his house his daughter met me, and said "the bone went back of itself." I supposed there was a mistake as to the nature of the injury; but in the light of what follows perhaps she was correct. On August 29th, 1896, he accidentally struck his right shoulder against a door, and the head of the humerus was thrown into the axilla. Failing to effect reduction without anæsthesia, I put him to bed, because as he had only just finished a hearty dinner I feared to administer chloroform until after the lapse of three hours, at least. After my departure he drank a good deal of whisky, and during his restless sleep he flung his arm about so much that in some manner spontaneous reduction took place. This I found, to my astonishment, when I returned to reduce it under anæsthesia, as usual.

Stillorgan Castle, co. Dublin. P. O'CONNELL, M.D., M.Ch.

FOREIGN BODY IN THE MALE URETHRA.

THERE are many cases on record of foreign bodies inserted in the male urethra, but I think the following instance, which came under my notice a short time ago, possesses a few points of special interest:

I was called one evening to a seafaring man who had been drinking heavily, and was then under the influence of alcohol. He informed me that he had passed a lady's bonnet pin up his urethra, that it had slipped from his grasp, and that he was unable to recover it.

I found the point of a black pin just protruding from the fleshy part of the glans penis, having perforated the mucous membrane; while the head, consisting of a large glass bead, could be felt deep in the perineum, grasped firmly by muscular contraction.

He was unable to bear any manipulation for its removal, so I decided to administer an anæsthetic. When under the influence of this the point of the pin was seized in a pair of strong toothed forceps, and the pin drawn through the urethra until its head rested against the urethral puncture; the pin was then rotated through a segment of a circle, and I was thus enabled to push it out of the urethra head first.

The pin was an ordinary black bonnet pin, 6½ inches in length. The patient, on recovering from the anæsthetic, immediately rejoined his vessel, and had no subsequent inconvenience.

Hackney, N.E. HORACE WILSON, M.R.C.S., L.R.C.P.

FRACTURE OF BOTH CLAVICLES.

REFERRING to the case of simultaneous fracture of both clavicles, recorded by Mr. Battersby in the BRITISH MEDICAL JOURNAL of January 13th, I may say that I had a similar case, due to a similar accident, a few years ago, when in practice at Accrington. A shunter was caught by the shoulders between the buffers of two gently colliding waggons, and sustained simple fracture of both clavicles in the middle third. The force seemed to have been just sufficient to snap the clavicles, and nothing more. Like Mr. Battersby, I was under the impression that my case was probably unique in its method of production.

Aberdeen. THOMAS MILNE, M.D.

WHEN IS CANCER CURED?

THE following case is interesting as showing how long after operation and apparent cure a cancer may return.

In November, 1890, I removed a scirrhous growth (the identity of which was proved by the microscope) from the axilla of a lady. She continued perfectly well until the autumn of last year, when she noticed a small lump in the neighbourhood of the old cicatrix. This I removed, together with the breast to which it was attached, last month—that is to say, nine years and two months after the first operation. This secondary growth was examined by the Clinical Research Association which, reports as follows: "This specimen shows a secondary scirrhous carcinoma in the fat of the axilla. It is not contained in lymphatic glands, but has evidently been deposited along the course of the lymphatic vessels."

Hearing, as we do, so much in the present day of a "time limit," I think this case worth reporting.

York. W. H. JALLAND, F.R.C.S.

THE BROMIDE SLEEP.

IN connection with Dr. Neil Macleod's paper in the BRITISH MEDICAL JOURNAL of January 20th, a case which came under my notice at the Kensington Dispensary a week or two ago may be of interest.

A youth, aged 16 years, was discharged from the navy for epilepsy, returned home, and took employment as stable boy. His mother, acting upon the advice of a neighbour, purchased seven pennyworth of potassium bromide at a chemist's. I ascertained that 2½ ozs. would be sold for this amount. The whole of this she dissolved in a pint of water, and directed her son to take a wineglassful, at stated times. The boy, however, dosed himself liberally out of a tumbler, and between Monday and Wednesday morning had taken three-quarters of the pint—that is, nearly two ounces of the salt in forty-eight hours. On the Thursday and Friday he was stated to be very drowsy, and, his parents becoming alarmed, his mother brought him to the dispensary on the Saturday. It was then three days since he had taken the last dose of the drug. He could only just manage to keep awake as he sat on his chair; he had a somewhat plethoric appearance, and that was all one noticed wrong with him until he was asked to walk, when he presented the staggering uncertain gait of a drunken man. He had no rash. His mind was clear, and his answers sufficiently accurate when he roused himself to reply to questions. His pupils were moderately dilated and reacted normally. His knee-jerks were normal. I ordered him some bitter tonic, and in three days he was practically

well again. On the tenth day, after taking his last dose, he had another fit lasting about fifteen minutes.

I see Dr. Macleod makes no mention of rash. One would infer from my case that manifestation of bromism depends rather on individual idiosyncrasy than on the quantity of drug taken. With regard to the degree of stupor supervening, I was impressed with the comparatively slight effect produced by so large a dose. There would have been no difficulty in rousing this boy to take nourishment. (This is at variance with Dr. Macleod's experience, for by this time, according to his cases, the "sleep" should have been profound.) Neither does it appear that an excessive dosage procures any lasting immunity from recurrence of epileptic "attacks."

Apart, however, from any interest attaching to this case in connection with Dr. Macleod's note, I desired to place it on record with a view to drawing attention to the impropriety of chemists being allowed to dispense in such large quantities drugs such as the one under consideration without a prescription.

Frank C. Ford, M.B.,
Honorary Medical Officer to the Kensington Dispensary.
Ladbroke Square, W.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

QUEEN'S HOSPITAL, BIRMINGHAM.

DERMOID CYST SIMULATING A MENINGOCELE.

(Under the care of Mr. F. Marsh, F.R.C.S., Surgeon to the Hospital.)

The patient, a young man, aged 25, was admitted on March 9th, 1899, into the Queen's Hospital, for a large rounded swelling situated in the middle line over the frontal bone and fronto-parietal suture.

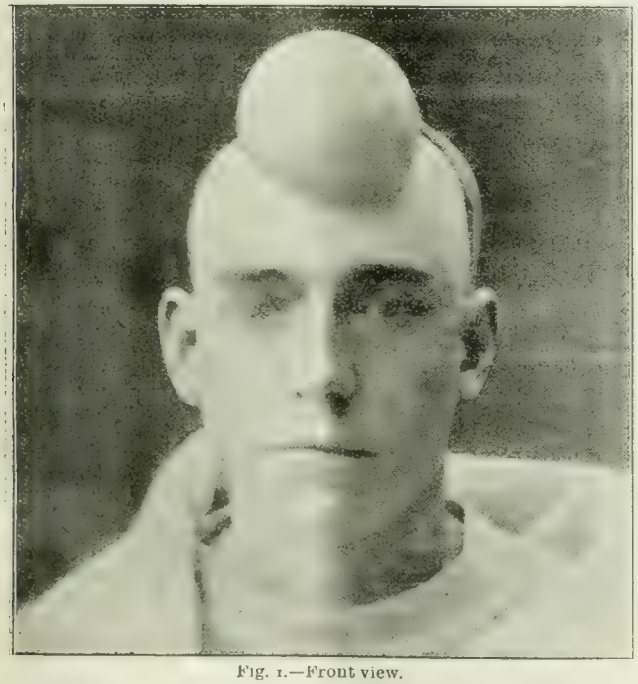


Fig. 1.—Front view.

The swelling had been there since birth, but had increased considerably in size during the previous twelve months. He had no pain nor inconvenience except from its bulk. The skin over it was normal, but the hair was not so abundant as over the rest of the scalp. It was not translucent, but was moderately tense and fluctuating. There was no tenderness on pressure, no impulse on coughing or increasing intracranial venous pressure, nor was there any perceptible diminution of the contents nor any symptoms caused by pressure. The bone round the base was felt as a raised ridge. The measurements were: Circumference at base, 11¼ in.; antero-posterior over swelling, 7¼ in.; lateral over swelling, 7 in. He had sought surgical assistance on several occasions, but had been always advised against operation. As the swelling—if a meningocele—had clearly only very slight, if any, communication with the interior of the skull, removal was advised.



Fig. 2.—Side view.

On March 10th an elliptical incision was made over the centre of the swelling and careful dissection of the wall commenced. This was unavoidably punctured, and a quantity of dark-brown grumous fluid escaped. The contents were seen to be sebaceous matter, hair, and epithelial *débris*. The cyst was then rapidly removed. The bone upon which it rested was, by pressure, flattened, and there was a marked ridge round the circumference, so causing the crater-like condition noted prior to operation.

The wound healed by primary union, and the patient was discharged cured on the 16th.

The notes of the case and photographs were taken for me by Messrs. Baylis and Dent, House-Surgeons.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

A. Pearce Gould, M.S.Lond., Vice-President, in the Chair

Tuesday, February 20th, 1900.

The Forms and Significance of the Proteids met with in the Urine.

Professor Halliburton opened the discussion on this subject by expressing regret that one with more clinical experience had not been selected to do so. He saw, however, the advantage of debates of this kind, in which pathologists of the laboratory could compare notes with those of the bedside; such co-operation was most useful in combating the disadvantages of over-specialisation. Their knowledge concerning proteids was still most imperfect. The substances found were of great molecular weight, and the large size of the molecules doubtless explained why in normal circum-

stances they were not able to pierce the barrier of renal epithelium except in the most minute traces. The proteid matter, however, of normal urine was chiefly contained in the mucicula. Still Mörner had shown that there was a trace of serum albumen even in normal urine. Serum albumen was also most abundant in the so-called physiological albuminuria, the causes of which were briefly alluded to. But in Bright's disease serum albumen was usually mixed with serum globulin, as Senator originally showed. The proportion in which these two proteids occurred still needed more investigation. As a general rule the globulin was less abundant, and the presence of much globulin was generally a serious condition. Some evidence showed that the molecules of globulin were larger than those of albumen, hence the abundance of the latter could be accounted for on physical grounds. It was only after the renal epithelial cells were greatly damaged that globulin could permeate through them. Some exceptional conditions, such as Byrom Bramwell and Noël Paton's case of crystalline globulin in the urine, and cases of fibrinuria were mentioned. The fibrinogen molecule was probably still larger than that of serum globulin, hence its comparative rarity in the urine. A similar explanation would hold for the fact that caseinogen of milk had never been found in cases where lactose was discoverable. Passing in review other and rarer urinary proteids, Professor Halliburton dwelt more especially on those with small molecules, and distinguished between peptonuria and albumosuria. The former term should be restricted to those cases, usually of suppurative nature, in which bacterial digestion led to the formation of proteolytic products, these being cast out from the body mainly by the kidneys. The substance most frequently found was not true peptone in Kühne's sense, but deutero-proteose. The term "albumosuria" was usually restricted to those rare cases in which, owing to osteomalacia and certain other bone diseases, the form of albumose that passed into the urine was hetero-albumose. Only a few of such cases had been hitherto fully recorded, and though there were small differences between the various cases, they on the whole agreed fairly well with the description originally give by Bence Jones.

Dr. T. R. BRADSHAW (Liverpool) confined his observations to myelopathic albumosuria, a condition of which eleven authentic instances had hitherto been recorded. In the case which was under his own observation the proteid was frequently precipitated spontaneously, so that the urine looked like milk when it was passed. Its most characteristic reactions were its precipitation at a temperature below 60°C., and by nitric acid and hydrochloric acid in the cold, the precipitate in every case being more or less soluble on boiling. The heat precipitate was entirely dissolved by a 1 per 1,000 solution of caustic soda without apparently undergoing any change in its nature. Careful analyses indicated that the proteid was all of one kind; if any others were present they were only in traces. As regarded the nature of the proteid, its reaction with nitric acid showed that it was an albumose, but it was doubtful whether it could be identified with any of the albumoses known in physiological chemistry. The balance of evidence pointed to its being an albumose of a peculiar kind which was not found in any other conditions. Clinical experience showed that its appearance in the urine was the earliest available indication of an affection of the bones of the trunk, which, as far as experience went, was always fatal. Dr. Bradshaw demonstrated the characters and reactions of the urine.

Dr. ROBERT HUTCHISON described a peculiar proteid found in the urine of a patient who died in the London Hospital of multiple myeloid sarcoma, the diagnosis having been verified *post mortem*. The proteid differed entirely from that hitherto described in such cases in belonging to the group of albumens, but whilst agreeing with serum albumen in most respects, it differed from it (1) in having a far lower coagulation point (58° C.), (2) in being more readily denaturalised, (3) in not being easily precipitated by acetic acid and ferrocyanide of potassium. The proteid in this case was entirely different from Bence Jones's albumose, nor was it a nucleo-proteid nor a histon. It must be regarded as a hitherto unknown albumen. Six grams of it were passed daily during the short time that the patient was under observation. No chemical examination of the tumour could be made.

Dr. PAVY commenced his remarks by saying that he could not consider albuminuria as ever being physiological; it might be functional, as not being due, that is, to histological changes in the kidney, but it was in all cases pathological. In regard to sugar the molecule of this substance was exceedingly small, whilst that of albumen was large. If sugar were present, therefore, in the blood, it could not fail to appear in the urine; it would filter through the capillaries under normal conditions; for the passage of albumen an increased pressure was necessary. This was seen in the albuminuria that followed prolonged exercise, and it explained the phenomenon of cyclic albuminuria. Under some special and unknown conditions the upright position would so increase the renal blood pressure as to produce an albuminuria, which was absent whilst the patient retained the recumbent position—it was for this reason cyclic. Although healthy urine contained no albumen, it might nevertheless contain small amounts of proteid, which reached it from the mucosa of the urinary passages; the substance was nucleo-albumin; and its presence was at times a source of fallacious prognosis. As to the determination, in albuminuria, whether the albumen or globulin predominated, it did not at present admit of being related to prognosis; nor was the actual quantity of proteid present of so much importance as the other changes in the urinary constituents in Bright's disease.

CARD SPECIMEN.

Mr. J. VALÉRIE: Fibroid thickening, the result of impaction of a piece of glass in the hand.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

J. GORDON BLACK, M.D., Vice-President, in the Chair.

Friday, February 2nd, 1900.

NOTIFICATION OF PHTHISIS.

DR. SPOTTISWOODE CAMERON introduced this subject rather, as he said, to secure discussion than to take up any very pronounced position. He thought the objections which would probably be urged against the notification of phthisis were of three kinds: (1) There was the very important one of "breach of confidence." The statutory obligation to report certain cases had in regard to such diseases done away with this difficulty, but in regard to phthisis, which was not at present included amongst these, the difficulty remained. Was it not, however, quite easy to get over it by obtaining the permission of the patient to the procedure? (2) The second objection was that notification was valueless. This, if sustained, would be fatal. In answer to this it was contended (*a*) that knowledge of cases enabled the sanitary authority to disinfect at intervals rooms occupied by phthisical patients; (*b*) it enabled them to suggest in some cases a certain amount of isolation, and would indirectly lead to the strengthening of the hands of those who wished to see proper hospital accommodation provided for patients of this class; again (*c*) the visit of the sanitary officer would often lead to the dealing with such sanitary shortcomings as the overcrowding of dwellings; it would also (*d*) have the effect of educating the public as to the communicability of the disease and by the distribution of handbills and by friendly explanation do something to overcome the crass ignorance on this subject, especially of the poorer classes. Not the least important, perhaps, of the advantages that might be expected from notification would be the greater opportunities it would give the health officer of getting at (*e*) the causes of the disease. Inquiring back from recent cases, he would visit workplaces where the patients had been employed, ascertain perhaps that other sources of infection existed there, remove conditions favourable to the spread of disease at the workshop. (3) The third objection might perhaps be that the system was impracticable. The best reply to this was that it was already in action. In Carlisle, the medical officers to the Union and to public institutions notified cases of phthisis in their practice. In Leeds, it might be mentioned in passing that dairymen had agreed to a testing of their herds, and of new cattle added to their herds, by tuberculin. In Sheffield also, he believed, notification had been determined on.

In response to the invitation of the Chairman, Dr. Niven (Manchester) described how the 500 cases from public practice which had been notified since September, 1899, had been dealt with. Every one of these cases had been visited by a medical man appointed for that purpose. He personally instructed the patient and his friends how to deal with the sputum to prevent its becoming dry and pulverised. He advised as to the disinfection of the rooms, reported on the source of infection, and the conditions as to overcrowding, and investigated the origin of the disease. The case then came on to the list of one of the lady visitors, of whom the Corporation had several. She visited the house at intervals, and saw that the measures advised were being carried out, giving such assistance and advice as might be required. Up to the present, the cases reported being chiefly well-marked ones, they had not thought it necessary to make arrangements for examination of sputum. This might be required when notification became more general. There were many advantages in their having begun in Manchester with the modified notification of institution cases. They had learned much; they had got their machinery into working order. In regard to disinfection their most usual plan was to wash the walls down with a weak solution of chloride of lime, as recommended by Professor Delépine. They regarded "the clean down" as one of the essentials with dirty households. Speaking of the infectivity of phthisis Dr. Niven mentioned that an investigation into the causation of a large number of fatal cases of phthisis had shown that in half of them there had been opportunities of infection from other cases of the disease.

Mr. H. J. Roper thought that general practitioners were capable of diagnosing their own cases of phthisis, and said that, in his experience, instructions such as those mentioned by Dr. Niven were usually given by doctors to their phthisical patients in the ordinary routine of practice.

Dr. Trevelyan said the notification of phthisis would undoubtedly enable them to lessen the mortality from phthisis, which in Leeds itself was over 600 per annum. With this notification the all-important question of educating the patient in regard to the spread of the disease to those about him became easier. Even now every phthisical hospital outpatient should receive simple printed instructions to enable him to avoid communicating the disease to others. The notification of phthisis and its diagnosis were closely related subjects. In some early cases, as was well known, it was impossible to make a certain diagnosis from the physical examination, even when taken in conjunction with the symptoms; in a proportion of such cases an examination of the sputum would be of assistance. Therefore he was in favour of the sanitary authority making provision for the examination of the sputum of suspected cases free of charge, in the same way as was done for diphtheria and some other infective diseases. Dr. Trevelyan did not think that the notification of phthisis judiciously carried out should give rise to any friction between the medical profession and the sanitary authority.

Mr. J. Holmes thought that not only should notification be adopted, but that institutions should be provided for the treatment of the phthisical.

Dr. Johnstone (M.O.H. Ilkley) said that having had experience of the Notification of the Infectious Diseases Act ever since it became law, he was able to speak most emphatically as to its value. He believed that all infectious diseases, including phthisis, should be notified and that arrangements should be made for treating phthisis in separate institutions. At the Ilkley Convalescent Home the few phthisical patients who were taken in slept in special wards, and every care was taken to give them practical instruction as regarded the spread of the disease. His experience would lead him to infer that sufficient stress was not always laid by every member of the profession upon the general instructions referred to by Dr. Niven.

Dr. Sanderson Long, and Dr. Bronner also took part in the discussion.

After some remarks from the Chairman, Dr. Cameron and Dr. Niven replied.

The Treatment of Gonorrhœal Arthritis.

Dr. Churton read notes of cases of severe gonorrhœal arthritis, a few simple, others complicated with rheumatism or with syphilis or both, in which the duration of the disease was apparently very much lessened by the frequent administration of sandal-wood and other oils, salicylates, mercury, etc.

Mr. Jessop, Dr. Solly, Mr. Moynihan, and Dr. Draper took part in the discussion; and Dr. Churton replied.

Cases, Pathological Specimens, etc.

The following were shown: Mr. Prigdin Teale: Tuberculous tumour of breast.—Dr. Croft: (1) Uterine appendages removed by laparotomy, showing tubo-ovarian abscess; (2) a calculus (weight 232 grs.) removed from female bladder by vaginal cystotomy; (3) a calculus (weight 5 grs.) passed spontaneously from female bladder.—Dr. T. Wardrop Griffith: (1) Two specimens of stricture of the œsophagus; (2) specimens of rheumatoid arthritis; (3) rheumatoid arthritis in a child following on measles.—Mr. Littlewood: (1) a patient on whom he had performed a month ago pyloroplasty for pyloric stenosis due to ulcer; a woman, aged 36 years, who had lost 4 st. in weight during the last eighteen months, and had vomited almost daily during that time; she had only vomited once since the operation, and was now taking ordinary diet; (2) an ovarian cyst, with a twisted pedicle and a specimen of osteitis deformans of the tibia and fibula.—Mr. Secker Walker: A diagrammatic model of the eye, designed for the teaching of refraction and accommodation.—Dr. Churton: (1) A child with anasarca without albuminuria, but with excessive indicanuria; (2) a specimen of cystin in the urine.—Mr. Mayo Robson: Enlarged axillary glands (small, round-celled sarcoma) of a few months' growth, secondary to a tumour of the breast (primarily an adenoma) of sixteen years' duration.—Dr. Trevelyan: A case of laryngeal disease in a child, probably due to congenital syphilis.—Dr. Bronner (Bradford): Large cholesteatoma removed from upper part of middle ear (attic); no subjective symptoms.—Mr. B. G. A. Moynihan: (1) Two cases of traumatic birth palsy; (2) congenital deformity of the hands; (3) case of Charcot's disease of both knee-joints.—Dr. J. B. Hellier: The uterus from a case of eclampsia, showing placental site.—Mr. Ward: An epithelioma of the forearm.—Mr. Cammidge: A ruptured liver.—Mr. Lawford Knaggs: (1) Primary resection of the bowel for extensive ulceration and perforation in a hernia (specimen and patient); (2) gangrene of the bowel and hernial sac; primary resection.—Mr. A. L. Whitehead: (1) Case of bilateral paralysis of the third nerve; (2) skiagraph of steel chipping in the eyeball.

LIVERPOOL MEDICAL INSTITUTION.

Edgar Browne, F.R.C.S.Edin., President, in the Chair.

Thursday, February 8th, 1900.

Presentation to Librarian.

Mr. William Jones, the resident Librarian, having been 21 years in the service of the Medical Institution, the members, wishing to mark their appreciation of his services, had collected a sum of £193 12s. 9d. (£95 6s. being collected by Dr. Rentoul and £98 6s. 9d. by a Subcommittee of the Medical Institution), and the President presented to Mr. Jones a cheque for that amount.

Mr. Jones thanked the members, introducing some interesting reminiscences in his remarks.

A Liverpool Branch of the National Association for the Prevention of Consumption.

Dr. Nathan Raw proposed:

That it is desirable that a local branch should be established in Liverpool in connection with the National Association for the Prevention Consumption and other Forms of Tuberculosis.

Dr. Carter seconded, and the motion was carried *nem. con.*

Dr. Hope said that Liverpool had through its City Council, Medical Institution, and Boards of Guardians, and the munificence of private individuals, taken active measures in regard to tuberculosis, but no branch of the National Association had been formed in it; and moved that the subcommittee appointed in 1898 to deal with questions on tuberculosis should be reappointed. This motion was seconded by Dr. Carter and carried *nem. con.*

Cases.

Mr. C. G. Lee showed (1) a patient who had been accidentally shot, the bullet penetrating the inner and upper angle of the right orbit, traversing the orbit, missing the eyeball, and finally lodging, as shown by radiographs, in the spheno-maxillary fossa. The boy was in perfect health, and although the bullet was still in the head, except for a limited choroidal atrophy, appeared none the worse. (2) A youth who had a piece of steel encapsuled with lymph lying at the posterior part of the retina. When first seen there was traumatic cataract, and the foreign body was discovered by the radiograph. The vision was now $\frac{6}{9}$ and the eye quiet, so Mr. Lee had decided to make no attempt to remove the foreign body.

Pathology and Treatment of Pneumonia.

Dr. Hope, in resuming the adjourned discussion on Dr. Raw's paper, said that the profession generally were agreed that interference predisposed to, and probably actually caused, the fatal results in many cases of pneumonia, but reference to this fact was not made in the death certificates. He had also found in Liverpool that fatal pneumonia coincided with influenza epidemics, and that the fatality of these diseases was

not associated so much directly with cold as with sudden changes of temperature.

Dr. MACALISTER, referring to the serum treatment of pneumonia, thought that the argument that the crisis resulted from the production of the antitoxin and that immediate relapse was thereby rendered unlikely was not maintained in the case of broncho-pneumonia where fresh patches of consolidation succeeded one another, and that one attack of croupous pneumonia seemed to predispose to subsequent attacks.

Dr. ABRAM agreed as to the specific infective nature of acute obar pneumonia, and thought that present lines of treatment were unsatisfactory mainly because they were symptomatic, and hoped that the work of Washbourn, Pal and others might give a curative serum. Maragliano had recently shown that the admixture of digitalin with nutrient media completely inhibited the growth of the pneumococcus, which afforded a valuable suggestion for curative treatment.

Dr. GULLAN noticed that the mortality in lobar pneumonia had been greater in 1899 than in the three previous years at the Royal Infirmary and thought the type of the disease had been more severe constitutionally and the local signs more extensive.

Dr. HAY referred to the influence of the alcoholic habit and stated that out of 100 cases that he had watched two-thirds of the entire mortality was amongst the alcoholics. He considered that cardiac valvular disease associated with pneumonia was of much less importance than degenerate myocardium, the condition of the latter being more important as a factor in the prognosis.

Dr. MACFIE CAMPBELL saw these cases at their commencement, and was responsible for their early treatment. He considered it was a much more fatal disease than it was twenty years ago; this he attributed to the influenza poison. Pleurisy was a frequent irritating symptom, and for that aconite relieved the pain and fever. Salicylate of soda with carbonate of ammonia were his stand-by, and small doses of opium in the form of Dover's powder for the relief of pain. In order to clear up the point as to the influence of alcoholism on the mortality, it would be well if death certificates should pass straight from the doctor to the registrar, otherwise the practitioner was placed in an awkward position.

Dr. A. E. DAVIS thought that with careful nursing and treatment the death-rate from pneumonia should be under 10 per cent. He advocated the treatment of ammon. carb. and brandy, and would never use opium or other narcotics.

Dr. NATHAN RAW, in reply, said he had included all forms of pneumonia in his statistics, as it was impossible to classify them. He thought the death-rate from genuine lobar pneumonia was probably about 12 per cent. He thought no treatment had any effect in cutting short the disease, or to any great extent influencing its progress. He found ammon. carb. the most useful expectorant and stimulant, and the combination of chloral and digitalis useful and soothing. Strychnine was the best drug in threatened heart failure. Oxygen was of little value, and as to alcohol, many cases did not require it; but in others it was necessary, must be of good quality, and was most valuable.

PATHOLOGICAL AND MICROSCOPICAL SECTION.

J. HILL ABRAM, M.D., in the Chair.

Thursday, February 15th, 1900.

MALIGNANT DISEASE OF PAROTID.

MR. F. T. PAUL exhibited specimens from six cases of malignant tumour of the parotid gland. Five were carcinoma and one a spindle-celled sarcoma. Of the five the majority were decidedly of the type of pure adenoma of the gland, even in their secondary infections; but one at least was almost indistinguishable from breast cancer. The malignant tumours of the parotid gland formed 30 per cent. of the total he had met with, the rest being all varieties of adenoma.

GASTROSTOMY.

Mr. RUSHTON PARKER showed the œsophagus and stomach and skin attachment of a man, aged 50, on whom he had performed gastrostomy at the Liverpool Royal Infirmary in June, 1899.

The diagnosis was malignant stricture of the œsophagus, and the operation answered its purpose well, enabling the man to feed on a mixed diet, which after mastication was passed by a funnel and tube into the stomach through the artificial opening. After three months the patient's health, previously robust, began to fail and he died on December 26th, 1899, at the Workhouse Infirmary, Mill Road. Dr. Raw made a *post-mortem* examination, the cause of death being acute pulmonary tuberculosis. Tubercles were also found in the peritoneum. A growth constricting the œsophagus showed the microscopic structure of epithelioma, and a specimen was exhibited at the meeting. Mr. Parker expressed his indebtedness to Dr. Raw for the specimens and notes of the necropsy.

INTESTINAL OBSTRUCTION.

Mr. PARKER also showed the pelvic organs and stomach of a young woman, aged 21, who had been sent by Dr. Dowling (Haydock) into the Royal Infirmary for intestinal obstruction with ascites.

The rectum was much narrowed owing to pressure by the surrounding tissues in a way not evident at first. Left inguinal colotomy was performed, and much peritoneal fluid escaped, but no disease of the colon was found. Whatever it was was all in the pelvis, and indistinguishable. She died four days later from septic infection of the peritoneal fluid remaining. On *post mortem* examination the connective tissue around the rectum was found extremely dense, fixing and compressing the rectum against the sacrum. This was apparently of inflammatory origin, and the tissues of the left iliac fossa were also found condensed, fully accounting for an attack of phlebitis, which had been her first symptom. Microscopic examination of the tissues showed round-cell infiltration, evidently inflammatory. The stomach was altered, the greater part being in the "india-rubber bottle" condition, showing under the microscope colloid infiltration. A neighbouring lymphatic gland also showed colloid carcinoma. There had been a previous history of symptoms of dyspepsia, as if due to gastric ulceration. Slides of each feature were exhibited.

VERTEBRAL CARIES.

Mr. PARKER also showed the cervical vertebræ of a young married woman who had had three children.

She had been sent in from the out-patient department on account of stiffness and thickening of the back of the neck, with loss of sensation in all the limbs and loss of motion in the right arm and leg. There was a prominence of the vertebral cervical spines. A diagnosis of caries was made, but whether from syphilis or tubercle opinion differed. She died two days after admission quite suddenly after a sort of fit with dyspnœa, for which she asked to be raised in bed, falling dead shortly after. On *post-mortem* examination the odontoid process of the second vertebra was found detached and bare from periostitis and caries, affecting also the front of the body of the same vertebra. The spinal dura mater was thickened at that level, and slightly ecchymosed outside. There was no visible alteration of the spinal cord itself. The skull-cap was much thickened and the diploë obliterated, and on one frontal eminence was a fibrous gummatous thickening of the pericranium. The brain was healthy throughout. In the muscles behind the cervical vertebræ was a cheesy mass, apparently a gumma, that had been felt and diagnosed as such in the out-patient room.

URETHRO VESICAL CALCULUS.

Mr. KEITH MONSARRAT exhibited a urethro-vesical calculus removed from a boy aged 8; it measured nearly 2 inches in length, and was shaped like a dumb-bell.

DEGENERATION OF SPINAL CORD FROM SEMISECTION.

Professor SHERRINGTON and Dr. LASLETT exhibited the spinal descending degeneration produced in a dog by a semi-transverse section through the spinal cord performed at the region of the fourth lumbar nerve. The degeneration was practically confined to the half of the spinal cord on which the lesion had been made. The specimens had been prepared by the Marchi method. There were numbers of descending degenerate fibres in the ventral as well as in the lateral column of the cord.

ASCENDING TRACTS IN SPINAL CORD.

Dr. WARRINGTON read a note describing an investigation carried out jointly with Dr. Laslett on ascending tracts in the spinal cord of the human subject. Two separate tracts were demonstrated, and their course traced to the cerebellum. The note was illustrated by microscopic specimens and photo-micrographs.

The specimens were discussed by Sir WILLIAM BANKS, Drs. WIGLESWORTH, ABRAM, WARRINGTON, Professor SHERRINGTON, and Messrs. PAUL and PARKER.

THE PARASITE OF CANCER.

Mr. KEITH MONSARRAT read a paper incorporating an account of extensive investigations carried out by himself on the etiology of cancer. These investigations were made by histological and experimental methods. By means of the latter methods he had been able to isolate from carcinoma an organism and had grown it upon various media; from these cultures inoculations had been made into the peritoneal cavity of guinea-pigs, with the result that they developed new growths on the peritoneum, and secondary growths in the internal

organs. In these growths the parasitic organism was found in abundance, and a further series of cultures made. Mr. Monsarrat stated at the outset that, although the theory of the parasitic origin of cancer was far from conclusively proved, at the same time it was second to none as a working hypothesis. A comparison was drawn between the cancer process and certain chronic infective processes. The explanation of the uniformity of primary and secondary growths was, he considered, to be found in the intracellular migration of the parasite, so that the cancer cells carried within them to the new nidus the stimulus to their own multiplication, and the cell type in this way remained the same. A description was given of the parasites as observed in carcinomata, the considerable diversity of form being shown by photomicrographs. A selective method of staining was described which had demonstrated several new points in their morphology. This method had been applied after the demonstration of its efficacy in distinguishing the parasite which had been isolated and inoculated. A description of this isolation and inoculation was then given. A comparison of the isolated organism and the cancer bodies showed that morphologically they appeared to be identical, accounting for the varieties of form in each. Lastly, the results of inoculation were stated to have been the production of new growths in the peritoneum, and secondarily in the liver, spleen, lungs, and kidneys, of endothelial elements in the peritoneum, lungs, and kidneys, but of cells of uncertain origin in the liver and spleen, though the type exactly corresponded with that composing the peritoneal growths. Guinea-pigs had so far alone been used. The analogies between these processes of new growth formation and carcinomata were discussed. The paper was profusely illustrated by means of microscopic specimens, photomicrographic and coloured lantern slides. The investigation had been assisted by a grant from the British Medical Association.

In the discussion which followed, Mr. F. T. PAUL, whilst admitting the presence of the bodies described, maintained that proof was still wanting that they were the cause of cancer. He considered that no line of demarcation existed between innocent and malignant growths; nor between innocent growths and normal tissue formation. The pathology of cancer he still believed to be more closely associated with embryology than bacteriology.

Professors BOYCE and SHERRINGTON, Sir WILLIAM BANKS, Drs. ABRAM, LOGAN, BUCHANAN, and GRÜNBAUM also took part in the discussion; and Mr. MONSARRAT replied.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

BENNETT MAY, F.R.C.S., President, in the Chair.

Thursday, February 8th, 1900.

INFECTIVE THROMBOSIS OF LATERAL SINUS.

MR. HEATON showed a man, aged 35, on whom he had successfully operated for infective thrombosis of the lateral sinus occurring in the course of middle-ear disease.

The patient had suffered from middle-ear disease for many years. In November, 1899, he was admitted into hospital suffering from intense left-sided headache and a fœtid discharge from the ear. He had in addition pain and tenderness extending below the mastoid process, and rigors daily whilst in hospital. The mastoid antrum was first explored and throughly cleansed. The left lateral sinus was then freely opened; it was filled completely with a soft adherent clot. On passing a small Volkmann's spoon down towards the jugular fossa, a drachm of most offensive pus was evacuated. The sinus was thoroughly cleansed and lightly packed with strips of gauze. The patient made an uninterrupted recovery. The pus on cultivation yielded growths of staphylococcus pyogenes albus and citreus, a non-capsulated diplococcus, and many putrefactive bacteria. There was no loss of blood during the operation, and the internal jugular vein was not ligatured.

RUPTURED TUBAL PREGNANCY.

Mr. JORDAN LLOYD showed a left tubal pregnancy successfully removed from a woman, aged 41, who was supposed to be suffering from intestinal obstruction. The chief interest of the case lay in the fact that since the birth of her last child fourteen months ago she had menstruated regularly every fourth week, the last period having taken place fourteen days before the onset of the present illness, which had begun twelve days before operation. Another interesting feature was that the left tubal ostium was completely closed by old firm adhesions, which rendered it quite impossible for an ovum to have entered the tube in the usual way. The ovum originating the present pregnancy must have found its way to the left tube from the uterus, and must therefore have come in the first instance from the opposite side.

SUTURE OF PATELLA AFTER FRACTURE.

Mr. T. VINCENT JACKSON showed two men recently operated upon for simple transverse fracture of the patella.

In one, aged 21, the operation performed was the tying subcutaneously of the broken fragments together by a strong silk ligature. The patient was in the Wolverhampton and Staffordshire General Hospital for three weeks, and now, sixteen weeks after his discharge, he was able to follow his occupation, and could walk and flex the joint well. In the second, aged 52, the left knee-joint was laid open by a longitudinal incision, and the articulation having been cleared of all clots, loose pieces of aponeurosis, and well washed out, a piece of silver wire, instead of passing through punctures made in the fragments, encircled both longitudinally by first being passed beneath them, and after each had been carefully and closely approximated, the ends of the wire were drawn together over the patella as tightly as possible, twisted two or three times, and then cut off. The man at the present time, six weeks since the operation, could walk well, and his power of flexing the joint was daily increasing.

MYOMA OF UTERUS REMOVED BY TOTAL HYSTERECTOMY.

Mr. SMALLWOOD SAVAGE showed a specimen of a myomatous uterus which he had removed by abdominal hysterectomy.

The patient, aged 35, had been married ten years, and had had one child eight years ago, since when she had been sterile. The tumour in the abdomen had been noticed twelve months, during the latter period of which it had considerably increased in size; it had caused neither pain nor hæmorrhage. On examination the tumour reached as high as the umbilicus, was uniformly hard, and it was found difficult to determine whether it was one with the uterus. On January 11th abdominal section was performed after vaginal cleansing, and the tumour removed. The ligatures and a gauze drain were brought down into the vagina and the abdomen closed. Both ovaries and tubes were left. The operation caused considerable shock, for vomiting did not commence until twenty-six hours after, and continued on and off until the fourth day, when the bowels were freely open. The pulse never exceed 104 and the temperature 99°. Since the fourth day the patient made an uninterrupted recovery, and was now quite well. The tumour was the size of an adult head.

PLASTIC OPERATION FOR REPAIR OF SCROTUM.

Mr. HASLAM showed a man, aged 40, who was admitted with gangrene of nearly the whole of the scrotum, which he attributed to an injury. As a result of this the testicles were left quite exposed, and the fragment of scrotum was not enough to cover either of them, even had one been removed. By means of taking a strap of tissue from the perineum, and bringing this up over the testicles, they were completely covered, and the patient had now a perfect scrotum.

PAPER.

Mr. JORDAN LLOYD read a paper on the symptoms and treatment of stone in the ureter.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

A. E. MORISON, M.B., C.M., Vice-President, in the Chair.

Thursday, February 8th, 1900.

OPERATION FOR APPENDICULAR ABSCESS.

MR. RUTHERFORD MORISON brought forward three patients operated upon for abscess in connection with the appendix, and illustrating points which he wished to raise.

The first, a boy, was seen on the ninth day of illness, without temperature, but with tender swelling in the right iliac fossa. On operation, an abscess was found containing 1 ounce of pus on the inner side of the cæcum, a perforated appendix and loose stercorolith in abscess cavity. The presence of pus was an undoubted indication for operation, but in certain cases it was difficult to diagnose; if after the fourth day there was a tender mass, operation should not be delayed.

The second case, a boy, had had four previous attacks, and on the fifth was seen urgently ill with doubtful diffuse septic peritonitis. The abscess simply incised, and six months later the development of a similar illness occurred, with a localised mass, which this time burst into the cæcum. On the seventh attack operation was performed before rupture, and the appendix removed. Mr. Morison strongly advocated removal of the appendix in suppurative cases, for the reason that he had operated upon six cases in which after simple incision attacks had recurred.

In the third case, a girl, upon operation a hole was found communicating with the cæcum.

Bursting of the abscess was therefore a not uncommon occurrence, and might terminate in recovery without operation, but operation, by determining the direction of pus evacuation, undoubtedly gave the best chance. Mr. Morison laid stress

on the following points: (1) The diagnosis of pus was largely determined by the presence of tender mass; (2) even in the presence of abscess the appendix should be removed, otherwise attacks might recur; (3) such abscesses by bursting into the cæcum might terminate in cure, a result neither to be waited for nor relied upon. He showed a series of diagrams illustrating the various positions in which appendicular abscess might occur and the anatomical position taken by the vermiform appendix.

Dr. CLAY, Dr. BEATTIE, and Dr. JAMES DRUMMOND took part in the discussion.

INFANTILE SPASTIC DIPLEGIA.

Mr. ALBERT M. MARTIN showed a child, aged 11 weeks, born after a somewhat severe and tedious labour.

It did not recover properly for 15 minutes. Since birth the condition had been noticed. At the present time the arms were rotated in at the shoulders, the forearms were markedly supinated, rigidity was very evident. The legs showed slight rigidity, with exaltation of reflexes; no muscular wasting; no facial palsy.

Mr. Martin took the view that the lesion was a hæmorrhage into the motor cortex, and that this probably resulted from the asphyxia at birth. Treatment was discussed, and also prognosis. Mr. Martin mentioned that these cases improved up to a certain point as the child grew older, the legs, as in this case, showing earlier and more complete improvement than the arms.

BRANCHIAL DERMOID.

Mr. ALBERT M. MARTIN also brought forward a child, aged 6 months, who had had a circumscribed fluctuating mass in the right side of its neck since birth. It was no doubt a dermoid in connection with the second branchial cleft.

PYLORECTOMY WITH REMOVAL OF MALIGNANT NODULE IN LIVER.

Dr. HUME showed the following case:

A woman, aged 51, three years ago developed stomach symptoms, with a movable nodular growth in the situation of the pylorus. Eighteen months after pylorectomy, with removal of glands, was performed; a small nodule of doubtful character was noticed in the skin cicatrix. This did not quickly increase in size, and one year later, at a second operation, a hard malignant nodule, in the margin of the liver to the left of the gall bladder, was removed after the application of an elastic ligature, the stump being treated extraperitoneally. The patient made a good recovery, the wound being now almost healed.

PYLOROPLASTY.

Dr. HUME showed two men who had had symptoms of dilatation of stomach for many years, and after pyloroplasty had rapidly improved in their general condition, increase in weight being a prominent feature. He advocated that doubtful stomach cases were worthy of exploration, and emphasised the expediency of these cases of early operation.

AMYOTROPHIC LATERAL SCLEROSIS WITH BULBAR SYMPTOMS.

Dr. OLIVER showed a case.

The man, aged 49, a stone mason, had a severe attack of influenza five years ago, which incapacitated him for work for six months. He had never been well since, and two years ago the present symptoms developed and had subsequently increased. He now displayed marked weakness and atrophy of the deltoids, the muscles of the upper arm and chest; weakness of the legs, with extensive fibrillation, together with increased reflexes. Along with this condition there was paralysis and atrophy of tongue and of the orbicularis oris.

CARD SPECIMENS.

The following were shown:—Dr. OLIVER: Drawing and specimen of pedunculated tumour of labium successfully removed. — Dr. WATSON: Photograph of unusual example of hare-lip with cleft extending into nose, from non-development of fronto-nasal process.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

CLINICAL EVENING.

R. L. SWAN, P.R.C.S.I., President, in the Chair.

Friday, January 19th, 1900.

EPITHELIOMA OF THE EPIGLOTTIS AND LARYNX.

MR. H. GRAY CROLY exhibited a man, aged 42, who had a growth attached to the epiglottis. No history of syphilis. The patient became emaciated, and suffered from considerable dyspnœa. Tracheotomy was performed. Mr. Croly showed the silver trachea tube which he used for some days, and then exhibited a rubber tube. He also showed an improvement in the end of the tube which he had adopted so as to prevent irritation.

Remarks were made by Professor BENNETT, Dr. KNOTT, the PRESIDENT, Mr. LENTAIGNE, Mr. HEUSTON, Mr. BENSON-GOULDING, and Mr. KIRKPATRICK; and Mr. CROLY replied.

GOITRE REMOVED UNDER COCAINE.

Mr. JOHN LENTAIGNE exhibited a patient, aged 20, from whom he had removed the greater portion of a very large goitre on September 4th, 1899. The operation had been done entirely under local anæsthesia by cocaine. It was well known that Professor Kocher habitually used this method with success in cases of severe goitre, but Mr. Lentaigne was not aware that so far anyone in Ireland had done so, and he thought the case might be of some interest. The result had been in every way most satisfactory. The goitre proved to be of the colloid variety. The left lobe of the goitre, which had been left, had shrunk since the operation to such an extent as to be now barely noticeable, and the patient was in excellent health and condition. The incision employed was the collar incision recommended by Professor Kocher.

Mr. LENTAIGNE, in reply to Mr. CROLY, Dr. KNIGHT, and Mr. HEUSTON, said there was very distinct pressure from behind. The upper horn of the goitre ran inward behind the larynx. There was practically no hæmorrhage, as he was able to tie each vessel as he saw it. The cocaine was used hypodermically, and was injected along the line where the incision was subsequently made: he did not think it would have any effect if applied to the surface of the skin. From time to time during the progress of the operation a little cocaine was dabbed on the tissues. The total amount of cocaine used was certainly not more than $\frac{3}{4}$ gr. A 1 per cent. solution made with sterilised water, and which also contained $2\frac{1}{2}$ per cent. of carbolic acid, was used. He commenced his incisions as soon as he had completed the injections. As to the dyspnœa, he thought that traction, due to the weight of the tumour, might have had something to do with it. There was a very large middle lobe, which represented what had originally been the isthmus.

FOREIGN BODY IN THE KNEE-JOINT.

Mr. R. L. SWAN showed a young man, aged 22, from whose knee, two years ago, he had removed a loose cartilage in the ordinary manner at the inner side. Soon afterwards he began to complain of symptoms indicating the presence of another similar body in the joint. Nothing, however, could by the most careful examination be felt. A skiagraph showed the outline of a foreign body in the joint. A lateral incision at the outer side was made, but this proved inefficient. Accordingly a transverse section of the patella was made, and the body was found attached by a strong fibrous envelope to the intercondyloid notch. The patient, who was exhibited, had a perfect joint.

Mr. SWAN, in reply to Messrs. MYLES, CROLY, and LENTAIGNE, said he would not have ventured to operate if he had not the skiagraph before him, because without its aid there was to some extent only a theoretical opinion as to the nature of the disablement of the joint. He used two silver wire sutures. He did not drain the joint beyond the necessary cleansing in the progress of the operation. He treated it in the same way as a healthy peritoneal surface in laparotomy. As regarded the advantages of free opening into the cavity, of course the joint could be drained directly, but it might be infected more readily through a large than through a small opening. He did not think the valvular incision erred in principle. Punctured wounds were perfectly safe if the instruments which produced them were aseptic. The foreign body became jammed between two sensitive surfaces, and by reflex irritation caused contraction of the quadriceps extensor. He had carefully considered the incision to be made before the operation, and in order not to have the cicatrix adherent over the patella he made a convex incision into the soft parts, with the concavity directed downwards.

LIGATION OF SUBCLAVIAN ARTERY FOR AXILLARY ANEURYSM.

Mr. FRANCIS HEUSTON brought forward a man for whom he had ligatured the left subclavian artery, in its third stage, for traumatic subclavio-axillary aneurysm four years since.

At the time of operation the patient was 30 years of age, and had been twenty years in the army. He was admitted to the Adelaide Hospital in February, 1896, suffering from severe pain in his shoulder, left arm, and back, which

was then continuous, although it had been for some time at first intermittent. The superficial veins of the left arm were tortuous, the arm being also swollen and œdematous. The clavicle was raised by a tumour occupying the supraclavicular and infraclavicular regions, presenting a well-marked *bruit*, distensile pulsation and thrill. There was well-marked difference of the pulse in the right and left arms. The artery was ligated by catgut applied close to the outer side of the scalenus anticus muscle, the patient leaving hospital twenty-three days after operation, and resumed his ordinary occupation, which he had filled since without any return of symptoms.

Mr. Heuston, in reply to Mr. Myles, Mr. Croly, Dr. Martin, Mr. Lentaigne, and Dr. Knott, said he was able to feel the artery at the edge of the sterno-mastoid. At the commencement of the operation he expected he would have to tie the artery in the second stage, or even at the inner edge of the scalenus anticus, but he found its coat good, the only thing that looked like disease being that the sheath was more adherent to it than usual, and evidently thickened slightly. He tied the ligature with sufficient force to rupture the inner and middle coats. The lower cord of the brachial plexus gave no trouble, and he was able to push the external jugular vein out of his way. He used catgut because it was the first aseptic absorbable material he could get. The double pains existed to a certain extent. At first the pain was interrupted and afterwards continuous, with paroxysmal severe pain. He had not examined the back of the clavicle. As to why he considered the aneurysm traumatic, the fact that the man had got an injury, although its not having come on for some time would be against the theory. What he found at the operation proved that he was right.

Ligation of Popliteal Artery for Aneurysm.

Mr. Arthur Chance exhibited a case.

The patient was a man aged 33, and married. He served in the Horse Artillery in India for seven years, and had suffered from syphilis. At the time of his illness he was engaged in the Dublin, Wicklow, and Wexford Railway Works. His duties were connected with the repairing and putting together of railway engines, a work which entailed the lifting of very heavy weights. Early in May, 1899, he noticed a dull pain at the back of his right knee. There was no noticeable swelling. The pain lasted for about a week, and seven or ten days after it disappeared a throbbing pain commenced, which was diminished by flexing the knee, and which disappeared when the man lay down. At the back of the right knee was then observed a small pulsating tumour. The pain and swelling gradually increased until June 10th, when the foot was noticed to be considerably swollen. Two days later he was admitted to the Mater Misericordiæ Hospital, where he was found to have in his right popliteal space a tumour about the size of a tangerine orange, which showed all the classical signs of aneurysm. The right foot was much swollen and œdematous. On June 21st the artery was exposed at its upper part by an incision parallel to the adductor magnus. The hamstring tendons were drawn backwards, the artery tied with silk, and the wound closed. There was no pain or rise of temperature, and the wound healed by first intention. It was now six months since he had returned to his duties in the railway works, and there was no sign of trouble in the aneurysm.

Remarks were made by Mr. Croly, Mr. Heuston, and Mr. Myles; and Mr. Chance replied.

MIDLAND MEDICAL SOCIETY.

E. Rickards, M.A., M.B., F.R.C.P., President, in the Chair.

Wednesday, February 7th, 1900.

Nephrectomy.

Mr. Gilbert Barling showed a kidney removed for calculous pyonephritis by lumbar nephrectomy from a woman aged 49.

The patient had had symptoms for about twelve months. During this time she had suffered from severe attack of pain in the right side, from frequency of micturition, and from a swelling which had gradually increased in size. At the time of operation the kidney formed a tumour reaching mesially to within an inch of the umbilicus, backwards into the loin, downwards into the iliac fossa, and upwards under the ribs. The kidney was separated from its surroundings with great difficulty, the peritoneum being widely torn during the process of separation, and at the lower end of the organ a piece was torn out of the junction of the internal, external, and common iliac veins. The hæmorrhage from the torn veins was small, and easily controlled by ligature of the three veins. A good recovery followed, with practically no œdema of the right lower extremity. Examination of the kidney showed an abscess cavity holding about 4 ounces of pus, and other tiny points of suppuration in the organ. A calculus was fixed in the pelvis, and there was a good deal of atrophy of the renal substance. Though some renal tubules and glomeruli still existed, the bulk of the kidney tissue was replaced by fat. There was some interstitial and parenchymatous nephritis, but casts were not found before the operation, the explanation possibly being that the ureter was blocked. The excretion of urea before the operation was about 300 grains, and this has remained pretty constant since the operation.

Aortic Aneurysm.

Mr. Chavasse showed a specimen of a sacculated aneurysm the size of a large orange of the upper part of the abdominal aorta removed from a man, aged 41, who had suffered from syphilis.

The only symptoms present during life were attacks of pain resembling those of renal colic and limited to the left side. Rupture of the sac had taken place posteriorly, and extravasation into the substance of the left psoas muscle caused a large subperitoneal hæmatoma. Erosion of the bodies of the last two dorsal and upper two lumbar vertebræ existed. A slight pouch was also found at the extreme convexity of the arch of the thoracic aorta.

Tumour of Ulnar Nerve.

Mr. Haslam showed a tumour the size of a walnut that he had successfully removed from the left ulnar nerve in the middle of the arm of a patient, aged 36. The tumour had been growing for eight years, and consisted centrally of blood clot, and around this a layer of angiomatous tissue.

Hydronephrosis.

Mr. Chavasse showed a large hydronephrotic cyst, which he had successfully removed by abdominal nephrectomy from a boy, aged 11 years. The cyst, which was apparently congenital (the abdomen having distended from birth) contained 5 pints 12 ounces of clear straw-coloured fluid, which chemical analysis showed to contain urea, uric acid, and traces of albumen.

Other Communications.

Dr. Murray read a paper on chronic brass poisoning.—Dr. Douglas Stanley showed a boy suffering from favus, and remarked on the rarity of the disease in the Midlands.

MANCHESTER MEDICAL SOCIETY.

T. C. Railton, M.D., President, in the Chair.

Wednesday, February 7th, 1900.

Infant Mortality.

The President delivered an address, in which he dealt with the increasing mortality from diarrhœa and dietetic diseases among young children in large towns. The necessity for the centralisation of the milk supplies in large establishments where pasteurising and humanising milk could be carried out under scientific supervision before distribution to the retail milk dealers was urged, and the growing employment of proprietary foods was condemned. He advocated a much wider intervention on the part of the profession in public affairs, especially in institutions having an influence upon child life, and suggested the more frequent delivery of popular lectures for the education of the public as to the proper methods of bringing up children.

Salol and Petroleum in Infantile Diarrhœa.

Dr. W. E. Fothergill gave the results of the administration of salol and of petroleum in infantile diarrhœa. The cases were observed by Dr. John Penny and himself at the Chorlton Dispensary during the summer of 1899. In 35 cases salol was used. Two children died; 6 did not recover until other drugs were used, whilst the remaining 27 cases recovered rapidly and completely under the influence of salol alone. An emulsion containing 33.3 per cent. of petroleum was given in 32 cases. One child died, two recovered slowly after the exhibition of other drugs, and the remaining 29 cases ended quickly and favourably on petroleum alone.

EPIDEMIOLOGICAL SOCIETY.

H. Franklin Parsons, M.D., President, in the Chair.

Friday, February 16th, 1900.

The Housing of the Working Classes.

Dr. Hope (M.O.H., Liverpool) read a paper, illustrated by a large number of coloured plans, sections, and elevations. The problem was, he said, the more difficult from the fact that a large proportion of the men, as dock labourers, market porters, and others, must live near their work, and that the great part of the houses occupied by them, erected before any building regulations came into existence, were massed together without open spaces or aanitary conveniences, and falling into decay. Few places could show such satisfactory results from the improvement of the dwellings of the poor as Liverpool, to which city was due the honour of having been the first to initiate legislation in this direction. During the last fifteen years nearly 4,500 "court houses" had been demolished, their sites having been covered by buildings such as he was about to describe, but there still remained over 3,000, more than three-fourths of which were in the courts, the rest facing the streets, but back to back with the

former. The width of the courts was on an average 8 feet, and of the approaches from the street 2 to 3 feet. Each court contained eight to ten houses of three rooms, one above the other, each reached by stairs or ladder from the one below; all back to back and side to side, without any sanitary conveniences whatever; waterclosets used in common were placed at one end of the courts, and dustbins at the other, the water supply being from a hydrant in the middle. It was in such areas that fevers were endemic, that epidemics of cholera and typhus made havoc, and that notwithstanding the palliative efforts of the authorities, scavenging twice daily, unlimited water supply, prompt removal of the sick, and practicable prevention of overcrowding, the (crude) death-rate ranged from 40 to 60, even reaching at times 75 per 1,000. These three-roomed houses being so numerous, and their insanitary character not recognised, no attempts were made until recently to put up cottages with fewer than four, five, or six rooms, except that from time to time since 1863 three and four-storeyed blocks had been erected by private enterprise, but while these tenements were beyond the needs and means of the very poor, the owners were of opinion that the rentals of 1s. 3d. to 1s. 6d. per room did not give a return for the capital invested. Those erected by the Corporation dated from 1868, when six large blocks, three to five storeys in height, each containing four, three, and two-roomed tenements were put up and let at about 1s. 5d. per room, and included Victoria Square opened in 1885, Juvenal Dwellings in 1895, and Arley Street and Gildart's Gardens in 1897. They were controlled by a resident superintendent and an assistant, who also collected the rents, the management of the several estates being vested in subcommittees of the Corporation. Dr. Hope gave full details of the numbers of tenements with one, two, and three or four rooms respectively, the rental of each, and the dimensions of the several rooms, as well as the returns of original cost, and annual income and expenditure on each estate, which might be summed up by the statement that 90 three-roomed, 300 two-roomed, and 70 single-roomed tenements, at rents of from 2s. to 3s. for the last, 3s. to 5s. for the two-roomed, and 4s. 6d. to 5s. 6d. for the largest, gave a net profit of 2½ to 4½ per cent. on the outlay. Another property was in course of development, to comprise 132, and ultimately 182, tenements, mostly two-roomed, but in some respects an improvement on those already described, for while they were provided with w.c.'s on the landings, one to each two or three families, everyone of the new tenements would have its own, and hot water would be laid on to the sinks, for which 6d. per week would be added to the rent. Gas would be supplied through automatic meters, and provision made for storage of fuel and of food in a locker ventilated from the outer air. There would also be a large recreation and reading room for the tenants.

Mr. SHIRLEY MURPHY, referring to Dr. Hope's statement that the death-rate in the new buildings did not exceed 21 or 22, remarked that the death-rate was determined far more by the habits of the occupants than by the sanitary conditions of the houses, nothing raising it so high as drunkenness and recklessness of infant life. He did not doubt that when in course of time the new dwellings erected by the London County Council passed into the occupation of a lower class, the mortality would be much higher than at present. Rents must be dependent on wages—that was, the cost of labour—which was higher in London than elsewhere, and rising year by year; but the sanitary arrangements should be such as not to permit of misuse—for example, dustshoots were convenient, but were apt to be used for slops, and waterclosets within the dwelling, though harmless in themselves, might be dangerous nuisances if dirty and neglected or out of repair.

Dr. NEWSHOLME compared the operation of Parts I and II of the Housing Act, considering that despite the expense and delay in putting the former into effect, it was preferable in most circumstances to Part II, the removal of small groups of buildings being generally insufficient. He admitted that the displaced populations did not to any great extent return but the public benefit was none the less, each class or stratum securing a higher standard of accommodation than it had enjoyed before; and whether the lowest were or were not elevated by their removal to a better class of dwellings, there was no doubt that the unavoidable occupation of insanitary houses by the better class of working men tended to drag them down.

Dr. WILLOUGHBY had always maintained that the only permanent solution of the problem of the housing of the very poor would be found in the provision of dwellings that, while fulfilling the necessary conditions of decency, health, and cleanliness should not be such as to attract the skilled artisan and better class of working people, and Dr. Hope's description of bare or whitewashed brick interiors devoid of the smallest decoration exemplified this principle.

After remarks by Dr. BULSTRODE and the PRESIDENT, Dr. HOPE replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—At a meeting on February 8th, W. J. SMYLY, M.D., President, in the chair, Dr. ARTHUR GILES showed a specimen of myomatous uterus removed from a patient with glycosuria.—Dr. F. A. PURCELL showed (1) a large pyosalpinx, together with uterus, removed by subperitoneal hysterectomy; (2) a fibromyoma springing from the uterine fundus, a sausage-shaped mass 10 inches long and the thickness of a man's wrist.—Dr. F. WINSON RAMSAY (Bournemouth) read the notes of a case of chronic total inversion of the uterus, complicated by vesico-vaginal fistula. The base of the bladder was completely gone, exposing the fundus, and the edges were composed of a ring of dense cicatricial tissue. After rendering as aseptic as possible, the uterus was removed with scissors on January 3rd, 1899. Operations for closing the fistula were performed on six occasions up to August, 1899. She was now quite well, could do her work, could hold her water for three hours during the day, and had not to get up at night. Dr. CLEMENT GODSON thought the best treatment had been adopted, as in view of the vesico-vaginal fistula it would have been useless to try to restore the uterus. Dr. MACNAUGHTON-JONES congratulated Dr. RAMSAY on the method adopted in closing the fistula. It was the plan first suggested by Dittel and adopted by Howard Kelly, of transplanting part of the vagina into the bladder. Professor JAPP SINCLAIR related a case of vesico-vaginal fistula in which there was considerable loss of tissue. It seemed to him that the only thing to do was to turn the uterus itself into the bladder. This was done, and the patient went on menstruating through the bladder, without any inconvenience. After some observations by Dr. OLIVER, Dr. RAMSAY replied.—The PRESIDENT then delivered his inaugural address, in which he dealt first with the question of the practical teaching of obstetrics and gynæcology, and secondly with the subject of the registration of midwives. On the motion of Dr. MACNAUGHTON-JONES, seconded by Dr. C. H. F. ROUTH, a hearty vote of thanks was accorded to the President for his address.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—At the first ordinary meeting, held on February 5th, Sir WILLIAM DALBY, the President, who was in the chair, after lamenting the death of Dr. Charles Delstanche, of Brussels, gave an inaugural address.—Professor URBAN PRITCHARD read a paper on antiseptic purification of the meatus and adjacent parts, both for operation and as a treatment of chronic middle-ear suppuration. It was pointed out that antiseptics could be applied to the meatus and intact membrane in the same way as in other parts of the body, with similar results, and also that an initial thorough purification of the middle ear and meatus followed by careful packing with double cyanide gauze was an excellent method of treating certain cases of chronic middle-ear suppuration. A discussion followed, in which the PRESIDENT, Mr. CUMBERBATCH, Dr. BRONNER, Dr. MILLIGAN, Dr. MACNAUGHTON-JONES, and Mr. ARTHUR CHEATLE took part.—Dr. MILLIGAN read notes of a case of cerebellar abscess which he had recently operated upon.

The intracranial lesion followed an attack of acute middle ear suppuration of only a few weeks' duration. During the first operation sudden paralysis of the respiratory centre intervened, necessitating the evacuation of the abscess being performed while artificial respiration was kept up. A month later it was found necessary again to explore the cerebellum, when another abscess was found and drained, but although the patient rallied from the operation, death occurred. At the *post-mortem* examination no macroscopical connection between the ear and cerebellar lesion could be found.

Mr. CHARLES A. BALLANCE suggested that the abscess had no connection with the middle-ear trouble, and cited some cases of the late Dr. Bristowe, in which abscesses

in various parts of the brain were attributed to influenza. He had operated on three cases of cerebellar abscess during artificial respiration. He found that the best organ for exploring the brain was the finger, and drew attention to a thin oyster-shaped abscess which was occasionally present immediately underneath the tentorium, of which he had seen three instances.

Professor URBAN PRITCHARD showed a patient from whom a large cholesteatomatous mass had been removed through the meatus. The disease had completely hollowed out the antrum and mastoid process, and by eroding the posterior meatal wall, had laid these cavities open into the meatus.—Dr. DUNDAS GRANT showed a case of thrombo-phlebitis of the lateral sinus, treated by operation without ligature of the internal jugular vein, with recovery. When the sinus was laid open, it was found that the septic contents were bounded above and below by healthy-looking clot.—Dr. HERBERT TILLEY showed: (1) A large mass of cholesteatoma removed from a boy aged 14. The middle ear, antrum, attic, mastoid process, and meatus were converted into one cavity by the disease. (2) A mass of cholesteatoma removed through the meatus, the removal practically curing a distressing cough from which the patient had been suffering.—Mr. A. L. LAWRENCE showed an elderly woman with a papillomatous growth from the meatal wall. The microscopical section was shown.—Mr. ARTHUR CHEATLE showed: (1) A woman, aged 28 years, in whom he had removed a large part of the auricle and the whole of the meatus for an adeno-carcinomatous growth, which started in the posterior cartilaginous meatal wall. The operation had been performed one year and three months previously, and there had not been any recurrence since; as the meatus could not be kept open, and as chronic middle-ear suppuration existed, the complete post-aural operation had also been performed, and a permanent opening behind the remains of the auricle established. The specimen and microscopical section were also shown. (2) A boy, aged 14 years, who had recovered from septic thrombosis of the lateral sinus without ligature of the internal jugular vein. The septic contents were limited above and below by healthy clot.—Mr. ERNEST WAGGETT showed a case of sequestration of the cochlea in a case of cured cerebellar abscess. Since the description of the case at the last British Medical Association meeting a portion of the cochlea had come away. The specimen was also shown.

—The discussion on the cases shown by Dr. Dundas Grant, Mr. Waggett, and Mr. Arthur Cheatle was adjourned until the next meeting on March 5th.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—At a meeting on February 12th, Dr. BARR, President, in the chair, Professor MUIR showed a fresh specimen, the kidneys from a case of diabetes. The kidneys were large and pale, but presented localised areas of septic infection of a specially acute kind, the infection being purely by staphylococcus. The source of infection was not discovered, but an acute pleurisy from which the patient suffered was probably from the same cause. The case was interesting as an illustration of the readiness with which diabetic patients became the subjects of microbic infection.—Dr. T. KENNEDY DALZIEL showed two patients—mother and daughter—on whom he had operated for sarcoma.

The mother, aged 54, had been operated upon first in 1892 for sarcoma of the left lachrymal gland. The disease recurred in the bones of the orbit and the superior maxilla, and six further operations were performed in the endeavour to eradicate the disease. The patient had now enjoyed good health since 1897, when the last operation was performed. The daughter had developed some swelling of the right lower jaw, which was at first thought to be due to decayed teeth. The swelling increased, however, and glands became involved, and the right inferior maxilla was then excised, the result being very satisfactory, and the deformity wonderfully little. In both cases the sarcoma was of the round-celled variety, and extensions had apparently been taking place by lymphatics. There was no further occurrence of tumours in the family.

Dr. Dalziel also showed a series of gall stones which had been removed from the bile ducts, 7 cases being operated upon with 1 death. The principal facts about each case were narrated. It was recommended that the abdominal incision should be rectangular, and that gall stones be removed through incision made directly in the bile duct, not through the bowel. Difficulties were mostly due to the adhesions which were frequently presence of suppuration, and to the depression of health caused by long illness. One of the cases simulated floating kidney. The fatal case had been one with very troublesome adhesions, and the operation very difficult, but the actual cause of death was unknown.—Dr. KNOX showed the specimens from a case where a large gall stone had caused acute obstruction of the bowels.

The patient had been admitted to the Royal Infirmary in a collapsed state, having for three days had acute intestinal obstruction. Surgical interference was hopeless, and patient died the next morning. A large gall stone was found in the jejunum, which had evidently ulcerated through into the duodenum, and then become impacted in the jejunum. There were many adhesions of the gall bladder, and a second gall stone was impacted in the ducts. There had been a story of biliary colic for thirty years, for which the patient had taken laudanum in increasing doses.

Some discussion took place on the communications of Dr. Dalziel and Dr. Knox, in which Dr. FINLAYSON, Professo MUIR, and Dr. EDINGTON took part.—Dr. DALZIEL also showed a large vesical calculus, the nucleus of which was the rubber tubing of an infant's feeding bottle. The patient suffered from acute cystitis, but refused operation.—Dr. EBENEZER DUNCAN showed the following specimens:

(1) Calcification of the pericardium, from a patient aged 67, the parietal pericardium being very rigid; (2) heart with marked mitral stenosis; there was no story of rheumatism, but ill-health following a confinement; (3) carcinomatous tumour at the root of the lung.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on February 2nd, Mr. HENRY E. CLARK (President) in the chair, Dr. RITCHIE THOMSON showed a young child suffering from paralysis of the right arm, with marked contraction of the fingers, this having followed some injury above the elbow. The paralysis was supposed to be due to the disturbance of the circulation (hæmic paralysis) from injury of or pressure upon the brachial artery, and not to injury of nerves.—Dr. ROBERT KIRK showed a young man, aged 20, the subject of cretinism, who had previously been shown to the Society. The diagnosis had not been perfectly clear, and had been doubted by many members of the Society, but the effect of thyroid treatment had been very striking and amply confirmed Dr. Kirk's opinion. The most striking improvement had been an increase in height of four or five inches within ten months, this being accompanied by actual loss of weight. Dr. Kirk remarked on the relationship of cretinism to myxœdema.—Dr. JAMES CARSLAW reported an isolated case of Friedreich's disease, and demonstrated the principal features of the case.

The patient was a young man, aged 20, a clerk, who was, however, able to continue his usual occupation without much inconvenience. His illness had begun at least as early as the age of 8, and at the age of 10 he had been in the Western Infirmary. His principal symptoms were ataxia of both upper and lower limbs, loss of knee-jerks, spinal curvature, and anæsthesia of limbs. His illness resembled both locomotor ataxia and Friedreich's hereditary ataxia, but even in the absence of nystagmus and any affection of the speech, and even with the sensory disturbance the case was regarded as one of Friedreich's disease. There was no other case of nervous disease in the family, of which he was the youngest, and the patient's condition had undergone practically no change for four or five years.

The PRESIDENT, Dr. HINSHELWOOD, and Dr. W. K. HUNTER made remarks on this case.—Dr. HINSHELWOOD showed a patient suffering from Graves's disease, who had previously been before the Society. The patient had improved remarkably under treatment by antipyrin in large doses.—Mr. A. E. MAYLARD reported a case of carcinoma of the rectum, in which he had made an artificial anus in the loin, in the same manner as one would perform a gastrostomy. The result had been very satisfactory, and by the use of a truss control of the evacuations had been comfortably attained. The PRESIDENT, Dr. DALZIEL, and Dr. RUTHERFURD discussed the various methods of operating for artificial anus.

PATHOLOGICAL SOCIETY OF MANCHESTER.—At a meeting held at Owens College on February 14th, Mr. THORBURN, President, in the chair, Dr. NATHAN RAW opened a discussion on the pathology of pneumonia, with special reference to its bacteriology. He reviewed at length the various theories which had been put forward and the supposed influence of chill in the causation of the disease. He said that the evidence was all in favour of pneumonia being a specific disease due to a micro organism, the diplococcus of Fraenkel, and that the treatment of the future would be antitoxic. Dr. Raw showed a large number of specimens; and several members took part in the prolonged and interesting discussion which followed.—Other preparations were shown as card specimens.

OXFORD MEDICAL SOCIETY.—At a meeting held on February 9th in the Anatomical Theatre, Oxford, Dr. RAMSDEN (Pembroke College) read a paper on the Clinical Value of Blood Examinations, illustrated by diagrams and microscopic specimens. He described what seemed to him the best methods, and gave a number of instances where such examinations had proved practically useful. The significance of the various leucocytes, normal and abnormal, and of the alterations in their quantitative relations was discussed, and it was maintained that, whether for diagnosis or prognosis, the blood often gave indications of considerable value. For blood films Jenner's method of staining was

strongly recommended as the simplest and most satisfactory yet devised, and quite sufficient for all clinical purposes. Dr. Oliver's hæmoglobinometer was the most accurate, but Gowers's instrument was sufficiently so if precautions were taken to employ a correct standard, and if the true reading was taken as the mean of that dilution which was just insufficient and of that which was just too much. Estimations of fibrin were of little practical value, as the methods used were open to serious objection. Nucleated red blood corpuscles were specially apt to appear in the general circulation in Bright's disease. Their absence, together with absence of eosinophilous cells in cases of severe anæmia, was a bad sign.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—At a meeting on February 1st, Mr. H. B. ANGUS, President, in the chair, Dr. A. H. HOBBS showed a female patient whose knee had been subjected to *x*-ray examination six months ago for suspected foreign body. Sixteen days later an inflammatory condition of the skin which had been most exposed to the *x* rays developed, and in from three to four weeks a well-marked bulla appeared; an ulcer, intractable to treatment, resulted, and was still present.—Dr. GEO. FOGGIN discussed the causation of the condition. Dr. W. MARTIN (Brady and Martin) stated that he had now employed the *x* rays in 200 cases, and this was the first in which untoward symptoms had developed. The PRESIDENT, who was in charge of the *x*-ray department at the Royal Infirmary, had only seen one case in his practice.—Mr. OUSTON showed a child, aged 5 months, with spina bifida:

The tumour was the size of a fœtal head, entirely covered with skin, and translucent except just beside the spine. There was no paralysis, and he considered the general and local conditions of the child warranted the performance of excision.

Dr. BEATTIE urged that the argument against operation in a case of spina bifida should be an increase in its size out of proportion to the size of the child.—Dr. RANKEN LYLE delivered an able address on the use of midwifery forceps. He strongly deprecated its too frequent use and considered 2 per cent. an ample average. No pains should be spared by the obstetrician to avoid their use by a careful management of the first and second stages of labour. If forceps were inevitable the easiest and safest operation should be aimed at. He considered turning preferable to the high operation. More care should be exercised to preserve the child's life. Forceps should not be applied to the breech or the aftercoming head.—A discussion ensued in which the PRESIDENT, Dr. BEATTIE, Dr. FOGGIN, Mr. OUSTON, Dr. HOBBS, Dr. CAMPBELL, and Dr. ALDERSON took part; and Dr. LYLE replied.

Dr. BEATTIE showed specimens of (1) simple endometritis and (2) surgical kidneys. The latter were removed from a man who had been operated on for stone in the bladder and were examples of non-suppurative consecutive nephritis. The pelvis was much dilated, the cortex diminished, and retention cysts present in the kidney substance. In one kidney a calculus was discovered *in situ*.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting was held on February 1st. The PRESIDENT (Dr. Burgess), who was in the chair, showed the following cases: (1) A boy with pseudo-hypertrophic paralysis; (2) a woman with argyria: (3) a case of cerebellar ataxia of over a year's duration. There was no optic neuritis, headache, vomiting, and no evidence of syphilis or tuberculosis.—Dr. ARTHUR HALL showed a severe case of tertiary syphilitic ulceration affecting the left orbital and nasal region. The man had acquired syphilis whilst in the army, and had only received six weeks' treatment after the primary infection.—Dr. SINCLAIR WHITE exhibited the following cases: (1) A man aged 54 years, on whom he had performed suprapubic prostatectomy for marked enlargement of the middle lobe of the prostate with vesical calculi. The bladder which had been in a state of atony for several years had recovered its tone, and the patient was greatly benefited by the operation. (2) Four cases of resection of large intestine for cancer; in one case the disease involved the cæcum, and in other three it was situated in the sigmoid; one of the latter was suffering from acute intestinal obstruction, and before resection a temporary artificial anus was made above the growth. In all four cases a Murphy button was employed, and all made a good recovery. One patient was only 29 years of age. (3) A myomatous uterus, removed by the abdominal route, with vaginal drainage. The patient made a good recovery notwithstanding a hernia of the small intestine through the abdominal wound, which was relieved on the third day.—Mr. ARTHUR CONNELL showed the following cases illustrating conservative surgery of bone: (1) A lad, aged 18, had his left hand caught in a hay chopper, the proximal phalanges of the four fingers being divided from the dorsal surface, the fingers hanging by the flexor tendons and the tissues of palmar surface. The phalanges were drilled and brought together with silkworm gut sutures. The wounds were quite healed on the eighth day. The patient had a good grasp and unimpaired extension, but flexion was limited. (2) A patient, aged 32, who had sustained a compound comminuted fracture of the upper fourth of the left tibia, involving the knee-joint. Loose pieces of bone were removed, and a large wedge-shaped part carrying the internal tuberosity wired to the shaft. Three subsequent operations were performed for small fragments of bone. The patient had perfect movement of the joint. The limb was somewhat bowed owing to dropping of the internal tuberosity. The patient resumed work one year after the accident. (3) A patient, aged 23, who had sustained a comminuted fracture of the left clavicle owing to a severe fall on the shoulder. Attempts at reduction being futile, two silver-wire bracelets were passed round the fragments, the ends of wire bent down on to the bone and interlocked, and the periosteum united over these. The wound was dressed on the third day, and the stitches removed. The result was gratifying, the position good, the limb unchanged, and all movements at the shoulder normal.—Professor MYERS-WARD demonstrated the most modern and approved forms of kymograph, artificial respiration apparatus, volumetric apparatus, and other physiological accessories.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on January 16th, Mr. W. HORROCKS, President, in the chair, Dr. EURICH gave a microscopical demonstration illustrating epitheliomata.—Dr. JAMES KERR read a paper on inflamed corneal ulcers, and showed illustrative preparations, together with the record of 100 cases treated by operation. The disease was most common in dusty weather, and workers in soil and stone were the most frequent sufferers. It was frequently traumatic in origin. Its incidence increased rapidly with age after 35. The spreading serpiginous ulceration, which was the most serious form, was due to pneumococci, which were confined to the cornea, the deep symptoms being due to the toxins produced. Galvano-cautery and paracentesis were held to be the best treatment, while scraping of the ulcer was not advised. Great importance was attached to early diagnosis and energetic treatment.—Dr. MAJOR related a case of trance, which had a fatal termination.

The patient was a woman, aged 50, seen in consultation with Dr. Moorhead. She lay almost as one dead; there was intense pallor of the skin, and the muscles were relaxed. The respirations were exceedingly shallow, and the heart's impulse was very weak. The conjunctival and other reflexes were absent, and she could not be roused to show any evidence of consciousness. The onset had been rather sudden three days previously; there were at first some transient spasmodic movements of the limbs. She continued in this state about three weeks, and finally died of exhaustion. She had been fed artificially by enemata and by nasal tube. Physical examination was negative. Optic discs normal. *Post-mortem* examination revealed nothing except anæmia of the nervous system and organs generally. The case was diagnosed as one of death trance, a very rare affection. The symptoms appeared to depend on profound functional inhibition of the nerve centres. As regarded diagnosis, uræmia, diabetic coma, cerebral tumour, and hæmorrhage must be eliminated, but a case of trance declared itself in a short time.

Practical considerations in the treatment of such a case were: Examination of urine for albumen and sugar to exclude uræmic and diabetic coma; regular nasal feeding; faradisation of the surface of the dry skin with electric brush was worth trial; the administration of amyl nitrite; the injection of normal saline either into cellular tissue or rectum. Should death appear to take place, one must be exceedingly careful before allowing anyone to act on that supposition. It was an acknowledged fact that patients had almost been put into their coffins while in a condition of trance. The faradic current should be applied to the muscles. Muscular contractions ceased three hours after death. (Care must be taken that the current employed would cause contractions of normal muscles.) A case was recorded by Rosenthal in which thirty-three hours after apparent death the muscles continued to react to faradism, and forty-four hours after the patient awoke

Dr. Campbell mentioned a case in which the patient had twice been put into her coffin, and subsequently recovered. Mr. Hall and Dr. Bell made remarks, and Dr. Major replied.—Dr. Mitchell showed a specimen from, and read notes on, a case of ectopic gestation.

The patient was a married woman aged 33. Had menstruated ten days before being seen. Had suffered from indigestion for six weeks. Pulse 80, temperature 98.8°. The illness commenced August 6th with severe pain and vomiting; it was thought to be a case of autumnal gastro-enteritis. The legs were extended and the abdomen tympanitic. The next day the distension had increased; there was no pain or vomiting. Bowels not moved. Temperature 101°, pulse 88. August 9th: Much worse; coffee-ground vomit. August 10th: Pulse 104. No pain; patient pallid; doubtful dulness in flanks on percussion. August 11th: Pulse uncountable; pallor increased. Hæmorrhage was diagnosed. Patient died before anything could be done. *Post-mortem* examination was made surreptitiously. The cyst was removed. The whole peritoneal cavity seemed filled with blood.

Ipswich Clinical Society.—At the annual meeting held on February 8th, Mr. C. K. Moseley was elected President for 1900, and Mr. Walter Sinclair was re-elected Honorary Secretary. The following were elected members of the Council: Mr. R. W. Brogden, Dr. H. H. Brown, Mr. J. F. C. Hossack, Dr. S. S. Hoyland, Mr. J. R. Staddon, and Dr. F. Warner.—Mr. Walter Sinclair showed (1) a case of interstitial keratitis; and (2) a case of lamellar cataract.—Mr. R. W. Brogden showed a man with peculiar nervous symptoms.

He walked with feet wide apart, dragging both legs slightly. When asked to stand with feet together and eyes closed, he staggered backwards with a succession of short steps on his heels. On attempting to carry a glass of water to his mouth, his hands trembled markedly, and at times when standing his legs trembled so violently that the whole ward was shaken. The knee-jerks seemed somewhat exaggerated, but varied. There were no pupil symptoms, and no ophthalmoscopic abnormality. The man attributed his symptoms to an injury to his spine.

Most of those who examined the case agreed with Mr. Brogden that there was a strong element of malingering in the case.—Mr. Wynne-Davies showed a well-marked case of ichthyosis in a child, improving rapidly under salicylic ointment and thyroid extract given internally. The President referred to the frequency of "maternal impressions" in the history of these cases.—Dr. H. H. Brown showed (1) a myoma weighing 5 lbs. removed by Mr. Deane. It took origin from the cervix, and grew between the layers of the broad ligament. The patient was doing well. (2) An apparatus he had devised for treating dislocation of the acromial end of the clavicle. Such dislocations were notoriously difficult to maintain in position. The apparatus had given an excellent result in the case for which it was devised.

Folkestone Medical Society.—At a meeting held on February 2nd, Dr. Tyson, President, in the chair, Dr. Hoggan Ewart read a paper on patent and quack remedies. A quack was defined as "a boastful pretender to knowledge which he did not possess." Patent medicines were almost always a financial failure whilst proprietary ones were not. In the former the ingredients were known whilst in the latter they were not. The authority of the Queen's patent gave a false impression to the ignorant, and Government protected the privileges of proprietors of quack medicines by paying for the prosecution of infringements. The Society passed the following resolutions unanimously:

1. That this Society is of opinion that the use of patent and proprietary medicines is largely on the increase and is a public danger.
2. That the unrestricted sale of powerful drugs, such as hypnotics and antipyretics, in tablet form is largely on the increase and is a public danger.

Cardiff Medical Society.—The ordinary monthly meeting of the Society was held on February 2nd, Dr. P. Rhys Griffiths, President, in the chair.—Dr. John Williams showed three specimens and two drawings of solid tumours of the ovary, varying in weight from 2 to 4 lbs., removed by laparotomy. Four of the tumours were associated with well-marked ascites, were malignant and removed from patients ranging in age from 19 to 66 years. The fifth, a solid fibroma, unassociated with dropsy, was removed from a patient aged 39. Dr. Williams also exhibited a drawing of a small papillomatous cyst springing from the oöphoron with a thick deposit of secondary sprouting papillæ over the pelvic peritoneum. This was removed from a patient aged 60, and was associated with ascites. Mr. E. T. Collins made some remarks.—Dr. A. P. Fiddian described a case of pediculi palpebrarum, and showed the specimen. He commented upon the rarity of the condition.—Mr. E. T. Collins showed a large nodular uterine fibroid removed by panhysterectomy. The tumour was in part impacted in Douglas's pouch and had contracted extensive adhesions with the intestine. The patient made a good recovery.—Mr. William Sheen showed a series of lantern slides to illustrate the topographical anatomy of the mastoid antrum and the operations connected with it. The anatomical details underlying the various complications of antral disease were briefly outlined. Dr. D. R. Paterson called attention to the importance of the persistence of the fœtal petro-squamous sinus in determining the route of the infective process. The President and Mr. Cornelius Griffiths also made some remarks, and Mr. William Sheen replied.

Southport Medical Society.—At a meeting held on February 14th Dr. Robert Harris was elected to the office of President, vacant through the death of Dr. H. H. Vernon.—A vote of condolence with the wife and family of the late Dr. Vernon was unanimously passed.—Dr. Russel made a communication on spasmodic stricture of the œsophagus, and showed an air dilator he had invented for the treatment of this condition, and found very successful.—Dr. Forrester Wood showed a case of compound depressed fracture of the skull, with trephining.—Dr. Stopford Taylor gave a lantern lecture on various skin affections, with practical comments. About sixty slides were shown, and the demonstration was much appreciated by the members.

Wigan Medical Society.—At the annual meeting held on February 15th, the following office-bearers for the ensuing year were unanimously elected:—*President:* Mr. R. H. Cowan. *Committee:* The President; Messrs. Luther Cooke (ex-president), C. M. Brady, W. Mitchell Roocroft, J. Blair, M. Benson, R. P. White, and C. R. Graham. *Honorary Treasurer:* Mr. E. H. Monks. *Honorary Secretary:* Mr. Wm. Berry.—A good number of members were present at the annual dinner, and Professor Carter and Dr. Macalister (Liverpool), Drs. Reynolds and Donald (Manchester), and Dr. Collinson (President of the Preston Medical Ethical Society) were present as visitors.

REVIEWS.

SOME RECENT WORKS ON ANATOMY.

Ever since the days of Vesalius the muscles of the pelvic floor have proved themselves a puzzle to the conscientious anatomist. His "musculus sedem attollens"—known later on as the levator ani—has been the subject of great controversy. Even the best-known demonstrators and teachers, such as Ellis and Holden, and the most authoritative professors and authors of special atlases, such as Luschka and Henry Savage, have differed greatly about its origin, insertion, and action. The muscles in the perineal triangle are likewise puzzling to the most careful dissector; hence, we have heard a great deal about the bulbo-cavernosus and ischio-cavernosus, especially in regard to their homologies in the human male and female. The great advances made by gynæcologists of late years have resulted in a yet more careful study of the muscles of the pelvic floor in woman. Till recently the student felt disappointed if he were allotted a female abdomen, as that part included the perineum, and what he desired was a male subject in order to study the structures concerned in lateral lithotomy. How ideas have changed we all know; the female perineum has been carefully studied since the days when Clay, Wells, and Keith began to raise the surgery of the female organs to its present level. Dr. Peter Thompson[1] dwells on these advances in anatomical science. He owns that, as the levator ani is an important factor in the female pelvic floor, the muscle has received very careful consideration by gynæcologists, and that many of the descriptions which are in use at the present day are largely

[1] *The Myology of the Pelvic Floor: A Contribution to Human Comparative Anatomy.* By Peter Thompson, M.D., Senior Demonstrator of Anatomy in Owens College, Manchester. Manchester: Sherratt and Hughes. 1899. (Demy 8vo, pp. 108, 24 plates.)

based on the results obtained by their investigations. The work is a fine analytical description of the pelvic muscles one by one, and the opinions of others are duly considered in each case. The plates are both clear and artistic. Dr. Thompson, however, shows us, perhaps better than any previous writer, that for a correct knowledge of the pelvic muscles a perfect idea of their homologies in man and woman, even if it could be attained, would be insufficient. Hence he dwells on their morphology. Not only is the female genital tract very different in purely anatomical and obstetrical respects from that tract in the lower animals, even in the anthropoid apes, but, owing to the erect posture the axes of the pelvis are profoundly modified in our species. In consequence, one of the boasts of the genus *Homo* is that it alone possesses a pelvic "floor." In animals the homologous muscles play little or no part in supporting structures above them. Many mammals possess tails, and some very powerful tails requiring strong muscles, but the coccyx in *Homo* represents the caudal vertebræ, the skeleton of the mammalian tail. Hence the attachments of muscles to the human coccyx must be compared to the insertions of corresponding muscles into the caudal vertebræ of long-tailed and short-tailed mammals. Every anatomist should study Dr. Thompson's lucid demonstrations of the distinctions between the different pelvic muscles in men and women and their homologies in *Homo* and lower types. His own views are given in full and those of others duly considered. The *Myology of the Pelvic Floor* also deserves the attention of every obstetrician and gynæcologist.

Dr. Juvara's *Guide to Surgical Anatomy*[2] is very uneven, both as regards its letterpress and its illustrations. Many of the latter are good, some are excellent, a few are merely caricatures. The letterpress seems to be rather the work of an anatomist than a surgeon. Dr. Juvara has already made a substantial claim to be regarded as an anatomist of no mean ability. He has probably a surgical career before him. The anatomical descriptions are generally minute and accurate. Accuracy is, of course, essential, but persistent minuteness in a work on surgical anatomy becomes irritating. There are not a few faults of omission. In a work of this size there should be some mention of the conflicting views of Kölliker and Albrecht on the anatomy of hare-lip, some mention of the ductus lingualis of His, some reference to the malformations of the rectum and their embryological causes. The description of the "pelvic colon," first given by Jonnesco, has very rightly been adopted, and in other directions the work embodies the latest authentic views. There are a few gross errors. The duct of the submaxillary is known by the name of "Wharton." The gland at the tip of the tongue near the frænum is usually called "Nuhn's." The "bloodless fold" of Treves does not arise from the anterior surface of the ileum: and its name should be spelt ileo-appendicular, not ilio; and so on. In a future edition, if one be needed, there should be less of minute anatomy and more of the surgical side of the subject.

It is well-nigh impossible to observe correctly that which one does not understand; hence it comes about that our finest marine painters so often go astray in the depiction of the rigging and sailing of ships, and we need not seek far to find serious and disfiguring errors in the work of figure painters of high repute, and even in that of teachers of eminence. Thus a knowledge of anatomy, in so far at all events as it affects surface form, is indispensable to the art student, and Professor Thomson's[3] work is eminently well calculated to convey it. No great amount of space is devoted to the skeleton in general, and we think properly, for although it was the habit of certain of the old masters to sketch in figures "in the bones" and afterwards to clothe them with flesh, it must be remembered that our knowledge of the positions assumed by the bones in active muscular action is largely inferential, and the result of placing a dry skeleton in attitudes not likely to be exact. Professor Thomson gives very many useful hints about the position of the bones of those joints which are much in evidence, such as the knee-joints and finger-joints, and certain peculiarities are pointed out as to resultant elongation in certain positions of flexion, which are very apt to be overlooked by artists. The book is profusely illustrated by photographs of well-chosen nude models, side by side with which are placed diagrams showing the muscles which are most concerned in causing the surface modelling in the various positions exhibited. Excellent accounts are given of the differences which exist between the male and female figure, and valuable data by which the student may seize upon what is characteristic and avoid emphasising that which is a defect in his model. We have read the book from cover to cover with much pleasure and profit, and can confidently recommend it as both scientifically accurate and excellently well adapted to the purpose for which it is intended; it shows much power of observation and good judgment in the selection of that which is likely to be useful to the special class of readers to whom it is addressed.

The first volume of a work on *Surgical Anatomy*[4] by Dr. John B. Deaver lies before us. The author is, both as a surgeon and as an anatomist, abundantly qualified for the task he has undertaken. In every sense the work is elaborate. No expense has been spared, no labour has been thought too great or too tedious, in an attempt to reach perfection in all essentials. The binding, the paper, the print, and the illustrations, considered as works of art, are all that can be desired. Surgical anatomy is a subject which, as Dr. Deaver remarks in his preface, has been dealt with fully by many authors. We cannot therefore reasonably expect any measure of novelty in the strictly anatomical parts of such a work as this either so far as description is concerned or in the presentation of the subject. But accuracy, strict and unvarying, we are entitled to demand. In a few instances the teaching given here is not of the soundest. For example, a branch to the phrenic from the sixth cervical nerve, which is figured in an otherwise admirable plate, is exceedingly rare. The origin of the pronator teres is not fully nor quite correctly given; the "lower" border of the first rib is spoken of; the posterior ligament of the elbow-joint is said to extend "from the upper margin of the olecranon fossa to the superior and external margins of the olecranon process, and to the articular ligament," and so on. These instances are all trivial from a surgical standpoint, but anatomical errors cannot be justified. Dr. Deaver opens his preface with the remark that his work has been "twelve years in preparation." This probably accounts for an occasional quaintness in the surgical opinion tendered. Excision of the sac of an aneurysm is not mentioned as one of the methods of treatment, though certain obsolete measures are recognised. In speaking of ligature of a vessel, it is said that the "ligature must be tied firmly enough to rupture the middle and internal coats." There is no mention of the work of Ballance and Edmunds, nor of the method of Senn, which revives a plan followed by Hunter. The surgical anatomy of the epiphyses is most curtly and most inadequately dealt with. The subject is one of great importance, and in a work of this size should have received detailed mention. This is a serious omission, but it must in justice be admitted that it is the only marked defect that exists. Taken as a whole, the volume is a piece of sincere and honest workmanship of which Dr. Deaver may justly be proud. The errors are, as we have said, trivial, and in comparison with the general excellence of the work may safely be forgotten. The illustrations are remarkable for their artistic merits and their general accuracy, but for some unaccountable reason the large arteries are represented as segmented, and remind one more of the backbone of a shark than of any normal human structure.

A book such as Professor Cleland's *Directory*[5] has up to the present time found few advocates in the London medical schools. This is probably owing to the fact that in most of the hospital dissecting rooms, where the principal teachers

[2] *Leitfaden für die chirurgische Anatomie.* Von Dr. E. Juvara, Subdirector und Assistent am Institut für practische Anatomie und für Chirurgie, etc., Bucharest. Berlin: August Hirschwald. 1899. (Roy. 8vo, pp. 291, fig. 183. M.8).

[3] *A Handbook of Anatomy for Art Students.* By Arthur Thomson, M.A., M.B. Second edition. Oxford: Clarendon Press. 1899. (Demy 8vo, pp. 434. 16s.)

[4] *Surgical Anatomy: A Treatise on Human Anatomy in its Application to the Practice of Medicine and Surgery.* By John B. Deaver, M.D., Surgeon-in-Chief to the German Hospital, Philadelphia. In 3 volumes. Vol. i, Upper Extremity, Back of Neck, Shoulder, Trunk, Cranium, Scalp, Face. London: Rebman Limited. 1899. (Demy 4to, pp. 632. Illustrations 151. 56s.)

[5] *A Directory for the Dissection of the Human Body.* By John Cleland, M.D., LL.D., F.R.S., and John Yule Mackay, M.D. Fourth edition. Glasgow: James Maclehose and Sons. 1898. (Fcap. 8vo, pp. 206. 3s. 6d.

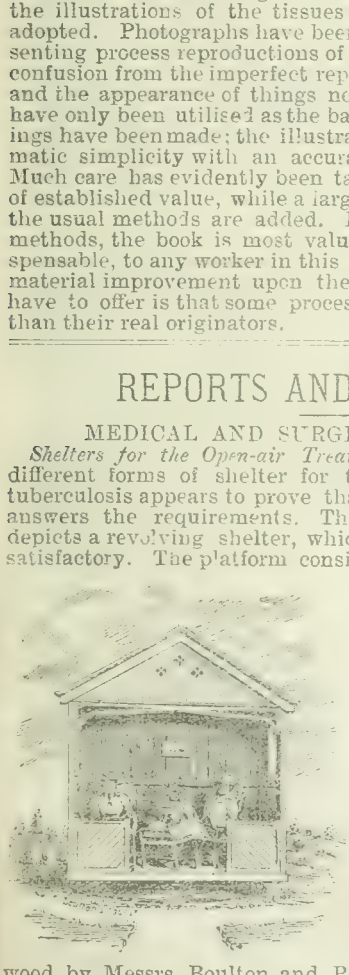
and demonstrators are young surgeons, more attention is devoted to the surgical aspects of anatomical study than is usually the case in the universities. The object of the authors has been to give to the student, when engaged in dissection, a fuller assistance in the practical difficulties which he is likely to meet with than can be afforded in a work devoted to description either in the systematic form of arrangement or that of demonstrations. This aim has been achieved, but the value of the work would have been enormously increased if, as a preface to each chapter, an account of the important bony and other landmarks, which are of great importance to the student when he commences the study of clinical surgery, had also been given. In the new (fourth) edition, in the preparation of which Professor Cleland has been assisted by Professor Mackay, of Dundee, there has been added within brackets, after the mention of each structure brought into view, the number of the page at which it is described in the treatise on *Human Anatomy* by the same authors.

Mr. Hopewell Smith's book[6] is essentially practical. Whilst giving to the student some brief information as to what he is to look for, and may hope to see if his preparations are successful, its intention is simply to set forth the technique of dental histology, and to give more minute and exact directions for overcoming the difficulties incidental to the study of hard and soft tissues in close association with one another than are to be found in general works. In the preparation of the illustrations of the tissues an excellent plan has been adopted. Photographs have been taken, but in place of presenting process reproductions of these, which often results in confusion from the imperfect representation of several planes, and the appearance of things not essential, the photographs have only been utilised as the basis from which careful drawings have been made; the illustrations thus combine diagrammatic simplicity with an accuracy not otherwise attainable. Much care has evidently been taken to include every process of established value, while a large number of modifications of the usual methods are added. Hence, as a compendium of methods, the book is most valuable, we may say quite indispensable, to any worker in this field. The new edition is a material improvement upon the old. The only criticism we have to offer is that some processes are accredited to others than their real originators.

REPORTS AND ANALYSES

MEDICAL AND SURGICAL APPLIANCES.

Shelters for the Open-air Treatment of Phthisis.—A test of different forms of shelter for the open-air treatment of tuberculosis appears to prove that a revolving pattern best answers the requirements. The accompanying illustration depicts a revolving shelter, which has been found generally satisfactory. The platform consists of a circular rail laid on wood: there is a central pin which is received into a socket in the floor of the shelter, and there are also four wheels under the floor. This shelter can be easily moved to afford protection from any wind; there are large windows in each side wall, which can generally be open, and thus ensure the maximum amount of air. In summer an outside blind must be attached to the roof to keep the shelter cool. For a single patient a shelter which measures 7 feet by 6 feet is sufficient. It has been constructed of wood by Messrs. Boulton and Paul of Norwich, and by Mr. Roope of Pulham, Norfolk, for the sum of ten guineas. Mr. Victor Norman of Great Yarmouth has made a similar shelter of Willesden canvas for about seven pounds.



[6] *Dental Microscopy.* By A. Hopewell Smith, L.R.C.P., M.R.C.S., L.D.S. R.C.S. Second Edition. London: Dental Manufacturing Co. 1899. (Demy 8vo, pp. 206, 8 plates, and 67 woodcuts. 10s. 6d.)

REPORT OF THE INDIAN PLAGUE COMMISSION ON HAFFKINE'S ANTIPLAGUE INOCULATION.

Introduction.

The Indian Plague Commissioners, after visiting India, are now completing their report. Recognising the practical importance of the subject of antiplague inoculation, they have consented to the separate publication of Chapter IV of their report, which expresses their views on the subject, in anticipation of the publication of the complete report. This chapter on inoculation occupies 87 pages, and is a critical survey of the subject from the bacteriological, statistical, and practical point of view. Beginning with a brief review of the history of preventive inoculation, the Commissioners deal first of all with preventive inoculation against small-pox, and point out the principles established by it. They then pass on to inoculation with cow-pox lymph, and the principles deduced from it: then to the researches on anthrax, to Ferran's inoculation against cholera, to Pasteur's work on rabies, to Haffkine's inoculations against cholera, with measured quantities of living bacteria of known virulence. They omit in this chronological summary Haffkine's inoculation against cholera with carbolised dead cultures of comma bacilli, and pass on to Wright's inoculations against typhoid with dead cultures; finally mention is made of Yersin's, Calmette's, and Borrel's experiments on rabbits and guinea-pigs with dead cultures of plague bacilli, and the introduction of antiplague inoculations by Haffkine by the use in man of dead bacilli and their products.

Haffkine's Methods of Preparing, Decanting, and Bottling the Vaccine.

The Commissioners then consider certain questions in connection with Mr. Haffkine's method of inoculation. These are:

1. The method of preparing mass cultures of the plague bacillus.
2. The method of controlling the purity of these cultures.
3. The method of killing the plague bacilli with the view of converting the culture into an immunising material.
4. The method of decanting and bottling the prophylactic fluid.
5. The method of ascertaining that the vaccine is free from contaminating micro-organisms, and the precautions which are adopted for preventing the growth of such organisms.
6. The method of standardising the vaccine.
7. The composition of the vaccine.
8. The volume of the prescribed dose.

Each of these questions is dealt with in a very elaborate manner. In preparing cultures of the plague bacillus on a large scale Mr. Haffkine had two difficulties to overcome: the first was to prepare a prophylactic which should not offend the religious feelings of the natives, and the second was to secure efficient aëration of the culture. A suitable culture medium was obtained by digesting goat's meat in the autoclave at 140° C. with hydrochloric acid, and then neutralising the acid medium with caustic potash, while the deeper layers of the culture medium were properly aërated by the ingenious device of introducing a small quantity of oil, the drops of which, floating on the surface, afford a basis from which the plague bacteria might suspend themselves.

The culture medium is inoculated with plague bacilli and cultivated at the temperature of the air for a period which varies from two to six weeks, during which time the culture is shaken up every few days. The purity of this culture is controlled by transferring with a sterile pipette a small quantity to a dry agar tube, and noting the appearance of the growth by reflected light through the thickness of the agar. If this is satisfactory the cultivation flasks are placed in a water bath, and maintained at a temperature of 65° C. for one hour; a small quantity of carbolic acid is then added. The prophylactic is then decanted from the flasks into ordinary 4 to 6 ounces narrow-necked and dark-coloured medicine bottles by a long glass siphon, which at times, as the Commissioners point out, there is some difficulty in starting. The bottles are then corked with corks which have undergone more or less sterilisation and they are sealed by immersing the necks in melted sealing wax. Since December, 1898, the sterility of the culture has been checked by testing on agar the first samples of the carbolised vaccine siphoned off from the cultivation flask. The procedure of decanting and bottling does

not commend itself to the Commissioners as one likely to secure absolute asepticism, in view of the difficulty there must always be:

1. Of ensuring the adequate sterilisation of the glass siphon.
2. Of ensuring that the siphon shall be started by the prescribed pro- [illegible] inating the end of the delivery tube.
3. Of corking a bottle in an aseptic manner when the cork has to be held and inserted into the neck of the bottle with no other implement than a pair of ordinary dissecting forceps.
4. The difficulty of sealing a bottle in an airtight manner with a material such as sealing wax, which refuses to adhere to a wet or stained glass surface.

The Commissioners show that a number of the samples tested revealed contamination of the prophylactic, and they suggest whether it would not be possible to make a final bac- [illegible] examination with a view to the detection and exclusion of contaminated bottles; and, failing the adoption of such a process of bacteriological control, whether it would be possible to resterilise the vaccine after it is finally bottled.

Objections to Haffkine's Methods of Standardisation.

We are writing under the disadvantage that we have not the evidence before us, but we are somewhat struck by the tone of that part of the report which deals with the method of standardising the vaccine.

We had some difficulty in ascertaining what was the method of standard- [illegible] ted by Mr. Haffkine. We gathered from Mr. Haffkine's statement when he was first examined before us that each brew was standardised by Mr. Haffkine himself, or by the inoculator, by determining what volume of the vaccine would produce an average temperature of 102° F. in a series of ten to twenty patients. Further inquiry, however, revealed that this method of standardisation was not syste- [illegible] employed. On the one hand, it was ascertained that Mr. Haff- [illegible] was not himself able to carry out this system of standardisation in the case of the large bulk of the vaccine which was sent out; and, on the other hand, we were able to say clearly that it was not possible for the inoculator to undertake this preliminary task of standardising his vaccine on a series of patients.

Finally, we elicited that the routine practice which was adopted in Mr. Haffkine's laboratory was to standardise the vaccine by holding up to the light one or two sample bottles of each brew with a view to appreciating the opacity of the vaccinating fluid. It was in conformity with the results of this appreciation that the dose was inscribed on the label of each bottle of the vaccine. The dose was there stated on the labels in multiples of a standard dose. This standard dose was an arbitrary quantity. It was assumed to be the equivalent of 2½ c.cm. of the original vaccine with which Mr. Haffkine inoculated himself and his first batch of patients. Where, for instance, two or three standard doses were prescribed, it was assumed that the vaccine of which this quantity was prescribed was twice or thrice weaker than the original vaccine, while it appears from the evidence which has been placed before us that the above is the routine practice which was adopted in the standardisation of the vaccine. It is to be observed that the results which were obtained by this method were in some instances controlled by direct observations of toxicity made on persons who presented themselves for antiplague inoculation at the inoculation station which was attached to Mr. Haffkine's laboratory. We may also note that Mr. Haffkine throws the ultimate responsibility for the [illegible] n of the vaccine upon the inoculator, inasmuch as he has [illegible] understood that each inoculator, before he proceeds to inocu- [illegible] sse, should make, in the case of a sample of vaccine, a preliminary series of test experiments with the prescribed dose on a batch of some twenty patients.

It is impossible to read these paragraphs, or in fact, the first thirteen pages of the report which refer to the bacteriology of the vaccine without being disagreeably impressed by the tone which pervades them. The criticism of the defects in the methods of preparing the vaccine would have lost nothing of their cogency by a less hostile attitude. It is contended that the methods of standardisation of the vaccine are unsatisfactory and imperfect, and that neither by the temperature reaction nor by the estimation of opacity can this be approximately affected.

So imperfect is the method of standardisation that we have no data for judging what the relation of strength is between doses of the samples we examined and the original dose which Mr. Haffkine has taken as his standard, nor are we able to form any estimate of the quantity of bacterial sediment which was contained in the original "standard dose." Assuming that the results obtained in our weighings represent the extreme limit of variation, the quantity of bacterial sediment employed may have consisted of any amount from 8 to 56 mg.

Objections to the Use of the Supernatant Fluid.

The Commissioners then discuss the question as to whether the supernatant fluid of the antiplague vaccine possesses any protective effect. They quote the experiments of Yersin, Calmette, and Borrel on animals: of the German Commission on monkeys, and of some experiments made by Lieutenant Liston, all of which seemed to indicate that on animals at least the filtrates of cultures of plague had no protective effect. On these experiments they found the opinion that the supernatant fluid might with advantage be dispensed with in the case of man, and it might readily be eliminated from the vaccine by a mere process of decantation.

The reduction of the volume of the vaccinating material would tend to diminish the dangers which might result from the possible contamination of the vaccine. By the elimination of the supernatant fluid there would be eliminated from the vaccinating material a considerable quantity of a poisonous substance (peptone) which stands in no known relation to the production of immunity.

A note appended to this statement adds:

We have not made any direct experiments on the toxic effect of peptone on man, nor do we know of any experiments made by M. Haffkine to determine whether any toxic effects result from the inoculation of his culture medium in man. But we conceive that it is hardly possible that a dose of 20 c.cm. of a peptone solution which may possibly contain from 3 to 6 per cent. of peptone can be quite indifferent to the human organism.

The Commissioners do not press their opinion to the extent of suggesting that the whole system should be altered, and that, without any experimental proof on man as wide as Haffkine's system is based upon, the antiplague vaccine should be changed, and a similar method adopted to that employed by Haffkine with his carbolised anticholera vaccine. Theoretically, however, they object to the mental process by which Haffkine, from the practical experience gained from his cholera inoculations, determined to retain in the antiplague inoculations the supernatant fluid. Nor do they mention the experiments of Dr. Stewart, since confirmed by Surgeon-Captain Milne, that the supernatant fluid has a distinctly protective effect.

No Serious Ill-effects Observed from the Inoculations.

The Commissioners made careful inquiries to ascertain whether any serious ill-consequences have followed from the defect in sterility which they refer to, and they declare that no evidence of that kind was laid before them. In a few isolated cases there were abscesses which may or may not have been due to the prophylactic fluid. In many cases, however, they think that the prolonged reaction at the seat of inoculation and the continuance of the fever point to the presence of a certian amount of septic contamination.

Review of the Statistical Evidence.

Having discussed the bacteriological aspect of the vaccine, the Commissioners pass on to a critical survey of the statistical evidence in favour of inoculation laid before them. The statistics submitted are subjected to a very able and searching examination, which certainly does not err on the side of acceptance without keen scrutiny. No evidence has been adduced against the protective effect of the inoculation. Whatever has been given is in its favour—and the task before the Commission has been mainly to sift the vast mass of evidence laid before them recording the value of the antiplague inoculations—in every case the trustworthiness of the dates on which the calculations are based is considered. The inoculations in Mora, the House of Correction, Byculla, Lower Daman, Lanauli, Kirki, Undhera, among the Khoja community at Bombay, at Umarkhadi Gaol, at Hubli, Dharwar, Gadag-Betigeri, Lingdhal, Huilgol, Bangalore City, among the military population of Bangalore, at Mysore City, at Karachi, among the Khojas of Karachi, in Bulsar, Baroda, the Punjab, Belgaum, Satara, and Alibaj are each gone into in a most painstaking manner, and the conclusion formed from them recorded. Those investigated by Mr. Haffkine are first dealt with, and the Commissioners, while criticising the method of calculation adopted, concur generally in the accuracy of the data. In regard, however, to the town of Daman, they are of opinion that no exact conclusions can be drawn from the data at their command which relate to the town as a whole, though they attach some importance to the fact that the medical men who observed the effects of the inoculation during the outbreak were satisfied that it exerted a great protective influence.

As regards other towns and villages, they were able, with perhaps the exception of Undhera, to show that, owing to errors of calculation, or to the omission of a census of the population, or to some other disturbing cause such as the agency employed in collecting the statistics, no exact arithmetical estimate of the amount of protection conferred by inoculation could be obtained. This is all the more extraordinary as the statistics laid before the Commission comprise those collected and compiled by civil servants, medical men of the Army and Indian Medical Service, European practitioners and native

medical men. The pains taken by these to collect, verify, and compile the statistics were very great, and reflect the highest credit upon them. The circumstances of the country, and the agency which they had frequently to employ did not permit absolute accuracy, so that the figures could only be approximate.

In the view of the Commissioners (except Dr. Ruffer, who doubts the correctness of the statistics) the experiment at Undhera appeared to be one of the most important of those made in villages. The work of the medical officers was checked by Mr. Haffkine, Surgeon-General Harvey, Surgeon-Major Bannerman, and Surgeon-Captain Dyson. The Commissioners deduce two lessons from the statistics. First, that the number of plague attacks among the uninoculated is much larger than among the inoculated, being four times more numerous among the former than the latter; and secondly, that the percentage of deaths among the attacked is very much higher among the uninoculated than among the inoculated; in this particular case the percentage of deaths among the uninoculated was ten times as great as among the inoculated.

The Commissioners give the statistical results which appear to them to be specially worthy of consideration in the table printed below.

In this form the number of attacks and deaths averted from the inoculated can be ascertained for any particular place by multiplying the figures shown in Column 6 and 8 of the table by the number of hundreds composing the inoculated population

CRITICISM OF HAFFKINE'S STATISTICAL METHOD.

The Commissioners in the above table adopt a different form of statement from that used by Mr. Haffkine, and criticise his in the following manner:

This method, though it affords information which is of value to those who desire to ascertain how far the effects of the vaccine have approximated to the ideal standard which would have been attained if all cases of plague had been averted from the inoculated, gives results which are likely to convey a wrong impression to the administrator. It will be seen that whereas the diminution of mortality which was achieved by the introduction of inoculations among the troops at Bangalore is 0.8 per cent, it figures when calculated out according to Mr. Haffkine's method, as 53.3 per cent. Similarly, in Undhera, the diminution in mortality which was actually effected among the inoculated was 5.3 per cent. Mr. Haffkine's statement of the result is that there was "a reduction of 89.6 per cent. of mortality attributable to inoculation." His method of calculation correctly represents the percentage which the number of lives saved by inoculation bears to the maximum number of lives that might have been saved, and he takes as the maximum number of lives that might have been saved, a number corresponding to the number of lives actually lost on account of plague among the uninoculated.

We think, however, that the Commissioners, in going to the other extreme, fall into error in their report. They do not adopt, except in the two columns of one tabular statement we have given, the ordinary methods of statistical expression, and certainly anyone reading the report without having his special attention drawn to this tabular statement would be apt to form an erroneous view of the value of the inoculations.

Effect of Inoculation on Case Mortality.

The table on p. 458 regarding the effect of inoculation on case mortality is also given.

First Synoptical Table.

Name.	Population under Observation.	Percentage of Plague Attacks on Population.	Percentage of Plague Deaths on Population.	Case Mortality (expressed in Percentages in Cases where the Number of Attacks exceeds 100).	Advantages accruing from Inoculation.					Remarks
					Diminution of Plague Attacks in every 100 of the Inoculated Population.	Ratio of Plague Attacks among the Uninoculated to Plague Attacks among an equal Number of Inoculated.	Diminution of Plague Deaths in every 100 of the Inoculated Population.	Diminution of Mortality among Inoculated as calculated according to Mr. Haffkine's Method of Calculation.	Ratio of Plague Deaths among the Uninoculated to Plague Deaths among an equal Number of Inoculated.	Ratio of Fatality in Plague Attacks among the Uninoculated to Fatality in an equal Number of Plague Attacks among the Inoculated	
1.	2	3.	4.	5	6.	7.	8.	9.	10.	11.	12.
Byculla Gaol ...	Uninoculated [illegible]	[illegible]	1.1	2 in 7	3.4	6.6 to 1	1.1	100.0	—	—	Only cases that occurred after the 4th February are included in this calculation.
	Inoculated [illegible]	[illegible]	—	0 in 1							
Umarkhadi Gaol	Uninoculated [illegible]	4.4	2.5	5 in 9	2.9	3.0 to 1	2.5	100.0	—	—	The percentages are taken on the original numbers of the inoculated and uninoculated.
	Inoculated 109	1.5	—	0 in 3							
Undhera ...	Uninoculated [illegible]	[illegible]	5.9	26 in 28	4.9	4.2 to 1	5.3	89.6	10 to 1	2.5 to 1	One of us, Dr. Ruffer, is of opinion that these figures are not trustworthy.
	Inoculated [illegible]	1.5	0.6	3 in 8							
The troops at Bangalore ...	Uninoculated [illegible]	1.7	1.5	7 in 8	0.6	1.5 to 1	0.8	53.3	2.1 to 1	1.4 to 1	
	Inoculated [illegible]	1.1	0.7	18 in 28							
Bulsar (4 Wards)	Uninoculated [illegible]	14.5	11.3	7 in 9	6.3	1.8 to 1	8.3	73.5	3.7 to 1	2.1 to 1	
	Inoculated 1,[illegible]15	8.2	3.0	31 in 84							
Lanauli (C. and D. Wards) ...	Uninoculated 230	8.8	5.4	46 in 69	7.5	6.8 to 1	4.6	85.2	6.7 to 1	1.5 to 1	The figures relate to the period from the 5th August to the 23rd September, 1897.
	Inoculated 370	1.3	0.8	6 in 13							
Kirki (followers of 4 batteries).	Uninoculated 812	10.3	5.8	67.8 p.c.	7.9	4.3 to 1	4.6	79.5	4.8 to 1	1.3 to 1	The figures relate to the period from the 26th August to the 28th September, 1897.
	Inoculated 755	2.4	1.2	53 p.c.							
Hubli (July 16th to August 19th)	Uninoculated 20,225	—	4.8	—	—	—	4.3	80.5	9.6 to 1	—	We think the figures for attacks untrustworthy. Dr. Ruffer thinks the figures for deaths also quite untrustworthy.
	Inoculated 22,067	—	0.5	—							
Gadag (Mr. Foy's figures) ...	Uninoculated 8,[illegible]	[illegible]	2.3	83 p.c.	1.7	1.8 to 1	1.7	74.0	3.8 to 1	1.9 to 1	
	Inoculated 9,[illegible]	1.5	0.6	44 p.c.							
Daman (62 houses) ...	Uninoculated 123	—	—	38 in 55	—	2.2 to 1	—	—	4 to 1	1.7 to 1	
	Inoculated 255	—	—	20 in 50							

Second Synoptical Table.

Hospital at	Once and twice Inoculated Patients grouped together.			Uninoculated Patients.			Ratio of Fatality among Uninoculated to Fatality among equal Numbers of Inoculated Persons.
	Admitted.	Died.	Case Mortality.	Admitted.	Died.	Case Mortality.	
			Per Cent.			Per Cent.	
Dharwar*	104	30	29.0	653	404	62	2.1 to 1.
Gadag	107	56	52.2	184	130	70	2.3 to 1.
Bangalore City	57	31	54.4	2,074	1,391	67	1.2 to 1.
Bangalore Civil and Military Station, North Camp ..	87	24	27.6	853	572	67	2.8 to 1.
Bangalore Civil and Military Station, South Camp ..	41	12	29.3	727	450	62	2.1 to 1.
Bangalore Civil and Military Station, Military Hospitals ...	121	80	66.0	69	59	78	1.2 to 1.
Mysore City	20	9	34.0	180	92	51	1.5 to 1.

* These figures are taken from a report on the Dharwar Plague Hospital from August 28th to December 18th, 18—, by Mr. Hornabrook, M.B., the Medical Officer in charge of the hospital.

The two tables show that in every case except that of Bulsar the inoculations had a considerable effect in warding off plague attacks from the inoculated, and that in every case without exception they rendered attacks among the inoculated less fatal than attacks among the uninoculated. The variations in the results may conceivably be explained in one of four ways:

1. They may be due to errors in the statistics sufficiently serious to falsify the ratios.
2. They may be due to the assignment to the inoculated in certain of the statistics of attacks and deaths which were imputable to infection contracted shortly before or shortly after inoculation.
3. They may be due to differences in the virulence of the plague epidemics in the various places where inoculation was employed.
4. They may be due to differences in the strength and amount of the vaccine employed in different places.

After discussing each of these possibilities, and considering the dose of vaccine that gives the best results, together with the comparative efficacy of double and single inoculation, the Commissioners are inclined to think that many of the differences are due to variations in the strength of the vaccine, and that a better standardised vaccine will give more uniform results.

THE COMMISSIONERS' SUMMARY.

The Commissioners summarise the results of their critical study of the nature and effect of the antiplague vaccine as follows:

I.—*Diminution of Number of Attacks.*

Inoculation sensibly diminishes the incidence of plague attacks on the inoculated population, but the protection which is afforded against attacks is not absolute. On the one hand plague has attacked persons who have undergone inoculation as many as four times in the course of two years previous to their attack. On the other hand, as many as 8 per cent. of the inoculated population may suffer from plague, as was the case in Bulsar. Many varying influences have been at work in determining the rate of attack in different places, and it is impossible to give a numerical expression for the measure of protection against attack which inoculation confers.

II.—*Diminution of Death-rate.*

Inoculation diminishes the death-rate among the inoculated population. This is due not to the fact that the rate of attack is diminished, but also to the fact that the fatality of attacks is diminished. Here again no numerical expression for the amount by which the death-rate is diminished can be given.

III.—*Protection Established only after some Days.*

Inoculation does not appear to confer any degree of protection within the first few days after the inoculation has been performed. This fact, we may note in passing, has an important bearing on the risk of infection which would be incurred by recently inoculated persons if they were left behind in surroundings so plague infected as to render their evacuation by the uninoculated desirable.

IV.—*Duration of Protection.*

Inoculation confers a protection which certainly lasts for some considerable number of weeks. It is possible that the protection lasts for a number of months. The maximum duration of protection can only be determined by further observation.

V.—*Reinoculation and the Strength of the Vaccine.*

The varying strength of the vaccine employed has apparently had a great effect upon the results which have been obtained from inoculation. There appears to be a definite quantum of vaccinating material which gives the maximum amount of protection; and provided that this quantum can be injected in one dose, and provided also that the protection turns out to be a lasting one, reinoculation might with advantage be dispensed with. The best results of inoculation will only be obtained after an accurate method of standardisation has been devised.

VI.—*The General Adoption of Inoculation.*

With regard to the feasibility of adopting a general policy of inoculation the Commission come to the conclusion that

1. Experience gained hitherto has shown that it is very seldom possible to get a large proportion of the inhabitants of an uninfected place inoculated.
2. It has been possible, where the inducements of exemption from segregation and eviction have been offered, to get a large proportion of an infected place inoculated quickly.
3. It has been possible in one place—Mysore City—even where no inducement that touched the great mass of the people could be offered, to get a considerable proportion of the inhabitants of an infected place inoculated quickly.
4. It has been possible also to induce a large proportion of particular communities, such as the Khojas of Bombay and Karachi, to be inoculated under the influence of their leaders.

VII.—*Inoculation Recommended under Safeguards.*

The Commissioners finally recommend that, under the safeguards and conditions of accurate standardisation and complete sterilisation of the vaccine and the thorough sterilisation of the syringe in every case, inoculations should be encouraged wherever possible, and in particular among disinfecting staffs and the attendants of plague hospitals.

THE STATISTICAL METHOD ADOPTED BY THE COMMISSIONERS.

We are indebted to Dr. Newsholme, M.O.H. Brighton, whose authority to speak on any question of vital statistics will be generally recognised, for the following note:—

Attention should be called to a somewhat misleading method of statement of statistical results which is employed in the valuable report of the Indian Plague Commission just issued. This is repeated in various pages of the report, and the details of this unfortunate method of statement of results are summarised and concentrated in the "First Synoptical Table" on page 71 of the proof copy of the report.

In order to make clear the misleading nature of this method of statement, it is necessary to take an example from the table mentioned. For the sake of clearness, the columns of the table not implicated in the error are omitted:

Name.	Population under Observation.	Percentage of Plague Attacks on Population.	Percentage of Plague Deaths on Population.	Diminution in every 100 of the Inoculated Population of	
				(a) Plague Attacks	(b) Plague Deaths.
(1)	(2)	(3)	(4)	(6)	(8)
Undhera	Uninoculated, 437	6.4	5.9	4.9	5.3
	Inoculated, 513	1.5	0.6		

Here the diminution of ratio of attacks and of deaths in the inoculated is obtained by subtracting the percentage among inoculated from that among the uninoculated. This is contrary to the rules of statistical work, and it is unfortunate that such a method of comparison should have been employed. Even though it is not likely to mislead those who are familiar with statistics, it will suggest to the public an erroneous inference, although nothing would be further from the wishes of the Commissioners than this result. The impression conveyed by the above table as it now stands is that the prospect of immunity from attack or death of an inoculated person is only about 5 per cent. more favourable than that of an uninoculated person. The real fact is that his prospect of escape from an attack is 76.6 per cent., and his prospect of escape from death is 89.8 per cent. more favourable on the strength of the above figures than that of the person who has not been partially protected by inoculation. It is only right to add that in another column of the "First Synoptical Table" 89.6 is given as the "Diminution of Mortality among Inoculated as calculated according to Mr. Haffkine's Method of Calculation." It is unfortunate that the Commissioners have not adopted Mr. Haffkine's method of calculation, which is the correct one for stating the differences of results as to inoculated and uninoculated persons.

The misunderstanding might easily have been avoided by giving the attack-rate and death-rate from plague per 1,000 of population instead of per cent., and then refraining from subtraction of these rates among the contrasted populations. The use of percentages in one way by Mr. Haffkine and in another way by the Commissioners does not conduce to enlightenment. Thus, if the Commissioners had stated that in Undhera the death-rate among the uninoculated was 59, and among the inoculated 6 per 1,000 of the respective populations, even the uninitiated would have had no difficulty in concluding, with Mr. Haffkine, that there is a diminution in mortality to the extent of 89.6 per cent. Of course there must be entire agreement with the Commissioners when they point out that there is some danger of misunderstanding in stating, as Mr. Haffkine is reported to have done: "One can say in a general manner that the reduction in the mortality produced by inoculation is between 80 and 90 per cent." I assume that in the context to such a statement, Mr. Haffkine would say that he was referring to two portions of a population equally exposed to infection, who were submitted in other words to a comparable experiment. It is, however, justifiable to assume as highly probable that this experience would be repeated in other places subjected to the same experiment, and experience like the above in one community gives a strong case for the extension of the plague inoculations in all parts of India in which the plague appears.

THE PLAGUE.

Prevalence of the Disease.

Portugal.

No case of plague has occurred in Oporto since January 16th. The Portuguese authorities, as long ago as February 7th, ordered the cessation of all measures relating to the plague, thereby practically declaring it at an end. There seems ample justification for this step, as plague does not seem endemic in Oporto.

India.

There is no better news from Bombay. On February 6th the number of deaths in Bombay from all causes reached the unprecedented total of 408. The worst previous record known for a single day was 392. The cause for this serious mortality is the prevalence of a number of diseases and the advent of famine refugees. The actual number of plague deaths recorded shows a diminution, the mortality being attributed to other illness. During the first week of February the deaths from plague declined from 478 during the week to 391. This is the first recorded decline since the week ending 3rd November last. The accuracy of these figures may, however, be called in question. It is probable that incorrect registration and defective diagnosis have produced an apparent decline in plague mortality which in reality exists in the statistical returns alone. Plague has assumed so many forms that unless every suspicious case is dealt with by expert bacteriologists, its detection is by no means easy. When the death-rate from actual plague really declines it is probable that the mortality from other diseases which have been regarded as epidemics will also subside. The rise in deaths from "respiratory disorders" is in all probability intimately associated with plague, and the same may perhaps be said of other diseases, especially diarrhœa, dysentery, etc., which often play a terminal part in cases of plague. Although said to be diminishing in the city of Bombay, the plague returns during the first week of February show an increase in the Presidency generally. In Calcutta plague seems endemic, some 12 to 20 deaths occurring from the disease daily. Although reported to be present in the Patna district since December last, it has never been definitely announced that plague prevailed there. It now seems, however, that in several villages and towns have been affected. Pandarak, Mohr, Awanta, Nadawad, Baktcarpur, Khoosroopur, and Mokameh have all been affected, and that measures are being actively taken for checking the spread, and with apparently good results. Patna is situated on the Ganges some 250 miles above Calcutta, and within 100 miles of Benares. In the Madras Presidency plague is not virulent in any district, and in the Mysore State a considerable improvement as regards plague has taken place.

China.

At Niu-chwang, in the Liau-tong district, to the north of the Gulf of Pechili, plague continues to occur. During October last it was believed that plague had disappeared, but a few suspicious cases of pneumonia occurred subsequently, and an examination of the sputum showed the plague bacillus. Since then plague has prevailed in one form or another, although not in any virulent type. The Sanitary Board, consisting of the British Consul, the Commissioner of Customs, two Russians, an American merchant, Dr. Daly, and the Rev. James Carson, has dealt vigorously with the outbreak, and there seems good hopes of grappling with the disease satisfactorily.

Mauritius.

During the week ending February 15th 7 fresh cases of plague occurred in the island, and 7 deaths from the disease. The numbers have for the last two or three weeks remained at the same totals in Mauritius.

Madagascar.

By the latest reports it appears that plague has totally disappeared from Tamatave, the capital of the island, and ships from that port are given a clean bill of health. Since the outbreak on July 23rd, 1899, 52 cases of plague occurred, of which number 39 died, only one European died of the disease; besides the 25 natives, 7 Creoles, 4 Chinese, and 2 Indians died of plague during the outbreak.

South America.

At Buenos Ayres, Rosario, and Santos plague prevails, but in no place is the visitation severe.

THE HEALTH OF DUBLIN.

At the meeting on February 14th of the Committee appointed by the Local Government Board to inquire into the health of Dublin it was decided that as the Local Government Board had left the matter to the Committee, counsel should not appear, the Corporation representatives only dissenting.

Sir Charles Cameron, Superintendent Medical Officer of Health, stated that he wished to disabuse the public mind of the belief that Dublin was a hotbed of infectious disease. The zymotic death-rate was slightly lower than in English towns. The infantile death-rate, considering the high birth-rate, compared favourably also with that of English towns. The zymotic death-rate in the Dublin registration district for five periods of 5 years each since his appointment was 5.1, 3.1, 2.9, 3.45, and in the period ending 1898, 2.4. Last year it was 4.47 owing to various epidemics. The causes of the high death-rate were poverty, insufficiency of food and clothing, and overcrowding in areas occupied by the poor; but although eight or ten families lived in a single house, the separate rooms were not overcrowded. The sanitary authorities had done much. In abating nuisances their notices in more than 10 per cent. of the cases were disregarded. The inspectors inspected 32,000 families out of 54,000. From 1897 to 1899 36,637 notices were served to abate nuisances, 5,849 summonses were issued and convictions to this number, less 4, were obtained. The fines amounted to £589. The inspectors were one-third less than in Liverpool, but had more work to do. From 1893 to 1899 there were 584 convictions under the Food and Drugs Acts, and 209 under the Margarine Act. More was done in this respect than in any English town. Birmingham stood highest with fines under the Margarine Act, amounting to £282, as against Dublin's £707. In regard to these two Acts, Dublin had done four times as much as the average of English towns. The disinfecting department was perfect, and was open to rich and poor as well as to neighbouring districts. The occupants of tenement houses should be made responsible for the condition of the sanitary accommodation. This would require legislation. Four lady sanitary inspectors had done good work. A new code of by-laws relating to tenements had been prepared. The Corporation, after clearing insanitary areas, had not provided sufficient dwellings for the people whose houses had been cleared. A quarter of a million would be required to clear the worst areas, and he pressed the claims of the "very poor." There was not sufficient accommodation for infectious diseases. The Public Health Committee thought there should be either an isolation hospital or else convalescent homes in connection with the existing fever hospitals. There was no public body responsible for the provision of accommodation for small-pox patients. They had no power to order the

closing of schools to prevent epidemics spreading. Legislation was required to enable the Corporation to close dairy yards in improper positions. The slaughterhouses should be done away with, and an abattoir established in the south as in the north of the city. The site of Dublin was unfavourable; the basements in many cases were below the level of the tide. Veterinary surgeons should be appointed to examine cows exclusively. The Notification Act was not universally obeyed. He had prosecuted some doctors for neglecting to notify. He did not prosecute parents who failed to do so.

Sir Charles Cameron's examination was continued on February 15th, and occupied the whole of the sitting.

In reply to Mr. Swan, he said there was a larger proportion of purlieus in Dublin than in London. The fewer convictions under the Public Health Act in England was due to the fact that the people complied with the requirements when served with notices, and owners were better off. He had a high opinion of Miss Octavia Hill's scheme. Some ladies tried it in Dublin, but several notices had been served on the occupants of these model houses. He had adopted a new form of watercloset for the tenements from which he hoped much. It was difficult and expensive to make clearances, and a competent and impartial valuer was required.

In reply to Dr. Thompson, he said that the birth-rate in the city was greatly in excess of that in the suburbs, but the death-rate was lower in the latter. In divisions of London with conditions analogous to those of Dublin the mortality was certainly less. Deaths in public institutions were credited to the district in which the person had last resided. Dublin had a more equable temperature than London but was damper, and this increased the tendency to chest affections. Enteric fever was greater in Dublin than in any town except Belfast and St. Helens. Diphtheria was less in these three than in the average towns. Enteric fever was equally prevalent among all classes, and occurred in sanitary houses. The pollution of the soil was largely due to the introduction of water closets. Enteric fever had been traced to milk and shellfish. The excavations in connection with the main drainage scheme might be partly responsible for the prevaleuce of enteric fever, but when this scheme was completed he expected a great falling off. Dairymen objected to washing the udders of cows, but for such omission they would in future be prosecuted. A great number of cellar and kitchen dwellings had been closed of late years. There should be a thinning of the densest portions of the city, where as many as 350 to the acre lived.

In reply to Dr. Moore, he said that diphtheria was on the increase but enteric fever was always as prevalent. He thought tuberculosis would be lessened by notification. The poor people did not believe it was contagious.

At the meeting of the Committee on February 16th, it was decided, at the suggestion of the Corporation, that they would make arrangements for the examination of Professor Smith (London), Dr. Hope (Liverpool), and Mr. Conway Scott (Belfast) who were willing to give evidence if called upon.

Dr. Quinlan, Fellow and Examiner in Hygiene of the Royal College of Physicians, stated that he owned house property in Dublin, including single cottages. He approved of the latter, and objected to tenements as tending to uncleanly habits. The exceptional death-rate was due to the unwholesome weather, and to a large epidemic of measles, followed by one of influenza. As to the general death-rate, Dublin would always be higher than London; a large proportion of the soil was made earth, and the subsoil being bad led to consumption. The abuse of alcohol among the poor affected their constitutions. Exposing house refuse was most objectionable. The barge system should be abolished, and a better method adopted. The tenements were an immense evil. The lanes, alleys, and courts not controlled by the Corporation were in many cases abominable, and should be taken over.

Mr. John Byrne, P.L.G., said the ventilating shafts of the sewers being on a level with the street were injurious. The bucket system of removing refuse was objectionable. At the time when no accommodation had been said to exist for cases of measles he had ascertained that from want of funds many beds were vacant in Cork Street Hospital. The Corporation had neglected to supply the necessary funds, and much of the high death-rate arose from that fact.

Dr. Knox Denham said tuberculosis infested and was deadly in the overcrowded portions of the city. Public institutions, such as the workhouses, were infected; and all public buildings, such as law courts, should be cleansed. The poor should be provided with houses. Rooms occupied by tuberculous persons should be frequently cleansed.

Drs. Cope and Day, Dispensary Medical Officers, said the exceptional death-rate was due to measles, influenza, and want of hospita accommodation for these diseases.

Dr. Speedy, Dispensary Medical Officer, agreed with the last. He thought day schools should be closed on the outbreak of an epidemic; that further hospital accommodation and convalescent homes should be provided. Some of the dairy yards were bad, and a veterinary examination of the cows was needed. He had reported houses as insanitary over and over again with little result. One filthy watercloset had been left for the use of twelve families. In numerous cases his report had received no notice.

Dr. Donnelly, also a medical officer, said that some of his recommendations were carried out, but he sometimes doubted if there was a subsanitary officer in his district; sometimes he would not see one for a year. He had never communicated to the Public Health Department the inattention of these officials.

The inquiry was resumed on Monday, February 19th.

Dr. J. M. Day, Registrar and Resident Medical Officer, Cork Street Fever Hospital, stated that there were 266 beds in the hospital and 26 in the Convalescent Home for Scarlatina. The Corporation gave £300 a year, but the grant from the Union had been cut off last year by the provisions of the Local Government Act, so that the number of the beds occupied had been reduced owing to want of funds. The average number occupied during the month when the pressure from measles was greatest was 244. The highest number in occupation on any day was 257. The hospital was indebt to the amount of nearly £4,000. Patients were refused from want of funds, never from want of room. There were 13 different sections isolated from one another. The authorities never refused to take in a bad case when pressed by a doctor. The past was the only year in which the hospital was pressed for room. In the height of the epidemic beds were vacant. It was incorrect to say there were no observation wards, for there were four such. The Convalescent Home was the only one of the kind in Ireland. It was capable of great extension if money were provided, as it stood on 20 acres of land away from the city.

Mr. Maguire, sanitary engineer, who had formerly been an Alderman, and Chairman of the Public Health Committee, stated that while he occupied the latter position two reports had been brought before the Corporation, but their recommendations were mostly postponed, and had never been adopted afterwards. He considered that at present one-half of the cross drains were leaking into the subsoil. He had inspected 4,000 houses. In the first ten years nine out of ten were sanitarily defective. As drains were reformed the percentage became less. At the present time no unprejudiced engineer would pass more than half the houses, including the squares and best streets in the city.

Mr. Spencer Hartz, Borough Surveyor, said that 5,300 new drains had been laid in the last ten years. The state of the tenements was shocking. In taking them down he often found the space between floor and ceiling solid with human excreta. There were 700 acres on the north side in which the sewers were tide-locked, and 300 acres on the south side. When the main drainage was completed tide-locked sewers would not exist. In carrying out excavations and improvements many old cesspools had been found.

On February 20th, the Committee again sat.

Dr. Henry Fitzgibbon, Medical Officer of the Post Office in Ireland for 21 years, said he had charge of about 1,600 people. Absence from duty through sickness in Dublin averaged for males 14.3 days per year, and 32.4 for females; in Glasgow the average was males 6.4, and females 10.3. Influenza was the bane of the Department, and defective scavenging was an important cause of the disease. The present method of disposing of rubbish was bad, and should be prohibited.

Dr. O'Carroll, Physician to the Hardwicke Fever Hospital, and late Visiting Physician to the Consumptive Hospital at Newcastle, said that tuberculosis was the most prevalent zymotic disease in Dublin, but little attention had been directed to it by the sanitary authorities. Tenement crowding *plus* tenement infection by tuberculosis caused healthy families coming from the country to die off like flies. Milk helped to spread the disease. Instruction on the prevention of tuberculosis should be given in schools, tenement houses should be abolished, or if not, supervised and disinfected as occasion arose. He thought notification of tuberculosis was practicable. Two classes of consumptive hospitals were required, one for early cases and another for hopeless ones. The cases that went to general hospitals and the unions spread the infection.

Mrs. Tolerton, representing the Philanthropic Reform Association, stated that the tenements were a great evil; some had no yards, and should be destroyed. Tenants should be punished for the misuse of closets and for filthy rooms. She had three and a-half years' experience in the slums, and the sanitary inspection was faulty and defective. More supervising officers and women inspectors were required. The cleansing of yards was done so as to spread the filth. Infectious cases were kept secret and not notified. Contrary to previous evidence her experience was that the individual rooms, as well as the houses, were overcrowded. Infection was spread in police courts and by the system of "wakes." The number of infants done to death because of life insurance increased the death-rate.

AN APPEAL.

THE widow of the late Andrew Spearing, M.D., of Antrim, having been left totally unprovided for, we desire to appeal to the members of the medical profession for assistance in the attempt which is being made in Antrim, where Dr. Spearing faithfully served the public for forty years, to purchase an annuity for his widow.

Any contribution will be thankfully received and acknowledged by the undersigned:

MAURICE H. T. COLLIS,
Vicar of Antrim, Honorary Secretary.
D. REDMOND,
Belfast Bank, Antrim, Honorary Treasurer.

The appeal is supported by Dr. Taggart, of Antrim.

The following contributions have already been received:

Contributions to the Spearing Fund.

	£ s. d.		£ s. d.
Viscount Massereene and Ferrard	25 0 0	John Murphy...	1 1 0
Hon. R. T. O'Neil	1 0 0	D. J. Keating	1 1 0
George Clarke	1 0 0	Dr. Richd. Purdon... ...	1 1 0
The Misses Gwynn	1 0 0	Dr. Michael McDonnel, J.P.	1 1 0
Wm. Chaine	1 0 0	Dr. Saml. Graham	1 1 0
Viscountess Massereene and Ferrard	5 5 0	R. J. Calvert	1 0 0
James C. Wilson	1 0 0	Jos. English	1 0 0
Rev. M. H. Collis	5 0 0	H. Armytage Moore ...	1 0 0
Hy. B. Murray	5 0 0	Mathew King	1 0 0
Dr. J. J. Adams	1 0 0	David Redmond	1 0 0
Dr. W. J. Taggart	5 0 0	Dr. Stewart Collis	1 0 0
Thos. W. Scott	1 5 0	Rev. Thos. West	1 0 0
Mrs. Hunt	2 2 0	John Kirk, J.P.	1 0 0
Clement K. Curdner ...	1 1 0	Andrew McKillop	1 0 0
Mrs. J. G. Wilson	1 1 0	Wm. Orr, R.M.	1 0 0
John Clark	2 2 0	W. D. McManus	1 0 0
John Young	2 2 0	Rev. J. O'Donnel, P.P. ...	1 0 0
John Gardner	1 1 0	Dr. Mussen	0 10 0
H. D. M. Barton	2 2 0	Dr. Torrens	0 10 0
Dr. J. A. Lindsay	2 2 0		136 10 0

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, FEBRUARY 24TH, 1900.

THE PLAGUE COMMISSION ON ANTIPLAGUE INOCULATIONS.

We are indebted to the courtesy of the Secretary of State for India for a copy of that part of the forthcoming report of the India Plague Commission which discusses the value of Haffkine's system of preventive inoculation against plague, and an analysis will be found at page 455. The general tone of this very able and highly critical document, which fills some 87 pages of Blue Book foolscap, will not give countenance to the suggestion even of the most uncompromising opponent of Mr. Haffkine's system that the Commission has in the slightest degree been biassed in its favour. In fact, for the first thirteen pages of the report such is the attitude assumed that the system appears in imminent danger of being annihilated. Defects are so mercilessly exposed and commented on that it looks like the beginning of the end, and the reader wonders what the other seventy-four pages can be about. The methods of decanting, bottling, standardisation, and dosage all come under a most powerful battery of criticism. Even the composition of the prophylactic fluid is assailed. It is questioned whether any protective effect lies in the supernatant fluid as distinguished from the bacterial sediment, and it is suggested that the large amount of peptone in the culture medium may produce injurious results. After this, which certainly seemed to be a frontal attack upon the bacteriological stronghold, the reader is vastly surprised to find that it has been after all only a reconnaisance in force, and that the Commissioners retire from the positions so hotly assailed, and conclude that no serious ill-effects have been produced by inoculation of Mr. Haffkine's fluid. In a later part of the report we read that inoculation sensibly diminishes the incidence of plague attacks on the inoculated population, and diminishes the death-rate among the inoculated population. Though the tone of the report has, as some may think, a somewhat hostile note, yet there can be no doubt that the criticism will serve a useful purpose. All those who hope that the inoculations may prove a really effective prophylactic will be grateful to the bacteriologists on the Commission for them. In fact, the necessity for a more careful and scientific method of preparing the antiplague prophylactic was foreshadowed in Mr. Haffkine's address at the meeting of the Royal Society in May, 1899.

From the bacteriological aspect the Commission next pass on to review the statistical evidence of at least twenty-five observations made by civil officers, medical men in the Army and Indian Medical Service, private practitioners, European and native, and others. All are in favour of the inoculations, and it may be remarked in passing that it is a remarkable fact that a perusal of the report gives not a single observation against the inoculations. Naturally the observations differ in value, and the Commissioners collect in a tabular form ten in which the statistical results seem to them to be specially worthy of attention. These are the observations in Byculla Gaol, Umarkhadi Gaol, Undhera, the troops at Bangalore, Bulsar, Lanauli, Kirki, Hubli, Gadag, and sixty-two houses in Daman. Even in this list the statistics are not equally trustworthy, for the Commissioners believe those of Byculla and Umarkhadi Gaols and of the troops at Bangalore to be more correct than the figures given for Kirki, Hubli, and Gadag. The statistics show that in every case except that of Bulsar inoculation had a considerable effect in warding off plague attacks from the inoculated, and that in every case without exception they rendered attacks among the inoculated less fatal than attacks among the uninoculated. The Commissioners criticise the form of stating results adopted by Mr. Haffkine, and express the opinion that it is likely to convey a wrong impression to the administrator. They have therefore adopted in their report a different method, but it is unfortunate that this method is not that usually employed by statisticians dealing with relative mortality. The following statement in regard to Hubli will show the method adopted by the Commission:

—	Average Strength.	Number of Plague Deaths.	Percentage of Deaths on Average Strength.
Uninoculated ...	20,225	980	4.8
Inoculated	22,967	118	0.5
Diminution of mortality in favour of inoculated ...			4.3

It is not the practice, as has been done in this table and throughout the report, to deduct percentage from percentage and take the result as the percentage of the diminution of mortality in favour of inoculated. The impression we gather from an analysis of these figures is not that the diminution of mortality in favour of inoculation is 4.3 per cent., but that the ratio of mortality between the not inoculated and inoculated is more than 9 to 1—that is, the uninoculated had a mortality nine times greater than the inoculated. This ratio is indeed given in another part of the report, but anyone reading the report itself and finding this method of deduction employed is likely to be confused, and to experience some difficulty in appreciating the benefits to be derived from the inoculations, inasmuch as in the case of every table a mental calculation must be made to ascertain the ordinary ratios which set forth the advantages of inoculation in a proper light. Whether figures obtained in this way are comparable is open to doubt, and it would have been advantageous not to have have left the ordinary paths of statistical expression, even if Mr. Haffkine's arithmetical method had not commended itself to the Commission.

Owing to the variations in the statistical results as worked out, the Commissioners are of opinion that no exact

arithmetical estimate of the amount of protection conferred by inoculation can be given, but from their study of the nature and effect of the antiplague serum they conclude that inoculation sensibly diminishes the incidence of plague attacks and plague deaths in the inoculated population; that inoculation does not appear to confer any great degree of protection within the first few days after the inoculation has been performed; that inoculation confers a protection which certainly lasts for some considerable number of weeks, possibly for a number of months; that the varying strength of the vaccine employed has apparently had a great effect upon the results which have been obtained from inoculation, and that the best results of inoculation will be obtained only after an accurate method of standardisation has been devised.

With regard to the feasibility of adopting a general policy of inoculation, the Commissioners are apparently not very hopeful. They find that experience has shown that it is very seldom possible to get a large proportion of the inhabitants of an uninfected place inoculated, but that it has been possible, where the inducement of exemption from segregation and eviction has been offered, to get a large proportion of the inhabitants of an infected place inoculated quickly. In one place, Mysore city—though no inducement that touched the great mass of the people could be offered—it was found possible to induce a considerable proportion of the inhabitants of an infected place to be inoculated quickly. Further, it has been found possible also to induce a large proportion of particular communities, such as the Khojas of Bombay and Karachi, to be inoculated under the influence of their leaders. Governed by these conclusions, the Commissioners recommend that, under the safeguards and conditions of accurate standardisation and sterilisation of the vaccine, together with the precautions of sterilisation of the syringe in each case, the inoculations should be encouraged wherever possible, and in particular among disinfecting staffs and the attendants of plague hospitals.

THE CLAIMS OF PURE SCIENCE.

ART for art's sake and science as an end in itself are phrases commonly heard, but of no meaning. They have, indeed, been explained on the analogy of fox hunting, which, as is well known, is carried on for the pleasure of the fox, but the comparison is of course fallacious. Art and science flourish because they satisfy men's desires, and for no other reason. All men desire beauty, and a few recognise it in art. But just as savages do not understand a picture even to represent an object, but merely see it as a flat mixture of colours, so most persons are unable to see any but the simplest qualities of the arts, and fail to understand their aims and their successes. The artist, working for an ignorant and incompetent employer, is reduced to making his own standard, and art for art's sake is his somewhat confused way of stating the fact.

But if few care about art, still fewer appreciate science. It is no great wonder that patience and truth, for which all scientific men are so remarkable, should be little appreciated by a people who worship resource, bravery, and decision. These qualities belong to a life of action, and with the life of contemplation our race has not much sympathy. But applications of science appeal even to the Briton. It has of late years been borne in upon most white men outside Pretoria that a life of civilisation is to be preferred to barbarism, and civilisation means chiefly applied science. Whether the seven deadly sins flourish less in a civilised country may be doubted, but no sceptic can dispute the greater prevalence of the seventy and seven conveniences.

The public view of science is the production of inventions. As Mr. Balfour said the other night when speaking on behalf of the new scientific laboratories at King's College, while all are admiring Marconi, few have heard of Maxwell and Hertz on whose researches his discovery rests.[1]

The English view has hitherto been that the man of science worked at some discovery until he could take out a patent which was sufficient recompense for his labour; that men work much better when their lives depend upon their success; that endowment of research meant the production of lazy and globular professors; that Newton and Darwin were Englishmen, and that Newton's work on the fall of apples and Darwin's on the rise of man are better than anything that has ever been done abroad; that it was not the business of the Government, nor that of any particular private person, to give money for that sort of thing; and that there was considerable risk in change.

Of late years a scare in the commercial world has wrought an alteration. It is allowed now that the youth must be highly trained in applied science in order to fit them for commercial enterprise, and for this purpose laboratories are to be equipped and teachers paid by public bodies. For some time, too, the success of preventive medicine and the advance in surgery has inclined the public to find considerable public moneys for the equipment of laboratories for public health and in connection with the clinical work of hospitals.

In these directions the public sees its way. It feels that money paid will bring a return, and that money saved will be really money lost. With considerable reluctance, therefore, it has made up its mind that besides the navy and army, science must be supported as an insurance. But men in general are still ignorant of science and its ways. They still have no belief in general research, still jeer at the quick advance of diagnosis and the slow progress of therapeutics, still expect to pay men for teaching without equipping them for investigation, still ask of what use knowledge is before they will pay for its support.

It is to this attitude that Mr. Balfour's speech is addressed, and it is cheering to find a member of the active world who shows so just an appreciation of the position. He urges not only that if the public want the benefits of science they must pay for them, but also that they must not be under the delusion that science can be confined to the immediately useful. To have applied science you must have pure science, for it is not the steam engine or the antiseptic method which are the main object, but to form a body of workers on whose researches fresh advances can be made. Work done is bound in time to find its use work done for immediate use only is almost always work wasted.

[1] In Mr. Balfour's speech, reported in the BRITISH MEDICAL JOURNAL of February 17th, p. 413, the sentence in col. 2, line 12 from bottom, after the words "wireless telegraphy" should read, "few remember the inventions which have made that telegraphy possible; they neither know," etc., instead of as printed.

The discoveries which have been applauded as the greatest rest invariably upon a mass of research unknown to any but a few fellow-workers, pursued for long years by many men for quite other objects. Without this the other would have been impossible. Mr. Balfour might have added that to teach science is not to teach facts but to instil a spirit, and that no man can be a teacher of others who is not able by example to show what original research is like and how it is to be carried on. Debarred from this, a teacher is a mere crammer for examinations; but give him the equipment for research, and his class is transformed into a body of men learning science in the only possible way—that of participation in active work.

It is to be hoped that Mr. Balfour's appeal to the public spirit of Londoners will be as effective as his statement of the public advantage. In an immense city such as this, a corporate feeling is difficult to create. Yet gifts to London have been many and of great value. Waterlow Park, the Tate Gallery, the Jenner Institute, and Mr. Mond's new Physical Laboratory at the Royal Institution, all show that rich men are taking a pride in benefiting their fellow-citizens and in beautifying the city. It may be hoped that Mr. Balfour's speech may be met in the same spirit, and with the same liberality.

THE NEW STATUTES FOR THE UNIVERSITY OF LONDON.

In the statutes drawn up by the London University Commission for the government of the reconstituted University of London laid before both Houses of Parliament, it is set out that the purposes of the University shall be to hold forth to all classes and denominations, both in the United Kingdom and elsewhere without any distinction whatsoever, an encouragement for pursuing a regular and liberal course of education; to promote research and the advancement of science and learning; and to organise, improve, and extend higher education within the appointed radius. No nobler or more comprehensive duty could be imposed upon any university, and it is sincerely to be hoped that the new constitution may be found to work so as to bring about this end.

The constitution contained in the statutes follows generally the lines of the compromise which was reached after so many years of discussion. The University will be governed by a Senate consisting of 56 persons—the Chancellor, the Chairman of Convocation, 4 persons nominated by the Queen in Council, 16 by Convocation, 2 each by the Royal College of Physicians, the Royal College of Surgeons, University College, London, and King's College, London; 1 each by Lincoln's Inn, the Inner Temple, the Middle Temple, Gray's Inn, and 2 by the Incorporated Law Society; 1 by the Corporation of the City of London, 2 by the London County Council, 1 by the Council of the City and Guilds of London Institute; and 16 by members of the respective Faculties. The registered graduates in medicine and in surgery would elect 2 of the 16 representatives of Convocation, and the Faculty of Medicine would elect 3 of the 16 representatives of the Faculties. Medicine would thus have 9 representatives on the Senate, and might possibly have 2 or 3 more. This is certainly not too large a representation of one of the most important Faculties of the University.

The medical schools, other than those of University and King's Colleges, though they are named among the schools of the University, would not have any direct representation as such upon the Senate; they would be represented indirectly through the Faculty of Medicine, which would consist of those teachers of the University nominated as members by the Commissioners, of appointed teachers of the University, and of such other teachers as might from time to time be admitted to the Faculty by the Senate. The teachers of the University would consist of two classes: the "appointed teachers," that is, the professors, assistant professors, readers and lecturers of the University appointed as officers of the University by the Senate, and of the "recognised teachers," who would be such members of the teaching staffs of the schools as might be recognised as teachers of the University by the Commissioners, or hereafter by the Senate.

The power of a Faculty would be limited to considering and reporting upon any matters referred to it by the Senate, or on any matter relating to courses of study, to the provision for teaching or research, or to the granting of degrees or certificates in the subjects comprised within the Faculty.

The Senate would have three standing Committees with advisory powers—the Academic Council, the Council for External Students, and the Board to Promote the Extension of University Teaching. The Faculties would have a special representation upon the Academic Council, which would consist of the Chancellor, Vice-Chancellor, the Chairman of Convocation, representatives of the Faculties on the Senate, and a member appointed by the Senate. In certain matters the Senate is required to invite and receive a report from the Academic Council before coming to any determination. These matters are expenditure on buildings, apparatus, or equipment in the University or any school, the admission of new schools, the appointment of professors, assistant professors, readers or lecturers, the expenditure for the endowment or remuneration of appointed teachers, or in connection with schools of the University, the determination of the duties of appointed teachers, the recognition of members of teaching staffs of schools, the regulation of the courses of study for internal students, and the provision of opportunities for and aids to research, the appointment of examiners for internal students, and the superintendence and conduct of the examinations for internal students, the equalisation of the standard of knowledge and attainment prescribed for degrees conferred upon internal and external students respectively, and, generally, all matters affecting internal students.

The Council for External Students will consist of the Chancellor, the Vice-Chancellor, the Chairman of Convocation, the representatives of Convocation upon the Senate, and one other member of the Senate appointed by it. The Senate upon all matters relating to external students is required to invite and receive a report from this Council before coming to any determination. Among the matters thus to be dealt with are the superintendence, regulation, and conduct of the examination for external students, the equalisation of the standard of knowledge and attainment prescribed for the degrees con-

ferred upon internal and external students respectively, the appointment of examiners and the course of studies to be recommended for external students, and the admission of external students to university course of instruction and university laboratories, museums, libraries or observatories.

The Board to Promote the Extension of University Teaching would consist of the Chancellor, the Vice-Chancellor, the Chairman of Convocation, and six members of the Senate, and its duty would be to advise the Senate upon the means best adapted to encourage and extend teaching of a university standard within the radius, which is thirty miles from the University building, and upon the admission to any of the privileges of matriculation, other than that of proceding to degrees, of persons who may have profited by such teaching.

Boards of Studies would be constituted for the subjects of university study, and it is laid down that the aim of the Senate should be thus to secure the representatives of every subject of university study opportunity of expressing their views to the Senate. Before advising the Senate upon any matter relating to courses of study, provision for teaching or research, examination, the payment of examiners, the granting of degrees or certificates the Academic Council or Council of External Students, as the case may be, is required to consult the Boards of Studies dealing with the studies concerned, and further each Board may report to the Senate direct upon any matters referred to it by the Senate.

The regulations proposed with regard to degrees in medicine and surgery are that no student shall be admitted to examination for a degree who has not gone through the prescribed course of study in a medical school of the University, or a medical institution or school in the United Kingdom, or any dependency of the British Crown or any foreign parts, recognised by the Senate, with the approval of Her Majesty in Council, as an institution or school whose students may be admitted as candidates for a degree. Power is given generally to the Senate to grant an honorary or *ad eundem* degree in exceptional cases. So far as we have observed no power has been taken to withdraw a degree once granted, an omission which ought certainly to be remedied. Most of the provisions with regard to external students have little bearing upon medical education, but one of the statutes empowers the Senate to make arrangements with the Royal College of Physicians of London and the Royal College of Surgeons of England, or either of them, to conduct jointly with the Senate examinations in such portions of the subjects included in the course of study for a medical degree as may be agreed upon between the Senate and those Colleges or either of them.

It is provided that the schools of the University shall be open to visitation by it, and the Senate is instructed to obtain reports at prescribed intervals on the efficiency of each school.

Upon the vexed question of the teaching of the earlier medical subject it is provided that, with a view to greater efficiency and economy the Senate may make arrangements with the governing bodies of any schools of the University to provide common courses of instruction for matriculated students in such schools in one or more subjects by appointed or recognised teachers, and to enable such schools to interchange their matriculated students for the purpose of instruction, and in particular the Senate shall use its best endeavours to secure whenever practicable such common courses of instruction for internal medical students in the preliminary and intermediate portion of their studies under appointed or recognised teachers at one or more centres. Further, power is given to the Senate to allocate funds for the erection or extension of buildings, or the remuneration of appointed or recognised teachers, or the provision or improvement of the equipment in a school of the University as a place of instruction or research, and to provide generally for its assistance or benefit. At first, at any rate, the University will have no funds for such purposes, but there is a still more ambitious provision which is to the effect that so soon as the funds of the University permit, the Senate shall found such professorships as it may think fit and prescribe the conditions on which they shall be tenable, and may provide lecture rooms, laboratories, workshops, and other facilities for the purpose both of teaching and research. It is clear that if this is to be done the University will need the benevolent hand of the pious founder.

ARMY MEDICAL ESTABLISHMENTS.

The Supplementary Estimates to complete army charges to March 31st, amounting to £13,000,000, include £70,000 for medical establishments, which looks a small sum in such a huge total. That sum will doubtless be expended chiefly in the pay of a large number of civilian surgeons, of men of the Militia Medical Staff Corps, and of Volunteers and female nurses, who it has been found necessary to employ. But, however the money is spent, it gives some clue to the aggregate medical estimates which will be needed in the future.

In the War Office plans for an increase of 30,000 men to the regular army, the necessary and corresponding augmentation of the medical establishments was not disclosed; and, indeed, we should probably have still been in the dark but for the vigilance of Sir W. Foster and Dr. Farquharson, who elicited from Mr. Wyndham that it was proposed to offer 100 commissions instead of 30 (which, by the way, have only been about half filled), and to add 250 non-commissioned officers and men to the Royal Army Medical Corps. It was not, however, stated whether the proposed augmentation is to be an addition to the existing 850, or the nominal 890 medical officers which the late Sir Thomas Crawford declared was a "dangerously low" establishment. But in either case we unhesitatingly pronounce the addition insufficient, as may be easily demonstrated.

It is quite evident, and admitted, that the existing establishment of under 900 officers is insufficient as a peace establishment, considering the demands made upon it; and therefore the proposed addition of 100, if the army is to be increased by 30,000 men, cannot possibly remedy that insufficiency, either actually or proportionately. Taking the future strength of the army at about 250,000, the proportion of 4 medical officers per 1,000 men would give an establishment of exactly 1,000. But as that proportion has been found insufficient, even in peace time, the new establishment will want at least 1,100 medical officers to make it

truly efficient; and it is remarkable that such was the figure forty years ago, when our army was under 200,000.

In these calculations account has been taken only of the provision necessary for the regular army. What of the militia, which we are informed is to be made a truly mobile force, with field artillery and transport? At present, as was shown in a recent article, it is wholly dependent on the regular army medical establishments. Is that to continue? If so, then a further increase of the regular Army Medical Service must be made.

These questions must be faced if coming army reforms are to be realities and not shams. We must indeed suffer no more medical anomalies, like the Medical Reserve—a body drawn from the volunteers and counted twice, who could not by any possibily act in the dual capacity, both with regulars and volunteers, in a supreme national emergency.

The addition of 250 men to the Royal Army Medical Corps also seems inadequate; for it is well known that every available man and reservist of the corps have been mobilised for the war. The result is that the military hospitals at home, and we suspect largely also abroad, are at present manned by untrained regimental orderlies; and, unless we are misinformed, are in a state of indiscipline and confusion, which, to say the least, is very unsatisfactory.

All this has arisen from the scandalous indifference of the War Office in years past to undermanned medical establishments; a neglect which must now be remedied in spite of opposition from any quarter.

We would urge upon the attention of Parliament the following reforms as essential: First, a medical establishment for the regular army, in proportion to its strength, adequate to meet the special strain of foreign service. Secondly, due provision for the medical wants of a mobile militia; either by making the medical department of that force self-contained, or by increasing the regular medical establishments on which at present it is dependent. Thirdly, to make the volunteer force properly self-contained, by not diverting its medical officers for impossible dual duties in a national emergency.

It must be noted that when we use the term "medical establishments" we include, along with a sufficient *personnel*, proper hospital and ambulance equipments and stores.

THE DUKE OF CAMBRIDGE AND THE R.A.M.C.

Many words of praise as to the way in which the work of the Royal Army Medical Corps has been organised and carried out have been said during the present war, but few have been more graceful or will carry more weight with the public than those which were uttered by the Duke of Cambridge in the course of some remarks at a luncheon given by Mr. Langman after an inspection of the Langman Hospital on February 21st. The Duke said that one of the bright things in the present war was the magnificent work done by the Army Medical Department under the organisation of his friend, Surgeon-General Jameson. This, we believe, is the impression which has been formed by those who have read with any attention the letters from the correspondents of the daily papers, or those which have appeared in our own columns, but it is pleasant to find it thus confirmed by one so competent to speak as the late Commander-in-Chief.

THE UNIVERSITY OF LONDON SEAT.

Sir Michael Foster, K.C.B., introduced by Professor Jebb (Cambridge University), and Sir W. Anson (Oxford University), took the oath and his seat in the House of Commons for the University of London on February 16th, amid general cheers. The large majority by which Sir Michael Foster was elected is a proof that the election was not determined by political considerations, and the general welcome with which he was received by the House of Commons, a body naturally very sensitive to the trend of public opinion, affords further evidence of this. It is, we believe, generally recognised that the entrance of a man of such high scientific eminence, and of so much experience in academic affairs, has distinctly strengthened the House of Commons in a direction in which it is least strong.

THE CHAIR OF MEDICINE AT EDINBURGH.

We are informed that there is a movement on foot in Edinburgh which has for its object to procure for Dr. Osler, the Professor of Medicine in Johns Hopkins University, Baltimore, a call to the Chair of the Practice of Physic in the University of Edinburgh, rendered vacant by the death of Sir Grainger Stewart. Professor Osler is a Canadian by birth, and a Fellow of the Royal Society, and of the Royal College of Physicians of London. He is a physician of world-wide reputation, both as a teacher and an investigator, and personally is as well known and esteemed on the Eastern as on the Western side of the Atlantic. It was stated in a paragraph published last week that Dr. Robert A. Fleming, who was for seven years University Assistant to Sir Grainger Stewart, and who is now Lecturer on Medicine in the School of Medicine of the Royal Colleges, was a candidate for the vacant chair. Dr. Fleming asks us to state that he is not, and has no present intention of becoming, a candidate.

THE QUEEN'S APPEAL.

The appeal which the Queen has made "to her old soldiers who have already served as officers, non-commissioned officers, or privates," to "serve once more in place of those who are absent from these islands," will, without doubt, meet with a hearty response. It is anticipated that these "Royal Reserve Battalions" will number some 45,000 men. We venture to hope that this occasion may be taken to put right a point which those old soldiers of the Queen who have served her in a medical capacity feel presses rather hardly upon them. There is a considerable number of officers who retired from the Army Medical Service before the new warrant was issued who are still liable to recall. Since the war began many of these officers have responded to a call to volunteer their services, and over thirty are now "temporarily employed." The position of these officers is at the present time very ill-defined, and it would, we have reason to believe, be a source of great satisfaction to many of them to be restored to the active list of the army.

PRACTICE BY COMPANIES.

As was foreshadowed in the Queen's Speech, the Companies Acts Amendment Bill has been introduced at an early period of the session; but, as it is a complex measure affecting many interests, and has taken several years to reach its present stage, it cannot be expected that it will pass through the House of Commons very rapidly. The Bill as presented with the names of the President of the Board of Trade, the Attorney-General, and the Solicitor-General, is that which was the result of the deliberations of a Select Committee of the House of Lords, and passed that House at the end of last session. Hence it contains the clause prohibiting companies from practising as physicians, surgeons, dentists, or midwives, and also that attempting to regulate the practice of pharmacy by com-

panies. It may be noticed that the words "physician and surgeon" are used, and that there is no other word of more general signification introduced, although, as the General Medical Council's Committee pointed out, this has become even more essential since the judgment in Hunter *v.* Clare, which tended to narrow to the utmost the scope of those words. We understand, however, that this matter has been neither forgotten nor neglected, and that the proper authorities have been communicated with. It was thought advisable by those in charge of the Bill to introduce it into the House of Commons precisely as it had passed the Lords, and any small alterations can easily be introduced at a second reading or at the Committee stage. The Bill is now before the public, and it remains to be seen what (if any) opposition will be offered to these clauses. We would urge on our readers to seize every opportunity of approaching their members and securing their support. From the pages of the *Pharmaceutical Journal* we gather that the pharmaceutical chemists have so far failed to arrive at any consensus of opinion amongst themselves as to the form which legislation on this subject as it affects their interests should take. Fortunately we are not in similar case, and are able to contend with perfect unanimity that company practice, whether of medicine, dentistry, or midwifery, ought to be absolutely prohibited as being financially unnecessary, logically indefensible, and resorted to only for evasion of the law.

ISOLATION HOSPITALS.

The fact that yet another Bill to define rather than to alter a point in public health law has had to be introduced into Parliament will make many people think that the time has come when another consolidating public health Act should be prepared. The new Bill is the Isolation Hospitals (Amendment) Bill, which was read a third time and passed in the House of Lords on February 20th. It introduces no new principle, and contains only five sections, and is intended to remedy certain omissions, or supposed omissions, in the Isolation Hospitals Act, 1893. That Act, it will be remembered, gave certain powers to county councils, by combining districts and otherwise, to facilitate the provision of hospital accommodation for infectious disease, and has already proved of much service. A district having already adequate accommodation may enter into partnership, for this purpose, if it will; but it is supposed that in doing so it cannot hand over an existing hospital to the combined Board. The Bill, if it become law, will enable, but not compel, local authorities to make over existing hospitals to such a Board. It seems also possible that the county council (and both the Act and the amending Bill deal only with areas outside county boroughs) have no power to make contributions to either the "structural" or "establishment" expenses of hospitals within their area which have been established otherwise than under the Act of 1893. The Bill enables them to make such contributions alike to hospitals provided under the Public Health Act, 1875, under a local Act, or under the Act which it amends. As interpreted by the Local Government Board, the contributions that county councils may make to a hospital can be only out of revenue. The Bill gives them the power to borrow, and thus increases their power of helping in the erection of infectious hospitals. The powers sought in the Bill are all enabling powers, and if the ruling of the central authority that they do not exist under the existing law be right, they certainly ought to be at once provided. The only regret we feel is that bad drafting in the Act of 1893 should necessitate another statutory addition to public health law.

THE EVASION OF MODEL BY-LAWS

One of the many powers exercisable by sanitary authorities, and calculated to improve in some degree the shocking condition of many tenement houses in London is that of making and enforcing by-laws under Section xciv of the Public Health Act for the sanitary supervision of houses let in lodgings. It has been shown that where one local authority carries out its duty in this matter, and an adjacent local authority neglects to do so, there is a tendency for the more undesirable class of tenants to drift into the latter from the former, and reduce the standard of sanitation of the houses and districts into which they migrate. Last December the London County Council decided to make formal complaint to the Local Government Board under Section ci of the Public Health Act, 1891, with a view to compel the Vestry of Bethnal Green to make valid by-laws as to tenement houses in that district. Meanwhile, it appears, from a report which on Tuesday last the Public Health Committee made to the County Council, and on which a lively debate took place, that the Vestry of Bethnal Green has made, and the Local Government Board have confirmed, a by-law whereby the defaulting vestry purported to exercise its own discretion as to what houses, if any, should be registered as houses let in lodgings. The "discretion" exercised in this case appears to be closely akin to a do-nothing policy. The Public Health Committee of the County Council not unreasonably complain that a statutory duty has been virtually evaded by this discretionary by-law, and that this evasion has been confirmed or sanctioned by the Local Government Board.

THE USE OF CARBURETTED WATER GAS FOR DOMESTIC LIGHTING PURPOSES.

Dr. J. S. Haldane's paper, read before the Incorporated Society of Medical Officers of Health, ought to be of great value. Few, even among those specially responsible for public health administration, are aware how greatly the use of carburetted water gas for domestic lighting purposes has increased in this country during the past five years. There are many reasons for this increase. The plant required is more compact and more convenient in use than that required for the manufacture of coal gas. It can be brought into operation more quickly than the latter, a fact of some importance when, as in a bad fog, the consumption of gas is suddenly increased. Furthermore, the number of men required is much smaller, so that with water-gas plant a strike can be more easily met. It is not surprising, under these circumstances, that a large number of the companies and corporations who supply illuminating gas have supplemented their coal-gas plant by water-gas plant. The circumstances relating to the use of water gas formed, a year or two ago, the subject of investigation by a Departmental Committee, which made certain recommendations. Dr. Haldane was a member of this Committee, and contributed the most important evidence laid before it, giving the results of a large number of experiments carefully conceived and executed. In the paper mentioned above he has brought to a focus our present knowledge on the subject, and given valuable help to the medical officers of health and gas analysts who may wish to keep a check upon the amount of carbon monoxide in the gas supplied in their district, by describing a new and simple but extremely accurate method of estimating the amount of this gas in any gas supply. The experiments made on behalf of the Departmental Committee clearly showed that the poisonous effects of both coal gas and carburetted water gas are due to carbon monoxide alone and not to any other constituents, which are quite harmless by comparison. Coal gas ordinarily contains about 7 per cent. and carburetted water gas 30 per cent. of carbon monoxide. The practical question is whether the danger to domestic consumers is greatly increased by a large admixture of water gas with coal gas. The Departmental Committee came to the conclusion that it was, and recommended that the proportion of carbon monoxide in the public gas supply at night should be limited to 12 per

cent., "or such greater amount as the department may consider desirable." The evidence on which this conclusion was based was twofold—statistical and experimental; we can here discuss only the former. In England and Wales the number of accidental deaths by gas poisoning for a population equal to that of London in 1896, and supplied with coal gas only, was 3; in 88 American cities supplied with coal gas only also 3; in Boston, supplied with 90 per cent. water gas, 390; in Brooklyn, supplied with 97 per cent. water gas, 120; in Chicago, supplied with 100 per cent. water gas, 155; and in San Francisco, supplied with about 70 per cent. water gas, 270. We have omitted suicidal deaths from the comparison, although these also became enormously increased, where the more poisonous gas is supplied. After making the fullest allowances for different methods of life, and for avoidable defects of fittings, it will be granted that the differences are startling, and indicate that in this country we have before us the prospect of a serious increase of deaths from poisoning by carbon monoxide unless some check upon the permissible amount of admixture of carburetted water gas with coal gas be enforced. It cannot reasonably be expected that gas companies will, by a self-denying ordinance, voluntarily confine the percentage of carbon monoxide to the night limit of 12 per cent. recommended by the Departmental Committee. To secure this end, pressure must be brought to bear upon the Government to enforce the necessary regulations; and experience in other departments of public health indicates that this pressure will require to be exerted in many districts, and be of the utmost firmness before any action will be taken. The first step obviously is for every medical officer of health to ascertain the facts in his own district, and proceed to educate the local authority up to the desired point. Dr. Haldane's paper, and the simple method of analysis described in it, will place him in a position for doing this.

THE PROVISION OF CORONERS' COURTS AND MORTUARIES IN LONDON.

Some few years ago the London County Council, having decided against the erection of a central morgue, set to work to secure that every sanitary district in the metropolis should be adequately provided with accommodation for the holding of inquests, for the reception of dead bodies awaiting interment, and for *post-mortem* examinations. Under the Public Health Act, 1891, the provision of mortuary accommodation was made obligatory upon the local sanitary authority; the provision of *post-mortem* rooms was left to the option of the same authorities, while the provision of accommodation for the holding of inquests was a duty imposed upon the County Council. The London Government Act of 1899 converts the 42 sanitary districts in London into 28 boroughs, each of which will in next November become a sanitary district within the meaning of the Public Health Act. If in each of the new boroughs a proper place for the reception of dead bodies awaiting interment shall have been provided, as well as a proper building for making necropsies ordered by the coroner, then the law will have been complied with so far as the borough councils are concerned. It may, however, be that in districts so large as the new Westminster or as the new borough of Wandsworth one mortuary will not only be inadequate, but inconveniently situated in regard to the needs of the inhabitants, jurymen, witnesses, and others. This is a matter which will doubtless receive early consideration at the hands of the newborn municipalities. Meanwhile, it is satisfactory to learn from a return just issued by the Public Control Department of the London County Council that in 21 of the boroughs that are to be, the provision of mortuaries, *post-mortem* rooms, and coroners' courts is regarded as adequate or sufficient, while in the boroughs of Battersea, Poplar, Wandsworth, Southwark, Bermondsey, Deptford, and Greenwich further provision is held to be required.

HOURS OF DUTY OF ASYLUM ATTENDANTS.

A long but rather fruitless discussion occurred at last Tuesday's meeting of the London County Council, on a report from its Asylums Committee, which recommended that no reduction in the hours of asylum attendants should at present be made. It appears that day attendants are on duty fourteen hours (6 A.M. to 8 P.M.) for six days a week. One day a week is allowed off, and twelve days' annual leave is granted in addition. Night attendants are on duty for ten hours per diem. Any attempt to introduce a system of three shifts of eight hours each is regarded as impracticable, and the superintendents are unanimous against the reduction of the daily hours of duty. To allow two days off a week would cost £17,600 per annum, and would mean the enhanced weekly cost for each patient of 10s. 5d., instead of 9s. 11d., as at present. The Chairman of the Committee, after defending the report, concluded by offering to take it back for further consideration. The general opinion appeared to be against fourteen hours a day duty—at any rate in some of the most exacting wards—and the Council seemed to doubt whether all possible methods of effecting reduction had received due consideration at the hands of the Asylums Committee.

INDIAN AND COLONIAL ADDENDUM TO THE BRITISH PHARMACOPŒIA, 1898.

Professor John Attfield, F.R.S., Editor of the *British Pharmacopœia* of 1898, and of the *Indian and Colonial Addendum*, which is now under preparation, has compiled a second report on the subject, which indicates the progress of the work, and gives promise of its speedy completion. As early as the year 1892—six years after the publication of the penultimate edition of the *British Pharmacopœia*—a communication was received from India, pointing out that certain drugs indigenous to India might be usefully substituted for pharmacopœial drugs, and that certain changes in pharmaceutical preparation would be advantageous for their Indian use. The matter was taken into consideration by the Pharmacopœia Committee of the General Medical Council, which addressed the Lord President of the Privy Council with a view to obtaining from India and the Colonies information regarding these two points. Twenty-eight communications were received from the Colonies, in 17 of which suggestions were offered respecting additions, omissions, and alterations. As regards India, action of a more elaborate character was taken. A Committee of experts was appointed in 1894 at Calcutta to take the whole subject into consideration. Three reports resulted from the labours of this Committee. Two of these, concerning compounds, were prepared by the Calcutta body. A third, drawn up by a Committee formed in Madras, in consequence of a letter from the Calcutta Committee, concerned indigenous drugs, and was both valuable and detailed. The data thus obtained enabled Professor Attfield to draw up a report embodying the various suggestions which had been received regarding the inclusion of drugs indigenous to India and some of the Colonies in the *Pharmacopœia*. This report, dated November, 1898, showed that the suggestion relating to the modification of compounds which had been received from India and elsewhere had been considered and largely adopted; also that a few alternative substances and preparations for local use had been introduced as an appendix to the *Pharmacopœia*; but that further information was needed for the purpose of preparing an *Addendum* for use in India and the Colonies in order to determine what substances should be made officinal by inclusion in this publication.

The report, therefore, displayed the material which had been collected, and invited further criticism and additional information as regards descriptions and preparations. For the purpose of fulfilling this indication, the Indian Government constituted a Central Committee in October, 1899, "to consider the question of extending in a practical way the use of indigenous drugs," and local committees in each province "to investigate and make a trial of indigenous drugs and report the results of their experiments to the Central Committee." These agencies are at work and five drugs have been selected for special investigation. This work will require time for its completion. Meanwhile the Madras Committee, to which reference has been made, has framed a fresh comment upon Professor Attfield's first report, and valuable help in the same direction has also been obtained from Surgeon-General G. Bidie of Madras, and Dr. Vandort of Ceylon. It is on the data thus provided that the second report is founded and the editor of the *Addendum* is sanguine that he will be able to issue a satisfactory Indian section of it "within the next few months." It is further in contemplation, as a result of the information already obtained and which it is hoped to obtain from the Indigenous Drugs Research Committees to include as an appendix to the next edition of the *British Pharmacopœia* the knowledge which is now about to be embodied in a special publication. This, we need hardly remark, is eminently desirable, but to render such an undertaking thoroughly satisfactory and useful continued diligence on the lines of the proceedings which we have now summarised is obviously needful, more especially in the direction of submitting these drugs to trial, and ascertaining what preparations of them are most effective and "elegant."

THE NATIVE DRUG PLANTS OF THE UNITED STATES.

The United States Secretary of Agriculture, Mr. James Wilson, in his annual report calls attention to the fact that the collection of native drug plants of the United States involves the expenditure of millions of dollars annually. The commercial extermination of some of the most useful species is already threatened. He states that the Pan-American Medical Congress has recently submitted to him a proposition to co-operate with the Department of Agriculture in a technical and statistical investigation and classification of American drug plants. By accepting this proposal (says Mr. Wilson) "we shall secure, in a research of which we have long felt the need, the cordial assistance of an influential association of learned physicians; we shall encourage each of the other American nations, all of which are represented in the Pan-American Medical Congress, to proceed with a similar investigation of their own medical flora; we shall furnish a basis for the remunerative employment of much land and many people; and we shall stimulate the great growth and growing trade in drugs between the countries of North America and South America. I urge the appropriation of 10,000 dollars to enable this department to co-operate in this investigation."

WILLIAM HUNTER'S ANATOMICAL AND PATHOLOGICAL MUSEUM AT GLASGOW.

The fame of William Hunter has been overshadowed by that of John his younger brother. William was possessed of the same mania for collecting as was John, but he had larger means, and gratified it in a more wholesale manner. John, perforce, contented himself with specimens of normal and diseased anatomy. William collected manuscripts, rare books, coins, pictures, and curiosities in general. The University of Glasgow has just issued, in two volumes, a *Catalogue of the Anatomical and Physiological Preparations of Dr. William Hunter*. The catalogue is prepared by John H. Teacher, M.B., and is published at the cost of the Bellahouston trustees. The catalogue, of which we hope to give a more detailed account, is of the highest value. It brings the Hunterian Museum at Glasgow into the front line of teaching collections in Great Britain, and it is issued at so reasonable a price as to be within the means of the ordinary medical student. The first volume of the catalogue contains, in addition to the description of the specimens, some forewords by Professor J. Young, the Keeper of the Museum, a preface showing the care and reverence with which the collection has been handled, and an excellent and most interesting account of Dr. William Hunter. The volume has also prefixed to it a fine reproduction of the more pleasing of R. E. Pine's paintings of William Hunter.

ALCOHOL AND LIFE ASSURANCE.

The remarks made by Sir Dyce Duckworth in opening a discussion at the Life Assurance Medical Officers' Association on Life Assurance Inquiries respecting the Use of Alcoholic Stimulants are of an eminently practical nature, and are characterised by common sense and moderation. The majority of mankind have decided for themselves that they will take alcohol in some form or another; it therefore behoves the medical profession to have some definite views as to the amount and kind of the various forms of alcoholic drinks that can be taken without harmful results. This is especially important for the medical examiner in life assurance. It will often tax his skill and tact to elicit from an applicant the amount of stimulant consumed daily, but Sir Andrew Clark's method of taking "a day of the candidate's life," inquiring as to early morning, forenoon, noon, afternoon, and evening habits in respect of alcoholic liquids, will frequently astonish the candidate himself when the amount comes to be added up. By this means also the harmful practice of taking stimulants at odd times between meals will be detected. Too many men engaged in business drift into the habit of taking stimulants between meals, for the want of recognising the danger of such a procedure, and the wise words of Sir Dyce Duckworth ought to be brought to their notice in some form.

THE CHAIR OF SURGERY AT CORK.

Professor Yelverton Pearson, M.D., M.Ch., who has been Professor of Materia Medica in Queen's College, Cork, since 1884, has been appointed Professor of Surgery in that College in succession to the late Professor O'Sullivan. Professor Pearson, after taking a distinguished degree at Queen's University, became Senior Demonstrator of Anatomy in Queen's College, Cork. He is Surgeon to the County and City of Cork Hospital for Women and Children, and of the Cork North Charitable Infirmary. His contributions to the literature of surgery are well known.

Dr. F. W. Pavy, F.R.S., has been nominated by the Council for election to the office of President of the Royal Medical and Chirurgical Society at the annual general meeting to be held on Thursday, March 1st, 1900.

At the meeting of the Medical Society of London on Monday next, February 26th, the discussion on The Pathology and Treatment of Appendicitis will be resumed. The following points are suggested for discussion: (1) Non-operative Treatment; (2) Indications for Operative Treatment; (3) Nature of Operation, and any Special Details; and (4) After-treatment.

Lieutenant Goddard, whose name appears among the list of casualties during Lord Roberts's recent operations as severely wounded, is, we believe, Lieutenant G. H. Goddard who entered the service in January, 1899. He was one of the medical officers of the Second Divisional Field

Hospital. The other medical officer mentioned as wounded is probably Captain J. E. Carter, who entered the service in 1891, and is returned in the *Army List* as serving in South Africa.

According to a Central News telegram from Durban, dated February 20th, Mr. Treves, who has done splendid work at the front, has come down to the coast to recuperate after a bad attack of dysentery which prostrated him at Chieveley Camp. He will return to the Tugela on Monday, but he cannot remain there long as he has very pressing engagements in England which will necessitate his sailing for home next month.

At the next meeting of the Society of Anæsthetists to be held at 20, Hanover Square on Friday, March 2nd, at 8.30 P.M., the adjourned discussion on the After-Effects of Ether Inhalation on the Respiratory System will be reopened by Dr. Dudley Buxton. Members of the profession can attend on presenting their visiting cards. By recent alterations in the rules, practically all duly-qualified practitioners who take an interest in anæsthetics are, subject to the approval of the Council, eligible for membership, and it is no longer necessary that they should be anæsthetists at a public institution.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Bill still stands as second order for Ash Wednesday, and will have really little chance of coming on if the House follows its usual practice of meeting at 2 o'clock on that day instead of at noon. On Shrove Tuesday this alteration of the hour for Ash Wednesday is moved by the Government, and is usually carried after a division. Once it was not carried, but on this occasion, unless all those interested in the Miners Eight Hours Bill, and all those connected with the Midwives Bill join forces to vote for the earlier hour (a most unlikely contingency), the usual custom will be followed. Even if the House met at 12, the Midwives Bill could not come on in time to pass a second reading unless discussion was practically omitted, as the fight over the Eight Hours Bill for Miners is always fierce and protracted. No one has yet blocked the Midwives Bill, but members are beginning to inquire about it, as in some parts of the country the medical constituents are very properly advising their representatives of their views on the proposed legislation.

The Royal Army Medical Corps was referred to by several speakers in the course of the debate on the Supplementary Army Estimates. Mr. Lough spoke in terms of commendation of the hospital work done in South Africa, and Captain Norton referred to the demands made on the civilian medical element as soon as the war began, as pointing to the want of strength in the Army Medical Department. He did not consider that the civilian element, however competent in other respects, had the necessary training for the efficient performance of administrative duties. As the closure was applied before the votes were discussed separately there was no opportunity for any special criticism of the Army Medical Service supplementary vote of £70,000.

The Isolation Hospitals Bill which passed the Lords last year was on Tuesday read a third time this session in the Upper Chamber, passed through Committee without amendment, and sent down to the Commons. The Bill seeks to amend the Isolation Hospitals Act of 1893, and especially to enable a local authority willing to be included in a hospital district to lease or sell its existing hospital to the hospital committee constituted under the Act of 1893. The Bill will also enable county councils to make contributions to hospitals provided under the Public Health Act, 1875, as well as to those provided under the Isolation Hospitals Act, 1893. It will also empower county councils to borrow for the purposes of the Act and so help in the original cost of hospitals. Last year the Bill was blocked in the House of Commons. Lord Lichfield, in moving the second reading, made a strong plea for the Bill to be taken up by the Government after it had passed the Lords this year. Lord Knutsford supported the appeal, and Lord Harris said he would submit the request to the President of the Local Government Board.

The Rejection of Volunteers.—Lord Brownlow called attention last week to the fact that volunteers after they had got all their clothing and equipment had been rejected as medically unfit for service in South Africa. These men, he complained, had "to crawl home to their native towns in humiliation and disgust," feeling that they were marked men. Lord Lansdowne promised to remedy the grievance, and proposed to alter the regulations so as to put an end to the hardship which had arisen.

The Census Bill of 1901 was introduced on Monday last by the Parliamentary Secretary of the Local Government Board. The Bill differs from the measure of 1890 in two respects: it applies to Scotland, which in previous years had a separate measure, and a great deal which in previous Acts had been done by express enactment will now be done by instructions. The measure will in this way be made shorter, and possibly less intelligible to the ordinary reader.

The Inebriates Amendment (Scotland) Bill was read a second time in the Lords on Monday last. The Bill gives power to County Councils and Town Councils in Scotland to borrow money for the purpose of defraying expenditure under the Act of 1898. This Bill has passed through Committee and was read a third time on Thursday.

The Supply of Nursing Orderlies to field and general hospitals in South Africa was the subject of a question by Sir Walter Foster on Thursday afternoon. He asked the Under-Secretary of State for War whether the present number was not at the rate of one orderly for every seven patients, and whether in the interest of efficiency this proportion could be increased to one for every five patients. Mr. Wyndham replied that the number of nursing orderlies was as stated and the Secretary of State was advised that the number was sufficient.

The Height of Recruits for the R.A.M.C. is fixed at not more than 5 ft. 5 in. and Sir Walter Foster has asked the Under-Secretary of State for War whether this restriction, which prevented the enlistment in that branch of the service of a man, however otherwise eligible, should he be over the height mentioned, could be removed. Mr. Wyndham replied that the maximum standard of the Corps was 5 ft. 5 in., but a taller man who might for special reasons be eligible would be taken on special enlistment.

Relief of Paupers.—Mr. Hazell brought before the House by question a case in which a poor woman had died before receiving relief from the Strand Guardians. The woman, it was admitted, had applied to the Strand officials, but had been referred to Lambeth, as she had obtained settlement in that Union. If she had made known the urgency of her case it would have been dealt with immediately, and she would have been admitted to the workhouse. The Local Government Board has pointed out that the reference of applications to a clerk with respect to a question of settlement is objectionable, and that it is the duty of the relieving officer to secure that relief shall be granted as promptly as possible. As a result, the Strand Guardians have altered their practice, and such cases will not occur again.

THE WAR IN SOUTH AFRICA.

[FROM OUR SPECIAL WAR CORRESPONDENTS.]

THE MARCH TO THE TUGELA.

By FREDERICK TREVES, F.R.C.S.,
Consulting Surgeon with the Forces.

Spearman's Hill, January 19th, 1900.

DYSENTERY AND ENTERIC FEVER.

AFTER the disastrous battle of Colenso on December 15th, 1899, the field hospital to which I was attached returned to Frere Camp. Sir Redvers Buller also returned to Frere, and made that place once more his headquarters. I have remained at Frere under canvas ever since. The hospital was pitched in the same place, and was cleared of all the wounded. We soon became filled up with cases of dysentery and enteric fever. The dysentery was of a severe type, and we had several deaths. One of my nurses (Miss Tarr) was, I am sorry to say, taken ill with dysentery, and was at once removed to Maritzburg. She developed the affection in a very acute form, and at one time her life was despaired of. She is now, I hear, doing well, but will, of course, not be able to go to the front again.

TREATMENT OF DYSENTERY.

I might mention that the treatment of dysentery which is mostly followed at Maritzburg—where there are now many cases—is that by sulphate of magnesia. The treatment is somewhat painful, but such able practitioners as Dr. Scott of Maritzburg and Dr. Brown of the Assembly Hospital are convinced of its great efficiency. Another method of treatment in favour with many is that by perchloride of mercury with a little opium.

I have had an opportunity of seeing many cases of dysentery, and my impression is that of the methods of treatment at present in vogue that by purgatives—such as sulphate of magnesia—is the best. Dr. Brown (under whose kind and skilful care my nurse was) has quite convinced himself of the value of the sulphate of magnesia mode of "cure."

THE WOUNDED AT MARITZBURG.

During my stay at Frere I paid two visits to Maritzburg to see certain of the wounded. One of these visits was in response to a telegram from the War Office requesting me to see and report upon two wounded officers. The cases from Colenso still lying at Maritzburg were doing well, and one was over and over again struck by the marvellous anatomical feats performed by the Mauser bullet. Perhaps the most remarkable cases are those in which a bullet has passed through the brain without causing more than trifling symptoms.

TRAUMATIC ANEURYSM.

The number of instances of traumatic aneurysm is also curious. I have seen traumatic aneurysms of the brachial, femoral, popliteal, and posterior tibial, several varicose aneurysms of the thigh, and an aneurysmal varix in Scarpa's triangle.

ARTERIO-VENOUS ANEURYSMS.

In one case there was a very large arterio-venous aneurysm in Hunter's canal, with free communication with the vein and great swelling of the thigh. The lesion was due to a Mauser bullet which had escaped. At the invitation of the surgeon in charge, I operated upon this case. I placed a temporary ligature on the common femoral, opened the sac, discovered the holes in the artery and vein, and ligatured the artery above and below the wound, and the vein on the proximal side only. Before the incision was closed, the temporary ligature was removed. This case, I am glad to say, did well, and when I saw the man again, fourteen days after the operation, he was well on the road to complete recovery.

THE HOSPITAL ARRANGEMENTS.

On Friday, January 12th, Sir Redvers Buller left Frere, and on the following day (the 13th) we took our departure. The movement was to be to Springfield some 18 miles from Frere. In order to meet the demands of the position and the possibilities of a big battle on or near the Tugela, Colonel Gallwey, C.B., the Principal Medical Officer, decided to make No. 4 Stationary Field Hospital (to which I had been attached from the first) a mobile hospital to follow the troops, otherwise all the wounded would have to be carried back to Frere. Colonel Gallwey also established a general hospital at Mooi River with 500 beds, and these with the 1,100 beds available at Maritzburg and the few beds at Estcourt, would do much to meet a very difficult medical position. There can be no doubt that Colonel Gallwey's arrangements were ably conceived and admirably carried out. He certainly spared no trouble to make the Army Medical Department in Natal a complete success.

THE JOURNEY OF THE HOSPITAL.

Our march was made on January 13th, and an account of it will give some idea of the difficulties in the way of work at the front. The hospital is to accommodate a minimum of 300 beds, and was made up of 60 tents and 10 marquees. The rank and file of the R.A.M.C. numbered 88. There were 12 surgeons including myself, 2 army sisters, and my remaining nurse Miss McCaul. We also took with us 100 coolies for camp work, who walked all the way with their earthly possessions on their heads. Our train was composed of 16 ox waggons each with 16 oxen. The water and bread carts were also drawn by oxen, so that the number of oxen employed was over 260. There were 5 ambulances, each drawn by 10 mules. My own transport consisted of a small covered waggon, a Scotch cart, 16 mules, a conductor on horseback, 4 Kaffir "boys," a groom, and my manservant. There were therefore 66 mules on the road. I rode on horseback, as did most of the other surgeons. We got up at 3 A.M., the tents were all down by 4 A.M., and at 5.15 A.M. we left Frere. It was a glorious day, a little too hot for comfort, and with a too blazing sun. We outspanned for two hours at 7.30 A.M. and reached Springfield at 2.30 P.M., having done the whole march in two treks. Considering the roads, the size of the waggons, the slowness of oxen, and the heat, this was considered a good march. On nearing Springfield we had an escort, and passed 4 Boer prisoners being marched to the base.

A VIEW OF THE BATTLEFIELD.

The camp at Springfield was a very charming one, and the Lesser Tugela, which is swift but muddy, provided excellent bathing. I rode each day to the hill commanding the Great Tugela upon which our big guns are placed. The view from this hill is grand in the extreme. It commands a splendid plain covered with kopjes, across which runs the Ladysmith road. At the bottom of the hill, which was rendered beautiful by mimosa trees in bloom, was the drift. The Boer trenches were well in view, and until our guns began I could see the Boers working in their shirtsleeves at their all-pervading earthworks.

On Thursday, January 18th, the hospital moved to the banks of the Great Tugela, a distance of six miles. I had an opportunity of seeing from the hill on which our guns were placed the many details connected with the crossing of the river: the passing of our men across the drift and their hiding behind the nearest kopje, the play of the howitzers and the field artillery, the ascent of the balloon, and the hundred and one incidents which attend a great military movement. One could also watch Sir Charles Warren's advance on the left. Over and over again our shells burst right in the Boer trenches, but only very rarely could any Boers be seen. They

"lay low" with admirable patience. I cannot imagine that the area of a great battlefield could be better viewed than from the hill on which we stood, and which rose abruptly from the river bank. The quietness of the place when the guns ceased was extreme, and was broken only by the numerous doves which occupy the wood on the hill side. The country, although occupied by some thousands of Boers, appeared to be absolutely deserted. There was a suspiciously large number of Boer ambulances to be seen, and I imagine that not a few of these ambulances were carrying ammunition and supplies. The accuracy of our big gun firing was much to be admired, and there was hardly a trench, donga, or copse which had not a shell dropped into it at some time. I believe that some five miles of the Ladysmith road is in view from the hill. The soldiers have been lying out without tents and on short rations, but fortunately the weather has been fine. It is difficult to give a proper impression of the immense tract of country to be covered, and of the number and irregularity of the hills which have to be passed.

The Provisioning of the Force.

The transport of rations, fodder, and ammunition for the large force employed must tax the Army Service Corps to the utmost, but so far the difficulty has been well met. Miles of waggons are to be met with along the road, and many thousands of oxen are employed.

I shall hope to be able to give some account of the engagement which is impending. At present we are waiting ready to start at an hour's notice, and of the direction of our move we know nothing.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

BULLET INJURIES OF THE HEAD.

"A Humane War."

The remark has already been frequently made that this is a very humane war. It is to be hoped that such is really the case. As far as regards bullet wounds there is no doubt that the vast majority inflict, as a rule, little pain, either at the time that the wound is received or subsequently. Flesh wounds heal soundly in a few days. The apertures of entrance and exit, which are often scarcely to be distinguished from each other, close up at once. The track of the Mauser or the Lee-Enfield bullet cicatrises rapidly into a tough cord (most noticeable where muscle has been traversed). Large extravasations are quickly absorbed and suppuration scarcely ever occurs. A month or so after the injury the scars on the surface are often scarcely perceptible, and when they are situated in a fold of the skin, particularly about the face, as, for instance, by the eyelids, the closest inspection is necessary to detect any mark at all. The explanation of the gratifying absence of all untoward complications probably lies in the fact that, in an ordinary wound resulting from a small-bore nickel-sheathed clean bullet, little if any air is introduced into the wound. The wound is almost valvular, and little more than is frequently made in subcutaneous surgery. If the bullet passes through the ordinary helmet worn by the men it does not bore a hole clean through, such as would be made by a drill. The aperture will more probably consist of a semicircular cut through the material and the little tongue of material, corresponding in diameter with that of the bullet, is seen to be slightly depressed below the level of the clean-cut portion.

Much the same sort of effect appears to be produced on the skin and possibly on deeper structures. It is not difficult to understand, therefore, how large wounds that must have traversed most important viscera heal readily. In a subsequent letter I hope to mention cases where the lung or lungs have been perforated, the abdominal cavity traversed, or the liver shot through with little more than temporary trouble. In the abdominal cases it is certainly still a question whether, in the absence of positive indications, exploratory laparotomy is advisable. The opinion generally held now seems to be adverse to operation. But so large and important a subject requires to be dealt with fully, and at present there is scarcely material enough to hand to justify any conclusions in the matter.

With head injuries, however, the case is different. The large number already seen has probably led most of those who have had them under treatment or watched their progress generally to arrive at certain broad conclusions. Perhaps no class of cases has shown more satisfactory results, and the recoveries in many instances have been very remarkable. In detailing some few instances that have come under notice, I will confine myself chiefly to the clinical aspect of the cases, and allow the records to speak for themselves. The points already mentioned with regard to the behaviour of the bullet in traversing the soft parts such as the scalp must be borne in mind in considering injuries of the skull and its contents, and it must also be remembered that we have no details of head injuries that were immediately fatal.

"Gutter" Wounds of the Skull.

A considerable number of gutter wounds are seen. Here the skull is grazed or troughed to a greater or less depth. Even when a strip of scalp is destroyed, the wound heals up very readily, and when more or less circular apertures of entrance and exit are present, the grooving of the bone may easily escape detection. But these injuries are by no means unimportant. Even when the skull is lightly touched, there is likely to be very considerable fracture and splintering of the internal table. When such cases have been trephined owing to cerebral symptoms, the extent of underlying damage has usually excited astonishment. There is little doubt in my mind—and I believe the opinion will come to be shared by the surgeons at work in the military hospitals—that every case of gutter wound of the skull should be trephined. In head injuries it is necessary to look far ahead. To concentrate the attention on the mere healing of the wound is to miss the cardinal importance of these cases. Operation in these instances, though it may seem unnecessary, and though it must be in some degree exploratory, is really most strongly indicated as a preventive measure. We are all, in civil hospitals at home, only too familiar with cases of old head injury in which mental symptoms have gradually developed; and we would probably acknowledge, if only to ourselves, that belated surgical interference in such patients does not give very encouraging results. "Exploratory" laparotomies are perpetually being performed in civil life, often with very faint shadow of justification. Exploratory trephinings are too often omitted, simply because the symptoms which might indicate operation only slowly come on. It is very far from my intention to criticise now in any way surgical practice here. Operations for trephining here in this campaign have been so strikingly successful (as I make no doubt whatever statistics will hereafter show), that the surgeons show no reluctance to undertake them. Nevertheless, some gutter wounds are seen which have been left to themselves. It is of course a class of injury very rarely met with in civil practice. Possibly some of those wounded in this way have been sent back to the front as recovered. It will be interesting in this case to note whether the men are easily affected by the sun, for it must be a matter of common experience that for a long time after a head injury involving any damage to the encephalon, patients are peculiarly liable to be so affected, even in climates much more temperate than that of South Africa. Possibly the high velocity of modern bullets accounts for the damage to the internal tables of the skull. The vibrations set up through the thickness of the skull by the passage of a Mauser bullet, say partly through the external table, must be enormously rapid, and the mechanical explanation of the bone lesion is not far to seek.

Penetrating Wounds of the Head.

Bullet wounds actually penetrating the skull and some portion of its contents are numerous enough, and constitute at first sight the most remarkable cases met with in the military hospitals. First, with regard to the effects on the skull itself: The range will, as is well known and as has been determined experimentally, greatly influence the amount of injury inflicted on the bone. Unfortunately reliable information can very seldom be obtained on this point. All who have

read the accounts of the engagements near the Modder River and at Colenso will recognise that the men can have had but a vague idea of the range at which they were hit. At Colenso, for instance, scarcely a Boer was seen, and there were tiers upon tiers of entrenched positions. Usually the shortness of the range is much exaggerated; 250 yards is a common estimate. There is no doubt, however, that the Highland Brigade at Magersfontein were shot down at extremely close quarters. Judging by the results of the experiments made with modern small-bore rifles in England and Germany, the bulk of the head injuries seen in hospital have been inflicted at medium ranges, say 400 to 800 yards. This is really what we should expect, for at close quarters the amount of damage caused by a penetrating wound of the head is so extensive as to be probably fatal.

The more obliquely the bullet enters the skull the greater will be the amount of damage to the inner tables. If the apertures of exit and entrance are both at a right angle to the plane of the skull, both wounds may seem to be cleanly drilled through the bone, and are scarcely to be distinguished by external inspection. But in all cases the inner table will be more or less broken up at the aperture of entrance; and if the skull is trephined there will be no doubt whatever as to the direction of the wound. Even in a long wound fragments of bone may be found lying along the greater part of the track. In not a few instances where trephining has been done at the front a second operation has been found necessary at the base, and much loose bone removed.

At very short ranges the skull may be burst open to a greater or less extent in the manner which has been shown experimentally to take place. Thus in Colonel Stevenson's work on *Gunshot Wounds* a skull is figured into which a small-bore bullet had been fired at a distance of few yards. I have not the work by me for reference, but believe the distance was ten yards. The skull is seen to be most extensively fractured. The specimen is in the Museum at Netley to the best of my recollection.

The observations made above relate to the calvarium, and instances may now be cited bearing out the foregoing remarks. I have to thank the surgeons for permission to give the following sketches of the cases under their charge. Frequently the patients as they are moved from field to base hospital or on to hospital ships have been under the care of several surgeons, and it is impossible to communicate with all. Moreover, often—too often indeed—the patients are shifted about in the base hospitals, and it is far from easy to follow out a particular case without giving much trouble to the much overworked administrative staff. The following are examples of injury at close range:

Private D., wounded at Modder River on December 10th, 1899. Entrance wound 2½ inches behind right parietal eminence in a line drawn between that eminence and occipital protuberance. Exit through frontal bone in right side close to longitudinal sinus. The bullet traversed at least 6 inches of brain tissue. The left arm was completely, and the left leg partially, paralysed. There was evidence of fracture of the base on both sides. Sanious discharge from both ears and deafness. The fissure seemed to split the skull in two in the vertical plane. A large flap connecting the two bone wounds was turned down and the skull trephined on the inner side of both the exit and entrance wounds. Many fragments of bone were removed from dura mater, and also blood clot and damaged brain matter. The scalp wound united at once, save over the anterior crown of trephine, where it was healing by granulation (on December 27th), and where there seemed to be some tendency to hernia cerebri. The deafness improved rapidly, and the discharge from the ears, at first abundant, soon ceased. On December 27th he could hear well; no facial paralysis. The leg had recovered power to a very considerable extent, but, as usually happens, the footdrop was almost complete. The arm was still completely paralysed. His memory and mental condition generally were practically normal. Recovery seemed probable. Further notes of this case are promised. Probably the cortex was not damaged by the fragments of bone, but the motor areas of the arm and leg were damaged by the track of the bullet passing close beneath the cortex.

In another case of wound at undoubted short range the bullet entered close to the longitudinal sinus in the occipital vein, possibly even wounding it, and passing out through the frontal bone, traversing several inches of brain matter. The skull was trephined in front of the posterior wound, and it was found that a fissure connected the apertures of entrance and exit. Fragments of bone were removed and brain matter. Free hæmorrhage necessitated plugging the wound posteriorly, but it was not certain that the hæmorrhage came from the longitudinal sinus. Forty-eight hours later the bleeding recurred on the removal of the plug, and it was replaced. Thenceforward rapid recovery. The wound was received on December 15th, and a month later the power had almost entirely returned in the arm and to a great extent in the leg, but there was still marked footdrop. The mental condition was altogether satisfactory.

The Helmet as a Protection.

That the helmets worn by the men afford a considerable amount of protection the following cases will show:

In one of the actions near the Modder River a private presented himself with a scalp wound and a fissure of the skull. According to his own account, the injury caused symptoms of concussion. The bullet was found beneath the inner canvas lining of the helmet, having perforated the substance but failed to pass right through. The canvas bulged in over the site of the head injury, and the bullet (a Mauser) could be distinctly felt and rattled about.

In another instance a bullet traversed the frontal lobes from side to side, and was found embedded in the substance of the helmet, fitting firmly into the hole it had made. No operation was performed in this case, and there were absolutely no symptoms. The entrance and exit wounds were close to the coronal suture.

Probably in both these cases the wounds were inflicted at long range at, say, 1,000 yards. In the second case the possibility of after-effects occurring months or even years after the injury is one to be borne in mind. The inner table, judging by the experience of other cases, was almost certainly broken, and driven in to the dura mater to some extent. As a curiosity may be here mentioned the case of a private. In this instance the bullet entered just behind the left mastoid process at the base, evidently narrowly escaping the lateral sinus, and passing out through the upper lip in the right side. The wound healed throughout immediately.

Some apology is, I feel, needed for any absence of systematic classification of the cases mentioned in this letter. I have thought it better to content myself with little more than the bare record of the cases, giving them more or less in the order in which they chance to have been seen. Moreover, our experience of the effects of the most modern firearms in actual warfare is still young, and possibly large additions may be made to it before long. The time will come later on for deliberate conclusions and for systematic analysis. At present statistics are merely being collected, and the opportunity for working out the results they may show has not arrived.

A Puzzling Case.

A case brought under my notice when the patient was in the hospital ship, *Lismore Castle*, is rather a puzzle. The man was wounded at Colenso on December 15th. The wounds in the scalp were characteristic of an ordinary Mauser bullet. The entrance wound was through the left frontal bone on the level of the eminence, and the exit through the parietal at the same level. The track was almost exactly parallel to the longitudinal sinus and close to it. There was no paralysis of the limbs. The sole symptom was loss of vision of the left eye. Light could just be distinguished. The man complained of weakness in the right eye. The fundus oculi appeared perfectly normal.

There seemed to be no doubt that, previous to the wound, the vision of the left eye was natural. No branch of the fifth nerve appeared to have been damaged; sensation over the area supplied by the supraorbital nerve was normal as far as could be ascertained. The loss of vision occurred immediately on the receipt of the wound. The vision of the right eye was improving slowly, but from the first was but little impaired. No change had taken place in the course of some three weeks in the vision of the left eye. Some considered that trephining was indicated in this case, not so much in any hope of restoring or improving vision, but more because tolerably extensive injury to the inner table might from the experience of other

cases be anticipated. So far, however, from this being done, it was suggested (not however by those immediately in charge of the case) that the man might return to the front, as he was capable of taking aim with his right eye. It is not in the least likely that many of the grave injuries will be considered really sufficiently recovered to go back to full duty.

Hemiplegia due to Perforating Bullet Wounds of the Head.

The following wound was almost certainly inflicted at long range: Private G. was wounded at Colenso on December 15th. The bullet entered close to the margin of the orbital arch in the left side, half an inch internal to the supraorbital notch. The exit was close to the lambdoid suture on the right side, some 2 inches below the level of the parietal eminence. The bullet perforated the skull at the latter point, but failed to pierce the scalp entirely, and was pulled out by a comrade. There was no loss of consciousness. The epistaxis was very free. The man was trephined on December 23rd, close to the wound of exit, which by some mistake was assumed to be the wound of entrance. Fragments of loose bone were removed. At the time of operation there was left hemiplegia and left facial paralysis. The eyes were normal. The motor area was examined at the time of operation, but appeared to be uninjured. Some brain matter escaped through the posterior wound, however, and there was evidently considerable laceration of the brain substance. The occipital wound was seen clearly to be the aperture of exit, as the bone was driven outwards at this point. The story of the removal of the bullet was not communicated before the operation. By January 18th, twenty-six days after operation, power of movement in the leg had been almost wholly restored, but there was still complete paralysis of the arm. The facial paralysis, which had been complete, was then very slight. The mental state was one of some hebetude. In very few of the cases of grave head injury from bullet wounds is the irritability, so often met with after head injuries in civil practice, to be noticed. The mental condition was slowly improving.

In several cases of hemiplegia from lesion of the cortical area the recovery of power in the arm is much slower than in the leg, and in some, at least, the prospect of recovery at all seems questionable. On the other hand, the foot drop is usually the most persistent symptom in the leg, which in not a few instances recovers rapidly up to that point, but then ceases to improve. The frontal lobes, in this and in many other of the cases, must have been extensively damaged, but no appreciable effects were manifest. As is commonly remarked, the experience of gunshot wounds of the head in this war almost appears to render the use of the frontal lobes questionable.

Aphasia: Trephining: Great Improvement.

A case of considerable interest illustrating the fact that functional activity can be restored with almost as remarkable rapidity as the mechanical lesion is repaired is furnished by the following case:

A trooper in the South African Light Horse (like so many of these adventurous and loyal young men, a man in good business position in Johannesburg) was wounded at Colenso on December 15th. The entrance wound was situated 1½ inch above the left zygoma, and the exit was about 3 inches higher up. Evidently from the direction of the wound, which was slightly oblique, the area of Broca's convolution was likely to be injured. The man did not lose consciousness when he was struck, but was able to walk some 300 yards to an ambulance. Arrived there, according to his account, he fainted. He was sent down in due course to Maritzburg. On admission he had aphasia; there was loss of power in the right arm, and left facial paralysis. On December 22nd he was trephined, the bone between the apertures of entrance and exit being freely removed. Much loose bone was removed, together with blood clot and brain matter. Three days after the operation some power of speech returned. The arm began rapidly to recover power and the facial paralysis to disappear. By January 15th, twenty-four days after the operation, the arm had practically fully recovered its power. The facial paralysis was still evident, but was steadily mending. His power of speech was good, and he could converse readily enough, though occasionally making mistakes in using common words. Thus he occasionally said "Yes" for "No," or *vice versâ*. On January 18th the power of speech had further markedly improved. At the outset there was complete agraphia. Asked to write something on January 10th he hesitated and waited for suggestion. Some one said "Write 'nurse,'" which he immediately did without much difficulty. Then he remarked that that was all very well, but he could not write the letter he wanted to, for he could not begin as he wished by writing "My dear brother Jack." Asked to try to set down those words he wrote "Nun," and then gave it up. The word "nurses" he had previously written was before his eyes at the time.

A week later he wrote the sentence down fairly rapidly and quite accurately, though whenever he came to the letter "r" he hesitated unless it was repeated to him several times. There may be further opportunity of seeing this case, and I hope to send specimens of his writing at different dates, with some remarks on the cerebral condition. It was noticeable that with the left hand he wrote down fairly quickly what he was asked to write, and that the power of doing simple arithmetical sums was not lost. In this case there was some suppuration in the wound. The long period that elapsed between the date of injury and that of operation in this and in other of the cases recorded is noteworthy.

Bullet Wound producing Depressed Fracture.

The following furnishes a good instance of the injury that may be inflicted when the bullet does not penetrate the skull. It is really an example of deep "gutter" wound. Private P., wounded at Modder River, was admitted at Wynberg some forty-eight hours after the injury. On admission there were marked signs of compression. The pulse was 40. There was paralysis of the left side of the face and tongue, and loss of power in the left arm and leg. Speech was very slow and imperfect, and consciousness at a low ebb. The wound was situated in front of the lower end of the right Rolandic area. On trephining, an oval piece of the outer table was found to have been chipped off, and through the opening the diploë could be seen. The skull was unusually thick. A crown of bone was removed with the trephine. The dura mater did not pulsate. Several large fragments of bone penetrating the dura mater and much blood clot were removed. As pulsation still did not return, the dura mater was incised, and more clot and fragments of bone removed from beneath it. Eventually pulsation returned. For some days subsequently the pulse remained slow, and the symptoms seemed unrelieved; but ten days after the operation the pulse-rate rose to 74, and the paralysis rapidly cleared up. For the foregoing notes I have to thank Mr. J. J. Day, the civil surgeon in charge of the case at Wynberg.

Clinton T. Dent.

SOME IMPRESSIONS OF MILITARY SURGERY IN SOUTH AFRICA.

By G. H. Makins, F.R.C.S.,
Consulting Surgeon to the Forces in South Africa.

III.—Wounds of the Blood Vessels.

Deaths from Hæmorrhage.

The small general tendency to external hæmorrhage exhibited by Mauser bullet wounds has already been alluded to, but striking as this experience has been in cases of wounds of the soft parts involving small or moderate-sized vessels, it falls into insignificance in comparison with that of wounds implicating the large arteries and veins.

Few cases of death from rapid primary hæmorrhage are observed further from the fighting line than the actual field hospitals, and unfortunately we have no exact knowledge of the cause of death in many of those who die before they have been brought in. General opinion, however, appears to support the above statement.

Internal Hæmorrhage.

I have only had the opportunity of observing two examples of rapid death from internal hæmorrhage. In one instance while standing in a tent I heard a man exclaim, "Why I am going to die after all." The man's face was blanched, and his expression was one of great terror. On examination of the abdomen this was found to have become suddenly distended with fluid, and in a few minutes death followed. In this

case, in which a wound traversed the abdomen from side to side, a very large vessel must have been involved. In the second case, a patient for whom I had operated for an intestinal injury and evacuated a considerable quantity of blood without discovering the source of the hæmorrhage which had ceased spontaneously, a recurrent hæmorrhage, probably from a mesenteric vessel, led to speedy death twenty-six hours after the operation. In one other instance, not seen by myself, a patient died a few hours after a wound of the liver, apparently from rapid hæmorrhage taking place internally from a large hepatic vessel.

Extravasation into Limbs.

In a considerable proportion, however, of wounds of the limbs unattended by serious external hæmorrhage, great primary enlargement of the limb from interstitial bleeding occurs during the first few hours following the injury. In the majority of these the swelling diminishes with some rapidity, and the limbs reassume their normal size, often with considerable stiffening of the tissues and surface ecchymosis, which latter appears only in the course of ten days to three weeks.

Traumatic Aneurysms.

In others, with the subsidence of general enlargement, local swelling and pulsation in the line of the artery appear, and a traumatic aneurysm develops. The aneurysms, when left at rest for a time, show a further disposition to contract and localise themselves. A considerable number of such aneurysms has been observed. Thus I have seen three of the popliteal artery, as well as examples in the femoral, brachial, and ulnar vessels.

Aneurysmal Varices and Varicose Aneurysms.

The most remarkable peculiarity, however, of the vascular injuries has been the frequent development of aneurysmal varices and varicose aneurysms. I have seen one or other condition in the innominate, brachial, femoral, popliteal, and the calf vessels.

The same tendency to localisation has been observed as in the simple traumatic aneurysms, cases which exhibit at first both thrill and tremor later retaining the thrill alone. The appearance of the thrill has been noted as early as three days after the infliction of the wound, in other cases not until the end of a fortnight or three weeks. This late discovery may have depended, however, in a measure on the number of cases to be dressed and examined, and in part on the fact that experience had shown us that wounds in immediate proximity to large vessels so seldom gave rise to any trouble that the condition was not looked for.

Where the symptoms are limited to thrill and machinery murmur the limbs are of normal size, and in only one has there been any sign of venous obstruction, and that not of a serious nature; the patients, in fact, suffer little or no inconvenience, and down to the present time the vessels have not been operated on. In the case of the large trunks the wound tracks are naturally usually so disposed as to cross the line of both artery and vein; thus in one case of innominate aneurysmal varix the bullet entered 1 inch below the axillary fold on the right side of the chest, and emerged at the posterior edge of the left sterno-mastoid, 1½ inch above the clavicle. In a case of brachial varix the bullet traversed the arm in the upper third from before backwards across the line of the vessels. In a case of popliteal varix the bullet pierced the centre of the patella, and emerged in the centre of the popliteal space.

In a second case of arterio-venous aneurysm at the root of the neck, however, the bullet may have passed between the artery and vein, wounding both vessels as it entered over the centre of the infraspinous fossa of the right scapula, and emerged through the sterno-mastoid muscle of the same side just at the junction of the two heads of origin of the muscle three-quarters of an inch above the clavicle. In this case a considerable pulsating swelling extending into the posterior triangle shows little sign of decrease.

Beyond these cases of implication of the large vessels, a similar condition has been noted both in the thigh and calf, in which smaller branches were concerned.

Death from Traumatic Aneurysm.

Other large trunks have been wounded and traumatic aneurysms have formed which have caused death at a comparatively late date; thus a bullet entered the left second intercostal space and lodged in the chest. A left hæmatothorax developed, and the left radial pulse was noted to be materially diminished. Three weeks later the chest was incised on account of the development of inflammatory symptoms, with the result of bettering the general condition and improvement in the radial pulse. A sudden gush of blood from the external wound occurred a fortnight after the operation, and after death a ruptured traumatic aneurysm the size of the fist was found on the first part of the left subclavian artery, the opening into the vessel admitting the tip of the finger.

Secondary Affection of Vessels.

Wound tracks crossing in immediate proximity to vessels seldom or never give rise to secondary hæmorrhage, or as far as it has been possible to observe up to the present time to the development of aneurysms from dilatation of the weakened coats, although the number of tracks which seem to have missed a vessel by a hairsbreadth is very considerable. On the other hand, the vessels often suffer secondarily in a somewhat peculiar manner, the extreme density and tendency to contraction of the cicatricial tissue resulting from the wound exerting such pressure as to lessen materially the calibre of the arteries. This condition is common, but I have observed it in its most marked degree in wounds piercing the inner side of the arm; in a very considerable proportion of such wounds the radial pulse loses more than half its volume. Whether the condition is permanent or transitory only further observation can show; but considering the small area over which the track extends it is remarkable, for the actual pressure on the vessel resembles what might be produced by encircling the limb with a band. Further, it is noteworthy that no corresponding degree of venous pressure is evidenced by œdema of the limb, for I have not observed this to be common. The fact is probably to be explained by the greater ease with which the venous circulation re-establishes itself by collateral channels.

Rarity of Primary Hæmorrhage.

The rare occurrence of severe primary hæmorrhage is probably to be accounted for by the extreme force by which the vascular injury is produced, the vessel wall reacting much as it would do if crushed; beyond this, the dry and devitalised nature of the track leading to and from the wounded point probably favours a rapid coagulation of effused blood, and thus further checks any tendency to external bleeding.

Secondary Hæmorrhage.

Secondary hæmorrhage has occasionally occurred independently of any aneurysmal condition, but in every case I have observed this was secondary to sepsis, and offered no peculiarity.

Treatment of Traumatic Aneurysm.

Traumatic aneurysms treated by ligation of the affected artery at or in the immediate vicinity of the wound in the vessel have done well: I have seen no case of aneurysmal varix interfered with.

THE MILITARY HOSPITALS IN NATAL.

[From our Special War Correspondent.]

Pietermaritzburg, January 25th.

At the present juncture, if one may judge by the crowd round the newspaper posting box at the post office on mail days, the circulation of South African journals at home is tolerably large. People in England are, not unnaturally, anxious to learn all they can about a colony such as Natal, of which they hear so much at present, and in which so much anxiety is now centred. They desire to keep their finger on the pulse of the Colony, to know to what extent the predominant spirit of the time at home is reciprocated in South Africa, and look eagerly for information as to how far the immense efforts made at home have met with the approval of those nearer to the scene of action, and how far their endeavours to cope with the emergency have met with practical success. For information on such points the Briton naturally turns to newspapers. It thus falls out that the

utterances of the South African press have probably acquired at home a greater importance than would be attached to them in time of peace.

For this reason it seems worth while to refer to two leading articles that have appeared in the *Times of Natal* on January 19th and 20th under the heading of Military Hospital Deficiencies. The main contention is that, while the medical staff are discharging their duties in a highly efficient manner, the administrative authorities have failed to reach the high standard of hospital excellence desired by the Imperial Government. Now, any such statement made by a responsible journal is likely to touch the public at home on the raw. The Government has spared no expense to provide medical stores in abundance, while the public has come forward with the most munificent liberality in order to ensure that the sick and wounded shall be thoroughly well cared for. When all at a distance are in a condition of strain and excitement people are prone to jump to conclusions, and any suspicion of a breakdown in the medical organisation may easily be magnified into a conviction that the hospital horrors of the Crimean war are being enacted over again in the present campaign. The public may be reassured. Nothing of the sort has happened, or is in the least degree likely to happen, in any of the military hospitals. The statement, however, has been made and the charges brought; strong evidence is needed in support of such charges, but, to the unprejudiced mind, such evidence is hardly furnished. The facts of the case scarcely warrant the rather sweeping assertions made. Much of what is set forth in the articles need hardly be taken seriously. Isolated instances of mismanagement in matters of detail may, if they happen to be true, furnish reasonable cause for complaint, but do not justify wholesale condemnation of the organisation. Nor is it fair or sound argument to quote a single case, which might possibly be well substantiated, and immediately assert that doubtless many similar instances are daily happening. One at least, however, of the instances adduced to show faulty management is wholly incorreet. It is asserted that a doctor cannot at two of the hospitals obtain brandy for a patient when urgently needed without sending over to obtain an order from the officer in charge of the stores at the camp hospital, which is nearly a mile distant. Further, it is stated that "days elapse sometimes between the application and the receipt of the brandy or other medicine." And, lastly, on this subject the writer "hears" that brandy has had to be supplied from an outside source to one of the hospitals for emergency cases. Careful and thorough inquiry has revealed that: (1) each hospital has its own stores of provisions, wines, etc.; (2) brandy can always be obtained at a moment's notice; (3) the nurses have an extra supply in each ward for emergencies; (4) there has always been an ample supply; (5) no medical officer or nurse knows of a case where there was the slightest difficulty in obtaining brandy. The foundation on which the apparently categorical statements rest appears to be that at one of the hospitals a gift of brandy was accepted; at the time there was an ample store in the hospital; elsewhere similar offers have been declined on the ground that there was already in stock more than was needed.

One or two more comprehensive allegations are brought forward. The author of the articles considers the strength of the nursing staff inadequate. To anyone accustomed to the nursing arrangements in civilian hospitals this view undoubtedly, at first sight, appears to be well founded. In a military hospital a nursing sister often has charge of 50 or even more patients if her wards happen to be full. There are, of course, orderlies in addition, in the proportion of about 1 to every 10 patients. These men are really trained male nurses, and must be reckoned in estimating the strength of the nursing staff. In a civil hospital, where there are no male nurses, the proportion of nurses to patients is about 1 to 4. The nursing question is a large one, and cannot be discussed here, for there is much to be said on both sides. It suffices to note that the Army Medical Department deliberately adopts the system of working with a small staff of nursing sisters in stationary hospitals, and that the weakness of the female nursing staff in point of numbers is not peculiar to the hospitals of Pietermaritzburg.

With regard to the food supplied, a point is raised that must be dealt with more fully, as it may have a very disturbing effect at home. Locally, as far as I have been able to ascertain, the attack has fallen rather flat, for the people here seem to have a shrewd capacity for judging for themselves. Thus the public is led to infer that tinned milk is, if not exclusively, at any rate extensively, used, and that the "milk diet" of patients suffering from enteric fever and dysentery consists solely of preserved milk. Unquestionably at one time the supply of fresh milk was inadequate. The contractor failed to deliver the amount he had undertaken to supply, and the deficiency had to be made up with tinned milk. Steps were therefore taken to improve the supply, and a dairy farm was started, with 75 cows, near the "College Hospital," a tent hospital similar to Nos. 2, 3, and 4 Base Hospitals, forming part of the General Hospital in Pietermaritzburg. For a while the supply of fresh milk still fell short of what might reasonably have been expected from so large a dairy farm, but a change of *personnel* at the farm brought about a more satisfactory condition of affairs, and since January 7th the supply has been adequate. All cases of dysentery and enteric fever have been for a long time supplied exclusively with fresh milk. Still a certain amount of the condensed milk has to be used. It must be remembered that the number of patients varies constantly. Drafts are constantly being sent away from the base hospitals either back to the front or on to Capetown. Every effort has been made to keep a large number of beds available in view of possible severe fighting at the front. At the moment of writing out of some 1,000 beds only about 460 are occupied. Within a few hours nearly all may be occupied. The difficulty of making contracts when varying amounts are required is by no means slight.

The *Times of Natal* further contends that while "hundreds of tons of hospital stores" are at Durban the hospitals "are practically dependent on charity for socks, sleeping suits, shirts, pillows, etc." Probably the statement is greatly exaggerated. The truth seems to be that the needs of Natal have hardly been enough considered, and that while Capetown has more than is wanted Durban has not enough. Certainly at the outset the line that the campaign was destined to take did not seem to have been accurately forecast, and no doubt if a few weeks ago a large number of sick and wounded had been brought down the hospital resources would have been strained almost to breaking point. Happily by this time adequate preparations have been made, and there is now no fear of the medical department being unable to meet any demands that may be made on it. With regard to the charitable liberality of the people of Natal it may be noted that while suitable gifts to the hospital of all kinds are gladly welcomed, the outflow of sympathy is so great, the patriotic feeling in the Colony so strong, and the desire of everyone to assist practically in the work so marked, that it would give wide offence if gifts in kind were not accepted; but this by no means implies that the hospitals here are dependent on charity for such minor luxuries as are almost a necessary part of the equipment of a modern hospital.

The excellence of the hospital trains and their success have been abundantly proved. The hospital ships are admirably equipped. But it is not only on the railway or on the sea that the comfort and well-being of the sick and wounded has been studied; in the base hospitals, too, they are well cared for. These hospitals are good, and every effort is constantly being made to improve them further.

I may note that the publication of the articles referred to led to the subjoined prompt rejoinder from Colonel Clery, R.A.M.C., in charge of No. 4 General Hospital now at Mooi River. The editorial note appended is instructive:

THE MILITARY HOSPITAL.

[To the Editor, *Times of Natal.*]

Sir,—Will you favour me with a brief space in your paper to enter an emphatic protest against a paragraph in your leading article of Saturday regarding Mooi River Hospital.

It is a direct perversion of facts to state that an appeal was made to the public to supply equipment of mattresses, sheets, blankets, pillows, towels, nightshirts, etc. No such appeal was issued by me, or with my approval. Such would be superfluous, as No. 4 General Hospital was not only fully equipped with more than the requisite supply of these articles before leaving England, but even now it would contrast favourably with an English hospital in its adequacy of equipment, clothing, abundance of medicine, modern surgical equipment, and other necessaries for the suitable treatment of the sick and wounded soldier on the field.

Of course, gifts from friends and well-wishers of books, fruit, etc., which could not be provided by Government, will always be thankfully received

and gratefully acknowledged, in the interest of the sick and suffering soldiers, by yours, etc.,

I. A. Clery,
Colonel, R.A.M.C.,
Mooi River, Jan. 22, 1900. P.M.O. No. 4 General Hospital.

[The public will regard the above letter as the most cheering piece of intelligence they have yet received with regard to any of the military hospitals. It is satisfactory to be assured that one among them claims to be considered well equipped. Our columns upon January 12th contained the following appeal:

"No. 4 General Hospital, with 520 beds, has been established at Mooi River, and the sick and wounded commenced coming in yesterday. It is very difficult to obtain those comforts so necessary in a hospital at Mooi River, and such will be thankfully received and acknowledged if sent. Packages should be addressed to Colonel Clery, R.A.M.C. The hotel has been taken over as a hospital for officers."

As we are aware that hundreds of sheets, etc., have been sent up to Estcourt, and as appeals for underclothing, mattress covers, etc., from hospitals have been attended to, the above appeal from Mooi River appears to have been confused with the others, and given a wider meaning than Colonel Clery, R.A.M.C., intended. As regards the general mismanagement, we may add that the R.A.M.C. has been on its trial, and, so far, has not distinguished itself favourably, but the reverse—except upon the field, where everything is splendidly managed, and, as Colonel Clery points out, also at Mooi River. Examples of cruel mismanagement have been plentiful, but as there are now welcome signs of an awakening and as our only object is to obtain proper treatment at once for the sick and wounded, we abstain at present from further irritating criticism, to watch progress. Suffice it, that when official tongues are untied after this campaign is over, there are several whose experiences, when related, will cause a considerable sensation at home. Hence, though we may be silent, it will be well to remember that there is a "hereafter" to the transient power of to-day, when an account will have to be rendered for shortcomings now being duly noted.]

THE MEDICAL SERVICE OF THE AUSTRALIAN CONTINGENT.

When that first strange initial blunder of the War Office was made, and the offer of an Australian contingent of all arms was declined, it occurred to Colonel W. D. Campbell Williams, of Sydney, Principal Medical Officer of the Medical Corps of the New South Wales Military Forces, that the offer of a medical service unit might nevertheless be accepted.

It should be explained that New South Wales is the only colony of Australia that possesses a thoroughly organised, trained, and equipped Medical Staff Corps. This is composed of a small number of regulars, but the bulk are "partially paid." The corps was originated by Colonel W. D. Campbell Williams, and is described as "more than up to date." The corps is able to provide for a field force of 7,000 men. One of its notable features is a cavalry ambulance, the waggons of which were designed and built to Colonel Williams's plans. They are for use with mounted forces in bush country, and are able to keep up with a rapidly moving force. A great proportion of the medical officers are either surgeons or physicians to civil hospitals, and included in their number are the leading surgeons and physicians of Sydney, so that it possesses the best medical skill of the colony. The "organisation" of the corps is such that with six hours' notice it can proceed to the front with every waggon horsed, its own transport, stretcher bearers, and all stores, tents, drugs, and medical comforts, etc., complete.

Colonel Campbell Williams's suggestion was taken up by the New South Wales Government, and the cable message sent to this country was, to the great gratification of the New South Wales Corps, answered by a message that the offer was "gratefully accepted," an instance of foresight, one among many, upon which the Director-General of the Army Medical Department must many times since have congratulated himself. The message accepting the offer was received in Sydney on Monday, and on Friday night the Army Medical Corps unit offered a half bearer company, and a field hospital complete in every detail on a war establishment was embarked. It included 93 men of all ranks, 49 horses, 5 ambulances, 10 transport carts, and 2 water carts, with all the ordnance and medical and surgical stores as laid down, with, in addition, a fine reserve store of drugs, Roentgen ray apparatus, etc. This is certainly an achievement upon which Colonel Williams is to be congratulated, and was rendered possible only by the state of preparedness in which the New South Wales Medical Staff Corps was kept, and by the goodwill by which the energy and organising ability of the commanding officer was seconded by all concerned. The medical officers who accompanied Colonel Williams (who is Senior Surgeon St. Vincent's Hospital, Sydney) were Captain Fiaschi (Surgeon to the Sydney Hospital), Captain R. E. Roth (Lecturer on Physiology New South Wales Government Training College, etc.), Captain Perkins, Captain Green, Captain Martin. Among the officers who followed at a later date were Major Alex MacCormick (Lecturer on Surgery University, Sydney, Surgeon Prince Alfred Hospital); Major R. Scot-Skirving (Physician Prince Alfred Hospital).

As has already been announced, Colonel Williams has recently been appointed Principal Medical Officer of all the Australian Forces in South Africa.

In a Reuter's telegram dated Modder River, February 19th, describing the rapid march of General French's relief column, there is the following reference of the New South Wales Medical Corps: "The New South Wales Ambulance Corps, under Lieutenant Edwards, drawn by Australian horses, kept pace with the column and picked up many wounded. They were complimented by the brigadier as being the first ambulance to cross the Modder River."

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XIV.

The Grass Plains of South Africa.

The master mind of our veteran general has no sooner been applied to the task in South Africa than a totally new development has been brought about. The war has entered on a new phase, and actions are being fought in an entirely new country. The whole of the country over which Roberts's various columns are now manœuvring, consists of rolling grass plains, with only here and there a few kopjes and ironstone ridges dotted on their surface. The soil for the most part is sandy, and is but loosely held together by grassy tufts which are everywhere separated from each other by considerable intervals. In travelling over this country, waggons frequently strike out new paths in the untrodden veld, and in places it is quite possible that the huge convoys of waggons, each with 16 oxen, and each carrying 6,000 pounds weight, might travel over the veld five or six abreast. The season has been exceptionally dry, only a few thunderstorms having occurred, and the whole veld is parched and brown. In the tracks of waggons clouds of dust arise, and may be seen for many miles ascending into the air, marking the line of convoys across the plain as smoke sometimes marks in the distance the track of an ocean steamer.

"Heat Exhaustion" and Meningitis.

The heat during the march of the different divisions appears to have been intense, and Lord Roberts mentioned in his telegram of February 14th that no fewer than 44 officers and 53 men had been sent on the 13th in return ox waggons to the line of railway, prostrate with heat exhaustion. Heat exhaustion is a good soldier's phrase, and is often described in the tropics by medical men as heat syncope or sun traumatism. What the precise pathology of this attack may be it is difficult to say, but the symptoms usually are prostration, with headache, which usually passes off in twenty-four hours, or even less. At other times solar fever may follow for a day or two, and in some cases, of which a few have come under my notice, meningitis is produced and terminates fatally. The fatal cases which I have seen occurred in natives employed in the open workings of the diamond mines, with heads entirely uncovered and exposed to the midday sun, and shut off by the surrounding walls of the mine from any currents of air. Certain cases of fatal meningitis arose on the diamond fields under these conditions. With these exceptions I have never seen more than a few days' lassitude follow the most persistent exposure to the sun. At the same time during periods of great heat acute meningitis, which seemed directly traceable to the action of extremely high temperature, sometimes developed among patients suffering from fever and other diseases. The Free State plains are at an altitude of about 4,000 feet above the sea level, and although hot by day they are almost always cool by night. The summer nights on these plains are ideal for bivouacking in the open; with one blanket, a hole in the sand hollowed out for the admission of the hip, and a pair of boots or other articles of equipment for a pillow, a weary man

may obtain an excellent night's rest. The water supply on these plains away from the rivers is not good, and not infrequently ten or fifteen miles occurs between one small fountain and another.

Deaths from Disease.

Mr. Wyndham, in reply to an inquiry, stated in the House of Commons that among combatants approximately 508 deaths from disease had occurred in South Africa, 240 from enteric fever, and 268 from other causes. If we deduct from these losses those resulting from epidemics of typhoid fever and dysentery in Ladysmith, it will be seen that the actual losses sustained by the whole of our forces cannot be described as great. As a matter of fact the Free State has a thoroughly healthy climate, in which our men are likely to remain fit and well, unless quartered for long periods of time in camps where the water supply is insufficient and typhoid fever is allowed to become established.

Ambulance with Irregular Corps.

My attention has been called to the medical corps attached to the New South Wales contingent, which is reported to have excellent provisions for ambulance attendance in the field, and an inquiry has been sent me as to whether the Colonial forces will be similarly equipped with medical requirements. A gentleman recently returned from Chieveley, where he has been some time with Buller's force, tells me that provision has been made for supplying surgeons to the irregular corps and that a considerable amount was collected among South Africans in London for supplementing some of the necessaries for such equipment. My informant added that pyjamas were badly needed by both the Colonial forces and the regulars, not for use in the field but for the use of wounded men brought into the field hospitals from the frout. He told me that while he was there many such wounded were brought in, and that after slitting up a man's khaki jacket or breeches, as the case might be, and attending to the wound, there was considerable difficulty in getting anything to put on. The matter is worthy the attention of some of the numerous organisations for sending out articles of clothing for the troops. While on the matter of clothing for the troops it is well to note a comment in the letter of my Capetown correspondent, which appeared in the last issue of the British Medical Journal.

Pleurisy and Pneumonia among Recruits.

He says many cases of pleurisy and pneumonia had been admitted to the base hospitals at Capetown from men only just landed from the transports. This is a distinctly unfortunate state of things, and is due, my correspondent thinks, to the fact that the men were obliged to go barefooted on board ship. I cannot believe this practice is in vogue on all troopships, but can readily understand that the khaki cotton, which many of the men are provided with, and which I have seen them wear on raw December days on the docks at Southampton, may prove a very poor protection during the first half of the voyage, and also in the case of a south-easter off the Cape. In some instances I am told that our men had no cloak whatever. No troops should be sent without cloaks, and for the mounted men there is nothing to beat the regulation blue cavalry cloak. Blue, by-the-by, is a better colour for this cloak than khaki. In South Africa itself the cloak will only be worn on picquet duty at night, or in camp. At night the dark cloak is less conspicuous than the khaki would be. One of the City Volunteers, a well-known lawyer, died of pneumonia on the voyage out, and I fear that he was a victim to insufficient clothing during the voyage. One of the peculiarities of the new campaigner or amateur traveller is the passion for unnecessary hardship, and many young fellows going out with the yeomanry and volunteers require a certain amount of restraint to prevent them from hazarding their health by recklessly undergoing unnecessary exposure, which they erroneously believe will have a hardening effect, but which as a matter of fact actually costs at any rate a small number of lives.

Ladysmith.

From Ladysmith an extremely interesting account of the state of affairs has recently been published by one of Reuter's war correspondents, who escaped from that town n February 10th. Stores still seem to be fairly abundant, but luxuries and vegetables are at famine prices. Mr. Hutton says that continual diet of horses and mules was getting somewhat monotonous. Further on we read that the live stock still included 4,000 horses, 700 mules, and 650 cattle. At first one is disposed to wonder why, with 650 cattle, men should be eating horses and mules. The explanation perhaps is that the little grazing obtainable more easily keeps the cattle in condition than either the horses or the mules. Cattle, therefore, will last longer, and possibly, in addition, give a certain amount of milk. There is something almost ludicrous in the idea of mule sausage. The mule has been described as a being who has neither pride of ancestry nor hope of posterity to inspire him; he is a queer-tempered brute, and we have not yet forgotten that he bolted with the guns at Nicholson's Nek. Nevertheless, as a vegetable feeder the mule should be quite eatable, and apparently does afford at least a nourishing diet. The sickness in Ladysmith is evidently on the wane, and although the condition of the garrison is undoubtedly a hard one, there is still every reason to suppose that Ladysmith can, if necessary, hold its own for a considerable time to come; for such time, in fact, as may be necessary for the pressure of Lord Roberts's column in the Free State to compel the withdrawal of a large portion of the Natal Boer forces, and thus relieve the long-beleagured town. In fact, we may confidently anticipate that, if by no other means, the positions round Ladysmith will be taken—as were the positions at Magersfontein—by a movement which compelled the withdrawal of the forces occupying them.

THE SCOTTISH HOSPITAL.

It has been decided at a public meeting held in Edinburgh to open a fund to provide and maintain a hospital for the sick and wounded soldiers in South Africa. The leading medical and surgical authorities in Edinburgh are giving their cordial support to the scheme, and are to assist in securing medical officers and nurses. Although the hospital will be Scottish in origin and equipment, its services will be available for the sick and wounded of any nationality. The object is to aid the Army Medical Department in its efforts to relieve the sick and wounded in connection with the war. We understand that the cost of the hospital is expected to be about £12,000, and that a large part of that sum has been subscribed or promised. The preliminary staff appointments will be made this week.

A WELSH HOSPITAL.

It has been decided to equip a Welsh hospital, and at a meeting held at the house of Sir John Williams on February 21st subscriptions amounting to nearly £1,000 were announced. A provisional Committee was elected, including Sir John Williams, Dr. Frederick Roberts, Dr. Isambard Owen, Mr. Edmund Owen, and Mr. Thomas Jones, F.R.C.S., of Manchester, with Professor Alfred Hughes, of King's College, as Organising Secretary. Further particulars will be furnished and donations will be received by Professor Hughes at 7, Chester Terrace, Regent's Park, N.W.

THE PRINCESS CHRISTIAN HOSPITAL.

This hospital will sail from Southampton early next week. It has been presented to the Government by Mr. Alfred Mosely, a native of Bristol. This munificent gift has been entirely equipped and will be supported by the generous donor, who accompanies it to the Cape. Mr. Mosely's knowledge of the country and climate gained during twenty-five years' connection with South Africa will prove of no little value to the efficient working of the hospital. No trouble or expense has been spared to make the hospital in every way worthy of Princess Christian, who has graciously consented that it should bear her name. Major H. B. Mathias, D.S.O., R.A.M.C., who is a brother of Colonel H. H. Mathias, V.C., is the military medical officer in command. The civil staff will consist of the following:

The Staff.

Medical Officers.—J. Paul Bush, M.R.C.S.Eng. (Surgeon to the Bristol Royal Infirmary, Lecturer on Operative Surgery, University College, Bristol, and Chief Surgeon to the Bristol Constabulary), Chief Surgeon; G. V. Worthington, M.A., M.B., B.C.Cantab., M.R.C.S.Eng., late Senior House-Surgeon, St. Bartholomew's Hospital, London, late Ayr District Medical and Sanitary Officer, South Canara, India; E. A. Nathan, M.D.,

B.S.Lond., M.R.C.S.Eng., late House-Surgeon and House-Physician, St. Mary's Hospital, London; A. L. Flemming, M.R.C.S.Eng., late Resident Surgical Officer, Bristol Royal Infirmary.

Dressers.—A. B. Cridland, M.R.C.S.Eng., House-Surgeon, Bristol Eye Hospital, late Casualty Officer, Bristol Royal Infirmary; E. M. Pearse, M.R.C.S.Eng., Casualty Officer, Bristol Royal Infirmary.

Nursing Staff.—Sister E. C. Laurence, of Guy's Hospital, who will be the sister in charge, and Sisters M. Long, E. Atkins, E. M. Fisher, D. A. Snell, and F. Baker. There will also be 6 non-commissioned officers and 26 hospital orderlies.

THE BUILDING.

The building will consist of four pavilions each 130 feet long, and containing 25 beds—100 in all, with surgery, operation room, nurses' room, fitted bath rooms, washing room for the men, and lavatories attached. The structure itself will be of corrugated iron, hung inside with greenish-tinted canvas. The wards will be comfortably furnished with bedsteads fitted with spring mattresses, folding washstands, invalid tables and chairs, and many little details likely to make them more comfortable and homelike. The surgeries and operation room will be fitted with the latest improvements, including a very complete Roentgen ray apparatus, with all the apparatus for localising foreign bodies, etc. The accessories include the new mercurial interruptor for making and breaking the current, and driven by a special motor of its own. This interruptor gives a particularly steady and distinct image with the fluorescent screen, and it also has the advantage of diminishing the length of time of exposure. An expert in this department is included in the list of the medical officers.

In addition to the main buildings there will be three stores for the warehousing of the ample supply of provisions, invalid specialities, stimulants, drugs, etc., there will also be a separate building for the storage of the linen, a laundry, and a very complete kitchen of considerable size; in charge of the culinary department will be a professed cook and assistants. Another large structure will contain a central mess-room and sleeping accommodation for the doctors, nurses, and other members of the staff, which will number in all about 50 persons.

In honour of the founder and the medical staff of the hospital, the Bristol medical students and their friends met at dinner at the Clifton Grand Spa on February 17th. The dinner was well attended, and was pronounced a great success. Mr. Munro Smith presided. The *menu* was decorated with a humorous sketch of the "Two Pauls," Mr. Kruger being represented as making a rapid strategic movement to the rear, closely followed by Mr. Paul Bush armed with a formidable amputating knife and pair of forceps. Equally amusing was a topical song, sung—and composed, we believe—by Mr. Pearce. The words will probably be published later in the *Stethoscope*, the organ of the Bristol Faculty of Medicine.

Mr. Bush and his colleagues bear with them the best wishes of their friends for a pleasant journey, a successful sojourn, and a speedy return to Bristol.

THE LANGMAN HOSPITAL.

THE staff of this hospital was inspected by the Duke of Cambridge on February 21st at the headquarters of the St. George's Rifles, Davies Street, Portman Square. As already stated, the civilian medical officers are Mr. Robert O'Callaghan, Surgeon to the French Hospital; Mr. Charles Gibbs, Assistant Surgeon to Charing Cross Hospital; Mr. Herbert Scharlieb, Assistant Anæsthetist to the University College Hospital; and Dr. Conan Doyle. The staff also includes six senior students of University College Hospital as dressers. The warrant officer is furnished by the Manchester Medical Staff Corps, and the St. John Ambulance has provided the non-commissioned officers and orderlies.

On the entry of the Duke of Cambridge the staff was called to order by Major O'C. Drury, R.A.M.C., the military officer in command. The Duke carefully inspected the men, and the medical officers were presented to him. The Duke then in a short speech congratulated the staff on having the opportunity of serving their Queen and country in South Africa. Though the news recently received had been more cheering, he still feared that there would be many occasions for them to render services both to the wounded and to the sick, and he congratulated the donor of the hospital, Mr. John Langman, on the noble gift which he had made to the nation. Mr. Langman subsequently entertained the Duke of Cambridge, the medical staff of the hospital, and a party of friends to lunch at Claridge's Hotel. It is expected that the hospital will sail in the *Oriental* on February 27th or 28th.

ACCOMMODATION FOR CONVALESCENTS AT MADEIRA.

Mr. Campbell Hyslop has been sent to Madeira on behalf of the Madeira Nursing Homes Committee, and has concluded arrangements by which 72 officers will find suitable accommodation in that island in the event of invalids being sent thither on their way home from the Cape.

After consultation with Dr. Graham it has been decided that the majority of cases will at this season do well in the environs of Funchal, where ample and most liberal provision has been made by Messrs. Reid. At a greater elevation cases demanding mountain air and altitude will be treated at Mr. Roche Machado's well-known quinta, 2,000 feet above sea level.

THE MIDWIVES BILL.

THE text of the Bill to Secure the Better Training of Midwives and to Regulate their Practice, which was introduced by Mr. Tatton Egerton into the House of Commons on February 2nd, and which has been put down to second reading on February 28th, was issued by the Parliamentary Printers on February 17th, and is printed below. The Bill has been modified in several material respects by its promoters, the Midwives Bill Committee, to bring it into accord with the recommendations of the General Medical Council, but otherwise it agrees with the Bill introduced last year.

It will be remembered that at the annual meeting of the British Medical Association at Portsmouth a rider to the report of the Council was moved by Mr. George Brown, seconded by Mr. Brindley James, and adopted, requesting the Council to cause representations to be made to the Lord President of the Privy Council, to the effect that the general meeting of members of the British Medical Association deprecated the adoption of the Bill promoted by the Midwives Bill Committee in the session of 1899. Acting upon this, Dr. Saundby, the retiring President of Council, wrote to the Duke of Devonshire and represented the strong objections there were to the Bill as brought into the House of Commons, and praying in the name of the Association that the Government would take no steps in the matter without giving the British Medical Association an opportunity of being heard by a small deputation. A reply was received from the Lord President of the Council to the effect that the statement would have the Duke of Devonshire's best attention. This was reported to the meeting of the Council in October last, and referred to the Parliamentary Bills Committee. At the meeting of this Committee on January 16th, it was stated that the modifications in the Bill which had been prepared by the Subcommittee of the Parliamentary Bills Committee would be brought up if and when a Bill was brought before the House of Commons.

THE MIDWIVES BILL, 1900

(PROMOTED BY THE MIDWIVES BILL COMMITTEE).

WE have received from the Honorary Secretary of the Midwives Bill Committee (12, Buckingham Street, Strand) a copy of the following Bill. The text differs in various respects from that of the Bill promoted by the Midwives Bill Committee in 1899, and the alterations are designed to bring it into accord with the recommendations of the General Medical Council:

MIDWIVES BILL.

ARRANGEMENT OF CLAUSES.

Clauses.

1. Short Title and commencement.
2. Certification.
3. Provision for existing midwives.
4. Constitution and duties of the Central Midwives Board.
5. Fees and expenses.
6. Power to County Councils to contribute.
7. Midwives' roll.
8. Appointment of Secretary and supplemental provision as to certificate.
9. Local supervision of midwives.
10. Delegation of powers to District Councils.
11. Midwives' licence.
12. Penalty for obtaining a certificate or a licence by false representation, or acting without a certificate or a licence.
13. Penalty for wilful falsification of the roll.
14. Prosecution of offences.
15. Appeal.
16. Act not to apply to medical practitioners.
17. Extent of Act and action by English Branch Council.
18. Definitions.

A BILL TO SECURE THE BETTER TRAINING OF MIDWIVES AND TO REGULATE THEIR PRACTICE.

BE it Enacted by the Queen's most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title and Commencement.*—This Act may for all purposes be cited as the Midwives, Act, 1900. It shall come into force on the first day of April, 1901.

2. *Certification.*—(1) From and after the first day of January, one thousand nine hundred and two, no woman shall be entitled to take or use the name or title of midwife (either

alone or in combination with any other word or words), or any name, title, addition or description implying that she is certified under this Act, or is qualified to act as a midwife unless she be certified under this Act.

(2) Any woman who, after the first day of January, one thousand nine hundred and two, not being certified under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, or shall habitually and for gain attend women in childbirth, shall be liable on summary conviction to a fine not exceeding five pounds.

(3) No woman shall be certified under this Act until she has complied with the rules and regulations to be laid down in pursuance of the terms of this Act.

(4) No woman certified under this Act shall employ as her substitute or assistant an uncertified person.

(5) The certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner, or that she is qualified to grant any medical certificate, or any certificate of death or of stillbirth, or to attend cases of abnormal labour, or of disease or of danger to the mother or the child.

3. *Provision for Existing Midwives.*—Any woman who, within two years from the date of this Act coming into operation, claims to be certified under this Act, shall be so certified provided she holds a certificate in midwifery from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the Central Midwives Board, or produces evidence, satisfactory to the Board, that at the passing of this Act she has been in *bonâ fide* practice as a midwife, and that she bears a good character.

4. *Constitution and Duties of the Central Midwives Board.*—On the passing of this Act the President of the General Medical Council shall take steps to secure the formation of a Central Midwives Board, which shall consist of:

(1) Four registered medical practitioners, one to be appointed by the Royal College of Physicians of London, one by the Royal College of Surgeons of England, one by the Society of Apothecaries, and one by the Incorporated Midwives Institute;

(2) Two persons (one of whom shall be a woman) to be appointed for terms of three years by the Lord President of the Council; and

(3) One person to be appointed for a term of three years by the Association of County Councils.

After two years from the date of this Act coming into operation, the members appointed under Subsection I, shall retire, but shall be eligible for reappointment annually. Any vacancy occurring by resignation or death shall be filled up in the case of a member appointed under Subsections I and III, by the body which appointed him, and in the case of a member appointed under Subsection II, by the Lord President of the Council.

The duties of the Board shall be as follows:

I. To frame rules subject to the approval of the General Medical Council:

(*a*) Regulating the issue of certificates and the conditions of admission to the roll.

(*b*) Regulating the course of training and the conduct of examinations;

(*c*) Regulating the admission to the roll of women already in practice as midwives at the passing of this Act:

(*d*) Regulating, supervising, and restricting within due limits the practice of midwives;

(*e*) Deciding the conditions under which midwives may be suspended from practice.

II. To appoint examiners:

III. To decide upon the places where, and the times when examinations shall be held;

IV. To publish annually a roll of midwives who have been duly certified under the Act;

V. To decide upon the removal from the roll of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Central Midwives Board, or for other misconduct, and also to decide upon the restoration to the roll of the name of any midwife so removed;

VI. To issue certificates;

And generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this Act.

5. *Fees and Expenses.*—There shall be payable by every woman presenting herself for examination or certificate such fee as the Central Midwives Board may, with the approval of the General Medical Council, from time to time determine, such fee not to exceed the sum of one guinea. All such fees paid by existing midwives and by candidates for examination shall be paid to the Central Midwives Board. The said Board shall devote such fees to the payment of expenses connected with the examination and certificate, and to the general expenses of the Board. Should these fees not equal the expenditure of the Board, the deficiency shall be supplied from the respective local county funds, in proportion to the number of midwives licensed to practise in the said county.

6. *Power to County Councils to Contribute.*—(1) A county council shall be employed to pay out of the county funds as general expenses incurred by them in the execution of their duties under the Local Government Act, 1888, any sum from time to time required to make good a deficiency in the funds of the Central Midwives Board.

(2) Such expenses as the Treasury may certify to have been necessarily incurred by the General Medical Council in the execution of this Act shall be defrayed out of moneys provided by Parliament.

7. *Midwives Roll.*—There shall be a midwives roll containing:

(1) The names of those midwives practising at the date of the passing of the Act who have been certified to practise under the Act.

(2) The names of those not already in practice as midwives at the passing of the Act, but who have been certified to practise under the Act.

The entry on the roll shall in every case indicate the conditions in virtue of which the certificate was granted.

8. *Appointment of Secretary and Supplemental Provision as to Certificate.*—The Central Midwives Board shall appoint a secretary who shall be charged with the custody of the roll, and every person so appointed shall be paid such salary as the Board shall think fit, and shall be removable at the pleasure of the Board. A copy of the midwives' roll for the time being shall be evidence in all courts that the women therein specified are certified according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not certified according to the provisions of this Act: Provided always, that in the case of any woman whose name does not appear in such copy, a certificate under the hand of the secretary of the entry of the name of such woman on the roll shall be evidence that such woman is certified under the provisions of this Act.

9. *Local Supervision of Midwives.*—Every county council or council of a county borough throughout England and Wales shall, on the date of this Act coming into operation, constitute the local supervising authority over midwives within the area of the said county or county borough. It shall be the duty of the local supervising authority—

(1) To issue licences.

(2) To exercise general supervision over all midwives practising within the prescribed area in accordance with the rules to be laid down under the provisions of this Act.

(3) To investigate charges of malpractice, negligence, or misconduct, on the part of any midwife practising within the district, and, should a *primâ-facie* case be established, to report the same to the Central Midwives Board.

(4) To suspend any midwife from practice, in accordance with the rules to be laid down by the Central Midwives Board and approved of by the General Medical Council, if such suspension appears necessary to prevent the spread of infection.

(5) To report at once to the said Board the name of any midwife practising in the district convicted of a misdemeanour or felony.

(6) During the month of January of each year to supply the secretary of the Central Midwives Board with the names and addresses of all midwives practising in the district, and to keep a current copy of the midwives roll, accessible at all reasonable times for public inspection.

(7) To report at once to the Central Midwives Board the death of any midwife or any change in the name or address of any midwife in the district, so that the necessary alteration may be made in the roll.

10. *Delegation of Powers to District Councils.*—A county council may delegate, with or without any restrictions or conditions as they may think fit, any powers or duties conferred or imposed upon them by or in pursuance of this Act, to any district council within the area of the county.

11. *Midwives Licence.*—No woman shall hold herself out as a practising midwife in any county or county borough, without having previously obtained from the local supervising authority a licence enabling her to practise therein, which licence shall be granted on proof by the woman that her name is on the midwives' roll. The licence shall remain in force till the thirty-first of December following, and shall be revocable at any time by the local supervising authority in case the holder be proved to the satisfaction of the Central Midwives Board to have infringed any of the regulations framed under this Act. The licence shall be issued on payment of a fee of one shilling, it shall only be available in the county for which it is issued, and it shall be renewed annually on the first day of January.

12. *Penalty for Obtaining a Certificate or a Licence by False Representation or Acting without a Certificate or a Licence.*—(*a*) Any woman who procures or attempts to procure a certificate or a licence by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding five pounds, or to be imprisoned, with or without hard labour, for any term not exceeding two months.

(*b*) Any woman, whether certified under this Act or not, who, after the first day of January one thousand nine hundred and two, shall hold herself out as a practising midwife or shall practise in any county or county borough without having previously obtained from the local supervising authority a licence enabling her to practise therein shall be deemed guilty of a misdemeanour, and shall, on conviction thereof, be liable to a fine not exceeding two pounds or to be imprisoned, with or without hard labour, for any term not exceeding one month.

(*c*) But a midwife shall not be guilty of a misdemeanour under this section by attending, on an emergency, a woman in childbirth in a county other than that for which she holds a licence; provided she has within a reasonable time, given notice of having so acted to the local supervising authority of the county.

13. *Penalty for Wilful Falsification of the Roll.*—Any person wilfully making or causing to be made any falsification in any matter relating to the roll of midwives shall be deemed guilty of a misdemeanour, and shall be liable to a fine not exceeding ten pounds, or to be imprisoned, with or without hard labour, for any term not exceeding three months.

14. *Prosecution of Offences.*—Any offences under this Act punishable on summary conviction may be prosecuted by the local supervising authority, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts.

The expenses of any prosecution shall be defrayed out of the funds of the county in which the prosecution takes place.

15. *Appeal.*—(1) An appeal shall be allowed to the Privy Council should any disagreement arise between the General Medical Council and the Midwives Board respecting the carrying out of the provisions of the Act, or any of them.

(2) Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

16. *Act not to apply to Medical Practitioners.*—Nothing in this Act respecting midwives shall apply to legally-qualified medical practitioners.

17. *Extent of Act and Action by English Branch Council.*—This Act shall not extend to Scotland or Ireland.

The General Medical Council shall act by the English Branch Council, which for all purposes of this Act shall occupy the place of the General Medical Council.

18. *Definitions.*—In this Act—

The term "midwife" means a woman who undertakes for gain, and in accordance with the provisions of this Act, to attend women in childbirth.

"Midwives' roll" means a roll of midwives kept in pursuance of this Act.

"Central Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

As already stated, though the second reading of the Bill is put down for Wednesday, February 28th, it is considered to be extremely improbable that it will be reached and discussed. It may, however, be convenient to point out some of the more important respects in which the Bill of the Midwives Bill Committee differs from the conditions laid down by the Parliamentary Bills Committee of the British Medical Association as those which should be embodied in any bill which Parliament might be induced to pass for dealing with the midwives' question.

It may, in the first place, be observed that the suggestion of the General Medical Council that the term "licence" should throughout be restricted to the permission granted by the local supervising authority to practise in a given area, and that the document granted by the Central Midwives Board should be termed a "certificate," entitling the possessor to be placed on the midwives' roll, and thereby testifying to her competence to receive a local "licence," has been adopted throughout.

It will be seen that the Bill (Clause XVIII) defines a midwife to be a "woman who undertakes for gain and in accordance with the provisions of this Act to attend women in childbirth." The recommendation of the British Medical Association was that a midwife should be defined as "a woman who undertakes for gain to attend cases of women during natural labour and the lying-in period under the rules, regulations and medical control or supervision set forth in this Act." It may be remembered that the report of the special committee of the General Medical Council received and adopted by the Council on June 5th, 1899, expressed the opinion that it was "of fundamental importance that the words 'natural labour' should be retained in the definition on the ground that if the word 'childbirth' is used without limitation, it may well be held to confer on women not registered under the Medical Acts a statutory right to attend for gain cases of abnormality or disease in connection with parturition. This is not only contrary to the public interest, but is inconsistent with Section XXXII of the Medical Act, 1858, and of Section VI of the Act of 1886." The Council held that a point "of such vital importance" should be expressly embodied in the statute, and should not be left to be dealt with under rules which may be varied from time to time. As regards the meaning of natural labour, the Council adopted the opinion that the rules to be drawn up by the Central Midwives Board under the Bill could be "fully relied on to deal with any difficulties which might arise on this point," and that "it would be easy, for example, to specify the conditions indicating difficulty, abnormality, danger, or disease under which qualified medical assistance should forthwith be sought." Instead of accepting this recommendation the promoters of the Midwives Bill have introduced into Clause II, paragraph 5, a provision that the certificate to be granted under the "Act shall not confer upon any woman any right or title.....to attend cases of abnormal labour, or of disease of or of danger to the mother or child." No penalty, however, is attached to the breach of this provision, although it would no doubt be within the power of the Central Midwives Board, under Clause IV, 5, to remove from the roll the name of any midwife who violated the provision, since one of the duties of the Board would be—Clause IV, 1 (*d*)—to regulate, supervise, and restrict within due limits the practice of midwives.

Clause II of the Bill, as printed above, which deals with cer-

tification agrees generally with the provisions approved by the Parliamentary Bills Committee, the main difference being that the penalty is set out in the second paragraph of the clause, and would therefore seem not to apply, as was recommended, to the employment by her of an uncertified person as a substitute or assistant, nor to the granting by her of a certificate, nor, as already pointed out, to attendance upon cases of abnormal labour.

Clause III retains the objectionable recommendation of the certificate of the Obstetrical Society of London, to which a quasi-legal position would be given were the Bill passed in its present form.

The constitution of the Central Midwives Board, as laid down in Clause IV differs entirely from that which has had the approval at various times of various Branches and Committees of the Association. The Bill proposes that the Board should consist of seven persons, four only of whom need be registered medical practitioners. The alternative proposal was that the Board should consist of seven persons, all of whom should be registered medical practitioners, and that of this number six should be selected by the General Medical Council from registered medical practitioners resident in or practising in various districts of England and Wales, whilst the seventh member of the Board, who should also be a registered medical practitioner, should be appointed by the Lord President of the Council. It will be seen that the Bill printed above contemplates that the four registered medical practitioners should be appointed—one by the Royal College of Physicians of London, one by the Royal College of Surgeons of England, one by the Society of Apothecaries, and one by the Incorporated Midwives Institute. The three other persons would probably be laymen or lay women.

With regard to the duties of the Board as defined in this clause, it may be observed that no reference is made to the inspection of private lying-in homes either here or elsewhere in the Bill; nor is failure to send for a registered medical practitioner when the case is not one of natural labour specifically mentioned as one of the acts for which a name might be erased from the midwives' roll.

There are numerous other minor points which will be found to be open to criticism, but under present circumstances it does not appear to be necessary to specify them.

Dr. Robert R. Rentoul, of Liverpool, has, we are informed, printed a paper entitled *Reasons Against the (so-called) Registration of Midwives*. The reasons are twenty in number, and copies of the leaflet can be obtained from Messrs. Meek, Thomas, and Co., Cable Street, Liverpool, at the rate of 2s. for 50 copies.

THE R.A.M.C. SOUTH AFRICA FUND.

The Special Subscription.

We print below a further list of special half-crown subscriptions to the R.A.M.C. South Africa Fund, started in accordance with a suggestion made by the Deputy Director-General of the Army Medical Department, Surgeon-General Muir. As we have already said, it is believed that it will afford great encouragement to the men of the corps if it were shown by the receipt of a large number of small subscriptions that they had the active sympathy of the medical profession at home.

The Half-Crown Subscription List.

	Half Crowns.
Dr. F. F. Ward (Ipswich)	1
Miss L. E. Cradock, L.R.C.P.I. (Liverpool)	1
Surgeon-General W. Stewart (Rome)	4
Mr. J. S. Hooker (Hastings)	1
Mr. C. D. Lindsey (Plymouth)	1
Dr. H. J. Jones (Wallington)	2
Dr F. Gourlay (Elgin)	1
Dr. H. Simpson (Conway)	1
Mr. H. Taylor (Wroxham)	1
Mr. W. H Dodd (Brighton)	4
Dr. C. J. R. McLean (Yeadon)	1
Mr. A. Finegan (Mullingar)	1
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Dr. W. J. Smyth (Bournemouth)	1
Mr. T. Fernhead (Lytham)	1
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Mr. G. R. Nunn (London)	1
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Per Mr. Simeon Snell (Sheffield):	
Dr. G. Scott Davidson	1
Dr. S. Morton	1
Dr. France	1
Dr. Myers-Ward	1
Dr. A. Curtis	1
Dr. Collier	1
Dr. Addison	1
Per Mr. R. E. B. Yelf (Morton-in-Marsh):	
Mr. J. N. Moore, J.P.	1
Mr. M. Style	1
Mr. R. E. B. Yelf	1
Mr. J. W. Clarke-Baylis	1
Per Dr. W. Thyne (High Barnet):	
Dr. D. Thyne	1
Dr. W. Thyne	1
Dr. D. R. G. Corrigan	1
Per W. F. C. (London):	
Dr. Percy Smith	1
Sir Hugh Beevor, Bart.	1
Dr. Christopher Childs	1
Mr. F. W. Braine	1
Mr. H. G. Howse	1
Mr. T. L. Read	1
Dr. W. W. Leadam	1
Mr. Howard Marsh	1
Mr. C. B. Lockwood (London)	17
Mr. T. V. de Denne (Cradley Heath)	1
Dr. H. S. Gabbett (Eastbourne)	4
Mr. H. S. Smith (Eltham)	1
Dr. F. Godfrey (Nettleston, Isle of Wight)	1
Mr. F. Durham (London)	1
Mr. C. Newman (St. Leonards-on-Sea)	3
Mr. M. A. Wood (Ledbury)	1
C. (Friedrichsheim)	1
Mr. H. Veasey (Aspley Guise)	8
Dr. M. Coates (London)	2
Mr. J. Taylor (Chester)	4
Mr. Owen Lankester (London)	1
Dr. A. Cohen (London)	1
Mr. F. H. Thompson (Hereford)	2
Mr. W. A. Meredith	1
Dr. W. H. Corfield	1
Dr. Blandford	1
Dr. W. O'B. White (Tralee)	2
Mrs. W. O'B. White	2
Dr. E. A. R. Covey (Southampton)	1
Mrs. E. A. R. Covey (Southampton)	1
Dr. T. Smailes (Honley)	2
Per Mr. C. B. Gabb (St Leonards-on-Sea):	
Dr. Barker	1
Mr. Gabb	1
Mr. Coventon	3
Mr. Travers	1
Dr. Allen	1
Dr. Bagshawe	1
Mr. E. R. Mansell	1
Dr. Redmayne	1
Mr. Kaye-Smith	1
Dr. Fennings	1
Mr. Deck	1
Dr. Batterham	1
Dr. Davis	1
Mr. Mossman	1
Dr. Trollope	1
Mr. Adkins	1
Mr. Halliday	1
Mr. Jowers	1

The following members of the Association have expressed their willingness to receive subscriptions from members of the Association in their respective districts. Such subscriptions will be acknowledged in the British Medical Journal. Subscriptions may also be sent to the Editor at the Office of the British Medical Journal:—

Dr. Henry Waldo, 19, Pembroke Road, Clifton, Bristol; Dr. E. Cureton, College Hill Court, Shrewsbury; Mr. John W. Fry, Blythesbury, Maidstone; Dr. Harcourt Gervis, 2, Lyncroft Mansions, W. Hampstead, N.W.; Dr. J. Stenson Hooker, Rothesay Bank, Clive Vale, Hastings; Mr. Edward Mathews, Mount Prospect, Redditch; Dr. W. Johnston Smyth, Durley Gardens, Bournemouth; Mr. R. Balfour Graham, F.R.C.S., Sea View House, Leven, Fife, N.B.; Brigade-Surgeon Lieutenant-Colonel G. A. Maconachie, I.M.S. (retired), 39, Queen's Road, Aberdeen; Lieutenant-Colonel J. Tidbury, R.A.M.C., Medical Officer in Charge, Barracks, Winchester.

Mr. Gilbert Barling, F.R.C.S., Surgeon to the Birmingham General Hospital, informs us that a local Committee is being organised in support of this fund. A meeting of medical practitioners and the lady members of their families is called for Monday next, February 26th, at 4 P.M., at the Birmingham Medical Institute.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

South-Eastern Branch: East Surrey District.—The next meeting of this District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 8th, at 4 P.M.; Dr. Burgess, of Streatham, in the chair. Agenda: Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of honorary secretary. To receive nominations for representatives on the Council of the Association. Communications from Wood Green and District Medical Society. Communication from East York and North Lincoln Branch and Hull Medical Society. The following papers, etc., will be read: Mr. W. Arbuthnot Lane, Causation and Treatment of the Several Resting Deformities. Dr. P. Horrocks, Notes on some Cases of Severe Dysmenorrhœa. Dr. W. Burgess, Notes of Cases from General Practice. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge 7s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him by

post-card whether they intend, if possible, to be present at the meeting and if likely to remain to dinner, by so doing they will very materially facilitate arrangements and promote the success of the meeting. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Ancrley, Honorary Secretary.

SOUTHERN BRANCH: EAST HANTS DISTRICT.—The next meeting of this District will be held at 5, Pembroke Road, Portsmouth, on Tuesday, March 6, at 9 P.M. Subject for discussion: Serumtherapy.—J. G. BLACKMAN, Portsmouth, Honorary Secretary.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.—The next meeting of this District will be held at Rochester, on Thursday, March 1st, T. Eastes, M.D., in the chair. Gentlemen desirous of reading papers or exhibiting specimens are requested to communicate with T. T. BRUNYATE, M.D., 46, Maidstone Road, Rochester.

BORDER COUNTIES BRANCH.—The next meeting of this Branch will be held at Luff's Central Hotel, Hawick, on Friday, March 2nd, at 3.45 P.M. A meeting of the Council will be held at 3.20 P.M. Business:—Minutes of last meeting. Election of new members. Dr. Graham (Carlisle) will move "That at each annual meeting of the Branch the number of attendances of each member of council at council meetings held during the preceding year be formally announced." To consider resolution of section of the Branch for the counties of Roxburgh, Berwick, Selkirk, and Peebles, *re* payment of expenses of section. Dr. Haddon (Denholm) will open a discussion on The Necessity for Preventing the Spread of Influenza and the best way to do so. Dr. Hamilton, President, invites the members to afternoon tea at Elm House, Hawick, before the meeting. Dinner will be served at the hotel after the meeting. Members intending to dine are requested to notify Dr. Dixon, 25, Bridge Street, Hawick, of their intention by February 28th at latest.—W. F. FARQUHARSON, M.D., Garlands, Carlisle, Honorary Secretary.

BATH AND BRISTOL BRANCH.—A meeting of this Branch will be held at Bath on Wednesday, February 28th, at half-past seven o'clock, Mr. A. J. Harrison, M.B., President. The evening will be devoted to a discussion on The Surgical Treatment of Diseases of the Stomach, which will be introduced by Mr. F. Lace.—W. M. BEAUMONT, Bath, J. MITCHELL CLARKE, Clifton, Honorary Secretaries.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

THE seventy-fourth quarterly meeting of this Branch was held on January 19th at Sandown, Dr. GROVES (Vice-President) taking the chair, in the absence of the President through domestic bereavement.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letters.—Letters were presented containing an account of the united meeting of the East York and North Lincoln Branch and the Hull Medical Society, and resolutions passed thereat *re* proposed legislation for midwives, as also on questions of medical reform; also letter on the same subjects from the Wood Green and District Medical Society. After discussion it was resolved to reply to both letters:

That the members of the Isle of Wight District, at this meeting assembled, are quite in accord with resolutions forwarded, and will assist, as far as able, in carrying out the objects desired.

Medical Attendance on Families of Soldiers and Sailors in South Africa.—A message was then laid before the meeting to the effect that the Governor of the Island, Princess Henry of Battenberg, was much pleased with the ready and willing way in which the members of the Isle of Wight District had volunteered to assist "the Association for the wives and families of the soldiers and sailors now serving in South Africa," and which the Princess considered was noble and patriotic.

Vote of Condolence.—A vote of condolence with the President (Dr. J. M. Williamson) in his late bereavement was carried unanimously.

Treatment of Empyema.—Dr. HUTTON CASTLE read notes of two nearly identical cases of empyema.

Both patients were girls, aged about 14. Both had pneumonia, pleurisy, and empyema of the left side. In one Dr. Buck, who saw the patient with Dr. Castle, passed a small aspirator just below the angle of the scapula, and with difficulty drew off about two drachms of serous fluid, yellowish in colour, but just suspicious of becoming purulent. Considering that the general condition was favourable, it was decided to wait. Dr. Castle put her on pot. iod., strych., and strophanthus. After a time, there being no improvement in the symptoms, Dr. Buck made a free incision, and removed parts of two ribs in the usual position in the lateral line; evacuated probably about a pint and a half of pus; put in a large india-rubber drainage tube, and dressed with cyanide gauze and Gamgee tissue. The child bore the long operation well. Next day the heart had almost returned to its normal position. The child went on well for eighteen days after the operation, when she died suddenly from hæmorrhage from the wound. There was no necropsy. The second patient was a delicate child. The case in its main features closely resembled the first. The parents, however, refused operative interference. More than eight weeks from the onset a bulging was noticed in the space just above and in line with the left nipple. This burst before it could be opened. Large quantities of pus escaped, welling out freely on coughing. Dr. Castle passed a bent bullet probe through the wound right down behind the lateral line against the chest wall. The discharge gradually lessened, and the child made a good recovery. For three months she had (at the date of meeting) been in general health and appearance much better and stronger than she ever had been. The left chest was slightly retracted, but respiratory sounds were good over the upper half and fair over the lower. The dulness over the right apex was almost gone.

Dr. Castle asked the following questions: (1) Is there so very much to be said in favour of free incision as against aspiration? He had had at least a dozen cases of empyema, chiefly in children, though several in adults, which were treated by aspiration, some several times, none of which died, all making more or less complete recovery, some very rapid. Whereas he had had only 3 cases that were treated by free incision, of these 2 died, and the third recovered only after a tedious convalescence. (2) Having made the free incision, is it or is it not better to make a counter-opening? (3) If done very cautiously, is there much danger in washing out with warm iodised water? He added that he did not regard leaving a case to spontaneous rupture, either outwardly or into the lung or anywhere else, as sound or proper practice, as from the length of time the lung is compressed it must be a very small chance that that lung should regain its usefulness.

Thrombosis of the Pulmonary Artery.—Dr. EWEN showed a specimen and described the case. The artery was quite occluded by a large cone-shaped thrombus. There was also a large *ante-mortem* clot in the right auricle. Death had occurred suddenly and without premonitory symptoms. The patient, a child, aged 10 years, was being treated for a large indolent ulcer on the left leg. There was no history of rheumatism, nor were the cardiac valves imperfect through vegetations. The child was an ill-fed, anæmic, strumous girl, and the point questioned was whether there had been any embolism (forming the nucleus of the thrombi) from the large indolent ulcer, or whether the clots were due only to the feeble circulation and ill-nourished condition of the child.

Death Certification.—Dr. GROVES's address on this subject was promised for the next meeting.

Next Meeting.—The next meeting was fixed for the third Friday in April next, 4 P.M., at Ryde.

WEST SOMERSET BRANCH.

A GENERAL meeting of this Branch was held on February 20th at the Taunton and Somerset Hospital, Dr. MACDONALD (Taunton), President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Conference on Medical Ethics.—A letter from the Secretary of the Proposed Conference on Medical Ethics and Politics was read and discussed, and Dr. Macdonald was appointed delegate from the Branch.

Communications.—Communications from (1) Wood Green and District Medical Society; (2) East York and North Lincoln Branch and Hull Medical Society; and (3) Lancashire and Cheshire Branch were read and discussed.—The following cases and specimens were shown:—Mr. RIGDEN: (1) specimen of sarcoma of the tibia; (2) specimen of carcinoma of the descending colon.—Mr. DRAKE: (1) specimen of cirrhosis of the liver and hypertrophied spleen in a child; (2) case of lead poisoning.—The SECRETARY (for Mr. ILES): (1) specimens of vesical calculus, and a hatpin removed from male bladder; (2) a case of bony deformity of the head of an infant.

Vote of Thanks.—The meeting ended with a vote of thanks to the Hospital Committee for the use of the room.

SPECIAL CORRESPONDENCE.

BERLIN.

The Overcrowding of Hospitals.—Instruction on Tuberculosis for Medical Men.—The Nursing Exhibition.—Berlin City Ambulances.

AT the last meeting of the City Councillors the subject of the overcrowding of Berlin hospitals was brought up for discussion, without, however, evoking anything satisfactory in the shape of proposals for meeting the difficulty. Meanwhile the newspapers continue to publish accounts of patients driven from hospital to hospital in search of accommodation. It is

high time that public spirit should be roused on the subject, and pressure be brought to bear on the municipality to induce them to start the building of temporary pavilion hospitals at once, for years will pass before the projected See-strasse Hospital can be opened.

Gratuitous courses on tuberculosis are to be held for the benefit of doctors—especially sick-club doctors—in the lecture hall of the Charité Hospital. The importance of early diagnosis and the methods for this purpose will be fully considered and special attention given to treatment of the initial stages, in connection with some general questions of great moment to sick clubs. Clinical demonstrations and skiagraphic experiments will illustrate the lectures.

The Nursing Exhibition which was held in Berlin last spring was not only a scientific but also a financial success; and this is the more remarkable as there was nothing in the shape of popular amusements to attract the masses, and solely intellectual or charitable impulse stimulated the visitors. When, at the close of the exhibition, the Committee found themselves with a surplus of 14,000 marks (£700) in hand, they decided to follow up a suggestion, made on the opening day by the Prussian Cultus Minister, that is, to use the sum as a nucleus of a fund for the establishment of a sick-nursing museum. They laid the proposal before the august patroness of the exhibition, the German Empress, and have now received her answer approving the scheme.

During the month of January of this year the Berlin city ambulances (*Unfall-stationen*) were made use of in 3,096 cases (against 2,608 in January, 1899), of which 2,459 cases were accidents, and 637 sudden attacks of illness; 2,847 persons were treated inside the stations: 98 persons were taken away in the carriages of the Society. A particularly beneficent practice in these city ambulance stations is the distribution of ice to poor sick people; this was carried out in 106 cases during January.

SYDNEY.

Plague in New Caledonia.—The Queen Victoria Home for Consumption.—Prince Alfred Hospital.—Sydney Hospital Operating Theatre.—Royal Commission on Tuberculosis and Tick Fever.

The news received here as to the outbreak of bubonic plague in Noumea, New Caledonia, is to the effect that 7 cases have occurred amongst the white population with 4 deaths; and 27 cases amongst the Kanakas and Chinese with 14 deaths. The illness was not recognised until December 27th, 1899, when a cable message from the Governor of New Caledonia confirmed the statement that the disease was undoubtedly plague. The plague still remains limited to one quarter of Noumea in which it first made its appearance. In view of the frequent communication by steamer between Noumea and the Australian colonies, the danger of infection is great, and all the colonies are insisting on twelve to fourteen days' quarantine of all vessels arriving from New Caledonia. The Board of Health here has met several times to discuss the various precautions to be taken to prevent the introduction of the disease. Last August the Government ordered from Bombay a supply of Professor Haffkine's vaccine, and some of this has now arrived. The President of the Board of Health, Dr. Ashburton Thompson, has pointed out that Sydney must depend entirely upon effective precautions being taken by quarantine and otherwise to save it from the plague, though it is almost certain that sooner or later the disease will find its way into this colony. In view of the danger of an epidemic the Premier has cabled for an additional supply of the vaccine, but it is doubtful if it can be obtained with any degree of promptitude.

According to arrangements previously recorded in the British Medical Journal, the funds collected for the establishment of the Queen Victoria Homes for Consumption as a memorial of Her Majesty's Diamond Jubilee are at present being devoted to the maintenance of the Consumption Hospital at Thirlmere, near Picton. The Executive Committee of the Fund took over the management of the Thirlmere Home on September 1st, 1898, and their report on the working of it for 1899 has just been issued. A fancy fair and press bazaar was held in August last, and realised £7,193 9s. This, added to previous collections, raises the total contributions towards the fund to about £22,000. It is expected that the Government will contribute the usual subsidy of £1 for every £1 raised by private subscription. The Committee have also impressed upon the Government the necessity of taking steps for the prevention of tuberculosis. During the year 92 patients have been admitted to the home and 72 discharged. Of this number, 37 were benefited and 35 were relieved or died. The large number of deaths was due to the fact that this is practically the only consumption hospital in the colony. The buildings have been improved, and the sanitary arrangements completely renovated. It is hoped that before long some steps will be taken towards establishing country sanatoria for the open-air treatment of tuberculosis, on the lines of Nordrach Institution.

The last annual report of Prince Alfred Hospital, the hospital in connection with the Medical School of the University, shows the very large increase in the amount of work done in the various departments during the past few years. This is specially noted on the surgical side, the number of operations performed having increased more than ten-fold during the last fifteen years. This means a large increased tax upon the hospital accommodation, and the directors point out the necessity for further additions to the hospital at an early date to enable them to deal with the increased demands for hospital accommodation. The structural plans of the hospital provide for the erection of four additional pavilions as the needs of the community may dictate. Two new pavilions would provide 120 beds, and this addition is now considered necessary to enable the hospital to meet the demands daily made upon it. At present, however, the funds at the disposal of the directors will not admit of this work being undertaken, though it is hoped that the Government will soon provide the necessary means to do so.

The operating theatre at the Sydney Hospital has been found by experience to be very defective in many ways, and the directors of the hospital recently commissioned Dr. Wilkinson, when in Europe, to make inquiries into the general working of the large European hospitals, specially as regards the construction of the operating theatres. Dr. Wilkinson has furnished his report on the subject, and it is now being considered by the Board with a view to making the necessary alterations in the operating theatre.

In May last a Royal Commission was appointed to inquire into the prevalence of tuberculosis among animals, the effects on man of consuming tuberculous meat and milk, and also into the effects produced on the meat and milk of animals affected with the tick fever. In consequence of matters of importance coming to light in the course of the inquiry, the Commission have published an interim report on the tick pest. It appears that some £10,000 is spent annually by this colony with the object of preventing the introduction of ticks. From the evidence adduced it seems clear that the ticks can be carried mechanically by any object alive or dead, but by sheep and horses they can also be carried parasitically. Hence, by allowing sheep and horses to be taken from infested areas and brought into clean areas, there is great risk of spreading the disease. As no law exists at present whereby the Government could quarantine any infested area or suspected cattle, the Commission recommend as a matter of urgency that steps should be taken at once to empower the Government to quarantine any infested area or cattle. The very serious losses which have followed the spread of tick fever in Queensland points to the necessity of stringent measures being taken to prevent its spread to this colony.

MANCHESTER.

The Sanitary Committee and Consumption.—The proposed new Infirmary.—Hall of Residence for Owens College Women Students.—Departure of Volunteers from the Medical Staff Corps for South Africa.

Under the skilled guidance of Dr. James Niven, the able medical officer of health, whose name is well known as a pioneer in preventive work, the Sanitary Committee of the City Council are evidently determined to leave no stone unturned in their crusade against consumption. In order to obtain as complete a picture as possible of the distribution of

phthisis in the city, and such information with respect to the circumstances determining infection as may assist them in their efforts to reduce the mortality from this disease, the Sanitary Committee have invited all medical practitioners to notify to the health officer any cases of tuberculous phthisis (consumption) which may occur in their practice. For each case so notified a fee of 2s. 6d. will be paid. In order to enable medical attendants to arrive at a diagnosis in doubtful cases as quickly as possible, the Sanitary Committee offer to practitioners the opportunity of having specimens of sputum examined at the Owens College by Professor Delépine, and supply vessels suitable for the collection and conveyance of sputum. On receipt of a notification from a practitioner, a fully qualified medical man from the health office will visit the house and ascertain what measures of disinfection or other precautions are necessary. These will be carried out by the Corporation or the householder, as occasion may require, the utmost pains being taken to act in complete agreement with the medical attendant. It is to be hoped that practitioners and the public will avail themselves fully of the opportunities so offered to discover infected and infective areas, and to stamp out existing infection.

The question of rebuilding the infirmary has entered upon a new phase. Up to the present time it has been discussed on the assumption that the pavilion type of hospital is an absolutely essential condition, and that, if it is not possible to build a hospital of this type upon the present site, the main building must be removed to some other locality, the out-patient and emergency departments only being retained on the present site. To erect a hospital on the pavilion system would require so much ground that it would be necessary to encroach upon the open space at present uncovered, and to this course objection was taken by the City Council. Negotiations were therefore opened with the Corporation for the sale of the present site to the city, and the Board of Management were prepared to recommend its sale by the trustees for a sum of £400,000. The City Council, however, decided not to offer this sum, and the negotiations lapsed. Thereupon the Board of Management conferred with the Medical Board, who after due consideration have recommended that it is desirable to retain the entire hospital on the present site, and that, as it is uncertain whether the pavilion system is so absolutely necessary as it has been thought to be up to the present time, it would be well to consider whether some other system requiring less ground may not be adopted. The majority of the Board of Management accepted this recommendation, and it has been further endorsed by the trustees, who at their annual general meeting, held under the presidency of Mr. Edward S. Heywood, appointed a committee to ascertain whether or not a hospital suitable in every way can be built on a plan other than the pavilion, and, if this be decided in the affirmative, authorised the Board of Management to take steps to obtain suitable plans and estimates, and to incur all necessary expenses in connection therewith. It is hoped that this Committee will be able to make their report within six months.

Following the example of Girton and Newnham, the Owens College has founded a home in Manchester for those women students who live at a distance from the city. The residence is intended to be not a "glorified lodging house," but an integral part of the Owens College and a social centre for the whole women's department of the College. While Girton and Newnham each began with 5 students, Manchester has made a good beginning with 13; it is to be hoped that this number will be increased and that benefactions may be received, to provide not only for extension and additional accommodation, but also for the establishment of exhibitions or bursaries for those to whom such additions to their income would be welcome and beneficial. Any such benefactions would be administered by the Council of Owens College as a trust for the benefit of the Hall as a permanent institution.

The Manchester Medical Staff Corps has the honour of being the first volunteer corps to send volunteers to the Royal Army Medical Corps for service in South Africa. From an enrolled strength of 205 the Manchester corps has supplied 79 men for South Africa and 20 men for service in this country, so that almost 50 per cent. of the corps will now be on active service with the regulars. The detachment of 78 men, under the command of Surgeon-Lieutenant J. W. Smith, F.R.C.S., have left for Aldershot. Mr. Smith leaves England with the best wishes of his professional brethren; he should have been accompanied by Surgeon-Lieutenant Pritchard, who, however, has been dangerously ill with duodenal ulcer, and is to his great regret unable to go out.

CORRESPONDENCE.

DIETS AT THE MILITARY HOSPITALS AT WYNBERG, CAPE COLONY.

SIR,—In view of a paragraph which recently appeared in the *Times*, I enclose two diet sheets from the Wynberg Hospital. I have been a frequent visitor in the wards since I arrived in South Africa, and feel justified in making an unqualified denial of the statement that sufficient or suitable food is not provided for the patients.

As to the allegation that the officers are the recipients of "charity," I may point out that all the hospitals and the ambulance trains receive gifts of articles of food. These gifts have been prompted by simple kindness of heart and sympathy on the part of the donors, and naturally have been gratefully accepted. It has not apparently occurred to anyone at present to object on the score of the reception of "charity" to the numerous comforts so liberally dispensed by the Red Cross Committee, yet no distinction can be drawn between the gifts from either source.

In the same communication it is stated that the scale of accommodation prepared for the sick and wounded was inadequate. In regard to this point No. 1 Hospital was never within 10 per cent. (60 beds) of full occupation, while Nos. 2 and 3 had a reserve of 50 per cent. of their beds.—I am, etc.,

Capetown, Jan. 28th. G. H. MAKINS.

*** The diet sheets sent by Mr. Makins refer to two officers, the one suffering from compound fracture of the femur, the other from gunshot wound of the hand. The diet in both cases was the roast joint, chop, or steak diet. This diet comprises of joint, beef, mutton, or chop, with bone, 10 ounces, or steak, 8 ounces, without bone; bread 18 ounces; potatoes 8 ounces; salt $\frac{1}{2}$ ounce; tea $\frac{1}{4}$ ounce; sugar $1\frac{1}{2}$ ounce; milk 6 ounces; vegetables 4 ounces; butter 1 ounce. In one case the extras ordered were: fish 8 ounces, beef for beef tea half a pound, oatmeal 4 ounces, sago pudding, butter 3 ounces, eggs 3, sugar 2 ounces, tea 1 ounce, soda water 2 bottles and 2 bottles of hock. In the other case the extras were: fish 8 ounces, beef for beef tea half a pound, oatmeal 4 ounces, rice pudding, butter 3 ounces, milk 2 ounces, eggs 3, sugar 2 ounces, tea 1 ounce, and 2 bottles of hock. In both cases the diet was supplemented by soups, joints, custards, jellies, fruit, etc., presented by people outside.

THE CLIMATE OF SOUTH AFRICA.

SIR,—May I be allowed to make a slight correction in the report which you published in the BRITISH MEDICAL JOURNAL of February 17th, of my address at the London Polyclinic on the Climate and Diseases of South Africa? In the report referred to the following sentence occurs:

> The prevalence of respiratory diseases in the more temperate portion of South Africa, and of alimentary diseases in the subtropical districts, was discussed, and the reason was suggested, in the one case, as an indoor life, and in the other the contamination of food and water with micro-organisms.

The comparison here referred to was not between the temperate and subtropical districts of South Africa, but between the colder and the warmer half of the temperate zones; thus, I said that in the colder half of the temperate zone in which middle Europe is situated, in such countries, for instance, as England and Germany, respiratory diseases predominate, whereas in the warmer half of the temperate zones, such as occurs on the shores of the Mediterranean or in South Africa, diseases of the alimentary system were more common. I suggested, as an explanation of this, that in the colder regions the impurities taken into the system were principally respiratory, the result of an indoor life; while in subtropical regions, where life is largely out of doors, on verandahs or in houses with widely-open windows, the impurities taken into the system were more frequently admitted through the alimentary system, both food and water

supply being more readily contaminated by putrefactive processes, which rapidly and readily occur at high temperatures.—I am, etc.,

Wimpole Street, Feb. 20th. Alfred Hillier.

UNAUTHORISED AMERICAN REPRINTS.

Sir,—In 1896 I had to call attention to the fact that Messrs. Wm. Wood and Co., of New York, were publishing an unauthorised edition of Kirkes's well known *Manual of Physiology*. I have recently obtained a copy of the fifteenth edition of their work bearing date 1899, and having on the title page the names of Mr. Morrant Baker and Dr. Vincent Harris as editors. The facts are as follows:

Mr. Morrant Baker (who is now dead) and Dr. Vincent Harris gave up the editorship of the genuine work four years ago, and even before that time Messrs. Wood never had permission to use their work or their names. Since 1895-96 Professor W. D. Halliburton has been sole editor of the Handbook; he has almost rewritten the work from beginning to end although Kirkes's name has been retained.

One of the special features of our book is a series of coloured illustrations of blood corpuscles, blood crystals, etc. These, together with many alterations and improvements both in cuts and text which have been introduced by Professor Halliburton, have been adopted by Messrs. Wood without any acknowledgment of the source whence they were derived, and in the teeth of a protest by Professor Halliburton and myself, who am the proprietor of the book.

Not only have Messrs. Wood "conveyed" a large amount of Professor Halliburton's original work, but they have also issued their book under the names of Mr. Morrant Baker and Dr. Vincent Harris, who have nothing to do with it.—I am, etc.,

Albemarle Street, W., Feb. 16th. John Murray.

SPECIES OF *ANOPHELES* IN SHANGHAI AND JAVA.

Sir,—With reference to Dr. Thin's note on species of *Anopheles* from China and Java, it may be well to point out that, assuming—which is probably the case—that the spotting of the wings is more correctly represented than the venation, the Chinese species may possibly be *An. Sinensis* (Wiedemann), and that from Java *An. Annularis* (Van der Wulp). These species were originally described from China and Java respectively; and, as far as the figures show, the wings correspond fairly. As Dr. Thin is careful to disclaim any zoological knowledge, he will, I am sure, not take amiss my pointing out that as *Claviger* and *Pictus* are specific and not generic names, we cannot have "species" of either, though, to a certain extent, *An. Annularis* may be said to be "near" *An. Pictus* (Loew).—I am, etc.,

George M. Giles, M.B., F.R.C.S.,
Plymouth, Feb. 13th. Major, I.M.S.

MIDWIVES BILL COMMITTEE.

Sir,—The letter signed by Dr. Colin Campbell, which appeared in the British Medical Journal of February 17th, only requires notice in that its totally unfounded direct and indirect accusations may create misconception in the minds of those of your readers who are unacquainted with the "midwives question." Similar misstatements have often been made and corrected before, so I shall reply as briefly as possible.

1. The Midwives Bill Committee has no connection whatsoever with the Midwives Society, nor do the *Transactions* of that body, quoted by Dr. Campbell, in any way represent "the objects of the Registration Bill," or "the real meaning of the whole got-up agitation," as he puts it.

2. The objects and intentions of the Midwives Bill Committee are:

(*a*) To ensure that midwives, before taking up practice, shall be sufficiently trained for the class of labours they attend, as well as to meet sudden emergencies in the interval while the friends are obtaining medical attendance.

(*b*) To supervise midwives in their practice, especially with a view o reducing the mortality from puerperal fever.

(*c*) To restrict the practice of midwives to their proper, very limited sphere, and to those who are thus trained and supervised.

The medical profession is very carefully protected in the Bill now before the House of Commons.

3. The Incorporated Midwives Institute is the only large and important body of midwives, and is, therefore, necessarily represented on the (representative) Midwives Bill Committee. It is a very different body from the Midwives Society, above mentioned, and it has thoroughly healthy aims and tone.

4. As I stated in my last letter (Dr. Campbell seems to have overlooked this) the Midwives Bill Committee is "totally unconnected" with the advertisement which has so often appeared in the *Daily Mail*.

Efforts have been made to ascertain its authorship, and to stop it, but without success. The extraordinary aims expressed in the advertisement do not in any way reflect, but are, indeed, opposed to those of the Midwives Bill Committee; nor could the passage of the present Midwives Bill or of any of its predecessors "abolish the system of man-midwifery in England." This is far too valuable and securely established.

So far from "any blame" attaching to the promoters of the legislation in question, this should rightly be attributed to Dr. Colin Campbell and those with him in whose "mischievous imaginations" these preposterous aims would, indeed, appear to have first had origin. Such methods of obstruction could not (and did not) have any real effect against the hard facts of midwives' midwifery, nor can their repetition have any at the present juncture.—I am, etc.

F. R. Humphreys,
Honorary Secretary Midwives Bill Committee.
Buckingham Street, W.C., Feb. 18th.

Sir,—I am sorry to have again to ask you to find room for a short letter in reply to Dr. Colin Campbell's communication in the British Medical Journal of February 17th. I desire most emphatically once more to disclaim on the part of the Institute over which I preside all knowledge of the advertisement in the *Daily Mail* to which Dr. Campbell refers, or the slightest approval of the same. If it had been the deliberate intention of the authors of that advertisement to do harm to the cause of legislation for midwives—which it is their alleged object to support—they could scarcely, in my opinion, have selected a more certain means of effecting their purpose.—I am, etc.,

Jane Wilson,
President of the Incorporated Midwives' Institute.
Buckingham Street, Strand, Feb. 20th.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

An analysis of the distribution of army medical officers in the Army List for February gives the following results:

Distribution in the February Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks: Seconded.
Surgeon-Generals ..	5	1	4	—	10	—
Colonels	7	8	12	—	27	2
Lieutenant-Colonels...	24	18	32	—	74	1
Majors	50	168	198	5	421	6
Captains	23	52	97	1	173	4
Lieutenants	8	103	42	—	153	7
Total...	117	350	385	6	858	20

The total is two fewer than in the January list.

The numbers at home increased from 84 to 117; but in the latter are now included the regimental medical officers of the Guards, with the old compound titles, who do not figure in the General Service List.

The number in South Africa is stated at 350, an increase of 4; and at other foreign stations 385, a decrease of 37, which is accounted for by a number of officers having been withdrawn from foreign garrisons—chiefly from the Mediterranean—who are now at home pending departure for the seat of war.

The numbers of those imported and seconded remain much as before.

These figures do not exactly tally with those given by the Under-Secretary of State for War, in reply to Sir W. Foster, on February 6th, which are as follows: Home, 111: South Africa, 368: other foreign stations, 377. The differences are not important, for the distribution necessarily alters almost from day to day; the broad result is practically the same.

The Under-Secretary stated that 133 civil surgeons were employed in South Africa, and 112 retired pay officers at home. But this return is incomplete without the number of civil surgeons employed at home. These must be included to show the actual deficiency in the R.A.M.C., even for current duty, not to mention a margin for reliefs and casualties.

As it is, we know that 245 retired pay and civil surgeons are now employed; to which should be added at least another 100 at home: 350, added to 858 (the strength of R.A.M.C. officers) gives a total of 1,208, which makes us believe the strength of the R.A.M.C. should be increased to 1,200, and not merely 1,000, as previously suggested.

We notice that two retired pay officers have proceeded to South Africa (see p. 1,290 of the *Army List* for February).

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: John E. Powell, Surgeon, to the *Centurion*, additional, supernumerary, February 13th; Alan G. Eastment, Surgeon, lent to Yarmouth Hospital for survey of stores from March 12th to 31st.

ROYAL ARMY MEDICAL CORPS.

Major Walter Kiddle, M.D., was murdered by frontier tribes at Mongkaw, Burma, on February 9th. He was a son of the late Captain W. W. Kiddle, R.N., and entered the service as Surgeon-Captain, July 28th, 1886, becoming Major, July 28th, 1898. He went to India in January, 1897, and was placed on duty with the Chinese Boundary Commission in November last. He had no war record.

CHANGES OF STATION.

The following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

		From	To
Lieut.-Col.	A. T. Sloggett	Egypt	Home District.
,,	B. W. Somerville-Large	Portsmouth	South Africa.
,,	R. C. Gunning	Chester	,,
,,	W. W. Kenny, M.B.	Dublin	,,
,,	J. Anderson, M.B.	Sheerness	Chatham.
,,	J. G. MacNeece	Bermuda	Portsmouth.
Major	H. J. Michael	Portsmouth	Aldershot.
,,	T. Archer, M.D.	Bermuda	Dublin.
,,	R. Jennings, M.D.	Chatham	South Africa.
,,	L. W. Swabey	Crete	Malta.
,,	D. V. O'Connell, M.D.	,,	,,
,,	R. H. Clement	Nova Scotia	Woolwich.
,,	J. I. P. Doyle	Limerick	Dublin.
,,	C. J. Holmes, M.D.	Egypt	Limerick.
,,	G. E. Hale, D.S.O.	Ceylon	Aldershot.
,,	H. Carr, M.D.	Egypt	Dover.
,,	H. W. Austin	Gibraltar	Devonport.
,,	D. M. Saunders, M.D.	,,	Dublin.
,,	D. M. O'Callaghan	Malta	Aldershot.
,,	H. B. Mathias, D.S.O.	Egypt	Home District.
,,	J. J. Russell, B.A., M.B.	Gibraltar	Curragh.
,,	J. P. S. Hayes	Egypt	Netley.
,,	A. Y. Reily, M.B.	,,	South Africa.
,,	D. Stiell, M.D.	Malta	Woolwich.
,,	G. F. Alexander, M.B.	Crete	Malta.
,,	E. C. Freeman	Bermuda	Portsmouth.
,,	A. Wright	Nova Scotia	Aldershot.
Captain	P. H. Whiston	—	Home District.
,,	W. W. O. Beveridge, M.B.	Bermuda	Chatham.
,,	T. W. Gibbard, M.B.	Madras	South Africa.
,,	G. S. Mansfield, M.B.	Bengal	Aldershot.
,,	P. Evans	Malta	Portsmouth.
,,	G. St. C. Thom, M.B.	Ceylon	Aldershot.
Lieutenant	L. Addams-Williams	Malta	Netley.
,,	A. J. S. Archer, M.B.	Dublin	South Africa.
,,	H. C. R. Hime, M.B.	—	,,
,,	C. C. Cumming, M.B.	—	,,
,,	E. M'Donnell, M.B.	—	Netley.
,,	A. F. Carlyon	—	,,
,,	C. S. Cato	—	,,
Quartermaster	J. M'Clay	—	Aldershot.
,,	G. F. Short	—	Curragh.
,,	F. Illingworth	—	Portsmouth.

Lieutenant-Colonel Sloggett has since proceeded to South Africa as Medical Officer in Command of the Imperial Yeomanry Hospital.

Lieutenant-Colonel J. R. Greenhill, retired pay, has been transferred from Christchurch to Gosport.

The undermentioned retired officers were during last month appointed to the stations specified for temporary employment:—Lieutenant-Colonel W. Johnston, M.D., War Office; Lieutenant-Colonel C. Healy, Cork; Lieutenant-Colonel W. Campbell, M.B., Caterham; Lieutenant-Colonel C. E. Dwyer, Shorncliffe; Lieutenant-Colonel H. Jagoe, M.B., Dublin; Lieutenant-Colonel L. Corban, M.D., Aldershot; Lieutenant-Colonel E. J. Fairland, London; Lieutenant-Colonel M. Knox, Londonderry; Lieutenant-Colonel F. G. Adye-Curran, M.B., Dublin; Lieutenant-Colonel J. Barry, M.D., Queenstown; Major A. H. Morgan, D.S.O., South Africa; Majors J. E. Nicholson and J. E. V. Foss, M.D., Aldershot; Surgeon-Captain R. A. Bostock, London.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel Edward Fawcett, Madras Establishment, has retired from the service, from December 28th, 1899. He was appointed Assistant-Surgeon, October 1st, 1869 and Brigade-Surgeon-Lieutenant-Colonel, April 4th, 1894. He was with the Burmese expedition in 1886-87, was mentioned in despatches, and received the Frontier medal with clasp.

Lieutenant-Colonel W. F. Murray, M.B., Bengal Establishment, has also retired from the service, from December 18th, 1899. He joined the department as Assistant-Surgeon, October 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, April 2nd, 1896.

Lieutenant-Colonel A. Duncan, M.D., Bengal Establishment, is permitted to retire from the service, from February 1st. His first appointment bears date March 30th, 1878; that of Surgeon-Lieutenant-Colonel, March 30th, 1898. He was in the Afghan war in 1878-80, and was in the action at Mattoon and in that at Charasiah on October 6th, 1879, where he was severely wounded (medal with clasp). He was also with the Hazara expedition in 1891, receiving the Frontier medal with clasp.

Lieutenant-Colonel F. C. Barker, M.D., M.B., Bombay Establishment, also retires from the service from January 3rd. He was appointed Assistant-Surgeon, October 1st, 1869, and became Brigade Surgeon-Lieutenant Colonel, August 31st, 1895. He has no war record in the Army Lists.

Lieutenant-Colonel James Young, M.B., Bengal Establishment, is appointed to officiate as Principal Medical Officer of the Presidency District, Madras Command.

Captain Alan Jasper Heath, M.B., Bombay Establishment, died at Exminster, Devon, on February 15th, aged 34. He joined the service as Surgeon-Captain, March 31st, 1890.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Major W. W. Lake is promoted to be Surgeon-Lieutenant-Colonel, February 14th.

THE VOLUNTEERS.

The Volunteer Officers' Decoration has been conferred upon the undermentioned officers:—Surgeon-Lieutenant-Colonel E. B. Reckitt, M.D., 1st Lincolnshire Volunteer Artillery (Western Division Royal Garrison Artillery); Surgeon-Major E. L. Freer, 1st Volunteer Battalion the Royal Warwickshire Regiment; Surgeon-Lieutenant-Colonel J. B. Ronaldson, 7th Volunteer Battalion the Royal Scots (Lothian Regiment); Surgeon-Major R. S. Gibb, M.B., 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers; Surgeon-Major R. T. Cæsar, 2nd Volunteer Battalion the Hampshire Regiment: Surgeon-Major J. S. Carleton, 1st Gloucestershire Volunteer Artillery.

Surgeon-Lieutenant-Colonel W. J. Naismith, M.D., Ayrshire (Earl of Carrick's Own) Yeomanry, is seconded for service with the Imperial Yeomanry, February 10th.

Surgeon-Captains A. Thorne, M.B., 2nd Middlesex Artillery; E. W. St. V. Ryan, 16th Middlesex (London Irish) Rifles; and R. R. Sleman, 20th Middlesex (Artists') Rifles, are borne as supernumeraries in their Volunteer corps while serving in the City of London Imperial Volunteers. February 10th.

Mr. John Clay, M.B., is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the Northumberland Fusiliers, February 14th.

Surgeon-Lieutenant D. R. Dobie, M.D., 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers, is promoted to be Surgeon-Captain, February 14th.

Mr. James H. Wilkinson is appointed Surgeon-Lieutenant in the 1st Volunteer Battalion the Worcestershire Regiment, February 14th.

Surgeon-Captain J. H. Anderson, M.B., 5th (Deeside Highland) Volunteer Battalion the Gordon Highlanders, is promoted to be Surgeon-Major, February 14th.

Surgeon-Lieutenant H. A. Pattullo, M.B., 1st Ayrshire and Galloway Artillery, resigns his commission, February 21st.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps relatively specified, dated February 21st: Samuel Davidson M.D., 1st Caithness Artillery; Robert W. Forrest, M.B., 1st Lanarkshire Artillery; Lloyd J. H. Oldmeadow, M.D., 2nd Volunteer Battalion the Royal Fusiliers (City of London Regiment); William E. M. Corbett, 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment; Sidney Hillier, M.D., 2nd Volunteer Battalion the Suffolk Regiment.

Surgeon-Lieutenant-Colonels A. Ballantyne, M.D., and C. J. Allan, 6th Volunteer Battalion the Royal Scots (Lothian Regiment) have resigned their commissions, retaining their rank and uniform, February 21st. Surgeon-Lieutenants G. Melville, M.B., and J. Cameron, of the same regiment, are promoted to be Surgeon-Captains, February 21st.

Surgeon-Captain John E. H. Davies, 1st Volunteer Battalion the Royal Welsh Fusiliers, resigns his commission, and is appointed Captain, February 21st.

Surgeon-Lieutenants R. Drinkwater, 1st Volunteer Battalion the Royal Welsh Fusiliers, and C. E. R. Bucknill, 2nd Volunteer Battalion the East Lancashire Regiment, are promoted to be Surgeon-Captains, February 21st.

VOLUNTEER MEDICAL STAFF CORPS.

The members and friends of the Volunteer Medical Staff Corps (London Companies) mustered in force on the evening of February 17th, at the head-quarters in Calthorpe Street, on the occasion of the annual distribution of prizes by Surgeon-General H. S. Muir, Deputy Director-General Army Medical Service.

The commanding officer, Surgeon-Lieutenant-Colonel J. E. Squire, said that the strength of the corps was 429 at the close of the volunteer year, as against 413 in the previous year. With regard to the Transport Section, they had for the past few years had a Transport Section for only one of the five companies, the transport of the sick and wounded being generally

undertaken by the Army Service Corps. An attempt was now being made to put the whole of the transport of the sick and wounded in the hands of the Medical Corps, and to have the transport for each of the companies. The students of the Royal Veterinary College had shown a great interest in the Transport Section, and there was reason to believe that they would be able to draw all the men they required from that College. The grant made for horses, etc., by the Government, however, was hardly enough in London, and representations he had made on the subject were being favourably considered. Seventy men out of 450 had offered for service in South Africa, but the offer has not been accepted. This has caused an amount of disappointment out of proportion to the amount of service that could have been rendered.

The prizes having been distributed by Surgeon-General Muir, Surgeon-Major Matthews moved a vote of thanks, and observed that the praise accorded to the Royal Army Medical Corps had been singularly unanimous, and that many officers of that body were men who had passed through the ranks of the Volunteer Medical Staff Corps. The Corps had raised £274 for the benefit of the wives and families of non-commissioned officers and men serving in the Royal Army Medical Corps. The vote of thanks was seconded by Surgeon-Captain J. Harper.

Surgeon-General Muir, in reply, said that with regard to the transport and the grant for transport, he was deputed by his chief, the Director-General, to say that it was his intention to try to obtain a better grant than that now given, and he had every reason to suppose that the recommendation would be acceded to. With reference to the offers to serve abroad, it must be remembered that the situation was somewhat unprecendented, that the motto of the Volunteer Force was "Defence not Defiance"; and that it was only quite lately contemplated to send any of the force on active service abroad. Now, however, such a step had been determined and acted upon, and the Volunteer Medical Staff Corps will now have their chance also. There had been some delay in the appearance of the Royal Warrant, but they must recollect that the matter was a complicated one, as it was desired that any regulations issued should be framed to include the brigade bearer companies also. It had been said that men of the St. John Ambulance Brigade had been taken in preference to the Volunteer Medical Staff Corps. This was not the case. The Director-General had no such preference; it was simply that there was no authority to send the Volunteer Medical Staff Corps abroad until the Warrant appeared, and he hoped that this Warrant, though it might not please all, would result in putting matters right. Some little misunderstanding had occurred about the strict medical examination, but that must be fairly strict, and it was not possible to relax it altogether. Some gentlemen had been disappointed at being rejected, but possibly when the rules were slightly relaxed, as they would probably be, all round, those gentlemen might have a chance of distinguishing themselves in South Africa.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

BRIGADE-SURGEON-LIEUTENANT-COLONEL PETER GILES, S.M.O., informs us that the spring class of the School for Stretcher Bearers, held at Queen's Hall, James Street, Buckingham Gate, the Headquarters of the Queen's Westminster R. V., by kind permission of Colonel Sir Howard Vincent, K.C.M.G., C.B., M.P., is now full, and no more can be taken on. The officers' class will be held at the Headquarters of the 20th Middlesex (Artists) R.V., Duke's Road, Euston Road, by kind permission of Colonel R. W. Edis, V.D., commencing May 7th, a further notice of which will appear later. During the absence in South Africa of Surgeon-Captain R. R. Sleman, S.M.O., C.I.V., Surgeon-Captain E. M. Callender, M.D., Prince of Wales's Own 12th Middlesex (Civil Service) R.V., 40, Connaught Square, Hyde Park, W., is detailed as Adjutant to the School.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

DUTIES OF ASSISTANTS.

KILBURN.—An assistant should not absent himself without leave; by doing so he renders himself liable to discharge for neglect of duty. An assistant is not entitled to "pocket" fees for extracting teeth or for any other services rendered by him to the patients of his principal, unless some agreement to that effect was entered into upon his engagement. An assistant must not overstay his leave of absence; by such conduct he renders himself liable to dismissal.

BIOGRAPHIES IN NEWSPAPERS.

B. A., M.D.—We have repeatedly expressed disapproval of the publication in lay newspapers, magazines, etc., of portraits and biographical sketches of medical practitioners such as that forwarded to us by our correspondent.

CIRCULAR AS TO NEW PARTNER.

H. R. B.—The proposed circular is unobjectionable provided that due care is taken to send it to none but *bona-fide* patients of the firm.

MEDICAL ADVERTISING.

H. M. W.—It is neither more nor less than advertising for a medical practitioner to send such a card as that enclosed by our correspondent to persons who are not his patients.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the congregation on February 15th the following degrees were conferred:

M.B. and B.C.—A. C. Fry, M.A., Pembroke; H. Glasier, M.A., Emmanuel.

B.C. only.—H. M. Harwood, M.A., Trinity; J. A. Nixon, B.A., Gonville and Caius.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen having passed the necessary examinations and conformed to the by-laws, have been admitted Members of the College:

A. P. Ambrose, Westminster Hospital; M. Arango, University of Bogota, Columbia; F. Atthill, Charing Cross Hospital; W. E. Bamber, Owens College and Royal Infirmary, Manchester; L. J. Bartlett, St. George's Hospital; B. S. Bartlett, F. R. Barwell, and W. Bastian, University College Hospital; H. W. Bayly, Cambridge University and St. George's Hospital; F. M. Bingham and E. W. Browne, St. Thomas's Hospital; A. F. Blake, London Hospital; F. D. Blandy, Middlesex Hospital; H. P. Bradley, Cambridge University and London Hospital; W. P. S. Branson, Cambridge University and St. Bartholomew's Hospital; C. A. D. Bryan, Guy's Hospital; E. P. Burns, Queen's and General Hospitals and Mason College, Birmingham; J. Cameron, Edinburgh University; T. Chetwood, London Hospital; H. N. R. Child, University of New Zealand and Middlesex Hospital; J. A. Churchill, St. George's Hospital; J. M. Collyns and C. V. Cornish, St. Bartholomew's Hospital; W. E. Cooper, University College Hospital; G. E. Cope, Westminster Hospital; J. F. Cunningham, St. Thomas's Hospital; H. N. Clarke and A. H. Davies, Cambridge University and Guy's Hospital; P. C. Douglas, St. Mary's Hospital; H. Durbridge, Guy's Hospital; G. M. Eastment, Middlesex Hospital; F. G. H. Edwards, St. Thomas's, Middlesex, and London Hospitals; T. C. English, St. George's Hospital; R. Fell and H. B. Foster, Guy's Hospital; H. W. Fisher, London Hospital; J. E. Francis, University College Hospital; W. V. C. Francis, Westminster Hospital; T. Gillespie, Cambridge University and St. Bartholomew's Hospital; G. Gomez, University of Bogota, Colombia; A. S. Good, St. George's Hospital; N. Grace, McGill University, Montreal, and St. Bartholomew's Hospital; W. St. G. Grantham-Hill, E. W. Holyoak, and J. W. Hunt, St. Mary's Hospital; W. H. Harland, Middlesex Hospital, and Owens College and Royal Infirmary, Manchester; F. R. M. Heggs, Mason College, Birmingham, St. Mary's and London Hospitals; R. F. Hiley, Cambridge University and St. Thomas's Hospital; E. F. Hill, Owens College and Royal Infirmary, Manchester; S. P. Hopewell, London Hospital; R. R. Horley, Middlesex Hospital; E. Hudson, Owens College and Royal Infirmary, Manchester, and St. Thomas's Hospital; J. W. Illins, St. Bartholomew's Hospital; O. Inchley and A. W. Izard, Cambridge University and St. Bartholomew's Hospital; F. B. Jefferies, King's College Hospital; R. G. Johnson, University College and Royal Infirmary, Bristol J. E. Judson, Owens College and Royal Infirmary, Manchester; S. J. Kerfoot, London Hospital; R. B. Kinlock, University College of South Wales, Cardiff, and St. Thomas's Hospital; C. Lees and P. A. Longhurst, Charing Cross Hospital; H. S. Libby, St. Thomas's Hospital; L. Lindop, St. Mary's Hospital; C. T. McClure, London Hospital; W. A. McEnery, R. W. H. Meredith, and P. T. Nicholls, Middlesex Hospital; O. Marriott and B. W. Moss, Guy's Hospital; H. A. Mason, Firth College and General Hospital, Sheffield; L. J. P. Mordaunt, St. Mary's and Charing Cross Hospitals, and Edinburgh University; J. W. Nunn, St. Bartholomew's Hospital; H. R. Nutt, St. Mary's Hospital; H. J. Orford, Mason College and Queen's and General Hospital, Birmingham; V. B. Orr, Melbourne University and Westminster Hospital; T. D. Paddock, University College and Royal Infirmary, Liverpool; W. H. Park, Charing Cross Hospital; J. F. Paul, St. George's Hospital; A. C. Pearson, Cambridge University and St. George's Hospital; W. E. Peck, University College Hospital; C. M. Pennefather, Durham University and St. Bartholomew's Hospital; S. Pern, St. Thomas's Hospital; C. A. Peters, McGill College, Montreal, and St. Bartholomew's Hospital; H. G. Pinker, St. Bartholomew's Hospital; R. N. Salaman, Cambridge University and London Hospital; J. H. Saunders and G. H. Spencer, London Hospital; E. M. Saunders, King's College Hospital; M. Sheeham, Queen's College and Northern Infirmary, Cork; A. E. Softly and H. Z. Stephens, St. Thomas's Hospital; A. R. Spencer and E. H. B. Stanley, University College Hospital; P. G. Stock, University College and Royal Infirmary, Bristol; W. Sutherland, University of New Zealand and University College Hospital; W. B. B. Taylor and H. Thwaites, London Hospital; C. Thackray, Firth College, Sheffield, and Royal Infirmary, Manchester; B. R. B. Truman, Cambridge University and St. Bartholomew's Hospital; W. E. Turner and A. D. B. Von Rosen, St. Mary's Hospital; J. Valérie, St. Bartholomew's Hospital; R. A. Walker, Cambridge University and St. George's Hospital; R. Warren, Oxford University and London Hospital; R. N. Watson, Westminster Hospital; C. H. Welch, University College and Royal Infirmary, Bristol; W. R. E. Williams, Edinburgh University and Guy's Hospital; R. Le G. Worsley, St. George's Hospital and Durham University; T. P. Yates, Owens College and Royal Infirmary, Manchester.

APOTHECARIES' HALL, IRELAND.

THE following candidates have passed the undermentioned Professional Examinations in the subjects undernoted (A., Anatomy; F., Forensic Medicine; H., Hygiene; Mat., Materia Medica; Med., Medicine; Mid., Midwifery; O., Ophthalmology; S., Surgery):

Second Professional.—R. Tracy, P., A.; H. W. Mason, A.

Third Professional.—L. J. Farrell, P. H., F.; S. A. Curran, P., Mat.; J. D'A. Hamilton, P., F.; W. P. Harding, Med., S.; F. A. Bass, Med., Mid.; A. J. Barnes, Med., Mid., O.; G. M. Sharpe, Med., S., Mid., O.

Messrs. F. E. Bass, W. P. Harding, and G. M. Sharpe have completed the Final Examinations and have been admitted Licentiates of the Apothecaries' Hall, and are now qualified to practise medicine, surgery, and midwifery.

ERRATUM.—In the Pass List of the Final Examination of the Conjoint Board for Scotland, published in the BRITISH MEDICAL JOURNAL of February 3rd, p. 293, col. 2, the first name should be Winifred Nell, not "Hill," as printed.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,079 births and 5,750 deaths were registered during the week ending Saturday last, February 17th. The annual rate of mortality in these towns, which had been 21.2 and 22.7 per 1,000 in the two preceding weeks, further rose to 25.8 last week. The rates in the several towns ranged from 14.3 in Brighton, 15.8 in Cardiff, 18.1 in Bristol, and 18.4 in Bradford, to 41.3 in Wolverhampton, 41.5 in Blackburn, 42.7 in Salford, and 54.8 in Preston. In the thirty-two provincial towns the mean death-rate was 27.8, and exceeded by 4.9 the rate recorded in London, which was 22.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the death-rate was equal to 1.9 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.8 in Blackburn, 5.0 in Leicester, 5.7 in Salford, and 7.5 in Preston. Measles caused a death-rate of 1.2 in Wolverhampton and in Leicester, 1.4 in Salford and in Oldham, 1.8 in Sunderland, and 4.4 in Preston; scarlet fever of 1.8 in Burnley; and whooping-cough of 1.2 in West Ham, in Birmingham, and in Liverpool, 1.4 in Norwich, and 1.9 in Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 102 deaths from diphtheria in the thirty-three towns included 35 in London, 10 in Leicester, 9 in Sheffield, 5 in West Ham, and 5 in Leeds. Two fatal cases of small-pox were registered last week in Hull, but not one in any other of the thirty-three large towns. Eight small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, February 17th, but no new case was admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 2,089 at the end of the thirteen preceding weeks, had further fallen to 2,052 on Saturday last; 159 new cases were admitted during the week, against 190, 174, and 157 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 17th, 959 births and 958 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 23.0 to 27.1 per 1,000 in the five preceding weeks, further rose to 31.0 last week, and exceeded by 5.2 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.2 in Greenock and 23.3 in Aberdeen, to 35.4 in Dundee and 50.6 in Perth. The zymotic death-rate in these towns averaged 2.7 per 1,000, the highest rates being recorded in Glasgow, Dundee, and Paisley. The 480 deaths registered in Glasgow included 17 from measles, 11 from scarlet fever, 3 from diphtheria, 10 from whooping-cough, and 7 from diarrhœa. Three fatal cases of diphtheria were recorded in Edinburgh, 4 of whooping-cough in Aberdeen, and 6 of measles and 2 of whooping-cough in Paisley.

FEMALE ASSISTANT MEDICAL OFFICER.

THE appointment of an additional assistant medical officer for the West Ham Union having become necessary, the guardians after some discussion have resolved to select a lady for the post. The salary is £100 a year, with the usual residential allowances.

METHOD OF PAYING SUPERANNUATION ALLOWANCE.

A CORRESPONDENT asks whether any Board of Guardians which has granted superannuation allowance under the Act of 1896, can direct the amount to be paid by one yearly sum instead of by quarterly instalments, as he believes is the general practice.

*** We cannot think that the Local Government Board would sanction any other than quarterly payments of the amount due to any claimant under this Act.

HOSPITAL AND DISPENSARY MANAGEMENT.

ABERDEEN ROYAL INFIRMARY.

The annual meeting of the Aberdeen Royal Infirmary and Lunatic Asylum Corporation was held on February 14th. It is very satisfactory to note that an answer to the numerous and strenuous appeals recently made to the public for pecuniary support has been received. The annual subscriptions from individuals show a total for the year more than double the average annual amount for the past ten years. The congregational subscriptions have also risen. The donations from out-patients show a small increase, and the large contribution of £600 has been raised from the Hospital Saturday Fund. These and other receipts, including—one is sorry to hear—over £2,000 of legacies, which it would have been so much more satisfactory to have seen put into capital, had that been possible, have amounted to over £10,000. Happy as such a result is in comparison with the past, the revenue account still shows a deficit of nearly £800. Every effort has been made by the directors to prevent any abuse of the charity by patients able to afford private advice, and, in keeping a guard against such an abuse, they are satisfied that on the whole there is little to be found fault with on this score. The number of beds occupied is higher than ever before, and there has been an increase of nearly 1,000 in the number of out-patients treated. The internal working of the institution appears thoroughly satisfactory, and it may be safely hoped that another year may see the finances of the hospital in a secure position.

OBITUARY.

THE LATE SIR THOMAS GRAINGER STEWART.

THE Queen has been graciously pleased, through Sir James Reid, to express to Lady Grainger Stewart and her family Her Majesty's regret at the loss of so distinguished a physician and her sincere sympathy with them in their bereavement.

In opening the Class of the Practice of Physic on the morning of Monday, February 12th, Dr. John Wyllie said:

Gentlemen,—You have no doubt heard of the sad event which has occurred since we last met. You have heard that on the morning of Saturday, February 3rd, Professor Sir Thomas Grainger Stewart departed this life. I understand that the end at last came somewhat suddenly; but you are aware that since last summer the Professor's health had been so much impaired as to give rise to great anxiety in the minds of his friends. For a time, indeed, as I said when I first met this class in October, there was progressive improvement, and there seemed ground for the hope that, with a prolonged rest during the winter season, the Professor's health might be in great measure restored. It even seemed possible that after a time he might be able to resume the duties of his chair. These hopes, unfortunately, have not been realised. The Professor's health has been very precarious during the whole of the winter, and of late there were indications that the end might not be far off.

This is not the time to attempt to make a sketch of the Professor's career, or an estimate of the value of his services to the University and to science. Such tributes to his memory, you may be sure, will not be wanting.

I cannot, however, to-day resume the work of the class without giving some expression to the feeling which must be in the minds of all of us. We all feel deeply that, by the death of Sir Thomas Grainger Stewart, the University and the Medical School of Edinburgh have sustained a grievous loss. In him the University and the profession have lost an eminent teacher, who devoted his time and energy without stint to the duties of his chair, a man of science whose work will keep his name in lasting remembrance, a man of ability and culture whose fine presence, and whose gifts of eloquent speech and kindly humour made him a fitting leader of the profession upon public occasions when professional subjects were to be discussed or social functions celebrated.

It will be widely felt to-day that the medical profession has lost one of its foremost leaders.

SIR WILLIAM MILLER, M.B., J.P., Londonderry.

THE death of Sir William Miller, of Londonderry, which, as already announced, took place upon January 28th, was the result of an attack of influenza. He had been a prominent figure in Londonderry for upwards of forty years, and was very well known alike in professional, social, and municipal circles. He was a magistrate for the city and also for the county of Londonderry, a grand juror for the county, a distinguished practitioner, and had been on several occasions Mayor of his native city. He had been appointed High Sheriff of County Derry for the present year, but had not been sworn in at the time of his decease. He entered the Corporation of Derry nearly forty years ago, and remained a member until the Irish Local Government Bill came into operation. He received the honour of knighthood in the year 1876. His professional appointments included that of Surgeon to the County Infirmary of Derry, Medical Officer of Her Majesty's prison, and Surgeon-Major of the Artillery Militia. He had an extensive private practice, and was much esteemed as a practitioner and as a wise and capable public man.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Julio Cesar de Sande Sacadura Botte, Emeritus Professor and Dean of the Faculty of Medicine of the University of Coimbra, aged 52; Dr. Beydler, the oldest member of the profession in Brussels, aged 95; Dr. Steylaess, Vice-President of the Belgian Medical Federation, and an authority on medical jurisprudence; Dr. Gabriel Tourdes, sometime Professor of Medicine in the old medical faculty of Strassburg, and after the Franco-German War Professor of Forensic Medicine at Nancy, aged 70; and Dr. J. Cargill Shaw, Professor of Diseases of the Nervous System at the Long Island College Hospital, Brooklyn, New York, aged 55.

MEDICAL NEWS.

The estate of the late Sir James Paget has been sworn at £74,701 15s. 5d. The executors are his son, Sir John R. Paget, Bart., Sir Thomas Smith, Bart., and the Rev. Henry Lewis Thompson of Oxford.

Antirabic Inoculations in St. Petersburg.—From the annual report of the Section for the Preventive Treatment of Rabies of the Imperial Institute of Experimental Medicine in St. Petersburg, by Dr. V. Kraïouchkine, published in the *Archives des Sciences Biologique*, t. vii, Nos. 1 and 2, it appears that during the year 1897 the number of persons who applied for treatment was 467, as against 388 in the previous year. Of the 467 persons, 62 for various reasons did not undergo the treatment. Of those actually treated 32 had only had their hands wetted with the saliva of rabid animals; in 7 cases the treatment was discontinued soon after it was begun, either at the patient's wish or because of intercurrent illness; 5 who went through the whole series of inoculations were found later to have been bitten by healthy animals; in 2 the treatment was employed to pacify the patients who had not been bitten at all. Deducting these 108 cases, the total number treated was 359, of whom 302 were bitten by dogs, 45 by cats, 2 by wolves, 6 by horses, and 4 by cows. There were 3 deaths, a percentage of 0.8. Excluding 1 case in which death occurred during the treatmeut, the mortality was 0.5 per cent.

After-care Association.—The annual meeting of this useful society was held on February 19th, at the house of Dr. Blandford, who presided. The Chairman, in his introductory remarks, pointed out that the main object of the Association was to help those who had left asylums recovered from an attack of insanity to make a fresh start in life; and this was the more necessary as mental illnesses were often matters of months, not days or weeks, and consequently situations could not be kept open for the sufferers, as they were sometimes for hospital patients. The Secretary (Mr. Thornhill Rexby) then read the annual report, from which it appeared that, during 1899, 222 cases had been before the Council, the largest annual number ever dealt with. Cases had been assisted, as in the past, by being boarded out in cottages in the country, by grants of money, and by finding occupation. The investigations involved had been of an onerous character. The failures had been comparatively few. Boards of Guardians had availed themselves largely of the help of the Association, and in some few cases they had subscribed to its funds. The total amount of subscriptions, donations, and contributions for maintenance was £549 8s. 1d., a falling-off from the previous year, when they amounted to £652. In moving the adoption of the report, Dr. G. H. Savage remarked on the difference between hospital and asylum patients, and the usefulness of such a society to bridge the gulf (too often exaggerated by popular prejudice) between "alienism" and the ordinary conditions of social life. The Association had done valuable work in two directions—in confirming health and in preventing relapse. The resolution was seconded by the Rev. Dr. Springett (Vicar of Brixton) who bore personal testimony to the admirable character of the agencies employed by the Association, and having been supported by the Rev. W. St. Hill Bourne and by Dr. Shuttleworth, was carried unanimously. Dr. Percy Smith moved, and Mr. Deputy White seconded, the reappointment of the Council and officers of the Association, and the meeting concluded with a vote of thanks to the Chairman, moved by the Rev. Henry Hawkins and seconded by Dr. Rayner. The offices of the Association are at Church House, Dean's Yard, Westminster, S.W.

Pure Oral System for Teaching the Deaf.—The festival dinner in aid of the Society for Training Teachers of the Deaf and for the Diffusion of the Pure Oral System was held at the Hotel Cecil, Strand, on February 21st under the chairmanship of Earl Egerton of Tatton. The object of the meeting was to raise the sum of £20,000 to pay off a debt of over £3,000, and to increase the Society's Training School by an adequate practising school, so as to afford wider opportunities to its students. After the usual loyal and patriotic toasts had been honoured, the Chairman proposed the toast of the "Society for Training Teachers of the Deaf and for the Diffusion of the Pure Oral or German System." The object of the pure oral system was to restore the deaf to some intercourse with mankind. He objected to the term "German" sometimes applied to the pure oral system, because though it had been brought to this country from Germany and was assisted by the admirable instruction obtained there, the system was nevertheless equally successfully carried out in Italy. The reason why the pure oral system had not spread as was hoped was the expense entailed and the difficulties that environed it. The sign system and the combined sign and oral system were defective, and the object of the pure oral system was to make the deaf as far as possible like other people. To supply the necessary teachers a special training college was necessary, and up to the present time the Society had trained 113 certificated teachers. The necessity had arisen to start a school in connection with the Society to ensure a sufficient number of pupils for the training of the teachers. Dr. Symes Thompson, in responding to the toast, said that twenty-seven years ago they always heard the expression "deaf and dumb," but now they had succeeded in overcoming many difficulties, and by carefully training the eye and the sense of touch it was possible to give the deaf an education which supplied the power of speech. The results of the sign system and combined system were not entirely successful, but if undivided attention was concentrated on the movements of the lips it was possible to overcome the barrier step by step until those who were lacking in hearing could communicate with mankind. The Secretary announced that the sum of £5,300, including subscriptions of £500 each from Viscount Portman, Mr. B. St. J. Ackers, Mrs. Miller, Mr. H. Fletcher, Dr. Symes Thompson, and Mrs. Armitage, had been received.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, S.W.—House-Surgeon. Appointment for six months. Board and residence provided and £5 allowance. Applications to the Honorary Secretary.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, 109, Edmund Street.—House-Surgeon. Appointment till October 31st, 1900, but eligible for re-election for further six months. Salary at the rate of £40 per annum, and if reappointed at £60 per annum, with board, lodging, and washing. Applications to the Secretary by March 13th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church Street.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by March 12th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Clinical Assistant. Applications to the Secretary, John Bright Street, Birmingham, by March 3rd.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—Fourth Resident Medical Officer; unmarried, and under 30 years of age. Salary, £30 per annum, with board washing, and residence. Applications to the Secretary by February 28th.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN, St. Michael's Hill.—Locum Tenens as House-Surgeon, for several weeks. Terms, 3 guineas per week, with furnished rooms and attendance. Applications to the Secretary.

CARDIFF INFIRMARY.—Resident Medical Officer. Appointment for three years but renewable. Salary, £100 per annum, with board, washing, and furnished apartments. Applications to the Secretary by March 5th.

CARDIFF: UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Demonstrator and Assistant Lecturer in Anatomy. Salary £120. Applications to the Secretary by March 10th.

CARMARTHENSHIRE INFIRMARY.—Resident Medical Officer; unmarried. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Secretary by March 3rd.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by March 6th.

CHELTENHAM GENERAL HOSPITAL.—Junior House-Surgeon; unmarried. Salary, £45 per annum, with board, lodging, and washing. Applications to the Hon. Secretary by March 7th.

CORK: QUEEN'S COLLEGE.—Professorship of Materia Medica. Applications to the Under-Secretary, Dublin Castle, by March 9th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried, Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided; no salary. Applications to the Secretary of Medical Committee by March 1st.

DUBLIN: MERCER'S HOSPITAL.—(1) Resident Medical Officer. (2) Vacancy on the Surgical Staff. Applications to the Registrar by February 26th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer; unmarried. Salary, £140 per annum, rising to £160, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Winterton, Ferryhill, by March 6th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Surgeon. Appointment for six months. Honorarium, £25, with board, residence, etc. Applications to the Secretary by March 17th.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.—Medical Woman as Resident. Board and lodging provided. No salary. Applications to Miss Venters, 6, Archibald Place, Edinburgh.

EDINBURGH: VICTORIA HOSPITAL FOR CONSUMPTION.—(1) Resident Physician. Rooms and board, etc., provided, and honorarium at the rate of £20 per annum. (2) Non-resident Clinical Assistant in charge of out-patients. Salary at the rate of £30 per annum. Appointments for six months. Applications to the Honorary Secretaries, 1, North Charlotte Street, Edinburgh, by March 10th.

FARRINGDON GENERAL DISPENSARY.—Resident Medical Officer. Salary, £100 per annum, with apartments and attendance. Applications to the Honorary Secretaries, 17, Bartlett's Buildings, Holborn, E.C., by March 10th.

FRENCH HOSPITAL AND DISPENSARY, 172, Shaftesbury Avenue, W.C.—Resident Medical Officer. Salary, £80 per annum, with full board. Applications to the Secretary.

GLASGOW LUNACY DISTRICT BOARD.—Assistant Medical Officer for Woodilee Asylum, to act as Pathologist. Salary, £100 per annum, with board, apartments, etc. Applications to the Clerk by February 26th.

GREAT NORTHERN HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by March 12th.

HASTINGS, ST. LEONARD'S, AND EAST SUSSEX HOSPITAL.—House-Surgeon unmarried. Salary, £75 per annum, with residence, board, and washing. Applications to the Secretary by February 28th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two House-Surgeons to Out-patients. Appointments for six months, but eligible for re-election. Salary, 25 guineas each. Applications on forms provided to be sent to the Secretary by February 27th.

HUDDERSFIELD INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum, with board, residence, and washing. Applications to the Secretary.

ITALIAN HOSPITAL, Queen Square, W.C.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Secretary by March 7th.

KENT COUNTY OPHTHALMIC HOSPITAL, Maidstone.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to Mr. M. A. Adams, F.R.C.S., Honorary Surgeon to the Hospital.

KING'S COLLEGE, London.—Professorship of Materia Medica and Therapeutics. Applications to the Secretary by March 6th.

KING'S COLLEGE HOSPITAL.—(1) Senior Medical Registrar and Tutor. (2) Senior Surgical Registrar and Tutor. Applications to the Secretary, King's College, by March 5th.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer. Salary, £120, with fees, board, washing, and residence. Applications to the Medical Superintendent by March 10th.

LINCOLN COUNTY HOSPITAL.—Assistant House Surgeon. Appointment for six months, but eligible for re-election. Honorarium £10, with board, residence, and washing. Applications to the Secretary by February 26th.

LONDON SCHOOL OF MEDICINE FOR WOMEN, Hunter Street, Brunswick Square, W.C.—Demonstrator of Anatomy. Applications to the Secretary by February 26th.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer. Salary at the rate of £30 per annum, with board and lodging. Appointment for six months, but eligible for re-election as Senior at salary at the rate of £100 per annum. Applications to the Secretary, Dispensary, Gartside Street, Manchester, by March 7th.

MIDDLESEX HOSPITAL.—Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent by March 1st.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications to the Secretary by March 22nd.

NORTH LONDON HOSPITAL FOR CONSUMPTION.—Clinical Assistant at Out-patients' Department, 41, Fitzroy Square, W. Appointment for six months. Honorarium £17 10s. Applications to the Secretary by February 28th.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £150, with board, apartments, and washing. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary.

OXFORD: RADCLIFFE INFIRMARY.—Honorary Assistant Physician. Applications to the Secretary by March 5th.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board and residence. Applications to the Honorary Secretary by March 10th.

ROCHDALE INFIRMARY.—House-Surgeon; unmarried. Salary, £90 per annum, with board, residence, and washing. Applications to the Secretary, 58A, Yorkshire Street, Rochdale.

ROYAL EYE HOSPITAL, Southwark.—(1) House-Surgeon. Appointment for six months, but renewable. Emoluments, £50 per annum, with furnished quarters and board. (2) Clinical Assistants. (3) Two out-patient Assistant-Surgeons, with option of an honorarium. Applications to the Secretary by February 26th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £100 a year, with board, lodging, and washing. Applications to the Secretary by March 8th.

SALFORD ROYAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. Junior House-Surgeon is a candidate, and if appointed there will be a vacancy for Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary by March 10th.

STOCKPORT.—Medical Officer of Health for the Borough. Between 28 and 40 years of age. Salary, £400, increasing to £500 per annum. Applications, endorsed "Medical Officer of Health," to be delivered at the Town Clerk's Office by March 5th.

STOCKPORT INFIRMARY.—Junior Assistant House-Surgeon. Appointment for six months. Salary, £2 per month, with board, washing, and residence. Applications to the Secretary by March 6th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by March 26th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Honorary Secretary, Bank Buildings, Taunton, by March 6th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, Chelsea, S.W.—Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by March 3rd.

WORKSOP DISPENSARY.—Resident Surgeon. Salary, £120 per annum, with rooms, etc. Applications to Mr. Charles A. Whall, Worksop.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by March 7th.

MEDICAL APPOINTMENTS.

BATTERSBY, James, F.R.C.S., appointed Surgeon to the Central Dispensary, Glasgow.

BAYLISS, Richard Arthur, M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Medical Officer to the Eastern Dispensary, Bath.

BELL, H. J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Mortlake District of the Richmond Union, *vice* A. McCook Weir, M.D.R.U.I., resigned.

BOTTOMLEY, Francis Carr, M.D., B.C., B.A.Camb., M.R.C.S., L.R.C.P., appointed Assistant Surgeon to the Boscombe Hospital.

CHIPMAN, Walter W., M.B., C.M., F.R.C.S.Ed., appointed Assistant Gynæcologist to the Royal Victoria Hospital, Montreal.

CLARKE, S. A., L.R.C.P.I., L.M., L.S.A., appointed District Medical Officer of the West Ham Union.

COLTART, W. H., M.R.C.S., L.R.C.P., appointed House-Physician to Brompton Hospital for Consumption and Diseases of Chest, London, S.W.

CRAGGS, R. F., M.D.Durh., appointed Ophthalmic Surgeon to the Children's Hospital, Newcastle-on-Tyne, *vice* Dr. Percival, resigned.

DOUGLAS, Carstairs C., M.D., B.Sc.Edin., F.F.P.S.Glasg., appointed Pathologist to the Glasgow Maternity Hospital, *vice* Dr. R. M. Buchanan, resigned.

ERSKINE, A. M., M.B., B.Ch.Irel., D.P.H., appointed an Honorary Surgeon to the Goole Cottage Hospital, *vice* R. C. Bruce, M.B., C.M.Edin., resigned.

HALLAM, Arthur, M.R.C.S.Eng., L.S.A., reappointed Surgeon to the Central Division of the Sheffield Police.

HALLAM, Walter, M.R.C.S.Eng., L.S.A., appointed Surgeon to the Brightside Division of the Sheffield Police.

HAYWARD, C. Curling, M.B., B.S., M.R.C.S., L.R.C.P., appointed House-Physician to Brompton Hospital for Consumption and Diseases of the Chest, London, S.W.

LAWRENCE, H. Cripps, M.D., L.R.C.P.Lond., M.R.C.S., appointed Medical Officer to the Male Department of the Cheltenham Training College, *vice* G. A. Cardew, M.R.C.S., resigned.

MORTIMER, J. D. E., M.B., F.R.C.S., appointed Registrar and Anæsthetist (pro tem.) to the Royal Hospital for Women and Children, Waterloo Bridge Road.

PENDLEBURY, H. S., F.R.C.S., appointed Assistant Surgeon to the Royal Hospital for Children and Women, Waterloo Bridge Road, S.E.

RICHARDSON, Richard I., M.B., C.M.Edin., appointed Visiting Physician to the Liverpool City Hospital North, Netherfield Road.

RICHARDSON, Walter Silverwood, M.D.Brux., L.R.C.P.Lond., M.R.C.S., appointed Assistant Physician to the Boscombe Hospital, Bournemouth.

RORIE, G. A., M.B., B.S.Edin., appointed Junior Assistant Medical Officer to the Cumberland County Council Asylum.

SELBY, J. S. E., B.A.Camb., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Seventh District of the Aylesbury Union, *vice* J. Shaw, M.D.Glas., resigned.

STEDMAN, S. B., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Binbrook District of the Louth Union, *vice* J. B. O. Richards, L.R.C.P., L.R.C.S.Edin., resigned.

STEWARD, F. J., M.S., F.R.C.S., appointed Assistant Surgeon to Guy's Hospital; also Assistant Surgeon to the Hospital for Sick Children, Great Ormond Street.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Adjourned discussion on The Pathology and Treatment of Appendicitis.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation. (Skin.)

Royal College of Surgeons of England, 4 P.M.—Professor A. Keith: The Results of an Investigation of the Anatomy of Man and Higher Primates; to determine more accurately the relationship of man to living and extinct forms. Lecture I.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Catchcart: Chronic Glandular Diseases of the Nose and Nasopharynx.

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Mr. Ballance: Surgery of the Nervous System.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. F. Parkes Weber: Acute Ménière's Symptoms in Splenomedullary Leucocythæmia, with special reference to the Anatomical Changes found in Acute Leucocythæmic Affections of the Ear. Mr. Richard Lake will give a Pathological Report on the Case.—Dr. Hugh Thursfield: The Skin Affections met with in Bright's Disease.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. T. Williams: Consultation. (Medical.)

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Informal exhibition of Cases at 4.30 P.M.

Royal College of Surgeons of England, 4 P.M.—Professor A. Keith: The Results of an Investigation of the Anatomy of Man and Higher Primates, to determine more accurately the relationship of man to living and extinct forms. Lecture II.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Dr. Patrick Manson: Clinical Lecture. (Malaria and the Malarial Parasite.)

THURSDAY.

Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Clinical Demonstration Dr. Dundas Grant: Cases of Aural and other forms of Vertigo.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Gibbs: Demonstration of Surgical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. E. Batten: Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

FRIDAY.

Royal College of Surgeons of England, 4 P.M.—Professor A. Keith: The Results of an Investigation of the Anatomy of Man and Higher Primates, to determine more accurately the relationship of man to living and extinct forms. Lecture III.

West Kent Medico-Chirurgical Royal Kent Dispensary, Greenwich Road, 8.45 P.M.—Exhibition of Clinical Cases. Specimens, etc., by Drs. McCann and Ezard, Dr. Adkins, Dr. Toogood, and Mr. Chisholm Williams.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Holmes Spicer: Consultation. (Eye, Ear, Nose and Throat.)

West London Medico-Chirurgical Society, West London Hospital, Hammersmith Road, W., 5 P.M.—Cases will be shown by Mr. Keetley, Dr. Campbell Pope, Dr. Seymour Taylor, Dr. Abraham, and Mr. Bidwell.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases and specimens will be shown by Sir Felix Semon, Drs. Horne, Potter, Powell, and St Clair Thomson, and Messrs. Heath, Lake, Robinson, and Waggett.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Adjourned Discussion on The After-effects of Ether Inhalation on the Respiratory System, to be reopened by Dr. Dudley Buxton.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

COUTTS.—On February 19th, at 1, Gainsborough Road, Leytonstone, the wife of F. Coutts, M.D., of a daughter.

DE JERSEY.—On February 19th, at Netherton, Guildford, the wife of Walter B. de Jersey M.B.Cantab., of a son.

MARRIAGE.

BOWDEN—OGILVIE.—On the 14th inst., at Crumlin Church, Crumlin, co. Dublin, by the Rev. J. Sandys Bird, M.A., assisted by the Rev. Humphrey Davy, M.A., Walter Bowden, D.S.O., Staff-Surgeon R.N., H.M.S. "Collingwood," son of the late William Bowden, 45, Hilldrop Crescent, Camden Road, London, to Althea M. (Sissy), second daughter of James Ogilvie, J.P., The Grove, Queenstown.

DEATHS.

BRIERLEY.—On February the 16th, Anna Phyllis Hester Brierley, youngest daughter of Dr. and Mrs. Jas. Brassey Brierley, of Old Trafford, in her 7th year.

CUNDELL.—On Sunday, February 11th, at his residence, Brunswick House, Kew, George Richard Cundell, M.D., M.R.C.S., M. and L.S.A., aged 50 years.

FRENCH.—At Branksome, Wheeley, Wigan, Thomas Beamish French, L.R.C.P. L.R.C.S.Edin., L.F.P.S.Glas., aged 30, eldest surviving son of Michael French, Esq. Westwood, Rosscarbery, co. Cork.

REYNOLDS.—On the 7th inst., at The Bungalow, Orchard Hill, Bideford, North Devon, Lieutenant-Colonel Edward Osmund Reynolds, Army Medical Staff (retired), aged 47 years.

SCURFIELD.—On February 18th, at 9, Rectory Terrace, Sunderland, Charlotte Augusta, wife of Harold Scurfield, M.D.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Rœntgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, 1.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

W. H. C. will be glad to know where he can get information as to obtaining a French diploma to enable him to practise in France; also in what Continental countries, if any, a medical man with only an English degree is allowed to practise?

*** Our correspondent will find the information required on the first point which he mentions in the Educational Number of the BRITISH MEDICAL JOURNAL of August 26th, 1899, p. 565; and as to the second in an address on Medical Practice in European Countries, published in the JOURNAL of February 17th, 1900, p. 367.

INSTRUMENT MAKERS AND THE WAR.

Z. Y. X. writes: I should be glad if any of your readers can tell me if all wholesale instrument makers have advanced their prices, or only those who have made such magnanimous gifts to the hospital ships? For if this is the case it comes very hard on the general practitioner, who has no doubt contributed his utmost to the various funds established for the widows and orphans of those who have so gallantly served and fallen for their Queen and country in this terrible war; especially as most of us have undertaken to attend free of charge the wives and families of all reservists who have been sent to the front.

ANSWERS.

SANITARIAN.—There is a brief note upon the subject of estimation of carbolic and cresol acids in Pearman and Moir's *Aids to the Analysis of Food and Drugs* (London: Baillière, Tindall, and Cox).

BROMIDROSIS.

DR. T. CHARTERS WHITE (Belgrave Road, S.W.) writes in reply to "M.D." (BRITISH MEDICAL JOURNAL, February 17th, 428):—I can recommend a lotion composed of ichthyol ammonia in the proportion of 30 minims to the ounce of cold boiled water to be sprayed over the surface of the body. A case almost identical with "M.D." occurred in my experience which this treatment has entirely curely cured, and a valuable servant has been retained.

MR. GERALD DALTON, M.S.A.Lond. (Strand, W.C.) writes: I have found in similar cases of bromidrosis that formalin (Schenig's) in solution 1 per cent. to have most marked good effect, the feet, etc., being bathed in the solution twice daily.

DR. ARTHUR ROBERTS, M.D. (Harrogate) writes: Dr. Shoemaker (Philadelphia), who kindly gave me a copy of his valuable treatise on *Materia Medica and Therapeutics* when I called on him three years ago, and who took me over several of the hospitals in Philadelphia, and showed me many forms of skin diseases, says that as an internal remedy he recommends tincture or fluid extract of hoang-nan, and externally a dusting powder composed of naphthol beta gr. xv, and bismuthi trinitras 1 ounce.

DR. H. W. SPAIGHT (Porlock, Somerset) writes: I would suggest to "M.D." that he should lay stress on his directions about personal cleanliness being properly carried out. Patients do not always take kindly to the morning bath and frequent change of linen. Thymol soap is the best deodorant, and should be used freely. After washing the feet in the morning, boric acid, finely powdered, should be applied on lint between the toes. The lint is of great importance, as it prevents perspiration by keeping the cutaneous surfaces apart. It should be worn constantly, fresh lint being applied night and morning. If the feet are cold at night, neither bed socks nor stockings should be worn in bed, as they increase the action of the sweat glands. A hot-water bottle is less objectionable. The girl should wear a cotton dress when at her morning work. Her shoes should be sufficiently large, and she should avoid the shoes with rubber soles which are sometimes used as slippers. A little tincture of belladonna with eau de cologne may be applied to the axillæ if required. As regards internal remedies a laxative pill such as cascara may be given every day in order to lessen the amount of work thrown on the skin. Liquorice powder is not a suitable laxative, as it contains sulphur. If the perspiration is excessive as well as offensive, a pill of zinc and belladonna may be given. If the breath is offensive a creosote pill may be given with each meal.

FARADISATION IN TINNITUS AURIUM.

BRIGADE-SURGEON-LIEUTENANT-COLONEL W. PRICE, M.D., I.M.S. (retired) (Coonoor), writes: In the BRITISH MEDICAL JOURNAL for January 6th, 1900, "J. B." asks for suggestions for treating tinnitus. For some time past I have been subject to occasional attacks of tinnitus in my left ear, and until I discovered the following method of "cure" it caused me considerable distress: The negative cord from a good coil is attached to a large copper electrode; from the positive terminal two cords are brought, each attached to an ordinary hand electrode. Both feet are placed against the negative electrode; each hand grasps one of the positive electrodes. The coil is now set working, until the strength of current is as much as can be endured with comfort. The knuckles of one hand are now applied to the affected ear. The amount of current passing through the ear can be regulated to a nicety as follows: Slightly open the hand against the ear; the current is at once proportionately decreased. Shut that hand while opening the other, and the current through the ear is at once increased. In my case this treatment is followed by almost instant relief, and the "cure" is quite as permanent as when the case is left to Nature. When it threatens to return another application relieves. In my case the tinnitus only occurs in the left ear, never in the right. I have not been able to find out the cause. It may come on quite suddenly when, so far as I know, I am in perfect health.

At other times I may think I am a little "run down," as the Americans say. It remains an uncertain time, sometimes for many days, sometimes only for hours, and goes away as suddenly and unexpectedly as it came. The misery and irritation it causes while it lasts no one who has not suffered from it can imagine. My left ear is much better than my right; it is the one I prefer for stethoscopic work. When the tinnitus is on, it is almost useless. Although over 54, and "retired," I have not met any one who can hear the ticking of a watch at a greater distance than I can with my left ear when it is in good working order. The tinnitus began some years ago, and, except when actually present, has not so far affected the hearing.

NOTES, LETTERS, Etc.

ERRATUM.—In the BRITISH MEDICAL JOURNAL of February 17th, p. 371, Dr. Fletcher Beach was described as "President-elect of the Branch," instead of President of the Thames Valley Branch and President-elect of the Medico-Psychological Association of Great Britain and Ireland.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

	£	s.	d.		£	s.	d.
Amount already acknowledged	267	2	11	V.M.S.C., No. 5 Company (additional)	2	6	0
Collecting card (Mrs. Scanlan), per Captain L. Way	5	0	0	Medical Officers, Plymouth V.I. Brigade	1	11	6

TREATMENT OF COLITIS.

MR. J. NUMA RAT, M.R.C.S.Eng., Magistrate of Anguilla (St. Kitts, West Indies), writes: I have noticed in the BRITISH MEDICAL JOURNAL, October 11th, 1899, a request for advice regarding the treatment of a case of catarrhal colitis, and, as I have lately cured a patient who had been suffering from this disease for seven years, I beg to communicate to your correspondent the treatment which proved successful: Two enemata of a quart of warm water were administered in close succession, night and morning, by means of an Alpha bag placed at a considerable height above the patient. These, having cleared the colon, were immediately followed during the first month by an enema night and morning of a quart of warm water containing 20 grs. of potassium permanganate, and during the second month by a similar one of unheated water in which the permanganate was replaced by mxl of formalin. During the third month, and from the end of that time to the present—which is a period of two months—the patient has used two enemata of a quart of unheated plain water every morning, and by this means has hitherto prevented any return of the complaint. The patient was not restricted to any particular diet, inasmuch as a previous course of a strictly milk diet during nine months, the last three of which were spent in bed, had been prescribed by me and followed very carefully without any benefit.

OCEAN VOYAGES IN PULMONARY PHTHISIS.

DR. G. F. INGLOTT (Malta) writes: Dr. H. J. Jones writes in the BRITISH MEDICAL JOURNAL of January 6th, 1900, that "he is sorry to see the old idea of sea voyages for phthisis advocated again." He calls it an "old idea," but to be called old it must have stood the criticism of all times and ages, and must have consequently been formed upon a strong foundation—that is to say, minute observation and long experience.

If eminent practitioners have again had recourse to sea voyages in treating phthisical patients, it clearly shows that these have proved beneficial to other patients. We never meant to send to sea patients in an advanced stage of the disease; but Dr. Jones will admit that there is a real benefit in the first stage when patients are still able to enjoy exercise on deck. Let Dr. Jones send his patients at the outset of the disease, and in the summer months, when they can get fine weather, and not in winter time, as did the cases he mentioned, and he will realise the good effects derived therefrom.

I can bring forward many instances to prove my assertions, such as the case of a priest who was advised by an eminent Maltese practitioner (Dr. Adami) to take several voyages to check the disease from which he had been already suffering for some time. This gentleman, after having travelled for two years, returned to Malta in perfect health, so much so that he lived up to the age of 74 years.

Another interesting case is that of an Englishwoman who had to leave Malta to follow her husband, leaving a daughter behind. The mother profited a great deal from the sea voyages she underwent for several years, for she returned to Malta only a few months ago in very good health, while the daughter who was left behind is under my treatment for consumption.

Even in the time of Christopher Columbus the good effects of sea voyages were recognised; in fact, I remember reading in an old Spanish book that one of the crew who accompanied the discoverer of America suffered from phthisis, and on his return to Lisbon after the long voyage he was perfectly cured.

PARTURITION AMONG THE ESKIMOS.

IT has been said by many writers that the higher the development of the nervous system the more sensitive it is to pain, and the more severely does it respond to shock. In a recent article in the *Pacific Medical Journal*, Dr. Gleaves has had the opportunity of putting on record his experience on the above subject, having had the rare opportunity of being in attendance during the confinement of an Eskimo woman. He states that it is seldom that a "cablona" (white man) physician is permitted to witness this function among the Eskimo races. It is the custom not to allow a childbirth to take place in the "igloo," or house. The woman must go out into the woods or scrub alone, no one being allowed to be present, and she must remain there with no food except a piece of dried fish for "five sleeps," when she is allowed to return to the igloo. Then she and her husband proceed to take a bath and to change their undergarments for fresh ones. Gleaves describes the birth of the child witnessed by him as taking place in Alaska at a time when the temperature was about 30° below zero. The mother was found by him hidden in the scrub in a snowpit which was oval in shape, and about 2 feet broad by 6 feet long. She lay on a reindeer skin with no covering of any kind, and the only warmth obtained was that given off by a smoky fire made with twigs. "On my arrival at the parturient field," says Gleaves, "I found the woman in labour on her knees, with buttocks resting on her heels, and having severe bearing-down pains which came faster and faster and more severe until almost continuous when the 'bag of waters' ruptured." The child was speedily born and "hæmorrhage occurred, but she soon rallied again and expelled the placenta, whereupon she took a piece of sinew (which had been prepared from the hock of a caribou) and ligatured the cord as close to the umbilicus as possible, and then severed the cord close to the ligature with a piece of serrated flint. She washed the babe in the snow, although it rebelled by kicking and squalling at such a cold reception. The woman wore a belt or a piece of thong to confine her 'parka' around the waist, and to it was fastened by short deerskin thongs bits of ivory, buttons, leather bags, in which she kept tobacco, matches, and other small articles of value. After the snow bath she placed her babe underneath the folds of her 'parka,' which is the usual place of the young Eskimo, and proceeded in a bent-over-position, with a staff in hand, stepping slowly and laboriously, leaving a trail of blood, to another snow pit about 50 feet away, which had been prepared. She would not remain any length of time where the baby was born, for it is considered unclean." It is said that the mortality of both mothers and babes compares favourably with that which prevails in the United States.

LETTERS, COMMUNICATIONS, ETC., have been received from

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BOOKS, ETC., RECEIVED.

The Illustrated Annual of Microscopy. London: P. Lund, Humphries and Co. 1900.

La Peste et son Microbe. Pas Dr. Netter. Paris: G. Carré et C. Naud. 1900.

The Refraction of the Eye. By A. E. Davis, A.M., M.D. London and New York: Macmillan and Co. 1900. 12s. 6d.

Kirkes's Handbook of Physiology. By W. D. Halliburton, M.D., F.R.S. Sixteenth Edition. London: John Murray. 1900.

Cyclopedia of Classified Dates. By C. E. Little. New York and London: Funk and Wagnalls Co. 1900. 42.

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CLINICAL LECTURE

ON CASES OF

MYASTHENIA GRAVIS PSEUDO-PARALYTICA,

Delivered at the National Hospital for the Paralysed and Epileptic.

BY THOMAS BUZZARD, M.D., F.R.C.P.,
Physician to the Hospital.

IT was in 1877 that Dr. (now Sir Samuel) Wilks published in in the *Guy's Hospital Reports* an account of a case of "Bulbar Paralysis without Anatomical Changes."

A girl had come to the hospital complaining of general weakness; she could scarcely move about, spoke slowly, and showed slight strabismus. For a month she remained in this state, the movements of her limbs and her speech being so slow and deliberate that the case appeared to be rather one of lethargy from want of will than a condition of actual paralysis. At the end of this period all the symptoms became aggravated, and in three days they had assumed well marked characters of bulbar paralysis. She spoke most indistinctly, swallowed with great difficulty, and was quite unable to cough. She was still able to get out of bed. Shortly afterwards there was increasing difficulty in respiration, and in a few hours she died. The bulb, *post mortem*, appeared quite healthy to the naked eye, as well as to microscopical examination. This important observation was followed next year by a description by Erb of three cases in which the principal symptoms consisted in striking paresis of muscles, especially of mastication, of the neck, and of the eyes (ptosis), less in those of deglutition, the tongue, and extremities.

As time passed on there came accounts from other observers of cases manifestly belonging to the same category, which had terminated fatally, and, with one or two doubtful exceptions, had shown no anatomical lesions. By all the earlier observers the symptoms in the district of muscles innervated from the bulb attracted most attention, as was likely to be the case from the fact that they appeal most directly to the eye, and the condition was thought to be a peculiar disease of the medulla oblongata.

A very characteristic example was published in 1890 by Dr. Shaw.[1] In this case, however, particular notice was taken of the patient's weakness, not only in the localities innervated by the bulb, but in the extremities. The patient would often fall and was quite unable to walk downstairs alone. When sitting he could not cross one leg over the other without lifting it with his hand. He died asphyxiated after repeated attacks of dyspnœa, due apparently to a powerless condition of the respiratory muscles. During recent years this symptom of weakness and early exhaustibility of the muscular system generally has come to take a place at least as important in the symptomatology of the disease as that previously occupied preferentially by the bulbar symptoms.

Amongst those who have contributed to our knowledge of the subject, Goldflam,[2] Jolly,[3] and Strümpell,[4] may, perhaps, be especially mentioned. In this country only four cases, so far as I am aware, have been published: those by Wilks and Shaw, to which I have already referred, one by Dreschfeld,[5] and another by Harry Campbell. I shall refer later to Dreschfeld's case. According to Toby Cohn no fewer than 70 cases have been described.

I have the opportunity to-day of showing you two patients under my care affected with this remarkable disease. The first, a male patient, had been in the hospital a few weeks when, by a strange coincidence, the second, a female, presented herself, and was also admitted. Dr. Campbell has been so good as to permit me likewise to show his patient—a characteristic example of the disease—a description of which will be found in the *Clinical Society's Transactions*, 1899.

CASE I.

H. B., aged 40, married, was admitted under my care in October, 1899. He complained of general weakness, and early exhaustion after various forms of muscular exertion, walking, writing, speaking, eating, etc. There was diplopia.

(My house-physician, Dr. Edwin Bramwell, having seen two examples of this disease in a foreign clinic, at once recognised the nature of the case, and drew my attention to the symptoms, which will be presently described. I should like to express here my indebtedness to Dr. Bramwell for the great help which he has given me in investigating the case, and also in looking up the literature on the subject. The following notes the case were taken by him.)

Family History.

The patient's mother died of phthisis. His father, who is alive, aged 63, has suffered from muscular rheumatism. The grandparents on both sides are long-lived. The patient had four brothers and sisters, of whom a brother three years younger than himself is alive and strong; a sister died of scarlatina, two died in infancy. He has three children, aged 14, 10, and 8, all of whom are fairly strong, and there have been no deaths, no miscarriages. No similar condition to the patient's is known to exist among his relations. There is a rheumatic tendency in his father's family. A paternal uncle died in a lunatic asylum; a paternal aunt, aged 60, of "creeping paralysis."

Personal History.

Although never robust, he was quite healthy till 1892. Twenty-eight years ago he had scarlatina, otherwise he has never had a day's illness until the present trouble. Syphilis can with certainty be excluded. There is no history of injury. He has not had a distinct attack of influenza. He is a total abstainer from alcohol, and not a heavy smoker. His work as a schoolmaster is hard, and involves much speaking. His recreations have been chiefly of a sedentary nature, although he is fond of walking. He has had considerable worry during the last year or two.

Present Illness.

Until 1892 he enjoyed good health. He then began to take a cold bath every morning, and is disposed to attribute his illness to this. About Christmas, 1892, after sawing wood, his little and ring fingers felt weak, but speedily recovered. The weakness recurred after playing the organ, and his right index would occasionally droop. In 1893 he occasionally saw double, and this trouble recurred in 1894. About this time his voice, after speaking a few minutes, would acquire a nasal character. His right eyelid, too, tended to droop. The weakness in fingers and eyelids occasionally recurred, but not in a very marked form, during the three following years. In the summer of 1897 he felt weakness in the lips and tongue, and spoke through his nose. After speaking some time the voice would become feeble. He again saw double. In the vacation he walked eight or ten miles a day without fatigue for several days. After this his right thigh became weak. He found that he had frequently to stop and rest it for a few minutes, after which he could go on walking. He had never noticed this difficulty before. In the winter of 1897-98 both arms and hands were easily fatigued, and the right leg felt weak. In July, 1898, his speech was again affected, especially in the evenings. He walked sixteen miles in one day during the vacation, and although he found difficulty in accomplishing the last few miles, this was due rather to trouble with his breathing than with his legs. At times he would suffer from palpitation, which was new to him. In October, 1898, whilst suffering from catarrh, he had difficulty in coughing and clearing his throat, and also in swallowing. This cold seems to have pulled him down very much, and he has never recovered the strength which he had before. In January, 1899, his right arm was so weak that he could not brush his hair or write upon the blackboard, but after two days' rest he was able to move the arm quite well. At this time there was dull, aching pain in the right arm and leg, especially after exertion, but also sometimes whilst lying still in bed. Last Easter (1899) he again had ptosis of the right lid, which has persisted in varying degree since. In June he gave up work. Diplopia and masticatory difficulty were then his chief troubles, but from time to time he would also suffer from dyspnœa, especially after exertion or emotion. Since August he has again improved, but has been subject to recurrence of all his troubles, especially in very hot or very cold weather. After a considerable rest his symptoms have almost entirely disappeared.

Condition on Admission.

His face is somewhat expressionless, and there is right-sided ptosis. Intelligence is not impaired. After speaking a little his speech becomes slower, laboured, and indistinct, and the voice is nasal in character and gradually fails. He describes the lips and tongue as feeling tired. It is noticeable that the chest expands less and less with each succeeding breath. The change in speech would appear to depend upon weakness of respiratory muscles as well as those of articulation. Diplopia is only present on extreme lateral deviation to the right and then only if the eyes are maintained for some considerable time in this position. The optic discs are normal. Hearing, taste, smell, and the viscera are normal. The ptosis is more marked in the evening, and is present to a slight extent also in the left eyelid; it is not always present. Two days after admission, when examined in the morning before rising, instead of ptosis there was actually retraction of the upper lids, so that a portion of the sclerotic was exposed above the cornea. Directly this condition was remarked upon the lid began to droop, illustrating what he says is one of the most characteristic features of his complaint—namely, that when his attention is drawn to any particular symptom, it will become exaggerated. He cannot voluntarily open his eyes widely, but when interested in conversation the lid moves upwards to a greater extent than he is capable of producing by any act of the will.

Ophthalmological Examination.

Mr. Gunn during his examination remarked this incident and attributed it to the action of Müller's muscle. Not only is he unable to open the eyes widely, but if he looks steadily upwards at an object held above his line of vision the upper lids gradually droop lower and lower until the eyes are almost closed. Mr. Gunn reports: "Downward movement and convergence are good; upward movement defective; both external recti are weak. The pupils are equal, of moderate size, and react perfectly to light and on convergence; they dilate upon appealing to the patient's emotions, and occasionally upon mental concentration after prolonged convergence they show a great tendency to oscillatory movements."

Laryngological Examination.

Sir Felix Semon, who was so good as to examine the palate and larynx, reports as follows:—"The condition of the motor movements of the palate

corresponds to what has been observed in the other voluntary muscles upon voluntary exertion. At first the palate is fairly well and symmetrically raised on phonating the letter A; gradually, however, as he repeats phonating the movements become less and less marked, and finally hardly any raising of the palate is observed.

"On laryngoscopic examination, at first the larynx appears perfectly normal, except perhaps that on deep inspiration the vocal cords do not separate quite as much as in the ordinary condition; but as the patient previous to the commencement of the examination complained spontaneously of shortness of breath, this might have been due to his general inability to take a long breath. Closure of the glottis on phonation was and remained perfect; on repeating his endeavours at breathing deeply, the glottis certainly finally opened less than at first. It is very probable, however, that this phenomenon was only part and parcel of the general exhaustion."

Muscular System.

He is quite unable to raise the eyebrows and wrinkle the forehead, and can only frown slightly. He can close his eyes, but cannot screw them up firmly. He can whistle and show his teeth, but the movement of the upper lip is feeble. Contraction of masseters, temporals, and pterygoids is feeble. He says that the jaw will frequently drop, the muscles apparently being unable to support it. The masticatory muscles become tired in the act of eating. The lips feel weak after talking, and at night saliva will dribble from his mouth. Occasionally he feels twitching sensations about the face, though no movements have been noticed, but he is awakened sometimes by a champing movement of the lower jaw. There is at present no difficulty in swallowing. The tongue is protruded straight, promptly, and to its full extent. It is symmetrical, and the movements are good but easily exhausted.

The muscular power of this patient is subject to great diurnal variations. Towards evening he often sits with his hands clasped behind his neck, supporting his head as though the neck were weak. There is a tendency for the head to fall backwards. He cannot sit up for very long without feeling the back weak. He cannot sit up in bed without using his hands. He has some difficulty in turning in bed.

The rapidity with which the respiratory muscles are fatigued is demonstrated when he reads. Respiration is abdominal in type. During respiration there is almost no thoracic expansion, the difference in circumference of the chest between extreme voluntary inspiration and expiration amounting to less than half an inch. No weakness of the diaphragm can be detected.

The movements of the upper extremities are feeble, the right more so than the left; the dynamometer, grasp R. 45, L. 50 (average man 160). The ready way in which the muscles of the hand become fatigued is demonstrated by asking him to button and unbutton his waistcoat repeatedly. As regards his writing, he begins to write rapidly, forming his letters well. After a few lines the writing becomes slower and laboured, and the letters are not so well formed. Finally he comes to a stop more or less suddenly, unable to write further. After a minute or two's rest he is able to write again as well as at first.

He can raise his arms above his head, but cannot maintain them in this position for more than half a minute. They gradually fall; he feels as if heavy weights were attached to them. Again after a short rest he performs the movement quite well. If requested to lift his arms quickly above his head several times in succession he will do this, but at each effort the arms are lifted less high, and after doing this seven or eight times they cannot be lifted at all, but hang by his sides. After a rest of from thirty to sixty seconds they can be lifted nearly as high as they were at first. All movements of the lower extremities are well and powerfully performed, but the right leg especially is easily fatigued. There is no muscular atrophy, nor are there any fibrillary twitchings. The muscles respond fairly well to direct stimulation with a percussion hammer and no diminution in the activity of the response results from repeated blows.

Sensation.—A dull aching in the neck, back, arms, and right leg, occurring particularly after exertion, but also when lying in bed, is sometimes present. No disturbances of cutaneous sensibility can be ascertained.

Reflexes.—The arm-jerks are present, feeble. The knee-jerks are present and equal, usually a little more active than the average. There is no depressed patella-jerk. Repeated attempts were made to determine whether the knee-jerk diminished after frequent tapping On one occasion the tendon was tapped continuously for a quarter of an hour, but at the end of that time quite as good a knee-jerk was obtained as at first. No ankle clonus is present. No abdominal reflex was obtained. The plantar reflex is present, with sluggish flexor response.

Sphincters.—The bowels are regular. There is no trouble in commencing micturition and the stream is well maintained.

Cranium and Spinal Column.—There is no abnormality. The gait is natural. After walking several times up and down the ward nothing abnormal is noticed. No vasomotor or trophic changes have been discovered.

THE MYASTHENIC REACTION.

Of great importance and interest are the results obtained by electrical examination. The muscles respond to faradism in varying degree on different occasions. For instance, if an electrode be placed upon the motor point of the biceps a prompt and good contraction is obtained except when the muscle has been fatigued by voluntary exertion. The initial contraction in certain muscles is very much poorer than in others, and some muscles tire very much more easily than others. As the result of faradic stimulation, voluntary power of contracting the muscle stimulated is much diminished and a feeling of fatigue induced. As regards galvanism, after repeated stimulation, the muscular contractions become less, but the muscle cannot be tired to the same extent as is the case with the faradic current. No polar change can be demonstrated.

(The patient being seated, with his right forearm resting easily on a table and the hand prone, the biceps was stimulated by faradic currents. Strong and rapid supination movement of the forearm was produced, with some amount of flexion at the elbow-joint. Gradually, as the applications were rapidly repeated, the movements declined in extent and force after a minute or so till none were visible. The currents were then cut off, and after thirty seconds of rest vigorous movements were again induced by faradism.)

The term "myasthenic reaction" has been applied to this remarkable behaviour of the muscles under the influence of electrical stimuli. So far as I am aware Jolly[6] was the first to describe this peculiarity. It is well marked also in the second of my cases, the notes of which were also taken by Dr. Edwin Bramwell.

CASE II.

A. P., aged 24, housemaid, single, was admitted in November, 1899, complaining of loss of voice and nasal speech, with difficulty in seeing on account of drooping of the upper eyelids, most noticeable towards evening, and weakness in arms and legs after exertion.

Duration.

Rather more than a year.

Family History.

Her father died, aged 52, of heart disease; he suffered much from rheumatism and gout. Her mother is alive and healthy, aged 56. There was no consanguinity. She has six brothers and two sisters; three older and five younger than herself. One brother has had rheumatic fever, and is never well; another brother has suffered slightly from rheumatism. All the others are particularly strong. No similar condition to that presented by the patient exists among her relations. No brothers or sisters have died. A strong rheumatic tendency exists in the father's family, but there is no family history of consumption, paralyis, fits, or insanity.

Previous Health.

She has enjoyed perfect health until this illness began. Has been a housemaid for the last eighteen months, and has had a good deal of stair-work. Prior to this she lived at home. She has been a total abstainer until last year, but now takes occasionally a glass of beer at dinner. She drinks a great deal of tea. She has never been nervous. No facts were elicited suggesting syphilis.

Present Illness.

About a year ago she was walking upstairs when the legs felt weak and gave way suddenly, so that she fell down. She had noticed no weakness in the legs before this. From this day up to the present time the legs have been growing gradually weaker, especially towards evening. The right leg has always been worse than the left. On several occasions when tired the legs have suddenly given way, and she has fallen. After walking for about half an hour or so the legs begin to feel weak, especially the thighs, so that she has to stop and rest. After resting a few minutes she can go on walking, but cannot walk so far as before. Until a year ago she was a very good walker. Since the beginning of her illness she has never been able to run. A short time after the onset the arms became affected; one day she was carrying a tray when a curious feeling came down into the hands from the shoulders; before she could reach a table she had dropped the tray. Her hands and arms became gradually weaker, and she found herself unable to scrub. She soon became unable even to write, for after a few lines the fatigue in her hand obliged her to stop. When sewing she would frequently drop the needle. Lately the hands and arms have been so weak that she has only been able to dress with the greatest difficulty. Both arms appear to have been equally affected from the commencement.

On account of the weakness in the arms and legs she gave up her work three weeks ago. For a month or two before doing so, after any exertion she would shake all over, and had a "sinking feeling as if she were hungry," even though she had just finished a meal.

A month or so after noticing the first weakness in the legs, she began to speak "through her nose," particularly when tired. Some two or three months ago she found that, particularly towards evening, her voice would gradually become weaker, until she became quite unable to speak for a minute or two, and her upper lip used to quiver.

The eyelids were first noticed to droop some ten months ago; now they constantly droop, especially towards evening. For six months she has occasionally seen double. For about the same time the jaws have become tired after eating, especially at supper time. Lately when brushing her teeth she has had difficulty in spitting; she has also been unable to cough and clear her throat properly. For a month swallowing has been difficult, fluids she has no difficulty with, but solid food seems to stick in the throat. On only one occasion have fluids come through her nose while drinking. She has had no attacks of breathlessness or palpitation. She has never had any definite pains in arms or legs, but after lying in bed the legs and arms ache. The hands and legs from the knee downwards have often been cold. There has never been any twitchings in the arms, legs, or face; no numbness, "pins and needles," or cramps.

About a month ago for a week she had frequent micturition, having to pass water every few minutes. With this exception she has never had any trouble with the bladder or rectum. When excited all the symptoms are exaggerated. Neither cold nor warm weather seem to affect the severity of her symptoms, nor does there seem to be any tendency for them to be more pronounced at the menstrual period.

Condition on Admission.

A tall, well-developed, well-nourished, but rather anæmic girl. Her face is immobile and expressionless, the mouth is kept slightly open, and the eyes half closed. The temperature is 97.6° to 99°, the pulse 80 to 85, and the respirations 16 to 22.

Mental State.

A very intelligent girl, with no sign of any mental defect. She has a good memory, and is of a cheerful disposition.

Speech.

She speaks usually with a more or less pronounced nasal twang. Given a book to read, after five minutes the nasal speech becomes much more evident, and the words indistinct, while her voice becomes gradually weaker.

Special Senses.

Vision.—R. §, J. 2, L. $\frac{6}{12}$, J. 4. She has always been short-sighted. Fields showed no alteration except that resulting from the ptosis. No diplopia. Discs normal.

Hearing, Taste, and Smell.—Acute, accurate and equal, both right and left.

Cranial Nerves.—Double ptosis is usually, although not always, present. This morning the edge of the upper lid comes down to the upper border of the pupil on the left side; a shade lower on the right. Towards evening the ptosis is more marked. She is able to widen the palpebral fissure only to a very slight extent, and cannot do so at all when she looks downward. Whilst fixing an object held above her head the lids gradually droop until the eyes are almost closed. Whenever the lids come down over the pupil she feels sleepy.

Ophthalmological Examination.

Mr. Gunn was kind enough to give the following report:

"The pupils are unequal, the left larger than the right; the reactions are normal. Movements of the eyes in all directions are good. On extreme lateral deviation nystagmoid jerkings are noticed, chiefly in the eye of which the external rectus is acting. This is a sign of general muscular asthenia, the external rectus being a weaker muscle than the internal, and the condition is frequently met with in persons suffering from severe general debility. No such jerkings are seen on looking up or down. Convergence is fair, but seems to tire soon. There is entire inability to close the eyes against the least resistance, and to 'screw them up.'"

Sir Felix Semon reports that the larynx is normal.

Muscular System.

The jaws, as already mentioned, become tired after chewing, but never to a marked degree. When she smiles there is very little movement about the mouth. She cannot whistle, and has difficulty in raising her upper lip. The lips feel constantly dry. There is no tendency to ptyalism. When she drinks she has to raise the lower lip with her fingers to prevent fluids coming out of the mouth. The difficulty in swallowing solids, already referred to, is now constantly present. The palate moves well and symmetrically, but after repeated phonation the word "rub" is sounded "rum," and the palate movements become visibly less. The tongue is protruded straight and in the middle line: its movements are well performed; when an attempt is made to keep it fully protruded it soon sinks back into the mouth.

Laryngological Examination.

All movements are well performed, with a considerable degree of force. No obvious weakness of the neck muscles. The head never tends to fall backward or forward. The arms can be raised above the head and kept there for half a minute, when they begin to fall gradually. Her grasp is not so good as one would expect from her muscular development. When asked to grasp one's hand, and continue grasping as powerfully as she can, the repeated efforts which she makes to maintain the grasp are noticeable. She has great difficulty in raising herself into a sitting position without using her hands. Her back becomes weak and tired after sitting up for a short time. Respiration is thoracic, abdominal in type; the chest expands well. The movements of the lower extremities are powerful. There is no wasting. No inco-ordination or loss of the sense of position; no fibrillary tremors are present.

Electrical Examination.

The muscles all respond well to faradism. The "myasthenic reaction" was demonstrated in the right biceps muscle.

Gait.

She walks a little unsteadily, but not more so than one would expect to see in a person who had been confined to bed for three or four days.

Sensation.

Both legs and hands frequently feel cold. She has no pain anywhere, and no subjective sensations except sense of fatigue in muscles after exertion.

Reflexes.

No jaw jerk. Wrist and elbow-jerks present, active. Knee-jerks present, equal, rather active. Attempts to exhaust the knee-jerk were unsuccessful. There is no ankle clonus. An extremely brisk flexor reflex in all the toes results on tickling the soles of the feet.

Sphincters, spine, cranium, and organs generally normal.

The cases which I have brought forward, and which correspond strikingly with those previously published, are in many respects remarkable, and in none more so, perhaps, than in the rapid variations which may occur in the severity of the symptoms from time to time. I may mention, to illustrate this, that I had arranged to show the male patient at the Neurological Society at the end of October last, but was compelled to forego this as he was then suffering every evening from attacks of dyspnœa of a very alarming character. To-day he is bright and active, and, except for the "myasthenic reaction" which has been demonstrated, he would easily pass muster for a man in fair health. His bulbar symptoms are remarkably improved, though it is still possible to demonstrate them by means calculated to cause muscular fatigue. As the record of his case shows, a like variation in severity of symptoms from time to time has characterised his history for the last seven years.

On the other hand, A. P. has not displayed this very common feature of alternation. Her symptoms have only manifested themselves for about a year, and have become aggravated almost uninterruptedly up to the present time. In both instances the tendency commonly shown in this disease for the symptoms to become more marked in the evening is strikingly shown. They illustrate, too, the fact that different muscular districts may be affected with varying amount of severity in different cases. A. P., for example, exhibits at the present time the facial aspect which H. B. presented a little while ago—expressionless lips and drooping lids; she has not, however, shown the weakness of the neck muscles which was so notable in H. B., who had to sit supporting the weight of his head by his hand placed at the back of his neck. On the other hand, the female patient shows more marked loss of power in the muscles of the jaw. When I put my finger between her teeth and invite her to bite as hard as she can the result is a very faint pressure which is borne without the slightest inconvenience. When asked to put out her tongue she does so, but cannot keep it protruded. Successive efforts to maintain its position become rapidly weaker, and in less than half a minute it has ceased to appear beyond the lips. An interval of rest of thirty seconds suffices to enable her to protrude it again. In her case the attacks of dyspnœa which have been so alarming in H. B. have as yet not been witnessed.

The behaviour of the knee-jerks in these cases is very interesting. In strange contrast to what might have been expected from the phenomenal fatigability of the muscular system, repeated tapping on the patellar tendon—to the extent of a quarter of an hour on one occasion—failed to produce any diminution in the vigour of the response. Moreover, when the vastus internus muscle had been completely exhausted by the application of induced currents for about a minute, and the knee-jerk was then immediately tested, a vigorous response took place.

The question may be asked whether we have to do with a similar pathological condition in these two cases. I am disposed to think that the occurrence of the "myasthenic reaction" in each may be accepted as evidence of their essential identity. It is different, however, with no inconsiderable proportion of the cases which have been published. Many of these appeared before Jolly called called attention to this remarkable reaction, and in the accounts of many which have since been published no reference is made to this point, and probably therefore the reaction was not tested. I am inclined to think that cases of multiple neuritis affecting the motor side preferentially and involving notably districts innervated from the bulb, have in some instances been erroneously classed with cases of the disease under consideration. So also it is open to question whether Dreschfeld's case, as well as some others which have appeared in Continental publications, characterised by the occurrence of muscular atrophy, should properly be included in examples of myasthenia gravis. Dr. Dreschfeld's case, indeed, although it has been included by writers in the category of myasthenia gravis, is described by himself as one of "polioencephalo-myelitis without any anatomical lesions."

The patient, a girl aged 15, became affected with paralysis of external muscles of the eye which disappeared after some months, but reappeared after some years along with symptoms of bulbar paralysis. Whilst the eye muscles recovered power the bulbar symptoms persisted and were associated with weakness in some of the spinal muscles till some years later, when somewhat suddenly there again appeared complete ophthalmoplegia externa, with almost complete paralysis in the district of all the motor cranial nerves, along with atrophy of some of the affected muscles. The deltoids were atrophied and almost completely paralysed; the tongue somewhat atrophied, as also were the sterno-mastoid and trapezius muscles. There was no sensory disturbance. The diaphragm became involved. Death ensued after more and more laboured breathing.

It appears possible that there may be various conditions which are not separated by any strongly defined line of demarcation, but merge into each other. It is impossible to discuss this general question on the present occasion. The cases of which I show examples are usually marked by the following features: Symptoms of bulbar paralysis not usually very strongly marked, with ptosis—and sometimes ophthalmoplegia, weakness, and rapid fatigability of muscles of the trunk and extremities as well as of those innervated from the bulb; absence of muscular atrophy and fibrillary tremors; normal excitability by induced currents at the moment of application, provided that the muscle is not already fatigued by voluntary exertion, rapid decrease and disappearance of

contractility under application of electric currents, with restored excitability after a very short rest; the occurrence of remissions and exacerbations; almost complete absence of sensory troubles; immunity of the function of bladder and rectum; sensorium unaffected; negative results of necropsy. Oppenheim points out that in polioencephalo-myelitis the symptoms of "myasthenic reaction," remissions and fatigue phenomena are all absent.

Neither sex nor age appear to play any important part. The disease may be chronic (as in H. B.) or subacute (as in A. P.) and in the narration of published cases it appears that there is almost always a tendency to very sudden exacerbations.

Apparently, too, the symptoms may originate in various parts, and by no means necessarily in the bulbar district. I have recently been consulted by a gentleman who may very likely prove to be a case in point. His complaint was that "when tired he could not walk straight." That was all he had to mention. This was in May last, and he had experienced the difficulty for a couple of years. Tabes, general paralysis, muscular atrophy, and every known form of structural disease could be perfectly excluded. He is a total abstainer. A few days ago I found him worse on his legs, and his speech was laboured. In the morning he is all right, and when starting to walk there is nothing wrong, but after a few yards he is tired, and staggers like one intoxicated. He has seen people watching and pitying him "for being so drunk." The greatest distance he can walk now when he is at his best is about a hundred yards, and then he is staggering hopelessly. Of late his writing has become unsteady. After rest he is better. Except for the symptoms mentioned he has nothing to complain of. I have been hitherto prevented by circumstances from ascertaining whether he presents the "myasthenic reaction."

The absence of any facial symptoms in this patient is likely to interfere with the recognition of the case as belonging to the class. The ease with which early or aberrant examples of a certain disease of the nervous system are apt to be overlooked or erroneously referred is well known, and is conspicuously seen as regards cases of insular sclerosis, tabes, and general paralysis, amongst others. My impression is that, in the course of practice, I have seen with my eyes, though failed to appreciate the significance of not a few other examples of this disease.

Of the essential nature of the disease it is at present impossible to say anything definite. By some it has been supposed to depend upon the presence of a poison in connection, perhaps, with disordered metabolism, and certainly the remissions and exacerbations point in that direction. It is impossible to hazard more than a guess as to whether the higher or lower motor neurons are affected by the supposed toxin, but in my opinion the balance of probability points to the cells of the motor cortex as being the seat of the morbid process. The absence of constant lesions in cases hitherto examined is not conclusive, and it is quite possible that more recent methods of investigation may in the future reveal some important cell changes.

In the case of H. B., Dr. Bramwell tried the effect of employing massage of the biceps muscle when it was exhausted either by voluntary action or by electrical stimulation. The period of rest which was required for restoration of function was not diminished by this process. He considers this fact to militate strongly against the idea that the affection is myopathic and occasioned by accumulation of effete products in the muscular tissue.

I have been fortunate to obtain from Dr. Robert Hutchison, Demonstrator of Physiology at the London Hospital, an account of an examination which he was kind enough to make of a specimen of the male patient's urine. His report is as follows:

I estimated (1) total nitrogen, (2) ammonia, (3) creatin, and tested for lactic acid. The results were just as in a normal urine. No excess of any constituent, and no lactic acid present. I also injected the urine into frogs to see if it gave any curare effects, but found none. I do not think, therefore, that the urine is likely to help much in explaining the case.

I can quite understand these cases being mistaken (as so often happens with the unknown) for examples of hysteria. There ought, however, to be no such error, and the presence of the "myasthenic reaction" alone is amply sufficient to prevent so serious a mistake being committed. Let me repeat that such a mistake would be extremely serious, because the prognosis in this disease is exceedingly grave, and death often occurs rapidly.

I have not been able to tabulate results of all published cases, but out of 19 of which I found mention in Laquer's lecture no fewer than 12 died. The importance of the recognition of the disease is therefore evident.

TREATMENT.

As regards treatment, in our ignorance of the pathogeny there is little or nothing to be said. My male patient improved whilst taking thyroid extract, which, however, had not the slightest effect upon the female.

The latter was also treated for some time with suprarenal gland—a therapeutic measure suggested by the profound myasthenia of Addison's disease—but without effect. The injection of strychnine has also been employed in these cases, but, as in Strumpell's experience, has proved of no value.

Apparently the best results are obtained by rest, removal from disturbing surroundings, and good food. There appears to be no objection to the use of galvanisation of the central nervous system, but the application of induced currents to the muscles of deglutition and respiration is strongly to be deprecated. Experience also shows that it is important to avoid feeding by tube, which, as is well known, is often of great service in bulbar paralysis of the ordinary type. It occurred to the medical attendant of a case of myasthenia gravis to try and spare his patient the alarming fatigue which was caused by the act of swallowing, and for this purpose he introduced an œsophageal tube, forgetting that the choking movements caused by its employment might exhaust the patient more than the natural swallowing movements. During the process of artificial feeding the patient died asphyxiated.

[At the time this lecture was delivered the four cases mentioned above were all that I had found described as having occurred in this country. Since the lecture has been in the printer's hands I have come across others which evidently belong to the same category. Dr. C. W. Suckling has published (BRITISH MEDICAL JOURNAL, March 25th, 1893) under the title Functional Ophthalmoplegia with General Paralysis and Implication of Cranial Nerves in Young Women, two very characteristic examples. In Dr. Beevor's article on Bulbar Paralysis (Allbutt's *System of Medicine*, vol. vii) the form of disease under consideration is described, and Dr. Clifford Allbutt in an editorial footnote refers to a case under his own observation which appears to have been one of the kind.]

REFERENCES.

1 *Brain*, 1890. 2 *Neurolog. Centralbl.*, 1894, p. 488. 3 *Neurolog. Centralbl.*, 1895, p. 35. 4 *Neurolog. Centralbl.*, 1894, p. 506. For excellent description and references see Leyden u. Goldscheider, *Die Erkrankungen des Rückenmarkes u. d. Medulla Oblongata*, 1897; H. Oppenheim, *Lehrbuch d. Nervenkrankheiten*, 1898; Leopold Laquer, *Sammlung klinische Vorträge*. No. 205, 1898, Ueber die allgemeine schwere Myasthenie. 5 BRITISH MEDICAL JOURNAL, 1893, vol. ii, p. 177. 6 *Neurolog. Centralbl.*, 1895, p. 35.

ABSTRACT OF AN ADDRESS ON SUICIDE IN SCOTLAND.

Delivered before the Royal Society of Edinburgh.

BY SIR JOHN SIBBALD, M.D., F.R.C.P.EDIN.,
Lately Commissioner in Lunacy of Scotland.

SIR JOHN SIBBALD said that the information given in the reports of the Registrar-General in regard to these statistics had not been hitherto, as they have been in most countries of Europe, digested and tabulated; and his first object was to lay on the table of the Society a series of statistical statements which he had prepared, and in which this information would be found collected and arranged. While presenting these statements, he should like to give a short account of the facts which appear to be revealed by them, and this would be most conveniently presented in a running commentary on the statistical tables.

The tables are arranged so as to show (1) the influence of sex and age upon suicide; (2) the comparative frequency with

which different methods of committing suicides are employed: (3) the influence of the time of year on the number of suicides; (4) the influences of town life and country life respectively; (5) the comparative prevalence of suicide in different parts of Scotland; and lastly, and chiefly, the question arose of how far we are justified, by a study of the statistics, in accepting the assertion, commonly made, that suicide is increasing in Scotland, as it is said to be also in all other civilised countries.

The majority of the tables refer to 3,725 cases of suicide, which occur in the period from 1877 to 1894, but some of the tables apply to 4,927 cases occurring for thirty years prior to 1894. In regard to sex there is nothing remarkable in the statistics for Scotland, the relative proportions of the two sexes being 70 per cent. for the males and 30 per cent. females. The most suicides are shown to be committed by persons between the age of 50 and 55, but the tendency to suicide at each period of life can only be truly indicated by giving the suicide rates at each age, that is, the number of suicides per million of persons living at each age, and these are the rates given in the tables. The tables show that from 15 to 20 years of age, including both sexes, the percentages of suicides is 17 per million. Over 20 years the rate for males rises to 300 per million at an age between 65 and 70, while the rate for females rises less rapidly to 100 per million at an age of from 55 to 60. From 10 to 20 years of age the rate is the same for both sexes. From 20 to 40 2 males committed suicide for every female; from 40 to 65 the proportion was 3 males to 1 female, and over 65 4 males to 1 female. With regard to the methods of committing suicide in each sex, it was found that over 90 per cent. of the suicides were effected by firearms, cutting and stabbing, poison, drowning, or hanging. The figures in this connection are identical with those in England, except that hanging shows a higher rate in England and drowning a higher in Scotland. The only period for which the female rate by any method exceeded the male was in cases of drowning during the adolescent period, from 15 to 20 years of age. The maximum rate by any method was reached from 50 to 70 years of age.

The statistics of Scotland exhibit the same preponderance in the number of suicides occurring during the summer over those occurring during the winter half of the year, which is shown by the statistics of every country in which the seasonal proportions have been investigated. This preponderance is not due to the deterrent influence of cold weather on suicide by drowning, which has been suggested as a probable cause, as this preponderance is shown in suicide by other methods, such as hanging. The gradual rise in the suicide rate from the months of November, December, and January to the months of May, June, and July, and the gradual fall after these summer months, is one of the most remarkable facts in vital statistics, the proportional progress from month to month being almost identical for all countries north of the equator.

The statistics of Scotland do not support the view that suicide is more frequent in towns. The annual rate per million of population in the eight principal towns of Scotland is somewhat lower than the rate in the districts designated by the Registrar-General as mainly rural. Great differences are shown, however, in the rates for different parts of Scotland; and it is worthy of special notice that the counties all along the east coast from Haddington to Elgin have higher rates than those along the west coast from the Mull of Galloway to Cape Wrath. The average rate for the whole of Scotland during the eighteen years 1877 to 1894 was 55 per million of population. The lowest rates were for the Highland counties lying north-west of a line drawn from the Moray Firth to the Firth of Clyde, these counties having rates varying from 27 for Inverness to 43 for Nairn. South of that line, on the west coast, the rates vary from 47 for Lanark to 54 for Renfrew. The difference between these counties and those on the east coast is very striking, the rates there varying from 54 for Aberdeen and Banff to 92 for Kincardine. The highest rates are shown by Kincardine, Forfar, Midlothian, Linlithgow, and Haddington, all of which have rates over 71. The general tendency of the statistics of geographical distribution of suicides in Scotland supports the view that the Saxon is much more suicidal than the Celt.

The statistics for successive years, given in the Registrar-General's report, show a steady increase for Scotland, just as is shown by the official numbers for almost every other country. The Scottish figures show an increase from an average rate of 40 per million in the five years 1865-1869 to 54 in the years 1890-1894, an increase of 35 per cent. in thirty years. The English rates have been persistently higher than the Scottish, but their proportional increase is somewhat less. The rate for the years 1865-1869 was 67, and that for the years 1890-1894 was 86, an increase of 28 per cent. in thirty years. These figures have been generally accepted as showing that suicide has increased to a great and perhaps alarming extent in recent years; but without for a moment doubting the accuracy of the numbers officially registered as representing the information officially obtainable, they require to be carefully examined. In this, as in other similar sets of statistics, we are too apt to accept official figures without carefully weighing their value, and their value at one period is often different from their value at a subsequent period. The state of public feeling and the degree of efficiency of the registering machinery must be kept in view. It is well known that in recent times great changes have taken place in public feeling in regard to this matter. The belief that an act of suicide necessarily involved disgrace has greatly diminished since suicide has been recognised to be, in at least a large proportion of cases, the result of mental disease; and in consequence of this change of opinion efforts to conceal its occurrence have correspondingly decreased. The administrative machinery for ascertaining the occurrence of suicide has also during the recent years been developed and made more efficient. On these grounds alone there is reason to expect that the official returns for recent years would yield different results from those for earlier periods.

All suicides in Scotland—and the same is true of England—are due to either wounding, poison, drowning, or hanging, with the exception of 8 per cent. due to other methods. This fact is a great assistance in examining the value of the figures. It is evident that the returns for suicide by these various methods are of various value. There can seldom be much doubt as to the accuracy of the returns in regard to hanging. A death by hanging can seldom be concealed, and when known it can seldom be regarded as otherwise than suicidal. This cannot be said of any of the other methods. There is frequently a well-founded doubt as to a death by wounding, poison, or drowning being suicidal, and it will often be possible to get a death really suicidal registered as accidental. It is an important fact, therefore, that during the thirty years already mentioned the rate for hanging in Scotland has remained unchanged, being 16 for the first fifteen years, and 16 for the last fifteen years. In England the rate for hanging has also remained practically unchanged, being 26 for the first fifteen years and 25 for the last fifteen. These facts of themselves should give us pause.

Almost exactly as the rates for suicides by other methods have increased, the rates for accidents from the same causes had decreased. For example, the rate for the aggregate deaths by wounding—that is, by firearms and by cutting and stabbing—has remained during the thirty years practically unchanged. These deaths give a total rate of 18 for the first fifteen years, and a total of 19 for the last fifteen. During the same periods suicide by wounding gives an increase from 11 in the first to 14 in the last period; but accidental wounding gives a decrease from a rate of 7 to one of 5. In the same way an examination of the total deaths, both suicidal and accidental, from poison and drowning, showed that similar decreases have taken place in the numbers registered as accidents, compensating for the increases in the numbers registered as suicides. The aggregate result of the examination of the figures is that the total increase in the rates of suicide by the three methods—wounding, poison, and drowning—is exactly counterbalanced by a total decrease in the rates of accident from the same causes. Similar results are furnished by the English statistics.

A fact which seems also to point in the direction of showing that increased accuracy of registration has to do with the increased numbers registered as suicides is that these numbers have not increased appreciably in many of the counties, and that the counties where they have increased are those in which the numbers registered under the headings of

"sudden deaths, causes not ascertained," and "ill-defined and not specified causes," are specially large, but have been greatly decreasing in recent years.

After a further examination of the figures from other points of view, Sir John Sibbald concluded by saying that it seemed clear that the alleged increase of suicide must be regarded as not proven; and he added a protest against the too frequent habit of accepting the conclusions suggested by what he designated as "crude statistics" without giving them the critical consideration that they ought to receive.

THE EYE SYMPTOMS OF LOCOMOTOR ATAXIA, WITH A CLINICAL RECORD OF 30 CASES.

By C. O. HAWTHORNE, M.D., M.R.C.P.,
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IT is now generally recognised that the disease known as locomotor ataxia may include among its clinical manifestations symptoms other than those which depend on pathological changes in the spinal cord. A number of these are associated with the functions of the eyeballs. The Argyll-Robertson pupil is universally admitted as valuable confirmatory evidence of a diagnosis of locomotor ataxia; ocular paralyses, if less frequent, are certainly not less significant; and optic nerve atrophy is at least so well known in connection with the disease that its occurrence in any individual case would hardly call for comment.

A further step forward in our knowledge of the clinical possibilities of locomotor ataxia has been the recognition of the fact that ocular disturbances may precede the evidences of any spinal lesion. This advance necessarily means that the occurrence of any one of the ocular events above mentioned must, unless otherwise explained, generate the suspicion that the case may in its later events display the phenomena known to depend upon sclerosis of the posterior columns of the spinal cord.

It is very difficult to collect the evidence necessary to show in what proportion of cases this suspicion is justified by the event. For it is certain that ocular disturbances may long precede the manifestation of spinal symptoms. In the case of optic atrophy the interval may, according to Gowers, extend even to twenty years. Thus it can only be in very exceptional instances that one and the same physician will have the opportunity of observing at least a number of these cases through all the stages of their progress. Yet, if true, it is of manifest importance, for the sake both of exact knowledge and of accurate prognosis, that it should be clearly recognised that an optic nerve atrophy, an ocular paralysis, or a loss of the pupil light reflex, unless capable of other explanation, belongs in all probability to the order of events incident to locomotor ataxia, and that any one of these may well be the introduction to a more widely-spread manifestation of the disease.

For reasons stated above, the collection of complete histories necessary to afford actual demonstration of the truth of these propositions is difficult; and all the more so as there is reason to believe that in those cases in which the early stress of the disease falls upon the nervous apparatus of the eyeball the spinal symptoms are apt to be slight in degree as well as delayed in development. This is certainly the case when the ocular disturbance takes the form of optic nerve atrophy. "In a large number of such cases," says Gowers, "ataxy never comes on, the spinal malady becoming stationary when the nerve suffers."

Of course in a given case of optic nerve atrophy without spinal symptoms the question may fairly be raised whether it is right to place such a case in the locomotor ataxia group. All that can be said in reply is (1) that from cases of optic atrophy pure and simple one passes by an unbroken series of steps through cases with more and more distinct evidence of locomotor ataxia to, at the end of the series, optic atrophy in association with characteristic ataxic symptoms, and (2) that as already stated, a simple case of optic atrophy may remain unchanged for many years, and yet in the end display undoubted evidence of the development of a spinal lesion. But if optic nerve atrophy may be the primary symptom in the disease, if the occurrence of spinal symptoms may follow it after an interval of many years, and if again it may remain without at any time any existing ataxia, it is not unreasonable to presume that both the Argyll-Robertson pupil and an ocular paralysis may each have exactly corresponding relations to the development of the spinal evidences of locomotor ataxia. The collection of evidence to support this suggestion is even more difficult than in the case of optic nerve atrophy. The latter condition must ere long compel the patient to seek medical advice, and thus the opportunity for a complete investigation of the state of his nervous apparatus is afforded at a relatively early date. But an Argyll-Robertson pupil may exist, and presumably exist for years, without any inconvenience to the patient. Such a patient, therefore, will not consult his medical adviser until spinal or other symptoms display themselves, and thus the precedence of the pupillary condition cannot be determined. In the case of an ocular paralysis medical assistance is, no doubt, usually promptly invoked. But such an occurrence is open to a number of etiological explanations, for example, rheumatism, cold, etc., which it is difficult to exclude with confidence. Hence it is much less precise in its significance than either a double optic atrophy or the Argyll-Robertson pupil. It must be by the collection of observations extending over a long term of years that actual demonstration of the relationship of the ocular disturbances now in question to the occurrence of spinal disease can be established. But while falling short of the merit of actual demonstration, the presentation of the facts displayed by a number of cases which could only be observed over relatively brief periods is not without value. If no one case affords a complete history of all the stages of the disease the picture presented may none the less be fairly complete, provided the cases are sufficiently numerous, and they are seen at different points of development. It is believed that in the present series these conditions are fulfilled. The conclusions they afford, as far as the present purpose is concerned, are: (1) That an optic-nerve atrophy, an ocular paralysis, or an Argyll-Robertson pupil may exist as an isolated symptom for a considerable time, presumably for years; (2) that any two of these may be associated together, with a correspondingly increased presumption that the diseased process causing them is of the locomotor ataxia order; (3) that any one of the three or a combination of two or all of them may exist in conjunction with a greater or less degree of evidence of spinal disease; and (4) that occasionally a case which commences with purely ocular symptoms may be seen to develop with comparative rapidity characteristic symptoms of the spinal lesion of locomotor ataxia. The cases therefore may be held to justify the view that an optic-nerve atrophy, an ocular paralysis, or the Argyll-Robertson pupil (not capable of other explanation) must be regarded as affording a definite basis for suspicion in reference to a possible development of spinal disease. On the other hand, it must be admitted that the prognostic indication so far as spinal disease is concerned is not an absolute one, for the ocular defect may exist certainly for many years without any evidence whatever of the involvement of the spinal cord.

The cases here recorded have all been the subject of detailed and in most cases repeated examination, and unless the contrary is stated, it may be taken for granted that the thoracic and abdominal viscera are normal to physical and other methods of examination. In all cases, too, in which no specific statement is made, it is to be understood that the visual acuity, the visual fields (both for white and colours), and the fundus oculi have been proved to be normal. This last statement of course does not apply to cases in which optic atrophy exists. Particular care has been taken to be accurate in regard to the condition of the pupils and the knee-jerks. In nearly, if not absolutely in every instance where a departure from the normal is chronicled, the record has been confirmed by more than one observer, and in the case of a deficient knee-jerk the conclusion stated has never been formulated until the conditions insisted on by Gowers, Buzzard, and Jendrassik have been fulfilled. With a few exceptions in which only a single observation was possible, the patients have been watched for months, and in some instances for several years. The cases are arranged in series, with a view to show how, from a purely ocular condition, one may pass through gradually accumulating evidence to the

same ocular condition in association with characteristic signs of the spinal lesion of locomotor ataxia.

I.—Cases in which Optic Nerve Atrophy[1] is the Primary or Dominating Condition.

(a) Optic Atrophy without other Evidence of Disease.

Case I.—W. T., aged 25. Failure of vision extending over two years, with reduction of visual acuity to the power of counting fingers at 3 ft. Double optic atrophy; pupils medium, with distinct light response; knee-jerks distinct and no evidence of spinal disease, and no cerebral symptoms other than one or two attacks of giddiness. Urethritis but no syphilis.

Case II.—F. R., aged 38. Double optic atrophy, with almost complete loss of vision, the defective sight having been observed for at least eighteen months; pupils dilated and immobile; no evidence of spinal disease, unless possibly some degree of failure of sexual power; no cerebral incidents; no history or evidence of syphilis.

(b) Optic Atrophy with other Ocular Evidence suggestive of Locomotor Ataxy.

Case III.—(By permission of Mr. Ernest Clarke, F.R.C.S.) R. C., aged 39. Double optic atrophy, reducing right visual acuity to the power to count fingers at 4 ft., and left to mere perception of light; right pupil dilated and three times the size of the left; neither any light response, but free movement on convergence; entire absence of symptoms and objective signs of spinal disease; "gleet" twenty years before, no syphilis.

Case IV.—A. S., aged 25. Double optic atrophy, with observed failure of vision for twelve months. V. A. right-hand movements only, left $\frac{1}{5}$ part; pupils 2.5 mm., no light response, but contract on convergence; knee-jerks difficult to obtain, but movement, though possibly wanting in promptness, is normal in extent; no ataxia or other evidence of spinal disease; mother of three healthy children, no miscarriages.

(c) Optic Atrophy with some Evidence of Spinal Disease.

Case V.—W. A., aged 37. Double optic atrophy with reduction of visual acuteness to "hand movements;" pupils dilated and immobile; knee-jerks absent, but no other evidence of spinal disease; venereal sore when aged 20; no recognised secondaries, and father of four healthy children.

Case VI.—J. G., aged 35. Failure of sight (six months); optic atrophy gradually increasing whilst under observation for twelve months; pupils not definitely abnormal; knee-jerks absent throughout, but no further appearance of spinal disturbance; urethritis, but no history of syphilis; father of two healthy children, wife no miscarriages.

Case VII.—F. L., aged 39. Double optic atrophy, reducing visual acuteness to $\frac{6}{24}$; pupils very small, and with Argyll-Robertson phenomenon; subsequent to failure of sight (twelve months) has had shooting pains in thighs, and failure in retention power of bladder; knee-jerks distinct; no ataxia or sensory defect in lower limbs; venereal sore twenty years before; no recognised secondary syphilis; wife healthy, seven pregnancies five miscarriages.

(d) Optic Atrophy with distinctive Evidence of Spinal Disease.

Case VIII.—C. H., aged 38. Failure of sight (two years) from double optic atrophy; pupils medium, with Argyll-Robertson phenomenon; moderate double ptosis, but no ocular paralysis; shooting pains in lower limbs (eight years); knee-jerks absent; considerable ataxia and failure of control over bladder; syphilis at 19 years.[2]

Case IX.—G. S., aged 40. Pallor of discs and peripheral contraction of visual fields; four months later loss of knee-jerks and gradual development of ataxia; pupils normal throughout; death at the end of twelve months with symptoms of meningitis; syphilis at 25 years.

II.—Cases with Argyll-Robertson Phenomenon.

(a) Argyll-Robertson Phenomenon without other Evidence of Disease.

Case X.—A. L., aged 33, the subject of slight hypermetropic astigmatism. Pupils small, not quite circular, with Argyll-Robertson phenomenon; no other ocular defect, and no evidence of a spinal lesion. No history of syphilis.

Case XI.—K. S., aged 43. Pupils rather small, unequal, quite destitute of light response, though moving freely in convergence; no other ocular defect except some presbyopia; no evidence of spinal disease, though left knee-jerk not easily obtained. Unmarried; syphilis seems highly improbable.

Case XII.—G. G., aged 60. Pupils small, with distinct Argyll-Robertson phenomenon. Knee-jerks not easily obtained, but not definitely abnormal, and no other evidence of spinal disease. Patient suffers from defective vision, probably from tobacco poisoning (central scotoma for red); no history or evidence of syphilis.

(b) Argyll-Robertson Phenomenon with other Ocular Disturbance suggestive of Locomotor Ataxia.

Case XIII.—D. T., aged 42. Pupils below medium size, destitute of light response, with free movement in convergence; had for seven days suffered from diplopia, and under observation gradual development of complete paralysis of right external rectus; no other ocular defect. Knee-jerks distinct, and no suggestion of spinal disease; chancre of lip and secondary syphilis nine years before.

(c) Argyll-Robertson Pupils with more or less Evidence of Spinal Disease.

Case XIV.—T. F., aged 55. Right pupil 2 mm., left 3 mm., each with Argyll-Robertson phenomenon; no other ocular defect except presbyopia. Ten years ago had difficulty in passing urine, and since then occasionally voids it involuntarily, and for eighteen years has been liable to seizures of pain in calves, insteps and heels: knee-jerks normal, and no objective sign of spinal disease. Venereal sore when aged 20 but no secondary symptoms, and father of six healthy children.

Case XV.—H. W., aged 38, is the subject of hypermetropia, 4.5 D. Pupils very small, especially left; neither moves under light but distinct contraction during convergence. Admits recent difficulty in descending stairs, saying he "frequently misses the bottom step," and has suffered from "sciatica" for two years. No objective evidence of spinal disease, and urinary and sexual functions undisturbed. Admits gonorrhœa but denies syphilis. Wife miscarried eight months after marriage; no further pregnancies.

Case XVI.—R. S., aged 43. Hypermetropic and presbyopic. Pupils small, unequal, not quite circular, and with definite Argyll-Robertson phenomenon. Knee-jerks cannot be obtained (confirmed on three different dates), but no other sign or symptom of tabes dorsalis unless "rheumatic pains" in lower limbs for several years. Unmarried; no history of syphilis. Four years ago had, after "catching cold," to have urine withdrawn by a catheter, but no subsequent disturbance of bladder function.

Case XVII.—E. W., aged 48. Myosis with Argyll-Robertson phenomenon; right ptosis and crossed diplopia (one month) without obvious ocular paresis; absence of right knee-jerk (confirmed on two occasions), and failure in retention power of bladder (six months), but no other evidence of spinal disease; vulval sores and skin eruption six years before.

III.—Cases in which an Ocular Paralysis is the Earliest or Dominating Symptom.

(a) Ocular Paralysis without other Evidence of Disease.

Case XVIII.—(By permission of Mr. J. T. James, F.R.C.S.) F. D., aged 37. Dilated and immobile pupils, without any other ocular defect. No evidence of spinal disease; syphilis nine years ago; no change while under observation for three years.

Case XIX.—K. K., aged 28.—Iridoplegia, double, followed by paralysis of left external rectus, the condition being under observation for nearly a year, but without the discovery of any satisfactory explanation. No evidence of spinal disease. Married, four healthy children, no miscarriage; during one pregnancy very free loss of hair (now grown again), but no other occurrence to suggest syphilis. No family or personal history of gout or rheumatism.

Case XX.—G. H., aged 33. Dilated and immobile pupils, with incomplete ptosis and divergence of eyeball on each side. Present condition of four years' duration, and separated by an interval of three years from venereal sore and skin eruption. No other ocular defect; no evidence of spinal disease and general health good throughout. No change while under observation for three months.

(b) Ocular Paralysis with other Ocular Evidence suggestive of Locomotor Ataxia.

Case XXI.—E. S. (aged 43 years) diplopia from paralysis right external rectus, pupils small, each with Argyll-Robertson phenomenon; visual left acuity only $\frac{6}{12}$, and small but distinct central scotoma, with some contraction of the peripheral field; knee-jerks distinct and no ataxia or other evidence of spinal disease. Three early miscarriages, no full-time child. No change while under observation for nine months, but on two occasions severe attack of vomiting and abdominal pain, extending over several days and without recognised cause (? gastric crises).

Case XXII.—A. M., aged 55. Left ptosis and paralysis of external ocular muscles supplied by third nerve in 1887, the pupils being normal, followed by incomplete recovery. In 1897 development of identical conditions on right side, and pupils found to be small and with Argyll-Robertson phenomenon; knee-jerks very slight and with great difficulty, but no other evidence of spinal disease. No history of syphilis.

Case XXIII.—H. F., aged 37. Right ptosis with diplopia (seven days) and defective inward excursion of right eyeball; pupils very small, not quite equal, and with Argyll-Robertson phenomenon; optic discs pale and marked contraction of visual fields, but normal central vision; knee-jerks scarcely to be obtained, but no other evidence of spinal disease. No history of syphilis. Father of four healthy children. Seen after a month's interval, paralysis of all external right ocular muscles supplied by third nerve, and knee-jerks absent.

(c) Ocular Paralysis with more or less Evidence of Spinal Disease.

Case XXIV.—G. S., aged 41. Ptosis and complete ophthalmoplegia externa on left side, with dilated and immobile pupils and some degree of right ptosis, these conditions or some of them having been present for five years. Knee-jerks distinct, and no ataxic phenomena, but imperfect control over bladder and failure of sexual power during last six months. No admitted syphilis.

Case XXV.—J. L., aged 42. Diplopia and drooping left upper eyelid for four years. Ptosis left side, and marked defect of ocular movements in each eye; left pupil dilated and immobile, right small contracts during convergence, but no light response; no other ocular defect. Knee-jerk scarcely obtained on either side; no ataxia, but attacks of "twitching pains" in lower limbs, and for some time difficulty in starting the flow of urine. Venereal sore in 1882, and subsequent loss of hair, but no other secondary symptoms. Patient watched for twelve months without appreciable change.

Case XXVI.—L. D., aged 44. Crossed diplopia (one month) without obvious ocular paralysis and pupils small with Argyll-Robertson phenomenon. Knee-jerks absent; no ataxia to usual tests, but has noticed tendency to stagger in the dark; is troubled with pains in the knees, has difficulty in commencing the act of micturition, and recent marked failure of sexual power; venereal sore at 20 years, and subsequent sore throat, but no skin eruption or loss of hair. Father of three healthy children.

Case XXVII.—J. H., aged 47. Double vision of two months' duration; similar attack three years ago, with complete recovery. Paralysis of right external rectus; pupils, visual acuity, and visual fields normal. Knee-jerks absent, but no other evidence of spinal disease. Patient the subject of albuminuria, and presents physical evidence of an aneurysm of the ascending aortic arch. Youngest child has marked evidence of inherited syphilis.

Case XXVIII.—W. M., aged 35. Paralysis of left third nerve, without iridoplegia or cycloplegia; pupils normal. Knee-jerks absent, but no ataxia or other evidence of spinal disease. Several venereal sores ten years ago, but no recognised secondary syphilis. There is, however, evidence of a former iritis.

Case XXIX.—M. C., aged 54. Paralysis of left external rectus, with history of two previous attacks of diplopia during last four years; no other ocular defect unless some imperfect light response in left pupil; knee-jerks absent, and complaint of "sciatica" for two years, but no other evi-

dence of spinal disease. Albuminuria distinct, and physical signs of hypertrophy of left ventricle. No history of syphilis.

CASE XXX.—(By permission of Mr. N. M. MacLehose, M.B.) H. Y., aged 30. Homonymous diplopia observed over a period of six months without appreciable ocular paralysis; pupils of medium size, with definite Argyll-Robertson phenomenon; knee-jerks absent, and in later months decided ataxia and sensory defects in lower limb; visual acuity unaffected to ordinary tests, but gradual contraction of visual fields, especially on right side; chancre and secondary syphilis four years before.

There are in these series of cases many facts which might reasonably be made the subject of remark, and several of the cases are certainly of great individual interest. But they are here displayed in the above grouping for the purpose of illustrating the clinical order and sequence in which, as a matter of actual experience, the ocular disturbances of locomotor ataxia may manifest themselves in relation to the spinal evidences of that disease. Of course, in those cases in which there exists only a single ocular symptom unaccompanied by any sign of spinal disease, it may be objected that it has yet to be demonstrated that such cases are of the nature of locomotor ataxia. It is doubtless to be desired that such cases should be under exact observation as long as the opportunity for further developments exists—that is, for the entire life of the patient. But to insist upon such a condition is a mere counsel of perfection. One must make reasonable use of such evidence as the brevity of life and the exigencies of practice permit. And the evidence here set forth affords at least a very strong presumption, to say the least of it, of the truth of the doctrines stated in the earlier paragraphs of this paper. Probably the particular proposition which is most likely to be contested is the one which places the Argyll-Robertson pupil equally with optic nerve atrophy, and an ocular paralysis, as a possible first event in the eruption of the phenomena of locomotor ataxia. But on turning to the records it will be found that the facts support this suggestion almost as strongly as they support the corresponding suggestion in reference to optic nerve atrophy and ocular paralyses. Attention in this respect may be particularly given to Case XIII. The man complains of a quite recent diplopia, and he has undoubtedly had syphilis; the pupils show the Argyll-Robertson phenomenon. It is in the highest degree probable that had the patient been under observation a week or two earlier the condition of the pupils would have been the sole existing ocular abnormality. Yet in the light of the development of an ocular paralysis, it can scarcely be doubted that whether he develop spinal symptoms or not, his nervous system is the site of diseased processes of the locomotor ataxia order. When to these facts there are added, as in Cases XIV to XVII, illustrations of the various forms and degrees of evidence of spinal disease that may be associated with the Argyll-Robertson pupil, it seems impossible to resist the conclusions that the condition of the pupil so named may be the first evidence of locomotor ataxia; that it may precede by varying intervals other evidences of the disease; and that at least very probably, in a certain number of cases, the symptomatology of the disease may be permanently restricted to this one event. In some examples of its spinal form locomotor ataxia is undoubtedly an extremely chronic disease, with few and imperfectly developed symptoms; and it is thus not unnatural to expect that similar limitations may obtain in the ocular manifestations of the disease. That evidences of grave nervous disease may be limited to the pupil is well seen in Case XVIII, where a syphilitic patient was under observation for three years without the discovery of any abnormality other than paresis of each sphincter iridis. There is certainly no obvious reason why a similar restriction should not determine the Argyll-Robertson pupil as a purely isolated phenomenon with, it must be added, the same unfortunate possibilities that are undoubtedly attached to the patient whose case has just been quoted. The conclusions above adopted in reference to the Argyll-Robertson pupil are applicable *mutatis mutandis* to optic nerve atrophy and to ocular paralyses, as is abundantly demonstrated in the corresponding series of the cases recorded with this paper.

NOTES.

[1] In all the cases the ophthalmoscopic appearances were those of primary optic atrophy. [2] This statement, both here and in other cases, must be taken as implying that there is a quite undoubted history of a primary sore followed by secondary symptoms; when the evidence is less conclusive the record carries a mere statement of the facts.

A SUM of 13,981 roubles has been collected in Russia for a monument to Pasteur.

CASE OF TABES DORSALIS WITH BULBAR SYMPTOMS.

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MANY observers have noted the affection of the larynx in tabes dorsalis, varying in degree from a slight alteration in the voice (depending, possibly, on ataxy of the intrinsic muscles of the larynx) to severe abductor paralysis, but I believe the following case to be exceptional from the severity of the laryngeal paralysis and the involvement of the other bulbar centres:

J. L., aged 50, married, and formerly a warder in a gaol, first came under my care as a out-patient at Prince Alfred Hospital some six years ago. He was subsequently admitted to the hospital as an in-patient on two or three occasions, and died while under my care in the early part of the year 1897. He gave the following history: About four years before he came to the hospital he suddenly lost power in the legs, and fell down as if he had been struck. He had no antecedent pains, and the weakness had been getting gradually worse. Up to a few months previously he had control over his bladder, but since then he had occasional incontinence of urine. His bowels have been very constipated. About two months before admission he noticed a difficulty in swallowing his food, and about a week later difficulty in breathing, especially at night; at the same time he began to make a great noise during inspiration, and to have some trouble in speaking. These symptoms have been getting gradually worse.

Previous History.

He had been a healthy man except for a slight touch of fever and ague about twenty years ago, and gonorrhœa seventeen years ago. This was not followed by any symptoms of secondary syphilis. He had been moderate in the use of alcohol. Family history showed nothing of importance.

Condition in February, 1896.

He is a tall thin man, but well built. Intelligence and memory good. No headache or pains anywhere: no convulsions, but has attacks of giddiness. Sleep is disturbed by his noisy respiration. His speech is thick and hesitating, and at times he appears to stammer.

Special Senses.—Smell is unaffected. Sight is fairly good, though he is presbyopic. Taste is impaired over the right side of the tongue. Hearing normal.

Cranial Nerves.—3, 4, 6. Pupils are unequal, left is slightly larger than the right. In the right eye the pupil does not react to light or on convergence, the left one reacts to light very feebly, and not at all on convergence. There is no ptosis or external ophthalmoplegia. 5. Tactile and painful sensation is impaired over right side of face; movements of jaws are normal. 7. No facial paralysis. 9, 10, 11. There is difficulty in swallowing, especially solid food. There is also complete paralysis of the abductors of the vocal cords, and during inspiration the cords do not separate, but tend to close together. The noise accompanying inspiration is so loud that he can be heard all over the ward. 12. Movements of the tongue are restricted; it is distinctly wasted on the right side, and it cannot be protruded very far. On protrusion the tip deviates to the right side.

Motion.—Muscular power is impaired in both legs, more so in the right than in the left. His arms are also weaker than normal, but there is no localised atrophy of muscle. He walks with difficulty, and cannot easily turn round.

Sensation.—Tactile and painful sensation is much impaired on both legs and arms. There is loss of muscular sense in the legs and arms, but more marked in the right than in the left arm. When standing on a hard floor he says he feels something soft under his feet.

Reflexes.—Abdominal and epigastric are feeble; cremasteric absent; plantar present on both sides. Left knee-jerk is very feeble, and right one is absent. No ankle clonus.

Sphincters.—Slight incontinence of urine, and bowels are constipated. There is complete loss of sexual desire and power. Romberg's symptom is well marked.

There are no vasomotor or trophic lesions. No gastric crises. He suffered somewhat from indigestion, but his other systems did not show anything unnatural. His urine is normal.

Progress of Case.

The abductor paralysis seemed to progress, so that he became very cyanosed at times, and had great dyspnœa. This became so bad that tracheotomy had to be performed soon after his admission to hospital, and he was obliged to wear the tube up to the time of his death.

On his readmission to the hospital in February, 1897, the following notes were made: He is now very weak, and cannot walk in consequence of his inco-ordination. His eyesight has been failing much during the last few months: the pupils do not react to light, or on convergence. The tongue still deviates to the right on protrusion. He has lightning pains in the legs at times, but no girdle sensation. He has no control over his bladder, and the bowels are very constipated, so that he requires an enema always to secure relief. The knee-jerks are quite absent on both sides. His appetite is fair, but on attempting to swallow he almost chokes, so that feeding by the nasal tube is necessary. He subsequently developed signs of lobar pneumonia at the left base, and died after a few days' illness.

Necropsy.—There was some delay in getting permission to perform a necropsy, and the weather was very hot at the time. The whole brain and cord was removed and put into Müller's fluid, but as it was not in very good condition at the time, it did not harden properly, so that practically only the spinal cord could be examined microscopically. The cord showed sclerosis of the posterior columns, more marked in the upper dorsal and cervical regions than in the lumbar region, though some degeneration was found in those columns throughout the whole length o

the cord. The posterior nerve roots were also degenerated, and the nerve cells in the cord showed marked pigmentation; in some places the whole cell appeared to be transferred into a mass of pigment. The blood vessels all showed marked thickening of their walls. In the upper dorsal region at one spot there was a small hæmorrhage in the grey matter of the anterior cornu. The lungs presented the appearances of pneumonia of a low type, but otherwise the organs were fairly healthy.

Dr. Hale White[1] reported a case of tabes with unusual symptoms, and among them a degree of abductor paralysis of the vocal cords which necessitated the performance of tracheotomy. In my case the extent of the involvement of the pharyngeal muscles rendering nasal feeding a necessity I believe to be extremely rare. Bloch,[2] in reporting a case of tabes with bulbar symptoms, stated that this condition has been referred to by two other observers only, Howard and Charcot. In his case there was only partial paralysis of the larynx, and no dyspnœa. Hemiatrophy of the tongue in tabes dorsalis was first noted by Charcot, and since then several French physicians have referred to it. Marie and P. D. Koch[3] called attention later on to the association of hemiatrophy of the tongue, with paralysis of the soft palate and vocal cord on the same side, and inferred from their pathological examinations that the muscles of the larynx and soft palate are innervated from the hypoglossal nucleus, as well as from those of the vagus and spinal accessory nerves. In this case there was, besides hemiatrophy of the tongue, bilateral abductor paralysis with paralysis of the pharyngeal muscles, rendering swallowing very difficult. I regret much that no examination of the medulla and nerves was made in this case to determine whether the paralysis of the pharyngeal and laryngeal muscles was due to degeneration of the nuclei in the bulb or to degenerations of the nerve roots or nerves.

References.

[1] *Lancet*, vol. ii., 1886, p. 1128. [2] *Neurologisches Centralblatt*, 18, 1899, p. 344. [3] Contribution à l'Étude de l'Hémiatrophie de la Langue, *Revue de Médecine*, 3, 1888, p. 1.

EXPERIMENTS TO DETERMINE THE EFFICACY OF THE DIFFERENT CONSTITUENTS OF HAFFKINE'S PLAGUE PROPHYLACTIC.

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In Haffkine's anticholera inoculations in India it was noticed that, whereas the case incidence among the inoculated was much reduced, the case mortality was not influenced; the inoculations produced a resistance against the invasion of the body by the cholera microbe, but no resistance against the toxins formed if they once caused infection.

Gamaleia showed that it was possible to immunise an an animal against virulent microbes without it being immune to the toxins of the same microbe produced artificially in the laboratory. Behring and Kitasato showed that by inoculating an animal with increasing doses of toxin it could be rendered resistant to a lethal dose.

Haffkine acted on these observations in devising the plan of antiplague inoculations. He says: "When in 1896 I was confronted with the problem of working out a prophylactic treatment against the plague, I determined to put to test the ideas originated by the observation on our cholera patients, and to attempt, in the new preventive inoculation, to obtain at once a lowering of the susceptibility to the disease and a reduction of the case mortality. This I resolved to obtain by treating the system with a combination of bodies of microbes and of concentrated products of them. In giving the above considerations I beg that they should be considered as temporary, subject to modifications or to complete refutation."[1]

The following experiments, of which a preliminary note appeared in the British Medical Journal for September 2nd, 1899, were done at the Plague Research Laboratory, Bombay, to try and supply experimental proof to this theory:

I had previously remarked that when several rabbits were inoculated with varying doses of a ten-day-old living broth culture of plague those that received the larger dose showed the lesser mortality. Arguing that when the larger dose was given a quantity of certain substances capable of conferring immunity or reducing the severity of the case were injected along with the living microbes, and that since a young culture was used and the microbes presumably all living, this substance was probably contained in the broth acted upon by the growth of the microbes, I proceeded to inoculate a series of rabbits with increasing doses of living plague culture in broth.

In some previous experiments I had found that about 2 c.cm. of Haffkine's prophylactic per 1,400 grams of rabbit were sufficient to give immunity. In these experiments a smaller dose was taken because immunity was not wanted; what I wanted to find was whether there was any benefit in the larger dose of metabolised broth. Moreover, if the rabbits became ill it would be from plague, since the culture was not sterilised, and if more recovered after receiving the larger dose than was the case with those receiving the lesser it would show that the larger dose of metabolised broth tended to lower the case mortality.

Seventeen rabbits were inoculated with a broth culture of plague from the laboratory stock. Letter *P.* denotes that a *post-mortem* examination was made and the plague bacillus recovered from the heart blood.

Experiment I.

No.	Weight.	Result.
1	2,020 grams inoculated with 0.175 c.cm. 8 days' old living culture.	Survived.
2	1,480 grams inoculated with 0.25 c.cm. 8 days' old living culture.	Died in 64 hours. *P.*
3	1,910 grams inoculated with 0.5 c.cm. 8 days' old living culture.	Survived.
4	1,470 grams inoculated with 0.75 c.cm. 8 days' old living culture.	Died in 20 hours. *P.*
5	1,540 grams inoculated with 1.0 c.cm. 8 days' old living culture.	Died in 64 hours. *P.*
6	1,810 grams inoculated with 1.25 c.cm. 8 days' old living culture.	Survived.
7	1,750 grams inoculated with 1.5 c.cm. 8 days' old living culture.	Survived.

Experiment II.

No.	Weight.	Result.
8	1,000 grams inoculated with 0.5 c.cm. 8 days' old living culture.	Died in 75 hours. *P.*
9	1,050 grams inoculated with 0.75 c.cm. 8 days' old living culture.	Died 6th day. No *P.M.*
10	1,300 grams inoculated with 1.0 c.cm. 8 days' old living culture.	Died in 60 hours. *P.*
11	1,450 grams inoculated with 1.25 c.cm. 8 days' old living culture.	Died in 60 hours. *P.*
12	1,280 grams inoculated with 1.5 c.cm. 8 days' old living culture.	Survived.
13	1,480 grams inoculated with 1.5 c.cm. 8 days' old living culture.	Survived.

Experiment III.

No.	Weight.	Result.
14	1,750 grams inoculated with 0.5 c.cm. 11 days old living culture.	Died 6th day. No *P.M.*
15	990 grams inoculated with 0.5 c.cm 11 days old living culture.	Died 6th day. No *P.M.*
16	1,880 grams inoculated with 1.5 c.cm. 11 days old living culture.	Survived.
17	940 grams inoculated with 1.5 c.cm. 11 days old living culture.	Died 3rd day. 10 hours. *P.*

As a control to these, some of the culture that was used for the last four rabbits was filtered through a porcelain filter, and the microbes were washed off the candle into a quantity of sterilised water equal in amount to the broth culture taken. Four rabbits were inoculated.

No.	Weight. Grams.					Result.
18	1,420	inoculated with	0.5	suspension		Died 4 days 20 hours. *P.*
19	900	,,	,,	0,5	,,	Died 5 days 20 hours. *P.*
20	1,290	,,	,,	1.5	,,	Died 3 days 23 hours. *P.*
21	840	,,	,,	1.5	,,	Died 3 days 22 hours. *P.*

Thus, out of 10 rabbits inoculated with doses of 1 c.cm. and under of living plague broth culture, 8 died, and of 7 rabbits inoculated with doses over 1 c.cm. and up to 1.5 c.cm., only 2 died. It is evident that the larger dose contained sufficient active substance to reduce the mortality, and as the cultures were young it is more likely the substance was contained in the broth than in the deposit, which would consist almost entirely of living microbes.

Another experiment was made in which the supernatant fluid in the broth acted upon by the microbe was separated from the sediment of microbes and the two constituents tested separately and together with respect to their prophylactic properties.

Experiment IV.

A 21-day old broth culture obtained recently from a patient was filtered through a porcelain filter, and the microbes remaining on the candle of

the filter were washed off into a quantity of sterilised water, equal in amount to the broth of the culture taken. The suspension was heated at 60° C. for thirty minutes. Rabbits were inoculated as follows:

No.	Weight.		
1	1,750 grams	inoculated with 3 c.cm. filtrate.	
2	1,150 ,,	,, ,, 3 ,,	,,
3	1,150 ,,	,, ,, 3 ,,	suspension.
4	1,610 ,,	,, ,, 3 ,,	,,
5	1,150 ,,	,, ,, 0.75 ,,	filtrate, 0.75 c.cm. suspension.
6	1,150 ,,	,, ,, 0.75 ,,	,, 0.75 ,, ,,

Immediately after they were inoculated in the other flank with ½ of a suspension of a 3-days-old agar culture of plague obtained from the same broth culture. Two controls were also inoculated with the same quantity of the living culture alone. The controls both died, one in forty-eight hours, the other in three to four days; a large number of bacilli were found in the heart blood.

Nos. 1 and 2 both survived, but No. 1 was ill for six days.

No. 3 died in three days, but very few bacilli were found in the heart blood, either by the microscope or by cultivation.

No. 4 survived.

No. 5 died in forty-nine hours, but no plague microbes were found in the heart blood, so it cannot be said to have died of plague.

No. 6 survived.

It appears from this experiment that the filtrate alone conferred power to prevent or to modify an attack of plague; rabbit No. 1 probably had plague, but survived.

The suspension of sterilised microbes seems to have conferred bactericidal properties, for the blood of the rabbit No. 3 contained few bacilli compared to that of the controls.

The mixture of filtrate and suspension of sterilised microbes protected rabbits Nos. 5 and 6 from plague infection, for no plague bacilli were found in the blood of rabbit No. 5. The dose of the mixture was equivalent to 0.75 c.cm. of culture; this dose was taken, and not 1.5 c.cm., as appeared from the first experiments to be required, because in this last experiment older, and therefore stronger, culture was used.

Lustig and Galeotti[2] state that the immunising property is a nucleo-proteid contained in the bodies of the microbes, and that if Haffkine's prophylactic has any immunising property, it is due to the nucleo-proteid dissolved or still contained in the bodies of the microbe. But this would not obtain in the above experiments, for the cultures were made in slightly acid broth—that is, ordinary beef broth without the addition of an alkali, so the nucleo-proteid would not be dissolved. Moreover, the cultures used were young and the microbes probably all living and not in a state to give up their nucleo-proteid.

These observers advocate a prophylactic made of a solution of the nucleo-proteid obtained from microbes grown on solid media, and they say that Haffkine concurred with their view when he tried to test the strength of his liquid by the quantity of deposit produced in the cultures. This no doubt is so, for inasmuch as the bactericidal property is conferred by substances contained in the dead bodies of the microbes, he naturally tests the strength of the prophylactic by the amount of deposit. The primary object is to produce a prophylactic substance, but Haffkine, on theoretical grounds, thought the supernatant fluid, by virtue of the toxins, conferred power to withstand the toxins formed if the persons did contract plague after being inoculated—that is to say, it reduced the case mortality; for these reasons he preferred to keep the supernatant fluid in his prophylactic.

The foregoing results show experimental confirmation of the theory. I recognise that many more observations should be made. I used up all the rabbits procurable in Bombay at the time, and was unable to obtain any more, but I hear that these experiments have subsequently been repeated and confirmed by Captain Milne, I.M.S., at the same laboratory.

REFERENCES.

[1] A Discourse on Preventive Inoculation. Delivered at the Royal Society, Sweden, on June 8th, 1899, by W. M. Haffkine, C.I.E. [2] BRITISH MEDICAL JOURNAL, February 10th, 1900.

SOCIETY OF AMERICAN BACTERIOLOGISTS.—A society of American bacteriologists has recently been formed, and held its first annual meeting at New Haven in December last in connection with the meeting of the American Society of Naturalists and Affiliated Societies. Over thirty bacteriologists from various parts of the United States were present, and twenty-six papers were read. Professor W. T. Sedgwick, of the Massachusetts Institute of Technology, was elected President, and Professor Conn, of Wesleyan University, Secretary and Treasurer for the ensuing year.

A CONTRIBUTION TO THE STUDY OF THE PITUITARY BODY.

BY

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University College, London.

[From the Physiological Laboratory, University College, London.]

(PRELIMINARY COMMUNICATION.)

OLIVER AND SCHÄFER[1] found that a saline decoction of the pituitary body of the sheep produces a marked rise of blood pressure when intravenously injected. Howell[2] observed that this effect is due solely to the infundibular portion of the body. He noted also that the result of one dose is to diminish, or even annul, the action of a second, unless a considerable time be allowed to elapse. He concluded that the active substance of the infundibular part of the pituitary body was not derived from the grey matter of the organ.

Schäfer and Vincent[3] describe both a pressor and a depressor substance. The pressor substance is soluble in salt solution, insoluble in alcohol and ether. The depressor substance is soluble in salt solution, in absolute alcohol, and in ether. An alcoholic extract, therefore, would contain only the depressor substance. The active substances are not destroyed by boiling, and can diffuse through parchment paper. The results of injection as observed by Schäfer and Vincent are that the first dose gives a marked elevation of the blood pressure, while subsequent doses produce a fall. This fall (due to the depressor substance) is evanescent, and can be repeated at frequent intervals, the pressor effect, on the contrary, being produced only by the first administration. The work of Schäfer and Vincent was performed with material taken from the ox, and the animals used for experiment were cats.[4]

Our own investigations upon the pituitary body have been performed, as were those of Schäfer and Vincent, with ox material, but we have employed dogs and rabbits for purposes of experiment. Our results have been in the main confirmatory of those obtained by the above-mentioned observers,[5] and we are able to add some facts in regard to the histological, chemical, and comparative physiological aspects of the question.

1. Since a saline decoction contains both the pressor and the depressor substances, we have chosen it as the starting point for further research. If this saline decoction be treated with excess of alcohol, a precipitate forms which contains nitrogen, is evidently proteid in nature, and cannot be redissolved in saline. The alcoholic filtrate from this precipitate evaporated *in vacuo* to dryness yields a residue soluble in ether, and which in saline solution produces marked depressor effects only. If our saline decoction of infundibular pituitary be half saturated with ammonium sulphate, a flocculent precipitate falls. This precipitate may be freed from ammonium sulphate by dialysis, and presents the appearance of a proteid body which is insoluble in distilled water, but soluble to a moderate extent in normal saline 0·9 per cent. This latter solution, when injected intravenously, produces only marked pressor effects of a lasting character.

2. We find that saline decoction of the pituitary body of teleostean fishes (*Gadus morrhua* and other species) produce effects identical with those obtained with mammalian gland, namely, a marked rise on the first injection, and a distinct fall on subsequent injections. This renders it probable that the pituitary body is functionally the same throughout the vertebrate kingdom.

3. The infundibular part of the pituitary being presumably nervous in structure, it may naturally be asked if any of the above-described effects can be produced by similar extracts of nervous tissues generally. We have devoted considerable attention to this part of the subject. Briefly, our conclusions are that all parts of the nervous system, but especially grey matter of brain, produce depressor effects which are not abolished by section of both vagi. We believe that the depressor substance in these tissues is not choline. The results were obtained with decoctions from material absolutely fresh, in some cases practically living; no pressor effects were ever obtained from these nervous extracts. Is, however, the depressor effect of pituitary due to the presence of nervous

matter? This point must at present remain undecided, though there is a distinct difference in the nature of the curve obtained by the two substances.[6]

4. The extracts used in our experiments have been prepared from the infundibular portion of the ox pituitary, since it has been fully established that the hypophysis proper is inactive.[7]

In the ox this infundibular portion appears to be separated from the hypophysial by an interspace, which is, however, as will be clear from what immediately follows, nothing more than a cleft in the hypophysial portion. Even to the naked eye the infundibular portion in the ox may be seen to consist of two distinct parts, an outer yellowish layer and an inner redder core. It has occurred to us to test the activity of each of these portions separately, and we find that an extract from the central part is much more active than one from the peripheral.[8] Probably the external layer would be found to be inactive if it could be obtained quite free from admixture with the central portion.

5. On microscopical examination it is clear that this peripheral layer of the infundibular part is of a glandular nature,[9] resembling the hypophysial portion of the organ. In some animals, notably the dog, we have been able to satisfy ourselves that it is nothing more than a reflection of the hypophysis over the infundibular part, as in many of our sections these two portions are confluent. In other animals—for example, sheep—the hypophysial and infundibular portions are in direct contact with each other, no cleft in the glandular portion being observable.

6. The infundibular portion of the gland has been described as possessing the histological features of grey nervous matter. Kölliker[10] speaks very doubtfully about the matter, even the results of investigation by the silver chromate method. We have so far been able to detect only very few undoubted nerve cells in the infundibular part of the pituitary.[11]

NOTES AND REFERENCES.

[1] *Journ. of Physiol.*, xviii, 1895. [2] *Journ. Exp. Medicine*, iii, 1893. [3] *Proc. Physiol. Soc.*, March 18th, 1899, in *Journ. of Physiol*, xxiv, 1899, p. 19, and in *Journ. of Physiol.*, xxv, No. 1, September 18th, 1899. See also Brit. Assoc. *Reports*, Dover, 1899. [4] *Cf.* Cyon (*Pflüger's Archiv*, lxxi, 1898) also *ibid.*, lxii, 1898; Biedl and Reiner, *Pflüger's Archiv*, lxxiii, 1898; Cleghorn, *Amer. Journ. of Physiol.*, ii, 1899. [5] There is one difference which appears to be due to idiosyncrasy on the part of the animals employed for experiment. The fall of pressure on repeating the injection is not mentioned by Howell, although he obtained almost constantly in the dog a preliminary fall as the result of the first injection. Schäfer and Vincent did not find this in their experiments, which were nearly all performed upon the cat. The present authors have frequently observed the preliminary fall in dogs described by Howell, but have also in most cases obtained a pure fall on a subsequent injection. [6] See Howell also Schäfer and Vincent, *loc. cit.* [7] This is contrary to what we had expected, as we can find no glandular-looking cells in the central portion. Those noted by Schäfer and Vincent (*loc. cit.*) were in the outer layer. [8] Schäfer and Vincent (*loc. cit.*) have shown that the depressor substance of pituitary is not choline. [9] *Cf.* Berkley, *Brain*, 17, 1894. [10] *Gewebelehre des Menschen*, ii, Sechste Aufl. 1896. [11] We have, however, so far not employed any special methods for demonstrating nerve cells.

ABSTRACTS OF

THE ARRIS AND GALE LECTURES

ON

THE ANATOMY AND PATHOLOGY OF THE RARER FORMS OF HERNIA.

Delivered before the Royal College of Surgeons of England.

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LECTURE II.

ENCYSTED HERNIA.

MR. PRESIDENT AND GENTLEMEN,—The term "encysted hernia" is one which for well-nigh a century has been the subject of abuse. There has long been, and there still continues to be, much difference of opinion as to the most apt and appropriate names for some of the less common forms of hernia. The term "infantile," introduced in the year 1803 by the first William Hey of Leeds for a certain condition of hernia which it in no sense accurately described, has recently been appropriated by Lockwood for that variety of hernia in which a separate peritoneal pouch is dragged down into the scrotum, probably by an aberrant attachment of the gubernaculum. The majority of surgeons who have written since Lockwood's admirable work was published have accepted, unhesitatingly and with complete accord, his description of that hernia and his restrictive adoption of the term "infantile" for it.

I propose to retain the term "encysted," which is strikingly appropriate for that variety of hernia which Hey described and figured, and which Cooper subsequently verified. I would define encysted hernia, therefore, as that form of hernia in which the sac, with its contents, wholly covered on the outer side by a reflected layer of serous membrane, hangs downwards from the internal ring in the cavity of the processus vaginalis. The portion of the processus vaginalis containing the hernia may be the whole as far upward as the internal abdominal ring, or may be only the upper portion, that lying in the inguinal canal, along the cord; the lower portion, tunica vaginalis, having in this case been shut off by the ordinary fusion process occurring at the upper end of the testicle.

This form of hernia, from some misconception which I do not understand, has not received adequate recognition from the later English authorities. Macready, in his work on *Ruptures*, mentions encysted hernia only in a footnote, which is very brief, but is at least of sufficient length to show that he does not appreciate this variety. Lockwood, who has contributed by far the best work on hernia of any English authority of recent years, in defining and describing "infantile" hernia, has overstepped, as I think, the very definite boundary between infantile and encysted hernia, and has made an attempt to include some of the latter among examples of the former.

Birkett, in his article in Holmes's *System*, gives a good account, based upon Forster's observations, of one form of this hernia. Other authorities either ignore the subject or quote without question the work of one or other of the writers I have named.

HISTORY.

The first case of this kind is probably that which occurred to Méry at the Hôtel Dieu in 1701. Forster's case, recorded in Sir A. Cooper's work, is described as follows:

A shoemaker, aged 31 years, who died of strangulated hernia. On dissection, the following were the appearances: When the scrotum was divided the tumour was brought in view, taking the course of the spermatic cord, evidently involved with it, and much contracted at the ring. On investigating further and cutting carefully through the tunica vaginalis of the cord near the ring, a fluid escaped. I then continued the incision to the bottom of the scrotum, through the tunica vaginalis of the cord and the tunica vaginalis testis, which I now found to be one cavity, the edges of which, being turned back on either side, exposed a hernial sac pendent from the ring and descending towards the testicle. From this it evidently appeared that the hernial sac and its contents were contained in the tunica vaginalis of the spermatic cord, which formed only one cavity up to the ring. On opening the hernial sac, it was found to contain a portion of small intestine, of a claret colour and in a mortified state.

At Hey's request the specimen from this case was examined by Sir A. Cooper and Mr. J. Pearson, and the following was their report:

In consequence of Mr. Hey having expressed a wish that the encysted hernia of the tunica vaginalis taken from a patient of Mr. Forster's in Guy's Hospital, and preserved in the Museum of St. Thomas's Hospital should be carefully examined,

We, the undersigned, have inspected the preparation above mentioned with much care, and the result of our inquiry is:

1. That the bag in which the intestine is incarcerated hangs within the tunica vaginalis testis, and reaches nearly to the superior edge of the epididymis.
2. The only connection which this bag has with the tunica vaginalis is at its orifice, at which part it adheres firmly to the tunica vaginalis.
3. From this adhering portion the bag hangs like a pear depending from its stalk, within the tunica vaginalis.
4. The tunica vaginalis forms a smooth unbroken surface, as usual.

We are, etc.,

(Signed) ASTLEY COOPER.
JOHN PEARSON.

Dupuytren and Aston Key also wrote of this hernia, but little or no advance was subsequently made until the appearance in 1865 of an important monograph by Bourguet, of Aix. Other writers have added one or more cases occurring under their observation. Among these are Berger, Monod, and Terrillon, D'Arcy Power, Heaton, and Selcke. There can, I take it, be little doubt that there has been considerable confusion in the description of cases as being "encysted." Many cases of hernia in association with hydrocele of the tunica vaginalis have been included under a misap-

prehension as to the authentic meaning of the term "encysted." Cases of hernia with a cystic condition of the wall of the sac, possibly due to the organ of Giraldès, and cases in which adhesions and fluid are present in the sac, have been similarly misunderstood. Until Lockwood carefully defined and restricted the term "infantile," many ruptures of this form were certainly looked upon as "encysted," and to some extent the error still persists.

THE VARIOUS FORMS OF "ENCYSTED HERNIA."

I propose to describe three forms of encysted hernia:

1. Encysted hernia of the tunica vaginalis, the testis lying at the bottom of the cavity (Fig. 8 B).

2. Encysted hernia of the tunica vaginalis, the testis lying at the lower end, the "apex" of the encysted mass (Fig. 8A).

3. Encysted hernia of the funicular process (Fig. 8 C).

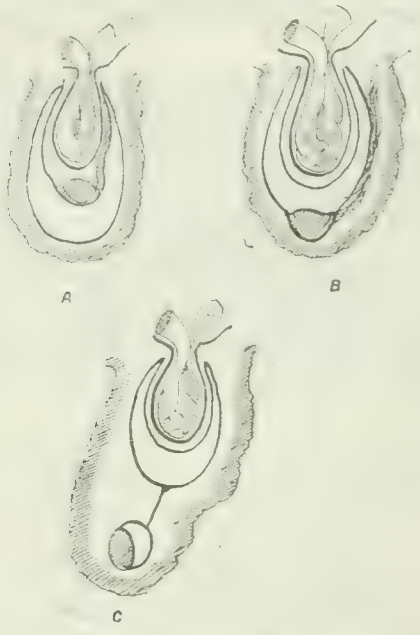


Fig. 8.—Encysted hernia.

1. *Encysted Hernia of the Tunica Vagicalis, the Testis lying at Bottom of the Sac.*

In this case the conditions presented on examination of the sac and tunica vaginalis are as follows:

On opening what appears to be the sac, a little fluid as a rule escapes. On enlarging the incision it is seen that the sac has not been opened, but, instead, a serous cavity, at the bottom of which lies the testis. This is the tunica vaginalis. Pendant from the neck of the tunica vaginalis, which extends almost, or quite, up to the internal abdominal ring, is a thick, rounded, elongated mass, covered on the outer side by a reflection of the tunica vaginalis, which is the hernial sac, containing the intestine, omentum, or other viscera. This pendant mass has been quite aptly compared by Bourguet to the "teat of a cow." In order to reach the hernial contents, therefore, from any point, three layers of peritonenm will have to be divided: (*a*) the outer layer of the tunica vaginalis; (*b*) the inner reflected layer of the tunica vaginalis; (*c*) the sac. Between (*b*) and (*c*) there is some loose cellular tissue, which is torn through with comparative ease. On passing the finger in through the original incision in the tunica vaginalis, and attempting to enter the abdomen through the inguinal canal, one is met everywhere by the reflection of the outer on to the inner layer of the tunica vaginalis. Examples of this form of hernia, occurring in women, have been recorded by Berger and Reclus.

The explanations which have been offered to account for the genesis of this condition are legion. They may be briefly epitomised thus:

a. Sir A. Cooper, after describing Forster's case, remarks: "The idea which I have formed of the nature of this case is that the tunica vaginalis, after the descent of the testis, became closed opposite the abdominal ring, but remained open above and below it. That the intestine descended into the upper part and elongated both the adhesion and the tunica vaginalis; so as to form it into a bag which descended into the tunica vaginalis below the adhesion, and becoming narrow at its neck though wide at its fundus, it received a portion of intestine which was too large either to be returned into the abdomen or to retain its functions while it continued in the sac.

The disadvantages of this theory have been pointed out by many subsequent writers. There is never, so far as we know, any evidence in the closure of the funicular process of the formation of a "septum." The process of closure is similar in all its details to that which in the peritoneal cavity of the embryo is normal in certain points, the process of "physiological fusion." Notwithstanding this fact Berger has, on wholly insufficient evidence, accepted this explanation as elucidating the conditions in a case recently observed by him.

b. Dupuytren considered that the formation of a large congenital hydrocele was an essential preliminary. Subsequent to this a hernia developed and lay posterior to the hydrocele sac. Then owing to mutual encroachment the hernial sac became embedded in and surrounded by the hydrocele until in the final event the "encysting" resulted.

c. Jaboulay offered an ingenious but, as I believe, incorrect theory to account for the condition. He suggests that the funicular process consists of three parts (a scrotal, an inguinal lying in the canal, and an internal, very short, joining the latter to the parietal peritoneum) which may be likened to the three tubes of a telescope. By the "shutting up" of these tubes the conditions present in encysted hernia are reproduced. This explanation is rendered clearer by a reference to the figures which he gives.

d. The explanation which appears to me to be the most satisfactory was, I recently learnt, first suggested by Bourguet in his original work. According to this theory the closure of the funicular process has only occurred at one spot, at or near the internal abdominal ring (Fig. 9). From here to the

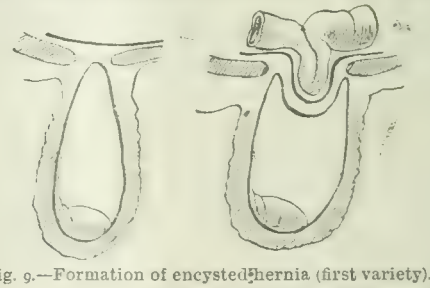


Fig. 9.—Formation of encysted hernia (first variety).

bottom of the scrotum the peritoneal tube remains open. A hernial sac now forms in the usual manner from the parietal peritoneum, at the internal abdominal ring, originated possibly by a small dimple of the upper part of the funicular process above the sole point of closure. This hernial sac as it gradually insinuates its way through the canal and into the scrotum, pushes before it the peritoneum of the unclosed funicular process, and invaginates its upper end. The "fusion" point of the funicular process will then form the tip of the advancing hernial mass, which is therefore, from its earliest beginnings, "encysted." In three cases of this kind recorded by Dupuytren, Bourguet, and Berger a rupture has occurred at the "apex" of the sac and the bowel, escaping into the tunica vaginalis, has been strangled at the point of rupture. Barret de Navaris has recorded an example of hernia encysted in a hæmatocele of the tunica vaginalis.

2. *Encysted Hernia of the Tunica Vaginalis, the Testis lying at the Lower End, the "Apex" of the Encysted Mass.*

The conditions found on examination of this class of hernia are precisely the same as those in the last class, with the exception that the testis instead of lying on the floor of the tunica vaginalis, lies on the apex of the encysted tumour, at the orifice, so to speak, of the "teat." The elements of the cord and the testis lie between the sac and the reflected layer of the tunica vaginalis. An essential preliminary to this form of hernia is the retention of the testis (Fig. 10). This has been observed and carefully noted in some of the cases. In Heaton's case and in my own the testis had never to the

patient's knowledge appeared at the external ring. The condition antecedent to the onset of the hernia will be this—the testis will be retained just outside the peritoneal cavity. The upper part of the funicular process is closed in the usual manner, so that above the testis is the peritoneal cavity completely shut off, and below it, and reaching up to it, the lower

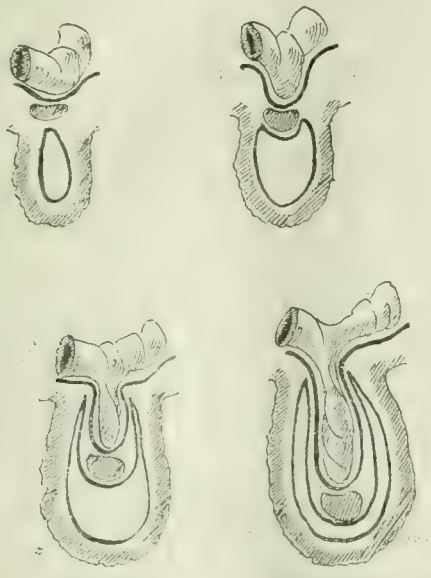


Fig. 10.—Formation of encysted hernia (second variety).

unclosed part of the funicular process. A protrusion of parietal peritoneum from the internal abdominal ring abuts immediately upon the testis, and in the further hernial descent the protrusion is headed by that organ. But as the testis proceeds it at once meets the tunica vaginalis; this it dimples and pushes in upon itself, and in the last stage the similar serous reduplication is produced as in the former case.

So far as I am aware this form of hernia, although described, has never been explained. The explanation I suggest seems reasonable, and in consonance with all the facts.

3. *Encysted Hernia of the Cord.*

In this form of hernia the sac is formed in the same way as the first variety, but the closure of the funicular process has been more extensive. The normal fusion at the upper end of the tunica vaginalis has resulted in the natural formation of that serous cavity. The funicular process above that point of fusion has remained open, and it is into this potential "hydrocele of the cord" that the hernial sac descends and becomes encysted. A very good example of this form is recorded and figured by Selcke. In one recorded case where the condition was in an early stage of its development there were two small hydroceles of the cord between the sac and the tunica vaginalis.

As a general rule it has been specially noted by the recorders of the few genuine cases that hydrocele fluid of greater or less amount has been present in the enveloping serous sac, but this fluid is merely a chance product. It stands in no causal relation to the hernial development.

Symptoms.

There is no symptom, there are no signs by which we can before operation recognise the presence of an encysted hernia. On the contrary, when any diagnosis, other than that of a normal oblique inguinal hernia has been made, it has indicated only the existence of fluid in connection with the sac. In not a few cases this has been observed, and a diagnosis of "hernia with hydrocele" has been accepted.

Treatment.

There is no need for any further remark than this, that in removing the tunica vaginalis, or part of it, and the hernial sac, care must be exercised in dealing with the cord, otherwise the spermatic vessels or the vas deferens may be unduly interfered with. The whole of the tunica vaginalis, so far as possible, must be removed. It is not necessary to fashion a new and smaller serous cavity for the testicle. When this procedure has been carried out it has led to the occurrence of hydrocele.

Lecture III.

HERNIA OF THE BLADDER.

Definition.

Hernia of the bladder may be defined as the appearance of the bladder at any of the usual hernial orifices, whether in relation with the peritoneum or not.

This definition, though not scientifically exact, will probably best meet the exigencies of the case. Strictly speaking, a "hernia" cannot exist without a sac; but, as the clinical manifestations of a case of bladder hernia without sac are to all intents indistinguishable from those where the sac is partial or complete, no good purpose could be served by separating, for academic purposes, the descriptions of the several conditions.

Inguinal Cystocele.

Frequency.—Inguinal hernia, much more frequently than crural, contains the bladder. From recently-published statistics I select the following list, for in each of these instances all the cases of hernia submitted to operation are enumerated without selection.

Lucas-Championnière	in 275	operations	found	2	bladder	hernias.
Kronlein	,, 276	,,	,,	1	,,	,,
Bassini	,, 262	,,	,,	1	,,	,,
Habs	,, 200	,,	,,	1	,,	,,
Corazza	,, 105	,,	,,	1	,,	,,
Monari (Novaro's cases)	,, 223	,,	,,	6	,,	,,
Montegnacco	,, 500	,,	,,	4	,,	,,
Von Hacker	,, 702	,,	,,	7	,,	,,
Total ...	2,543			23	,,	,,

This would give, roughly, 1 per cent. of cystocele. Ssalistschew, writing in 1897, gave the percentage as 5.88. Broadly speaking, hernia of the bladder is a disease of the aged and enfeebled. Four cases only of inguinal cystocele have been recorded in children. The average age of the males, in all published cases, was 51 years; of the females 44. The majority of the cases occur between the ages of 50 and 60. The relative frequency on the right and left sides is as 1.46 to 1 (Sjövall).

Varieties of Cystocele.

There are three distinct forms of cystocele, which may be most aptly described after the manner of Jaboulay and Villard as follows (Fig. 11):

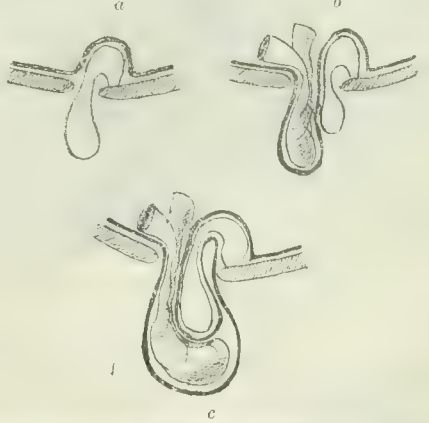


Fig. 11.—Hernia of the bladder; *a*, extra-peritoneal; *b*, para-peritoneal; *c*, intra-peritoneal.

1. *Intra-peritoneal Cystocele.*—In this variety there is a complete hernial sac, occupying the position of an oblique inguinal hernia—the neck of the sac, that is to say, is external to the deep epigastric artery. Into this sac a portion of the bladder, completely covered by peritoneum, descends. That portion of the bladder implicated in the hernia is the upper part of the posterior surface. This form

of hernia is rare. According to Lotheissen, probably only about 6 per cent. of all cases of cystocele are of the intra-peritoneal form. This estimate seems to me to be in excess of the truth. Out of nearly 200 cases, I can only discover 4 of the inguinal variety and 1 of the femoral (Gibson), in which the description leaves no doubt as to the exact nature of the hernia. The hernia in all cases was very large and the hernial rings widely dilated. It is always secondary. The sac may contain the bladder only, or bladder with intestine or omentum. On tracing the peritoneum of the inner wall of the sac inside the abdomen it is found to sweep round, a little distance inside the internal abdominal ring, in order to become continuous with that which clothes the bladder. The viscus must therefore be twisted round on its vertical axis.

2. *Para-peritoneal Cystocele.*—In this form (Fig. 12) there is a hernial sac, either of the oblique or direct form. On the inner side of the sac lies the bladder, in such manner that the peritoneum of the inner wall of the sac, is the serous covering of the outer wall of the bladder. The rest of the bladder outside the abdomen has no peritoneal covering. The viscus, therefore, is outside the sac; it is not a part of the contents of the hernia. The hernial sac may contain intestines, large or small omentum, ovary, or tube and ovary, or it may be found empty. This variety forms, according to Lotheissen, about 24 per cent. of all recorded cases. The estimate is probably far below the truth. Since accurate and exact records have been kept of these cases the proportion has been considerably greater. Sjövall gives 40 per cent. as correct, but even this probably too small. In not a few cases believed, at first, to be extra-peritoneal, a further and more careful examination has revealed a small and inconspicuous peritoneal descent on the outer side of the bladder. The relative size of the peritoneal sac and bladder implicated in the hernia varies. On the one hand, the sac may be large and capacious, and a mere fringe of bladder be present in the canal: or, on the other hand, the bladder involved may be large and bulky, and the peritoneal descent quite trivial and inconspicuous.

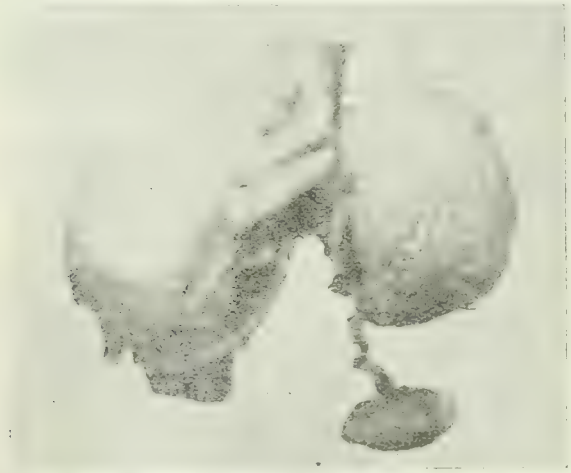


Fig. 12.—Vesical hernia. Sir Astley Cooper's case. The bladder is covered by peritoneum except at the inner and posterior part. Para-peritoneal form. (Guy's Museum, 1,170.)

In about one-half of the total cases, 51 per cent. (Sjövall) the bladder has been thickly covered with fat. When the sac has been stripped up, after the reduction of its contents, a thickening, more or less massive, of the upper and inner portion has been discovered.

3. *Extra-peritoneal Cystocele.*—This form is rare. According to Brunner only 6 cases have been confirmed by *post-mortem* examination. The small peritoneal diverticulum converting an "extra-peritoneal" into a "para-peritoneal" example may be quite insignificant. Of the 6 cases, 4 were inguinal, and 2 femoral. As a general rule the hernia is very small, the size of a walnut or thereabouts. The largest tumour was "of the size of an orange." All extra-peritoneal hernia are of the "direct" variety.

Of the three forms, then, the para-peritoneal is, beyond all question, the most frequent. It includes the smallest as well as the largest herniæ. The amount of the bladder engaged in the hernia varies between the two extremes. In some cases either para-peritoneal or extra-peritoneal, the merest "pinch" of the viscus may lie in the inguinal canal. In others, notably in one recorded and figured by Krönlein, the whole bladder, with the prostate, portions of both ureters, and the vesiculæ, with the terminal portions of the vasa deferentia, may lie outside the abdomen. It is incidentally worth remark that Reichel has described an inguinal hernia which contained only a small dilated portion of the ureter on the right side. The bladder wall engaged in the hernia is, in about half the recorded cases, covered with fat; sometimes densely so. There is occasionally a slight thickening of the bladder, but more frequently there is thinning. To such an extent may this occur that the wall appears no thicker than the serous membrane over it. In a few cases the bladder has been recognised by the presence of muscular fibres.

On reading through the reports of cases one is struck by the constant repetition of the phrase "diverticulum" of the bladder. The pouch-like protrusion is said to be connected with the larger intra-pelvic portion of the bladder by a narrow neck. Recent investigations, however, certainly tend to show that, speaking accurately, no diverticulum ever exists. A certain appearance of narrowing may be seen at the internal abdominal ring as a result of constriction there, but all that portion of the viscus contained in the canal or scrotum is nevertheless bladder, more or less altered and attenuated. So narrow may the neck of the sac be that urine finding its way in from an over-distended bladder is, with difficulty, returned. Inflammatory process may then develop, and the urine retained undergoes decomposition. A phosphatic deposit on the walls may be thrown down, and to such a degree may this occur that a definite calculus may be formed. Stalpart van der Wiel makes mention of two cases in which inflammation resulted in abscess of the groin. On the abscesses bursting calculi were discharged.

Operative Cystocele.—In addition to these forms of hernia of the bladder there are two other varieties which have been described by Hermes as "operative cystocele." In the first of these the bladder does not lie within the inguinal canal, but as a result of the stripping of the sac up to the internal abdominal ring and of the traction upon the sac before its transfixion a small tongue-shaped slip of the viscus is dragged down below the level of the internal abdominal ring. In such a condition the bladder may readily be pierced by the needle or included in the ligature. The more complete the stripping of the sac, and the more vigorous the traction exerted the more likely is it that the bladder will be dragged downwards. In Bassini's and similar operations operative cystocele is therefore proportionally more frequent than in those procedures not involving a laying open of the canal. The second form of operative cystocele occurs in patients who have been subjected to the "radical cure" ineffectually. The conditions of such a hernia are essentially different from those of the ordinary hernia, and it is well to emphasise that difference by a separate classification.

Etiology.

The explanation of the existence of the bladder within a hernial sac is a problem that has exercised the minds of surgeons for over a couple of centuries.

[After explaining the various theories which had been entertained, the lecturer said that the causes leading to the development of a hernia of the bladder might thus be summed up:]

1. There must be a condition of permanent vesical distension. As a result of this enlargement the normal anatomical relations of the bladder undergo considerable modification. The increase is not merely in the vertical direction, but also in the transverse. The bladder is, therefore, brought into relationship with the inguinal fossæ.

2. There must be a condition of motor insufficiency of the bladder. The wall is thinned in certainly the great majority of cases. Ssalistschew gives it as his experience that the bladder wall may be not only not thinned but actually thickened, and the muscular fibres considerably hypertrophied. A glance through the recorded cases, however, is amply suffi-

cient to show that the atrophy of the muscular coat is incomparably more frequent.

3. There must be a condition of laxity of the abdominal wall, especially in the lower half, or of undue patency of the inguinal canal and unusual size of the abdominal rings. A bulging of the lower abdominal wall is very common in cases of hernia occurring in middle or old age. It has been described and figured by Glenard, Macready, and others.

4. As supplementary to these three there is also necessary the increase of intra-abdominal pressure, the "effort" upon which Nélaton in 1857 was the first to lay definite emphasis. Undoubtedly these essential conditions are represented to perfection in the case of prostatic enlargement. In an enlargement of the middle lobe of the prostate, of such kind that the lobe acts as a ball valve, they would be more clearly defined than in other forms of prostatic enlargement. In those cases where prostatic hypertrophy is not a factor, and to some, at present uncertain, extent even in these, we must allow some share as a causative factor to the *lipome herniaire* of Monod. The occurrence of this massive deposit of fat is much too frequent to be merely a coincidence. It is only right, however, to state that its influence is strenuously denied by many observers, among whom Legars and Imbert are the most emphatic. Cystocele, then, may be primary or secondary.

Primary cystocele results from two conditions.

1. In which the bladder through persistent over-distension, associated with muscular atony, laxity of the abdominal wall and "effort," is forced into the inguinal canal.

2. In which the traction or fixation of a lipoma causes the descent of the organ.

Secondary cystocele results from

1. The traction of a pre-existing hernia.

2. The protrusion of the peritoneally clad portion of a lax, distended bladder into a hernial sac of old standing. This may be spontaneous or the result of omental adhesion. The omentum in a hernia may as a result of injury, temporary strangulation, or other cause suffer inflammation. On reduction it may be in contact with and adhere to the bladder, and thus be responsible for the hernial descent of that organ.

Symptoms and Signs.

It must be admitted that any special signs and symptoms of the implication of the bladder in a hernia may be entirely absent. The number of cases that have been diagnosed before operation does not amount, at a generous estimate, to more than 5 per cent. of the whole. The signs of a bladder hernia of moderate or large size are those of a hernia, which at times contains fluid. The tumour is generally rounded, smooth, soft, and fluctuating. The fluid is capable of reduction under pressure, and in a few cases it has been recorded that the patient has become expert in assuming a certain posture, in order to facilitate the return of the urine. The size of the hernia is liable to rapid and considerable alteration. Within a couple of hours it may alter from the bulk of a lemon to the size of an average water-melon. On percussion such a tumour is almost wholly dull.

The tumour in whole or in part, except in the rare intraperitoneal form, is irreducible. The position left behind after reduction has been carried out as far as is possible is thick and doughy in consistence, being made up of the *lipome herniaire*. As Sir Astley Cooper pointed out, the scrotal swelling is distinguished from hydrocele by the fact that it is not translucent.

The functional characteristics are striking. The chief of these is the *miction en deux temps*, the divided micturition. A patient so affected voids urine and empties the portion of the bladder in the pelvis. Then on pressure being applied to the hernia the urine it contains is returned within the pelvic portion of the bladder, and thence passes by the urethra. Micturition is in two stages, and is associated with a simultaneous lessening of the hernial swelling. If the bladder, after being naturally emptied, is filled by the injection of lotion, the fluid will pass through the canal and distend the hernial tumour. In some cases it has been possible to pass a sound or a catheter through the urethra into the bladder and out by the inguinal canal, so that the beak could be felt in the hernia. Pressure upon the hernial swelling produces a desire, which with increasing pressure becomes irresistible, to micturate, and a few drops of urine may be involuntarily passed. In a few of the cases it has been remarked that there was considerable difficulty in emptying the scrotal portion of the bladder into the pelvic portion, on account of the narrowness or compression of the joining isthmus.

Guterbock emphasises the importance of a rectal examination, asserting that the normal bulging of a distended bladder towards the rectum is absent.

Hernia of the bladder is very rarely strangled, but not infrequently there have been symptoms simulating and suggesting strangulation. Such are nausea and vomiting, abdominal distension, obstruction of fæces and flatus. They, however, have never had the acuteness of those present in true strangulation. The most distressing symptom in my own case was hiccough, which was persistent and exhausting. In two cases recorded by Hermes, where symptoms suggesting strangulation were present, no gut was found in the sac on operation. In the severer cases the general aspect of the case would suggest omental rather than intestinal strangulation.

A cystocele of any bulk can be distinguished from a hydrocele by the following differences: it is opaque, is fluid, is reducible, reduction is attended with the desire of urination, and micturition is effected in two stages. The presence of fluid in a hernial sac may mimic a herniated bladder. On the reduction of the fluid, which is unattended by urinary discomfort, there is not usually that massive thickening of the inner and posterior part of the sac to which the *lipome herniaire* gives rise.

Brunner has made the suggestion that from the clinical point of view we should describe two classes of cystocele, the "manifest" and the "latent." The "manifest" would include those cases where, owing to the large portion of the bladder implicated, the signs and symptoms are unmistakable; and the "latent" those where only a trace of the viscus is involved, and where therefore any signs or symptoms at all characteristic are entirely wanting.

Treatment.

It is of course quite impossible for a patient suffering from a hernia of the bladder (which save in the intra-peritoneal form, and sometimes then, is irreducible) to wear a truss. Such an instrument would only add to the inconveniences and the danger of the case. In all cases, unless there is decided objection upon other grounds, an operation should be performed.

The frequency with which the bladder has been wounded during operation makes it a matter of considerable importance that the surgeon should be able to recognise the bladder when it exists as a hernial content. There are two chief conditions which facilitate this recognition:

1. A thickening or a deposit of fat at the inner and back part of the sac.

2. The presence of interlacing muscular bundles in a similar position.

Any thickening of the upper part of the sac, especially on the inner side, should be treated with the profoundest respect. An examination of the recorded errors shows that in many cases, even where the thickening has been noticed, sufficient care has not been exercised in investigating its nature, and harm has followed. Unless the neck of the stripped sac is perfectly free and of normal appearance and feel, it should not be transfixed, ligatured, or twisted. Lejars remarks that in many cases the bladder has been wounded because it was not seen. The importance, therefore, of a clean stripping of the sac and of a minute examination of its neck can hardly be over emphasised. The advantage which operations like Bassini's, Halsted's, and Lockwood's exhibit in this regard need not be enlarged upon.

If a fairly large area of the sac is involved as a covering of the bladder it must not be stripped up. The peritoneum can be cut round the bladder and on the outer side close up to the ring, and the circular wound stitched up by continuous or interrupted sutures. The bladder loosened gently from its surroundings (it has been torn even when recognised, and therefore requires delicate handling) is returned into the abdomen, and the rings and canal stitched up in such manner as is considered most satisfactory. In the great majority, if not in all cases, it will be necessary for the patient after operation to wear a truss. The operation may be said to have for its object the rendering of the condition of the inguinal region such that a truss can be readily and safely worn.

When the bladder is wounded and recognised the best plan

undoubtedly is to stitch up the wound with stitches which do not include the mucous membrane. A single, double, or even triple layers of sutures have been employed. Probably two layers are ample. In some cases the bladder has been wounded and not recognised until some time after the operation. Within 12, 24, or 48 hours it may be noticed in such a case that the dressings are soiled with a more or less copious discharge of thin yellow fluid, or blood may be present in the urine voided after recovery from an anæsthetic. In such cases the wound must be reopened, and, if possible, the bladder wound accurately stitched up. A urinary fistula may result and persist for an indefinite period, or may gradually close up and the wound heal soundly.

Prognosis.

The serious aspect of hernia of the bladder results from the attendant maladies. There is nothing in the bladder involvement, as such, that is untoward. The bodily feebleness, the prostatic enlargement with its secondary effects on bladder, kidneys, and general health, and the not infrequent wounding of the viscus during operation, are the circumstances that create or add to the seriousness of the case.

Where the presence of the bladder in a hernial sac is merely an episode without any bearing upon the case, the dangers are those merely of an ordinary hernia.

Crural Cystocele.

What has been written of inguinal cystocele applies almost equally to the femoral variety; 33 cases are recorded by Ansinn in a recent pamphlet; of these, 30 occurred in women. The part played by the prostate in the production of hernia of the bladder in men is assumed very probably by pregnancy and its attendant conditions in women. According to the records of these cases, which in some respects are not sufficiently detailed, 20 cases are extra-peritoneal, 8 para-peritoneal, and 1 intra-peritoneal; of the rest, it is impossible to speak with accuracy. Only three patients presented symptoms sufficiently definite to render a diagnosis possible. During operation the bladder was wounded seven times, being mistaken for (1) the sac (Hermes); (2) a second sac (Curtis, Hermes, Fenger, Weir); (3) a subserous lipoma (Lanz); (4) a peritoneal reduplication (Guterbock). In 5 cases the bladder was wounded and recognised by the escape of urine (Braun, Thiriar, Gelpke, Petit, Imbert). In 8 cases the bladder was wounded, and recognised after the operation was completed. In 2 cases (Ane and Jaboulay) the bladder had been mistaken for the sac, and in 1 (Habs) for a second sac. In the remaining cases no special feature had attracted notice during the operation.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF TETANUS TREATED BY ANTITETANIC SERUM: RECOVERY.

On December 5th, 1899, I was called to see G. G., a boy 10 years old. His body was absolutely rigid, and the slightest irritation caused a paroxysm. Opisthotonos was marked. He had been unable to swallow for twelve hours. A wound (covered by a scab the size of a threepenny piece) was found in front of the left instep, and the following history was elicited: While at play in a stackyard nine or ten days before, a sharp stone had entered the opening in front of his boot, and penetrating the stocking had wounded the skin. The wound was washed shortly afterwards, and as it was considered trifling no further notice was taken of it.

On December 2nd (three days before I saw him) he complained of not feeling well, and had pain in the back. Stiffness of the same region followed, spreading all over the body, until, when seen on December 5th, there was no difficulty in diagnosing well-marked tetanus. There was risus sardonicus, rigidity of all the muscles, frequent paroxysms, and complete inability to open the mouth or swallow. He complained of great pain in his back. The same night chloroform was given, and the wound excised; 10 c.cm. of antitetanic serum[1] was injected, and 10 grains each of chloral and bromide every four hours prescribed.

Next day, December 6th, there were no longer paroxysms, but his condition was otherwise unaltered. The body was as rigid as ever, and he had swallowed nothing. It is doubtful if any of the chloral had been got down. Chloroform was again administered and serum injected, and whilst under the anæsthetic he was fed by the nasal tube.

On December 7th there was a decided improvement, and he had swallowed 1¼ pint of milk in the twenty-four hours and was taking his medicine well. From this date improvement was gradual, but uninterrupted.

The injections were continued until December 14th, nine in all being given. Chloroform was administered each time. A few days after each injection an erythematous rash appeared round its site, lasting a few days, then gradually fading. The bowels were kept open with 5-grain doses of calomel assisted by enemata, the latter being given whilst under the anæsthetic. The patient complained a good deal of pain in the back, but was kept well under the influence of the chloral and slept most of his time.

On December 16th the chloral was reduced to 10 gr. every six hours, and on December 19th to every eight hours; on December 23rd it was discontinued altogether. From the day the second injection was given the rigidity gradually disappeared, although it was over three weeks until it quite cleared up. He began to swallow two days after the first injection, and was able to chew in a modified way on the tenth day. The temperature was subnormal throughout, and the pulse ranged from 80 to 100.

Although the use of the chloral and bromide prevents me from unreservedly attributing the cure to the serum, yet the progress of this case was so satisfactory when compared to that of those I have seen treated with chloral and bromide alone, that I am compelled to consider the serum had a good deal to do with its successful ending.

Hessle, E. Yorks. W. Murray, M.D.

MANIACAL EXCITEMENT DURING AN ATTACK OF INFLUENZA.

Amongst a series of cases of influenza which have come under my observation and treatment during the present epidemic one case presented the following alarming symptoms:

A gentleman, aged 25, in good circumstances, was attacked by influenza, the initial symptoms of which consisted of pains in the head and back, aching of the limbs, with general lassitude, loss of appetite, and sore throat. There was a great deal of restlessness and loss of sleep from the onset. The temperature was 104° F. at first, but after three days it rose to only 101° F. at night. The sore throat subsided with the fall of temperature, and there was copious expectoration of mucus slightly tinged with blood for a few days. The restlessness could not be overcome by ordinary doses of sulphonal, chloral, bromides, and morphine. From the first day on which I saw the patient up till the fourth, when the temperature sank to normal during the day time, the general excitement increased, and delirium eventually set in of such a violent character that the nurse who was in charge was unable to cope with it, and I was obliged to engage a male nurse, who had the greatest difficulty in preventing the patient from throwing himself out of the window of his room, which was situated on the second storey of the house. The patient kept continually saying that people were on the road calling to him, and that he must get there at all risks, and that he would precipitate himself from the window if restrained.

As the mental excitement continued in spite of the administration of narcotics, ice was applied to the head and neck, and grey powder, in ½-grain doses, was frequently given. Towards the end of the week the excitement had all but subsided, and reactionary symptoms of general weakness showed themselves.

As I had recently had a case of tuberculous meningitis, the symptoms of which were very similar to those detailed above, I had my doubts at first whether this might not turn out to be one of tuberculous origin, especially as the patient had been under my care three years previously for hæmoptysis. I

[1] The serum was supplied by Messrs. Parke, Davis, and Co.

could not, however, detect any pulmonary lesion, and, as perfect recovery from all the symptoms ensued after three weeks, I was obliged to look upon the maniacal excitement as resulting from the influenza bacillus on a perhaps weakened nervous system.

Canonbury, N. JOHN H. SPITZLY, M.R.C.S., L.R.C.P.

SUPERNUMERARY NIPPLE.

MRS. P., primipara, aged 26, was delivered by me on August 1st, after a natural labour, of a male child, which weighed immediately after birth 11 lbs. The patient was a well-developed woman. It can be well seen from the photograph taken by me on August 21st, 1899, that she has a very large breast,



and that there is well-marked pigmentation which covers a large area of the breast. The left breast is quite as large as the right. There is a supernumerary nipple on the under surface of the right breast from which milk flows freely; it is large enough for the child to suckle.

Edinburgh. E. G. SALT, L.R.C.P.Edin., etc.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

KILLARNEY DISTRICT LUNATIC ASYLUM.

POISONING BY WATER PARSNIP (ŒNANTHE CROCATA).

(By EDWARD W. GRIFFIN, M.D., M.Ch.R.U.I., Assistant Medical Officer.)

J. M., without any previous warning, fell down in a fit in the dining hall as he was finishing dinner. He was seen by the superintendent, who considered that it was epileptic. He regained consciousness soon afterwards. Whilst being removed from the dining-hall to the ward he had a second severe fit, with vomiting. On arriving in the ward his face was livid, his pupils dilated and fixed; the conjunctivæ did not respond to the touch; there was a bloody foam about the mouth and nostrils; the breathing was stertorous, and there was complete insensibility. He had six severe fits subsequently with an interval of a few seconds between them. The convulsion, which was clonic, was general, but attained its greatest intensity in the lower extremities first; next in the upper extremities, and lastly in the facial muscles. He died before a hypodermic of apomorphine had time to act. It was impossible to use the stomach pump and give emetics by the mouth, owing to the severe and continuous convulsion. Death was due to asphyxia, and the heart continued to beat for a few seconds after respiratory movements had ceased.

On the same date T. F. was seized with a severe fit when going out to resume work on the farm after dinner, and vomited a quantity of food whilst being carried into the ward. He was seen at once, and half an ounce of ipecacuanha wine given, which induced vomiting in a few minutes; the effects of the emetic were kept up by giving the patient tepid water to drink. There was no insensibility in this case, but therewas a marked change in the mental state after the convulsions. The patient was delirious and talked incessantly to himself; was drowsy and did not like being questioned. His face was pale, the pupils dilated, and the pulse weak and slower than normal. Two hours afterwards he imparted the following information:

Between 12.30 and 1 P.M., while at work in a field, he got what he described as a piece of carrot from the patient J. M. He took two bites of this and then threw it into a stream of water at the lower end of the garden. The writer, in company with the head attendant, searched this place and found what looked at first sight like a piece of parsnip in the water. It had a strong disagreeable smell and acrid taste. The broken surface was dotted over with reddish brown spots each the size of a pin's head. These were not present when another part of the root was broken across, and only appeared after exposure to the air for a few minutes.

The root of one of the plants which was dug up consisted of as many as 20 oblong tubercles varying in length from four to eight inches. This plant grows in great abundance in marshy places and by the banks of sluggish streams in the south of Ireland, and country people use it for poulticing boils, carbuncles, and other inflammatory swellings. On the following day T. F. complained of pain and a sense of heat in throat, chest, and hypogastrium, also some difficulty in swallowing. On examination the fæces and pharynx were seen to be congested. Castor oil was given the evening before, and he was given strong tea after the vomiting had ceased. This was the only medical treatment used in the case.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

G. T. BLANDFORD, M.D., F.R.C.P., Vice-President, in the Chair.

Tuesday, February 27th, 1900.

MÉNIÈRE'S SYMPTOMS IN SPLENO-MEDULLARY LEUCOCYTHÆMIA.

DR. PARKES WEBER read a paper on acute Ménière's symptoms in spleno-medullary leucocythæmia with special reference to the anatomical changes found in acute leucocythæmic affections of the ear. He began by relating the following case:

A man, aged 31, suffering from advanced leucocythæmia, was admitted to the German Hospital with great enlargement of the spleen and liver. He had had malaria six years previously. He died about six and a half months after admission from collapse following internal hæmorrhage. During life the ophthalmoscope showed the presence of the so-called "leukæmic retinitis." About six months before his death he was attacked with acute ear symptoms (headache, vertigo, and vomiting). Examination of the patient's hearing, etc., pointed to the symptoms being probably due to a leucocythæmic affection of the internal ears. In a very short time the man became quite deaf. *Post-mortem* examination of the ears by Mr. Richard Lake (showing the changes about six months after the onset of the acute Ménière's symptoms) proved that a portion of the scala tympani (one side only examined) and the perilymphatic spaces of the semicircular canals (both sides examined) were filled up with newly-formed fibroid and bony tissue. The scala vestibuli, canalis cochleæ, and vestibule showed only comparatively slight changes. Transverse sections of the nerve trunks showed no obvious change.

From a comparison of similar cases which had been reported, it was concluded that the pathological appearances in the internal ears after death differed in different cases, partly in accordance with the length of time which had elapsed between the onset of the acute aural symptoms and the death of the patient. In most cases of acute leucocythæmic affection of the internal ears, *post-mortem* investigation suggested that the following was the sequence of events: The commencement of the aural symptoms (vertigo, headache, vomiting, deafness) marked the occurrence of more or less extensive extravasations of blood in the semicircular canals and the cochlea, the process being doubtless nearly always more or less symmetrical and simultaneous in the two ears. In such cases, though apparently lymphocytic infiltration and hæmorrhages might be found in various parts of the ears after death, the labyrinthine hæmorrhage was probably the essential lesion which gave rise to the acute aural phenomena in question. Subsequently vascularisation and organisation proceeded in the usual manner, with the result that the clot became gradually replaced by newly-

formed connective tissue, closely connected by its blood vessels with the endosteum of the bony labyrinth. In process of time (if the patient lived long enough) more or less ossification occurred in the newly-formed tissue, and irregular processes of bone projected inwards from the walls of the bony labyrinth. At this stage of the pathological process transverse sections of the bony semicircular canals mostly showed the membranous canals surrounded by a meshwork, or by irregular masses of newly-formed bone and fibroid tissue, completely filling up the perilymphatic spaces. Besides the striking cases in which acute (apoplectiform) Ménière's symptoms occurred, there were also leucocythæmic patients, as pointed out by Schwabach, who presented aural troubles of a less severe or less sudden nature. These lesser symptoms might be in part or altogether independent of the leucocythæmia, but in part due to small hæmorrhages and patches of lymphocytic (leucocythæmic) infiltration in various parts of the auditory apparatus. Dr. Weber likewise drew attention to the light thrown by leucocythæmic cases of Ménière's symptom-complex on cases associated with constitutional disorders other than leucocythæmia (such as arteriosclerosis, syphilis, chronic gout, renal fibrosis, and the various cachetic conditions in which hæmorrhages often occurred). He sketched a rough pathological and clinical classification of such cases; the exact nature, however, of the pathological condition in the ear could not often be determined with certainty merely from the symptoms observed during life.

Dr. F. W. MOTT narrated a case in some respects similar, and showed preparations of the blood and internal ear. A wood carver, aged 38, gave an unimportant family and personal history except for an indefinite history of "influenza," which might have been the real onset of the disease. Six months before admission he had a sudden pain in the left side of the abdomen, followed by deafness, vertigo, and difficulty in co-ordinating the movements of the legs. On admission to the hospital, he was cyanosed and dazed. The liver and spleen were greatly enlarged, as were also the lymph glands. Examination of the blood showed hæmoglobin 54 per cent., 1,540,000 of red corpuscles, 1,150,000 of white corpuscles with many large myelocytes, many multinuclear leucocytes, a few mononuclear leucocytes, and a few eosinophilous cells. There was no loss of motor power or of co-ordination while lying in bed, no hypotonus or loss of muscular sense. Sensibility was quite good. He showed Romberg's symptom markedly with a "cerebellar"-like gait. The knee-jerks were absent. The sphincters were unaffected. Vision was blurred, the light pupillary reflex was slight; there was neuro-retinitis. Hearing improved with the left ear and then the right ear became deaf. Taste and smell were normal; his intelligence was good but he was somnolent. Seven days after admission he became absolutely deaf in both ears. He complained of pain at the point of the penis. The liver weighed 5½ kilogrammes, the spleen 1.8 kilogramme, and they were typically leucocythæmic. All the vessels were congested, particularly those of the brain. The right petrous bone was unusually fragile, and the left was also soft owing to rarefaction of the bone. The spinal cord and nerves showed no evidence of degeneration, but there were hæmorrhages into the posterior roots and into the cerebral cortex.

Mr. RICHARD LAKE observed that the ligamentum spirale had not previously been described as ossified; likewise the clot being in the perilymphatic not in the membranous canal and the vestibule not containing clot, were particulars in which the case was peculiar. The porosity of the bone described by Dr. Mott had not been previously noticed.

Dr. PARKES WEBER replied.

CLINICAL SOCIETY OF LONDON.

LEONARD W. SEDGWICK, M.D., Vice-President, in the Chair.

Friday, February 23rd, 1900.

CLINICAL EVENING.

PRIMARY TUBERCULOSIS OF NASAL SEPTUM.

DR. STCLAIR THOMSON presented a young woman who had already been shown to the Society in October, 1897.

In July, 1896, a growth the size of a filbert was removed from the right side of the septum, diagnosed as tuberculous though no bacilli were present. Three months later the base of the growth broke through the septum. She had active local treatment and three injections of Koch's tuberculin, to which she reacted. When recently examined it was seen that the perforation had increased in size, but the condition in other respects was better. Sections showed giant cells and caseation, but no bacilli. The treatment was painting with Mandl's solution of iodine and iodide of potassium, and, later on, guaiacol and cod-liver oil.

Mr. BARKER and Dr. KIDD made remarks.

LATERAL CURVATURE OF THE SPINE IN AN INFANT.

Mr. JACKSON CLARKE showed an infant, aged 17 months, with well-marked scoliosis, probably due to rickets. In addition to ordinary general treatment he insisted upon the importance of daily manipulations and the use of an effective instrument such as Chance's splint.

IRREDUCIBLE TRAUMATIC DISLOCATION OF THE KNEE TREATED BY OPERATION.

Mr. BATTLE showed a woman, aged 50, who, as the result of a severe twist of the left knee, had marked displacement of the knee-joint, the patella being displaced outwards and fixed.

The mobility of the joint pointed to rupture of the internal lateral crucial ligaments. Manipulations having failed, he opened the joint by a transverse incision, dividing the ligamentum patellæ. The patella was found to be fixed by a thick muscular band, torn from the inner condyle, through which it had slipped, and it was replaced. On opening the joint freely the anterior crucial ligament was seen to be torn away from the femur, and the posterior crucial ligament was lacerated. These were sutured and the internal lateral ligament repaired. The case did well except for a little suppuration on the inner side of the wound, and the patient could now walk normally.

ACHONDROPLASIA.

Mr. KELLOCK showed a boy, aged 4½ years, the second of a family of four, the other children being normal. He was born easily at term, but had a queer shape. He had been breast-fed until 10 months old. He began to crawl at six months, but did not walk until two years. His height was only 30½ inches, the deficiency bearing on the lower limbs, the bones whereof were shorter than usual and the epiphyses abnormally large. The head had a large vault and a narrow base, and the patient presented the usual lordosis, prominent abdomen, genu retrorsum, waddling gait, and a peculiar manner of raising himself, all features characteristic of such cases. The child was intelligent and had good general health.

CONGENITAL DEFORMITY OF HANDS.

Dr. CHAPMAN showed a father and son presenting a peculiar deformity of the hands, with, in the child, absence of radius.

The right hand of the father exhibited the peculiarity in respect of the three phalanges that the second was flexed at a right angle on the first and the third on the second. The thenar eminence was almost entirely absent, and abduction and adduction were non-existent. In the left hand the terminal portion, representing the thumb, was united for two-thirds of its extent with the index finger, and there was a wide cleft between the first and second fingers. The man used the index finger like a thumb, and the hand could be used for most purposes. The son, an intelligent boy aged 3, exhibited the following deformities. On the right the thumb at its terminal part resembled a finger. It had three phalanges, the second and third being permanently flexed on the first. On the left there was an entire absence of the radius, with a club hand of the radio-palmar variety.

Mr. BATTLE said a similar absence of the radius had been made out accidentally in a man who was under treatment for a totally different defect. He played the organ in church on Sunday, and did it remarkably well.

ASTHENIC BULBAR PARALYSIS.

Dr. GUTHRIE showed a woman, aged 23, formerly a waitress, working very long hours.

Two years ago she noticed some difficulty in articulation. Later, swallowing began to be difficult for both solids and liquids, and then she became unable to close her eyes properly. These symptoms had gradually increased until she was first seen a month ago, when there was weakness of the orbicular muscles of the eyes and mouth and of the soft palate. The pupils were normal, and there was no squint; there was slight ptosis on the left side. She could not whistle or blow out a candle, nor puff out her cheeks because the air could not be retained by the orbicularis oris muscle. She could not curl up the tongue transversely. Speech was indistinct, and she could not pronounce gutturals. After talking or reading aloud, speech was greatly affected. There was no reaction of degeneration in the muscles of the palate. She had no pains, no loss of sensation anywhere; the knee-jerks were good.

Dr. Guthrie regarded the case as one of the kind described by Strümpel as asthenic bulbar paralysis. The patient had improved since being treated and rested.

PARALYSIS OF CRANIAL NERVES.

Dr. BEEVOR showed a case of paralysis of the seventh, eighth, ninth, and eleventh cranial nerves on the left side, in a woman, aged 32.

No family history. Six years ago she contracted a primary specific sore, followed by sore throat, hair falling off, and rash over chest. Since then she had had two children, one born blind, the other becoming so soon, and a miscarriage. Nine years ago she had received a blow on the left ear, and

had had deafness and noises ever since. Present illness: For two and a-half years she had had twitching of left side of tongue and the facial paralysis and deafness in the ear; for three months neuralgic pains in the left temple. For the last six weeks her voice had been hoarse, with difficulty in swallowing. For three weeks she had had discharge of blood from the left ear; at present the right optic neuritis was not complete. There was absolute deafness of the left ear to aërial and osseous conduction. Taste was lost both front and back on the left side of the tongue. The left facial nerve was completely paralysed, including the platysma. There was paralysis of the palate on the left side, so that it drew to the right on phonation and also on reflex stimulation. There was difficulty in swallowing. On the posterior wall of the pharynx, left side, there was some anæsthesia. There was complete paralysis of the left inferior laryngeal nerve, with the left vocal cord in the cadaveric position. The pulse frequency was not increased. The left side of the tongue, which went to the left when protruded, was wasted, with fibrillar tremor; she could not put the tip so well into the left as the right cheek. The left sterno-mastoid was completely atrophied and paralysed. The left trapezius was atrophied and paralysed with the exception of fibres arising from the sixth cervical to the second dorsal spines, which reacted faintly to volition and faradism. The affected muscles did not react to faradism. The sterno-hyoid and omo-hyoid muscles contracted well. There had been severe neuralgic pain in the ear and temple. Probably there was syphilitic meningitis affecting nerves of the medulla.

Unilateral Lesions of the Pons.

Dr. Collier (for Dr. Hughlings Jackson) showed a man, aged 40, with no pathological history.

His illness began gradually with giddiness, deafness of the left ear, alteration of speech, difficulty in guiding the left arm, and diplopia, difficulty of swallowing and mastication, and loss of feeling on the left side of the face. He had no headache, vomiting, or dysuria. The optic discs were pale, and there was paralysis of the fifth, sixth, seventh, and eighth cranial nerves on the left side, with weakness of the ninth, tenth, and eleventh. He held his head in the right cerebellar position. There was slight spasticity of the right arm and leg, and the speech resembled that often met with in cases of disseminated sclerosis.

Macroglossia after two Operations.

Mr. Barker showed a girl who first came to him thirteen years ago with macroglossia, when he removed a wedge-shaped portion of the organ, bringing the side angles together.

The case was recorded in vol. xli of the Pathological *Transactions*. She had returned last year with recurrence, and the growth this time being in the direction of the hard palate, he had removed a wedge-shaped piece in a horizontal plane, bringing the upper and lower flaps together. Sections of the first growth showed a preponderance of lympho-angiomatous tissue, but the latter was more of a nævoid character.

Three Surgical Cases.

Mr. F. C Wallis showed (1) a child, aged 3, with tuberculous disease of the knee which he had treated by division of the patella, free exposure of the joint, removal of the affected synovial membrane, and swabbing with pure carbolic. The child was now able to walk, and had limited movement of the joint. He referred to two other cases similarly treated with equally good results. (2) A case of acute infective osteo-myelitis in a child, aged 12, with necrosis of the whole of the shaft of the humerus. A large sequestrum was removed (shown). The arm, which was previously useless, was now rapidly regaining power. (3) A case of osteitis and periosteitis in a child, aged 11, which he treated by cutting down on the tibia, elevating the periosteum, and cutting a deep groove through both the epiphyses and the diaphyses. Since the operation the pain had disappeared and the child could stand. The case was originally thought to be tuberculous.

MEDICAL SOCIETY OF LONDON.

Frederick T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, February 26th, 1900.

Adjourned Discussion on the Pathology and Treatment of Appendicitis.

Mr. Marmaduke Sheild congratulated Mr. Lockwood[1] on having done them the service of pointing out the correlation between certain pathological conditions and clinical symptoms, particularly in respect of the infective nature of appendicular lesions. He held strongly that the non-operative treatment was only justifiable in the very mild cases, the operative necessity in cases of the kind being in direct proportion to the severity of the initial symptoms. He discountenanced the use of opium except for the relief of pain. He thought that if those who advocated the expectant treatment could only look inside and see the actual lesions that were present, even in many cases reputed mild, they would hesitate to assume the responsibility of refusing operative treatment. He mentioned several cases to illustrate the difficulty of establishing clinically the actual severity of the lesions and the dangers to which unrecognised lesions exposed the patient. The difficulty of deciding what course to adopt, he observed, only obtained in respect of the "mild" cases, and he insisted on the fact that the absence of induration over the cæcum was not a sufficient reason for holding one's hand; on the contrary, where there was a mass to be felt the practitioner might often safely wait for a few hours. Cases in which there was only pain with some rigidity of the belly wall often turned out to be very grave. They must observe these cases closely, and whenever the symptoms tended to get worse an operation should be thought of. He agreed that the rapidity of the pulse was an important factor in deciding on the treatment, and this ought to be taken every hour. He had not met with cases in which he had ever had to regret having acted in accordance with this rule. He urged that the incision should be as small as possible, the muscles being split, but in chronic cases with many adhesions a free incision might be required. He himself had had great trouble with buried sutures when he used silk, but since he had employed kangaroo tendon for suturing the deeper tissues the cases had ceased to give rise to subsequent trouble. It was very important to get the bowels to act quickly, and with this object in view he gave powerful saline laxatives with turpentine enemata. These were eminently cases for consultation between physicians and surgeons, but on the whole early operation was desirable.

Dr. Cayley agreed that the non-operative treatment was only justified in milder cases, and the question was as to the proportion of these cases. He referred to the statistics which he had brought forward on a previous occasion bearing on this point, and although he admitted that statistics in reference to appendicular mischief were more than usually untrustworthy, yet they served to illustrate certain points in the history of the disease. Some 30 per cent. of the cases reported as cures subsequently relapsed. He urged that the proportion of concretions in the "cured" cases was less considerable than some speakers believed. He called attention on pathological grounds to a definite and considerable class of cases not associated with ulceration or gangrene which as a rule subsided and, if they relapsed, did not lapse into the graver forms of the disease. The point of his paper was to establish a correlation between the pathological condition of the appendix and certain clinical manifestations, thus dividing the cases broadly into two great groups, the mild cases and the cases which were actually or potentially severe. The real difficulty arose in respect of cases in which the initial symptoms were severe, and yet when seen early it was practically impossible to decide whether the case was likely to go on to a severe form or whether the symptoms would subside. That group of cases with severe initial symptoms constituted a fourth group in which early operation was certainly indicated. With regard to the significance of the pulse-rate as a guide to operation, he observed that although most speakers were agreed thereon the rule did not hold good, for in some of the very severe cases the pulse might not be very rapid, yet if they considered conjointly the other clinical manifestations, the respiration, the temperature, and especially the abdominal condition they would generally be able to arrive at a satisfactory conclusion. He agreed in discountenancing the continuous administration of opium in large doses, but he urged that the drug was of great value if given with two important provisos, namely, that it should not be prescribed until they had made up their minds as to the question whether or not an operation was desirable, and, in the second place, that it should only be given for the relief of pain and not continuously.

Mr. Harrison Cripps observed that in regard to treatment they must divide the cases into two groups, the comparatively mild cases of which went on from one attack to another, the so called intermittent appendicitis, and the far severer attacks of the "fulminating" kind. If it was a first attack, and of a mild type, it might possibly be due to some accidental cause, and if not seen until the attack subsided he would not advise interference. If the attack recurred, then they were justified in supposing that it was not due to any accidental cause, but to some abiding condition calling for operative treatment. If a patient had had two or three attacks, and in the intervals complained of pain or tenderness, he would still urge operation, for he would consider that such a patient was carrying about a dynamite shell which might explode at any moment. The risk to life, if the operation were performed during a quiescent period, was very small; in fact he himself had never had a fatal case under these conditions, and Mr. Treves, with 130 or 140 cases of the kind, had only

[1] British Medical Journal, January 27th, p. 192.

had one death. Alluding to a case in which the absence of swelling in that region had been advanced as a reason for not operating, he pointed out that this depended upon the position of the appendix and not upon the gravity of the lesion. He had seen a case in which the appendicular abscess was perceptible low down in Douglas's pouch, and the appendix had been dragged down and measured some nine inches in length. While he had made up his mind as to the best treatment in the recurring cases he was less clear in regard to the fulminating cases. Such patients were not in a favourable state for operative interference, and the risk was therefore greater, though the risk of leaving them unoperated was possibly greater still. In cases where there was considerable induration, like a plate or saucer under the skin, he suggested that it might be better to wait and see where the abscess would point and in any case there would be great difficulty in finding the appendix. He himself preferred in general a free incision, but he insisted on the importance of splitting the aponeurosis of the external oblique. He abominated buried sutures and deprecated the use of any support after the operation, a practice which he had long since abandoned.

Dr. HUNTER was glad that the subject had been treated from the point of view of pathology and treatment, because their views of the pathology greatly influenced their treatment. It was usual to distinguish one class of cases as "catarrhal," but he insisted that this was as much an infective lesion as the others; and, if this fact were grasped, it would throw all the cases into one general group, and it would be understood that there was no essential difference between one form and the other, however clinically dissimilar. He showed a series of specimens to bear out this view. He urged that abscess often formed after the initial symptoms had apparently subsided; therefore whenever, after this lapse of time, there was even a slight rise of temperature, that should be taken as an indication of the presence of pus. Even a temperature of 99°, 100°, or 101° was significant. He always called in a surgeon under these circumstances. He pointed out that the question of treatment was not as simple as it appeared, for in certain classes of society the cost of an operation indisposed them to consent thereto. Inasmuch as they could not ascertain for certain the nature and extent of the actual lesion, and as even a mild case might promptly take on a severe form, he thought no hard-and-fast rule could ever be laid down as to when to operate and when not to operate. With ideal surroundings and an ideal surgeon it might be well to operate in all cases, but these conditions could not always be realised. He deprecated too much attention to the bowels, urging that a small quantity of fæces in the colon could not possibly have a prejudicial effect. In conclusion, he pointed out that they could not influence in any way the course of the lesion, but the administration of small doses of opium, combined with some intestinal antiseptic, calomel and opium, for example, might prove of service.

Mr. MCADAM ECCLES, who had himself undergone an operation for suppurating appendicitis, pointed out that the gravity of the lesion depended on the virulence of the invading microbe. If they could always remove the appendix no doubt the patient would be cured, but that was not always possible. He suggested that in many cases the tissues of the patient could deal with the microbial invasion, and he urged that in the event of a recurrence of even the so-called catarrhal appendicitis the appendix should be removed.

Mr. MANSELL MOULLIN said he had met with some cases in which he had found it difficult to establish an infective origin for the attack, but, in the absence of a microscopical examination, this was always possible even when not apparent. He accepted Dr. Allchin's classification although it did not take into account the pathological changes. He thought that these cases suppurated more frequently than was generally thought, and that many cases in which the symptoms subsided suddenly were cases in which the abscess had discharged into the intestine. He thought it would be an advantage in these cases to operate before suppuration had set in as a preventive measure in view of the risks which the condition entailed, the impossibility of ascertaining the exact nature of the pathological changes, and the lack of any means of controlling its course, especially as an exploratory operation involved very little risk. It might be urged that this would involve a large number of unnecessary operations, but he did not attach any importance to this argument, and whenever the pulse showed a tendency to increase in frequency he would operate. He had not yet met with a grave case in which the pulse was infrequent. With regard to the so called "cures," he asked whether the parts were likely to return to normal after an abundant exudation of lymph. From 50 to 60 per cent. of the non-operated cases relapsed and another 14 per cent. died. Even in the cases that recovered he did not think that an operation would materially influence the prognosis, and the patient would be spared a long convalescence.

Dr. LYNN THOMAS (Cardiff) said he had operated 41 times with 2 deaths. He mentioned a case which had been diagnosed as typhoid fever and three weeks later as perityphlitis when he operated and found it was a case of gonorrhœal salpingitis, the right tube being attached to the cæcum. In another case presenting the characteristic sausage tumour, it turned out to be abscess of the right ovary with hydrosalpinx adherent to the appendix. Lastly, he referred to a case in which a young woman presented symptoms of appendicitis in which he operated and removed a healthy appendix. The symptoms recurred but yielded to a course of Weir-Mitchell treatment. He himself used silk for buried sutures and it had answered very well; and he thought that if they compared statistics in regard to the subsequent results with buried sutures and suture *en masse*, the superiority of the former would be manifest.

Mr. BERRY thought operation in the chronic relapsing cases saved the patients a vast amount of suffering. He urged that the incision should be made through the sheath of the rectus and not outside it, and he agreed in the use of silk for buried sutures. In the fulminating cases he thought the incision should be free and the septic material sponged out. He protested strongly against the practice of washing out the peritoneal cavity. He remarked that surgeons themselves, when they fell victims to appendicitis, rarely, if ever, called in a surgeon.

The PRESIDENT urged the importance of studying the treatment from a clinical standpoint. He agreed that the cost of the operation stood in the way under certain circumstances, and remarked that from this point of view poor patients in hospital stood a better chance of being properly treated than others of better position outside. If physicians did not always forthwith hand over their patients to the surgeons, they were always very careful what they did in the way of medication, but he thought the suggestion to give calomel and opium was good.

Dr. ALLCHIN, in reply, remarked that Mr. Sheild had not defined the mild cases which might be treated otherwise than by operation. He adhered to the view that a great proportion of the cases recovered, for all practical purposes, without operation. He hoped it would go forth, as one result of the debate, that surgeons were not opposed to the moderate use of opium.

Mr. LOCKWOOD, in reply, pointed out that they could never come to a common agreement as to when to operate until they were able to associate certain clinical symptoms with definite pathological changes. The first thing was to establish the diagnosis of appendicitis, then to define to what group it belonged, bearing in mind that a catarrhal case of to-day might become a gangrenous case of to-morrow. He thought there was only one way of diagnosing pus, and that was to look for it. In conclusion he urged that a patient should be carefully watched after a first attack, and if symptoms persisted then he should be urged to submit to an operation.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, January 17th, 1900.

A. G. MILLER, M.D., F.R.C.S.E., President, in the Chair.

PATIENTS.

DR. NORMAN WALKER showed (1) a case of acne varioliformis; (2) a case of lupus erythematosus of the scalp.

SPECIMEN.

Dr. C. W. MACGILLIVRAY showed a specimen from a case of fracture of the skull.

SALOL IN SMALL-POX.

Dr. CHARLES BEGG (Bridge of Allan) read a paper in

which he related his clinical experience with salol in the treatment of small-pox in China. He did not dwell on the use of salol in intestinal cases, merely recording his conviction of its great value. An observation he made during the progress of such a case led him to believe that it might be useful in quite another class of cases.

His patient was taking four powders per day, each containing 15 grs. salol. They produced a condition of slight mental depression, but the important point was that, although when in health he was specially liable to severe irritation from mosquito bites, he now suffered no discomfort from their attacks, and hardly noticed their attentions. This was not due to the mental condition. The puncture from the bite was plainly visible, with a total absence of the characteristic reaction, neither swelling, heat, or irritation being present.

This observation was followed up by giving the drug freely in cases of irritable skin diseases—acute eczema, prurigo, etc., of which so many cases were seen in the tropics. In these cases his belief in the power of the drug was confirmed. Then naturally he thought of small-pox, and on trying it obtained the following remarkable results: First, it kept the patient free from all sense of irritation, without the slightest desire to scratch. Those who knew anything of small-pox cases would at once see the great gain to the patient by preventing exhaustion from sleepless nights and drain to the system from weeping vesicles and pustules torn by scratching, avoiding danger to the eyes from soiled fingers, conserving energy for the most trying time of the disease—namely, the convalescence. Further, he found in the second place that almost all the vesicles terminated as vesicles, and the stage of maturation was absent except in a few isolated vesicles which matured in the usual way. In his last case an Englishman, aged 60, with confluent small-pox, only two groups of vesicles, one on either upper arm, matured. They did so with perhaps greater energy than usual, taking on more the character of abscesses. In all the other vessels the lymph dried up, and this was an end of them. The relief to itching was most marked, and could be demonstrated to depend on the drug, returning at once on the dose being reduced. He had not observed any evil effects from a daily dose of 5j continued for long periods, and the mental depression quickly passed off with discontinuance of the drug, nor did it always appear in any marked degree. Salol was accused of having caused death from 120 grs. given during eight hours. The death took place four days after; so one would like to know more particulars. Salol was said to be of slow excretion, but allowed to be quickly decomposed into its component parts by the whole digestive tract except the stomach. Both the phenol and the salicylic acid were found abundantly in the urine, which became dark, but a large quantity must be given off by lungs and skin, because the characteristic sweet fruity odour was very quickly perceptible in the patient's room, and was more pronounced than in the case of any other drug he knew. In acting as an intestinal disinfectant it was acting, of course, quite outside the body, but the marked affinity it showed for elimination by lungs and skin would explain the above-noted results of clinical observation by allowing it to act directly on the nerve terminals, and to reach the vesicles more surely than could be done by hypodermic needle, a treatment long ago suggested, in the case of abscesses, with carbolic. Dr. Begg had just found that salophen had been reported in the medical papers for 1897 as of use in pruritus, which would go to confirm his observations. Salophen was introduced to replace salol on account of the ill-effects thought to result from the elimination of phenol. It was said quickly to remove the pain and swelling in acute rheumatism, but did not prevent relapses. Dr. Begg hoped that those who had the opportunity would not fail to bring small-pox patients early and fully under the influence of this drug, in order that they might see if the results obtained in China were confirmed here. He knew of no reason why it should not be so, for it was during the cool season in China that the disease showed itself. Still, there was always the charge to be met, namely, that one had perhaps been dealing with a milder type of the disease, or that the drug had been helped in its action by climate, just as in the case of sprue, until he successfully treated cases from India it was doubted whether the disease as seen in China was at best more than a mild form.

Drs. Norman Walker and Harvey Littlejohn spoke; and Dr. Begg replied.

Permanent Dislocation of the Patella.

Mr. John Shaw McLaren read a paper on this subject. Some years ago Appel, of Munich, published the result of this rare condition. The dislocation was a displacement of the patella outwards so that it lay, even in extension of the knee, in most cases to the outside of the middle line, and in flexion it slipped outwards and backwards till it lay on the outer surface of the external condyle of the femur, its anterior surface directed partly outwards. The patient's gait was most insecure, and frequent falls and synovitis of the knee were the result. Dr. McLaren believed that in most cases a fall and consequent injury to the knee first directed attention to the condition, and, indeed, might increase the dislocation to a certain extent, but it really depended, as held, on a congenital defect, namely, a deformity of the external condyle and trochlea of the femur. In most of the recorded cases one or other of the following conditions would be found: (1) The dislocation or some accompanying deformity actually noticed at birth; (2) the late age at which the child learned to walk, or else insecurity in walking during childhood; (3) rachitis; (4) genu valgum; (5) outward rotation of the leg; (6) ill-developed patella; (7) abnormality in the shape of the external condyle and patellar fossa of the femur. The following were the notes of Mr. McLaren's own case:

A domestic servant, aged 19, admitted to hospital in May, 1895. She never walked securely, did not walk much till 7, never able to run, constantly falling, developed knock-knee of the left side; had fallen helplessly on several occasions, and had consequent synovitis. There was evidence of rickets, genu valgum left side, leg rotated outwards. On extension of the knee the patella lay to the outside of the normal position. On flexion it passed further and further out till it lay on the outer side of the external condyle, its anterior surface directed upwards and forwards. By force it could be retained in the middle line.

Appel gave notes of 30 cases including his own 2. Of these, 12 made no mention of the femur. Of the remaining 18, 15 had a deformity of the femur, while in three that bone was said to be normal. Cases had been recorded by Wright, Pollard, Goldthwait, and Canton. Mr. McLaren explained the mechanism of the production of the condition. The patella eventually contracted to prevent the possibility of the bone retaining its proper position. What was the relation between rickets and the dislocation? Various methods of treatment had been suggested: dividing the vastus externus, detaching the ligamentum patellæ and nailing it further inwards to the tibia. Mr. McLaren's own treatment was to liberate the patella by dividing on the outside whatever contracted structures prevented its assuming its normal position, and then mooring it there by sutures passed through the inner border. The steps of the operation were described. When seen on November 30th, 1899, the patient walked with security and confidence, and said that recently she had won the third prize in a race at a picnic.

The President, Mr. Cathcart, Mr. Cotterill, and others, spoke; and Mr. McLaren replied.

Murder and Suicide by Cut-throat.

Dr. Harvey Littlejohn read a paper on this subject. Where two persons were found dead in the same room with fatal injuries on their bodies, several questions of medico-legal interest arose. Was it accident, suicide, or murder, or a combination of two of these conditions? The accidental death of two persons together as a result of violence was as a rule easily determined. The question of murder or suicide was much more difficult. The examination of circumstances and surroundings must, to be satisfactory, be made before the bodies were any way interfered with. Unless this were done most important circumstantial evidence might be lost. The facts of the case to which he wished to draw attention were these:

A gentleman arrived at a hotel in the city of Edinburgh, and engaged a room for himself and his wife, who he said would join him later in the day. There was nothing about him to attract attention. He went out in the early evening, and returned at 7 P.M., with the lady. After refreshment they retired for the night. Next day they had breakfast together, and then went out. They returned at 1 P.M. At 7 P.M. the door of the bedroom was forced open, and both were lying on the bed in a pool of blood. The room was not disordered, and blood was seen only on the bedclothes. Both were fully dressed with the exception of their hats. Dr. Littlejohn described the position of the bodies and the nature of the wounds.

Both were murdered, or one murdered the other and then committed suicide, or both committed suicide. These three propositions were carefully discussed by Dr. Littlejohn, who showed from the various manifest points that the second was the correct explanation. In all probability when they returned from this walk, shortly

affer they entered the bedroom, and while she was sitting on the edge of the bed, he pushed her backwards, and taking a razor from his pocket attacked her before she realised his murderous intention. He must then and there have cut his own throat and fallen transversely across her body on the bed. There was evident preconceived and fixed design on the part of the murderer, a design carried out with unrelenting resolution against a person towards whom his professions and behaviour indicated a true if not a very deep affection, and towards whom until the last his manner indicated nothing of the terrible scheme he harboured and foreshadowed in the letters written on the previous day. The only motive appeared to be that his circumstances in life did not enable him to fulfil his promise of marriage at the time he had fixed, and he therefore determed to end his life and at the same time to compel the woman to share his fate.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

J. W. MOORE, M.D., P.R.C.P.I., President, in the Chair.

Friday, January 26th, 1900.

CASES.

DR. R. TRAVERS SMITH exhibited a case of ataxic paraplegia and a case of amyotrophic lateral sclerosis.

BRONCHOTOMY IN CROUP, DIPHTHERIA, AND ALLIED MEDICAL CONDITIONS.

Mr. H. G. CROLY detailed the symptoms of a case of diphtheritic inflammation of the larynx and trachea in a child, 2 years old, admitted recently into the City of Dublin Hospital (detached Drummond Hospital for infectious cases) under the care of Sir George Duffey, Senior Physician to the hospital.

Sir George was summoned to the hospital about 10 P.M. He found the child in a most critical condition—urgent dyspnœa, lips bluish, signs of collapse. With much difficulty the fauces were examined. The tonsils were considerably swollen, and there was some evidence of a whitish patch on one side. Mr. Croly was sent for. The question of tracheotomy was discussed, and the consent of the father of the child was obtained. High tracheotomy was performed; the child got immediate relief, and fell into a peaceful sleep. At 4 A.M. the little patient became very restless, gradually got worse, and died about 10.30 A.M., within 12 hours of the operation. The larynx and trachea were removed in a few hours, but no further examination was made. The larynx and trachea, with the silver tube *in situ*, were exhibited. The epiglottis was thickened and hard: the folds at the entrance of the larynx considerably thickened. On opening the windpipe a bluish false membrane easily detached was found at one side.

Mr. Croly gave a sketch of the history of tracheotomy in such cases from the time of Hippocrates, and said the largest proportion of recoveries was in children over 5 years of age. Mr. Croly exhibited some fine specimens of membranous croup from the Museum of the Royal College of Surgeons. He also showed some trachea tubes, and made some practical suggestions on the shape of the tube with a view of preventing irritation, and advocated strongly the high operation, which was so much easier and safer than the deep operation.

The PRESIDENT said there were three affections of the larynx attended with evidence of obstruction to the breathing—first, laryngismus stridulus, a purely spasmodic affection; then a very rare condition, croupous laryngitis, analogous to croupous or plastic bronchitis. To the third condition, diphtheria of the larynx, they must refer most of the cases formerly described as croup. His experience was that two micro-organisms were concerned in the production of diphtheria, namely, the Klebs-Loeffler bacillus and the streptococcus; and in some recent cases in the Meath Hospital of what was undoubtedly diphtheria, the former micro-organism was conspicuous by its absence. That these were diphtheria, and of a malignant type, was proved by the fact that there were 3 fatal cases out of 6. Four of these cases were examined bacteriologically but in not one was there a culture of the Klebs-Loeffler bacillus obtained, but in two of them Oertel's streptococcus was found.

Dr. E. H. TAYLOR did not agree with Treves's statement that there was no danger in cutting the isthmus, for on injecting the gland large vessels were found crossing in the isthmus.

Professor E. H. BENNETT did not concur in Mr. Croly's recommendation of taking out a piece of the trachea, because he knew of a man of great skill, now dead, who in taking out a piece of the trachea took out a portion of the innominate artery. He preferred a straight simple incision in the middle line.

Dr. O'CARROLL gave an analysis of cases in the Hardwicke Hospital. They had 101 cases labelled diphtheria in the last year. In 47 of these the Klebs-Loeffler bacillus was found, in 46 it was not identified, and in the remaining 8 cases, for some reason or other, no examination was made. There were 17 tracheotomies done, with 11 deaths and 6 recoveries. The cases below 2 years of age were not successful when operated on, this fact bearing out Mr. Croly's observation. Dyspnœa in long-standing cases was due to the development of bronchopneumonia and obstruction of the smaller tubes. Only one or two of those cases in which no Klebs-Loeffler bacillus was found died, and they were cases of malignant local gangrenous sore throat, possibly diphtheritic or post-diphtheritic. In those, also, there were other infections, streptococcus and staphylococcus. Tracheotomy was useful in giving the patient a longer time to avail himself of the ordinary aids to recovery. In the Hardwicke Hospital they were fond of large doses of the antitoxin, giving to patients 3 years of age at least 3,000 units. Calomel fumigations and swabbing out of the throat locally were also adopted.

Dr. PARSONS said the term "diphtheria" should be limited to Klebs-Loeffler cases, for if they included under this heading every disease with a false membrane, they would not be able to compare results. He took it that the antidiphtheria serum was useless in streptococcus cases, for what they wanted then was antistreptococcus serum, which had not yet been proved satisfactory.

Sir GEORGE DUFFEY, Dr. KNOTT, and Mr. G. J. JOHNSTON also spoke; and Mr. CROLY replied.

LIVERPOOL MEDICAL INSTITUTION.

W. T. THOMAS, F.R.C.S., Vice-President, in the Chair.

Thursday, February 22nd, 1900.

CASES.

MR. R. W. MURRAY showed a patient upon whom he had performed tarsectomy for double club-foot.—Dr. ALEXANDER related two cases in which he had removed foreign bodies from viscera, and showed the specimens—(1) pieces of coal and pebbles removed from the vagina; (2) a piece of slate pencil removed from the male urethra.

OPERATIONS ON THE STOMACH.

Mr. RUSHTON PARKER read a paper on recent operations on the stomach, comprising 15 cases, of which 8 occurred in the last six months, and 12 in the year. Four were "gastrostomies" in men for carcinoma of the œsophagus, the operation being that known by the names of Hahn, Franck, and Albert. Two of the patients died within six months of acute phthisis, one in six days of bronchitis, one in three months suddenly of syncope. He considered the procedure in suitably selected cases of value, but probably the least satisfactory of the temporary operations on the stomach. Four were gastro-enterostomies—three in men and one in a woman. The symptoms in all pointed to carcinoma, and although a tumour was felt only in two, in all a growth was found, which was either too firmly fixed or surrounded by secondary deposit to permit of removal. Two were still doing well, the others getting worse; in one the tumour was increasing and undoubtedly cancer; whilst in the others no microscopical verification had been made, and between carcinoma and gumma there was no means of being certain in the examination by eye and hand alone. The operations were well borne, and the healing rapid. No adventitious appliances were used. The nearest piece of jejunum was attached to the lower part of the stomach, an incision 3 inches long being made in the axis of each viscus and continuous silk sutures used, one set through mucous membrane, another through peritoneum. The operation quickly admitted of satisfactory feeding, and although only required for temporary purposes, might now and then give permanent relief in the event of suspected carcinoma proving to be non-malignant. Two cases of excision were shown.

One was a woman, aged 37, for malignant disease (ascertained microscopically) to the left of the pylorus, still in good health, without any sign of recurrence after two years; one a man, aged 49, for whom pylorectomy was done a year previously for a tumour thought to be malignant, but at the operation regarded as gummatous, and proved microscopically to be so.

Three cases of pyloropasty were discussed; two for contracted pylorus due to gastric ulcer, the other for ulceration (probably syphilitic) contracting the right half of the stomach. Two patients were shown after perforation of gastric ulcer.

One was a chronic perforation, with limiting adhesions to the liver necessitating complete section of the stomach near the cardiac end before suture, the other a perforation operated upon within six hours of the accident, hour-glass contraction of the stomach existed, to the diameter of an inch, with the perforation in front of it. Free incision of the contraction right and left was made, the edges of the perforation cut away, and the wound in the stomach drawn together, end to end, and separated in the middle as in pyloroplasty. Both patients were in good health.

Mr. F. T. PAUL agreed that Franck's modification of Hahn's operation of gastrostomy was the best, but unless a diverticulum of from 2 to 2½ inches in length could be withdrawn to form the fistulous passage in the abdominal wall, it was better to do Senn's operation, which he thought the more efficient, but not so easily recovered from as Franck's. He had ceased to use all mechanical appliances except Murphy's button, and this he believed might generally be dispensed with. In gastro-enterostomy there was a danger of the intestinal juices escaping into the stomach and of the anastomosis proving only temporary; the former trouble was more common in the posterior operation, and rarely met with when the opening was made in front. This operation could compare with either pylorectomy or pyloroplasty in the benefit afforded to the patient. Pylorectomy was never likely to be a frequent method of operation in cancer of the pylorus, owing to the fact that by the time the diagnosis was made the extent of the growth, fixation, etc., rendered it unfeasible. Pyloroplasty had given him the best results in practice. With reference to the suture of perforated gastric ulcer, he considered that drying out the peritoneal cavity was better than flushing. He always washed viscera that were withdrawn from the abdomen, but limited the internal flushing to localised septic tracts that were isolated by adhesions or otherwise.

Mr. ROBERT JONES referred to a patient with large nodular mass at the pylorus, so fixed that after opening the abdomen pylorectomy was considered undesirable. Now, three years later, the patient was nearly well, and the tumour had disappeared. This was of interest in view of reported cases of gastro-enterostomy for malignant disease, when years had passed and the patient lived. A microscopic examination was necessary before malignancy could be pronounced.

Mr. W. THELWALL THOMAS drew attention to the unsatisfactory state of the knowledge of the pathology of the stomach, two of the cases referred to in the paper being due to syphilis—a cause rarely mentioned. He advocated early operation in cases of gastric ulcer with perforation, and "mopping" in preference to washing out the abdomen.

CLINICAL SOCIETY OF MANCHESTER.

Tuesday, February 20th, 1900.

JUDSON S. BURY, M.D., President, in the Chair.

CASES.

THE PRESIDENT showed a case of idiopathic muscular atrophy and a case of unilateral paralysis of the serratus magnus.—Dr. A. WAHLTUCH showed (1) a girl aged 10 years who had been suffering for twelve months from right hemichorea.

She developed in the early stages of the illness an inequality in the pupils, the left being enlarged and slower in contraction than the right. Vision in both eyes was perfect, though there was slight astigmatism in the right. She attended as an out-patient at the Hulme Dispensary, and was treated twice a week by massage, and was now considerably improved, the twitchings being very rare and slight.

(2) A girl, aged 3 years, suffering from congenital infantile paralysis in the right leg and forearm.

The supinators and extensors of the forearm and the right peroneus longus were chiefly affected. She came to the Hulme Dispensary in August, 1899, the mother stating that the child had never been able to walk. Under treatment by massage and electricity she improved so far that she could now walk and run and extend the fingers, though supination was still difficult.

—Dr. W. MILLIGAN mentioned the case of a patient who suffered from chronic suppurative middle-ear disease, complicated with extradural abscess and lateral sinus thrombosis, and upon whom he had operated with a successful result.

The patient, who had suffered for many years from suppurative middle-ear disease, suddenly developed acute symptoms, namely, pain in the head, high temperature, rigors, nausea, etc. Three weeks after the onset, and when the patient was suffering from profound septic poisoning, operation was performed. A large extradural abscess was opened and drained; the lateral sinus, which was found ulcerated through and thrombosed at the distal end, was freely scraped and packed with gauze. A second deep-seated cervical abscess round the jugular vein was also opened and drained, the vein itself being tied and divided. Localised pneumonia developed after the operation, probably due to a pulmonary infarct. The patient, however, finally made a good recovery.

Dr. Milligan also showed a patient upon whom the Stacke operation had been performed for chronic mastoid disease with satisfactory results, and made some remarks upon the *rationale* of the operation and the methods by which the most rapid healing could be secured.

HEPATIC TOXÆMIA OF PREGNANCY.

Dr. W. E. FOTHERGILL and Dr. J. W. STENHOUSE related the case of a woman, aged 32, who before completing the seventh month of her first pregnancy developed excessive swelling of the legs and body, which extended up to the lower ribs.

The urine turned solid on boiling, and contained a quantity of bile; about a third of a pint was passed per diem. The liver was tender, and its dulness was at first increased. In spite of active treatment the patient became worse. Fluid collected within the abdomen, and the liver dulness became reduced to 2½ inches. The stools were absolutely without bile. Labour was induced as a last resource, and the patient thereafter rapidly improved. In less than a month her urine contained a normal quantity of urea, no bile, and only 0.1 per cent. of albumen. The liver had resumed its normal size, the action of the bowels was normal, and every trace of œdema had disappeared.

The case was brought forward as an example of one of the forms in which hepatic toxæmia occurs during pregnancy. Poisons probably derived from the alimentary canal, which should be destroyed by the liver, were, through liver failure, allowed to remain in the circulation. The kidneys failed to excrete the poison, which produced extreme renal irritation. Other forms of auto-intoxication during pregnancy were referred to.

ANEURYSMAL VARIX AT ELBOW AND INJURY TO MEDIAN NERVE.

Mr. J. E. PLATT showed a blacksmith, aged 41, upon whom he had operated for aneurysmal varix of the brachial artery and median basilic vein and partial division of the median nerve.

Fourteen months previously the man had received a small punctured wound immediately below the bend of the elbow. Two weeks later an operation was performed, and a piece of steel three-quarters of an inch in length was found embedded in the brachial artery near its bifurcation. The median nerve had been found to be divided for the inner three-fourths of its extent. The brachial, radial, and ulnar arteries and the median basilic vein had been ligatured and the nerve sutured. Recovery of the function of the muscles supplied by the median nerve had subsequently progressed slowly but surely, and was almost complete at the time the patient was exhibited.

Some remarks were made upon the treatment of aneurysmal varix and upon the period necessary for recovery after division of motor nerves.

HARVEIAN SOCIETY.—At a meeting on February 15th, W. H. LAMB, M.B., President, in the chair, Dr. S. F. BLACKER read a paper on his experiences in feeding delicate and premature children with modified milk. He said that in cases where cow's milk caused marked gastric disturbance, modified milk or the method of ordering a mixture of cow's milk of varying composition according to the needs of the particular child seemed to be a distinct advance. The mixtures of cow's milk and water given to infants were markedly deficient in fat. Modified milk contained a cream of stable composition, and the amount of fat could be accurately regulated. Modified milk had the advantage that it was made up with milk sugar and not with cane sugar. The percentages of proteids and sugar varied little in selected milk, but the percentage of fat varied from day to day. The materials used were cream with 16 per cent. of fat, separated milk, a 20 per cent. solution of milk sugar and lime water. The advantages of modified milk were that the exact composition was known, the milk only required warming before being given, no cleansing of the bottles was required, and there was not that daily variation noted in ordinary cow's milk. The disadvantages were an increase of trouble to the medical attendant, that pasteurised or sterilised milk for long periods of time was apt to lead to the production of low forms of malnutrition, and that it was only applicable to a certain class owing to the cost. Dr. Blacker considered modified milk was under certain conditions undoubtedly of great service in the feeding of delicate infants, and he now ordered it in cases where it was not possible to get a suitable milk and cream mixture made at home, and where one would otherwise be compelled to use condensed milk or asses milk, or to obtain a wet nurse

Dr. Luff said that the method described was not without possible drawbacks in that the important antiscorbutic elements of the milk might possibly be altered by the treatment. Although it was extremely desirable that the milk should be free from tubercle bacilli, yet there were many beneficent bacteria which it was necessary for the health of the child should remain intact in the milk. Dr. Boxall said that if the milk supply were regulated, as, for instance, he had observed in the Eifel district of Germany, where a well-ordered public milk establishment was to be found in every village and hamlet, even among the poorest, modified milk could be readily obtained anywhere. Drs. Cautley and Sutherland also took part in the discussion.—Mr. Francis Jaffrey read a paper on a case of suppression of urine of sixty hours' duration treated by operation.

An architect, aged 53, was admitted into St. George's Hospital on December 3rd, 1899. On December 1st he was unable to pass any urine whatever, and complained of acute tearing pains in the left groin and lumbar regions with frequent vomiting. No definite tumour could be felt at first, no doubt owing partly to the thickness of the abdominal walls and to their rigidity, but on December 3rd a very definite tumour could be felt; this was thought to be a distended kidney, probably hydronephrosis. Gas and ether were given, and an oblique incision 6 inches long was made in the left lumbar region; a sound was carefully passed into the upper part of the ureter, but nothing was felt; the pelvis of the kidney and the space outside the kidney was freely irrigated with warm water at a temperature of 102° F., a large-sized drainage tube was passed into the pelvis of the kidney, and the wound was sewn up with silkworm-gut sutures, and dressed with cyanide gauze and wool. Two hours later the dressings had to be changed, as it was found that urine was being freely secreted and passing from the drainage tube. Thirty-six hours later all the urine was practically passed by the urethra. The patient left the hospital just three weeks after admission quite well.

Drs. Lamb, Blacker, and Boxall took part in the discussion.

British Orthopædic Society.—At a meeting on February 17th Mr. Chisholm Williams showed cases: (1) of ganglion of the extensor tendons of the foot, (2) caries of dorsal vertebræ, and (3) severe hallux valgus with hammer toes. Remarks were made by Mr. Jackson Clarke, Mr. William Thomas, Mr. Robert Jones, Mr. Noble Smith, and Mr. Muirhead Little. Mr. Williams, in reply, said that he had never found any difficulty in curing ganglia by rupture, provided that enough pressure were applied. In the case of hallux valgus he could trace no history of rheumatism. The patient had flat foot,—Mr. Muirhead Little showed a boy, aged 10 years, with a stiff shoulder, probably due to tuberculosis.

There was a history of injury. When first seen nine months ago the humerus was firmly fixed on the scapula, its head was slightly displaced upwards and inwards. There was no swelling and no sign of local inflammation. Under an anæsthetic the humerus could be easily moved on the scapula through 90° of abduction. Rotation was very limited. There was roughness in the movement of the joint. The other shoulder-joint allowed an unusual degree of movement, so that the boy was able to turn his olecranon to the front. Both elbow-joints were normal except for slight hyperextension.

Mr. Robert Jones said that he thought that the case was one of tuberculous disease with subluxation. The best plan was to keep the parts at rest until inflammation had subsided, and then to try and impart as much mobility to the scapula as possible. Mr. Noble Smith recommended drilling into the head of the humerus. Mr. Jackson Clarke showed a skiagraph of a somewhat similar case. Mr. William Thomas believed that excision would give the best results. Mr. John Poland agreed that the case was tuberculous. His experience was that tuberculosis of the shoulder differed much from that of other joints. Its progress was very insidious, the amount of deposit being at first small, and very slight injury would produce dislocation. He thought nothing short of excision would produce a movable limb. Mr. Muirhead Little replied.

Mr. Poland showed a skiagraph of a case of hallux varus—probably of paralytic origin. He had replaced the part after dividing the tendon of the abductor pollicis and the internal lateral ligament. He also showed casts of the hands of an infant with defect of thumb on one hand and redundant digit on the other.—Mr. Jackson Clarke showed a skiagraph of an old case of hip disease with dislocation, on which he had performed intertrochanteric osteotomy to correct abduction. The pelvis showed secondary changes of shape on the affected side.—Mr. Poland showed a skiagraph of a case of separation of the lower epiphysis of the radius. He pointed out that a radiograph would not show the separation unless there were displacement.

—Mr. Jackson Clarke opened a discussion upon hallux valgus and hallux varus. He considered that congenital cases of hallux valgus were due to intrauterine pressure. The more severe cases of acquired hallux valgus were due to the combined action of a predisposing and an exciting cause. The former was usually rheumatoid arthritis, and the latter wrongly-shaped boots. The more commonly occurring concomitant deformities were hammer toe, flat-floot of the ordinary and of the transverse type, the latter being sometimes complicated by metatarsalgia. In regard to treatment, active and passive exercises, instrumental and operative treatment were considered. When operation was called for, excision of the whole of the head of the first metatarsal bone was to be preferred. Hallux varus was seen as part of congenital equino-varus, and as an acquired condition in severe genu valgum, some cases of paralysis, etc. Pronounced hallux varus was present in some cases of dichotomy of the great toe. Mr. Clarke expressed his belief that every case of hallux valgus was curable, the most troublesome being those in which the second (hammer) toe had been (quite unnecessarily) removed, previously to the patient being seen. Mr. John Poland showed a skiagraph of a remarkable congenital case. Mr. Robert Jones thought the extensor of the great toe generally needed division in hallux valgus. He had seen a boy, aged 14, who had never worn boots, with pronounced hallux valgus. Mr. Tubby thought that 90 per cent. of cases were due to rheumatoid arthritis. If enough bone were removed, there was no need to divide the extensor tendon. Mr. Little referred to secondary shortening of the flexors as well as the extensor. The sesamoid bones were often displaced into the first interosseous space, and had been mistaken for the cause of symptoms and removed by at least one surgeon. Many cases of considerable valgus deformity caused no symptoms without arthritis. Toe posts were useless. Mr. Keetley thought excision the best treatment. He had never succeeded by mechanical means alone. He did not believe that, apart from rickets, hallux valgus affected people who wore no boots. Dr. Blagg said that osteotomy was not enough to effect a permanent cure. Mr. Noble Smith said that in the slighter cases much might be done by persuading patients to wear proper boots. Mr. Jackson Clarke replied.

REVIEWS.

A Handbook of Physics and Chemistry. By H. E. Corbin, B.Sc.Lond., and A. M. Stewart, B.Sc.Lond. London: J. and A. Churchill. 1899. (Cr.8vo, pp. 424, 120 illustrations. 6s.6d.)

This book is intended for the use of students preparing for the examinations of the Conjoint Board, but the authors in their preface are willing to admit that the student should supplement his reading by practical work in the laboratory. We would add that the student should further "supplement his reading" by attending a proper course of lectures illustrated by experimental demonstrations. We therefore prefer to consider the present book as one intended to be used as a supplement to a course of lectures given by a competent teacher. From this point of view the book has many advantages. It may be described as lightly skimming all the subjects included in the syllabus of physics and chemistry, such as heat, electricity, and chemistry, both inorganic and organic—subjects for which the student has usually to refer to at least two separate textbooks.

We congratulate the authors on having avoided a good many errors into which writers of textbooks are liable to fall, and some portions of the book, such as the account of conductivity, are distinctly good. We meet, however, with the usual statement that the molecule of an elementary gas consists (generally) of two atoms, and we are told, in addition, that a molecule is a combination of atoms—a statement which takes no account of monatomic molecules. The deduction of the formula of ozone from its density is decidedly misleading, since it would encourage the idea that ozone had been prepared in a state of purity.

Passing to the more descriptive part of the book, we observe that no account is given of the corrections that ought to be applied to a reading of the height of a barometer. The description of the induction coil is too brief to be of much use. The description of hydrogen, marsh gas, and carbon monoxide as diluents of coal gas "serving only to dilute the heavier gases" is misleading, and the same may be said of the statement, accompanied by an illustration, that starch "consists

of granules with concentric striations and an eccentric nucleus." This last statement can, of course, at the best, only apply to one or two varieties of starch, such as potato starch. Under urea we do not find any mention of Liebig's process of estimation with mercuric nitrate.

In fact, the book, though decidedly useful as notes to be read by students attending lectures, can only be considered to give an outline sketch of the subjects of which it treats.

Introduction to the the Outlines of the Principles of Differential Diagnosis, with Clinical Memoranda. By Fred. J. Smith, M.A., M.D., F.R.C.P. London: Macmillan and Co. 1899. (Demy 8vo, pp. 353, 6 figures. 7s. 6d.)

The special feature of this book is its novel and useful method of classifying and grouping those facts of clinical medicine that particularly bear on differential diagnosis. Early in the introductory chapter appears the method of case taking which is in use at the London Hospital, and the author uses this as a guide in the construction of his book. But we can hardly allow for this particular case-taking method the merit claimed for it by Dr. Smith, that it omits nothing of importance, inasmuch as we can find in it no indication for the examination of the blood in medical cases, or for the investigation of sensibility to pain, although direction is given for the observation of tactile and thermal sensibility. Immediately following the introduction is a useful chapter on micro-organisms and disease, giving the differential diagnosis of the exanthemata, then the different systems of the body are dealt with in turn, omitting, however, the diseases of the blood, and merely mentioning some of the diseases of the spleen. The chapters on the diseases of the thoracic organs, and the final chapter treating of so-called urgency cases, such as those of hæmorrhage, poisoning, and sudden death, are particularly good.

The book is not easy reading; its style is conversational but disjointed, even when not characterised by a severely tabular arrangement. Exception may be taken to the use of the term "physiology" of an organ when its "function" is meant, and to what is stated as a point of fact that an ulcerated sore throat may arise merely from the smell of drains and septic wounds. But in spite of several slight defects, the book should prove eminently useful in grounding the student in the processes of diagnosis, for it is full of valuable information arranged in a very forceful way.

The Purification of Sewage. By Sydney Barwise, M.D., D.P.H., Medical Officer of Health to the Derbyshire County Council. London: Crosby, Lockwood, and Son. 1899. (Cr. 8vo, pp. 162. 5s.)

The author claims that in this "small book upon a large subject" he has dealt with the question of purification of sewage chiefly from a chemical and biological point of view, and in the light of his experience as the medical officer of health for a large county.

In his first chapter he deals with sewage, and explains how it differs in watercloset and non-watercloset towns. He perhaps under-estimates the risks we most of us run from our indoor waterclosets, alleging that "there is no more difficulty in disconnecting a watercloset than there is in cutting off a bath waste."

The next chapter is chiefly concerned with the chemistry of sewage. The statement that the weight the dried sediment loses on ignition "gives the total amount of organic matter which has been burnt off," is perhaps a little inexact. In speaking of the objection often made to the adoption of standards of purification—that sanitary authorities might escape by merely diluting their effluent—the author pertinently observes that this might be prevented by insisting that such effluent should contain at least 2.5 parts per million of nitrogen as nitrates. Were this done it would be necessary to keep a record of the rainfall. The variations in sewages of different towns, the changes undergone in the process of purification, the maximum discharge in pipes of different size at various inclinations are then dealt with, and in the fourth chapter the important subject of river pollution is faced.

The fifth and sixth chapters discuss the treatment of sewage by land and by precipitation, whilst the seventh, dealing with nitrification and Warrington's suggestion f artificial filtration, details the principal results of the celebrated Massachussetts experiments, and the more recent ones at Barking.

The final chapter gives some hints on the choice of a method of purification. We hope a second edition will soon be demanded.

The subject is one of such importance, and one in which new processes are so rapidly multiplying, that in even a few months a book becomes old. We shall be glad for instance to learn Dr. Barwise's experiences of the open septic tank and of the Whittaker tumulus. When the second edition of this excellent little work arrives we shall doubtless find the mistake in the chemical formula for acetic acid on page 111 rectified. The diagrams and tables add considerably to the value of the book, which will be especially welcomed by the engineers and health officers of rural and small urban authorities.

A Practical Textbook of Midwifery for Nurses and Students. By Robert Jardine, M.D.Edin., etc., Physician to the Glasgow Maternity Hospital. Edinburgh: J. F. Clay. (Crown 8vo, pp. 260. 6s.)

In the preface the author states that this book is intended primarily as a textbook for nurses, and also for students "who take out their cases before they have had lectures on midwifery." We believe that in no well-regulated medical school or lying-in hospital are students now allowed to attend women in labour before they have received systematic instruction in midwifery. We trust that Dr. Jardine does not desire to encourage a system fraught with so many disadvantages to students and dangers to parturient women. Midwives and monthly nurses will read his book with interest and profit; it is clear, concise, and sufficiently illustrated, and if it errs at all it is in the direction of including subjects which midwives, with their short training, can hardly be expected to master.

Emil du Bois-Reymond's Vorlesungen über die Physik des organischen Stoffwechsels [E. du Bois-Reymond's Lectures on the Physics of Organic Metabolism]. Herausgegeben von Dr. R. du Bois-Reymond. Berlin: A. Hirschwald. 1899. (Demy 8vo, pp. 208, 26 figures. M.6.)

This book will be welcomed by all students of physiological history, and especially by those who are admirers of du Bois-Reymond, who did so much to make modern physiology what it is. The present volume is in no sense a textbook; it is a memento, a collection of lecture notes, which has been compiled by René du Bois-Reymond from his father's rough notes, and from the notes taken during lecture by several of his father's most celebrated pupils in various years during the long period during which these or similar lectures were delivered by the famous Professor at Berlin.

It treats of such subjects as diffusion, osmosis, capillarity, and so forth; that is, of physical processes which form the groundwork of those vital exchanges termed metabolism. In each case the physical aspect of the subject is given with such completeness that we are forcibly reminded of du Bois-Reymond's friend Helmholtz; after this the physiological bearings are given briefly. We are so apt to think of du Bois-Reymond as an electro-physiologist that it may occasion surprise to some to find how equally at home he was in other branches of physics.

Local Government Law and Legislation for the Year ending September 30th, 1899. By W. H. Dumsday, of Gray's Inn, Barrister-at-Law. London: Hadden Best and Co. 1899. (Demy 8vo, pp. 279. 7s. 6d.)

This work, which is intended to be the first of a series to be issued at the close of each parliamentary and legal year, has been prepared, as stated in the preface, "for the express purpose of bringing together in a convenient form the legislation and cases of the year which affect the powers and duties of county, borough, district, and parish councils, and boards of guardians."

In view of the fact that explanatory notes become an absolute necessity in order to enable the lay mind to grasp the

technicalities of a modern Act of Parliament, the notes appended by Mr. Dumsday to the Infectious Diseases (Notification) Extension Act, 1899, will be of value to the medical profession. The above remarks apply, with almost equal force, to the Sale of Food and Drugs Act, 1899, to which a number of circulars issued by the Board of Agriculture to the clerks of local authorities are appended. These circulars, couched in the graceful language of the Board, serve to explain better than anything else the exact terms of the Act.

Among the cases to be found in the Digest, which occupies the second part of the book, that of R. *v.* Leicester Guardians (15 *T.L. R.*, 611) occupies a prominent position.

Perhaps the most useful feature of the work is the insertion of miscellaneous orders, regulations, circulars, and other official information issued during the year ending September 30th, 1899. Although these can all be had at Eyre and Spottiswoode's for a few pence, it is convenient to have them in a concrete form. The Vaccination Order, 1898, is here set out at length.

The absence of an index is to some extent atoned for by the arrangement of the Public Statutes, Digest Cases, and Miscellaneous Orders, etc., in alphabetical order.

NOTES ON BOOKS.

As far as it goes, the advice contained in *A Handbook with Hints for the Nursery*, by J. Maclean Carvell, M.R.C.S. (London: George Barber, 1899. Demy 8vo, pp. 40. 1s.), as to the feeding and general management of infants and young children is good, but as its title implies the work makes no pretence to being a treatise on the subject. It is well printed, and the author has introduced an innovation in leaving blank the left-hand page so that the young mother may make notes as to the difficulties she may have had to cope with; whether the blank pages at the end of the book for clinical memoranda by the mother and the instructions of the doctor will prove useful remains to be seen.

The major portion of the small book entitled *The Murmurs of Mitral Disease*, by Dr. Edward Mansfield Brockbank (Edinburgh and London: Young J. Pentland. 1899. Demy 8vo, pp. 46. 3s. 6d.), is a reprint of a paper entitled The Causation and Rhythm of the Crescendo Murmur of Mitral Stenosis, which appeared in the *Edinburgh Medical Journal* early in 1899. In 1897 the author upheld the theory that the crescendo murmur of mitral stenosis is produced by blood regurgitating through the stiff, rigid orifice of the narrowed valves, whilst this orifice, which resists closure, is being rapidly diminished in area, and finally obliterated by the action of a strong force, which on its part increases progressively in strength with the duration of the *bruit*. The author thus agrees with those who believe, with Dr. Dickinson, that the murmur is not presystolic, but early systolic—caused by the force of the ventricular contraction, and not by that of the auricle. The author states as his experience that the auricle is not always, if it is ever, strong enough to contract with the vigour necessary for the development of the murmur, since it is as often as not abnormally weak in mitral stenosis. He describes some ingenious devices by which a sound resembling the crescendo murmur may be experimentally produced, which seem to support the theory of causation he advocates. The argument is well worked out and well sustained, and Dr. Brockbank may be congratulated on having furnished a very interesting contribution to the controversy on the exact origin and rhythm of the mitral crescendo murmur.

The third part of Dr. Murrell's *Aids to Materia Medica* (London: Baillière, Tindall, and Cox. 1900. Fcap. 8vo, pp. 93. 2s. 6d.) contains a short but complete account of the various synthetical products employed in medicine of drugs of animal origin, including those obtained from glands and serum. The sketch of the latter, although brief, gives a very excellent account of the therapeutics of the thyroid and thymus glands, suprarenal substance, bone marrow, spinal cord, and cerebral substance, ovarian substance, prostate gland, diphtheria antitoxin, antistreptococcus serum, antitetanic serum, antivenene, mallein, tuberculin, and Coley's fluid. The book will be useful to the student to refresh his memory before examination.

NOVA ET VETERA.

LECTURERS AND LECTURES AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The *List of Lecturers and Lectures at the Royal College of Surgeons of England, 1810-1900*, compiled by Mr. Victor G. Plarr, M.A., Librarian to the College, stirs many memories. The lectures were in part the carrying out of an old trust bequeathed from the United Company of Barbers and Surgeons, and were partly a condition upon which the Government delivered the Hunterian collections into the keeping of the Master and Wardens of the College of Surgeons of England at the beginning of the present century. They have been continued almost without intermission until the present time, and have been divided into those given by the Arris and Gale Lecturers, the Hunterian Professors of Comparative Anatomy, and the Hunterian Professors of Surgery. The lectures have always maintained a very high standard of excellence, and the lecturers have been chosen with such care that many have attained the highest celebrity often on account of the lectures recorded in Mr. Plarr's list.

The very first name on the list is unfortunately one which no lover of John Hunter can mention without execration. Everard Home delivered in 1810 twelve lectures on Comparative Anatomy, and he lectured also in 1813 and in 1822. The lectures were of the highest value, but there is every reason to think that they were the direct outcome of John Hunter's unpublished manuscripts—manuscripts which his unworthy brother-in-law first removed and then burnt to conceal the amount of his indebtedness. We can still picture the scene of the discovery by Clift, the amanuensis and the whole-hearted lover of Hunter. He and Home were driving down to Kew one July afternoon in 1823 to a meeting of the Medico-Botanical Society, and in course of conversation Home mentioned that he had nearly had a fire in his house. Clift asked in all innocence how it had happened, and Home replied "in burning those manuscripts of John Hunter." Clift, stupefied at first, said, "I hope, Sir Everard, you have not destroyed those ten volumes relating to the gallery?" He said, "Yes." "And Mr. Hunter's lectures?" "Yes." "And then," said Clift, "I mentioned twenty others that I had a very perfect recollection of." He told me they were all gone, and I said to him, "Well, Sir Everard, there is only one thing more to do." He said, "What is that?" I said, "To burn the collection." Clift adds, significantly, "We had very little conversation after that."

Home was succeeded as a lecturer by Sir Astley Cooper, one of the finest surgeons of the century, whilst his successor, Sir William Lawrence was thought by his contemporaries to be the best lecturer. Lawrence, in 1817, delivered a course of lectures upon physiology, zoology, and the natural history of man, which, though harmless as we now read them, created the utmost stir amongst contemporaries, and led to their author being branded atheist. Lawrence was succeeded by Brodie and he by Joseph Henry Green, one of the great philosophers of his age. Green in turn was replaced by Herbert Mayo and he by Sir Charles Bell. With Bell ended the direct oral tradition of John Hunter's teaching as expounded by his pupils, for with him the Hunterian or Great Windmill Street School practically ceased to exist.

The lectures on comparative anatomy were suspended from 1834 to 1836, and in 1837 a new era was inaugurated by the appointment of Richard Owen, who continued to lecture until 1855. Busk and Savory succeeded him, for comparative physiology had now been added to comparative anatomy. Then came Gulliver, and in 1863 Huxley began his celebrated courses, in which he demolished the hypotheses so carefully woven by Owen, and taught the anatomy of the invertebrata. Huxley gave place to Flower in 1870, and Flower to Parker, one of the most original scientific geniuses of the century, whose work still awaits a competent editor to reveal its full value.

The selection of professors of surgery has been equally happy. Blizard, Abernethy, Anthony Carlisle, and James Wilson, were able to communicate the Hunterian doctrine as it had been communicated to them by the lips of their master. To them succeeded Thomas Chevalier in 1823, a personality of great interest, though he was in no sense a great

surgeon. Born a Baptist in 1767, he knew that his father had escaped from France in an open boat after the revocation of the edict of Nantes. He published in 1804 a *Treatise on Gunshot Wounds*, which brought him a present of a diamond ring from the Czar of Russia, and led to his appointment as surgeon-extraordinary to the Prince of Wales. Later in life he translated Bossuet's *Universal History* and Pascal's *Thoughts*. He compiled the collection of texts and the various readings for Bagster's Polyglot Bible, and it was his *Remarks on Suicide*, published in 1824, which first suggested that the now hackneyed verdict of "suicide by insanity" should replace the old "felo de se." Chevalier gave place to Bell, Bell to Guthrie (the rough old army surgeon), and Guthrie to Earle and Tyrrell. Then came a long interval—from 1839 to 1868—after which the lectures were rearranged, and the old professorship of surgery gave way to one whose scope included pathology.

The Arris and Gale Lectureship is an interesting survival of two old bequests. The one by Mr. Edward Arris, Alderman and Barber Surgeon, who on October 27th, 1645, "through his greater desire of the increase of the knowledge of Chirurgery did freely offer for ever the sum of 250 li. to the end and upon condition that a humane body be once in every yeare hereafter publiquely dissected and six lectures therupon read"; the other by Mr. John Gale of Bushey, who by his will of August 13th, 1655, left to the Barber Surgeons £16 per annum, payable out of certain houses on Snow Hill in the parish of St. Sepulchre, for the founding of an Anatomy lecture in the name of Gale's Anatomy. The bequests were long in abeyance, but since 1810 lectures have been pretty regularly delivered by lecturers whose work would have done good to the hearts of the worthy old citizens. Amongst the more recent chairs endowed at the College are those allotted to the Erasmus Wilson and the Bradshaw lecturers, whilst the Histological Lectures by Quekett, the Dermatological Lectures by Erasmus Wilson, and the Morton Lectures on Cancer, have served their purpose and are now discontinued.

Mr. Plarr is highly to be commended on the issue of the list of lecturers and lectures. It represents an amount of labour which can be adequately estimated only by those who know how little interest was taken in surgery during the first forty years of the present century, when it appeared to be the whole aim of a surgeon to become an anatomist, instead of anatomy being only a feature of the perfect surgeon.

LITERARY NOTES.

Professor Grassi's work on the natural history of the malaria parasite and the *Anopheles*, which is its extracorporeal host, will appear within the next few months under the auspices of the Accademia dei Lincei. An English translation by Dr. Luigi Sambon, of the London School of Tropical Medicine, will be published simultaneously by Messrs. Macmillan. Dr. Manson will contribute a preface.

We are glad to learn that Major Ronald Ross's thoroughly practical *Instructions for the Prevention of Malarial Fever for the Use of Residents in Malarious Places*, issued by the Liverpool School of Tropical Diseases, has already reached a second edition. We understand that the volume containing the report of the Malarial Expedition to West Africa will be issued by the School very shortly.

In the *Proceedings of the Pathological Society of Philadelphia* of January 1st is a paper by Dr. Francis R. Packard on the earliest recorded *post-mortem* examinations in the United States. The earliest mention of a necropsy performed in America is to be found in *An Account of Two Voyages to New England*, published in London in 1674 by John Josselyn, an Englishman who had spent some time in New England. Josselyn writes:

> A young maid that was troubled with a sore pricking at her heart, still as she leaned her body or stept down with her foot to the one side or the other; this maid during her distemper voided worms of the length of a finger, all hairy with black heads; it so fell out that the maid dyed; her friends, desirous to discover the cause of the distemper of her heart, had her open'd and found two crooked bones growing upon the top of the heart, which as she bowed her body to the right or left side would job their points into one and the same place, till they had worn a hole quite through.

The following case is in the records of Roxburg Church, under date August 20th, 1674:

> John Burge died of ye Winde Collick and was burned the day following. His body was opened. He had sundry small holes in his stomak and bowels, and one hole in his stomak yt a man's fist might pass through, wich is thought was rent with violent straining to vomit, the night before he dyed, for the Watchers observed yt something seemed to rend within him, and he said of it I am a dead man.

The records of the Essex county contain accounts of two cases. On June 1st, 1676, an examination was made of the body of Jacob Goodale in a complaint against Giles Cory. The jury found as follows:

> Several wrongs he both had on his body, as upon his left arme and upon the right thigh, a great bruise wich is very much swold, and upon the reigns of his back, in colour differinge from the other parts of his body, we caused an incision to be made. Much bruised and run with a gelly and the skin broke upon the outside of each buttocke.

Cotton Mather, in his *Wonders of the Invisible World*, says of this case:

> That about seventeen years ago Giles Cory kept a man in his House that was almost a Natural Fool; which Man Dy'd suddenly. A Jury was Impannel'd upon him, among whom was Dr. Zorobbabel Endicot; who found the man bruised to Death, and having clodders of Blood about his heart.

The other necropsy was made on May 2nd, 1678. The following is the report of the chirurgeon:

> Search the Body of one called Edward Bodge. I made incision upon the parte of his Body which was most suspitious, which was upon the Temporall Muscle: I lavd the Bones Beare: We could nott find any fracture in the least, neither was the flesh in any way corupted or putrefied.

In the January number of the *Caledonian Medical Journal*, Dr. William Bannerman discusses the death wound of Oscar. A collection of Gaelic ballads made by James McGregor, Dean of Lismore, in the sixteenth century, and published in 1862, contains two ballads on the battle of Gaura, in which Oscar was slain. The nature and situation of Oscar's wound are related with Homeric particularity:

> The spear of Cairbar jarred my heart,
> It has parted me from my friends:
> He sent the spear of nine points
> Between my navel and kidneys.

A spear of nine points gives the impression of an instrument of slaughter even more fearsome than the Boers have found the lances of our troopers. We accept with relief Dr. Bannerman's explanation that eight of the nine points existed only in the perfervid imagination of the combatants. As regards the description of the wound, we are told that it means not that the point of entrance was between the umbilicus and the kidneys, but that the spear lay within the belly with the navel in front and the kidneys behind it. The hero was tended by Caoilte MacRonain, a warrior-surgeon—for non-combatants appear to have been unknown in those days—who proceeded to explore the wound. "The arm of Caoilte up to the elbow follows the track of the spear; the wound was through to the back." Caoilte gives a gloomy prognosis, but Oscar's grandfather reminds him that he was worse than than that on the day of Capanedin, when there was daylight through his side, and yet they managed to heal him. The hero, however, feels that he is hurt past all surgery, and asks to be carried to a grassy knoll, where he slowly bleeds to death.

Dr. Barclay-Smith contributes to the current number of the *Journal of Anatomy and Physiology* an interesting account of John Halle, an English anatomist of the sixteenth century. The *Compendious work of Anatomie, more utile and profitable than any heretofore in the Englyshe tongue publyshed*, appended to Halles's translation of Lanfranc's *Chirurgia Parva* (A most excellent and learned Woorke of Chirurgerie) is, according to Dr. Barclay-Smith, perhaps the earliest anatomical treatise written by an Englishman now existent. It was published in 1565. Vicary's *Profitable Treatise of the Anatomie of Man's Body* first saw the light in 1548, but this first edition seems to have vanished from the earth as completely as the *neiges d'antan*. Dr. Barclay-Smith thinks Halle's work on the whole superior to that of Vicary. The author has fared ill at the hands of bibliographers. In Watt's *Bibliographia Britannica* there is the entry, "Hallaway. Fruitful and necessary work on Anatomy"; and in Haller's *Bibliotheca Anatomica* there is the still more mysterious entry, "Hallaway fruitful and necessary work on Anatomy." How the mythical Hallaway was evolved from the real Halle may be conjectured by comparing the entry in Douglas's *Bibliographiæ Anatomicæ Specimen* with those cited above. There we find, "Hall a very fruitful," etc. From "Hall a very" to "Hallaway" is a "translation" which is a trifle to the printer's devil. Halle practised at Maidstone, and seems to have suffered from the competition of quacks of various kinds. He relieved his mind on

the subject in "An Historiall Expostulation," which some medical controversialists might find useful for the enrichment of their vocabulary. "Beastly deceivers," "hellhounds," "devilish beasts," "hellish beguilers," "ignorant beasts," "ruffians," "vagabonds," are among the gems of speech to be found in this well of English undefiled.

WEST INDIAN MEDICAL OFFICERS AND THEIR APPOINTMENTS.

Most of our readers are probably aware that during the last few years our West Indian Colonies have been passing through very bad times. Although formerly regarded as the richest possession of the British Crown, their prosperity has been destroyed by a succession of misfortunes. The sugar industry, which was prostrated for a time by the emancipation of the slaves, recovered sufficiently to wage for years an unequal war against hostile tariffs and the competition of foreign bounties. The end has been an immense reduction in the volume of the trade, only very few factories remaining active at the present time. The prosperity of the West Indies has been bound up with that of the sugar trade, and although islands so favoured by Nature must have a future before them, even now indicated by the success of the comparatively young industry of growing cocoa, yet the immediate effect has been to cause a ruinous reduction in the sources of revenue, and to make retrenchment of the somewhat lavish Government establishments an absolute necessity. We need not dilate upon these facts, which are too well known, but it must not be forgotten that the coloured population of these islands lives from hand to mouth and is liable to be precipitated into the gulf of pauperism, where it must be fed and maintained by Government agencies whenever Nature proves unkind. In the past few years the West Indies have been visited by a succession of hurricanes which have caused immense damage to houses and crops, and have given rise to widespread misery and destitution and taxed all the resources of the local administrations. The inevitable result has been the compulsory reduction of the number of officials and of their salaries—that is to say, those who remain have to do more work for less pay, so that there has been a good deal of natural grumbling, and appeals for assistance have been made by the West Indian medical officers to the Council of the Association. The Council has endeavoured to give the required help, and the representations made to the Secretary of State for the Colonies by the late President of the Council were received most sympathetically, Mr. Chamberlain promising to do all in his power to protect the rights of individuals, while recognising with regret the hard necessity which compelled these reductions to be made. But it is to be feared that the local administrations do not always act in this spirit or show due consideration to their medical officers. Not long ago, upon the representations of the Council of the Association, the Secretary of State compelled the Jamaica Legislature to do justice to the medical profession by making provision for the payment for notifications of disease, which the local Legislature proposed to make compulsory but gratuitous.

The Kingston (Jamaica) *Daily Gleaner* has recently drawn attention in a leading article to the case of Dr. Grabham, which appears to present strong *primâ-facie* grounds for the interference of the Secretary of State. The facts as stated in that paper are the following: Dr. Grabham, who has done good scientific work in connection with the mosquito-borne theory of malarial fever, had held since 1892 the offices of Surgeon to the General Penitentiary and Medical Officer to the Jubilee Lying-in Hospital at an aggregate yearly salary of £350. In June last year he found himself suddenly served with a fortnight's notice of retirement from both these offices, but he subsequently accepted reappointment at a salary of £250, being a reduction of £100 per annum, suddenly effected with only fourteen days' notice. We assume that Dr. Grabham is not in the permanent Colonial Medical Service, and that there was ample ground for this retrenchment of expenditure, but it was due to Dr. Grabham to give him reasonable notice, and he may well feel under the circumstances that he has been treated harshly by those in authority. Six months' notice would have been by no means too long. We see with regret that it is stated that the Colonial Office has declined to interfere upon the ground that Dr. Grabham had consented to the reduction, but it is evident that Dr. Grabham's consent was forced from him, as he could not afford to give up the appointments altogether, so that this is not a valid ground for refusing him justice. We hope it is not yet too late for Mr. Chamberlain to make some compensation to Dr. Grabham, and we trust he will issue instructions to prevent the recurrence of such proceedings, which must in the end do greater injury to the public service than to the individual who is the first victim.

HOSPITAL REVENUES AND THE WAR EMERGENCY: AN OPPORTUNITY AND A WARNING.

By Sir Henry Burdett, K.C.B.

It is only now that I have a minute to take up the comment on the letter I wrote to the British Medical Journal on the subject of Home Charities and the War. In the Journal of January 29th it is stated:

> We published last week an interesting letter from Sir Henry Burdett giving a very different view of the situation, and it is to be wished that his opinion may turn out to be correct. Some little hesitation may perhaps legitimately be felt when we learn that the Prince of Wales's Hospital Fund for London, in the organisation of which Sir Henry Burdett has taken so important a share, has thought it advisable since the war began to discontinue its efforts to raise the total of the Fund for this year to £50,000.

I gather from this that you misapprehend the drift of my letter, and especially the action of the Prince of Wales's Fund. I tried to explain in my letter that a wise administrator of a public charity, by extending his appeals over the most fruitful periods of each year, contrived to have his funds well in hand to maintain his charity long before the end of any single period of six months. By such means he was always in a position to stay his hand should special occasions demand special gifts for special funds from the public. In this way, by not worrying his ordinary supporters with appeals at such times, he wins their sympathy, and they invariably respond with increased liberality when he next addresses them on behalf of the institution he represents. This knowledge led the Prince of Wales's Hospital Fund executive to withhold the appeals they had prepared to issue in October, in order to give the war funds a chance, and thereby double the force of the appeal which they will make to certain members of the public in the present year. By the adoption of the policy I advocate, they had already increased the Prince of Wales's Fund by £10,000 a year during 1899 as compared with the previous year, and they thought—and I think wisely thought—that this justified them in exhibiting intelligence in the management of their demands upon the public charity, which I make no doubt will be generally appreciated with the results I have indicated.

I hope, therefore, you will see that so far from the action of the Prince of Wales's Fund in regard to its October appeal exciting any hesitation in the acceptance of my views, it should as a matter of fact commend those views to the acceptance of men of business who have much to do with the support and up-keep of public charities.

So much for the general principle which lies at the bottom of sound hospital, and indeed of all eleemosynary, finance. I exclude for the present purpose the raising of money for religious organisations, because they appeal entirely to sentiment, and are often based upon grounds so specious that they revolt a man of business, who glances through them and edits them with a knowledge of the actual facts. Hospitals have now become a part—and a most important part—of our social life and well-being. The adequate support of hospitals is necessarily vital to the best interests of all classes of the population. In London it has taken quite twenty years to make the general public realise that if they are to have the best hospital accommodation and hospital treatment, they must individually give their support. This view, thanks to the Hospital Sunday, the Hospital Saturday, and the Prince of Wales's Hospital Funds, is now becoming more general, and I look forward to the time—say ten years hence—when every reputable hospital which really does good work for London will have adequate financial means, providing business methods are introduced and maintained in the

management of its affairs. The present season of war, which must necessarily make it more difficult to raise money from voluntary sources at the moment, is an occasion which I welcome, because it will reveal in due course which of our hospitals are managed intelligently and which are not. It makes me positively sick to read some of the statements which are made at meetings of hospitals in regard to the terrible straits to which they are stated to have been reduced financially. Speaking of the London hospitals as a whole I know, as the speakers ought to know, that they possess great financial strength. From a want of intelligent appreciation and the courage to take up the sound position of declaring precisely what the total resources of each hospital are, many institutions have been debased morally and publicly by statements relating to their finances which are not justified by the facts. How many people realise that behind the London hospitals as a whole is a reserve fund amounting to millions of pounds sterling, vested in approved securities, in addition to the magnificent income which they at present derive from voluntary sources. No one is therefore justified in continually crying wolf when dealing with the financial position of the London hospitals. That position is solid and sound, has continuously improved year by year, and can be made secure, I am confident, if the old bad system, of making out a case by muddling the figures, is given up of deliberate purpose, by each institution.

It is probable that this year the actual sums derived from donations, which is the fluctuating item of income at most hospitals, may be relatively much smaller than usual, though this is by no means certain. My advice to these managers who have consulted me has been to assume in advance that there will be a deficiency, and to prepare to meet that deficiency by determining to realise a sufficiency of their invested funds to meet the temporary and exceptional circumstances of the hour. When a hospital has invested funds amounting to two years' expenditure it has a good reserve, and when the invested funds amount to three years' total expenditure, it has enough invested property for safety.

I am convinced that if the voluntary system is to endure, no appeal to the public for enormous sums in order to erect new or to reconstruct and equip old buildings should be entered upon without much hesitation and the fullest consideration. Until comparatively recent years this plan was always followed. To be successful a hospital must depend for its support upon the contributions of the generation to the needs of which it ministers. The object of reserve funds is to make each voluntary hospital reasonably secure against a time of emergency like the present war. It is often contended by relatively rich institutions that the governors must and ought to invest all legacies. Of course it is absurd to say anything of the kind. As a matter of fact, it is quite certain that the London hospitals could not have been carried on if they had not spent a good proportion of their legacies year by year, for each year from 20 to 25 per cent. of the moneys received by the hospitals is derived from legacies, the receipts from this source amounting to no less than £262,000 in 1898, or upwards of 25 per cent. of the total. Formerly, no doubt, the principle of permanent endowments was popular, but to-day it is unpopular. This is shown by the fact that the Prince of Wales's Fund, which offers donors and subscribers an opportunity of giving sums to be retained for investment, only received £66 during 1899 for this purpose, although the total receipts for the year exceeded £42,000. Those hospital managers who expend wisely and promptly the money entrusted to them will receive, and deserve to receive, the largest share of the gifts of the charitable, providing they strive to keep in hand a reserve fund equal to two years' total expenditure. My object in writing these letters is to try and get those interested in each hospital to face the position of the present year, and to organise their scheme of finance upon a sound basis, which will commend itself to the support of all intelligent men of business, who are much more interested and have a much better knowledge of our voluntary hospitals to-day than they have ever had before in the history of these institutions. Those who are wise will read the writing on the wall and act accordingly. Those who persist in continuing in the old slipshod bad ways deserve to suffer, to languish, and to succumb.

Apart altogether from hospital income, there is the question of hospital expenditure. In these latter days the expenditure has increased by leaps and bounds, a fact which is largely due to the circumstance that demands have been made upon the funds of the hospitals for new objects, some of which are in fact excessive. Any committee of consultation such as I have suggested, upon which the medical staff should be represented, should go carefully into each item and head of expenditure, and lay down the principles upon which it may properly be based, and then fix a maximum which should not be exceeded. Four great sources of expenditure ought to be controlled and fixed. They are:

1. *Expenditure upon Medical Appliances, Instruments, and Dressings.*—This has become too prodigal and has so led to much waste owing to an absence of control in the general administration of stores of this description and their use, to say nothing of the improper purposes to which they are sometimes put, especially by young and inexperienced members of the nursing staff and by students in the wards and out-patient departments.

2. *Expenditure upon the Nursing Departments.*—Formerly arrangements were totally inadequate, both in regard to the number of nurses employed and the accommodation and food supplied. Now I see a growing tendency on the part of some in authority to unduly increase the numbers of the nursing staff and to add to the expenditure upon this one item sums which could be and ought to be saved. There is a unit of efficiency which can be had for the maximum sum a head per annum, which unit ought to be ascertained and adhered to in every well-managed hospital.

3. *Expenditure upon New Buildings.*—Here the tendency is to increased cost, and anyone would do a public service who would take the trouble to get out the cost of each of the more recent hospitals of the Metropolitan Asylums Board and of certain of the larger general hospitals, and to extend the return for a period of twenty years, exhibiting in each case the cost per bed of (1) the site, (2) the buildings, (3) the furniture. It was thought when St. Thomas's Hospital was erected that the expenditure upon that institution was so prodigal as to amount to an abuse of public money. But compare the cost of a bed at St. Thomas's Hospital with the cost of a bed in some of the types of hospitals I have indicated, and people will begin to realise that the time has arrived to put a stop to an extravagant system which results in the wasteful expenditure of a great many thousands of pounds every year, for this mammoth of waste is growing continuously.

4. *Medical Schools.*—Every well-administered hospital should refuse to devote any portion of the revenue and the funds which have been entrusted to its managers for hospital purposes, to the purposes of medical education or the medical school. Those of us who have sent our sons to be educated for the medical profession are prepared to pay an adequate sum for such education, as we have to pay adequate sums for their education in any other profession they may choose to enter. There is a very deep feeling of resentment growing up in the public mind against all such illegitimate expenditure on the part of hospital managers in these days. Another and an even greater evil attaches to it from the circumstance that the more eleemosynary you make the education and training of medical students the more medical students you will have, and the less chance will qualified medical men have to make an adequate living by devoting their lives to the treatment of the sick.

I am merely indicating the directions in which inquiry and regulation are essential. The necessity for economy and a reconsideration of methods, which the effect on hospital finances of the present war may produce, should be turned to practical account by hospital managers in the present year. If adequate steps are taken in the directions indicated, the ultimate result will yield an abundant income for all well-managed voluntary hospitals throughout the metropolis. The public are not in favour of rate-supported hospitals. They wisely favour the voluntary principle, for the sufficient reason that under no other system has or can equal efficiency be secured.

At the meeting of the West Kent Medico-Chirurgical Society in April a discussion will take place on the Midwives Bill.

THE CENTENARY OF THE LEICESTER MEDICAL SOCIETY.

THE centenary of the Leicester Medical Society was celebrated by a dinner which was held in the County Assembly Rooms, Leicester, on February 27th, when about one hundred members and guests were present.

The chair was taken by Dr. FRANK M. POPE, the President of the Society, who, in giving the toast of "The Queen," referred to the interest which she had always shown in the welfare of her soldiers in South Africa, and in particular to the visits which Her Majesty had paid to Netley Hospital. The Chairman also gave the toast of "The Prince of Wales and the rest of the Royal Family," and both toasts were most loyally received.

Mr. CLAUD DOUGLAS, F.R.C.S., gave the toast of "The Navy, Army, and the rest of Her Majesty's Forces," and dwelt on the admirable spirit with which the difficulties encountered in the present war had been met. The toast was acknowledged by Colonel Hogarth, commanding the 17th Regimental District, and by Colonel SARSON, commanding the Leicestershire Volunteer Battalion.

Sir WILLIAM BROADBENT then gave the toast of "The Leicester Medical Society," and, while admitting that the meetings of medical societies might not be exhilarating, and might even be made exasperating by the presence of "the society bore," yet maintained that when well conducted they were in many ways beneficial to the profession. It was good for the reader of a paper to have the discipline of ordering his ideas, and to find them criticised or confirmed by others. At such meetings the young man fresh from the hospitals and laboratories met the man of old experience. The elder might hear from the younger of the progress made since his student days, while the young man would often find his theories shattered against the walls of ripe experience. To both benefit ensued, and thus ideas were disseminated and clarified. But a medical society did more than this by the opportunities which it afforded for personal intercourse. It fostered an honourable feeling amid the inevitable rivalry of professional competitors, it mitigated jealousies, allayed suspicions, and kept down the tendency to quackery which sometimes displayed itself even within the bounds of the medical profession itself. The Leicester Medical Society had undoubtedly done much good work in these directions during the hundred years of its existence. Looking back to the state of medicine at that date, it might be remembered that Hunter was just dead, that Astley Cooper was writing his great work on hernia, and that Abernethy had not yet reached the height of his fame, for in looking over an old copy of the *Transactions of the Medical Society of London* he had found him described merely as "a very respectable gentleman." At that time there were only two medical societies in London—the Medical Society, which still flourished, and the Society for the Advancement of Medical and Surgical Knowledge, which was dissolved when the Royal Medical and Chirurgical Society was founded. Curiously enough, as he gathered from the volume of *Transactions* to which he had already referred, the Medical Society of London was at that time much interested in influenza, and had issued a circular containing a number of questions, the answers to which discovered considerable differences of opinion. To refer to vaccination was, he knew, to tread on dangerous ground in Leicester, but he would mention that Manchester, at about the time the Leicester Medical Society was founded, had resolved to give to the poor the benefit of vaccination, and had voted money for its gratuitous performance. He had that night for the first time made the acquaintance of an antivaccinator, though he had not ventured to discuss the question, as he was well aware that one might just as well try to discuss a beautiful sunset with a colour-blind man as vaccination with an antivaccinationist. He believed that the principles of vaccination were destined to extend, and already it had been applied to the prevention of typhoid fever.

Dr. POPE, in reply, said that all the members of the Society would appreciate Sir William Broadbent's sympathetic and kindly speech. He then sketched briefly the history of the society. It was an off-shoot from the Leicester Permanent Library, which also still flourished. The Medical Society, which was at first a Book Society, was founded by Mr. Thomas Paget, Surgeon to the Leicester Infirmary; he held the office of Steward, an office which seemed to have combined the functions of president, treasurer, and secretary, for the first forty-two years of the Society's existence. He was succeeded by his son, who remained Steward until 1868, and at his death in that year the Society was reconstituted with a president, treasurer, and secretaries. It now held monthly meetings for the reading and discussion of medical papers, and two informal social meetings. The influence of the Society had been most happy, and he believed that there was no town where a better fraternal feeling existed than in Leicester.

Mr. C. J. BOND, F.R.C.S., who gave the toast of "The Royal Colleges of Physicians and Surgeons and the learned Medical Societies," observed that the general body of the profession looked to the Royal Colleges to raise the position of the profession, and to diminish the disadvantages under which its members still laboured. He observed that the governing body of the Royal College of Surgeons was still elected by a small part only of the body corporate, and expressed the opinion that the Royal College of Physicians had not taken sufficient note of the fact that the number of pure physicians in provincial cities was tending to increase, owing to the circumstance that many men who attained success in general practice subsequently practised as consulting physicians, though they might perforce remain outside the pale of the College. Mr. Bond then referred to the work of the General Medical Council, which he thought might be more active in the interests of the profession, and concluded by referring to the medical societies which were represented by their presidents.

Dr. W. S. CHURCH (President of the Royal College of Physicians) warmly defended his College from the suggestion that it was indifferent. The College was constantly endeavouring to maintain a high standard of professional conduct among all connected with it, and frequently took steps to check conduct which it considered to be injurious to the best interests of the profession. But there were certain evils which the Colleges could not touch. He was very conscious that "undercutting" was a real evil, leading inevitably to neglect of duty, but the Colleges could not interfere to regulate the financial relations of practitioners with their patients; that must be done by the pressure of professional opinion acting through such societies as the Leicester Medical Society, which to quote the words Harvey addressed to the Royal College of Physicians, helped its members "for the honour of the profession to continue in mutual love and affection among themselves."

Mr. TWEEDY, Vice-President of the Royal College of Surgeons, also replied, and said that as one who had for many years taken a deep interest in what were called medical politics, and a considerable share in their discussion he entirely concurred with what had fallen from the President of the College of Physicians. He had all along held, and experience confirmed him in the opinion, that questions of professional procedure could not be dealt with by the Colleges. Interprofessional relations, involving as they did far-reaching social and economic questions, could only be dealt with by voluntary societies. In conclusion, he said that he regretted that he should be called upon to respond in the absence of the President of his College. The call to go to South Africa had come to Sir William MacCormac at a moment most inopportune to him, when he was deeply immersed in the preparations for the celebration next summer of the centenary of the College. He hoped that circumstances might permit Sir William MacCormac to return in time for that celebration, but all would feel that he had done right in responding to the call, for not only were his services of value as a surgeon, but he possessed a very special knowledge of the organisation needed in the field.

Dr. F. T. ROBERTS responded for the Medical Society of London, and Mr. T. BRYANT for the Royal Medical and Chirurgical Society.

The toast of "The Mayor, Magistrates, and Corporation of Leicester," was given by Dr. J. ST. THOMAS CLARKE, and acknowledged by the MAYOR, who said that the municipality had spared no trouble or expense to make Leicester a clean and healthy town, and had succeeded in reducing the death-rate from 23 to between 14 and 18 per mille. With regard to small-pox, he believed that in the system of isolation which

had been adopted under the advice of their former medical officer of health, Dr. Johnston, an effectual means had been found to prevent the disease, which had in fact been introduced into Leicester on more than one occasion, but had not spread. The toast was also acknowledged by Mr. Fielding Johnson.

The toast of "The Guests" was then given by Mr. G. C. Franklin, F.R.C.S., and acknowledged by the Archdeacon of Leicester, the President of the British Medical Association (Dr. J. Ward Cousins), and Sir James Sawyer of Birmingham.

The last toast, that of "The President," given by Mr. C. Crossley, was very cordially received, and briefly acknowledged by Dr. Pope.

THE R.A.M.C. SOUTH AFRICA FUND.

A meeting of medical men in Birmingham was held on February 26th at the Medical Institute to take steps to form a Committee to co-operate with the Central Committee in London, which is seeking to provide the non-commissioned officers and men of the Royal Army Medical Corps now serving in South Africa with comforts, especially in the way of clothing, which are provided for territorial regiments by the regimental or county funds. Mr. Gilbert Barling, who was in the chair, pointed out that this being the case the men were likely to be left out in the cold unless the work was taken up by the medical profession and the lady members of their families. On the motion of Dr. Rickards a General Committee was formed and an Executive Committee of ladies elected; Mrs. Bennett May and Mrs. Lloyd Owen were appointed Honorary Secretaries, and Mrs. Hallwright Honorary Treasurer. It was pointed out that those men who had volunteered for ambulance work had been put on the strength of the corps, and would therefore participate in the benefits of the fund.

As our readers are aware, a special appeal has been made in the columns of the British Medical Journal to medical men to contribute the sum of half a crown each to this fund. By such contributions, which would not be felt by the individual donors, a considerable amount would be raised, and at the same time the men who are assisting in the great work of the medical profession with the army in South Africa at the present time would feel that they had the sympathy of the profession at home. We have the pleasure of announcing the following subscriptions to this fund which have been received since our last issue:

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Dr. J. Stenson Hooker, Rothesay Bank, Clive Vale, Hastings.
Major R. C. Lever, Denton House, Iffley, Oxford.
Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie, I.M.S. (retired), 39, Queen's Road, Aberdeen.
Mr. Edward Mathews, Mount Prospect, Redditch.
Major J. Raby, Ashford House, Barnstaple.
Dr. Henry Simpson, Glen Moria, Conway.
Dr. W. Johnston Smyth, Durley Gardens, Bournemouth.
Colonel J. Tidbury, R.A.M.C., Medical Officer in Charge, Barracks, Winchester.
Dr. Henry Waldo, 19, Pembroke Road, Clifton, Bristol.
Mr. E. C. R. Ward, F.R.C.S.I., Belmont, Castle Connell, co. Limerick.

Subscriptions may also be sent to the Editor of the BRITISH MEDICAL JOURNAL, and will be acknowledged in the JOURNAL. The amount received for the Half-crown Fund up to and including Wednesday, February 28th, by the Editor is £101 8s. 0d. Cheques and Postal Orders should be made payable to the "R.A.M.C. South Africa Fund" and crossed "Holt and Co."

THE HEALTH OF DUBLIN.

THE inquiry into the health of Dublin was resumed on February 21st.

The Rev. Gilbert Mahaffy, M.A., said great improvement had taken place in the last twenty-five years as regards the cleanliness of and the housing of the poor. The Corporation and the Artisans' Dwellings Company had provided sanitary dwellings for the poor. Cottages were better than flats. The very poor would degrade any building provided for them. The decent poor should be provided for. Intemperance was the strongest cause of the low vitality. The infant mortality among the very poor was seven times greater than in the professional classes. This was due to inherited alcoholism, insufficient nourishment, want of sleep, and the rotting dwellings.

Dr. Charles Moore, Certifying Factory Surgeon, Dublin, said that many of the dairy yards and slaughterhouses were offensive and a menace to health. The by-laws were tolerably stringent, but were not carried out. Bad food was consumed, especially fish and vegetables. He knew of a case where 200 tons of manure had matured in a dairy-yard. Drink should not be sold to children.

Mr. Delaney, on behalf of the Victuallers' Association, said there were sixty-three slaughterhouses in Dublin constantly inspected under stringent by-laws by the Corporation. Only one prosecution was necessary in 1898. The abattoir was inconvenient and expensive, and carcasses were allowed into it which would not be seen in a properly-conducted slaughterhouse.

Dr. Barton, Dispensary Medical Officer, said his district had been improved by the destruction of bad houses. Some of his suggestions as to the closing of houses and remedying sanitary defects had been unheeded by the Corporation. A large proportion of the houses were in a dirty state, and led to disease.

The inquiry was continued on February 22nd.

Dr. George White advocated an improvement in the removal of refuse, by which the rubbish would be carried away, and be allowed to fall from one closed receptacle into another.

Dr. Langford Symes, Physician to the Brunswick Street Children's Hospital, said there was an improvement in infant mortality during the past ten years. Among the very poor deaths under 5 years were more than six times greater than in the well-to-do classes. More attention should be given to the feeding of children; the milk should be sterilised and the ground purified. This would prevent much of the mortality due to infantile diarrhœa.

Dr. Ninian Falkiner, Dispensary Medical Officer, said the recent high death-rate was due to measles and influenza. The type of measles was severe. Nearly all young children were insured. Pneumonia, broncho-pneumonia and meningitis were the principal causes of death among children. The hospital accommodation broke down owing to a hitch. He had recommended special district nurses to help in the epidemic, but did not get them. He also had suggested that a shed to hold 1,600 cases should be provided in a suitable locality. The tenements were insanitary; 100 should be demolished each year; they should be limewashed yearly to prevent infantile diarrhœa. Tuberculosis should be notified, and the houses inhabited by sufferers from it should be disinfected.

The Superintendent of the Cleansing Department of the Corporation said there were 10,000 dustbins in use; they were emptied early in the morning; tenement bins were removed three times a week. The emptying of the bins caused dust to be blown about. The tenement yards should be concreted. The tenement dustbins should be emptied daily. They were turned into privies; their contents were liquid and oozed from the carts.

At the meeting on February 23rd:

Dr. Edgar Flinn, Local Government Board Inspector, stated that the recent abnormal death-rate was due to measles and influenza. The causes of the general high mortality were: The method of disposing refuse, the want of public and domestic cleansing, the deficient accommodation for housing the poor, the condition of the cowsheds and dairy yards, the presence of slaughterhouses within the city, the want of sufficient hospital accommodation for infectious cases; the defective administration of the Infectious Diseases Act, especially as regards notification; defective drainage, the condition of the subsoil, and, lastly, intemperance and poverty.

PRESENTATION.—Dr. A. H. Robinson, who resigned the post of Medical Superintendent of the Mile End Infirmary, which he held for 15 years, to take up a similar appointment at the Islington New Infirmary, Highgate, has been presented by the staff of the Mile End Infirmary with a black marble and bronze timepiece, bearing a suitable inscription, and a case of solid silver fruit spoons.

THE next examination of the Medico-Psychological Society of Great Britain and Ireland for the certificate in nursing attendance on the insane will be held on Monday, May 7th. Schedules to be filled and signed can be obtained from the Registrar, Dr. Benham, City Asylum, Fishponds, Bristol, to whom they must be returned at least four weeks before the date of the examination.

FATAL POISONING BY PÂTÉ DE FOIE GRAS.—M. Papillon reports a case of poisoning from this luxury, the patient being a labourer, aged 40, who is cautiously described in the clinical report as fairly sober and but little impaired in health by alcoholism. He was admitted into the Hôspital Beaujon, Paris, under Dr. Fernet, for violent indigestion, which had set in two nights previously after a meal composed entirely of *pâté de foie gras* of bad quality. It is possible that in lands like our own, where this article of diet commands a price which puts it above the means of labourers, bad samples may sometimes be sold to persons who fear no evil from so eminently respectable a dish. The worst signs of irritant poisoning developed in this patient. Vomiting and diarrhœa were severe; a rash like urticaria appeared, then albuminuria set in. The conjunctivæ became yellow, but not from true jaundice: then choleraic symptoms developed, and the patient died in an algid condition six days after admission. Renal and hepatic mischief, such as are seen in cholera, were detected in this case after death. Unfortunately, as usually happens, no sample of the noxious food of which the patient partook could be procured for bacteriological examination.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 3RD, 1900.

THE CENSUS (GREAT BRITAIN) BILL.

THE Bill for the taking of the census on March 31st of next year has been printed, and will be passed during the present session of Parliament. Its main features are similar to those of the Census Act of 1890, but there are some changes of interest. The most important is perhaps the one altering the limit of rooms from four to five, in connection with which the occupier of a dwelling is required to state the number of rooms occupied by him. The statistics to be prepared under this head will possess a great value if based upon fairly accurate data. There was, however, grave reason for suspecting that the similar data for tenements having four rooms or less than this number at the last census were far from trustworthy, in consequence partly of the absence of a definition of the meaning of the word "room." It is difficult to understand, on any other supposition, the differences as to overcrowding shown by the comparative conditions in the great towns, as tabulated on p. 23 of vol. iv of the last census report. The standard of overcrowding taken was tenements having more than two occupants a room. The mistakes occurring in the above table were probably due to the varying interpretation of the word "room" in different towns. The mistake is on a par with that which led to the statement made in a paper published in 1895, in which it was asserted that Paris had only 14 per cent., while London had 20 per cent., and Buda-Pesth 74 per cent., of overcrowded tenements. The question of definitions will doubtless be left in the hands of the General Register Office, and requires most careful consideration.

Medical officers of health will welcome Clause 9 of the Bill, particularly if, as may be hopefully anticipated, the information be given promptly. This clause empowers the Registrar-General, "if he thinks fit, at the request and cost of the council of any county, borough, or urban district, to cause abstracts to be prepared containing statistical information with respect to the county, borough, or district, which can be derived from the census returns, but is not supplied by the census report, and which, in his opinion, the council may reasonably require." In this, as in many other important matters of detail, we shall be dependent on the "instructions issued under this Act." In particular, this will be the case with regard to the mode in which the enumeration districts are "to be formed." In previous articles the need for strict regulations forbidding the formation of enumeration areas which will overlap wards or other municipal divisions has been emphasised, and its importance need not again be insisted on.

The Act applies to Scotland as well as England. Some important reforms, repeatedly urged in these columns, in the interests of sanitation and of vital statistics, which are inextricably inter-related, are conspicuous by their absence from the Bill. There is no provision for a permanent census staff, and there is no provision for an intermediate census in 1906. It is not too late to remedy the last omission, and we hope that an effort will be made in this direction before the Bill leaves the House of Commons.

THE BACTERIAL TREATMENT OF LONDON SEWAGE.

A SUPPLEMENT to the "second report" on the bacterial treatment of crude sewage, by Professor Clowes and Dr. Houston, has been issued by the London County Council. In the first division of this report Professor Clowes confirms, on the strength of further experiments, the statement contained in the second report that the aëration of the coke beds has proved satisfactory. In the earlier report it was stated that the surface of each piece of coke had become coated with a soft matter containing some fine coke particles, sand grains, cotton and woollen fibres, and diatoms, but consisting chiefly of straw, chaff, and woody fibre. Owing to this deposit the sewage capacity of the bed decreased at something like 1 per cent. of its original amount a week. Cellulose is known to be so slowly acted on by bacteria that there was little advantage to be expected from merely resting the filters. It has been shown, however, that a rough sort of sedimentation reduces the loss of capacity from 1 to 0.64 per cent. a week. Further experiments of this kind, which are on similar lines to those described in the BRITISH MEDICAL JOURNAL upwards of a year ago as being carried on at Leeds, are in progress.

The second division of the supplementary report, dealing as it does with Dr. Houston's bacteriological investigation into the nature of the deposit upon the coke, is of special interest. Examination by the microscope revealed, in addition to the matters already mentioned, infusoria, diatoms, and minute worms, but the "sewage fungus" was not present to any great extent. The bacteria stained by the ordinary aniline dyes were present to a less extent than might perhaps have been expected. Diluting the deposit with sterilised water and making cultures from it showed that there were about 1,800,000 bacteria per gram of deposit. The actual weight of these 1,800,000 germs Dr. Houston estimates at 0.0000147 of a gram, or perhaps less. The spores of B. enteritidis sporogenes were at least 10,000, but fewer than 100,000 per gram of deposit. They were more numerous in proportion than in the crude sewage, B. coli less so. Proteus-like germs, B. arborescens and an allied form, were abundant. An organism apparently identical with B. prodigiosus was isolated, and a red-colour-forming bacillus was cultivated from the pus of a guinea-pig inoculated with the deposit. Numerous bacilli with drumstick spore formation were detected in cover-glass preparations, and two mice inoculated with minute portions of the deposit died with all the symptoms of tetanus.

Several organisms gave the colour reactions of B. tuberculosis, and many of them resembled that bacillus morphologically, and were arranged in clumps. Some, however, were shorter, plumper, and took the fuchsin stain more readily. A considerable amount of space is devoted to the discussion of these "acid-fast" bacteria, though not more than the importance of the subject deserves. None of the animals inoculated with the Barking or Crossness coke deposit (for obvious reasons only with very minute quantities) developed tubercle. One animal, however, inoculated with a similar deposit from a bacterial bed longer in use died after a few weeks, and presented the usual appearances of tuberculous infection. The report is accompanied by ten photomicrographs and a drawing of the microscopic appearances of the acid-fast bacteria. As many of these latter are found in the effluent from the beds, we hope Dr. Houston may be asked to continue this most valuable research, which he has hitherto conducted with so much judgment and care. Though it may be of less moment in regard to an effluent discharged into a tidal river, it is of the utmost importance as to a river the water of which is afterwards to be used for domestic purposes that the question of the passage of tubercle bacilli should be determined. May it not also be of some importance where the effluent is used to irrigate pasture land or to water cattle?

It would be interesting, especially in this relation, to know whether any considerable number of acid-fast bacilli pass the second bacterial bed—the fine bed as it is called, where Mr. Dibdin's process is more fully carried out. We infer that the deposit, the subcutaneous injection of which was followed in one case by infective tuberculosis, was from a primary, not a secondary, filter bed. It will also be noticed that it was the deposit retained in the bed, not the effluent, that gave this positive result. The question would naturally arise whether the silting up of the bed may not be a wholesome protection to the community. So far it is not claimed to have been proved that the tubercle bacilli which have passed through even the first, or coarse, bed, are alive. The investigation is a most important one, and we hope it will be carried much further.

HOSPITALS AND THE WAR FUNDS.

SIR HENRY BURDETT some two months ago[1] was good enough, in response to our request, to give us his opinion on the question of the effect upon the finances of the hospitals, and of hospitals in London in particular, of the special funds for various purposes connected with the war which had then been opened, and which have since been multiplied. That letter is well worth the attentive perusal of anyone interested in hospital finance, as is an article by Sir Henry Burdett, published in another column this week. In the letter he expressed his belief that the circumstances of the present time will not have "any material effect upon the resources of the home charities," and in his article he explains that the discontinuance of the appeal on behalf of the Prince of Wales's Fund to raise a balance of £50,000 for last year's income (on which we commented in our issue of December 30th) was only temporary, and he regards the present emergency as an "opportunity" as well as a warning—an opportunity which will test the soundness of the financial system of the various hospitals which endured its strain, and reveal "which of our hospitals are managed intelligently and which are not."

In the meanwhile what is to be done? Sir H. Burdett says truly enough that competent hospital financiers so arrange their receipts that the contributions are coming in regularly all the year round. But what if the contributions of each quarter are quite inadequate to balance the necessary expenses of that quarter? There are, we fear, many, even among hospitals having the highest and most deserved reputation in London, which have either no accumulated resources, or only to an extent which a constantly recurring deficit would exhaust in a very few quarters. It is the weak point of our voluntary hospital system that the public has founded so many hospitals in London with so little endowment that in any time of distress they are in serious difficulties, and even in ordinary times are compelled to resort to methods of raising funds which are both expensive and undignified.

That the present crisis is a time of special distress for our hospitals cannot, as far as we can judge, be disputed. The various war funds must amount to a million—of which London has contributed its full share—and now the famine in India is appealing irresistibly to public charity. If Londoners can, after the war is over, forget the call it has made on their liberality, and find as much money in their pockets as before to meet similar claims, it will be well. But even in this cheerful aspect of the matter, it will be much more than three months before the end is reached. More than that time has already elapsed since the declaration of war, but we still seem far from having reached such a happy state of things.

Sir H. Burdett's test of sound hospital finance is that the hospital should have two years' income in reserve as capital invested in good securities; and with three years' income so invested he pronounces the hospital to be safe. We should have thought this rather an inadequate reserve fund, but let that pass. What is to be said of a hospital which does not possess any such reserve? Is its management to be condemned as "unintelligent" when the managers may never have had any opportunity of collecting such a fund? And if it were so condemned what is to be done? Unless we are misinformed, such a condemnation would touch more than one of our most useful and most valuable schools of medicine. Sir Henry seems to assert that some hospitals deliberately conceal from the public the amount of their invested funds. But this surely cannot apply to those hospitals which render their accounts on the plan prescribed by the Hospital Sunday Fund; and we find it difficult to believe that any respectable charity would be guilty of such deception. A full statement of liabilities and assets should of course form a part of every yearly account.

We must, however, repeat that many London hospitals, and some in large provincial towns, though managed with all the financial and administrative skill possible, are too poor to bear a serious fall in income for any long period. The remedy can only lie in increased subscriptions, or in endowments to an extent sufficient to tide over the lean years. The Prince of Wales's

[1] BRITISH MEDICAL JOURNAL, December 23rd, 1899.

Fund was started to procure for the hospitals in London, which always find it difficult to make both ends meet, a very large number of small subscriptions which it would annually distribute among the necessitous hospitals (provided, of course, their management was satisfactory) in proportion to their necessities. We do not say that the Fund has failed to do this, but it has not as yet entirely succeeded in this most useful and most practical object. We rejoice to hear from Sir H. Burdett that any relaxation in prosecuting it is only temporary. It would be a scandal to so great and rich a city if a movement originated and so ardently pursued by the Heir to the Crown failed to raise an income of £100,000 a year for distribution among the great hospitals. Meantime, those institutions are, we believe, in temporary difficulties, and they deserve doubly generous support from all who can afford it, and in so saying we are glad to be supported by the high authority of Sir Henry Burdett.

THE GOVERNMENT HOUSING BILL.

It will be remembered that in the Queen's Speech there was a promise of a Bill to amend and improve existing legislation in the matter of housing the working classes. We have in these columns repeatedly dwelt upon the need of such amendment, while urging local authorities to use zealously the powers they at present possess. We hoped that the Government Bill would have proved worthy of the occasion, and would have met and removed many of the difficulties which local authorities have encountered in coping with one of the greatest evils of our large urban populations.

All or nearly all who have seriously studied the problem have agreed that, after private enterprise and philanthropic companies have done their best, there yet remains work in connection with the housing of the weekly wage earner which legitimately falls upon the shoulders of municipal and sanitary authorities. To buy land in large towns for the purpose of erecting workmen's dwellings is a costly affair; to clear away slums in order to replace them by sanitary dwellings, at the present rate of compensation to owners of such property, is almost ruinous. Yet economists demand that as a rule municipal housing schemes must pay for themselves; there must be no payment of rent out of rate; the average ratepayer must not be charged with any portion of the rent of sanitarily housing his less fortunate neighbours. There is much-needed simplification of procedure, compensation should be paid at less exorbitant rates, the responsibilities of landlords and leaseholders need to be brought home to them more directly. A registration of ownership is in some cases advocated. The borrowing powers of local authorities, especially in the matter of terms for repayment of the sinking fund, need rectification. Some mode of fixing fair rents, as in the case of Irish land courts, has been demanded by more ardent reformers.

The Government Bill, which has now been printed, will produce a feeling of disappointment, and the form of the measures appears to have been so chosen as to preclude any very considerable reform of the Act of 1890. It is all very well so far as it goes, but it goes a very little way. By its title the Bill purports only to amend Part III of the former Act. Its provisions, embodied in two clauses, are inadequate. Clause 1 gives power to any council other than a rural district council to exercise outside its district the same powers in regard to the establishment or acquisition of lodging-houses for the working classes, as it now has within its own area only. Clause 2 facilitates the adoption of Part III of the Act of 1890 by councils of rural districts.

Truly the mountains have been in labour, and the product, if not ridiculous, is eminently unsatisfactory and inadequate.

How far valuable amendments may yet be introduced into a measure so slim in its original conception remains to be seen. The surprise and disappointment voiced by Sir Walter Foster at the birth of the bantling will probably be endorsed by all serious sanitary reformers.

DEATHS FROM DISEASE IN SOUTH AFRICA.

It is commonplace to say that in war disease kills more men than the enemy, but so far this has not been the case with the British forces in South Africa. Down to the week ending February 24th the number of officers and men killed in action has been 1,652. To this must be added 294 officers and men who have died of wounds, making a total of 1,946 officers and men killed by the enemy. Down to the same date the number of officers and men who have died of disease is returned as 723. This appears to be a small proportion, and no doubt really is so, when it is remembered that it includes deaths from disease among the besieged garrisons, but we regret to notice that the last return shows a serious tendency to an increase in the number of deaths from disease. The number reported to have died from disease during the week ending February 17th was 50. On February 9th the Under-Secretary for War stated in the House of Commons that the force then in South Africa numbered 179,000. Since then reinforcements have been going out and invalids have been coming home, but in smaller numbers, and we shall probably not be far wrong if we take the force in South Africa in the week ending February 17th at 180,000. This would give a death-rate from disease for the week of about 14 per mille per annum. But in the week ending February 24th the number of deaths from disease had risen to 117, and this would give a rate of nearly 34 per mille per annum. The rate which would prevail in this country in a population of similar age-distribution to the age-distribution of the army would be about 7 per mille per annum, so that it will be seen that the rate among the troops in South Africa was last week very high. We can only hope that the relief of Ladysmith—which, at the time we write, appears to have been accomplished—and the greater freedom which General Buller, as well as Lord Roberts, will, it is to be hoped, in future enjoy in the choice of camps, may have the effect of bringing about a considerable diminution in the number of deaths from disease in the forces in South Africa.

DEATH CERTIFICATION.

Every few weeks bring under notice the present unsatisfactory condition of the law as regards death certificates. Last week the Deputy-Coroner for Central London held an inquest on an infant whose mother was attended in her confinement by one of the lady students of the British Lying-in Hospital. The child died without having been seen by a medical practitioner; and Dr. Drummond Robinson, one of the visiting officers of the hospital, gave a signed certificate stating that death was due to convulsions, with instructions that the certificate, when filled in with the name and address of the infant, should be taken to the coroner, who would decide as to the propriety of an

inquest. The inquest was held, and the coroner remarked that Miss Sanderson, who had attended the mother, had not only filled in the name and address of the child, but had also inserted a date, making it appear as if Dr. Robinson had seen the child on February 15th, whereas he had never attended or even seen the child. The coroner condemned this action, and laid it down that certificates should not be given unless the body had been seen. The jury added a rider to their verdict, expressing the view that: (1) The body of a deceased person should be viewed by the medical practititioner signing the death certificate before he issued the same, especially in cases where he had not seen the deceased alive or shortly before death: (2) no death certificate should be signed and issued until the necessary particulars had been entered; (3) as there was no resident medical officer at the British Lying-in Hospital, the Committee should consider the advisability of having telephonic communication with the physician of the out-patient department, so that he could be speedily advised of cases of emergency. The jury practically endorsed the recommendation of the Select Committee on Death Certification issued in September, 1893, namely, "that a medical practitioner in attendance should be required, before giving a certificate of death, to personally inspect the body," and when unable to do so should attach a certificate signed by two persons verifying the fact of death. It is obvious that such a procedure as was followed in this case might, in the absence of a watchful coroner, lead to the concealment of crime, and that inspection of the body in all such cases is essential before a medical man signs a certificate. As no fee is paid under the existing law for the certificate it would be unfair to impose such a duty, but the recommendation of the Select Committee that a fee should be payable for every death certificate would meet the difficulty. In this case Dr. Robinson very properly sent the case to the coroner for consideration, but his subordinate erred in filling up the certificate so as to make him appear responsible for attendance on the infant. All this points to a lax practice with regard to death certification which urgently needs regulation by a more effective law. Such cases, we fear, will be greatly multiplied if any unwise legislation for the regulation of midwives is passed, as these new registered midwives, if employed to attend cases, will naturally fall back on medical men for death certificates. It is essential that the law should be amended to meet cases like that under notice, as well as many others in which burial can now be obtained without proper inquiry. In this case if the certificate had not been submitted, as it properly was, to the coroner, the child would have been buried without question. We have repeatedly urged the Government to take up this question and legislate on the lines of the report of the Select Committee. Is there any hope, we ask, that they will do so this session?

THE LEICESTER MEDICAL SOCIETY.

The centenary of the Leicester Medical Society, which was celebrated on February 27th is one of the oldest societies in the country. It was founded by Mr. Paget, Surgeon to the infirmary, and was at first, and indeed down to a date subsequent to the middle of the century, a book society, which only met twice a year to look after the maintenance and increase of its library. Without ceasing to take care of its library, it has during the last quarter of a century become an active medical society, meeting once a month for the reading and discussion of papers, and includes nearly all the medical practitioners in Leicester. The members of the Society when they resolved to commemorate the centenary of its foundation by a dinner interpreted their duty as hosts in a very liberal manner, and a large and representative gathering of medical men from London and from Birmingham and other Midland towns supported Dr. Pope, the President of the Society, who was in the chair. Two rather amusing passages of arms took place during the speaking after dinner. One was between Sir William Broadbent and the Mayor of Leicester. Sir William Broadbent had been sitting beside the Mayor, but he protested that he had not ventured to discuss the question of vaccination, for "one might as well discuss sunset with a colour-blind man as vaccination with an anti-vaccinationist." The Mayor, when it came to his turn to speak, retorted that it was the medical profession which suffered from defective vision in this matter, that the system of isolation of small-pox elaborated at Leicester had proved itself efficient, and that in fact that town had set an example to the world. We can only hope that the example may not be generally followed, for the antivaccination enthusiasm of Leicester leads its citizens to tolerate a system of isolation and quarantine of the most drastic kind; but without such a system the risk of failure would be vastly greater than it is. The other passage of arms was between Mr. C. J. Bond, one of the surgeons of the Leicester Infirmary, who proposed the toast of "The Royal Colleges of Physicians and Surgeons, and the Learned Medical Societies," and the gentlemen who responded to that toast. Mr. Bond, as will be seen from the report published at page 524, referred to matters of fundamental importance to the profession. They cannot be discussed within the space of a paragraph, but there is no doubt truth on both sides. While we have no sympathy with the attitude of the countryman who, when his waggon became bogged, prayed to Jupiter to pull it out instead of putting his shoulder to the wheel, yet we venture to think that Mr. Tweedy, whose opinion on any question of the kind is deserving of the greatest respect, seems disposed to carry the policy of non-intervention too far. If it were necessary to define the part which the various agencies may take, it might be said that it was the part of the Medical Societies to prevent, of the Colleges to admonish, and of the General Medical Council to punish.

MEDICAL COURTS OF HONOUR IN PRUSSIA.

The institution of professional courts of honour is not a new one in Prussia. The army has its courts of honour, and so has the legal profession. On April 1st similar courts for the medical profession are to come into existence. The plan of organisation is simple. In each district where there is an *Aerztekammer* (representative body of doctors) a court is to be established; it will consist of the president of that body, three of its members, and, in addition, a judge of one of the local courts. A central supreme court will act as court of appeal, and is to consist of (1) the Director of the Prussian Ministerial Medical Department, (2) four members of the Central Committee of the *Aertzekammern*, (3) two medical men specially elected by the King of Prussia. The courts are to exercise jurisdiction over all certified practitioners excepting medical officers of the army and navy and others for whom a State disciplinary Board already exists. The scope of jurisdiction is defined by the new law as follows: "Every medical man is bound to exercise his profession conscientiously, and by his behaviour—both in his professional and in his private life—to show himself worthy of the respect which his profession demands. A medical practitioner who fails in the duties incumbent on him is subject to the infliction of a penalty by the court of honour. Political, scientific, and religious opinions or actions of a practitioner as such can never form the subject of proceedings in a court of honour." Evidently this paragraph presents ambiguities. These were the subject of strong but finally ineffectual remonstrances during the debates on the Bill in the Prussian Diet. The first part leaves it doubtful whether or not a medical practitioner's private life may be brought under the jurisdiction of the new

court; the second part by the words "as such" opens the door wide to possible illiberal construction on the part of the court. The penalties which the court may inflict are: (1) Warning; (2) reprimand; (3) fine, not exceeding 3,000 marks (£150); (4) temporary or permanent withdrawal of the right to elect members of the *Aerztekammer* or to be elected a member. In special cases the publication of the court's judgment may be ruled. In a number of paragraphs the forms of procedure are laid down. The trial is not to be public; only members of the *Aerztekammer* and persons who have the President's special permission are to be admitted.

THE CEYLON BACTERIOLOGICAL INSTITUTE.

Ceylon is to be congratulated on the establishment of a bacteriological institute thoroughly equipped with the latest and most approved scientific appliances. The institute is the gift of Mr. J. W. Chas. de Soysa, a gentleman of Ceylon distinguished for his many philanthropic acts, and is made in commemoration of Her Majesty's Jubilee. The offer, which was made in 1891, but which was then declined by the Government, was, through the good offices of Sir William Kynsey, renewed in 1897, and then accepted. The building was opened on January 31st by His Excellency the Governor, Sir Joseph West Ridgeway, K.C.B., K.C.S.I., who said that he had much pleasure in accepting on behalf of the Government Mr. de Soysa's splendid gift, which he believed would be eminently useful, and over which the whole colony had good reason for rejoicing. He had no doubt that the medical profession of the island would derive great benefit from it. Dr. Perry, P.C.M.O., in reading a statement of the history and objects of the institute, said that it would form the teaching school for bacteriology in Ceylon, and would render invaluable service in the diagnosis of such diseases as typhoid fever, plague, cholera, diphtheria, hydrophobia, etc., besides offering a home for original research in diseases peculiar to the tropics. Dr. Marcus Fernando has been appointed Director.

ANTIPLAGUE INOCULATION IN INDIA.

The Government of India has with admirable promptitude published a resolution on the subject of Mr. Haffkine's system of inoculation against plague. The resolution states that, having regard to the fact now established that inoculation sensibly lessens the liability to plague while greatly increasing the chances of recovery, and that healthy persons run no risk from inoculation, the Government accept the opinion of the Plague Commission that it should be encouraged, and the Viceroy hopes that every effort will be made to explain the advantages of the system to the people. We are glad to see that Lord Curzon also pays a high tribute to Mr. Haffkine and to the manner in which he has attacked a difficult problem. This is all the more welcome, for the Commission seemed hardly to have done justice to Mr. Haffkine in that part of its report to which reference was made last week. Mr. Haffkine is to be congratulated on the way in which his system has passed through the ordeal of the Commission's criticism. The value of the method of prophylaxis devised by him has been established, and we have no doubt that every effort will be made still further to improve the prophylactic fluid itself. In referring last week to the somewhat severe criticism to which this fluid had been subjected by the Commissioners, it was pointed out that the opinion expressed in the report was to the effect that the prophylactic agent was contained in the bacterial sediment alone, and that, contrary to Mr. Haffkine's views, the supernatant fluid possessed no protective effect. The bases on which the Commissioners rested their opinion would appear to have been mainly some early experiments on the microbes and their toxins by Yersin, Borrel, and Calmette, and some observations made by Lieutenant Liston, who we gather was employed by the Commissioners to carry out some laboratory experiments on the lines indicated by them. The account of the experiments by Dr. Balfour Stewart to determine the efficacy of the different constituents of Haffkine's plague prophylactic, which is printed at page 501, is an able contribution to the question, and it will be observed that his observations do not support the view adopted by the Commissioners. In fact, his experiments lead to the opposite conclusion. Dr. Stewart very properly recognises that many more observations are needed, but his experiments have subsequently been repeated and confirmed by Captain Milne, I.M.S., at the Bombay Laboratory. The position taken up by the Commissioners does not find confirmation in the results of the most recent experiments on animals. The Commissioners have contended that Mr. Haffkine's results on anticholera inoculation do not present any analogy to the case of plague inoculation, but the evidence on this head is by no means conclusive. On the other hand, it is incontestable that the case mortality in plague, unlike the case mortality in cholera, has been considerably reduced, and unless and until it is shown that the toxin has no effect on the case mortality in man, the hypothesis which Mr. Haffkine has put forward provisionally as the most probable cannot safely be set aside.

PREPARING FOR PLAGUE.

In view of the fact that Germany may be invaded by plague this summer four courses of lectures have recently been given in Berlin, with the object of providing the country with a number of men who have been taught the bacteriological diagnosis and the treatment of the disease. Men who had worked for at least a year at a recognised bacteriological laboratory were admitted free on condition of their reporting cases of plague to the authorities at the Institute for Infectious Diseases, and allowing them to investigate them. Others were admitted on payment of a fee (£2 10s.). Similar courses of instruction are to be given in other parts of the country. The commercial relations of this country, with its long seaboard, have compelled the British authorities to look into this matter at an earlier date, and it is believed that—at any rate in all the larger seaports—the precautions taken by the medical officers of health are such as to ensure the recognition of any cases of plague or suspected plague. But it must be remembered that this is a difficult task, owing to the existence of extremely mild forms of plague commonly known as pestis minor. It is not impossible, therefore, that a case might escape the vigilance of the port sanitary authorities, and it is open to question whether the example set by Germany might not be followed with advantage in this country, so as to afford opportunities to medical officers of health and others to become acquainted with the bacterial diagnosis of plague, and to afford opportunities for the discussion of the best means of dealing with the earliest cases, and with rats in any place which there is reason to suppose may have been infected.

RATS AND THE PLAGUE.

A report on bubonic plague by Dr. Walter Wyman, Surgeon-General of the Marine Hospital Service, U.S.A., has been published by the Secretary of State, Treasury Department, U.S.A. Surgeon-General Wyman gives a concise history of the epidemic of plague, of the measures taken to prevent its spread, and of the methods of treatment. He is disposed to place great reliance on the suggested value of Yersin's serum, both as a prophylactic and a curative agency, although as a prophylactic he regards Haffkine's fluid as by far the more potent and lasting. He holds that it has not been distinctly proved that merchandise plays a part in the spread of plague. He observes that "the vitality of the plague bacillus outside the human body is very short," and "its virulence is rapidly lost under conditions of heat,

light, exposure to sun and air, etc." Two factors are of serious consideration in the spread of plague. "One is the ambulant, a walking form, or pestis minor, in which the symptoms are mild, the patients not being confined to bed," and "the other feature is the possibility of infected rats on a vessel." An account of the quarantine regulations recommended by the German, French, and Japanese Governments, forms a useful feature of this pamphlet. All agree that rats are especially concerned in the propagation of plague, and that in all cases steps must be taken to rid the cargoes of ships of rats, both before the cargo leaves the ship and also when the goods are brought on shore. For this purpose the German authorities encourage port watchmen to keep rat-catching dogs, and further award a premium to the owners who keep dogs for the purpose. In fact, according to Surgeon-General Wyman, the whole question of guarding against plague consists in destroying infected rats and carefully inspecting passengers by land and sea.

THE COST OF ASYLUMS.

THE London County Council, soon after its formation, completed a fifth London county asylum at Claybury, and, in view of the excess of patients over beds, at once proceeded to build a sixth asylum at Bexley and a seventh near Epsom. It was hoped that it might be possible so to build asylums as not to exceed some £175 a bed, and that the two asylums might accommodate 4,000 persons at a cost not exceeding £350,000 apiece. Unfortunately such anticipations have proved to be over-sanguine, and on Tuesday the Council considered reports from its General Purposes Committee upon the reasons for the large excesses for which the Asylums Committee asked sanction. In the case of the Heath Asylum, Bexley, the actual cost was £70,000 above the estimate of £330,000, and in the case of Horton Asylum, Epsom, the excess, it is anticipated, will amount to £117,000. It appears from the discussion that the so-called "estimate" was rather of the nature of a sum which, at the time, it was hoped might prove sufficient, and was rather intended as a check upon extravagance than as a figure arrived at by measuring up of quantities and the careful analysis of specifications. To regard such excess as "scandalous," as an evening contemporary has affected to do, is obviously to abuse language, in view of the fact that the Committee of Inquiry, and indeed all who have studied the matter, assert that there has been good value for money, and that the urgent demand for accommodation, and the excessive cost of boarding cases out of London, justified the pressing forward of the erections with as little delay as possible. Moreover, if we compare the cost per bed at the Bexley Asylum with that at other recently constructed asylums, it is clear that the actual cost has not been excessive. At Claybury the cost per bed was £236, at the new West Somerset Asylum £377, while the projected North Stafford Asylum is estimated to cost for the building alone £280 per bed. It is, however, satisfactory that the Council, through its Asylum Committee, is considering the propriety of varying the stereotyped plan of erecting huge palatial buildings for the insane, and it remains to be seen whether more humble and cottage-like accommodation will not be more efficient and quite as economical.

DERELICT CHILDREN.

THE State Children's Aid Association is to be congratulated on having obtained an Act (Poor Law Act, 1899) increasing the power of Boards of Guardians over derelict children. The effect of this Act is to place the guardians *in loco parentis* as regards children (up to the age of 18 years) who are or have been maintained by them, if the Board passes a resolution that this is necessary in consequence of the desertion, mental deficiency, vicious habits, or criminality of the parents. In the past the eagerness of such parents to possess themselves of their children as soon as they had reached an age at which they were able to earn anything has been a serious drawback to the work of ameliorative training, and the educative measures adopted have too often been frustrated by the untimely interference of parents. The consequence has been the perpetuation of pauper taint, since the child never has a proper start towards earning an honest livelihood, and too often in the end becomes an addition to the criminal class. The very reasonable reform secured by the Act gives a better prospect for such children in the future, as it is to be hoped that under proper tutelage up to 18 years of age they will have a better chance of attaining some measure of discretion and of independence in industrial employment which will place them beyond the evil example and influence of their parents.

THE SANITARY CONDITION OF NATIONAL SCHOOLS.

AT a recent meeting of the Statistical and Social Inquiry Society of Ireland, Professor Anthony Roche read a paper on the sanitary defects prevailing in many of these schools, his information being based on evidence extracted from the reports of 5 head inspectors and 12 district inspectors of these schools, and also on official returns. There are 8,651 of these schools, and on their rolls 808,467 pupils. Some of the buildings are reported as "altogether unsuitable." In many the want of proper ventilation, warming, lighting and cleansing is painfully apparent. A considerable number, even of the recently built vested schools are described as "very unsatisfactory structures, faulty in plan, unsound in construction, and, as a result, rapidly falling into bad repair." Professor Roche gives the following analysis of the sanitary condition of the schools:—Out of 8,542 schools the out offices are described as middling or bad as regards cleanliness in no fewer than 2,068, and in 823 there are no offices at all—a state of things bad both from the moral and the sanitary point of view. As regards the state of repair of the buildings 2,411 schools are reported as middling or bad, while furniture and apparatus are reported as middling or bad in 2,590 schools. Premises and playground are middling or bad in 2,344 schools, while there are no playgrounds in 1,577. Space accommodation is middling or bad in no fewer than 1,713 schools. Out of 808,467 pupils only 211 passed in the subject of hygiene. Moreover, in only one of the 5 training colleges is this subject taught, and of 843 internal students in these colleges training for teachers only 3 passed in it. Professor Roche considers that he has shown conclusively that "sanitary laws are neglected and outraged in many of the national schools in Ireland," and that, whoever may be responsible for the existing state of things, "no shifting of responsibility can or should be allowed to hinder or delay reform." He acknowledges that the greatest credit should be given to the head and district inspectors for their repeated and emphatic condemnation of the sanitary abuses that come so constantly under their notice, and that improvements have been made in many of the schools in sanitary matters. He observes that the schools directly under the Board are better kept and inspected than those under their partial control, but he considers it altogether inexcusable that the plans and inspection of new schools should be defective in any instances, and urges that those responsible should be made answerable, and that means should be taken to keep the new structures in repair—a precaution frequently neglected at present. He recommends that the National Board should have a competent adviser, that a special sanitary report should be made and published on every national school, and that where the sanitary defects cannot be removed, a new building should be insisted on. He advises that the instruction of teachers in hygiene should be made compulsory, and that simple instruction in the elements of sanitation and the best me-

thods of preserving health and preventing disease should be printed and circulated among the children. The state of affairs revealed by Professor Roche's inquiry cries aloud for the reform which he earnestly advocates. The facts that only one out of the five training colleges provides for teaching hygiene, and that only three students trained as teachers, while only 211 out of the 808,467 scholars passed in this subject, indicate the slight consideration which is given to sanitary conditions and to education in the elements of hygiene. The reports of the inspectors show how frequently their protests against the discreditable and noxious conditions coming under their notice have been ignored. In the reports referred to, which are very unlikely to be at all exaggerated, graphic sketches are given of the many sanitary defects which prevail—of faulty buildings, of out offices "offensive alike to health and decency, of schoolrooms unventilated and uncleansed, and in some instances unprovided with any adequate means for warming in winter. Of the measures suggested by Professor Roche the most important appear to be the sanitary inspection of the schools, followed by a report to the school authorities; the provision for careful inspection and control of all plans for new buildings; the provision of ample floor and cubic space, of sufficient means for ventilating, warming, and lighting, and of adequate outoffices in keeping with modern sanitary requirements; the arrangement for systematic cleansing and repairs; the instruction of teachers, and, through them, of the scholars, in the elements of hygiene; and, finally, the appointment of a competent sanitary adviser to the National Board. Nothing less than these measures will secure the conditions which are requisite for maintaining the comfort and healthy development of the children, as well as for protecting them from the many forms of infectious disease to which they are especially susceptible. It would be of great interest, and probably of great service, to institute a similar inquiry into the conditions of the elementary schools in the other divisions of the United Kingdom. For, although vast improvements have been carried out in many places, there can be little doubt that in others gross sanitary defects still exist.

A PROPOSED INTERNATIONAL COUNTERBLAST TO TOBACCO.

Not long before Field Marshal the Duke of Wellington retired from the office of head of the British Army, he issued the famous "General Order No. 577," in which he declared in a tone of horrified surprise that "the Commander-in-Chief has been informed that the practice of smoking, by the use of pipes, cigars, or cheroots [cigarettes as yet were not], has become prevalent among the officers of the Army, which is not only in itself a species of intoxication occasioned by the fumes of tobacco, but undoubtedly occasions drinking and tippling by those who acquire the habit; and he entreats the officers commanding regiments to prevent smoking in the messrooms of their several regiments and in the adjoining apartments, and to discourage the practice among the officers of junior rank in their regiments." One vainly tries to imagine how the Iron Duke's feelings would have been shocked had he lived to see the *matériel* for "the practice of smoking" figure most prominently among the comforts sent by a grateful and admiring nation to the soldiers fighting its battles among the kopjes of South Africa. But he would have found a soothing unction for his sentimental bruises in the programme of the Congrès International Antitabacique, which is to be held in Paris this year during the great Exhibition. No fewer than 106 questions are proposed for the consideration of the Congress; and tobacco is to be discussed and doubtless solemnly damned from the historical, chemical, physiological, pathological, hygienic, social, criminological, and several other points of view. In order probably that the anathema may have the maximum of fulminatory power, the minds of members are to be prepared by a recital of the laws, decrees, interdicts, and ukases launched by kings and emperors against the accursed weed from the humanitarian point of view; and of the bulls, encyclicals, ordinances, and other documents hurled at it by popes, bishops, pastors, rabbis, marabouts, etc., from the religious side. After the study of models of such varied excellence in the art of malediction, the Congress should be able to produce a curse beside which that of Ernulphus will sound like the bleatings of the Curate of Assesmilk-cum-Worter. Perhaps, however, the Congress will refrain itself from cursing, for among the questions proposed is the following: What has been the result of the anathemas launched against tobacco by civil and religious authorities? We venture to say that we can save the Congress the trouble of debating that question by supplying the answer offhand. Pontiffs and potentates have banned and anathematised tobacco, but, as was the case after the hail of ecclesiastical lyddite of which the Jackdaw of Rheims was the occasion, nobody seemed one penny the worse. Some of the other questions on the programme of the Congress are curious. Members are seriously invited to decide whether marriageable girls should in choosing a husband give the preference to smokers or non-smokers. Marriageable girls, in this country at any rate, will doubtless settle that question for themselves. Another question to be considered is whether the company of women who smoke is as pleasant and as much sought after as that of those who do not. This is a problem which will be solved differently by different individuals. The organisers of the Congress have evidently taken to heart Fletcher of Saltoun's famous declaration, "Let me make the songs of a nation, and let who will make its laws," for they invite offers of a popular antitobacco songs and of an "antitobacco comedy." The subject is scarcely inspiring, and we do not expect that literature will be enriched with any brilliant production, for it would be difficult *ex fumo dare lucem*.

A FRENCH SURGEON OF THE OLD SCHOOL.

At the annual meeting of the Société de Chirurgie, held a few weeks ago, M. Paul Reclus gave an interesting account of the career of Maisonneuve, whose name is already moss-grown, as if he had been half a century in his grave, though he died only three years ago. Maisonneuve was a pioneer in many previously unexplored regions of surgery, and he had the fate which too often befalls the man who is in advance of his time. He opened up more than one path which has since led others to lands flowing with milk and honey, but which brought him only to a Dead Sea of failure and disappointment. Not that he would have acknowledged defeat; he was ever a fighter, and to him doubtless the joy of the fray was in itself worth living for. But a spirit so bold and a genius so inventive might have accomplished far more than he did had it been his fate to work not in the dimness of the misty dawn of scientific surgery, but in the fuller light of a later day. Maisonneuve was born of good middle class stock at Nantes in 1809. He had a brilliant career as a student, the teachers who influenced him most being Dupuytren and Récamier. As a hospital surgeon he soon distinguished him by originality in conception and boldness in execution. In 1845 he proved by experiments on animals the feasibility of intestinal anastomosis, but he was thought by the surgeons of that day to have imagined a vain thing. He was the first to perform blepharorrhaphy, to use forcible dilatation in stricture of the rectum, to tie the vertebral artery. He did excellent work on fracture of the fibula, on hip disease, on hernia. But his name will probably be remembered

chiefly in association with internal urethrotomy. Maisonneuve was too strong a man not to have enemies, and his manners had not that repose which suits the inhabitants of academic Olympus. He is reported to have said to a distinguished surgeon who was lamenting the bad conditions of his hospital as conducing to a high rate of mortality, "There are no bad hospitals; there are only bad surgeons." To a student new to Paris who asked for guidance as to the choice of a surgical teacher, he said, "There are but two surgeons in Paris, Chassaignac and myself; and Chassaignac, too, is an imbecile." Tumours that no one else would touch were sent to Maisonneuve, who dared all that might become a surgeon, and perhaps a little more. So free was he with the knife that a house-surgeon is said to have asked on one occasion which part of the patient was to be carried back to bed. He was like Othello, rude in his speech, and he was something of a bully to his pupils. But he sometimes found his match. A student who was afterwards one of the leading physicians in Paris attracted Maisonneuve's notice by the foppishness of his dress and a certain affectation in his speech. The surgeon said to him, with a snarl of contempt, "Well, young gentleman, do you know what distinguishes a man from an ape?" The student coolly answered, "Yes, sir; politeness." The bystanders expected to see the presumptuous youth crushed by the wrath of the great man; but Maisonneuve only laughed, asked the lad to dinner, and was ever afterwards one of his staunchest friends. In 1872 came the time for retirement from public work, and after 1879 Paris knew Maisonneuve no more. He buried himself in a country house in Brittany. He made no acquaintances among his neighbours, and received no visitors. But from miles round there came poor people on foot, on horse or donkey back, in carts and in wheelbarrows, to whom he freely gave the benefit of his skill, dressing their sores, setting their broken bones, breaking down ankyloses, reducing hernias, and removing cataracts. When he died the country folk crowded around his coffin for three days to sprinkle holy water on his dead body, and pray for the repose of his soul; and to this day they bless the memory of the old man with the rough tongue but the skilful hand which wrought miracles of cure.

THE JUBILEE OF THE ROYAL METEOROLOGICAL SOCIETY.

Dr. C. Theodore Williams has been elected President of the Royal Meteorological Society, which celebrates its jubilee this year. The Council desired that the office in the jubilee year should be held by a past President, and at first elected Mr. G. J. Symons, F.R.S., who, however, has been compelled to resign owing to illness. The Society was founded on April 3rd, 1850, and the Council have arranged to hold a commemoration meeting at 3 P.M. on April 3rd next. The President will deliver an address, and delegates from other societies will be received. In the evening a *conversazione* will be held at the Royal Institute of Painters in Water Colours. On the following day, April 4th, the Fellows will visit the Royal Observatory, Greenwich, and in the evening will dine together at the Westminster Palace Hotel.

THE FORTHCOMING CONGRESS ON TUBERCULOSIS AT NAPLES.

It is now definitely announced that the Congress on Tuberculosis which is to be held in Naples will open on April 25th and close on April 28th. The Congress, which is under the patronage of the Queen of Italy, will be presided over by His Excellency Professor Guido Baccelli, Minister of Public Instruction. The work of the Congress will be divided among four Sections as follows: 1. Etiology and Prophylaxis, with Professor A. De Giovanni as President; 2. Pathology and Clinical Observation, with Professor E. Maragliano as President; 3. Treatment, with Professor E. De Renzi as President; 4. Sanatoria, with Professor D. Capozzi as President. Among the members of the various Committees are Professors A. Celli, A. Murri, C. Bozzolo, G. Bizzozero, A. Maffucci, E. Marchiafava, G. B. Queirolo, V. Cervello, C. Forlanini, and most of the leading clinicians and pathologists of Italy. Besides members of the medical profession, sanitary engineers, members of Italian and foreign leagues and associations for the prevention of tuberculosis, philanthropists, and students of social science may take part in the proceedings. The subscription is 20 lire; this entitles to all the privileges of membership, including special reductions on railway and steamer fares, and admission to all receptions and entertainments. The latter include excursions to Palermo, Pompeii, and the Gulf of Naples. The wives of members of the Congress are admissible on the same terms. Applications should be addressed to the Segretaria del Comitato del Congresso contro la Tuberculosi, 1ª, Clinica Medica, Ospedale di Gesù e Maria, Napoli. An English Committee is being formed in connection with the Congress.

GERMAN SURGICAL CONGRESS.

The twenty-ninth annual Congress of the German Surgical Society will be held in Berlin from Wednesday, April 18th, to Saturday, April 21st. Among the communications promised are the following: Professor Czerny (Heidelberg), the Treatment of Inoperable Cancer; Professor Krönlein (Zurich), Intestinal and Rectal Cancer, and the Results of their Operative Treatment; Dr. Rehn (Frankfort-on-Main), Improvements in the Technique of Amputation and Resection of the Rectum; Dr. Israel (Berlin), Operations on the Kidneys and Renal Calculi; Dr. von Angerer (Munich), Operations for Abdominal Contusion; Dr. Credé (Dresden), the Simplification of Gastrostomy and Enterostomy; and Dr. Lexer (Berlin), Teratoid Tumours in the Abdominal Cavity and their Treatment.

COLLECTIVE INVESTIGATIONS OF CANCER IN GERMANY.

On February 18th a meeting of prominent medical men was, at the invitation of Professor von Leyden and Dr. George Meyer, held in the Medical Department of the Cultusministerium, Berlin, to take steps for the institution of a collective inquiry into the diffusion of cancerous and cognate tumours. An organising Committee was appointed for the purpose.

LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The Milroy Lectures at the Royal College of Physicians of London will be given by Dr. F. J. Waldo on March 8th, 13th, and 15th. The subject selected is Summer Diarrhœa, with Special Relation to Causation and Prevention. The Goulstonian Lectures will be given by Dr. P. Horton-Smith, on The Typhoid Bacillus and Typhoid Fever, on March 20th, 22nd, and 27th; and the Lumleian Lectures, by Dr. W. B. Cheadle, on March 29th, April 3rd and 5th, on Some Cirrhoses of the Liver. The lectures will be given each day at 5 P.M. The Croonian Lectures will be delivered this year by Dr. F. W. Mott, F.R.S.

THE CHAIR OF MEDICINE AT EDINBURGH.

We are asked to draw attention to a notice which appears in our advertising columns stating that the Curators of Patronage of the University of Edinburgh are prepared to receive applications from candidates for the Professorship of Medicine in the University. Such applications must be lodged with Mr. R. Herbert Johnston, W.S., Secretary to the Curators, 66, Frederick Street, Edinburgh, not later than April 14th.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Plague and Famine in India.—Lord George Hamilton informed the House of Commons that the number of deaths from plague in Bombay City during the week ending February 16th, was 583. The number for the corresponding week last year was 712. As regards the famine the latest estimate of the area affected is now 445,000 square miles, and that of the population affected 61½ millions, as against 550,000 square miles, and 49 millions, as given on February 1st. The number of persons in receipt of relief the Secretary for India estimates to be about 4 millions, as against 3 millions in the corresponding week of 1897. On the other hand, the relief arrangements are more advanced, the people are more ready to accept relief, the prices are on the whole less high, and the death-rates, as far as known, lower than in the famine districts in 1897.

Deaths from Disease in South Africa were the subject of a question addressed to the Under-Secretary for War early in February. Mr. Wyndham then stated that there had been 240 deaths among the troops from enteric fever and 268 from other forms of disease. The returns issued by the War Office on February 22nd show that 50 deaths from disease were reported in the week ending February 17th, and that up to that date 576 deaths had occurred from disease, of which a large proportion must have been from enteric fever. For the week ending the 24th February there were 117 deaths from disease, which raise the total to 723.

The Census of 1901 Bill, introduced by Mr. Chaplin, provides for the enumeration of the people on Sunday, March 31st, 1901. The Bill only extends to Great Britain, and a separate measure will be passed for Ireland. No doubt the debate on the Bill will evoke the demand for a quinquennial census and a permanent staff of statistical officers. The schedules will, as the Bill directs, show the name, sex, age, profession or occupation, condition as to marriage, relation to head of family, birthplace and nationality of each person, and also record every blind, deaf, dumb, imbecile, or insane person; the number of rooms occupied by any occupier having fewer than five rooms, and in the case of Wales and Monmouthshire the capacity of each person to speak Welsh or English only, or both languages. The Welsh members are likely to raise some discussion on this requirement, as the comments of the late Registrar-General in the last census on this point provoked more than one animated debate.

The Naval Medical Service was specially referred to by the First Lord in his speech on the Naval Estimates, and also in his statement issued in explanation of the votes. He stated that the numbers of inspectors-general and deputy-inspectors-general have been increased, and the conditions of promotion to those ranks modified. The period of instruction at Haslar Hospital for surgeons on entry has been increased, and the award of prizes at the end of each session introduced. The system of allowing medical officers to undergo periods of study at medical schools has been extended both as regards numbers and ranks. A special professor has been appointed at Haslar to lecture on the diseases of foreign stations, and with a long-delayed liberality ships and naval and marine barracks will now be supplied with surgical instruments at the public cost, and newly entered medical officers will only be required to provide themselves with a pocket case of instruments. The First Lord admitted in his speech the injustice of the past custom, and referred in sympathetic terms to the service generally.

The Army List and Civil Surgeons in South Africa.—The Under-Secretary for War does not see his way to place in the Army List the names of civil surgeons employed with the forces in South Africa. The suggestion made by question that a list of the field hospitals, bearer companies, and general hospitals in South Africa should be appended to the list of medical officers in the Army List was considered by Mr. Wyndham impracticable in consequence of the constant changes necessitated by the disposition of the troops.

THE MIDWIVES BILL.

As was anticipated, the House resolved on Shrove Tuesday by a majority of 114 to meet at two o'clock on Ash Wednesday, and so the sitting was shortened to three hours and a-half instead of the usual five and a-half. The Mines (Eight Hours) Bill was the first order and provoked as usual an animated discussion. The division which rejected this Bill was taken after the closure had been carried at half-past five, and then the Midwives Bill, which had been blocked by Mr. T. P. O'Connor, was moved and objected to, and then formally postponed till Thursday night. The opponents will no doubt now arrange to have it watched carefully and objected to whenever it comes on at the close of public business. The only prospect the Bill now has is the chance of slipping through at the close of some sitting after twelve or when public business is finished before midnight.

We have received a communication from a correspondent, who asks for the names of the members of the Midwives Bill Committee, and for information as to the objects and constitution of the Incorporated Midwives' Institute. The following information, for which we are indebted to the officers of these bodies, will probably be of interest to others than the correspondent who made the original inquiry:

The Midwives Bill Committee.

We are informed by the Honorary Secretary of the Midwives Bill Committee that it is constituted as follows:

Dr. R. S. Fancourt Barnes.	Mrs. C. Mallett.
Mr. Charles Bill, M.P.	Miss Annie McCall, M.D.
*Dr. J. Watt Black.	Mr. W. Pritchard Morgan, M.P.
Mr. H. Cosmo Bonsor, M.P.	Mr. Henry Owen.
Mr. Edmund Boulnois, M.P.	*Miss Rosalind Paget.
Dr. Robert Boxall.	*Dr. E. C. Perry.
Dr. F. H. Champneys.	*Dr. J. B. Potter.
Mr. C. E. H. A. Colston, M.P.	Dr. H. Rayner.
Mrs. Creighton.	Miss Lucy Robinson.
*Dr. C. J. Cullingworth.	Mrs. Charles Roundell.
Hon. Alan de Tatton Egerton, M.P.	Mrs. Scharlieb, M.D.
Dr. Clement Godson.	*Mr. C. E. Schwann, M.P.
Dr. W. Chapman Grigg.	Mrs. Schwann.
Mr. W. Hazell, M.P.	Mr. T. Skewes-Cox, M.P.
Dr. G. E. Herman.	Mr. H. J. Tennant, M.P.
*Mr. T. Almond Hind.	Mr. A. Money Wigram.
Mr. J. H. Johnstone, M.P.	Sir John Williams, Bart., M.D.
The Right Hon. William Lidderdale.	*Miss Wilson.
*Mr. A. W. Lightbody.	

Honorary Secretary.
*Mr. F. Rowland Humphreys.

Acting Secretary.
*Mr. G. W. Duncan.

* Members of the Executive Committee.

The Midwives Institute.

From documents obligingly supplied to us by the Secretary we learn that the Midwives' Institute (founded in 1881, incorporated in 1889) and Trained Nurses' Club, has its offices at 12, Buckingham Street, Strand, W.C. The objects of the society are stated to be: "(1) To raise the efficiency and improve the status of midwives, and to petition Parliament for their recognition. (2) To establish a registry for members, and to establish a centre of information for the public. (3) To provide a good medical lending library and clubroom for friendly meetings. (4) To arrange courses for medical lectures and to afford opportunities for discussion on subjects connected with the profession."

The President is Miss Wilson; the Treasurer, Miss Rosalind Paget; the Honorary Secretaries, Miss Brierly and Miss Mary Toynbee; the Secretary, Miss R. P. Fynes-Clinton. Members of the Society consist of founders, members, associates, and lay associates. Members must be women who have obtained a medical qualification, or trained midwives who have passed the examination of the Obstetrical Society of London; associates must be trained nurses or midwives who "hold any other diploma," and who may be elected by the Council; and lay associates are persons other than midwives who are interested in the objects of the Society. Every member has one vote at general meetings. The Council consists of the president, not more than four vice-presidents, the treasurer, and not more than ten members and ten associates. Five ordinary members of the Council retire annually but are eligible for re-election. The election is, we gather, by the members of the Institute. The Institute maintains a club for its members, a lending library, provides medical lectures and social evenings for midwives, nurses, and masseuses, classes to prepare candidates for the examination of the Obstetrical Society, and also massage and bandaging classes. It maintains a list of midwives who pass the examination of the Obstetrical Society, supplies midwives, monthly nurses, and masseuses (belonging to the Society of Trained Masseuses), nurse attendants, and travelling nurses to the public, and publishes a monthly journal entitled *Nursing Notes*. The Council consists entirely of ladies, among whom are the matrons of the General Lying-in Hospital, Queen Charlotte's Lying-in Hospital, City of London Lying-in Hospital, British Lying-in Hospital, the Lambeth Infirmary, Hospital for Paralysis, Regent's Park, the Superintendent of Guy's Hospital Nurses' Institute, the Superintendent of the Central Training Home, Queen's Nurses, and the Superintendent of the Nurses' Co-operation. The Honorary Secretary of the Association for Promoting the Compulsory Registration of Midwives is also a member of the Council

THE WAR IN SOUTH AFRICA.

THE BATTLE OF SPION KOP.

By FREDERICK TREVES, F.R.C.S.,
Consulting Surgeon with the Forces.

Spearman's Hill, January 28th, 1900.

THE HOSPITAL BEHIND MOUNT ALICE.

As I mentioned in my last letter, the hospital to which I was attached moved to the banks of the Tugela. We reached the river on January 18th, and pitched our tents close to the headquarters camp and just under the hill—Mount Alice—from which the big naval guns were firing. We were thus as near as possible to the actual fighting. It was intended that the wounded taken off the field should be brought to our hospital, and then be moved down to Frere, and thence to the base, as quickly as possible. It is twenty-five miles across the veld from this camp to Frere. The road is not so bad as roads go in this part of the country, but it is very rough in places, and several drifts have to be crossed. At Frere the railway is reached.

FIRST WOUNDED ADMITTED.

On the Sunday after our arrival the wounded began to come in. Thirteen only came from the division posted at Potgeiter's drift, the rest came from Sir Charles Warren's division. Increasing numbers of wounded came in every day in batches of from 50 to 150. They were all attended to, and were sent on to Frere as soon as possible. All the serious cases were of course kept in the hospital.

THE ATTACK ON SPION KOP.

On Wednesday, January 24th, came the terrible affair of Spion Kop. I was awakened about 3 A.M. by the rifle fire attending the night attack upon the hill, and all through the day the artillery and rifle firing was terrible and incessant. Spion Kop is just opposite the hill under the shelter of which our hospital stands, and from this hill the engagement could be witnessed. The hill is steep, and was approached from the side of the river. I watched our men climb up, and it was evident that in certain steep places the getting of the wounded down would be attended with difficulty. The shell fire to which our men were exposed was very severe, and it was clear that the casualties would be numerous. Our hospital—when first we reached the river—was made up of 60 tents and 10 marquees. On Tuesday the order was given to increase it by 100 bell tents. This meant additional accommodation for 500 patients. No increase in the staff was possible. Under the able direction of Majors Kirkpatrick and Mallins the arrangements were complete on Wednesday.

THE WOUNDED FROM SPION KOP.

On Thursday the wounded came pouring in, and they came in the whole day and until late at night until the hospital was full. The number taken in that day was nearly 600. We had already sent down some 300, so the casualties have been heavier than at Colenso. In spite of the immense number of the wounded they were all got under shelter by Thursday night, had had their more serious injuries attended to, and had been made as comfortable as circumstances would admit. They bore evidence of the excellent work done in the field hospitals. These hospitals bear the brunt of the trouble and carry out the first treatment. They did splendidly on Wednesday and Thursday. The volunteer ambulance corps and the large body of coolie bearers did excellent service. The larger number of the wounded were on the top of Spion Kop. The path down was about two miles, was steep, and in places very difficult. The carriage of the wounded down the hill had all to be by hand. From the foot of the hill to the hospital the carriage was by ambulance waggons and in some cases by coolie bearers. All the stretchers had hoods. There was no doubt that the wounded suffered much on account of the tedious transport, but it was rendered as nearly perfect as possible.

The surgeons who went after the wounded on the top of the hill told me that the sight of the dead and injured was terrible in the extreme, the wounds having been mostly from shell and shrapnel; some men had been blown almost to pieces. The weather on Wednesday was warm but was not to be compared with the intense heat on the day of the battle of Colenso; the temperature was that of a hot summer's day in England. Thursday was fortunately cloudy and much cooler.

THE NATURE OF THE WOUNDS AND THE CONDITION OF THE WOUNDED.

As to the wounded, there was the usual proportion of minor injuries, but on the whole the wounds were much more severe than those received at Colenso. This is explained by the large number of wounds from shell and shrapnel. The men, moreover, were much exhausted by the hardships they had undergone. In many instances they had not had their clothes off for a week or ten days. They had slept in the open without great coats, and had been reduced to the minimum in the matter of rations. The nights were cold, and there was on nearly every night a heavy dew. Fortunately there was little or no rain. The want of sleep and the long waiting upon the hill had told upon them severely. There is no doubt also that the incessant shell fire must have proved a terrible strain. Some of the men, although severely wounded, were found asleep upon their stretchers when brought in. Many were absolutely exhausted and worn out independently of their wounds.

"THE MEN ARE SPLENDID."

In spite of all their hardships the wounded men behaved as splendidly as they always have done. They never complained. They were quite touching in their unselfishness and in their anxiety "not to give trouble." The English soldier is a man of whom the country may well be proud, and in these two terrible engagements on the Tugela they behaved from first to last in a manner worthy of the splendid traditions of the British army. A finer, hardier, and more heroic set of men could hardly have been gathered together. They were much depressed at the reverse. One poor fellow had been shot in the face by a piece of shell, which had carried away his left eye, the left upper jaw with the corresponding part of the cheek, and had left a hideous cavity at the bottom of which his tongue was exposed. He had been lying hours on the hill. He was unable to speak, and as soon as he was landed at the hospital he made signs that he wanted to write. Pencil and paper were given him, and it was supposed he wished to ask for something, but he merely wrote, "Did we win?" No one had the heart to tell him the truth.

WOUNDS OF THE NECK AND HEAD.

The Mauser wounds showed nothing new. The bullet at a long range acts more like a fine-pointed instrument, going through bone without splintering it, and dividing nerves and arteries with remarkable neatness. One case showed a communication between the external carotid artery and some adjacent vein, and another a communication between the common femoral artery and vein. There were several wounds involving the neck in which the larynx was involved. In one of these, in which I performed tracheotomy, the lesion had been effected by a piece of shell, and it was surprising that the patient could have survived the damage to the larynx and gullet. He is so far doing well.

General Woodgate received a very severe wound of the head from a fragment of shell. The piece entered at the outer angle of the right orbit, and ploughed along the skull as far as the pinna. It made a linear ragged gap in

the bone. Much brain matter was escaping, and the sight in the right eye was lost. I opened up the wound, and removed all depressed and loose fragments of bone with a relief to the patient which is, I am afraid, only temporary.

Treatment of Abdominal Wounds.

The abdominal wounds are numerous. Few are suited for operation. I have seen, on the one hand, many in which a Mauser bullet has passed through the abdomen in almost every direction, and in which recovery has followed without operation. On the other hand, abdominal sections are not very easily carried out on the field, and I think the cases for operation are best limited to those in which the lesion is well localised, and in which the bullet has escaped. Bullet wounds of the liver have done well, as also have like wounds of the kidney. An officer with a bullet wound of the liver—no exit—has done well after passing through a serious crisis.

Amputations.

Very few amputations are required for Mauser wounds. Most of the amputations have been for shell wounds. In some cases bullets other than the Mauser (probably the Martini-Henry) have been used. Some of the compound fractures of the leg in both officers and men may yet need amputation. Wounds do remarkably well in camp.

Shell Wounds.

The shell wounds are the most terrible and the most difficult to treat. One man had most of the face shot away, including both eyes. Another had the forearm shot off and two fearful wounds of each thigh dividing the anterior muscles to the bone. The chest cases are numerous, but do quite fairly. One patient has developed pneumonia and others have pneumothorax or hæmothorax. So far there has been little gangrene. In one case a shrapnel had opened the ulnar artery and the man came down safely with a tourniquet on his brachial composed of a plug of cake tobacco and the tape of a puttie. Of the many curious tourniquets I have seen this is the most ingenious.

The Hospital Nurses and Orderlies.

We have a few iron bedsteads in the hospital which are of great service and are much appreciated. The great majority of the patients, however, are lying on the ground and cannot be dressed without difficulty. As many as possible are accommodated on stretchers. I have slept on a stretcher since I came to the front and can testify that they are most comfortable. Miss McCaul and the two Netley Sisters have rendered invaluable service, and have worked day and night. It is hard to imagine what we should have done without them. Three nursing sisters, however, can hardly cope with a hospital containing over 700 wounded men, and the great mass of the work falls upon the orderlies who are a singularly efficient, obliging, hard-working set of men.

THE MILITARY HOSPITALS AT WYNBERG.

By Sir William Stokes, M.D., F.R.C.S.I.

We have received the following communication from Sir William Stokes, Surgeon-in-Ordinary to the Queen in Ireland, and Consulting Surgeon to the Field Forces in South Africa, describing a visit which he paid to the military hospitals at Wynberg, in the neighbourhood of Capetown, shortly after his arrival from England:

The Wounded.

On January 25th I visited the hospital at Wynberg, and was most courteously received by its Principal Medical Officer, Colonel Anthonisz. Accompanied by him and Mr. Fox Symons, who has had a large experience of military surgery, not only in the late Græco-Turkish but also in the present South African war, I visited Nos. 1 and 2.

The number of patients at present under treatment is not very great, owing doubtless to a lull in the hostilities during the past fortnight. But still, in the wards I found many cases of exceptional surgical interest—traumatic aneurysms, injuries of nerves, fractures of the femur, tibia, fibula, and humerus, and many cases illustrating the eccentric courses bullets take at times, even invading the brain, the thorax, or the abdomen without destroying life. One case struck me particularly. The ball entered the skull above and behind the left zygoma, passed forwards and downwards penetrating the orbit, then entered the nasal fossa, and ultimately emerged in the right submaxillary space without fracturing the lower jaw. The patient has recovered, but with loss of sight in the left eye. There have been several traumatic aneurysms of the axillary, posterior tibial, popliteal, and brachial arteries. These have been successfully operated on, all by the method of Antyllus, namely, ligation of the artery on the proximal and distal side of the tumour, and excision of the sac. Colonel Stevenson, the author of the well-known handbook of military surgery, *Wounds in War*, operated on a large diffused traumatic aneurysm of the axillary artery, in which there was no pulsation whatever. The result was most satisfactory.

Several exceptionally interesting cases of perforating pulmonary wounds have been treated, and the results in many of them have been complete recovery. This has been largely attributed to the comparatively minute tunnel-like wounds inflicted by the Mauser bullet. It appears to be agreed that the Mauser bullet inflicts as a rule a much less serious injury than any of the others. In a large proportion of instances when a bone is struck instead of being splintered or pulverised it is tunnelled, and the opening made being very small soon fills up, and the cases, as a rule, do well. The necessity for amputation or resection does not therefore arise as often as formerly. This opinion is strongly held by the eminent Principal Medical Officer of the Field Force, Surgeon-General Wilson.

The Administration.

As regards hospital management, administration, and nursing the arrangements in the Wynberg Hospital are deserving of high commendation. With the operating theatre I was most favourably impressed. I found everything well up to date. The walls sheeted with enamelled zinc, the floor tiled and sloping, the light abundant both from above and one side, and for night operations electric light. Ample arrangements for sterilising instruments and dressing have been made, and hard by is a room for Roentgen ray photographic work. Great credit is due to the military authorities who have brought the arrangements and fittings of this hospital to such a high degree of perfection, and I trust that in Natal, which is my present destination, and where I hope to meet Sir William MacCormac and Mr. Treves, I may have the good fortune to work in hospitals equally well equipped.

INVALIDING FROM THE TRANSPORTS.

[From Our Special Correspondent in Capetown.]

February 7th, 1900.

The Undermanning of the R.A.M.C.

I am compelled this week to depart somewhat from the tone of optimism which I have hitherto honestly adopted, and to point out one or two directions in which the military machinery is showing some signs of strain. These signs have only become evident quite recently, and one has no justification for reflecting in any way upon the men on the spot. They are working, one and all, gallantly. The material at command is at fault. Up to the time of the arrival of the recent reinforcements, the Sixth and Seventh Divisions, and the auxiliaries, the department was standing the strain admirably. Now two things are becoming evident: one that the *personnel* of the R.A.M.C., both officers and men, is insufficient and without automatic machinery for expansion; and the other that the reserves and militia are, from a physical point of view, somewhat disappointing.

Invalid Reservists and Militia.

One has always held the idea that, whatever might be the case with regard to the militia, the reservist would be of superior physique to the man with the colours. Transport after transport tells us a different tale. It is perfectly true that the average reservist is a better developed man than his comrade with the colours, but it is unfortunately true tha

both reservists and militiamen contain a very large number of "lame ducks," hopelessly incapable of going to the front. This is not the case, to any appreciable extent, with the colours men, who are obviously under such continual observation as to render it very unlikely that any obviously unfit men could be drafted for foreign service. But the percentage of others who are being landed here, and sent to the station hospital with the immediate result of being marked for re-drafting to England, is far greater than would have been the case had an efficient system of inspection been adopted on your side. I am inclined to connect the number of lame ducks with the deficient *personnel* of the R.A.M.C. From the object lessons one is seeing here it is quite evident that the examitions at home have been conducted either by men who do not understand military requirements, or by men who were so pressed for time that they had to run through the work at a speed which does not permit thorough investigation. On no other supposition could one explain the fact that cases of distinct phthisis, of renal disease, of well-marked tertiary syphilis, of ulcer of leg, of large varicose veins, of varicocele, of inguinal hernia (old), of chronic gonorrhœa, of pretty distinct valvular disease of the heart, and similar ailments have been landed here, and can only be sent back again; and this, not in ones and twos, but in a very fair proportion. The station hospital, and unfortunately too often its *post-mortem* room, is the index of this state of things.

The Station Hospital at Capetown.

The station hospital has to-day about 350 patients, with accommodation in marquees available for another 150 or more—that is, it is practically a general hospital. But a general hospital has a staff calculated for 520 beds. The station hospital has a staff for about half that number, and owing to the exigencies of the war has gone on expanding and expanding until the work is fairly beyond the power of the staff. The medical officer in charge has no secretary, no divisional officers, only a small staff of civil surgeons, of whom only one has had any military experience, and who are, moreover, being constantly changed. He has 37 of the R.A.M.C. all told, including sergeant-major and clerks. There are in addition 24 R.A.M.C. belonging to other units (but these are constantly being withdrawn), 1 man from the Militia Medical Staff Corps, 23 of the Cape Medical Staff Corps, 9 St. John men from England, and 11 others. But, it must be remembered, that none of these except the R.A.M.C. are fully trained, and that fatigues are exceptionally heavy, mainly owing to the constant transfer of patients from one part to another, and to the constant erection and re-erection of marquees in the attempt to adjust the accommodation to the exigencies of the patients. The number of men on fatigue duty daily has of late been on an average 25. Beside 2 ward-masters, 19 or 20 special night orderlies are regularly detailed. This means three nights in bed for the staff, and even then four of the proper wards, two detached huts (80 beds), two quite detached iron huts (80 beds), a marquee camp (at a long distance away with 90 patients), and sundry marquees are without any attendant after 5 P.M. It is true that every effort is made to put the more serious cases into the better attended wards; but, carry that as far as you may, the wards left to themselves at night contain many cases for whom supervision is necessary. Discipline, of course, must go to the wall, and even this attenuated staff is being depleted by the transfer of a sergeant and four corporals to the two additional companies of the Cape Medical Staff Corps now being raised. These are for bearer purposes, and the material coming forward appears to me to be indifferent. To add to the difficulty, the already overworked orderly officers at the station hospital are charged with the duty of examining numbers of recruits.

Need for more Orderlies and Nurses.

I blame no local authority for all this. The Medical Department has no real reserve, and the material for replenishing is not forthcoming. You can easily make a good light horse trooper out of your average colonial, but the same does not hold good on the medical side. Weighty as are the objections to nurses, the weightiest being the difficulty of accommodating them, I see no way out of the trouble but falling back upon the colonial nurses. Three nursing sisters, Miss Thomas of the Army Nursing Service, and two volunteers (Mrs. Bond and Mrs. Withycombe) have just joined, and are working in the enteric and pneumonia wards.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XV.

The Turn of the Tide.

The good news of the surrender of the army which had invested Kimberley for so long has been quickly followed by the official announcement that a portion of the relief force has entered Ladysmith. The relief has been purchased at a heavy cost, and it is to be feared that the sufferings of the garrisons have been severe. Reports received since the relief of Kimberley show that that town offered a heroic resistance, and that its inhabitants endured much from hunger and disease as well as from the enemy. The forces on which Colonel Kekewich had to rely were small and indifferently armed for the defence of so large a town and the resources in food supplies had run extremely low before the siege was raised. Thus a correspondent of the *Daily Chronicle* says that the people tell harrowing stories of their sufferings during the siege, rivalling those of Paris. The stock of mealies had been consumed, the horses were starving, and those which died of starvation were seized and devoured by the kaffirs. Numbers of women and children lived in the underground workings of the mines, and when they came to the surface they were pale and weird-looking, like the inhabitants of a nether world. On Friday (February 16th) many saw the sun for the first time for weeks. This residence underground and in bomb-proof pits may have avoided heavy losses by the Boer bombardment, but I fear that when all the story is told, to the casualties of men during the siege will have to be added a long roll of children. These children have not only had their milk supply cut off, but have been compelled to put up with an indifferent water supply. Kimberley under ordinary circumstances is supplied by water brought in 18 miles by pumping from the Vaal river; this supply was long ago cut off, and that obtainable from the mines could not be entirely trustworthy. Siege soup, which appears to have consisted of what available vegetables there were, with a certain amount of horseflesh, may have sufficed for adults, but among children it is hardly to be wondered at that many died for want of more suitable nourishment. Apart from the privations which all alike had to suffer, several women and children are reported killed and wounded during the bombardment.

British and Boer Ambulances.

Reuter's agent at Arundel, reporting the other day, says there is a marked difference between the character of our ambulance waggons and those of the Boers. Ours appear designed to combine the greatest clumsiness and the least comfort with the minimum of accommodation. It takes ten mules to draw them, and they carry 2 men lying down and several sitting; they jolt like a quarryman's dray. The Boer ambulances, on the other hand, are lightly but strongly built, and provide comfortable accommodation for 8 men lying down; they are mounted on springs and scarcely jolt at all. If this report be true it is certainly not altogether creditable to us. It must, however, be pointed out that there is among colonists and also among the Boers a predilection in favour of the spider-built American vehicle which has not yet extended itself to Britishers, either military or civil. In discussing field ambulances in a former letter I suggested that the ideal light ambulance was an American spider, and the BRITISH MEDICAL JOURNAL produced an illustration showing the sort of vehicle indicated. The extension of this style of mounting on wheels to our larger ambulance waggons would undoubtedly be advantageous. I have travelled for days in light American spider-built waggonettes drawn by mules over the rough veld roads, and it is astonishing how light, strong, and at the same time comfortable these spider-built vehicles are. The English cart, waggon, or carriage is invariably built on much heavier lines than the same vehicle would be in America, and this gives a certain clumsiness, which is not felt over macadamised roads but causes discomfort to the

passengers and additional labour to the horses or mules drawing it in such a country as the prairie or the veldt. This matter is well worth the consideration of the Army Medical Department, and the whole subject of remodelling the ambulance transport should receive attention.

Sir James Sivewright's Ambulance Corps.

Mr. Allan Johnson, one of the three British members of the South African Medical Corps organised by Sir James Sivewright, sent a full account of the remarkable adventures of that expedition to the *Aberdeen Free Press* and other journals. The story may be summarised as follows: Although the Transvaal Government had telegraphed to Capetown declining the services of the ambulance, the members were induced to proceed to Delagoa Bay, where they had an interview with Mr. Pott, the Transvaal Consul, who told them curtly that they were not wanted, declaring that there were no wounded requiring assistance. Mr. Pott's object, however, appears to have been to get rid of the British element of the corps. The Boer members, who had remained discreetly in the background so long as the corps had to deal with the British Colonial authorities at the Cape or at Durban, now claimed complete control over the expedition. In spite of the refusal of the Transvaal Government to have anything to do with the corps, they accepted the friendly assurances of a Boer whom they met fortuitously at Lourenço Marques that their services, if volunteered individually, would be accepted. The British members of the ambulance regarded these strange developments with suspicion, and Dr. Gray sought to retain the equipment of the expedition until Sir James Sivewright's wishes had been elicited. Sir James then telegraphed that they were to be handed over to the Boer leader, Dr. Neethling, who proceeded with the other Boers under special passports to Pretoria. Mr. Johnson says, in conclusion, it was clear "that, while the Transvaal Government was quite willing to receive any number of Afrikanders into their service, they would not look at an ambulance corps which included Britishers, especially if these showed that they meant to stick tenaciously to their pledge to work for the wounded of every sort and race without prejudice in the interest of humanity alone....."

The British Losses in the War.

The War Office has issued an analytical table of the total casualties since the beginning of the war up to the week ending February 17th. From these statistics it will be seen that the proportion of killed—1,409 officers and men, to the wounded, 5,303—is at the rate of 1 to 3.7. Of the wounded, it is extremely satisfactory to note that over 95 per cent. recovered. This is a far higher percentage of recoveries than is recorded in any of the campaigns given in Stevenson's book. In plain English, the deduction from these statistics is that the chances of recovery for a wounded man are no less than 19 to 1. The excellent prospects of recovery which are thus afforded to men placed *hors de combat* are due to the humane qualities of the modern small magazine-rifle bullet, either Mauser or Lee-Metford. But it is extremely unsatisfactory to learn from Lord Roberts's telegram from Paardeberg of February 24th that "six of the men yesterday (February 23rd) were wounded by hollow-nosed Mauser bullets. The nickel case is slit with four slits, making the projectile of the most expansive and explosive nature possible. A wounded Boer brought into our hospital yesterday had sixty of these bullets in his pockets." The brutality of such conduct merits the strongest condemnation. The bullets described by Lord Roberts are those used by sportsmen for shooting big game, for while the Mauser and Lee-Metford bullet having a conical hard nickle tip inflicts a clean, small, and readily healing wound, the same bullets by very little manipulation can be made to produce wounds of the most terrible character. I have myself used the Lee-Metford bullet in deer stalking, and have seen evidence of what it can do if the nose of the bullet be made of soft lead and hollow, or even if the nickel casing be split up.

Dysentery.

Dysentery is one of the commonest forms of disease in South Africa, and is especially attendant upon camp or campaigning life. Under the term is embraced a group of diseases affecting chiefly the large intestine. They are similar in their symptoms, but they differ in etiology and pathological results. It is erroneous to suppose that dysentery is confined to the tropics or subtropical countries. As a matter of fact, dysentery has often proved the scourge of armies, and was notably so among our own troops, both in the Peninsula and in the Crimea. It is also the disease of half-starved garrisons and ill-fed prisoners. Although dysentery may occur in temperate regions, especially among exposed armies, as in the case of our army in the Crimea, it increases in frequency and malignancy as the tropics are approached. Hamilton West, an American writer, ranks it in malignancy and mortality in the tropics with yellow fever, small-pox, and cholera as one of the four great epidemic diseases in the world. As a matter of fact, all forms of gastric and enteric catarrh increase in frequency and severity as the tropics are approached. Provisionally it is convenient to consider dysentery as occurring in no fewer than four different forms—these are the catarrhal form, amœbic dysentery, the diphtherial, and Japanese forms of dysentery. The commonest in South Africa is undoubtedly the catarrhal form.

Diarrhœa frequently precedes an attack, and at first is not painful; then follow griping abdominal pains, frequently blood-stained stools, with straining of the anus and tenesmus; later the stools become more gelatinous and bloody. The disease may last from a week to a month, and is usually followed by recovery, though death occurs in some cases of severe sloughing and ulceration.

In this form of disease no specific organism has yet been definitely assigned the responsibility, although Osler states that the "cercomonas intestinalis" is found in large quantities in the discharges. Mr. Treves discusses the treatment of dysentery, and tells us that Dr. Scott of Maritzburg and other local physicians are strongly in favour of sulphate of magnesia. This saline treatment, as it is called, has a strong advocate in Trousseau, and both in India and in South Africa there are physicians who prefer this salt together with the sulphate of sodium to any other drugs. Personally I confess I have found Livingstone's fever formula for African dysentery of great value. The Livingstone powder, as it is called, consists of a combination of calomel, bismuth, and compound ipecacuanha powder. One of Dr. Jameson's favourite remedies for dysentery was the injection into the bowel of a large enema of warm milk. If dysentery takes on at all a chronic character, there is nothing in my experience better than small doses of castor oil and opium at short intervals. Milk diet is of the utmost importance.

Kit for South Africa.

The *Morning Post* of February 24th refers to my last letter on the subject of kit for soldiers proceeding to South Africa. The question is undoubtedly an important one, and I have no hesitation in saying that, in providing kit for some of the corps sent out, errors for want of information have been made. As I was myself on an Equipment Committee, I append a list of articles which, in conjunction with several officers of long campaigning experience in South Africa, were eventually selected:—

Loch's Contingent (No. 2), South Africa.

List of Equipment supplied each Man in two Kit Bags numbered and marked L.C.—1 belt, 1 belt (cholera), 2 pairs boots, 1 brush, 6 pairs bootlaces, 1 bandolier, 1 blanket (large, about 8 feet by 6 feet), 2 pairs breeches (Bedford cord), 1 cap (field), 1 cap (fisherman's), 1 tin dubbin, 2 pairs drawers, 1 pair gloves, 1 hat (felt), 1 haversack, 1 hold all (fitted), 1 housewife, 1 jacket lined, 1 jacket unlined (both khaki serge), 1 knife, 1 overcoat (cavalry pattern, blue or grey, not khaki colour), 1 patrol tin, 1 pair putties (leather), 1 purse, 1 pipe case, 1 pair shoes, 2 shirts (khaki flannel), 4 pairs socks, 1 sweater, 1 pair spurs and spare straps, 1 towel, 1 pair trousers (khaki serge), 2 vests, 1 water bottle, 1 watch case, 1 waterproof sheet.

THE R.A.M.C. AT DUNDEE.

Major F. A. B. Daly, R.A.M.C., who was left in Dundee in medical charge of the dangerously wounded after the battle of Talana Hill, after being close on three months in the Boer's hands, at last succeeded in getting away with his whole staff, military and civilian, to Durban *viâ* Pretoria and Delagoa Bay. Major Daly and his staff were during the last month placed under close arrest and finally guarded over the frontier.

The Special Hospitals.

The Langman Hospital sailed in the *Oriental* from the Albert Docks on February 2-th. The male staff of the Princess Christian Hospital embarked on the *Assaye* at Southampton on the same day.

MEDICAL OFFICERS OF THE FIELD FORCE, SOUTH AFRICA.

ADDITIONAL APPOINTMENTS.

FOR the following lists of medical officers who have recently proceeded or are proceeding to South Africa we are indebted to the courtesy of the Medical Division of the War Office:

Officers R.A.M. Corps and Civil Surgeons detailed for the 4th Cavalry Brigade (January 8th, 1900).

Unit.	Place of Mobilisation.	Medical Officer.	District from whence Obtained.
7th Dragoon Guards ...	Aldershot	Civil Surgeon J. L. Aymard	
8th Hussars	Curragh	Major J. M. Irwin	Curragh.
17th Lancers	Aldershot	Civil Surgeon A. C. Bird	
"M" Battery R.H.A. ...	Curragh	Captain H. W. H. O'Reilly	Aldershot.
No. 20 Bearer Co.	Aldershot	Major C. C. Reilly	Western.
		Captain T. P. Jones	
		Lieutenant C. S. Cato	Southern (Netley)
No. 20 Field Hospital ...	Aldershot	Major J. Ritchie	Scottish
		,, A. P. Blenkinsop	
		Civil Surgeon A. E. Priddle	
		Civil Surgeon K. B. Alexander	
		Quartermaster Hon. Lieutenant	

Officers R.A.M. Corps and Civil Surgeons detailed for Brigade Divisions of Royal Field Artillery.

Unit.	Place of Mobilisation.	Medical Officer.	District from whence Obtained.
12th Brigade Division: Brigade Division Staff (43rd, 86th, and 87th Batteries)...	Woolwich	Captain G. A. T. Bray	Aldershot
13th Brigade Division: Brigade Division Staff (2nd, 8th, and 44th Batteries) ...	Hilsea	Civil Surgeon C. C. Simpson	
14th Brigade Division: Brigade Division Staff (39th, 68th, and 88th Batteries)...	Weedon	Civil Surgeon F. O. Stoehr	
15th Brigade Division: Brigade Division Staff (5th, 29th, and 17th Batteries) ...	Woolwich	Civil Surgeon G. Mowat	

Medical Officers detailed for duty with Militia Infantry Battalions ordered to South Africa (January 8th, 1900).

Unit.	Place of Mobilisation.	Medical Officer.
4th Batt. Royal Lancaster Regiment...	Lichfield	Civil Surgeon A. S. Wells.
6th Batt. Royal Warwickshire Regiment...	Colchester	,, A. Young.
3rd Batt. South Lancashire Regiment	Preston	,, T. H. Wells.
4th Batt. Derbyshire Regiment	Manchester	,, G. B. Buchanan.
9th Batt. King's Royal Rifle Corps	Templemore	Surgeon-Major J. Creagh.*
3rd Batt. Durham Light Infantry	Aldershot	Civil Surgeon F. E. Walker.
4th Batt. Argyll and Sutherland Highlanders	Dublin	,, H. R. Phillips.

* Regimental Medical Officer.

Personnel of Medical Units on the Lines of Communication (January 15th, 1900).

Unit and Place of Mobilisation.	Names.	Remarks.
No. 5 Stationary Hospital (Woolwich)	*Royal Army Medical Corps.* Lieutenant-Colonel W. W. Kenny (a)	1 warrant officer, (c) 40 non-commissioned officers and men (including 20 St. John Ambulance Brigade).
	Lieutenant G. J. S. Archer	
	Quartermaster and Hon. Lieut. (b)	
	Civil Surgeons. Mr. R. Williams	
	,, H. Moore	
No. 6 General Hospital (Portsmouth)	*Royal Army Medical Corps.* Lieut.-Col. B. W. Somerville-Large (a)	2 warrant officers, 143 non-commissioned officers and men (including 50 St. John Ambulance Brigade).
	Major R. Jennings (c)	
	,, J. Osburne	
	Lieutenant H. C. R. Hime (d)	
	Quartermaster and Hon. Lieut. (b)	
	Civil Surgeons. Mr. H. A. Ballance	
	,, J. W. E. Cole	
	,, F. G. Engelbach	
	,, J. D. Finlay	
	,, P. C. P. Ingram	
	,, V. W. Low	
	,, R. D. Maxwell	
	,, J. Owen	
	,, W. M. Parham	
	,, E. L. Parry-Edwards	
	,, R. D. Parker	
	,, H. J. Starling	
	,, J. O. Skevington	
	,, L. T. Whelan	
	Army Nursing Service. Superintendent Miss S. E. Oram	
	Army Nursing Service Reserve. Nursing Sisters: Misses L. E. V. Asman, M. I. Burdett, A. E. Davidson, R. Lawless, M. F. Lightfoot, L. B. Peers, J. E. Skillman, and A. L. Wilson and 2 female servants.	

(a) Officer in charge. (b) Will join the unit on its arrival in South Africa. (c) Registrar and Secretary. (d) In charge of *x* ray apparatus. (e) For duty with a unit in South Africa; unit to be decided locally.

Personnel of Medical Units on the Lines of Communication (February 1st, 1900).

Unit and Place of Mobilisation.	Names.	Remarks.
No. 7 General Hospital Portsmouth)	*Royal Army Medical Corps.* Lieutenant-Colonel J. G. MacNeece (a)	2 warrant officers, 143 non-commissioned officers and men (including 50 St. John Ambulance Brigade), and 1 special cook
	Major J. P. S. Hayes (b)	
	,, J. F. Burke	
	Captain W. W. C. Beveridge (c)	
	Quartermaster and Hon. Lieutenant (d)	
	Militia Medical Staff Corps. Surgeon-Captain W. Waring	
	,, T. W. G. Kelly	
	Civil Surgeons. Mr. H. Baylis	
	,, G. W. K. Crosland	
	,, H. Goodman	
	,, H. F. N. Hine	
	,, F. E. Ingall	
	,, W. J. Lindsay	
	,, B. A. Nicol	
	,, P. J. O'Sullivan	
	,, G. Park	
	,, A. Spong	
	,, G. R. Thomson (e)	
	,, W. Watkins-Pitchford	
	Army Nursing Service. Superintendent Miss F. E. Addams-Williams	
	Army Nursing Service Reserve. Nursing Sisters: Misses L. Basan, S. C. Chown, A. N. Ferguson, L. M. Fletcher, E. M. Gardner, M. L. Gordon, M. O. McNeill, and E. H. Wilson, and 2 female servants.	

(a) Officer in charge. (b) Registrar and Secretary. (c) In charge of *x* ray apparatus. (d) Will join the unit on its arrival in South Africa. (e) Skilled in *x* ray work.

Personnel of Medical Units on the Lines of Communication (February 10th, 1900).

Unit and Place of Mobilisation.	Names.	Remarks.
No. 8 General Hospital (Woolwich)	*Royal Army Medical Corps.* Lieutenant-Colonel R. T. Beamish (*a*) Major A. Wright (*b*) ,, J. S. Edge Lieutenant E. McDonnell (*c*) Quartermaster (*d*) *Militia Medical Staff Corps.* Surgeon-Captain H. E. Mortis ,, J. E. O'Connor *Civil Surgeons.* Mr. J. Bruce ,, F. W. B. Fitchett ,, A. H. B. Kirkman (*e*) ,, J. T. Leon ,, A. W. May ,, A. L. H. Smith ,, F. Stableford ,, W. A. Stott ,, W. L. W. Walker ,, C. Warren ,, R. Whittington ,, J. G. Willis *Army Nursing Service.* Superintendent Miss E. Holland *Army Nursing Service Reserve.* Nursing Sisters: Misses M. S. Barwell, E. M. Bickerdike, A. A. Bowles, A. Brooke, V. H. Buchanan, R. M. Bullock, R. M. Carr, E. E. Coutts, C. M. Friend, M. L. Harris, L. D. Hills, A. Hilson, F. Holmes, M. B. King, A. Knaggs, J. E. Mount, J. A. Ormerod, L. A. H Seligmann, and A. L. Walker, and 3 female servants.	1 warrant officer, 109 non-commissioned officers and men (including 50 St. John Ambulance Brigade from England), 1 warrant officer, 23 non-commissioned officers and men from Colonial stations. 1 special cook.

(*a*) Officer in charge. (*b*) Secretary and Registrar: Specially selected; has a competent knowledge of the Dutch language. (*c*) In charge of *x*-ray apparatus. (*d*) Will join the unit on its arrival in South Africa. (*e*) Skilled in *x*-ray work.

Personnel of Medical Units on the Lines of Communication (February 20th, 1900.)

Unit and Place of Mobilisation.	Names.	Remarks.
No. 5A General Hospital (Depôt R.A.M.C., Aldershot) (*a*).	*Royal Army Medical Corps.* Lieut.-Colonel J. F Williamson (*b*) Major J. J. Russell (*c*) ,, T. Archer Lieutenant A. F. Carlyon (*d*) Quartermaster (*e*) *Militia Medical Staff Corps.* Surgeon-Captain J. T. Simpson Surgeon-Lieutenant J. Clerke *Civil Surgeons.* Mr. H. T. D. Acland ,, W. O. Beddard ,, C. L. Dunn ,, J. G. Green ,, P. W. James ,, R. Lindsay ,, H. D. N. Mackenzie ,, C. B. Paisley ,, C. A. Peters ,, R. W. E. Roe ,, H. S. Thomas ,, J. S. Warrack *Army Nursing Service.* Acting Superintendt. Miss L. W. Tulloh *Army Nursing Service Reserve.* Nursing Sisters: Misses R. I. Briggs, E. M. Chamberlain, E. M. M. Howard, I. Lovett, M. B. Perweet, E. M. Rowley, G. G. ~~Styles, H. Whiteford~~, and 2 female servants.	2 warrant officers (*f*), 144 non commissioned officers and men (including 35 men St. John Ambulance Brigade) (*g*).

(*a*) The *personnel* for this unit has been mobilised on receipt of orders from the Field Marshal Commanding in South Africa, and is despatched with a view to the re-establishment of No. 5 General Hospital, the *personnel* of which is reported to have been distributed to various stations. (*b*) Officer in charge. (*c*) Secretary and Registrar. (*d*) In charge of *x*-ray apparatus. (*e*) Will join the unit on its arrival in South Africa. (*f*) 1 to join the unit in South Africa. (*g*) Includes 1 rank and file to allow for the warrant officer joining the unit in South Africa.

CASUALTIES IN THE R.A.M.C.

THE deaths of two officers of the R.A.M.C. are announced in recent casualties lists. Captain R. H. E. Holt, who has died of wounds (reported February 20th), entered the service in February, 1892. He was a student of St. Mary's Hospital. Captain G. S. Walker, who died of enteric fever at Ladysmith on February 23rd, entered the service in 1892. He was a student of Queen's College, Cork.

Lieutenant MacKenzie, who was wounded in the action at Koodoosberg Drift on February 7th, was attached to the 1st Highland Light Infantry, and had already distinguished himself at Magersfontein. He is the son of Mr. MacKenzie, Assistant Land Commissioner, Dublin, and was a student of the school of the Royal College of Surgeons in Ireland. He received a commission by nomination in July, 1899.

THE SCOTTISH SOUTH AFRICAN HOSPITAL.

A MEETING of a Subcommittee of the Scottish South African Hospital was held in the Edinburgh City Chambers on April 23rd, under the presidency of Sir William Turner. There were also present the President of the Royal College of Physicians (Dr. Andrew), the President of the Royal College of Surgeons (Dr. Dunsmure), the Superintendent of the Edinburgh Royal Infirmary (Colonel Warburton), Professor John Chiene, Dr. Joseph Bell, and Colonel Rooney, R.A.M.C., Principal Medical Officer in the Scottish Military District. Mr. Chiene (the Professor of Surgery in the University of Edinburgh) was recommended as the head of the medical staff of the hospital. At the same time Mr. David Wallace was recommended as Professor Chiene's second, and the following four gentlemen as assistant surgeons—Messrs. George L. Chiene (a son of Professor Chiene), C. M. Cooper, James Miller (a son of Mr. A. G. Miller, one of the consulting surgeons to the Infirmary and a grandson of Professor Miller), and A. H. Watt. It was further recommended that Miss Beveridge, Matron of the Longmore Hospital for Incurables, should go out as matron of the hospital. These recommendations will come before a meeting of the full Committee in due course. The Subcommittee are meanwhile considering the remaining appointments as dressers, nurses, etc. Sir James R. A. Clark, Bart., late Surgeon-Major A.M.S., who is to be in military charge of the hospital, has arrived in Edinburgh, and is arranging details with Professor Chiene.

THE WOUNDED IN ENGLAND.

ON February 27th the Queen visited the Royal Victoria Hospital, Netley, and spoke to every patient in the hospital, numbering altogether on that day 556. Her Majesty was received by Colonel Charlton, R.A.M.C., the Principal Medical Officer, and the following officers were presented to her: Colonel Macleod, Lieutenant-Colonel Webb, Lieutenant-Colonel Chester, Lieutenant-Colonel Hughes, and Major Dick. The visit to the wards occupied altogether three hours.

The hospital ship *Princess of Wales* arrived at Southampton on February 25th, and on February 26th was visited by the Princess of Wales, who was accompanied by the Prince of Wales and the Duke of York. The royal party was received by Major Morgan, and Major Macpherson, R.A.M.C. The royal party visited every ward, and subsequently went on to Netley, where the wards as well as the Doecker huts, of which thirty have been lent by the German Red Cross Society, were inspected.

THE MEDICAL SERVICE OF THE AUSTRALIAN CONTINGENT.

OUR Special Correspondent in Sydney writes:

In addition to the eight medical men who have already gone to the seat of war in South Africa with the first contingent from this Colony,[1] twelve are going with the Medical Corps attached to the second contingent, which leaves Sydney on January 17th. The staff has been increased to a strength of 127, of which number 13 are lady nurses, and 23 are mounted men. Two of our best-known medical men have volunteered for service—Dr. MacCormick, the Lecturer in Surgery in the University, and Surgeon to Prince Alfred Hospital; and Dr. Scot-Skirving, Surgeon to St. Vincent's

[1] BRITISH MEDICAL JOURNAL, February 24th, p. 476.

Hospital, and one of the leading practitioners in Sydney. These two gentlemen are going with the rank of Honorary Major at considerable personal sacrifice, and in recognition of their patriotism they have been presented with five cases of surgical dressings and appliances, provided by subscription amongst the ladies of Sydney. Among the others who have volunteered for service are Dr. J. A. Dick, Dr. Newmarch, Assistant Surgeon to the Sydney Hospital, and Drs. Eames and Horsfall, Surgeons to the Newcastle Hospital. The thirteen trained nurses are under the superintendence of Miss Gould, Lady Superintendent of the Army Nursing Service Reserve, and late Matron of the Sydney Hospital. Six additional nurses are joining at Adelaide.

THE WELSH HOSPITAL.

Meetings in aid of the Welsh Hospital for South Africa are being held in Wales and in various towns of England to appeal to Welshmen. Local funds are being raised in most towns throughout the Principality. The Committee desire it to be understood that the hospital is intended for the use of the Imperial troops independent of nationality. Alderman Sir David Evans is the Treasurer, and the following surgical staff was appointed at a meeting of the Committee on February 27th: Mr. Thomas Jones, F.R.C.S., Professor of Surgery, Owens College, Manchester, and Surgeon to the Manchester Royal Infirmary; Mr. Lynn Thomas, F.R.C.S., Assistant Surgeon to the Cardiff Infirmary; and Mr. Mills Roberts, F.R.C.S.Edin., Surgeon to the Llanberis Quarries Hospital.

New Field Hospital and Bearer Company.

The R.A.M.C. at Aldershot have received orders to prepare Nos. 21 and and 22 Bearer Companies for duty with the 8th Division, and Nos. 21, 22, and 23 Field Hospitals.

We are informed that the *personnel* of No. 24 Field Hospital will be Major J. Moir, in command, Major Saunders, Captain Thom, Lieutenant Harvey, 15 non-commissioned officers and men of the R.A.M.C., and 20 non-commissioned officers and men of the St. John Ambulance Association.

A large number of Volunteer Medical Staff Corps and St. John Ambulance Association men have been joining at Aldershot during last week. The R.A.M.C. has thus grown to very great proportions, and could muster then over 700 non-commissioned officers and men. Accommodation for these could not be found in the blocks of barracks for the Medical Corps. The overflow has had to find place in the Crunna and Talavera Barracks.

The *Norman*, in which Lieutenant-Colonel Sloggett, R.A.M.C., Medical Officer in Command of the Imperial Yeomanry Hospital, and Mr. A. D. Fripp, the Senior Civil Surgeon, and the ambulance men and supernumeraries, sailed from Southampton on February 10th, arrived at Capetown on February 28th.

THE PLAGUE.

Progress of the Disease.

Europe.

It is satisfactory to note that no plague exists in Europe at the present moment.

Africa.

Plague is not recorded from any part of Africa. It has disappeared from Egypt; and the outbreak at Delagoa Bay, which at one time seemed to be alarming, has completely subsided. Except for the possibly endemic area of plague in Central Africa reported by Koch, we have no knowledge of the presence of plague in Africa.

India.

The total mortality in Bombay for the week ending February 10th reached a maximum of 2,461; the recorded mortality from plague for the week was 456. In the opinion of residents in Bombay plague prevails in the city to a much greater extent than official figures indicate, so much so indeed that many believe the number to be at least twice as many as the mortality statistics show, but it is allowed that the famine refugees have brought many acute ailments in their train. Some hundreds of the total deaths are assigned to diarrhœa and dysentery. Lately some 27 Europeans have been attacked by plague in Bombay, and some doubt is thrown upon the use the public conveyances are being put to, as regards the conveyance of infected persons to the hospitals. For the week ending February 9th the deaths from the principal diseases are assigned as follows: Plague, 456; respiratory diseases, 406; fevers, 242; small-pox, 225; phthisis, 178; diarrhœa, 165; dysentery, 70. In Calcutta plague has a tendency to increase. During the week ending February 3rd 87 deaths from the disease occurred as compared with 65 during the previous week. In the Patna district there were 620 deaths from plague during the week ending February 3rd. This is a serious increase, and points to a possible spread of plague through the North-West Provinces of India. In the Madras Presidency sporadic cases of plague continue to occur. In the Jullundur district, Karachi, and the Punjab a small number of deaths are recorded. At present Rajputana and Central India are free of plague.

Aden.

Six cases of plague were reported from Aden on February 23rd and 1 death from the disease. The authorities are taking active steps to check the spread of infection at this important port of call.

Mauritius.

For the week ending February 22nd, 8 fresh cases of plague occurred in the island and 4 deaths from the disease. For some weeks now the return from Mauritius would seem to indicate that the disease is stationary.

Australia.

A case of plague is reported from Sydney during the past week. It is also stated that a great number of rats are dying in the goods sheds along the quay.

The more we learn of the cases of plague at Adelaide, the more puzzling does the source of infection become. The first victim was a man, one of a number of deserters from the ship *Formosa*, which arrived at Adelaide on November 12th, 1898; and it was not until six week after landing on Australian soil he was admitted to hospital. Moreover, it was not at Adelaide, but at the small township of Gawler, that he was seized with plague. From the same place, also, the second plague case came, the patient being a boy, aged 9 years, a resident in Gawler. Although the captain of the ship *Formosa* mentions that "a number cases of sickness" occurred during the voyage from New York to Adelaide, they were all of a trivial nature. It will be remembered that this vessel called nowhere between America and Australia, and as no plague is known to exist in North America or Australia, the source of infection seems inexplicable. The man when brought into hospital was in a filthy condition, but we have yet to learn that filth generates plague. It would seem that infection must have been carried from either India or China. It is with the latter country that Australia is more intimately in contact, many Chinese having settled in Australia, especially along the coast. Even then the source of infection is a mystery, as none of the Chinese in Australia are known to be infected by plague.

Siberia.

Dr. Clemow's account of plague in Siberia and Mongolia, and the part played by the turbagan (*Arctomys bobac*) published in the *Journal of Tropical Medicine*, seems to show a wide area for the disease. It would appear that, in the former mention of this infected district, we should have stated that in the Aksha military district, in the province of Transbaikal, Siberia, plague has an endemic home where both man and animals are attacked. Aksha lies almost on the Russo-Mongolian border, hence the error in mentioning Mongolia as the seat of the disease; but as Eastern Mongolia is itself infected, it would seem that a continuous area of country is infected by plague. The *Arctomys bobac* (the turbagan), a species of marmot, seems to be the undoubted carrier of plague in the Transbaikal Province, and possibly in one of the infected districts of Mongolia.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch: West London District.—A meeting of this District will be held at the Metropolitan Ear, Nose, and Throat Hospital, Grafton Street, Fitzroy Square, W. (near Gower Street Station), on Monday, March 5th, at 4.30 P.M., J. Pickett, M.D., Vice-President, in the chair. Agenda: Dr. Pegler: A short paper on Nasal Insufficiency. Dr. Jobson Horne: (*a*) Lantern Demonstration of Photographs of the Larynx, taken during life, to illustrate the position of the vocal cords in voice production; (*b*) Some Morbid Growths in the Larynx;

(c) also further Diseases of the Larynx. Clinical cases by Drs. Frederick Spicer, Pegler, Horne, and Mr. Richard Lake. Tea and coffee at 4.15.—THOMAS DUTTON, M.D., 13, Holland Park Avenue, W., Hon. Secretary.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of the District will be held at the Highgate Infirmary, Dartmouth Park Hill, N., on Wednesday, March 14th, at 4.30 P.M., Mr. Thomas Bryant, President of the Branch, will preside. Dr. Harry Campbell will read a paper on the Treatment of Bronchitis in the Elderly and Aged. Dr. Chilcott will show some cases of interest in the wards of the infirmary. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Hon. Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Grand Hotel, Brighton, on Thursday, March 29th, at 5.15 P.M. Tea and coffee, to which the Chairman, Dr. Mackey, invites members, at 5 o'clock. Dinner at 7, charge 6s., exclusive of wine. Notice of intended communications should be sent to J. W. BATTERHAM, Bank House, Grand Parade, St. Leonards-on-Sea, Hon. Secretary.

SOUTH-EASTERN BRANCH: NORTH KENT DISTRICT.—The next meeting of the above District will be held at the Bull Hotel, Chislehurst, on Thursday, March 8th, at 3.45 P.M., Dr. Davis, of Sidcup, in the chair. Agenda: (1) Minutes of Bromley meeting; (2) to decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat; (3) to receive nominations for representatives on the Council of the Association: (4) communication from Wood Green and District Medical Society, "Medical Reform and the Midwives Bill"; (5) communication from East York and North Lincoln Branch and Hull Medical Society. Mr. W. H. Bennett will read a paper on Some Surgical Aspects of Vomiting. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Hon. Sec. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. N.B.—The Hon. Sec. would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—A. TENNYSON SMITH, Orpington, Hon. Sec.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this District will be held at the Queen's Hotel, Upper Norwood, on Thursday, March 8th, at 4 P.M.; Dr. Burgess, of Streatham, in the chair. Agenda: Minutes of Reigate meeting. To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of honorary secretary. To receive nominations for representatives on the Council of the Association. Communications from Wood Green and District Medical Society. Communication from East York and North Lincoln Branch and Hull Medical Society. The following papers, etc., will be read: Mr. W. Arbuthnot Lane, Causation and Treatment of the Several Resting Deformities. Dr. P. Horrocks, Notes on some Cases of Severe Dysmenorrhœa. Dr. W. Burgess, Notes of Cases from General Practice. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M.; charge 7s., exclusive of wine. The Honorary Secretary would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting and if likely to remain to dinner, by so doing they will very materially facilitate arrangements and promote the success of the meeting. All members of the South-Eastern Branch are entitled to attend and to introduce professional friends.—HENRY J. PRANGLEY, Tudor House, Anerley, Honorary Secretary.

SOUTHERN BRANCH: EAST HANTS DISTRICT.—The next meeting of this District will be held at 5, Pembroke Road, Portsmouth, on Tuesday, March 6th, at 9 P.M. Subject for discussion: Serumtherapy.—J. G. BLACKMAN, Portsmouth, Honorary Secretary.

EDINBURGH (FIFE AND LOTHIANS), DUNDEE AND DISTRICT, PERTHSHIRE AND STIRLING, KINROSS AND CLACKMANNAN BRANCHES.

A COMBINED meeting of these Branches was held in the Royal Infirmary, Edinburgh, on February 23rd. Dr. Dow, of Dunfermline, the President of the Edinburgh Branch, in the chair.

THE LATE SIR THOMAS GRAINGER STEWART.

Before proceeding to the regular business the CHAIRMAN made feeling reference to the death of Sir Thomas Grainger Stewart, and submitted the following motion, which was carried unanimously:

That this conjoint meeting of the Edinburgh (Fife and Lothians), Dundee and District, Perthshire, Stirling, Kinross and Clackmannan Branches of the British Medical Association, desires to record its deep sense of the loss which the British Medical Association has sustained by the death of Professor Sir Thomas Grainger Stewart. For many years Sir Thomas was a distinguished member of the Association and a conspicuous figure at the conjoint winter meetings. In 1898 he presided over the annual meeting of the Association with great dignity, and much of the success of that brilliant meeting was due to his most able and tactful conduct in the chair. At the time of his death Sir Thomas was Vice-President of the Association and Vice-President of the Edinburgh Branch, whose members mourn the removal of a devoted office-bearer and honoured colleague.

This meeting requested the Secretary of the Edinburgh Branch to forward a copy of this motion to Lady Grainger Stewart with an expression of most respectful sympathy.

DEMONSTRATIONS.

The programme of the meeting was then taken up as follows:

Microscopical and Bacteriological Demonstrations (3 P.M. and onwards throughout afternoon, in Ward IV, surgical).—Dr. GULLAND: (1) Demonstration of filaria sanguinis; (2) malarial organisms; (3) various blood preparations.—Dr. JAMES: Blood from malarious patient, showing organism.—Dr. FORD ROBERTSON: (1) Platinum preparations of the central nervous system; (2) preparations by a gold method for medullated nerve fibres.

Pathological Preparations, Casts, etc. (3 P.M. and onwards throughout afternoon, in Ward IV, surgical).—Professor ANNANDALE: (1) Examples of elbow injuries; (2) specimens of testicle; (3) pigmented nævus of scalp; (4) malignant epulis of lower jaw; (5) preputial calculi; (6) fractured skull; (7) gunshot injury of foot; (8) boots, showing effect of small shot.—Mr. CAIRD: (1) Examples of syphilitic sequestra; (2) papilloma of bladder; (3) series of gallstones removed by operation; (4) carcinoma of stomach removed by operation.—Mr. COTTERILL: Tumours of brain.—Dr. R. A. FLEMING: Pathological specimens—(1) of liver, (2) suprarenal.—Mr. HODGSON: Myeloma of humerus.—Dr. CHAS. W. MACGILLIVRAY and Mr HAROLD J. STILES: Dissection of a recent dorsal dislocation of the hip.—Mr. MILES: (1) Series of recent fractures; (2) excised cæcum and portion of colon; (3) enchondroma of femur; (4) specimens illustrative of absence of rectum; (5) series of vermiform appendices; (6) stereoscopic photographs of clinical cases and pathological specimens.—Dr. R. W. PHILIP: Series of photographs illustrative of the open-air treatment of pulmonary tuberculosis.—Dr. RAINY: Series of radiographs.—Dr. SHENNAN: (1) Psoas abscess, which seemed to have healed; (2) acute suppurative parotiditis; (3) calcareous deposits in spinal arachnoid mater; (4) gangrenous colitis; (5) series of specimens preserved by Jores's method; (6) abscess between bladder and rectum.—Professor SIMPSON: (1) Basilyst and head delivered by basilysis; (2) an early twin abortion.—Mr. HAROLD J. STILES and Mr. ANDREW H. WATT: Stereoscopic photographs of surgical affections in children.—Mr. ALEXIS THOMSON: (1) Series of appendices removed by operation; (2) series of gall stones removed by operation; (3) gall stone obstructing small intestine.—Mr. WALLACE: (1) Skiagraphs of calculi and calculi themselves; (2) Meckel's diverticulum removed at operation; (3) kidney removed by operation for hydronephrosis.

Instruments, etc. (3 P.M. and onwards throughout afternoon, in Ward IV, surgical).—Mr. COTTERILL: New form of trephine.—Mr. GUY: (1) Apparatus for gas and ether; (2) Sydney Rumboll's apparatus for gas and ether.—Professor SIMPSON: Doyen's angiotribe.—Dr. A. D. WEBSTER: Hot-air spray for dry or moist medication.

Clinical Congress.—At 3.45 P.M. a clinical congress was held in the large surgical theatre. President, Dr. DOW, Dunfermline; Vice-President, Dr. WEMYSS, Broughty Ferry.

Mr. D. WALLACE showed a patient after nephrectomy.—Dr. JAMES G. C. MACNAB showed: (1) A case of Klumpke's paralysis; (2) a case of middle meningeal hæmorrhage.—Dr. F. D. BOYD (for Dr. GEORGE GIBSON) showed a case of patent ductus arteriosus.—Dr. ALEXANDER BRUCE showed a case of myoclonus multiplex.—Mr. COTTERILL showed: (1) A patient after amputation at the hip-joint for sarcoma, with curious deformity of hands and arms; (2) a patient after operation for cerebral abscess; (3) a patient suffering from cerebrospinal rhinorrhœa.—Mr. F. M. CAIRD showed a patient after partial removal of stomach for carcinoma.—Dr. GEORGE A. BERRY showed: (1) Two cases of orbital tumour; (2) a case of ptosis after operation.—Dr. MELVILLE DUNLOP: Case of hemi-hypertrophy.—Mr. ALEXIS THOMSON: (1) Case of microcephaly; (2) patient after removal of cancer of stomach twenty months ago.—Mr. HAROLD J. STILES: (1) Case of plexiform neuroma of jaw; (2) case of tubercle of lower jaw.—Dr. ALLAN JAMIESON: (1) Case of erythroderma succeeding psoriasis; (2) case of tropho-neurotic leprosy.—Dr. M'KENZIE JOHNSTONE: Two cases of double frontal sinus.—Dr. JAMES: (1) Case of hyperkinesis after hemiplegia; (2) case of malaria (parasite shown in museum).—Dr. AFFLECK: Case of paraplegia in a boy.—Mr MILES: (1) Patient after operation for perforated gastric ulcer; (2) patient after excision of cæcum and colon (23½ inches).

Demonstrations in Electrical Department and Male Lock Ward (5.30 P.M. and onwards, in Electrical Department).—Demonstration of new electrical apparatus, by Dr. MILNE MURRAY. (5.30 P.M. and onwards, in Male Lock Ward.)—Demonstration of cases of tertiary syphilis by Mr. CAIRD.

DINNER.

At 6.15 P.M. the members dined at the Royal Hotel. Dr. Dow was in the chair, and the croupiers were Drs. Argyll Robertson and Underhill. The toasts were: "The Queen and Royal Family," from the chair. "The Navy, Army, and Reserve Forces," given by the CHAIRMAN, and responded to by Dr. HAULTAIN for the Navy, Major W. BLACK for the Army, and Mr. DAVID WALLACE for the Reserve Forces. "The British Medical Association" was given by Dr. W. ALLAN JAMIESON, and replied to by the CHAIRMAN (Edinburgh Branch), Dr. WEMYSS (Dundee Branch), Dr. URQUHART (Perthshire Branch), Dr. MOORHOUSE (Stirling, Kinross). "The Guests" were proposed by Dr. JAMES CARMICHAEL, and replied to by Dr. BUIST (Dundee). "The Secretaries" were proposed by the CHAIRMAN; "The Chairman" by Dr. DUNCAN (Dundee); "The Croupiers" by Dr. AITKEN (Buckhaven). The meeting was closed with the usual Floreat Res Medica!

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.
A MEETING of this Branch was held at the Worcester Infirmary on February 27th.

Medical Organisation.—It was considered advisable to send a delegate to the proposed conference on medical organisation, and Dr. Harry E. Dixey of Malvern was elected delegate.

Medical Attendance on Families of Soldiers and Sailors in South Africa.—The HONORARY SECRETARY announced that forty-six members of the Branch had signified their willingness to give gratuitous attendance to the wives and families of soldiers and sailors serving in South Africa.

New Members.—Mr. Foulds of Droitwich was elected a member of the Branch.

Donations to R.A.M.C. South African Fund.—It was decided that the sum of £10 be given from the funds of the Branch to the R.A.M.C. South African Fund.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.
A CLINICAL meeting of this Branch was held at the Swansea Hospital on February 15th, Mr. W. W. LEIGH, President, in the Chair.

Cases and Specimens.—Mr. W. T. BROOK showed (1) A case of contracted knee-joint after a burn ten years previously, in which he had restored complete extension with full power of flexion. The case will be published. (2) A case in which he had successfully performed an osteoplastic resection, exposing the whole motor area, for traumatic epilepsy (the fits not enabling exact localisation). An inverted case of ivory bone an inch in depth projecting into the brain had been found and removed. (3) Specimens kindly lent from the National Hospital, Queen Square, of a case he had shown a year previously. It had been looked upon as one of leontiasis ossea of the cranial bones, and described as such in the BRITISH MEDICAL JOURNAL, 1896, vol. i., p. 1377. Subsequently symptoms ascribed to pressure had developed. The specimens showed the cranial bones to have been abnormally thin, the symptoms being due to syringomyelia, and the deformity of the skull probably the result of injury in early life.—Mr. WILLIAM SHEEN, M.S., showed a large naso pharyngeal polypus removed from a youth, aged 18. After tracheotomy, an incision was made through the lip to the left inner canthus, the nasal septum, hard and soft palates divided, the left upper jaw levered outwards, and the growth removed intact with the fingers. The patient recovered; microscopically the tumour showed pure myxomatous structure.—Dr. E. LE CRONIER LANCASTER showed a case of acute cerebral infantile paralysis or spastic infantile hemiplegia in a girl, aged 5. She had diphtheria in October, 1898, from which she recovered. In November, 1898, she had a fit, and was unconscious for two days. She was hemiplegic on the right side, and aphasic till May, 1899. She was now typically hemiplegic on the right side. There was no defect of intelligence, no more fits, no athetosis.—Mr. W. J. GREER read notes of a case of gastric ulcer treated by gastro-jejunostomy, which will be published.—Mr. CORNELIUS A. GRIFFITHS showed cases of choledochotomy and cholecystotomy.—Dr. ELSWORTH showed the following cases: (1) Renal calculus in a movable kidney which had presented only pyuria; the calculus formed a complete cast of the pelvis and calices of the ureter. (2) Intestinal obstruction due to multiple kinking of lower end of the small intestine caused by plastic peritonitis. (3) Ovariotomy with complications; the tumour was impacted in the pelvis, so that when the catheter was passed and 14 ounces of urine drawn off the catheter collapsed and the bladder tumour was mistaken and bladder opened; the patient made an uninterrupted recovery till the twelfth day, when the abdominal wound opened, and about 2 feet of small intestine protruded; this was returned, and the abdominal cavity washed out; the wound refreshed and closed; the patient completely recovered. (4) Kraske's operation for extensive disease of the rectum; about 6 inches of bowel, together with the anus, was removed, and vesiculæ seminales; during the dissection of the bladder and prostate the bladder was opened, and though it was carefully sutured at the time a urinary fistula had formed, opening on the surface at the side of the rectum; most of the minor methods had been tried to close it without success; it was proposed to try suturing from above after suprapubic cystotomy. (5) Persistent hæmaturia due to multiple ulcers of bladder, treated by suprapubic cystotomy, scraping, and drainage. (6) Extra-uterine gestation treated by abdominal section; the abdomen washed out after ligature of the broad ligament; this being the sixth case with four recoveries.

SPECIAL CORRESPONDENCE.

PARIS.

Statistics of Tuberculosis.—The Municipal Chemical Laboratory.—The Undermanning of the Army Medical Service.—A Continental Anglo-American Medical Society.—Influenza.

DR. BARBIER communicated recently to the Hospital Medical Society statistics he had compiled from consecutive cases of tuberculosis at the Bichat Hospital. The statistics show very clearly that the very large percentage of tuberculous cases treated in Paris were among persons born outside Paris, and who had acquired their disease in that city. From July 1st to December 31st, 1899, the total number of tuberculous cases at the consultation was 431 (males 292, females 139). Of these, 300 (males 194, females 106)—that is, 69.6 per cent.—were born outside Paris, while 131 only (males 98, females 33)—that is, 30.4 per cent.—were born in Paris. Of the 300 born in the provinces, 15 only were ill before coming to Paris; the remainder (285) were taken ill after a varying term of residence in the city: 29 in under 2 years, 70 in under 5 years, 133 in under 10 years, 206 in under 15 years, 240 in under 20 years. Adding these figures to statistics published in June, 1899, and making deductions for those who were already ill on their arrival in Paris, Dr. Barbier finds that, out of 555 cases at the consultation, 377—that is, 68.79 per cent.—were among immigrants, while only 178 cases—that is, 31.05 per cent.—were among the Paris-born. The data as to the period of stay in Paris before infection can only be approximate, being based on the memory of the patients, who consider, as a rule, some such alarming symptom as hæmoptysis or pleurisy the beginning of the disease. The maximum of contagion, however, would seem to arise between the second and the fifteenth year of residence in Paris. An important point to which Dr. Barbier calls especial attention is the fact that very few of these patients have any direct ancestors or relatives with tuberculous disease; the greater number indeed had a normal bodily and chest development. This is a strong argument in support of the theory that contagion alone can explain this especial incidence of the disease among the immigrants to Paris from healthy country districts.

M. Chautard, Professor of the Ecole Centrale, has presented to the Municipal Council an interesting report on the working of the Municipal Chemical Laboratory, which has been in existence since 1878. The results obtained are very gratifying, the number of adulterations having fallen from 29 per cent. to 10 per cent. Moreover, the substances used in adulteration are less dangerous than formerly; no more strychnine is added to the beer, or arsenic to wine. The commonest fraud is the addition of water to wine or milk. The analyses are either qualitative (free) or quantitative, the fee varying from 5 to 20 francs. The 13 sections of Paris and the Department of the Seine are divided among 16 chemical experts, who have the title of Commissaires de Police. They inspect the markets, condemn what is unfit for food, and take samples for analysis. Two samples are taken, one to analyse, and a second is sealed in case of counter-analysis; a third may be left, sealed, in the possession of the interested person. These inspectors can take samples of milk as it comes from the cow to compare with the same milk at the retailers'; they can take samples at the railway stations, and by a special permit may go to the farm in the provinces. An anomaly exists, however; these chemists have not the right to go into the large central market, so that if an adulteration is discovered at a small dealer's, the latter can say he bought the article as such at the central market, and there is no means of proving the contrary.

The report of M. Camille Pelletan having drawn attention to the undermanning in the Army Medical Service, M.

Lachaud, deputy, has given notice of a motion to introduce a law whereby medical students who have to do their military service will be placed at the disposal of the military surgeons. At the present time the majority of the students are absorbed in the mass of the regiment, no advantage being taken of their previous professional training. M. Lachaud proposes that medical students shall be called to serve after having taken their eighth inscription (the end of the second year) and after having passed their examination in physiology; they must also produce a certificate showing that during their first year they have worked for six months in surgical wards, and have clerked during the whole of their second year in medical wards.

At the annual meeting of the Continental Anglo-American Medical Society, which was held at the residence of Dr. Bull, the Hon. Secretary, 4, rue de la Paix, a ballot was taken to fill the vacancies caused by the retirement by rotation of three members of the Executive Committee, and Dr. W. W. Baldwin (Rome), Dr. Bright (Cannes), and Dr. Danvers (Bordighera) were elected. Letters were read from Sir William Turner and Professor Osler accepting their election as Honorary Presidents of the society. Seventeen new members were elected to the society. On the proposal of Dr. Linn it was decided that a special meeting of the society should be held in 1900 at the end of July or at the beginning of August to coincide with the meeting of the International Medical Congress in Paris.

Influenza has increased in Paris and throughout the north of France, the symptoms of the disease being rather of the nervous or the gastro-intestinal type. During the week ending February 3rd the total number of deaths in Paris was 1,104. Influenza causing 38, pneumonia 70, broncho-pneumonia 45. During the week ending February 10th, the total number of deaths was 1,255, influenza causing 58, pneumonia 60, broncho-pneumonia 78.

BUENOS AIRES.

Bubonic Plague in Argentina and Paraguay.—Bacteriological Diagnosis established at Rosario.—Prophylaxis by Gunboats.—Rational Prophylaxis and its Cost.—The Future.

THE existence of bubonic plague is officially acknowledged in the Argentine; at Rosario, an important commercial city of over 100,000 inhabitants, situated on the great waterway of the Parana, and about 200 miles from Buenos Aires, with which it is, of course, connected by several railway lines and lines of steamers and sailing craft. From Rosario many hundreds of thousands of tons of wheat, linseed, maize, and wool are annually exported to Europe and America. The plague has existed for some months at Asuncion, the capital of Paraguay, in a mild sporadic form. Asuncion is on a continuation of the great waterway of the Parana, some hundreds of miles above Rosario, so it is not to be wondered at that the pest has crept down to that city.

For some time past bacteriological examination of "suspected" cases at Rosario gave no definite results, but I understand that on January 26th the typical bacillus was obtained by culture from a bubo in a fatal case.

Prophylactic measures are being rapidly taken both in Rosario and in Buenos Aires, the chief measure being the complete isolation of Rosario by a *cordon sanitaire*, military by land, and gunboats by river. This is following ancient Spanish traditions, so difficult to eradicate in these countries.

Both Rosario and Buenos Aires are well able to cope with a disease of this kind, as both have an abundant water supply, good drainage, and food is plentiful and within the reach of all. Municipal measures are directed chiefly against the common lodging-houses, small hotels, and insanitary hovels along the river banks, and all are being overhauled daily, and some already destroyed by fire. We do not do things by halves in the River Plate, and we wait to count the cost afterwards.

There are rumours of suspicious cases in this city this morning (January 27th), but I can get no information at headquarters, and I do not regard the future here with any apprehension. It appears certain that the disease in a mild form has existed for several months at various places along the East Coast of South America.

LIVERPOOL.

Presentation to Dr. Manby, late Assistant Medical Officer of Health.—Proposed Expedition to the Niger for the Study of Malaria.—New Out-Patient Department at the Stanley Hospital.—Hospital Accommodation for Wounded Soldiers.

DR. E. P. MANBY, who, as already announced in the BRITISH MEDICAL JOURNAL, has resigned the office of Assistant Medical Officer of Health for Liverpool and accepted a position on the staff of the Local Government Board, has been the recipient of a presentation from the staff of the Health Department. In making the presentation, which took the form of a handsome silver inkstand, suitably inscribed, Dr. Hope said that although Dr. Manby was going to take up a position on the staff of the Local Government Board they did not regard his departure as so much of a severance as they would have done if he had been leaving to take up an appointment in some other city or county, and they hoped still to regard him in some sense as a colleague. He referred at some length to the harmonious relations which had always existed between Dr. Manby and the staff of the Public Health Department, and said that on behalf of the staff he wished Dr. Manby every success and happiness in his new position. Dr. Manby, in acknowledging the present, said he was deeply touched by this mark of appreciation and kind feeling shown by his colleagues and fellow workers in the public health service of the city. He thanked them most heartily, and assured them that he would ever have the most happy recollections of that portion of his career which had been passed in the city of Liverpool. Dr. N. E. Roberts, Physician to the Grafton Street Fever Hospital, testified to the cordial relations existing between Dr. Manby and the staffs of the city hospitals, and the Chief Sanitary Inspector and the Chief Clerk of the Department also spoke on behalf of the inspectors and clerks respectively.

The Committee of the School of Tropical Diseases has decided to send out a second expedition to the West Coast of Africa, to work out Major Ross's theory of the transmission of malaria fever by the *Anopheles* mosquito. The expedition will proceed up the Niger, and carry on its researches on the Oil Rivers. It is proposed that it shall be under the direction of Dr. Annett, the Demonstrator of Tropical Diseases, and the *personnel*, which will for the most part be composed of experts who have studied the question of malaria thoroughly, will include Dr. Dutton, one of the most distinguished students of the Liverpool school. As the conditions of life on the rivers are somewhat different from those on other parts of the West Coast, it is expected that this new expedition will be of great value. The expedition will start about the end of March in one of Messrs. Elder, Dempster and Co.'s mail steamers, Mr. A. L. Jones, the chairman of the school, having again placed every possible facility at the disposal of the Committee. It is worth noting that the members of these expeditions rely for their individual immunity from the malaria they are investigating chiefly on the careful employment of mosquito curtains.

On February 22nd a new out-patient department, which has been added to the Stanley Hospital, was formally opened by the Right Hon. the Lord Mayor in the presence of a large gathering, which included most of the past and present members of the medical and surgical staff. The Stanley Hospital is the only general hospital in Liverpool which has a completely organised out-patient department for the supply of advice and medicines to the sick poor, the greater part of this kind of work being done by the three dispensaries. The out-patient department at the Stanley Hospital is a large and an increasing one. In the first year of its existence (1867) the attendances amounted to 10,600, and last year they had increased to 96,445. The old waiting-room, which was built to be used as a ward, was quite inadequate for the numbers it had to contain, and the increased prosperity of the institution made the Committee anxious to put the room to the use for which it was originally designed, and to open it as a ward. For the present this ward will be set aside for the reception of wounded soldiers returning from South Africa. The new building consists of a large waiting-room, 75 feet by 20 feet, capable of seating at least 200 persons. Leading out of the

waiting-room are physicians' consulting and examining rooms; an oculist's room, with dark room adjoining; surgeons' examining room and a room for minor operations; and a commodious dispensary, with storeroom. There are also a casualty dressing room and a porter's lodge. The exterior of the block is faced with red Ruabon bricks relieved with Yorkshire stone dressings. The floors are laid with oak blocks, and the waiting room is surrounded by a glazed tiled dado of pleasing design. The building has been provided out of the Roger Lyon Jones Trust, and has been presented to the hospital free from debt. The Lord Mayor, in the course of his remarks, pointed out that the additional beds which it would now be possible to provide would qualify the hospital for recognition as a clinical school for medical students. He also laid stress on the urgent need which existed for a nurses' home, as the nurses at present had to be accommodated within the hospital, and that in a very inconvenient and uncomfortable manner. The cost of a home would be at least £2,000. He thought that what was wanted was another gala, and that if the men of the present day had only got the energy of those who had preceded them, the Stanley Hospital would in a very short time be in as good a position as any other in the city. The treasurer, Mr. Sampson, pointed out that the sum of £200 was still required to defray the cost of furnishing the building. With regard to the furnishing of the ward which had been offered to the Government for the use of wounded soldiers, Mr. and Mrs. Oswald Dobell had generously undertaken to furnish it at the cost of £400.

All the general hospitals in Liverpool have notified the War Office that they are willing to admit a certain number of wounded soldiers belonging to the Liverpool district. At the Royal Infirmary the recreation room will be turned into a temporary ward for this purpose.

SHEFFIELD.

The Children's Hospital.—Open-air Treatment of Consumption at the Royal Infirmary.—The Cost of Vaccination.—Lady Sanitary Inspectors.—Lieutenant Goddard, R.A.M.C.

EACH hospital in turn has during the last few years gone in for new buildings, extensions, and alterations. The Royal Infirmary, the Royal Hospital, and the Hospital for Women have each appealed to the public for funds. Now it is the Children's Hospital which is making an appeal for £10,000 to erect a new building for out-patients, with rooms for a house-surgeon and also an administrative block. The first list of subscriptions is a very promising one.

The success achieved at the Royal Infirmary with the open-air treatment of consumption has stimulated the Sheffield Board of Guardians to make provision for the same object. At a recent meeting it was stated that the Hospital Committee had given instructions for the erection of a corrugated iron building, with accommodation for 25 beds, and with verandahs and other suitable appliances for the open-air treatment. Male patients only are to be treated.

At the same meeting an interesting return as to the new vaccination system costs was presented. It should be borne in mind that no expenses are now incurred in the renting of public vaccination stations. The comparison between the years 1898 and 1899 is interesting, and is thus set forth:

	1898.	1899.
Cases reported to officers	5,856	7,055
Fees paid to officers	£219 12s. 0d. (average 9d.)	£618 10s. 0d. (average 1s. 9d.)
Cases dealt with by public vaccinators	2,175	3,685
Fees paid to public vaccinators ...	£207 3s 6d. (average 1s. 11d.)	£1,484 14s. 2d. (average 8s. 1d.)
Total average cost of each public vaccination...	2s. 8d.	9s. 10d.
Total cost, public vaccination	£616 15s. 4d.	£2,223 9s. 0d.
Average cost to Union of vaccination—all cases	2s. 1d.	6s. 4d.

The lady sanitary inspectors appointed last year will, it is hoped, prove of some real service to the community. Model lodging-house keepers are being haled before the Bench and being made to feel the necessity of obeying by-laws as to the keeping of such houses. In some instances cleanliness of the most elementary character has been absent. One of these inspectors has also recently addressed a "local society" on the way in which the poor live, their houses, overcrowding, etc., matters in which the education of the more fortunate classes can only be of benefit.

Lieutenant E. H. Goddard, R.A.M.C., was well known here, as he was for some time Assistant House-Surgeon at the Royal Infirmary, and the news of his being severely wounded at the front was received with regret. It was during his tenure of office at the infirmary that he passed into the army. He was with the Highland Brigade at the battle of Magersfontein, and more recently has been attached to the Black Watch. He appears to have been slightly wounded in the head, but severely in the leg.

CORRESPONDENCE.

THE MIDWIVES BILL.

SIR,—I am directed by the Council of the British Gynæcological Society to ask you to be good enough to insert the following copy of a memorial addressed by the Council to the General Medical Council, and of the resolution adopted with regard thereto by the General Medical Council.

Thanking you in anticipation.—I am, etc.,

ARTHUR E. GILES,
Honorary Secretary.

Queen Anne Street, Feb. 21st.

THE REGISTRATION OF MIDWIVES.

Copy of a Memorial addressed to the General Medical Council in May, 1899, by the Council of the British Gynæcological Society.

The Council of the British Gynæcological Society approaches the General Medical Council with the view of securing on its part the fullest consideration of any proposed Bill dealing with the licensing of midwives, so as to prevent any direct or indirect infraction of the Medical Act of 1886.

The Council, while recognising the necessity for such legislation as shall prevent incompetent women from acting as midwives or midwifery nurses, trusts that the General Medical Council will not lend its support to any Bill which does not adequately provide for the public safety, nor protect the interests of the medical profession.

The Council of the British Gynæcological Society would ask the General Medical Council to consider the many inherent difficulties which are inseparable from the recognition by the State of a new order of midwives, entitled by a registerable licence to practise for gain, without direct medical control, the art of obstetrics.

As one proof of the necessity for such deliberation on the part of the General Medical Council, the Council of the British Gynæcological Society would point to the obviously vague use of the term "natural labour," on the application of which term the entire construction of the present Bill is based.

The Council regard it to be a function of the General Medical Council to take such measures as it may consider right to restrict the independent action of such midwifery or monthly nurses, in the conduct of parturition, as will prevent the assumption by them of those duties which rightly fall to the medical man alone to discharge. Towards this end the report of a Subcommittee, as has been suggested by the direct representatives of the profession on the General Medical Council, would appear to be both valuable and desirable.

Without such limitations being imposed on women who are ignorant of all the collateral branches of medical science, on which the first principles of the obstetric art depend, and without any guarantee to ensure a prompt appeal for medical supervision in the conduct of parturition when such is required from any cause whatsoever, the Council of the British Gynæcological Society views with concern the creation of a new and inferior grade of licensed practitioners.

The extreme gravity of the question, and the influence which any legislation with regard to it must exert on the practice of obstetrics in this country, has induced the Council of the British Gynæcological Society, in the cause of medical science generally, and in defence of the art of midwifery in particular, to address the General Medical Council on the matter, and to respectfully ask its consideration of this memorial.

Copy of the resolution adopted by the General Medical Council with regard to the memorial of the British Gynæcological Society:

"That the memorial be acknowledged with thanks and that the British Gynæcological Society be informed that the successive reports of the Committee to the Council will show that the considerations set forth in the memorial have continually been kept in view by the Committee."

SIR,—With respect to your observations in the BRITISH MEDICAL JOURNAL of February 24th, on the Midwives Bill now before Parliament, may I point out that the omission of the words "natural labour" from the definition of a midwife, which you remark was strongly objected to by the

General Medical Council, was, however, agreed to by it when the words in Clause II (5) were added. A letter on this subject from the Clerk of the Privy Council is printed in the report of the proceedings of the General Medical Council of last summer's session.[1] As was pointed out in it, the definition is merely a description, while the words added to Clause II (5) "are sufficient to prevent any inference that the Bill would interfere with the principle or policy of the Medical Acts."

Under Clause II (5) an infraction might be punished even to the extent of entirely stopping the offender from practising—a very heavy punishment after her special education and getting a *clientèle* together. The insertion of the words "natural labour" in the definition might, on the other hand, give the convenient excuse—that, when a case was not one of "natural labour," it did not come under the Act. Again, penal action could not be taken under a definition without an enacting clause.

In regard to your remark that Clause III gives a quasi-legal position to the Obstetrical Society of London, the Society has repeatedly stated, through its Presidents, that it will cease the examination as soon as a statutory examination is established. Even if the examination were still to be continued it would be subject to the jurisdiction of the Central Board, and could be remodelled or extinguished. As a matter of practical working, some such examination as at present is held by the Society must be specially continued under the Act, in order to bridge over the interval of nine months which intervenes between the Act coming into operation and the Board beginning its work.

The proposal contained in the Bill prepared by the Parliamentary Bills Committee—that the Central Board should be selected, with one exception, by the General Medical Council—is impracticable, in that the Council has repeatedly refused to undertake any such active duties under the Bill. It will only advise. Further, as the Board would consist almost entirely of representatives of the profession which is pecuniarily interested, if any body be so, in the suppression of the class over which it is to be given judicial authority, it is improbable in the extreme that Parliament would sanction any such Board unless it had representatives of the midwives upon it, and was well balanced by nominees of the Privy Council. Then the payment of the expenses of a Board nominated by the General Medical Council would be a serious difficulty. It is certain that no public body with the necessary powers of granting money would contribute unlimited funds for the support of a Board upon which it had no representative, and over which it had no control even indirectly, as through a fair proportion of its members being appointed by the Privy Council.

With regard to the inspection of lying-in homes, surely this would come under the powers of regulating the midwife's practice? It is, however, primarily a police question.

The failure to send for a medical practitioner in an abnormal case would undoubtedly be one of the things enumerated in the rules for "restricting within due limits the practice of midwives" (which have to be approved by the General Medical Council) as constituting a gross infringement of the Act.

My Committee is always glad to have criticisms on the Bill with a view to its improvement, and we shall therefore hope to be favoured with the others to which you refer.—I am, etc.,

F. R. Humphreys,
Honorary Secretary Midwives Bill Committee.

Buckingham Street, Strand, W.C., Feb. 24th.

Sir,—The observations which I made at the proceedings of the Parliamentary Bills Committee on January 26th *re* the *Transactions* of the Midwives Society and the now notorious "man-midwifery" advertisement (as throwing a new light on the real object of the midwives' registration agitation), have in the British Medical Journal of February 24th drawn a belated disclaimer of the advertisement from the Midwives Societies' headquarters, 12, Buckingham Street, Strand. Miss Jane Wilson says:

> I desire most emphatically once more to disclaim ..... all knowledge of the advertisement in the *Daily Mail* ..... If it had been the deliberate intention of the authors of the advertisement to do harm to the cause of legislation for midwives, which it is their alleged object to support, they could scarcely, in my opinion, have selected a more certain means of effecting their purpose.

I desire to make a very few observations on the foregoing:

1. That the disclaimer appears to be purely personal.
2. That the writer is a lady.
3. That her name does not appear in the *Medical Directory* (I apologise if she be "registered").
4. I would ask if she has been chosen as the spokesman of the various bodies interested in the "registration" of midwives' certificates or diplomas?
5. I would ask the date of the earlier disclaimer, and whether it appeared in the *Daily Mail*?

Dr. F. R. Humphreys has given your readers further interesting (?) details of the various midwives' societies, and he indulges in some personalities to confuse the issue. These I pass by. He also—at the last moment—condemns the man-midwifery advertisement. But the advertisement has been allowed to appear—to help the interests of midwives' registration, and to damage the honour of medical practitioners—until five days before the Midwives Registration Bill is down to be read a second time by the House of Commons—and then, and not till then, its authorship is denied, and it is almost suggested (see Miss Wilson's letter) that it is the work of the enemy. There are "separationists" in politics, as in medicine—the parallel is perfect. In the days of the Land League, when an outrage against civil life occurred, it was generally ascribed to the police—"to do harm to the cause." History repeats itself.—I am, etc.,

Upper Mill, Saddleworth, Feb. 26th. Colin Campbell.

Sir,—Dr. Colin Campbell has apparently found out what I did some years ago—that there is a difficulty in fixing the responsibility of the present condition of affairs connected with the Midwives Bill upon the appropriate shoulders. I believe I succeeded in doing so.

The Council of the Obstetrical Society, aided by the Committee of the Royal College of Physicians and the British Medical Association were, in the first place, the would-be legislators, or connected with the backing of it. The first-named, when the position became warm, fell back upon three positions or bodies, two committees—one of which was composed entirely of medical men, and another which was not so composed—and the Midwives' Institute. The second named being mostly composed of the members of the former have backed their points. The third has been brought into a ragged line. If I may venture to do so, I should recommend Dr. Colin Campbell to attack the main body. He will receive little practical support from the profession, because so many are interested in gilded saloons whose denizens are active in support of legislation, and so many are practically unacquainted with the difficulties attending legislation in this matter. If the powers that be had any political foresight at all, the present position of the would-be legislators would have been untenable from the first. As it is, what foresight they possess was obscured at the outset and has remained so ever since. The practical conclusion which I have arrived at, and I believe one which Dr. Colin Campbell and his friends will also arrive at, is this—that until the full representation upon the governing authorities of the profession, to which free men have a just claim, is conceded, it is impossible for individual members of our profession to fight with success against the infatuations and absurdities of cliques and collections of our own body who have their own axe to grind.—I am, etc.,

Hatfield, Feb. 24th. Lovell Drage.

Sir,—In the British Medical Journal of February 24th you refer readers to the fact that I have had printed twenty "Reasons Against" the above Bill in double leaflet form, and that such can be obtained from Meek, Thomas, and Co., Cable Street, Liverpool, at the nominal charge of 2s. per 50. I wish to add that if a practitioner in the different towns would publish these "Reasons" in his local papers, and over his own name, but without mine, this might help to educate the thinking portion of the public to a truer finding regarding this contemptible proposal to supply the poorer classes of pregnant women with a class of midwifery practitioners whom neither the promoters of the Bill nor we ourselves would tolerate for one moment. The entire proposal is disgusting, and comes ill at a time when there is so much ranting

[1] British Medical Journal, June 17th, 1899, p. 1478.

about "doing to your neighbour as you would wish to be done to."

I would earnestly ask every practitioner to write at once to the M.P.s for his Division, and to induce all his local political and all his women patients to write them. This will let M.P.'s see that ours is not a mere trades-union movement, but, on the other hand, one which has for its aim the supplying of all women—poor and well-to-do—with thoroughly educated and qualified medical practitioners. We do not object to the midwife if she be educated up to the same level as the present registered woman medical practitioner. Yield this simple request to us, and our opposition will cease forthwith.—I am, etc.,

Liverpool, Feb. 25th. R. R. Rentoul.

THE NATURE AND TREATMENT OF PUERPERAL INFECTION.

Sir,—The elucidation of the treatment of puerperal fever is of such importance that it is absolutely essential that more work should be published of the nature of Dr. Macharg's paper in the British Medical Journal of February 17th. It is evident that no antistreptococcus serum can do away with septic thrombi which are so large and so independent of the general circulation—except when they overflow or break loose into the circulation—that, even were the serum fully competent, its action would have to be sustained for weeks and months until the last germ had ceased to act or the thrombi had escaped by abscess opening outwards.

The striking feature of the cases reported which recover after (? through) the use of antistreptococcus serum is the comparatively slight circulatory disturbance. That is, the temperature is high but the pulse is not proportionately accelerated. Temperature 105°, pulse 120 in Dr. Webber's case; pulse 120 in Dr. Anderson's case. It is probable that in these cases the sepsis was in the endometrium and placental sinuses and escaped into the uterine cavity. It is, therefore, necessary that the local treatment should consist in drainage of the uterus and the tamponnade of iodoform gauze is the usual means.

Curetting does good where the sepsis is superficial in the uterus; and although it often leads to rigors and high temperature when the sepsis is deep (septic thrombi are disturbed), yet it probably does no harm, even in these cases beyond hastening an inevitable result.

Hysterectomy, with dissection out of thrombosed ovarian veins, is the operation Dr. Macharg suggests for cases in which the venous sinuses are believed to be involved. The antistreptococcus serum seems therefore to have no value except in recent superficial sepsis—that is, it is useful in septic intoxication and septicæmia with superficial lesions. But drainage and irrigation usually remove septic intoxication, so that the field for serum treatment in puerperal septicæmia is limited to a very narrow zone. It is advisable that the blood be examined in all cases of puerperal fever, so that true septicæmia may be differentiated from cases of fever produced by septic intoxication or other cause. Otherwise reports of recoveries after the use of serum are of no value, since everyone has seen cases in the pre-serum times which seemed moribund, and recovered after Warburg's tincture or some other specific quite as quickly as after injection of serum.—I am, etc.,

Wolverhamptom, Feb. 17th. Fred. Edge.

COLLIERY SURGEONS IN THE MIDLANDS.

Sir,—I wish to draw the attention of the above members of the profession to the fact that some time ago the colliery surgeons of Durham and Northumberland united, and obtained a fair remuneration for their services.

The rate of pay that the Midland surgeons obtain for attendance on a collier and his wife and children is so small that I am ashamed to put it in print. Although a "strike" is altogether foreign to the tenets of the profession, yet something like it ought to be mooted. There are times when a "worm will turn." Colliers have had their pay increased, but they never think of their doctors, who are at their beck and call for twenty-four hours a day. Qualified assistants will not come to a colliery practice unless well paid, and yet colliery surgeons will not stir a finger to improve matters.

In fine, I appeal through your columns to the Midland colliery surgeons to make some move in the matter; we can unite as well as Durham, and if so we can win. If a sufficient number of replies are made to this appeal, a committee will be formed and action taken at once.—I am, etc.,

February 26th. Colliery Surgeon.

DEFECTS OF THE CLUB SYSTEM.

Sir,—I cannot do other than express my approval of the letters upon this subject by "Gray's," Dr. W. Bruce, and "Municeps."

The remuneration is, in many cases, absurdly inadequate for the work done, and especially is it so when we see medical men taking clubs at 2s. 6d. a member per annum, as is the case in some of the large towns in the north of England.

There is a rooted impression amongst club patients that they do not receive the same attention as private patients. That such is frequently the case there can be no doubt, but, in my opinion, it is entirely their own fault. If a man expects to receive a shilling article, but will not pay more than a quarter of that sum for it, he need not be surprised to find that after all he has only received something worth threepence.

This is an age for combination, and, unless we adopt this course, we cannot expect to hold our own against the clubs. I am convinced of the uselessness of local combinations, as there is always someone who refuses to fall in with the wishes of the majority, and thus their intentions are frustrated.

The reason of their refusal to combine is that they are afraid that some other medical men will come who will take the clubs at a small sum, and so overthrow the combination. There is certainly a great deal in this argument, and thus I consider the only way to deal with the subject effectually is for the General Medical Council to take it up on behalf of the profession.

But, unfortunately for us, the General Medical Council does not consider that such subjects are within its province, so that we find ourselves without a central body to whom we can appeal in matters of this sort. Were the General Medical Council composed, as it should be, of a preponderance of general practitioners, I think it would soon discover that it had the power to deal with matters of this sort, and we should have them righted.

The General Medical Council is, as a body, absolutely useless to the general practitioner, as this and kindred subjects do not affect the members financially; and they, if one can judge by their action towards the general practitioner in the past, will not trouble themselves about this matter in the future. I feel sure that so long as the General Medical Council is composed of professors and consultants, the general practitioner will have to wait in vain for anything of a really beneficial nature.

The General Medical Council has adopted a dog-in-the-manger policy, as it will not endeavour to remove the disabilities under which the general practitioner practises, nor will it increase its numbers in order to admit more direct representatives who understand, and are able to deal with, these matters.

The formation of a Conciliation Board is in theory very good, but as it would have no *locus standi*, I fail to see how it could be a success.—I am, etc.,

Rotherham, Feb. 10th. W. H. Rowthorn, L.R.C.P.

COLOSTOMY.

Sir,—The method described in the British Medical Journal of February 24th, p. 441, as "a modification of the operation of inguinal colotomy" is known as Franck's colostomy. Some years ago, being interested in the subject, I found that the same idea, differently carried out, had suggested itself to Witzel and Hacker. The references I cannot lay my hands on, but an epitomised description of the three proceedings is as follows:

1. Franck attaches the loop to peritoneum as in gastrostomy and draws it under, and then through, the skin further out.

2. Witzel makes an incision to the left of the middle line, draws a loop of colon out, sutures the parallel portions of gut together, then passes the loop between the anterior and posterior fibres of the rectus abdominis to its outer border,

then out through the skin, where the end of the loop is fixed, to be divided by the Paquelin cautery on the sixth day.

3. Hacker makes the usual incision to ascertain the length and freedom of mesentery of sigmoid. If long enough, a loop of intestine is drawn out and passed between the anterior and posterior fibres of the rectus towards the middle line (the opposite way to Witzel) and out through the skin. He suggests slight torsion of the loop as originally proposed by Gersuny before suturing to the skin. The first wound is sutured layer by layer, and the loop kept out by a glass rod (Maydl's method).

Other methods have been described, such as taking the cut end out under muscles and over the crest of the ilium, or, indeed, by someone through the ilium.—I am, etc.,

W. Thelwall Thomas, F.R.C.S.,
Honorary Assistant Surgeon, Royal Infirmary; Assistant Lecturer in Surgery in University College, Liverpool.

February 26th.

COLONEL LAWRIE ON MALARIA.

Sir,—In the *Indian Medical Gazette* for November, 1899, I published a paper, a copy of which is enclosed, to prove that the proteosoma and the halteridium are different shapes of one and the same thing, and to save confusion I proposed to call them all in future by the one name of proteosoma. I further stated that you never can be certain that birds of the class in which proteosomata are found will not develop them spontaneously, and that Ross's manifest ignorance of this fact entirely vitiates his inoculation experiments and the conclusions he has drawn from them. In your issue of January 20th Dr. Ross says: "Here one of Colonel Lawrie's frequent little fallacies crop up. He has published photographs of the proteosoma found by him. Will it be believed that it is not proteosoma, but quite another parasite, the common halteridium Danilewskii?" This is a fine sample of criticism Rossii. Dr. Ross states that I am the "victim of a fixed idea that scientific men have wickedly conspired, he accuses *us* (the italics are mine) all round, and so on." Here my friend Dr. Ross is slightly in error. I have most assuredly never been the victim of a fixed idea, or of any idea, that he and his brother plasmodists are "scientific men." I do not consider it science to call the "sports" in the blood of healthy birds by such names as "Grassii" or "Danilewskii." The well known parody of Godley applies in my humble opinion to Ross, Manson, MacCallum, and other discoverers of the sham sexual processes among Laveran bodies, and of the transformations, inside the mosquito, of the mythical offspring of these processes:

'Tis all they need, they are content with these:
Not facts they want, but soft Hypotheses
Which none need take the Pains to verify:
E.g. the Theory of Anopheles.

—I am, etc.,

Edward Lawrie.

Hyderabad, Feb. 8th.

SIRIASIS AND CEREBRAL HÆMORRHAGE.

Sir,—Will you kindly allow me space to contradict a damaging statement reported to have been made about me by Dr. Sambon in the British Medical Journal of September 9th, 1899, p. 651? He is there reported to have said, in referring to me, "Unfortunately he confounded cerebral hæmorrhage with siriasis." It looks like an error on the part of the reporter, for I can hardly believe that a member of the profession would wish to discredit an opponent by a statement for which there is absolutely no ground and no justification whatsoever.

In my article on heat apoplexy I did not give any of the symptoms on which the diagnosis was based, so that it is impossible for a reader to say that I was mistaken. Whatever the origin of the remark, I must request its withdrawal.—I am, etc.,

C. J. McCartie,
Lieutenant-Colonel I.M.S.

Chitral, India.

*** We have referred Colonel McCartie's letter to the author of the remark of which he complains. Dr. Sambon writes: "I am sorry that Colonel McCartie makes a personal matter of my criticism of his paper on heat apoplexy. This is unnecessary as well as unfortunate. I entertain a high opinion of his contribution to the subject, although I cannot agree with some of his views as to the nature and etiology of the various pathological states included under that rather obsolete title. My statement that Colonel McCartie mixes up heat syncope, cerebral hæmorrhage, and siriasis conveyed the impression produced on my mind by reading his paper."

FAILURE TO OBTAIN ASEPSIS.

Sir,—In Mr. Lockwood's paper on Aseptic Operations, published in the British Medical Journal of February 24th, the following statement occurs: "Of late years, where suppuration has occurred, it has almost invariably been due to a collection of blood in the depths of the wound." The questions which naturally occur to one are: (1) Was the blood *per se* infective? and (2) Can blood by its presence in a wound cause suppuration physically or chemically without the presence of organisms?

If these two questions are answered in the negative there only remain two causes for suppuration under the circumstances: (1) Spontaneous evolution; and (2) infection from without.—I am, etc.,

Harley Street, W., Feb. 27th. Arthur H. Cheatle.

OBITUARY.

THOMAS SCATTERGOOD, M.R.C.S., L.S.A.,

Dean of the Medical Department, Yorkshire College, Leeds.

In the death of Mr. Thomas Scattergood the medical profession in Leeds has lost one of its most useful members, while the Medical Department of the Yorkshire College has sustained in the death of its Dean an almost irreparable loss. Though Mr. Scattergood had a large general practice, the greater part of his leisure and much of the time that he could have very profitably employed in his private work was given to the College affairs, either as a member of the Council or as Dean of the Medical Department or as a lecturer.

Mr. Scattergood's sound and ready judgment, his strong will, his sense of justice, and his strict uprightness peculiarly fitted him to preside over the Medical Board of the College, every member of which respected his decisions, listened carefully to his words of advice, and never failed to receive from him a sound judgment on any vexed question. His colleagues, knowing his worth and honesty of purpose, had learnt by experience that his, at times, apparent brusqueness was simply directness of purpose and love of truth.

For many years before the Leeds Medical School became amalgamated with the Yorkshire College Mr. Scattergood was an active member of the Council and a Lecturer on Forensic Medicine and Toxicology, in which subjects he attained such eminence that as an expert his advice was constantly sought in medico-legal cases not only in Leeds, but in Yorkshire and in the North of England generally.

Mr. Scattergood's work at the Women and Children's Hospital, of which he was an honorary officer for many years, and his occupation in a large general practice since 1850, brought him a vast and varied experience of the diseases peculiar to women, and, although he never posed as a specialist, his advice was much sought on the subject both in Leeds and the neighbourhood.

Mr. Scattergood took no active part in politics or in municipal matters generally, but as an active member of the Leeds Musical Festival Committee, of the Leeds Sanitary Aid Society, and of other similar philanthropic bodies he did much useful work in a quiet and unassuming manner.

Though Mr. Scattergood had attained the ripe age of 74, he was more active than not a few men many years his junior; and of him it may truly be said that he died in harness, for he was in active work within three weeks of his death, which occurred from syncope following on influenza.

GEORGE RICHARD CUNDELL, M.D., M.R.C.S., J.P.,

Surgeon, Royal Hospital, Richmond.

The medical profession in the Thames Valley district has lost a valued colleague by the death on February 11th, at little over 50 years of age, of Dr. G. R. Cundell, of Kew. He commenced his medical studies by apprenticeship to the Apothecaries Company, serving part of his time with Dr. Major, of Hungerford, Berks. He afterwards proceeded to University College, and was then engaged in the electrical department in India. Returning again to London after a year, he concluded

his medical studies at St. Mary's Hospital, and became M.R.C.S.Eng. and L.S.A. in 1875. He took the M.D.Durh. in 1893. He served the office of Resident Medical Officer at St. Mary's and the Female Lock Hospital. He settled in practice at Kew, latterly carried on in partnership with his brother, Dr. W. H. Cundell, and with Dr. Burrell. He was Surgeon to the Royal Hospital, Richmond, and was Medical Officer to the Staff of the Royal Gardens at Kew for many years. He was also Medical Officer to the Kew District of the Richmond Union. He was a member (and for a time Councillor) of the Thames Valley Branch of the British Medical Association.

Dr. Cundell always displayed much public spirit, and from his first settling at Kew we find him identified with many of the local institutions, taking an active interest in the cricket club and other athletic associations of his "village." On the incorporation of Kew with Richmond, Dr. Cundell became its representative on the Town Council, and rendered valuable service to the community by his assistance on the Health Committee, of which he was for some time the Chairman. In this capacity he had the satisfaction of seeing brought to a practical issue the long-discussed project of an isolation hospital for Richmond ultimately established at Mogden in conjunction with a neighbouring sanitary authority. In 1896 he was chosen Mayor of Richmond; and in that office presided over the Jubilee celebrations, which in the royal borough of Richmond extended over a week. In addition, Dr. Cundell set on foot, as a permanent memorial of Her Majesty's Diamond Jubilee, the "Victoria Endowment Fund" for the Richmond Hospital, and during his year of office upwards of £3,000 was raised for this purpose. He was to the last a devoted member of the honorary medical staff of this institution.

The strain of his multifarious efforts for the public weal, in addition to the cares of a large practice, appeared to have affected his health, and for the last year or two his friends had noticed with concern signs of failure. He underwent some months ago a severe operation, from which, however, he recovered sufficiently to resume his ordinary avocations, and three days before his death he was going about as usual. Sudden hæmatemesis then occurred, and he died after a brief illness, much lamented by a large circle of private and professional friends, and by his former colleagues on the Corporation, many of whom testified their respect by attending the funeral.

EDWARD JONES, M.D.ST.AND., M.R.C.S.ENG., J.P.

THIS well known and highly respected member of the profession died at his residence Dolgelly, Merionethshire, North Wales, on February 5th, at the age of 66. He had suffered for some years from diabetes, but the immediate cause of death was inflammation of the lungs supervening on a chill and lasting only two or three days. He was about to retire from practice in favour of his two sons, and to reside in a house which he had lately built and furnished overlooking the valley in which Dolgelly lies, and in full view of Cader Idris, when death thus interrupted the scheme.

Edward Jones was born at Dolgelly in 1834, his father being a painter in the town. He early decided to enter the medical profession, and was further incited thereto by the young lady, Miss Ann Jones, who afterwards became his wife, and who, together with six sons and a daughter, has survived him. After an apprenticeship in Plasbrith, Dolgelly, he studied at Glasgow for three years, and in 1861 became M.D.St.Andrews and M.R.C.S.Eng. Two years later he commenced practice in Dolgelly, and was elected Medical Officer of Health for that place and also for Barmouth. In this office he did his duty fearlessly; his reports constantly attacked insanitary conditions, and pointed out the appropriate remedies. He took great interest too in the school board elections of Dolgelly, was in his element as a debater at public meetings, and in politics was a staunch Liberal. He had an intense love for his native language, and was well read in its best literature. He had also a great desire to see Wales recognised as a nationality, and to have the opportunity of working out her own destiny in her own way. He was a strong advocate of temperance. He greatly assisted the movement by which Dolgelly is supplied with water, himself becoming chairman of the company. He was J.P. for his county, and Alderman of the county council, in almost all departments of which his judgment and common sense were of great use. He was chairman of the Joint Education Committee for the county, and in every sense a strong and excellent advocate of liberal and just measures on behalf of the people, for whom his time and talents were freely used. He will be greatly missed in the multifarious public posts that he filled.

The funeral took place at Dolgelly Cemetery on February 9th.

MR. BERNARD EDWARD BRODHURST, F.R.C.S., who died on January 30th, in his 78th year, studied at the London Hospital, where he filled various surgical appointments. He obtained the diploma of M.R.C.S. in 1844, and in 1846 visited some Continental medical schools, especially those of Paris, Vienna, and Berlin. He arrived in Rome at the end of 1848, together with Arthur Clough. At that time Garibaldi was marching towards the city, and presently afterwards he occupied it with his troops. Mr. Brodhurst was present when General Oudinot advanced with 5,000 troops, without cannon, and with rifles unloaded, expecting to enter the city without firing a shot. But Garibaldi had planted his guns outside the walls to defend the road by which they must approach, and as they appeared he opened fire upon them; 300 wounded were left on the field, and these were taken into the city hospitals, especially into that of Santo Spirito. The prisoners were afraid of the Italian surgeons, and begged that any foreigners might be asked to take care of them. All, however, had left Rome at the commencement of hostilities except Mr. Brodhurst, and thus, at the request of the Triumvirs, he undertook this duty. For this service he received the cross of the Legion of Honour from the Commander-in-chief, Marshal Baraguay d'Hilliers. On returning to London he joined in 1852 the staff of the Royal Orthopædic Hospital, and he continued there as Surgeon until his death. He was also on the staff of the Royal Hospital for Incurables, and Consulting Surgeon of the Belgrave Hospital for Children. He took the diploma of F.R.C.S.Eng. in 1859, and in 1863 was elected Assistant Surgeon at St. George's Hospital, but owing to the calls of private practice he resigned in 1869, and was then elected Surgeon with orthopædic wards, which post he held until 1874. He was also for a time Lecturer on Orthopædic Surgery at St. George's Hospital. Mr. Brodhurst was an Associate of the Academy of Sciences of Rome, and a Corresponding Member of the Medical Societies of Lyons, Rome, and Odessa, of the Chirurgical Society of Paris, and of the American Orthopædic Association. He made many contributions to medical literature, of which the following are perhaps the most important, namely, On Ankylosis, *Medico-Chirurgical Transactions*, vol. xl, 1857; On Subcutaneous Osteotomy, *Medico-Chirurgical Proceedings*, vol. iv, 1862; and *Clinical Society's Transactions*, vol. x; On Congenital Dislocations of the Femur, *St. George's Hospital Reports*, vol. i, 1866. He published also works on *Curvatures and Disease of the Spine; On Ankylosis*, and *A System of Orthopædic Surgery*.

WE have to record the death of Dr. THOMAS PURCELL of 41, Great Baggot Street, Dublin, which occurred suddenly in the street on February 9th. Dr. Purcell, who was about 60 years of age, obtained the Licences of the Royal Colleges of Physicians and Surgeons, Ireland, in 1863, and the membership of the former body in 1880. He was Medical Officer and Medical Officer of Health of No. 1 Dispensary District in the City of Dublin. Fully 20 years ago it was discovered that he had severe disease of the endocardium and pericardium which had followed on an attack of scarlatina. A quiet and unemotional life, which entailed little work beyond his dispensary duties, gave him an opportunity of enjoying a comparative freedom from distressing symptoms which hard work would certainly have induced. Dr. Purcell was unmarried, and was of a retiring disposition, but was held in much esteem by his intimate friends and the inhabitants of the dispensary district, where his loss will be much felt. He was formerly an Assistant-Surgeon in the Royal Navy. Dr. Purcell was the eldest son of the late County Court judge for Limerick. Three of his brothers went into the medical profession. One of them served for several years under the Japanese Government, and died in Japan in 1877, another died in the Army Service after he had attained his majority; and the third, Dr. Herbert Churchill Purcell, is in practice in Sydney, N.S.W.

We regret to record the death of Dr. David Millar King, at Hounslow, on December 30th, 1899, at the early age of 29. Some ten days before he was apparently in good health, and going about his professional work with his accustomed zeal. He then had an attack of influenza, on which pneumonia supervened. His death caused profound regret in Hounslow, where he had only resided for about two years, though long enough for his sterling worth to be recognised. Two of Dr. King's brothers are in South Africa, one of them being with Colonel Plumer, who is attempting the relief of Mafeking. An incident connected with Dr. King's death is that twelve years ago five students, friends from boyhood, of whom the deceased was one, took leave of one another in Glasgow before going out into the world on their different vocations, and made a compact that wherever they might be they would again meet together on January 1st, 1900. Two of them arrived on December 30th at Hounslow, to find that their friend had just died. One of them attended the funeral on January 2nd, and thus kept his share of the compact. Dr. King was born in Scotland in 1870, and was educated at Glasgow University, where he obtained the degrees of M.B., and C.M. in 1893. He then assisted Dr. Bontor, at Berkhamsted, for three years, and about two years since became assistant to Dr. H. Sydney, at Hounslow. He was studying for the M.D. degree when he became ill. The funeral took place at Isleworth Cemetery on January 2nd, amidst general tokens of respect, several of the medical men of Hounslow and its neighbourhood being present.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Gustavo Pacetti, Lecturer on Neuropathology in the University of Rome, aged 34; Dr. A. Valenti, Extraordinary Professor of General Pathology in the University of Rome; Dr. L. Brunetti, Emeritus Professor of Morbid Anatomy in the University of Padua; Dr. Philip Knoll, Professor of Experimental Physiology in the University of Vienna, aged 58; Dr. Oscar Widmann, Extraordinary Professor of Medical Pathology at Lemberg; and Dr. Arthur Decès, Professor of Clinical Surgery in the Rheims School of Medicine, aged 69.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE NAVY ESTIMATES, 1900-1901.

I.

These estimates indicate further provision for the efficiency, attractiveness, and contentment of the Naval Medical Service, due to the present able Admiralty administration.

Some of these desirable and requisite reforms have been recently mentioned in the British Medical Journal. Among these are the decision to make a larger proportion of promotion to the rank of deputy inspector-general by special selection, and the modifications of the conditions required for promotion to the rank of fleet-surgeon; the supply of surgical instruments to ships, naval and marine barracks; the reorganisation of the school of instruction at Haslar, with the addition of a professor in connection with the study of the diseases of foreign stations, Roentgen ray work, etc., and an extension of the time for the course; study leave for naval medical officers of both junior and senior rank. These reforms have necessitated an increase in the Naval Estimates for the coming financial year.

In the First Lord's statement explanatory of the Navy Estimates, a most important and long-required reform of the *personnel* of the Naval Medical Service is announced:

> To meet the difficulty of recruiting suitable men for the rating of sick berth attendant the pay and prospects of this class have been improved, and the rank of warrant officer granted to the position of ward master at the three principal hospitals at home. An extended course of training will be introduced for probationers.

The senior officers of the Naval Medical Service will recognise what an important reform this is. They can recall the previous futile endeavours to secure suitable and desirable nurses for their patients. They can recall the days when such men were entered from the shore for the ship's commission; the introduction of continuous service for such ratings; the subsequent recruiting of boys from the training ships for instruction at Haslar Hospital, an arrangement which proved unsatisfactory; a subsequent attempt to obtain suitable men from young marines, which was also a failure, as many foresaw. The prospects for such boys and men attracted, as a rule, few desirable candidates for training, and, as may readily be believed, neither naval or marine officers were inclined to encourage promising boys or marines to exchange the ratings for which they had entered for that of sick berth attendants. The next procedure was to recruit young men for training; this again proved on the whole unsatisfactory, as indicated by the First Lord's statement; the pay and prospects were not such as to attract men available for other and more popular naval ratings, for which such youths were also eligible. Of the efficient men who were obtained under these systems, the majority took their discharge as soon as they had secured a pension, and readily obtained situations, their duties, prospects, and pay not encouraging them to prolong their naval service. The improved pay and prospects, with the possibility of attaining warrant rank now notified, will doubtless attract desirable recruits for the sick berth staff of the navy.

It is now some five years since Mr. Goschen, in introducing the Naval Estimates for the year, stated that the increase of seamen and marines, which has steadily been voted from year to year, amounting for the coming year to 114,800, as compared with 105,000 on February 1st, 1899, necessitated increased hospital accommodation, but so far its provision has been greatly delayed. The Estimates for 1900-1901, however, indicate progress in the provision of suitable modern hospital accommodation at Chatham, Sheerness, Haslar, Plymouth, Pembroke, Haulbowline, Harwich, Portland, Walmer, Gibraltar, Malta, Cape of Good Hope, and Hong Kong.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 3s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

Civil Surgeon serving in Portsmouth wishes to exchange anywhere north of Birmingham or to Belfast.—Address, No. 504, British Medical Journal Office.

ROYAL NAVY MEDICAL SERVICE.

Surgeons Johnston H. Acheson, M.B.; John McElwee, M.D.; D'Arcy Harvey, M.B.; Reginald T. A. Levinge, B.A.; John C. Ferguson, B.A., M.B., and Edward P. Mourilyan, M.B., having completed twelve years' service, are promoted to be Staff-Surgeons, February 22nd. Staff-Surgeon Acheson was Surgeon of *St. George* (Flag), and served in the Naval Brigade landed under the command of Rear Admiral Sir F. Bedford, for the punitive expedition against King Koko, of Nimby, the chief town of Brass, on the River Niger, February, 1895 (medal with clasp). He was also in the Naval Brigade landed by Rear-Admiral Rawson at Mombasa from the *St. George*, *Phœbe*, *Barrosa*, *Racoon*, and *Blonde*, accompanied by sixty Soudanese and fifty Zanzibar Askaris, for the punishment of Mburuk, a rebellious Arab chief, resulting in the capture of his stronghold, M'weli, August 17th, 1895; mentioned in despatches ("M'weli, 1895," engraved on rim of General Africa Medal). Staff-Surgeon McElwee, whilst Surgeon of *Widgeon*, landed with the Naval Brigade in the expedition up the Gambia, West Coast of Africa, December, 1891, to February, 1892, resulting in the capture of Tambi and Tomataba (medal with clasp). Staff-Surgeon Levinge was Surgeon of *Alecto*, took part in the punitive naval expedition commanded by Rear-Admiral Rawson, C.B., and landed from the Squadron to punish the King of Benin for the massacre of the political expedition, 1897, ending in the capture of Benin City; on Lieutenant-Commander Pritchard being shot, Dr. Levinge took command and behaved admirably (mentioned in despatches, medal with clasp).

Surgeon Eric E. Kershaw has been allowed to withdraw from the service with a gratuity. He was appointed Surgeon February 11th, 1891.

The following appointments have been made at the Admiralty: John F. M. M'Dougall, Surgeon, to the *Rodney*, March 1st; Nelson J. Roche, Surgeon, to the *Alexandra*, March 1st; John P. H. Greenhalgh, M.B., Surgeon, lent to the Royal Marine Infirmary, Plymouth, February 2 to.

ROYAL ARMY MEDICAL CORPS.

Major John Semple retires from the service receiving a gratuity, February 24th. He was appointed Surgeon July 30th, 1881, and Surgeon-Captain twelve years thereafter.

Captain Robert H. E. G. Holt died on February 21st from wounds received in action with General Buller's forces in Natal, aged 33 years. He was the only son of Lieutenant-Colonel R. W. F. Holt, late Royal Marine Light Infantry, and entered the service as Surgeon-Lieutenant January 30th, 1892, becoming Surgeon-Captain three years later. He went to South Africa in October last.

ARMY MEDICAL RESERVE.

SURGEON-LIEUTENANT-COLONEL C. B. STONEY, M.B., having resigned his Militia appointment, ceases to belong to the Army Medical Reserve of Officers, February 24th.

INDIAN MEDICAL SERVICE.

LIEUTENANTS A. A. F. MCARDLE, M.B., J. M. WOOLLEY, M.B., C. A. LANE, M.B., T. P. KELLY, J. H. HUGO, M.B., D.S.O., W. H. KENRICK, C. H. WATSON, C. H. S. LINCOLN, R. H. PRICE, M.B., E. F. E. BAINES, G. O. F. SEALY, and R. BRYSON, having completed three years' full-pay service, are promoted to be Captains from January 28th.

The retirement from the service of Lieutenant-Colonels W. F. MURRAY and ANDREW DUNCAN, M.D., of the Bengal Establishment, and of Lieutenant-Colonel E. FAWCETT, Madras Establishment, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

Lieutenant-Colonel J. YOUNG, M.B., Bengal Establishment, has been appointed to officiate as Principal Medical Officer Presidency District, *vice* Colonel J. C. G. Carmichael, M.D., who has proceeded on leave.

THE IMPERIAL YEOMANRY.

THE appointments of the undermentioned gentlemen as Medical Officers are cancelled:—H. MANDERS, M.D. (Major 1st Volunteer Battalion Princess Charlotte of Wales's Royal Berkshire Regiment), R. C. DUN, M.B., C. SMITH, M.D., A. C. FRY, M.R.C.S., E. T. VINT, M.B., C. B. HOWSE, M.R.C.S., H. A. LOWNDS (Captain 2nd Volunteer Battalion the York and Lancaster Regiment).

Mr. FRANCIS WELLFORD, M.B., is appointed Medical Officer, with the temporary rank of Captain, February 24th.

THE VOLUNTEERS.

THE undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated February 28th:—CHARLES O. PARSONS and EDWARD T. COLLINS, 2nd Glamorganshire Artillery; WILLIAM T. BLACKLEDGE, M.B., 6th Lancashire Artillery; D'ARCY B. CARTER, 2nd Volunteer Battalion the Prince of Wales's Own West Yorkshire Regiment; GEORGE R. F. STILWELL, M.B., 2nd Volunteer Battalion the Queen's Own Royal West Kent Regiment, ROBERT FENNER, 3rd London Rifles.

Surgeon-Captains T. C. BAILEY, 2nd Cheshire (Railway) Engineers, and J. MOIR, 2nd Volunteer Battalion, the Royal Scots Fusiliers, have resigned their commissions, February 28th.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated February 28th: P. D. MINCHIN, 2nd Volunteer Battalion the Queen's Royal West Surrey Regiment; W. H. VICKERY, 3rd Volunteer Battalion the Northumberland Fusiliers; J. C. FENWICK, 3rd (Sunderland) Volunteer Battalion the Durham Light Infantry.

Surgeon-Lieutenant A. B. HARRIS, M.B., 1st Volunteer Battalion the Essex Regiment, has resigned his commission, February 28th.

R.A.M.C. MESSES IN INDIA.

PROVISION for separate messes for officers of the R.A.M.C. in India has been sanctioned by the Government. Allowances of Rs. 100 monthly where ten officers are in residence, and Rs. 80 where there are eight, are sanctioned towards rent of separate mess houses in stations where Government buildings cannot be given rent free for the purpose.

THE R.A.M.C. IN INDIA.

THE War Office has decided that administrative officers of the R.A.M.C. on the Indian Establishment will in future be granted leave under the rules applying to officers of the British army. They thus become entitled to a passage to and from England on sick leave.

THE ARMY MEDICAL RESERVE OF OFFICERS.

MILES writes: Your recent correspondence and adverse criticism on the Army Medical Reserve, which has been challenged by "Fairplay," seems over-severe; but it must be acknowledged that recent events in South Africa have tended to sanction your action.

Few would endure the taunts so often levelled at the reserve as useless had not Volunteers become accustomed to snubs and neglect. The stiff-necked War Office has at length been driven to implore the assistance of our citizen army, but the Army Medical Reserve so far is still left severely isolated. Its last official recognition was in a circular letter of 1895, at a time when the Medical Staff was at a low ebb, but now, with war and disaster, we look forward to long-deferred developments. The Army Medical Reserve suffers many anomalies compared with the Royal Army Medical Corps: it has no Royal title or army rank; it has disappeared from the *Army List*; and in the present crisis does not participate in privileges over other Volunteer officers or civilians, and beyond an additional commission (and stamp duty) has no organisation or machinery of its own. But it may yet rise to what was intended at its inception—namely, to be a force of trained officers to fall back upon to replenish vacancies in the army, either from deficiency of candidates for commissions or of officers in time of "great national emergency."

To show the strain upon the patriotism of the Army Medical Reserve I will give one instance in my district. The approving medical officer of it, carrying out the examination of recruits for all branches of the army, is a civilian. When appointed, he succeeded his partner who held it, and was at the time a Volunteer officer, although not an Army Medical Reserve. Subsequently he resigned his commission in the Volunteers, but retained his recruiting appointment, in which he has been doing a brisk business lately. This has happened, although an Army Medical Reserve officer lives in the district, who has to examine his own recruits, as well as volunteers for Africa, without pay or the protection of his department.

Such treatment is enough to paralyse enthusiasm, and is contrary to Para. 675 of the Army Medical Regulations, which alone empowers the Army Medical Reserve to carry out these duties. It appears a doubtful advantage to enter the Army Medical Reserve; and in the present state of our foreign relations I hope you will do what you can towards a healthy reanimation of the Army Medical Reserve.

*** There seems to be still considerable misapprehension of our attitude to the army medical reserve of officers. Because we endeavoured to point out, on its very formation, that it was constituted on unsound lines, it seems to be inferred we are entirely hostile to any such body. That is not so; we yield to none in our admiration of the patriotism of our volunteers, and we recognise that the medical portion of them display a self-sacrifice perhaps greater than that of any other. But the point is, Are not the Army Medical Reserve in a false position? As officers, forming an integral part of volunteer battalions, how can they be a real reserve, when the supreme test of "great national emergency" occurs? That great contingency, we take it, involves, to a certainty, Volunteer mobilisation; where, therefore, can the Army Medical Reserve come in—with the regular army, or with their corps? Do the public realise this position? We are afraid not, and herein lies a danger. Those who have hitherto opposed the needed reforms of the Army Medical Service, always—either openly or tacitly, have endeavoured to play off either the civil profession at large, or such portions of it as were embodied in the Army Medical Reserve, against the needed rights and reforms; and this we foresaw from the very inception of the Reserve by time-serving officials. But, fortunately, this little game has not, and is not likely, to succeed, because the profession at large, and medical volunteers in particular, have shown they will be no party to it.

In these remarks we are viewing a reserve as a *bonâ-fide* body that can really be called upon to supplement or take the place of the regular Army Medical Service in real and "great" national emergency; not a body merely with "prior claims" to employment in times of small emergency. It seems that the Army Medical Reserve have been passed over, and very indifferently treated in the present crisis; but, as we have before observed, it has been perhaps found necessary to employ, in this emergency, medical men who can give their whole time to military work, which we fancy the majority of the Army Medical Reserve, as gentlemen mostly in full and good civil practice, are not prepared to give, unless in a supreme crisis.

We are now striving for full, honest and open army medical reforms, and cannot countenance any system which involves either officers or men (as in the case of the Army Medical Reserve) being counted twice, or expected to perform impossible dual duties, in real or great national emergencies.

The part of volunteers, medical or other, is to act with volunteers, and to have no double entanglement when the supreme test comes; they cannot be in two places at once, and on this ground we hold, and have always held, that the constitution of the Army Medical Reserve is and must be unsound. Unless and until it can be demonstrated that our position and contention is wrong we must hold to it.

THE EMPLOYMENT OF RETIRED MEDICAL OFFICIALS.

A CORRESPONDENT avers that the chief reason why civilians are sent to the seat of war in preference to retired officers willing to go, is, that the latter are more wanted in the hospitals at home, which have been denuded of competent commandants. Many hospitals are in a sad mess under civilian surgeons in charge, with incompetent pensioners acting as clerks and stewards. Returns, reports, and records, under such circumstances, are not models of exactitude. The supersession of active by retired officers in the field is of course an awkward question.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Horton-Smith Prize.—Mr. R. Horton-Smith, Q.C., M.A., of St. John's College, has offered to the University a fund of about £600 for the establishment of a prize for medicine and pathology, in memory of his son Raymond Horton-Smith, M.B., who, after a distinguished career in the University and at St. Thomas's Hospital, died in October, 1899, in his 27th year. The prize is to be awarded annually for the best thesis for the M.D. degree offered by candidates who have taken honours in one of the Triposes. The prize thesis is to be printed, and copies are to be sent to various officers and libraries of the University and the Royal College of Physicians.

Arrangement with Addenbrooke's Hospital.—The scheme for a formal connection between the medical school of the hospital, which has already received the approval of the Governors, is now submitted for adoption by the Senate. It provides, on the one hand, for a contribution of £300 a year to the hospital funds, and on the other for the election of the Regius Professor of Physic and the Professor of Surgery to the hospital staff. The formation of a Hospital Council of fifteen, on which the town, county, and University shall each be represented by five Governors is also arranged for. The scheme has the unanimous approval of the staff, the Medical Board, and the Council of the Senate, so that it is likely to come into effect without delay. The Council expresses the opinion that it will be serviceable both to the University and to the hospital, and that it will remove existing difficulties in connection with the work of the school and the conduct of the examinations for medical degrees.

Honorary Degree.—The complete degree of M.A. *honoris causâ* is to

be conferred on Mr. F. G. Hopkins, M.B., B.Sc.Lond., University Lecturer in Chemical Physiology.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen passed the Preliminary Science Examination for the Licence in Dental Surgery in Chemistry, Physics, and Practical Chemistry:

P. D. Anderson and H. Bryan, Victoria Science and Art School, Southport; G. S. Bateman, Birkbeck Institute: W. B. Dougan, Owens College, Manchester: F. N. Fox, Muuicipal School of Science, Art, and Technology, Gloucester; A. W. Gant, Hymers College, Hull; W. E. Griffin, Guy's Hospital; W. R. Parker, School of Science, Technology, and Art, Liverpool; Ernest H. Tice and S. A. Tice, South West Polytechnic Institute, Chelsea.

Eight gentlemen were referred back to their studies for three months.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen having passed the necessary examinations have been admitted Diplomates in Public Health:

J. Allinson, M.D., C.M.Edin., F.R.C.S.Edin., Edinburgh University; A. D. Cowburn, L.R.C.P.Lond., M.R.C.S.Eng., M.D.Brux., University College Hospital; H. E. Finch, M.B., B.Ch.Oxon., Oxford University and London Hospital; H. P. Foulerton, L.R.C.P.Lond., M.R.C.S. Eng., St. George's Hospital; S. B. Gadgil, L.M. and S.Bombay, Grant Medical College, Bombay, and University College, London; H. W. Henshaw, L.R.C.P.Lond., M.R.C.S.Eng., St. Bartholomew's Hospital; J. N. Martin, L.R.C.P.Lond., M.R.C.S.Eng., St. Bartholomew's Hospital and University College, London; W. D. Murray, M.B., C.M.Glasg., Glasgow University and Jenner Institute; E. J. Smyth, L.R.C.P.Lond., M.R.C.S.Eng., M.D., B.S.Lond., University College Hospital; A. Spitteler, M.B., C.M.Madras, Medical College, Madras, and University College, London; D. J. Thomas, L.R.C.P. Lond., M.R.C.S.Eng., London Hospital; R. E. G. Tilleke, L.R.C.P. and S.Edin., M.D.Brux., Ceylon Medical College, Edinburgh University, and King's College, London; F. H. White, L.R.C.P.Lond., M.R.C.S.Eng., L.S.A., London Hospital.

Three gentlemen were referred back to their studies for six months.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examination.—Mr. D. A. Fitzgerald, having passed the necessary examination, has been admitted a Fellow of the College. The following gentlemen have passed the primary part of the examination: F. H. McC. C. Crawley, K. L. G. Gunn, S. H. Law, H. Charles, T. A. Dillon, and A. H. B. Hartford.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST February, 1900.—The following candidates passed in:

Surgery.—C. B. S. Amos (Sections I and II), Royal Free Hospital; C. A. W. Egan, Dublin and Charing Cross Hospital; W. J. H. Hepworth, London Hospital; O. E. Lemin (Section I), London Hospital; R. V. A. Mosley (Section I and II), Leeds; S. Page (Section I), Birmingham; A. Y. St. Leger (Section I), Cambridge and St. Mary's Hospital; N. Walmisley, St. Bartholomew's Hospital; A. J. Watson ((Section I), St. Mary's Hospital.

Medicine.—C. B. S. Amos (Section II), Royal Free Hospital; J. F. Hodgson, Manchester; J. W. H. Morrison (Sections I and II), Durham; R. V. A. Mosley (Sections I and II), Leeds; A. C. Oliver (Section I), Charing Cross Hospital.

Forensic Medicine.—J. F. Hodgson, Manchester; J. W. H. Morrison, Durham; R. V. A. Mosley, Leeds; A. C. Oliver, Charing Cross Hospital.

Midwifery.—W. Alcock, Sheffield; C. E. C. Child, Charing Cross Hospital; J. I. Halstead, Manchester; J. F. Hodgson, Manchester; G. J. W. Keigwin, London Hospital; A. E. Malaher, St. Thomas's Hospital; R. V. A. Mosley, Leeds; E. A. Quirke, Birmingham; J. C. S. Rashleigh, St. George's Hospital; M. J. Ryan, St. Bartholomew's Hospital.

The diploma of the Society was granted to C. B. S. Amos, C. A. W. Egan, W. J. H. Hepworth, R. V. A. Mosley, and N. Walmisley.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

THE LAW OF NUISANCE.

THE report of the case of Conry *v.* Fox, which came before Mr. Justice Farwell on February 22nd, will be read with interest by the medical profession. It appears that an action was brought by Dr. Conry, of 30, Colborne Road, North Kensington, to restrain the defendant, who carried on business as a fishmonger in the same street, from shouting in so loud a voice as to seriously disturb the plaintiff in the practice of his profession. According to the evidence the plaintiff, who had practised in Colborne Road for four years, found it difficult to auscult his patients owing to the noise created by the defendant.

Counsel for the defendant submitted that in estimating the degree of noise which constitutes a nuisance, the character of the neighbourhood and the immediate surroundings of the plaintiff's house must be taken into consideration. The truth of this proposition, as applicable to most cases, cannot be doubted, but Mr. Justice Farwell answered it by saying: "This is not like the case of a literary man seeking a quiet neighbourhood. Doctors must practise sometimes in the poorest districts.....It is essential for them to have reasonable quiet in order to examine, and especially to sound, patients." He accordingly granted the injunction in the terms asked.

It is interesting to note that in a leading case upon the law of nuisance, which was referred to by Mr. Justice Farwell in the present instance, the facts were very similar to those just alluded to. Dr. Sturges, who lived in Wimpole Street in 1877, brought an action against one Bridgman, a confectioner, whose kitchen abutted upon the plaintiff's back garden. The plaintiff, having erected a consulting room at the end of his garden, found that owing to the noise and vibration caused by the pestles and mortars used by the defendant, his profession was seriously interfered with. In particular he was prevented from examining his patients by auscultation for diseases of the chest. Prior to the erection of a consulting room in his garden the plaintiff had suffered no annoyance, but he was nevertheless held entitled to an injunction. (Sturges *v.* Bridgman, 11 C. L. D., 852.)

This decision is often cited in support of the proposition that a person coming to a nuisance is entitled to an injunction to restrain its continuance. Thus suppose Dr. Conry, in the case under review, had commenced to practise in Colborne Road in the full knowledge that shouting was going on in the immediate neighbourhood, he would nevertheless have been able to obtain an injunction. As it stands, the judgment in Conry *v.* Fox is of great importance to the medical profession, as it establishes the principle that the physician is entitled to "quiet enjoyment" whether his consulting room is situated in a quiet or in the most noisy parts of the metropolis.

UNLAWFUL ASSUMPTION OF MEDICAL TITLES.

AT Marylebone, on February 17th, Harry Edwin Collis, Cambridge Street, Hyde Park, was summoned for wilfully and falsely pretending to be a doctor of medicine, and unlawfully using the titles of "Doctor" and "M.D."

Mr. Muir Mackenzie prosecuted for the General Medical Council, and Mr. Freke Palmer, solicitor, defended.

It appeared that the Council, having received a pamphlet published from Cambridge Street, Hyde Park, the defendant's premises were visited, and it was found that on the door, railings, and letter-box were brass plates bearing the name of "Dr. Washington Evans," whose name had been erased from the *Medical Register* in 1885.

The Council's solicitors having caused a letter to be sent to "Dr. Washington Evans," Cambridge Street, a reply in that name was received, which the defendant subsequently admitted was written by himself, offering terms for treatment.

Mr. Freke Palmer stated that after the death of Dr. Evans in November last, his widow asked defendant to help her to carry on the business, which he did entirely for her benefit. The business had been stopped.

The magistrate (Mr. Curtis Bennett) said that the worst feature of the case was that the defendant had no qualification for carrying on the business, and but for these proceedings he would probably still be doing it. He would be fined 40s., and £5 5s. costs.

INQUEST AND VERDICT WITHOUT MEDICAL EVIDENCE.

A CORRESPONDENT sends us a report of an inquest recently held near Manchester in the case of an old woman aged 74 years, who was supposed to have poisoned herself with ammonia. The Deputy Coroner first called the daughter, who stated that the deceased had been ill for the past three weeks and suffered much pain from boils on the back of her neck, but declined to have medical aid, and that on the day of her death she bought some ammonia, which she was in the habit of taking to ease her breath, and that shortly after taking it she was found helplessly sitting in her chair foaming at the mouth and stretched out as if in a fit and quite unconscious. A doctor was sent for and attended her, but death occurred the same eveniug. The witness further stated that when the deceased was asked why she took the ammonia, she replied that she was weary of living, but that she had never heard her threaten at any time to take her life.

The next witness was the grocer's wife, who stated that she sold the deceased twopennyworth of ammonia and that she was in the habit of buying it.

The coroner, according to the report, then said that was the whole of the evidence he proposed to call as the jury had quite sufficient to prove the cause of the death of the woman. They had the facts before them that the deceased bought the ammonia and took it.

Upon this some of the jury made reference to the presence of the medical attendant, who was prepared to give evidence; but the coroner declined to call him as a witness, and said he did not intend to pay his fee, as he could give no further evidence as to the cause of death than that already given.

Subsequently several of the jurymen through their foreman again expressed a desire that the medical witness should be called, but the coroner declined to do so. He said that if the doctor wished to give evidence voluntarily he would take it down, but he would not call him. This the doctor declined to do.

Ultimately the jury returned a verdict to the effect that the deceased died from poisoning by ammonia, but that there was no evidence to show the state of her mind when the act was committed.

Our correspondent, who attended the deceased, informs us that had he been called upon to give evidence, it would have shown that when he saw the deceased she was lying on her bed quite conscious; she complained of no pain, there was no dyspnœa, no dysphagia, no aphonia, and the breath did not smell of ammonia, but she was very prostrate. He further says: I was shown a small bottle unlabelled, smelling not very strongly of ammonia, the contents of which she was said to have swallowed. She admitted having taken some of it, and I treated

her accordingly. On asking her why she had taken it, she replied that "she had been worried by her breathing." On examining the back of her neck I found a large sloughing carbuncle which had received no treatment of any kind. Finding so little evidence of poisoning, I attribute her exhausted condition to the carbuncle.

Our correspondent not unnaturally asks us to express our opinion upon the case.

*** This would seem to be another example of the errors which the coroner and jury are likely to commit by holding inquests and returning verdicts in the absence of medical evidence. In the present case, assuming the statement of our correspondent to be accurate, it seems clear that the verdict was arrived at on incomplete and unsatisfactory evidence. Indeed from the statement of the medical attendant, it would appear to be doubtful if the deceased did die from ammonia poisoning at all, and had the medical evidence been accepted by the coroner, an altogether different verdict might have been returned. Had the jury been determined not to return a verdict without hearing the medical witness, the coroner would have been compelled to call him, as it was undoubtedly his duty to do in the first instance. It is hardly necessary to add that the deputy coroner in question was not a medical coroner, for had he been one it is highly improbable that he would have allowed the case to be closed without hearing the medical evidence in accordance with the express wish of the jury. Such a case as this might well be reopened, and a further inquest held.

LIABILITY FOR FEE.

J. S. R. sends the following query: A man who had never been a patient of mine was coming to my surgery for medicine for his sister, and on his way was knocked down by a cab and injured. Being asked on his recovery where he was going, though barely conscious, he replied that he was going to my surgery. The cabman brought him to me, and told me that he had run over him. The man was in a very dazed state, and I attended him and sent in my bill to the cab proprietor, who denies his liability, saying it was the man's own fault. The man gave no orders to be brought to me, and the cabman acted on the advice of a bystander. What course ought I to adopt?

*** The cab proprietor is clearly not responsible to our correspondent. We should recommend him to apply to the patient for payment of his bill, and the latter can then, unless the accident was caused or contributed to by his own negligence, recover the amount from the person legally responsible for causing the injury.

M.R.C.S. ETC.—A lithographed letter might be addressed to the householders whose names appear on the books of the practice, stating the name and qualifications of the partner admitted.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,084 births and 5,287 deaths were registered during the week ending Saturday last, February 24th. The annual rate of mortality in these towns, which had increased from 21.2 to 25.8 per 1,000 in the three preceding weeks, declined again to 24.2 last week. The rates in the several towns ranged from 9.9 in Croydon, 13.7 in Cardiff, 16.9 in Birkenhead, and 17.6 in West Ham, to 37.3 in Blackburn, 39.0 in Salford, 40.7 in Wolverhampton, and 44.7 in Preston. In the thirty-two provincial towns the mean death-rate was 25.9 per 1,000, and exceeded by 4.4 the rate recorded in London, which was 21.5 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London the death-rate was 1.8 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.3 in Sheffield, 3.8 in Blackburn, 4.7 in Wolverhampton, and 6.1 in Preston. Measles caused a death-rate of 1.2 in Leicester, 1.4 in Sunderland, 1.7 in Wolverhampton, and 3.9 in Preston; whooping-cough of 1.2 in Wolverhampton and Salford, 1.3 in Portsmouth, 1.5 in Leeds, and 1.8 in Norwich; and "fever" of 1.7 in Wolverhampton. The mortality from scarlet fever showed no marked excess in any of the large towns. The 92 deaths from diphtheria in the thirty-three towns included 48 in London, 10 in Sheffield, 6 in Liverpool, and 4 in Portsmouth. No fatal case of small-pox was registered last week either in London or in any of the thirty-two large provincial towns; but 11 small-pox patients were under treatment in the Metropolitan Asylums Hospitals at the end of the week, against 24, 17, and 8 on the three preceding Saturdays, and 3 new cases were admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 2,032 at the end of the fourteen preceding weeks, had further fallen to 2,000 on Saturday last; 160 new cases were admitted during the week, against 174, 157, and 159 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, February 24th, 1,007 births and 981 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 23.0 to 31.0 per 1,000 in the six preceding weeks, further rose last week to 31.7, and 7.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.2 in Leith and 24.7 in Aberdeen, to 39.1 in Dundee and 62.4 in Perth. The zymotic death-rate in these towns averaged 2.3 per 1,000, the highest rates being recorded in Paisley and Perth. The 502 deaths registered in Glasgow included 9 from measles, 5 from scarlet fever, 5 from diphtheria, 0 from whooping-cough, 2 from "fever," and 8 from diarrhœa. Two fatal cases of scarlet fever and 3 of diarrhœa were recorded in Edinburgh: 5 deaths from measles occurred in Dundee, 3 from whooping-cough and 4 from diarrhœa in Aberdeen, 3 from measles and 2 from scarlet fever in Paisley, and 3 from whooping-cough in Perth.

MEDICAL OFFICER OF HEALTH FOR ALDERSHOT.

THE Aldershot Council have appointed Mr. Thomas Dunlop, M.B., C.M. Edin., to be appointed Medical Officer of Health and Public Analyst for Aldershot, and intend to fit up a laboratory for his use. The Council did not bind the selected candidate to refrain from private practice, but Mr. Dunlop has, we are informed, intimated his intention not to engage in private practice.

INFLUENZA IN EDINBURGH.

FROM January 1st to February 24th 99 deaths from influenza occurred in the city of Edinburgh. Taking the first seven weeks of the year for purposes of comparison, the deaths for the last eight years due to influenza have been:

In 1892	... ...	26 deaths.
,, 1894	... ...	16 ,,
,, 1895	... ...	2 ,,
,, 1896	... ...	1 ,,
,, 1897	... ...	9 ,,
,, 1898	... ...	13 ,,
,, 1899	... ...	17 ,,
,, 1900	... ...	82 ,,

And while in 1899 the number of deaths from influenza had reached 33 by the first week of April the number of cases for the whole year was only 60.

VACCINATION QUESTIONS.

H. E. B.—There is no legal necessity to visit and offer to vaccinate children born before August 31st, 1898, as these children automatically became in default on reaching the age of six months, if no certificate had been transmitted to the vaccination officer within seven days of that period. It is, however, expedient to visit and offer to vaccinate any such cases before the issue of any summons to obtain compliance with the provisions of the Act. No fee can be charged for such a visit unless the child is successfully vaccinated as the result of it, when it has been conceded that both visiting and vaccination fee may be claimed.

Y. Z., P. V.—It is necessary for the public vaccinator to make the visit to the home of the child and offer to vaccinate there, even although he may have received intimation from the parents that his services are not required, and any failure so to do would probably mean failure in any proceedings taken to enforce the Vaccination Act, and would deprive him of the right to claim fee under Article 3 (1) (a). As to the notice being returned through the post, marked "Gone, no address," this would generally not occur till after the public vaccinator had himself visited and verified the absence of the child. The public vaccinator ought to receive his fee, although it is quite possible that an objection might be upheld on the ground of his failure to "offer to vaccinate."

B. W. C.—The second clause in that part of the Form of Vaccination Contract, which specifies the duties of the public vaccinator, says: "In the case of every child resident in the district who has reached the age of 4 months, and as to whom he has received the requisite notice from the vaccination officer, he will visit the home of the child within two weeks after receipt of the notice, and offer to vaccinate the child.....and if his offer is accepted, will thereupon *(or after such postponement, if any, as may in his opinion be necessary)* so vaccinate the child." This distinctly implies that the public vaccinator is required to visit and offer to vaccinate a second time, if he postpones a case, without any extra fee being chargeable. It should be distinctly understood that no child can be primarily vaccinated by a public vaccinator except at the child's home, or at an appointed educational vaccination station. Shaw's *Manual of the Vaccination Law* is published by Shaw and Sons Fetter Lane (5s.), Fry's *Law of Vaccination* by Knight and Co. (7s. 6d.)

DR. PETER GILES (Holne Chase, Bletchley) writes: Believing that the Exemption Clause of the recent Vaccination Act is wrong, and conscientiously believing that granting these exemptions must ultimately be perilous to the State, am I justified in refusing to sign the exemption form should I happen to be the only justice sitting? Hitherto it has always happened that other magistrates have been present, but such a contingency most likely will arise.

*** An exemption certificate requires to be signed by at least two justices sitting in a court of petty sessions. A single signature would not make a valid certificate.

HOSPITAL AND DISPENSARY MANAGEMENT.

NEW ISOLATION HOSPITAL AT SOUTHAMPTON.

THE new isolation hospital for infectious diseases at Southampton, opened recently by the Mayor, was commenced in August, 1898. It is situated on ten acres of high ground, with gravel soil, on the north side of Mousehole Lane, Shirley, and is arranged on the pavilion system. There are four pavilions at present, but provision has been made for future extension if necessary. The two largest blocks, which will be devoted to scarlet fever cases, provide accommodation for 26 patients each, and each consists of two large and two small wards, and is provided with lavatories, bathrooms, etc., disconnected by a ventilating lobby. The floors are laid with pitch-pine blocks, and the walls are finished with Robinson's cement, all corners being carefully rounded off. The large wards are heated by double Doulton-ware stoves with descending flues and fresh air inlets

and radiators at the sides in front of each inlet. Separated from each pavilion is a smaller block containing a reception room, in which cases will be placed pending their verification by the medical officer. Of the two smaller pavilions, one, containing ten beds arranged in four wards, will be used chiefly for typhoid fever and diphtheria; the other, with eight beds, is intended for the isolation and observation of doubtful cases, and also for paying patients. The total accommodation provided will be seventy-two beds, and is based on the requirements of 2,000 cubic feet of air space in the scarlet fever pavilions, and 2,500 in those for enteric fever and diphtheria. There are also a separate admistration block; an out-bathing station specially arranged to facilitate thorough disinfection of discharged patients; a laundry provided with a Washington-Lyons disinfector; and a mortuary separated by a hermetically sealed plate-glass partition from a viewing lobby, to enable friends of deceased patients to view the bodies without risk of infection. All these buildings are lighted by electricity, and are connected by telephone with the administrative block.

This fine hospital provides for a long-felt want. Southampton, as an important seaport town, runs special risks from the importation of infectious diseases; and the isolation accommodation has hitherto been very inadequate, consisting only of an old private house. This, while unsuitable in itself, had the additional disadvantage of being situated in a much-frequented thoroughfare and in close proximity to a crowded and insanitary area.

THE TUNBRIDGE WELLS GENERAL HOSPITAL.

At the annual meeting of the governors and subscribers of the Tunbridge Wells General Hospital a resolution was carried on the motion of Dr. Ranking, the Senior Physician, to appoint a Special Committee, consisting of the President, the Mayor, the Senior Medical Officers, and four other governors, who are not members of the Committee, together with some recognised expert in hospital administration to consider the whole question of the future administration of the General Hospital. Dr. Ranking, in his speech moving the resolution, said that the complaints which were being made against the hospital fell into three classes: First, general complaints, such as always arose when large numbers of people had to be dealt with; secondly, alleged extravagance in the administration; and thirdly, delay in the out-patient service. The delay in the out-patient service he attributed to inadequate accommodation.

INDIA AND THE COLONIES.

THE PUNJAB.

Medical Report for 1898.

The report submitted by Lieutenant-Colonel C. J. Bamber, I.M.S., Sanitary Commissioner, gives evidence of a favourable condition of public health. The registered birth-rate was 41 per mille, somewhat below the average, but the highest of any Indian province; the death-rate was 31.05. These rates are calculated on the basis of the census of 1891, but there is reason to believe that the population has undergone considerable changes since then, especially in places where irrigation has been introduced. There was practically no cholera during the year, and the small-pox mortality was low. A comparison of years succeeding with those preceding the introduction of vaccination yields a decided balance in favour of the former. The fever mortality was considerably below the average, that caused by bowel complaints and chest diseases about the same. The latter constitute a substantial feature in the Punjab death roll. From plague 1,563 deaths were registered in the Jullunder district, and 388 in the Hoshiarpur district. The disease prevailed in the cold season. A table and plan are given for the purpose of showing statistically the effect of works for improved drainage and water supply upon the public health. The Sanitary Commissioner remarks that "with very few exceptions the statistics show a marked improvement in the health of towns in which the water supply was introdueed." The remarks of the Government review are more discriminating, but seem on the whole to justify the view. A more searching investigation of particular instances, favourable and unfavourable, is desirable. A system of giving rewards to village communities for zeal in sanitation is on its trial. The amount of municipal and district revenues expended upon sanitary purposes is satisfactory. The provincial Sanitary Board held no meeting during the year. An alteration in its constitution so as to give it some executive power is under consideration.

INDIA.

New Hospital at Jubbulpore.—The Government of India has sanctioned the erection of a new hospital, at a cost of Rs. 22,000, for soldiers' wives and children at Jubbulpore. The work will be put in hand at once.

Sir Thomas Smith, Bart., F.R.C.S., Surgeon Extraordinary to the Queen has been appointed Honorary Consulting Surgeon to the Finsbury Dispensary in succession to the late Sir James Paget, Bart., F.R.S.

MEDICAL NEWS.

A Congress for the revision of the United States *Pharmacopœia* will meet in May of the present year.

The appeal made by *Punch* on behalf of the Hospital for Sick Children, Great Ormond Street, has already resulted in the promise of annual subscriptions to the amount of £175, and donations to the amount of £5,839 10s. 10d.

Unusually High Death-Rate in Edinburgh.—The mortality in Edinburgh in the week ending mid-day, February 10th, was 149, and the death-rate 25 per 1,000. Diseases of the chest accounted for at least 94 of these deaths, and 18 were directly due to influenza. Probably a much larger number were indirectly or secondarily due to influenza. The number of cases of zymotic diseases remains unusually low.

Irish Medical Schools' and Graduates' Association.—The St. Patrick's festival dinner of the Irish Medical Schools' and Graduates' Association will be held at the Hotel Cecil on Saturday, March 17th, at 7.15 o'clock, the President, Inspector-General W. H. Lloyd, M.D., R.N., in the chair. The guests of the evening will be the Right Honourable W. E. H. Lecky, P.C., M.P., and Sir Dennis Fitzpatrick, K.C.S.I., late Lieutenant-Governor of the Punjab. A very large attendance of members and their guests is anticipated. Application for tickets should be made without delay to Dr. J. Hutchinson Swanton, 40, Harley Street, W., Honorary Secretary to the Dinner Committee.

The Edinburgh University Club of London.—At the annual general meeting and the February dinner of the club which took place at the Holborn Restaurant Deputy-Surgeon-General W. G. Don, M.D., Vice-President, was in the chair. A large party of members and guests were present to support the Vice-President, and former Honorary Secretary; and to honour in his person the Army Medical Service. In proposing "The Naval and Military Forces of the Empire," Sir Dyce Duckworth referred in very high terms to the gallantry of our troops, amid many discouragements, in South Africa, and particularly to the splendid and fully-acknowledged services of the medical department, which made every man proud of his profession. Major Macpherson, R.A.M.C., replied, and said the work of the medical service in South Africa had been lightened and brightened by the voluntary aid afforded by societies and individuals. The club is in a very flourishing condition, and has between four and five hundred members.

West London Medico-Chirurgical Society.—At the annual dinner of this Society at the Café Monico on February 14th, Dr. J. B. Ball, the President, occupied the chair. In proposing the toast of "The West London Medico-Chirurgical Society," the President alluded to the fact that, although it was in its eighteenth year, it was highly vigorous, having begun the present session with 530 members, and having since added 21 to the number; whilst the smallest numbers present at any meeting during this session of inclement weather had been 41. Much of this success was due to the journal of the Society, and its editor, Mr. Percy Dunn. The names of the seven founders of the Society had "passed into history, and therefore into oblivion," but they were gratefully mentioned by the Chairman. The Society was to be conducted largely by general practitioners, to be democratic, and to be distinguished by principles of good fellowship; and such was the Society to-day. Mr. T. Gunton Alderton, in replying, remarked that of the 115 original members 25 had "joined the majority" and 25 had left the Society. Mr. Howard Marsh proposed "The Kindred Societies," of which no fewer than five, the Medical, Harveian, Chelsea Physical, Obstetrical, and Laryngological Societies, were represented by their Presidents. Dr. F. T. Roberts replied and also enlarged on the benefits conferred by the societies on the profession and the community at large. Mr C. B. Keetley, in an amusing speech, proposed "The Guests," of whom about 30 were present, "great in number, excellent in quality." Mr. H. T.

Butlin returned thanks. The toast of "The President" was proposed by Mr. Herbert Menzies, who stated that the scheme for providing free medical aid for the families of the soldiers in South Africa had originated with Dr. Ball, who briefly responded. The last toast, that of "The Officers of the Society," was proposed by Mr. W. H. Lamb, M.B. Mr. Percy Dunn, the editor of the journal of the Society, replied, and remarked that the journal was nearly self-supporting, and bid fair in time to support the Society itself. Dr. D. G. Robinson, upon whom the organisation of the dinner chiefly rested, also returned thanks.

BRADFORD AND WEST RIDING MEDICAL UNION.—At a general meeting held on February 15th the following resolution was passed unanimously:

The members of the Bradford and West Riding Medical Union beg to offer their hearty congratulations to Professor Victor Horsley, F.R.S., one of the direct representatives of the medical profession on the General Medical Council, on the success with which he has struggled to defend the interests of medical practitioners against the continued neglect shown by the representatives of corporations on the General Medical Council, and hope that the medical profession may long continue to have the advantage of being represented on the Council by a gentleman so distinguished alike by scientific attainments and remarkable energy and skill in pushing the work of reform which is so much needed.

STUDY OF TROPICAL DISEASES IN THE PHILIPPINES.—By the direction of the United States Secretary for War, a Board of medical officers has been appointed to meet at one of the general hospitals near Manila for the purpose of studying tropical diseases as they occur in the Philippine Islands.

MEDICAL VACANCIES.

The following vacancies are announced:

BELGRAVE HOSPITAL FOR CHILDREN, Gloucester Street, S.W.—House-Surgeon. Appointment for six months. Board and residence provided and £5 allowance. Applications to the Honorary Secretary.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, 109, Edmund Street.—House-Surgeon. Appointment till October 31st, 1900, but eligible for re-election for further six months. Salary at the rate of £40 per annum, and if reappointed at £60 per annum, with board, lodging, and washing. Applications to the Secretary by March 13th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church Street.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by March 12th.

BIRMINGHAM AND MIDLAND SKIN AND URINARY HOSPITAL.—Clinical Assistant. Applications to the Secretary, John Bright Street, Birmingham, by March 5th.

BRADFORD ROYAL INFIRMARY.—House-Surgeon, Salary, £110 per annum, with board and residence. Applications, endorsed "House-Surgeon," to the Secretary by March 6th.

CARDIFF INFIRMARY.—Resident Medical Officer. Appointment for three years but renewable. Salary, £100 per annum, with board, washing, and furnished apartments. Applications to the Secretary by March 5th.

CARDIFF: UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Demonstrator and Assistant Lecturer in Anatomy. Salary £120. Applications to the Secretary by March 10th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—House-Surgeon. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by March 6th.

CHELTENHAM GENERAL HOSPITAL.—Junior House-Surgeon; unmarried. Salary £45 per annum, with board, lodging, and washing. Applications to the Hon. Secretary by March 7th.

CORK: QUEEN'S COLLEGE.—Professorship of Materia Medica. Applications to the Under-Secretary, Dublin Castle, by March 9th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer; unmarried. Salary, £140 per annum, rising to £160, with board, lodging, washing, and attendance. Applications to the Medical Superintendent, Winterton, Ferryhill, by March 6th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Surgeon. Appointment for six months. Honorarium, £25, with board, residence, etc. Applications to the Secretary by March 17th.

EDINBURGH UNIVERSITY.—Professor of Medicine. Applications to the Secretary, 66, Frederick Street, Edinburgh, by April 14th.

EDINBURGH: VICTORIA HOSPITAL FOR CONSUMPTION.—(1) Resident Physician. Rooms and board, etc., provided, and honorarium at the rate of £20 per annum. (2) Non-resident Clinical Assistant in charge of out-patients. Salary at the rate of £90 per annum. Appointments for six months. Applications to the Honorary Secretaries, 1, North Charlotte Street, Edinburgh, by March 10th.

FARRINGDON GENERAL DISPENSARY.—Resident Medical Officer. Salary, £100 per annum, with apartments and attendance. Applications to the Honorary Secretaries, 17, Bartlett's Buildings, Holborn, E.C., by March 10th.

GREAT NORTHERN HOSPITAL, Holloway Road, N.—Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. Applications to the Secretary by March 12th.

GUILDFORD ROYAL SURREY COUNTY HOSPITAL.—(1) House-Surgeon. Salary £50 per annum. (2) Assistant House-Surgeon. Salary, £30 per annum. Board, residence, and laundry provided with each appointment. Applications to the Hon. Secretary.

ITALIAN HOSPITAL, Queen Square, W.C.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Secretary by March 7th.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon, unmarried. Salary £50 per annum, with board and lodging. Applications to the Secretary by March 16th.

KING'S COLLEGE, London.—Professorship of Materia Medica and Therapeutics. Applications to the Secretary by March 5th.

KING'S COLLEGE HOSPITAL.—(1) Senior Medical Registrar and Tutor. (2) Senior Surgical Registrar and Tutor. Applications to the Secretary, King's College, by March 5th.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer. Salary, £120 per annum, with fees, board, washing, and residence. Applications to the Medical Superintendent by March 10th.

LEITH HOSPITAL.—House-Physician, House-Surgeon, Assistant House-Physician, Assistant House-Surgeon, Surgeon, for the Outdoor Department. Applications to the Secretary, 33, Bernard Street, Leith, by March 7th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by March 15th.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer. Salary at the rate of £80 per annum, with board and lodging. Appointment for six months, but eligible for re-election as Senior at salary at the rate of £100 per annum. Applications to the Secretary, Dispensary, Gartside Street, Manchester, by March 7th.

MILE END.—Assistant Medical Officer at the Workhouse Infirmary, and Assistant Medical Officer to the Workhouse and School, unmarried, and not exceeding 30 years of age. Salary £120 per annum, with board, lodging, and allowances. Applications, on forms provided, to be sent to the Clerk to the Guardians, Bancroft Road, E.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications to the Secretary by March 22nd.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £150, with board, apartments, and washing. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary.

OXFORD: RADCLIFFE INFIRMARY.—Honorary Assistant Physician. Applications to the Secretary by March 5th.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board and residence. Applications to the Honorary Secretary by March 10th.

ROCHDALE INFIRMARY.—House-Surgeon; unmarried. Salary, £90 per annum, with board, residence, and washing. Applications to the Secretary, 58A, Yorkshire Street, Rochdale.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Salary, £70 per annum, with rations and laundry. Applications to the Secretary by March 17th.

RYDE: ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £50 per annum, and £10 10s. for lectures to nurses. Applications to Dr. Davey, at the Hospital by March 15th.

ST. MARY'S HOSPITAL SCHOOL.—Demonstrator of Physiology. Salary, £100 to £150. Applications to the Dean by March 24th.

ST. PETER'S HOSPITAL FOR STONE, Henrietta Street, W.C.—House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £100 a year, with board, lodging, and washing. Applications to the Secretary by March 8th.

SALISBURY INFIRMARY.—Assistant House-Surgeon, unmarried. Salary £50 per annum, with board, lodging, and washing. Applications to the Secretary by March 15th.

SALFORD ROYAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and residence. Junior House-Surgeon is a candidate, and if appointed there will be a vacancy for Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary by March 10th.

SHEFFIELD ROYAL HOSPITAL.—Two Assistant House-Surgeons, unmarried. Salary, £50 each per annum, with board, lodging, and washing. Applications to Dr. Stanley Riseley, Secretary to the Hon. Medical Staff, by March 7th.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon. Appointment for six months, but renewable. Salary, at the rate of £50 per annum, with residence, board, and washing. Applications to Mr. Joseph Worall, 24, King Street, Southport, by March 10th.

STOCKPORT.—Medical Officer of Health for the Borough. Between 28 and 40 years of age. Salary, £400, increasing to £500 per annum. Applications, endorsed "Medical Officer of Health," to be delivered at the Town Clerk's Office by March 5th.

STOCKPORT INFIRMARY.—(1) Assistant House and Visiting Surgeon. Salary £70 per annum. (2) Junior Assistant House-Surgeon. Appointment for six months. Salary, at the rate of £24 per annum. Board, residence, and washing provided in both cases. Applications to the Secretary by March 13th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by March 20th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and washing. Applications to the Honorary Secretary, Bank Buildings, Taunton, by March 6th.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—(1) Resident Medical Officer. Salary £150 per annum, with board and lodging. (2) Clinical Assistant. Board, residence, and laundry provided. No salary. Applications to Dr. Parry, at the Hospital.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum, with board, etc. Applications to the Secretary.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by March 7th.

MEDICAL APPOINTMENTS.

ALLAN, C. M., M.A., M.D., M.S.Edin., appointed Public Vaccinator for the Luyton District of the Stoke-upon-Trent Union, *vice* Alfred Averill, M.R.C.S.

BLACKBURNE, G. H. S., M.B., B.S., appointed House-Physician to the Perth Hospital, West Australia.

BROOKS, J. Harley, M.D., M.B., C.M.Aberd., appointed Medical Superintendent of Mile End Infirmary, and Medical Officer of the Mile End Workhouse and Schools, *vice* Dr. Arthur H. Robinson, resigned.

COCKCROFT, Herbert M., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glas., appointed Medical Officer and Public Vaccinator for the Masham District of the Leyburn Union.

DOCKER, W. B., M.B., appointed Health Officer for the Borough of Portland, Victoria, *vice* N. Dowling, M.R.C.S., L.R.C.P.Lond.

DUNLOP, Thomas, M.B., C.M.Edin., D.P.H.Camb., appointed Medical Officer of Health to the Aldershot Urban District Council.

LINES, D. H. E., M.B., Ch.B.Melb., appointed Assistant House Surgeon to the Hobart General Hospital, *vice* Dr. MacGowan.

LININGTON, W. W., F.R.C.S.Eng., appointed Honorary Assistant Medical Officer to the Victoria Hospital, Folkestone.

MERCER, W. B., M.B., D.P.H.Camb., M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the Rushworth Urban District Council, *vice* H. G. Hine, resigned.

MURISON, Patrick, M.B., C.M.Edin., appointed Medical Officer of Health for Sutherlandshire.

PRIOR, Samuel, M.B., C.M.Glasg., appointed Medical Officer of the Kirkheaton District of the Huddersfield Union, *vice* D. Robertson, M.D., resigned.

RICHARDSON, W. G., M.B., B.S.Dunelm, F.R.C.S.Eng., appointed Assistant Surgeon to the Royal Infirmary, Newcastle-on-Tyne, *vice* Walter Ridley, appointed Surgeon.

RITCHIE, R. H., M.B., appointed Health Officer for the Borough of Horsham, Victoria, *vice* W. J. Cross, M.D.

SCARLETT, Ella Campbell, M.D.Brux., L.M., L.S.A., appointed Assistant Surgeon to the Household of H.M. the Emperor of Korea.

STEEGMANN, Edward J., M.B., D.P.H., appointed Assistant Lecturer on Hygiene and Public Health at St. Mary's Hospital Medical School.

THOMPSON, James, M.B., B.S., appointed Resident Medical Officer to the Perth Public Hospital, Western Australia.

DIARY FOR NEXT WEEK.

MONDAY.

Otological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 4.30 P.M.—Cases and Specimens will be shown by Professor Urban Pritchard, Mr. R. Lake, Dr. Herbert Tilley, Mr. Arthur Cheatle, Mr. W. C. Bull, and Dr. Jobson Horne.

Royal College of Surgeons of England, 4 P.M.—Professor A. W. Mayo Robson: The Surgery of the Stomach. Lecture I.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Mr. Waggett: Accessory Sinus Suppuration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Galloway: Consultation. (Skin.)

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Mr. Breward Neale: (1) A Case of Multiple Necrosis of the Mandible of Dental Origin, with Notes on the Surgical Aspect of the Case by Mr. F. Marsh; (2) Prophylactic Lower Dentures. Communications by Mr. H. Baldwin, Mr. H. R. F. Brooks and Mr. Martin Henry.

Medical Society of London, 9 P.M.—Sir William M. Banks: Practical Observations on Cancer of the Breast. Lettsomian Lecture I.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Ball: Methods of Treating Throat, Nose, and Ear Affections. Lecture I.

TUESDAY.

Pathological Society of London, Laboratories of the Royal College of Physicians and Surgeons, Victoria Embankment, W.C., 8.30 P.M.—Papers and Demonstrations: Drs. Brodie and Dixon. The Influence of Drugs on the Pulmonary Circulation and the Bronchial Muscles. The Production of Asthma.—Dr. Brodie: The Action of Diphtheria Toxin on the Spleen.—Dr. Pavy: The Production of Glycosuria by Exalted Respiration.—Drs. Pavy and Brodie and Mr. Sian: Phlorizin Glycosuria in an Artificially Perfused Kidney.—Dr. Bain: Observations on Metabolism in Rheumatoid Arthritis.—Dr. Grube: The Pathology of Diabetic Coma.—Dr. Colman: The Arrangements of Fibres in the Rootlets of the Ninth, Tenth, and Eleventh Cranial Nerves.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 1 P.M.—Sir W. H. Broadbent, Bart.: Consultation. (Medical.)

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Mr. Gunn: Optic Neuritis.

WEDNESDAY.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Mr. G. W. B. Lawrence (introduced by Dr. Blacker), Dr. Macnaughton-Jones, and others.—Mr. A. Keith (introduced by Dr. Lewers) will give a Demonstration of a Dropsical Parasitic Twin Fœtus of Peculiar Form.—Dr. J. Phillips: A Case of Extra-uterine Gestation in which Fœtal Death Occurred at Term After Spurious Labour and Abdominal Section was performed Four to Five Months Later.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. James Berry: Clinical Demonstration.

Royal College of Surgeons of England, 4 P.M.—Professor A. W. Mayo Robson: The Surgery of the Stomach. Lecture II.

THURSDAY.

British Balneological and Climatological Society, 20, Hanover Square, 8.30 P.M.—Adjourned discussion on The Treatment of Nervous Diseases and Affections by Baths and Climate. The following are expected to take part in the discussion: Dr. Bagshawe (St. Leonards), Dr. Wm. Ewart, Dr. Alexander Morison, Dr. Felkin, Dr. Hedley, Dr. Simpson (Worthing), Dr. Pardington (Tunbridge Wells), Dr. Bain (Harrogate), Dr. Leonard Williams, Dr. Shirley-Jones (Droitwich), Dr. Havell (Felixstowe), Dr. McClure, Dr. Moxon (Matlock), Dr. Larking (Folkestone), and others.—Dr. Bain (Harrogate) will read a short note on The Effect of Superheated Air on the Local Temperature.

Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Clinical Demonstration by Mr. H. Work Dodd: Cases of Visual Disorder in Relation to Diseases of the Nervous System.

Charing Cross Hospital. Post-Graduate Course, 4 P.M.—Dr. Montague Murray: Demonstration of Medical Cases.

Royal College of Physicians of London, 5 P.M.—Dr. F. J. Waldo on Summer Diarrhœa, with Special Relation to Causation and Prevention. Milroy Lecture I.

Ophthalmological Society of the United Kingdom.—Cases and Specimens at 8 P.M. Chair at 8.30 P.M. Papers: Mr. W. M. Beaumont: Family Tendency to Ophthalmoplegia Externa.—Mr. A. Q. Silcock: Meningitis followed by Panophthalmitis.—Mr. J. Herbert Fisher: Pigmented Tumour of the Eyeball; Death from Multiple Pigmented Carcinomata nearly Fourteen Years After Excision of the Eye.—Mr. H. Work Dodd: Green Vision.—Mr. W. H. Jessop: Embolism of Both Central Retinal Arteries.

British Gynæcological Society, 8 P.M.—Specimens will be shown by Mr. Stanmore Bishop, Dr. G. Elder, and Dr. Macnaughton-Jones.—Papers, Dr. Ralf Worrall: Pregnancy Complicated with Myomata and Ovarian Cyst.—Dr. Macpherson Lawrie: The Indications for the Removal of the Uterine Appendages.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Ball: Methods of Treating Throat, Nose, and Ear Affections. Lecture II.

Hospital for Sick Children, Great Ormond Street W.C. 4 P.M.—Mr. H. S. Collier: Demonstration of Selected Cases.

FRIDAY.

Royal College of Surgeons of England, 4 P.M.—Professor A. W. Mayo Robson: The Surgery of the Stomach. Lecture III.

Medical Graduates' College and Polyclinic, 22 Chenies Street, W.C., 4 P.M.—Mr. R. Lake: Consultation. (Eye, Ear, Nose and Throat.)—2 P.M., Dr. Harry Campbell: Class. Clinical Examination of the Nervous System. —Dem. I.

Clinical Society of London, 8.30 P.M.—Dr. Caton: The Prevention of Valvular Disease in Acute Rheumatism.—Dr. Hale White and Mr. Fripp: A Case in which the Attempt was Made to Remove a Dermoid Tumour which, Growing in the Spinal Canal, Pressed upon the Spinal Cord.—Dr. F. E. Batten and Dr. Prickett: A Case of Acute Encephalitis in a Child following Influenza.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

FAGGE.—On February 20th, at 22, St. Thomas's Street, S.E., the wife of Chas. H. Fagge, M.S., F.R.C.S., of a daughter.

HARDYMAN.—At 43, Pulteney Street, Bath, on February 25th, the wife of George Hardyman, M.B., F.R.C.S.E., of a son.

MILLAR.—At Welton, Brough, East Yorks, on the 26th February, the wife of William Millar, M.B., C.M., etc., of a son.

MARRIAGE.

AMBLER—CASTLEDINE.—On February 22nd, at St. Andrew's, Kirkella, by the Rev. James Foord, M.A., Vicar, and the Rev. M. H. James, LL.D., Vicar of St. Thomas's, Hull, John Richardson Ambler, M.R.C.S., L.R.C.P., of Chester, elder son of Thomas Ambler, of Birkenhead, to Kate Castledine, eldest stepdaughter of John Merson, M.A., M.D., of De La Pole, Willerby, Hull.

DEATH.

BODGER.—On February 25th, at Studley R.S.O., Warwickshire, William, infant son of Dr. and Mrs. Bodger.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 3. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, 1.p., M. Tu. Th. F. S., 1.30; o.p., M. W. Th. F., 12; Surgical, 1.p., daily, 1.30; o.p., M. W. Th. S., 12; Obstetric, 1.p., M. Tu. Th. F., 1.30; o.p., Th. S., 12; Eye, 1.p., M. Tu. Th. F., 1.30; o.p., M. Tu. F., 12; o.p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 3; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, 1.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical; daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 3; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9; Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F., 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F., 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F., 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 2. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

MANIA asks for experience in the use of orchitic substance in cases of insanity where the cause is self-abuse; and for references to any literature on this form of treatment in similar cases.

ACUTE INFLAMMATION OF THE FOLLICLES AT THE BASE OF THE TONGUE FOLLOWING INFLUENZA.

MR. W. R. H. STEWART, Aural Surgeon Great Northern Central Hospital, writes: During this winter I have had under my care four cases of acute inflammation of the follicles at the base of the tongue, three of them following influenza; the fourth was after an ordinary cold. As I have not come across this condition following influenza in any of the previous epidemics, I shall be interested to know if it has been met with by others. All the cases quickly yielded to appropriate remedies.

CLUB RATES.

M.D. writes to say that he has recently sent in his resignation of the post of surgeon, which he has held for some years, to a lodge of Oddfellows. A deputation has waited on him, asking him to reconsider his resignation, offering him, if he will do so, better terms of payment, and acknowledging that his present remuneration was very inadequate. Up to the present he has received the club rate usual in that part of the country—namely, 4s. a member per annum. What terms should he ask?

*** Under the circumstances our correspondent, if he is so disposed, might accept the club at the rate of 6s. a member instead of 4s. Even that, although considerably higher than the usual club payment, is very inadequate remuneration, and it is not unlikely that our correspondent would be the gainer by declining to reconsider his resignation. As an example of the rates which can be paid by a friendly society, the following rates of the National Deposit Friendly Society may be quoted: The National Deposit Friendly Society's rates of payments to medical men are: One visit and medicine for two days, 2s. 6d., with 6d. extra per mile over three miles distance; for members entitled to over 5s. daily sick pay, 6d. extra per visit for every 1s. above 5s. Intermediate visits in dangerous cases are paid for at the rate of 1s. extra per visit. For attendance at surgery and medicine for two days, 1s. 6d.; for a fresh supply of medicine for two days, 1s. In surgical cases for attendance on compound fracture of the thigh, or for amputation of leg, arm, foot, or hand, £5; for an operation for strangulated hernia, and for attendance on simple fracture of thigh or leg, £3; for attendance on simple fracture of the arm, claviele, or ribs, £1; amputation of finger or toe, 10s. 6d.; for passing a catheter, 2s. 6d. (if at patient's house extra).

ANSWERS.

A. W. S.—We believe that the Prudential Assurance Company and the Economic Life Assurance Society grant policies to volunteers at ordinary rates, but the amount would probably be limited.

MONDAY.—We are informed by a practitioner of experience that the following charges have been found a suitable basis for making such a contract: One penny an ounce for mixtures, and 2d. or 3d. a dozen for pills.

P.—Hecker's *Epidemics of the Middle Ages*, translated by B. G. Babington, M.D., F.R.S., was one of the volumes issued by the old Sydenham Society in 1844. The price of the volume was covered by the subscription to the society, but the book may probably be bought at a second-hand medical bookshop.

DR. J. MCNAMARA (Kensington, W.) writes: "J. R." asks for information as the pathology of a condition of permanent painless chordee which he describes. The condition in question has the same pathology as Dupuytren's contraction of the fingers, and is obscurely connected with a family history of gout. Should your correspondent desire to become familiar with this and other rare diseases, he can do so by becoming a member of the Medical Graduates' College, Chenies Street, and attending the Thursday afternoon demonstrations by Mr. Jonathan Hutchinson. With many other medical men I have attended these demonstrations for some years, formerly at Mr. Hutchinson's museum, and latterly at the Graduates' College, and I may say that the amount of valuable information which we have there acquired is only equalled by our depth of gratitude to Mr. Hutchinson, who so generously places his valuable time and unrivalled experience at our disposal.

BROMIDROSIS.

B. K. would recommend "M.D." to try liquor ferri sesquichloridi of the old Edinburgh Pharmacopœia, with calcii chlorid. pur. (crystals). As these crystals are very deliquescent, it is more convenient to denote the dose in minims. I have found mv to mviij together with 5j of the liquor ferri sesquichlor. taken in half a tumbler of water three times a day give complete relief in a similar distressing case, the bowels being kept open with small (5j) doses of magnesium sulphate.

NOTES, LETTERS, Etc.

THE code word "Jatrophric" has been registered as the telegraphic address of the Principal Medical Officer of each military hospital in South Africa. The name of the town or place in all cases must be added.

ERRATUM.—In Mr. Lockwood's paper on Aseptic Surgery, published in the BRITISH MEDICAL JOURNAL of February 24th, page 432, line 38, "For any operations a single sponge will suffice" should read "For *many*, etc."

BEEF TEA FOR INVALIDS.

LAICUS writes that in a case in which he found it difficult to induce the patient to take sufficient nourishment, he tried the following with very satisfactory results: Half a pound lean rump steak, remove all fat, skin, etc., scrape into a pulp, or pass through a fine mincing machine, place in a jar, and then put in a saucepan, and boil for fifteen minutes; take the jar out and put in a cool place. The following morning or when quite cold, strain the fluid from the meat, carefully pound the meat in a pestle and mortar, then gradually mix into a thin paste with the fluid, and stir well. Leave to cool and stand until wanted, when the fibrin of the meat will be found still in suspense. When required for use stir up a teacupful (quarter of a pint), flavour to invalid's taste, and warm by placing cup in boiling water. It is advisable to change the flavouring from time to time. A quarter of a pint is not a large quantity for a patient; it contains the maximum of nourishment, and is very easily digested.

LETTERS, COMMUNICATIONS, ETC., have been received from

A A. E. N.; Dr. G. E. Armstrong, Montreal; Professor T. Clifford Allbutt, Cambridge; Dr. R. Anderson, London; Mr. R. B. Anderson, London. **B** Mrs. Brodhurst, London; Dr. E. G. Barnes, Eye; Dr. J. G. Blackman, Portsmouth; Mr. U. N. Brahmachari, Calcutta; Mr. C. Bennetts, Falmouth; Mr. S. E. Baxter, Wollaston; J. W. Batterham, M.B., St. Leonards-on-Sea; Brigade-Surgeon and Lieutenant-Colonel of the Regular Army. **C** Dr. F. G. Clemow, Birmingham; Mr. A. H. Cheatle, London; Correspondent; Mr. B. W. Conway, Manchester; Colliery Surgeon; F. W. Clark, M.B., Kong Hong; Dr. J. G. Clegg, Manchester; College and Hall; Dr. G. W. Crowe, Worcester; Candidate; Dr. A. E. Cooper, London. **D** Dr. T. Dutton, London; Dr. L. Drage, Hatfield; Dr. H. M. Duncan, London; Disgusted Member. **E** Dr. J. Edmunds, London. **F** Dr. R. A. Fleming, Edinburgh; Mr. W. T. Freeman, Reading; Mr. W. J. L. Ffrench, Lincoln; Mr. A. T. Field, Oakham; Mr. P. J. Freyer, London. **G** M. Grabham, M.B., Kingston, W.I.; W. H. Goldie, M.B., London; Dr. A. E. Giles, London; J. E. Gemmell, M.B., Liverpool; Dr. J. W. Good, Dawson; Dr. H. Gervis, London; Mr. H. B. Gardner, London. **H** Mr. M. J. Houghton, Ilford; Dr. W. W. Hardwicke, E. Molesey; Dr. W. M. Hamilton, Patricroft; Mr. T. L. Hall, Dilwyn; H. H., Harveian Society, Secretary of, London; Mr. F. R. Humphreys, London; Messrs. Holt and Co., London; Mr. A. Hawley, Coventry; Messrs. Hull, Blyth, and Co., London; Dr. J. Haddon, Hawick. **I** Dr. G. F. Inglott, Malta; International Purification Syndicate, Manager of, London. **J** Mr. R. H. Johnston, Edinburgh; J. Jack, M.B., Carluke; Mr. R. Johnson, Hollesley Bay. **K** Dr. R. Kennedy, Glasgow; "The King," Editor of, London; Mrs. Kiddle, Eastbourne. **L** F. H. Low, M.B., London; Laicus; Miss F. Lankester, London; Mr. C. B. Lockwood, London; E. M. Little, M.B., London; Dr. R. P. R. Lyle, Newcastle-on-Tyne. **M** Mr. E. Morgan, London; Dr. J. McG. MacCormac, Belfast; Mania; M.; Miles Medicus; Member British Medical Association; Dr. A. G. Miller, Edinburgh; A. E. Maylard, M.B., Glasgow; Mr. J. H. Mummery, London; Middlesex; Mr. W. Marriott, London; Dr. H. J. Macevoy, London; Dr. G. Mackern, Buenos Aires; Mr. W. J. D. Mulford, London; Mr. H. May, Birmingham. **N** New Member; Mr. A. Neve, Srinigar; Messrs. Newton and Co., London. **O** Dr. T. Oliver, Newcastle-on-Tyne. **P** J. R. Purdy, M.B., Wellington, N.Z.; P.; Mr. J. Poland, London; Provincial Member. **R** Messrs. G. Reiss and Co., Manchester; Mr. G. Richardson, London; Mr. F. Robottom, London; Dr. R. R. Rentoul, Liverpool; Mr. C. Ryall, London. **S** Mr. R. C. Saunders, London; Mr. S. N. Scott, Plymstock; Student; Mr. R. W. H. Stewart, London; Mr. R. E. P. Squibbs, Nottingham; Mr. E. N. Smith, London; Dr. S. Sunderland, London. **T** Mr. J. W. Taylor, Bristol; Mr. C. W. Thies, London; T. E. S.; Mr. W. T. Thomas, Liverpool; Mr. B. Thornton, Margate; Mr. G. N. W. Thomas, Bradford; T. F. E.; Mr. N. Thomson, London. **V** Mr. J. C. G. Vianna, London. **W** Dr. B. T. Whitmore, New York; Dr. G. West, Baden-Baden; Mr. W. F. W. Wilding, Hindley; Mr. H. W. S. Williams, Holywell; Mr. E. W. Wallis, London. **Y** Yorkshire Practitioner.

BOOKS, Etc., RECEIVED.

A Manual of Gynæcological Practice. By Dr A. Dührssen. Second English Edition. Translated by J. W. Taylor, F.R.C.S., and F. Edge, M.D., M.R.C.P., F.R.C.S. London: H. K. Lewis. 1900. 6s.

Brain and Body; The Nervous System in Social Life. By Dr. A. Wilson. London: J. Bowden. 1900. 1s. 6d.

Consumption: Its Nature and Treatment. By W. H. Spencer, M.A., M.D. London: H. J. Glaisher. 1900. 1s. 6d.

Estudio de la Cistitis Tuberculosa. Por Dr. F. C. y Soles. Barcelona: Tipografia de la Casa Provincial de Caridad. 1900. 3 Pesetas.

A Primer of the Physiological Action of Alcohol. By E. J. Norris, M.R.C.S. London: Swan Sonnenchein and Co. 1900. 1s.

Acromegaly. By Dr. M. Sternberg. Translated by F. R. R. Atkinson, M.D., C.M. London: New Sydenham Society. 1899.

Medical Indoor Gymnastics. By D. G. M. Schreber, M.D. Translated by H. A. Day. London: Williams and Norgate. 1899. 3s.

Aids to Practical Pharmacy. By A. C. Stark. London: Baillière, Tindall and Cox. 2s 6d.

Contagious Ophthalmia, Acute and Chronic. By S. Stephenson. London: Baillière, Tindall and Cox. 1900. 2s. 6d.

Treatise on Orthopædic Surgery. By E. H. Bradford, M.D., and R. W. Lovett, M.D. Second Edition. London: Baillière, Tindall and Cox. 1900. 18s.

Die Krankheiten der Frauen. Von Dr. H. Fritsch. Neunte Auflage. Braunschweig: F. Wreden. 1900.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

THE LETTSOMIAN LECTURES

BEING

PRACTICAL OBSERVATIONS ON CANCER OF THE BREAST.

Delivered before the Medical Society of London, March 5th, 1900.

By Sir WILLIAM BANKS, LL.D., F.R.C.S.,
Liverpool.

Lecture I.

Experience and Statistics in Medicine.

When a man has to prepare an address the choice of a subject is generally a most difficult matter. If he has nothing of a very distinctly novel character to offer his hearers, it is probably best for him to give them his experiences on the subject with which he is most acquainted. If he has any judgment and discretion in him he may do something useful in this way, because in our profession advances are so rapid that they are apt to become bewildering. The record of a long personal experience under such circumstances may be of service as a kind of steadying medium. Moreover, these lectures, although nominally delivered to you, do really reach the majority of the medical public, and one of their prime uses is to present to that public at given periods a synoptical view of all that is known of the subjects they embrace up to the moment.

I will endeavour, then, to put into them my experiences of cancer of the breast during the past thirty-three years in which I have been engaged in surgical practice. It is true that, in the absence of statistics, experience can only produce "impressions and recollections," and the professional statistician holds all "impressions and recollections" in the greatest contempt. He holds that figures can never lie. On the other hand, it has long been painfully manifest that nothing can be more lying and delusive than statistics if not properly used. In the first place their collection must be made with the utmost accuracy, and with perfect purity of heart and calmness of mind. With medical statistics the temptation to gloss over and soften down unfavourable figures is very great, and requires that a man shall summon to his aid all his integrity. Again, when a man presents to you a vast mass of statistics, compiled at the expense of much time and labour, it is practically impossible to go over them with him, and you have no choice but to accept them. As a result many errors have been long handed down from book to book, until some disagreeable doubter has arisen who has exposed them. Finally, even when the statistics are absolutely correct, the most erroneous deductions may be drawn from them, and from the same figures two men may extract the most opposite conclusions. If anybody wants to know how statistics may be manipulated and applied, let him consult the literature of the anticontagious diseases, antivivisectionist, and antivaccinationist propaganda—all prepared by persons of the most superior virtue. Nobody wishes to deny to statistics their great value and their proper place, but one must also stand up for the value of those views which many successes and many failures have engrained on the mind of any man endued with an average amount of good sense and judgment. If, then, a man be not a waverer blown every way by the wind of opinion, he ought, at the end of an experience extending over the life of a generation, to have come to certain firm and definite conclusions about many things; and if he proposes making these views public, he must express them in a firm and definite fashion. This necessarily exposes him to the charge of egotism and dogmatism. The former I shall endeavour to avoid as far as in me lies, but should I occasionally become dogmatic, I pray you put it down to the exigencies of the situation, compelling me as they do to give my own particular views about cancer of the breast, while freely according to every other surgeon the liberty to advocate his views and declare mine entirely wrong.

The Increase of Cancerous Disease and its Cause.

Before coming to cancer as it specially manifests itself in the female breast, I should like to say something on certain points on the general question of malignant disease, which legitimately forms part of our present subject. Most medical men are of opinion that the number of persons who die from cancer in proportion to the number of the population has been steadily increasing. Very voluminous statistics from the Registrar-General's returns and from the returns of deaths in individual towns and countries seem to prove this very emphatically. My own "impression," apart from any knowledge gained from statistics, is strongly to the same effect. It is true that the "impression" of a surgeon who sees a great deal of cancer must be received with care, for it is doubtless the fact that, as a man's practice increases, he may see more of certain cases than he used to do, because his friends, knowing that he is interested in them, send them to him. Thus he may come to think that the same thing is happening in the practice of everybody, and that there is a general increase in those diseases all round, whereas the increase is in reality only in his own sphere of observation. In order to protect myself from falling into this mistake, I have summoned up my recollection of the year 1861-2, when I was a dresser in the wards of Mr. Syme in the Edinburgh Royal Infirmary. Mr. Syme had a reputation then as indisputably the first surgeon in Scotland. So that I am sure my old fellow-students of the period I mention will bear me out in saying that the pick of the surgical cases in the south of Scotland were sent to him. I have a very vivid recollection of the run of cases I saw, and possess a notebook to-day containing many of them. Now, cases of cancer, although not uncommon, were rare compared with the numbers in the practice of my colleagues at the Liverpool Royal Infirmary and myself at this moment. They were objects of curiosity and interest to us students. I can only remember once seeing a case of cancer of the rectum, so that I am able quite clearly, after an interval of eight-and-thirty years, to assert that the number of cases in the wards of any one of the surgeons of the Liverpool Royal Infirmary at this day is much larger than I can remember in the wards of so distinguished a man as Mr. Syme, who drew his patients from a great area. This is more than a mere impression; this is a fact. The arguments used against the alleged increase of cancer are that it is more apparent than real, on account of the improved diagnosis of modern days producing greater accuracy in death certificates, and on account of necropsies being formerly the exception in hospital, whereas they are now the rule. In his very able article in the *Practitioner* for April, 1899, Dr. Arthur Newsholme advocates these views with much ability. On these points I will with your permission, gentlemen, once more revert to my student experience. I think it may be fairly admitted that the character of the medical teaching at any given epoch is a barometer which gives the level of the knowledge of the mass of practitioners at that same period. In 1861, Miller, Syme, Spence, and Patrick Watson were the chief surgical teachers in Edinburgh. I assert that their knowledge of surgical cancer on the surface of the body and in the ends of the intestinal tract was as accurate as that of any surgeon of the present day. Bennett, Laycock, Begbie, Gairdner, and Sanders taught medicine, and I am unable to see any notable difference between their ideas of internal cancer and their methods of diagnosing it as compared with now. If mention be made of the brain, spinal cord, and nervous system generally, then, at the time I speak of, absolutely nothing was known about them, and the improvements in the diagnosis of them can only be appreciated by one who has witnessed the change; but this is not the case with the diagnosis of cancer.

I do not like to say much about the increase in the number of necropsies at hospitals, because I cannot make a positive statement on the question beyond this, that in my student days at Edinburgh (and I imagine the same holds good of all the great London hospitals) every effort was made to secure *post-mortem* examinations when possible. One would too gladly wish that Dr. Newsholme were right, but immediately following his paper is one by Professor Roswell Bark (Buffalo), who states that in England and Wales the cancer death-rate has risen from 1 out of 5,646 of population in 1840 to 1 out of every 1,306 of population in 1890; that is to say, that in 50 years the death-rate has increased between four and five times, and he makes this astonishing statement; "A careful study of all these tables permits one to make the following startling prophecy. If for the next ten years the relative death-rates are maintained, we shall find that ten years from

now, namely, in 1909, there will be more deaths in New York State from cancer than from consumption, small-pox, and typhoid fever combined." With every wish, then, to give a good deal to the theory of better diagnosis and more numerous necropsies, I cannot bring myself to believe that they account for more than a moderate amount in the increase of cancer mortality.

Local Distribution.

Has locality anything to do with cancer? This is a matter upon which a great deal hinges, but from personal experience I cannot give any information. It is unlikely that any hospital surgeon will be able to do so, for he who has obtained any reputation for the operative treatment of cancer draws his patients from such varied sources that the question of locality as affecting them is void. On this subject information of any moment can only be obtained by collecting great masses of statistics, and even then the deductions therefrom will have to be made very cautiously and judiciously. The first attempt in this direction was made by Mr. Moore, of the Middlesex Hospital, in 1865, and to him is also due the merit of being the first who boldly drew the attention of the profession to the inefficient operations for cancer which were performed in his day. To his courageous protest is owing the modern principle of free removal. But, as we all know, Mr. Haviland's labours have been those of a lifetime, and his tables of statistics are a marvel. In 1868, to the Medical Society in this very room, he read his first paper, On the Geographical Distribution of Cancer among Females throughout England and Wales during the Decennial Period 1851-60. He found that 4.33 cases of cancer occurred in every 10,000 females, and 1.94 in every 10,000 males. Leaving untouched the decennial periods 1861-70 and 1871-80, he has investigated 1881-90. He then found 7.30 cases in 10,000 females, and 4.30 in 10,000 males—that is, 0.42 more than double among males and 1.28 less than double among females. Admitting these statistics as true, two things are clear: (1) That there has been a great general increase of cancer all round; (2) that this increase is much more marked in males than in females. The following are Mr. Haviland's "last words":

1. That the districts having the highest death-rates from cancer among females were invariably associated with seasonally-flooded areas traversed by, or in close propinquity to, seasonally-flooded rivers.
2. That geologically these high-mortality districts were characterised by alluvium and subsoils of clays of every variety of age and formation.
3. That the districts having the lowest death-rates from cancer were situated on elevated land, where the drainage was good and the physical features of the country such as to preclude the possibility of floods; where rivers derived their sources, and where, in fact, they were not fully formed.
4. That geologically these low mortality districts were characterised by the oldest palaeozoic rocks, especially those of the carboniferous limestone period—the liassic, oolitic, and cretaceous limestones.

Thus at the end of this brief sketch of the medical geography of cancer we find ourselves asking the same question that rose to the lips of my audience in November, 1868: How is it that limestones are always associated in England and Wales with the lowest mortality from cancer, and flooded clays with the highest? This question still remains unanswered, and will still so remain until the subject is taken up in earnest by the medical profession, for it is a field, I find after thirty years of working in it, that cannot be made to produce fruit without the toil of many labourers. When the above question is answered light will begin to fall on the cause of cancer.

It is a most refreshing thing to find this veteran statistician placing his figures at the disposal of his fellow practitioners, modestly admitting his inability to draw sure and certain conclusions from them and encouraging other workers to supplement his labours, so that some determination on a most important question may be reached.

Let us turn to Mr. W. Roger Williams's most interesting work on *Diseases of the Breast*, published in 1894, a work evincing an infinity of statistical learning. It is a model of how research by statistics should be employed, in which figures are fairly handled and deductions prudently made. Furthermore, it is a mine for all those to dig in who are interested in the question of cancer. Mr. Williams thinks there is much to be said in favour of the opinion that in this country cancer is specially prevalent in flat, low-lying, fenny districts, noting especially Cambridgeshire and the adjacent counties of Northamptonshire, Huntingdonshire, and Bedfordshire. He observes, however (taking his figures from the Registrar-General's forty-seventh report), that all low-lying and seasonally flooded districts have not a high cancer mortality. The very large area drained by the Severn and its tributaries, for instance, has throughout a low average mortality from this disease. In fact, as we shall see presently, his view of the cause of the increased cancer mortality is very different and is not geological at all.

One would very much like to enter into the question of cancer houses, but it is, perhaps, digressing too far from my subject, which really has relation to the disease as it occurs in the breast. Mr. Haviland, Mr. D'Arcy Power, and Mr. Law Webb, of Ironbridge, in this country, as well as certain French and German surgeons, have written papers on the subject of profound interest, indeed almost terrible interest. Still more evidence, however, will have to be forthcoming to make a clear case; for the liability to fallacious deduction in such a subject is so serious that a great mass and weight of testimony in its favour will yet have to be produced.

Cause of the Increased Cancer Death-rate.

Up to the present time, while statistics have already cleared and are at this moment rapidly clearing up many points about cancer, nothing definite has as yet been furnished by them as to the reason of its increase. That being so, there is a fair and reasonable ground for the employment of the "impressions" begotten of experience. For many years, the more I have thought over this matter the more forcibly does the idea present itself to me that it may be due to the great increase in the amount of food consumed by the people of this country during the past half-century. At all events, this view is worthy of being argued. I think it was first put into my head a long time ago by Sir James Paget. I took to him a lady with incurable cancer. He gave her some directions, and one was that she was to eat as little as possible; to try and starve herself, in fact. His long experience had taught him that to starve the body as a whole probably meant starving the cancer locally. *Per contra*, if that be a correct notion, then cancer ought to be connected with well-nourished bodies. Certain it is that the disease has not appeared to me to affect the weakling, the tea-shrivelled, mummy-like old maid, or the ill-fed, more than half-starved drunkard who never has any money to spend on good food. Its most numerous victims are well-nourished persons, with plenty of beef and fat about them, and often with a fine, healthy colour in their cheeks. In summing up the many operations I have done for cancer of the tongue, my recollection of the patients is for the most part of biggish, powerful men, with large, strong jaws which were hard to saw through when sawing had to be done. The better the nutrition and the younger the patient, the more deadly and rapidly growing is the cancer. Take what is termed a fine, "buxom" woman of 30 or 35, with cancer of the breast, and her chance of permanent cure, even by the most extensive of operations, is almost *nil*. It is true that cancer is uncommon in the young during the period of development of the body and of the functional activity of organs, so that in one sense it is a disease of "degeneration;" but this has nothing to do with the good nourishment and muscular development of the body in middle life.

Being assured in one's own mind that well-nourished, well-developed, healthy people are the most numerous victims of cancer, the question at once arises, Is the increase of cancer in any way synchronous with an increase of nutrient material—that is, of food—throughout the country, and are people in consequence better nourished? There cannot be a doubt of it. Ever since the passing of the Corn Laws bread has been cheap and plentiful, while during the last twenty years the importation of animal food from other countries has been enormous. The increased wages and emoluments of all classes in this country have enabled them to purchase freely of the best there is to be had in the whole world of things to eat and drink. Our working classes fare admirably. Our better classes eat infinitely too much, especially of animal food partaken of at breakfast, lunch, and dinner. But for the athletic tendency of the age and the general passion for games and exercises which pervades all classes, this over-stuffing must have proved very dangerous. I am pretty well convinced that, when a man is over 45, excess in food is perhaps worse for him than excess in drink.

Apparently one of the results of too much nourishing food is the production of a widely-spread, second-rate kind of gout of a different type from the acute and furious attacks produced in former days by the copious drinking of beer and port wine. Moreover, I think distinctly that it has also to

do with the production of the cancerous diathesis. This is also the opinion of Mr. Roger Williams, who, while admitting Mr. Haviland's topographical statistics, cannot agree with him in his geological views, but inclines to think that cancer areas are also the areas where the people are best nourished.

The stock answer to what may be called the over-nutrition theory is that vegetarians and rice eaters are just as subject to cancer as gross feeders and flesh eaters, and this statement goes on being very steadily repeated from one book to another. I am not prepared to admit this. Cancer is not so rife in Ireland, where feeding has been poor and very largely of a vegetable character, and where improvement in the living of the people has not proceeded *pari passu* with that in England. The Registrar-General's report for the decade 1881-90 shows that in 1881 in England 1 death in 36 was due to cancer, and in Ireland 1 in 47, while in 1890, in England there was 1 in 28 and in Ireland 1 in 40. Ireland, therefore, does not rise to the level of England. Mr. Roger Williams has a most interesting chapter of facts in this connection. He tells that Billings of the United States showed that among the whites there were 2 cases to 1 among the blacks. From what can be learnt of the whole continent of Africa, that vast country enjoys a remarkable immunity from the disease, especially the Egyptian area and the northern parts. At the Cape cancer is common among the whites, but very rare among the natives. All through the tropics the disease is distinctly rare. In India the general opinion is that it is not common, and that when it does occur neither the rice eaters nor the meat eaters are exempt. It is true that certain surgeons (McLeod, Hendley, and Lawrie notably) hold the opposite opinion, but I notice that their experiences are drawn from hospital work almost entirely, and refer chiefly to the number of operations occurring in large hospitals. This seems hardly a sound argument. All that it proves is that a number of cases of cancer come into large hospitals, and consequently that in a huge country there must be many cases of cancer. But if statistics are to be of any avail, the proportion of cases to the actual population is absolutely necessary to make any fair deduction. It is like the death-rate from snakebite. To an Englishman who never sees such a thing, the sum total of these seems appalling. It is not till one takes the proportion to the astounding population of India that the insignificance of the loss of life becomes apparent. If there were no knowledge of the exact population of Lancashire, and if a person were to walk round the wards of the Liverpool Royal Infirmary and estimate the cancer mortality of the county from the number of cases found in these wards, his view of the prevalence of the disease would be a most alarming one.

At this moment the Massachussetts State Board of Health is instituting an inquiry into this question. Its circular states that

> every year there is an increase in the reports to the State of the number of deaths from cancer, even when allowance is made for age and greater population. By some it is alleged that this is due to an increase of the disease itself, by others that better diagnosis and more careful registration will account for it. Furthermore the infectious nature of this disease, caused by a possible parasite, and its contagiousness, have been strongly urged.

I believe that the great general increase of cancer is for the most part admitted, and that Dr. Newsholme's idea that it is not a real, but only an apparent, increase, due to better knowledge and more accurate registration of the disease, is entirely erroneous; but even were we to admit his views, it would not account for the fact that during the past thirty years the comparative cancer mortality of the sexes has altered in a most singular manner, so that whereas the disease was formerly more prevalent among females, it has now become more prevalent among males, and is becoming increasingly so.

Now do drunken habits account for more cancer? I am certain that confirmed drunkards are not more liable to it than other people; besides, drunken habits are rather diminishing than increasing. Does syphilis account for it? I have never been able to trace any connection between that disease and cancer whatever. It is true that leukoplakial bald patches and specific surface ulcers of the tongue and mouth are places where epithelial cancers arise, but they do so, not in virtue of any special syphilitic taint, but just as they arise from irritation of any kind, as from a sharp-edged tooth. Mr. Williams, out of 165 female breast cancer patients, did not find a single one of immoral character. Do bad water, bad housing, and bad sanitary arrangements account for it? This is impossible, for in nothing have we improved so much as in improved sanitation, in improved water supply, drainage, housing, and clothing. Will increased nervous tension from our rapid existence, due to the development of steam and electricity, account for it? It would seem reasonable to suppose this likely to produce all sorts of nervous trouble and arterial or cardiac degenerations, but not cancer. Is it due to the fact that there is a great saving in the early periods of life, and that more people live into what may be called the cancerous age? The Registrar-General's statistics show that the number of persons of 25 years of age and upwards, out of every million living persons was just the same in the decade 1881-90 as in the decade 1871-80. There has, therefore, been no increase in the proportion of persons who live into the cancerous age.

What great change, then, has taken place in the national life? Richer and more abundant food. You will note particularly that it is the male who eats the heavy food in ever-increasing quantities; while the female remains much as before in her eating, and note along with this that it is men now who suffer most severely from cancer and not women as formerly. Again, in all England the most tainted places are London, the Thames Valley, and the counties adjoining the metropolis, where the most luxurious habits and the best living prevail, and it has been pointed out, that even in the capital itself, the parts where those in easy, comfortable circumstances live, who are supplied with more than the necessaries of life abide, show the highest mortality. It is curious to note that amongst the very highest mortality rates for occupations are those which include commercial travellers, coachmen and grooms, merchant seamen, maltsters, brewers, innkeepers, butchers and plumbers. Most of these certainly are persons likely to eat and drink abundantly, and not take too much exercise; persons who live well and do not work off their spare products. Singularly enough doctors figure low in the list. In conclusion, let me quote Mr. Moore's statement, made many years ago, that "cancer is eminently a disease of persons whose previous life has been healthy, and whose nutritive vigour gives them otherwise a prospect of long life."

The Paramount Importance of Early Diagnosis.

As one goes on seeing case after case with gentlemen in general practice, one gets to find out that, even with the highest standard of modern education, a great many errors are still being committed by doctors in the matter of the early diagnosis of mammary cancer. Now, seeing that in the matter of its cure we have nothing but free removal to fall back upon, the smaller the amount of disease the better the chance of cure. Early diagnosis is, therefore, of paramount importance. If this can only be steadily crammed into the minds of students and practitioners, a remarkable increase in the number of permanently successful operations will ere long result. This is the real line of improvement at the present moment, not in devising extravagant operations for cases that are past praying for. It is true that in the very early stages of a mammary cancer a certain and positive diagnosis cannot be made, even by the most skilled and experienced surgeon. Nobody, however, expects that of the general practitioner. But I have found that when the patient comes and shows her doctor a small lump in the breast, if it does not seem anything very formidable he is unwilling to frighten her, talks vaguely about a "swollen gland," and generally is apt rather to make light of the matter. There is a phrase I know well which must have cost a great many people their lives, "If it doesn't bother you, don't bother it." It is a most destructive axiom. Then the patient goes home, the lump grows and she sees it growing, but she buries her head in the sand, and repeats to herself that the doctor did not attach any importance to it and so nothing can be going wrong. In due time she becomes terrified and repairs to the doctor. There is a distressing scene, and then they repair to the surgeon, who says he thinks he can get the disease out but he is not sure.

Now, what I would implore my brethren in general practice to do is to cease regarding any lump in the breast, however small, as harmless or unworthy of the utmost attention. No man can tell what is going to become of a small

lump in the breast. All strangulated herniæ are now operated upon without delay if they will not go back; so all lumps in the breast ought to be cut out if they will not speedily disappear. As to frightening the patient, there is no necessity for alarming her; but, even if it were so, how much better that she should get a needless fright in the beginning than be ultimately terrified by the dreadful intimation that her doom is sealed, and that a brief period of agony is all of life that is left to her! My advice to a general practitioner would be that, when a patient comes to him with the smallest lump in the breast, he should at once send her to a surgeon. If she be a poor person, he will surely have a surgical friend who will see her gratuitously for him. If an absolutely certain diagnosis cannot be made on the moment, the point is to get the patient to visit the doctor month by month to let him see what is happening to the lump. It seems hardly credible, but on several occasions I have seen a patient in consultation with her own medical man about an early mammary swelling. It has been impossible just then to give a certain opinion about it; treatment has been suggested, and a strong recommendation made that the swelling should be carefully watched. And yet, after a year or more has elapsed, they have so muddled up matters between them that the patient has been brought back with a pronounced cancer. This is a statement of fact and not an ideal picture. We have just been considering various conditions relating to cancer upon which have been brought to bear ingenious speculations, supported by statistical researches involving years and years of labour. All these researches are not of the faintest consequence (considering the nature of the solitary method of treating cancer of the breast which we possess), compared with efficient early recognition of the disease. Every effort should be made by teachers to inculcate the doctrine of early recognition upon students for, if there is a hopeful day to come for the sufferers from cancer of the breast, it will be when women have been taught by the medical profession to present themselves on the slightest symptom of anything being found wrong with the mammary gland. Too often at present they hug their distressing secret, and only part with it when it cannot be concealed; and small wonder it is, when one reflects that the present generation are still under the influence of the distressing tales told them by their mothers about the horrors of cancers of the breast, and the terrible and useless operations performed for its relief. I hope my medical brethren will forgive my speaking in this very forcible manner about what appears to be a very simple thing. It is a very simple thing, but, simple as it is, it is the real secret of the future of the operative surgery of cancer, and we are not getting what we ought out of it.

Let me not be supposed to reproach my profession with ignorance (for I trust I can recognise the many mistakes I have made myself), but to expect omniscience from the general practitioner is absurd. I consider that the range and extent of his knowledge is astonishing, but the early diagnosis of many mammary enlargements will defy the most experienced surgeon. It is only by the early co-operation of the two that the patient's chances can be saved to her; were I a younger man I would not dare to say this.

CONSTITUTION AND HEREDITY.

One of the terrible mistakes of former days, which gave cancer the character of being even more hopeless than it is, was the idea that it was purely a constitutional disease. To remove it in one place was useless, for it would just break out in another. Now the modern scientific inquirer, whose first consideration is too often to sweep contemptuously aside all that his predecessors have excogitated, asserts that there is nothing constitutional whatever about cancer; that it is a purely local disease, and that it is certainly an infective one. It seems odd why there should be any difficulty about the question. It is a long time since Laycock first described the diathetic tendencies of the body, and how they influenced all the illneses which attacked that body on its way through life and often so modified them that they were almost unrecognisable, so changed were they from their usual types. Paget used to draw our attention very vividly to the remarkable way in which the gouty diathesis affected surgical disease. We know, nevertheless, that it does not necessarily follow that, because a man has a diathetic tendency, it need ever become obviously manifest. He may go through a long life and never show it until some *contretemps* brings it to the surface. An old friend of mine, whose male relatives to a man were all full of gout, lived to over 70 without a trace of it. He drank champagne and port most days, but he was small and thin and a passionate sportsman, so that he staved off the gout by great physical exercise. But at last one day he fell off his shooting pony and hurt his ribs. While lying in bed recovering from the injury he had a serious attack of gout in the foot. For the next two or three years of his life it never left him, and it killed him with acute cerebral trouble at the last. If in place of "gout" we were to put "cancer" into this little case there would be really no difference. But that cancer should in some way be set agoing in a particular spot of a perfectly healthy man's body by the process of infection and should then produce a constitutional state—apart from mere spreading by lymphatic channels—is with our present knowledge difficult to realise. If you were to take a fine, wholesome, clean-blooded man, the descendant of a race who had for generations been free from all morbid diathesis and put tubercle into him, you could not make it spread. It would die out locally. It requires a distempered constitution, like a sour, impoverished soil, to give the appropriate pabulum for pathological weeds, which seed and spread through it and ruin it. We know now how the tubercle weed gets sown. The cancer weed may yet be caught and bottled too. When we think what an absolute revolution has taken place in our views about tuberculous disease, we must not despair about cancer. It is a curious thing, however, to remember that while the North Italian peasants regarded phthisis with the greatest dread as an infectious disease, scientific medical men were the very persons who scouted the idea. Long-continued experiences are worth something after all.

As to heredity, it behoves us to be very careful how much importance we are to give to this in a difficult case of diagnosis of a breast tumour, where side issues have to be taken into account. By the public without doubt too much value has been always attached to it. The patient consoles herself with the belief that hers cannot be a cancerous tumour because nobody in the family was ever known to have such a thing. Unfortunately we can only put the matter in this way: While the want of history of a cancerous tendency inherited from her progenitors is no proof that the patient's disease is not cancer, the existence of it among several near relations is distinct evidence in the direction that it is so. There have been attempts made on certain abstruse developmental grounds to overthrow the possibility of the hereditability of acquired (diseased) variations, notably by the philosophic teaching of Weismann, but nothing has come of them. A great deal of philosophic froth has been beaten up and much learned verbiage has been poured about, but I have never seen abstract philosophy do much in disease. Our knowledge—our most useful knowledge—has been gained empirically; and so patient collectors of facts have told appalling histories of whole families who have died from cancer and have disseminated it among their descendants, which are now so numerous and well authenticated as to leave no doubt in the mind of any surgeon (not a philosopher) as to the existence of heredity, and what we have to do is to attach to it its appropriate value clinically, and by no means to consider that the absence of heredity is proof of non-malignancy in a tumour. It is true that, as a general rule, cancer in a family seems very erratic in its visitations, and appears to jump over a generation, but we may take a simple view of the question thus as explaining these irregularities. What figures seem to show is that the inherited infectivity of cancer is not strong, and dies out most likely at the end of a couple of generations. In the midst of a family among whom cancer was never known, a healthy man develops (catches?) cancer, and throws the gloomy pall of hereditary diathesis over his children and grandchildren. A son shows it, but his children escape, and his niece—the originator's grandchild—shows it. The rest escape because the match has not been applied to the tinder, just like my friend who escaped hereditary gout till he met with an accident towards the end of a long life which set it ablaze in him. It is impossible to resist coming again and again to ask What is the match? Meantime, until a very clear answer is given to this, I see no

occasion for throwing overboard what knowledge we already possess.

Dr. Roswell Park, in his chapter on the frequency and nature of cancer in the *Practitioner*, already alluded to, writes as follows:

Next, with regard to the actual nature of this disease. First of all, it is possible to sweep aside, with one or two possible exceptions, everything that has been brought forward until recent years as an explanation of this disease. The old theories of irritation, of perverted nerve centres, of heredity, etc., cannot for a moment stand in view of the searching scientific methods of to-day. We have gotten as far as this at present, that we know that cells act as they do in producing the disease either as the result of some external or of some internal stimulus. The exact character of this stimulus is not yet certainly demonstrated, though things point more and more towards its parasitic—that is, its potent living—influence.

To the first part of this statement I entirely demur, because I am so old-fashioned as not to have got far enough to sweep aside all that experience has accumulated until I have something to put in its place. With regard to the second part, it seems to involve on the part of Dr. Park what an old Scotch judge called "a plain perception of the obvious." What we all want to know is What is the match? and there is no certain answer to that as yet.

Traumatism.

We are all very prone to produce some distinct reason why a disease should have come to us. That it should come spontaneously is a stigma upon the soundness of the constitution, and so we wish to find out a cause. But the natural liveliness of the female imagination makes it very difficult to apportion with anything like accuracy the exact amount of credence to be placed in their statements. I must say that I have never been able to make out that milk abscesses or the scars of incision for them have ever been the starting points of cancer; and, curiously enough, although the patients have mentioned the existence of these things, I do not remember having heard them distinctly and directly attribute their growths to them. After all, if cancer ever develop in inflammatory products, it is in those of a very chronic and not in those of an acute nature. I never heard, furthermore, any statements from the patients that pressure from corsets or that irritation of the nipple by suckling had produced their complaints. On the other hand I have very often heard most clear and circumstantial histories narrated, in which blows were asserted to have been the primal cause of the trouble. It has been held as an argument against the effect of traumatism that men are very much more liable to blows on the breast than women, and most rarely have breast cancer. I very much doubt this. Take a number of men at 50, and an equal number of matronly, full-bosomed women of the same age, and it stands to reason that the latter will get more knocks on the mammæ than the men. Moreover, they are always in the way of getting knocks from young children or from articles of furniture, such as cribs and bedposts, among which they are always working. Besides, what is a man's breast after all? A little mass of fibrous tissue with some rudimentary gland stuff in it, whose small size would save it from many blows which a big, soft, vascular female breast must encounter. Moreover, it is contended that if blows caused mammary cancer, the lesions would be multiple, but this just shows how things appear differently to different people, for I do not suppose that if a woman gets an injury to her breast, she gets it in the form of a series of thumps all round, so as to produce multiple cancers. I have received very succinct accounts from intelligent women of blows from pieces of furniture or kicks from young children, in which there was pain immediately afterwards sufficiently severe to fix the exact place in the breast in the memory. Then the pain has gone away, and they have almost forgotten the circumstance, until some day a lump is found at the old site of injury. Were the allegation true that the injury directs the woman's attention to a tumour which is lying concealed in her breast already, then she would discover it at once on receipt of the injury, but this is not the history of these cases. The history is that of an interval, after which the lump comes painlessly. Many of the patients whose histories I have ascertained were far too intelligent to have invented the story after finding the lump.

Mr. Roger Williams says that in examining the cases of 137 women 1 out of 4 made statements as to previous traumata. I should hardly have thought so many would have done so, for, supposing we put one half of them out of count at once as imaginary, it would leave 1 case in 8 in which there was not improbably some truth in the patient's statements. After the way in which the vulgar but rooted belief in the infectiousness of phthisis of the Italian peasant has, in the light of modern discovery, triumphed over the contemptuous disbelief of the whole world of medicine, I am not disposed to abandon all belief in the statements of women, whom we will even admit to be anxious to find a cause for their malady. Constant repetition from different sources strengthens even a weak tale, provided the evidence be steadily in the same direction. I have investigated these stories too often not to feel that, stripped of all exaggeration, there is a distinct element of truth in them. Remember I do not make any attempt to assert that cancers of traumatic origin are at all frequent, but I believe in the possibility and, indeed, in the strong probability of their occurrence. I cannot see anything irreconcilable with our pathological knowledge in the idea of a blow leaving behind it a certain limited area of chronic inflammation in which the gland epithelium should begin to grow and then burst its bounds, just as I am certain it does in chronic mastitis. Dr. Roswell Park says: "The supposed intimate relation which injury bears to cancer is of no more importance than that upon which the clinicians and even the pathologists used to place so much stress in tuberculosis. There are still those who claim that the predisposing cause of most tuberculous joint diseases is previous injury of some character, and there are still those who look for a similar mechanical cause of cancer in virtually every case." I am not one of those who look for a mechanical cause of cancer in virtually every case, but I venture to say that there is no practising surgeon in this country who has much to do with joint disease who does not recognise the immense importance of wrenches, blows, and sprains in the production of the early inflammatory changes in and about joints, which ultimately end in what is known as articular tuberculous disease. I was educated in exactly the opposite view—namely, that the tales which mothers told about injuries to their children's joints were all nonsense, and I was forced out of this belief by the irresistible arguments of experience.

One feels the more inclined to this view from the knowledge that acute traumatic malignancy is a well-recognised disease. Scattered throughout the medical journals are so many cases of its occurrence that no possible doubt can be entertained about its existence. In the British Medical Journal for 1882 are two short but very interesting papers on the subject by Messrs. Barwell and Harrison Cripps, also a third by my friend Mr. Puzey, of Liverpool, detailing in a most interesting manner the history of a man who was struck over the sternum, and in whom there was developed at the spot a sarcoma. It is true that, in all the cases I have read about, sarcomata and not carcinomata supervened, and therefore the disease is rightly named "acute." But if injury will, so to speak, on the spot start into existence the swift growing tumour of the connective tissue, why should it not at a longer interval give rise to the slow-growing tumour of glandular lining epithelium?

Syphilis in Finland.—Almost all cases of syphilis in Finland are treated within hospitals. Treatment is free, and the community has power to compel any suspected individual to be medically examined. It is quite an exception, however, when the examination is not voluntary. Hence the extent and intensity of venereal diseases can be mapped out for each town, province, and year. From a vast amount of statistical matter, Leontjeff (*Finska Läkare-handlingar*, p. 1, 1900) concludes that in a twenty years' period (1877-97) syphilis in Finland has much diminished, but gonorrhœa has increased. In males the prevailing age has been 20 to 50 years; in females 10 to 20 years. In towns the frequency was three times more than in the country. To 5 cases of condylomata there was only one of gumma. A marked increase occurred in 1891-5. Smaller augmentations occurred in 1879 and 1883—the intensity affecting males in one and females in the other outbreak. Since 1895 the number of cases has much diminished. Congenital syphilis gradually became less frequent, and in later years both adult and hereditary forms were of much milder type. Possibly both the isolation and the treatment played their part in this result.

ABSTRACTS OF

THE HUNTERIAN LECTURES

ON

THE SURGERY OF THE STOMACH.

By A. W. MAYO ROBSON, F.R.C.S.,

Surgeon to the Leeds General Infirmary: Hunterian Professor in the Royal College of Surgeons.

Lecture I.

[Mr. Mayo Robson commenced his course by considering the anatomical relations of the stomach and the diagnosis of its diseases by means of inspection, palpation, percussion, auscultation, by the character of the pain, by œsophageal bougies, by electrical illumination, by examination of the vomited matters and the contents of the stomach; and, finally, by exploratory incision, which, he observed, was necessary or even justifiable only in a very small percentage of cases, since a careful physical examination and time and care in studying the history of the case would usually enable either an exact or an approximate diagnosis to be made. With reference to this he further observed as follows:]

Exploratory Incision.

Very frequently, however, it is impossible to decide what surgical operation is required until the stomach is exposed and handled. I find that I have performed an exploratory operation on the stomach on eight occasions; all were in malignant cases, and the presence of glands or secondary nodules rendered further operation inadvisable: all the patients recovered.

In some case of abdominal injury, either gunshot, stab wound, or even injury without external wound, the severe shock, the vomiting of blood, and the general condition of the patient may lead to a suspicion that the stomach has been injured, and an exploratory operation may be justified. as in case of rupture of the stomach such an injury, if not repaired, would inevitably prove fatal.

At times all the symptoms of perforating ulcer may be present without a previous history of ulceration, and all that can be said is that a peritoneal catastrophe has occurred which threatens life. Under such circumstances an exploratory operation may be required.

Incision for Exposure of Stomach.

Although incision in the middle line between the xiphoid and umbilicus gives the readiest access to the stomach in the greater number of cases, especially if there is doubt as to what may be required, it is not always the best site for three reasons.

1. It is apt to be followed by yielding of the scar and subsequent hernia unless long rest is enjoined subsequent to operation.

2. The round ligament of the liver with its irregular adipose envelope is apt to be in the way and prove confusing.

3. To prolong the incision for further investigation is inconvenient because of the umbilicus.

These difficulties, of which the first only is of importance, are obviated by an incision through the inner margin of the rectus just to the right or left of the middle line. An incision on either side gives ample room, but if the pylorus is to be attacked it is preferable on the right; if gastro-enterostomy has to be done it is better on the left. Afterwards the abdominal wall is sutured layer by layer, and there is no fear of hernia or a weak scar being left; moreover there need be no fear of extending the incision if more room be required. The oblique incision along the costal margins is undesirable because it divides muscle so freely, and exact repair by suture is difficult, especially in the case of the rectus, which so freely retracts, hence permanent weakening of the abdominal wall and ventral hernia are more likely to follow. As a matter of fact, with due care in applying sutures any one of these methods may be employed, and the operator should select that which will give him the best access to the parts to be manipulated. Personally I prefer the vertical incision through the inner edge of the rectus where practicable.

Gastrotomy.

Exploratory gastrotomy has only been performed within the last few years, and by its means an extensive and minute examination of the interior of the stomach may be made with thoroughness and safety, so that in any case calling for operation, where by other means a positive diagnosis cannot be arrived at, the surgeon is justified in opening and exploring the stomach.

Operation.

The preliminary incision of the parietes has been described, and for gastrotomy it requires to be rather free. Flat sponges or gauze pads should then be packed around the stomach so as to avoid soiling the peritoneal cavity. The edges of the wound having been retracted the stomach can now be palpated, and if anterior palpation affords no guide a tear may be made in the gastro-colic omentum, which will admit the fingers to palpate the posterior surface.

The stomach may now be drawn forward surrounded by a sheet of sterilised gauze, and opened by a free incision in its longitudinal axis. Divided vessels must be seized and ligatured, and the liquid contents of the stomach must be mopped or siphoned out or pushed into the duodenum.

On retracting the edges of the gastric incision, the interior of the stomach will be brought into view, and may be further explored by the electric cystocope if thought necessary, as, for instance, in hæmatemesis from a small bleeding ulcer. If the posterior wall be the affected part it may be invaginated by the fingers inserted through the omental slit pushing it forward into the wound. A tumour may now be removed, an ulcer excised, a bleeding point ligatured or cauterised, the pylorus explored and divulsed, the œsophageal opening exposed and dilated, or other treatment may be carried out. For foreign bodies in the stomach there is, of course, no need to make the omental wound, and an anterior incision may at once be made, and the object seized and removed.

The incision in the stomach can be rapidly closed by a continuous catgut suture to the mucous margin and a continuous silk suture for the serous edges, a few Lembert's silk sutures sometimes being applied over all for greater security; the exposed parts may then be gently sponged over, the pads or sponges removed, and the abdominal wound closed without drainage.

(1) *The Removal by Gastrotomy of Foreign Bodies* lodged in the stomach has been attended with considerable success. A preliminary distension of the stomach with fluid or air is neither advantageous nor desirable. The indications for operation are the presence of a foreign body which can neither be safely dissolved nor passed, and which is actually producing or is likely to produce serious symptoms.

(2) *Gastrotomy for the Removal of Foreign Bodies impacted in the Lower end of the Œsophagus* may be done when all attempts to recover them by the mouth have failed. When a foreign body is impacted in the cardiac orifice, it is about six inches below the opening made in œsophagotomy; and if it be firmly impacted and require much force to detach it the safer plan will probably be to perform gastrotomy and draw it downwards a little way, than to perform œsophagotomy, and draw it forcibly a distance of six inches past very important structures.

(3 and 4) *Gastrotomy as a Preliminary to Forcible Dilatation of the Pyloric and Cardiac Orifice* of the stomach was suggested by Richter, and put in practice by Loreta in September, 1882. In stenosis of the pylorus divulsion has given way to pyloroplasty for the double reason of pylorodiosis having a greater death-rate, and of its being liable to be followed by relapse, though it may yet be advisable in those cases of stenosis due to spasm and hypertrophy of the pyloric sphincter, and in those milder forms where the sphincter may be dilated without gastrotomy by invaginating the stomach wall, and gradually pushing the finger through the pyloric opening. In simple cicatricial stricture of the œsophagus near the cardiac orifice, if dilatation by bougies is impossible or have failed to keep open the stricture, the operation of gastrotomy may be performed, and an attempt made to dilate the orifice from below. The operation, which has proved very successful, may be performed in one or two stages, in the latter case a large gastrotomy opening must be made, and the dilatation proceeded with later. The one-stage operation is to be preferred, as the finger can then palpate the cardiac orifice, and a

mechanical dilator may be used if necessary. For subsequent operation the gastric fistula may be left, if it be thought that there may be a difficulty in keeping the passage patent by bougies introduced through the mouth.

(5) *Gastrotomy for the Removal of a Polypus* or other growth projecting into the cavity of the stomach or occluding the pylorus is an operation seldom required, since simple tumours of the stomach are uncommon.

Gastric Ulcer.

Although in its earlier phases gastric ulcer comes under the care of the physician, many of the complications to which it gives rise demand surgical intervention, and in fact can only be treated satisfactorily by surgical means. For the present, passing over malignant, tuberculous, and syphilitic ulcers, the special form of ulcer which produces the complication calling for surgical treatment is the simple ulcer of Cruveilhier, which may be classified according to its stage and size, and to this may be added the simple erosion of the mucous membrane described by Dieulafoy, which at times lead to serious or even fatal hæmorrhage.

There appear, however, to be clinically two distinct forms of ulceration of the stomach—the acute and chronic, but, although they seem to be separate and characteristic, there are so many intermediate stages that it is a question whether or not the ulcers are as distinct as the extreme varieties would seem to indicate.

The *chronic* ulcer may be very large, and has shelving or irregular margins. It occurs chiefly in men, and is a disease of middle or advanced age. It is usually situated near to or at the pylorus, but may spread and form a tumour of the stomach extending along the lesser curvature, and it may occur in other parts of the stomach. It is irregular in outline, and surrounded by well-marked thickening of the outer coats of the stomach. It frequently leads to adhesions, hence is less liable to be followed by perforation into the peritoneal cavity, though it may eat its way into neighbouring organs. It is frequently followed by pyloric contraction. Bleeding, if it occurs, is usually less in quantity than in acute ulcer, but may be severe or even fatal. The characteristic symptoms of ulcer of the stomach, pain and vomiting, may be absent until some complication supervenes, though usually they are sufficiently distinct. The pain frequently occurs from one to two or more hours after food. There is usually tenderness over the pylorus or between the xiphoid and the right costal margin. Vomiting is very irregular, but when present is characteristic; the vomit is often large in quantity, containing much mucus, and it is sometimes grumous or coffee ground; it is often fœtid, and if there be dilatation there will be signs of fermentation. The symptoms vary very much, and may disappear for weeks together. I have observed and operated on cases in which the symptoms had been going on for 5, 7, 15, and 17 years, with more or less long intervals when the symptoms were in abeyance. Loss of flesh is well marked, especially in the later stages, and may be extreme, extending to half the body weight. Tumour of the pylorus is frequently present, and may resemble malignant disease. The chronic ulcer is usually single and very irregular, and in its deeper parts it often appears funnel-shaped.

The simple, acute, or perforating ulcer occurs chiefly in women, and often in young single women. It seems to be associated in many cases with amenorrhœa and chlorosis. The site varies, but it is frequently found near the cardiac end and near the lesser curvature, though it may attack either curvature or either surface. The shape is constant, it being clean punched out and round, with little or no inflammatory exudation around it. It is frequently followed by severe and sometimes fatal hæmorrhage. Pain at the epigastrium, passing to the left infra-scapular region, comes on directly after food, and is associated with local tenderness at the mid-line or on the left of the superior abdominal region. Vomiting is irregular usually after food and often without blood. If there be bleeding it is usually free, seldom simply grumous. Perforation is common and the ulcers may be multiple.

Complications.

Although the following complications are common to both forms of ulcer, certain of them are much more common in one than the other. For instance, the acute round ulcer is more frequently followed by violent hæmorrhage and by perforation than the chronic ulcer, yet the chronic ulcer is also liable to be followed by both. On the other hand, the chronic ulcer is more frequently followed by cicatricial contraction of the pylorus with subsequent dilatation of the stomach, and by perigastritis leading to disabling adhesions, also by hour-glass contraction, fistula and tumour of the pylorus or of the stomach, serious atonic motor deficiency, severe gastralgia with uncontrollable vomiting, cancer of the pylorus, tetany, chronic pancreatitis, abscess of the liver, chronic hepatitis, profound anæmia (resembling the pernicious form), stricture of the bile ducts, jaundice, catarrh of the gall bladder, and other complications depending on invasion of the neighbouring organs. Both forms are accompanied by pain, by great loss of flesh and strength, and at times by subphrenic abscess.

Diagnosis.

The well-known symptoms of pain after food with vomiting and bleeding, as shown by hæmatemesis and melæna, are usually sufficiently characteristic of gastric ulcer; but no surgeon can afford to pass over the diagnosis, which he must confirm personally before deciding on the question of surgical treatment. Doubtless before he sees the case it will have been settled that the patient is not suffering from simple gastralgia due to anæmia and hyperæsthesia of the stomach from the absence of localised tenderness and of hyperacidity of the gastric juice as well as from the irregularity of the vomiting and of the pain which may occur independently of meals; but he may be called on to negative cancer of the stomach, which will usually be indicated by the presence of a tumour, the absence or diminution in quantity of free hydrochloric acid in the vomit, the presence of coffee-ground vomiting and of cachexia, and the occurrence of the disease at or after middle life.

The diagnosis between gall stones and ulcer will usually be indicated by the irregularity of the paroxysms of pain, which occur quite independent of food, the character and site of the pain, the presence of jaundice and the character of the vomiting, which in cholelithiasis usually comes on soon after the pain begins, and persists long after all food has been rejected.

Between ulcer of the duodenum and ulcer of the stomach, the occurrence of the former more frequently in men and after middle age, the presence of melæna with or without hæmatemesis, the pain occurring from an hour to two hours after food, and the tenderness on the right of the abdomen will usually be sufficiently characteristic.

The pain in an ulcer of the stomach is usually definitely localised and associated with tenderness on pressure. The tender area is in the upper abdominal region, the position being more or less to the right or left of the middle line according to the site of the ulcer. For instance, an ulcer on the anterior surface of the stomach near the cardiac end is usually associated with tenderness between the left costal arch and the mid line, and relieved by the dorsal decubitus; but if the pylorus be involved, the tender spot is between the right costal arch and the mid line, and the pain is relieved by lying on the left side and increased by turning to the right. An ulcer on the posterior wall of the stomach gives rise to less epigastric tenderness, and the pain is felt more in the back beneath the left scapula, or close to the spine opposite the attachment of the tenth and eleventh ribs.

If adhesions have formed between the pylorus and liver or gall bladder, the pain may radiate towards the right infra-scapular region. When the ulcer is on the posterior wall, the dorsal decubitus increases the pain, which may be relieved by lying on the face or leaning forward, or even by assuming the erect posture.

In all cases of ulcer, the pain is usually increased by food, but the time of the onset of pain after eating is significant; for instance, an ulcer close to the cardiac end of the stomach causes pain immediately after food has been taken, or the pain may even start as the food is being swallowed; whereas in ulcer of the pylorus the pain frequently does not occur until from half an hour to an hour and a-half after meals. If the pain is very severe, vomiting frequently occurs, some-

times immediately after food, at others not for an hour or two, and the act of vomiting usually gives immediate relief.

Latent Ulcers.

Latent ulcers are not uncommon, and are said to be always of the acute round variety, but in two cases, where I have had to operate for perforation, without any previous symptoms pointing to ulceration, I found considerable thickening around the ulcers, showing that the disease must have existed in a latent form for some time.

Treatment of Gastric Ulcer.

The treatment of simple ulcer of the stomach is at first essentially medical, and when properly carried out is usually satisfactory. Unfortunately in many cases treatment is stopped as soon as relief to pain is obtained, and I would urge most emphatically that the absolute treatment advocated in the medical textbooks should be carried out more systematically and for a much greater length of time, and that it should not be left off as soon as the ulcer has got to the painless, that is to say the healing, stage. Doubtless this too brief treatment is most frequently due to the impatience of the patient, but I feel sure that in hospital practice it is often due to pressure on the beds and to a desire to make the most out of them, and in private practice it is frequently due to thoughtlessness, and perhaps sometimes to ignorance of how long it takes to secure healing of a gastric ulcer.

The surgical treatment of intractable ulcer of the stomach is still *sub judice*. Heydenreich [1] puts the matter tersely when he says:

> The death-rate for all cases of gastric ulcer is 25 to 30 per cent., but for gastro-enterostomy only 16.2 per cent., and therefore the operation has less danger than the disease. Another advantage of not waiting for complications is that the patient is in better health. At any rate, cases which do not improve with medical treatment in a reasonable time should be treated surgically.

It will thus be seen that the question will have to be finally settled by a careful study of statistics, and to this end I have, with the assistance of Mr. Willmott Evans, collected 188 cases of gastric ulcer treated surgically, of this number 157 recovered and 31 died, thus giving a mortality of 16.4 per cent. My own experience and a careful study of the subject would lead me to say that the time has not yet come for a sweeping change to be made in the treatment of uncomplicated gastric ulcer except in the way of more rigid and more prolonged medical treatment, but that when the ulcers prove intractable or when complications supervene, medical should give place to surgical treatment at a much earlier stage than has hitherto been the custom.

I find that I have operated on 34 cases of intractable gastric ulcer with various complications that in every case must have caused permanent disability or would have ended fatally, but excluding perforation, hæmorrhage, and cancer, all of which I am considering separately. Of these 18 operations were done in private, with 5 deaths, giving a mortality of 5.5 per cent. and 16 in hospital, with 5 deaths, giving a mortality of 31.2 per cent., or if both private and hospital cases be taken together, the mortality is 17.6 per cent. The difference between the private and hospital cases can be readily explained, in that a large proportion of the latter were almost moribund before surgical help was sought, and though many of the cases in private were also very far advanced, the treatment of such serious cases in a private surgical home, where the undivided care of special nurses and constant medical supervision, together with the comforts and advantages that such homes afford, must lead to better results all round.

The conclusion that I would urge concerning the surgical treatment of gastric ulcer are:

1. In all cases of gastric ulcer, except in case of perforation, medical treatment should be first tried.
2. Where ulceration persists, or the symptoms recur and prove intractable to medical treatment, gastro-enterostomy should be performed so as not only to give rest to the stomach but to relieve the hyperacidity of the gastric juice.
3. As a rule, direct treatment of the ulcers by excision is unnecessary.
4. Complications such as adhesions, pyloric contraction, dilatation and hour-glass contraction, leading to loss of flesh and impairment of health, should be treated surgically.
5. In chronic hæmorrhage surgical treatment is advisable, as it is in some cases of recurrent acute hæmorrhage, but, as a rule, acute hæmorrhages should be treated medically.
6. In perforation surgical treatment is demanded.

Hæmatemesis.

Hæmorrhage, which occurs in about 80 per cent. of all cases of ulcer of the stomach, may be arterial, venous, or capillary, and curiously, capillary hæmorrhage may be so free as to render it impossible to say that some large vessel has not given way.

Capillary Hæmorrhage.

This capillary hæmorrhage occurs under two special circumstances—vicarious hæmatemesis at the menstrual period and hæmatemesis after surgical operation. The former is well known and usually yields to medical treatment, surgical treatment having signally failed on the few occasions on which it has been tried. The latter is neither well recognised nor well understood yet is often serious and at times fatal. I have seen it follow operation for intestinal obstruction, tuberculous peritonitis, cholecystotomy, choledochtomy, hernia, ovariotomy and simple exploratory laparotomy, and in two cases death occurred without peritonitis or other cause than the profound hæmatemesis to account for death.

That the anæsthetic was not responsible for the hæmatemesis was shown by one of my cases having been operated on under cocaine. The case was a cholecystotomy for cancer of the common bile duct, and the operation only occupied fifteen minutes, yet violent hæmatemesis set in the day after operation and proved fatal in three days, and at the necropsy nothing was found in the stomach to account for the bleeding, nor any peritonitis or other condition than the hæmorrhage to account for death. Eiselberg, at the Surgical Society in Berlin, said that he had observed hæmatemesis following operation in the Königsberg clinic after Bassini's operation; after ligature of omentum, after operation for omental hernia, after laparotomy for ileus and for torsion of omentum, and after proctectomy for cancer. In some cases numerous hæmorrhages into the mucosa of the stomach, and in others numerous small recent ulcers had been found *post mortem*.

There could be no doubt as to causal relation between the operation and the hæmorrhage. Vomiting after narcosis could not have been the cause, as in 2 cases there was no vomiting after the anæsthetic. In 6 cases, however, there was ligature of the omentum, and in the seventh the omentum was probably contused. In an experiment on an animal multiple hæmorrhages into the stomach followed twisting of the omentum.

At the meeting of the Free Society of Surgeons in Berlin in December, 1899, Reichard related 3 cases of parenchymatous gastric hæmorrhage; in 1 cholecystenterostomy had been performed for obstructive jaundice, and was followed on the sixth day by hæmatemesis; the patient died in two days, no visible cause being found in the stomach or intestines after death. In 2 other cases after operations in young women violent hæmatemesis occurred as if from gastric ulcer; both were operated on, but gastrotomy failed to reveal any source of bleeding. Both died, and the necropsies revealed no manifest vascular lesions or even ulcers.

This form of hæmatemesis coming on after operation is not necessarily fatal, though it is serious and demands active treatment. Free purgation by calomel, and rectal feeding, with the avoidance of anything by the mouth, are the means I have employed, and usually with success. I have never ventured to operate in these cases, as the indications are not clear, and the patients have, as a rule, not been in a condition to bear a second operation.

Capillary hæmorrhage and hæmatemesis may come on in other conditions, associated with congestion of the portal circulation, enlargement of the spleen, and general engorgements of the venous system, but these do not concern us in regarding hæmatemesis from a surgical point of view.

Venous Hæmorrhage.

Rapid death may be due to perforation of the coronary, splenic, or other large veins. The portal vein has also been perforated by an ulcer of the duodenum. Owing to the more languid circulation and the small pressure of the blood, a fatal result is much less likely than in perforation of arterial trunks, but if the hæmorrhage should persist or be repeated,

such a case would be likely to be benefited by surgical treatment.

Arterial Hæmorrhage.

Serious or fatal hæmorrhage from the stomach is usually arterial. It may be from:

(*a*) The small branches which radiate between the glands in the mucous membrane, and this may occur before the ulcer has even perforated the mucous coat.

(*b*) From the large arteries along the curvatures, the coronary being the most frequently affected.

(*c*) From the extrinsic arteries, the splenic being, according to Brinton, responsible for 55 per cent. of deaths in fatal hæmatemesis.

Ulcers of the pylorus and duodenum affect principally the pancreatico-duodenal and then the right gastro-epiploic arteries.

The aorta has been perforated by ulcer of the stomach in cases recorded by Grüngeld and Stick, the hepatic artery by an ulcer of the duodenum (recorded by Broussais) and the heart itself in perforating ulcers of the stomach (recorded by Chiari, Brenner, and Finney).

The peculiarly fatal nature of hæmorrhages from medium-sized arteries depends on the fact that the ulcer makes a lateral opening into the vessel, which prevents natural hæmostasis by retraction and contraction; then the whole force of the heart is exerted on the clot which tends to form during the syncope that usually occurs when a large quantity of blood is poured out.

It is curious that the size of the perforated vessel does not seem to bear any relation to the time between the first bleeding and the prolongation of life; this is doubtless due to the irregular and variable amount of coagulation that occurs around the mouth of the opening and within the vessel. It is therefore impossible to diagnose the size of the vessel perforated either from the amount of the bleeding or the length of survival; for death has occurred very rapidly in some cases where the hæmorrhage has been from the capillaries or small vessels.

Surgical Treatment of Hæmorrhage due to Ulcer.

The mortality from hæmorrhage in ulcer of the stomach is estimated very differently. Muller gives 11 per cent., Gerhart 3 to 5 per cent., Welch 3 to 5 per cent., Steiner 6.36 per cent.. Lebert 3 per cent., Brinton 5 per cent., Debove 5 per cent., Leube 1 per cent., Dreschfeld 3½ per cent. The average of these numbers gives approximately 5 per cent., which seems to be a proportion agreed on by English physicians. In a quarter of the cases death comes so rapidly that there is barely time to consider the question of surgical treatment. In another quarter a fatal termination takes place in from twenty-four to thirty-six hours after the first onset of the bleeding. Surgical treatment in these cases of fulminating hæmorrhage has so far yielded few good results, and they usually terminate fatally, whether treated medically or surgically, but in the remaining 50 per cent. of cases where repeated hæmorrhages occur, and where the interval between the onset of bleeding and death varies from a few days to a fortnight, the question of surgical treatment is well worth considering.

In acute hæmorrhages the mortality is very high, 27 died and 15 recovered in 42 cases, which gives a mortality of 64.2 per cent. On the other hand, in chronic hæmorrhages, out of 19 cases 2 died, giving a mortality of 10.5 per cent.

In considering the question of operative treatment for supposed hæmorrhage from the stomach, it is well to bear in mind that bleeding may occur from the following causes:

1. From retarded circulation, as in cirrhosis of the liver and heart disease.
2. From aneurysm of the aorta and cœliac axis.
3. From miliary aneurysms in the stomach.
4. From erosion of a vessel by ulceration due to a biliary calculus, as in a case reported in my work on *Diseases of the Gall Bladder and Bile Ducts*, 2nd Edition, 1900.
5. From vicarious menstruation.

The operative measures that may be employed in the treatment of hæmatemesis from bleeding ulcer, are:

1. Excision of ulcer.
2. Pylorectomy.
3. Cauterisation of the ulcer.
4. Ligature of the ulcer and vessels *en masse*.
5. Ligature of the bleeding vessels *in situ*.
6. Scraping of the ulcer, followed by suture of the ulcerated surface.
7. Ligature in their continuity of the larger vessels supplying the ulcer.
8. Gastro-enterostomy.

After gastro-enterostomy, as a rule, all symptoms disappear at once, and hyperacidity ceases owing to the unobstructed escape of the gastric contents.

Operation for Bleeding Ulcer and for Ulcer Generally.

On account of the fear of exciting fresh hæmorrhage, it is undesirable to wash out the stomach before operating on a bleeding ulcer; and as the patient is usually anæmic, and will therefore bear shock badly, it is desirable to have him enveloped in cotton wool or otherwise kept warm on a heated table, and to give a subcutaneous injection of strychnine before operation. If it be unnecessary to give an infusion of saline fluid before the operation, an assistant should be ready to perform that duty while the abdominal operation is being proceeded with, should it be called for. After the abdomen is opened, the stomach may be emptied by pressing the contents into the duodenum, as suggested by M. Terrier; this saves much time, and rapidity is of great importance. The surface of the stomach should then be carefully examined, as very frequently a puckering of the surface or a thickening of the coats will be noticed at the site of the ulcer, or a difference in colour may sometimes indicate its site. Should the operator be fortunately able to find these indications, much time may be saved; but if no indications of this sort be obtained, the stomach must be well drawn forward and opened, either by a vertical incision, which gives less hæmorrhage, or by an incision in the long axis of the stomach, which affords a much better view of the interior. In order to avoid soiling the peritoneum, thin, flat sponges should be placed within the abdomen; and it is well to have a perforated sterilised gauze pad covering the stomach, the opening to correspond with the opening in the stomach. The edges of the stomach should then be held open by forceps, one above and below, and one at each end.

The interior of the stomach must now be systematically examined—first the anterior and posterior surfaces, the upper and lower curvatures, and lastly the pyloric and cardiac orifices, all of which can be done either by the naked eye or by the aid of an electric cystoscope or a reflected light. If the posterior wall of the stomach cannot be efficiently examined, a slit may be made in the omentum, and two fingers or even the whole hand pushed through it and employed to invaginate the posterior wall. If no ulcer can be found on the wall of the stomach, the duodenum should be explored not only by the finger but by invagination. If no ulcer be found anywhere and the bleeding proves to be capillary or from small undiscoverable ulcers, gastro-enterostomy as advocated by Doyen should be performed; but, if an ulcer be discovered and it be possible to excise it, that operation should be done, as it undoubtedly offers the likeliest method of cure.

After excision of the ulcer and ligature of the bleeding vessels the edges of the wound are brought together by sutures, of which one or two layers may be employed. Should the excision involve the peritoneal coat, it is desirable if possible to apply Lembert's sutures, and if it be on the posterior wall the operation may present some, though not insuperable, difficulty. Should the ulcer be discovered in some region where excision is impracticable—for instance, near the cardiac end—the method adopted by Mikulicz, in his first operation in 1887, of applying the cautery may be employed. This seems to have answered well in several cases, and where death occurred afterwards it was not from a recurrence of the bleeding.

Possibly in a case of this kind gastro-enterostomy might also be advisable by way of setting the stomach at rest, or the ulcer might be curetted: but in one case in which I simply scraped the ulcer and applied carbolic acid to it an extension of the ulcer occurred and led to perforation on the eighth day, so that I am not much in favour of trusting to curetting simply. If any superficial points of bleeding be discovered, they may be caught up by forceps and ligatured; but this is more easily said than done, as the mucous membrane is very friable, and a ligature, if drawn at all tightly, tends to cut its way through; moreover, forceps easily tear the mucous membrane, and may produce a larger bleeding area. A method of ligature *en masse* may, however, be employed if the ulcer is a small one. This has proved serviceable in several cases, and is easy of application when the ulcer can be reached. This method of ligaturing *en masse* has been tested by experiments on animals by Dr. Eisendrath, and has been shown to endanger perforation except when supported by external sutures. Ligature of the main arteries of the stomach was suggested

theoretically by Savariaud when no bleeding ulcer could be discovered; it does not, however, commend itself as being safe, and it has not yet been put in practice.

Should the bleeding be from an ulcer at the pylorus, the operation of pyloroplasty may be performed, the ulcer being excised, the edges of the ulcer being united so that the line of sutures shall be transverse to the axis of the pylorus.

I would not, however, advise pyloroplasty when there is active ulceration of the pylorus, unless the ulcer can be completely excised, for in three cases of this kind I have had disappointments. In one the patient made a good recovery from the operation, but subsequently suffered from stenosis, for which a further operation had to be done. In a second, recovery took place, and the patient regained his lost weight, but subsequently a tumour of the pylorus developed, which was thought to be cancer, and for which I had to perform pylorectomy; and the third case is the one ending in perforation, which I mentioned in speaking of curetting ulcers. I think, therefore, that in cases of ulcer of the pylorus, where a clean excision of the ulcer cannot be done, it would be better to perform gastro-enterostomy or pylorectomy, whichever at the time may appear to be easier.

So far as I can gather, the mortality of pyloroplasty in simple ulcer appears to be about 13 per cent., that of gastro-enterostomy about 16 per cent., and of pylorectomy 28 per cent., but it is most difficult to get at genuine statistics, since many single failures are unreported, and these figures must only be accepted as approximate.

Wherever the pylorus is adherent, as in my experience it is in so many cases of ulcer, I should certainly prefer gastro-enterostomy; but if the pylorus be extensively ulcerated and free from adhesions, pylorectomy can be almost as quickly performed as gastro-enterostomy, seeing that the pylorus is already in the hand.

The operative treatment of parenchymatous or capillary hæmorrhage by any surgical method would seem to be of doubtful value; for, according to a report by Peterson from Czerny's clinic, of three cases operated on for severe parenchymatous hæmorrhage from vicarious menstruation, operation entirely failed to relieve; and of two other cases of post-operative parenchymatous hæmorrhage by Reichard, both died.

Conclusions.

After a careful study of reported cases, as well as from personal experience, I cannot help feeling that operative treatment in acute hæmorrhage gives such a high rate of mortality, "64.2 per cent. as compared with from 5 to 10 per cent. in cases treated medically," that it is better in such cases to rely solely on medical means. But in the repeated chronic hæmorrhages that are responsible for quite half the total deaths from hæmatemesis, the operation of gastro-enterostomy affords a reliable method of treatment, since it at the same time gives rest to the stomach, and removes the hyperacidity of the gastric juice, by an operation that can be done with rapidity and comparative safety; moreover, when the ulceration is at the pylorus, where it so frequently leads to hypertrophy and stenosis, the operation not only relieves the symptoms for which it was undertaken, but proves curative to the disease.

REFERENCE.
[1] *Sem. Med.*, February 2nd, 1898.

THE CAUSES AND TREATMENT OF MOVABLE KIDNEY.

Being an Abstract of the First Hunterian Society Lecture, February 28th, 1900.

BY C. MANSELL MOULLIN, M.D.OXON., F.R.C.S.,
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[AFTER thanking the President and the Fellows of the Hunterian Society for inviting him to deliver one of the Hunterian lectures this year, and mentioning his reason for selecting movable kidney as his subject, the lecturer proceeded to explain why the presence of a movable kidney was so often diagnosed during life and so rarely found after death. A distinction was drawn between movable kidney and floating kidney, in which there is a true mesonephron; and it was pointed out that although the kidney might push the peritoneum in front of it like a hernial sac, or even possibly insinuate itself between the layers of the ascending or the transverse mesocolon, neither of these could be regarded as constituting a mesonephron—a structure which it was almost impossible to explain on the ordinary view of the development of the peritoneum. The relation of the kidneys to Cunningham's subcostal plane was then described, and the lecturer proceeded to demonstrate that the generally-accepted view that the kidneys were fixed organs was incorrect.]

During life the kidneys, with all their anatomical relations undisturbed, normally possess a range of movement estimated by Albarran at from 3 to 5 centimetres. The movement is especially evident when the kidney is exposed through an incision in the loin. This makes it more difficult to define what should be called a movable kidney. Kendal Franks holds that the extent of surface which can be felt beneath the ribs is the best criterion. A much more satisfactory test, however, is the failure of the kidney to reascend on tranquil expiration (coughing or straining is not fair) when the patient is standing erect, and has driven the kidney down by forced inspiration. I look upon this as sufficient even if the kidney only comes down low enough to enable its inferior extremity to be felt. If, on the other hand, it retains its normal relation to the diaphragm, so that the movement of the one follows that of the other, I do not regard it as unduly movable, even if half of the organ can be felt.

The kidneys are invested by what has been described by Zuckerkandl and Gerota as the perirenal fascia. This is a development of the subperitoneal tissue, strengthened upon the left side, where it lies upon the ventral surface of the kidney, by some fibrous bands which Zuckerkandl has shown to be the remnant of the fusion of the descending mesocolon with the primitive parietal peritoneum. The corresponding strands on the right side, owing to the different position of the colon, stand in no relation to the kidney. The fascia consists of two layers, anterior and posterior. These are united along the external convex border of the kidney, but are quite separate on the inner side and below. The anterior layer passes across the great vessels, and becomes continuous with the anterior layer of the opposite side. Below both layers are lost in the subperitoneal tissue. Together they form an investment for the kidney, loosely attached to it by connective tissue and fat, open on the inner side and below. Like the recess in which the kidney lies, this fascia offers no resistance to movement of the kidney downwards and inwards. The normal movements of the kidney during respiration, and when the body is raised from a horizontal to an erect position take place inside this investing fascia.

Immediately around the kidneys, inside this perirenal fascia, is a large amount of fat which differs in colour and consistence from the ordinary subperitoneal fat, and which must be regarded to some extent as a special structure having a special function. It is but slightly developed until the eighth or tenth year, and is so soft and delicate in structure that it appears to be much more suited to facilitate the movements of the kidney than to check them. This deposit is especially thick on the posterior surface, and opposite the hilum, for on this surface the perirenal fascia is closely attached to the transversalis fascia, and this in its turn is firmly blended with the muscles beneath. In front there is comparatively little, for here the anterior layer is more loosely attached to the peritoneum, and both are movable. Atrophy of this fat has been noted in some cases of movable kidney, but much more often it is abundantly developed, and has to be stripped off in the operation for suturing the kidney in place.

Running through this fat are some stouter strands of fibrous tissue which pass from the fascia to the renal capsule. They are best developed above and opposite the hilum, but there are a few below. In cases of nephroptosis these are either torn or unduly stretched. Wolkow and Delitzin have shown that they are not strong enough to support the weight of the kidney, and they believe that their chief function is to maintain the normal shape of the kidney and the relative position of its different parts. If the upper ones are divided, the upper segment of the kidney, according to these observers, falls forward upon the lower. Potain has described this displacement, which he calls anteversion of the kidney; and it is said that sometimes it causes very severe symptoms from the way

in which it presses upon the neck of the gall bladder and the bile duct. However this may be, Newman showed a long while ago that if the abdomen is opened while the body is suspended in the erect position, the kidneys, which are already at their lowest normal point, fall much lower, even though these bands are uncut. Neither the fascia nor the fat is capable of maintaining the kidney in position when the influence of the abdominal pressure is removed.

The same may be said of the peritoneum. This is stronger on the right side than the left, owing to a special fold described by Jonnesco; but the kidneys glide behind it, and it is so easily displaced, even on the posterior wall of the abdomen, that they have no difficulty in pushing it before them. The surrounding organs check the movements of the kidneys and support them, but the kidneys are not in any way tied down or fastened by ligaments, like, for instance, the splenic flexure of the colon.

Kendal Franks described the kidneys as maintained in position by the combined pressure of the liver, acting from above and in front, and the colon acting from below and in front. But the liver and the colon, so far as intra-abdominal pressure is concerned, cannot be regarded as independent agents. Together with all the other organs enclosed by the peritoneum, they form one soft elastic mass, pressing against the kidneys. If any one of the organs that form this mass changes in position or consistence, the rest—so long as the peritoneal cavity is unopened—compensate for it at once. There is no independent action until air has been admitted into the peritoneal cavity.

Glénard regards mobility of the kidneys as merely one of the phenomena of enteroptosis; but in the vast majority of cases in which the right kidney is movable, there is no displacement of the other viscera. When enteroptosis does occur, so that the liver rotates and the intestines sink, movable kidney may follow, owing to the disturbance of the intra-abdominal pressure. Even this, however, will only happen if there is at the same time defective development of the lumbar recesses.

The kidneys are maintained in position partly by the pressure in the extra-peritoneal space, partly by the way in which they fit into the lumbar recesses. Neither of these is sufficient without the other. Wolkow and Delitzin in particular, have drawn attention to the importance of the shape of the lumbar recesses. This is best shown by taking plaster casts of the posterior wall of the abdomen, while the body is suspended vertically. In the male they are deep, narrow, and pear-shaped, with the narrow end below. In the female, owing to the greater width of the pelvis, they are shallower and more cylindrical; and the difference in shape is almost always more marked upon the right side than upon the left. This I believe to be due to a slight degree of torsion of the lumbar spine. In right-handed people there is usually a slight convexity towards the right in the dorsal spine. This entails an equivalent convexity towards the left in the lumbar region; and this, in its turn, necessitates a slight degree of rotation. The left transverse processes rotate backwards and deepen the lumbar recess upon that side. The right rotate forwards, and make the lumbar recess proportionately more shallow.

In a very large number of cases of movable kidney there is definite flattening of the right lumbar region. This, of course, cannot possibly be due to absence of the right kidney. Abdominal nephrectomy does not cause it. It really means that the vertebræ have rotated slightly, and is an indication of the cause of the displacement of the kidney, not a consequence of it.

The width of the lumbar recesses is one of the penalties which have followed the assumption of the erect attitude. If the history of the development of the renal organs in the race, as well as in the individual, is worked out, it is seen that, originally, they were distributed over the whole length of the head and body; and that by degrees, as their function became more specialised, they became concentrated together, until in their most perfect form they constitute a pair of organs, which, in the quadrupedal mammalia, are placed in a position of the greatest possible security. They lie close to the spine, immediately under the anticlinal vertebra, almost in the central axis around which all movement of the trunk and limbs takes place. They are buried in two deep and narrow recesses, protected by the lower ribs, and rest upon a horizontal sheet of fascia, which in its turn rests upon the peritoneal viscera. The slight degree of backward and forward movement which is necessitated by the action of the diaphragm takes place without the least risk, but with the assumption of the erect attitude the greater portion of this security is lost. The backward and forward movement is altered to movement upwards and downwards, in the direction of the line of gravity. The peritoneal viscera and the supporting fascia lie in front and not below. The lumbar recesses, instead of being deep and narrow, become broad. The convexity forwards of the lumbar spine helps to make them still more shallow. The pelvis, especially in the female sex, becomes wider, so that the lower end of the recess becomes more open, and then the development of right-handedness causes the transverse processes of the lumbar vertebræ, which lie under the floor of the lumbar recess, to rotate. From a position of the greatest safety the kidneys are placed in one from which all security is gone; and it is not to be wondered at that comparatively trivial causes—an increase in the weight of the organ without a corresponding increase in the bulk, a sudden violent jerk, or a great lowering of the intra-abdominal pressure, can increase their normal range of mobility. The wonder is not that movable kidney occurs, but that it does not occur more often.

This accounts completely for the peculiar clinical distribution of movable kidney. It is certainly hereditary and common. It is present in women much more often than it is in men; and in women who have borne children more often than in those who have not. And it is much more common upon the right side than upon the left. None of the other reasons which have been assigned for this, such as the weight of the liver or the length of the renal vessels, deserve consideration.

[The lecturer, after detailing the different methods of treatment which have been advised, proceeded:]

The choice lies between wearing an abdominal belt and nephrorrhaphy. In my experience it is only in the milder cases than the former succeeds, and then it must be combined with massage and exercises calculated to strengthen the abdominal muscles. A belt braces the viscera together, and so steadies the displaced organ, but it cannot press the kidney back into its place or retain it there after it has been reduced, if the patient stands upright and takes a deep breath. Pads are useless. For all cases in which there is manifest deformity of the lumbar region, associated with movable kidney, or in which there is real distress, even if the mobility attains no higher degree than the anteversion of Potain, I never hesitate to recommend nephorrhaphy. In the former case it is advisable, in order to save the kidney from hydronephrosis and other troubles. In the latter I believe it to be the most certain method of giving relief. I have never known it fail when properly carried out if the symptoms have not already lasted so long as to produce an indelible impression upon the patient's nervous system.

A CONTRIBUTION TO THE SURGERY OF PERFORATED GASTRIC ULCER,

WITH SPECIAL REFERENCE TO THE RESULTS OF OPERATION IN ULSTER.*

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History and Statistics.

So far as I know, the first successful operation for perforating ulcer of the stomach was recorded by Kriege, a German surgeon, in 1892. The first English success was reported by Mr. Morse, of Norwich, in March, 1894. The first Irish triumph falls to the credit of an Ulster surgeon, Dr. John Campbell, whose operation was carried out in July, 1897; whilst the most brilliant result in the annals of this branch of surgery must be accorded to an Irishman, Dr. Myles, of Dublin, who operated with signal success on an old gentleman

* Read before the Ulster Medical Society.

Table of Operations for Perforated Gastric Ulcer performed in Ulster up to November 30th, 1899.

No.	Sex.	Age.	Previous Symptoms.	Initial Symptoms of Perforation.	Nature of Last Meal.	Position of Patient at Moment of Perforation.	Interval between Last Meal and Perforation.	Interval between Perforation and Operation.	Condition Found at Operation.	Treatment of the Peritoneal Cavity.	Duration of Operation.	Subsequent Complications.	Result.	Subsequent History.	Operator.	Date of Operation.
							Hours.	Hours.			Hours.					
1	F.	35	Pain and vomiting for 2 years	Sudden violent abdominal pain and collapse. Vomited twice	Porridge	Lying in bed	-	14	Anterior surface near lesser curvature, perforation size of three penny piece, surrounded by induration and adhesions. Partial excision. Double row of sutures	Sponged with gauze pad. Gauze drain	?	Nil	Recovery	Well and free from pain one year later	Dr. John Campbell	July 21st, 1897.
2	M.	25	Slight dyspepsia, for which he never had been treated	Sudden pain. Violent vomiting	Tea and bacon	Sitting on a chair	1	10	Anterior surface, near pylorus. Perforation size of lead pencil. Adhesions to under surface of liver	Thoroughly douched with saline solution	-	Never rallied from shock	Death 24 hours after operation	*Post-mortem*. Ulcer firmly closed, but a second ulcer near cardiac end	Dr. A. B. Mitchell	December 29th, 1897.
3	F.	38	Typical of ulcer for 2 to 3 years	Sudden pain and collapse. No vomiting	Milk and bread	In her bath	1	4	Anterior surface near lesser curvature. Perforation size of threepenny piece in centre of indurated area size half-a-crown. Partial excision	Douched with saline	1¼	Never rallied from shock	Death in 18 hours	No *post-mortem*	Dr. A. B. Mitchell	March 2nd, 1898.
4	F.	19	Chronic dyspepsia	Sudden pain and collapse and vomiting	?	Standing at work	1½	3	Perforation on anterior surface, near cardiac end, with thick indurated margin	Douched with boiled water. Rubber drainage	1½	Abscess in abdominal wall, which was opened on twenty-eighth day	Recovery	Quite well six months later	Dr. Walton Browne	April 16th, 1898.
5	F.	21	Pain and coffee-ground vomit	Sudden pain and collapse and diarrhœa. No vomiting	Tea and bread	Standing at work	2	4	Perforation size of sixpence on anterior surface, near lesser curvature and near cardiac end. Adhesion to under surface of liver	Douched with saline. Glass drain	1½	Did well for 18 hours, when she showed sudden symptoms of collapse	Death in 28 hours	No *post-mortem*	Dr. A. B. Mitchell	November 10th, 1898.
6	M.	45	Stomach symptoms for over 7 years. Several severe attacks of hæmatemesis	Sudden pain and collapse. Vomiting of blood	Being fed by rectum, owing to hæmorrhage	In bed	—	3½	Perforation on anterior surface, near pylorus, extending from the perforation, a tear about 1½ inches long. A large thick mass, apparently malignant, at some distance from ulcer	—	1½	Rallied fairly well, but had several fainting attacks	Death in 12 hours	No *post-mortem*	Professor Sinclair	December 5th, 1898.
7	M.	40	Pain and vomiting for 12 years	Sudden pain and vomiting	?	At 4 A.M. while engaged in extinguishing a fire	2	11	On anterior surface, near lesser curvature, old and firm adhesion to liver, so that opening could not be drawn toward the wound	Douched with saline. Glass drain	2	Did well for 1 week, then intestinal obstruction set in	Death on tenth day	Ulcer perfectly healed. Stomach watertight. Acute strangulation 2 feet above cæcum, due to adhesions	Dr. T. K. Wheeler	November 5th, 1898.
8	F.	19	Ulcer for - years	Sudden pain and collapse	?	?	?	-7	Perforation on anterior surface, near the cardiac end. Adhesions	Sponged with gauze pad. Gauze drain	?	Slight stitch abscesses	Recovery	Well and free from pain six months later	Professor Sinclair	November 28th, 1898.
9	F.	32	Ulcer for 3 years	Sudden pain and collapse. No vomiting	Tea and bread and butter	While sitting at work at a sewing machine	1½	8½	Perforation which admitted tip of little finger, on the anterior surface, near lesser curvature, and 3 inches from pylorus. Firm adhesions	Sponged with gauze pad. Gauze drain	1¼	On second day troublesome distension, which, with difficulty, yielded to enemata of turpentine and water	Recovery	Well and free from pain nine months after operation	Dr. A. B. Mitchell	February 16th, 1899.
10	M.	30	Dyspepsia and attack of pain for years	Sudden pain and slight vomiting	?	Standing	—	26½	Perforation on anterior surface, close to lesser curvature, near pylorus, and size of lead pencil. Zone of induration 2½ inches in diameter, firmly adherent to liver	Douched with oiled water. Gauze drain	2½	Sudden collapse on sixth day, when patient attempted to get out of bed	Death	No *post-mortem*	Mr. Robert Campbell	—

11	F.	32	Bad stomach for 12 years	Intense pain and collapse. Slight vomiting	Pork	Standing	1½	6½	Perforation on anterior surface, close to lesser curvature, midway between cardiac and pyloric ends	Sponged with gauze and douched owing to pelvic peritonitis. Gauze drain in wound, glass drain in pelvis	1½	Tympanites and fairly severe bronchitis	Recovery	—	Dr. John Campbell	November 10th, 1899.
12	F.	22	Pain, vomiting, and hæmatemesis	Sudden pain and collapse. No vomiting	Barley water and toast	Standing washing some linen	1½	6	Perforation size of threepenny piece, surrounded by indurated area, size of 2s. piece, on anterior surface, near lesser curvature and near the cardiac ends. Firm adhesions	Sponged with gauze pad. Gauze drain	1½	Tympanites, which yielded to calomel purge on third day	Recovery	—	Dr. A. B. Mitchell	November 14th, 1899.
13	M.	27	Stomach symptoms for 6 months, with occasional vomiting of blood	Pain, collapse, vomiting of blood	Cocoa and bread	Standing	1	11½	Perforation on anterior surface, near lesser curvature, 2 to 3 inches from cardiac orifice. Soft adhesions	Sponged and douched. Gauze drain in wound, glass drain in pelvis	2	Alarming attack of collapse	Death on twenty-second day	Right and left subphrenic abscess; left pleural abscess; pericarditis	Professor Sinclair	November 19th, 1899.

aged 70, whose stomach perforated shortly after the reduction of an umbilical hernia.

A table published by Mikulicz, and quoted by Barker demonstrates very forcibly the advance of surgery and surgical technique in dealing with gastric perforation. His list included all published operations which he could find, and is as follows:

	Cases.	Recoveries.	Per Cent.
1885-1893	35 ...	1 ...	2.85
1894-1896	68 ...	32 ...	47.06

It will thus be seen that previous to the year 1894 physicians were justified in regarding their surgical colleagues as useless, or even worse than useless.

Our position to-day is entirely different, and it would now be regarded as almost culpable were a physician to neglect to offer to his patient the advantage of surgical aid in the event of perforation. Mr. Goffe, of University College, tabulated all the operations recorded in England and America up to the end of 1897. His table shows:

125 cases with 63 recoveries: 50 per cent.

It is obvious that statistics obtained from the journals in this way will give an undue proportion of recoveries. I have collected what I believe to be a complete list of all operations done in Ulster, and have tabulated them so as to show at a glance the more important features of each case. I desire to thank very sincerely those operators who have furnished me with notes of their cases and permitted me to make use of them.

Of the 13 cases included in this table, only one, the first on the list, has yet been published. This collection has, I think, a special statistical value, though the number of cases is small, owing to the fact that successful and unsuccessful cases are alike recorded; and the result—13 cases with 6 recoveries—must, I think, be regarded as eminently satisfactory.

The first case, operated on by myself sixty hours after perforation, was practically hopeless from the first; and Professor Sinclair's first patient was in a very similar condition, the stomach wall being so rotten that it was actually torn to the extent of 1½ inch, and a large mass of tissue apparently malignant, occupied the anterior wall of the organ at some distance from the ulcer.

The only list which I can find at all comparable to our Ulster table, in the matter of completeness, is that published by Mr. Barker in his lectures on Surgical Affections of the Stomach, which included all his own cases to the end of 1897. He had then operated on 9 cases with 3 recoveries; and when you consider that these operations were all carried out by the same man, a skilled abdominal surgeon, you will, I am sure, acknowledge that the record which I place before you to-night is one of which we have no reason to be ashamed.

Frequency of Gastric Ulcer.

There can be little doubt that ulcer of the stomach is a much commoner ailment that it is generally considered to be, and that a large number of cases treated as dyspepsia or gastritis are in reality examples of gastric ulcer. This view has been specially emphasised on more than one occasion by my colleague Dr. William Calwell. That a large percentage of these ulcers undergo complete cure under the care of the physician is a well-established fact; the mortality probably does not exceed 15 per cent. from all causes.

When we come to inquire into the death-rate from perforation, we are met with a considerable difference of opinion, some authorities putting it as high as 18 per cent., while Dreschfeld estimates it as low as 6.5 per cent. Hospital records from which such figures are obtained are, however, evidently misleading. Cases of gastric ulcer almost invariably show signs of improvement under the rest and careful dieting which residence in hospital ensures, and there, indeed, the risk of perforation is reduced to a minimum. It is when such patients go home, perhaps to the country, and, forgetful of the caution they have received, grow careless as to their habits and their diet, that perforation occurs and we incidentally hear of their death from peritonitis.

The following case, which occurred in my own practice, illustrates this, and is, I feel sure, by no means uncommon:

In November, 1895, I saw a young lady, a shop assistant, who suffered from marked anæmia, with history of severe pain in the epigastrium, which was aggravated by food, accompanied by nausea and flatulence but without actual vomiting. I regarded the case as one of gastric ulcer, and, amongst other things, strongly urged the desirability of complete rest. Early in December, 1895, she left business and went to live with her mother in a country town. I saw her again in January, 1896, when she looked much better, but had a fresh attack of pain owing to some indiscretion in diet. On March 15th, 1896, her mother called to tell me that her daughter was dead. She had been taken suddenly ill with peritonitis on March 5th and died on March 8th.

I think it may safely be asserted that the peritonitis from which this girl died was due to perforation of a gastric ulcer. These cases of unexplained peritonitis are every year becoming fewer. The surgery of the vermiform appendix has simplified many cases which a few years ago would have been hopelessly obscure. Indeed if we eliminate those instances of acute peritonitis dependent on perforation of the stomach, duodenum, or appendix, the proportion to be accounted for by all the other causes will be comparatively small. I think the table I submit demonstrates conclusively that cases of perforating gastric ulcer admit of successful treatment. A prompt diagnosis being of such vital importance I propose briefly to review the more important symptoms of perforation before discussing the operative treatment. The following is a history of an average case:

SYMPTOMS OF PERFORATION.

A patient, male or female, with or without a previous history of gastric symptoms, is suddenly seized with a violent abdominal pain, immediately followed by profound shock and collapse, and perhaps by vomiting. The pain, which may at first have been localised, rapidly becomes general. The abdomen becomes intensely tender, with its muscle hard and rigid. On percussion there is a tympanitic note all over; possibly there is a diminished area of hepatic dulness, especially in front. The bowels are inactive. The patient is cold and livid, with subnormal temperature, a quick, feeble pulse, thoracic respiration, anxious expression, and suffers from intense thirst. Soon a period of repose commences, when the sufferer feels distinctly easier, the pulse improves a little as the initial shock passes off, the abdominal retraction is replaced by slight distension, and liver dulness becomes markedly diminished. In a short time, however, the pain returns, tenderness increases, the temperature rises, and the patient exhibits all the signs of general septic peritonitis; or in the more fortunate cases the peritonitis is localised by adhesions and an abscess forms.

To the more important of these symptoms, pain, shock, vomiting, absence of liver dulness, and the period of repose I desire to refer at more length.

Pain comes on with startling rapidity, and generally commences in the epigastrium, but has been referred to the region of the gall bladder, simulating biliary colic, and even the right iliac fossa mimicking appendicitis, while in my last case it commenced in the region of the left clavicle, and gradually travelled down to the epigastrium. The tenderness with which it is associated affects the entire abdomen, but is almost invariably most marked over the epigastrium.

Shock is usually a very characteristic symptom, but is occasionally only slightly marked, and Charters Symonds records a case in which a patient on whom he operated and found a perforating ulcer had a pulse of 60, and was free from pain. Shock, when present, appears to be due to

(1) *Disturbance of the great sympathetic ganglia and peritoneum* by the stomach contents, and I have noticed the collapse was greater in those cases in which solid indigestible particles had escaped and violently irritated the peritoneum.

(2) *The presence of gas in the peritoneal cavity*, which, with the abdominal muscles powerfully contracted, causes a strong upward pressure on the diaphragm and irritates the heart.

Some observations kindly made for me by Dr. Calwell on my fourth case are of importance in this connection. He carefully observed the pulse from the commencement of the anæsthesia to the completion of the operation. He found that the pulse, which reached 140, and was very weak and irregular at the time of making the abdominal incision, promptly fell to 96, and became fairly strong and regular when the peritoneum was opened and the gas allowed to escape.

In my fifth case there was very little free gas, and the opening of the peritoneum made no appreciable difference in the the pulse. In Professor Sinclair's third case I observed the pulse myself, and on the opening of the peritoneum and escape of gas it fell from 108 to 88 and distinctly improved in tone. Further observations on this point would be of considerable value, for if the escape of gas may be relied on to give some relief from shock, it obviously places in our hands a valuable weapon for obtaining temporary relief when the collapse is so profound as to exclude the practicability of a general anæsthetic or a complete operation. In such cases I would suggest a small incision under cocaine, opening of the peritoneum, removal of the gas, and insertion of a gauze drain, in the hope that a more thorough operation may be possible in a few hours. This procedure can be carried out in about five minutes, and cannot make matters worse. I followed this plan on a patient who was practically pulseless, rendering any complete operation impossible, whom I saw with my colleague, Dr. Wheeler, on April 3rd, 1899. The history pointed to perforating appendicitis, and I cut down over this organ but failed to obtain any free escape of gas, and the little operation had no appreciable effect, though the patient herself thought she was slightly easier, she never rallied, however, from the original shock, and death occurred ten hours after the first symptom. Mr. Barker has, I think, since then recorded a case in which he followed the same line of treatment, unfortunately without any more favourable result.

Vomiting.—There seems to be a wide difference of opinion as to the frequency in which vomiting appears as an early symptom. Sir W. Broadbent says that "in the majority of cases there is vomiting and retching." Stawell estimates it as occurring in "about 70 per cent. of cases," while Dreschfeld, writing in Clifford Allbutt's *System of Medicine*, remarks that "vomiting is generally absent." You must, therefore, be be careful as to the importance you attach to this symptom. It was, as you will see, present in 8 out of the 13 cases in our list. In my first patient vomiting and retching were so severe, however, that the case was looked upon as an example of acute intestinal obstruction, and treated by enemata for almost two days before he was sent into hospital. Vomiting, when present, has almost invariably this characteristic, that it is not long-continued, occurring probably only two or three times, thus presenting a striking contrast to the symptom when present in obstruction, where it is noted for its persistency.

Vomiting of blood as a symptom of perforation is very rare, but was present in the sixth and thirteenth cases in my table.

Absence of liver dulness has been called by Liebermeister a "pathognomonic sign of rupture of a hollow viscera." Unfortunately, like many other so-called pathognomonic signs, when weighed in the balance it is occasionally found wanting. Everyone who has carefully examined the abdomen of a number of patients suffering from chronic atonic dyspepsia or allied conditions, will recall instances in which liver dulness was greatly diminished, especially in front. On the other hand, it is quite possible to have a perforation in which the escape of gastric contents is so limited by adhesions that there may be no free gas in the peritoneal cavity, and in which the liver dulness will therefore remain unaffected. The sign, however, is one that should always be looked for, and is of the greatest value when associated with other symptoms. Nevertheless, the following case shows that even then it cannot be absolutely relied upon:

A young woman was walking along the footpath on the Antrim Road one evening, about 8.30 P.M., when she was knocked down by a runaway horse, and the wheel of the vehicle went over her. She was promptly brought into hospital, and when I saw her about 9.30 P.M. I found her suffering from considerable shock, with severe abdominal pain, intense tenderness, rigid muscles, and absence of liver dulness. Her pulse was 120, and respiration shallow and thoracic. I immediately thought of rupture of intestine or stomach, but on examination of the skin we found that the wheel had apparently crossed the pelvis, thus diminishing the danger of visceral injury. Having satisfied ourselves as to the state of the bladder, we decided to await events. About 10 P.M. several members of the staff happened to be at the hospital, and I took advantage of their presence to have a consultation. The result was that we came to the conclusion to recommend an exploratory incision. This, however, the patient resolutely declined, and she left the hospital in about a week perfectly well.

Period of Repose.—Charters Symonds, who introduced this term, thus describes the condition:

In nearly all acute cases a stage is reached soon after the onset, marked by a cessation of all acute symptoms. The patient passes unaided by sedatives into a condition of repose. A lull takes place in the advance of the disease, or, more correctly, the relief from pain and sickness and the general sense of comfort experienced by the patient are interpreted as being signs of improvement. This period of repose, if wrongly interpreted, may lead to disaster, and if deepened by the regular administration of sedatives will almost certainly do so. It is in its early stage a period of safety, one in which operation is successful.

As illustrative of how deceptive this condition may prove, he relates the case of a girl of 20 suffering from a perforating gastric ulcer, who was at first refused admission to hospital; then the physician who saw her deemed no operation necessary; yet a few hours later, when the abdomen was distended and operation was performed, it was too late.

I have to confess that in my third case I was misled by this stage of repose; the girl, however, had received an opiate, and liver dulness was normal when I first saw her about 10 o'clock at night. The following morning her condition was such as to admit of no hesitation, but the operation then undertaken was unsuccessful. Like most of our failures, however, it taught me a very sharp lesson, one which I am never likely to forget.

To sum up, the characteristic symptoms of perforation are sudden onset, violent pain, profound shock, intense tenderness, rigidly-contracted abdominal muscles, shallow thoracic respiration, and absence of liver dulness.

This certainly appears to be a sufficiently decisive list, and the great majority of cases will admit of an accurate diagnosis; but occasionally nothing short of an exploratory in

cision will enable us to arrive at an absolutely satisfactory opinion.

Early Operation.

That a few cases of true perforating ulcers recover without surgical aid is undoubted, and I believe I have seen one instance myself. All authorities, however, put the death-rate under these circumstances at over 95 per cent. In other words, without the interference of the surgeon, they are practically hopeless.

It will be worth while, therefore, to point out the chief factors which influence success. The first, and by far the most important, is early diagnosis and early operation. Once you have suspected that your patient suffers from the symptoms of perforation, there is not a moment to be lost. There is a slight difference of opinion amongst surgeons as to whether it is better to wait till the initial shock has passed off, but the trend of opinion seems to be against delay. Such, however, is the nature of these cases and the magnitude of the operation involved, that considerable time must of necessity be lost in obtaining surgical aid and in making the necessary preparations.

The importance of early operation is conclusively demonstrated by the following figures collected by Mr. Goffe:

Hours.	Cases.	Recoveries.	Rate.
Up to 12	44	34	77 per cent.
12 to 24	21	7	33 ,,
Over 24	34	10	29·4 ,,

While these figures are all doubtless too high, being obtained from the various journals, they nevertheless furnish striking proof of the value of prompt operation, it being evident that if interference is delayed more than twelve hours the patient's chance of recovery is diminished more than half. It cannot be too clearly understood, therefore, that the lives of these patients depend on the promptness and energy of the physician who first sees the case even more than on the skill of the operating surgeon. Above all things avoid the use of morphine if possible till a final diagnosis is made and the line of treatment decided. The other points of importance to be noted previous to operation are: (1) The nature of the last meal taken; (2) the interval of time between the last meal and the occurrence of perforation; (3) the position of the patient at the time of perforation.

It is a well-known fact that the stomach contracts firmly and vigorously on indigestible food in an endeavour to force it through the pylorus, which in its turn contracts tightly to prevent the escape of the partially-digested material. Should a perforation occur under these circumstances the food is liable to be driven a considerable distance into the peritoneal cavity, and the contents of the stomach are more likely to reach the pelvic regions if perforation occurs whilst the patient is in the erect position.

In point of time perforation usually occurs about two hours after a meal. The longer this interval the more complete will be the process of digestion and the smaller the quantity of food remaining in the stomach. The danger due to extravasation will of course be proportionately diminished.

The Operation.

As I have had the good fortune to have been present at no fewer than eleven out of the thirteen cases, I think I may with advantage refer to some of the more important lessons which have impressed themselves on my mind.

1. The incision in the first instance should be a fairly small one, and the peritoneal opening as small as possible in order that the gas may escape slowly. Once all doubt as to the diagnosis has been set at rest, the wound may be rapidly enlarged to the required length by scissors.

2. The best guide to the ulcer seems to be the presence of adhesions. Having drawn gently on the stomach, you find that in some direction it is more fixed than in others. On running the finger down to this area you will generally come on a zone of induration in the midst of which the ulcer is almost certain to be found when the adhesions have been separated. Of course, cases occur in which perforation takes place so rapidly after the onset of the ulcer that there is no time for adhesions, or for induration, but they are very rare.

The bubbling up of fluid and other gastric contents is not necessarily a guide to the seat of perforation. In Professor Sinclair's last case the least pressure caused free bubbling near the pyloric end of the stomach of contents which had escaped from an ulcer near the cardiac end, and which was ultimately found concealed by adhesions to the under-surface of the left lobe of the liver.

Should a careful search fail to find the ulcer on the anterior surface, it will be necessary to open the lesser sac of peritoneum, and this can be most easily done by tearing through the layers of the great omentum, when the posterior surface can be examined. In at least two of the cases in my table it was necessary to divide the left rectus transversely in order thoroughly to expose the ulcer.

Having found the ulcer the next thing is to bring it as well out through the wound as possible; and though I have read of several cases in which this has been done with ease, my own experience has not been so fortunate. With but one exception it was not possible even to draw the ulcer up to the wound; while in one of my own cases, and in that operated on by Dr. Wheeler, the sutures had to be inserted under circumstances of the greatest difficulty. The stomach in both these instances was very firmly adherent in the region of the transverse fissure of the liver, and the operator had to work with his needle at the bottom of a deep wound.

Treatment of the Ulcer.—Surgeons do not as a rule make any attempt to excise the ulcer, as this involves considerable risk of hæmorrhage, bringing in its train delay and increased shock. Occasionally a partial excision is carried out. This was done by Dr. Campbell in his first case, and in my second patient the tissue round the perforation was so friable that it would not hold a suture, and I was obliged to remove a portion of it. Generally a continuous suture perforating all the coats of the stomach is employed to close the opening, and this in its turn is buried by a row of Lembert sutures.

Cleansing of the Peritoneal Cavity.—This may be attempted in two ways:—1. By sponging with sterilised gauze pads, which are wonderfully effectual in removing coarse material, and rapidly soak up fluid. 2. By thorough douching with boiled water or normal saline solution. Most surgeons, I think, now favour the former method, though douching still has powerful advocates. Dr. Myles speaks strongly in its favour, and says that it acted as a powerful stimulant to his old patient (70 years), who was profoundly collapsed, but at once rallied under the influence of the warm saline douche. In the 6 successful cases in my table you will see that sponging alone was employed in 4, douching alone in 1, whilst in 1 in which the gastric contents had reached the pelvis both methods were employed. Of my own cases, 3 in which I employed the douche were unsuccessful, but they were at the same time the most unfavourable of the five. Neither method will thoroughly cleanse the abdominal cavity, and were it not the peritoneum has wonderful powers of resistance and absorption we could never hope to approach these cases with any prospect of success.

Drainage.—I do not think any surgeon would now neglect to employ a drain after this operation. A gauze drain is gradually taking the place of the older method, and a strand of this material should be introduced so as to lead down to the line of suture, and one into each subphrenic space, as it is here that abscess most frequently occurs. The only point in reference to these drains is the rapidity with which they form adhesions; and for the benefit of any surgeons who may not yet have employed them, I would point out that while they are often very difficult to remove on the third or fourth day, they will, if left alone, gradually loosen themselves, and slip out without difficulty at the end of a week.

After-treatment.

The operation being completed, the dangers which still face the patient are both numerous and grave. A short reference to the most important must suffice.

Shock.—First of all comes shock, which is the commonest cause of death, and must be energetically dealt with; external warmth, elevation of the lower limbs, strychnine hypodermically, and stimulants by the rectum will all be called

for. From the outset, shock is very severe, and when we add to this the effect of a difficult and dangerous operation, it is obvious we are taxing our patient's resistance to the utmost. It is therefore of supreme importance that every effort should be made to complete the operation as rapidly as possible. In our modern zeal for thorough asepsis, I am afraid we are rather inclined to under-estimate the value of rapid surgical work. Here, however, the question of time has an intimate bearing on the prospect of success, and we cannot afford to neglect it.

Peritonitis.—Our next complication is peritonitis. It is always present to some extent. Its severity will depend on the nature of the extravasated material and the throughness with which cleansing has been carried out.

Tympanites is another very troublesome complication. It occurred in two of my cases and in one of Dr. John Campbell's. It must be promptly dealt with, and here we are face to face with a serious difficulty. A purge unfortunately is precluded by the state of the stomach. It must, therefore, be combated by turpentine enemata, use of the rectal tube, and gentle movement of the patient from one side to the other. Should these measures fail, a purge must be risked, and I gave my last case 5 grains of calomel on the third day, and in this way obtained the necessary relief.

Abscess.—Subphrenic abscess is another very fatal complication, and is commoner on the left side, extending to the splenic area. Deaths from this cause are reported by Whipple, Jones, Barker, Roughton, and others.

Empyema.—Mr. Morse records a case in which a left pleural abscess developed. This was opened and drained, and the patient recovered.

Hæmorrhage.—Mr. Barker mentions one of his cases, which made an apparently good recovery from the operation, but was suddenly seized on the tenth day with a violent attack of hæmatemesis, from which he never rallied.

Other Causes of Death.—Among the causes of death which have been recorded may be mentioned pneumonia, hepatic abscess, and rupture of a second ulcer. Intestinal obstruction was the cause of death in the case operated on by my colleague, Dr. Wheeler. The patient died on the tenth day, and the *post-mortem* notes made by Dr. Lorrain Smith are as follows:

Marked abdominal distension, the abdominal wound being torn open by the distended small intestine. Stomach was firmly adherent to the diaphragm, liver, spleen, and some loops of small intestine. On tracing the small intestine downwards, congestion and distension were well marked till a point was reached 2 ft. above the ileo-cæcal valve. Here the bowel was bent sharply back on itself, forming a V shaped bend, with the limbs of the V firmly bound together, and the apex adherent to the anterior abdominal wall, causing a complete obstruction of the gut at this point. The 2 ft. of small intestine below this, and all the large intestine was collapsed and empty. When the stomach was removed the opening was found firmly closed; the sutures were in position, and on distending the viscus with water there was no leakage whatever. On opening the stomach and examining the inner surface no trace of the ulcer could be found. The mucous membrane was perfectly healed, leaving no sign whatever of scar, ridge, or anything else to show where the ulcer had been.

This an exceedingly interesting record, demonstrating very clearly two important points:

1. How rapid and thorough is the effort at repair.

2. The great extent of the adhesions which we may expect to follow this operation.

The first point is of importance as forming a guide to the time after operation at which we may allow food freely by the mouth. In my last case the patient had sips of water after forty-eight hours, peptonised milk on the third day, tea on the fifth, and fish on the seventh day, and chop at the end of a fortnight.

The second point bears very directly on the question of the influence of adhesions on the functions of the stomach.

Adhesions.—It has been recently pointed out that adhesions are one of the causes of gastric pain. It is, however, a curious fact that patients who have been successfully operated upon are, in the majority of instances, practically free from pain and gastric trouble. This is probably explained by the fact that while slight adhesions are liable to stretch, those following operation are so extensive and firm that stretching is almost impossible.

Since the above paper was written the following case has come under my care:

Miss L. D., aged 20, had suffered for about four years from gastric disorder, her prominent symptoms being (1) Severe pains in the epigastrium, coming on about half an hour after food, relieved by lying on the left side and on the back; (2) nausea; (3) vomiting only about once a week, and this always gave relief to the pain; she never vomited any blood; (4) anæmia and constipation; her diet for more than three years was limited to milk foods, and even these caused pain.

Perforation.—On January 23rd, 1900, during a visit to a friend's house, two hours after a meal consisting of two slices of brown bread and butter and a cup of tea, while sitting in a chair, she was suddenly seized with a violent pain in the epigastrium, and felt very sick and faint, but did not vomit. She was helped home—a distance of about 200 yards—"half walking, half carried." Dr. Ledlie, who saw her almost immediately, found her in a very collapsed condition, with a rapid thready pulse. He suspected perforation, and Professor Whitla, who saw her in consultation, confirmed his opinion, and she was promptly sent to hospital, her home surroundings being unsuitable for operation.

Condition on Admission.—About 11.45 P.M. her condition was as follows: Colour fair; initial shock had passed off, and she said she felt much better; pulse 118, but small; pain over the abdomen was very slight, though there was distinct tenderness in the epigastrium just below the xiphoid; abdomen was slightly distended. Liver dulness was normal, but percussion revealed a uniform tympanitic note all over the abdomen, it being impossible to differentiate stomach or colic resonance. Respiration was shallow and thoracic.

Operation.—This was undertaken five hours after perforation. An incision was made from the xiphoid to the umbilicus. On opening the peritoneum there was an immediate escape of stomach contents with evidence of localised peritonitis. The stomach was adherent to the under-surface of the left lobe of the liver. On gently separating the adhesions, a perforation the size of a threepenny-piece was found, surrounded by a zone of induration larger than a crown-piece: this area was pale and friable, and the tissue of which it was formed failed to hold a suture. The ulcer was situated on the middle of the anterior surface of the stomach nearer the pyloric than the cardiac end. The perforation was closed by a single row of Lembert's sutures, 15 in number, and about 4½ inches long, the entire indurated area being enfolded. There was no general soiling of the peritoneum, and, the stomach area having been thoroughly sponged with gauze pads, three gauze drains were inserted, one into each subphrenic space and a third leading down to the line of suture, and the wound closed with silkworm gut. The operation lasted an hour and a-half.

After-history.—The patient suffered from troublesome vomiting for two days, which yielded to a hypodermic injection of morphine bimeconate gr. ⅓. She passed urine the day following operation (this I always regard as a very favourable sign), and her recovery was uneventful. The gauze drains were removed on the sixth day. She was fed every four hours by peptonised nutrient enemata, consisting of bovril ʒiv, whisky ʒss, alternating with peptonised milk ʒiv, 1 egg, whisky ʒss. Nutrient suppositories were also employed, and water was given by the mouth on the second day, peptonised milk in small quantities on the fourth day; on the fifth day some Brand's essence and some cocoa; on the sixth day Benger's food. After ten days rectal feeding was discontinued, and she was then able to take tea, fish, and thin bread and butter.

Three weeks after the operation she was able to be up, and could eat chicken, fish, and chop without the least discomfort for the first time for almost four years.

In this case the ulcer was on the anterior surface, and the pain was relieved by lying on the back. In my third patient the pain was greatly aggravated by lying on the back, and I rather expected to find a posterior ulcer, but the lesion was on the anterior surface. The relief of pain by any special position can therefore not be relied on to give trustworthy information as to the seat of the ulcer.

This brings the total number of cases operated on in Ulster up to 14, with 7 recoveries. My own operations amounted to 6, with 3 recoveries.

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PERFORATING GASTRIC ULCER, WITH NOTES OF TWO SUCCESSFUL CASES AFTER OPERATION.

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THERE is no department in which surgery has made such remarkable advances within recent years as in the treatment of abdominal disease, and it may safely be predicted that with increasing accuracy in diagnosis the brilliant results which have hitherto been achieved will be wholly eclipsed. Fifteen years ago a case of perforating ulcer of the stomach was regarded as almost of necessity fatal, and the physician was powerless to check the course of the disease, and only

hoped, with morphine and opium, to relieve the suffering and pain.

We may safely state that the death-rate for acute cases after operation is as nearly as possible 70 per cent., for chronic cases 55 per cent. If we bear in mind that the mortality of cases left to Nature is 95 per cent., it will be evident that a gratifying advance has been made.

Perforation takes place in about 12 per cent. of all cases of gastric ulcer. The ulcer perforates on the anterior surface in about 85 per cent. of cases, in the pylorus 10 per cent., in the posterior surface only in 2 per cent., for reasons which are perfectly obvious and well-known to you all. Perforation is more common in females than in males, in the proportion of 70 to 30, but the actual proportion of perforation cases is greater in males.

There are no special signs whereby we may arrive at the diagnosis of perforation. The symptoms are simply those of a "sudden peritoneal injury with rapidly appearing peritonitis." Very often, indeed, the condition has only been ascertained after opening the abdomen. The past history of the patient may help us. Where the classical symptoms of ulcer—pain after food, vomiting, hæmatemesis—have been in evidence, followed by sudden acute pain in the abdomen the diagnosis may be easy, but in the cases which have come under my observation these have been conspicuous by their absence. In one case we had the history of dyspepsia, in the other merely a sense of discomfort after food. Yet, notwithstanding this, we had unmistakable evidence at the operation that a grave lesion of the stomach had been in existence for some time. The ulcers were not of the acute type, simply punched-out holes with extravasation in the immediate vicinity. The first thing to note is that a grave lesion of the stomach may exist, without definite symptoms pointing to it.

The situation of the pain deserves careful notice. The position of greatest intensity does not help us—on the contrary, it may and often does lead us astray. In the first case the point of greatest intensity was over the iliac region, in the neighbourhood of McBurney's spot, suggesting at once the possibility of perforating appendicitis. This delusive symptom has been noted in many cases, and the explanation suggested has been this, that in perforations near the pylorus escaped fluids from the stomach fall naturally by gravitation into the iliac region, and there set up irritation. This may be so in some cases, but I well remember the case of a barmaid under my care suffering from peritonitis, secondary to an ulcer on the posterior wall of the stomach, without extravasation of the stomach contents, in which the predominant symptom was pain in the right iliac region. So marked was this that after consultation it was decided to explore this region, and the appendix being much swollen and inflamed it was deemed advisable to remove it, but the true lesion was not discovered, as the patient became so collapsed that she died on the operating table before complete exploration of the abdomen could be performed.

With regard to the operation for perforating ulcer I will simply state that it may be easy or may be very difficult, requiring great care and patience to render the holes water-tight. The openings in the anterior wall are generally fairly easy to close with a little ingenuity, but the openings in the posterior wall, which fortunately so rarely occur, often present very serious difficulties, as is readily appreciated when one considers the anatomy of the parts concerned. Absolute cleanliness is the keynote of success. One of my cases got well without interruption; the other developed a subphrenic abscess.

We may have three kinds of abscesses in connection with an ulcer of the stomach, two within the peritoneal cavity and one outside it: (1) in front and (2) behind the gastro-hepatic omentum, and (3) retroperitoneal.

In Case 1 we had to deal with the second variety. Cases have been recorded of retrogastric and perisplenic abscess in connection with perforations on the anterior surface. This condition may be explained in two ways—septic material may have been absorbed and transferred by the lymphatics, or some of the contents of the stomach may have found their way through the foramen of Winslow into the lesser peritoneal cavity, travelling over the lower border of the lesser omentum. The practical question is how to prevent this most serious complication. Clearly it seems to be by cleaning out the lesser bag in all cases of perforation.

Case I.—E. C., aged 19, a shop assistant, was admitted into the Cardiff Infirmary on December 16th, 1898. He stated that he had been suddenly seized with pain in the right side of the abdomen at 9 P.M. on December 15th. The pain was paroxysmal in character. He vomited soon after the pain came on and several times during the night. In his past history there was no special feature to note. For nine months he had experienced an uncomfortable feeling in his stomach one or two hours after food. He had never had any pain after food, and there had been no vomiting of food or blood. He had been feeling ill and very irritable for some time before his attack.

On admission the abdomen was found to be very tense and resistant to pressure. Pain was complained of in the epigastric and right and left hypochondriac regions. On pressure there seemed to be greater tenderness in the right lumbar and iliac regions than elsewhere. The pulse was good, its rate was 112; the tongue was slightly furred and dry.

I had seen the case in consultation with Dr. Fiddian, and our diagnosis was probably a perforating ulcer of stomach. As the result of consultation in hospital, it was decided to explore the iliac region first, in order to ascertain the condition of the appendix. The usual operation for appendicectomy was performed, and the appendix found normal. An incision was then made between the sternum and the umbilicus, the stomach exposed, and a small perforation found in the anterior wall, close to the pylorus. The perforation was closed without much difficulty with silk sutures. The abdomen was then thoroughly flushed with hot water, the opening in the iliac region facilitating this very greatly, and then sponged. The wounds in the abdominal wall were sutured with silkworm gut.

In the after-history of the case there was no special feature to note except the temperature. There was no pain of any kind or vomiting. The temperature did not become perfectly normal during the whole of his stay in hospital, the evening temperature being generally a little above 99° F. for a fortnight. On January 1st, 1899, it went up to 100.4°, and the patient was put back on to milk diet; on January 7th and 8th it was up to 101°, and remained at this level till the 13th.

From January 15th to the 22nd the temperature was normal, and after this there was a very slight evening rise to 99° till he left the hospital on February 1st. He was discharged because of an outbreak of erysipelas, which rendered it necessary to clear out the ward.

He was readmitted into the hospital under the care of Dr. Fred. Evans on March 31st, 1899, at the request of Dr. Fiddian some two months after his discharge. He stated that in the interval he had continued in much the same condition as when he was first discharged, although well looked after at home he did not get stronger, but there were no special symptoms. His doctor called to see him occasionally. About March 10th a temperature chart was started, and then it was found that his evening temperature was generally over 100°F. Towards the close of March he had pains in various parts of his body and in the right shoulder, and he used to feel cold and shivery at times. On the day of his readmission into hospital, March 31st, his temperature mounted to 103°F., and he began to feel sick and inclined to vomit, and his doctor therefore ordered him into the hospital.

On admission he had a temperature of 104°F., pulse-rate 132, and a respiration rate of 32. He felt very ill. There was definite pain and tenderness in the epigastric and right hypochondriac regions, but no visible swelling or redness. At 7 P.M the same day he started vomiting a large quantity of foul-smelling purulent material, and then coughed up a considerable quantity of the same. His temperature went down to 102°, and at 8.30 P.M. he said he felt much better.

On April 1st he was much better, and his temperature was normal. On examination of his chest it was found that expansion was not so good at the right base as at the left; the vocal fremitus was diminished on the right back from about the fourth to the sixth ribs, and below this it was absent. On percussion there was considerable dulness from the fifth rib to the base; the breath sounds were very feeble from the fourth to the sixth ribs, and below this absent. No dulness was to be seen or felt in the abdomen, at the seat of pain in the right hypochondriac region, and the pain and tenderness disappeared after he started coughing on April 31st. Dr. Evans explored the right base with a needle, and drew off some blood-stained fluid which contained pus cells.

The patient continued to cough up some purulent material, the quantity per diem gradually diminishing, and the chest condition improved so that on April 15th there was no dulness on right side, the breathing was vesicular, the vocal fremitus and resonance equal on the two sides, the expansion equal on the two sides. No tubercle bacilli were found in the sputum. He was discharged apparently well on July 30th, and was sent to a sanatorium at Weston-super-Mare.

Case II.—S. I., aged 27, was admitted into the infirmary on June 22nd, 1899, at 11.30 P.M. He stated that he had been out of sorts for some months, and that he had suffered from pain after food, and loss of appetite. There was no history of hæmatemesis or of vomiting. About 7 P.M on the night of admission he was seized with a sudden severe pain in the upper part of the abdomen, which made him writhe in agony. This pain was paroxysmal in character, the attacks coming on every one or two minutes. He was seen by a medical man, Dr. Girvan, who diagnosed perforating gastric ulcer, and advised his immediate removal to hospital.

On admission he was pale, with an anxious expression of face, and was evidently in great pain. His abdomen was very tense and rigid, and on palpation tenderness was very marked all over it, and especially in the upper regions. The limbs were not drawn up. The pulse was of about normal character. There was no pyrexia and no increase in the respiration rate. His general condition was so good that I decided to wait a little. Morphine, gr. $\frac{1}{3}$, was given hypodermically, and shortly after the pain subsided and the patient slept. All food and liquids were stopped. On the next morning (June 23rd) the patient complained but very little, yet he had some abdominal pain. His general condition was excellent. Two enemata had been given without effect. About midday the pain became more severe, and it seemed to be more marked in the region of the appendix than elsewhere. In the evening the pains became still worse, and the anxious expression returned, his general condition, however, being still good.

At 7.30 P.M., twenty-four hours after the first attack of severe pain, the abdomen was opened between the sternum and umbilicus, and on exposing the stomach, a small perforation was found in the anterior wall near

the pylorus, with a few flakes of yellow lymph around the aperture. The wall of the stomach in the immediate vicinity of the ulcer was greatly thickened. No escape of any liquid or solid contents was observed, but a considerable quantity of gas escaped through the hole from time to time. Owing to the thickening of the stomach wall it was difficult to close the opening by the ordinary Lembert suture. In order to seal the hole effectively a tuck of the stomach was made. The abdominal cavity was then thoroughly douched with hot water and carefully sponged. The parietal wound was sutured with silkworm gut. The condition of the patient on removal from the operating theatre was most satisfactory, and there was very little collapse and a very fair pulse.

On June 27th it was noted that the patient had done very well since the operation. Nutrient enemata had been administered, and by mouth only water and lemon water. He had had sundry injections of morphine for the pain which he referred chiefly to the upper part of the abdomen. He had a fair pulse and fair colour, although looking very thin.

On July 5th the wound was dressed for the first time since operation. The cutaneous wound was for the most part healed. Some stitch abscesses had formed, giving rise to a considerable amount of offensive discharge. The stitches were all removed and the area cleared up. The patient had complained of no local pain.

The temperature on the evening of July 26th went up to 99.8°, on the 27th to 101°, becoming normal again on the 28th, and remaining so.

On July 5th extras such as chicken and broth were added to his diet. He had not vomited since the operation, he had a keen desire for food, was stouter, and looked much better.

On July 10th he was able to sit up.

On July 17th he left the hospital, after having been up for a few days, cured.

GASTRO-JEJUNOSTOMY FOR GASTRIC ULCER.*

BY W. JONES GREER, F.R.C.S., D.P.H.IREL.
Newport (Mon.)

A LADY, aged 28, had suffered for nearly ten years from the symptoms of gastric ulcer. Nausea was almost constant; vomiting was frequent; pain, more or less severe, was of daily occurrence, irrespective of the presence or absence of food in the stomach. Occasional profuse hæmatemesis had, as the patient herself expressed it, more than once called on her to contemplate the crossing of the "melancholy flood." Her weight, which had been 126 lbs., had diminished to 84 lbs., and her appearance, when I saw her first about the middle of September, 1899, was that of a profoundly anæmic, ill-nourished chronic invalid. That she had received the very best advice was shown by her bundle of prescriptions and diet charts. It would be very unfair to suggest that the remedies prescribed were of no avail; many of them gave prompt relief for a time; but, unfortunately the good effect soon became exhausted; the mixture which gave her most relief, and which, though not entirely annulling the pain, brought it within the margin of endurance, was one of sodium bicarbonate, bismuth carbonate, and morphine. The invaluable aid of scientific dietetics was invoked with considerable temporary success in the private wards of two well-known hospitals, where, also, rectal feeding was given a sustained trial; this careful treatment, though signally beneficial at the time, failed to effect more than a transient amelioration of the symptoms. Not that she was careless or indiscreet in her dietary, her experience undoubtedly controlled that; whilst at the same time she was nearly always under observation by some medical man.

A careful examination revealed nothing more than considerable tenderness over the epigastrium and probably a somewhat dilated stomach. An attack of acute rheumatism some five years earlier had left at the apex a soft murmur, which was conducted towards the angle of the scapula.

A consideration of this history led me to think that I was not likely to attain much success with drug or dietetic treatment. I expressed this opinion, and also suggested that possibly an operation might be of some benefit. The patient eagerly accepted the suggestion, and I fully explained the gravity of the proposal, pointing out the more than ordinary risks which her wretched physical condition would demand her to take. She replied to this by saying that, if I had the courage to operate on her, she would gladly take the risk, however great, as she could not long exist in such misery, a burden to herself and her friends. Operation was accordingly decided on.

I thought it well first to make an effort to improve the general health, and I sent her to Weston for a fortnight; but unfortunately during this time she had another severe attack of vomiting and hæmatemesis, and she returned home as bad as, if not worse than, when she left. This was not encouraging, and my first impulse was to decline to operate; but, on reflection, I came to the conclusion that if she was to be operated on at all it ought to be done without delay, as, in her rapidly degenerating state of health, what was boldness now, in a month's time would be rashness, and that if the proceeding could be conducted with rapidity the case might be guided to a successful issue. Doyen's[1] classical indications for gastro-jejunostomy in non-cancerous affections were surely fulfilled in this case—"*la gravité du cas*" was obvious and "*l'inefficacité de tout moyen médical*" was proved.

Operation.

This was performed in the patient's home on October 10th, 1899. She was prepared in the usual way; the field of operation was treated, in addition to ordinary cleanliness, by scrubbing with germicidal soap and brushing with biniodide of mercury in methylated spirit, 1 in 500. This was done the day previous to the morning of, and just before, the operation; after each dressing a sterile compress moistened with chinosol, 1 in 1,000, was applied. Dr. S. Hamilton administered chloroform with Krohne's apparatus, and I had also the advantage of the expert assistance of Mr. W. J. Corrigan. The instruments, dressings, etc., were sterilised by steam, and our hands were carefully cleansed and treated by the permanganate, oxalic, and lime-water process. An incision in the median line about 4 inches in length, reaching to within almost an inch of the umbilicus, was made, and the stomach brought out; it was found to be greatly dilated, and the pylorus thickened for 3 or 4 inches in the direction of the stomach. This thickening was irregular, and confined mostly to the anterior surface, probably a large ulcer; there were no adhesions, but several darkened spots were seen on the anterior surface, possibly more ulcers; at this stage the patient, who had taken the chloroform rather badly, exhibited alarming symptoms of cardiac failure, but restorative measures rallied her a little. I had intended to make the junction of small intestine and stomach with Laplace's forceps, tearing the compression action of Murphy's button in so anæmic a patient, but the desperate condition demanded a hasty termination of the operation, so a medium-sized Murphy's button, $\frac{15}{16}$ inch, was used; the stomach and colon with omentum being turned up, an incision was made through the posterior layer of transverse mesocolon: the posterior wall of the stomach, practically the antrum of the pylorus, was pulled through, an opening made, the female end of the button inserted, and the purse-string suture, which did not pass through all the coats, tightened. This opening was somewhat nearer to the great curvature than to the axis of the stomach. A portion of the jejunum, about 8 inches from the ligament of Treitz, was sought, opened, and the male end of the button fixed; the two halves of the button were then brought together, care being taken not to press them home too tightly. The abdominal wound was united with silkworm gut, and a sterile dressing applied. The whole proceeding occupied just under twenty five minutes, and at least five minutes were taken up in efforts to rally the patient.

After-Course.

The highest temperature during the first thirteen days was under 100° F. The bowels acted on the seventh day in response to mercury subchloride ½ gr. Within the first twenty-four hours the patient vomited in all about a pint of green fluid. This ceased until the twenty-fourth day, when she again vomited some green fluid; since then it has not recurred. The stitches were removed on the thirteenth day, when the wound was found to be soundly healed.

On the evening of the fourteenth day the temperature was 101.2°, owing to femoral thrombosis, which followed the normal and painful course. Possibly nothing I have said with regard to the anæmic condition of the patient will as clearly demonstrate the gravity of the cachexia as this single sign, phlegmasia dolens. The button passed on the seventeenth day.

The patient was fed during the first eight days by meat suppositories and enemata, consisting of brandy, peptonised milk, and bovinine. Soon after the operation teaspoonfuls of hot water were permitted by the mouth to allay the thirst, but this was chiefly combated by the administration by the rectum of about a pint of warm water once or twice in the twenty-four hours. On the third day peptonised milk and bovinine in small quantities were allowed by the mouth: in about ten days she was taking beef-tea, milk puddings, and eggs, stewed apples; and on the twentieth day she took some minced chicken and breadcrumb. On the twenty-seventh day she left her bed room, and on this day she had a dinner consisting of chicken and bread, with stewed apples and a little cream, a combination which she had been unable to touch for more than four years. All the pain, sickness, and discomfort have gone, she is gaining flesh rapidly, and altogether has the appearance of returning to robust health.

It will be noticed that in the earlier history of the case there is no mention of the use of the stomach tube. I ought to have said that that some years ago the tube was used once, but it made the patient so ill that she declined to have it passed again.

In recommending a severe surgical proceedure for chronic gastric ulcer, one has to consider that the large majority,[2] 85 per cent., heal under ordinary treatment, so that the indications for operation must be clear and imperative—I had almost said "as they were in this case," but, if I had a choice, I should much prefer to operate earlier, when the chances of success were more favourable. Without doubt, too prolonged medical treatment is not advisable, as it is well not to overlook that "Brinton, Dittrich," and others, to quote Doyen,

* Read before the South Wales and Monmouthshire Branch of the British Medical Association at Swansea.

have demonstrated the frequency of the cancerous transformation of a simple ulcer." Again, quoting Debove, he gives the mortality of ulcer of the stomach treated medically as 50 per cent., and thinks this is actually below the mark in view of this subsequent malignant degeneration. It may be asked, How can an operation of this character, which does not actually attack the disease itself, cure, or much less, prevent serious sequelæ? The contention is that after gastrojejunostomy the stomach rapidly empties itself, and food is not retained to irritate the ulcer—that is, rest is permitted. If there is also dilatation, due to spasm, or the presence of an ulcer near the pylorus, then the unobstructed escape of the gastric contents favours a return of the stomach to its normal state.

The general mortality of this procedure is given by Greig Smith[3] and others as about 30 per cent., but this includes operations for malignant disease; for non-cancerous affections the outlook is much more pleasing, Doyen's brilliant record and the 10 cases from the Breslau clinic[4] without a death, the 28 cases from the Heidelberg clinic[5] with 4 deaths, as well as the later statistics of Carle,[6] giving 23 consecutive cases without a death—all present this grave operation in a favourable light.

As to which position is best—the Wölfler as against the Courvoisier or von Hacker—my experience is altogether too limited to express an opinion, save this: that I am so satisfied with the von Hacker position in this case that I should adopt it again if local circumstances would permit.

It is a very great satisfaction to me to be able to state that in the four months since the operation the patient has gained 27 lbs. in weight.

References.

[1] *Traitement Chirurgical des Affections de l'Estomac.* [2] British Medical Journal, 1894, and *Medical Annual*, 1896. [3] *Abdominal Surgery.* [4] Editorial, *Annals of Surgery*, August 1898, and *Beiträge zur klinischen Chirurgie*, Band xx, Hefte 1 und 2 [5] *Annals of Surgery*, June, 1899, and *Beiträge zur klinischen Chirurgie.* [6] *Medical Annual*, 1899.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

DIPHTHERIA: PARTURITION: RETAINED MEMBRANES: INFLUENZA: DIPHTHERIA IN THE INFANT: RECOVERY.

M. G., wife of an employee, aged 33, and advanced in pregnancy, was found to be suffering on December 18th from a sore throat of a suspicious nature with nasal discharge. She was isolated, and her condition closely watched. On December 19th the patient was no better, and a slight membrane had appeared on the right tonsil. There was no pyrexia and no enlargement of the glands of the neck. The pulse-rate was slightly accelerated. A bacteriological examination showed the presence of the Klebs-Loeffler bacillus, and accordingly a dose of 1,500 units of diphtheria antitoxic serum was administered on December 22nd.

On December 21st a full-term infant was born. Parturition was complicated by adherent chorion, which required digital removal from the uterus. The throat condition improved greatly after the antitoxin, which evidently loosened some membranous matter present in the trachea and hitherto unsuspected, as after this a considerable quantity was coughed up. The patient progressed favourably with the exception of a slight rise of temperature to 100.4° F. on December 23rd, and a rise of 101.4° on December 29th, the latter being due to constipation.

Epidemic influenza was prevalent at this time, and on January 3rd she developed a severe attack of the myalgic type with an alarming rise of temperature to 105° F. On January 4th the temperature was 104°, and on the 5th returned to normal. There was an entire absence of symptoms pointing to pelvic trouble at this time. The patient has now quite recovered, and with the exception of slight nasal regurgitation no paralytic symptoms manifested themselves. The case is of interest owing to the association of confinement with diphtheria and influenza.

Every precaution was adopted with regard to the child, but when 4 days old it was noticed to have slight difficulty in nasal breathing. When 5 days old a distinct patch of membrane was seen on the right tonsil, and a dose of 350 units of antitoxin was injected subcutaneously. The following day there was little improvement, and a dose of 1,000 units was given. The child made an uninterrupted recovery, and was in no way harmed by the large dose of serum.

The writer has not seen a case recorded in which so large a dose has been given at so early an age.

R. H. Steen, M.D.Lond.,
Assistant Medical Officer, West Sussex County Asylum, Chichester.

RETENTION OF THE PLACENTA FOR NINE DAYS: RECOVERY.

During one of my missionary tours this winter I came across the following remarkable case: When I reached the village of Lyngkyrdem (Khasi Hills, Assam) on November 15th, 1899, a message was brought to me from another village called Nongshken (distant about eighteen miles), asking me to go there to assist a woman who had been delivered of a child some days before, but the placenta was still retained. It was impossible to proceed further that night, the mountain path being so difficult to travel in the dark that none of the natives would accompany me. Starting early in the morning I reached the place after midday, and found a woman about 20 years of age in a most deplorable condition. This was her second child, and it had been born nine days before my arrival, or, as her friends put it, nine nights had intervened between the birth of the child and my arrival. The child was alive and strong, having been fed chiefly upon plantain, but had also occasionally been put to the breast. There was no bed in the house, and the patient was lying upon a small mat on the floor, which latter was composed of split bamboos elevated 3 or 4 feet above the ground, and her surroundings were more insanitary than anyone not knowing the Khasi hills can imagine. The perineum had been torn to within half an inch of the margin of the anus; the cord had been torn from the placenta by their rude efforts at extraction. Her temperature was 102° F. The smell from the patient and her surroundings was almost unbearable. My compounder administering chloroform, I introduced the whole hand into the uterus and extracted a placenta in an advanced state of decomposition. Then I gave her a douche of sol. hydrarg. perchlor., 1 in 1,000, and administered ergot and quinine. I remained in the village about four days, continuing the douches twice a day and also the quinine and ergot. The village is very malarious, and the patient, like more than half the inhabitants, had a spleen reaching nearly to the middle line; that was the reason for giving her quinine. The only way I could give her the douche was by bringing the body to the edge of the small mat and allowing the discharge, etc., to run to the ground through the split bamboo flooring. Afterwards the temperature reached 103°, and then subsided gradually, and she made a good recovery. When leaving I instructed the teacher of the village how to continue the injections for a few days longer. Three weeks after I saw her again, and found her out of danger, her temperature normal, her appetite returned; she was also able to sit up and walk about the house and to nurse the child.

Griffith Griffiths, M.B. and C.M.Glasg.,
Welsh Calvinistic Methodist Foreign Mission.
Laitlyngkot, Shillong.

A CASE OF COMPLETE INERTIA AND PROLAPSUS UTERI.

In the evening of December 27th I was called to a primipara, aged 20. The midwife who sent for me stated that one child was born, but there was another child, dead, which she was unable to deliver.

On examining the patient I found a firm fleshy pyriform mass of a dark claret colour, and about the size of a fœtal head, projecting from the vulva. To the exact apex of this mass about one-fifth of the maternal surface of the placenta was still adherent. On digital examination the finger passed at once into a *cul-de-sac* formed by the stretched and inverted vaginal walls. No uterus could be felt through the abdominal wall. The tumour did not harden on taxis. Despite the fact

that hæmorrhage had not been excessive the patient was very much collapsed, the face was cadaverous, the lips bloodless, the pulse rapid and hardly perceptible, the breathing quick and shallow, and the extremities cold.

Having detached the placenta and bathed the uterus with hot boiled water, I returned the mass without any difficulty by squeezing it well with both hands, and, at the same time, exerting steady upward pressure in the direction of the pelvic axis, following up the uterus with my closed fist until its normal position was reached, and the inversion quite rectified.

I then administered sterilised ergot and brandy subcutaneously, and slowly injected a quart of hot saline solution by the rectum. The patient was also surrounded with hot bottles. Under this treatment her condition quickly improved, the pulse became markedly stronger, perspiration broke out on the skin, and the extremities became warm, the patient expressing her relief.

The puerperium was comparatively uneventful. The lochia became slightly offensive, and the temperature rose to 101° on the second day, but an intrauterine injection of one-half per cent. lysol solution put all right again.

This accident is extremely rare. It only occurred once in 190,800 deliveries at the Rotunda Hospital, Dublin (Playfair). In the clinic of Braun and Spaeth no complete case was observed in 250,000 births (Lusk). The case-mortality is about 42 per cent. (Crosse). The condition has been ascribed to traction on the cord, either by the midwife or as a result of the funis being twisted round the child's neck. Insertion of the placenta exactly at the fundus is considered to predispose to the accident.

In this case the patient had been intensely anæmic for a long time before delivery; there had been "some trouble with the afterbirth," and the midwife had "pulled the cord a little." The cord was not twisted round the child's neck.

Fakenham, Norfolk. F. L. POCHIN, M.B., C.M.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ANCOATS HOSPITAL, MANCHESTER.

UNILATERAL FACIAL PARALYSIS FOR EMOTIONAL BUT NOT FOR VOLUNTARY MOVEMENTS.

By R. T. WILLIAMSON, M.D.Lond., M.R.C.P., Physician to the Hospital.

THE following are the notes of a cerebral case in which there was marked paralysis of the left side of the face on emotional movements (smiling); but scarcely any difference of the two sides of the face could be noticed on voluntary movements, as when the patient showed her teeth.

E. N., aged 41, was admitted under my care on November 18th, 1899, suffering from chronic Bright's disease. There was slight œdema of the feet, and of the face just below the eyes. The urine was acid, specific gravity 1008; it was loaded with albumen (6 per 1000 Esbach's albuminometer). The cardiac dulness extended on the left side to the nipple line; the second aortic sound was accentuated. The pulse tension was a little increased. Ophthalmoscopic examination revealed a few white patches of albuminuric retinitis.

The œdema rapidly disappeared and the patient improved; but on January 2nd, 1900, after great mental excitement, she suddenly became hemiplegic on the left side. This occurred about midday. There was no loss of consciousness.

When seen on January 3rd she complained of severe headache. The pulse was slow and bounding, and the tension much increased. The left leg was completely paralysed, the left arm partially paralysed (she could flex at the elbow and wrist slightly), the tongue was protruded straight. When asked to show the teeth she was able to do so quite well. There was no definite facial paralysis; but possibly the nasolabial fold was not quite so marked on the left side as on the right. She was able to close the eyes tightly, and when told to show the teeth at the same time the nasolabial fold was distinct on each side, and there was scarcely any difference in the facial wrinkles on the two sides; those on the left side were, however, just a little less distinct than those of the right. But on smiling, the difference of the two sides of the face was very well marked. When asked some absurd question she smiled only on the right side of the face; the right naso-labial fold was well marked, and the right angle of the mouth was retracted well, whilst there was scarcely any movement on the left side of the face. There was thus paralysis of the left side of the face for emotional movements, whilst both sides moved well on voluntary action. There was hemianæsthesia to tactile and painful impressions, as well as to heat and cold, on the left side (face, arm, trunk, and leg). There was no hemianopsia.

On January 5th the left leg could be flexed at the hip and knee, and the fingers of the left hand could be moved. The knee-jerks were increased, and there was a slight but not sustained, ankle clonus on the left side. The condition of the face was the same as on January 3rd. The voluntary movements were equal on the two sides when she was told to show the teeth; but on smiling the left side of the face was motionless, whilst on the right side the nasolabial fold became very well marked, and the angle of the mouth was well retracted and elevated.

The patient left the hospital a few days later, and when seen three weeks afterwards the facial symptoms just described had entirely disappeared, and the paralysis of the arm and leg was much less.

REMARKS.—From the sudden onset of the hemiplegia following great mental excitement, from the high tension and bounding character of the pulse, and the presence of chronic Bright's disease, there can be little doubt that the lesion was a cerebral hæmorrhage. From the fact that consciousness was not lost, probably the hæmorrhage was a small one. The hemianæsthesia, and the greater affection of the leg than the arm, indicated that the lesion had involved, directly or indirectly, the posterior part of the posterior half of the internal capsule. The optic thalamus is adjacent to this part of the internal capsule, and would be very liable to be involved. The case is of interest on account of the peculiar facial affection—paralysis of the left side of the face for emotional but not for voluntary movements. In the common forms of hemiplegia, in which the optic thalamus is not involved, when the face is affected, there is usually unilateral paralysis for voluntary but not for emotional movements. In such cases, when the patient smiles both sides of the face move well. Nothnagel[1] has shown, by clinical and pathological records, that in lesions of the optic thalamus there may be paralysis of one side of the face for emotional movements, such as smiling, but not for voluntary movements. This is the condition met with in the case just recorded, and there is also distinct evidence from the other symptoms that the lesion was in the neighbourhood of the optic thalamus.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

T. BRYANT, M.Ch., F.R.C.S., President, in the Chair.

Thursday, March 1st, 1900.

ANNUAL GENERAL MEETING.

THE Report of Council stated that there had been a net gain of 16 Fellows during the year. The following reports had been received:

Suspended Animation.

The Committee on Suspended Animation had presented an interim report. The Committee determined at their first meeting to limit their investigations to the best means of resuscitation of suspended animation in the drowned, and agreed in the first instance to ask Drs. Bowles and Silvester to attend the Committee and to state their views. Dr. Bowles and Dr. Silvester accordingly met the Committee and stated their views, which were given in epitome. The Committee determined to perform a series of experiments to ascertain the relative amount of air which could be introduced with the

[1] *Zeitschrift f. klin. Med.*, Bd. xvi, H. 5 and 6.

body in the prone and supine positions respectively. The Committee were, however, after numerous experiments, obliged reluctantly to come to the conclusion that there was no way in which the desired information could be obtained except by performing a series of experiments on the living subject under the influence of an anæsthetic, a mode of investigation to which they did not feel they would be justified in resorting. Until exact experiment could be carried out the Committee were of opinion that the instructions which had been hitherto issued with the sanction of the Society for the treatment of the apparently drowned should remain unaltered. At a meeting of the Council specially summoned to consider this report it was unanimously decided to request the Committee to continue its investigations.

Climates and Baths of the United Kingdom.

During the past year the Climatological Committee had received reports from Dr. Murrell on the east coast, from Dr. Leech on North Wales, and from Dr. J. W. Moore on the eastern, southern, and western portions of Ireland. Only three reports were now outstanding, and as progress had already been made with each of these, it was probable that before the end of the present year the work of the Committee would be brought to a conclusion.

PRESIDENT'S ADDRESS.

According to the custom of the Society, the address of the retiring president mainly consisted of biographical notices of the Fellows who had died during the year. Among others to whom sympathetic allusion was made were Sir William Roberts, Mr. Lawson Tait, Sir William Flower, Dr. Reginald Southey, Captain Hughes, and Sir James Paget.

Votes of thanks to the retiring President, Mr. Thomas Bryant, and to the retiring Vice-Presidents and members of Council, were adopted, and acknowledged by the PRESIDENT and Mr. REGINALD HARRISON.

Dr. PAVY then took the chair and thanked the Society for electing him to the office of President, an honour any member of the profession might be deeply proud to receive.

PATHOLOGICAL SOCIETY OF LONDON.*

A. PEARCE GOULD, F.R.C.S., Vice-President, in the Chair.

Tuesday, March 6th, 1900.

THE PATHOLOGY OF DIABETIC COMA.

DR. GRUBE discussed the various theories which had been advanced in explanation of the above condition. Amongst others, that of acetone poisoning had engaged much attention. He observed, however, in regard to this, that acetone was poisonous only in very large doses, and that the symptoms resulting were not those of diabetic coma. He had performed twelve experiments upon cats by injecting intravenously beta amido-butyric acid in aqueous solution. Narcosis followed; the pupils first dilated, then contracted; the respiratory movements became slowed and shallow; the blood pressure was increased. In the urine sugar was in many cases present, but to this the author attached no significance, as such a result arose in cats from various operative procedures. Di-acetic acid was present; and in some, acetone. He concluded that the substance with which he had experimented was one of those concerned in producing diabetic coma.

THE EXCRETION OF NITROGEN IN RHEUMATOID ARTHRITIS.

Dr. BAIN described a typical case occurring in a young man in which he made a quantitative examination of the urine for seven consecutive days, the patient being on a fixed diet. The average daily amounts of the constituents estimated were as follows: Urea, 18.856 grams; uric acid, 0.266 gram; P_2O_5, 0.986 gram; alloxur bases, 0.033 gram; ammonia, 0.397 gram. Lactic acid was not detected. It will be observed that there was a diminution in the excretion of uric acid and phosphates.

DEMONSTRATIONS.

The following demonstrations were given: The influence of drugs on the pulmonary circulation and the bronchial muscles: the production of asthma, by Drs. T. G. BRODIE and DIXON. The action of antitoxin on the spleen, by Dr. T. G. BRODIE. The production of glycosuria by exalted respiration, by Dr. F. W. PAVY. Phlorizin glycosuria in an artificially perfused kidney, by Drs. F. W. PAVY, T. G. BRODIE, and Mr. SIAU. The arrangements of fibres in the rootlets of the ninth, tenth, eleventh cranial nerves, by Dr. CADMAN.

*The meeting was held in the Conjoint Laboratories, Victoria Embankment.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, February 7th, 1900.

JAMES DUNSMURE, M.D., F.R.C.S.E., Vice-President, in the Chair.

PATIENTS.

DR. ALEXANDER BRUCE showed a man of 33 suffering from insular sclerosis, with a remarkable condition of adductor clonus, which began two years ago in the right arm and leg. This disappeared, but later the left arm was implicated, still later the right arm again, and subsequently the legs. The deep reflexes were exaggerated. When the patient sat in a chair and planted his toes on the ground a regular adductor clonus ensued, alternating with an extensor clonus, and lasting five or more minutes. A great many cases of exaggerated reflexes had been seen of late in hospital and private practice, and Dr. Bruce thought that the increased number of cases of disseminated scleroses was due to influenza.—Mr. C. W. CATHCART showed a boy of 15 after excision of the cæcum for tuberculous ulceration and contraction, where symptoms of intestinal obstruction had existed for about six months.—Dr. NORMAN WALKER showed a young woman aged 20 with an ulcer on the left forearm, without tuberculous or syphilitic history or signs. The case was one for diagnosis.

SPECIMENS.

Mr. F. M. CAIRD showed two preparations illustrating syphilitic necrosis, both from the alveolar margin of the upper jaw; also a sequestrum of the whole calvarium removed *post mortem* from a woman aged 22, the subject of congenital syphilis.—Mr. DAVID WALLACE showed a case of fracture of the radius higher than the usual site of Colles's fracture.

INSTRUMENT.

Mr. J. M. COTTERILL showed a simplified form of trephine in two pieces.

DEMONSTRATION.

Mr. CATHCART showed a suggested plan for using gauze dressing rolled up into balls, avoiding exposure to the atmosphere of any except those about to be used.

PAPERS.

A short note on a case of ligature for femoral aneurysm (with patient) was read by Mr. F. M. CAIRD. The patient was a man of 74, who suffered in October, 1897, from a right-sided ruptured femoral aneurysm. The thigh was greatly swollen, cold, and without pulsation. The tibial arteries, too, were without pulsation. The history was that the patient had suffered for some months from pulsating swellings in both inguinal regions. In the early part of August the right aneurysm had increased in size and then burst; it was ligatured at his own home. Bronchitis and retention of urine followed, yet the patient made a good recovery.—Mr. DAVID WALLACE read a short note on hæmaturia due to bilharzia hæmatobia. The disease was so frequent in men from the Cape to Cairo that a flow of bloody urine was not taken much notice of. The disease might be contracted from drinking impure water or bathing in impure water. He had seen three cases in young men in the city of Edinburgh. One was a man who went to Colesberg five years ago, drank and bathed in doubtful water, had hæmaturia, priapism, and seminal emissions. The second was 21 years of age, was born in South Africa, and had had hæmaturia for eight years. The third was a medical student from Newcastle, Natal, who passed blood at the end of micturition. The ova were generally entangled in the blood clot. Salol seemed to do good in these cases.—Dr. W. W. IRELAND read a paper on the increase of nervous diseases and insanity. He referred to Erb's last publication on the causes of the increase of insanity—greater anxiety, hurry, mental toil, overwork at school, strain of study for the learned professions, exciting amusements, stimulating diet, etc. While the stress and strain of life were felt most severely by the middle classes, they had to-day many compensations. Drunkenness, he believed, was

less among all classes. All lived more secure lives than their fathers did. In the middle and upper classes the strain on the nervous system was increasing, and breakdowns might be expected. Dr. Ireland had sent three questions to a large number of medical men. These were: (1) Have you found since you began to practise medicine that there has been any increase in the relative frequency of diseases of the nervous system? (2) Have new forms come into prominence? (3) Have you observed any change in the type of old diseases? Many interesting replies had been received. Among those who had long practised in one district the general feeling seemed to be that diseases of the nervous system had not increased relatively to other diseases. On the other hand, men practising in large town centres seemed to think that there had been during the last twenty years an increase in the "lighter" forms, especially in neurasthenia. Few had noted a change of type. Dr. Byrom Bramwell and Dr. Bruce thought that there had been an increase in some of the functional neuroses, and that disseminated scleroses had become more frequent, and that this was probably due in many cases to influenza. Dr. Ireland thought that monotonous work with severe and unremitting attention aided in causing mental troubles. Nervous diseases and insanity were particularly common among telegraphists, letter sorters, and persons checking mechanical labour. Apparently there had been no noteworthy increase in the number of diseases in country districts and small towns, but there was some evidence of increase in large towns. He found that those nervous diseases which were given as causes of death were less frequent in Scotland than in England. Statistics seemed to show that the graver forms of nervous disease had increased in Great Britain, as in Germany and France, during the past forty years. The increase had not been marked in Scotland from 1885 to 1897. Suicides were steadily increasing in all European countries save Norway. In Scotland the increase from 1865 to 1894 had been stated as 35 per cent. In both England and Scotland there had been a startling increase of the insane in 1897 and 1898. In Scotland the figures were in 1871 one insane person for every 494 of the population, in 1881 one for every 444, and in 1891 one for every 385. Probably the accumulation of chronic cases in asylums, and the greater readiness to grant admission to all cases of mental failure, aided by the Imperial grant, and the diminished number of discharges, lessened the figures, but did not account for the whole increase of insanity. There undoubtedly was a real and considerable increase in the number of the insane, and this was a part of an increase along the whole line, an increase in the occurrence of nervous disease, of suicide, and of insanity.

EDINBURGH OBSTETRICAL SOCIETY.

J. W. BALLANTYNE, M.D., F.R.C.P.E., Vice-President, in the Chair.

Wednesday, February 14th, 1900.

ECLAMPSIA.

DR. MACVIE (Chirnside, Berwickshire) read a paper on a case of eclampsia having a peculiar puerperal history, with observations on coma.

The patient was a 4-para, aged 35, below average in muscular development and neurotic. She had a slow recovery after her first confinement. Her second labour was normal and easy, but at the end of a week she was seriously ill, in a partial stupor. The stupor deepened; the urine was normal. The child was put on artificial feeding; nutrition of the mother was pushed. When death seemed imminent consciousness returned, and gradually she improved, till at the end of another week she was merely feeble. After her third confinement she became listless and apathetic on the seventh day, with a low tension pulse. The symptoms of the previous puerperium were repeated, but the stupor was not so profound, and the rally was earlier. At the fourth confinement there was a right mento-posterior presentation, some œdema of the ankles, and a highly neurotic state. By manipulation a mento-anterior position was secured, the membranes were soon ruptured, and the face engaged in the roomy inlet. Forceps were applied, and the matter terminated in a short time. In six or eight hours later convulsions occurred, and eight or ten more succeeded within two hours. She then had stertorous breathing, small hard and rapid pulse, flushed face, contracted pupils. The uterus was douched, the rectum washed out and filled with normal saline solution; 4 ounces of urine were withdrawn from the bladder (which on boiling gave nearly one-half deposit of albumen). Hot fomentations were applied to the abdomen. About 9 ounces of blood were withdrawn from the median cephalic vein. Gradually the patient recovered, the treatment being mainly dietetic. The milk secretion ceased on the third day. The amount of albumen in the urine gradually lessened. On the seventh day, after some emotional passages with friends, she became apathetic. This was more pronounced on the eighth day, though she still took food well. On the ninth day stupor deepened, and on the tenth day there were signs of cardiac failure and unsatisfactory breathing. Death took place in the evening, when the temperature was 103°. The eclampsia was apparently cured, but the lowered vitality induced by it acted unfavourably on a cerebral lesion which had complicated three and probably four pregnancies.

The paper was discussed by Professor SIMPSON, DRS. HAULTAIN and BARBOUR; and Dr. MACVIE replied.

BASILYSIS.

Professor SIMPSON read a paper on this subject. He referred to his communication to the Society in 1880 regarding a basilyst for first perforating the cranial vault, afterwards perforating and dissolving the cranial base, and to his illustrative cases brought before the Society in 1882 and 1883. He had explained that to fit the instrument to act as perforator, comminutor, and extractor, he had added a traction blade to be applied outside the head, like the external blade of a cranioclast. He then referred to various suggestions for the improvement of the cranioclast in Germany and France to aid in extraction, including the basiotribe of Tarnier.

This last instrument was described as consisting of (1) a straight perforator going on to the base; (2) a first blade to be applied outside the head and fointed to the perforator, so as to make it a modified cranioclast; and (3) a second blade to be applied when necessary to the side of the head opposed to that which was caught by the first, so as to make it a modified cephalotribe.

But the first effort of the obstetrician should be to break up the base from within and not from without. The application of the external blade was not easy, and was not unattended with danger. Then the basiotribe flattened the head between the two blades, and therefore did not tend to the adaptation of the head to the canal. The basis cranii could be so simply and safely dissolved from within as to render it unnecessary to use even one external blade.

Notes were given of a recent case of basilysis in a dwarf-like, stunted young woman of 18 years of age, with flat pelvis, and noted the ease and safety with which the operation was done. With the basilyst the vault was perforated, and an opening made wide enough to allow of the complete breaking up of the brain and cerebellum. The same instrument was screwed into the base, and the blades separated in different directions. After a few "pains" the uterus, aided by pressure from above the broken-up head, was on the pelvic floor. There was only a slight fissuring of the mucous membrane in the vaginal orifice at the base of the hymen.

He now had his basilyst made on a slighter scale, and not so heavy as at first. The internal perforating and external grasping portion fitted like the two blades of a cranioclast, so that for extraction—where that became necessary—the basilyst factor had the qualities of what was admittedly the best instrument for the delivery of the perforated head. The instrument was exhibited.

The paper was spoken to by Drs. J. W. BALLANTYNE, BARBOUR, HAIG FERGUSON, FORDYCE, and HAULTAIN; and Professor SIMPSON replied.

LEVURINE.

Professor A. R. SIMPSON read a note on the use of levurine. Dr. Doyen at Christmas told him that he had seen some remarkable results from the use of levurine.

Professor Simpson's son had a sharp tonsillitis checked by levurine. He had used it also with good result in a case of appendicitis following operation for removal of tubes and ovaries where the appendix was adherent to one of the tubes. It had been tried in a case of old tuberculous ulceration with good result. A young woman of 17 on the third day after delivery showed septic signs, and levurine gave speedy relief and reduced the temperature to the normal limit. The temperature again rose and was similarly reduced, and the rest of the puerperium was uneventful. Another maternity case suffering from albuminuria, who had given birth to dead twins, showed on the following day septic signs. Next day levurine was given, and repeated on several following days till it was no longer required. A case of pelvic cellulitis with a temperature of 104.3° was treated with levurine and icebag, with the result that the temperature fell and the deposit was gradually disappearing.

Levurine was a dried extract of beer yeast prepared by Dr. Aragon and M. Couturieux, and described by them in the *Bulletin Médical* of July 5th, 1899. They were stimulated to the preparation of the drug by a paper in the same journal in 1897 on the use of barm in diabetes mellitus, in which the authors had recalled previous observations as to the value of yeast in the treatment of furunculosis. Levurine was thus not a new drug, but yeast prepared in a concentrated powder form, constant in action and easily administered. It might be taken in beer or aërated water or in cachets. The dose was a teaspoonful, to be given before food twice daily if necessary until the desired effect was attained of arrest of suppuration and reduction of temperature. What was its precise action was difficult to say. A sample of levurine was shown.

Specimens.

Specimens were shown by Professor Simpson, and Drs. J. W. Ballantyne and E. Keppie Paterson.

ROYAL ACADEMY OF MEDICINE IN IRELAND

Section of Anatomy and Physiology.

Professor W. H. Thomson, M.D., President, in the Chair.

Friday, February 2nd, 1900.

The Form and Position of the Stomach.

Professor Birmingham gave a lantern demonstration of the form, position, and relations of the stomach as seen in bodies hardened by intravascular injections of formalin. The chief points upon which he dwelt were: That the empty stomach was contracted, not collapsed, its pyloric portion resembling thick-walled small intestine; its cardiac portion rounded, but attenuated; its surfaces looking the one up the other down, and its long axis nearly horizontal. The large, flattened, and collapsed stomach, with anterior and posterior walls in contact, usually described and pictured, was not found in the hardened body. Three stages were recognised in passing from the empty to the distended condition. In the first the fundus and cardiac portions were expanded, the pyloric portion remained contracted, and the lesser curve sharply bent as in the empty state; in this stage the stomach resembled a Florence flask, strongly bent at the junction of neck and body. In the second stage the cardiac portion was further expanded, and the pyloric portion opened out, but the junction between the two was distinctly marked. In the third stage there was an enlargement of all the axes of the organ; the distinction between pyloric and cardiac parts was almost lost; the pylorus was carried an inch or two to the left of the middle line, and the antrum pylori was developed. But in all these changes there was no rotation around the long axis of the organ, with a raising up of the great curvature, etc., as commonly described. The distended stomach lay obliquely, its long axis running from the fundus, not vertically, but inwards and downwards, at an angle of about 40 to 45 degrees, with both the horizontal and mesial planes. The various views expressed by the author were illustrated by photographs of hardened bodies, and also by a series of hardened stomachs, showing the various stages of distension, and the sphincter action of the diaphragm on the lower end of the œsophagus.

Dr. Patten and Mr. Taylor made remarks; and Professor Birmingham replied.

Other Communications.

The President read a paper on protamines and their cleavage products, which was discussed by Professor Coffey, Dr. Walter Smith, and Dr. Dawson.—Dr. Patten exhibited (for Professor Cunningham) a model of the thoracic and abdominal viscera from behind showing the form and relations of the spleen.—Professor Coffey showed sections illustrating simple forms of mucous glands from the œsophagus of snakes.—Dr. Knott exhibited a series of human bones, all presenting non-united or perhaps united epiphyses.—Dr. Charles J. Patten brought forward a communication dealing with the visceral anatomy of the gibbon.

MANCHESTER THERAPEUTICAL SOCIETY.

Professor J. Dreschfeld, M.D., President, in the Chair.

Wednesday, February 28th, 1900.

Mercuriol in Syphilis.

Dr. Walker Hall made a communication on mercuriol in syphilis, describing Ahman's method of treating syphilis by means of cotton bags fastened to the front of the body and charged with mercuriol. The method was the outcome of Professor Welander's views as to the absorption of mercury when applied to the external surface being chiefly due to inhalation of the volatilised mercury. Mercuriol was described as an amalgam of mercury, aluminium, and magnesium containing 40 per cent. of mercury. It was stated that in this preparation the globules of mercury were in a condition of much finer division, and, therefore, more rapidly volatilised. Five grams of mercuriol were put in a cotton bag (Welander's), which was fastened round the patient's body. These bags had a twill surface outside and a smooth soft texture inside. For a course of treatment twenty powders of 5 grams each were required. For the first five days one powder was put in the bag every evening, afterwards a powder was put in every other day. It was claimed that it was the most elegant mode of administering mercury, that it was effective without producing bad results such as dermatitis, stomatitis, or gastritis. The only precaution necessary during the treatment was to test the urine at least once a week. Should albumen appear it should be stopped for a few days. Dr. Hall showed specimens of mercuriol and of the bags used in the treatment.

Dr. Wild stated that he was using mercuriol, but had not tried it long enough to be sure of the results.

Professor Dixon Mann doubted the statement that mercuriol was a true amalgam. Globules of metallic mercury could be seen in it by a lens.

The President referred to a recent paper on the method of treatment by Dr. Schuster, who had obtained no good results and had to return to the use of mercurial ointment.

Sugar Excretion in Diabetes.

Dr. R. T. Williamson made some remarks on the diminution of the sugar excretion in diabetes during medical treatment, in which he pointed out how difficult it was to be certain that diminution of sugar excretion was actually due to medicinal treatment. In mild cases of diabetes many factors might come into play to reduce the sugar excretion, and it was necessary to eliminate these before drawing conclusions as to the beneficial action of drugs. Bearing this in mind he was, nevertheless, inclined to believe from experience in 3 cases that salicylate of soda did sometimes exert a favourable influence. In 3 cases of mild diabetes in old people the sugar excretion diminished or disappeared after administration of sodium salicylate, although the patients were allowed to take nitrogenous and fatty foods, as much white bread and milk as they wanted; potatoes and sugar being practically the only foods excluded. He found it necessary to increase the amount of sodium salicylate to 80 or 100 gr. per day, and had not found any serious complications arise from these large doses.

Saline Baths.

Professor D. J. Leech read a paper in which he referred first to the pharmacological effects of the external and internal application of sodium chloride solutions of various strengths. He then gave an account of some English and Continental health resorts where sodium chloride waters were used medicinally, mentioning the various kinds of cases which were said to be benefited by the different baths. The bromides and iodides present in some of these waters were in such insignificant amount that they could produce no effect, but calcium chloride in many cases was present in considerable quantity, and might account for some of the beneficial results obtained by drinking certain waters.

The meeting was adjourned with the intention of continuing the discussion on the question of the saline baths at the next meeting of the Society.

Harveian Society.—At a meeting on March 1st, Mr. W. H. Lamb, President, in the chair, Dr. Risien Russell made a communication on the clinical evidence which was relied upon for the localisation for cerebellar disease, and illustrated his subject by lantern slides. The attitude which characterised a unilateral lesion of the cerebellum (inclination of the head to the affected side so that the ear and shoulder were approximated, and rotation so that the chin pointed to the opposite side) could not be too implicitly relied on in clinical investigations. He quoted a case in which a tumour was situated in the opposite lateral lobe of the cerebellum to that indicated by the attitude. He had met with cases of cerebral tumour in which the same sign had been present, in one of which the growth was situated too far forward to allow of the possibility of direct pressure on the superior peduncle of the cerebellum. Rotation was so rarely met with clinically, and the direction of reeling was so inconstant that these phenomena were of little value in localisation; but ataxy of the limbs was commonly more marked on the affected side in unilateral lesions of the cerebellum. Motor paresis was sometimes met with in the limbs on the same side as the affection of the cerebellum, and was an indication of cerebellar insufficiency, for such theories as had been advanced to account for it by pressure on the pyramidal fibres could not account for the fact that the phenomenon had resulted from softening of the cerebellum consequent on vascular occlusion. Convulsions did not belong to the symptomatology of cerebellar lesions, except as consequences of secondary disturbance of other parts of the central nervous system, unless Dr. Hughlings Jackson's view were accepted,

that peculiar tetanic-like seizures which occurred in certain cases of tumour of the middle lobe were of cerebellar origin. Rigidity followed experimental ablation, but when present as the result of disease of the cerebellum usually indicated secondary interference with the pons, for with the cerebellum alone affected there was more likely to be hypotonia of the muscles. The state of the knee-jerks afforded little aid in localisation, for while there may be increased activity on the affected side, as after experimental ablation, there might, on the other hand, be diminution on this side, or there might be great variability, or both might be abolished. Valuable information as to the side affected was derived from evidence of implication of the fifth, seventh, and eighth cranial nerves, and, in a few cases, from the twelfth; but in some instances one or other of these nerves might suffer on the opposite side instead of on the side of the cerebellar lesion.—Dr. LEONARD GUTHRIE cited cases illustrating the difficulty in localising cerebellar lesions, and even in deciding whether they existed all.—Dr. H. A. CALEY remarked on the clinical importance in relation to localisation, of the association, in some cases, of unilateral paresis with a lesion of the cerebellar hemisphere on the same side.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—At a meeting on February 15th, Dr. HELLIER, President, in the chair, Dr. DONALD read notes of a case of extra-uterine pregnancy and showed the specimen.

The patient, aged 30, had been married four and a-half years and had no previous pregnancy. The menstrual periods were regular until October, 1899, when the period was delayed four days. Uterine hæmorrhage then came on and lasted until the date of operation (sixteen weeks). In December she had sickness and nausea and was seized with a pain in the right iliac region. Early in January the sickness was very severe. The abdomen was distended and tender, and an obscure swelling was felt bimanually in the right iliac region. The diagnosis was tubal pregnancy with rupture into the right broad ligament. Some improvement took place under palliative treatment, but after a time pain and sickness increased, and on February 6th abdominal section was performed. The abdomen contained large clots and much fluid blood. A four months' fœtus and placenta were found lying loosely amidst coils of intestine. No sac and no amniotic fluid were seen. The pelvic organs were not felt, as they were completely shut off by adhesions. The abdomen was cleansed with gauze sponges, but no attempt was made to remove clots adherent to intestines. A large quantity of iodoform gauze was packed into the abdomen. Convalescence after the first forty-eight hours was uninterrupted.

The case was probably one of secondary rupture into the abdomen. Neither the fœtus nor the placenta showed any signs of maceration or degeneration. From a clinical point of view it was interesting that the most prominent symptom throughout was the vomiting, and that even after the final rupture pain and exhaustion and symptoms of peritonitis were more marked than the signs of hæmorrhage.—Dr. J. B. GRIMSDALE (Liverpool) related a case of metrorrhagia in a single woman, aged 31.

The bleeding had been almost continuous for three years. She had been in bed for eighteen months, and various modes of treatment, including plugging and electrical treatment, had been tried without effect. Vaginal examination revealed no cause for the bleeding, the uterus being small and mobile. The uterus was explored and curetted, but three weeks later the bleeding again commenced. Examination of the blood gave evidence of simple anæmia. Abdominal section was performed, and the ovarian arteries were ligatured. The bleeding immediately ceased, and since then the patient has had a normal menstrual period lasting five days.

Remarks were made by Drs. BRIGGS, DONALD, and Professor SINCLAIR, and Dr. GRIMSDALE replied.—Dr. NATHAN RAW (Liverpool) related two cases of eclampsia treated with success. In the second case the patient appeared to be moribund for some hours after delivery. Two pints of normal saline solution were transfused into a vein. This was followed by immediate improvement, and life appeared to be undoubtedly saved by this measure.—Specimens were shown by Drs. BRIGGS, LLOYD ROBERTS, I. GRIMSDALE, J. E. GEMMELL, BURTON, and RAW.

‖ PROFESSOR BIEDERT, in a pamphlet published recently in Munich, advocates the establishment, apparently under State patronage, on the lines of the Pasteur Institutes which have been founded in so many places, of institutions for the practical investigation of all matters pertaining to nutrition, which he maintains to be a scientific, politico-ecenomic, and humanitarian necessity. The feeding of infants on human milk, cow's milk, and artificial substitutes; of growing children; on various food stuffs; the pathology of "hypopepsia" and "hyperpepsia," etc., are some of the subjects he proposes for systematic research.

REVIEWS.

RECENT WORKS ON DISEASES OF CHILDREN.

WE are glad to welcome the reappearance of Dr. EUSTACE SMITH'S admirable book on the *Wasting Diseases of Infants and Children*,[1] which has now been out of print for several years. During the thirty-one years which have elapsed since it was first circulated, it has probably done more than any other work in the English language to introduce young practitioners to rational and careful methods of treating sick children, and few books have acquired a more deserved popularity. Although there is no radical change to be found in the sixth edition, there is a good deal of fresh matter relating especially to treatment scattered through its pages. When we compare it with earlier editions it is interesting to note that certain subjects have come to bulk more largely in the author's mind than formerly. The influence of slight chills as a frequent cause of disease is repeatedly referred to, and its importance is insisted on much more than in the early editions. Dr. Smith points out that where there is an already existing catarrh this greatly heightens the patient's susceptibility to changes of temperature, and an impression of cold which would be powerless to originate a catarrh may be amply sufficient to keep up one already existing. Consequently, in many cases of chronic diarrhœa and chronic vomiting it is advisable either to forbid the bath altogether or to have the infant merely sponged for one minute in hot soapsuds, and dried with as little exposure as possible. In speaking of rickets and "mucous disease," also he draws special attention to the evil effects which prolonged and careless bathing are apt to produce. Another factor in the causation of disease on which Dr. Smith lays great stress in this edition is the presence of adenoid growths in the naso-pharynx. He refers to the influence of this condition in promoting deformities of the chest by interfering with the full expansion of the lungs, and he even holds that "in most rickety children with marked chest distortion, adenoid growths will be found on examinatien of the naso-pharynx." He also regards them as a frequent cause of laryngeal stridor and spasm, and points out that they may lead to such a degree of snuffles in babies as to cause an erroneous diagnosis of congenital syphilis. We hope that in its new and more compact form the book will have an even larger circulation than before.

Dr. GOODHART'S work on *The Diseases of Children*[2] is a thoroughly living book, and one which bids fair to see many more editions. Since its first appearance, its contents have increased in bulk about one-third, and in practical value considerably more. In this, the sixth edition, Dr. Goodhart has had the help of Dr. G. F. Still, whose hand we trace in many places in numerous observations and statistics from Great Ormond Street. We see his influence also in the treatment of subjects such as posterior basic meningitis, chronic rheumatoid arthritis, and several others on which he has already elsewhere proved his right to be heard. In going over the book in its present form, we find the same clear and interesting statement of practical common-sense views as formerly, and a good many additional subjects are dealt with. Subjects of well-established importance are everywhere given the most prominent place, while those of more doubtful or perhaps only temporary interest are less fully considered. Questions which have recently come more to the front, such as the symptomatology of adenoid growths, the bacteriology of diphtheria and typhoid fever, the surgical treatment of abdominal tuberculosis and of intracranial conditions, are treated with a wise moderation and reserve. The classification of the different forms of stomatitis seems rather old-fashioned and unsatisfactory, while in the chapter on measles no mention is made of Koplik's spots and their importance as an aid to diagnosis. The chapter on diphtheria is very excellent, as is also that on whooping-cough. In the latter the treatment of the disease is very fully gone into, and it is in-

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[1] *The Wasting Diseases of Infants and Children.* By Eustace Smith, M.D., F.R.C.P.Lond., Senior Physician to the East London Hospital for Children. Sixth edition. London: J. and A. Churchill. 1889. (Crown 8vo, pp. 400. 6s.)

[2] *The Diseases of Children.* By J. F. Goodhart, M.D., F.R.C.P. Sixth edition. With the assistance of G. F. Still, M.A., M.D., M.R.C.P. London: J. and A. Churchill 1899. (Cr. 8vo, pp. 720. 10s. 6d.)

teresting to note how much larger a place antiseptics occupy than they did a few years ago. Dr. Goodhart regards lithæmia as attributable mainly to constitutional tendencies, and he thinks that too much has been made of its dependence on diet. The chapter on genito-urinary disorders is much larger than it used to be, and is exceedingly good. The section dealing with the diseases of the nervous system is also enlarged considerably. We are surprised to find in it no allusion to lumbar puncture as a possible aid to diagnosis. The new edition of Dr. Goodhart's book may without hesitation be recommended as likely to be most useful, both to students and practitioners. It gives probably as good a systematic account of the diseases of children as is possible in a volume of its size.

Trousseau was wont to enjoin upon his students that they should use Graves's *Clinical Medicine* "as their breviary." A similar injunction with regard to HENOCH'S *Vorlesungen*[3] might well be laid on all who have many children under their charge. There is nothing on the subject of disease in childhood which exceeds them in instructiveness and interest, and the singularly readable German in which they are written makes them more pleasantly accessible to English readers than are many of the works which come from the Fatherland. The first edition of Professor Henoch's book appeared in 1881. Since that time no fewer than 20,000 copies of the original German work have been put into circulation. It has also been largely circulated in the form of translations, not only in England by the New Sydenham Society, but also in America and in many of the European countries. No one can study recent literature on the diseases of children without noticing that Henoch's lectures have been widely read as well as widely circulated, and have played a large part in inspiring many of the best modern writers in this field.

The clinical handbook which Drs. ELDER and FOWLER have written on the *Diseases of Children*[4] is "designed for the use of students." It is divided into three sections, of which the first deals with the physiology, feeding, and general therapeutics of infancy. The second, in which the various signs and systems (respiratory, alimentary, etc.) are discussed will be the part which the student will find most useful. Having diagnosed the complaint with the help of Section II, a short systematic account of its pathology, symptoms and treatment is to be found in Section III. The arrangement is convenient from the student's point of view, though it involves a certain amount of repetition. The different diseases are described clearly and concisely, while the illustrations —taken from photographs—are for the most part excellent. Where the book is somewhat disappointing is in the matter of treatment. In a clinical handbook for students we have a right to expect special attention to be paid to the details of practical therapeutics, which play so important a part in the treatment of sick children, and which are not to be found as a rule in the textbooks, but it is precisely these details which are passed over in silence. To take an example or two at random. In the treatment of rickets the student is instructed, among other things, to "rectify obvious defects in clothing and bathing," etc. Now, no student would gather from this how useful an adjunct to other treatment a suitable course of baths, salt or otherwise, may prove in many cases of rickets. Again, the hot pack is recommended in certain conditions, but nothing is said of the necessity of watching the patient's temperature while he is in the pack, lest it rise suddenly and more harm be done than good, and yet the point is one of considerable importance. The book's deficiencies in the matter of treatment are really accentuated by its excellence in the department of diagnosis, and might easily be remedied, without an increase in its bulk, by the omission of a good deal of the "systematic" portion in Section III.

Mr. ARTHUR MACDONALD, of the United States Bureau of Education at Washington, has written several books on abnormal children and criminals. He has now published as a separate volume, with the title, *Experimental Study of Children*, an extract from the report of the Commissioner, in which he has attempted to define a normal standard on the basis of careful anthropometrical and psycho-physical measurements. Graphic curves of height, weight, and head circumference, and so on, are given for both the normal and abnormal children of the Washington schools. The United States afford a particularly fruitful field for such statistics, owing to the presence of different races—Celtic, Scandinavian, Teutonic, and African. Mr. Macdonald defines American children as children whose parents were born in America. His conclusion as to race influence is that (1) American children are less unruly than those of foreign or mixed parentage, and (2) that both unfavourable sociological conditions and foreign and mixed nationality seem to accompany a merely average ability. He does not attempt any explanation of this fact. It may possibly be that owing to the cheapness of the voyage the neurotic and the less fit are now able to emigrate to the United States, whereas two generations ago only those with health and energy were brave enough to venture into a far-off land. As regards sex influence, the conclusions which the author draws from his tables are both instructive and amusing. The statistics obtained show that boys have a higher percentage of sickliness, convulsions, laziness, and defective speech. The girls excel in most branches of study; but at the same time they show a higher percentage of merely average ability. From the point of view of evolution, this greater variability of the boys may point, according to Mr. Macdonald, to their superiority, as the superior species varies the most, and can adapt itself better to circumstances. The curves of brightness, dulness, and average ability are interesting. The summit of the brightness curve and the lowest point of the dulness curve occur at the age of 10. At puberty the brightness curve sinks below the average, while the dulness curve rises above the average. The chapter dealing with purely psychological observations is distinctly amusing. In view of the present general opposition to Nature's own method of rewards and punishments, it is interesting to note that of some 3,000 girls and boys from 6 to 16 who were asked to suggest some punishment for a hypothetical "Jennie," the boys "showed much less mercy than the girls." At 6 years of age, 512 girls and 590 boys would whip Jennie; at 16, only 52 girls but 133 boys. This would suggest that the policy of Do-as-you-are-done-by rules the childish mind of to-day in spite of altruistic philosophy; a further motive probably is found in the pathetic childish notion that whatever its parents do must be right. Of 104 interrogated as to the effect of punishment, 66 spoke of having been benefited, and 38 of having been injured by it. Paul Bourget, in his recent novel *Le Disciple*, pointed out the danger of some of the present methods of experimental psychology; and we certainly think that such questions as "What were your ethical relations to your parents?" "What are the causes and sensations of blushing?" border on the dangerous as well as on the slightly ridiculous, and certainly pedantic. The age is too self-conscious as it is, and it seems a pity to set children to writing compositions on their own sensations. Mr. Macdonald has some observations on "only children," which are instructive. They are, he says, below the average in health and in success at school; they do not like games, have imaginary companions, have little self-control, are more peculiar, more precocious, more quarrelsome, and much more selfish. This may be due in many cases to their coming of neurotic families, but it is no doubt largely due to over-indulgence, and to absence of the discipline which brothers and sisters afford each other. There is an excellent bibliographical index, and a good description of the measuring instruments required. The book may be cordially recommended to those who are interested in children from either the medical or the educational standpoint.

The Clinical Professor of Mental Maladies in the Paris Faculty, Dr. Joffroy, introduces in a preface of some length his old pupil, Dr. MANHEIMER, and commends his work, entitled *Les Troubles Mentaux de l'Enfance*[6] to his readers.

[3] *Vorlesungen ueber Kinderkrankheiten.* [Lectures on Children's Diseases.] Von Dr. Eduard Henoch. Zehnte Auflage. Berlin: August Hirschwald. 1899. (Pp. 918. M. 17.)

[4] *The Diseases of Children: A Clinical Handbook* By George Elder, M.D., F.R.C.P.E., and J. S. Fowler, M.B., F.R.C.P.E. London: C. Griffin and Co. 1899. (Foolscap 8vo, pp. 404, 23 illustrations. 10s. 6d.)

[5] *Experimental Study of Children.* By Arthur Macdonald. Washington: Government Printing Office. 1899. (Demy 8vo, pp. 150.)

[6] *Les Troubles Mentaux de l'Enfance; Précis de Psychiatrie Infantile avec les Applications Pédagogiques et Médico-Légales.* Par Dr. Marcel Manheimer. Paris: Société d'Editions Scientifiques. 1899. (Crown 8vo, pp. 182. Fr. 5.)

The treatise, which in its sub-title is stated to be a summary of the psychiatry of childhood and its pedagogic and medico legal bearings, is divided into five parts—etiology, semeiology, nosographical description, legal medicine, and treatment. Under these headings we have presented in orderly array the views of the French school of psychology, and the author's own observations are largely supplemented by references to acknowledged authorities. As an example may be taken the note on Legrain's investigations on alcoholic inheritance. He found in the first generation degenerative conditions, mental and physical, to the extent of 77 per cent.; in the second generation the percentage was still higher; and in the third not one child escaped; they were all imbeciles, idiots, insane, hysteric, or epileptic. In discussing causes of mental trouble in childhood the author notes the comparative rarity of those that are psychical, setting them down at only 20 per cent. (as against 50 per cent. in adult life). He lays stress on the influence of surroundings both in school and home life, emphasising the evils of educational overpressure on brains predisposed to breakdown by heredity and injudicious upbringing. Finally he calls attention to the changes in social environment of recent years, attributing the increase of madness and criminality in childhood to the accumulation of population in town, the substitution of factory for home industries, and the propagation of materialist beliefs by a licentious press. Diffuse apathy and psychic hyperalgia are the contrasting conditions chiefly seen in abnormal mental states in children, and children's fears are discussed in some detail. Disorders of attention, of memory, of imagination, and of judgment and reasoning faculty are successively considered, and the failure of imagination is stated to be a serious symptom of brain exhaustion. Under the head of degeneration the author seems inclined to assign less value than has been done by some to the so-called stigmata or physical malformations. Sexual aberrations, eccentricities, moral perversion, mental instability, and hypochondrias are some of the mental characteristics, and in some cases an original condition of "paranoia" is observed, which would appear to correspond in its progress to what is more commonly known in this country as juvenile general paralysis. Dr. Manheimer has devoted much pains to the section on legal medicine and in particular insists that judicial authorities should be on their guard against children's innocent misrepresentations. In the section on treatment he speaks approvingly of the English system of nursery life for the young as contrasted with that of the salon. The importance of precautions against onanism in nervous children is judiciously treated. The increase of juvenile suicide is considered at some length, as its importance demands.

Some time ago we reviewed a large work by Dr. H. de Rothschild on infant feeding. He has now issued a small work[7] which is practically an abridgement of the larger. It is intended to be a guide to mothers in all that relates to the use of milk as a food for their children. After laying down the rules according to which a child should be suckled, the author gives a description of some of the methods of pasteurising and sterilising milk in common use, and winds up with a short account of some of the consequences of improper feeding. The author's style is admirably clear, and the text is illustrated by excellent diagrams of the apparatus employed. We fancy, however, that the book will be appreciated more by students and young practitioners than by the public, partly because the author's efforts to avoid technicalities are too often unsuccessful, and partly because he applies himself to the subject of milk at, perhaps, too great length. The half-dozen pages devoted to substitutes for milk are insufficient for this branch of the question. The twenty-four pages of tables at the end of the book might well have been omitted.

Practitioners who are not constantly prescribing diets for young children find considerable difficulty in remembering the formulæ recommended by authorities as suitable at different ages. Among much other information compressed into very little space, Mr. Symes, in his *Notes on the Feeding of Infants*,[8] gives a selection both of formulæ for the modification of milk and of dietaries for children up to 2 or 3 years of age. While there is nothing original in the book, excepting, perhaps, its brevity, we can recommend it as a useful and well-arranged little book of reference.

Dr. J. Comby is surely one of the most indefatigable of men. It is only a few months ago since we had to congratulate him on bringing to a conclusion the task, which he shared with MM. Grancher and Marfan, of editing the five volumes of the *Traité des Maladies de l'Enfance*, and on having issued a new and greatly enlarged edition of his own work bearing the same title. Now he presents us with two more bulky volumes, which together form a kind of dictionary or cyclopædia of the therapeutics of children's diseases. Both are arranged alphabetically, but in the one entitled *Les Médicaments*[9] the articles are on drugs, while in the other, *Thérapeutique et Prophylaxie*,[10] they are on diseases. There are two ways in which an author who proposes to compile such a work as this may set about his task. He may select or collect. Dr. Comby has chosen the latter alternative. As has been said, the articles are arranged alphabetically, and it is a little startling on taking up the volume first named to find that accident has placed first an account of absinthe, a drug which, we must confess, we were unaware was ever prescribed for children. We are told that the essential oil of *Artemisia absinthium* stimulates the stomach, augments the appetite, is a tonic to the nervous system, and, moreover, acts as a vermifuge; then follow some prescriptions in which absinthe figures, and we are told also that a syrup, a wine, a tincture, an extract, a distilled water, and an essence of absinthe are made. A similar system is followed with other drugs, and altogether the list is of somewhat portentous length. The second volume is more likely to be generally useful, and it has, in fact, already reached its third edition. When all is said that can be said for scientific therapeutics, it must be admitted that there are times when the most scientific is forced to be empirical, and is glad enough to have such a work as Dr. Comby's to suggest alternative methods of treatment, and to jog the memory as to the doses of drugs and the best mode of exhibiting them. The volume is one which may be recommended to all practitioners who are familiar with French as a useful volume to have at hand.

NOTES ON BOOKS.

The Transactions of the Second International Actuarial Congress (London: C. and E. Layton. 1899. Royal 8vo, pp. 931. 30s.) form a large volume, and include several papers of medical interest, and indeed of general interest; for instance, those concerning friendly societies, workmen's compensation for accidents, and old age pensions. The various questions are dealt with by competent authorities of different countries, and for the convenience of English readers an English translation of each foreign paper is appended. By a study of the volume the prevailing views regarding workmen's insurance, old-age pensions, and similar important subjects, and the arrangements which at present exist regarding these matters in Germany, France, Belgium, Italy, and Russia may be compared. Perhaps the paper of greatest general interest is a comprehensive essay by H. Unger on workmen's assurance in Germany. It contains an account of the origin and development of the famous State system of insurance which is now compulsory. The beginnings of the older funds for insurance of workmen are traced back far into the last and even to the seventeenth century; but, says Unger, it has been left to quite modern times to create the gigantic work represented to-day by German workmen's insurance. The effect of the modern laws has been very great. By a system of partially voluntary insurance 1,300,000 persons were assured in Prussia during the year 1880, whereas during the year 1893, after the

[7] *Hygiène de l'Allaitement*. [The Hygienic Principles of Infant Feeding.] Par Henri de Rothschild. Paris: Masson. 1899. (Crown 8vo, pp. 198, 21 illustrations. Fr. 1.50.)

[8] *Notes on the Feeding of Infants*. By W. Langford Symes, F.R.C.P.I. Dublin: Fannin and Co. 1899. (Pp. 43.)

[9] *Les Médicaments chez les Enfants*. Par le Dr. Jules Comby. Paris: J. Rueff. 1900. (Large 8vo, pp. 686. Fr. 18.)

[10] *Formulaire Thérapeutique et Prophylaxie des Maladies des Enfants*. Third edition, same author and publisher. (Large 8vo, pp. 854.)

coming into force of the appendix to the law relating to sickness assurances (of April, 1892), the number of assured amounted to about 3,700,000. For these reasons Unger holds that compulsion is absolutely necessary in connection with workmen's assurance. "Absolute liberty of assurance," he says, "is certainly most desirable from an ideal point of view, but it is also, as all ideals, only practicable in a limited sense. Its impracticability has been eminently demonstrated in connection with workmen's assurance. Voluntary workmen's assurance will always . . . signally fail owing to the carelessness and shortsightedness of the interested parties. Experience has demonstrated this even in Switzerland, where the workmen are specially predisposed to, and prepared for, social self-help." Great sanitary results have been realised in Germany from the whole system, but from the infirmity and old-age assurance especially. The assurance institutions have lent money for the erection of (sanitary) artisans' dwellings, and (more important still) they have established and contributed to sanatoria for consumption. In the year 1897 the assurance institutions and authorised special funds provided special care for no fewer than 4,480 consumptives, devoting to this purpose a sum of more than one million marks. Enough has been said to show how important from a medical point of view the social problems of workmen's assurance are. These problems still remain to be solved as far as England is concerned, and the present volume helps to elucidate many points in connection with them.

NOVA ET VETERA.

THE SERJEANT-SURGEONS OF ENGLAND AND THEIR OFFICE.

The honourable office of Serjeant-Surgeon seems to have ended with Sir James Paget, for Sir Prescott Hewett, his colleague, died in 1891, and his post was allowed to lapse, whilst the vacancy created by the death of Sir James has not been filled. The office of Serjeant-Surgeon is of no great antiquity. William Hobbes, the first holder who can be traced, was appointed in 1461, and the office is thus many years younger than some of our hospitals in London and of the Colleges in Oxford and Cambridge. Its name, however, reminds us of feudal times, and of the system which treated the tenure of land and all dignities, honours, and offices as alike derived from the Crown, and involving *feodale servitium* or *serjeantry*. There were thus two classes of Serjeantry, the one attached to the holding of land, the other without land, but involving services of honour and dignity. In each case the holder was known by the personal designation of Serjeant, unless he held the superior rank of Earl, Baron, or Knight. It is said that these Serjeants are by no means to be confused with the petty officers called Sergeants, who were originally the more intelligent men capable of taking an order, and so holding a better position than the majority of their fellows in the army, where they assisted the captain; or in the civil courts, where they helped the sheriff. It is noteworthy, however, that the Latin equivalent for both sergeant and serjeant is *serviens*.

The office of Serjeant-Surgeon has always been held under a patent during the lifetime of the patentee. Originally there was one Serjeant-Surgeon, but from the time of Queen Elizabeth there were two, and from time to time additional Serjeant-Surgeons were appointed extraordinary, with reversion to the office at the next vacancy. The Serjeant-Surgeons were originally military surgeons who had served in the field, and it was their duty to attend the king in time of war. John Ranby was the last Serjeant-Surgeon to perform this duty when he was present with his master, George II., at the battle of Dettingen in 1743. The office gradually lost touch with the army, the severance becoming complete after the death of Keate, but it has always been conferred upon those who have been engaged previously in the service of the Royal family. The salary attached to the office at its foundation was 40 marks, or £26 13s. 4d., with "bouge of Court," wine, wax, and requisites for cures. Wiseman, in 1685, received in addition £80 a year as principal surgeon to the King, as well as a special pension of £150 for services rendered to Charles II. during his years of exile. Of late years these charges have been commuted for a fixed salary of £280.

The office carried with it certain well-defined privileges in the profession, originating no doubt in the worldly wisdom exemplified in the maxim that it is always well to have a friend at Court. In the United Company of Barbers and Surgeons (1540-1745) it is agreed that the Serjeant-Surgeon "shall sit next to the last Master upon the bench where the Master now usually do sit," and if he had not already passed the chair he was put through it with all convenient speed. In the Surgeon's Company (1745-1796) the King's Serjeant-Surgeon was admitted into the Council and Court of Examiners on the first vacancy and was looked upon as Master. Difficulties arose when George III appointed a general practitioner at Richmond to the office of Serjeant-Surgeon; but, in spite of this, a clause confirming these rights to the Serjeant-Surgeon was introduced into the Charter of 1800 which established the Royal College of Surgeons in London. The Charter of 1822 enacts that the Serjeant-Surgeons, if not already members of the Council, shall be elected to the Court of Examiners upon the first vacancy after their appointment if they have already been elected members of the Council, but it states expressly that the office gives them no preference in respect of admission to the Council. The Charter of 1843 confirms them in a preference to be appointed Examiners at the College provided they have already been chosen members of Council, and it was not until 1852 that these rights fell into abeyance.

The following list of Serjeant Surgeons is confessedly incomplete, since the *Calendar of State Papers* (Domestic Series) is still in course of publication, but it is more accurate than some others which have been published:

1415. Thomas Morstede was appointed surgeon to Henry V in the campaign which ended at Agincourt. He is called Principal, but not Serjeant-Surgeon to the King.
1416. William Sredewardyne was associated with Thomas Morstede.
1423. John Harwe, surgeon to Henry V.
1461. William Hobbes, appointed Serjeant-Surgeon. Morestede died in 1450.
1513. Marcellus de la More.
1535. Thomas Vicary.
1562. Richard Ferris.
1565. Robert Baltrop.
1591. George Baker.
1592. William Goodbrus.
1603. Gilbert Primrose, the elder brother of Archibald, from whom the present Earl of Rosebery traces his descent.
1609. Christopher Frederick.
1625. William Clowes, the younger.
1642. Richard Pyle, who married Catherine Clowes, niece of Mr. Serjeant-Surgeon Clowes.
Thomas Trapham, surgeon to Cromwell.
1661. Humphry Painter.
1661. John Knight, a naval surgeon.
1665. Richard Wiseman, appointed Serjeant-Surgeon Extraordinary. He became Serjeant-Surgeon in 1671-2, on the death of Humphry Painter.
1687. Thomas Hobbs.
1697. Thomas Gardiner.
1702. Charles Bernard. His daughter Elizabeth married her father's apprentice, who succeeded him at Court, and was
1729. Ambrose Dickins. His connection with St. George's Hospital seems to have led to many subsequent Serjeant-Surgeons being chosen from the staff of St. George's.
1729. Claudius Amyand.
1740. John Ranby.
1747. (Sir) Cæsar Hawkins.
Before 1765. David Middleton.
Before 1769. Thomas Gataker, Serjeant-Surgeon Extraordinary.
Before 1783. Pennell Hawkins, brother of Sir Cæsar Hawkins.
1773. Robert Adair, Surgeon to the forces at the siege of Quebec.
Before 1783. George Edward Hawkins, nephew of Sir Cæsar Hawkins.
Before 1786. Charles Hawkins, son of Sir Cæsar Hawkins.
1793. (Sir) David Dundas.
Before 1808. (Sir) Patrick Macgregor.
1808. Sir Everard Home.
1828. Sir Astley Paston Cooper.
1837. Sir Benjamin Brodie.
1837. Robert Keate.
1857. Benjamin Travers.
1858. Sir William Lawrence.
1862. Cæsar Henry Hawkins, grandson of Sir Cæsar Hawkins.
1867. Sir William Fergusson.
1877. Sir James Paget.
1884. Sir Prescott Gardner Hewett.

Dentists for the United States Army.—Efforts are being made to secure the establishment of a corps of dental surgeons in the United States army. The services of dentists are said to be greatly needed by troops serving on foreign stations, and it is considered probable that Congress will authorise the engagement of competent men to satisfy this need under the same regulations as contract surgeons are now employed.

SIR H. BURDETT ON HOSPITAL FINANCE.

By TIMOTHY HOLMES, F.R.C.S.,
Consulting Surgeon and Treasurer to St. George's Hospital.

I NEED make no apology for asking to be allowed space in the BRITISH MEDICAL JOURNAL for a comment on Sir H. Burdett's article in your issue of March 3rd on Hospital Revenues and the War Emergency. The article is weighty in itself, and Sir Henry Burdett's experience and position give it even greater weight: whilst its evident good feeling and its aim, namely, to support and strengthen our voluntary hospital system, demand our warmest acknowledgment and sympathy. There are, however, a few points in the article on which, as an old medical officer, and now a sharer in the management, of one of our great hospitals, I should like further enlightenment and, possibly, some in which I should venture to differ from the writer.

In the first place, I would respectfully protest against the way in which in that article a number of institutions differing extremely both in circumstances and character are regarded under the common designation of "the hospitals." It is true, I daresay, since so good an authority says so, that "behind the London hospitals, as a whole, is a reserve fund amounting to millions of pounds sterling, invested in approved securities," but the advocates of the poorer hospitals say that they have got none of this fund, or very little of it. How can the fact that some hospitals are rich be used to prove that others are not poor?

Again, what does Sir H. Burdett mean when he says that "the financial position of the London hospitals.....can be made secure if the old bad system of making out a case by muddling the figures is given up of deliberate purpose by each institution"? Such general statements are naturally (and I think legitimately) applied by the public to each member of the class inculpated. For my own part, belonging as I do to a hospital of which Sir H. Burdett is a life governor (though his other avocations have hitherto, to our great loss, prevented his giving us his personal assistance), I protest against the gross injustice of any such inference. The annual reports of St. George's Hospital contain a detailed statement of every legacy left to the hospital since its foundation, the exact particulars of every kind of invested property held by the institution, and the accounts of every farthing of income and expenditure, drawn up by one of the best-known firms of accountants in London, and on a plan which we are told is the best, but for which any other would be at once substituted if preferred by proper authority. In a letter which was written to the *Times* recently at the order of the Weekly Board by the secretary of the hospital and myself, we gave the exact yearly income of our invested and freehold property, from which its present value can be deduced in a minute.

Of course, I shall be told that St. George's is not one of the hospitals to which Sir H. Burdett is referring. I can easily believe this; but what I want to know, and what I think is of public importance to know, is to what hospitals he does refer. I believed, and still believe, that all respectable hospitals follow substantially the same plan. If it is not so, it must do great good to point out those that do otherwise. I am completely of Sir H. Burdett's opinion that nothing but harm is done by any management of hospital finance on other than sound business principles, even if we can put aside the question of common honesty.

But the part of Sir H. Burdett's article which interested me most, and on which I am most desirous of eliciting the experience of those concerned with the management of other hospitals, is that in which he treats of hospital expenditure. He is indeed right in saying that "it has increased by leaps and bounds," and this is true both of ordinary and extraordinary expenditure. Half a century ago, when I first joined St. George's Hospital as a student, the ordinary expenditure was about £12,000. This, however, was in 1848, before the original hospital had received its first addition, on ground leased to us at a peppercorn rent by the last Marquis of Westminster. When I first joined the staff of the hospital in 1861 the annual expenditure was, I believe, about £20,000. It is now about £36,000, and an immense sum has been spent as extraordinary expenditure on the remodelling of the old hospital and the erection of a new wing on land kindly leased to us at a nominal rent by the late Duke of Westminster, as well as on the erection of a Nurses' Home on freehold land of our own in Brompton.

Now, it is a grave question whether this extra expense is justifiable—a grave personal question for the managers of the hospital—and one of considerable public interest, since it applies, as Sir H. Burdett justly says, to all these great institutions, more or less. And it is one which I am anxious to elucidate by every means in my power. If we have unwittingly embarked in unjustifiable and unremunerative expenditure the sooner we are stopped the better.

I will take, then, the "four great sources of expenditure," which according to Sir H. Burdett "ought to be controlled and fixed."

The first is "expenditure upon medical appliances, instruments, and dressings." "This," says Sir H. Burdett, "has become too prodigal and has so led to much waste owing to an absence of control in the general administration of stores of this description and their use, to say nothing of the improper purposes to which they are sometimes put, especially by young and inexperienced members of the nursing staff and by students in the wards and out-patient departments."

Let us see how this matter stands at St. George's Hospital, and what prospect there is of substantial saving in that department. I think it useless to make any comparison with pre-antiseptic days, since the whole system of surgical appliances has altered since then. The expense in modern times must have much increased, and in fact such increase was unavoidable. But what I understand to be meant by the preceding paragraph is that there is a tendency to continuous increase in recent years, and that this could be, and ought to be, checked. The hospital accounts for the year 1899 have not yet come back from the printers, but I have added up the expense on the three items, "Drugs, Chemicals, etc.", "Dressings, Bandages, etc.", and "Instruments and Appliances," for the six years 1893-98 inclusive, and have added the average number of patients in each year—

Year.	Expenditure on the above items.	Average No. of Patients.
1893	£3,185	323
1894	3,879	328
1895	3,531	280
1896	3,629	312
1897	3,430	327
1898	3,874	307

This table shows an average expenditure of nearly £3,600 a year on an average of 312 patients, or less than £12 a year per bed,[1] and does not show any tendency to expansion—certainly not to any marked extent. While, therefore, cordially agreeing with Sir H. Burdett that in this, as in all items of hospital expenditure, every effort should be made to secure as much economy as is consistent with efficiency, I doubt whether in well-managed hospitals much can be expected from this item as an important factor in their finance.

Sir H. Burdett next directs our attention to the Nursing Department. "Formerly," he says, "arrangements were totally inadequate, both in regard to the number of nurses employed and the accommodation and food supplied. Now I see a growing tendency on the part of some in authority to unduly increase the numbers of the nursing staff and to add to the expenditure upon this one item sums which could be and ought to be saved. There is a unit of efficiency which can be had for the maximum sum a head per annum, which unit ought to be ascertained and adhered to in every well-managed hospital."

Here there can be no doubt that Sir H. Burdett has got hold of one of the main sources of the increased cost of modern hospitals, at least of those that try to do their duty by admitting cases on the score of their urgency and acuteness. In this relation St. George's furnishes a good comparison between the present and the past, because though (after the first enlargement above spoken of) a new wing was added in 1869, comprising three wards, the number of beds was not materially changed; one ward in the old hospital being disused, as unfit for the treatment of acute cases,

[1] I should conjecture that the expense does not amount to £10 a bed for the in-patients, for in these totals the expense for medicines, dressings, and instruments for out-patients is included. This would be less than £1 a head on the individual patients admitted during the year.

and beds being taken out of other wards which were thought to be overcrowded. I give, through the kindness of our secretary, Mr. Todd, the number of the regular nursing staff and its cost in the years 1859, 1869, and 1899 for comparison.

In 1859 the number of nurses may be taken at 51, and the cost at about £1,150. This is, however, an approximation only, as the wages book for that year could not be found. The number of beds was 350.

In 1869 the number of beds was only 331, some being closed in consequence of the building of the new wing. There were 56 nurses on an average—for the number varied every quarter—and the expense was £1,309.

In 1899, with 351 beds, we had 130 nurses, and spent £4,060, exclusive of the interest of the money spent in building the Nurses' Home and the expenses of that Home, which was opened in January, 1896.

The above figures will show clearly how large a part the increased expense of nursing bears in the increased cost of modern hospitals. The governors of St. George's have always been alive to this increase in its expenses, as may be seen by a reference to their Annual Report for 1893 (page 5). But what is to be done? They cannot leave their patients to be nursed less efficiently than those of other hospitals, without sacrificing interests which are far more important than those of finance. The last sentence of the paragraph quoted above from Sir H. Burdett seems to point to some way of obtaining perfect efficiency without sacrificing economy, but I must confess that I do not quite grasp its meaning. If it means—as it seems to do—that a limit should be put to the wages of nurses, I would, in all humility, dissent from it. It seems to me that the wages of nurses, like those of railway servants, or any other workpeople, depend on the rise or fall of the market. If it means anything else, Sir H. Burdett would be doing a service to hospital managers if he would explain it.

The above figures, though they show a formidable increase in the expenses of nursing, do not show the whole of it. There is the cost of food, the cost of servants (for, while in my student days the nurses did part, at least, of the menial service of the wards, they have now ward maids for this purpose, and even servants of their own to look after their bedrooms), the interest on the money spent on enlarging their accommodation, the expense of better furniture, and, I daresay, other items. But much of this Sir H. Burdett allows to have been necessary.

I will invert the order of Sir H. Burdett's third and fourth paragraphs, and take the latter first, because it may be dismissed in a few words. He says: "Every well-administered hospital should refuse to devote any portion of the revenue and the funds which have been entrusted to its managers for hospital purposes to the purposes of medical education or the medical school."

This seems to me hardly self-evident. A medical school of good repute is a source of constant revenue to a hospital supported by voluntary contributions, besides saving the hospital large sums in salaries for resident medical officers; and I think it is an arguable proposition that the hospital is justified in giving to the medical school the premises which that school requires, either rent-free or at a rent which would be much less than would be charged by an ordinary landlord. This is what is done now at St. George's. The medical school pays 3 per cent. on the sum originally estimated as the cost of the buildings, and on all improvements which the school requires in them to meet the ever-increasing demands of medical tuition. This arrangement appeared equitable to the governors, and was accepted by the medical school. Sir H. Burdett seems to think that the hospitals make some contribution to the schools by which the training of students for their diplomas is made "eleemosynary." I am quite unaware of any such bargain. Anyhow, no considerable reduction of hospital expenditure can be looked for in this quarter. The whole sum paid at St. George's by the medical school to the hospital in 1898 was £354. Possibly an ordinary landlord would charge £500.

Finally, we come to Sir H. Burdett's third item, which refers to "the expenditure on new buildings," a great subject indeed, but one which he complicates, as it seems to me, by a comparison of the expense per bed of the hospitals of the Metropolitan Asylums Board with that of "the larger general hospitals," and especially of St. Thomas's Hospital. He believes that the hospitals of the Asylums Board are much more expensive (as reckoned by "the cost per bed, (1) of the site, (2) the building, (3) the furniture") than the general hospitals. This may easily be, but I cannot see how it applies. Most of the general hospitals acquired their sites when the price of the land was very much less than it is now, and when building was much cheaper. The objections that were made to the cost of St. Thomas's Hospital were based, not so much on the actual sum expended as on the contention that an equally efficient hospital could have been built on a much cheaper plan, and one that would have involved much less annual expense in management, than the so-called "pavilion principle."

But the subject is one of immense importance in hospital finance. And here again I would urge that the various circumstances of different hospitals must be patiently considered before any general conclusion is drawn or insinuated. Some hospitals stand on ample sites acquired long ago, and on which any needful additions or improvements can be carried out at the mere cost of building. Others have become surrounded by adjacent houses, which either prevent extension altogether, or only admit of it at a ruinous price. I will again use St. George's as an illustration. When the present building was erected, under the direction of Wilkins, one of the best architects of his day, it was, I have no doubt, on a level with the science of that day. But hospital requirements now are very different from what they were 70 years ago. The great liberality of the Grosvenor family (the last Marquis and first Duke of Westminster) has enabled the governors to enlarge the hospital to some extent, and to build a medical school. But that enlargement of the hospital, together with the increasing demands of medical and surgical treatment, rendered the old building utterly inadequate for the reception of the number of acute cases for which it was designed; and the opening of a country branch—the Atkinson Morley Hospital at Wimbledon in 1869—increased the number of patients admitted, and made the average of cases more acute. When the hospital was built there was no separate out-patient department. At the comparatively recent period when I was assistant-surgeon we saw out-patients in a room on the ground floor of the main building. Even the necessity of ventilating the latrines separately from the wards was not understood. What were the governors to do? To save your money is no doubt good finance, but good hospital management aims first at saving the patients' lives, and no one knows better than Sir H. Burdett, or more strenuously preaches, the sound principle laid down in his article that hospital managers should use the funds they have in hand for any purpose which is plainly necessary, and trust to future years to provide for the emergencies of those years. So the governors were confronted with the grave alternatives of either selling the site and removing the hospital altogether, or pulling down the old building (one, I believe, of the best-built edifices in London) and replacing it with another, or modifying it to suit its present requirements. It was not without grave and prolonged discussion that they chose the last-named course. But this involved very heavy expenses, such as the construction of a separate out-patient department, and of a system of "sanitary turrets" for the separate ventilation of the waterclosets and sculleries, the erection of a home to accommodate the extra number of nurses for whom there was no room in the hospital and the remodelling of the central block so as to provide a second operating theatre (rendered necessary by the great increase of surgical operations), to enlarge the chapel in order to accommodate the increased number of nurses and servants, and to provide the nurses living in the hospital with separate bedrooms instead of cubicles, which were not only inconvenient, but might in case of fire have led to some awful disaster, and to give proper accommodation for the increased staff of servants. I give these details at the risk of wearying the reader, so that he may see whether there is any proof here of what Sir H. Burdett denounces as "an extravagant system which results in the wasteful expenditure of a great many thousands of pounds every year." I could with a little labour ascertain the prime cost of these buildings and alterations from our annual statements of "extraordinary expenditure," but this is perhaps superfluous. I guess it at about £80,000 on the lowest com-

putation. And besides the prime cost there is the great increase in the cost of maintenance. It is, I think, mainly the second and third sources of expense pointed out in Sir H. Burdett's article which have raised the annual expenditure of St. George's by the large sum above stated. And I have used the experience of St. George's, which is accessible to me, not because I think there is anything peculiar in it, but for the opposite reason—because I believe it is a fair sample of the experience of other hospitals built a long while ago on restricted sites.

The great question, however, is how far such increased expenditure is wasted, and how far it is a legitimate investment bringing in a rich return in increased efficiency and in the saving of the lives of many thousands. That the latter has been the case to a very large extent no one who has known our hospitals for half-a-century would think of questioning. Waste there may have been. It is difficult in such complicated operations to avoid waste entirely. But we have done our best, and will feel the greatest gratitude to Sir. H. Burdett or any competent person who can teach us to do better.

GENERAL MEDICAL COUNCIL.

Meeting of Executive Committee.

A meeting of the Executive Committee of the General Medical Council was held on Monday, February 26th, when there were present Sir William Turner, President, in the chair, Sir Dyce Duckworth, Mr. Bryant, Dr. Atthill, Dr. Glover, and Sir William Gairdner.

Appointments.

The official notifications of the appointment of Sir Hugh Reeve Beevor, Bart., M.D., F.R.C.P., as Representative of the Apothecaries' Society of London, and of the reappointment of Sir Philip C. Smyly, M.D., as Representative of the Royal College of Surgeons in Ireland were read.

Receipts and Expenditure.

The Treasurers submitted the accounts of the receipts and expenditure of the General Council and of the English Branch Council for the year ending December 31st, 1899, and a statement made and submitted by the Auditors of the proposed apportionment of the estimated expenditure of the General Council for 1900. The accounts of receipts and expenditure were directed to be laid before Parliament, and the Branch Councils were directed to pay to the account of the General Council the amounts shown in the estimates (see Table).

Penal and Disciplinary Powers.

The President made a statement as to the steps taken by him in regard to legislation respecting amended penal powers, and he was authorised to instruct Mr. Farrer and Mr. Muir Mackenzie to prepare a Bill in accordance with the clauses submitted to and approved by the Council on December 2nd, 1899.[1]

Reciprocity.

The President reported the reception of letters from the Privy Council in regard to the practice of medicine by foreigners in Italy, from which it appeared that up to January 13th, 1900, no fixed determination had been arrived at by the Italian Government for an alteration of the present law. It was now, however, reported to the Committee that the Italian Government had under its consideration a Bill to exclude foreign practitioners belonging to countries which do not grant reciprocal rights. The President was requested to call the attention of the Privy Council to this latter information.

Law respecting Foreign Practitioners.

Mr. Muir Mackenzie was requested to draw up or procure a translation into French of the statement as to the law respecting foreign practitioners in the United Kingdom.[2]

British Pharmacopœia.

The President called attention to certain publications in which copious extracts from the *British Pharmacopœia* were incorporated, or were proposed to be incorporated, and a small committee was appointed consisting of the Chairman of the Pharmacopœia Committee and two other members of the committee to be selected by him, to prepare a statement on the subject and report to the President, with the view of obtaining the opinion of counsel as to whether such extracts infringed the copyright.

Resignation of Solicitor.

The President read a letter from Mr. Farrer intimating his resignation of his appointment as solicitor, as he was about to retire from active business. At the request of the Committee Mr. Farrer consented to continue to perform the duties of solicitor till the May session of the Council.

Standing Orders.

A number of amendments proposed to Chapter iv of the Standing Orders were considered, approved, and recommended to the General Council.

Complaint against a Registered Practitioner.

A letter was considered making a complaint against a registered medical practitioner; and a resolution was adopted expressing the opinion of the Executive Committee that the case was of a kind to be dealt with by the ordinary tribunals of the country.

Grant Medical College.

Application for registration was received from a gentleman whose only qualification was one of the Grant Medical College. The opinion of Mr. Muir Mackenzie had been taken, who recommended that the recognition of the Grant Medical College should be considered by the Executive Committee. The Committee resolved that it was not prepared to recommend the recognition of the Grant Medical College.

Technical Schools.

A communication from Owens College, Manchester, transmitting the following resolution of the Committee of the College on Instruction in Chemistry and Physics in Technical Schools, was read:

The Committee, having had under consideration the recognition of instruction in Chemistry and Physics in Technical Schools by the Conjoint Board for Medical and for Dental Students, although not recommending any official representation to be made by the College to the Technical Schools, consider that it is advisable that such students should take their course in the subjects named at a recognised Medical School or University College.

[1] British Medical Journal, December 9th, 1899, p. 1633.

[2] *Ibid.*, December 9th, 1899, p. 1635.

Table compiled from the Returns prepared for presentation to Parliament showing the Income and Expenditure of the Branch Councils for 1899.

	Income.				Expenditure.				
Branch Councils.	Registration Fees.	Dividends.	Interest on Mortgage.	Total.	Contributions to General Council.	Fees to Branch Councillors and Expenses.	Salaries, Printing, etc.	Total.	Excess of Deficit.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
English ...	3,697 12 6	313 8 4	696 4 0	4,707 4 10	4,030 1 7	—	552 17 9	4,582 19 4	+ 124 5 6
Scottish ...	2,521 9 6	151 10 7	—	2,673 0 1	2,288 9 6	36 15 0	296 19 1	2,622 3 7	+ 50 16 6
Irish	812 10 0	4 18 2	—	817 8 2	699 16 5	14 14 0	324 5 9	1,038 16 2	— 221 8 0

The Irish Branch Council started the year with a debit of £123 4s. 3d. This Branch Council appears to pay rent for its house, an item which does not appear in the expenditure of the other Branch Councils.

Medical Aid Associations.

The following report from the Medical Aid Associations Committee was received and entered on the minutes, and transmitted to the Council:

The Medical Aids Committee met on Tuesday, December 5th, 1899, and considered several communications referred to them by the Executive Committee at its meeting on November 27th, on the subject of medical contracts, in which the question of canvassing arises. These communications were, respectively, from Messrs. Graham and Shepherd, Joint Secretaries of the County of Durham Medical Union; from Mr. L. Cooke, Honorary Secretary of the Wigan and District Medical Guild, Wigan; and from the Ashton-under-Lyne Medical Society. The Medical Aids Committee suggest that these gentlemen should be informed that in any given case where the General Medical Council is desired to take action, facts and evidence of the implication of the particular registered practitioner complained of will have to be furnished by the complainants (in a statement attested by affidavit).

J. G. Glover, *Chairman.*

Illegal Certificates.

A communication from the Bradford and West Riding Medical Union on the subject of alleged illegal certificates was read. A communication from the East End Mothers' Home, forwarding specimens of certificates in nursing and for midwifery given to nurses trained at the Home, and requesting the Council's opinion as to the advisability of granting them, and as to any liability incurred in so doing. The Executive Committee declined to give any opinion on these questions.

Southern Rhodesia Medical Ordinance.

It was reported that in reply to the resolution of the General Council passed on December 5th, 1899,[3] a letter had been received from the Colonial Office transmitting a copy of the letter addressed on this subject to the President of the Council of the British Medical Association by direction of the Colonial Secretary.[4] Copies of the letters were directed to be forwarded to the practitioners in South Africa who had presented a memorial to the Council.

International Pharmacopœia.

A communication from the Privy Council forwarding a note addressed to the Foreign Secretary by the Belgian Minister on the subject of a proposed Conference as to an International Pharmacopœia limited to drugs of a drastic nature was remitted to the Pharmacopœia Committee to report at the May session of the Council.

Midwives Bill.

The Registrar reported that he had received from the Midwives Bill Committee six copies of a Midwives Bill introduced into Parliament during the present session. The Executive Committee resolved as follows:

That as the Midwives Bill now before Parliament does not make the provision as advised by the General Medical Council (see report in Minutes, vol. xxxvi, p. 501[5]), forrequiring the licensed midwife to apply for qualified medical assistance in every case attended by a midwife which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn child, the Executive Committee would again represent to the Lord President that in its opinion such a provision is one of imperative necessity for the safety of lying-in women, and they would urge that the Bill should include such a provision.

Appointment to Executive Committee.

The Committee considered a vacancy in the Executive Committee, and resolved to exercise the power of co-option conferred upon it by the Standing Orders.

The President read a letter from Mr. George Brown bearing on this question.

The Committee appointed Dr. MacAlister to fill the vacancy.

Dental Business.

The accounts of the Dental Fund were submitted. An application from the Dental Board of Victoria for the recognition of its diploma of Licentiate for registration in Great Britain was referred to the Dental Education and Examination Committee for report to the Council in May, as was also a communication from the Royal College of Dental Surgeons of Ontario, having reference to the relations of the dental profession of Great Britain and the province of Ontario, and suggesting a measure of reciprocity.

[3] British Medical Journal, December 9th, 1899, p. 1645.
[4] *Ibid.*, August 12th, p. 417.
[5] There would appear to be some error in this reference. The reference is probably to p. 351 *et seq.* The report of the Committee will be found in the British Medical Journal, June 10th, 1899, p. 1410.

TERCENTENARY CELEBRATION OF THE GLASGOW FACULTY OF PHYSICIANS AND SURGEONS.

The Faculty of Physicians and Surgeons of Glasgow gave a *conversazione* in the Faculty Hall on the evening of March 2nd, in celebration of the tercentenary of the Faculty. Invitations had been issued to the members of the medical profession in Glasgow and the surrounding counties, and upwards of 700 acceptances had been intimated. The gathering was restricted to members of the medical profession, and included a number of ladies. The guests were received by Dr. Hector Cameron, the President of the Faculty, who was accompanied by Professor Sir William Gairdner and the members of the Council.

The President formally welcomed the guests in the name of the Council and Fellows of the Faculty. He referred to the interest of such a large gathering of medical men, and the opportunity it afforded them of reviving old friendships. Moreover, he was not without hope that the programme of demonstrations and exhibits that had been prepared would be found of much scientific and professional interest. But the special interest that attached to the gathering lay in the fact that it had been arranged in order to help to celebrate the tercentenary of the Faculty. The Faculty had received its charter from King James the Sixth of Scotland on the penultimate day of November, 1599. On the corresponding day of last year the Fellows of the Faculty held their anniversary dinner, when they had with them representatives from the various Scottish Corporations and Universities, and from the City. But the Council and the Faculty had felt that they would like to associate with them in the celebration of their tercentary a large representation of the profession in the West of Scotland, and he thought that the very large number present was an indication that they desired to congratulate the Faculty on its three hundredth birthday.

Sir William Gairdner also briefly addressed the meeting, and in referring to the advances in surgery since the foundation of the Faculty, spoke of Lord Lister's work in the discovery and development of antiseptic, or more properly aseptic, surgery, work in which Dr. Cameron, the President, had taken an active part as Lord Lister's assistant. All the early stages of that movement were conducted in Glasgow and in the Glasgow Royal Infirmary, and they should not lose the credit of it.

In the course of the evening several lantern demonstrations were given illustrating certain anatomical, pathological, and clinical subjects. There were also exhibited a large number of photographs and water-colour drawings, many interesting microscopic specimens, and a fine collection of bacteriological cultures. Demonstrations of skiagraphy, phonography, and wireless telegraphy also received much attention, while there was a very interesting exhibition of instruments by Messrs. Weiss and Sons (surgical) and by Messrs. C. Ash and Co. (dental), and of pharmaceutical preparations (arranged by Mr. John Macmillan, Glasgow). Refreshments were served during the evening, and an excellent musical programme, and in every way the *conversazione* was a great success.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The usual monthly meeting of the Medical Sickness, Annuity, and Life Assurance Society was held on February 23rd at 429, Strand, London, W.C.

There were present: Dr. de Havilland Hall, the Chairman; Dr. J. B. Ball, Dr. Walter Smith, Mr. F. S. Edwards, Dr. J. Pickett, Mr. William J. Stephens, Dr. M. Greenwood, Mr. J. Brindley James, Dr. J. W. Hunt, Dr. W. Knowsley Sibley, and Mr. Edward Bartlett.

The Committee were principally engaged in the examination of the long sickness claim list, which at this time of the year is always heavy and has been made abnormally so this winter by the epidemic of influenza. There are many signs that this epidemic is dying away, but as on previous occasions it is found that the members of the Medical Sickness and Accident Society are incapacitated much more by the after-effects of influenza than by the acute stage of the malady, and accordingly some time must be expected to elapse before the claims for sickness pay fall to their normal number. In the meantime

the income of the Society greatly exceeds it total outgo, and in no year of its working has the Medical Sickness and Accident Society been unable to make a substantial addition to its large reserve of funds.

The number of those permanently incapacitated steadily grows, and nearly £2,000 per annum is now being paid by the Society to members whose medical reports leave little room for hope that they will ever again be fit for medical practice. The probability of a number of such claims as those arising was foreseen when the Society was founded and provided for in the rates of contribution. In addition to this a special reserve has been made for those chronic cases at each valuation of the Society's business, so that ample provision now exists to enable the Society to fulfil what has always been considered its most important function.

Prospectuses and all particulars can be obtained on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

HEALTH OF DUBLIN.

On February 26th Dr. Hope, M.O.H., Liverpool, stated that the estimated population of Liverpool was 668,000. The staff, exclusive of the clerical, appointed to carry out the requirements of the Sanitary Acts, was 99. Their duties were clearly defined. The officers had to pass a qualifying examination and on appointment were provided with a book indicating their duties. Dairy yards and cowsheds were all licensed and carefully inspected beforehand, and 600 cubic feet were insisted on for each cow. Two special inspectors gave their time to the inspection of cowsheds and milkshops. If dairy yards were removed to the country they could not be supervised. It was contemplated to have milk sterilised by steam, especially during the summer months. The abattoirs were leased to a company and were popular with butchers, but it was probable the site would be altered. The private slaughterhouses required much supervision by a large staff of meat inspectors. There were twelve inspectors to look after common lodging houses and houses let in lodgings, and overcrowding was infrequent, owing to constant supervision by day and night. The sublet lodging houses which corresponded with the tenements in Dublin were registered and numbered 13,000. The aim of the Liverpool Corporation was to have sanitary homes for the working classes provided at 1s. a week a room. He did not know at present whether this could be done without a loss to the rates. Scavenging was now done by the City Engineers' department. The bins were conveyed in covered carts, and mostly disposed of by destructors; some was sent out to sea, and some used as manure. The tenements in Dublin were worse than anything in Liverpool, and the overcrowding was a source of danger. The closet accommodation in Dublin was very bad, and the water supply deficient. The fact that people had to come down from the tops of houses for water and watercloset accommodation conduced to great neglect. The dairy yards seemed to him overcrowded, and many did not comply with the by-laws. In Liverpool the infant mortality was higher, probably because mothers in Ireland suckled their infants more commonly than was the case in England. It astonished him to learn that notification of infectious diseases was imperfectly carried out in the city, and in some of the contiguous suburbs was not in force at all. He was in favour of closing day schools in certain epidemics, but by closing boarding schools infection might be spread. Owing to improved sanitation the death-rate in Liverpool was for the decade ending 1870, 32, for 1880 it was 28, for 1890 it was 26, from 1830 to 1895 it was 24.8, and for the past four years he thought it was 23 3. The proportion of people living in insanitary houses was much greater in Dublin than in Liverpool. The worst houses should be closed and the better ones reconstructed. This, he observed, had been done to some extent. They disinfected after cases of tuberculosis where doctors or responsible persons desired it. They were building a small-pox hospital and a convalescent home for infectious cases well outside the city. It was a matter of importance in Dublin to have the boundaries extended so as to take in the suburbs.

Dr. W. R. Smith, Medical Officer of Health for Woolwich, thought the duties of different departments in the corporation might be grouped in a more efficacious way. The tenements should be registered and better supervised. The slaughterhouses should be got rid of. The condition of the tenements and the pollution of the subsoil was the cause of the high mortality from enteric fever.

On February 27th, Mr. Conway Scott, Executive Sanitary Officer of Belfast, said they had no tenements like those in Dublin, owing to the building of houses on the outskirts of the city. They had 365 cowsheds, and 2,950 cows within the city. The space required for each cow was 400 cubic feet instead of 800. The tenement house population in Dublin should be moved in large numbers to the suburbs. Private slaughterhouses should be abolished.

Mr. Charles Eason, representing the Philanthropic Reform Association, was in favour of women as sanitary inspectors. No one should be allowed to let a tenement house until the sanitary arrangements had met with the approval of the authorities.

Mr. Prentice, of the Veterinary Department of the Privy Council, said dairy yards should have impervious floors. There should be a general cleansing once a month. The dairy yards in the suburbs were not kept in as good order as in the city. The pigstyes in the city were bad, and housed about 4,000 pigs.

On March 1st, Mr. George Ross, C.E., stated that the present system of allowing everybody and anybody to carry out sanitary works without the supervision of any qualified person was vicious. Some of the plumbing work was really scandalous.

Dr. J. E. Kenny, the City Coroner, said that the substitution of water-closets for privies in the tenements had been a failure. Schools should be closed when an epidemic was imminent, and persons from infected houses should not attend churches. The tenements were saturated with the germs of tuberculosis, and it would be almost impossible to have them properly disinfected.

On March 2nd, Dr. Katharine Maguire, who appeared on behalf of the Alexandra College Guild Tenements Company, said the enterprise, which was not wholly philanthropic, had been a success. They had rented five tenement houses, and put them into good sanitary condition. It was, as a rule, difficult to get the tenants to keep the sanitary accommodation clean, but the people were decidedly teachable. The tenants should be jointly responsible for misuse of the waterclosets.

Mr. Thos. Dunne, formerly Superintendent of the Corporation Abattoir, contradicted the statements made by Mr. Delaney in regard to the exposure for sale of unsound meat, and of meat which a private butcher would not take.

On March 3rd, the Rev. Canon Ryan, P.P., said that the eight dispensary medical officers on the north side of the city should be reduced to four, and their salaries increased on the stipulation that the poor should receive their undivided attention. There was no regular system of nursing the poor, although the Jubilee nurses did excellent work. Girls in the primary schools should be taught nursing and cooking, the value of ventilation, and the general principles of elementary hygiene. He advocated more open spaces in the city.

The Rev. Canon Coulan, P.P., said that in one area in his parish there were 518 people in 166 rooms. A number of tenements should be closed. Children attending school should have facilities for washing themselves before entering. The water supply and sanitary accommodation were defective in the tenements. Girls should be taught cookery.

The Rev. Wm. Murphy said that in his parish there were twenty districts where the houses were so bad, dirty, dilapidated, and sanitarily defective, that they must be a prolific source of ill-health. There should be rigorous inspection as to ventilation, which the people neglected. The vice of intemperance was a widespread evil in the city.

The Lord Mayor said their powers were limited in dealing with public health. They should have power to ensure that houses would not be used as dwellings until made suitable. The houses should have an annual licence, which would secure the provision of proper sanitary arrangements. A large body of the people should be got outside of the present city area, especially into cottages around the outskirts. The excellent tram system would facilitate this. The Corporation should have large borrowing powers for building, and they should be able to inspect and issue licences to dairy yards outside the city. It was monstrous that adjacent sanitary authorities did not adopt the Notification of Infectious Diseases Act. He favoured the establishment of a bacteriological laboratory where the citizens could have food and drink analysed free of charge. It would be better to have one medical officer of health on either side of the city. There should be power to send the poor who collected in the city back to their own districts. Infant life insurance should be controlled by the Corporation.

The Committee adjourned for a fortnight.

THE MIDWIVES BILL.

THE OBSTETRICAL SOCIETY AND THE MIDWIVES QUESTION.

DR. R. R. RENTOUL desires to make an appeal to each Fellow of the Obstetrical Society. He writes:

There is little doubt that this Society has been the prime mover in the agitation *re* midwives' registration. Although the Society was established in 1858, it was not until 1872 that it entered upon the down-grade act of examining and granting documents to intending midwives. Since that time over £3,966 worth of diplomas has been sold, while over £1,957 has been handed to the few Fellows who conduct the said questionable examinations. I think it was one of the saddest and most humiliating episodes in connection with any body of practitioners when they formed themselves into a voluntary Society and established a "back-door entrance" so that certain persons could practise that branch of medicine known as midwifery, and without undergoing the usual medical education and examination. What will be done if other medical societies degrade themselves and their profession by following so evil an example? And can any practitioner state that if one society takes it upon itself to grant certificates which prefers to empower the holder to practise midwifery, it is not equally open for any other society to grant a certificate empowering its holder to practise alone minor medicine or surgery? It is most regrettable that it has fallen to the lot of medical men to establish so debasing and dangerous a line of conduct. Do we hear of barristers, or solicitors, or dentists, or veterinary surgeons, or chemists in any of their societies beginning to sell diplomas to persons which profess to entitle the holders to practise minor law, dentistry, or pharmacy, etc.? They have not fallen so low; yet chemists have a strong claim to establish an inferior order of chemists because a portion of the public employ herbalists' mixtures and potions.

After some further observations on herbalists and others, Dr. Rentoul writes:

In 1894 I petitioned the General Medical Council to make a rule to the effect that the Council will consider it "infamous conduct in a professional respect" if any practitioners—other than those appointed by Parliament—grant any document which professes to empower the holder to practise any branch or part of medicine, surgery, or midwifery (see Minutes, May, 1894). In 1895 I had a petition signed by over forty Fellows of the Obstetrical Society to the same effect as the above, presented to the General Medical Council (see Minutes, General Medical Council, May, 1895).

What I wish to propose now is, that every Fellow of the Obstetrical Society of London who feels that the Society should cease forthwith to examine and grant documents to intending midwives, shall write at once to the Secretary of the Society (20, Hanover Square, London, W.), stating that if the Society does not cease to grant documents to intending midwives, he will resign his connection with the Society. There are about 711 Fellows of the Society.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 10TH, 1900.

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

A MEETING of the Executive Committee of the General Medical Council was held on February 26th, and an account of the proceedings, founded on the *Minutes*, will be found at page 586. Under the statute this Committee, in the interval between the meetings of the Council, exercises many of the powers of the Council, and its proceedings therefore are of moment, though some of the business transacted hardly appears to call for comment.

The Apothecaries Society of London having appointed Sir Hugh Beevor its representative, Mr. Brudenell Carter, who has represented this body since 1887, ceases to be a member of the Council, and vacancies were thus created in the Executive Committee (filled by the appointment of Dr. MacAlister), in the Pharmacopœia Committee, in the Dental Education and Examination Committee, and in the Penal Cases Committee.

Two resolutions relating to the midwives' question were passed. The first was a representation to the Lord President of the Council that the Midwives Bill now before Parliament fails in an important respect to comply with the recommendations of the Council in that there is no adequate provision that the midwife shall in cases of difficulty, abnormality, danger, or disease, apply for qualified medical assistance. This omission is vital, and even the warmest adherents of the Bill in the medical profession cannot with equanimity see a Bill pass which, as drafted, elevates the midwife into an independent position. A communication had also been received from an East End Mothers' Home, which was in the habit of granting certificates in nursing and in midwifery, and asked for an opinion upon the advisability of so doing. On this the Committee declined to give an opinion; without more knowledge than the *Minutes* afford of the circumstances, it is difficult to see why the Executive Committee should have hesitated to answer that it was inadvisable, but they may have had good reasons for declining to pledge themselves in any way.

Some amendments in the Standing Orders which relate to the conduct of debates were considered and adopted, or rather recommended for adoption. Hitherto the only course when it was desired to stop a debate was to move the previous question, which is open to sundry objections, but the new rules will introduce the closure, and are designed to economise the time of the Council, which it is generally felt has on many occasions been grievously wasted. Only experience can show how far they will achieve the desired economy. The power to move the previous question has been retained, and a new rule provides that if a motion for the adjournment of the Council be carried, the President may put the question whether any unopposed business may nevertheless be taken.

The solicitor to the Council, upon the ground of age and health, has tendered his resignation of the office which he and his firm have for so many years held. It will be for the Council to decide whether they shall make any formal appointment, or simply place business as it arises in the hands of some solicitor. Something may be said in favour of either course.

In November last applications were received by the Council from several medical associations inviting it to take steps to put an end to the system of canvassing, etc., which they declared to be very rife in their districts. These were referred to the Committee on Medical Aid Associations, which, as will be seen, makes no pronouncement on the subject, but advises that the General Medical Council should inform the applicants that in any given case facts and evidence supported by sworn affidavits will have to be submitted. This appears tantamount to saying that the Committee is not prepared to advise the Council to deal in any general way at present with the question, but that they will entertain individual cases.

The accounts for the year 1899 and the estimates for 1900 present some noteworthy features. The Irish Branch Council, which has for some time past been drifting towards a condition of bankruptcy, has now, after its liabilities are discharged, a balance of only £62 odd, so that it is within measurable distance of insolvency; while the Scottish Branch stands possessed of £6,218, and the English Branch of no less than £36,865, of which £25,007 is in the form of a mortgage upon the premises of the General Medical Council. In brief, the nature of the situation is this: Under the terms of the Act and the interpretation placed upon them, the accounts of the three Branch Councils must be kept separate, and they have each their own treasurer. Each Branch Council contributes to the expenses of the General Medical Council according to a percentage rate, whilst certain charges are borne separately by the several Branch Councils. The General Medical Council has no income beyond the receipts from the sale of the *British Pharmacopœia* and the *Registers*, and from fees paid for registration on the Colonial List. Its expenses beyond the comparatively trifling receipts from these sources are met by the annual contributions from the Branch Councils. Hence the General Medical Council has no accumulated funds, and has given a mortgage on its premises to the English Branch Council. The receipts of the Branch Councils are made up of the fees they severally receive for registration and the interest upon any funds they may have accumulated. For the year 1899 the receipts of the English and Scottish Branch Councils rather more than covered their expenses. But the accounts of the Irish Branch, which only received £812 in registration fees, show a deficit which has had to be met by sale of their accumulated savings, now all but exhausted. It appears that the General Medical Council is paying £215 12s. 6d. per annum to an insurance

company as a sinking fund, which will in course of time extinguish the indebtedness to the English Branch Council. But according to its contribution under the percentage rate, taken for this one year only as an illustration, the English Branch provides about £120 of this sum itself, so it is paying this sum per annum, so to speak, for nothing; or, to put it in another form, is accepting a little more than 2 per cent. for its loan instead of the nominal 3 per cent. Viewed as a purely financial transaction, this appears to be bad business; but it perhaps may be more properly regarded as an endeavour to provide a remedy for the anomaly that the General Medical Council is impecunious, whilst the English Branch, which after all has no status except as a part of the general body, is in a prosperous condition.

The English Branch has all along been the capitalist. It has had to find most of the money required for various purposes, and hence it comes about that this Branch is the virtual owner of the premises and has as security a mortgage upon them. The whole subject of the finances of the Council is under consideration, and a report of a confidential nature from Mr. Muir Mackenzie is before the Council and the Subcommittee appointed to report on the subject.

LONDON'S WATER SUPPLY.

The recommendations of the last Royal Commission on London Water are now receiving the careful consideration of Her Majesty's Government and of the London County Council. The enormous interests concerned, the sanitary and financial questions involved, and the engineering difficulties to be encountered, may be held to justify caution and deliberation in arriving at conclusions which if carried into effect must influence for good or ill the health and welfare of millions who now, or who will hereafter, dwell within the County of London and the adjacent portions of the Home Counties.

The report of Lord Llandaff's Commission, published at the end of January, and based upon the replies to some 30,000 questions addressed to thoroughly representative witnesses, will probably satisfy or even satiate the most robust appetite for this class of literary fare. It is true the terms of reference to this last of a series of Commissions and Committees which have from time to time inquired into the sources and sufficiency of the metropolitan water supply were relatively restricted, but the Commissioners have ranged widely over the whole question, and alike in drafting their able report and in their mode of taking evidence they have not too obsequiously followed the dictates of precedent. It is not difficult to trace throughout the skilful handling and experience of the Chairman, who is better known to the present generation as Mr. Matthews, formerly Home Secretary, than as Lord Llandaff.

The two direct and fundamental questions remitted to the Commissioners were, Is it to the advantage of the public that the undertakings of the water companies of London should be purchased, and if so, into whose hands shall these undertakings pass?

The end to be secured is thus enunciated in paragraph 86 of the report: "A supply of pure and wholesome water, constantly laid on, at such a pressure as will make the water reach the top storey of the highest houses, and in quantity sufficient from time to time to meet the needs of the growing number of the inhabitants." The Commissioners then proceed to show that improvement in quality, regulation of pressure, prevention of failure and of waste, and adequate provision for future needs are more likely to be secured if the water supplies were transferred to a public body instead of remaining in the hands of profit-making companies. This conclusion, which is only in harmony with innumerable precedents, having been reached, the questions at once arise what are to be the terms of purchase, and who is to be the purchasing authority. On these two points the Commission falls foul of the declared policy of the London County Council which there is every reason to believe accurately reflects the opinion of the great majority of Londoners, perhaps more emphatically upon this than upon any other single question.

The Commissioners frankly state (in paragraph 48) that the price to be paid under any scheme of compulsory purchase must be assumed to be such as would be determined by arbitration on the lines of the Lands Clauses Consolidation Acts. If, however, purchase were thus effected, and the purchasing authority were required to provide a sinking fund in the usual way so as to redeem the purchase money in sixty or even in eighty years, either the water-rate must rise or a fresh burden must be imposed upon the ratepayers. We are thus landed in a dilemma with the choice of impalement on the horn of orthodox finance, or on that of the infuriated ratepayer.

When we turn to the findings of the Commission in regard to the authority which it is proposed to invest with the power of purchasing and managing the metropolitan water supplies, there is a fresh crop of difficulties to be faced. The London County Council has been not unnaturally indicated as the body, being the metropolitan health authority, which should perform these duties, or which should at least be the water authority within its own area. Unfortunately, however, following the example of the ill-fated Bill of Lord James, a new Water Board is suggested, consisting of thirty members, of whom one-third are to be appointed by the London County Council, twelve by the Home Counties, six by the Conservancies of the Thames and Lee, with two salaried nominees from the Local Government Board. It would be difficult to conceive any suggested authority more calculated to arouse opposition than the one which the Commission has indicated.

We are glad to note that the report of the Water Committee of the London County Council, which was brought up at the last meeting of that body, deals with the Commission's report in a conciliatory and reasonable tone. It is true it asserts its distrust of arbitration prices fixed under the Lands Clauses Acts, and it stands to its policy of London for the Londoners and municipal control of the water supply, but having regard to the fact that the Council has deposited two Bills in the present session of Parliament—one for bringing water from Wales and the other for acquisition of the companies' undertakings—it has urged the desirability of approaching the Government in order to ascertain their views upon the altered aspect of the water question now that a Royal Commission has unanimously decided that private ownership of London

water supplies should cease. We await with interest the decisions of the Government on this momentous question, attended, as it is, with far-reaching social and sanitary consequences for the future of the metropolis.

THE ARMY ESTIMATES FOR 1900-1901.

UNUSUAL interest naturally centres in the Army Estimates for the coming financial year; not merely as revealing the huge cost of the war, but as indicating how the weak spots exposed in our military organisation are to be met in the future.

The total votes are, of course, very large; the net estimate for effective services being this year £58,323,400, against £17,553,000 last year; but the total number of men on the Home and Colonial establishments (always excluding India) is 430,000, against 184,853. The non-effective estimate is £3,176,000 against £3,064,000 last year. The effective and non-effective votes combined are £61,499,400, against £20,617,200 last year. But even these huge figures are exclusive of the Supplementary Estimates (£23,000,000) voted in October and February last.

The £61,499,400 is split up under the following heads: Normal establishments, £21,777,700 (against £20,096,373 expended last year); future permanent additions, £1,925,000; temporary increases, £6,288,000; war services, £31,568,700. Adding the normal and permanent increase together, we arrive at the future cost of our army, supposing no great disturbing factor meanwhile occurs, at £23,702,700, or £3,606,327 above that with which we began the war. For this we shall have an increase of about 27,600 men, including a heavy and much desired addition to the artillery.

Vote 2—Medical Establishments—includes all proper medical charges, except the regimental pay of non-commissioned officers and men of the Royal Army Medical Corps (£93,100) included in Vote 1. The net estimate of Vote 2 is £555,000 against £305,800 last year, an increase of £249,200, of which no less than £241,300 is for "war services" in South Africa.

This abnormal increase includes £41,800 to the pay, etc., of the Army Medical Service, £700 for contingencies, no less than £120,600 for pay of civilian medical practitioners, £36,300 for corps and extra duty pay of the R.A.M.C. nurses, clerks, and other subordinates, and £50,000 for cost of medicines, etc. It must be noted that the estimate of £555,000 does not include what has already been disbursed, but what will be required to March 31st, 1901; and is no doubt based on the calculation that the war will continue for many months. The "normal" estimate is £313,700, showing an actual increase over last year of only £7,900, which sum it is explained "provides for a further permanent addition to the establishment of officers and men of the Royal Army Medical Corps, to keep pace with the augmentation of the army generally." Whether it does anything of the sort is an entirely different matter.

We naturally turn to the tables, which show where the permanent additions come in. We find the Home and Colonial establishment of medical officers (excluding India) set down at 550 against 543 last year, an increase of 7; and 3,045 non-commissioned officers and men, against 2,792, an increase of 253. While, therefore, the increase of officers is practically *nil*, that of men is fairly substantial. The entire strength, officers and men, of the R.A.M.C. is 3,626, including those employed on the staff of the Militia and Volunteers.

In another part of the Estimates (page 39) we find details of the establishments and their cost. The Indian establishment of officers R.A.M.C. remains as last year at 335. In the Home and Colonial establishments there is a decrease of 1 surgeon-general, and an increase of 3 colonels; but in the whole executive ranks an increase of 5 only, while the number of acting, that is retired, medical officers employed is 85—the same as last year. The total establishments, including quartermasters, is therefore 642, against 636, or a magnificent augmentation of 6 officers! The total establishment of officers, including Indian and acting or retired officers employed is this year 977, against 971 last year. How far this is "keeping pace with the augmentation of the army generally" we are at a loss to imagine.

The "normal" expenditure in the pay of civilian medical practitioners is £13,900, exactly the same as last year. The cost of medicines (£14,000) is also the same. The extra duty pay of non-commissioned officers and men of the R.A.M.C., of nurses, clerks, etc., is £46,000, against £39,700, accounted for by the increase of establishment already mentioned. There is a substantial increase of £16,250 in the cost of the Militia Medical Staff Corps.

Turning to the non-effective vote, which has always a sort of melancholy interest, we find that although the total for the army has increased by £111,800, that for the medical portion has decreased from £201,000 to £186,000; this portion of the vote, as was foretold by actuaries in 1879, reached its high-water mark about 1892, and has since steadily declined. The retired medical recipients have fallen from 492 to 455 during the year; so rapidly are the old race of officers dropping off. Only one inspector and four deputy-inspectors of hospitals now survive; all the other ranks have also declined, except those of lieutenant-colonel and captain, which have slightly increased.

The non-effective vote, being affected by circumstances which cannot be foreseen or controlled, is of course only approximate; and considerable "variations," as they are officially and euphemistically called, are allowed for. At all events, considering the numbers and the great wear and tear of the service, it can no longer, so far as medical establishments are concerned, be stigmatised as "bloated," which was the favourite expression of the "economists" of former days. We shall watch with much interest the discussion on these medical estimates in Parliament.

THE LUNACY BILL.

THE Lunacy Bill has been passed through the House of Lords with great speed. We believe, and we certainly hope, that the other House will use more deliberation in dealing with the defects and omissions which, as we have indicated before, prevent the Bill from reaching a high point of utility and justice. In the Committee stage, in addition to some trifling amendments, two entirely new ideas were imported. By a new clause (11) power is given to a "local authority" to appoint not more than one-third of the visiting committee of its asylum from persons not

members of the local authority. This innovation, simple as it is on first sight, in reality raises a principle of such general importance that astonishment may well be felt that it should first make its appearance in a subsidiary stage of a departmental Bill. It will be remembered that on the institution of county councils great objection was taken in some quarters to aldermen being possibly elected from outside councils, on the ground that no one should have a share in government unless he had been directly elected by the people. Yet now in the quietest possible manner appears a refinement of the idea. The County Councils Association has, in matters such as the superannuation of asylum officers, resented any interference with existing discretion; will not the elector be justified in crying out against any further reduction of his sole right to say who shall manage his affairs for him? In the proposal itself we see no utility, nor can we admit that circumstances have called for such a change, while it has the disadvantage of possibly weakening the voting power of the Committee when it seeks to enforce its views at a meeting of the full Council. But its mere introduction will probably serve the purpose of rendering the Bill contentious, and may thus afford opportunity of offering resistance to other undesirable provisions.

But of the other idea we can speak with unqualified satisfaction. The clause in which it is contained would give power to two or more local authorities to provide and maintain in combination a laboratory for pathological research in connection with lunacy. The idea is borrowed from the practice of the London County Council, which could conveniently carry it out without the assistance of other authorities, and from the combination of several district and other asylums in Scotland, which have for some time past jointly maintained such an institution. The success attending the labours of Drs. Mott and Ford Robertson, the respective directors of these laboratories, amply justifies the extension of the principle to the provinces of England, where, perhaps with the exception of Lancashire and Yorkshire, combined research has been hitherto impossible for want of the power now proposed to be conferred. In many county asylums first-rate pathological work is being done, but existing arrangements have prevented its being carried out consistently and to the fullest extent. As a general rule, the pathologist of an asylum is one of the assistant medical officers, whose time is sufficiently taxed by routine duties; or, if he be specially appointed for pathological work, he is on the footing and salary of an assistant officer, and without any prospect of attaining pecuniary remuneration for his valuable labours such as would justify him in retaining his office for any sufficient time. If the clause passes it will be possible for authorities in combination to offer a salary which would enable an expert to live, and thus highly trained, experienced, and continuous research may be secured, to the possible solution of problems deeply affecting the treatment and cure of insanity. Probably the Scottish laboratory will afford the best model for deciding the terms and conditions of combination, while the laboratory at Claybury probably represents the ideal of a perfectly equipped institution.

No other alteration in the Bill is of sufficient importance as to require notice here.

THE COMPANIES ACTS AMENDMENT BILL.

Side by side with letters in the columns of the London and provincial press which proclaim the hardships of interference with companies which protect unqualified practice, comes an incident that serves to lift the veil which ordinarily shrouds their proceedings. An inquest was held at Eastbourne, in the course of which it appeared that the deceased had been taking the remedies of the Viavi Company, and had not consulted a regular medical practitioner. She had been ill for some time, and had visited Miss O'Dowda, the agent of the Viavi Company at Eastbourne. When the deceased became more seriously ill Miss O'Dowda visited her, and visited her again on subsequent days. A medical man was summoned at the last moment, but when he arrived the patient was dead. Miss O'Dowda alleged that the visits of the patient to her, and her visits to the patient, were paid on the footing of personal friendship, but, according to the *Eastbourne Standard*, Miss O'Dowda first met her through a friend, also an agent. The deceased had also seen Miss O'Dowda's agent, a Miss Brown. Death was due to a duodenal ulcer, a condition always difficult of diagnosis and calling for most careful treatment. The jury brought in a verdict that the death was due to natural causes, but they added an expression of their opinion (we quote from the report in the *Eastbourne Chronicle*, March 3rd) "that the life of the patient might have been prolonged had the deceased been placed under qualified medical treatment; and from the evidence brought before them they consider the Viavi Company a fraud." Evidence was given by a person, who described himself as the medical adviser of the Viavi Company, who is not registered. According to his statement the company was only incorporated as a limited liability company some time since last June, and he denied all knowledge of a letter put in evidence, his connection with the company having begun after that date. The manageress at Eastbourne gave evidence that she gave instructions as to the application of the medicines, judging what was necessary by symptoms. She also stated that every patient received advice by letter from the Hygienic Department in London, which was controlled by a registered practitioner, but this was at once stated by the "medical adviser" to be erroneous. The medicines supplied were a box of ointment, 36s.; box of capsules, containing eighty-four, 36s.; bottle of Viavi liquid, 36s.; box of tablets, 36s.; she was unable to name the ingredients. Unless it is to be contended that the intrinsic worth of the drugs approaches the prices charged, it would appear that the advice and treatment are charged for indirectly. If anything were needed to emphasise the necessity for legal action such as that proposed in the Companies Act Amendment Bill now before the House of Commons, it is furnished by the occurrence of cases such as this. We can only again advise members of the profession to approach their Parliamentary representatives and point out to them the public importance of the provisions as to practice by companies introduced into the Bill last year by the Lord Chancellor. We are sorry to learn that the pharmaceutical chemists are still unable to arrive at an agreement as to the provisions which they should seek, and we learn from the last number of the *Pharmaceutical Journal* that they are submitting two alternative clauses as substitutes for that at present embodied in the Bill before the House. One clause goes the whole length of forbidding company practice whilst the other only requires qualified directors: both alike prohibit the use of titles by the company, the latter restricting it to the name of an individual, which shall be conspicuously displayed. It seems a pity that this difference of opinion should be shown, as it weakens the force with which either alternative can be urged upon the Legislature. We believe that it has also been suggested that a motion should be made upon the second reading of the

Bill to forbid impersonal corporations (or associations of natural persons) to assume the personal titles obtainable by individuals only after examination and registration. It is very questionable whether it would be expedient to move such a resolution. If carried it would in all probability result in the settlement of the question being postponed indefinitely. It is to be regretted that the pharmacists have been unable to agree upon some clause which might have been vigorously pressed upon Parliament. In the present state of feeling amongst the pharmacists this seems to be impossible. On one point, however, they appear to be agreed, and that is that it is wiser for them to seek to obtain a clause of their own than to endeavour to secure a place in the medical clause, which is the position we have taken up from the first.

THE MEDICAL SERVICE AND THE VICTORIA CROSS.

WE are informed that Major Babtie and Lieutenant H. E. M. Douglas, Royal Army Medical Corps, have been recommended for the Victoria Cross for conspicuous gallantry in recent battles. We are greatly pleased to hear it, but, at the same time, note that while the brave actions of those officers have been made known in telegrams and by correspondents at the front, we fail to find mention of them in official despatches, in which recommendations are properly made. We trust, however, that the want of direct official recognition hitherto may not ultimately bar the bestowal of the Cross so devotedly earned. In his letter, published in the BRITISH MEDICAL JOURNAL of January 27th, p. 219, Mr. Treves describes the heroic conduct of Major Babtie at the Tugela battle. On the loss of the guns the surviving artillerymen sought shelter in a donga, and among them, mortally wounded, was the lamented Lieutenant Roberts. "Major Babtie," says Mr. Treves, "rode into the donga through a hail of bullets, and his horse was shot under him; he kept by the wounded men in the donga until the battle was over, and as he alone had water in his water bottle, doled out water to each man, in a minimum measure, 1 drachm to each. The courage and daring of Major Babtie on this occasion call for some recognition from the medical profession, if not from the military authorities." The conduct of Lieutenant Douglas on the Modder River, as described by correspondents, was equally gallant and devoted. He succoured the wounded Highlanders under a murderous fire, and himself received a severe shell wound in the face. Only their great personal modesty, which their friends recognise as characteristic of both these officers, has hindered their heroic conduct from being more publicly known. Whether they receive the Victoria Cross or not, there can be no question that they deserve it. But some recent developments in connection with the bestowal of the coveted decoration have been represented to us as probably militating against their receiving it. First, it is rumoured—we do not know on what good evidence—that the present Commander-in-Chief is against the bestowal of the Cross on medical officers. We cannot believe this, for two good reasons, namely, that such opposition would be absolutely unjust and unreasonable, but chiefly that it would be wholly contrary to the Queen's gracious intention on founding the decoration in 1856. The Cross was to be, and has always hitherto been, given for conspicuous bravery in action, without any distinction whatsoever as to rank, corps, or class. To limit its bestowal on certain classes is outside the power of any official whatsoever, and we may be sure would not be attempted. The chivalrous Sir George White is, at all events, not of that way of thinking, for he told the young officers at Netley in August last that he had recommended more medical officers for the Cross than any other; but he did not say whether his recommendations had been carried out. Secondly, Sir Redvers Buller, in recent despatches, has laid down what seems to be new conditions in recommending officers and men for the Cross. He has, in fact, introduced an element which, much to the surprise of everybody, is made to justify the exclusion of the name of Captain Schofield, R.A., whose supreme bravery and exertions in successfully rescuing some of the abandoned guns, made him, in popular estimation, the certain recipient of the Cross; but he was excluded on the ground that he was only obeying orders and doing his duty. We do not presume to question the strict military propriety of that definition; nevertheless it could clearly be logically stretched to an extent that would, if the general officer in command was so minded, perhaps preclude the possibility of anyone at all being recommended for the Cross. Especially, we foresee, it might be stretched to the total exclusion of medical officers. It may fairly be asked, when, where, how, and by whom can the line be drawn between heroic deeds done under individual initiative, or under orders specific or implied? Is it not a standing duty for medical officers to succour the wounded under all possible circumstances? Did Babtie and Douglas go beyond that standing order? If this new doctrine is to be adopted, the difficulty which conscientious general and other officers will have in its practical application will be exceedingly great. We have no wish to see the Victoria Cross common, much less cheap; but it is clear if it is to be given at all, it must be for acts and under conditions which shall be judged by some standard of public common sense.

THE CONSULTING SURGEONS IN SOUTH AFRICA.

WE understand that Sir William MacCormac intends to leave Durban on March 10th by the ss. *Kaiser*, and expects to reach Naples about April 12th, travelling by way of the Suez Canal. Mr. Treves, who, we are glad to learn, has quite recovered from the indisposition from which he suffered about five weeks ago, intends to leave Durban on March 19th by the *Dunvegan Castle*, and expects to reach England on April 13th. Their departure will still leave five civilian consulting surgeons with the forces in South Africa, namely, Sir William Stokes, Mr. Watson Cheyne, Mr. Makins, Mr. Kendal Franks, and Mr. Cheatle, in addition to Colonel W. F. Stevenson, R.A.M.C., the Professor of Military Surgery in the Army Medical School, Netley. In private letters which have been received in this country Mr. Treves speaks in the warmest terms of the good feeling which has been shown towards him by the officers of the R.A.M.C., and of the courtesy and consideration uniformly extended to him by all the military authorities. The splendid transport with which he was provided made him independent, while the cordial co-operation of the Principal Medical Officers enabled him to move without delay to any point at which his services might be required during the course of the two months' fighting on the Tugela.

MEDICAL ATTENDANCE ON THE FAMILIES OF SOLDIERS AND SAILORS ON ACTIVE SERVICE.

AT a meeting of the Council of the Edinburgh Branch it was unanimously agreed to recommend to the members of the British Medical Association resident within the area of the Edinburgh (Lothians and Fife) Branch that medical attendance on the families of sailors and soldiers on active service should be undertaken without fee during the continuance of the present war in South Africa. The Honorary Secretary of the Bath and Bristol Branch informs us that in response to a circular to the members he has obtained the names of a very large proportion of them, which he has sent to the Local Secretary of the Soldiers' and Sailors' Wives and Families Association. At a meeting of the Worcestershire and Herefordshire Branch on February 27th it was announced that forty-six members had expressed their willingness to

attend gratuitously the families of men serving in South Africa. At the last meeting of the Staffordshire Branch it was announced that 150 practitioners in the county had offered their services in the same way.

THE BIRMINGHAM CONSULTING INSTITUTE.

THE current number of *Forward*, the organ of the Birmingham Hospital Saturday Fund, announces that, after having had the opportunity of considering the applications of numerous highly qualified gentlemen, Dr. Henry Ward Irvine has been appointed the first consulting physician to the Institute. We are told that Dr. Irvine is M.D., B.A.(Medallist), M.B., B.Ch., B.A.O., Classical Scholar of Trinity College, Dublin; Senior Exhibitioner, First Honourman in Classics, Modern History, and English Literature, Prizeman in Materia Medica, etc. The Committee congratulate themselves upon having secured the services of so able a practitioner, and announce that "first-class consulting rooms have been taken," and that it is hoped that work will be begun early in April. "We understand," says the *Birmingham Daily Post*, "that bills, pamphlets, and all detailed information will be supplied during the next few days to the manufactories, trading establishments, and mercantile offices of the city." We regret that a graduate of Trinity College, Dublin, should have accepted a situation which, if the above quotation correctly represents the facts, is to be supported by a system of advertising for patients which is entirely opposed to the traditions of the profession, and, we may add, to the spirit of the recent warning of the General Medical Council with respect to the proceedings of medical aid societies. We still hope that it is not too late for Dr. Irvine to reconsider his position; and we commend the matter to the consideration of the medical professors of Trinity College, who can scarcely be pleased to see one of their graduates allowing himself to be the instrument of an attack upon the medical profession, which, if it could be successful, would be disastrous to its independence.

SPECIAL FACTORY RULES AND ARBITRATION.

THE present time appears particularly opportune for factory legislation. The public for some time past have been expecting it, and working men and women have been educated up to it. Until now dangerous trades have been regulated by special rules and by arbitration. It was an excellent law which gave the Home Secretary power, when he was convinced of the necessity, to schedule certain processes and trades as dangerous, and to deal with such by special rules. These, however, can be objected to by employers within fourteen days of their issue, and as the matter had often to be submitted to arbitration, compromises were only too frequently resorted to in the arbitration court, and thus, as a result of the whittling down that took place, the special rules were robbed of much of their stringency, and consequently of their usefulness. The Bill, introduced by Sir Matthew White Ridley last week, proposes to abolish what he himself called the objectionable system of arbitration, and to provide regulations which, subject to certain specified exceptions, shall be uniform in their application. In the future, as in the past, when new regulations are drafted, a stated time will be given to employers to lodge objections, and if these objections cannot be removed and the difficulties settled by the Home Secretary, it is proposed that a referee shall be appointed who is not a Home Office official, nor in any way concerned in the regulations, who will have power to hear objections in open court. By a large section of the House of Commons and the public the abolition of arbitration is regarded as a most important step in industrial legislation. Arbitration is almost purely a British procedure. On the Continent such matters as in this country would be submitted to arbitration are handled quite differently. The unsatisfactory manner in which health problems were dealt with in the Potteries some months ago has no doubt stiffened the backs of the authorities and driven them to propose the abolition of arbitration. It is sure to meet with considerable opposition in Parliament, but notwithstanding this the Home Secretary will succeed. So far as children under 12 are concerned, it is proposed to make the law applicable wherever the Factory Act applies. Overtime is to be dealt with, as also the protection of boilers. The subject of laundries, which was rather hastily dealt with some time ago, is to be reconsidered so as to bring laundries under the provision of the Act. Few of us look upon laundry work as an unhealthy occupation, and yet what with the long hours spent in over-heated and moist chambers, and the use of chemicals for bleaching purposes, women are known to have suffered much in health. Fish curing, jam making, and creameries, hitherto exempted, are included in the Bill, so that the workers may have the sanitary protection which these trades require. In fish curing, jam making, and trades which deal with perishable articles, it is found necessary to provide for extra hours or overtime, so as to prevent the materials becoming damaged by changes in the weather, but the Bill proposes regulations for such emergencies. The main object of the Bill is to fill up gaps caused by the imperfect dovetailing of previous Acts, and to improve the wording so that administration may be facilitated and subsequent consolidation more easily effected.

THE REGISTRAR-GENERAL FOR IRELAND.

MR. R. E. MATHESON has been promoted from the position of Assistant Registrar-General to the full command of the department. There is a feeling of disappointment among the members of the medical profession that one of their own body has not been selected to succeed the late Dr. Grimshaw. It is hardly possible that an officer who is devoid of medical training should deal adequately with the special statistics which relate to the registration of deaths, but apart from this the new Registrar-General is thoroughly conversant with the details of the work of the office, and has already shown himself to be an adept in dealing with statistics. The labour involved in the compilation of next year's census would have weighed heavily on anyone unfamiliar with such work, and the fact that Mr. Matheson could continue Dr. Grimshaw's duties in this respect without a hitch no doubt had exceptional weight in his selection. It was pretty generally believed that the position of Assistant Registrar-General would be given to a member of the medical profession, and that the objection which had been raised against the appointment of a non-medical man as Registrar-General would thereby to a certain extent have been removed. This, however, has not been done, for the vacancy has been filled by the elevation of a senior clerk. This arrangement is eminently satisfactory to the officials in the office, who have done their work well, but on broader grounds it is greatly to be regretted that the valuable work done by the late Dr. Grimshaw cannot be continued by a medical man, whose training and special knowledge would have been infinitely more valuable than a mere clerical experience in the office. It is stated that the intention of the Government is to appoint a medical referee on whom would devolve the duty of supervising all statistics relating to medicine. This position will probably fall into the hands of a competent authority, but at the same time it is to be deplored that the opportunity has been let slip.

MALLEIN IN GLANDERS.

A RECENT report issued by the Tramway Department of the Glasgow Corporation has attracted considerable attention, and is very important as demonstrating the value of mallein as a diagnostic and, it may be, also as a curative in glanders. The tramway stud of horses is a large one—at present 4,439

—and therefore the experience of the manager and of the veterinary surgeon in this matter is very important. During the last few years up till July, 1899, the stud enjoyed almost complete immunity from glanders, but at that date two animals destroyed after severe street accidents were found to be affected with the disease, although they had shown no clinical symptoms. All the horses from the same depôt as these two were thereupon submitted to the mallein test, and of over 700 about 10 per cent. reacted and were destroyed, although apparently in good health. In the majority of these animals the disease was found in its very early stages. The test was then applied to the animals in several of the other depôts and revealed the unexpected fact that a large proportion of the horses reacted, although to all appearance in splendid condition. This led the authorities to adopt isolation of reacting animals instead of their destruction, and the repeated application of the mallein test on these isolated animals showed the interesting fact that they gradually ceased to react. Indeed, of 278 animals that reacted on the first test with mallein not one reacted on the seventh test, and these animals were all drafted back to work. The report affords one more proof that glanders may be rapidly and widely disseminated even through well-managed studs and stables without any clinical evidence of its presence. It may perhaps be taken to indicate that mallein is not only a valuable diagnostic, but also has some controlling power over, if not curative action upon, the disease. The Tramway Department now test all horses as soon as possible after purchase, and thereafter every three months. Any animals that react are at once isolated, then tested monthly, and only returned to work when the last two injections of mallein have failed to produce a reaction. The experience of Glasgow in this matter should be important in all centres where there are large studs of horses, and where glanders is always looked upon with dread.

THE APPLICATIONS OF ELECTRICITY IN MEDICAL AND SURGICAL PRACTICE.

On March 8th Dr. Lewis Jones, by invitation of the President of the Institution of Electrical Engineers, delivered an address before that body on the applications of electricity in medical and surgical practice. Electrical departments were in existence in some of the London hospitals a hundred years ago. At St. Thomas's in 1799 the department was under the charge of Mr. Birch, a surgeon, who had left an interesting Letter on Medical Electricity, which was printed in a book entitled *An Essay on Electricity* by George Adams. John Freke, F.R.S., who was elected Surgeon to St. Bartholomew's in 1729 was incidentally referred to by Fielding in *Tom Jones* as an authority on medical electricity. The progress of medical electricity during the last decade had been very great. The commercial application of electricity and its house-to-house distribution by electric lighting companies had called into existence a large number of new instruments and new methods of treatment, and was helping the spread of the study of the subject by simplifying the means of obtaining the current when required. The accumulator had been of great service by affording a trustworthy source of currents for the use of surgeons in their galvano-cauteries and exploring lamp instruments. The discovery of the x rays and their application to surgery and medicine had also done good by bringing electrical apparatus into more extended use. Most of the London hospitals now had electrical departments, and these were of manifest utility. At St. Bartholomew's Hospital they had about 600 cases referred yearly to the electrical department from all quarters of the hospital, exclusive of the cases for x-ray photography, the numbers of which were even greater. And the results of the treatment would compare favourably with those in any other branch of medical practice. The use of electricity in the production of hot-air baths with incandescent lamps or electrically heated coils of wire as the source of heat was a development of some promise; while in the immediate future could be seen the approach of new methods of treatment by the light of the arc lamp. The employment of electricity in disease was very largely an application of its capacity of stimulation. Beard and Rockwell in the United States, and Débédat in France, had shown experimentally that in young rabbits the rate of growth could be accelerated by suitable electrification. D'Arsonval by calorimeter observations and chemical analysis of the expired air had established the fact that electrification increased the activity of the tissue exchanges of the body. Capriati had recently shown by careful dynamometric researches that the application of electricity to the central nervous system in the form of a continuous current along the spine undoubtedly increased muscular power, and applications to the limbs had the same effect. In the United States it was becoming fairly common for athletes to undergo electrical treatment when preparing for a contest. General electrification applied to cases of simple failure of nutrition, such as weakness after illness or debility of any kind, produced a rapid improvement in the condition of the patient. In rickets electrical applications had a very high value. The more complex forms of defective nutrition, such as rheumatism, gout, and diabetes, were not yet completely controlled by electricity, but indications were not wanting that in time good results might be expected. Already electricity was doing much for these conditions. After referring to the limitations to the usefulness of electrical treatment in paralytic conditions, to its beneficial effect in the relief of pain, and to the utility of electrolysis in the treatment of small tumours, Dr. Jones went on to describe in detail the types of electrical apparatus in use at the present day, and to compare them with those formerly employed. Speaking of high-frequency currents, he said their application to medical practice had not had much extension. The brush discharge had been applied locally to the skin, and had seemed efficacious in curing certain cutaneous diseases. The use of electricity for generating ozone for medical purposes was attracting some interest, but the rapid development of electricity in so many directions of late years had given medical men just at present so many fresh things to handle that ozone in its medical application was waiting till someone had time to attend to it.

SMALL-POX IN THE EARLY DAYS OF CAPE COLONY.

In his able account of South Africa[1] Mr. Theal gives some interesting facts as to the first appearance of small-pox in Cape Colony in March, 1713. The disease was introduced by clothing belonging to ship's people who had been ill on the passage from India, but who had recovered before arriving at Table Bay. The clothing was sent to the Dutch East India Company's slave lodge to be washed. The women who handled it were the first to be attacked. The disease then spread to the Europeans and natives, the death-rate being, of course, very high. The historian states that in May and June there was hardly a family in the town that had not someone sick or dead. Nearly one-fourth of the European inhabitants perished in the country districts. The disease was less severely felt owing to the sparse population. Among the free blacks the mortality was very great, the Hottentots suffering most. Whole kraals disappeared without leaving a single representative. There was a second outbreak in the winter of 1755, the disease being this time introduced by a homeward bound fleet from Ceylon, also a Dutch colony at that time. Mr. Theal remarks that at first the

[1] *South Africa.* By George McCall Theal, D.Lit., LL.D., late Cape Colonial Civil Service. 5th Edition. 1899. (Story of the Nations Series, pp. 71 and 80.) See also same author's *History of South Africa*, in 5 vols for original references.

disease was supposed to be a kind of fever, but after a few days there were cases that admitted of no doubt. It assumed various forms, and among some of the distant Hottentot tribes differed so much from what was held to be true small-pox that the Europeans termed it gall-sickness. Whether this outbreak was due to small-pox or to some other disease (cholera or bubonic plague) cannot be made out from the necessarily scant details given in Mr. Theal's *South Africa*. According to Tembu traditions, the territory between the Kei and the Bashee was almost depopulated by the small-pox.

OVEREATING AND CANCER.

THE abundance of food, which is one of the results of our national prosperity, is on the whole a most powerful factor in the improvement of the public health. But the high standard of general nutrition thus maintained appears to be not without its drawbacks. More than one hygienic prophet has lately uplifted his voice in warning as to the evils of overfeeding. Sir Henry Thompson has preached from this text with all the weight of his authority, and Dr. George Keith has advanced a strong plea for a simpler life. In his Lettsomian Lectures, delivered before the Medical Society, Sir William Banks takes up the same parable, and points the moral by suggesting that the increase in the number of deaths from cancer is due to the over-eating which is almost universal even among the poorer classes of the population. The theory is not altogether new, but it undoubtedly acquires new strength from the adhesion of a surgeon of his experience and sagacity. He points out that the increase of cancer coincides with an increase of food throughout the country. Ever since the passing of the Corn Laws, he says, bread has been cheap and plentiful, while during the last twenty years the importation of animal food from other countries has been enormous. The increased wages and emoluments of all classes in this country have enabled them to purchase freely of the best there is to be had in the whole world of things to eat and drink. Our working classes fare admirably. Our better classes eat infinitely too much, especially of animal food partaken of at breakfast, lunch, and dinner. But for the athletic tendency of the age and the general passion for games and exercises which pervades all classes, this over-stuffing must have proved very dangerous. Sir William Banks is pretty well convinced that, when a man is over 45, excess in food is perhaps worse for him than excess in drink, and believes one of the results of too much nourishing food is the production of a widely-spread, second-rate kind of gout, of a different type from the acute and furious attacks produced in former days by the copious drinking of beer and port wine. Sir William Banks is distinctly of opinion that it has also to do with the increase of the constitutional tendency to cancer. The theory is supported by the fact that the increase of cancer in males has been more rapid than in females. And it is precisely the male population that eats heavy food in ever-increasing quantities, whereas the female remains much as she was before in this respect. Sir William Banks has added a striking illustration of the soundness of the epigrammatic aphorism of the mediæval physicians *Modicus cibi medicus sibi*.

NAPOLEON'S SURGEON AT ST. HELENA.

THE *Century* for March contains a further instalment of Dr. Barry O'Meara's Talks with Napoleon. There is little in it of medical interest, and indeed even in the larger sphere of history it is mostly a chronicle of small beer. One day we are told that the illustrious prisoner asked several questions about the teeth, and seemed to be apprehensive that some of his were becoming carious. More than once he curses the climate of the island where he was confined. The following entry appears to show that he did not always take the counsel given him by his medical adviser quite seriously: "He complained of pain in his side, probably rheumatic, said it was caused by the humidity of the climate. Asked some questions about his liver, I advised him to rub his side well with a flannel cloth and some eau de Cologne. He laughed, looked at me, and gave me a gentle slap in the face, laughing." Some days later, he found the Emperor still curious about his liver. The following entry shows that among the innumerable difficulties which poor O'Meara had to contend with was the great lady with pronounced views of her own on medicine whom many practitioners know too well: "Spoke to N. in Mme. Montholon's room. N. said he had still a pain in his side, and asked several questions about the liver, and made me show him the situation of it on my own body. Asked the symptoms of hepatitis and what caused it. Said that he thought this climate was not sufficiently hot to cause it. I gave him some explanations, and *Dr. Mme. Montholon* immediately entered into an elaborate lecture upon hepatitis. Described with great knowledge that there was sometimes inflammation on the convex and sometimes on the concave side of the liver. Entered into some of the symptoms which she had got by heart out of Buchan's *Domestic Medicine* translated into French." O'Meara told Napoleon that intoxication was a frequent cause of hepatitis, especially when combined with the effects of a hot climate. This uncourtierlike statement drew from the Emperor the following confession: "'Then,' said he, 'I ought not to have it, as I never was drunk but once in my life, and that was twenty-four years ago, at Nice.... I drank three bottles of Burgundy, and was completely drunk. Oh, how sick I was the next day! I wonder how a man who once gets drunk can ever think of doing it again. Such headache, vomiting, and general sickness; I was nearly dead for two days.'" We commend this anecdote and the reflections of the illustrious penitent on the consequences of his single debauch to temperance orators. An impressive picture might be drawn of the mighty conqueror overcome by an enemy too strong even for him, and repenting in sickness and sorrow for two days afterwards.

RESUSCITATION OF THE APPARENTLY DEAD NEWBORN.

AMONG the various methods of resuscitating the apparently dead, the one suggested by Laborde has only recently begun to occupy the place to which its value entitles it. It is, perhaps, best known as a means of reviving patients who stop breathing under chloroform: its application to the drowned and the hanged (by suicide) widened the area of its recognition; but no doubt its most frequent use in the hands of practitioners will be found to be in connection with asphyxia neonatorum. The pallid or greater degree of asphyxia in the newborn is often a cause of great anxiety to the obstetrician, and, when Hall's or Sylvester's artificial respiration, Schultze's swinging, Prochownik's feet suspension, and other expedients have failed, a plan that promises success will be welcomed. Its value does not, however, simply consist in its being a last resource. Fronczak, who reports[1] four successful cases of its employment, points out several advantages which it possesses, even at the outset, over older methods. Of these advantages, two stand out prominently: In the first place, the child is kept in a warm bath all the time, and is thus saved the sometimes disastrous cooling of the body surface which may follow swinging and other manipulations; and, in the second place, there is no physical tax on the medical attendant's endurance, and this is a really important consideration, in view of the fact that half an hour or an hour may be spent in the efforts at resuscitation. To illustrate the cases in which good results may be obtained we may quote two of Fronczak's: In one, after

[1] *Buffalo Medical Journal.*

version, performed for a shoulder presentation with prolapse of the arm, the head remained some time fixed and the child was born in deep asphyxia. The Schultze and Prochownik methods were tried without results; then the child was put into a warm bath, and Laborde's rhythmic traction of the tongue, at the rate of 25 a minute, was performed; after ten minutes the child slowly revived. In another case of transverse presentation with prolapse of the cord the child was born asphyxiated after version; sprinkling with cold water and putting the child in a warm bath were without result, and the pulsation of the heart was not apparent. With Laborde's method at almost every traction of the tongue there was slight respiratory movement, which ceased as soon as the tractions were stopped. After several minutes the child gradually began to breathe. Laborde's method is as follows: After the nose and mouth have been cleared of mucus, traction is made on the tongue, about 20 to 25 times a minute, by means of two fingers wrapped in a handkerchief, the child being meanwhile supported in a warm bath. Perseverance is the watchword, even if no results are seen for some time. The tongue at first will give no resistance; after awhile it resists positively; soon very mild respiratory movement is noticed; then all is quiet. In a short time the breathing is stronger and has a normal character, and the child begins to cry, move, etc. The method is certainly simple, and as it has been found effective it appears to be worthy of further trial.

CHINESE MEDICINE.

An interesting account of medical education and practice in China is given by Dr. W. S. Caldwell in a recent number of the *Journal of the American Medical Association*. The Chinese show their proverbial conservatism in nothing more than in medicine, with the result that both their theory and practice are of the most primitive description, and remain much what they were at the beginning of the Christian era. The profession is looked upon as a trade, and the true Chinese scholar regards it as a sphere too low for a man of learning to occupy. A young man who wishes to study medicine is apprenticed to a practitioner for three years, at the end of which period he is supposed to be fit to practise on his own account. No anatomy, physiology, chemistry, or pathology is taught, and such textbooks as exist consist for the most part of extracts from the writings of Confucius or even earlier authors. The Celestial physician always visits his patients, if possible, in the early morning, considering that at this time he can form a better opinion of the nature of disease. So much importance, indeed, is attached to an early visit that an extra charge is made for all those paid before noon. Clinical examination is restricted to feeling the pulse, and the diagnosis is formed on the data so obtained, aided by questioning the patient. The Chinese materia medica is very varied, and comprises the tissues of various species of animals, their excretions, and a vast array of vegetable substances. In one dispensary attached to a native hospital which Dr. Caldwell visited he saw a large bottle containing a snake about 2 feet long macerating in red wine, and was told that the resulting fluid had a high reputation in the treatment of amenorrhœa and other menstrual derangements. The Chinese doctor's prescription frequently contains as many as twenty-four ingredients. All medicines are prepared in the form of decoctions, and the quantity of liquid when ready for use is usually about a pint. This the unhappy patient is expected to take in one dose, administered generally in the early morning. Chinese therapeutics are rendered particularly complicated by the fact that the organisation of the two sexes is looked upon as different, and the treatment for male and female patients varies in consequence. Surgery forms a very subordinate part of practice, and the knife is seldom used except occasionally to open an abscess which is on the point of bursting. The horror of cutting operations, and especially of amputations, universal among the Chinese, is not due to want of courage, for they bear pain well, but to their belief that if once mutilated they will remain so through all the innumerable mutations through which they believe they will pass after death. Chinese practitioners possess considerable skill, apparently, in the treatment of fractures, and apply splints and bandages well; and though they never attempt extension, their results are said to be good on the whole. Cases of severe compound fracture are left to Nature until a complete line of demarcation has formed and the soft parts have sloughed away, when the surgeon saws off the projecting ends of the bones. Needless to say, antiseptics are not included in his armamentarium. The practice of obstetrics is entrusted to a set of ignorant midwives; gynæcology enters very little into the Chinese physician's work, as the women have a great objection to being examined by men. The various missionary societies have done good work in establishing centres for medical education on Western lines in China. One of the most important of these is St. John's College, Shanghai. The number of students in the medical faculty is limited to eight, and before commencing their curriculum they must graduate in the literary department of the College. Two years are devoted to the elementary subjects, and another similar period to practical work in the St. Luke's Hospital. The teaching of anatomy is much handicapped by the fact that dissection of human bodies is prohibited. In lieu of it, demonstrations are given on a French manikin, supplemented occasionally by the body of a monkey. Another good school of European medicine is conducted by the officials of the Red Cross Hospital at Canton, and at Tientsin the medical college is still supported by the Chinese Government. The class here consists of some 30 students, all of whom are destined for places in the army or navy, and are selected by competitive examination. The Hong Kong school is still, we believe, the most important institution for training natives of China in Western medicine.

THE MEDICAL SCHOOL BUILDINGS AT CAMBRIDGE.

The Council of the Senate of the University of Cambridge propose to assign £6,280 towards the erection of new buildings for the Medical School. This amounts, with the gifts already made specifically for this object, to a sum of £11,850. As the erection of the complete block will cost at least three times this sum, there is still ample room for further benefactions.

CHAIR OF CLINICAL SURGERY, GLASGOW UNIVERSITY.

We understand that Dr. George Buchanan, Professor of Clinical Surgery in the University of Glasgow, has resigned his chair. For the past few months his health has not been satisfactory, and this has led him to seek relief from his professorial duties. Professor Buchanan has been a member of the medical profession for more than half a century, having qualified in 1849 as a Licentiate of the Royal College of Surgeons, Edinburgh, and taken the degree of M.D. at St. Andrews in the same year. Three years later he became a Fellow of the Faculty of Physicians and Surgeons, Glasgow, and a few years ago the honorary degree of LL.D. was conferred upon him in recognition of his important services to surgery. He served in the Crimean war as a civil surgeon. He has held important positions in Glasgow. He was one of the surgeons in the Glasgow Royal Infirmary, and also the Professor of Anatomy in the Andersonian Medical School. When the Chair of Clinical Surgery was founded in the University of Glasgow in 1874 Dr. Buchanan received the appointment, and became one of the Surgeons in the Western Infirmary; he has thus held both of these posi-

tions for nearly twenty-six years. He has contributed largely to medical literature, and former students will not soon forget his original and graphic methods of clinical teaching. It is hoped that he may yet be spared for many years to enjoy the retirement which he has now obtained.

THE HEALTH OF LADYSMITH.

We have received the following telegram, dated Pietermaritzburg, March 5th, 11.5 A.M., from Mr. Treves, Consulting Surgeon with Sir Redvers Buller's Force: "I and Nurse McCaul entered Ladysmith Friday; first woman in. State of town most deplorable; 800 typhoid. Ample and lavish supplies and comforts now in."

The Duke of Cambridge, K.G., President of the Sanitary Institute, will preside at the annual dinner of the Institute, which will take place on Friday, May 11th.

We regret to have to record the death, on March 4th, of Dr. William Marcet, F.R.S., well known for his researches on respiration. Dr. Marcet, who was in his 72nd year, died at Luxor, Egypt.

Mr. Henry Croly has been elected to the vacancy on the surgical staff of Mercer's Hospital, Dublin. He is son of Mr. H. Gray Croly, Senior Surgeon to the City of Dublin Hospital.

The first annual general meeting of the members of the National Association for the Prevention of Consumption and other Forms of Tuberculosis, will be held at 20, Hanover Square, London, on Tuesday next, at 3 P.M. The Earl of Derby, K.G., will take the chair.

Two special meetings of the Chelsea Clinical Society will be held in the Holy Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., on Tuesday, March 13th, and Tuesday, March 20th, at 8.30 P.M., when a discussion on the Treatment of Rheumatism, with Special Reference to Prophylaxis and Cardiac Complications, will be opened by Dr. William Ewart. Among those who have promised to take part in the discussion are Dr. A. E. Sansom, Dr. David B. Lees, Dr. Archibald Garrod, Dr. Pye-Smith, Dr. Burney Yeo, and Dr. Isambard Owen. Sir Richard Douglas Powell will deliver a closing address on March 20th.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Bill was down for second reading on Monday last, but as the House sat late on that night over the Budget proposals it was formally postponed to Thursday, as were several other Bills. These postponements will occur regularly now, and it behoves those opposed to the Bill to watch it at the close of public business, lest it should slip through in a small House in the absence of any objection.

The Local Government (Scotland) Bill, which is introduced by Mr. Nicol, and is down for second reading on March 14th, contains two clauses of medical interest. Clause 17 proposes that a medical officer "shall be removable from office only by or with the consent of the" Local Government Board; and Clause 18 gives to a parish council or the committee of management of a poorhouse, power with consent of the Local Government Board, to grant to any officer or servant incapable of discharging his duties by reason of infirmity or age, an annual allowance not exceeding two-thirds of his salary. The Bill follows the lines of the Government Bill of 1895, but has not much chance of passing unless supported by the Government.

The Factory and Workshop Acts Amendment Bill was introduced by the Home Secretary on March 2nd. He said that it dealt with the regulation of dangerous trades and abolished the system of arbitration. The regulations when made are to apply uniformly, subject to certain specified exceptions. The regulations will be published in draft form; objections can then be considered, and if not settled by the Home Secretary, decided by a referee. The regulations might prohibit the use of any material or process which was dangerous. The Bill also deals with sanitation as regards outwork in unhealthy places, with overtime, and with accidents from boilers. It also proposes to deal with laundries, and to include fish-curing, jam-making, and creameries in its purview, so as to give proper sanitary protection to the workers. The Bill extends to 46 clauses, and does much to simplify the register, and lessen the number and volume of the returns. The general object of the Bill is to fill up the gaps in the existing Acts, amend imperfect wording, facilitate administration, and prepare for consolidation of the law.

The Public Health (Sanitary Inspectors' Qualification, &c.) Bill seeks to place sanitary inspectors in the same position as Poor-law medical officers as regards their appointment and tenure of office. The inspector is not to be appointed for a limited period, and shall not be removable except with the consent of the Local Government Board. He will also be required after the passing of the Bill to hold a certificate of competence satisfactory to the Local Government Board, unless he has been for three years consecutively an inspector within the meaning of the Act. The Bill protects the rights of existing inspectors, and provides that an inspector may hold office in any two or more districts subject to the sanction of the Local Government Board. The Bill is introduced by Mr. Thornton, and backed, among others, by Sir Walter Foster. An attempt was made to get a second reading late on Wednesday, but objection was taken.

Homes for Inebriates.—In answer to a question by Sir Charles Cameron, who called attention to the complaints of magistrates as to the want of homes except for Roman Catholics, the Home Secretary informed the House that the complaints were made under some misapprehension as to the facts. In reality, 100 females and 2 males have been committed to, and received in, certified reformatories, and of these 59 are Protestants. More accommodation is needed, and action is being taken by many local authorities with a view to providing it.

The Taunton Corporation Bill gave rise to a brisk debate on Tuesday on an instruction moved by Mr. Strachey to direct the Committee to provide in the Bill that the powers of the Corporation to inspect cows and dairies outside the borough be not exercised without a previous order of two justices sitting in petty sessions, and that such order be not made unless the said justices are satisfied that the local authority of the district has not already dealt with the case. The instruction was resisted by the President of the Local Government Board, and spoken against by Lord Edmund Fitzmaurice and Sir Walter Foster, on the ground that the public health would suffer by the needlessly complicated method of obtaining inspection. The Bill provided that the order of one county justice shall be obtained. This would not mean much loss of time, but the order of two justices in petty sessions might lead to delay in face of an epidemic of disease which could only be stopped by the prompt discovery of its source in some dairy outside the borough. A strong plea was also made for each county to appoint a medical officer of health. Finally, the instruction was rejected by a majority of 63.

The Companies Bill has been put down for second reading on Monday next, but will not be taken on that day. So much interest is excited by the measure that the Leader of the House has promised at least three days' notice of the second reading. It will probably prove the most contentious Bill of the session. The second clause which affects pharmacists, and the third which would prohibit a company from carrying on the work of a physician, surgeon, dentist, or midwife, are already exercising the minds of members. The pharmacists wish to be placed more in the position of a profession, and these views, if unwisely pushed, may have serious consequences, and, it is feared, may cause the loss of clauses which, it is recognised, would be most beneficial to the public.

THE WAR IN SOUTH AFRICA.

AFTER SPION KOP.

By Frederick Treves, F.R.C.S.,
Consulting Surgeon with the Forces.

Spearman's Camp, on the Tugela, February 7th, 1900.

Shell and Shrapnel Wounds.

As I mentioned in my last letter, the wounded from the battle of Spion Kop on January 24th presented a very large proportion of shell and shrapnel injuries. In spite of every possible care, the shell wounds, almost without exception, have done badly. We had over 30 deaths within the week after the battle, and these were nearly all cases of shell injury. The wounds are of the worst type, contused and lacerated, and very often contain dirt, fragments of stone, and even grass. The men at the time of the battle had had a week of hard work and hardship, and were unnerved by the terrible experience on the summit of the hill. A good number of primary amputations were found necessary, and a still larger number of secondary amputations. As an example of the latter I may mention the following case:

Amputation of the Upper Limbs by Berger's Method.

A man was wounded in the right shoulder on January 24th by a Mauser bullet at short range. The bullet entered at the outer side of the limb, about the centre of the deltoid muscle. It passed through the ala of the scapula, and was ultimately found under the skin near the vertebral column. It was much distorted. The tissues at the back of the shoulder were abraded and contused by a fall upon stone. Dr. Nuttal, under whose care the patient was, enlarged the wound and found great shattering of the humerus about the surgical and anatomical necks. Permission for amputation had not been given by the patient, and the limb was adjusted on splints. The wound suppurated and the patient rapidly lost ground. I was of opinion that an amputation of the shoulder-joint would hardly be possible owing to the state of the soft parts. It was evident also that the head of the humerus was shattered. The scapula was shot through. I therefore proposed the amputation of the entire limb—including the scapula and the outer two-thirds of the clavicle—by Paul Berger's method. This operation I performed on February 3rd. The joint was found to be full of pus and fragments of bone. The patient has so far done very well. I imagine this to be the first occasion upon which this operation has been done on the field.

Colotomy for Wound of Rectum.

One case presented a curious complication. A man was shot through both hips by a Mauser or a shrapnel, probably the latter. The lower end of the rectum was wounded in two places, and in due course fæces and flatus were passed through each of the gluteal wounds. In one of these wounds the hip-joint was involved. The wound in the rectum was easily felt on anal examination. The man's condition was absolutely deplorable, and his pain intense. The question was, should the case be left, or should the lower end of the rectum be excised, or should left colotomy be performed? We decided to perform colotomy, and this was carried out by Dr. Nuttal. There were many difficulties in the way of a direct operation upon the rectum.

Wounds of the Thorax.

Many of the wounds of the thorax have been attended by pneumothorax, hæmothorax, and empyema. Taken as a whole this series of cases has done well.

The Telephone Probe.

Before I left England Dr. Hedley—the physician in charge of the electrical department at the London Hospital—kindly lent me a telephone probe. This instrument has been of the very greatest possible service, and it has proved to be absolutely reliable and very easy to manipulate. As we have no Roentgen ray apparatus at the front, I do not know what we should have done without this handy little instrument. In compound fractures with comminution of the bone, it is impossible by any ordinary examination to tell a distorted and broken-up Mauser from a fragment of bone. The probe reveals the metal at once, and will detect the smallest fragment. I have a piece of a Mauser picked out of a compound fracture by the probe, which has precisely the feel to the finger and common probe of a fragmentary bone.

(The news has just reached us that a Roentgen ray apparatus is on its way to this field hospital.)

Abdominal Operations.

But little encouragement attends upon abdominal operations.

1. The first argument against laparotomy rests with the fact that a very large number of cases in which the patient has been shot directly through the abdomen have recovered perfectly without operation. As examples of such recovery I may mention the following:

Point of entry near navel, and point of exit by side of second lumbar vertebra.

Entry directly over stomach, and exit by upper part of right loin.

Entry in anterior part of one loin, and exit in other loin.

Entry at tip of eleventh rib, and escape through the opposite axilla.

2. The second point is this: The Mauser is apt to make a small hole in the bowel, which hole may be closed by apposition with an adjacent coil of intestine.

3. In the third place abdominal operations are not very easy in a place where the supply of water is very limited, and where washing—as of towels, etc.—is difficult to provide for. Major Kirkpatrick has surmounted these obstacles in a very able manner, but still they cannot be quite got over.

The appliances I took with me for abdominal operations get over all difficulties as to really efficient and sterile sponges, sterile silk, etc., and a sterile instrument tray and sponge dish. They also provide a reliable means of making a carbolic solution. The whole tin is so small that three can be carried in a capacious coat pocket.[1] They are, however, still far from perfect.

4. In the fourth place, the injury in many of the cases is very extensive. As an instance, I may quote the following example:

A man was knocked down by a Mauser in the engagement of Monday, February 5th. I witnessed the engagement, and saw the rifle fire and shell fire to which the men were exposed. He was hit at long range, and fell about 1 P.M. He was brought into hospital on a stretcher, having been carried by hand all the way. He came in at 5.30 P.M., having had to wait until the infantry and field artillery had retired. I saw him at once. He was blanched and somewhat collapsed. His pulse was small. He answered all questions promptly. He had had an injection of morphine when picked up, and had vomited twice. There was still much pain, but the abdomen was quite flat. There was evidence of considerable peritoneal hæmorrhage. The wound was a Mauser wound, and was over the left tenth rib in the mid-axillary line. There was no point of exit, but a well-marked ecchymosis of the right parietes at the tip of the right twelfth rib suggested the position of the bullet. The case seemed favourable for operation, and I carried out a laparotomy by median incision at once. The following condition was found: Fracture of tenth rib, lacerated hole in the spleen, enor-

[1] These appliances have been already described in the British Medical Journal.

mous quantity of blood in the peritoneal cavity and evidently from the spleen, a linear rent in the upper jejunum 1½ inch long, four holes (entry and exit) in the jejunum at its very commencement, a hole in the lower part of the right lobe of the liver. All the five wounds in the bowel were carefully sutured, the smaller holes requiring—in addition to a continuous suture of the mucous membrane—from 3 to 6 Lembert sutures. I found the bullet lying loose under the liver. The wounds in the solid organs had ceased to bleed, and were not touched. The whole peritoneal cavity was flushed out with hot water, which had been passed through a Berkefeld filter after having been boiled. The operation of necessity occupied a considerable time. The patient died shortly after he was removed to his tent.

THE OPERATING TENT.

I may say that these operations are done practically in the open air, that is, under the shelter of a widely-opened square tent. The light, therefore, is good. A great trouble is from flies; they cover the surgeon's hands, and with all care cannot be kept from alighting on exposed intestine, etc. The flies in this camp are nearly as bad as they were at Frere, where they constituted a real plague.

THE LEE-METFORD.

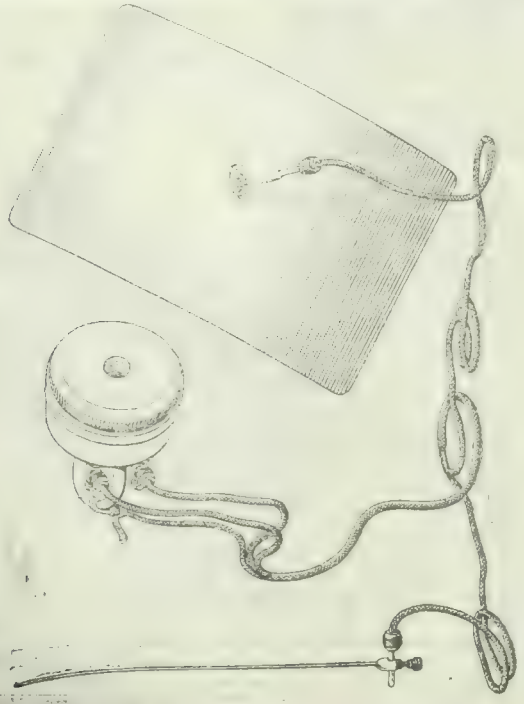
We have a certain number of wounded Boer prisoners in the hospital, and it is evident from their wounds that the Lee-Metford bullet is not so merciful as the Mauser.

GENERAL WOODGATE.

I am sorry to say that General Woodgate is not progressing favourably, and is indeed losing strength. I had to remove the damaged eye. The General is free from pain, but is seldom really conscious, although he recognises his friends and answers a few questions.

THE TELEPHONE PROBE.

The following description of the telephone probe, taken from Dr. Hedley's recent work on *Therapeutic Electricity and Practical Muscle Testing*, together with the accompanying illustration, for the use of which we are indebted to



Dr. Hedley and to Messrs. J. and A. Churchill, the publishers of his book, will explain the construction of the probe to which Mr. Treves refers:

"It was de Wilde, a civil engineer, who (1872) first proposed the use of the electric bell as a signal of a metallic body in the tissues. An improvement on this is the telephone probe. Its action depends on the difference of potential between two different metals, and upon the delicacy with which the telephone will disclose an electric current so engendered. A thin sheet of pure silver is placed upon an indifferent part of the body, and attached by means of a wire having a telephone in circuit to a silver probe or heavily-plated exploring needle. If the probe be inserted into the tissues the telephone is silent because there is no difference of potential that the telephone will register; but immediately a metallic body other than silver is touched there is a fall of potential, a current is produced, and the telephone indicates the fact. Used to verify the localisation of foreign metallic bodies whose presence has been shown by radiography, this probe is a strikingly effective device."

THE BASE HOSPITAL, CAPE COLONY.

[FROM OUR SPECIAL CORRESPONDENT AT CAPETOWN.]

February 14th, 1900.

NEW BEARER COMPANIES, CAPE MEDICAL STAFF CORPS.

In my last week's letter I was compelled to point a few minor details in which it seemed as if the extraordinary strain of the campaign was apparently overtaxing the *personnel* of the medical authorities. The only wonder is that more weak spots have not been evident, considering how fruitful this war has been in surprises, and how utterly it has falsified all expectations as to its duration and magnitude. When we reflect that Great Britain has never, during the whole course of her national existence, put into the field forces of anything like the magnitude of those engaged in the present campaign, and that it has to be carried on in a country singularly deficient in natural resources and in means of communication, it is possible to form some estimate of the difficulties which have met the medical authorities in common with their colleagues in every branch of the service. It is not too much to say that everything in this war has to be carried on under what are experimental conditions. If, until the experiments had been tried, the British taxpayer had been asked to equip and maintain an army medical establishment sufficient to deal with the present crisis, he would have retorted that such a premium was an altogether fantastic measure of national assurance. But it is satisfactory to be able to note the extent to which the authorities here have developed the improvising faculty. Even the small defects which I mentioned last week, and which I hardly thought were remediable, are being so rapidly put straight that in a week or two they will be probably non-existent. It has often been said by Colonials that the British soldier is hidebound by tradition, and will not deviate one inch from the beaten track. This war certainly disproves that assertion so far as medical matters are concerned. The capacity shown for original arrangements has been simply marvellous. Since my last letter the startling, but manifestly common-sense, departure has been taken of determining to practically break up the bearer companies of the R.A.M.C., substituting therefor newly-raised companies of the Cape Medical Staff Corps, and thus setting free the highly-trained regulars for ward work at the hospitals. As I pointed out in a previous letter, hospital orderlies cannot be improvised, whereas bearers can. The average citizen can be taught stretcher drill and first aid in a week or two, and got to take to it very creditably. Months will not make him a decent hospital orderly except he be under the perpetual supervision of a superior. The moral of this has been acted upon. Companies D and E of the Cape Medical Staff Corps are now being rapidly drilled and trained, and will be fit for the front in another week or so. I hear that probably another company will be raised at once, and more will follow if required. The men are shaping better than I at first thought they would. Major Nicol, R.A.M.C., of the 20th Company, which is now being broken up as a unit, is supervising the training of these companies, and is, I under-

stand, to take command of D. Mr. Fryer, a South African practitioner, who has been acting as one of the civil surgeons at the Woodstock Station Hospital, is to be one of his subalterns. Surgeon-Captain Black, the Medical Superintendent at Robben Island, who properly commands one of the permanent companies (C), but who was not permitted by the Cape Government to leave his civil appointment when his company was mobilised, has now obtained the desired leave, and is to take command of E. I have not heard of any other appointments having been made.

The projected equipment by the local St. John Centre of a bearer company has, for some reason or other, fallen through. This is, I think, a pity, as it would have been a very effective way not only of showing patriotism, but of rendering real service. The Centre would have been in a position to get excellent men, and the very fact of the company being raised and equipped by the Centre would doubtless have induced a class of recruits, passed pupils, to come forward who would not volunteer in the ordinary way. So soon as these volunteer companies are in working order they will set free a very valuable accession of strength of the Royal Army Medical Corps available for the hospitals.

Woodstock Station Hospitals.

In other directions the authorities have shown their common sense in not hesitating to break up units to meet the special requirements of the situation, and provide *personnel* where it is most needed. No. 5 General Hospital is, I understand, not to be mobilised. Its *personnel* is at present scattered to the ends of the South African earth. Some are in Natal, some with French, some with Methuen, and some down here. Major Gibson, of that unit, is temporarily attached to the Woodstock Station Hospital, where his services are extremely welcome, as the administrative work is becoming too much for Major Tuke.

This hospital is being thoroughly remodelled, and is fast becoming quite equal to any demands laid upon it. Four new wooden huts are about to be erected, making a total of six of these structures, which are excellently adapted for the purpose and will enable the marquees to be vacated as the rainy season comes on. Some old buildings are being thoroughly reconstructed and adapted for infectious and lunacy wards. The huts are hygienically perfect, and should be most comfortable in both summer and winter. A completely new system of drainage for these buildings is being laid out under Colonel Supple's supervision. And in connection with these alterations a systematic classification of the patients is being made. All the more serious medical cases, cases of enteric fever (in a ward of their own), pneumonia, acute rheumatism, and the like, are located in one of the wings of the permanent building, and the *élite* of the nursing staff, including the sisters whom I mentioned last week, are attending to them. Five more nurses of the Army Reserve are expected almost immediately, to be followed, I understand, by five more. For the accommodation of these ladies a whole block of quarters hitherto occupied by the commanding officer and other officers and staff is to be set aside, the former inmates being put on lodging allowance. The civil surgeon who attends to outside work and who has other quarters will continue to reside on the place, a very excellent arrangement securing the presence of one medical officer in addition to whoever may be the orderly medical officer of the day. The medical staff has been strengthened so that seven executive officers are available, a number amply sufficient for present needs, especially as recruit examination is likely soon to be out of the way. With these new arrangements, and a further strengthening of the orderly *personnel*, this hospital will compare most favourably with any civil hospital in the Colony and will be able if required to accommodate fully 500 patients. Another little point I must mention for the benefit of those who have their doubts about the feeding of Tommy when sick. The chief cook of No. 5 General, a Swiss *chef* of undoubted attainments, and drawing, I am told, a salary of £150 per annum, has been taken on at Woodstock.

Enteric Fever.

A number of cases of enteric fever, but especially of pneumonia and acute rheumatism, continue to come into this hospital from the transports. Very good results are being obtained all round, especially with the enteric cases, very few of which have had any dangerous complications. The medical officer in charge of this ward informs me that he relies principally upon Yeo's chlorinated quinine mixture, and seldom administers stimulants earlier than the third week. If pneumonia occurs he promptly adds digitalis to the quinine. He draws attention also to the fact—known to all South African practitioners of experience—that high temperatures have by no means the same clinical significance as in England. Patients keep a temperature of from 104° to 105° night after night, with a clean tongue, a clear head, and a good appetite, and do splendidly after all. He never uses any galenical antipyretics, and only in rare cases resorts to sponging with a lump of ice in flannel. South African enteric is a very puzzling thing. Spots are quite seldom met with, and the temperature very rarely takes the characteristic curves. But the enlarged spleen is almost constantly present, and often furnishes the only diagnostic sign. If any severe diarrhœa comes on, the indigenous drug, *Monsonia ovata*, or better, if obtainable, *Monsonia Burkei*, brings about admirable results. There are several cases of phthisis in the hospital, mostly traceable to previous pneumonia. A project is on foot to provide an open-air treatment for them, as it would be a pity to send them to England just now.

Engagement of Colonial Nurses.

About forty Colonial nurses have already been engaged by the department to accompany invalids to England. These ladies are paid £2 per week until return to Capetown, with all found, a very liberal remuneration considering the little element of pleasure that must enter into such a trip. A very careful selection has been made, only nurses with undoubted qualification being engaged. Several Colonial nurses have also been taken on for other work.

Income Tax.

One notable concession has just been made to the local civil surgeons, and other local officers participate in the benefit. Hitherto income tax has been deducted from the pay of these gentlemen. Against this one of the civil surgeons protested, on the ground that he had no English domicile, and did not come under the purview of the Board of Inland Revenue. The Field Marshal adopted this view, and ordered the deduction to be suspended pending communication with the War Office. These little concessions do much to create a good feeling.

Surgical Convalescents at the Wynberg Hospitals.

There is little doing at the Peninsula General Hospitals. No. 1, especially, is practically a convalescent home. A somewhat interesting case, which I think I mentioned in a former letter, is now almost well. It is remarkable as showing the results obtained even with bullet wounds other than the Mauser. The man was wounded at Belmont, a sporting bullet striking just over the right eye, ploughing through the frontal bone, and emerging in the right temple. Numerous fragments of the frontal bone and much sloughing skin were found; portions of the frontal lobe were removed, and a good deal of cerebro-spinal fluid escaped. This escape of fluid continued for some days. There were never any signs of fracture of the base. The wound was gently irrigated with warm boracic lotion at first, weak perchloride and finally dusting with iodoform being substituted later. At first there was total blindness of the right eye, but now he has recovered perception of form and colour, and can count fingers, although he cannot make out details. The range of vision is limited irregularly. An elongated detachment, or rather separation of the retina is shown by the ophthalmoscope. He was very drowsy at first, but the temperature never rose above 100°, and that only early in the case. The intellect is now perfectly clear. He vomited early in the case. He had a few spasms in both lower extremities early, and the left hand and leg are still weak. Facial movements are diminished on the left, and the right orbicularis oculi is partially paralysed. I may mention that fragments of bone continued to be extruded for some time. He was not trephined. A rather notable case of fracture of the thigh is still in the wards. A wedge-shaped fragment was (as shown by radiography) forced out of the line of continuity, and lodged against the edges of the two portions of the bone, forming a sort of buttress to the broken limb at

the line of fracture. There was a complete loss of continuity for an inch or more, other smaller fragments coming away. It was first put up in a Bavarian, then in a Hodgen splint, and later, for a time, on Stevenson's sliding panels. It has done well, is in excellent position, and is only showing $1\frac{3}{4}$ inch shortening, not a bad result considering the extensive comminution. A case mentioned by me before of a gunshot wound evidently passing the spleen is now convalescent. These are practically all the surgical cases of any interest. Numbers of convalescents from the station hospital and various cases from the ships have lately been sent to Wynberg.

Scarlet Fever among the C.I.V.

I omitted to mention in the proper place that three men of the City Imperial Volunteers have been lately admitted to the station hospital with scarlet fever. How they got it is not quite clear. They were all sent in from the Green Point Camp. The first was attacked eight days after arrival. This would be twenty-four days after leaving England and eighteen from Madeira. The other two showed signs two days later. The three men did not occupy the same tent in camp. All three are slight cases; indeed, in the two diagnosis would have been very doubtful had it not been for the concurrence with the others.

The R.A.M.C.

One point of administration must not be omitted, the amount of interest taken in actual executive work by the principal medical officers of the Army Corps and the lines. I mean that they are not only constantly inspecting, and making every detail fit in with every other, but that they keep well in touch with the treatment of cases, and continually give very valuable hints to the officers in charge. Colonel Stevenson is continually at Wynberg, and practically supervises the surgical work there. The amount of travelling about which the Surgeon-General seems to get through is remarkable.

Voluntary Aid.

Voluntary effort is moving along well. The work has now been divided, the Red Cross taking the wounded at the front, the Good Hope the base, and the Absent-minded Beggar Fund the home ships.

WOUNDED FROM SPION KOP.

[From an Occasional Correspondent.]

Capetown, February 10th, 1900.

Arrival of the Wounded at Capetown.

The hospital ship *Spartan* arrived on February 5th from Durban with 150 sick and wounded, and the *Lismore Castle* on February 6th, with 120. The speedy way in which these men were entrained in an hour and a-half and a little over an hour respectively, says much for the energy and skill of Major Tatham, R.A.M.C., disembarkation medical officer, whose duty it is to superintend their removal from the ship to the train which is run alongside, and in which they proceed to the general hospitals at Rondebosch and Wynberg.

Some Fortunate Convalescents.

Many of the men wounded at Spion Kop on January 25th are to-day (February 10th) practically well; amongst them are two cases of penetrating wound of the lung in which the bullet passed clean through the chest and out at the back; another man was shot through the liver, and two men were shot in the inguinal region, the bullet passing out at the buttock. What is the cause of this marvellous recuperation in wounds of such severity? First, the Mauser bullet is very small, and makes a clean wound, the exit very little larger than the entrance, and totally different from the Snider or Martini-Henry bullets, which inflicted terrible wounds compared to those we see here. Secondly, the bullet passes into the body at a high temperature, and is practically aseptic, leaving an aseptic track in its course; hence there is nothing, so to speak, to heal. The X-Ray Department at No. 1 General Hospital, Wynberg, has done some admirable work, and the series of skiagraphs taken by Mr. Catling will form one of the most interesting surgical records of the war.

The Princess Christian Hospital Train.

Surgeon-Lieutenant-Colonel Forrester, Royal Horse Guards, and the *personnel* of the Princess Christian's hospital train have arrived, and await the putting together of the train at the Cape Government Railway Works at Salt River, before proceeding to the front.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XVI.

The Relief of Ladysmith.

Not only has the tide turned in South Africa, it is now in full flood. One success has followed another, culminating in the relief of Ladysmith. The raising of the siege so long conducted against this gallant little town has evoked expressions of the wildest enthusiasm, not only from every corner of the British Empire, but from the Anglo-Saxon world. Last week we had to record the sufferings endured by the besieged in Kimberley. They were great; but those endured in Ladysmith were still greater. In this hour of relief we cannot refrain from turning for a moment to the eloquent description of one of the most gifted victims of the siege. Thus in his last letter Steevens wrote:

> Poor Ladysmith, deserted in its markets, repeopled in its wastes; here ripped with iron splinters, there rising again into rail roofed, rock-walled caves; trampled down in its gardens, manured where nothing can ever grow; skirts hemmed with sand bags and bowels bored with tunnels..... Where people should be the long, long day from dawn to daylight shows only a dead blank.....Where no people should be in the clefts at the river bank, in bald patches of veld ringed with rocks, in overgrown ditches—all these you find alive with men and beasts. The place that a month ago was only fit to pitch empty meat tins into is now priceless stable room; two squadrons of troop horses packed flank to flank inside its shelter.

Such was Ladysmith for four weary months. Men, women, and children dwelling not in the dwelling places of the town, but in half-buried tents, under slopes of rocks, in the midst of *débris*, perforce sharing the dongas, dark corners and waste spaces with the sewage and wreckage of the town. Their food grew ever less and less. Their water befouled by the besieging Boers became more and more pestiferous, and for want of fuel the inhabitants could not even adopt the precaution of boiling it. Gaunt, worn, weary, but never despondent the garrison held on. Men died like sheep of disease. The weakness of hunger was constantly increasing; ammunition had been almost expended; the last gasp seemed nigh at hand; until at length relief came. "And ever upon the topmost roof our banner of England blew."

Some few special correspondents have already sent through accounts of relief, thus supplementing the very brief official despatches containing its announcement. The best we have seen is contributed to the *Standard*. This correspondent tells us that the garrison which has for four months defended Ladysmith is now but a shadow of the force as it existed on October 30th, 1899. There is hardly a man but bears evidence of the physical sufferings and the mental torture of the siege. Since the investment there have been lost in action 16 officers and 162 men. The casual bombardment has killed 35 officers and men and wounded 20 officers and 168 men; 47 officers and 360 men, of whom 94 have since died, have been wounded in action, and disease has accounted for 476 more, a figure which implies a greater loss of life, of permanent injury to health, than all the battles, assaults, and sorties. Enteric fever, "low fever," and dysentery have been rampant—the direct outcome of bad water, privations, and fœtid dust. No fewer than 8,424 out of a total of 21,000 half-starved inhabitants have passed through the hospitals, and the daily average under treatment ranged from 1,500 to 2,000. There were 1,710 cases of enteric fever alone. Some of the regiments, indeed, now can muster only a quarter of their former strength, and some time must elapse for careful nursing and proper feeding before they can be fit for duty. The once dashing cavalry brigade has practically ceased to exist. At the beginning of the year the garrison had 5,500 horses and 4,500 mules. Before the end of January they could only feed 1,100; the remainder had either been converted into food or been left to forage for themselves. These emaciated animals, mere phantoms, were among the most painful sights of the siege. The same correspondent adds that the bombardment throughout the siege was heavy but, on the whole, ineffective. It was estimated that 12,000 shells had been thrown into the town—an average of 3 tons of explosives daily—yet only 35 men were killed and 188 wounded by the shelling. The lessons which may be

learned both from the experience here and at Kimberley, and, we fear, in Mafeking, are of the highest military importance. The effect of shelling is to be found not so much in the actual destruction or maiming of men, as in the conditions of life which continual bombardment entails. Buried in holes, in drains, and subterranean shelters of every description, the health of the garrison must soon suffer, and doubtless many of the deaths from disease may be directly attributed to the artillery fire and the dark unhealthy refuges in which it compelled the inhabitants to dwell. On the water supply from the Klip River the correspondent of the *Morning Leader* writes: "It is thick with putrid animal matter, and the water has in it suspended fibre something like beef tea, the sewage of the Boer camps."

Dr. Jameson, who has been doing excellent service during the siege, was seized with enteric fever on February 14th, after nursing his servant through an illness. He is said to have only a slight attack, and to be doing well. A message which a telegraphist from Natal despatched from Colenso during the bombardment, tells with graphic if somewhat grim humour, its story: "Hear gun; run cover platform; shell burst; rum work." To-day (March 6th) a message direct from Ladysmith, sent by Mr. Treves, which appears elsewhere in the British Medical Journal, bears further witness to the deplorable condition of the town.

Boer Ambulances.

The *Times* published an interesting telegram from St. Petersburg dated March 1st, in which it is stated that the Dutch Committee there received news from Professor Korteweg, Surgeon at the University Clinic at Amsterdam, who has recently returned home after two months with the Boers. He states that

hitherto there have been six foreign sanitary detachments, or ambulances, on the Boer side—namely, two Dutch, one of these being from Java, and the other four respectively from Belgium, France, Germany, and Russia. The second Russian ambulance fitted out by public subscription, which has not yet reached its destination, will be the seventh. The English, it is stated, have splendidly equipped hospitals for their own wounded at Pretoria. The foreign doctors and nurses had great difficulty in finding out where their services would be most required, as the Boer officials refuse all information, and General Joubert declined for strategical reasons to indicate where fighting was likely to take place. Strangers were therefore left to shift for themselves and had to depend upon the information of private persons. Another difficulty was the want of confidence among the Boers in all Europeans. The Boer will on no account accept assistance from a European doctor if he can possibly help it. It would seem, from this and other accounts, that the display of sentiment and sacrifice of money in sending medical aid to the Transvaal have so far been lost on the Boers. When the professor was last at the seat of war, in the middle of January, the Boer losses had been very insignificant, not more than 350 killed and 800 wounded from the beginning of the war. The great majority of wounds were caused by explosive shells. During the month that the professor was present at the siege of Ladysmith he performed about 40 surgical operations.

The want of confidence among the Boers in Europeans here referred to may seem curious, but knowing the Boers as I do I have not the least doubt that the statement is accurate. The Boer has a deep-seated suspicion and distrust of all strangers. It is a trait which he has in common with the natives, and is due to various causes, the chief being the isolated life, ignorance, and continuous native environment.

Shields and the Magazine Rifle.

The accounts which have appeared from distinguished surgeons in South Africa, as well as your correspondent's description of the cases at Netley, show the ready way in which almost every wound made by a small modern bullet heals. Thus the lungs, the liver, the abdominal organs, and even occasionally the brain, appear to have been penetrated, and the wounds recovered from, in most cases with great rapidity. The one organ which cannot recover from even the bullet of the Mauser rifle appears to be the heart. As was pointed out by Mr. Jonathan Hutchinson, an efficient heart shield would thus save a great many lives, and such a shield one of our correspondents has modelled, and it is now being experimented upon. Weighing under 4 lbs., it is designed to be worn under the tunic, and without in any appreciable way interfering with the free movements of the soldier to diminish considerably his risk of being killed. The difficulty will be to obtain a shield sufficiently light to stop the bullet at short ranges, and an effort to find something which will combine the maximum resisting power with the minimum of weight is now being made by an eminent firm of engineers.

Mr. Benett-Stanford, late Lieutenant the 1st Royal Dragoons, who is now at Modder River, in a letter to the *Western Morning News*, writes of the battle of Magersfontein, and in a reflection on the lessons which this conflict conveyed clearly indicates his advocacy of some form of shield. He says, Messrs. Cummel, of Sheffield, have constructed a small shield of Harveyised steel, which has been patented by Mr. Boynton, and only weighs about 5½ lbs.; this shield, he says, is 1 foot 9 inches in width and 1 foot 5 inches in height, and only ¼ inch in thickness, and gives protection against modern rifle fire at point-blank range, besides which it forms an excellent rifle rest; so that a force attacking a position with this shield, unless there is a cross-fire, could calculate on reducing the loss of men by 60 or 70 per cent. When the infantry had "got up to charging distance of the enemies trenches, the shield could easily be slipped off by merely releasing a catch, and depressing the muzzle of the rifle. It would be the old game of guns *versus* armour, as in the case of the navy of the present day. It would be curious if in the twentieth century we went back to the ideas of the twelfth century of defending a man with armour from the missiles of his enemies." The description at least suggests that some such device might be used with advantage.

In the *Daily Mail* of February 10th another form of shield is described, which, it is said, may be possibly sent to South Africa. This shield is somewhat heavier than the one described by Mr. Benett-Stanford, and is known as the "Sharpshooter." It is said to be impervious to Mauser or Lee-Metford bullets at 400 yards, and to light machine-gun fire at 700 yards; it weighs 13 pounds, and cannot be overturned by the impact of any number of bullets; it is divided into two parts hinged together, each weighing 6½ pounds, which can be made interchangeable. It is intended for the use of marksmen only—not more than about 10 per cent. of the infantry.

It is quite certain that the Germans have long contemplated the necessity of some such protection against the terrific hail from modern magazine rifles. It is obvious that men who have to storm entrenchments must, if they are to be on even terms with their opponents, be provided with some readily movable form of cover, and I cannot but believe that such a shield as a "Sharpshooter," behind which a man might securely cover himself in a prone position, and through a hole in which he can, with safety and deliberation, fire at his partially-concealed opponent, will eventually be adopted. If the marksmen, say 20 per cent. of an attacking force, were provided with an artificial cover of this sort, and the rest of the men wore under their tunics a heart shield, the frontal attack would be much more deadly to those holding the entrenched position, and much less deadly to those making the attack than it is at present.

I note from the German book of musketry instruction that a steel shield for use in entrenchments is described as a portion of routine military equipment, and I am informed by a correspondent from South Africa that over many of their trenches the Boers actually have a sort of hinged lid of corrugated iron through which they protrude their rifles, and which in a measure deflects bullets.

Our own book of musketry instruction makes no reference to any shield, but the longer I study the accounts of the present campaign, the more I feel convinced that in order to put our men on anything like even terms with the Boers when they attack them in position they must be provided in advancing with some artificial protection of a readily movable character, such as the Boers obtain in fixed positions from trenches, boulders, and earthworks.

THE WOUNDED AT THE HERBERT HOSPITAL, WOOLWICH.

Nature of the Wounds.

The ss. *Avoca* arrived at the Royal Albert Dock, London, on March 3rd. The wounded on board were met by all the members of the military medical staff of the Herbert Hospital, Woolwich, and were quickly conveyed in a large number of ambulances to the hospital.

Operations, some of them of a very severe nature, had been successfully performed on some of these men in South Africa. Among the cases are instances of ligature of the femoral artery

and removal of bullets from the thigh, amputation of the thigh above the knee, amputation of the leg below the knee, amputation of the wrist, many cases of injury to the head and of penetrating wounds of the chest, and many minor injuries of the limbs.

A Case of Intestinal Resection for Bullet Wound.

There are two cases of recovery from serious abdominal injuries. One of these is very remarkable. The man was wounded near Frere at about 4 A.M. on November 27th, 1899. He arrived at the Convent Hospital, Estcourt, a distance of about twelve miles, about 10 A.M. It was found that he had been wounded in the abdomen. The posterior wound was about 3 inches above the right trochanter, the anterior wound to the right of the middle line half way between the umbilicus and pubes. Laparotomy was at once done by Dr. J. E. Neale, civil surgeon. The abdomen was full of blood; the small intestine was found to be cut right across, and there were four bullet wounds on each side of the cut edges. A piece of intestine, 15 inches long, was resected, an end-to-end anastomosis done by Czerny-Lembert sutures. A gauze drain was inserted and double cyanide dressings used. Transfusion was done with ½ per cent. saline. The patient was fed by rectal injections for forty-eight hours. The drain was then removed. He never had a bad sign. He was kept on slop diet for a month, and enemata were used to keep the bowels regular. The bullet had penetrated the iliac bone, and must have injured some branches of the lumbar nerve, as the right leg suffered slightly. The patient was up and about, gaining strength daily before he left Estcourt, but great care was taken with his diet.

The Hospital Arrangements.

The accommodation for the wounded at present in the Herbert Hospital is very good indeed, as the wards have all just recently been redecorated and equipped throughout. The food for the invalids is of a very excellent quality, and the majority are on medical comforts. Great credit is due to the officers and to the civil staff of surgeons for the attention which is paid by them to the sick in the hospital. We understand that a great increase in hospital accommodation is about to be made at Woolwich.

LORD STRATHCONA'S HORSE.

Our Montreal correspondent writes, under date February 22nd: The surgeon appointed to Lord Strathcona's Horse, soon to depart for the Transvaal, is Dr. Campbell B. Keenan, Senior Resident Surgeon at the Royal Victoria Hospital, Montreal. This appointment has given great satisfaction to the friends of the Royal Victoria Hospital, and of Dr. Keenan, who is a graduate of McGill Medical School of the class of 1897. Dr. Keenan was the third honour man in his class, and for the past three years has been a resident surgeon in the Hospital. He leaves Montreal this week to join the Strathcona Horse, which will hasten to Capetown as speedily as possible.

THE YEOMANRY FIELD HOSPITAL AND BEARER COMPANY.

The following is a complete list of the *personnel* of the Imperial Yeomanry Field Hospital and Bearer Company.

It is probable that the Hospital will sail on or about March 13th in the steamship *Winkfield*.

Field Hospital.

Chief Surgeon and Military Commandant.—Major C. Stonham, F.R.C.S., Senior Surgeon Westminster Hospital.

Surgeon.—T. H. Openshaw, F.R.C.S., Surgeon to the London Hospital.

Assistant Surgeons.—A. W. Sheen, F.R.C.S., Assistant Surgeon to the Cardiff Infirmary; A. H. Evans, F.R.C.S., Surgeon to the East Dispensary, Liverpool.

Physician and Anæsthetist.—J. Purves Stewart, M.D.Edin., Assistant Physician Westminster Hospital.

Dressers.—C. H. Jefferys, M.B., B.S.Cantab., St. George's Hospital, and the following students of the Westminster Hospital: E. G. Carlin, S. W. Crowther, C. H. M. Hughes, C. A. Gill, G. J. Marett, and W. C. Nimmo.

Bearer Company.

The Company will be commanded by Major G. E. Hale, R.A.M.C., D.S.O. Major Hale served with the Soudan Frontier Field Force in 1885-86, and was present at the engagement at Giniss (medal and Khedive's star). He served with the Burmese expedition in 1887-89 (medal with clasp), and in 1889-91 with the Tonhon and Wuntho expedition (received the thanks of the Government of India, mentioned in despatches, D.S.O., and clasp).

Assistant Surgeons.—A. A. Scot Skirving, F.R.C.S.Edin., Assistant Surgeon Leith Infirmary; Frederick Green, M.D., B.Ch.Dublin.

Orderlies.—Most of the men are from the Volunteer Medical Staff Corps, but 10 waggon orderlies and 2 sergeants in the bearer company are being provided by the St. John Ambulance Brigade.

We are requested to state that the Doecker huts recently erected at Netley were not lent by the German Red Cross Society. Through the kindness of the Central Committee of the German Red Cross Society the British Central Committee obtained by purchase, within a very short time, a large number of huts which the manufacturers had been making to the order of the German Central Committee. This seems to be another instance of the greater foresight exhibited by Germany.

DEATHS OF OFFICERS R.A.M.C.

Captain R. H. E. HOLT, R.A.M.C.

Captain R. H. E. Holt, R.A.M.C., whose death from wounds was reported on February 20th, was the only son of Lieutenant-Colonel R. W. F. Holt (late Royal Marine Light Infantry), of Fareham. On the mother's side he came of an old military family, his great grandfather, Lieutenant-General the Hon. Sir Henry King, K.C.B., having fought both in Holland and in the Peninsular war in the "Fighting Fifth Regiment" under Wellington, while his grandfather was Colonel E. R. King, late 36th Regiment.

Captain Holt was born on July 6th, 1866, at Woolwich, and entered Mason College, Birmingham, in 1883. Later he became a student of St. Mary's Hospital. He took the diploma of L.S.A. in June, 1890, and of M.R.C.S. and L.R.C.P. in October, 1890. He entered the service in January, 1892. Captain Holt married in September 13th, 1893, Ethel, third daughter of Mr. S. T. Blake, of Alverstoke, Hants, and leaves two sons, the youngest born on December 27th, 1899.

He was ordered for service in India in October, 1893, and was stationed for some time at Jhansi. He took part in the operations on the North-West Frontier of India in 1897-98, first with the Mohmand Field Force, and afterwards with the Tirah expeditionary force, for which he received the medal with two clasps. He contracted enteric fever in passing down the Khyber Pass from Lundi Kotal, but fortunately reached Meerut in time, and attributed his recovery to the good medical and nursing attendance he received at the military hospital there. He was sent home on sick leave in 1898. On recovery he was ordered for duty to the Station Hospital, Haslar, Gosport, where he remained until attached as surgeon to the 2nd Somersetshire Light Infantry, with whom he proceeded on November 4th, 1899, to the Cape.

On arrival his regiment was at once ordered to join the field force of Sir Redvers Buller, and it was with that force, while attending those in the firing line belonging to his regiment, that he received the wounds which caused his death. Captain Holt was a universal favourite, and his family, while overwhelmed with grief, are yet comforted by the affectionate sympathy and regret of all who knew him. He has died a noble death, such as he himself would have desired. We are informed that Colonel Holt has been given privately to understand that the Director-General of the Army Medical Department had the very highest opinion of Captain Holt professionally, and deeply regrets the loss of an officer who was in every way an ornament to his profession and corps.

Captain GEORGE STANLEY WALKER, R.A.M.C.

Captain G. S. Walker, who died of enteric fever at Ladysmith on February 23rd, was the son of Mr. Henry B. Walker, of Ballymacus, near Kinsale, co. Cork. He was apprenticed to Dr. Vickery, of Kinsale, and subsequently entered at Queen's College, Cork, where he had a distinguished career as a student. He took prizes in anatomy, practical histology, materia medica, and medical jurisprudence, was Demonstrator in Practical Pathology, and was also resident student in the North Infirmary, Cork. He graduated M.B., B.Ch., B.A.O., R.U.I. in 1890. He entered the service in 1892 and was soon after stationed at Cork for three years, during which time he showed excellent capabilities as a surgeon.

He was a great enthusiast in his work, as he constantly testified by leaving nothing undone by which he might obtain surgical knowledge. He was a constant visitor at the fortnightly discussions of the Cork Medical and Surgical Society and brought some most successful cases before the meetings. He was a skilful operator, and his opinion in surgical work was always respected by his colleagues in Cork garrison.

While stationed at Cork he suffered from a very tedious and severe attack of typhoid fever. He married Miss Juliet Waters, second daughter of Mr. James Waters, Springfield, Cork. She accompanied him to India. He went to South Africa from India as medical officer of the 2nd Battalion Gordon Highlanders. He leaves no family.

Lieutenant Hugh Bernard Onraët was killed on February 27th, in the course of the fighting under General Buller which resulted in the relief of Ladysmith. Lieutenant Onraët was in his 29th year, and joined the service on July 28th last. He went to South Africa in October.

THE R.A.M.C. SOUTH AFRICA FUND.

We are glad to learn that the sum collected by the Central (London) Committee of the R.A.M.C. South Africa Fund now amounts to over £900. Many contributions, especially by donors living in London, have been forwarded direct to the Honorary Treasurer or to the bankers. Liberal donations have thus been received from many of the ladies who are vice-presidents, and also from many leading members of the profession.

The object of the fund is, it will be remembered, to supply the non commissioned officers and men of the R.A.M.C. and those working with them in the care of the sick and wounded in South Africa with the comforts which are being sent to other branches of the service. The first appeal was made by Mrs. Charlton, the wife of the Principal Medical Officer at the Royal Victoria Hospital, Netley; and we understand that the wives of several officers of the R.A.M.C. have collected and sent out gifts to South Africa. Thus Mrs. Battersby informs us that through the kindness of friends she has been able to send over 1,100 articles of clothing, besides cigars, cigarettes, housewives, writing paper, doyleys, bootlaces, etc., to her husband, Major H. L. Battersby, for the men of the Corps on the Western Frontier, and that she has received several contributions of money from the officers and men of the Corps.

The Central (London) Committee was formed through the instrumentality of Mrs. Charlton and Surgeon-General Muir, the Deputy-Director-General, at a meeting held at the house of Sir Dyce and Lady Duckworth on February 5th. In addition to the subscriptions a number of contributions in kind have been received. Mrs. Charlton had already despatched parcels to 1,200 men, and the Central Committee has since despatched many more. The Committee makes up a parcel for each man, containing a flannel shirt, pair of socks, cake of soap, pair of bootlaces, handkerchief, knitted helmet or comforter, note paper and pencil, and a pipe. A bale containing fifty of such parcels is made up, and five bales are sent to the Principal Medical Officer of each division for distribution. Gifts in kind should be sent to Miss Maxwell Müller, R.R.C., the Secretary of the Fund, 100, Victoria Street, S.W.

The Special Subscription.

We are enabled to acknowledge a further list of subscriptions to the half-crown fund, and to publish an extended list of names of gentlemen willing to receive such subscriptions.

The Half-Crown Subscription List.

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We have also received, per Dr. Tison, 10s. 6d. from Mr. Browne (Amesbury) and 3s. 6d. from Mr. Shorland (Westbury).

In order to facilitate the work of collecting the small sums, the following gentlemen have expressed their willingness to receive subscriptions from gentlemen residing in their neighbourhood:

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Subscriptions may also be sent to the Editor of the BRITISH MEDICAL JOURNAL, and will be acknowledged in the JOURNAL. The amount received for the Half-crown Fund up to and including Wednesday, March 7th, by the Editor is £154 9s. 6d. Cheques and Postal Orders should be made payable to the "R.A.M.C. South Africa Fund" and crossed "Holt and Co."

THE ROYAL MEDICAL SOCIETY, EDINBURGH.

PRESIDENT'S DINNER.

THE annual President's Dinner of the Royal Medical Society took place in the Edinburgh Students' Union on the evening of March 6th. In the absence of Dr. A. Dingwall Fordyce, the Senior President, the chair was taken by Dr. W. J. BARCLAY, one of the Junior Presidents, and Drs. J. D. Comrie and George Mackie acted as croupiers. The guest of the evening was Mr. Victor Horsley, and there were also present Professors Simpson, Chiene, and Schäfer, Colonel Rooney, Colonel Warburton, Surgeon-Captain Home, Drs. Renton, Smart, McBride, Milne Murray, Berry Hart, Bruce, Ker, Harvey Littlejohn, MacGillivray, Wallace, Cotterill, Stiles, Alexis Thomson, etc., to the number of over sixty.

The loyal and patriotic toasts were given, and received with unusual enthusiasm. Colonel Rooney, Principal Medical Officer for the Scottish District, replied for the Army, and and Surgeon Home for the Navy. Colonel Rooney gave the toast of "The Medical Officers who are about to proceed to South Africa on the Staff of the Scottish Hospital," three of whom were present—namely, Professor Chiene, Mr. David Wallace, and Mr. G. L. Chiene. The last named replied.

The Chairman then gave "The Guest, Mr. Victor Horsley." He thanked him for having honoured the Society by coming at great personal inconvenience to be their guest for the evening, briefly traced his career, indicated the great value of his work in medicine and in surgery, emphasised his influence in the sphere of medical politics, and referred to his hobby, archæology. The toast having been enthusiastically honoured, Mr. Horsley replied. He had, he said, a lively recollection of the hospitable reception the University had given him when they awarded him the Cameron Prize. Referring to the complimentary remarks which the Chairman had made as to his work in surgery, he said that it was true that he had done certain things for which the profession seemed never to cease thanking him, though his share in what was called cranial surgery had not been so large as the Chairman had in his kindness inferred; yet it was perfectly true that by experimental science alone had it been possible to do cranial surgery at all; the profession was apt to forget the man to whom it owed all modern surgery, including cranial surgery, and he thought that in Edinburgh the name of Lord Lister ought to come first whenever any advance in surgery was mentioned. It was true that most operations on the head were regarded as of necessity dangerous twenty years ago: now it was known why, and the application of the scientific principles which Lord Lister taught had made possible what all were proud to recognise as a distinct advance in surgery. To the members of the Society it would be given to see the advances in professional knowledge which he was sure would occur during the next forty or fifty years. In conclusion, he thanked the members for their kind reception.

The toast of "The Royal Medical Society" was given by Professor Simpson; and Dr. Mackie, the Junior President, replied.

"The University and Medical Corporations" was given by Mr. Victor Horsley, who said: It gives me very great pleasure to propose this toast, and to couple with it the names of my friend and teacher, Professor Schäfer, and my friend (though unfortunately not my teacher), Professor Chiene. The expression "Medical Corporations" I suppose we understand to include the Royal Colleges of Physicians and Surgeons, not only of this great city, but of all the other metropolitan cities in the United Kingdom, the Medical Corporations in general distinguishing them from the Universities. The unity of purpose existing in these institutions has not been obtained by an Act of Parliament, nor is it ever likely to be attained by that means. In some respects, fortunately, each University and each Medical Corporation preserves a certain tradition of its own, and there is no University and no Medical Corporation more than the University of Edinburgh and the Royal Colleges of Physicians and Surgeons which have preserved distinguished traditions. The history of the University shows that it has always been to the front in the advancement of medical science. It is true that some one hundred and twenty years ago medical science was in a confused condition so far as its teaching was concerned, but the lustre which Alexander Munro, for example, shed upon the University in the last century has been maintained by numerous distinguished men up to the present time. When you come to the Medical Corporations—the Colleges of this great city especially—I must associate with them, as I said before, the other medical colleges and corporations in this kingdom, because things at the present moment are in a very curious state. In fact, there is a sort of medical war going on in the least favoured part of the kingdom—London—where, I am sure to your grief you will learn, the two Colleges have departed from what are called peaceful lines, and are now going to strike off from their mother for a kind of stepmother who has been forced upon them. Yes, that is unfortunately a fact. The situation is this: The Medical Corporations in this country have a certain duty to perform, or they think they have to perform through their Councils—the duty of examining some of us, and deciding whether we are fit to be registered to practise. At the present moment the Medical Corporations are attemping an impossible task. Originally they were Guilds of a

high order. Originally they had powers, disciplinary powers over the so-called apprentices, which have disappeared into the background; but they achieved a work at that time which had for its object the preservation and the advancement of medical science, in addition to the more academic kind of work which the Universities were performing. But since 1858 the position of those Corporations has been one of difficulty, and almost a contradiction in terms; for whereas they were supposed to continue those disciplinary measures, and to go on with education, hold examinations, and grant qualifying diplomas, they nevertheless have lost their primary position. Since 1858 the Medical Corporations have been placed by Acts of Parliament under the hierarchy of the body called the General Medical Council. Their one desire is apparently both to be connected with the General Medical Council as a department of the Government, and on the other hand to be free of the restrictions of the General Medical Council, and the Colleges of Physicians and Surgeons in London are banded together in a distinct revolt against the General Medical Council to such a degree that it is possible that students in London may find certain difficulties in obtaining qualifying diplomas from those bodies. That is a very unfortunate state of things. It seems to me that it is one which you—most of you—will have the chance, and the duty in fact, of putting an end to in future years. I say future years advisedly, because no medical reform can be achieved within thirty or forty years, and as this is a fundamental reform, any change in the political and social position of the great Corporations which have lasted for centuries is not likely to be attained in a short time. If you ask me the solution of the difficulty, I reply—the one-portal system, and I take it that Professor Chiene will say that it is the worst medicine he ever heard of; that in fact it is a dose which is likely to carry them off altogether. I know perfectly well that many members of the councils of the various Corporations think honestly that the one-portal system would mean the total extinction of these venerable and much-to-be-respected institutions. Personally, as a Fellow of one of those Colleges, it is not likely that I should be in sympathy with anything calculated to lead to extinction of bodies which have done good work in the past, and which I am convinced will do very good work in the future. It is, of course, a fact that the one-portal system would deprive the so-called Medical Corporations of a certain income now derived from the fees of candidates who present themselves for diplomas, because the one-portal system would to a certain extent render some of these diplomas unnecessary, but the commercial side of the question is not the one that should really appeal to us. We have the brilliant example of the College of Physicians to the direct contrary, because the College, in their desire to promote medical science, established a scientific laboratory. They cannot do that without money, and they cannot do that, again, if they have no endowments, without the fees of candidates. I quite admit all that; but I say this, that where a corporate body like the College of Physicians of Edinburgh has shown that it has such a wide grasp of the affairs of the profession, when it goes out of its way to have this laboratory, it then takes upon itself public duties which it is the bounden duty of the public to support. The public at present accept everything that the medical profession gives them, but not with thankfulness. They accept it almost as a matter of course. I consider that those Medical Corporations who are thus performing public duties of great value, such as the Colleges in Edinburgh and London, have a claim on the State, that their continuance and efficiency is a matter of importance to the State, and to the furtherance of medical science. What would be the result if this view were accepted and the one-portal system introduced, and those Corporations who do the work were supported by the State? The result would be at once that we should have an impetus given to medical study and science, and the Universities would occupy their proper place. I am very interested in this subject of medical education, especially in its relation to the Universities and the Medical Corporations, which great bodies are too often brought, as it were, into competition with each other, whereas they ought simply both to be in the van of medical progress. I hope you will accord to Professor Schäfer and Professor Chiene the reception which a toast of this kind should carry—"Success and Prosperity to the University of Edinburgh and the Medical Corporations."

In reply Professor Schäfer urged the claims of laboratories in connection with the University—laboratories that were not cast in an inflexible mould so that they could not be altered, but laboratories capable of expansion, modification, and what not, as the changes and advances in medicine and surgery demanded.

Professor Chiene, referring to Mr. Horsley's advocacy of the one-portal system, said he did not see how the difficulty was to be overcome by the system. He was, however, willing to learn, and if it were proved to him that the one-portal system was the best he trusted he was not too old to learn.

The toast of "The Royal Infirmary" was given by Dr. Comrie, and Dr. Smart replied.

Professor Chiene proposed the toast of "The Chairman," Dr. W. J. Barclay. He was a Colonial, a New Zealander, and they were specially proud of him at this time. They all regretted the absence of the Senior President, Dr. A. Dingwall Fordyce, but they must warmly compliment Dr. Barclay on his excellent conduct in the chair.

LITERARY NOTES.

The number of new books dealing with medical science and hygiene published in the United States in 1899 was 120. The number of new editions issued during the same period was 33. The corresponding figures for 1898 were respectively 143 and 45.

It is announced that the library of the late Dr. William Frazer, of Dublin, who was a noted antiquarian and book-hunter, will be sold early next month by Messrs. Sotheby. Dr. Frazer was the possessor of what is said to have been the finest private collection in Europe of early Continental printing, and succeeded in obtaining some unique copies of volumes of early Irish music.

At a meeting of the Académie de Médecine on February 20th M. Huchard presented a work entitled *Experiences and Remarks on the Use and Abuse of Tobacco*, by Dr. Masoin, perpetual secretary of the Belgian Academy of Medicine, and Professor in the University of Louvain. The book embodies the substance of an address delivered by the author at a meeting of the Belgian Academy of Medicine in opening a discussion on a question proposed by the Government—the use of tobacco by persons under 16 years of age. Dr. Masoin's conclusion is that in the case of children smoking should be forbidden by law.

The fiftieth volume of the *Jahrbuch für Kinderheilkunde* was completed a short time ago, and this valuable periodical has taken a new lease of life with a larger page, clearer type, and better paper. Moreover, for the future a number will be issued once a month instead of at irregular intervals as heretofore. Six numbers will form a volume, and the subscription price is 18 marks. It is published by B. G. Teubner, Leipzig.

The following announcement which appears in *The Sei-I-Kwai Medical Journal* of December 31st is interesting from a linguistic as well as from a purely scientific point of view:

Fleet Surgeon T. Yabe, of the Imperial Japanese Navy, who is now studying bacteriology in the Pasteur's Institute, Paris, discovered some method to make human subjects immunity from the tubercular disease with some material which he calls Tuberculo-Immunitine. We heartily congratulate his success for such great and difficult subject which was considered almost impossible to achieve at among the imminent authorities in Europe and America.

We hope the "imminent authorities" will now have the grace to hide their diminished heads.

In the *Revue des Deux Mondes*, M. le Dr. A. Kuyper, deputy to the States-General of Holland, concludes an article on the South African crisis, written from the Dutch point of view, in the following words:

Perhaps England may succeed in disarming the men but she will never be able to destroy the fertility of the female Boer. In less than a century, thanks to this extraordinary fertility, 60,000 Boers have grown to half a million. In the coming century they will increase to 3, 4, 5 millions, and South Africa will be theirs. The wife of General Joubert, who accompanies her husband to the battlefield, is the perfect type of the Boer wife, whose fecundity is unequalled, and who knows how to inspire all her children with the national virtue. So long as the Transvaal lioness surrounded with her cubs roars against England from the heights of the Drakenberg, the Boers will never be brought into subjection.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA

IN Bombay the number of deaths from plague increased during the week ending February 13th. On February 8th, 9th, 10th, 11th, 12th, and 13th the number of deaths in Bombay were 82, 95, 86, 68, 76, and 74 respectively. The number of deaths from all causes had also risen, and the returns show that 1,256 more deaths occurred in the city than in the corresponding period in the preceding five years. The middle of March is the time usually considered as the period at which the maximum of plague deaths is attained, but owing to the epidemic having appeared earlier in the autumn than usual, and to the fact that during the fourth week of January some slight abatement in the number of cases was notified, it was hoped that the epidemic would have declined earlier this year. This is now the fourth successive season that plague has appeared in Bombay, and every outbreak has proved more serious than its immediate predecessor. The first outbreak occurred in September, 1896, although it was not until October 23rd of the same year that the presence of plague was officially announced. The belief that the outbreak was an "accidental" occurrence, speedily to be "stamped out," was soon seen to be unfounded, and it would even appear that plague has become endemic in the city of Bombay. The cause of this is as yet unexplained. Many ascribe it to insanitation, and many to the fact that those parts of the city in which plague seems rooted were built on reclaimed land made up with city refuse of the worst kind. In many parts most of the sewage has been shown to escape into the ground, and the reclaimed ground is composed of "sewage-sodden soil." But many Asiatic and Egyptian cities are in no better plight, and plague has not been so severe, nor has it recurred with such persistency as in Bombay. We are not yet in a position to state what attaches plague to certain localities, but it would seem that some selective affinity exists.

In Calcutta plague keeps its grip, although up to the present it has not assumed an epidemic form. The latest telegrams, dated March 7th, would seem to indicate that it is rapidly and suddenly becoming so. During the week ending March 7th, 411 deaths have occurred in the city. Numbers of the inhabitants are fleeing from the city, a sure preliminary to the extension of plague in Lower Bengal.

Inoculation for plague in Bombay proceeds satisfactorily. During the week ending January 31st 4,456 were inoculated with plague prophylactic, and the treatment seems to have been fairly well distributed over the various communities. During the week referred to 45 Brahmins, 15 Jains, 1,566 high-caste Hindus, 2,567 low-caste Hindus, 200 Mussulmans, 13 Parsees, 1 Jew, 2 Europeans, 2 Eurasians, 32 native Christians, and 13 of other nationalities were inoculated. It is satisfactory to note that the inhabitants of the plague-infected town of Nawashahr of their own accord asked the authorities to allow them to leave their infected houses and to dwell in huts. This unexpected readiness shows that the people are beginning to recognise the wisdom of the preventive measures which they so long resisted.

CAPETOWN.

Telegrams from Capetown, dated March 6th, make the rather serious announcement that 3 cases of bubonic plague have been reported on the transport *Kilburn* which has arrived from the Argentine. The captain of the ship died on the voyage, it is believed from plague. The vessel has been sent into quarantine in Saldanha Bay. A cargo of forage is sure to be a nest of rats, and were the rats from this plague-infected ship to find their way ashore, Capetown would be in danger of an outbreak of plague. The safest and cheapest step for the authorities to take is to destroy the cargo forthwith.

HONG KONG.

On February 1st and 2nd there were 7 and 8 fresh cases of plague, and 1 death was reported on each day in the island. This news is greatly to be regretted, as it seems to point to a recrudescence of the disease, which it was hoped had disappeared entirely. Moreover, it offers but small hopes of "stamping out" the disease in other quarters where plague has obtained a hold, as Hong Kong has now been infected for six years.

JAPAN.

Nagasaki and Kobe were both reported free of plague on January 11th, and so far as we can ascertain there is no plague at present in Japan.

MAURITIUS.

For the week ending March 1st 3 fresh cases of plague and 5 deaths from the disease occurred in the island of Mauritius. This is the most favourable report for many months, and the epidemic would appear to be over.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of April next, at 2 o'clock in the afternoon.

March, 1900. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, March 22nd, June 21st, and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of the District will be held at the Highgate Infirmary, Dartmouth Park Hill, N., on Wednesday, March 14th, at 4.30 P.M., Mr. Thomas Bryant, President of the Branch, will preside. Dr. Harry Campbell will read a paper on the Treatment of Bronchitis in the Elderly and Aged. Dr. Chilcott will show some cases of interest in the wards of the infirmary. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Hon. Secretary.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The next meeting of this District will be held at the London Hospital on Thursday, March 15th, at 4.30 P.M. A demonstration of cases will be given by members of the staff. Visitors are invited.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Grand Hotel Brighton, on Thursday, March 29th, at 5.15 P.M. Tea and coffee, to which the Chairman, Dr. Mackey, invites members, at 5 o'clock. Dinner at 7, charge 6s., exclusive of wine. Notice of intended communications should be sent to J. W. BATTERHAM, Bank House, Grand Parade, St. Leonards-on-Sea, Hon. Secretary.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Town Hall, Sittingbourne, on March 22nd, at 3 P.M., Dr. Gosse in the Chair. Agenda: The Chairman: The Pathology of Death from Senility. Mr. Bertram Thornton: A case illustrating the value of Antistreptococcic Serum. Mr. R. Rigden: The Vaccination Act of 1898. Mr. Raven: A question of Medical Ethics. The Chairman kindly invites members to luncheon at the Sittingbourne Club, Crescent Street, at 2 P.M. Members intending to avail themselves of Dr. Gosse's hospitality are requested to send acceptances by Tuesday, the 20th, or they will not be expected. Tea and coffee will be served after the meeting. All members of the South Eastern Branch are entitled to attend these meetings and to introduce professional friends.—THOS. F. RAVEN, Barfield House, Broadstairs, Hon. District Secretary.

OXFORD AND DISTRICT BRANCH.—The next meeting of the Branch will be held at the Radcliffe Infirmary on Friday, March 23rd, at 3 P.M. Members wishing to read papers on show cases are requested to communicate as early as possible with WM. COLLIER, M.D., St. Mary's Entry, Oxford, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING of this Branch was held in Aberdeen on February 20th, Brigade-Surgeon-Lieutenant-Colonel MACONACHIE in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

New Member.—Dr. H. Watt (Gisburn) was admitted a member of the Association.

Exhibits.—Dr. MACKENZIE BOOTH exhibited skiagraphs of Chinese lady's feet, and read a description of them which had been sent by Dr. J. D. Thomson (Hankow).—Professor FINLAY showed a number of photographs from Bombay illustrative of plague, and these were described by the CHAIRMAN.

Abdominal Sections.—Dr. SCOTT RIDDELL read a paper on fifty recent abdominal sections which he had performed in private and hospital practice. A number of specimens from

cases of ovarian tumour, myoma uteri, cholelithiasis, relapsing appendicitis, malignant disease of kidney, ruptured tubal pregnancy, etc., were shown.

BORDER COUNTIES BRANCH.

A meeting of this Branch was held at Hawick on March 2nd, Dr. J. R. Hamilton, President, in the chair. Fifteen other members were present.

Confirmation of Minutes.—The minutes of the last meeting of the Branch were read, approved, and signed by the President.

New Members.—The following gentlemen were elected members of the Association and Branch:—James Johnstone Anderson, L.R.C.P. and S.Ed., Millom; Robert T. B. Lorraine, M.B.Edin., Castle Douglas; George A. Rorie, M.B.Edin., Garlands, Carlisle. Thomas G. Mathews, M.D.Edin., Whitehaven, was elected a member of the Branch.

Attendance at Council Meetings.—In the absence of Dr. Graham, Dr. Haddon moved:

That at each annual meeting of the Branch the number of attendances of each member of council at council meetings held during the preceding year be formally announced.

Dr. Mair seconded, and the motion was carried unanimously.

The Recent Victories in South Africa.—At the suggestion of the President, it was unanimously decided to send telegrams of congratulation to Lady Roberts, Lady Buller, and Lady White.

Expenses of Section.—Dr. Carlyle Johnstone moved:

That this meeting approve of the proposal of the Section of the Branch for the counties of Roxburgh, Berwick, Selkirk, and Peebles that the expenses of the Section be paid out of the funds of the Branch, the claim of the Section being restricted to a sum not exceeding 1s. per head of the members of the Branch residing in the area of the Section.

Dr. Haddon seconded. Drs. Mair and Calvert spoke in favour of the resolution. A letter was read from Dr. Maxwell Ross (Dumfries) protesting against the proposal. Dr. Thomson (Penrith) and Dr. Bowser (Penrith) thought discussion of the matter at this meeting was futile, as the whole subject would again have to be discussed at the annual meeting. Ultimately the motion was carried *nem. con.* Two members refrained from voting.

The Prevention of Influenza.—Dr. Haddon (Denholm) introduced a discussion on the necessity for preventing the spread of influenza and the best way to do so. The President, and Drs. Blair, Menzies, Carlyle Johnstone, Calvert, Thomson, Evans, Bowser, Mair, Graham, and Ogilvy-Ramsay spoke.

Dinner.—The President and Mrs. Hamilton entertained members at afternoon tea before the meeting. After the meeting the members dined together in the Central Hotel.

SPECIAL CORRESPONDENCE.

SYDNEY.

Infectious Diseases Hospital for Sydney.—Australian Association for the Advancement of Science.—University Examinations in Medicine.—Plague.

The question of the necessity for an infectious diseases hospital for the metropolitan district has again become an urgent one in view of the proposed closing of the diphtheria branch of the Hospital for Sick Children at the Glebe. It appears that owing to a great diminution in the number of cases of diphtheria this branch of the hospital is being carried on at a considerable loss, and the directors desired to close it altogether. But in view of the fact that if it is closed there is no hospital accommodation available for these cases except at the Coast Hospital at Little Bay, which is too far away for patients suffering from diphtheria, the Government has been approached by the directors, with the object of securing monetary assistance to defray the cost of maintenance until such time as a suitable site and buildings have been provided for an infectious diseases hospital. The chief medical officer of the Government, Dr. Ashburton Thompson, has been asked to report upon this question, and in a letter to the Chief Secretary he has reviewed the whole subject. But in the meantime no further steps are being taken to act upon his report.

The Australasian Association for the Advancement of Science is meeting this year in Melbourne. The opening proceedings were held under the presidency of Professor Liversidge, of the Sydney University. He subsequently vacated the chair in favour of Mr. Ellery, the Government Astronomer of Victoria. The Section of Biology is under the presidency of Mr. J. J. Fletcher, the Librarian of the Linnean Society of New South Wales, who, in the course of his presidential address gave an interesting historical review of the progress of biological science during the past century.

The annual examinations in the Faculty of Medicine in the University of Sydney were held in December last. In the final examinations for the degrees of M.B. and C.M., 20 out of 25 candidates were successful in obtaining these degrees, Mr. Burfitt, B.A., B.Sc.Syd., graduated with first-class honours, and obtaining the University medal.

Two cases of disease believed to be the bubonic plague have occurred in Adelaide, South Australia. One patient died; the other case, a boy of 9 years, is now in Adelaide Hospital. No fresh case has since occurred to arouse suspicion and the quarantine restrictions are being relaxed. All precautionary measures are being taken to prevent the spread of the disease. It is reported that rats have been found dead close to the place where the patients were isolated, and that cultures of the plague bacillus have been obtained from the glands and other organs. The South Australian Branch of the British Medical Association has requested the Government to arrange that an inquiry be held into the alleged outbreak of the plague, and that the services of a competent physician and bacteriologist be obtained from one of the other Colonies. Dr. Gresswell, the Chairman of the Victorian Board of Health, has been asked to visit Adelaide and report.

Fresh cases of the disease are still occurring in the isolated district of Noumea, but no particulars as to number of cases or deaths are to hand. It now appears that in all probability cases of the plague had occurred in the vicinity of Noumea as far back as last November. Several deaths among the Kanakas which were ascribed to tuberculosis are believed now to have been due to the plague. One of the nurses in the hospital, a European, has died from the disease.

A suspicious case was reported to the Sydney Board of Health last week. A van driver employed on the wharves at Sydney developed symptoms of illness resembling the bubonic plague. The case was subsequently proved to be a genuine one of plague, Dr. Tidswell, the Bacteriologist to the Board of Health, having proved the presence of the plague bacillus. The patient with his family has been quarantined and his house disinfected. It is believed that the disease has been introduced by rats on board ship from Mauritius. No other case has been reported up to date, and active steps are being taken to prevent the spread of the disease.

CORRESPONDENCE.

HOSPITALS AND THE WAR FUNDS.

Sir,—The writer of a leading article under the above heading in the British Medical Journal of the 3rd inst., states that I seem to assert that some hospitals deliberately conceal from the public the amount of their invested funds, and adds that this cannot apply to those hospitals which render their accounts to the Hospital Sunday Fund plan. I am most anxious there should be no implication upon anybody as to the reasons or motives in this matter. We are all eager to do our utmost to help the finances of our hospitals, and no implications, direct or indirect, must be made upon the good faith of anybody concerned. The Hospital Sunday Fund account does not exhibit the amount of invested funds, and only a few of the hospitals publish any capital or reserve account of the kind verified by the auditors, without which verification it is useless for practical purposes. Such being the practice I hope that no implication of motive may be put forward again in this matter in the columns of the Journal.—I am, etc.,

Porchester Square, W., March 2nd. Henry C. Burdett.

THE DEFECTS OF THE CLUB SYSTEM.

SIR,—If you will kindly afford me the necessary space, I would like to take the opportunity of referring to Mr. Rowthorn's letter in the BRITISH MEDICAL JOURNAL of March 3rd, and also to your own answer to "M.D." in the same issue.

Mr. Rowthorn speaks as if the General Medical Council were able to compel club doctors to universally combine to raise the present rates for medical attendance. If some club doctors refused, how could the Council take any such action? Does any rational person believe that the Council could proceed to condemn all such recalcitrants and to strike their names off the *Register* as guilty of infamous conduct in a professional respect?

"Infamous conduct in a professional respect," let us bear in mind, is not a crime as against the profession itself or an offence professional men must condemn in their relations towards themselves. It is such conduct as the public feels worthy of condemnation in a professional man, or, in other words, the action complained of must not be merely an infringement of medical etiquette or an offence to medical opinion, but to a certain extent, and in its effects a moral delinquency, affecting the whole community, and one worthy of punishment in the shape of exclusion from the *Medical Register* and deprivation of all civil rights which flow from such a position.

The Council could only advise or suggest, and what "suggestions" could any central body make of any value without local knowledge in the cases of different districts up and down the country? Is not a Conciliation Board with means of procuring local assistance more likely to arrange satisfactorily terms for both parties?

Then he speaks as if the General Medical Council were indifferent to such economical questions. Why, the Medical Aids Committee have sat for months and their Chairman has spent, to my knowledge, half his leisure time and more, working constantly almost, receiving, answering, and considering heaps and heaps of correspondence. Not only so, but the President, Sir William Turner, who has all his life been working outside medical practice, has been and is most anxious to help in smoothing the difficulties which have arisen between club doctors and club managers.

I am glad you have directed attention once more to the methods of the National Deposit Friendly Society. This without doubt is the only correct and sound system for securing medical help and encouraging thrift and providence amongst the working classes. Let us have a Conciliation Board and in due time that body will come to see that it really is so.

The Council of the British Medical Association has now a fresh opportunity afforded to it of making a beginning, at least in the way of solving this *quæstio vexata*. May we not expect that other constituted authorities, such as the different licensing bodies, will lend a hand in forwarding this highly desirable object? So large and important a body as our parent Association, if it will graciously take the lead to which its historical and prominent position in the medical world entitles it most assuredly to take in this beneficent object of peace making, will surely do well. To those of us who have given most attention to the subject the present appears a crisis in the future relations between two millions of the best of our working men and the profession, and we fervently hope it will not be let pass without bringing about a happy result for all interested.—I am, etc.,

Dingwall, March 5th. WILLIAM BRUCE.

SIR,—While most of us will in the main agree with what Dr. Rowthorn says in the BRITISH MEDICAL JOURNAL of March 3rd, page 546, on the comparative uselessness and the non-representative character of the General Medical Council, we should be careful to give even the Council its due. Occasionally—so seldom that it seems as if it were by accident—the Council deviates into what the ordinary practitioner would call usefulness, and in my opinion its action on this very subject is a case in point.

Taking the Council as it is, and remembering that the majority of its members hold a very decided view of its limitations, we could hardly expect it to do more in this matter than it has done. By appointing a Committee to confer with the friendly societies' representatives, the Council has elicited valuable information, much of which, by the way, is hinted at rather than imparted. One thing comes out plainly. The friendly societies' representatives are in a "coming-on disposition." We are told that a most candid and conciliatory spirit was shown by them. They are perfectly willing, and are empowered to meet us and talk over the various grievances we have against them—and, what is more, they freely recognise that we have legitimate grievances.

A great deal has been made of the exclusion of the wage-limit from the purview of the Board; but Dr. Glover, at the Newcastle Conference, told us that, although the wage limit "is not directly included in the purview of the Board, it does not follow that it will not come in indirectly, or that some concession will not be made to neutralise its exclusion." Dr. Glover is not the man to speak without his book, and, if I know anything of the spirit of the profession, the wage limit would stand a very good chance of "coming in," directly or indirectly, and staying in. Practically, then, every point in dispute is open to discussion, and this, to put it at the lowest estimate, can do no harm.

What has been done in the matter in the ten months which have elapsed since the proposal came before the profession? On the part of the friendly societies all is ready, and their representatives are appointed. On our side practically nothing has been done except to give the public one more example of what an unbusinesslike and disorganised body it has to deal with. It really seems to be time that something definite should be done on our part, and there is only one organisation which is entitled to speak with authority for the profession, and that, of course, is the British Medical Asssociation. The Council of the Association has taken from August, when the matter was first brought before it, until January, to find out that it must have more particulars before pledging itself to the principle of a Conciliation Board. I have carefully read everything which has appeared on the matter, and unless the Council has information not given to the profession at large, I fail to understand this delay, unless it is anxious to keep up a reputation for procrastination. Judging by the information given to the world, it is no use asking for particulars which do not exist. We are simply asked to send half-a-dozen representatives to meet the same number from the friendly societies, and talk over our grievances with a view to getting them remedied. I cannot find that we are asked to pledge ourselves to anything. Let the British Medical Association elect the medical representatives. It is the only body which can do so, and if from red-tapeism or a mistaken idea of modesty our Association does not act, the project will fall through. The expenses, which would not be great, should be equally shared between the Association and the friendly societies. After full discussion (the medical case being carefully prepared beforehand, of course), both sides would report to their constituents. Any proposals would be voted on by the Branches or by a postal ballot, and would be discussed in the medical journals, after which another meeting of the Board would take place, with a reasonable prospect of an improvement in the relations between the two parties.

Dr. Rowthorn thinks that any representatives of the profession on such a Board would have no *locus standi*, and that the deliberations of the Board would therefore be useless. I cannot see it. There exists no organisation which is capable of speaking for the whole profession, but the British Medical Association, which can speak for half of it, is the best substitute. It is a case of the British Medical Association or nothing, and even men who do not belong to it would admit that no representatives likely to be appointed by the Association would give the profession away. We must, of course, see that the men put on are not merely figureheads, however well-meaning, but men thoroughly conversant with friendly society work, and having the respect and confidence of the profession. One or two members of the Board might be non-members of the Association.

What are the alternatives? If the plan fall through, we must go on as we are. Fighting amongst ourselves, sweated by the societies, and with the odium of having refused to meet and talk things over in an amicable way. On the other hand, a Conciliation Board may be the means of gaining better pecuniary terms, and greater security of tenure in the position of medical officer to a friendly society lodge. At the worst we could not be worse off than we are. The pressing

need at this juncture is that the profession should accept cheerfully the olive leaf held out, and set about electing its representatives without waiting for details, which can only be forthcoming when the two parties meet. The idea is a new one and I believe the friendly societies are simply asking us in all good faith to send men with whom they can have a talk in order to consider the possibility of a *modus vivendi*. To ask for further particulars is to insinuate that the societies have some deep-laid scheme up their sleeve.

Considering the novelty and importance of the idea, very little interest has been shown in the proposed Board by the profession. If we as members of the British Medical Association do our duty, and our Council does its share, we ought to have our men ready not later than the annual meeting this year. After that I am sure Dr. Glover, who has already taken a great deal of trouble in this matter, would willingly make the arrangements for the first meeting of the Conciliation Board.—I am, etc.,

Gateshead, March 5th. ALFRED COX.

BORAX AND BORACIC ACID AS FOOD PRESERVATIVES.

SIR,—The author of a review of my paper on The Effects of Borax and Boracic Acid on the Human System, which appeared in the BRITISH MEDICAL JOURNAL of February 17th, alludes to me in a very flattering manner, but says "it is difficult to avoid a suspicion that this paper is intended to be used and quoted by the defence in any prosecutions which may be instituted." I should like to do away with this suspicion by frankly admitting that my investigations were intended to correct the many false and unscientific attacks which have been made upon a substance whose proper use is of the greatest importance for the welfare of the people. I should be glad if the value of the results I have obtained were recognised not only by scientists but by the legislature and the courts of law. I trust that my paper will be an incentive to further scientific investigation, in which I shall always be ready to take part.—I am, etc.,

OSCAR LIEBREICH.

Berlin, N.W., March 4th.

COLLIERY SURGEONS IN THE MIDLANDS.

SIR,—At last there is a cry raised by a colliery surgeon in the Midlands for an increase of remuneration from the miners. Months ago I urged that other counties should follow our example, and so make it easier for all, but there was hardly any response.

If "Colliery Surgeon" will write to me, I will try and find time to give him some help to carry out his idea to a good and happy issue.—I am, etc.,

EDWARD JEPSON,
President, County of Durham Medical Union.

42, Old Elvet, Durham, March 4th.

INSTRUCTION OF MEDICAL STUDENTS IN MIDWIFERY.

SIR,—In the review of my *Practical Textbooks of Midwifery for Nurses and Students*, which appeared in the BRITISH MEDICAL JOURNAL of March 3rd, the following statment is made: "We believe that in no well-regulated medical school or lying-in hospital are students now allowed to attend women in labour before they have received systematic instruction in midwifery." Allow me to point out the fact that a large number of the Glasgow students do take their cases out before they have attended lectures on the subject. The same practice existed in Edinburgh in my student days, and I understand it is still not uncommon there. Both these universities are generally supposed to be "well-regulated medical schools."

I am at one with your reviewer in disapproval of the practice, but as it actually exists I have endeavoured to supply what appeared to be a felt want by giving to the students a clear and concise statement of our methods of work. Of course a student who has not had lectures is not allowed to attend cases until he has passed an oral examination. The house-surgeon attends the first three cases along with the men. I have never known of any patient suffering from the ignorance of the men, but, as regards the students themselves, it seems to me the proceeding is to be deprecated as involving a great waste of time.

The teaching of midwifery from the practical side certainly calls for reform. It appears to me that, over and above personal attendance of twelve or twenty labours, a course of at least three months' clinical instruction should be made compulsory.—I am, etc.,

Glasgow, March 5th. ROBERT JARDINE.

MEDICO-LEGAL AND MEDICO-ETHICAL.

AN INQUEST AT EASTBOURNE.
THE VIAVI TREATMENT.

WE learn from the *Eastbourne Chronicle* that Mr. G. Vere Benson, coroner, held an inquest at Eastbourne on February 27th touching the death of Elizabeth Mary Lake. The deceased's husband stated that she had been out of health for over a year, but had refused to see a medical man. She had seen Miss O'Dowda, who was agent to the British Viavi Company in Eastbourne. On the Monday before her death the deceased was confined to bed, and subsequently, at his request, Miss O'Dowda came to see her every day until Saturday, about four times altogether. He understood that his wife was suffering from an obstruction of the passage of the bowels. The treatment comprised an ointment rubbed down the spine, which it was explained was to feed the nerves running from the spine. The Viavi treatment was commenced a little previous to Lady Day, 1899, and in the summer about July she was decidedly better. She became worse about Christmas, which, however, she attributed to a visit to Reading, where she said the air did not agree with her, Miss O'Dowda gave his wife advice, and gave him to understand that she was suffering from a tumourous condition of the intestines. He noticed a change come over his wife on February 25th, and he immediately went for a doctor, but she died before he arrived.

Miss Mary Josephine O'Dowda stated she was branch house manager of the British Viavi Company, which was a health treatment company for home treatment. It did not give medical aid, but medical treatment, for which it charged. It was a commercial company which distributed certain remedies to the patients who came under treatment.

The Coroner observed that a company could hardly have a patient; it must be some individual of the company.

The witness replied that each office had its own representative. The business of the agent was to give instructions with regard to the remedies to the people who wished to buy them, as to their application, and to put them in touch with the Hygiene Department in London, which was controlled by medical advisers, and corresponded with the patients. It was part of the witness's business to advise or give instruction as to the application of the remedies, but she did not give medical or surgical advice, and had no diploma. Witness's connection with the deceased began through a friend; the deceased came to see witness at her office last March. She came first as a friend, and continued to come simply as a friend for some time until she came under treatment.

Coroner: How was it she came under treatment?

Witness: She complained of nervous exhaustion, indigestion, and other trouble.

The Coroner: To whom did she complain?

Witness: She explained her symptoms to me

The Coroner: As a friend?

Witness: As a prospective patient.

In reply to further questions, witness said that deceased came under treatment, which meant that she purchased some of the remedies for application, and the witness told her what she required.

The Coroner: If you were a doctor you would call it prescribing.

The Witness: I am not a doctor, and I prefer the term treatment.

Witness then pointed out the remedies which she recommended to Mrs. Lake, and said that they were composed of vegetable ingredients, the names of which she did not know. She believed the remedies to be efficacious because the health of very many of the patients improved. Witness further stated that none of the Viavi remedies contained poison. She stated that she had not examined the deceased further than asking her her symptoms, and on that she formed an opinion as to what was the matter with her. The deceased had visited her frequently.

The Coroner then questioned the witness further as to the ingredients of Viavi, but the witness did not make any statement beyond that they were vegetable ingredients, perfectly pure and harmless, and had proved efficacious all over the world. She did not know the names of the plants from which the remedies were extracted. Each box containing medicine also contained a paper of questions, which was filled up by the patient explaining what was the matter with her; that was sent to the Hygiene Department in London, and the questions were replied to by medical men of the department. Mrs. Lake was so advised, but it was a long time ago, and witness did not remember whether she had seen the advice or not. The Hygiene Department in London was under medical superintendence; the medical supervisor was Dr. Woodward; he was a registered medical practitioner.

Dr. Woodward, who was present, here stated that he desired to correct the witness's statement. He was not registered; his qualification was from the University of Pennsylvania.

The Coroner: That is an important correction.

Questions were then put with regard to the charges, when it was stated that the prices were as follows: Box of ointment, 36s.; box of 84 capsules, 36s., bottle of Viavi liquid, 36s.; box of tablets, to last three months, 36s.

Answering further questions, witness said she was called to see Mrs. Lake on Tuesday or Wednesday, and she went to her regularly after that. Before that time deceased visited witness.

The Coroner: Has anyone else attended deceased?

Witness: Sometimes she has been seen by Mrs. Brown, my agent.

When was that?—Some weeks ago.

When did you see deceased last before you were called to see her?—About a fortnight ago.

Did you do anything for her?—I saw and spoke to her, and told her to use the remedies. The ointment was to be rubbed on the spine in order

to create vitality in the nerve centres. She had gone to see the deceased every day as a friend to see how she was, and how the remedies were working.

In reply to a question from the Coroner, witness said that she had no medical qualification. They were trained by the house in London as Viavi workers under Miss Glassford. She was the Viavi Company. The training consisted of instruction and other things, and its length depended very much on the applicants—the capabilities of the person being trained. She had been nearly five years with the Viavi Company.

Pressed as to the length of time for which she had been with the Company before commencing to sell medicines, she said she did not know how long, but possibly two months. When she saw the deceased at the house she seemed very weak, but she did not advise her to get medical assistance, although when Mr. Lake spoke of it witness did not object. Witness continued that they sent for medical men where they saw it was necessary. She could not say if medical men had ever worked with her. She had no idea the patient was going to die. She did not go to see Mrs. Lake as her adviser, but simply as the representative of the Viavi Company.

The inquest was then adjourned.

At the resumption of the inquiry on March 1st, Dr. Alexander Harper, a registered medical practitioner, practising at Eastbourne, said he had attended the deceased some three years ago, but not since. When he saw her on the morning of February 25th, she was dead. He had made a *post-mortem* examination, and found an ulcer in the upper part of the small intestine near the stomach which had given way, with the result that a portion of the contents of the intestine had escaped into the abdominal cavity, causing the almost immediate death of the patient. The ulcers could not have been diagnosed with positive certainty even by a skilled medical man. He was not prepared to say that treatment by a medical man would have saved the patient's life.

Miss O'Dowda, who was recalled, stated, in answer to Mr. Hillman, who appeared on behalf of the Viavi Company, that in each packet of the Company's remedies were printed instructions, and when she advised patients she told them to follow the instructions; that was what she meant when she said she had advised patients. She did not by advertisement or in any other way hold herself out as a qualified medical practitioner. Mrs. Lake was her friend, and it was in that capacity that she visited her and gave her advice.

The Coroner, in summing up, remarked that it was evident from the medical evidence that it would have been very difficult indeed for any medical man, however skilled he might be, to discover the ulcers, although he probably would have done so. If that was so it did away with the suggestion that death might have been precipitated by the incompetence of the medical attendants. Of course Miss O'Dowda wished it to be considered that she did not medically attend the deceased, but they must recollect that Miss O'Dowda carried on business and had offices in the town for the sale of the remedies. Mrs. Lake visited her and had since been taking the remedies sold by her at what they must feel to be a very considerable price. Miss O'Dowda had said that she charged no fee for attending patients, but the price of the remedies left an ample margin, which might represent the fee. They had heard that 36s was charged for each remedy. If Miss O'Dowda did not receive a fee she got a salary or commission. So then it was not quite frank to suggest that she got no advantage by introducing the remedies to the people. He proceeded to comment on the danger of people who confessed themselves utterly ignorant of the human body and its workings administering remedies the ingredients of which they did not know, to patients of the nature of whose illness they were ignorant. To his mind, Miss O'Dowda certainly undertook the duty for which she was called in. They must, however, remember that the patient had a perfect right to call in whom she pleased and to adopt what treatment she liked, and they could only regret that she did not call in a properly qualified medical man, under whose treatment she might have been alive at the present day. More than that it would be unfair to say. Under those circumstances he should recommend the jury to say that death was due to natural causes, but that would not affect the question of what they thought of the operations of Miss O'Dowda and the company she represented. They sold remedies at high prices, not to persons who were ordered them by medical men, but by persons who knew nothing about medical matters and who might overlook a most serious complaint, as, in fact, was done in this case.

Dr. Woodward, the medical adviser of the Viavi Company, was then permitted to make a statement and put in a copy of the instructions issued by the Company to all their agents.

He was sworn, and stated that his name was Henry Thomas Woodward, of New Cavendish Road, W. He held the medical qualification of M.D. of the University of Pennsylvania, and was overseer of the managing department of the Viavi Company. His work was to read and answer the correspondence of patients, but he had had no correspondence with the deceased; he did not know what were the ingredients of the remedies. He put in the company's instructions to their agents, which briefly warned them against posing as medical men, not to attempt to diagnose diseases, and simply to visit patients as acquaintances or friends. Witness stated that the company was a limited liability company, but it was incorporated after he joined it in June. There was no other qualified medical adviser to the company at the time of his appointment.

The jury returned the following verdict: "The verdict is 'Natural causes.' The jury also think that the life of the patient might have been prolonged had the deceased been placed under proper qualified medical treatment, and from the evidence brought before them they consider the Viavi Company a fraud."

The Coroner said that he considered the verdict very important, and that he agreed with the whole of it.

PROCEEDINGS UNDER THE MEDICAL ACT.

On February 28th at the North London Police Court, before Mr. Paul Taylor, Edwin William Alabone, of Highbury Quadrant, was summoned at the instance of the General Medical Council for wilfully and falsely pretending to be a Doctor of Medicine, and using titles and descriptions implying that he was recognised by law as a practitioner in medicine.

Mr. S. G. Lushington and Mr. Muir Mackenzie appeared for the General Medical Council, and Mr. H. S. Schultess Young for the defendant.

Mr. Lushington stated that the proceedings were taken under Section XL of the Medical Act, 1858, an Act to enable the public to distinguish between registered and unregistered practitioners. It was not necessary to prove that the public had been deceived; all he had to prove was that the public might be deceived. Mr. Alabone had held the qualification of M.R.C.S., but his name was in 1886 removed by the College from its list of members, and subsequently erased by the General Medical Council from the *Medical Register*, though it should be said that Mr. Alabone had written asking that his name might be erased. The defendant had described himself as Edwin W. Alabone, M.D. Bellevue College, M.D. Phil. U.S.A., D.Sc., F.R.M.S., ex-M.R.C.S.Eng. That the false pretence was wilful was shown by a note in the book published by Mr. Alabone on the treatment of consumption.

Mr. Schultess Young submitted that Mr. Alabone was qualified if not registered, and that the prosecution was not justified in instituting these proceedings. Mr. Alabone was careful to state the origin of his degrees, so that no one could be deceived, and also the reasons why he had been struck off the *Medical Register*. Mr. Alabone had passed through the ordinary medical course, becoming in due time a Member of the Royal College of Surgeons. In 1886 a laudatory article on Dr. Alabone's cure for consumption appeared in *Moonshine*. The Royal College considered this derogatory to the profession, and the defendant's name was removed from the list of members. Since then Mr. Alabone had been most careful to state that he was an ex-member of the College.

Mr. Alabone, in giving evidence, stated that the article in *Moonshine* was not inserted with his knowledge. It was done by a patient of his. Since he had been to his mind illegally struck off the medical list, he had been in consultation with many a registered medical man, and he had lost no opportunity of telling his patients that he was not registered, and the reasons therefor. Some years before his name was erased from the *Register* attention was drawn to his work in London, and, after an examination and writing a thesis on consumption, he was made an M.D. of Philadelphia. The proceedings regarding the Bellevue College were similar. The D.Sc. degree was obtained from Chicago.

In cross-examination, witness said that the Bellevue College, to which he belonged, was not the College of that name in New York. It was another part of America. He paid £5 5s. for that degree, and £10 10s. was charged by the University of Philadelphia.

Mr. Paul Taylor said that the suggestion of the prosecution appeared to be that, because the defendant said that he was an M.D. of Bellevue College and an M.D. of Philadelphia, it implied that he was an M.D. of the Bellevue College, New York, and of the Jefferson Medical College, Philadelphia, both of which degrees entitled the holder to registration in England. This assumption, in his mind, was wrong. The defendant gave the origin of his degrees, and, further, said he was an ex-member of the Royal College of Surgeons. That being so, he found as a fact that the defendant described himself accurately as to what he was, without any intention of misleading the public.

The summons was dismissed, with £10 10s. costs, and the magistrate declined to state a case.

DR. MAJOR GREENWOOD (Hackney Road, N.E.) writes: Once again has the General Medical Council shown a conspicuous want of prudence in its prosecutions under Section LX of the Medical Act. Its attack on Mr. Alabone last week, although no doubt much more to the taste of the profession than the proceedings in the Hunter case, were in reality quite as injudicious. Nothing is more prejudicial to the interests of the profession than to prosecute unless a successful issue is at least probable. The legal triumph of one such practitioner is more injurious than the conviction of three is beneficial, and it is therefore incumbent on those who advise such proceedings to show ordinary judgment in the matter. Among those who direct the action of either Medical Defence Society, I do not believe that a single opinion would have been given in favour of this prosecution, and it does not seem too much to expect that the General Medical Council should be as well advised as those Societies. The case of Ferdinand is the only one in which a conviction has been gained where the "M.D." was qualified by descriptive letters, and although in that case Mr. Sheil said he should utterly disregard such letters, he is probably the only magistrate that would. The recorded cases on the other side are far more numerous, and certainly have a better claim to be considered when prosecutions are contemplated.

I protest also against the loose statements of medical facts, made from time to time by counsel acting for the General Medical Council, which are, to say the least, a *suggestio falsi*. In the above prosecution Mr. Lushington is reported by the *Times* to have said that it was a fact that the degrees of the Bellevue College, New York, and Jefferson College, Philadelphia, were registrable in this country. Later on, Mr. Paul Taylor, speaking of these degrees, and evidently taking the counsel's words literally, said "both of these degrees entitled the holder to registration in England." Now, what are the facts? No foreign degree is, or ever has been, registrable here as such, but under Section XVI of the Act of 1886, all holders of foreign degrees, granted after examination, who are already on the *Register* for English diplomas, may register them as additional titles, provided the said degrees were obtained before June, 1886. It was an unfortunate coincidence, too, that the General Medical Council's legal representative should have quoted as registrable the very degree—"M.D." Jefferson College—for the use of which the late Dr. Hunter was threatened with prosecution by the the Council, and which was really the origin of the much-to-be-regretted Hunter case.

F.R.C.S. (Brighton) writes to express the opinion that a short amendment of the Medical Act, to the effect "that it shall be unlawful for anyone to practise medicine, surgery, midwifery, or dentistry, unless he or she be actually on the *Register* at the time of so practising," would soon wipe out unqualified practitioners, prescribing chemists, and herbalists.

DR. GARROD, J.P., D.L., of Panteryrod, Aberayron, Cardigan, and Newport, Mon., has been elected a sheriff for Cardiganshire.

OBITUARY.

WILLIAM MACNEILL WHISTLER, M.D.

Senior Physician, London Throat Hospital.

It is with much regret that we have to record the death of Dr. Whistler, the distinguished laryngologist, who succumbed to the after-effects of influenza on February 27th, at the age of 63. He had been in indifferent health for two or three years, but the end came unexpectedly, causing a proportionate shock to his very numerous personal friends.

The Whistler family is of English origin, and bearers of the name are found at Goring, and elsewhere in Oxfordshire, in records of the latter part of the fifteenth century. From one branch of the family which settled in Essex came Dr. Daniel Whistler, who was President of the Royal College of Physicians in the reign of Charles the Second; his name occurs frequently in Pepys's *Diary*. Another branch migrated to Ireland; from it came Dr. Whistler's grandfather, Major John Whistler, who went to America during the Revolution and afterwards served in the American army. His son, George Washington, also served in the army, in which he rose to the rank of Major. After leaving the service he devoted himself to engineering, and took a leading part in the early development of railways in America. So great was his reputation that he was invited to Russia by the Emperor Nicholas to superintend the construction of the first railway between Moscow and St. Petersburg. It is said that no American, except John Quincy Adams, was ever held in such high estimation in Russia. He had very remarkable skill with the pencil, and might have won distinction as an artist. But the power that was in him was not lost to the world, for it was transmitted to his son James, who has made the name of Whistler illustrious in the world of art.

It is an interesting coincidence that a daughter of Major G. W. Whistler is the wife of Sir Seymour Haden, in whose fame medicine may claim a share but little less than that which belongs to art.



[From a sketch by James MacNeill Whistler.]

William MacNeill Whistler was born in the United States in July, 1836. A part of his boyhood was spent in St. Petersburg, where he laid the foundation of a linguistic knowledge which included a mastery of Russian, French, and German. On his father's death, in 1849, the family returned to America. He studied medicine at Philadelphia, and took the M.D. degree of the University of Pennsylvania with honours in 1860. During the American Civil War he served as a medical officer in the Confederate States army. In that capacity he did good work, and earned besides a reputation for courage, being known in his regiment as the "plucky little surgeon." Early in 1865 he was entrusted with despatches to deliver to the Confederate Agent in Liverpool, and, after running more than one blockade and many adventures and hair's-breadth 'scapes, he succeeded in reaching England. He was preparing to return when the news of Lee's surrender at Appomatox and the downfall of the Confederacy changed all his plans.

After a year of wandering in Russia and other countries, he settled down to work first in Paris, and afterwards in London at St. George's Hospital. He was admitted a Member of the College of Surgeons of England in 1871, and a Member of the Royal College of Physicians in 1876. He chose diseases of the upper air passages for his special province of practice, and was appointed Physician to the Hospital for Diseases of the Throat. He severed his connection with that institution in 1886, and took an active part in founding the London Throat Hospital, of which he was the Senior Physician till his death. He was Honorary Physician to the National Training School for Music, and Lecturer on Diseases of the Throat and Nose in the London Post-Graduate Course. At the annual meeting of the British Medical Association held in Dublin in 1887 Dr. Whistler was President of the Subsection of Laryngology and Rhinology, this being the first occasion on which these specialities were officially recognised by the Association. In his presidential address to the Subsection he expressed the hope that some proposition for the founding of an association specially devoted to the advancement of laryngology might be brought forward, and steps taken towards its accomplishment. This hope was afterwards fulfilled, perhaps beyond his expectation, for two bodies of the kind are now in existence. One of these, the British Laryngological, Rhinological, and Otological Association, owed its foundation largely to the initiative of Dr. Whistler, who was for some time its President. Of the other, the Laryngological Society of London, he was also a member. He was also a member of several other professional societies, British and foreign.

Dr. Whistler did not write much, but the comparative scantiness of his production was due not to intellectual barrenness, but to the almost painful conscientiousness of his literary workmanship. No man ever took such pains to see things within the sphere of his vision as they really were, or was more scrupulously accurate in stating the results of his observation. Hence his work, though not considerable in amount, is of great value. Among his writings may be specially mentioned his *Lectures on Syphilis of the Larynx*; his *Notes on Operations in Syphilitic Structures of the Larynx* (for the treatment of which conditions he devised a useful instrument); the article on Diseases of the Nose, contributed to Quain's *Dictionary of Medicine*; papers on the Prognosis of Laryngeal Phthisis as influenced by Local Treatment, in the old *Medical Times and Gazette*; and others published in the British Medical Journal and the *Lancet*.

Dr. Whistler was a man of singularly lovable character; it was impossible to come within the range of his personal influence without feeling his power of attraction. He had a delightful gift of quiet humour, and his varied experiences of life and wide knowledge of men and cities supplied him with a wealth of amusing stories which he told with great effect. He was a man of wide intellectual interests and had a

highly cultivated taste in art. His very oddities—the slowness in his speech and the extreme deliberateness of all his movements—which in another man might have been irritating, somehow added to Whistler's charm. Of the attachment felt for him by patients, a remarkable proof was given two or three years ago. Four of his old comrades in his campaigning days, who had benefited in one way or another by his skill, sent him their photographs in a group with a letter testifying to their ever-living gratitude to their skilful surgeon. The feeling must have been deep which thus found expression after thirty-three years.

Among his professional brethren Dr. Whistler was held in the highest respect both for his intellectual powers and for his perfect integrity. His name was honoured by laryngologists throughout the world, but it never came prominently before the public. He lacked the "pushfulness" which is supposed to be characteristic of his countrymen, and indeed he hated the "public means which public manners breeds." His death has robbed the profession to which he belonged of a most capable physician and a thoroughly honest man.

All old King's men who were the contemporaries of the late Mr. J. W. H. Lavies will learn with regret of his comparatively early death, for it may truly be said that his friends numbered all who knew him. Inheriting in a marked degree the geniality of his father, Dr. J. Lavies, the deceased was amongst the most popular men of his time at King's College. After qualifying he settled in practice in Warwick Square, where he speedily gained the affection and confidence of an increasing *clientèle*. His end was characteristic of his devotion to duty. In spite of a severe chill, he insisted on seeing a patient during the late inclement weather, the result being that he contracted a severe attack of pneumonia, from which he never rallied. That he was thoroughly appreciated was testified by the large concourse of friends who attended a memorial service. Of him it may without exaggeration be said, *Multis ille bonis flebilis occidit*.

The somewhat sudden death of Mr. R. G. Tucker has excited a feeling of deep regret throughout West Kent, especially in Farningham and Swanley, where, as a kind and skilful doctor, as a genial and charming companion, as the embodiment of good spirits, and as one whose bright and cheery presence was always welcome, he was for nearly twenty years one of the best known members of the community. About three weeks ago he was attacked by influenza, and, resuming his duties too soon, a relapse occurred, pneumonia rapidly set in, and he died on Friday, February 23rd. Mr. R. G. Tucker was the son of a well-known surgeon, who was himself the first to pass the then new examination for the Fellowship of the Royal College of Surgeons of England. He was a distinguished student of St. Bartholomew's Hospital; of a powerful frame and a quick intelligence, he there excelled greatly, not only in his professional studies, but also in manly physical exercises, especially in billiards and boxing, and earned the respect and friendship of several of the staff and many of his fellow-students. In 1873 he obtained the diplomas of M.R.C.S.Eng. and L.R.C.P.Edin., and in the following year he took a share in the practice of Messrs. Ashurst, Tucker, and Smith, at Farningham, Kent, where bold without rashness, acute in the difficulties of diagnosis, with a steady hand and a keen eye, combined with a good knowledge of anatomy, he proved himself a typical general practitioner. About 1887 he removed to Swanley Junction, a new and rapidly-increasing place, where he carved for himself a separate and extensive practice; he became Surgeon to the St. Bartholomew's (Kettlewell) Convalescent Home, to the Swanley Little Boys' Home, the Swanley Horticultural College, as well as the railway staff, and he also filled several other local offices. In May, 1897, however, he decided, for family reasons, to dispose of his Swanley practice, and removed to Southend-on-Sea, where he again quickly made his mark, and where he died at the early age of 47, in the midst and promise of a growing popularity. As a medical man he was kind and attentive; his memory is widely and deeply cherished by his former patients, whose confidence he possessed in a rare degree, and whose sympathy followed him to the end. His funeral took place on February 27th at Prittlewell, near Southend. Many of his patients and friends were present in spirit, and not a few—some from distant places—attended in person, with all the members of his family, to pay a last tribute to one for whom all who knew him well will join in the prayer of the writer of this notice—an old and grateful friend—*Requiescat in pace!*

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. E. Lorenzo Holmes, Professor of Ophthalmology and Otology in the Rush Medical College, Chicago, of which he was President from 1890 to 1898, aged 72; Dr. Giovanni Canestrini, Professor of Comparative Anatomy in the University of Padua, aged 65; Dr. Eugene Boeckel, Surgeon to the Civil Hospital, and formerly *agrégé* Professor in the French Faculty of Medicine, Strassburg, aged 69; Dr. Gérin-Roze, formerly Physician to the Paris hospitals, aged 65; Dr. José Hernandez y Sanz, Medical Director of the Baths of Alceda, Spain; Dr. Feldmann, described as the Nestor of the German medical profession, aged 92; Dr. Ernst Kruse, a member of the German Reichstag, aged 63; Dr. Bouchereau, Physician to the Sainte Anne Asylum, Paris, and President of the Association Mutuelle des Aliénistes de France; and Professor O. Leichtenstern, Chief of the Medical Department of the Augusta Hospital, Cologne, aged 55.

A movement has recently been set on foot for the establishment of a Pasteur Institute in Belgium

Child Labour in Coal Mines.—The Bill introduced by Sir Charles Dilke last week into the House of Commons will prohibit the employment of boys under 13 years of age in any mine below ground.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN 1899.

IN the accompanying table will be found summarised the vital statistics of 1899 relating to the thirty-three large English towns, including London, dealt with by the Registrar-General in his weekly returns.

The 343,294 births registered during 1899 in these thirty-three large towns were equal to a rate of 30.2 per 1,000 of their aggregate population, estimated at nearly eleven and a half million of persons. This rate was 1.3 per 1,000 below the mean rate in the preceding ten years, 1889-98, and was lower than in any year than on record. In London the birth-rate last year was equal to 29.4 per 1,000, while it averaged 30.7 in the thirty-two provincial towns, among which it ranged from 23.0 in Huddersfield, 23.1 in Halifax, 23.4 in Bradford, and 24.8 in Oldham, to 35.3 in Wolverhampton, 35.6 in Liverpool, 35.7 in Sunderland, and 36.6 in Gateshead.

The 229,731 deaths registered last year in the thirty-three towns were equal to an annual rate of 20.2 per 1,000; this rate was slightly below the average in the ten preceding years, but exceeded by 1.2 per 1,000 the death-rate during 1898. The rate of mortality in London during the year under notice was equal to 19.8 per 1,000, while it averaged 20.5 in the thirty-two provincial towns, among which it ranged from 15.0 in Croydon, 15.4 in Cardiff, 16.2 in Huddersfield, and 16.7 in West Ham, to 22.8 in Preston, 23.8 in Salford, 24.6 in Manchester, and 26.4 in Liverpool.

During the year under notice 31,992 deaths were referred to the principal zymotic diseases in the thirty-three towns, equal to an annual rate of 2.81 per 1,000, which slightly exceeded the mean rate from the same diseases in the ten preceding years, 1889-98. The zymotic death-rates in these towns last year ranged from 1.50 in Halifax, 1.56 in Croydon, 1.65 in Derby, and 1.82 in Newcastle, to 3.93 in Preston, 4.32 in Salford, 4.35 in Burnley, and 4.39 in Sheffield. The 31,992 deaths referred to the principal zymotic diseases included 145 which resulted from small-pox, 5,231 from measles, 1,520 from scarlet fever, 4,551 from diphtheria, 4,345 from whooping-cough, 2,472 from "fever" (principally enteric), and 13,728 from diarrhœa. The fatal cases of small-pox registered in the thirty-three large towns, which had been 450, 120, 25, 18, and 13 in the five preceding years, rose again last year to 145, of which 141 belonged to Hull, 3 to London, and 1 to Liverpool. The death-rate from measles, which had been 0.71, 0.55, and 0.56 per 1,000 in the three preceding years, declined again during 1899 to 0.46, and was 0.14 below the mean rate in the ten years 1889-98. In London the measles death-rate was 0.47, while it averaged 0.45 in the thirty-two provincial towns, among which the highest rates were recorded in West Ham, Bolton, Manchester, Salford, Burnley, and Sheffield. The death-rate from scarlet fever, which had been 0.22, 0.18, and 0.14 per 1,000 in the three preceding years, further declined to 0.13 during the year under notice, and was considerably below the average rate in the ten preceding years; in London the rate of mortality from this disease was only 0.09 per 1,000, while it averaged 0.16 in the thirty-two provincial towns, and was highest in Liverpool, Oldham, Burnley, Halifax, Bradford, Sheffield, and Sunderland. The death-rate from diphtheria, which had been 0.31 per 1,000 in each of the two preceding years, increased to 0.40 during 1899, and exceeded by 0.08 the mean rate in the ten preceding years; in London the diphtheria death-rate was 0.43 per 1,000, while it averaged 0.38 in the thirty-two provincial towns, among which the highest rates were recorded in West Ham, Portsmouth, Swansea, Leicester, Leeds, and Sheffield. The rate of mortality from whooping-cough, which had been 0.57, 0.41, and 0.42 per 1,000 in the three preceding years, was 0.38 during 1899, against an average of 0.51 in the ten preceding years; in London the death-rate from this disease was equal to 0.38, and corresponded with the average rate in the thirty-two provincial towns, among which whooping-cough showed the highest proportional fatality in Plymouth, Cardiff, Birkenhead, Burnley, Huddersfield, and Hull. The death-rate from different forms of "fever" (including typhus, enteric fever, and simple and ill-defined forms of fever), which had been 0.19, 0.18, and 0.20 per 1,000 in the three preceding years, further rose to 0.22 during the year under notice, and slightly exceeded the average rate in the ten preceding years, 1889-98; in London the "fever" death-rate was 0.18 per 1,000, while it averaged 0.24 in the thirty two provincial towns, among which the highest rates were recorded in Portsmouth, Wolverhampton, Nottingham, Birkenhead, Sheffield, and Sunderland. The rate of mortality from diarrhœa, which had been 0.79, 1.24, and 1.22 per 1,000 in the three preceding years, was 1.21 during 1899, and showed an excess of 0.31 per 1,000 over the average rate in the ten preceding years; in London the death rate from this disease was equal to 0.93 per 1,000, while it averaged 1.39 in the thirty-two provincial towns, among which diarrhœa showed the highest proportional fatality in Portsmouth, Liverpool, Manchester, Salford, Burnley, and Preston.

Infant mortality, measured by the proportion of deaths under 1 year of age to births registered, was equal to 181 per 1,000, and exceeded by 11 per 1,000 the mean rate in the ten preceding years. In London the rate of infant mortality was equal to 167 per 1,000, while it averaged 190 in the thirty-two provincial towns among which it ranged from 152 in Huddersfield, 154 in Croydon, 158 in Bristol, 159 in Halifax, 162 in Derby, and 166 in Swansea, to 206 in Manchester, 209 in Salford, 210 in Nottingham, 255 in Preston, and 269 in Burnley.

The causes of 2,761, or 1.2 per cent., of the 229,777 deaths in the thirty-three towns during 1899 were not certified, either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Croydon and in Derby; in the other towns the lowest proportions of uncertified deaths were registered in Brighton, Plymouth, Bolton, and Oldham, and the highest in Liverpool, Blackburn, Preston, Halifax, Leeds, and Sheffield.

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the Year 1899.

Towns.	Estimated Population middle of 1899.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Uncertified Deaths.
33 Towns	11,404,408	343,294	229,731	30.2	20.2	2.81	31,992	145	5,231	1,520	4,551	4,345	2,472	13,728	181	1.2
32 Provincial Towns	6,858,656	210,174	140,042	30.7	20.5	3.02	20,764	142	3,088	1,122	2,587	2,625	1,668	9,532	190	1.6
London	4,546,752	133,120	89,689	29.4	19.8	2.48	11,228	3	2,143	398	1,964	1,720	804	4,196	167	0.6
West Ham	300,241	8,891	5,004	29.7	16.7	3.50	1,049	—	204	19	183	101	77	465	197	1.9
Croydon	127,759	3,204	1,916	25.1	15.0	1.56	200	—	18	3	17	40	9	113	154	—
Brighton	123,226	3,058	2,329	24.9	19.0	2.50	307	—	1	10	61	19	24	192	173	0.4
Portsmouth	190,741	4,980	3,747	26.2	19.7	3.51	665	—	52	21	121	62	76	333	197	0.9
Plymouth	100,637	2,992	2,180	29.8	21.7	1.93	193	—	11	3	20	51	7	101	190	0.3
Bristol	320,911	9,345	5,840	29.2	18.2	1.86	595	—	41	13	33	119	34	355	158	0.6
Cardiff	185,826	5,309	2,857	28.6	15.4	2.06	382	—	11	3	61	119	19	169	184	0.7
Swansea	103,722	2,870	1,877	27.7	18.1	2.67	276	—	15	11	141	28	8	73	166	1.3
Wolverhampton	88,821	3,123	1,932	35.3	21.8	2.56	227	—	2	6	17	22	46	134	184	0.5
Birmingham	514,956	17,609	10,704	34.3	20.8	2.96	1,522	—	197	30	147	166	125	857	191	2.1
Norwich	113,266	3,290	1,953	29.1	17.3	2.40	271	—	5	18	40	46	20	142	179	0.0
Leicester	213,851	6,273	3,777	29.4	17.7	3.31	706	—	28	43	227	89	29	290	195	2.2
Nottingham	239,384	6,910	4,772	28.9	20.0	3.33	797	—	138	56	32	56	115	400	210	1.0
Derby	106,401	2,984	1,796	28.1	16.9	1.65	174	—	23	25	8	9	15	94	162	—
Birkenhead	115,162	3,437	2,201	29.9	19.2	2.65	304	—	51	7	24	88	49	85	186	0.7
Liverpool	634,212	22,490	16,686	35.6	26.4	3.77	2,383	1	319	162	212	367	199	1,183	198	3.8
Bolton	102,221	4,838	3,278	29.9	19.9	3.18	511	—	98	35	14	43	56	265	181	0.4
Manchester	543,902	17,692	13,347	32.6	24.6	3.92	2,130	—	703	45	83	227	77	995	206	0.8
Salford	218,244	7,378	5,181	33.9	23.8	4.32	940	—	211	49	75	99	77	429	209	0.7
Oldham	150,772	3,732	3,078	24.8	20.5	2.16	323	—	48	46	24	54	19	132	198	0.2
Burnley	113,081	2,848	2,214	25.3	19.6	4.35	491	—	88	76	26	74	25	202	269	1.5
Blackburn	135,154	3,643	2,579	27.0	19.1	2.67	360	—	42	23	72	52	41	130	189	3.5
Preston	117,622	3,526	2,679	30.1	22.8	3.93	462	—	44	11	39	59	39	270	255	3.1
Huddersfield	103,464	2,374	1,671	23.0	16.2	1.79	185	—	11	6	5	57	21	85	152	2.0
Halifax	97,721	2,248	1,779	23.1	18.3	1.50	146	—	13	26	15	22	24	46	159	3.7
Bradford	236,241	5,506	4,344	23.4	18.4	2.33	549	—	76	106	27	65	46	229	181	0.9
Leeds	423,889	12,937	8,090	30.6	19.1	2.79	1,178	—	157	64	328	161	71	397	171	2.6
Sheffield	361,169	12,446	7,980	34.6	22.2	4.39	1,583	—	220	91	460	57	85	570	194	2.9
Hull	234,270	8,603	4,508	34.3	19.3	3.66	856	141	120	39	29	144	142	341	175	2.1
Sunderland	145,673	5,184	3,119	35.7	21.5	2.50	362	—	40	36	9	56	55	166	175	1.8
Gateshead	106,332	3,890	1,997	36.6	18.8	2.09	222	—	21	93	8	46	15	119	177	0.7
Newcastle-on-Tyne	228,625	7,164	4,687	31.4	20.6	1.82	415	—	80	20	29	87	23	170	193	0.9

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,741 births and 4,[illegible] deaths were registered during the week ending Saturday last, March 3rd. The annual rate of mortality in these towns, which had been 25.8 and 24.5 per 1,000 in the two preceding weeks, further declined to [illegible] last week. The rates in the several towns ranged from 14.8 in Gateshead, 15.9 in West Ham and in Croydon, 16.8 in Nottingham, and 17.2 in Brighton, to 29.8 in Preston, 30.1 in Plymouth, 30.7 in Salford, [illegible] in Liverpool and in Blackburn. In the thirty-two provincial towns the mean death-rate was 22.7 per 1,000, and exceeded by 3.7 the rate recorded in London, which was 19.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the death-rate was 1.6 per 1,000, while it averaged 2.6 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.9 in Wolverhampton, 3.1 in Salford and in Oldham, 4.9 in Blackburn, and 6.1 in Preston. Measles caused a death-rate of 1.2 in Wolverhampton, 1.3 in Bristol, 1.8 in Sunderland, 1.9 in Blackburn, and 4.8 in Preston; scarlet fever of 1.8 in Burnley; and whooping-cough of 1.2 in Liverpool and in Manchester, 1.4 in Birmingham and in Norwich, 1.5 in Blackburn, and 2.1 in Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 75 deaths from diphtheria in the thirty-three towns included 26 in London, 0 in Sheffield, 6 in Leicester, 6 in Leeds, 5 in Portsmouth, 4 in West Ham, and 4 in Liverpool. One fatal case of small-pox was registered last week in London, but not one in any of the thirty-two large provincial towns. There were 7 cases of small-pox under treatment in the Metropolitan Asylums Hospitals on Saturday last, March 3rd, against 17.8, and 11 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from [illegible] to [illegible] at the end of the fifteen preceding weeks, had further fallen to [illegible] on Saturday last; 154 new cases were admitted during the week, against 157, 150, and 160 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 3rd, 933 births and 897 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 23.0 to 31.7 per 1,000 in the seven preceding weeks, declined again to 29.0 last week, but was 7.8 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.0 in Leith and 21.2 in Aberdeen, to 30.4 in Perth, and 31.2 in Glasgow. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Paisley and Greenock. The 420 deaths registered in Glasgow included 10 from measles, 9 from scarlet fever, 4 from diphtheria, 6 from whooping-cough, 4 from "fever," and 8 from diarrhœa. Two fatal cases of whooping-cough occurred in Edinburgh, 3 in Aberdeen, and 2 in Paisley; and 4 deaths from measles were registered in Dundee and in Paisley.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Chair of Physiology.—Dr. J. N. Langley, F.R.S., has been nominated as deputy for the Professor of Physiology from Lady Day, 1900, to Michaelmas, 1901. Dr. Langley will accordingly assume the directorship of the department in the absence of Sir Michael Foster, necessitated by his election to Parliament.

Addenbrooke's Hospital.—The proposed arrangement with the hospital met with no serious opposition in the Senate, and will be submitted for adoption by the University on March 15th, and by the governors on March 19th.

Degrees.—At the Congregation on March 1st, the following medical degrees were conferred:

M.D.—J. A. K. Renshaw, M.A., Trinity.

M.B. and B.C.—C. H. Barnes, B.A., and W. T. Mullings, B.A., Christ's.

Mr. F. G. Hopkins, University Lecturer in Chemical Physiology, was admitted to the degree of M.A. *honoris causâ*.

UNIVERSITY OF ABERDEEN.

THE University Court has requested Dr. Scott Riddell to act as substitute for Professor Ogston at the approaching examinations in Surgery and Clinical Surgery.

UNIVERSITY OF GLASGOW.

DR. ROBERT JARDINE has been appointed Examiner in Midwifery to the University.

UNIVERSITY OF DUBLIN.

AT the Spring Commencement in Hilary Term, held on Shrove Tuesday, February 27th, the following Degrees and Licences in Medicine, Surgery, and Midwifery were conferred by the University Caput:

Baccalaureus Medicinæ, in Chirurgiâ, et in Arte Obstetriciâ.—C. W. H. Fleming, H. A. J. S. Murphy.

Baccalaureus Medicinæ, in Chirurgiâ, et in Arte Obstetriciâ.—G. Baillie, T. S. Campion, J. Harpur, R. N. Hunt, C. R. L. Ronayne, E. S. Smythe, E. F. Stapleton, H. S. Tarrant, A. D. Waring.

Doctor in Medicinâ.—H. S. Tarrant.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen passed the First Examination of the Board in the subjects indicated:

Chemistry and Physics.—B. R. Bickford, Charing Cross Hospital; R. D. Bridger, Guy's Hospital and Birkbeck Institute; J. B. Binns and E. J. Cooper-Smith, St. Bartholomew's Hospital; P. D. McI. Campbell, St. Mary's Hospital; F. W. Cooper, Guy's Hospital; O. C. P. Cooke, M. O. Cruickshank, H. W. B. Danaher, and J. B. Dunstan, London Hospital; J. R. Davies, University College of South Wales, Cardiff; R. Dean, University College, London; G. F. Denning, Charing Cross Hospital; K. A. C. Doig, Westminster Hospital; A. M. Dowdall, University College, Liverpool; G. B. Edwards, London Hospital; H. A. Fenton, S. Field, and W. T. Finlayson, St Mary's Hospital; C. B. Fowler, Charing Cross Hospital; J. A. C. Greene, Guy's Hospital; K. G. Haig, Oxford University; G. W. Heron, Westminster Hospital; M. O. Hunter, St. George's Hospital; W. H. Hamilton and J. R. Kemp, St. Bartholomew's Hospital; C. F. Kernot, Cambridge University and London Hospital; J. Lascells, St. Mary's Hospital; I. N. Morgan, University College of South Wales, Cardiff; C. S. Morris and M. J. Mottram, Guy's Hospital; F. G. Mountain, St. Bartholomew's Hospital; H. Nicol, Westminster Hospital; R. W. O'Dowd, Mason College, Birmingham; W. S. Orton, Guy's Hospital; C. Parker, Westminster Hospital; E. C. Pope, St. Paul's School, West Kensington; R. H. Preston, St. Mary's Hospital; R. Raby and L. Raws, St. Thomas's Hospital, G. H. Rains, Clifton Laboratory; A. E. Rowlett, Guy's Hospital and Wyggeston School, Leicester; H. B. Scott, St. Bartholomew's Hospital; F. G. Snoad, Mason College, Birmingham; J. E. Spiller, Guy's Hospital; J. D. Stanley, Owens College, Manchester; G. M. A. Thomas, University College of South Wales, Cardiff, Edinburgh University, and St. Mary's Hospital; G. T. Verry, St. Bartholomew's Hospital; B. J. Wakley and J. M. Wall, St. Thomas's Hospital; W. A. Westherill and S. J. Weinberg, Owens College, Manchester; A. S. Webley and R. K. White, St. Mary's Hospital; S. M. Wells, Forest School, Walthamstow; V. N. Whitamore, Charing Cross Hospital; and E. D. Wolff, King's College, London.

Practical Pharmacy.—J. W. W. Adamson, St. George's Hospital; R. G. Anderson, Guy's Hospital; S. E. Atkinson, Yorkshire College, Leeds; H. C. Baker, St. Mary's Hospital; C. J. Battle, St. Thomas's Hospital; W. N. Blatchford and R. O. Bodman, University College, Bristol; I. McW. Bourke, St. George's Hospital; G. B. Davis, Cambridge University and London Hospital; C. H. Denyer, Guy's Hospital; L. C. Driscoll, Charing Cross Hospital; H. D. Duke and H. W. Fisher, London Hospital; L. E. Ellis, St. George's Hospital; E. W. Goble, Guy's Hospital; J. L. Goldstein, A. H. Jacob, N. B. V. Jacob, G. J. W. Keigwin, and A. Macrae, London Hospital; A. M. Mackintosh, St. Mary's Hospital; P. J. Martin, Oxford University and St. Bartholomew's Hospital; W. C. Mence, St. Thomas's Hospital; F. Morgan, Westminster Hospital; S. P. Mummery, St. George's Hospital; W. L. E. Mathews and R. W. O'Dowd, Mason College, Birmingham; J. H. Le B. Page, St. Mary's Hospital; H. T. Palmer and A. P. Piggot, Guy's Hospital; P. G. Pavitt, Middlesex Hospital; J. F. Powell, St. George's Hospital; G. R. Rew, King's College, London; R. J. Reynolds, private study; H. G. Rickman, St. Mary's Hospital; C. S. S. Rigby, Mason College, Birmingham; G. F. Rugg and R. Spears, University College, London; L. D. Saunders, St. George's Hospital; C. N. Slaney private study; J. S. Smith, Middlesex Hospital; E. D. Townroe and F. G. Walker, St. George's Hospital; W. F. H. Vaughan and H. V. Wells, St. Mary's Hospital; F. E. Wayte, Owens College, Manchester; and R. C. Wilmot, St. Bartholomew's Hospital.

Elementary Biology.—A. R. Beaumont and O. Black, Guy's Hospital; C. M. Bernays, St. Thomas's Hospital; E. J. Blewitt, London Hospital; J. T. Bowker, Owens College, Manchester; H. Clapham, St. Mary's Hospital; F. W. Cooper and H. P. Costobadie, Guy's Hospital; H. P. S. Courtney, St. George's Hospital; H. E. Cribb, Charing Cross Hospital; T. H. J. Crookes, St. Bartholomew's Hospital; A. H. Curtis, University College, London; W. L. Dickson, Middlesex Hospital; H. D. Duke, London Hospital; H. L. Field, St. George's Hospital; A. G. Finch and C. B. Fowler, Charing Cross Hospital; W. H. France, South-West Polytechnic Institute, Chelsea; J. S. France and J. A. C. Greene, Guy's Hospital; P. Gully, Charing Cross Hospital; C. N. Hampson, Owens College, Manchester; A. L. Heiser, Middlesex Hospital; A. W. Hill, Yorkshire College, Leeds; W. de M. Hill, St. Bartholomew's Hospital; S. W. Ives, Guy's Hospital; W. G. Jack, St. George's Hospital; C. F. Kernot, Cambridge University and London Hospital; C. Lamb, Oxford University and Guy's Hospital; W. A. T. Lloyd, G. W. Mason, and E. S. Molyneux, London Hospital; H. C. Malleson, Birkbeck Institute; E. S. Marshall, St. Bartholomew's Hospital; C. S. Morris, L. J. Patterson-Clavier, and E. C. Peers, Guy's Hospital; J. I. Papanicoly, J. W. Peatt, and G. R. Plaister, London Hospital; V. G. J. Paul, St. Mary's Hospital; W. B. Peacock, King's College, London; G. C. Pounds and C. Puxley, Charing Cross Hospital; G. C. F. Robinson, R. P. Rowlands, and J. E. Spiller, Guy's Hospital; H. H. E. Scatliff, Oxford University and St. George's Hospital; T. W. Sexton, Middlesex Hospital; H. S. Sington and G. T. Stephens, St. Thomas's Hospital; C. N. Slaney, The Science, Art, and Technical School, Plymouth; N. Tarr and H. R. S. Walford, St. George's Hospital; G. M. Taylor, London Hospital; I. T. Walker, St. Thomas's Hospital; and T. R. Waltenberg, Owens College, Manchester.

Materia Medica.—A. Farrington, Cambridge University and St. Bartholomew's Hospital; K. W. Goadby, Guy's Hospital; and J. M. H. Munro, University College, Bristol.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: ROBERT W. ANDERSON, Staff Surgeon, to the *Caledonia*, March 22nd; FRANK BRADSHAW, B.A., Surgeon to the *Bellona*, February 28th; FRANCIS BOLSTER, M.B., B.A., Surgeon to the *Rosario*, March 20th; THOMAS E. HONEY, M.D., Surgeon to the *Basilisk*, March 22nd; EDWARD HAINES, Surgeon to the *Humber*, February 28th; JOHN H. STENHOUSE, Staff Surgeon, for medical charge of the *Edgar* on the voyage home; JAMES W. W. STANTON, Surgeon, for medical charge of the *Edgar* on the voyage to China, undated; PERCY C. SUTCLIFFE, B.A., M.B., Surgeon to the *Boscawen*, for the *Seaflower*, lent, March 15th; ROBERT HUGHES, Surgeon to the *St. Vincent*, for the *Martin*,

lent, March 15th; Edward O. B. Carbery, M.B., Surgeon to the *Boscawen*, for the *Dolphin*, March 15th; George E. Glynn, B.A., M.B., Surgeon to the *Boscawen*, for the *Wanderer*, lent, March 15th; John K. Raymond, Surgeon to the *Impregnable*, for the *Nautilus*, lent, March 15th; George M. O. Richards, Surgeon to the *Impregnable*, for the *Pilot*, lent. March 15th; Augustus J. Laurie, Surgeon to the *Lion*, for the *Liberty*, lent, March 15th: John H. Jones, Surgeon to the *Sharpshooter*, lent, March 1st; John C. Ferguson, B.A., M.B., Staff Surgeon to the *Wallaroo*, lent to the *Europa*, February 28th, and appointment as Surgeon cancelled; George Hewlett M.B. Staff Surgeon to the *Charybdis*, undated.

The undermentioned gentlemen, who competed on February 19th and following days at Examination Hall, Victoria Embankment, for appointment as Surgeon in the Royal Navy, have been granted commissions:

	Marks.		Marks.
H. E. C. Fox, M.B.	2,436	H. R. H. Denny	2,028
J. G. Wallis, M.B.	2,334	R. B. Ainsworth	2,020
W. P. Walker, M.B.	2,320	J. H. J. Murphy	2,005
R. W. G. Stewart, M.B. ...	2,270	A. I. Hewitt	1,950
J. O'Hea	2,258	G. M. Eastment	1,901
R. R. Fasson, M.B.	2,234	H. J. Rogers, B.A., M.B. ...	1,183
J. S. Muir, M.B.	2,211	A. C. Renwick, M.B.	1,873
L. R. Whitwam, M.B. ...	2,173	W. P. Dyer	1,846
A. F. Fraser, M.B.	2,098	T. H. Vickers	1,806
A. S. Frank, M.B.	2,041	R. R. Horley	1,717

Surgeon Ernest A. Shaw, B.A., M.B., whose commission dates from November 11th, 1891, has been allowed to withdraw from the service with a gratuity.

SCARCITY OF CANDIDATES.

Senior writes: Definite titles and army position have done much towards rehabilitating the Medical Service, and have been most loyally received by the combatant branches, according to the best traditions of English gentlemen. Yet candidates keep away, under two grievances: (1) Undermanning; (2) deficient pay. The numbers should at least be 1,200, to stop the everlasting working in a scratch, perfunctory way, which has so long prevailed. Instead of decreasing the administrative ranks they should be increased; medical officers have nothing to look forward to at the top of the tree. It is this which makes so many retire at 20 years. Pay is too small to compete with a rising medical market in civil life. Remedy these internal defects, and the service will rise in estimation.

ARMY MEDICAL SERVICE.

Inspector-General Thomas Guy, M.D., F.R.C.P., died at Dover on March 2nd in his 81st year. He entered the service as Assistant Surgeon January 28th, 1842; became Surgeon July 1st, 1853; Surgeon-Major January 28th, 1862; Deputy Inspector-General August 15th, 1868; and Honorary Inspector-General on retirement on half-pay November 23rd, 1872. He served throughout the Abyssinian war in 1867-8 as Superintendent of Hospital Ships and as Principal Medical Officer of the European troops at Zoulla. He was mentioned in despatches, promoted to be Deputy Inspector-General, and received the medal for the campaign. During the Franco-German war he acted as Director-in-Chief of the English ambulance.

ROYAL ARMY MEDICAL CORPS.

Surgeon-Major R. T. A. O'Callaghan, F.R.C.S.I., 1st Flintshire Royal Engineers (Volunteers) is granted the temporary rank of Major while serving in South Africa, March 3rd.

Surgeon-Captain J. Wreford, 1st Northumberland Volunteer Artillery, is granted the temporary rank of Captain while serving with the Volunteer Battery, March 3rd.

Surgeon-Lieutenants John W. Smith, M.B., and Edmund W. Herrington, Volunteer Medical Staff Corps, are granted the temporary rank of Lieutenant, while serving in South Africa, March 7th.

Sergeant-Major John B. Conolly is appointed Quartermaster, with the honorary rank of Lieutenant, on augmentation, March 7th.

ARMY MEDICAL RESERVE.

Surgeon-Captain John Arnallt Jones, 2nd Volunteer Battalion the Welsh Regiment, to be Surgeon-Major, March 3rd.

INDIAN MEDICAL SERVICE.

The Queen has approved the appointment of the following as Lieutenants, dated January 27th: Archibald C. MacGilchrist, John W. D. Megaw, Edward O. Thurston, George Browse, Cecil M. Goodbody, Robert Steen, Frederick F. Elwes, Ian L. MacInnes, Ernest A. C. Matthews, Lessel P. Stephen, Leonard Gilbert, Thomas G. M. Stokes, Harry M. Mackeezie, Michael H. Thornely, Francis V. O. Beit, William O. S. Murphy, Matthew Corry, Cecil C. Murison, Herbert A. Willams, William C. Long, George C. Beamish.

THE MILITIA.

Surgeon-Lieutenant-Colonel G. W. Shipman, Militia Medical Staff, has resigned his commission, from March 7th; he retains his rank and uniform.

THE IMPERIAL YEOMANRY.

Messrs. Emelias Hopkinson and Hay Reynolds are appointed Medical Officers, with the temporary rank of Captain, March 7th.

COLONEL LUMSDEN'S CORPS.

Surgeon-Captain Samuel A. Powell, M.D., Surma Valley Light Horse Volunteers, is appointed Medical Officer, with the temporary rank of Captain, March 7th.

MEDICAL NEWS.

Dr. A. M. Phelps, of New York City, has been elected President of the Medical Society of the State of New York.

Dr. Theodore Williams has been elected President of the Life Assurance Medical Officers' Association, in succession to Sir Hermann Weber.

Medical Defence Union.—The annual general meeting of the Medical Defence Union will be held on Tuesday, March 13th, at St. Martin's Town Hall, W.C., at 4 P.M. The chair will be taken by Dr. Griffith, F.R.C.P., the President of the Union.

Mr. Godlee will give a lecture on Some Peculiar Cases of Empyema at the Hospital for Consumption, Brompton, on Wednesday next, March 14th, at 4 P.M. This is one of a course of lectures given by the staff of the hospital, to which medical men are admitted free.

Female Students at the Manchester Infirmary.—At a meeting of the Manchester Infirmary Board on February 26th, it was reported that the House Committee had considered and approved a recommendation from the Medical Board to the effect that women students should be admitted to the infirmary hospital practice and clinical instruction upon the same terms as men except as regards the surgical out-patient department. This decision had been communicated to the Council of Owens College, and the Principal (Mr. A. Hopkinson), in reply, had written expressing satisfaction that through the joint action of the College and the Infirmary Board women students in Manchester would now be able to obtain satisfactory qualifications for the medical profession. The House Committee's recommendation upon this subject was adopted on the motion of Sir J. W. Maclure, M.P.

Low Birth-rate in East Anglia.—In the Hartismere rural district (Suffolk), comprising nineteen parishes with an estimated population of 12,572, the medical officer of health, Dr. Barnes, of Eye, records the low birth-rate of 24.2 per 1,000 of the population for the year 1899. The average birth-rate of the district during the four preceding years was even lower—namely, 23.5. The marriage-rate of the district has "decidedly decreased" of late years, being as low as 11.9 during the ten years 1889-1898. The lowness of the death-rates are worthy of note; for example, from all causes, 15.4; from the seven principal zymotic diseases, 0.79; from phthisis, 1.03. Seventeen cases of scarlet fever and 20 of diphtheria occurred, but the outbreaks appear to have been kept well under control owing to regular and systematic inspection, removal of insanitary conditions and closure of the public elementary schools during the progress of infectious illness. It is to be regretted that the report contains no account of supervision and control of the milk supplies.

The Constituents of Tobacco Smoke.—Professor C. Binz has been making some chemical and physiological observations, and gives an account of his researches in the *Deutsche Aerzte-Zeitung* (January 1st). He confirms the statement of all previous experimenters that there are three kinds of substances in tobacco smoke, namely: nicotine, the chief alkaloid of tobacco; pyridin, a liquid nitrogenous compound of the benzine series, which is obtained by slow combustion of the tobacco; and carbonic oxide gas. He finds that carbonic oxide gas is always present in tobacco smoke in the proportion of 0.6 to 7.6 per cent. of the total volume of the smoke. The variations depend upon the rapidity of combustion and the greater or less abundance of air mixed with the smoke. He points out that a slight degree of carbonic oxide poisoning must be produced by the smoking of large quantities of tobacco, but whether this has a cumulative and deleterious effect is hard to determine. The carbonic oxide can be detected in the blood by means of the test with tannin in aqueous solution at a temperature of about 40° C., and this test is regarded as better than the spectroscopic test—observation of the bands of carboxyhæmoglobin.

Bradford Eye and Ear Hospital.—The forty-third annual meeting of the Bradford Eye and Ear Hospital was held on February 16th, the Mayor of Bradford presiding. This hospital draws patients from a wide area; the number during the past

twelve months has been 6,126, of whom 907 were treated for diseases of the ear. There have been 992 in-patients, giving a daily average of 27, and an average stay of ten days. The major operations numbered 970, of which 116 were flap extractions for senile cataract, and 28 removal of the lens in high myopia. The out-patient attendances amounted to about 15,000, and now necessitate a daily attendance in this department. The income was £2,454, and expenditure £2,835. The hospital has also about £15,000 of invested funds.

CHILDHOOD SOCIETY.—The third annual meeting of this Society (formed to carry on the scheme of scientific investigation of the physical and mental conditions of children, inaugurated under the auspices of the British Medical Association in 1888) was held on March 1st at the house of the President, Earl Egerton of Tatton, who moved the adoption of the annual report. The report drew attention to the passing of the Elementary Education (Defective and Epileptic Children) Act, to lectures and discussions which had been promoted by the Society, and to certain representations made to Government departments. The Rev. T. W. Sharpe, C.B., Chairman of the Council, seconded the motion, and the resolution was supported by Drs. Warner and Shuttleworth. A vote of thanks was afterwards passed to the Chairman, on the motion of Mr. R. B. Martin, M.P., seconded by Mr. Brudenell Carter. The financial statement showed a balance in hand of £33 15s. 10d. The subscription is 10s. 6d. annually; and the Honorary Secretary is Mr. W. J. Durrie Mulford, Parkes Museum, Margaret Street, W.

MEDICAL VACANCIES.

The following vacancies are announced:

ASTON UNION.—Resident Assistant Medical Officer, at the Workhouse at Erdington, and Assistant Medical Officer to the Cottage Home adjoining. Salary, inclusive, £140 per annum, increasing to £160, with furnished apartments, board, washing, etc. Applications to the Clerk to the Guardians, Union Offices, Vauxhall Road, Birmingham, by March 16th.

BIRKENHEAD BOROUGH HOSPITAL.—Visiting House-Surgeon. Salary, £75 per annum, with board, lodging, and washing. Applications to the Chairman of the Weekly Board, by March 19th.

BIRMINGHAM: GENERAL HOSPITAL.—House-Surgeon. Appointment for six months. No salary, but board, residence, and washing provided. Applications to the House Governor by March 31st.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, 109, Edmund Street.—House-Surgeon. Appointment till October 31st, 1900, but eligible for re-election for further six months. Salary at the rate of £40 per annum, and if reappointed at £60 per annum, with board, lodging, and washing. Applications to the Secretary by March 13th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church Street.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by March 12th.

BURY INFIRMARY.—Junior House Surgeon. Salary, £60 per annum, with board, residence, and attendance. Applications to the Honorary Secretary, Dispensary, Knowsley Street, Bury.

CARDIFF INFIRMARY.—(1) Resident Medical Officer. Salary £100 per annum. (2) Assistant House Physician, appointment for six months, but renewable. Salary at the rate of £50 per annum. Board, washing, and apartments provided in each case. Applications to the Secretary by March 13th.

CLUTTON UNION.—Medical Officer and Public Vaccinator for the Timsbury District. Salary at the rate of £65 per annum and fees. Applications to the Clerk, Union Offices, Temple Cloud, near Bristol, by March 14th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried, Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DEVONPORT ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by March 22nd.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer. Salary £140 per annum, rising to £160, with board, lodging, washing, etc. Applications to the Medical Superintendent, Winterton, Ferryhill, by April 3rd.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—(1) House-Surgeon. Honorarium, £25, with board, residence, etc. (2) Medical Officer for the Casualty Department. Salary at the rate of £100 per annum, with luncheon. Appointment for six months. Applications to the Secretary by March 17th and 24th respectively.

EDINBURGH UNIVERSITY.—Professor of Medicine. Applications to the Secretary, 66, Frederick Street, Edinburgh, by April 14th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary £50, with apartments and board. Application to the Secretary, 88, West Regent Street, Glasgow, by March 28th.

GREAT NORTHERN HOSPITAL, Holloway Road, N.—(1) Assistant Anæsthetist. Appointment for six months, but eligible for re-election. Honorarium at the rate of 10 guineas per annum. (2) Junior House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging and washing. Applications to the Secretary by March 12th and 19th respectively.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—(1) House-Surgeon. Salary £80 per annum. (2) Assistant House-Surgeon. Salary, £30 per annum. Board, residence, and laundry provided with each appointment. Applications to the Hon. Secretary.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer, unmarried, and not exceeding 30 years of age. Salary, £125 per annum, increasing to £150, with furnished apartments, board, etc. Applications endorsed "Application for appointment of Medical Officer," to the Committee of Visitors, by March 21st.

HEREFORD GENERAL INFIRMARY.—(1) Senior House-Surgeon, unmarried. Appointment for six months. Salary, £40, with furnished rooms, board, etc. (2) Junior House Surgeon, unmarried. Appointment for six months, after which he will be appointed Senior House Surgeon. Salary, £17 10s., with furnished rooms, board, etc. Applications to the Secretary, 37, Bridge Street, Hereford, by March 17th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton,—Assistant Physician. Applications to the Secretary by March 21st.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon, unmarried. Salary £61 per annum, with board and lodging. Applications to the Secretary by March 16th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Physician to Out-patients; must be F. or M.R.C.P. Lond. Honorarium, 50 guineas per annum. Applications to the Secretary by April 5th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by March 15th.

MAIDSTONE: KENT COUNTY OPHTHALMIC HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to Mr. Matthew A. Adams, F.R.C.S., Hon. Surgeon to the Hospital.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Honorary Surgeon, must be F.R.C.S. Applications to the Secretary by March 14th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House-Physician, (2) House-Surgeon, (3) Assistant House-Physician, (4) Assistant House-Surgeon. Appointments for six months. Salary for the first two at the rate of £40 per annum, and for the latter two at the rate of £20 per annum. Applications to the Secretary by March 19th.

MILE END.—Assistant Medical Officer at the Workhouse Infirmary and the Workhouse and School, unmarried, and not exceeding 30 years of age. Salary, £120 per annum, with board, lodging, and allowances. Applications on forms provided to the Clerk to the Guardians, Bancroft Road, E.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport.—House-Surgeon. Salary, £160 per annum, with board and residence. Applications to the Secretary by March 22nd.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Salary, £70 per annum, with rations and laundry. Applications to the Secretary by March 17th.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House Physician. Appointment for six months. Salary at the rate of £40 per annum, with furnished apartments, board and washing. Applications to the Secretary, by March 13th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by April 23rd.

RYDE: ROYAL ISLE OF WIGHT INFIRMARY AND COUNTY HOSPITAL.—Resident House-Surgeon. Salary, £50 per annum, and £10 10s. for lectures to nurses. Applications to Dr. Davey, at the Hospital by March 15th.

ST. MARY'S HOSPITAL SCHOOL.—Demonstrator of Physiology. Salary, £100 to £150. Applications to the Dean by March 24th.

ST. OLAVE'S UNION.—Medical Officer for the Workhouse. Salary, £70 per annum, with fees. Applications, on forms provided, to be sent to the Clerk to the Guardians, Union Offices, Tooley Street, S.E., by March 12th.

ST. THOMAS'S HOSPITAL.—Assistant Physician, must be M.R.C.P. Lond. Applications to the Treasurer's Clerk by March 10th.

SALISBURY INFIRMARY.—Assistant House-Surgeon, unmarried. Salary £50 per annum, with board, lodging, and washing. Applications to the Secretary by March 15th.

STAMFORD, RUTLAND AND GENERAL INFIRMARY.—House-Surgeon, unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 30th.

STOCKPORT INFIRMARY.—(1) Assistant House and Visiting Surgeon. Salary £70 per annum. (2) Junior Assistant House-Surgeon. Appointment for six months. Salary, at the rate of £24 per annum. Board, residence, and washing provided in both cases. Applications to the Secretary by March 13th.

STROUD RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £130 per annum. Applications to the Clerk, Union Offices, Stroud, Gloucestershire, by March 21st.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by March 30th.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—(1) Resident Medical Officer. Salary £150 per annum, with board and lodging. (2) Clinical Assistant. Board, residence, and laundry provided. No salary. Applications to Dr. Parry, at the Hospital.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum, with board, etc. Applications to the Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician, (2) House-Surgeon. Appointments for six months. Applications to the Secretary-Superintendent.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary, £110 a year, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by March 14th.

MEDICAL APPOINTMENTS.

ALLPORT, R. H., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer of the Renfrew Road Workhouse, of the Parish of St. Mary, Lambeth, *vice* J. C. Harcourt, M.R.C.S., L.R.C.P., resigned.

BARKER, Percy D., M.R.C.S., L.R.C.P., appointed Senior House-Surgeon to the Sheffield Royal Infirmary.

BROWN, W. Langdon, M.A., M.B., B.C.Cantab., M.R.C.P.Lond., appointed Assistant-Physician and Pathologist to the Metropolitan Hospital.

CARTER, H. H. A., L.R.C.P.I., L.R.C.S.I., appointed Assistant Medical Officer in the Colonial Service.

CLARKE, A. Bleckley, L.R.C.S., L.S.A., appointed Medical Officer of the Marland District of Jorrington Union, *vice* E. Sutcliffe, M.D., deceased.

CLEMENTS, John Edmund, M.B., B.Ch., B.A.O.R.U.I., appointed Medical Officer to the Chinese Customs Service.

HERBERT DIXON, J., M.B., Mast.-Surg.Edin., appointed Honorary Surgeon to the Birkenhead Women's Hospital.

FAGGE, C. H., M.S., F.R.C.S., appointed Surgeon to Out-patients to the Evelina Hospital for Sick Children.

MORDAUNT, L. I. Pavillet, M.R.C.S., L.R.C.P.Lond., appointed Junior House Surgeon to the Miller Hospital.

PIM, J. H., L.R.C.P., L.R.C.S.I., appointed Medical Officer and Public Vaccinator for the Billinghay District of the Sleaford Union.

PRIOR, S., M.B., C.M.Glas., appointed Medical Officer for the Kirkburton District of the Huddersfield Union.

RICHMOND, R. T., M.A.Camb., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Salisbury Infirmary, *vice* W. Gordon, L.R.C.P., L.R.C.S.Edin., resigned.

ROBIE, George A., M.B., Ch.B., appointed Senior Assistant Medical Officer at Cumberland and Westmorland Asylum, in place of I. W. Leitch, M.B., etc., resigned.

SEACOMB, A. F., L.R.C.P., L.R.C.S.Edin, appointed Assistant Medical Officer to the Tooteth Park Workhouse, *vice* J. B. Hughes, M.R.C.S., L.R.C.P., resigned.

SMITH, Edmund Moody, M.D., C.M.Edin. D.P.H.Camb. appointed Medical Officer of Health for the City of York, *vice* Robert Cattley, M.B., B.Sc., resigned.

THOPSON, Stitt, M.D.St.And., F.R.C.P.E., F.R.C.S.E., appointed Physician to the Lincoln County Hospital, *vice* George Mutchinson, deceased.

WORSLEY, Richard Le Geyt, M.R.C.S, L.R.C.P.Lond., L.S.A., appointed Visiting Medical Officer to the Newcastle-upon-Tyne Dispensary.

ST. THOMAS'S HOSPITAL.—The following House Appointments have been made:—House Physicians—H. R. Bayle, L.R.C.P., M.R.C.S.; L. S. Dudgeon, L.R.C.P., M.R.C.S. Assistant House Physicians—E. W. Hedley, M.A., M.B., B.C.Cantab.; F. C. Eve, B.A., M.B., B.C.Cantab. House-Surgeons—A. Webb Jones, L.R.C.P., M.R.C.S.; E. A. Gates, L.R.C.P., M.R.C.S.; E. C. Bourdas, L.R.C.P., M.R.C.S.; N. Unsworth, L.R.C.P., M.R.C.S. Assistant House-Surgeons—A. E. Martin, B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.; C. L. Hawkins, B.A., M.B., B.C.Cantab., L.R.C.P., M.R.C.S.; J. P. Cunningham, L.R.C.P., M.R.C.S.; Y. Takaki, L.R.C.P., M.R.C.S. Obstetric House-Physicians—Senior, H. H. R. Clarke, L.R.C.P., M.R.C.S.; Junior, Bevan Lake, L.R.C.P., M.R.C.S.

Ophthalmic House-Surgeon—(Senior) J. E. Kilvert, L.R.C.P. M.R.C.S.
Clinical Assistants in the Special Department for Diseases of the Throat—S. A. Lucas, L.R.C.P., M.R.C.S. Skin—R. B. Kinloch, L.R.C.P., M.R.C.S.; J. G. W. Graham, B.A.Cantab., L.R.C.P., M.R.C.S. Ear—G. I. T. Stewart, M.A., M.B., C.M. Aberd.
Several other gentlemen who held office before have received an extension of their appointments.

DIARY FOR NEXT WEEK.

MONDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Mr. Waggett: Accessory Sinus Suppuration.

Medical Society of London, 8.30 P.M.—Mr. P. J. Freyer: A New Method of Performing Perineal Prostatectomy.—Mr. C. B. Keetley: Coxa Vara (with Cases, Skiagraphs, and Photographs).—Dr. Campbell Pope: Twenty-three Years' Death Certificates in General Practice.

Royal College of Surgeons of England, 4 P.M.—Professor C. Stewart: On the Protection and Nourishment of the Young in Plants and Animals. Lecture I.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Colcott Fox: Consultation. (Skin).—2 to 3.30 P.M.: Mr. Hayward Pinch: Class, Clinical Microscopy.

TUESDAY.

Royal College of Physicians of London, 5 P.M.—Dr. F. J. Waldo on Summer Diarrhœa, with Special Relation to Causation and Prevention. Milroy Lecture II.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. Hugh Thursfield: The Skin Affections met with in Bright's Disease.

Chelsea Clinical Society, Holy Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—A Debate on The Treatment of Rheumatism, with Special Reference to Prophylaxis and Cardiac Complications will be opened by Dr. William Ewart, and the following have promised to take part in the discussion: Drs. T. J. Maclagan, A. E. Sansom, Donald Hood, David B. Lees, and Archd. Garrod.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. W. Miller Ord: Consultation. (Medical.)

National Hospital for the Paralysed and Epileptic, Queen Square, W.C., 3.30 P.M.—Dr. Risien Russell: Cerebellar Localisation.

WEDNESDAY.

Royal College of Surgeons of England, 4 P.M.—Professor C. Stewart: On the Protection and Nourishment of the Young in Plants and Animals. Lecture II.

Sanitary Institute, Parkes Museum, Margaret Street, W., 8 P.M.—Discussion on the Experimental Bacterial Treatment of the London Sewage, to be opened by Professor Frank Clowes.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Mr. Godlee on Some Peculiar Cases of Empyema.

Hunterian Society, London Institution, 8.30 P.M.—Pathological Specimens will be shown.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Dr. R. Saundby: Clinical Lecture. Non-diabetic Glycosuria.

THURSDAY.

Royal College of Physicians of London, 5 P.M.—Dr F. J. Waldo on Summer Diarrhœa, with Special Relation to Causation and Prevention. Milroy Lecture III.

Hospital for Diseases of the Nervous System, 73, Welbeck Street, W., 5 P.M.—Dr. T. D Savill: Electricity in the Diagnosis and Treatment of Diseases of the Nervous System.

Hospital for Sick Children, Great Ormond Street W.C. 4 P.M.—Mr. H. S. Collier: Demonstration of Selected Cases.

Charing Cross Hospital Post-Graduate Course, 4 P.M.—Dr. Hunter: Pathological Demonstration.

Harveian Society of London, 8.30 P.M.—Clinical Evening. The following cases will be shown: Dr. Herbert Tilley: Cholesteatomata of Mastoid.—Mr. Francis Jaffray: Urticaria Pigmentosa.—Dr. W. Harris: Progressive Muscular Atrophy.—Dr. Leonard Guthrie: Cerebellar Tumour.—Dr. H. J. Macevoy: Lit le's Disease.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Neurological Society of London, 11, Chandos Street, W., 8.30 P.M.—Clinical Evening. Dr. F. E. Batten: A Case of Congenital Cerebellar Defect.—Dr. Risien Russell: (1) A Case of Functional Wry neck and Clonic Spasm of the Palate; (2) Two Cases of Thomsen's Disease. And other cases.

FRIDAY.

Royal College of Surgeons of England, 4 P.M.—Professor C. Stewart: On the Protection and Nourishment of the Young in Plants and Animals. Lecture III.

Epidemiological Society of London, 11, Chandos Street, W., 8.30 P.M.—Dr. Robinson (M.O.H., Leicestershire) On Measles, its Distribution and Control.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. H. Tilley: Consultation. (Eye, Ear, Nose and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

ATKINS.—On March 2nd, at Booth Street, Handsworth, Birmingham, the wife of J. F. Atkins, M.R.C.S., L.R.C.P., a daughter (stillborn).

MARRIAGES.

DICKSON—CLARK.—At Panmure Villa, Downfield, on the 2nd March, by the Rev. Dr. Chas. Grant, of St. Marks, Dundee, assisted by the Rev. R. Spenser Ritchie, Mains and Strathmartine, David Elliot Dickson, M.B., C.M.Edin., Lochgelly, eldest son of Mr. Wm Dickson, ironmonger, Dundee, to Maggie, only daughter of Mr. Jacob Clark, "Dundee Advertiser."

PAKES—FISHER.—On March 1st, at St. Andrew's, Fulham, by the Rev. C. Pakes, B.A., Vicar of Copp Garstang, father of the bridegroom, assisted by the Rev. J. S. Skinner, B.A., brother-in-law of the bride, Walter Charles Cross Pakes, L.R.C.P., D.P.H., to Dora Agnes, youngest daughter of the late John Fisher, of Leckonby, Gt. Eccleston, Lancashire.

PRICE—LLOYD.—On March 7th, at the Church of St. Michael and All Angels, Ammanford, David Rees Price, M.B., C.M., of Ammanford, to Gwenny Elizabeth Clara, only daughter of Evan Lloyd, M.R.C.S., L.S.A., of Ammanford, Carmarthenshire.

DEATHS.

HERON WATSON.—At Gotha, Germany, on the 27th February, Elizabeth Gordon Miller, wife of Patrick Heron Watson, LL.D., M.D., F.R.S., F.R.C.S.E. & I., Surgeon-in-Ordinary to the Queen in Scotland, and daughter of the late James Miller, F.R.S., F.R.C.S., Professor of Surgery in the University of Edinburgh, and Surgeon-in-Ordinary to the Queen in Scotland.

WEARING.—On March 2nd, at Mayfield, Victoria Park, Wavertree, Liverpool, aged 46 years, Richard Wearing, M.D.

WHISTLER.—On the 27th February, at 6B, Bickenhall Mansions, Gloucester Place, William MacNeill Whistler, M.D., late Surgeon to the Confederate States Army, U.S.A., aged 63.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 3; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O. p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Chudren's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiologic, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

FRATER would be grateful to any surgeon who would kindly tell him the most satisfactory treatment for partial prolapsus ani. There is only one sessile pile, and nitric acid has been applied to this, without, however, any benefit. The patient is aged 53.

W. V. M. asks (1) the difference between wood naphtha and wood spirit (methyl and alcohol); (2) the best, cheapest, and most economical coal or coke stove for a consulting room.

*** Wood spirit and wood naphtha are the names applied to the crude methyl alcohol of commerce. Wood spirit is a very complex liquid containing variable proportions of methyl alcohol, acetone, methyl acetate and formate, allylic alcohol, aldehyde water, etc.

PURCHASE OF SHARE OF MEDICAL PRACTICE.

T. E. S. asks for information on the following point: A. has a practice which for two or three years has been going down. He takes B., his *locum tenens*, into partnership on the condition that the latter shall attend to the practice by himself for the next three years, receiving one-third of the profits. At the end of three years B. is to possess a third share of the practice, with a right to make it one-half by purchase. The three years have now expired, and B. wishes to know at what rate he should pay for the additional share. Ought the value of the practice to be taken to be what it was when he came into partnership, or taking an average of the last three years, or the three years before that?

*** We are advised that the value of the practice should be calculated on the average receipts for the last three years.

ALBUMINURIA OF ADOLESCENTS.

A. asks for help in coming to a decision in the following case:

R. S., a lad of 16, was examined by me six months ago for entry into the local Rechabite Society. I found a faint trace of albumen in his urine but no other evidence of ill-health; indeed, he is an exceptionally strong lad in every way. I examined the urine again to-day. His general health is as good as ever, but the faint, though unmistakable, trace of albumen remains. Should I pass him?

*** The literature on this subject is very voluminous. Our correspondent will find an excellent discussion of the matter in a paper by Dr. Herbert Hawkins in the BRITISH MEDICAL JOURNAL of December 9th, 1899, p. 1599.

EXAMINATION FOR THE F.R.C.S.EDIN.

CANDIDATE asks what books are recommended for medical jurisprudence and public health taken as the optional subjects for the F.R.C.S.Edin. examination.

*** A general acquaintance with the whole subject is in each case presumed. The following books may be recommended:—1. Medical jurisprudence: *Principles and Practice of Medical Jurisprudence*, by A. S. Taylor. Fourth Edition, by T. Stevenson. 2 vols. (London: J. and A. Churchill. 1894. 31s. 6d.); *Forensic Medicine and Toxicology*, by J. Dixon Mann. Second Edition. (London: C. Griffin and Co. 1898. 21s.); *Poisons; their Effects and Detection*, by A. Wynter Blyth. Third edition. (London: C. Griffin and Co. 1895. 21s.) 2. Public health: *The Theory and Practice of Hygiene*, by Notter and Firth. (London: J. and A. Churchill. 1896. 24s.); *Practical Sanitation*, by G. Reid. Fifth edition. (London: B. Griffin and Co. 1899. 6s.); *The Elements of Vital Statistics*, by A. Newsholme. (Third edition. London: Swan Sonnenschein and Co. 1899. 7s. 6d.)

LYDDITE AND CARBOLIC ACID.

MR. R. E. P. SQUIBBS (Nottingham) writes: On inquiring of the wholesale chemists who supply me with drugs why they had charged such a high price for some carbolic acid which I ordered last month, I was informed that the price had risen owing to its extensive employment in the manufacture of lyddite.

*** Lyddite is chiefly composed of picric acid, which is tri-nitrophenol, being formed by the action of nitric acid upon phenol (carbolic acid). It might, therefore, be expected that the increased manufacture of lyddite would raise the price of carbolic acid. Melinite also contains picric acid as its chief constituent. Carbonic oxide, hydrocyanic acid, nitric oxide, nitrogen, and carbonic acid gas are produced in the explosion of picric acid, and it is probably on account of the first two gases that the fumes are described by war correspondents as "deadly," though why they are described by some correspondents as "green," is not easy to understand. It might have been supposed that "brown" or "red" would have been a more correct description.

ANSWERS.

A. J. S.—The practice described would be quite opposed to the usual standard of professional propriety. No medical practitioner should use secret remedies, nor should any one object to his prescription being seen by a colleague, least of all when that colleague has to continue the treatment. Our correspondent's information would seem to be derived from patients only, who sometimes fall into strange errors.

NOTES, LETTERS, Etc.

CLUB RATES.

DR. EDWARD J. CROSS (St. Neots, Hunts) writes: I think that it may interest some of your readers to know that for this district the amount paid by the National Deposit Society to medical men amounted to 5s. 4d. per member (male and female) in 1898 and 5s. 7d. in 1899. The Secretary tells me that this is above the average.

INCOME TAX.

THE INCOME TAX REPAYMENT AGENCY (6, Chichester Road, Paddington, W.) desires to remind readers that April 5th is the last day for reclaiming income tax on exemption or abatement for the year 1896-97. All claims should be lodged before that date, otherwise any refund is irrevocably lost. We would also remind all taxpayers that the limit of income allowing abatement, which was £500 in 1896-97 and 1897-98, was raised from April 5th, 1898, to £700, and that income tax is recoverable, not only on property, interest, and dividends from which it is deducted, but upon dividends which are said to be paid "free of tax," a most misleading expression. Tax can also almost invariably be claimed upon life insurance premiums.

DIET OF THE WOUNDED AT WYNBERG.

DR. JOHN HADDON (Denholm) writes: With regard to the letter of Mr. G. H. Makins, in the JOURNAL of February 24th, denying that sufficient food is not provided for the patients at the military hospitals at Wynberg, allow me to point out the nutritive value of the diet given to one of the officers mentioned, suffering from a compound fracture of the thigh. It is equal to 2,643 calories. The extras amount to 1,924 calories, exclusive of soups, custards, jellies, and fruit, and two bottles of hock. Atwater, an authority on nutrition, gives from 3,500 to 4,000 calories as sufficient for hardworking robust men. That, I have no doubt, is over rather than under the mark, so that, instead of the food ordered for our wounded soldiers at the Cape being insufficient, it is far more than sufficient, and, if eaten, must retard their recovery, if it does not entirely prevent it, lying as they are, in bed, in a hot climate.

LETTERS, COMMUNICATIONS, ETC., have been received from

A Dr. T. C. Askin, Woodbridge; Dr. W. Aickin, Belfast; Army Medical Officer; Albuminuria; Dr. D. Ainley, Halifax; Mrs. G. B. Arnold, London. **B** British Somatose Co., Manager of, London; Mr. W. M. Beaumont, Bath; Mr. G. V. Benson, Lewes; Mr. E. W. Barton-Knight, London; J. S. Bell, M.B., Lockerbie; Dr. W. Bruce, Dingwall; Dr. P. L. Benson, Winslow; Mr. T. Be l, Uppingham; F. M. Bloomer, M.B., Stafford; Mr. F. Bagger, London; Mr. W. L'H. Blenkarne, Worthing. **C** H. W. Collier, M.B., London; Dr. J. Cargill, Jamaica; Mr. E. J. Cross, St. Neots; Dr. F. J. H. Coutts, Manchester: A. Cox, M.B., Gateshead; Mr. T. A. Caley, Rotherham; Dr. W. S Colman, London. **D** Mr. E. A. G. Doyle, Trinidad; Dr. A. Duncan, London; Dr. C. R. Drysdale, London; R. A. Daniel, M.B., London. **F** Mr A. C Fenn, Dover; Mr W. T. Freeman, Reading: F.R.C.S.: Frater in Medico; Facial Lupus; Dr. W. F. Farquharson, Carlisle; Mr. Fitz J. Molony, Porlock. **G** Mr. O. Galgey, St. Lucia; Mr. P. B. Giles, Bletchley; Gray's; Dr. D. P. Gaussen, Dunmurry. **H** Mr. F. Howell, London; Mr. J. Hart, London; Harveian Society, Secretary of, London; Mr. E. K. Houchin, Ilford; Dr. S. H. Habershon, London. **I** Dr. J. Ince, Swanley. **J** Dr. E. Jepson, Durham; Dr. J. Johnston, Bolton; Dr. R. Jardine, Glasgow. **K** Kilgerm Co. Limited, Manager of, Cleckheaton; Dr. F. Kraemer, London; Kidderminster Medical Society, Secretary of, Kidderminster; Dr. W. G. Kemp, London. **L** Dr. A. W. W. Lea, Manchester; Dr. T. G. Lyon, London; Dr. O. Liebreich, Berlin. **M** A. MacLennan, M.B., Glasgow; J. W. Mason, M.B., Hull; M.O.H.: Dr. C. J. Morton, Waltnamstow; Mr. J. McMillan, Glasgow; T. E. Mitchell, M.B., Old Hill; Mr. J. H. Montague, London; A. B. Mitchell, M.B., Belfast. **N** Mr. H. S. Nicholls, London; Mr. G. H. F. Nuttall, Cambridge; Mr. L. Nelicker, Rock Ferry. **O** Mr. W. Odell, Torquay; Mr. W. Owen, London. **P** Dr. T. D. Poole, Wolverhampton; Puzzled; Mr. J. F. Pink, London; Dr. E. F. Potter, London. **R** Mr. C. E. Ross, Tenbury: Retired on Gratuity; Dr. R. R. Rentoul, Liverpool; Dr. G. H. Rodman, East Sheen; J. S. Riddell, M.B., Aberdeen; Mr. T. F. Raven, Broadstairs; Respice Finem; Mr. W. H. Rowthorn, Rotherham. **S** Mr. L. Scott, Winchester; Mr. J. Snowman, London: Senior; G. P. Shuter, M.B., London: Messrs. Street and Co., London. **T** Dr. E. F. Trevelyan, Leeds; Mr. C. W. Thies, London; Mr. J. H. Targett, London. **W** Mr. A. Wallace, Ashton-under-Lyne; Mr. D. M. Watt, Dingwall; Mr. H. H. Woods, New Milton.

BOOKS, ETC., RECEIVED.

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REMARKS
ON
THE HOLMGREN WOOL TEST:
IS IT ADEQUATE FOR THE DETECTION OF COLOUR BLINDNESS?

BY THOMAS H. BICKERTON, M.R.C.S.ENG.,
Oculist to the Liverpool Royal Infirmary.

THE official test employed by the British Board of Trade for the elimination of colour-blinds from the ranks of British mercantile marine officers is that of Holmgren's wools. One is almost fearful of venturing to breathe anything approaching a suggestion of incompleteness or imperfection against this test, for the struggle which had to be waged against the Board of Trade before they could be induced to abandon their guessing competition style of testing for colour blindness was of such an arduous and protracted character that I for one would almost feel disposed to abandon the fight did it become necessary to urge some other method of testing upon the officials of that slow-moving department. The great superiority of the test which requires a candidate to do something over that which invited a candidate to name (guess at) the colours of lights and cards exhibited to him is of course apparent, but for some time past it has struck me that Holmgren's wools do not answer to that superlative degree of infallibility which has been claimed for them. Is it possible for persons whose perception of colour is far from normal—in fact so abnormal as to render the individual altogether unable to discriminate between the lights carried by vessels at sea—to pass the test? The following illustration from life, which came under my own observation, answers the question in no uncertain tone.

In February, 1897, the 4,000-ton steamer *D*——, belonging to Liverpool owners, was in the North Sea. The time was night, and the second officer, who had passed for second mate in 1894 and first mate in 1895, was on the bridge. By accident the captain came on deck, and was horrified to find his vessel making straight for an approaching sailing ship. The second officer had seen the approaching craft's green light, and, mistaking it for a white one, supposing it to be exhibited on some stationary craft, kept his course. A minute or two more and it would have been too late to avert a disaster, and probably the resulting collision would have sent one, if not both, vessels to the bottom. As it was, however, the captain grasped the situation at once, and, promptly starboarding, averted the danger of collision, but not until the two vessels were less than a length apart.

The officer concerned was discharged at B———, and early in March he received the following letter from the Board of Trade official there:

Board of Trade.
"Certificates." Mercantile Marine Office, March, 1897.

Sir,—With reference to report made at time of your discharge from ss. *D*—— on the ——th ult. that you suffered from defective eyesight, I am requested by the Board of Trade to ask if you would be willing to have your sight tested under the conditions laid down in Rule 7 of Examination 1. Awaiting your reply, I am, Sir, yours obediently,

————, Supt.

Needless to say the officer had no objection. He had passed the Holmgren wool test before, and had no need to fear its reapplication. Accordingly he was retested, and passed as possessed of normal vision. Later I tested him myself with the wools, and he neither by wrong matches, hesitancy, or nervousness showed the least sign that his colour perception was not perfectly normal. I then submitted the case to Professor Oliver Lodge, F.R.S., of Liverpool University College, of whose researches in the field of physics I have no need to speak. After testing the officer with the spectrum, etc., Professor Lodge wrote as follows:

Your patient has the very slightest touch of ordinary colour blindness of the usual kind—namely, what we assume to be and call a slight defect of red sensation. He matches an orange mixture with a pure yellow, and calls a true yellow match "too green." Quite the usual thing, but very slight. All ordinary wrong matches with pigments that a colour-blind person makes, he is quite clear about. I should hardly have thought it sufficient to disable him. But it's there.

Now, here was a person who could not distinguish between the masthead light (white) and the starboard light (green). His mistake on the *D*—— was no accident, for he freely confessed to me that he never was certain about these two lights. Yet in spite of this visual and regular inability to discriminate between white and green lights, he could and can escape detection by the Holmgren wool test. This hardly makes for the infallibility of the test. I ought, perhaps, to say that this gentleman's object in consulting me was one of conscience. What was he to do? Shore berths in which his training would be of value were not to be had, even if vacant, by one with little or no interest, and he might as soon look to the heavens to rain gold as expect the Board of Trade—though aware of the case—to find a shore berth for him. No; he might starve so far as they were concerned. He did not want to risk his own or other people's lives, but he had been freely permitted to pursue the sea life—nay, more, he was a certificated officer. The sea was his livelihood. If the conscience of this great Government, whose privilege it is to safeguard the lives of its citizens, permitted him to spend many years of his life in training for a profession for which he was physically unfitted, why should he presume to set up a higher standard of morality? This reasoning it has been my lot to hear times without number. Some months later I wrote to this gentleman, asking for some further information, and I quote the reply received: "Mr. —— went to sea as mate about two months ago in the —— bound for ——. I expect him home in about four months." Whether Mr. —— did safely return I know not. If so he is quite at liberty to bring about a calamity of the character which the captain of the *D*—— so narrowly averted.

I quite realise that this criticism of the generally accepted method of testing for colour blindness may come as a surprise to some of those who have watched the development of the colour-blind question. Indeed, by many, ability to pass the Holmgren wool test is regarded "confirmation strong as proof of Holy Writ" of a normal colour perception.

To be perfectly candid, I was, up to a comparatively recent date, a firm believer in the all-sufficiency of the test. In fact, I informed the Royal Society Commission which investigated the Seamen's Eyesight question, that I was prepared to pin my faith to the Holmgren wool test. Some little of this confidence has, I need hardly say, been shaken by the discovery of the phenomena to which I have alluded. Nor is it by any means an unusual occurrence for theories to be upset, or to require modification through the discovery of fresh data. There is no such thing as finality in scientific research, and history furnishes us with many examples of the accepted theories of to day becoming the fallacies of to-morrow. I do not wish to be understood as prophesying a wholesale upsettal of existing beliefs and tests concerning this question, but I wish to make it thoroughly clear that the case I have quoted proves conclusively that the Holmgren wool test is by no means a certain discoverer of the lesser marked forms of colour blindness. That there should be such a phase of physical infirmity argues pretty strongly in favour of that opinion that colour and luminosity are in some way or other intimately associated. A person who loses the power to discriminate between colours at a distance, but regains it at close quarters, is clearly possessed of a type of abnormal colour perception which the Holmgren wool test can never discover. The disquieting character of this phase of colour-blindness is well expressed in the following letter written to me by Dr. Hubert Seager:

I do not remember to have yet seen any discussion on the peculiar form of colour blindness to which I myself—and no doubt other people as well—am subject: Inability to distinguish at night between a red and a green light at a distance exceeding half a mile, though I can pass any test for colour or long sight in the daytime, and can distinguish coloured lamps perfectly at night within half a mile's distance. I tested this condition of my eyesight again last year when I was at sea for a week or two, and found it unaltered.....Naturally, such a state of colour blindness might lead to very serious accidents at night, and the Board of Trade tests should be adapted to such defects.

Then, too, there are that numerous class who, while they can distinguish between the colours of the spectrum, are yet, so to speak, weaksighted for colours, the difference between one section of the spectrum and others being, especially under weak illumination, by no means decidedly marked. Captain Abney states his experience of such cases as follows:

Besides cases of complete blindness due to the absence of one or two sensations, on the Young theory we have other cases in which one or even two sensations are more or less deadened. It has often been said that

uch cases are difficult to class as red or green deficient. As far as my own observations go, I have never found this difficulty. In numerous experiments which Lord Rayleigh has made in matching orange by means of a mixture of red and green he has come across several who have apparently normal vision, as they see colours correctly in every part of the spectrum and yet some require much less red mixed with green to make a match with the orange than do others .....The limits of the visible spectrum to those persons, as far as my examination of their cases goes, are the very same as my own.

Now, neither the person who is shortsighted for colours nor he who is weaksighted for colours will be detected as possessed of anything but a normal colour perception by the Holmgren wool test. I am not alone in asserting that the Holmgren wool test is far from being the be-all and end-all of a colour-blind discriminative. Dr. George Mackay, of Edinburgh, writes on the subject as follows:

It seems to be scarcely appreciated as it ought that there exist persons whose perception of colour appears to be correct in quality, but is congenitally defective in quantity or intensity. The subjects of this affection can pass successfully such a test as Holmgren's applied in the orthodox way, since they inspect the skeins at close quarters. They appear to see colours much or quite as the normal-eyed, provided the stimulus of colour rays applied to their retina is sufficiently strong, but if it be weakened by dilution with white light or removal of the source of colour to a distance, their defect is made manifest.

Again, Dr. Angus McGillivray, of Dundee, in commenting upon a case which came under his own observation, remarks as follows:—

Now a candidate may arrange the Holmgren tests with perfect accuracy, and recognise and name promptly the colours used in signalling, yet, though possessing perfect distant vision, he may be quite unable to tell the difference between a red and a green signal at the distance of a few yards, even in a clear atmosphere.

He then proceeds to mention some of the peculiarities of this type of colour blindness, as instanced in a patient of his, who, although an effective colourist, and who could pass the Holmgren wool test with ease, practically lost the sense for colour when the coloured object was removed to a distance. In conclusion, Dr. McGillivray states that the recommendations of the Royal Society Committee mention no tests that would detect such a case as he has recorded. Thus it is evident that the official test used by the British Board of Trade, even if it were properly applied, is ineffectual in eliminating from the mercantile marine all persons who by their visual infirmities are totally unfitted to assist in the navigation of vessels. To ensure, therefore, certain discovery of all colour defects, a quantitative test for colour is in addition required.

THE PRACTICAL APPLICATIONS OF "LARGIN" IN DISEASES OF THE EYE.

By SYDNEY STEPHENSON, M.B., F.R.C.S.Edin.,

Ophthalmic Surgeon to the Evelina Hospital; Surgeon to the Ophthalmic School, Hanwell, etc.

Modern pharmacy has provided us with several substitutes for nitrate of silver, such as protargol, argentamin, actol, itrol, and argonin. Largin, the latest of these synthetic compounds, occurs in the form of a stone-coloured, granular powder. It is stated by Merck[1] to contain 11.10 per cent. of silver combined with protalbin, so that it is richer in the percentage of metal than any of the other compounds. Its watery solution has a brownish colour and an alkaline reaction, and keeps well in suitable phials. It is precipitated neither by albumen nor by chlorides. Largin is claimed to be a non-irritating bactericide possessing some astringent properties. It has been employed by Pezzoli and Finger[2] in gonorrhœa. Dr. Marczel Falta[3] appears to be the only writer who has yet published anything with regard to its action in ophthalmic disorders. By dropping a 1 per cent. watery solution into the eye several times a day Falta claims to have obtained "surprising results" in conjunctival inflammations and in catarrhal ulceration of the cornea. In diseases of the tear passages he used a 10 per cent. solution. Falta never observed any staining of the conjunctiva follow its application.[4]

For several months I have employed largin rather extensively in the treatment of superficial eye disorders, especially in the various forms of ophthalmia. The preliminary trials were made with a 3 per cent. watery solution, but that was soon replaced by a 5 per cent., and eventually by a saturated 10 per cent. solution; the remedy was also used as a powder in some cases, such as phlyctenulæ of the conjunctiva. For the most part the remedy was painted over the exposed palpebral conjunctiva once or twice a day. In these various ways largin has up to now been employed by me in upwards of 100 cases of eye disease. In some kinds of ophthalmia the results have been in nowise inferior to those obtained with silver nitrate, over which largin has one obvious practical advantage in the fact that its application neither causes pain nor is it followed by any appreciable reaction. Largin is, however, much more expensive than lunar caustic, but that drawback will doubtless be lessened as the advantages of the new agent become better known. It is to be especially noted that if used for more than a few weeks, largin certainly does stain the conjunctiva.

In gonococcal ophthalmia my results with largin have, upon the whole, been of a somewhat disappointing character. It has appeared to me in such cases distinctly inferior as a curative agent both to protargol and to silver nitrate. The following is a case in point:

Case I.—A thin and ill-nourished baby, aged 14 days, was brought to me on October 9th, 1899, suffering from severe ophthalmia, noticed on the third day after birth. A non-infiltrated ulcer, with rounded edges, existed in the lower part of the left cornea. The pus, when examined with the microscope, was found to include cocci and diplococci, mainly grouped in the protoplasm of the cells: the organisms did not stain by Gram's method. Two agar tubes inoculated with pus from the conjunctiva remained sterile after three days in the incubator, thus excluding the organism that above all others is likely to be confused with the gonococcus—namely, the diplococcus intercellularis meningitidis. The treatment comprised—(*a*) largin, 5 per cent. to lids daily; (*b*) sublimate lotion, 1 in 5,000, frequently: and (*c*) drops of physostigmine and cocaine to left eye. One week later the conjunctival secretion included many gonococci. After fourteen days' treatment with largin the eyelids were still swollen, gonococci were present in the abundant discharge, while the ulcer of the left cornea had become vascular. The strength of the largin was accordingly increased to 10 per cent.; but the discharge remained thick and profuse, so that three days later (October 21st) it was replaced by a 2 per cent. silver nitrate solution. Under that treatment the ulcer soon healed and the discharge quickly subsided. Indeed, the good effects of the silver were most marked. The patient was discharged on November 14th with a smooth and pale palpebral conjunctiva and an insignificant nebula in the lower-inner quadrant of the left cornea.

So much for the superiority of silver nitrate. The next case goes to show that protargol is better than largin in the treatment of gonorrhœal ophthalmia:

Case II.—R. B., aged 19 days, was first seen on November 29th, 1899. She was born at term, after a labour lasting about forty-eight hours. Her mother was affected with a greenish genital discharge before and after parturition. The baby's left eye became inflamed on the third day and the right eye on the sixth. Pus from the eyes contained numerous gonococci, mostly grouped within the cell elements of the specimen. The corneæ were clear, and there were no joint or other complications. The eyes were cleansed frequently with sublimate lotion (1 to 5,000) and the exposed conjunctiva painted daily with largin (10 per cent.). Three applications of largin having failed to make any appreciable impression on the purulent secretion, that agent was, on December 2nd, replaced by protargol (50 per cent.). Four days later the pus was less, although specimens still included many gonococci. On December 20th, after eighteen applications, there was still some secretion from the conjunctiva. Gonococci were present, especially in specimens from the right eye (thirty-fourth day of the inflammation), where they formed many intracellular groups. On December 27th a fair number of gonococci were found in the scanty secretion from the right eye (forty-first day) and a few scattered gonococci in specimens from the left eye (forty-fourth day); xerosis bacilli were present in each case. On January 3rd, 1900, the conjunctiva of the eyelids was smooth, thickened, and pallid; the corneæ were clear and the eyes free from inflammation. Nothing beyond xerosis bacilli could be demonstrated in the extremely scanty conjunctival discharge. The protargol was stopped and the patient dismissed.

In the common acute contagious ophthalmia, due to the tiny Koch-Weeks bacillus, largin has yielded very different results. In 20 such cases, some of a severe nature, a rapid cure has followed the daily application to the conjunctiva of a 10 per cent. solution. Indeed, in that particular affection, my experience leads me to believe that a 10 per cent. largin is every whit as effectual as a 2 per cent. silver nitrate solution. In acute trachoma (also often associated with the Koch-Weeks bacillus) largin has given good results.

Case III.—G. E., 9 years, was admitted to the Ophthalmic School with acute trachoma. The lids were red and puffy, the eyeball was congested; the palpebral conjunctiva was thick, red, and granular; and a coherent pellicle was present upon the mucous membrane of the upper lids. In the profuse conjunctival discharges, the Koch-Weeks and the xerosis bacillus were found. After three applications of 10 per cent. largin, the swelling, redness, and membrane had disappeared; while after five applications no bacilli could be demonstrated, and the general improvement was most striking. The remedy was then changed for bluestone in order to attack more efficiently the residual chronic trachoma.

Case IV.—M. A. T., aged 9 years, admitted November 16th, 1899, with subacute trachoma. In the discharges from the eyes Weeks and the xerosis bacillus were found both by cover-glass preparations and by cultures. Vision $\frac{6}{9}$. Sublimate lotion, 1 in 5,000, frequently, and the daily application to the everted conjunctiva of largin, 10 per cent. After forty-three applications of largin, sight was equal to $\frac{6}{6}$; little discharge was present, and the conjunctiva was much less red and granular.

Largin is also of service after trachoma operations, as, for example, squeezing or "brushing" the conjunctiva, where, in my experience, it is equal to silver nitrate.

Largin will sometimes bring about a speedy cure in that form of chronic opthalmia associated with the diplo-bacillus of Morax. But, as a rule, it is markedly inferior to a watery solution of zinc sulphate, 10 to 40 grs. to the ounce.

Case v.—A. F., aged 7 years, suffered from slight congestion of the palpebral conjunctiva, soreness at the angles of the lids, and a mucous secretion from the eyes. Enormous masses of diplobacilli were present in cover-glass preparations from the secretion, and the organisms were cultivated on blood serum and blood agar. After eight daily applications of 5 per cent. largin, the condition of the conjunctiva was good and diplobacilli could not be demonstrated.

Case vi.—In the case of E. G., aged 8 years, the characteristic microparasites did not disappear until twelve applications had been made of 10 per cent. largin.

In the more acute forms of blepharitis associated with redness and swelling of the conjunctiva and a rather profuse secretion (the blepharo-conjunctivitis of German authors), largin has rendered me service.

Case vii.—J. W., aged 5 years, was seen on July 19th, 1899. His left upper lid was red and markedly swollen, while his eye was discharging freely. The ocular conjunctiva was congested and ecchymotic; the semilunar fold was red and swollen; the palpebral conjunctiva was inflamed. The accompanying muco-purulent secretion was smeared on cover glasses and examined with negative results. On agar-agar, however, pure cultures of the staphylococcus pyogenes aureus were obtained. The case was treated with boric lotion and 3 per cent. largin, and five days later the eye was almost well. The patient was discharged on July 31st, after eleven days' treatment.

In some few cases of lachrymal trouble I have had encouraging results from largin injections with the ordinary treatment by probes.

Case viii.—On September 14th, 1899, I was consulted about J. C., aged 8 years, whose eyes were stated to be perpetually watering and discharging matter. Upon examination he was found to be suffering from bilateral stenosis of the nasal duct. The secretion from the lachrymal sacs contained (*a*) pneumococci, and (*b*) pneumobacilli. No nasal affection could be made out. On September 16th each lower canaliculus was slit, and a small Bowman's probe passed down the nasal ducts. After eleven probings and injections of largin, there was neither lachrymation nor regurgitation from the sacs, and the case appeared to be cured.

In brief, I cannot help thinking that largin seems likely to help us in dealing with this very troublesome class of case.

Largin, when applied to the conjunctiva, causes little if any pain, and in that respect has an obvious advantage over silver nitrate. At the same time, in my experience, it is even more likely than lunar caustic or protargol to stain the palpebral conjunctiva of an indelible light brownish hue. The discoloration affects mainly those parts to which the largin has been directly applied—namely, the lower and the upper tarsal conjunctiva. It is due to the deposition of tiny granules of silver in the lymphatic and perilymphatic structures of the mucous membrane. I have collected the following ten instances of this so-called argyrosis.

1. A. D., aged 6½ years, slight conjunctival staining noted after ten applications of a 3 per cent. and twenty-nine applications of a 10 per largin solution.
2. G. C., aged 2 years, affected with subacute trachoma, slight discoloration of conjunctiva after twenty-one applications of 10 per cent. largin.
3. C P., aged 12 years, staining after thirty-seven applications of a 5 per cent. solution.
4. A. P., aged 13 years, argyrosis noticed after fifty-one applications of 10 per cent. largin.
5. E. P., aged 10 years, as in last case.
6. M. W., aged 6 years, a little conjunctival staining after fifty-one applications of 3 per cent. largin.
7. M. L., aged 12 years, argyrosis after using once a day for sixty-one days a 3 per cent. solution.
8. A. E., aged 12 years, suffering from subacute trachoma with pneumococci in the conjunctival secretion, was ordered a daily application of 5 per cent. largin on October 21st, 1899. On November 24th a 10 per cent. solution was prescribed. On January 6th, 1900, staining of the conjunctiva was observed.
9. M. M., aged 10 years, conjunctiva found to be stained after sixty-four applications of 10 per cent. largin for relief of subacute trachoma.
10. P. W., aged 7 years, affected with subacute trachoma and pannus, was found to have a stained conjunctiva after forty-nine applications of a 3 per cent. and forty seven applications of a 10 per cent. largin solution.

Conclusions.

The application of largin, even in concentrated form, is painless, but, when prolonged beyond a few weeks, may stain the conjunctiva. It acts well in blepharo-conjunctivitis, and in some cases of dacryocystitis. It is an efficient substitute for silver nitrate in any of the conjunctival inflammations associated with the Koch-Weeks bacillus, such as acute infectious ophthalmia and acute or subacute trachoma. It acts admirably as a temporary remedy after any of the operations commonly practised for the relief of chronic trachoma. In gonorrhœal ophthalmia, on the contrary, it is, in my experience, distinctly inferior both to protargol and to silver nitrate. In diplo-bacillary conjunctivitis, too, it does not succeed so well as zinc sulphate. In short, largin seems likely to gain a permanent place among the somewhat restricted number of remedies employed in everyday eye work.

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[1] Merck's *Annual Report on the Year 1898.* [2] Pezzoli and Finger, *Wien. klin. Woch.*, Nos. 11 and 12, 1898. [3] Falta, *Centralbl. f. prak. Aug.*, February, 1899. [4] A paper by Welander (*Arch. f. Derm. u. Syph.*, xlvi, 3, 1898) on largin has recently fallen under my notice.

DETACHMENT OF CORNEAL EPITHELIUM (?)

By J. ACWORTH MENZIES, M.D.Edin.,
Rochdale.

The following case seems to be worthy of record because of the long duration of the symptoms and the immediate relief ultimately obtained. Mrs. W. consulted me on August 4th, 1899, and gave the following history. Five years previously the right eye was struck and "cut" by a cricket ball. Since that time there had been pain exactly as if there was a foreign body under the lid or embedded in the cornea. There was a pricking feeling on winking, and the patient could not bear to have the upper lid touched in its outer half. She could only obtain ease by keeping the eyes closed and perfectly still, or wide open with the lids motionless. On examination no foreign body could be seen, and the lids were normal. In the lower outer quadrant of the cornea careful observation showed that the epithelium was ruffled and freely movable over a small area, and in part of the same area was a tiny circular, slightly opaque, raised patch of the corneal tissue. Nothing more could be made out. I prescribed a bandage and some boric lotion with cocaine. Two months later, on October 6th, I again saw the patient, who was then in precisely the same condition as before, and had been so during the two months' interval. She was in such misery that I decided to adopt surgical measures at once. Accordingly, after instilling cocaine, I carefully explored the painful area with a needle, but could detect no foreign body. I then scraped the part thoroughly with a sharp spoon, removing the epithelium for some little distance around, and a fair amount of corneal tissue in the affected area. The following day there was some smarting, but the eye could be moved freely under the lid, and there was no pain on pressure over the previously tender spot. Progress was uninterrupted. The epithelium grew over the denuded surface, and no opacity resulted. The eye now is perfectly right and the vision is normal.

I should have put the difficulty I had in making a diagnosis down to my having overlooked some detail, had it not been that the patient was for a considerable time under treatment at an eye hospital. The explanation I am inclined to adopt, for want of a better, is this, that the original blow caused the anterior elastic lamina with the epithelium to become detached. The nutrition of the epithelium might thus be kept up, and every movement which pressed upon the surface would bring the detached membrane down on the corneal nerve filaments. But it must be confessed it is not easy to understand how this condition could remain stationary for five years.

Pellagra in Italy.—In the *Giornale degli Economisti* Signor Pietro Pitta gives the results of an investigation as to the diffusion of pellagra in Italy. In the Venetian provinces, which are the cradle of the disease, there has, owing to the preventive measures taken by local sanitary authorities, been a notable decrease in the number of deaths attributed to the disease. Whereas in 1887 it was 29,836, in 1891 it had fallen to 5,581; and this figure represented the average number of deaths from pellagra during the remainder of the decennium. But while the scourge has diminished in intensity, it has spread over a larger area. Deaths from pellagra are beginning to be reported in Lazio, the Abruzzi, in Apulia, in Basilicata, Campania, and Calabria, and are increasing in number. Signor Pitta urges the adoption of strict prophylactic measures in these and other places where the disease has made its appearance.

ABSTRACTS OF

THE HUNTERIAN LECTURES

ON

THE SURGERY OF THE STOMACH.

BY A. W. MAYO ROBSON, F.R.C.S.,

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LECTURE II.

PERFORATION.

PERFORATION may occur in any form of ulcer of the stomach, though it is much more frequently in the simple round or acute ulcer than in the chronic form. The cases fall into two classes, the acute and subacute.

In acute perforation, there are the signs of a peritoneal catastrophe, usually supervening on the symptoms of gastric ulcer. In the greater number of cases of perforation, the actual rupture occurs when the stomach is full or moderately distended, and as it usually takes place on the anterior surface, the contents are poured into the great sac of the peritoneum, flowing along the depression between the colon and stomach into the right or left lumbar pouches, but if the stomach contents be abundant, they flow over the omentum and pass into the pelvis at once. I have operated on cases of recent rupture, where, although there were no adhesions, the right kidney pouch only had become soiled, where both kidney pouches only were involved, and where the pelvis and all parts of the peritoneal cavity had become invaded. When an ulcer perforates the posterior surface of the stomach, the lesser peritoneal cavity is at once invaded, and if the stomach contents be abundant the fluid pours into the right kidney pouch through the foramen of Winslow, and so involves the general peritoneal cavity. Under these circumstances, where there are no limiting adhesions, the symptoms are very acute, and operation, to be successful, must be undertaken at the earliest possible moment. If perforation occurs with the stomach empty or only containing a small amount, protective adhesions may be formed in immediate contiguity to the ulcer, and recovery occur in a few exceptional cases.

In subacute perforation there is more difficulty in making a diagnosis, as the symptoms are less definite; there may be pain followed by sickness and faintness, perhaps by vomiting, with slowly-extending tenderness of the abdomen and distension; but all these conditions are much less marked in the early stage, though they may at the end of two or three days develop rapidly and end the patient's life in a few hours, or the inflammation may very slowly extend, leading to localised abscess. In these cases—perhaps because the perforation has occurred on an empty stomach—there is a smaller leakage, which becomes more or less encysted by adhesions, and the abscess may perforate into the intestine or on to the surface of the abdomen or into the thorax, or some accidental exertion, such as that of vomiting, may cause a rupture of the abscess into the general peritoneal cavity.

There is a third class of cases in which a small amount of fluid escapes, and is limited by adhesions at some distance from the perforation. If this occur on the posterior surface the lesser sac and left subphrenic space are alone involved, because of adhesions at the foramen of Winslow, and because of the falciform ligament limiting extension between the diaphragm and liver towards the front and right side. If the perforation occurs into an adjoining hollow viscus—for example, intestine or gall bladder—a fistula will be formed. Usually in the subacute or chronic cases a retro-peritoneal abscess forms in or near the pancreas, and then bursts behind the peritoneum, as in a case on which I operated recently, but this is much less common from perforation of a gastric than of a duodenal ulcer.

The diagnosis can usually be made by a careful physical examination, when there will be found absence of liver dulness owing to free gas passing between the liver and diaphragm, and if the stomach has been full at the time of rupture or fluid has been given after its occurrence, there will be dulness in the flanks and a thrill may be present. If the case be not seen until a later stage the tympanitic distension owing to peritonitis replaces the early rigidity of the parietes, and the distension may itself give rise to absence of liver dulness. Ineffectual vomiting is suggestive of acute perforation, it being accounted for by the contracting stomach forcing its contents into the peritoneal cavity.

When the perforation is subacute or chronic the diagnosis may be extremely difficult. The first symptoms may be acute, subsiding in a little while under treatment, and then again, according to later developments, becoming serious or even acute; or from the onset these cases may be slow and insidious, and the first evidence that perforation has occurred may be the formation of a subphrenic or other abscess. The diagnosis in this case rests mainly on the physical signs in the shape of swelling in the upper abdominal region on the right or left sides according to the site of the perforation, and as these abscesses frequently contain free gas the percussion note is often misleading, though the hyper-resonance may usually be readily distinguished from a pulmonary sound. Sometimes fluctuation may be felt, at other times the presence of fluid can only be elicited by a thrill on flicking the affected part of the abdomen with the fingers. When the collection of fluid is between the diaphragm and liver, the liver may be pushed downwards and the thoracic contents pressed upwards. Here the exploring syringe will afford valuable indications.

The late Mr. Greig Smith drew attention to an important symptom in this class of cases, a line of induration underlying and adherent to and moving with the parietes, this being the site at which the omentum is adherent to the abdominal wall, limiting the downward extension of the pus, and occurring in subacute perforation on the anterior wall of the stomach.

Treatment.—Though in the first 100 cases operated on the rate of mortality was something like 70 to 80 per cent. even in those reported; yet later results show a steadily decreasing mortality. The importance of the time of operation is well known. My own experience of acute perforation from the point of view of time is very striking; of 3 cases operated on on the second and third day after perforation all died, of 3 operated on six, thirteen, and eighteen hours after rupture all recovered.

[The lecturer then discussed a table of 429 operations collected from various sources, showing a rate of mortality of 55 per cent.]

The details of operation in cases of perforation are of great importance. Everything should be done to save shock, for the collapse may, and probably will, be severe. An injection of strychnine should be given; the limbs should be covered with cotton-wool, and the patient placed on a heated table. While the abdomen is being asepticised plenty of boiling water should be got ready, and, if possible, some cold water that has been boiled. A free incision should be made in the mid-line above the umbilicus. Odourless gas will probably escape on opening the peritoneum, and possibly some fluid or particles of food. The stomach should then be rapidly and carefully examined, it being borne in mind that the site of perforation is on the anterior wall in 52 per cent., near the lesser curvature in 31 per cent., near the cardiac end in 27 per cent, near the pylorus in 13 per cent., and on the posterior wall in only 8 per cent., so that in all probability the ulcer will be readily found. If the ulcer be not discovered on the anterior wall or near the lesser curvature, the lesser cavity of the peritoneum should be explored by tearing a slit in the gastro-colic omentum. Should the lesser cavity be free from fluid or the lining walls be free from injection it is not necessary to proceed further in that direction, and the pylorus must then be carefully examined.

As soon as the perforation is discovered it must be sutured by apposition of the margins, or by turning the edges inward and by inserting a row of Lembert's sutures through the peritoneal coat over the site of perforation, and, if practicable, superimposing a second row of stitches; but, owing to the unhealthy and sometimes indurated condition of the margins of the ulcer, this is more easily described than done. If the line of suturing be thought to be insecure, a flap of omentum may easily be brought up and stitched over the opening. This I have successfully done in several cases, and as it involves very little time and gives a decided sense of security, I think it is not a bad rule to follow in most cases. Excision of

the ulcer is, as a rule, unnecessary, and involves a waste of time, but in some cases it may make suturing easier.

Having closed the ulcer, the cleansing of the peritoneal cavity must be thoroughly and methodically carried out, and if the extravasation of fluids be limited—as in a case that I saw within six hours of rupture, and where only the right side of the abdomen was soiled—general irrigation is undesirable and may do more harm than good; but the parts should be very carefully wiped by soft sponges, great care being taken to cleanse the various folds and the space between the liver and diaphragm. When the effusion is more extensive and the peritoneal cavity has been generally soiled, irrigation is undoubtedly the best means for cleansing it. I have found a coil of india-rubber tubing, with an ordinary abdominal glass drainage tube fixed to one end of it and a funnel at the other, to be more convenient than any more complicated apparatus, and I prefer a normal saline solution at a temperature of 105° before any other, though a solution of boro-glyceride or boracic acid can be equally well employed.

It must be remembered that irrigation should be a means of removing and not diffusing foreign material. It is very desirable, therefore, when gross particles of food are found in the region of the stomach, to wipe these away before irrigating. Having done that, the glass tube can be pushed down into the various recesses and the fluid allowed to well out. When there is much effusion I usually prefer to make a suprapubic opening and put a drainage tube into the lowest pelvic peritoneal pouch. As soon as fluid is returned perfectly clear, and when the douche has been applied between the liver and the diaphragm and into every other accessible recess, the abdomen may be closed, leaving the pelvic tube for drainage. It does not matter if some of the fluid remains in the cavity so long as it is pure, for it becomes absorbed and acts in the same way as an infusion of saline fluid would do. I am quite aware that some surgeons prefer always to wipe rather than to flush; but my own feeling is that we should select our cases, and, where the soiling is limited, wipe, but, where it is general, flush. The most difficult region to purify is that between the liver and diaphragm. When the perforation is on the anterior wall of the stomach, the right side of the suspensory ligament is almost certain to be soiled, when it is on the posterior surface the space between the liver and the diaphragm on the left will be soiled. In either case these regions should be flushed or wiped as the case may be. Saline infusions, rectal injections, and subcutaneous injections of strychnine may be required to combat shock.

Operation in Chronic Perforation practically resolves itself into the treatment of peritoneal abscess wherever it may be found; but in case of chronic or subacute perforation from gastric ulcer, in by far the greater number of cases the abscess is under the diaphragm. It is curious that an abscess of this kind seldom bursts into the general peritoneal cavity. Nevertheless, unless surgically treated, these cases nearly always terminate fatally, either by extension towards the thorax or from septicæmia or exhaustion.

In case of right subphrenic abscess an incision may usually be made in the superior abdominal region to the right of the middle line. In left subphrenic abscess the pus is behind the liver on the left side of the abdomen, and it may be necessary to resect a portion of the eighth or ninth rib and to incise the diaphragm, care being taken to shut off by sutures the pleura if opened. Or an abscess of this kind, if showing a tendency to come forward, may frequently be drained by an incision from the front, through the gastrocolic omentum. Having reached the abscess, simple drainage will in most cases be sufficient, especially if a dependent point for drainage can be obtained by pushing a probe from the front, and cutting down on it from the loin. If, however, the adhesions surrounding the abscess seem firm and dependent, drainage cannot be conveniently obtained, gentle irrigation of the cavity with boracic lotion may be employed by inserting two tubes side by side in the cavity, injecting through one and letting the fluid return through the other so as to avoid tension, which might tend to break down adhesions. As the perforation in the stomach may be still patent, care must be taken not to use any poisonous antiseptic, and for the same reason feeding by the mouth is undesirable and for some days all food should be administered *per rectum*, so as to give the ulcer time to heal.

If the pus be retro-peritoneal, the abscess may be incised and drained in the loin, or it may be possible to reach the pus by an incision to the inner side of the anterior superior iliac spine, and then, by lifting the peritoneum, to open and drain the abscess sac, making a counter-opening in the loin if thought desirable. The tube must be gradually shortened as the pus lessens, and left out as early as is safe, lest a fistula should form.

Gastric Fistula.

Gastric Fistula, a sequel of perforation, may be found occasionally on the surface of the abdomen, very rarely in the loin, but not infrequently between the stomach and adjoining organs. It may be pathological or traumatic. The symptoms vary according to the cause and the site of the fistula. If it be between the stomach and upper bowel the symptoms may be slight or absent, but if between the stomach and large bowel the food will pass too rapidly through the alimentary canal and be parted with before absorption is adequate for nutrition; and, on the other hand, gases from the colon entering the stomach will give rise to fœtid eructations, at times to fæculent vomiting, and always to chronic dyspepsia. Fistulæ on the surface of the abdomen, if small, may cause little loss of health, but, if extensive, the leakage from the stomach of food and gastric juice leads to great distress from the soreness of the skin around the fistula, and to loss of flesh from the waste of food.

Diagnosis.—As a rule, except in surface fistulæ, diagnosis can be made only after opening the abdomen, but if unaltered or slightly altered food be seen in the fæces after a history pointing to simple or malignant ulceration of the stomach, a fistula between the stomach and colon would be suspected, especially if fœtid eructations or fæculent vomiting occurred from time to time. The inability to distend the stomach with air pumped through an œsophageal tube would help in the diagnosis.

Treatment.—In simple internal fistula I have explored by abdominal section and closed the two openings. In malignant disease partial gastrectomy and enterectomy might possibly be performed if the disease could be discovered in time. A surface fistula, if it do not close spontaneously under careful dressing and rest, may be closed by carefully dissecting the adherent peritoneum away from the parietes without opening the peritoneal cavity, and then invaginating the margins of the opening in the stomach and suturing them accurately together with two layers of superimposed sutures, afterwards closing the muscular and aponeurotic layers of the abdominal wall by separate sutures, and lastly the skin.

Perigastritis and Adhesions.

Adhesions of the stomach and pylorus to neighbouring organs are a common result of perigastritis, the causes of which may be extrinsic (gall stones, tuberculous peritonitis, local peritonitis from intestinal ulceration, or from malignant growths in adjoining organs, typhoid and possibly other fevers), or intrinsic (ulceration, rarely cancer or syphilis).

Adhesions, the result of perigastritis, though at the time conservative, may later lead to great functional disturbance by interfering with the motor activity of the stomach.

Since I read a paper on this subject before the Clinical Society of London my experience has extended, and I can now point to a very large number of cases (nearly 50) of pyloric or other stomach adhesions caused in some cases by gall stones, in others by gastric ulceration, where the adhesions, though not the original disease, were of the first importance in producing the symptoms. Though in some cases the adhesions may be due to a perforating ulcer, yet in many cases long before the peritoneum is reached by the ulcer, a local peritonitis occurs. Adhesions are found around the stomach in about 5 per cent. of all necropsies, and about 40 per cent. of all cases of ulcer of the stomach are associated with adhesions. My experience in a very considerable number of abdominal sections, about 500 of which have been in the upper abdominal region, is that pyloric adhesions are very much more common, and their importance greater than is generally recognised. This is especially the case in cholelithiasis, where I am accustomed to find gastric dilatation almost always due to adhesions of the pylorus to the gall bladder and liver.

Sometimes the adhesions may be strictly limited to the pylorus and gall bladder, leading to a characteristic train of symptoms. In one case under my care, acute dilatation of the stomach came on suddenly, and ended fatally within thirty-six hours, it being apparently due solely to pyloric adhesions, as a *post-mortem* examination revealed no other cause. At other times they may extend from the pylorus along the lesser curvature of the stomach, fixing the upper border of the stomach firmly to the gall bladder, cystic duct, and under surface of the liver. When the pylorus is tied up in this abnormal position, not only are the normal movements of the pylorus and stomach interfered with, but the food has to be forced out at a higher level, and when the pylorus is alone fixed, a kink forms, leading soon to well-marked dilatation with flatulence, chronic dyspepsia, and loss of flesh.

Where perigastritis is due to ulceration the adhesions are only found over the site of the ulcer, and if this be at the pylorus a double difficulty is presented, for not only is there fixation of the pylorus at an abnormally high level, but the pyloric orifice itself becomes stenosed from the contraction due to the healing of the ulcer. If the ulcer happens to be on the anterior wall of the stomach it may lead to hour-glass contraction.

I find that I have operated on 47 cases of stomach disorder, where adhesions alone, or adhesions associated with some other disease such as gall stones, led to serious dyspepsia or other digestive derangements, and where the removal of the adhesions was followed by great relief or cure of the symptoms. The symptoms vary, according to the site and cause of the disease, from mere dyspepsia to serious apepsia.

The diagnosis in these cases rests on a careful consideration of the previous history, together with the presence of well-marked signs and symptoms, so that is not generally difficult. There will usually be a history of gall stones, typhoid fever, ulcer of the pylorus, or some local peritonitis in the pyloric region, months or years previously; this will have been followed by indefinite dyspepsia and flatulence, which later takes a very definite shape, consisting of discomfort and pain after food, especially after a full meal, so that the patient prefers to take several small rather than one large repast. The pain and discomfort are at once relieved by the recumbent posture, so that a necessity to lie down or rest after every meal is suggestive. Relief is frequently found by the wearing of a belt; this is usually discovered by the patient before advice is sought. The pain is often of a dragging character; at times it may be acute, and is increased or brought on by lifting or reaching—say to adjust a picture. Walking or any active exertion may bring on discomfort and pain. Besides the ordinary signs of dilatation of the stomach and the tenderness between the umbilicus and ninth costal cartilage, as shown by a rigid right rectus, there is an important physical sign to be obtained by distending the stomach with gas, and that is, the cavity of the stomach is found to extend further to the right and higher than normal.

An entire cessation of pain and freedom from dyspeptic troubles if the patient be confined to bed is suggestive, for it will be seen that under these circumstances the higher level of the pylorus is done away with, and the recumbent posture prevents the dragging of adhesions.

Relief may be obtained by advising the patient to take small meals and to avoid bulky and fermentable foods, such as potatoes and bread, to rest after meals, and to wear a well-fitting abdominal belt.

The natural cure, in some cases where there has been no operation, is probably due to the stretching of adhesions and to their absorption, if the exciting cause has fortunately been removed; but in the more severe cases, where the adhesions are almost universal, such a fortunate termination of symptoms is scarcely to be hoped for, and in some cases the adhesions are so extreme that nothing short of gastro-enterostomy can prove of any avail.

I have heard the question asked What is the use of simply detaching adhesions? Fortunately my experience in this class of cases is sufficient for me to give a very direct answer to this query, for I can point to many cases of cure where men and women, formerly invalided by pain and dyspepsia, are now leading active and useful lives. Slight adhesions I am accustomed to separate with the fingers: firmer bands I divide between ligatures, going carefully to work until I feel the pylorus is quite free. Where the omentum is available I usually bring the right border upwards and leave it between the pylorus and gall bladder and liver, so that should any adhesions form again they will be in the shape of a loose mesentery, and not binding like adhesions to fixed organs.

Gastrolysis is a very safe operation, the mortality in 77 operations being only at the rate of 2.5 per cent.

HOUR-GLASS CONTRACTION.

My recent experience leads me to believe that hour-glass contraction is much more common than is usually thought, for I have operated on no fewer than 6 cases within a year. Its chief cause is cicatricial contraction of a chronic ulcer, but it may also be due to peri-gastritis and the subsequent contraction of a band of lymph, or to adhesions on the outside of the stomach. It is said at times to be congenital. In many cases no morbid changes are found in the walls of the constricted portion; for instance, in 13 out of 22 cases collected by Hiersch, ulcers, erosions, scars, or thickenings were present, though at some distance from the constriction. The site of the stricture varies, but in all my cases except one it has been sufficiently to the right to leave the proximal cavity decidedly the larger; in the exception the pylorus was also contracted. The cavity between the stricture and the pylorus may vary considerably in size, but is seldom dilated to any great extent unless there be also a narrowing of the pylorus.

Symptoms and Diagnosis.—Out of my six cases I was able to make a diagnosis before operating in two. In all, there were stomach symptoms extending over various periods, in one case so long as 23 years, and in every case there was the history of ulceration at the beginning, with gastralgia and hæmatemesis, followed by relief for a time, and then by relapse, and all along by alternate recoveries and relapses, each attack leaving the patient weaker. Vomiting was present during the time of ulceration, then it ceased, to be followed by dyspepsia, and afterwards to recur at intervals of several days, in this resembling dilatation of the stomach from stenosis. The vomit was hyperacid, contained free HCl, and in other respects resembled the fermenting contents of ordinary dilated stomach. Constipation, with diminution in the quantity of urine excreted, was noted, and visible peristalsis was seen in three of the cases. In all there was marked loss of flesh. Borborygmi formed a distinct symptom in several of the cases. A sulcus between the two halves of the stomach on distension with CO_2 was well marked in two of the cases. In these the symptoms were so distinct as to leave no doubt of the diagnosis. Two pathognomonic signs were present (1) on cleansing the stomach by lavage and leaving it pure, a second washing within a few minutes, showed that the distal cavity had emptied itself into the proximal, and the second washing out brought away fluid as foul as if no lavage had occurred; (2) on distending the stomach with air pumped through a stomach tube the two loculi could be distinctly mapped out both by palpation and percussion.

Treatment.—With reference to early medical treatment I have not much to say. Lavage and careful dieting will give relief, but the limit is soon reached if constriction be well marked, and, as soon as marked loss of flesh is occurring, despite careful medical attention, medical should give place to surgical treatment.

After opening the abdomen, if adhesions be seen to be the cause of stricture, they must be divided, and if after this the communication between the two cavities be sufficiently free, the abdomen may be closed. If the stricture be cicatricial, its calibre may be easily felt by pinching it up between the finger and thumb, when the lumen will be felt between the finger tips. Three courses are now open: (*a*) gastroplasty, (*b*) gastro-gastrostomy; (*c*) gastro-enterostomy.

(*a*) *Gastroplasty* is the operation that I have performed in all my cases, and to facilitate its performance I have modified the operation by stitching up the longitudinal incision transversely over a large decalcified bone bobbin, thus making an opening between the two cavities from 1½ to 2 inches in diameter. Either a catgut suture may be employed for the mucous margin and a silk suture for the serous surfaces, or silk sutures may be employed for both. The operation can,

of course, be performed by simple suture without the bobbin, but I prefer to employ the bobbin, in order to be sure of having the new opening sufficiently large. In 13 collected cases of gastroplasty for hour-glass stomach, of which 11 recovered, the 2 deaths—eight days and a month respectively after operation—were due to perforation and hæmorrhage and dependent on ulceration of the stomach.

(*b*) *Gastro-gastrotomy* seems a good term to apply to the operation for making an artificial opening between the two cavities of the stomach; it can be performed either by simple suture or with the help of a bone bobbin as a splint, or by means of Laplace's forceps; but in this situation I would not advise the use of a metal button, as it would have no chance of escaping, and might lead to subsequent trouble. In 7 collected operations there was 1 death.

(*c*) *Gastro-enterostomy* between the proximal cavity and the jejunum would leave the second cavity with its foul contents untouched, and although relief would be likely to occur, I question whether a permanent cure would ensue. If however, as in one of my cases, it be at once discovered that not only is there a constriction in the stomach, but also one at the pylorus, the question of gastro-enterostomy would be worth considering, as it would lead to a considerable saving of time by substituting one operation for two. It has been performed by Tricomi successfully.

Dilatation of the Stomach.

Diagnosis.—When there is severe dilatation the stomach soon becomes displaced downwards. This is associated with vomiting, which does not occur after meals, nor even every day, but usually every second or third day, and more frequently at night than in the day. The vomit is, as a rule, enormous in quantity, consisting of fermented material with mucus; sarcinæ and yeast cells are usually present. If the dilatation be dependent on ulcer, the vomiting may be excessively acid owing to the presence of hydrochloric acid, if on cancer the acidity is due to lactic acid, and hydrochloric acid will be in small quantity or absent. As a rule, the first sign noticed in stomach dilatation is the splash on succussion of the abdomen, but if the patient has previously vomited this may be absent, but is usually obtained by allowing him to drink freely of warm water. Constipation and diminished secretion of urine are nearly always present. Where the obstruction is mechanical, visible peristalsis from left to right can frequently not only be felt but observed through the abdominal wall; and if visible peristalsis be present, it is always indicative of considerable pyloric obstruction which will probably only yield to surgical treatment.

The amount of dilatation may be ascertained by distending the stomach with air introduced through a tube, and pumped into it by means of a Higginson's syringe. This can be done with very little discomfort and without danger. A simpler method which I frequently employ is to give a dose of tartaric acid immediately after one of carbonate of soda, when, if the patient is recumbent, inspection, palpation, and percussion show the increase in size of the organ. It is highly probable that nearly every case of extreme dilatation of the stomach has some mechanical explanation, and can only be efficiently treated by surgical means. I know that this view is one which will raise some criticism, but I think time will prove that the statement is correct. I do not of course refer to those cases of moderate dilatation which are so commonly seen, and which are associated with atonic conditions and with chronic catarrh, but I refer to the cases of dilatation producing the characteristic symptoms I have mentioned. In a discussion with my colleague, Dr. Barrs, I find that he supports this view.

The *treatment* in any form of gastrectasis will at first be medical and general, but if in a short time weight and strength be not definitely gained and maintained, with relief to pain and discomfort, then time should not be wasted by persisting with lavage and medical treatment for months until the vital powers have become sapped, and the patient reduced to the last extremity of exhaustion before surgical treatment is advised.

The stomach should be washed out for a day or two before operation if the patient be not so far advanced that there will be danger in waiting, and during twelve or twenty-four hours rectal injections may with advantage supplement light stomach feeding. The last lavage should be several hours before operation. A subcutaneous injection of 10 minims of liq. strychninæ may with advantage be given just before operation if the patient be very weak, so as to forestall shock, which may also be further lessened by a pint of saline solution being given by the rectum and by operating on a heated operating table.

After exposing the stomach a diagnosis of the cause will be speedily made by inspection and palpation of the stomach and plorus. If there be stricture of the stomach itself, either from cicatrisation or from ulcer leading to hour-glass contraction, it must be treated in one of the ways previously described. If the dilatation be dependent on adhesions of the pylorus, and these can be detached, leaving the pylorus free, they should be dealt with as I have described. If there is a stricture of the pylorus it must be dealt with in one of the several ways to be immediately mentioned (pylorodiosis, pyloroplasty, gastro-enterostomy, or pylorectomy), according to its nature.

Pylorodiosis.

If the narrowing of the pylorus be due to spasm or hypertrophy of the circular muscular fibres, pylorodiosis or dilatation of the pylorus, known as Loreta's operation, may be indicated, and when we hear of Loreta having had 29 cases, all successful, it would seem that the operation does all that could be desired; but in the hands of many able surgeons this apparently simple operation has had as high a rate of mortality as 40 per cent., and Loreta himself has confessed to having had several deaths from hæmorrhage and peritonitis. Moreover, the stricture seems to have recurred in so large a number of the classes that it is scarcely likely that the operation will hold its own, though it may probably be of use in that very limited class of cases where the stenosis is simply dependent on spasm of the sphincter, which may either be caused by ulceration or independent of such a condition. The late Greig Smith held a favourable opinion of Loreta's operation, but Mr. Treves and other surgeons have told me that they have given up pylorodiosis, and my own feeling is decidedly in favour of pyloroplasty where no active ulceration is going on, and of gastro-enterostomy where the pylorus is ulcerated.

Pyloroplasty.

The principle of obtaining an increase of the calibre in a stricture by dividing the narrow passage longitudinally and closing the wound transversely is as ingenious as it is efficient. If the pylorus be free from adhesions the operation is of the simplest, as the pylorus can be brought outside the abdomen and surrounded by gauze pads or sponges. The incision through the pylorus must be longitudinal, commencing on the stomach side of the sphincter, and being prolonged through it either by scissors or by the knife over a director. Blunt hooks or catch forceps placed in the wound convert the horizontal incision into a transverse one, and it is then closed by a double line of sutures. The modification of the operation by the use of an internal splint in the shape of a bone bobbin over which to apply the sutures is one that I have employed in all my operations, and one which I consider offers the several advantages, as follows: Only two continuous sutures are required for the mucous and peritoneal margins respectively. The bone tube secures an immediate and thoroughly patent channel. It affords protection for from twenty-four to forty-eight hours to the line of sutures, by which time union should be established, and it prevents the new channel being inadvertently made too narrow. Although the bone bobbin that I originally invented for pylorectomy and enterectomy answers quite well, a recent modification in which the barrel of the bobbin is lengthened facilitates the operation.

If, owing to the cicatrisation of the ulcer, there be extensive hypertrophy of the pylorus with a large amount of thickening, pyloroplasty is insufficient, as in such cases contraction will be likely to recur. Here pylorectomy may be performed as in two cases of my own, or better still gastro-enterostomy, which is a simpler, quicker, and safer operation. Numerous and firm adhesions, active ulceration, and the presence of new growth are also contra-indications for pyloroplasty. Pyloroplasty with partial excision seems the right practice in bad organic stricture. The dense tissue being cut away, the lozenge-shaped incision can be readily sutured so

as to become transverse; whilst if a simple longitudinal incision is made through the tissues of a dense stricture, it is impossible to convert it safely into a transverse line of sutured wound, owing to the great tension if the two ends be made to meet in the middle. If on opening the stomach or pylorus a polypus be found as a cause of the obstruction it must be removed, and if necessary the operation can be completed by a pyloroplasty, as in a case of my own.

If the dilatation be dependent on an *obstruction outside the stomach*, as, for instance, a tumour of the pancreas, liver, or gall bladder, relief may be given by removing the tumour, or, if that be impracticable, by gastro-enterostomy.

If *cancer of the pylorus* be found to be causing the dilatation, pylorectomy may be indicated if the disease be limited and there be no secondary infection, but if it be too extensive gastro-enterostomy will be the only treatment likely to afford relief.

[After some remarks on *congenital stenosis of the pylorus*, the lecturer passed on to consider *dilatation from atony*, and observed that general and medical treatment, if carried out systematically and for a sufficient length of time, usually yielded good results; but in some cases the dilatation persisted, and the nutrition of the patient and the general health became seriously impaired; in such cases the operation of gastrorrhaphy or gastro-plication might be worth considering. The operation was neither difficult nor attended with serious risk, since there was no danger of sepsis, as the cavity of the stomach was not opened. In a table, in the compilation of which Mr. Willmott Evans had assisted, 28 cases had been collected with a mortality of 7 per cent. Mr. Robson quoted the following case:]

I have only seen one case that I thought suitable for gastro-plication, and as the operation was only performed in January of this year, it is too early to speak of it except to say that the patient, a Canadian, of 35, who had been invalided for eighteen months, and who had tried lavage and medical treatment for several years, expresses himself as cured of all his former symptoms, and he certainly looks well, and seems able to take his food without any difficulty. I performed the operation after the plan carried out by Mr. Bennett.

ACUTE DILATATION OF THE STOMACH.

A careful analysis of all the recorded cases of acute dilatation would seem to point to a neuroparesis, probably associated with spasm of the pylorus. So far surgery seems to have been of little avail in these cases, but in fact no treatment seems to have been of material service; nevertheless, we must not give up our efforts, and I would suggest that in every case of this kind, no matter at what stage it may be recognised, unless the patient be actually dying, that the abdomen should be opened and the stomach emptied and connected to the jejunum, thus providing for continuous drainage into the intestine. I believe that as yet this method has not been put to the test.

Although in the greater number of cases of stenosis of the pylorus requiring surgical treatment a general anæsthetic may be given, it is well to bear in mind that, if necessary, as in serious cases like those under consideration, operation may be performed under local anæsthesia produced by Schleich's method. I have on several occasions performed operations of the stomach successfully under cocaine, where I thought the patient too feeble for general anæsthesia, or where chest complications rendered chloroform or ether inadvisable, and with very little pain, discomfort, or shock to the patient.

GASTRO-ENTEROSTOMY.

Gastro-enterostomy, or the establishment of a permanent fistula between the stomach and duodenum or jejunum, is one of the most useful of the operations undertaken on the stomach. It may be performed for simple or malignant stenosis of the pylorus, for chronic or acute dilatation, for intractable simple ulceration, and for bleeding ulcer, and it has been done for severe gastralgia and inveterate chronic dyspepsia not yielding to medical treatment.

As the various methods employed for gastro-enterostomy are given so fully in various textbooks it is needless for me to enter into details. I have performed the operation successfully (1) by simple suture, (2) by the aid of Senn's plates, (3) by the use of my bone bobbin, (4) by the employment of the Murphy button, and of these methods I have no hesitation in saying that I prefer the use of the bobbin. The procedure by means of the button being by a few minutes quicker than when the bobbin is employed may in some cases be preferable, though there is a drawback to its employment in the fact that the button not infrequently falls into the stomach and remains there. This has occurred in three of my own cases. In consequence of this accident and for other reasons Professor Kocher has given it up, and I hear that Dr. Murphy himself has also adopted Laplace's method of suturing in this operation. Laplace's operation is performed by means of an ingenious instrument which coapts the opposing surfaces that have to be united, so that a continuous suture can be applied around the opening before the final stitch is inserted. I have seen the operation done by one of my colleagues, but have not as yet employed it. Its great disadvantages seem to be the absence of direct union between the two mucous margins and the small opening for anastomosis. The junction with the stomach may be made either into the duodenum or upper part of the jejunum, the latter being as a rule preferred because it is easier and less likely to cause soiling of the peritoneum, since it is so readily clamped by an elastic ligature. The jejunum is easily found by pushing to the right, or raising the omentum and passing the hand behind the transverse colon, when the attached part of the jejunum is at once reached, and a loop selected about a foot from the fixed point. The junction may either be made to the front or back of the stomach; if the latter, a slit must be made in the transverse meso-colon and the junction made through that; if the former, the whole procedure can be effected outside the abdomen and with much less general exposure, hence I prefer to make the junction in front.

Dr. Steubel gives the average prolongation of life after gastro-enterostomy as 12.6 months, some of the patients being alive 4½, 5, and 5½ years after operation; but as these were in all probability cases of simple character, this cannot be accepted as altogether accurate, and the estimate of 7 to 8 months, when doubtful cases are removed from the malignant list, is much more likely to be correct. Considerable contraction evidently occurs in some cases after the use of the button (Steubel), and probably after every method a certain amount of diminution of the opening occurs in time.

[*Statistics of Gastro-enterostomy.*—Mr. Robson then referred to a table, in the compilation of which he had been assisted by Mr. Wilmott Evans. It comprised 1,978 cases, including 8 cases with 6 recoveries from his private practice, and 35 cases with 20 recoveries from the reports of the Leeds Infirmary. The mortality of different sets of cases varied from 0 per cent. to 100 per cent., but on grouping all the cases together, the average mortality was found to be 36.4 per cent.]

TETANY AND TETANOID SPASMS IN ASSOCIATION WITH GASTRIC DILATATION.

It does not appear to have been generally noticed that severe muscular spasms of a tetanoid character, in rare cases amounting to severe or even fatal tetany, are frequently associated with dilatation of the stomach; yet I have noticed tetanoid symptoms in so many cases of dilated stomach that I have come to look at it as a frequent concomitant of the disease.

My own experience of tetany and of the severe muscular spasms in association with gastric dilatation leads me to think that we may possibly take a more hopeful view if the cases be treated surgically at an early period.

[Mr. Robson then related three cases of tetany in adults in which he had performed pyroplasty. All recovered, and all ceased to suffer from tetany, though in one case the recurrence of symptoms of gastric disorder with evidence of pyloric tumour had led him to perform gastro-enterostomy, after which the patient recovered completely. Though tetany occurrred apart from gastric dilatation, yet tetany or painful muscular spasms of a serious character were so frequently associated with gastric dilatation that the association could not be pronounced merely accidental. He had never seen the symptoms in other than dilatation due to simple causes, such as adhesions of the pylorus to the gall bladder or liver, or stricture of the pylorus due to the cicatrisation of ulcers. He had never seen it in simple unobstructive dilatation, nor in dilatation due to cancer of the pylorus, though Dr. Trevelyan had given single examples of its association with both. Mr. Robson concluded his observations on this subject as follows:]

I have noticed that the exacerbations of the tetanic state (especially in the first case related) were always associated with a painful contraction of the stomach, and that when the wave of contraction had reached the pylorus, the latter, which was previously incapable of being felt, formed a distinct hard tumour. The abdominal pain then became very intense, and the tetanic cramps in other muscles came on, or if already present became intensified. From this sequence of events I have come to the conclusion that the cause of tetany is a double one.

First, the absorption of some poison from the dilated stomach, which increases the excitability of the nervous system; and secondly, a reflex effect produced by the painful contraction of the pylorus.

The practical outcome of these observations is that where tetany or allied conditions are associated with gastric dilatation, surgical treatment is well worth considering before the symptoms become so severe as to lead to the almost hopeless condition described in the report of some of the fatal cases.

THE TREATMENT OF RHEUMATISM, WITH SPECIAL REFERENCE TO PROPHYLAXIS AND TO CARDIAC COMPLICATIONS.

Abstract of an Introduction to a Debate at the Chelsea Clinical Society.

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The Prevalence of Cardiac Rheumatism.

The time is not distant when the full extent of the rheumatic evil will be realised by the laity, whose sympathies have been chiefly bestowed upon the more obvious fatality of phthisis. The Registrar-General's tables do not supply definite information, for, according to Dr. J. Tatham, the returns of fatal cases of heart disease are not a reliable guide as to the relative number attributable to rheumatism as a cause, yet at the lowest computation the mortality is sufficiently appalling to claim to be ascertained in the future with accuracy.

The prevalence of rheumatic fever is likewise an imperfectly-known quantity, whether we consult the records of its mortality or those of its occurrence. Yet, as shown by the epidemiological studies of Dr. Newsholme,[1] accurate data as to its fluctuations are essential to our knowledge of the disease and to its future prevention. A knowledge of its geographical and of its seasonal incidence is also dependent upon complete returns.

Notification,[2] such as that which has long obtained in Scandinavia, is the only reliable means of solving most of these essential preliminary questions, but the all-important function of the statistical method and our own urgent duty is to ascertain the effect of various forms of treatment in checking the frequency of rheumatism and of its cardiac lesions.

The "Infective" Theory and the Arguments in its Support.

The arguments advanced in favour of the yet unproved infectious origin of rheumatism are ably set forth by Newsholme.

The *meteorological argument* is based upon a periodical increase in prevalence coinciding with periods of deficient rainfall and continuous relatively high temperature of air and soil. The lowering of the ground water would favour in the subsoil the growth of any telluric contagium such as he assumes. The *bacteriological argument* loses much of its strength owing to the diversity of the organisms described, and to the frequency with which they have been looked for in vain. The *epidemiological argument* is based upon the occurrence of epidemics, and of remarkable local fluctuations disclosed by his studies of the statistics available, upon the greater prevalence in towns than in country districts, and upon the occasional concentrated prevalence in certain cities, streets, or even houses. Lastly, the *clinical argument* lays stress upon the many features which are analogous to those of infective fevers, and upon the quasi-specific power of the salicylates.

The Prophylaxis of Rheumatism.

In this direction suggestions are still wanting, but the *statistical method* might have proved more productive had it been more thorough. The benefits of notification are largely due to a stimulation of clinical observation and thought; and in the case of rheumatism the *clinical method* is specially recommended by the prominence of the *individual* factor of predisposition.

1. *General prophylaxis*, pending fresh bacteriological revelations, seems to be limited to the scope of sanitation; but the improvements in the latter have not, as in the case of phthisis, resulted in a steady decrease. The recrudescences ascribed to a desiccation of the subsoil do not suggest any prophylactic indications. But we must still trust to the obvious indication for "desiccation of the surface soil," and particularly of the sites for houses, as well as of the habitations themselves. Again, the prophylactic indications connected with climate can only find their application in the individual case.

2. *In individual prophylaxis* we seem to have hitherto neglected or missed our opportunities. Where does the weakness reside which lays a child open to insidious rheumatism or an adult to rheumatic fever when others undergo the same depression, fatigue, or exposure with impunity? By what sign shall we tell the predisposition? And, if able to suspect its presence, how shall we best arm the subject against it?

A study of the distinctive features of a rheumatic predisposition or of the earliest rheumatic premonitions is an obvious requisite. The tonsils, which are strongly suspected of introducing and of harbouring the germs of phthisis, have also been suggested as the portals of a rheumatic infection. May not indications be traced in their aspect or behaviour which might aid us in recognising the rheumatic proclivity? Is the frequent immunity from arthritis, whilst the liability to carditis persists, in any way connected with the more active function of the tonsil in early life? Can anything be achieved by treating the tonsils which could in any way influence the rheumatic bias? This practical question might conceivably be answered by the results of surgical interference—that is, is the rheumatic tendency favoured or in any way affected by removal of the tonsils and of adenoids? Valuable indications might, perhaps, be gained by a systematic examination of children at schools with a view to prophylaxis.

We learn the importance of schools being removed from town to country. Concerning the selection of a local climate, atmosphere, and soil, we yet know too little. Is rheumatic fever ever developed at sea? Is the rheumatic tendency counteracted by marine climates, and, if so, by which variety—the soft or the bracing?

Prophylaxis by Drugs. Is Salicylate Indicated?—Too much stress cannot be laid upon the importance of management and regulation of the alimentary functions in this form of delicacy. With special reference to the iodides and to cod-liver oil, are the indications analogous to those approved in the scrofulous predisposition? But we need further guidance as to the prophylactic use of antirheumatic remedies at all stages of the liability. Belief in the specific virtues of the salicylates would almost imply as a duty their systematic administration in all threatened individuals. Unhappily that belief is shaken by some exceptions, but periodical courses of salicylates may be of advantage for the sake of their hepatic action. The responsible question still remains, Can their continuous administration be detrimental, particularly in the young?

The Varieties of Acute Rheumatism, with special reference to their Liability to Cardiac Complications.

In spite of its rapidly advancing cleavage, owing to the identification of various specific microbes or toxins, the rheumatic group is still unwieldy. For the purposes of treatment a provisional sorting of cases, according to their clinical kind, is expedient.

The Distribution of the Arthritic Lesions, their local incidence, the order of their migrations, and their varying tendency to permanence may serve as indicators to contrasts and affinities between acute rheumatic and rheumatoid arthritis. Four broad types stand out clearly:

A. *Monarthritis.*—Whether rheumatic or rheumatoid, this is in both affections an outlying and mysterious variety.

B. *Symmetrical Rheumatoid Arthritis.*—This is the typical form, both in acute and chronic cases.

C. *Non-symmetrical or Erratic Rheumatic Polyarthritis.*—In its most acute form, rheumatic polyarthritis is conspicuously non-symmetrical. It is erratic as well as migratory. Symmetry, when it does occur, would seem to be an exception rather than the rule, and a departure from the purest type.

D. "*Symmetrical Rheumatism,*" *Acute and Subacute.*—In some cases, usually not the most severe and often subacute, symmetry is a prominent feature of the arthritis. The more I have looked for this symmetrical condition, the more I have been impressed with its frequency and with its peculiarities.

Clinical Classification showing Transitional Varieties.

1. Chronic rheumatoid arthritis.	Subvariety	(*a*) with symmetrical, permanent, incurable deformity.
	,,	(*b*) with symmetrical deformity capable of some degree of recovery.
2. Acute and subacute rheumatoid arthritis.	,,	(*c*) distinctly "rheumatoid"; heart not not affected.
	,,	(*d*) "rheumatoid" in the local persistence of its joint lesions, and "rheumatic" in its heart lesions.
3. Acute symmetrical rheumatic arthritis.	,,	(*e*) with persistent and refractory joint mischief (a rheumatoid feature) with or without heart lesion.
	,,	(*f*) with transient joint mischief, and no permanent heart lesion.
	,,	(*g*) with permanent heart lesion and transient joint mischief.
4. Acute cardiac rheumatism without arthritis ("juvenile" type).	,,	(*h*) joint pains only (usually bilateral) with cardiac lesion.
	,,	(*i*) febris rheumatica sine arthritide.
5. Acute rheumatic polyarthritis.	,,	(*j*) polyarthritis without heart lesion.
	,,	(*k*) polyarthritis with heart lesion.
	,,	(*l*) hyperpyrexia and various acute complications.

The group polyarthritis has a subvariety (*j*) without heart lesions. This immunity I have specially noted in some of the most acute rheumatic attacks, whilst valvulitis occurs chiefly in Group IV from subacute and almost latent attacks in the young.

Acute Symmetrical Rheumatism.—The acuteness of the arthritis in these cases is usually not of the first order, but its tendency either to stay or to return is marked. In the subvarieties (*f*) and (*g*) it closely resembles, but for its systematic distribution, the ordinary acute polyarthritis; whilst in subvariety (*d*) its persistence or steady relapses, and the eventual deformity, identify it as "rheumatoid" in spite of its originally "rheumatic" appearances and of the heart lesions frequently present, and indeed the most striking feature of the whole group is the frequent implication of the heart. It would be important to determine whether the cardiac lesions are, as I think, verrucose rather than vegetative.

The difficulty of separating the rheumatoid subvariety (*d*) from the rheumatic subvariety (*e*) is great. Some acute or subacute attacks are confined to, or settle, quite early in a pair of joints, and remain in possession in spite of salicylates, or may relapse for weeks. They suggest the rheumatoid type, except in two particulars: the joints get quite well, but the valves are commonly affected. The "juvenile type," where the swelling, the stiffness, or the pain are bilateral, is analogous to this merely in respect of the great prevalence of the valvulitis, and of the relative mildness of the arthritis. The local persistence of the arthritic process (often limited to one pair of joints) and the *frequent absence of response to salicylates* suggest that some forms hitherto considered rheumatic are rheumatoid arthritis in a truly acute form, with a tendency to affect the heart.

In the symmetrical cases there has been more of the "rheumatic" cutaneous rashes, with less of the profuse sweating. It is significant that not only the rheumatic exanthemata but the eruptions of subcutaneous nodules are almost invariably bilateral, and would fall within this group.

The common failure of the salicylates supports the view that they control the hyperæmic and more ephemeral arthritis rather than that associated with fibroid nodules and with warty valvulitis.

The Salicylate Treatment.

If this is to be regarded as a specific treatment, why does it sometimes fail to relieve the arthritis and the fever? Why does it usually fail to cure or to prevent the cardiac complication? Idiosyncrasy and individual divergence in biochemical processes are possible factors, as well as differences between forms of the disease. Similarly the failure to protect the heart may be due to purely cardiac reasons, in spite of an antirheumatic action. Meanwhile the main question is still whether the remedy strikes at the cause or merely at some of the symptoms.

The Mode of Action of Salicylates.—At least three views may be entertained. The action may be that of a sedative for the pyrexia by some influence upon the nerve centres, and for the local inflammation by some influence upon the peripheral vasomotor mechanism; or that of an antiseptic or microbe destroyer; or that of a metabolic or antitoxic remedy. So long as the existence of a specific micro-organism remains a postulate the second view cannot be discussed with profit. According to the third, the suppression of an infective toxin or of the products of an unhealthy metabolism might be brought about merely by a stimulation of the normal protective function of the liver, irrespective of any fixed proportion between the quantity of the morbid material and that of the drug. In Professor Latham's theory, however, a definite proportion must obtain. The greater the production of glycocine (together with that of lactic acid arising from an assumed vasoparalysis in the muscular area), so much more of the salicylate will be required to remove it in the shape of a salicylurate, thus obviating a further excess of the uric acid, which, in Latham's view, tends to paralyse some departments of the vasomotor centre. It has been objected to this chemical theory that we lack evidence of any excess in the blood of the lactic acid, or of the uric acid, though it is consistent with the excessive acidity present.

The Excretion of Salicylates.—In addition to the salicyluric acid a large quantity of salicylic acid is generally held to be excreted unchanged, and must be carried as such by the blood; hence the danger of an administration of the drug in renal impermeability. Suspecting that the drug might not be entirely eliminated as salicylic acid and salicyluric acid, and that some of it might split up into its synthetic components—carbonic acid and carbolic acid—and that the latter might be excreted as ethereal sulphate, I availed myself of Mr. J. Addyman Gardner's kind offer to analyse the urine from two patients during periods of freedom from salicylate and periods of its administration. The results were conflicting, indicating in one instance a rise, in the second a fall in the ratio of the ethereal sulphates to the metallic sulphates, and can only support the inference that if any phenol is produced in small quantities by a decomposition of the salicylate, the amount excreted as sulphate is inconsiderable. The lividity peculiar to subjects overdosed with salicylate and other symptoms pointing to increased venosity of the blood might be due partly to the carbonic and partly to the carbolic acid, and the major toxæmic events to a dangerous increase in their amount in circulation.

The beneficial effects might conceivably be due to them, for they are both general as well as local anæsthetics, their small production explaining why such large quantities of the drug, most of which passes out unutilised, should have to be put into circulation before a specific benefit can be obtained.

It is interesting to find that subcutaneous injections of a 1 per cent. solution of carbolic acid had been used by Marder (1873) in 3 cases, by Kunze (1874) in 4 cases, and by Senator (1875) in 25 cases (in one of these cases a 2 to 3 per cent. solution was employed), with excellent results as regards the pain and other local symptoms; but this treatment did not ward off complications or relapses, and little or no impression was made upon the pyrexia. The pain was controlled sometimes within an hour.

The results of inhalations of carbonic acid gas in the few cases to which I have hitherto tried it agrees to some extent with those just stated. The pain was lessened or relieved, but the improvement in the joints—which in one case was marked—was not in others sufficiently obvious to induce me to defer other methods of treatment. It was specially noted that the temperature did not improve in the same proportion as the symptoms.

The Place of Salicylates in Treatment

Unreserved criticism of a method which has now become a

routine is perhaps opportune. First, Can the drug do any harm? The question is how far it may disagree in individual degrees of renal inadequacy or idiosyncrasy. A more usual risk is that we should be misled into overestimating its anti-rheumatic powers and relax too early both treatment and diet. On the other hand, May the drug be withheld without any detriment? If powerless against heart complications it need not be our rigid duty to administer it forthwith, but it would be our stringent duty to use any other drug capable of controlling them.

The Relative Frequency of Heart Lesion under Salicylate Treatment.—In recent literature[3] we meet with the ominous state-statement that since its introduction cardiac complications have shown increasing frequency. If this result were due to the drug (Jaccoud), the remedy would be worse than the disease; it might, however, have occurred in spite of the drug. Pribram[4] suggests that a similar increase has occurred in connection with other infective affections, and may be due to increasing care and facilities in clinical work. The plea for its almost exclusive use that some protection is afforded to the heart by the lessened duration of the rheumatic attack begs the question in assuming that the cause is relieved as well as the symptoms.

The Alkaline Treatment.—Should Salicylates be Prescribed Alone or with an Alkali?

Fodor's[5] experiments tend to show that some protection is afforded against various infective inoculations by the preliminary administration of alkalies. Pribram[6] states that heart complications were less frequent among the patients which he formerly treated exclusively with sodium bicarbonate than among those placed under the modern salicylate treatment. Dr. W. Howship Dickinson,[7] in a paper entitled "Alkalies in Rheumatism," arrives at similar conclusions, and ascribes the remarkable difference recorded to the influence of the alkalies in preventing the coagulation of fibrin. He has invariably employed the alkaline treatment during later years in conjunction with the salicylate, and comparing his cases with 62 cases treated with the salicylate alone, he finds that under full alkalies, and while under them, 1 case in 54 displayed heart affection; under the salicylate by itself, 1 case in 12. Reference is also made in Dr. Cyril Ogle's report to cases where the heart, though not natural on admission, became so under treatment.

The *choice of the alkaline salt* should take into account the greater alkalising and depressing power of potassium as compared with sodium. Again, a larger proportion of the metal is administered with the bicarbonate than with an equal weight of any organic salt, but I have had reasons to suspect that the almost permanent inflation to which the stomach is subjected whilst in an adynamic condition may be answerable for some of the temporary or even permanent dilatations of the stomach observed after a protracted attack of rheumatic fever treated with the bicarbonates.

There would seem to be a natural fitness in associating in our treatment two remedies, the virtues of which seem to complete each other, the sphere of the salicylates being the rapid control of the pyrexia and of the arthritis, that of the alkalies the control of the tendency to endocarditis. It cannot be matter of indifference whether we give or withhold the alkali. It is enough that the two plans should yield diverging results in connection with the heart; one of them must be the better plan and should be preferred.

The Salicylate Treatment in its Bearing upon the Pathology of Rheumatism and of Cardiac Rheumatism.

Much in acute arthritis and in the rheumatic state might be explained in connection with vasomotor mechanisms and sudden revulsion from "chill." Perhaps too little is now made of the evil powers of "chill." Vasospasm, which in Raynaud's disease will kill the tips of the fingers, might be credited with the power of damaging delicate cells or trophic fibrils with the effect of robbing our juices of some of their vitalising, preservative or antitoxic virtues, and of rendering them irritating to joints or endocardium. A distinction is made by Dr. A. Garrod between the fibrous morbid changes and those which are merely hyperæmic and more amenable to salicylates.

But when we turn to the valves the nervine theory has no place. Our pathology becomes, like the tissues, independent of vessels and of vasomotor nerves. The endothelial lesions lead up to coagulation and fibrosis, whilst in the thickness of the swollen valve the changes probably include swelling of the lymphatic endothelia. We might then regard rheumatism as largely made up of a perverted metabolism and of lesions of the lymphatic structures (including in some cases the serous membranes) and of the vascular endothelium, and on the other hand of passing hyperæmic and fluxional swellings rapidly disappearing under salicylates, and the proportion between these vascular and extravascular changes would vary in cases.

Endothelial Vulnerability.—Failure of the salicylates need not imply that the rheumatic process in the heart is different from that in the joints. The mechanical conditions alone differ: the joints can rest, but the heart and its valves never do. There is another paramount determining factor, that of predisposition. The liability to atheroma can be traced through families, and the same is true of cutaneous delicacy and of a tendency to eczema. Similarly in the rheumatic inheritance, the vascular endothelium may be yet more vulnerable than it usually is in children, and an analogous vulnerability of the lymphatic endothelia such as is also seen in phthisis might explain some of the extravascular lesions.

The Rheumatic Heart Complications and their Prophylaxis.

Lesions of the joints are easily recognised, but not always the early beginnings of the cardiac lesions, which may develop murmurs only at a late stage. The researches of Dr. Lees and Dr. Poynton have raised our estimate of the frequency of rheumatic carditis and its results in fatal cases of acute rheumatism. Clinically, though it is a safe rule to frame our treatment on the assumption that the heart is threatened in all rheumatic attacks by its own continued activity, not always restrained by a merciful immobilisation of acutely inflamed joints, the occurrence of pericarditis is the exception, and that of myocarditis and dilatation is far from being the rule. Not only is primary valvulitis the prevailing danger, but, as pointed out by Dr. Sansom, valvular disease may often arise secondarily as a late result of changes which were originally myocardial.

Cardiac lesions may accompany every form of arthritis down to febris rheumatica sine arthritide (Hawthorne), but their frequency and their degree are not proportionate to the degree of the joint affection nor to the intensity of the rheumatic attack.

The Treatment by Vesication and Serotherapy.—Systematic blistering which was introduced long ago by Herbert Davies (over the joints), and recommended by Harkin (over the heart), and recently urged by Dr. Caton, is now in most cases just as superfluous for the mere relief of the pain as the ice-bags applied to them long ago by Esmarch. But the cardiac inflammations have not been prevented or suppressed by the salicylate treatment, and they should not be denied any advantage such as that claimed from precordial blisters.

Is acute immobilising arthritis protective to the heart otherwise than in the measure of the mechanical rest afforded? Is the heart less safe when the articular effusion has been dispelled as well as the pain? There are indications for a renewed inquiry in this direction from the serotherapeutical aspect. I have been struck by the circumstances that immunity from heart lesions often coincides with very free arthritic effusion and general acuteness of symptoms. Is this a guide for our treatment of those cases where, as in childhood, little or no articular effusion occurs? If so prophylaxis might demand in predisposed subjects the application of blisters for the threatenings of an attack.

The size and the frequency of application are practical points for discussion, also the question related to the infective theory whether reabsorption should be allowed, from the constantly renewed vesications, of systematic doses of a serum presumably antitoxic, or the blisters incised and used merely as revulsive, derivative, and counter-irritant remedies.

The General Treatment of the Acute Attack.

Absolute rest in bed for weeks and a careful graduation of resumed activity are rigid rules.

The characteristic anorexia and failure of excretion pointing to an embarrassment of metabolism are indications for

free outlets and carefully measured supplies. Indeed it is a question whether rheumatic arthritis could long coexist with diarrhœa. A mild cholagogue, diaphoretic, and diuretic action is a recommendation for the salicylates.

Probably the sodium salt of salicylic acid is the best to administer, though the strontium salt is favourably reported upon from America, and should be given in full doses, but in the presence of albuminuria all salicylates should be avoided and salines prescribed.

Whether with or without salicylates I venture to think that alkalies should never be omitted. The potassium salts are preferable, and for reasons stated the citrate may be largely substituted for the bicarbonate. Both the alkaline and salicylate treatment should be continued with diminishing frequency of administration for two or more weeks after the cessation of joint symptoms, and the urine kept alkaline during convalescence partly through the agency of diet. As the salicylate is diminished, quinine, which may be needed from the first is added or increased.

The iodides of potassium and of sodium, of undoubted service[1] in acute rheumatoid arthritis, are likely to be useful in some of the "symmetrical" rheumatic cases included in the subvariety (*e*) when the skin is sufficiently tolerant. Dr. Caton prescribes them in acute rheumatism with repeated vesication over the chest, for the prevention and cure of endocarditis. They are specially recommended by the influence which they exercise upon the lymphatic system on the one hand, upon the blood on the other. Iodide of potassium has been credited with a power to consolidate aneurysms. In my own cases, after considerable doses taken continuously for many months no clotting was found within the sac. The real tendency of the iodide is, I think to lower the coagulability in spite of the favouring influence of a diseased arterial surface, and I expect good results from it in a disease where the absence of clotting is the great end to be secured.

Both in the rheumatoid cases and in the allied rheumatic cases the sodium salt would probably prove less depressant and more satisfactory in the result. During convalescence iron is not tolerated unless associated with adequate purgation, and alcohol is not needed in average cases.

Acute polyarthritis, with its pain and discomfort, needs attention to the varied requirements of individual cases. The heart being concerned gastric inflation should be guarded against and relieved.

A totally different treatment, so far as I have observed, is called for in the monarthritic acute rheumatic attacks.

The Local Treatment for Arthritis and the Constitutional Treatment for Rheumatism.

The Treatment of Acute Monarthritis.—When drugs entirely fail the tendency is usually to localisation, and the primary indication is to treat the joint (by splint and bandage, elevation, leeches or blisters, inunctions, and graduated pressure), the next being internal support in the chief line of weakness by quinine, nerve tonics or stomachics. Mild salines are wanted, but salicylates and strong alkalies are worse than useless.

The Treatment of the "Acute Rheumatoid" and of the "Symmetrical Rheumatic" Attacks.—Here again (in Group II) there is localisation, and local treatment is needed, though of a different kind. As I have insisted elsewhere,[2] in harmony with Fuller's teaching, many, though not all, of these inveterate or relapsing pyrexial cases are made worse by continued rest, in spite of salicylates and alkalies, and are curable by movement and by a supporting treatment, after the acute swelling and pain have been subdued by Esmarch's ice applications or ice massage. Surgical treatment has been advocated and practised by Dr. O'Connor, of Buenos Aires, but of this I have no personal experience.

The cases in Group III most need an adjustment between the local and the constitutional treatment. Instead of dealing with an unyielding attack by increasing and oppressive doses of salicylates, we should trust to the milder alkalines or to iodides and blisters to protect the heart, in association with quinine, nerve tonics, or stomachics, as each case will suggest. The local measures may include tentatively leeching, blistering, ice massage, bandages, or splints.

Diet.

An opinion may be ventured that rheumatism is in part a dietetic disease, and that in its wide range of varieties the "feeding" plan finds application as well as the "starving" plan.

In rheumatic fever the diet at first cannot be too light. Meat and beaf-teas have been held detrimental as a source of lactic acid, and milk only prescribed. A milk diet does not agree with all, and I am led to suspect that in some it may keep up the acidity and the rheumatism, for there is evidence that fermentation is set up in the stomach as well as on the tongue, and I regard this as another source of gastric distension in rheumatic fever. A small dose of salt (15 grains to the half pint) with, or added to, the milk, has been tried by me with success in these cases. In adults I now regard salt as an indispensable adjunct in all cases of long-continued exclusive milk diet, and I find the same method successful in those infants who fail to digest, and are supposed to be intolerant of, milk. I am glad to find in Dr. Burney Yeo's *Manual of Medical Treatment* that he has recommended a salted alkaline milk drink in acute rheumatism.

It has seemed to me also that a temporary vegetarian diet is as much indicated by the rheumatic state as the avoidance of animal food, and that as the recovery of slow and refractory cases must be dependent upon a supply of suitable food, the administration of soups made of a variety of vegetables, such as I am now prescribing at St. George's Hospital, may furnish the food as well as in part the medicine required. Whilst meat renders urine acid, vegetables render it alkaline, and this is the result at which we aim.

I have reached the end of this cursory sketch of an almost unlimited subject. The points for elucidation are many, but the main questions are: How shall we prevent rheumatism? How shall we put a stop to the rheumatic heart evil?

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

SOME CASES OF BELLADONNA POISONING.

The following account of some cases of belladonna poisoning, which I am enabled to publish by the kindness of Dr. Roberts, of Twyford, near Winchester, may be interesting:

On February 17th I was called to some racing stables three miles from here to see some of the lads, who I was told had been taking some of the "horse" medicine. The medicine was an electuary, sweet to the taste, containing belladonna and liquorice. I found six lads exhibiting well-marked symptoms of belladonna poisoning. Two of them (K. and N.) were wildly delirious, another (P.), who had taken most of the electuary, but fortunately for himself had been sick shortly afterwards, was in a semi-comatose state. The other three lads were able—one (R.) with difficulty—to answer my queries. They complained of dry throat and tongue, indistinct vision, and giddiness; their pupils were widely dilated. R. maintained his equilibrium with difficulty. Vinum ipecac. ʒiv was administered, followed by copious draughts of mustard and hot water to R., S., and H., and soon they had profuse emesis.

The other three (K., N., and P.), had had larger doses of the electuary. N., aged 17 years, was very amusing; he got down on his hands and knees and tried to take the bystander's boots off, at another time to saddle an imaginary horse, unbuttoning buttons, muttering to himself, reeling about, and talking incoherently. K., aged 19 years, was more violent, impatient of restraint, fighting with the air, picking at things real and imaginary, when not controlled rushing up

and down the yard and then tumbling over. P., aged 15 years, was quieter, unable to stand, muttering to himself and tossing about. He had a very feeble, thready pulse. K., P., and N. gave much trouble in the administration of emetics; they were unable or refused to swallow; the action of the drug on the throat doubtless made swallowing difficult. I had a stomach tube with me, but forgetting in the hurry to bring a gag, it was useless. Still, each in turn were placed on a bed, held down by four lads, and in spite of their violent struggles emetics were given which acted well except in P.'s case.

After-History.—The patients were put to bed. To those able to swallow purgatives were given until free purging resulted. To P. a mixture of ammonium carbonate, and spiritus chloroformi was ordered to be given when he could swallow, as his pulse kept very weak at night. K. and N. were slightly delirious, at times requiring restraint; they took purgatives, and later some food. P. was in a sleepy state, but took the stimulant mixture. The following day they were better, quite sensible, and the pupils less dilated; from that time on they continued to improve.

Amount of Drug Taken.—The strength of the electuary was ℥ij of the extract of belladonna to ℥j (that is, gr. xv to ℥j). The dose for a horse was ℥j to ℥ij. It was taken by the boys on account of its sweet taste. It is difficult to form a correct idea of the amount taken, for it was taken by dipping a small stick into the electuary, and then licking it, and a good scolding by their master tended to make the boys minimise the quantity. K. and N. admitted having taken at least half a teaspoonful, and P. one teaspoonful, and perhaps more; at any rate, from gr. viij to gr. xv would be within the mark.

The cases are, I think, noteworthy for the large amount of the drug taken without a fatal result; the rapid elimination of the drug; the violent delirium, with its purposeless movements and strange vagaries, and the difficulty of carrying out antidotal treatment on patients in the delirious stage caused by the drug.

George Scott, M.B., B.Ch. R.U.I.

Twyford, near Winchester.

FOREIGN BODY IN MALE URETHRA.

In the British Medical Journal for February 24th, page 442, under the above heading, Mr. Horace Wilson, reported an interesting case of a bonnet pin in the male urethra. As I happen to have had a similar case, it may be interesting to place it on record.

A patient called at my house about 11 P.M., after walking three miles. He complained of a little bleeding from the penis. On questioning him I found he had inserted into his urethra a long bonnet pin about 6 inches long, and in trying to remove it had broken off about an inch and a half. I could feel the glass head at the end, in the perineum, just in front of the anus, and the broken end could be felt in front of the scrotum. I tried with all the forceps I could think of to remove it, but was unable to do so. I advised him to go home and keep his bed, and I would see him in the morning, having arrived at the conclusion that opening the perineum was the only course to pursue.

On visiting him in the morning I found him in bed very comfortable; he had a little hæmorrhage from his urethra, and had passed urine. I again tried to reach the pin with long sinus forceps, but was unable to do so, when the patient himself suggested that I should try his wife's curling tongs. These were the usual tools used by ladies, consisting of two blades, one concave, and one convex (solid), and were fixed in wooden handles.

I passed the blades down the urethra, and caught the broken end of the pin, and gradually pulled, when the pin and large head came away. The patient made a speedy recovery.

I happened to see him again on February 25th, and he told me that he had never felt any inconvenience since the removal.

Coventry. Arthur Hawley, M.R.C.S., L.R.C.P.

A Medical Diplomatist.—It is announced that Dr. Kolovitch, a former student of Montpellier, and lately physician to the Alexander Hospital, Sofia, is to be sent to Paris as diplomatic agent for Bulgaria.

REPORTS

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

JAMES MURRAY'S ROYAL ASYLUM, PERTH.

SKIN ERUPTION CONSEQUENT ON ADMINISTRATION OF CROTON OIL.

(Under the care of A. R. Urquhart, M.D., F.R.C.P.E., Physician-Superintendent.)

A middle-aged man, who had long suffered from recurrent mania with phthisis, was lately readmitted in an excited resistive condition. As on former occasions, his mental state was complicated by constipation of an obstinate character. Two minims of croton oil were given with good effect. On the third day after, a diffuse bright red rash appeared, eventually passing from a papular to a pustular stage. The area chiefly affected was the upper part of the chest and the lower part of the neck, and specially on the right side. On the sixth day after, the patient died somewhat suddenly of exhaustion. The *post-mortem* examination revealed few tubercles in the lungs, but degeneration of liver and kidneys. Seventeen years ago, on his first admission, this patient suffered from a very severe attack of phlegmasia dolens, and on subsequent admissions his condition presented very anomalous symptoms. Once he was received in an apparently dying state, with a large and foul bedsore. The chief point of interest, however, is the rash which persisted after death as yellowish papules with scaly tops. Dr. Lauder Brunton, although no such event had been brought under his personal notice, kindly took an interest in the case, and referred to Lewin[1] having observed an eruption resembling that of scarlet fever after the internal administration of croton oil. Certainly the appearance of the rash in the patient above mentioned had a suspicious resemblance to scarlet fever at the onset, but in its later stages it more closely approached to the irritant effects of the local application of the drug.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. Pavy, M.D, F.R.C.P., F.R.S., President, in the Chair.

Tuesday, March 13th, 1900.

Skin Affections in Bright's Disease.

Dr. Hugh Thursfield read a paper on this subject. In 1870, Huet, a Dutch physician, published a complete account of one of the varieties of skin affections with which he had met. Since then many writers on the Continent, especially in France, had treated the subject, but very few in England, and they nearly all within the last ten years. After careful comparison of the greater part of the literature of the subject the following classification was suggested: (1) Those affections which characterised the early stages of the disease: pruritus, urticaria, and eczema; (2) those which occurred in the final stages, and in uræmic conditions: the universal erythematous, bullous, and desquamative eruptions; (3) purpura and other hæmorrhagic conditions; (4) those affections which occurred in patients the subjects of general œdema, and were most probably the result of invasion by pyogenic micro-organisms. This fourth division was not further discussed in the paper; the other three were considered in greater detail. In the first division the skin affections were to be regarded as suggestive indications of the real seat of disease, which occurred earlier than the more usually recognised symptoms, and in exceptional cases as premonitory signs of grave complications, such as uræmic coma. Under the second division was classed the affection described originally by Huet, and later by Le Cronier Lancaster; and, in addition, references were given to several instances of general exfoliative dermatitis, these being now so numerous that this affection should be generally recognised

[1] *Nebenwirkungen der Arzneimittel.*

as frequently caused by renal disease. The third division—the hæmorrhagic eruptions—was possibly due to causes different from the above, and the number of cases reported fell short of expectation. The causation of these skin affections was comparable to the causation of the rashes which occurred in septicæmia, and as a result of drug administration. They were most probably due to the action of a toxin, or possibly of a combination of toxins, the skin being affected through the vasomotor and trophic nerves, rather than by direct action of the poison excreted through its glands.

Dr. Pye-Smith agreed that these cases were very rare, and that many of them were merely coincidence. He doubted if eczema had any direct relation with nephritis. The erythema læve undoubtedly was causally related to nephritis, but this was a local thing depending mainly on the tension of œdema. Apart from this these skin diseases were related to the chronic interstitial nephritis. The hæmorrhagic cases occurred in the later stages of chronic nephritis and were a special, almost an accidental, form. Of the rest the most singular was pityriasis rubra, and in this it sometimes seemed as if the albuminuria were a result and not a cause of the skin disease. The most common form was a papular eruption with pruritus, probably a part of the pathology of Bright's disease. In many cases the eruptions passed away, and therefore he would rather call them renal than uræmic. These eruptions were not in themselves of very grave import, although they of course occurred in the later stages of a very serious disease. They at all events were not an invariably fatal prognostic sign.

Dr. Radcliffe Crocker remarked that there were two stages at which the kidneys might be associated with skin disease—the early and late. Though albuminuria was often associated with skin diseases, yet these could not be taken to suggest kidney disease. Thus, although pruritus might be associated with albuminuria, yet it was more commonly associated with glycosuria. In a few cases albuminuria was probably etiological. There was a form of erythema rather suggestive of uræmia—discs the size of a thumbnail eventuating in a general desquamation. A case was quoted of this nature, which developed into a diffuse lupus erythematosus. The skin diseases had, he believed, no immediate lethal prognosis. Any form of kidney disease might give rise to erythematous eruptions, and were probably due to a toxin, but its nature was not certain. The same skin disease might be due to different causes in different people, and its nature depended more on constitutional peculiarities than on any toxin.

Dr. Sidney Ringer asked how a toxin could act through the nervous system. He rather imagined that the effect was due to a direct action of the toxin on the skin, suggesting that there was some intermediate condition. The nervous system had undoubtedly in some cases a controlling action on the eruption, as in herpes zoster. The same governing influence of the nervous system obtained in the rashes of acute specific fevers as in chicken-pox and in small-pox, where there was almost certainly some microbic action as the more important factor. He suggested that in the skin diseases of nephritis there might be some microbic action.

Dr. H. A. Caley asked if there was any special relation between general exfoliative dermatitis and renal disease. He referred to a group of cases occurring in St. Mary's Hospital where the two were coexistent. In these cases the form of renal disease was the chronic interstitial nephritis.

The President observed that Bright's disease especially attacked surface structures, and the skin was such. The poison probably produced a neurosis giving the pruritus. The toxic agent was certainly not urea, but it was uncertain what its nature was. It must be different from that merely due to suppression of urine, as after extirpation of the kidneys in animals or on the occurrence of obstruction in the ureters in man. In Bright's disease, as Dr. Bradford's experiments showed, there was, owing to faulty metabolism, a toxic agent developed which produced the so called uræmic symptoms.

Dr. Thursfield replied.

CLINICAL SOCIETY OF LONDON.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, March 9th, 1900.

Prevention of Valvular Disease in Acute Rheumatism.

Dr. Richard Caton (Liverpool) read a paper on this subject. Feeling strongly the great importance of the sequelæ frequently following valvulitis in attacks of acute rheumatism, the author began nineteen years ago to try various measures of prevention. Fifteen years since he decided upon a definite method, which had been followed ever since, and had been applied in nearly five hundred cases. These were treated in the ordinary manner by salicylates, cholagogues, and a light diet; the whole body excepting the head was clothed in flannel, and the patient kept in bed for some weeks; any lingering pains were dissipated by small blisters locally. The proportion of cases of valvulitis was under 20 per cent. The following signs were considered to indicate affection of the valve: *assourdissement*, going on to the development of a *bruit*, usually mitral, mostly systolic, but sometimes presystolic, heard in the axilla, followed by accentuation of the second pulmonary sound; more rarely a diastolic *bruit* at the aortic cartilage. Treatment consisted in: (1) Absolute rest in bed for several weeks; (2) the application of a series of blisters, in size somewhat less than a florin, one at a time, in the course of the first, second, third, and fourth dorsal nerves: after each blister a small poultice was applied; (3) sodium or potassium iodide in 8 or 10-grain doses was given thrice daily; in some cases small doses of mercury. The object of the rest in bed was to protect as far as possible the softened and weakened valve cusps from pressure. The object of the blisters was to stimulate the trophic nerves of the heart through the sensory filaments of its related skin area, and so to hasten repair and absorption, just as the reparative process in a joint was unquestionably stimulated by blistering the adjacent skin. The purpose of the iodides or mercury was to help absorption of the, at first, imperfectly organised inflammatory products in the cusps and endocardium. The treatment was of use only if commenced within the first two or three weeks. In long-standing cases it was absolutely useless. Setting aside all cases of slight transitory *bruit*, all cases of hæmic origin, and all that seemed due merely to a weakened and dilated ventricle, 85 cases remained for treatment. These were divisible into two groups. First, those which on admission into hospital had a *bruit*, probably, but not certainly, of recent origin. They numbered 54: of these 34 left hospital with hearts apparently sound; while 20 were believed to have valvular disease. Secondly, those in which the *bruit* and other signs of valvular disease came on in hospital, or in which the onset had been recently observed by the practitioner who sent in the case. They numbered 31: of these 27 left hospital with an apparently sound heart, 3 with valvular disease, and 1 remained under treatment. As far as possible the apparently cured cases had been kept under observation for months or years. One unsatisfactory point should be noted; if in a case apparently cured rheumatism recurred at an early date, the endocarditis generally recurred also, and though sometimes it was again removed by treatment, more frequently it persisted. The author gave a brief summary of 85 cases, and read details of 3. His experience of rheumatic endocarditis caused him to insist strongly on the two following principles: First, that every case of acute rheumatism should be regarded not merely and essentially as rheumatism, which was in itself comparatively unimportant, but first and before everything else as a case of impending peril to the heart, endangering the whole future life of the patient. Whenever the heart was sound at the outset the practitioner should examine it daily. Secondly, in all forms of acute endocarditis there was a brief stage during which, if treatment was begun promptly, the disease was usually curable. In adults this stage probably only lasted two or three weeks; in children it was longer. In children, and to a less extent in adults, by persistent rest alone some cases recovered. In the author's opinion the proportion of recoveries was larger if the three measures above described were adopted and persevered in for at least six weeks. The *bruit* usually became soft, and, after being for a time variable, finally vanished. After disappearance of the *bruit* and other symptoms, avoidance of all active exertion was desirable for at least two months further.

The President said no case of rheumatic endocarditis was unsuited for treatment on the lines laid down by the author. Good results often followed such treatment after a lengthened continuance; but disastrous results followed when the patient was allowed to do his daily work with a valve not quite

recovered. Restrictive treatment was specially important in such cases in preventing further deformity of the valves.

Dr. Burney Yeo said that twenty years ago he was impressed with the advantage of using iodides, and had taught the same during that time, and mentioned it in his *Manual of Medical Treatment*, page 308. Blistering over the precordia was an old method of treatment in endocarditis. Dr. Harkin, of Belfast, adopted that plan, and Dr. Whitla also followed it. He believed a great deal of harm was done in cases of rheumatic endocarditis by the routine use of digitalis, which certainly did not promote functional rest.

Dr. de Havilland Hall could testify to the advantage of precordial blistering in cases of endocarditis as well as in pericarditis; the blister often gave immense and immediate relief. He also applied blisters to the joints. His routine plan of treatment of hospital patients was to administer the first night 1 grain of opium and 3 grains of calomel, to secure rest after the journey; and to repeat the calomel occasionally if there was constipation. He considered that heart disease in children was often overlooked; the condition of that organ should be examined daily in cases of joint pain or tonsillitis; heart disease would thus become less common. Both in hospital and private practice he believed patients were detained for too short a time in bed in the ordinary way; and even in the author's list of cases 29 patients with mitral disease were not, on the average, in bed for more than four weeks, which was surely a very short time. Many patients leaving hospital apparently quite well afterwards developed signs of cardiac disease, so that the insurance companies added to the premium in cases where a candidate had been in bed over three weeks with acute rheumatism, even though his heart appeared to be sound. Anæmia was a common result of the disease; he was consequently wont to put the patient on a course of iron, arsenic, and strychnine during his last fourteen days in hospital. He objected to the indiscriminate use of digitalis, also if iron were given too soon it was apt to cause a recurrence of the arthritic pain.

Dr. Morison said that Dr. Hope sixty years ago laid down almost exactly the same treatment as the author, namely, small blisters, rest in bed, and light diet, but with mercury instead of the iodides. Formerly physicians would not apply blisters in pyrexial conditions; but with a moderate pyrexia —say of 102° F.—he had found that a blister would cause a calming of a tumultuous heart's action on the day following its application; it seemed to stimulate and bridle such a heart.

Dr. Maclagan attached prime importance to rest, coupled with the use of salicylate in some form. In some cases the joint pain might be got rid of in twenty-four, or even in twelve, hours. In acute rheumatism when the heart was implicated, it was almost always affected in the first week, though in some of the author's cases it was not noticed until the third week. Blisters might afford relief, but were inapplicable for children or nervous women. As to the heart, endocarditis was a disease of the fibrous structure of the valves, which at first caused no physical signs and could not be recognised. Only when nodules were thrown out and lymph perchance deposited on them from the blood itself was the condition perceptible. Even then, if the patient had rest, the growth would be nearly all absorbed.

Mr. W. Coode Adams remarked that the treatment by blistering over the affected parts should be very carefully considered before being adopted. The effusion into the joints removed a considerable amount of septic poison from the general system, with a corresponding relief of pain and constitutional symptoms. Anything which tended to throw the poison back again into the general system seemed to be of problematical benefit.

Dr. Poynton considered that the effect of the rheumatic poison on the cardiac muscle was scarcely appreciated by the medical profession. During the last few years he had examined 18 cases after death, of which 6 had been acute, and of those 5 showed marked fatty degeneration. In the chronic cases there was nearly always a chronic fibrosis, with foci of cellular infiltration between the fibres of the muscle. The fatty change was not due to the valvular changes, nor to the secondary inflammation of the endocardium, nor to interference with the coronary circulation, since in a case of syphiloma of the heart, attended with nearly complete obstruction of the coronary arteries, no fatty change of the heart muscle was found. Whereas in a rabbit injected with staphylococci, and dying on the sixth day, a fatty change was found. Also in a case of chorea, very little change of the valves was found, but there were foci of micro-organisms with considerable fatty change in the muscle itself. Diphtheria also sometimes killed by the direct action of the poison on the cardiac muscle, which caused a fatty change with leucocytosis. Rheumatism acted strongly, too, on the cardiac muscle, and in all cases one must take into account the undoubted action on the cardiac wall.

Dr. Ewart said that an additional explanation of the advantages derived from the treatment might be submitted. As to blistering, it possibly tended to influence the character of the blood, by causing the absorption of the rheumatic poison. Potassium iodide was given in aneurysm nominally to cause coagulation of the blood, as well as for its good action on the lining membrane of the vessel; but it did not assist coagulation. In fact, it tended to keep the blood fluid; and in endocarditis such an effect was likely to be beneficial.

Dr. Davies said that Dr. Caton's treatment was similar to that of his father, who gave no medicine, but trusted to the effect of blisters alone. In the *London Hospital Reports* of 1864 was a series of 23 cases of acute rheumatism so treated, which all did well, without any cardiac complication. Two other cases in the same series had cardiac mischief; but they also did well. He believed that blistering was better than the salicylate treatment.

Dr. Longhurst protested against the treatment of all cases by one method only. Rest would benefit all; but each should be otherwise treated on its own merits, according to the underlying condition—tuberculous, syphilitic, etc.—of the patient.

Dr. Chapman considered that the iodide lessened the blood pressure, and thus gave the heart less work to do, hence its beneficial action.

Dr. Hale White asked how some of the cases in which cardiac disease was present were differentiated as cases of chronic or acute disease. Any error in this respect would seriously modify the results to be drawn from those tables.

Dr. Seymour Taylor agreed that the application of a blister to an acutely inflamed joint frequently relieved the pain at once; but blistering outside the chest was a roundabout way of acting on the endocardium. If the effect was by means of the nerves, the blister should be applied to the back of the neck, where the cords containing fibres for the heart came off. He believed complete rest was the most important treatment for endocardial troubles, and it should be prolonged for six weeks at the least. Iodide of potassium had a great effect on the inflammations of all fibrous tissues. He would place iodide after rest in the treatment, and to blistering he assigned the third place. The profession was assured of the advantage of the treatment by salicylate, provided it were given in suitable doses.

Dr. A. Garrod believed in the value of rest for weeks in bed, and for months afterwards in a modified way; and held that a patient who had had endocarditis should remain, if possible, on one level for some months. He still thought it possible that equally good results would be obtained by rest alone carried out to the very end. It was almost impossible to say, when three factors of treatment were simultaneously carried out, what was the real therapeutic advantage of each factor individually. A patient who had had rheumatic fever was liable for some time to relapses of joint trouble, and probably of endocardial mischief as well.

Dr. Caton, in reply, said that he gave as much salicylate as the patient could bear—15 to 20 grs. every three or four hours, reducing the dose if necessary to 10 grs. every hour or two. He continued that treatment, which had caused an immense reduction of the suffering, for a considerable time after the pain and fever had disappeared. In the days before the introduction of the salicylates he used to treat many cases exclusively by blistering with much better results than were obtained by the then prevalent alkaline treatment, and he believed that the proportion of cardiac disease was less. He observed that a blister ought never to be larger than a florin, and such blisters ought to be applied to women and children without inconvenience. He applied a small poultice after-

wards, and the serum escaped. He used the same treatment for pericarditis, but he thought this lesion tended more to get well of itself. He admitted that in his earlier cases he was not so impressed with the importance of rest as he was at present, so that some of the patients certainly left hospital earlier than they ought to have done. He did not apply the blister over the heart but over the upper left chest—over the region, in fact, where the cardiac nerves were given off. Rest alone, or even with the salicylates, had not given him those good results which he now obtained with blisters in addition.

OBSTETRICAL SOCIETY OF LONDON.

Alban Doran, F.R.C.S., President, in the Chair.

Wednesday, March 7th, 1900.

Dropsical Parasitic Fœtuses.

Mr. Arthur Keith, introduced by Dr. Lewers, gave a lantern demonstration on the anatomy of two specimens of dropsical parasitic fœtuses.

One, given to him for examination by Dr. Lewers, was at full time, the other was in the fifth month. In both the circulation was carried on by the host fœtus, each fœtus being one of twins. Each fœtus was therefore of the nature of a bud, the parasite being supplied with impure blood from the host. In both specimens the hinder extremities and the caudal end of the body were better developed than the anterior extremities and cephalic ends.

The principal interest in these specimens lay in the fact that they reproduced the lesions which many observers had experimentally produced in chick embryos hatched under abnormal conditions of temperature and position. Such chicks showed (1) dropsical conditions of the tissues and closed cavities, especially a dropsy of the central nervous canal; (2) malformations of the blood islands and primary blood vessels; and (3) abnormal segmentation of the trunk. Such lesions appeared in the two specimens, and probably as early as the fifteenth day.

In the younger of the two segmentation forwards had been arrested at the seventh cervical segment, the central nervous system in front of that point being absent. The foregut was also absent, but the glands and structures derived from that part of the gut, the heart, nodules of bones representing the mandible, hyoid, and base of the skull, and three processes representing the fronto-nasal and lateral maxillary processes were present. In the larger specimen anterior segmentation was arrested in the frontal region, the fronto-nasal and maxillary processes being present, with the cerebral vesicle and central nervous tube, which was so dilated that it had burst the skull apart, and carried with it the separated bones on the one side and the shoulder-girdle on the other. The foregut was present, with the lung buds and a small, functionless three chambered heart. In the smaller fœtus segmentation had proceeded backwards to the third coccygeal segment, leading to a normal development of the hindgut and its derivatives. In the larger specimen segmentation was arrested at the first lumbar vertebra, with a result that the hind-limb buds were left in close contact, a symmelian extremity resulting. Many ribs and vertebræ were imperfectly separated. The hindgut ended blindly, and there were no external genitals. The blood in the umbilical vein showed more leucocytes than red blood discs. The subcutaneous tissue was mucoid, there were no structural differences between arteries and veins, and nucleated corpuscles, some containing hæmoglobin, were found in the bone marrow. In both specimens the thyroid, spleen, thymus, and liver were absent. In the large fœtus ovaries and rudimentary kidneys were present, and in the smaller fœtus the genito-urinary arrangements of a fifth-month fœtus were noticeable.

These dropsical parasitic fœtuses were probably the result of an imperfect division of the ovum to form twins. It was known experimentally that absorption of part of a segmenting ovum led to such errors in development. A parasitic fœtus was probably the result of the unequal division of a twin-forming ovum.

The President said he had published a communication on acardiac monsters in the museums of the London medical schools, which was to be found in the Society's *Transactions* for 1889. He congratulated Mr. Keith on his lucid demonstration of a very complicated teratological subject. Dr. Boxall's and Mr. Keith's two specimens suggested reflections on the precise significance of fœtal œdema and anasarca.

Extrauterine Gestation.

Dr. John Phillips read a paper on a case of extrauterine gestation in which fœtal death occurred at term after spurious labour, and where abdominal section was performed four to five months later.

The patient, aged 31, with three children, the youngest 9 years of age, menstruated last normally in November, 1896, the exact date being uncertain. About a month later she was seized with severe abdominal pain, and was ill for fourteen days. Subsequently all the symptoms of a normal pregnancy developed; she had, however, frequent and prolonged attacks of pelvic and abdominal pain. At term a spurious labour occurred, and subsequently the signs of pregnancy became less marked and the abdomen less distended. From four to five months afterwards she was seized with much pain and fever after a rigor. The abdomen was opened, and a full-term dead fœtus removed from an extrauterine sac. The placenta, which was putrid, was removed without hæmorrhage. The patient made a good recovery, and was now in good health.

Dr. Cullingworth commented upon the normal condition of the Fallopian tubes in this case. As tending to corroborate Mr. Bland Sutton's observations on the analogy between the behaviour of the uterus and the Fallopian tubes when expelling a contained ovum, he had on a previous occasion exhibited to the Society a Fallopian tube which had entirely resumed its normal appearance ten hours after the occurrence of rupture and expulsion of an early ovum. He thought the author's theory correct—namely, that there had been a complete tubal abortion, and that the ovum had preserved its vitality, and had continued to develop in the abdominal cavity. He thought the fœtal sac would then be the fœtal membranes, but wished to know if it had been examined. He asked for further details as to the site of implantation of the placenta, and especially as to whether the placenta had retained its connection, wholly or in part, with its original site, which was the general rule.

The President observed that his own case of removal of putrid fœtus would shortly be reported. It was not "abdominal" but of the "posterior ligamentary" type, infection occurring through the walls of the rectum. The patient did well for six weeks, and then sank slowly from marasmus rather than complete obstruction, dying in the ninth week. He asked Dr. Phillips whence the putrid infection was derived in his case.

Dr. John Phillips, in reply, said that a piece of the sac wall had been excised and microscopically examined, and consisted of fibrous tissue. The colon was incorporated in the sac walls, and hence the putrefactive changes which took place.

Demonstrations.

Mr. G.W. B. Lawrence, introduced by Dr. Blacker, gave a short demonstration on spondylolisthesis.

Specimens.

The following were shown:—Dr. Blacker: Specimens illustrating Mr. Lawrence's demonstration on spondylolisthesis.—Dr. Macnaughton-Jones: Two cases of congenital malformation of the genital organs.—Dr. Lewers: (1) Rupture of the uterus, with a dermoid cyst of the ovary; (2) fibroid, undergoing mucoid changes. Abdominal hysterectomy.—Dr. Cullingworth and Dr. Fairbairn: An acutely inflamed ovarian cyst communicating with a chronically inflamed Fallopian tube.—Dr. Boxall: Fœtus with anasarca and large placenta.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, March 7th, 1900.

Alexander E. Miller, M.D., F.R.C.S.E., President, in the Chair.

The Effect of Heredity on Disease.

Professor Hamilton (Aberdeen) introduced a discussion on this subject. He said it was advisable to recall the fact that mere congenital transmission of disease from either parent to child was not heredity. Most of those diseases which were transmitted to the fœtus *in utero* were of the contagious type, and consequently were to be referred back to the action of a *contagium vivum*. Such transmission of contagious disease was, of course, to be accounted for by direct inoculation of the fœtus, in most cases through the blood of the mother. Of all the theories to account for the handing down of hereditary characteristics there might be said to be two which had met with most acceptance, not that they had much in common, but rather because they represented the two points of view from which the matter was regarded. The one was known as the "pangenic theory" of Darwin; the other that of Weismann, known as the theory of the "continuity of the germ plasm." The whole matter of the alleged transmission of disease hereditarily hinged on the debated point as to whether acquired characteristics could be inherited; in other words, whether external influences could so impress the soma, and through it the germ plasm, that the effects of these impressions became hereditary. Haeckel, Virchow, and Eimer were at one with Darwin in the belief that they could, and the evidence they had brought forward in support of the assertion was voluminous, in many cases striking, but not in all instances convincing. Virchow was a strong upholder of the theory of *causæ extremæ* generating effects which were inherited, and it mattered not whether

these acted on germ cell or body cell. "A living being placed under varying circumstances changes its functions and habits, and what it acquires it can transmit hereditarily." On the other hand, Weismann, Ziegler, and others were as strongly convinced that acquired properties were not inherited, but that hereditary tendencies were due to variation in the structure of the germ plasm. There was no evidence in support of the view of the transmission of mutilations. The Jewish and other Eastern nations had been circumcising since the days of Abraham, and probably long before that period, and he had yet to learn that Jewish children were born without foreskins. Could they say, however, that an external agent of any kind giving rise to a morbid state of the body ever so impressed the cells of the body that the disease became established as a hereditary peculiarity? In answering this question, he would take up some of the so-called hereditary diseases with the view of discussing them, and of calling forth the valuable experience of members of this Society. With regard to tuberculosis, the general conclusion of pathologists at the present day was that the disease was not hereditary, and very seldom congenital. With extremely few exceptions, so few that they might be put out of account, children were not born tuberculous, even of tuberculous mothers, nor were the young of animals born tuberculous under like circumstances. They had to fall back upon the explanation of the undoubted proclivity which the disease had to run in certain families as dependent upon one of two factors—either direct inoculation of the individual in extrauterine life, or the inheritance of a particular predisposition—the tuberculous temperament. No doubt when a member of a household became tuberculous the liability to infection owing to family relationships was very great, but this could not be held to be the only cause of the disease, selecting such families, and affecting it might be several generations continuously. The members of such families were in a large number of instances notable as tuberculous subjects from their conformation of body, and the liability which they manifested to certain diseased conditions not necessarily tuberculous, but which, nevertheless, were sufficiently evident to confirm the suspicion of the hereditary taint. He held it was this habit of body which was inherited, not the disease itself, and when they asked him in what the particular vulnerability consisted, he would reply that most likely the epithelial protective coverings of the body were too little resistant, too easily stimulated by external agencies, too readily penetrated by the parasite of the disease. There was good reason to believe that man, instead of being an animal very prone to tuberculosis, was extremely insusceptible. There was no reason, however, to suppose that any member of the human race was immune to the parasite in the sense that certain animals were immune to parasitical diseases peculiar to man, or in the sense in which an animal might be rendered immune artificially. There was good reason for affirming, on the contrary, that there were few members of the human race who could not be inoculated with the tubercle bacillus were it implanted in their tissues. The lung was the portal at which the organism usually gained admission, and there the protection of the surface consisted simply of a delicate film of epithelial cells. What he suggested as inherently bound up with the hereditary tendency of tuberculosis was the vulnerability of this protective epithelia, and this, there was every reason to believe, was handed down from generation to generation. In support of this doctrine were to be taken into account certain epithelial manifestations which accompanied the tuberculous habit, namely, very dark or very light degree of colour of the hair, the overgrowth of hair in the bushy eyebrows and long eyelashes, and lastly, the occurrence of a lanugo-like overgrowth in tuberculous children along the spine and over the legs. To his mind these all pointed to an anomaly of the epithelial type which was peculiar to the tuberculous habit of body. But where did the inherited strain come from? Could it be generated by vicious surroundings? He questioned whether it could. His impression was that these features were the lineal descendants of a variation that occurred far back in their own history; that the variation had occurred irrespective of surroundings or external influences, and that its influence had been propagated in the descendants ever since. With regard to gout, there was no more common belief than that this disease was engendered by high living, and that once established it was capable of being hereditarily transmitted. In a certain sense this notion was correct, and in a certain sense it was to his way of thinking entirely erroneous. No doubt, once the gouty tendency had been made manifest, the disease would most likely show itself in the next generation, but not necessarily so; it might skip a generation, and reappear in that which followed. The gouty individual was one with a peculiar habit of body showing itself not only by the deposition of uric acid in certain tissues, but by modifying almost every function of the body. It was accompanied frequently by high arterial tension, and was followed, in course of time, by degeneration of the kidney and blood vessels. Were these complex phenomena traceable to any external agent such as high living, or was the external agent simply one means of rendering the inherent vice apparent? The presence of uric acid in the blood and tissues had been held by Garrod to be the diagnostic feature of the disease, and this formation of uric acid had by some been looked upon as evidence of suboxidation of nitrogenous waste. They knew, however, that reptiles and birds excreted a large part of their nitrogenous waste in the shape of uric acid. Was it very far-fetched to suppose, therefore, that the gouty constitution so-called was in part a reversion to some far back ancestor in which uric acid was excreted normally to a much larger extent than it was at present in an average member of the human race? It had always seemed to him that one great reason why it tended to be deposited in the tissues was the fact that the kidney, owing to its degeneration, failed to excrete it. The conclusion he arrived at as regarded the origin and heredity of this disease was very much the same as that bearing upon tuberculosis, namely, that the gouty habit of body had arisen as a variation, and as such was hereditarily transmissible, and that excess of diet and alcohol merely rendered this apparent. He next dealt with diseases which manifested themselves in connection with the neurotic or psychopathic constitution. Manifestations of mental derangement indicated a certain diminished resistance or power of endurance on the part of the nerve cells of the brain, and in this relationship it must be borne in mind that nerve cells were of epidermic origin, and that the tuberculous constitution was frequently associated with the psychopathic. Might there not be a certain connection between the two classes of diseases in this respect, that they represented in reality the same hereditary peculiarity, in the fact that both nerve cells and epithelial cells were liable to decay, were specially vulnerable? He had often thought that another predisposing cause of mental derangement was the fact that nerve cells showed so little capability, if any at all, of regeneration. They were apparently born with the nerve cells which would serve them throughout life. Was it a matter of wonder that frequently these broke down under unusual strain, or, what was probably much more likely, as an inherited peculiarity? The substratum which underlay the mental peculiarity was allied to that of the predisposition to tuberculosis or gout, and probably was referable to a fault in metabolism, excited it might be by an inherent tendency to degeneration in the nerve cells of the brain, and this was eminently hereditary. From what he had said it would be evident that he did not regard syphilis as a hereditary disease. Congenital it certainly was, but he failed to note that once acquired it could be transmitted as a truly hereditary affection. Hæmophilia appeared to be, in many instances, a truly heritable disease, and the current view was that it was more a disease of the blood vessels than one of the blood. The vessels did not seem to contract as they ought to do, and their coats were peculiarly friable. One could quite well understand this peculiarity being transmitted, just as the tendency to hæmorrhoids was said to be transmissible on account of the veins concerned having unusually thin walls. He had often thought, however, that there was something more in hæmophilia than this mere anatomical peculiarity, and that there might be a close relationship between it and menstruation. The fact that it was transmitted in the male line was significant. He then considered the evidence of a hereditary tendency to disease becoming eradicated by inbreeding with a series of strains having no such tendency. His firm conviction was that if a vicious

line was introduced it might die out, and probably did in most cases die out, by interbreeding with a series of pure stocks, but that no reliance could be placed upon its not recurring atavistically, it might be generations afterwards. In the last place he referred to the subjects of maternal impressions and telegony in disease. In maternal impressions as a cause of malformation or other peculiarity he had little belief. From the evidence collected by Romanes and others as to telegony of disease, there seemed to be no doubt of the mother being impressed by the male element of a first pregnancy in such fashion that the subsequent progeny by another male partook of the features of the father of the first-born; but what he would endeavour to elicit from the discussion was whether they had anything analogous in the transmission of hereditary diseased states of the body. Summarising his remarks, he said: (1) There was no evidence proving that diseased conditions of body excited by external agencies, using the term in the broadest sense, could be transmitted hereditarily through generations; (2) that the various hereditary tendencies or predispositions to disease of the hereditary type had arisen as variations in the germ plasm: (3) that these predispositions to disease extended far back into the history of the human race, and broke out only occasionally in accordance with the laws of atavism; (4) that external agencies were merely the means of bringing them to light; (5) that little, if any, reliance was to be placed on the evidence bearing upon the influence of maternal impressions; (6) that there was no reason to disbelieve that telegony might prevail in the case of hereditary predisposition, as it evidently did in regard to other characteristics.

Dr. CLOUSTON said it was certainly well proved that there could be five or six generations of tuberculous subjects. With regard to psychopathic constitutions, he instanced the case of one of the royal families of Europe where for 200 years all the varieties of this disease had been manifested. Passing to the hereditariness of neuroses he said, assuming there was a certain debasement in power, an alteration in nutrition in the germ cell, and that it affected the great power of the individual to develop, did they not in this get an explanation of a vast number of neuroses? If they took the neuroses one by one they would find undoubtedly by far the most remarkable arose during the period of development, from some defect in the maturation of the cells of the tissues. At least three-fourths of all cases of epilepsy occurred during development, and St. Vitus's dance only occurred during development. The same observations applied to mental defects. There was no doubt that insanity occurred in its most marked and characteristic forms from defects arising during the developmental period. This theory explained hereditary defects simply as defects in the arrestment of the maturation of the cells which constituted those things, and by this means they had a basis of the non-heredity of a large number of the neurosis germ.

Dr. JOSEPH BELL said one point in surgery had always struck him as interesting: the hereditary tendency in certain families to the formation of those small encysted tumours called "wens" on the head and other parts of the body. What was transmitted was a hereditary tendency, which at the age of 35, 40, or 45 showed itself in these family circles. There were many fallacies in regard to cancer, and in this connection he remarked that a woman was much more likely to get cancer or a tumour of the breast if she dwelt upon its hereditary aspect. Another point he alluded to was the very great hereditary tendency to certain deformities.

Professor COSSAR EWART said that Professor Hamilton in almost every point would, from a biologist's point of view, be considered as nearly as possible orthodox. Wild as well as domestic animals produced themselves with great uniformity if left alone, but the moment they mixed up two different strains, races, or breeds, they did something which led to an epidemic variation. In the human family there was a constant mixing up, and the result of mixing up different germ cells was always a certain amount of variation, and he thought that particular predisposition to things favourable to the growth and development of germs of tubercle might appear any day in any country, and might go on appearing for ever. All the work he had been doing recently pointed to the fact that germ cells were unceasingly sensitive, but it did not point to the fact that there was any transmission of acquired characteristics. It had been the fashion during recent years to say there was no such thing as reversion. Reversion was originally discussed by Darwin in a scientific way, and his idea was that it was common, and resulted from a kind of antagonism. He had evidence of reversion in his experiments with pigeons and fowls, and most of all among zebras. His hybrid zebra was the restoration of an extremely old type of horse. That fact had been verified by discoveries in Thibet of ponies striped almost like zebras. They had therefore in these hybrids a very marked instance of variation.

Dr. BALLANTYNE agreed with Professor Hamilton as to the non-effect of maternal impressions. To whatever extent they believed the mind was capable of influencing a diseased state of the body, to that extent the mother's mind might influence her parasitic growth, but that must be very much according to the state of her mind and its influence over her body. He was compelled to differ from Professor Hamilton as to separating diseased conditions of the fœtus from hereditary diseases. There was no doubt, for example, that small-pox was handed from mother to fœtus. Another condition which was not so clearly divided off was fœtal tuberculosis. Here there was sufficient evidence that it occasionally occurred, though it was rare. Tuberculosis was not often in the blood, and therefore did not often reach the fœtus. Heart disease was one of the diseases supposed occasionally to be hereditarily transmitted, and, as had been recently strongly emphasised, the mother might have tuberculosis and the fœtus be born, not with tuberculosis, but with a cardiac condition or malformation other than tuberculosis. In this way the child got rid of its tuberculous tendency because of its malformed heart. He believed that changes in the environment of the embryo produced malformations. In the human subject these observations were borne out, because they found malformations were more common in the descendants of individuals who had syphilitic, tuberculous, or alcoholic tendencies, or suffered from lead poisoning, and various other toxic conditions. Through a series of connecting links he had got from syphilis, which was not hereditary, to conditions which were hereditary. It was exceedingly difficult to draw the line between what everyone admitted to be a fœtal disease or a hereditary transmitted condition. With regard to the transmission of characters, they had not tackled this subject in a scientific sense, because apparently they had all begun with the idea that a character to be acquired must be acquired after the birth of the individual. Instead of beginning their experiments after birth, ought they not to experiment on the fœtus *in utero*? If that were done he doubted whether they would have the same series of negative results. He believed the ultimate solution of heredity would come through tackling one after another of the links leading backwards.

Professor STEWART STOCKMAN said that since the introduction of tuberculin they had been enabled to diagnose tuberculosis in cattle. Instead of looking at a cow to see whether she would become tuberculous, they could now ascertain, not that the cows were predisposed to tuberculosis, but that they actually had the disease. As regarded congenital tuberculosis, every week for the last eight years he had gone to the slaughterhouses to examine the animals, and his experience was that out of the 8,000 carcasses slaughtered annually there was one case of congenital tuberculosis. Four per cent. of the cows slaughtered were tuberculous; that was a low percentage, but they were so strict in Edinburgh that any animals that had the least suspicion of tuberculosis were sent elsewhere. Among the bullocks slaughtered there was not 1 per cent. tuberculous, showing that if the disease was transmitted it was transmitted to cows and not to bullocks. He had found that the tubercle bacillus taken from one species often failed to affect another. There was no evidence in the veterinary profession that cancer was hereditary.

Dr. JAMES favoured the idea of acquired variations being transmitted. In medicine it was an old idea, and he thought there was a good deal of truth in it, that the immunity which an individual acquired from having certain diseases did not, or might not, cease with the individual, but might be transmitted. He could assert that the most malignant examples of small-pox and scarlet fever he had ever seen occurred among individuals who came from outlying parts of Scotland

where small-pox and scarlet fever had not occurred for generations.

Professor Schäfer agreed with Professor Hamilton that owing to the complex character of the nerve cell it was hardly conceivable it would or could transmit any character which it might acquire. Until they knew something of the causes of disease it was difficult to say what they were dealing with when they were talking of heredity. With reference to Dr. Ballantyne's remark, he observed that experiments were being made on thousands of embryos, and on the first cells produced in the egg, so as to determine the character of the early mutilations. Romanes had made experiments on guinea-pigs, which so far as they went showed that guinea-pigs in which neurosis had been produced did not transmit the property to their offspring.

Professor Hamilton, in reply, said that a condition of body was hereditary if they found that it passed from generation after generation, if the tendency was inherent in particular families to have the same colour of hair, or same type of nose, perhaps slipping a generation now and again. He called that hereditary. But if it was merely a child becoming affected with syphilis *in utero*, that was not hereditary at all, but was transmitted through the mother.

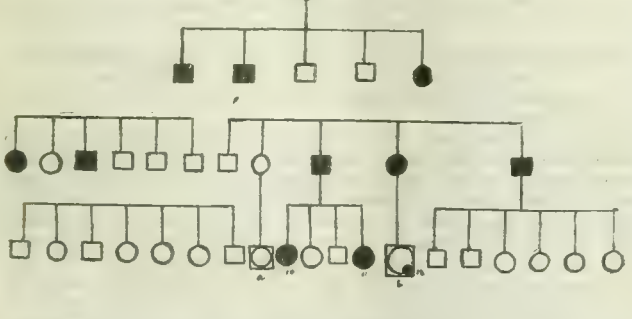
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. Anderson Critchett, F.R.C.S.E., President, in the Chair.

Thursday, March 8th, 1900.

Family Tendency to Ophthalmoplegia Externa.

Mr. W. M. Beaumont (Bath) read details of a series of 12 cases of ophthalmoplegia externa occurring in four generations of an otherwise healthy family. This was no doubt due to nuclear disease limited to a small area. It was never congenital, but came on in adult life, and slowly progressed until all the external ocular muscles were affected. Ptosis occurred in all, and was an early symptom, but there was never ophthalmoplegia interna. In the advanced cases there was great weakness of the orbicularis palpebrarum. There was no other paralysis, nor were any of the special senses affected. The first case—the ancestress of the family—died in extreme old age, her son died aged 90, while another died at the age of 85. One of the family had been shown to the Society by Mr. Lawford, and the case is recorded in vol. vii of the *Transactions*. Photographs of most of the others were shown, and they all had ptosis. Mr. Beaumont thought that this was the first time that a family of twelve had been recorded suffering from this condition, and he regretted that owing to time and space—time because the cases were spread over four generations, and space because they were spread over four quarters of the globe—prevented him from giving fuller details.



Pedigree of the D family: *a*, eleven children, sex unknown; *b*, sixteen children, sex of one known.

Male ☐
Female ○

Meningitis followed by Panophthalmitis.

Mr. A. Quarry Silcock, in a paper on this subject, said that the interest in this case lay chiefly in the fact that both eyes were affected by a diffuse inflammatory change (panophthalmitis) the result of general septicæmia, and in so early a stage of the latter as to constitute one of its most prominent signs.

The man, aged 35, was admitted to St. Mary's Hospital under the care of Dr. Cheadle on October 14th, 1899. He was well and at work until October 4th, when he was taken with shivering fits, pains in the chest, headache, cough with blood-stained sputum, and delirium at night. Since October 7th, he had persistent pain in the back of the neck. He answered questions intelligently, complained of headache and pain in the chest. Temperature 101°. There were no symptoms of cardiac lesion, nor any obvious lung change affording an explanation of the patient's condition. On the 15th, the day after admission, it was noticed that the right eye was inflamed (uveitis and hypopyon, chemosis of the conjunctiva). In the left eye the media were turbid, impeding a view of the fundus. The right eye was proptosed. On October 16th Mr. Silcock, after consultation with Dr. Cheadle, excised the eye, hoping its examination would throw some light on the nature of the infection This was done by Mr. Plimmer, who found that the infection of the eye was due to the streptococcus lanceolatus. The man became rapidly worse, and died in a semicomatose condition on October 17th. *Post-mortem* examination showed extensive basic meningitis and subarachnoid hæmorrhage in the lower dorsal and lumbar regions; recent vegetations on the aortic valves and embolic lesions in lung and spleen. The proptosis of the right eye was clearly due to œdema of the orbit. The examination of the eyes (the left was examined by Mr. Marshall) showed purulent panophthalmitis, but whether this condition was secondary to meningitis or was a part of the septicæmic condition was uncertain.

The President remarked on the extreme rarity of the case, and said that he had never seen one in which both eyes had been affected.

Mr. Richardson Cross, although he had never seen one in which both eyes had been affected, said he had had one case under his care in which one eye was lost during an attack of epidemic cerebro-spinal meningitis, and he read notes of this case.

Mr. Nettleship had never seen a case like Mr. Silcock's, but he had seen one similar to that described by Mr. Cross, the patient being a girl of about 10 years of age. He had also published a case in vol. v of the Society's *Transactions*.

Mr. Treacher Collins had published a case of acute irido-cyclitis, followed by meningitis, and associated with ear disease.

Mr. Holmes Spicer mentioned a case of suppuration of both eyes, which was due to a septic uterine condition following abortion.

Pigmented Tumour of the Eyeball: Death from Multiple Pigmented Carcinoma nearly Fourteen Years after Excision of the Eye.

Mr. Herbert Fisher and Dr. Charles R. Box related a case of primary pigmented tumour of the eyeball for which the eye was excised in 1885, the patient being a man at that time aged 42.

Fourteen years later he was readmitted into St. Thomas's Hospital with great enlargement of the liver, accompanied by jaundice, abdominal pain, sickness and diarrhœa, and œdema of the lower extremities. For fifteen months the abdominal swelling had been progressing, with general weakness and loss of flesh. The patient died, and a *post-mortem* examination showed that the liver was almost replaced by a nodular mass of melanotic growth weighing 12 lbs. 6 ozs. There were also a few pigmented growths in the left parietal pleura. A small pigmented growth the size of a pea sprang from the myocardium and projected into the right ventricle. Microscopic examination of the liver growths proved them to be melanotic carcinoma, and not sarcoma as had been expected.

The eye containing the growth had been preserved, and Mr. Treacher Collins was able to obtain sections of it. He reported the growth to have originated in the ciliary processes, and to have extended thence into the iris and through the sclerotic. The cells were pigmented to a varying degree; they were small polygonal and of an epithelial type, and from their arrangement in rows Mr. Collins gave it as his opinion that this growth was carcinomatous in character. It was decided to submit the sections to a pathological committee of the Society for further examination and report.

Mr. Collins supported his view as to the origin and nature of the primary growth.

Mr. Devereux Marshall, although expressing no opinion as to the nature of the primary growth, said he had never heard of a case in which a true cancer had remained dormant for fourteen years, though he had seen and published a case in which a patient had died of metastatic sarcoma eleven years and five months after an eye had been removed for sarcoma.

Dr. Box added some details of the case, and Mr. Fisher briefly replied.

Green Vision.

Mr. H. Work Dodd said that some months ago he exhibited to the Society a patient who saw everything green, and since that time he had collected 13 published cases of this condi-

tion. In reviewing these he came to the conclusion that neither sex nor age had to be specially considered, and that errors of refraction and their effects might be excluded. The condition of the general health was noticeable in 7 of the cases; 2 suffered from migraine, 2 from syphilis, and 3 from chronic lead poisoning. Ten of the cases showed some departure from the normal in their ocular structures, such as wounds, detachments of retina, choroiditis, optic atrophy, neuro-retinitis, as well as tortuosity of the retinal vessels. With the exception of 2 cases following, one a wound and the other an operation for cataract, the abnormalities were connected with the optic nerve and retina. As to the reason why these people had green vision these cases gave but little information. It should, however, be noted that the macular region of the retina in 3 of the cases was the part affected, and in 2 of the others the temporal side was indicated as being particularly disturbed. Looked at in the light of the knowledge of the conditions existing in tobacco amblyopia, possibly the same tissues were affected in the two conditions. Two of the cases in which green vision was noted only when the patients were indoors seemed to depend on the character or degree of the illumination.

CARD SPECIMENS.

The following card specimens were shown: Mr. LAWFORD: Growth (? tuberculous) in the macular region.—Mr. E. TREACHER COLLINS: Unusual changes in the macular region.—Mr. N. BISHOP HARMAN: Central choroiditis.

ROYAL ACADEMY OF MEDICINE IN IRELAND

SECTION OF OBSTETRICS.

A. V. MACAN, M.B., President, in the Chair.

Friday, February 9th, 1900.

CLINICAL REPORT OF THE ROTUNDA LYING-IN HOSPITAL FOR 1898-1899.

DR. PUREFOY read selected parts of his report.

Dr. A. SMITH criticised the absence of the date of entry into and departure from hospital of patients, and some other points in the report. He congratulated Dr. Purefoy on the mortality, which was very low, and on the state into which he had brought the morbidity of the house. The hospital still maintained its high position among similar institutions.

Dr. W. J. SMYLY pointed out a case of threatened eclampsia in commencing labour, in which two bougies were passed into the uterus. They were taught hitherto that one of the fundamental points in the treatment of eclampsia was to avoid any source of reflex irritation, and he therefore considered it bad practice to try to induce labour by bougies in eclampsia. Whether it was *post hoc* or *propter hoc*, the patient whose case he was discussing had her first eclamptic seizure some hours after the introduction of the bougies. He agreed with Dr. Smith in deprecating the use of the expression "mixed accidental hæmorrhage," inasmuch as there was no form which was altogether external, and internal hæmorrhage was the only form which might not be mixed. The indications for the forceps should be danger to the mother or danger to the child. When he was Master of the Rotunda he determined to follow that rule, and the result was that he had only 20 forceps cases in the house. If this rule was still followed, he asked why there were 40 forceps cases one year and only 20 another year? The forceps had been applied in 6 cases of pelvic deformity. The interesting point was to know whether they had been put on before the head had passed the brim or afterwards, but this was not stated. There were five or six cases of deaths which were attributable to ignorant midwifery, and it was a terrible thing to think that, in the city of Dublin, with three large maternity hospitals, and Sir Patrick Dun's Extern Maternity, where nurses were properly trained, lives should be lost through the attendance of absolutely ignorant women.

Dr. KIDD, referring to the treatment of complete inversion of the uterus, thought that the rule taught in Dublin and elsewhere was that they should replace, first, those parts which came down last, and not press upon the centre of the fundus that had been prolapsed.

Dr. JELLETT, speaking of the treatment of abortions, remarked the number of cases in the house that were curetted was nearly 50 per cent. Though he could not say that the curetting had led to any bad results, he thought they would do harm if they sent out men with the idea that 50 per cent. of abortions required curetting.

Dr. TWEEDY, referring to a case of hæmatoma, described as a very rare condition, said it appeared to him that hæmatoma of the cervix was a condition that occurred before the os was fully opened, and before the presenting part had passed through the cervix. He did not think that this condition of large anterior lip of the cervix protruding through the vulva came under the head of hæmatoma, but if it did, he thought it the commonest of all accidents.

The PRESIDENT, as far as the external department went, joined in the chorus against sending men out believing that 47 per cent. or so of abortion cases required curetting. He commended the term "mixed hæmorrhage," because they might have not only an external and an internal hæmorrhage, but also a slight external hæmorrhage with marked symptoms of internal hæmorrhage, which might then be termed mixed.

Dr. PUREFOY, owing to the advanced hour, deferred his reply until the next meeting.

EXHIBITS.

The following were shown:—Dr. R. A. FLYNN: Parovarian cyst removed by vaginal cœliotomy. In reply to the PRESIDENT and Dr. LANE, Dr. FLYNN said that before he did the operation the patient came to him suffering from menorrhagia, which he relieved by curetting. She suffered a good deal from pain in her back, which seemed to get worse after operation. She also complained of pain about the umbilicus.—Dr. E. HASTINGS TWEEDY: Ovarian cyst removed by cœliotomy. In reply to Drs. A. SMITH, KIRKPATRICK, HADDEN, and the PRESIDENT, Dr. TWEEDY said the urine was always acid and of low specific gravity. Owing to the large amount of water which she drank she passed a good deal of urine daily. There was only a trace of albumen in the urine at present, which seemed to him to be due to a slight cystitis. There had been no blood in the urine since before the operation had been performed in December last. The operation wound healed by first intention, and the patient was now up every day.—THE PRESIDENT: Double ovariotomy, with papillomatous cyst. A pathological report on the case was read by Dr. EARL. Dr. SMYLY asked if Dr. Earl had mentioned that the tube was papillomatous on the right side, as there was a warty growth present not unlike this condition. Dr. EARL replied in the negative.

SECTIONS.

Dr. ALFRED SMITH showed an ovary which he had removed from a patient, aged 25, who enjoyed good health up to Christmas, 1899, when her abdomen began to get distended. She rapidly emaciated, was extremely weak, and on admission into hospital no diagnosis could be made, the distension from the free ascites being so great. Exploration revealed the omentum to be quite solid, mobile, confined to the upper abdomen, and in appearance like boiled sago grains; it bled easily. The left ovary was normal; the right ovary, which was of normal size and consistency, showed in the fresh state numerous small whitish warty elevations, not unlike in appearance grains of boiled sago, identical in appearance to the omentum. Microscopic examination showed that these growths consisted of a delicate stroma, containing in its meshes, in a somewhat alveolar arrangement, groups of large globular degenerate-looking cells. In parts the growth seemed to be converted into true fat. The section of omentum gave the same characteristics. In reply to Dr. GOULDING, Dr. SMITH said the fluid in the abdomen was light brown or straw-coloured fluid, but it contained no blood.

CHELSEA CLINICAL SOCIETY.

J. FOSTER PALMER, M.R.C.S., L.R.C.P., President, in the Chair.

Tuesday, March 13th, 1900.

THE TREATMENT OF RHEUMATISM, WITH SPECIAL REFERENCE TO PROPHYLAXIS AND CARDIAC COMPLICATIONS.

A DISCUSSION on this subject was opened by Dr. WILLIAM EWART (see p. 629).

Dr. T. J. MACLAGAN said his theory was that the rheumatic poison was a minute organism of malarial origin acting on the muscles and on the fibrous textures of the joints, and the heart was in the same position as the joints. In the pre-salicylic times the heart was involved in 33 per cent. of the cases. The rheumatic poison was more apt to attack the joints and muscles in their period of greatest activity. It did not matter whether salicin or salicylate was used, because the true anti-rheumatic remedy was the radicle salicyl. Everything which recovered in the joint recovered in the heart, and the one structure which was not apt to recover was the endocardial lining. Dr. Ewart had expressed the opinion that cardiac complications were more frequent with the salicylic treatment than before. That opinion could not be accepted without support. He remembered, and cases were recorded, in which patients died in the early stages of rheumatic fever. They were then called cerebral rheumatism; now they were called cases of hyperpyrexia, and in all these cases one side of the valve only was affected, and that side was the one which came into contact, the place where pin-

point vegetations were found. The explanation was that it was owing to friction due to the action of the poison causing the fibrous structures to swell so that the valves in the act of closure came into contact an appreciable time earlier than before. The first clinical evidence of this was a murmur. If the fact was accepted that the salicylate treatment did control the rheumatic process, it must have the same action on the cardiac complication as it had in the joint. When complications arose he gave salicin because it was difficult to ensure the purity of salicylate. He did not think salicylates had any control over hyperpyrexia, and did not agree with Dr. Ewart's views as to the influence of cold and chill.

Dr. Sansom thought that rheumatism was one thing and "arthritis" was another. He had seen cases treated with the blister treatment, and concluded that it added considerably to the discomfort of the patient, but did nothing towards his ultimate recovery. In regard to value of treatment he put in the first place the salicin treatment as Dr. Maclagan had developed it in this country. He himself used sodium salicylate, and did not combine it with alkali in the first stages. He gave 20-gr. doses for the first few days, and then less frequently as the symptoms of pain and pyrexia subsided. He could not conclude that the salicylate treatment had no effect upon the prevalence and manageability of the heart conditions. Heart lesions could occur without symptoms, and in some cases would be unknown except for physical examination. In pericarditis there were so many variations in the depth, severity, and continuance of the symptoms that in some cases they feared that life would not last a few hours, and in other cases it was difficult to persuade the patient to even keep quiet; in one case of a boy with pericarditis great trouble was experienced in doing this. He thought that cases in which there were toxic symptoms from salicylates were very rare. He had seen cases in which it seemed as if there must have been toxic symptoms from salicylates, but it was clearly proved that they were really manifestations of the disease. With reference to the application of the ice-bag treatment, he had a series of cases in which a considerable improvement had taken place, with certainly an addition to the comfort of the patients and a good recovery absolute and complete. It was difficult to form an opinion in regard to the treatment of endocarditis. The heart could become swollen and dilated, and then could be restored to its normal shape and size in twenty-four hours. He had known a case where skilled observers were certain that there was a murmur of mitral incompetence, but *post mortem* no disease of the mitral valve was found; the incompetence arose from the enfeebled state of the papillary muscle. Rheumatic fever patients were discharged from the hospital with the heart described as normal, but months afterwards mitral incompetence was found; therefore they must assume that the process of rheumatic valvulitis was extremely subtle and slow. Such patients should be examined from time to time. Though as regarded rheumatic endocarditis they were very powerless, still they had certain powers of treatment, and much could be done by hygiene, protection from rheumatic surroundings, and by diligent treatment of the muscle. The old treatment was to keep the patient perfectly quiescent, which in mitral or aortic disease was wrong, for by careful training the power of the heart muscle could be increased and that combined with hygienic measures, exercises, and baths furnished means not possessed in the early days for the treatment of heart conditions. In some cases he had had good results by application of galvanism to the vagus; the treatment required patience and there was no harm in it. In the more acute stages of the development of cardiac disease, in the swollen heart of rheumatism, or in the early onset of valvulitis he had seen a great deal of harm from digitalis.

Dr. Donald Hood quoted statistics of cases and said he was not quite satisfied that they had such a great remedy in salicylates as many considered. If they had such a sure remedy in the salicylate compound some very strong tendency towards the betterment of the treatment of rheumatic fever ought to be clearly shown. He had collected 90 cases in which patients who were well under the influence of salicylates suffered from endocarditis or pericarditis. It seemed to him that after the treatment with sodium salicylate patients suffered more from "after-crippling." The great point gained with salicylate of soda was the immediate relief it gave the patient, and they might be led astray by the fact of this relief of pain, and might forget the number of patients who relapsed after that treatment. He had been in the habit of using a modified alkaline treatment, and invariably treated cases of pericarditis with opium from the first. He had never seen any deaths from pericarditis treated with opium, but he had seen deaths in pericarditis treated with full doses of sodium salicylate.

Dr. D. B. Lees suggested that the term cardiac complications of acute rheumatism ought to be used no longer. He asserted that on the whole rheumatic heart disease was more common than rheumatic inflammation of joints. It would be better to speak of rheumatic fever as a cardiac disease with arthritic complications. Further, in a first attack of acute rheumatism there was always evidence of acute dilatation of the left ventricle, and in later attacks it was probably always present also. The evidence of this was not only enlargement of cardiac dulness but there was also enfeeblement and diffusion of the cardiac impulse, with shifting to the left, and a weakening and shortening of the first sound at the apex. More than that, in many cases of chronic heart disease failure of compensation was accompanied by fresh rheumatism. Acute and subacute rheumatism must be due to a yet undiscovered microbe, and the conditions favourable to the microbe must be searched out Rheumatism was probably a house disease, and if every house had an impermeable basement rheumatism would diminish. The facts he drew attention to emphasised the importance of long-continued rest in treatment, and suggested that the depression ascribed to salicylates was from the disease itself. Lastly, the facts pointed to the use of the icebag in rheumatic myocarditis as well as in pericarditis.

Dr. Gabrod thought that rheumatism was a disease due to a micro-organism, and that the results of infection lingered on in a manner comparable, perhaps, more to syphilis than to most of the other diseases of the microbic group. In adults minor rheumatic attacks were seen to develop after rheumatic fever, but a child might show evidences of the persistence of the rheumatic process for years. The same was seen in heart lesions, for in necropsies of old heart cases the beads found on the valves indicated a fresh outbreak of endocarditis. In the treatment of valvular lesions the endocarditic process had to be distinguished from the shrinkage of the valves after the acute process had ended. Referring to the treatment by salicylates, he considered that no treatment was introduced and became universal and lasted for twenty years unless there was something in it. There were, however, limitations in the use of salicylate, for its effects were not very marked on cardiac complications. It had to be remembered that the type of the disease varied from time to time: there were periods when pericarditis in acute rheumatism was common and when it was rare. He believed hyperpyrexia was much less common than it was formerly, and he thought that pericarditis was less common also. The most grave complications of rheumatism were associated with pericarditis; he did not say they were caused by it, but pericarditis was an evidence of the malignant type of the disease. He would say that acute rheumatism was a systemic disease with cardiac and arthritic manifestations, and, believing it was of bacterial origin, chorea would be due to the toxin produced by the micro organisms.

The discussion was adjourned to March 20th.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

J. Gordon Black, M.D., Vice-President, in the Chair.

Friday, March 2nd, 1900.

The late Mr. Scattergood.

In the absence of the President, Dr. Black alluded to the loss sustained by the death of Mr. Thomas Scattergood, Dean of the Medical School and a past President of the Society. A vote of condolence with his family was passed.

Urotropine as a Urinary Antiseptic.

Mr. Cammidge, after briefly referring to a case of cystitis complicating enteric fever in which urotropine had proved beneficial, gave details of investigations which he had carried out on the action of urotropine and urotropine urine on the

B. typhosus, the B. coli communis, and the staphylococcus pyogenes aureus under various conditions. He also described some chemical experiments designed to determine the mode of excretion of the drug in the urine, and the cause of the marked antiseptic and inhibitory powers over the growth of micro-organisms possessed by such a urine. The results of these experiments seemed to show that although this action was probably in part due to the urotropine itself, excreted unchanged in the urine, another and more powerfully inhibitory substance was present. The author did not think this was free formaldehyde, but thought it possible that it might be a sodium compound of formaldehyde as suggested by A. Citron. There was both clinical and experimental evidence tending to show that one condition necessary for success in using the drug as a urinary antiseptic was that the urine should be acid in reaction as it was secreted in the kidney. Stress was laid on the marked inhibitory action of urotropine, and still more of urotropine urine on the typhoid bacillus, and it was pointed out that there was a wide field of usefulness for urotropine, both in the treatment of cystitis and other conditions liable to complicate enteric fever, and as a preventive against the dissemination of typhoid bacilli by the urine. He suggested that all patients suffering from enteric fever should receive 10 gr. of urotropine three times a day from the end of the second week on during convalescence. Reference was also made to the usefulness of the drug in the cystitis accompanying enlarged prostate and stone, as well as the benefits to be derived from its administration in bacteruria, some cases of nocturnal enuresis in children, and as a preparation for operations on the urinary tract.

Drs. GORDON BLACK, CHURTON, and TREVELYAN took part in the discussion which followed; and Mr. CAMMIDGE replied.

INTESTINAL OBSTRUCTION.

Mr. BASIL HALL (Bradford) read the reports of two cases of intestinal obstruction caused by Meckel's diverticulum.

The first case occurred in a boy aged 15, and was quoted as a typical instance of strangulation by a band, the onset and symptoms being acute. The abdomen was opened in the right iliac region, and the diverticulum removed, the patient making an uneventful recovery. The second case was that of a boy aged 3 years, and was peculiar on account of its very gradual onset. For four days the child suffered from constipation and occasional vomiting, but continued to play about the house. On the fourth day some abdominal distension appeared, the child passed very rapidly into a state of collapse, with greatly increased distension and signs of peritonitis. The abdomen was opened in the middle line, and a Meckel's band found constricting a loop of ileum. The loop was in a condition of volvulus, evidently of recent formation, thus accounting for the onset of acute symptoms on the fourth day. In both cases the diverticulum was attached to the root of the mesentery near its termination.

Dr. GRIFFITH and Mr. MOYNIHAN discussed the paper; and Mr. BASIL HALL replied.

CONTRACTED PELVIS.

Dr. HELLIER described a case of kyphotic pelvis in which the transverse diameter of the pelvic outlet was reduced to $1\frac{8}{8}$ inch.

The patient was 4 ft. 8 in. in stature, and had lumbo-sacral kyphosis due to a fall in infancy. She was admitted into the Leeds Infirmary on Christmas Day, 1899, after having been twenty-four hours in labour. The uterus was in a state of tonic spasm and the head was impacted on the pelvic floor against the external spines. She was delivered by craniotomy.

Dr. Hellier showed drawings and photographs of the case, and dwelt on the relation between angular curvature and pelvic deformity.

CASES AND SPECIMENS.

Cases and specimens were shown by Mr T. R. JESSOP, Dr. E. O. CROFT, Mr. E. WARD, Dr. CHURTON, Mr. LITTLEWOOD, Mr. CAMMIDGE, and Dr. TREVELYAN.

LIVERPOOL MEDICAL INSTITUTION.

EDGAR BROWNE, F.R.C.S.E., President, in the Chair.

Thursday, March 8th, 1900.

SUPRAPUBIC LITHOTOMY IN CASES OF ENLARGED PROSTATE.

MR. THELWALL THOMAS read a note on suprapubic lithotomy in old men with enlarged prostate. In such cases the prostatic enlargement sometimes increased the perineal depth to such a degree that neither forceps nor finger could reach the stone in perineal lithotomy; and in all cases the suprapubic operation was preferable and safer, with modern precautions, and carried out as suggested. Before operation, the urine and urinary tract should be rendered as sterile as possible. Urotropine (5 to 10 grs. t. d. s.) should be given for a few days to sterilise the urine; if cystitis were present, the bladder should be washed twice a day, or more frequently, with chinosol, 1 in 1,200; the glans penis and urethra should be washed and cleaned with chinosol lotion; the catheter should be boiled, and as a lubricant a mixture of soft soap and glycerine, 8-4, with biniodide of mercury, 1 in 1,000, should be used. The following were the details of the operation:

The bladder is emptied by a catheter, and washed; an incision made in the middle line, 3 to 4 inches long; the wound deepened until the extraperitoneal fat is reached, just above the pubes, when air is pumped into the bladder until it rises like a balloon into the wound, pushing the peritoneum upwards. Two silk loops are passed through the muscular coat of the bladder by means of a handled needle, the origin of one rectus muscle being nicked, to make room, if necessary. An assistant holds the loops, thus keeping the bladder well up; an incision is made into the bladder, and the air escapes; the finger is passed in, and the calculus felt and extracted. The bladder wound is sutured, continuous chromicised gut in the mucous membrane, and continuous silk, *à la* Lembert, for the muscular coat; the bladder suture tested by air distension; the silk loops are removed. A small incision is made through the skin to one side of the middle line, to accommodate a glass tube passed down to the sutures in the bladder wall. The original skin incision is sutured, and a gauze dressing under a double spica bandage applied. A soft catheter is tied into the bladder, which is washed out daily with 2 ounces of chinosol lotion, and catheter removed in a few days.

Four cases had been operated upon in patients, aged 61, 63, 70, and 80 years. All had recovered, and were well three years to twelve months since operation. The calculi removed, two uric acid uncoated with phosphate, 15 in one case, total weight 140 grs.; six in the other, weight 133 grs.; two uric acid coated with phosphate, 46 and 120 grs. respectively.

Mr. F. C. LARKIN considered suprapubic lithotomy satisfactory in these cases, and made it a practice when operating upon such cases at the same time to remove the obstructing piece of prostate with punch forceps. When the condition of the bladder was bad he preferred to employ suprapubic drainage for some days.

Messrs. RAW, DAMER HARRISSON, and NEWBOLT also spoke.

BUBONIC PLAGUE.

Dr. A. S. GRÜNBAUM read a paper on bubonic plague, describing the history, etiology, the plague bacillus, experiments on animals, distribution, clinical forms and symptoms, diagnosis, prognosis, prevention, inoculation, quarantine and sanitary measures, treatment, ancient and modern.

Dr. BALFOUR STEWART said that Haffkine partly on theoretical and partly from observations of the results of anticholera inoculations decided to retain the supernatant broth of the plague culture in his prophylactic. In the anticholera inoculations only the bodies of the microbes were injected, and it was noticed that although the case incidence was lowered, yet if the disease was contracted there was no marked advantage to the inoculated over the uninoculated. Haffkine's thought that if the supernatant broth containing the toxins formed by the microbes were injected along with the microbes the system would become immune to the toxins if the disease were contracted. His own experiments on animals tended to confirm this hypothesis.

Dr. HOPE referred to the methods adopted in the Port of Liverpool for the medical inspection of vessels coming from plague-infected ports on having suspected cases on board. He considered that the great damage to commerce as a result of the importation of plague into the city was a powerful incentive to shipowners and to the Mersey Dock Board to co-operate with the Port Sanitary and Customs officers. When the wide diffusion of plague in places remote from one another was considered it was remarkable that no plague had been introduced into this country.

Dr. N. E. ROBERTS regretted that a method of serum diagnosis was not practicable for plague, and thought that if plague appeared in this country it would be by mild ambulant cases. In an extensive experience of diphtheria he was convinced that the spread of the disease was due to the mild unrecognisable forms found in children attending schools, and so he, in his duties in Port work, was ever anxious lest "ambulant plague" might slip through; Dr. Stewart's statement that ambulant plague was not certainly infectious would tend to allay his fears.

Dr. A. C. RENDLE spoke in favour of quarantine segregation as opposed to inoculation, and mentioned some of the methods adopted by the Madras Government; also the

successful extermination of plague in Penang. Inoculation was not altogether free from grave risks, as shown by a temperature chart of a severe case of pleurisy following inoculation. The facility of diagnosing plague by staining the blood was alluded to.

Cases.

Dr. Wm. Carter related (1) a case of acute Bright's disease characterised by the urine containing three-quarters of albumen, epithelial and hyaline casts, and œdema, yielding entirely to the exclusive use of milk diet, complete rest, and a diaphoretic mixture after a few months. Dr. Carter deprecated the inclination there seemed to be in some quarters to depart from the simple and safe principles of treatment hitherto applied in such cases. (2) A case of so-called pernicious anæmia in a man, aged 44, successfully treated. The red corpuscles had fallen to 880,000 per c.mm. and hæmoglobin to 30 c.mm. There was œdema, febrile attacks, prostration, anæmia, and constant vomiting. The treatment employed was rest in bed, liq. hydrarg perchlor. mj; ferri perchlor. mj; aq. ad 5j every hour for eight hours daily by the mouth; 5ij of sanguis bovinus exsic. diffused through 5jv of water injected into the bowel twice daily, and afterwards residuum rubrum and St. Raphael's wine. The last estimation showed the corpuscles to be 4,080,000.

MIDLAND MEDICAL SOCIETY.

E. Rickards, M.A., M.B., F.R.C.P., President, in the Chair.

Wednesday, February 21st, 1900.

Chorea.

Dr. Kauffmann showed a woman, aged 79, who was suffering from chorea. The movements had come on in consequence of a fall downstairs nine years ago, which produced a scalp wound, and confined her to bed for a week, and as soon as she rose the movements appeared. The character of the movements was now the same as that of ordinary juvenile chorea of moderate degree. The mental state, too, was perfectly comparable with that of a child who had suffered from chorea for a considerable time—a little dull, with a tendency to confusion or excitement; but there was no considerable intellectual disturbance. The general health was impoverished—probably chiefly from the patient's poor surroundings. The only point in the family history which bore on the case was that one of the patient's sisters had suffered from chorea, which commenced in childhood, and persisted till her death from pneumonia at the age of 33.

Vesical Calculi in Females.

Dr. Malins showed three calculi removed *per vaginam* from the bladder of a woman aged 54, the weights being respectively 641, 624, and 610 grs. The composition was apparently phosphatic. The history of formation was about two years. There was no difficulty in removing them. The wound was left open to drain the bladder, and it was proposed to mend this by operation a month later, when the cystitis had improved.

Mr. George Heaton showed a very large vesical calculus which had been taken *post mortem* from the body of a woman, aged 84. The calculus was a mixed uric acid and oxalate of lime one, covered on its surface with a thin layer of phosphates. It weighed 3 oz. The patient had had symptoms of calculus for many years, but steadily refused operation. She was admitted into hospital dying with symptoms of uræmia. The calculus during life projected into the urethra, causing complete incontinence. Calculi weighing 3 oz. and upwards were extremely rare in women.

Fibroid Uterus with Ovarian Cyst.

Dr. Purslow showed a specimen of fibroid uterus with ovarian cyst. The uterus, of about the size of a five months pregnancy, contained numerous fibroid tumours, most of them being submucous; the cyst, which was of the multilocular variety, grew from the right ovary, and was of the size of a fœtal head; the left ovary was also cystic. The specimen was removed by abdomino-vaginal hysterectomy from a married nulliparous woman, aged 35. She had suffered from severe hæmorrhage for five years and was extremely anæmic; there had also been much pain in the pelvis and legs. The tumour reached to the umbilicus, the uterus being lifted up by the cyst, which lay behind and below it, distending the pouch of Douglas. The cervix was high up in front and could not be reached by the finger. The patient made a good recovery. Dr. Purslow drew attention to the frequency with which cystic disease of the ovaries was associated with fibroid disease of the uterus.

Facial Paralysis.

Dr. Short read a paper on facial paralysis, and showed two patients. One was a girl, aged 25, who had left facial paralysis three years previously. When first seen, nearly three months after the onset, no treatment had been applied. In spite of the severity of the case, complete control over the muscles of the face was eventually obtained after treatment extending over eight months. The second case, in a man aged 22, was similar. In each of these cases as soon as slight voluntary control returned, the muscles of the face were exercised by placing a small silver hook in the angle of the mouth, attached to the ear of the same side by an elastic loop. By keeping a slight tension on the hook the muscles of the face were exercised with special movements. Their power was increased, and a most satisfactory result obtained.

Coxa Vara.

Mr. W. E. Bennett read a paper on coxa vara, and showed a case. The patient was a girl, aged 7, who had been lame since June, 1899, and complained of pain in the right hip. She had wasting of the muscles round the hip, particularly in the gluteal regions. There was no swelling or tenderness about the hip. The great trochanter was raised $\frac{3}{4}$ inch above Nelaton's line, and Bryant's triangle was converted into an isosceles triangle. There was shortening of the limb by $\frac{3}{4}$ inch. The movements were free in all directions excepting some restriction of abduction. A radiograph showed that the angle which the neck of the femur made with the shaft was almost a right angle.

Hunterian Society.—At the annual general meeting of the Society on February 14th, the following Fellows were duly elected office-bearers for the ensuing year:—*President:* J. Dundas Grant, M.D. *Vice-Presidents:* G. Newton Pitt, M.D.; Hope Grant; Arthur T. Davies, M.D.; Sir Hugh Beevor, Bart., M.D. *Treasurer:* R. Hingston Fox, M.D. *Trustees:* H. I. Fotherby, M.D.; F. M. Corner. *Honorary Librarian:* T. H. Arnold Chaplin, M.D. *Orator:* John Poland. *Secretaries:* J. H. Targett, M.S.; T. Glover Lyon, M.D. *Council:* H. L. Barnard, M.S; J. S. E. Cotman; W. A. Dingle, M.D.; Fortescue Fox, M.D.; E. W. Goodall, M.D.; A. Butler Harris, M.D; W. H. Kelson, M.D.; J. W. Oliver, M.D.; W. Rawes, M.D; F. J. Smith, M.D.; J. H. Sequeira, M.D.; T. G. Stevens, M.D. *Auditors:* F. Gordon Brown; Hope Grant; S. H. Appleford, M.D.; W. Rawes, M.D.

Sheffield Medico-Chirurgical Society.—At a meeting on March 1st, Dr. Burgess, President, in the chair, Dr. Porter showed cases of aortic stenosis and mitral stenosis.—Dr. Sorley showed a case of clubfoot associated with spinal lesion.—Dr. Dyson showed two cases of Graves's disease, one of which had been under his observation eight years, and the other twelve years. In one case the tendency to exacerbations, the value of rest in bed, and of the administration of thymus tablets were mentioned. In the other the thyroid gland was completely atrophied, the pulse had fallen from 140 to 60, and the proptosis had diminished. The prognosis of the disease was discussed, special reference being made to the modes of death, and to the relation of the disease to the physiology of the sexual system.—Mr. Dale James showed a case of lichen scrofulosorum in a child, aged 16 months, in which mitral lesion was very characteristic but the distribution was uncommon. The case was chiefly interesting because of the age of the patient, the distribution of the rash, and the rarity of the affection in Sheffield.—Dr. L. T Giles read notes of a case of simple tonsillitis, with paralysis of the soft palate. The fauces and tonsils were much reddened and swollen, the cervical glands were enlarged There was no albuminuria. For three days all fluids regurgitated through the nose. There were no other paralytic signs. A bacteriological examination showed no diphtheria bacilli. Dr. Giles considered that the paralysis was due to mechanical interference with the movements of the palate, and that diphtheria could be safely excluded.—Dr. Arthur Hall read a paper entitled Cases of Skin Disease presenting Unusual Features, illustrated by patients, photographs, and drawings:

(1) A case of lupus erythematosus in which the treatment suggested by Hebra—namely, the frequent application of rectified spirit containing a little menthol, had been fairly successful. (2) A case of parakeratosis palmaris which had been relieved by the following treatment: The hands,

after being well soaked in hot water containing a little soda, were well rubbed with pumice stone, and an ointment containing acid salicyl. 10, emp. saponis 100, ol. olivæ 20, was applied on linen, which was worn during the night. (3) A case of erythema capitis infantis in which, owing probably to neglect on the part of the mother, a spreading ulcer had formed at the root of the nose which eventually proved fatal. (4) Two cases of ringed vesiculo-bullous eruption in children, affecting chiefly the vulva and surrounding parts (also the legs and the face about the mouth and nose). (5) A case of erythema induratum of Bazin in a young woman which had lasted for 4 years, recurring every autumn, and lasting throughout the winter months.

Dr. Hall also referred to a simple and easy method of satisfactorily treating scabies suggested by Sherwell, of New York, which consisted of applying one teaspoonful of washed flowers of sulphur to the body and sheets every second night for three times.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on February 20th, Mr. HORROCKS, President, in the chair, Dr. BRONNER showed a series of specimens, macroscopical and microscopical, illustrating growths of the nose.—Dr. CROWLEY showed specimens: (1) Cancer of uterus with secondary deposit in lungs; (2) a thrombus of the pulmonary artery, firmly adherent and evidently of old standing; (3) perforating tuberculous ulcer of the small intestine; (4) the brain of a microcephalic idiot; the child was 3 years old, weighed 14½ lbs., and the brain weighed 11 ozs.—Mr. ALTHORP showed a specimen of a very extensive tumour of the thyroid gland occurring in a child 7 years old.

The patient had been apparently in good health till about three months before admission to hospital, when it was said to have developed whooping-cough, and soon after this the mother noticed an enlargement of the neck. The child was found, after admission, to suffer from attacks of severe inspiratory dyspnœa, which were at first relieved by belladonna. But this drug soon failed to control the paroxysms. The thyroid was seen to be greatly enlarged laterally and the isthmus much thickened. The isthmus was exposed and divided between two ligatures. For a fortnight the child had no attack of dyspnœa: at the end of this time, however, it had another paroxysm, which proved fatal. On *post-mortem* examination, there was found to be a large tumour of the thyroid body, which spread downwards into the mediastinum, completely surrounding the trachea and invading the wall of the right auricle. The growth was a lympho-sarcoma.

—Dr. RABAGLIATI showed a portion of the ramus of the lower jaw, removed by operation. The patient had a cystic swelling of the jaw which had been repeatedly tapped without relief, and was supposed to be sarcomatous. The portion of the jaw was consequently removed.—The PRESIDENT showed a right tubal pregnancy of about six weeks' duration which had ruptured into the broad ligament and was removed by abdominal section.

It was taken from a woman, aged 35, who had had no child for 12 years, but during this time had two abortions. She had apparently a third abortion at the beginning of the present illness and discharged a thick-walled cyst from the uterus. The discharge of blood continued for some time. On examination there was found a rounded swelling closely attached to the uterus, and this when removed was found to be the specimen shown.

—Dr. METCALF showed two sarcomatous tumours removed from the popliteal region at the site of an old bullet wound.

The patient had been wounded in battle 18 years before. The wound healed, and nothing was noticed for 9 years, when a swelling formed in the scar and was excised and said to be a fibroma. No further trouble was experienced till two years ago, when he twisted his lower limb violently, and a good deal of blood was effused beneath the skin at the site of the old injury. This never cleared up, and eventually the tumours shown developed and were removed by operation. They were found to be sarcomata on microscopic examination—one was solid, the other cystic.

—Dr. T JASON WOOD related a case of ovarian tumour of an unusual character.

The patient was a married woman, aged 48, admitted July 29th, 1899, to hospital with a six months' history of abdominal pain and swelling. The abdomen was uniformly distended by a tense cyst, which reached 2 inches above the umbilicus. On vaginal examination the uterus was found to be high up and fixed. Temperature 100 5°, pulse 114. On August 4th the abdomen was opened, under ether, below the umbilicus. The peritoneum was greatly thickened, and the cyst universally adherent. It was found to be multilocular in character, and some of the loculi contained fœtid green pus. During separation of the cyst the wall gave way in places, and allowed some of the pus to escape into the peritoneal cavity. When all the adhesions had been separated it was found to be possible to remove the cyst, there being no trace of a pedicle. The small intestines were confined to the upper part of the abdomen by adhesions, so that the cavity occupied by the tumour remained. It was washed out with hot water and loosely packed with alembroth gauze; the end of the gauze was brought out of the wound, which was closed, and a cotton-wool dressing applied. The ovaries could not be recognised, owing to the great inflammatory thickening of the peritoneum. The gauze was removed after forty-eight hours, and a tube substituted. The patient made a good recovery: discharged September 16th. On examination of the cyst, such of the loculi as did not contain pus contained a clear straw-coloured fluid. Microscopic examination showed the wall to be composed of fibrous material, lined with cubical epithelium. The cells were rather smaller than are usually seen in multilocular cystomata.

Dr. WOOD suggested that the absence of a pedicle was to be accounted for by the ovary becoming detached from its usual connections, and then undergoing cystic change.—Mr. J. BASIL HALL resd a paper on gastrostomy, with an account of two cases, and made remarks on palliative operations in general, particularly colotomy. After reviewing the history of the operation, the methods of performance, as introduced by Albert and Witzel, were described. The former was advocated when it was possible to bring the stomach readily to the surface, and the latter when the stomach was contracted. Mr. Hall strongly advocated the performance of gastrostomy in cases of malignant disease of the œsophagus, and urged that the operation should not be delayed after the power of swallowing solid food was gone. The PRESIDENT and Drs. ALTHORP and WOOD made remarks. Dr. LODGE advocated the use of resting tubes in œsophageal cancer. Dr. HALL replied.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—A meeting was held on March 6th in the Library, New Hospital for Women, Mrs. SCHARLIEB, M.D., M.S., President, in the chair. By invitation of the Committee, Mr. STANLEY BOYD, F.R.C.S., read a paper on some points in the pathology and treatment of cancer of the breast, illustrated by lantern slides.

REVIEWS.

SOME RECENT WORKS ON SURGERY.

MR. REGINALD HARRISON'S volume of *Selected Papers*[1] is made up for the most part of a series of lectures, addresses, and papers on urinary disorders, which have been published since the production of the last edition of the author's well-known work on the *Surgical Disorders of the Urinary Organs*, and which presents his latest views and practice as influenced by recent developments in this branch of surgery. The list is a comprehensive one, and includes papers on vesical stone, prostatic disorders, urethral stricture, and urinary fever. The subjects are discussed in a simple and thoroughly practical manner, and as they are here presented by a surgeon of large experience in this special work, a perusal of them cannot fail to afford both instruction and benefit. The author, as a rule, deals exclusively with what he has found in his clinical experience to be actual fact, and seldom ventures to discuss any doubtful questions either of pathology or of therapeutics. For this reason some two or three of his papers—especially that on vesico-intestinal fistula—may be regarded as "thin" and insufficient. In an interesting article on the Treatment of Prostatic Obstruction, Mr. Harrison hints that much has yet to be learnt with regard to the nature and the scope of operative interference in such cases. Castration he has never regarded with much favour, and vasectomy, though in his opinion much preferable, is to be considered in its bearing on the restoration of voluntary micturition in the light of an experiment. The reader will find in the paper on Some Suppurations of the Urinary Organs a very useful epitome of the latest advance in the treatment of these affections. Mr. Harrison, we think, has done well to republish a short paper on A New Operation for Extroversion of the Bladder. This operation, though not ultimately successful on its first trial, shows much ingenuity on the part of the author, and the record of the case is full of suggestion as to an improved method of dealing with one of the most grievous of human affections.

In the second edition of his work on *Enlargement of the Prostate*,[2] Mr. MOULLIN has introduced several important alterations. The earlier parts of the book have required very little modification or revision, but the methods of treatment are described in a decidedly more practical manner. In the

[1] *Selected Papers on Stone, Prostate, and Other Urinary Disorders.* By Reginald Harrison, F.R.C.S., Surgeon to St. Peter's Hospital. London: J. and A. Churchill. 1899. (Demy 8vo, pp. 199, 15 illustrations; 5s.)

[2] *Enlargement of the Prostate, its Treatment and Radical Cure.* By C. Mansell Moullin, M.D.Oxon., F.R.C.S., Surgeon and Lecturer on Surgery at the London Hospital, etc. Second edition. London: H. K. Lewis 1899. (Demy 8vo, pp. 211. 6s.)

first edition many procedures, chiefly of historic interest, were, for purposes of completeness, introduced. In the present edition only those are retained which are of practical value. Among the methods of removal of the prostate, both Nicoll's operation and Dittel's operation are described. Both aim at keeping the mucous membrane of the bladder intact, while removing the prostate widely. Mr. Moullin points out with regard to them that the ejaculatory ducts are always torn or injured, with the necessary consequence of sterility, and if the patient consents to this, "it is a question whether an equally good result, so far as removal of the obstruction is concerned, cannot be attained by other measures of a less serious character." The effect of orchidectomy upon the prostate is discussed very fully. One point which we are very glad to see emphasised is the effect of vascular congestion upon the prostate. The author remarks: "Congestion is a very important factor. I am probably well within the mark in saying that in many of the cases under my care one-third of the increase in the size of the gland at the time that the patients consulted me was due to this cause alone." After orchidectomy diminution in the size of the prostate followed in every one of the author's cases. This diminution appeared sometimes very swiftly, and was due in part to the disappearance of the prostatic congestion, and at other times very slowly. A definite opinion upon the results of orchidectomy in any patient should not be expressed until after the lapse of months. The mortality in general is far too large. Cases are not properly selected, but have been operated upon at times quite inappropriate. The scrotal incision is difficult to keep aseptic, and therefore a transverse inguinal incision is to be preferred. In some cases it may be advisable to remove one testis, and then to wait for some weeks before removing the second. All prostates do not diminish with the same rapidity or to the same extent. Consistence, apart from size, is of little use as a guide. "Comparatively small hard prostates accompanied by conspicuous atony of the bladder and a persistently large amount of residual urine, diminish proportionately less than any others." Unilateral orchidectomy is not theoretically so promising, nor in practice so effective, as the bilateral operation. If, however, there is a conspicuous inequality in the size of the lobes, it would be advisable to try removal of the corresponding testis alone at first. It seems probable that the effect upon the prostate of orchidectomy is exerted in some way or another through the nervous system, and that in the alternative operation of removal of the vas the more profound the disturbance or destruction of the nerves of the cord, the more likely is vasectomy to be followed by prostatic withering. This volume contains an admirable and practically complete summary of our knowledge of the subject with which it deals. The opinions expressed by the author as the fruit of his experience are in all cases sound. He writes in an unusually fluent and graceful style, and shows himself a prudent counsellor.

Professor Legueu of Paris has written a pamphlet[3] to advocate surgical intervention as a general rule of practice in cases of appendicitis. He holds that there is no such course as a medical treatment of this affection, and that every case should be operated on as speedily as possible when once the diagnosis has been clearly established. Like most of the American surgeons who have written on this subject, and an increasing number of his French colleagues, the author would operate in mild cases of appendicitis in the absence both of local swelling and of symptoms of localised peritonitis. The pamphlet is interesting and suggestive, and Professor Legueu certainly gives good grounds for the views he holds on the treatment of an affection which is so frequently observed, and concerning the pathology and proper management of which there is still so much difference of opinion amongst practical surgeons.

The appearance of a treatise in the bulk-contracting garb of phonography is at first sight calculated to diminish its importance, but in the third volume of the Phonographic Medical Library Sir William Thomson gives, under the title *Some Diseases of the Rectum*[4] a concise epitome of the symptoms and treatment of anal and rectal diseases, with a special chapter on Cancer of the Rectum. He insists upon the necessity of careful local examination, and gives many hints on treatment. For hæmorrhoids he prefers the silk ligature, inserted a quarter of an inch from the junction of the pile with the bowel wall, as a precaution against after-stricture. He objects to the injection of coagulating fluids, because of the possibility of a thrombus becoming an embolus. Whitehead's operation he reserves for cases in which "the tumours are very numerous and the whole plexus of veins is engaged." In the surgical treatment of cancer of the rectum Sir William Thomson limits the perineal operation to cases within easy reach of the anus; for the others he prefers the sacral method, with Moulonguet's procedure for obviating loss of sphincter control.

Dr. J. C. Bloodgood has collected, in a somewhat bulky volume,[5] all the available facts as to the *Operations on Four Hundred and Fifty-Nine Cases of Hernia*, subjected to surgical treatment with the object of attaining radical cure, in the Johns Hopkins Hospital from June, 1889, to January, 1899. Special consideration is given to 268 cases operated on by the Halsted method, and to the transplantation of the rectus muscle in certain cases of inguinal hernia, in which the conjoined tendon is obliterated. A full description is given of the different stages of the Halsted operation for the cure of inguinal hernia in the male. This resembles in many of its details that now generally known as Bassini's operation, but, as is here pointed out, was described by Halsted before the appearance of Bassini's first article on the subject. By those who desire to gain full knowledge of this addition to the many modern operations devised for the radical cure of hernia, Dr. Bloodgood's report will be found very useful. A complicated operation is made quite clear by a lucid description of every stage, and by numerous excellent illustrations. It contains also valuable hints on almost every practical point relating to the surgical treatment of hernia. Instructive detail is abundant, and this volume, like others in the important series of the *Johns Hopkins Hospital Reports*, ought to be regarded as one for careful study and for reference, rather than for hurried perusal.

Dr. Parlavecchio has written a painstaking and comprehensive account of the various new growths of the tongue[6] and of certain allied affections, not true neoplasms of the tongue itself, but giving rise to somewhat similar effects. The general etiology and semeiology of the subject are discussed at somewhat unnecessary length, and it comes as a relief after reading these early pages to come across a rather irrelevant disquisition on mediæval ideas with regard to operations upon the tongue; since it was the supposed organ of speech it was held to be a sacrilege to interfere with it surgically, although by a well-known casuistic process it was made to seem perfectly right to practise horrible cruelties upon the same organ in the way of ecclesiastical punishment. The chapter on macroglossia is particularly good. The author takes the view that most of the cases are due to an anomalous development of the lymphatics of the tongue, although in some cases the enlargement is produced by muscular hypertrophy, and cystic or vasal abnormalities. How large this hypertrophy may be is seen from a case of Wutzer's, quoted by the author, in which a piece weighing as much as 8½ lbs. was removed. With regard to smoking as a cause of cancer of the tongue the author is evidently rather sceptical as to the extreme importance attributed to it by some writers, but thinks it may act as an exciting cause just as any other long-continued chemical or mechanical irritant. He speaks strongly of the dangerous waste of time which is sometimes allowed to take place whilst iodide of potassium is being tried in doubtful

[3] *Traitement de l'Appendicite.* Par Félix Legueu, Professeur Agrégé à la Faculté de Médecine de Paris. No. 18. L'Œuvre Médico-Chirurgicale. Paris: Masson et Cie. 1899. (Roy. 8vo, p. 32. F. 1.25.)

[4] *Some Diseases of the Rectum and Anus.* By Sir William Thomson, F.R.C.S.I. Phonographic Medical Library, vol. iii. London: Sir I. Pitman and Sons. 1899. (Fcap 8vo, pp. 60. 2s. 6d.)

[5] *Operations on Four Hundred and Fifty Nine Cases of Hernia in the Johns Hopkins Hospital.* By J. C. Bloodgood, M.D., Associate in Surgery. Johns Hopkins University, *The Johns Hopkins Hospital Reports*, vol. vii, Nos. 5 to 9. Baltimore, 1899. (Pp. 344, 30 illustrations.)

[6] *I Tumori della Lingua e la loro Cura.* Par Dott. G. Parlavecchio. Roma. 1899, pp. 220.

cases. If no results occur in a fortnight he would operate as though the growth were cancerous. There is a full bibliography at the end of the volume, which, indeed, throughout shows traces of extensive and careful reading. There are no illustrations or detailed index.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS.

IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

An Improved Clinical Thermometer.—Dr. W. Aickin (Belfast) writes: There is often a difficulty in throwing down the column of mercury in clinical thermometers. I beg to introduce to the notice of the medical profession a simple arrangement by which centrifugal motion makes it quite easy. The accompanying sketch shows the arrangement; a few whirls, holding the cord, puts the mercury down at once. Messrs. Fannin and Co., of Belfast, adapted a small band with eyelet holes for cord, a knot being on each end.



A New Flexible Catheter.—Mr. Alex. MacLennan, M.B., C.M. (Glasgow) writes: The use of a gum-elastic catheter would be greatly increased if it could be sterilised without damage. Ordinary antiseptic lotions destroy all the forms of gum-elastic catheter in the market. No soft catheter save those of pure rubber stand repeated boiling, steaming, or sterilisation by any other efficient method. Their employment is therefore somewhat costly, as they have to be discarded after being used once or twice. I have recently made a catheter which, though it cannot stand prolonged and frequent boiling, is in no way injured by any antiseptic solution. The same catheter may thus be utilised indefinitely. I have made them as follows: The ordinary cotton or linen basis of the catheter is threaded on to a solid metal stylet, thick enough to fill up the lumen. The whole is next soaked in a bath of gelatine solution and then allowed to dry. The stylet is removed when the catheter becomes dry and stiff, then the eye may be made and the catheter dipped once or twice into the gelatine solution till it becomes smoothly coated inside and outside. Each coat is allowed to dry before the next is applied. The well-smoothed and finished dry product is steeped in formol (40 per cent.) solution for from 12 to 24 hours, thus rendering the gelatine quite insoluble, even in hot water. The catheter is next rinsed in boiling water till free from excess of formol. The catheter may then be allowed to dry or may be kept in any antiseptic solution. The dry catheter before use should be soaked in a hot antiseptic solution. I am at present experimenting with them and also with the application of this principle in the manufacture of intestinal bobbins, drainage tubes, sutures, etc.

Black Instruments in the Examination of Interiors.—Dr. Greville MacDonald writes: Custom is commonly in error in the construction of specula employed for the illumination of various cavities in that it is commonly assumed that they must be made of bright reflecting surfaces. The word "speculum" itself suggests this so far as it signifies a mirror. Practically many must have observed that the bright specula designed with the object of carrying light further into the cavity illuminated, so far from effecting this object, actually prove disconcerting to the vision by surrounding the dark region investigated with a field of dazzling light. Even supposing that more light is actually carried inwards, which is often doubtful, it must be largely counterbalanced by the reflection backward on to the operator's eye. When it is remembered that the first physical essential for examining a field darker than its environment is that the pupil should dilate, it is obviously unscientific to counteract this by the inevitable contraction which the reflected light from the speculum induces. This has been realised to a certain extent by the construction of black vulcanite aural and other specula, which are of course useful by assisting dilatation of the pupil. And any surgeon using the black nasal specula I have had constructed for me by Messrs. Mayer and Meltzer will realise the immense gain when contrasted with the ordinary silvered instruments. Extending this principle in the use of intralaryngeal instruments I have had forceps similarly blackened. The result is a considerable gain when removing minute papillomata from the vocal cords, in which case any condition which prevents contraction of the pupil while examining the relatively dark interior of the larynx must be of essential value. I believe the gain to the operator is as great here as in examining the nose with blackened specula. Presumably there is no reason why nasal forceps, etc., should not be similarly blackened, though the need is obviously not so great as in operations upon the larynx. Messrs. Mayer and Meltzer have spent much time in discovering a satisfactory method of blackening, and in spite of disappointments have, I think, succeeded admirably.

THE MEDICAL DEFENCE UNION.

Annual Meeting.

The annual general meeting of the Medical Defence Union was held on March 13th at St. Martin's Town Hall, the chair being taken by the President, Dr. W. S. A. Griffith.

Annual Report.

The annual report and statement of accounts for the year 1899 was presented, The report stated that the Union was progressing satisfactorily, and showed increased growth. The aim had always been defence, and no just expense had been spared in the conduct of legal cases. It had been decided that the subscriptions of members should not be utilised for the benefit of those who were not subscribers, namely, the profession generally, but that the funds of the Union should be husbanded for the individual defence of those who were wise enough to "insure." Very little money had therefore been spent during the year in the prosecution of "quacks," and the few instances mentioned in the law report were cases in which the Council was requested to act by a large body of members living in the district in which the quack practised, and in these prosecutions the work done was practically defence of members against illegal competition. Until a new Medical Act was passed, the prosecution of unqualified practitioners must be left almost entirely to the General Medical Council.

Impersonation.—Several cases of impersonation had been dealt with, and in two instances warrants had been obtained for the arrest of the offenders. The fraudulent use of names and qualifications of persons upon the *Medical Register* was increasing; the names usually taken were those of British practitioners living in the colonies. Medical men were cautioned against admitting into their practices anyone unable to prove possession of a registration certificate and registered degrees or diplomas. It was not sufficient to accept persons provided by some firm of medical agents. It was satisfactory to the Council of the Union to have been enabled in the case of impersonation by one Rowland to expose a great fraud, and to have moved the General Medical Council to alter the procedure formerly adopted by the Registrar.

Disciplinary Cases.—Several cases of alleged infamous conduct were brought before the General Medical Council at the May Sessions, and three names as the result of the inquiries were directed to be erased from the *Register*. Thus, whilst the General Medical Council had been of great service to the

Union, it in its turn had been enabled to supply important information to the General Medical Council. It was impossible for the General Medical Council to collect the evidence required in penal cases. All that it could do was to hear the case and to adjudicate; it could not be both judge and prosecutor; the Union, where it deemed the case of sufficient importance, collected the evidence, put it into proper form, and conducted the prosecution.

Fines under the Medical Acts.—The Council hoped that the suggested action by the General Medical Council in regard to recovery of fines under the Medical Acts, which were now "commandeered" by the Metropolitan Police, would soon be taken so as to test the point of law relating to penalties. If successful the Union would be able again to prosecute unqualified persons in the metropolitan area.

Medical Aid Associations.—In consequence of the resolution passed by the General Medical Council disapproving of medical practitioners associating themselves with the medical aid associations which canvassed and advertised for patients, the Medical Defence Union decided that future candidates for membership should subscribe to the following declaration:

I hereby declare that I do not at the present time hold any office in connection with any medical aid or other institution in which systematic canvassing is practised as a means of procuring patients; and that in the event of my being elected a member of the Medical Defence Union I will not during the continuation of my membership thereof accept any office whatsoever in, or be otherwise associated with, any society, association, provident dispensary, or medical institution where canvassing for the purpose of procuring patients is practised; and I further declare that I will not engage in any practice either as principal, partner, or assistant in which canvassing for the purpose of procuring patients is adopted.

Drugs "to Remove Obstructions."—In the case of "Madam Frain M.B.Co." evidence was laid before the police authorities by the Union, and resulted in the conviction of the offenders, who had polluted the newspapers for years with advertisements, and it was now established that there was no necessity to prove the existence of noxious drugs in medicines advertised to "remove any obstruction."

Finance.—In order to relieve the General Secretary of the Union from the work connected with accounts, etc., it had been decided to give the Treasurer 100 guineas, and place the financial details and arrangements under his care. The number of new members for the year was 449, an increase on the year before. The statement by the Treasurer, Dr. J. A. Masters, showed that the financial position of the Union had steadily improved year by year, and that with every liability fully paid up, there was a credit balance of £602.

Canadian and American Defence Societies.—During the year applications had been received from the United States and Canada for reports and documents with the object of founding similar defence societies in those countries. It was satisfactory to find that the Union was acknowledged as the pioneer society.

Solicitor's Report.—Mr. Hempson, the Solicitor to the Medical Defence Union, in his report drew attention to the fact that with an increased membership of something like 500 new members over that of the year 1898, only 120 cases had been placed in his hands, as compared to 138 in the year 1898. The number of cases dealt with by the Council through the General Secretary was in excess of that in any previous year of the Union's work, but the mere intimation from the General Secretary when conveyed to the source from which threat of action had proceeded caused a very large proportion of the threatened actions to collapse. In each and every action defended by the Union for its members a favourable verdict had been secured, and of the entire 120 cases only one adverse verdict had been recorded. There were 36 cases relating to the defence of members in actions concerning libels and slanders, and it had to be observed that the defence of members in relation to libel and slander formed a large and important item in the year's work, and it was perhaps in this respect that the benefits of membership were felt more than in any other way. Included under the head of malpraxis actions there were 19 cases. Personal and miscellaneous matters accounted for 42 more cases, and the remainder were instituted for the prosecution of unqualified persons and the suppression of unqualified practice. Of the prosecutions undertaken in court under the Apothecaries' Acts three resulted in convictions. Regarding prosecutions under the Medical Acts the Union had undertaken no prosecution in the past year, for the reason that there was a practical impossibility of obtaining a conviction, let the evidence be of the clearest description possible.

Amalgamation.—Referring to the question of the amalgamation of the London and Counties Medical Protection Society with the Medical Defence Union, the report stated that the Council had been asked to pledge the Union to accept and carry out a scheme to be drawn up by an arbitrator which would neither have been considered nor discussed by either Council or members. There could have been no certainty that, in the natural efforts of an arbitrator to deal equitably with both Societies, such a scheme would not have led to an attempted fusion of discordant elements, so that the first result of the amalgamation might have been the starting of a new Society by dissentient members from both the others. The Council was bound to see that, if any amalgamation was effected, it should be without danger of wrecking the organisation of the Union; in the scheme suggested there was no safeguard whatever against this risk.

The Chairman, in moving the adoption of the report, said that the Council had made one additional safeguard in a particular branch of their work in the past year, and that was as regards finance. It was thought desirable that the Treasurer and the Finance Committee should be made as absolutely responsible for every penny expended as the General Secretary was made responsible for carrying out the details of the work. The Council considered this so important that they had voted an honorarium of 100 guineas to the Treasurer. A copy of the Rules taken from the Articles of Association of the Union had been added to the report. It had happened in the course of last year that a medical man knowing trouble was likely to occur had suddenly joined the Union and then asked that he should be defended, but the rules made that an impossibility, because the Council were bound to act under the Articles of Association, and paragraph 39 made it clear that under such circumstances it was not possible for the Council to take the course desired. Only that day a doctor had said to him that he would not join the Union because he was sure he would not require its help. That was a very rash statement as that medical man might find out to his cost. Thanks were specially due to those members of the Council who had so regularly travelled long distances to attend the meetings. The Union was also indebted to their solicitor, Mr. Hempson, who had the entire confidence of every member of the Council, and it would be entirely against the wishes of members if he did not acknowledge their indebtedness to Dr. Bateman for the care he devoted to the interests of the Union.

Dr. Bridgwater seconded the resolution, which was as follows:

That the Report of the Council for the year 1899, now formally presented, and which has been duly circulated to all members of the Union, be received, adopted, and entered upon the minutes.

In reply to inquiries for fuller information in regard to the proposed amalgamation of the Union with the London and Counties Medical Protection Society, the Chairman said that if they once began going into the whole subject it would give rise to a very long and a very difficult discussion, which would be liable to cause misunderstanding. The Council had after much deliberation decided to use the words found in the report. He would be happy to furnish any member desiring information with the details concerning the proposed amalgamation. He was convinced that very many of the members would object to it, and the scheme presented great difficulties.

Mr. Murtaugh Houghton asked if amalgamation of any kind was refused. He thought from the letter of the London and Counties Society that they offered practically to accept the terms of the Union. [This was met with loud cries of "No."]

The Chairman said that the Council had decided not to amalgamate.

Dr. Bridgwater remarked that it was wisdom to let sleeping dogs lie.

Dr. Felce said that the decision of the Council was practically unanimous. An arbitrator chosen outside the two Societies could know nothing practically of the working of either association.

The resolution was then put to the meeting and carried unanimously.

Dr. Masters proposed that the accounts as audited by Mr.

Hardy, the Company's auditor, be received, adopted, and entered upon the minutes, which was seconded by Dr. ELLISTON.—In reply to questions regarding the position of a member who had not paid his subscriptions in time, the CHAIRMAN explained that when any case came before the Council in regard to a member, if the last subscription of that member had not been paid, the Council could not consider the case.—Mr. MURTAUGH HOUGHTON thought that the rule about unpaid subscriptions should be on the notice convening the meeting, which view was supported by a member. —After a long discussion concerning the best method of remitting subscriptions to the Treasurer, the CHAIRMAN said the best way was to send a postal order, and assured Mr. Houghton that his suggestion would be followed out.—Dr. ROSE inquired as to the amount of costs that had been recovered in actions won by the Union, and Mr. HEMPSON, the Solicitor, explained that it was often not possible to recover costs because the people had not got the money, but the Union nevertheless had to defend its members against these men of straw.—The resolution was then put and carried.

Dr. MASTERS proposed, Dr. PURVES seconded, and it was carried:

That the sum of £100 be allotted *pro ratâ* to the provincial members of the Council as payment, or part payment, of their travelling expenses whilst attending Council and executive meetings.

Dr. DANFORD THOMAS proposed and Dr. PURCELL seconded that Dr. Gunton Alderton, Dr. Rigden, and Dr. Arthur Jones be elected members of Council.—Dr. COLLIE objected to the principle of the Council nominating members for election to that body, and Dr. ROSE considered an introduction of fresh blood was desirable on the Council.—Dr. LOVELL DRAGE said the Council only suggested suitable names, and it was open to any one to nominate their own "cocks" to fight on the other side.—Dr. ROSE having nominated Dr. Collie as a candidate and Dr. WEBSTER having nominated Dr. Rose as a candidate, the meeting proceeded to vote, with the result that Dr. Gunton Alderton, Dr. Rigden, and Dr. Arthur Jones were declared elected.

Dr. BENNETT moved a vote of thanks to the retiring members.—Mr. HARDY was elected auditor, and the meeting closed with a hearty vote of thanks to the Chairman.

NOTES ON HEALTH RESORTS.

Nauheim.—Dr. Schott, of Bad Nauheim, informs us that boring operations, which have been going on there for four months, have been rewarded by the appearance, from a depth of 207 metres of a new effervescent thermal brine spring. The water contains between 3 and 4 per cent. of brine; the present temperature is 89° F., but it is thought likely that on its complete development it will rise to about 95° F., which temperature it has been ascertained exists in the deeper parts of the boring. The quantity of carbonic acid gas is abundant, but the percentage has not yet been determined by analysis. The boring took place under the direction of Geheime Bergrat Dr. Lepsius, Professor of Geology at the Hessian Grand Ducal Polytechnic College of Darmstadt. Dr. Schott adds that, thanks to the new spring, there will be so abundant a supply of mineral water for bathing that it will be easy to satisfy any demands in this respect for a long time. Nauheim has obtained by this means a valuable and ample increase of its curative resources.

Helouan.—At Helouan, near Cairo, in Egypt, an admirable and complete thermal establishment, the medical arrangements of which have been planned by Dr. Page May, was officially opened recently by His Highness the Khedive. The apparatus has been carefully selected, and the establishment is quite up-to-date. The Khedive, who was accompanied by the chief officials in Cairo and many distinguished visitors, took much interest in the arrangements, especially in the details of the electric hot-air baths and in the use of aluminium to avoid the corrosive action of the sulphur water. He wished the establishment the success which it appears to deserve.

Lowestoft, Felixstowe, and other seaside resorts of the Eastern Counties, popular enough though they are during summer time, are hardly yet regarded as winter resorts. Even in November and December, the writer of a pamphlet on *Lowestoft as a Winter Resort*[1] claims that "Lowestoft bears comparison with any South Coast winter resort for amount of sunshine, dryness of air, and general climatic virtue." Without going quite to the same length, one may very well agree that even during the winter months of the year a stay at Lowestoft is likely to benefit many persons who can stand a certain amount of cold, and who require a holiday on account of overwork and temporary ill-health from various causes.

[1] Lowestoft: Dotesio and Todd. 1889. (Fcap. 8vo, pp. 31. 3d.)

THE MIDWIVES BILL.

DIVISION LIST.

THE division on the second reading of the Bill was of much interest, and below are the names, constituencies, and the politics of the members who voted; (L) denotes the Liberal, (U) the Unionist, (C) the Conservative, and (N) the Nationalist members. It will be seen that the Irish members generally voted against the Bill. One hundred and sixty-two members voted, and of these, 76 sit on the Government side. It will be observed that two members of the Government voted against the Bill.

Ayes (124).

Arrol, Sir W. (Ayrshire South) (U)
Ashton, T. G. (Luton, Beds) (L)
B ter, Sir J. (Portsmouth) (L)
B ley, T. (Derbyshire) (L)
B ach, Right Hon. Sir M. Hicks- (Bristol) (C)
Begg, F. F. (St. Rollox, Glasgow) (C)
Bolton, T. D. (Derbyshire) (L)
Buchanan, T R. (Aberdeenshire East) (L)
Burns J. (Battersea) (L)
Burt, T. (Morpeth) (L)
Cameron, R. (Durham) (L)
Campbell-Bannerman, Sir H. (Stirling (L)
Cavendish, V. C. W. (Derbyshire) (U)
Cawley, F. (Prestwich, Lancs) (L)
Channing, F. A. (East Northants) (L)
Charrington, S., (Mile End) (C)
Colomb, Sir J. C. R (Yarmouth) (C)
Colville, J. (Lanark) (L)
Cooke, C. W. R. (Hereford) (C)
Corbett, A. C. (Glasgow) (U)
Cornwallis, F. S. W. (Maidstone) (C)
Courtney, Rt. Hon. L. H. (Bodmin) (U)
Crombie, J. W. (Kincardineshire) (L)
Curran, T. B. (Donegal) (N)
Dalkeith, Earl of (Roxburgh) (C)
Davies, M. Vaughan- (Cardigan) (L)
Dixon-Hartland, Sir F. D. (Uxbridge) (C)
Dunn, Sir W. (Paisley) (L)
Emmott, A. (Oldham) (L)
Evans, S. T. (Glamorgan) (L)
Fenwick, C. (Wansbeck, Northumberland) (L)
Fergusson, Rt. Hon. Sir J. (Manchester) (C)
Field, Admiral (Eastbourne) (C)
Finlay, Sir R. B. (Inverness) (U)
Fisher, W. H. (Fulham) (C)
Flannery, Sir F. (Shipley, Yorks) (U)
Foster, H. S. (Suffolk) (C)
Gedge, S. (Walsall) (C)
Gibbs, Hon. V. (St. Albans, Herts) (C)
Gilliat, J. S. (Widnes) (C)
Gorst, Rt. Hon. Sir J E. (Cambridge University) (C)
Greene, H. D. (Shrewsbury) (C)
Gurdon, Sir W. B. (Norfolk East) (L)
Haldane, R. B. (Haddington) (L)
Hardy, L. (Ashford, Kent) (C)
Hazell, W. (Leicester) (L)
Henderson, A. (Staffs West) (U)
Hobhouse, H. (Somerset East) (U)
Houldsworth, Sir W. H. (Manchester (C)
Hubbard, Hon. E. (Brixton) (C)
Hutton, A. E. (Morley, Yorks) (L)
Jacoby, J. A (Derbyshire) (L)
Johnston, W. (Belfast) (C)
Joicey, Sir J. (Durham) (L)
Jones, W. (Carnarvonshire (L)
Kenyon-Slaney, Col. W. (Newport, Salop) (C)
Kimber, H. (Wandsworth) (C)
Lawrence, Sir E. Durning- (Cornwall (U)
Lawson, Sir W. (Cumberland) (L)
Leese, Sir J. F. (Accrington) (L)
Leng, Sir J. (Dundee) (L)
Llewellyn, Sir Dillwyn- (Swansea)
Loder, G. W. E. (Brighton) (C)
Lonsdale, J. B. (Armagh) (U)
Lopes, H. Y. B. (Grantham) (C)
Lowe, F. W. (Edgbaston, Birmingham) (C)
Lowles, J. (Haggerston) (C)
Loyd, A. K. (Abingdon, Berks) (C)
Lyttelton, Hon. A. (Leamington) (U)
Macdona, J. C. (Rotherhithe) (C
M'Kenna, R. (Monmouthshire) (L)
M'Killop, J. (Stirlingshire) (C)
Maddison, F. (Sheffield) (L)
Martin, R. B. (Droitwich) (U)
Melville, B. V. (Stockport) (C)
Milward, Col. V. (Warwickshire) (C)
Molloy, B. C. (King's Co.) (N)
Monckton, E. P. (North Northants) (C)
Monk, C. J. (Gloucester) (U)
Moore, A. (Londonderry) (N)
Moore, W. (Antrim, N.) (C)
More, R. J. (Shropshire) (U)
Morrell, G. H. (Woodstock) (C)
Murray, C. J. (Coventry) (C)
Norton, Capt. C. W. (Newington) (L)
O'Connor, A. (Donegal) (N)
Oldroyd, M. (Dewsbury) (L)
Orr-Ewing, C. L. (Ayr Burghs) (C)
Phillpotts, Captain A. (Torquay) (C)
Pickersgill, E. H. (Bethnal Green) (L)
Powell, Sir F. S. (Wigan) (C)
Pryce-Jones, Lt.-Colonel E. (Montgomery) (C)
Quilter, Sir C. (Suffolk) (C)
Reid, Sir R. T. (Dumfries) (L)
Renshaw, C. B. (Renfrew) (C)
Roberts, J. H. (Denbigh, W.) (L)
Russell, T. W. (Tyrone) (U)
Rutherford, J. (Darwen, Lancs) (C)
Ryder, J. H. D. (Gravesend) (C)
Schwann, C. E. (Manchester) (L)
Scott, C. P. (Leigh, Lancs) (L)
Shaw, T. (Hawick Burghs) (L)
Sinclair, Captain J. (Forfarshire) (L)
Smith, J. P. (Lanarks) (U)
Smith, Hon. W. F. D. (Strand) (C)
Souttar, R. (Dumfriesshire) (L)
Steadman, W. C. (Stepney) (L)
Sullivan, D. (Westmeath) (N)
Talbot, Rt. Hon. J. G. (Oxford University) (C)
Thornton, P. M. (Clapham) (C)
Trevelyan, C. P. (Elland, Yorks) (L)
Ure, A. (Linlithgow) (L)
Wallace, R. (Perth) (L)
Walton, J. L. (Leeds, South) (L)
Warner, T. C. T. (Lichfield) (L)
Wason, E. (Clackmannan) (L)
Wedderburn, Sir W. (Banffshire) (L)
Whiteley, G. (Stockport) (L)
Williams, J. C. (Notts) (L)
Wilson, J. (Durham, Mid.) (L)
Wilson, J. (Falkirk) (U)
Wilson, J. (Govan) (L)
Wilson, J. W. (Worcestershire, N.) (U)
Wortley, Rt. Hon. C. B. Stuart- (Sheffield) (C)

Tellers for the Ayes, Mr. Heywood Johnstone (Horsham, Sussex) (C) and Mr. Tennant (Berwickshire) (L).

Noes (34).

Abraham, W. (Cork, N.E.) (N)
Allsopp, Hon. G. (Worcester) (C)
Austin, M. (Limerick, W.) (N)
Blundell, Colonel H. (Ince, Lancs) (C)
Caldwell, J. (Lanarkshire) (L)
Collings, Rt. Hon. J. (Birmingham) (U)
Donelan, Captain A. (East Cork) (N)
Doogan, P. C. (East Tyrone) (N)
Douglas, Rt. Hon. A. Akers- (Kent) (C)
Galloway, W. J. (Manchester) (C)
Giles, C. T. (Wisbech) (C)
Goldsworthy, Major-General (Hammersmith) (C)
Goulding, E. A. (Devizes) (C)
Greville, Hon. R. (Bradford (C)
Hayne, Rt. Hon. C. Seale- (Devon) (L)
Hemphill, Rt. Hon. C. H. (Tyrone) (L)
Hogan, J. F. (Tipperary) (N)
Kenyon, J. (Bury, Lancs) (C)
Kilbride, D. (Galway) (N)
Lawson, J. G. (Yorks) (C)
Leigh-Bennett, H. C. (Surrey) (C)
MacAleese, D. ((Monaghan) (N)
M'Dermott, P. (Kilkenny North) (N)
Nicol, D. N. (Argyll) (C)
O'Brien, J. F. X. (Cork) (N)
O'Brien, P. (Kilkenny) (N)
Pierpoint, R. (Warrington) (C)
Purvis, R. (Peterborough) (U)
Rentoul, J. A. (East Down) (C)
Strauss, A. (Cornwall) (U)
Tanner, C. K. (Cork Co.) (N)
Walrond, Rt. Hon. Sir W. H. (Tiverton Devon) (C)
Wilson-Todd, W. H. (Yorks) (C)
Wyvill, M. D'A. (Otley, Yorks) (C)

Tellers for the Noes, Mr. T. P. O'Connor (Liverpool) (N), and Dr. Robert Ambrose (West Mayo) (N).

DR. BRASSEY BRIERLEY (Old Trafford, Manchester).—So far as we are aware Mr. Walter Hazell, M.P. for Leicester, is the only member of Parliament of that name. His name appears on the back of the Midwives Bill now before the Grand Committee on Law of the House of Commons, but whether he was "one of a noisy crowd on a railway platform who greeted the Leicester Guardians in their defiance of the law" we do not know. As regards vaccination, he is, we believe, at least an anticompulsionist. As to other questions put by Dr. Brierley, some he must, as a member of the Council of the Association, be able to answer himself, and others are dealt with elsewhere in this number of the BRITISH MEDICAL JOURNAL. It may perhaps interest Dr. Brierley to see that eleven of the members of the Grand Committee which is to consider the Bill represent constituencies in Lancashire or Cheshire, and that the majority in favour of the second reading of the Bill contains the names of twelve, and the minority those of four representatives of such constituencies.

NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

THE first general meeting of members of the National Association for the Prevention of Consumption was held at 20, Hanover Square, on March 13th, when the chair was taken by the Earl of Derby, K.G., who, in moving the adoption of the report, referred to the acceptance by the Prince of Wales of the office of President of the National Congress to be held in London in 1901 on the subject of tuberculosis. After Lord Spencer had seconded the resolution, Dr. Ransome spoke on the question of tuberculosis as it affected insurance, and detailed what had been done at Nottingham in regard to building a sanatorium. The resolution having been carried, Dr. Nathan Raw, of Liverpool, moved the re-election of the members of the Council, and read a statement of the work done by the Association in the North of England. Dr. Weatherly asked whether a sanatorium could not be built at the cost of £200 per bed for the lower middle class. The Rev. Mr. Chapman having suggested that the clergy should be enlisted in the movement and should be represented on the Council, Sir William Broadbent said that the Council welcomed the suggestion. After it had been stated by Sir E. H. Verney that a sanatorium for rich people could be built at the cost of £200 a bed, the re-election of the members of the Council was carried. Dr. Theodore Williams proposed a vote of thanks to the Chairman, which was seconded by Sir James Blyth. The Chairman in his reply referred in detail to a sanatorium near Kendal, the cost of which was well within £200 a bed.

CREMATION IN BOSTON.—Dr. James R. Chadwick, at a recent meeting of the Cremation Society of Boston, reported that 230 bodies were incinerated in 1899. The number in 1898 was 167; in 1897, 160; in 1896, 137; in 1895, 88; in 1894, 87. The large number of notable persons who have chosen incineration shows that the sentiment in its favour is growing in Boston.

ROYAL NAVY NURSING SERVICE.—Mr. Austen Chamberlain, M.P., Civil Lord of the Admiralty, received recently a deputation from the Matrons' Council of Great Britain and Ireland, who laid before him suggestions as to organisation in the Royal Navy Nursing Service. Mr. Austen Chamberlain, M.P., who was accompanied by Sir Henry Norbury, K.C.B., M.D., Director-General of the Medical Department, promised to bring the views expressed by the deputation before his colleagues.

THE R.A.M.C. SOUTH AFRICA FUND.

THE SPECIAL SUBSCRIPTION.

THE Executive Committee were honoured by the presence in the Chair of H.R.H. the Princess Christian at a meeting held on the evening of Wednesday, March 7th, at 19, Portland Place. The reports of the Honorary Secretary and Treasurer having been read, Her Royal Highness made a few remarks expressing her warm interest in the work and its progress. The undermentioned ladies and gentlemen were present: Lady White, Lady Broadbent, Sir Dyce and Lady Duckworth, Lady MacCormac, Lady Katharine Manners, Mrs. Barlow, Mrs. Butlin, Mrs. Clutton, Mrs. Garrett Anderson, Mrs. F. Howard, Mrs. Jameson, Miss Loch, Mrs. Macpherson, Mrs. Meredith, Surgeon-General and Mrs. Muir, Mrs. O'Callaghan, Mrs. Playfair, Mrs. Pye-Smith, Mrs. Cole Reade, Mr. and Mrs. Charters Symonds, Mrs. F. Taylor, Mrs. Hale White, and Miss Maxwell-Müller, R.R.C. (Honorary Secretary).

Since the publication of the list in the BRITISH MEDICAL JOURNAL of March 10th the Editor has received the following additional subscriptions to the Fund for furnishing comforts and clothing to the non-commissioned officers and men of the R.A.M.C. in South Africa. The ambulance orderlies and also the Indian dhoolie bearers, who have displayed such conspicuous bravery and devotion in carrying the wounded off the field of battle under fire, share in the benefits of the Fund.

THE HALF-CROWN SUBSCRIPTION LIST.

	Half Crowns
Dr. Calvert (Melrose)	1
Mr. S. Arnott (London)	8
Dr. B. J. E. Wright (Overton)	2
Dr. F. C. Palmer (Woking)	4
Mrs. Wright Grant (Woburn Sands)	8
Major E. M. Hassard, R.A.M.C. (Portland)	8
Brigade-Surgeon J. Kelly (late I.M.S.) (Blackrock)	8
Dr. A. P. Fiddian (Roath)	1
Dr. H. R. Mosse (London)	2
Dr. R. E. Legat (Cromer)	1
Dr. R. McCombe (Bassingbourne)	1
Staff-Surgeon W. W. Pryn, R.N. (Gibraltar)	1
Dr. Winterbotham (Bridgwater)	1
Mr. R. Winterbotham (London)	1
Dr. Dora E. Allman (Armagh)	1
Mr. E. P. Edwards (Valley)	1
Mr. F. A. Humphry (Brighton)	8
Mr. E. D. H. Hawke (Shortlands)	1
Deputy-Surgeon-General F. M. Skues (retired) (London)	4
Dr. S. J. Parkhill (Burton-on-Trent)	1
Per Lieutenant-Colonel G. A. Emerson (Bedford):	
Lieutenant-Colonel I. Paxton (Bedford)	1
Mrs. Paxton (Bedford)	1
Miss Paxton ,,	1
Miss R. Paxton ,,	1
Mrs. F. J. Grindon (Olney)	1
Per Dr. C. A. Sturrock (Dunfermline):	
Dr. Bell (Dunfermline)	2
Dr. Carment (Kelty)	4
Dr. Craine (Limekilns)	8
Dr. Dendle (Dunfermline)	1
Dr. Dow ,,	2
Dr. Drysdale ,,	4
Dr. Lee ,,	2
Dr. McGregor ,,	2
Dr. Morris ,,	8
Dr. Philp (Inverkeithing)	4
Dr. Ritchie (Tranent)	4
Dr. Selkirk (Cowdenbeath)	4
Dr. Sturrock (Dunfermline)	2
Dr. Tuke ,,	4
Dr. Zuill (Carnock)	2
Dr. Nasmyth (Crossgates)	4
Per Dr. F. C. H. Pigott (Teignmouth):	
Mr. G. F. Flemmick	1
Mr. Limvery	1
Mr. Goddard	1
Mr. Hillyard	1
Mr. Studdert	1
Mr. Dell	1
Mr. E. A. Johnson	1
Mr. H. Leah	1
Mr. P. G. Dobson	1
Dr. Leah	1
Dr. Compton	1
Dr. Whiteway Wilkinson	1
Dr. Bell	1
Dr. McCoy	1
Dr. Little	1
Dr. Johnson	1
Dr. Rudkin	1
Dr. Piggott	1
Mrs. Piggott	1
Dr. Haward	1
Per Dr. J. Raby (Barnstaple):	
Dr. Reston (Ashford)	2
Dr. Joseph Harper	2
Dr. Raby	2
Dr. Ware	1
Dr. Walter Cooper	1
Dr. A. W. Lemarchant	1
Dr. C. H. Gamble	2
Dr. C. Cooke	1
Dr. J. Wood Cooke	1
Dr. Manning	1
Dr. M. Jackson	1
Dr. F. Penny	1
Dr. Harper ("Braunton")	2
Per Dr. G. A. Williamson (Larnaca, Cyprus):	
Major Girvin, R.A.M.C.	1
Mr. B. B. Tahmisian	2
Dr. G. A. Williamson	1
Per Mr. W. H. Copley (Wisbech):	
Dr. F. E. Allen (Wisbech)	1
Dr. E. C. Bury ,,	1
Dr. A. W. Clark ,,	1
Dr. J. G. B. Coleman (Sutton Bridge)	1
W. H. Coply, Esq. (Wisbech)	1
Dr. Wm. Groom ,,	1
Dr. H. Groom ,,	1
Dr. Holme ,,	1
Dr. G. Mason ,,	1
Dr. H. C. Meacock ,,	1
Dr. T. E. Price (Upwell, Wisbech)	1
Dr. H. Taylor (H.S. Hospital, Wisbech)	1
S. A. T. Coxon, Esq., L.D.S., (Wisbech)	1
Per Mr. J. F. Steedman (London):	
Dr. Burgess	1
Per Dr. E. Cureton (Shrewsbury):	
Dr. E. Cureton	1
Mr. H. Macleod	1
Dr. C. E. Salt	1
Dr. E. L. Burd	1
Mr. A. Jackson	1
Mr. J. Cock	1
Dr. H. W. Gardner	1
Mr. L. J. Godson	1
Mr. A. Sewell	1
Mr. T. L. Webb	1
Mr. J. A. Black	1

	Half Crowns.
Per Mr. T. Vincent Jackson (Wolverhampton):	
Dr Butter (Cannock) ...	1
Per Brig.-Surg.-Lt.-Col. Maconachie (I.M.S. retired) Aberdeen):	
Surg. Major A. G. Grant, I.M.S. (Aberdeen)	2
Dr. Ironside (Fochabers) ...	2
Per Dr. Herbert Peck (Chesterfield):	
Mrs. Clarke, Sen. (Chesterfield)	2
Mrs. E. Wearne Clarke ,,	1
Dr. E. Wearne Clarke ,,	1
Dr. J. H. Booth ,,	1
Dr. W. S. Symes ,,	1
Dr. Meredith Richards ,,	1
Dr. J. A. Benson (Ashover)	1
Dr. Geo. Booth, J.P. (Chesterfield)	1
Dr. Badcock (Staveley) ...	1
Dr. Blight ,, ...	1
Dr. A. Court ,, ...	1
Dr. J. Court ,, ...	1
Dr. Hale ,, ...	1
Dr. S. H. Court (St. Ives, Cornwall)	1
Dr. A. P. E. O'Leary (Brimington)	1
Per Dr. W. Johnson Smyth (Bournemouth):	
Dr. W. Marriner (Bournemouth)	1
Dr. A. Ransome (Bournemouth)	1
Dr. Love (Bournemouth) ...	2
Dr. Roberts Thomson, (Bournemouth)	8
Dr. Muspratt (Bournemouth)	2
Dr. E. P. Philpots (Bournemouth)	2
Dr. Reid (Bournemouth) ...	1
Dr. Mahomed (Bournemouth)	1
Dr. Spencer Simpson (Boscombe)	1
Dr. Yelf (Boscombe)	1
Dr. Saul, ,, ...	1
Dr. Milner (Parkstone) ...	2
Dr. Hooper Masters (Parkstone)	1
Dr. John Moorhead (Weymouth)	4
Dr. Lush (Weymouth) ...	1
Per. Mr. W. M. Beaumont (Bath)	
Mr. F. Laco (Bath) ...	1
Dr. Field ,, ...	1
Mrs. Hensley ,, ...	1
Miss Hensley ,, ...	1
Mr. W. M. Beaumont (Bath)	1
Mrs. W. M. Beaumont ,,	1
Misses Norman ,,	2
Sir John W. Reid, K.C.B. (Bath)	1
Mr. F. W. S. Stone (Bitton)...	1
Mrs. F. W. S. Stone ,, ...	1
Mr. W. S. Batten (Calne) ...	1
Mr. R. T. Richardson (Trowbridge)	1
Mr. A. Sudlow (Bradford-on-Avon)	1
Dr. R. Carter (Bath)	1
Miss Carter ,, ...	1
Mr. W. N. Heygate (Bath) ...	1
Surgeon-Major Dyce ,, ...	1
Mr. E. Skeate ,, ...	1
Mr E. T. Thompson (Wellow)	2
Mr. H. G. Terry (Bath) ...	1
Mrs. H. G. Terry ,, ...	1
Master Terry ,, ...	1
Miss Terry ,, ...	1
Lieutenant-Colonel P. R. Martin, I.M.S. (Bath) ...	1
Mr. R. S. Fowler ,, ...	1
Mrs. R. S. Fowler ,, ...	1
Mr. T. B. Goss ,, ...	1
Mr. R. A. Bayliss ,, ...	1
Surgeon-General Ogg, M.B., (Bath)	1
Dr. A. S. Wohlmann (Bath)	1
Per Surgeon-Major-General G. L. Hinde, A.M.S. (retired) (Brighton):	
Mrs. Wight	1
Miss Wilson	1
Mrs. White	1
Per Dr. G. P. Longman (Bexhill-on-Sea):	
Dr. M. Shepherd Boyd ...	1
Per Dr. Henry Waldo (Clifton, Bristol):	
Dr. A. J. Harrison	4
Dr. E. C. Edwards (Penzance)	2
Dr. F. St. John Bullen ...	2
Dr. Henry Skelton (Downend)	1
Mr. Henry F. Parsons (Sneyd Park)...	2
Mr. John Broom (Clifton) ...	8
Mr. C. K. C. Herapath ...	2
Dr. James Wilding	1
Dr. Frank G. Hopkins (Lagos, W. Africa)	1
Dr. C. Percival Crouch (Weston-super-Mare) ...	1
Per Dr. T. Thornton Macklin (St. Mary's, Scilly Isles):	
Mr. T. A. Harrison-Smith ...	4
Mr. J. Jenkinson	1
Dr. T. T. Macklin	4
Master Macklin	1
Per Matron of Southend Victoria Hospital:	
Dr. Waters	1
Dr. Smith	1
Dr. Silvia Jones	1
Dr. Forsyth	1
Dr. Hinks	1
Dr. Paisley	1

We have also received £10 from the Worcestershire and Herefordshire Branch of the British Medical Association, per Dr. G. W. Crowe; £2 2s. from Mr. J. S. Bartrum, per Mr. W. M. Beaumont (Bath); £1 1s. from Mr. F. M. Mackenzie (London); £1 1s. from F. C. Heidenstam, C.M.G., per Dr. G. A. Williamson (Larnaca, Cyprus); 3s. 6d. from Dr. J. Fuller, per Dr. H. Waldo (Clifton); and 3s. 6d. from "A. G." (London).

In order to facilitate the work of collecting the small sums, the following gentlemen have expressed their willingness to receive subscriptions from gentlemen residing in their neighbourhood:

Mr. W. M. Beaumont, 4, Gay Street, Bath.
Dr. J. St. Clair Boyd, 27, Victoria Place, Belfast.
Dr. E. Cureton, College Hill Court, Shrewsbury.
Lieutenant-Colonel G. A. Emerson, I.M.S., 49, St. Michael's Road, Bedford.
Mr. John W. Fry, Blythesbury, Maidstone.
Dr. Harcourt Gervis, 2, Lyncroft Mansions, West Hampstead, N.W.
Mr. R. Balfour Graham, F.R.C.S.E., Seaview House, Leven, Fife, N.B.
Dr. J. Stenson Hooker, Rothesay Bank, Clive Vale, Hastings.
Dr. G. P. Longman, 14, Wickham Avenue, Bexhill-on-Sea.
Major R. C. Lever, Denton House, Iffley, Oxford.
Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie, I.M.S. (retired), 39, Queen's Road, Aberdeen.
Mr. Edward Mathews, Mount Prospect, Redditch.
Dr. Herbert Peck, St. Helen's, Chesterfield.
Dr. John Ruxton, 4, Brighton Parade, Blackpool.
Mr. C. T. Quiller, St. Paul's Close, Rectory Grove, Clapham, S.W.
Major J. Raby, Ashford House, Barnstaple.
Dr. Henry Simpson, Glen Morfa, Conway.
Dr. W. Johnston Smyth, Durley Gardens, Bournemouth.
Colonel J. Tidbury, R.A.M.C., Medical Officer in Charge, Barracks, Winchester.
Dr. Henry Waldo, 19, Pembroke Road, Clifton, Bristol.
Mr. E. C. R. Ward, F.R.C.S.I., Belmont, Castle Connell, co. Limerick.

Subscriptions may also be sent to the Editor of the BRITISH MEDICAL JOURNAL, and will be acknowledged in the JOURNAL. The amount received for the Half-crown Fund up to and including Wednesday, March 14th, by the Editor is £207 5s. 6d. Cheques and Postal Orders should be made payable to the "R.A.M.C. South Africa Fund" and crossed "Holt and Co."

THE PROPOSED PENSION FOR THE AGED DESERVING POOR.

THE Departmental Committee, under the chairmanship of Sir Edward Hamilton, in issuing their report on the financial aspects of the proposals made in their report of July 26th, 1899, by the Select Committee of the House of Commons, have drawn up certain estimates of costs. The pension scheme, on the assumption that the pensionable age is fixed at 65, would, according to the estimates arrived at, cost the United Kingdom £10,300,000 in the year 1901; but if the pensionable age were 70, it would cost only £5,950,000; and only £2,950,000 were the pensionable age deferred to 75. The importance of instituting a State pension for the aged poor is too generally acknowledged to need any further discussion, but some of the difficulties in estimating the probable cost of any such scheme, and in successfully carrying it out, are very clearly pointed out by the Departmental Committee. The conditions which an applicant for a pension should be required to fulfil are laid down as follows:

1. British nationality.
2. Attainment of the necessary age.
3. Absence of conviction for any serious offence between the ages of 45 and 65.
4. Non-receipt of Poor-law relief (other than medical relief) during the twenty years preceding the application for a pension, unless under circumstances of a wholly exceptional character.
5. Residence within a given district.
6. Non-possession of an income (from any source) of more than 10s. a week.
7. Proved industry or proved exercise of reasonable providence by some definite mode of thrift.

The Departmental Committee point out that for the many persons whose incomes are just over the border line of 10s. a week, it will be an advantage to understate their receipts. It will be equally advantageous to some to assign away portions of their incomes or income-producing properties—a step which they think would probably be frequently resorted to in Ireland. There would be an inevitable tendency to reduce the wages or charitable pensions of aged persons when the receipts of these persons slightly exceeded the pensionable income. Meritorious poor people who had not reached the pensionable age would be considered to have stronger claims on charitable funds than the more aged, who would be secure of their pensions, and consequently a larger number of old persons, by losing the aid of charity, would fall within the category of pensioners. Moreover, knowing that the aged would be provided for by the pension scheme, well-to-do persons would subscribe less to charities in connection with the aged poor, and would thus increase the number of candidates for pensions. Again, persons would be likely to "make the most of their ages," with a view to obtaining pensions; whilst some who were in receipt of the old age pension might underbid their younger competitors in the labour market, and the resulting reduction of wages would tend to augment the number of pensionable persons. Lastly, it is justly pointed out that the improving conditions of life will probably increase the general duration of life in the future, and thus augment the number of those who would require the pension.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THE total number of deaths registered in the City of Bombay during the week ending February 20th was 2,701, being 64 more than in the preceding week and 1,380 more than in the corresponding period in the preceding five years. The plague deaths during the same period amounted to 641, being 71 more than during the previous week. The present plague epidemic has been in existence for a period of sixteen weeks, or three weeks beyond the duration of the three

previous epidemics. Of the 27,093 deaths in Bombay during the sixteen weeks since plague appeared, 5,018, or about one-fifth, are attributed to plague. Major Reade, who has been the chief plague authority in Poona since 1897, and who has done excellent work during that period, was the recipient of an address from those connected with plague work in Poona. At Nagpur the plague is increasing; 10 deaths occurred there on February 16th. Calcutta telegrams give an alarming account of the sudden increase of plague in that city. The latest printed records give the number of deaths on February 16th, 17th, 18th, 19th, 20th, and 21st as 24, 25, 26, 44, 34, and 40 respectively.

In the Patna district plague continues to make headway. At the public burning ghat on the Ganges bank, just below the town of Barh, some 35 plague corpses arrive daily from Barh and the surrounding villages. Since the beginning of the outbreak in the Barh district 3,500 deaths from plague have occurred. At Dinapur plague has existed for some time, but the fact has been concealed. In Madras, the Punjab, and the Jullunder district plague prevails also with more or less severity.

HONG KONG.

The efforts of the sanitary authorities to destroy the rats in the City of Victoria have not been successful. Although some 157 rat traps were issued, only 37 rats were brought in during a whole month.

JAPAN.

A few cases of plague continue to occur in several cities in Japan. The authorities have offered a small sum of money to persons bringing in dead rats.

AUSTRALIA.

On March 12th 2 fresh cases of plague were reported in the City of Sydney. Since the beginning of the outbreak 15 persons have been attacked, of whom 6 died, 8 are still suffering, and 1 has recovered. It would seem as if plague had really attained a foothold in Sydney.

MAURITIUS.

For the week ending March 8th 9 fresh cases of plague and 7 deaths from the disease are reported.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following analysis shows the distribution of medical officers in the Army List for March:

Distribution in the March Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks: Seconded.
Surgeon-Generals ...	5	1	4	—	10	—
Colonels	7	8	12	—	27	2
Lieutenant-Colonels...	12	23	39	—	74	1
Majors	30	189	197	3	419	5
Captains	17	67	98	1	183	3
Lieutenants	4	101	36	—	141	5
Total...	75	389	386	4	854	16

Compared with the February list, the total has decreased by 4, accounted for as follows in the obituary: 1 murdered on Burmah-Chinese frontier, 1 died of wounds, and 2 from disease in South Africa.

The number at home has sunk from 117 to 75, no doubt through the mobilisation of the Eighth Division; while the number in South Africa has correspondingly increased from 350 to 389. The number at other foreign stations is 386 against 385, while the unposted have declined from 6 to 4.

It must be noted that if the administrative and the executive officers holding staff appointments, and therefore not available for general duty, be deducted from the 75 at home, only about 50 full-pay executive medical officers are left for general duty. These are reinforced by about 84 retired-pay officers, called "acting" in the Estimates, and by 33 on the retired list "temporarily employed" (of whom 2 are in South Africa), and by a large contingent of civilian surgeons, of which there is no complete return.

The effective total strength of full pay army medical officers is nominally at present 854, not including the Director-General; but if 16 seconded officers be deducted the real strength is 838. This number is insufficient for ordinary peace duties, and, of course, quite unequal for the present strain. It provides no margin whatever for current casualties and periodical reliefs; it will be still more insufficient when the proposed addition of 27,600 men to permanent army establishments is effected. The present number of 838 officers must indeed be reinforced by at least 200 if the service is to be placed on an efficient footing.

THE NAVY ESTIMATES, 1900-1901.

II.

As is indicated, Vote 3, Medical Establishments and Services is an estimate of the sum that will be required in the year ending March 31st, 1901, to defray the expenses of medical services, including the cost of medical establishments at home and abroad, as well as of marine infirmaries, irrespective of that incurred for H.M. ships and naval depôts. It shows a net increase of £32,000.

We will endeavour to indicate the extra provision proposed for the year in question, necessitated by the increased *personnel*, and necessary increase of hospital accommodation.

Some considerable addition to this vote is due to the improved pay and prospects of the Sick Berth Staff referred to in our observations on the First Lord's statement explanatory of the Navy Estimates, 1900-1901, in the BRITISH MEDICAL JOURNAL of March 3rd.

In examining Vote 3, we find provision made for the following increase of medical officers, sisters of the nursing staff, dispensers, and sick berth staff.

Melville Hospital, Chatham.—1 sister, 1 warrant officer of the sick berth staff (a rank now for the first time established).

Haslar.—1 staff-surgeon (as instructor in the diseases of warm climates, etc.), 1 surgeon, 1 sister, 1 dispenser, 1 warrant officer, and 51 other ratings of the sick berth staff. The provision of a museum attendant (presumably an expert museum assistant) is a most noteworthy reform. For some years past this museum, rich in many valuable natural history and pathological preparations, and especially in its collection of crania, contributed by naval medical officers from all quarters of the globe, has been greatly neglected. The recent Admiralty Departmental Committee on naval medical questions recognised this neglect, and also made arrangements for future contributions from foreign stations of pathological and other specimens, in connection with the now established instruction in the diseases of warm climates. This museum, in great part the work of the late Sir Andrew Clark, who in his early career was pathologist at Haslar, will doubless in the future prove a most valuable and important one, worthy of the noble institutlon where it was established.

Plymouth.—1 deputy-inspector-general, 1 sister, 1 dispenser, 1 warrant officer, and 38 other ratings of the sick berth staff.

Malta.—1 staff surgeon, 1 head sister, 1 sister.

Portland.—3 sick berth staff ratings.

Foreign Hospitals.—26 sick berth staff ratings.

Under the head of "Hospital and Infirmary Provisions and Stores, Medicines, and Instruments," provision is made for an increased expenditure of £19,000. In the year 1899-1900 the increase under this head was £5,000; we conclude that supply of surgical instruments to ships and naval and marine barracks, a new provision announced in the First Lord's statement, is accountable for a considerable amount of this increase.

Under Vote A, provision is made for 390 medical officers under the rank of Deputy Inspector-General for all naval services.

Under Vote 12, provision is made for an additional fleet or staff surgeon for the Medical Department of the Admiralty, due doubtless to the great increase in the medical returns received in the office, consequent on the larger *personnel* and number of ships in commission, as well as other medical work, physical examinations of candidates for entry into the navy as naval cadets, clerks, etc.

There appears to be no increase in the clerical staff of this department, though the duties must greatly increase from year to year with the growth of our naval forces; a considerable decrease in their salaries is noted by the apparent retirement of a senior clerk and clerk, and their replacement by two staff clerks; it is further noted that the remaining senior clerk will ultimately be replaced by a staff clerk at a lower salary; they are all of the higher division of clerks, however. These economies are the result of the working of the Playfair scheme for the clerical branches of Government establishments.

LITERARY NOTES.

ACCORDING to the *Clinical Review* of Chicago, it is estimated that up to 1898 over twenty-five hundred articles and monographs had been written on the subject of appendicitis. One-half of this total amount of literature was produced during the five years preceding 1898. It is not stated what proportion of this output is American, but doubtless it is very large.

The Board of Trustees of the University of Pennsylvania has, it is announced, secured entire control of the *University Medical Magazine*, and in future that periodical will be pub-

lished under the auspices of the University. The *Magazine* has heretofore been in the hands of a joint-stock company which was altogether independent of the University. The first number of the new series will appear this month. It is intended that the *Magazine* shall henceforward be the organ of the department of medicine of the University of Pennsylvania, and its readers will be kept informed as to the work that is being done in the clinic, the wards, and the laboratory by the members of the teaching and hospital staff. Dr. Charles H. Frazier has been appointed Editor.

Dr. Daniel G. Brinton, for thirteen years Professor of American Archæology and Languages in the University of Pennsylvania, who died July 30th, 1899, had long been recognised as foremost among the students of the aboriginal languages of North America. Shortly before his death he presented to the University his library of works relating to the aboriginal languages of North America, comprising about 3,000 volumes and embracing a large number of unpublished manuscripts as well as nearly all the printed material now extant.

The next volume of the "Masters of Medicine" series will be "Sydenham" by Dr. J. Frank Payne, who has already written the life of the English Hippocrates in the *National Dictionary of Biography*. Dr. Payne has unearthed a good deal of absolutely new material, not only about Sydenham's life but as to the intellectual activity of Oxford in the troubled times of the Civil War and as to the effect of the Puritan *régime* on scientific thought. The work therefore promises to be of exceptional interest and value, and will be an important contribution to our national history as well as to that of the development of the healing art in this country. The book will be published by Mr. Fisher Unwin probably early in the summer.

Messrs. Baillière, Tindall and Co. announce for early publication a new edition (the eighth) of Dr. Macnaughton-Jones's *Manual of Diseases of Women*. The book is considerably enlarged in size, and will contain about 1,000 pages, with more than 600 illustrations, besides 28 plates. The same firm will also issue a second much enlarged edition of Mr. Mayo Robson's *Diseases of the Gall Bladder and Bile Ducts;* an English translation of Dr. José V. Montenegro's *Bubonic Plague*, by Mr. William Munro, with an appendix specially written for this edition; a translation of Dr. Ludwig Grünwald's work on Nasal Suppuration; and *Mock Nurses of the Latest Fashion*, by Mr. F. J. Gant. The last work is a reprint, with additions, of papers published in the *Medical Press and Circular*.

The *Century Magazine* for March contains the first instalment of a new novel, entitled "Dr. North and his Friends," by Dr. S. Weir-Mitchell, the distinguished neurologist of Philadelphia. We have called it a "novel" because it has the outward and visible aspect of that class of literary product; but in what has so far appeared there is not even the promise of a story. To this Dr. Weir-Mitchell might perhaps reply with the needy knife-grinder of the *Antijacobin*, "Story! God bless you, I have none to tell you, Sir!" He has already shown, however, by several brilliant works of fiction that he has a story to tell when he chooses, and that he can tell it remarkably well. "Dr. North and His Friends," as far as can be judged from the beginning, is intended to be a series of conversations between superior persons—probably of all forms of literary entertainment the most wearisome to the average sensual man. But, then, Dr. Weir-Mitchell would doubtless say that he does not write for the average man.

Dr. George M. Gould, the Editor of *Philadelphia Medical Journal*, has reprinted an interesting paper on Medical Palæography, which appeared in that periodical a short time ago. He has been struck by the fact that physicians have, as a rule, no suspicion of the origin of the signs used every day for drachms, ounces, scruples, etc. Their origin, he says, can be understood only by a general comprehension of the principal facts of the history of punctuation and of general palæography. In the evolution of the latter, the three main factors were: (1) The expensiveness of material on which mediæval scribes had to write; whether upon leaf, wood, bark, vellum, or other material, the necessity for economy led to small writing, narrow spaces, and innumerable contractions; (2) further, human laziness led to devices for lessening work by the use of abbreviations and signs; (3) increasing carelessness finally led to such a degradation of handwriting that many contractions inaccurately used resulted in meaningless flourishes. As the Middle Ages advanced towards the discovery of printing, those three factors worked together to produce a complicated system of contractions, abbreviations, and signs, the object of which was to spare writers labour and book-buyers expense. It has been calculated that in the French MSS. there were as many as 5,000 distinct kinds of these artificial contractions. In England the number did not rise above 1,000. Another factor which was powerful in medical palæography was the desire to keep from patients the nature of the remedy prescribed. Dr. Gould gives a number of interesting illustrations of the contractions and symbols used in mediæval writings on medicine.

It was mentioned in this column a week or two ago that a successor to the unhappily defunct *Index Medicus* was about to arise in France. We have since received the first number of the new index to current medical literature which is entitled *Bibliographia Medica*, and is edited, under the direction of Professors Potain and Charles Richet, by Dr. Marcel Baudouin. It is to be published on the 15th of each month, and each issue is to contain 4,000 references to the periodical literature of the preceding month. The arrangement is based on that adopted in the *Index Medicus*, with some modifications. The *Bibliographia Medica* is somewhat smaller than its predecessor, and the print is not so clear; but, as far as we have been able to examine the first number, it is commendably free from misprints. Space has been economised by the elimination of anthropology, zoology, and other subjects only indirectly connected with medical science.

Baboo English always tends to laughter in the English reader, though the classical scholar must have an uncomfortable feeling that our modern Latinity would have sounded equally comic in the ears of Livy and Cicero. The following delicious effusion was lately received by an administrative medical officer in India, praying for the removal of a native subordinate in favour of a rival:

> We, the inhabitants of ..... are perfectly at a loss to account for the anomalous arrangements resorted to by Government of late ..... has from time to time immemorial gained the world-wide notoriety of being a fever-stricken and malarious district Sober reason and sane thinking would lead an ordinary mind to station an active and energetic doctor at ....., but by some occult and mysterious process of thought, the higher authorities have taken it to their fancy to post a superannuated, lethargic, diabetic, worn-out, dry stick of humanity at a station which, to say the least of it, is the most unhealthy district in ....., and the atmosphere whereof is impregnated and saturated with all the germs and bacilli of all the toxins pronounced to be most fatal to mankind. It is a patent fact that the number of patients admitted to the ..... Hospital is decidedly very great, but there has been an appreciable fall in the number since the advent of the present incumbent. The causes of this desertion, though obvious, are the foul-mouthed vituperations, peevish revilings, and the short temper of the old diabetic Esculapius, who has grown rabid with the rise of the temperature in this hottest part of the season. There is a rumour in vogue that officers when old are compelled by Government to retire from service, but the continuance of this octogenarian in service gives a direct lie to the long-cherished opinion of the public in general. We beg most respectfully to pray that you will be graciously pleased to consider this hard case, and see your way to ridding us of the old man of the woods.

The alleged "octogenarian" was, it appears, only some 50 years of age.

The Editors of the *London Hospital Gazette* have issued a tasteful and interesting *souvenir* of that institution, consisting of reproductions of illustrations of the London Hospital at various periods from 1753 to 1896, the medical college, the museum, and laboratories, with excellent portraits of the staff. The Editors express the hope that the *souvenir* will "maintain and increase general interest in that hospital, which will always hold the formost place in the affections of all who have been connected in any way with it." It appears to us admirably adapted to serve that purpose.

Medical Congress in Cuba.—A Medical Congress of the Island of Cuba is now being organised. It is to be held at Havana, and will open on February 24th, 1901. The President of the Organising Committee is Dr. Vicente B. Valdés. The subjects with which the Congress will deal are the following: (1) Local Anthropology; (2) Medical Topography and Statistics; (3) Yellow Fever; (4) Paludism; (5) *Fiebre de borras;* (6) Chronic Enteritis of Hot Countries; (7) Febrile Conditions of Infancy which do no not correspond to Definite Clinical Types; (8) Treatment of Pulmonary Phthisis by Local Climatotherapy; (9) Medical Hydrology of Cuba; (10) Therapeutic Uses of some Indigenous Plants.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 17TH, 1900.

THE MIDWIVES BILL.

The Midwives Bill, promoted by the Midwives Bill Committee, was read a second time in the House of Commons on March 9th by a large majority, by a majority, in fact, of nearly four to one. The House of Commons is the mother of parliaments but its methods of procedure still have some of the vagaries of youth. As our readers were warned might be the case, the Bill came on, to quote the words used by Mr. Balfour with reference to the Bill which immediately preceded, "accidentally; not a single member interested in the Bill the previous day conceived that it would come before the House" when it did. It would seem that Mr. de Tatton Egerton, the member in charge of the Bill this year, was not in the House at the time, and its promoters, in despair of its prospects in the Lower House, even a couple of hours previously, had introduced it in the Lords. No more striking proof could be afforded of the unexpected nature of the success.

The debate and the vote were surprises; but it cannot be said that the result of the division is altogether a surprise. Indeed, those who have some acquaintance with the temper of the House of Commons have all along foretold that if the House once found an occasion to discuss the Bill it would be read a second time. The procedure of the House of Commons puts the policy of mere negation at a great disadvantage. A private member may put down a Bill again and again, even day after day, on the off-chance that on some day on which the Bill has been put down it may, owing to the collapse of debate on other subjects, or some sudden alteration in the plans of the Government—as occurred on this occasion—be reached before the hour of adjournment.

A Bill may be "blocked" if any member signifies his opposition, but this only points out that it is a contentious Bill; if the blocker is absent at the close of business when the orders of the day are called over, he may stimulate some friend to object, and so stop the Bill. But if it comes on earlier, it must be discussed and voted on, unless a succession of members will go on talking until the hour of adjournment, at the risk of having the guillotine of the closure descend, or unless a motion for the adjournment of the debate or of the House can be carried. The adjournment of the House had been moved by the Government on March 9th at an earlier stage of the sittings, but had had to be withdrawn, and the motion for the adjournment of the discussion of the Bill was lost by a large majority, so that there was nothing for it but to take a vote for or against the Bill, with the result stated. It is very unsatisfactory that the business of the country should be conducted in this haphazard way, and that the fate of an important measure affecting the welfare of large classes of the population should be decided by a snap vote in a comparatively small house, but this risk has all along been known. The result shows the exceeding unwisdom of the policy of mere negation; those who pledged themselves to that attitude of do-nothing may now find grounds for congratulation in the fact that there were others of more statesman-like instincts who have taken the precaution to have ready amendments calculated to render the measure as little mischievous as possible.

It will be well for the profession to consider very seriously the position in which the matter now stands. The House of Commons, by reading the Bill a second time, has approved its general principle—that is to say, it has declared that it is necessary by legislation to provide for the better training of midwives and to regulate their practice. It has not expressed any opinion on the clauses of the Bill by which it is proposed that these principles should be carried out. But the scheme of the Bill now holds the ground, and it is the duty of those who object to any of the provisions to seek its amendment in Committee. The Bill has been referred to the Grand Committee on Law, a large Standing Committee of the House of Commons, by which each clause will be separately examined. This Committee will report the Bill to the House, with any amendments which may have been approved by it. The minutes of the proceedings of the Grand Committee will then be ordered to be printed, and the Bill will be taken into consideration by the House after an interval of some days. At this stage the Bill may be refused consideration, or may be amended, but the House is generally impatient of many amendments, and it is therefore essential that all amendments should be moved in the Grand Committee. It will not be advisable to bring on more than one or two on the report stage. After the report stage comes the third reading, when a Bill may be opposed and even in rare cases rejected; and lastly, it has, of course, to pass all the stages again in the Lords before it becomes law.

In view of the emergency thus created the President of the Council of the British Medical Association has called a special meeting of the Council on Wednesday, March 21st. The various proposals for legislation which have been made by the Midwives Bill Committee from time to time have been carefully considered by the Parliamentary Bills Committee and the Council, and the nature of the provisions which should be embodied in any legislation that Parliament might be induced to sanction has been laid down. These provisions were for convenience embodied in the form of a draft Bill. This draft has twice been before the Branches of the Association, and the alterations suggested by them have been considered by the special subcommittee of the Parliamentary Bills Committee, and embodied in the draft which was subsequently approved by the Committee, and by the Council, at its special meeting on March 10th, 1899. Many of the alterations suggested by the Association have

been endorsed by the General Medical Council, and have finally been accepted by the promoters of the Bill. Others remain over, and it is intended that a meeting of the special Subcommittee should be held before the special meeting of the Council next week to consider the amendments which should be moved in the Grand Committee on Law.

The Midwives Bill Committee of the General Medical Council was reappointed last June to watch any further legislation; and, as will have been seen by the report of the proceedings published last week (p. 587), the Executive Committee of the Council, at its meeting on February 26th last, passed a resolution representing to the Lord President of Council that in any such Bill provisions requiring the midwife to apply for qualified medical assistance in every case which presented symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn child were imperatively necessary. It does not appear that such provisions exist in the Bill now before the Grand Committee of the House of Commons, and there are other respects in which the Bill stands in need of amendment. We should therefore be glad to hear that the Midwives Bill Committee of the General Medical Council has been called to meet at an early date. We understand that Mr. Horsley is taking steps with this object. The members of this Committee are Sir Christopher Nixon, Dr. Glover, Mr. Horsley, and Dr. MacAlister; the late Sir Richard Thorne was its chairman.

There is no time to lose. The Grand Committee may begin its sittings in the course of a week, and medical men interested in the Bill should at once write to their representatives in Parliament, expressing clearly their opinions of the Bill. Members of the Grand Committee should be given all necessary information on the subject by written communications from their medical constituents.

CHILDBIRTH AND FACTORY LABOUR.

I.

IN 1890, at the Congress at Berlin, the fifteen nations represented adopted a resolution to the effect that a woman should not be permitted to go back to work in a factory until four weeks had elapsed after her confinement. In this country the Factory and Workshops Act, passed in the following year, enacted (Section XVII) that an occupier of a factory or workshop shall not knowingly allow a woman to be employed therein within four weeks after she has given birth to a child. Legislation on similar lines has been adopted in Belgium, Holland, Germany, Austria-Hungary, Switzerland, Norway, and Portugal. In France several attempts have been made to pass such a law, but hitherto without success.

In 1892 Dr. George Reid, Medical Officer of Health for Staffordshire, communicated to the annual meeting of the British Medical Association the results of an investigation which he had made into the effect on the infant death-rate of the practice of mothers leaving home during the day to work in factories. As a result of the discussion which then took place the matter was further considered by the Parliamentary Bills Committee, and a memorial was presented to the then Home Secretary (Mr. Asquith) setting out the facts collected by Dr. Reid, and making two practical suggestions: (1) That women should not be allowed to return to their work in factories or workshops until a period of three months after confinement had been completed; and (2) that local authorities should be empowered to make proper provision for the due care and feeding of the infant during the hours of work of the mother after this period of compulsory abstention from all work had expired, on a system which, as far as practicable, should be self-supporting by payments from the parents. The memorial received a fairly sympathetic hearing from Mr. Asquith, but nothing was done by him, nor has anything been done by his successor.

It has seemed well to give this short historical summary because the subject has been allowed to drop a little out of mind, and because the promise by the Government of a new Bill to amend the Factories and Workshops Act may possibly afford an opportunity of pressing the matter on the attention of Parliament. It is probable that most of our legislators are still living under the influence of the impressions produced by the statements current in their youthful and receptive days as to the enormous increase of population in England, Wales, and Scotland. This is no longer the case. Those who give even a cursory attention to such questions know that the birth-rate is declining, and that we appear to be approaching the condition of France, where the population is stationary or even decreasing owing to an excess of deaths over births. To some people this decline in the birth-rate appears to be a good thing, to others a very serious evil. Whichever view be taken, however, we suppose that everyone will be agreed that if the children are born they ought to be given a fair chance of reaching maturity and of attaining a robust constitution.

Unfortunately existing legislation does not seem to be capable of achieving what was expected of it. On the contrary, the most recent statistics collected by Dr. Reid, and published by him in his last annual report,[1] indicate that matters are even getting worse. His method of inquiry is to classify the artisan towns in the county in accordance with the relative proportion of married women engaged in factory work, and to compare the deaths of children of 1 year and under in the groups of towns according as there are many, few, or practically no women engaged in factory work. He is now able to present the statistics for two period of ten years—1881-90, 1889-98. In the first ten years the figures were 195, 166, and 152 respectively; in the second period of ten years they were 208, 176, and 166 respectively. These statistics show, as far as figures can, two things: First, that more infants die in towns where the women are largely engaged in factory work than in those in which they are little or not at all engaged in this way from home; and secondly, that existing legislation has failed entirely to check this excessive mortality. This failure may have been due either to the law not being enforced, to the period of compulsory abstention from work being too short, to the absence of proper provision for the tending of infants during working hours after their mothers have gone back to the factories, or, as is possibly most probable, to a combination of these causes, the last being the predominant one.

[1] Annual Report of Medical Officer of Health, Staffordshire County Council, for 1898.

THE STAMPING OUT OF MALARIA.

At a meeting held at the Colonial Institute on March 13th, Dr. Patrick Manson, C.M.G., delivered an address in which he dealt with the necessity of studying tropical diseases and the possibility of their extinction. Malaria, he said, was the great disease of the tropics. Five millions died annually of fever, principally malarial, in British India alone. That figure, heavy as it was, conveyed no idea of the amount of suffering, invalidism, and poverty entailed on India by this one disease. Over one-third of our soldiers there, European and native, suffered annually from malaria. If this proportion were applied to the whole civil population, some idea might be got of the aggregate amount of suffering malaria means to India. Things were still worse in other tropical countries. Apart from humanitarian considerations, malaria doubled the cost of government. A table prepared for Dr. Manson by Mr. Turton, of the Colonial Office, showed the invalidings and deaths during the year 1896 among the Government servants in one of our West African Colonies—the Gold Coast. Of 176 European officers, 25 were invalided to Europe and elsewhere, 10 died within the Colony, 5 of those invalided died after leaving the Colony in consequence of diseases contracted there; thus between death and invaliding the services of 28.4 per cent. of the Colonial officials were lost to this Government. The death-rate was 85.2 per 1,000, or about 1 in 10. And all this could be prevented. Malaria could be stamped out in a community by all-round free drugging with quinine. After a month or two the supply of infected blood would have come to an end, and consequently there would be no more infected mosquitos. That was one way of exterminating malaria. Another was to cause all malarials to sleep under mosquito nets or in mosquito houses. A third was to cause the uninfected to live in mosquito-proof houses and sleep in mosquito-proof beds. By so doing they could not become infected, and the parasites would tend to die out for want of fresh hosts. A fourth way was to kill by different kinds of culicicides all mosquitos entering the house. A fifth method was to destroy the mosquito larvæ before they reached maturity and the biting stage. This could be done by drainage, or by poisoning the mosquito pools. Lastly, malaria might be stamped out by the combined application of all these methods, and it was probable that such a combination would be the method adopted in the future. The Colonial Office was alive to the practical importance of the recent developments of malariology. It had already, in conjunction with the Royal Society, sent a commission to Central Africa and to the West Coast to study malaria on the spot; it had now authorised him to make, in conjunction with the London School of Tropical Medicine, an experiment on the practicability of preventing malaria in intensely malarial localities by easily applied means. Dr. Manson went on to describe the experiments about to be instituted, A hut, such as would be suitable for the European to live in in tropical Africa, was to be erected in the most malarial part of the Roman Campagna. The hut was to be furnished with wire gauze door and window screens and other devices to render it mosquito-proof. Two skilled observers and their two servants were to live in this hut from May till October of this year—that is, during the entire malarial season. They would be at liberty to go where they liked during the day, but from an hour before sunset to an hour after sunrise they were to be in the hut. If they escaped fever, this would be absolute proof that by very simple and inexpensive means the human body could be protected from the malaria germ, for, as regards the spot in the Roman Campagna selected for the experiment, to sleep there unprotected but for one night was regarded by the Romans as tantamount to contracting a malarial fever of a virulent type. The second experiment was to be as follows: Laboratory-bred mosquitos, that is, mosquitos raised from the egg in the laboratory, and which had had no opportunity of picking up malaria germs in the haunts of malaria, were to be fed in Rome on patients in whose blood the benign tertian malaria parasite had been ascertained by the microscope to be present. These mosquitos were to be transported to London, fed on vegetable juices till such time as it was known that the malaria germs had arrived at the venom gland. The insects were then to be liberated in a small mosquito house in which one or more Englishmen who had never left this country were to sleep. It was expected that in about ten days after this these Englishmen would develop malarial fever, and that the malaria parasite would be found in their blood. There was no danger from this experiment, as the type of malaria parasite it was proposed to experiment with was not virulent, and was easily killed by quinine. Similar experiments had been successfully made before, so that for the malariologist positive results, provided the proper conditions were complied with, was a foregone conclusion. But the experiments had never been combined in the crucial way proposed, or carried out in a way so dramatic and so well calculated to carry conviction to our countrymen at home and abroad. Should the results be such as was confidently anticipated, they would encourage the Colonial Office to go forward in the direction now indicated. Volunteers had already been secured as subjects for the experiments. Dr. Manson concluded with an earnest appeal for public support for the School of Tropical Medicine as an institution of national importance.

MEDICAL STUDENT VOLUNTEERS.

We have received a communication from a correspondent who modestly hides his identity, drawing attention to a letter of complaint which has appeared in a daily paper as to the duties assigned to medical students who have volunteered for service as hospital orderlies. One of these gentlemen on joining at Woolwich had, it was stated, been set to scrub floors and clean windows; another was set to sweep out an officer's room, and was given sixpence by the officer's wife. It is added that "members of the Ambulance Corps, largely made up of artisans and small tradesmen, appear to be exempt from the infliction of such labours, and for some inscrutable reason, apparently claim a higher status than their comrades in the Royal Army Medical Corps." We can quite understand that these young men, who have volunteered from patriotic motives which everybody must admire, should feel much disappointed at being set to do the work of charwomen, but the reason is not "inscrutable." The St. John Ambulance men have passed an examination in nursing, for which they are able to produce a certificate, whereas the medical students are unable to show anything of the sort. The result is that the St. John man with his certificate, though perhaps an artisan and of no particular education, is a "first-class orderly," whilst the medical student, who may by chance be in his fifth or sixth year, ranks as "third-class orderly." On the other hand, the medical student may be at the beginning of his first year in medical work, and therefore absolutely ignorant of nursing. In the R.A.M.C. the third-class orderlies have to clean the windows and do the fatigue work generally. These things will probably soon right themselves in Africa, and even now the St. John of Jerusalem sergeant ranks as corporal in the R.A.M.C. It is quite easy for a medical student in the V.M.S.C. to get a single stripe, or even two stripes, and a single stripe protects him from all fatigue duty. If a medical student has been for a full year, or say two years, in the V.M.S.C. without getting a stripe he ought to have got one; probably he has been a "slacker." Going from the V.M.S.C. into the R.A.M.C. he takes his stripe, and holds a good position. So it comes about that cleaning windows and

fatigue work may be part of the duty of a stripeless man who enlists in the service of the Empire. He must set to work to get his stripe.

SUMMER MOBILISATION.

It is announced that it has been definitely settled to mobilise 50,000 militia and volunteers this summer on Salisbury Plain for special training. The camping season opens on May 1st, and continues throughout the summer months. In consequence of this decision, it is time to inquire what are to be the medical arrangements for such a large force, in the absence of the regular medical service abroad. The volunteers, of course, will have their own medical officers; and we shall be curious to note the position which that part of them belonging to the Army Medical Reserve will occupy. Will they take the place of the regulars, as they are nominally supposed to do, or will they serve with their regiments or corps? The chief difficulty will be with regard to the militia, which have no effective medical establishment, regimental or unified. Is this important branch of the army, which we are told is to be made effective for field service, to remain without any medical organisation? It is time the question was asked and pressed on the attention of the War Office.

AN OUTSIDE LIGHT ON THE ROYAL ARMY MEDICAL CORPS.

The current number of *Blackwood's Magazine* contains an interesting article in which full justice is done to the admirable work of the Royal Army Medical Corps in South Africa. The writer truly says that while there have been many details of command and administration which apparently deserve to be criticised, "there is only one military department which has proved itself quite equal to the work that it has undertaken, in whose operations it has been impossible to detect the slightest flaw, and in which there has never been any friction or shortcoming." He adds that the medical service of the army has attracted the cordial admiration of Continental, and particularly Russian, military surgeons by its performance of duty in the field and the completeness of its arrangements. We are glad to note that our contemporary heartily approves of the changes in the matter of title and so forth which have so largely contributed to make the Royal Army Medical Corps the efficient organisation it is proving itself to be. We learn, however, with some amusement that the reform in its condition was brought about chiefly by an article published in *Blackwood's Magazine* in December, 1896. This startling claim would almost persuade us to believe that "Maga" was ignorant of the existence of the British Medical Journal but for the internal evidence the article abundantly affords of a close acquaintance with our pages. This, however, is a small matter. The important part is that a lay periodical of the popularity and influence justly belonging to *Blackwood's Magazine* should so fully acknowledge the splendid services of the Royal Army Medical Corps and its claims to the unstinted gratitude of the State and the whole British people. Our contemporary has something to say on the attitude of hostility towards the medical officers of which an example is set in certain high quarters. The passage is so much to the point that we make no excuse for quoting it: "A very ill-advised commander in the English army once said, not so very long ago, that the medical corps 'were not soldiers, but only attendants upon soldiers.' It may be perhaps difficult to define what special qualifications or employments make a man a soldier; but if entire self-abnegation in the cause of duty, if patient endurance of fatigue and hardship in the course of military operations, if the profoundest disregard of danger in the battlefield, if the fact of their officers and men being large sharers in the death and injury that smite the *personnel* of an army, are any of the conditions that mark a true soldier, the Royal Army Medical Corps can say, 'No men are more soldiers than we.' This must be iterated again and yet again; for, in the face of these very palpable facts, there can be no doubt that in certain military quarters—and those, so far, very influential quarters—there is still a deep-rooted feeling of animosity against the medical service. Or is it possible that the feeling is rather one of jealousy, because that service has been so eminently equal to a great occasion when the purely combatant administration has, to say the least, not been too successful? Specific army status has been granted to the medical department, but this has not apparently always carried with it the recognition that is due." It would scarcely be good taste for a medical journal to speak so plainly as this. But it is the simple truth, and we are glad to see it so frankly acknowledged by a journal which cannot be suspected of any antimilitary bias. Surely, after the deeds of heroism done by so many officers of the Royal Army Medical Corps which have been recorded in the daily press, the War Office will no longer persist in branding the officers of the Royal Army Medical Corps as "non-combatants."

THE PREVENTION OF CONSUMPTION.

The report presented by the Council of the National Association for the Prevention of Consumption and Other Forms of Tuberculosis to the annual meeting, a brief account of which appears elsewhere, is hardly calculated to encourage the hopes of enthusiasts who may have looked for great immediate results from the crusade which was initiated a year or two ago. The formation of branches goes on, but the number of subscribers is still small, and money comes in slowly. The generous donor indeed is not wanting, but it is too clear that the work of the Association is crippled by want of funds. Efforts have been made to enlist the co-operation of the public in the repression of spitting in public places, and we gather from the report that an appeal has been made to railway companies to place notices in their carriages calling attention to the danger of this filthy practice. In response to numerous inquiries information has been collected as to existing and prospective sanatoria in the United Kingdom, and a complete list of sanatoria both here and abroad is being prepared. As one result of this investigation it appears that with the exception of the hospitals for consumption there are extremely few beds in sanatoria in this country available for persons unable to pay for the accommodation, although certain towns, as Liverpool and Bradford, and a few counties, are promoting such sanatoria for the poor. There has, however, been a good deal of difficulty in procuring sites for such sanatoria, owing to the fear in the public mind that they would be sources of danger to the neighbourhood. The Council has, through the medium of the public press, published a resolution that from well-conducted sanatoria there is no danger whatever of infection to those living in the immediate vicinity. The Council appears to have been fairly active in the distribution of leaflets, and of one or two of these a considerable number has been sold. Of the quarterly journal, *Tuberculosis*, the first number of which appeared in October, some 4,000 copies have been distributed and sold. While recognising the difficulties, owing to scantiness of the funds at present available, in producing a journal, the Association owes it to itself not less than to the public to issue something better, both in substance and in appearance, than it has yet done. A journal of this kind to be of real use should gather up information as to what is being done for the prevention of tuberculosis and for the advancement of knowledge in regard to the disease throughout the world. So far the journal has consisted chiefly of reports of meetings held in the United Kingdom, most of which had already appeared in the public press. In a paragraph of the report it is

stated that since May last newspaper cuttings relative to tuberculosis have been systematically collected and pasted into books kept for that purpose; in this way, it is said, some very valuable information has been collected which is open to all members who may care to pay a visit to the central office for that purpose. We would respectfully suggest that a more practical way of making this very valuable information open to members would be to publish it in the journal, the proper function of which is to supply such information and not to be a mere record of what has been done. We venture to offer these criticisms on the proceedings of the National Association for the Prevention of Consumption not out of any spirit of hostility to its aims or to its methods. Its aim is one of the highest and most important that could animate any body of men. Its methods are based on a sound principle, for no movement for the improvement of the public health can succeed without the active co-operation of the public. We most heartily wish to see the Association victorious in the campaign upon which it has entered. But if victory is to be achieved the war must be carried on with more vigour.

THE RATING OF HOSPITALS.

A deputation representing the hospitals in Great Britain waited on Mr. Chaplin on March 7th to urge on him the propriety of granting by Act of Parliament to hospitals throughout England and Scotland that exemption which the Irish hospitals now have, and which all hospitals used to enjoy until in 1865 it was accidentally discovered, during the arguments on a case totally unconnected with this question, that such exemption rested on no legal foundation. Since that time they have been rated to the poor but very unequally, some being entirely exempt by private legislation, others partially so; some being leniently dealt with by the rating authorities, while the greater number pay exactly on the same footing as premises maintained for business purposes. The arguments in favour of the proposed exemption were urged with great power by Mr. Burt, the Chairman of the Central Hospital Council for London, and supported by the Duke of Norfolk (Postmaster-General), Sir Savile Crossley (Honorary Secretary to the Prince of Wales's Fund), Sir Trevor Lawrence, and Lord Glenesk; and other speakers of weight were ready had Mr. Chaplin's time admitted of their being heard. The arguments in favour of the prayer of the deputation were, first, that the hospitals save the rates a sum far exceeding that from which relief was sought; secondly, that such relief would enable them so to extend their operations that over 4,000 more persons would be admitted in a year in London only; thirdly, that the exemption would add so little to the burdens borne by the rest of the ratepayers that the addition would hardly be felt, even by the poorest of them; fourthly, that the exemption is given in Ireland and in most Continental countries; fifthly, that other institutions not more, and many less, beneficial to the public are already exempted; and, finally, to crown this array of reasons, the strong *argumentum ad hominem* was brought forward that Mr. Balfour had been willing to insert a clause to this effect in the Bill for London government, but technical reasons rendered such a clause inadmissible. Mr. Chaplin's reply to this array of arguments was of that orthodox "non-committal" type to which memorialising deputations are so well accustomed. He expressed the most benevolent sentiments and promised carefully to consider the arguments, and bring them before his colleagues. All this is common form. Then he proceeded to put before the deputation what he called the other side of the case. There was our old friend "the thin end of the wedge." "If they were to exempt hospitals, where were they to stop?" But Mr. Chaplin must have known that the rating of hospitals is purely accidental, never contemplated by Parliament, and only of very recent date. If hospitals were free of rates from the dawn of English history to the year 1865 without any harm to anyone, there can be no great danger in freeing them now. Next Mr. Chaplin made the discovery that the patients in a hospital are not all inhabitants of the district, and that therefore "the relief would not be wholly to the rates of the district in which the hospital is situated." But in London this small anomaly must be largely neutralised by the extent to which patients from all parts of the town go into hospitals, not because they are in their own neighbourhood, but because they are recommended there. So that if at Guy's you find a patient who lives near St. Thomas's, you are pretty sure to find the reverse at the latter hospital. The whole anomaly could be removed by equalising the rates. In the country no such inequality exists. Then the bogey of the Royal Commission on Local Taxation was produced, and it was hinted that it would be well to wait till "at no distant date" that body should report. But what inconvenience would accrue from extinguishing this very minute bit of local taxation before the main question is formally reported on Mr. Chaplin did not say. Nor did he explain how Mr. Balfour came to consent to the insertion of the clause above referred to if the subject were new to the Cabinet, and exposed to all these grave objections. On the whole, the object of the memorial seems so desirable, so many members of both Houses (including, as above noted, a member of the present Government) are in its favour, and the public are so alive to the needs of our hospitals and to the services which they render, that we may be certain that the movement will succeed, if not in the present session, yet "at no distant date," as Mr. Chaplin put it.

MORTUARIES IN CONNECTION WITH CEMETERIES.

The custom of keeping the bodies of the dead for several days after their decease is from a sanitary point of view one decidedly more honoured in the breach than in the observance. Even in the houses of the well-to do the practice is always unpleasant, and may possibly be a source of danger. In the dwellings of the poor, where bodies are often kept in rooms tenanted by the living till decomposition is far advanced, it is still more objectionable; and where it is considered necessary to "wake" the dead, it is apt to lead to unseemly revelry and disorder. Dr. Carline of Lincoln has been strongly impressed with the evils of the custom, and he has accordingly suggested that mortuaries should be provided in connection with cemeteries where the bodies of the dead may be kept till the time for burial arrives. At the Health Exhibition held in Lincoln last summer, during the Congress of the Sanitary Inspectors' Association, a design by Mr. W. G. Watkins for a public mortuary in conjunction with cemetery chapels, based on Dr. Carline's suggestions, was exhibited. The idea is that the body should be conveyed to the mortuary as soon as possible, preferably in the evening, and placed in a shallow coffin, the temperature being kept at freezing point. The mortuary consists of the following parts: The mortuary proper, a room where the bodies of the dead are kept; a refrigerating apparatus, disinfecting and undertakers' rooms, all underground; above there should be a chapel, with several subsidiary chapels. When the friends wish to take a last look at the departed the body is placed on a bier and hoisted up into one of the chapels; thus, on entering, they see the body lying decently in a small chapel with stained-glass windows in a befitting environment; when they leave, the body is again removed to the mortuary. Where expense is no object the body may be retained altogether in the small chapel, and the arrangement should therefore be such that the refrigerating apparatus can be connected to any of these. There should be a number of subsidiary chapels sufficient to meet the greatest demand that is likely to occur. The undertakers should discharge their functions in the mortuary, and the funeral procession might start from the

chapel where the service has been held. In order to avoid associations of a repulsive character, it is essential that there should be no *post-mortem* room in connection with the mortuary. We think Dr. Carline's idea excellent from a sentimental, not less than from a sanitary, point of view. Plans embodying his suggestions for a mortuary in conjunction with cemetery chapels were published in the *Building News* for February 2nd. It is interesting to note that a proposal of a similar kind has recently been submitted to the Paris Municipal Council by M. Fortin. He suggests that in each arrondissement mortuary chambers should be established where the bodies of poor people might be kept while awaiting burial. Some time ago mortuaries were established in some of the Paris cemeteries, but these do not answer the purpose for which they were intended. All the bodies have to be placed in one room under the charge of a single watchman. It is thus difficult to pay the last offices to the dead with proper regard for the feelings of the living. The proposed arrondissement mortuaries will each have four rooms, a number which statistics are said to show to be sufficient. Apart from what may be called the sentimental aspect of the question, the mortuaries will be a safeguard to the public health in cases of death from contagious diseases.

THE HUGHES BEQUEST FOR LONDON HOSPITALS.

PROFESSOR D. E. HUGHES, the eminent electrician, has left a sum—estimated at about £400,000—to trustees to form a fund for the benefit of certain London hospitals. The hospitals named in his will are the Middlesex, the London, King's College, and Charing Cross. The bequest is charged with some life interests, which will reduce the amount at present available to between £300,000 and £350,000, but the testator's "earnest desire and hope" was that "after the period of twenty-one years shall have expired the four hospitals named will voluntarily add to their respective funds as capital one-third of their income from his bequest" Meanwhile, for the twenty-one years named, one-half of the income only is to be divided among the four hospitals and the other half added to the capital. The treasurers of the four hospitals are to be the trustees of the fund; they are to retain the capital, so far as may be, in its present investments, to satisfy the life interests, and then to share the income equally. In the very unlikely contingency of any of the four hospitals falling into such decay as not to keep in continuous use for patients more than 100 beds, such hospital shall cease to be a *cestui que trust* and the remaining three treasurers shall choose another hospital in its place. It is impossible not to feel some little regret that Professor Hughes did not devote some part of his wealth to the advancement of those sciences upon which practical medicine rests, for a bequest would have been a godsend to the University of London at the present moment, not only intrinsically but as an example to testators. But remembering the proverb not to look a gift-horse in the mouth, we can only praise the wise provisions of the bequest. It will be observed that the clause about capitalising a third of the income of the bequest 21 years hence is merely an expression of the testator's own views, and is left to the discretion of the managers of each hospital. It seems unlikely that the trustees of the fund will be in a position to carry out any such suggestion. Allowing that the principal will ultimately give to each hospital £100,000, and that it is invested to return an income of 4 per cent. (which is a very liberal supposition, and only tenable on the condition that the money is invested in securities improving in dividends) this will not suffice, at any of the hospitals named, to cover the margin between ordinary income and ordinary expenditure, and it must be recollected that the necessary expenses of hospitals are continually growing, and there is a continuous call for the enlargement of their operations. It would be very poor finance to capitalise income without any real surplus. This bequest, however, will be a welcome addition to the resources of four institutions which are now maintaining an arduous struggle. Most of our London hospitals have too scanty an endowment; ampler invested funds would render them more capable both of improvement and expansion, though it is undesirable that they should be free from all dependence on annual subscriptions and donations. Professor Hughes's charitable and thoughtful bequest is an unmixed benefit to the voluntary hospital system. We may conjecture that the foundation of the Prince's Fund, by directing public attention more strongly to the needs of our hospitals, will tend to encourage such bequests.

THE HOUSING BILL OF THE GOVERNMENT.

MUCH criticism of the Bill introduced by the Government to amend Part III of the Housing of the Working Classes Act, 1890, was elicited on further consideration of a report by its Housing Committee to the London County Council at its last meeting. Dr. Collins maintained that while the new power it was proposed to give in the way of taking land for housing purposes outside London was a welcome reform, the measure introduced by the Government fell far short of the expectations raised by the promise of housing legislation in the Speech from the Throne. The knowledge acquired by the County Council during the ten years which have elapsed since the last Act was passed has been mainly in connection with clearance schemes under Parts I and II of the 1890 Act. The second reading of the Bill has, we understand, been postponed for a week or two: but abundant evidence is accumulating to show that those who desire a real and radical measure of reform directed against slum owners will seize the occasion to formulate far-reaching amendments.

OVERCROWDING IN LODGING-HOUSES.

A FEW weeks ago we called attention to what practically amounted to an evasion by the Vestry of Bethnal Green of the by-laws directed against overcrowding and other insanitary conditions so likely to obtain in houses let in lodgings to members of more than one family. The worst feature of the case was that the Local Government Board had appeared to connive at the evasive action of the Vestry by confirming a by-law which purported to give the Vestry discretionary power as to which houses of this class should be registered and which should not. We may gather from a report of the Public Health Committee of the London County Council that the beneficent action effected by that body in clearing away one of the worst plague spots in London—the "Jago" area—is likely to be neutralised to some extent by the overcrowding which is permitted to occur in the adjacent tenement houses. Both owners and tenants in Bethnal Green have discovered that the Vestry allow their by-laws to be inoperative and do not do anything to stop overcrowding; and, moreover, the owner uses this neglect to demand higher rent, while the tenant overcrowds in order to be able to pay the increased demand. That great improvement follows the registration and supervision of lodging-houses is shown by the experience of the vestries of St. George the Martyr, St. Giles, and Camberwell; and the Health Committee of the Council fail to see why what is practicable in these districts should remain impracticable in Bethnal Green. They accordingly advised, and the Council last Tuesday approved the advice, that a deputation should wait on the President of the Local Government Board to urge upon him such an amendment of the law as will render it obligatory upon sanitary authorities not only to make by-laws, but to register and regulate houses let in lodgings in their districts.

THE DEATH OF MR. G. J. SYMONS.

IT is with great regret that we record the death of Mr. G. J. Symons, F.R.S., the originator of the British rainfall organisation. Mr. Symons, who was in his 62nd year, was attacked by hemiplegia on February 14th, and never rallied. He seems to have felt an interest in meteorology from his earliest days, for when only 16 he offered himself as an assistant to Mr. Glaisher, and actually obtained employment as one of the Registrar-General's meteorological reporters when only 19. For some years he worked under the late Admiral Fitz-Roy, but soon specialised his work, confining it to the study of rainfall, the importance of which in connection with the increasing demand on the water supply by the growth of the population and by improved sanitation, as well as the growth of industry, he was one of the first to appreciate. The first annual volume of *British Rainfall*, which contained records from 163 stations in England and 5 in Wales, was published in 1860; volumes have appeared annually ever since. The last volume contains records from 3,404 stations, 2,545 in England, 237 in Wales, 436 in Scotland, and 186 in Ireland. The fact that records from some 3,000 stations were furnished by voluntary workers is a sufficient proof that Mr. Symons was endowed not only with enthusiasm and energy, but possessed the most resourceful tact. He was, indeed, a thoroughly genuine character, and was regarded with feelings akin to affection by all with whom he was brought in contact. He was elected a Fellow of the Royal Society in 1878, was President of the Royal Meteorological Society in 1880, was Secretary up to the close of last year, and had been elected President for this—the jubilee year of the Society—when he was struck down by his fatal illness. He was for many years an active member of the Council of the Sanitary Institute, and in 1897 was awarded the Albert Medal of the Society of Arts for the services rendered to engineers by his work in connection with the British rainfall.

LEPROSY IN NEW SOUTH WALES.

DR. J. ASHBURTON THOMPSON'S *Report on Leprosy in New South Wales during 1898*, which has been received recently, contains as usual many points of interest. In the first place, it may be stated that on January 1st, 1898, 13 persons were under detention at the Little Bay Lazaret. During the period under consideration 9 persons were reported under the Leprosy Act of 1890, but of these 4 only were found to be suffering from the disease. After deducting deaths and one man, a Chinese, who was allowed to leave the Colony, the number of patients remaining in hospital on December 31st, 1898, was 14; of these 10 were whites, 8 of whom (including 2 females) were natives of New South Wales of European descent; 3 of the patients admitted during 1898 came under this category. Altogether the total number of whites, natives of New South Wales of European descent, admitted since 1883 amount to 18, as opposed to 33 Chinese during the same period. Of course there have been, and are still, other white inmates of European descent in the lazaret. If stress is laid on these figures, it is to dispel the notion that leprosy is practically confined to the Chinese, a view which is invoked in favour of the theory which would attribute leprosy to the eating of fish. The clinical and etiological notes of the fresh cases contain many interesting details. The two Chinamen notified presented symptoms which were at first attributed to beri-beri. In the case of another Chinaman previously reported, the same diagnosis was made whilst the patient was under observation at the Sydney Hospital, some months before admission to the Coast Leper Hospital. Mr. John D. Gimlette, Residency Surgeon at Pahang, Malay Peninsula, has quite recently recorded a case of leprosy in a male Eurasian, whose condition had also been diagnosed at Singapore as beri-beri. This is a point of some importance, and worth bearing in mind. Among the cases reported during 1896 there was a Chinese woman, the first instance of a female of that race to be admitted to the lazaret. She had four children, ranging in ages from 3 to 9 years (a fifth, a female infant, was born at the time the case was notified, only survived for nine weeks). It is stated that all her family, including her husband (also Chinese) were in apparent good health. As to the three whites—natives of New South Wales—they were all males. Two of them came from Wollongong, a coast town south of Sydney. It was ascertained that an uncle of one of these patients died of a disease which might have been leprosy. Communication between male and nephew apparently extended over four years. Further, this uncle and the other Wollongong case, both journeymen butchers, had worked for the same master, and the latter some years after occupied the same bedroom as that used by the former. The third white case came from Gumedah, an up-country township, but he had previously been in other parts of New South Wales. Two other native white lepers had also come from the same place. Further, in all three white cases notified during 1896 the patients had never been out of New South Wales. The serum treatment on the principles laid down by Carrasquilla of Santa Fé de Bogota are given, and it was tested in a most thorough and painstaking manner by Dr. Frank Tidswell during a period extending from August, 1897, to June, 1898. Two patients were treated. Dr. Tidswell did not observe the "reaction" described by Carrasquilla. He noticed erythema, urticaria, and so forth, which were dependent on the use of horse serum as such, but no favourable effect on the disease. Reports of Carrasquilla's method obtained from the native medical men from Ecuador passing through London recently go to show that the high hopes of cure which had been held out by its author had once more been shown by inexorable time to be but vain things after all.

DAMAGES CLAIMED FOR ANTENATAL INJURIES.

ACCORDING to the New York *Medical Record*, the Supreme Court of Illinois has recently adjudicated in a remarkable case. An infant claimed damages for a deformity alleged to have resulted from injury to the mother before its birth. The mother, while pregnant, was injured in an elevator accident at St. Luke's Hospital, Chicago, her left leg being caught and crushed. When the child was born his left leg was deformed. The hospital authorities settled with the woman for her injuries, and then she brought suit in the child's name for 50,000 dollars damages for the deformity, which it was claimed was due to the same accident. The Court dismissed the suit on the ground that at the time of the accident the child could not be credited as a separate being capable of sustaining an action independent of the mother.

THE CAMBRIDGE APPOINTMENTS ASSOCIATION.

WHEN Tom Pinch, after his dismissal by Pecksniff, was looking over the advertisement sheet of a newspaper for a suitable vacancy, it may be remembered that he indulged in some philosophic reflections. "As I often think," said he, "the strange thing seems to be that nobody is suited. Here are all kinds of employers wanting all sorts of servants, and all sorts of servants wanting all kinds of employers, and they never seem to come together." Some excellent persons at Cambridge appear to have been struck by the same fact, and we gave some time ago an account of the manner in which they have set to work to correct this particular flaw in the universal frame of things. With this object they formed a body called the Cambridge Appointments Association, the function of which is to bring together employers and those wishing to be employed. The Association has now 134 Associates on its list, and the number is rapidly increasing. In regard to its relations with employers who have vacant posts

to fill, its progress has been very encouraging, and several young men have already got a start in life by its means. The Association issues a journal in which useful information is given as to openings in various walks in life, and lists of vacant appointments are published. The next issue of the *Gazette*, which is to appear on June 1st, will be of special interest to medical students, as it will contain an account of the valuable London scholarships open for competition to those entering the London hospitals in the ensuing winter session. We may add that the *Gazette* publishes notices of all public medical appointments, and particulars of more temporary engagements may be obtained at the office of the *Gazette*, which is at 73, Trumpington Street, Cambridge.

MIDWIVES BILLS IN THE UNITED STATES.

A Bill restraining the practice of midwifery in the city of New York by others than legally qualified medical practitioners was introduced in the New York State Legislature on February 19th. It provides that before July 1st the Board of Health of New York City shall appoint a Board of Examiners in Midwifery. The Board is to examine all candidates of not less than 21 years of age, and of good moral character, who may apply for a licence to practise midwifery, and on receipt of a fee of 10 dollars (£2) grant its certificate to those found qualified. Moneys obtained from this source are to be paid to the pension fund of the City Department of Health. Any person attempting to practise midwifery without such certificate shall be guilty of a misdemeanour punishable by a fine of not less than 250 dollars (£50), or more than 500 dollars (£100). The general feeling of medical practitioners is said to be against the Bill, which they consider unnecessary and objectionable. A Bill is also before the Iowa Legislature defining the art of midwifery, declaring the qualifications of midwives, regulating their practice in the State, and providing penalties for violation of the Act. The *Iowa Health Bulletin* says that the measure is one which should become law. "It provides for the issuance of certificates to graduates of reputable schools of midwifery, and provides minimum requirements for such schools. It also provides that non-graduates shall receive a certificate upon examination by the Board of Medical Examiners. The law would place under proper control and restriction a large number of women who, without any qualifications whatever, assume the responsible duty of midwives." The proposed enactment is almost identical with the law now in force in Illinois.

PILGRIMS AND VACCINATION.

The modern pilgrim travels in *trains de luxe*, and has no need to boil any penitential peas which he may carry in his patent leather boots; but he may still meet with adventures on his way to the shrine of his devotion. These, however, are of a comparatively unexciting character; for instance, instead of the knife of the robber, he may meet with the lancet of the vaccinator. This is what lately befell a party of 370 pilgrims from Marseilles who, headed by their bishop, were journeying to Rome. On arriving at Ventimiglia on the Italian frontier, the pilgrims were received by officials who invited them to consider themselves pestiferous persons, and submit to be quarantined unless they would consent to be vaccinated. With commendable forethought, the sanitary authorities had sent from Genoa a representative of the civil power in the shape of a delegate of the Government and six doctors armed with everything necessary for the performance of what our antivaccinist friend would call the "Jennerian rite." The delegate explained that as an epidemic of small-pox was known to be raging in Marseilles, no pilgrim could be allowed to proceed on his journey who could not produce a certificate or show marks of recent vaccination, or submit to be revaccinated. The pilgrims were not prepared for this particular ritual observance, thinking, perhaps, that vaccination during a fatiguing journey could hardly conduce either to their bodily or their spiritual welfare. They therefore decided to return to Marseilles. The real responsibility for the incident appears to lie with the civic authorities of Marseilles, who were duly informed of the intentions of the Italian officials, but failed to convey the information to the bishop. This is a year of pilgrimages, and arrangements are, we believe, being made for a number of such pious expeditions from this country. The story just related has a moral which may be commended to intending pilgrims from Hull or Leicester.

AN INSTANCE OF LONGEVITY.

It has been suggested that centenarians are increasing. Whether or not this is the case it would appear that more cases of longevity have been recorded of late years. A lady, the relative of a distinguished London physician, has just passed over to the majority after living 102 years and 9 months. Mrs. Mary Susan Curtis was born at Ipswich on May 17th, 1797. She was married on March 12th, 1820, and at the time of her death had been a widow for thirty-three years. Almost to the last she kept the use of her faculties, and even after she had passed her hundredth year she was often seen walking in places of public resort. During the last four years of her life she did not require any medical attention, except for accidents, until her fatal illness. She died from an attack of bronchitis which lasted only five days, leaving behind her children, grandchildren, and great grandchildren.

THE CHAIR OF MEDICINE AT EDINBURGH.

We are informed that Dr. Osler, F.R.S., Professor of Medicine in Johns Hopkins University, Baltimore, has sent in an application for the vacant Chair of the Practice of Physic in the University of Edinburgh. Dr. Osler is a graduate of McGill University, Montreal. The other candidates are all graduates of the University of Edinburgh, and in order of seniority as follows: Dr. John Wyllie (M.D. 1865), Dr. Byrom Bramwell (M.B., 1869, M.D. 1877), Dr. Alexander James (M.B. 1872, M.D. 1876), and Dr. G. A. Gibson (M.B. 1876, D.Sc. 1877, M.D. 1881). Dr. Osler is a Fellow of the Royal College of Physicians of London, while the other candidates are all Fellows of the Royal College of Physicians of Edinburgh.

A Bill prohibiting the use of tobacco by all persons under 18 years of age, and by all minor pupils in public schools, is now before the Iowa State Legislature.

The honorary degree of LL.D. will be conferred on Dr. C. D. F. Philips, of London, by the University of Edinburgh at the graduation ceremony of April 14th.

The Croonian Lecture before the Royal Society will be delivered on March 22nd by Professor Paul Ehrlich. The subject of the lecture will be Immunity, with special reference to cell life.

Last Tuesday the London County Council proceeded to election of a new chairman in the place of Lord Welby, whose year of office has expired. Mr. W. H. Dickinson, who was formerly Deputy-Chairman of the Council, was elected to the office without opposition. Mr. Dickinson, though well versed in all departments of the Council's service, has especially distinguished himself by his endeavours to improve and extend the water supply of the metropolis

At the meeting of the Pathological Society of London for Tuesday, March 20th, the adjourned discussion on Professor Halliburton's paper on The Forms and Significance of the Proteids met with in the Urine will be resumed by Dr. Brodie. Among those who are expected to continue the debate are Dr. Herringham, Mr. Cammidge, Dr. Luff, Dr. Lee Dickinson, and Dr. Parkes Weber.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Bill.—It is the unexpected which has always to be taken into account in the House of Commons. No better illustration of this ever occurred than the second reading of the Midwives Bill on Friday last week. It was the accident of a series of accidents. Soon after midnight at Thursday's sitting the Bill went over with some others into Friday's list as a matter of form. The Government a few minutes later announced that they would alter Friday's business and take several Government Bills, including the Factory Acts Amendment Bill as the earlier business, so as to prevent the day being counted as one of the Fridays allotted purely to Supply. They were led to do this on account of the temporary illness of the Under-Secretary for War; otherwise the Army Estimates would have come on. When Friday's work began, the Factory Bill was not proceeded with, as strong representations against taking the measure at so short a notice had been made from both sides of the House. This made the bill of fare very light, and the Census Bill and some others were disposed of, and two money votes passed soon after 5.30 P.M. There remained on the paper some private members' Bills, and, as is the usual custom, the Government should have moved the adjournment at once. Mr. Souttar, however, was up, and moving the second reading of the Sale of Intoxicating Liquors to Children Bill. Mr. Goschen now moved the adjournment of the House, on the ground that it was an understanding that this should be done at the conclusion of Government business. Then the storm burst. The temperance advocates of all parties seized their opportunity, and member after member uttered his protest against using the Government majority against such a Bill. After a wrangle of three-quarters of an hour or so, Mr. Balfour yielded, and then on a brief discussion the Bill was read a second time without a division. Next came the Midwives Bill, and although Mr. de Tatton Egerton, who was in charge of it, was absent, Mr. Heywood Johnstone promptly availed himself of the opportunity, and moved the second reading. As it was not yet 7 P.M., and the dinner hour did not press, the members stayed in force. Mr. T. P. O'Connor, as last year, took the floor against the Bill, quoted figures to show how strong was the opposition of the medical profession, and concluded by moving the adjournment of the debate. Dr. Ambrose seconded this, and a division was at once taken when the adjournment was rejected by 127 to 56. Mr. Vicary Gibbs resumed the debate, and stated that the General Medical Council and the two Royal Colleges approved of the Bill. Dr. Tanner in reply stoutly affirmed that medical opinion was against the measure, and then after a few words in favour of it from Mr. Hazell the second reading was carried by 124 to 34, or by a majority of 90! The Bill was then referred to the Grand Committee on Law, and the House adjourned at 7.45. The division list is published at page 648. The chapter of accidents which ended in this result was as follows: (1) The usual work of Friday—Supply—was postponed on account of Mr. Wyndham's illness; (2) the programme for business placed on the paper for Friday was altered after the House met by the omission of the Factory Bill; (3) the usual course of adjourning at the conclusion of Government business was not followed; (4) there happened to be a strongly supported temperance Bill on the paper, and (5) by this means a large and specially favourable House was kept to enable the friends of the Midwives Bill cleverly to engineer the second reading of their measure. How unexpected it all was may be gathered from the fact that their hopes were so low that only a couple of hours earlier the promoters had introduced the Bill into the Lords in despair of its chances in the Commons.

The Standing Committee on Law consists of the following 68 members:

Asquith, Mr. (East Fife)
Atherley-Jones, Mr. (Durham N.W.)
Atkinson, Mr. (North Londonderry)
Barlow, Mr. (Frome, Somerset)
Bartley, Mr. (Islington)
Beach, Mr. (Andover, Hants)
Butcher, Mr. (York)
Carew, Mr. (Dublin)
Coghill, Mr. (Stoke-upon-Trent)
Commins, Dr. (Cork, South-East)
Cooke, Mr. Radcliffe (Hereford)
Cranbourne, Viscount (Rochester)
Cripps, Mr. (Stroud, Gloucestershire)
Curran, Mr. T. B. (North Donegal)
Davenport, Mr. Bromley- (Macclesfield, Cheshire)
Dillon, Mr. (East Mayo)
Egerton, Mr. Tatton (Knutsford, Cheshire)
Elliot, Mr. Arthur (Durham)
Evans, Mr. Samuel (Mid Glamorgan)
Fardell, Sir George (Paddington, S.)
Flynn, Mr. (North Cork)
Fry, Mr. Lewis (Bristol)
Gedge, Mr. Sydney (Walsall)
George, Mr. Lloyd- (Carnarvon)
Godson, Sir Frederick (Kidderminster)
Goulding, Mr. (Devizes, Wilts)
Graham, Mr. (St. Pancras West)
Greene, Mr. H. D. (Shrewsbury)
Haldane, Mr. (Haddington)
Harwood, Mr. (Bolton)
Healy, Mr. T. M. (North Louth)
Helder, Mr. (Whitehaven)
Hemphill, Mr. (North Tyrone)
Hill, Mr. Staveley (Kingswinford, Staffordshire)
Hobhouse, Mr. (East Somerset)
Jenkins, Sir John (Carmarthen Boroughs)
Johnson-Ferguson, Mr. (Loughborough)
Knowles, Mr. Lees (West Salford)
Lawrence, Mr. W. F. (Liverpool)
Leese, Sir Joseph (Accrington, Lancs)
Loder, Mr. (Brighton)
Loyd, Mr. A. K. (Abingdon, Bucks)
MacNeil, Mr. (South Donegal)
Meysey-Thompson, Sir Henry (Staffordshire)
Milward, Colonel (Warwickshire)
Monk, Mr. (Gloucester)
Morgan, Mr. Lloyd (Carmarthen West)
Mount, Mr. (Newbury, Berks)
Murray, Mr. Graham (Buteshire)
Norton, Captain (Newington West)
Pickersgill, Mr. (Bethnal Green)
Powell, Sir Francis (Wigan)
Pryce Jones, Colonel (Montgomery Borough)
Reid, Sir Robert (Dumfries Burgh)
Rentoul, Mr. (East Down)
Ridley, Secretary Sir Matthew White (Blackpool)
Roberts, Mr. Bryn (Carnarvonshire)
Scoble, Sir Andrew (Central Hackney)
Smith, Mr. Parker (Partick, Lanark)
Solicitor General, Mr. (Inverness Borough)
Spencer, Mr. Ernest (West Bromwich)
Stevenson, Mr. (Eye, Suffolk)
Ure, Mr. (Linlithgow)
Vincent, Sir Howard (Sheffield)
Wallace, Mr. Robert (Perth)
Warr, Mr. (Liverpool)
Woodhouse, Sir James (Huddersfield)
Woods, Mr. (Walthamstow)

To these, fifteen have been added for the consideration of the Midwives Bill, namely:

Ambrose, Dr. (Mayo West)
Bonsor, Mr. (Surrey, Wimbledon)
Flower, Mr. (Bradford)
Gibbs, Mr. Vicary (Herts, St. Albans)
Hazell, Mr. (Leicester)
Howard, Mr. (Tottenham)
Johnstone, Mr. Heywood (Sussex, Horsham)
Milbank, Sir Powlett (Radnor)
O'Connor, Mr. T. P. (Liverpool)
Owen, Mr. Humphreys (Montgomery)
Pilkington, Sir George (Southport)
Schwann, Mr. (Manchester)
Tennant, Mr. (Berwickshire)
Thornton, Mr. (Clapham)
Tritton, Mr. (Norwood)

Mr. Laurence Hardy (Ashford, Kent) has been appointed Chairman of the Grand Committee on Law.

The Census Bill was read a second time on Friday last week, and gave rise to a very short debate. The need for a quinquennial census was raised by several speakers, and it was very forcibly pointed out by Mr. Courtney that the movements of the population often made the estimates of the Registrar-General wide of the truth, and that consequently sanitary improvements were often delayed. The President of the Local Government Board agreed in the main with the advisability of a five years' census, but urged that the present Bill stood by itself, that in 1905 it would be possible to provide for it by a special Bill.

The Companies Bill is exciting a good deal of interest in the House, and a financial question concerning it on Monday elicited a reply from the President of the Board of Trade which seemed to indicate that he could not at present state what attitude the Government would take on any particular clause. Mr. Ritchie, however, went so far as to say that the Government hoped the Bill would be referred to a Grand Committee. Clauses II and III, which refer to pharmacy and medicine respectively, are sure to excite a good deal of criticism. They were originally in separate Bills, and were afterwards introduced into the Companies Bill by the Lord Chancellor, and there is no small risk of their being dropped out of the Bill in its progress through Committee.

The Teeth of Navy Recruits was the subject of a question last Monday, in reply to which the First Lord of the Admiralty stated that no statistics are kept of the men and boys rejected for bad teeth, but that the number might be as much as 25 per cent. Careful attention is given to the teeth of candidates as a test of health and suitability for service afloat.

THE WAR IN SOUTH AFRICA.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

[From our Special War Correspondent.]

Maritzburg, February 10th, 1900.

SLIGHTER BULLET WOUNDS.

Out-Patients.

The graver varieties of gunshot wounds naturally attract chief attention, but the slighter injuries have also a peculiar interest in the present campaign. The recoveries are, indeed, often so remarkable that the term "slight injury" is a very elastic one, and must be construed only as signifying that the patient is likely within two months to be able to return to active duty. Through the kindness of Major Browning, R.A.M.C., I was enabled to see all the cases of gunshot wounds in the Fort and Lower Barracks Hospital at Pietermaritzburg, the men being specially paraded for the purpose. The bulk of these had been wounded in the action at Colenso on December 15th, and were seen about four weeks later. Practically, and in civilian phraseology, they were out-patients. Many of the cases were simple flesh wounds that had healed at once and completely without any trouble. The extent of extravasation in some of these cases was noteworthy, and suggested that the injury was by no means confined simply to the parts traversed.

Flesh Wounds.

The hard cicatricial cord resulting from the passage of the Mauser bullet was often more marked when the bullet had traversed a large muscle. In a remarkable number of the cases the wounds were of the thigh and in the close proximity of the femoral vessels. The apertures of entrance and exit resembled each other absolutely. In a case in which the gluteal region was traversed on both sides the four wounds were all exactly alike. Cases in which great and persistent pain follows a flesh wound where the bullet has passed close to a nerve have been already mentioned in a previous letter. Such are very common, but were naturally not among the patients attending medical inspection.

Wounds of the Hand and Wrist and Foot.

In a few—a very few—instances fingers had been amputated, but more it seemed with the object of giving the most useful hand possible than because the injury of the bones of the finger or phalangeal joints was such that local recovery could not take place, or because any septic complications threatened. One man had three fingers wounded. The bullet grazed the skin over the back of the little finger, and just grooved the proximal phalanges of the third and fourth on the back. The wounds healed at once, but the power of extension was much impaired. Such grooving of the shafts of the longer bones appears to be rare; usually a fragment is broken off. The small bones of the carpus and tarsus are constantly drilled, without any apparent comminution, by the Mauser bullet. Thus, one patient showed a transverse wound of the anterior half of the tarsus; the wound healed throughout at once. In another case the entrance wound was over the middle cuneiform bone, and the exit through the os calcis. The bullet probably traversed the scaphoid and astragalus as well as the two bones named. There was no impairment of the utility of the foot. When the small diameter and the rapid rotation of the Mauser bullet are taken into consideration, it is of course not very remarkable that so little mischief is caused. The injury to the bones is scarcely greater than is involved in inserting a screw for fixing together the fragments in a bad fracture or a broken olecranon. So long as the wound is aseptic no harm should result, and in the great majority of Mauser bullet wounds the track is perfectly aseptic from the first apart from treatment.

Wounds of the Patella and Knee-Joint.

Many cases have been noted in which the patella has been cleanly drilled through by bullets. Such cases almost uniformly do well unless complicated with injury of the popliteal vessels or nerve. Extensive hæmarthrosis may form in the knee, but subsides without trouble. A man with a wound of the knee received about a month previously illustrated this. The bullet had passed through the patella obliquely, and made its exit on the outer side of the joint. No trace of the injury to the bone could be felt, and the joint, in which there had been considerable effusion of blood, was perfectly movable. In one case, at Wynberg, the bullet (a Lee-Metford) caused a transverse fracture of the patella. In this instance the entrance wound was in the popliteal space. I have not been able to hear of any other cases of fracture of the patella, though very possibly some will come to light hereafter. The contrast between the results of wounds of the knee-joint in this and previous wars will certainly prove very striking.

Heating of the Mauser Bullet.

A curious case of possible burn from a bullet was shown in a wound received by a corporal in the Queen's Regiment. The bullet (possibly a spent one) had struck the shaft of the tibia close to the crest transversely, and apparently had drilled the bone. There was a little irregularity of the bone, and a fragment may have been displaced. Close to the exit wound was a mark resembling a burn the extent and shape of a bullet. The patient's account was that he had felt himself hit and felt something burning his leg. On removing the puttie the bullet was found lying underneath it. The man stated that it was "red hot," a perhaps pardonable exaggeration. The bullet, at any rate, was too hot to hold in the hand without pain. The bullet was not a ricochet in appearance. Another patient gave a somewhat similar account. In this instance the bullet entered 1 inch to the right side of the eighth dorsal spine, and made its exit 3 inches below the clavicle on the same side, without traversing the thoracic cavity. The bullet dropped down inside the shirt and burnt the skin of the abdomen. The bullet was found inside the clothes a day or two later. Such accounts have to be received with a certain amount of caution, but undoubtedly the mark on the skin of the abdomen did resemble a burn. It is often supposed popularly that the temperature of bullets is greatly raised by the friction of the air. The supposition does not seem to rest on an experimental basis. Arrest of movement would develop heat, of course, but the prodigious range of the small-bore bullet shows that the friction is exceedingly slight. Markers at rifle butts are familiar with the fact that ricochet shots (which are recognised by the peculiar hum they make in passing through the air, and which often fall dead by the shelters or drop back off the target), if picked up at once are warm or even hot; but in such cases the movement has been violently arrested. It is possible that some heat might be developed by the arrest of the bullet by the clothing, but in such a case the missile cannot have been travelling with any great velocity. A ricochet shot loses the spin in its longitudinal axis that it acquires in passing through the rifled barrel, but as it glances off after the impact it may revolve on a transverse axis, turning over and over in its flight. It is therefore unlikely to make the small wounds of entrance and exit characteristic of the perfect smallbore bullet. Moreover, the nickel sheath of the bullet will probably split up as the bullet strikes the earth and bounds up or glances from it. It is occasionally stated that the cicatricial cord resulting from the passage of a smallbore bullet through soft tissues is due to the cauterising action of the bullet. Such a view is hardly to be taken seriously. The cicatrix resembles no doubt that which might be caused by passing a thick galvanic wire through the tissues, and then raising it to a temperature sufficient to burn the tissues. But the cicatrix of a bullet wound is not produced in that way. The velocity with which it passes through the tissues is too great to allow time for any cauterising action, even if the bullet were at white heat.

Injuries of the Head and Neck.

The injuries of the head and neck were not numerous. A private showed a wound of the side of the neck. The exit wound was into the pharynx, and the man spat up the bullet. Instances of the kind were numerous enough in the days of round bullets and low velocity, but are not likely to occur often with modern firearms. Another patient showed a transverse linear scar over the frontal sinus. The bone beneath was deeply and irregularly grooved, and evidently the anterior plate of the bone had been rather extensively fractured, be-

having like the inner table of the calvarium in cases of "gutter fracture." No trouble had resulted save rather profuse epistaxis, and apparently the injury to the supraorbital nerve did not threaten any evil consequences.

Wounds of the Thorax.

A private in the King's Royal Rifles was wounded at the action of Elandslaagte by a bullet which traversed the scapula and thorax. Some hæmoptysis followed the injury, but there was no other untoward symptom. The wound healed throughout at once soundly. Many of the patients with similar injuries, though apparently completely recovered, are troubled with shortness of breath on slight exertion, and this seems usually to be the case where both lungs have been traversed, even when there has been no pneumothorax—which is seldom seen—or hæmothorax, a complication which occurs pretty frequently.

Wounds of the Liver.

Another private, also wounded at Elandslaagte, had a more extensive wound. The bullet entered in front close to the right side of the sternum on a level with the seventh costal cartilage. The exit wound was seen 3 inches above the right sacro-iliac joint. The possibility of the wounds in such cases being caused by different bullets must always be taken into consideration, seeing that in a vast number of cases there is no appreciable distinction between the apertures of entrance and exit; but in this case there seemed no doubt that the bullet had traversed the right lung and the liver. The direction of the wound corresponded to the position the man was in when the wound was received. The wound had healed throughout without causing any trouble at all. In another case in which the bullet had probably traversed the upper part of the liver superficially, there had been some hæmatemesis, but practically no other symptom.

Wounds of the Intestine.

In the following case the small intestine was probably wounded. The injury was sustained at the action of Colenso on December 15th. The Mauser bullet entered close to the posterior superior spine of the ilium on the right side. The exit was on much the same horizontal level, between 3 and 4 inches from the umbilicus, and to its left. It is almost inconceivable, therefore, that the small intestine could have escaped injury. The man had been without any food for many hours before the wound was received, and stated that at the time the abdomen was collapsed. No vomiting followed the injury, but for two days there was much distension. This latter symptom gradually passed off, and recovery took place uninterruptedly. Four days after the injury the man, according to his own account, was able to walk about, having probably noted the absence of the medical officer and nursing sister. Whether true or not, it is at least possible, in the absence of any specific orders being given to the orderly to keep the patient in bed. For the best of hospital orderlies do not watch their patients with the unwearying and intelligent attention so characteristic of a good trained nurse. In this instance no operation was done. I can recall only a very few similar instances of recovery where the small intestine was presumably wounded. Cases in which the large gut was injured, as far as could be judged followed by complete recovery, are rare, but more common. Full statistics are needed before the question of operative interference in gunshot wound of the abdomen can be properly discussed, and these are not yet to hand. The impression at present seems to be that the results of laparotomy have not so far been encouraging. Everything depends, however, on the time that elapses between the infliction of the wound and the laparotomy. Hitherto, as far as I have been able to ascertain, the time that has elapsed has been so considerable that the chance of recovery was but remote. Very protracted operations are hardly feasible in a field hospital when there is any rush of wounded, and by the time that the patient has been transported to some place where there is opportunity for performing the exploration with due deliberation, the most favourable moment has passed, and the difficulties to the operator are vastly increased. Moreover, as the above and other cases show, recovery may take place in cases in which, if they were seen in civil hospitals soon after the injury, exploration would in most instances be advised.

Clinton T. Dent.

THE HOSPITAL SHIPS AT DURBAN, NATAL.

By Sir William Stokes, M.D., F.R.C.S.I.,

Surgeon in Ordinary to the Queen in Ireland, and Consulting Surgeon to the Field Forces in South Africa.

Pietermaritzburg, Natal, February 7th, 1900.

On February 2nd, accompanied by Major MacCormac, R.A.M.C., Senior Medical Officer, Durban, I visited and inspected the four hospital ships then stationed in the harbour at Durban. These were the *Nubia*, the *Maine*, the *Lismore Castle*, and the *Avoca*. The first and two latter of these have in an incredibly short time—about ten days, I heard—been converted from passenger and troop ships into floating hospitals. The transformation was effected entirely at Durban. In the first-named vessel 216 patients were accommodated, of whom 100 were convalescents. The light, space, ventilation, baths, lifts—worked by hand—from one deck to another, movable electric fans, swinging cots, etc., showed that there were few requirements unthought-of to secure the comfort of the patients. Colonel Hodder had the medical and surgical care of the patients, assisted by four civil practitioners.

Dr. Ashton showed me two very remarkable cases that were under his care, both happily convalescent. In the first case the bullet entered about ½ an inch to the right of the eighth or ninth dorsal spinous process, and, passing through the lung, emerged 1½ inch below and to the right of the right nipple. The patient had some slight hæmoptysis after he was wounded, but since that no bad symptoms whatever. In another case the bullet entered about 1 inch below the spine of the right scapula and emerged a little to the left of the sacrum. The length of the traverse of the bullet was 18½ inches. The wound in this case remained perfectly aseptic, and is now quite healed; the patient does not suffer any inconvenience except occasional pain, which he refers to the lumbar region. In the *Lismore Castle* and *Avoca* the arrangements for the comfort and convenience of the patients were most satisfactory. Dr. Brodie, with three assistants, has medical charge of the first of these. It has accommodation for 264 cases; of these, 150 were convalescents and 114 under treatment, or "cot cases" as they are termed. In the officers' quarters there were 16 cases, of which 4 were "cot cases" and the remainder convalescents.

Dr. Hamilton, one of the assistants, showed me some very remarkable cases. The first was a multiple injury, the patient having been shot in four different places, namely, through the neck, the right knee, the left leg, and the forearm. He is rapidly recovering from all these injuries. In another case the ball penetrated the nose down to the frontal bone, passed downwards perforating the hard palate, and ultimately emerged at the left side of the neck without injuring the tongue or lower jaw. The third case was a very sad one. The bullet penetrated the lower dorsal spine. Immediate paralysis of the left lower limb followed, the right lower limb remaining normal.

The last case I saw on the *Lismore Castle* was to my mind the most remarkable of all. The bullet struck and penetrated the forehead on the left side high up, and emerged at the vertex a little to the right of the occipital protuberance. The only result of this wound was total blindness of the left eye with optic atrophy.

I next visited the *Maine*, which is under the direction of Lady Randolph Churchill, and is organised and financed by American ladies. The vessel had just arrived from Capetown, and was not yet ready for the reception of patients. There is accommodation for 187 patients, Although the arrangements were still in a state of unpreparedness owing to the vessel having just arrived, it was obvious that little or nothing had been omitted that experience, knowledge, and apparently unlimited financial resources could procure. There were spring beds of the latest design, thick india-rubber matting on each side of the beds, ingeniously constructed bed tables and head rests, electric fans, etc. The strong electric lights were modified by elegantly designed green shades, all of which Lady Randolph Churchill told me were manufactured by Mrs. Joseph Chamberlain. There are electric cooking appliances of all kinds, refrigerators, and floral and foliage decorations in abundance. In fact, everything that

could be suggested for the comfort of the patients was to be found.

The medical and surgical staff, with Colonel Hensman at their head, consist of forty-five persons; there are five surgeons, five sisters, the remainder being orderlies and nurses. The nursing staff is under the skilful direction of Lady Randolph Churchill. Messrs. Burroughs, Wellcome and Co., who have furnished the medicine in the dispensary, have presented a very beautiful and ingeniously-constructed cabinet fitted with medicines in the convenient tabloid form. On the outside of the cabinet is the appropriate motto, "No distance breaks the tie of blood." In addition to the fittings and appliances already mentioned, there are baths for fever cases, and provision is also made for Roentgen-ray photography. The operating theatre has all the most recent appliances, furniture of metal and glass, and perfect arrangements for sterilising instruments, dressings, etc. If anything could be fairly criticised about the *Maine* it would certainly not be in reference to its fittings and arrangements, but the vessel itself does not compare favourably with the other hospital vessels I inspected. The low ceilings between decks and the small port windows appeared to me to be structural defects likely to interfere with both ventilation and light. Lady Randolph Churchill most kindly spared no pains or trouble to let me see all the admirable arrangements she has made, and I cannot speak too highly of them.

Were it not that this communication has already reached too great a length, I should like to mention several cases of gunshot wounds I have seen. Many of these are of absorbing interest, and the results likely to be hardly credible to those who have not seen them; but later on I hope to forward you memoranda of some of these that I have seen and been consulted on. Many of them will doubtless furnish problems the solution of which will test the ingenuity, skill, and resources both of the physiologist and pathologist.

THE HOSPITALS AT RONDEBOSCH.

[From Our Special Correspondent at Capetown.]

February 20th, 1900.

Enteric Fever.

At present things are still fairly quiet at the general hospitals. The cases cleared out of the advance hospitals preparatory to Lord Roberts's brilliant march were not generally of much interest and were mostly convalescent, and the casualties hitherto in that march have been infinitesimal. A few cases have come down from the Colesberg operations and will be dealt with later when I come to speak of the Rondeboseh hospitals, whither most of them have gone.

The influx of cases from the front has generally more of a medical than a surgical aspect. Enterics are coming in pretty freely to all the general hospitals, most of them of course in a convalescing stage. Still, they are not in sufficient quantity to shake one's belief in the sanitary arrangements at the front. At this time of year enteric is more or less rife all over the country, and to expect freedom from it in camps would be to expect the unattainable. The station hospital is getting a good number of cases in the earlier stages, from the camps at Green Point and Maitland, and from the various stations along the railway line. Four cases of this affection landed from the Australian transport a few days ago. Three of them commenced to be ill some ten days after commencing the voyage, the fourth only a few days before landing. The three first cases are convalescing steadily. The other cases of enteric recently admitted have been of a somewhat severe type generally. It is noticeable that at all the hospitals a large number of typhoid cases persist in a prolonged pyrexia of an erratic character, the temperature in the fourth, fifth, or sixth weeks running up to 103° or so every evening, with a drop nearly to normal in the mornings for a few days; then the range becomes less, the maximum being perhaps 100° for a few days more, but then mounting again. This constantly happens without any perceptible explanatory complication, and with the utmost care in diet and regimen. Exactly the some thing is observed in civil practice. One case died at the Station Hospital last week. Violent hæmorrhage came on on the twelfth day, and later symptoms of perforation with localised peritonitis. The case had been hitherto a mild one, with only very moderate diarrhœa. At the necropsy, a perforation quite the size of a shilling was found just above the ileo-cæcal valve. This perforation was evidently through a gangrenous patch, and a plugged vessel around it. The Peyer patch lesions corresponded to the assumed date of the disease. The medical officer in charge of the enteric ward informs me that he finds nothing controls diarrhœa in typhoid fever so effectively as the indigenous drug *Monsonia*, which I mentioned in my last letter.

Enteric Fever in the Inoculated.

At No. 3 General Hospital, where there are a large number of cases of enteric fever, a certain proportion of whom have been inoculated, it is very instructive to note the temperature charts. In all the inoculated cases which I have seen, except one, the temperature has dropped steadily and punctually at the fourteenth day or thereabouts, and has never gone up again. The uninoculated cases run on with the erratic temperatures I have described before. At Rondebosch the favourite drug in typhoid fever appears to be salol, but I think most of the elder hands at all the hospitals have very little faith left in drugs except in complications.

The New Bearer Companies.

Some modification of the arrangements with reference to the recently raised bearer companies has been made. D Company went up a few days ago under Major Nicol, R.A.M.C., but it has been taken over bodily by the officers of one of the R.A.M.C. companies, and Major Nicol has just returned. He is to take permanent command of E, and his senior subaltern will be Surgeon-Lieutenant Vaux of the Royal Canadian Medical Corps. The junior will be Lieutenant Fryer, whom I mentioned last week. Surgeon-Captain Black, on account of a breakdown in his health, is not able to go to the front after all. E Company, Medical Staff Corps, leaves to-night or to-morrow. Both these newly-raised companies present a very creditable appearance, and will be very fit for bearer work.

Movements of Hospitals.

No. 6 General Hospital has arrived, and is to be fixed at Nauuwport. Four Canadian nursing sisters have been posted to Wynberg.

It has been arranged that Lord Iveagh's hospital will be at Beaufort West. This Karoo town is extremely well situated, but is a perfect hotbed of typhoid. However, once on the Karoo, Matjesfontein and Beaufort West are practically the only places available, and for hospitals now being established it is perhaps as well to go inland, as well because of the moving forward of the troops as because of the continuous rains with which Capetown will shortly be visited practically daily. The Yeomanry Hospital is, I understand, to be fixed inland after all, and it is quite possible that one, if not two, of the general hospitals may make an up-country move.

Phthisis after Lobar Pneumonia.

Owing to the approaching change of seasons it is becoming a question what should be done with the phthisical cases which are accumulating. Apart from ordinary cases of the disease, there is a notable tendency which it is a little difficult to explain, for quite a number of men who had had lobar pneumonia to develop a rapidly-advancing form of phthisis directly as a sequel of the former affection. Dr. Darley-Hartley, who has charge of the medical wards in the right wing of the station hospital, emphasises this tendency, and has verified his diagnosis early by bacteriological investigation. Hitherto it has not been considered advisable to send those patients home to an English winter, while none of the base hospitals—the station hospital least of all (on account of its dusty and windy situation)—are suitable for open-air treatment, more especially as these cases are mostly of a rapid and high febrile type. Should any of the general hospitals be moved up-country the cases could be advantageously dealt with there, or, if not, they will probably be sent to Netley, which after another month or two will be a better climate than the Cape Peninsula.

The General and Portland Hospitals at Rondebosch.

No. 3 General Hospital and the Portland Hospital are pitched on adjoining sites at Rondebosch, about a mile from the station, on shallow sandy ground with a clay subsoil, amidst

pine woods. The sand is so shallow—in parts of the camp not more than 3 or 4 inches deep—that one would have had some *primâ facie* fears about drainage, especially as the slope is very slight. However, Colonel Wood, in command of No. 3, has arranged so excellent a system of drainage and sanitation as to overcome all the difficulties, and both hospitals are in a hygienic respect well-nigh perfect. There are two or three points in the administration of No. 3 which are somewhat original, albeit deserving of the highest praise. Besides the ordinary sanitary supervision of the Principal Medical Officer, who makes a regular round of the whole extensive area every morning, and the usual inspections of the orderly medical officer, one of the staff, Captain Withers, is sanitary officer (in addition to his other duties), and has three men under him doing nothing but sanitary work. Consequently, the most constant personal attention to every sanitary detail is given. The enteric stools are, of course, dealt with in a special structure adjacent to the enteric wards, and, after being disinfected in the ordinary way, are mixed with a large quantity of sawdust, and this is again saturated with paraffin, and the whole removed to a site on the outskirts of the camp and burned. This addition of paraffin struck me as a remarkable instance of the thoroughness with which Colonel Wood carries out every detail. His favourite disinfectant appears to be formalin. Dressings are burned in three very handy little incinerators. Soiled linen from infectious cases is first of all soaked in formalin solution and then dealt with in the Theal disinfector, if that apparatus (which has to do duty for all the hospitals) is available. If not, prolonged boiling in large cauldrons is resorted to. One may point out that the soakage pit system of dealing with liquid refuse, so effective at Wynberg, is out of the question on a site like Rondebosch, where drainage clean away has to be resorted to. Another point is worth mention. For the enteric cases, hospital marquees are not used, but three of the larger store marquees. This strikes me as being a decided advantage. They are larger, containing fifteen beds each, arranged in a row down each side, and could contain sixteen, but for one bed space being occupied by a table. They have a more airy and cheerful appearance, owing to the greater width, and the larger number accommodated facilitates nursing arrangements. Of course they are only single tents, but this, in so airy a situation, and at this season of the year, does not interfere with either drainage or ventilation. Attached to the enteric wards is a spare marquee used by the sisters as a sort of office and ward annexe, in which Colonel Wood insists that all spare blankets and clothing, fruit and other articles of diet, and so on, shall be kept. I consider this arrangement a most admirable one. The other marquees have a maximum of seven patients, the serious surgical marquees only four, and most of the major operations are isolated for a few days. Another little convenience, not to be found in every London hospital, is a preparation tent adjoining the operating marquee, in which timid patients can be anæsthetised.

The Portland Hospital.

Among the cases in the Portland Hospital is one by far the most remarkable I have yet seen. It was shown to me by Mr. Bowlby, and I enclose a photograph, taken by Mr. Wallace, which he very kindly placed at my disposal. An expanding bullet entered the anterior edge of the tibia, making the ordinary small wound. It completely smashed the bone, destroying its continuity for fully two inches, and emerging by a huge circular wound about three inches in diameter, so large that one part of its circumference is within about ¾ of an inch of the edge of the entrance wound. Mr. Bowlby found that, not only was there most extensive comminution at the seat of injury, but that the lower fragment of the tibia was split longitudinally downwards as far as it could be followed. All the fragments having been removed, the two parts of the lower longitudinal split were wired togther, and then the lower fragment was wired as a whole to the upper. By this I do not mean that they were approximated, for that was found to be impossible, but they were fixed. Mr. Bowlby says that some new bone was certainly growing and the wound is now rapidly granulating up. The same patient was hit by a similar bullet also just above the elbow, which, however, missed the humerus, and then smashed the upper part of the radius and ulna. This wound also is doing excellently. It was put up straight at first, and is now on an angular splint. The movement of the elbow-joint is apparently all right, and the constitutional disturbance all through has been practically *nil*. The same Boer inflicted both wounds, deliberately emptying his rifle into the soldier.



Portland Hospital, Wound (exit) of leg by expanding bullet.

Another case illustrates the comparatively little harm done by the Mauser. A bullet had entered just behind the internal malleolus, drilled through the astragalus, and emerged about the centre of the external malleolus. Nothing was ever applied but the original field dressing and the wound has healed perfectly.

In another case the bullet had entered in the left buttock, had passed through the pelvis and emerged just below the great trochanter on the right side. There were no signs of any bladder trouble or other intra-abdominal injury, which is the more remarkable as the exit wound is rugged with everted edges and quite 1½ inch in diameter, showing that the bullet used was something softer than the Mauser. It is nearly healed.

The fittings at the Portland Hospital are superb, although everything is arranged for easy transport. The dispensary fittings both here and in No. 3 are entirely made out of the original packing cases. These are banked in various ways to serve as counters, tables, and cupboards, and each box has its lids sewed by hinges on one side to form a fall-down door. On moving, nothing is required but to pack the boxes and fasten them down. The operating tables take to pieces and pack up, but they are more substantial than the army regulation table, which has been found to collapse on occasion. The use of tortoise tents increases the mobility of the hospital, as these tents only weigh 300lbs. as against the 500lbs. of the army marquees. Those in use at the Portland, except two (green) are the ordinary white. The Australian tortoise tents are green. Of course No. 3 Hospital has the regulation marquee. The military officers seem to think that the tortoise tent is better than the marquee. It seems to me, however, hardly to stand the wind so well, and the flapping in a breeze is certainly more obvious. Mr. Bowlby and Mr. Wallace are certainly keeping up to their reputation as surgeons, and are doing some brilliant work.

No. 3 General Hospital.

At No. 3, also, some very fine surgery has been done. It has not, however, been of such a strictly military character as at the Portland. One development surprised me, as being somewhat unusual in a general hospital, but, all the same, strong evidence of the up-to-date methods of the men at No. 3. Colonel Wood, the P.M.O., who by no means confines himself to administrative matters, has done three successful (to date) operations for radical cure of hernia; and Civil Surgeon Robinson one, all by Bassini's method.

Another strikingly difficult operation has been done by Major Keogh and Captain Wade-Brown, and had been entirely successful, the man being practically well yesterday. The patient had been wounded by an expanding bullet passing into the calf from the front, but just missing the tibia. The wound completely healed; then, some days later, a very large swelling suddenly appeared, and a traumatic aneurysm was diagnosed, the diagnosis proving correct; when the swelling was cut down upon immense clots were turned out.

Mr. Bowlby was good enough to see the case, and advised plugging. This course was adopted, and the case did well for two days, when hæmorrhage recommenced. Major Keogh and Captain Wade-Brown cut down through a very well-developed gastrocnemius, and after much difficulty succeeded in tying the posterior tibial artery above and below, no mean surgical achievment. Major Keogh combines the offices of registrar and officer in charge of the surgical division, and does most of the *x*-ray work into the bargain, Colonel Wood himself helping a good deal in the latter. They have succeeded admirably in localisation, some very deep fragments of shell having been fixed to a nicety, as proved by probe measurements when cut down upon.

A couple of Wheelhouse operations have been done for stricture, and one attempted, but abandoned in favour of the old-fashioned Cock's operation. This last was a man who complained of nothing but incontinence of urine. Careful examination showed that he had a perineal fistula, which he was concealing in his anxiety to get to the front. There was extensive extravasation, and he died very shortly after the operation had been performed. He had a huge prostatic abscess, a bladder about as bad as it could be, and pyelitis in both kidneys. And this man still tried to get away to fight for his country! Verily, we have some heroes amongst us still.

At present the Portland has about 90 beds occupied, and the No. 3 something over 300. Careful observation of the two institutions side by side is instructive, as showing that even when in close comparison with the work of two of the most brilliant London surgeons, the army men can still hold their own in an honourable rivalry. Colonel Wood's work shows that a R.A.M.C. officer does not necessarily rust when he grows grey in the service.

THE BATTLE OF SPION KOP.

[From an Occasional Correspondent.]

The Conditions of the Battle.

On January 15th the cavalry under Lord Dundonald, by a brilliant forced march, seized the passage of the Tugela at Potgieter's Drift, and at the same time reported that the passage of the river at Triegart's Drift, some five miles further up the river, was unoccupied by the Boers. The force under Sir Redvers Buller, which was then encamped at Springfield, paraded at 5.30 P.M. on January 16th, and made a forced night march of sixteen miles through a wild, rugged, barren, and mountainous district to Emmasdale, a high plateau which commanded the river at Triegart's Drift. Arriving there at 2.45 A.M. on January 17th the troops bivouacked until daybreak, when breakfasts were served. Immediately afterwards two batteries of field artillery were pushed forward to the edge of the plateau so as to command the crossing, and a company of Royal Engineers, supported by cavalry and infantry, were sent to throw a couple of pontoon bridges across the river.

These were completed about 4 P.M., and our advanced troops crossed at once. The remainder of the troops bivouacked on the south side of the river for the night. The whole of the following day was spent in getting the troops together with the transport, field hospitals, and bearer companies across the pontoon bridges. At 4 A.M. on January 19th the troops were hurried out of camp in the direction of Venter's Spruit, and were practically kept under arms all day in a broiling sun, as an attack by the Boers was believed to be imminent. The attack did not take place, however, and after sunset we bivouacked at Venter's Spruit. At daybreak on January 20th the troops advanced to attack the Boer position, which was situated amongst the steep hills of the Spion Kop range. The position was indeed a formidable one, composed as it was of masses of steep and rugged hills, which extended from north to south for nearly three miles. Many of these were very steep, and varied in height from 500 feet to 2,000 feet above the plain. Before reaching these the troops had to cross an open plain which sloped upwards to the hills at an angle of 20 to 25 degrees.

The Field Hospitals.

During the six days of the battle our losses were roughly 250 killed and between 800 and 900 wounded. To meet this great emergency the medical arrangements were carefully planned by the P.M.O., Colonel T. J. Gallwey, C.B., R.A.M.C. No. 4 Stationary Hospital, under Major R. Kirkpatrick, R.A.M.C., was moved up to Spearman's Hill, the accommodation being raised to 500 beds, whilst a bearer company and field hospital accompanied each brigade. The Fifth or Irish Brigade, under General Fitzroy Hart, C.B., was the first to attack, their object being to turn the Boer right flank at Rangworthy. The Fifth Brigade Field Hospital, under Major G. H. Younge, R.A.M.C.—which distinguished itself at the battle of Colenso—was pushed forwards to Seymour's Farm, a large dwelling-house with numerous outbuildings, situated on the lower range of hills at Rangworthy. The houses were cleared out and occupied as a hospital, tents being also pitched on a large grass-covered square in rear of the dwelling-house. Being in the most advanced position, a very large share of the work fell to this hospital. No fewer than 21 officers and 326 men were admitted for wounds received in action. As may be imagined under the circumstances, the hospital establishment was kept working practically day and night. The other hospitals, however, especially that under Major J. D. Moir, R.A.M.C., were far from idle. The arrangements made by Colonel T. J. Gallwey, and carried out by Lieutenant-Colonel W. B. Allin, P.M.O. of the Second Division, for evacuating the wounded were so admirable that the congestion of the field hospitals was rapidly overcome.

The Stationary Hospitals.

Convoys of wounded were sent back in wagons and ambulances to Triegert's Drift. There they were met by fresh ambulances and Indian dhoolie bearers from Spearman's Hill, who conveyed them across the river to the Stationary Hospital. To show the excellence of the arrangements I may mention that the order to fall back was received at the 5th Brigade's Field Hospital about 8 A.M. on January 25th. At 11 A.M. the hospital marched out of Seymour's Farm, having in the meantime struck their tents, packed their equipment, and despatched all their wounded to Spearman's Hill. Looked at as a whole no praise is too high for the manner in which the medical arrangements and treatment of the wounded was carried out during and after the battle. As may be imagined, the collection of the wounded from amongst the steep rugged hills, which formed the Boer position, where the use of ambulances was out of the question and each wounded man had to be carried on a stretcher, was no light task. Yet the wounded were collected and brought to the field hospitals with very little delay. Amongst the officers of the bearer companies Captain E. M. Morphew, R.A.M.C., was conspicuous for his untiring labour, his indifference to danger, and his ready resource amidst every difficulty. He scarcely left the field during the battle, and the absence of rest and food seemed not to affect him.

The medical department may well look back on the manner in which they acquitted themselves at the battle of Spion Kop with feelings of justifiable pride, and the way in which the evacuation of the wounded was carried out when the retirement was ordered was referred to by the General Officer Commanding as truly wonderful.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XVII.

Ladysmith and Kimberley.

Additional evidence, if such were needed, continues to reach us from time to time of the great sufferings endured by the garrison at Ladysmith, and the heavy mortality both in that town and in Kimberley during the last weeks of the state of siege. The state of things was bad in December, but was much worse in January, and as February advanced disease

worked ravages, and short inferior rations, bad water, foul smells, and fierce heat all played their part in spreading typhoid and dysentery. Medicines were exhausted, and the nurses were worked almost to death, while the plague of flies made life almost intolerable. The calculations by Dr. James Dunlop published below show how slight was the sustenance offered by the rations in the later days of the siege. A Reuter's telegram states that the mortality returns for February show that the death-rate per 1,000 was: Whites, 42.8; coloured population, 288.7; all races, 169.5. The returns for February last year were: Whites, 26.8; coloured population, 52.8; all races, 42.5. The death-rate among children under 1 year was: Whites, 394 4; coloured population, 760.0; all races, 583.7. Enteric fever was responsible for the death of 63 whites (excluding cases contracted elsewhere) and 9 coloured people. The deaths from scurvy among the coloured population amounted to 250. There are still 750 cases in the borough.

British Prisoners in Pretoria.

Laffan's Pretoria correspondent, in a despatch dated January 24th, states that the Boer Government has endeavoured to maintain what it considers a correct attitude in its occasional communication with the British Government and its representatives. Whenever British prisoners have arrived at Pretoria, careful lists have been made of names, rank, and condition, and telegraphed to Sir Alfred Milner. This service has been scrupulously reciprocated by the High Commissioner at Cape Town. It is stated to be the intention of the Boer authorities, in case the supplies run short, to expel all foreigners from the country and to put the British prisoners upon a diet of mealies. The correspondent states that he has just returned from a visit to the Water Fall, the new military prison camp occupied by about 2,600 soldiers. The impression he gathered from this visit was that the prisoners were being well fed; they were allowed to purchase vegetables and fruit. The hospital arrangements he described as excellent, and the Government was sending a daily supply of fountain water in tanks from Pretoria. The State Model School, in which the officers in Pretoria are confined, is modern and well-built, having many large and lofty rooms and surrounded by a broad cool verandah. In painful contrast to the treatment of the British regulars, however, it would appear that the treatment of the Colonials of Natal or Cape Colony is harsh. Thus, even Laffan's correspondent, who is an American journalist, and by no means ill-disposed towards the Boers, says that "prisoners of this class, whenever identified, are separated from the others and sent to the ordinary gaol, where they are treated like common criminals."

This testimony is confirmed by the special correspondent of the *Daily Mail* writing from Pretoria gaol on March 2nd. He states: "In the gaol are about one hundred Colonials who were taken on the Natal frontier and at Kuruman; they are undergoing scandalous treatment, exactly as if they were criminals without hard labour; they have no coffee or tea, are locked in cells at 6 in the evening, are not allowed to see friends or relations, and are searched like felons." The treatment described by these correspondents as meted out to the Colonials was experienced by myself as a political prisoner with the Boers in 1895. The beggarly starvation rations here mentioned were for a time served out to the reform prisoners, with the result that sickness among several of their number rapidly supervened, and strong representations from both outside and within the prison compelled the Government to amend this diet scale, and thus save them from the reproach of doing men to death while nominally subjecting them to prison treatment. What justification can possibly be put forward by the Boer Government for this treatment of South African colonists? It is an infringement of international practice and the usages of civilised belligerents.

Mafeking.

Kimberley and Ladysmith being relieved our anxieties are now centred chiefly upon the gallant little garrison under Colonel Baden-Powell still holding the little town of Mafeking. The reports that come through are sufficiently explicit to enable us to realise the gravity of their position. Thus Reuter's agent on February 19th says that dysentery and stomach evils through the want of vegetables and good food are rife amongst the garrison. Since the beginning of the siege 292 persons have been killed or wounded, or have died of disease. It is devoutly to be hoped that the statement that Colonel Plumer is sufficiently near to have got a waggon load of provisions into the town may turn out to be true, but it is to be feared that in any case the death-rate must have been enormous during the last few weeks.

British Wounded at Burghersdorp.

An interesting letter from an officer of the R.A.M.C. who was at Burghersdorp with the British wounded and prisoners after the Stormberg reverse has been published. The letter dated Sterkstroom, January 24th, but was not allowed to be published until our forces had reoccupied Burghersdorp. From this letter it appears that the Englishmen in the town banded themselves together, refusing either to take the oath of allegiance to the Free State or leave, and did everything in their power for the British prisoners who were taken through from Gatacre's column to Pretoria as well as for the wounded. As many as 44 wounded were in the hospitals at one time, and the whole of the provision and the nursing of this force was undertaken by this small band of English men and women; books were supplied from the town library, and the Committee were unwearying in their efforts for the relief of the wounded. The stubborn refusal either to submit or fly, and the gallant efforts under the most trying and adverse circumstances, made by this little band of loyalists in Burghersdorp, deserves cordial recognition and permanent record in the history of the campaign.

Abuse of the White Flag: Expanding Bullets.

Lord Roberts's last despatch to the State Presidents of the two Republics referring to Boer misuse of the white flag puts the seal of the highest authority upon charges which have, on many previous occasions, been brought against the Boers. A large quantity of expanding bullets of three different kinds are said by Lord Roberts to have been found in Cronje's laager, and after other engagements with the Boer forces. As Lord Roberts says: "Such breaches of the recognised usages of war and of the Geneva Convention are a disgrace to any civilised Power." Mr. Treves is reported to have stated to Reuter's correspondent at Durban that a considerable proportion of the wounds received by our men in the recent fighting at Hlangwane and Pieters were caused by soft-nosed bullets.

Boer Ambulances.

The following telegram, which has reference to a telegram from St. Petersburg to the *Times*, which was quoted in the article under this head published last week, has been received: "Amsterdam, March 14th.—Please mention in your next that statements in article Boer Ambulances, page 603, are erroneously attributed to me, and quite in contradiction with my letters published in Dutch medical journal and with personal impression.—KORTEWEG."

THE FOOD RATIONS IN LADYSMITH.

WE are indebted to Dr. JAMES C. DUNLOP, of Edinburgh, for the following interesting note on the food rations given to the soldiers and other inhabitants of Ladysmith during the latter part of the siege:

It occurred to me that it might be of interest to formulate what the dietetic value of the rations were, and thus obtain some measure of one of the hardships undergone by the residents in that town. My estimation may be considered approximate only, exactitude in the matter being unobtainable. The particulars of the rations I have taken from a despatch from the *Daily Telegraph's* special correspondent, dated Ladysmith, March 1st, and the composition of the food stuffs I have estimated from the tables given in Atwater and Bryant's Composition of American Food Materials (United States Department of Agriculture, Office of Experimental Stations, *Bulletin* 28 (revised), 1899). In the following two tables are shown the approximate food value of daily rations, and the comparison of that to the "standards," and to some official dietaries:

Table showing Food Value of Ladysmith Rations.

Food and Quantity in Ounces.	Proteid.	Fat.	Carbo-hydrates.	Energy Value.
	Grams.	Grams.	Grams.	Calories.
Meat 16	56.9	58.1	0.0	771
Biscuit 4	2.8	5.6	56.1	293
Meal 3	13.7	6.1	57.5	348
Sugar 1	0.0	0.0	28.0	115
Tea 0½	0.0	0.0	0.0	0
Condiments (one pinch)	0.0	0.0	0.0	0
Total	73.4	69.7	141.6	1,527

Table comparing Ladysmith Rations with Standard Dietaries, etc.

	Proteid.	Energy Value.
	Grams.	Calories.
Ladysmith rations	73.4	1,527
Atwater's standard (moderate work)	125.0	3,500
Voit's standard (moderate work)	118.0	3,055
A convict's food (moderate work)	169.0	3,700
A prisoner's food (light work)	134.0	3,100
A poorhouse diet, idle	83.5	1,871
,, working	113.0	2,381

The comparison shown in the second table tells a sad tale of serious underfeeding, or, in other words, of partial starvation. It may be noted that the food value of the Ladysmith rations only amounts to half what the older authorities put down as the normal diet (see Voit's standard), and to only about 40 per cent. of the more modern standard (Atwater's). The comparison between Ladysmith rations with prison and poorhouse diets shows them to be of far less food value than the food of a prisoner, and of even less food value than the food of our underfed paupers.

These figures and comparisons give some conception of one of the hardships of a siege, and if when considering them one remembers that this deplorably short feeding was combined with fairly hard work, one can only express surprise at our gallant soldiers being able to continue such a struggle, and great admiration of their success in so doing.

CASUALTIES AMONG OFFICERS R.A M.C.

Lieutenant HUGH BERNARD ONRAET.

Lieutenant Onraët, who was killed on February 27th during the fighting which preceded the relief of Ladysmith, was the Medical Officer of the 2nd Battalion Royal Scots Fusiliers. He was the son of Mr. Pierre Onraët, an indigo planter at Bhagalpur, Bengal, where Lieutenant Onraët was born. While yet a child he lost his father, and about 1879 his mother settled at Sydenham. He received his early education at Cranleigh, Surrey, and subsequently became a student at Guy's Hospital. We are indebted to Mr. Charters Symonds for the following note on his career there:

"As one of poor Bernard Onraët's teachers at Guy's Hospital, your readers may like to know what we thought of him. He was one of the most genial and pleasant of 'boys,' and his happy and bright disposition endeared him to all. Though less gifted than many as regards ability, he yet possessed those qualities that drew from his teachers a special regard. By patient and earnest attention to his duties he proved himself a reliable worker, and one left him in charge of important cases, feeling sure that nothing would be overlooked. His delightfully cheerful disposition, his keen interest in sport, and his attachment to military life marked him as eminently suited for the medical service of the army. When we nominated two men for the service last year, his name was placed third. We all wished to nominate him, but the unexpected application from a senior man compelled us to act otherwise. When I saw that he was sent to the front, I knew that in Bernard Onraët they had a man who would never fail to discharge his duty in the face of the greatest dangers, and would preserve a cool judgment in the most trying circumstances. His cheerful disposition would enable many a poor fellow to bear his sufferings with greater fortitude, and, last of all, that he knew how to do his special work, and would do it well. That he met his death in the discharge of his duties, that in doing so he scorned the dangers of the fighting line, none who knew Bernard Onraët will doubt. A career of much promise and a man of a lovable disposition has been cut off."

Mr. Onraët obtained the diplomas of the Conjoint Board in London in 1898, and entered the Royal Army Medical Corps in July, 1899.

Lord Roberts in his telegraphic despatch from Driefontein, dated March 11th, states that during the previous day when the brunt of the fighting fell on Kelly-Kenny's division (the Sixth) two officers of the R.A M.C. were wounded. Major T. Du B. Whaite, originally attached to the Third Field Hospital of the Divisional Troops of the Sixth Division was severely wounded in the chest. Major Whaite entered the service in July, 1886, and was promoted to the rank of Major in July, 1898. The other officer, who is returned as slightly wounded in the neck, is Lieutenant J. G. Berne, who was Medical Officer of the Royal Field Artillery attached to the Sixth Division.

During an engagement at Britstown with the rebels in the Western part of the field of operations, an engagement in which the City of London Volunteers were in action, Civil Surgeon H. Moore was slightly wounded in the left foot.

To the list of deaths from enteric fever at Ladysmith must be added the name of Lieutenant G. W. Grey Jones, R.A.M.C., who died on February 20th. He was a student of St. Mary's Hospital, and qualified M.R.C S. and L.R.C.P. early in 1898. For a few months he was House-Surgeon at the Horton Infirmary, Banbury, and entered the Service on October 1st, 1898. After passing the usual probationary period at Netley, he received his commission as Lieutenant R.A.M.C. from January 1st, 1899, and on September 30th he embarked with No. 12 Field Hospital on board the ss. *Kinfauns Castle* for South Africa, and immediately on arrival at Durban was urgently sent up to Ladysmith, and was on the field a few days before the investment of that town by the Boer army.

The following deaths from enteric fever are reported from Capetown: Assistant-Surgeon Jackson, typhoid fever, Pretoria, March 9th. Civil Surgeon W. E. Grigg, enteric fever, Wynberg, March 12th. (There is reason to believe that this is Dr. W. Chapman Grigg, formerly Obstetric Physician to Out-patients, Westminster Hospital.)

YEOMANRY FIELD HOSPITAL AND BEARER COMPANY.

The staff of the Imperial Yeomanry Field Hospital and Bearer Company, 143 strong, were inspected at Devonshire House on March 12th. The staff was under the command of Major C. Stonham, Chief Surgeon and Military Commandant of the Hospital, and Major G. E. Hale, R.A.M.C., D.S.O., who is in command of the Bearer Company. The Director-General of the Army Medical Department first made an inspection. Soon afterwards the Prince of Wales, who was accompanied by the Princess, arrived and inspected the detachment. After shaking hands with the officers he addressed the men as follows: "I am glad to have had the opportunity of inspecting you before your departure, and am sure that you will carry out well the duties which will devolve upon you. You are leaving this country because you wish to do something to assist those who are fighting for the honour of the flag." Three cheers were given for the Prince and were repeated for the Princess. The Royal party then returned to the terrace, and the men passed in single file before the Princess, who gave each man a parcel containing articles of clothing.

The staff left Liverpool Street Station for the Albert Docks on March 13th, when they had an enthusiastic send-off from the students of the Westminster Hospital, of which Major Charles Stonham is the Senior Surgeon, and of the London Hospital, to which Captain T. H. Openshaw, F.R.C.S., is Assistant Surgeon. The staff sailed in the *Winkfield* the same afternoon.

The telegraphic address of the Imperial Yeomanry Hospitals is "Hospitable, Capetown."

MEDICAL OFFICERS OF THE FIELD FORCE.

Additional Appointments.

For the following list of medical officers who have recently

proceeded, or are proceding to South Africa, we are indebted to the courtesy of the Medical Department of the War Office:

Table showing the Personnel of Medical Units on the Lines of Communication.

Unit and Place of Mobilisation.	Names.	Remarks.
No. 10 General Hospital (Depôt R.A.M.C., Aldershot)	Surgeon-Lieutenant-Colonel W. W. Lake, M.M.S.C. (*a*) *Royal Army Medical Corps.* Major R. H. Clement " E. C. Freeman (*b*) Lieutenant H. B. G. Walton Quartermaster and Honorary Lieutenant (*c*) *Militia Medical Staff Corps.* Surgeon-Captain W. K. Steele *Volunteer Regimental Medical Officers.* Surgeon-Captain C. A. MacMunn, 3rd Volunteer Battalion South Staffordshire Regiment Surgeon Captain A. A. Watson, 2nd Volunteer Battalion East Lancashire Regiment Surgeon-Captain J. K. Butter, 2nd Volunteer Battalion South Staffordshire Regiment *Civil Surgeons.* Mr. D. V. M. Adams " L. B. Betts " A. Copland " R. Corfe " G. Grace " H. H. G. Knapp " W. H. May " J. G. Parker " M. W. Renton " J. H. Sheldon *Army Nursing Service Reserve.* (*d*) Nursing Sisters: Misses L. Ainsworth, N. V. Blythe, F. L. Carey, I. E. Church, S. Clark, L. M. Green, R. A. Humphrey, A. M. Joscelyne, M. W. B. Kendall, M. Lippiatt, M. L. MacAdam, M. McLeod, M. Pedler, A. I. Richardson, L. Shepherd, E. C. Stuart-Jones, B. Turner, L. Warriner, F. M. Wilkinson, and A. B. Wohlmann, and 3 female servants.	2 warrant officers. (1 to join the unit on its arrival in South Africa.) 133 non-commissioned officers and men (including 50 men St. John Ambulance Brigade), 1 special cook. Arrangements for charge of *x*-ray apparatus to be made in South Africa.

(*a*) Officer in charge. (*b*) Secretary and Registrar. (*c*) Will join the unit on its arrival in South Africa. (*d*) Superintendent or acting superintendent to be selected from Army Nursing Service in South Africa, and extra nursing sister being included in this detail to allow of the adjustment.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF SPECIAL MEETING.

A SPECIAL meeting of the Council will be held at the office of the Association, No. 429, Strand, London, W.C., on Wednesday the 21st day of March next, at 2 o'clock in the afternoon, to consider the Midwives Bill which has just passed the second reading in the House of Commons.

FRANCIS FOWKE, *General Secretary.*

429, Strand, March 14th, 1900.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Grand Hotel Brighton, on Thursday, March 29th. The chair will be taken by Dr Mackey at 5.15 P.M. The following communications have been promised:—Dr. Mackey: A Case of Typhoid Spine (Osler). Dr. Morgan: Retropharyngeal Abscess. Dr. Maynard: Hæmorrhagic Pancreatitis (with specimen). Dr. Mackendee: Errors in Diagnosis (three cases). The Chairman will provide tea and coffee at 5 P.M. Dinner at 7 P.M.; charge 6s., without wine. Messrs. Down Brothers will exhibit instruments, etc., from 4.30 P.M.—J. W. BATTERHAM, M.B., 3, Grand Parade, St. Leonards-on-Sea, Honorary District Secretary.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held at the Royal Surrey County Hospital, Guildford, on Thursday, March 29th, at 4.15 P.M. Mr. F. Boxall, of Rudgwick, will preside. Agenda: Minutes of Guildford meeting. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. To receive nominations for representations on the Council of the Association. Communication from East York and North Lincoln Branch and Hull Medical Society. The following papers will be read:—Dr. Sidney Martin: The Diagnosis of Early Tuberculous Disease of the Lungs. Mr. Battle: The Diagnosis of Early Tuberculous Disease of Joints. The Honorary Secretary: Remarks on the Treatment of Spasmodic Asthma. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate with the Honorary Secretary at once. Dinner at the White Lion Hotel at 6.45 P.M.; charge, 6s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend and introduce professional friends. N.B.—The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend to remain to dinner. By so doing they will materially facilitate arrangements, and promote the success of the dinner.—ALEX. HOPE WALKER, The Common, Cranleigh, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The next meeting of this District will be held at the Town Hall, Sittingbourne, on March 22nd, at 3 P.M., Dr. Gosse in the Chair. Agenda: The Chairman: The Pathology of Death from Senility. Mr. Bertram Thornton: A case illustrating the value of Antistreptococcic Serum. Mr. R. Rigden: The Vaccination Act of 1898. Mr. Raven: A question of Medical Ethics. The Chairman kindly invites members to luncheon at the Sittingbourne Club, Crescent Street, at 2 P.M. Members intending to avail themselves of Dr. Gosse's hospitality are requested to send acceptances by Tuesday, the 20th, or they will not be expected. Tea and coffee will be served after the meeting. All members of the South Eastern Branch are entitled to attend these meetings and to introduce professional friends.—THOS. F. RAVEN, Barfield House, Broadstairs, Hon. District Secretary.

OXFORD AND DISTRICT BRANCH.—The next meeting of the Branch will be held at the Radcliffe Infirmary on Friday, March 23rd, at 3 P.M. Members wishing to read papers on show cases are requested to communicate as early as possible with WM. COLLIER, M.D., St. Mary's Entry, Oxford, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.—The next meeting of this District will be held at the Evelina Hospital on Thursday, March 22nd, at 4 P.M. Dr. Nestor Tirard will read a paper on Intestinal Hæmorrhage in Children. Cases of clinical interest from the wards of the Hospital will be shown by members of the staff.—MAURICE CRAIG, Bethlem Royal Hospital, S.E., Locum District Secretary.

STAFFORDSHIRE BRANCH.

A MEETING of this Branch was held at Stafford on February 22nd, Dr. J. B. SPENCE, President, in the chair. Eighteen members were present.

Confirmation of Minutes.—The minutes of the last general meeting were read, approved, and signed.

New Members.—G. Heaton, M.A., M.B., F.R.C.S. (Birmingham), and G. L. Lefevre, M.B., C.M. (Longton) were elected members of the Branch.

British Congress on Tuberculosis.—Dr. McAldowie was appointed delegate from the Branch.

Communications.—The Lancashire and Cheshire Branch having forwarded a copy of three resolutions which it had passed, the same were considered, and it was unanimously resolved:

That this Branch disagrees with Nos. 1 and 3, but agrees with No. 2 (Railway Expenses of Representatives), with the proviso that the finances of the Association will allow of it.

Medical Organisation.—A letter was read from Dr. Crawshaw *re* proposed conference on medical organisation, and it was resolved to leave the matter in the hands of the Secretary.

Medical Attendance on the Families of Soldiers and Sailors on Active Service.—The meeting approved the action taken by the Secretary in response to the letter received from the General Secretary on this question; 150 medical men in the county had replied in the affirmative offering their gratuitous services.

Case.—Dr. F. H. MARSON showed a boy, aged 10 years, the subject of partial paralysis of left arm and leg, and frequent epileptic fits.

The hemiplegia resulted from a fall on the head from a height of 25 feet, when the boy was 1½ year old. The fits commenced eight months ago, at first one, increasing to four daily, and simulating epilepsy, but always commencing with a cramp of the left leg. Dr. Marson trephined over a cranial depression about ¾ inch anterior to the motor area for the left leg. On removing the bone, about 3 drachms of fluid escaped, and a cyst was found about the size of an acorn between the skull and dura mater. After the operation the fits were much milder, being more of the nature of hysterical attacks; they appeared to depend only on the accumulation of fluid in the wound, and occurred at intervals of from three to six days. The last fit occurred five weeks after the operation, and that was five weeks ago. The boy had been skating since, and the use was returning in his arm and leg.

Septicæmia.—Dr. C. M. ALLAN read a paper on septicæmia,

with clinical notes of nine cases. He pointed out the value and discussed the action of antistreptococcus serum. Care was to be taken that the preparation was active. If the result of injecting the serum was negative, or failed to reduce the temperature temporarily, this was in his experience evidence of inert serum, and, if the serum failed ultimately to reduce the temperature permanently and benefit the patient, this was evidence, even in the absence of bacteriological examination of the blood and pus, that the case was one of mixed infection. This applied specially to cases of puerperal septicæmia. In four cases of wound infection in which the streptococcus was found in the pus and in the blood, the effect was rapid and beneficial, but, even in cases of erysipelas where the streptococcus was not always found in the blood, the result of injection of serum was even more satisfactory, the general and local symptoms improving rapidly. The location of injection was immaterial, but the serum treatment must not be discontinued in septicæmia until the streptococcus had entirely disappeared from the blood; that only, and not normal temperature for a day or two, was evidence of cure. In case of feeble and rapid pulse he recommended the injection of digitalin and strychnine, urging the probability that the onset of pneumonia sometimes occurring in septicæmia was due to the vasoparetic action of the coccus toxin, and probably of the serum. In the cases of erysipelas, he advised the local application of sulpho-ichthyolate of ammonia, and the administration of antipyrin for the urticaria sometimes arising during serum treatment.

Paroxysmal Bladder Trouble.—Dr. F. EDGE read notes on a case of paroxysmal bladder trouble caused by a small myomatous nodule pressing on the base of the bladder between the ureters. Vaginal hysterectomy was successfully performed, and relieved all symptoms. The points of the case were the smallness of the uterus and the nodules, and the patient being past the climacteric. For twelve months she had been quite free.

Specimens.—Dr. EDGE showed a myomatous uterus removed by panhysterectomy.—Mr. F. M. BLUMER showed thirteen gall stones he had removed from a woman, aged 52 years. The case was one of cholecystitis with sero-purulent contents and general peritonitis, and had only been seen the day before. The thirteenth stone was tightly impacted in the cystic duct. Persistent vomiting followed the operation. The patient died on the fourth day. There had not been any symptoms pointing to the presence of gall stones.

BATH AND BRISTOL BRANCH.

THE fourth ordinary meeting of the session was held at Bath on February 28th, Dr. A. J. HARRISON, President, in the chair. There were 22 members present.

New Members.—Dr. T. Hopkins (Highbridge), Mr. E. G. Stocker (Clevedon), and Dr. F. Crossman (Hambrook) were elected members of the Association and of the Branch.

Surgery of the Stomach.—Mr. F. LACE, in opening a discussion on the surgical treatment of diseases of the stomach, began by dealing with the cardiac end. He discussed the dilatation of fibrous stricture through an opening in the stomach, and in view of recurrence, the artificial union of its anterior wall to the abdominal wall for convenience in subsequent treatment when necessary. For cancerous stricture he thought gastrostomy justifiable in selected cases. Turning to the pyloric region, where the surgeon was chiefly concerned with simple or cancerous obstruction, he pointed out the difficulty of diagnosing pyloric obstruction and the importance of examination under anæsthesia to eliminate spasmodic contractions of reflex origin. He also considered no exploratory operation complete without an incision in the stomach for digital examination from within. In cancerous stricture the cases suitable for pylorectomy and gastro-enterostomy were dealt with, and in pylorectomy the advantages of end-to-end and lateral anastomosis, and also the value of simple suturing over mechanical appliances were referred to. In gastro-enterostomy he mentioned the advantages of the anterior and posterior operations, and also the serious accidents which had occurred, such as gangrene of the transverse colon in the posterior, and the kinking or volvulus of the loop of small intestine in the anterior operation. Turning next to the body of the stomach, he referred to the causes which at times called for interference, such as cancer, dilatation, ulceration, and adhesions. He did not defend extensive operations for cancer, such as total gastrectomy, and thought partial gastrectomy justifiable only in cases where the growth was very limited. Operations for freeing gastric or omental adhesions had been very successful in relieving gastric symptoms. The results of gastro-plication for reducing the size of a dilated stomach were not encouraging. The question of gastro-enterostomy for dilatation of unknown cause was also raised. In gastric ulcer the best results had been obtained by gastro-enterostomy, which gave physiological rest to the stomach; but for this object the most recent operation of gastro-enterostomy combined with gastrostomy, with a feeding tube passed through both holes in the stomach into the bowel beyond, had been practised on the Continent.

Within the past year Mr. Lace had operated on three and assisted at a fourth operation, and in every instance the patient recovered without a hitch. After urging the difficulties in diagnosis, he was chiefly guided by a previous history of gastric trouble, the sudden onset of pain, abdominal rigidity, local acute tenderness, and slight rise of temperature after a few hours. In one instance the perforation was posterior, and abdominal rigidity and local tenderness were absent. The absence of liver dulness, occurring as it did from other causes, could only be regarded as a confirmatory sign. His guide for the abdominal incision was the position of the local tenderness. In all cases he had invaginated the stomach wall opposite the ulcer by plication with Lembert sutures, using silk, and preferred this method to excision, it being more rapid and less liable to be followed by hæmorrhage. In one instance he found the operation simplified by emptying the stomach through an incision. Irrigation with sterilised water or salt solution was employed in each operation, a second incision above the pubes being made to facilitate the cleansing of the pelvis, where food stuff was always found. He had never resorted to sponging, so strongly advocated by some surgeons. Drainage tubes with gauze wick were inserted into the pelvis in all his cases. He would use a gauze drain leading down to the stomach sutures only in cases where there was doubt about the efficiency of the sutures, or where there was a quantity of lymph adhering to the stomach and adjacent parts.

The treatment of the so-called chronic perforation usually resolved itself into an operation for a subphrenic abscess, the chief indications being to first incise at the most prominent point, and then, if possible, to obtain dependent drainage by removing portions of one or more ribs behind, taking care to see that the pleural cavity was shut off. In closing his remarks Mr. Lace pointed out the importance of the time element in the successful treatment of perforation. Too great a desire for a certain diagnosis had often resulted in patients being handed over to the surgeon when all hope of success was lost.—Mr. C. A. MORTON referred to the more encouraging recent statistics of the result of pylorectomy, and expressed his preference for the posterior rather than the anterior method of performing gastro-enterostomy. He had not found it a difficult operation, and the risk of kinking of the jejunum was much less. He would not care to use a Murphy button for anterior gastro-enterostomy, as he thought it would be very likely to drop into the stomach, but he had done so for posterior gastro-enterostomy, and referred to Carle's very successful series of cases of posterior gastro-enterostomy with the button.

He described a case in which he had recently operated for gastric ulcer of seven years' duration. The ulcer was too large for excision, and he had performed gastro-enterostomy in order that the stomach might have rest, and the ulcer a chance of healing. He referred to the condition of the patient he had operated on last summer for very extensive malignant disease of the stomach, the greater part of whose stomach had been excised. He had just heard from him that he was in very good health, could take meat and any other ordinary article of diet, had no discomfort after food, and was engaged in business.

—Dr. MELSOME said that in doing gastrototomy by Frank's method, suturing the base of the cone to the parietal peritoneum was safer than merely fixing the apex of the cone and trusting to contact of the rest of the cone. *Post-mortem* examination eight days after an operation of this kind showed that sutured parts united more rapidly and more firmly than unsutured parts. The oblique tract, however carefully executed, very soon became a direct one owing to the tension of the stomach. Posterior gastro-enterostomy was more scientific than anterior, in which *post-mortem* examination showed that the drag of the jejunal loop might so constrict the transverse colon as to completely obstruct it. In the posterior method gangrene of the transverse colon could only be assured by carefully avoiding the colica media artery and its branches. Other things being equal, suturing was always safer than mechanical appliances, and a lateral anastomosis an easier and safer procedure than an end-to-end anastomosis, and that whether buttons or sutures were employed it was important to fix the viscera in question by suturing for some little distance on either side of the anastomosis to prevent the formation of a volvulus such as he had recently observed in a

case of anterior gastro-enterostomy performed with a button. In regard to gastric hæmorrhage, he agreed with Mr. Morton that it was better to reserve operation for cases of repeated hæmorrhages, and to leave a copious primary hæmorrhage alone.—Mr. R. J. H. SCOTT, referring to Mr. Lace's remarks on gastrostomy for malignant disease of the cardiac entrance of the stomach, said that he had found that thirst rather than hunger induced patients to be operated on, and this symptom became so severe in these cases that he considered it advisable to operate even if it would only give a few months' or weeks' relief. He also pointed out the advantage of operating as soon as the diagnosis of malignant disease was certain. With regard to irrigation *versus* sponging in cleaning the abdominal cavity after perforating gastric ulcer, he mentioned that at a recent discussion at the Clinical Society in London sponging had been unanimously recommended, though Mr. Lace's 3 successful cases of operation had certainly proved how satisfactory irrigation was.—Mr. H. G. TERRY recorded 2 cases of gastric surgery.

In the first, on opening the abdomen, nothing was found, although the symptoms pointed strongly to perforating gastric ulcer. The wound was closed, and the patient made a good recovery. The second case was that to which Mr. Lace referred, a girl of 23, with perforation of the posterior wall, the interesting point in the diagnosis being the free movement of the abdominal walls from the time of perforation up to the time of operation.

It would be instructive to know if any other members of the Branch had met with cases of perforation of the posterior wall in which the movements of the abdomen were unaffected. The explanation, he thought, was that the perforation being behind there was no friction of the perforated spot against the abdominal parieties. The abdomen was irrigated and a suprapubic drain inserted, and the patient made an uninterrupted recovery.—Dr. CAVE was by no means convinced of the view held by some surgeons that considerable dilatation of the stomach, with retention of its contents, did not occur independently of mechanical obstruction at or about the pylorus. It was generally held by physicians that great dilatation might now and then occur in severe forms of gastric myasthenia, and although it was impossible to deny the presence of pyloric spasm in these cases, it was certain that a *post-mortem* examination might fail to disclose any permanent obstruction at the outlet. He referred to the attempt to discriminate these cases clinically by the rapidity with which the stomach, previously evacuated, discharged a measured quantity of plain water, an ordinary degree of pyloric obstruction causing little delay, while the period in myasthenic retention was much prolonged.

He had known a patient after gastro-enterostomy to be in a miserable condition from regurgitation of the intestinal contents into the stomach and vomiting of a horribly offensive material. In this case, which was operated on in London on the supposition that the dilatation and retention were due to pyloric obstruction, a *post-mortem* examination, when the patient died a month later, disclosed a normally patent pylorus.

As regards the diagnosis of perforation, in many cases this was quite obvious, and in most it was highly probable. But there remained a not inconsiderable minority in which present available diagnostic methods were insufficient. In these cases, looking at the eloquent statistics which surgeons had adduced as to the increased mortality in operations postponed for twelve, and still more for twenty-four, hours, it was surely justifiable to urge an early exploratory incision. No harm would ensue in cases of colic or painful "neurotic" conditions—on the contrary, the mere exploration seemed to have in some cases a distinctly curative effect—and some terrible catastrophes would be avoided. On the fallacy of the individual signs, he quoted from Dr. Gee's Bradshaw Lecture in 1892, on the Signs of Acute Peritoneal Disease, and maintained that no discredit attached to an operation undertaken under these circumstances, although no peritoneal lesion was discovered.—Dr. WILSON SMITH said that in the diagnosis of perforating gastric ulcer we were often helped by a long previous history of chronic dyspepsia with considerable anæmia and possibly hæmatemesis, and by the sudden onset of acute pain. In these cases the final perforative attack might often have been preceded by an indigestible meal. He thought that cases where operation had been undertaken under a mistaken suspicion of perforating ulcer of the stomach or appendix were not infrequently cases of the abdominal form of influenza, and in these cases there was often uncontrollable sickness.—Dr. WIGMORE related his experience of cases of disease of the stomach, some of which, although apparently calling for surgical interference, had ultimately recovered without operation.—Dr. HARRISON said that in order to give an operation a fair chance of success it should be done early.—Dr. MICHELL CLARKE said the diagnosis of perforation had sometimes to be made in the absence of a clinical history of gastric ulcer. The signs varied in intensity, largely according to whether perforation took place on an empty or full stomach. Often there was history of sudden strain immediately preceding the rupture. In the cases he had seen the signs were sufficiently distinctive. In two, operation was done with a successful result within six hours after the perforation had occurred. With regard to hæmorrhage from a gastric ulcer, the number of patients who were admitted to hospital for this symptom and went out well, showed that death directly from hæmorrhage was uncommon, and operation would be required only if large hæmorrhages recurred several times within a short period. In all cases of hæmorrhage the patient should be fed exclusively by rectal injections for from 4 to 10 days, according to the severity of the case. In cases of intractable pains, long continued, and the consequence of gastric ulcer, making the patient an invalid, an operation should be advised. Such continued pains were often due to adhesions left by the ulcer, and he gave instances where relief had followed on operation.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

A GENERAL meeting of this Branch was held at Larbert on March 9th, Dr. MACKINTOSH (Stirling), President, in the chair.

War in South Africa.—The SECRETARY read a report on the arrangements that had been made, on the suggestion of the President of Council of the Association, for gratuitous attendance on the families of soldiers and reservists at present on active service in South Africa. In December last a circular was issued asking for the co-operation of all the members of the Association practising in the area of the Branch. The result was that of the 33 members of the Branch in active practice, 32 had volunteered their services, and of the 23 unattached members 15 had replied to the same effect. A letter was read from the Treasurer of the Stirlingshire Branch of the Soldiers' and Sailors' Families' Association expressing warm thanks for the offer of services.

Resolutions.—A motion was proposed by Dr. MOORHOUSE (Stirling) that the resolutions passed in 1896 with regard to medical aid associations, friendly societies, and lunacy certificates be rescinded. Dr. HIGHET (Stirling) seconded, and the motion was unanimously agreed to.

Scottish Poor-Law Medical Officers.—An address was delivered by Dr. MUIR, Secretary of the Scottish Poor-Law Medical Officers' Association, on the grievances of the Poor-law medical officers in Scotland. Reference was especially made to tenure of office. The unsatisfactory state of affairs produced by the Poor-law Act of 1845 was pointed out and the aggravation of matters brought about by the Local Government Act of 1894.—On the motion of Dr. MCVAIL (Partick), seconded by Dr. SMITH (Falkirk), it was decided that the Secretary be instructed to write to the members of Parliament representing the district of the Branch, drawing their attention to the Bill dealing with tenure of office to be brought before the House of Commons this session and appealing for their support.

Votes of Thanks.—Dr. ROBERTSON (Larbert) proposed the thanks of the meeting to Dr. Muir, which were cordially given.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of the West Kent District was held on March 1st at St. Bartholomew's Hospital, Rochester, Dr. EASTES in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—It was decided to hold the next meeting at Maidstone.

Communication from other Branches.—A communication was received from the East York and North Lincoln Branch of the Association.

Throat, Nose, and Ear Complications of Influenza.—Dr. SCANES SPICER said persons with chronic disorders of the throat,

nose, and ear of non-influenzal origin were peculiarly susceptible to influenza, and to exhibit these local manifestations and sequelæ owing to the lowered vitality of the local mucous membranes and the exhaustion of their defensive mechanisms in the struggle with other pathogenic organisms. It was hence one of the most important prophylactic measures against influenza to keep the upper respiratory tract free from pathological conditions such as obstruction, catarrh, and suppuration. Influenza had the tendency to rouse into activity latent and quiescent forms of disease, and to reveal vulnerable or weak parts. Purulent discharges from the nose due to suppuration supervening in some of the accessory sinuses, recrudescence of old syphilitic and other disease, rhinitis, rapid formation of polypus, caries, and necrosis of bone, epistaxis, affections of smell, headaches, retropharyngeal abscess, inflammation and abscess at the base of the tongue with the œdema extending to the larynx and causing symptoms demanding tracheotomy, as well as all varieties of morbid states of the pharynx and tonsils, had been repeatedly seen by him during the past ten to twelve years which had originated directly in an attack of influenza. Similarly the larynx was affected, showing congestion, all degrees of inflammation, hæmorrhage, œdema, ulceration, abscess, and paralysis of vocal cords. He laid especial stress on one form of laryngeal affection which was very common—namely, a pale, rugose thickening and crumpling of the mucous membrane of the posterior wall of the larynx—the interarytenoid space. On being treated locally the cough soon disappeared. The characters of the ear affections of influenza were the rapidity of invasion, the great severity of the pain, the high fever, the frequency of hæmorrhage in the drum, and in the discharge when the abscess broke, and, later on, the intractability and chronicity of the inflammation and suppuration. Serious permanent injury followed in many cases—necrosis of ossicles, mastoid invasion, cerebral, etc., extension—if these local influenzal ear affections were not energetically treated by counter-irritation, leeches, incisions, or early paracentesis according to the indication. In acute influenzal local affections of nose, throat, and ear, surgical interference should be considered early and prosecuted vigorously, as, owing to the virulence of the influenza toxin and the rapid depression of the vitality of tissues, feeble opposition was offered to the spread of the organisms of suppuration, and they easily reached recesses—the frontal, ethmoid, maxillary, and mastoid sinuses—from which it was very difficult to dislodge them, and where they gave rise to the most chronic, troublesome, and even dangerous complications.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE spring meeting of this District was held at Upper Norwood on March 8th, Dr. BURGESS, of Streatham, in the chair.

Confirmation of Minutes.—The minutes of the Reigate meeting were read and confirmed.

Next Meeting.—On the proposition of Dr. PARSONS SMITH, seconded by Mr. W. ENRAGHT, it was resolved that the next meeting should be held at Croydon on Thursday, May 10th, and that Dr. Redfern be invited to take the chair.

Election of Officers.—Mr. Prangley was unanimously re-elected as Honorary Secretary. The following were nominated for representatives on the Council of the Association—namely, Dr. J. H. Galton for Surrey, Dr. Tyson for Kent, and Mr. Jenner Verrall for Sussex.

Medical Reform.—Communications from the Wood Green and District Medical Society and from the East York and North Lincoln Branch and Hull Medical Society on the subject of medical reform and the Midwives Bill were read to the meeting. Dr. PARSONS SMITH moved and Mr. ENRAGHT seconded:

> That a summary of these communications be sent to all the members, and the subjects be considered at a further special meeting.

This resolution was lost. Another was then moved by Dr. GALTON and seconded by Mr. MACILWAINE:

> That these communications lie on the table.

which was carried.

Communications.—Mr. W. ARBUTHNOT LANE read a paper on causation and treatment of the several resting deformities.—Dr. P. HORROCKS: Notes on some cases of severe dysmenorrhœa.—Dr. W. BURGESS: Notes of cases from general practice

Dinner.—After the meeting fifteen members and visitors dined together, and during the toasts it was moved by Dr. R. M. MILLER, and seconded by Dr. PARSONS SMITH:

> That the East Surrey District of the British Medical Association, being the first body to meet Dr. P. Horrocks after the successful termination of his recent trial, desires to be the first to put on record the great joy with which it finds him relieved publicly from gross charges which no one for one minute believed, and which were a grave attack on the reputation of our profession

This resolution was unanimously carried.

SOUTH-EASTERN BRANCH: NORTH KENT DISTRICT.

THE March meeting of the North Kent District of the South-Eastern Branch was held at Chislehurst on March 8th; Dr. DAVIS in the chair.

Confirmation of Minutes.—The minutes of the Bromley meeting were read and confirmed.

May Meeting.—It was decided that the next meeting should be held at Dartford, and that Dr. White be asked to take the chair thereat.

Branch Representatives on Association Council.—It was decided that Drs. Galton, Tyson, and Verrall be nominated as the representatives of the Branch on the Council of the Association.

Medical Reform.—A communication was read from the Wood Green and District Medical Society *re* Medical Reform and the Midwives Bill. A communication from the East York and North Lincoln Branch and Hull Medical Society on the same subject was taken as read, and the Honorary Secretary was directed to write to both Societies thanking them for their communications.

Surgical Aspects of Vomiting.—Mr. W. H. BENNETT, of St. George's Hospital, gave an address on some surgical aspects of vomiting.—Drs. DAVIS, CROMBIE, HUGH SMITH, and STURGES took part in the discussion which followed the address, and a hearty vote of thanks was accorded Mr. Bennett for his most able and original paper. The address will be published.

At the end of the meeting the Chairman entertained the members and guests to tea.

SPECIAL CORRESPONDENCE.

PARIS.

The Mortality from Measles, its Causes and Prevention.—Foreign Practitioners in France.—Zymotic Disease in Paris.

M. VALLIN, at the meeting of the Académie de Médicine held on February 20th, proposed that measles should be added to the list of contagious diseases which entail compulsory notification. During the five years 1895-99 the average annual number of deaths from the principal infectious diseases has been: Measles, 785; typhoid fever, 364; whooping-cough, 356; diphtheria, 355; scarlatina, 150; small-pox, 12. It is thus seen that with the exception of tuberculosis, which annually causes 12,000 deaths in Paris, measles causes the highest mortality of the infectious and contagious diseases. During the last five years the other infectious diseases have been steadily decreasing, owing to the more frequent use of rigorous disinfection during and after each case of these notifiable diseases; the number of disinfections by the municipal authorities, which in 1895 was 38,000, reached in 1899 the total of 64,000. The mortality caused by measles, however, has increased annually: in 1895, 679 deaths; in 1896, 658; in 1897, 821; in 1898, 876; in 1899, 904. The number of disinfections demanded after cases of measles has steadily decreased each year; in 1895 there were nearly 4 disinfections, 1899 there were only 2.5 disinfections for each fatal case of measles. During recent years medical men have reiterated that disinfection is inefficacious as a prophylactic measure in measles, because the disease is contagious at such an early stage that the neighbours are all infected before the first case has been diagnosed. Measles, strictly speaking, is not the cause of death; the fatal termination is due almost entirely to the complications, for example, broncho-pneumonia in young children. M. Vallin does not believe in the existence of a malignant type of the disease, but thinks that the grave suffocative form is due to a localisation of the eruption on

the smaller bronchi, and more especially to an associated infection by streptococci and pneumococci with consecutive absorption of the toxins of multiple origin. "I will admit, if you like," he said, "that it is useless to attempt by disinfection to destroy the germ of measles itself, because as often as not we arrive too late ... But if you do not destroy the specific germ of the eruptive fever, which after all is mild enough, at least destroy the germs which cause the fatal complication." During 1899, of the 904 fatal cases 542 (60 per cent.) occurred in private houses. It is for these 542 deaths, which represent, perhaps, 7,000 or 8,000 cases of measles, that disinfection is so necessary. The public does not fear disinfection, but, on the contrary, asks for it when it believes it useful, for example, tuberculosis, which is not notifiable, as is shown by the fact that during 1899 there were 12,000 disinfections during or after this disease. Doubtless it will be the same with measles. At the meeting held on February 27th, the Académie de Médecine unanimously decided that measles ought to be added to the list of contagious diseases for which compulsory notification is desirable.

In the address on Medical Practice in European Countries by Dr. Kilner Clarke, published in the BRITISH MEDICAL JOURNAL of February 17th, there are two or three inaccuracies in regard both to the facilities granted to foreign qualified men wishing to practise in France, and to the subjects of the different professional examinations. Foreigners wishing to obtain the degree of doctor in medicine are considered under two categories: (1) Those who wish to obtain the *diplôme d'état*, which alone gives the right to practise on French territory; (2) those who wish to possess the title of doctor in medicine of the University of Paris, as a proof of their scientific attainments without wishing to practise in France.

1. The regulations regarding matriculation with a view to obtaining the State diploma are the same for foreigners as for the French student. By the decree of July 31st, 1898, before being allowed to matriculate as a medical student, the postulant must possess the two grades of *diplôme de bachelier d'enseignement secondaire classique lettres philosophie*, and the *certificat d'études physiques, chimiques et naturelles*. The former includes French composition, mathematics, etc., and the latter entails a year's study in the laboratories of the Sorbonne. This decree would annul Article 23 of the decree of July 21st, 1897, whereby foreigners might, by a special Ministerial decree, obtain for their diplomas an equivalent value to, or a dispensation from, the above two "grades" compulsory for the French student. The postulant for the State diploma may, however, obtain a partial or total exemption from the quarterly registration (*inscriptions*) but an exemption from the corresponding professional examinations is never granted. The foreign graduate must pass all the five professional examinations, and present his thesis before being allowed to practise. The following is the programme of the five professional examinations under the new regulations. The first professional under the old regulations is now subdivided among the second, third, and fourth examinations. No candidate can present himself for the fourth examination until he has taken his sixteenth quarterly inscription.

First Examination.—Anatomy except topographical anatomy, with a practical examination in dissection.
Second Examination.—Histology. Physiology including biological physics and biological chemistry.
Third Examination.—Part I: Practical examination in operative surgery and topographical anatomy. External pathology. Obstetrics.
Part II: General pathology, animal and vegetable parasites, microbes. Internal pathology with a practical examination in morbid anatomy.
Fourth Examination.—Therapeutics, hygiene, medical jurisprudence, materia medica, pharmacology, with the applications of physical and natural sciences.
Fifth Examination.—Part I; Clinical surgery. Clinical obstetrics.
Part II: Clinical medicine.
Thesis on a subject of the candidate's choice.

2. Foreign graduates who wish to obtain the degree of Doctor in Medicine of the University of Paris without wishing to practise in France, can obtain a total or partial exemption from the quarterly registration, and a partial exemption from the professional examinations.

Small-pox in the week ending February 10th caused 4 deaths in Paris, and as the number of first cases showed a slight increase, the Prefect of the Seine ordered the revaccination of the staff of the administrations first exposed to contagion, especially that of the Mont de Piété. During the week ending February 17th, the total number of deaths in Paris from all causes was 1,423, influenza causing 78, broncho-pneumonia 90, pneumonia 114. During the week ending February 24th the total mortality was 1,382, influenza causing 69 deaths, broncho-pneumonia 111, pneumonia 93.

CORRESPONDENCE.

THE CORONERS' SOCIETY OF ENGLAND AND WALES.

SIR,—At the last meeting of the Council of this Society it was resolved:

That it is the opinion of the Council that in cases of death from violence or from any unnatural cause, it is a common law duty imposed upon the medical practitioner in attendance, among others, to report to the coroner.

This resolution was unofficially communicated to one of the medical journals, and in an article upon the same its object was misconceived. There are certain causes of death into which it is imperative for the coroner to inquire by holding an inquest under Section 11 of the Coroners' Act, 1887, and it would seem advisable to quote the words, namely:

Where a coroner is informed that the dead body of a person is lying within his jurisdiction, and there is reasonable cause to suspect that such person has died either a violent or unnatural death, or has died a sudden death of which the cause is unknown, or that such person has died in prison, or in such place or under such circumstances as to require an inquest in pursuance of any Act, the coroner, whether the cause of death arose within his jurisdiction or not, shall, as soon as practicable, issue his warrant for summoning not less than twelve nor more than twenty-three good and lawful men to appear before him at a specified time and place, there to inquire as jurors touching the death of such person as aforesaid.

It is to be noticed at the very outset that no particular class of persons are mentioned whose duty it should be to inform the coroner, and therefore it is laid down in *Jervis on Coroners* that this duty devolves upon those who are in attendance in or about the deceased at the time of his death, and the medical practitioner if he is in attendance is clearly one of these persons In fact, from his privileged position as a registered medical practitioner, it is clearly his duty to see that the law is carried out, and that he does nothing which could assist directly or indirectly in an evasion of the law.

In order to avoid his personal interests clashing with the law, a simple method would be for him to refrain from giving a certificate in such cases where the coroner should be informed, and thus the friends themselves would be bound to communicate with the coroner or his officer. Also he could in confidence write to the coroner or his officer.

It is quite incorrect to assert that a medical man in attendance is compelled to give a certificate in every case, for by Section XXXIX of the Registration of Births and Deaths Act, 1874, it is stated that a person shall only be fined who refuses or fails to do so without reasonable excuse, and surely the fact that the death requires an inquest is such a reasonable excuse.

Educated men like medical men are surely expected to know sufficient of the law to be aware that in deaths from injuries or unnatural or unknown causes, an inquest is necessary, and it is only such cases that the resolution refers to.

The correspondence appearing in the medical journal does not appear to meet this point. It is beside the question that the district registrar should report such cases, as for instance if a certificate was given of "peritonitis," there would be nothing to show if it was idiopathic or traumatic. This would be best known to the medical practitioner.

It is greatly to be regretted that so many of the medical profession, as is clearly evinced by letters in the medical journals, place themselves in a position of antagonism to the coroner, who is a public officer merely doing his duty.

The Council, in approving of this letter, also desires to point out that any medical man might be amenable to an indictment at common law for not fully stating the cause of death, whereby a body on which an inquest should have been held is enabled to be buried; and I was directed to forward a copy of this letter to the medical journals in the hope that by

publishing it, it may tend to assist both the profession and the coroner when coming in contact.—I am, etc.,

A. BRAXTON HICKS,
Honorary Secretary.

Lupus Street, S.W., March 12th.

THE DEFECTS OF THE CLUB SYSTEM.

SIR,—Dr. William Bruce complains that "our parent Association" boggles at that inspiration of the General Medical Council, the Conciliation Board, but I trust our Association will continue not only to boggle at but to reject it in its present nebulous, not to say misleading, character. This proposed Conciliation Board was put forward as a remedy for medical aid associations; and as the profession, with passive indignation, would not have it as such, its sponsors now transfer its centre of gravity by putting it forward as a remedy likely to increase the remuneration of the club surgeon. Will these sponsors let us have what has been often asked for—a definition of its *rôle?* What is it going to conciliate about? Until this definition is supplied I for one hope it will not even be discussed by our Association.

If it proposes to conciliate the medical aid principle as originally suggested, I repeat it is worse than a clumsy attempt to conciliate on a principle which no loyal member of our profession will admit is capable of conciliation. It is unfortunate that the records of the General Medical Council contain even a hint that this question can fall to the purview of conciliation; but, as Lord Beaconsfield said, "a man who never makes a mistake never makes anything." Why does not the General Medical Council admit its mistake and correct it—it is by no means its first.

The medical aid principle is, "the owning and carrying on of a medical practice by unqualified person or persons by means of—that is, by farming—a salaried medical servant." Remuneration of club surgeons is one thing; medical aid associations are quite another. If, as Dr. Bruce says, the Medical Aid Committee of the General Medical Council are so very conversant with the subject, why do they mix up things which are related only in the imagination and reports of the Committee?

Here is a medical aid association described in the BRITISH MEDICAL JOURNAL of March 10th, p. 594. "Birmingham Consulting Institute." A committee of unregistered laymen announce that first-class consulting rooms have been taken, that a salary-paid fee-earning servant has been appointed, who is a highly qualified medical gentleman, and that work will begin in April. "Bills, pamphlets, etc., will be supplied during the next few days to the manufactories, trading establishments, and mercantile offices in the city." You very properly say that this, if it could be successful, would be disastrous to the independence of the medical profession. But, sir, if the Committee of the General Medical Council know anything of the subject they have devoted years to, they know that this kind of thing has been rampantly successful (in the sense that the general practitioner has been thus exploited) up and down the land for many years, and was many years ago challenged by me.

No one will deny that what is disastrous to the independence of the medical profession of a State must injure the public interest, and that it is the duty of the General Medical Council to so control the profession that this injury of the public interest shall cease. This question is by no means a question of fees or remuneration; the principle remains the same, although the remuneration of the responsible medical man is £500 a year, as in this Birmingham case. The endeavour to sell medical skill at its proper price is a proper one, and quite conceivably may be assisted by conciliatory means, but I insist that this Conciliation Board stands at present as a recommendation of the General Medical Council relating to medical aid associations, and as such must be rejected till such time as the General Medical Council corrects its position in the matter.—I am, etc.,

LESLIE PHILLIPS.

Leamington, March 11th.

SIR,—I do not think there need be any great surprise that a large number of medical men take but little interest in the club doctors' demand for a higher scale of payment. Happily there are many medical men whose practice is outside the region of clubs, and those living where clubs predominate know well that an additional shilling or two from Shepherds or Foresters touches only the merest fringe of the grievances of medical men. Working men readily admit that the sum paid is too small, and yet there seems to be a prevailing impression among those with whom I have conversed on the subject that, as there is now free education, free sittings in churches, free attendance at hospitals, all medical attendance should be free of charge. It is easy to state the grievances of medical men, but it is by no means easy even to suggest a remedy.

1. We have free attendance at hospitals for practically any man, woman, or child that cares to apply for it. If in some cases a letter of recommendation is required, that is easily obtained, and there are few hospitals where these are refused, as otherwise the hospital loses, it may be, a wealthy subscriber. Medical men are scrambling for honorary appointments at hospitals, and the public, and strange to say, many medical men, seem to think that a man's opinion cannot be of much value unless he is connected with a hospital. It may seem gross heresy, and yet it is but ordinary common sense, to say that medical men who are giving their services free of charge to those who can afford to pay for them are doing more harm to the other members of their profession than the despised sixpenny doctor.

2. As regards clubs, granted that their medical attendants succeed in getting 1½d. a week, that is surely not enough from a man who is earning from £2 to £5 a week, and spending half a crown to ten shillings on beer. And yet, if that sum is obtained, it simply means a larger number of insurance companies providing medical attendance, slate clubs, and similar institutions. The "slate club" is familiar to many London practitioners, but, as happily it is little known in the provinces, I may explain that it is a club formed by a publican, to whom, or his representative, weekly payments are made to provide for sickness and medical attendance. These slate clubs are held not merely by young and struggling members of the profession but by men of old standing and in good practice.

3. There are insurance companies providing medical attendance, and, as a patient told me the other day, she had been repeatedly called on by agents of these companies, offering as an inducement medical attendance from medical men that were named.

4. There are provident dispensaries founded on the principle of supplying medical attendance at a low rate to those with small incomes, aided by charitable donations, but admitting or retaining on their list shopkeepers and others with good incomes.

In London one finds these abuses full-fledged, though happily as yet only to a limited extent in the provinces. This is probably the reason why, though the metropolis is increasing more rapidly than the provinces or Scotland, it had during the past year a decrease of fifteen medical men, while the provinces had an increase of 297, and Scotland of 72.

The loss to medical men is evident, but I do not think the loss to the general public is sufficiently estimated. It is no advantage to a patient to have by his bedside a medical man whose thoughts are distracted by the dread of not being able to get ends to meet, which, if anyone cares to inquire into it, they will find that not a little of the poverty and begging, even in good times, for parish relief is due to the fact that the individual who has had free attendance at hospitals when he did not require it, afterwards sees no reason why he should pay his doctor, nor, at a later stage, why he should pay his his grocer or baker, and gradually becomes shiftless and cares not to work, when he has learned how to circumvent a relieving officer or obtain means of subsistence from the charitable.

The remedy I cannot give. I do not think it likely, or even desirable, that the State should provide free medical attendance as it has provided free education, and yet there are many—not fit subjects for parish relief—to whom it would be cruel and a waste of time to send a bill for medical attendance. Hospitals have their legitimate field, but, as many of them are conducted, it is doubtful whether they are productive of good or harm to the community. Provident dispensaries, with payment by members supplemented by the general public not as conducted as present, but with a sliding scale of charges and affiliated to hospitals, might do something to solve the difficulty. If the question were rightly put before the working man and the public I do not think this difficulty would rest with them. The difficulty is with medical men themselves, and till they show the same power of combination and regard for each others' interests as the artisan, any or every scheme seems utterly impracticable.—I am, etc.,

J. H. KEAY, M.D.

Bexley House, Greenwich, March 11th.

COLLIERY SURGEONS IN THE MIDLANDS.

SIR,—The letter of "Colliery Surgeon," in the BRITISH MEDICAL JOURNAL of March 3rd has undoubtedly voiced the feelings of many who have any experience of medical practice in a colliery district. Compared with other working men a collier is well paid, and his sons, even when leaving school,

can add considerably to the general income—so much so that a thrifty man is able, and does, manage to become the owner of the house he lives in. His general expenses are small, and he is well able to pay his doctor reasonable remuneration, far better than the average working man in towns.

What are the facts? Perhaps no class of the community pays less—and gives more trouble. Colliery districts are filled with the field clubs (remuneration reduced to a minimum), women's clubs, and penny dispensaries. All the thrifty are in such societies—the unthrifty won't pay, either privately or even into clubs; and, by virtue of the general ignorance of common things, the doctor is sent for for every trivial ailment.

This state of things should and could be altered if only the medical men would make some united effort in that direction. To my mind, the establishment of more numerous local medical societies would have a very desirable effect by way of fostering a proper spirit among neighbouring practitioners, and generally paving the way for unanimous action.—I am, etc.,

Cannock Chase, March 5th. ERNEST BRICE, L.R.C.P.E.

UNITED STATES ARMY HOSPITALS.

SIR,—I recently had an opportunity of visiting the military hospitals, United States Army, in the Philippines. There is one custom in that interesting army that I desire to bring to notice—I mean the disciplinary control exercised by medical commanding officers over patients in military hospitals.

The American medical officers have direct punishment power over all patients in hospital, and exercise it freely. In the English service the custom is different. There is a compromise, and like most compromises it is defective. English medical officers have authority to command, but no authority to punish, patients. The "crime" has to hang over until the patient's discharge from hospital, and is then dealt with by the military commander of the delinquent. No more unsatisfactory compromise could exist. It injures all concerned. It lets the patient think he can commit irregularities without punishment, it greatly enfeebles the medical officer's control, and indeed induces crime, and finally it tempts slack or popularity-seeking commanding officers to dismiss the crime, and pose as the true friend of the soldier.

It is interesting to note that at Netley a patient in hospital is punished while in hospital, receiving such punishment as he may be considered fit to undergo—usually confinement in the prisoners' ward. The authority, however, is exercised by the Assistant-Adjutant-General, and not by the army medical authorities.

In any future revision of our Regulations this fundamental question needs to be dealt with. A soldier admitted to hospital should bring his defaulter sheet with him—a most valuable help in judging of the man's character and habits. All the minor punishments should be available for use against men disturbing the hospital.

It is not the really ill who give trouble. It is the many venereal patients, the convalescents, and the bad characters who, whether in barracks or hospital, disturb the peace and quiet of their comrades. The bad soldier outside is always the bad patient inside the hospital.

Of course the title of the medical officer in charge of a hospital should be medical officer or officer commanding a hospital. This title defines responsibility, and is in itself a lesson and a warning to evildoers, as it is to the commanders themselves.—I am, etc.,

Devonport, Feb. 22nd. GEORGE J. H. EVATT.

DIPHTHERIA AND BUTTER.

SIR,—Can any of your readers inform me whether there are any authentic cases on record in which diphtheria has been conveyed by butter? A case now under observation suggests that source of infection, but I am not aware that cases proving its actuality have ever been published, and the works I have consulted are silent on the point in question.—I am, etc.,

Wimpole Street, W., March 12th. FELIX SEMON.

A QUESTION OF ETIQUETTE.

SIR,—A Local Government Board inquiry was held at Lincoln on March 9th. The Lincoln Corporation wish to borrow £6,400 for the erection of public slaughterhouses on a site in the centre of the town.

It is proposed that these slaughterhouses shall be built on the slope of a hill facing south, and having a subsoil of clay; part of the hill is to be dug out, and the buildings will abut against and be partially covered by this clay. There was naturally a strong opposition to this scheme, and I attended to give evidence for the opponents.

The Lincoln Corporation did not call their medical officer of health, and the inference is obvious. They called, however, two medical officers from other towns, one of whom stated in his evidence, "I have not consulted the medical officer of this city; I don't know him; I don't know whether he has any experience in these matters; an ordinary medical man knows nothing about it."

I write to ask you if it is usual or courteous for one medical officer of health to go into another medical officer's district to give evidence about matters which must concern that officer, without previously communicating with him?

We know that if a medical practitioner gave advice to a patient unknown to the doctor who was attending him, his conduct would be deemed unprofessional, and a statement that he did not know that doctor, and did not know whether he had any experience of the disease the patient was suffering from, would make matters much worse.

I forward by this post a local paper containing a report of the inquiry.—I am, etc.,

Lincoln, March 10th. W. A. CARLINE.

FLESH EATING AND CANCER.

SIR,—With reference to Sir William Banks's remark in his paper as to increased consumption of nitrogenous (especially animal) food being possibly responsible for the increase in cancer in late years in Great Britain, I can state as a fact that cancer is extremely prevalent among the Boers in South Africa, who, as is well known, consume large quantities of flesh, both fresh and dried in the sun (biltong). This fact appears to corroborate his theory.—I am, etc,

H. F. D. STEPHENS, M.B.,
Portsmouth, March 12th. Staff-Surgeon, R.N.

OBITUARY.

WILLIAM MARCET, M.D., F.R.S., F.R.C.P.

WE have to record with regret the death of Dr. William Marcet. He was in his 72nd year. He had been in failing health for some time, and lately had been living at his Swiss home near Geneva. He travelled to Egypt with the object of recruiting his health, and it was at Luxor that his death occurred on March 4th.

William Marcet was the eldest son of Professor Francis Marcet, of Geneva, and grandson of Dr. Alexander Marcet, of Guy's Hospital, and of Jane Marcet the authoress. He was born at Geneva, and there he received his early education. Though since the age of 18 he had made this country his own, he never entirely lost a slight foreign accent. At the University of Edinburgh, where he received his medical education, he was the friend of several who have since become well known in the scientific world. Among these we may mention Murchison, William Priestley, and Burdon Sanderson. He obtained his degree with high honours in 1850, at the age of 21, and then came to London, where he commenced practice. Subsequently for some time he was Assistant-Physician to the Westminster Hospital and to the Hospital for Consumption and Diseases of the Chest at Brompton. He was one of the earliest workers at laryngology. He had, however, relinquished practice for many years before his death; his ample means enabled him to do this, as well as to spend much time in his native Switzerland. But he did not cease to take interest in scientific investigation, and it was this side of professional work that always had the greatest attraction for him. In his early days, when the science of physiological chemistry was in its infancy, Marcet became well known for his work in connection with digestion. He published researches on the action of bile, the digestion and absorption of fat, and on certain constituents of the intestinal contents. He was elected a Fellow of the Royal

Society in 1857. The work of his later years was directed to the study of respiration, especially in man. He formed the subject of most of his experiments, and the measurements he made of the various quantities of the gases inspired and expired under various conditions will form, like those of John Hutchinson, standard quantities of reference for the investigators of the future. He carried out this work in the Physiological Laboratory of University College, London; he only relinquished it last year, when his valuable collection of apparatus was dismantled. All workers in this laboratory and all who listened to Dr. Marcet when he related his experiments will recall the almost juvenile enthusiasm he manifested in his work. He would often stay in the laboratory till quite late in the evening, and never seemed tired of his laborious observations and calculations. This work he did chiefly in the winter, but he did not forget it in the summer, for then he was collecting the air of the Swiss mountains, or collecting his own expired air at different elevations, and his stores of collected air would serve to start him in his work the following winter. His good nature was unbounded, and he always gave an encouraging word to the younger workers around him. There can be little doubt that his love of mountaineering determined in great measure the direction of his physiological work, and whether he was among the Swiss hills or on the Peak of Teneriffe, his admiration for fine scenes and the exhilaration of the exercise did not lead him to forget the scientific aspect of the subject. The most complete statement of his life-work will be found in the Croonian Lectures he delivered before the Royal College of Physicians in 1896.

He was elected a Fellow of the Royal College of Physicians of London in 1859, was an examiner eight years later, and subsequently served the office of Councillor. In 1865 Dr. Marcet was requested by the Royal Commission for the investigation of the Cattle Plague to study the chemical pathology of the disease. His researches are recorded in the third report of the Commissioners, and the character of Marcet's work may be gauged from the words of the late Sir Thomas Watson, who remarked "that probably no disease, either of man or of animals, has ever undergone such an investigation in all its details as has the cattle plague." But an enumeration of his medical investigations does not complete the record of Marcet's many-sided nature. He was also an authority on climatology and meteorology. He published several works on the subject of climate, the chief of which was *The Principal Southern and Swiss Health Resorts, their Climate and Medical Aspect (1883)*. He was elected President of the Meteorological Society in 1888. Dr. Marcet was a prominent figure in both physiological and meteorological gatherings. He endeared himself to his fellow-workers, and his loss will be a subject of the greatest regret to all.

Dr. Thomas P. Mason died at his residence, 45, Harcourt Street, Dublin, on March 11th, at the age of 83. His mother was of German extraction, and his father was descended from from an English officer who served in the Army of William III. Dr. Mason was born in Dublin, and received his medical education at the school which was afterwards known as the Ledwich, in which he became a Demonstrator of Anatomy in 1842. In the same year he obtained the Licence of the Royal College of Surgeons in Ireland, of which he became a Fellow in 1852. In 1846 he graduated Bachelor of Medicine of the London University, a qualification of which he was always extremely proud. For over forty years Dr. Mason was Lecturer on Anatomy, and a principal proprietor of the Ledwich School of Medicine, and during those years he acquired a great reputation for his ability in teaching. In his early professional career he was Assistant Master of the Combe Lying-in Hospital, where his eldest son—the late Dr. S. R. Mason—subsequently gained distinction as Master for seven years. Dr. Mason was for some time Physician to the Cork Street Fever Hospital, but it was in his position as Physician for many years to Mercer's Hospital that his reputation as an able diagnostician and a lucid clinical teacher was made. His numerous pupils, scattered widely in many lands, can look back with thankfulness to the wise principles which Dr. Mason inculcated at the bedside, and only the burden of advancing years compelled him of late to exchange the active work of physician for that of consultant to the institution. His three sons followed the profession of their father, and the unexpected and untimely death of his eldest—Dr. S. R. Mason—occurring, as it did, only a few weeks ago, must have been a severe blow to the frail and aged physician.

Dr. George Mitchinson, Coroner for Lincolnshire, who died recently, was born at Carrington, near Boston, on October 21st, 1829. He received his medical education at St. Bartholomew's Hospital, and obtained the diplomas of M.R.C.S.Eng. and L.S.A.Lond. in 1851. In 1852 he became House-Surgeon to the Lincoln County Hospital, and seven years later he commenced practice in Lincoln. He held for thirty years the appointment of Physician to the County Hospital. He was also Physician to the County Prison and Magistrate for the City of Lincoln. Alike in the private practice and in his public relations with his fellow townsmen he was a trusted adviser and faithful friend. He was a member of the British Medical Association and of its Midland Branch.

Mr. J. W. Orr, of Wollaston, Northamptonshire, who died recently of influenza, received his medical education at St. George's Hospital, where he held the posts of Assistant House-Physician and Assistant Registrar. From St. George's he went to the Brompton Consumption Hospital as House-Physician. At the time of his death, at the age of 47, Mr. Orr had been in practice at Wollaston for twenty years. He was Medical Officer and Public Vaccinator for the district, and held other public appointments. Mr. Orr was a keen sportsman and a member of the Oakley Hunt. A careful and painstaking practitioner, his loss is deeply felt throughout the district, where his genial disposition and kindly sympathy had won him many friends.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Professor Lorenzo Bruno, Senator of the Kingdom of Italy and formerly Physician to King Victor Emanuel, Director of the Surgical Clinic of the University of Turin, and Dean of the Royal Academy of Medicine of that city, aged 80; Dr. Adolfo Murillo, Dean of the Medical Faculty of Santiago de Chile and President of the Scientific Society of Chile; Dr. Tito Ambroni of Milan, described as "patriot, veteran, and explorer," aged 90; Dr. Anton Tschurtschenthaler von Helmheim, Professor of Pathology and Pharmacology in the University of Innsbruck, aged 83; Dr. Gombault, of Paris, for many years a collaborator of Charcot's, aged 59: and Dr. Ernest Brewster-Sangree, late Professor of Bacteriology and Pathology in the Department of Medicine of Vanderbilt University, Nashville, Tennessee, aged 36. Dr. Leslie E. Keeley, whose name was prominently before the public some years ago in connection with the "gold cure" of inebriety, died of heart disease at Los Angeles, California, on February 21st. He was about 68 years of age. He took his degree at Rush Medical College, Chicago, in 1864, entered the American Army as Assistant Surgeon, and served till the close of the Civil War. He afterwards practised medicine on ordinary lines at Dwight, Illinois, for many years. Then came his great discovery of a "cure" for inebriety in the form of bichloride of gold, by which he is said to have made more than a million dollars (£200,000) while the boom lasted.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Scholarships.—By an arrangement with the Oxford Colleges the examinations for entrance scholarships at Cambridge will in 1900 and 1901 take place after the first Monday in December. This arrangement establishes the principle of making the Michaelmas Term a "close time" for such examinations; it has been urged as a desirable reform by the headmasters of schools, but Oxford has hitherto stood in the way of its accomplishment.

Honorary Degree.—Mr. Charles Hose, of Sarawak, whose contributions to anthropology and to various other branches of natural history have been numerous and important, is to receive the honorary degree of Doctor of Science

Examiners.—Professor E. Ward, of Leeds, and Mr. G. E. Wherry, Lecturer in Surgery, have been appointed Examiners in Surgery in the place of Professor Watson Cheyne, of King's College, and Professor Chiene, of Edinburgh, whose services have been called for in South Africa.

Degrees.—At the Congregation on March 10th, the following degrees were conferred:

M.B.—R. F. C. Ward, St. John's; C. L. Hawkins, Emmanuel; S. W. Curl, and A. E. Martin, Downing.

B.C.—R. F. C. Ward; W. B. Winton, Clare; C. L. Hawkins; S. W. Curl; and A. E. Martin.

UNIVERSITY OF LONDON.

THE NEW STATUTES AND REGULATIONS.

THE Commissioners under the University of London Act have issued a report to accompany the statutes and regulations which were ordered to be printed by Parliament on February 16th and March 1st respectively. These documents can be obtained through any bookseller, price: the report, 2d.; the statutes, 2½d.; and the regulations, 3d.

The Report

The report, which is signed by all the Commissioners, is not a voluminous document. It recapitulates briefly the circumstances under which the Commission was appointed, and sets out at some length the regret with which the Commissioners have arrived at the conclusion that it is at present impossible to establish a Faculty of Laws, understanding by that "a body of persons charged with the teaching of a group of subjects in the University."

The Commissioners call attention to Section LXXX of the statutes, which is as follows:

"With a view to greater efficiency and economy, the Senate may make arrangements with the governing bodies of any schools of the University to provide common courses of instruction for matriculating students in such schools in one or more subjects by appointed or recognised teachers, and to enable such schools to interchange their matriculated students for the purpose of instruction, and in particular the Senate shall use its best endeavours whenever practicable to secure such common courses of instruction for internal medical students in the preliminary and intermediate portion of their studies under appointed or recognised teachers at one or more centres."

The Commissioners explain the reasons which have moved them to make this recommendation, which are briefly as follows: (1) That the teaching of the sciences in question entails heavy expense for the provision of properly equipped laboratories, such provision growing every year more elaborate and more costly. (2) That such subjects should be taught by men who propose to devote themselves to a career in the sciences which they teach, and that adequate salaries cannot be provided without concentration. (3) That by such concentration laboratories and teaching power would be set free for clinical laboratories, which ought to be provided at every properly-equipped hospital. The subjects to which concentration might in the opinion of the Commissioners be applied are:

1. *Preliminary Studies*, namely, Physics, Chemistry, and General Biology.
2. *Intermediate Studies*, namely, Anatomy and Physiology.
3. *Second Intermediate Studies*, namely, Pathology, that is to say General Pathology, including certain departments of Bacteriology and Pharmacology.
4. *Hygiene* and all studies relating to public health.

The Statutes.

The general scope of the statutes has already been indicated in the article published in the BRITISH MEDICAL JOURNAL of February 24th, p. 463.

The Regulations.

The Commissioners explained that by regulations they mean provisions recommended by them for carrying the statutes into effect, and open to repeal or alteration hereafter by the Senate.

I. *Boards of Studies.*—The Commissioners direct thirty-two Boards of Studies to be appointed. Among these are:

A Board of Preliminary Medical Studies.
" " Intermediate Medical Studies.
" " Advanced
" " Dentistry.
" " Pharmacy.
" " Hygiene and Public Health
" " Physiology and Experimental Psychology.

II. *Science Degrees.*—The conditions under which a candidate for the degree of B.Sc. may present the results of a research as qualifying him to receive the degree are defined.

III. *Recognised Teachers.*—The Commissioners enumerate the members of the teaching staffs of public educational institutions within the appointed radius recognised as teachers of the University, and specify the subjects in which they are so recognised. Among those thus recognised are the teachers in the medical faculties of University College and King's College, and of the medical schools of the following hospitals—St. Bartholomew's, the London, Guy's, St. Thomas's, St. George's, Middlesex, St. Mary's, Charing Cross, and Westminster. The teachers of the London School of Medicine for Women and the teachers of the medical classes at the Royal London Ophthalmic Hospital, the National Hospital for the Paralysed and Epileptic, the Hospital for Consumption and Diseases of the Chest, Brompton; the Hospital for Sick Children, Great Ormond Street; the London School of Tropical Medicine, the London School of Dental Surgery, the College of the National Dental Hospital, the Institute of Dental Technology, the School of Pharmacy of the Pharmaceutical Society. Teachers in anatomy and physiology at all the medical schools, and teachers in chemistry, biology, and physics at all the medical schools, except University and King's Colleges and the Middlesex Hospital, are placed in a separate list, and recognised provisionally under the provisions of Section LXXX of the statutes quoted above.

IV. *Faculties.*—The Commissioners give a list of recognised teachers of the University appointed members of the respective faculties. The faculties are Theology, Arts, Music, Medicine, Science, Engineering, Economics, and Political Science. The members of the Faculty of Medicine number 162.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE ordinary Council was held on March 8th, when the chair was taken by Mr. H. G. Howse, Vice-President.

Court of Examiners.—Mr. W. H. A. Jacobson made the prescribed declaration, and was admitted a member of the Court.

Board of Examiners in Dental Surgery.—The Chairman of the Board of Examiners in Dental Surgery reported that, at a meeting on February 21st, the Board, with the object of carrying out the decision arrived at by the Council on February 8th, adopted the following resolution, namely: "That time spent in the capacity of assistant to a dental surgeon in one of the hospitals attached to the army in South Africa, not exceeding a period of six months, be allowed to count in lieu of the completion of any courses of dental or general professional study which such students were undergoing during this present winter session, and in lieu of any dental or general courses which such students would ordinarily be required to attend during the ordinary summer session, on the understanding that allowance will only be made for the number of months, not exceeding six, during which such students shall be in the service of the hospital, and for which a satisfactory certificate from the dental surgeon can be produced."

College By-laws.—The Committee on By-laws submitted a proposal to the Council for alterations in certain sections of the by-laws. The most important of these relate to Sections XIV and XX. These changes were prepared with the object of carrying out the determination of the Council to admit candidates with qualifications specially recognised by the Council to the Fellowship Examination without requiring them to pass the examinations of the Conjoint Examining Board.

Walker Prize.—The Council appointed a Committee to adjudicate on the Walker Prize. This prize, which is open to investigators of all nationalities, is given for the best work in advancing the knowledge and therapeutics of cancer during the past five years ending December 31st, 1900, and amounts to the sum of £100.

Quarterly Meeting of Council.—The date of the next meeting was changed from the second Thursday of April to the first, namely, April 5th.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

New Museum.—During the last few years the Royal Free Hospital has undergone considerable alterations and improvements. The latest of these is the new museum, which was opened recently by Lady Reay. The old museum has been converted into a pathological and bacteriological laboratory for the students of the London School of Medicine for Women. It is well fitted up with water, gas, and electric light, and the teak benches afford accommodation for twenty students. Skylights have been added to the *post-mortem* room to improve the light. A new floor has been added, containing a laboratory for the use of the curator and the medical staff, with an assistant's room for the preparation of specimens, and a large, well-lighted museum with room for 6,000 specimens. The walls are provided with the usual rows of shelves, but much additional space is gained by the use of fifteen jutting partitions also consisting of rows of shelves. The Curator, Miss Vaughan, M.D., B.S., has arranged a central case of specimens prepared with formalin, and giving excellent results, especially as regards the preservation of the natural colour; these were recently exhibited by her at a meeting of the East Anglian Branch of the British Medical Association. The museum and laboratories have been erected by the relatives and friends of the late Curator, Miss Mabel Webb, M.B., whose sudden death in October, 1898, prevented her from carrying out personally the scheme she had thought out for the improvement of the pathological department. A bronze tablet is to be put up in the museum testifying to Miss Webb's "devotion to duty and pursuit of high ideals of work and conduct," and bearing witness to the universal esteem and affection in which she was held. Such an inscription is, we think, sufficient answer to the objection so often urged in the old days, that women who enter a man's profession must lose their womanliness. A more suitable beatitude could not have been found for this memorial tablet than that chosen, "Beati mundo corde; quoniam ipsi Deum videbunt."

ROYAL NAVY AND ARMY MEDICAL SERVICES.

LAST EMBARKED MEDICAL UNITS.

We hear that the last medical units embarked for South Africa had very few trained men of the Royal Army Medical Corps, but were chiefly composed of men of the militia and Volunteer Medical Staff Corps, and of the St. John Ambulance Brigade. It thus appears that the men, active or reserve, of the Royal Army Medical Corps are equally and entirely used up, as are the officers. The employment of these different bodies hastily thrown together cannot, of course, be conducive to the highest efficiency.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: WILLIAM H. PATTERSON, Fleet Surgeon, and CHARLES J. E. COCK, Surgeon, to the *Victorious*, on recommissioning, undated; DAVID W. HEWITT, M.B., Surgeon, to the *Goliath*, March 27th; JOHN STODDART, M.B., Surgeon, to the *Vernon*, for dental duties, March 27th; HENRY B. HALL, M.B., Surgeon, to the *Vernon*, March 27th; REGINALD ST. G. A. BOND, M.B., Surgeon, lent to Yarmouth Hospital, for survey on stores, from March 12th to 31st inclusive; ALAN G. EASTMENT, Surgeon, to the *Cossack*, March 29th, his appointment to Yarmouth Hospital being cancelled; WILLIAM E. HOME, M.D., Staff-Surgeon, to the *Boscawen* for the *Minotaur*, March 9th; LANCELOT KILROY, Surgeon, to the *Hibernia*, March 9th; LORRIS E. DALTON, Surgeon, to the *Ganges*, March 10th.

ROYAL ARMY MEDICAL CORPS.

SURGEON-CAPTAIN C. STONHAM, Middlesex Yeomanry, Officer in Command and Chief Surgeon, Imperial Yeomanry Field Hospital, is granted the temporary rank of Major while serving in South Africa.

The undermentioned Surgeon-Captains are granted the temporary rank of Captain while serving in South Africa: C. E. DOUGLAS, 6th Volunteer Battalion the Black Watch (Royal Highlanders); G. G. OAKLEY, 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment); A. A. WATSON, 2nd Volunteer Battalion the East Lancashire Regiment; C. A. MACMUNN, M.D., 3rd Volunteer Battalion the South Staffordshire Regiment; J. K. BUTTER, M.D., 2nd Volunteer Battalion the South Staffordshire Regiment.

The undermentioned Surgeon-Lieutenants are granted the temporary rank of Lieutenant while serving in South Africa: R. W. MITCHELL, 4th Volunteer Battalion the Suffolk Regiment; J. C. TAYLOR, 9th Lanarkshire Volunteer Rifles; G. BLACK, 2nd Volunteer Battalion the Royal Sussex Regiment; J. R. ATKINSON, 2nd Cheshire Royal Engineers (Volunteers); A. E. MORISON, 1st Volunteer Battalion the Durham Light Infantry.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAINS J. W. COOK, M.D., and JAMES MILL, M.B., are promoted to be Surgeon-Majors.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL WILLIAM A. C. ROE, Bengal Establishment, has retired from the service from February 27th. He joined the department as Assistant Surgeon, October 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, March 31st, 1895.

Deputy-Surgeon-General HUNTER ADAM, Madras Establishment, died at Maida Hill on March 13th, in the 71st year of his age. He was appointed Assistant-Surgeon, August 4th, 1855, and became Brigade-Surgeon, August 15th, 1881. He retired with the honorary rank of Deputy Surgeon-General, December 31st, 1882.

Lieutenant-Colonel HUGH M'CALMAN, M.D., Bombay Establishment, who was transferred to the half-pay list in February, 1898, is restored to the establishment.

THE IMPERIAL YEOMANRY.

LIEUTENANT A. E. VIDLER, M.R.C.S., 1st Cinque Ports Volunteer Rifles, and MR. E. T. SHORLAND, are appointed Medical Officers, with the temporary rank of Captain, March 10th.

CHANGES OF STATION.

IN addition to officers ordered to South Africa, the following changes of station have taken place during the last month: Major A. ASBURY, from Strensall to York; Major M. O'D. BRADDELL, B.A., M.B., from Egypt to Aldershot; Captain T. W. GIBBARD, from South Africa to Madras; Captain H. A. BERRYMAN, from half pay to Colchester.

Lieutenant Colonel W. A. PARKER, retired pay, has been transferred from Woolwich to Portsmouth.

The undermentioned officers on retired pay have assumed medical charge of troops at the stations specified: Lieutenant-Colonel A. L. BROWNE, M.D., Warley; Major G. H. M. COLMAN, M.B., Chester; Lieutenant-Colonel F. E. BARROW, South Africa; Lieutenant-Colonel S. K. RAY, Colchester.

THE VOLUNTEERS.

SURGEON-MAJOR A. COOPER, Suffolk Yeomanry (the Duke of York's Own Loyal Suffolk Hussars), is promoted to be Surgeon-Lieutenant-Colonel, March 7th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated March 7th: ARTHUR S. WOHLMANN, M.D., 1st Devon and Somerset Engineers; ALFRED O. DAVIES, 5th Volunteer Battalion the South Wales Borderers; WILLIAM H. CALVERT, M.D., 1st Roxburgh and Selkirk (the Border) Rifles; GEORGE R. R. PAINE, 2nd Volunteer Battalion the Royal Sussex Regiment.

Surgeon-Captain G. MCINTYRE, M.B., 4th Volunteer Battalion the Cameronians (Scottish Rifles), has resigned his commission, March 7th.

Surgeon-Lieutenant E. L. PATON, M.B., 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders), is promoted to be Surgeon Captain, March 7th.

Surgeon-Captain W. D. WATERHOUSE, 1st Tower Hamlets Rifles, is promoted to be Surgeon-Major, March 7th.

Surgeon-Lieutenant T. W. BUTCHER, M.B., 5th Lancashire Artillery, is promoted to be Surgeon-Captain, March 14th.

Surgeon-Lieutenant T. HAMILTON, M.B., resigns his commission, March 14th.

MR. OWEN T. STEPHENSON is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the Hampshire Regiment, March 14th.

VOLUNTEER MEDICAL STAFF CORPS.

MR. FRED. P. WOOLLEY is appointed Surgeon-Lieutenant in the Manchester Companies, March 14th.

COMMITTEE ON MILITARY MEDICAL SERVICE IN INDIA.

A COMMITTEE will shortly assemble for the purpose of considering the question of supply and expenditure and the method of accounting for stores, also for investigating and reporting on the question of the reduction and consolidation of reports and returns pertaining to the military medical services in India. The Committee will be composed of a colonel of the Royal Army Medical Corps as President, with two field officers (one from the Indian Medical Service) and the Senior Assistant Surgeon of the Indian Subordinate Medical Department as members. The Committee will be empowered to visit the medical commissariat depôts, the military accounts department, and such military hospitals as may be deemed expedient.

THE ADMINISTRATIVE MEDICAL SERVICE IN SOUTH AFRICA.

A SURGEON-GENERAL (RETIRED) writes to draw attention to the administrative position of the medical service with the army in South Africa, which he considers anomalous and unfair. He points out that it is laid down in the mobilisation regulations that there should be one surgeon-general on the staff of each general officer commanding an army corps in the field. An army corps consists of 35,000 men, and as there are at present (or soon will be) nearly 200,000 men in South Africa on active service, there ought proportionately to be five surgeon-generals, whereas there is but one—Surgeon-General Wilson. Admitting that the exigencies of the campaign practically divided the forces into two armies, that in the Cape Colony under Lord Roberts, and that in Natal under Sir Redvers Buller, it is still quite evident there should have been at least a surgeon-general with each army. As matters stand, there has been no superior Principal Medical Officer in Natal, and administration has struggled on without a responsible head, the senior on the spot doing his best to keep matters going, but really responsible to no medical superior. Who is to blame for this state of affairs? Did the Director-General nominate a surgeon-general for Natal? If not, he is primarily to blame; but if he officially nominated one, and the War Office refused to carry out his views, then the blame rests there. This should be made clear by a question in the House of Commons.

It is believed that the forces in South Africa are to be rearranged in three armies—one in the Free State under Lord Roberts, one in Natal under Sir Redvers Buller, and one on the East under Sir George White. If this arrangement is carried out there should be at least three surgeon-generals in the field.

Our correspondent draws attention also to the principal medical officers of divisions. The first four divisions sent out had colonels of the R.A.M.C. appointed on the staffs of the lieutenant-generals commanding, but the Fifth, Sixth, Seventh, and Eighth Divisions only had lieutenant-colonels appointed to these positions. Why have these officers not been granted acting rank, with the pay and allowances of full colonel while so employed? All the combatant colonels appointed to the command of brigades have been gazetted as major-generals, and the assistant adjutant-general of each division is also a colonel; but we have the anomaly of seeing four out of the eight divisions with colonels as principal medical officers, while the other four have lieutenant-colonels only. Each of these lieutenant-colonels ought at once to be given local rank, with the pay and allowances of colonel: and now that attention has been drawn to the matter, the Secretary of State for War should take immediate action to rectify these anomalies by giving retrospective effect to local promotion from date of appointment.

*** Our correspondent's letter calls timely attention to several anomalies in the medical administration of our forces in the field, which should be remedied even if at the eleventh hour. The original idea was to despatch one army corps, of which Surgeon-General Wilson was the Principal Medical Officer. The splitting up of this army corps, together with the subsequent despatch of successive divisions, and large numbers of unattached troops, completely upset the first arrangements; but that is no reason why the medical administration should not have been correspondingly altered. A surgeon-general should most certainly have been sent to Natal, and we agree that three of that rank would not be too many for the great force now in the field, and considering the vast areas forming the scene of operations and administration. The lieutenant-colonels sent as principal medical officers of divisions should certainly have had the acting rank of colonel, together with the allowances thereof; and retrospective effect should be given to such local promotion.

"SCARCITY OF CANDIDATES": THE R.N. MEDICAL SERVICE.

ONE WHO RETIRED UNWILLINGLY writes: Your correspondent "Senior," in the BRITISH MEDICAL JOURNAL of March 10th, is, I maintain, misinformed as to any present scarcity of candidates for the Naval Medical Service, or that those already in the service are discontented with their pay, which is rank for rank the same as that of the army, while their necessary expenses are less; in addition, they always have the advantage of a ward-room mess, where they are associated with the other officers of the ship, and not thrown on their own resources as to messing as in the sister service as a rule. Where has "Senior" been during the last few months that he speaks of decreasing the administrative ranks, whereas they have been increased of late by one inspector-general and two deputy-inspector-general? Then, again, the other reforms in this service recently noticed in the JOURNAL, such as promotion to fleet rank at latest at 20 years from entry; the provision of surgical instruments, and the improved pay of their sick berth staff, are more likely to attract candidates than to deter them.

EMPLOYMENT IN THE MEDICAL SERVICE.

A CORRESPONDENT wants to know: (1) Whether medical men over 30 years of age can be employed in any branch of the service other than yeomanry or volunteers? (2) Whether the use of tinted glasses in very bright light (vision otherwise normal) would disqualify? (3) What is meant by the Militia Medical Staff Corps, and how are appointments made to it?

*** (1) The age limit for the regular service is 28 years. (2) We should say distinctly so. (3) It is a body on a militia enlistment trained in ambulance and hospital duties as the regulars are. Its officers are appointed by the War Office on the nomination of the Director General.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

CROOK v. CROOK AND HORROCKS.

The case of Crook v. Crook and Horrocks exemplifies a peril from which no medical man is safe. The danger sprang up from a quarter from which it could have been little expected. Dr. Horrocks was asked in 1896 by an old pupil to see his wife. The lady had been married between four and five years. During this time marital intercourse had been imperfect and painful, and no child had been born. After the wife had been treated by Dr. Horrocks she became pregnant. No suggestion was made at the trial that the treatment was improper or uncalled for; that the visits were unnecessarily frequent; or that the lady remained in Dr. Horrocks's room for longer than was needful. No complaint of Dr. Horrocks's conduct was made during the whole time that the lady was under his care. Dr. Horrocks had never seen the lady until she became a patient of his. When the child was born Dr. Horrocks was asked to be its godfather. He wrote consenting to stand, and gave the child a silver mug, accompanying the gift with a letter. At Christmas Dr. and Mrs. Crook sent Dr. Horrocks a Christmas card, and in reply Dr. Horrocks sent them his photograph. A photograph of Mrs. Crook and the baby were sent to him. This was the only correspondence between the parties, excepting letters from Dr. Horrocks to Dr. Crook informing and advising him as to his wife's health. The first time that Mrs. Crook came to see Dr. Horrocks after that gentleman had removed from St. Thomas's Street to Brook Street he showed his patient over his new house, and on one occasion, having to pass Victoria Station on his way to the south of London, he took Mrs. Crook in his carriage, dropped her at the station, and bought her a book and a paper to read in the train. These were the only attentions Dr. Horrocks ever paid to the patient outside his strictly professional duties. After the year 1898 he never saw her at all, either professionally or otherwise.

After the birth of her child Mrs. Crook was slow in regaining strength. In the summer and autumn of 1899 she was, according to her own account, in poor health—sleeping badly, eating badly, losing flesh, nervous, and low spirited. It is proper that we should also state that her husband had not noticed this, nor had some servants and acquaintances whom he called as witnesses. During the Margate season of this year a woman was practising "palmistry" in that town—that is, she proposed to read character and foretell the future by inspecting the palm of the hand. Dr. Crook and his sister Miss Crook, consulted the palmist. They were greatly astonished at the lady's powers, and inclined to believe in them. Mrs. Crook consulted her. She told Mrs. Crook that she had been unfaithful to her husband, that her line of life would be broken either by divorce or death, she thought the former; that there would be a scandal connected with her name; that she would have another child, but not by her husband. These predictions made a great impression upon Mrs. Crook; they preyed upon her mind by day, and she dreamed of them by night. On November 6th she made a confession to her husband to the effect that she had committed adultery with Dr. Horrocks. This confession, curiously enough, began not with any expression of contrition or regret, but with an inquiry as to divorce. She stated that the adultery had taken place on every occasion but one on which she had consulted Dr. Horrocks. Dr. Crook at once consulted a solicitor. He did not inform Dr. Horrocks of the charge against him, so that that gentleman had no opportunity of explaining or refuting the lady's allegations. He first heard of them when he was informed that he was the co-respondent in the divorce suit. Mrs. Crook's brother, finding that she had to defend a divorce petition, put her in communication with a solicitor, and by his advice she consulted Dr. Savage. To Dr. Savage the confession bore the marks of the self-accusations which hysterical women so often make, and to his eye the patient presented the physical signs of the state of impaired mental health in which such confessions are often made. He advised that the patient should have rest and change, and that then the matter should be reconsidered. Within a few days the patient made a statement to her solicitor, in which she said that her mind was clearer, and she now realised that she had made a confession which was untrue.

The case was tried at great length, with the assistance of eminent counsel for each party concerned. The jury had no alternative but to dismiss Dr. Horrocks from the suit, there being no evidence against him, but they hopelessly disagreed as to the credibility of the lady's confession, and were discharged without having given a verdict on that part of the case. As the jury disagreed it is, we presume, possible that the case may be retried, and this being so, we are debarred from further comment upon it.

We can only say that we feel sure that the sympathy of the whole profession will go out to Dr. Horrocks, for there is no doctor, from the most eminent consultant to the most junior assistant, who is not daily exposed to the risk of having similar charges brought against him on evidence equally insufficient.

A LEGAL CORONER AND MEDICAL EVIDENCE.

At an inquest recently held in the county of Cheshire respecting the death of a young girl who was taken ill suddenly in the street and died the next morning, the medical witness gave evidence that death arose from peritonitis following ulceration of the stomach, and that he had ascertained this by *post-mortem* examination. According to the local newspaper the coroner, in his summing up, is reported to have said: "The girl's mistress had no more right to give the doctor permission to make a *post mortem* than any stranger in the land. Having regard to the position in which the girl was found, the case ought to have been reported to the police, and he (the coroner) was the person who had a right to order a *post mortem*. He had a very strong objection to granting *post-mortem* examinations to satisfy medical curiosity, and, with all respect to the doctor in this case, he had made the *post mortem* with no other object than that of medical curiosity. He had arrived at an opinion that peritonitis was the cause of death, and that would have been ample evidence. He only hoped he would never do such a thing again."

*** It is evident that the coroner would have been satisfied with a verdict simply stating that the cause of death was "peritonitis." No medical coroner would have accepted such a statement without ascertaining the cause of the peritonitis, knowing well that such might be the result of injury, violence, poison, or a cause other than natural, and that only by a *post-mortem* examination could complete and satisfactory evidence be obtained. It is not from curiosity that such *post-mortem* examinations are made, but to ascertain the truth, and although it might have been advisable to have obtained an order from the coroner first, it is clear that no satisfactory verdict could have been arrived at in the case without a necropsy.

THE SURGEONCY TO THE QUEEN'S COUNTY INFIRMARY.

Dr. W. G. Jacob, on the resignation of his father, was unanimously elected surgeon to the Queen's County Infirmary in May, 1898. The Local Government (Ireland) Act, 1898, provided that the management of the county infirmaries should be in future entrusted to a Committee formed partly from the former governors and partly from the County Councillors. Furthermore, an "existing officer" was not to be deprived of any privileges enjoyed by him under any Act, and could not be removed except with the consent of the Local Government Board; but with this exception every officer was to be appointed or removed by the new Committee. The term "existing officer" was defined by the Act as one holding office on March 31st, 1898; and as this date was prior to Dr. Jacob's election, the new Committee with a Catholic majority proceeded to take advantage of their position by summarily dismissing him and electing a candidate—Dr. Blayney—of a different religious persuasion. Dr. Jacob applied to the Court of Queen's Bench in Dublin for a *quo warranto* to compel Dr. Blayney to show by what authority he holds office. This the Bench unanimously refused to grant. Had Dr. Jacob's election taken place a few weeks earlier, the Local Government Board could have maintained his appointment.

LAWYERS AND DOCTORS AS CORONERS.

The following letter appeared in a recent number of the *Lincolnshire Echo*, addressed to the Editor:

February 16th, 1900.

Sir,—My attention has been called to the following paragraph which appeared in the early edition of the *Echo* of February 12th: "At a meeting of the Medical Society in Lincoln last week, a very outspoken opinion was expressed in favour of the appointment of lawyers in preference to medical men as coroners, as the latter seldom possess the necessary judicial mental attitude that fits them for the office."

I have to inform you that at the meeting referred to no such question was before the members; nor has any opinion whatever on such question been formulated by the Society in the five and twenty years during which I have held the office of Honorary Secretary.—Yours, etc.,

W. A. Carline,
Honorary Secretary, Lincoln Medical Society.

At the time the elections for county coroners were pending.

A BONESETTER'S ACCOUNT.

Under the above heading the *Kilmarnock Standard* of February 24th reports the hearing of an action in the Sheriff's Small Debt Court, wherein Robert Risk, bonesetter, Falkirk, sued W. H. Duncan, Saltcoats, for £4 5s., being an account for twenty-eight bottles of lotion at 2s. 3d. each, thirteen bottles of oil at 1s. 6d. each, and one visit, 2s. 6d.

The defender said that the pursuer had undertaken to cure an ailment in his wife's knee in six weeks; he declined to pay this account because he had paid too much already. Pursuer had charged him for about eighty-three bottles altogether.

The pursuer was not present in person, but ultimately his representative agreed to accept £2 2s., and the Sheriff thereupon gave decree for that amount, with court expenses.

*** Section XXXII of the Medical Act, 1858, provides that "no person shall be entitled to recover any charge in any court of law for any medical or surgical advice, attendance, or for the performance of any operation or for any medicine which he shall have both prescribed and supplied, unless he shall prove upon the trial that he is registered under this Act."

It is difficult to understand in view of this section how the action above referred to could have been commenced and maintained. It is of course possible that the attention of the court officials and of the sheriff was not drawn to the section in question. Or there may be other circumstances with which we are unacquainted to justify the sheriff's decision.

CIRCULARS TO PATIENTS.

Puzzled.—There is no objection to the circular so long as care is exercised to see that it is sent only to persons who are *bonâ-fide* patients of the practice.

Factor.—We are of opinion that our correspondent should submit the facts, properly supported by an affidavit, to the General Medical Council.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,207 births and 4,553 deaths were registered during the week ending Saturday last, March 10th. The annual rate of mortality in these towns, which had been 25.8, 24.2, and 21.2 per 1,000 in the three preceding weeks, further declined to 20.4 last week. The rates in the several towns ranged from 13.0 in Huddersfield, 14.3 in Brighton and in Swansea, 14.9 in West Ham, and 15.1 in Birkenhead to 28.9 in Preston, 29.1 in Liverpool, 31.4 in Wolverhampton, and 32.4 in Salford. In the thirty-two provincial towns the mean death-rate was 21.5 per 1,000, and exceeded by 2.7 the rate recorded in London, which was 18.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the death-rate was 1.6 per 1,000, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.8 in Leicester, 5.0 in Salford, 6.1 in Preston, and 7.0 in Wolverhampton. Measles caused a death-rate of 1.4 in Salford, 1.5 in Plymouth, 1.7 in Leicester, 2.1 in Cardiff, 2.9 in Wolverhampton, and 3.1 in Preston; and whooping-cough of 1.4 in Oldham, 1.6 in Liverpool and in Bolton, 1.8 in Preston, 2.1 in Salford and 2.9 in Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 85 deaths from diphtheria in the thirty-three towns included 41 in London, 8 in Leicester, 6 in Leeds, 5 in Sheffield, and 5 in West Ham. No fatal case of small-pox was registered last week either in London or in any of the thirty-two large provincial towns. Seven cases of small-pox remained under treatment in the Metropolitan Asylums Hospitals on Saturday last, March 10th, against 8, 11, and 7 at the end of the three preceding weeks; 1 new case was admitted during the week, against 3 and 2 in the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 1,868 at the end of the sixteen preceding weeks, had further fallen to 1,777 on Saturday last; 147 new cases were admitted during the week, against 159, 160, and 154 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 10th, 1,051 births and 857 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 31.7 and 29.0 per 1,000 in the two preceding weeks, further declined last week to 27.7, but was 7.3 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.2 in Leith and 22.4 in Edinburgh, to 31.9 in Paisley and 32.0 in Perth. The zymotic death-rate in these towns averaged 3.0 per 1,000, the highest rates being recorded in Paisley and Greenock. The 453 deaths registered in Glasgow included 12 from measles, 5 from scarlet fever, 5 from diphtheria, 11 from whooping-cough, 5 from "fever," and 14 from diarrhœa. Three fatal cases of scarlet fever, 3 of whooping-cough, 3 of "fever," and 3 of diarrhœa were recorded in Edinburgh. Three deaths from diarrhœa occurred in Dundee, 4 from whooping-cough in Aberdeen, 3 from measles and 3 from whooping-cough in Paisley, and 2 from scarlet fever and 3 from diarrhœa in Greenock.

A CONVERTED ANTIVACCINATIONIST.

FROM the *Bolton Evening News* we cut the following letter:

"71, Waller Street, Hull, February 28th, 1900.

"Dear Sir,—In answer to yours of the 23rd inst. I am sorry to acquaint you with the facts of the case. I was an antivaccinator before that dreadful disease small-pox set its foot into my home. First it attacked my middle daughter, Frances Emily, and when I called the doctor in to attend his first words were that this is an unvaccinated case of small-pox, and he said this child is unvaccinated and this is what you are reaping. Well, sir, that doctor had never seen that child before. From then I began to alter my opinion as regards vaccination. To tell the truth, my wife, myself, and oldest daughter Annie got vaccinated, my son Willie was ill with bronchitis, and the doctor would not do him. My eldest daughter Annie would not take, but she had been done when an infant and was under ten years of age. My wife and myself took the vaccination, and at the same time we had the small-pox on us. Our daughter was taken from us on December 6th, and died on December 12th, and on December 16th my wife, myself, and my son were taken to the hospital, and on the 20th my son died, so you will see that *both of my children that were unvaccinated took the small-pox and died.* My wife and myself were vaccinated when infants and revaccinated, and to which I owe my life. In regard to the unvaccinated cases, they are a [illegible] sight to see, and ought to be a lesson to all honest-minded people that have seen them suffer. My wife and myself would have had our children vaccinated if it had cost us twenty pounds, but sorry to say it cost us our two dear children. *We are as strong now for vaccination as we were against it.* Seeing what we have seen in the hospital will open one's eyes. I can say this for revaccination, that it is a very stimulating thing for small-pox. It is one of the best safeguards that the public can take.—Yours truly (signed), WM. JAS. TAYLOR, 71, Waller Street, Holderness Road, Hull. P.S.—You can publish this letter for public information on condition that you send me a copy of the paper. From one that has had to pay for his foolishness."

This letter evidently records the impression which actual dealing with small-pox has made on the mind of a man previously misled by antivaccinationist propagandism. It is a pity that so terribly severe a lesson has been needed, but experience is a hard schoolmaster. Every parent in Bolton who has been foolish enough to neglect to protect his children against small-pox should take to heart this object lesson, providing as it does an example of the way in which small-pox differentiates between the vaccinated and the unvaccinated in the same household.

THE AMERICAN SANITARY SERVICE IN HAVANA.

FROM reports by Dr. John G. Davis, Major and Surgeon of Volunteers, Chief Sanitary Officer of Havana, it appears that the work done in the sanitation of Havana during the year 1899 was as follows: 41,552 examinations of premises were made, 34,241 written notices were issued, 9,039 premises were disinfected, 4,576 cartloads of rubbish were removed, 25,497 examinations of cesspools were made, 6,769 cesspools were cleaned, 207 analyses of food products were made, 36 bacteriological examinations were conducted, 347 food products were destroyed, 298 horses were treated, sewer and catch basins were cleaned and disinfected in 40,570 instances, 1,234 houses were newly supplied with water, public urinals were cleaned and disinfected in 4,879 instances, an average of 24,000 gallons of electrozone was applied daily in streets, sewers, and houses, 253,583 linear feet of old sewers were cleaned and disinfected, 1,731,982 square metres of street area were cleaned daily, 400,298 square metres of pavement were removed, and the plumbing was modified in 2,424 houses. There were 284 cases of yellow fever during the year, with 103 deaths. The population of the city is estimated at 220,000.

THE CONSUMPTION OF TUBERCULOUS MEAT.

THE Belgian Government has issued a circular to all municipal authorities urging them to use apparatus for the sterilisation of meat from tuberculous cattle without extensive lesions. The meat, which after subjection to the sterilising process is said to be harmless, is sold for 50 centimes per kilo. Part of the money thus received is applied to defraying the cost of sterilisation, and the remainder is added to the indemnity paid by the Government to the owners of condemned cattle.

VACCINATION.

MAGISTRATES AND THE CONSCIENCE CLAUSE.

DR. PETER GILES (Holne Chase, Bletchley) writes with reference to an answer published in the BRITISH MEDICAL JOURNAL, March 3rd, p. 532: I intended it to be understood that I was the justice wanted to complete the certificate. To explain more fully: A justice is ready to sign a vaccination exemption: I am the only other justice present and have conscientious scruples against exemption. What can I do? Must I sign or can I refuse?

*** If the magistrate is "satisfied" that the applicant has conscientious objection to vaccination he ought to sign the certificate. He may believe the conscience clause to be a piece of bad legislation, but he is there to administer the law, not to nullify it. If he acts otherwise he will only be following the evil example of the antivaccinationist, at the same time that he will be providing the League with material on which to base further agitation for further relaxation of the law.

"NO ANTIVACCINATIONIST NEED APPLY."

THIS is the sensible if somewhat tardy determination come to by the Liskeard Board of Guardians with regard to their proposed appointment of a vaccination officer. Following the bad example of Leicester, they elected to the office a man who strongly disapproved of vaccination and had declined to have his own children vaccinated. Then Mr. Preston Thomas went down from the Local Government Board to explain the Board's refusal to sanction the action of the guardians, and in doing so he referred to the action of the Leicester guardians, who in the same circumstances had been compelled to yield. One member of the Liskeard Board proposed to appeal to the House of Commons on the matter, but the Inspector from Whitehall pointed out that the Local Government Board had already been entrusted by Parliament with power to refuse to sanction any such appointment if they deemed it desirable to do so. It was then decided to invite tenders for the vacancy, and at the suggestion of Mr. Shovel (who had proposed the appeal to Parliament) the words "no antivaccinationist need apply" were inserted in the advertisement.

PRIVATE VACCINATION BY PUBLIC VACCINATORS.

M.B., M.A.—In the Vaccination Act, 1898, Schedule III. Instructions to Vaccinators under Contract, it is stated: "In all ordinary cases of primary vaccination the public vaccinator must aim at producing four separate good sized vesicles or groups of vesicles not less than ½ inch from one another. The total area of vesiculation resulting from the vaccination should not be less than half a square inch." This throws the responsibility of deciding whether any concession is to be made on the public vaccinator. He is the only one who can say what is an extraordinary case, and appreciate the difficulties of "aiming at producing." The Royal Commission distinctly deprecated any reduction of the number of insertions below three, and the instruction seems to have been framed so as to allow a certain latitude to the public vaccinator in districts, for example, where vaccination had been almost a dead letter. In practice, however, it will be found easier to stick to four vesicles, and certainly it should be more satisfactory to the public vaccinator himself to maintain a high standard. The Local Government Board has no authority over the vaccination of private practitioners, or of public vaccinators acting in their private capacity, as they would be doing if vaccinating in any other district than their own.

METHOD OF PAYING SUPERANNUATION ALLOWANCE.

IN the BRITISH MEDICAL JOURNAL of February 24th, p. 488, in a reply to a correspondent on the above subject, it was stated that we considered the Local Government Board would order this allowance to be paid by quarterly instalments. The same correspondent now asks for our authority for this opinion.

*** We are not aware that there is at present any law or regulation as to the method of paying superannuation allowance, but the Local Government Board has power to make a regulation thereon, and we have every reason to suppose that, as annual fixed salaries are invariably paid by quarterly instalments, the Local Government Board would insist on the same method of paying any fixed annual superannuation allowance.

MEDICAL NEWS.

RUGBY UNION HOSPITALS CUP.—After a keen game St. Mary's beat London at Richmond in the final tie of the Hospitals Cup competition by two tries to one. St. Mary's Hospital has never previously won the cup.

A PATHOLOGICAL LABORATORY ON THE CONGO.—The Baroness von Hirsch-Gereuth, who died recently, has bequeathed 50,000 francs for the establishment of a physiological and pathological laboratory on the Congo. Leopoldsville, the terminus of the Congo railway, has been chosen as the place where the laboratory is to be established.

THE METRIC SYSTEM IN THE UNITED STATES.—A Bill for the general adoption of the metric system in the United States is now before Congress. The Bill provides for the adoption of the system after January 1st, 1901, in all departments of the Government except in the completion of the survey of public lands, and that after January 1st, 1902, the metric system shall be the legal standard of the United States.

SOW'S MILK FOR NURSLINGS.—The French Superior Council of Hygiene will shortly, it is said, be invited to consider the suitability of sow's milk as a substitute for that of the cow in the feeding of children brought up by hand. The proposal emanates from an ingenious lady of Finisterre, who has managed to enlist in its favour the sympathies of some members of the medical profession. If the matter comes to the proof, the results of the experiment will doubtless be watched with interest by those philosophers who think that the key to the human character is to be found in the nature of the food.

THE PREVENTION OF MALARIA IN SPAIN.—The Spanish Government has issued a decree ordering the Royal Academy of Medicine to prepare within the next two years a report as detailed as possible as to the foci and sources of malaria in Spain, the injury which it causes, and the best means of combating the scourge. All local sanitary authorities and all medical practitioners are enjoined to give every assistance in their power to the Academy in its inquiry. When the report is presented it will first be referred to the Royal Council of Health, and afterwards the Government will submit to the Legislature a scheme for the extinction of malaria in Spain.

BRITISH DENTAL ASSOCIATION.—The annual dinner of the Metropolitan Branch of the British Dental Association was held at the Hotel Cecil on March 3rd, Mr. Ashley W. Barrett in the chair. Among the guests were Dr. Glover and Mr. George Brown. Replying to the toast of "The Visitors," Dr. Glover said the dental surgeons had always been a source of strength and support to the direct representatives on the General Medical Council. Dental surgery had attained a very high professional standard, and the general culture enjoined on candidates for membership had raised that branch of the medical profession to a very high level.

THE PARIS MEDICAL FACULTY.—The last annual report of the University of Paris shows that the number of students in the Faculty of Medicine in the academic year 1898-1899 was 4,315. Of these 570 were foreigners, including 21 Swiss, 26 German, 25 Greeks, 79 Roumanians, 180 Russians, 12 South Americans, and 24 West Indians. The number of female students was 129, of whom 91 were Russians, 5 Roumanians, 2 Germans, 1 Swiss, and 1 British. The degree of Doctor of Medicine was conferred on 671 persons. Of these degrees, 79 were of the ornamental kind granted to foreigners, which does not give the right to practise medicine in France. In addition to the 592 degrees conferred in the ordinary way on French students, 13 licences as *officier de santé* were given to candidates who had begun their studies before the date of the degree abolishing that qualification. The total number of new members, therefore, added to the medical profession of France in the year in question was 605. The average number of degrees conferred by the provincial medical faculties each year is 500, making the total annual output of new practitioners about 1,100.

THE STATE AND THE PREVENTION OF TUBERCULOSIS.—At the ninety-fourth annual meeting of the Medical Society of the State of New York held at Albany on January 30th, the Committee on Hygiene presented a report in which the establishment of State sanatoria for the treatment of cases of incipient consumption was strongly urged. It was pointed out that sanatoria for the treatment of consumptives are now in successful operation in almost every civilised country of the world. In the United States there are 33, distributed as follows:—Alabama, 2; Colorado, 3; Illinois, 3; Maryland, 1; Massachusetts, 4; New Mexico, 4; New York, 10; North Caroline, 2; and Pennsylvania, 4. With the exception of one in Massachusetts these are all private institutions. Last year the Society unanimously adopted resolutions calling on the Legislature of New York State to take speedy action for the establishment of a State sanatorium.

MEDICAL SOCIETY OF LONDON.—Under the genial presidency of Dr. Frederick T. Roberts, F.R.C.P., the Medical Society of London held a dinner in the Whitehall Rooms on March 8th to celebrate its 127th anniversary. It is not customary at these functions to hear anything but the ordinary loyal sentiments expressed in the toasts of "The Queen" and "The Royal Family," and Dr. Roberts must be complimented on the excellent speeches which he delivered. In proposing the toast "The Medical Society of London," the President gave an interesting sketch of the history of the growth and importance of the Society. In the course of his remarks he referred in graceful and complimentary terms to the services to the Society of Dr. Stocker, the Master of the Apothecaries' Society, and Dr. W. Smiles. The toast of "The Visitors," proposed by Mr. Thomas Bryant, was replied to by Sir Richard Douglas Powell, Bart., President of the Clinical Society, and by Surgeon General J. Jameson, C.B., Director-General of the Army Medical Service, who took the opportunity to relate some facts concerning the arrangements for dealing with wounded men in action. In his opinion cases of abdominal wounds under certain circumstances do better if not immediately subjected to operation in field hospitals. He also pointed out that there was a danger of septic infection occurring in the course of long conveyance of wounded by railway. The toast of "The President," having been proposed and acknowledged, the President took the occasion to propose the toast of "The Council, the Honorary Secretaries, and Mr. Hall, the Registrar," to which, in a few words, the Senior Honorary Secretary, Dr. Calvert, suitably replied.

MEDICAL VACANCIES.

The following vacancies are announced:

ARGYLL AND BUTE ASYLUM, Lochgilphead.—Assistant Medical Officer, unmarried, and not exceeding 30 years of age. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Medical Superintendent by April 7th.

BIRKENHEAD BOROUGH HOSPITAL.—Visiting House-Surgeon. Salary, £75 per annum, with board, lodging, and washing. Applications to the Chairman of the Weekly Board, by March 19th.

BIRMINGHAM: GENERAL HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Physician. Appointments for six months. No salary, but board, residence, and washing provided. Applications to the House Governor by March 31st.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund Street, Birmingham.—House-Surgeon. Appointment tenable till October 31st, but eligible for re election. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to the Secretary by March 21st.

BRADFORD ROYAL INFIRMARY.—House-Surgeon, unmarried. Salary, £110 per annum, with board and residence. Applications, endorsed "House-Surgeon," to be sent to the Secretary by March 20th.

BURY INFIRMARY.—Junior House-Surgeon. Salary, £80 per annum, with board, residence, and attendance. Applications to the Honorary Secretary, Dispensary, Knowsley Street, Bury.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications to the Honorary Secretary by June 11th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DEVONPORT ROYAL ALBERT HOSPITAL.—Assistant House Surgeon, for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by March 22nd.

DOWN COUNTY ASYLUM, Downpatrick.—Assistant Medical Officer, not exceeding 32 years of age, unmarried. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by April 14th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer. Salary £140 per annum, rising to £160, with board, lodging, washing, etc. Applications to the Medical Superintendent, Winterton, Ferryhill, by April 3rd.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—Medical Officer for the Casualty Department. Salary at the rate of £100 per annum, with luncheon. Appointment for six months. Applications to the Secretary by March 24th.

EDINBURGH UNIVERSITY.—Professor of Medicine. Applications to the Secretary, 66, Frederick Street, Edinburgh, by April 14th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary £50, with apartments and board. Application to the Secretary, 88, West Regent Street, Glasgow, by March 28th.

GREAT NORTHERN HOSPITAL, Holloway Road, N.—Junior House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging and washing. Applications to the Secretary by March 19th.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon, unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by March 28th.

HANTS COUNTY ASYLUM, Fareham.—Third Assistant Medical Officer, unmarried, and not exceeding 30 years of age. Salary, £125 per annum, increasing to £150, with

furnished apartments, board, etc. Applications endorsed "Application for appointment of Medical Officer," to the Committee of Visitors, by March 21st.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton,—(1) Assistant Physician, (2) Resident House Physicians. Appointments for six months. Honorarium, £25. Applications to the Secretary for the first by March 21st, and for the latter by April 3rd.

INVERNESS: NORTHERN INFIRMARY.—House-Surgeon and Dispenser. Salary, £70 per annum, with board, etc. Applications to the Secretary, 15, High Street, Inverness, by March 26th.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon, unmarried. Salary, £60 per annum, with board and lodging. Applications to the Secretary by March 29th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium, £10, with board, residence, and washing. Applications to the Secretary by April 14th.

LINCOLN HOSPITAL FOR INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent.

LIVERPOOL DISPENSARIES.—Assistant House-Surgeon, unmarried. £100 per annum, with board and apartments. Applications to the Secretary, 34, Moorfields, Liverpool, by March 26th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Physician to Out-patients; must be F. or M.R.C.P.Lond. Honorarium, 50 guineas per annum. Applications to the Secretary by April 5th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by March 29th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—Medical Officer. Appointment for six months, but eligible for re-election. Salary, £65 per annum, with board and residence. Applications to the Chairman of the Board of Management by March 29th.

METROPOLITAN HOSPITAL, Kingsland Road, N.E.—(1) House-Physician, (2) House-Surgeon, (3) Assistant House-Physician, (4) Assistant House-Surgeon. Appointments for six months. Salary for the first two at the rate of £40 per annum, and for the latter two at the rate of £20 per annum. Applications to the Secretary by March 19th.

MIDDLESBROUGH-ON-TEES: NORTH RIDING INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum, with lodging, board, and washing. Applications marked "Application for post of Assistant House-Surgeon" to the Secretary by March 27th.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Assistant Resident Surgeon. Salary, £52 per annum, with board and residence. Applications to the Secretary at the offices, 30, Charing Cross, London, S.W.

MILE END.—Assistant Medical Officer at the Workhouse Infirmary and the Workhouse and School, unmarried, and not exceeding 30 years of age. Salary, £120 per annum, with board, lodging, and allowances. Applications on forms provided to the Clerk to the Guardians, Bancroft Road, E.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport.—House-Surgeon. Salary, £100 per annum, with board and residence. Applications to the Secretary by March 22nd.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—(1) Ophthalmic Surgeon. (2) Assistant Resident Medical Officer, unmarried. Appointment for six months. Salary at the rate of £60 per annum, with board, residence, laundry, etc. Applications to the Secretary by March 28th.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £50 per annum. Applications to the Honorary Secretary by March 22nd.

PRESTON ROYAL INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary, 5, Winckley Street, Preston, by March 31st.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer, unmarried. Salary, £100 per annum, with furnished apartments, board, and attendance. Applications to the Secretary by March 31st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by April 23rd.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Resident Medical Officer. Salary, £70 per annum, with full rations and laundry. Applications to the Secretary by March 24th.

ST. MARY'S HOSPITAL SCHOOL.—Demonstrator of Physiology. Salary, £100 to £150. Applications to the Dean by March 24th.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 27th.

STAMFORD, RUTLAND AND GENERAL INFIRMARY.—House-Surgeon, unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 30th.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to the Secretary by March 20th.

STROUD RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £130 per annum. Applications to the Clerk, Union Offices, Stroud, Gloucestershire, by March 21st.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by March 26th.

SUNDERLAND: MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—House-Surgeon, unmarried. Salary, £80 per annum, with board, residence, and washing. Applications to the Honorary Secretary by March 20th.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Clinical Assistant. No salary. Board, residence, and laundry provided. Applications to Dr. Parry, Resident Medical Officer.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon. Salary, £50 per annum, with board, etc. Applications to the Secretary.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary by March 27th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by March 26th.

MEDICAL APPOINTMENTS.

BALCH, J. A., M.B., Ch.B., appointed House-Physician to the Royal Hants County Hospital, Winchester.

BENNETT, William Edward, F.R.C.S.Eng., appointed a Demonstrator of Anatomy in Mason University College, Birmingham.

BERRY, H. P., M.B.Lond., M.R.C.S.Eng., reappointed Medical Officer to the Grantham Town Council.

BLAIR, Charles S., M.D.Durh., F.R.C.S.Eng., appointed Assistant Surgeon to the Western Ophthalmic Hospital, London.

CAMPBELL, E. Kenneth, M.B., F.R.C.S., late Senior Assistant Surgeon, appointed Surgeon to the Western Ophthalmic Hospital.

CHRISTMAS, R. W. S., L.R.C.P.Lond., M.R.C.S., appointed Public Vaccinator to the Streatham No. 2 Division of the Wandsworth and Clapham Union.

CLARKE, A. C., L.R.C.P., L.R.C.S., appointed Medical Officer for the Tenth District of the Hexham Union, *vice* W. C. Steele, M.D.Brux., M.R.C.P.Edin., M.R.C.S., resigned.

DECK, E. J., M.R.C.S.Eng., L.R.C.P., appointed Medical Officer for the Second District of the Hastings Union, *vice* C. A. Brodribb, M.R.C.S.Eng., resigned.

DONAGAN, A. E., B.A., L.D.S., appointed Lecturer on Dental Mechanics in Mason University College, Birmingham.

EVANS, J. Jameson, M.B. C.M., F.R.C.S., appointed a Demonstrator of Anatomy in Mason University College, Birmingham.

FELCE, Stamford G., M.A., M.D., B.C.Cantab., appointed Medical Officer to the Willesden Parish Infirmary.

GILES, A. E., M.D., M.R.C.P.Lond., F.R.C.S.Edin., appointed Honorary Gynæcologist to Out-patients at the Tottenham Hospital.

GILMER, H. A. H., M.B., Ch.B.Edin., appointed Assistant House-Surgeon to the Northern Hospital, Liverpool.

HAYS, A. G., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Third District of the Brackley Union, *vice* H. R. Jacobs, L.R.C.P.Edin., M.R.C.S.Eng., resigned.

HEDLEY, A. S., M.B., B.S.Durh., appointed Medical Officer for the Rothley District of the Rothbury Union, *vice* W. Sutherland, L.R.C.P.Edin., L.F.P.S.Glasg., resigned.

HEMSTED, Henry, jun., M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Surgeon to the Royal Hants County Hospital, Winchester.

HERBERT, B. H., M.R.C.S.Eng., reappointed Medical Officer in the Uttoxeter District Council.

LESLIE, R. Murray, M.B.Edin., L.R.C.P.Lond., appointed Senior Medical Registrar and Medical Tutor, King's College Hospital, and Honorary Physician to In-patients at the Tottenham Hospital.

NEVENS, J. E., M.B.Lond., M.R.C.S.Eng., appointed Medical Officer for the Brownlow Hill Workhouse of the Parish of Liverpool.

ROWLANDS, W. H., M.R.C.S., L.R.C.P., appointed Medical Officer to the Bromsgrove Union Workhouse, *vice* C. Kidd, M.B., resigned.

THOMPSON, George, W., M.B., C.M.Edin., appointed Assistant Surgeon to the Western Ophthalmic Hospital.

WEAVER, John J., M.R.C.S.Eng., L.S.A., appointed Medical Officer of Health for Southport.

WRIGHT, William, M.B., Ch.B., M.R.C.S., L.R.C.P., appointed Lecturer on Osteology and Senior Demonstrator of Anatomy in Mason University College, Birmingham.

DIARY FOR NEXT WEEK.

MONDAY.

Royal College of Surgeons of England, 4 P.M.—Professor C. Stewart: On the Protection and Nourishment of the Young in Plants and Animals. Lecture IV.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Galloway: Consultation. (Skin).

Medical Society of London, 8 P.M.—Sir W. M. Banks: Prevalent Errors about Mammary Cancers and its Diagnosis. Acute Mania. Chronic Interstitial Mastitis, and how it Degenerates into Cancer. Lantern demonstration to illustrate the last subject. Lettsomian Lecture II.

TUESDAY.

Royal College of Physicians of London, 5 P.M.—Dr. P. Horton-Smith on the Typhoid Bacillus and Typhoid Fever. Goulstonian Lecture I.

Chelsea Clinical society, Holy Trinity Parish Hall, Pavilion Road, Sloane Square, S.W., 8.30 P.M.—Resumption of the Debate on the Treatment of Rheumatism, with Special Reference to Prophylaxis and Cardiac Complications in which Dr. Fye-Smith, Dr. R. Caton (Liverpool), Dr. Burney Yeo, and Dr. Isambard Owen will take part, and Sir Richard Douglas Powell, Bart., will give a closing address.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent, Bart.: Consultation. (Medical.)

Royal Statistical Society, 9, Adelphi Terrace, Strand, W.C., 5 P.M.—Miss Rosa M. Barrett: The Treatment of Juvenile Offenders, together with Statistics of their Numbers.

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Adjourned Discussion on Professor Halliburton's Paper on the Forms and Significance of the Proteids met with in the Urine, to be resumed by Dr. Brodie.

WEDNESDAY.

Royal College of Surgeons of England, 4 P.M.—Professor C. Stewart: On the Protection and Nourishment of the Young in Plants and Animals. Lecture V.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Dr. Schorstein on Emphysema.

Royal Microscopical Society, 20, Hanover Square, W., 7.30 P.M.

Royal Meteorological Society, 25, Great George Street, Westminster, 7.30 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. O. Hawthorne: Consultation. (Medical.) 5-7 P.M.—Dr. St Clair Thomson. Class. Practical Ophthalmology. Demonstration III.

THURSDAY.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Still: Some Functional Neuroses of Childhood.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Royal College of Physicians of London, 5 P.M.—Dr. P. Horton-Smith on the Typhoid Bacillus and Typhoid Fever. Goulstonian Lecture II.

FRIDAY.

Royal College of Surgeons of England, 4 P.M.—Professor C. Stewart: On the Protection and Nourishment of the Young in Plants and Animals. Lecture VI.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. St Clair Thomson: Consultation. (Eye, Ear, Nose and Throat.) Demonstration III.

Clinical Society of London, 8.30 P.M.—Dr. Hale White and Mr. Fripp: A case in which the attempt was made to Remove a Dermoid Tumour, which, growing in the Spinal Canal, pressed upon the Spinal Cord.—Mr. Robert Jones and Mr. Tubby: Further Experience of Cases of Spinal Rectification.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

FIELD.—On March 11th, at "Greta," Wyke, near Bradford, the wife of A. Holmes Field, L.R.C.P., L.R.C.S., etc., of a son.

WILLIS.—On March 12th, at Littleport, Cambridgeshire, the wife of E. Ernest Willis, L.R.C.S., L.R.C.P. L.F.P.S. of a son.

DEATHS.

CUMMING.—At Findhorn, N.B., on March 14th, Dr. Walter J. Haldane Cumming, L.R.C.P. and L.R.C.S.Edin., late of Lochgelly.

KIDDLE.—On February 9th, at Mongkaw, Burma, murdered by frontier tribes, Major Walter Kiddle, R.A.M.C., M.D., L.K.Q.C.P.I., etc., second son of the late Captain W. W. Kiddle, R.N., and of Mrs. Kiddle, 14, Hardwick Road, Eastbourne.

WILLIAMS.—At Brynymor, Penygroes, Carnarvonshire, on March 12th, John Cadwaladr Williams, M.B., C.M.Edin., M.R.C.S.Eng., L.R.C.P.Lond., of Grange Road West, Middlesborough-on-Tees, aged 31 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1. Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

INTERROGATOR would like to hear of a home (private) where a mentally deficient girl, aged 19, could be received, and not only educated, but taught an occupation.

STUDENT will be grateful if any reader can tell him from recent personal experience if any good post-graduate class in practical gynæcology of about a month's duration, such as that formerly given by Martin, can be had in Berlin about the month of April, and, if so, to whom and where application should be addressed for admission, and the fee charged.

TREATMENT OF VAGINAL DISCHARGE.

LYMPH would be glad to hear some suggestions as to treatment of the following case. A patient, since a miscarriage two years ago, has had a yellow discharge, distinctly vaginal. The husband, now deceased, had gonorrhœa. The discharge has not yielded to ordinary astringents, nor to swabbing out the vagina with silver nitrate solution followed by a plug of bismuth and glycerine.

MERCANTILE MARINE.

DR. STANLEY HAYNES (Malvern) writes to know of practical medical and surgical handbooks suitable for navigating officers in the mercantile marine. The works should contain some account of and treatment of tropical diseases, and be such as would be useful in emergencies on board colonial "tramp" steamers unprovided with a surgeon.

*** The following works may be recommended: *Medical and Surgical Help for Shipmasters and Officers of the Merchant Navy,* by W. Johnson Smith, F.R.C.S. (London: C. Griffin and Co. 1895. 6s.); *Health in Africa,* by Dr. Kerr Cross (London: J. Nisbet and Co. 1897. 3s. 6d.). It would probably be desirable to take both books.

VENEREAL DISEASES ABROAD.

A CORRESPONDENT wishes to know where he could find statistics relating to the prevalence of venereal diseases for the last few years in the French, German, Italian, Russian, and Japanese armies. Also if Contagious Diseases Acts are in force in those countries? The facts he more particularly wishes to ascertain are: (1) Admissions per 1,000 from all diseases; (2) from venereal diseases, subdivided if possible into (*a*) primary syphilis, (*b*) secondary later, (*c*) soft chancre (chancroid), (*d*) gonorrhœa; (3) number constantly sick per 1,000 from all diseases; (4) ditto from venereal diseases; (5) total yearly admissions from all diseases; (6) total yearly admissions from venereal diseases; (7) total constantly sick from all diseases; (8) total constantly sick from venereal diseases. Perhaps some of our readers may be able to give the requisite details.

THE SWEATING SICKNESS.

ZEPHYR asks for information as to the malady which Bacon alludes to in his *Essays* in narrating the history of the reign of Henry VII (p. 313, Bohn's edition).

"About this time, in autumn, towards the end of September, there began and reigned in the City and other parts of the kingdom a disease then new, which by the accidents and manner thereof they called the sweating sickness. This disease had a swift course, both in the sick body and in the time and period of the lasting thereof, for they that were taken with it, upon four and twenty hours escaping were thought almost assured.....It was a pestilent fever, but as it seemeth not seated in the veins or humours, for that there followed no carbuncle, no purple or livid spots, or the like, the mass of the body being not tainted, only a malign vapour flows to the heart and seized the vital spirits, which stirred nature to strive to send it forth by an extreme sweat..... But infinite persons died suddenly of it, before the manner of the cure and attendance was known. It was conceived not to be an epidemic disease, but to proceed from a malignity in the constitution of the air, gathered by the predispositions of seasons, and the speedy cessation declared as much."

This clearly refers to the sweating sickness which first visited England after the battle of Bosworth (August 22nd, 1485), spreading in a few weeks from the distant mountains of Wales to the metropolis, which it reached on September 21st. John Caius or Kaye, sometime Professor of Greek at Padua, the refounder of Caius College, Cambridge, and the celebrated President of the Royal College of Physicians from 1555 to 1560, wrote a *Boke or Counseill against the disease commonly called the Sweate, or Sweatyng Sicknesse.* There is an excellent and interesting account of the disease in Hecker's *Epidemics of the Middle Ages,* published by the Old Sydenham Society in 1844.

ANSWERS.

SECRETARY.—The rule is well established and generally recognised by hospital administrators.

MEMBER of twenty five years' standing has not authenticated his communication by his name.

TERTIAN.—One of the mosquito family (*Culex*) is still present, in some years in great numbers, in the Fen district, and in many marshy places in the Eastern Counties of England. Whether *Culex* is ever the extracorporeal host of the malarial parasite is a point not yet settled. *Anopheles,* which is known to carry the parasite in other countries is not, so far as we are aware, known to exist in this country, but probably it has not been looked for very carefully.

ANXIOUS FRIENDS.

B.—We have no doubt the poor lady was anxious to try to inform herself in order to be more capable of rendering assistance to her husband

in his sad plight. But we think our correspondent should have no difficulty in sympathetically explaining to her that it would be better not to read medical books while expressing his willingness to answer any questions about the case, and to give her any information in his power.

THE TWO JENNERS.

A CORRESPONDENT asks whether the late Sir William Jenner was descended from or related to Dr. Edward Jenner, the discoverer of vaccination. The following anecdote (which we take from the *Practitioner*) will supply an answer to the question: "When Sir William Jenner was beginning to make his name known by his researches on typhoid fever, Seaton, who had not long before been introduced to the young physician, found himself seated opposite to him in an omnibus. Availing himself of a 'flash of silence' in the roar of the street, Seaton leaned over and said to Jenner, 'Are you——'? But before he could get further came the explosive answer, 'No, not the least!' Sir William's supposed relationship to Edward Jenner (which was positively affirmed not long ago by a medical man in a debate on vaccination on a public platform) must have made Seaton's uncompleted question one of the minor troubles of his life."

TREATMENT OF PILES COMPLICATED BY PROLAPSUS ANI.

MR. E. HARDING FREELAND, F.R.C.S.Eng. (Portland Place, W.) writes: In answer to "Frater," in all probability complete freeing of the pile—or what remains of it—from its bed, with ligature above where the vessels enter the tumour, would have the effect of curing the pile and relieving the prolapse.

G. B. advises the free application of carbolic acid; the acid, after about 2 minutes, to be neutralised by powdered chalk, and the bowels to be relieved after a day or two by enema.

DR. H. W. SPAIGHT (Porlock, Somerset) writes to suggest the following treatment: Keep the motions soft by means of frequent small doses of sulphur, the patient lying on his side during the passage of the motion, and injecting a small quantity of ice-cold water afterwards. If the ordinary position is adopted during defæcation, the feet should be raised from the ground to prevent straining. It is possible that the sessile pile may have to be excised before the prolapse can be cured. The absorption of fat in cases of extreme emaciation, by which the rectum is deprived of its mechanical support, is likely to produce prolapse. "Frater" does not mention whether his patient has lately become thinner. Stronger measures such as scarification or caustics may be necessary, but before resorting to them I should advise him to try the effect of a well-fitting support.

DR. RIVERS WILLSON (Oxford) writes: I have found the following treatment successful in a similar case: Cleanse the prolapsed mucous membrane with tepid water, and return, if possible, after each action of the bowels; insert an enule of hazeline compound, B.W. and Co.'s (hazelene, hamamelidin, and zinc oxide); saturate a pledget of absorbent cotton wool in a lotion of tr hamamelidis 3ss c. aq. dest. ad 3viij; place it over the anus, and secure it in position with a pad of gamgee tissue and a flannel T bandage. Administer ext. cascar. sagrad. gr. iij every evening if there is any tendency to constipation. Perseverance in carrying out the treatment is essential.

NOTES, LETTERS, Etc.

MIDLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

THE Honorary Treasurer lately received £1 3s. 6d. with no name or address enclosed. The sender will please communicate with Dr. Frank M. Pope, 4, Prebend Street, Leicester.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This fund is established to assist the families on or off the strength of non-commissioned officers and men of Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

	£	s.	d.
Amount already acknowledged	276	0	5
Brigade-Surgeon-Lieutenant-Colonel C. Dukes ...	1	1	0
Messrs. Solomon Bros.	0	10	6
Officers Aberdeen Company V.M.S.C...	3	13	6
Messrs. Fremlin Bros	3	3	0
Bearer Company S. Wales V. I. Brigade	0	14	0
No. 5 London Co. V.M.S.C. (additional)	1	5	6
Band Lond. Cos. (additional)	0	5	8
M. F. Carter	0	5	0

LAURIA FUND.

MR. JOHN H. BARRS (6, Wandsworth Bridge Road, S.W.) and Mr. Edward B. Hartnell (1, Rvecroft Road, Fulham), Honorary Secretaries, write: The above fund is now closed, and we enclose herewith a final statement of subscriptions.

	£	s.	d.
To amounts previously acknowledged	55	3	0
E. Coates, Esq.	3	3	0
Colonel Neate	5	0	0
Mrs Cater	0	10	0
C. L. Loch, Esq	10	0	0
Collected by Dr. Jones (Lagos, West Africa) ...	42	0	0
British Medical Benevolent Fund	20	0	0
Total	135	16	0

A cheque has been handed to Mrs. Lauria for this amount.

MEDICAL DEPARTMENTS OF ROYAL HOUSEHOLDS.

A CORRESPONDENT writes, with reference to some remarks on this subject in the BRITISH MEDICAL JOURNAL of January 13th, to point out that the establishment of honorary surgeons and physicians to the Queen from the Army Medical Service are six of each, although at the present time only five of the former and four of the latter are shown in the official Army List, page 2, no doubt in consequence of vacancies not having been gazetted. Our correspondent points out also that these gentlemen are all "members of the Queen's Household," and are shown in the same list as the rest of the Household, on pages 1 and 2 of the official Army List; indeed, the Queen herself proved this by her gracious telegram to the relatives of the late Sir William Mackinnon, D.G., A.M.D., with reference to that officer's death, when she alluded to him as "a member of her Household." In a similar way the honorary surgeons to the Viceroy of India are on this Excellency's "personal staff" so long as they retain their appointments.

SYMPATHY AND ANTIPATHY FOR CATS.

THE CORRESPONDENT who first drew attention to this subject writes: Mr. Balmanno Squire's note on fondness for cats is interesting enough, but it does not appear to touch the particular point I desired to bring to notice (when I wrote concerning the case of the late Dr. Stark). The instance he adduces are those of simple affection for the cat as a companion. Dr. Stark had, in addition to this fondness or fascination, a feeling that his brain could not exert full concentration of energy unless "puss" were near him.

LETTERS, COMMUNICATIONS, Etc., have been received from

A J. W. Allan, M.B., Glasgow; Professor J. Attfield, Watford; Dr. T. R. Atkinson, Clifton. **B** Mr. E. Brice, Cannock Chase; Mr. W. M. Beaumont, Bath; Dr. E. Buxton, Liverpool; Mr. W. H. Bennett, London; Dr. J. Barr, Liverpool; Mr. C. L. W. Brunton, Jersey; Mr. W. Berry, Wigan; J. W. Batterham, M.B., St Leonards-on-Sea; Mr. R. C. Bensley, London; Dr. R. du Bois-Reymond, Charlottenburg; Sir W. M. Banks, Liverpool; Dr. N. T. Bond, Polesworth; Birmingham Medical Society, Secretary of, Birmingham; Dr. J. B. Brierley, Manchester; Dr. T. T. Brunyate, Rochester; B.H.; **C** Dr. F. G. Clemow, Birmingham; Dr. C. Campbell, Uppermill; Dr. G. W. Crowe, Worcester; Dr. G. P. Chappel, London; Mr. F. K. Cahill, Dublin; Dr. M. Craig, London; Dr. W. A. Carline, Lincoln; C.M.; Mr. A. H. Cheatle, London; Mr. J. Collinson, London; Mr. C. Corben, Caldicot. **D** Mr. P. J. Dempsey, Vienna; Mr. H. W. Drew, Ballyduff; Dr. J. C. Dunlop, Edinburgh; Messrs. Davies, Gibbins and Co., Derby; W. B. Drummond, M.B., Edinburgh; Mr. F. Deighan, Dublin. **E** E.A.L.; F.D. **F** Messrs. Fassett and Johnson, London; Fruitarian; Dr. C. Forsythe, Coleraine; Dr. R. F. Fox, Strathpeffer Spa; Mr. E. H. Freeland, London; F.J.A.B.; Dr. E. T. Fison, Salisbury; Dr. T. C. Fox, London. **G** G.B.; J. E. Gemmell, M.B., Liverpool. **H** Mr. E. B. Hartnell, London; Mr. A. B. Hicks, London; E. H. Houfton, M.B., Shirebrook; G. Halley, M.B., Dundee; W. H. Horrocks, M.B., Netley. **I** Messrs. Innes, Smith and Co., Birmingham; Interrogator; I.M.S. **J** J. L. F.; Dr. G. T. Jones, London; Mr. J. Johnson, Blackpool; Justice. **K** Mr. T. Kirby, Winchester; Dr. J. H. Keay, London; Dr E. D. Kirby, Birmingham. **L** C. F. Lilli, M.B., Bala. **M** Mr. W. Marriott, London; Dr. L. Marco, Madrid; Member of 25 Years Standing; A. M. Martin, M.B., Newcastle-on-Tyne; Dr. J. E. Moorhouse, Stirling; Dr. G. Macdonald, London; Messrs. J. MacLehose and Sons, Glasgow; M.D., M.S.; Mr. F. Malony, Porlock; Mrs. G. W. Macpherson, London; Mr. Y. Moore, London; M.D.: **N** Dr. H. J. Neilson, Bulwell; Mr. P. Newell, Crowborough; **P** F. M. Pope, M.B., Leicester; Dr. F. L. Phillips, Leamington; Dr. P. H. Pye-Smith, London; Dr. R. J. Probyn-Williams, London; Mr. H. J. Pangley, London; W. R. Parker, M.B., Kendal. **R** Dr. J. L. Rushton, Macclesfield; Dr. R. R. Rentoul, Liverpool; Mr. A. Reinhardt, London; G. A. Reid, M.B., Southsea; G. L. Roberts, M.B., Carnarvon. **S** Mr. J. H. Staniland, London; Sheffield Med. Chir. Soc., Secretary of, Sheffield; Dr. S. Sunderland, London; Mr. C. J. Symonds, London; Dr. Schott, Bad-Nauheim; J. B. F. Stewart, M.B., Guildford, W.A.; Seaside; Sir F. Semon, London; Dr G. E. Shuttleworth, Richmond Hill; Dr. E. J. H. Sullivan, South Kirkby. **T** Dr. G. Th bierge, Paris; Tertian; **W** Dr. T. J. Wood, Bradford; Dr. H. Woods, London; Mr. A. H. Walker, Cranleigh Dr. R. Willson, Oxford. **X** X.Y.Z.; X.; **Z** Zephyr.

BOOKS, Etc., RECEIVED.

The Voice: its Physiology and Cultivation. By W. A. Aikin, M.D. London: Macmillan and Co. 1900. 3s. 6d.

A Pocket-Book for Chemists. By T. Bayley, A.R.C.Sc.I. Seventh Edition. London: E. and F. N. Spon. 1900.

Encyklopädie der Ohrenheilkunde. Herausgegeben von Dr. L. Brau. Leipzig: F. C. W. Vogel. 1900. M.20.

Anæsthetics: Their Uses and Administration. By D. W. Buxton, M.D., B.S. Third Edition. London: H. K. Lewis. 1900. 6s.

A Textbook of Physiology. By M. Foster, M.A., M.D., D.C.L., F.R.S., assisted by W. H. R. Rivers, M.A., M.D. Sixth Edition. Part IV. London: Macmillan and Co. 1900. 10s. 6d.

Atlas und Grundriss der Verbandlehre. Von Dr. A. Hoffa. II Auflage. Munich: J. F. Lehmann. 1900. M.7.

Midwifery Notes. By T. A. Glover, M.D. Edinburgh: E. and S. Livingstone.

Mémentos de Médecine Thermale à l'Usage des Praticiens. Publiés sous la direction du Dr. G. Morice. Première Série. Paris: Bureau de la "Gazette des Eaux." 1900. F.4.

Elemente der allgemeinen Bakteriologie. Von Dr. N. Gamaleia. Berlin: A. Hirschwald. 1900. M.7.

Volksbräuche und Aberglauben in der Geburtshilfe und der Pflege des Neugeborenen in Ungarn. Von Dr. R. Temesváry. Leipzig: L. Fernau. 1900.

*** In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

Eight lines and under	£0	4	0
Each additional line	0	0	6
A whole column	1	17	6
A page	5	5	0

An average line contains six words.

Advertisements should be delivered, addressed to the Manager, at the Office, not later than first post on Wednesday morning preceding publication; and if not paid for at the time, should be accompanied by a reference.

Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

[1] BRITISH MEDICAL JOURNAL, March 10th, 1900, p. 620.

THE LETTSOMIAN LECTURES

BEING

PRACTICAL OBSERVATIONS ON CANCER OF THE BREAST.

[WITH SPECIAL ILLUSTRATIONS.]

Delivered before the Medical Society of London, March 19th, 1900.

BY SIR WILLIAM BANKS, LL.D., F.R.C.S.,
Liverpool.

LECTURE II.

SOME POPULAR ERRORS IN DIAGNOSIS.

THERE are some delusions about cancer of the breast to which almost the entire public still give credit, and, I regret to say, not a few medical men. They are partly the result of textbook statements not properly explained and partly the result of popular tradition. They are difficult to eradicate, because there is just that small amount of truth in them which makes it possible to argue about them. But they are very deadly and dangerous delusions, because they cause loss of time, and, as we have just been seeing, that is destructive of the only chance of complete cure—namely, early operation. I would reckon among them errors about heredity, about pain, about cachexia, and about nipple retraction.

Error about Heredity.—This question we have already discussed and need not further refer to, except to repeat that the absence of any cancerous taint among relatives is to a woman a very strong inducement to say nothing about any suspicious growth she may feel in her breast, because she comforts herself with the idea that it cannot be cancer, as such a thing was never known in her family.

Error about Pain.—This error is a most serious one. A few internal cancers—such as those of the liver and lungs—are sometimes almost painless in their whole course; but the termination of all external cancers, at all events, is invariably accompanied by severe suffering. These dreadful cases appeal so distressingly to the minds of women that they always associate pain and cancer. But unfortunately there are no neoplasms which produce less pain in their early stages than cancer. As the female mind, then, invariably associates the presence of pain with cancer, so its absence means to the patient that there is no cancer. If she has no pain in the lump and never heard of the disease among her relatives she is very unwilling to tell the doctor what she has in her breast. This remarkable absence of early pain is regarded as all the more of good omen by reason of the fact that, in a large proportion of cases, the patient discovers the lump in her breast by accident. Men do not as a rule wash their breasts very much, but women do, and certainly the most frequent way in which the patient tells the story of the discovery of her enemy is that it occurred as she passed her hand over her breast while washing. So far from regarding pain as a sign of cancer, when a patient comes to tell me that she has detected something abnormal in her breast and that it is very painful, I am always glad to express my pleasure at hearing this statement, inasmuch as the disease is then probably not malignant. Pain in certain cases is by no means an evil.

Error about Cachexia.—The error about cachexia is chiefly made by doctors. Often, after examining a patient with some medical friend, I have been struck by his remarking "Well, but look at her ruddy colour and healthy aspect. There is no cancerous cachexia there!" Like pain, we have here an old superstition, a deeply rooted, popular belief to the effect that a patient who has cancer must have a pallid, emaciated, haggard appearance. When fœtid discharge and agonising pain, and sleepless nights and mental distress, and absorption of septic products have done their work, then it is true that the unfortunate patient does present the appearance of a cachexia, but certainly not at the beginning of her disease. We have already noted that the victims of cancer are usually well-nourished persons, often with a fine healthy colour in their cheeks. Many a time I have pointed out to students in the out-patient room some jolly-looking, ruddy-faced man, with hair just turning grey, a big comforter up to his nose, and a tuft of cotton wadding sticking out of one ear, and have said, "That man has cancer of the tongue." In cancer of the external parts cachexia is practically of no aid diagnostically, because in its early stages there is none, while in the later stages the growth is apparent. But I admit that in certain forms of intestinal and other internal cancers, where the disease is long latent the fact that the patient has lost his ruddy colour and become pale and waxy, that his aspect is pinched, and that he has lost flesh and shrunk in his clothes—in short, the existence of cachexia—is an important point.

Nipple Retraction and Skin Adhesion.—Any error with regard to these can only be made by the doctor and not by the patient. Perhaps the majority of textbooks have hitherto somewhat misled the student on these points. It has been given out too broadly that retraction of the nipple is a sign of carcinoma, while the statement has not been sufficiently qualified by clearly indicating to the tiro that the sign is only of the least value when the disease happens to be situated immediately beneath the nipple. If the tumour has its site at any distance from the central point then retraction naturally does not occur. To persons thoroughly conversant with the matter it seems strange that it should be necessary to point out to anyone that the central point of the mamma can only be interfered with by disease that underlies that central point. As an actual fact, however, I know that the mere presence or absence of nipple retraction, without reference at all to the position of the cancerous mass, is too often appealed to by young practitioners. But if the absence of nipple retraction is no diagnostic sign in cases where the disease is situated away from the centre of the gland, on the other hand it is practically pathognomonic when it lies beneath it.

Adhesion of the skin, as we all know, is a very grave indication of a sublying cancer. It does not occur with any other tumour except an inflammatory swelling of the nature of an abscess. But there is a different appearance between the skin in the two cases. In the inflammatory adhesion the skin is fairly smooth over the abscess, or whatever of an inflammatory nature underlies it. But over a carcinoma, if you try to pinch the skin up between the finger and thumb, immediately a number of fine points appear, which are the hair follicles caught and tucked down by the cancer. It is exactly like the leather of a saddle, insomuch that I have always demonstrated it to students under the name of "pigskin." I regard this "pigskin" appearance as almost certainly indicative of subjacent carcinoma.

WHAT ARE THE CONDITIONS WHICH MOST CLOSELY SIMULATE MAMMARY CANCER?

Chronic Mastitis.—To recount one's own mistakes is the most telling way of communicating information to others. I know that I have several times confounded a piece of chronic inflammatory induration with carcinoma. I can recall very clearly three cases. Curiously enough the three patients were all married women between 35 and 40 years of age, comparatively spare in form, and childless—a kind of person, by the way, who has always seemed to me more prone to chronic mammary induration than the stout plethoric woman who has had a big family. When the condition becomes pronounced the whole breast comes to resemble a hard flat cake. You can lift it off the pectoral muscle in a mass. Here and there throughout it are points of extra hardness, like knobs or bosses. One of these, bigger than its fellows, is the suspicious object. The question comes to be, Is that hard knob simply a bit of extra-hard chronically indurated tissue, or is it a piece of malignant disease? In point of mere hardness there is nothing to choose between either condition. Feeling alone gives very little help, while the difficulty is increased by the fact that throughout the rest of the breast are points which are only a little less in size and a shade less hard than the one which has given rise to suspicion. It is very difficult to give any precise rules by which to recognise a bit of indurated mastitis from a bit of carcinoma. Experience alone helps. But it may be noticed that in mastitis skin adhesion is very rare and so is glandular enlargement. The adhesion, if it exists, is not of the "pigskin" type, while, when axillary glands are to be detected, as they are in thin women, they are so hard in cancer that this feature alone distinguishes them.

Small Chronic Abscess.—Probably the thing which is next

most commonly mistaken for cancer is a small, deep collection of pus, surrounded by a zone of inflammatory thickening. Not many years ago I saw a surgeon whip out a breast for a supposed scirrhus. When the breast was cut up in the lavatory, before being handed round to the students, the tumour was found to be a small abscess with a condensed mass of inflamed tissue around it. At the first blush one would think this mistake a very unlikely one to happen, but it is not so. The deep seated, ill-defined, hard, inflammatory mass, surrounding so small a quantity of pus that fluctuation cannot be detected in it, has a marvellous resemblance to a piece of carcinomatous tissue. Moreover, the delusion is heightened by the fact that there is often a little adhesion between the skin and the swelling beneath, but as we have just seen, it is not of the genuine "pigskin" order.

A Small Fibro-adenoma.—A condition very like the hard point in a case of chronic mastitis, to which allusion has just been made, is produced by a small fibro-adenoma. I recollect a very nervous woman coming into hospital with what I believed to be a tumour of this kind. She was extremely timid, and only after considerable pressure consented to have the growth out, and that on the express understanding that nothing more was to be done; but when we came to the growth it was found to be scirrhus, although the signs of a fibro-adenoma had been so marked that I had been at some pains to point them out to the students as very characteristic of that form of tumour. I removed it freely. The patient was told what had been found, and was begged to return and report herself from time to time. This, however, she never did, being a most foolish and nervous creature, and we saw nothing of her for a considerable period, until she came back again with the whole breast a hopeless mass of cancer. In point of hardness a small fibro-adenoma scarcely differs from a scirrhus, but the great diagnostic point is the absence of the "pigskin" and the total want of all glandular enlargement.

A Small, very Tight, Simple Cyst.—I learnt to correct this first from seeing a surgeon of great experience proceed to cut out a breast for cancer. He gave his reasons for thinking that the tumour was malignant, but said that, as the growth was only small, he would cut into it before removing the breast in order to make assurance doubly sure. He did so. A tablespoonful of brownish fluid escaped and the tumour disappeared. I once afterwards did the same thing before a crowd of students, even though perfectly aware of the liability of mistaking a very tense cyst for a scirrhous mass. Many years elapsed, and I did not fall into the trap again until a few months ago, when I diagnosed a very deepseated tight cyst as a malignant growth. If the cyst is near the surface of the mamma the difficulty is not great, but, if it is deep down, its margins become obscured. The diagnostic features are that the tumour is round, smooth, sharply-defined—unless it is very deep—and freely movable, while there is never any skin adhesion or glandular enlargement by any chance.

I was very pleased to notice that Mr. Marmaduke Sheild, in his excellent work on *Cancer of the Breast*, says with regard to the diagnosis of carcinoma from cysts and abscesses: "It is in these cases that the most disastrous errors are made in matters of diagnosis of mammary disease. It will be well at the outset to point out that if any surgeon thinks he is clever enough to certainly distinguish between solid tumours and some of the more peculiar abscesses or cysts found in the breast without exploratory incision, he will sooner or later make an egregious error."

In connection with the diagnosis of mammary tumours there are one or two points of practice which, if employed as a matter of routine, might save an operator from occasionally falling into an error of what may be termed a public character.

1. *I never remove a breast without first cutting into the tumour* so soon as the patient is anæsthetised, and on sundry occasions I have been extremely glad that I did so. I acknowledge to constant mistakes, being aware that omniscience is the exclusive property of very young men.

2. *I frequently use a small exploring trocar and cannula for diagnosis.* I know that this practice has been much condemned. I was taught that it was very dangerous, but I found by practical experiment that it was nothing of the sort. It was held that it inflamed the tumour and accelerated its growth; and so, if the tumour were inoperable, it did damage to the patient. This view was quite true, because surgeons formerly put large and dirty trocars into the interior of solid tumours, and inoculated them with septic material. If an exploring trocar and cannula with a metal handle be used, which can be boiled and then passed through a spirit tube, no harm whatever will result. On the contrary, many dubious questions can often be settled at the cost of a most trifling amount of suffering, and to the enormous mental relief of the patient.

3. *I always examine a breast tumour in three positions.* In examining (say) the left breast in the first position, the surgeon should stand behind the patient, with his left arm passed beneath her left armpit, and his right arm over her right shoulder. The surgeon should be steady on his feet, and the patient should be asked to press back against him. He can thus regulate the pressure he is putting on with his hands to a nicety, and make the best possible use of his sense of touch. When the breast is examined from the front, the surgeon puts a certain amount of pressure on it, and the patient yields from it, and so the judgment of weight, so essential to determining the nature of a soft body, is lost. In the second position the patient should be seated in a firm chair, and the surgeon should examine the breast from the front. In the third position the patient should be on her back on a sofa. Now in each of these positions the surgeon will acquire a new appreciation of the tumour, but the first is by far the most effective, for in it he will avoid the mistake, so liable to be made in the other two (especially the third) of crumpling up a mass of sound tissue, so that it comes to feel just like a tumour. All things under the chin, down the neck, in the breasts, and in the groins should be examined by the surgeon standing behind the patient. In examining a hernia, for instance, the surgeon, having first restored the bowel, can, by standing behind the patient, constitute himself an animated truss, and can determine the exact spot where the truss head will best control descent, and also judge the down-push caused by coughing, so as to estimate the power required for the truss spring. Students are not nearly enough impressed with the great value of this method of examination. It was Paget who first showed me the necessity of examining a breast in all three positions.

Explanation of the Illustrations.

(See Special Plate.)

Fig. 1 represents chronic interstitial mastitis affecting a lobule. The lighter part with the dark areas in it is the lobule; *a* shows tubes and acini of a lobule filled with proliferating cells, but they are being compressed by the growth of a young, fine intralobular connective tissue *(b)*; *c* is the older interlobular connective tissue of the breast, also much hypertrophied (× 50).

Fig. 2 shows an advanced hypertrophy of the connective tissue, so that the glandular tissue is almost squeezed out of existence; *a*, atrophied gland tube and acini; *b*, large duct partially filled with cells, with an empty one close by; *c*, hypertrophied connective tissue (× 50).

Fig. 3 at upper part shows ducts and acini dilated owing to the compression by connective tissue at other parts. These produce the innumerable small cysts found in chronic mastitis. *a*, dilated ducts and acini; *b*, hypertrophied connective tissue; *c*, mass of acini, with others close by, so dilated by proliferating epithelium as to press against each other and practically become fused. This lower part might become dangerous some day (× 50).

Fig. 4 shows mastitis degenerating rather towards cancer than towards cirrhosis. *a*, old interlobular connective tissue considerably hypertrophied. The centre of the figure is occupied by the greater part of a lobule. There is no great overgrowth of young, interacinous, connective tissue. At *b* the acini are still separate, although filled with proliferating epithelium; *c* shows a large mass of cells formed by acini, which have swelled out under cell pressure, have met and then fused. The white holes from which cells have dropped evidence the sites of the former acini. Cells still well limited (× 50).

Fig. 5, mastitis becoming cancerous. *a*, connective tissue; *b*, a lobule with acini filled with proliferating epithelium, of which some has dropped out. Not much interacinous connective tissue; *c*, masses of cells composed of fused acini, still well defined; *d*, cells from such a similar large mass bursting into the connective tissue and becoming cancerous at *e* (× 50).

Fig. 6, mastitis become cancerous. *a*, large fused mass of acini, with two neighbouring ones: central cells have degenerated and some have fallen out; *b*, cells escaping from this mass into surrounding connective tissue; *c*, a large mass of these escaped cells; *d*, true cancer, irregular cell masses now running in all directions through the connective tissue strata (× 50).

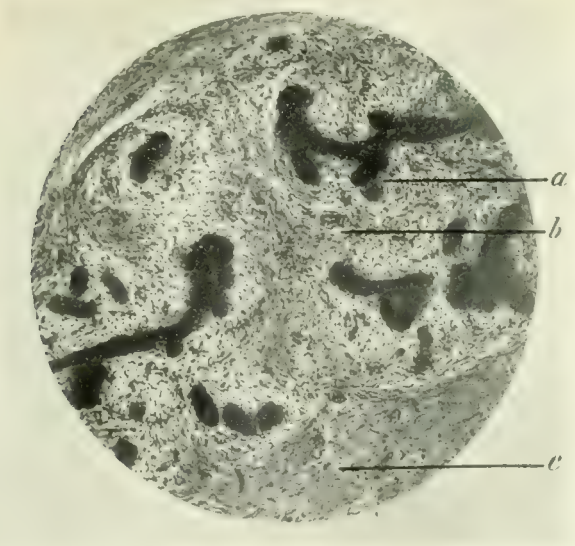


FIG. 1.

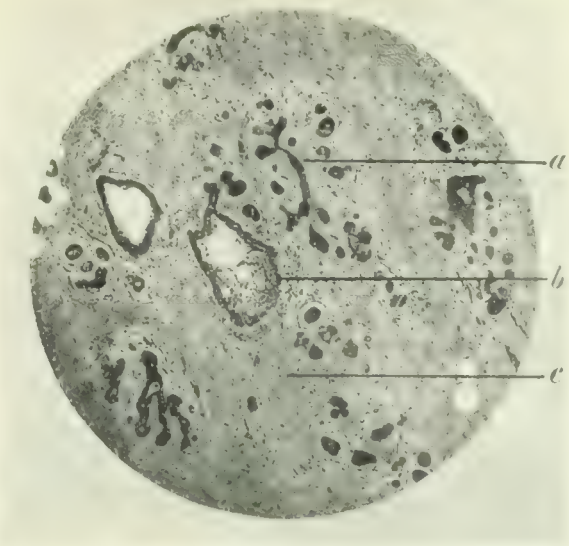


FIG. 2.

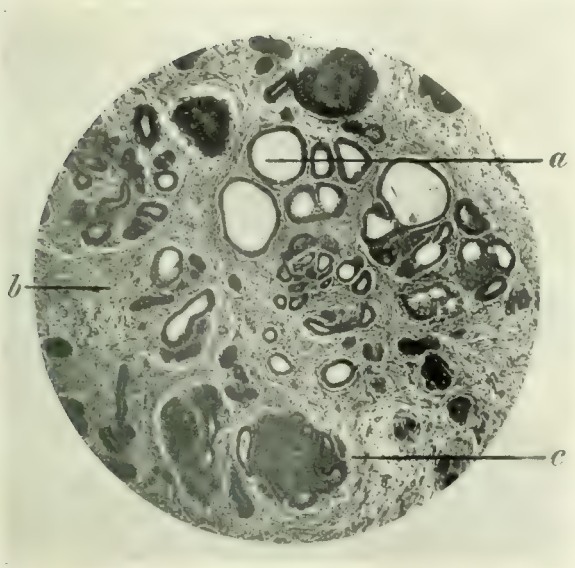


FIG. 3



FIG. 4.



FIG. 5.

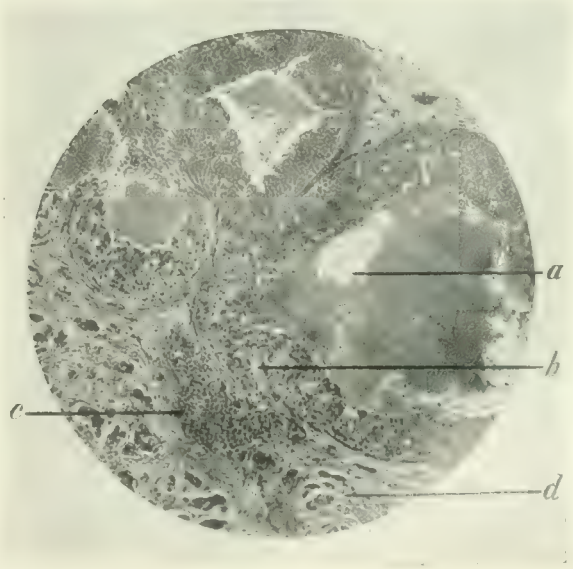


FIG. 6.

Acute Mania after Operations on the Breast.

A matter which is worthy of some little attention is the occurrence of acute mania after operations on the breast. That this occasionally comes on after any kind of operation is true, but there are some after which it is more common than after others. It seems to be only comparatively recently that it has been taken distinct notice of. Dr. S. Rutherford Macphail, of the Derby County Lunatic Asylum, has written in the British Medical Journal of September 23rd, 1899, p. 781, a short but eminently useful and practical statistical account of lunacy after surgical operations, from which I have extracted the following figures:

His own experience of the malady embraces 900 admissions of all kinds to his asylum, of which 40 were post-operative, namely, 13 males and 27 females. Of the 27 women no fewer than 15 had been the subject of gynæcological operations, and of the remaining 12 5 had been subjected to ophthalmic operations. Of the 13 male cases, 4 were after ophthalmic proceedings, and the rest after general operations of all kinds. All who have written about the subject apparently agree that the vast preponderance of cases occurs after gynæcological and ophthalmic operations. Dr. J. Christian Simpson, in his work on *Cerebral Symptoms relating to Surgical Disease*, speaks of a record of 185 cases by Sears of which 50 were gynæcological, 62 ophthalmic, 45 general surgical, and 10 after excision of the mamma. Rianan out of 186 cases had 65 gynæcological and 35 ophthalmic. But, as showing how statistics often come utterly to grief, Dr. Denis (Montpellier *Thesis*, 1889) reckons that out of all cases of operation 2.5 occurred in each 100. Dr. Simpson, however, proceeding to examine the records of operations of all kinds done in Professor Annandale's clinic from 1882 to 1894, found that out of 5,500 he could only find 11 cases of mental derangement, being about 2 per 1,000—a very different thing from Denis's figures.

In my experience I can only remember among general cases one male who became maniacal after operation. He had a large sarcoma removed from just below the axilla, and after about a week he became maniacal, and continued so for three weeks, after which he recovered and remained well for some years. There was nothing wrong with the wound here. One female died from acute mania after excision of an epitheliomatous ulcer of the rectum. But amongst my cases of removal of the breast I find eight in which acute mania supervened. Of these, two were maiden ladies between 50 and 60 years of age, and were women of excellent intellect and highly cultivated—both great readers. One of them was rather melancholic than maniacal, becoming so about a week after the operation, and remaining so for several weeks before the condition completely wore off. The wound united by primary union all through, and there was no rise of temperature. The other began to be queer in a few days after the operation, and for more than a fortnight talked very amusing and sometimes clever nonsense. In her case the wound broke completely down and suppurated profusely, because she was never still when awake; but it was never septic, and there was no rise of temperature, while the patient never became weak or looked ill. Both of these ladies are sound mentally as ever, one nine years after the operation and the other two years and a-half. The next two cases occurred in hospital. Nothing especially went amiss with the wounds. One patient recovered completely, but the other never quite regained her mental condition, and ultimately died in a lunatic asylum.

Next I note four cases which all proved fatal, and I will add to them the female mentioned above, who died after the removal of a cancer from the rectum. Let us call them A., B., C., D., and E.; E. being the rectum case. To begin with, they were all private patients and in excellent circumstances. A.'s wound never became aseptic, but she became melancholic and died on the thirteenth day after operation. Her own mother and sister died from cancer, and she was the second wife of a gentleman whose sister and first wife died of cancer also. These depressing circumstances no doubt seriously affected the patient. Case B.'s symptoms appeared on the fifth day. I only saw her once after the operation, as she lived in another town, but her doctor sent me a very full report of her case. She exhibited extreme likes and dislikes, and one nurse had to be sent away because she would not tolerate her presence. Then she became violent and talked and kicked about incessantly. She jumped out of bed if not constantly watched, and once made her way into an adjoining room before she could be stopped. Curiously enough she allowed her wound to be dressed, and would even help in the process. At death it was practically healed. Her doctor had only attended her a very short time, but he subsequently learnt that she was a mysterious old widow who had married unhappily a second time and lived away from her husband under an assumed name. When well she had attacks of mental derangement, and there was insanity in her family. When her effects were being routed out a great quantity of spirit bottles were found secreted about the house, which showed that she was probably a secret drinker also. Cases C., D., and E. were practically maniacal before they were operated upon. One was married and the other two were widows. They were all between 50 and 55, and were all noted as being flighty, singular persons, and very vain even when in good health. When they learnt that they were the victims of cancer their terror became indescribable. It was most distressing to have anything to do with them and the interviews and consultations were very painful. On the day of operation it was noticed that they were all supernaturally calm and composed. Doubtless this involved a great mental effort. In the course of a few days the wounds all broke down and suppurated profusely (although not in any way malodorous), while the temperature was high. They all talked, shouted, shuffled about unceasingly, and kept wanting to get out of bed. One (rectum case) did escape from bed, and got on to the landing of the staircase. At times they would be quite collected and rational, and speak sensibly for a short period. They all took nourishment fairly. Now as the wounds suppurated, and as the temperature was high, one must admit that septic infection was present, and helped to cause their deaths; and it may reasonably be argued that the delirium was simply the delirium of septicæmia. But this was not the case. It began too soon after the operation, and before the wounds began to break down and suppurate. Moreover, in former days I have unfortunately seen too many persons die of erysipelatous and septic wounds, and in my experience they have never been violent and furious. They lay quietly muttering and moving uneasily; but they did not get out of bed, and run out on to the landing and into the next room. They had not the strength for that. To conclude this point, cases of post-operative mania have been often referred to the use of carbolic acid and iodoform. There seems no proof of this. Such toxic effects as may have occurred in this way have been transient in their duration, and have passed off at once on their ceasing to be used.

Chronic Mammary Induration: Chronic Interstitial Mastitis.

I would now like, gentlemen, to dwell with you for a while upon a subject of immense importance in connection with mammary cancer: I allude to chronic inflammatory induration or chronic interstitial mastitis. Billroth termed it chronic cirrhosing mastitis. There are sundry forms of this described. One is known as diffuse chronic mastitis. It is described as coming on with tenderness and swelling, with out febrile symptoms, while the affected part becomes tumid and painful. The whole gland and even the overlying nipple may become involved. The affected skin has the appearance of being adherent, thickened, and rough looking *(peau d'orange)*. Then, the inflammatory process subsiding, a cirrhosis takes place, the breast diminishes in size, and the nipple and skin are drawn in. The contraction being irregular, the breast becomes eventually a mere shrivelled, nodular structure. The axillary glands may also enlarge, and there may be a watery discharge from the nipple. Now I must confess that in all my experience I have never seen anything like this; anything. I mean, so definite in its course and so startling in its results. So that surely such marked cases of chronic mastitis must be rare. Doubtless they occur, for the disease is described and the shrivelled organ figured by Billroth, but I think this form need not enter into our calculations. The most common form with which we are all acquainted is what pathologists call the "periductal" form—the *maladie noueuse* or plexiform fibroma of the French. Surgeons here call it chronic interstitial mastitis. It seems to be simply a very slow and painless variety of the preceding form,

where the inflammatory process, confining itself strictly to the neighbourhood of the glandular tissue proper, results in a fibrous sclerosis. Bits of the gland may be affected or the entire organ. In the latter case the breast feels like a hard pancake, which you can lift up from the subjacent great pectoral muscle. All through it are scattered hard masses from the size of a pea up to that of a broad bean. Besides these larger pieces there are little minute nodules distributed all through the gland. The microscope shows these to be small cysts, structures produced in all tubular glands under cirrhotic conditions. Sometimes only a portion of the gland is affected, while the rest is healthy and soft, but I see no reason for elevating such cases into a special class.

Thus, then, if a chronic mastitis continue to progress by developing more and more connective tissue, then what happens is the production of a cirrhosis with pressure destruction of the glandular tissue, with the formation of small cysts, and finally with completed shrinkage of the whole breast, this process being accompanied by the formation of nodules almost approaching the characters of small fibroid tumours. If this be the bent of the mastitic change it is a happy thing for the patient, for no malignant state supervenes; but, as we shall see, the mastitis may progress by a more dangerous method—namely, by the immense proliferation of intra-glandular epithelium, which some day will burst its bonds and erupt into the surrounding connective tissue. This is cancer.

The disease is essentially one of the climacteric period, and in my experience seems to be as common in single as in married women. I have not been able to detect any connection between it and acute puerperal abscess, and, as bearing upon the production of cancer by injury, I cannot remember patients making definite allegations that chronic mastitis arose from blows or traumatism of any kind. On the other hand, as I mentioned at my last lecture, the statement of patients concerning the direct connection of their cancerous growths with injury, and the presence afterwards of slight pain or uneasiness at the point thereof, have appeared to me to be worthy of more serious consideration than has been given them, and should not be dismissed at once as mere silly tales.

The principles of treatment of chronic mastitis by pressure, gentle friction, and the use of local remedies, such as used to be called "discutients," seems to be reasonable. I have a routine practice, which is distinctly serviceable, and which I imagine most practical surgeons employ also with variations. The patient is directed to bathe the breast for five minutes morning and evening with very hot water applied by means of a big cone-shaped sponge. Then there is rubbed into it mercurial ointment one week and liniment of potassium iodide with soap the next, the inunction being done with the greatest gentleness. After a while this treatment is apt to make the skin of the breast very tender and produce crops of painful little pustules. It should then be entirely left off, and soft zinc ointment smeared on until the skin irritation has subsided. Stays must be abandoned, and the breast covered with a layer of cotton wadding. Pressure is applied by means of a broad elastic webbing bandage. The first turn is brought round under the armpits and fastened with a safety pin, and then the patient can pull on the remaining turns as they go down over the mamma as tightly as she can bear, fixing it at the short ribs with another pin. The patient may take a moderate dose of potassium iodide morning and evening, unless it proves very disagreeable to her; but, after all, it is without doubt in the local treatment that confidence is to be place. Of course I know that mercury and potassium iodide are very old-fashioned remedies; but I still have belief in them and in their efficiency as "discutients" of chronic, inflammatory indurations. But probably these simple views will not find favour with the practitioner of to-day, for whom a new drug has to be provided once a week from the pill and capsule blast furnaces of America and Germany.

Only a generation ago the universal teaching was that an innocent or non-malignant tumour remained so always, and never changed its character, while a cancerous or malignant one was so from its very earliest inception, and never could be anything else. Surgeons have been compelled slowly to work themselves round to quite the opposite belief. It would almost seem with our present knowledge that, with the exception of simple cysts and pure fibromata or myomata, there is no neoplasm, however innocent in its commencement, which may not in time—perhaps after very many years—degenerate into malignancy. I have seen on two occasions even that most simple of all tumours—the lipoma—followed by what is called fat sarcoma, requiring two or three operations of most extensive character for its extirpation. Now, the degeneration of chronic interstitial mastitis into cancer is, of course, perfectly familiar to all operating surgeons. But I very much doubt if this knowledge is as thoroughly diffused throughout the profession as it ought to be, or rather, I should say, that I question whether medical men at large attach to it the immense importance which the matter deserves.

A little while ago I said I thought that attention might now be diverted from the devising of new operations for mammary cancer, for I believed that for the present they had in the majority of cases reached the limit of real use, and that the whole energies of surgical teachers should be thrown into the propagation of the gospel of early diagnosis; for there is no more difficult case in the range of breast surgery than to know what to do with a breast, obviously the subject of chronic mastitis, in which, among several very hard points, there are one or two which are of such special hardness that it is impossible to tell whether they have degenerated into cancer or not. My own practice is that if the preponderance—the distinct preponderance—of evidence makes for nothing worse than chronic mastitis, pure and simple, naturally the treatment above referred to should be at once put in practice, but even then the patient should be seen at regular intervals until all hardness is quite gone, for I have repeatedly seen the breast clear up from all induration—to the great delight of the patient—except at one spot, and there the cancerous limit has been reached and overpassed. When, on the other hand, the balance of probability is that the cancerous limit is being reached, even when to the touch no absolute certainty thereof is communicated, I have for many years practised and taught that removal of the breast is a justifiable proceeding. The way I have done it is by making a semilunar incision along the lower border of the mamma, dissecting up the skin and nipple and laying them down again after the gland is removed, provided there is no sign that palpable carcinoma exists. How is this to be known? By cutting through any suspicious mass or nodule after raising the skin. I am quite sure that the section which an experienced surgeon makes with a knife through a fresh piece of carcinoma will enable him to give a far more decided and certain opinion than anything the microscopist can give. Not for a minute that I would speak disparagingly of the value of microscopic examination. When it coincides with the naked-eye view of the clinician so much the better, but when they differ, I hold that the history of the tumour and the look and feel of the fresh section constitute the most trustworthy guide. An error may always be made by taking a microscopic section from a limited portion of the tumour, where the process of growth is not actively going on. Moreover, there are inflammatory conditions of organs which so simulate in appearance certain malignant states that the ablest microscopist will admit himself unable to give a positive opinion about them. But the colour, the resistance to the touch, and the feel to the knife of a fresh mammary tumour section, however small that tumour may be, are the most certain guides of all as to its nature. With regard to the retention of the nipple and areola, it must be remembered that they are to a woman the signs and symbols of the mammary gland, which is a distinguishing feature of her sex. There are many women whose breasts when past middle life are so small and shrunken, that but for the nipple and areola it would hardly be known that any breasts existed at all. I have an "impression" that chronic mastitis is more common in small breasts than in big ones, but it may well be said that this may arise simply from the disease being more easily detected in a small breast than in a big one. Still, having made a very great many naked-eye sections of cancerous breasts, the apparently sound gland tissue (away from the cancer) in a big, fat breast has rarely the tough hardness characteristic of a piece of chronically inflamed material. Referring again to the nipple and areola, if these be left to the patient she does not think so much of the loss of the gland itself. A man, similarly, will be quite content with a very wooden nutmeg kind of testicle, which is certainly

useless functionally, if only he be allowed to retain it in his scrotum as the badge of his sex. Assure the patient that her breast will not be materially disfigured, and she will generally consent to anything to get rid of the haunting dread of that terror of her life—mammary cancer. But what if there should be more than mere mastitis? When the skin is being raised any suspicious point or points should be cut into, and if any one of these looks cancerous, then skin and nipple as well as the breast can be swept away too, and the axilla cleared out, just as for an ordinary well-recognised case. About a month ago this very case happened to myself. Yet the patient's first shock of disappointment, when she learnt what had been done, was soon relieved by her satisfaction at feeling that she had been relieved of her enemy.

It is many years ago since I first proposed to the surgical profession that in every case of cancer, where the breast was removed in the hope of ultimate freedom from disease, the axillary glands should be removed as a necessary part of the operation. My argument was that it was impossible to tell whether they were involved or not, particularly in well-nourished persons. That argument has eventually prevailed over much opposition. And now to-day I would desire to impress upon the profession that it is a right and proper thing in many cases to remove breasts, the subjects of chronic mastitis, even before cancer has been definitely diagnosed in them. The question—and a reasonable one—at once arises, To what excesses may a doctrine like this not lead? What absurd and unnecessary surgery at the hands of the "enterprising surgeon" may not arise from this? Nay, may it not be a direct incitement to certain of the more needy class of surgeons to do operations for the sake of fees? I admit these possibilities, and yet I have such confidence in the good judgment and probity of the English surgeon, beyond all other surgeons in the world, that I believe the evil that may occur in this way will be far outweighed by the saving of life effected by the removal of nascent cancers. We know how absurdly overdone the removal of the appendix has been in some countries until it became positively the subject of public merriment; and yet, with all this abuse, many lives have been saved by it, while the operation is meantime quietly finding its proper level and sphere of usefulness.

I have seen several cases of chronic mastitis in men, and, curiously enough, they have all been in private practice; one of the things that, I think, produces it in them is the rubbing of braces and brace buckles, and these, of course, must be at once removed and a belt worn. The course of treatment above mentioned seems to be perfectly successful. One case of this nature occurred in the person of a healthy young gentleman, who was going abroad to a distant part of South America, where he would be far from surgical assistance, and that of a very poor order. Some few months before his departure he developed a chronic mastitis, but did not take any notice of it, as he had no pain from it. But very shortly before he was about to leave the swelling increased somewhat, and he became very much alarmed in case anything dangerous should occur to him abroad in his out-of-the-way location. I told him there was no time for any treatment, and that the gland, which was a mere rudimentary and useless affair, could be removed with the certainty of a cure in a week. The removal was done by the semilunar incision, preserving the skin, areola, and nipple, so that no disfigurement resulted, and he went sway feeling quite happy in his mind.

At this stage the question naturally arises: If the transition from chronic interstitial mastitis into cancer is a thing whose occurrence is admitted by all surgeons, can we guess in what proportion it occurs? Here it seems as if statistics were of no avail whatever. What attempts have been hitherto made have lost weight by reason of the fact that they have included all kinds of mastitic trouble. Now, my contention is that the mastitis out of which, or in which carcinoma develops is of one kind, and of one kind only—namely, the chronic interstitial mastitis, which arises spontaneously about the middle period of life, and has nothing to do with any previous inflammatory condition. Putting aside infantile and adolescent mammary abscess, the only other acute inflammatory condition which arises in the breast of moment is milk abscess. It occurs in women during the active child-bearing period between 18 and 35. When opened, drained, and cured, all traces of inflammatory induration disappear in their sites. I have seen breasts the subjects of "rabbit-warren" milk abscesses, which I have literally cut in pieces, which have healed so remarkably that the scars of them have been no great disfigurement, while the breast tissue has been as supple and soft as if nothing had been wrong with it. Again, in examining all kinds of female breasts for all sorts of trouble, I have found the scars of incisions few and far between and of a very simple nature. Mr. Bryant, in *Diseases of the Breast*, says: "My own statistics tell me that out of my 360 cases of women who had borne children mastitis had occurred at some antecedent period in 80, but it is almost impossible to make out that the cancerous tumour originated at the seat of scar or induration. The tumour in the majority of cases appeared many years after the mastitis, in one case thirty years."

I cannot therefore agree to the statement, copied from one book to another, that acute milk abscesses leave behind them permanent indurations which degenerate into carcinoma, or that the scars made for their relief are similarly dangerous. Chronic interstitial mastitis of the menopause—*voilà l'ennemi!* My friend and colleague, Mr. Paul, has long studied this question, and has an unrivalled collection of specimens illustrating it. It is from his stores that the most beautiful of the specimens which I shall show you to-night have come, and I hope that he will lay before the profession some day the results of this histological work. I would wish publicly to thank him for his courtesy, and also my friend Dr. Buchanan (whose work on the *Cancer Parasite* will come into my next lecture) for the trouble he has taken in arranging and preparing the lantern demonstration for to-night. Mr. Paul, like myself, while unable to fix a percentage, believes most firmly that a much larger number of cases of chronic interstitial mastitis are allowed to drift into cancer than is commonly believed.

The suggestion has been made and carried into practice by not a few surgeons that, where there is a doubt about the nature of a hard piece of chronic mastitis, the patient should be anæsthetised, and a piece of the tumour removed and subjected to microscopical examination. I have done this twice, but it does not seem a satisfactory proceeding, although theoretically it appears a very sensible thing to do. The truth is that what the patient dreads is chloroform and an operation of any kind. If the microscopist declares in due time that the disease is malignant, then another chloroforming and another operation have to be faced. To everyone, and more especially to a woman, it is the prospect of a surgical proceeding that terrorises, and, however much we may tell our patient that the removal of a small piece of her breast for examination is a mere trifle, to her it does not appear in that light, for she is no judge of the comparative severity of operations. In my first case I felt practically sure that the lump was cancerous, but the relatives were in doubt, and would not allow removal until satisfied by the microscope that it was so. As the microscope did pronounce it cancerous, the breast was duly removed, and the patient had all the anxiety of the exploratory operation for nothing. In the second case the microscopic sections were so dubious in character that they were practically of no help, and the diagnosis by the hand was just as good. It does not seem as if the exploratory examination will become popular. The best way is to tell the patient and her friends the true state of the case and the sources of doubt, and to ask permission to proceed as you think fit on the strength of a naked-eye section made under an anæsthetic.

It is universally admitted that the essential feature of carcinoma consists in the escape of epithelium from the interior of the alveoli into the surrounding connective tissue and its subsequent proliferation there, this cancerous epithelium differing but slightly from the normal variety. It is clear that the ultimate reason for its proliferation must always be incomprehensible to us, involving as it does the principles of life and growth. Gland epithelium is always growing and always perishing, and always being eaten up or discharged. So long as the balance between growth and waste is even there is health; when growth exceeds waste there is neoplastic disease. Apparently as soon as the epithelial cells escape from their normal habitat and get into the spaces that exist between the connective tissue fibres they increase at a great rate. Why? This is the crux of the whole question. Some hold that the irritation produced by

parasitic bodies excites the growth of epithelium in ultimate alveoli or tubules, and carries on the excitement when the epithelium has burst its bounds and escaped into the cellular tissue.

In the *Journal of Pathology* (August, 1899) is detailed a very remarkable experiment by Dr. Lack: His view is that there is no necessity for such a view as a parasite, and that carcinoma is simply the result of the entrance of the normal epithelium of the body by some means—probably traumatic—into the lymphatic spaces and its continued growth therein. The peritoneum of a rabbit was opened, the ovaries cut open, and the milky juice from the cut surfaces allowed to diffuse through the peritoneal cavity. An opinion was received from Professor McFadyen that the rabbit never developed cancer spontaneously in his experience. Thus normal epithelium cells from a healthy animal were introduced into its own lymphatics. The rabbit remained well for nearly a year, after which it became thin and weak and suffered from dyspnœa. It was killed at the end of fourteen months. White, hard, round nodules were found in the mesentery. Great masses of tumour-like tissue were found all about the thorax and abdomen, so that the spleen, kidneys, and one or two other organs, were alone found to be normal. Sections showed "the typical structure of a columnar-celled carcinoma." Alluding to the fact that malignant disease of the peritoneum has been known to follow the removal of ovarian tumours, the fluid of which contains free epithelium, Dr. Lack does not admit the explanation that these tumours were necessarily malignant.

Presently came a counterblast from Mr. Shattock, who showed to the Pathological Society of London [1] a rabbit whose uteri were full of cancer, while the peritoneum contained growths also, this animal not having been the subject of any experiment. Why might this not have been the case with Dr. Lack's rabbit? He notes also that after the rupture of an ovarian dermoid multiple cysts may form in the peritoneum, but these are simple circumscribed cysts and not malignant growths, such as should arise were Lack's hypothesis of the mechanical origin of carcinoma in the displacement of normal epithelium into a lymph space or lymph cavity correct. In this condition we must leave the matter for the moment, acknowledging the almost startling nature of Lack's experiment, but feeling that we cannot trust to a solitary example.

Let us see, then, if it be possible to trace the gradual development of a piece of carcinoma in a chronic interstitial mastitis. The earliest change probably consists in the appearance of quantities of leucocytes, which constitute a round-celled infiltration distributed in the neighbourhood of the ultimate lobules. The single-layer epithelial lining of the tubules and acini which compose the ultimate lobules then begins to proliferate and grow into the interior of these cavities; at the same time there is a production of a new and very delicate connective tissue which surrounds the tubules and acini of each ultimate lobule. The normal connective tissue outside of that also increases largely in bulk; by reason of all which things many tubules are so squeezed and strangulated that, their distal portions being cut off, there is no exit for their contents, and they, therefore, become distended and form the innumerable little closed cysts which are found all through the cirrhotic breast of chronic mastitis. Matters may remain thus for long enough, the breast shrivelling more or less. This is the cirrhotic change already alluded to; but another change may occur. The growth of the epithelial cells in the tubules and alveoli may go on to such an extent that they become completely blocked up, and appear as black areas on microscopic section. The fine interacinous connective tissue does not increase much in this case, but the ducts and acini, becoming more and more distended, eventually meet and fuse into each other, so that in place of a number of small black areas, we now see large ones, still giving slight evidences of the agglomerated acini of which they are composed. These masses of cells, however, are still held together by the surrounding interlobular tissue and by the limiting membranes of the original ducts and acini; but finally even these give way, and the cells pour out into the strata of the connective tissue. They creep along between the bundles of connective tissue, following the tracks of what are probably the very earliest commencements of the lymphatic system, rapidly reproducing themselves by the process of karyokinesis. They are now cancer cells, although between them and the original epithelial cells lining the tubules and alveoli there is not a great difference. There is certainly nothing absolutely distinctive. The normal glandular epithelial cell is of very regular shape and size, and has one well-marked nucleus, being an orderly growing cell. The cancerous epithelial cell varies a good deal in size and shape, being a young rapidly-growing erratic cell. There is some difference in the way in which certain stains affect with more or less intensity the cytoplasm of the two kinds of cells, but this is not improbably due to the difference in their age. Mr. Plimmer notices that in all actively growing cancers there is a zone of round-celled infiltration at the margin of the tumour where growth is most intense, and this zone does not exist in simple tumours. Near the more central parts of the tumour these round cells are converted into large mononuclear cells, and later on into fibrous tissue, which surrounds the cancer cells. This stroma next causes a degeneration of the cancer cells, a digestive or phagocytic process. As time goes on the stroma hardens and serves the function of protection against invasion, so that the centre of a carcinoma is the hardest and most fibrous, and thus comes to pass the fact also that the harder the tumour—in other words, the more fibrous tissue there is in it—the less is the chance either of generalisation or recurrence. So, too, we arrive at the explanation of the atrophic cancer, where the cells have been really all devoured by the connective tissue.

In the *Transactions* of the Pathological Society of London is a very interesting paper by Mr. Cecil F. Beadles, which has not been accorded the prominence it deserves. It is on Certain Histological Changes found in Association with Glandular Carcinoma. He examined microscopically nearly 100 breasts removed for primary carcinoma. He came to the conclusion that breasts in which such tumours are found are never in what may be called a normal state. It is often possible to make out with the finger small hard nodules situated at a distance from the tumour, and having no apparent connection with it. Sometimes, however, only slight thickenings can be felt in some parts of the breast. The acini show proliferative and other changes in the epithelium, and there are to be noticed also changes in the stroma, which comes to resemble that seen in some rapidly-growing scirrhous tumours in which connective tissue cells with their elongated nuclei run parallel around the acinus, having between them what appear to be small uniform cells with round nuclei. The changes are both of the nature of chronic interstitial mastitis, and, in the case especially of the thickenings and small nodules, of a condition intermediate between simple adenoma and carcinoma extremely suggestive of commencing malignant disease.

Mr. Beadles is of opinion that these changes in the apparently sound breast tissue are not produced by infection from the existing carcinoma, but are most likely due to the same causes which started the tumour. Clinically, and quite apart from all microscopic examination, this is the opinion I have always held myself. In plain language, it means that there is a precancerous state of the whole breast, which, however, only blazes up into full-grown cancer at one or two points. It was this view which made me utterly disbelieve in the removal of the tumour alone, and which prompted me many years ago to press vigorously upon the attention of the medical profession the advisability of free removal of the entire breast and with that the clearing out of the axilla.

REFERENCE.
[1] British Medical Journal, January 20th, 1900, p. 136.

THE NEW ITALIAN HOSPITAL.—The new buildings of the Italian Hospital, Queen Square, Bloomsbury, were formally opened on March 14th by the Italian Ambassador, Baron de Renzis Montagnaro. His Excellency made a speech in which he said the building they were opening would be called the Italian Hospital, but if Italians were willing to devote themselves to its direction or assistance the hospital would be open to all without distinction of nationality. On the façade of the building would be inscribed: "Charity knows no restriction of country." Subsequently the Ambassador read a letter from the King of Italy, recognising the beneficent action of the founder, the late Signor Ortelli, and presented to his widow, Mrs. Ortelli, a gold medal sent by His Majesty, to commemorate the opening of the new hospital.

AN ADDRESS
ON
VOMITING CONSIDERED FROM SOME OF ITS SURGICAL ASPECTS,

ESPECIALLY WITH REFERENCE TO A FÆCULENT VOMIT, WHICH IS SOMETIMES CURATIVE.

Delivered at the Meeting of the North Kent District of the South-Eastern Branch of the British Medical Association on March 8th.

By WILLIAM H. BENNETT, F.R.C.S.Eng.,
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Mr. Chairman and Gentlemen,—In the first place, perhaps I may be allowed to express my gratification at the compliment which has been conveyed to me, through your Secretary, in the invitation that I should address you this afternoon.

As is usual under circumstances like these, a difficulty arises with regard to the choice of a subject; for it is unnecessary to say that there is in these times little, if anything, which is new in surgery, so that the speaker, under the circumstances in which I find myself, is practically confined to one of two alternatives: the first being a historical review of matters of the surgical past; and the second a consideration of some aspects of matters of common knowledge which may have been forgotten, or possibly overlooked.

It is to the latter of these alternatives that I propose to call your attention to-day; and in doing so I shall follow the plan which I have always adopted, of describing certain clinical examples of the points which I wish to impress upon you, because I think that abstract opinions expressed without the evidence of cases to support them can hardly be of the same value as views which are supported by practical corroboration.

Upon consideration, it has struck me that a useful subject to deal with in the relation just mentioned is that of certain varieties of vomiting as it is met with in surgical practice. I shall confine my observations to two main classes of vomiting of this kind: (1) cases which occur ofter operation, being due either to the anæsthetic or to certain conditions of disease, which necessarily lead to vomiting under any circumstances, whether an operation be performed or not; and (2) certain other cases of any record of which I have no knowledge, in which vomiting of a particularly grave kind, as commonly understood, proves in the end to be curative.

I.—Vomiting occurring in Connection with Operations.

This vomiting is mainly of two kinds: first, that which is the result of the administration of an anæsthetic; and secondly, that which is the outcome of the disease from which the patient is suffering. In the latter instance the anæsthetic may, it is true, increase the tendency to the vomiting, but does not originate it, a point which is for my present purpose of particular importance.

With regard to the vomiting which is the direct result of the administration of anæsthetics, it may, perhaps, at first sight seem outside the province of the surgeon, since the matter may appear to lie rather in the field of the anæsthetist. At the same time, it must be remembered that although the anæsthetist may see and have to do with the vomiting which occurs immediately upon the administration of the anæsthetic, yet, in the vast majority of cases, that symptom when it becomes at all grave, and possibly threatens the life of the patient, is seen and dealt with by the surgeon, or by the practitioner, at all events, in charge of the patient long after the anæsthetist has disappeared from the scene.

Under ordinary conditions the vomiting following the administration of an anæsthetic is harmless in competent hands, excepting in certain patients of poor fibre, and in some who may be in an extremely exhausted or collapsed condition. Under other circumstances, however, to which it is unnecessary to refer in detail just at present, the vomiting after an anæsthetic may prove to be an extremely grievous complication, not only causing great distress to the patient, but tending sometimes to a fatal issue. It is, therefore, obvious that if this be the case, any method that can be devised to obviate vomiting of the kind is worth consideration; and it is a question in the minds of some of us—I speak as a surgeon—whether all the precautions which are really available are habitually made use of to prevent the vomiting which is liable to follow upon the administration of an anæsthetic.

Vomiting after operations may be, as I have already said, practically divided into two varieties—that in which the vomiting is the direct result of the anæsthetic, and that in which it is caused by the disease from which the patient suffers. In the former of these cases, again, the condition may be considered under two heads—that which occurs directly after, or during, the operation, and vomiting which is deferred for a period varying from some hours to two days. In the first of these classes, as a rule, presuming the patient is not suffering from any disease which in itself produces vomiting, very little trouble or danger arises. But in cases in which the condition of the vomit is such, from the nature of the disease which afflicts the patient, as to give rise to a possibility of septic infection, the danger is frequently great. The question therefore arises at once as to what means can be taken to prevent the danger which arises under the circumstances I have just described. As all surgeons know, under certain conditions of abdominal disease—for example, hernia, peritonitis, from whatever cause it may arise, intestinal obstruction, and so on—patients after operation are prone to what is called broncho-pneumonia, and this broncho-pneumonia is very commonly ascribed to the influence of the anæsthetic, because it is said that the patient, having been subjected to an operation, after leaving the operating table in comparatively good condition, remains well for some hours, or perhaps for a day or longer, and then develops, in spite of all precautions to the contrary, an inflammation of the lungs which sometimes proves intractable to treatment and ends in death.

Such deaths are not infrequently classified as being caused by the anæsthetic; indeed, in the majority of cases in which a fatal result is said to occur from the administration of ether, it will be found that changes something like those I have just mentioned have occurred before the patient's death. Now, in such cases the inflammation of the lungs which ends in the death of the patient is not necessarily the direct effect of the anæsthetic at all; in fact, it is often the result of the vomiting from which the patient suffered. Supposing that the vomit is putrid, as it so often is, in cases of hernia, intestinal obstruction, or peritonitis from whatever cause, the tendency to a fatal issue is considerable, provided that the vomiting occurs during the time that the patient is unconscious.

The reason of the fatal tendency of such vomiting is the proneness, whilst the patient is unconscious, of portions of the vomit—stinking, putrid, or fermenting—to pass into the lungs as it is ejected through the mouth in the ordinary way. The result of this inhalation is the infection of the lungs, and it is of the resulting pneumonia that many of the patients die, and not from the administration of the anæsthetic in the ordinary acceptation of the expression. It is true that the unconsciousness produced by the anæsthetic has no doubt led to the sucking into the windpipe of the material, which, by its passage into the small bronchi, sometimes kills, but it certainly is not the administration of the anæsthetic as such which is the immediate cause of death.

If this, then, is the case, it is quite clear that we cannot be too careful in preventing, so far as we are able, the possibility of vomiting after the administration of an anæsthetic. It has been said by some that the occurrence of vomiting after the taking of an anæsthetic depends greatly upon the method of its administration, and to some extent no doubt this is so. But, so far as I remember, no anæsthetist with whom I have ever been associated has been able to produce anæsthesia with any certainty of preventing subsequent vomiting.

With regard to the measures which can be taken to prevent the vomiting of this peccant material in certain cases of abdominal lesion, which is at times prone to terminate fatally by pulmonary infection, there is only one plan. It is not new, for, as I have said before, there is little that is new in these days, but it is a plan which seems to have been almost forgotten. It

has been recommended by Treves, myself, and others for some years. I have used it at intervals, for example, for at least ten years. The plan is to clear away this foul material, either before or during the operation, by washing out the stomach. It is obvious if the stomach is full of foul contents at the commencement of an operation, as it very frequently is, that unless this material is cleared out, there must be the danger during the subsequent period of vomiting, which is sure to come, of the passage into the bronchi of some of the peccant ejecta. That this danger is not an imaginary one is easily proved by a clinical example. The following is a case in point:

A woman, about 48 years of age, was admitted into St. George's Hospital on account of strangulated femoral hernia. She was rather ill at the time of her admission, as she had been vomiting for two or three days, but there was nothing particularly grave about the case. The operation was conducted in the ordinary way, and at the end of it she appeared to be in a condition which promised well for her recovery. She vomited during and at the end of the operation a great deal, and some offensive material ran out of her mouth just as she became unconscious, as not infrequently happens in cases of this sort. She appeared to do well for twelve hours, and then, without any apparent reason, so far as could be seen from the general circumstances of the patient, her temperature rose, and her face soon assumed the aspect of one who was suffering from pneumonia. To make a long story short, in four days she died, obviously of pneumonia. At the *post-mortem* examination it was found that some of her smaller bronchi were full of portions of decomposed food, which must of necessity have come from the stomach, and had been no doubt sucked into the bronchi during the latter portion of the operation which had been performed for the relief of her strangulated hernia.

Now if this patient's stomach had been cleared out, either before the commencement of or during the operation by lavage, it is quite obvious that there could then have been no vomiting of this material which finally brought about the fatal termination; and I have not the least doubt that, if this simple measure had been adopted, recovery would have followed.

This, then, is the first point which I wish to impress upon you—the desirability in all cases in which the administration of an anæsthetic is necessary, when there is any possibility (to say nothing of probability) of the stomach being a reservoir for offensive material or half-digested food, that the proper practice to adopt is stomach lavage, with the object of preventing the possibility of lung implication from the passage of portions of the contents of the viscus down the trachea.

With regard to the simple vomiting which follows so often after the administration of an anæsthetic—I am not now speaking of cases in which there is any chance of there being putrid or fermenting material in the stomach—there is a point which I think is worth your attention in relation to stomach lavage. Vomiting of this kind is commonly unimportant; it varies in degree in different subjects, and usually passes off in a few hours, but sometimes the case is otherwise, since the vomiting continues for days, and death has followed from exhaustion and cardiac failure. In such a case the death of the patient is due to the anæsthetic, because under those circumstances the vomiting would not have occurred excepting for the administration of it. This is quite a different condition of things from that which I mentioned just now, where the vomiting is the result of disease, although of course the tendency to vomiting may be increased to some extent by the administration of the anæsthetic. It is not a very infrequent experience, I suppose, in practice to find that a patient who has had an anæsthetic on some occasion has been desperately ill afterwards in consequence of the vomiting which has followed. If in such a patient a second administration is necessary it becomes a matter of some anxiety as to what will be be the effect of the anæsthetic on the second occasion. The patient may have been so ill in the first instance that the risk of the administration of an anæsthetic a second time seems greater than usual. Some time since a case of this kind presented itself to me, in which a second operation was inevitable. It was quite certain that the effect of the anæsthetic in the first instance was so serious that the patient almost died; and it appeared to me, too, considering the case from a general aspect, that she would be very likely to die on the second occasion unless something could be done to prevent the strain of persistent vomiting. It struck me also that perhaps, if before the commencement of the operation the stomach were well washed out and cleared of all the acrid material which it would probably contain, the tendency to this great amount of vomiting after the anæsthetic might be obviated. I therefore washed the stomach out very freely before the commencement of the operation. Although the patient, at the previous operation, had been so ill that it was understood, as I have already said, that recovery was almost impossible, owing to the effect upon the heart's action produced by the vomiting, after the second operation no vomiting of any sort occurred; and I cannot recall to mind at the present moment any instance in which a patient recovered so thoroughly and so well from the administration of an anæsthetic for a very severe operation as this one did. Of course, the absence of symptoms in the second instance may have been a coincidence, but I hardly think it was so, because I have subsequently corroborated the opinion I then formed by treating other patients in the same way. The result of my experience is practically this: that if the contents of the stomach are completely cleared out before an operation, by siphonage and irrigation, with plain warm water, nothing more—the viscus being thoroughly empty at the end of the washing—there is little chance of vomiting, or even retching, subsequently to the operation.

That, then, is the second point that I wish to impress upon you—namely, the desirability in cases in which there is reason to believe that the administration of an anæsthetic is likely to be, or has been, followed by very grave vomiting, of thoroughly washing out the stomach before the commencement of the operation, by which the tendency to subsequent vomiting may be altogether obviated, and further that vomiting of the ordinary kind which follows upon the administration of an anæsthetic may be frequently avoided by the same means.

In connection with the subject of vomiting after operations, there is only one other point with which I shall trouble you at present; it is a matter of some importance. Whether my experience is different from that of other surgeons I do not know, but, so far as I have seen, vomiting coming on immediately after an operation in cases in which there is no particular reason, so far as the disease is concerned, why vomiting should occur, is very rarely followed by serious consequences in the absence of grave cardiac trouble. On the other hand, it has happened to me in several cases to have seen patients, after having apparently borne an operation well without vomiting, attacked by vomiting after intervals varying from a few hours to two days subsequent to the operation, from the effects of which they have become desperately ill. I wish to call your attention rather particularly to the danger of this deferred vomiting, as I venture to call it, after the administration of anæsthetics. The danger of the condition is not an imaginary one. I have seen several examples of it, and have recorded a case in the *Practitioner* of May, 1899, in which the condition is particularly well shown. In another patient, a girl, upon whom I performed abdominal section for obscure pain, nothing could have been more satisfactory than the patient's state at the end of the operation. She progressed perfectly for about twelve hours. At the end of that time, without any particular reason, vomiting set in. This vomiting occurred continuously, and she died from cardiac failure. Please note that no peritonitis was found at the *post-mortem* examination. Death was clearly due to cardiac failure, the result of the vomiting. It is a rather remarkable fact that, so far as I have seen in advanced abdominal lesions submitted to operation, if vomiting immediately follows after the operation and so empties the stomach at once, the chance of recovery is much greater than when vomiting is deferred for some hours. If twelve hours or more elapse and vomiting then supervenes, the patient as a rule becomes extremely ill and may die. Here again is a point with a practical bearing. If, in cases of this kind, the stomach has not been emptied by vomiting during or at the end of the operation, it is a good practice, unless the extreme collapse of the patient negatives its propriety, to wash out the stomach. In the cases of the kind I have just mentioned, there is, I am sure, no doubt that if the stomach is washed out before or immediately after the operation, this deferred vomiting will rarely occur. A further advantage arises in this respect from the undoubted fact that irrigation of the stomach with hot water is one of the best possible antidotes to shock which we have at our disposal.

I.—Fæculent Vomiting, which is sometimes Curative.

It is singular how tardy one sometimes is in assimilating the teaching of experience. A member of the profession of distinction and great experience, an old friend of mine, some years ago had lying ill in the country a relative who was very dear to him, who, I learned, was suffering from some form of intestinal obstruction. I therefore wrote expressing my sorrow, and asking him to let me know how matters were going on. He replied in a letter, in which, after mentioning several things in connection with the case, he said that they—he and his friends—had been extremely anxious, as they feared—in fact, it appeared certain—that there was obstruction of the bowels; two days previously it seemed that the chance of recovery was *nil;* but since then he was (I use his own words) "happy to say that *stercoraceous vomiting has set in*, and, therefore, by the blessing of God, I hope that the illness will be cast off." This appeared to me, for a man of his age and experience, a most remarkable expression, and I am bound to confess at that time I was rather inclined to think that under stress of anxiety my old friend's mind was failing. But the end of the story is that this patient did not die; that the stercoraceous vomit did occur, and that the illness was thrown off, so that the patient lived to die of a different complaint. I thought very little of this matter again until I saw other cases in which it appeared to me something of the same kind had happened. Recently the subject has been more especially brought to my mind by the occurrence of a case upon which I operated just before Christmas. The practitioner who was good enough to call me in was of great experience, and probably as acute a man as it would be possible to find.

At his request on December 19th, 1899, I saw, and afterwards operated upon, a girl, 14 years of age, for what appeared to be acute appendicitis—that is to say, I opened a large stinking abdominal abscess in the neighbourhood of the appendix, passing down into the pelvis. The patient at the time being altogether too ill to make it justifiable to attempt the removal of the appendix, I contented myself with merely laying the abscess open and draining it. She did perfectly well for two or three days, at the end of which time I saw her. Her condition then became less satisfactory, inasmuch as the abdomen was a little full and that there was occasional retching. On the morning of December 26th (I saw her on December 24th) I received a letter from her medical attendant as follows:

"I am afraid little ——— is hopeless. She kept down the oil: the enema brought away a few lumps, but the oil itself never acted, and she began to regurgitate a little greenish-brown fluid. Her tongue kept moist until 6 P.M. [on December 25th], and there was no more distension. The belly looked as yesterday" (the date of my last visit), "but since 6 P.M. she has vomited foul-smelling stercoraceous stuff, her tongue beginning to get dry. Now, about 11.30 P.M. her temperature is 97° F., pulse small, and the end is not far off. Seeing that, we did not think her in a fit state to attempt more operative interference yesterday, I am sure she would die under the anæsthetic to-day.....I am awfully sorry for the unhappy result."

Upon the receipt of this letter I wrote at once, advising that the case, for the reasons to be explained presently, should not be considered hopeless; but my letter was crossed by the following, which I received on December 27th:

"There are surprises in store in little ———'s case. After a copious foul vomit she slept off and on all night, an injection of beef-tea and brandy having been given. There was no more sickness, so I gave a seidlitz powder early this morning and a hot cup of tea afterwards. At about 6 A.M. an action occurred. At the present time her temperature is 99.4°; her pulse is very good. She will evidently now do well."

The patient recovered subsequently without any drawback.

It will be noted in this case that although the patient at the time of the commencement of the vomiting had an abdomen which I have described as "full," no increase of distension occurred, in spite of this stercoraceous vomit.

The following is another case of the same kind:

A member of the Irish Constabulary, 32 years of age, was sent to me by Sir William Broadbent, as he had symptoms of mechanical obstruction of some sort in his abdomen. From time to time he had attacks of constipation, with acute pain across the umbilical region, accompanied by vomiting, during which he became collapsed and very ill. As medical means had failed to give any relief, I operated, and I found a retro-peritoneal hernia, which I relieved in the ordinary way, afterwards sewing up the orifice through which it had passed. He did well for a week, and then, without any obvious cause—his bowels having been acting up till then—vomiting again commenced. His belly became a little full, but not what is commonly called "distended." The vomiting increased in frequency and in violence, its character at the same time changing, until at length, at the end of four days, the vomit had all the appearance of fæces. At the same time, there was no increase in the distension of the belly. At this time, Sir William Broadbent saw him with me, and it was really impossible to distinguish an action of the bowel which happened to occur after an enema on the morning of our meeting from the material which was vomited from the mouth. As I have said before, during all this time there was no increase in the distension of the belly. For two days later he vomited nothing but this fæculent material, which was practically indistinguishable from fæces; then, after a more copious and stinking vomit than usual, he turned over, went to sleep, and slept for about twelve hours, awaking a different man. Food was taken with comfort, and two days later a spontaneous bowel action followed. From that time he made an uninterrupted recovery.

I especially wish you to note here again the absence of increasing distension with the continuance of the vomiting. The following is a different kind of case teaching the same lesson.

A man in the Belgrave Ward of St. George's Hospital had an omental inguinal hernia, giving rise to symptoms resembling strangulation. I operated in the usual way, and removed a mass of omentum, having previously pulled it down, till I found a healthy piece around which to pass a ligature. He did well for about six or eight hours, and then, with a recurrence of pain in his belly, he began to vomit, and vomited frequently for the following twenty-four hours. Towards the latter part of this time the vomit was extremely foul, and under ordinary circumstances it would, I am sure, have been considered by any practitioner that he must have died, and that he was dying from intestinal obstruction, as there was absolute constipation. Under ordinary circumstances also his condition would have clearly indicated abdominal exploration. The experience, however, which I had gained in other cases led me to negative operative interference, a course which was justified by the result of the case. The question of his dying of intestinal obstruction was put out of court by the occurrence of two copious actions on the third day, which occurred upon his awaking from a sleep which had followed profuse vomiting of fæculent stuff, which was almost indistinguishable from fæces. No vomiting recurred, and from that time the case pursued the ordinary course, and the man got perfectly well.

In this case again no increase of abdominal distension occurred, although the vomiting continued.

The description of more clinical examples would, I fear, prove tedious. I will not, therefore, weary you with anything further in this respect beyond a brief reference to the case of a boy who came under my observation after receiving a kick on the belly from a horse.

Two days after the injury, which did not appear serious, he was attacked by vomiting, no action of the bowels having occurred. The vomiting became stercoraceous, and physic failed to produce a motion. Operation was declined, and the boy was therefore left to his fate. Death appeared to be inevitable. He did not, however, die, for after an attack of vomiting, more copious and foul than those which had preceded it, he fell asleep; a few hours after the bowels acted, and he recovered uninterruptedly.

It must, I think, be admitted that these cases are sufficiently interesting to be worth a little consideration. It will have been noted in each of them:

1. That the change for the better followed upon an attack of vomiting, which was more copious than any which had occurred before.

2. That in spite of the fæculent vomiting, which continued in each case for a considerable time, no increase of abdominal distension occurred during the continuance of the vomiting, although each case presented the ordinary aspects of intestinal obstruction.

The causes of the vomiting in cases like these must, I fear, be difficult of explanation with the exception of instances like that, in which a mass of recent omentum had been ligatured. In such cases, as I have previously pointed out (*Clinical Lectures on Abdominal Hernia*, 1893), it is not altogether uncommon for symptoms closely resembling recurrent strangulation of a hernia to follow upon ligature of healthy omentum, and in some cases of this kind, in which the belly has been laid open under the impression that strangulation had recurred, nothing of the kind has been found.

A somewhat careful consideration of the subject raised by these cases and others like them lead me to the conclusion that:

(1) Fæculent or stercoraceous vomiting occurs more commonly than is supposed in cases in which no mortal disease exists. The occurrence of fæculent vomiting must of necessity be a grave symptom, but it is not always followed by death, even though nothing be done for the patient from a surgical point of view.[2]

(2) That in certain cases the vomiting is curative, inasmuch as it empties the bowel and stomach of accumulated contents which for the time being are unable to find their way downwards in the normal way. This view is supported by the fact that in such cases as I have narrated, a very copious and as it were final vomit immediately preceded the change of the patient from an apparently hopeless state to the commencement of recovery.

The question then arises as to the possibility of determining in any case whether the fæculent vomiting is certain to end in death if the patient be unrelieved by radical measures, or whether the vomiting may possibly prove curative—a question of extreme importance from the point of view both of prognosis and treatment. On this point I think it is possible to arrive at an opinion which practically depends for its value upon one

sign—this is, the condition of the belly with regard to distension. It may, I believe, be with certainty concluded that if with the continuance of the vomiting there is persistent increase of abdominal distension, the condition is a mortal one unless radically relieved. If, on the other hand, with the continuance of the vomiting there is no increase of distension, there is reason to hope that active interference is unnecessary and that recovery may follow "the casting off of the complaint" (to quote my old friend whom I have mentioned), effected by the cleaning out of the stomach and intestine in the upward way.

The bearing of this point, if it is worth anything at all, upon treatment is obvious, especially in cases which, having been submitted to abdominal section, vomiting of the kind I am discussing follows immediately after or comparatively remotely. The application of the point is this: if with vomiting there coincides increasing distension, nothing can save the patient but reopening the abdomen with a view to the removal of the cause if that is possible. On the other hand, should there be no increasing distension, operative measures may reasonably be deferred, since the chances of spontaneous recovery are good enough to negative the propriety of running a risk so serious as a second operation under the circumstances must as a rule entail. When no operation has been performed, as in the last of the cases to which I have referred, the practical bearing is the same, and the urgent necessity for operation or the reverse depends upon whether there is or whether there is not increasing abdominal distension coinciding with the vomiting. In conclusion, the matter may perhaps be comprehensively summed up in the statement that in cases of abdominal disease or injury fæculent vomiting as such is no positive indication for surgical interference, unless it is accompanied by increasing abdominal distension.

Notes.

[1] Although deferred vomiting of this kind is commonest after abdominal operations, it occurs in other cases. For example, I have seen it after amputation at the shoulder-joint, after trephining, and after incising a whitlow. [2] A well-known physician tells me that, from his experience, he believes about 10 per cent. of patients who vomit fæculent or stercoraceous material recover without radical treatment.

ABSTRACTS OF

THE HUNTERIAN LECTURES

ON

THE SURGERY OF THE STOMACH.

By A. W. MAYO ROBSON, F.R.C.S.,

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Lecture III.

Injury of the Stomach.

The stomach is so well protected by the chest wall and the surrounding organs, that it is seldom ruptured from blunt force applied to the abdominal wall, though contusions and partial or complete rupture may occur from a blow or kick in the epigastric region when the stomach is full. The vomiting of blood, therefore, with pain over the stomach immediately following a blow, may demand exploration. It would be wise, however, before resorting to operation to inflate the stomach, as if a rupture has taken place, gas will escape into the peritoneal cavity and the liver dulness will disappear, whereas if the organ be unruptured, the distended stomach will be clearly outlined through the abdominal wall. In case of doubt, a small incision in the middle line above the umbilicus will speedily settle the question, for if the stomach is ruptured there will be an escape of odourless gas immediately the peritoneum is opened, and in all probability bloodstained fluid from the stomach contents would also escape. Needless to say, in case of rupture, no time should be lost in first arresting hæmorrhage, and then closing the laceration and cleansing the peritoneum.

Gunshot and stab wounds of the stomach are not infrequent, and there are now numbers of cases on record where the stomach has been perforated by a bullet and recovery has occurred. In stitching up the stomach, Lembert's sutures must be applied well beyond the wound at both extremities.

The older authors relate numerous cases of successful treatment of wounds of the stomach, but in many a fistula was left. Nearly all cases of spontaneous rupture of the stomach are due to ulcer or carcinoma, but we should not forget that there are a number of cases on record in which rupture has occurred from over-distension. Recovery probably never occurs naturally in these spontaneous ruptures, but there are many cases on record of recovery after stab wounds. Perforation may occur from within, as in the case of sword and knife swallowers.

Cancer and other Tumours of the Stomach.

Cancer of the stomach, which is more common in men than in women, in the proportion of 2 to 1, may occur at any period of life from youth to extreme old age, but it is most commonly found between 50 and 60, and may be said to be a disease of middle or advanced age. Sarcoma occurs less frequently, and usually at earlier periods. Tubercle of the stomach is uncommon, except in children affected with general tuberculosis. I have only operated in one case in a girl of 12, who, besides the pyloric stenosis due to tuberculous disease, had stricture of the duodenum, general tuberculous disease of the stomach, and tuberculous peritonitis. Fibromyoma of the stomach is rare, but it may form a pedunculated growth projecting as a polypus into the stomach, and if it be away from the pyloric extremity it may produce no symptom until its size demands attention. Polypoid outgrowths of the mucous membrane, which may be termed adenoma or papilloma, are uncommon, but in one case that came under my care a polypus of this nature was obstructing the pylorus, the obstruction being successfully relieved by its removal. The stomach may also be the seat of lipoma, lymphadenoma, villous growth, and, secondly, malignant tumours.

Fibroid thickening of the pylorus may form a tumour which can with difficulty be distinguished from malignant growth, and on two occasions I have performed pylorectomy in such cases under the impression that I was removing a cancer; such a tumour is dependent on the deposit of lymph around a pyloric ulcer, which, becoming changed into fibrous tissue, not only causes great thickening of the pylorus, but leads to matting of the omentum around it, and to puckering and hardening of the tissues that in some cases can only be distinguished from cancer on section or on microscopic examination. The long-continued history of ulcer may be the only guide to the diagnosis, but in this connection it must be borne in mind that a chronic ulcer may end in cancer.

Diagnosis.—When the symptoms and signs of ulcer of the stomach with or without stricture, but with tumour, are found at or after middle age, the probability is that the patient is suffering from cancer.

Cancer of the cardiac extremity can seldom be felt until it has attained a considerable size, and cancer of the pylorus often cannot be distinctly felt until it has formed a fairly large tumour; though in most cases an indefinite sense of fulness and hardness leads to a suspicion of growth before it can be distinctly defined. The tumour usually moves up and down by respiration, and when the pylorus is free from adhesions it may be felt quite easily well away from the costal margin.

While in cancer of the cardiac orifice the stomach is usually contracted and small, in pyloric cancer it becomes dilated, and the dilatation may be the prominent sign. Inflation will not only render it possible to estimate the size of the organ, but to distinguish between a retroperitoneal and a pyloric or stomach tumour, and to ascertain the relation of the tumour to the stomach cavity. In cancer of the head of the pancreas jaundice and a distended gall bladder are usually present, and inflation will show the relation of the stomach to the tumour.

Bleeding in cancer of the stomach is usually shown as grumous vomit, seldom as a large hæmatemesis, as in ulcer; and melæna is rare. The pain is more constant than in ulcer, and not so distinctly after food. It may be absent, but in one form or another is present in 90 per cent. of the cases, and is usually very severe.

On examining the stomach contents after a test meal, the absence of free hydrochloric acid is very suggestive of cancer as is the presence of free lactic acid, but the presence of free hydrochloric acid does not negative the existence of cancer.

Loss of flesh occurs from the outset, and cachexia supervenes at an earlier stage than in cancer elsewhere.

It would almost seem incredible that cancer of the stomach may exist in a latent form and produce death by exhaustion without any of the characteristic symptoms, but I have seen a case of this kind in a man of 70, and others have reported similar cases.

Before a tumour is felt, there may often be a difficulty in diagnosing between pernicious anæmia, tubercle, and cancer of the stomach, but when persistent indigestion comes on after 50 for the first time, it is very frequently due to cancer. At times carcinoma can only be diagnosed by the resistance present when the patient is deeply anæsthetised.

Prognosis.—As surgery holds out the only hope of relief or cure, and as, moreover, the earlier these cases are seen by the surgeon the greater is the probability of real good being done, it would seem to me that in every case where cancer of the stomach is suspected, the question of surgical treatment should be considered at a much earlier period than is now the custom. It is important to note that out of 38 cases of cancer of the stomach collected by Drs. Perry and Shaw, in 18 per cent. there were no secondary deposits in other organs, and that Gussenbauer and Winiwater, as a result of the examination of the register of 542 cases of cancer of the pylorus, state that in 41 per cent. there was no metastasis, and that in 37 per cent. there were no adhesions. One may reasonably hope therefore to perform a radical operation in one out of three or four cases of cancer of the stomach, if surgical means be adopted sufficiently early. Cancer of the stomach *qua* cancer is more favourable for radical treatment than cancer of the breast or of the tongue; and now that the technique of the radical operation is becoming more perfect, I venture to predict that we shall in the future give our patients the chance of relief by operation more frequently, and that the aid of surgery will be sought as soon as the disease is recognised. Every life saved is a life gained, so that if we only save 50 per cent. by the radical operation it is well worth doing, since patients with cancer of the stomach can only at the best have a miserable and hopeless existence unless treated surgically.

[Mr. Mayo Robson then gave an analysis of cases in which the radical operation has been done for the cure of cancer of the stomach by Professors Kocher, Maydl, and Czerny.]

Kocher has resected the pylorus in 57 cases, the mortality being only 8.7 per cent., otherwise over 50 of the cases recovered. Of these one (a woman) is still living, 10 years, another 5, a third 3, and a fourth 2 years after operation. Four other cases died from accidental causes, or from other diseases after three years had elapsed.

At the Heidelberg clinic up to January, 1898, there had been 24 operations with 9 deaths, a mortality of 37.5 per cent. Life was prolonged 3, 7, 9, 10, 11, 15, 20, and 31 months in those recovering, and in four the patients were alive 9 and 11 months and 3½ and 7 years after operation.

Professor Maydl has published results of 25 operations which he divides into three classes: (1) Four cases in which the patient died from the effects of the operation either directly or indirectly; one from a sudden attack of gangrene in the right lower extremity, probably embolic from the tying of a vein, but this could not be confirmed, as there was no *post-mortem* examination. The other three died in 2, 3 and 5 days respectively after the operation from peritoneal symptoms, collapse with anæmia and exhaustion.

(2) Seven who left hospital in good health, and apparently cured, but ere long had recurrence elsewhere and died. One of the seven may be looked upon as doubtful. This patient lived fourteen months after the operation and died of pleurisy with effusion, every other organ being found healthy at the necropsy. Even the appetite was unimpaired up to the very end, and no disease could be discovered in or near the stomach. The other 6 cases lived 12 months, 8 months, 2 months, 20 months, 14 months and 12 months respectively after the operation, or on an average of 11.3 months.

(3) Fourteen were still alive at the date of the report. These were divisible into those in whom the interval had been (*a*) less and (*b*) more than two years. Under (*b*) there were 7 cases:

8 years	...	8½ months.		3 years	...	1½ months.	
5 ,,	...	11 ,,		2 ,,	...	2½ ,,	
4 ,,	...	3½ ,,		2 ,,	...	1½ ,,	
3 ,,	...	2 ,,					

The prognosis is at present much more favourable than it was in the past. In order to still further lower the mortality it will be necessary that patients be placed in the hands of the surgeon earlier than has hitherto been the case.

Surgical Treatment.—The treatment of cancer of the stomach may be radical or palliative. The first procedure will in all cases thought suitable for operation consist of an exploratory abdominal section, and according to the condition found will depend the after-treatment. In Czerny's clinic there were 24 exploratory operations for cancer, with a mortality of 25 per cent., and the duration of life after operation was usually less than five months. I have myself performed 8 exploratory operations for cancer of the stomach, and, finding enlarged glands or secondary deposits, have at once closed the abdomen. All the cases recovered from the operation, and lived for various periods.

Preparation.—The bowels should be cleared either by an aperient or enema the night before operation, and the stomach should be washed out an hour or two before if the patient be in a condition to bear it. As these patients bear shock badly it should if possible be prevented. The operating room should have a temperature of 70° F., and the patient should be enveloped in cotton wool, which may be conveniently carried out by a long-sleeved jacket and long stockings made of gamgee tissue. An artificially-heated operating table is an advantage, and if a specially-heated table be not at hand, an oblong water cushion filled with hot water, or a series of india-rubber water bottles placed under the blanket of the operating table will take its place. An injection of liq. strychninæ ♏x, given before the administration of the anæsthetic, supplemented by another injection if necessary during the operation, is useful. An infusion of saline solution may be required; the apparatus for transfusion should therefore always be ready, as it can be used by a colleague while the operation is proceeding, or the saline fluid may be steadily injected in good quantities into the subcutaneous tissue of the axilla, either by means of a large syringe or by an ordinary aspirator needle connected with an india-rubber tube and glass funnel, which can be easily arranged by a nurse and used continuously for a little time. After operation the patient should be placed in a warm bed and surrounded by hot-water bottles, and I always order a pint of warm saline fluid with an ounce of brandy, to be injected into the rectum immediately after the operation, the injection to be repeated if the pulse seems to indicate its necessity.

Pylorectomy.

Pylorectomy is the removal of the pylorus and as much of the adjoining part of the stomach and duodenum as may be involved. The operation has been much modified since it was first performed by Péan in 1879 and Billroth in 1881, it being then done by suturing the open end of the duodenum, after removing the disease, to the open end of the stomach, and closing by sutures the remainder of the stomach opening not fixed to the bowel. In one operation of this kind that I reported before the Royal Medical and Chirurgical Society in 1891, contraction of the newly-made orifice ensued some months later, and in order to avoid a like accident I modified the operation by employing a bone bobbin, around which to join the open ends of the stomach and duodenum by sutures, thus securing adequate patency of the new channel. As time is a very important factor in any operation on the stomach, the rapid procedure of making the junction by means of a Murphy's button has found favour with many operators, though Professor Kocher speaks against its use.

A further modification, now frequently followed, is to close completely both the stomach and duodenal openings, either by a purse-string suture or by a double row of stitches, and then to connect the bowel to the stomach, making either a gastro-duodenostomy or a gastro-jejunostomy, whichever may be thought most easy and expeditious at the time. This will depend very much on the amount of stomach that has to be removed in order to get away the whole of the disease, for if much stomach has to be removed, the open end of the duodenum will be less easy to fix to the stomach than a free loop of the jejunum. This operation is the one favoured by Professor Kocher, and in his hands it has proved very successful. He uses strong forceps in closing the lumen of the stomach and bowel, instead of employing digital compression, and as a suture he uses silk exclusively. Doyen's method of *écrasement* is very expeditious.

The performance of the operation *en deux temps* was suggested by Tupolske in 1891. He first performed a gastro-enterostomy, and then, when the patient had recovered, he removed the pylorus three months later, closing the openings in the stomach and bowel, and leaving the gastro-enterostomy opening to continue the communication with the intestine. This method, which has been followed by Quénu, Czerny,

Hahn, Franke, Kummel, Barker, and Doyen, may certainly be advantageous in some cases where the patient is much exhausted and unfit to bear the longer operation of pylorectomy, as after the gastro-enterostomy strength will be gained, and later the larger operation may be borne. The gastro-enterostomy may, however, give so much relief that the patient cannot always be brought to see the necessity of the second operation until it is too late to perform a successful operation; this has been my experience in one case.

[A table of cases of pylorectomy, or partial gastrectomy, prepared with the help of Mr. Willmott Evans, containing 572 cases, with 174 deaths, a mortality of 30.4 per cent., was shown, and Mr. Robson added that Haberkant's statistics[1] showed that, where adhesions were extensive, the mortality was 72.7 per cent., whereas where there were no adhesions it was only 27.2 per cent. A comparison between the various methods of operating was given in Guinard's thesis as follows:]

	Cases.	Deaths.
Pylorectomy, with end-to-end anastomosis	148	56 = 37.8 per cent.
,, with terminal and lateral anastomosis	64	10 = 15.6 ,,
,, with lateral anastomosis	54	24 = 44.4 ,,
,, by invagination	4	4 = 100.0 ,,
,, in two stages	3	0 = 0.0 ,,

If the cardiac end of the stomach be involved, the question of resection will be considered, and if decided on, it may be carried out in the manner described by Levy. It presents two special difficulties: (1) Danger to both pneumogastric nerves; (2) the difficulty of isolating the cardiac end of the œsophagus and fixing it to the stomach that is left.

Gastrostomy.

If the disease has advanced so as to produce stenosis, it will be beyond successful removal, and gastrostomy should be performed, as in stricture of the œsophagus, in order to prevent the patient dying of starvation. The operation, however, has been, and is even yet I fear with many physicians looked on as a very formidable procedure. Death by starvation under such circumstances is, however, one of the most terrible experiences both to the patient and his friends.

Why has the operation of gastrostomy acquired this ill-repute? In the first place, because it was, and even yet is as a rule, customary to defer it until the sufferer is so reduced by starvation and so enfeebled as to be unable to withstand the shock of any operative procedure. Even if he does not die of shock, his healing powers are so impaired as to lead to failure in union and then to death from wound complications, or his assimilative powers are so impoverished that, even if the operation be immediately successful, death ensues from exhaustion.

In the second place, where a direct opening is made into the stomach, the fistula in many cases speedily enlarges and becomes patulous, leading to leakage of food and of irritating gastric secretion, so that the skin of the abdomen tends to become excoriated, and the prolongation of life is attended with considerable discomfort. Do these conditions still apply? I think I shall be able to show that if the operation be performed sufficiently early, and if it be done according to the best methods, it will be found that gastrostomy may be included among the most useful and beneficent of the palliative operations the surgeon is called upon to perform. When abdominal section was attended with a high rate of mortality, it was only natural that delay should occur in advising operation; but if it can be shown that early operation has no mortality or only a slight one, due to accidental or unforeseen complications, it will be justifiable to perform gastrostomy early, knowing that the small opening will close voluntarily if the cause of the dysphagia should disappear or be cured by treatment.

The operation I am accustomed to perform is very simple, and only occupies a few minutes; it is a modification of the Ssabanejews-Franks method, but it differs in several details.

A vertical incision of about an inch and a half is made over the outer third of the left rectus abdominis, commencing three-quarters of an inch below the costal margin (Fig. 1); the fibres of the rectus are separated, but not divided, to the extent of the incision, and the posterior part of the rectus sheath and peritoneum are divided together, the opening being an inch in length. A portion of the cardiac end of the stomach is then brought up through the wound, and held forward by an assistant until four sutures are inserted into the base of the cone by means of a curved intestinal needle, thus fixing the visceral peritoneum of the stomach to the edges of the parietal peritoneum.

A tranverse incision of half an inch is then made through the skin, an inch above the upper end of the first cut (Fig. 1), and by means of a blunt instrument, such as the handle of a scalpel, the skin is undermined so as to connect the two openings beneath a bridge of skin and subcutaneous tissue.

A closed pair of pressure forceps is introduced through the upper incision, as far as the projecting part of the stomach, and made to grasp the most prominent part (Fig. 2), which it draws up to and beyond the surface of the second opening, where it is retained by means of two hare-lip pins (Fig. 3). It should just fill the opening and should require no sutures. The lower opening is now closed by two or three silkworm-gut sutures, or by a continuous stitch, and the edges are dried and covered with collodion and gauze. If needful, the stomach can be opened at once by a tenotomy knife introduced between the pins, but, if possible, the opening should be deferred for twenty-four hours, when a barrier of lymph will have been thrown out.

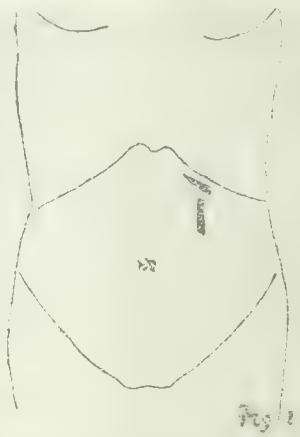


Fig. 1



Fig. 2

After opening, a No. 8 to 12 soft catheter is inserted, to which a piece of tubing is fixed, and by means of a funnel the patient can at once be fed with warm milk and egg, or whatever liquid may be thought desirable. The catheter may be left in position for a few days, after which I find that it is easy to insert it whenever a meal is required.

If the patient is much exhausted, an anæsthetic may be dispensed with and cocaine employed, as the only pain is caused by the skin incisions.

I have performed this operation in patients from 1 to 86 years of age, and with most satisfactory results.

Little or no shock is experienced, as although the peritoneum is opened there is neither exposure of viscera nor handling of any organ except the portion of stomach to be fixed, and I have never known peritonitis to follow.

Where the operation is not deferred until "too late," death should not occur except from some accidental complication; for instance, I lost a patient at the end of the first week after operation from the unusual occurrence of an abscess caused by suppurating cancerous glands bursting into the trachea and flooding the bronchial tubes with pus. Even after gastrostomy for malignant stricture of the œsophagus I have known as much as a stone and a-half to be gained in weight.

In one case in which I performed gastrostomy three years ago, for what I supposed to be a malignant stricture, the patient gained his health and weight completely, and some time afterwards he regained the power of swallowing a little fluid, not sufficient, however, to support life, and he still makes use of his gastrostomy opening for feeding purposes. He has a mere dimple to represent the site of the stomach fistula, into which he inserts, without the slightest difficulty, a No. 12 catheter. There is no irritation around the opening, and even after so long a time, there is no leakage of food or gastric fluid, so that he does not find it necessary to wear any apparatus or to have any dressing applied.

In advocating, therefore, the earlier and more frequent performance of the operation of gastrostomy in cases of dysphagia incapable of relief by ordinary means, whether from cancer of the cardiac end of the stomach or of the œsophagus, I feel that I can do so as the result of ample experience of its beneficial results.

Solid food may first be subjected to thorough mastication and insalivation, and then transferred by the patient from his mouth to a small funnel connected with the distal end of the catheter, where it is made to enter the stomach by blowing it through the tube, or it may be aspirated into the stomach by the patient's sudden respiratory efforts. Mastication of food, as a preliminary step to its introduction into the stomach, satisfies, at least in part, the sense of hunger, which is not always accomplished even by liberal exclusive gastric feeding through the fistula.

It is quite impossible in the time at my disposal to describe all the modifications of the operation of gastrostomy, nor is it here necessary to do so, as they can be found in the textbooks. I have performed the operation in various ways, but have had such success by the method I have described that I can see no need to change it.

Statistics of Gastrostomy.

Name of Surgeon Operating or Compiling Cases.	No. of Cases.	Recovered.	Died.	Reference.
Zerzas up to 1875 ...	28	0	28	*Arch. f. klin. Chir.* 1885, vol. xxxii, p. 200.
Lagrange up to 1884	163	30	133	*Rev. de Chir.*, vol. v., p. 549.
Gross up to 1884 ...	207	146	61	*Trans. Amer. Surg. Assoc.*, ii, 363.
Powes	96	70	26	*Int. Journ. of Surg.*, November, 1891.
Mikulicz*	10	10	0	*Arch. f. klin. Chir.*, 1896, vol. li, p. 9.
Mikulicz†	34	27	7	,, ,,
Rommerskrich* ...	18	17	1	*Centralbl. f. Chir*, 1898, p. 1134.
Rommerskrich† ...	83	66	17	,, ,, ,,
From hospitals in London	77	30	47	Hospital *Reports.*
Leeds General Infirmary	36	17	19	Hospital *Reports.*
Mayo Robson (private cases	5	5	0	Here reported for first time.
Loison	1	1	—	*Bull. Soc. de Chir.*, Paris, 1898, p. 439.
Dubourg	1	1	—	*Soc. de Méd. Bordeaux*, 1898, July 15th.
Trofimoff	3	2	1	*Ann. Russes de Chir.*, 1898, vol. iii, Part 5.
McVicar	1	1	—	*Lancet*, 1898, vol. ii., p. 1406.
Maylard	2	2	—	,, ,, p. 475.
Forgue	4	4	—	*Presse Méd.*, Paris, 1898, p. 145.
	769	429	340	= 44.2 per cent. mortality.

* Non-malignant. † Malignant.

A comparison of the reesults of gastrostomy in the foregoing table show a mortality varying between 0 and 100 per cent., so that it is impossible to state exactly the death-rate of the operation, for practically all the earlier cases died, and nearly all the later cases when performed sufficiently early recovered.

I do not think it would be an exaggeration to say that if cases of incurable stricture of the œsophagus or of obstructive cancer of the cardiac end of the stomach were handed over to the surgeon at a sufficiently early stage the mortality would not exceed 5 to 10 per cent.

If the pylorus be extensively involved there will be dilatation of the stomach, and if the patient be not in a fit condition to bear its removal, or if there be involvement of glands or secondary deposits, a palliative operation only can be performed.

Jejunostomy.

Should the disease be so extensive as not to permit gastro-enterostomy, the operation of jejunostomy may be considered. I have performed it twice, but as the operation at best can only prolong life for a very short time, it is a procedure that cannot be strongly advocated.

Statistics of Jejunostomy.

Name of Surgeon Operating or Compiling Cases.	No. of Cases.	Recovered.	Died.	Reference.
Mayo Robson ...	2	1	1	*Med. Chir. Trans.*, 1892.
Ogston	1	1	—	Greig Smith's *Abdominal Surgery*, 1896, p. 550.
Pearce Gould ...	1	—	1	
Golding Bird ...	1	—	1	
Terrier	1	1	—	*Lancet*, 1898, vol. ii. p. 1,440.
Henle	1	1	—	*Allgem. med. Central Zeit.*, 1897, No. 58.
Karewski	1	—	1	*Berl. klin. Woch.*, 1896, No. 60
Maylard	1	1	—	*Lancet*, 1897, vol. ii, p. 1,454.
	9	5	4	= 44.4 per cent. mortality.

Gastro-enterostomy.

For giving relief in obstruction due to cancer of the pylorus that cannot be removed, as also in many cases of simple stricture, some surgeons advocate gastro-enterostomy to the exclusion of all other operations; but it must not be forgotten that gastro-enterostomy is merely palliative, and therefore cannot be considered on the same level with operations that may prove curative by the complete removal of the disease.

The mortality of gastro-enterostomy is much greater in cancer than in simple ulcer. Taking all collected cases together, from reports by Mikulicz, Dojen, Curle, D'Ewald, Czerny, Chlumskiji, Halberkant, etc., I find that the mortality is 36.4 per cent. It is rare for a patient with cancer to survive the operation for a year, and the average duration is probably only from four to six months. Later statistics are much better than the earlier ones, and the results in cases operated on "in time" are really good. The reason of the high mortality is undoubtedly the low state of the patient when placed under the care of the surgeon.

Total Gastrectomy.

If the greater part of the stomach be invaded by growth, and a careful examination of the adjoining parts reveals no secondary growths in glands or adjoining organs, complete or almost complete gastrectomy may be performed. Although total gastrectomy had been proved possible in animals, the first attempt to remove the entire stomach in the human subject was made by Connor in Cincinnati in 1883, but the patient died on the table; and it remained for Schlatter of Zurich to perform the first successful resection of the entire stomach for cancer in a woman of 56, on September 6th, 1897.

The following list, compiled by Mr. Willmott Evans, I believe, represents all the published cases of complete gastrectomy up to the end of 1899; they are 8 in number, with 4 recoveries, otherwise a mortality of 50 per cent.

Table of Cases of Complete Gastrectomy for Malignant Disease.

Name of Surgeon.	No. of Cases.	Recovered.	Died.	Remarks.	Reference.
P. S. Conner	1	—	1	Died on table	*Med. News*, 1884, vol. ii, p. 578.
C. Schlatter	1	1	—	Lived 14 months	*Corresp. Blatt. f. Schweizer Aerzte*, 1897, Dec. 1st.
C. B. Brigham ...	1	1	—	Alive and well 7 weeks later	*Boston Med. and Surg. Journ.*, 1898, vol. i, p. 415.
G. C. Macdonald ...	1	1	—	Alive and well 6 weeks later	*Journ. Amer. Med. Assoc.*, 1898, vol. ii, p. 538.
M. H. Richardson ...	1	1	—	Alive and well "several weeks later"	*New York Med. Journ.*, 1898, vol. ii, p. 35.
T. F. Chavasse ...	1	—	1		*Pathol. Soc. of Lond. Trans.*, vol. l.
W. H. Koble	1	—	1	Died on table before œsophagus was divided	*New York Med. Journ.*, 1898, vol. ii, p. 125.
A. C. Bernays ...	1	—	1	Lived 36 hours	*Journ. Amer. Med. Assoc.*, 1898, vol. i, p. 341.
	8	4	4	= 50 per cent. mortality.	

PARTIAL GASTRECTOMY.

If the growth be limited to the body of the stomach, partial gastrectomy may be done by a free circular or elliptical incision, the opening being closed by a continuous chromicised gut suture to the mucous margin and interrupted Lembert sutures to the peritoneal coat, all bleeding points being previously caught up and ligatured.

In many cases, both of sarcoma and cancer, the disease has advanced well into the body of the stomach, and to get it away an extensive partial gastrectomy has to be performed. In Langenbuch's case in 1894 he excised seven-eighths of the stomach, and sutured the pylorus to the small cardiac portion of stomach remaining, the patient making a good recovery. This operation has been repeated a number of times by others, and with considerable success. A list of collected cases of almost complete gastrectomy, in which at least three-fourths of the stomach has been removed for cancer, contains 14 cases with 4 deaths, equal 28.5 per cent. mortality. My colleague Mr. Ward has done three partial gastrectomies: two cases succumbed to the operation, but the first patient doubled her weight in three months.

It seems advisable in these cases to close the gastric openings, and establish a gastro-enterostomy with the remaining portion of the stomach, but the technique will depend on the amount of stomach removed and the state of the parts left.

In concluding my appointed task as Hunterian Professor, I venture to hope that I have succeeded in demonstrating what an important relation surgery bears to diseases of the stomach, both simple and malignant. I have tried to prove my points not only by the relation of some of my own cases, but by statistical evidence gathered from all sources, and, in the latter, my work has been lightened by the kind assistance of Mr. Willmott Evans. I know how wearisome to the average reader is the study of tables of statistics, but I venture to think that they will show not only the actual risk of any special operation, but also how great is the improvement that is taking place in the results of stomach operations generally.

I am proud to be able to say that my last 32 operations on the stomach in my private practice have all recovered, and I can see no reason why the success in this branch of surgery should not be as great as in gall-bladder surgery, which now holds a very different position to what it did when I gave my first paper on the subject before the Clinical Society in 1885, nay, even to what it did when I lectured from this chair on Diseases of the Gall Bladder and Bile Ducts in 1897. In order, however, that surgery may attain its maximum amount of success, we must ask our medical colleagues for earlier diagnoses and earlier surgical consultations, so that if the case is one that can be only cured or relieved by an operation, it may be performed before the recuperative powers have been lost. Then, and only then, shall we attain the ideal.

REFERENCE

1 *Arch. f. klin. Chir*, 1896, vol. li, p. 484.

CORRECTION.

TREATMENT OF GASTRIC ULCER.

Mr. Mayo Robson points out that in the synopsis of his first lecture, published in the BRITISH MEDICAL JOURNAL for March 10th, 1900, p. 564, there is a printer's error, which, if allowed to pass, would give a wrong impression of the mortality in operations on intractable ulcers of the stomach. The sentence with regard to the mortality in his experience should read "I find that I have operated on 34 cases of intractable gastric ulcer, with various complications, which in every case must have caused permanent disability, or would have ended fatally, but excluding perforation, hæmorrhage, and cancer, all of which I am considering separately. Of these, 18 operations were done in private with *one* death, giving a mortality of 5.5 per cent., and 16 in hospital with 5 deaths, giving a mortality of 31.2 per cent.; or, if both private and hospital cases be taken together, the mortality is 17.6 per cent."

MEDICAL GRADUATES IN GERMANY.—The total number of degrees in medicine conferred by the German universities in the academic year 1898-99 was 1,050. Of these, Berlin gave 87, Bonn 22, Breslau 30, Erlangen 47, Freiburg-in-Baden 60, Giessen 32, Göttingen 31, Greifswald 10, Halle 23, Heidelberg 32, Jena 34, Kiel 86, Königsberg 24, Leipzig 55, Marburg 28, Munich 134, Rostock 14, Strassburg 43, Tübingen 46, and Würburg 147. The number of degrees awarded by these universities in the previous academic year was 1,208, while the corresponding figure for 1896-97 was 1,268, showing a progressive diminution.

A NEW METHOD OF PERFORMING PERINEAL PROSTATECTOMY.

BY P. J. FREYER, M.A., M.D., M.CH.,
Surgeon to St. Peter's Hospital.

THE vast majority of cases of senile enlargement of the prostate are, in my opinion, best treated by careful, cleanly, and judicious catheterism. There is, however, a minority in which a surgical operation of some kind is advisable, and a still smaller proportion in which an operation is imperative to save the patient's life or ameliorate his sufferings. I propose this evening introducing to your notice, by means of an illustrative case from practice, a new method of removing certain forms of enlarged prostate through the perineum. In order to clear the way for your appreciation of this procedure, I shall classify briefly the various recognised surgical operations for the disease under consideration as follows:

1. *Palliative operations*, undertaken when there is cystitis or some other complication present, rendering catheterism impossible or extremely difficult.

(1) Suprapubic cystotomy, with temporary or permanent drainage through a retained tube.

(2) Perineal urethrotomy, with temporary or permanent drainage.

2. *Operations undertaken for the purpose of inducing permament atrophy or shrinkage of the prostate.*

(1) Castration.

(2) Vasectomy.

3. *Radical operations*, which aim at removing a part or the whole of the obstructing portion of the gland:

(1) Division of a median obstruction by means of the galvano-cautery introduced through the urethra (Bottini) or through a perineal urethrotomy (Wishard).

(2) Removal of a median growth through a perineal opening in the urethra by cutting forceps or other instrument.

(3) Suprapubic prostatectomy (McGill), suitable only for enlarged middle lobe, ring of hypertrophied tissue round the orifice of the urethra, or enlargements of the lateral lobes projecting into the bladder.

(4) Perineal prostatectomy by Dittel's method, which consists in removing a wedge-shaped portion from the under surface of one or both lateral lobes, through an incision extending from the median raphe round the sphincter ani to the tip of the coccyx, the urethra and bladder being left intact.

(5) Nicoll's operation, which is similar to this last, only that a preliminary suprapubic cystotomy is performed, for the purpose of introducing a finger into the bladder, with a view to pushing the prostatic tumour into the perineal wound, thus facilitating its removal.

In the operation that I am about to describe advantage is taken of the perineal incision recommended by Dittel, but Nicoll's object is attained by a much less heroic and dangerous proceeding than suprapubic cystotomy—namely, by a preliminary perineal opening into the urethra.

A gentleman, aged 59, sent by Dr. Richard Heath, of St. Leonards-on-Sea, consulted me on October 11th, 1899, suffering from the following symptoms: Increased frequency of micturition, averaging about ten or eleven times by day and seven or eight times by night; difficulty in starting the stream, necessitating much straining to effect this; he finds that when he places his hand on the hypogastric region and pushes the abdomen upwards the stream starts more readily. Diminished force of the stream. Dribbling at the end of micturition. Sometimes the stream is intermittent. The urine is clear, as a rule; some eight months ago it was very dark in colour, but patient cannot say if it contained blood. Pain and discomfort behind the glans during micturition, and discomfort above the pubes before the act. The symptoms have existed three years, and have been gradually growing worse. At first they were more troublesome at night, but latterly they have been as bad in the daytime. They are increased by exercise, particularly in walking.

I sounded the patient, but could find no stone. There was some difficulty in passing the instrument over the enlarged prostate. Residual urine, 4½ ounces: trace of albumen. *Per rectum* there was a tumour felt in the right side of the prostate, twice the size of a walnut, very dense throughout, with a nodule of intense hardness, which was very painful on pressure. This nodule felt like a stone embedded in the prostate. The left lobe of the prostate was scarcely enlarged, and quite soft.

On the 17th I made a cystoscopic examination, the patient being anæsthetised by Dr. Dudley Buxton, and Mr. Victor Horsley being present in consultation. The right lobe of the prostate was seen to be enlarged and projecting into the bladder, the size of a walnut, irregularly nodulated, and of a dark brown colour. The left lobe was not visible in the bladder, which, generally, presented a healthy appearance, except that the mucous membrane was trabeculated, the result of constant straining and back-

ward pressure of urine. After consultation exploration of the bladder by a perineal urethrotomy was decided on, and this was carried out next day. The urethra was opened in front of the prostate on a staff. On passing my finger through the opening I found a round, prominent mass, involving the right lobe of the prostate, projecting into the bladder, but no stone could be detected. On inserting the forefinger of my other hand into the rectum, the hard nodule was felt as before, and the tumour clearly defined, rounded and intensely hard, the left lobe of the prostate being almost normal. After consultation with Mr. Horsley, we determined to remove the tumour perineally. A crescentic incision about 4 inches long was made from the median raphe at the lower end of the urethral wound, backwards round the anus to the coccyx on the right side. The dissection was carried deep into the ischio-rectal fossa, the rectum being drawn inwards by a broad retractor. The left forefinger was passed through the urethral wound into the bladder and hooked round the tumour, which was pressed out into the wound, and thus came well into view. The capsule of the prostate was incised and peeled off by means of an elevator. The tumour, which involved the whole of the right lobe of the prostate, was thus removed piecemeal by cutting forceps and curved scissors, only a thin layer being left to support the mucous membrane of the bladder and prostatic urethra, which was left intact. There was very little bleeding, and this was controlled by forcipressure, no vessels being ligatured. On completion of the operation a soft-rubber perineal tube was passed through the urethral opening into the bladder and retained there by a suture, and on this a rubber drainage tube was fixed to convey the urine to a vessel beneath the bed. The large gaping wound in the ischio-rectal fossa was packed with iodoform gauze and the usual dressings applied.

The perineal tube was kept in for six days, during which time the whole of the urine passed through it, not a drop escaping beside the tube, thus obviating any chance of infection of the deep ischio-rectal wound till it had partly filled up and was covered by healthy granulations. The temperature rose to 100° F. on one night, after which it did not go above 99° F.

After a fortnight the urine began to pass partly through the urethra, and after a few days later no urine passed by the perineal wound in the urethra. The patient was sitting up on December 1st. On the 18th he left the surgical home, untroubled by any urinary symptom, and he is now quite well.

The tumour turned out to be of the fibro-adenomatous type, frequently met with in the prostates of the aged, the fibrous elements predominating. It was as hard as scirrhus. About its centre a few drops of pus were found in the middle of a small coagulum, due to a thrombus or irritation of a small prostatic concretion found in this vicinity.

The advantages claimed for this method of operating are:

1. The preliminary external urethrotomy permits of the introduction of the finger into the bladder, which, with a finger in the rectum, enables the surgeon to define accurately the shape, density, size, and extent of the prostatic growth in a manner that cannot otherwise be accomplished, except, perhaps, by a suprapubic opening—a much more serious proceeding.

2. The finger can be hooked over the enlarged lateral lobe and the latter pushed well into the ischio-rectal wound, thus to a large extent obviating a deep and dangerous dissection, as in Dittel's operation.

3. With the tumour pushed well into the wound the capsule is easily incised and erased, and the cutting forceps and scissors easily and freely applied, to eradicate the whole mass.

4. The finger in the bladder enables the surgeon to feel when the cutting instruments are approaching that viscus, so that he can remove the whole growth, except a thin layer for the support of the mucous membrane of the bladder and prostatic urethra, without opening the latter, thus avoiding infection of the wound and the existence of a permanent fistula.

5. The stout perineal drainage tube inserted into the urethral wound carries off all the urine and prevents the perineal wound from becoming septic.

The drawback to the operation is that, like all other operations proposed for the removal of prostatic growths, it is applicable only to certain forms of the disease. It is not, of course, applicable to cases of enlarged middle lobe projecting into the cavity of the bladder. For such cases McGill's operation is undoubtedly the best. In very fat patients, or when the prostatic tumour is extremely large, it may not be feasible, owing to the fact that the finger may not in such cases be sufficiently long to hook it round the growth.

Presentation.—On March 20th, Dr. Major Greenwood, Honorary Secretary of the Brussels Medical Graduates' Association, was presented by Dr. Danford Thomas, in the name of the members of the Association, with a handsome gold watch and chain, and a silver cigarette case. The watch has the following inscription: "Presented to Dr. Major Greenwood by members of the B.M.G.A. as a token of their high regard and a slight recognition of valuable services as Honorary Secretary, March, 1900."

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

WHEN IS CANCER CURED?

With regard to this important question, which Mr. Jalland asks in the British Medical Journal of February 17th, the following case is full of interest.

The patient is aged 70 years. Twenty-five years ago the left breast was removed for mammary cancer. For fifteen years she remained free from the disease, but after the period of immunity a recurrence took place high up in the axilla, which fungated and then contracted, and there is now a puckered ulcerating cicatrix.

Five years ago, a mass appeared in the middle of the posterior surface of the upper arm; this fungated one year ago, and has bled frequently, but only once sufficiently to cause any anxiety. There are also many other secondary growths in the arm in the subcutaneous tissue, and some have ulcerated. There are also multiple nodules in the skin. The arm is enormously swollen, and there is much pain; the patient has lost ground rapidly since I first saw her in September, 1899.

The operation was performed twenty-five years ago by the most eminent surgeon of the day, and he stated that if recurrence did not take place for ten years the patient would remain free of the disease. Such, I suppose, represented the opinion of the day. Since the more radical operations on the mamma for cancer have been introduced, surgeons have naturally looked for better results, and the tendency has been in some quarters to speak of definite "cures" after operation, and to assert that after three years have passed all danger of recurrence is at an end.

Four years ago Mr. Watson Cheyne brought forward 22 cases operated upon by the more radical method, and at that time 13 of these cases were alive and free from recurrence, and more than three years had elapsed after the operation, these cases having passed the "time limit" were spoken of as "cures." The life-history of these 13 patients now or in a few years would be most interesting and important.

Two years ago, at a long debate at the Royal Medical and Chirurgical Society upon a paper by Mr. Marmaduke Sheild on Immunity and Latency after Operations for Cancer of the Breast, the general tendency was not to speak of freedom from the disease for a fixed number of years as a "cure." This seems to be the correct view to take, and in the present state of the pathology of cancer the answer to the question cannot be given definitely with perfect candour and honesty.

The case related above is interesting as showing the extraordinary latency exhibited, and it also demonstrates how enormously the rate of growth of mammary cancer varies. The immunity existed for fifteen years and recurrence took place ten years ago, and yet the patient is still living.

Salisbury. E. T. Fison, M.D.Cantab., F.R.C.S.Ed.

KERNIG'S SYMPTOM IN MENINGITIS.

In the British Medical Journal of February 3rd, Major Buchanan refers to Kernig's symptom in meningitis, and describes a similar condition occurring in the upper extremities. In conclusion he says: "I have not been able to find any allusion to this symptom appearing in the arms in any of the numerous writings on this disease that I have been able to come across."

I wish now to point out that this is no new observation. During the last ten or twelve years I have frequently demonstrated under the term "over-action of the flexors" the so-called Kernig's sign occurring in the lower extremities, and a similar condition in the upper. In a lecture of mine on the Treatment of Typhoid Fever, in the *Lancet* of March 15th, 1890, the following sentences occurred in describing a case complicated with meningitis:

Her head is still very much retracted, the muscles of the upper limbs rigid, and the flexors are so much contracted that the forearms are acutely flexed on the arms: the thumbs are adducted to the centre of the palms, and the fingers are flexed. The lower limbs are drawn up, the thighs flexed on the abdomen, and the legs on the thighs, and the feet are extended. Ankle clonus and patellar reflex still marked, plantar reflex increased, but the other superficial reflexes are barely, if at all, elicited.

The attitude is still one of flexion, the lower limbs being rigidly flexed, and any attempt to straighten them is attended with pain. The upper limbs can be easily straightened. It is difficult to estimate the patellar reflex owing to the firm contraction of the flexors. Ankle clonus hard to elicit.

The lower limbs are still rigidly flexed, and cannot be straightened without causing pain. Ankle clonus not obtainable. The upper limbs are more rigid to-day, the head is slightly retracted, and any attempt to passively move them is attended with pain.

The lower limbs cannot yet be completely extended passively, but she can voluntarily extend them to a considerable degree for the first time for the last twelve days.

The above was an extreme case, and it is also quoted in my work on the *Treatment of Typhoid Fever*. In another case recorded in the latter work, the following description occurs:

Whenever the pack is changed, he flexes his thighs and legs, and the nurse has some trouble in straightening them. His body is very rigid, and head retracted.

His forearms are acutely flexed on arms, and difficult to extend.

In my address on Meningitis, published in the JOURNAL of November 18th, 1899, such statements as the following occur: "There is headache, restlessness, delirium, vomiting, hyperalgesia, vertigo, early rigidity, and weakness of the limbs..... Owing to the hyperalgesia and over-action of the flexors it is often difficult to elicit the deep reflexes," etc.

Professor Osler, Major Buchanan, and others look upon Kernig's sign as diagnostic of cerebro-spinal meningitis, but I have seen it very marked, both in the upper and lower extremities, in cases where there was no reason to suspect any spinal mischief. In a case of basal meningitis arising from middle-ear disease at present under my care in the Royal Infirmary, it is very prominent in the lower extremities but not in the upper. In another case of meningitis, probably tuberculous, at present under my care, it is well marked in the lower but not in the upper extremities.

Liverpool. JAMES BARR, M.D.

GASTRIC ULCER IN PREGNANCY AND HYSTERIA.

A CASE similar to that of Mayet, noted in your EPITOME of January 27th, No. 70, came under my notice four weeks since. As the question of the frequency of occurrence of gastric ulcer during pregnancy is suggested, I write but to record this case briefly.

Mrs. H. B., aged 30, primipara, pregnant (sixth month), slightly neurotic, had suffered from dyspeptic symptoms for several months when I saw her. Characteristic symptoms of gastric ulcer were present, including paroxysms of pain, vomiting, and hæmatemesis. Rest in bed, lavage, medication, abstinence from food for thirty-six hours, followed by a very gradual restoration of diet, brought about a return to her normal condition.

Manitowaning, Ont. J. W. MCINTOSH, B.A., M.B.

A CASE OF SMALL-POX DURING PREGNANCY: PREMATURE LABOUR: RECOVERY.

E. B., aged 25, wife of a boatman trading between Lincoln and Hull, was admitted into the sanatorium on December 10th, suffering from small-pox. She had not been well for some two or three weeks previously, and on December 8th developed a papular eruption on face and other parts of the body, which, with the other symptoms, decided the diagnosis. On admission the temperature was 101.2°, pulse 84. She was covered with a copious eruption in various stages of development, most abundant on the face. She complained of labour pains, and some three hours afterwards was delivered of a male child prematurely born who lived only a few hours. There was a good deal of hæmorrhage from the womb, but by careful manipulation and use of ergot this was got under control. A vaginal douche of perchloride of mercury (1 in 2,000) was used daily for some days, and an effervescing mixture containing citrate of potash, with 3 to 5 grs. quinine for a dose, was given every four hours, according to the temperature. There were practically no ill symptoms, with the exception of great weakness during the secondary fever, the temperature during this stage not exceeding 103°. The strength was maintained with plenty of liquid nourishment, and she made an uninterrupted recovery. She was discharged on January 27th. There were three good primary vaccination marks on the arm done when a child.

REMARKS.—There is no doubt that pregnancy rendered the woman more susceptible to the disease, as she had not been away from her home nor on the boat since August. The husband, however, had suffered from what he decribed as influenza with a rash, particularly on the face, which rash developed into boils, the scars of which were visible in two or three places. As this so-called attack of influenza appeared exactly fourteen days after the man had left Hull, I think everything was confirmatory of small-pox, very modified no doubt, and therefore the cause of the disease in the wife. There were three young children in the house at the same time, an elder girl, and also the mother of patient, both of whom attended to the patient in the early stages of the disease. All these were primarily vaccinated, the elder girl and mother being revaccinated, and all have escaped. There is every proof that successful vaccination in the woman saved her life by mitigating the severity of the disease, especially in the suppurating stages, for the presence of pregnancy and the occurrence of premature labour increased twofold the gravity of the case.

As regards the protection conferred by vaccination, anyone being acquainted with all the circumstance of these two small-pox cases could not fail to ask himself to what extent small-pox is infectious, in presence of successful vaccination, for the numbers of people, including children, who were accidentally subjected to the risk of infection must have reached thirty, only about half of whom had been revaccinated, and none contracted the disease.

Lincoln. A. DEAN ROBERTS, M.R.C.S.

PUNCTURED WOUND OF THE SKULL, WITH ESCAPE OF BRAIN SUBSTANCE: RECOVERY.

ON the evening of January 8th, 1900, I was summoned to see a child, aged 16 months, by the father, who stated that it had fallen, piercing its head with a carpenter's gouge, which he had himself pulled out. It was quite an hour after the accident before I saw the child, as the father, in his anxiety, had gone to three other doctors' houses who lived nearer than myself. On arrival I found the child in its grandmother's lap with a wound 2 inches above the left ear and 2 inches from the orbit, from which brain substance was escaping as the child cried. The wound was crescentic in shape, and corresponded to the carpenter's gouge with which it was inflicted. The gouge measured 7½ inches in its entire length, with a bevelled-out part 6 inches in length, the diameter being $\frac{5}{8}$ inch. The father showed me the mark upon the gouge to which it had penetrated the child's head, and it was just 2 inches. Whilst the father was putting up a lamp in the hall the child had climbed up three steps, and had fallen with the gouge in its hand. The gouge had caught against the wainscoating a foot above the floor, and the triangular solid part was jointed firmly between the wainscoat and the wall by the force with which the child's head had struck it. Portions of brain substance were afterwards found on the gouge and on the steps upon which the father placed it after its removal. There had been some hæmorrhage, so I washed the wound with water which had been recently boiled, and applied a thick pad of double cyanide gauze, over which I had dusted a powder consisting of one part iodoform and two of boric acid; this was covered with a layer of sal-alembroth wool, and bandaged on firmly. Next morning the child was evidently suffering from shock, but was taking its food fairly well, and had had a fairly good night. He played with my watch whilst I was feeling his pulse, and seemed to take interest in all that was going on around him. I gave the child half a grain of calomel, and told the mother to repeat the dose at bedtime if necessary. I saw the child daily for the next three days, and there was no rise of temperature or apparent constitutional disturbance after he recovered from the shock, which lasted till the second day.

On January 13th, five days after the injury, I removed the dressing, which had got saturated with sero-sanguineous fluid. I washed the wound with boiled water to which a little carbolic acid was added, and dressed it in the same way as before.

On January 15th I again dressed the wound, and this time there was only a discharge of perfectly clear fluid, apparently cerebro-spinal.

On January 17th the dressing had hardly been soiled; and on January 19th a scab had formed. The same dressing was reapplied at intervals of three, five, and seven days, and firm pressure by a bandage maintained until February 10th, when the scab came off, and the wound was firmly healed.

The scar is crescentic in shape, and by gentle pressure a mark in the bone can be felt corresponding exactly to the shape of the carpenter's gouge with which the perforation was made. The child seems perfectly well, has no squint, and is in no way different from its condition before the accident; and its intellectual progress has been maintained, for it has learnt several fresh baby-words, which are French, as its mother is of that nationality.

Torquay. WILLIAM ODELL, F.R.C.S.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

MONTREAL GENERAL HOSPITAL.

A CASE OF HÆMATEMESIS.

(By G. E. ARMSTRONG, M.D., Associate Professor of Clinical Surgery in M'Gill College; Attending Surgeon to the Hospital.)[1]

Miss —, aged 46, a housekeeper, was brought to the Montreal General Hospital on October 8th, 1899, complaining of having vomited a large quantity of blood, followed by marked prostration. When 26 years of age she suffered from an attack of rheumatic fever. Convalescence was protracted, she being obliged to use crutches for one year. Since then she has always complained of some weakness of the stomach, and eight or ten years ago she spat up some blood. There is no history of anæmia, menstrual disorder, nor tuberculosis, and the family history is negative.

Her present illness began in February, 1899, with severe pain in the right epigastric region, accompanied by vomiting. These symptoms developed suddenly. The pain, although chiefly referred to the right epigastrium, often radiated around to the back. The relation of the pain to the taking of food seems to have been indefinite, probably it was on the whole worse two or three hours after eating. It was relieved by pressure. Vomiting was a prominent symptom at this time, and usually occurred about two hours after eating. Both pain and vomiting were intermittent, and some days she seemed to be quite well. Under treatment she improved considerably. At different times during the summer she complained of indigestion, stomach distress, vomiting, and weakness. These symptoms were always relieved by dieting and rest.

On the day of her admission to the hospital she passed a stool that was very black, but thought nothing of it. She worked the whole day, walked to church in the evening, feeling well and in good spirits. About the middle of the service she was suddenly seized with vomiting of blood. This came on without any warning, and was not attended by pain or distress of any kind. The vomit was dark-coloured; no bright blood was noticed. She fainted, and was sent home in a cab, when she was seen by Dr. Springle, who ordered her immediate removal to the hospital.

The patient was found to be a small woman, with muscles small, hard, and in good condition; her skin was dry and dark. The mucous membranes were pale and the eyes dull. Her temperature was 98.4° F., her pulse 96, and her respirations 24. Her tongue was dry, and she complained greatly of thirst. Her abdomen was flat, soft, and not tender. The right kidney was enlarged, movable, and sensitive. There was no vomiting after entrance into the hospital, and the patient stated that she felt "as well as ever." She was given a hypodermic injection of morphine, gr.$\frac{1}{8}$; an icebag was applied to the epigastrium, absolute rest in the recumbent posture was enjoined, and rectal injections of peptonised food were given.

The following day, October 9th, she seemed very comfortable. There was no vomiting or tenderness on pressure over the stomach.

On October 10th her condition remained the same, until on October 11th, towards evening, when she had a feeling of nausea. At 10.45 P.M. she vomited some coffee-ground material, and also several well-formed blood clots, in all 12 to 15 ounces. Her pulse became rapid, small, and very compressible. She was given $\frac{1}{4}$ grain of morphine hypodermically, and an enema of normal saline solution; also ice was applied over the stomach.

On October 12th, at 1.15 A.M., she vomited 2 to 4 ounces of blood; her pulse became very weak, and rapid; her respiration slow and scarcely perceptible, her temperature 96° F.; the pulse could not be felt at the wrist. She was given 40 ounces of normal saline solution subcutaneously, a hypodermic of morphine, gr.$\frac{1}{8}$, and the foot of the bed was raised. At 1 P.M., fearing that another hæmorrhage would prove fatal, and her condition being somewhat improved, I decided to operate.

After opening the abdomen in the median line I brought up the stomach, but failed to locate the ulcer by palpation. From the fact that she had passed bloody stools, and that the pain and vomiting had of late occurred usually two or three hours after eating, I thought possibly that I had to deal with a duodenal ulcer, and therefore decided to incise the pylorus, thus obtaining access to the duodenum and stomach. After making this incision I readily came upon an ulcer in the pyloric end of the stomach. It was a deep excavated ulcer, with indurated base and edges situated on the lesser curvature. Two vessels of considerable size lay open, one in the floor of the ulcer and one on the border. I excised the ulcer, and completed the operation as in a Heincke-Mikulicz pyloroplasty. While I was operating an assistant gave an intravenous injection of 40 ounces of normal saline solution. The patient made a most satisfactory recovery; the only untoward event being a bilateral dislocation of the lower jaw, brought on by laughing. Peptonised milk was given by the mouth twenty-four hour hours after the operation. When she left the hospital she was able to eat three good meals a day, and was rapidly regaining her strength, weight, and colour.

[1] This case is a supplement to a paper read at Portsmouth by the author, and printed in the BRITISH MEDICAL JOURNAL, October 21st, 1899.

BELFAST HOSPITAL FOR SICK CHILDREN.

LYMPHATIC VARIX OF THE GROIN CONTAINING CHYLE.

(By ROBERT CAMPBELL, B.A., M.B.Irel., F.R.C.S.Eng., Surgeon to the Hospital.)

A. M., a girl aged 9 years, was admitted on October 24th, 1899, suffering from a swelling in the right groin, first noticed twelve months previously. It was supposed to have been caused by a fall, and had been slowly increasing in size since. She had always been a delicate child, and, among other illnesses, had at five years of age, when residing abroad, suffered from malarial fever, from which, however, she completely recovered. The mother stated that the patient had a poor appetite, complained at times of pain in the belly after food, was subject to a bad cough now and again, and had a tendency to bleed freely when a tooth was extracted. The family history was good, with the exception that the mother two years before had been treated for some chest trouble at a special hospital.

The patient was anæmic and delicate looking, although her nutrition was fair. The lungs, heart and abdomen were normal. In the right groin, below and outside the pubic spine, was a swelling about the size of a large walnut, which was doughy in consistence, disappeared gradually on pressure, gave a faint impulse on coughing, and was smooth on the surface, except at one point where there was a small hard nodule resembling in size and shape a lymphatic gland. The tumour was evidently vascular, and it was thought that the termination of the saphenous vein might be dilated from pressure on the femoral vein by an enlarged gland.

On October 27th a vertical incision was made over the swelling, which was then found to consist of a cyst-like dilatation of a lymphatic vessel, which, when pulled down out of the femoral canal, presented three other similar, but smaller, dilatations at intervals of a quarter-of-an-inch. In dissecting out the vessel the largest of the dilatations was punctured, and about six drachms of milky fluid escaped, which was collected in a test tube. The escape of the fluid was hastened when the patient strained as though there were a considerable collection within the abdomen. The vessel was ligatured above and below with cat-

gut, the dilated portion excised, and the wound closed with silkworm-gut sutures. The sutures were removed a week later, when the incision was found to be firmly healed. The fluid collected in the test tube coagulated on standing, and presented on microscopic examination the ordinary appearance of chyle. The condition of the blood was not investigated. The patient has not been under observation for the last two months, but the mother reports that the swelling in the groin shows a tendency to return, and that there is also some swelling of the foot and knee on the affected side.

Cases of chyluria, chylous hydrocele, and dilatation of the lymphatics of the spermatic cord with chyle occasionally occur in adults, and are usually ascribed to blocking of some part of the lacteal system by the filaria sanguinis hominis, with consequent overflow of chyle through anastomotic channels into the lymphatics. As this patient was at one time resident in the West Indies, and suffered whilst there from malaria, it is possible that this may have been the cause of the lesion, and it is therefore to be regretted that a careful examination of the blood was not made. But on the other hand there seems no reason to doubt that such a condition might be brought about by lymphatic glands consolidated by, for example, a tuberculous deposit.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

A. PEARCE GOULD, F.R.C.S., Vice-President, in the Chair.

Tuesday, March 20th, 1900.

THE FORMS AND SIGNIFICANCE OF THE PROTEIDS MET WITH IN THE URINE.

DR. T. G. BRODIE, in resuming the adjourned discussion on this subject, said the first point that he should deal with was the question why albumen should more frequently be present in the urine than globulin. Professor Halliburton had stated that it depended on the size of the molecule, and he intended to bring forward experimental evidence in support of this view. In the simple filtration of a proteid solution it was found that a filtrate was obtained that was considerably weaker in proteid than the original solution; and, if this proteid solution were a globulin, this was even more marked than if the substance were an albumen. If a proteid were filtered through a gelatine filter, it was found that the albumen came through and not the globulin; if the gelatine molecules were more closely packed together by having a thicker gelatine filter, then it was found that the simple molecules of the albumose passed easily while the large molecules of the globulin were not passed. The nature of the proteid passed depended solely on the density of the gelatine molecules. In a kidney removed from the body and perfused with defibrinated blood it was found experimentally that the proteids were passed in a definite order, according to the condition of the kidney. The first proteid to pass was that of hæmoglobin, the second that of albumen with possibly a very little globulin, and in the last stage blood was passed and all the constituents of the blood plasma. Hæmoglobin, therefore, could pass through the kidney with greater ease than any other form of proteid. The next experiment was to use the kidney as a gelatine filter, and for this purpose the kidney was rapidly hardened by injecting it with warm methylated spirit under a high pressure; in this way one obtained a kidney free from blood. Such a kidney, after being freed from the methylated spirit by washing with water, was transfused with a solution of egg white or with serum, and a filtrate was obtained which contained only $\frac{1}{100}$th to $\frac{1}{250}$th of the original amount of proteid present, and in a few instances only salts were obtained and no proteid. In kidneys in which the renal epithelium was less perfectly preserved, albumen was obtained in larger quantities, and when the kidney was still more damaged globulin was obtained. Dr. Brodie thought that the difference in the character of the proteid present in the urine should be an indication of the condition of the kidney—that was, a urine in which much globulin was passed would indicate a kidney in which there was considerable damage to the renal epithelium, and as an instance of this he quoted two cases, the first, an advanced case of heart disease in which a large amount of globulin was present, and a second, a chronic case of nephritis in which there was very little globulin present.

MR. CAMMIDGE had examined the urine from cases of albuminuria both associated and unassociated with pregnancy. He described the method he had employed in the estimation of the serum-albumen and the serum-globulin in these cases, and showed a series of charts demonstrating (1) the total amount of proteid passed in twenty-four hours; (2) the proteid in grams per litre; (3) the proportion of serum-albumen; (4) the proportion of serum-globulin. He demonstrated that under such a variety of renal affections as acute nephritis, large white kidney, chronic parenchymatous nephritis, amyloid kidney, albumen of pregnancy, and eclampsia the amount of serum-albumen was nearly always considerably greater than the amount of serum-globulin, although in certain cases and at certain times the amount of serum-globulin exceeded the amount of serum-albumen. His investigations went to show that the amount of albumen in any given specimen of urine could not be taken as a safe guide of the severity of the disease, and that it was necessary to estimate the total quantity passed in the twenty-four hours to obtain a reliable guide, and secondly that even in eclampsia, in which it was generally considered that the amount of serum-globulin exceeded that of serum-albumen, this condition was by no means commonly present, and only on rare occasions did the serum-globulin exceed the serum-albumen; he thought, however, that a large proportion of serum-globulin indicated a severe case.

DR. GOWLAND HOPKINS said that in a case of physiological albumen that he had examined in a man, aged 21, who was in perfect health, the condition was closely related to diet, the amount of albumen being greatest about four to five hours after a meal. Examination at various times showed that the proteid was not always the same; for instance, on a diet of bread and milk only, it was found that the proteid contained no loosely-combined sulphur, whereas when on an ordinary diet this was always present. He thought that this depended on the synthesis of the different proteids in the intestinal canal, and not on the kidney.

DR. LEE DICKINSON dealt with the conditions known as peptonuria and albumosuria, and said that the latter was distinguished from all other proteids by its coagulation at a low temperature, and the fact that it redissolved at a higher temperature. These albumoses were not only found in cases of bone disease, but occurred also in certain cases of glycosuria, myxœdema, and leucocythæmia, and he considered that the finding of albumose in the urine was almost always a fatal omen. Peptonuria occurred under a variety of conditions, such as measles, scarlet fever, typhoid, rheumatism, and cerebro-spinal meningitis; and in relation to the last-mentioned disease he said that as it had been proved to be present in the cerebro-spinal fluid it was not unnatural that it should be eliminated by the kidney. In a large series of cases examined he had found it to be especially common in severe affections of the chest, such as empyema and pneumonia, but that the presence of peptonuria could not be relied upon as an indication of suppuration; he thought, however, that the presence of peptonuria indicated a severe case in which the micro-organisms were extremely active, but, on the other hand, the presence of peptone in the urine showed that the kidney still preserved its secretory power.

DR. A. E. GARROD said that in considering the nature of albumen it was necessary to remember that an apparently healthy kidney at times excreted a proteid in the form met with in paroxysmal hæmoglobinuria, and that Dr. Brodie's experiments rather went to show that the kidney was not able to keep back abnormal forms of proteid that might occur in the blood, and in further support of this suggestion he said that when egg-albumen was injected into the circulation it gave rise to a temporary albuminuria and the same phenomenon took place when a large number of eggs were consumed. He then suggested that as individuals differed morphologically so they might differ in the chemical processes that occurred within the body, and that the condition, alcaptonuria, was an instance of such a chemical variation.

DR. PARKES WEBBER said that there were two clinical points to which he wished to allude. The first of these was the presence of small quantities of albumen in urine of very low specific gravity. He discussed the relation of this body

with mucus, and suggested that although it gave all the tests for albumen it might nevertheless be mucin. The second point was that in severe cases of jaundice it was common to find a precipitate produced in the urine by the addition of acetic acid, and that the excess of acetic acid caused this precipitate to be redissolved. He thought that this body was bile mucus absorbed from the dilated gall bladder and excreted by the kidney.

Professor Halliburton, in reply, said that the experiments which Dr. Brodie had performed tended to confirm the theories which he had put forward with regard to the molecular constitution of albumen and globulin, and their passage through the renal epithelium. In reference to the work of Mr. Cammidge he said that the methods used were not of sufficient accuracy to allow one to accept all the evidence he had brought forward. In conclusion, he referred to the easy passage of hæmoglobin through the renal epithelium, and stated that its molecular weight was over 16,000, and therefore that the molecules of albumen and globinulin must be enormous since they passed with so much difficulty.

MEDICAL SOCIETY OF LONDON.

Frederick T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, March 12th, 1900.

A New Method of Performing Perineal Prostatectomy.

Mr. P. J. Freyer read a paper on this subject, which is published at p. 698.

Mr. Mansell Moullin remarked that prostatectomy, either suprapubic or perineal, had never become popular, possibly because other measures for causing atrophy of an enlarged prostate came in soon after McGill proposed his operation and had been practised very largely. There were cases, however, in which prostatectomy could be done with much benefit, but it was applicable only to a limited number of cases. If there were a large intravesical growth, or, indeed, any growth at all, the perineal distance was too great to allow of its being got at in this way. A fat or rigid perineum was also a contraindication. It was especially in enlargement of the lateral lobes that this operation could be done with advantage. The mortality was still between 14 and 15 per cent., but this, he suggested, was due to operation having been deferred until the bladder was in a hopeless state. He mentioned incidentally that he had performed a very similar operation on a patient with an enlargement of one lobe of the prostate three months ago, but he had not planned it beforehand as the author had done and did not employ a tube to carry off the water. He packed the external opening with gauze and the patient passed his urine through the urethra almost from the first. Nicoll's operation was doubtless more thorough, but it involved a suprapubic incision. In patients not too fat and in the lithotomy position, it was, however, possible to exert pressure through the abdominal wall sufficient to bring the prostate and bladder well into view. He criticised the title of the paper, observing that the patient was 59 years of age, and the symptoms had begun three years before, so that the enlargement, which dated still further back, could hardly be called senile.

Mr. Swinford Edwards also objected to the title, which ought, he thought, to have been "removal of tumour of prostate by pararectal incision combined with external urethrotomy." He mentioned several procedures which had not been referred to by the author in his list of proposed operations, observing that there were so many methods that it was evident that none of them were applicable in all cases. No doubt the operation was very suitable in the author's case, and whenever they had to do with a tumour of the prostate which it was desired to remove without impinging upon the mucous membrane covering it towards the bladder. For most tumours of the prostate, which were intra-vesical, McGill's operation was better. It was attended with a certain amount of risk, but it was far more radical.

Mr. Stanley Boyd thought the incision ought to be described as circum-anal, and he remarked that it must divide the inferior hæmorrhoidal nerves, thus destroying the sensibility of the anus. He asked whether in the author's case this had given rise to any undesirable result. He suggested, on theoretical grounds, that better access might be obtained if a large semilunar flap were thrown down from one tuber ischii to the other. He did not see why even an enlarged median lobe could not be dealt with in this way.

Mr. Bruce Clarke pointed out that no operation could fulfil all indications in respect of enlargements of the prostate, inasmuch as these took place in three different directions—namely, either into the bladder—which could be dealt with through the perineum—into the rectum, and in the median direction. He pointed out that for any gouging operation to prove effectual it would be necessary to repeat it every six months. Prostatectomy was not more popular, simply because they had not hit off a plan which would ensure success in a reasonable proportion of cases, probably because most cases were already septic, and also because it was difficult beforehand to know what they had to remove. Until they could eliminate sepsis and know what had to be done, he did not anticipate much greater success.

The President admitted that there might be some truth in the author's reference to the operation being unsatisfactory on account of sepsis due to delay in handing over such cases to the surgeon.

Mr. Freyer, in reply, agreed that the operation was applicable only to growths of the lateral lobes of the prostate. When the tumour projected, as in his own case, not only into the bladder but also into the deep perineum, he thought his method adequate within the limits he had laid down. In senile enlargements of the prostate, which were often fibrotic rather than hypertrophic, he followed Sir Henry Thompson's lines. Far from removing too little of the prostate, he thought the operations alluded to by Mr. Edwards incurred the risk of removing too much, since the surgeon was working in the dark.

The Diagnosis and Treatment of Coxa Vara.

Mr. Keetley read a paper based on 7 cases of coxa vara, in 5 of which the diagnosis was verified by skiagraphs, one began at the age of 20, and the others between the ages of 10 and 16. Four occurred in females and three in males. The predominant symptoms were adduction, eversion, and diminished flexion. They differed from hip-joint disease in a total absence of tenderness on pressure, and also in not presenting at any time in their history signs of inflammation or suppuration. One was treated by wedge osteotomy below the trochanter with great improvement. The others were sufficiently relieved by rest. One of these had been subjected to forcible movements by a bonesetter, and the patient thought himself improved, but the same method was tried in one of the other cases without benefit.

THE SANITARY INSTITUTE.

Professor William Ramsay, F.R.S., in the Chair.

Wednesday, March 14th, 1900.

Experimental Bacterial Treatment of the London Sewage.

Professor Frank Clowes (Chief Chemist to the London County Council) described the work which had been carried out at the sewage outfalls under the control of the London County Council. The sewage was allowed to flow into large tanks which contained coke broken up into fragments about the size of walnuts. The inflow of sewage was stopped when the level of the liquid was at the upper surface of the coke bed, and the raw sewage was allowed to remain in contact with the bacteria coke surface generally for about three hours. The effluent was then drawn off slowly from the bottom of the coke bed. An interval was then allowed of about seven hours, when a fresh lot of sewage was let in, and the processes of emptying and filling the coke bed were repeated. On the average the coke bed was thus filled and emptied twice in every twenty-four hours. The purifying action of the coke bed depended upon the introduction of bacteria from the sewage. By the continuous presence of bacteria or their enzymes upon the coke surfaces, and the contact frequently renewed of these surfaces with oxygen, the purifying action was maintained. The air present in the interstices of the coke between two fillings with sewage usually contained 75 per cent. of the amount of oxygen present in the air, which showed that the aëration of even the lowest portions of a deep coke bed was satisfactory. By keeping raw sewage for two or three hours in such a coke bacteria bed

after depriving the sewage of its larger particles by screening it through coarse gratings, it was found that it had practically lost the whole of its suspended matter. It appeared that the suspended particles of fæcal matter underwent liquefaction by the bacteria, and did not collect upon the surface of the coke. The capacity of the coke bed, however, was gradually reduced, owing to a deposit upon the coke surfaces consisting of the sand, grit, and fine mud from the road surfaces, and of hair, fibrous matter, and woody fibre, the latter derived from wood pavements, and of particles of chaff and straw, mainly derived from the dejecta of horses employed in the street traffic. It was found that these substances, which consisted mainly of cellulose, were only acted upon by bacteria with extreme slowness, but as they arrived at the outfall in a water-logged condition they rapidly settled down from the sewage if its rate of flow was reduced. In order to allow these substances to subside it seemed best when dealing with the sewage of the metropolis to allow the roughly-screened raw sewage to undergo a somewhat rapid process of sedimentation and then to pass the sewage direct into the coke beds. By this means practically no choking of the bed occurred because the dissolved matters and the small amount of suspended matters which were still present in the sewage were then readily dealt with by the bacteria of the coke bed. The sewage effluent from the coke bed was entirely free from offensive odours and remained inoffensive and odourless even after it had been kept for a month; except during heavy rain, when a turbidity was produced by fine mud particles, it was clear. Goldfish, jack, and many pond and river fishes had been kept in this constantly renewed effluent for a month, and were found at the end of that period to be perfectly healthy and to have increased in weight. This showed that the effluent was well aërated. On an average 51.3 per cent. of the dissolved matter of the original sewage oxidisable by permanganate was removed by the bacteria and the portion removed was evidently the matter which would have become rapidly offensive and would have rapidly led to de-aëration of the river water if it had been allowed to pass into the river. This percentage of removal was effected by coke beds varying from 4 to 6 feet in depth. A similar bed, 13 feet in depth, had proved more efficient and had for some time produced a percentage purification of 64 per cent., while an old bed, 6 feet in depth, had given a percentage purification of 86 per cent. A repetition of the treatment of the effluent in a second similar coke bed had produced an additional purification of 19.3 per cent., giving a total purification of 70.6 per cent. In these calculations the suspended solid matter was not taken into account, and the purification was reckoned on the dissolved impurity of the sewage. The bacteriological condition of the effluent corresponded in the main with that of the raw sewage, but the total number of bacteria underwent some reduction in the coke beds, though the different kinds of bacteria which were present in the sewage were still represented in the effluent. The introduction of such a sewage effluent in the lower Thames appeared to be unobjectionable. The river water at this part was uniformly muddy, it was always brackish and frequently salt to taste owing to the presence of tidal sea water, and was, therefore, not capable of being used for drinking purposes. The effluent would certainly cause no deposit upon the river-bed and would ordinarily tend to render the muddy river water more clear by mixing with it. No offensive smell could be emitted by the effluent as it was discharged and the bacteria which it contained would slowly and inoffensively remove the remaining dissolved organic matter from the effluent after it had been introduced into the river. Further, the effluent would be suitable for the maintenance in the river of healthy fish life. It might be thought that the idea of fish in the lower reaches of the river was a matter of sentiment, but the working-men's angling societies were beginning to get fish in the lower parts of the river from the improvement which had been effected by the change made some time ago of preventing solid matters from passing into the river. This had had a remarkable effect in bringing the fish up stream, and even at Richmond it had been noticed that sea-fish were making their appearance. Some gentlemen had subscribed together to stock the river Thames with salmon, and Professor Clowes thought that there was little doubt that salmon which could make their way up the Clyde, and could make their way through a short distance of extremely foul water in the Liffey, could also traverse a somewhat longer stretch of water in the Thames which was far less foul. This would be all the more possible with an effluent such as he had described. There were certain times when the water of the lower reaches of the Thames from Teddington to the Nore was practically almost saturated with oxygen. This was a quantity sufficient for fish life, and if by an improved plan, such as the bacterial method, a better effluent was sent into the river the Thames would be very well suited for the respiration of salmon and also of other fish.

Dr. RIDEAL said that the more he saw of the intermittent system of coke beds the more he felt inclined to adhere to the opinion he had expressed, that some anaërobic preliminary was an essential to success if it was wished to make the process a bacteriological one. In the experiments at Leeds it was thought that the plan was going to work out, but they had heard of the diminution of the capacity of the coke beds there. The Manchester experiments (1899) showed that in order to get satisfactory results with these coke beds it was necessary to use large precipitation tanks.

Dr. DIBDIN said that there was no question that the question had now been completely solved, and that the purification of foul organic matters by the action of living organisms was an established fact. In regard to the power of the bacterial process to deal with sewage containing refuse from manufactories, he quoted instances to show that the purification might be effectual.

Mr. ARCHIBALD believed that the chemical treatment of sewage had been rather underestimated, for the reason that where it had been most employed the method had not been adequately carried out through the corporations trying to do the work as cheaply as possible. He considered that a middle way would be found between the two processes. A previous chemical treatment would be capable of producing an effluent which with one bacterial filtration would result in a more perfect purification than with bacterial treatment from beginning to end.

Mr. OSBORN SMITH asked what was the general experience of grease on the coke bed.

Mr. ACKERMAN inquired as to the value of the effluent from the point of view of manure.

Mr. DENNIS related what had been done at Aldershot.

Professor RAMSAY said that it struck him that the process was a mixed one, both anaërobic and aërobic.

Professor CLOWES, in reply, said that it was considered that the process was a mixed one, and that the larger amount of the anaërobic effect occurred in the transit of the sewage in sewers. It had not been found that the soap and grease caused any practical interference with the coke beds, for the reason that by using rough screens and scum-boards any large quantity of grease was prevented from reaching the beds. As to the manurial value, the enormous volume of the effluent rendered it impossible to be dealt with from that aspect.

BRITISH GYNÆCOLOGICAL SOCIETY.

W. J. SMYLY, M.D., President, in the Chair.

Thursday, March 8th, 1900.

THE TREATMENT OF FIBROIDS.

MR. E. STANMORE BISHOP (Manchester) showed the following specimens: (1) Sclero-cystic ovary, history and symptoms simulating ectopic pregnancy: (2) double papilloma of the broad ligament: (3) large pyosalpinx, the symptoms of which simulated appendicitis; (4) sloughing fibromyoma; (5) multiple uterine fibromyoma, with central suppuration in one mass. The discussion on these specimens resolved itself mainly into a discussion of Mr. Stanmore Bishop's final proposition—namely, that whilst some fibroids, such as those discovered by accident, having given rise to no symptoms whatever, were best ignored entirely, whenever a fibromyoma showed signs of growth it was wisest to remove it, and with it the organ in which it has developed, the uterus; the removal or otherwise of the appendages should depend entirely on their diseased or healthy condition.

After some remarks by Mr. MANSELL MOULLIN and Dr. C. H. F. ROUTH,

Dr. MACNAUGHTON-JONES said that it had been laid down as an axiom in surgery that if the risks attendant upon an opera-

tion were not in themselves greater than those arising out of the disease for which it was proposed to operate, then operation was advisable and justifiable. The mortality from fibroids left alone was probably at least equal to 8 per cent., which was the percentage of fatal results from supravaginal hysterectomy in skilled hands. Of course there were tumours which gave rise to no troublesome symptoms, and which no one would operate upon, and in which operation would not be justifiable.

After some observations by Mr. Bowreman Jessett, Dr. Herbert Snow, and Mr. Charles Ryall,

Mr. Christopher Martin (Birmingham) remarked that the question of the early removal of fibroids turned very largely on the risk of malignant changes supervening in these tumours. As to the choice of operation, he preferred panhysterectomy, of which the results were very good. He had now done 35 of these operations, with one death.

After remarks by Dr. W. Walter (Manchester) and Dr. T. M. Dolan (Halifax),

Dr. Inglis Parsons pointed out that among working women an operation was often urgently required in order to enable them to do the work on which their very existence depended; but it was often permissible to do no operation in the case of a patient who could afford to be an invalid.

The President expressed his belief that the mortality of the operation depended not only on the dexterity, but also on the views of the operator. One who believed that most cases should be operated on would probably have a mortality of 5 to 8 per cent.; one who held the views of Dr. Champneys would probably reach a mortality of 18 to 20 per cent.; whilst the surgeon who held an intermediate position would have an intermediate mortality. He expressed his own preference for the operation of panhysterectomy.

Mr. Stanmore Bishop replied.

Specimens.

Dr. Macnaughton-Jones exhibited the right appendages of a patient in whom there had been a complication of symptoms—renal, uterine, and peritoneal—making the diagnosis of the actual condition difficult. She suffered from endometritis, and had been recently married. Operation by posterior colpotomy revealed a cyst in the right mesosalpinx lying upwards and to the left side, while the ovary, enlarged and cystic, was in the normal position. The cyst was tapped and the adnexa removed. The patient was now well. He also showed a large solid tumour of the ovary complicating cystoma. The solid mass filled the entire pelvic cavity. A diagnosis had been made of fibroma of the uterus, but laparotomy discovered that it was ovarian. A report on the nature of the tumour would be made by Mr. Targett. The patient was doing well. He showed also a large fibroma of the uterus removed by supravaginal hysterectomy from a patient who had been several times operated upon for sarcoma of the breast, with recurrences in the side of the thorax. From this she had perfectly recovered, and it was feared that the pelvic tumour was also sarcomatous, but it proved to be a fibromyoma. The patient made a good recovery.—Dr. William Walter showed a specimen of uterine myoma complicating pregnancy.—Mr. Skene Keith showed a recent specimen of a large uterine myoma weighing 36 lbs. The patient was progressing favourably.

ROYAL ACADEMY OF MEDICINE IN IRELAND

Section of State Medicine.

Sir C. A. Cameron, C.B., M.D., President, in the Chair.

Friday, February 16th, 1900.

President's Address.

Sir Charles A. Cameron, on taking the Presidential chair, thanked the Council of the Section for having nominated him as President, and the Academy for having elected him. He gave a short account of the origin of the Section. When the Academy was formed in 1882 by the amalgamation of the Medical, Surgical, Pathological, and Obstetrical Societies, there was in existence a Society of Metropolitan Officers of Health, of which he had the honour to be President. The Society met monthly, many valuable papers were read before them, and they had an annual dinner. He suggested that, as the various Medical Societies were being amalgamated, it would be desirable that their Society should enter into the Union under the title of Section of Hygiene. Some years subsequently the Subsection was elevated to the dignity of a Section, and the Chairman was converted into President. He was the first Chairman, and now, after an interval of eighteen years, he again filled the highest office, under the title of President. Passing to other matters, he regretted that the Notification of Infectious Diseases Act was not a compulsory one. Measles and whooping-cough were not amongst the diseases enumerated in the schedule of the Act, but sanitary authorities had the power of adding them to the schedule with the assent of the Local Government Board. The Corporation of Dublin had included both diseases in the schedule, but whooping-cough had since been eliminated, as no good had resulted from notification. Measles was hardly notified in any town save Dublin, but he believed it was desirable that it should be notified. If the sanitary authorities in Ireland had the power of closing schools at the beginning of an epidemic (a power possessed by sanitary authorities in England), epidemics of measles might be checked earlier than they could now be. Notification of diarrhœa was required when these countries were threatened with cholera, but were only scheduled until all danger had passed away. The President referred to the inquiry now going on in London as regarded the use of preservatives in food, and believed that some of them, such as boric acid, if used in moderation, would be useful.

Paper.

Dr. Walter Bernard read a paper on infantile insanity, which was discussed by Drs. Conolly Norman, Symes, Dawson, Douglas, and Little, Sir Francis Cruise, and the President.

LIVERPOOL MEDICAL INSTITUTION.

Pathological and Microscopical Section.

F. T. Paul, F.R.C.S., in the Chair.

Thursday, March 15th, 1900.

Cardiac Thrombi.

Dr. Hay read a note on a series of hearts containing thrombi. The thrombi were old-standing, and not of the cadaveric or agony type. The series served to illustrate: (1) The usual sites of thrombi; (2) the forms of thrombi; (3) the associated conditions, and included thrombi in the left auricle, left auriculo-ventricular orifice obstructing the blood flow; in the apex of the left ventricle in the infundibulum of the left ventricle, giving rise to signs of aortic obstruction, and attached to the aortic valves. In the series there were solid dense thrombi, cystic thrombi, stratified flat thrombi, and pedunculated thrombi. The note was illustrated by specimens, photographs, and lantern slides.

Dr. Barr discussed the note; and Dr. Hay replied.

Congenital Cysts of the Neck.

The President read a paper in which he called especial attention to cysts arising from the sinus procervicalis, the thyroglossal duct, and lymphangiomata. Mr. Paul considered that, owing to the dual character of the structure of cysts arising from the second branchial cleft, the cysts were derived partly from the surface and partly from pharyngeal structures, the latter containing adenoid tissue in small nodules. Cysts from the thyroglossal duct were lined with columnar ciliated epithelium, and were situated in the middle line.

In the discussion which followed, Mr. Larkin recognised in the cysts from the second branchial cleft structure resembling the tonsil.

Professor Sherrington stated that in thirty thyroid glands from dogs which he had examined he only remembered one having ciliated epithelium.

The President replied.

Specimens.

Dr. F. W. Bailey showed specimens of a carneous mole and a nasal polyp expelled by sneezing.—Dr. J. Lloyd Roberts showed an aortic aneurysm from a man who had been under observation for a long time and who died from other causes. During expiration the pulse in the right wrist disappeared, and it was suggested by Dr. Hay that as the aneurysm was on the posterior region of the aortic arch it was pressed during expiration against the innominate artery and so caused the right radial pulse to disappear.—Dr. J. Wigglesworth showed a case of double porencephaly.—Dr. A. W. Campbell showed specimens and drawings illustrating the arrangement of the nerve cells and nerve fibres in the cerebral cortex in cases of idiocy. The drawings, which were of special excellence, were made to scale with the aid of an Abbe drawing apparatus.—Dr. Alexander showed specimens of a round-celled sarcoma of the testicle and tunica vaginalis of nearly three years' growth.—Dr. Grossmann showed specimens from a tumour of the orbit of six years' growth; partial removal in 1894 resulted in recovery of sight. In October, 1899, it was found necessary to remove the new growth and the eyeball. The growth consisted of spindle cells, fibrous tissue, and muscle fibres.—Mr. Larkin showed specimens from an epithelioma of the penis. The growth was accompanied by extreme pain, and Mr. Larkin drew attention

to the fact that the growth had extended along the perineural sheaths of the nerves, separating the lamina and causing proliferation of its cells, and that this would account for the severe pain. Mr. Larkin also showed a specimen of multiple carcinoma of the scalp. Between twenty and thirty small tumours were present, varying in size from a small pea to a hazel nut. They were all quite separate. The occipital glands were secondarily involved. The structure resembled rodent ulcer.—Professor Sherrington showed normal specimens of the organ of Corti, and sections of the brain from the olfactory region of the rabbit.—Dr. Buchanan showed a specimen of a nipple from a case of early cancer of the breast. The nipple was clinically healthy, but microscopic examination proved it to be profusely infiltrated with cancer. Parasitic cancer bodies were present in great numbers.—Dr. Bradshaw showed specimens of a rare crystalline urinary deposit.—The specimens were discussed by the Chairman, Drs. Alexander, Hay, Lloyd Roberts, Bowen, Grossmann, and Mr. Larkin.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

Bennett May, F.R.C.S., President, in the Chair.

Thursday, March 8th, 1900.

Pancreatic Cyst Associated with Gall Stones.

Mr. Barling showed a man, aged 29, upon whom he had operated on July 31st, 1899, for gall stones with occasional transient jaundice.

The usual operation was performed, 840 gall stones were removed, and a good recovery followed. When the abdomen was opened, a large lobulated hard mass was found in the region of the pancreas, and it was regarded as an enlarged pancreas, either a purely inflammatory condition or one of dilatation of the duct from blocking. There was no jaundice at this time, and no stone could be felt in the common duct or projecting into the duodenum. About three months later the pancreatic tumour was found to be much increased, and the man was readmitted to the General Hospital in January, 1900, with a tumour occupying the epigastrium, the upper part of the umbilical region, a good deal of the left hypochrondrium, and a small portion of the right hypochondrium. The tumour appear to be fluid contained in a tense cyst; there were no physical signs at the base of the left lung behind. The abdomen was opened over the left rectus, over the most prominent part of the tumour, and about five pints of a fluid of a greenish-brown colour were removed. The cyst was then drained, and a sinus remained at the present time, and from this a fluid leaked which caused excoriation of the skin. The fluid removed was alkaline in reaction, and had a feeble but quite distinct digestive action on egg albumen. It contained a number of red blood corpuscles, but was free from bile. It was sterile on cultivation.

Œsophagotomy for Impacted Tooth-plate.

Mr. George Heaton showed a man, aged 21, on whom he had performed œsophagotomy:

The patient had, six months prior to operation, swallowed a vulcanite tooth-plate containing three incisor teeth, and fixed by inelastic bands to the contiguous teeth. During the interval the symptoms complained of by the patient were pains over the left clavicle and an inability to swallow solid food. The tooth-plate was localised by the Roentgen rays at the level of the third dorsal vertebra, and could be felt by bougies passed into the œsophagus through the mouth situated 7⅛ inches from the lower incisor teeth. All attempts to extract it proving fruitless, œsophagotomy was performed on February 8th. On opening the œsophagus low down in the neck, much difficulty was experienced in extracting the plate, which lay in a pouch 1⅛ inch below the opening. The sharp hook attached to the plate was fixed in the wall of the œsophagus and resisted extraction for some time. The œsophageal wound was left open and a tube passed through it into the stomach, through which the patient was fed. A fistula remained for nearly a month, but was firmly closed on March 5th. The plate measured 1⅛ inch long by 1 inch broad, and supported three incisor teeth.

Compound Multilocular and Dermoid Cysts of one Ovary.

Mr. Smallwood Savage showed a specimen of an ovarian tumour which he had removed from a patient, aged 36, on June 30th, 1899.

She had been married eight years, had had one child seven years ago, and a miscarriage two years ago, and she had been quite regular until May, 1899. Her history was that she had noticed a swelling of her abdomen for two years, at first in the left lower part, and latterly on the right side; that she had for the last two years had painful micturition, and that six weeks before she had been taken suddenly ill with severe pain in the abdomen, which lasted for one week. On examination, a large cystic tumour of an irregular shape was felt, reaching above the umbilicus and separable from the uterus. The tumour was removed in the usual way, and the patient made good progress until the end of the second week, when she contracted a hæmatocele in the base of the broad ligament below the ligature and around the uterus in the parametric tissue. After this she made a good recovery.

The tumour was made up of a large multilocular cyst of the right ovary together with a dermoid of the same. The multilocular cysts contained altered blood which, together with a slight rotation of the pedicle, represented some twisting. The dermoid was the size of an orange, and contained teeth, a compact mat of hair, and much sebaceous material.

Paterson's Apparatus for the Prolonged Administration of Nitrous Oxide through the Nose during Dental Operations.

Dr. McCardie showed this apparatus. Mr. Coleman (London) originated the idea and Paterson elaborated his apparatus. The use of this or other apparatus devised for the same object obviated in many cases the use of ether. Many patients could be kept under for five or even ten minutes. The exhibitor had used the apparatus in considerably more than 100 cases, and had on the whole been pleased with the results, especially in private practice. He had had nitrous oxide administered to himself on three occasions with the apparatus, and could affirm that it was as pleasant and easy to inhale in this as in the ordinary way. In the most difficult and prolonged dental operations it was still probably better to rely on the administration of nitrous oxide followed by ether, or perhaps better still, the sequence of nitrous oxide, ether, chloroform.

Papers.

Dr. Douglas Stanley read a paper on spasmodic wry-neck with reference to its treatment.—Dr. Simon read a paper on a case of pneumonia in which the pneumococcus was found in in the blood.

PATHOLOGICAL SOCIETY OF MANCHESTER.

W. Thorburn, F.R.C.S., President, in the Chair.

Wednesday, March 14th, 1900.

Diphtheria.

Dr. Powell White showed specimens of B. diphtheriæ showing branching. They were obtained from a culture on agar-agar forty-eight hours old. The culture was remarkable for the large size of the club-shaped forms, some of which measured as much as 40 μ in length. These large forms, as well as those of more normal size, showed well-marked true branching, the branches being clubbed at the extremities. Subcultures showed ordinary forms of the bacillus only.

Dr. J. R. Carver showed several specimens of non-typical diphtheria bacilli, which he had met with in the examination of specimens sent up by various sanitary authorities. One showed bacilli of great length interlacing with each other, and showing doubtful branchings which seemed to merit the term "streptothricial bacilli;" the large forms disappeared on subculture. Other specimens showed bacilli with enormous pear-shaped heads, and in another the sheath of the bacillus was very faintly stained, while the protoplasm was collected into a chain of small granules, giving the appearance of an encapsuled streptococcus. The greatest difficulty in the identification of the bacillus was in the case of doubtful forms of the short bacillus, especially when they somewhat approached the B. coli type. He had often found that pneumococci in process of division might resemble a double club-shaped bacillus, and show a certain amount of metachromatism.

General Paralysis of the Insane.

Drs. Cowen and Orr made a preliminary communication on the morbid anatomy of general paralysis of the insane, and illustrated their remarks with microscopical specimens. They described the changes in the nerve cells of the cortex, pons, medulla, and cord, in the medullated fibres of the cortex and cord, and the neuroglia and vessel changes in the cortex. They pointed out that the cell changes—that is, the chromatolysis—were of a slow chronic nature, invading more especially the perinuclear region, and were associated with marked increase of the cell pigment, so bearing a striking similarity to the senile involution changes described by Marinesco. In the cord they found the damaged fibres almost entirely confined to the crossed pyramidal tracts, with a few scattered morbid fibres in the posterior, lateral, and anterior pyramidal tracts. Neuroglia proliferation and hypertrophy were demonstrated, especially in the white matter, subpial, and innermost layers of grey matter. Periarteritis of more or less degree was shown to affect the arterioles in every case. The authors were of opinion, from their investigations in early general paralysis, that the nerve cell was the first to degenerate, and later the tangential and other medullated fibres.

ACUTE PHAGEDÆNA OF THE NOSE AND FACE.

Dr. YONGE showed specimens illustrating this condition.

The patient, a man, aged 26, gave a history of alcoholism and syphilis and was suffering from phthisis. Phagedænic ulceration began in the roof of the mouth immediately behind the incisor teeth; it spread into the nose, and in a few days completely destroyed the soft parts of that organ. The right side of the face and the right eye then rapidly became gangrenous, and the air sinuses were invaded. Finally, the process involved the left side of the face and the left eye. Death occurred one month after the onset.

CANCER OF STOMACH.

Dr. R. B. WILD showed preparations from a case of cancer of the body of the stomach in which the orifices were unaffected, but a large part of the anterior wall, lesser curvature, and posterior wall was occupied by a firm scirrhous growth. One nodule of the growth within the stomach was prominent, and presented a horny degeneration of the epithelial cells. The liver presented several secondary nodules showing similar horny changes.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

W. ROBINSON, M.D., F.R.C.S., President, in the Chair.

Thursday, March 8th, 1900.

PUERPERAL SEPSIS.

DR. R. P. RANKEN LYLE, in introducing a discussion on puerperal sepsis, classified that condition under the following varieties, namely: (1) Sapræmia, subdividing this into fœtid sapræmia, inflammatory sapræmia, and suppurative sapræmia; (2) septicæmia (acute septic infection); (3) pyæmia. Puerperal sepsis was in no wise different from surgical sepsis. Suppurative sapræmia included puerperal ulcer on the perineum, vaginal wall, or cervix uteri, suppurative colpitis, and septic endometritis; inflammatory sapræmia included acute inflammation of the vagina, uterus, and parametrium; puerperal septicæmia or acute sepsis was absolutely fatal, and arose either independently of or as a consequence of the preceding conditions. He reviewed published cases and personal experience of antistreptococcus serum, and did not believe that any beneficial result had ever been obtained from it, but that it rather did harm. Puerperal pyæmia was in every respect the same as surgical pyæmia, and started from the septic thrombi in uterine veins. He discussed infection by the hands, instruments, etc., of the practitioner or nurse, and the more rare auto-infection. The pathology, period of development, symptoms, and prognosis of each of the above varieties was discussed. In regard to treatment, the same rigid aseptic and antiseptic precautions were necessary as in surgical proceedings, even in making a simple vaginal examination on a parturient woman. He laid down the following rules to lessen the frequency of puerperal sepsis: (1) The thorough disinfection of the patient's external genitals, the hands and forearms of doctor and nurse prior even to a vaginal examination; (2) the abolition of routine *ante-partum* and *post-partum* douching, condemning the use of perchloride of mercury especially; (3) that all instruments used should be rendered aseptic before use; (4) the proper conduct of the third stage of labour; (5) the strict limitation of vaginal examinations; (6) the disuse of all so-called aseptic lubricants, their use being justifiable only on rare occasions to protect the fingers of the practitioner from syphilis or gonorrhœa; (7) the immediate suturing of all perineal lacerations.

The PRESIDENT, Dr. MURPHY, Dr. CALTHROP, Dr. WHILLIS, Dr. MODLIN, and Dr. CLAY took part in the discussion.

CASES.

Dr. G. R. MURRAY brought forward a man, aged 34, who had exhibited, when first seen, weakness in the right leg with spasticity and increased reflexes in both, together with anæsthesia and loss of thermal sense in the left leg. There was slight nystagmus and marked optic atrophy, but no intention tremor at this time. The right leg had improved, sensation had again become normal, as had also the reflexes. A further point of interest was that Babinski's toe phenomenon, previously present, had now disappeared. Such temporary improvements in disseminated sclerosis were not uncommon. The patient had now developed slight tremors in the hands, aggravated by volition. Dr. MURRAY also showed (1) A lad, aged 19, the subject of early acromegaly; and (2) a youth, aged 18, showing effect of chronic overfeeding with sweetstuffs. He was greatly emaciated, his principal symptoms being dyspnœa, vomiting, occasional trace of sugar in urine, and an abundant excretion of uric acid.—Dr. H. P. BENNETT exhibited a case showing anterior polar cataracts remains of papillary membranes, and opaque nerve fibres.—Mr. WALTER RIDLEY brought forward a man, aged 66, from whom he had successfully enucleated a large fibro-adenoma of the thyroid. The history had extended over four years, with recent rapid increase. During the past two years there had been 3 st. loss in weight. The condition had been previously considered malignant, but, on account of its persistent unilateral position, an exploratory incision had been determined upon, when the mass readily shelled out, and proved to be a simple adenoma. Mr. Ridley also showed a man, aged 23, who eighteen months previously received a blow on his head with a brick, and sustained a compound depressed fracture near the anterior fontanelle, becoming immediately unconscious, and having six fits. He recovered for a time, but two months ago the fits returned so frequently as to result in status epilepticus. He was trephined over the depression, and a large keel-shaped fragment of the inner table was found pressing into the underlying hemisphere. After operation complete recovery took place. Mr. Ridley showed a woman who had had attacks of pain in the back and left side, with vomiting, for six years; she had never passed blood. A large, fluctuating, renal tumour was discovered occupying the left loin. An incision was made in the left linea semilunaris; the opposite kidney was found to be normal. The left kidney on exposure was hydronephrotic, the ureter at its junction with the kidney pelvis showed a congenital narrowing. It was divided at this point, and the pelvis opened. The stenosed ureter was now split for an inch, and sutured to the opening in the kidney pelvis. After operation there was no leakage from wound, and the patient was now passing a normal daily quantity of urine.

MANCHESTER MEDICAL SOCIETY.

T. C. RAILTON, M.D., President, in the Chair.

Wednesday, March 7th, 1900.

EPIDIDYMECTOMY.

MR. F. A. SOUTHAM showed a patient, aged 36, upon whom he had recently performed epididymectomy for tuberculosis of the right testis, the disease being localised to the epididymis and lower part of the vas deferens, of which $4\frac{1}{2}$ inches were also excised. The wound had healed, and there was no evidence of any recurrence in the body of the gland, which was left intact. Four months previously the left testis had been removed for the same condition. The author referred to four other cases in which he had performed double castration for tuberculosis with satisfactory results, none of the patients having shown any of the mental symptoms which have been said to follow removal of both testes for tuberculous disease; on the contrary, the complete removal of the local disease had in each case exercised a beneficial effect on the health and general comfort of the patient.

INTESTINAL OBSTRUCTION DUE TO PERITONEAL BANDS.

Mr. J. E. PLATT described two cases in which he had operated for this condition—one a case of acute complete obstruction, the other of chronic partial obstruction.

The first patient, a boy aged 4, had had complete obstruction for three days before operation. Laparotomy had revealed a peritoneal band attached to the mesentery at the site of an enlarged tuberculous gland and stretching tightly over the ileum. The band had been divided and the boy had made an uninterrupted recovery. He had remained in good health for twelve months afterwards and had then been lost sight of. The second case was in a woman, aged 41, whose illness had commenced with an attack of appendicitis two years and four months before operation. This had been followed by very marked constipation and almost constant abdominal pain. For more than two years the patient had been confined to bed, during which time the bowels had never been moved without enemata, the administration of which gave rise to more excruciating pain in the lower and left part of the abdomen. The appendix, which was matted to surrounding parts, had been removed, and in addition a very dense band about an inch in length and stretching from the sigmoid flexure to the left Fallopian tube had been divided. Convalescence had been slow, but at the time of the report (ten months after operation) the patient was able to get about again. She was not altogether free from pain, probably owing to the presence of a retroflexion of the uterus, but the bowels acted naturally.

Some remarks were made upon the modes of origin of peritoneal bands and the ways in which they might cause obstruction of the bowels.

TREATMENT OF SEA-SICKNESS.

Mr. PERCY MCDOUGALL described the results he had obtained in the treatment of sea-sickness by the hypodermic injection of atropine and strychnine, as recommended by Dr. W. W. Skinner in the *New York Medical Journal* in 1893. He had tried these remedies in 47 cases, with complete success in 40, and with partial success in the remaining cases. The doses used had been $\frac{1}{100}$ to $\frac{1}{50}$ gr. of strychnine sulphate, and $\frac{1}{150}$ gr. of atropine sulphate dissolved in from 10 to 15 minims of peppermint water. When necessary, the dose had been repeated in a few hours or the next day. The injection should be given at the very onset of nausea or discomfort, or as a prophylactic in very susceptible persons. The symptoms of sea-sickness being those of circulatory depression and cerebral anæmia,

this stimulating treatment was preferable to treatment by sedative drugs, as it placed the patient in the best position to avail himself of the natural prophylactics—namely, food and exercise.

Harveian Society of London.—At a meeting on March 15th, Mr. W. H. Lamb, President, in the chair, Dr. Cautley showed a female baby who had recovered from a very prolonged attack of basal meningitis.

She came under treatment on November 23rd, aged 10 months, with a history of a measles rash on November 4th and a fall on the head on November 16th. Drowsiness, restlessness, and irritability were noted on the day after the fall and on the next day stiffness of the neck muscles, retraction of the neck with pain on movement, frequent pulse, fever, and constipation. The course of the illness was characterised by the above symptoms, frequent vomiting, *tâche cérébrale*, retracted abdomen, screaming attacks, and a hectic type of temperature ranging between 98° and 102° F. The child had frequently to be fed nasally. There was no optic neuritis. Double otitis media developed towards the end of December. For two months no improvement took place, but in the course of another month the fever and symptoms subsided, with temporary relapses, and after February 11th the temperature remained normal. During the illness the weight diminished from 14 lbs. 8 oz. to 11 lbs. 5 oz. It was rapidly regained during convalescence, a gain of 4 lbs. taking place in seventeen days. The child now weighed 15 lbs. 10 ozs., and was apparently quite well.

Dr. Cautley also showed a boy of 21 months the subject of congenital infantile paraplegia.—Dr. Macevoy showed a boy, aged 3½ years, suffering from Little's disease (cerebral diplegia).—Dr. Leonard Guthrie showed a lad, aged 18, who in July, 1899, complained of "cramp" and shaking in his right arm occurring after his day's work (bricklaying).

He now had weakness with marked intention tremors of the right upper extremity, exaggerated knee-jerk and ankle clonus, but normal plantar reflex on the right side, recent and rapidly increasing double optic neuritis. His gait was awkward and shambling, but not reeling. Lately he had had attacks of vertical or right frontal headache, but no vomiting. Sensation and special senses were unaffected.

The symptoms were regarded as due to tumour either in the neighbourhood of the left optic thalamus or in the right cerebellum.—Dr. Wilfred Harris showed a case of progressive muscular atrophy.—Dr. Alfred Eddowes showed the following cases: (1) A girl presenting a single patch of lupus on the left side of the face and a patch of impetigo on the opposite side. (2) A case of lupus erythematosus of the scalp of twelve years' duration. In reply to a question from the President as to treatment, Dr. Eddowes said that ointments seemed to irritate and make the parts feel hotter. Except in very cold weather, he used lotions containing lead and a little spirit, gave quinine internally, looked to general health, and advised patients to avoid exposure to great changes of temperature. (3) A girl recovering from leucodermia. Three years ago the girl's back was of a dull yellow colour with numerous white patches on it. The pigmentation of the whole back was now practically normal, almost all traces of the patches being lost. He attributed the good result mainly to treatment.

Otological Society of the United Kingdom.—At a meeting on March 5th, Sir William Dalby, the President, who was in the chair, announced that the Council had appointed an Investigating Committee, consisting of himself, Dr. Herbert Tilley, and Mr. Arthur Cheatle, to inquire into the condition of the ears in school children.—Dr. Dundas Grant showed a case of old-standing perforation in the postero-superior segment healed by means of the application of trichloracetic acid, with improvement in hearing.—Professor Urban Pritchard showed a patient who had had the malleus removed for long-standing suppuration, with perforation in the membrana flaccida. Sound healing had occurred, and the hearing was improved.—Mr. R. Lake showed a patient who had an exostosis growing from the posterior wall of the right meatus, and almost filling the canal, which was periodically blocked by cerumen. The President and Mr. Cheatle advised chiselling the growth away after turning the auricle forwards.—Mr. R. Lake also showed a patient with destruction of both external attic walls resulting from chronic suppurative trouble in that region. The disease was soundly healed, and the remainder of the membranes intact.—Dr. Herbert Tilley showed a child with congenital dimples in front of each auricle. The condition was present in the father, three of the aunts, an uncle, and a cousin. Mr. Cheatle related a case of his in which a dimple was present on one side and a sinus on the other. Dr. Milligan had seen a similar case which was tuberculous.—Mr. Arthur Cheatle showed two patients on whom the complete post-aural operation had been performed: (1) five weeks previously; (2) three weeks previously. Packing had been left off in both, and they were being treated by daily syringing with carbolic (1 in 60) and instillation of spirit; nitrate of silver being applied to any exuberant granulations. Mr. Ballance recommended epithelial grafting, and stated that the bone surface could thereby be completely healed within a fortnight of the original operation, possibly in less. Dr. Milligan and the President concurred. In reply to Mr. Waggett, Mr. Ballance said he had used small grafts, but they were not at all comparable in results with the large grafting method.—Mr. Arthur Cheatle showed specimens from fœtal to adult life of the recess under the Fallopian aqueduct; the space had been described by Steinbrügge and named by him "sinus tympani." Mr. Cheatle also described a recess outside the eminentia pyramidalis, which sometimes ran outside the Fallopian aqueduct and dipped downwards for some distance.—Mr. W. C. Bull showed a sequestrum of the petrous bone which had been exfoliated spontaneously from a child aged 3 years, leaving a smooth healed cavity. Mr. Ballance suggested that it was tuberculous in origin.—Mr. L. A. Lawrence showed an elderly woman with a papillomatous growth in the meatus. The opinion was expressed that it was probably malignant, and that radical operative measures were necessary.—Dr. StClair Thomson showed a man with a perforation in Shrapnel's membrane with cholesteatomatous formation. Mr. Ballance and Mr. Cheatle advocated removal of the membrane, malleus, and incus, and outer attic wall; and if these measures were not successful, the complete post-aural operation.

British Laryngological, Rhinological, and Otological Association.—At a meeting on March 9th, Dr. Barclay Baron, the President, who was in the chair, alluded with regret to the loss sustained by the Association in the death of Dr. MacNeill Whistler, one of its founders and a former President. A vote of condolence with Mrs. Whistler was unanimously passed.—Mr. Mayo Collier showed a case of abductor paralysis of the left vocal cord in a young woman, the cause of which was undetermined.—A discussion on conditions of the throat and larynx simulating and predisposing to tuberculosis was opened by Mr. Lennox Browne, and continued by Dr. Thorowgood, Dr. J. Macintyre (Glasgow), Mr. Mayo Collier, Mr. St. George Reid, Dr. Dundas Grant, Dr. Foster Palmer, Dr. P. Abercrombie, Mr. Wyatt Wingrave, and the President.

Society of Anæsthetists.—At a meeting on March 2nd, Dr. J. F. W. Silk, President, in the chair, the adjourned discussion on the respiratory after-effects following the inhalation of ether was resumed by Dr. Dudley Buxton, who said that there were three most important questions involved: (1) whether any respiratory after-effects could be entirely attributed to the use of ether: (2) if so, the pathogenesis of these complications; and (3) the prophylaxis. With regard to the first point, he did not believe that "ether pneumonia" was an entity or any special disease. Many of the cases which had been reported were due to other probable influences that had been at work. An enormous amount of experimental work had been done abroad, especially in Germany, but the clinical research was less satisfactory, inasmuch as in most cases no reference was made to the method of administration of the anæsthetic. A large number of cases of respiratory trouble had been recorded as following the inhalation of chloroform, and the trouble was seldom ascribed by surgeons to the chloroform itself, although it was a well-established fact that that anæsthetic frequently caused such after-effects. With regard to the frequency with which respiratory trouble occurred after the use of ether, he had found it extremely difficult to prove that ether was the responsible factor, as the published statistics were very loosely recorded. For instance, one observer recorded 17 cases in 4,914 administrations, but 7 of these were pneumonias commencing on the seventh, twenty-fifth, fifth, fifth, fourteenth, tenth, and fourteenth days after the inhalation, and only 2 within twenty-four hours of the operation. It appeared to him at least probable that in these intervals of time many other factors would be at work. Further, the recorded cases had in almost all instances been

hospital patients. On the other hand, Julliard of Geneva had never met with any lung complications in upwards of 4,000 cases. His own experience was that lung complications were extremely rare, especially in private practice, and that disease was of the ordinary catarrhal type, modified perhaps by the condition of the patient and exigencies of the operation, for example, tight bandaging. With regard to pathogenesis he referred to the important work of Hölschen, Whitney, and Lindemann, who ascribed the pneumonia to direct infection from the pneumococcus aspirated with the mucus from the mouth. He himself thought that in considering the pathogenesis it had generally been overlooked that the position of the patient under an anæsthetic was not that of the normal individual. For one thing, the body temperature was lowered from 2° to 4°F., which meant that the vitality and resisting power were correspondingly diminished. The other view was that the ether acted entirely as a local irritant to the bronchi and fine air-cells. In many cases, too, no doubt initial lesions were overlooked. As to prophylaxis, Dr. Buxton considered that the limitation of the amount of ether was of importance. When once the patient was fully under, very little more ether should be given. All cyanosis should be avoided, and the patient should be kept warm during the operation, and not exposed to draughts afterwards. He did not think that there was much risk of infection through the face-pieces, though of course these should be kept clean.—A letter was read from Mr. CARTER BRAINE in which he expressed the opinion that pulmonary troubles after ether were extremely rare provided that it was properly given and in suitable cases. Out of 4,380 cases of ether administration he had only come across one case of pneumonia, and he was doubtful whether in that one case the ether could be entirely blamed, as the patient was exposed to draughts afterwards. A letter was also read from Dr. POUNDS (Derby), who thought that the occasional cases of pneumonia after ether were due to the hypersecretion of mucus occluding the smaller bronchi, and advocating the early administration of belladonna or atropine. After remarks by Mr. CORNER, Mr. EASTES, and Mr. BURTON, Dr. PROBYN WILLIAMS said that with regard to Julliard's cases, nearly all the patients had a hypodermic injection of morphine before the administration of the ether. The discussion was concluded by Dr. FLUX, Mr. WALTER TYRRELL, Mr. CROUCH, Dr. LOW, and the PRESIDENT, who said he had been able to find only 1 case of pulmonary trouble in 900 cases of ether administration. The points which seemed to him to have been established by the discussion were (1) that such cases certainly occurred; (2) the infrequency of their occurrence; (3) that the average age of the patient was lower than might have been expected; (4) that in the reported cases there was a marked preponderance of abdominal operations; (5) the advantages of prophylactic measures. He was sure that the pulmonary troubles after ether did not in any way differ from those due to other causes.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 7th, Dr. MICHIE, President, in the chair, Dr. HANDFORD showed 2 cases of nervous disease following typhoid fever, both occurring in young men. In one case the symptoms were those of lateral sclerosis, with increased reflexes, and the typical spastic gait, etc.; in the other case the signs were those of tabes dorsalis, knee-jerks being abolished and ataxic gait existing. Both cases were recovering when shown. The interest of these lay in their extreme rarity and their close simulation of the above-named diseases, from which they differed, however, in that they were recovering.—Dr. MACKENZIE read notes of cases of diphtheria treated by antitoxin in private practice. He first classified the cases into groups, in accordance with the anatomical situation of the disease; there were seven such groups. The whole number of cases treated with serum was 31, and were the severest cases only which occurred in his practice. In many of the cases the disease had existed for nearly a week before they were seen, and in the 31 cases there were but 2 deaths, giving a mortality of just above 6 per cent. Respecting one group of 3 cases, he admitted that there was some doubt as to the existence of true diphtheria; possibly they were only simple acute laryngitis. They were all treated with serum, rather experimentally, and all recovered. Excluding these 3, there were 28 cases of true diphtheria, many very severe, with a death roll of 2, giving a mortality of only 7.1 per cent. The paper was discussed by the PRESIDENT, and Messrs. WOODS, BOLTON, THOMPSON, and WILLIS.—Mr. R. C. CHICKEN read an account of a new method which he had devised of performing hysterectomy for prolapse of the uterus, which had for its object not merely the removal of the extruding organ but the formation of a support to the pelvic floor.

BIRKENHEAD MEDICAL SOCIETY.—A meeting of this Society was held on March 6th, Dr. H. NAZEBY HARRINGTON, President, in the chair. After a discussion the following resolutions were unanimously passed:

Medical Acts.—That in the opinion of this society the Medical Acts require amendment, especially in regard to illicit practice, death certification, and the Inebriate and Lunacy Acts. *Contract Practice.*—That in the opinion of this Society, in contract practice there should be a minimum rate of five shillings (5s.) per member per annum, and this Society condemns the practice of canvassing in connection with medical clubs. *Medical Charities.*—(*a*) That in the opinion of this Society there is considerable abuse in connection with medical charities, and it is desirable that the medical profession should be directly represented on the committees by which they are managed; (*b*) that the staffs of the various hospitals be requested to combine in getting a visitor appointed to inquire into the circumstances of patients applying for relief in order to prevent such abuse. *Midwives Question.*—That in the opinion of this Society it is not desirable that midwives should be registered according to the provisions of the Bill at present before the House of Commons. *Direct Representation.*—That in the opinion of this Society it is desirable that general practitioners should have a larger representation on the General Medical Council.

General Paralysis of the Insane.—Dr. W. R. DALZELL read a paper, in which, after briefly reviewing the history of the affection, and describing the symptoms of various types met with in asylums and in general practice, he passed on to the consideration of its etiology and pathology, giving as the chief factors in its etiology (1) over-exertion, (2) syphilis; (3) alcoholism, and (4) excessive venery. As to distribution it was found all over the civilised world, though it occurred chiefly in the great industrial centres, and seldom in the rural districts. It occurred much more frequently in males than females, and was essentially a poor man's disease, though also found in the higher ranks of life. Passing to diagnosis he enumerated the following affections, amongst others, which might be confounded with it, giving the differential diagnosis in each case: (1) Acute recent mania; (2) alcoholic paralysis; (3) pseudo-general paralysis, (4) lead paralysis; (5) syphilitic brain disease; (6) senile dementia, (7) epileptic paralysis, (8) primary dementia, and (9) locomotor ataxia. As to prognosis his experience was that nearly all cases ended fatally—usually through some intercurrent disease, the chief of which was phthisis—within three years. With regard to treatment there was nothing known which would arrest the disease, and one had to be content with general hygienic measures, removal of all nerve excitants, and the assistance of hypnotic and nerve tonics.

FORFARSHIRE MEDICAL ASSOCIATION.—At a meeting on March 7th, Dr. TEMPLEMAN, Vice-President, in the chair, after the exhibition of specimens by Mr. GREIG, Professor C. R MARSHALL spoke on the nitrites and allied substances, giving his classification of them, and illustrating by means of the blackboard and sphygmographic tracings the actions of the various classes. He explained how it could be shown by experiment that these substances only acted on the blood vessels and not on the heart. He also pointed out the various steps that had been taken in order to find a substance with a similar action to nitroglycerine or glycerol nitrate, but which had a more prolonged or lasting action. The toxic effects of these substances was then shown to be due to their power of forming methæmoglobin in the blood, and that the sodium nitrate was in this more rapid than nitroglycerine. The therapeutic uses of these substances was next touched on in angina pectoris and in cardiac failure.—Professor STALKER emphasised the beneficial effects of iodide of potassium in arterial sclerosis.—Dr. GEORGE WHYTE gave an account of a case of corrosive sublimate poisoning, which had resulted in recovery, partly due to vomiting being induced early and to its solubility in alcohol. The quantity taken was equal to 9.6 grams. The symptoms (severe vomiting and purging) were treated by 20 minims of tincture of opium every four hours to begin with.

The patient resumed his occupation on the fifth day after taking the poison.—Professor Stalker read notes of a case of subacute endocarditis, which showed some difficulty in the diagnosis. There was a persistent temperature, some cough, and later on mitral systolic murmur was made out, but for a time the case resembled one of pulmonary tuberculosis. There was no rheumatic history, and the case did not present the appearance of a cardiac case.—Professor L. R. Sutherland showed the heart from this case, which had vegetations on the mitral cusps. Several of the chordæ tendineæ had given way, causing the valve to flap during the heart's action, and infect the endocardium in the auricle. He pointed out that the orifice, though in life it must have been narrowed, still admitted two fingers. He considered that the separation of chordæ tendineæ was not such a rare affection as was generally made out.

Glasgow Pathological and Clinical Society.—At a meeting on March 12th, Dr. Thomas Barr delivered his Presidential address on The Recent Developments of Intracranial Surgery in Relation to Purulent Diseases of the Ear (Oto-craniology). The address was illustrated by a demonstration of cases and pathological specimens. Dr. Barr claimed for British surgeons the credit of being the pioneers in this subject, and gave an interesting account of the earliest operations for cerebral abscess. In particular he described the first case that had been undertaken in Glasgow by Professor Macewen in conjunction with himself, and this patient was shown to the Society, now thirteen years after operation. Such developments were followed rapidly by the surgical treatment of cerebellar abscess and operations on the lateral sinus, and Dr. Barr gave a summary of the progress of these events and showed several patients to illustrate his remarks.

Chelsea Clinical Society.—At a meeting held on February 20th, Mr. J. Foster Palmer, President, in the chair, Dr. Ewart showed: (1) A case of vertical displacement of the liver and stomach; (2) a case of relapsing pernicious anæmia, with some remarks on the treatment by mercury and iron.—Dr. Vincent Dickinson read a paper on gynæcological therapeutics. The subject was reviewed under the following heads: (1) External applications—caustic, astringent, antiseptic, resolvant, and anodyne. (2) Drugs exhibited internally; the author drawing special attention to the use of cimicifuge in dysmenorrhœa, asafœtida in repeated abortion, helenin, pulsatilla, salix nigra, viburnum prunifolium, etc. (3) Douches and baths, including the application of heat and cold. The hot douche (100 to 120° F.) caused contraction of all the involuntary muscular fibres in that part of the pelvis which came under its influence, and drove the blood away from it. Hence it was usefully employed in all cases of inflammation and congestion of the uterus or appendages, in perimetritis and parametritis, in hæmorrhage, and to allay pelvic neuralgia common in anæmic and obese patients. The use of the cold douche, baths, and medicinal spas were also discussed. (4) Rest, exercise, and position. Rest when prescribed should, as far as possible, be definite in amount. In slight cases one hour before lunch and before dinner was a good rule. Massage was the best form of exercise because it could be regulated. The use of the inclined plane, which was known to Hippocrates, was of value in the treatment of enlarged and prolapsed ovaries and in threatened attacks of pelvic peritonitis and irritation of the bladder. A less degree than raising the foot of the bed 12 to 18 inches would not produce any effect. The effect of position on displacements of the uterus was also discussed. (5) Electricity. The results were best in the hard variety of fibromyoma of the uterus, and relief was often given to hæmorrhage and pain, although no appreciable diminution in the size of the tumour could be ascertained.

The Naples Congress on Tuberculosis.—The Neapolitan Committee of the Italian National League against Tuberculosis has decided to give, on the first day of the Congress, which is to be held in Naples in April, a dinner to 1,200 poor persons in the twelve sections of the city. Each of the persons so entertained will in addition be presented with a linen shirt.

REVIEWS.

SOME RECENT WORKS ON SURGERY.

Dr. Parham has collected the records of all the cases of *Thoracic Resection for Tumours*[1] that have been published. In 26 cases the pleural cavity was not opened, and 7 cases died. In 55 cases the operation was intrapleural, and 16 patients died. The value of the statistics, however, is diminished by the fact that some of the patients were operated upon a couple of centuries ago. Dr. Parham records two cases which have come under his own observation. In both an extensive operation was performed. In the second case the Fell-O'Dwyer apparatus for forced respiration was employed, and of it the author remarks: "The assistance rendered me in my second case was so striking that I can without hesitation endorse every word that has been said in its favour," and, "I believe no surgeon now would be justified in attempting a thoracic resection without having this apparatus at hand." For the prevention of pneumothorax Dr. Parham also advocates, and in one case adopted, the stitching of the lung to the margin of the thoracic wound. The suggestion made by Dr. Murphy, of Chicago, that antiseptic or sterilised nitrogen gas might be introduced into the chest for a day or two before operation, in order that the lung should collapse and so remain, has not, we believe, as yet been put into practice on the human subject. Theoretically it has much to recommend it. Dr. Parham has exhausted the literature of his subject, and has put before us a readable and complete history of this branch of surgery.

Mr. Fitzgerald's pamphlet on *Pyorrhœa Alveolaris*[2] is an attempt "to point out the bearings of this disease upon medical practice, and to indicate simple methods of treatment within the reach of the family physician." It is in many respects carefully and well put together, and contains many suggestive passages. But as a contribution to the science of the subject it is to be regretted that the author accepts on many points the slipshod pathology of some American dental writers as authoritative and conclusive. For example, although he makes mention of experiments which by no means confirm it, he accepts as established the fact that deposits of tartar which are found well within the sockets of teeth consist largely of urates, and so may be connected with the gouty habit. But this is at most merely a tentative hypothesis; the evidence against it is almost as strong as that in its favour, and the experiments upon which it is founded are open to numerous fallacies to guard against which little or no attempt has been made. Again, the disease is said to have been first described by Dr. Riggs, of Hartford, U.S.A., and it is sometimes styled "Riggs's disease:" but really the objection to the coupling of his name with the malady is that he did not describe it, but at most only propounded an empirical treatment. So also the term "seruminal" tartar is adopted from American writers without question, as though the hypothesis which is indicated in the name were incontestable, whereas it rests upon the shallowest of foundations. But apart from somewhat numerous minor blemishes of this kind the object of the book is a praiseworthy one, namely, to interest the practitioner of medicine in a subject to which he as a rule gives but little attention, although his co-operation with the dentist who treats the purely local condition may frequently be of great service to the patient, for there is no doubt that the condition is closely connected with constitutional states. As the author expressly states that he makes no profession to offer an exhaustive treatment of his subject, the book may be taken to fulfil very fairly the object with which it was written.

In the preface to *Orthopædic Surgery*,[3] Mr. Jackson Clarke tells us that for many years past it has been his "intention to write a book on the surgery of deformities based upon their

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[1] *Thoracic Resection for Tumours growing from the Bony Wall of the Chest.* By F. W. Parham, M.D., Professor of General Clinical and Operative Surgery, New Orleans Polyclinic. New Orleans. 1899. (Demy 8vo, pp. 147.)

[2] *Pyorrhœa Alveolaris.* By John Fitzgerald, L.D.S.. London: Medical Publishing Company. 1899. (Small 8vo, pp. 68. 2s. 6d.)

[3] *Orthopædic Surgery; a Textbook of the Pathology and Treatment of Deformities.* By J. Jackson Clarke, M.B.Lond., F.R.C.S.Eng., Surgeon to Outpatients at the North-West London and City Orthopædic Hospitals; Member of the Council of the British Orthopædic Society, etc. London: Cassell and Co. 1899. (Demy 8vo, pp. 454. Illustrations 309. 21s.

pathology, and giving in a systematised form an outline of the various therapeutic measures applicable to their treatment." The book consists of two parts. In the first, which deals with the general pathology and principles of treatment of deformities, the sections devoted to the general pathology are too brief to be of much value, but in dealing with the general treatment of deformities by instruments, the author goes at once to the root of the matter by declaring "that the surgeon must have a taste for practical mechanical work." It is the surgeon rather than the instrument maker who should be responsible for the efficacy of all appliances. The light value put upon various forms of apparatus by some surgeons is doubtless due to lack of appreciation of the precise principles which should guide the artisan in the construction of the instrument. In discussing the rigid splint usually applied to cases of knock-knee, the following sentence, embodying a principle which many practitioners are apt to ignore, is worthy of emphasis: "The perfection of form resulting in this and many similar cases (of genu valgum) that have passed through my hands has convinced me of the undesirability of performing operations, such as osteoclasia or osteotomy, while rickets is still in progress and the patient is growing." With regard to arthrodesis, the author expresses his belief that suitable mechanical appliances afford as much relief as the fixation of the joint by ankylosis. Special orthopædic surgery is considered in the second part of the book. The first deformity dealt with is hallux valgus, and what may be called the regulation belief of the orthopædic surgeon as to the correct shape of boots is once more explicitly stated. Once more it must be admitted that such belief lacks anatomical foundation. In speaking of the treatment of hammer-toe, Adams's, Anderson's, or Petersen's operations are advised. Of amputation, it is said that it is rarely justifiable. "Indeed," Mr. Clarke adds, "I should not use this resource unless the toe were in a state of gangrene"; and he adds that he has "seen many unfavourable results of amputation." This experience, we venture to think, is unusual. In the discussion of the various forms of talipes there is little mention of the causes of congenital deformities, and throughout the section there is repeated evidence of compression. The division of talipes cavus into the two categories, suggested by Mr. R Fisher—of talipes arcuatus and talipes plantaris—is considered misleading, "seeing that the cause of the heel not reaching the ground is usually talipes equinus, to which the hollowing of the foot is secondary." Scoliosis is defined as "any lateral deviation of the spine from its normal form," which may be contracted with the definition given by Mr. Tubby: "A rotation of the vertebræ around a vertical axis, frequently but not necessarily combined with lateral deviation." There is a brief and unsatisfactory reference to the experiments of Bradford and Lovett, experiments which are certainly deserving of ample description. A very full account is given of congenital dislocation of the hip-joint. Illustrations from some dissections of a typical case of the author's give greater clearness to the description. This work is, on the whole, in spite of a few deficiencies, a sound one. The chief fault, a most rare one, is that of brevity. In all sections where the author has dealt with his subject freely the result is all that can be desired. In some sections, either from considerations of space or from lack of equal personal interest on the part of the author, the descriptions are meagre. On the whole, however, the good so completely outweighs the indifferent that we cannot but feel grateful to Mr. Jackson Clarke for the book he has written.

Mr. Platt's volume on the *Surgery of Fractures and Dislocations of the Upper Extremity*[4] is almost entirely a reprint of a series of papers contributed to the *Medical Chronicle*. There is no attempt to give a systematic and detailed academic description of the injuries of the upper extremity. A series of tables show, readily enough, the salient features of each class of injuries, and abstracts of all the cases are added. The author supplies a running commentary, and at times quotes appropriately from authorities. The observations upon which the book has been founded were made, if we may say so, at an unfortunate period. The *x* rays had not reached that perfection to which we are now accustomed, and, indeed, had hardly at the earliest part of the period come into general employment. Many points, therefore, have not received that amount of attention from Mr. Platt which, if his experience could be repeated now, would be bestowed upon them. As one instance of this, we may quote the observation upon fracture of the styloid process of the ulna in association with Colles's fracture. The work embodies very careful and persistent work, and its statistics will without doubt be found of considerable value, and will frequently be quoted.

The appearance of a second edition of Rose and Carless's *Manual of Surgery*,[5] after an interval of less than eighteen months from the date of the original issue is a proof that it has passed beyond the influence of criticism and attained complete and well-deserved success. The authors have endeavoured to maintain the excellence of their work by careful and thorough revision, by removal of slight errors almost unavoidable in a first edition, and by the incorporation of new material relating to the rapid progress in modern surgery. The usefulness of this *Manual* has been increased also by a revision of the illustrations, some having been redrawn and new ones added.

The sixth volume of the large work on clinical and operative surgery[6] which is now being published under the joint editorship of Professors Le Dentu and Delbet, contains articles upon the mouth, pharynx, œsophagus, larynx, trachea, thyroid gland, neck and chest. As deserving of special recognition, we may select the articles of H. Morestin upon the diseases of the tongue, and of Ch. Souligout upon the injuries and disease of the chest. Both these articles are complete and authoritative; the rest of the book is of merely average merit. The eighth volume deals with the mesentery, pancreas, spleen, liver and biliary passages, anus and rectum, and kidney. This volume will be remembered gratefully by succeeding generations because of a memorable article by Albarran on the diseases of the kidney. The article occupies nearly half of the book, and is the most elaborate and complete summary of this subject which has been published in the French language. It will add to the already high reputation of its author. The article upon diseases of the rectum and anus by Delbet is also excellent. Indeed, this volume is, on the whole, the best of those issued up to the present time.

The latest volume of Professor Koenig's well known text-book,[7] which has now reached the seventh edition, is devoted to the subjects of diseases of the breast, to abdominal surgery, and to diseases of the genitals and urinary organs of the male. The author has spared no pains to keep up the high reputation of his work, and claims from his readers some consideration for the delay in the publication of this volume on account of the recent advances in abdominal surgery, and also the rapid changes, both in its principles and practical details, that have to be noticed.

We have received the third of a series of annual reports on surgical progress,[8] prepared, under the editorship of Professor Hildebrand of Berlin, by about forty-five contributors. The latest volume, like those recording the advance in surgical work during 1895 and 1896, is a good example of German thoroughness and industry. Every subject of interest to the

[4] *A Contribution to the Surgery of Fractures and Dislocations of the Upper Extremity*, based upon an analysis of about 700 consecutive cases observed at the Manchester Royal Infirmary. By J. E. Platt, M.S.Lond., F.R.C.S., Honorary Surgeon to the Hulme Dispensary, etc. London: H. K. Lewis. 1899. (Roy. 8vo, pp. 228, 23 illustrations. 10s.)

[5] *A Manual of Surgery for Students and Practitioners.* By William Rose, M.B., B.S.Lond., F.R.C.S., Professor of Clinical Surgery in King's College, London, and Albert Carless, M.S.Lond., F.R.C.S., Surgeon to King's College Hospital. Second edition. London: Baillière, Tindall, and Cox. 1899. (Demy 8vo, pp. 1,190, 400 illustrations. 21s.)

[6] *Traité de Chirurgie Clinique et Opératoire.* Publié sous la Direction de A. le Dentu et Pierre Delbet. Paris: J. B. Baillière et Fils. 1899. (Roy 8vo. Tome vi, pp. 952. Illustrations 107. Tome viii, pp. 972. Illustrations 123. 12 francs per vol.)

[7] *Lehrbuch der speciellen Chirurgie fur Aerzte und Studirende.* Von Dr. Franz Koenig, Ord. Professor der Chirurgie, Geh. Med. Rath, Director der chirurgischen Universitäts-Klinik und Poliklinik der kgl. Charité in Berlin. Siebente Auflage, II Band. Berlin: August Hirschwald. 1899. (Roy. 8vo, p. 904, 125 woodcuts. M. 16.)

[8] *Jahresbericht über die Fortschritte auf dem Gebiete der Chirurgie.* Redigirt und herausgegeben von Professor Dr. Hildebrand in Berlin, III Jahrgang. Bericht über das Jahr 1897. Wiesbaden: J. F. Bergmann and Glasgow: F. Bauermeister. 1898. (Roy 8vo. pp. 1103. M. 25.)

practical surgeon, from anæsthetics to new instruments, has been carefully considered, and the recent literature of interest and importance relating to each brought in an abridged form under the notice of the reader. The list of contributors, which includes the names of Italian, Russian, and other foreign writers, shows that Dr. Hildebrand has entrusted the different subjects of his book to very competent colleagues, and he is to be congratulated on the success which has resulted. The recent development in the surgery of internal organs is here indicated by the fact that over 350 pages—nearly one-third of the whole volume—deal with the injuries and diseases of the chest and abdomen.

Dr. DEPAGE'S *Année Chirurgicale*,[2] which in its scope and general arrangement follows the same lines as Hildebrand's *Jahresbericht*, is intended to serve as an encyclopædic compendium of the state of surgical science in the year with which it deals. The editor, with the assistance of what may be regarded as a small body of contributors, has in the preparation of his first volume, performed a difficult task in a very satisfactory manner, and has succeeded in his object of giving a comprehensive review of recent surgical work. The matter is so well arranged that reference can be readily made to any special subject, and full information at once obtained. Some of the special sections might with advantage have been compressed, as the bulk of the volume exceeds that even of German works of a like kind. A complete review of recent surgical literature must of course contain much matter of uncertain value and ephemeral interest, which consideration may be consoling to readers in this country, who will find that the proportion of English to Continental and American authors is unduly small.

SOME RECENT WORKS ON OBSTETRICS.

DR. HENRI VARNIER'S *Pratique des Accouchements*[1] is, in more than one sense, one of the weightiest works in midwifery that the French school of medicine has given to the world. It is a treatise on the anatomy, physiology, and management of natural labour. The numerous illustrations are nearly all photographs, either of frozen sections, dissections, or actual patients. The old stock diagrams are reproduced only in order to illustrate errors which Varnier's more accurate representations correct. The work is thoroughly original, not only as to the pictures, but as to the observations and thought which it embodies. The abdominal palpation of pregnant women is described with much care and method. This the author rightly speaks of as one of the "great obstetrical conquests of the age," and he claims this conquest for the Paris school and in particular for Pinard. Far be it from us to belittle the excellent work that Pinard has done, but we really thought that some German obstetricians had taught their pupils external palpation, and that an Englishman named Braxton Hicks had tried to impress upon his fellow countrymen the value of using their hands upon the abdomen. External cephalic version is strongly recommended in the treatment of breech presentations. The author divides this operation into two stages of "mobilisation" and "mutation." If the operator after several attempts fails in mobilisation he must leave the breech where it is. This, says Varnier, "is what Pinard does and teaches. Be not more royalist than the king." Basing his statements on the frozen sections of Pinard, the author attacks the long-accepted view that the head enters the pelvis either in synclitism or with the Naegelé obliquity, and maintains that in normal labour the head descends with posterior obliquity. The section on the lying-in period comprises not only the history of the prevention of puerperal fever, from Semmelweis onwards, but an account of the different bacteria that may cause fever in childbed, and their effects. Enough has been said to show that the book is full of interest, should be studied by everyone who has to teach midwifery, and reflects the greatest credit upon its author.

Dr. EUGEN WINTERNITZ has written a guide to the systematic examination of pregnant women.[2] It describes a very searching method of examination which in this country would generally be regarded as an instance of "*trop de zèle*," but all who have visited the gynæcological clinics of the Continent know how thoroughly it is carried out there in routine practice. The following seven points, the author remarks, should all be settled on the first examination of a pregnant woman: (1) diagnosis of pregnancy; (2) primipara or multipara; (3) period of pregnancy; (4) position of the fœtus; (5) life of fœtus; (6) size of fœtal head: (7) condition of pelvis. To this might have been added another, namely, the condition of the breasts. A series of illustrations of the pregnancy changes in the nipple and of the microscopic appearances of the milk are valuable and well executed. In the section dealing with internal pelvic measurements a full description, both verbal and pictorial, of the methods of using the pliable pelvimeter of Skutsch is given. This instrument is little known in this country and seems to have been generally overlooked by English writers of textbooks, but its superiority to the digital method cannot be doubted. Abdominal palpation is well described and microscopic illustrations of the vaginal secretion in normal and pathological conditions taken from Döderlein will be found very useful. We recommend this book to all medical men who are interested in practical obstetrics.

The object of a small book published recently by Dr. A. MUELLER[3] is to illustrate the mechanism of delivery in head presentations of all varieties, and is designed for the use of those who are unable to make use of the large obstetric dummy. An ingenious contrivance is affixed to the cover, consisting of a cardboard section of the pelvis, and a series of cardboard sections of the fœtal head, which can be passed through the pelvis section, or delivered with a toy forceps. This kindergarten method of teaching midwifery, it is fair to state, is only advocated by the author *faute de mieux*. An excellent series of illustrations of the moulding of the fœtal head in different presentations and positions is the most valuable feature of the work.

Dr. ROBERT JARDINE has reprinted from the *Scottish Medical and Surgical Journal* a series of *Lectures on Hæmorrhage and Eclampsia*,[4] delivered at the Glasgow Maternity Hospital. They are eminently practical in their aims, and although the various subjects are only handled in brief, Dr. Jardine has succeeded in conveying a large amount of useful information based upon his own experience. The lecture on eclampsia will be read with most interest, as the author therein records 17 cases which he personally treated with intercellular injections of saline solution. Dr. Jardine is impressed with the value of this method, but his account of his cases hardly carries conviction with it. Of the 17 cases 4 died, giving a mortality of about 24 per cent.; as some of the cases were slight, this percentage is not specially favourable. Some interesting urinary observations by Dr. Carstairs Douglas are appended to three of the cases, showing that before the saline injections the percentages of urea and uric acid were below normal, while afterwards they became very largely increased. Dr. Jardine believes that eclampsia is due to accumulation of these substances in the blood, and saline injection acts by clearing them out through the renal secretion. But in most of the cases there is no evidence that this method proved to be a specially powerful diuretic. Diuresis usually occurs after delivery and cessation of the fits, and in the cases treated by saline injections there was no marked increase in the amount of urine for the first forty-eight hours. Dr. Jardine's observations are, however, very interesting, and the method he advocates appears to be well deserving of further trial.

Dr. CAROSSA thinks that the precautions usually taken to keep the genital canal during and after delivery aseptic are not enough; that the wounds of the genital canal which

[2] *L'Annee Chirurgicale, Revue Encyclopédique de Chirurgie Générale et Spéciale.* Publiée par le Docteur A. Depage, Agrégé à l'Université Libre de Bruxelles. Première Année, 1898. Bruxelles: Henri Lamartin. 1899. (Roy. 8vo, pp. 1,078. F.50.)

[1] *La Pratique des Accouchements: Obstétrique Journalière* [The Practice of Midwifery: Everyday Obstetrics]. Par Henri Varnier, Professeur Agrégé à la Faculté de Paris, etc. Paris: G. Steinheil. 1900. (Imp. 8vo, pp. 440. 387 illustrations. Fr.26.)

[2] *Leitfaden für die Schwangeren-Untersuchung.* Von Dr. Eugen Winternitz. Leipzig: Arthur Georgi. 1900. (Crown 8vo, pp. 94. M.3.)

[3] *Geburtshilfliches Taschenphantom.* Von D. A. Mueller. Munich: J. F. Lehmann. 1899. (Crown 8vo, pp. 52. M.2.)

[4] *Lectures on Hæmorrhage and Eclampsia.* By Robert Jardine, M.D.Edin., M.R.C.S.Eng. Edinburgh: J. F. Clay. 1899. (Demy 8vo, pp. 82. 1s. 6d.)

usually accompany delivery require to be made aseptic by an effective application of an antiseptic. So he puts a catheter into the uterus, packs gauze round it, and then runs through the catheter a stream of dilute alcohol, 25 per cent. This he has described in a recent pamphlet as a "new method of treating childbed fever (alcohol treatment)."[5] Since Dr. Carossa is so pleased with this practice as to write a pamphlet about it, we have no doubt that his patients make satisfactory progress—we are inclined to add, in spite of his treatment. We have lying-in hospitals in London from which puerperal fever has been banished for years, without any treatment in the least degree resembling this being carried out. We therefore do not accept Dr. Carossa's fundamental proposition that it is necessary after delivery to make uterine wounds aseptic. They are aseptic already, unless dirty hands or instruments have carried infection from without; and therefore they do not need gauze packing or alcoholic irrigation.

The new volume[6] of *Transactions of the Edinburgh Obstetrical Society* is chiefly distinguished by a courageous address by the President, Dr Halliday Croom, on Surgical Interference in Gynæcology. Speaking of the operation of vaginal hysterectomy for cancer, he states that out of a large experience he has not known a single patient to survive operation for more than a year. And he adds that "everyone of them died with greater suffering than if they had been left alone." He sums up his conclusions thus: "Looking back over thirty years' experience I am disposed to think that the surgical method of dealing with uterine cancer has done little to either ameliorate suffering or prolong life." Among many other interesting papers may be mentioned that of Dr. Jardine on the Treatment of Eclampsia by Intercellular Injection of Saline Fluid, and a learned paper by Dr. Ballantyne on the Present Position of the Pessary in Gynæcological Practice.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.

THE twenty-second annual general meeting of this Association was held on St. Patrick's Day, March 17th, at the Hotel Cecil, London, Dr. Phillips-Conn, Vice-President, in the absence of Sir William Thomson, now in South Africa, inducted Inspector General Lloyd, R.N., as President for the coming year.

The annual report, presented by the Council, drew attention to the fact of the Association having "attained its majority" during the past year, which was one of marked prosperity, the numbers on the roll being 726, notwithstanding the deaths of an unusually large number of members. Great regret was expressed at the death of the senior honorary member, the late Sir James Paget, Bart., "a warm friend of the Association who frequently expressed his sympathy with the efforts of the Council to induce the governors of English public hospitals to remove from their statutes disabilities affecting Irish diplomates." Satisfaction was expressed at the increasing number of those attending the business and social gatherings of the Association, at one of which—the "Coming of Age" celebrated last November—no fewer than 401 members and their friends were present. Reference was also made to the very large number of members of the Association holding important medical posts at the front in South Africa in the R.A.M.C. The accounts of the Honorary Treasurer showed a credit balance of £130 2s. 3d. The report having been adopted, a warm vote of thanks to Sir William Thomson and the other retiring officers was passed with acclamation.

The following appointments for 1900-1901 were made as a result of a ballot which took place at the close of the meeting.

President-elect: Dr. William Frazer (Bournemouth). *Vice Presidents:* Dr. Phillips-Conn (Reading); Professor Alexander Macalister, F.R.S. (Cambridge); Dr. Mapother; and Sir William Thomson, F.R.C.S.I. *Honorary Treasurer:* Dr. Jocelyn Swan. *Honorary Auditors:* Colonel Tuohy, I.M.S.; Dr. F. H. Daly. *Members of Council (elected):* Colonel Boileau, A.M.S.; Drs. W. H. Bourke; Campbell Boyd; Bulger; T. H. Crampton; J. Donelan; Surgeon-General Rice, C.S.I., I.M.S.; G. Richardson; C. Ryall; J. G. Shea; J. H. Swanton; Colonel Thornhill, I.M.S.; W. H. White.

[5] *Eine neue Methode der Behandlung des Kindbett-Fiebers (Alkohol-Behandlung).* Von Dr. Med. Carossa. Zweite Auflage. München: Leitz and Schauer. 1899. (Demy 8vo, pp 26. M.1.)

[6] Vol. xxiv. Session 1898-99. Edinburgh: Oliver and Boyd. (Demy 8vo, pp. 160. 8s. 6d.)

THE ST. PATRICK'S FESTIVAL DINNER.

In the evening the members and their friends dined together at the Hotel Cecil. Inspector-General LLOYD, R.N., the President, occupied the chair. Nearly all the guests, of whatever nationality, wore sprigs of shamrock, in honour of the occasion, and the Chairman sent the following telegram to the Queen at Windsor Castle:

The Queen's Most Excellent Majesty, Windsor Castle.

MADAM,—On behalf of the Irish Medical Schools' and Graduates' Association here assembled, I beg to offer your Majesty our heartfelt gratitude for your Majesty's gracious recognition of the services rendered in South Africa by your Majesty's Irish soldiers, our fellow-countrymen; and for the highly-prized permission to wear the shamrock as a distinction on St. Patrick's Day.

I humbly convey to your Majesty our full appreciation of your Majesty's gracious thought of our country at this time, and earnestly pray that your Majesty's approaching visit to the Irish metropolis may be all that our loyal Irish hearts can wish for our beloved Queen.

I am, your Majesty's most faithful Subject,
Inspector-General LLOYD, R.N.,
Hon. Surgeon to your Majesty,
Hotel Cecil, St. Patrick's Day. President of the Association.

The following reply was received:

To Inspector-General Lloyd, R.N., Hotel Cecil.

The Queen desires me to thank the members of the Irish Medical Schools' and Graduates' Association for their loyal and kindly message, which alludes to the national appreciation felt at Her Majesty's permission for the future wearing of the shamrock by our Irish troops on this day. The Queen is gratified by their good wishes expressed for her coming visit to Ireland, to which event her Majesty looks forward with much pleasure.

ARTHUR BIGGE.

Another telegram was sent to Lord Roberts at Bloemfontein as follows:—

Accept our best St. Patrick's Day wishes. Kindly convey them to our fellow-countrymen under your command. We drink to your health and your safe return.

It is almost needless to say the health of Lord Roberts was enthusiastically honoured.

In replying for the Army, after the toast of "Our Defenders" had been proposed by Dr. J. HOLMES JOY, Surgeon-General JAMESON, C.B., Director-General A.M.S., remarked that in the distant past his department was "without form and void." In those remote days boiling tar was applied to wounds, and this was probably the first example of antiseptic surgery. The Crimean campaign was the first occasion on which the duty of the State to the individual soldier was first fully appreciated. In comparing the work of the A.M.S. with the corresponding service in the French Army, he said that in their last 18 expeditions the French had lost from disease 26½ times more men than ourselves in a corresponding number of campaigns. Comparing the Ashanti and Madagascar expeditions, for example, we lost in the former 0.7 per cent. from disease, whilst they in the latter lost 32.5 per cent. of the men engaged. In the Tirah expedition there were 1,100 gunshot wounds, without a single case of tetanus or pyæmia. The medical arrangements for the present war, he was pleased to say, had excited the warm admiration of the military *attachés* of Germany and Russia.

In proposing "Our Guests," Mr. FREYER dwelt on the galaxy of Irish talent found in all ranks of the Army in South Africa at the present time, from Lord Roberts downwards, and alluded to the fact that Sir George White had been present at the Association's dinner a year ago.

Mr. LECKY, M.P., responded, and said that they were proud not only of the Irish generals and soldiers in South Africa, but also of the Irish doctors, many of whom had gone out to do all in their power to relieve the sufferings caused by the war. What had happened in South Africa, and what was going to happen in Ireland when the Queen went there in the course of a few days would have a most improving and salutary effect upon Irish public opinion. He would be glad if the medical profession was more numerously represented in Parliament. Sir DENNIS FITZPATRICK, K.C.S.I., also replied.

Dr. W. S. PLAYFAIR proposed "Ourselves," and alluded to the magnificent services of Lord Roberts who, when called upon to serve, made none of the excuses which might well have fallen from a man of his years who had just felt the deepest personal sorrow. The doctors throughout the campaign, too, had behaved remarkably well, and must henceforth be included whenever the soldiers of the Queen were talked about.

The PRESIDENT, in reply, said that the success of the Asso-

ciation was chiefly due to its permanent officials, the President of the Council, the Treasurer, and Secretaries. He had much pleasure in announcing that the arrangements in respect to the Arnott Gold Medal were approaching completion. This Medal had been given to the Council of the Association by Mr. David Arnott, in commemoration of his late father, Sir John Arnott, so well known by Irishmen for his philanthropic benevolence, and for his untiring promotion of Irish industries. The medal would be awarded annually to such Irish graduates or diplomates as should be decreed by the Council to have pre-eminently distinguished themselves by some acts of heroism in civil, naval, or military life, or by some achievements in medicine, surgery, or medical research. Their grateful thanks were due to Mr. David Arnott for this generous gift.

THE R.A.M.C. SOUTH AFRICA FUND.

Ireland.

The appeal of Mrs. Preston (wife of Surgeon-General Preston, P.M.O. Ireland) for comforts for the men of the R.A.M.C. in South Africa has met with a generous response. Mrs. Preston has been enabled to despatch to South Africa 26 large cases containing upwards of 3,000 articles of clothing besides a considerable quantity of tobacco, cigarettes, books, pillows, bootlaces, note paper, pencils, and many other useful gifts. She hopes before long to be in a position to send off a further consignment.

The Special Subscription.

The following is the list of subscriptions to the special fund received by the Editor since the list published in the British Medical Journal of March 17th:

The Half-Crown Subscription List.

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Dr. Parker ,,	1
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Dr. Ewart	1
Dr. F. A. Farr	1
Brigadier-Surgeon Mackinnon	1
Dr. Ross	1
Dr. Cowburn	1
Dr. Ackroyd	1
Dr. Hamilton	1
Dr. Clemow	1
Dr. Chittenden	1
Dr. J. W. Browne	1
Dr. Bridges	1
Dr. Brinton	1
Deputy-Inspector-General Meiklejohn	2
Dr. Travers	2
Surgeon-General A. Eteson	1
Dr. J. Jones	1
Dr. Oswald	1
Dr. Gloster	2
Dr. Arthur Farr	1
Dr. Moir	1
Dr. Fox	1
Mr. E. T. Gregory	1
Dr. Baldock	1
Dr. Whitelaw Bourns	2
Surgeon-Lieutenant-Colonel Baines, V.D.	1
Dr. Cutler	1
Mr. Kingston Barton	1
Dr. Seton Orr	1
Mr. Eustace Barton	2
Surgeon-Major Heffernan	1
Dr. R. C. Priestley	1
Dr. J. Harper	1
Dr. A. de Burgh Galwey Caven	1
Dr. F. E. Pocock	2

We have also received £68 from Colonel J. P. Rooney, R.A.M.C. (Edinburgh), as proceeds of a concert held in the hall of the Edinburgh University Union on March 14th; £4 5s. per Dr. W. Mitchell Bird, from "Some members of Visiting Staff, all the Resident Medical Officers, and some others employed here" of St. Mary's Hospital, London; £3 12s. per Brigade-Surgeon-Lieutenant-Colonel Maconachie, from the Aberdeen Medical Cycling Club; £1 1s. per Dr. J. St. Clair Boyd (Belfast) from Miss Florence E. Henderson; and per Mr. C. T. Quiller (London), Dr. W. G. Gyton, £1 1s., Dr. Gavin Stiell, £1 1s., Dr. C. C. Lauchlan, £1 1s., Dr. Felix Kempster, £1 1s, Dr. Scott Battams, 10s, 6d., Dr. H. Wilkins, 10s. 6d.

In order to facilitate the work of collecting the small sums, the following gentlemen have expressed their willingness to receive subscriptions from gentlemen residing in their neighbourhood:

Mr. W. M. Beaumont, 4, Gay Street, Bath.
Dr. Henry J. Blakesley, 46, London Road, Leicester.
Dr. J. St. Clair Boyd, 27, Victoria Place, Belfast.
Dr. E. Cureton, College Hill Court, Shrewsbury.
Lieutenant-Colonel G. A. Emerson, I.M.S., 49, St. Michael's Road, Bedford.
Mr. John W. Fry, Blythesbury, Maidstone.
Dr. Harcourt Gervis, 2, Lyncroft Mansions, West Hampstead, N.W.
Mr. R. Balfour Graham, F.R.C.S.E., Seaview House, Leven, Fife, N.B.
Dr. J. Stenson Hooker, Rothesay Bank, Clive Vale, Hastings.
Dr. G. P. Longman, 14, Wickham Avenue, Bexhill-on-Sea.
Major R. C. Lever, Denton House, Iffley, Oxford.
Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie, I.M.S. (retired), 30, Queen's Road, Aberdeen.
Mr. Edward Mathews, Mount Prospect, Redditch.
Dr. Herbert Peck, St. Helen's, Chesterfield.
Dr. John Ruxton, 4, Brighton Parade, Blackpool.

Mr. C. T. Quiller, St. Paul's Close, Rectory Grove, Clapham, S.W.
Major J. Raby, Ashford House, Barnstaple.
Dr. Henry Simpson, Glen Morfa, Conway.
Dr. W. Johnston Smyth, Durley Gardens, Bournemouth.
Mr. Arnold Thomson, F.R.C.S.I., Castle Hill, Maidenhead.
Colonel J. Tidbury, R.A.M.C., Medical Officer in Charge, Barracks, Winchester.
Dr. Henry Waldo, 19, Pembroke Road, Clifton, Bristol.
Mr. E. C. R. Ward, F.R.C.S.I., Belmont, Castle Connell, co. Limerick.

Subscriptions may also be sent to the Editor of the British Medical Journal, and will be acknowledged in the Journal. The amount received for the Half-crown Fund up to and including Wednesday, March 21st, by the Editor is £335 18s. 6d. Cheques and Postal Orders should be made payable to the "R.A.M.C. South Africa Fund" and crossed "Holt and Co."

MEDICAL PRACTICE BY COMPANIES.

The Companies Act Amendment Bill, which Mr. Ritchie has introduced into the House of Commons, contains a clause which would prevent companies from conducting medical practice. It is as follows:

3. It shall be unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife; and if any company contravenes this enactment, it shall be liable, on summary conviction, to a fine not exceeding five pounds for every day during which the contravention happens.

There is some apprehension that the Government may be disposed not to press the clause in view of the opposition threatened by interested parties. In consequence of this Mr. Tomes made a statement before the business commenced to members of the Council of the British Medical Association attending the special meeting on March 21st, and the following memorial to the President of the Board of Trade was signed, and will shortly be transmitted to Mr. Ritchie:

To the Right Honourable Charles Thomson Ritchie, P.C., M.P., President of the Board of Trade.

The Memorial of Members of the Council of the British Medical Association.

That we, the undersigned members of the Council of the British Medical Association, which Association numbers upwards of 18,000 members, beg to urge upon Her Majesty's Government the importance of passing Clause III of the Companies Acts Amendment Bill, which was originally drafted and printed as a separate measure under the directions of the Lord Chancellor.

The companies whose operations it is intended to check constitute a very considerable and a growing evil. They foist upon the public under conditions which lead them to suppose that they are obtaining the advice of qualified medical men the services of absolutely unqualified and incompetent persons, and thus deprive the public of that protection which is intended to be afforded by the various Medical Acts, in many cases with serious and even fatal consequences, and legislation upon the subject is urgently required.

And your Memorialists will ever pray, etc.,

J. Roberts Thomson, M.D., President of Council.
Andrew Clark, F.R.C.S., Treasurer.
W. J. Tyson, M.D., M.R.C.P., President Folkestone Medical Society.
Frank M. Pope, M.B., M.R.C.P., President Leicester Medical Society.
William Dyson, M.D.
H. J. Manning, M.R.C.S.
John H. Galton, M.D.
C. Holman, M.D., Vice-President British Medical Association.
H. Langley Browne, F.R.C.S.
Thomas H. Cheatle, J.P.
Edgar G. Barnes, M.D.
A. Brown Ritchie, M.B., C.M.
C. H. Milburn, M.B., M.S.
R. H. Kinsey, M.R.C.S.
G. E. Shuttleworth, M.D., etc.
George Eastes, M.B., F.R.C.S.
Sam Woodcock, M.D.
T. Arthur Helme, M.D., M.R.C.P., F.R.S.E.
H. Handford, M.D.
Ogilvie Grant, M.B., D.P.H.
James Barr, M.D.
Bruce Goff, M.D.
Henry Stear, M.R.C.S., L.S.A.
N. C. Macnamara, F.R.C.S.
H. Radcliffe Crocker, M.D., F.R.C.P.
C. H. Watts Parkinson, M.R.C.S., L.S.A., D.P.H.
H. H. Phillips-Conn, M.D., L.R.C.S.I.
Leonard W. Sedgwick, M.D.
James Cantlie, M.B., F.R.C.S.
Drummond Morier, L.R.C.S., L.R.C.P.Dub.

THE PLAGUE.

Prevalence of the Disease.

India.

The reports received of plague in India up to March 1st show a wide prevalence, and, for the most part, increased mortality from the disease.

In the City of Bombay the number of deaths during the last six days February were 103, 101, 110, 121, 116, and 122. The total plague mortality for the week ending March 1st in Bombay amounted to 765, being an increase of 124 upon the previous week.

In Calcutta the disease seems to be steadily increasing in extent and in virulence. During the week ending February 27th, the number of deaths from plague alone in Calcutta were, on the several days, 51, 35, 32, 37, 52, 31, and 47. Recent telegraphic intelligence indicates an increase of these numbers, and seeing that the total mortality is at present more than double the quinquennial average, it would seem as though the numbers, large as they are, do not accurately represent the whole extent of the disease. In Karachi plague shows signs of increase: 12 cases and 8 deaths were recorded in the last day of February. Rats are dying in large numbers in the native town.

Australia.

At Sydney, New South Wales, another death from plague was reported on March 19th, and 2 fresh cases of the disease had been detected during the preceding twenty-four hours. Down to March 19th 5 deaths attributed to plague had occurred at Adelaide, South Australia. These reports are very disquieting, more especially as plague seems to have got hold upon two important seaports of Australia, as evidenced partly by the fact that a number of cases have occurred, and that rats have died in numbers in the Sydney goods stores on the quay.

Mauritius.

During the week ending March 16th, 5 fresh cases of plague occurred in the island and 2 deaths from the disease.

South Africa.

There is no news of any extension of plague in South African waters, nor has it appeared in any of the ports of Cape Colony. The scare caused by the arrival of the ship *Kilburn* from South America at Capetown has subsided. Seeing, however, the large number of vessels arriving at Capetown just now from South America, it behoves the port authorities at Capetown to be vigilant.

NOVA ET VETERA.

THE HOMES OF BYGONE PHYSICIANS IN LONDON.

In a book published in 1817, and entitled *A Picture of the Present State of the Royal College of Physicians of London*, we find lists of the Fellows and Licentiates then alive, with their residences, and also memoirs of a large number of each order. Very curious are the laudatory notices of these living physicians. Thus we read of Dr. B. that "in his various relations no one can boast a fairer fame than this respectable individual; and, encircled with a numerous family—no less than 11 children—he is equally attentive to the duties of the father and the husband, as the friend and the physician." Of Dr. C. it is said that "he has been considered as possessing an acuteness of perception superior to most of his competitors, and rather a brilliance of talents, than the commonplace display of mediocrity." We are not considering the men, however, but their residences.

London by 1817 had increased considerably, and all Harley Fields was covered by the various streets which now house so many of our profession. The Regent's Park was being laid out, Marylebone Gardens had been turned into houses, and Mr. Lord had moved his cricket ground from what is now Dorset Square to its present situation. Both sides of Oxford Road had been lined with houses, which extended on the north as far as Edgware Road. Tyburn Turnpike had still to be paid, but there were no dismal processions to Tyburn Tree, which had long ago been converted into stands for the beer barrels in a neighbouring public-house.

Let us now look at list of physicians. The first thing that strikes us is the number of those who were physicians ordinary or extraordinary to Royalty. The Prince Regent had no fewer than ten. The King, who was now verging towards his end, blind and insane, had five, and the Queen one, while two were physicians to their Majesties. The Princess of Wales had two, so that altogether there were no fewer than twenty court physicians. The President of the Royal College of Physicians was Dr. John Latham, who was living in Harley Street. Dr. Latham, after some years of excessive work, had retired to the country, supposed to be mortally sick of consumption at the age of 46. Under the influence of country air and complete relaxation from the cares and toils of professional business he recovered and returned to London, but not wishing again to hazard his health, he removed far away from the sphere of his former business, Bedford Road, and settled in Harley Street. There he lived till 1829, presiding over the College for seven years. He left London in his 68th year, and lived in Cheshire for fourteen years longer. He was the only physician at this time in Harley Street, and not a single one was living in Wimpole Street.

If we turn to the list of the Elects, we find that the senior, Sir Lucas Pepys, lived in Upper Brook Street. He had been President of the College from 1804 to 1810, and was Physician to the King, whom he had attended in his first illness in 1788. Dr. Richard Budd lived in Craven Street, Sir Francis Milman in Lower Brook Street. The latter had been President of the College for two years, and was Physician in Ordinary to both the King and Queen. Dr. Hervey lived in Leicester Square, but for some years attended at Tunbridge Wells every summer more for recreation than practice. He had been Registrar of the College, and also the first Registrar of the National Vaccine Establishment. The next on the list of Elects is a name well known to all St. George's men, Dr. Matthew Baillie, who at this date resided in Lower Grosvenor Street. The nephew of John and William Hunter, and the adopted son of the latter, he inherited the school in Great Windmill Street, and taught there with great success. He was Physician to St. George's Hospital from 1787 to 1799, when private practice compelled him to resign and to give up teaching. Dr. Thomas Monro lived in the Adelphi, and his house was well known by all lovers of art. He was a great patron of art and artists, and was one of the first to recognise the talents of Turner, to whom he proved a warm and constant friend. The last Elect was Dr. Roberts, who lived in Bloomsbury, and was Physician to St. Bartholomew's Hospital for forty years.

The treasurer of the College at this date was Dr. Maton, a well-known and highly respected physician, who attended the Duke of Kent, the father of our Queen, in his last illness, and was a great favourite with the Royal Family. His residence was in Spring Gardens. The registrar, Dr. Clement Hue, lived in Bernard Street, Russell Square, was physician to St. Bartholomew's Hospital for more than forty years, and physician to the Foundling Hospital for more than thirty. Where did the Censors dwell? Dr. Haworth, also a physician of St. Bartholomew's, lived in Bedford Row; Dr. Cholmeley, of Guy's, in St. Mary Axe. Dr. Hume, who was with the Duke of Wellington in the Peninsula, lived in Little Stanhope Street, and Dr. Ainslie in Dover Street.

There were at this time 73 Fellows of the College, and, besides the 14 already mentioned, there were 25 whose addresses are not given or who lived out of London. Of the remaining 34, only 5 lived east of Temple Bar, in Paper Buildings, Bridge Street Blackfriars, Charterhouse Square, Northampton Square, and New Broad Street. Twelve were located north of Oxford Street in Queen Anne Street, Welbeck Street, New Cavendish Street, Margaret Street, Blenheim Street, Somers Place, Somerset Street, Gower Street, Charlotte Street, Bedford Square, Great Ormond Street, Buckingham Street Fitzroy Square, and King's Road Bedford Row. The rest dwelt south of Oxford Street, the most conspicuous of them being Sir Henry Halford, whose house was in Curzon Street, and Dr. Heberden, of Upper Brook Street. As has already been mentioned, Sir Lucas Pepys also lived in Upper Brook Street. This and Curzon Street appear to be the only streets which could boast of two Fellows of the College as residents. Others lived in Blenheim Street Bond Street, in Tenterden Street, Argyll Street, George Street Hanover Square, Old Burlington Street, Half Moon Street, Jermyn Street, King Street St. James's, Cleveland Row, Parliament Street, Salisbury Street, and Essex Street Strand; one, Dr. Rainier, lived in the Albany, but probably did not practise.

Besides the Fellows, there were five candidates for the Fellowship and eleven Inceptor candidates, and there is a long list of Licentiates answering to the present Members of the College. The number given is 184: out of these 89 are not given as domiciled in London. Many of them occupied high positions at that time or subsequently, and we recognise the names of Sir Gilbert Blane in Cleveland Row, Dr. W. Babington in Aldermanbury, Sir W. Farquhar in Conduit Street, Dr. Tierney in Dover Street, Sir W. Knighton in Hanover Square, Dr. Alexander Morison in Pall Mall, Dr. Southey, the father of Dr. Reginald Southey, who died last November, and brother of the poet, in Queen Anne Street; while some have come down almost to our own times, as Dr. Henry Holland in Mount Street, and Sir James McGrigor in Brompton. The London Licentiates seem to have been scattered generally over the town as it then was: a few were in the city, but the greater portion lived in the western district. They do not appear to have congregated in certain streets: there was no physicians' quarter in any part of London.

G. Fielding Blandford.

LITERARY NOTES.

A translation of Dr. Corfield's Harveian Lectures on Diseases and Defective House Sanitation has been published in the *Bulletin* of the Belgian Royal Society of Public Health, of which he is an honorary member.

The discussion on the Open-air Treatment of Tuberculosis which took place at the Royal Medical and Chirurgical Society on November 14th, 28th, and December 12th, 1899, has been reprinted in pamphlet form, and is sold by Mr. H. K. Lewis, 136, Gower Street, W.C. The discussion was a very important one, and was opened by Dr. Kingston Fowler and continued by Sir William Broadbent, Professor Boyce, Dr. Burton Fanning, Dr. Thurnam, Dr. Clifford Allbutt, Sir Richard Douglas Powell, Sir H. Weber, Dr. Ransome, Dr. Heron, Dr. Edward Squire, Dr. Pruen, Dr. Vivian Poore, Dr. Alfred Hillier, Dr. Sidney Martin, Dr. Pollock, Dr. Drewitt, Dr. Washbourn, Dr. Walters, Dr. F. Parkes Weber, Mr. Spencer Watson, Mr. Pearce Gould, Dr. Kingston Fowler, and the President. Some readers may be glad to know that a full report in a handy form may be obtained. The price is 2s. 6d.

The *Medical Examiner* is the title of a new journal which began to appear with the new year. Its object is to assist medical examiners in obtaining increased information and greater unity of opinion on matters within their special province. It deals with the medical aspect of subjects connected with life assurance and with those relating to the status and functions of medical officers of life assurance institutions. Careful reviews are to be given of the financial position and special features of life assurance and other institutions connected with the medical profession, and questions on points of law and inquiries as to the financial status of societies and similar matters will be answered in columns reserved for the purpose. In this way it is hoped that the journal will be found a trustworthy actuarial consultant to the medical profession. The *Medical Examiner* appears to us to fill a distinct place in professional journalism, and, if it fulfils the promise of its first number, it cannot fail to be of use to all medical men who have anything to do with life insurance.

L'Odontologie of February 15th contains the report of an interesting lecture on the history of dentistry delivered by Dr. Maurice Roy at the opening of the Dental School of Paris. He began with a sketch of the dental therapeutics of the sixteenth century. Ambroise Paré mentions certain remedies as applicable to affections of the teeth, but the greater part of these are simple reproductions of the precepts of Galen and other ancient writers. "For the cure of toothache," he says, "there are three steps. By the first we regulate the diet, by the second we purge out the antecedent matter, and by the third we apply those special remedies which have the virtue of soothing this exceeding pain." A remedy in great repute was "holding a bruised garlic in the hand on the same side as that of the pain." Brantôme tells the following story:

> I was two days without going to see her (he is speaking of Elizabeth of France, the wife of Philip II. King of Spain) as I was suffering from a rheum of the teeth which I had contracted at sea. She asked of Mdlle. Riberac what had become of me, and if I was unwell; and having learned my ailment she sent me her leech, who brought me a herb of singular virtue for this trouble, which he having given it to me by the holding it in the palm of my hand, of a sudden the evil pain went out from me completely.

In 1582 the first work devoted specially to dentistry appeared. It was entitled *Recherche de la Vraye Anathomie des Dents, Nature et Propriétés d'Icelles*, and was written by Urbain Hémard, who was surgeon to Cardinal d'Armagnac. In 1679 there appeared a *Dissertation sur les Dents*, by B. Martin. In 1728 a book was published which marks a distinct epoch in dental art: this was *Le Chirurgien-Dentiste ou Tracté des Dents*, by Pierre Fauchard, the founder of the art of dentistry: it was the first textbook on the subject, and it was so successful that a second edition was called for during the life of the author, and it was translated into several foreign languages. From that time the literature of dentistry increased and multiplied. France was, in the eighteenth century, the centre of dental art, and it was two Frenchmen who sailed with Lafayette to America and established in that country the first beginnings of dental science.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 24TH, 1900.

THE ALLEGED DUTY TO SEND INFORMATION TO THE CORONER.

SOME weeks ago an article appeared in these columns criticising the resolution which the Coroners' Society was reported as having adopted that "in cases of death from violence, or from any unnatural cause, there is a common law duty imposed on the medical practitioner in attendance . . . to report to the coroner." The article has elicited a good deal of correspondence, and has caused the publication of contradictory letters from writers who all profess to understand the subject about which they write.

It appears that the position taken up by the Coroners Society was not quite as strong as was assumed. "Medical Coroner," who is a member of the Society, and approves the resolution, points out that it should be prefaced by the words, "It is the opinion of the Council" (of the Coroners' Society) "that in cases," etc. This preface, in his view, takes away any sting there may be in the resolution, and should absolve it from adverse criticism. The Council, or those of them who framed the resolution in question, probably do not appreciate the defence thus put forward for them. Indeed, Mr. Braxton Hicks, the Honorary Secretary of the Society, has written a letter, published in the BRITISH MEDICAL JOURNAL of March 17th, page 673, to justify the resolution, and to point out that coroners are greatly in want of the information which they assert there is a common law duty to give. It may therefore be now taken that they mean to persist in it, and make it operative if they can. If their resolution meant nothing, and had no sanction to support it, of course it might be ignored and forgotten; but if the Society, or individual coroners, intend to enforce the opinion expressed by making matters unpleasant for some unhappy practitioner who does not give them information which he is not under any legal obligation to give, the case will be different.

As was pointed out in a previous article there seems to be no reported instance in ancient or modern times in which anyone has been made amenable for not giving the information which the resolution declares there is a common law duty to give. "Medical Coroner," who is a practitioner of thirty-six years' standing, quotes no specific instance in support of the view of the Society, but states his own opinion that "the duty (of reporting) is incumbent on medical practitioners among others," "*whether by common law or in the general interest of the public matters not.*" The words in italics show well the confusion which underlies the whole contention thus put forward. They may be paraphrased "There is a legal duty, and if there is not there ought to be." Mr. Hicks, in the same way, points out that Section III of the Coroners' Act, 1887, which prescribes the cases in which the coroner is to hold inquests, "mentions no particular class of persons whose duty it should be to inform the coroner, and therefore it is laid down in *Jervis on Coroners* that this duty devolves on those in attendance on or about the deceased at the time of his death," among whom the medical attendant should be included. The passage here quoted shows, again, pretty clearly the frame of mind which leads the supporters of the resolution to declare that the law is what they wish it to be. If the only authority for the supposed common law duty is the statement quoted from *Jervis* by Mr. Hicks, the doubt already expressed in these columns as to the existence of the supposed duty becomes doubly strong.

It is one thing to think that the law should be modified in accordance with a particular view, and another to contend that the existing law already provides what is desired. The resolution states that in the opinion of the Coroners' Society the common law imposes on medical practitioners the duty of making reports to coroners in certain cases. As has been pointed out in our previous article, there seems to be very little trace in any legal records or textbooks of this supposed common law duty, and consequently the expressed opinion of the Council of the Coroners' Society is not of any binding authority, and seems unlikely to be enforceable by any process known to our law.

There is no immediate prospect of Parliament interfering to alter the law affecting coroners or medical practitioners. Codifying Acts, as most people know, were passed in recent years, and the law as then declared is likely to remain in force. The powers of coroners are somewhat vague and the duties of medical practitioners in some respects undefined. Parliament will probably not interfere to clear up any doubts there may be; and no one seems anxious to take the opinion of a superior Court about them.

Mr. Hicks points out quite correctly what is the legal duty of medical practitioners in regard to giving certificates of death, and states that the resolutions of the Coroners' Society only refers to cases in which such certificates ought to be withheld. Other correspondents, however, state that, whatever may be the intention of the Council of the Society, certain coroners consider that they, and not the medical practitioners in attendance, are the proper persons to decide whether a certificate should have been given and an inquest held. They have pointed out a real grievance in the way in which coroners sometimes, under the protection of their office, presume to censure witnesses and other persons whose conduct may have displeased them. It is hinted plainly enough that a coroner may possibly censure some practitioner for not sending the report of the death of a patient when the circumstances are such as the coroner may think point to an unnatural cause, though the attendant practitioner thinks otherwise. If such a thing should occur it will be a misfortune. An injury more or less serious will be inflicted on someone

who does not deserve it, and probably the indiscreet and overzealous author of the mischief will be protected by privilege from having to make reparation for the wrong he may have done. Fortunately words spoken—and even censures uttered—under such circumstances seldom do much harm. In no other way than by censuring those who do not agree with them can coroners enforce the resolution of their Society. If the members of the medical profession choose to pay no regard to it they will probably find that they are in no way sufferers.

THE ARMY MEDICAL VOTE.

THE discussion of this vote in the Estimates took place on March 16th, and was in some respects very satisfactory, but in others disappointing, and the result on the whole is not so definite as there was reasonable ground to expect.

Nothing could be more satisfactory than the unanimous recognition by the House of the admirable and devoted services of the medical department in the present war, to which all the speakers bore testimony. Dr. Farquharson spoke of the heroic devotion of the Royal Army Medical Corps in the field, and of the admirable results of its improved military status. Mr. Price declared that the medical service had done honour to itself and to the country, a sentiment echoed by Mr. Arnold Forster, by Sir Walter Foster, and finally by Mr. Wyndham himself, who generously said, "the Committee could not pay too high a tribute to the fortitude, courage, and efficiency displayed by the medical officers."

This is a frank testimony to the self-sacrifice of men who did not exercise their functions, as the Under-Secretary for War stated, "stimulated by the joy and intoxication of battle," but sustained alone by devotion to "suffering humanity." Such devotion has recently been sealed by the lives and the blood of not a few medical officers on the battlefield. We shall not allow these manly and generous expressions as to the services of the medical department to be forgotten, but will treasure them for the future, should there still remain, which we can hardly believe, any so prejudiced and ungenerous as to sneer at medical officers as non-combatants and "camp followers." This war will open the eyes of the younger race of regimental officers to the unjust and miserably narrow criticisms which in past years they have too often heard from the lips of seniors, who ought to have known better, but whose caste prejudices blinded them to obvious facts.

The unsatisfactory points in the discussion were the absence of any strong pressure on the Under-Secretary to bring the medical service up to an efficient position numerically, or any definite promise by him that this all-important matter would be resolutely faced.

The deplorable results of undermanned medical establishments come out every day both in peace and war. Dr. Farquharson urged that the hand-to-mouth system of muddling along with the constant assistance of civilian surgeons should cease. Mr. Arnold Forster pertinently asked whether the "lame ducks"—reservists and militia—who crowded into the Cape hospitals immediately on arrival had been examined at home "by men who did not understand military requirements, or by men too pressed for time to make proper investigations." Sir Walter Foster properly said that it was a serious matter that men should have been allowed to proceed on active service "with chronic diseases which ought to have been recognised," and asked whether those errors could not be traced to the temporary civilian substitutes. No definite answer was given to these inquiries. A scratch medical, like any other army service, is bound to prove dear in the end; but the dominating spirits of the War Office seem to hold military medical experience very cheap.

In reply to the notorious weakening of the Army Medical Service, numerically, during past years, all Mr. Wyndham had to say was that he trusted "inducements" might shortly be made which would, it was hoped, fill the depleted ranks of the Royal Army Medical Corps. The nature of these inducements and the form in which they are to be presented cannot be made known too soon. We can only repeat that they should include increase of establishment, study leave, increased pay in the junior ranks, the remedy of Indian grievances, and the final cancelling of all regulations and orders which cast any doubt on the *bonâ-fide* army status of medical officers.

We would remark that no provision for a Militia Medical Service seems to be contemplated. This alone is a serious matter; it is no use giving transports, commissariat, and field guns to the Militia, while leaving them unprovided with any medical service; they cannot be a self-contained army without such a service.

CHILDBIRTH AND FACTORY LABOUR.

II.

THE importance, both to mother and child, and indirectly to the community, of the maintenance of proper hygienic surroundings, especially in the last weeks of pregnancy, is undoubtedly great, and recent observations tend to prove that it is even greater than has been generally recognised hitherto. Women of the working classes who earn their living in factories and workshops frequently continue their laborious daily toil throughout the whole of pregnancy until labour actually commences. They are in any case physically unfit to do this; and in addition, certain unhealthy trades, such as lead working, are notoriously harmful to pregnant women, and frequently induce abortion or death of the fœtus *in utero*. During the last two months of the period of gestation no pregnant woman should undergo laborious physical toil. This is a most important time for the development of the fœtus, which during the last two months increases in weight from 3½ to 7½ lbs., and there is evidence which appears to warrant the assumption that insufficient food and unhealthy surroundings exert a specially unfavourable influence upon its vitality during this period. Although unknown in this country, homes for the reception of pregnant working women have been for many years in existence in many Continental cities. Paris possesses three which are open free to the poor of that city, and which are capable of receiving over 2,500 pregnant women during the year. Pinard has published statistics giving the average weight of the fœtus in three classes of cases: (*a*) in those of women who were working right up to the commencement of labour; (*b*) in those who spent the last few months of the period of pregnancy in a lying-in hospital; and (*c*) in those who had

spent the whole period of pregnancy in the hospital. Five hundred cases taken from each class showed that the average weight of the fœtus was in class (*a*) 3,000 grams, in class (*b*) 3,290 grams, for class (*c*) 3,368 grams. The children of the women who had been carefully tended during pregnancy were thus more than 10 per cent. heavier than those of the women who had been working up to the time of their confinement.

In Switzerland, a law passed in 1877, requires women to abstain from work in a factory for a total period of eight weeks "before and after their confinement," and enacts that six weeks of this period shall elapse after childbirth. The intention, therefore, is that a woman should not do factory work for the fortnight preceding her confinement. According to M. Schuler, an inspector of factories in Switzerland, the beneficial effect of this law has been shown by the facts that pregnancy is now more likely to proceed to the normal term, and that the infants weigh more at birth (on the average about 10 ounces more), and that altogether the chance of survival of the infant has been increased. This is what we would expect; at the same time, as mothers who intend to return to work at the end of the six weeks' period would hardly be likely to start suckling their infants, and as it is to injudicious feeding in such cases that the chief injury is probably attributable, it is desirable to make some provision, such as has been suggested, to insure that infants who are thus deprived of their natural food shall have a wholesome substitute provided, at any rate during the first twelve months of their lives, when diet is of such supreme importance.

In France a Bill to deal with this question has been introduced into the Senate, but our well-informed contemporary, *La Semaine Médicale*, seems to have little expectation that this new measure will fare better than its predecessors, and it may be useful to consider the reasons given for this apprehension. M. Strauss considers, and our contemporary supports him in that opinion, that a law which prohibited work for a certain period must contain a provision for compensating the woman for the loss of wages thus brought about.

In Germany and Austria the existence of a compulsory system of workmen's insurance renders the carrying out of such regulations comparatively easy. In Germany the working woman, when owing to childbirth she is compelled to abstain from industrial labour, receives, in addition to gratuitous medical assistance, etc., a sum equal to half her ordinary daily wages.

Voluntary assurance associations can doubtless do much good in this direction, but without some State system of assurance they are certain to prove insufficient. The whole matter is closely bound up with the greater question of compulsory assurance for the working classes against sickness, infirmity, and old age—a question many times referred to in these pages.

In Great Britain a great deal has been done by charitable institutions and by voluntary associations of workmen for assurance to lessen the uncertainties of the means of existence amongst the industrious poor. It becomes, however, every year more and more obvious that all this is insufficient to make up for want of State control. No system of State assurance is needed for the provident working man, who will take care of himself, by joining mutual associations, etc.; but it is for the very large class of improvident poor for which State control is required, so as to make every able-bodied man contribute something towards his support in case of sickness and old age.

In introducing a system of universal compulsory workmen's insurance this country would have the advantage of knowing the results of the schemes adopted in Germany. Some such system as the German one will, we believe, ultimately have to be introduced in England. The waste on the present Poor-law and private charity system is necessarily enormous, and we believe that the initial outlay required to introduce a State system of assurance will be amply repaid in the future by the good results which such a system will yield. Still we must also keep this point in view—namely, that while such a system of insurance would prove of great value at times when mothers are kept from work, either from illness or by reason of the restrictions mentioned, means should be devised to insure that infants are properly provided for when the mothers return to work. Further, in view of the fact that in the case probably of the majority of young married women who work in factories in this country, their husbands are also earning good wages, it is but reasonable to expect that local authorities who either voluntarily or compulsorily provide such means should make a reasonable charge upon the parents towards defraying the cost.

THE LONDON WATER QUESTION.

Last week the President of the Local Government Board received a deputation from the London County Council, Mr. Dickinson, the new Chairman of the Council, was the spokesman, and in a moderate and able speech pressed Mr. Chaplin to consider favourably the two Bills introduced this session by the County Council, one for the purchase of the eight London water companies' undertakings, and the other for the acquisition of a water-bearing area in Wales. The duty of advising Her Majesty's Government to support or to throw out these Bills is one of extreme gravity alike from the point of view of municipal government and from that of the sanitary requirements of the largest city in the world.

In earlier years Governments have excused themselves from grappling with the London water question because no responsible central governing body for London was in existence. That excuse vanished with the institution of the London County Council in 1888. The present Home Secretary in 1891 presided over an important Committee which recommended that the London County Council should promote Bills for constituting itself the water authority for London, and at the same time intimated that any difficulty which might arise from the area supplied by the companies overlapping the area of the Council's jurisdiction should be met by some arrangements for severance of the rules of distribution or even possibly of the sources of supply.

The nine years which have since passed have witnessed numerous attempts by the Council to obtain legislation to carry out these suggestions. In 1895 the Council's Bills passed a second reading, and were apparently likely to emerge successfully from the Committee stage when a change of Government put an end to the project for a while.

In the following year, on the advice of the present Government, similar Bills were thrown out on second reading by a majority of 162, and the Government, through Lord James, introduced into the House of Lords an alternative plan of a Water Board charged with deciding as to the future policy as regards London water supply, and invested with authority to carry such decision into effect. The Government Bill was withdrawn in consequence of the opposition of representatives of the "outside areas" accorded a minority representation on the proposed Board.

Once again the County Council endeavoured, as numerous other municipalities had done, and done successfully, to carry Bills for purchasing the water companies. Mr. Chaplin, on behalf of the Government, proposed yet another Royal Commission, more particularly to advise on the question of purchase and the mode in which it should be effected, if thought desirable. This was Lord Llandaff's Commission, which has now reported in favour of purchase, being of opinion that private ownership of London's water supply should cease, and that on every ground of quality, quantity, and pressure the supply would be better in the hands of a public body. The Commission, however, did not approve of the London County Council being the metropolitan water authority, and doubted the need or wisdom of placing upon the present generation the expense of bringing water from Wales.

On the question of purchase, apart from that of the composition of the water authority, the County Council's contention is now supported by the weight and authority of the Royal Commission, and Mr. Chaplin informed the deputation last week that he was "not prepared to disagree upon that point." As to the water authority, the Chairman of the County Council showed a sweet reasonableness which cannot fail to dispose the Government to meet it in a conciliatory spirit. If anything is to be done this session, owing to the necessary notices required, it can and must be done through and by the Bills of the County Council.

Mr. Chaplin thus has a unique opportunity of solving a long-standing problem in a manner worthy of a Minister of Health and the head of local government in this country. His reply to the deputation was not altogether encouraging. He pleaded for more time to consider the evidence taken by Lord Llandaff's Commission, though he claimed to have studied its report very carefully. He did not wish to be misunderstood, "or to hold out any hopes with regard to which the County Council may find themselves to be afterwards disappointed." As purchase is no longer in question, and as the County Council is willing to consider any reasonable suggestion as to the nature and composition of the proposed authority, it is difficult to see why Mr. Chaplin should not accept the Council's purchase Bill so as to make at least some progress in the present Parliament. The explanation appears to be contained in the close of his reply to the deputation. He said, "I ought to say that other views of an opposite character have been already pressed upon me, and pressed upon me from quarters to which I am bound to attach very considerable importance." This influential counterblast, it appears, proceeds from the Unionist metropolitan members. The influence of the water companies in the House of Commons is very powerful, and is not exercised with a single eye to the public welfare.

The London County Council, as a body responsible to London ratepayers on London questions, is by an enormous majority committed to putting an end to private ownership of London's water supply. In this policy it has the support of the community at large; it has no axe to grind, and it would be a misfortune if the President of the Local Government Board proves himself too weak to press forward this long-delayed reform.

RESIGNATION OR SIR WILLIAM GAIRDNER.

Sir William Gairdner has this week made an announcement which will be read with regret by a very large number of friends and old pupils in all parts of the world. After much consideration he has determined to apply, in the course of the present summer, to the University Court to relieve him of the office he holds as Professor of Medicine in the University of Glasgow. We understand that the reasons which have induced him to come to this decision are not any diminution of the enjoyment of his work as a teacher of medicine—for the class room and the hospital remain the greatest of his occupations and the source of the most profound satisfaction—but that he feels that at a time when medical science in its immediate relation to the healing of disease is making progress by leaps and bounds, and when in particular the new science of bacteriology is ever increasing in its range of application both in diagnosis and treatment, failing eyesight renders it difficult for him to read the enormous literature of the subject or to verify the statements of others by the personal use of the microscope. It is understood that Sir William Gairdner's resignation will not take effect until after the summer graduation; he will thus take part in the final examinations, and his successor will be installed in time for the winter session in October next.

THE VICTORIA CROSS.

We are glad to see that our recent observations on this important matter have not escaped official notice. In reply to Mr. Allhusen, Mr. Powell Williams said: "The qualification for the Victoria Cross is defined by Royal Warrant to be 'conspicuous bravery or devotion to the country in the presence of the enemy.' There is nothing in this to preclude the Cross being given for an act done in pursuance of orders. The recommendations, however, must come from the officer in command, who must judge whether the act is such as, in his opinion, to merit the Cross." This authoritative statement entirely covers our arguments in a recent paragraph, and upsets Sir Redvers Buller's latest gloss on the Royal Warrant, which interpretation has by no means met with the concurrence of either experts or of the public. It is true that the officer in command is the judge whether a given act deserves recommendation for the Cross; but at the same time the public would most strongly resent any capricious exercise of this practical veto by any commanding officer. We are greatly pleased to see that the heroic conduct of Lieutenant Douglas, R.A.M.C., at the terrible battle of Magersfontein is mentioned in Lord Methuen's despatch, and although no recommendation for the Cross is made, we trust that this will in due time follow. We have not yet seen Major Babtie's name officially mentioned, but trust that will yet follow. The public will be careful to watch for what and on whom the Cross is bestowed; and whether it is given, as hitherto, and according to the terms of its institution, without distinction as to corps, title, rank, or status.

PROHIBITION OF SPITTING IN THE STREETS OF PARIS.

We have more than once called attention to the dangers likely to arise from the filthy habit of spitting in the streets, and we have endeavoured to awaken our sanitary Ediles to a sense of their duty in this matter by setting before them the example of the United States. Charles Dickens gave our American cousins a bad name for promiscuous expectoration in public places, but we may now learn of them how to put down this revolting nuisance. In many of the principal cities of the United States spitting on the "sidewalks" or pavements is forbidden, and the prohibition is rigidly enforced. Not long ago a millionaire was fined in Chicago for infringing this regulation, and a prominent citizen of Philadelphia was, if we remember aright, imprisoned for a like offence. We now have a good example nearer home. At a meeting of the Paris Municipal Council on March 16th, M. Fortin brought forward a proposal that spitting in the streets of Paris should be forbidden under penalty of fine, or in default imprisonment. He painted the dangers of the dissemination of tuberculosis by means of the sputum so forcibly that he convinced his colleagues almost against their will, and roused them to take action for the suppression of the noisome and disgusting practice. Those who wish to spit when out-of-doors in Paris will henceforth have to do so in the decent privacy of a public lavatory. The Council has voted a sum of money for the purpose of setting up notices in the streets for the information of wayfarers, and the ordinance against spitting is to come into effect with the least possible delay. We commend the example of the Paris municipality to the London County Council, which has shown sufficient enlightenment in the direction of sanitary reform to make it surprising that in a matter of elementary hygiene it should lag behind other great cities.

THE BERLIN ACADEMY OF SCIENCES.

The Royal Prussian Academy of Sciences in Berlin completed its second century of existence on January 25th, when an open meeting was held and the work achieved by its members during the last hundred years was commemorated. The more formal celebration of its bicentenary began in Berlin on March 19th, when the members of the Academy and the delegates from foreign countries, who had attended to do honour to the Academy, were received by the Emperor in the presence of the German Crown Prince, many princes of the Prussian and other German royal houses, foreign ambassadors, the Imperial Chancellor, and the Ministers and Secretaries of State. The Emperor delivered an allocution, in the course of which he said that the Academy had completely fulfilled the expectations with which his ancestor, Frederick I of Prussia, had founded it. German science had developed in close connection with the universities, for, as the immortal Helmholtz had said, academic teaching and intercourse with the students furnished abundant sources of energy for scientific research. At the same time, the organisation of scientific work by academies had proved an essential element of scientific progress. The Academy, indeed, was already a century old when the University of Berlin was founded; it had taken all knowledge to be its province, but had refrained from the pursuit of any matter unconnected with learning. On March 20th, at an extraordinary session, Professor Harnack delivered an address on the history of the Academy, and addresses of congratulation were presented by a number of deputations, among them being representatives of the Royal Society of London, the Royal Irish Academy, the Royal Society of Edinburgh, the Royal Asiatic Society of Great Britain and Ireland, the Smithsonian Institute of Washington, the American Academy of Arts and Sciences, and the Academy of Science in Paris. In acknowledging the addresses, Professor Diels said that the bicentenary of the Berlin Academy was contemporaneous with the birth of that international association of the academies of all countries, which he might call the "academy of the world." He sketched the objects of this association, and presented as one of the first-fruits of its labours the first printed sheets of the *Thesaurus Linguæ Latinæ*. The nature of this first-fruit affords an indication of the range of the Academy's work which is much wider than that of the Royal Society of London. Among the corresponding members elected on this occasion was Sir J. Burdon Sanderson, Bart., Professor of Physic in the University of Oxford.

THE END OF A FAMOUS SURGICAL CASE.

It may be remembered by those among us whose professional memory can carry them back a quarter of a century that in the mid Seventies there was much talk in the newspapers of a Frenchman who had swallowed a fork. The fork was successfully removed by M. Labbé, surgeon to the Charité Hospital, now a member of the French Senate, and the case is quoted in the books as marking a step in the development of the surgery of the stomach. The man, whose name was Lausseur, lately died, twenty-five years after the operation. He was an assistant in the Magasins du Printemps, a large drapery establishment, and he was in the habit of amusing his fellow employees by putting into his mouth down to the handle the big scissors—30 centimetres long—with which he cut samples. One day at luncheon in the early part of 1875, by way of what our ancestors would have called a "merrie and conceited jest," he introduced a fork into his mouth with the handle downwards, holding the points between his teeth and closing his lips so as to hide the fork. On opening his mouth to take it out again he drew in his breath, and the fork slipped down into the gullet. Attempts to seize it with forceps failed, and it finally found its way into the stomach. The affair for some weeks figured prominently in the newspapers. *L'homme à la fourchette* was the sensation of the day, and must have been a good advertisement for the Magasins du Printemps, for people wrote there from Russia, from America, and nearly every part of the world, asking for particulars of the accident and as to the condition of the patient. Lausseur, who was a man of cheerful disposition, did not allow himself to be depressed by the knowledge of the formidable foreign body which he had in his stomach. He actually composed a waltz about it, which he called "La Fourchette," and he used to sing it, accompanying himself on the piano. He did not, as a matter of fact, suffer so much inconvenience as might have been expected, and it was only when the fork got into an awkward position in the stomach that acute pain was caused. After a time, however, an abscess formed, which pointed under the umbilicus, and symptoms of constitutional disturbance showed themselves. M. Labbé opened the abscess and removed the fork, which he found projecting into the abscess cavity, the stomach being adherent to the abdominal wall. This was the first instance in which a foreign body was removed from the stomach by a surgical procedure, though it was not strictly speaking a gastrotomy.

THE TRAINING OF DEFICIENT CHILDREN BY SCHOOL BOARDS.

Dr. G. E. Shuttleworth, Medical Examiner of Defective Children for the School Board for London, in a paper on the training of defective children under School Boards, read recently before the Childhood Society, traced the formation of special classes for the instruction of dull, backward, and defective children to Germany (where they had existed since 1863), and stated that at the present time probably no fewer than 6,000 children were receiving special

instruction in Germany. In Scandinavian countries such instruction had existed for upwards of twenty years. In England the Leicester School Board had actually opened the first special class in April, 1892. The London School Board, which approved the system in March, 1891, and started centres of instruction in the following year, now has 2,125 children on the roll at upwards of fifty "special" centres scattered through the metropolis. The School Boards of Birmingham, Bolton, Bradford, Brighton, Bristol, Burnley, Halifax, Nottingham, and Plymouth have also established special classes, whilst those of Manchester, Liverpool, and Derby have determined to do so. It was claimed in Germany that many children considered hopeless in the ordinary school had been enabled by the special instruction to follow useful practical careers. In London Mrs. Burgwin had reported that after special training many children had been enabled to return to the ordinary standards, and a still larger number to follow useful employments. Much depended on the selection of suitable cases —neither imbeciles nor those simply backward from neglect. The diagnosis of mental deficiency was a matter for the medical expert upon the information of the teacher. The more teaching could be individualised the better the results, and Dr. Shuttleworth urged that classes should never exceed twenty pupils to one teacher, but ten would be better. Teachers required special preparation for this work, and a training college was wanted. The curriculum ought to be elastic in special schools, as manual training properly applied developed intelligence when mere routine teaching of the "three R's" was ineffectual.

M. DUCLAUX ON THE PREVENTION OF PLAGUE.

M. E. Duclaux, Director of the Pasteur Institute, speaking (in the *Revue de Paris*) of the means of protection against plague afforded by bacteriology, insists strongly on the necessity of destroying rats, fleas, and bugs as an essential preliminary. The extermination of rats and their parasites is, he says, a more effectual barrier than is generally believed against the invasion of the disease. In this matter Paris has set a good example by taking steps to destroy the millions of rats which infest warehouses, hospitals, and sewers. One of the means to this end which appears to be very effectual, is to sow among the rats a microbe which kills them, and is harmless to other animals. An experiment made with the sanction of the Prefect of the Seine has proved that this virus, sufficiently reinforced, could surely destroy all the rats in Paris. The experiment is to be tried again shortly on a large scale, and M. Duclaux predicts that if it succeeds there will soon only be a single sewer rat left, which will be kept, like the poor little wolf of the Capitol in Rome, in a cage, where it will be shown to visitors to the Exhibition. M. Duclaux suggests further that preventive inoculations should be largely practised. The whole population of a seaport should be vaccinated. M. Duclaux draws an impressive picture of the inhabitants of Marseilles assisting without fear at the disembarkation of the plague on the Quay of La Joliette. He states that the Pasteur Institute will, by the end of the winter, be in a position to provide for all contingencies, but only on condition that the population shall not take fright if by chance some cases of plague should occur among them. If a panic arises the Montsouris reservoirs, filled with serum, would not suffice. M. Duclaux speaks highly of the work of Yersin, Roux, A. Calmette, Salimbeni, and Simond in connection with the plague, and of the conclusive results which their methods of serumtherapy have given in Bombay and Oporto. We cordially echo the praises which he lavishes on these investigators. But there is a greater than they whose name is conspicuous by its absence. French men of science are proverbially ignorant of what is done abroad even in their own departments of knowledge, but it is scarcely conceivable that M. Duclaux should never have heard of the work of Mr. Haffkine, to whom our possession of this means of protection against plague is mainly due. Mr. Haffkine was not only the pioneer in this province of applied science, but it is not too much to say that he has achieved more in the way of practical results than all the gentlemen mentioned by M. Duclaux put together. It is but a short time ago since all good Frenchmen seemed to make it a point of religion to look upon everything Russian as sacred. Has the union of hearts between Gaul and Slav already been dissolved? or is M. Duclaux haply unaware that Mr. Haffkine is by birth a Russian? It would almost appear as if the mere fact that Mr. Haffkine is prosecuting his beneficent work under the British flag is sufficient to make his name unmentionable to ears polite even among enlightened Frenchmen. Surely such miserable exhibitions of chauvinistic spite are grotesquely unbecoming in a scientific man.

COAL SMOKE ABATEMENT SOCIETY.

The annual report for 1899, with balance sheet and list of subscribers, has just been issued, and is of considerable interest, inasmuch as it records the proceedings of the Society during its first year of life. The chief work has been to put into action the machinery already provided by the law for the prosecution of offenders. The Society's inspector has been employed in making observations of smoke, reporting the same to the Committee, and giving evidence before the Courts having jurisdiction in the matter. He has since May last reported 1,250 observations in 12 parishes; and his 680 complaints laid before the vestries have led to great lessening or entire suppression of the nuisances complained of. Further good has been done by educating public opinion and stimulating interest in the object. The funds of the Society unfortunately permit the employment of only one inspector at present, and necessarily restrict the benefits achieved by the Society in the above direction. The other object which the Society hopes to effect is the lessening of the smoke from the vast number of chimneys of the private dwellings of London. This task is vast, but not, we believe, impossible.

A MODEL SURGICAL AMPHITHEATRE.

In the British Medical Journal of March 31st, 1894, a description, with illustrations, was given of the Policlinico Umberto I, the vast pile of buildings in Rome which have been in course of erection since 1893, and are intended to serve all purposes of clinical teaching. One of the most important of the later additions is an operating theatre designed by Professor Durante, Senator of Italy, and head of the surgical clinic. During a recent visit to Rome a party of British physicians and surgeons visited the clinic, and were greatly struck by the arrangements and by the work which they saw there. Professor Durante impressed them as a bold and brilliant operator, full of resource and originality. He practises rigid asepsis, but applies no antiseptic dressings or fluids to wounds. He washes all wounds with plain boiled water, and applies non-medicated cotton-wool or gauze dressings. By the excellent results attained he is justified in his line of treatment, which is merely the Listerian doctrine rigidly enforced—namely, cleanliness. Durante's method is cleanliness without irritating medication: in fact asepsis without antisepsis. In his operating theatre the seating accommodation for students and visitors is completely separated from the operating table area; a glass screen, hermetic in its imperviousness, is interposed between the onlookers and the operator and his assistants. The theatre is arranged in a horse-shoe fashion, and the glass partition extends from roof to floor, and follows the horse-shoe outline of the front seats. In this way "septic" visitors or students can be admitted to the operating theatre seats without fear of carrying infection, as the ventilation of the partitioned areas does not in any way communicate. By many the

rigorousness of this exclusion is considered unnecessary, but when the danger of infection to wounds, say, of the peritoneum, by students fresh from a *post-mortem* examination or a dissecting room is taken into account, the precaution can hardly be said to be too severe. Many foreign post-graduate students wish to attend the surgical operations and the pathological rooms, and it is only by the adoption of some such method as that followed in the Policlinico at Rome that an attendance at both can be justified. We may add that the idea of an operating room divided by an impervious glass partition into an aseptic sanctuary, and an outer place for the *profanum*, or at any rate possibly *septicum*, *vulgus*, is not new. There is or was an operating theatre of the kind in Madrid, devised by the late Marquis del Busto, who was then chief of the surgical clinic in the University of Madrid. A full description of this theatre, which was called by its inventor *Quirofano*—a term apparently intended to mean a surgical transparency—was given in the British Medical Journal of February 25th, 1893.

THE STUDY OF MALARIAL FEVER.

The second malarial expedition, promoted by the Liverpool School of Tropical Medicine, left Liverpool on March 21st, in the steamship *Olenda*, for Old Calabar and South Nigeria. The expedition consists of Dr. H. E. Annett, Demonstrator in the School, and Drs. Elliott of Toronto, and Dr. J. E. Dutton, who have been studying in the school. The expedition will continue the work commenced by that which, under the direction of Major Ronald Ross, visited Sierra Leone, but will give special attention to the very practical object of finding the best solid substance or powder for preventing the breeding of *Anopheles* in surface puddles. Before the expedition started a letter was received from the Colonial Secretary expressing his appreciation of its objects and stating that he would do all in his power to secure for it the assistance of Government officials in the West African settlements. Mr. Chamberlain's kindly wishes will be much appreciated by the members of the expedition, and his official recommendation will doubtless be of great value to them. But we could have wished that his approval had taken the more practical form of contributing towards the expenses of the expedition. The members will receive a small salary from the Liverpool School of Tropical Medicine, but it must be remembered that the work before them is to be carried out in districts notoriously unhealthy, and therefore at considerable risk. The gentlemen who are thus sacrificing time and immediate prospects are really carrying out Imperial work, and it would be only right that the Imperial Government should offer them some modest remuneration to augment the salaries which private enterprise has supplied. It may be well to remind the Colonial Office that the expenses of the expeditions sent out by Germany have been entirely defrayed by the German Government. We are asked to state that the Committee of the School has decided to admit qualified medical women on equal terms with male students. As a large proportion of medical women find their principal field of work in India and the tropics, this decision is a matter for congratulation.

THE TREATMENT OF LEAD POISONING.

A conference to discuss the electrical method of treating cases of lead poisoning was held on March 14th at Trentham, by the invitation of the Duchess of Sutherland. There was a large attendance of the medical profession, and the chair was taken by Dr. McAldowie. Dr. Lewis Jones said that the cases seen at St. Bartholomew's Hospital, London, from the Potteries, were remarkable on account of the comparative youth of the patients and the severity of their paralytic conditions. They were, however, more amenable to treatment than the more chronic cases in painters and plumbers, because the poisoning had gone on for a shorter time. On the commencement of electrical treatment some improvement began for the most part immediately. Wrist-drop from lead was slow to yield to any treatment, and electricity should not be condemned because it had not cured the patient after five or six applications. It was often necessary to persevere with it for three, or even six, months, or longer, in order to obtain the full benefit which could be secured from electricity. There was a tendency to regard electrical treatment as of little or no use in lead cases, and to think that any improvement which might take place was due to lapse of time and natural causes. Electric baths had been recommended for the extraction of lead and of mercury and other metals from the body, but Dr. Lewis Jones remarked that the treatment of the paralysis and the elimination of the metal were independent of each other. The mode of action of the electricity was by its effect as a stimulant to the nerves and muscles involved and to their blood supply. The routine method of treating wrist-drop caused by lead at St. Bartholomew's Hospital was as follows: Arm baths of stoneware were filled with warm water, the patient immersed the forearms and hands in them, and a current was passed through the water and the limbs. An alternating current from the electric-light mains was used, the pressure being reduced by a transformer from 100 volts to from 12 to 16 volts. Alternating currents had a valuable therapeutic influence upon muscles which did not contract to them, and lead cases did extremely well when treated by the alternating current from the mains, or by the interrupted current from the coil. As it was far easier to provide an arm bath than a full-length bath, it was obviously of great importance to take the cases as soon as possible before the paralytic condition had extended to other portions of the body. Where the alternating current was not laid on from the mains an alternating current could be generated by means of a small electrical generator. Failing all these, recourse might be had to the induction coil. Dr. Armytage showed three cases, and Drs. Alcock, Armstrong, and Prendergast also spoke.

THE FRENCH NATIONAL COMMITTEE ON TUBERCULOSIS.

A meeting of the recently-formed French Commission on Tuberculosis has been held at the Ministry of the Interior under the presidency of M. Waldeck-Rousseau. The chairman suggested that the Commission should without delay consider the question of the establishment of sanatoria, and he expressed the hope that poor patients would readily find admission into these institutions. The Commission, for practical purposes, has divided itself into two subcommittees, one on prophylaxis, the other on therapeutics. Professor Brouardel is the chairman of both subcommittees, the vice-presidents of that on prophylaxis being M. Louis Lucipia, President of the Municipal Council of Paris, and Dr. Roux, of the Pasteur Institute; while Dr. Proust, Inspector-General of Sanitary Services, and Professor Lannelongue, are the vice-presidents of the therapeutic subcommittee.

SANATORIA FOR THE POOR IN FRANCE.

The new philanthropy is adopting Napoleon's principle of making war support war. By this method the means of providing for the treatment of poor consumptives are obtained by levying tribute on their wealthy fellow-sufferers. The Œuvre Nationale des Tuberculeux et Infirmes Pauvres des Campagnes is the name of a new movement recently started in Lyons. Its object is to help country hospitals and sanatoria for poor consumptives by applying for their benefit a large proportion of the profits of hotels and sanatoria for paying patients. It is intended

to make a beginning by making an electric tramway from Brindas to Yzeron in the Lyonnais mountains, erecting a hotel with accommodation for 100 persons at Yzeron, and a sanatorium for the same number five kilometres beyond that place in the Vangueray Commune. The largest part of the profits of these undertakings will be devoted to the maintenance of the rural hospitals of the district and of the Hauteville sanatorium. It is expected that this establishment will be opened by the President of the French Republic some time in the course of the present year.

CHAIR OF CLINICAL SURGERY, GLASGOW UNIVERSITY.

The Glasgow University Court have appointed Dr. Hector Clare Cameron to fill the Chair of Clinical Surgery in the University, vacant by the resignation of Professor George Buchanan. Dr. Cameron is a native of Glasgow, and received his education at the University there. He graduated M.B. C.M. in 1866 and M.D. in 1868, and two years later became a Fellow of the Faculty of Physicians and Surgeons of Glasgow. Immediately after graduation he was chosen as chief assistant to Lord Lister, then Mr. Lister; and in subsequent years he has held appointments as Surgeon to almost every public institution in Glasgow. Since the opening of the Western Infirmary Dr. Cameron has held the position of Surgeon to and Lecturer on Clinical Surgery in that institution. He is at present the President of the Faculty of Physicians and Surgeons of Glasgow, and has for a number of years been a member of the General Medical Council.

A HEALING HORSE.

When Napoleon was asked by Madame de Staël whom he considered the greatest woman that ever lived, he said: "She that had the most children." In a similar spirit, though with the appropriate difference in the point of view, a bacteriologist might say that the greatest horse in history was not Bucephalus or Copenhagen, but the one that had supplied the most serum. We therefore make no apology for introducing to our readers an animal whose claim to this honour seems to us very great. Our Cuban contemporary, the *Cronica Medico-Quirurgica de la Havana*, which has a bacteriological laboratory of its own, has a horse attached thereto with the following interesting record. It was presented to the laboratory by Don A. Saavedra in January, 1895, when it weighed 600 lbs. It was forthwith immunised, and since then has received a total amount of 5,210 c.cm. of toxin. It has undergone 37 bleedings to 4 litres, making a total quantity of 148,000 c.cm. of blood withdrawn. This blood has yielded 74,000 c.cm. of serum, and taking 40 c.cm. as the average amount used in the treatment of a single case of diphtheria, 1,850 individuals have benefited by the remedial substance supplied by this one animal. One gathers, though it is not expressly stated, that the horse has not suffered in health from the bleedings. There can have been few horses since the beginning of human history that have deserved better of mankind than this Cuban sorrel nag. Caligula wished to make his horse Consul; surely this one deserves a statue.

PLAGUE IN INDIA.

There would now appear to be no doubt that to the other troubles under which India is suffering is to be added a serious increase in the extent of country now infected by plague. The disease appears to have become epidemic in Calcutta, and in that city as well as in Karachi and Bombay the total mortality from all causes is also rising during the present outbreak. It has been frequently noticed in every city where plague has prevailed previous to the present recurrence in India that the general death-rate of the community declined, and the public health, except for plague, remained good. In India, however, wherever plague appears, it is now accompanied by a serious and in many cases an alarming general increase of mortality. It may be that the prevalence of famine accounts for this peculiarity, or it may be that returns are being falsified, and that plague is the real cause of death in many cases returned as fever, pneumonia, respiratory diseases, etc. There is no doubt, however, that small-pox is increasing the death-rate to a marked extent in both Bombay and Calcutta. Mr. Haffkine's method of inoculation against plague has received the stamp of approval from the Indian Government, and is commended in the highest terms. In view of the increasing virulence of plague, and the fact that its visitations continue longer with each recurrence, the opinion of the Indian Government, based upon the report of the recent Commission, is opportune.

HOLDERS OF MIDWIFERY CERTIFICATES.

As Clause 3 of the Midwives Bill now before the House of Commons would recognise the certificates in midwifery granted by the Royal College of Physicians of Ireland and by the Obstetrical Society of London as entitling women to be certified by the Medical Board proposed to be established under the Bill, we have addressed communications to the authorities of these two institutions requesting information as to the number of women who now possess their certificates. We are informed that the number of women possessing the certificate of the Obstetrical Society of London is about 4,390. The Registrar of the Royal College of Physicians of Ireland informs us that at the present time 49 women hold the certificate in midwifery of that College, but he adds that since July, 1899, his College "has ceased to grant a qualification to midwives."

At the meeting of the Hunterian Society on Wednesday next Dr. Dundas Grant will deliver a Presidential address on Traps and Pitfalls in General and Special Practice.

The annual meeting of the London Medical Graduates' College and Polyclinic will be held under the presidency of Sir William Broadbent on Wednesday next at 6 P.M.

We regret to have to record the death on March 19th of Dr. Robert Cory, one time Assistant Obstetric Physician to St. Thomas's Hospital, better known as the Director of the Animal Vaccine Establishment of the Local Government Board.

The Queen has been pleased to appoint Lord Lister, Surgeon-Extraordinary to Her Majesty, to be Serjeant-Surgeon-in-Ordinary to Her Majesty, in the room of Sir James Paget, Bart., deceased. The Queen has been pleased to appoint Mr. Frederick Treves to be one of the Surgeons-Extraordinary to Her Majesty.

The *Minutes of the General Medical Council* for the year 1899, forming volume xxxvi, have been issued, and can be obtained from Messrs. Spottiswoode and Co. through any bookseller, price 12s. The volume contains over 850 pages, the bulk being due largely to appendices containing the reports by the Examination Committee on the examinations of the Apothecaries' Hall, Dublin, and the reports of the Education Committee, especially that on the raising of the standard of preliminary examinations. There are also reports by the Medical Aid Associations Committee, by the President on the proposed increase of penal powers, by the Committee on the prevention of personation, and a narrative of the proceedings in the case of the late Mr. H. K. Hunter.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Midwives Bill was down for consideration by the Grand Committee on Law, on Friday, March 23rd, and the result of its deliberations cannot be known before the JOURNAL goes to press. Among the amendments to be considered by the Committee are those approved by the Council of the British Medical Association, at its special meeting on Wednesday. These will be found in the report of the meeting of the Council published on page 731. So far there has not been much talk in the House about this Bill; the interest of members generally has not yet been stirred up sufficiently to promise any effective opposition. At one time the county councils seemed to be alarmed at the duties and possible expenses imposed upon them in connection with the Bill, and this threatened to become a source of considerable difficulty to the measure in Committee. The Local Government Board have drafted amendments to meet the difficulties of administration, and if these are sufficient to reassure the members who speak for county councils, the opposition in Committee will be considerably lessened. We publish the amendments below. The Bill will be in charge of the Committee of Council on Education so far as the Government is concerned, and Sir John Gorst in the Commons and the Duke of Devonshire in the Lords will be the Ministers to declare the views of the Government.

The Expenses under the Midwives Bill have received the attention of the Government, and notice was given by Sir John Gorst late on Wednesday to set up a Committee to consider as to authorising the payment, out of moneys to be provided by Parliament, of such expenses as the Treasury may certify to have been necessarily incurred by the General Medical Council, under any Act of the present session, to secure the better training of midwives, and to regulate their practice (Queen's Recommendation signified).

The Government Amendments to the Midwives Bill which have been put down by Sir John Gorst are as follows:

Clause 5, page 3, line 26, leave out from "should" to end of clause, and insert,—

"The Board shall, as soon as practicable after the thirty first day of December in each year, publish a financial statement made up to that date, and certified by a chartered accountant as correct, showing the receipts and expenditure, including liabilities, of the Board during the year. The Board may apportion between the councils of the several counties and county boroughs any balance against the Board shown in the financial statement in proportion to the number of midwives licensed during the year to practise in those areas respectively, and may recover from the councils the sum so apportioned."

Clause 6, page 3, line 30, leave out sub-section (1).

Clause 9, page 4, line 42, leave out "practising," and insert "licensed during the previous year to practise."

Clause 10, page 5, line 10, after "county" add "and any expenses incurred by a district council in the execution of any powers or duties so delegated shall, to an amount not exceeding such sum as may be prescribed by the county council, be repaid to such district council as a debt by the county council, any excess above the sum so prescribed shall be borne by the district council as part of their ordinary expenses. The provisions of this section shall apply to the administrative county of London in like manner as if each metropolitan borough were a county district and the borough council were the district council of that district."

Clause 11, page 5, line 21, after "county" insert "or county borough."

Clause 14, page 6, line 13, leave out from "out" to "funds." in line 14, and insert "by the council."

Clause 14, page 6, line 14, after "county" insert "or county borough."

Page 6, after Clause 15, insert the following clause:

"Any expenses under this Act payable by the council of a county or county borough shall be defrayed out of the county fund or out of the borough fund or borough rate, as the case may be."

The Army Medical Department was discussed in Supply last week on the vote of £355,000 for medical establishments. Dr. Tanner, Dr. Farquharson, Mr. Price, Mr. Arnold Forster, Sir Walter Foster, and Mr. Wyndham all spoke at some length. The general outcome of the debate was remarkable for the high opinion expressed on all sides of the excellent services of the Royal Army Medical Corps. It was described as the one department which had been uniformly successful in the South African campaign. Some disappointment was expressed at the increase of only six medical officers for the army, which was relatively much too small. Some serious criticism was passed on the lax system of examination which allowed men suffering from chronic disease to be sent out, and the BRITISH MEDICAL JOURNAL was quoted as authority for the statement that many such men had arrived at Capetown. The makeshift system of relying on civil surgeons was condemned, and the appointment of consulting surgeons warmly commended; but it was pointed out that it was unnecessary generosity to rate alike as regards salary the most distinguished surgeons and other gentlemen who had been selected to assist them. With reference to the prevalence of enteric fever, the Under-Secretary for War paid a high compliment to the advances in sanitary work made by the army medical officers, and pointed out that the mortality was much less relatively than in the Egyptian campaign. Suggestions as to the form of examination now in force for candidates for the army medical service, and the importance of allowing "study leave" so as to enable medical officers to keep abreast of medical progress were made and promised consideration. On the whole the debate was one of the most satisfactory for the Royal Army Medical Corps in recent years.

The Sick and Wounded from South Africa, it appears from an answer made by the Under Secretary for War to Sir E. Vincent, amount up to the present to about 2,000. For those who required it accommodation has been found in military hospitals, and many have been sent on sick furlough. The War Office has issued a circular to the various town and county hospitals, asking what number of beds could be provided for military patients in case of necessity, and a very favourable response has been received. So far no need for civil hospital accommodation has arisen, and there is no necessity to keep beds vacant, as ample notice will be given when beds are wanted.

The Convalescent Wounded.—Some interesting figures were given last week of the wounded who have recovered up to February 2nd. The officers wounded numbered 261; the non-commissioned officers and men 4,583. Of these 67 officers and 705 non-commissioned officers and men have returned to duty. The figures are exclusive of casualties at Ladysmith and Kimberley since investment.

Volunteers for Ambulance Service who are recruited by the St. John Ambulance Brigade are, it seems, required to have a maximum height of 5 feet 10 inches, in order to obtain bearers whose heights did not greatly vary. Free discretion is, however, given to accept suitable men, although above the above-mentioned height.

The Teeth of Army Recruits formed the subject of a question last week by Mr. Weir, and it appears that the 25 per cent. rejections on account of bad teeth in the navy is by no means reached in the army, for which the percentage was only 7.74 of those rejected, and 2.5 per cent. of those recruited.

Death Certification.—Sir Walter Foster called the attention of the President of the Local Government Board to the unsatisfactory state of the law as regards death certification, and asked if the Government could introduce a Bill this session to carry out the recommendations of the Select Committee of 1893. The reply was that the matter was being considered by the Local Government Board, and that no promise of legislation this session could be given.

The Rating of Hospitals was raised by Sir Cameron Gull on Monday, who asked the First Lord of the Treasury whether, having regard to the representations made to the President of the Local Government Board, the Government would introduce a Bill this session to relieve hospitals from local rates. Mr. Balfour replied sympathetically, but said the matter was surrounded by considerable difficulty, and that the best plan would be to refer it to a committee of the House.

The Census Bill passed through Committee on Monday night without amendment, and, after several protests in favour of a quinquennial census, was read a third time. It was read a second time in the Lords on Thursday. The Irish Bill has so far failed to get a second reading in the Commons.

THE WAR IN SOUTH AFRICA.

THE RETREAT FROM SPEARMAN'S HILL TO CHIEVELEY.

By FREDERICK TREVES, F.R.C.S.,
Consulting Surgeon with the Forces.

Chieveley Camp, by Colenso, February 23rd, 1900.

SEPTIC INFECTION OF SHELL WOUNDS.

As I mentioned in my last letter, we had great trouble at Spearman's Camp with the number of shell wounds. They suppurated without exception, and a few secondary amputations became necessary. Moreover, the septic changes were apt to spread to simpler wounds which would, under ordinary conditions, have healed without trouble. We had 100 coolie attendants with the hospital. It was their duty to keep the camp clean, to take away and bury all soiled dressings, and to empty vessels containing discharges, etc. This work was well done, but the difficulties of keeping a field hospital free from septic influences were increased by the great heat and the plague of flies. Had we remained at Spearman's it would no doubt have been necessary to have changed the pitch of the camp. The latrine arrangements were on the earth-closet system with protected buckets, and were quite perfect.

RETIREMENT OF ARMY.

On February 8th the army began to retire, and we were ordered to move all our wounded at daybreak on February 9th. We had then about 150 cases in the hospital, and all of them would be described as serious. Indeed, they were cases whose removal to the base had been delayed as long as possible. All these patients had to travel a distance of twenty-five miles, in hot and dusty weather, across the veld and along roads that could only be described as comparatively fair.

HAND TRANSPORT OF SERIOUS CASES.

It was here, again, that the value of the excellent system of stretcher bearers introduced by Colonel Gallwey, P.M.O., came so prominently forward. The wounded were got ready before daybreak, and at sunrise every man was on a stretcher and the army of stretcher bearers was at hand. The whole of the 150 were carried by hand on stretchers from Spearman's to Frere, a distance of twenty-five miles. Each stretcher had a hood to protect the patient from the sun. Food and drink and other necessaries were taken, and the convoy was attended by a surgeon on horseback. No more perfect way of carrying the wounded exists, and we were pleased to hear that they all reached Frere without mishap, although one poor fellow—whose case was hopeless—died as soon as Frere was entered. This is, I think, a triumph, and the achievement would appeal to any who know what roads across the veld are like. At Springfield the bearers had to ford a river which enters the Little Tugela. Had the transport been made by ambulance waggons I am sure that both lives and limbs would have been lost and a terrible amount of suffering would have been occasioned. An ambulance waggon is built to stand very rough work and any kind of road, and is at best a very uncomfortable vehicle for a long journey.

SOME OF THE CASES TRANSPORTED.

Among the patients who were carried down on the 9th were several cases of interest. On February 3rd I had removed the "fore-quarter" (clavicle, scapula, and upper limb) for severe gunshot injury of the humerus and scapula. I employed Paul Berger's method. This man was among those who travelled to Frere, and I am glad to hear that he had a comfortable journey, and has since done very well.

On February 7th, at 11 A.M., I performed laparatomy for a gunshot wound of the abdomen involving the sigmoid flexure. No drain was employed, but the abdomen was well washed out. This man undertook this journey of twenty-five miles across country on the morning of February 9th—that is, within forty-eight hours of the operation. He not only reached Frere with comfort, but has since done well. In civil practice it would be a little novel to let a patient take a long journey on the second day after a laparotomy.

General Woodgate, whose case is assuming a little more favourable aspect, and who was more at ease after I removed the damaged eye, was among those who travelled down on the 9th. He was accompanied by his brother, who has nursed him with the utmost devotion since the day he was wounded.

THE RETURN MARCH OF THE HOSPITAL.

As soon as one field hospital was empty we began our march to Chieveley with, as before, seventeen oxen waggons. We reached Springfield at sundown, and there bivouacked, the nurses sleeping in ambulance wagons. We left at dawn, and bivouacked for the next night at Frere. On February 11th we reached Chieveley, and enjoyed the luxury of once more having tents over our heads. These marches were very tedious and trying owing largely to the great heat, the blinding sun, and the dust. Our stay at Spearman's Camp had extended to 3 weeks, and we had dealt with over 1,000 (one thousand) wounded during that period.

THE SOUND OF AN APPROACHING SHELL.

Before leaving Spearman's I had an experience of a shell which enabled me to appreciate the very marked dislike Tommy Atkins has to the sound of an approaching shell. I and Captain Begbie, R.A.M.C., had ridden out to visit one of the advanced field hospitals—hospitals whose officers have the heaviest duties, the greatest share of hardships, and I am afraid the least credit for their splendid work. This particular hospital had been shelled, and had just come in to what they hoped was a more sheltered position under Zwarts Kop. After a chat we left the hospital, clambered through a donga, and rode across a level green to the road. As we reached the road we heard the exceedingly unpleasant sound of an approaching shell from the Boers' big gun. This shell dropped on the green we had just cantered across, and some 250 yards from where we had pulled up our horses. The shell in question was unpleasantly near the hospital, and a second shell that burst shortly after was nearer still, and I am afraid our already tried friends had once more to move. There is no doubt that the Boer fire was directed at some waggons, and not actually at the hospital itself.

THREE MONTHS CAMPAIGNING.

I and my remaining nurse, Miss McCaul, have now been nearly three months at the front, during which time we have been under canvas with the same field hospital. We have moved as the head-quarters camp has moved, and have pitched our camp no fewer than six times, namely, twice at Frere, twice at Chieveley, once at Springfield, and once at Spearman's. As a comment upon the effect of camp life, I may say that when we started at Frere at the beginning of December the *personnel* of the hospital consisted of six individuals—three officers of the R.A.M.C., my two nurses, and myself. Out of the six, five of us have been laid up with dysentery, Miss McCaul being the sole individual to escape. Of the five who were sick, two only (the commanding officer and myself) managed to get well in camp. The remaining three were seriously ill, and were gradually removed to the base. It thus happens that of the six who started, only three are still with the hospital. The hospital has since we started increased in size, and the staff more than doubled by the appointment of a number of civil surgeons and of Netley sisters.

The Consulting Surgeons and the R.A.M.C.

I shall leave the hospital, when the campaign ends, with great regret. Major Kirkpatrick has proved himself to be an ideal commanding officer. He has shown us all the greatest kindness and consideration, and has spared no pains to make "No. 4" the smartest and best hospital in the field. We have borne the brunt of every engagement, and the hospital has never failed. My other colleagues, the civil surgeons, were not only the most agreeable of companions, but they were so keen and so efficient in their work that it was the greatest pleasure to co-operate with them. Those who prophesied that all sorts of trouble and disagreement would arise between the army surgeons and the civil surgeons should know that no more harmonious body of men ever worked together than did those who constituted the staff of "No. 4." Miss McCaul and the Netley sisters worked without ceasing, and many and many a wounded soldier will have reason never to forget the unstinted kindness and devotion of the sisters at "No. 4."

The Girl He left behind Him.

In conclusion I am reminded of one little incident which may interest those who are interested in the "Absent-Minded Beggar." Among the wounded brought in one day from Potgieter's Drift was a man of scanty clothing, who held something in his closed hand. He had kept this treasure in his hand for some eight hours. He showed it to the sister. It was a ring. In explanation he said, "My girl gave me this ring, and when I was hit I made up my mind the Boers should never get it, so I have kept it in my hand ready to swallow it if I was taken before our stretchers could reach me."

THE BOER AMBULANCE SYSTEM.

From our Special Correspondent in Capetown.

February 28th, 1900.

The Hospital at Jacobsdal.

I am indebted to Dr. T. G. Hall, a graduate of the University of Durham, who has been for some time District Surgeon of Jacobsdal, for some interesting particulars about the Boer system of attendance on the wounded at that place, which was the principal medical base for Cronje's force whilst barring the road to Kimberley.

At the outset of the war, Dr. Hall, who, I may mention, is not a Free State burgher, was appointed to work at this hospital. Jacobsdal is about a dozen miles from Modder River, about twenty from Magersfontein, about twenty-five from Graspan, and about forty from Belmont. The original hospital there was the schoolhouse. It consisted of three wards, having about fifteen beds each, an operating, reception, and administration room, dispensary, and offices. To this were added from time to time three adjacent cottages, each accommodating about ten patients. The whole was under the charge of Dr. Ramsbottom, the Principal Medical Officer of the Free State forces, with Drs. Bidwell and Hall as assistants. These were aided from time to time by the various doctors attached to the commandos in the field. For the last few weeks, however, Dr. Hall was absolutely singlehanded, the other medical men having been withdrawn elsewhere. The nursing staff at first consisted of the matron and two nurses from the Bloemfontein Hospital: later four other nurses from Bloemfontein and several Jacobsdal ladies were added. There were several ambulance men recruited from various places, but none of them had had any previous training, although two were chemists. One of the chemists was in charge of the *x*-ray apparatus. The supply of instruments was good. The fittings generally were fair, and the beds were spring mattresses sent from Bloemfontein and Pretoria.

The German Ambulance.

Just before the British occupation of Jacobsdal, the whole place was taken over by the German ambulance, which was splendidly equipped with the very latest appliances, including its own oil engine and dynamo for the *x*-ray. The staff of this ambulance consisted of three surgeons, four nurses, and five trained ambulance men, besides a man in charge of the *x*-ray apparatus. Operations were few. No major amputations were performed. Several fractures of the thigh and upper arm healed perfectly in two months. One case of a compound smash just above the ankle was very notable. The bone had been comminuted most extensively, and the wound of exit was very large. The patient was a man of the Lancers. The wound healed perfectly. It may be mentioned that the climate about this part of the country is dry, and favourable in every way to aseptic surgery and to convalescence.

The Boer Commando System.

To understand the general working of the Boer system of medical aid, one must look at the military system of the Republics. The units are commandos from each district, which act more or less independently of each other, and maintain their own *personnel* in everything. This organisation led to what is practically the old English regimental system of medical administration. Outside the hospitals there was nothing that one could call a departmental organisation. Each commando (or part thereof when divided, as was occasionally done in the case of large commandos) had a doctor attached, as long as the medical supply lasted, which was, in the case of the Free State, longer than with the sister Republic, owing to there being less prejudice against English surgeons. Each of these doctors had four to eight ambulance men, almost entirely without training, employed mostly as dressers. The bearers were generally Kaffirs. A spring waggon was used for conveying wounded. At Jacobsdal were three or four other spring waggons, which were sent out from time to time to the battle-fields. The surgeon remained with his commando, that is, actually with the fighting line. First aid was rendered to wounded men on the field, and splints roughly applied, but nothing of the nature of an operation was performed. The wounded were then at once transported either to Jacobsdal or to Boshof, or Koffyfontein, where hospitals similar to those at Jacobsdal were established. The surgeon of the commando usually accompanied his own wounded, and remained at the hospital for some days. This provided each hospital with a staff of floating assistants after each battle. At Magersfontein, which, as your readers know, was held for a long time, there were a certain number of what might be called "field hospitals," established in farmhouses when available, in tents when they were not.

It will be seen from this sketch of the medical arrangements on the Western Border—and they appear to have been substantially the same elsewhere—that the Boer organisation has been practically that of corps surgeons rendering first aid and stationary hospitals. On the Natal side there has been practically a base hospital added at Pretoria and Johannesburg. But no organised system of collection existed, and nothing that could be called a field hospital as we understand it. It is obvious that such a system, although it may have answered fairly well with Boers defending certain positions at which they remained for long periods, and from which they only retreated to points nearer their stationary hospitals, must utterly break down with large numbers of wounded over a shifting area of country, such as is the condition under which fighting is now going on in the Free State. Even earlier it has begun to break down, with the splitting up of the Boer force between the West, Colesberg, and the Eastern Frontier. The amount of suffering which such a "system" would bring about if the Boers moved far away from their base, and clear of a railway line, is awful to contemplate. But, on the whole, it seems to me that the Free State arrangements were better thought out than those of the sister Republic, and more honestly administered.

Management of Enteric Fever.

Curiously enough, these temporary hospitals, which I have called "field hospitals," were principally used for medical cases, some of the cases of enteric fever being treated there right through. But, as a rule, the patients were sent to Jacobsdal, where special enteric hospitals were extemporised out of the Dutch reformed and Kaffir churches. They accommodated together about eighty patients, and Dr. Hall had charge of all these most of the time, in addition to his other work. Dr. Hall tells me that enteric fever constituted the main part of the medical work, dysentery being, curiously enough, conspicuous by its absence. The dietetic treatment

of typhoid fever presented much difficulty, owing to the scarcity of milk. Dr. Hall tells me that he has had to make twenty-four bottles (imperial pints) go round sixty patients. Maizena and various makeshifts had to be used to eke out this scanty supply. Otherwise food was fairly plentiful.

The Boer Wounded.

Dr. Hall does not feel justified in giving me any statistics about the actual numbers of Boer wounded, but he took in at Jacobsdal most of the cases from Belmont and the succeeding battle. The most fatal cases were head wounds. Coinciding with our experience in Capetown, he found that perforating wounds of the abdomen, as well as those of the chest, did almost uniformly well. One unfortunate individual had a bullet wound right through the abdomen, shell wounds above and below the left knee, similar shell wounds above the left elbow, and a fracture of the left radius and ulna. He recovered most satisfactorily.

NOTES ON THE BASE HOSPITALS IN CAPE COLONY.

By Sir William Thomson,
Chief Surgeon, Irish Hospital, South Africa.

Capetown, February 25th, 1900.

Accompanied by Lord Iveagh's son, Hon. Rupert Guinness, I arrived here in the *Norham Castle* on Thursday last for service with the Irish Hospital. We were a day over the ship's usual time, for we had two bursts of heavy weather, and our earlier hopes of a good run were thus disappointed. Our last three days were unusually bad owing to a strong south-easter and a heavy head sea, but we came in sight of Table Mountain early on February 22nd, and by 7 o'clock we had heard of the relief of Kimberley.

Capetown has only one interest just now. The subject of the war pervades all conversation; the signs of it are present everywhere. There is a crowd of transports in the bay; in the streets khaki uniforms are many. I have seen here our own men from home, and the splendid soldiers whom New South Wales, New Zealand, Queensland, and Ceylon have sent to help. Some variety is lent to the monotonous khaki by the Indian *syces* who come in charge of horses from that country, men made conspicuous by their brilliant turbans, some wearing medals, some who will see war for the first time.

The Portland Hospital.

I was anxious to see some of the base hospitals here, and on February 23rd I spent some time at the Portland at Rondebosch. I was fortunate enough to meet Mr. Bowlby and some of his colleagues, and also an old friend from Ireland, Surgeon-Major Kilkelly of the Grenadier Guards.

Rondebosch is a suburb of Capetown, and the site for the hospital is alongside that of No. 3 General Hospital, on a clear, sandy ground, about 100 feet above sea level. There is a good water supply. Pines grow round about very freely, and the roads are pleasantly cool and otherwise excellent. The hospital is very well equipped. The operation tent is boarded, and in the kitchen concrete has been laid down as flooring. The cooking arrangements are very good. There are several ranges, but, of course, all this is only possible at the base. The tents are of the tortoise pattern. I found the men occupying excellent wire-woven beds, and nothing was wanting to make their comfort and convalescence secure.

Some of the cases were of especial interest, and I may mention a few of those I saw.

Perforating Wound of Upper Jaw and Neck.—A Grenadier Guard was in the firing line, lying prone as he took aim. A Mauser bullet struck him in the right eye, passed downwards and to the left through the soft palate, continued its course through the floor of the mouth, emerged from the neck at the anterior edge of the sterno-mastoid, and again entering above the clavicle smashed that bone. That happened at Magersfontein. To-day all the wounds are healed. There is not any indication of a scar about the eyelids. The bullet went in without touching either. The man suffers from huskiness, and Mr. Bowlby told me there was some laryngeal paralysis, but the patient is otherwise perfectly well.

Multiple Bullet Wounds.—Near him lay a man belonging, I think, to the Warwickshire regiment. A lieutenant and six men tried to storm a kopje, but it proved too great an undertaking and they had to retire. The patient was struck at the outer edge of the left scapula. The bullet emerged in front 2 inches above the nipple. He fell, and was immediately attacked by a Boer, who emptied the remainder of his magazine at him. One bullet entered above the left anterior superior spinous process, and coursed backwards through the muscles, and another went through the soft part of his left leg. This man was quite well, except that he had some blood in the left thorax. The wounds all ran an aseptic course.

Bullet Wound of Brain: Trephining: Recovery.—A young soldier was lying in bed looking as if nothing was the matter with him. He had been trephined five days before. When admitted he had a bullet wound in the vertex. He was partially insensible, but had no localising symptoms. His temperature then was 102°. The operation disclosed several fragments of bone embedded in the brain, and also part of the nickel covering of the bullet. He was quite free from fever or other symptoms, and he told me he felt all right.

Bullet Wound of Tarsus.—I saw another lad with an interesting injury. A bullet entered at the tip of the inner malleolus, passed slightly obliquely outwards and upwards, traversed the astragalus, and made its exit through the centre of the outer malleolus. The wounds were quite healed. All that remained were two scars of the area of the end of a lead pencil. The motion of the joint was all right, and there was no effusion of any kind to indicate a recent injury.

There had been four cases of fractured femur from bullet wounds. There was much bone splintering, but all had done well. Mr. Bowlby bore high testimony to the management of these cases at the front. All came down most carefully dressed; an aseptic case was rarely seen.

The Base Hospitals at Wynberg.

On February 24th I went to Wynberg, where I was glad to meet an old fellow-student, Lieutenant-Colonel Greer, R.A.M.C., one of the officers in charge. Later on, Mr. Makins, the Civilian Consulting Surgeon, joined us, and gave me much pleasure in the narration of the work being done at this great base hospital.

The name of Wynberg is so well known at home that it is unnecessary to do more than say it is eight miles from Capetown, and is normally the military camp. The range of large commodious huts have all been converted into hospital wards, and there is accommodation for 600 patients. The air is clear and cool, and there is a pleasant surrounding shade of pine trees, through which here and there views of the sea can be had.

There were not many serious cases in when I visited. There were two or three fractures of the femur, which were getting well slowly, but Mr. Makins believed the result would be good. In these and other cases where there had been much destruction there was considerable suppuration following necrosis, but the amount of shortening was very slight, and in some cases there was none.

Bullet Wound of Shoulder Joint.—An officer whom I saw had his left humerus divided through the surgical neck by a splinter of shell. There was of course a considerable wound. Mr. Makins determined to try to save the arm. Union of bone had taken place, and it is probable that there will ultimately be a useful arm. Nearly all the spinal cases have done badly.

I was interested to visit the Boer prisoners. They were a fine lot of men, and those of them who were out of bed were in high good spirits. I chatted with several of them about their injuries. I found that many of them belonged to European nationalities and that the pure Boer was only a percentage. These, however, all spoke English just as one hears it at home.

Perforating Lee-Metford Bullet Wound of Chest.—One man, a Dane, told me he was wounded at Magersfontein on December 11th. He was one of the Scandanavian picket, and he said that two-thirds of them were killed. He had a remarkable wound. The bullet entered just below the apex of the heart, and passing through the thorax came out at the eighth interspace on the right side in the mid-axillary line. He was out of bed, all the wounds were quite healed, and he appeared to be in good health.

Case of Snake-bite.—One boy, aged 17, told me he was in hospital for snake-bite. I learned that there had been much cellulitis of the hand and forearm, but he was recovering. He was taken at Elandslaagte. He said his father was in the Town Guard at Kimberley. Here was an instance of father and son fighting on opposite sides.

The prisoners occupied the same class of ward as our own men, and were treated in precisely the same way. They had comfortable wire-woven mattresses, mosquito curtains, etc., and the only indication that they were prisoners was the presence of a sentry outside the door.

All the wards were large, airy, well lighted, and well ventilated. So far as such comforts go, nothing could have been better.

Aseptic Wounds.

One of the facts which have been established thus far is the marvellous success which has followed the effort to keep wounds aseptic. It must always be remembered that the first dressings are made under the greatest disadvantages,

and that the patients pass quickly out of the hands of the surgeons at the front. They do not, of course, know what the results are in more than a tithe of the cases. At base hospitals such as Wynberg and Rondebosch the cases are treated to a termination, and it is high testimony to the efficiency of the work on the field that the results are so surprising.

Are Modern Bullets too "Merciful?"

Another fact is no longer new: that the modern smallbore bullet is more merciful than the bullet of the Snider or the Martini. Indeed, I have heard that a foreign *attaché* has expressed the view that there must be some reversion to older forms. Already the Boers have been trying to make their fire more deadly, not by using a soft-nosed bullet, but by splitting up the nickel covering so that it may spread and cause a more severe wound. Lord Roberts reports that such missiles have been found upon prisoners captured at Paardeberg. This may not be a general custom, but as I am under orders for Naauwpoort I may be able to inform you on this point in a future letter.

Sir William Mac Cormac.

I was glad to meet Sir William Mac Cormac on February 23rd. He had just come down from Kimberley. He has been very hard worked, and has been almost ubiquitous. He has well earned his rest, after most trying labour.

THE BASE HOSPITALS NEAR CAPETOWN.

From our Special Correspondent.

Capetown, February 28th.

Surgical Cases.

The German hospitals have had little new lately, except that a few cases from the neighbourhood of Colesberg, and now that No. 6 has been established at Nauuwpoort, these will probably be dealt with there. There will, of course, be a big rush during the next few days, at least this is anticipated, as No. 6 will hardly be able to absorb all the cases coming from Roberts's column, including, as they will, an enormous number of Boer wounded. I have had an opportunity of seeing several interesting convalescent surgical cases at No. 1 General Hospital during the last week. They show conclusively the excellence of the surgical work done.

Splinter Wounds of Shoulder and Neck.—One man who had been wounded at a place called Strydfontein had a curious mass of wounds about the left shoulder and neck. He was lying down firing, and the Boers were advancing. A bullet struck a rock close to him, and the shoulder and neck were absolutely riddled with largish fragments. He says that the place where the rock was struck was not more than four to six inches away from him. A number of pieces of rock and lead were taken out. The shoulder-joint escaped, and no nerves were injured, at least there is no paralysis.

Expanding Bullet Wounds.—This was evidently an expanding bullet, for a comrade was hit by the same Boer directly, the little finger being carried off, and then the jaw smashed in a way that could not have been done by a Mauser. That the Boers are using explosive bullets and expansive bullets largely is certain. The writer has in his possession quite a number of such taken from Boer bandoliers, including the murderous sporting Mauser cartridge—I mean the bullet which is used for elephants and such *feræ naturæ*.

Injury of Musculo-spiral Nerve.—In another case a bullet which had penetrated the chest, had then gone into the upper arm, and evidently injured the musculo-spiral nerve. The man has dropped wrist and other evidences of musculo-spiral paralysis, with impaired, but not abolished, sensation. In another case, the first part of the axillary artery had had to be tied on account of secondary hæmorrhage from a bullet wound penetrating the shoulder and emerging low down in the axilla. The case did admirably.

Shell Wound of Leg: Suppuration of Knee: Secondary Hæmorrhage.—I have seen again a case, which I reported in one of my earlier letters, of a shell wound of the leg with commencing purulent trouble in the knee-joint. This man's leg has had to be amputated in the middle third of the thigh, secondary hæmorrhage from the posterior tibial precipitating an issue which was impending on account of the effusion into the knee.

Comminuted Fractures of Humerus.—Another case at No. 1 General Hospital shows how admirably bone injuries are managed. A bullet, presumably soft-nosed, had entered the upper arm in front about 4 inches above the elbow-joint, and had emerged by a wound 3½ by 2½ inches behind, smashing up the humerus on the way. Fully an inch of the humerus was destroyed. This wound kept aseptic throughout, and after his arrival here there was no rise of temperature. The limb was put up in a poroplastic splint, and irrigated with sublimate solution, and is now rapidly healing.

Increase of Enteric Fever.

Cases of enteric fever are steadily increasing in number at the whole of the hospitals, but the disease, in proportion to the number engaged is not so large in Roberts's and Methuen's commands as on the frontier. This is what one would expect from the climatic conditions. I understand that it is very rife in Natal. The cases do, as a rule, fairly well, but as is observable always in this country, the temperature keeps up a long time. The medical officer in charge of the enteric fever ward at the Station Hospital informs me that he was struck with the much greater proportion of cases showing a rash than in civil practice in the Colony.

The Portland Hospital.

The following cases of interest in the Portland Hospital may be added to those published last week:

Another remarkable case in the Portland Hospital is one in which a bullet entered the right orbit, passed diagonally downwards and to the left through the soft palate, emerged just behind the left sterno-mastoid about at the level of the fifth cervical vertebra, then hit the left clavicle and glanced along it for about 1½ inch, splintering it on the way. The man has paralysis of the recurrent laryngeal, the left vocal cord being quite fixed, and Mr. Bowlby is convinced that the pneumogastric is divided, although there are no symptoms distinctly pointing to this. Considering the track of the wound and the laryngeal paralysis, Mr. Bowlby's inference seems incontrovertible.

Another interesting case in the Portland Hospital was one of trephining. A bullet or fragment of shell had entered the vertex just in the line of prolongation of the Rolandic fissure, but absolutely in the middle line, consequently no motor symptoms were observed. A good deal of bruised tissue came away, but the patient when I saw him two days after operation was absolutely *compos mentis* and conversing naturally, and had no elevation of temperature.

Compound fractures of the femur have been treated hitherto by simple extension and have done admirably. Both Mr. Bowlby and Mr. Wallace, however, intend using Hodgen's splint as soon as they can obtain them. As an illustration of the success of conservative surgery in this war, Mr. Bowlby informs me that not a single amputation of any kind has been performed in the Portland Hospital as yet.

The Medical Staff Corps.

E and F Companies of the Medical Staff Corps left on the 22nd, with Major Nichol in command, and Lieutenants Vaux, Fryer, Usherwood, and Brown as subalterns, the latter two being civilians drawn from No. 6 General Hospital.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XVIII.

Bloemfontein.

On March 13th Lord Roberts telegraphed to the War Office that "by the help of God and the bravery of Her Majesty's soldiers" the troops under his command had taken possession of Bloemfontein.

Bloemfontein, the capital of the Orange Free State, is in the middle of the flat grass plains constituting the inland plateau. In 1846 it was made the headquarters of a British Resident and a small British force, at a time when the Orange State was the Orange Sovereignty under British rule. It is now once more the headquarters of a British Resident and a British force.

The town stands on the plain, and has in its vicinity one of the continually-recurring South African kopjes, in this instance in the shape of a long flat-topped hill. The streets

in the town all run at right angles to one another, and nearly every house has its garden and trees shading it. The Presidency, now the headquarters of Lord Roberts, is a handsome modern villa with cactus, aloes, and other subtropical plants growing in its gardens. In many parts of the town trees are growing in the streets. Bloemfontein, and the country round it, stands at an elevation of 4,500 feet above sea level. It is, as many of the correspondents have already stated, a pleasant little town, and Bloemfontein, together with the Dutch farms in the vicinity, have often been recommended as particularly good health resorts for phthisical patients.

The natural features of the climate are extreme dryness of air, brilliancy of atmosphere, and continuous sunshine, with only an occasional thunderstorm in the summer. It is improbable that there will be any rain after this month; and for six months to come Bloemfontein will have over it a sky which seldom or never contains a cloud. The weather will become much colder about the month of May, and the tormenting half gale of the high veld will prove a not infrequent annoyance. At night it is not at all unusual to get sharp frosts, although the bright sunshine of the daytime invariably raises the temperature considerably over freezing point. In June and July, warm clothing is essential by day as well as by night. Of all garments for the soldier, there is nothing at this time of year so serviceable as a good thick sweater; he can wear it under his tunic by day, and sleep in it at night.

The physical features of Bloemfontein and the portions of the Free State in which it stands, together with its climate, are thus excellent. The country is about as healthy as Nature can make it; only man is vile. The sanitation of Bloemfontein is very far from perfect, and hence epidemics of typhoid fever have on several occasions occurred in the town. The system in vogue is the pail system, or removal of the night soil by night in waggons. This system is theoretically an excellent one, but the least carelessness in the sanitary service renders it both obnoxious and dangerous. In my experience, wherever this theoretically perfect system is in vogue, as it almost invariably is in all South African towns, the degree of carelessness necessary to produce the obnoxious and dangerous conditions referred to is always displayed. With regard to the water supply, I am not sufficiently well informed to be able to speak of it with certainty. Bloemfontein, however, as pointed out, stands on a flat country, and is at a considerable distance from any river, conditions not favourable to an abundant and liberal water supply. As illustrating the almost level character of the plateau between Kimberley and Bloemfontein, it is interesting to note that a difference in the altitude in these towns is only 140 feet, Kimberley being exactly 4,360 feet above the sea. Lord Roberts, in his telegram of March 20th, states that "the people of Bloemfontein are affording us every assistance in the matter of hospital accommodation, and we have consequently been able to arrange for 500 beds." A telegram from the *Times* correspondent states that the New South Wales Ambulance Corps, which is under the command of Major Fiaschi, Surgeon to the Sydney Hospital, N.S.W., has been placed in charge of these 500 beds.

THE BASUTO BORDER.

Travelling east of Bloemfontein towards Ladybrand the plains begin to rise more markedly until the strip of fertile country known as the "Conquered Territory," which was originally possessed by the Basutos, is reached. On the borders of this territory is situated the old missionary station at Thabanchu. Lord Roberts's despatch, published on March 19th, says that a cavalry brigade has gone to this district in order to reassure the inhabitants in that part of the country, and distribute copies of the proclamation laying down the conditions on which burghers will be allowed to return to their homes. Through this territory the country continues to rise until the valley of the Caledon river is reached. This is a swift stream with steep banks, and on the eastern side of it is the Switzerland of South Africa—Basutoland. The "Conquered Territory" is a magnificent piece of country with a climate almost as cool as our own. It enjoys clear skies, bright sunshine, very little mist, and its rain falls in storms. I once spent a fortnight travelling in this country and into Basutoland to the foot of the Maluti mountains. After the arid, sandy plains of the Modder River and Kimberley, it will be a comparatively cool and delightful land for our cavalry to find themselves in. The elevation of this district is about 5,000 feet above the sea, and its cool summer climate is much like that of the Johannesburg district in the Transvaal. The country is fertile, and the corn is grown readily without irrigation. In the midst of this country stands a beautiful and luxurious home, a rich man's hobby, a house which took over four years to build, situated in wild mountainous scenery, and surrounded by a million planted trees of every variety and shade of foliage. An instance of what the country is capable, and what its climate produces, it stands like an oasis in the veld. A few notes of this estate may be of interest. The owner is an Englishman, his wife the daughter of the missionary who founded the station at Thabanchu, who speaks Basuto like a native, and is beloved and almost worshipped by the Basutos. The house stands under a precipitous and weather-beaten kranz or cliff, and looks down over a wide-covered grass amphitheatre surrounded by hills. From the foot of a beautiful flower garden rises a great stretch of woods and plantations for some miles out into this natural amphitheatre. Here, in a naturally treeless country, firs, poplars, oaks, gum trees, ash, and the broom (*planta genesta*) all grow in luxurious abundance, a living monument of energy and enterprise. In the glades of these woods wander zebra and antelope, while from the trees come alternately the harsh cry of the guinea fowl and the cooing of the turtle dove. The bright plumage of the honeysucker flashes from flower to flower in the sunshine of the garden; overhead, above the trees, against the sky, the noblest of his kind, the blue rock pigeon cuts his swift way from kranz to kranz. From the cliffs behind the house away to the eastward, distant a day's journey into Basutoland, may be seen the broken serried peaks and rugged outlines of the Maluti mountains. In these mountains are peaks over 10,000 feet high, notably the Mont aux Sources. In these mountains to the north-east there rise the Orange, Tugela, and some of the tributaries of the Vaal rivers. They are a grand range, running parallel to and at only a short distance from the main line of the Drakensberg; they form the greatest mass and contain the highest peaks anywhere south of the Zambesi. On the slopes of these mountains and in the fertile valleys between them and the Caledon river the Basutos chiefly dwell. They are perhaps the most intelligent of the great Bantu race.

COLONIAL PRISONERS AT PRETORIA.

In my last letter I drew special attention to the treatment accorded by the Boer executive to the Colonial prisoners at Pretoria. Before that letter was in the press a question had been addressed on the subject to Lord Lansdowne, and an assurance given that, should the reports with reference to these prisoners be authenticated, strong representations would immediately be made.

THE SIEGE STATISTICS FROM LADYSMITH.

We have already had occasion to quote some few statistics with reference to the siege of Ladysmith. The Special Correspondent of the *Standard* now supplements the interesting despatches on this subject already received from him by the following, dated Ladysmith, March 17th:

In November the garrison consisted of 572 officers and 12,924 men. In March it had been reduced to 403 officers and 9,761 men. The admissions to hospital numbered 10,668, including 1,766 cases of enteric fever, and 1,857 of dysentery. The deaths were 600, including 393 from the former disease and 117 from the latter. The patients in hospital on March 1st numbered 1,996, 708 of whom were suffering from enteric fever, 341 from dysentery, and 189 from wounds. Other figures are as follows: Died of wounds, 59; killed in action, 18 officers, 193 men; killed in assaults and sorties, 17 officers and 160 men; killed by the bombardment, 2 officers, 33 men; wounded in assaults and sorties, 45 officers, 352 men. In November there were in Ladysmith 5,309 horses and 4,539 mules. At the end of the siege the horses numbered 2,000, of which only 500 were effective, and the mules 3,713. The rations which in November were issued for 40 days were, towards the end, made to extend over 120 days.

To make this statement absolutely complete it would be interesting to know whether the deaths from disease referred to occurred entirely among the officers and men of the garrison, or whether they include the deaths among the civilian population, European and native, of which there were a considerable number in Ladysmith. Until we are quite clear on this point it is impossible to work out exactly the death-rate, although it is quite obvious that in any case this was terribly high.

DEATHS FROM DISEASE.

In the BRITISH MEDICAL JOURNAL of March 3rd we had to record the rather rapid rise in the number of deaths from disease in the force in South Africa. In the week ending February 17th the deaths from disease numbered 50, but in the following week they rose to 117; taking the force to be about 180,000 men, this amounted to a death-rate of nearly 34 per mille per annum. In the week ending March 3rd the deaths from disease fell to 92, a death-rate of about 26.5 per mille per annum, but in the following week they rose again to 115, which would give a death-rate of about 33 per mille per annum. In the week ending March 17th they again dropped to 93, which gives a death-rate of nearly 27 per mille per annum.

SCOTTISH SOUTH AFRICAN HOSPITAL.

The members of the surgical and nursing staffs in uniform attended the military service in St. Giles Cathedral in the morning of Sunday, March 18th. The surgical staff, headed by Professor Chiene, were in khaki. An appropriate service was conducted by the Rev. Dr. Theodore Marshall, Acting Chaplain to the Forces. At the close of the service the medical staff marched to the Royal Exchange Square, where they were briefly addressed by Lord Provost Mitchell Thompson. They sail on March 24th. We understand that Miss Florence Nightingale has given a donation of £100 towards the funds of the hospital. Dr. Francis D. Boyd goes as Physician to the Hospital.

DESPATCHES.

The *London Gazette* of March 16th publishes despatches from Lord Roberts, forwarding the reports of Lord Methuen and Sir William Gatacre respectively, describing the operations on the Modder River on December 10th and 11th, 1899, and at Stormberg on December 10th.

In summing up the result of the engagements, and bringing to notice the services of officers, Lord Methuen says: "Major O'Donnell, Royal Army Medical Corps, and Lieutenant Delap, Royal Army Medical Corps, were indefatigable in attending wounded under fire.....Lieutenant Douglas, Royal Army Medical Corps, showed great gallantry and devotion under a very severe fire in advancing in the open and attending to Captain Gordon, Gordon Highlanders, who was wounded; also attending to Major Robinson and other wounded men under a fearful fire."

General Gatacre specially mentions only two of the officers who served under him at Stormberg, and beyond that he was accompanied by Lieutenant-Colonel Edge, Principal Medical Officer, has nothing to say of the medical officers present with him.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of April next, at 2 o'clock in the afternoon.

March, 1900. FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The spring meeting of this Branch will be held at Abergavenny on Thursday, April 26th. Notices of nominations, papers, etc., to be sent in by Monday, April 9th.—ALFRED SHEEN, Cardiff, D. ARTHUR DAVIES, Swansea, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held at the Grand Hotel, Brighton, on Thursday, March 29th. The chair will be taken by Dr. Mackey at 5.15 P.M. The following communications have been promised:—Dr. Mackey: A Case of Typhoid Spine (Osler). Dr. Morgan: Retropharyngeal Abscess. Dr. Maynard: Hæmorrhagic Pancreatitis (with specimen). Dr. Mackendee: Errors in Diagnosis (three cases). The Chairman will provide tea and coffee at 5 P.M. Dinner at 7 P.M.; charge 6s., without wine. Messrs. Down Brothers will exhibit instruments, etc., from 4.30 P.M.—J. W. BATTERHAM, M.B., 3, Grand Parade, St. Leonards-on-Sea, Honorary District Secretary.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.—The next meeting of this District will be held at the Royal Surrey County Hospital, Guildford, on Thursday, March 29th, at 4.15 P.M. Mr. F. Boxall, of Rudgwick, will preside. Agenda: Minutes of Guildford meeting. To decide where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. Election of Honorary Secretary. To receive nominations for representations on the Council of the Association. Communications from East York and North Lincoln Branch and Hull Medical Society. The following papers will be read:—Dr. Sidney Martin: The Diagnosis of Early Tuberculous Disease of the Lungs. Mr. Battle: The Diagnosis of Early Tuberculous Disease of Joints. The Honorary Secretary: Remarks on the Treatment of Spasmodic Asthma. Members desirous of exhibiting specimens or reading notes of cases are invited to communicate with the Honorary Secretary at once. Dinner at the White Lion Hotel at 6.45 P.M.; charge, 6s., exclusive of wine. All members of the South-Eastern Branch are entitled to attend and introduce professional friends. N.B.—The Honorary Secretary would be much obliged if members would kindly inform him by postcard whether they intend to remain to dinner. By so doing they will materially facilitate arrangements and promote the success of the dinner.—ALEX. HOPE WALKER, The Common, Cranleigh, Honorary Secretary.

PROCEEDINGS OF COUNCIL.

AT a special meeting of the Council to consider amendments to the Midwives Bill, held in the Council Room of the Association, 429, Strand, on Wednesday, March 21st, 1900. Present:

Dr. J. ROBERTS THOMSON, President of the Council, in the Chair.
Mr. ANDREW CLARK, Treasurer.

Dr. E. G. BARNES, Eye.
Dr. JAMES BARR, Liverpool.
Dr. RAYNER W. BATTEN, Gloucester.
Mr. LANGLEY BROWNE, West Bromwich.
Mr. JAMES CANTLIE, London (Hong Kong Branch).
Mr. T. H. CHEATLE, Burford.
Dr. H. RADCLIFFE CROCKER, London.
Dr. W. DYSON, Sheffield.
Mr. GEORGE EASTES, M.B., London.
Dr. JOHN H. GALTON, Upper Norwood.
Dr. BRUCE GOFF, Bothwell.
Dr. OGILVIE GRANT, Inverness.
Dr. HENRY HANDFORD, Nottingham.
Dr. T. A. HELME, Manchester.
Dr. HOLMAN, London.
Dr. R. H. KINSEY, Bedford.
Mr. N. C. MACNAMARA, London.
Mr. H. J. MANNING, Salisbury.
Dr. C. H. MILBURN, Hull.
Dr. C. G. DRUMMOND MORIER, London (Adelaide and South Australia Branch).
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. H. PHILLIPS-CONN, Reading.
Dr. FRANK M. POPE, Leicester.
Dr. A. BROWN RITCHIE, Hulme.
Dr. L. W. SEDGWICK, London.
Dr. G. E. SHUTTLEWORTH, Richmond.
Mr. HENRY STEAR, Saffron Walden.
Mr. C. S. TOMES, F.R.S., London.
Dr. W. J. TYSON, Folkestone.
Dr. S. WOODCOCK, Old Trafford.

Dr. Farquharson, M.P., Chairman of the Parliamentary Bills Committee, attended by request.

The General Secretary read notice convening the meeting.

Read letters of apology for non-attendance from:

Dr. J. Ward Cousins, President; Dr. W. A. Elliston, President-Elect; Dr. H. Barnes, Dr. M. Beverley, Dr. J. Brassey Brierley, Dr. P. Maury Deas, Dr. T. M. Dolan, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, Dr. Freeland Fergus, Professor David W. Finlay, Sir W. T. Gairdner, Dr. A. Godson, Dr. David Goyder, Dr. J. Groves, Mr. J. D. Harries, Mr. T. Vincent Jackson, Mr. T. R. Jessop, Mr. Evan Jones, Mr. Jordan Lloyd, Dr. J. C. McVail, Dr. J. W. Miller, Dr. J. W. Moore, Dr. James Murphy, Surgeon-General T. F. O'Dwyer, Dr. C. Parsons, Dr. R. W. Philip, Dr. G. H. Philipson, Dr. John Rolston, Dr. W. Russell, Dr. R. Saundby, Dr. A. Sheen, Dr. E. Markham Skerritt, Dr. R. Somerville, Dr. A. R. Urquhart, Mr. T. Jenner Verrall.

Moved by the PRESIDENT OF COUNCIL, seconded by Dr. HOLMAN and Resolved: That the Council desires to express its deep sympathy with Dr. Charles Parsons upon the sad loss of his son whilst fighting in South Africa.

The Council then proceeded to draft the following amendments to the Midwives Bill as read a second time in the House of Commons on Friday, March 9th, 1900, in order to bring the Bill into substantial agreement with the Bill of the British Medical Association:

1. In Section 2 Subsection (5) to omit the words "that she is qualified."

2. In Section 2 Subsection (5) at the end thereof to insert the words "and if any woman certificated under this Act shall do or purport to do anything which by this subsection it is declared that her certificate does not confer upon her a right or title to do she shall be liable on summary conviction to a fine not exceeding five pounds."

After Section 2 to insert the following section:

3. (1) A certificate under the Act shall entitle a woman to act as a midwife in accordance with this Act and the rules and regulations to be laid down hereunder in cases of natural labour only.

(2) From and after the first day of January one thousand

nine hundred and two a woman shall not be entitled to recover in any Court any charge for any attendance on or service to a lying-in woman unless she is certificated under this Act nor shall any midwife certificated under this Act be entitled to recover in any court any charge for any attendance or service not authorised by this Act or any charge for attendance or service as midwife unless in the latter case she has either in person or by a substitute duly licensed under this Act performed the duties to be prescribed by the Central Midwives Board pursuant to this Act.

4. In Section 3 to omit the words "two years" and insert the words "one year" in lieu thereof.

Section 3 to read as follows:

5. Any woman who within one year from the date of this Act coming into operation claims to be certified under this Act shall be so certified provided she bears a good character and holds such certificate in midwifery as may be approved by the Central Midwives Board or produces evidence satisfactory to the Board that at the passing of this Act she has been in *bonâ-fide* practice as a midwife.

6. To omit the whole of Section 4 down to the words "the duties of the Board" and in lieu thereof to insert the following words:—

(1) A Board in this Act referred to as the "Central Midwives Board" consisting of seven registered medical practitioners shall be appointed as hereinafter provided.

(2) (*a*) Six registered medical practitioners shall be appointed members of the Board by the General Medical Council. Of these six members:—

Two shall at the time of their appointment be resident or practising in the London and South-Eastern Registration Division.

One shall at the like time be resident or practising in one of the South-Western West Midland and Welsh Registration Division.

One shall at the like time be resident or practising in one of the Eastern North Midland and South Midland Registration Division.

Two shall at the like time be resident or practising in the York and Northern Registration Division.

The registration divisions mentioned in this section shall be the divisions of England and Wales as from time to time defined by the Registrar-General.

(*b*) One registered medical practitioner shall be appointed a member of the Board by the Lord President of the Privy Council.

(*c*) The first members of the Board shall be appointed within six months after the passing of this Act.

(3) (*a*) A member appointed by the General Medical Council shall hold office for two years and a member appointed by the Lord President of the Council for three years provided that in the case of the first members of the Board three only of those appointed by the General Medical Council (such three to be nominated by the Council for this purpose at the time of their appointment) shall retire at the expiration of two years from the passing of this Act and the other three members so appointed and the member appointed by the Lord President of the Privy Council shall hold office for three years from the passing of this Act.

(*b*) A member whose tenure of office expires under this section shall be eligible for reappointment.

(4) In the event of any vacancy occurring on the Board by the death or resignation of a member (hereinafter called "the outgoing member") a new member shall be appointed in the same manner and by the same authority in all respects as if such vacancy had occurred by reason of the expiration of the tenure of office of the outgoing member but the new member shall hold office only for the period for which the outgoing member would have held office had he not died or resigned.

(5) Any vacancy occurring on the Board shall be filled up at an interval of not less than three months but the existence of any such vacancy shall not invalidate any act or proceeding of the Board.

(6) A member of the Board shall not during his membership teach instruct or examine any woman in the theory or practice of midwifery and a member of the Board shall not take any part in any inquiry respecting the conduct of any person whom he may have taught or instructed as aforesaid while not a member of the Board.

7. In Subsection 3 of Section 4 after the word "duties" to insert the words "and powers."

8. In Clause 5 of Subsection 3 of Section 4 after the word "misconduct" to insert the words "and so that for the purposes of this Act the omission to summon a registered medical practitioner in a case of abnormal labour shall be deemed to be misconduct."

9. In Subsection 3 of Section 4 after the words "to issue certificates" to insert the words "VII. At the discretion of the Board to inspect or cause to be inspected from time to time any premises wherein any woman receives or proposes to receive as a midwife a pregnant or lying-in woman and if such premises shall in the opinion of the Board be fit for the reception of a pregnant or lying-in woman the Board shall issue a certificate to that effect upon payment by the midwife of such fee as may be fixed by the Board and shall enter such premises upon a register to be kept by the Board."

10. In Section 5 after the words "with the examination and certificate" to insert the words "the local supervision of midwives."

11. At the end of Section 5 to insert the words "The general expenses of the Board shall include the payment to the members thereof of remuneration for their services and reasonable travelling expenses upon such a scale as may be approved by the Treasury."

That Clause 9 be omitted and that Clause 10 of British Medical Association Bill be substituted, viz.:—

12. Every County Council of any administrative county and county borough throughout England and Wales shall on the passing of this Act appoint a committee of no fewer than three registered medical practitioners not teachers nor examiners of midwives as the local supervising authority over midwives within the area of the said county.

It shall be the duty of the local supervising authority:

(1) To issue midwives' licences and to exercise general supervision over all midwives practising within the prescribed area, in accordance with the rules to be laid down under the provisions of this Act.

(2) To investigate charges of malpractice negligence or misconduct on the part of any midwife practising within its district and if the Committee considers that a *primâ-facie* case is established to report the same to the Central Midwives Board and if they think fit to suspend the midwife's licence pending inquiry by the Board.

(3) To suspend the midwife's licence of any woman in accordance with the rules to be laid down by the Central Midwives Board or if the Committee considers such suspension necessary to prevent the spread of infection.

(4) To report at once to the said Board the name of any midwife practising in the district convicted of a misdemeanour or felony.

(5) During the month of January of each year to supply the Secretary of the Central Midwives Board with the names and addresses of all midwives practising in the district, and to keep a current copy of the midwives' roll, accessible at all reasonable times for public inspection.

13. In Section 11 after the word "following" to insert the words "its issue."

14. In Section 11 after the words "on payment of a fee" to omit the words "of one shilling" and to insert the words "to be determined by the Central Midwives Board" in lieu thereof.

15. In Section 12 at the end thereof to insert the following subsection:—

(*d*) Any woman whether certified or licensed under this Act or not who after the first day of January one thousand nine hundred and two shall receive as a midwife a pregnant or lying-in woman in premises which shall not have been certified by the Board as fit for the reception of such a woman under the pro

visions of this Act shall be guilty of a misdemeanour and on conviction on indictment shall be liable at the discretion of the court to a fine not exceeding ten pounds or to imprisonment for any term nor exceeding two months with or without hard labour or to both fine and imprisonment or on summary conviction to a fine not exceeding ten pounds.

16. In Section 14 after the words "Summary Jurisdiction Acts" to insert the words "and shall be paid to the Central Midwives Board anything contained in any existing Act to the contrary notwithstanding."

17. In Section 18 to omit the words "and in accordance with the provisions of this Act to attend women in childbirth" and to insert the words "to attend women during natural labour and the lying-in period" in lieu thereof.

18. That for the purposes of this Act "normal labour" shall be held to mean a labour in which the presentation is that of the vertex and in which none of the conditions mentioned in Schedule (A) as necessitating the presence of a registered medical practitioner obtain.

SCHEDULE A.

CONCERNING THE SUMMONING OF REGISTERED MEDICAL PRACTITIONERS.

1. A midwifery nurse is bound in all cases of abnormal pregnancy labour or lying-in as well as in illness of the child to demand medical assistance. She must under the following circumstances more particularly insist upon a registered medical practitioner being called:—

(*a*) *In the Case of a Pregnant Woman:*
- (1) When she suspects or has discovered a narrow pelvis.
- (2) Where there is hæmorrhage.
- (3) When a patient is threatened with an attack of any illness.
- (4) When the patient dies suddenly.

(*b*) *In the Case of a Woman during Labour:*
- (1) In all cases of abnormal position of the child if possible before the liquor amnii escapes.
- (2) In presentation of hands feet or when the cord presents with the head.
- (3) In every case where either from the smallness of the pelvis or largeness of the child's head or from any cause whatever the normal descent of the head is interfered with by which undue pressure may be caused to the parts between the child's head and the pelvis.
- (4) In the disturbance of the labour pains leading to delay of birth or in cases of excessive pains followed by exhaustion. To this category belong the cases where a child whose head has already deeply descended is not delivered for two hours after the opening of the mouth of the womb and the escape of the liquor amnii.
- (5) In hæmorrhage at whatever time in the labour it may occur.
- (6) In presenting placenta even when the midwifery nurse does not at the moment of the examination perceive any bleeding.
- (7) If the placenta be not expelled an hour after the birth of the child even if no bleeding has occurred.
- (8) In all cases of rupture of the perineum as soon as such occurs.
- (9) In all cases where abortion or premature labour is threatening or has occurred.
- (10) In twins or multiple births or monstrosities.
- (11) In all cases of apparent sickness or threatened danger as well as in the event of the sudden death of the woman.
- (12) In the apparently dead newborn child.
- (13) In all cases of stillbirth no matter what the stage of development of the child.

(*c*) *In the Case of Lying-in Women and in the Case of Newly-born Children:*
- (1) In the lying-in woman when she notices a rise of pulse or temperature rigor tender abdomen stoppage of the lochia or bad smell of the same.
- (2) In all cases of illness attacking the newly-born child.

The following is the text of the Bill with the suggested amendments embodied:

MIDWIVES BILL.

ARRANGEMENT OF CLAUSES.

Clauses.
1. Short title and commencement.
2. Certification.
3. Provision for existing midwives.
4. Constitution and duties of the Central Midwives Board.
5. Fees and expenses.
6. Power to County Councils to contribute.
7. Midwives' roll.
8. Appointment of Secretary and supplemental provision as to certificate.
9. Local supervision of midwives.
10. Delegation of powers to District Councils.
11. Midwives' licence.
12. Penalty for obtaining a certificate or a licence by false representation, or acting without a certificate or a licence.
13. Penalty for wilful falsification of the roll.
14. Prosecution of offences.
15. Appeal.
16. Act not to apply to medical practitioners.
17. Extent of Act and action by English Branch Council.
18. Definitions.

A BILL TO SECURE THE BETTER TRAINING OF MIDWIVES AND TO REGULATE THEIR PRACTICE.

BE it Enacted by the Queen's most Excellent Majesty by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Short Title and Commencement.*—This Act may for all purposes be cited as the Midwives Act, 1900. It shall come into force on the first day of April, 1901.

2. *Certification.*—(1) From and after the first day of January, one thousand nine hundred and two, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition or description implying that she is certified under this Act, or is qualified to act as a midwife unless she be certified under this Act.

(2) Any woman who, after the first day of January, one thousand nine hundred and two, not being certified under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, or shall habitually and for gain attend women in childbirth, shall be liable on summary conviction to a fine not exceeding five pounds.

(3) No woman shall be certified under this Act until she has complied with the rules and regulations to be laid down in pursuance of the terms of this Act.

(4) No woman certified under this Act shall employ as her substitute or assistant an uncertified person.

(5) The certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner, or to grant any medical certificate, or any certificate of death or of stillbirth, or to attend cases of abnormal labour, or of disease or of danger to the mother or the child. And if any woman certificated under this Act shall do or purport to do anything which by this subsection it is declared that her certificate does not confer upon her a right or title to do she shall be liable on summary conviction to a fine not exceeding five pounds.

3. (1) A certificate under the Act shall entitle a woman to act as a midwife in accordance with this Act and the [rules and regulations to be laid down hereunder in cases of natural labour only.

(2) From and after the first day of January one thousand nine hundred and two a woman shall not be entitled to recover in any court any charge for any attendance on or service to a lying-in woman unless she is certificated under this Act, nor shall any midwife certificated under this Act be entitled to recover in any court any charge for any attendance or service not authorised by this Act, or any charge for attendance or service as midwife unless in the latter case she

has either in person or by a substitute duly certificated under this Act performed the duties to be prescribed by the Central Midwives Board pursuant to this Act.

4. Any woman who, within one year from the date of this Act coming into operation, claims to be certified under this Act, shall be so certified provided she bears a good character and holds such certificate in midwifery as may be approved by the Central Midwives Board, or produces evidence, satisfactory to the Board, that at the passing of this Act she has been in *bonâ fide* practice as a midwife.

5. (1) A Board in this Act referred to as the "Central Midwives Board" consisting of seven registered medical practitioners shall be appointed as hereinafter provided.

(2) (*a*) Six registered medical practitioners shall be appointed members of the Board by the General Medical Council. Of these six members:

Two shall at the time of their appointment be resident or practising in the London and South-Eastern Registration Divisions.

One shall at the like time be resident or practising in one of the South-Western, West Midland, and Welsh Registration Divisions.

One shall at the like time be resident or practising in one of the Eastern, North Midland and South Midland Registration Divisions.

Two shall at the like time be resident or practising in the Yorkshire and Northern Registration Divisions.

The registration divisions mentioned in this section shall be the registration divisions of England and Wales as from time to time defined by the Registrar-General.

(*b*) One registered medical practitioner shall be appointed a member of the Board by the Lord President of the Privy Council.

(*c*) The first members of the Board shall be appointed within six months after the passing of this Act.

(3) (*a*) A member appointed by the General Medical Council shall hold office for two years, and a member appointed by the Lord President of the Council for three years, provided that in the case of the first members of the Board three only of those appointed by the General Medical Council (such three to be nominated by the Council for this purpose at the time of their appointment) shall retire at the expiration of two years from the passing of this Act, and the other three members so appointed and the member appointed by the Lord President of the Privy Council shall hold office for three years from the passing of this Act.

(*b*) A member whose tenure of office expires under this section shall be eligible for reappointment.

(4) In the event of any vacancy occurring on the Board by the death or resignation of a member (hereinafter called the outgoing member), a new member shall be appointed in the same manner and by the same authority in all respects as if such vacancy had occurred by reason of the expiration of the tenure of office of the outgoing member, but the new member shall hold office only for the period for which the outgoing member would have held office had he not died or resigned.

(5) Any vacancy occurring on the Board shall be filled up at an interval of not less than three months, but the existence of any such vacancy shall not invalidate any act or proceeding of the Board.

(6) A member of the Board shall not during his membership teach, instruct, or examine any woman in the theory or practice of midwifery, and a member of the Board shall not take any part in any inquiry respecting the conduct of any person whom he may have taught or instructed as aforesaid while not a member of the Board.

The duties and powers of the Board shall be as follows:

I. To frame rules subject to the approval of the General Medical Council:

(*a*) Regulating the issue of certificates and the conditions of admission to the roll.

(*b*) Regulating the course of training and the conduct of examinations;

(*c*) Regulating the admission to the roll of women already in practice as midwives at the passing of this Act;

(*d*) Regulating, supervising, and restricting within due limits the practice of midwives;

(*e*) Deciding the conditions under which midwives may be suspended from practice.

II. To appoint examiners:

III. To decide upon the places where, and the times when examinations shall be held;

IV. To publish annually a roll of midwives who have been duly certified under the Act;

V. To decide upon the removal from the roll of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Central Midwives Board, or for other misconduct, and so that for the purposes of this Act the omission to summon a registered medical practitioner in a case of abnormal labour shall be deemed to be misconduct, and also to decide upon the restoration to the roll of the name of any midwife so removed;

VI. To issue certificates;

VII. At the discretion of the Board to inspect or cause to be inspected from time to time any premises wherein any woman receives or proposes to receive as a midwife a pregnant or lying-in woman, and if such premises shall in the opinion of the Board be fit for the reception of a pregnant or lying-in woman the Board shall issue a certificate to that effect upon payment by the midwife of such fee as may be fixed by the Board, and shall enter such premises upon a register to be kept by the Board.

And generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this Act.

6. *Fees and Expenses.*—There shall be payable by every woman presenting herself for examination or certificate such fee as the Central Midwives Board may, with the approval of the General Medical Council, from time to time determine, such fee not to exceed the sum of one guinea. All such fees paid by existing midwives and by candidates for examination shall be paid to the Central Midwives Board. The said Board shall devote such fees to the payment of expenses connected with the examination and certificate, the local supervision of midwives, and to the general expenses of the Board. Should these fees not equal the expenditure of the Board, the deficiency shall be supplied from the respective local county funds, in proportion to the number of midwives licensed to practise in the said county. The general expenses of the Board shall include the payment to the members thereof of remuneration for their services and reasonable travelling expenses upon such a scale as may be approved by the Treasury.

7. *Power to County Councils to Contribute.*—(1) A county council shall be empowered to pay out of the county funds as general expenses incurred by them in the execution of their duties under the Local Government Act, 1888, any sum from time to time required to make good a deficiency in the funds of the Central Midwives Board.

(2) Such expenses as the Treasury may certify to have been necessarily incurred by the General Medical Council in the execution of this Act shall be defrayed out of moneys provided by Parliament.

8. *Midwives' Roll.*—There shall be a midwives' roll containing:

(1) The names of those midwives practising at the date of the passing of the Act who have been certified to practise under the Act.

(2) The names of those not already in practice as midwives at the passing of the Act, but who have been certified to practise under the Act.

The entry on the roll shall in every case indicate the conditions in virtue of which the certificate was granted.

9. *Appointment of Secretary and Supplemental Provision as to Certificate.*—The Central Midwives Board shall appoint a secretary who shall be charged with the custody of the roll, and every person so appointed shall be paid such salary as

the Board shall think fit, and shall be removable at the pleasure of the Board. A copy of the midwives' roll for the time being shall be evidence in all courts that the women therein specified are certified according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not certified according to the provisions of this Act: Provided always, that in the case of any woman whose name does not appear in such copy, a certificate under the hand of the secretary of the entry of the name of such woman on the roll shall be evidence that such woman is certified under the provisions of this Act.

10. *Local Supervision of Midwives.*—Every county council of any administrative county and county borough throughout England and Wales shall, on the passing of this Act, appoint a committee of no fewer than three registered medical practitioners not teachers nor examiners of midwives as the local supervising authority over midwives within the area of the said county.

It shall be the duty of the local supervising authority:

(1) To issue midwives' licences and to exercise general supervision over all midwives practising within the prescribed area, in accordance with the rules to be laid down under the provisions of this Act.

(2) To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within its district, and, if the Committee considers that a *primâ facie* case is established, to report the same to the Central Midwives Board, and if they think fit to suspend the midwife's licence pending inquiry by the Board.

(3) To suspend the midwife's licence of any woman in accordance with the rules to be laid down by the Central Midwives Board, or if the Committee considers such suspension necessary to prevent the spread of infection.

(4) To report at once to the said Board the name of any midwife practising in the district convicted of a misdemeanour or felony.

(5) During the month of January of each year to supply the Secretary of the Central Midwives Board with the names and addresses of all midwives practising in the district, and to keep a current copy of the midwives' roll, accessible at all reasonable times for public inspection.

11. *Midwives' Licence.*—No woman shall hold herself out as a practising midwife in any county or county borough, without having previously obtained from the local supervising authority a licence enabling her to practise therein, which licence shall be granted on proof by the woman that her name is on the midwives' roll. The licence shall remain in force till the thirty-first day of December following its issue, and shall be revocable at any time by the local supervising authority in case the holder be proved to the satisfaction of the Central Midwives Board to have infringed any of the regulations framed under this Act. The licence shall be issued on payment of a fee to be determined by the Central Midwives Board, it shall only be available in the county for which it is issued, and it shall be renewed annually on the first day of January.

12. *Penalty for Obtaining a Certificate or a Licence by False Representation or Acting without a Certificate or a Licence.*—(*a*) Any woman who procures or attempts to procure a certificate or a licence by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding five pounds, or to be imprisoned, with or without hard labour, for any term not exceeding two months.

(*b*) Any woman, whether certified under this Act or not, who, after the first day of January one thousand nine hundred and two, shall hold herself out as a practising midwife or shall practise in any county or county borough without having previously obtained from the local supervising authority a licence enabling her to practise therein shall be deemed guilty of a misdemeanour, and shall, on conviction thereof, be liable to a fine not exceeding two pounds or to be imprisoned, with or without hard labour, for any term not exceeding one month.

(*c*) But a midwife shall not be guilty of a misdemeanour under this section by attending, on an emergency, a woman in childbirth in a county other than that for which she holds a licence; provided she has within a reasonable time given notice of having so acted to the local supervising authority of the county.

(*d*) Any woman, whether certified or licensed under this Act or not, who after the first day of January one thousand nine hundred and two shall receive as a midwife a pregnant or lying-in woman in premises which shall not have been certified by the Board as fit for the reception of such a woman under the provision of this Act shall be guilty of a misdemeanour, and on conviction on indictment shall be liable at the discretion of the court to a fine not exceeding ten pounds, or to imprisonment for any term not exceeding two months with or without hard labour, or to both fine and imprisonment, or on summary conviction to a fine not exceeding ten pounds.

13. *Penalty for Wilful Falsification of the Roll.*—Any person wilfully making or causing to be made any falsification in any matter relating to the roll of midwives shall be deemed guilty of a misdemeanour, and shall be liable to a fine not exceeding ten pounds, or to be imprisoned, with or without hard labour, for any term not exceeding three months.

14. *Prosecution of Offences.*—Any offences under this Act punishable on summary conviction may be prosecuted by the local supervising authority, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts, and shall be paid to the Central Midwives Board, anything contained in any existing Act to the contrary notwithstanding.

The expenses of any prosecution shall be defrayed out of the funds of the county in which the prosecution takes place.

15. *Appeal.*—(1) An appeal shall be allowed to the Privy Council should any disagreement arise between the General Medical Council and the Midwives Board respecting the carrying out of the provisions of the Act, or any of them.

(2) Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

16. *Act not to apply to Medical Practitioners.*—Nothing in this Act respecting midwives shall apply to legally-qualified medical practitioners.

17. *Extent of Act and Action by English Branch Council.*—This Act shall not extend to Scotland or Ireland.

The General Medical Council shall act by the English Branch Council, which for all purposes of this Act shall occupy the place of the General Medical Council.

18. *Definitions.*—In this Act—

The term "midwife" means a woman who undertakes for gain to attend women during natural labour and the lying-in period.

"Midwives' roll" means a roll of midwives kept in pursuance of this Act.

"Central Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

That for the purposes of this Act normal labour shall be held to mean a labour in which the presentation is that of the vertex, and in which none of the conditions mentioned in Schedule (A)* as necessitating the presence of a registered medical practitioner obtain.

SOUTH WESTERN BRANCH.

Report from the Council of the Branch.—At a meeting of the South Western Branch Council held on November 14th, 1899, a subcommittee was appointed to consider the best means of placing the system of Branch organisation, lately adopted by this Branch, before the rest of the Association, with a view, if possible, to promoting the adoption by other Branches of a

* See above p. 733.

system of organisation based on Parliamentary divisions. The subcommittee recommended that a brief account of the organisation in question should be prepared by the Honorary Secretary and forwarded to the General Secretary of the Association, to the members of the Council of the Association and of the Parliamentary Bills Committeee, and to the Editor of the British Medical Journal, this last for publication. At a meeting of the Branch Council held at Plymouth on January 16th, 1900, the report of the subcommittee was received and adopted and its recommendations directed to be carried into effect.

The system of organisation adopted is as follows:

The Branch Council consists of the President, Vice-Presidents, Honorary Secretary, Past Honorary Secretaries who have served for five years as such, "Representative Members" and "Local Members," these two last being the elective portion of the Council. Formerly the elective part of the Council consisted of "local members" only. There were fifteen of them—five elected each year from the locality in which the next annual meeting was to be held, and each held office three years. They had no duties. Now these "local members" are reduced to nine, three being elected annually instead of five, and it has been made their duty to assist in arranging the annual meeting in their locality. It is to the rules relating to the "representative members" that we would draw attention. (6) That the Branch be divided for purposes of representation into the following divisions, corresponding to the Parliamentary divisions, both borough and county, throughout Devon and Cornwall, namely: Barnstaple, Tiverton, South Molton, Exeter, Honiton, Torquay, Ashburton, Totnes, Plymouth, Devonport, Bodmin, Launceston, Tavistock, Truro, St. Austell, Falmouth, Camborne, St. Ives, and that each of these return one representative member (divisional member) to the Branch Council. The members of the Branch residing within the area of each division shall be the electorate for the election of the representative of that division. Each divisional member shall hold office for three years after 1899. (6*a*) That the Honorary Secretary be instructed to make the necessary arrangements for the election of the representative member of Council in each division and locality. (9) That it shall be one of the duties of the divisional members to keep a list of all medical men in their division, and to do their utmost to induce all those who are not members of the Branch to become members. The reasons which led to the change in the Branch organisation were these: (1) It appeared easier to increase the members of the Branch if several officially undertook the work of recruiting than if one man only (necessarily unknown personally to many medical men in a wide area) undertook it. Hence a division of the Branch into recruiting areas. (2) It appeared desirable that when members of Parliament had to be approached personally or by letter, with reference to any important public matter, they should be approached by constituents of their own. Hence the recruiting areas were made coterminous with Parliamentary divisions. Of these two reasons the first has been justified by results. The Branch growth is now very rapid. The second, at present untested, is, we think, at least plausible. (Signed) Mark Jackson (President), W. Gordon, H. W. Webber (Honorary Secretary).

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.

A meeting of this District was held at the Metropolitan Ear, Nose, and Throat Hospital on March 5th; Dr. J. Pickett, Vice-President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Midwives Bill.—Dr. Dutton, the Honorary Secretary, informed the members that he had received a communication from an important Branch *re* the Midwives Bill, which had already been discussed at a special meeting of the Branch.

Communications.—Dr. Pegler read a paper on nasal insufficiency; owing to want of time there was no discussion.—Dr. Jobson Horne gave a lecture on some factors in the etiology of loss of voice in singers. The lecture was illustrated by several lantern photographs, some of which showed the position and condition of the vocal cords in the falsetto and chest registers; for these he expressed his indebtedness to Dr. Murehold of Berlin. After referring to the valuable work done by Dr. Murehold in photography of the cords, he drew attention to the strain put upon them in the misuse of the chest register, and to the increased flow of blood to their tissues in consequence. This vascularity led to changes in the epithelium—a hyperplasia followed by a metaplasia—the essential features of pachydermia laryngis. A deposition of fibrous tissue in the submucous followed, which as it progressed affected the muscles of the cords, and their mobility became impaired. Similar changes in the epithelium could arise from other causes acting as irritants, such as syphilis, tuberculosis, alcohol; and limitations should be placed upon the meaning and significance attached to pachydermia laryngis, which he considered was as often evidence of disease as a disease in itself.

Clinical Cases.—Drs. Pegler and Frederick Spicer showed some cases.

Tea.—The Vice-President kindly provided afternoon tea for the members.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A meeting was held at the Highgate Infirmary on March 14th, Mr. Thomas Bryant, President of the Branch, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Treatment of Bronchitis.—Dr. Harry Campbell read a paper on the treatment of bronchitis in the elderly and aged. Pathology imposed especially three conditions to be considered in the treatment of bronchitis: (1) Keeping down toxicity; (2) increasing the general vitality; (3) maintaining a good circulation. Just as nitrogen was principally eliminated by the kidneys, carbon was especially expelled by the lungs, this function necessitating a call for oxygen. But as dyspnœa was an expression of the need for oxygen in the blood, the ingestion of carbon in this condition should be restricted. The amount of nitrogen taken should also be lessened. There were other reasons for diminishing the diet in bronchitis: (1) One thereby reduced the necessity of a vigorous circulation; that is, the heart's energy was economised; (2) an aged bronchitic was usually obese; obesity with its bad circulation aggravated bronchitis. The indication was to reduce the weight of the patient by legitimate means and within reason; (3) finally, a low diet meant diminution of the toxicity of the blood. Curtailing the diet might be only a temporary expedient. Chronic dyspnœa led to fixity of the chest in the inspiratory position; free expectoration was interfered with. Hence the importance in bronchitis of increased control over the expiratory muscles and of freely using the diaphragm. By education (suitable exercises at) these objects might be attained.—The paper was discussed by the President, Mr. Morton, and other members and visitors, and a hearty vote of thanks was passed to Dr. H. Campbell.

Demonstration in Wards.—In Mr. Chilcott's (Superintendent) absence, Mr. Bowden showed cases of interest in the wards of the infirmary.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

The Report of the Malaria Expedition to West Africa: Nomenclature of Malaria: Frequency of the Disease in Freetown: The Conditions which Favour the Development of the Mosquito: Its Life-History: Prospects of Exterminating the Anopheles: Conditions of Life on the West Coast.—Colonial Fellowship and the School of Tropical Medicine.—Appointment of Assistant M.O.H.

The Liverpool School of Tropical Medicine has published (the University Press of Liverpool) a complete report of the Malaria Expedition to Sierra Leone, in the form of a handsome quarto volume, illustrated with several excellent plates. The authors of the report are Major Ross, Dr. H. E. Annett, and Mr. E. E. Austen, and there are two supplementary reports by

Major G. M. Giles, I.M.S., and Dr. R. Fielding-Ould respectively.

After tracing the various steps by which our present knowledge of the connection between mosquitos and malaria has been reached the report states the objects of the expedition, which together with many of the results obtained were given in letters from Sierra Leone and published in the BRITISH MEDICAL JOURNAL last year. It will be remembered that the authors of the report have abandoned the term "mosquito" in favour of the popular English word "gnat"; and in place of malaria they have adopted the cumbrous appellations "hæmamœbiasis," or "gnat fever." They are of opinion that the latter terms will serve to popularise more correct notions of the malady than are implied in the word "malaria"; but it is at least doubtful whether the introduction of these terms will serve any useful purpose. Hæmamœbiasis can never come into general use, even among medical practitioners; and gnat fever, even if it were adopted, would only express an imperfect idea of the nature of the disease. Malaria is a classical word for a well-defined clinical condition, and it has as much right to survive as the terms "rheumatism," "cataract," and "hysteria," which are survivals of a no less erroneous pathology.

Freetown, the capital of Sierra Leone, was found to be an excellent field for observation. A careful search showed that the larvæ of *Anopheles* were contained in many pools which were permanent, and were not liable to scouring, for they cannot survive complete desiccation, and are readily washed away by heavy rain.

The opinion is expressed that, although mosquitos can feed on fruits, such as bananas, fertilisation cannot take place without a meal of blood. Thus the general use of mosquito curtains not only protects the inhabitants from immediate attacks, but also helps to restrict the propagation of the insects. Another important observation is that the ova are not laid except in the presence of water.

The parasite of malaria as it exists in the blood can propagate by an asexual and a sexual generation. The youngest parasites, which exist in the blood corpuscles, and are called amœbulæ, develop either into sporocytes or gamocytes, of which the former are destined for asexual propagation within the vertebrate hosts. They divide into spores, which escape into the plasma, enter fresh corpuscles, and in their turn become amœbulæ. Of the gamocytes, some are male and some female; the male containing a number of microgametes, the female one macrogamete. So long as they remain in the vertebrate host they do not change, but when withdrawn into the stomach of the mosquito the male emits its microgametes, one of which enters a macrogamete and fertilises it. The latter then becomes a zygote. The zygote passes through the walls of the stomach of the *Anopheles*, and attaches itself to its outer surface, where it grows largely in bulk, and divides into eight or twelve meres. Each mere subsequently becomes a blastophore, bearing a large number of blasts on its surface. Ultimately the zygote ruptures, discharging its blasts into the body cavity of the insect, whence they find their way to the salivary gland, and are ultimately injected into the blood of a new vertebrate host along with the poison of the mosquito. In the blood they find their way into the red corpuscles, and develop into amœbulæ.

It is pointed out that the association of malaria with mosquitos of a particular kind explains many of the admitted facts with regard to its incidence. Thus the frequency of malaria in swampy localities, and its prevalence in the rainy season, the special risk of sleeping in malarious places, and many other circumstances affecting the incidence of the disease, are readily explained by the influence on the growth of the *Anopheles*.

With regard to the question whether malaria can be caught in any other way than by the agency of mosquitos, there is no evidence to show that it can, while all the probabilities are strongly against it. To suppose that the hæmamœba can be propagated and conveyed in any other way would imply that it may have another life-history entirely different from the one at present known, and this is so extremely improbable that it could not be entertained without some strong evidence in support of it.

For the prevention of malaria the report urges the systematic destruction of the larvæ of *Anopheles* wherever they are found, and scrupulous care by means of the mosquito net and the punkah to avoid being bitten by the adult insect. The degree of success which may be looked for in the effort to destroy the *Anopheles* will depend very much upon the nature of the locality and the extent of the breeding grounds. In level waterlogged localities, where the pools are numerous, and hidden by rank vegetation, efforts to destroy the larvæ will be attended with indifferent success; but on sloping ground, and especially in very dry localities, the prospects of success will be considerable. Tar is recommended as the best chemical destroyer of the larvæ.

The addendum by Dr. R. Fielding-Ould contains much valuable information concerning the incidence of malaria and the conditions of life generally in the West Coast of Africa. The natives in some quarters live in an almost inconceivable state of filth, and their dwellings must be a constant cause of ill-health to themselves and a menace to the Europeans in the neighbourhood. The report forms a valuable addition to our knowledge of the subject, and affords evidence of a vast amount of accurate scientific observation carried out under peculiar difficulties, and it cannot fail to be productive of much good both by the suggestions it offers and by prompting other workers to continue investigations on the same lines.

It is announced that an anonymous benefactor has undertaken to endow a Colonial Fellowship of £100 a year for five years in connection with the School of Tropical Medicine. It will be granted to a graduate or student of a Colonial University who desires to carry on bacteriological work in the Thompson-Yates laboratories.

The post of Assistant Medical Officer of Health, rendered vacant by the resignation of Dr. Manby, has been filled by the appointment of Dr. Arthur Augustus Mussen, Assistant M.O.H. Huddersfield. Dr. Mussen is well known to the medical profession in Liverpool, having been for two and a-half years senior house-surgeon at the Northern Hospital.

CORRESPONDENCE.

THE CASE OF CROOK v. CROOK AND HORROCKS.

SIR,—Will you permit me through your columns to thank all those who have written to me letters of sympathy and congratulation, and also to thank all who have expressed a desire to help to defray my costs? I quite appreciate the kind motive, and am very grateful, but I prefer that no subscription list should be started on my behalf.—I am, etc.,

Brook Street, W., March 19th. PETER HORROCKS.

COLLIERY SURGEONS IN THE MIDLANDS.

SIR,—The response to my letter in the BRITISH MEDICAL JOURNAL of March 3rd has been beyond my expectation. As doubtless there are some gentlemen who have not been reached by our circulars, I would be obliged by their forwarding their letters to "Colliery Surgeon," through the Editor of the BRITISH MEDICAL JOURNAL, and also kindly enclose names and addresses of neighbouring doctors.

In order to clear up any doubt as to the object of this movement, I wish to state that what we aim at is a union of the Midland surgeons, so that a fair remuneration for our services may be obtained. What a fair remuneration is can be discussed at a general meeting, but nothing can be done without union.

It will surprise the profession that some colliery surgeons get paid for each collier for twelvemonths' work less than a collier generally earns in an eight-hour shift. There is no time like the present for such a movement; everything is in our favour, but may I remind Midland colliery surgeons that "time flies"?—I am, etc.,

March 19th. COLLIERY SURGEON.

SIR,—Many thanks for putting me in communication with "Colliery Surgeon." You will be pleased to hear that organisation is being proceeded with, and that answers so far received point not only to a desire but almost to an anxiety that a union should be formed; and considering the present scale of fees, this is not to be wondered at. The colliers in this district are being paid higher wages than at any pre-

vious time, and many make as much as £1 a day, yet we medical men have been ready to give "medical attendance, provide them and their families with proper and sufficient medicine, and every requisite attention" for 3d. a week. If we rate our services so cheaply, is it to be wondered at that they should take the same view, and regard us as perhaps just a little better than a tradesman?

The colliers have certainly shown us the way we may improve our position, and that is by union.

If colliery surgeons in the Midlands will not wait for a personal appeal, but will reply as to whether they will be willing to join us in our endeavours, it will greatly facilitate our labours.—I am etc.,

March 19th. DERBYSHIRE.

MIDWIVES BILL.

SIR,—In view of the question which you raised in the BRITISH MEDICAL JOURNAL of March 17th, it is well to call your attention to the fact that the present Bill is based upon two principles—one that of control, and one that of improving the status of the midwife. For practical purposes these two principles are incompatible, for, with improvement in status, control of any value is impossible.

It appears to me, therefore, that the first question to consider is that of basis. Until this is decided it is impossible to draft amendments of any value.

It is quite patent that the medical profession has been given away from the outset, not only by the Corporations, especially that of the Physicians, but also by the Council of the British Medical Association.

I quite agree with you that the policy of sitting on the fence is like that of the majority of statesmen of the present day, but it is doubtful whether the inability of the British Medical Association to distinguish between the two principles upon which legislation could be based will or will not result in the production of a Bill which will cause a great deal of mischief.

The result of a policy of sitting on the fence for the last ten years in South Africa is common knowledge.—I am, etc.,

Hatfield, March 19th. LOVELL DRAGE.

THE NATIONAL ASSOCIATION FOR THE PREVENTION OF CONSUMPTION.

SIR,—While cordially recognising the friendly spirit of your criticism on the first two numbers of the journal of the National Association for the Prevention of Consumption, entitled *Tuberculosis*, may we be allowed to invite your attention to one or two facts in reply to it? The journal has had, as you recognise, to be restricted in size in order to keep within the limit prescribed by economy, although, owing to the reception it has met with from many quarters, it is hoped that it may be possible shortly to enlarge it.

With regard to the reports of meetings, most of which have already appeared in the press, we must point out that inasmuch as *Tuberculosis* is essentially the journal of the Association, it is necessary that the meetings of branches, and those held for the purpose of founding branches, should be reported in it, and so have some more permanent record for the information of members than those provided in various organs of the provincial press, no one of which can obviously contain more than an account of its own local meeting.

The extent to which this movement has been taken up throughout the country can only be fully appreciated by a perusal of *Tuberculosis*.

With reference to the advancement of knowledge in regard to the disease, we admit that to supply such matter which should appear as new to many members of the medical profession would be somewhat difficult, but that we have already supplied much that is both new and interesting to the numerous lay readers of *Tuberculosis* we venture to believe.—We are, etc.,

March 21st. THE EDITORS OF *Tuberculosis*.

THE EFFECT OF HEREDITY ON DISEASE.

SIR,—I have read with great interest Professor Hamilton's remarks upon "The Effect of Heredity on Disease," published in the BRITISH MEDICAL JOURNAL of March 17th. I entirely agree with his six conclusions. His first conclusion that "there is no evidence proving that diseased conditions of body excited by external agencies can be transmitted hereditarily through generations," coming from so great an authority, should give those gentlemen pause who have been throwing ridicule on the view that acquired characters are non-inheritable.

Will you allow me one remark by way of criticism? The professor stated as "his firm conviction that if a vicious line was introduced it might die out, and probably did in most cases die out, by interbreeding with a series of pure stocks." Such interbreeding is undoubtedly an important factor in maintaining the standard of racial perfection, but one must not overlook an equally, if not more, important factor operating in the same direction—I mean the elimination through death or non-marriage of unfit variations. The fact cannot too strongly be insisted upon that such weeding out is a biological necessity, and that the more actively it proceeds the higher will be the racial standard. Imagine a race of perfect men living under theoretically perfect conditions of health, and that all elimination be checked for several generations. Under such conditions the standard of perfection will steadily fall and the tendency to disease as steadily increase.—I am, etc.,

Wimpole Street, March 18th. HARRY CAMPBELL.

DEFECTS OF THE CLUB SYSTEM.

SIR,—May I ask all who think that the General Medical Council should interfere in the club question to read over the Medical Act, 1858, Sections XXIX and LII, and the Medical Act, 1862, Section I?

Act of 1858, Section XXIX: If any registered medical practitioner..... shall after due inquiry be judged by the General Council to have been guilty of infamous conduct in any professional respect, the General Council may if they see fit direct the Registrar to erase the name of such medical practitioner from the *Register*.

Act of 1858, Section LII: Provided always that nothing herein contained shall extend to authorise Her Majesty to create any new restriction in the practice of medicine or surgery, or to grant to any of the said corporations any powers or privileges contrary to the common law of the land.

Act of 1862, Section I: The General Council of Medical Education and Registration shall be deemed to be, and to have been from the date of its first establishment, a body corporate by the name aforesaid.

Is it credible, for one moment, that Parliament ever intended to give the General Medical Council powers to regulate the private conduct of medical men with their patients or their brethren? Is it likely that the common law of the land, so jealous of monopolies and so tenacious of the freedom of the subject (even if that freedom may be to the injury of its possessor), is it likely, I say, that the law would for one moment suffer the General Medical Council to restrict the practice of those who took clubs at unremunerative rates? *Volenti non fit injuria* has ever been a recognised legal maxim.

To appeal to the General Medical Council to brand business incapacity as unprofessional conduct is utterly hopeless. The functions of the Council are clearly laid down in the Acts, which are printed at the beginning of the *Register*. They are clearly confined to education, registration, and revision of the *Register*. The only loophole is the expression "unprofessional conduct;" and surely inability to make both ends meet, and ignorance of how to construct a balance sheet cannot come under this head.

But, Sir, while it is useless to expect from a public body redress for a private wrong, it is our duty to consider how far our misfortunes are due to causes which we can control. Collectively we have made a bad bargain with the public. To that bargain the law will hold us tight unless we can show that the bargain is working mischief, not to us but to the community at large. I hardly think that we can appeal to equity, for "he that comes into equity must do equity"; and have we done equity to each other or to our club patients? In the present state of feeling it is useless to appeal to Parliament. The law is against us. What is left?

Let us look within to ourselves and to each other. So long as we act legally we can combine to our heart's content. "Collective bargaining" is perfectly legal and eminently satisfactory. As for "Conciliation Boards" and "arbitrations," they are like the "compromises" for which Cardinal Newman had such a profound mistrust. They may or may not work, but they never give satisfaction to the losers. The

wider the organisation the greater will be its power. At present the widest is the British Medical Association. Are all the clubmen members? Do they attend Branch meetings? If not, why not? We can impose on ourselves any laws we like. We have no charter; neither have the Inns of Court. They are strong enough, and we may be as strong if we will but unite. If we will not unite we shall never succeed, for we shall not deserve to succeed. Supposing that no man in an area of fifty miles was outside the Association; that every man had paid scot and lot; that he had insured himself with the Association for defence, against sickness, and even against death; that he met monthly his neighbours in common hall and at a common meal; that he had elected his Branch officers because he respected them and trusted them. Is it likely that he would disobey their orders, that he would willingly put away the fruits of his own self-denial?

Surely what the Freemasons have done we can do. Our failures are at our own doors; do not let us blame others.—I am, etc.,

GRAY'S.

March 4th.

SIR,—In the annual report of the Manchester and Salford Provident Dispensaries Association appears the analysis of cases attended by the medical officers attached thereto, and of their remuneration, and what was evidently considered a very satisfactory result panned out at the handsome sum of 5½d. per visit. It is painful reading. The despised "sixpenny doctor" would not accept such a sum. This is the reward for the time and money expended on obtaining a medical education.

The report also states "that the Society had given greater independence and self-respect to the members." The pity of it that we, too, could not form a society whereby we might experience those pleasurable and much-to-be-coveted feelings of independence and self-respect, and perhaps abstract a little more respect from a certain section of the public, as it is only too painfully evident that the doctor is not looked upon with the respect which is due to his position; and so it will remain so long as we have to hold ourselves at so cheap a value.

All that has been written on the beggarly pittance given by a great many clubs, and suggested cures for such grievances come to nought, and, I regret much to say, will never come to anything, for the simple reason that we will never combine, and someone will always be found to take the clubs at a cheaper rate than his fellows. That may be taken for granted, and, being so, there seems to me to be only one way by which we can attain our ends—reasonable remuneration for club work—and that is, for the General Medical Council to make it "infamous conduct" to accept a club under a certain sum per member to be laid down by the said Council.

The club doctors, I am certain, would hail such procedure with satisfaction. The rule as to employment of unqualified assistants has proved a boon to the *locum tenens* and to the assistant, but it has proved more costly to the principal, as his fees have not risen, and, should he have the temerity to ask for an increase in his club fees, the next thing he knows is that he has lost the club because Dr. So-and-So will do it for less.

This undercutting, to my mind, can only be prevented by action by the General Medical Council. This would be a real and beneficial reform, and would exercise more benefit on a perhaps humble section of the profession than such a discussion, for example, as to "What Constitutes a Physician?"—as if either the public or the profession cared.—I am, etc.,

February 16th. CLUB DOCTOR.

OBITUARY.

PROFESSOR EUGENE BŒCKEL, M.D.,

Strassburg.

PROFESSOR EUGENE BŒCKEL, whose death was recently announced in the BRITISH MEDICAL JOURNAL, was born in 1831 at Strassburg, where his father, Dr. Theodore Bœckel, was in practice. Young Bœckel received his preliminary education at the Protestant Gymnasium, and afterwards studied medicine in the Faculty of his native city. He took his doctor's degree in 1857. After travelling for some time, and visiting London, Paris, and Constantinople, he returned to Strassburg, where he was successively Prosector and Chief Demonstrator of Anatomy. He became *Agrégé* Professor in 1857. In the war of 1870 his services with the ambulances won for him the Cross of the Legion of Honour. After the war Bœckel continued to teach in Strassburg till 1872, when the German University was created in that city. He was offered a Chair in the new University, but declined the honour. Some months before he had declined an invitation to occupy the Chair of Clinical Surgery at Geneva. He remained at Strassburg, however, as Chief Surgeon to the Civil Hospital, in which position he succeeded Sédillot. Among his pupils were some of the foremost men in the French profession. He was greatly beloved by all his colleagues and patients.

Bœckel contributed largely to surgical literature. The bibliography of his writings occupies two and a-half columns of the *Gazette Médicale de Strasbourg*.

WE regret to have to record the death of Dr. BUIST of Perth. He was the son of a citizen of Perth, well known and highly respected in his day, and received his early education in the Academy of his native town. In 1856 he took the degree of M.D. in the University of Edinburgh, and in 1874 became a Fellow of the Royal College of Surgeons of Edinburgh. His medical education having been completed with distinction, he was almost immediately appointed House-Surgeon to the Royal Infirmary, Perth, and there gained the esteem of his patients and the confidence of the directors. In the early years of his professional life, Dr. Buist was appointed Medical Officer of Health for the city of Perth, and was soon immersed in the cares of an extensive practice. He also served as Parochial Medical Officer for the last twenty-five years. His intimate knowledge of the poorer classes was not the mere result of arduous, and sometimes repellent, long-continued duties; it was gained by a hearty good-fellowship and a warm heart towards those who were in suffering and distress. It did not require a lengthy investigation to learn that Dr. Buist was a good and faithful friend to the poor of Perth. Many a hard day and many a disturbed night he willingly spent in their service. He was on the best of terms with his brethren, with a smile for a foible and an encouraging remark for a difficulty. Dr. Buist commanded the confidence of his numerous patients of all classes, who had the highest opinion of his skill and acumen. He took a real interest in the affairs of his native city, although he did not enter upon any public office unconnected with his profession. Dr. Buist was one of the original members of the Perthshire Medical Association, which is now the local Branch of the British Medical Association. He was liberal and kindly in helping any charitable work connected with it or the British Medical Benevolent Fund, and by many he will be greatly missed. Although the funeral was of a private character, nearly all the medical men of the town were present. Dr. Buist is survived by a widow and family, one of his sons being a Captain in the R.A.M.C. They have the respectful sympathy of a great number of friends in their sudden bereavement.

MR. MONKS, of Southport, and formerly of Wigan, died at his residence, Glendining House, Southport, on March 7th, at the age of 72 years. He was born at Hindley, near Wigan, and received his medical education at the Manchester Royal Infirmary School of Medicine. After completing his curriculum he became M.R.C.S.Eng. and L.S.A. in 1856, and afterwards L.R.C.P.Edin. in 1869. He had married previously a niece of Dr. Barwise, of Wigan, whom he joined in practice. Dr. Barwise ultimately removing to Bury, the Wigan practice was carried on by Mr. Monks for a number of years, till he was joined by his son, when he retired, and has since resided in Southport. Whilst in practice he took part in the affairs of his town. He was never an ardent politician, but sought to represent the ratepayers of his ward in the town council as an independent member, supporting everything that was for the good of the people. He was a member and Vice-Chairman of the Sanitary Committee, and took much interest in sanitary matters. In 1878 he was made a J.P. He was on the staff of the Royal Albert Edward Infirmary as Honorary Medical

Officer from the time of its opening till 1883, having previously served some years before as Honorary Surgeon to the Dispensary. On his retirement from the acting staff of the infirmary he was elected Consulting Surgeon, a position he held up to the time of his death. At one time he took an active interest in the Lancashire and Cheshire Branch of the British Medical Association, and frequently attended its meetings. At the annual meeting of the Association in 1876 he read a paper on Jaundice during Pregnancy: its Effects on the Mother and Child. He always took great interest in the welfare of the junior members of the profession, often sympathising and tendering his advice when asked, his genial manner always commanding confidence. Energetic and persevering himself, he was always glad to help others in their difficulties. Having a strong will and determination, once he formed an opinion it was difficult to change it, unless he was thoroughly convinced, though he was always tolerant of the opinion of others. He was interred at the cemetery of Southport, beside his only daughter, who predeceased him seven years. He leaves a widow and grown-up family of sons, one of whom, Mr. E. H. Monks, of Wigan, is a member of the medical profession.

DR. L. H. PETIT, who was for twenty years Assistant Librarian of the Paris Faculty of Medicine, and Librarian of the Paris Surgical Society, died recently at Mentone. He took his degree at Paris in 1875, the subject of his thesis being Syphilis in its Relations with Traumatism. He was a favourite pupil of Verneuil, and was the author of a number of contributions to surgical literature. Dr. Petit's name was well known in connection with the organised effort initiated in recent years in France for the prevention of tuberculosis. He was Secretary to the Œuvre de la Tuberculose, and Acting Editor of the *Revue de la Tuberculose* from its foundation. He was a Knight of the Legion of Honour, and had recently had the Order of Franz-Josef conferred on him by the Emperor of Austria for services in connection with the organisation of the movement against tuberculosis in Austria-Hungary. He was a man of wide and solid learning, and his loss will be felt by students of medical literature, not only in France, but in other countries.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. von Mosengeil, Professor of Surgery in the University of Bonn, and author of numerous contributions to professional literature, chiefly on inflammation and sepsis, aged 60; Dr. Leroy, Professor of Internal and Experimental Pathology in the Medical Faculty of Lille; and Dr. B. Baschkiroff of St. Petersburg, Director of the Caucasian Mineral Watering Places, aged 58.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: JAMES P. WILLIS, M.B., Surgeon, to the *Pembroke*, lent to Deptford Victualling Yard for survey of stores from April 3rd to May 5th inclusive, March 22nd; REGINALD ST. G. S. BOND, M.B., Surgeon, also lent to Deptford Victualling Yard for survey of stores from April 3rd to May 5th inclusive; ARTHUR W. B. LIVESAY, M.B., Surgeon, to the *Pembroke* for Chatham Dockyard, March 30th; HENRY R. GARDNER, M.B., Surgeon, to the *Thunderer*, March 30th; ROBERT J. MACKEOWN, Surgeon, to the *Excellent*, March 30th; ARTHUR H. PRICHARD, Surgeon, lent to the *Research*, March 26th; JOHN N. ROBERTSON, M.B., Surgeon, lent to the *Triton*, March 26th.

ROYAL ARMY MEDICAL CORPS.

SERGEANT-MAJORS EDWIN HOUGHTON, RICHARD SCOTT, ALEXANDER WILSON, and HENRY W. GLOVER are appointed Quartermasters with the honorary rank of Lieutenant, on augmentation, March 17th.

Surgeon-Major E. J. LAWLESS, 4th Volunteer Battalion the East Surrey Regiment, is granted the temporary rank of Major while serving in South Africa, March 17th.

Surgeon-Lieutenant J. K. TOMORY, 1st Sutherland Volunteer Rifles, is granted the temporary rank of Lieutenant while serving in South Africa, March 17th.

Captain C. F. WANHILL, from the Seconded List, to be Captain, *vice* R. H. E. Holt, died of wounds received in action, February 2nd. Captain Wanhill was placed on the Seconded List for service with the Egyptian Army in February, 1897.

Surgeon-Major E. L. FREER, 1st Volunteer Battalion the Royal Warwickshire Regiment, is granted the temporary rank of Major while serving in South Africa, March 21st.

Surgeon-Lieutenants A. H. MCDOUGALL, 1st Volunteer Battalion the Royal Warwickshire Regiment, and JOHN CLAY, M.B., 2nd Volunteer Battalion the Northumberland Fusiliers, are granted the temporary rank of Lieutenant while serving in South Africa, March 21st.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL C. B. HUNTER, Bengal Establishment, is permitted to retire from the service from April 15th. He was appointed Surgeon, March 31st, 1879, and Lieutenant-Colonel, March 31st, 1899. He was in the Afghan war in 1879-80 (medal); with the Zhob Valley Expedition in 1890; and with the two Miranzai Expeditions in 1891 (medal with clasp).

THE IMPERIAL YEOMANRY.

MR. THOMAS WALCOT, F.R.C.S., is appointed Medical Officer, with the temporary rank of Captain, March 21st.

INVITED TO SERVE.

RETIRED ON GRATUITY writes: The War Office should be pressed for a definite answer to the following question: Are officers retired from the R.A.M.C., but now once more doing duty on full pay, to count their present service towards pension? Here is a crucial case: A major retired on gratuity after eighteen years' service was a year or so afterwards, under the pressure of circumstances, placed on full pay and given a full share of army medical work. Does such duty count for nothing, not even towards pension?

*** We cannot pretend to answer our correspondent's question, although it clearly ought to be answered. The case of re-employment after retirement on gratuity seems doubly complicated. If the service counted towards pension, it seems clear that the gratuity would have to be returned; the recipient could not have both. Cannot our correspondent put the question officially, and so get it authoritatively answered?

COMPOUND TITLES.

A RETIRED BRIGADE-SURGEON-LIEUTENANT-COLONEL points out that the compound titles being now those of the auxiliary forces only, their use by retired officers of the regular forces makes it appear as if they had never been in the regular army at all—in short, puts them on the footing of volunteers.

*** There is no little force in this contention.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

ILLNESS OF ASSISTANT.

A CORRESPONDENT inquires to what an assistant is entitled who, after having been in his service three months, contracts scarlet fever, goes into the fever hospital, and is disabled for three months, during which time the principal is compelled to employ a substitute. Can he claim his salary in full during the time he was disabled?

*** If at the commencement of the assistant's illness the principal terminates the engagement, the former is entitled to a month's salary in lieu of notice. If the principal decides to retain the assistant in his service, and to wait for his convalescence, the assistant can claim his salary for the whole period of his disability: but it is usual under such circumstances for the principal and assistant to agree together as to sharing the cost of the substitute, if one is required, during the assistant's absence.

BOOK DEBTS AND NET PROFITS.

A. enters into partnership with B. in B.'s practice in June, 1897. The terms are that B. shall retire after fifteen years from above date, and shall be paid on his retirement a sum equal to one half the net annual profits on the average of the two preceding years. B. desires to retire at once, and A. agrees that he may do so on the terms of the agreement. How are the "net annual profits" to be arrived at? Are they to be calculated on the basis of the actual receipts for the two years, or on the gross bookings?

*** The net annual profits must be calculated on the basis of the actual receipts. B. will be entitled, after he has left the practice, to his share of all book debts due to the firm while he was a member of it, whenever they may be paid, but it is open to A. to purchase of B. at an agreed sum his share of the above book debts.

THE ETHICS OF CONSULTATION.

R. A.—Our correspondent should remember that his suppression of the prescription must have appeared most extraordinary to the consultant and the father of the patient, all the more so as he was unable at the time to offer any explanation on the subject; therefore, as there is no getting over the fact that this was due to our correspondent's mistake,

we think he should overlook any expressions of feeling which originated in the misunderstanding for which he must feel he is solely to blame. With respect to the other points of our correspondent's inquiry, we are of opinion that the consultant, if he took over the sole charge of the case at all, should have done so only until our correspondent's partner should have been able to return to his work, and we do not think that this should be made conditional upon the wish of the patient's father; but this only raises hypothetical questions which have been disposed of by the death of the patient. As to our correspondent's future attitude towards the consultant, that must depend very much upon circumstances. If the consultant's manner facilitates the resumption of friendly relations, we see no reason why our correspondent should not try to forget the somewhat unfortunate circumstances of this case. We should not advise any appeal to the local Branch or Ethical Committee.

COURTESY ATTENDANCE.

G. H. K.—No medical practitioner is obliged to attend a colleague whether retired or in practice without payment. It is purely a matter of courtesy, and payment should always be tendered. Therefore A. is no doubt at liberty to charge B. It is quite possible for the name of a retired practitioner to have disappeared from the *Register* and *Directory*, and it is also quite possible that offence may have been given by inquiries which were evidently inspired by doubt of B.'s account of himself.

CHARGES OF MEDICAL AGENTS.

"Query" asks: Has a medical agent any legal right to charge a fee of £3 3s. when he has been unsuccessful in disposing of a practice and when he had not specified any such fee beforehand?

*** In the absence of any agreement, expressed or implied, the agent does not appear to have any claim.

FEES FOR ATTENDANCE AT INQUESTS.

Army Medical Officer writes: A Reservist dies in a military hospital as the result of an accident. The coroner decides to hold an inquest. The army medical officer who has proceeded on leave is recalled by telegram to give evidence. He travels by rail 120 miles, attends the inquest held in the Town Hall, having paid all his own expenses, and is then informed by the coroner that he is not entitled to any fee nor even to his expenses. Is the coroner acting justly by the medical officer?

*** Assuming that it was the duty of the army medical officer in question to attend the deceased person as the medical officer of the military hospital, it is doubtful whether he is legally entitled to any remuneration for giving evidence. The author of *Jervis on Coroners* states, in reference to Section xxii, Subsection 11 of the Coroners Act 1887 that among institutions such as military hospitals doubts may well arise as to whether the medical officer is entitled to claim any fee.

HUSBAND'S LIABILITY FOR FEES: MEDICAL EVIDENCE.

X. sends the following question: In August last I was consulted by a married woman, whom I found to be suffering from secondary specific disease, and also to be pregnant. She told me that her husband had gone abroad two months before this, and I went on attending her in good faith. The confinement took place early in January. In the matter of payment, the patient had kept putting me off, so I made inquiries, and found the address of the husband, who returned to England at the end of last year. I sent him my account, in which was mentioned the date of the child's birth. In reply, he called, thanking me for giving him the means of getting a divorce. He can prove that he was not in England later than January of last year, so that he could not have been the father. He disclaims liability for my fees, saying that neither the pregnancy nor illness was due to him; he did not know where his wife was living until he heard from me. He is negotiating for a divorce. Can I claim against the husband for professional attendance on the wife? also can he subpœna me as a witness in the divorce case? Can I demand payment in advance for giving evidence; and, if so, how much can I claim?

*** Our correspondent's questions give rise to so many considerations, that he ought to consult his solicitor. *Primâ facie*, however, it would appear that the husband is liable to pay the account. The husband can subpœna our correspondent, and his best course would be to arrange the fee to be paid previously. Payment could be demanded as a condition precedent to giving evidence. The amount of the fee will depend on the value our correspondent places on his time, and on his probable expenses.

THE DUTY OF MEDICAL PRACTITIONERS IN NON-NOTIFIABLE INFECTIOUS DISEASES.

W. F.—While it is the duty of a medical practitioner placed in such circumstances to see that proper means are taken to prevent infection, W. F. would have exceeded his duty had he communicated with the patient's employer or fellow servants without the patient's consent.

COMPETITION.

X. Y. Z.—The offer of medicine gratis was probably a bid for a patient; and the newcomer, having brought no introduction, may intend to live by raiding existing practices. But such matters should not be taken too much to heart. In a larger town, where competition is always present, our correspondent would be less sensitive.

A department for the carrying out of Finsen's light treatment has been established in connection with the St. Petersburg Institute of Experimental Medicine.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF ABERDEEN.

The Queen has been pleased to appoint, on the recommendation of the Secretary for Scotland, the Rev. John Marshall Lang to be Principal of Aberdeen University. Dr. Marshall Lang has long been known as one of the most distinguished ministers in the Established Church of Scotland. Educated at Glasgow University, he was, at the age of 21, minister for two years to a large parish in Aberdeen, and since that time he has frequently addressed audiences in Aberdeen from the pulpit or as lecturer. He has represented the Established Church of Scotland in the assemblies of the Presbyterian Church in America and in Australia, and in 1893 was elected Moderator of the General Assembly. He leaves his important charge of the Barony Parish in Glasgow to come to Aberdeen. Dr. Marshall Lang has shown considerable interest in educational matters. He is a very eloquent speaker, is gifted with a striking personality, and has the reputation of administrative power. Though the University cannot but feel the loss of one so deeply inbued with the academic spirit as the late Principal, the appointment of a man so highly qualified in many ways as Dr. Marshall Lang is likely to be received with approbation.

UNIVERSITY OF EDINBURGH.

Close of the Winter Session.—The University and Extra-Academical Medical Classes rise for the Easter or Spring vacation on March 30th. The Summer Session begins on May 1st, on which day the examinations in Clinical Medicine for the Final begin. The Final Professional Written Examinations begin on June 18th.

CONJOINT BOARD IN IRELAND.

Preliminary Examination.—Candidates have passed this examination as undernoted:

Honours in Order of Merit.—L. A. Andrews, B. T. Brayshay.

Pass.—W. W. Boyce, H. N. Cole, Miss C. H. Colley, E. G. Condon, J. J. Connolly, C. Cooper, R. F. Cooper, W. J. Lowan, L. Ellenbogen, J. Farrelly, H. W. Forsyth, B. Goldfoot, E. J. Higgins, D. Hutch, C. I. Kean, F. Lyburn, W. Matthews, H. V. M'Keogh, F. M'Lorinan, F. MacManus, T. O'Donovan, H. E. Redmond, A. O'Reilly, E. Strickland, P. D. Sullivan, A. Weinronk, G. F. Wright.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE DEATH-RATES OF LONDON SANITARY AREAS DURING 1899.

In the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis, based upon the Registrar-General's returns for the year 1899. The mortality figures relate to persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary areas in which the patients had previously resided.

The 133,120 births registered in London during 1899 were equal to an annual rate of 29.4 per 1,000 of the population, estimated at 4,546,752 persons in the middle of that year; this rate was lower than in any of the ten preceding years, during which the birth-rate averaged 30.7 per 1,000. Among the various sanitary areas the birth-rate showed, as usual, wide variations, owing principally to the differences in the sex and age-distributions of their populations. In St. George Hanover Square, St. James Westminster, Hampstead, St. Martin-in-the-Fields, Strand, and City of London the rates were considerably below the average; while they showed a marked excess in St. Luke, Bethnal Green, Whitechapel, St. George-in-the-East, Mile End Old Town, and Bermondsey sanitary areas.

The deaths of persons belonging to London registered during last year were 87,530, equal to a rate of 19.3 per 1,000 of the population, against 18.2, 17.7, and 18.3 in the three preceding years; this rate was 0.9 per 1,000 below the mean rate in the ten preceding years 1889-98. The lowest death-rates last year in the various sanitary areas were 11.6 in Hampstead, 12.7 in Stoke Newington, 14.2 in St. George Hanover Square, 14.3 in Plumstead, 15.1 in Lee, and 15.3 in Wandsworth; the highest rates were 24.9 in Holborn and in St. Olave Southwark, 25.1 in St. Saviour Southwark, 25.6 in Limehouse, 27.1 in St. George-in-the-East, 27.7 in St. George Southwark, and 28.4 in St. Luke.

During the year under notice, 11,147 deaths were referred to the principal zymotic diseases in London; of these, 3 resulted from small-pox, 2,141 from measles, 398 from scarlet fever, 1,946 from diphtheria, 1,717 from whooping-cough, 2 from typhus, 758 from enteric, 1 from simple continued fever, and 4,181 from diarrhœa. These 11,147 deaths were equal to an annual rate of 2.46 per 1,000, against 3.11, 2.56, and 2.77 in the three preceding years; this rate was slightly below the mean rate in the ten preceding years 1889-98, which was 2.70 per 1,000. In the various sanitary areas the zymotic death-rates ranged from 1.07 in St. Martin-in-the-Fields, 1.09 in St. George Hanover Square, 1.12 in St. James Westminster, 1.16 in Hampstead, 1.33 in Stoke Newington, and 1.35 in Plumstead, to 3.46 in Bermondsey, 3.51 in St. Saviour Southwark, 3.64 in Shoreditch, 3.67 in Newington, 3.78 in Limehouse, and 4.53 in St. George Southwark. Compared with the averages in the ten preceding years, the mortality from "fever" and from diarrhœa showed an excess, while that from each of the other principal zymotic diseases was below the average. Of the three fatal cases of small-pox registered in London during 1899, one belonged to Marylebone, one to Whitechapel, and one to Lewisham sanitary area. During last year, 18 cases of small-pox were admitted into the Metropolitan Asylums Hospitals, and 7 remained under treatment at the end of the year. Measles showed the highest proportional fatality in St. George's-in-the-East, Limehouse, St. Saviour Southwark, St. George Southwark, St. Olave Southwark, and Bermondsey sanitary areas. Scarlet

fever was proportionally most fatal in Fulham, Clerkenwell, St. Luke, St. Olave Southwark, and Rotherhithe sanitary areas; 13,641 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals during 1899, and 2,797 remained under treatment at the end of December last. Diphtheria caused the highest proportional fatality in St. George Southwark, Newington, St. Olave Southwark, Rotherhithe, Bermondsey, and Lewisham (excluding Penge) sanitary areas; there were 9,569 diphtheria patients admitted into the Metropolitan Asylum Hospitals during 1899, and 1,679 remained under treatment at the end of December last. Whooping-cough was proportionately most fatal in Chelsea, St. Pancras, Limehouse, Poplar, St. George Southwark, and Newington sanitary areas; enteric fever in Holborn, Clerkenwell, City of London, Bethnal Green, Limehouse, and Rotherhithe sanitary areas; and diarrhœa in Fulham, St. Luke, Shoreditch, Poplar, St. Saviour Southwark, and St. George Southwark sanitary areas.

During the year under notice 8,275 deaths from phthisis were registered in London, equal to an annual rate of 1.82 per 1,000; the proportional fatality from this disease was considerably higher in Central and in East London than in any other part of the metropolis. In North London the phthisis death-rate was 1.64 per 1,000, in West London it was 1.65, in South London 1.74; while in East London it was 2.19, and in Central London 2.75 per 1,000. Among the various sanitary areas the lowest phthisis death-rates were 0.84 in Hampstead, 0.88 in Stoke Newington, 1.00 in Lee, 1.15 in Paddington and in Lewisham (excluding Penge), 1.21 in Wandsworth, and 1.34 in Kensington; the highest rates were 2.70 in Strand, 3.08 in Holborn, 3.13 in St. Giles, 3.31 in Westminster, 3.44 in St. Saviour Southwark, and 3.53 in St. Luke and in St. George Southwark.

Infant mortality in London last year, measured by the proportion of deaths under 1 year of age to registered births, was equal to 1.66 per 1,000, and exceeded by 9 per 1,000 the mean rate in the ten preceding years. The lowest rates of infant mortality were 103 in Stoke Newington, 112 in St. Giles, 124 in St. Marylebone and in Plumstead, and 129 in St. George Hanover Square and in Hampstead; while they ranged upwards in the other sanitary areas to 203 in St. Martin-in-the-Fields and in St. Saviour Southwark, 204 in Shoreditch, 205 in St. George Southwark, 207 in Westminster, 216 in Limehouse, and 226 in Holborn.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,859 births and 4,525 deaths were registered during the week ending Saturday last, March 17th. The annual rate of mortality in these towns, which had declined from 25.8 to 20.4 per 1,000 in the four preceding weeks, further fell to 20.3 last week. The rates in the several towns ranged from 12.7 in Croydon, 14.9 in West Ham, 16.4 in Brighton, and 16.5 in Bristol, to 25.7 in Salford, 27.6 in Liverpool, 28.6 in Oldham, and 31.1 in Preston. In the thirty-two provincial towns the mean death-rate was 21.3 per 1,000, and exceeded by 2.5 the rate recorded in London, which was 18.8 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London the death-rate was 1.7 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Salford, 3.6 in Plymouth, 3.9 in Preston, and 4.1 in Wolverhampton. Measles caused a death-rate of 1.4 in Salford, 1.7 in Wolverhampton, 2.1 in Halifax, 2.4 in Cardiff, 2.6 in Preston, and 3.1 in Plymouth; and whooping-cough of 1.2 in West Ham, in Liverpool, and in Leeds, 1.3 in Newcastle, and 1.7 in Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 77 deaths from diphtheria in the thirty-three towns included 35 in London, 8 in Sheffield, 7 in Leicester, 5 in Leeds, and 4 in Bristol. One fatal case of small-pox was registered last week in Cardiff, but not one in any other of the thirty-three large towns. The number of small-pox patients under treatment in the Metropolitan Asylum Hospitals, which had been 7 at the end of each of the two preceding weeks, had declined to 5 on Saturday last, March 17th; 2 new cases were admitted during the week, against 3, 2, and 1 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1,760, against numbers decreasing from 3,578 to 1,777 on the seventeen pre-

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions during the Year 1899.

Sanitary Areas.	Estimated Population middle of 1899.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
LONDON	4,546,752	133,120	87,530	29.4	19.3	2.46	11,147	3	2,141	398	1,946	1,717	2	758	1	4,181	8,275	166
West Districts.																		
Paddington	128,794	2,941	2,065	22.9	16.1	1.55	198	—	6	5	29	43	—	9	—	106	148	151
Kensington	172,899	3,590	3,054	20.8	17.7	1.53	263	—	24	10	43	61	—	24	—	101	231	180
Hammersmith	108,785	3,061	2,058	28.2	19.0	2.11	230	—	22	13	25	46	—	23	—	101	187	183
Fulham	130,720	4,574	2,507	35.1	19.2	3.23	423	—	68	33	59	54	—	25	1	183	238	189
Chelsea	96,721	2,381	1,893	24.7	19.6	2.13	205	—	18	8	26	71	—	18	—	64	173	164
St. George Hanover Sq.	80,876	1,348	1,142	16.7	14.2	1.09	88	—	17	7	12	14	—	9	—	29	110	129
Westminster	52,117	1,115	1,159	21.5	22.3	1.04	85	—	17	5	10	5	—	9	—	39	172	207
St. James Westminster	21,827	437	389	20.1	17.9	1.12	24	—	3	1	3	6	—	3	—	8	46	142
North Districts.																		
Marylebone	140,139	3,987	2,596	28.5	18.6	1.70	236	1	24	15	36	34	—	26	—	100	277	124
Hampstead	80,252	1,577	926	19.8	11.6	1.16	93	—	22	6	15	11	—	4	—	35	67	129
St. Pancras	244,548	6,621	4,948	27.1	20.3	2.69	653	—	102	25	111	142	—	42	—	231	489	178
Islington	348,085	9,658	6,299	27.8	18.1	2.30	798	—	164	34	126	170	—	48	—	256	552	160
Stoke Newington	35,187	799	446	22.8	12.7	1.33	47	—	10	3	6	4	—	5	—	19	31	103
Hackney	222,571	6,453	3,753	29.1	16.9	2.22	492	—	110	16	89	48	—	33	—	194	332	153
Central Districts.																		
St. Giles	37,196	1,132	739	30.5	19.9	1.40	52	—	16	—	5	1	—	4	—	26	116	112
St. Martin-in-the-Fields	12,142	148	189	12.2	15.6	1.07	13	—	5	—	1	—	—	1	—	6	22	203
Strand	23,016	472	521	20.6	22.7	1.30	30	—	5	1	7	—	—	—	—	17	62	189
Holborn	29,621	721	737	24.4	24.9	2.23	66	—	11	3	6	13	—	7	—	26	91	226
Clerkenwell	66,068	2,050	1,492	31.1	22.6	3.04	200	—	36	13	28	30	—	23	—	70	153	193
St. Luke	40,868	1,811	1,159	44.4	28.4	3.03	123	—	26	8	10	14	—	6	—	59	144	149
London City	27,986	416	599	14.9	21.5	1.36	38	—	4	1	7	5	—	12	—	9	61	144
East Districts.																		
Shoreditch	121,071	4,132	2,857	34.2	23.8	3.64	438	—	50	13	65	47	—	25	—	198	253	204
Bethnal Green	128,938	4,753	2,936	37.0	22.8	3.15	405	—	98	9	59	45	—	38	—	156	303	174
Whitechapel	81,391	3,000	1,714	37.0	21.1	2.12	173	—	58	2	27	24	—	15	—	46	194	147
St. George-in-the-East	48,560	2,068	1,312	42.7	27.1	3.44	166	1	58	3	12	25	—	9	—	59	121	200
Limehouse	58,807	1,933	1,500	33.0	25.6	3.78	221	—	62	1	34	31	—	22	—	71	135	216
Mile End Old Town	113,161	4,250	2,406	37.7	21.3	2.72	307	—	52	5	65	48	—	26	—	111	205	158
Poplar	170,606	5,918	3,762	34.8	22.1	3.41	582	—	104	10	77	106	—	38	—	247	364	176
South Districts.																		
St. Saviour Southwark	24,207	694	607	28.7	25.1	3.51	85	—	21	2	17	10	—	1	—	34	83	203
St. George Southwark	60,536	2,128	1,673	35.2	27.7	4.53	274	—	63	6	63	32	—	8	—	102	213	205
Newington	124,166	4,178	2,969	33.7	24.0	3.67	455	—	87	13	104	104	—	23	—	124	325	191
St. Olave Southwark	11,098	361	276	32.6	24.9	2.61	29	—	10	2	9	—	—	2	—	6	28	147
Bermondsey	85,835	3,063	2,063	35.8	24.1	3.46	296	—	68	10	88	29	1	18	—	82	183	187
Rotherhithe	41,050	1,266	865	30.9	21.1	2.80	115	—	14	11	32	14	1	11	—	32	75	170
Lambeth	308,108	9,433	5,894	30.7	19.2	2.65	819	—	170	25	158	130	—	50	—	286	537	158
Battersea	174,996	5,179	2,910	29.7	16.7	2.22	387	—	105	14	62	52	—	38	—	116	277	162
Wandsworth	209,655	5,542	3,203	26.5	15.3	1.89	395	—	59	9	68	65	—	18	—	176	253	153
Camberwell	264,817	7,444	4,602	28.2	17.4	2.52	667	—	130	19	160	86	—	33	—	239	404	158
Greenwich	182,513	5,682	3,415	31.2	18.8	2.76	503	—	127	17	73	53	—	30	—	203	281	167
Lee	40,219	976	606	24.3	15.1	2.06	83	—	25	4	14	9	—	4	—	27	40	141
Lewisham	91,027	2,597	1,478	28.6	16.3	2.23	203	1	14	6	68	12	—	11	—	91	104	143
Woolwich	41,542	1,260	879	30.4	21.2	2.44	101	—	13	4	21	13	—	5	—	45	102	163
Plumstead	94,031	1,971	914	30.9	14.3	1.35	86	—	3	6	16	10	—	—	—	51	93	124

ceding Saturdays; 181 new cases were admitted during the week, against 160, 154, and 147 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 17th, 966 births and 700 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 31.7, 29.0, and 27.7 per 1,000 in the three preceding weeks, further declined to 22.7 last week, but was 2.4 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.9 in Leith, and 18.6 in Dundee, to 26.6 in Greenock, and 27.0 in Perth. The zymotic death-rate in these towns averaged 2.9 per 1,000, the highest rates being recorded in Dundee and Perth. The 364 deaths registered in Glasgow included 7 from measles, 3 from scarlet fever, 2 from diphtheria, 5 from whooping-cough, 3 from "fever," and 3 from diarrhœa. Five fatal cases of whooping-cough and 5 of diarrhœa were recorded in Edinburgh; 5 of measles and 3 of diarrhœa in Dundee; 5 of diarrhœa in Aberdeen; 4 of measles in Paisley; and 2 of whooping-cough in Perth.

EXAMINATION OF PATHOLOGICAL FLUIDS IN EDINBURGH.

THE Edinburgh City Corporation has made an arrangement with the Royal College of Physicians for the examination of sputum, urine, and milk for tubercle bacilli with reports thereon. The condition is that all the specimens for examination shall be transmitted by the city medical officer of health. The following is the scale of fees to be charged:—Examination and report on sputum, 2s. 6d.; on urine, 5s.; on milk, 10s. The arrangement takes effect from March 1st.

SALE OF FOOD AND DRUGS ACTS (SCOTLAND).

THE Local Government Board of Scotland has issued to county council and burgh local authorities circulars drawing their attention to the Sale of Food and Drugs Act, 1899, which came into operation on January 1st, 1900. It is pointed out that the general effect of the Act is to extend and to render more stringent the provisions of the earlier Acts. All the powers and duties which were vested in the Secretary for Scotland in relation to the Sale of Food and Drugs Acts are transferred to the Local Government Board. This Board is invested with further powers of securing the execution and enforcement of the Acts, particularly in relation to matters affecting the general interests of the consumer as distinguished from the interests of agriculture.

The provisions of the Margarine Act, 1887, are extended to "margarine cheese," which expression is defined as meaning "any substance, whether compound or otherwise, which is prepared in imitation of cheese, and which contains fat not derived from milk." The Board have issued a new order directing the manner in which the registration of manufactories of margarine cheese as well as margarine, and of premises wherein the business of a wholesale dealer in margarine or margarine cheese is carried on in Scotland. It is pointed out that as a first step towards carrying out their statutory duties under these Acts, the local authorities who have not hitherto appointed public analysts must now proceed to do so at once in terms of the statute.

THE ISOLATION OF SCARLET FEVER PATIENTS.

IN a pamphlet of twenty pages, entitled *Scarlet Fever: The Case Against Hospital Isolation*, Dr. Edward Dean Marriott, not without a certain amount of rhetoric, sets forth his objections to the hospital isolation, more especially of scarlet fever patients. These he sums up as "(1) the danger of reinfection; (2) the failure of the system as instanced by return cases; (3) the mortality of return cases; (4) the danger to which children are exposed in isolation hospitals of catching other diseases and contracting bad habits; (5) the injury inflicted on children by removing them from home influences and parental care; (6) the demoralisation which follows in the train of rate-supported free hospitals; (7) the fact that the dread of interference by the sanitary authority leads to concealment in a very large number of mild cases; (8) the all-important fact that the period during which houses remain centres of infection is trebled, quadrupled, and sometimes sextupled by return cases; (9) the utter and complete failure to control epidemics, as evidenced by the annual returns of notified cases."

In support of his last contention, Dr. Marriott gives the number of cases notified in Nottingham annually since 1883, the first complete year after the adoption of the Act. He arrives, by a method of his own, at the startling conclusion that something like 4 per cent. of the estimated population of Nottingham suffered last year from scarlet fever. This liberal estimate led us naturally to refer to the deaths from this disease given in the BRITISH MEDICAL JOURNAL of March 10th, p. 615. There we found to our no little relief that the deaths registered in Nottingham from scarlet fever last year amounted to 56, not an extraordinary number during a period of epidemic prevalence. Calculated on the estimated population of Nottingham, these 56 deaths are equivalent to a rate of 0.23 per 1,000. Having begun the investigation, we thought it as well to compare this rate with that which obtained in the happy days before notification. We found, on consulting the annual summaries of the Registrar-General, for the five years 1878-82, that no fewer than 1,020 had been registered in that period, or an average of 204 a year. In fact, for those five years the scarlet fever death-rate in Nottingham was 1.24 per 1,000, instead of 0.23 as in 1899. By a somewhat curious coincidence the 204 deaths per annum which scarlet fever caused for the five years 1878-82 corresponds closely with the aggregate deaths which occurred in the same town in the whole of the five years just ended. These were 203. The lessening of mortality from this disease is, however, not merely to a fifth of the previous amount. The fall is really to one-seventh. This will be evident when we point out that while the death-rate averaged, as just said, for the five pre-notification years 1.24 per 1,000 of the estimated population, in the five recent years the rate has been only 0.17. We scarcely think the ratepayers of Nottingham will be anxious to return to the halcyon days mourned over by Dr. Marriott.

But though we differ from this gentleman as to his main contention, we are far from wishing to make light of the evils of so-called "return cases." All sanitarians regret the occasional occurrence of such cases, and are willing to co-operate in finding a remedy. So, also, as to any evils from the aggregation of large numbers of cases in a limited space. While we think that in both these respects Dr. Marriott exaggerates the actual amount of evil which has resulted, we do not think that such cases need really very often occur. One direction in which we should look for a lessening of these occasional evils is in the provision of larger accommodation for the treatment of patients. Every scarlet fever patient should have an air space of at least 2,000 cubic feet. Not only so, but the wards should be numerous enough to allow of the separation of the patients about to be discharged after they and their clothes have been thoroughly disinfected. The wards should also be numerous enough to allow each in turn and at frequently-recurring intervals to be cleaned down and disinfected. This process should be repeated much more frequently than is at all usual in many institutions. If Dr. Marriott will join in pressing on the ratepayers the advantages of ample air space for the sick, careful quarantine of the convalescents, and repeated recleansing of all fever wards he will assist in improving the health of his town more than by pamphlets like the one before us.

FOOD AND DRUGS.

THE Local Government Board has recently issued a General Order, under the Sale of Food and Drugs Act, 1899, dealing with the appointment of public analyst, in which a regulation affecting the evidence of competency which such an officer must furnish in order to secure the requisite approval of the Board to the appointment is laid down.

Every public analyst appointed on or after January 1st, 1900, will be required to furnish sufficient proof of his competent skill and knowledge of analytical chemistry, therapeutics, and microscopy, and the proof required will be a qualification conferred by some person or body of persons recognised by the Board. This regulation does not apply to those whose appointments were confirmed by the Board between January 1st, 1891, and March 7th, 1900—the date of the Order—nor to the subsequent appointment of any such person.

In a circular letter accompanying the Order the Board states that it would accord with their existing practice to accept as sufficient evidence of competency the Diploma of Fellowship or Associateship of the Institute of Chemistry, together with the certificate granted by the Institute, after an examination conducted by them on lines approved by the Board, in Therapeutics, Pharmacology, and Microscopy. The possession of a diploma as a registered medical practitioner is accepted as sufficient proof of competency in microscopy and therapeutics, but evidence of sufficient skill and knowledge of analytical chemistry will also have to be furnished.

No exception can be taken to the regulation on the ground of undue stringency. It does not affect those who are already in office, and those who seek appointments hereafter will have no reason to complain if any appointment they may secure at the hands of the local authority under the Act is not confirmed, for the Local Government Board's requirements as to qualification are no more than are absolutely essential if the public analyst is to be able to discharge his duties efficiently.

THE M.O.H. FOR ILFRACOMBE.

ACTING on a recommendation made by the Local Government Board, the District Councils of Great Torrington, Dulverton, and Ilfracombe have made permanent the appointment of the medical officer of health, Dr. E. Slade-King. The Local Government Board based this recommendation on the fact that the health officer was a D.P.H., on his long and continuous service, and on the satisfactory manner in which he had discharged his duties. The Ilfracombe District Council have also voted a substantial addition to Dr. Slade-King's salary.

HIGHLAND PARISH DOCTORS.

A HIGHLAND PARISH DOCTOR draws attention to some of the difficulties medical men have to contend with in the Highlands of Scotland. Very often the doctor's house is the property of the principal landed proprietor and usually it is the only house available, so if the doctor should have differences with the local magnate he may find himself houseless and homeless. It is suggested that the doctor should have an appeal to the Local Government Board, and that the Board should have power to provide a residence for the doctor.

Another difficulty that Highland doctors have to contend with is the impossibility of getting any holidays owing to the great expense of bringing a substitute from a distance, the expense being much greater than a poorly-paid Highland doctor can afford. Our correspondent also complains that owing to the recent Public Health Act which makes it necessary for all medical officers of health to have a Diploma of Public Health, he cannot get appointed as medical officer of health for the parish. As usually a salary of from £10 to £20 is attached to this office, this is a distinct loss. The difficulty, however, can be got over by the appointment of the local doctor, not as medical officer of health, but as assistant to the county medical officer, and this can be done by arrangement with that official.

HOSPITAL AND DISPENSARY MANAGEMENT.

ROYAL EDINBURGH ASYLUM FOR THE INSANE.

THE statutory annual meeting of the Corporation of the Royal Edinburgh Asylum for the Insane was held recently, the Lord Provost presiding. After the managers' business report and the report of the Charity and Bevan Funds had been given, the Physician-Superintendent (Dr. Clouston) submitted his annual report. At the beginning of the year 1899 the number of patients was 945, while at the close it was 912. The admissions were 428, 212 men and 216 women. The total number of patients under treatment was therefore 1,373; 366 patients were discharged, 105 patients died; the average number of patients was 908. There were 140 rate-paid cases. The proportion of new admissions to resident population enormously exceeded any other Scottish Asylum, and indeed in the

pauper department was nearly double the average of the Scottish District Asylums.

Alcoholic excess stood as the cause of 25½ per cent. of the cases—the average figure for the past five years. He wished he could report even the sure beginning of a slow improvement among the population in this matter. It was precisely the men and women to whose brains alcohol was most dangerous who so frequently took it to excess. Few persons who had had an opportunity of studying the effects of alcohol on the brain, and especially on predisposed brains, but would most heartily approve of most of the recommendations of Lord Peel's Commission, recently published.

FAILURE OF THE INEBRIATES ACT, 1898.

The Act of 1898 dealing with habitual inebriates had done very little good, and had excited little interest, because it only touched that pressing question in its criminal aspect, and was generally colourless and limited in scope. If they were to have legislation on that matter, let them have it effective.

The past year's experience was in no way peculiar when they saw from one of their tables that of all the 236 cases in which the cause was known, or could be probably assigned, it was only in 27 of them, or 11½ per cent., that trouble and anxieties, worries and mental shocks produced the disease, all the remaining 209 being due to drink, faulty development, getting old on wrong lines, gross brain disease, child-bearing, strong hereditary predisposition, and such-like bodily causes. He believed that the experience of the medical profession would back him up in the statement that the recent epidemic of influenza caused more insanity by far in the country than all the public anxiety, and even the private griefs, of the war.

A distinguished medical writer and statistician had lately been going into the question as to whether we as a people were becoming more "nervous" of late years. The actual facts ascertained did not seem to bear out any alarming conclusions. A few nervous diseases and forms of insanity had no doubt increased, but in regard to the question whether insanity as a whole was increasing, the verdict by the most competent recent investigators was "not proven," with which he agreed. To lessen materially in civilised societies the total amount of the great nervous disturbances and failures comprised in insanity, neurasthenia, or general nervous exhaustion and breakdown, epilepsy, idiocy, premature brain softening, and nervous degenerations, there were, he believed, only two great methods—(1) to live according to physiological and moral law, and (2) to arrange suitable marriages. Even with those in operation it would take many generations to effect any great change. Time alone would be the healer of the effects of broken natural law.

There was a kind of insanity that he long ago described and called "phthisical," showing a special connection between the two diseases. Formerly their phthisis rate was a very high one. Now it was well below he average.

Two able young medical men in England, in very careful recent papers on the subject, had pointed out the danger of tuberculous infection to the other patients in asylums through consumptive patients being left in ordinary wards, or even in asylum hospitals, advocating the establishment of isolation wards to avoid that danger, and Sir William Broadbent and Professor Allbutt confirmed their conclusions.

In the last report of the Scottish Commissioners in Lunacy special attention was directed to that matter, and he thoroughly agreed with all that was there said. In the West House such an isolation block would by and by have to be provided. In Craig House they had, so far as he knew, no consumptives

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THE GALWAY HOSPITALS AND THE APPOINTMENT OF A MATRON

A FEUD of a particularly bitter nature has been in existence for some time in connection with the appointment of a matron to the Galway Hospital, with the result that the authorities in the Queen's College may be permanently deprived of the right to secure as heretofore adequate clinical instruction for their medical students.

There are three hospitals in Galway; one known as the Galway Hospital is in reality the County Infirmary, and the other two are the Galway Union Hospital and the Fever Hospital. The prospectus of the Queen's College, Galway, states that these contain upwards of 200 beds, and afford every means of obtaining practical knowledge in both medicine and surgery, and are visited every morning by professors of the College, who deliver clinical lectures. Five of the professors in the Queen's College are connected with the Galway Hospital, but as it contains only 60 beds the Poor-law guardians have heretofore granted to the College the privilege of allowing the students in medicine to be further instructed in the Union Hospitals

On December 22nd, 1899, the Board of Management of the Galway Hospital appointed as matron a nun from the Union Hospital, but the Local Government Board for Ireland refused to sanction the appointment on the ground that her certificate in nursing had not been obtained from a recognised public hospital, and that therefore she was not qualified as a trained nurse or matron in accordance with the regulations. Notwithstanding this the Board of Management met and refused to appoint any other than the nun in question.

At this same meeting the Board had before them the report of the Medical Inspector of the Local Government Board, which pointed to a serious state of affairs in the management of the hospital. The watercloset were in a very bad way, and the supply of water to them was unsatisfactory. The servants' sleeping apartment was untidy and too small. The dispensary was dirty and untidy. The flooring of the passages required renewal. One member of the medical staff had not recorded any attendance from February to October. The Finance Committee did not meet, and the Visiting Committee had met only once during the year, and the hospital, as far as could be ascertained, was in debt to the extent of about £743.

The Board of Guardians, who control the Union Hospital, next undertook to champion the cause of the nun, and a notice of motion was handed in at one of their meetings to rescind a resolution permitting the attendance of the medical students of the College for clinical instruction at the Union Hospital until the Local Government Board sanctioned the appointment of this particular lady as matron of the Galway Hospital. When the motion came to be discussed by the guardians at their meeting on January 31st, a letter was read from the President of the College pointing out that the exclusion of the students from a privilege which the guardians had conceded to them for many years, while being injurious to the students, could have no effect on the decision of the Local Government Board, which had no connection with the College and had no interest in the students. He further pointed out that if the motion were adopted the medical school would be injured, and, consequently, the town itself indirectly. In spite of this the resolution to exclude the students was carried by 10 votes to 5.

The Queen's College must therefore apply to the Licensing Boards and ask them to accept the certificates of attendance on the Galway Hospital only, and this institution as already noted is in a very unsatisfactory condition. Surely if its managers were prepared to offer sufficient remuneration there should be little difficulty in securing a thoroughly capable nurse of the Roman Catholic faith, whose training would meet with the approval of the Local Government Board.

Let them also immediately set about improving their institution, and it is to be hoped that the guardians of the poor will not further pursue the shortsighted policy of endeavouring to injure the medical school of the College, which, after all must mean something to the trading community in the town.

INDIA AND THE COLONIES.

ASSAM.

Sanitary Commissioner's Report.

REGISTRATION of births and deaths is still very imperfect in this province, and as there is reason to believe that the population is increasing, rates calculated on the census of 1891 are fallacious. The figures for 1898 are 29.47 and 36.15, against 32.59 and 50.61 in 1897. The lowered birth-rate is attributed to the unhealthiness of the preceding year, and the improved death-rate to a reduction in the severity of malarious fevers. The district of Nowgong, where that fatal type known as kala-azar is worst, renders death-rates of 50.40 and 47.25, and birth-rates of 19.77 and 18.66 in 1897 and 1898. There was a marked diminution in the mortality from cholera in the province generally and among the garden coolies. The improvement as regards this class is attributed to more stringent precautions to prevent infection during the journey from the recruiting districts. Small-pox prevailed rather severely in the Surma Valley, where vaccination is still unpopular and insufficient. The mortality from fever (mostly malarious) in the same valley declined from the high rate of 31.5 per 1,000 to 18.5. In the Bramaputra Valley the rate was 23.4, and in the district of Nowgong 34.5. Kala-azar is responsible for this excessive rate, but the disease is said to be on the decline. The sale of quinine through the agency of post-offices, missionaries, and vaccinators is on the increase. Municipalities and other bodies spent 45 per cent. of their income on sanitary work. Incinerators are in use in three localities, and are said to be working well. The Provincial Sanitary Board held no meeting during the year. The work done by Colonel C. W. Carr-Calthorp, M.D., I.M.S., the Sanitary Commissioner, by whom the report has been compiled, is highly commended by the Chief Commissioner.

Hospitals and Dispensaries.

The province of Assam includes two very malarious valleys through which run the rivers Brahmaputra and Surma and an intervening range of hills, a southern offshoot of the great Himalayan range. The year 1897 was a very sickly one, malarial fever raging in both valleys and kala-azar in deadly evidence in parts of Assam proper. Cholera is endemic in these valleys and finds in coolie emigrants a congenial vehicle and nidus. The subject of medical relief is therefore an important one, and it is satisfactory to find that the number of dispensaries underwent an increase in 1898 of 7, from 101 to 108, and, notwithstanding a healthier year, that the attendance rose from 609,490 to 610,267, and surgical operations from 13,335 to 14,701. The death-rate among indoor patients is very high, 16.07 per cent. This is due to the impoverished sickly class of coolies admitted. The Government contributes about one-third to the support of these institutions, the remainder being derived from local and municipal funds and subscriptions, which are on the increase. A leper asylum was opened at Sylhet in October, but only 3 patients were admitted up to the close of the year. Colonel Carr-Calthrop, M.D., I.M.S., by whom this report has been compiled evidently takes great interest and trouble in this department of his official duties.

MEDICAL NEWS.

Dr. John Thomson has been appointed one of the ordinary physicians to the Royal Edinburgh Hospital for Sick Children, and Dr. Stewart Fowler one of the extra physicians.

The Royal National Pension Fund for Nurses.—At the recent annual meeting of the Society, Sir Henry Burdett, K.C.B., stated that a larger number of policies had been issued than in any previous year except 1895, while the withdrawals had been fewer than in 1898. The invested funds exceeded £52,000. The affairs of this most important Society, which has set an admirable example in encouraging thrift among women, appear to be in a highly satisfactory condition.

A Serumtherapeutic Institute in Belgium.—The Council of the Province of Brabant in Belgium has decided to establish a provincial institute of serumtherapy and bacteriology with a department for the treatment of rabies. The institute is intended to be used for analyses and the preparation of serums and vaccines, the rabies department undertaking diagnoses and inoculations. The cost of the establishment is estimated at 150,000 francs, while from 42,000 to 45,000 francs will be required for maintenance.

Presentation.—Mr. F. J. Marshall, M.R.C.S., on the completion of twenty-five years of service as Resident Medical Officer of St. George's Hospital, was entertained at dinner on March 14th by upwards of sixty past and present House-Physicians, House-Surgeons, and Resident Obstetricians to the hospital. Dr. Sherwood of Eastbourne occupied the chair. Mr. Marshall was presented with a substantial cheque and some books and handsome silver ornaments. The toast of his health was received with much enthusiasm, and the universal wish of all was that he might long continue in the office he so ably fills.

We are asked to state that the Metropolitan Asylums Board will cease to occupy its offices in Norfolk House, Norfolk Street, Strand, on the evening of March 24th after 8 p.m., and that the new offices on the Victoria Embankment at the corner of Carmelite Street, E.C., will be opened on Monday, March 26th. Applications for the removal of patients to hospitals from 8 p.m. on March 24th until Monday morning, March 26th, must be made at the Ambulance Stations. After March 26th the Ambulance Department will be open on Sundays, Good Friday, and Christmas Day during the same hours as on week days, that is, from 9 a.m. till 8 p.m.

Folkestone Medical Society.—At a meeting of this Society held on March 2nd, Dr. Eastes, Vice-President, in the chair, Mr. Powell played "Rule Britannia," and the members sang the chorus with much enthusiasm. A musical programme was then gone through, and Dr. Perry, Dr. Eastes, Dr. Norton, Mr. Gore, and Mr. Yunge-Bateman sang, Mr. Chambers played the mandolin, and Dr. Chubb the flute. Dr. Ewart gave a recitation, and Mr. Thornton Gilbert a demonstration on card tricks and thought reading. When the "Soldiers of the Queen" was sung by Dr. Perry a collection was made on behalf of the R.A.M.C. Fund, and the sum of £2 15s. was collected.

Donations to Hospitals.—The Treasurers of the Middlesex Hospital have recently received from the Goldsmiths' Company a donation of £250, to be applied solely to the use of the new wing recently erected for the investigation and treatment of cancer.—The North-Eastern Hospital for Children, Hackney Road, has received an anonymous donation of £500 towards the sum of £20,000 required for the carrying out part of an extensive scheme of enlargement.—A Vice-President of the Dental Hospital of London has presented £100 as a special donation towards the amount required for rebuilding the hospital, with a promise that, provided an additional £800 be collected within a reasonable time, he will give the remaining £100 to complete £1,000.

Malaria and Anopheles.—We learn from the *Zanzibar Gazette* that Dr. Spurrier has found *Anopheles* in certain of the notoriously unhealthy districts in that region. In the last district in which they have been found, Dunga, the larvæ of *Anopheles* were present in puddles formed by the spilling of water at the small dip holes made in the dry swamps on the Zanzibar side of the Dunga mountains. A complete map of Zanzibar and the neighbourhood is now being made showing the mosquito-infected localities and the species of mosquito hitherto found in each. Dr. Spurrier has also found larvæ (apparently of *Anopheles*, though this is not stated) in a disused stone water tank in the town, and in the hollows formed between the ridges of earth on which the sweet potato is cultivated. Dr. Spurrier points out that in a pool or tank containing reeds or grass the larvæ may be overlooked as they cling to the reeds; when the reeds are touched, however, the larvæ shoot into the middle and may be dipped up by a quick hand.

The Chemical Composition of the Tubercle Bacillus.—The tubercle bacillus has been chemically analysed by Dr. de Schweinitz and his assistant, Dr. Dorset, for the United States Board of Agriculture, who find that cellulose in very minute amount is present in the bacilli grown upon different culture media; it is probable, therefore, that cellulose is a normal constituent. The amount of fat in the bacillus is very large, being equal to about 37 per cent. of the weight of the dried germs. The fat is principally a glyceride of palmitic acid. Other fats are present in small quantities. One of these, which is volatile, gives to tuberculous cultures their characteristic odour. The large percentage of fat in the tubercle bacillus suggested the use as a staining reagent of Sudan III, which is a useful stain for fats in histological and pathological work. The result was very satisfactory, and apparently this stain is more selective than carbol-fuchsin. Smegma bacilli, which stain readily with fuchsin, do not stain with Sudan III. The mineral constituents of the tubercle bacillus include sodium, potassium, calcium, and magnesium. The high percentage of phosphorus pentoxide and the absence of other acid radicles were noticeable. Phosphates and cod-liver oil are two materials frequently recommended in tuberculosis. As the germs of the disease seem to demand a large quantity of food containing phosphorus and also rich in fat, it is a fair supposition, says the report, that in giving these drugs we are supplying to the animal body those constituents which are very important for its proper nourishment, the supply of which is constantly being drawn upon by the bacilli.

MEDICAL VACANCIES.

The following vacancies are announced:

ARGYLL AND BUTE ASYLUM, Lochgilphead.—Assistant Medical Officer, unmarried, and not exceeding 30 years of age. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Medical Superintendent by April 7th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary, £150 per annum (with allowance of £30 for cab hire), and furnished rooms, etc. Applications to the Secretary by April 23rd.

BIRMINGHAM: GENERAL HOSPITAL.—(1) House-Surgeon. (2) Assistant House-Physician. Appointments for six months. No salary, but board, residence, and washing provided. Applications to the House Governor by March 31st.

CANNING TOWN MEDICAL MISSION DISPENSARY.—Female Assistant Medical Officer. Board and lodging provided. No salary. Applications to the Resident Medical Officer, 520, Barking Road, E., by March 29th.

CARDIFF INFIRMARY.—(1) Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum. (2) Resident Medical Officer. Salary, £100 per annum. Board, lodging, and apartments provided in each case. Applications to the Secretary by March 27th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Applications to the Secretary.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary, £80 per annum, with board and lodging. Applications to the Honorary Secretary by March 30th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DOWN COUNTY ASYLUM, Downpatrick.—Assistant Medical Officer, not exceeding 32 years of age, unmarried. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by April 14th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer. Salary £140 per annum, rising to £160, with board, lodging, washing, etc. Applications to the Medical Superintendent, Winterton, Ferryhill, by April 3rd.

EAST SUSSEX COUNTY COUNCIL.—Consulting Medical Officer. Appointment for one year. Honorarium, 100 guineas and travelling expenses. Applications to the Clerk, County Hall, Lewes, by March 29th.

EDINBURGH UNIVERSITY.—Professor of Medicine. Applications to the Secretary, 66, Frederick Street, Edinburgh, by April 14th.

GLASGOW EYE INFIRMARY.—Resident Assistant House-Surgeon. Salary £50, with apartments and board. Application to the Secretary, 88, West Regent Street, Glasgow, by March 28th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £30 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon, unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by March 28th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Assistant Physician. (2) Resident House Physicians. Appointments for six months. Honorarium, £25. Applications to the Secretary for the first by March 21st, and for the latter by April 3rd.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician, unmarried. Appointment for six months. Salary £20, with board and residence. Applications on forms provided to be sent to the Secretary by April 3rd.

HULME DISPENSARY, Dale Street, Manchester.—House-Surgeon. Salary, £150 per annum, with apartments, etc. Applications to the Honorary Secretary, Medical Committee by April 4th.

INVERNESS: NORTHERN INFIRMARY.—House-Surgeon and Dispenser. Salary, £70 per annum, with board, etc. Applications to the Secretary, 15, High Street, Inverness, by March 26th.

ITALIAN HOSPITAL, Queen Square, W.C.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Secretary by April 18th.

KENT AND CANTERBURY HOSPITAL.—Assistant House-Surgeon, unmarried. Salary, £60 per annum, with board and lodging. Applications to the Secretary by March 29th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium, £10, with board, residence, and washing. Applications to the Secretary by April 14th.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—(1) House-Surgeon. Salary, £35 per annum, with board and lodging. (2) Assistant House-Surgeon. Appointment for six months. Salary, £25, with board and lodging. Applications to the Honorary Secretary by March 31st.

LIVERPOOL: STANLEY HOSPITAL.—Senior House-Surgeon. Salary, £80 per annum with board, lodging, and washing. Applications, endorsed "House-Surgeon," to be sent to the Honorary Secretary, Medical Board, by April 6th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Physician to Out patients; must be F. or M.R.C.P.Lond. Honorarium, 50 guineas per annum. Applications to the Secretary by April 5th.

MACCLESFIELD GENERAL INFIRMARY.—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications to the Chairman of the House Committee by March 29th.

MANCHESTER: ST. MARY'S HOSPITAL, Quay Street.—Medical Officer. Appointment for six months, but eligible for re-election. Salary, £65 per annum, with board and residence. Applications to the Chairman of the Board of Management by March 29th.

MIDDLESBROUGH-ON-TEES: NORTH RIDING INFIRMARY.—Assistant House-Surgeon. Salary, £75 per annum, with lodging, board, and washing. Applications marked "Application for post of Assistant House-Surgeon" to the Secretary by March 27th.

MARGATE: ROYAL SEA BATHING HOSPITAL.—Assistant Resident Surgeon. Salary, £52 per annum, with board and residence. Applications to the Secretary at the offices, 30, Charing Cross, London, S.W.

METROPOLITAN ASYLUMS BOARD.—Four Assistant Medical Officers at the Fever and Small-pox Hospitals, unmarried, and not exceed 35 years of age. Salary, £160 for the first year, £180 the second, and £200 the third and subsequent years, with board, lodging, etc. Applications, on forms provided, to be sent to the office of the Board, Victoria Embankment, E.C., by April 5th.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Board, washing, and residence provided, and honorarium at the rate of £50 per annum. Applications to Dr. M. F. Squire at the Infirmary, 285, Harrow Road, W., by April 23rd.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician, (2) House-Surgeon. Appointments for six months. Salaries at the rate of 50 guineas, with board and residence. Applications to the Secretar by April 6th.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—(1) Ophthalmic Surgeon. (2) Assistant Resident Medical Officer, unmarried. Appointment for six months. Salary at the rate of £60 per annum, with board, residence, laundry, etc. Applications to the Secretary by March 28th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £65 per annum, with board and residence. Applications to the House Governor by April 7th.

PRESTON ROYAL INFIRMARY.—Senior House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary, 5, Winckley Street, Preston, by March 31st.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY.—Resident Medical Officer, unmarried. Salary, £100 per annum, with furnished apartments, board, and attendance. Applications to the Secretary by March 31st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by April 23rd.

SEAMEN'S HOSPITAL SOCIETY.—House-Physician for the Dreadnought Hospital. Salary, £75 per annum, with board and residence. Applications to the Secretary by April 11th.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 27th.

TAMFORD, RUTLAND AND GENERAL INFIRMARY.—House-Surgeon, unmarried. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by March 30th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, rising to £100, with board and residence. Applications to the Chairman of the Medical Board by March 26th.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, lodging, and washing, and £6 in lieu of stimulants. Applications to the House Committee by April 2nd.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon, unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by March 28th.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House-Surgeon Salary, £50 per annum, with board, etc. Applications to the Secretary.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary by March 27th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by March 26th.

MEDICAL APPOINTMENTS.

ADENEY, E. L., M.D.Lond., M.R.C.S.Eng., appointed Physician to the General Hospital, Tunbridge Wells.

ALDERSON, Wilfred E., M.D., M.S Durh., appointed Honorary Assistant Surgeon, Fleming Memorial Hospital for Children, Newcastle-on-Tyne, *vice* R. F. Craggs, M.D., appointed Ophthalmic Surgeon.

ANDERSON, A. J., M.B., C.M.Edin., appointed Medical Officer for the Ashford District of the Staines Union, *vice* F. C. Tothill, M.B., C.M.Edin.

BOYD, John James, M.B., Ch.M.Glasg., D.P.H.Camb., appointed Assistant Medical Officer of Health to the Borough and Port of Southampton.

BREWER, D., M.R.C.S., L.R.C.P., appointed Second Assistant Medical Officer to the Kensington Workhouse and Infirmary, *vice* L. J. Lloyd, M.R.C.S., L.R.C.P., resigned.

BUCKLEY, J., L.S.A., appointed Medical Officer for the Hasland District of the Chesterfield Union, *vice* R. K. Hamilton, M.R.C.S., resigned.

CAHILL, M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Whitby District of the Wirral Union, *vice* H. A. Bredin, M.D., B.S.

CAMERON, Hector C., M.D.Glasg., appointed Professor of Clinical Surgery at the University of Glasgow, *vice* George Buchanan, M.D.

COOPER, C. E., M.B., B.C.Cantab., appointed Medical Officer of Health for the Ivybridge Urban District, *vice* J. M. Randle, L.R.C.P., M.R.C.S.Eng., resigned.

EDDOWES, Alfred, M.D.Edin., M.R.C.P.Lond., appointed Physician for Diseases of the Skin to St. George's and St. James's Dispensary, King Street, Regent Street, W.

GOLDIE, W. H., M.D., C.M.Edin., appointed Registrar to the Chelsea Hospital for Women.

HALLIDIE, A., M.B., F.R.C.S., appointed Ophthalmic Surgeon to the Hastings, St. Leonards, and East Sussex Hospital.

HARCOURT, J. C., M.R.C.S., L.R.C.P.Lond., appointed Assistant Medical Superintendent to the City of London Union Infirmary, *vice* J. W. E. Cole, B.A.Camb., M.R.C.S.Eng., resigned.

HUDSON, E., M.R.C.S.Eng., L.R.C.P.Lond., appointed Clinical Assistant to the Chelsea Hospital for Women.

LEFEVRE, G. L., M.B., C.M.Glasg., appointed Medical Officer for the Longton Division of the Stoke-on-Trent Union.

LEGG, T. Percy, M.B.Lond., F.R.C.S.Eng., appointed Senior Surgical Registrar and Surgical Tutor, King's College Hospital, London.

MACDONALD, J. H., M.B., B.Ch.Glasg., appointed Assistant Medical Officer (Pathologist) at the Glasgow District Asylum, Woodilee Lenzie.

MACNALTY, F. C., M.A., M.D., M.Ch.T.C.D., appointed Surgeon to the City of Winchester Police, *vice* T. D. Richards, L.R.C.P., L.R.C.S.E., resigned.

MANKELL, A., M.B., B.S.Lond., appointed Medical Officer for the First (East Bradford) District of the Bradford Union, *vice* H. W. White, L.R.C.P.Edin., L.F.P.S.Glasg., resigned.

MUSSEN, A. A., M.D., D.P.H., appointed Assistant Medical Officer of Health for the City of Liverpool, *vice* E. P. Manby, M.D., D.P.H., resigned.

NOBBS, A., M.D., C.M.Edin., appointed Clinical Assistant to the Chelsea Hospital for Women.

NOTT, H. W., M.R.C.S., L.R.C.P., appointed Medical Officer for the Eastham District of the Wirral Union, *vice* H. A. Bredin, M.D., B.S.

PARDINGTON, G. L., M.D.Durh., L.R.C.P.Lond, M.R.C.S.Eng., appointed Physician to the General Hospital, Tunbridge Wells.

PLAYFAIR, Hugh J. M., M.D.Lond., F.R.C.S.Eng., appointed Gynæcological Surgeon to the Metropolitan Hospital.

RIX, B., M.R.C.S.Eng., L.S.A., appointed Surgeon to the General Hospital, Tunbridge Wells.

SPENCER, E. M., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Ninth District of the Totnes Union, *vice* T. Lakeman, L.R.C.P.Lond., M.R.C.S.

TARBET, P. R., M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior Assistant Medical Officer to the St. Pancras Infirmary, *vice* J. S. Boden, M.B., B.S.Lond., resigned.

TAYLOR, James, M.D.Aberd., appointed Medical Officer to the Keith General Post Office.

THOMAS, A. H., M.B., appointed Medical Officer for the Aldborough District of the Great Ouseburn Union, *vice* J. Sedgwick, M.D., resigned.

THOMSON, H. Campbell, M.D., M.R.C.P.Lond., appointed Assistant Physician to the Middlesex Hospital.

TOMPSETT, R. H., M.R.C.S.Eng., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the Lambeth Infirmary, *vice* R. H. Allport, M.R.C.S., L.R.C.P.Lond., resigned.

YEARSLEY, Macleod, F.R.C.S., appointed Surgeon to the Royal Ear Hospital, Frith Street, Soho.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. A. Whitfield: Consultation. (Skin).

Medical Society of London, 8.30 P.M.—Dr. Luff: The Gelatinous Form of Sodium Biurate, and its Bearing on the Treatment of Gout. Dr. Bain: The Action of Various Drugs and Diets on the Excretion of Nitrogen in Gout.

TUESDAY.

Royal College of Physicians of London, 5 P.M.—Dr. P. Horton-Smith on the Typhoid Bacillus and Typhoid Fever. Goulstonian Lecture III.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. W. Miller Ord: Consultation. (Medical.) 6 P.M.—Dr. Seymour Taylor. Class. Applied Anatomy: Physical Diagnosis. Demonstration IV.

Royal Medical and Chirurgical Society, 8.30 P.M.—Dr. Bowles and Mr. G. R. Turner: A Case of Rupture of the Œsophagus caused by Vomiting. Mr. A. Pearce Gould: A Case of Sarcomatous Tumour of the Gastro-Hepatic Omentum, removed by Operation, with Remarks on the Diagnosis of such Tumours.

WEDNESDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, W., 5 P.M.—Informal exhibition of Cases at 4.30 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Mr. Jonathan Hutchinson: Clinical Lecture. The Present Day Treatment of Syphilis. 6 P.M.—Annual Meeting.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Dr. Acland: Cases Illustrating Various Types of Pulmonary Tuberculosis.

Hunterian Society, London Institution, 8.30 P.M.—The President will give an Address, and Dr. David Ross will read a Paper on Some Points in the Therapeutics of Gout.

THURSDAY.

Harveian Society of London, 8.30 P.M.—A discussion on Purulent Nasal Discharges and their Treatment will be opened by Mr. Edmund Roughton. Dr. Dundas Grant, Dr. William Hill, Dr. Herbert Tilley, and others will take part.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. Pitts: Demonstration of Selected Cases.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Royal College of Physicians of London, 5 P.M.—Dr. W. B. Cheadle: On Cirrhosis of the Liver. Lumleian Lecture I.

FRIDAY.

West London Medico Chirurgical Society, West London Hospital, Hammersmith Road, W., 8.30 P.M.—Mr. Percy Dunn: Purulent Ophthalmia and its Treatment. Dr. H. Snow: Three Cases Illustrating the Clinical Behaviour of Gall Stones.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Treacher Collins. Consultation. (Eye, Ear, Nose, and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 8s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BEST.—On March 18th, at The Firs, Waltham Cross, Herts, the wife of F. H. de Graves Best, M.R.C.S., L.R.C.P., of a son.

ROWLEY.—On February 1st, at Otahuhu, Auckland, N.Z., the wife of Charles Rowley, M.R.C.S.Eng., of a daughter.

TYSON.—At Folkestone, on March 15th, the wife of W. J. Tyson, M.D., of a daughter.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30; F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 8.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

S. M. V. asks for advice in the treatment of a case of uterine fibroid, in which hypodermic injections have produced attacks of erysipelas. He desires to know whether thyroid extract has been used in these cases.

GEOPHAGISM.

J. R. W. (India) asks for advice in the treatment of children who have contracted the habit of earth-eating.

HYPODERMIC INJECTION OF ARSENIC.

C. H. would be grateful for information as to previous experiences and references to hypodermic injections of arsenic and opinions as to risks run, having regard to a case of severe myelogenous leukæmia, in which 5.33 grs. of arsenious acid and 39 grs. of arseniate of soda were injected hypodermically during 20 weeks without symptoms of poisoning having developed up to present time, a month since cessation of treatment.

TREATMENT OF ENURESIS IN THE ADULT.

L.R.C.P. writes: A schoolmaster, about 35, has suffered from nocturnal enuresis for about six months; he cannot take belladonna, as by affecting his sight it interferes with his work. Tr. ferri perch., tr. canthar., liq. strych., and rhus have all had a long trial; ergot, antipyrin, and ferri iod. have had a short trial, but did not appear to do much good. I am now trying a mixture containing potassium bicarbonate, sodium salicylate, sodium bromide, digitalis, and strychnine (he has suffered from rheumatism and the urine is hyper-acid). He is not suffering from diabetes or albuminuria. I have not tried electricity. I should be much obliged for suggestions in the event of present treatment failing.

ANSWERS.

G. Y.—The insertion of a degree in arts would be unusual.

JUSTICE.—It would appear that the question should be addressed to the Admiralty.

NORTHERN MEMBER.—Dr. F. La Torre's *Elementi di Ostetricia ad Uso dei Medici e dei Studenti*, published by Fratelli Bocca, 21, Corso Vittorio Emanuele, Milan, might suit our correspondent's purpose.

TREATMENT OF VAGINAL DISCHARGE.

DR. J. A. SHAW-MACKENZIE suggests that the case described by "Lymph" is not an ordinary case of "gonorrhœa" but of secondary specific inflammation of mucous membrane, and likely to be benefited by a mild course of mercury and iodides. The subject is referred to more fully in a paper in the BRITISH MEDICAL JOURNAL, October 14th, 1899.

TREATMENT OF PILES COMPLICATED WITH PROLAPSUS ANI.

MR. FRED. C. FISHER, F.R.C.S. (King's Langley) writes: I have recently had a case of this nature under my care. The prolapse had been of many years' standing, in a patient aged 65. There were five internal piles, sessile, no external ones. The patient had a weak heart and chronic bronchitis, and was evidently not a good patient for a long anæsthetic or I should have performed a Whitehead's operation. Instead of that I performed Swinford Edwards's operation of injecting carbolic acid with a hypodermic syringe. This has completely cured the patient. I can strongly recommend this method provided the proper case is selected namely, true internal piles and not intero-external.

NOTES, LETTERS, Etc.

THE *Journal of the American Medical Association* states that for speaking disrespectfully of British generals and British soldiers in the South African war, a medical student of McGill College, Montreal, was treated by his fellows to a bath in a dissecting vat.

THE EGYPTIAN QUARANTINE BOARD.

THE Egyptian Quarantine Board are about to appoint a director of the second class and a lady doctor (at Suez). The salary in each case is £22 to £28 Egyptian, monthly. Applicants for the post of director must be doctors in medicine and surgery, and must send copies of their diplomas, and must produce evidence of instruction in bacteriology and epidemiology. The lady must send a copy of her diploma as doctor of medicine. Candidates for both appointments must forward certificates of good health, and an undertaking to commence work within one month after receiving official notification of appointment. Applications must be received by Dr. M. Armand Ruffer, President du Conseil Sanitaire Maritime et Quarentenaire d'Egypte, Alexandrie, Egypt, not later than April 30th, 1900.

CLUB RATES.

DR. JOHN H STANILAND (Wood Green, N.), writes: In your answer to "M.D.", on page 556, I think that you must have read the rule of the National Deposit Friendly Society regarding fees from a medical man's point of view. The view entertained by the Society is different, at least so I was told by the Divisional Secretary for London last week. They only pay according to their reading. Thus: Visit and medicine, which is to last for two days, 2s. 6d. If visit any time before second day, charged as intermediate visit in dangerous cases, 1s. only; not, as we read it, 3s. 6d. (that is, 1s. extra). Still, the extra 1s. is allowed for night visit, making 3s. 6d. That is their reading of "extra" in all cases except "intermediate visits." The extra mileage has been reduced from 3 to 2 miles, and the operation for strangulated hernia should, I think, be joined with the major operations at £5.

DR. T. CUMING ASKIN, B.A., M.D.Dub. (Woodbridge, Suffolk), in the course of a letter on this subject, writes: Surely no one can find fault with the

reasonableness of the fees of the National Deposit Friendly Society, and yet we quietly submit to the system of sweating the medical profession which exists all over England. As a country doctor of eight years' experience, with a large club practice, I feel sure no system will ever be found satisfactory alike to doctor and patient where the former receives a fixed annual sum independent of the work done, even though it be 6s. or more. A doctor's life is of such a harassing nature that it is absolutely necessary, in my opinion, that he should be paid for work done on some such principle as that adopted by the National Deposit Friendly Society. This is all the more necessary now since, owing to the frequent epidemics of influenza, the club doctor's work is increased tenfold. For example, during the recent epidemic, in January alone I dispensed, I should think, nearly a thousand bottles of medicine, for which I did not receive an extra penny (that is, practically gave them away), and this in addition to the numerous visits which had to be made, and of course my experience was by no means singular. If this is not sweating, what is? The interests of the patient, quite apart from those of the doctor, demand a change. It is idle to pretend that we do our work properly: we do not; we cannot; and yet I am sorry to say I believe there are many who will not admit this unpleasant truth. It may be said that there are many of the poorer people (labourers, for example) who could not afford to pay an annual contribution sufficient to defray the cost of the fees above mentioned. This difficulty might easily be got over by the richer branches of the big friendly societies helping their poorer brethren, and in this connection we must remember that there are thousands of members who could easily afford to pay much more. I feel sure the friendly societies will not consent to pay us for work done unless under great pressure. They have been in the habit of sweating us for so long that they are not likely now to give it up. For this reason I think a Conciliation Board is not likely to do much good. There ought to be a minimum fee for club patients fixed, if possible, by the General Medical Council, and any doctor taking less should be considered guilty of infamous conduct and punished accordingly. For infamous conduct from a professional point of view it certainly would be did he take less, whatever the public might think of it.

Address Required.

Dr. Hugh Woods (Honorary General Secretary) writes: The Secretary of the London and Counties Medical Protection Society, 12, New Court, Lincoln's Inn, W.C., would be obliged if any reader can furnish him with the present address of Mr. W. R. Willis, bonesetter, recently practising at Tylorstown, South Wales.

Employment of Unqualified Assistants.

Fair Play writes: I am in practice in North Wales, but find to my dismay that there are several medical practitioners in the locality who continue to employ unqualified persons as assistants (in one case two are employed). Such persons visit, treat, and vaccinate in the district where they are known as Dr. So-and-So. I am fully aware that if such cases were brought before the General Medical Council and substantiated by statutory declaration the complaints would at once be investigated; but this would lead undoubtedly to the erasion of the names of the medical practitioners from the *Register*, and the full penalty would be enforced, which is more severe than I should wish.

There is no difficulty now in obtaining qualified assistants, but we (the qualified ones) expect a reasonable remuneration, and if, as it is so often stated, we do less work, it is done conscientiously. Is there no likelihood of the General Medical Council issuing a "final notice," or carrying out the laws they make?

I should be glad of your advice.

*** We are not sure that we understand our correspondent's point. It is true that the only punishment which the General Medical Council can inflict is erasure from the *Register*, but it has frequently, in cases in which the charge has been proved, admonished the offender and suspended judgment, to afford him an opportunity to reconsider his position.

The Treatment of Diphtheria.

Dr. A. Jefferis Turner (Brisbane) asks us to publish the following corrected form of the table in his paper on the Treatment of Diphtheria, published in the British Medical Journal of December 30th, 1899, p. 1789, col. 2:

Mortality of all Cases of Diphtheria at each Year of Life treated in the Hospital for Sick Children, Brisbane, before and after the Introduction of Antitoxin.

Age Last Birthday.	Preantitoxin Period.			Antitoxin Period.		
	Cases.	Deaths.	Mortality.	Cases.	Deaths.	Mortality.
			Per Cent.			Per Cent.
Under 1 year...	11	9	81.8	7	2	28.6
1 year	44	32	72.7	35	10	28.6
2 years ...	56	27	48.2	48	10	20.8
3 ,, ...	44	19	43.2	44	6	13.6
4 ,, ...	53	14	26.4	47	3	6.4
5 ,, ...	38	9	23.7	54	4	7.4
6 ,, ...	23	10	38.5	42	4	8.2
7 ,, ...	16	5		19	1	
8 ,, ...	6	1		8	—	
9 ,, ...	7	—		6	—	
10 ,, ...	—	—	16.7	5	—	0.0
11 ,, ...	1	1		2	—	
12 ,, ...	3	—		—	—	
13 ,, ...	1	1		—	—	
Total ...	303	128	42.2	317	40	12.6

Treatment of Anal Ulcer.

L.R.C.P.L. writes: Ulcer of the anus and rectum may be speedily and painlessly cured, without using the knife or caustics. Let the patient lie in bed during six or seven days, taking a low diet, and preventing all evacuation by the bowels. On the seventh day give an aperient dose, say of castor oil, to be followed in a short interval with a softening enema to promote defæcation. This will be quite painless, as by this time all trace of ulceration will be gone.

Sodium Salicylate Poisoning.

Dr. A. C. Barron, (Dailly, Ayrshire) sends us a case of poisoning with salicylate of soda in a patient suffering from acute pleurisy, and closely resembling in its symptoms that recorded by Dr. Ainslie Scott, in the British Medical Journal of February 3rd, 1900. The man, who was a healthy ploughman, contracted pleurisy after exposure in a ploughing match. He was given 3 drachms of the drug in the course of three days; he became noisy and restless, developing hallucinations of sight and hearing. He was with difficulty kept in bed; he imagined that pins were being thrust into him, and that bees were buzzing within his head. With the fall in his temperature, and under the exhibition of sedatives, the untoward symptoms passed off.

LETTERS, COMMUNICATIONS, Etc., have been received from

A Author; Mr. J. Y. W. MacAlister, London; Professor T. Clifford Allbutt, Cambridge. **B** Mr. W. L'H Bleukarne, Worthing; Mr. H. Brown, Leeds; J. C. Brown, M.B., London; Mr. R. J. Bland, London; Dr. F. Beach, Kingston Hill; Dr. G. Buchanan, Glasgow; Dr. R. J. M. Buchanan, Liverpool; B. G.; Mr. J. R. Buchanan, Glasgow; Mr. P. D. Barker, Rochester. **C** A. C. x, M.B., Gateshead; C. H; Dr. J. M. Clarke, Bristol; Dr. H. Campbell, London; Dr. D. P. H. Cunningham, New York; Dr. W. H. Corfield, London; Colliery Doctor of the North; Colliery Surgeon; Court Fees. **D** J. Dunbar-Brunton, M.B., Leatherhead; Dr. T. Dutton, London; Dr. J. R. W., India; Derbyshire; Dr. A. Duke, Cheltenham; Dr. L. Drage, Hatfield. **E** Enquirens. **F** Fair Play; Mr. F. C. Fisher, King's Langley. **G** Dr. A. E. Giles, London; Dr. T. M. Griffiths, St. Louis; Dr. J. G. Glover, London. **H** Dr. G. E. Herman, London; Mr. W. F. Haslam, Birmingham; Dr. P. Horrocks, London; Harveian Society of London, Secretary of, London; Mr. A. E. Hayward-Pinch, London; T. E. Hayward, M.B., Haydock; Dr. E. M. Hasbrouch, Washington, D.C. **I** I.M.S. **J** Dr. N. B. Jenkins, Chicago. **K** Mr. J. N. Kaye, London. **L** Dr. A. E. Larking, Folkestone; F. H. Low, M.B., London; Mr. R. M. Littler, Southport; W. Leask, M.B., Birkenhead. **M** J. W. McIntosh, M.B., Manitowaning, Canada; Mr. G. O. Moorhead, Cathcart; Mr. T. R. Marr, London; Mr. A. H. Milne, London; Dr. H. J. Macevoy, London; Manchester Pathological Society, Secretary of, Manchester; Military Correspondent; Mr G. Mackay, Perth. **N** Mr. W. J. C. Nourse, London; Nottingham Medico-Chirurgical Society, Secretary of, Nottingham; Dr. D. Newman, Glasgow. **P** Dr. P. H. Pye-Smith, London; Mr. C. E. Paget, Northampton; Mr. J. F. Pink, London; Dr. C. H. Phillips, Hanley; Mr. J. R. Philpots, Parkstone; Mr. W. Paget-Tomlinson, Kirkby Lonsdale; Dr. T. D. Poole, Wolverhampton. **R** Dr. A. Routh, London; T. E. B. Roddis, M.B., King's Lynn; Dr. G. D. Robinson, London; Dr. G. H. Rodman, East Sheen; Mr. F. Rustoniji, Bombay; Reader; R. **S** A. M. Sheild, M.B., London; Student; S. M. V.; A. J. B. Squire, M.B., London; Dr. J. A. Shaw-Mackenzie, London. **T** Dr. A. J. Turner, Brisbane; T. P.; "Tuberculosis," Editors of, London. **W** Dr. H. W. Webber, Plymouth; Mr. W. B. Winston, London; Mr. L. W. Williams, Glasgow; W. F.; Mr. E. M. Wrench, Baslow. **X** Mr. G. Yeoman, Northallerton.

BOOKS, Etc., RECEIVED.

Victor von Richter's Organic Chemistry, or Chemistry of the Carbon Compounds. Edited by Professor R. Anschütz. Authorised Translation by Professor E. F. Smith. Third Edition. Vol. ii. London: Keegan Paul, Trench, Trübner, and Co. 1900. 15s.

St. Thomas's Hospital Reports. Vol. xxvii. London: J. and A. Churchill. 1899. 8s. 6d.

Das Weib in seiner geschlechtlichen Eigenart. Von Dr. Max Runge. Vierte Auflage. Berlin: J. Springer; and Glasgow: F. Bauermeister. 1900. 1s. 3d.

Die Neurologie des Auges. Von Dr. H. Wilbrand und Dr. A. Saenger. Erster Band (II Abtheilung). Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1900. 8s.

Das Sarkom des Auges. Von Dr. R. P. Kerschbaumer. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1900. 16s.

Pocket Guide to Paris. London: A. Nion. 2s. 6d.

Diphtheria. By W. R. Smith, M.D., D.Sc., F.R.S.E. London: Baillière, Tindall, and Cox. 1900. 6s.

Lessons in Elementary Physiology. By T. H. Huxley, LL.D., F.R.S. Fifth Edition. London: Macmillan and Co. 1900. 4s. 6d.

Mock-Nurses of the Latest Fashion A.D. 1900. By F. J. Gant, F.R.C.S. London: Baillière, Tindall, and Cox. 1900. 3s.

Bubonic Plague. By Dr. J. V. Montenegro. Authorised Translation by W. Munro, M.D. London: Baillière, Tindall, and Cox. 1900. 3s. 6d.

Atlas und Grundriss der Lehre vom Geburtsakt und der operativen Geburtshilfe. Von Dr. O. Schaeffer. Munich: J. F. Lehmann. 1900. M.8.

Die Leukämie als Protozoeninfektion. Von Dr. M. Löwit. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1900. 14s. 9d.

Uber Missbildungen der menschlichen Gliedmassen und ihre Entstehungsweise. Von Dr. F. Klaussner. Wiesbaden: J. F. Bergmann. 1900. 8s.

Les Sanatoria. Traitement et Prophylaxie de la Phtisie Pulmonaire. Par Dr. S. A. Knopf. Deuxième Edition. Paris: G. Carré et C. Naud. 1900. F.22.

*** In forwarding books the publishers are requested to state the selling price.

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REMARKS
ON
WILL-MAKING IN APHASIC PARALYSIS.

By JAMES EDMUNDS, M.D., M.R.C.P.Lond.,
Consulting Physician, London Temperance Hospital.

Partial Right-sided Hemiplegia, with Motor Aphasia Complete both as to Speaking and Writing.—Instructions for Will Given by Patient through the Medium of Printed Cards.—Death Twenty-two Days after Execution of Will.—Will Proved in Solemn Form in Probate Court, London, on February 12th, 1900.—Approval by President of Probate Court of the Method Devised for Ascertaining the Wishes of the Testatrix. Judgment for the Will.

History of the Case.

A single lady, 60 years of age, who had been under my care for years, became the subject of partial right-sided hemiplegia, together with confusion in speech and in writing. Later on the hemiplegia improved, but her loss of power to speak or to write became complete. Her conduct remained perfectly rational, and her mind was evidently intact. She understood gesture, slow careful speech, and very plain writing. In-going ideas by way of ear or eye seemed to find complete mental receptivity. Out-going ideas were completely barred for want of power to utter them either in speech or in writing. Gestural indications and facial expression, together with assent or dissent by nodding or shaking the head, were all the language which she could command.

When led by the reading aloud or speaking out of sentences which she was invited to repeat she could speak distinctly. In writing, her letters and words were formed perfectly, and her own name was signed correctly. But soon her meaning became unintelligible. Her writing was full of repetitions, as if labouring to express herself, but unable to complete her propositions. She repeatedly recommenced a phrase, apparently in hope of getting it completed, but was unable to find words, or unable to find the right words. Later on, not a word that she spoke or attempted to write could be made out. There was complete motor aphasia, except that up to nearly the last an interjectional "No, no," or "Yes, yes," would sometimes come.

After a week's rest in bed and careful nursing she was able to get up for part of the day and to take exercise by walking about upon the floor on which her bedroom was situated, she leaning on the arm of her maid. She used to sit about, read the newspapers and current literature, and superintend a little tea-table which she caused to be set up for herself in her bedroom. At this time she wanted to go down and see after the house, and when I intervened she protested that I was making "too much fuss over her little attack." I used often to join her at tea after I had completed the professional business of my visit. She managed her little tea-table just as if she were in her drawing-room, would pour out my tea as usual, though as if her right hand were feeble and sometimes needed to be helped out by her left. But she held up the cream or sugar, and looked at me till she caught my wishes, and, after putting in one lump of sugar, would wait with a second in the sugar tongs until I spoke or indicated my wishes.

I often put my finger on to the cream jug or teapot, and said "What is that?" Sometimes she would name all or most of the things on the table—more often the monosyllabic than the polysyllabic names—and when she succeeded she would laugh as much as to say, "There now, that's all right; you see I'm improving." At other times she would be unable to say "cream" or "sugar" or "cake," and she would look wistfully at the objects to which I pointed and then look at me and laugh, as if at the oddity of her condition.

One day, after she had named everything upon the tea-table correctly, I took from the mantelshelf a box of matches, and, holding it up, said, "What is that?" She looked at it for some half minute, and then said "centipede." But when I laughed and shook my head, and said, "No—box of matches," she said, "Yes, yes, of course. Box of matches." I cannot see how she came to associate the word "centipede" with a box of matches, except by means of suggestion due to the fact that she had recently been travelling in Palestine. At other times I found her playing a game of patience or telling fortunes to herself, with small playing cards, all spread out before her on a table. If I took up a card and held it up, and said, "What is that?" she would say off-hand, "Six of diamonds," or if I had picked up another card, name it correctly. I found that she could always name the ordinary playing cards correctly and off-hand, although she might not be able to name objects of another sort.

Here I may, perhaps, say that the patient was an accomplished lady, a good linguist, and an able woman, managing her own affairs with very few confidences in her immediate relatives, but often consulting me seriously in important matters. She was a woman of powerful will and high intelligence. We frequently dined at each other's houses, and she was one of those interesting patients who also become personal friends. Her kindness and benevolence to her servants and others was so extreme that often I remonstrated with her. In conversation she rather tired herself by her fluency, and her command of language had always been remarkable. She was fond of horses, and took active exercise out of doors as well as in her house. Now and then she had gouty manifestations and slight uric acid nephralgia, but by her activity and her moderation with regard to wine and food, gout was kept at bay. There was never a trace of albuminuria nor of glycosuria. She was a muscular well built woman of some 170 lbs. She was right-handed. After her seizure the pupils were equal and active. There was no deviation of the tongue; no noticeable hemianæsthesia. There was slight paralysis of the right facial muscles. She was never emotional—always a model of quiet endurance and submission to her illness.

In April, 1896, I find from my notes that she consulted me professionally about her right knee, which she had injured and bruised by a fall at Davos, but about which I took the view that it was of central origin, there being also well-marked numbness of the knee and foot. Later on—December, 1896—persistent numbness of her right hand supervened, and there was some little clumsiness in its action. In August, 1897, I find another note as to this persistent numbness of the right hand. In August, 1898, I find notes of distinct threatenings of an outbreak of gout, together with uric acid deposit, for which I gave her 20 grs. of potassium bitartras in a tumblerful of Salutaris water as her beverage at lunch and dinner. This relieved her entirely of her gout, she travelled in Palestine, and she did not see me again professionally for herself until July 10th, 1899, when her butler fetched me at 11 P.M. He told me that she had had a dinner party at her house that evening, and that after all her guests had left she had been seized with faintness, and seemed so unwell that he had thought it his duty to fetch me. I found her dazed and faint, with weakness of right arm and leg, and with her speech in a state of confusion. Her mind was perfectly clear. This was the commencement of her last illness, and the preliminary narrative already outlined is now followed on from this date of July 10th, 1899. On August 3rd and 4th my patient made her will. On August 13th the nurses noted in their journal "Patient had a slight attack of faintness." From that date there came on a spastic condition on the right side, affecting chiefly the arm. For this massage was used. On August 18th a further stroke of paralysis occurred, which rendered her thenceforth unable to leave her bed, but she still read newspapers and books, said her prayers with great regularity, and as to her mind seemed only feeble. On August 25th a third extension of cerebral mischief occurred, respiratory paralysis gradually came on, and on August 26th she died. On August 3rd Dr. Lionel Beale, at my request, saw her with me, and we wrote out a short report of her condition at that time. On August 9th Dr. Beale saw her with me again, and we wrote a second report. On August 18th I asked Dr. Beale to see her with me again, and on August 25th we had a fourth consultation. From July 27th a day and night journal of the case was kept by the nurses.

In 1897, I think, my patient asked me about making her will, and I advised her to see her solicitor and get the matter off her mind. Her solicitor was Mr. Samuel Garrett, M.A., of

the firm of Parker, Garrett, and Holman. He had been solicitor to her father's will, and knew all her affairs. She saw him at that time, but could not quite make up her mind on all points as to her will. The will, therefore, went over. She did not mention the matter to me again, and as she seemed to be in excellent health, the will question did not recur to my mind. But she was possessed of landed property and personalty to a considerable amount, and there were powers of appointment under her father's will which she had never exercised, and as to which it was of considerable importance that she should determine whether she would exercise them or not.

Now that my patient and friend had fallen into this aphasic condition I was anxious to see that she had, if possible, the opportunity of making the will which she had wished to make. But the matter seemed extremely difficult with a patient who called a box of matches a "centipede." Yet, if she had wanted to light a candle she would have used the said box of matches precisely as I should, and it was clear to me that her mind was intact, although she could not find the words which she needed in order to produce her ideas. She seemed to look at things precisely as a busy man of full age has sometimes to look at someone—someone whom he recognises perfectly, and whose business he knows all about, but whose name he cannot fish up out of the recesses of his memory. My patient was unable to name things at all with any certainty, sometimes she seemed as if at the Tower of Babel and utterly unable to communicate with those around her. But, in her, this loss of power to name things, persons, actions, relationships, and other notions was practically absolute and persistent. Looking back also over the persistent numbness and fumbling of the right hand and the right foot, I believed that her condition would be a progressive one unless she should speedily mend. She did for a time mend considerably as to the ordinary muscular actions, and the sensations of her right side remained almost unimpaired. But I did not regard her case as a promising one. Meanwhile, the question that exercised my mind was, whether we could obtain for her an opportunity of making her will without laying the foundation for painful and costly family litigation. I came to the conclusion that my patient was still a clear-headed resolute woman battling with a breakdown of the apparatus by means of which she could make her mind known to outsiders. The breakdown was in that highly artificial and very delicate apparatus of exposition which we call speech and writing. Her gestural and facial expression was practically unimpaired.

It was after several times testing her with her playing cards that the idea occurred to me of devising a system of bold printed cards upon which various categories of property to be bequeathed, of functions to be performed, of persons to receive those properties or to perform those functions, should be denoted. The idea worked itself out at once, and I took occasion next day to join her at tea, and to ask casually if she had made her will. She shook her head and looked at me as if she wished she could talk. I said, "Oh, I have made my will a long time ago, and I wish you would make yours; I want to get you down to Brighton shortly if possible." She nodded approvingly, and I said, "Write to your solicitor." She said, "I will." At about the same time I spoke to her brother, and he quite approved of her having every opportunity of making a will if it could be done. Next day (July 22nd) I wrote her a short letter to the same effect and left it with her, asking her to read it carefully, and meaning it to bring matters to a point. On the day afterwards I broached the matter again, and she said, "Yes, I quite approve," but I could not ascertain whether she had taken any step in the matter; in fact, the words, "Yes, I quite approve," had exhausted her capacity for utterance. I was convinced that she would like to make her will. She was, however, quite unable then to write to her solicitor, and equally unable to give a verbal message for him to her brother or servants, and soon afterwards I suggested to her brother that he should ask Mr Garrett to call upon her and reopen the question she had herself previously raised as to making her will. I had then come to the conclusion that no more time should be lost.

Late in the evening of August 2nd Mr. Garrett called at my house, and I explained to him the real significance of her aphasic condition, and went on to describe the cards which I had planned out, and by which I thought we might safely get her to give instructions for her will. Mr. Garrett seized the whole idea at once, and we made an appointment to see the patient together next evening at 7.30 P.M. Meanwhile Mr. Garrett forthwith drafted the lists of things, functions, and persons whose printed card representatives were to be sorted over and grouped together by the patient. Next day Mr. Garrett sent me up a sample set of the cards duly printed, and these I entirely approved. That evening we spent some two hours with the patient—no nurse, no relative, no servant present—and we got complete instructions for the will. Not a single suggestion, not a shade of influence, was allowed to affect the patient's mind; the whole will was absolutely spontaneous, and it was as good, effective, and just a will as ever was made. Mr. Garrett marked and fastened together the groups of cards, worked the instructions out into effective legal form at once, and had the will engrossed. On the next day, August 4th, at 7 30 P.M, we met again in conference with the patient, read over the will clause by clause very slowly, and gave her full explanations. Ultimately she signified her full assent. She then put her mark to the will with some assistance, and her execution of the will was formally witnessed by Mr. Garrett and myself. The patient then executed a power of attorney, enabling her brother to act for her in business matters.

The Judgment of the Probate Court.

As this will passed landed property and personalty to a considerable amount it had to be "proved in solemn form," that is, in open court, before the President as in a contested action at law. The will had to be established by sworn personal evidence, and the witnesses to be cross-examined by counsel who represented relatives and others—whose interests were defeated by the will. Judgment by Sir Francis Jeune was pronounced in favour of the will, and the novel method which had been devised for enabling the patient to give instructions was approved of. The following is a full report of the judgment of the Right Honourable Sir Francis H. Jeune:

This case is not quite an easy one because, as far as I know, it represents to me, at any rate, a novel mode of arriving at the real wishes of the testatrix, and I am perfectly conscious that what is suggested to me is suggested with a great deal of force, namely, that this method, although most well intended and in its way most ingenious, and on the whole, I think, satisfactory, leaves it open to question whether or no it does exhaust the wishes of the testatrix because, as has been pointed out, there is the necessary limitation, namely, that the wishes of the testatrix were bound by what was to be found on the face of these cards, and it is conceivable that there may have been a legacy, perhaps to a charity, or it might be a legacy to some person not within the circle of her relations, but a friend who may have been passing through the mind of the testatrix that she desired to make but to which she was quite incapable of giving effect. Or supposing this sort of case had been set up in its extreme form, that some name of a relation was by accident omitted, and was not on a card, or in a more extreme form if it had been shown that she had expressed at other times the fact that she had in her mind the intention of benefiting some person or object not named on these cards, I think it might be shown that these cards did not, in fact, contain the whole statement of her wishes.

But, taking the matter as it stands, I think I am satisfied that her wishes were fairly ascertained. Everything was done that could be done. Nothing could have been more fair and ingenious (I mean skilful; I do not mean to suggest any kind of subtle ingenuity), more skilful than the means adopted by Mr. Garrett and Dr. Edmunds; and I think they did everything any human being could do; and inasmuch as they did put all the names of her relations, and as there is no reason to suppose she desired to benefit anybody but the relatives, I think on the whole one may say the will expresses her desires.

With regard to the executors, it is clear it was not so fully ascertained, because no doubt she wished to indicate somebody else, but could not. On the other hand, I think it is fair to say that she did not regard the executorship of great importance; and when she found a difficulty in indicating the second name, she waived it, and allowed the one only to stand. That leads me to say this: It is not absolutely limited to those cards, for the reason that the will was written out, and was read over to her; and I see no reason to doubt that, when it was read over to her, she was able to follow what was said; and if that will had in any material respect differed from her wishes, I have no doubt that, by touching the arm of Mr. Garrett, or in some other way which was indicated to her, she would have been able to convey to him that that was not her will. I think she had quite sufficient strength of mind and knowledge of the will to lead her to disapprove of it if she wished to.

On the whole I think the method was fairly and satisfactorily adopted, and I feel satisfied that the will is the real will of the testatrix. I propose to grant probate of it.

Mr. Drury: I ask your lordship to say that it is right that I should be here, and that my client should have costs out of the estate

The President: I think so. Mr. Barnard, what do you say?

Mr Barnard: Yes, my lord. And there is the Hand in Hand Insurance Office.

Mr. Priestly: I represent them.

Mr. Barnard: They made inquiries and had all the facts before them and they were satisfied, and they ask for their costs out of the estate.

Mr. Priestly: Yes, we did inquire into the matter.

The President: Yes, it is so peculiar a case that I think it was right that careful inquiry should be made, and I think costs should come out of the estate.

In consequence of Sir Francis Jeune's judgment this becomes a leading case in will-making, and as the circumstances are such as will be of special interest to medical as well as legal practitioners, I am submitting the case in fuller detail than I should otherwise have done.

Remarks on the Agraphia and Aphasia.

I am indebted to a lady, who was one of the guests, for a letter written to her by the patient one or two days before the dinner-party. Names suppressed, the following is a copy:

My Dear Mrs. (correct name, and perfectly spelled).
Pray let me let me forgive you, for forgiving you for forgiving you for not forgiving you for not letting you you know not, and letting you know eight oclock.
I know eight oclock Sunday Sunday.
Yours Sunday yours
(Correct signature.)

The above letter was a reply to one of the guests who had written to ask at what hour the dinner would take place, and the fact that the patient in her invitation had omitted to state the hour may be noteworthy. The above print of the letter has been spaced out so as to show what, in my idea, were the consecutive mental efforts which the patient then made in order to fish up the words which she required for the expression of her thoughts. As to the handwriting, it was well formed, and every word was spelled correctly. Therefore, as a matter of handwriting, the letter would perfectly pass muster. But the letter reveals the patient's mental condition as to inspiring the machinery which wrote it. It shows obstruction to the flow of the writer's thought; it shows repeated failures to complete the expression of the propositions which constituted her intended letter. The mental current was blocked by a lack of the words which she needed in order to deliver herself of her outgoing ideas. What the patient wanted to write was probably as follows:

Pray forgive me for not having let you know the time at which we dine. It will be eight o'clock.
Yours, affectionately,
Sunday. *(Signature).*

If this be a correct imaging of what the patient intended to say, the curious inversions which the letter contains as to the subject and object of its verbs are worthy of study.

Such writing and such speech are often called "jargon letters" or "jargon speech." But this ink letter of August 8-9th has no true resemblance to "the sounding jargon of the schools." I call it a Tower of Babel letter. She had a keen perception of what she intended to write, but she could no more write it than I could write down my ideas in the Chinese language. She wrote and spoke Babel.

The dinner-party was on Monday, July 10th, at 8 P.M. The patient who had written that letter did her shopping, managed her household, and prepared for her dinner-party; she then conducted her dinner-party through to its natural end, and her guests all left in the usual way, without any comment so far as I can learn. It was only when the strain was over that "the seizure" occurred.

Some ten days after the seizure—say on July 20th, upon one of the occasions on which I tested her with a view to possible will-making, or asked her to write me a letter to her solicitor—she wrote me some sentences in pencil. These sentences were written upon a very comfortable bed-rest table, which was set up on the bed before her, and upon which she was reading when I went in. I stood by her bedside. The writing runs as follows:

Hox (Flora ?), let me have the have the (xox ?) left at at
Koehall on Tuesdy it on Thursday last laid on Thursday kast
(last ?) Send (Lead ?) it by Soy the sea sea The Shea by the Sea
by the sea on the the Son by on Jhe by the Son
(erasure of short word) by the by the the By the Ky
in on the Sea.

This pencil writing I cannot in the least explain nor understand; its words and letters are still fairly well formed, and, as handwriting it would pass muster. But the chaos in expression has advanced beyond merely affecting the construction of sentences and impeding the development of propositions. Chaos now affects the names of things, and wrong words come in. The inversion of subject and object also appears to have developed into the substitution of one letter for another in particular words. Some of the words cannot be made out; they are collocations of letters which form dummy words. Such dummy words might be put in as we put $x\,y\,z$ into an equation, or they may be merely collocations of letters, that is, real words in which substitution or exchange of letters has occurred in such a way as to make them unintelligible. In the ink letter of July 8th-9th, we get well-written words and faultless orthography, with a mental inversion of subject and object, and a mental inability to complete the expression of the propositions which constitute her letter. In the pencil writing of August 20th there is superimposed upon these characters a profounder disintegration of the faculty of language.

In the ink letter of July 8th-9th we get:
- Well-written words.
- Faultless spelling.
- Mental inversion of subject and object.
- Partial inability to complete the expression of propositions.

In the pencil writing of July 20th we get:
- Fairly good writing.
- Absolute inability to set out her propositions.
- Wrong names, or the substitution of one word for another.
- Words falsified by the substitution of one letter for another, or put in as dummy words, or used as we use $x\,y\,z$ in an equation.

Upon August 3rd, when we took the instructions for her will, there intervened one of the limitations of this card method. As the subject matter of the final step, Mr. Garrett laid down a card on which was printed "Appointment of Executors." Here the patient took up the "relatives' pack," and turned them over and over as if not satisfied. Then she showed us one name, but did not put it down. We came to the conclusion that she wanted a second executor whose name was not before her. Several names were mentioned, but she shook her head. At last we gave her paper and pencil, and asked her by voice to write the name down. She perfectly understood, and she made several attempts, but she could only scrawl on the paper. She could now write nothing—not a word, not even an intelligible initial letter. Her handwriting was gone, as well as the mental faculty of speaking out and writing down outgoing ideas. At last she turned the *impasse* by throwing down the card which she had previously shown us, and which was that of her brother and heir at law—a member of Parliament and a most fitting and natural executor.

I made several other attempts to get her to write, but I cannot put my hand on other results. They would only have corroborated in detail the course of the case as shown by the above three illustrations, and at the time my object was simply to do the best I could for my patient and friend. I did not then anticipate the medico-legal importance which this case would assume after the will had been proved in solemn form, and its method been so emphatically approved of by the judgment of the Probate Court. I find, also, that I did not ascertain whether she could have written out sentences which might have been read aloud to her, or placed before her in bold print. I was occupied by the clinical aspects of her case, and the desirability of determining this question did not occur to me. Looking at the way in which her right hand served her mind in other matters, I see no reason why she should not have been able to write to dictation, just as she could speak to dictation.

Up to this point we sum up the history of the case by saying that on August 3rd, when she gave instructions for her will, she was the subject of complete motor aphasia.

As to her speech, it was only occasionally that she could blurt out one or two interjectional words. As to her writing, she was unable to indicate, even by initials, the name of the second executor whom she wished to be appointed in her will. Yet her conduct was eminently rational. Her facial expression was active and significant. She watched everything that went on around her with great intelligence. The mind, which could not find words for a single utterance of outgoing

thought, could easily utter the words of sentences which were read aloud or spoken out to her. The hand which, to my knowledge, formerly wrote a particularly bold, firm, clear handwriting, still served her to feed herself, to turn over books and newspapers, to say her prayers (as a Catholic), and even to handle deftly enough the cards by which she was enabled to make her will. But it could not write a sentence, not a word, not a letter that was intelligible as the expression of an outgoing idea.

The reports which have been mentioned were:

August 3rd, 1899.

Miss —— has had a stroke of paralysis affecting the right side to some extent, and her faculty of language is seriously affected. Her mind and intelligence are perfectly intact.

LIONEL S. BEALE,, M.D.
JAMES EDMUNDS, M.D.

August 9th, 1899.

Miss —— is going on fairly well, but is still in a very uncertain condition. The mind is perfectly intelligent, but the faculty of speech is practically in abeyance.

We think that the same treatment should be continued.

JAMES EDMUNDS.
LIONEL S. BEALE.

August 18th, 3.30 P.M.

Miss —— has a little failed in general power, but otherwise her condition is much the same.

We think that the same treatment, diet, and regimen should be pursued.

LIONEL S. BEALE.
JAMES EDMUNDS.

August 25th, 1899.

Miss —— has had a further extension of the mischief in her brain, and her strength is considerably lower.

Her mental powers are now largely in abeyance. She is not in a condition to see friends unless that be absolutely necessary.

The present treatment should be continued.

LIONEL S. BEALE.
JAMES EDMUNDS.

THE METHOD OF CARDS.

By means of categories of printed cards, a patient affected with complete motor aphasia may have brought to his mind effectively:

1. The items of any catalogue of properties which he may have to bequeath.

2. The offices which he may need to fill up in order to obtain executors, trustees, guardians, etc.

3. The names of all relatives and other persons whom he ought to consider in relation to bequests of the items of his property, or in relation to appointments for the necessary offices.

The above three categories may be added to, in order to meet the circumstances of particular cases. The catalogues in each category may be elaborated as the case requires. By means of detached printed letters, the method may be developed so as to enable an aphasic to spell out and indicate the names of any other persons whom he may desire to see added to the list, or to indicate any further items which may not have been catalogued in the list of properties. By apposing cards carrying names to such groups of detached letters, bequests might be made outside the catalogues of things and persons known to the solicitor and friends.

In the case of a blind aphasic it would be possible to bring to his mind successively each of the items by reading aloud the proper card, and, by means of an unequivocal collection and denotement of his decisions—as by the reader grouping the cards—the blind aphasic would be enabled to give instructions for his will.

In difficult cases of blind aphasia, the patient might perhaps be further helped by means of a second reader—one to frequently reiterate in a low monotone the name of the item to be disposed of, and thus keep this item persistently before the mind of the testator, the other to read slowly over and over the names of the persons until the testator indicates by gesture the one to whom he bequeathes the item. Blind aphasics used to the raised letters by which the blind read, would be helped by cards printed in these raised letters, and these they would read over and over by the sense of touch, just as seeing aphasics would read them by the sense of sight. These cards in raised letters might even help aphasics who, previously both blind and deaf, will now be blind and deaf and dumb. These would have no means of communication except by the sense of touch.

By one or other possible application of this card method, all patients suffering from complete motor aphasia would be enabled to give instructions for a will. But I see no way by which aphasics perfectly illiterate could be helped by this card method.

An extension of this method of printed cards may enable chronic sufferers from complete motor aphasia to develop a new faculty of language in the right hemisphere of the brain so as to enable speech and left-handed writing to bring such patients back again within the circle of social life. The method of lip-reading would be a powerful accessory.

If the words used in every-day life be carefully posted up, it will be found that a vocabulary of some 400 words is the basis of all the permutations of speech which are required for every-day life. Grafted upon the circle of this every-day vocabulary there come technical vocabularies. These multiply so rapidly and develop at such length that a highly-educated man who has a large knowledge of things and has the faculty of discriminating speech will use many thousands of words. A man may talk about the weather, about his bread and butter and coffee, about the time of day and the clock, and about his horse a thousand times for once in which he may want to name a chisel, a screwdriver, or a plane. In every direction the speech of a man of active mind and extended thought radiates into these technical vocabularies; and, taking legal, or medical, or chemical, or mechanical vocabularies one by one, it is obvious that many of them would each fill up an ordinary-sized dictionary. If technical vocabularies were to be provided for, each aphasic must work out his own catalogues; but it is quite possible that a set of phrase cards might be devised to cover the round of every-day life, of shopping and travelling, and by means of which the motor aphasic might communicate his outgoing ideas readily with the aid of gestural language.

The ordinary courier will "speak a dozen different languages." The secret is that he never goes outside a vocabulary of some 400 words, except by means of a pocket dictionary. One day on going into an hotel at Munich I was accosted by a waiter who seemed to speak perfect and unlimited English. After ordering our dinner in half an hour, I said, "And I think we'll have a stroll." "Yes, sir." My wife and I went out for a stroll, and on returning for dinner the waiter told me that "it was impossible to get a stroll for dinner; there was not such a thing in Munich." Thus I had unwittingly got outside the every-day vocabulary of this waiter, who spoke with perfect fluency and ease so long as he kept within his list of words. As the every-day vocabulary consists of the names of every-day things, it is the same set of things which is named in every language, and it is only these different sets of names that the courier linguist learns up. He does not learn new things. With our absurd method of learning languages at school we mix up the ideas of general knowledge and linguistic culture with the simple object of becoming able to exchange ideas with people who speak a different language. Hence a man who knows many languages generally knows nothing else, and a youth who has spent years in the study of French verbs is discharged into the streets of Paris to find that he cannot make a bargain with a cabman. It would therefore seem that by means of bilingual phrase cards for each country—such as France or Germany or Turkey or Russia or China—and one's own language, those of us who are locally complete aphasics when we travel, say, in Russia, would be able to exchange ideas by putting down a bilingual phrase card, and offering to the Russian his choice of a group of other bilingual phrase cards containing among them the answer we want. In this way, within a circle of a small every-day vocabulary, and by means of a small bundle of bilingual phrase cards, we might extend the possibilities of travel indefinitely. How easily, for instance, his three daily meals might be ordered by an adventurous traveller in Russia or China at every fresh place by means of three bilingual printed cards. Then such small vocabularies might have their different categories of subjects printed upon cards running the gamut of the spectral colours, and thus naturally grouping themselves at a glance when taken out of the pocket. One hundred small bilingual cards so arranged would enormously facilitate travel.

THE PRACTICAL PROCEDURE.

Reverting to the practical procedure by which my patient was enabled to make her will, the following details will be useful:

1. For a paralysed patient in bed, as ours was, the cards should be large (4 inches by 5), thick, and white, boldly printed in black; type a quarter of an inch in height, and open laterally, with total abstinence from the abominations known as "ornamental" type and printers' flourishes. The cards should be such that a paralytic patient can comfortably handle them while he reads what they denote. He should be able to read them without spectacles, and the physician and solicitor should also be able to read the cards without crowding up to the patient. With so small a number of categories as will-making requires, there is no need to devise any grouping of the subjects by variously coloured cards. A comfortable invalid table should be arranged on the bed in front of the patient—a table with a large rising slope, and of such ample size that the patient may deal out and group the cards before him with a minimum of mental strain and physical fatigue. The patient must not be hurried nor bothered. An hour at least was occupied in taking instructions from this patient after having had a comfortable little talk with her and made her perfectly understand our card method and our proposed procedure.

2. Each card carries only the denotement of one single item—whether property, office, or person. This is fundamental. In dealing with the residue, "legacy cards" were used denoting different sums of money. These by grouping could be made to represent such various round sums as were likely to be wanted by the testator. If one block of property is left to the children of a sister or brother, say, or to two sets of nephews and nieces, that is indicated by grouping the names of all the recipients with that of the particular block of property which they take. The solicitor, in working out the instructions into effective legal form, shapes such a bequest properly, and, when the draft will is read over and explained to the patient, that shaping can be approved of or modified. A certain rational order should be preserved in dealing with the cards so as to avoid bothering the patient. For instance, we took the largest items of property first and in their natural order, one by one. We introduced no second item until the one before the patient had been quite disposed of. Each group of cards when settled should be marked, fastened together with two elastic rings, and laid aside in order upon the foot of the bed or upon a side table, like a row of tricks at a game of whist. We took first the Landed Property, then Town Residence—Furniture and Contents of Town Residence—Jewellery—Horses, Carriages, Harness, etc.—One half share under your father's will (value of one half about £16,000)—Private Property, Savings, Investments, etc, and all property not otherwise disposed of. Executors to be appointed. These are examples of items which appeared upon the several cards.

3. In taking the instructions Mr. Garrett first laid down upon the table a card denoting the most important item of the property. This was a family landed estate, which came to the testatrix under her father's will. This card with the name of "The —— Estate" was laid down on the left side of the table, and Mr. Garrett or I said, "There now, whom do you give that to?" The patient had in her hands the complete pack of the third category containing all the persons, and she thereupon turned the cards over and over, and then slowly laid down upon the estate card the name of her brother, who would have been heir at-law if she had died intestate. After a pause, to be quite sure that no other name was to share this item, a few words from one of us followed, such as, "Then you give that estate to your brother?" The patient nodded her head deliberately. The two cards were then marked, fastened together, and laid aside on the foot of the bed. Every other item was, with very few words from one or other of us, disposed of by the patient just in the same way, the jewellery being given to a niece, who was the testatrix's goddaughter, and who bore the testatrix's christian name. No one but Mr. Garrett and myself was with the patient. Every act was a purely spontaneous one, coming out of the patient's own mind without any sort of suggestion from either of us. I should note that after the first item had taken her brother's name out of the relatives' pack, a second card bearing his name was put into the pack, and, after the disposal of each item, this replacement of used names kept the pack always full in the hands of the testatrix. If the relatives' pack had not been kept complete the patient would not for every item have had all the names before her, and therefore duplicate bequests could not have been made. A dozen copies of each card should be printed.

It should be realised that this procedure is not a mere dodge. It is based upon a definite scheme of scientific thought. Aphasics lose first and chiefly the names of things, places, and persons. These names cannot be replaced by pantomime. The things cannot be indicated except by producing their names, or by pointing out the things themselves as concrete objects of sense. Now this method of printed cards supplies to the patient's mind, through his eye, all such names as are needed for the making of his will. His will as to the distribution of these things is shown by motions of translation and by the establishment of static relationships in space. These simple rational motions and relationships become a language intermediate between vulgar pantomime and spoken or written language. Ordinary language also is produced by motions, but its motions are so purely conventional that they are unintelligible as between persons who merely speak different languages. Its motions, moreover, are extremely difficult, almost infinitely complex, and practically indeterminate. The aphasic has become unable to accomplish them. Contrary to all this, the simple rational motions and static relationships in space form a concrete thinking visible alike to the patient and others, and they partake sufficiently of the universal language of pantomime. They constitute a scientific pantomime. They are, moreover, perfectly determinate, of extreme simplicity, and they compass sufficiently the purpose of will-making. The scheme of the method, therefore, is to substitute these simple and rational motions and relationships in space for the unattainable complexities of speech, writing, or dactylology.

A most interesting account of the devices hitherto resorted to for utilising gestural language from aphasics for will-making will be found in a chapter on the Jurisprudence of Aphasia in Sir Frederic Bateman's work on *Aphasia*.

In giving evidence before the Court of Probate, I pointed out that this method of cards was subject to limitations which might make a will imperfect. For instance, a testator might own properties which had unwittingly been left out of the catalogue, and which therefore would improperly augment a bequest of general residue. Again, persons or objects—such as a private friend or a charity whom the testator had intended to benefit—might unwittingly be left out of the list submitted to the testator, and so lose their bequests. But the alternatives do not lie between a will made by this method of cards and a perfect will. The alternatives lie between a will made by this method of cards and an intestacy. Now, the persons and objects which under an intestacy would constitute the list of beneficiaries will be well known. If all such names be not submitted to the testator the will is voidable. But in either alternative the outside persons and objects, whose existence is for the sake of argument assumed, would be left out. Therefore a will made by this method of cards could not fail in expressing the full wishes of the testator more than the intestacy would have done. In fine, I see only one disadvantage, and that lies in the fact that a testator might be possessed of properties not known to his family and solicitor, and that such properties would fall into a bequest of residue, whereas under an intestacy such unknown properties would be distributed according to law. This one disadvantage must be set against other manifest advantages, one of which is to enable the testator to rescue his estate from descending to a spendthrift or to a *persona non grata*. Moreover, it must be recollected that this one disadvantage may be entirely obviated by properly shaping and limiting the bequest of residue.

The method of cards being adopted, it must be carried out with strenuous impartiality, with submission to testator of the completest available lists, with entire avoidance of undue influence or suggestion, with scrupulous care in procedure. At the subsequent perusal of the written-out will full opportunity must be given to the testator for amendment, and also for deliberate and unequivocal assent, before it is executed and witnessed.

REFERENCE

1 *Times*, February 13th, 1900.

THE LUMLEIAN LECTURES
ON
SOME CIRRHOSES OF THE LIVER.

Delivered before the Royal College of Physicians

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[Abstract.]

Lecture I.

Cirrhosis of the liver occurs in various forms, and in different degrees. It does not, as some would appear to conceive, arise suddenly fully developed—in the extreme form of the final stage of atrophic degeneration. It is my purpose to deal mainly with the three chief forms of cirrhosis, and those with which ascites in its most pronounced and characteristic form is especially associated. It is on these—distinguished as atrophic cirrhosis, hypertrophic cirrhosis, syphilitic cirrhosis—that the main interest of the subject centres.

Before proceeding further, however, it will be well to clear the ground by putting aside certain minor forms which lie outside the strict lines of the present inquiry. Amongst these are those conditions of fibrosis which are due to the obstruction of venous escape from the hepatic vein—as in mediastinal tumours, mediastinitis—or associated with general dropsy in mitral and tricuspid disease of the heart. The hepatic fibrosis which is set up by chronic venous congestion of this kind is as a rule only a slight cirrhosis, not usually sufficient in itself to interfere materially with nutrition, or to cause such serious portal obstruction as to give rise to abdominal dropsy. The peritoneal effusion is not great, and forms merely a part as it were of the general dropsy which follows the damming back of blood in the systemic venous system. Yet in some instances of this congestive cirrhosis we meet with an ascites as a distinct feature, which is out of all proportion to the effusion elsewhere—a true ascites due to added difficulty in the portal area, the systemic obstruction, insufficient alone to produce a general dropsy—reinforced by the hepatic obstruction causes peritoneal dropsy. I wish to draw attention to this, because it has, I think, an important bearing upon certain cases of hypertrophic cirrhosis of which I have to speak later.

1. In *atrophic cirrhosis* the fibrous invasion is described as spreading along the main branches of the interstitial tree, embracing groups of lobules and compressing them, and thus causing atrophy and destruction of cells. The new fibrous growth between the enclosed groups of lobules contracts, and, drawing in the surface at these points, causes hobnailing of the surface and shrinkage of the whole organ, so that it is much smaller than normal, decreased in weight, tough and hard. Amongst the clinical features which are laid down as characteristic of atrophic cirrhosis, as contrasted with other forms, are signs of portal obstruction, evidenced by the frequency of ascites and the occurrence of hæmorrhage from the stomach and bowels, the rarity of jaundice, the short course of the disease after it can be recognised, its inevitable fatality, and that it is almost invariably set up by chronic alcoholic irritation.

2. In *hypertrophic cirrhosis*, described by Hanot as "biliary cirrhosis," the liver condition is stated to be characterised by increase in size and weight; the fibrosis which invades the interstitial tree affects the smaller twigs rather than the main branches, embracing single lobules and even single cells, instead of groups of lobules; and is accompanied, moreover, by a curious development of biliary canaliculi at the periphery of the lobule, due either to the formation of new ductules there, or to the exposure of existing ones, by denudation through the destruction of hepatic cells. In this form the liver is greatly enlarged; it is hard, smooth of surface, or only slightly granular. The clinical aspect, as laid down by authority, is characterised by features which contrast sharply with those of the atrophic form. Ascites is described as entirely absent, or, if present, is so slight as to be comparatively unimportant; while jaundice, on the contrary, is said to be an almost invariable symptom, and often intense and persistent. Intermittent attacks of pain and pyrexia, enlargement of the spleen, and a liability to the supervention of acute symptoms, such as severe delirium, hæmorrhages, coma, and a chronic course of some years, are other signs which distinguish hypertrophic cirrhosis. Its cause is involved in obscurity; a doubtful factor, in some instances supposed to be malarial, in some alcoholic, in some obstruction to ducts is credited with setting up inflammation of the biliary canaliculi, which is regarded as the starting point of the pathological change.

3. *Syphilitic cirrhosis* is described as characterised by the presence of broad bands of fibrous tissue, separating isolated masses of liver tissue, and causing destruction of hepatic cells. The organ is often much deformed by the gradual contraction of these several fibrous bands, giving it a lobulated appearance, its surface marked by rounded bosses, often scarred and furrowed, or only slightly uneven; gummata may also be present in various stages—a hard liver, usually enlarged, sometimes contracted, with uneven, bossed, or slightly irregular surface. The clinical features of this kind of cirrhosis closely resemble one or other of the preceding forms—in the early stage of enlargement, the hypertrophic; in the latter, either the hypertrophic or atrophic alcoholic form. In one case jaundice, no ascites; in another both; in a third neither; but, as a rule, when advanced, ascites and perihepatitis. There is another form of syphilitic cirrhosis described as chiefly limited to the hereditary syphilis of childhood, a diffuse fibrosis characterised microscopically by its immature, partly cellular character penetrating the lobules, and even between the cells. The liver is greatly enlarged, clinically jaundice, ascites, and emaciation are amongst the chief symptoms.

Factors in the Causation.

Atrophic cirrhosis of the contracted, hobnailed liver would appear to be almost invariably of alcoholic origin. It is said that malaria sometimes plays a part in its production, but the evidence of this is by no means conclusive. I have met with no instance of the kind; yet it is not intrinsically improbable that a disease like malarial fever, which sets up such marked fibroids of the spleen, should also set up an analogous fibrosis of the liver. In those cases attributed to malarious influences, however, when the cirrhosis is of the contracted, hobnailed variety, it is probable that alcohol, an agent by no means inactive in malarial districts, is largely concerned in its production.

The Question of an Early Stage of Enlargement in the Atrophic Form.

Another question which has been much debated is, Is the liver enlarged in the early stage of atrophic cirrhosis? Is it first hypertrophied, and subsequently diminished in size as fibrotic contraction proceeds? The older writers generally held that this was so occasionally, but that it was exceptional. Murchison[1] expressed the opinion that it was a matter for further investigation whether, if a patient with enlarged liver survived long enough, the enlargement would be followed by cirrhotic contraction. Instances have been recorded by Dr. Frederick Taylor[2] and others in which the greatly-enlarged liver of alcoholic cirrhosis has been observed to undergo contraction. I have watched a number of these cases of cirrhosis with enlargement for considerable periods—one for nearly 12 years, one for 8 years, one for 2 years. In the first there has been some slight decrease in size, but great enlargement is a characteristic feature still, and in no case have I observed the condition change from an enlarged to a small contracted liver.

I think, however, that there is a state of engorgement, and congestive swelling in the atrophic cases, before fibrotic contraction is fairly in process. We are all of us familiar with the enlarged liver of the drinker, who has not developed any symptoms of actual cirrhosis. This, however, is quite distinct from the large hard liver of hypertrophic cirrhosis, which does not merge into the atrophic form. Such contraction as that described in Dr. Taylor's case must at least be extremely rare. The hypertrophied liver does not represent the early stage of the contracted form. The microscopic characters alone negative this; in the one the fibrosis is multilobular almost invariably; in the other, monolobular, or a

combination of the two. Hanot, indeed, recognised that hypertrophic cirrhosis was not merely an early stage of the atrophic variety, even when of alcoholic origin.[3]

The error of regarding the hypertrophic and atrophic condition as different stages of the same thing has probably arisen from its being observed that in some cases the liver was large, in others small; and since permanent hypertrophy was supposed to be limited to Hanot's biliary form, the inference was too hastily drawn that in alcoholic cirrhosis the large and small were connected, and merely different stages of the same affection. They are distinct varieties, rather than different stages of alcoholic cirrhosis.

Ascites in Atrophic Cirrhosis.

In the next place, is the occurrence of ascites a special feature of atrophic cirrhosis and practically limited to the final stage of it, and is it as rare in the hypertrophic form as it is common in the atrophic?

There can be no doubt as to the frequency of ascites in atrophic cirrhosis. In 23 consecutive cases of fatal cirrhosis at St. Mary's in which the liver was small (under 60 ounces) ascites was present in 17, absent in 6 only. Nor can there be any question of its grave significance in the majority of cases. It indicates, generally, that the disease has progressed towards its end, that the collateral circulation established has become inadequate to the full relief of the obstructed portal circulation, and that the destruction of liver tissue, advancing usually *pari passu*, has reached the limit of viability. As a rule, but by no means invariably, the patient has only a few months to live; now and again however the months are extended to a year or two. The supervention of marked jaundice in atrophic cirrhosis is of more immediately fatal augury than the appearance of ascites. There are cases of atrophic cirrhosis in which ascites supervenes before the final stage when sufficient glandular structure still remains intact and functionally effective to carry on life, and the obstruction to the portal system is not yet so great as to be past compensation by collateral channels. In these rarer instances partial recovery may take place for a time.

Jaundice in Atrophic Cirrhosis.

In the standard descriptions of the symptoms pertaining to atrophic cirrhosis a point is made of the fact that, although a slight icteric tint may be present, marked jaundice is conspicuously absent, while it is almost invariably present in the hypertrophic form. Here, again, we have been misled by the assumption that hypertrophic cirrhosis usually corresponds with Hanot's special biliary form. The matter is of no great moment, but no such hard-and-fast line as to the occurrence of jaundice can be drawn. Jaundice of a marked character is not constantly absent in the small liver of alcoholism; and on the other hand, it is by no means constantly present in the hypertrophic form. Murchison[4] observed that although decided jaundice is rarely met with in atrophic cirrhosis in the early stage, it may occur in advanced stages, and is then an ominous symptom. Dr. Foxwell,[5] as the result of his investigation of 67 cases, concludes that jaundice and cerebral symptoms are as common when the liver is small as when it is large. In the 53 fatal cases of cirrhosis of all kinds at St. Mary's during the last ten years I find 8 in which marked jaundice was observed. In 4 of these cases the liver was small, and in 4 enlarged. The distinction between the two forms with regard to the occurrence of jaundice should be that whilst it is met with pretty equally in both forms, it occurs at an earlier stage in the hypertrophic than in the atrophic condition, in which latter it is often indicative of the approach of a fatal termination.

The Character of the Fibrosis in Atrophic Cirrhosis.

Another question of some interest in connection with atrophic cirrhosis is whether the fibrosis is always of the coarse multilobular kind, affecting the main branches of the interstitial tree, or whether the finer interlobular variety, which is undoubtedly most characteristic of the hypertrophic form, is found in the small contracted liver also. In the 53 cases adduced before, the liver was examined microscopically in 18. In one only of the distinctly contracted specimens was the fibrosis diffuse, in the rest coarse and multilobular, with, in a few instances, a small amount of finer fibrosis invading the lobules.

Atrophic Cirrhosis and Bright's Disease.

A certain amount of interstitial change is found in the kidneys in a large proportion of cases (about one-half) of alcoholic cirrhosis. In most it is not extreme; and this fibrosis of the kidney is to be regarded as a result of alcoholism, just as is the fibrosis of the liver, the kidney being affected usually in minor degree. In some cases the interstitial nephritis is advanced, and, associated with the Bright's disease, a special form of cirrhotic atrophy is occasionally found, which has been more particularly described by Dr. Fagge and Dr. Hale White. In this the liver is greatly contracted, its substance atrophied, but the connective tissue is not always greatly increased. The capsule is much thickened, and there is also extensive perihepatitis associated with adhesive peritonitis, and ascites, which is attributed chiefly to the perihepatitis and chronic peritonitis.

Occurrence of Perihepatitis and Peritonitis in Cirrhosis.

In the 53 cases mentioned there are 15 in which extensive perihepatitis is recorded, usually with extension of peritonitis to neighbouring structures, and adhesions, notably of the diaphragm, stomach, and transverse colon.

Of these 15, 4 were syphilitic—in one of these parenchymatous nephritis was present—in the remaining 3 the kidneys were normal. Of the 11 others, in 4 the kidneys were more or less granular, in 3 enlarged, and in 5 normal.

In 22 cases the perihepatitis was slight or not recorded.

In 4 cases there was acute peritonitis. Of these the kidneys were fibrosed in 3; in 1 (which was syphilitic) there was cloudy swelling.

In 5 cases of the 53, there was some chronic peritonitis other than perihepatitis. Of these in 1 the kidneys were granular, in 2 large and tough, and in 2 not affected.

In 6 of the last cases examined, in which the condition was specially noted, it is stated positively that there was no peritonitis. In 5 of these the kidneys were cirrhotic; in 1 congested only.

Since, therefore, in these cases of cirrhosis with extensive perihepatitis and adhesive peritonitis of neighbouring structures the kidneys are not constantly affected, and, on the other hand, when the kidneys are granular there may be no peritonitis, the presumption is that the cirrhosis, perihepatitis, and Bright's disease are probably due to the same cause—chronic alcoholic poisoning.

Hypertrophic Cirrhosis.

The first question which arises with respect to cirrhosis with enlargement of the liver is whether the affection described by Hanot and Charcot as a biliary cirrhosis of uncertain origin is to be accepted as the representative form of hypertrophic cirrhosis, or whether it even exists as a separate entity or is merely a modified form of alcoholic cirrhosis. Hypertrophic cirrhosis is described as having a special morbid anatomy and a distinct clinical history and course, which give it a marked individuality of its own.

I think we have been unduly biassed by the classical description of Hanot, as we were formerly by Laennec's description of the atrophic form, and have had no eyes to see obvious facts. Just as deference to Laennec's authority led to the too ready assumption that an enlarged fibrosed liver must be an early stage of the atrophic form, so, when the existence of a distinct hypertrophic condition, always hypertrophic and of special character, was demonstrated, it was assumed that every cirrhosis with enlargement must conform to this special variety. Subsequent research, however, has proved that many of the features which were considered to be distinctive of the so-called biliary cirrhosis are not peculiar to that exact type, but occur also in cirrhoses which in other points do not conform to Hanot's description.

The Character of the Fibrosis in Hypertrophic Cirrhosis.

There is now no question that a fine fibrosis, monolobular or intralobular in arrangement, occurs in conjunction with hypertrophy of the liver in cirrhosis due to alcohol; and this diffuse fibrosis appears also to be met with in the cirrhosis attributed to malaria which is usually hypertrophic.[6] It is also established, I think, that the appearance of hyperplasia of bile ducts in the highly nucleated tissue between the lobules is not met with in cirrhosis with the clinical characters of Hanot's form alone. Dr. Saundby[7] has shown that this appearance of new canaliculi occurs in cases of ordinary cirrhosis; and, also, that it is not always present in any marked degree in cases presenting the clinical characters of biliary cirrhosis. Dr. Frederick Taylor has produced evidence of a like nature.[8] In a case of alcoholic cirrhosis with enlarged

liver recently under my care this appearance was found in conjunction with a coarse fibrosis, and this same formation of so-called biliary canaliculi is also seen in the simple fibrosis of cardiac disease. In another instance a fine fibrosis was observed in a case of alcoholic cirrhosis without jaundice in which the liver was small (53 ounces). The interstitial fibrosis most commonly met with in cirrhosis in which the liver is enlarged is a combination of coarse multilobular and fine monolobular development; the microscopic distinction, therefore, does not hold.

JAUNDICE IN HYPERTROPHIC CIRRHOSIS.

In the next place, the presence of jaundice is by no means a constant, nor, according to my experience, a very common symptom of hypertrophic cirrhosis.

In 17 consecutive fatal cases of cirrhosis with enlarged liver, varying in weight from 60 to 134 ounces, I find jaundice noted as a marked symptom in 4 only; in 6 it is described as slight, and in the remaining 8 none is recorded.

Again, out of 27 more cases of cirrhosis with enlarged liver, which have either recovered or been relieved, or in which, if fatal, no *post-mortem* examination was made, jaundice was absent in 19, and present only in 8.

In 10 cases of enlarged fibrous livers from different causes recorded by Murchison, jaundice is mentioned as a symptom in 4 only, and, as noted before, Dr. Foxwell's[8] investigation of 67 cases of cirrhosis yielded the conclusion that jaundice was as common when the liver was contracted as when it was enlarged.

It is clear, therefore, that jaundice is by no means a constant or characteristic symptom of hypertrophic cirrhosis generally; and, on the other hand, as we have seen before, jaundice in marked degree is by no means rare in the atrophic form.

ASCITES IN HYPERTROPHIC CIRRHOSIS.

The absence of ascites in any important degree is described as being as distinctive a feature of the typical form of hypertrophic biliary cirrhosis as the presence of jaundice. This certainly does not hold good with regard to hypertrophic cirrhosis which has come under my observation.

In the 25 fatal cases of hypertrophic cirrhosis in which the liver weight varied between 60 and 134 ounces, ascites was present in 16. In 6, which recovered more or less perfectly, ascites was a prominent symptom in all but one.

In the 10 cases of hypertrophic cirrhosis given by Murchison, ascites was present in 7. Bristowe records one of alcoholic cirrhosis with great enlargement, in which the patient was tapped fourteen times for ascites.

In the 67 cases of alcoholic cirrhosis recorded by Dr. Foxwell, he found that ascites was as common when the liver was large as when it was small.

The absence of ascites, therefore, is not a constant and typical negative symptom of cirrhosis when the liver is enlarged, any more than the presence of jaundice is a reliable sign of distinctive symptom of the hypertrophic form. It is probable that this impression of the frequency of the occurrence of ascites in contracted liver, and its absence in the enlarged liver, has arisen partly from the fact that atrophic cirrhosis escapes notice until ascites arises to draw attention to it. A liver smaller than natural is not obtrusive. When the liver is enlarged, however, it challenges recognition, and is often discovered before ascites supervenes.

Enlargement of the spleen, again, is not an especial feature of hypertrophic cirrhosis. In the 53 cases I have instanced it was enlarged in the great majority of alcoholic cirrhoses, large or small, but the greatest size was reached in the syphilitic cases, in one of which it attained to 42½ ounces, or six times the normal weight.

PAIN, PYREXIA, DELIRIUM, COMA, THE TYPHOID STATE.

Another feature which is said to mark the course of biliary cirrhosis is the occurrence of attacks of pain and pyrexia. These symptoms are, however, met with in atrophic cirrhosis, in alcoholic hypertrophic cirrhosis without the characteristics of the biliary form, and notably in syphilitic cirrhosis.

Pain, tenderness, and pyrexia are, I imagine, merely an indication of the supervention of perihepatitis. Grave symptoms, such as delirium, the typhoid state, and coma, are not confined to hypertrophic cirrhosis of the so-called biliary type. They occur in hypertrophic cirrhosis of alcoholic origin, and in atrophic cirrhosis also. These symptoms cannot therefore be regarded as distinctive of special forms of hypertrophic cirrhosis.

CHRONIC COURSE OF HYPERTROPHIC CIRRHOSIS.

The course of the type form of hypertrophic cirrhosis is stated to be a chronic one of two, four, or six years, or more. It must be allowed that the cases which run a protracted course are those in which the liver is enlarged; they are as a rule more benign. This is, however, not invariable; and Dr. Dreschfeld[10] has recently published a case of alcoholic hypertrophic cirrhosis which, while agreeing with Hanot's affection in many respects, differed in the presence of ascites and in the short course of the disease. Chronicity, then, cannot be regarded as a constant character of hypertrophic cirrhosis.

It will be seen, therefore, that a cirrhosis in which the liver is greatly enlarged may fail to correspond, in one case or other in nearly every particular with the classical type, for which we all look, and so rarely find. Further, from the time of Murchison downwards, a number of cases of cirrhosis have been recorded by Saundby, Bristowe, Dreschfeld, Foxwell, and others in which although the liver was greatly enlarged, the symptoms have been those usually ascribed to the contracted liver, rather than those of so-called biliary cirrhosis. In the majority of instances the cause has been traced to alcoholic intoxication. A number of like cases have come under my own observation. The hypertrophic cirrhosis I have met with corresponds with the cirrhosis of Hanot chiefly in two respects: the enlargement of the liver is smooth and hard and the fibrosis is usually diffuse and monolobular and sometimes partly multilobular. In one instance, however, in which the liver weighed 152 ounces the cirrhosis was coarse and multilobular, with much fatty deposit.

Is it therefore to be inferred that no such special form of hypertrophic cirrhosis as that described by Hanot and recognised by Charcot actually exists? I think we are not warranted in assuming this absolutely. In addition to the original cases described so graphically by the French writers, other isolated instances have been observed now and again in this country and abroad, which agree closely with the so-called biliary type. For my part I have not, in spite of a close scrutiny for sixteen years, met with a case which has exhibited in full completeness the typical presentment of the French authorities. Although in view of the detailed description of such cases occurring in the experience of others it must be allowed that, clinically at all events, cirrhosis of that precise character does arise from time to time, it is certain that it is rare, at least in this country. It is, moreover, still doubtful whether these rare examples are entirely distinct from hypertrophic cirrhosis of alcoholic origin, or merely an exceptional variety of it. At all events, the representative fibrosis of the liver with enlargement is, in the vast majority of cases, a hypertrophic cirrhosis set up by alcohol equally with the atrophic form; in other instances by syphilis, and not the rare condition described by the French pathologists.

SYPHILITIC CIRRHOSIS.

The points at issue with regard to syphilitic cirrhosis are comparatively few. The ordinary form which results from acquired syphilis, in the tertiary stage, has usually well-marked characteristics when the liver is examined after death: although its identification during life is often extremely difficult, and mistakes in diagnosis are frequent with regard to it. In a typical instance the gummata in various stages, the massive wedges penetrating the liver substance at various points, the scarring and puckering, and lobulation, and the extensive perihepatitis are striking and unmistakable morbid appearances.

Microscopically may be seen the gummatous cellular growth developing into fibrous tissue or undergoing caseation. Endarteritis obliterans, a condition well known as the result of tertiary syphilis elsewhere, but, as far as I am aware, not observed directly in connection with hepatic syphilis, was discovered in 1 case by Mr. Plimmer, our able Pathologist at St. Mary's. In a paper by Hanot and Chauffard[11] this condition of arteritis is described as met with in hypertrophic cirrhosis with pigmentation and diabetes, to which latter the cirrhosis was regarded as secondary. In one case scarring is mentioned, which is very suggestive of syphilitic affection, but in the second case it is said that there was no history of syphilis, and the surface of the liver was flat and finely granular.

One point which is not sufficiently recognised and which I would emphasise is that the morbid changes in syphilitic cirrhosis may exist in every degree. Occasionally they are so slight as scarcely to alter the normal appearance of the organ;

a few small scars, some thickening of the hepatic capsule, or slight perihepatitis may be the only morbid features perceptible externally on *post-mortem* examination. This fact is of great importance in its bearing upon diagnosis. There may be no suspicious history, nothing whatever distinctive in the physical signs made out during life. The condition of the liver, as ascertained by examination of the abdomen may correspond exactly with that of an ordinary alcoholic cirrhosis.

Another feature of syphilitic cirrhosis is the degree of perihepatitis and local peritonitis in the region of the liver. This condition of general perihepatitis, with extension to neighbouring structures, is far more marked in connection with syphilitic disease than in any other condition.

The great development of perihepatis and local peritonitis n many cases of syphilitic cirrhosis has been imperfectly ecognised. Perihepatitis has been usually regarded as more especially associated with other forms. Murchison, however, observed that it was met with in marked degree in syphilitic cirrhosis, and in connection with long-standing disease of the heart. He described it as accompanied by fibrous bands extending from the capsule into the liver structure and causing atrophy.

There may be, as I have observed, no history of syphilis in these cases. In 10 cases of which I have notes—8 of which were fatal and the gummata found *post mortem*—in 2 only was there any definite history of syphilis; in 2 others syphilitic scars were found during life; but distinctive physical signs in the shape of irregularities or bossing of the surface were found in 3 only. The condition usually disclosed by physical examination of the abdomen was a large liver, smooth and slightly irregular and hard; or sometimes simply that the liver was small and contracted.

The syphilitic liver, then, is liable to be mistaken—and, as a matter of fact is, I believe, frequently mistaken—for the alcoholic liver, an error which, in view of the remedial power of antisyphilitic remedies, may be disastrous.

Signs of perihepatitis, pain, and tenderness over the liver and pyrexia, when the degree is marked and persistent, afford a presumption in favour of the syphilitic nature of the affection. The temperature affords valuable indications of the existence of perihepatitis. Perihepatitis does occur in pure alcoholic cases, and in connection with Bright's disease; but, according to my observation, it is not so constant or so extreme as in syphilitic cirrhosis.

Another undetermined question is as to the specific cirrhosis which arises in young children as a result of congenital syphilis. I have not met with any instance of gummatous development such as is found in the acquired disease, although the condition has been recorded by Ziegler and others. The smooth liver greatly enlarged offers no points of distinction from a liver enlarged from other causes, and the diagnosis must depend upon the history or the existence of other signs of the disease. *Post mortem* the microscope reveals a very distinct form of cellular infiltration and early fibrosis, which spreads through the lobules between the cells in a diffuse and characteristic manner. There may be no thickening of the capsule or external change perceptible.

In 8 cases of cirrhosis in children between 5 and 9 years of age, of which I have careful records, there was a reliable history of congenital syphilis in 2 only. In 2 there was one of alcoholism, and in the remaining 4 no cause could be made out. In connection with this subject of cirrhosis in children there are many interesting points—such as the effect of congenital obliteration or stenosis of the bile ducts, as recorded by Dr. John Thomson[12]; the question of hereditary tendency, as noted by Dr. Howard[13] and Dr. Finlayson[14]; and the connection of this with nervous lesions, as noted by some observers. I think it is probable that congenital syphilis will furnish the key to the relation of these several conditions. With these matters, however, it is beside my present purpose to deal.

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ANTHRAX OF THE THIGH TREATED BY OPERATION: RECOVERY.

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The occurrence of anthrax in the human subject in Ireland has been sufficiently rare to warrant the publication of the following brief notes, which are an abstract of a communication made to the North of Ireland Branch of the Association at a recent meeting. The patient and the excised morbid tissues were exhibited to the members. Some additional interest arises from the facts as to mode of infection and the bacteriological proofs being unusually clear in this instance.

The patient was a healthy labourer, aged 23, employed in a chemical manure manufactory. On December 22nd, 1899, while wheeling a barrow laden with bone manure he was accidentally pricked on the inner side of the thigh, in the lower third, by a splinter of wood on the barrow handle. Feeling something scratch him in this situation, he extracted a tiny chip of wood from his trousers and continued his work, taking no further notice of the occurrence as the spot was not painful. In three days a pimple formed and became a sore, which grew daily larger and more painful. Meantime his trousers, soiled by the bone manure, continued to rub against the affected part. On the tenth day, January 1st, he was obliged to abandon work, and sought advice at hospital. Free excision was recommended and carried out on the following day.

At this time, January 2nd, the characteristic signs were manifest—the central depressed black slough surrounded by a complete ring of vesicles. Inflammatory redness and swelling extended around for an area of 7 inches by 5, and very marked enlargement and tenderness of the femoral glands had recently supervened. It was this glandular implication which determined the operative treatment, as it appeared to point to a dissemination of the germs. The temperature and pulse up to this period remained undisturbed. The operation was begun by an incision in the groin, and the saphenous vein was ligatured first, lest the subsequent manipulations of the infected tissues should detach infective thrombi. The cluster of lymph glands was removed in one mass together with the surrounding fat. The wound was sutured and drained. Next a large oval patch surrounding the anthrax, and involving the tissues down to the vastus internus, was excised. The angles only were sutured in this wound and the centre left to granulate. The subsequent progress during the ensuing three weeks was satisfactory; systemic infection did not occur, and the patient made a good recovery.

Bacteriological investigations were made by Dr. Lorrain Smith; the chief interest, after demonstrating the nature of the disease, attaching to his report as to the presence or absence of anthrax bacilli in the swollen lymphatic glands in the groin. Subjoined is Dr. Lorrain Smith's report:

1. Fluid removed from blebs contains large numbers of bacillus anthracis.
2. Broth cultivation of this fluid for five hours contains a pure growth of these bacilli.
3. The fluid expressed from the central slough contains a few bacilli and multitudes of staphylococci.
4. The film made from the centre of a swollen lymph gland shows no anthrax bacilli. Two experiments were made to ensure accuracy.
5. Needle-prick inoculation of a mouse resulted in death of the animal in thirty-six hours, and microscopic examination of splenic pulp therefrom showed abundant anthrax bacilli.

From this report it appears that the inflammation of the lymphatic glands was not due to the arrival of anthrax bacilli in the glands, but was probably of a sapræmic nature.

Female Medical Students in Paris.—From the report of M. Petit de Julleville to the Minister of Public Instruction at a meeting of the Council of the University of Paris, it appears that the Faculty of Medicine has 129 female students. Of these 29 are French, while 100 belong to other nations; 91 being Russian, 5 Roumanian, 2 German, 1 Swiss, and 1 English. Twenty women are studying in the School of Pharmacy, of whom with one exception all are French. In the Faculty of Science there are 35 female students—21 French and 14 foreign.

THE CONDITION OF THE BLOOD IN TWO CASES OF PERNICIOUS ANÆMIA.

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Having had an opportunity of examining the blood in two cases of pernicious anæmia for a period extending over several months—from the time that the condition was diagnosed till within a short time of death, I have drawn up a table of the more important numerical alterations in the corpuscular elements of the blood.

A mere glance at this very clearly shows the temporary improvement which may take place in this disease, and also the relapses and ultimate failure of all treatment.

The patients were: A., a man, aged 32, in comfortable circumstances; and C., a woman, aged 42, living in poor surroundings. In both the disease came on very gradually, with progressive weakness without any determinable cause. In neither was there the slightest evidence of any malignant or organic disease, nor was there any emaciation, although there was in each some loss of weight from time to time.

Both presented the typical signs and symptoms of the disease. The lemon-yellow complexion, the breathlessness on the slightest exertion, the palpitation and at times marked tendency to syncope were present in both at one or other stage of the disease. In both there was occasionally slight elevation of temperature, and once or twice muttering delirium. Abdominal disturbances, particularly abdominal distension and diarrhœa, were not infrequently the cause of much distress.

One thing was very noticeable, that the state of the blood was found to coincide with this physical condition. When they were feeling worse, when weakness, buzzing, or swimming in the head, palpitation or faintness were more pronounced, the number of red corpuscles and the amount of hæmoglobin were almost invariably diminished.

The following tables show the number of the red and white blood corpuscles, the amount of hæmoglobin, the percentage of the leucocytes and nucleated red blood cells. The enumeration of the corpuscles was made with a Thoma-Zeiss hæmocytometer and Toison's diluting fluid. The amount of hæmoglobin was determined by von Fleischl's hæmometer. As the amount of hæmoglobin was exceedingly low, I have found it much more accurate to use double the amount of blood and then take half the resulting percentage.

The colour index was determined by dividing the percentage of hæmoglobin by the percentage of the red corpuscles present. As Fleischl's hæmometer gives rather a low reading, that is, the amount of hæmoglobin in health being usually found to be 90 per cent. instead of 100 per cent., I have in one column estimated the corrected colour index.

The percentage of the different forms of leucocytes was estimated by making a differential count of the white blood corpuscles in dry films stained with eosin and hæmatoxylin or eosin and methylene blue.

I may here mention that exceedingly few marrow cells or myelocytes were seen, and on no occasion did I find an eosinophile marrow cell. The nucleated red blood corpuscles were counted in the dry stained films, and it was noted how many of these were met with whilst counting 1,500 leucocytes. The absolute number of the nucleated red corpuscles per c.mm. cannot be determined with the hæmocytometer, and therefore the figures given are calculated relatively from the number of white blood corpuscles. I have not classified separately the very small nucleated red corpuscles, or microblasts, as these were only present in very small numbers, and I have therefore included them under the normoblasts.

At the end of the first case I have added the number of corpuscles and the percentage of leucocytes found in normal blood. The treatment adopted in both cases was similar. Arsenic and red bone marrow were given for a considerable time. The former was gradually increased in quantity till gastric symptoms occurred. It seemed as if the arsenic at times did more harm than good, and it was therefore discontinued for some time. The red bone marrow was given in the raw state (it would appear that it is extremely difficult to obtain the red bone marrow from butchers), in capsules, and as the glycerine extract. Iron was from time to time also tried.

On account of the abdominal distension, various intestinal antiseptics—especially β naphthol and salicylate of bismuth—were given. The patients were kept at absolute rest, the woman in bed, whilst the man was often taken out in the fresh air whilst lying on a stretcher carriage.

In neither case could I attribute the temporary improvement to any one line of treatment, although I consider that the arsenic was chiefly instrumental in at first improving the condition of Case A. I made cultures from the blood of both cases on glycerine agar and blood serum, but with no very definite results, and in order to eliminate the possibility of there being any intestinal parasites I examined the fæces for ova, but with negative results.

Case of A., a man, aged 32.

Date.	Red Blood Corpuscles.	White Blood Corpuscles.	Hæmoglobin.	Colour Index.	Corrected Colour Index.
Oct. 11, 1897 ...	1,642,500	5,092	37	1.12	1.25
,, 29, ,, ...	3,152,083	3,395	58	0.92	1.31
Nov. 13, ,, ...	4,075,000	3,495	72	0.88	0.98
April 12, 1898 ...	2,221,875	4,125	35	0.78	0.87
May 28, ,, ...	1,388,750	3,623	27	0.99	1.08
June 8, ,, ...	1,412,500	3,600	25	0.87	0.98
,, 17, ,, ...	1,047,500	4,371	25 per cent.	1.19	1.32
,, 29, ,, ...	943,750	2,541	17½	0.93	1.03
July 11 ,, ...	677,083	6,485	14	1.03	1.15
,, 22 ,, ...	772,656	4,838	15 per cent.	0.97	1.07
,, 29 ,,	970,312	10,695	20 per cent.	1.03	1.14
Aug. 5 ,, ...	1,070,312	3,157	28	1.30	1.45
,, 12 ,, ...	1,176,562	1,920	23	0.97	1.04
,, 25 ,, ...	818,750	1,700	18	1.10	1.22
Sept. 1 ,, ...	812,500	2,850	20	1.23	1.36
,, 8 ,, ...	1,081,250	2,453	23	1.06	1.18
Normal blood ...	5,000,000	8-9,000	90 per cent. Fleischl	0.90	1.00

Percentage of Leucocytes.

Date.	Multinucleated.	Lymphocytes.	Large Uninucleated.	Eosinophiles.
Oct. 11, 1897 ...	47	44	5	7
,, 29, ,, ...	50	31	5	5
Nov. 13, ,, ...	48	40	4	8
April 12, 1898 ...	45	48	3	4
May 28, ,, ...	34	53	6	7
June 8, ,, ...	40	54	3	3
,, 17, ,, ...	44	50	3	3
,, 29, ,, ...	52	42	3	3
July 11, ,, ...	57	37	2	4
,, 22, ,, ...	34	56	3	7
,, 29, ,, ...	44	47	5	4
Aug. 5, ,, ...	41	46	3	7
,, 12, ,, ...	32	64	3	2
,, 25, ,, ...	48	45	3	4
Sept. 1, ,, ...	59	36	3	2
,, 8, ,, ...	56	30	2	12
Normal blood ...	65-70	25	3-6	2

Nucleated Red Blood Corpuscles.

	Proportion to Leucocytes.	Number per c.mm.	Normoblasts.	Megaloblasts.
Oct. 11, 1897 ...	14 in 1,500	253	24	50
,, 29, ,, ...	0	0	0	0
Nov. 13, ,, ...	0	0	0	0
April 12, 1898 ...	105 in 1,500	288	50	75
May 28, ,, ...	55 in 1,500	132	20	35
June 8, ,, ...	35 in 1,500	84	5	30
,, 17, ,, ...	22 in 1,500	64	0	22
,, 29, ,, ...	60 in 1,500	101	25	35
July 11, ,, ...	60 in 1,500	259	22	38
,, 22, ,, ...	74 in 1,500	238	22	52
,, 29, ,, ...	915 in 1,500	6,523	164	751
Aug. 5, ,, ...	525 in 1,500	1,204	120	405
,, 12, ,, ...	97 in 1,500	124	37	61
,, 25 ,, ...	25 in 1,500	28	2	23
Sept. 1, ,, ...	146 in 1,500	277	34	112
,, 8, ,, ...	60 in 1,500	118	15	45
Normal blood ...	0	0	0	0

Case of C., a woman, aged 42.

Date.	Red Blood Corpuscles.	White Blood Corpuscles.	Hæmoglobin.	Colour Index.	Corrected Colour Index.
April 24, 1897 ...	914,583	1,944	15 per cent.	0.82	0.91
May 1, ,, ...	705,147	2,919	15.0	1.06	1.18
,, 8, ,, ...	666,666	2,801	14	1.05	1.16
,, 17, ,, ...	1,201,755	3,961	24 per cent.	1.00	1.11
,, 22, ,, ...	1,485,833	3,060	30 per cent.	1.01	1.12
,, 29, ,, ...	2,077,500	4,752	37.5	0.90	1.00
June 12, ,, ...	3,670,000	7,300	53 per cent.	0.72	0.80
,, 26, ,, ...	3,581,250	5,873	53	0.76	0.85
July 10, ,, ...	4,400,000	9,166	50 per cent.	0.57	0.63
April 13, 1898 ...	1,205,000	3,563	20 per cent.	0.83	0.92
,, 27, ,, ...	920,833	3,216	20 per cent.	1.08	1.20
May 11, ,, —	1,320,000	3,106	30	1.13	1.26
July 2, ,, ...	632,777	3,475	15 per cent.	1.19	1.32
,, 20, ,, ...	673,437	3,677	12.5	0.94	1.03
,, 28, ,, ...	806,250	4,227	15 per cent.	0.93	1.03
Aug. 6, ,, ...	651,136	2,738	14	1.07	1.19
Sept. 2, ,, ...	2,083,333	6,111	50	0.84	0.93
,, 23, ,, ...	3,912,500	5,888	58	0.74	0.82
Oct. 14, ,, ...	2,525,000	5,092	35 per cent.	0.69	0.77

Percentage of Leucocytes.

Date.	Multinucleated.	Lymphocytes.	Large Uninucleated	Eosinophile.
April 24, 1897 ...	51.8	45.8	1.5	0.9
May 1, ,, ...	46.3	51.3	1.5	0.7
,, 8, ,, ...	51.0	44.0	3.0	2.0
,, 17, ,, ...	46.4	51.9	1.5	1.1
,, 22, ,, ...	48.0	48.0	2.0	2.0
,, 29, ,, ...	34.0	57.0	7.0	2.0
June 12, ,, ...	57.0	31.0	6.0	6.0
,, 26, ,, ...	60.0	35.0	4.0	1.0
July 10, ,, ...	50.0	40.0	5.0	5.0
April 13, 1898 ...	50.0	46.0	2.0	2.0
,, 27, ,, ...	62.0	34.0	2.0	2.0
May 11, ,, ...	51.0	42.0	4.0	3.0
July 2, ,, ...	41.0	55.0	2.0	2.0
,, 20, ,, ...	37.0	59.0	4.0	0.1
,, [illegible], ,, ...	60.0	38.0	1.0	1.0
Aug. 6, ,, ...	43.0	53.0	3.0	1.0
Sept. 2, ,, ...	49.0	41.0	7.5	2.5
,, 23, ,, ...	50.0	47.0	2.0	1.0
Oct. 14, ,, ...	53.0	43.0	2.5	1.5

Nucleated Red Blood Corpuscles.

	Proportion to Leucocytes.	Number per c.mm.	Normoblasts.	Megaloblasts.
April 24, 1897 ...	29 in 1,500	38	11	18
May 1 ,, ...	23 in 1,500	45	16	7
,, 8 ,, ...	15 in 1,500	28	6	9
,, 17 ,, ...	5 in 1,500	13	5	0
,, 22 ,, ...	52 in 1,500	106	52	0
,, 29 ,, ...	1 in 1,500	3	1	0
June 12 ,, ...	0	0	0	0
,, 26 ,, ...	0	0	0	0
July 10 ,, ...	0	0	0	0
April 13, 1898 ...	9 in 1,500	21	2	7
,, 27 ,, ...	2 in 1,500	4	0	2
May 11 ,, ...	20 in 1,500	41	5	15
July 2 ,, ...	9 in 1,500	21	1	8
,, 20 ,, ...	23 in 1,500	56	10	13
,, 28 ,, ...	2 in 1,500	5	2	0
Aug. 6 ,, ...	10 in 1,500	18	4	[illegible]
Sept. 2 ,, ...	2 in 1,500	8	2	0
,, 23 ,, ...	0	0	0	0
Oct. 14 , ...	8 in 1,500	27	4	4

Both cases ended fatally—the man within seven days of the last blood count, and the woman within about five months of that period. As both died at their respective homes away from Bournemouth, there was no opportunity of having a *post-mortem* examination.

I will not describe here the various morphological alterations in the blood corpuscles, as these were quite typical of pernicious anæmia, and I have elsewhere given a detailed account of the subject.[1] I may, however, mention that the more important features in both cases were: the great reduction in the number of red blood corpuscles, and in the amount of hæmoglobin, although the latter was seldom quite as great as the former; the marked alteration in the size and shape of the red cells, numerous poikilocytes, and the increase in the average diameter of the red blood corpuscles. Megalocytes were more frequent than microcytes, and nucleated red corpuscles were usually present. It will be noticed that the large nucleated red corpuscles or megaloblasts were usually more numerous than the normoblasts. There was no leucocytosis, but a relative lymphocytosis.

On examining the table of Case A, it will be seen that the number of red blood corpuscles increased enormously within the first month from October to November. The patient then returned home, feeling and looking very well, and one almost felt inclined to doubt the original diagnosis. Five months later he again came under observation, and from that time the up and down progress is very evident. The lowest count was on July 11th, 1898, when red cells were 677,000 per c.mm. and the hæmoglobin 14 per cent., yet at that period the nucleated red corpuscles were not so numerous as at several other periods.

On July 29th it will be noticed that the leucocytes are apparently increased. This, I think, is an error, as in counting with the tinted diluting solution many of the large nucleated red blood corpuscles took on the stain and were probably mistaken for white blood corpuscles. At this date the nucleated red corpuscles were more numerous than in any case of pernicious anæmia which I have seen. They were of all sizes, and in some there were two or three nuclei, whilst in others there were all the stages of a nuclear division. In dry-stained films these nucleated erythrocytes seemed quite as plentiful as the white blood corpuscles.

In the second case, C, it is interesting to notice that, although on May 8th, 1897, the red corpuscles fell to 666,666 per c.mm. and the hæmoglobin to 14 per cent., yet the woman went home on July 10th, two months later, with nearly 4½ million red corpuscles and 50 per cent. of hæmoglobin. She, however, came under observation on April 13th, 1898, when the red corpuscles were only just over 1 million and the hæmoglobin 23 per cent.

In both cases during the stage of greatest improvement, when in fact the number of the red blood corpuscles approached the normal, the red cells appeared very much like those seen in moderate cases of chlorosis, that is, they were distinctly pale in colour, and the colour index was low. There was, however, I think, this important difference, that the average size of the corpuscles appeared on careful examination somewhat larger than the normal, and not, as is usually the case in chlorosis, smaller.

Quite a noticeable and constant feature in both cases was the diminution in the absolute number of the white blood corpuscles. In malignant disease or hæmorrhage—the two most probable causes of intense anæmia—there would almost certainly be a distinct leucocytosis. The lymphocytes throughout were relatively increased, whilst the multinucleated or neutrophile cells were diminished. The eosinophile cells were in Case A always above the normal, reaching on one occasion 12 per cent.

With regard to the amount of hæmoglobin the lowest recorded in either case was 14 per cent. It is very instructive to notice that the colour index was nearly always high, but seldom higher than the normal, and that when improvement took place the increase in the number of red blood corpuscles was greater than the amount of hæmoglobin and a chlorotic condition of the blood—in which the colour index was below 1, the normal—was present. The highest corrected colour index was 1.45, the lowest 0.63, whilst the average in the case of the man A. was 1.13, in the woman—Case C—1.2.

From either chart it will be evident how difficult it would have been at one or two stages to make a diagnosis from one examination, and also the impossibility of giving a definite prognosis for the immediate future. Both cases might at one time have been regarded as cured.

REFERENCE.

1 *The Blood; How to Examine and Diagnose its Diseases.* London and A. Churchill.

SPLENO-MYELOGENOUS LEUKÆMIA;

WITH DISAPPEARANCE OF THE SPLEEN TUMOUR AND OF THE MYELOCYTES FROM THE BLOOD.

By THOMAS McCRAE, M.B.TORONTO,

Instructor in Medicine, Johns Hopkins University; and Physician-in-Charge of the Clinical Laboratory, Johns Hopkins Hospital.

THIS case is reported on account of the unusual features shown in the course of the disease. So far as a search of the literature has shown no such case has been reported.

R. J., male, aged 28 years, white, stockfarmer, was first seen on September 28th, 1898, when he came complaining of weakness. His family history was negative, although he thought he came from a neurotic stock. He had had the ordinary diseases of childhood, and was always delicate as a child. His digestion had always been weak, and he was subject to frequent attacks of dyspepsia. His colour had always been sallow. He used neither tobacco nor alcohol, and denied syphilis. His occupation kept him out of doors a great deal, but did not involve any exposure. His present illness had no very easily determined time of onset. His previous attacks of weakness and indigestion had become more frequent and severe since August of 1897. He had had several acute attacks of stomach trouble with much pain but no vomiting. At times, after December, 1897, he had frequent attacks of herpes preputialis, and with these very troublesome erections lasting sometimes for several hours. In the spring of 1898 he became very weak and nervous, and went to the sanatorium at Clifton Springs, New York, where it was discovered that his spleen was enlarged. He had not noticed this himself until his attention was directed to it. Through the kindness of Dr. Lichty, of Clifton Springs, I am able to give the blood condition at that time. He was good enough to send the blood counts made at the time, and also his dried specimens of the blood. Dr. Lichty's note of June 21st, 1898, was: "The spleen is much enlarged, coming to within 2½ inches of the navel. The edge is rough." The blood examination at that time showed hæmoglobin 45 per cent., red corpuscles 2,680,000, and white corpuscles 584,000 per c.mm. The differential count, made from the dried specimens sent by Dr. Lichty, showed:

Polymorphonuclears	72 per cent.
Mononuclears, etc.	2 ,,
Eosinophiles	3 ,,
Myelocytes	23 ,,

In counting 600 white cells 6 nucleated reds were seen, all normoblasts.

Dr. Lichty made the diagnosis of "spleno-myelogenous leukæmia," and put the patient on arsenic with general hygienic treatment. On August 1st, 1898, the spleen was barely palpable, and the blood count was hæmoglobin 65 per cent., red cells 4,240,000, and white cells 184,000 per c.mm. A differential count, also made from the slides furnished by Dr. Lichty, showed:

Polymorphonuclears	90 per cent.
Mononuclears, etc.	2 ,,
Eosinophiles	3 ,,
Myelocytes	5 ,,

In counting 500 white cells, 7 nucleated reds were seen, of which 6 were normoblasts and 1 a megaloblast.

He left Clifton Springs in August, 1898, and had been gaining gradually until he was seen in Baltimore in September, 1898. Examination then showed a sparsely-nourished man, who had no difficulty in getting about, although rather easily fatigued. His colour was sallow but there was no yellow tint. The mucous membranes were of fair colour. The lymphatic glands were palpable but not specially enlarged. The thorax was negative. The spleen could just be felt on deep inspiration. The blood examination showed: Hæmoglobin 68 per cent., red cells 4,640,000, and white cells 9,250 per c.mm. The differential count of 1,000 whites showed:

Polymorphonuclears	84 per cent.
Small mononuclears	10 ,,
Large ,, and transitionals ...	4 ,,
Eosinophiles	2 ,,

The red cells showed very slight variation from the normal in shape and size. No nucleated red cells or myelocytes were found.

To recapitulate: The patient, in June of 1898, undoubtedly had "spleno myelogenous leukæmia," with a much enlarged spleen, and 584,000 white corpuscles per c.mm., of which 23 per cent. were myelocytes. In September of the same year the spleen was barely palpable and the blood count was practically a normal one. Until the account of Dr. Lichty's blood examination was forwarded considerable doubt was felt as to the existence of leukæmia in June. The patient was advised to continue the use of arsenic for about three weeks in each month, during each period increasing the dose of Fowler's solution from 3 to 10 drops three times a day.

He again came under observation in November 1898, when he was admitted to the service of Professor Osler in the Johns Hopkins Hospital. His general condition was much the same as on the last note. He looked rather sallow, and complained especially of his digestion. During the interval he had taken arsenic fairly regularly. Examination showed that the spleen was somewhat enlarged. Its edge was hard and firm, and palpable 2½ cm. below the costal margin. There was slight dilatation of the stomach. The edge of the liver could be felt. The blood examination: Hæmoglobin 67 per cent., red corpuscles 4,160,000, and white corpuscles 178,000 per c.mm. The differential count of 1,000 whites showed:

Polymorphonuclears	67 per cent.
"Doubtful" forms	9 ,,
Mononuclears	2 ,,
Eosinophiles	1 ,,
Mastzellen	1 ,,
Myelocytes	20 ,,

The red cells showed but little variation from normal in either shape, size, or staining. In counting 1,000 white cells, 18 nucleated reds were seen, of which 12 were normoblasts and 6 intermediate forms between normoblasts and megaloblasts. The white cells classed as "doubtful" were between myelocytes and multinuclear neutrophiles. They were smaller than the average neutrophile, and had a single excentric nicked nucleus with a neutrophilic granulation. The myelocytes varied much in size, the majority being smaller than usual.

The patient remained in the hospital until December 10th, 1898, when Dr. Osler noted: "The edge of the spleen on quiet respiration cannot be felt. On deep inspiration it is just palpable." The blood then showed 98,000 white corpuscles per c.mm. The differential count showed 81 per cent. of polymorphonuclears and only 8 per cent. of myelocytes. In counting 1,000 white corpuscles, 16 nucleated reds were seen.

He was advised to continue the arsenic as before. During his stay in the hospital, he took 10 drops of Fowler's solution three times a day. He spent the winter in Florida, and was again seen in April, 1899. He had continued the arsenic during the interval. His general condition was excellent; he had gained weight, and his digestion was good. The area of stomach tympany was normal, and the spleen could not be felt even on the deepest inspiration. The blood examination was practically normal. Hæmoglobin 70 per cent., red corpuscles 5,328,000, and white corpuscles 5,000 per c.mm. The differential count was normal. There were no myelocytes or nucleated reds found.

This patient therefore came twice under observation with the typical condition of spleno-myelogenous leukæmia. On each occasion, under the use of arsenic, the leukæmic condition disappeared. The spleen became reduced to normal size, and the myelocytes disappeared from the blood. At these periods his health was good, and there was not any intercurrent affection present. The main blood counts of the white cells and the differential counts may be tabulated:

Date.	June, 1898.	Sept., 1898.	Nov., 1898.	April, 1899.
Leucocytes...	584,000	9,250	178,000	5,000
Polymorphonuclears	72.0	84.0	67 + 9.0 (?)	66.0
Small mononuclears	0.30	10.0	0.20	13.0
Large mononuclears and transitionals	0.60	4.0	1.80	16.0
Eosinophiles	3.0	2.0	1.0	2.0
Myelocytes...	23.0	0.0	20.0	0.0
Nucleated reds	6	0	18	0

His subsequent history was unfortunately not obtained in any detail. He went to California, and died there some months later. His death was sudden, and considered by his physician to be due to cerebral hæmorrhage.

As already stated, no similar case has been found in the literature. It is impossible to know how long the patient had been suffering from leukæmia when he first came under observation. The occurrence of priapism in December of 1897 suggests the existence of the disease at that date. Twice during the space of less than twelve months he showed typical features of spleno-myelogenous leukæmia, and twice was his condition a normal one. Emphasis may be laid on the fact that at neither of these times was there any intercurrent disease. He seemed in ordinary good health.

Changes in the condition of a leukæmic patient may be considered under two headings, (1) when an intercurrent malady is present, and (2) where improvement occurs, as in the present case. It has been recognised for some years that other conditions arising in a leukæmic patient may so alter the blood that the specific features are absent. This has been noted in connection with typhoid fever, influenza, erysipelas, septic infections, etc. Many of these cases have been tabulated by Marischler[1] in an article dealing especially with the influence of malignant growth on leukæmia. The most striking change, however, occurs with a septic infection. Fraenkel[2] has reported two cases of much interest. In one, on March 6th, the patient had 89,000 leucocytes per c.mm., the majority of which were lymphocytes. On March 21st there was a staphylococcus infection, and on March 26th the leucocytes had fallen to 6,000 per c.mm. In the second case the white cells fell in a few days from 220,000 per c.mm. to 1,200. The lymphocytes were 99 per cent. on the first date and 81 per cent. on the second. Death followed in both of these cases. Müller[3] reports a case of acute leukæmia in a child with a staphylococcus infection in which the leucocytes fell from 109,600 to 6,800 per c.mm. In going over the records of a series of cases of leukæmia, it is striking to note the decrease in the number of leucocytes shortly before death in many of them. This is probably due to terminal infections. Fraenkel also refers to Eisenlohr's case, in which during an intercurrent

attack of typhoid fever the leucocytes fell to normal but returned to their previous condition after recovery.

In the second group are the cases in which, apart from any intercurrent affection, a marked change in the condition occurs. This, however, rarely goes to complete disappearance of all the special features of the disease. The spleen tumour may rapidly disappear, as in a case reported by Rensselaer,[4] in which on November 21st there were 1,095,000 leucocytes per c.mm., and the spleen extended 4 inches to the right of and 1 inch below the umbilicus. There were many myelocytes present. The patient was given arsenic, and on December 23rd of the same year the white cells were 160,000 per c.mm., while the spleen had steadily reduced in size, and could not be felt. The patient died suddenly with convulsions soon after. Stengel[5] refers to a case where the differential count was normal during improvement, but with characters not unlike a pernicious anæmia. Subsequently the blood picture of leukæmia returned, and the patient died.

Another class of cases show marked changes in the blood, but the enlarged spleen persists. Thus Osler[6] has referred to a case of spleno-myelogenous leukæmia in which the leucocytes fell to normal, but always showed a certain percentage of myelocytes. The enlarged spleen persisted. The case may be referred to in some detail. The patient was a coloured man, aged 24 years, who was first seen in the autumn of 1890, when he gave a history of having noticed a swelling in the abdomen about one year previously. He had frequent diarrhœa, and complained of having lost much strength. The spleen was much enlarged, and the blood showed 500,000 leucocytes per c.mm. In January, 1891, there were 714 000 leucocytes per c.mm., of which 23.5 per cent. were myelocytes. The spleen was still enlarged. He was put on arsenic, and in a month his blood condition was: hæmoglobin, 44 per cent.; red cells, 3,500 000, and white cells, 7,500, per c.mm. As Dr. Osler points out, were such a case seen for the first time with this blood count, a diagnosis of leukæmia would hardly be made, even with the enlarged spleen. The differential count, however, showed the presence of 4 per cent. of myelocytes. He was admitted to the Johns Hopkins Hospital in March of 1891. The spleen then extended to the right of the navel, and nearly to the crest of the left ilium. When discharged in May of 1891 the spleen was still enlarged, and the leucocytes were 9,500.

He was again admitted to the hospital in February of 1892. The spleen was much enlarged, reaching almost to the middle of Poupart's ligament on the right side. The hæmoglobin was 45 per cent., red cells 2,765,000, and white cells 230,000 per c.mm. Under treatment the leucocytes fell to 63,000. Myelocytes were found on every examination. This patient died in November of 1892. Although in this case the number of leucocytes at times fell to normal, marked enlargement of the spleen was always present and a certain percentage of myelocytes always found.

Bramwell[7] reports a similar case coming under observation, with an enormously enlarged spleen and 210,000 leucocytes per c.mm., of which 29 per cent. were myelocytes. Under treatment the leucocytes fell to normal, although there were still myelocytes present. He also reports the case of a man seen in 1870, whose illness only dated back two or three weeks. The spleen half filled the abdomen; the lymph glands were not enlarged. On examining the blood, the white cells seemed almost as numerous as the red. Large doses of quinine and iron were given, and in a few weeks the enlargement of the spleen and the increase in the leucocytes had disappeared.

Da Costa and Hershey[8] report 2 cases of leukæmia treated by inhalations of oxygen, in one of which the leucocytes diminished from 320,000 to 12,000 per c.mm. The enlargement of the spleen persisted. There was no note as to myelocytes.

These cases show the rapid changes that may occur in the course of spleno-myelogenous leukæmia. Thus in the cases reported by Osler and Bramwell enormous reduction of the white corpuscles took place in a period of about a month. In the present case, in less than three months, the leucocytes fell from 584,000 per c.mm. to normal, and again in two months they had risen to 178,000. In all the cases reported, in which an intercurrent infection has brought the blood to normal, there was a return to the leukæmic condition if the patient survived. The cases of the second group show the occurrence of a return of the leucocytes to a normal number, but with usually a percentage of abnormal elements present and the persistence of the enlarged spleen. The present case shows the possibility of the disappearance of all these symptoms, but also shows that, in spite of the temporary improvement, the essentially fatal character of the disease is not altered.

References.

[1] Marischler, *Wien. klin. Woch.*, 1896, p. 686. [2] Fraenkel, *Deut. med. Woch.*, 1895, xxi, p. 639 *et seq.* [3] Müller, *Jahrb. f. Kinderheilk.*, 1896, xliii, p. 130. [4] Rensselaer, *Albany M. Ann.*, 1897, xviii, p. 530. [5] Stengel, *Progressive Medicine*, June, 1899. [6] Osler, *Textbook of Medicine.* [7] Bramwell, *Anæmia*, 1899. [8] Da Costa and Hershey, *Amer. Journ. of Med. Sci.*, 1889.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

PIECE OF AMBER IN A BRONCHUS FOR TEN WEEKS.

F. R. consulted me first on August 12th. He stated that on the previous evening, while smoking, a lad accidentally stumbled against him and broke the amber of his pipe. The roof of his mouth was cut, and he believed he must have swallowed a portion of the mouthpiece which could not be found. Immediately afterwards he spat out a large quantity of blood, and continued to spit blood at intervals all night, probably from the wound in the mouth. He also began to be troubled with slight dyspnœa and a frequent short cough. On examination, twenty-four hours after the accident, there were found slight dulness and diminished expansion at the base of the left lung, and a few moist *râles*, otherwise the chest was normal.

A sedative cough mixture was prescribed, and for the next two months he continued at his work as a coachman. At the end of that time he had to take to bed. The diminished expansion and dulness at the left base were now more apparent, and all over the left lung numerous sibilant rhonchi could be heard. There was frequent expectoration of a dark-coloured stringy mucus which was at no time purulent. Rest in bed was the only treatment that did any good though the rhonchi never entirely disappeared.



Finally, on November 10th, or more than ten weeks after the accident, he coughed up without any trouble, when sitting up in bed to take his breakfast, the end of an amber mouthpiece. It measured $1\frac{1}{8}$ inch long, $\frac{1}{2}$ inch broad, and $\frac{5}{16}$ inch thick. The rhonchi, cough, and other symptoms disappeared at once.

On examination a month later nothing abnormal could be discovered in the chest. I attribute the very slight dyspnœa in this case to the fact that there was a fairly large hole in the centre of the amber, and as it would lie lengthways in one of the larger bronchi, a limited amount of air would be able to pass.

I am indebted to my friend, Dr. Richardson, for the accompanying photograph.

J. Frank Crombie, M.B., D.P.H.Edin.

North Berwick.

AMPUTATION WITHOUT ANÆSTHESIA.

Like Mr. Christopher Heath, I am not old enough to have practised surgery in the ante-anæsthesia days, but on one occasion, some years ago, I way compelled by circumstances to amputate a leg without chloroform. I have amputated many legs since with chloroform, but the case I now relate left a lasting impression on my memory, because I felt nearly as bad as the poor patient did; indeed, she seemed less concerned during the ordeal than I was.

A black woman, between 30 and 40 years old, was admitted to my hospital in one of the country districts of Jamaica with an incurable ulcer involving the bones of the foot, for

which amputation below the knee was the only remedy. My friend the late Dr. Phillips drove a distance of thirteen miles to assist me in the operation. Soon after commencing to give chloroform he removed the lint from the woman's face, and whispered in my ear that her heart had failed. The woman was apparently dead, but after doing all we could in the way of restoration, we were relieved to see her return to life, and in half an hour she was herself again. On informing my patient that the operation could not be proceeded with, and why, she calmly said, "Please cut it off, doctor; I can stand it without chloroform." This staggered me a bit, but after a brief consultation we replaced the tourniquet, and I went to work as rapidly as I could. In a short time (not within the minute) the leg was removed, and the stump bandaged, etc. During the operation the woman remained perfectly still, no resistance (not even a groan) escaped her lips; she lay with her eyes open apparently watching every step of the operation. When it was all over, on asking her if she had suffered much pain, she replied, "Hi! I no flesh and blood? Course it hurt me." I then asked what part of the operation was most painful, and she told me that stitching up the flesh (as she called it) hurt her most.

The late Sir Bryan Edwards, many years ago Chief Justice of Jamaica, who had been a midshipman in the navy before the days of chloroform, told me how he had one of his fingers amputated when on board one of His Majesty's frigates. He was made to sit down near a table and deliver his wrist to the tight and strong grasp of a stout dresser, while the assistant surgeon cut the wounded finger off. Robert Liston would have managed it better. My old friend told me that the pain was like the prolonged extraction of a tight jaw tooth, because it took so much time. He described the taking up of the arteries as excruciating.

Monathie, Jamaica. JASPER CARGILL, L.R.C.P.Lond.

A CASE OF "SPURIOUS HERMAPHRODITISM."

J. C., aged 20, a domestic servant, was sent to me because of not having menstruated. She had felt no discomfort, nor any sensation whatever, such as she had been told to expect at the onset of the periods. She was, to look at, a rather tall fair girl, with a pleasant feminine voice, and indeed nothing external to point to the existence of anything unusual. On examination she was found to have no breasts, the pelvis was female in type, the pubic hair arranged as in women, but there was absence of fat over the trochanters. In the right labium majus there was a small ovoid body with the "feel" of a testicle, and which on pressure gave peculiar sensation. This was suspended by a cord, which when traced upwards disappeared into the inguinal canal of the right side. The clitoris was not enlarged, and the urethra was normal and feminine in arrangement. A well-marked hymen was present. The vagina was small, but admitted an ordinary sound easily, and the sound could be passed for about 2½ inches. With the finger in the rectum and the sound in the vagina there could be made out the absence of anything beyond this small vagina —no uterus, no appendages. Summing up the conditions, there were on the one hand:

(*a*) Absence of breasts.
(*b*) Absence of fat over trochanters.
(*c*) Absence of uterus and appendages, unless the body in the right labium majus were to be considered an ovary.
(*d*) The presence of a body in the right labium majus, if considered a testicle.

On the other hand, there were:

(*a*) Feminine voice, hair arrangements, and "feelings" (patient had been keeping company with a young man, and had lived with female domestic servants and slept with them without exhibiting any marked partiality for their society).
(*b*) The presence of a clitoris, urethra, vagina, with hymen.
(*c*) The pelvis had female dimensions.
(*d*) Presence of a body in the right labium majus=an ovary.

Dr. Champneys, who also saw the case, was of opinion that it was that of a girl with an ill-developed ovary which had "prolapsed." The patient was advised as to her state being peculiar, that she would never be able to marry, and was asked to appear again if the body in the labium began to swell or gave any trouble.

Welbeck Street, W. J. CHALMERS BROWN, M.B.

THE Turkish Government has decided to establish a civil school of medicine in Damascus.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

CORNWALL COUNTY ASYLUM, BODMIN.

SCARLET FEVER FOLLOWED BY PLEURISY IN A PHTHISICAL PATIENT.

(By L. D. PARSONS, B.A., M B, Ch.B.Edin., Junior Assistant Medical Officer.)

A. L., a nurse in this asylum (stated to be phthisical), aged 27, single, complained of fever with a rash and sore throat on November 29th, 1899. The rash was distinctly of three types: (1) Small scattered areas of tiny papular elevations chiefly over forearms and legs; (2) a few sudaminal vesicles; and (3) a characteristic hyperæmic rash over the sides of the face and neck, and the front of the chest.

There was a history of vomiting. The circum-oral pallor was distinct, and the tongue was furred, but not characteristic. There was a moderate soreness of the throat. The temperature was only 102 2° F. Scarlet fever was diagnosed from the local appearances and the history of infection, and the patient was isolated in a special hospital under my care.

The following night she was delirious and violent, and it took two nurses most of their time to keep her in bed. The next day I gave her morphine acetate gr. ⅔ and trional gr. xvj, and she slept well. The temperature also fell to 101.6° F. The following night she slept without the aid of any drug, but on December 4th she was given morphine acetate gr. ⅓. The urine was examined daily for albumen, and on December 5th there was a fair quantity, but curiously enough it was entirely absent the next day, and till her discharge she had no further recurrence of albuminuria. The ears, chest, and palms of hands desquamated slightly; the legs and feet not at all. She was kept absolutely on milk till December 7th, when her temperature reached normal. Her diet was then altered to beef tea, eggs and brandy being allowed. The temperature, unfortunately, again rose slightly in the evenings, and she developed slight pleurisy on the left side on December 18th, which soon yielded to treatment.

I now made a thorough physical examination. She had been examined a month previously by our senior assistant medical officer, who found her left lung quite dull anteriorly at the apex, and slightly so at the base, and from these and other physical signs a diagnosis of tuberculosis was arrived at. My examination showed all the symptoms of a small cavity in the second intercostal space anteriorly on the left side, with cooing *râles* posteriorly. The right lung was apparently normal.

She had suffered from asthma, and had an attack on December 11th; her mother also is asthmatical. I gave her creosote pills (♏j) two daily to start with, as also ℥ij of Angier's petroleum emulsion twice daily, morning and evening, with cod-liver oil and iron once daily after her midday meal. She bore this well and seemed to improve daily. I soon increased the creosote pills to four daily, and the odour of the drug now appeared in her breath.

On December 23rd her temperature reached normal again, and on January 10th, 1900, I again examined her chest. I was surprised to find that the auscultatory character of the respiration had completely changed. The respiration anteriorly showed slight prolongation of expiration with a little harshness. But all signs of a cavity were gone, and I began to doubt the correctness of my observation. Posteriorly the lung was normal except for a small dull area about 2 square inches in extent, where there was a certain "distant" character in the respiration. She was discharged on January 11th, when her weight was found to be 97 lbs.; she was weighed a week later and it was 100 lbs., at which she still remains. She missed her period of November 23rd and did not menstruate again till January 8th.

I would like to ask two questions (1) has the scarlet fever poison any effect in arresting a tuberculous condition? and (2) would a case of exfoliative dermatitis in a tuberculous subject show the same symptoms as the above case?

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. PAVY, M.D., F.R.C.P., F.R.S., President, in the Chair.

Tuesday, March 27th, 1900.

RUPTURE OF THE ŒSOPHAGUS CAUSED BY VOMITING.

DR. BOWLES and Mr. G. R. TURNER, who communicated this paper, began by relating the following case:

Mrs. B., aged 62, after taking overnight a pill of aloes and rhubarb, which freely purged her, was sick on taking some milk. She vomited four or five times, and still feeling ill took a tumblerful of salt and water "to clear the stomach." The vomiting caused by this was followed by collapse of an alarming nature and epigastric pain. She was given chlorodyne by her maid, and complained of agonising pain after swallowing. When first seen the usual symptoms of profound collapse were present; her respiration was gasping, and she was moaning with pain, which she referred to the epigastrium and dorsal spine, "not on either side," "as if I was breaking in two." She was sure it had no connection with the bowels. There was retraction and some tenderness of the upper abdomen, with rigidity of the recti. All vomiting had ceased since the sudden onset of the pain and collapse. Stimulants and laudanum, mxv, given by the mouth, immediately aggravated her pain. It was thought that some perforation of the stomach had possibly occurred, but the diagnosis was by no means clear. She rallied from the collapse, and under the influence of hypodermic injection of morphine her condition somewhat improved, and it became possible to examine her more thoroughly. Her gasping moans, extreme distress, and rapid respiration made auscultation difficult, but as far as could be ascertained the cardiac sounds were absent and the chest hyper-resonant; there was no dulness. Her symptoms now, some six hours after their onset, were evidently more thoracic than abdominal, and it was decided there was no indication for laparotomy. She was quieted by morphine; indeed, at one time it seemed as if she was too much under the influence of the drug, so that she had to be roused from a comatose condition by coffee, salicylate of caffeine, and electricity. Her distress and pain returned as she threw off the effects of the opiates, and emphysema of the neck, soon extending to the face, appeared some five hours before death, which occurred some twenty-two and a-half hours from the commencement of the attack. The *post-mortem* examination showed emphysema of chest and neck, chiefly on the left side and left pneumothorax; about 6 ounces of brownish fluid in left pleural cavity, a small quantity in the right cavity. The posterior mediastinum was infiltrated with similar fluid. The lungs were healthy, the left one collapsed; no tubercle, no adhesions, no rupture of visceral pleura; one inch and a-half above the diaphragm there was a longitudinal rupture of the œsophagus five-eighths of an inch in length, edges thin; no peeling of mucous membrane, no other disease of any kind.

Some remarks were made on the diagnosis of this form of accident from perforation of the stomach, duodenum, rupture of an aneurysm, angina pectoris, irritant poisoning, etc. With reference to the surgical treatment, allusion was made to the recent work done in mediastinal surgery by various Continental surgeons, and to the possibility of exposing the œsophagus in the posterior mediastinum without injury to any important viscus. Drainage of the posterior mediastinum and suture of the rupture was regarded as feasible, and an attempt at such treatment more than justified in what was otherwise a necessarily fatal injury. The literature on the subject was analysed, and 16 other cases were tabulated. It would seem that this class of injury, though rare, was not so rare as usually supposed, and it was an accident that was overlooked and sometimes confused with *post-mortem* softening.

Dr. CYRIL OGLE remarked on the obvious subcutaneous emphysema noticed at the necropsy, which suggested a pneumothorax before the chest was opened. There was no evidence of previous disease in the œsophagus; its lower part was much softened. There was, he thought, no doubt that the rupture was primary, and not due to the softening, which, if it were *ante mortem*, as he believed, would contraindicate any operative interference.

Dr. ROLLESTON referred to a case he had published in the Pathological Society's *Transactions* as a case of peri-œsophageal abscess in a healthy man, aged 30, who was seized with violent pain in the chest, developed pleural effusion, and died in forty eight hours; an abscess cavity was found in the posterior mediastinum, setting up left-sided pleurisy, and communicating with a rupture in the œsophagus. The site of rupture being in its lower third was curious, as the weakest part of the gullet was where it joined the pharynx. One possible explanation was that the lower third consisted of longitudinal muscular fibres only, and was firmly fixed as it passed through the diaphragm. Another explanation was that this was the common seat of œsophageal ulcer, and the two might be causally correlated and the actual rupture might destroy the evidence of the previous ulceration. It was remarkable that this, the strongest, portion of the alimentary tract was alone liable to rupture.

Mr. STANLEY BOYD referred to a case recorded by Tändler of rupture of the œsophagus. In one case recorded by himself there was no shock, sudden pain, or pneumothorax, and nothing suggesting the condition. Between the longitudinal rugæ were short clots which could hardly have been due to *post-mortem* digestion, and he thought it was due to ulceration. In a second case recorded by him which was associated with Addison's disease there had been vomiting incessantly for two months, and no typical symptoms were developed, no pneumothorax, and no emphysema. In neither case were there characteristic symptoms.

Mr. BRYANT remarked that these cases were very rare. Excluding the cases due to external injury he referred to a case which had come under his observation. An imbecile woman, under 40 years of age, whom he had seen, had sudden vomiting lasting for some hours. It was suggested by the action of the patient that the symptoms were due to swallowing a sharp piece of wood. The vomited matter consisted in great part of blood. Nothing was found on examination to support the suggested view of the cause. An indiarubber instrument passed quite readily through the œsophagus. Death occurred during the day, and a large rupture of the œsophagus was found in the lower third in a vertical direction. There was in this case no emphysema but a quantity of fluid given to the woman was found outside the gullet in the connective tissue around. It should probably be classed with the case described in the paper.

Dr. BOWLES said the pulse was 50 and very tense, which was considered strange considering the amount of collapse and suggested implication of the vagus. The explanation of the seat of rupture might be that the lower third was the narrowest part of the œsophagus and was the first to receive the shock of vomiting. Leaden pipes were said similarly to burst vertically from an increase of the internal pressure comparable with the shock of vomiting. The pneumothorax would not occur without laceration of the pleura. He referred to experiments the authors had made in testing the breaking strain of the œsophagus and the intestine by attaching them to an oxygen gas cylinder.

Mr. TURNER, in reply, remarked that when pneumothorax and emphysema were present there was no necessity to avoid opening the pleura, as the unfavourable results ordinarily produced had already occurred.

SARCOMATOUS TUMOUR OF GASTRO-HEPATIC OMENTUM.

Mr. A. PEARCE GOULD described a case of a man, aged 38, who came under his care in October, 1895, for a large solid abdominal tumour which had been noticed for about twelve months.

When operated upon, it was found to occupy the gastro-hepatic omentum, and the stomach was displaced into the pelvis. The tumour, which weighed 21 lbs., was enucleated from the omentum. Microscopic examination showed it to be a spindle-celled sarcoma with extensive hæmorrhages into its tissue.

The patient recovered, and remained well, without sign of recurrence—a period of four years and a-half. The author drew attention: (1) to the extreme rarity of primary tumours in the gastro hepatic omentum; he had found a record of only one other case; (2) to the means of diagnosing a tumour in this situation; (3) to the very great elongation and displacement of important structures which occurred without serious symptoms, and were recovered from without ill-effect; (4) to the long period period of freedom from recurrence after removal of a sarcoma apparently malignant. (The patient, who looked in robust health, was shown to the Society.)

Mr. T. BRYANT alluded to a case of abdominal tumour in a healthy middle-aged man. It was a tumour of long growth; the lumbar regions were alone resonant. It gave the impression of fluctuation. It was above the pelvis, not affecting the bladder or the function of the bowel. Sarcoma was excluded, as it had a perfectly smooth outline. Puncture gave a negative result, except that the needle was clean and oiled. It turned out to be a large lipoma, which was enucleated. It was apparently connected with the mesentery and weighed over 50 pounds. The man eventually sank and died.

Mr. STANLEY BOYD described the case of a woman, aged 20, who had a tumour in the left hypochondrium pressing up the heart and whose lower dulness joined that of the kidney. It

was tense and probably fluctuating. He thought it a cyst of the left lobe of the liver. It moved with respiration and was movable from above down and from side to side. It was retroperitoneal and was probable a cyst of the pancreas. The fluid removed by aspiration had actively digestive qualities. He thought the portal vessels in Mr. Gould's case might not have been displaced so much as was suggested in the paper.

Mr. PEARCE GOULD replied.

CLINICAL SOCIETY OF LONDON.

Sir R. DOUGLAS POWELL, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, March 23rd, 1900.

ATTEMPTED REMOVAL OF DERMOID FROM SPINAL CANAL.

DR. HALE WHITE read a report by himself and Mr. A. D. FRIPP of a case in which the attempt was made to remove a dermoid tumour which, growing in the spinal canal, pressed upon the spinal cord.

The patient, a man aged 26, who had been suffering from a very chronic form of Hodgkin's disease, was first seen by the authors with Mr. A. F. Wilson at the end of March, 1899. In the middle of January, 1899, he began to complain of loss of power in the legs. By the end of March there was complete paraplegia, no muscular wasting; the breathing was almost entirely diaphragmatic, the right hand was much stronger than the left, all forms of sensation were lost up to near the nipples; there was no hyperæsthetic zone: there was severe pain shooting down both intercosto-humeral nerves and round the chest along the second intercostal; the lower limbs were spastically rigid, the knee-jerks and plantar reflexes were exaggerated; there was great superficial tenderness over the second, third, and fourth dorsal spines: there was incontinence of urine with cystitis and obstinate constipation, with great distension of the abdomen. The pulse was 120 and the temperature generally about 101° F. There were no other signs pointing to caries or aneurysm. The diagnosis was that there was some collection of fluid or a new growth within the spinal canal, irritating the second dorsal nerve, and compressing the cord below it. An exploratory laminectomy was performed, the second, third, and fourth dorsal arches being removed. A grey tumour upon the outer surface of the dura mater was exposed, which reached out of sight both above and below. Pieces of the growth were snipped away. The man quickly rallied from the operation, and the wound healed by first intention. The tumour proved upon microscopical examination to be a dermoid. The patient was seen again by the authors eight weeks later. The pulse and temperature were normal. There was slight and occasional voluntary movement in the legs. The exaggeration of the knee-jerks was less, and the rigidity had disappeared. There was almost complete return of all forms of sensation down to the groins, but no improvement in the lower extremities. The radiating pains had disappeared. The chest moved better. The cystitis and incontinence had disappeared, and the constipation and abdominal distension were less. There was a large sore on the sacrum and another on the buttock. Considerable as had been the improvement, it appeared to the authors that as much of the tumour had been left behind, and as the pressure symptoms were far from completely relieved, the only chance lay in a further attempt at complete removal. A second operation was performed. A large mass of the tumour was found to have grown backwards through the gap in the spinal canal made at the first operation. The first, fifth, and sixth dorsal laminæ were removed, but still no limit could be seen to the growth. The patient again rallied well, but sank eight hours after the operation.

In reply to the PRESIDENT, Dr. HALE WHITE said that as far as he knew the case was unique, for although there were cases on record of dermoid growths in the middle line between the skin and spinous processes, he had not met with instances in which such a tumour had been found in the spinal canal.

THE REDUCTION OF THE DEFORMITY OF SPINAL CARIES.

Mr. ROBERT JONES (Liverpool) and Mr. A. H. TUBBY brought forward a report of 99 cases of angular deformity from Pott's disease treated by manual rectification, including the results of the 25 cases brought before the Society in November, 1897. The objects of that preliminary communication were to emphasise the following points: (1) That rectification of the deformity was not *per se* an immediate danger to life; (2) that the operation did not necessarily cause paraplegia; and (3) that by pressure many curvatures could be lessened and even obliterated.

In this first series of 25 cases the following results had been obtained: 5 had died, 4 had discontinued treatment, 15 were alive and well and walking, and 1 was recumbent and sickly. Causes of death: One died of vomiting four days after operation, but *post mortem* nothing was found abdominally beyond some enlarged mesentery glands: 1 died of tabes mesenterica fifteen months after, 1 died of pulmonary tubercle sixteen months after last stretching, 1 of intestinal obstruction twelve months after, and 1 of diphtheria. Billroth, Menzel, Jaffe, and Mohr estimated the death-rate from Pott's disease to be 25 per cent., the author's own death-rate being only 12 per cent.; 4 of the cases developed abscess, of which 2 healed and 1 became paraplegic eight months after operation, but had since recovered; 5 of the 25 recovered from paraplegia as the immediate result of the operation, recurrence taking place in 1. In 5 the curvature was practically obliterated, and remained so with a spinal support, and the curve was much improved in 10. In a parallel series of non-rectified cases 3 had died of tubercle, 4 had developed abscess, 2 of them healing; 4 had become paraplegic, with 2 recoveries; and in 7 the deformity was very marked. The authors then brought forward a series of 74 subsequent operated cases. Of these, 7 had died, 29 were walking, 28 were recumbent, and 10 had discontinued treatment. Causes of death: One died of empyema four weeks after operation; 1 died of general tuberculosis thirteen days after operation, and another two years after; 1 died of pulmonary phthisis eighteen months later, and 1 of pneumonia two years after; 1 died of exhaustion, and 1 died six months after reduction for paraplegia, without relief, of diarrhœa one month after subsequent laminectomy. Three were operated upon while abscess was present; 13 developed abscess subsequently, of which 9 had healed; 7 cases had recovered from paraplegia, or it had been relieved, and remained well; in 38 the curvature had been lessened, and remained so; in 16 the curvature had either not improved or had become worse, but not necessarily as the result of the operation.

The authors deprecated the employment of much force, their plan having been to proceed by stages, with an interval of a month between each attempt. They laid it down that the after-treatment should not be less than three years. Conclusions: (1) That danger to life was not great, (2) that, far from inducing paraplegia, the operation was actually a curative measure, (3) that abscess formation was, if anything, less frequent, (4) that the risk of disseminating tubercle was a negligeable quantity, (5) that there was no risk of a flail-like spine. Contraindications: (1) Cervical and high dorsal curves, unless associated with paralysis, (2) ankylosed spines, (3) large and angular deformities, (4) evidence of tubercle elsewhere, (5) in children under 2 and in adults over 22, (6) in presence of abscess unless there were paraplegia. They advised the operation only when the spine was yielding, and in comparatively strong children free from abscess and tubercle. They pointed out that the operation was not to obliterate all the prominence, but to give as erect a position as possible. Lastly, they urged that cases for operation must be selected with great care, that personal care of the patients must be unremitting, and that fresh air was an all-important factor in the after-treatment. They exhibited a selection of the first series of 25 cases brought from all parts of the country in order that Fellows might see for themselves the actual results.

The PRESIDENT remarked that whatever the ultimate decision as to this method might be, the facts brought before them had changed some of their preconceived views. One used to fear the advent of general tuberculosis from the disturbance of the local disease, also the onset of abscess and spinal cord disease, but paraplegia had been relieved, not induced in any of the cases. He inquired if the albuminuria due to amyloid disease had diminished or disappeared with the removal of the local disease.

Mr. JACKSON CLARKE said that before adopting their present treatment Mr. Tubby had chiefly used corsets of plaster or of felt, and Mr. Jones usually employed Thomas's cuirass; but Sayre's jackets, if worn for a length of time, were apt to injure the general health, and although the cuirass was a better appliance than the corset, yet it did not lend itself to periodical readjustment in an improved position, whilst it was difficult to add to it a headpiece for the support of the head in cervical and high dorsal cases. By the use of an apparatus which overcame these two defects he (the speaker) had obtained as good results without forcible measures as the authors had obtained by their treatment. Thus, in cases of lower dorsal and lumbar deformity he had obtained obliteration of the curvature, and in higher parts of the spine the deformity had been much lessened. In any instrument worn for rectification of the deformity the pressure should be made over the transverse processes of the vertebræ not on the spinous processes. In some of the author's cases the head had been brought up and placed in the erect position by the production of a secondary lordosis in the lumbar region. The death-rate of 25 per cent. quoted by the authors as given by Billroth in cases of tubercle of the spine was, he thought, far too high; and even that of 12 per cent. obtained by the authors in their cases seemed to him to be a higher rate of mortality than he met with in his own cases. He did not, however, attribute that high rate to the operation. So many contra-indications to operation were mentioned by Messrs. Jones and Tubby that they evidently considered, as he did, that the treatment should be limited to exceptional cases. Paraplegia was the chief indication for its performance. In his opinion, the results had not revolutionised the former milder treatment of these cases.

Mr. Barwell doubted if some of the angular curvatures in the cases exhibited had been much altered; simply the spine above and below the site of disease had been compensatingly bent to bring the head over the pelvis. One child said to have had paraplegia was less than 2 years old at the time of the operation, and possibly could not walk, but his mother said he could move his legs. The patients after operation had to wear a splint for three years, and many of them had still an angular curvature. Most cases of that early age, if treated for that length of time with instruments alone, and kept in fair health, would be greatly benefited, as much indeed as by these forcible measures. He would like to know, too, whether after three or four years, when the instruments of these cases would be removed, the spines would bend again. Upon lifting two of the children by the arms he had found that the curvature was still soft and yielding, and not consolidated. On the whole, he questioned if the results were not somewhat disappointing.

Mr. B. Roth thought some of the cases were decidedly promising; but they should be exhibited again when the instruments, which they were all still wearing, had been discontinued for a year.

Dr. Paton asked how long the patients had been kept in hospital. Recumbency in the patients' own homes with their insanitary surroundings was not a desirable thing.

Mr. Howard Marsh commended the authors for the patience and labour they had devoted to the subject. All must feel, however, that although many interesting questions had been started they had not been settled. The Society could investigate such points, and he hoped a committee might be appointed to examine and report upon the whole question. He somewhat doubted if all the conclusions of the authors were quite justified by the cases which had been shown; for example, in the great majority of cases of paraplegia that symptom tended to disappear without forcible treatment. Further, in some of the photographs which had been exhibited the angle of curvature seemed not to be much lessened, but the spine was placed in a different position. He though the estimate of 25 per cent. as the usual mortality from Pott's disease was excessive; he himself would place it at 5 or 6 per cent.

Mr. B. Roth seconded the reference of the subject to investigation by a committee.

The President thought a standing committee might serve a useful purpose if only to separate the cases for which the operation was desirable.

Mr. Wallis and other members discussed the terms of appointment of the Committee.

Mr. Jones stated that the cases exhibited to the meeting had been collected from York, Sheffield, and other distant parts of the country, by much labour, and could scarcely, he feared, be again brought together for examination by a Committee. The proposal to nominate a Committee was carried, the precise terms of the reference being left to the Council.

Mr. Tubby, in reply, said he thought it would be conceded that they had done their best to fulfil their pledge of two years ago to follow up these cases. He pointed out that they did not insist so much upon the value of the operation in remedying the curve as for the relief of the paraplegia. With reference to albuminuria, he said it disappeared when the abscess ceased discharging, and no patient had died of albuminuria or of lardaceous disease. He did not believe that equally good results could be obtained with instruments alone. In reply to Mr. Barwell he said that the child stated to have paraplegia had the lower limbs rigid, with exaggerated reflexes, and could not walk. He added that the labour, difficulty, and anxiety entailed by the endeavour to afford the Society such a demonstration of results as that before them were very great, and he did not think they could in any way manage that a Committee should be sent about the country to inspect their cases, but the Committee would, of course, be welcome to examine the records.

Hunterian Society.—A pathological meeting was held on March 14th, the President in the chair. Dr. Glover Lyon showed a heart whose aortic valve was incompetent, apparently through extensive fenestrations. This heart had beaten as a rule between 30 and 40 times a minute for twenty months before death, sometimes at a much slower rate.—Dr. Fred. Smith showed (1) a specimen of pachymeningitis hæmorrhagica; (2) a large malignant growth of the kidney occurring in a child, aged 10 months; (3) extensive basic meningitis with a small patch of old tubercle of the lung; (4) abscess in lung and brain in which there was absence of fœtor; (5) adherent pericardium with old endocarditis which had presented no signs usually said to indicate adherent pericardium. —Dr. Dundas Grant showed (1) a nasal polypus which had occupied the whole naso-pharynx; this had been removed under a general anæsthetic; (2) sarcoma of larynx; (3) hypertrophied middle turbinal, which had blocked up the infundibulum of the frontal sinus.—Remarks were made by Drs. Adams, T. R. Andrews, Kelson, Glover Lyon, D. Ross, Mr. Targett, and the President.

CHELSEA CLINICAL SOCIETY.

J. Foster Palmer, M.R.C.S., L.R.C.P., President, in the Chair.

Tuesday, March 20th, 1900.

The Treatment of Rheumatism, with Special Reference to Prophylaxis and Cardiac Complications.

The adjourned discussion on this subject was resumed by Dr. Pye-Smith, who said that when he spoke of rheumatism he meant rheumatic fever and nothing else, and he held there was no such thing as chronic rheumatism. It was said some day it would turn out that rheumatism was due to a bacterium, but till then the less said about it the better. The salicylic treatment had made rheumatism a different disease from the point of treatment but it had not diminished the mortality. He could not accept Dr. Lees's statement that rheumatism was a febrile disease affecting the heart and sometimes the joints. The first time he used the salicylic treatment the effect was vomiting and diarrhœa, but that was perhaps due to admixture with other products, and was now rare. The depressing effect on the heart was best counteracted by diminishing the dose as soon as pain departed, and by giving brandy when called for. Excepting hyperpyrexia, the points remaining were relapses, recurrences, and cardiac complications. For the first the remedy was continued light diet, confinement to bed, and salicylates. It would still take six weeks and patience to cure rheumatism, but it should be five weeks and six days of comfort instead of misery. For recurrence he was sorry he had nothing to recommend except change of climate, and it often recurred then. The cardiac complications could certainly not be prevented by any direct effect of salicylates. The quieter the heart was kept by the recumbent posture, unstimulating diet, sleep, and freedom from pain the less likely was it to become inflamed. Nothing so much ensured severe valvular lesions as too short convalescence and too early resumption of ordinary diet and manual labour.

Dr. R. Caton (Liverpool) said that if the heart complications could be got rid of there would be comparatively little anxiety about rheumatic patients. His ordinary treatment was to keep a patient in bed and wrap him in flannel in every case from the neck to the feet combined with a light diet absolutely excluding all nitrogenous food except milk. He gave salicylate, the most glorious boon to the rheumatic, and a certain amount of cholagogue. If pain lingered in any joint he applied a few blisters, which relieved the pain and swelling, and removed the stiffness at small discomfort to the patient. Nineteen years ago he hit upon the method of keeping a patient who had developed a true valvular *bruit* in a recumbent position for a great length of time preventing him raising his head even, so as to slow the action of the heart and prevent the blood waves of high tension from injuring the swollen and softened valve cusps. To influence the heart itself it was thought possible to send a stimulus through the first, second, third, or fourth dorsal nerves, remembering how frequently these nerves were the exponents of mischief in angina and other cardiac affections. He applied small blisters along these nerves, but not over the precordium. The blisters were applied one at a time, followed by a small poultice to keep up a gentle stimulation. To the treatment by rest and blisters he added 8 grs. of sodium or potassium iodide three times daily to absorb the inflammatory products in the endocardium

while still unorganised. Out of 500 cases of acute rheumatism in a great many no cardiac complications occurred, considerably under 20 per cent. Fifty-four had cardiac mischief on admission, and 34 of these were discharged with quite normal hearts, and in the great majority the heart had remained sound. Of those cases where valvulitis began in hospital, and who left without any heart affection, he had watched a great many who had continued well.

Dr. Burney Yeo said that reasoning from analogy acute rheumatism could be deemed to be due to bacterial influence. He approved of the treatment of acute rheumatism by the salicyl compounds. He described the treatment of a case before the introduction of the salicylate treatment, and pointed out that if the joint pains and swellings lingered it was very common then to apply a blister about 2 inches above the joint. He quite agreed with Dr. Caton as to the slight inconvenience caused by a blister skilfully and carefully applied. He had never seen irritation of the kidneys produced by a blister. The discomfort to the patient often arose from the looseness with which the dressing was applied to the blister, it should be firmly fixed by sticking-plaster. He could not say he was fond of salicylates; he had seen so much cardiac depression that he was always glad to reduce the dose. He was surprised to hear Dr. Lees say he thought the depression due to the disease. A patient after taking salicylate of soda for twenty-four hours had the pulse lowered to about 60, while the temperature might be only reduced to 101°. He was accustomed to give in rheumatic fever a few doses of salicin at first, and after a day or two, when pain was relieved, he gave quinine or some drug which gave him no anxiety in regard to cardiac depression. He agreed with Dr. Osler that a combination of the salicylate treatment and the alkaline treatment was perhaps the best. In no disease was there such a loss of water as in rheumatism, and it was important to give patients large quantities of water to drink to dilute the concentrated blood. The usual explanation that the left side of the heart was functionally more active than the right was inadequate to explain the immunity of the right side of the heart in acute rheumatism. More probably the endocardium on the right side of the heart was protected in some way by the condition of the blood.

Dr. Isambard Owen believed that rheumatic fever was a specific disease produced by a specific germ, and that the action of the salicyl compounds was specific. A certain proportion of cases occurred in which the toxic effects of the drug on the nervous system were reached before the necessary saturation had taken place. Personally he had administered salicylate of sodium in many hundreds of cases, and had very seldom suspended the drug owing to the depressant effects, and those effects were rather upon the central nervous system than upon the heart. He considered that the salicyl compounds prevented a great deal of pericarditis by cutting short attacks of rheumatic fever. He did not think that salicylate treatment materially prevented the development of endocarditis. The endocardium was one of the earliest parts affected in rheumatic fever. The answer to the objection that the salicyl compounds exercised no curative effect on endocarditis and pericarditis was that it was quite the habit of diseases produced by specific germs giving rise to several toxins in the circulation, that although the remedy might destroy the parent germ and some of the toxins, other toxins might remain, over which the remedy had no power. This was corroborated by the fact that endocardial and pericardial lesions differed from the articular lesions in kind, a difference masked under the common name of inflammation. The exudation of a rheumatic joint contained scarcely any fibrinous substance; the number of leucocytes was no more than would be expected in an effusion produced by any other kind of hyperæmia. It was a hyperæmia and not a true inflammation as pointed out by Todd fifty years ago. The belief that rheumatic fever was a malady especially attaching to low-lying, damp districts was not borne out by statistical evidence. The result of the Collective Investigation Committee's inquiries showed the largest group of cases in the class of locality described as high, dry, and exposed, and this was borne out by the experience at the Convalescent Hospital at Wimbledon belonging to St. George's Hospital. Dr. Owen concluded by pointing out that in some cases the application of eight or a dozen leeches to the region of the heart, if it did not absolutely check pericarditis, at any rate relieved the patient of most serious symptoms, and considerably modified the intensity of the process.

Dr. C. C. Gibbes said there were four different kinds of salicylate of sodium on the market, and why the Pharmacopœia Committee of the General Medical Council should have adopted and made official the cheapest and the most impure form of the drug in the market was a puzzle. If the purest form of salicylate were not given, he did not believe that the drug could be pushed to the full benefit of the patient.

Dr. R. Caton, in reply to the Chairman, said that he applied the blisters to the region between the clavicle and the nipple either right or left. If applied behind, the patient's rest was interfered with.

Dr. William Keen was understood to comment on the view that there was less chance of heart complications if the urine was kept alkaline in rheumatic fever.

Sir Richard Douglas Powell, in giving the closing address, said that the profession was prepared to accept any duly accredited microbe as the cause of rheumatism. The arguments as yet only lent colour to the hypothesis that such an organism existed in surface ground entering the susceptible subject through the air passages, tonsils, or digestive tract. It was questionable whether follicular tonsillitis was ever purely rheumatic, and Dr. Abrahams's observations on cases of rheumatic tonsillitis were of interest because they explained how in such cases any cardiac complication would be liable to assume the infective form. The blood in acute rheumatism showed remarkable increase in fibrin, diminution in red corpuscles, and increase in leucocytes. The blood also showed a diminished alkalinity. Upon the manifestations of hyperacidity in the urine and in the sweat the alkaline treatment was based. It was impossible to say whether the hyperacidity was due to modified local metabolism, disordered intestinal secretions, or the effect of a definite bacterial toxin. The most fatal phenomena of acute rheumatism were those of hyperpyrexia generally associated with the recedence of the proper rheumatic manifestations, and apparently due to a paralysis of the thermic control centres. Although arthritis was an essential part of rheumatic fever, it was yet a lesion as ephemeral as the rose-spot of typhoid fever. He thought few would go so far to agree with Dr. David Lees that acute rheumatism was essentially a cardiac disease. Most were aware of the occasional occurrence apart from valve lesion of some degree of cardiac dilatation usually in cases with well-marked anæmia. Some cases were attributable to the muscular changes known as "cloudy swelling." He had not been previously aware of the primary affections of the heart described by Dr. Lees which caused it to yield to such a notable extent before the blood pressure. He could not see any other explanation except that of Dr. Lees that some paralytic yielding of the muscle under toxic influence occurred. He (the speaker) had summed up in a sentence the treatment of acute rheumatism as follows: That the right treatment was absolute rest in bed in woollen wrappings, a free relief of the bowels, and the administration of salicylate of soda in efficient doses in combination with such alkaline remedies as the condition of the urine may suggest. With regard to rest, so long as the tongue was coated, the urine charged, and so long as there was a trace, even the slightest, of pyrexia, and for some days after, a patient was still the subject of latent rheumatism, and recrudescence was sure to arise from exposure or exertion. In cardiac cases a slight daily rise of temperature was sometimes observed for many weeks, necessitating prolonged rest. He had heard the late Sir William Jenner say in memory-clinging words, that "children do not grow out of heart disease, they grow into it"; and this remark was based upon the incomplete rest treatment of cardiac rheumatism. Salicin neutralised, although it did not extirpate, the rheumatic poison. The salicin compounds had remote antiseptic power. Statistics were said to prove that cardiac complications were more frequent under the salicylate treatment, but he thought Dr. Ewart pointed to the true fallacy of the inference when he remarked that an indirect risk arose from over-estimating the antirheumatic power of salicylates, whereby both treatment and diet might be relaxed too early. He believed that cases of rheumatic hyperpyrexia were much less frequent than they were before

the salicylate treatment. A pericardial friction sound might often be heard in association with a high temperature, and found to disappear when the temperature came down nearer to the normal, and such sounds he regarded with great suspicion when present in cases with a temperature above 104°. He had seen severe renal hæmorrhage produced with salicylates. In some cases the depressing effect on the heart rendered the continuous use of the drug impossible. Delirium with a fall in temperature was again in rheumatism characteristic of intolerance of the drug. Alkalies were called for by the main factors of the rheumatic illness. Opium was no longer necessary for the relief of pain, except for the first twenty-four hours, but in myocarditis, in bad cases of endocarditis, and in pericarditis it was of great value. In arthritis and pericarditis blisters were efficacious, but it had not been shown that they controlled rheumatic fever.

Dr. W. Ewart said they had still before them the whole inquiry as to the treatment of rheumatism, and underlying that was the inquiry as to the nature of rheumatism and its mode of manifestation. He concluded by moving the following resolution:

That in the opinion of this Society much useful knowledge might be obtained for the prevention of heart disease and other affections of rheumatic origin were fuller data as to the prevalence and distribution of acute rheumatism available for study.

It was also proposed that this resolution should be sent to the Local Government Board, but this was withdrawn after a discussion in which Dr. Vinrace, Dr. Maclagan, and Dr. Gibbes took part.

The resolution was seconded by Dr. B. Blacker and carried unanimously.

EDINBURGH OBSTETRICAL SOCIETY.

R. M. Milne Murray, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, March 14th, 1900.

Chronology of Antenatal Life.

Dr. J. W. Ballantyne demonstrated a schedule of the divisions of antenatal life which he had constructed on the "space-for-time" method which Mr. Jonathan Hutchinson had introduced into medical case taking. In the scheme each interspace represented a week, and the whole of the intrauterine period of antenatal life was extended therefore to forty spaces. The leading subdivisions were marked off by thick and thin lines; in this way germinal life was divided off from embryonic, and embryonic from fœtal, and fœtal from neonatal. At one side were numbers indicating the age of the pregnancy in weeks, and at the other side were some of the great events, such as impregnation, organogenesis, growth, birth, adaptation, etc. By means of the schedule he claimed that a more clear conception could be formed of the phenomena of antenatal life and of their relation to each other, and to the progress of gestation; it might also be used as a case-taking scheme in midwifery practice in which any unusual occurrences in pregnancy might be noted down in their appropriate place, and their possible bearing upon the condition of the fœtus as discovered at birth made evident. Dr. Ballantyne also demonstrated a second scheme, in which an attempt had been made to represent the projection of the various periods of antenatal life into one another, for it could not of course be affirmed that that the whole of the organogenesis of the body was completed in the embryonic period of antenatal life, some of it was postponed till the fœtal period. This projection or overlapping was brought out graphically in the second schedule.

The paper was spoken to by Drs. Halliday Croom, Foulis, Berry Hart, James Ritchie, and the President; and Dr. Ballantyne replied.

Chylous Ascites.

Dr. Halliday Croom read a paper on this subject with an illustrative case. Obstruction of the thoracic duct, especially if gradual, might give rise to no symptoms, since anastomotic channels were established through which the lymph and chyle entered the circulation. However in other cases congestion of the lymphatic system did give rise to definite signs, and this was especially so when the lacteals of the abdominal cavity were within the area affected. A few cases had been recorded in which chylous fluid was found secondarily in the pleural cavity, and only 63 cases of chylous ascites ha been recorded. The notes of his case were:

Mrs. P., aged 39, was admitted to Ward 28 in the Royal Infirmary on September 29th, 1899, complaining of swelling of the abdomen, and gradually advancing weakness and emaciation. These symptoms she had observed for three months, before which time she had been perfectly well. Examination of the abdomen revealed the presence of free fluid, and an irregularly-shaped and evidently malignant tumour. The abdominal cavity was aspirated, and 380 ounces of fluid removed. This at first sight presented all the appearances of pus, but on examination it was found that it was more mobile, and had a sweetish milky odour, and after standing for twenty-four hours, a slight creamy layer formed on the surface. Dr. Milroy reported that the fluid consisted partly of finely emulsified fat, but more largely of a granular *débris* consisting mainly of fat. The patient did not improve, but became more and more emaciated, and a fortnight later 350 ounces of similar fluid were removed. She died five days later. *Post mortem* examination was made by Dr. Welsh. A cancerous tumour was found at the pyloric end of the stomach and the mesentery and the glands were secondarily infiltrated. The small intestine showed an immense number of small cancer nodules surrounding the lacteals close to the mesenteric attachment. The thoracic duct and receptaculum chyli were carefully dissected out and were found healthy, but there was a mass of glands pressing on the receptaculum.

Dr. Croom then referred to the literature on the subject, and pointed out the differences which some authorities held existed between chylous ascites and adipose ascites.

The paper was spoken to by Drs. Berry Hart, James Foulis, Macvie (Chirnside), Haultain, James Ritchie, and J. W. Ballantyne; and Dr. Croom replied.

Double Ovariotomy.

Dr. Halliday Croom read a note on a case of double ovariotomy.

The patient at the age of 18 was first admitted to his ward in the Royal Infirmary in July, 1897. She complained of swelling of the abdomen, which had been observed for 16 months. Before admission the tumour had been tapped three times. On examination extensive hydrothorax was discovered, and the abdomen was enormously distended with fluid. The right pleural cavity was tapped, and 144 ounces of serous fluid removed, and a few days later 280 ounces of similar fluid was removed from the abdomen. A large tumour was then detected in the abdominal cavity; it was irregular in shape, very hard, and presented all the features of a malignant ovarian tumour. It was considered hopeless to attempt any radical operation. From July, 1897, to April, 1898, the patient remained in the ward, and during that time the abdomen was aspirated every fortnight, and the right pleural cavity was tapped on four occasions. In April, 1898, one was forced to the conclusion that, since the patient's general condition was no worse than on admission, and the tumour had not changed in any way, the condition might not, after all, be malignant, and operation was accordingly undertaken on April 5th. Dr. Croom then removed the largest ovarian dermoid he had ever seen, but the operation was comparatively simple, and the patient made an uninterrupted recovery. The right ovary was left intact, as it seemed healthy. The patient went home to Shetland perfectly well on June 7th. She was readmitted to Ward 28 on September 30th, 1899, when she complained of swelling of the abdomen, which she had noticed for six weeks. Examination revealed a large hard semi-solid tumour growing upwards in the abdominal cavity, and this was diagnosed as an ovarian cystoma growing from the other ovary. Operation proved this tumour to be cystic, but owing to the numerous adhesions, and to the fact that the tumour was intraligamentous, the operation was very tedious, and the patient became extremely collapsed. However, she speedily recovered, and left the ward a month later perfectly well. The tumour was examined at the College of Physicians laboratory, from which a report was sent that it was a cystic papilloma of the ovary.

Dr. Croom referred to the difficulty of diagnosis of abdominal tumours, and the importance of opening the abdomen in doubtful cases.

Drs. Berry Hart and Haultain spoke; and Dr. Croom replied.

The Treatment of Eclampsia by Saline Infusion.

Dr. Robert Jardine (Glasgow) read a further contribution on this subject. During last session of the Society he had given notes of 12 cases of eclampsia treated by saline infusion. He had since published 5 cases more, and he now proceeded to give notes of 5 further cases treated during the present year. The injection used consisted of ℥j each of sodium acetate and sodium chloride to the pint. Detailed notes of the 5 new cases were then given. As a rule, ♏x of the tincture of veratrum viride were given in every case. Reviewing the whole series of 22 cases, Dr. Jardine stated that in only one case had the fits first occurred during the puerperium, and this was the only case in which there was merely a trace of albumen in the urine. These 22 cases were a sufficient number to enable one to estimate the efficiency of the treatment. Of the first 12 cases, 4 died. The first fatal case should have been excluded from the reckoning, because only normal saline was used, and she was moribund on admission. Of the last 10 recorded, 2 had died, but one death was due to a perforating duodenal ulcer on the seventh day after the

eclampsia had been cured. But taking the death-rate at 6 in 22, and in view of the nature of the cases, that rate compared favourably with any other form of treatment. The statement ought really to be 4 deaths in 21. Then, too, it had to be borne in mind that many of the cases were admitted after they had been having fits for many hours, after in some cases a consultation had been held outside hospital and a hopeless prognosis given. He claimed to have established a method of treatment worth trying. There was no risk in giving these large injections; he must have given at least 200, and he had never had a single abscess form. Of course rigid aseptic precautions were necessary.

The paper was spoken to by the PRESIDENT, Dr. MACVIE (Chirnside), Drs. HALLIDAY CROOM, RITCHIE, FOULIS, HAULTAIN, and J. W. BALLANTYNE; and Dr. JARDINE replied.

PATHOLOGICAL AMENORRHŒA FROM OTHER THAN CONSTITUTIONAL CAUSES.

Dr. F. W. N. HAULTAIN read a paper on this subject, and gave details of illustrative cases. In the absence of pregnancy and deteriorated constitutional states amenorrhœa was by no means a rare condition. From a general point of view it might be classified as of two types—primitive and acquired—and from a physiological aspect each might be considered as due to: (1) Atresia of the canals—(*a*) atresia cervicis, (*b*) atresia vaginalis (*c*) atresia hymenalis; (2) uterine conditions; (3) ovarian conditions. The last two might be primary or secondary to central nervous changes. Examples of these three varieties of atresia were related. From their greater frequency, however, those cases of amenorrhœa due to functional inactivity of the uterus and ovaries were of more general interest. Those already narrated were really cases of concealed menstruation. Absence of menstruation was difficult of explanation. But there were certain incontrovertible facts. First, the ovaries were essential for the institution of the menstrual function. Secondly, an undeveloped uterus was always associated with amenorrhœa. Puberty was a phase of life associated chiefly with the development of the sexual organ and instincts. Normally they were developed coincidentally, but were quite independent of each other. Pathological states might result from irregular development. The imbecile might be a veritable Hebe in the development of her sexual organs, and yet utterly devoid of sexual instincts. On the other hand, sexual instincts might be acute in women devoid of functionally active sexual organs. Functionally active ovaries might be present with development of the uterus and *vice versâ*. Cases were then narrated illustrative of primitive amenorrhœa in these last instances. Another class of case of primitive amenorrhœa was difficult of explanation, those where both ovaries and uterus were apparently normally developed in size. Probably the cause lay in the central nervous system. Want of development of an organ, whether organic or functional, was usually beyond the range of therapeutics. Removal of the organs relieved pain and suffering removed, that was, the secondary manifestations, but did not cure the primary disease. Often these were the result of long-continued anæmia and constitutional debility in early womanhood, where, after the anæmia had been cured, a permanent want of the functional activity of the organs remained. Electricity sometimes cured this. As to acquired amenorrhœa, inactivity of the sexual organs might result from impairment of the functions of the ovary, uterus, or controlling nerve centre. The last was probably the most frequent and yet was often overlooked. Thus there was the amenorrhœa of fear after illicit intercourse, the effect of sudden shock, the inertia which followed depression during labour, the stimulating action on labour pains of encouragement. It was from this cause the delayed or suppressed menstrual function so frequently noted in girls, the subjects of overstudy, was probably due, as evidenced by the beneficial effect of prolonged rest from work. The "new woman" might in due course propagate a race of females with the menstrual function entirely abrogated. The anomaly would, however, soon automatically cease. A prolonged period of enforced cessation of the menses through anæmia and other enfeebled constitutional states might induce permanent absence of functional activity in the ovaries and uterus. Here electricity might be beneficial. Acquired amenorrhœa might also be due primarily to want of ovarian activity alone. The uterus remained normal for a time. Ovarian extract here was helpful. Amenorrhœa might be caused by simple inactivity of the ovaries or uterus independently of one another. Thus the cessation of menses and atrophy of the uterus after oöphorectomy demonstrated the ovarian influence on the uterus. The question of premature climacteric was here of great interest. It must not be looked at in the light of being inevitable. As to the treatment of acquired amenorrhœa, till recently the galvanic intrauterine stem was the almost universal panacea. The risks were such that it was generaliy decided to leave cases alone. Defective uterine function was usually associated with diminution in the size of the organ, so called superinvolution, while in ovarian inactivity of not too long standing the uterus remained more or less normal in size. Treatment, therefore, varied with the size of the uterus. Uterine activity could be powerfully stimulated by a continuous electric current of 40 to 60 milliamperes, the negative pole in the uterine cavity. Where ovarian inactivity was the cause Dr. Haultain advocated treatment by ovarian extract. This certainly led to the recurrence of menstruation, but he was not able to say to occurrence of pregnancy. It was, therefore, doubtful whether ovulation recurred. Ovarian extract was specially valuable in diminished menstruation where obesity and full-bloodedness existed; again, too, where the completion of the climacteric was irregular. The dose usually necessary was 15 grs. per day. Dr. Haultain's own experience was this: In 7 cases of acquired amenorrhœa from apparent uterine cause, 3 were absolutely successful, menstruation was permanently re-established, and 2 of these had subsequently borne children. Two cases were only temporari y cured, and the remaining 3 were complete failures. In 7 cases treated by ovarian extract, 2 were permanently successful, and 1 temporarily so, in restoring the function. None, however, had subsequently become pregnant. In all the 14 cases menstruation had been absent over six months. All the uterine cases treated were married women. In conclusion, Dr. Haultain emphasised the following points: 1. That acquired amenorrhœa might be due to functional inactivity of either uterus or ovaries alone, and might in these cases be treated effectively. 2. That treatment was to be directed along lines indicated by the dimensions of the uterus. 3. That the lines thus indicated were uncertain from the influences of the central nervous system which might be the primary cause. 4. That from the fair amount of success obtained treatment was justifiable, and should be attempted if the patient so desired.

SPECIMENS.

Dr. FOULIS showed two specimens from the fœtus of the deer, to show that the cord had no amniotic covering. The splanchno-pleure alone closed round the yolk sac.

LIVERPOOL MEDICAL INSTITUTION.

EDGAR BROWNE, F.R.C.S.Ed., President, in the Chair.

Thursday, March 22nd, 1900.

STRANGULATED OBTURATOR HERNIA.

MR. G. REINHARDT ANDERSON read notes of a case of strangulated obturator hernia in a woman, aged 75.

The patient was seized with pain in the left thigh and vomiting; when first seen 24 hours later, the vomiting had ceased and the pain was not so marked; next day all the symptoms pointed to complete obstruction, fæcal vomiting, and abdominal distension. There was some fulness in the left femoral region and the diagnosis was partial enterocele in the left femoral canal. Operation by incision over the femoral region revealed nothing, the lump felt being an enlarged gland; the patient was unrelieved and too ill apparently for laparotomy. Five hours later the femoral wound was reopened, and a deep dissection revealed a hernia through the obturator foramen; this was reduced, and the patient made a rapid recovery and was now well.

MR. RUSHTON PARKER said the condition was one of great rarity, in an operative experience of 510 herniotomies he had never met with obturator hernia.

MEDIASTINO-PERICARDITIS.

Dr. LLOYD ROBERTS described the sequence of the symptoms and physical signs in the course of a typical case of mediastino-pericarditis and read notes of a case he had met with in a boy aged 5 years.

OPHTHALMIA IN LIVERPOOL.

Dr. WM. ALEXANDER read a paper on the Prevalence of

Ophthalmia in Liverpool; its Prevention and Treatment." In three years nearly 1 000 cases of ophthalmia in various forms had been admitted into the Liverpool Workhouse Infirmary. These all came from the lowest parts of the city, and many of the children were admitted direct from their attendance at school. In one-tenth of the cases there was impairment of vision, some were temporarily blind, and in many the eyes hopelessly lost. To prevent the disease it would be necessary to have ophthalmia notified as a contagious disease and arrangements made for the effectual treatment of each case notified before its return to school. The patient's homes should be visited and all the family inspected, for often children had acquired the disease in a latent form. All schools should be periodically visited and latent cases eliminated. The treatment of granular lids was described as hygienic and local, and the methods for the former, adopted by the select vestry, discussed. He thought the best results in the treatment of trachoma were obtained from the use of solid sulphate of copper in cases where the discharge was slight and the granules distinct; when the discharge was greater he used nitrate of silver solution. The relations between follicular conjunctivitis and granular lids were discussed, and it was shown how difficult it was to diagnose one from the other. Follicular conjunctivitis was comparatively rare in Liverpool, and many surgeons were doubtful of its existence as a distinct disease. The paper was illustrated by cases, photographs, drawings, and lantern slides.

Dr. K. Grossmann urged the importance of classification, and considered the follicular and glandular forms as distinct diseases, and not as stages in the same disease. Granular conjunctivitis he considered a rare disease in Liverpool, after a long hospital experience in one of the poorest parts of the city. The clinical facts were the guides as to prophylaxis and treatment.

Dr. A. S. Griffith stated that in every case of mucopurulent catarrh he had found the Koch Weeks bacillus; in the scanty discharge of chronic granular conjunctivitis there was no organism found to which the condition could be ascribed, but when trachoma developed the Koch-Weeks bacillus was found in large numbers. He assumed that bacilli enter the tissues, and, acting as an irritant, resulted in the formation of granules; and that the particular bacillus was probably the Koch-Weeks bacillus acting with a small amount of virulence.

Mr. Richard Williams, Mr. Bickerton, Dr. Hoare, Dr. Macalister, Professor Boyce, and Mr. C. G. Lee also took part in the discussion; and Dr. Alexander replied.

Cases.

Dr. K. Grossmann showed a case of double congenital anophthalmos in a child 11 weeks old. The eyelids turned inwards and opened through a small rima into a conical space lined with conjunctiva; the eyelashes were well formed, with an absence of puncta lachrymalia. The conjunctiva at the fornix formed a straight cone, whose apex in the left eye was a whitish, in the right eye a bluish point. The well-developed state of the adjacent structures indicated that the arrest of development of the eyeballs and their probable subsequent disappearance had taken place at an advanced stage of fœtal life.—Dr. W. B. Bennett showed a woman suffering from mo or aphasia, right hemianæsthesia, and paralysis of the right side of the tongue, but no hemiplegia. He considered the lesion to be a softening in the subcortical area of the brain.

Society of Medical Officers of Health.—At a meeting on March 9th, Dr. A. Newsholme, President, in the chair, Dr. Priestley, M.O.H. for Lambeth, read a paper on Area Condemnation under the Housing Act, Part I. He thought that a system of vigilant house-to-house inspection, with abatement of nuisances and enforcement of repairs—the few houses only whose conditions were irremediable being demolished one at a time, with no wholesale displacement of the population—was in every way to be preferred. He had consistently carried it out in his district. Such displacements of the population served but to create overcrowding with all its concomitant evils in other districts, which soon became converted into slums. Dr. Priestley referred to the work of rehousing as carried out in Liverpool, Glasgow, and other large towns, where the rents averaged 1s. 5d. a room, whereas from various causes they were much higher in London; and the London County Council itself had paused to consider the arguments against as well as for the execution of Part I of the Acts, which their late architect Mr. Blashill, had described as "costly, dilatory, and unsatisfactory." He believed that more good could be effected by Part II; by enforcing the provisions of the Public Health Act by constant house-to-house inspection, and by substituting, when these means failed, house condemnation and house demolition for the condemnation and clearance of areas. After some remarks by Dr. Allan (Strand) and Dr. Chalmers (Glasgow), Mr. Blashill, while admitting that the question was mainly a medical one, and that there were circumstances under which Part I alone could be of use, felt that it should not be adopted without necessity, for the mere clearing of the area cost on an average £50 per head of the displaced population, a dead loss of money which, spent on improvement, facilities for locomotion, etc., would yield better results. Mr. Shirley Murphy maintained that Dr. Priestley had totally misconceived the purposes of Part I. Wholesale clearances were unavoidable with slum property, courts and alleys, back-to-back houses, etc., and when the land belonged to numerous owners only by its means, vesting the land in a single ownership, could streets be widened and opened out. Dr. Sykes maintained that all work done by public bodies was necessarily more costly than that of private speculators. The greater cost of London schemes than of those in the northern cities was a fact, but one should consider the greater cost of labour and the price of land. In Liverpool this had averaged 12s. the square yard, but in Shoreditch and Bethnal Green £4 to £4 3s 6d. Again it was impossible to accommodate the same number of people with 600 cubic feet per head that had previously enjoyed but 300, and if the majority did not return it was better for them and others. Much of the overcrowding created by clearances was due not to the proceedings of the authorities under the Act, but of private owners on the falling in of leases, and to the erection of warehouses, etc. The President maintained that light and air had more influence on health than the state of repair of the stairs or ceilings, and it was the truest humanitarianism to scatter the vicious and the idle, who might be improved amid new surroundings, but could not so long as they remained amid their old haunts and associates. Dr. Priestley replied.

REVIEWS.

THE UTILITY AND THE ETHICS OF EXPERIMENTS ON ANIMALS.

It seemed desirable, not in the hope of convincing the avowed opponents of experiments upon animals, but of putting the purposes and conditions of such experiments before thoughtful persons who wish to consider the matter judicially as well as humanely, to set forth the reasons and results of the method, as well as the past history of its uses, in an argument intelligible to the lay reader. This task Mr. Stephen Paget, not himself occupied in experimental physiology or pathology, has done, and, as it seems to us, very successfully.[1] Well equipped for his task with an adequate knowledge of the history of the medical sciences, with a large clinical experience and with the lucidity of exposition, calm judgment, and profound humanity which we associate with his name, Mr. Paget has produced that most difficult of products—a book which is at once satisfactory to the specialist and yet within the comprehension of every intelligent reader. We will, indeed, go a little farther than this, and say that few members of our profession, or indeed few physiologists, will read the book without being the wiser for it; for the historical chapters are the work of one who is conversant with that larger history which is necessary to him who would write a brief one.

The book is arranged as follows: The first section deals with experiments in physiology, and herein the history of the several discoveries of the circulation of the blood, of the lacteals, of the gastric juice and its properties, of glycogen, of the functions of the pancreas, of the growth of bone, and of the functions of the nervous system are shortly narrated; the second section deals with experimental results in pathology, bacteriology, and therapeutics; and a third part

[1] *Experiments on Animals.* By Stephen Paget. With an Introduction by Lord Lister. London: Fisher Unwin, and Baillière, Tindall, and Cox. 1900. (Cr. 8vo, pp. 286. 6s.)

contains the text of the Act relating to such experiments, an account of the anæsthetics used in the method, and certain reports and official statements.

We have received also "A Review" of Mr. Paget's book by the Hon. Stephen Coleridge, and, probably on the same occasion, another appeal on the subject, especially addressed to the medical profession; it seems well therefore to see what the opponents of the Acts have to say concerning Mr. Paget's argument.

To take Mr. Coleridge first: he begins by asserting that Lord Lister has pronounced the torture of animals to be needless, his reference being made to a provincial daily journal which can scarcely be at the disposal of many of his readers. Even if on verification, which is impracticable, Lord Lister did so express himself, the quotation would seem to be otiose, seeing that Lord Lister himself has written an introduction to Mr. Paget's book, of which he speaks with approval. Whatsoever, then, his lordship's former words in their full context may be, either they cannot conflict with Mr. Paget's views and historical survey, or Lord Lister has on maturer thought come round to Mr. Paget's opinions; if so, this is a strong testimony to their truth. We have, however, excellent reasons to suppose that Lord Lister's views have been consistent throughout. Indeed Mr. Coleridge calls Lord Lister Mr. Paget's "patron," which seems to us to be scarcely an urbane way of stating their relationship, but at any rate it does not suggest a difference of opinion between them. However, Mr. Coleridge goes on to say that Mr. Paget's opinion is that if "the acquisition of any useful items of knowledge can be traced to the practice of vivisection there is an end of the matter; all restrictions must at once be condemned as 'hampering' ..... and all animals delivered over to be tormented at the discretion of persons who have no regard at all for their agonies." "There is no other argument," he says, "from the first page to the last of this book." He says also that "certain antivivisectors, after a careful study of the whole of (Harvey's) works, nevertheless think there is good ground for believing that he was not really indebted to vivisection," etc. "Mr. Paget admits," says Mr. Coleridge again, "that Sir Charles Bell declared that he was not indebted to vivisection for his discoveries ....., but Mr. Paget nevertheless maintains that he was, which should preclude him from severe criticism of his opponent's opinions upon Harvey."

In the next place, Mr. Coleridge complains that Mr. Paget does not state what benefit to medicine and the healing art has arisen from Bernard's discovery of glycogen; and that he seems to suppose such sufferers can be cured in a manner previously impossible; whereas Mr. Coleridge infers from the Registrar-General's return of the death-rate from diabetes, that the contrary is the case, the death-rate being largely on the increase. Again, he alleges that Mr. Paget "accidentally forgets" to tell us "what benefit accrues to us from knowing that different bits of the brain attend to different bits of the body;" furthermore, that no statistics are given to show that "anybody is cured of these (tuberculous) diseases more frequently than before Professor Koch found out how to propagate them." Moreover, Mr. Coleridge produces statistics from Somerset House to show that deaths from diphtheria have increased since the introduction of the antitoxin; and the want of success in obtaining as yet an efficient antitoxin for tetanus is emphasised. As to hydrophobia, "over a thousand persons have died of hydrophobia after having been cured by the treatment." Here also statistics are adduced which show by the way that the deaths from hydrophobia in England are greatly diminished, a diminution which Mr. Coleridge attributes to the muzzle, which may be true enough; but, if so, may not the diphtheria statistics admit of some analysis likewise? The effects of Haffkine's inoculations are sceptically disposed of, and Professor Wright is quoted in evidence that they are not so brilliant as a speech of Mr. Haffkine would lead us to suppose; though Mr. Coleridge, somewhat oddly, goes on to discredit his own witness on the ground of some supposed rivalry between these experimenters. The success of Professor Wright's attempts with typhoid antitoxin is declared to be unproven yet, a declaration to which Professor Wright himself would probably make no objection. The rebukes addressed to Sanarelli for testing yellow fever toxins on man may be well founded and well merited; but, as we are not told who these subjects were, it is a little too soon to cast blame upon him unreservedly. We know that physiologists have been only too brave in subjecting themselves to such preliminary tests.

An error is alleged against one of Mr. Paget's printed certificates; this is at most a clerical matter, and need not detain us; but Mr. Coleridge's contemptuous references to the statements of the Home Secretary in his place in Parliament seem to us unbecoming; however, it is for this Minister to take notice of them if he think fit; they have no validity against the thesis of Mr. Paget.

Finally, Mr. Coleridge makes what seems to us the only important point in his pamphlet—namely, "Mr. Paget's colossal omission of the whole moral aspect of torture." To this point we will return presently, when we consider the arguments of the other tract in deprecation of experiments upon living animals to which we have referred.

Now as regards the alleged inutility of Bernard's glycogen researches and of the search for antidotes for typhoid, diphtheria, rabies, plague, and cholera, while we believe on the contrary that very important results have been obtained, we are not careful to assert that in some half-score years successes have been so definitely and widely matured as to withstand hostile advocacy. A larger view than this must be taken of the matter.

In any science but the present, in physics or in chemistry, for instance, the experimental method is now followed, and after some 2,000 years of darkness and error, proves to be the true method of attaining to natural knowledge. It is sufficient to say that to one who reads the history of natural knowledge with an open mind the experimental method appears as not only the best, but almost the only method by which this kind of knowledge is to be achieved. In the sciences which we have taken as illustrative, the experimental method has from the time of Galileo, let us say, proved itself indeed to be the only clue to truth; the advance of physical and chemical science has become identified with this method, and the centuries in which natural knowledge stood still—which in physiology we may roughly assume to be from the time of Galen to that of Harvey (some 1,400 years)—were marked by disuse and even contempt of this method.

Mr. Coleridge's gibes that discoveries of the nature of living processes have led to no alleviation of disease are gibes which have been directed not at physiology only, but also at scientific students of medicine generally, for many centuries. Yet anyone who is acquainted with the history of physiological discovery in the hands of Harvey himself and of his immediate predecessors is well aware that this dawn of knowledge of the nature of life advanced precisely in so far as the experimental method was rigidly pursued, and that deviations from this method were responsible for most of the false opinions which still embarrassed that advance both in the seventeenth and eighteenth centuries. In the fields of other sciences Mr. Coleridge probably would recognise this, and he cannot but recognise that if physiology is to progress, such must be the method of its progress.

It is not, perhaps, too much to say that in no instance has an anatomist of the dead discovered a function of the living body; if a few such instances are on record they escape our memory, and at most are a negligible quantity. Observation does not suffice; experiment is inexorably necessary, if we are to learn from the large and consistent teachings of history, and it is difficult to see what other teaching we are to look for. Whoso may doubt that this was Harvey's method and the only method by which he advanced our knowledge of life cannot have read Harvey's treatise *De Motu Cordis* or his *Epistles to Riolanus*.

Now, Mr. Coleridge cannot deny that by the experimental method we are attaining to a knowledge of living function, nor is he surely so sceptical as to assert that a knowledge of life is likely to be unprofitable to the physician; his contention must be that, this method being on ethical grounds illegitimate, we must remain ignorant. This is a perfectly fair issue, and it is comprehensible that serious persons may differ upon it. It is therefore with more interest that we leave Mr. Coleridge's pleadings—forensic efforts of a kind which have won for his gifted family not the least of its honourable distinctions—and turn to his passionate denun-

ciation of the experimental method, in physiology alone, on moral grounds. It is on the same grounds that an appeal is made to the medical profession in the tract issued by the Friends' Antivivisection Association.

Mr. Joseph Fry and his co-signatories see, what Mr. Coleridge does not see, or as an advocate avoids, that the point between the physiological investigator and themselves is not whether such and such discoveries are scientifically illuminating, and so likely to be beneficial or not—let it be granted, indeed, that they will alleviate human suffering and prevent human sorrows—but whether it be lawful or unlawful to obtain such knowledge in the only possible way. The Society of Friends is consistent in not shrinking from this issue, as the Friend does not shrink also from saying that, whatsoever the ends to be gained in the sphere of justice or of ideas, under no circumstances is war justifiable. To other mortal men it appears that our lot is cast in a world of conflict, and that in it life is not a thing absolutely inviolable but, whether of animal or man, to be economised. To physicians who are familiar with the unutterable pain and afflictions of mankind, it seems that the life of animals, when animal life is in the balance against the lives of men, is not to be conserved absolutely, but with economy and care to be spent.

Mr. Coleridge, in his forensic way, says that "On such a basis of naked utilitarianism the torture of hospital patients, not for their own benefit, but for the sake of science, might with equal logic be defended." Mr. Coleridge does not really think this—it is only his way; he does not really think that if a man, a boy, and a pig are pining in a boat that either the pig or the boy might with equal logic be killed to feed the man. He knows that, although human life may be sacrificed for the common good where certain tremendous issues are involved, yet, short of these, something like an absolute sanctity ought to protect man from man. Some ardent philanthropists have been tyrannicides, but the verdict of the world is against them; we all admit that the experimental method has its limits in human society. But can any reasonable disputant say that animals are or ought to be in the same sacred position? Mr. Coleridge, we presume, does not hesitate day by day to kill animals for his eating, because he likes flesh better than vegetables; wherein he seems to go rather a long way. He probably enslaves animals also, and otherwise looks on them as given for the use of man. Not that this alone justifies experiment upon them, but surely it puts an end to the plea that to experiment on animals is on all fours with experiment on hospital patients?

Mr. Coleridge objects to Mr. Paget that "he simply assumes that if torture (of animals) be useful to man, it is justifiable." Well, passing by the dyslogistic word "torture," Mr. Paget does assume it, and so do most thoughtful men; moreover, an instructed public opinion is deciding this matter every day more and more distinctly in Mr. Paget's favour. Pain and death are implicit in the world as it is made; all that man can do is to minimise them to the uttermost. The position of the physiologist is that by some small sacrifice of animal life—small, that is, in comparison with the sacrifice of animal life in other directions, as for food or in war, and infinitely small in respect of the issues involved—the laws of life can be discovered, and as in the other natural sciences, by the experimental method only; also that by a knowledge of these laws only, if at all, can life be managed, and disease prevented or cured. If the public were to agree with Mr Coleridge and his friends, these inquiries would cease, our search into the laws of life would be fruitless, and medicine, public and private, would return into the degradation into which, for lack of experimental methods, it fell in the time, let us say, of Louis XIV, or of the Great Plague of London. The serious tract of the Friends recognises this alternative, and faces it without flinching; and as with the tract was a courteous appeal to the medical profession to wrestle with them in this high argument, and to state its individual views in the stamped envelopes enclosed, the present writer ventured accordingly to state the following ethical problem, and to request a plain answer of "Yes" or "No." The problem, abstracted in non-essentials so as to conceal an actual occurrence within the writer's own experience, was stated as follows:

A father had a dearly beloved and only child, a grown-up daughter, who fell ill of diphtheria. His physicians told him that without the use of the diphtheria antitoxin she must die. The father asked if the discovery of this antidote was made by experiment on animals, and their answer was to this effect. Again he asked if the supply of the remedy is maintained by operations on animals. The answer was necessarily in the affirmative. The father replied that to use the remedy was against his conscience, and that his child's life was in the hands of God. On the premisses of Mr. Coleridge and his friends the father was right; his daughter died. The father now believes, that as every expert knows, by the use of the remedy the life of his child might have been saved, and in his remorse is a broken-hearted man. The question put to Mr. Fry and his co-signatories is, "Was the father right or was he wrong?" a question which admits of a simple "Yes" or "No." To this question, invited by the Friends' Society and forwarded to them many weeks ago, no answer has been received.

UEBER GANGRÄN BEI DIABETES MELLITUS. [On Gangrene in Diabetes Mellitus.] Von Dr. FRITZ GROSSMANN. Berlin: August Hirschwald. 1900. (Demy 8vo, pp. 134. M 3.60).

THE author of this pamphlet comes to the following conclusions:

1. According to the experiments of Smith and himself the presence of a moderate quantity of sugar, such as is present in the tissues of diabetics, favours the growth of pus organisms as well as other microbes, increases their virulence, and favours symbiosis with other bacteria.

2. Abnormal products of tissue metamorphosis circulating in the blood in diabetics (acetone, diacetic acid, lactic acid, beta-oxybutyric acid, oxalic acid, etc.), injure the tissues and render them more liable to infection. They are also the cause of the frequency of necrosis of internal organs, of premature angio-sclerosis, and in association with heightened destruction of albumen and defective nutrition they determine the premature occurrence of senile changes.

3. All recent authors find in nearly all their cases extensive vascular disease, Marchal's influence alone accounted for the failure to notice it in earlier publications.

4. The seldom-found "neuritis degenerativa" is not to be regarded as the cause of trophic disturbance and gangrene, as it is only a consequence of the altered nutrition of the nervous system depending upon angio-sclerosis.

5. There are two principal forms of diabetic gangrene: (*a*) that caused by angio-sclerosis and thrombosis, (*b*) that caused by inflammatory processes, that is, by the action of very virulent bacteria upon enfeebled tissues.

6. There is no secondary diabetes in Wagner's sense, nor any "diabetes acutissimus" (Griesinger), nor any ephemeral or concomitant glycosuria such as Redard believes in. A study of their histories shows that in these cases there was always present latent or intermittent diabetes, or more strictly a latent glycosuria, that is, they had to do with individuals with diminished capacity for assimilating carbohydrates in whom, for example, a test meal of 200 grams of bread would have caused the presence of sugar in the urine.

7. Operations for diabetic gangrene are best performed under local anæsthesia with manual compression of the great vessels.

8. Any surgical proceedings should be preceded by a careful examination of the great vessels for thrombosis. In all doubtful cases amputation through the thigh should be preferred to amputation of the leg, although in general König's indications hold good.

9. The prognosis does not depend so much upon operating when the urine is as free as possible from sugar, but upon the prevention of great destruction of albumen with acidosis, and upon the general strength of the individual. When diacetic acid can be demonstrated in the urine, it is desirable to avoid strict diet, and to give carbolic acid (0.3 gram (5 gr.) daily according to H. Fischer).

10. As a prophylactic measure to prevent the occurrence of coma, 5 to 10 grams (75 to 150 gr.) of sodium bicarbonate may be given before and after the operation.

11. The results of operations have become yearly better under careful aseptic treatment, so that surgical interference, considering the sad prospect for cases left to themselves, should be encouraged whenever there is any hope of success.

In so far as these conclusions are not in accordance with generally-received opinions we may state that they appear to be based upon a review of already published cases and upon a few original experiments.

According to the author's experiments, streptococcus infection will not produce glycosuria in healthy animals, and he infers from this that healthy—that is, non-diabetic—persons do not become glycosuric in consequence of such infection, as is generally believed. To the large number of cases which have been published he opposes his assertion that sooner or later these persons will develop true diabetes, a statement which he may fairly be asked to support by better evidence than he has produced in this book.

THE WAR IN SOUTH AFRICA.

THE MOOI RIVER GENERAL HOSPITAL.

From Our Special War Correspondent.

The Site of the Hospital.

No. 4 General Hospital, stationed close to the Mooi River station on the Natal Government Railway main line, and known generally as the Mooi River Hospital, merits a detailed notice, for it reflects infinite credit on the R.A.M.C. and on all concerned; on those who selected the site, on those who laboured hard to utilise it to the best advantage, on those who are entrusted with the management, and on the medical staff, who work together with an *esprit de corps* not invariably found in large military base hospitals. However stereotyped the pattern, each hospital, when once it has got into full working swing, develops an individuality, and this quality undoubtedly affects the standard of the work done. No. 4 has one great advantage, due to its position. It is not near any town or even village. There are a few camps scattered about in the vicinity. The cavalry depôt is situated on the left bank of the river, a mile away. The camp—a small one—of the scouts is seen in the distance, and close to this, in a commanding position, on the strong crest overlooking a flat, well-watered plain, on which a great herd of cattle grazes peacefully, a detachment of the Naval Brigade watch unceasingly for an enemy now, mercifully, never likely to show themselves again as such in the vicinity. Viewed through the clear air, the kopjes where the Boer guns were stationed when they shelled the station seem but a short distance away. A thriving farm nestles under the slope of a hill a mile or two away, bedded in a dark patch of trees relieved by the brighter green of the mealie fields around it. For the most part, the country is quite bare of trees, but here and there on the crests of the hills dark fringes show. The country is really a great upland, over 4 000 feet above the sea level. The beauty lies in the magnificent sweeping curves of the hills, and possibly to some extent in the fact that the bracing air predisposes one to admire everything. No better station could have been found for a hospital and, indeed, the place is known as a health resort. A couple of miles away is the Lake Hotel, known to invalids, situated in the minute village of Weston, and looking down the valley along which the river winds.

The Officers' Hospital.

The principal hotel close to the railway station has been taken over entirely and converted into a hospital for officers. It is well adapted for the purpose, having a large verandah or "stoep" running round three sides of the building. Most of the officers are accommodated in separate rooms, an arrangement that seems to be preferred, though the reason is rather hard to understand. These bedrooms are small, and most of them of an uncompromising cubical shape that suggests rather a prison cell than a sick room. The isolation is complete if the occupant has any complaint that confines him to bed, and at Mooi River visitors are few and far between, a condition of affairs which may increase the monotony of convalescence in some cases, but undeniably tends to the smooth working of the hospital, even if it be not an actual advantage to the patients. The officers no doubt feel the deprivation of communication with the outside world, but the men in camp, ungracious as it may be to hint even at the fact, appear to be perfectly satisfied with their own society, and profoundly indifferent as to whether they are visited or not. People do not always realise how absorbing and engrossing an occupation is the contemplation of one's own convalescence.

The main dining-room is fitted up as a general ward with about a dozen beds. As in all buildings not primarily designed for hospitals, the ventilation arrangements are less thorough than might be desired. So long as the warm weather continues, and windows and doors can be kept continually open, there is nothing to complain of. But the winter is fast approaching, and the cold at Mooi River can be very severe. Some difficulty is likely then to be experienced throughout the building in securing an adequate supply of fresh air without draught and without risk of chill. This, after all, is a problem in hospital construction that is still not solved to everyone's satisfaction in places where the architect and the sanitary officer have a free hand to devise the most perfect arrangements that can be secured. The sanitary arrangements of the hotel are now good, though the amount of work done at the outset in this direction before the sanitary condition was considered satisfactory must have rather surprised the proprietors of the hotel.

The ground immediately surrounding the hospital required extensive clearing, for in this, as in so many of the hotels and dwellings in South Africa, the immediate *entourage* was more than untidy. Kaffir servants can hardly be expected to realise the necessity of living not only in a clean house but with clean surroundings. Sufficient care is not taken to impress this on them. They are such intelligent, willing, and cheerful servants, that the fault clearly lies with the masters rather than with the subordinates. The alterations, sweepings, and cleanings effected by the R.A.M.C. before the place was held fit for the reception of patients must have astounded and, it is to be hoped, also instructed them.

There is no doubt that the bold step of "commandeering" the hotel has been thoroughly justified. In the case of officers, tent life in hospital is unsuitable on many grounds. For the men, however, whenever the climate will allow of it, tent hospitals appear to be the ideal arrangement on active service.

Cooking.

In the important but often rather neglected detail of cooking the arrangements appear satisfactory. This essential department of a hospital has probably, during the present campaign, occasioned the authorities as much trouble and worry as any other of administration, and it must be admitted that the difficulty has not always been satisfactorily met. Sick cookery is an art that but few possess, and invalids are critical to the point of captiousness in many cases. Even offers of large salaries have failed to tempt competent *chefs*, and the dearth of cooks of even moderate ability has been a serious trial. No Principal Medical Officer can ever feel entirely confident in the smooth working of the hospital under his charge unless this essential detail has been satisfactorily provided for. It is the one department in which everyone is qualified to give an opinion. It is unfortunate that in our country the disposition to learn the art of cooking, and the talent for exercising that art appears to be confined to women. The importance of this subsidiary branch of army organisation does not appear to have received the same amount of consideration in our own country as it has in Continental nations.

The Hospital Camp.

From the Mooi River station to the hospital camp is about three quarters of a mile, the ground on the right bank of the river rising in a gentle slope. A thoroughly good road has been made, and a wide, well-constructed wooden bridge thrown across the river. The discomfort of transit from the station is thus reduced to a minimum, and a high embankment renders the gradient of the road down to the river very gradual, so that the wheeled stretcher carriages are easily conveyed to the hospital.

The Hospital Trains.

While on the subject of the conveyance of patients from the front it may not be out of place here to make brief reference to the hospital trains on the Natal Government Railway. At the time of my visit there were two such trains, both of which had been converted for the purpose. Although extreme ingenuity had been shown in making the very best of the materials at hand, it must be admitted that the trains fell far short of the standard attained in Cape Colony, and also, it would appear, in the Transvaal and the Orange Free State. The cardinal difficulty that could not be overcome was that the corridor carriage is not in use on this line, and no corridor carriages, of course, that might have been converted could be brought round from Cape Colony by rail, as a glance at a map of the railway system will show. Even at a station where there is a suitable platform the entraining of a stretcher case was attended with some inconvenience, and even risk, to the patient. Where no platform existed the difficulty was, of course, much enhanced. It is true that in other of our hospital trains this drawback has not been fully recognised. I was informed by Major Daly, R.A.M.C., whose almost unique

experience in this war gave him full opportunity of seeing the arrangements made for the care of the sick and wounded on the Boer side, that in his opinion the Boer ambulance trains were superior to our own. In particular he praised the ingenious arrangement whereby patients could be easily entrained out in the open. A sloping way, adapted at will to the position of the train, could be let down, and the stretcher bearers were able without difficulty and without alarming the patient, to carry their burden into the carriage. The device resembled apparently the method adopted in England for horse-boxes. These trains were, it is alleged, bought in Germany; a striking example, if true, of the completeness of the preparations thought necessary for purely defensive purposes. The worst feature of the separate compartment arrangement is, of course, that so long as the train is moving, the patients are inaccessible to the medical officer.

The Princess Christian train, now it is understood in process of being fitted together for use in Natal, will remedy a very serious defect in the arrangements, and there is no doubt that it is more needed in Natal than in the western sphere of operations.

The Plan of the Hospital.

No one—not even a civilian, who is supposed to have no eye for such matters—could fail to be struck by the workmanlike order in which the general hospital was set out, and with the rigid mathematical precision of the lines. The diagonal lines of the marquees were as absolutely true as the longitudinal or transverse, a feature that furnished at once evidence of the complete and careful attention to detail of every kind which characterised the hospital throughout.

I was informed that no positive instructions existed as to the precise plan on which a general hospital was to be laid out, a rather striking example that *de maximis non curat* always the War Department. Colonel Clery, the P.M.O. of the hospital, and Major Lucas, R.A.M.C., taking advantage of the latitude thus provided, had to devise to a great extent their own arrangements of marquees, and had certainly succeeded very admirably in the general design. Some 89 marquees were in use as hospital wards at the time of my visit. The space available allowed of an almost indefinite increase without in any way altering the plan of the hospital.

The central row was devoted purely to administration. Building was going on actively and in the centre of the administrative block a large erection of wood and galvanised iron was nearly completed. This was to be used as a reading and recreation room.

Close by was the operating theatre, which was opened for use during my stay. The theatre was of wood and galvanised iron, with floors of concrete slightly sloping to one corner so as to allow of free flushing of the floor. The lighting was excellent, top lights being placed in the sloping parts of the roof. The operations that the military surgeon may be called in to perform may be of the most difficult nature, and it is cruel to compel him to work, as is the case too often in the hospitals here, under conditions of semi-darkness. Practically there were two theatres, divided by a partition with a wide door. The second room was used, when there was no great pressure of work in the theatre, as an anæsthetising room.

Attached to the same building was the *x*-ray room. The mains supplying current for this room furnished also electric light to the operating theatre—an enormous boon, and an advantage that one did not expect to meet with in a hospital practically so remote. The accumulator battery was at the railway station in trucks. These had to be sent down to Maritzburg to be charged.

The Medical and Surgical Divisions.

Wide alley ways separated the medical division and the surgical division respectively from the central administrative block. In too many of the military hospitals sufficient care did not seem to be taken to keep the medical and surgical cases apart. This necessary precaution was difficult or impossible to observe no doubt when large numbers of patients were aggregated together, and public buildings were utilised as hospitals; but the plan of mixing up the different cases was very objectionable, and when many cases of enteric or dysentery were under treatment, or bad septic cases were present, positively dangerous. At Mooi river the distinction was very thoroughly observed from the first. Thus the medical officers were not, as is the case in some hospitals, called upon to treat cases of every kind at once, but were kept, very properly and very much to their own and the patients' benefit, to a particular line of practice.

Separation of Surgical Cases.

The principle of segregation was carried still further. Septic cases were on the surgical side kept apart as much as possible. The cases of spinal injury were left by themselves as requiring special care and attention. Venereal cases were lodged in a separate camp altogether some distance from the main hospital and entirely distinct from it. Most of the marquees contained six beds, but at the upper end of the hospital where the slighter cases were lodged there were eight beds, the regulation number.

The Bedsteads.

It may be noted that for the most part the bedsteads were too wide, and with eight in a tent little room is left. If the camp is pitched on rising ground it is impossible as a rule to arrange the beds so that all shall slope in a convenient direction, and wide bedsteads have really to be packed in rather without regard to the comfort of the patient lying in them. The difficulty of moving or lifting a patient on a wide bedstead is much greater than on a narrow one, and when the case is one of fracture, particularly when the fracture is of the femur, the sagging of the wirewove frame constitutes a serious objection and one prejudicial to the patient. A great variety of frame is found in the different hospitals. It would seem desirable to adopt a regulation pattern of a more convenient height than the majority of those in use here, and of a regulation width that would allow more space in the tent while contributing to the patient's advantage and comfort.

Sanitary Arrangements.

The sanitation of the camp was all that could be desired, and the precautions especially that were not only enjoined but rigidly enforced in dealing with the dejecta in the enteric and dysenteric cases were admirable. Rules and written regulations, however complete and minute, are useless without constant personal supervision. Orderlies—and nurses, too, for that matter—are but human, and in their anxiety to observe the actual letter of the law often strangely err in understanding its spirit. An incinerator at some little distance from the hospital provided for the prompt destruction of soiled dressings, etc.

The Water Supply.

The water supply was taken direct from the river, which here flows with a fairly rapid stream. A small donkey engine pumped the water up into a tank raised on a scaffolding above the level of the highest point of the camp. This tank was circular, and made of galvanised iron, a contrivance that has been found of the utmost value. Such tanks are light, easily moved by rolling, and readily cleaned. The water was run off from this reservoir through a sand and gravel filtering bed and then into the boilers for thorough sterilisation, before it was distributed to the camp. Thus treated, the water could be readily further filtered through the Berkefeld filters. Unless water be delivered in a fairly pure state into these filters it is almost out of the question to secure due observance of the regulations with regard to the use of the Berkefeld filter. If there is any sediment in the water the candle of the filter becomes clogged, and the process is then so slow and laborious as to render it almost useless. That the filter is an extremely efficient one all agree, but in active service in a hot climate its employment is perpetually evaded.

Laundry.

Both the medical and surgical wards were most thoroughly equipped. Laundry difficulties, which in a wet climate are much more formidable than might be imagined, had been efficiently provided for.

Milk and Eggs.

The supply of fresh milk left something to be desired, and indeed this has been a great difficulty throughout in the Natal hospitals. "Ideal" milk was in great request, and

many of the men asked for this in preference to the fresh milk which had to be boiled before it was served out. The time of delivery of the milk which had to travel far was necessarily rather uncertain; and in an uncertain climate like that of Natal, there was also a liability to the whole stock being delivered in a sour state. Eggs, too, were scarce, and fetched a high price.

"COMFORTS" AND LUXURIES.

The small luxuries and comforts which count for so much in the mind of the public when it turns its attention to hospitals, were provided in abundance. Of tobacco, too, there was an ample supply. The open-air method of treatment which the climate permits, and which has been so widely and wisely adopted in the military hospitals, allows of free use of tobacco in wards without annoyance to non-smokers. Tobacco has a very real value in the treatment of such cases as abound in military hospitals in time of war. A full supply of tobacco for smoking, in whatever form it might be preferred, would in the field hospitals and dressing stations be second only in value to morphine, and would very often most advantageously replace it. Men waiting their turn to be dressed after they are brought down from the fighting line often positively crave for tobacco, and it acts as a most efficient and harmless anodyne. A box of cigars or cigarettes would often give as much relief as the hypodermic syringe, and fit a man far better to stand a rough journey from the dressing station into the field or stationary hospital. The value of tobacco is recognised, but still not recognised enough.

THE NURSING SISTERS.

At the time of my visit there were only nine nursing sisters at work in the hospital. Nursing, in the sense it is ordinarily understood, was therefore practically out of the question. A general superintendence was really all that the sisters could provide—valuable, beyond question, but still of necessity so limited that its value was reduced to the smallest compass. If the principle is recognised of having nurses in hospitals at all a sufficient number should be provided to enable real nursing to be carried out. It was in contemplation to erect immediately marquees for 200 more patients, in anticipation of the relief of Ladysmith, making some 800 beds in all. But it seemed by no means certain that additional nurses would be forthcoming.

THE ORGANISERS.

I have given only a very imperfect sketch of what appeared to me, reviewing the hospital with an absolutely unprejudiced eye, as a very perfect organisation. Only a few weeks ago the site was practically a hayfield, covered with wiry grass, through which one had to wade, in wet weather, knee deep. Now, by dint of hard work and energy, controlled by judicious foresight, and directed into the proper channels by chiefs who possessed a real gift of organisation, the field is converted into a village, and this village is one of the most efficient and well-managed hospitals I have hitherto met with. The natural advantages of site, remoteness from habitations, proximity to the railway, etc., have been utilised to the fullest, and the net result is one of which the P.M.O., Colonel Clery, R.A.M.C., may well be proud. No commanding officer could well be more fortunate in his staff, and the share that Major Lucas, R.A.M.C., has taken in providing for the efficiency of the hospital is acknowledged by all.

CLINTON T. DENT.

THE WYNBERG HOSPITALS.

By Sir WILLIAM THOMSON,
Chief Surgeon, Irish Hospital, South Africa.

Capetown, March 6th, 1900.

WE have been unable to move to Naauwpoort owing to the block on the railway. With a single line it is difficult to carry up reinforcements and at the same time to bring down nearly 5,000 Boer prisoners. But we are promised an early transit to the junction, which is near the Free State border, and on the road to Bloemfontein. The hospital there is full, and help is badly needed, so that we hope to "lend a hand" there very soon.

I was anxious to pay a second visit to Wynberg, as some trainloads of wounded had come down from Paardeberg. They had suffered much before they reached the train. For three days many of them had travelled in ox waggons, exposed to the heavy drenching rains of that region, but once the luxurious hospital train was reached, they travelled the 600 miles to Wynberg with all comfort.

In No. 1 Hospital I met Colonel Greer, who conducted me through several wards, and I saw several men whom I had visited before.

There were many new wounded Boers, but although they had arrived in a rather dilapidated condition they were now clean and cheerful. In one ward Boers and our own wounded were mixed. They are on excellent visiting terms, but the political question, when it is broached, sometimes interrupts this cordiality. The prisoners are treated precisely as our own men. They are, indeed, on parole now, and although there are the usual guards, the Boers who are able can leave the wards and move about the beautiful shady groves which are part of this delightful spot, or receive their visitors in the wards. I asked several how they were treated. The first said, "We could not be better treated in a first-class hotel." Others bore like testimony. I asked if they got enough to eat, and they testified that they were very well treated in this respect. "They could get anything." They were all well dressed in clothes provided by the hospital authorities. A father and his son were amongst them. I asked their name. "Thompson," said the boy, and he told me that his father was born in England, and, coming out at an early age, was now a burgher of the Free State.

I went to see No. 2 Hospital, which is under the charge of Colonel Duke. It is accommodated in tents. I was glad to find an old resident pupil of my own—Major Lougheed—in charge of the surgical side. The tents are large marquees of the usual size. There are boarded floors, and beside every bed is a small shelfed table. The sheets and bedding were scrupulously clean, and the patients were clothed in sleeping suits, with which they had been provided on reaching the train. I was particularly struck by the fine healthy appearance of those who were not suffering from severe wounds. There were English, Scotch, and Irish, and a few Canadians—all fine stalwart fellows. One of the latter had five bullet wounds—none of them serious. He enjoyed his pre-eminence. The Highlanders were recognisable by the colour of their legs. The knee, and a little above and below, were sunburnt almost quite black; and one or two men told me that their bare legs suffered a good deal from the fierce sun on the veld.

I spoke to a Highlander who had come down from Paardeberg with a bullet wound of the ankle. It was not serious, and I refer to him only in connection with a curious coincidence. He was in hospital a couple of months ago with a wound in the same foot. He recovered and went to the front. Now he found himself back again in the same tent, in the same bed, and with another wound in the same foot.

Major Lougheed showed me a young fellow who had a bad brain wound.

Perforating Bullet Wound of Brain: Hemiplegia: Trephining: Recovery.—The bullet entered on the left side from before backwards, ploughed through the motor area, and passed out. There was paralysis of the right side. Both entrance and exit openings were enlarged by the trephine, and fragments of buried bone extracted. The paralysis disappeared. There had been a little suppuration anteriorly, but I found the patient doing well. He had practically no symptoms.

In this division seven or eight gunshot wounds of the head required trephining, and only one case which developed abscess has been lost.

The compound fractures of the thigh form an interesting group. In all those cases where the injury to the shaft is done by high-velocity bullets the comminution is very severe; sometimes the loss of substance is so great that union appears almost hopeless; yet when the loose fragments have been removed the results are excellent. Of a group of 30 admitted to No. 2 Hospital amputation has been necessary in only one case. Extension by weights is practised, and the shortening is slight.

Bullet Wound of Pharynx: Recovery.—One man of the East Kent received a bullet wound just below the base of the skull on the right side, about an inch and a half behind the mastoid process. The bullet passed under the base, pierced the pharynx and soft palate, carried away the first two upper molars on the left side, and escaped. This wound was received at Paardeberg on February 18th, just 16 days ago. The wounds were entirely healed, and the man was walking about the grounds.

The penetrating bullet wounds of the thorax are numerous, but are all doing well. In several of them there is hæmo-

thorax, and it is necessary occasionally to aspirate, or to open the chest wall deliberately to relieve dyspnœa; but all the cases do excellently well.

The mortality-rate of the wounded brought here is quite remarkable. Out of 970 bullet-wound cases of all sorts only 5 have died, a record which is a high testimony not only to excellent surgery but to the pains taken from the first to secure the safety and comfort of the wounded.

This camp is well laid out, and its general arrangements are quite good. Colonel Duke and his assistants have paid special attention to sanitation. The earth closet is used, and all ward refuse, dressings, etc., are burned. The water from the wash houses goes into absorption tanks and trenches. The tents are large and airy, with clean wooden floors. The bedding is as good as could be desired, and I know from personal inquiry that the men have no complaints to make as to their treatment in hospital. Indeed, speaking generally, in no war hitherto waged has so much attention been given to the care of the wounded, nor have the recoveries from wounds been so extraordinary.

I am anxious to make known the result of my visit to this great military hospital, because before I left home a ridiculous article appeared in *Le Matin*, associating me with an an official duty—that of reforming the hospitals in South Africa. Indeed, the writer said there were really none to reform as they did not exist. Of course, this reference to me was absolutely without a particle of foundation. It is of a part with the information and intelligence which combine monthly in addressing a leading French medical journal to me at Dublin, Ecosse! I have only been a casual visitor, and I can say that while I think there are parts of the system in which improvements may be made, the exhibition of efficient working at Wynberg is one of which the medical department of any country might well be proud.

NOTES ON THE BASE HOSPITALS IN CAPE COLONY.

From our Special Correspondent in Capetown.

March 7th, 1900.

The Wounded from Lord Roberts's Force.

The work at the base continues to be more or less of a routine character. There is very little of surgical interest. The cases from the actions at Belmont, Modder River, and Magersfontein have now mostly passed into the convalescent stage, and only the slighter cases from the actions fought by Lord Roberts and General French have been sent down here. With the departure of our troops from the railway, the despatch of wounded almost straight from the battlefield to the base has been discontinued. This is obviously a wise course to pursue, as the fatigue of a couple of days' journey by road would be very detrimental to seriously wounded men. Lord Roberts's next forward move will probably bring him into possession of the railway either at Bloemfontein or some point to the southward thereof, and then within easy reach of the base hospitals or of the General Hospital No. 6, which has been established at Naauwpoort, and in that case the original plan of prompt despatch of wounded to a general hospital will probably be reverted to. Indeed, it is rumoured that as soon as we are in full possession of Bloemfontein and the country to the southward thereof, No. 3 General and the Portland will be moved up to the Free State capital. In favour of this course is the fact that in a few weeks the rains, which are already beginning, will render the Cape peninsula a very undesirable location for hospitals under canvas. This consideration will apply more strongly to No. 3 and the Portland than to any other of the general hospitals, as Rondebosch is particularly damp, and the site being on a dead flat will be liable to be swamped. As No. 1 consists of huts, and is on an easily drained slope, it may last very well through the winter months. One may be certain that Colonel Supple, the base Principal Medical Officer, who thoroughly understands local conditions, will appraise all these considerations at their proper value. So far very few serious surgical cases have been sent even to No. 6, which is principally filled with more or less convalescent patients from the Colesberg force, and with cases of enteric fever. I understand that there were an immense number of cases of enteric fever in Ladysmith, which might be expected. Even under normal conditions the disease is rife in Natal at this time of year, and one can easily account for a marked increase in a cooped-up garrison devoid of the ordinary conveniences of life. There have been a large number of cases on the Eastern frontier in the forces under Gatacre and Brabant. The base station hospital at Woodstock is getting its full share, mostly from the cavalry camp at Maitland and from the Australian transports.

The South African Type of Typhoid Fever.

Typhoid fever here differs materially from the form usual in England, and approximates more nearly to the Indian type. The classical textbook typhoid is hardly ever seen here, and diagnosis, especially in the early stages, is very difficult. A practitioner of very large experience assures me that he does not see a rash in more than one out of five or six cases in civil practice, although, as I mentioned last week, the medical officer in charge of the enteric wards at Woodstock sees a larger proportion amongst the soldiers. This is interesting, as it may be due to the type being an imported one. Then, again, it is extremely rare to find the temperature chart typical. The temperature hardly ever goes either up or down in the orthodox manner, and defervescence is very irregular, and marked by a much closer approximation of the morning and evening register than is usual in Europe. Marked diarrhœa, again, is less frequent, and the characteristic tongue is seldom met with. Diarrhœa, when it is present, often appears only at a late period, perhaps for the first time in the third or even the fourth week, and gurgling and abdominal tenderness are frequently absent. Indeed, it may be said that a large number of enteric cases present nothing but pyrexia and the conditions which accompany any pyrexia. And yet many of these simple pyrexial cases are fatal, presenting typical lesions at the necropsy. The writer saw many such during the Kaffir and Zulu wars, when the disease was extremely rife. The fever is very often extremely prolonged, without any complications, and assumes very often an intermittent type. Cardiac failure is a frequent cause of death, and most experienced practitioners guard against it very carefully from the beginning. One cannot help thinking that there is something in the typho-malarial theory after all. Curiously enough there do not seem to be very many cases of enteric amongst the Boer prisoners from Cronje's force. What cases there are are being mostly taken to Wynberg. Several cases of measles have already appeared, but, although occurring in adults, do not seem to be severe. All the infectious cases amongst the prisoners are sent to Woodstock.

The Hospital at Woodstock.

This hospital which is now, under the immediate eye of Colonel Supple, being got into excellent order, needs a few more nurses to make it complete, and these will be installed as soon as quarters are ready for their reception. I saw a very interesting necropsy there the other day:

The subject was a case of phthisis, with a mass of old consolidation at the right apex, a large ramifying vomica occupying most of the upper part of the right lung, and disseminated tubercle almost all over the rest of the same lung. The interesting point was that the vomica had penetrated the pulmonary pleura, formed an adhesion with the costal pleura, and perforated the chest wall in the second interspace, forming an abscess about the size of a pigeon's egg in the axilla, looking exactly like a suppurating gland. There was no general pleurisy whatever on that side. The patient had only been out about six weeks, and had been sent from a transport with the diagnosis of pneumonia.

This patient was either a militiaman or a reservist, I forget which, but a moderately careful physical examination ought to have precluded him from being sent out at all.

Some Surgical Cases.

Dr. Simon, of the Station Hospital, related to me the other day particulars of a curious surgical injury.

The subject had been struck by the cowcatcher of an engine in the back, but not run over. The sacrum had been smashed and pushed to the right, and the adjoining parts of the left ilium comminuted so as to leave a large gap, exposing almost the whole length of the rectum. He had also sustained a gutter fracture of the skull, with resulting intracranial hæmorrhage, and this was apparently the cause of death. For some reason or other the head injury had been left alone.

At the Portland Hospital I saw a rather curious head injury the other day, under the care of Mr. Wallace.

Depressed Gutter Fractures of Skull.—A bullet had ploughed along the vertex, near the top of the Rolandic fissure, and had depressed the outer table in an absolutely vertical manner, without a trace of splintering, the inner table forming the floor. There is an almost exactly similar case in No. 3 Hospital, except that in the latter the bullet had separate entrance and exit wounds in the scalp, whereas in the former it had ploughed up the soft tissues as it went. Both cases had done absolutely well.

There are a good many wounds of bone, showing how largely soft-nosed bullets are being used by the Boers. One of these showed a small ordinary Mauser entrance wound at the back of the thigh, with a ragged exit in front, about 2 inches in diameter, the femur being comminuted extensively. Many fragments of bone have come away This is a type of many similar cases. They are now being put up in Hodgen's splints, and both Mr. Bowlby and Mr. Wallace accord unstinted praise to that ancient but very effective appliance. Good results are almost uniformly attained, even in these cases of extensive bone destruction. The gaps fill up apparently with new bone. Mr. Wallace thinks that many of the fragments retain their periosteum, and act as so many bone grafts. He consequently leaves as many as possible *in situ*. Judging from some specimens of bullets in the possession of the writer, the ingenious Boer, finding that the ordinary Mauser fails in full stopping power, improves upon it by cutting off the nose, and then making four longitudinal grooves along the mantling. A small turning machine for doing this work is, I am told, carried with the commandos. The use of this machine must apparently be left to individual predilection, for many of the ordinary Mauser clean wounds are met with.

Another case I saw at the Portland Hospital, under the care of Dr. Howard H. Tooth, was a very interesting instance of nerve lesions.

Injury of the Brachial Plexus.—A bullet had entered in front of the shoulder just to the outer side of the coracoid process, and had emerged immediately to the right of the fifth dorsal vertebra. There was more or less paresis and impaired sensation of the whole arm, but, according to Dr. Tooth, not complete paralysis of any one muscle, leading to the inference that one or the cords of the brachial plexus had been bruised but not actually divided.

Colonial Nurses.

A recent critic of the authorities on the score of failure to encourage colonial nursing talent may now possess his soul in peace. Ten nurses were sent to Natal last week and four to Orange River; this is in addition to many engaged for the transports and some for the hospitals. It may be safely said that no nurse with satisfactory credentials has gone without an engagement.

Colonial Surgeons.

Colonial surgeons are freely available, and are being employed as far as possible, although the supply is still somewhat in excess of the demand. The station hospital at Woodstock is now, with the exception of the administrative officers, entirely worked by a staff of these gentlemen. Very many of them are also at work at the up country hospitals.

Commissions for Civilian Surgeons?

This war has been productive of many startling departures from established military usage. Let me suggest another, with a view to filling the depleted ranks of the R.A.M.C. Let the authorities offer commissions, without examination, to a certain number of the Volunteer and civil surgeons who have done satisfactory work; and I feel certain that the offer would, in a large number of cases, be gladly accepted to the advantage of the service. Many of these gentlemen have got very fairly into the minutiæ of military detail, and have got so fond of military work that they would even face a moderate pecuniary sacrifice to have the opportunity of going on with it, more especially if some of the older men were allowed to commence as captains, a concession which I do not think the R.A.M.C. officers would resent if it were only made in really deserving cases. In this connection I feel bound to note the excellent good feeling which seems to exist between the regular officers and the civilians. There is no evidence of one iota of jealousy. A combatant officer high in rank said to me the other day that nothing could be better than the granting of commissions to some of the civilians, and made the remark, which I simply quote without endorsing, that there would be far less friction between the combatants and the surgeons if the latter did not enter the service till they had been toned down by eight or ten years of civil life, starting when they did enter as captains or majors.

The P.M.O.s with Lord Roberts and on the Lines of Communication.

Colonel Stevenson is away up country acting as P.M.O. with Lord Roberts's force, and during his absence Colonel Supple is acting as P.M.O. of the Lines in addition to his other duties. The burden of responsibility on this very energetic and capable officer must be very great. Base duties alone are, I suppose, far heavier than they have ever been in any British campaign, not only because of the magnitude of the force engaged, but because almost all this force has been landed at the one base, and, owing to the geographical and climatic conditions, general hospitals have had to be concentrated here instead of being located somewhere on the lines of communication, as ordinarily would be the case. The base jurisdiction reaches as far as Stellenbosch, and within the area covered are three general hospitals, the Portland, the big station hospital, now run up to 420 beds—the camp hospitals at Green Point and Maitland, and several subsidiary institutions, most of which have had to be more or less improved. Added to this, the base P.M.O. has to manage all details of embarkation and disembarkation, make medical provision for all the Boer prisoners, engage civil surgeons and nurses, see after the equipment of new bearer companies, and do a thousand other things, largely through machinery which requires—as all improvised machinery does—constant supervision. How much the country owes to the energetic officer upon whom has fallen the main burden and heat of the day will probably only be found out at the close of the war. He has been ably helped by his painstaking Secretary, Major O'Connor, with whom in my journalistic capacity I have come a good deal into contact, but one hardly can understand how he will be able to supervise another office.

New Hospital at Green Point.

The military authorities have taken the newly erected Corporation Infectious Hospital at Green Point, and are raising it by the aid of auxiliary buildings to an establishment of 300 beds. It will take the place of the present camp hospital, and will be partly dieted and partly nondieted. The venereal wards will come under the latter establishment. This new hospital will relieve the overtaxed Woodstock establishment. Some 60 cases of venereal diseases are, I understand, to be transferred at once.

Augmentation of General Hospitals.

Equipment for an additional 100 beds, drawn from the stores of the defunct No. 5, has been sent out to No. 3. I understand that it is likely that the other general hospitals will be raised beyond the regulation establishment. As this economises *personnel*, it is perhaps preferable to mobilising more hospitals.

WITH THE SOUTH NATAL FIELD FORCE.

From an Occasional Corbespondent.

Water Supply.

This is one of the chief difficulties at the present moment. Under the most favourable circumstances good water is far from abundant in South Natal. Wells may be said not to exist, and drinking water has to be obtained from streams and rivers which are scattered at long intervals apart. The past season has been one of exceptional drought, so that many of the streams are at present dried up. Thus the water has frequently to be taken from stagnant pools, which are often the colour of weak chocolate. The supply of wood in Natal is so limited that to boil the drinking water is out of question. Fortunately each unit is liberally supplied with Berkefeld filters, and when properly used, these are found eminently satisfactory. They have, however, certain drawbacks. The cylinders are so brittle that they require the most careful handling. They clog so quickly that they have to be removed and brushed every two or three minutes. The process of filtration is so slow that few have patience to continue it day by day. When, however, the filter is properly and carefully used it is, perhaps, the best we at present possess.

Rations.

Fresh meat and vegetables are issued when available. On the whole their quality has been excellent. The bread supplied has been particularly good, vastly superior in every way to that which is supplied to the troops in England, where the ration bread is so often heavy, sodden, and indigestible. When fresh rations cannot be obtained, biscuits and tinned meats are issued. These have been of excellent quality, and

many officers and men prefer them to fresh rations. Lime juice is also issued, but only when the troops are in receipt of tinned provisions. It is, however, to be regretted that the regulations do not permit more latitude to the Army Service Corps, and allow them to take a leaf out of the enemy's book. The Boer brings his cattle along with him, and at the same time makes them carry supplies of biscuits and dried rations. Fresh meat is, therefore, always available for him, whilst at the same time he gets rid of much of the long line of baggage waggons which so hamper the movements of British troops.

Clothing.

Khaki is, of course, worn by all ranks. In addition, each soldier has a great coat and the usual grey flannel shirt. When going into battle, however, he is so loaded with ammunition that the great coat has to be left behind. For many nights in succession, therefore, as happened for instance at the battle of Spion Kop, he may have to sleep without either great coat or blanket. In spite of this, the troops have kept wonderfully healthy.

Field Hospitals.

At the time of writing there are with the South Natal Field Force eight field hospitals, namely, six with infantry brigades and two with corps troops. Each field hospital is provided with its own transport. Originally this consisted of two mule waggons, two ox waggons, and two water carts. The mule waggons have been withdrawn from most of the hospitals, as they were required for the use of mounted corps, and additional ox waggons have been issued instead. Each ox waggon is provided with sixteen to eighteen oxen, and is capable of carrying easily from 4,000 to 6,000 lbs. As the total weight of the field hospital equipment, including tents, is in round numbers about 12,000 lbs., it will be seen that the waggons are not overloaded. They are therefore able to move quickly and can keep pace with any, even mounted, troops. By order of the P.M.O., Colonel F. J. Gallwey, C.B., R.A.M.C., each hospital carries, in addition to its ordinary equipment, a large reserve of medical comforts, so as to be prepared for all eventualities—an excellent arrangement which has been found to work admirably, as the hospitals are now more or less independent of the supply column and may be separated from it for days without risk of breaking down. According to the *Field Service Manual*, 1899, the equipment of a field hospital is two medical companions, two surgical haversacks, two field medical panniers one reserve field medical pannier, one field surgical pannier, one field fracture box, and one antiseptic case. By order of Colonel Gallwey each hospital has been allowed to draw one additional fracture box and three additional antiseptic cases. With these additions the equipment is practically perfect. Without them the hospitals would have been quite unable to cope with the large numbers of wounded they have had to deal with since the commencement of the war. Each hospital also carries a large surplus stock of blankets and waterproof sheets, which have added greatly to the comfort of the sick and wounded. Charitable societies both here and in England have sent supplies of underclothing, etc., which were found invaluable, as the kits of many of the wounded were so damaged by the time they reached the field hospitals as to be practically useless. The articles which were found by far the most useful were pyjamas, flannel shirts, and cardigan jackets.

THE IMPERIAL YEOMANRY HOSPITAL.

We are indebted for the following account of the establishment of this hospital to Mr. Alfred Fripp, M.S., F.R.C.S., Chief Surgeon:

Deelfontein (29 miles south of De Aar), March 5th, 1900.

Deelfontein is the site selected for the Imperial Yeomanry Hospital, and is the most northerly at present safe, in fact had we been two days later in leaving Capetown we should not have been allowed, with our 40 nurses, to come so far up, for the region around has broken out in rebellion, and a band of 2,000 to 3,000 are looting. It is not thought, however, that they will do any serious fighting. We met all Lord Roberts's Boer prisoners going down to Capetown—3,700 whites and some 400 blacks, under the charge of Lord Erroll. The railway line from Capetown, 471 miles, is very hard-worked, and we were very fortunate to get away actually within one hour of the first moment that our force was completed by the arrival of the *Majestic* with our 17 other doctors and 10 surgical dressers. Colonel Sloggett, R.A.M.C.—our Principal Medical Officer—and I and 100 men had arrived three days earlier on the *Norman*.

Deelfontein is an excellent site for a hospital, but a lonely spot. However with our 520 beds, and 180 to 200 *personnel*, 100 blacks, and our guard of 50 volunteers, it will soon cease to be lonely. We face east, and have a lovely view of hills (mostly table-topped) many miles distant over rolling plains of karoo-covered ground. At our back is a long kopje, some three or four hundred feet high, which shuts out the prevailing wind. Ostrich farms (two of 13,000 acres each) come up to our land, and flocks of sheep and goats (which fatten exceedingly on the poor looking karoo plant) are in the neighbourhood. There are no trees anywhere in this country for hundreds of miles, except at the older towns and in river beds, both of which are insanitary. But we have a clump of willows which just give relief to the eye, and will be popular with our patients. It is very hot now, both day and night, but in a month it will be very cold at night, and in June and July it is no uncommon thing for an inch of ice to form in the tank on the railway from which our water supply is drawn. But it is always warm during the day.

The water, which has been fully analysed with the best results, is pumped up from a well. We shall sink a second well as a stand-by. Unlike De Aar it is not very dusty here, and the karoo is greener than in most parts travelled through coming from Capetown. The railway line is guarded strongly by troops all the way—especially at the bridges—and in view of the rebels I mentioned the guard has been increased. We only arrived here this morning—100 *personnel*, 19 doctors and 10 dressers, and much baggage, and between 8 A.M. and 8 P.M. a wilderness of store cases was transformed into a camp. It was very hot and very hard work, but the 50 volunteers who form our guard erected a huge marquee, so that we messed 40 in it at 8 P.M.; everybody down to the cooks, who cooked in all three square meals (the first thing we did was to purchase and slaughter a bullock and two sheep) worked magnificently, and the result is that an iron and wood hut has been erected and all the stores put into it. Six tortoise tents have been put up for the officers and sufficient bell tents for the men, and we shall all sleep under cover, and the officers even on beds. Latrines have been dug. Blankets and washing and cooking and eating utensils and tables and chairs have been served out. Every man has his allotted task to perform until the hospital is open. We are hurrying on because the wounded and sick are many, and the other base hospitals are pretty full.

Most of our wards will be huts—corrugated iron outside, wood inside, with, generally, felt between, for, as I said before, the winter is coming on.

All our 40 nurses will be housed in similar huts. The nurses and their 10 maids are due in the *Guelph* in less than a week. It is a journey of 26 hours in the mail train, and as only four can travel in each compartment, they will fill up three long "bogies," and we shall have some difficulty in securing so much accommodation. We hope to have the nurses here and the hospital open by March 14th, which will be nine weeks only since the active work to float the hospital was begun in London.

The feeding and timing arrangements along the railway are a little uncertain, but really the railway has borne the brunt of this war as well as any department involved—with perhaps the sole exception of the R.A.M.C., whose achievements are almost beyond criticism. I have been over all the hospitals at Wynberg and Rondebosch, and one of the hospital trains, and I can only say that I am filled with admiration.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XIX

It is gratifying to observe that the death-rate from disease in the forces in South Africa has been considerably lower than that which occurred among the American army in Cuba. In both instances typhoid has been the most virulent enemy to the soldier. The remedy, which I have persistently advocated as the one reliable measure against typhoid, is that

which was found the most effectual through this campaign—simple boiling of the water. Water boiled in South Africa can very readily be cooled to an almost ice-cold temperature by being suspended in canvas water bags or felt-lined water bottles in the open air. The dryness of the atmosphere produces evaporation so rapidly from the surface of the canvas bag or the saturated felt lining of the bottle that the temperature of the water is rapidly lowered.

The Siege of Kimberley.

An interesting letter from Mrs. Maguire to the *Times* refers to the unusual prevalence of typhoid during the siege, which was inevitable from the insanitary conditions arising. The scurvy, which we were informed by heliograph two months ago was prevalent in Kimberley, was, as I suggested at the time, almost confined to the natives. Lack of milk was undoubtedly one of the chief causes of the high infant mortality. The deaths from different causes towards the end of the siege appear to have averaged about 200 a week.

Feats of Medical Men during the Campaign.

When the war is over there is little doubt that a volume of the greatest interest might be compiled dealing with the services and adventures of medical men during the campaign. The experience of Dr. Mackenzie, one of the best-known professional men in Durban, Natal, is of interest. At the time the war broke out he was returning from Europe with his family after a holiday trip. On landing at Durban he found that war was in progress, and that the Natal Carbineers, in which he held a commission as Major, was already at the front. In twenty-four hours after landing he had left Durban to join his regiment. One of the most brilliant feats performed by the Carbineers—and, indeed, by any body of men throughout the campaign in Natal—was the interception of a body of 300 Boers retreating into the Free State by a squadron of some 120 men in command of Major Mackenzie. The colonists in this squadron having detected the line which the Boer force proposed to take, galloped for an hour under cover of the hills of Natal, and formed an ambuscade on the line which the Boer force was taking. On the arrival of the Boers, Mackenzie's force took them completely by surprise, killing and wounding a considerable number, capturing prisoners, and putting the rest to flight. This brilliant performance may perhaps be cited in support of the view that the training of a surgeon by no means disqualifies a man as a soldier. Dr. Davies, of Johannesburg, has served throughout with the Imperial Light Horse, having twice been taken prisoner by the Boers. Dr. Arthur Fuller, of Kimberley, who was so unfortunate as to lose his only infant son in a railway accident which occurred at the time when trains were crowded with refugees, had travelled to Capetown before the siege of Kimberley began. The siege having commenced it seemed impossible for him to get back to his friends and his duties in the beleaguered city; nevertheless he succeeded, after the battle of Magersfontein, in getting through the Boer line and joining his friends at Kimberley.

THE WELSH HOSPITAL.

The surgical and nursing staff of the Welsh Hospital for South Africa will be inspected by the Prince of Wales at Marlborough House on Monday next.

The staff of the hospital has now been completed as follows:

Surgeons.

Professor Thomas Jones, F.R.C.S., Professor of Surgery, Owens College, Manchester, and Surgeon to the Manchester Royal Infirmary.

Mr. Lynn Thomas, F.R.C.S., Assistant-Surgeon to the Cardiff Infirmary.

Mr. Mills Roberts, F.R.C.S.Edin., Surgeon to the Llanberis Quarries Hospital.

Assistant Surgeons.

Laming Evans M.B.Cantab, F.R.C.S., late House Surgeon, St. Bartholomew's Hospital

Herbert Davies, M.B., Ch.B.Vict., Senior House-Surgeon, Stoke-on-Trent Infirmary.

Five dressers and nine or ten nurses will be appointed.

Mr. Thomas Jones was entertained at dinner on March 22nd by his colleagues at Owens College and by several prominent Welsh citizens of Manchester. The chair was taken by the Principal of the Owens College (Professor Hopkinson, Q.C.), and there were also present the Lord Mayor of Manchester Councillor Briggs), the Dean of Manchester, the Treasurer of the Owens College (Alderman Thompson), the Chairman of the Board of Management of the Royal Infirmary (Mr. Ed. S. Heywood), and a large gathering of medical and lay friends of Professor Jones. In responding to the toast of his health Mr. Jones stated that the Welsh Hospital was expected to leave England in about three weeks' time; that although officered entirely by Welsh surgeons and nurses, and subscribed for mainly by Welsh people, it was prepared to assist the wounded of any part of the British islands; and that the estimated cost of £10,000 was already nearly subscribed. The toast of "The Welsh Hospital" was proposed by the Lord Mayor, and responded for by Drs. Emrys Jones and Lloyd Roberts; that of "The Army, Navy, and Auxiliary Forces," proposed by Mr. Edward Heywood, was replied for by Captain Thorburn, commanding the Owens College Volunteer Company, and by Surgeon-Captain Coates, commanding the Manchester companies of the Volunteer Medical Staff Corps. His Honour Judge Parry also proposed the health of the Chairman. Some excellent music was provided during the evening by a Welsh choir and by Mr. Harrison Brockbank. About seventy persons were present at the dinner, and all expressed the heartiest good wishes for Professor Jones and congratulations upon his appointment.

MEDICAL OFFICERS OF THE FIELD FORCE.

Additional Appointments.

For the following list of medical officers who have recently proceeded, or are proceeding to South Africa, we are indebted to the courtesy of the Medical Department of the War Office:

Table showing the Personnel of Medical Units on the Lines of Communication.

Unit and Place of Mobilisation.	Names.	Remarks.
No. 11 General Hospital (Depôt, R.A.M.C., Aldershot).	*Royal Army Medical Corps.* Major H. Carr (a) ,, E. J. Lawless ,, E. L. Freer Captain C. F. Wanhill Lieutenant H. P. W. Barrow ,, J. R. Atkinson ,, J. K. Tomory ,, A. H. McDougall ,, J. Clay *Civil Surgeons.* Mr. P. J. Bodington ,, J. M. Coates ,, A. P. B. Ellis ,, A. Gilmour ,, E. G. Goddard ,, J. C. Hibbert ,, W. H. Rowell ,, W. H. Steele ,, J. F. Whelan	134 non-commissioned officers and men (including 45 St. John Ambulance Brigade), and 1 special cook. 2 warrant officers to join the unit on its arrival in South Africa. Arrangements for charge of x-ray apparatus to be made in South Africa.

(a) Registrar and Secretary, and to act as officer commanding the unit till its arrival in South Africa.

The P.M.O., Field Force, South Africa, to detail a Lieutenant-Colonel, R.A.M.C., in South Africa, to command this hospital.

THE QUEEN'S VISIT TO THE WOUNDED, HERBERT HOSPITAL, WOOLWICH.

On Thursday, March 22nd, the Queen visited the Herbert Hospital, Woolwich, accompanied by Princess Christian and Princess Victoria of Schleswig-Holstein. Her Majesty was attended by Colonel the Hon. H. C. Legge and Colonel Davidson, whilst Sir Arthur Bigge, the Countess of Antrim, and Miss Emily Loch were the only other members of her suite. Major General J. F. Maurice, C.B., and the staff of the Woolwich Command were in attendance. The Principal Medical Officer, Lieutenant-Colonel U. J. Bourke, R.A.M.C., received the Queen at the Herbert Hospital, and the following officers were presented: Lieutenant-Colonel J. J. Lamprey, R.A.M.C.; Civil Surgeons C. S. B. Eames, C. J. Jackson, and T. Hartington, and Miss Vaughan. Acting Lady Superintendent, R.A.M.C. Passing through the main archway, a covered platform had been erected opposite the door of the long corridor in which the convalescents recently home from South Africa were paraded, and down this the Queen passed to the grand pavilion, where every wounded soldier in the wards was seen and spoken to by the Queen.

To every man Her Majesty gave a bunch of hot-house flowers, with a kind and gracious word of sympathy to each. The name of the regiment and the name of the engagement and the nature of the wounds were mentioned to Her Majesty in each case. Princess Christian and Princess Victoria of Schleswig-Holstein also conversed with the wounded, and were greatly interested in everything they heard from them, the battles

they had been engaged in, and the injuries they had sustained. Every gracious word of sympathy from the Queen was most gratifying to the sick and wounded, as showing a tender solicitude for them. When the Queen left the Herbert Hospital for Windsor it was with expressions of pleasure at all she saw, and the arrangements made for her visit.

Lieutenant-Colonel Ulick Bourke, R.A.M.C., has received the following telegram:

"Windsor Castle. I am desired by the Queen to express to you Her Majesty's entire satisfaction with all she saw at the Herbert Hospital on Thursday. BIGGE."

During the week the *x*-ray apparatus has been used for locating retained Mauser bullets and shell fragments still retained in the injured recently admitted from South Africa. Messrs. Arnold and Sons have been engaged in fitting artificial limbs.

THE R.A.M.C. SOUTH AFRICA FUND.

AT a meeting held at Leeds, under the chairmanship of Dr. J. E. Eddison, a committee was appointed, on the motion of Mr. Pridgin Teale, seconded by Dr. de Burgh Birch, Surgeon-Captain commanding the Leeds Company Volunteer Medical Staff Corps, to co-operate with the Central Committee in London in providing comforts required for the non-commissioned officers and men of the Royal Army Medical Corps and the various ambulance corps.

THE SPECIAL SUBSCRIPTION.

The following is a list of subscriptions to the special fund received by the Editor since the list published in the BRITISH MEDICAL JOURNAL of March 24th:

THE HALF-CROWN SUBSCRIPTION LIST.

	Half Crowns.
Mr. W. K. Miley (Monkstown)	1
Mr. W. E. Soffe (East Harling)	1
Surgeon-Major G. K. Poole (London)	4
Dr. L. Grant (London)	2
Surgeon J. O'Regan, R.N. (Bermuda)	1
Mr. G. W. Charsley (Great Malvern)	1
Major W. J. Buchanan, I.M.S. (Bhagalpur)	1
Mr. F. Barrow (Rothbury)	2
Mr. L. A. Francis (Uxbridge)	1
Sir A. Lauder Brunton (London)	1
Sir Felix Semon (London)	1
Mr. H. H. Williamson (Andover)	1
Surgeon-Major-General J. Davis, A.M.S. (Southsea)	16
Mr. J. W. Greenwood (Scarborough)	4
Per Mr. A. W. Mayo Robson (Leeds):	
Miss Newboult	1
Miss Cranswick	1
Miss Atkin	1
Miss Rudgard	1
Miss M. Newboult	1
Mr. Marwood	1
Mr. Newboult	1
Miss Y. C. Newboult	1
Mr. Palmer	1
Mr. Robinson	1
Mr. Coning	1
Miss A. Cranswick	1
Mr. Knowles	1
Mr. G. Gise	1
Mr. Brock	1
Mr. F. R. Robinson	1
Miss Crickett	1
Mr. Deane	1
Mr. Barlow	1
Mr. Thompson	1
Mr. Cross	1
Mr. Y. Brook	1
Mr. Y. Haslehurst	1
Mr. J. W. Chapman	1
Per Mrs. W. L. Hunter (Pudsey):	
Dr. Squire (Pudsey)	1
Dr. Hunter ,,	1
Dr. Kershaw ,,	1
Dr. Brereton (Gildersome)	1
Major Hunter (Londonderry)	4
Per Brigade-Surgeon Lieutenant-Colonel Maconachie (Aberdeen):	
Mrs. Simpson and Friends (Alford)	9
Per Mrs. Alan Covey (Southampton):	
Lady Birt	2
Dr. E. F. Syrett	2
Mrs. Hillas Crampton	1
Per Dr. J. R. Hamilton (Hawick):	
Dr. McLeod	1
Dr. Bryden	1
Dr. Mair	1
Dr. Barrie	1
Dr. Lorraine	1
Dr. Bannerman	1
Dr. Dixon	1
Dr. Purdom	1
Dr. Williamson	1
Dr. Elliot	1
Dr. Hamilton	1
Per Mr. W. M. Beaumont (Bath):	
Mr. F. K. Green ,,	1
Mrs. F. K. Green ,,	1
Mr. H. L. Brownlow ,,	1
Dr. F. H. Blaxall, R.N. ,,	1
Mr. C. E. S. Flemming (Freshford)	1
Dr. Benj. Cocks (London)	1
Mr. R. L. Willcox (Warminster)	1
Mr. H. Norton (Batheaston)	1
Dr. Bannatyne (Bath)	1
Mrs. Bannatyne ,,	1
Mr. T. Martin (Temple Cloud)	1
Dr. C. R. Wood (Frome)	1
Per Dr. J. St. Clair Boyd (Belfast):	
Sir Otto Jaffé	8
Dr. Andrew McConnell	4
Dr. McKinney	1
Dr. Fullerton	1
Dr. Colville	1
Dr. Tennant	1
Dr. Coates	1
Dr. Hall	1
Dr. R. M'Cullough	1
Dr. Scott Core	1
Dr. John Campbell	1
Mr. T. Sinclair Kirk	1
Professor Whitla	1
Professor Byers	1
Per Dr. J. Harper (London):	
Dr. T. Aspinall	1
Dr. Webb	1
Dr. Marsden Low	1
Dr. E. U. Barton	1
Dr. Campbell	1
Dr. Maitland	1
E. M. S.	1
Dr. Gayer	1
Dr. Menzies	1
Dr. Herbert Menzies	1
Mr. J. H. Ceely, F.R.C.S.	1
Mr. Conolly	1
Dr. Brown	1
Dr. Twynam	1
Dr. Clifford Beale	4
Dr. C. N. Barton	1
Dr. Williams	1
Mr. Sutton Townsend	1
Dr. Sheldon	1
W. S. Sheldon, L.R.C.P.	1
A. J. Sheldon, L.R.C.P.	1
Dr. Whitlock	1
Dr. Coates	1
Dr. White Cooper	1
Dr. Forman	1
Lieutenant-Colonel Harrison	1
Dr. Barton	1
Dr. de Wolf	1
Dr. Griffiths	2
Dr. Whitelegge	1
Dr. Dockrell	1
Mr. J. H. G. Hill	1
Mr. Blake	1
Mr. Lloyd	1
Dr. English	1
Dr. Lehane	1
Per Sir William M. Banks (Liverpool):	
Dr. T. D. Leigh	1
Dr. Frank Walker	1
Dr. Ernest Nevins	1
Dr. J. R. Logan	1
Dr. C. Sharp	1
Dr. H. S. Mitchell	1
Dr. Samuels	1
Dr. Adam	1
Dr. Moss-Bristow	1
Dr. Crawford	1
Dr. Westby	1
Dr. H. Wallace	1
Dr. Carter	1
Dr. Edis	1
Dr. Graham-Martin	1
Brigade-Surgeon Nicholson	1
Dr. Douglas-Crawford	1
Dr. T. H. Bickerton	1
Dr. S. H. House	1
Dr. K. S. Archer	2
Dr. Llewellan Morgan	1
Dr. Bailey	1
Dr. J. M. Hunt	1
Dr. T. R. Bradshaw	1
Dr. Beaman (Haydock)	2
Dr. Street	2
Dr. W. Williams	1
Dr. J. J. O'Hagan	2
Dr. Blackledge	1
Per Mr. C. T. Quiller (London):	
Dr. G. D. Wilson	1
Dr. Lennane	1
Dr. Sutcliffe	2
Dr. Caiger	4
Dr. Richards	1
Mr. Herbert Turner	2

We have also received £1 per Miss Paget (London), collected at the Midwives' Institute after lecture given by Mr. F. R. Humphreys; and 10s. 6d. per Sir W. M. Banks (Liverpool), from Dr. W. B. Paterson; and, per Mr. C. T. Quiller, £1 1s. from Dr. Crisp, 10s. 6d. from Dr. Cronin, and 10s. 6d. from Dr. Wonnacott.

In order to facilitate the work of collecting the small sums, the following gentlemen have expressed their willingness to receive subscriptions from gentlemen residing in their neighbourhood:

Mr. W. M. Beaumont, 4, Gay Street, Bath.
Dr. Henry J. Blakesley, 46, London Road, Leicester.
Dr. J. St. Clair Boyd, 27, Victoria Place, Belfast.
Dr. E. Cureton, College Hill Court, Shrewsbury.
Surgeon-Major-General J. Davis, 22, Merton Road, Southsea.
Lieutenant-Colonel G. A. Emerson, I.M.S., 49, St. Michael's Road, Bedford.
Mr. John W. Fry, Blythesbury, Maidstone.
Dr. Harcourt Gervis, 2, Lyncroft Mansions, West Hampstead, N.W.
Mr. R. Balfour Graham, F.R.C.S.E., Seaview House, Leven, Fife, N.B.
Dr. J. Stenson Hooker, Rothesay Bank, Clive Vale, Hastings.
Dr. G. P. Longman, 14, Wickham Avenue, Bexhill-on-Sea.
Major R. C. Lever, Denton House, Iffley, Oxford.
Brigade-Surgeon-Lieutenant-Colonel G. A. Maconachie, I.M.S. (retired), 39, Queen's Road, Aberdeen.
Mr. Edward Mathews, Mount Prospect, Redditch.
Dr. Herbert Peck, St. Helen's, Chesterfield.
Mr. C. T. Quiller, St. Paul's Close, Rectory Grove, Clapham, S.W.
Major J. Raby, Ashford House, Barnstaple.
Dr. John Ruxton, 4, Brighton Parade, Blackpool.
Dr. Henry Simpson, Glen Morfa, Conway.
Dr. W. Johnston Smyth, Durley Gardens, Bournemouth.
Mr. Arnold Thomson, F.R.C.S.I., Castle Hill, Maidenhead.
Colonel J. Tidbury, R.A.M.C., Medical Officer in Charge, Barracks, Winchester.
Dr. Henry Waldo, 19, Pembroke Road, Clifton, Bristol.
Mr. E. C. R. Ward, F.R.C.S.I., Belmont, Castle Connell, co. Limerick.

Subscriptions may also be sent to the Editor of the BRITISH MEDICAL JOURNAL, and will be acknowledged in the JOURNAL. The amount received for the Half-crown Fund up to and including Wednesday, March 28th, by the Editor is £365 14s. 0d. Cheques and Postal Orders should be made payable to the "R.A.M.C. South Africa Fund" and crossed "Holt and Co."

THE HEALTH OF DUBLIN.

THE Committee appointed to inquire into the health of Dublin met on March 19th, and inspected a large number of the most congested portions of the insanitary areas, courts, yards, etc., in both sides of the city. The Committee held sittings for evidence on March 20th, 21st, and 22nd:

Mr. Cooke, Honorary Secretary of the Society for the Prevention of Cruelty to Children, attributed nine-tenths of the cases of cruelty to drink. The insurance of children, as carried out by the poor, was immoral. The children dealt with by his Society were dirty and neglected, and the parents had a direct financial interest in their death.

Mr. Collins, Chief Inspector of Dairies, said there were at present 236 dairy yards within the city, many in congested districts. No dairy sheds should be allowed within 40 feet of a dwelling-house in the city.

Mr. Geoghegan, President of the Victuallers' Society, thought properly equipped slaughterhouses for butchers would be better than the present abattoir.

Mr. McBride, of the Tailors' Association, called attention to the great

risk the public incurred by purchasing woollen garments that were made up in densely crowded and insanitary tenements.

Dr. Kidd, Master of the Coombe Hospital, regarded the knacker's yard within 300 yards of the hospital as injurious to the patients. Sanitary officers should be so independent that their reports would be impartial.

Dr. Delahoyde, a dispensary medical officer, thought the high mortality was due to the dirty condition and the overcrowding of the tenement houses. He believed the prevalence of consumption was due to the dampness of the houses.

Sir Charles Cameron protested against the interment of bodies in vaults underneath churches in the city. The gases set free by the opening of these vaults, as well as the gases which escaped from the unopened ones, were a source of danger to health.

The Town Clerk stated that the Corporation had spent £2,300,000 since 1880 in clearing insanitary areas and in erecting new buildings, etc. On account of the many interests involved the Corporation could not acquire unhealthy areas at a reasonable price, unless further powers were obtained and a firm arbitrator appointed.

After the inquiry was declared to be closed, Dr. James Little attended and handed in a statement, which the Committee read, and decided to publish as portion of the appendix to their report.

Before meeting to consider their report, the Committee arranged to inspect the sanitary conditions of Liverpool and Manchester, which was done on March 26th and 27th.

NOVA ET VETERA.

THE TERM "MOONCALF."

A Teratological Note.

By J. W. Ballantyne, M.D., F.R.C.P.Edin.

The word "mooncalf" has three meanings given to it in most English dictionaries. In Webster's *Unabridged* (Goodrich and Porter), for instance, it is defined as (1) a monster; false conception; (2) a mole, or mass of fleshy matter generated in the uterus; and (3) a dolt; a stupid fellow. Ogilvie, in the *Imperial Dictionary* (New Edit., III, 1882), gives the same three meanings, and adds that it is comparable to the German "Mond-kalb," a person or conception influenced by the moon. In Foster's *Illustrated Medical Dictionary* (IV, p. 2337), its German equivalents are stated to be "Mondkalb" or "Mohnkalb," and it is defined as (1) a fœtal monstrosity, and (2) the translation of an old term for a fleshy mole. J. O. Halliwell in his *Dictionary of Archaic and Provincial Words* (II, p. 560, London, 1847) quotes Cotgrave's definition, "a mooncalfe, a hard swelling or shapeless peece of flesh in the wombe, which makes women beleeve they are with child when they are not," and goes on to state that the term was often applied to a monster or a fool, and that in Somerset a crying child is so called.

It is by no means easy to determine when the word first came to be used in the above-mentioned sense. Several authors refer back to Pliny; but of course the word used by him is *mola*. Thus, in the *Natural History* (lib. vii, cap. 15) it is said, "Solum autem animal menstruale mulier est: inde unius utero, quas appellarunt molas. Ea est caro informis, inanima, ferri ictum et aciem respuens," and again in lib. x, cap. 64, we read, "Molas, de quibus ante diximus, gigni putant, ubi mulier non ex mare, verum ex semetipsa tantum conceperit." It is in the translation of Pliny's works by Philemon Holland (*The History of the World, commonly called the Natural Historie of C. Plinius Secundus*, translated into English by Philemon Holland. London, 1601) that the word "mooncalf" appears as the equivalent of "mola." Holland translates the above passages as follows: "Of all living creatures, a woman hath a flux of bloud every moneth; and hereupon it is that in her wombe only there are found a false conception called mola, i. a moonecalfe, that is to say, a lumpe of flesh without shape, without life, and so hard withall, that uneth a knife will enter and pierce it either with edge or point;" "As for false conceptions or moonecalves (whereof we spake before), some thinke they are engendred of the woman's seed only; namely when she is not conceived by a man, but by herselfe." In another passage[1] Pliny speaks of the virtues of goosegrease, stating, as Holland renders it[2]: "Likewise there is not a better thing for to dissolve and scatter mooncalves and such like false conceptions in the wombe." It is perfectly evident, therefore, that in the beginning of the seventeenth century the word "mooncalf" was regarded as a synonym of uterine mole, and meant the same structure or rather structures — for example, blood clot, diseased decidual membranes, uterine tumour, etc. It may also be supposed that the word "calf" meant not the young of the cow but a swelling or lump, as in the expression "calf" of the leg. "Mooncalf" might, therefore, be freely rendered "menstrual lump."

In Viardel's *Accouchemens* (Paris, 1671) the word "mole" is used to signify a round fleshy mass engendered in the uterus; but it is very interesting to find in the German translation (Franckfurt, 1676) the term *monkalb* or *mutterkalb* used constantly as its equivalent. In this sense it seems to have been commonly employed in Germany in the seventeenth and eighteenth centuries. Zeller, for instance, entitles his dissertation "De molis virilibus mirabilibus, von wunderbaren Mannskälbern oder Vatergewächsen" (Tübingen, 1696); G. Prauser had an article, "Von Molis oder Mondskalbern" in 1725; and G. W. Wedel wrote "Von der Erzeugung und dem Unterschied der Mondkalber" in 1763.

That "mooncalf" was also used as a synonym of monster and monstrosity becomes apparent from several passages in Shakespeare's *Tempest*. In this play Caliban, the son of the "foul witch, Sycorax," is on several occasions called a "mooncalf," for example, "the siege of this mooncalf," and "the dead mooncalf's gaberdine," Act II, sc. 2. He is described as "a freckled whelp, hag-born—not honour'd with a human shape," "half a fish, half a monster."

> This misshapen knave,
> His mother was a witch, and one so strong
> That could control the moon, make flows and ebbs,
> And deal in her command, without her power.

Whether Shakespeare in this passage hinted at a connection between the witch-mother's control of the moon and her mooncalf son or is merely playing upon words is not clear; but the latter hypothesis is the more probable, and elsewhere in the play the diabolical origin of Caliban is referred to, Prospero saying:

> Thou poisonous slave, got by the devil himself
> Upon thy wicked dam, come forth.

In an interesting work by Ernst Antons Nicolai, published at Halle in 1749 and entitled *Gedancken von der Erzeugung der Misgeburthen und Mondkälber*, several very evident monstrosities (chiefly united twins) are described, and clearly the terms *Misgeburthen* and *Mondkälber* are regarded as synonymous.

In its meaning of monster we may take it that mooncalf is derived from moon and calf, the latter word signifying in middle English, Anglo-Saxon, German, etc., the young of the cow or other animal, and being related to the Greek βρεφος (embryo) and to the Sanskrit *garbha* (fœtus or embryo); while "moon" may be supposed to refer to the belief in the influence of lunar power over the unborn infant which was very firmly established in the Middle Ages. Mooncalf, then, was in this sense an embryo or fœtus become monstrous under lunar influence. The word "calf" (the calf of the leg) seems to be of quite different origin, being derived from the Icelandic *kalfi*, and related to the Irish and Gaelic *kalpa*. At the same time a connecting link is found between the two meanings of mooncalf when we speak of a monstrosity which is also a shapeless lump of flesh, as is the case with the fœtus anideus or amorphus, or with the dropsical fœtus (*Wasserkalb*). In this way transitions between the two meanings may be found and the two uses reconciled.

In connection with the subject of the power of the moon over the growth of the infant in the womb, allusion may be made to the discussion on the meaning of the word "moonblasting" in *Notes and Queries* (8th series, iv, pp. 288, 432, and 475, 1893). A correspondent (James Hooper) writes: "Milton in his *Apology for Smectymnuus* refers to 'thanks in the woman's churching for her delivery from sun-burning and moonblasting, as if she had been travelling, not in her bed, but in the deserts of Arabia.' When, and by what authority, was the passage in which the above occurs removed from the Prayer Book? What meaning was attached to the term 'moonblasting?'" In reply it was stated that the reference was to Psalm cxxi, 6, "The sun shall not smite thee by day, neither the moon by night." According to another writer the term "moonblasting" as applied to women with child had its origin in the belief that the beams of the moon caused an

[1] *Nat. Hist.*, lib. xxx, cap. 14.

[2] *Transl.* II, p. 397.

abortion known as a mooncalf. Starblasting, but not moonblasting, occurs in Shakespeare (*Lear*, iii, 4). The third meaning of mooncalf (a dolt or stupid fellow) is easily understood, *cf.* lunatic, lunacy.

THE INEBRIATES ACT, 1898.

Action of the London County Council.

As there has been a good deal of ill-informed criticism in reference to delay on the part of local authorities to put in force the powers conferred by the Inebriates Act of 1898, it is satisfactory to learn, from a report presented this week to the London County Council, that vigorous action is being taken by the Committee to which this question has been referred. The Committee in their report say:

At the present time there are only three reformatories under the Act in the kingdom, namely, the Royal Victoria Homes, Brentry; the Duxhurst Reformatory, for Protestant women; and the St. Joseph's Reformatory, Ashford, for Roman Catholic women. We have, as already reported, been in negotiation with the managers of the Royal Victoria Homes, but have failed to come to any arrangement. The managers have declined to enter into any agreement unless the Council would pay a contribution towards capital expenditure in addition to contributions towards the maintenance of the inmates, and ..... any temporary arrangement with the managers of the homes is impracticable owing to the managers declining to enter into an agreement for a term of less than five years. With the managers of the Duxhurst and St. Joseph's Reformatories the Council has, it will be remembered, on our recommendation, entered into agreements for the reception of female inebriates. There are now 19 London inmates at the Duxhurst Reformatory, which is the full number for which there is accommodation. At the date of the latest return there were 36 London inmates at the St. Joseph's Reformatory, and there was still accommodation available for about 20 more.

Having regard to the insufficiency of accommodation for Protestant women at the Duxhurst Reformatory, and the refusal of the managers to receive patients of the prostitute class, who form a large proportion of those who come before the courts, we have been in negotiation with the Salvation Army, with the managers of various penitentiaries, who, we understood, had under consideration the question of applying for certificates under the Act, and have done all we could to find accommodation for those who could not be received under the terms of our existing agreements. Our efforts have not, however, been successful, and failing the provision of accommodation in any other way, the Council, on our recommendation, decided to provide accommodation itself, and has, for this purpose, acquired the Farmfield Estate, and arrangements are now being pushed forward as rapidly as possible for the adaptation of the buildings on the estate for the purpose of a reformatory for females. In order that no avoidable delay may occur in bringing the buildings into use immediately they are ready, a superintendent has already been appointed, and we are in conference with her with a view to the completion of the arrangements with regard to the staff and other details. We hope to have the reformatory ready for the reception of patients not later than the middle of June.

With regard to the accommodation for male inebriates we have been in negotiation with the Church Army, who have a reformatory in course of construction near Dorking, and with the Managers of the Lingfield Training Colony, which has been visited by our Chairman. The Managers of the Colony are prepared to make arrangements in the existing buildings at the Colony for the temporary accommodation of from ten to fourteen inmates within a few weeks, and to proceed with the erection of a permanent reformatory at which they propose to provide accommodation for twenty-five inmates. This accommodation they are prepared to make available for the reception of London inmates on the terms stated in our recommendation, which is as follows:

"That an agreement be entered into with the managers of the Lingfield Training Colony for the reception of male inebriates from the County of London at the Colony in one of the existing buildings to be adapted for the purpose pending the erection of a permanent reformatory at the Colony, and subsequently at such reformatory, the Council to pay a rate of 1s. per day per head towards the maintenance of each such patient received and maintained at the Colony. The agreement to be for a term of not less than four years, and to be subject to the condition that the Council will arrange that when there are vacancies for the reception of reformatory patients at the Lingfield Colony, no male inebriate committed from within the County of London towards whose maintenance the Council is liable to contribute shall be sent to any other than the Lingfield Reformatory during the four years for which the agreement is to last, and while the arrangements for the care and maintenance are carried out to the Council's satisfaction, the four years for which the agreement is to last to commence from the date at which the temporary accommodation is available, and that it be referred to the solicitor to complete the agreement."

This report, subject to a slight amendment securing to the Council the power of sending male inebriates to its own reformatory at Horley, was carried *nemine contradicente*.

THE PLAGUE.

Prevalence of the Disease.

India.

In the City of Bombay on March 1st, 2nd, 3rd, 4th 5th, and 6th, there occurred 134, 152, 146, 138, 10°, and 133 cases of plague respectively, and 90, 85, 108, 98, 100, and 105 deaths from the disease. Practically about 100 deaths a day were occurring during the first week in March, and the latest telegrams afford no signs of abatement. On March 2nd, three servants in the compound of Government House, Malabar Point, were reported to be suffering from plague. Throughout the Bombay Residency plague continues at most of the old centres, and it has appeared at several places previously exempt.

Plague is spreading far and wide in the Bengal Presidency, and as many as 4,725 deaths occurred from the disease during the week ending March 21st. In Calcutta 744 deaths from plague are recorded, being actually in excess of the Bombay fatalities. In the Patna District as many as 2,044 deaths occurred during the week ending March 21st. Lord Curzon is doing all that he can to encourage the natives to be inoculated; but although a few come forward, it is mostly with the idea of obtaining relief from the inconveniences of the plague measures.

From the Mysore Province there is better news. At the beginning of March the affected districts in the Province fell in number from 41 to 26, and the actual cases in those still affected were much fewer. The southern parts of the peninsula experience the returning heat of spring at an earlier date than those farther north, and it is just possible that this accounts for the difference between the northern and southern reports.

Mauritius.

During the week ending March 22nd, 8 fresh cases of plague occurred in the island and 5 deaths from the disease.

United States.

Since the sporadic case of plague, which occurred in the Chinese quarter of San Francisco on March 6th, no other has been notified. It is said that the authorities have inspected and disinfected the Chinese quarter of the city. Except by evacuation and by destruction of the Chinese quarter of San Francisco by fire, it is scarcely conceivable that this pest house could have been disinfected.

MIDWIVES BILL.

THE COLLEGE OF PHYSICIANS OF IRELAND.

We understand that the Royal College of Physicians of Ireland is taking steps to have the Midwives Bill opposed at its third reading, unless the scope of the Bill is extended to Ireland. There are a great number of women trained as midwives in the lying-in hospitals of Ireland—particularly in the Rotunda and Coombe—and the College considers that it is unfair that these women should have to proceed to England for examination by the Central Board when the extension of the Bill to Ireland would give that country a representation on the Central Board, and would provide for an Irish examination centre.

On the other hand, it is pointed out that the College has itself ceased to grant a certificate to midwives and nurse-tenders, and as the certificates of the existing midwives would be recognised by the proposed Central Board, the interests of the College are not directly affected.

The following letter has been addressed to Irish members of Parliament and to the members of the Grand Committee on Law:

Royal College of Physicians, Ireland, Kildare Street, Dublin.
March, 1900.

Dear Sir,—I am directed by the President and Fellows of the Royal College of Physicians of Ireland to call your attention to the serious injury which will be inflicted upon Irish-trained midwives and upon Irish training institutions should the Midwives Bill now before Parliament be enacted in its present form.

One hundred and fifty years ago the Rotunda Lying-in Hospital, Dublin, was granted a Royal Charter with the express object of training, examining, and certifying midwives, and since then Dublin has been regarded as the most important school of midwifery in the United Kingdom, and consequently attracts a large number of English women annually to its training schools. The College considers that it will be an injustice to women trained and examined at considerable expense in this country if they should be compelled to present themselves for re-examination before a Central Board in England should they determine to practise in that country. For these reasons the President and Fellows are of opinion that the Midwives Bill should be extended to Ireland.—Yours faithfully,

James Craig, M.D.,
Fellow and Registrar.

PROPOSED MEETING IN LONDON.

We are asked to state that a meeting of medical and lay constituents of the boroughs and divisions of South-east London and adjacent parts of Kent and Surrey will be held to consider measures to resist the registration of midwives, and particularly the Bill now before Parliament, at the Cannon Street Hotel, London, E.C., on Wednesday next at 4 P.M. The chair will be taken by Mr. George Brown, Direct Representative for England on the General Medical Council, and the members of Parliament for the boroughs and divisions comprised have been invited to attend. It is proposed to move the following resolutions:

(1). That this meeting of medical constituents of the boroughs and divisions of South-east London and adjacent parts of Kent and Surrey condemns the registration of midwives and especially the Bill now before Parliament for that purpose as a retrogressive measure, a reversal of the humane and enlightened policy of the Medical Acts, in violation of the

rights of medical practitioners, and in breach of public faith; and as mischievous and degrading class legislation endangering the health and lives of poor women and infants by providing attendance in midwifery of less efficiency than that now required by law and provided under the Poor Law Acts and Orders.

(2) That members of Parliament for the boroughs and divisions represented by this meeting, and the direct representatives on the General Medical Council, are earnestly invited to unite with their constituents in resisting such registration, and particularly the Midwives Registration Bill now before Parliament

(3) That this meeting resolve itself into a committee for the purposes of the foregoing resolutions, and particularly of organising a deputation to the Lord President of the Privy Council.

Dr. F. S. Toogood, The Infirmary, 282, High Street, Lewisham, S.E., Chairman of the Joint Committee of the Societies convening the meeting, will give further information, and expresses the hope that "even if the Midwives Bill is read a third time in the Commons before Easter that still the profession by meetings and petitions will convince the House of Lords that the Bill is as dangerous to the public as it is destructive of the rights of the profession."

The report of the proceedings in the Grand Committee on Law will be found at page 795.

LITERARY NOTES.

A NEW novel by Dr. Weir-Mitchell, entitled, *The Autobiography of a Quack*, which has been running in the *Century Magazine* as a serial, will shortly be published in this country by Mr. Fisher Unwin.

Mr. Fisher Unwin will also publish a volume bearing the title *Nursing Tommy Atkins in Natal*, by Lady Sykes.

The *Revue Internationale de Thérapie Physique* is the title of a new periodical which is about to appear. It will be edited by Dr. Colombo of Rome, and will be published fortnightly in French and Italian alternately. The first number will be issued on March 31st.

Among Messrs. J. and A. Churchill's forthcoming publications are the following: A treatise on *Diseases of the Ear*, second edition, by Mr. Mark Hovell, Aural Surgeon to the London Hospital; *The Clinical Examination of Urine*, with an Atlas of Urinary Deposits, including 41 original plates (mostly coloured), by Dr. Lindley Scott; the third edition of Clowes's and Coleman's *Elementary Practical Hygiene*; and *Chemistry: an Exact Mechanical Philosophy*, by Frederick G. Edwards, Inventor of Atonic Models.

It is stated that a *Handbook on Gnats or Mosquitos*, by Major George M. Giles, I.M.S., is in the press. Messrs. Bale, Sons, and Danielsson, Limited, 85, Great Titchfield Street, London, W., are the publishers.

The growing interest in tuberculosis is shown by the appearance of new journals specially devoted to the subject. We announced some time ago the issue of a *Zeitschrift für Tuberculose und Heilstättenwesen*, under the editorship of Professors Gerhardt, von Leyden, and B. Fraenkel, with the collaboration of Professor Baccelli, Professor Bouchard, Dr. Cornet, Professor Flügge, Professor von Ziemssen, Dr. Landouzy, and others. An American journal devoted to the same object is the *Journal of Tuberculosis*, a quarterly magazine devoted to the prevention and treatment of tuberculosis. It is published at Asherville, North Carolina, and is edited by Dr. Karl von Ruck. Not long ago we received the first number of the second volume. The *Journal* is intended, in the words of the editor, to be "a representative organ of American endeavour and progress in the prevention and treatment of tuberculosis." It contains more than a hundred octavo pages of reading matter, and is well printed and full of useful and interesting information. The editor states that it already has nearly 4,000 subscribers. We mention these facts by way of stimulating the editors of the journal of our own Association for the Prevention of Consumption and other Forms of Tuberculosis to a generous rivalry, and encouraging them to *donner un peu plus de volée à leurs cloches*.

Virchow's Archiv for October 5th, 1899, contains a note on the English Sweating Sickness, by Professor Ebstein, of Göttingen. He cites two passages from unpublished records, to which his attention has been called by Dr. J. Pistor, headmaster of the Kassel Gymnasium. One of these passages is from Konrad Klüppel's *Historia Gualdecensis*, of which there is a manuscript copy in the Darmstadt Public Library. The author lived at Korbach in the latter part of the fifteenth and in the first half of the sixteenth centuries. He was, therefore, contemporary with the events which he describes. The passage, which is in Chapter XVII of the Third Book, is as follows:

Lest, however, in such a universal stress of anxiety there should be any safety for miserable mortals, behold a wretched and unheard-of plague suddenly breaks forth, coming from the ocean across which it was carried on the swift breath of the north wind, and forthwith spreading swifter than the south-east wind overthrows and destroys. The name of this sudden, pestilential, and pernicious disease was the British Sweat, because it had for forty years raged with peculiar severity, and even now slays thousands. The minds of mortals were marvellously astonied by the sudden novelty and swiftness of the scourge; nobody felt safe; nobody looked to see the morrow; the hour of death, always uncertain, was in the midst of such terrible havoc, such tremendous disturbance, most uncertain, inasmuch as that most deadly plague killed a man within twenty-four hours, most often even in less time. First of all the heads of those attacked began to burn with heat, the eyes were suffused with redness, there was buzzing in the ears, anxious countenances, frequent and foul breath, then sneezing, quickly followed by most profound sleep. Men's bodies, which were outwardly somewhat reddened, burnt inwardly with such heat that they could not bear even the thinnest coverings. The sole and most easily applied remedies were believed to be to keep the patient awake, and the heaping on his burning body of as many coverings as possible, and those rough in substance; it was considered deadly if even the slightest breath of air were allowed to blow on him. On the right side and on the left stood persons plucking at the recumbent sufferer and worrying him, in the strenuous effort to keep off sleep which it was thought would be fatal. Hence it fell out that many were imprudently killed by excessive heat who otherwise had it been applied in moderation would have lived. This dire scourge in one or two days carried off thirty citizens of Korbach in the flower of their strength and age. The disease with most fatal severity spread throughout almost the whole of Germany, but only in one month, to wit September, and overwhelmed many thousands of men with sudden and unexpected destruction.

The other passage is taken from the municipal records of Korbach. It is to the following effect:—

In the year 1529 a new unheard-of disease called the English Sweat spread to Lübeck and Hamburg and in a short time many men died thereof. The same disease raged in the whole of Saxony and in Westphalia and reached this place of the Nativity of the Virgin Mary. On Thursday and Friday 31 men and women died, and besides more than 500 folk fell sick of it; these it is said must sweat and keep in bed for 24 hours and no breath of air must be allowed to reach them nor must they eat anything. Afterwards the disease spread from here to Frankenburg, Wetter, Marburg, and onward in the same direction to Hesse along the course of the Lahn river. It did not stay long in one place.

According to Hecker, the sweating sickness appeared for the first time in England in 1486 after the Battle of Bosworth. It broke out again in London in the summer of 1487, but did not spread so widely through the country as in the previous year; it disappeared before the autumn. A third outbreak occurred in July, 1518. Starting from London, it spread in the ensuing six months over a large part of England, and even reached Calais, attacking, however, only the English people there. A fourth epidemic broke out in the British Isles in 1529, and this time the disease spread over a large part of the Continent of Europe. Beginning in London in May 1529, it reached in July the German harbours of the Baltic and German Ocean, and spread in the next five months over the whole of Germany. This is the outbreak the ravages of which at Korbach are recorded in the extracts quoted above. It likewise overran the Netherlands, Denmark, Sweden, Livonia, Lithuania, Russia, and Poland, appearing finally in the northern parts of Switzerland in December. France and the South of Europe escaped. A fifth and last outbreak occurred in 1551. This time it began in Shrewsbury in April and spread thence over the whole of England, disappearing in September. The Continent of Europe remained exempt, as in the first, second, and third epidemics. Dr. Pistor also called Ebstein's attention to a passage in the *Autobiography* of Bartholomäus Sastrow, which runs as follows:

In this year 1528 appeared the English Sweat of which many folk died. My mother was ill with it twice, but got well. She was big with my brother Carsten at the time.

It might be gathered from this that the disease appeared in Pomerania in 1528, but as Sastrow, who was born at Greifswald in 1520, was but 8 years old at that time and wrote his autobiography in his 75th year, it is likely enough that he mixed his dates. The apparently favourable influence of pregnancy on the course of the disease is noteworthy.

THE fund for the establishment of a public sanatorium for tuberculous patients of the city and province of Milan already amounts to more than 170,000 lire (£6,800).

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MARCH 31ST, 1900.

THE MIDWIVES BILL.

The Midwives Bill has passed the Standing Committee on Law of the House of Commons without any very material amendments. The fact, however, that some amendments have been introduced into the text of the Bill will ensure a discussion on the report stage, and we hope that the opportunity will be taken to bring on a debate in the House of Commons, so that attention may be directed to the faults of the Bill more fully than was the case when the second reading was carried by a snatch vote.

The discussions which took place at the two meetings of the Standing Committee were interesting, and the very full report, which is published at page 795, should be read with care both by those who are opposed to all legislation and by those who consider some legislation inevitable. The first amendment, which stood in the name of Mr. Lloyd-George, to whom the profession is very much indebted for the interest which he showed in the amendments desired by the Council of the British Medical Association, raised the whole question of the status which it is proposed to confer on the women to be registered by the Central Midwives Board should the Bill become law. He proposed to alter the title of the Bill from "The Midwives Bill" to "The Midwifery Nurses Bill." He insisted that, at a time when the General Medical Council was stringently enforcing the rule that unqualified assistants must not be employed by registered medical practitioners, to legalise the practice of midwives with a few months' training was unjust to the medical profession, impolitic in the interests of the poorer classes, and practically amounted to an abrogation of the law as to medical practice. Mr. Heywood Johnstone, who was in charge of the Bill, contended that the trained woman would know when the assistance of a medical man was needed, and the amendment was lost on a division by 20 votes to 5. Many members of the Committee were, however, evidently uneasy on the point, some, like Mr. Lloyd-George and Sir George Pilkington, on the ground that women registered under the Bill would be apt to arrogate to themselves the right to take charge of abnormal cases, and others on the opposite ground that the Bill was drafted so widely as to include in its net monthly nurses and the casual neighbour who might render assistance in an emergency. Finally Mr. Heywood Johnstone produced an amendment to the definition of midwife designed to meet the latter objection. He proposed, and the amendment was passed by the Committee, that a midwife should be defined as "a woman who undertakes for reward to attend women in childbirth where no registered medical practitioner is engaged or employed."

The exact effect of this new definition will require to be very carefully considered. It will apparently preserve intact the position of a monthly nurse as opposed to that of the midwife, but by so doing will put the midwife in the position of a practitioner. In all probability this will have the effect of preventing her from ever attending in the capacity of a monthly nurse, since she will be apt to look upon this as something beneath her dignity, although we believe that at the present time the majority of women holding the certificate of the Obstetrical Society of London do, as a matter of fact, gain their livelihood as monthly nurses. With regard to the former more important point, Mr. Heywood Johnstone relied upon Subclause 5 of Clause 2, which would enact that the certificate to be granted by the Central Midwives Board "shall not confer upon any woman any right or title . . . . to assume any name, title, or designation implying . . . . . that she is authorised . . . . . to attend cases of abnormal labour, or of disease of, or danger to the mother or the child." There is, however, no penalty named for infraction f this injunction, which must inevitably occur from tim to time, and when Mr. Lloyd-George moved an amendment to add words to the subclause imposing a penalty he had the Committee against him, and withdrew his amendment, while expressing his intention to raise the point on the report stage in the House of Commons.

The amendment moved by Sir George Pilkington on Clause 4 to provide that the steps to secure the formation of the Central Midwives Board should be taken, not by the President of the General Medical Council but by the Council itself, was carried, but a further amendment to this clause, which was in the direction desired by the Council of the British Medical Association, to provide that the four registered medical practitioners to have seats on the Board should be representative of the main divisions of England and Wales was resisted by Mr. Heywood Johnstone, and not pressed to a division in the face of an obvious majority against it.

On this clause an attempt was indeed made to render the Central Midwives Board altogether independent of the General Medical Council. Mr. Atherley-Jones was responsible for this attempt, and he assigned as his reason letters which he had received from medical men which had convinced him that the writers hoped that the provision of the Bill, which subjects the rules be made by the Midwives Board for regulating, supervising, and restricting within due limits the practice of midwives, to the approval of the General Medical Council, would have the effect of causing vexatious and restrictive rules to be made with the view of discouraging the employment of midwives. The amendment found no support and was withdrawn, but the same member, at a subsequent stage, made another speech in the same sense, and asserted that an attempt was being made to restrict the operations of the Act by placing the control over midwives "in the hands of a body of rival practitioners.' In

support of his view he made some unwarrantable reflections upon country practitioners, which we are glad to say were at once and warmly repudiated by many members of the Committee.

The Bill as it stood constituted the county council or council of a county borough the local supervising authority over midwives; but an important amendment was adopted empowering a county council to delegate its powers to a committee consisting either wholly or partly of members of the council. This amendment was in the right direction, but it did not go far enough. Mr. Atherley-Jones, in the plenitude of his epistolary experience, may consider it unnecessary that the practice of midwives should be subject to medical control, but that is not the opinion of anyone who has made himself acquainted with the spirit of the Medical Acts. It is not, we are glad to recognise, the opinion of the promoters of the Bill, though they have failed to recognise the need for stringent statutory regulations on this head. It is much to be regretted that these gentlemen did not see the wisdom of making the local supervising authority a medical committee appointed by the county council, and we hope that the point may be raised in the House of Commons by an amendment on the report stage.

On the whole it cannot be said that the Bill has been improved in any material respect by the Standing Committee on Law. It will give legal sanction to an order of midwifery practitioners of one sex, who will be enjoined to refrain from attending cases of abnormal labour or of disease in mother or child, but who will not be subject to any statutory penalty if, as is almost certain to be the case, they take a more extended view of their privileges. It does not place the practice of these women under the direct control and supervision of registered medical practitioners, who alone are competent to deal with childbirth under abnormal conditions, who alone are entrusted by the State with that duty, who are required by the State to undergo prolonged training and stringent examination in all the departments of medical practice before they undertake that duty, and who are forbidden to employ as an assistant or substitute any person who has not undergone the same tests. Nevertheless, the profession as a whole, and the bodies by which it is represented, other than the British Medical Association, have shown singularly little interest in the Bill at its present stage. The amendment proposed by Mr. Lloyd-George to alter the title to the Midwifery Nurses Bill, and his further amendment to alter "woman" to "person," which disclosed the essentially partial nature of the proposed legislation, were moved by him on his own initiative. So far as we have been able to ascertain no amendments were submitted to the Committee in the interests of the medical profession except those which had been suggested by the Council of the British Medical Association at its meeting last week. The General Medical Council, which constitutionally must act through the Lord President of the Privy Council, was, we believe, precluded from approaching the Committee, but none of the medical corporations or medical societies or organisations, which are under no such restriction, appear to have moved in the matter. It is true that the Bill is limited to England and Wales, and that the corporations in Scotland may therefore on a superficial view, possibly consider themselves absolved from any duty in the matter. But, in the first place, we would observe that a very large number of their Licentiates practise in England and Wales; and that, in the second place, a very confident hope was expressed by many friends of the Bill on the Grand Committee that Midwives Bills for Scotland and for Ireland would be introduced at an early date.

The action taken by the Royal College of Physicians of Ireland, as reported at p. 781, will, we cannot but believe, be regarded with some astonishment by many of its Licentiates in England. The College hardly appears to have grasped the real situation, and we hope that it may not yet be too late for it and its sister College to make some useful effort so to amend the Bill that it may really be calculated to fulfil the avowed objects of its promoters.

PHOSPHORUS NECROSIS AND MATCH MAKING.

The new rules issued recently by the Home Office for the regulation of the manufacture of matches were the outcome of investigations carried out at the instance of the Home Office by Professor Thorpe, the Government analyst, Dr. Oliver, of Newcastle, and Mr. Cunningham, lately Dental Surgeon to the London Hospital. These gentlemen visited practically all the match factories in England and a very large number of those abroad, and their reports are embodied in a bulky Blue Book.

Objections to the rules were lodged by manufacturers, on the ground that they were unduly onerous, and consequently an arbitration has been held before Mr. Chester Jones, at which the Attorney-General represented the Home Office, Mr. Reader Harris, Q.C., appeared for Messrs. Bryant and May, and Mr. Corrie Grant for a workmen's Union, whilst some other manufacturers appeared in person. Additional medical evidence was given by Mr. C. S. Tomes, Dr. T. F. Young, certifying medical officer of the Diamond Match Factory, Liverpool; Dr. G. P. Bate, Medical Officer of Health for Bethnal Green, and certifying surgeon to Messrs. Bryant and May's Factory, and by Mr. Fairfield and Mr. Gill, the dentists who have been voluntarily appointed by the Diamond Match Factory and by Messrs. Bryant and May respectively to attend to the teeth of their employees.

Professor Thorpe showed that a fume is freely given off from the phosphorus paste used for the manufacture of "strike anywhere" matches when it is damp, but that little or no fume is given off when it is quite dry; this fume consists in part of phosphoric oxide, but also in part of phosphorous oxide and of free phosphorus. He also showed that in the accidental firing of matches, which frequently happens in the boxing rooms, the workers smother out the fires with sawdust; under such circumstances the oxidation of the burnt match composition is not complete, and the lower oxides of phosphorus are present in considerable quantity in the smoke, and perhaps some volatilised free phosphorus also. He further showed that the passage of phosphorus fumes over carious teeth exercised a solvent action upon them to a certain extent. Professor Thorpe, to whom most of our knowledge on the nature of phosphorous oxide is due, arrived at the opinion whilst experimenting upon it that it is a very unwholesome substance, and is inclined to attribute the ill effects of working with phosphorus mainly to it.

With regard to the actual causation of necrosis, all the evidence accumulated both at home and abroad tends to support the view generally held, that a worker with sound teeth or with no teeth is practically exempt. As to the reason for this, one view is that the phosphorus or its oxides obtains direct access to the periosteum through some breach of surface, such as may be afforded by the cavity of a carious tooth, by the vacant socket left after extraction of a tooth, by a dental abscess, or by any injury.

Wegner's experiments are often cited in support of this view. He fed animals on minute doses of phosphorus and exposed others for lengthened periods to phosphorus fumes, and found that necrosis was produced only when the jawbone was exposed. These experiments were made thirty years ago, before the days of asepsis and before any exact knowledge of bacterial infection existed. Read by the light of present-day knowledge they do not justify a definite conclusion that the action is local, but lend at least as much support to the other view—namely, that phosphorus produces a systemic effect. This effect, to which French writers have applied the term "phosphorism" was manifested in the case of some of Wegner's unwounded animals by the occurrence of what he called artificial rickets, of a plastic periostitis not going on to necrosis, and of death from inanition. The special liability of the jawbones to necrosis may therefore depend upon the special frequency with which they are exposed to infective inflammations owing to the presence of diseased teeth. A case of acute and fatal necrosis of a fractured thighbone in a phosphorus worker, which he cites, appears to have attracted less attention than it deserved, though in the Blue Book the frequency of fracture of the long bones from trivial causes, even from muscular action alone, is in several places noted. Much indirect evidence points in the same direction; thus, one of the dentists employed was of opinion that the teeth of persons long employed in a phosphorus factory were distinctly more difficult to extract than those of other persons, which might be accounted for by the existence of plastic periostitis having thickened the bone.

Again, one of the lady factory inspectors was of opinion that the girls in match factories were more anæmic and in poorer health than other workers, as is the opinion of some Continental writers who have had much experience. On this point, however, the evidence was contradictory, some holding quite a contrary opinion.

It must be remembered that a very large number of the hands come and go, and are not employed consecutively for long periods. Messrs. Bryant and May, who employ an average of 2,500 hands, consider that in twenty years 50,000 persons have passed through their factories. Moreover, the rules hitherto in force as to medical examination, both here and abroad, render the more or less permanent workers a selected population from which the notably unhealthy have been in part at least eliminated. Another fact which tends to support the opinion that a systemic effect is produced is that no case of phosphorus necrosis is known to have occurred except in a worker who has been long exposed, a fact hardly consistent with a purely local action which might operate at any time. Again, cases have occurred a considerable time after the patient has left this form of employment, a fact unintelligible on the theory of purely local action of the fumes. On the whole, the inference is that phosphorus produces some change, possibly affecting the jawbones rather than other bones, which predisposes to necrosis, and renders lesions which would otherwise be trivial and temporary productive of serious consequences.

One of the points at issue between the manufacturers and the Home Office was as to the extent to which medical and dental examination should be enforced, and the proportions which they should relatively take, the new rules on this head being far more stringent than the old. It must be remembered that the two largest factories had already voluntarily gone far beyond the new rules in providing dental treatment for their employees at a considerable cost.

Although the arbitrator has not given his final award, he foreshadowed its probable nature. The new rules will probably be upheld as regards the more dangerous portions of the work, but relaxed as regards certain parts of the work which appear to be less dangerous. It had been quite clearly shown that the dippers of the heads of matches in moist paste suffer far more than other workers; but as regards the boxing of matches, though cases have occurred amongst the workers, they might perhaps be referable to the habit of boxing wooden matches moist, wax vestas being boxed dry.

The arbitrator appeared to think that, notwithstanding Professor Thorpe's evidence, it had not been adequately proved that the products of the accidentally fired matches were harmful. The proposed new rules will probably be that no person shall be newly employed for more than one month without a certificate from the certifying surgeon; that no person shall be newly employed as a dipper or in the dipping room for more than a month without being examined by the appointed dentist; and that every person employed in a phosphorus process, except a wax-vesta boxer, should be examined by the dentist once in every three months. That the examination of the teeth should be made by a dentist and not by the surgeon only was pressed upon the ground that not merely would his examination be more searching, but that, as it is admitted that there is no present but only a prospective danger in the initial stages of dental caries, it is a matter of estimating not only the existence but the stage of disease; that, in fact, the surgeon might reject persons to whom the dentist would only say: "You must not work for more than a short period unless you have this set right." If the dentist sees any threatening of necrosis he is at once to refer the case to the surgeon. No meals are to be consumed in the workroom, and ample washing accommodation is to be insisted on, as it has been found by Professor Thorpe that the water in which the workpeople had washed their hands contained a notable proportion of phosphorus.

Messrs. Bryant and May's statistics indicate that about 3 per cent. of the dippers become affected with phosphorus necrosis, but that only 0.16 per cent. of the boxers are so affected. As to this it may be observed that the dippers remain in their employment for much longer consecutive periods than the others. The firm believes that they have had 47 cases in 29 years, of which 19 per cent. were fatal. The red or amorphous phosphorus employed for matches

which strike only upon the box has a clean record so far as we know, and this firm further announce that they are about wholly to discontinue the use of white or yellow phosphorus for "strike anywhere" matches, substituting for it what is believed to be a sulphide of phosphorus. It is alleged that this is quite innocuous, and does not give off objectionable fumes, but whether it really is absolutely safe only time can show.

THE MEDICAL SERVICE IN THE WAR.

Our persistent efforts to draw public attention to the grievously undermanned condition of the army medical establishments are, we are glad to observe, attracting notice, as is shown in an important letter from the Cape-town correspondent of the *Times*, published in that journal on March 24th.

At an earlier period of the war that gentleman allowed himself to be the channel for the circulation of some carping complaints as to the medical service. Now he clearly grasps the situation as a whole, in an enlightened spirit; and his powerful letter, which is to be followed by others, must arouse attention and inquiry in quarters hitherto difficult to reach.

While he bears full and generous testimony to the admirable conduct of the medical service in the war, he utters a significant note of warning that "the intrinsic merit of the performance of the Royal Army Medical Corps in this campaign is likely to conceal from view some grave underlying dangers which nothing but good fortune has averted; as well as certain deficiencies in this department of the War Office which it is equally important to examine." In speaking of these dangers and deficiencies he is careful to add that "it is not the quality that has to be criticised so much as the quantity, measured first by its numerical strength, for which the country is responsible; and, secondly, by its power of automatic expansion in time of war, which is a matter largely under the control of the department itself." These extracts form the key to his subsequent observations. For each man, he says, who dies on the field, five are shattered and tortured by bullets and shell wounds; while, beyond that, deaths from disease are from four to ten times more numerous than those produced directly by the enemy.

The terrible suddenness of casualties in a modern battlefield makes them most difficult to cope with. Our undermanned Army Medical Service would in the present war have been utterly unable to meet the demands made on it but for the voluntary assistance of individuals and societies, and the writer asks, "Is it right and prudent that reliance on such assistance should be carried to the point indicated by the present strength of the Army Medical Department in relation to the needs of a great war?" Most assuredly not. It is the climate and circumstances of South Africa which have invited and rendered possible such assistance, which we believe would not be possible or forthcoming in such a probable theatre of war as Afghanistan or Beluchistan.

Our salvation in the present war, as the correspondent declares, has lain in the possibility of civil assistance, the salubrity of the climate, and the absence of any great general engagement. We have fought many severe, if small, actions, but hardly one sufficient to throw a sudden and serious strain on our medical resources; none, of course, comparable to the 10,000 wounded which the French had on their hands at Gravelotte.

The grave insufficiency of our medical preparations for a big general action, as well as for the casualties which ought prudently to be provided for, is shown in some figures he gives. We have, or will shortly have, 194,000 men in the field, for which—on the recognised scale of 10 per cent.—we ought to have 19,400 beds, whereas we have only some 5,000 or 6,000.

But he puts the weak position of the Army Medical Service before the public, as he says, in a "nutshell," by the assertion that "a single army corps—in round numbers with lines of communication 50,000 men—sent to South Africa exhausted the whole available Army Medical Department in England. There was not a man left at home; the source was dried up." This is, of course, the broad truth, but it will probably be traversed by the defenders of a mere hand-to-mouth system of administration. The real stress must be laid on the adjective "available," for, while it is true that many medical officers and men were sent to South Africa after the first army corps was despatched, this was done at the serious risk of completely stripping our home establishments, and by gravely depleting our Mediterranean and Egyptian garrisons. We cannot hold that, in a well-ordered state of things, the medical officers and men lately sent to South Africa were really and truly available for the war; they were sent because the situation was desperate.

The full force of the correspondent's indictment lies in facts we lately presented in an analysis of the Estimates, which showed that while 335 medical officers are constantly needed with the 70,000 British troops in India, there are but 500 left at once to carry out the relief of those in India, and for every other purpose and garrison of our world-wide Empire. The force in South Africa should have had 800 medical officers in the recognised proportion of 4 per 1,000 men; it has only 400, reinforced by about half as many civilians.

We frankly recognise with Mr. Wyndham, Under-Secretary for War, that it is not possible to keep up regular medical establishments for such extraordinary demands as are now being made. Nobody asks for that; but there is no reason why those establishments, as in other branches of the army, should not bear a definite proportion to army strength, say in relation to three army corps instead of one.

This could be done by increasing the active medical strength by, say, 200 officers, and the reorganisation of real—not sham—reserves. It is probably to the so-called reserves we at present have that the correspondent alludes when he speaks of "automatic expansion in time of war" as largely being in the control of the medical department itself.

These matters must be urged in Parliament, notwithstanding that, as the correspondent alleges, nothing empties the House of Commons like mention of any military medical matter. We hope that is not the case; it would indicate a lamentable indifference to the well-being of our gallant soldiers, only equalled by official supineness towards the medical department.

THE RELATIONS OF MEDICAL PRACTITIONERS TO MIDWIVES

From complaints which have reached us there seems to be some ground for believing that the practice exists in certain quarters, although we hope only to a limited extent, of what, to use plain language, must be called bribing midwives by medical practitioners as an inducement to seek their aid in cases of difficult labour. The sums paid appear to vary from half-a-crown to seven shillings. We understand it is not admitted that this is a bribe, but it is regarded as the midwife's "commission." It seems to us to be a kind of secret commission which is open to very many objections. Any payments made by doctors to chemists or midwives, or to one another in return for an introduction, are open to the strongest objection, as they afford not only a corrupt inducement in the selection of a medical attendant, but an improper motive for calling in further medical assistance. "Gyp," in her witty series of medical sketches entitled *Ces Chers Docteurs*, has exposed this iniquity in the story of the Docteur Tant pour Cent. Tant pour Cent. is an eminent operating surgeon who hands over a third of his large fees to the practitioner who calls him in, thus offering a very weighty inducement to a poor man to require his services, and the moral and material evil resulting are graphically depicted in the tale. We hope and believe these corrupting influences exist to a very limited extent in the medical profession in these islands, whether amongst those in high or in low places, but wherever they appear we shall do our best to expose them and to protest against them. The Bill for suppressing secret commissions has again been introduced into the House of Lords, and in some form will probably become law. We have protested vigorously against what we believe to be the unfounded charges made against the medical profession in connection with this subject, and we regret that they were ever made, but our indignation does not make us less anxious to see every vocation in life, including our own, purged from all traces of this sordid shame. The profession at large will welcome such legislation, for its members have no desire either to give or to receive these unholy payments.

MALARIA AND PETROLEUM WORKS.

Mr. Alfred Jones, the Chairman of the Liverpool School of Tropical Medicine, has received interesting communications from Mr. C. W. McIntosh of Liverpool with reference to a statement that kerosene is destructive of the larvæ of mosquitos, a statement which is reproduced. "I could never understand until I read the *Report of the Malaria Expedition to West Africa* why it was that, during my fourteen months' residence in the petroleum field in Apolonia, West Africa, not one of the five white men under me, who had never been in Africa before, working from morning till night amongst stagnant swamps, ever got a touch of the old familiar fever. But I understand it now. Every drop of water upon and below the surface in that district is impregnated with petroleum, and, in the case of still pools full of decomposed vegetable matter, a film of the oil floats on the surface. This accounts for the remarkable fact that mosquitos are non-existent in the locality..... During my expedition to Chad Lake some years ago, whither I was sent to enter into a commercial treaty with the Sultan of Borneo, we Europeans attached to the expedition found that after crossing the summit of the watershed dividing the Chad basin from the Niger and its tributaries, we were no longer annoyed by mosquitos. Now it is a curious coincidence that all the water in that vast region, the Chad basin, is what we termed for want of a better word 'brackish,' and very disagreeable to drink until one becomes, of necessity, used to it. It contains in solution the alkali well known in the Southern Soudan as 'lubi,' which forms a considerable staple trade amongst the Mohammedan population of the Soudan, Fulanis, Haussas, and, in fact, all who, from time immemorial, have had no access to salt. It is collected periodically from the surface of the sun-baked ground after the annual subsidence of the waters during the dry season. The source of the alkali itself no doubt is in deposits below the surface. I have been wondering if the fact that the water of that region contains this alkali in solution accounts for mosquitos not being present, for certainly they are not, although the natives suffer from the usual diseases of the country—for example, yaws (frambœsia), small-pox, and a sort of leprosy, but not elephantiasis. We did not find during our three months' residence in the populous town of Kuka a single instance of 'fever' among the Turks, Algerians, Moors, Arabs, and others, from more northerly temperate climates. If this scientific theory is correct, and the mosquito is alone to blame for the prevalence of malarial fever, it occurs to me to be another most curious example of the poison and its antidote existing, so to speak, side by side, although, of course, neither the alkali from Lake Chad basin nor the crude petroleum from the Gold Coast could be within commercial bounds available for use over the vast infected territories of West Africa, but for the purposes set forth in *Instructions for the Prevention of Malarial Fever* I should say that kerosene from America, a by-product of crude petroleum as it exists on the Gold Coast, would prove most useful. Crude petroleum, if dropped into water, remains floating as an intact bleb, whereas a drop of kerosene disperses itself over a large surface of water." Mr. McIntosh's observations in Apolonia are direct evidence in favour of the view that petroleum products may be of use to exterminate the larvæ of *Anopheles*, while his experience both there and in the Lake Chad region gives strong indirect support to the theory that the mosquito is the true disseminator of malarial infection.

A NEWLY OBSERVED FORM OF PESTIS AMBULANS.

We are indebted to Dr. Dickson of Constantinople, who, we regret to note, died there on March 27th, for particulars regarding the curious case of plague which occurred at Trieste in November, 1899, and was landed from the Ottoman steamer *Polis Mytilini*. It is important in two respects, first, as relating to an ambulatory form of the disease which has not been previously observed; and, secondly, as occurring in an individual who is not known to have been anywhere near an infected centre. The port from which the *Polis Mytilini* started was Constantinople, and there had been no plague in the Turkish Dominions since June, 1899, when it ceased at Jedda. A case of plague occurred on board the French steamer *Equateur* on September 8th during a voyage from Alexandria to Beyrout. The man died on board September 10th. The *Equateur* was kept in strict quarantine, and no cases of plague occurred in any part of Syria. The Archipelago Islands were also quite free from plague. The circumstances of the case landed at Trieste are the following:—The *Polis Mytilini* sailed from Constantinople on October 17th with a crew of 30 men and 63 passengers. It called at Gallipoli, Dardanelles, Mitylene, Smyrna, Scio, Teshesmé, Piræus, Crete, Kalamata, Patras, Corfu, and arrived with five passengers at Trieste on October 27th (thirteen days after leaving Constantinople) and received free pratique immediately. Goods and passengers had been shipped at all the ports, and everyone on board was in excellent health except the boatswain, Nicolas Barbarossa, who was ailing, having "caught cold." Next day he went on shore to consult a medical man. On the following day the malady increased, and continued to grow worse until October 31st, when the medical man who visited him on board stated that he was suffering from bronchitis, and advised his removal to the municipal hospital at Trieste. The

symptoms when on board were high fever, pain in the limbs, and loss of appetite, but no sanguineous expectoration nor glandular swellings in any parts. On November 4th he died in hospital, and it was found that he suffered from abscess of the liver, lungs, and kidney, but was free from any glandular enlargements. A bacteriological examination of the contents of the abscesses revealed, however, that the case was one of plague. No other case of plague has occurred. An interesting feature of the voyage is that some wine was shipped from one of the islands and was placed in open casks on the ship's lower deck. To the fact that the wine was new and fermenting, and therefore evolving carbonic dioxide gas, the captain attributed the circumstance that the deck was covered with a great number of dead rats.

THE VACCINATION OF A NATION

Dr. George G. Groff gave, not long ago, in the *Medical News*, an interesting account of the vaccination of the inhabitants of Porto Rico. When the Americans took over the government of the island of Porto Rico, they found small-pox epidemic. At the end of January, 1899, the Governor-General ordered a general vaccination of the inhabitants. As for some reason it was not thought advisable to buy the vaccine from the United States, it became necessary to start a "vaccine farm." At first all animals were tested with tuberculin; but no reactions were obtained, so it was concluded that tuberculosis does not occur among the unconfined cattle of the island. The animals were not stabled either before or after inoculation. The lymph was collected upon points, dried, wrapped in bundles of 100 and dated, and sent by mail daily to the vaccine stations. Letters were sent to all medical practitioners and to all the *alcaldes* asking their co-operation. The *alcaldes* at once took action, which resulted in the people appearing on the date ordered, and submitting themselves to vaccination. The instructions to public vaccinators required them (1) to wear clean white clothing and to disinfect their hands before operation; (2) to scrub each subject's arm with soap and water and then with bichloride solution; (3) to use as scarifiers either needles kept in 1 to 40 carbolic solution (one vaccination only with each needle) or a lancet dipped in 1 to 20 carbolic solution and passed through an alcohol flame before vaccination; (4) to make two scarifications on each subject, the vaccine point to be wet with sterile water, rubbed thoroughly over the scarifications and allowed to dry thoroughly; (5) to visit every vaccinated person a second time, and either give a certificate or revaccinate; and (6) to report daily upon the work of the day and the needs of the morrow. Every post-surgeon was made an inspector of vaccination, and required to enforce the instructions to vaccinators, and to report daily to his director. The director, in his turn, reported weekly to the chief surgeon. In three working months 800,000 people were vaccinated at a cost of 32,000 dollars, and Dr. Groff says that on October 20th not a single case of small-pox was known to either the civil or military authorities in any part of the island. The work was accomplished without a disturbance of any sort. It may strike some of our readers that our Local Government Board might do worse than import a sufficient supply of *alcaldes* from Porto Rico, and set them to teach local and other authorities in this country how to get vaccination enforced.

VACCINATION OF WORKHOUSE INFANTS.

The absurdities into which antivaccination may drag its votaries were well illustrated at a recent meeting of the Gainsborough guardians. The Board has charge of a workhouse which, like other workhouses, sometimes has among its inmates babies under 4 months old, who ought to be vaccinated. It seems that heretofore such vaccinations have been performed by the public vaccinator, as necessity arose. According to a local newspaper, however, the Board has now apparently determined to regard itself *in loco parentis* of such children; and this being so, it insists that in future the public vaccinator shall in every case intimate to the Board his purpose of vaccinating. Judging from the proceedings of the Board, it seems possible that such vaccinations may then be objected to. But if the Board is to be looked upon as a parent possessed of conscientious objections to vaccination, then obviously, in order to avert the operation in the legal manner, the Board must go before a Court of Petty Sessions, and ask for an exemption certificate. Such a certificate cannot well cover more than one case, and must be applied for before the child has attained the age of 4 months, so that if the births in the workhouse are numerous, the appearances of the Board before the Court of Petty Sessions will have to be correspondingly numerous. In the event of the Board not claiming exemption, and afterwards refusing to submit its workhouse children to vaccination, it will then be the duty of the vaccination officer to prosecute his own Board for neglect. If under such circumstances the Board is fined, and desires to pay the fine, the question will arise whether it can do so out of the public funds of which it is the custodian, and it seems unlikely that an auditor would pass as correct a payment made by a local authority to prevent its imprisonment for law breaking. In all this, however, the child's mother has not been taken into account. She may be foolish enough to hold that she, and not the Board, is to be regarded as the parent, and her views on the question may be just the opposite of the Board's. If the mother wishes vaccination for her baby is she to be balked by antivaccinating guardians, who may insist on being technically regarded—of course in their corporate capacity—as the father of the child? If, on the other hand, the mother objects to vaccination, can the guardians in their parental capacity overrule her opposition? Such are a few of the recondite questions that might arise out of the preposterous position into which the Gainsborough guardians may drift if they allow themselves further to be led by the nose by the faddists who have obtained a seat at their councils. The style of controversy adopted by the two antivaccination representatives is what might perhaps be expected, but can hardly recommend itself to a Gainsborough man who has the good name of his town at heart; and, without knowing anything of local circumstances, it strikes the outsider that the methods of the members in question might be controlled a little more firmly from the chair. Be that as it may, it is hardly conceivable that the more level-headed of the guardians will allow themselves to be borne further along the path of folly by their antivaccinationist members, and, indeed, they could not do better than begin by retracing the step they have already taken.

THE COST OF ANTIVACCINATION AT LEICESTER.

We are not aware that any statement has ever been published of the cost to Leicester of the small epidemic of small-pox which visited the city in 1893. Gloucester has been far less reticent as to the cost of her experience on a similar occasion, and we may fairly assume that Leicester did not buy hers, which, fortunately for her, was of a much more limited description, under some thousands of pounds. Her citizens have now the opportunity of considering the financial aspects of the vaccination question from another point of view. Those members of the Board of Guardians who lately came into such unpleasant relations with the High Court of Justice on account of their refusal to elect a vaccination officer, have just received from their solicitor his little bill of costs in connection with this escapade. Some well-known lines describe the sobering effect of the reckoning when presented to a roystering party at the close of their carousal, and such, we imagine, must be the disagreeable after-taste which will be left

by the demand for a little over £1,200 as the cost of their frolic. A few months ago they were enjoying the intoxication of posing as the champions of liberty of the subject and local self-government; to-day, on cool reflection, they have probably come to the conclusion that this also is only vanity and vexation of spirit. It is said that the fund which was collected to defray the expected expenses of the demonstration amounts only to some £600. A vigorous attempt is now being made to induce the working men of Leicester to subscribe the balance, and it will be interesting to see with what alacrity they respond to the appeal. Some of the members of the Board are, it is stated, quite unable to pay the £50 odd which they are now called upon to provide. At Wellingborough, where the opposition was considerably less, the costs correspond, the charges amounting to only £43, this being apparently the expenses incurred by the Local Government Board in compelling the guardians to appoint a vaccination officer, and now to be defrayed by the guardians, who ought to congratulate themselves on buying their experience at so cheap a rate.

CHRISTIAN SCIENCE BEFORE THE MARYLAND LEGISLATURE.

A Bill is now before the State Legislature of Maryland restricting the practice of medicine to duly qualified practitioners, and providing "that any person shall be regarded as practising medicine within the meaning of the Act who shall attempt to heal, operate, or prescribe for any ailment of another." An explanation of this very comprehensive provision is probably to be found in the fact that it is necessary to cast the net very wide in order to catch the professors of Christian Science in its meshes. Naturally the Christian Scientists are opposing the measure. On February 2nd a deputation of some 150 followers of the gospel according to Mrs. Eddy appeared before the Committee on Hygiene of the Maryland House of Delegates to urge an amendment to the Bill. Some remarkable statements were made on the occasion. Thus the "First Reader" of a Christian Science church in Baltimore, being asked what precautions would be taken against infectious disease in a community of 500 or 1,000 Christian Scientists, replied: "In a community of a 1,000, aye, in a community of 500 souls, all Christian Scientists, disease of any sort would be impossible." Here it occurs to our profane minds that an opportunity for an interesting experiment is offered. Let the Christian Scientists give proof of the faith that is in them by establishing such a community in a place where a few active disease germs can have access to them; the result could hardly fail to be instructive. A lady being asked whether she employed the microscope in the diagnosis of diphtheria, answered: "Yes, but not a material microscope; the microscope which we employ is the microscope of spiritual discernment." It is, we presume, by the help of the microscope of spiritual discernment that Mrs. Eddy's disciples are able to diagnose disease which, according to their own teaching, has no real existence. For the edification of the Committee, the "Church by laws" on medical education were read. They showed, among other things, that the whole art of obstetrics is imparted in four lessons in as many days. After all, this is not so rapid a process as that by which Sangredo taught Gil Blas the whole art of medicine in four words. One would like, by the way, to know something about the obstetrical experiences of female devotees of the Christian Science cult. Mrs. Eddy, as our readers are aware, says there is no such thing as pain; do all her fair disciples who become mothers escape the curse pronounced upon Eve? The Committee was also informed that the course in "mental practice and malpractice" occupies twelve lessons. We should be disposed to say of malpractice within the sphere of Christian Science what Mr. Pickwick said of politics, that it "comprises in itself a subject of no inconsiderable magnitude." The course of instruction in this branch might, we submit, be greatly extended with distinct advantage to all concerned. Christian Science does not confine itself to the practice of medicine in the ordinary sense; it takes the working of miracles to be its province. Thus a woman afflicted with a carious tooth which was making itself felt as a "rooted sorrow," was not only eased of the pain in twelve hours, but made the pleasing discovery that she had a sound and perfect set of teeth in her head. We hope our dental friends will take note of this case, for if new dentures are to be got in this way by faith in Mrs. Eddy, their occupation will be gone. Another case was that of a dumb child in Ohio who was cured by a Christian Scientist in Kansas. This case presented the remarkable feature that neither the healer or healed was aware that any treatment had been sought or given. Naturally, however, the Scientist, as soon as she heard of the miracle, realised that virtue had gone out of her. These and other similar cases were cited by one of the medical men present, as showing the absurdity of the claims of Christian Science, but they were hailed with applause by the Scientists themselves as proofs of the therapeutic virtues of their creed. The members of the deputation do not seem to have been very judiciously selected as representatives of a community in which disease is impossible. One is said to have shown evident signs of phthisis; another was the subject of chorea; while a third had a glass eye which is described as a misfit. This adds a touch of comedy which relieves what to any enlightened lover of his kind would otherwise be a tragic exhibition of human stupidity.

PHTHISIS AND LIFE ASSURANCE.

Dr. W. B. Ransom, in a paper on Phthisis in relation to Life Assurance, read before the Nottingham Insurance Institute, expressed the opinion that the practice of exacting an extra premium from proposers with a family history in which phthisis was proved rested on a basis of truth. He thought, however, that with the fuller knowledge of the disease now possessed there had been a tendency to exaggerate the risks of a phthisical family history. He hoped that the time would come when life offices would copy the fire offices, and insist on regulating the risks they were asked to pay for. This could only be done by the companies' inspectors insisting on proper ventilation, drainage, and sleeping accommodation in the shops and warehouses in which the applicants for assurance were engaged. In Germany, where insurance against sickness and old age was compulsory for all whose income was below £150 a year, the insurance companies had found that it paid them to erect and maintain institutions where they kept those who developed symptoms of phthisis in pure country air, with wholesome food, until the disease was so far cured as to enable them to return to their occupations. Dr. Ransom suggested that life assurance societies might follow this example, and find it worth their while to assist the cure of their phthisical policy holders. It is possible that some such development of life assurance may in the future take place, but there are many difficulties in the way; still they need not be insuperable.

THE PREVENTION OF CONSUMPTION.

In an address on the Guidance of Public Effort towards the further Prevention of Consumption, delivered in the Section of Public Health of the Medical Congress of Australasia, Dr. J. Ashburton Thompson, Chief Medical Officer to the New South Wales Government, formulated the parts to be taken in prevention by the Central Health Authority of the State, and by a private association such as the National Association for the Prevention of Consumption in this country. The Government of New South Wales, under the advice of its chief medical officer, appears to have realised the necessity for State action in addition to any private efforts in this direction. Amongst

the requirements which only a central authority with full powers can initiate and control, Dr. Thompson gives first place to notification. This notification of consumption he considers should be only to central and not to local authorities. No other form of tuberculosis should be notified, and the register should be confidential as regards names. District registrars should notify all deaths from phthisis as soon as registered by them. The disinfection of all rooms from which consumptives have been removed, or in which they have died, should be made obligatory on owners and occupiers of houses before these rooms are reoccupied. Good building laws should be enacted and steadily enforced. The central health authority should forward by post some brief pamphlet of instructions to those whose names have been notified to it. Supposing the State to have taken the action above indicated, the main object of a private association should, in Dr. Thompson's opinion, be to endeavour to secure hospital accommodation for those whose continued presence at home necessarily involves danger to the rest of the household. To ensure the removal of these, and to prevent the hospitals being filled by those who might remain at home without danger to others, visitors must be employed. These visitors could supplement the printed instructions sent to the patients by verbal instructions and explanations, and they should possess a sufficient knowledge of house construction to record the character of the houses in which they found consumptives living. Such are briefly the requirements as formulated by Dr. Thompson. To induce the health authorities in this country to carry out such a programme, and to assist in the details, would be a work worthy of an influential organisation such as the National Association for the Prevention of Consumption.

A FORERUNNER OF FATHER KNEIPP.

Dr. Julian Marcuse of Mannheim, has unearthed a forerunner of Father Kneipp, and gives an account of him in a recent number of the *Münchener medicinische Wochenschrift*. Father Bernardo Maria de Castrogiane, a Capuchin monk, was in the last century celebrated throughout the South of Europe as the *Medico dell'acqua fresca*. He was the son of an apothecary, and in addition to the studies appertaining to his ecclesiastical profession, gave attention to chemistry and medicine. He was a pupil of Rovida, a Neapolitan physician, who in 1699 acquired some local reputation by his successful treatment of disease with cold water. Father Bernardo afterwards went to Malta, where patients of all sorts and conditions came to him in crowds. He was, as was natural, especially patronised by the clergy of all ranks, from cardinals to curates; but dukes and princes, and lords of high degree, as well as the vulgar herd, flocked to him in such numbers that the Bishop of Malta built a hospital for him with the approval of his monastic brethren. He went through a medical curriculum and obtained the degree of Doctor of Medicine. He returned to Malta in 1724 and continued to pursue his mission of healing for many years, till he was cut off by a malignant disease. The only remedy he employed was fresh water made cold by mixing with ice or snow. He used this in three forms: externally, by wrapping the patient in linen cloths steeped in water, or as a kind of massage by rubbing the affected part with unbroken ice; internally, by making the patient drink from 6 to 8 quarts of water a day; lastly, in enemata, especially in diarrhœa. During the administration of this treatment, which was the same in all cases, varying only in the amount of water used, the patient was kept on a strict diet. At first no food was allowed, the only thing taken being ice water; in certain diseases, particularly in those of a sexual character, this therapeutic fast was prolonged for twenty-five or even thirty days, possibly with some notion of adding a penitential element to the treatment. Afterwards the yolks of five or six eggs were allowed as a daily portion, sometimes a little fowl or pigeon. After eight or ten days of this comparative carnival came another Lenten period, which, brought the course to an end. Father Bernardo set his face strongly against any other kinds of nourishment but those mentioned, and denounced soup and farinaceous foods with especial vigour. In addition to dieting and cold water he used methods akin to the open-air treatment. Bedridden patients had their hair cut short, and were made to lie with little clothing by an open window: those who could walk about were directed to go barefoot. Of innumerable cures recorded, the following, which was published in the *Mercure Historique* in 1724, may serve as a sample: "Malta, 12 July, 1724.—Count von Beverens, a German, had for three years suffered from grievous palpitation of the heart and violent cramps, and was affected with such chilliness that even in the Dog Days he could not bear the warmest breath of air. He constantly wore furs next to his skin, and over these he had waistcoats and coats. In bed he was very warmly clothed, and in the night he could not put a finger from under the blankets without beginning to shiver and bringing on cramp. Father Bernardo, who undertook to treat him, first took away his superfluous clothing, sent him into the open air, and operated on him with ice water so powerfully that the Count no longer felt the weakness of the chest or the habitual chilliness of which he had complained, was freed from his cramps, slept well, and was forthwith restored to health." This case reveals the secret of the Capuchin physician's success: he cured hypochondriacs and *malades imaginaires* by forcing them into a healthier way of life; and those whose sufferings were caused by sumptuous feasting and riotous living, by fasting and rough living. He does not seem to have troubled himself to frame any theory as to the mode of action of the water, further than that he supposed that it served to carry away morbific matters in the urine and fæces. So far from seeking to produce sweating, he would not use his water treatment on hot days, lest the skin should thereby be stimulated to act freely. During the whole period of treatment he remained near his patient and watched the pulse, the finger nails, the eyes, and the tongue very closely. The pulse and the nails were his guides in the administration of water, and according to the indications furnished by them he doubled or lessened the dose. Like Pindar, he looked upon water as "the best" for everything, and with this panacea he treated all diseases, from small-pox to sciatica. His cures have been recorded; but who can say how many he killed?

THE NOISE NUISANCE.

A notice has been issued by Sir E. R. C. Bradford, the Chief Commissioner of Police of the metropolis calling the attention of all whom it may concern to the fact that the London County Council has at last summoned up courage to deal with the abominable nuisance caused by the newsboys who rush through the streets cleaving the general ear with horrid yells of "Weenahs!" "Horful Disaster," or "Great British Victory!" as the spirit moves them. It has made a by-law to the effect that no person shall, for the purpose of hawking, selling, or advertising any newspaper, call or shout in any street so as to cause annoyance to the inhabitants of the neighbourhood. Any person offending against this by-law is liable to a fine of 40s. for every such offence. All hawkers and sellers of newspapers are cautioned that the by-law will be strictly enforced by the police, and inhabitants who are annoyed by any hawker or seller of newspapers are requested to acquaint the police and point out the offenders. Marry, as Sir Thomas More would have said, this is somewhat. But it is not enough. If the auditory apparatus of those of us now condemned to dwell in this populous city is to be safeguarded from injury, which may express itself in nervous

wreck of one kind or another in our descendants to the tenth generation, something must be done to lessen the maddening concourse of harsh sounds in which we live and move and have our being. The deafening crash of heavy vans and waggons rolling heavily on springless wheels; the constant whistling which makes the neighbourhood of a busy railway a place of torture; the hoarse cries of the costermongers; the bawling of omnibus conductors; the howls and hootings by which the "hooligan" gives vent to his feelings, and worse still, the tuneless singing in which he indulges in his hours of dalliance; the wheezy wail of the barrel organ, and the manifold discord of the "breathing brass" of the German band—all these make up a complex din to which that which Hogarth's "enraged musician" had to endure was but as what Bottom might have called the roaring of sucking doves. Surely something more than has yet been attempted can be done to mitigate the horrible nuisance of noise which makes a walk down Fleet Street, such as Dr. Johnson loved, a severe ordeal even for nerves sheathed, in a physiological sense, in triple steel. At Charing Cross, where the sage used to go to contemplate the full tide of human existence, the toughest philosopher would now find his thinking faculty drowned by the overwhelming roar of the surge. The man who could devise some means of deadening the noise in which the nerves of city dwellers are steeped as in an atmosphere would deserve a statue far more than most successful generals. We commend the subject to sanitary reformers, for we are convinced that it is one that in subtle but none the less important ways closely concerns the public health.

CHEMICAL NATURE OF ENZYMES.

The nature and composition of this class of organic compounds is but little known, and a contribution which Dr. Oscar Loew has published,[1] based on chemical and physiological studies of enzymes or ferments, is of interest. He divides enzymes into three classes: (*a*) enzymes which are closely connected with digestion, such as pepsin, trypsin, diastase, lipase, etc., the first two of which act on proteids, the third on starch, and the last on fats; (*b*) enzymes which cause oxidation, the oxidases; and (*c*) enzymes which bring about coagulation or clotting, such as rennet, pectose, and the enzymes of thrombosis or intravascular clotting. The first group of ferments has been known longest. In addition to the above enzymes there are a number of others which are active in more limited spheres. A large and important group is made up of bacterial ferments produced by the growth of various kinds of bacteria. These enzymes play an important *rôle* in immunisation against certain infectious diseases and in recovery from disease. Certain fungi which grow on the skin produce an enzyme which attacks the keratin of the hair and epidermis, while other fungi grow on the wings of insects, and behave similarly towards the chitin which composes the insect's cuticle, and forms the chief constituent of the wings. It is well known that many bacteria produce enzymes which tend to kill the producer; thus bacillus pyocyaneus "commits suicide by means of its own enzyme." Chemical examination suffices to show that certain enzymes have all the properties of proteids, and some are derivatives from proteid compounds, and are of simple chemical constitution. To the question, "How can one explain the fact that a very small amount of an enzyme can transform a relatively large amount of another compound?" no satisfactory answer can be given, except that the process has the closest analogy with "catalytic action," a property which various gases and a few metals have been found to possess. Probably a storing up of chemical energy at the expense of heat is the net result of the action of enzymes, stated in general physico-chemical terms. As regards the molecular structure of the enzymes, little is as yet known, though it is surmised that amido and cyano groups are present in some, and that both fatty and aromatic radicles are also met with in their constitution.

[1] *Science Progress*, November, 1899.

POOR-LAW REFORMS.

It is stated that the Local Government Board have in contemplation to introduce legislation to carry out the recommendations of the Select Committee of last session with regard to various reforms in the Poor-law system. One of the most considerable of these is the abolition of workhouse schools and the boarding-out of all pauper children, who will then attend the local elementary schools, amongst the ordinary population. Given an efficient superintendence of boarding-out arrangements, this is a desirable step in the direction of getting rid of the "pauper taint," which seems inseparable from juvenile associations with the workhouse, too often regarded in after-life as a home to be returned to, without compunction, when necessary. Another matter of medical interest is the proposed removal of imbeciles and epileptics from workhouse treatment. The County Councils Association has raised the question whether the necessities of the case might not be met by setting apart distinct portions of workhouses for this purpose instead of providing new and expensive buildings. The importance of providing suitable occupation for these classes under due medical supervision should not, however, be overlooked, for the experience of institutions both for imbeciles and for epileptics has demonstrated that properly-regulated industrial employment is essential both for health and happiness, and conditions favourable to such employment (especially outdoor employment) are rarely met with in the system of classification in vogue in workhouses. The true solution of the difficulty would seem to lie in the combination of Poor-law authorities for the establishment of colonies, with associated hospital arrangements, for pauper imbeciles and epileptics, as has indeed been already planned by the unions of Manchester and Chorlton.

THE PATHOLOGICAL ASPECTS OF THE POSTAGE STAMP.

The brothers of the Saint Jean-de-Dieu Hospital at Ghent, who would seem to have a good deal of leisure time on their hands, have hit on a novel style of wall decoration. They have papered the parlour, the two refectories, the 28 rooms, and all the corridors of that establishment with stamps, ingeniously arranged in such a fashion as to represent palaces, forests, rivers, flowers, insects, and even persons, the latter in life size. All the subjects are treated in the Japanese style with remarkable perfection. Many Belgian painters have been to see these highly original works of art, in the execution of which some twenty million of postage stamps have been employed. We are willing to believe that the artistic effect of this new style of mural decoration is admirable, but from the sanitary point of view—which after all should not be altogether lost sight of in the decorations of a building intended for the reception of the sick—we are disposed to think it a little questionable. A severe hygiene would doubtless proscribe any kind or description of wall paper as being likely to harbour the ubiquitous microbe. With regard to postage stamps in particular, cause has recently been shown to regard them with special suspicion as possible agents in the dissemination of tuberculous infection. A French investigator has shown that the stamps are often infected by means of the saliva of diseased persons, and he has uttered a note of warning to this effect to stamp collectors. He had occasion to observe a man suffering from tuberculosis who plied a trade in stamps, and who was in the habit of sticking them on gummed paper after moistening

them with his tongue. A number of stamps which had been thus dealt with were placed in sterilised water. The water was afterwards inoculated in some guinea-pigs, all of which died with well-marked signs of tuberculosis. Against so subtle an enemy as tuberculosis no precaution can safely be neglected. The moral of the experiments to which we have referred is that postage stamps are not to be recommended either as hobbies or as mural decorations except under antiseptic precautions.

MEDICAL SCHOOLS IN THE UNITED STATES.

The United States, as is well known, rejoice in a larger number of medical schools than any other country of the world. Excluding graduate schools, there are, according to a monograph on professional education by Mr. James Russell Parsons (quoted in the *Medical Record*), 156 schools of medicine, 5,735 instructors, and 24,119 students. The ratio of medical practitioners to population in the United States is 1 to a little under 600, while in other countries it varies from 1 to about 1,100 in the British Isles to 1 to about 8,500 in Russia. It is estimated that the United States have in proportion to population four times as many practitioners as France, five times as many as Germany, and six times as many as Italy. There are more medical schools in the United States alone than in countries whose total population is six times as great. Yet few of the schools in the United States have endowments in any way proportioned to their needs.

THE CANADIAN MEDICAL ASSOCIATION.

The annual meeting of the Canadian Medical Association will be held at Ottawa on September 12th, 13th, and 14th, 1900. Mr. Edmund Owen, surgeon to St. Mary's Hospital, London, has undertaken to deliver the Address in Surgery. The profession in Ottawa intend to spare no pains to make the meeting worthy of the capital city of the Dominion, and those who shared the hearty welcome extended to the British Medical Association when it visited Canada in 1897 will feel sure that the scientific interest of the meeting will be second only to the genial hospitality extended to visitors.

THE CHAIR OF MEDICINE AT EDINBURGH.

We have received a telegram from Professor Osler, of Baltimore, stating that he is not a candidate for the Chair of Medicine.

Dr. Edkins, Lecturer on Chemical Physiology and Demonstrator of Physiology in St. Bartholomew's Hospital Medical School, has been appointed jointly with Dr. Klein Lecturer in Physiology in the School.

The President and Fellows of the Royal College of Physicians of Ireland have unanimously elected Sir James Reid, Bart., K.C.B., M.D., Physician in Ordinary to Her Majesty the Queen, to the Honorary Fellowship of the College.

The Lord Lieutenant of Ireland has appointed Dr. Ninian McIntyre Falkiner to the post of Medical Superintendent in the General Register Office. This is a new post, and was created by the Government in order to overcome the obvious disability in which the office was placed by the appointment of non-medical men to the positions of Registrar-General and Assistant Registrar-General. The duties attached to the office will be mainly to supervise the Statistical Branch of the department, and the work will, therefore, not be of a laborious character, but, in view of the fact that the official is required to devote his whole time to the public service, the salary attached to the office is decidedly small—£350, increasing by annual increments of £15 to £500 per annum.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Bill has had even a shorter time in Committee than was anticipated. Two sittings, of which the second was short, have sufficed to amend the Bill and report it to the House. The attendance at the Committee was not large, only some 30 members attending at first out of 83, while later on the numbers were fewer. The promoters of the Bill were largely in the ascendant in the Committee, and they managed the conduct of the Bill very skilfully. On the part of some speakers there was a regrettable antagonism exhibited to the country practitioner; but on the whole the assertion that the profession was actuated by public rather than by professional interests was energetically maintained by the members who had charge of medical amendments. The position of the Bill now is most favourable. As it has been amended in Committee it will have to be considered by the whole House on report, and it will then be competent for any member to move amendments, and even to raise again questions decided by the Committee. The Vaccination Bill, it will be remembered, was materially altered on the report stage. Later on there will come the third reading. The Bill has been put down for Monday next, but it cannot at present be considered, as the House has not yet passed in Committee the resolution with regard to expenses under the Bill. There is therefore this little impediment to be overcome. Now, as the Committee resolution is not likely to be reached before midnight, and as it can be stopped by the words "I object," it is quite possible that members may, in the interest of other Bills rather than from any hostility to this particular measure, use their rights to check its progress and deprive it of the premier position which it now enjoys. In the meantime some amendments for the report stage are pretty sure to be placed on the paper.

The Indian Troops in South Africa have suffered rather severely in the campaign, so far. Of a total number of between 7,000 and 8,000 brought from India it appears that no fewer than 80 officers and 1,221 men are reported as killed, wounded, or missing. Disease has carried off 2 officers and 246 men.

The Indian Ambulance Corps in South Africa is apparently numerous, for of some 1,300 Indian subjects employed in South Africa the majority are employed with the Army Medical Department. So far only 4 have been killed and 7 wounded according to the returns in the hands of the Under-Secretary for War.

The Census (Great Britain) Bill passed its third reading on Monday last in the House of Lords, and received the Royal Assent on Tuesday. The question of a quinquennial census has been postponed, and many members fear that the prospect of securing this important reform in the interest of vital statistics has been lost for another ten years.

The Burial Grounds Bill, introduced on Monday by the Home Secretary, will amend the law in the direction of placing all the ecclesiastical side under the Home Office as at present and giving the whole of the sanitary and financial part to the Local Government Board. This will be a useful reform from a public health point of view and will prevent the conflict of authority and confusion of interest which occur under the present system.

A Pasteur Hospital has been established in Paris, on the initiative of Drs. Roux and Martin. The building, which is situated in the Rue Vaugirard, was erected from designs by M. Florentin Martin. The funds have been obtained from the State and the municipalities, as well as from private subscriptions. Dr. Martin is to be senior physician, and there will be two physicians for each pavilion, making 20 in all. The formal opening of the new hospital will take place shortly.

THE RETIREMENT OF SIR WILLIAM GAIRDNER.

His Farewell to his Class.

On March 23rd, in concluding the winter course of Practice of Medicine for the session 1899-1900, Professor Sir William Gairdner addressed the class as follows:

I have one other statement to make before closing, which may be of some importance beyond the bounds of this class-room; and therefore I propose, contrary to the usual custom, to allow it to appear in the public journals. I have determined, after much consideration, to apply in the course of the present summer to the University Court to relieve me of the offices I hold as Professor of Medicine in this University. It will be proposed that my actual demission should not take place until after the summer graduation, and at such time as may allow my successor to be installed for the winter session in October next. I hope thus to engage in the Final Examinations and otherwise to fulfil as well as I can my duties towards most of those who are to go forward for a degree in the present year. With the motives which have brought about this determination it is not perhaps necessary to trouble you; but it is due to my own feelings to say that in retiring from official life, I am not conscious of any less keen enjoyment of my work as a teacher of medicine than at any time before. My class-room and my hospital remain now, as they have all along been, the greatest of my occupations and the sources of the most profound satisfaction in endeavouring to serve thereby my day and generation. But what I am coming to feel more and more, though very gradually pressed upon me, is the difficulty, with failing eyesight, of keeping up with the enormous amount of reading required for a systematic course of practice of medicine at a time when medical science, in its immediate relation to the healing of disease, is making progress "by leaps and bounds." I have done my best; but the new science of bacteriology alone, in its ever-increasing range of applications, both in diagnosis and in treatment, is getting beyond me, whether as regards reading about it or the use of the microscope to verify what I read. I have therefore come to the conclusion that it is expedient, however painful to myself, as the loss of a thoroughly wholesome and stimulating discipline of mind and of body, that in the interest of the University and in that of your immediate successors a new and younger professor, with at least a younger pair of eyes, and perhaps a younger brain as well, is desirable; and I cannot doubt that the University Court will give effect to this opinion when called upon to do so. Meanwhile it is a great satisfaction to me that I have been able to arrive at this conclusion at a time when my relations to you, gentlemen, are, as they have all along been to the students of this University, so entirely cordial and satisfactory. What I owe to the affection and enthusiasm of students of medicine, during a much longer career than falls to most teachers, can never be expressed in words. It can only take effect practically in the very cordial benediction which I now desire to extend to you, in the name of many past generations of pupils, many of whom have grown to be aged practitioners of medicine, colleagues, rivals, or assistants in hospital or academic work. Of these last I can only say in general terms that it seems to me now a marvel how excellent, how truly helpful, how assiduous and devoted they have been from first to last; and never more so than now, when the burden of years has possibly made me more dependent on their ever-gracious courtesy and kindness. Few men, I think, can ever have had such a succession of helpers in class and ward duty as now comes to a close for me in the persons of our good friends Carslaw, Ness, and Watson. I can only hope for you, in your turn, that each of you may, during a long lifetime, come to feel that he has become a debtor to so many others in the only form of indebtedness which has high apostolic authority. "Owe no man anything but to love one another." The example of loyalty, of devotion, and of goodwill which have come to me during a very long professoriate is perhaps the best legacy I can leave to my successor, and I hereby leave it to him with all my heart.

At the conclusion of the address Sir William Gairdner was heartily cheered by the assembled students.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of April next, at 2 o'clock in the afternoon.

March, 1900. Francis Fowke, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

South Wales and Monmouthshire Branch.—The spring meeting of this Branch will be held at Abergavenny on Thursday, April 26th. Notices of nominations, papers, etc., to be sent in by Monday, April 9th.—Alfred Sheen, Cardiff, D. Arthur Davies, Swansea, Honorary Secretaries.

South-Western Branch.—Preliminary Notice.—The spring intermediate meeting of this Branch will be held on Tuesday, April 10th, at Truro, at 4.15 P.M. The Honorary Secretary will be glad to hear at once from members wishing to read papers or show cases or specimens, that an agenda paper may be issued.—H. W. Webber, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

North Wales Branch.—The spring intermediate meeting of this Branch will be held at Bala on or about April 19th. Members having any paper or case to communicate should kindly intimate their intention to do so before April 12th. Members having medical men to propose as members of the Association and Branch should apply at once for forms of membership to be filled up. Those already members of the Association should make a written application for membership of the Branch.—W. Jones-Morris, Portmadoc, H. Jones Roberts, Pen-y-groes, Honorary Secretaries.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

The 154th meeting of this District was held on March 22nd at Sittingbourne, Dr. Josse in the chair. There were nineteen members and visitors present.

Confirmation of Minutes.—The minutes of the last meeting, held at Canterbury in November, 1899, were read and confirmed.

Chairman of the Annual Meeting in May.—Dr. Latter, of Folkestone, was elected Chairman of the forthcoming annual meeting at Canterbury.

Representatives of Branch on Association Council.—Dr. Verrall (Sussex), Dr. J. H. Galton (Surrey), and Dr. Tyson (Kent) were nominated as representatives.

Death from Senility.—The Chairman read a paper entitled the Pathology of Death from Senility. He stated that atheroma and dyspepsia were rare in old age. Charcot's

observation that in senile diseases the axillary temperature was much lower than the rectal, was noted. The deductions of authorities were that persons of spare figure and average height lived longest, and that the chief requisites for longevity were a well-balanced system with persistent nutritive force. Those who slept well and ate sparingly, with but little meat and alcohol, lived longest. Deaths from old age purely were very rare, and the symptoms which he had often observed, but never seen described except partially by Maclachlan as catarrhal gastritis, were apathy, anorexia, subfebrile temperature, a brown coated tongue, sometimes with sordes, sickness, constipation, thirst, and progressive emaciation, ending in coma and death. Vitality might overcome the first and second attacks, but rarely the third. Two theories were advanced to explain this condition: (1) Failure of circulation or (2) a central nerve lesion; the first, owing to fatty degeneration of the heart, producing passive congestion and failure of elimination so often observed in these cases; the second producing elevation of temperature. The more advanced stage of atrophy of the brain was accompanied by degeneration of a chemical character, the fatty elements decreasing, and the proportion of water and phosphorus increasing. This pyrexia existing, and excessive waste being set up, the by-products of fever accumulated and circulated in the blood, producing a secondary condition of autotoxæmia. This latter theory seemed to explain the irregularity of temperature and the functional troubles, previously described, more completely than the former.

The Value of Antistreptococcus Serum.—Mr. BERTRAM THORNTON (Margate) contributed a paper on a case illustrating the value of antistreptococcus serum.

The patient was a middle-aged labourer whose illness began with slight erysipelas, degenerating into severe septicæmia, several joints being inflamed as well as the pericardium. The case appeared hopeless. Pure cultures of streptococci were found in the blood. On the fourteenth day 10 c.cm. of the serum were injected twice, and daily for eight days following. Improvement was marked after the first dose, and the man made a good and fairly rapid recovery.

Mr. Thornton read an account of several other cases in recent medical literature, chiefly instances of puerperal septicæmia, and the evidence, though somewhat inconclusive, seemed to show that where the morbid agent was entirely or chiefly the streptococcus, the serum, if given in time, was often effective, and there appeared to be little evidence to show that it ever did any harm, even when it did no good.

The Vaccination Act, 1898.—Mr. BRYAN RIGDEN (Canterbury) read a paper on The Vaccination Act of 1898, and gave a general support to its provisions. He alluded to the way in which it affected the general public, the general practitioner, and the public vaccinator; and, in conclusion, offered a few suggestions for its improvement.

BRITISH GUIANA BRANCH.

THE first quarterly meeting of this Branch was held at the Public Hospital, Georgetown, on January 18th, Dr. DUNSCOMBE HONIBALL, President, in the chair. Ten members attended, and Surgeon-Colonel S. Archer, A.M.S. (retired) was present as a visitor.

Place of Meeting.—The PRESIDENT read a letter from the Surgeon-General, granting permission to the Branch to hold their meetings at the Public Hospital, Georgetown, for the coming year.

New Members.—The following candidates were elected members of the Branch: H. L. S. D. Belasco, M.B., C.M.; Jas. H. Sholto-Douglas, M.B., C.M.; and W. A. Pitt, L.R.C.P. and S., etc.

Dr. F. H. Anderson.—The PRESIDENT read a letter from Dr. F. H. Anderson, regretting his inability to be present at the meeting, which would probably be the last it would be in his power to attend before leaving the Colony.—The HONORARY SECRETARY was directed to write to Dr. Anderson, expressing regret at his having to sever his connection with the Branch, and to express their appreciation of his past services.

President's Address.—The PRESIDENT thanked the members for the high honour they had done to him by electing him as their President, and he hoped that under his presidency the Branch would flourish, as it had done in the past, for the advancement of medical science and practice. After remarking on the excellent work done by his predecessor and various members of the Branch, he read a paper on Some Accidents and Injuries caused by Lightning, which will be published.

Vote of Thanks to President.—A cordial vote of thanks was passed to the President for his most interesting paper, which was discussed by several of the members present.

HONG KONG AND CHINA BRANCH.

A MEETING of this Branch was held at the Sanitary Board Offices, Hong Kong, on Thursday, January 18th, Dr. FRANCIS CLARK, M.O.H., President, in the chair.

Beri-Beri.—The PRESIDENT opened a discussion on beri-beri, with special reference to a recent outbreak at the Berlin Foundling House. The address will be published.—Dr. KRIEG, under whose care the patients had been, said that the principal symptoms had been dropsy and marked heart weakness; there had been no marked paralysis, although some of the children had exhibited a somewhat staggering gait; there had been very little fever among the patients; there was no albumen in the urine.—Dr. GIBSON, who had treated two of the patients from the Foundling House at the Alice Memorial Hospital, exhibited a photograph of these patients, and stated that both had shown loss of tendon reflex and some difficulty in walking, but that the œdema and the cardiac symptoms had been the most prominent. He also instanced a similar epidemic among young children at the Levaton Schools some some few years ago.—Dr. WAN TIM MO laid great stress on respiratory oppression as one of the earliest symptoms of beri-beri among the Chinese, who had known and described the disease many years ago.—Dr. ATKINSON, P.C.M.O., suggested that the outbreak at the Berlin Foundling House might have been epidemic dropsy and not beri-beri, and instanced in support of this the marked absence of paralysis and other NERVOUS SYMPTOMS.—Staff-Surgeon WHITELEGGE, Dr. HARSTON, Major WHITTY, R.A.M.C., Dr. HARTIGAN and Staff-Surgeon ANDREWS, R.N., also joined in the discussion.—The PRESIDENT, in summing up, pointed out that whereas certain symptoms of beri-beri, particularly those of paralyses, were more or less absent in the recent outbreak, yet the suggested diagnosis of epidemic dropsy hardly seemed to be any more appropriate, as many of the characteristic symptoms of this latter disease, especially the rash, the continued fever, and the evidences of intestinal irritation were also absent. Whatever the diagnosis, however, one point appeared clear, and that was that the locality of the Foundling House had become infected with a specific disease and that a change of venue had resulted in a rapid improvement in the condition of health of the patients. The only duty that remained therefore was to see that the infected locality was thoroughly disinfected and cleansed before the return of the children.

CEYLON BRANCH.

A MEETING of this Branch was held at the Colonial Medical Library, Colombo, on January 20th, under the presidency of Surgeon-Major ALLAN PERRY, P.C.M.O. There were 10 members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The following were elected members of the Branch and Association: Miss M. Nona Sharman, M.B., London; J. H. S. Goonewardena, L.C., M.C., Ceylon; H. S. Rasaiah, L.C., M.C., Ceylon; H. I. Fernando, L.C., M.C., Ceylon.

Papers.—A paper by Dr. W. WIJESAKERA on the diagnosis and treatment of Ceylon sore mouth (psilosis) was read by Dr. J. W. A. ATTYGALLE. A brief discussion ensued in which Drs. W. G. VAN DORT, M. SINNE-TAMBY, W. H. DE SILVA, and the PRESIDENT took part.—Another paper was read by Dr. W. H. DE SILVA on a modified operation for pterygium.

Cases.—Dr. W. H. DE SILVA showed cases of herpes corneæ with complications, and double coloboma of iris with cataract, and a skiagraph by Dr. ATTYGALLE.—Dr. S. A. SITTAMPALAM showed a case of facial paralysis following influenza.

Vote of Thanks.—After a vote of thanks to the writers of the papers the meeting adjourned.

THE ninth annual meeting of the German Otological Society will be held this year at Heidelberg on June 1st and 2nd.

THE MIDWIVES BILL IN THE STANDING COMMITTEE ON LAW OF THE HOUSE OF COMMONS.

Rejection of Amendments.

The Standing Committee on Law met on Friday, March 23rd, under the chairmanship of Mr. Laurence Hardy. The number of members on the Committee for this Bill is 83, but the number present did not exceed 30.

Mr. T. P. O'Connor (Liverpool, Scotland) moved the following for Mr. Lloyd-George:

Clause 1, line 5 (short title), to leave out "midwives," and insert "midwifery nurses."

He said that the main objection to the Bill was that it transformed the midwife into a medical man, with all his privileges. The amendment would have the effect of making it clear that the women to be certified were nurses.

Mr. Heywood Johnstone (Sussex, Horsham), who was in charge of the Bill, said that he could not accept the amendment. The word "midwife" was well known and understood, and was used in the Scriptures. Further, if a distinction were drawn between midwife and midwifery nurse, there was danger that the existing midwife might carry on her profession unchecked, asserting that she was not a "midwifery nurse."

Dr. Commins (Cork, South-East) said that a registered medical practitioner was compelled to take a midwifery qualification requiring a long course of attendance at a medical school, and a knowledge of physiology and anatomy. These midwives would be led to dub themselves practitioners of midwifery, and would be confused to a large extent in the minds of those who sought their assistance with medical men properly qualified. He considered the amendment absolutely necessary.

Mr. Lloyd-George (Carnarvon District) said the Bill was a very serious amendment to the law as it now stood. If a qualified medical practitioner were to employ an unqualified person he was liable to be removed from the profession on the charge of infamous conduct. A medical practitioner was not allowed to employ an unqualified male assistant, even of twenty years' experience. The Bill proposed to allow midwives with a few months' training to practise, though medical practitioners had been struck off the *Register* for availing themselves of the services of men of considerable experience. The Committee ought to insist on the operations of these women being confined purely to nursing, otherwise the poor would suffer. The General Medical Council enforced the rule that unqualified assistants must not be employed. At the present time a medical man employing an unqualified assistant would be found guilty of infamous conduct if he did not dismiss him, but under the Bill the wives of working men would be attended by midwives certified after a few months' training. Those fashionable ladies who had done so much to promote this movement would not, he thought, care to have the experiment they proposed for these women tried on themselves. In the interests of the poorer classes the Committee ought seriously to consider this measure, which practically proposed an abrogation of the law as to medical practice.

Mr. Warr (Liverpool, E. Toxteth) said that if proper precautions were introduced into the Bill, he did not think it was desirable to give up the word "midwife" and substitute "midwifery nurse."

Sir George Pilkington (Lancashire, Southport) said the time had come when all nurses, whether for the sick or otherwise, should be brought under control and registered.

Mr. Vicary Gibbs (Hertfordshire, St. Albans) said that he could not conceive why the word "midwife" should not be retained. The supporters of the amendment had simply attacked the essence of the Bill, and this was a fundamental objection to the amendment.

Mr. Harwood (Bolton) said the term "midwife" was commonly used, and connoted a certain class of persons; it was a good thing to distinguish these midwives from incapable persons. The term "midwife" as usually understood would indicate a class of persons quite distinct from the chance neighbour who rushed in on an emergency. It would indicate a special class of trained women.

Mr. Heywood Johnstone said the Bill created no new class of person. The Bill assumed that midwives existed, and provided that they should have some training and some fitness for carrying on their profession. A Select Committee which sat on the subject some time ago reported that medical men had nothing to fear on the score of competition. The trained woman would know when she needed the assistance of a medical man, and would know the right time to send for him, and thus the patient would be saved from a vast amount of suffering to which she was now exposed.

Sir George Pilkington said that the members of the medical profession did not for one moment fear competition. Their thought and care was to ensure the proper protection of the poor.

Dr. Commins said that what was proposed was a new medical qualification; it would damage the qualification of those who had become qualified under the Medical Acts. It would have the effect of confusing the public, who would give the confidence they had in medical men to these women who were not qualified for that confidence. The aim of the amendment was to protect the poor.

Upon a vote the amendment was lost by 20 to 5.

On Clause 2 (1), providing that from and after January 1st, 1902, no uncertificated person shall call herself a midwife or use any title implying that she is certified or shall habitually or for gain attend women in childbirth, Colonel Milward moved, and it was agreed, that the date should be altered to January 1st, 1903.

Mr. Lloyd-George moved that the word "woman" should be left out from Clause 2 and the word "person" inserted, but the amendment was withdrawn.

Colonel Milward (Warwickshire, Stratford-on-Avon), moved to leave out the second "or" and insert "and" in Clause 2 (2), "or shall habitually and for gain attend women in childbirth," etc. Was it intended by the Bill that in future no person should attend midwifery cases except registered midwives? What would be the position of the old people in the country villages who attended to the wants of their neighbours at critical periods? He did not know whether the Committee were aware what an enormous change this Bill would make. The Registrar-General's returns showed that there were 115,000 births in the kingdom, and assuming that a midwife on an average attended 50 births a year, there were 23,000 persons practising as monthly nurses. All of these would be disqualified if it became an offence that anyone who was not registered attended on women in childbirth.

Mr. Heywood Johnstone said he had great sympathy with any effort towards protecting the rights of poor women practising in villages. Any amendment that could be suggested that could make this clear would have the most anxious, the most benevolent consideration of the promoters of the Bill. But he doubted if the Bill would hit that class of person. It would affect those who habitually engaged in midwifery, and not those who might be called upon in an emergency to help. With regard to the women at the present time engaged in practice in villages, they were protected by Clause 3. They could claim to be put on the Midwives' List, and they could claim that without any further qualification than their experience. If the word "or" was struck out and the word "and" substituted, the case of a person who habitually and for gain practised midwifery would be left untouched. She would not call herself midwife, but simply Mrs. or Madame So-and-So. It left untouched the vast number of persons who might engage in midwifery without any proper training, and who would be very careful to keep within the law. He called to his aid the opinion of the General Medical Council, and the Colleges of Physicians and Surgeons that any measure which proposed merely to protect the name "midwife," and which did not make penal the unlicensed practice of women for gain could not be regarded as containing a sufficient safeguard. The promoters of the Bill could not accept an amendment undoing that recommendation of the General Medical Council from whom they had received great assistance.

Mr. Helder (Whitehaven) said that the object of the Bill was to qualify a person after an examination to practise in a particular way, and he thought that was right enough, but the Bill would cut out a number of persons who at the present time were doing good work.

Colonel Milward said that as it stood the Bill was too

drastic, but, if Mr. Johnstone would accept an amendment later, he was willing to withdraw.

Mr. Harwood said that under the clause as it stood women would not in cases of emergency be able to accept the assistance of their neighbours.

The amendment was by leave withdrawn.

Sir George Pilkington, who had an amendment to leave out the words "that she is qualified," in Clause 2 (5), said that he would withdraw it in favour of the next amendment

Mr. Lloyd-George moved that in Clause 2, line 29, the word "qualified" should be left out ("or that she is qualified to grant any medical certificate," etc.), and the word "authorised" inserted, on the ground that this word was used in a technical sense in the Medical Acts.

The amendment was accepted.

Colonel Milward moved as an amendment:

Clause 2 (5) that the words after "stillbirth" should be left out to the end of the clause, and the following inserted, "and she shall apply for qualified medical assistance in every case which presents abnormality, danger, or disease on the part of the mother or of the newborn child."

Mr. Heywood Johnstone said that he could not accede to the amendment. The object of the amendment could better be attained by the rules to be made for the guidance of midwives by the Midwives Board. It was not right to put upon one class of the community a statutory responsibility for sending for medical assistance at a particular juncture. If midwives were properly trained, they would know when to send. In the case of a midwife nursing a poor woman was she to go for the doctor herself? The responsibility for sending for assistance should be imposed by rule. Why should not the responsibility be left where it was—upon the husband or others who might be in the house?

The amendment was withdrawn.

Mr. Lloyd-George proposed that the following words should be inserted at the end of Clause 2:

"And if any woman certificated under this Act shall do or purport to do anything which by this Subsection it is declared that her certificate does not confer upon her a right or title to do, she shall be liable on summary conviction to a fine not exceeding five pounds."

Mr. Arthur Elliot (Durham City) said that the Bill did not authorise a midwife to attend cases of abnormal birth, but if a labour became dangerous it would be hard that a penalty should be incurred by the midwife for rendering what assistance she could.

Mr. Vicary Gibbs contended that the amendment would have the effect of preventing the midwife doing something to save life in an emergency at a moment's notice. It might cause her to leave her patient, when, by taking some precaution, the life might be saved.

Mr. Lloyd George inquired whether the promoters did not really intend that these midwives should perform functions which were not authorised by the Bill. It was contended that there might be cases of emergency in which a midwife might just overstep the mark, and that it was unreasonable that she should be punished for this. But what emergency could arise which would authorise a midwife to grant certificates? If the Bill authorised midwives to attend abnormal labours it was a worse Bill than he thought.

Mr. Parker Smith (Lanark, Partick) said that if a midwife went to a confinement which turned out abnormal, and sent for a doctor, and in the meantime it became absolutely necessary to do something, the midwife would have to get an uncertified woman to do her best because of the liability which this amendment would create. That was an absurdity.

Mr. Atherley-Jones (Durham, North West) said that the amendment was moved in the interests of the medical profession to render as difficult as possible the attainment of the benefits aimed at by the Bill, which was designed to provide persons to perform necessary duties for the working classes. Assuming a midwife attended a case in which she found abnormal conditions, she without, probably, having the means of calling a medical man, would have to do at her peril that which she had actually been called in to do, namely, to assist at the birth of the child. An absolute liability would be placed upon her of a fine of five pounds if she attended cases of abnormality or disorder which could only be discovered at the time of birth. The amendment was only designed to maintain the monopoly of medical men.

Colonel Milward hoped Mr. Lloyd-George would withdraw the amendment, as he thought it undesirable that the Bill should bristle with penalties all through.

Mr. Lloyd-George asked whether, if he withdrew the amendment, Mr. Johnstone would accept an amendment imposing a penalty.

Mr. T. P. O'Connor said that the point he wished to bring home was the objection that these midwives were not to be midwives and nurses, but medical men with all their privileges. The Bill would enable these women, with a comparatively small experience, to possess the rights and privileges, and to assume all the duties of qualified medical men. These certified women would be able to attend abnormal labours, for Mr. Parker Smith had really shown that, though not authorised, they could attend abnormal labours. It had been contended that these midwives would not, dared not, and could not undertake the duties of medical men, but the Bill had no safeguard whatever. The Committee were bound to insert some safeguard by which the certified midwife should not be authorised to attend abnormal labours nor have such a burden put upon her. Without a proviso of that kind the Committee would be approving of the principle that these midwives were not to do ordinary nursing work but to assume the privileges of medical men.

The Solicitor-General (Inverness Burgh) said that the wording of the clause with the amendment would be ambiguous—so much so that most of the speakers had mistaken the incidence of the penalty. The matter might be raised again and considered on a later amendment.

Mr. T. P. O'Connor said it was not right to throw the responsibility of framing the amendment upon the critics of the Bill.

Mr. Heywood Johnstone said that the amendment referred to a woman certified under the Act, and under Clause 4 it would be one of the duties of the Midwives Board to make rules regulating the practice of midwives. A rule made under that clause would, he thought, meet all the points raised.

Mr. Parker Smith agreed that a woman who gave herself out as qualified to attend abnormal cases ought to be prevented from doing so. He would like to ask the Solicitor-General if she would not be liable to penalties under the existing law?

The Solicitor-General said he did not think so, but the Bill would give power to the Midwives Board to make a rule to regulate the practice of midwives. Such a rule in stringent terms providing that certified women should not give out that they were qualified to do what they had no power to do would meet the case. Perhaps the promoters of the Bill would consider whether it would not be enough to leave it to the Midwives Board, which would have power to frame rules to supervise the midwives.

Mr. Lloyd-George then withdrew the amendment.

Sir George Pilkington moved an amendment that after the word "provided" in Clause 3, line 5, there should be inserted the words "that she bears a good character and that." The clause as it stood would not require that women holding a certificate from the bodies mentioned should provide evidence of good character.

Mr. Heywood Johnstone said that he hoped this would not be pressed. The clause provided that a woman could claim to be certified who held a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London, or produced evidence of having been in practice as a midwife and bore a good character. The effect of this amendment would be to require evidence of character from persons holding certificates from the above-named bodies.

The amendment was withdrawn.

Sir George Pilkington moved:

To omit from Clause 3 the words "from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be."

He pointed out that the Royal College of Physicians of Ireland had already ceased to grant its certificate, and that as a matter of fact only forty-nine women held such certificates at the present time. With regard to the Obstetrical Society of London, it was a voluntary association, not a statutory body, and it was understood that the Society intended to discontinue its examination if an examination were instituted by

the Midwives Board to be established under the Bill. He thought it would be better to leave the Board free to recognise certificates.

Mr. Heywood Johnstone said that it would be ungracious to fail to recognise the work done by the Obstetrical Society. That Society had granted certificates to over 4,000 women, and it would be only right that the Central Midwives Board should accept that certificate.

The amendment was, after some discussion, withdrawn.

Sir George Pilkington moved to omit from the first line of Clause 4 the words "the President of." He considered it desirable that the steps to be taken to secure the formation of a Central Midwives Board should be taken by the General Medical Council itself, and not by the President, whose authority was derived entirely from the Council.

The amendment was accepted.

Sir George Pilkington moved:

In Clause 4 to omit all words after "practitioner," and to insert "to be appointed by the General Medical Council, one being a practitioner practising in the London and South Eastern Registration Divisions, one practising in the South-Western, West Midland, or Welsh Registration Divisions, one practising in the Eastern, North Midland, or South Midland Registration Divisions, and one practising in the Yorkshire or Northern Registration Divisions, as from time to time defined by the Registrar-General."

He said that the governing bodies of the Royal Colleges of Physicians and Surgeons of London consisted of medical men who had attained consulting rank, whereas the work to be done by midwives would be among the poorer classes of the community. Its supervision should be entrusted, therefore, to general medical practitioners who understood the conditions of practice among the poorer classes.

Mr. Heywood Johnstone refused to accept the amendment, on the ground that the Committee might be satisfied that the bodies named in the Bill would provide satisfactory representatives.

After some discussion, which disclosed that the majority of the Committee was opposed to the amendment, it was withdrawn.

Mr. Lloyd-George said he proposed to insert the words "and powers" after the word "duties," so that the words of the clause should read: "the duties and powers should be as follows."

This was agreed to.

Mr. Atherley-Jones proposed an amendment to omit the words, "subject to the approval of the General Medical Council" in Clause 4 (1). He said that there was no doubt that great opposition was offered to the Bill by a considerable number of practising medical men. That opposition was founded upon the idea that by establishing certified midwives the public would avail themselves of the services of these women in preference to those of medical men. Letters which he had received made it plain to him that the idea of the medical men was to impose as many restrictions and difficulties in the way of rules as they could with the object of making the use of midwives impossible. Clause 4 as it stood provided that the Midwives Board should frame rules, and the choice of that Board and the constitution of it provided that there should be four registered medical practitioners on it. He considered that the Central Midwives Board was well adapted for the purpose of framing rules without the assistance of the General Medical Council. Letters he had received from medical men convinced him that the writers expected that if these rules were made subject to the approval of the General Medical Council that would have the effect of causing vexatious and restrictive rules to be made which would tend to discourage the employment of midwives. He was warranted in making that observation from the amendment last moved by Sir George Pilkington. It was sought by it to ensure that the framing of these rules should be controlled by the general medical practitioners of the country, who would do the most they could to restrict the use of midwives. No such provision was to be found in Continental countries.

Mr. Heywood Johnstone said he could not accept the amendment. All through, the General Medical Council had made the condition that any rules should be subject to its approval. After the assistance they had received from the General Medical Council they could not in honour throw them over.

Sir George Pilkington said that he thought the General Medical Council, which was representative of medical men, must be the best body to have control and give advice. He regretted that Mr. Atherley-Jones had such a low opinion of the morality of medical men. The medical profession were only anxious to protect poor women in every way from being attended by persons not properly qualified after only three months' training.

Mr. Atherley-Jones withdrew the amendment.

Mr. Lloyd-George moved:

Clause (4), 5, line 11, after the word "misconduct" (or other misconduct) to insert the words "and so that for the purposes of this Act the omission to summon a registered medical practitioner in a case of abnormal labour shall be deemed to be misconduct."

Mr. Heywood Johnstone said that it would be an unfortunate thing to fix such a statutory responsibility on midwives. The end in view could be attained by a rule framed by the Midwives Board.

Mr. Lloyd-George withdrew his amendment.

Sir George Pilkington moved:

Clause 4 to insert after (6) the following: "(7) At the discretion of the Board to inspect, or cause to be inspected from time to time, any premises wherein any woman receives, or proposes to receive as a midwife, a pregnant or lying-in woman, and if such premises shall, in the opinion of the Board, be fit for the reception of a pregnant or lying-in woman, the Board shall issue a certificate to that effect upon payment by the midwife of such fee as may be fixed by the Board, and shall enter such premises upon a register to be kept by the Board."

He said that it was most necessary to bring lying-in homes conducted by midwives under control. A large number of deaths occurred from puerperal fever; rigid cleanliness and proper sanitation of the house were absolutely necessary for its prevention.

Mr. Parker Smith said that the proposal as it stood would mean that the Board would have to maintain a staff of sanitary inspectors.

Mr. Vicary Gibbs thought that the principle of the amendment was good. The local authorities should pay for the inspection, and the medical officer of health of the district should inspect.

Mr. Heywood Johnstone agreed that the object aimed at was very desirable. If any suggestion could be brought forward to carry out the object he would be only glad to accept it. He suggested that the point might be more properly dealt with by an addition to Clause 12.

The Solicitor-General suggested that the Local Government Board should be consulted in order to obtain its views as to the machinery which should be provided for the purpose of working the proposal.

The amendment was withdrawn with this understanding.

The Solicitor General moved the following amendment, which was accepted:

To leave out from Clause 5 the sentence beginning "Should these fees," and to insert "The Board shall, as soon as practicable after the thirty-first day of December in each year, publish a financial statement made up to that date, and certified by a chartered accountant as correct, showing the receipts and expenditure, including liabilities, of the Board during the year. The Board may apportion between the Councils of the several counties and county boroughs any balance against the Board shown in the financial statement in proportion to the number of midwives licensed during the year to practise in those areas respectively, and may recover from the Councils the sum so apportioned."

Mr. Lloyd George then proposed to add the following words at the end of Clause 5:

"The general expenses of the Board shall include the payment to the members thereof of remuneration for their services, and reasonable travelling expenses upon such a scale as may be approved by the Treasury."

After some conversation, in the course of which the Solicitor-General was understood to express a doubt as to whether it was within the competence of the Committee to accept the words, and suggested that the point, if it was to be dealt with, must be dealt with in the next clause, the Committee divided, when the words proposed to be added were thrown out by 20 votes to 4.

After some observations by the Solicitor-General as to the competence of the Committee to deal with Clause 6, its further consideration was postponed.

Clauses 7 and 8 were then put by the Chairman, and carried.

Mr. Lloyd-George proposed an amendment directing the county council to "appoint a committee of no fewer than three registered medical practitioners not teachers nor examiners of midwives," to be the local supervising authority. He thought that the functions of this body made it necessary that it should be composed of medical men.

Mr. Atherley-Jones said that the amendment demonstrated that there was an attempt on the part of one or two members of the Committee to so restrict the operations of the Act as to prevent midwives from fulfilling the useful purpose for which the Bill was proposed by placing the control over midwives in the hands of a body of rival practitioners. He had received numerous representations from medical men that the result of this Bill would be to cause midwives to be employed in preference to medical men. What was proposed in this amendment? It would have this effect, that in sparsely populated and poor places country practitioners (and everyone knew what country practitioners were) would form the body who were to have the general supervision over midwives, and judge whether they were guilty of malpractice or of misconduct in neglecting to send for medical men. He thought the county council could be left to decide what was right in this matter.

Colonel Milward was in favour of at least one member of the supervising authority being a medical man. He did not understand what Mr. Atherley-Jones meant by saying that everyone knew what country practitioners were.

Mr. Heywood Johnstone said that the good sense of the county councils could be trusted in the matter. He wished to dissociate himself from the ungenerous remarks in regard to medical men made by Mr. Atherley-Jones. On the contrary, medical men had given the greatest possible assistance.

Mr. Vicary Gibbs protested against Mr. Atherley-Jones's remarks. He (Mr. Gibbs) had the honour of knowing many medical men, and they had never said one word to him against the Bill. He thought the amendment unnecessary, because it was absurd to suppose that the county councils would fail to resort to expert advice. They would be certain to appoint medical representatives.

Sir Francis Sharp Powell (Wigan) thought that the wording of the clause as it stood was not clear. What did the word "constitute" mean; "every county council.....shall .....constitute the local supervising authority."

Mr. Heywood Johnstone suggested that the word "constitute" should be left out and the word "appointed" inserted.

The Solicitor-General said that a county council ought to appoint a committee for the local supervision over midwives. It would thus be the local supervising authority, but would act through the committee.

The Chairman called the Committee to order, and put as an amendment that the word "constitute" be left out.

This was carried, and the word "be" was inserted in its place.

Mr. Lloyd-George said the question arose as to the delegation of powers by county councils. The supervising authority would have to sit in judgment on cases of misconduct and medical assessors would have to be appointed. There ought to be three medical men appointed, because with only one it was not possible to ensure attendance, especially as they were not to be paid.

Mr. Bonsor (Surrey, Wimbledon) said that it might be anticipated that the county councils would appoint their medical officers.

Mr. Lloyd-George said that if the clause passed as it stood it would not be competent for a county council to appoint its medical officer to the committee. It might be glad to call him in, but he would not be present as a judge. Moreover, all county councils had not got a medical officer.

The Solicitor General suggested that it would be a good plan for the county council to be the authority and to be given power to appoint persons on the committee who were not members of the council.

It was agreed that the question should be raised again on Clause 10.

Colonel Milward moved an amendment to Clause 9 to give the local authority power to frame a sliding scale of charges to be made by the midwives.

Sir Francis Sharp Powell failed to understand what was meant by "a sliding scale." He thought the amendment unnecessary and unworkable.

Mr. Sydney Gedge (Walsall) expressed a similar view; and after some conversation the amendment was withdrawn.

The Committee then adjourned until March 27th.

The Committee resumed the consideration of the Bill on Tuesday, March 27th.

Mr. Heywood Johnstone on Clause 9 (6) moved an amendment to provide that the local supervising authority should "supply the Secretary of the Central Midwives Board with the names and addresses of all midwives practising in the district" during the month of February instead of January, as provided by the Bill, and this was agreed to.

On the same passage of the same subclause, the Solicitor-General moved that the word "practising" be left out, and the words "licensed during the previous year to practise" be inserted. He said it would be difficult for the local authorities to say who were practising midwifery unless the clause was amended as he suggested.

After some conversation Mr. Heywood Johnstone proposed to omit the word "practising" and insert "licensed during the previous month to practise." This was agreed to.

Mr. Warr (Liverpool) moved to add to Clause 9, at the end thereof:

It shall be lawful for the local supervising authority (1) To make from time to time any such order as to them seems fit for prescribing and regulating the remuneration of midwives practising in the district.

Sir Frederick Godson (Kidderminster) asked whether it was intended that this should be compulsory. He knew cases in which it would be most difficult for this to be worked. One town or district would be making one schedule, and another town or county, perhaps a neighbouring one, would be making another. He thought it was far better to leave the matter to the common sense of the people in the district. He would like to ask the Solicitor-General whether it was necessary to make this compulsory. If it was not compulsory, he should think it was as well left out, and he should advise that course.

Mr. Bonsor agreed with the last speaker, and said if compulsion was insisted upon he would like the Committee to divide. He thought the amendment was a step in the wrong direction. It was going back to the time when the price of bread was regulated by the local authority, and as far as he knew there was no profession, except possibly solicitors, whose fees were regulated. In towns competition would practically settle the scale of charges, and in country villages there was always some lady, the clergyman's or the minister's wife, for instance, who could see that no overcharge was made. If the amendment was pressed to a division he would vote against it.

Mr. Vicary Gibbs (Herts, St. Albans) said he objected to this amendment for the reason which was given by the two preceding speakers, namely, the mischievous effects of imposing a regulation of fees, a condition of things which applied to no other class of the community except solicitors, in whose case the court could interfere and fix the rate for any particular service.

Colonel Milward (Warwickshire) said he was sorry to differ from the three last speakers, but he did not think they quite recognised what the effect would be as regards villages. If the Bill passed as it was, the poor in the country villages must have recourse either to a doctor or to a midwife, and inasmuch as the midwife, in order to practise, must pay a fee for her examination and registration, the number of midwives would be very much restricted. It was absolutely necessary that there should be some protection for the poor women in country villages against what might become extortion by the midwife. The case was not like that of the lawyers. A poor woman when she was in sad trouble must go to the midwife or the doctor, and therefore she ought to be protected.

Mr. Hazell (Leicester) said he hoped Mr. Warr would not press his amendment. If the local authority had this power, those who were of opinion that the work should be done by medical men might in some localities be inclined to fix a high scale of fee, and thus throw the work into the hands of the medical men. In other parts of the country there might be other people who might say that the remuneration of the midwife was very small, and that they were being sweated already, and would raise the fee for this reason.

The amendment was lost by 19 to 2.

Mr. Heywood Johnstone moved to insert at the end of Clause 9:

The local supervising authority may delegate, with or without restrictions or conditions as they may think fit, any powers or duties conferred or imposed upon them by or in pursuance of this Act, to a committee appointed by them, and consisting either wholly or partly of members of the council, and the provisions of subsections 1 and 2 of Section lxxxii of the Local Government Act, 1888, shall apply to every committee appointed under this Section, and to every council appointing the same.

Mr. Parker Smith asked whether the words made it possible for women to be members of the committee. He thought it was highly important that a committee should have the power to include women.

The Solicitor-General said he thought that if it was desirable to have women on the committees it should be quite clearly expressed, and that words should be inserted to make that clear.

Mr. Parker Smith moved as an amendment that the words "women shall be eligible to serve on such committees" should be added, which was agreed to.

Colonel Milward asked Mr. Heywood Johnstone if he thought it desirable that those added to these committees should be limited in number.

Mr. Heywood Johnstone said he had no objection but did not think the matter urgent.

Mr. Vicary Gibbs thought Colonel Milward should give some reasons why it should be necessary to limit the number of co-opted members. The county councils would put on the committee those most suitable.

Sir Francis Powell said it seemed to him that it was extremely undesirable to limit the discretion of the councils.

The amendment, with the addition moved by Mr. Parker Smith, was agreed to.

Mr. Heywood Johnstone moved to add at the end of Clause 10:

And the powers and duties so delegated may be exercised by a committee appointed by such district council, and consisting either wholly or partly of members of the district council.

This was agreed to.

The Solicitor-General moved to add to the clause:

Any expenses incurred by a district council in the execution of any powers or duties so delegated shall, to an amount not exceeding such sum as may be prescribed by the county council, be repaid to such district council as a debt by the county council, any excess above the sum so prescribed shall be borne by the district council as part of their ordinary expenses.

The provisions of this Section shall apply to the administrative County of London in like manner as if each metropolitan borough were a county district and the borough council were the district council of that district.

This was agreed to.

On Clause 11, Mr. Heywood Johnstone moved to leave out "December following," and insert "January in the following year"; the Solicitor General to insert after "county," "or county borough"; and Mr. Heywood Johnstone to leave out "on the first day," and insert "in the month of," all of which were agreed to, as were two drafting amendments to Clause 12.

Mr. Heywood Johnstone moved to leave out in Clause 12 from "shall" to "by," so that Subclause (*b*) should read as follows:

(*b*) Any woman, whether certified under this Act or not, who after the first day of January one thousand nine hundred and two, shall hold herself out as a practising midwife or shall practise in any county or county borough without having previously obtained from the local supervising authority a licence enabling her to practise therein shall be liable on summary conviction to a fine not exceeding two pounds: Provided that a midwife shall not become liable under this subsection by attending, on an emergency, a woman in childbirth in a county other than that for which she holds a licence, provided she has within a reasonable time given notice of having so acted to the local supervising authority of the county.

The object of the amendment was that instead of making false representation, a misdemeanour of a rather severe kind, it should be punishable by a somewhat smaller penalty on summary conviction. The reasonableness of this would commend itself to the Committee.

The amendment was agreed to.

Clause 13 was then passed, as was Clause 14, with two drafting amendments moved by the Solicitor-General.

On the motion of Mr. Heywood Johnstone, the words "An appeal shall be allowed to the Privy Council" were omitted from the body of the clause and the words "it shall be determined by the Lord President of the Council" inserted at the end.

After Clauses 16 and 17 had been formally passed, Mr. Tennant (Berwickshire) and Mr. Parker Smith expressed regret that the Bill did not extend to Scotland, and a hope that a Bill for Scotland might be introduced.

Mr. Heywood Johnstone said he thought Scotland would be much better served by having a separate Bill. He could only hope that those who had given such loyal help in connection with this Bill would be willing to give the same help in connection with a Bill to apply to Scotland. He hoped to see a Bill dealing with this subject in not only Scotland but also Ireland and the Isle of Man.

On Clause 18, Mr. Heywood Johnstone moved to amend the definition of the term "midwife," so that it should read:

The term "midwife" means a woman who undertakes for reward to attend women in childbirth where no registered medical practitioner is engaged or employed.

He hoped the Committee would consider the new definition was an improvement. Colonel Milward had expressed a fear that the definition as it stood in the Bill might have hit the monthly nurse who was engaged in the popular sense of the word to attend the woman "during childbirth." He thought the effect of the amendment would be to divide women engaged in attending childbirth into two classes: (1) those who did their work under the superintendence and regulation of a medical practitioner—the monthly nurse; and (2) the women who attend cases where there was no doctor—a midwife. The midwife was the person whose training they wanted to ensure, and he thought the effect of the amendment would be to make it perfectly plain that it was not in any way intended or wished to interfere with the ordinary monthly nurse who was engaged to attend upon a woman who had medical attendance, and who had more nursing functions than midwifery functions.

The amendment was agreed to.

Mr. Vicary Gibbs, in the absence of Sir George Pilkington, moved to leave out "childbirth" from the above definition and insert

natural labour, but not in cases which present difficulty, abnormality danger, or disease on the part of the mother or of the newborn child.

He had promised to take care of that amendment for Sir George Pilkington, but he had not promised that he would supply arguments in favour of it. Though he moved the amendment as a matter of form because he had promised to do so, still he would point out that if accepted it would wreck the Bill and make it absolutely worthless.

The Chairman ruled the amendment out of order.

The Solicitor-General moved, and it was agreed, to insert after Clause 15 the following clause concerning expenses of local supervising authority:

Any expenses under this Act payable by the council of a county or county borough shall be defrayed out of the county fund or out of the borough fund or borough rate, as the case may be.

The Committee then resolved to report the Bill as amended to the House.

SPECIAL CORRESPONDENCE.

PARIS.

Convalescent Homes for Consumptives.—Separate Wards for Advanced Cases of Phthisis in Hospital.—The Typhoid Bacillus in the Paris Water Supply.—An Antituberculosis League.—Haffkine's Preventive Inoculations against Plague.

A recent decree of the Minister of the Interior forbids patients with any signs of tuberculous disease of the respiratory organs to be sent to the national convalescent homes at Vincennes or Le Vésinet. The Hospital Medical Society appointed a Committee, composed of Drs. Rendu, Merklen, and Barth, to examine the changed situation and the means of meeting the difficulty of finding hospital accommodation for consumptives and at the same time preventing the risks of contagion. The Committee's report,

while recognising the justice of the Ministerial decree forbidding the placing of consumptives among patients convalescent from influenza, pneumonia, etc., points out that it is nevertheless impossible to deprive the former of all access to the convalescent homes in the country; otherwise such patients must either be sent back too soon to their homes or else kept on indefinitely in the city hospitals. A special sanatorium exclusively for consumptives leaving hospital is, therefore, imperatively called for; in the meantime the Committee suggest that it would be a simple matter to set aside at Vincennes and Le Vésinet a special block for male patients whose sputum contains the tubercle bacillus.

The Committee also suggest that in the hospitals in Paris special wards should be set apart for the confirmed phthisical patients, whose presence in the general medical wards is a danger to the other patients. The situation is daily becoming more serious, in the men's wards especially, where at times 60 to 70 per cent. of the patients are consumptives, many with cavities; these have beds alongside patients with influenza, typhoid fever, chlorosis, etc. These two suggestions were unanimously adopted.

The Municipal Council of Paris has discussed the water supply at its last three sittings. The matter was important, owing to the number of cases of enteric fever in Paris last year —764 deaths were registered and 11,349 disinfections were performed—and also from the fact that owing to the Exhibition the daily consumption of water will be greatly increased during the current year. The water of the Vanne is very pure at its source, but owing to the fact that before reaching Paris it is fed by drains which increase the quantity but do not improve the quality of the water, on its arrival at the Montsouris reservoir it contains ten times as many germs. "During the month of August, 1899, the bacillus of Eberth was found in the Vanne water," said Dr. Navarre. The Prefect of the Seine replied that Dr. Miquel had not found the bacillus of Eberth, but a bacillus resembling it somewhat—at the most an "Eberthiform bacillus." As to the quantity of water in previous years during the hottest months, it has sometimes been found necessary to add the water of the Seine to obtain the necessary quantity for distribution, the householders in the districts concerned being always notified of the fact. Thus the Seine water was used for six days during 1898, but never since, and the Prefect of the Seine hopes that with the new water supply it will never be again necessary. During the Exhibition Paris will, in addition to its present supply, receive the water of the Loing and the Lunain, which will furnish 50,000 cubic metres of water. In case of the springs running low, there are filter beds at Saint Maur which give 20,000 cubic metres daily, and the new filter beds at Ivry will give 35,000 cubic metres daily. These filter beds will have a double canalisation. A reservoir is being constructed at St. Cloud to hold 100,000 cubic metres as a reserve.

It is proposed to found an "Antituberculosis League" in France, to promote the hygienic education of the tuberculous patient, and the prevention of the infection of his surroundings, and the house, the school, and the workshop; to teach him that his disease is curable, and what are the necessary precautions against being a source of infection. Medical men attached to the league will give lectures on the subject, and will visit the patients indicated to them till the necessary hygienic and prophylactic measures shall have been fully understood and applied. The hospitalisation of patients will be especially attended to, the remedying of the present need of sanatoria being the aim of the Society.

Professor Proust, Professor of Hygiene, recently presented to the Académie de Médecine the new work by M. Netter, entitled *La Peste et son Microbe*. M. Netter gives numerous statistics and tables proving the efficacy of vaccination by Haffkine's method, calling especial attention to those of the town of Hubli. He concludes:

> In principle the seremtherapy of plague must be recognised as now solved, and in practice we can affirm that the serum injected during the first few days diminishes the mortality in a very appreciable manner, at least in the common and even in the septicæmic form of the disease. Its intravenous injection, if begun early, will even cure the pneumonic form. Vaccination, especially by Haffkine's method, confers a fairly marked immunity, and the disease is much less grave among those who have been vaccinated. Vaccination seems an essential measure for those in attendance on the sick, the members of the family, or the inhabitants of a house where there have been cases. It will be a great advantage to generalise the use of vaccination in the affected or threatened districts.

M. Netter does not agree with Haffkine that the generalisation of preventive inoculation will allow us to abandon other prophylactic measures such as isolation, disinfection, and port inspection. Its efficacy is limited, and it should be repeated after six months.

CHICAGO.

Epidemic of Small-pox in Indiana and Illinois.—Neglect of Vaccination in Country Districts.—Death from "Surgical Fright."—Medical Inspection of School Children.—State Sanatorium for Consumptives.—Ambulance Party for the Boers.—The Insane, Feeble-minded, and Dependent.—Rush Medical College.—Dead Bodies from the Philippines.—Proposed Emergency Hospital.

HEALTH officials in general throughout the central West have been exercised over an outbreak of small-pox in the north-eastern part of Indiana. It seems that the first cases were erroneously diagnosed as chicken-pox (the locality being rural and without experts in differentiating small-pox). In this way, and among people who have more or less neglected vaccination, the disease obtained a foothold. The State health officials took action as soon as an appreciation of the situation reached them, and strict quarantine was instituted, together with measures to promote vaccination. The disease was thus limited, but not until after many had been exposed, and, travelling in different directions, had conveyed the infection to even distant parts of the country. In the State of Illinois small-pox has been more than usually prevalent, over 500 cases being reported during the last quarter of 1899. The cases have been scattered, and have mostly been found in out-of-the-way places.

Indifference as to vaccination can almost invariably be held responsible for the occurrence of an epidemic anywhere in this country. Compulsory vaccination laws do not exist, except that in most cities and well-organised school districts no child can be enrolled as a scholar without evidences of successful vaccination. This requirement, however, is very apt to be ignored in many rural communities, and without constant and adequate education upon the matter an indifference is very sure to follow. It then needs but the spark of infection to spread a disease like small-pox far and wide in a given community.

An instance of death from surgical fright recently occurred not far from here. It seems that the patient had been postponing a needed surgical operation for some time owing to a deep, unyielding dread of the procedure itself. She had been encouraged by husband, friends, and physician, but to no use. An overpowering fear possessed her. Consent, however, was finally given—the necessities becoming very urgent—and a day was set. Arrangements were made with care, so as to produce no further apprehension. The day set for the operation arrived, the patient was cheered up by all, and she was prepared and all but placed in position, when death occurred from no determinable cause but downright fright. There had been a great tension of fear for days, increasing constantly until the climax was reached, and the forces of life gave way under the strain.

The new arrangement for the medical inspection of school children in Chicago seems to be meritorious, and working very well. Children complaining of illness are looked to, and sent home if necessary, but it is principally in the case of those returning to school after an absence that the greatest benefit follows. If such children have been ill with any contagious disease, a too early return to contact with other children may be, and no doubt in the past has been, dangerous to many. Therefore each child, after an absence from school, brief or not, and without respect to the excuse given, is examined by the medical inspector. The most important feature of this examination probably lies in the bacteriological analysis of the throat secretions, determining the presence or absence of the Klebs-Loeffler bacillus.

The State Board of Health of Illinois has unanimously recommended the establishment of a State Sanatorium for consumptives. The recommendation will pass to the Legislature, asking for an appropriation to carry out the plan.

Under the auspices of the American Red Cross Society six surgeons and a large staff of hospital corps men recently left

this city for South Africa. The ostensible purpose of the expedition is to render aid to wounded Boers. A very large majority, if not quite all, of the contingent were of Irish blood.

According to the last report of the State Commissioners of Charities, there were the following numbers of State charges in the various institutions: Northern Insane Hospital, Elgin, 1,053; Eastern Insane Hospital, Kankakee, 2,197; Central Insane Hospital, Jacksonville, 1,259; Southern Insane Hospital, Anna, 981; Western Insane Hospital, Watertown, 591; Asylum for Insane Criminals, Chester, 174; Institution for the Deaf and Dumb, Jacksonville, 511; Institution for the Blind, Jacksonville, 249; Asylum for Feeble-minded, Lincoln, 801; Soldiers' and Sailors' Home, Quincy, 1,692; Soldiers' Orphans' Home, Normal, 403; Soldiers' Widows' Home, Wilmington, 43; Charitable Eye and Ear Infirmary, Chicago, 119; State Home for Juvenile Female Offenders, Geneva, 124. It should be borne well in mind, in reviewing the above statistics, that no account is here taken of criminals, nor is any account taken of the great number of dependents and incompetents cared for by the various municipalities and by all the counties in the State. In every county there is an almshouse in which provision is made for the care and control of the mentally unfit as well as the totally dependent.

There are very good prospects of the heavy endowment of Rush Medical College, and the early erection of a very much larger building than that now owned and occupied. A committee from the college faculty has lately visited various points in the east—Philadelphia, Baltimore, New York, Boston—with a view of obtaining general information as to the later and better methods of housing a large medical teaching institution. This knowledge will be well sifted, and an architect will be instructed to design a building suited to the particular needs now existing. It is expected that early steps will be taken towards the new building.

The Health Commissioner of Chicago believes there is danger to the country in bringing home for burial the bodies of soldiers who die while in service in the Philippines, in view of the prevalence of the plague in those distant islands. It is of course a question of sentiment entirely that prompts the Government to assume the heavy expense of transporting bodies thousands of miles through the tropics, while the risk is considerable, and the result revolting, to look at it from a purely sanitary point of view.

The city of Chicago with approximately a population of 2,000,000 souls, is sadly deficient in the matter of a centrally-located emergency hospital. There are, to be sure, many general hospitals, and the large free county hospital to which emergency cases are admitted. The county hospital is a strictly free institution, and to it all emergency cases among the poor are taken. But it is located nearly three miles from the commercial centre of the city, and the long transportation in an ambulance no doubt jeopardises seriously many of the critical cases. A strictly emergency hospital, centrally located, seems therefore called for, and some agitation to that end is noticeable.

PHILADELPHIA.

The Water Supply and Typhoid Fever.—The Fatality after Operation for Appendicitis.—The Motor Region of the Cortex.

In the light of Philadelphia's typhoid statistics of last winter and spring, the tardiness of our councils and our bureaus of water and engineering in making immediate use of the 12,000,000dols. voted by the people for the improvement of our water supply seems little short of criminal. It might not be unprofitable for our City Fathers to read and ponder well the discussion at the last meeting of the American Society of Civil Engineers, following Mr. Allen Hazen's report of the results obtained from the new filtration plant recently established at Albany, New York. They might also profitably turn their attention to Dr. E. B. Godfrey's recent paper before the Camden Medical Society. Camden is across the river from Philadelphia, and has, until now, taken its water from the Delaware. As some of our experts have advocated the use of Delaware instead of Schuylkill water, it is of no little interest to note Dr. Godfrey's report of a reduction of 62 per cent. in the typhoid cases of Camden since artesian has been submitted for Delaware water. Artesian water is the product of the most perfect natural filter. Of course it can hardly be expected to find an artesian supply equal to the daily demands of a million and a-half of people, but the lesson pointed out is that filtration, artificial or natural, is the only method of dealing with a polluted water supply.

The large number of members present at the last meeting of the Philadelphia County Medical Society were treated to a royal discussion of appendicitis, participated in by Drs. Deaver, Price, and Hearn. It was all precipitated by Dr. Hearn's paper on The Mortality of Appendicitis, in which he showed a fatality of about 8 per cent. in a series of 114 unselected cases operated at the Jefferson Hospital. In the discussion of the paper, Dr. Mordecai Price reported about the same relative fatality in his own and his brother (Dr. Joseph Price's) practice, and stated his belief that with perfection of technique (especially as touching the most perfect flushing of the abdomen with boiled water), the present generation of surgeons ought to see the death-rate brought down to 2 per cent., and perhaps even to 1 per cent. He could not understand why Dr. Deaver's fatalities at the German Hospital had reached to nearly 20 per cent. In replying, Dr. Deaver explained that this 20 per cent. applied to acute cases, in which all manner of peritoneal as well as general complications were present. In chronic cases (that is free from ordinarily fatal complications) he had done 156 consecutive operations without a death. Dr. Deaver argued against entering the abdomen through the great flat muscles of the belly, preferring—on anatomical grounds, and as a safeguard against post-operative ventral hernia—to place his incision at the edge of the rectus muscle. He was not overfond of irrigation, although it was plain to be seen that he always did a most thorough operation and provided the utmost drainage, in which method he was quite at one with both Drs. Price and Hearn. Both of the latter gentlemen, however, seemed to believe more in flushing out the abdomen after the operation. In closing, Dr. Hearn reaffirmed his faith in an incision placed about an inch from, and parallel with the anterior crest of the ilium, contending that when the head of the cæcum fell against the closed wound, there was practically no chance for the small intestine to find the weakened spot in the abdominal wall. There was perfect agreement as to the advisability of operation at the earliest possible moment. The whole discussion was one of the most animated heard on the floor of the Society for months.

No little interest attaches to the paper of Dr. W. G Spiller, presented at the late meeting of the Neurologic Society, in which, after a *post-mortem* study of the degenerations in an uncomplicated case of amyotrophic lateral sclerosis, he offered a new map of the commonly accepted geography of the motor region in the cerebral cortex. So far there have been reported in literature but 10 cases in which degeneration methods have been employed to trace out the motor paths and their expansion in the cerebral cortex. Dr. Spiller finds the ascending parietal convolution partially motor as well as sensory in its functions. Indeed, at almost every point his results correspond very closely to the scheme recently shown by von Monakow based on the findings of Starr, Keen, Horsley, von Monakow himself, and many others.

INDIA.

Vaccination in Bengal.—The Vaccination Staff: Extension of the Use of Calf Lymph.—The Progress of the Famine.—The War against the Malarial Mosquito.—The Plague.—Lumsden' Force.

The triennial report on vaccination in Bengal, which is written by Major Dyson, I.M.S., the Sanitary Commissioner, shows on the whole a steady, if slow, progress. In the year 1898 there was a slight decrease in many of the districts, attributed to the introduction of the system of making three punctures in each arm, or six in all, instead of only four as in previous years. This change coincided with the appearance of plague in Bengal, and the extra punctures were thought by the ignorant villagers to be connected in some way with that disease, and hence were objected to. The six-puncture system had previously been successfully introduced into the Punjab,

and is expected to afford greater protection. The number of persons per 1,000 vaccinated in different districts varies extremely, but the average is only between 200 and 300, so that there is still room for marked improvement.

The present organisation of the department was introduced some eight years ago, and is briefly as follows: The vaccination staff of each district is under the control of the civil surgeon, and consists of inspectors, subinspectors, and vaccinators, with sometimes apprentices. All these men are natives, and the great majority of the actual vaccinations are carried out by licensed men too often of very low caste, whose only training has been as apprentice to other vaccinators. They are appointed annually by the civil surgeon and get no pay, but are entitled to a fee of 2 annas (2d.) from the patient for each successful vaccination, so that if a man works well he can make a living—if his fees are paid. Unfortunately, only too often he is unable to recover his dues from perhaps the majority of his patients, while, if he sets the cumbrous machinery of the law into action for their recovery, the villagers refuse to allow any further vaccinations to be performed. As, except in a few areas, the process is not compulsory, the vaccinator finds it very hard to make a living; good and suitable men cannot be got to take up the work under such conditions. As a rule the people are quite ready to be vaccinated, but they object to paying fees, and to the class of people who receive licences; and in the last respect they not infrequently have good reason to complain. The system of licensed vaccinators was introduced partly to effect a considerable saving in the pay of the large number of operators which are required, most of the districts having from 1 to 3 million inhabitants, and partly in the hope that the operators would work better if their remuneration depended on their own efforts. Very much depends on the manner in which the work of the staff is supervised. This is partly done by the civil surgeons of the districts and partly by the Deputy Sanitary commissioners, of whom there are three for the whole of Bengal. The civil surgeons, whose duties are multifarious, can spare but little time for the work, and are quite unable to visit the more outlying parts of their districts, as they are not allowed to be absent from headquarters for more than ten days at a time. The deputy sanitary commissioners are expected to inspect those parts of the districts which the civil surgeon does not visit, one division each year, every district being thus seen once in three years. Owing to shortness of officers on account of war, famine, and plague during most of the last three years there have been no regular deputy sanitary commissioners, and the supervision of the department has suffered to some extent. The steady increase under such unfavourable circumstances is satisfactory, and affords reason for believing that under a better system vaccination operations in Bengal might be very greatly extended. Major Dyson is inclined to look on a compulsory Vaccination Act as the only effective remedy. He advocates also schools for training vaccinators as the only means by which efficient men whom the people can trust could be obtained.

The use of calf lymph is gradually replacing arm-to-arm vaccination. It is prepared in large quantity in two lymph depôts, one in Calcutta, which also supplies the municipality, and one in Darjeeling. It is mixed with lanolin, and sent out in tubes to each district during each of the six cold weather working months. District vaccination is started with lanolin calf lymph, and is continued by the arm-to-arm method, although calves are also used in many districts. Calf lymph is usually preferred by the villagers, and especially by Mohammedans; and if it could be universally used by properly trained and paid vaccinators a great increase in the number of operators employed would very soon take place.

During the month of January good rain fell in the North West Provinces, in parts of the Punjab and Central Provinces, and although it has come too late to prevent the present famine being by far the worst of the century, still it will be of the utmost value in preventing a still wider extension of the affected area, which would have resulted in a very great strain on the resources of the Government, and a possible breakdown in their measures for its relief. The numbers on the relief works have already reached three and a-half millions. A greater number than during the worst months of the famine of 1897, although the climax of the present scarcity will not be felt for another two or three months. It has recently been announced that no more staff corps officers can be spared for famine or plague duty, and all leave has been stopped, so that the medical services must once more be prepared to submit to a period of stress, although leave has only been fully open for a little more than a year.

Arrangements have been made by the Health Officer of Calcutta, Dr. Neil Cook, to try the effect of kerosene oil in destroying mosquitos in pools and small tanks in Calcutta, and although relapses are very frequent among the inhabitants of cities and it will be somewhat difficult to gauge the results in such a large place, still the results will be watched with great interest. Unfortunately another observer in the Madras presidency has found the *Anopheles* larvæ in wells and the pools of rivers in large numbers and over an extensive area of the river bed, which it would be impossible to deal with by this method of destroying the mosquitos. The place, Sivasamudram, is very malarious and the few inhabitants leave the place in the cold weather, which is the unhealthy season. The same observer, Captain Cornwell, of the Indian Medical Service, found the *Anopheles* widely distributed in Madras city in unused wells, puddles in open land, and in swamps, one of which was from two to three acres in extent. He concludes that in a city like Madras, which covers an area of 27 square miles, the extermination of the mosquito would be a very serious business lasting years and costing a large sum. It will, however, be worth while to undertake the task so soon as it is certain that the measure would be effective.

The plague we have ever with us, and its vagaries have ceased to excite the interest with which they were at first followed. At Bombay city it is still very bad, the weekly death-rate from this cause alone being over 400, but the rest of the province is now but little affected. Calcutta remains the same, and the mystery of its escape from being more severely attacked deepens. The Barh subdivision of the Patna district is still very bad, but it has not yet spread to neighbouring areas, and except for a small outbreak in a village, which was promptly and effectively dealt with, the North-West Provinces still remain free, and a decrease has occurred in Mysore. In the Punjab the disease is still confined to the Jullundur district, where 110 villages have been attacked in all since October, 1897, with 1,962 deaths. A few cases are occurring in Karachi. The Bombay and Patna outbreaks may be expected to decrease as the hot weather comes on, and then it will be possible to review the general position of the epidemic, and speculate on its further progress.

Great enthusiasm is being shown in the fitting out of Lumsden's force, which is largely recruited from the planter section of the community, Colonel Lumsden himself being a retired Assam planter. Competitions in shooting and riding are being held in many volunteer corps in India to select the best men to represent them in the campaign, and it is certain that Lumsden's force will not be behind their Colonial brethren in those qualities which are needed in South Africa at the present time. The brightest spot in the present outlook is the extraordinary wave of imperialism which the recent reverses have aroused, and which may be relied on to sweep all opposition before it.

BUENOS AIRES.

The Plague and Heat Stroke in Buenos Aires.

As mentioned in my last letter the "official" declaration of bubonic plague in epidemic form in Rosario and Buenos Aires has given rise to a very general protest from professional as well as commercial circles. The Board of Health (Concejo de Higiene) defends itself by saying that, as the typical plague bacillus was found in some cases it was bound to take the necessary precautions to prevent the disease spreading in "epidemic form." I am glad, however, to say that most of the medical men were opposed to the sanitary cordon as both unscientific and useless. Both cordon and quarantine are now relaxed as only an odd case or two has occurred since, but the Central Argentine Railway alone has lost over £10,000 in income during the past fortnight. The great heat-wave reported

in my last as passing over this city caused many deaths. The Municipal Statistical Bureau's fortnightly table of deaths in this city from February 1st to 15th, which included the week of great heat and mortality, shows 403 deaths from sunstroke and heat apoplexy, and 76 from heart disease. From tuberculosis there are registered 69 deaths, and from diarrhœa and enteritis 184. Altogether the mortality for the 15 days amounted to 1,110 deaths from all causes, more than double the average mortality, which is now again normal—about 19 per million. The weather is now delightfully cool and bright, and the municipality is taking some sound sanitary measures, namely, (1) increased water supply, (2) free baths for working people, (3) reduction of hours of work during the hot season.

MONTREAL.

Instruction in Public Health at McGill University.—The Sabbatical Year at McGill University.—A Defence Association.—The Montreal Medico-Chirurgical Society.—The Lister Laboratory Club.

A COURSE in hygiene and public health has been established at McGill Medical School under the special charge of Dr. Wyatt Johnson. This will be limited to graduates in medicine, who will do practical laboratory work for a period of six months, at the same time making periodical inspections of all public buildings, dairies, nuisances, and factories, etc. The special work on public sanitation is under the charge of Dr. Laberge, Medical Health Officer for Montreal. This year only laboratory assistants and demonstrators are allowed to take the course, which will be thrown open for any graduate students during the next session. A diploma of public health is to be given in June to those who have taken the course and successfully passed the examinations. McGill is the only university in America which gives a post-graduate course in hygiene similar to those given in England and on the Continent. A similar course was started some years ago in the University of Pennsylvania in Philadelphia, but through lack of attendance the work was abandoned.

At a recent meeting of the Medical Faculty of McGill University it was decided to allow any member of the faculty leave of absence for one term in every other year or for one year once in seven years. The person taking such leave is required to spend his time in original work in the laboratories of some other university. At present Dr. Mills, Professor of Physiology, is doing special research work in Leipzig, and is thus among the first to avail himself of this privilege.

A Defence Association for the protection of physicians has been organised in the province of Ontario. Its organisation is similar to the associations in the Old Country, and it is hoped that such an organisation may be made for the whole Dominion of Canada.

At the meeting of the Montreal Medico-Chirurgical Society, on February 9th, Dr. D. D. MacTaggart showed a case of hæmorrhagic cystitis and Dr. William Gardner a case of retro-peritoneal lipoma. Dr. F. G. Finley showed a living case of œsophageal ulcer and Dr. James Bell reported a successful laryngectomy and showed the specimen removed. The remainder of the evening was devoted to the report of Dr. T. G. Roddick in relation to Dominion Registration.

The Lister Laboratory Club met in the Molson Pathological Laboratory on February 5th. A paper was read by Dr. Bruere, and Dr. Adami gave a dissertation on mother cells. Dr. Martin spoke on the occurrence of hyaline and granular casts in urine without any evidence of albuminuria. Drs. Springle and Forbes discussed an interesting anomaly of the heart, and the examination of milk was treated of by Professor Johnson and Dr. Williams.

SYDNEY.

University Appointments.—Bubonic Plague.—Typhoid Epidemic.—Hospital Saturday Fund.—The Government Subsidies to Hospitals.

LEAVE of absence has been granted by the Senate of the University to Dr. MacCormick, Lecturer in Surgery, and Dr. Scot-Skirving, Lecturer in Clinical Medicine, to allow them to proceed to the seat of war in South Africa. Dr. C. P. B. Clubbe has been appointed Acting Lecturer in Surgery, and Dr. E. J. Jenkins, Tutor in Clinical Medicine, Acting Lecturer in Clinical Medicine. Dr. G. E. Rennie has been appointed Acting Tutor in Clinical Medicine.

The patient who was removed to the quarantine ground suffering from bubonic plague has now recovered, and will shortly be released. No fresh cases have been reported in any of the other Australian Colonies, and from information received from New Caledonia it appears that the disease has been stamped out there, at any rate for the present. There is no doubt that the case reported in Sydney was a genuine one of plague. The cultures made from the bubo presented all the typical characters of the bacillus, and guinea-pigs inoculated with them died in six days, and presented all the usual *post-mortem* appearances. It has, however, not been ascertained how the patient contracted the disease.

After a comparative immunity from a severe epidemic of typhoid fever Sydney is again suffering from a severe outbreak. The city hospitals contain a larger number of cases than for the last ten years. The true explanation of this is not yet forthcoming, but the medical officer of health has been making full inquiries into the sanitary arrangements. He finds, as usual, that in many instances defects in drainage have been associated with the occurrence of the disease. The outbreak is not confined to one part of the city, though it is more prevalent in some of the more densely populated and poorer parts. The type of the disease is a little unusual, gastric symptoms being largely predominant, reminding one of the "gastric fever" of the past generation.

The Hospital Saturday Fund, which has now been in existence for six years, continues to do good work. Complaints have been made that some persons who have usually subscribed directly to the Sydney Hospital now contribute to the Hospital Saturday Fund, and that this hospital was thereby the loser. But it has been pointed out that this hospital has received during the last six years an annual donation from the Fund of £859 16s. 2d., and that this sum probably represents a good deal more than it has lost by reason of the diversion of some of its subscriptions to the Hospital Saturday Fund.

The annual meetings of all the hospitals, both town and country, have been held, and the reports show to what a large extent these institutions are dependent upon the Government for financial support. Apparently not more than about one-fifth of the total cost of maintenance is provided by the charitable public, the rest being donated by the Government, either as a subsidy of £1 for £1, or in payment for pauper patients. The comparatively small donations by private subscribers prevents the directors of the large city hospitals from adopting the plan urged by the medical staffs, namely, the abolition of the system of payment by patients. It is maintained that until some means are devised to provide in other ways the amounts now derived from the payments of the patients, this system must be kept in force.

LIVERPOOL.

The Country Hospital for Children.—The Proposed Branch of the National Society for the Prevention of Consumption.

THE Liverpool Country Hospital for the Treatment of the Chronic Diseases of Children has been in existence for a year, and the first annual meeting of its supporters has taken place. The work of the institution is temporarily carried on in wards which are rented from the Committee of the Children's Convalescent Hospital at West Kirby, but it is expected that before long a suitable building will be erected for the purposes of the new institution. The twenty-two beds at the disposal of the Committee have been kept filled, and the results which have followed treatment in the country are considered highly satisfactory. In the majority of cases parents make a contribution towards the cost of maintaining their children in the institution, but there are a certain number of free cots to which cases are nominated by the various hospitals. The actual cost of each cot amounts to £25 a year, which must be considered a very moderate sum.

In connection with the proposal to form a branch in Liverpool of the National Society for the Prevention of Consumption and other forms of Tuberculosis, an influential meeting of medical practitioners and others took place on March 21st

at the Medical Institution, Mr. Edgar Browne, President of the Institution, being in the chair. A resolution was unanimously passed that it was desirable that a public meeting should be held with the view to founding a branch, and that a deputation should wait upon the Lord Mayor to request him to convene a meeting at the Town Hall.

NEWCASTLE.

University of Durham College of Medicine.—Student Volunteers.

THE annual dinner of the students of the College was held on March 23rd, the President, Dr. Philipson, occupying the chair. In the course of the evening Dr. Nathan Raw proposed the health of Mr. Page, and asked him to accept from the past and present students a beautiful set of silver candlesticks and dishes, on his retirement from the office of Honorary Surgeon to the Royal Infirmary, Newcastle-on-Tyne. In accepting the present, Mr. Page referred to the pleasant relations that had always been maintained between himself and the students.

Dr. Lyle, the recently appointed Lecturer on Midwifery at the College, received a hearty welcome, and was congratulated on the success that had attended his first course of lectures.

On March 7th a rather unusual occurrence took place in St. George's Hall, Newcastle. At 3.30 in the afternoon, 45 of the medical students of the Durham University College of Medicine marched in order under the command of Lieutenant Fullerton to St. George's Hall, where they were met by sixty students from the Durham College of Science; the united bodies being enrolled as a separate company in the Third Volunteer Battalion Northumberland Fusiliers, under the charge of Colonel Downing. The officers are: Captain Bell, A.Sc., Lieutenant Garrett, M.Sc., Lieutenant Lyle, M.D. This occurrence is unusual, as the men selected their own officers, and were accepted as a complete company by Colonel Downing.

CORRESPONDENCE.

IRISH DISPENSARY DOCTORS AND GUARDIANS.

SIR,—I wish to call the attention of the profession in Ireland to the following case: During the first three weeks of September, 1899, I acted as *locum tenens* in the Connor Division of the Antrim Union, with the approval of the Local Government Board. When I sent my account to the guardians they refused to pay me for three weeks, but sent a cheque for two weeks, which I returned. The Local Government Board wrote ordering the guardians to pay me in full, as they had sanctioned my appointment for three weeks during the absence of the medical officer on his holiday. I entered a process against the guardians; the case was tried in Antrim, and decided in my favour. Against this decision the guardians appealed; the appeal came before Mr. Justice Gibson at the assizes held in Belfast on March 16th. I enclose a cutting from *Belfast News Letter* giving a report of the case, also a letter from my solicitor.

My object in writing this letter is to ask the profession in Ireland, and especially dispensary medical officers, to interest themselves in the case and see that they are not deprived of their well-earned annual holiday.

Personally I am only interested to the extent of 6 guineas, and no doubt most, if not all, of this has already gone to the lawyer's pocket, so I would be safer to settle with the guardians; but as future cases will be ruled by this one, I ask not only the opinion but also the aid of those most interested in defending it.—I am, etc.,

MOSES HENRY, M.B.

Benvista, Antrim Road, Belfast, March 23rd.

*** The report in the *Belfast News Letter* states that the judge observed that the difficulty was that the words were "each medical officer shall be allowed an annual vacation not exceeding four weeks;" who, his lordship asked, was to fix the minimum? Counsel for Dr. Henry said that he thought the Local Government Board ought to fix the minimum. The judge said that it was a matter of great importance to the medical profession and to public bodies. As a case was to be stated he would not go into the matter, but would be glad to see the point soon decided. A case was stated accordingly for the opinion of the judges of the Divisional Court. Dr. Henry's solicitor writes to him as follows:

As the decision when given will rule all other similar cases in Ireland, it is important that the matter should be argued by the best counsel that can be retained, and I will be glad to know if I have your authority to retain senior counsel for this purpose. As so many other medical men are interested in the question, the extra expense incurred should be arranged to be borne by them.

As the principle raised in this case is one of great importance, it is to be hoped that a sufficient sum may be subscribed to ensure that the matter shall be placed properly before the Divisional Court, and we are authorised to say that Dr. Calwell, 1, College Square North, Belfast, will receive subscriptions to a fund to defray the cost of the appeal.

DEFECTS OF THE CLUB SYSTEM.

SIR,—Will you allow me space for a word or two of criticism on the strong, able, and logical letter of your correspondent "Gray's?"

It is on the principle of "combination" among ourselves which, as he puts the matter, seems not only so highly desirable but really quite practicable. Of its desirability no one doubts, but is it really probable, and if not why not? There are in the nature of things surely some very decided reasons why the medical profession does not combine; what are these reasons?

To my mind the chief cause of our want of unity is suggested by "Gray's" himself when he speaks of us doctors "meeting monthly in a common hall at a common meal." Yes, at the millennium, not sooner. The idea is, alas! utterly impracticable and Utopian. On thinking over the subject of our miserable medical differences, I had long ago come to the conclusion that the main cause of our domestic troubles is the want of opportunities for meeting together day by day and discussing face to face our little personal squabbles and ill-starred dissensions; and I have said to myself how fortunate are our brother professionals, the lawyers, who blackguard each other in court and meet to be the best of friends an hour afterwards.

No! the exigencies of a trying profession will ever stand in the way of our frequently joining together in professional intercourse; and, if this be so—and who can doubt it?—then we as a body can never hope to "combine." But does "Gray's," on due consideration, believe that it would be wise for us in the long run to form ourselves into a trades-union for the purpose of raising our fees? Would it be for the advantage of the public? and, if not, then it cannot be for the ultimate good of the medical practitioner. These are weighty questions, which, to my mind, appear clearly to demand answers only in the negative. But if they are to be argued this is not the time or place for such an academic debate. Let us try to be practical. A Board of Conciliation, if properly constituted on our side, will at least formulate our due demands, and we shall then be one step nearer to combination. That our representatives should give our interests away is surely in the highest degree unlikely.—I am, etc.,

Dingwall, N.B., March 26th, WILLIAM BRUCE.

THE ALLEGED DUTY TO SEND INFORMATION TO THE CORONER.

SIR,—Referring to your leading article in the BRITISH MEDICAL JOURNAL of March 24th, may I be permitted to point out, with all respect, that the tone in which it is conceived does not seem to me calculated to throw oil on the troubled waters?

There is a growing tendency to the appointment of medical men as coroners, and it would be matter for regret if any feeling of hostility were encouraged to grow up between coroners as such and members of the medical profession, a feeling already to be observed in some of the letters of your correspondents on this subject.

Reading between the lines of your article, I seem to detect the influence of a very natural feeling of resentment at the uncalled-for strictures which have here and there been passed o members of our profession by individual coroners: but in such cases surely it is the individual coroner and not the body that is to blame.

By your paraphrase of a sentence in my recent letter you make me responsible for the confusion which you say underlies my position; but there was no confusion in my statement, which I should prefer to paraphrase as follows: "There is a moral duty (to report) if there is not a legal duty also." Common law is, after all, but well-established usage which has received the stamp of judicial sanction. Thus, the presumption of the Coroners' Society, as expressed by Mr. Hicks in his letter to the JOURNAL, seems to my mind very strong as to the "common law duty," since the dictum which he quotes from one of the earliest and most well-known authorities on the law of coroners has been tacitly accepted and never judicially condemned for seventy years, and *sine scripto, jus venit quod usus approbavit.*

But I preferred to take my stand on moral rather than on legal ground. As coroners exist for the protection of the public, surely all members of that public, including the medical profession, should be willing to aid them in the discharge of duty. All the medical coroners I know receive most ready assistance from their professional brethren. Isolated instances of insolence or ignorance on the part of individual coroners and their possible protection by privilege from the responsibility that would otherwise attach to offensive observations should not be allowed to operate to the prejudice of a body which can have no reason for antagonism to, but many grounds for sympathy with, the members of the medical profession.

There is one point on which the doctors, with ample justification, oft complain. It is too often overlooked by coroners that the forms for certifying deaths, after inquest held, are intended to be used not alone for legal purposes, such as the revelation of foul play or criminal neglect, but also to afford a reliable basis on which the Registrar-General can classify the "medical cause" of death for statistical purposes; hence it follows that comparatively few inquests need to be held at all in which medical evidence can properly be dispensed with. Some coroners appear to pride themselves on the saving they effect to the county rates by dispensing with such evidence, their juries as a necessary consequence not infrequently returning verdicts "utterly inadequate for other than purely legal uses," and therefore far from fulfilling the requirements of the Registration Act, 1874.

Until it is either made compulsory for coroners to take expert evidence at almost every inquest (exceptions are too obvious to need mention), or, as an alternative, to tender a reasonable fee for a preliminary medical report (which would frequently enable the coroner to dispense with inquiry before a jury altogether), the feeling of antagonism which some of your correspondents acknowledge can scarcely be quite annulled, for medical men are not disposed, and should not be expected to tender expert information gratis. The revival of the custom which formerly obtained of allowing coroners to pay a fee of 10s. 6d. for a preliminary report by a medical man, could not fail to effect considerable saving to the ratepayers, by enabling the coroner to dispense with inquests in some cases; and by discontinuing this allowance county councils have adopted a retrograde and expensive policy.—I am, etc.,

March 26th. MEDICAL CORONER.

SIR WILLIAM BANKS ON CANCER.

SIR,—In his lecture on cancer Sir William Banks said: "There have been attempts made on certain abstruse developmental grounds to overthrow the possibility of the hereditability of acquired (diseased) variations" (modifications?)....."but nothing has come of them." It would be interesting to learn what Sir William Banks thinks should come of them. What actually has resulted is that nearly everyone who has devoted serious attention to the subject is convinced that acquired modifications are not in the least heritable. The lecturer added: "A great deal of philosophical froth has been beaten up and much learned verbiage has been poured about, but I have never seen abstract philosophy do much in disease." Neither have I; but this is not a question of abstract philosophy but of science founded on common sense and evidence. The school to which Sir William Banks belongs holds that acquirements are heritable. His own contribution to the question is that certain hypothetical modifications produced by cancer are heritable. The onus of proof rests with him and his school. His opponents cannot prove that acquirements are not transmissible, since it is logically impossible to prove a universal negative. But they say on developmental grounds that such transmission is wildly improbable. For twenty years they have called for evidence and have shattered all evidence hitherto produced. Sir William Banks has long studied the modifications produced by disease and the surgeon's knife. No man is better fitted to deal with the question; if, drawing on his vast experience, he can prove the transmission of even a single acquirement, he will confer immense benefit on science, and will succeed where many famous thinkers and workers have failed. His illustration of tuberculosis is decidedly not happy. He says:

> If you were to take a fine, wholesome, clean-blooded man, the descendant of a race who had for generations been free from all morbid diathesis, and put tubercle into him, you could not make it spread; it would die out locally. It requires a distempered constitution, like a sour impoverished soil, to give the appropriate pabulum for pathological weeds, which seed and spread through it and ruin it. We know how the tubercle weed gets sown.

Well, but the simple fact is that races that have longest been tainted with tubercle—the English, for example—are precisely the most resistant to it; whereas races, wholesome, clean blooded, the descendants of races which had for generations been free from all morbid diathesis, perish if you put tubercle into them. For example, the native races of America, Australasia, and Polynesia, to whom tubercle was unknown before we introduced it to them, become extinct if placed under conditions so favourable to the spread of the disease as those which normally obtain among Englishmen. Were acquirements transmissible, the English should be the weakest against tubercle and the Polynesians the strongest. The contrary being the case, it is plain that, in this instance at least, acquirements have not been transmitted, but that there has been a considerable survival of the fittest. I greatly admire Sir William Banks's eloquence, but, under the circumstances, I do not think he should bring the charge of abstract philosophical froth and learned verbiage against his opponents. They, at any rate, insist on concrete evidence. Will Sir William Banks supply it?—I am, etc.,

Southsea, March 13th. G. ARCHDALL REID.

SIR,—Hippocrates, the father of medicine, who died 361 B.C., taught that disease might be treated by medicine, by surgery, and by diet. Medicine has had a fair trial, and has been in late years almost supplanted by surgery; but there are not wanting signs that the time is fast approaching when diet will be studied as it should be, and then even the surgeon will have comparatively little to do. Hitherto it has been a rare occurrence for a physician to call attention to the question of diet, and still rarer for a surgeon to do so; but now both physician and surgeon do not hesitate to enter the ranks of dietetic reformers. The last to join the pioneers of the profession is Sir William Banks, who, lecturing before the Medical Society on Cancer of the Breast, says that as the result of his researches he concludes that overfeeding is the predisposing cause of cancer; and he attributes the increase of cancer to the more general consumption of butcher's meat, the use of which has increased enormously during the last thirty years. Physicians have long taught that gout was the direct result of overfeeding, and if their warning were listened to that fell disease would be banished from our midst. Some physicians have ventured to assert that overfeeding is also the predisposing cause of all our epidemic diseases, lowering the vitality and making us an easy prey to the various bacteria which give rise to such diseases. Now that a surgeon of such eminence as Sir William Banks, after a life-study of cancer, with the accumulated wisdom of close observation, has come to the conclusion that the change from the simple food of our forefathers to the highly concentrated food, more especially the fleshy food, of the present day is the cause of that dreaded disease, from which, in the majority of cases, even the unsparing knife of the surgeon cannot save us, may we not hope that the medical profession will in these latter days turn its attention to diet, and under the guidance of Hippocrates, who has left an excellent treatise on the subject, enter upon a crusade against all foods which are known or can be proved to produce disease in man?

The laity have led the way so far: now let us hope that the profession will take up the study of food, and that every

medical school will endow a Chair of Dietetics, so that its students may be instructed in a subject hitherto entirely ignored by our medical educational institutions, and enabled to guide not only themselves but their *clientèle* in the choice of food while in health, that all diet-produced disease may be stamped out.—I am, etc.,

Denholm, N.B., March 25th. JOHN HADDON, M.A., M.D.

THE TREATMENT OF LEAD POISONING.

SIR,—The note on the above in the BRITISH MEDICAL JOURNAL of March 24th, p. 723, is somewhat onesided, as the remarks made by Dr. Lewis Jones only are reported, thus leading your readers to conclude that what he had to say was the most important communication made. From a practical standpoint such was not the case, the bulk of his paper being taken up by what anyone acquainted with the rudiments of electricity could learn for himself by reading a good work on medical electricity.

Dr. Armitage's (not Armytage, as stated in the article) paper was made up of clinical material and was a description of the successful treatment of about 40 cases of lead poisoning of varying degrees of severity, 1 being a case of hemiplegia, and from a standpoint independent of a current main, the source of his electricity being Leclanché cells, in contrast to the alternating current as used and recommended by Dr. Jones, though at the latter stage in the treatment he also used the current from an induction coil. Patients were first of all treated by a general bath, both monopolar and dipolar methods being used, and for local paralyses local applications and large carbon electrodes being used. Moreover the meeting was really called to hear the results of the treatment of the cases under his care, seeing that they were all sent from the Potteries, one very intractable case only having been latterly under Dr. Jones's care at St. Bartholomew's, the result however being unsatisfactory.

The discussion turned mainly upon Dr. Armitage's paper as paper, as was to be expected from its clinical character, and as far as could be gathered from the local practitioners present—and who were primarily interested—they are indebted to him for bringing the electric bath treatment before them, and especially for the recital of so many successful cases, encouraging them thereby to put into practice his suggestions, the method being described explicitly and in detail, the appliances in the way of a bath and Leclanché cells being available to all of them. Of the five, besides the authors of the papers, who took part in the discussion, three only are mentioned, the names of Drs Mac Aldowie and Allan being omitted.—I am, etc.,

Longton, March 26th. C. M. ALLAN.

LISTERISM *V.* CLEANLINESS: A PROTEST.

SIR,—Under the title "A Model Surgical Amphitheatre," a note in the BRITISH MEDICAL JOURNAL for March 24th is devoted to a description of Professor Durante's operating theatre and his mode of practice. The writer says: "He practises rigid asepsis, but applies no antiseptic dressings or fluid to wounds. He washes all wounds with plain boiled water, and applies non-medicated cotton wool or gauze dressings. By the excellent results attained he is justified in his line of treatment, which is merely the Listerian doctrine rigidly enforced, namely, cleanliness. Durante's method is cleanliness without irritating medication; in fact, asepsis without antiseptics."

My protest is against the description of this method as being merely "the Listerian doctrine rigidly enforced." If there be any meaning in words the Listerian doctrine or method was, and must ever be known as the antiseptic, in contradistinction to the aseptic. The one is the very antithesis of the other, for the latter means the exclusion from the wound of any "irritating medication," whether derived from the animal, the vegetable, or the mineral kingdom. But men say: "The aseptic is the outcome of the antiseptic." As well may one say that the inventor of the muzzle-loading gun is to be credited with the invention of the most recent development of the sporting or military rifle. The case is even stronger than this, for as regards antisepsis and asepsis the latter is the absolute negation of the former.

Let me remind you that Durante's method, with the exception of washing all wounds with plain boiled water—which, however, may be regarded as the equivalent of using sponges wrung out of plain but not necessarily boiled water—is identical with that which, against the most embittered opposition, I have practised for well nigh twenty years; a practice in which I have been fully justified by results. And while I get no credit for its initiation along with the late Mr. Lawson Tait, I have the satisfaction of knowing that it has become almost universal. It has been well said that "superstition dies hard," and that applies in this instance.

As regards the "glass screen, hermetic in its imperviousness," which "is interposed between the onlookers and the operator and his assistants," how applicable is Mr. Treves's satire, when he speaks of "the onlookers beyond the pale, who are excluded with infinite solicitude from the sacred circle as septic outlaws!"—I am, etc.,

Granville Place, W., March 26th. GEO. GRANVILLE BANTOCK.

THE METROPOLITAN ASYLUMS BOARD AND ITS ASSISTANT MEDICAL OFFICERS.

SIR,—In a letter which you published in the BRITISH MEDICAL JOURNAL on January 13th, page 110, I pointed out, with regard to the Metropolitan Asylums Board: "a few of the conditions under which the assistant medical officers at their asylums work." Now, I submit that anybody reading that sentence—with the possible exception of Dr. Latter—would never for a moment imagine that I was writing about fever hospitals. I know as little about their fever hospitals as Dr. Latter evidently knows about their asylums. I am willing to accept his views about their fever hospitals, and can only say that it is a pity that the Metropolitan Asylums Board does not treat their asylum assistant medical officers as well as Dr. Latter says they treat their fever hospital assistant medical officers.

I pointed out that in their asylums the assistant medical officers are disgracefully housed; that their status is that of the laundry maids; that the medical superintendent cannot write testimonials for them, and that their outlook in the way of promotion is practically hopeless; that they cannot, as in all other asylums, lodge a friend or relative overnight. These, whatever Dr. Latter writes, are statements of "facts;" and it will not soothe the outraged feelings of a man who has taken up asylum work as a life's occupation to know that Dr. Latter in a fever hospital was well housed and had champagne when he was ill. Dr. Latter, with his fever hospital experience, is simply drawing a red herring across the trail. As a set-off to Dr. Latter's champagne, I might mention that when a nurse at their asylums, in attending to her duties, contracts—say, typhoid fever, a not-unheard-of event—and she is ordered whiskey by a medical officer, she has to pay for it out of her own pocket. Dr. Latter says he was well paid. I may be permitted to point out to him that the Metropolitan Asylums Board at their fever hospitals pay all their assistant medical officers £160, rapidly rising to £200 per annum, whereas at their asylums the salary is £120, rising to £150 as junior assistant medical officer, and until he gets promotion (which may be several years under the Board), his pay remains at £150 per annum.—I am, etc.,

January 23rd. F. J. S.

HOW TO MAKE SHORT CHILDREN GROW.

SIR,—I have read with great interest the paragraph in the BRITISH MEDICAL JOURNAL of February 3rd on the above subject. I cannot help thinking the most important causes of stunted growth have been left out, namely, want of sufficient rest, fresh air, and sunlight.

At boarding schools children have to go to bed early, the time varying at different institutions. On the other hand, children attending day schools are nearly always allowed to sit up till 10 or 11 P.M., thus spending from two to three hours more in artificially lighted, badly-ventilated rooms. This is especially marked in the case of Board school children. The result is that children attending day schools do not as a class reach the average height of those who have been at boarding schools. Picking out the tall boys from the day schools, one finds either that they have been the victims of some illness which has necessitated their remaining in bed for a lengthened period, or that they have the reputation of being lazy and "fond of bed," or that they have parents who insist on their having plenty of rest.

Take the boys who have been at boarding schools, divide them into two classes:

1. Those who go into city offices (always more or less badly ventilated) who get little exercise and, as a rule, keep late hours.

2. Those who go into out-door occupations or to the universities, etc., who are thus more favourably placed as regards rest, fresh air, and sunshine.

The average height of the latter class undoubtedly exceeds that of the former at the age of 21 years. You say, "The rising generation promises to be well above the older averages in height"; possibly, because our houses are better ventilated, and outdoor games are encouraged at schools, and girls also get out more than formerly, cycling, etc. This does not apply to factory girls who work in badly-ventilated rooms; girls who go to the city young as clerks, typewriters, etc., are as a rule shorter than those who live always at home. Want of fresh air probably explains why the average miner is short.

"Adenoma of the respiratory tract is now well known to check growth." Here the fresh air supply is interfered with. With regard to M. Springer's observations on the "habits of parents," I should like to ask: How many are the subjects of chronic alcoholism, morphine habit, etc., at the time their children are born? The percentage is undoubtedly small. If chronic alcoholism is a cause of stunted growth this is to be explained by the fact that the children in such cases are generally neglected, underfed, and allowed to keep late hours, in fact are kept up night after night to wait upon their drunken parents.

Savages living in open tropical countries are as a rule tall; they get fresh air and sunlight. Tribes living in colder regions who find it necessary to live in badly ventilated huts are stunted (for example, Lapps). The "Pygmies" of Africa seem an exception, but they live in the semi-gloom of a tropical forest without sunlight.

If M. Springer will take 100 boys aged 10 years, let them then be undersized, their parents stunted, syphilitic, alcoholic or the victims of the morphine habit; put them under ordinary good hygienic conditions, give them wholesome food, plenty of outdoor exercise, and send them to bed from 8 P.M. till 7 A.M., and I think he would find that the average height of these boys at the age of 17 years would be up to the standard without having resort to the local application of electricity.—I am, etc.,

February 6th. A. T. T-W.

OBITUARY.

ROBERT CORY, M.D., F.R.C.P.,

Director of the Animal Vaccine Establishment.

ROBERT CORY was the son of the late Mr. John Cory of Bolcherley, near Carlisle. He was educated at St. Thomas's Hospital and Cambridge, whence he graduated B.A. in 1869 M.B. in 1871, M.A. and M.D in 1879. For some time he was examiner in Natural Science at Pembroke College. At St. Thomas's Hospital he took the Physical Society's prize for third year's students in 1869, and was subsequently appointed House Surgeon.

During the Franco-German war he was Assistant-Surgeon to the Alice Darmstadt Hospital, a temporary hospital constructed by Englishmen, the nursing in which was done by a Society established and superintended by the late Princess Alice. On the conclusion of the war he returned to this country, became a Member of the Royal College of Surgeons in 1871; four years later he obtained the Membership of the Royal College of Physicians, being elected a Fellow in 1887.

For a number of years he was Assistant Obstetric Physician to St. Thomas's Hospital. After he resigned that office he continued to hold the office of Lecturer on Forensic Medicine and Physician in charge of the Vaccination Department, Lecturer on Vaccination to the University of Cambridge, and Teacher of Vaccination at the stations of the Local Government Board in London.

It is, indeed, in connection with vaccination that he will be best remembered. As Vaccinator at the station of the Local Government Board in Blackfriars, and Director of the Animal Vaccine Establishment in Lamb's Conduit Street, he found much opportunity for work which was especially congenial to him. A keen observer of Nature he incessantly studied this subject, and probably no man had so complete a knowledge of it as Robert Cory. He was, however, not only an observer, but an experimentalist. His desire to put to the test current beliefs led to his exposing himself repeatedly to inoculations, on one occasion with results which seriously damaged his health, and in all probability contributed to his death. This great act of personal sacrifice by Robert Cory was borne witness to in the House of Commons by the President of the Local Government Board.

One of his most interesting pieces of work was designed to test the period after vaccination at which immunity to subsequent vaccination was secured. Cory used for this purpose children with supernumerary fingers. He vaccinated the finger and subsequently removed it, leaving in successive children a longer interval of time between the inoculation and the amputation. The vaccination of the child shortly afterwards provided the test of the amount of immunity due to the vaccination of the finger. Another observation of his may be cited as illustrative of the patience with which during many years he devoted his attention to a particular subject. From the year 1884 he kept a record of the persons who came before him pitted with small-pox, and whose condition as to vaccination he was able to learn. He thus obtained particulars of 448 persons, 210 of whom were admittedly unvaccinated, and a further 105 who had no mark of vaccination. Cory's writings are for the most part to be found in the *Reports* of St. Thomas's Hospital and of the Local Government Board. Many of those relating to vaccination he summarised in his lectures on the *Theory and Practice of Vaccination*, which he published two years ago. They serve well to show the thoroughness and originality of his observation.

Cory personally was a man of much depth of feeling, expressing his opinions without hesitancy, and showing a disregard for mere conventionalities. He was an absolutely truthful man, always endeavouring to learn where the truth was, and never lending support to a theory, however plausible, unless he thought it had substantial foundation. A warm and kindly-natured friend, he will be much missed by those who knew him.

DR. HYDE, of Buxton, whose death was recently announced, was born at Stalybridge in 1849, and received his medical education at King's College, London. As a student he took an active part in mission work, and was for some time attached to St. Giles's Medical Mission. In 1877 he settled in Buxton, and was for some years Resident Physician to the Peak Hydropathic and Thermal Establishment. Later, however, he forsook this specialised department of treatment for the wider field of general spa practice. He was a hard working and conscientious practitioner, and an ardent believer in the means which he employed. He was an earnest advocate for balneary procedures and for climatic treatment in many chronic disorders, and he prescribed them for his patients and recommended them in his writings with equal confidence. Among his more important publications and occasional papers are *The Causes and Treatment of Rheumatoid Arthritis; Buxton, its Baths and Climate; Notes from Spa Practice; The Uses of Animal Extracts in Chronic Joint Affections; The Treatment of Cardiac Diseases by Baths, Climate, and Waters; Analysis of 200 Cases of Sciatica; The Pure-air Treatment of Consumption*, etc. For some years he was the editor of *The Journal of British and Foreign Health Resorts*, thus being, after Dr. Prosser James, a pioneer of balneological literature in this country. He was struck by the apathy and neglect which this department of medical science and practice has met with on this side of the Channel, whilst both in France and Germany, and to a less extent in other countries, numerous societies and journals have long been devoted to its study. To Dr. Hyde's initiative and tireless energy are due the formation nearly five years ago of the British Balneological and Climatological Society—a Society founded not only to unite the many practitioners scattered at the various health resorts in a bond of fellowship, but to promote amongst them the pursuit of scientific medicine and the highest ideals in practice. In the

work of this Society Dr. Hyde took the keenest interest, and he remained the Chairman of Council and the Editor of its journal to the time of his death. His last illness was prolonged and painful. Well aware of the serious nature of the malady, he was cheerful and resigned, and made all preparations for the end with the care and judgment which marked his character. He was a skilled and observant physician, and a true and kind friend. As such he will be missed, and not least by his medical brethren and by his fellow townsmen, who held him in the highest esteem.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Truchot, Professor of Physics in the Medical School of Clermont-Ferrand; Dr. Lauzet, Chief Surgeon to the Hospital of Marseilles; Dr. Latrille, Deputy Professor in the Medical School of Poitiers; and Dr. F. E. Aub, member of the Bavarian Chamber of Representatives, a prominent sanitarian and medical reformer, aged 63.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE HEALTH OF THE NAVY IN 1898.

The Form of the Report.

This Statistical Report on the Health of the Navy for 1898 appears in the form with which we have been familiar for some years past. It is mainly statistical, and contains little detailed information regarding the prevalent and exceptional diseases met with in Her Majesty's navy for the year reported on.

The rendering of this report was recently considered by the Departmental Committee of the Admiralty regarding the Naval Medical Service, and reform in its compilation was recommended, as well as an addition to it, either in the same volume or as a separate publication, of original observations by naval medical officers on the diseases or injuries met with on the various stations visited, or other subjects of interest in connection with the health of the navy. It may therefore be anticipated that in future years the reports will be of greater interest and professional value.

The Strength of the Force.

The total force of the service afloat in 1898 averaged 82,830 officers and men; in 1888 it was 50,060. This indicates a great advance in a decade, and a still more rapid increase is now taking place, for in the Naval Estimates for 1900-1901 provision is made for 105,611 of all ranks.

Sickness and Invaliding and Mortality.

The ratio of cases of disease and injury recorded for the year 1898 was 906 09 per 1,000, a decrease of 60 04 per 1,000 when compared with the average of the last ten years; the invaliding ratio was 28 86 per 1,000, an increase of 2.32 per 1,000 on the average for the same period; this is the number invalided from all stations, but many invalided from abroad proved serviceable on return to England; those finally invalided from the service were 1,557, which was also an increase of 2.32 per 1,000 in comparison with the average of the previous decade.

The mortality from disease and injury was 4.91 per 1,000, or 1.94 per 1,000 below the last ten years' average. The ratio per 1,000 of sick and injured daily was 38.95, a decrease of 3.02 per 1,000 in comparison with the average of the last ten years; the lowest ratio, 29.15, was on the North American and West Indian Station, the highest on the East Indian, 45.58; the China Station being the next highest, 41.23.

Small-pox.

Twenty-four cases of small-pox are returned, 20 occurring on the China Station, where this disease may be considered endemic; one, of a confluent type, proved fatal; he had been vaccinated and revaccinated after entering the service, but no cicatrix was visible; a second case was very severe, he also had been vaccinated and revaccinated, but unsuccessfully, it is stated; the remaining cases were modified by previous vaccination. On the East Indian Station a Seedie boy died at Zanzibar, but no information is given as to his having been vaccinated, or as to the vaccination of two cases in the Mediterranean that made good recoveries, but all entering the navy are revaccinated. A Seedie boy contracted the disease at Bombay, and recovered.

Plague.

Eight cases of plague appear in the report; 3 occurred on the China Station; one, a Chinese steward, died; the other two were ordinary seamen, messmates; the disease was contracted at Hong Kong, and was of the pneumonic type. The first affected had been on leave in Hong Kong prior to his attack; he recovered, but his messmate, who had assisted in removing him to hospital, died. Four Lascars contracted the disease at Bombay; 2 died. The eighth case was one of debility after plague at Bombay. The patient is stated to have been a time-expired man, and presumably a European.

Diphtheria.

Sixteen cases of diphtheria, 14 with 1 death on the Home, and 2 on the Australian Station are reported.

Enteric Fever.

There were 153 cases of enteric fever, with 14 deaths; 72 occurred on the Home Station, 20 in the Mediterranean, 9 on the North American and West Indian Station, 7 on the South-East Coast of America, 4 on the Cape of Good Hope and West African Station, 9 on the East Indian, 28 on the China Station, and 3 in Australia.

Malaria.

Malarial fevers produced 1,652 entries, with 10 deaths; 1,003 occurred on the Cape of Good Hope and West African Station. Of these 117 were in the gunboats *Herald* and *Mosquito*, with complements of 25 and 30 respectively, employed in the Shire and Zambesi rivers; the attacks occurred chiefly among the younger members of the crew: men over 35 years of age suffered little; 93 entries show in the returns from the *Heron*, and 56 in those from the *Jackdaw* shallow-draught steamers in the Niger River; 127 in the *Alecto* at Lagos; the *Sparrow* returns 123 cases (51 when serving in the Niger River, 60 in the Congo River, and 12 at Mombassa); these 4 vessels had complements of 80 to 85 men. The *Blonde*, with a complement of about 180, returned 34 cases during the first quarter of the year, when in the Sherboro River. Twelve other vessels on this station returned 335 cases, but where originating is not stated.

The remaining cases occurred on the following stations: China, 195; the most severe attacks were due to service at Labuan, as guard on shore. Home, 132; in the Irregular Force, namely, transports and vessels for brief periods on various stations, 77, of which 34 occurred in the *Blonde* (previously mentioned), after service in the Sherboro River; Mediterranean, 82; East Indies, 61; North American and West Indian and the Pacific, each 44; Australia, 14.

Tuberculosis.

Tuberculous diseases were responsible for 222 cases, 2.08 per 1,000 of the total force; 20 died, and 139 were invalided. It is to be hoped that some effort may be made in the future to provide open-air treatment for many of these invalids, many of whom are suitable cases for it.

Venereal Diseases.

All venereal sores in the navy are classed as primary syphilis; ulcus penis is so returned, as a rule; of primary syphilis there were 3,513 cases; of secondary syphilis 2,294; the ratio of primary syphilis was 42.41 per 1,000, a decrease of 12 09 on the average of the last ten years; while the ratio of the secondary disease, 27.69 per 1,000, is an increase of 3.13 per 1,000 when contrasted with that of the previous ten years. In 1888 the ratios per 1,000 were 57.67 for the primary, 22.51 for the secondary diseases. The abolition of the Contagious Diseases Act may be considered responsible for this increase of constitutional syphilis, as in Cape Colony, where this Act was reintroduced after repeal, there is a remarkable absence of this dire disease in the ships stationed at or visiting those ports. Six deaths were due to constitutional syphilis.

There were 6,119 cases of gonorrhœa and its sequelæ, a ratio of 73 87 per 1,000; in 1897 it was 71.61; in 1888, 74.31. The China Station shows the highest ratio for the year 1898, namely, 107.77; the Australian, 96 0; and the South-East Coast of America Station, 81.15, are the next highest,

PARASITIC DISEASES.

Surgeon Livesey, M.B., of the *Herald*, records a case of filaria loa occurring in the person of a chief petty officer at Chinde. The parasite first appeared in the subcutaneous tissue of the dorsum of the left foot; from thence it travelled between the toes to the sole of the foot, round the external malleolus, and reappeared on the dorsum of the foot, leaving in its course a suppurating track about a quarter of an inch in breadth; cocaine injection "appeared to stimulate its activity"; finally an injection of mercury perchloride, 1 in 3,000, killed it. The parasite was not recovered unfortunately. It is reported that the natives suffer from it. Dr. Patrick Manson, C.M.G., considers that the "suppurating track" negatives filaria loa, and he suggests that the larva of some dipterous insect was the cause of this affection.

BERI-BERI.

The Kroomen stationed on the island of Ascension presented 78 cases of beri-beri, and 3 died. Surgeon Randal, M.B., reports, "that in spite of roomy and well-ventilated quarters, it is the custom of these people to crowd close together for warmth (with which view they will block up all sources of ventilation) and also for protection from darkness, of which they stand much in dread." Their food is the same as that of the other residents on the island.

It may reasonably be supposed that their quarters have become infected. The outbreak reported is spoken of as a recrudescence of this disease, indicating a previous outbreak. It is suggested that the disease may originally have been introduced from Sierra Leone.

According to Manson beri-beri is a place disease. Overcrowding seems to favour the outbreak of the disease, such conditions create an incubator on a large scale, which should it chance to contain a beri-beri germ quickly becomes extensively infective and lethal. He does not think, however, the germ lives as a parasite in the human body or that it exercises its pathogenic powers in a direct way, or that it passes from one human being to another like the germ of the ordinary infectious or directly communicable disease. He suggests it is possibly caused by a toxin generated by a germ living in the patient's surroundings.

DEATHS FROM VIOLENCE.

Falls from aloft caused 4 deaths; wounds, fractures, etc., 30; asphyxia due to food lodging in the trachea during an alcoholic sleep, 1; drowning, 53; 6 by the foundering of a Norwegian vessel, the men having been sent to assist in her navigation after collision; the majority of the remainder were individual cases of drowning from boat accidents, and falls overboard—a few occurred while on leave. Wounds in action numbered 11, and occurred at Candia when the boat's crew of the *Hazard* was fired on; 4 proved fatal.

Eight suicides occurred during 1898.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: WILLIAM J. COLBORNE, Staff-Surgeon, to the Admiralty Medical Department, April 1st; HENRY W. G. GREEN, Surgeon, to Plymouth Hospital, April 13th; VIDAL G. THORPE, Staff-Surgeon, to the *Argonaut*, April 19th; HAROLD F. D. STEPHENS, M.B., Staff-Surgeon, to the *Furious*, April 6th; SAMUEL H. WOODS, M.B., Surgeon, to the *Argonaut*, April 19th; GILBERT KIRKER, M.D., Fleet-Surgeon, to the *President*, for three months' hospital study, April 2nd; FREDERICK W. STERICKER, B.A., M.B., Surgeon, to the *Galatea*, April 2nd; GEORGE R. MACMAHON, B.A., M.B., to the *Duke of Wellington*, April 2nd.

The announcement in the *London Gazette* of March 6th of the withdrawal of Surgeon E. A. SHAW, B.A., M.B., is cancelled.

ROYAL ARMY MEDICAL CORPS.

CAPTAIN N. FAICHNIE is among those reported by Sir Redvers Buller as having returned to duty. Quartermaster S. DUFFIELD is also discharged from hospital for duty.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN J. MOIR, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve, March 28th.

Surgeon-Lieutenant F. H. THOMPSON, 1st Volunteer Battalion the K[illegible]g's (Shropshire Light Infantry), is promoted to be Surgeon-Captain, March 28th.

MILITIA MEDICAL STAFF CORPS.

Mr. HERBERT E. DALBY is appointed Surgeon-Lieutenant, March 28th.

THE VOLUNTEER MEDICAL STAFF CORPS.

THE Manchester Companies of the Volunteer Medical Staff Corps have taken a most prominent part in providing for the needs of the South African Field Force. Under the able command of Surgeon-Captain Coates, M.R.C.S., they have long been recognised by the War Office as being among the best companies of the staff, and they were assigned to an army corps in the mobilisation scheme for home defence. Although only 200 strong, they have now supplied for active service in South Africa 2 officers (Surgeon-Captain J. W. Smith, F.R.C.S., and Quartermaster Howell) and 75 men. Under these circumstances it is not surprising that the War Office has decided to double the strength of the Manchester Companies, and Surgeon-Captain Coates is at present actively recruiting with this object. It is, by the way, a remarkable anomaly that while the cumbrous titles of Surgeon-Lieutenant, Surgeon-Captain, and the like have now been abolished in the R.A.M.C., they are still retained in the V.M.S.C.

Mr. GEORGE LAPRAIK, M.B., has been appointed a Surgeon-Captain in the New Zealand Volunteer Medical Staff.

Surgeon-Lieutenant E. W. HERRINGTON, the London Companies, and Surgeon-Lieutenant J. W. SMITH, M.B., the Manchester Companies, are borne as supernumerary whilst serving with the Royal Army Medical Corps in South Africa, March 28th.

THE VOLUNTEERS.

THE undermentioned officers are borne as supernumerary while serving with the Royal Army Medical Corps in South Africa, dated March 21st:—Surgeon-Lieutenant R. W. MICHELL, M.B. 4th (Cambridge University) Volunteer Battalion the Suffolk Regiment; Surgeon-Captain G. G. OAKLEY, 1st Volunteer Battalion the Duke of Wellington's West Riding Regiment; Surgeon-Captain C. E. DOUGLAS, M.B., 6th (Fifeshire) Volunteer Battalion the Black Watch (Royal Highlanders); Surgeon-Lieutenant J. C. TAYLOR, M.B., 9th Lanarkshire Rifles.

Surgeon-Major J. B. OLIVER, 6th Lancashire Artillery, resigns his commission, retaining his rank and uniform, March 21st.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified dated March 21st:—ERNEST A. SNAPE, 2nd Middlesex Artillery; JAMES HURLEY, 1st Monmouthshire Artillery; JAMES DUNBAR-BRUNTON, M.B., 2nd Volunteer Battalion the East Surrey Regiment; JOHN ANDERSON, M.B., 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders).

Surgeon-Lieutenant C. T. GREEN, 1st Volunteer Battalion the Cheshire Regiment, is promoted to be Surgeon-Captain, March 21st.

Surgeon-Major R. T. CÆSAR, 2nd Volunteer Battalion the Hampshire Regiment, is promoted to be Surgeon-Lieutenant-Colonel, March 21st.

Surgeon-Captain A. D. FRASER, M.D., 4th (Stirlingshire) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders, is promoted to be Surgeon-Major, March 21st.

The resignation of Surgeon-Captain D. LAWRIE, M.B., 1st Ayrshire and Galloway Artillery, which appeared in the *London Gazette* of January 5th, is cancelled.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated March 28th:—ANDREW YOUNG, M.B., 1st Ayrshire and Galloway Artillery; ASHLEY BIRD, 2nd Glamorganshire Artillery; CHARLES K. BOWES, M.D., 1st Volunteer Battalion the Buffs (East Kent Regiment); JOHN A. KENDALL, M.D., 5th Volunteer Battalion the Durham Light Infantry.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated March 28th:—A. ALLPORT, 1st City of London Artillery (Eastern Division Royal Artillery); R. J. R. C. SIMONS, 2nd Glamorganshire Artillery; E. U. F. MACW. BOURKE, 18th Middlesex Rifles.

Surgeon-Lieutenant R. C. MACDONALD, M.B., 8th Volunteer Battalion the Royal Scots (Lothian Regiment), resigns his commission, March 28th.

Surgeon-Captain W. D'O. GRANGE, M.D., 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers, is promoted to be Surgeon-Major, March 28th.

Lieutenant A. W. SHEEN, M.D., 3rd Volunteer Battalion the Welsh Regiment, resigns his commission, and is appointed Surgeon-Lieutenant, March 28th.

Surgeon-Captain H. W. ROBERTS, 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment), is promoted to be Surgeon-Major, March 28th.

The undermentioned are borne as supernumerary whilst serving with the Royal Army Medical Corps in South Africa, dated March 28th: Surgeon-Captain C. STONHAM, Middlesex Yeomanry (Duke of Cambridge's Hussars); Surgeon-Lieutenant J. R. ATKINSON, 2nd Cheshire (Railway Engineers); Surgeon-Major R. T. A. O'CALLAGHAN, 1st Flintshire (Buckley) Engineers; Surgeon-Captain A. A. WATSON, 2nd Volunteer Battalion the East Lancashire Regiment; Surgeon-Major E. J. LAWLESS, 4th Volunteer Battalion the East Surrey Regiment; Surgeon-Lieutenant G. BLACK, M.B., 2nd Volunteer Battalion the Royal Sussex Regiment; Surgeon-Captain J. K. BUTTER, M.D., 2nd Volunteer Battalion the South Staffordshire Regiment; Surgeon-Captain C. A. MACMUNN, M.D., 3rd Volunteer Battalion the South Staffordshire Regiment; Surgeon-Lieutenant A. E. MORISON, M.B., 1st Volunteer Battalion the Durham Light Infantry; Surgeon-Lieutenant J. K. TOMORY, M.D., 1st Sutherland (the Sutherland Highland) Rifles.

NURSING IN INDIAN MILITARY HOSPITALS.

WE have received a long communication on the above subject from a correspondent whose opinions are of much value. But we are reluctantly compelled to hold it over for the present; the war necessarily makes such large demands on our space that we cannot open up new military questions outside of it.

WHAT IS A SOLDIER?

ONE who had "spent a month of his life in the trenches before Sebastopol" writes: In your admirable article on "An Outside Light on the R.A.M.C.," you omitted one very definite qualification of what makes a man a soldier—namely, that he is not a free agent, even when his life is in danger.

In civil life a man may incur odium if he refuses to face danger in the performance of duty, but a soldier is liable to punishment, not only if

he refuses to risk his life in obedience to orders, but even if he uses his discretion as to his own safety and exhibits cowardice in the face of the enemy.

It is hardly conceivable that any of the civil surgeons now employed in South Africa would refuse to face danger in performance of duty; but it is doubtful if they did so whether they would incur any penalty. An officer R.A.M.C. could undoubtedly be tried by court-martial and punished for cowardice: he has the responsibilities of a soldier, as well as the honours and rewards due to his rank.

*** Our correspondent raises a point in military law which we cannot pretend to define or resolve. What is the military position of a so-called "civil" surgeon attached for duty to a field hospital or bearer company? As he is necessarily under military orders, is he also under military law, its pains and penalties? And if he is, by virtue of what commission, bond, agreement, or declaration is he so? Can a civil surgeon be shot for cowardice if he refuses to go under fire? We did not raise these very recondite questions; they were suggested no doubt by our quotation from *Blackwood's* article. The military status of all civilians attached to an army in the field is probably very anomalous; at all events, we leave its definition to others.

MEDICAL ADMINISTRATION IN SOUTH AFRICA.

A correspondent writes in reference to the letter of a "Surgeon-General (retired)" on the anomalous administrative position of the medical service in the Boer war, especially on the absence of a "superior medical officer" in Natal, that no more efficient superior could be found than Colonel Gallwey, C.B., who occupies the position there as Principal Medical Officer. That officer has earned the highest praise from Sir Redvers Buller for his admirable arrangements at Spion Kop and elsewhere. Why did your correspondent not suggest that Colonel Gallwey should be given the local rank of surgeon-general? That would have met his complaint. The services of Colonel Gallwey have been very distinguished.

*** We fancy that no one would have been more pleased than our correspondent "Surgeon-General" had Colonel Gallwey received the local rank of surgeon-general while performing the duties of one in the very able manner he has done. His complaint was that instead of one surgeon-general in South Africa there ought to be at least three; and it was unfair that colonels should be called upon to do the duty of the higher rank, and lieutenant-colonels that of colonels without recognition. He did not say the duty was badly done anywhere, but that it was done without the superior heads, which in every other branch would be at least gazetted with local rank and receive the emoluments thereof. The admirable manner in which Colonel Gallwey has always done administrative duties wherever employed is well known to all, and no one is more deserving of promotion to the highest medical rank than he; but we suppose our correspondent did not mention him individually, because other colonels R.A.M.C. are in similar positions in South Africa. We learn that Colonel Stevenson is P.M.O. of Lord Roberts's force of 50,000 men. Surely he ought to have the local rank of surgeon-general.

MEDICAL UNITS FOR THE WAR.

A correspondent states that the *personnel* of the rank and file of medical units recently embarked was as follows:

Royal Army Medical Corps	43
Volunteer Medical Staff Corps	52
Volunteer Brigade Bearers	143
St. John Ambulance	86
Sundry civilians, compounders, etc.	25
Total ...	349

How to make such a scratch lot collectively efficient would puzzle a medical Moltke. If the medical department continues to do well under such conditions, it indeed deserves the highest praise.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

"PROFESSOR" WELLS IN THE DOCK.

Under the above heading the *Birmingham Mail* of March 15th reports the trial of Robert Blockley Dodds Wells, aged 60, at the recent Birmingham assizes, for having used obscene and filthy language, and of having published an obscene book at a lecture delivered at the Exchange Rooms, Birmingham, on February 2nd and 6th. From the evidence it would appear that the accused was a man of no education, who had originally been a farm labourer, and who, finding hydropathy more profitable than manual labour, changed his vocation of tiller of the soil into that of a quack hydropath. The emoluments from hydropathy alone presumably being insufficient, he appears to have taken up in addition the *rôle* of a popular lecturer on sexual subjects, and has lately been drawing crowds to hear his lectures at Birmingham advertised "For men only" or "For women only." At the commencement of the trial Mr. Justice Darling very properly ordered out of court all members of the public not connected with the business, and cautioned the reporters as to the responsibility of the press for anything published of an obscene nature. Extracts were read from the accused's book, and verbatim reports given of portions of his lectures, which were of so obscene a character that several jurors inquired whether they were compelled to listen to such evidence. The judge replied that were it not absolutely necessary he would not allow it to be put before them. After his lordship had summed up the jury retired for ten minutes, and on return found the accused guilty on all the charges. Mr Justice Darling expressed himself as being in complete agreement with the finding of the jury, and sentenced "Professor" Wells to twelve months' imprisonment without hard labour, informing the prisoner that it was only on account of his age that the hard labour was omitted.

*** Few people will dissent from the justice of the sentence. If men o the stamp of "Professor" Wells are to be allowed to perambulate the country delivering lectures of this kind, public morality must necessarily suffer. If the obvious filthiness and obscenity, which is stamped on literature and lecturing of this nature, is insufficient to keep the public—or a portion of it—from greedily devouring it, for it was in evidence that the lectures were attended by crowded audiences, it is fully time that the law was put into force to protect the public from its own prurient curiosity.

THE LAW AS TO SLANDER.

The recent case of How *v.* Broomhead, which was heard by Mr. Justice Grantham on March 22nd, serves to show how strictly the law will protect a medical man when he is charged with incapacity in the performance of his professional duties. It appears from the report in the *Standard* that the defendant in this case, for the purpose of persuading the mother of a child not to employ the plaintiff, said, "Dr How is no doctor; he has not passed his examination, and is no class of doctor at all." The jury found a verdict for the plaintiff, damages £100.

A notable feature of the law of libel and slander, in so far as it relates to medical men, is that any words imputing to a practitioner misconduct or incompetence in the discharge of his professional duties are actionable *per se*. Thus it is actionable, without proof of special damage, to charge any physician or surgeon with having caused the death of any patient through ignorance (Poe *v.* Mondford, Cro. Eliz. 620), and in one case the Court inclined to the view that to say of a medical man, "He is a bad character: none of the medical men here will meet him," are actionable in themselves (Southie *v.* Denny, 1 Exch. 196). It must, however, be quite clear that the words impute incapacity or misconduct. For instance, to say of a surgeon, "He poisoned the wound of his patient," without some averment that this was improper treatment of the wound, is not actionable without proof of special damage, for such treatment might be the cure of the wound (Suego's case, Heil. 175). Again, while it is actionable to call a qualified medical man "a quack" or "an impostor," the same words applied to an unqualified person would not be actionable, at any rate without proof of special damage. It is no libel to write of a physician that he has met homœopathists in consultation, although it be averred that to do so is a breach of professional etiquette (Clay *v.* Roberts, 9 Jur., N. S. 11).

A USELESS INQUEST AND A WORTHLESS VERDICT.

The Coroner for Norwich lately held an inquest on an infant child found dead in bed, lying by the side of an older child, aged 3 years. The parents had gone out, leaving the children asleep together in the bed, and on their return three hours afterwards the deceased was found dead. The coroner, according to the report in the *Eastern Evening News*, informed the jury that the death might have been caused by suffocation, that at present there was no evidence to show the cause of death, and that if the jury were not satisfied with the evidence he would adjourn and order a *post-mortem* examination, but he hoped something would be brought out in the evidence which would satisfy them. The mother stated that the child was quite healthy and well nourished, that it was not suffering from teething, or convulsions, or any chest affection, but that she had given it some teething powders, which she thought did it good. She could not account for the death. No medical evidence was called, and the coroner, after commenting upon the undesirability of leaving children too long alone, said that he thought the deceased was too fat, and that it had evidently been suffering from teething, and had no doubt died in convulsions. The jury returned a verdict of death from "natural causes—to wit, convulsions."

*** We have always been under the impression that in all cases where an inquest is held it is the duty of the coroner and jury to ascertain the true cause of the death, and not to make a guess at it at the suggestion of the former. In the present case we do not hesitate to say that a medical man should have been summoned to attend, after making a *post-mortem* examination, and then the jury would have had evidence before them enabling them to arrive at a correct verdict. Without such medical evidence the inquest becomes a farce, and the verdict futile.

SCENE AT A CORONER'S INQUEST AT GATESHEAD.

Under the above heading, the *Newcastle Journal* reports as follows:

Mr. Graham, coroner, held an inquest at the Half Moon Hotel, Gateshead, yesterday, into the circumstances attending the death of William Burton, a labourer, whose body was found in an old building behind Bridge Street on Sunday morning. During the inquiry the coroner requested Dr. Duff, who was acting for the police doctor, to write his report on the case. Dr. Duff replied that he was there to give evidence not to write a report. After a sharp passage at arms between

doctor and coroner, the latter ordered his officer to take Dr. Duff into custody. Subsequently he was allowed to return to the room, and the coroner, addressing him, said: Now, sir, are you ready to apologise for your behaviour in this room?—Dr. Duff: Not for one moment.—The Coroner: Then you can go. I won't fine you on this occasion. I will content myself and deprive you of your fee. I shall at the same time take care that Dr. Kay gets to know about your conduct.—Dr. Duff: I shall take the greatest care that Dr. Kay gets to know too.—The Coroner: That is enough. Say no more.—Dr. Duff: You will have to go to a higher authority for such gross abuse of your brief judicial authority. You will hear more about this.—The Coroner: Let us have no more of it now. Go away, please.—Dr. Duff made attempts to speak further, but the Coroner gave instructions to Detective Sergeant Robson to remove him, adding, I shall commit you for contempt of court if you don't go at once.—The jury, after hearing the evidence, returned a verdict that Burton had met his death by having fallen into an old building whilst in a state of intoxication.

*** The report speaks for itself, but having regard to the advice given by a contemporary we would strongly recommend Dr. Duff, before taking any legal action, to send a full report of the proceedings to the Lord Chancellor, who will probably afford him the redress to which he is undoubtedly entitled. The peremptory demand of the coroner was in our opinion quite unwarrantable, and his subsequent conduct and treatment of the medical witness appears to have been a distinct abuse of office.

FEE OF MEDICAL WITNESS.

COURT FEES.—As our correspondent appears to have attended the court in virtue of a citation duly served upon him, and without any fee being explicitly agreed to, he would probably be unable to recover more than the prescribed remuneration.

GRATUITIES TO MIDWIVES.

LUX.—If it is the custom for some medical men when called to a difficult labour by a midwife to give sums varying from 5s. to 7s. out of the 21s. charged to the patient the practice is very reprehensible, although it is not what is technically called "covering."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Diploma in Public Health.—The examinations for this diploma will extend from April 3rd to April 12th.

Appointments.—Mr. Hardy and Dr. Anderson have been reappointed Demonstrators in Physiology for five years.

Degrees.—At the congregation on March 15th, the following degrees were conferred:

M.D.—E. A Peters, B.A., Caius College.

M.B. and B.C.—F. T. Talbot, B.A., King's College.

M.B.—H. N. Clarke, B.A., Trinity College: J. A. Nixon and W. Tyson, B.A., Caius College.

Addenbrooke's Hospital.—The concordat between the hospital and the medical school, which has for some time been under discussion, has been formally adopted by the University and by the General Court of Governors respectively.

UNIVERSITY OF GLASGOW.

Close of the Winter Session.—The medical classes for the winter session were brought to a close on Friday, March 23rd, when the various medals and certificates of distinction were announced.

YORKSHIRE COLLEGE, LEEDS.

THE Council has unanimously adopted the following resolution expressing its sense of the services of the late Mr. Scattergood, Dean of the Medical Department:

"Before proceeding to the business of the day, the Council resolve that a record be placed upon their minutes of their sense of the heavy loss which the College has sustained since their last meeting by the death of their esteemed colleague, Mr. Scattergood. He took part in the foundation of the College, was an active member of its Council from the commencement, and in every possible way showed his sincere interest in the work of the institution.

"Whilst every branch of liberal education had his warm support, his chief concern was undoubtedly centred in the department of medicine, which he served with an ardour which would have appeared extraordinary even in the case of a man of leisure, with but few other public interests, and was truly remarkable as evinced in the life of Mr. Scattergood, with the daily responsibilities of a large practice, and with his active connection with so many other institutions for the cultivation of those moral and intellectual forces that tend to the highest welfare of the community. The present Medical School is to a great extent a monument to Mr. Scattergood, to whose energy and persistent advocacy the new building is in great measure due. As Dean of the Medical Department from the union of the Leeds School of Medicine with the Yorkshire College up to the time of his death, he has left a record of devotion which will remain as a stimulus to his former colleagues, and an example of what is possible to those who follow him.

"To the family of their late friend the Council tender their sincerest sympathy in their bereavement, the bitterness of which, it is hoped, will to some extent be mitigated by the knowledge of the extent and depth of the regret felt throughout this city for the loss of so good a friend and so worthy a public servant."

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, MARCH, 1900.—The following candidates passed in:

Surgery.—W. F. C. Bennett (Section II), Sheffield; R. R. P. S. Bowker, Middlesex Hospital; H. N. Collier, Guy's Hospital; R. V. Cowey (Section I), St. Mary's Hospital; W. K. S. Hay-Coghlan, St. Mary's Hospital; R. C. Rumbelow, Middlesex Hospital; A. Y. St. Leger (Section II), Cambridge and St. Mary's Hospital; T. Young (Sections I and II), St. Bartholomew's Hospital.

Medicine.—W. D. French (Section I), University College Hospital; H. Jessop (Section I), Birmingham; W. T. Meagher, Cork; A. C. Oliver (Section II), Charing Cross Hospital; J. R. Pooler (Section I), Birmingham.

Forensic Medicine.—W. D. French, University College Hospital; H. Jessop, Birmingham; W. T. Meagher, Cork; J. R. Pooler, Birmingham; H. F. Willington, Manchester.

Midwifery.—E. F. Lamport, Royal Free Hospital; C. A. Lower, Guy's Hospital and Bristol: F. A Segreda, Guy's Hospital; H. P. Shanks, University College Hospital.

The Diploma of the Society was granted to Messrs. W. F. C. Bennett and W. K. S. Hay-Coghlan.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

APPLICATION OF PART III OF THE HOUSING OF THE WORKING CLASSES ACT 1890 TO RURAL DISTRICTS.

THE Northamptonshire County Council have passed a resolution to enable the Brixworth Rural District Council to adopt Part III of the Housing of the Working Classes Act, 1890, in the parish of Spratton. A study the report which was made by the councillor appointed to make the inquiry serves to show the nature of the evidence upon which accommodation will be provided in rural districts, to which the provisions of the Part III of the Act can only be applied after a certificate has been granted by the county council. (See Section LV of the Act.)

From reports made by a committee of the rural district council and by the medical officer of health (Dr. C. E. Paget), it seems that the total number of dwellings in Spratton is 187, of which 146 are cottages; 16 of these are unfit for occupation, while the sanitary inspector submitted a list of 21 cottages which, although not actually unfit for occupation, are in an unsatisfactory condition. This evidence was considered sufficient to show that accommodation is necessary for the housing of the working classes in Spratton.

Another urgent reason for allowing Part III of the Act to come into operation was furnished by the fact that Spratton has for generations been an "open" not a close village. Moreover, the large majority of the insanitary cottages have been erected by squatters on the roadsides, constituting encroachment, which are consequently in the hands of numerous small owners, who are without the means of effectually repairing them. This state of things in Spratton is largely due to the fact that the action of the local sanitary authority is impeded by the owners of insanitary dwellings who have no means to remedy defects, and who are rendered homeless by the closing of their dwellings.

The proposal of the district council, which has now been approved by the county council, is for the erection of six new cottages at Spratton, estimated to cost £1,000. This sum, repayable in about thirty years, will involve an outlay of £50 and £10 a year for repairs. Allowing for a rent of 3s. a week for the cottages, the cost to the ratepayers will only be one farthing in the £.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,824 births and 4,807 deaths were registered during the week ending Saturday last, March 24th. The annual rate of mortality in these towns, which had declined from 25.8 to 20.3 per 1,000 in the five preceding weeks, rose again to 21.6 last week. The rates in the several towns ranged from 10.7 in Burnley, 14.3 in Leicester, 15.0 in Huddersfield, and 15.2 in Blackburn to 28.6 in Plymouth, 29.0 in Halifax, 31.3 in Liverpool, and 36.7 in Wolverhampton. In the thirty-two provincial towns the mean death-rate was 22.2 per 1,000, and exceeded by 1.6 the rate recorded in London, which was 20.6 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the death-rate was 1.8 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Salford, 3.9 in Preston, 4.8 in Sheffield, and 5.8 in Wolverhampton. Measles caused a death-rate of 1.3 in Cardiff, 1.4 in Bristol and in Oldham, 2.1 in Halifax, 2.2 in Preston, and 2.3 in Wolverhampton; scarlet fever of 1.3 in Bradford; and whooping-cough of 1.3 in Portsmouth, 1.6 in Bolton, 1.7 in Liverpool and in Salford, and 2.9 in Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. The 91 deaths from diphtheria in the thirty-three towns included 36 in London, 19 in Sheffield, 8 in Leeds, and 4 in Leicester. One fatal case of small-pox was registered last week in Hull, but not one in any other of the thirty-three large towns. There were 5 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, March 24th, against 7, 7 and 5 at the end of the three preceding weeks; no new case was admitted during the week against 2, 1, and 2 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 1,760 at the end of the eighteen preceding weeks, had further fallen to 1,715 on Saturday last; 170 new cases were admitted during the week, against 154, 147, and 181 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, March 24th, 958 births and 686 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 31.7 to 22.7 per 1,000 in the four preceding weeks, further fell last week to 22.2, but exceeded by 0.6 per 1,000 the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the

death-rates ranged from 11.8 in Perth, and 14.6 in Leith, to 23.7 in Edinburgh, and 25.2 in Paisley. The zymotic death-rate in these towns averaged 2.2 per 1,000, the highest rates being recorded in Paisley and Greenock. The 334 deaths registered in Glasgow included 13 from measles, 4 from scarlet fever, 3 from diphtheria, 10 from whooping-cough, and 8 from diarrhœa. Two fatal cases of whooping-cough, 3 of "fever," and 5 of diarrhœa were recorded in Edinburgh. Two deaths from measles occurred in Dundee; 3 from whooping-cough in Aberdeen; 2 from measles and 2 from whooping-cough in Paisley; and 2 from diphtheria in Greenock.

P. V.—The root difficulty in our correspondent's case, as in other more or less similar cases, is the want of security of tenure. "P. V." is mistaken in assuming that this has not already engaged the attention of the Parliamentary Bills Committee of the Association. The Vaccination Subcommittee brought the matter before the Parliamentary Bills Committee at their meeting in January last, and submitted a draft memorial, which was approved by the Parliamentary Bills Committee and by the Council, and has been sent to the President of the Local Government Board.[1]

INDIA AND THE COLONIES.

THE PUNJAB.

Hospitals and Dispensaries.

THERE was an increase of 10 institutions during the three years, 1896-97-98; but the attendance of patients, which amounted to over three millions, underwent some decrease, in consequence, it is stated, of a healthy year, the plague scare, and the temporary removal of medical staff in some instances for plague duties. Only 3 cases of cholera and 67 of small-pox were treated in 1898, and there was a large reduction in cases of malarial fever. The death-rate among indoor patients (4 per cent.) showed some abatement. The proportions of men, women, and children treated were 54, 20, and 26, much the same as usual; 170,809 surgical operations of all sorts were performed, with a death-rate per cent. of 0.16. These included 4,534 cataract operations with a percentage of 87 cures, and 2,000 operations for stone—306 by cutting and 1694 by crushing, with a death-rate for the former of 11.4 and latter of 3.2 per cent.; 164 cases of natural labour were treated, and a considerable number of operations performed for difficult labour, including 4 cases of Cæsarean section, one of which recovered. The education and training of females for attendance on women is making satisfactory progress. These institutions are supported mainly by local and municipal funds, Government contributing about one-twentieth of their income. The report, which is drawn up by Colonel A. Deane, M.D., I.M.S., Inspector-General of Civil Hospitals, is detailed and interesting, and indicates that sustained effort is being made in the Punjab to relieve the indigent sick. Some of the trans-border dispensaries give conspicuous evidence of increased popularity and usefulness.

BURMAH.

Sanitary Commissioner's Report.

OWING to the circumstances of the province, the collection of vital statistics is still limited and difficult. The birth-rate returned in 1898 by the areas under registration was 34.1, and death-rate 26.13, the rates for 1897 having been 31.82 and 26.26. The population is said to be increasing at a more rapid rate than the difference between birth-rates and death-rates would indicate, and the former are held to be more defective than the latter. Cholera mortality was low, about half the average of the preceding decennium, but the small-pox mortality was doubled. Fevers account for nearly 50 per cent. of the registered deaths, but the term covers a multitude of maladies. The sale of quinine does not make satisfactory progress; for this several reasons are assigned—ignorance, prejudice, and apathy being probably the principal. The province has so far remained free from plague. Precautions have been taken against importation, and these are justified by the fact that two cases have been detected in the ports of Rangoon and Moulmein. One-third of the income of local bodies was expended on sanitary work. Schemes for the improvement of water supply and drainage of the larger towns are in progress. A sanitary engineer has been appointed for the province, and entered on his duties at the beginning of the year. The Sanitary Board "is reported to have done practically nothing," and the Lieutenant-Governor doubts whether it justifies its existence. Colonel Sinclair, C.S.I., I.M.S., the Sanitary Commissioner, compiled the report for the year. As this officer also administered the gaol, medical and vaccination departments, the question of making a separate and special arrangement for sanitary administration is under consideration.

[1] BRITISH MEDICAL JOURNAL, January 27th, 1900, p. 233.

BENGAL.

Charitable Hospitals and Dispensaries.

THE latest report on these institutions, submitted by Colonel T. H. Hendley, C.I.E., I.M.S., Inspector-General of Civil Hospitals, embraces the years 1896, 1897, and 1898. The number of dispensaries has increased during these three years from 430 to 492, and of patients treated in them from 2,684,610 to 2,879,545. These figures indicate progress, which is particularly satisfactory in the face of the fact that 1898 was a healthy year, and that the plague scare, which diminished attendance in other provinces, did not produce a similar result in Bengal. The extent to which public medical relief has been organised in Bengal as compared with the other five principal provinces of the Indian Empire is instructively shown by the following tabular statement:

Province.	Number of Dispensaries.	Square Miles per Dispensary.	Population per Dispensary.	Number of Patients Treated per Dispensary.
Bengal	487	311	145,103	5,913
N.-W. Provinces ...	331	324	141,707	10,983
Punjab	265	417	78,720	12,232
Bombay	337	371	56,086	5,074
Central Provinces.	121	591	78,524	12,499
Madras	496	280	71,835	8,161

These figures do not include the large hospitals situated in Presidency towns. They indicate a wide but by no means exhaustive distribution of centres of medical relief, leaving still fallow fields for future extensions. Colonel Hendley states that the inhabitants of Bengal resort largely to private practitioners for medical aid, to a greater extent probably than in any other province. This is accepted by the Government as a satisfactory circumstance. Probably in no part of the province are the sick in ordinary times destitute of treatment of some description. The question comes to be whether the available means of treatment are adequate and efficient—in other words, whether the *baids* and *hakims* and native doctors practising among the people are properly qualified, properly distributed, and available for the destitute. To this question it is impossible to supply a satisfactory answer at present, and it is manifestly the duty of Government to support and push the dispensary movement, and render it more attractive and efficient. This triennial review discusses various matters tending in that direction. The competence and skill of medical officers in charge is a fundamental point, and the report indicates that advance is taking place in this respect. The conveniences and comforts placed at the disposal of the sick are also being considered; and the surgical resources of these institutes, which constitute a very important element in their work, and which cannot be supplied elsewhere, are being improved and extended. The importance of systematic and practical inspection is likewise fully recognised. Government contributes a little over one-tenth of the income of these dispensaries, the remaining nine-tenths being obtained from municipal and local funds and private subscriptions. This is a satisfactory position, and the revenues appear to be judiciously expended, and in some cases husbanded. Perhaps there is too great a tendency to save, and an absence of energy and enterprise in utilising available resources for the purpose of increasing and extending the benefits of these institutions. This appears to be realised by the Inspector-General and by Government, and the expenditure of subscriptions for "special objects tending to the improvement of comfort in dispensaries," is suggested, and is being considered.

ACCORDING to the *Hong Kong Weekly Press* the Korean Imperial Household Department has engaged an English female physician at a salary of 300 yen a month.

HOSPITAL AND DISPENSARY MANAGEMENT.

EDINBURGH ROYAL INFIRMARY.

At the usual weekly meeting of the managers of the Edinburgh Royal Infirmary held on March 26th, the following appointments, for the period of six months from April 1st, were ratified:—Resident Physicians—David Albert Callender, M.B., Ch.B., to Dr. Bruce; Wm. Jas. Stuart, M.A., M.B., Ch.B., to Professor Fraser; R. M Rowe, M.B., Ch.B., to Professor Greenfield; Thos. D. M'Laren, M.B., Ch.B., to Dr. Affleck; David Ferrier, M.B., Ch.B., to Dr. Bramwell; and C. M. Pearson, M.B., Ch.B., to Dr. Gibson. Resident Surgeons—L. C. Maclagan Wedderburn, M.B., Ch.B., to Professor Annandale; James M. Reid, M.B., Ch.B., to Professor Chiene; David B. King, M.A., M.B., Ch.B., to Dr. Maclaren; Charles Heron Watson, M.A., M.B., Ch.B., to Dr. MacGillivray: Charles Forsyth, M.B., Ch.B, to Mr. Cotterill; and John Jeffrey, M.B., Ch.B., to Mr. Catheart. Non-resident House-Physicians—G. F. Barbour Simpson, M.B., Ch.B., to Dr. Croom; John Macmillan, M.B., F.R.C.P., to Dr. W. Allan Jamieson. Non-resident House-Surgeons—J. F. Falconer, M.B., Ch.B., to Dr. Mackay; J. Matheson Cullen, M.D., to Mr. Hodsdon; Thomas Paul Gray, M.D., to Dr. M'Bride; and Geo. K. Grimmer, M.B., C.M., to Mr. Berry. Clinical Assistants—Arthur Preston, M.B., Ch.B., to Professor Fraser; A. Hill Buchan, M.B., M.R.C.P.E., to Dr. Bruce; A. H. Macpherson, L.R.C.P.E., and F. W. Mayes Willcox, M.B., C.M., to Dr. Philip; John Eason, M.B., C.M., etc., to Dr. William Russell: T. J. Thomson, M.D., to Dr. Murdoch Brown; R. J. Johnston, M.B., etc., to Dr. G. Lovell Gulland; John W. Simpson, M.B., etc., to Dr. Graham Brown; W. Macrae Taylor, M.B., F.R.C.S.E., to Dr. M'Bride; and F. Gardiner, M.B., C.M., and Wm. Hope Fowler, M.B., Ch.B., to Dr. R. Milne Murray. Mr. Charles G. S. Leeds, L.R.C.P.& S Ed., was appointed Resident Medical Officer at the Convalescent House, Corstorphine.

MEDICAL NEWS.

The Lord Lieutenant of Ireland has appointed Sir Francis R. Cruise, M.D., to be one of the Commissioners of National Education in Ireland.

Mr. Victor Horsley will deliver the second Lees and Raper Memorial Lecture in St. James's Hall, W., on Friday, April 27th. The chair will be taken by Mr. Augustine Birrell, Q.C., M.P. The subject of the lecture will be "The Effect of Alcohol upon the Human Brain."

An ambulance corps has been organised and equipped for service with the Boers by the United Irish Societies of Chicago. The corps expects to be in the field on April 1st. Whether the date chosen for the commencement of operations has any special significance we are unable to say.

At the annual general meeting of University College Hospital it was stated that it was hoped shortly to occupy the north-west wing and the central block of the new hospital. The south wing of the present hospital will then be demolished to make room for the building of the south-east wing.

The Roentgen Society.—We are asked to state that the members of this Society will welcome any members of the British Medical Association who may desire to attend the meetings which are held on the first Thursday in the month from November to June inclusive, at 20, Hanover Square, at 8 p.m.

A French Parliamentary Committee of Public Health.—In accordance with a recent decision of the French Chamber of Deputies, a grand committee, which is to deal with all questions relating to public health, has been appointed. The committee is composed of 33 members, of whom 18 are members of the medical profession, while 3 are pharmacists. The chairman is M. Dubois.

Irish Medical Schools' and Graduates' Association.—In reply to the congratulatory telegram despatched by the members of this Association dining at the Hotel Cecil on St. Patrick's Day to Lord Roberts at Bloemfontein, the following telegram has been received: "Bloemfontein, March 19th.—Hearty thanks for your kind and seasonable telegram.—Roberts" By an oversight the following names were omitted in the British Medical Journal of March 24th from the list of members of council newly elected: Surgeon-General G. J. H. Evatt, Drs. W. E. St. Lawrence Finny, and J. Wheeler O'Bryen.

At a recent meeting of the New York Historical Society Dr. Sydney H. Carney, jun. (as we learn from the *Medical News*) read a paper, in which he stated that in 1800 there were 94 physicians in New York City. "They all used that staff of medical propriety, a gold-headed cane. Small clothes were rapidly disappearing, and pantaloons were covering a multitude of shins." There were in 1800 five medical schools in the United States, namely, at Columbia College, at Philadelphia, at Cambridge, at Dartmouth, and at Lexington, Kentucky. In 1798 16 medical practitioners lost their lives in trying to mitigate the sufferings caused by the plague. The pay of doctors at Bellevue was then 20s. a day. That hospital was then three miles out of New York. For a visit the fee charged was 1dol., for a visit and a dose 1dol. 24 cents. Pills were 12 cents. Doctors got 1dol. a mile for going out of town. For bleeding the charge was from 1dol. to 5dols.

Royal Meteorological Society.—The Royal Meteorological Society will celebrate its Jubilee on Tuesday, April 3rd. In honour of the occasion, a commemoration meeting will be held at the Institution of Civil Engineers Great George Street, Westminster, at 3 p.m. on that date, when the President, Dr. C. Theodore Williams, will deliver an address. A *conversazione* will be held the same evening at 8.30 p.m. at the Royal Institute of Painters in Water Colours, Piccadilly, where, in addition to the pictures in the galleries, there will be an exhibition of meteorological instruments, models, and photographs, and lantern demonstrations will be given by Colonel H. M. Saunders, Mr. T. C. Porter, of Eton, and Mr. W. Marriott. On Wednesday, April 4th, there will be an excursion to the Royal Observatory, Greenwich, by permission of the Astronomer Royal, and in the evening a dinner at the Westminster Palace Hotel. As a memento of the Jubilee of the Society, a bronze commemoration medal, bearing on the obverse a portrait of Luke Howard, F.R.S., has been struck. Further particulars as to the programme of the Jubilee celebration may be obtained from the Assistant Secretary, Mr. William Marriott, 70, Victoria Street, Westminster.

MEDICAL VACANCIES.

The following vacancies are announced:

ARGYLL AND BUTE ASYLUM, Lochgilphead.—Assistant Medical Officer, unmarried, and not exceeding 30 years of age. Salary, £100 per annum, with furnished apartments, board, etc. Applications to the Medical Superintendent by April 7th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary, £150 per annum (with allowance of £30 for cab hire), and furnished rooms, etc. Applications to the Secretary by April 23rd.

CANNING TOWN MEDICAL MISSION DISPENSARY.—Female Assistant Medical Officer. Board and lodging provided No salary. Applications to the Resident Medical Officer, 520, Barking Road, E., by April 5th.

CARDIFF INFIRMARY.—(1) Resident Medical Officer. Salary, £100 per annum, with board, washing, and furnished apartments (2) Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by April 3rd.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried, Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DEVONPORT: ROYAL ALBERT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £40 per annum, with board, lodging, and washing. Applications to the Chairman of Medical Committee by April 5th.

DOWN COUNTY ASYLUM, Downpatrick.—Assistant Medical Officer, not exceeding 32 years of age, unmarried. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by April 14th.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to Surgeon, unmarried. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. Tate by April 19th.

DURHAM COUNTY ASYLUM.—Assistant Medical Officer. Salary £140 per annum, rising to £160, with board, lodging, washing, etc. Applications to the Medical Superintendent, Winterton, Ferryhill, by April 3rd.

EDINBURGH UNIVERSITY.—Professor of Medicine. Applications to the Secretary, 66, Frederick Street, Edinburgh, by April 14th.

GLASGOW DISTRICT ASYLUM AND MENTAL HOSPITAL, Gartloch.—Junior Assistant Medical Officer. Applications to Mr. Jas. R. Motion, Clerk and Treasurer, Glasgow District Lunacy Board, 38, Cochrane Street, Glasgow.

GOVAN DISTRICT ASYLUM, Cookstown, Paisley, N.B.—Junior Assistant Medical Officer. Salary, £120 per annum, with rooms, board, etc. Applications to the Medical Superintendent.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon, unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by April 11th.

HEREFORD GENERAL INFIRMARY.—Junior House-Surgeon, unmarried. Appointment for six months, but eligible for re-election as Senior. Salary, £17 10s. and £40 respectively, with furnished rooms, board, etc. Applications to the Secretary, 37, Bridge Street, Hereford, by April 11th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Assistant Physician, (2) Resident House Physicians. Appointments for six months. Honorarium, £25. Applications to the Secretary for the first by March 21st, and for the latter by April 3rd.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—House-Physician, unmarried. Appointment for six months. Salary, £20, with board and residence. Applications on forms provided to be sent to the Secretary by April 3rd.

HULL ROYAL INFIRMARY.—Honorary Assistant-Surgeon. Applications to the Chairman, Committee of Management, by April 4th.

HULME DISPENSARY, Dale Street, Manchester.—House-Surgeon. Salary, £150 per annum, with apartments, etc. Applications to the Honorary Secretary, Medical Committee, by April 4th.

ITALIAN HOSPITAL, Queen Square, W.C.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Secretary by April 18th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum. Applications to the Secretary of the Faculty.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium, £10, with board, residence, and washing. Applications to the Secretary by April 14th.

LINCOLN HOSPITAL FOR INSANE.—Assistant Medical Officer. Salary, £100. Applications to the Medical Superintendent.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle Street.—(1) House-Surgeon. Salary, £85 per annum, with board and lodging. (2) Assistant House-Surgeon. Appointment for six months. Salary, £25, with board and lodging. Applications to the Honorary Secretary by March 31st.

LIVERPOOL: STANLEY HOSPITAL.—(1) Honorary Physician. (2) Senior House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, to the Honorary Secretary, in the former instance, by April 12th, and in the latter, endorsed "House-Surgeon," to the Honorary Secretary, Medical Board, by April 6th.

LONDON COUNTY ASYLUM, Horton.—Medical Superintendent, not over 40 years of age. Salary, £1,000 per annum, with unfurnished house, etc. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 66, Waterloo Place, London, S.W., by May 1st.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Physician to Outpatients; must be F. or M.R.C.P.Lond. Honorarium, 50 guineas per annum. Applications to the Secretary by April 5th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House-Surgeon. Honorarium at the rate of £50 per annum, and board. Applications to Mr. G. W. Fox, Hon. Secretary, 53, Princess Street, Manchester, by April 6th.

METROPOLITAN ASYLUMS BOARD.—Four Assistant Medical Officers at the Fever and Small-pox Hospitals, unmarried, and not exceed 35 years of age. Salary, £160 for the first year, £180 the second, and £200 the third and subsequent years, with board, lodging, etc. Applications, on forms provided, to be sent to the office of the Board, Victoria Embankment, E.C., by April 5th.

NEWARK-UPON-TRENT HOSPITAL AND DISPENSARY.—House-Surgeon, unmarried. Salary, £80 per annum, with board and lodging. Applications, on forms provided, to be sent to the Secretary.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Board, washing, and residence provided, and honorarium at the rate of £50 per annum. Applications to Dr. M. F. Squire at the Infirmary, 285, Harrow Road, W., by April 23rd.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—(1) House-Physician, (2) House-Surgeon. Appointments for six months. Salaries at the rate of 50 guineas, with board and residence. Applications to the Secretary by April 6th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £65 per annum, with board and residence. Applications to the House Governor by April 7th.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to the Secretary by April 23rd.

ST. SAVIOUR'S UNION.—Second Assistant Medical Officer at the Infirmary, East Dulwich Grove, S.E. Salary, £100 per annum, with residential allowances. Applications, marked "Applications for Second Assistant Medical Officer," to be sent to the Clerk, Union Offices, John Street West, Blackfriars Road, E.C., by April 2nd.

SEAMEN'S HOSPITAL SOCIETY.—House-Physician for the Dreadnought Hospital. Salary, £75 per annum, with board and residence. Applications to the Secretary by April 11th.

SHREWSBURY: COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £130 per annum, rising to £150, with board, lodging, and washing. Applications to the Medical Superintendent by April 11th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon, Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum. Applications to the Secretary.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to be received by April 3rd.

SWANSEA GENERAL AND EAR HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, apartments, etc. Applications to the General Secretary by April 9th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging and laundry. Applications to the Hon. Secretary, Bank Buildings, Taunton.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, lodging, and washing, and allowance. Applications to the House Committee by April 2nd.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £80 per annum, with board and residence. Applications to the Honorary Secretary by April 3rd.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by April 19th.

WORCESTER GENERAL INFIRMARY.—Assistant House-Surgeon, unmarried. Salary, £70 per annum, with board, residence, and washing. Applications to the Secretary by April 7th.

MEDICAL APPOINTMENTS.

AINSWORTH, H. P., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Fourth District of the North Witchford Union, *vice* G. P. O'Connor, L.R.C.P., L.R.C.S.Edin., resigned.

BARON, H. N., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Orford District of the Plomesgate Union, *vice* F. S. Flint, L.R.C.P., L.R.C.S.Edin.

BIRKETT, G. T., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Catford District of the Lewisham Union, *vice* J. F. Saunders, M.R.C.S.Eng., resigned.

BROADBENT, G., L.R.C.P., L.R.C.S., appointed Medical Officer for the Maltby District of the Rotherham Union, *vice* W. H. Crossley, M.R.C.S.Eng.

BROOK, Charles, M.R.C.S., L.S.A., appointed Consulting Surgeon to the Lincoln County Hospital.

BROOK, W. H. B., M.D., B.S.Lond., F.R.C.S., appointed Surgeon to the Lincoln County Hospital, *vice* Charles Brook, M.R.C.S.Eng., appointed Consulting Surgeon.

DRUMMOND, J., M.D.Glasg., reappointed Medical Officer for the Westowe District of the South Shields Union.

EDINGTON, George H., M.D., M.R.C.S., appointed Visiting Surgeon to the Glasgow Training Home for Nurses.

FIRTH, O., M.D.Lond., F.R.C.S., appointed Medical Officer for the Children's Homes of the Gravesend and Milton Union.

GOFFE, E. G. L., M.B., B.S.Lond., appointed Assistant Medical Officer to the Infirmary and Workhouse of the Lewisham Union, *vice* E. R. Badcock, M.R.C.S.Eng., L.R.C.P. Lond., resigned.

HOPKIN, R., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Second District of the Llandovery Union.

JONES, D. W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Rotherham District of the Rotherham Union, *vice* J. Branson, M.R.C.P., L.R.C.P.Edin., resigned.

LAFRAIK, George, M.B., C.M.Glasg., appointed Public Vaccinator for the District of Thames, New Zealand.

LAWSON, T. C., M.R.C.S.Eng., appointed Medical Officer for the Longtown District of the Dore Union, vice L. Thain, M.R.C.S.Eng., resigned.

MCMURRAY, J., M.D., appointed Medical Officer for the Kirkdale Branch Workhouse of the Parish of Liverpool.

MACNAMARA, A. P., M.B., appointed Medical Officer of Health for the Shrivenham District of the Faringdon Union, *vice* G. E. P. Nixon, L.R.C.S.I., L.A.H.Dub.

MAHON, R. B., M.D.R.U.I., F.R.C.S.Eng., appointed Certifying Factory Surgeon for the Ballinrobe Dispensary District, co. Mayo.

OLIPHANT, E. H. Lawrence, M.D.Edin., F.F.P.S.G., appointed Physician to the Dispensary for Diseases of Women, Glasgow Western Infirmary, *vice* Dr. Turner, deceased.

PEARSON, H. A., L.R.C.P., L.R.C.S., appointed Medical Officer for the Fifth District of the Royston Union, *vice* F. A. Davey, M.R.C.S., resigned.

RHYS, W. L., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer of the Aberdare Town District, *vice* D. Davies, L.R.C.P.Edin., F.R.C.S.Eng., resigned.

ROBERTS, Arthur, F.R.C.S.E., appointed Aural Surgeon to the Royal Berkshire Hospital, Reading.

ROBINSON, Bernard, L.R.C.P.Lond., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Civil Parishes of Croxden and Rocester in the Uttoxeter Rural District.

STONEY, Ralph, L.R.C.P., L.R.C.S.Irel., appointed Medical Officer to the British Africa Protectorate.

SYMPSON, E. Mansel, M.A., M.D., B.C.Cantab., M.R.C.S., appointed Medical Officer to Her Majesty's Prison, Lincoln, *vice* Dr. George Mitchinson, deceased.

TEES, J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Woolwich District of the Woolwich Union, *vice* C. J. Fuller, M.R.C.S., L.R.C.P., resigned.

VINCENT, Ralph, M.B., B.S.Dunelm., M.R.C.P.Lond., appointed Assistant Resident Medical Officer, Queen Charlotte's Lying-in Hospital.

WATSON, Anne Mercer, L.R.C.P., L.R.C.S.Edin., L.F.P.&S.Glas., appointed Resident Assistant Medical Officer to the Dundee Royal Infirmary.

WOLFE, J. F., M.B., C.M.Edin., appointed Medical Officer of Health to the Heavitree Urban District, *vice* R. J. Andrews, M.R.C.S., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Mr. G. J. Goldie: On the "X" Rays in the Practice of Dentistry. Communications by Mr. H. Baldwin and Mr. H. G. Read.

Medical Society of London, 9 P.M.—Sir W. M. Banks: The Present Position of the Parasitic and Infective Theories of Cancer; Operative Proceedings for the Cure of Mammary Cancer; the author's statistics. Lantern Demonstration to illustrate the first subject. Lettsomian Lecture III.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. F. Payne: Consultation. (Skin).

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. S. J. Sharkey: Consultation. (Medical.)

Royal College of Physicians of London, 5 P.M.—Dr. W. B. Cheadle: On Some Cirrhoses of the Liver. Lumleian Lecture II.

Pathological society of London, 20 Hanover Square, W., 8.30 P.M.—Dr. Sidney Martin and Dr. Charles Sherrington will open a discussion on The Change of the Blood in Disease; and the following gentlemen will read papers or join in the discussion: Professor Wright, Dr. William Hunter, Dr. Herbert Hawkins, Dr. Drysdale Dr. Garrod, Dr. Whitfield, Dr. Rose Bradford, and Dr. Bryant.

Royal Meteorological Society (Jubilee Celebration), 25 Great George Street, Westminster, 3 P.M.—Commemoration Meeting. The President, Dr. Theodore Williams, will deliver an address.—Royal Institute of Painters in Water Colours, Piccadilly, 8.30 P.M., Conversazione.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. G. Heron: Consultation. (Medical.)

Royal Meteorological Society (Jubilee Celebration).—Excursion to the Royal Observatory, Greenwich. Meeting at the Observatory at 11.30 A.M.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by the President, Dr. William Duncan, Dr. Cullingworth, Dr. Stabb, Dr. Addinsell, Dr. Macnaughton-Jones, Dr. C. Hubert Roberts, Dr. Tate, and Dr. A. W. W. Lea. Papers—Dr. J. M. Munro Kerr: Three cases of Incarceration of the Retrodisplaced Gravid Uterus and one of Extrauterine Pregnancy simulating that condition. The President (Mr. Alban Doran): A case of Extrauterine Gestation in which Foetal Death occurred at the eighth month after Spurious Labour; Abdominal Section two months later.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Royal College of Physicians of London, 5 P.M.—Dr. W. B. Cheadle: On Some Cirrhoses of the Liver. Lumleian Lecture III.

Roentgen Society, 20, Hanover Square, 8 P.M.—Dr. Norris Wolfenden and Dr. Forbes Ross: The Influence of the "X" Rays upon the Growth and Development of Micro-organisms.

Harveian Society of London, 8.30 P.M.—A discussion on Purulent Nasal Discharges and their Treatment will be opened by Mr. Edmund Roughton. Dr. Dundas Grant, Dr. William Hill, Dr. Herbert Tilley, and others will take part.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 2 to 3 P.M.—Dr. Harry Campbell: Class. Clinical Examination of the Nervous System. Demonstration V. 4 P.M.—Mr. R. Lake: Consultation. (Ear and Throat.) Demonstration V.

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, 8.45 P.M.—Discussion on the Midwives Registration Bill to be introduced by Dr. F. S. Toogood.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Mr. Edgar Willett: On the Administration of Anæsthetics to Young Children.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases will be shown by Sir Felix Semon, Drs. Beale, Tilley, StClair Thomson, Dundas Grant, and Watson Williams, Messrs. Lake, Charters Symonds, and Waggett.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

ECCLES.—On the 24th inst., at Harley Street, W., the wife of W. McAdam Eccles, M.S.Lond., F.R.C.S.Eng., of a daughter.

HORROCKS.—On Christmas Eve, at Perth, Western Australia, the wife of Herbert Horrocks, Esq., M.D., of a daughter.

MARRIAGE

MILLER—SMITH.—On February 14th, at St. John's Church, Darlinghurst, Sydney, N.S.W., by Canon Moreton, Staff-Surgeon Richard Miller, R.N., H.M.S. "Mildura," fourth son of the late George Mackay Miller of Dublin, to Philippa Foster, daughter of Dr. James Walter Smith, of the English Bar and Crown Law Department, Perth, W.A.

DEATH.

KING.—On the 16th inst., at Whitstable, Kent, Henry Stavely King, M.D.Lond., M.A. Cantab., aged 68, formerly of Brook Street, Grosvenor Square, and late Senior Physician, Metropolitan Free Hospital.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Lazyan, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—1.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th. 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 9.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

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IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A CORRESPONDENT desires to hear of a home where a medical man, aged 60, suffering from general paralysis, could be received along with his wife at a moderate payment.

A. P. D. asks: (1) Is there any institution where a young neurotic girl, aged 21, can be dealt with at a small sum per week? (2) Is there any kind of baby diaper manufactured so cheaply as to admit of being destroyed after being used once?

SUBNORMAL TEMPERATURE.

W.F.B. asks for information on the subject of subnormal temperatures. Lately I discovered, he writes, almost accidentally, that my temperature always falls to 95° after my morning bath, and before breakfast; at other periods, before and after, it is normal, or within 1° under normal. It was on my recovery from an attack of influenza about two months since that I first discovered this subnormal period, which still continues, although otherwise I am in my usual good health, except that perhaps I am more easily tired on slight exertion than formerly. The action of the heart during the subnormal period is slow (50 to 60) and slightly intermittent sometimes when seated, generally rising 20 or 30 beats in the minute when standing.

"KOPLIK'S SPOTS" IN MEASLES.

C. M. asks for information about "Koplik's spots" in measles.

*** The term is applied to an eruption which is met with on the buccal mucous membrane and on the inside of the lips in cases of measles before the rash appears on the skin. According to Dr. Koplik (*Arch. of Pediat.*, December, 1896) "it consists of small irregular spots of a bright red colour. In the centre of each spot there is noted, in strong daylight, a minute bluish-white speck; these red spots, with accompanying speck of a bluish-white colour, are absolutely pathognomonic of beginning measles, and when seen can be relied on as a forerunner of the skin eruption." An abstract of Dr. Koplik's paper will be found in the EPITOME of the BRITISH MEDICAL JOURNAL for March 13th, 1897, while abstracts of later German papers on the subject appeared there on May 29th, 1898, and on January 14th, 1899.

ANSWERS.

T. C. A.—On May 26th, 1898, the General Medical Council adjudged Mr. Joshua Hamilton Hart to have been guilty of infamous conduct in a professional respect, and directed the Registrar to remove the name from the *Medical Register.*

K. PRENTICE.—It is possible that the British Medical Benevolent Fund may be able to give assistance in the case. Applications should in the first place be made to Mr. W. E. Sargant, M.R.C.S. (Honorary Secretary for Cases), St. Bartholomew's Hospital, E.C.

R.—We do not know of any assurance company which would accept the life of a lady aged 48 with albuminuria of some years' standing. Judging from the tone of the discussion which took place lately at the Life Assurance Medical Officers' Association, it may be doubted whether any office in London would do so.

C. G. S.—The Income Tax Repayment Agency, of 6, Chichester Road, Paddington, informs us that although most surveyors of taxes allow actual receipts to be returned for assessment to income tax, they have a right to insist upon the gross bookings being shown. The tax, however, should not be paid upon the whole of these, as there are allowable deductions for bad debts and the estimated loss on doubtful debts outside the ordinary professional expenses. The Agency issues balance sheets for the use of medical men showing what these deductions are, and how the receipts and book debts should be returned.

TREATMENT OF ENURESIS IN THE ADULT.

DR. J. AURIOL ARMITAGE (Wolverhampton) writes: I have recently had a case of enuresis continua of six years' standing in an adult. After trying the usual remedies in vain I treated it with the constant current of electricity. A small anode was applied to the perineum, and a comparatively large cathode to the upper lumbar region, and a current passed varying from 2½ to 5 milliamperes. The result was a complete cure after the eighth application.

NOTES, LETTERS, Etc.

ERRATUM.—In the notice of the annual meeting of the Royal National Pension Fund for Nurses in the BRITISH MEDICAL JOURNAL of March 24th, p. 745, the invested funds are stated as exceeding £52,000; this should read "exceeding £520,000."

UNSTEADY ASSISTANTS.

A MEMBER OF TWENTY-FIVE YEARS' STANDING asks: How is it that, amongst the offences that the Penal Committee of the General Medical Council deal with, drunkenness amongst qualified assistants is not included? I am one of the unfortunate principals who have been misled through the giving of good testimonials to unsteady men, not once but five times, and after the most careful inquiries; yet, so far as I can find, this is not looked upon by the General Medical Council as being "unprofessional conduct." I, amongst others, consider that the utmost penalty ought to be inflicted upon men who take assistants' places, and who are unsteady, and if the Council requires help to prosecute such I would bring the very next man under their notice, as they are a standing disgrace to the profession.

EMPLOYMENT OF UNQUALIFIED ASSISTANTS.

A NORTH WALES PRACTITIONER writes: I can fully endorse every word of what "Fair Play" says upon the above subject, for the very thing which he complains of is also done in this district of North Wales where I have been for a long time in practice. Several of my neighbours and acquaintances still employ unqualified assistants, whereas I have discontinued the service of such help long ago. These assistants are to be seen constantly going about as if they were fully-qualified practitioners, are often driven about in carriages and also ride on horseback. They regularly attend all sorts of cases, including midwifery, instrumental and otherwise. Now while these men still hold on, whereas the services of those who used to be employed by some of us have been discontinued, a wrong impression is left upon the minds of the public: and the working classes will naturally think that these doctors must have been employing better qualified assistants than I did in the past, otherwise they could not have been retained when I had to part with mine. Thus the public are wronged by being misled, and the practitioners who abide by the provisions of the Act are unfairly handicapped and injured in their practice. I have been given to understand on good authority that if I complained of the practice referred to to the General Medical Council or the Medical Defence Union (of which I am an old member), I should have to get affidavits prepared, make a formal complaint, and appear in person to substantiate it. Anyone can see that this course would place me in a very invidious position.

The friends of the delinquents would at once raise a cry that I was actuated by malice and jealousy towards, and was trying to injure my neighbours. Now I should not like to see any harsh measures applied, or any extreme penalty meted out to any of them, and it is far from my desire to see any of them struck off the *Register*, but I should like some steps to be taken to secure for us "fair play" all round, and therefore I ask could not some central body be authorised to receive complaints on condition of a fee being deposited by the complainant as a security that the complaint was made in good faith, and was not the result of jealousy of a rival. In such a case the body could make an independent inquiry on the spot, and in case the complaint was proved to be well founded, return the fee deposited by the complainant and charge it as a fine upon the delinquent, at the same time cautioning him of the serious consequences of a continuance or repetition of the offence.

*** Something of the kind is urgently needed in order to protect those who submit to the proper regulations from the unfair competition of less scrupulous practitioners, as well as to protect the public against their imposition.

THE ROYAL MASONIC INSTITUTE FOR BOYS.

DR. G. J. EADY (Juglans Lodge, Enfield) writes: May I through your columns ask my Masonic brethren, more especially old King's men, for any votes they can possibly spare or obtain on behalf of the little son of the late F. W. Skrimshire, who is a candidate for the Boys' School at the coming election in April, and I believe the only one from our profession? They will be most gratefully received either by the widow, Mrs. Skrimshire 2, Southampton Terrace, Farnborough, Hants, or by myself.

COLLIERY AND CLUB DOCTORS

A COLLIERY DOCTOR OF THE NORTH writes: I am a club doctor, and as I am too old and poor to start in a fresh career, a club doctor I shall be until death terminates my existence. Colliers and working men have been my clients, and I have no money saved for comforting declining years. Week by week and year by year one reads in the BRITISH MEDICAL JOURNAL of various schemes for improving the lot of the club doctor, yet nothing is done. I wonder how many have read the insolent remarks expressed towards the medical profession by various Oddfellows, Shepherds, etc., at Plymouth recently? One speaker (a Mr. Bunn) is reported to have said "that a special local sick visitor had power in case of doubt to call in a second medical man. As to the refusals of medical men to attend members on account of social position, the Friendly Societies Conference had practically brought the doctors to their senses in this respect." (The above extract is taken from the *Western Weekly News* of March 17th).

To what a state has our so-called noble profession come to when "club people" speak of us like that. I would strongly urge the younger members of our profession, if they want a life of peace, to have nothing whatever to do with clubs. For 3d. a week a collier making "big money" gets the services of a doctor for self and family. The "colliery doctor" gets little private practice, and his life is one ceaseless round of worry. Could not some magnate take up the matter of the abolition of contract service (unless under Government)? Lawyers and parsons do no similar work. A collier employing a lawyer can rake together a few pounds, yet he grudges the oppressed and down-trodden doctor a living wage. Cannot something be done to raise our profession?

DEFECTS OF THE CLUB SYSTEM.

SCAPULA writes: Dr. Askin hits the nail on the head when he says that no system will ever be found satisfactory where the doctor receives a fixed sum independent of the work done. The most serious defect of the club system is the want of friendly feeling between doctor and patient which seems to exist everywhere in club practice. Under the present system the doctor's surgery is filled with club patients who are not suffering from any disease, but come to get medicine because it costs nothing. My own clubs yield only a small fraction of my income, probably 4 per cent. of it, yet half the patients who come to my surgery are club members. Under such circumstances a surgeon can hardly fail to entertain a feeling of resentment at his time being needlessly occupied. Yet if he venture to remonstrate, or if he show haste in making the diagnosis, he will most probably receive an abusive letter from the club secretary, charging him with neglecting the members, or with failing to show them due deference. Under such circumstances the attitude of the doctor is likely to become one of indifference tempered by fear of the club secretary, and duty to the patient is apt to be forgotten in his silent indignation at being sweated by a hundred ignorant and boorish taskmasters.

Private patients are usually reasonable in their demands, and are always friendly in feeling; club patients constantly imagine themselves slighted, and their ordinary attitude is one of half-veiled hostility. Let the doctor strive as he may, he cannot overcome this want of confidence which exists everywhere in contract practice, neither can he avoid the defamatory criticisms of the lodge. No increase of salary will ever remedy this evil. Nothing less than the total abolition of the contract system will ever be of any use. Contract medical work has been suppressed in Lower Canada, and the interest of the patient demands its suppression in England. Its abolition would save hundreds of lives and prevent an enormous amount of suffering among our working classes.

JEWISH FRIENDLY SOCIETIES.

THE *Jewish Chronicle* in a recent number publishes the result of a Friendly Societies Conference, held for the purpose of promoting a federation of Jewish friendly societies, to provide members with doctors, medicines, surgical and medical appliances, and a consulting physician. The contributions were to be at the rate of 1s. per quarter, but the doctor was only to be remunerated at the rate of 3s. per annum per member, and he is to guarantee "that his medicines are of the best quality." Mr. Joel Hart, in a letter to the same paper on March 2nd, asks very pertinently "if a doctor's medicines are subject to suspicion when paid at the rate of 4s. per annum, what improvement could be expected when that amount is reduced to 3s.?" and makes some wholesome remarks on "sweating" terms exacted by many friendly societies' contracts. The "consulting physician," it would appear, is to be paid at the rate of only 2s. per annum per member, but he is only to be required to see patients in consultation when requested to do so by one of the other doctors.

As far as can be gathered from the report in our contemporary little that is good can be said for the scheme proposed. The payments to the doctors are on a scale less by 25 per cent. than that paid by most friendly societies, and the proposed appointment of a consulting physician is an absurdity.

LETTERS, COMMUNICATIONS, ETC., have been received from

A H. E. Annett, M.B., Liverpool; Dr. C. MacA. Allan, Longton; Dr. J. A. Armitage, Wolverhampton; Messrs. Arnold and Sons, London; A. D. P.-D.; Dr. T. R. Atkinson, Clifton. **B** Dr. E. M. Brockbank, Manchester; Dr. J. P. z. Busch, London; Dr. W. Bruce, Dingwall; Dr. G. G. Bantock, London; Mr. P. A. Bloxam, London. **C** Dr. W. B. Cheadle, London; Mr. A. J. Coke, London; Dr. F. G. Clemow, London; Capt. R.A.M.C. Cornwall; Mr. R. C. Clarken, Nottingham; Mr. B. F. Clowes, Wotton-under-Edge; Mr. W. R. E. Coles, London; Messrs. Crowley and Bolger, Dublin; Mr. G. W. Chevalier, London. **D** Mr. G. Dalton, London; Dr. J. T. R. Davison, Buenos Aires; Miss L. H. M. Dick, London. **E** Enquirer; Equal Justice; Dr. P. A. Elkins, King's Langley; Dr. G. Ebler, Nottingham; Dr. G. J. Eady, Enfield; Ex-Mayor. **F** G. W. S. Farmer, M.B., Oxford; Dr. P. J. Freyer, London. **G** W. H. Goldie, M.B., London; Gray's; Mr. R. J. Graham, Springfield; J. F. Gemmell, M.B., Liverpool; Miss Gill, London; Mr. J. Gay, London; Mr. C. H. Garland, London. **H** T. H. Haydon, M.B., Marlborough; Mr. A. Holdswell, London; Dr. J. P. Henry, London; Dr. J. Haddon, Denholm; M. Henry, M.B., Belfast; P. J. Henderson, M.B., Galashiels; Mr. J. Hopkins, London; Dr. T. A. Helme, Manchester. **J** Dr. J. S. Jameson, Manningtree; Mr. D. R. Jones, Cardiff; Mr. F. B. Jefferiss, Chatham; Mr. W. Jones-Morris, Portmadoc. **K** Mr. J. N. Kaye, London; Mr. J. Kempster, London. **L** Lux; R. E. Legat, M.B., Cromer; Mr. A. D. H. Leadman, Pocklington; Dr. T. G. Lyon, London; Dr. A. W. W. Lea, Manchester. **M** Member B.M.A.; Messrs. S. Maw, Son, and Thompson, London; M.D., F.R.C.S.I.; Member; Dr. W. Murray, Birmingham; J. P. D. Macara, M.B., Durness; Mr. J. H. Mummery, London; Medical Coroner, C. Martin, M.B., Birmingham; Mr. R. Mansell-Jones, London. **N** North Wales Practitioner; Dr. D. Newman, Glasgow; Mr. P. L. Nicholls, Fulbourn; J. S. Norwell, M.B., Perth. **O** One Who Knows. **P** Mr. G. H. Pearce, Darton; Mr. K. Prentice, London; D'A. Power, M.B., London; Mr. W. C. C. Pakes, London; A. S. Percival, M.B., Newcastle-on-Tyne; Mr. H. C. Phillips, London; Patricius; Dr. R. J. Probyn-Williams, London; Messrs. Parke, Davis and Co., London. **R** Mr. E. J. Read, London; Dr. W. B. Ransom, Nottingham; Dr. R. R. Rentoul, Liverpool; Mr. T. F. Raven, Broadstairs; G. A. Reid, M.B., Southsea. **S** Messrs. Street and Co., London; Scapula; C. G. Stein, M.B., Bournemouth; E. P. Satchell, M.B., Birmingham. **T** G. Turner, M.B., Capetown; Dr. R. S. Thomas, Exmouth; Dr. E. F. Trevelyan, Leeds; Dr. F. S. Toogood, London. **U** Ut Prosim; Up-to-Date. **V** Vendetta. **W** D. S. Waghe, M.B., Manchester; W. S. H.; W. P. B.; Mr. F. H. Wilson, Kappax; Dr. J. T. Wilson, Bothwell; Dr. H. W. Webber, Plymouth. **X** X. etc.

BOOKS, ETC., RECEIVED.

The Disenchantment of Nurse Dorothy. By Florence Baxendale. London: Skeffington and Son. 1900. 2s. 6d.

Outlines of the Comparative Physiology and Morphology of Animals. By Joseph Le Conte. New York: D. Appleton and Co.; and London: Gay and Bird. 1900. 7s. 6d.

The Diagnosis and Treatment of Syphilis. By T. Robinson, M.D. Second Edition. London: J. and A. Churchill. 1900. 3s. 6d.

Der moderne Vegetarianismus. Von F. Hueppe. Berlin: A. Hirschwald. 1900. M 1.

*** In forwarding books the publishers are requested to state the selling price.

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THE LETTSOMIAN LECTURES

BEING

PRACTICAL OBSERVATIONS ON CANCER OF THE BREAST.

[WITH SPECIAL ILLUSTRATIONS.]

Delivered before the Medical Society of London, April 2nd, 1900.

By Sir WILLIAM BANKS, LL.D., F.R.C.S.,
Liverpool.

Lecture III.

The Parasitic and Infective Views of Cancer.

It would be out of place here to enter into a detailed history of the early searchings after truth in this matter, for, however praiseworthy, nothing definite came of them. The first notable step in advance was made by Dr. Russell, of Edinburgh, in 1890. In the British Medical Journal for December of that year will be found a paper by him modestly entitled "A Characteristic Organism of Cancer." Seeing that they were well displayed by staining with fuchsin, he termed them "fuchsin bodies." The attaching of men's names to all sorts of silly little discoveries and operations is much to be deprecated, but so important a move in the right direction might well be commemorated by designating them Russell's bodies. He described them both as intracellular and extracellular, and, what is of much importance, he held them to be blastomycetes, a variety of the saccharomycetes or yeasts.

The general opinion was distinctly against him, but in the *Annals de l'Institut Pasteur for 1890* appeared a paper by Professor Soudakewitch of Kieff, "Parasitisme Intracellulaire des Neoplasies Cancéreuses," describing and figuring bodies obviously very similar to Russell's bodies, and in the same year (*Journal of Pathology*) a very important contribution by Armand Ruffer containing confirmatory evidence. Preparations illustrating both these papers were shown to Metchnikoff, and that distinguished pathologist gave it as his opinion that the bodies were "parasitic protozoa." This at once altered the *venue* from the vegetable to the animal kingdom. In this country the fuller investigation of the parasite has been very ably carried on by Mr. Plimmer, of St. Mary's Hospital. In the so-called Cancer Number of the *Practitioner*, already referred to, will be found a review by him of the whole question up to April, 1899. It is a model of clear unbiassed writing, and the description of the general structure of cancer and methods of examination most admirable.

For a considerable time, my friend and old pupil, Dr. Buchanan, formerly Assistant Demonstrator of Physiology in University College, Liverpool, and now Physician to the Liverpool Consumption Hospital, has been investigating these parasites, and he recently (January, 1900) contributed a paper upon them to the Pathological Section of the Liverpool Medical Institution. I have had the pleasure of going over all his work with him, and I cannot help coming to the conclusion that the bodies described as parasites are bodies *sui generis*—special organisms—and are not degenerations of cell protoplasm or of non-parasitic cell inclusions. It seems as if the almost daily increasing evidence is now too strong to permit of our simply listening to those sceptical persons who merely deny their existence without having ever hunted for them or even seen them. Where these bodies come from, where they go, or what they do, is nothing to the point for the moment. The question is, Do they exist? I have been convinced that they do.

A very reasonable question on the part of the doubter is this: Cannot these said parasites be found in structures other than carcinomata and sarcomata? After Russell's pronouncement, many investigators said that this was so, but, as time has gone on, they have failed so far to prove their case. On the other hand Plimmer's most extensive inquiries have gone all the other way. During the six years preceding 1899 he had examined microscopically 1,278 cancers, taken as they came from many parts and organs and of all possible varieties; out of this number he has found the parasite in 1,130 instances; of the cases in which he failed to find them, 63 were densely fibrous and atrophic, actually in process of spontaneous cure, and 23 were so degenerated that they would not stain. He has examined by his method gummata, typical histoid tumours of all kinds, tuberculous growths, glanders, actinomycotic growths, epithelium which had been artificially irritated, and normal tissues; and never in man, in any instance, has he seen any intracellular or extracellular bodies like the parasitic bodies he describes or which had their reactions.

The opinion of Metchnikoff that the parasitic bodies were protozoa was for awhile the dominant one with probably all investigators. But Russell's view that they were blastomycetes has been revived by two eminent Italian *savants*, whose names are at present in the mouths of all who are interested in the question. One of these is Professor Sanfelice, Director of the Institute of Hygiene in the Royal University of Cagliari, and the other is Professor Roncali, of Rome—the former working largely from the experimental point of view and the latter from the histological. Now, their opinion is distinctly that the parasites are blastomycetes. Plimmer, however, still holds to the protozoal view as the better for provisional acceptance until more is known. It is clear that the question is not a vital one, and that, at all events, it does not in any way hinder the experimental work now going on, and having for its object to prove that these bodies, when separated from the other constituents of a cancerous growth when cultivated and the cultivated products implanted in animals, will be reproduced in these animals and originate cancer in them.

What, then, is the appearance of these parasites? As I have seen them in Dr. Buchanan's sections they are round cells, possessing what would correspond to a central nucleus, a surrounding mass of indefinite protoplasm, and an enveloping cell wall or enclosing capsule of some kind. These general features have been brought out by different investigators in different ways, but the plates published by them show a great uniformity in the general appearance of the parasite.

The method of display pursued by Dr. Buchanan is this. As fixing reagents he used (1) a saturated solution of perchloride of mercury, in 0.75 salt solution, in which the specimen was placed for 24 hours, and then transferred to methylated spirit to which had been added a few drops of saturated solution of iodine in alcohol; (2) bichromate of ammonia; (3) Fleming's solution. As regards staining processes he found the Ehrlich-Biondi triple stain very good, but apt to fade too quickly. Another method: Stain with Ehrlich's acid hæmatoxylin, wash in distilled water, then "blue" in distilled water rendered faintly alkaline with lithium carbonate. Again, another: Stain with saturated aqueous solution of fuchsin S. or carbol fuchsin S., then dehydrate in absolute alcohol strongly tinged with aurantia, clear in clove oil tinged with aurantia, and mount in xylobalsam. The size of the cells is very various. Plimmer reckons them at from 0.004 mm. to 0.04 mm., or even more. I have seen some which have a circumferential row of fine dots disposed just within the capsule, and others in which the nucleus has an appearance of being split up and the portions somewhat twisted. Again, there are some which have most delicate lines, radiating from the centre to the circumference. Some writers have described and figured quite an array of different forms of the parasite, but personally, possibly owing to my want of skill, I have not been able to make sure to myself of more than the varieties mentioned above. As far as regards their mode of reproduction, Plimmer is of opinion that it is by division into two by the process of budding, or the nucleus divides into two while the capsule throws in septa which meet between these two halves, and so divide the parasite into two. Dr. Buchanan thinks they spore, but in his specimens I have not been able either to make sure of anything definite as regards this point. I think Plimmer's immense experience makes his opinion the one to be received at the moment at all events. In a recent interview which I had with him, he most kindly showed me his specimens, and gave me the very beautiful one which I show you to-night. Those of you who may care to turn back to his article in the *Practitioner* will see that Fig. 1, Plate 1, represents this in the most faithful manner.

I also saw specimens identical with Fig. 8, Plate 2, where the nucleus, becoming somewhat oval, had then divided into two.

I would like here to quote some of Dr. Buchanan's conclusions: "By careful comparison I found in these bodies a constant recurrence of definite structure, a beauty and regularity of design marked by stages of enlargement and growth with many evidences of a truly developmental process. Degenerative processes are essentially irregular, with no definite recurrence of form and with no beauty of design. I entertained two ideas:

"1. That if these bodies were truly parasitic from without two conditions were necessary for their entrance into cells: (*a*) either they must be capable of movement constituting change of locality, or (*b*) the (epithelial) cell must be capable of movement sufficient for it to enclose the parasite, or a combination of both conditions at one time.

"2. That, as a cancer is progressive in growth, the parasite must develop *in situ*; if it do not, then, if it be an exciting cause, the growth must eventually cease."

He then goes on to express his opinion that the parasite is capable of movement, and that its appearance in many cases is due to definite change of shape, such as is generally recognised in amœboid cells; that in its young state it enters a cell and there develops, dividing and redividing into a number of spore-like bodies, which may eventually fill and swell the capsule into a cyst, in which the spore bodies lie like a mulberry mass, and the cyst resembles a sporocyst; that these spores eventually find exit from the capsule, probably through a special aperture, whence they infect other cells: that the parasites are probably fertilised to ensure reproduction, although the method has not yet been demonstrated; that they are living entities introduced from without to whom the cancer cell occupies the position of a host.

It has been matter of wonder why, if the parasites are such well-defined bodies, they have not been noticed long ago. But the fact is that on any average tumour they are comparatively few in number and have to be searched for, and, a most important point, they are not to be found in the hard centre of a scirrhous mass at all, but only at the growing edges of a tumour. The centre is largely composed of fibrous tissue and cells in course of degeneration. It is the inactive part of the tumour, where Nature is making an effort at cure. All the vigorous proliferating epithelium is at the margin, and it is only inside active cells that the parasite is found. Then the processes of staining required to display the parasites are very delicate and complicated, and are really only the product of the last few years.

Ignoring, then, the question of whether the parasites are to be considered as yeasts, and to be named blastomycetes, or whether they are protozoa or coccidia, has anything experimental been done with them? I will begin with some recent observations made by my friend, Mr. Keith W. Monsarrat, Assistant Surgeon to the Liverpool Infirmary for Children, in order, if possible, to confirm the observations of Sanfelice, Roncali, and others. Having obtained a fresh cancerous tumour, he made into its outlying parts a series of some twenty or thirty incisions with a sterilised knife. Scrapings were taken from the edges of these incisions and inoculated on glucose-agar. From this subcultures grown on wort-agar and wort-bouillon were employed, and were plentiful after twenty-four hours' incubation at 37° C. From this again guinea-pigs were inoculated by intraperitoneal injection of 1 c.cm. of a culture 48 hours old. They showed no symptoms of illness, and were killed at periods from two to six weeks after the injection. On opening the abdomen the omentum and general peritoneal surface were found to be studded with nodules from the size of a pea to that of a pin's head: to the naked eye nodules were visible in the lungs, liver, spleen, and kidneys. The parasites were found reproduced in the cultivations and in the inoculation growths. Mr. Monsarrat employed the following staining process for them, which he believes very accurately differentiates them and picks them out from surrounding structures. Fix with saturated solution of perchloride of mercury and harden in alcohol; place in acetic carmine for half an hour and then wash in water, followed by two minutes in methyl violet 1 per cent., and two minutes in picric acid 25 per cent., then transfer to clove oil until no more methyl violet will come off. The primary growths on the peritoneum are composed of proliferated endothelial cells. The organisms are present in considerable numbers, some within the cells, but most outside them. This is contrary to what occurs in primary cancers in the human body, where the extracellular parasites are few in number compared with the intracellular. In many of the nodules there is some attempt at the formation of a connective tissue capsule, and in others the central parts are broken down. In the lungs the nodules are made up of endothelial cells; in each nodule there are organisms present, and usually centrally situated. In the liver and spleen the nodules are very similar in appearance to the primary omental growths. The origin of the cells composing them is doubtful. In the kidney, where again the nodules are of endothelial origin, the cells are derived from those lining the Malpighian corpuscles and tubules. In no case was there any alveolar arrangement of the cells or any appearance resembling the endotheliomata of man.

With regard to the cultures, the appearances agreed in the main with those described by Sanfelice and Plimmer. Fresh specimens from them are spherical, from 4 to 10 microm. in diameter, and in most instances take an aniline chromatin stain diffusely.

I think we may regard Mr. Monsarrat's work as quite confirmative of what Mr. Plimmer has detailed with such admirable clearness and precision in the Cancer Number of the *Practitioner*. There his own experiments on the same lines are to be found, and there the fullest directions for staining according to the method which he has found the best, and which produces specimens at once beautiful and convincing. To anyone who wishes to know about the parasites of cancer this article is invaluable. But what has been briefly touched upon in this description regarding the results of the inoculation of animals with the parasite has been far outdone by Sanfelice, who began his researches in 1894, and whose last conclusions were published in 1899. Dr. Russell has written a most admirable summary of Sanfelice's last experiments.[1] If you will allow me, I will give you the barest outline of them. Sanfelice was investigating the characters of blastomycetes, when he found that some of them were pathogenic to animals and caused the growths of tumours in them. He selected a special organism for purposes of experiment, which he denominated the "saccharomyces neoformans." Inoculations of guinea-pigs with it produced a general infection of the animal with the formation of tumours, consisting partly of masses of the parasite and partly of proliferation of the cells of the part. The general microscopic appearance of the new growth seems to have been pretty much what Plimmer has recorded as the result of his experiments, and what Monsarrat has described as produced in his, as we have just noted. Bodies were perceived having the appearance of what the earlier investigators described as coccidia (protozoa), and what Russell had described and regarded as blastomycetes. These bodies as found in the tumours differed somewhat from those in the cultures as regards appearance. He inoculated with pure cultures of the saccharomyces neoformans certain cats, and found typical forms of Russell's bodies in the tissues. To make sure of the matter, he investigated the tissues of normal cats, but no parasites were found in them, although this occurred invariably after the injection of the special blastomyces. The cats, in short, were very susceptible. Cats, by the way, are liable to cancer, although not nearly in the same proportion as geldings. Next, the experimenter proceeded to pass the blastomyces with which he was experimenting through a number of dogs—that is, from dog to dog. In two instances something very specially tending towards malignancy was produced. In one case the dog was inoculated in the two posterior nipples with the blastomyces which had been passed through several dogs. The animal died ten months later with tumours in both teats, showing retraction of the nipples and tacking down of the skin, with secondary growths in the inguinal and abdominal glands. All these showed the type of adeno-carcinoma. In the other case, a dog which was inoculated in both testicles died with adeno-carcinoma of these organs, with secondary growths in the neighbourhood of the penis and glans. If all this be true, it will constitute a remarkable advance in

the history of the parasitic view of cancer, more especially when it is considered that these experiments were conducted with cultures made from an organism obtained from a fruit juice. These he found much more active than the cultures made from cancer. I have seen a microscopic section of a tumour produced after passing a blastomyces through many animals, but I confess I could not recognise in it a typical carcinoma, although it assuredly tended in that direction, and had a certain amount of connective tissue in its composition.

If I were now asked what is the impression produced on my mind by what I have seen and read about the so-called Russell's bodies or cancer parasites, I would put it briefly thus: (1) There is plainly a structure of a definite nature which is found in man at the marginal or growing edges of carcinomata. It is not found in any healthy tissue nor in any other neoplasm except sarcoma. It used to be regarded as a protozoon or coccidium, but most investigators seem now to regard it (as Russell did at first) as a blastomyces which is a form of saccharomyces, reckoned to be a development stage of certain fungi. Most parasites are inside the epithelial cancer cells; some are outside. There is a strong probability that they spread by sporing, although much more knowledge on this point is wanted. How they get into or originate in the human body is not known, and what action, if any, they have upon the epithelial cells has not yet been demonstrated. But, admitting an action, it is doubtless that of an irritant to them, which causes them to proliferate. (2) There is no doubt that from these parasites cultivations in certain media can be made, and that, when such are injected into animals, growths are produced in them, mostly of a fatal character, which contains these parasites. (3) Sanfelice asserts that he can produce the same results in animals by the injection of a blastomyces obtained from a fruit juice. Furthermore, that by passing the parasites through a series of animals a tumour is at length produced which is an adeno-carcinoma. On these points I cannot say anything of my own knowledge beyond what I have said a few sentences back regarding a section of such a tumour which I have seen. (4) That as yet there is no clear and indisputable proof of the infectivity of cancer; that consequently any strong assertions to that effect or any statements that surgeons infect wounds by disseminating cancer products through them during operations, are not justified. That, on the other hand, the possibility of this infectivity must not be sneered at or treated lightly in view of the remarkable information which has been obtained during the last few years concerning the cancer parasite and certain of its attributes. This is not the time for positive assertion. This is the time for patient experiment and the collection of facts.

Operative Procedures in Mammary Cancer.

When I left my medical school in 1862 my recollection of operations for cancer of the breast was that they consisted of local removals of the tumour of the most imperfect description. If any glands were affected, not merely in the case of breast cancer, but in all instances, *ipso facto* that was a sufficient bar to any operation. In 1867 Mr. Moore, of the Middlesex Hospital, whose experience of cancer in that institution was great, wrote what is now an almost historic paper on Inadequate Operations in Cancer, which set a great many minds thinking, inasmuch as it was a revolt against constituted authority. It made me think too, so that I became deeply interested in the question. I hope that in what I am about to say I may not appear to be too self-satisfied with what little share I have been enabled to take in it. But this does seem an opportune occasion for presenting to the medical public a review of the history of the operations for mammary cancer, seeing that the changes that have occurred in a very brief period have been of profound moment, and what has been done only a few years ago seems wonderfully soon forgotten. Well then, during the ten years following Mr. Moore's protest, great progress was made by the persevering and bold manner in which Lister and Bryant and Annandale and Heath and other able surgeons attacked secondary glandular growths, and demonstrated that all that was required for their safe removal was careful, patient dissection. Among English-speaking surgeons Samuel Gross, of Philadelphia, was the next who made a notable move in favour of the free removal of breast cancers,[2] and to him much is due for the earnestness and enthusiasm with which he pushed his cause, as will be remembered by all those who, like myself, had the privilege of being his friend,

My first paper on the subject was read to the Lancashire and Cheshire Branch of the British Medical Association in 1877, and was termed "A Plea for the more free Removal of Cancerous Growths." In it I said "I can point to several cases of hard scirrhus of the breast in which the whole mamma has been removed which have now remained well for years. There is no mystery about this; all that is required is to take the precaution to cut freely through sound textures. But this is exactly what surgeons will not do. I have over and over again watched a surgeon remove a breast, and have seen him make his incisions so as to include a little elliptical bit of skin containing the nipple, after which he would proceed to scoop out the breast so as to get nice flaps, which fell easily together and covered in the wound. He never considered that, in the brawny dotted skin over the tumour were already implanted the germs of the disease, and that the most dangerous thing he could do was to leave plenty of skin; one of the tissues above all others along which cancer cells love to make their way. I can safely affirm that in the great majority of operations for cancer which I have seen—and they are not a few—the cancer has not been removed root and branch. When the tumour has been carefully looked at after the excitement of the operation has been over, there has generally been found some spot where everyone wished that a bit more had been taken away. Not long ago I was looking over some old illuminated manuscripts. Among other pictures of the tortures inflicted upon the faithful there was one in which a horrid wretch was represented with a great crooked knife mangling the body of a devout female. He had slashed off one breast, the former site of which was represented by a great bleeding chasm, while with one hand he was clutching the remaining organ, and with the other was preparing with one sweep to lop it off also. I could not help wishing that I had this picture to hang up in the students' room in our school; not *in terrorem*, but as my idea of what most amputations of the breast ought to be; not a niggling, half-and-half digging out of the tumour, but a radical sweeping away of the whole mamma, skin and all." . . . "I have a very strong notion that it would not be a bad plan when removing a breast always to clear out the axillary glands whether we can feel anything wrong with them or not, and I mean to try it. At present we only remove the glands when we can distinctly feel them enlarged, and that frequently through a great deal of fat and a thick skin. How do we know they are not already infected? And then the patient disappears, and doesn't return till the axilla is full, and the great vessels are so mixed up with the disease that we despair about being able to clear everything out and so leave her alone." . . . "By disabusing the lay mind of the unreasonable dread of operation, the public will come to regard an operation for cancer in the same light as they do an operation for stone or for cataract; a bad job at the best they will say, but still with a prospect of ultimate cure. They will come to us when their cancers are small and request us to remove them, and, if we could only extirpate them freely, what might we not expect? Have you ever imagined what the results would be if all cancers were thoroughly excised when they were no bigger than peas?"

Twenty-three years have elapsed since I said the above words, and I have very little more to say now.

In 1880, three years after the above appeared, Mr. Samuel W. Gross's admirable work on *Tumours of the Mammary Gland* was published. In it occur the following sentences:

"This point demonstrates that the wiser course is to explore the axilla, even if its glands cannot be detected from without. By clearing out that cavity in all operations we may naturally expect to diminish, if not prevent, further local dissemination, and remove foci of general infection."

My next papers were read before the meeting of the British Medical Association in Worcester in August, 1882 (On Free Removal of Mammary Cancer with Extirpation of the Axillary Glands as a Necessary Accompaniment) and to the Liverpool Medical Institution in the same year. They are in purport the same paper. The results of 46 cases were given. May I quote a paragraph or two from it? I said, referring to

my paper written in 1877: "In this paper it was asserted that surgeons do not remove cancers of the breast. After an interval of five years I feel obliged to reassert the statement. Surgeons, as a rule, do not remove cancers of the breast. They persuade their patients that they do, and they almost persuade themselves. But there is always that little bit which they leave behind, and which they fondly hope will not grow because it is such a little bit. Alas! that so little leaven should leaven the whole lump!"....."In the present paper a principal object is to advocate the removal of the axillary glands, as well as the breast, in *all* cases, whether we can feel them enlarged or not—in fact, to make a clearing out of the axilla a necessary part of the operation for removal of the breast. I have been quietly practising this for three or four years, having been driven to the conclusion that it was the right thing to do by discovering that, even in those cases where certain glands could distinctly be felt enlarged, when the axilla was opened small ones were discovered which, although most palpably affected, were quite incapable of being affected from the outside. From this it follows that the usual fumbling in the axilla, which is commonly practised, is all nonsense. When the glands are as big as walnuts any first-year student can tell that they are affected. But what I wish with all earnestness to insist upon is that there is a stage —the early stage—when they are certainly infected, although to the touch, through layers of fat and skin, nothing amiss can be felt. When the dresser at the end of his report upon a case of mammary scirrhus, winds up with the stock phrase, 'Glands in the axilla not affected,' I immediately stop him with, 'How do you know? All that you should say is that you can't feel them, which is a totally different matter.'"

In 1887 I read a paper to the Harveian Society of London, entitled "Extirpation of the Axillary Glands a Necessary Accompaniment of Removal of the Breast for Cancer," with details of 82 cases. I there reiterated the points I have just alluded to, and added some others which had struck me:

"Having cleared out the breast, I do not cut it adrift, but leave it suspended by its upper and outer end. I next open the axilla, and in so doing carry away a continuous mass of tissue upwards from the mamma with the object of including in it all the lymphatic vessels going from the breast to the glands. This is an important step and should never be neglected."....."I have tied the axillary vein at least half a dozen times, and there was not the slightest difference afterwards between these cases and others, so that it seems certain that careful ligature thereof is not in the least a dangerous proceeding. Is it necessary to divide the pectoralis major? Very seldom, I think. I imagine that, out of my 82 recorded cases, it was not done more than 2 or 3 times. If the floor of the axilla has been widely opened, and if the arm is properly drawn up, you can feel with your finger quite well up to the clavicle, and pinch or pull down glands from the very top of the cavity. Dividing the pectoral muscle adds somewhat to the tediousness of the operation, but that is all."

Seeing that my paper, although urging the employment of a much more extensive operation than that usually performed, did nevertheless seem to prove that greater immunity from recurrent disease was obtained thereby, I had hoped to have received some little encouragement from the London surgeons present at the meeting. Exactly the reverse was the case. In the *International Journal of the Medical Sciences* (1888) is a most important paper by Mr. Samuel Cross, in which he said: "In the remarks on Banks's paper at the Harveian Society in the spring of 1887, in which that surgeon reported 82 cases of extirpation of the breast along with the axillary contents, Bryant and Butlin questioned whether the complete operation afforded better results than the incomplete; and Butlin, Pick, and Cripps held that clearing out the axilla in every case was neither necessary nor judicious, although Pick asserted that the skin should be freely removed. Owen was the only member who gave cordial support to the procedure urged by Banks, the prevailing opinion being that the operation was attended with an excessive mortality, and did not lessen the risk of recurrence." Mr. Thomas Smith, by the way, thought that the patients lived longest who had never been operated upon, and that it was a question for consideration whether a local excretion of cancer did not render patients less liable to constitutional disease. I returned to Liverpool very much downcast after this meeting, but I am glad to think that after thirteen years Mr. Edmund Owen and I are here to-night to rejoice in the complete triumph of the principles for which we contended on the night of March 3rd, 1887.

MR BUTLIN'S VIEWS.

"Before I enter on the discussion of this question let me say that no personal feeling exists between myself and those who hold the doctrine of extensive operation, and that, if I speak at any time warmly on the points under discussion, it is because the subject is one in which I take the warmest interest and on which I hold very decided opinions. I entertain a great respect for both Dr. Gross and Mr. Banks, and only mention their names as the distinguished leaders of a school of surgery from which I venture to disagree." Mr. Butlin was good enough to make these very kind remarks in 1887, and I would like here entirely to reciprocate them. After this very generous introduction, however, he made some criticisms, which I am sure he will forgive me reproducing here, along with some remarks made in 1881 and 1898.

1881. From the Transactions of the International Medical Congress.—Mr. Butlin said that he quite agreed with Dr. Gross that in the case of any tumour of suspicious character the sooner it was removed and the more freely it was removed the greater were the prospects of complete recovery; and, further, he agreed thoroughly with Dr Gross that in the case of carcinomatous tumours it was highly desirable to extend the operation so as to examine the axilla if there were any doubtful fulness, even though no definite enlargement of the glands could be detected.

1887. From the Operative Surgery of Malignant Disease.—Mr. Butlin wrote that no prolonged search need be made for the lymphatic vessels lying between the breast and the axillary glands. If there were not any distinct cords to be felt running up into the axilla, it was not necessary to search for the lines of lymphatic vessels or to remove a large quantity of the fat and other tissues in order to ensure their removal. Referring to Gross and Banks, these surgeons were in the habit of cutting off the mamma with all the skin which covers it, dissecting off the fascia from the pectoral muscle, searching for outlying lobules of the gland in the surrounding tissues, carrying the incision into the axilla, whether enlarged glands were previously felt there or not, and clearing out the glands and all easily removable structures. Both surgeons were impressed with the absolute necessity of very extensive operations if the patient was to be afforded a reasonable chance of complete recovery from the disease. Both surgeons had pushed this teaching so far that it had already gained many adherents, although he believed rather among foreign than among English surgeons. Indeed he was surprised to find how strong an opinion was expressed against it by some of the English operating surgeons at a recent meeting of the Harveian Society in the discussion of a paper by Mr. Banks. As he entirely disapproved of this wholesale way of treating cancers of the breast, and believed it to be unscientific and needlessly cruel to many women, he would venture to criticise it as thoroughly as he could. The operation recommended by Banks was not such an operation as that which was frequently practised in London and provincial hospitals, but was much more sweeping, for it included the whole of the skin over the breast, and not merely over the tumour. In fact the breast was, so to speak, lopped off as if the operation had been performed with a sword or a carving knife. Now, he quite admitted that, if the entire breast was to be removed in every instance of cancer, the operation should be of this sweeping character. But he was strongly of opinion that the practice of removing the whole of the breast in every case was theoretically and practically wrong. Probably a long time and much false reasoning were required to induce the acceptance of the doctrine of the necessity of the removal of the mamma for cancers of small size limited to a part of it; and he was afraid a still longer time and much good reasoning would be required to convince surgeons that the practice was radically wrong. So far as the removal of the glands was concerned, by all means let them be removed when they can be felt enlarged and to be within reach of removal, and in cases in which there was a doubtful fulness which was not apparent on the other side. But let no theoretical considera-

tions lead them further than this, and on no account let the axilla be opened in search of diseased glands of the existence of which there was not the least outward or palpable sign. In reply to all the arguments he had brought forward, Mr. Banks had at his command a very strong answer—namely, his results. He quite admitted—and with very great pleasure admitted—that, so far as his later results were concerned, they were the best he had ever seen from operations performed with the knife. The superiority of these statistics may be accounted for, not by the fact that the entire breast was removed in every instance, but because Mr. Banks was in the habit of sweeping away the disease itself and the surrounding textures in a fashion at which most operators would be horrified.

1898.—In the number of the British Medical Journal for November 26th, 1898, Mr. Butlin wrote that he had read Professor Halsted's paper on the Results of Operations for the Cure of Cancer of the Breast (1894), and his results appeared to him to justify a thorough reconsideration of the subject of the operative surgery of cancer of the breast. This operation was suggested by a paper in *Langenbeck's Archiv* (1889) on the Causes of Local Recurrence of Cancer after Amputation, by Dr. Heidenhain, and he had studied it along with a paper on the Surgical Anatomy of the Breast and Lymphatic Glands, reprinted from the *Edinburgh Medical Journal* (1892), which the author, Mr. Harold Stiles, had been so kind as to send to him. Both authors had come to the conclusion, from a general and microscopical examination of a number of breasts which had been removed, that cancer of the breast rapidly extends back towards and then into the pectoral fascia, even when there appears to the naked eye to be a considerable interval between the posterior border of the tumour, and that the pectoral fascia is often very difficult to separate satisfactorily from the surface of the muscle. Looking back on his own clinical experience, in order to see how far it seemed to be consistent with the investigations of Heidenhain and Stiles, he could quickly remember several cases in which recurrence had taken place in the substance of the pectoral muscle, after the removal of a cancer which appeared to be quite separate from the pectoral fascia, and even after the fascia had been roughly dissected off. (Then followed a long description of Halsted's operation, with Mr. Butlin's expressions of belief in its value.)

Now, if any gentleman will take the trouble to turn up Mr. Butlin's work on *The Operative Surgery of Malignant Disease*, he will find that the last chapter is devoted very largely to three things: (1) A subdued admiration of a certain Dr. Bougard, of Brussels, who used caustic paste for the destruction of cancerous mammæ as well as of the axillary glands down to the vicinity of the main vessels and nerves; (2) an advocacy of the mere removal of malignant tumours of the breast and nothing more, seeing that the evidence for the removal of the entire breast was only very partially true; and (3) a very sharp attack upon the doctrines then being promulgated by Dr. Gross and myself. Dr. Gross presently wrote these words, "Had so good a pathologist as Butlin been in possession of the facts derived from my practice and that of Kuester, he would scarcely have given utterance to so pernicious a doctrine—a doctrine which, we fear, will so influence English surgeons as to counteract in great measure the recent advances that have been made in the treatment of carcinoma of the breast."

For myself I offer no criticism. I have merely quoted the *ipsissima verba* of Mr. Butlin in 1881, 1887, and 1898, and leave them to the consideration of the surgical profession.

Halsted's and other Operations.

In the British Medical Journal of December 8th, 1898, is a very full description of Halsted's operation. It contains fifteen paragraphs, with very minute details, down to the grasping of the tumour with the left hand, and the scrupulous dissection of the axilla with "the sharpest possible knife." The only points of any fundamental importance in which it differs from the operation ascribed by Mr. Butlin to myself (just quoted) consist in the removal of the sternal portion of the pectoralis major and the division of the pectoralis minor with reflection of that muscle. This is described as necessary for the complete removal of the glands in the axilla. I desire entirely to dissent from this view. I do not believe it necessary, still less that the entire pectoralis major need be removed as is now Dr. Halsted's present contention. If the arm be properly manipulated and the great pectoral wall dragged upwards and inwards, the very topmost point of the axilla can be cleaned out. Moreover, if there is any doubt at all, the great pectoral muscle can be cut across with very little trouble, and then stitched together with catgut sutures, as I have every now and then done. In the *Transactions* of the American Surgical Association Dr. Halsted relates that he now almost invariably cleans out the supraclavicular region, and that our rule ought to be, "Operate on the neck in every case." For this purpose, however, he does not divide the clavicle as he did five or six years ago: but if it were very desirable to remove the supraclavicular contents in one piece with the axillary contents and breast, one need not hesitate to excise, if necessary, even the entire clavicle. He considers the neck involvement is no more serious than the axillary, and that the neck can be cleaned out just as thoroughly as the axillary region. He believes that in the near future we shall remove the mediastinal contents at some of our primary operations. It seems a pity he did not throw in the liver and lungs when he was at it.

With every wish to defer to the opinions of those from whom I differ, I feel sure that they will permit me to state my views as plainly as many of them have stated theirs. Some little apology I may plead, namely, that I have removed the breast and cleaned out the axilla over 250 times. It is a locality with which I am necessarily fairly familiar. Well, I have stated that I do not consider that carrying away the entire great pectoral muscle and dividing the small ones are at all necessary for the satisfactory removal of the axillary contents. Moreover, I have given up attempting to get any good out of clearing out the supraclavicular region. In former days, when I thought I could remove any cancer, I did a good many cases, but never one survived. I do not say I will not do it again if an apparently suitable case occurs. I did it twelve months ago on a lady who had a small cancer situated about an inch below the clavicle, which had directly affected the cervical glands, but it was a failure as usual. Dr. Coley, in the article Cancer, in *Twentieth Century Practice of Medicine*, says: "The only positive evidence Halsted's statistics afford us as to the value of this operation of cleaning out the supraclavicular fossa rests upon two cases in which the operation was done secondarily, and in which the patients remained well three and three and a-half years after the operation. In view of what I have already said regarding the failure of a three-year limit as establishing a cure of the disease, we cannot consider the question as settled with much stronger evidence." *Natürlich!* My notion is this, that when cancer has laid hold of the supraclavicular glands it has got such a grip as to be past extirpation. It is like a burning house. When the fire is beginning even some buckets of water will put it out; when it has got to a certain pitch a whole fire brigade will not quench it. Moreover, an experienced fireman will tell you the minute he sees the fire whether he can put it out or not. Bennett May, in his Ingleby Lectures for 1897, says that he thinks it very doubtful whether some of these modern extensive operative procedures confer any additional immunity from recurrence at all commensurate with their severity. It is clear that in both classes of operation the majority of fatal cases die of internal metastasis without external recurrence, and against these no operation can protect. Dr. Matas, of New Orleans, at a meeting of the American Surgical Association in 1898 said, speaking of Halsted and Meyer's operations, that he firmly believed that surgery had there nearly reached, if it had not already attained, its maximum expression of effectiveness, beyond which it is absolutely impossible to advance without great risk to life, or with any further expectation of increasing the chances of permanent recovery. I entirely agree with Mr. Marmaduke Sheild when he says that the swing of the pendulum of surgical opinion is generally too extreme, and has now turned from too slight to too extensive operating.

One word more in reference to removing the great pectoral muscle. Do cancerous recurrences take place in the substance of that muscle? Are they found in the interval between the great and small pectoral muscles? Taking the latter query first, I have never seen such an occurrence. Referring to the first, I believe that when the great pectoral muscle is the site of recurrent growths they creep into it from

the subcutaneous tissues and pectoral fascia. They do not primarily originate in the muscle. There is, therefore, no need for its removal on that ground. No man in this country has had more experience of the pathology of cancer than Mr. Plimmer, from his connection as pathologist to the cancer Hospital. In a conversation with him the other day he perfectly concurred in this view, and, moreover, stated that he had never known anybody live long after distinct invasion of the supraclavicular glands.

I think I need say very little concerning the operation of Berger, which means removing the upper limb along with the scapula. It may be dismissed with the remark I once heard made by my friend Mr. Owen, about another matter slightly altered from the French Marshal's observation about Balaclava: "*C'est magnifique mais ce n'est pas la chirurgie.*" Surely there are hypodermic syringes and morphine still in the land.

In the operations, the statistics of which I am about to present to you, my plan has been this: I never make an angular, triangular, or multiangular incision, for they are a farce. I draw a circular "ring fence" with a knife outside the apparent limits of the mamma if the tumour is central, and, if it is lateral, the "ring fence" should bulge well beyond the tumour. I then slip the blade on the flat beneath the skin for about 2 inches, and undercut it all round. This skin is then well pulled back at successive points by an assistant, and where the undercutting stops there the removal begins. So one gets a long way beyond the rough limits of the mamma proper. Then the tumour is removed, and the fascia dissected off the great pectoral muscle. The great advantage of the undercutting is that one can get the fascia off the muscle as far inwards as the sternum, down to the ribs and up almost to the clavicle. As Mr. Butlin mentions, the removal of the fascia was one of the points dwelt upon by Dr Gross and myself very many years ago. The axilla should then be opened by an incision just under the edge of the great pectoral and the upper end of the gland and the whole contents of this cavity, as far as they can be held together, carried away in one mass. The importance of this lies in the fact that recurrence in the axilla takes place for the most part not in glands that are left behind but in fragments of lymphatic vessels. I feel convinced of that. A good plan is to get hold soon of the axillary vein, and then there is nothing else to trouble about. One must take the matter very patiently, getting everything out of the cavity that can be got, and cleaning up the digitations of the serratus magnus. On no account do I introduce the "sharpest possible knife" into the armpit, nor any knife at all. I use a dissecting tool, two very long strong pairs of dissecting forceps, and curved probe-pointed scissors. But everybody according to his taste, except beginners, who ought not to use knives here.

A drain hole should now be made just above the edge of the latissimus dorsi. Concerning the covering in of the great wound, it is remarkable what can be done towards pulling it together by very strong wire and by the help of lead buttons. The very top of the axillary incision should be kept open. I put a little bit of gauze into this aperture and into the drain hole below. I wash my hands well with hot water and soap before operating. I pour hot water constantly over the wound during the operation, and see that it is dry from blood at the end. I use no disinfectant fluids, and I dress the wound with a piece of perchloride gauze and a pad of absorbent wood wool over it. I have used this plan of operating for over twenty years, and have only altered it slightly in the following points: After reading my paper to the Harveian Society in 1887, so soon as I had recovered from my first discouragement, I proceeded to remove more skin than ever, for I became more and more convinced that skin is the really dangerous tissue in this matter of cancer of the breast. Thiersch grafting was not then invented, and so I had great difficulty in covering the big wounds. It was then that I began the practice of undercutting, which I have demonstrated and taught ever since. If a wound of great size is left uncovered nowadays, we have the Thiersching to fall back upon. I have used it both at the time of operation, and afterwards when granulation was going on, and I prefer the latter plan.

The accompanying photograph shows the result of the operation just described. The patient was a small woman, the carcinoma about the size of a walnut, and the affected glands few in number and not big. It was, therefore, a proceeding of quite moderate dimensions. Just as I finished a sudden thought struck me to have it photographed. My house-surgeon, Dr. Arkle, ran to his room for his camera, and took a rapid picture. If it is not very successful the flurry of doing it in much haste must account for that, nevertheless it will give an idea of what I regard as the "complete" operation in opposition to the "redundant" variety. This lady was up and walking about on the twelfth day with the wound entirely healed without a drop of suppuration and without a degree of rise in temperature.



A view is now being taught that there is great danger of infecting the wound with the knife that has made the exploratory incision through the tumours. I have seen no evidence whatever to this effect, and the extreme difficulty of getting the strongest cancer juice to reproduce anything in any cultivation medium is not in favour of it. If the operator is afraid of such a contingency let him wash his knife.

Before leaving this subject I wish to make a few remarks, and I find great difficulty in making them, so much do I fear lest what I may say should be regarded in any way as derogatory to the talents of two gentlemen for whom I have a very great admiration—Dr. Heidenhain and Mr. Stiles. In 1887 Mr. Butlin said with reference to mammary operations: "It was only during the writing of this book that I became impressed with the necessity for reconsideration of the subject." In 1898, in consequence of having read Dr. Halsted's paper, the results "appeared to me to justify a thorough reconsideration of the surgery of cancer of the breast." In this he was fortified by the work of Heidenhain and Stiles. Now, the researches of these gentlemen on the minute lymphatics of the breast and neighbouring tissues and the way cancer creeps into them are of the greatest interest from an anatomical point of view.

But I do not see that they have done anything very specially to influence the views of men who are occupied practically in endeavouring to eradicate mammary cancer. Dr. Coley says: "Still later, in 1889, Heidenhain, by his very careful and scientific investigation as to the manner in which cancer cells extended from the original focus of the disease into the neighbouring parts demonstrated the facts, many of which Moore and Gross had already from clinical observations previously assumed as true. The gist of Heidenhain's results may be summed up in a few words. A cancerous tumour that has become sufficiently large to be recognised clinically has

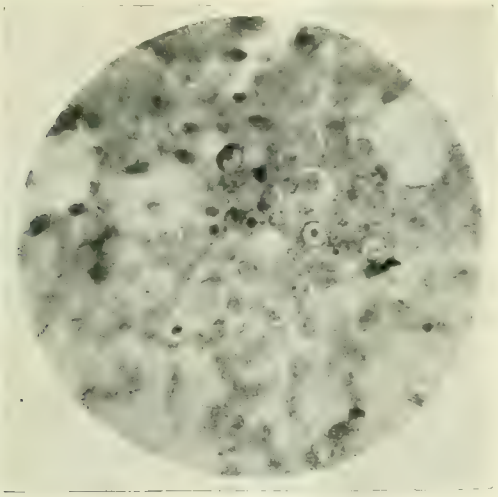


Fig. 1.—Parasites in a mammary carcinoma; two in centre well defined. × 375. Reichert $\frac{1}{12}$ oil immersion. Dr. R. J. M. Buchanan.

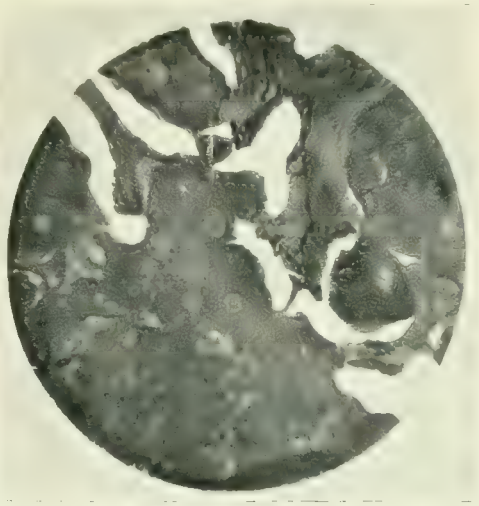


Fig. 2.—Parasites in an axillary gland secondary to mammary carcinoma. × 375. Reichert $\frac{1}{12}$ oil immersion. Dr. R. J. M. Buchanan.

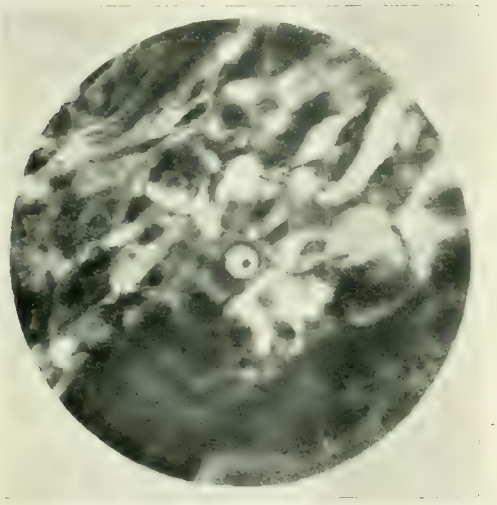


Fig. 3.—A single well-defined parasite from infiltrated skin over a mammary carcinoma. × 375. Reichert $\frac{1}{12}$ oil immersion. Dr. R. J. M. Buchanan.

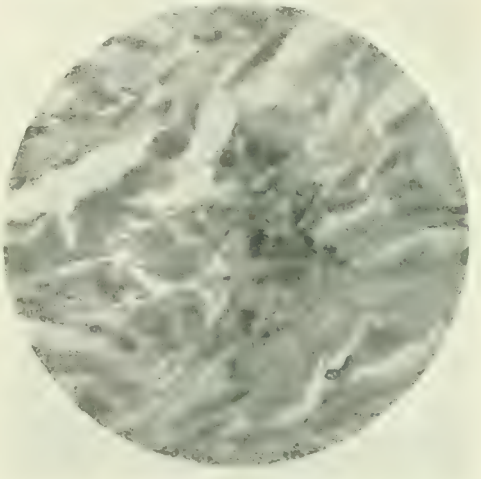


Fig. 4.—Group of parasites in a mammary carcinoma. × 350. Mr. Keith W. Monsarrat.

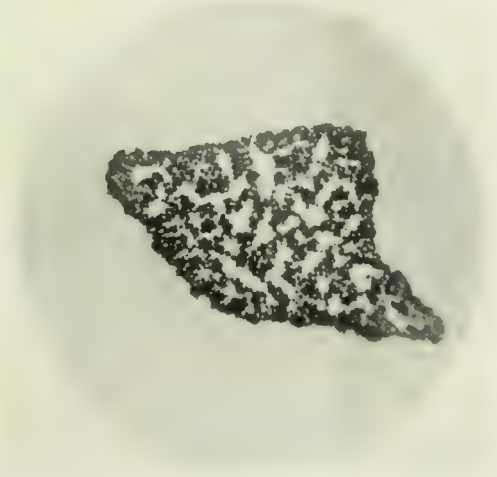


Fig. 5.—Coverslip preparation of parasites cultivated on artificial media from a mammary carcinoma. × 75. Low power. Mr. Keith W. Monsarrat.



Fig. 6.—Lung of guinea-pig showing parasites, the result of the inoculation of cultivation, Fig. 5. × 350. Mr. Keith W. Monsarrat

already scattered its infective cells throughout the entire breast, the neighbouring chain of glands and in many instances the fascia overlying the pectoral muscle." Quite so, but there was no surgeon in 1889 who did know this as a matter of fact, although it had not actually been demonstrated by the microscope. It was not that surgeons did not know his—it was that they were not bold enough to act on their knowledge. In justice to myself, and to the memory of my late friend Gross, I think it rather hard that a certain group of surgeons should date the origin of the modern operative treatment of cancer from the microscopic researches of Heidenhain and Stiles, and the labours of Halsted and themselves.

TABLE OF STATISTICS.

Cases in which the Disease Proved Fatal by Local Recurrence.

Series 1.—(a) Cases which lived between 1 and 3 years.

	Name.	Age.	Duration of Life. Y.	M.	Name.	Age.	Duration of Life. Y.	M.	Name.	Age.	Duration of Life. Y.	M.
1	Mary N.	(?)		5	18 Julia K.	46		1	34 Ann O.	44	1	9
2	Miss B.	50		6	19 Mrs. L'E.	60	1	1	35 Jane C.	56	2	0
3	Eliz. P.	50		6	20 Miss M.	41	1	1	36 Mary A. M.	45	2	0
4	Rachel K.	61		6	21 Amy H.	35	1	2	37 Annie T.	44	2	0
5	Mrs. C.	50		8	22 Mrs. G.	45	1	3	38 Jane R.	39	2	0
6	Miss S.	46		9	23 Miss B.	55	1	2	39 Margaret J.	53	2	0
7	Eliz M.	47		9	24 Mrs. H.	55	1	2	40 Eliz. P.	52	2	0
8	Miss B.	54		10	25 Ann H.	42	1	4	41 Miss W.	56	2	0
9	Mrs. H.	35		10	26 Mrs. C.	40	1	4	42 Miss L.	36	2	2
10	Mrs. V. W.	(?)		10	27 Mary W.	45	1	6	43 Mrs. F.	42	2	1
11	Han. R. B.	41		11	28 Eliz. G.	40	1	4	44 Ann W.	54	2	3
12	Mary A. K.	33	1	0	29 Jane H.	48	1	6	45 Jane H.	49	2	4
13	Anna Mc.	39	1	0	30 Mrs. A.	52	1	6	46 Jane H.	38	2	6
14	Eliz. C. C.	41	1	0	31 Mrs. B.	(?)	1	8	47 Ann W.	54	2	6
15	Mrs. K.	(?)	1	0	32 Janet J.	46	1	8	48 Miss S.	40	2	6
16	Eliz. D.	58	1	0	33 Margaret O.	46	1	8	49 Mrs. M.	50	2	6
17	E. H.	67	1	0								

Series 1.—(b) Cases which lived between 3 and 14 years.

50	Eliz. R.	40	3	0	56 Mrs. W.	(?)	4	0	62 Mrs. T.	48	5	0
51	Cath. H.	52	3	2	57 Mrs. M. J.	43	4	0	63 Mrs. T.	34	5	7
52	Mrs. F.	43	3	3	58 Mary J. T.	47	4	0	64 Mary A.	67	5	7
53	Eliz C.	48	3	5	59 Marg W.	46	4	2	65 Mary M.	36	7	3
54	Jane T.	50	3	6	60 Mrs. F.	57	4	5	66 Mary S.	50	12	0
55	Mary C.	48	3	3	61 Jane B.	50	4	6	67 Mary D.	40	14	0

Series 2.—Cases alive and remaining free from disease.

(*a*) From 1 to 3 years.

	Name.	Age.	Duration of Life. Y.	M.	Name.	Age.	Duration of Life. Y.	M.	Name.	Age.	Duration of Life. Y.	M.
1	Mrs. C. M.	40	1	5	5 Miss R.	54	1	10	9 Annie R.	53	2	5
2	Margt. B.	49	1	6	6 Mrs. S.	56	2	0	10 Miss C.	56	2	6
3	Mrs. T.	39	1	8	7 Amelia H.	58	2	4				
4	Miss T.	(?)	1	10	8 Jane E.	57	2	5				

(*b*) From 3 to 21 years.

11	Mrs. E.	56	3	0	24 Mrs. G.	50	5	6	37 Eliza J.	69	10	11
12	Miss S.	45	3	0	25 Kate B.	52	6	0	38 Miss R.	62	10	0
13	Miss D.	24	3	0	26 Mrs. C.	45	6	4	39 Miss C.	40	10	3
14	Martha H.	46	3	0	27 H. W.	68	5	4	40 Mrs. T.	55	11	0
15	Miss A. J.	45	3	1	28 Mrs. F.	47	7	0	41 Margt. F.	41	12	7
16	Annie V.	42	3	3	29 Louisa B.	43	7	0	42 Mrs. B.	46	14	11
17	Mary M.	38	3	6	30 Margt. B.	50	7	2	43 Miss R.	52	14	3
18	Mrs. S.	34	3	5	31 Louisa S.	55	7	6	44 C. R.	53	14	6
19	Mrs. B.	50	4	4	32 Mrs. B.	51	8	0	45 Mrs. R.	50	14	10
20	Mrs. L.	50	4	10	33 Margt. C.	(?)	8	0	46 Miss M.	44	16	2
21	Mrs. L.	62	4	3	34 Margt. S.	63	8	2	47 Mrs. M.	42	17	10
22	Mrs. W.	54	5	0	35 Sarah C.	64	8	5	48 Maria R.	49	21	
23	Cthrn. S.	31	5	5	36 Miss H.	39	8	6				

Series 3.—Cases where the patient died without local or general return as far as known.

	Name.	Age.	Duration of Life.	Cause of Death.
1	Martha K.	48	2 months	Died in asylum—mania (?).
2	Mary W.	56	1 year, 4 months	Acute pleurisy.
3	Alice Ann D.	37	1 year	Heart Disease.
4	Margaret J.	36	1 ,,	Childbirth.
5	Mrs L.	43	1 ,,	Acute meningitis.
6	Ellen W.	41	1 year, 6 months	Some nerve disease.
7	Mrs. A B.	49	1 ,, 8 ,,	Acute pneumonia.
8	Mrs. F.	45	1 ,, 10 ,,	Sudden coma and collapse.
9	Margaret B.	62	1 ,, 9 ,,	(?)
10	Marjory G.	32	2 years	(?)
11	Margaret C.	46	2 years, 6 months	Bronchitis and heart disease.
12	Mrs. C.	57	2 ,, 11 ,,	Pneumonia.
13	Mrs. B.	(?)	2 ,, 6 ,,	Acute tuberculous phthisis (doctor's report).
14	Anna C.	56	2 ,, 8 ,,	Liver cirrhosis.
15	Mrs. A.	48	2 ,, 7 ,,	Phthisis and hæmoptysis.
16	Elizabeth M.	54	3 years	(?)
17	Mrs. W.	38	3 years, 8 months	Diabetes.
18	Barbara McG.	50	3 ,, 9 ,,	Acute bronchitis.
19	Mary J.	(?)	3 ,, 8 ,,	Do.
20	Eliza M.	42	4 years	Some cerebral disease.
21	Margaret H.	63	4 ,,	Renal and general debility.
22	Miss C.	61	5 years, 6 months	"No secondary cancer" (doctor's report).
23	Elizabeth W.	55	5 ,, 6 ,,	M (?)
24	Mary L.	43	6 years	Pneumonia.
25	Miss A.	(?)	8 ,,	Apoplexy.
26	Ann J.	49	8 years, 2 months	(?)
27	Mrs. L.	56	9 years	Heart disease.
28	Agnes R. M.	48	9 years, 3 months	Apoplexy.
29	Miss T.	50	16 years	Influenza.
30	Mrs. W.	53	18 ,,	"Weak heart" at 71.

Series 4.—Cases with no local but general recurrence.

	Name.	Age.	Duration of Life.	Sites and Causes of Recurrence.
1	Mary B.	49	3 months	Liver
2	Jane S.	26	8 ,,	Lung
3	Mrs. H.	42	1 year	Cancerous pleurisy
4	Caroline O'B.	50	1 ,, 2 months	Pelvic organs
5	Jane C.	42	1 ,, 2 ,,	Humerus
6	Edith T.	40	1 ,, 4 ,,	Liver
7	Mrs. G.	53	1 ,, 6 ,,	Lung
8	Annie H.	42	2 years	Stomach—probably cancer
9	Mrs. L.	61	2 ,, 1 month	Spinal column
10	Sarah P.	35	2 ,, 6 months	Lung
11	Mrs. E.	40	3 ,,	Lung—probably cancer
12	Mrs. B.	49	3 ,,	Stomach
13	Jane C.	51	3 ,, 1 month	Rectum
14	Mrs. B.	(?)	3 ,, 10 months	Uterus
15	Miss B.	56	3 ,, 10 ,,	Lung
16	Elizabeth J.	(?)	4 ,,	Uterus and rectum
17	Barbara G.	40	4 ,,	Lung—probably cancer
18	Mrs. E.	(?)	4 ,,	Lung
19	Mrs B.	33	4 ,,	Rectum
20	Mrs. J.	62	4 ,, 10 months	Cæcum
21	Mrs. J.	52	5 ,,	Rectum
22	Mrs. R.	52	5 ,,	Œsophageal disease (?)
23	Margaret C.	(?)	5 ,, 6 ,,	"Relapse"
24	Miss R.	48	5 ,, 2 ,,	Lung
25	Mary W.	67	7 ,,	Lung
26	Mrs. W.	49	7 ,, 2 ,,	Stomach and pleura
27	Mrs. F.	(?)	7 ,, 4 ,,	Liver and rectum
28	Mrs. E.	46	10 ,, 6 ,,	Ovary
29	Mrs. H.	58	10 ,, 6 ,,	Liver
30	Mrs. Anne J.	38	14 ,,	Stomach—probably cancer.

Series 5.—Imperfect cases in which it was found impossible to remove the whole disease at the time of operation.

	Name.	Age.	Duration of Life.
1	Esther G.	52	6 months
2	Ann H.	36	7 ,,
3	M. A. C.	51	7 ,,
4	Martha L.	42	1 year, 1 month
5	Sarah R.	51	1 year, 6 months
6	Fanny P.	49	4 months
7	Ann D.	54	2 years

Series 6.—Cases done under 1 year and about which nothing can as yet be said.

Sixteen cases have been operated upon during the past year successfully.

Series 7.—Cases which recovered from operation but cannot be traced.

These numbered 15, of whom 1 was alive after 2 years 10 months, another after 2 years 6 months, and a third after 8 months.

Series 8.—Cases operated upon during 1896, 1897, 1898, 1899 and three months of 1900.

1896.			
1.	Miss S.	...	March
2.	Mrs. E.	...	January
3.	Mrs. S.	...	November
4.	Mrs. H.	...	October
5.	Mrs. R.	...	November
6.	E. G.	...	August
7.	B. W.	...	April
8.	J. McG.	...	February
9.	M. H.	...	October
10.	C. Ob.	...	August
11.	M. M.	...	October
12.	A. V.	...	December
13.	J. C.	...	March
14.	J. K.	...	December

1897.			
15.	Miss B.	...	April
16.	Miss C.	...	December
17.	Miss E.	...	March
18.	Miss S.	...	April
19	Miss D.	...	May
20.	A. R.	...	October
21.	J. K.	...	January
22.	A. V.	...	February
23.	J. E.	...	November
24.	A. H.	...	September
25.	E. T.	...	November
26.	M. W.	...	January
27.	M. H.	...	May
28.	A. J.	...	March
29.	A. W.	...	June
30.	A. H.	...	November

1898.			
31.	Mrs. T.	...	June
32.	Miss W.	...	November
33.	M. N.	...	November
34.	Miss T.	...	June
35.	Miss R.	...	June
36.	Miss S.	...	March
37.	A. McC.	...	April
38.	M. B.	...	September
39.	C. M.	...	October
40.	J. K.	...	December
41.	H. W.	...	March.

1899.			
42.	Miss C.	...	December
43.	Mrs. D.	...	April
44.	Mrs. D.	...	March
45.	Mrs. E.	...	October
46.	Mrs. C.	...	March
47.	Mrs. H.	...	January
48.	Mrs. F.	...	October
49.	Mrs. B.	...	January
50.	Mrs. H.	...	November
51.	R. K.	...	August
52.	M. S.	...	April
53.	M. B.	...	April
54.	A. H.	...	June
55.	M. D.	...	July
56.	E. C.	...	June
57.	A. McN.	...	April

1900.			
58.	Mrs. L.	...	March
59.	Mrs. P.	...	March
60.	Mrs. F.	...	January

Among these 60 cases there was no fatal one.

The above table of statistics speaks for itself. I am sorr that during the removal from our old Liverpool Infirmary to the present one the histories of many cases were lost. But what I have laid before you have been collected with as much care and accuracy as I could give to the matter. Mistakes there may be, but I am certain that they cannot be sufficiently numerous to invalidate in any way any general conclusions that may be drawn from the table. The cases number 213, of which 175 are available for statistical comparison. In Series I it is noteworthy that of the 67 persons who died of local recurrence 17 lived for periods between 3 and 13 years. Series II shows 38 persons alive and well between 3 and 21 years after operation. To Series III it may be objected that I cannot prove that some of the patients did not die from internal recurrence. It is a fair argument, and all I can reply is that I have taken all the pains I could to make sure of the causes of death, and have put any doubtful ones into Series IV. But, after all, if a breast cancer seems a fit subject for removal we do not speculate on internal recurrence, for our business as surgeons is to find out whether we can eradicate the disease locally, so that we may be able to give patients who apply early for relief a good prospect of future immunity. Now, the first four series comprise 175 patients and of these 108 have remained free from local recurrence. Of the 108 there have lived 73 over three years as follows:

Cases that lived between 3 and 6 years after operation ...	40
Cases that lived between 7 and 14 years after operation ...	28
Cases that lived between 16 and 21 years after operation ...	5

Take from these 73 cases half-a-dozen in case or errors, and still it follows that for every one of my 67 failures I can pit against it a case when the patient remained free from 3 to 21 years. With regard to tables of statistics in general the plan of taking percentages of small numbers of cases ought to be abolished. The figures in a surgical article nowadays make it look like an extract from an accountant's report on a bankruptcy case. As for the three years' cure system it, too, must be abolished if people are to be instructed fairly. Let no woman be reckoned cured of cancer of the breast till she is dead.

And now, gentlemen, I have only to thank you for the patient courtesy with which you have listened to my poor attempts in a line of surgery to which I have devoted the best efforts of my life during the past quarter of a century.

REFERENCES.
[1] *Lancet*, April 29th, 1899. [2] *Tumours of the Breast*, 1880.

THE LUMLEIAN LECTURES
ON
SOME CIRRHOSES OF THE LIVER.

Delivered before the Royal College of Physicians

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[ABSTRACT.]

LECTURE II.
GENERAL CONSIDERATIONS WITH REGARD TO THE FORMS OF CIRRHOSIS.

CARDIAC DEGENERATION: FIBROSIS OF OTHER ORGANS.

THERE are certain points connected with the pathology of these different forms of cirrhosis which deserve a passing consideration.

Degeneration of Heart Muscle.—Degeneration of cardiac muscle and cardiac failure are of course acknowledged results of chronic alcoholism, and their importance in that relation has been emphasised by Dr. Graham Steele,[1] but the frequency of such degeneration and failure in connection with cirrhosis, its pathological significance, and its bearing upon prognosis have, I think, been insufficiently appreciated.

Of the 53 fatal cases mentioned, the condition of the heart was especially noted in 36.

In 6 of these fatty degeneration, in some instances extreme, was verified by microscopic examination; active myocarditis was observed in 1, and in 8 others the muscle was found pale, soft, and presumably fatty. In 9 more there was atheroma of one or other of the cardiac valves.

There was, therefore, marked degeneration of heart muscle in 8, and in less degree in 9 more, or 17 in all, out of 36, without counting the cases (9 more) in which atheroma of the valves only was recorded.

Of the 17 cases of fatty degeneration, the liver was enlarged in 11 instances, in 6 it was small and contracted. So that the tendency to degeneration is not limited either to the large or the small liver. In 13 the cirrhosis was distinctly traced to alcohol.

The frequent occurrence of serious degeneration of the cardiac muscle accounts for the fact that a certain proportion of these cases end suddenly in death by syncope, many more by rapid, if not sudden, heart failure. In the 53 fatal cases mentioned the patient died suddenly from syncope (not the result of hæmorrhage) in six instances. As I shall endeavour to show later, it is probable that the enfeebled cardiac condition may sometimes be the factor which determines the advent of ascites in alcoholic cirrhosis, and also be concerned in the development of the fibrotic change and influence its character.

Concurrent Interstitial Fibrosis of Other Organs.—In cases of cirrhosis—or at all events of alcoholic cirrhosis—the interstitial fibrosis is not confined to the liver, although its most extreme development may be found there, and very largely rule the pathological situation.

The kidneys suffer next to the liver in order. They were found to be distinctly affected in 26 of the 53 cases. In 5 instances the kidneys were granular, "moderately cirrhosed" or "fibrosed" in 13, in 5 they are described as "fibrosed" simply, in 3 there was parenchymatous nephritis. Again, in 12 of these cases in which the liver was markedly atrophic and small there was fibrotic change in the kidney in every instance, but in 5 only was the interstitial change advanced. In the remaining 7 it was extremely slight.

The spleen was enlarged in 23 instances, 11 of these being in atrophic, 12 in hypertrophic cases, and its condition was noted as fibrosed in 6.

The pancreas has only been systematically examined in a few of the recent cases, namely, in 14. It is described as cirrhosed in 3 instances, extremely hard or firmer than natural in 10; in the remaining case, which was one in which neither alcohol nor syphilis could be traced, the organ was large and soft. In 7 of the 14 cases alcoholism was established: in 2 syphilis; in the remaining 5 the cause was not stated.

This association of cirrhosis of the pancreas with cirrhosis of the liver is of interest in connection with Hanot's[2] observation that hypertrophic cirrhosis was an occasional complication of diabetes; and also the association of fibrosis and atrophy of the pancreas with diabetes independently. In the cases to which reference is here made the fibrosis of the pancreas was not limited to those cirrhoses of the liver in which that organ was enlarged, although these were in the majority, namely, 9 as compared with 5 of the atrophic form. In no case did diabetes occur, nor did sugar appear in the urine; but it is obvious that such a condition of pancreatic degeneration must seriously affect nutrition and be a factor in the wasting which attends hepatic cirrhosis.

Liability to Erysipelas.—These records also show that persons suffering from cirrhosis, vulnerable in so many respects, suffer from a special liability to erysipelas beyond that common to all chronic exhaustive diseases. Dr. Dreschfeld has remarked that erysipelas is not uncommon in Hanot's disease—but there is no exclusive association with biliary cirrhosis, or indeed with hypertrophic cirrhosis as compared with the atrophic kind.

In the 53 fatal cases of the last ten years death occurred from facial erysipelas in 3.

In two other instances of a previous period the fatal issue was due to the same cause—or 5 cases in all.

Of these the liver was enlarged in 3—two of which were syphilitic, one alcoholic. In the remaining 2 the liver was contracted and hobnailed, and the affection of alcoholic origin.

Liability to Tuberculosis.—The close association of tuberculosis with cirrhosis of the liver is well known, and marks again the vulnerability of these subjects of degenerated tissues. It is due chiefly, I imagine, to the proved influence of alcohol in this respect.[3]

RIGID CLASSIFICATION OF CASES IMPOSSIBLE.

The evidence which I have adduced in the first lecture supports, I think, the opinion which I ventured to express at the outset, namely, that the lines of demarcation between some of the different forms have been too rigidly drawn. They hold good with regard to typical examples only. Take, for instance, the mere question of size and weight. No strict line can be drawn between hypertrophic and atrophic forms, at any rate so far as alcoholic cirrhosis is concerned. The conclusion arrived at by Dr. Foxwell that all sizes, from 100 ozs. to 30 ozs., are met with, is more than borne out by my series of cases, in which all sizes from 152 ozs. to 18 ozs. are found. And thus with regard to other symptoms, there are many cases in which the symptoms agree in some respects with those attributed to

one form, in other respects with those attributed to another form. In our conceptions of disease we look for a strict separation into classes, and the expectation of close conformity to given types is apt to warp our intelligence.

It is thus with reference to cirrhoses; they are met with in typical forms, but occur also in various degrees of modification between them. We assume one factor to be alone engaged and expect each case to correspond to the authorised description. Yet the acknowledged causes—alcohol, syphilis, malaria—are just those which, although they may usually act alone, and produce simple results, are, from the very nature of things, liable to be associated: to act together in varying degree upon the same subjects, and produce results more or less complex. In these instances the effect of the relative influences at work is not easily estimated. Then there is the fallacy of negative classification. If no alcoholic history is traced the case is called non-alcoholic. If no history of syphilis—non-syphilitic. The fallacy of this with regard to syphilis I have shown, and that it exists largely with regard to alcohol we all know well.

Occasionally—as in certain cases of cirrhosis in children—no adequate cause can be discovered. And there are other cases again which differ from all recognised forms, and from any combination of the characters of the acknowledged varieties.

Prognosis.

The prognosis in cirrhosis varies according to the particular form in which it appears and the conditions associated with it. Yet, as set forth by authority in books of medicine, it is almost universally and absolutely unfavourable. Thierfelder speaking of cirrhosis generally, says: "In the cases which have been accurately diagnosticated the termination is without exception death." Frerichs, Niemeyer, Murchison spoke in like fashion, and more recent authorities are almost equally pessimistic.

This unfavourable verdict, more positive than the actual facts seem to me to warrant, has, I think, arisen partly from the use of the generic term "cirrhosis," when the condition really intended to be indicated, is *one* form of the disease only—the atrophic contracted liver of Laennec—and thus the occurrence of ascites, so significant of evil in that condition, has been assumed to be equally serious in hypertrophic or syphilitic cirrhosis, where its import is less grave.

Cirrhosis is, of course, incurable—fibrous tissue is a permanent formation—but it is in itself harmless; it injures only by pressure, and it may exist within certain limits for long without fatal issue. In some degree of it the glandular structure of the liver is not so extensively injured as to render life impossible, and if the obstruction to the direct portal flow is eased by compensatory channels, fair health may be maintained for a season. Cases are recorded where the patient has been known to survive for many years.

Cirrhosis is not a disease of rapid development, but of slow and gradual progress. It may advance silently and steadily for years before its presence is discovered. The liver is frequently found indurated to an extreme degree, and usually enlarged in persons who have died from other causes, without the patient having been known to suffer from any marked symptoms of such affection during life. Dr. Fagge[4] noted that the average age of such persons, thus found accidentally to have been suffering from cirrhosis without discovery, was five years in excess of the average age of those who died directly of the disease. This would seem to show that the disease is often quiescent before reaching its final stage. The elaborate statistics of Dr. Rolleston and Dr. Fenton[6] give, however, somewhat different results, and make the patients with latent cirrhosis slightly younger than those who die of the disease.

Further, as the existence of cirrhosis is commonly betrayed by the supervention of ascites, the estimation of its future course is only made towards the extreme end of it. If the disease could be recognised earlier, the prognosis would be in corresponding degree less immediately unfavourable.

The prognosis in cirrhosis is, however, almost invariably made with regard to the advent of ascites, and turns upon this symptom. The observation of Dr. Bristowe[6] in 1892 that most medical men of that time regarded the development of ascites in connection with liver disease as of fatal omen, or at any rate as "the beginning of the end," still I believe holds true. Yet some masters in medicine have expressed more hopeful views. Dr. Roberts[7] and Dr. Austin Flint[8] have shown that the supervention of ascites is not necessarily a sentence of immediate death, and adduced a series of cases in proof of it.

It is not disputed, I think, that occasionally the course of cirrhosis, even after ascites has supervened, is in some cases prolonged for months, and in a few rare instances for a considerable number of years. Hitherto, however, as far as I know, no satisfactory discrimination of the conditions in which a favourable issue may be regarded as possible has been established.

The first point to lay down is that when the cirrhosis is of the atrophic contracted kind traceable to alcoholic excess, the prognosis is the least favourable. If ascites has supervened, as is usually the case when the diagnosis is made, it probably indicates that the disease has reached its final stage. Much, however, depends upon the condition of general nutrition. In proportion as this is satisfactory, the prognosis is more hopeful of respite. If emaciation and cachexia have advanced, the condition is one of proximate gravity.

In my notes I find a number of cases of atrophic cirrhosis in which life has been prolonged for considerable periods after the first appearance of ascites, and there is evidence from other sources as to the occasional prolongation of life in atrophic cirrhosis for a considerable period after the betrayal of its existence by the occurrence of dropsy.

In the hypertrophic form, however, the prognosis is less gloomy. In the majority of cases the disease progresses to a fatal ending, but far less certainly and, as I have seen it, less rapidly than in the contracted form. As I pointed out in 1892,[9] it is the large liver which gives promise of recovery. Curiously enough, however, according to Dr. Rolleston and Dr. Fenton's[10] statistics, and those of Dr. Pitt,[11] patients with enlarged livers who die are younger than patients who die with contracted livers. There is, however, no incompatibility between the two statements. The patients with enlarged livers are younger than those with contracted liver; if they die, they die younger probably. This does not, however, affect the question whether more of these recover, or prove that, although they die younger, on the average some do not run a more protracted course. Again, the cirrhosis of the enlarged liver is said to be more acute—and this I believe is so, as I shall show later—but this is only in its development; its after-course may be prolonged.

In some instance, no doubt, the estimation of the size of the liver during life is liable to error. A contracted liver, displaced downwards, may be mistaken for actual enlargement, especially in the case of women, and when ascites is present. A large liver, on the contrary, may be mistaken during life for a small contracted one when it is bound by adhesions to the diaphragm and tucked under it. Each of these cases has happened once within my knowledge, and once only I think. In all other cases which have ended fatally, and the condition of the liver has been verified by *post-mortem* examination, the diagnosis of enlargement or contraction has proved to be correct. Be this how it may, however, the cases which do well are, to put it broadly, those in which the liver, apparently large, exposes a flat, hard surface to the abdominal front, extending far below the edge of the ribs, and sometimes down to the umbilicus.

In speaking of recovery in cirrhosis, I may repeat, it is not suggested that the impossible feat of removing the fibrosis is accomplished, but that changes are effected in the general condition, so that the disease does not progress. The effects of ascitic pressure for instance are removed. In alcoholic disease the stimulation of the growth of interstitial tissue is arrested; in syphilis, gummata are reduced, and the formation of fibrous tissue from them cut short; the peritonitis subdued. In this way a condition of stable equilibrium is established compatible with the maintenance of life.

In three cases of recovery from alcoholic cirrhosis with ascites recorded by Murchison, the liver was enlarged. In another attributed to mitral disease of the heart the liver was enlarged. In one of the four cases observed by Dr. Bristowe the liver was greatly enlarged. In two cases recorded by Dr. Dickinson,[12] in which recovery took place after extreme ascites developed, and in one of which the diagnosis was veri-

fied on death from cerebral abscess two years afterwards, the liver was described as hypertrophic. In eleven other cases which I have culled from various authorities, in which recovery is stated to have taken place, and the patient to have regained apparent health for periods varying from one year to eighteen years, the liver was stated to be enlarged in six, contracted in one, and the condition was not stated in four.

This fact of the more favourable prognosis in cirrhosis when the liver is enlarged was recognised by Hanot and Gilbert [1] who, writing of alcoholic cirrhosis, affirmed that the hypertrophic form was the most curable, and that all the most successful cases they had seen were of this type.

In my address at the annual meeting of the British Medical Association in 1892 I enumerated 8 cases of hepatic ascites in which relief of the ascites and restoration of general health took place. To these cases of recovery, temporary or prolonged, I may add 3 more, making 11 in all. These are exclusive of those instances in which there was mere relief of symptoms sufficient to permit of discharge from hospital, or private cases which were not traced afterwards. Of these 11 cases the liver was greatly enlarged in 7, considerably enlarged in 1, slightly enlarged in 2, and in 1 the condition of the liver was not ascertained.

If I add to these cases 24 others in which relief was such as to warrant discharge from hospital, or in private cases cessation of attendance, there are 30 in which recovery, either temporary or prolonged, resulted. I may remark with regard to the St. Mary's cases, that they were not merely tapped and discharged at once, but kept in for considerable periods and recovery was maintained. Of these 30 the liver was markedly enlarged in 19 cases, normal or slightly enlarged in 3, smaller than normal in 5, and in the remaining 3 the condition was not ascertained. So that here again, in nearly two-thirds of the cases in which good was effected by treatment the liver was enlarged. One salient feature of the cases which are capable of relief or recovery, then, is that the liver is enlarged.

The next question that offers itself is whether any of these were cases of genuine alcoholic cirrhosis, or are they merely instances of syphilic fibrosis? A certain proportion of cases of cirrhosis with enlargement which recover are undoubtedly syphilitic, having a history or marks of syphilis, or yielding to antisyphilitic treatment More often, however, in syphilitic fibrosis contraction proceeds together with gummatous formation, and no great enlargement takes place. It must, however, be borne in mind, as I have said before, that there is a close social relation between alcohol and syphilis, and that in some instances both these factors may be engaged. Further, in certain instances — as I know by grievous mistakes in diagnosis—syphilis exists when there is no history of it to be obtained, where there is nothing in the physical character of the liver as far as can be ascertained during life to suggest it. As I urged before there may be no history of syphilitic infection, no irregularity of surface, no enlargement or marked contraction, and yet the condition is syphilitic. There is, however, sometimes, as in the instance already mentioned, extensive persistent or recurrent perihepatitis, which in the absence of distinct renal disease, is in itself suggestive of syphilitic origin, and its occurrence should always arouse suspicion. Apart from these cases, however, of syphilitic, or mixed syphilitic and alcoholic hypertrophic cirrhosis, there are, as has been shown already, instances in which the disease is purely alcoholic in origin. These also are to be included amongst the cases of hypertrophic cirrhosis which now and again recover. Syphilitic cases, it is generally allowed, occasionally recover. A certain proportion of cases of hypertrophic cirrhosis also in which no cause except alcoholic stimulation can be traced, in which syphilitic remedies are useless and even harmful, from time to time recover sufficiently to enjoy apparent health for years. Three cases recorded by Murchison were alcoholic in origin. In 6 cases of hypertrophic cirrhosis under my care, which recovered for long periods, 4 were judged to be purely alcoholic, 1 alcoholic (and probably syphilitic also), and 1 syphilitic (and probably also alcoholic).

Another condition in addition to the hypertrophic enlargement which marks the cases promising recovery is the state of general nutrition. The patients who recover are, as a rule, comparatively healthy in appearance, not emaciated, not cachectic. The significance of this lies, of course, in the evidence it affords of the efficiency of the vital functions the liver. It shows that sufficient gland structure remain intact to serve the purpose of nutrition. In some cases o syphilitic affection which get well the cachectic state may be marked. In the pure alcoholic cases, however, all the patients who have recovered within my personal knowledge have been in fair condition generally, not cachectic or greatly emaciated.

Another feature of the cases which are of more favourable prognosis is that they are, as a rule, younger than those which end fatally. Of the 11 cases of recovery which I adduced I omit 5 in which the further history was less perfectly traced. In the 6 others the later career was ascertained for periods ranging from 6 months to 11½ years. The average age is just over 39 (39.5). In 31 cases of recovery recorded by others the average age is, curiously enough, almost exactly the same—just under 39.

Further, in the enlarged liver we find a texture tough and hard, but not that leathery hardness and toughness of the contracted form; there is nowhere any tendency to contraction, unless it be a little drawing in of the surface at interlobular points, giving the appearance of slight granulation.

Microscopically the connective tissue development is as a rule in a more active stage than in the atrophic form, the fibrosis more diffuse and finer, and cell proliferation is conspicuous. This sign of an active process appears to prevail chiefly in hypertrophied forms, and suggests a more acute condition than the mature fibrosis of the contracted form, which bears evidence of a more chronic and advanced development. Possibly in some instances of early atrophic cirrhosis nuclear growth may be present; in cases however which progress to a final stage, and death comes directly from the liver affection, the contrast between the two conditions of fibrous change is generally distinctly marked. Dr. Price,[14] as the result of his investigation of 143 cases of cirrhosis, came to the same conclusion—that the large cirrhotic livers represent a more acute form of the disease than do the small. If these conclusions are confirmed, I think that some of these cases of hypertrophic alcoholic cirrhosis in younger subjects might be termed acute cirrhosis, set up by more acute and extreme drinking, as contracted with the cirrhosis of older persons, whose steady and protracted, but less intense drinking, spread over many years, produces a more dense and mature fibrosis with greater destruction of secreting tissue.

To sum up: the distinctive feature of the favourable cases are:

1. The liver is large, the cirrhosis probably more acute.
2. The subjects are on the average younger than in the less favourable cases of contracted liver.
3. They are in a condition of fairly good nutrition.
4. They are as a rule either exceptionally hard drinkers, acute drinkers, or they are syphilitic.

It may be asked with regard to these cases of apparent recovery in syphilitic and alcoholic cirrhosis as shown by subsidence of ascites and recovery of general health, how far this remained permanent?

There is nothing more difficult, as every hospital physician knows, than to trace out cases to their conclusion. Leaving aside all which have been lost sight of quickly, I have been able to follow out the history in six instances for periods varying from one to twelve years, two to my knowledge surviving to this day; others I have observed for less, although for considerable periods, at the close of which the recovery remained unimpaired.

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[1] *Med. Chronicle*, vol. xviii, 1893. [2] Hanot and Chauffard, *Revue de Médecine*, 1882. [3] Dickinson, *Med.-Chir. Trans.*, vol. lvi, 1873. [4] *Principles and Pract of Med.*, 3rd ed., vol. ii, p. 370. [5] *Birmingham Med. Rev.*, October, 1896. [6] British Medical Journal, April 23rd 1892. [7] *Practitioner*, 1872. [8] British Medical Journal, 1883. [9] British Medical Journal, November 19th, 1892. [10] *Birmingham Med. Rev.*, October, 1896. [11] *Pathol. Trans.*, vol. xi. [12] *Allbutt's System of Medicine*, p. 692, vol. v. [13] *Arch. Gén. de Méd.*, 1890, vol. 166, p. 250. [14] *Guy's Hosp. Reports*, Series III, vol. xxvii.

A Novel Professorship of Hygiene.—An unnamed benefactor has given 156,000 dollars to found a professorship of hygiene in the University of Harvard. The foundation is of a somewhat novel character, as the chair is not intended to be one of public but personal hygiene, and the holder is to be the personal adviser of the undergraduates. The professor is, in fact, to be in a hygienic sense the ghostly father of his pupils.

THE GOULSTONIAN LECTURES
ON
THE TYPHOID BACILLUS AND TYPHOID FEVER.

Delivered before the Royal College of Physicians of London,

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[Abstracts.]

[The introductory portion of the first lecture consisted of a historical account of the differentiation effected by Sir William Jenner between typhoid fever and typhus fever, and the recognition of the typhoid bacilli by Eberth. The lecturer then proceeded to discuss the methods which should be employed in identifying the typhoid bacillus. He laid especial stress on the serum test when performed in dilutions of at least 1 in 1,000, but pointed out that positive results obtained with lower dilutions could not be relied upon. He then proceeded to ask:]

Are we justified in saying that a bacillus which is only slightly sensitive to a strong typhoid serum is therefore not the typhoid bacillus, even though in all other respects it may resemble the latter? In other words, are all typhoid bacilli agglutinated by a given serum to an exactly equal extent? In the opinion of most observers this is the case, but Van de Velde,[1] from observations on twenty different typhoid stocks, found very considerable variations in the clumping power. The following observations also show that using 18-hour broth cultures, as is now the usual practice, marked variations in the clumping power manifested by different typhoid bacilli do exist. In these experiments typhoid serums of different typhoid clumping power were tested against the laboratory standard typhoid bacillus, and also against typhoid bacilli isolated from stools, urine, mesenteric glands, and spleen—bacilli which, be it remembered, were found to resemble the typhoid bacillus in all respects both morphologically and culturally. As a result it was found that their clumping powers differed most materially, some refusing to clump at all, others agglutinating with ease.

If broth cultures be used, typhoid bacilli often differ markedly among themselves in the ease with which they are affected by the typhoid agglutinins. With cultures on solid media, however, the case is different. Thus it is not uncommon to find that while a broth culture of a given typhoid bacillus cannot be agglutinated at all, the agar culture of the same bacillus may be easily and rapidly clumped by the very serum which failed with the broth culture. This extraordinary difference I have noticed in the case of six typhoid bacilli, isolated from different patients (and in a seventh case a similar result was obtained on using a gelatine culture), so that it cannot really be rare. It is possible, too, that it should be associated with a fact observed by Kraus,[2] who showed that if broth cultures of the typhoid bacillus be incubated for some days, and be then filtered, the filtrate gave rise, on the addition of typhoid serum, to a precipitate closely resembling in appearance that produced by agglutinated micro-organisms. The reaction was specific, and only occurred when typhoid serum was added. It may be that the constituent of the bacillary body, on which the agglutinins act, and which thus seems normally to pass into the surrounding liquid, may in some cases diffuse much more easily, and even after twenty-four hours be no longer present in the bacilli themselves. We should thus have an easy explanation of the absence of the reaction in the broth-grown bacilli, and its presence in those obtained from solid media. Be this as it may, the obvious moral to be drawn from the fact is that in testing the agglutinable qualities of a suspected bacillus, cultures on solid media should always be used, and especially therefore agar cultures.

So far, too, though my experiments are not numerous enough for me to speak with certainty, I have not noticed more than slight differences in agglutinable capacity between different typhoid bacilli, provided agar cultures be compared.

Pfeiffer's Test.—Should, however, a bacillus be discovered which culturally or morphologically resembles the typhoid bacillus in all respects, and which yet agglutinates but feebly or not at all, then one further test must be applied to it—namely, Pfeiffer's test. This consists in injecting into the peritoneum of a guinea-pig a 10-times fatal dose of the bacillus in question, together with a very small quantity (0.001 c.cm. may be quite sufficient) of typhoid serum from a highly-immunised animal. If the bacillus in question be the typhoid bacillus, then while a control animal injected only with the bacillus will die this animal will recover, the bacilli being converted first into granular masses (Pfeiffer's phenomenon) and then gradually disappearing under the influence of the lysogenic properties of the serum. Such a serum, however, is specific, and can therefore only protect, in minute doses, against the corresponding micro-organism. If, therefore, the bacillus in question be not the typhoid bacillus, but some variety of bacillus coli, the animal will infallibly die like the control animal. This test is of the highest importance, for if properly performed a positive result is infallible. The test should always be applied in any case in which there can be doubt as to the nature of the micro-organism. If for example, a bacillus which should fail to agglutinate nevertheless should react like the typhoid bacillus to this test, then we must accept it as the latter.

[In regard to the typhoid bacillus as a saprophyte, the lecturer remarked that we must allow that so far there was no proof that the typhoid bacilli could multiply outside the human body. Two points respecting the toxins of the typhoid bacillus were emphasised, one that the toxins of that bacillus are for the most part contained within the bacillus itself, and are chiefly set free when the latter is destroyed; and the other that the toxin is a very feeble one as compared with those of certain other micro-organisms, and that to explain the symptoms of typhoid fever the number of bacilli present in the body should be very large, so that sufficient toxin may be formed. The lecturer recounted the evidence which went to prove that typhoid fever could be communicated to animals by means of the typhoid bacillus. The situations of the body in which the bacillus may be found were shown to be the mesenteric glands and spleen, the Peyer's patches, the liver, including the bile, the bone marrow, the kidney, the lung, and certain other glands, and in the blood. He continued:]

The reason why the bacilli are not found in greater numbers in the blood during life probably depends on the fact that in ordinary cases the blood is an extremely bad medium for their growth. Indeed, owing to its bactericidal power, it is likely that such bacilli as do not succeed in finding shelter in some viscus are rapidly destroyed. This would not occur to the same extent in fatal cases (perforation and similar cases being excluded), for often it is owing to such patients failing to acquire this power that a fatal termination ensues, and on this fact doubtless in part depends the greater ease with which the bacilli can be demonstrated in the blood after death. We may believe, therefore, as indeed we should expect from the distribution of the bacillus in the body, that the micro-organisms pass into the blood in all cases of typhoid fever. They are, however, rapidly eliminated from it into the various organs or destroyed. In rarer cases, on the contrary, probably always fatal, when the blood fails to acquire bactericidal properties, the typhoid bacilli may develop therein, and be found after death in considerable numbers.

The Typhoid Eruption.

It is obvious from the facts brought forward that typhoid fever is far from being merely an intestinal disease. Bearing this in mind, it will be interesting to consider the relation of the bacilli to the "spots"—the roseolous eruption characteristic of the illness.

The early observers for the most part were unable to demonstrate the presence of the bacilli in this lesion. Thus Wiltschur,[3] Seitz,[4] Curschmann,[5] Merkel and Goldschmidt,[6] and others in their numerous experiments all obtained negative results, while Rutimeyer[7] obtained one positive result in six observations. In the light of these results the statement of Neuhaus,[8] made as long ago as 1886, that he had obtained nine positive results in 15 cases, was generally received with incredulity. It may be said, therefore, that until quite recently the received opinion was that the spots in typhoid fever were not due to a local growth of the typhoid bacilli, but were more probably due to the absorption of the typhoid toxins into the general circulation.

Observers, however, were not entirely satisfied and continued working at the subject. In 1895 Thiemich[9] reported that he had found the bacilli in the spots in three cases out of seven, while early in 1899 appeared the important paper by Neufeld,[10] which apparently explained the discrepancies between the results of various observers. Neufeld argued that if the bacilli really were the cause it was evident they were only able to obtain their foothold in the skin and subcutaneous tissue for a very short time, otherwise the spots themselves would not be so fleeting; hence

to find them spots should be examined quite early in their development. Secondly, to eliminate as far as possible the bactericidal power of the blood itself, which would come in contact with the bacilli as soon as the spot was opened, he advocated the use of liquid culture media (broth) in order to dilute the blood and so diminish this source of error. The value of these suggestions was shown by his results. He examined the spots in 14 cases, and in 13 he obtained a positive result. His methods of testing the bacilli obtained were it may be stated, admirable. These results were confirmed in November of last year by Curschmann[11] of Leipzig. Following Neufeld's methods he examined the spots in 20 cases, and in 14 he was able to demonstrate the typhoid bacilli, certain of his negative results also being evidently due to his having in some cases chosen spots already beginning to fade. Lastly, within the last few weeks, Richardson[12] of Boston, an extremely careful observer, reports similar successful results, the bacilli being isolated from the spots on an average six days before the Widal reaction was obtained. It should be added, however, that the number of typhoid bacilli in each individual spot must be very small, for though many observers have endeavoured to demonstrate them microscopically therein, they have never yet succeeded (Ernst[13] and Neufeld[14]).

There would seem, then, to be hardly any doubt whatever that the rose spots are truly specific in nature and are the result of the direct presence of the typhoid bacillus.

THE EXCRETIONS.

There are four excretions which have been described as infectious with more or less frequency—the sweat, the expectoration, the fæces, and the urine. At present there is no evidence to show that the bacilli do occur in the sweat, but we should always look upon the expectoration in the case of typhoid fever, if there be any, as a possible means of spreading the disease, and should take measures accordingly.

There can be now no reasonable doubt that in the first and second weeks of typhoid fever the stools are highly infectious. At later periods of the disease, however, and also during convalescence, if care be taken to obtain fæces uncontaminated with urine, it is extremely difficult to isolate the micro-organism. Thus Jemma,[15] Richardson,[16] and Lazarus[17] all found great difficulty at this stage, and my own observations bear out their results. Thus out of 20 observations made during the later periods of the disease, sloughs being actually present in the stools in some instances, in one only was a positive result obtained, and in this case a relapse very shortly followed, though in the three cases in which the examinations were made before the seventeenth day in each the typhoid bacilli were demonstrated at the second attempt.

The specific micro-organism then can be demonstrated in the stools if care be taken during the first and second and early part of the third week of the disease, and possibly during the early part of the relapse. Later it cannot be demonstrated by our present methods. It follows, therefore, that the fæces are highly infectious at the commencement of the disease, and that later they become much less dangerous. How soon they become absolutely innocuous cannot be stated, but we must be prepared for the possibility of their remaining in some cases a source of danger for long periods after the patient is apparently well—as long, that is to say, as the bile continues to harbour the parasite.

The urine is the other great secretion by means of which typhoid fever is spread, or, as I believe myself, the chief means. Unlike the fæces, the urine only becomes dangerous in 1 out of every 4 cases of the disease, also as a rule it is towards the end of the disease or during convalescence that this condition occurs. While it is always difficult to find the typhoid bacilli in the stools, in the urine it is always easy, for when they occur they are nearly always in pure culture, and not uncommonly they are present in such extraordinary numbers that 1 c.cm. may contain as many as 500 000,000 micro-organisms.

[In conclusion, the lecturer considered how the facts adduced bore upon our conception of typhoid fever, and proceeded:]

Any conception of this disease which regards it merely as affecting the alimentary canal only can no longer be maintained. On the contrary, so far from considering it as an intestinal disease pure and simple, we should rather look upon it as a modified form of septicæmia. It is septicæmia in that always and in all cases the bacilli pass into the blood and then into the various organs, and in that the symptoms, excepting as far as they are intestinal, are referable to the poisons there produced. It is a modified form, however, in that in nearly all cases there is a definite local and primary disease whence the secondary dissemination of the micro-organism takes place.

Looked at in this way we have a ready explanation of the fact that the severity of the disease bears no relation to the number and character of the intestinal lesions. For just as a fatal septicæmia may originate in a scratch, so one or two small typhoidal ulcers may be quite sufficient to allow the entry of the micro-organism and the development of the disease.

[The second lecture commenced with a discussion of the relation of relapses of the disease to the typhoid bacilli on the one hand, and to autointoxication by the toxins of non-specific organisms on the other. Reference was then made to the occurrence of typhoid fever without intestinal lesions, and the lecturer proceeded as follows:]

In this connection an important fact strikes one on reading the records of the *post-mortem* examinations. It is that, though in all cases the intestine is described as being quite natural, yet in nearly all we find that the mesenteric glands were affected, being for the most part enlarged, swollen, and reddened, very much indeed as we find them in ordinary cases of typhoid fever. This would seem to suggest strongly that in these cases also the bacilli commonly enter the body through the intestine, passing, however, directly through the intestinal wall into the lymphatic glands, where they germinate and whence they become generalised as usual. The passage of micro-organisms through an apparently intact mucous membrane would seem to be by no means an uncommon event, the common presence of tubercle bacilli in the bronchial glands being a well-known example in point.

There would seem, then, to be the strongest evidence in favour of the view that sometimes, though rarely, the typhoid bacillus may pass into the blood and become generalised in the organs, just as occurs in ordinary typhoid fever, but without first causing any intestinal disease, even though, as is probable, the bacilli enter through the intestinal tract.

TYPHOID FEVER IN THE FŒTUS.

It is interesting to notice that a very similar form of the disease is by no means uncommon in the fœtus. Indeed, fœtal typhoid fever of the primary septicæmic type is a frequent, though by no means the only, cause of the abortion which so commonly occurs during the disease. Experimentally it was shown many years ago by Chantemesse and Widal[18] that the placenta formed no bar to the typhoid bacillus, and at the present time a considerable number of cases are on record in which the micro-organism has been found in the human fœtus. One of the most interesting of these is the following, observed by Dr. Andrewes, in the case of a fœtus from a woman suffering from typhoid fever, who aborted in the fourth month during the epidemic at King's Lynn. The typhoid bacillus in this instance was found in pure culture in the heart's blood and also in the spleen. Morphologically (including flagella) and culturally in all respects it resembled the typhoid bacillus, while its agglutinable qualities were so marked that for a time it was used as the laboratory standard culture.

It should be noted, too, that in these cases, though the bacillus may be found in the blood and in many of the internal organs, the intestine is always natural (Etienne,[19] Freund and Lévy,[20] and Janiszewski[21]), and this indeed is what we might expect, seeing that the bacilli having broken through the placental barrier pass directly into the circulating blood without coming first in contact with the alimentary canal. Typhoid fever, then, in the fœtus is an example of a primary typhoid septicæmia.

[Evidence was then adduced to show that as in the lower animals, so in man, a local disease such as cystitis might be set up by the typhoid bacilli without producing a general infection. The question of the complications of typhoid fever was then discussed, and an analysis of the results of 300 cases which had occurred at St. Bartholomew's Hospital during the past thirty years was brought forward and commented upon. It was shown that while meningitis and neuritis were probably due to the typhoid bacilli, and that arteritis was possibly so, lobar pneumonia, laryngeal ulceration, and phlebitis occurring in typhoid fever were probably not specific; that, although the presence of nephritis in typhoid fever was no certain indication of the presence of typhoid bacilli in the kidney, yet, as evidence was advanced to show, the nephritis was sometimes directly due to the specific bacilli. The lecturer then passed on to the subject of]

Typhoid Bacilluria and Cystitis.

In drawing attention to the presence of the bacilli in the urine some little time ago[22] I was only able to prove without doubt the existence of the condition, and could not venture at that time to state how frequent its occurrence might be. Lately, however, I have had the opportunity of examining a large series of cases, and the results of my observations I now bring forward. In all, 45 cases of typhoid fever were examined; in 28 of these the urine was never found to contain typhoid bacilli, while in 17 these bacilli were found. This would give apparently a percentage of nearly 38 for the positive results. It is, however, undoubtedly too high, for out of the 17 positive results 6 were cases in which the abnormal condition of the urine had attracted attention, and in which a bacteriological examination was therefore requested. Eliminating these, then, we find that 39 typhoid fever cases have been taken at random in the wards, and the urine examined on several occasions. Of these cases 28 never contained typhoid bacilli, while 11 contained them in large quantities, constituting a percentage of 28. In London, then, at all events it will probably be correct to say that at least 25 per cent. of all cases present this serious and dangerous condition. This conclusion is also supported by the fact that it agrees approximately with the results obtained by Richardson,[23] This observer, working in Boston, examined the urine in 102 cases of typhoid fever, and in 23 he was able to isolate the bacillus, obtaining, therefore, a percentage of 22.5. At the present time, then, the evidence would show that the condition is one frequently met with, and that it probably occurs in one out of every four typhoid fever patients. An important point also in connection with the condition is the fact that very commonly the bacilli are present in enormous numbers, so that the urine is rendered turbid. I was at first inclined to regard these cases as rare, but really they are the rule rather than the exception. Thus out of 14 recent cases in which this point was especially looked for, in 12 I found that the urine was turbid with bacilli, while in 2 only was it noted as "clear," and the microbes were accordingly first discovered on culture. The enormous numbers in which the micro-organisms may be present has been already referred to; but this very fact, though it increases the danger of the complication, brings with it the advantage that the condition can be recognised, or rather suspected, more easily. Indeed, this can often be effected by the naked eye. All that is necessary is to pour the turbid urine into a test tube and then hold it up to the light and gently shake it. If the turbidity be due to the presence of micro-organisms, we notice at once a curious shimmer in the liquid exactly comparable to that seen in shaking any turbid broth culture, a phenomenon which is not seen when the urine is cloudy from other causes, such as phosphates, urates, etc., probably because the amorphous particles of which these deposits consist are unable to catch and reflect the light in the same way as the regularly shaped bodies of the bacteria. If, then, in a turbid typhoid urine this curious shimmer is seen it may at once be predicted that the urine is full of micro-organisms, and the typhoid bacillus should be at once suspected, for experience shows that when this condition is noticed in typhoid fever, if the patient be a male, it is most commonly due to the presence of the true typhoid bacillus. This, however, can only be proved by cultivation, and even in the male the same naked-eye appearance may sometimes, though much less commonly, be produced by other microbes, such as the bacillus coli communis, the streptococcus pyogenes, and the staphylococcus aureus. In the female, however, much less reliance can be placed on a mere inspection of a naturally passed urine, the sources of contamination being so gross.

Conditions Governing the Appearance of the Bacilli.—The bacilli may make their first appearance in the urine at any period of the disease. The earliest date on which I have myself isolated them was the thirteenth day, and in this case they had undoubtedly been present from a much earlier period. The latest date on which I have known them first to occur was the fourteenth day of convalescence. Speaking generally, however, we may say that the condition is rare before the third week of the disease. After this it may occur at any time during the fever, but not uncommonly its occurrence is delayed until the early days of convalescence. It is, therefore, much more closely associated with the later stages of the disease. The duration of the bacilluria also varies. The shortest duration recorded is eight days, but in four other cases it had not disappeared until after the lapse of twenty-one days, twenty-five days, thirty days, and seventy days. Occasionally it may persist, not for months, but for years, as in a remarkable case recorded by Gwyn.[24] In this case the patient had been in the hospital five years before with an attack of typhoid fever. Ever since his discharge he had had trouble with his bladder, and on readmission he was found to be suffering from cystitis and the typhoid bacillus was obtained in pure culture from his urine. The condition of the urine, too, offers no constant qualities. Not uncommonly, even when millions of bacilli are present, albumen is totally absent, and when present, it usually does not amount to more than a trace or a cloud. In rare cases it may be present in larger quantities—one-sixth or one-seventh in two of my cases. In one case hæmaturia occurred.

Frequency of Associated Pyuria.—Although, however, albuminuria is not conspicuous in these cases it is not at all uncommon to find pus, sometimes even in considerable quantities. Thus of my 17 cases, 9, or over 50 per cent., showed pyuria. The urine in nearly all cases was acid. It was never ammoniacal. Lastly, it has sometimes been said that the cases in which typhoid bacilluria occurs are more severe than those not showing this condition. Taken as a whole this is true, but it is equally true that patients may have typhoid fever of extreme severity without the urine ever becoming infected. In no case, then, we can say from the condition of the patient or from the presence or absence of albuminuria that bacilluria has occurred. We should however, suspect it if either the urine becomes suddenly turbid and manifests the "shimmer phenomenon" or if pyuria occurs.

The Pathology of the Condition.

How is the bacilluria produced and on what does it depend? The simplest explanation which suggests itself—namely, that we have to do with a mere filtration of the bacilli from the blood—may be at once dismissed. The extreme difficulty in finding the bacilli in the blood during life would point to its improbability. Moreover, I have on four occasions examined the blood bacteriologically, at a time when the urine was swarming with bacilli, and on all occasions I failed to find the typhoid bacilli therein. A second suggestion is that the condition arises from suppuration set up in the kidney by the typhoid bacillus, accompanied by the secondary passage of the bacilli and pus into the urine. Such cases do undoubtedly occur, one being recently recorded by Flexner,[25] but they are extremely rare. Thus out of 289 *post-mortem* examinations on patients who had died from typhoid fever at St. Bartholomew's Hospital during the last thirty years, in one case only were abscesses found in the kidneys. This rare condition, therefore, could hardly explain the very frequent presence of the bacilluria.

We are driven, then, to our third possibility to offer an adequate explanation of the condition. According to this view, which I believe to be correct, the whole would depend on a rapid growth in the urine itself within the bladder of the bacillus, a stray micro-organism having found its way there from the blood, doubtless after its passage through the kidney. This explanation would seem to meet the facts of the case, for it would explain the chief peculiarities of the condition—namely, the sudden onset of the affection, the enormous numbers of the micro-organisms, and not uncommonly the total absence of albuminuria. It would also readily explain the frequency of pyuria in these cases, which would be due to the onset of cystitis. It has, however, by some observers been doubted whether the typhoid bacillus can grow and multiply in urine. As a matter of fact there is no doubt that it is able to do so.

Thus I found that out of six samples of urine taken and inoculated with the typhoid bacillus and then incubated at 37° C. four showed general turbidity, though varying in degree, from growth of the micro-organism at the end of eighteen hours, while two did not. These latter, however, showed good growth at the end of forty-eight hours.

The typhoid bacillus evidently, then, can grow in most urines, though the rapidity of growth varies with the specimen of the urine used. On the latter fact, also, doubtless in part depends the absence of the bacilli in the urine in so many

cases of typhoid fever. We must believe that in every case, since the bacilli always pass into the blood, every now and then a stray bacillus is carried into the kidney and so passes into the urine. If, however, the urine be in this case not very suitable to the growth of the micro-organism, and if, too the bladder be evacuated frequently and completely, then the micro-organism will be excreted in the urine before it has time to multiply. If, however, as is often the case in typhoid fever, the patient only passes his urine at long intervals, perhaps not emptying the bladder completely, then, if the urine be a favourable medium, the bacillus will have ample opportunities to grow and multiply and marked infection of the urine will result.

In addition, however, to the above considerations we have positive evidence that the *fons et origo* of the condition lies in the bladder itself. In the first place, the condition can be cured by the injection of antiseptics into the bladder. This was shown very clearly by Richardson,[26] who in a given case, having failed with boric acid, was at once successful when perchloride of mercury (1 in 7,000) was substituted. Gwyn[27] also has had a similar experience. Secondly, a short time ago I had the opportunity of examining one of these cases *post mortem*.

The patient was a man, aged 31 years, who died on the nineteenth day of the disease from heart failure. The urine was examined a few hours before death, and was found to contain one-seventh of albumen and to be strongly turbid with typhoid bacilli in pure culture. Death occurred a few hours later. At the *post mortem* examination the usual intestinal lesions of typhoid fever were found. The Peyer's patches and solitary follicles were swollen and beginning to ulcerate. The spleen was enlarged and soft. The kidneys to the naked eye showed only engorgement, and microscopically nothing beyond cloudy swelling could be demonstrated. The bladder, however, showed a few scattered hæmorrhages and its mucous membrane was slightly injected. Bacteriologically the typhoid bacilli were demonstrated by culture in the spleen, the liver, and the gall bladder, as well as the bladder urine, but the cultures from the heart's blood, the lungs, and both kidneys were sterile. I should say that, in all, four separate bacteriological examinations were made from the kidneys, two from each organ, but all four yielded absolutely negative results.

In this perfectly typical case, then, there can be no doubt as to the source of the bacilli. They were not found in the blood or in the kidneys, but they were present in the urine in enormous numbers. There would seem to be no reasonable doubt that a stray bacillus had passed into the urine and had multiplied there, and so given rise to this condition.

We are, then, evidently dealing with what foreign writers would call a specific "bacteriuria," meaning by this term that the urine is swarming with micro-organisms, though no definite symptoms are produced by this condition. This affection has been known for years. Indeed, it was the late Sir William Roberts[25] who first drew attention to it. His observations, however, did not attract general attention, and it was not until 1894 that Krogius[29] published 8 cases all due to the presence of bacillus coli communis, and since this other writers have confirmed his observations. No hard and fast line, however, can be drawn between bacteriuria and cystitis. While a typical case of bacteriuria will give rise to no symptoms, and will at most show under the microscope a few scattered pus cells in addition to the bacilli, there are others in which the patient may complain of slight pain in passing the urine and slight frequency of micturition, the number of leucocytes also increasing, but still not forming a deposit visible to the naked eye. Finally, these cases merge again into cases of frank cystitis. Now, this is exactly what is also noticed in the bacilluria of typhoid fever, According to my experience about half the cases are examples of simple bacteriuria. The patients complain of absolutely no symptoms whatever; there is no frequency of micturition, and no pain accompanies the act. The urine itself swarms with bacilli, and beyond this nothing can be seen abnormal in it. Under the microscope, however, an occasional pus cell can generally be found. These cases are nearly always undetected because of the absence of symptoms. There are, however, others in which, in addition to the bacilli, there is an evident deposit of pus visible to the naked eye, showing that the bladder mucous membrane has become slightly inflamed. The inflammation, however, must be very slight, for usually in these also no symptoms are manifested. Lastly, we have cases in which, while the urine contains bacilli and pus, but remaining of course acid, since the typhoid bacillus has no power to decompose urea—we have clinical symptoms—namely, pain and frequency of micturition and possibly tenderness over the region of the bladder. These cases of obvious typhoidal cystitis are rare. The mere presence of bacteria in the bladder is not sufficient of itself to cause cystitis. Some predisposing cause is also necessary, as, for example, some injury to the bladder walls. Now in typhoid fever so many tissues suffer from the effects of the fever that it is not very hazardous to assume that in some cases the mucous membrane of the bladder may be damaged with the rest. If, then, in a case of typhoid fever the mucous membrane is in a natural condition, and if the urine be passed at the usual intervals, then if bacilluria occurs it will remain a simple bacilluria. But should there be marked retention, or should the bladder walls have been damaged in any way during the course of the disease, then we have the condition in which a frank cystitis may be set up. This view receives valuable support from experiment, which shows that according as the circumstances vary the typhoid bacillus is capable of causing now a simple bacilluria, now a pure cystitis.

Cholecystitis.

[The lecturer then pointed out that a very close parallel might be drawn between the relation of the bacillus to the urinary bladder and that which it bears to the gall-bladder. He continued as follows:]

In the latter, just as in the former, it is not uncommon for the micro-organisms to be present in large numbers, but to give rise to no symptoms. Should, however, retention be produced or the walls irritated by the presence of gall stones, then cholecystitis follows, just as cystitis does in the case of the urinary bladder. In reading the record of the true typhoidal cases of cholecystitis it is noteworthy how almost constantly gall stones were found at the time of operation. If inflammation of the gall bladder occur after a case of typhoid fever, and the specific bacilli be found in pure culture, the sequence of events in all probability has been, first the formation of gall stones, and only secondly cholecystitis. In a few cases—and this is specially seen in those rare ones occurring in the fever itself—the gall bladder may become inflamed primarily through the action of the typhoid bacillus, without gall stones being present. But in these cases, just as with typhoidal cystitis, the walls have in all probability been damaged through the stress of the disease and the predisposing cause is therefore already present.

Suppuration in Typhoid Fever.

We may now turn our attention to suppuration in typhoid fever. In the earlier days of bacteriology all suppurations occurring in typhoid fever were regarded as due to a secondary infection by the pyogenic micro organisms, and the experiments of Dmochowski and Janowski[30] and others, showing that experimentally the typhoid bacillus is quite capable of producing suppuration, came therefore somewhat as a surprise. Their correctness, however, was soon demonstrated, for is was shown that not uncommonly in man, especially in the abscesses connected with bone, the typhoid bacillus could be obtained from the pus in pure culture.

[Reference was made to 12 cases of typhoid suppuration occurring at St. Bartholomew's Hospital, which had been examined bacteriologically; in two of these, both of which were connected with bone, typhoid bacilli were found in the pus, but in the other 10 they were not found although in 2 of them the suppuration was associated with periostitis.]

The Persistence of the Typhoid Bacillus in the Body.

There is one other point which it may be of interest now to consider, and that is, What is the length of time during which the bacillus may remain in the body? It was naturally supposed at first that as the fever passed away and as health returned the bacillus, the cause of the disease, would disappear from the tissues also. This apparently was demonstrated by the earlier observations. Thus it was shown long ago that if the spleen or mesenteric glands—the classical breeding grounds of the microbe—be examined late in the disease, no typhoid bacilli would be found, the organs being either sterile or possibly containing bacillus coli communis. This has been noticed by Flexner[31] as early as the sixth week. Dr. Klein[32] recorded it in the ninth week, and recently a case dying at St. Bartholomew's Hospital in the thirteenth week showed the same disappearance of the specific organisms. The experiments of Blackstein and Welch,[33] however, showed that, some-

times at least, the typhoid bacillus might remain for much longer times in the body. Thus after intravenous injections of the bacillus into rabbits, they found that the bile still contained the micro-organisms when the animals died or were killed at such long intervals as 84 days, 109 days, and even 128 days after the date of inoculation. The other organs were, however, found sterile.

These experimental results in animals naturally suggested that the same thing might occur in man after typhoid fever, and this has been amply proved, for we now know that it is nothing uncommon for the bacilli to remain dormant in the bile or the bone marrow for long periods, the patient, just like the experimentally inoculated animal, being meanwhile often in perfect health, and then, possibly after several years, under the influence of some passing stimulus, to resume their activity and to give rise now to periostitis, now to osteomyelitis, or it may be to cholecystitis.

Conclusions.

We can no longer regard typhoid fever as purely a disease of the intestines. In ordinary cases indeed the intestinal lesions form the starting point of the disease, but rapidly the bacilli become generalised, and a septicæmic condition ensues, the micro organisms being found in the most varied portions of the body and not uncommonly in the blood itself. Secondly, this septicæmic condition may occur without any obvious lesion of the intestinal tract. In some cases, too, both of the ordinary intestinal variety and of those without intestinal lesions, the stress of the disease may fall with special severity on one of the internal organs—for example, the meninges or the kidneys—so that the terms "meningo-typhoid" and "nephro-typhoid" may actually represent a pathological fact. It is probable that the typhoid bacillus is capable under certain circumstances of producing a local lesion only—such as a cholecystitis or a cystitis—without giving rise to a general disease.

[The third lecture commenced with a historical account of the discovery of the agglutinating power of the blood in typhoid fever. The technique which should be employed in performing the reaction was next discussed.]

Technique.

The Dilution to be Used.—As originally proposed by Widal for the "extemporaneous" or microscopical method, a dilution of the serum 1 in 10 was adopted. This was somewhat too low, a considerable number of cases being recorded in which a positive reaction was obtained although the patients were not suffering from, and had never had, typhoid fever. The dilution has therefore been generally raised, and the only question at issue is the exact dilution which should be decided upon. If we raise the dilution considerably—to 1 in 100, for example—we diminish the value of the test, for some 20 per cent. of cases never show a clumping power as marked as this, while others again only reach this height late in the disease, when the reaction is as a rule no longer needed. If, on the contrary, we choose too low a dilution, we run the risk of error of diagnosing as typhoid fever cases which are not really so. Without pursuing the subject further at this moment I may say that on the whole a 1 in 20 dilution would seem from a practical point of view to attain the results in the most satisfactory manner.

The Time Limit.—It would seem that a short time limit should be employed, one hour perhaps being the most suitable. It is, of course, possible that slight delayed reactions may be due to the presence of small amounts of the typhoid agglutinin, but it is equally true that they may also result from the agglutinins of other micro organisms, such as Gärtner's bacillus enteritidis, which in small amounts would only produce an effect after some considerable time.

The Typhoid Culture.—If broth cultures are used most marked differences in clumping power between various typhoid bacilli can be demonstrated. The difference seems to be in some way connected with the culture media, and does not mark as a rule any inherent difference in clumping power between various typhoid stocks, for often an agar culture from the same bacillus would clump admirably in high dilutions with the very serum which produced no effect on the broth culture. Since, however, the latter from their convenience are always now used in performing the reaction, it behoves us to select a culture the clumping power of which in this medium is not diminished.

The Use of Dead Bacilli.—It was early shown by Bordet that the reaction was not concerned with the life of the bacillus. This was confirmed by Widal and Sicard[34] as regards the typhoid bacillus, and they showed that perhaps formalin was the best reagent for killing the bacillus, while yet leaving its sensibility towards the agglutinating serum absolutely intact. From a practical point of view, however, it may be said that while dead cultures act admirably if the agglutinating power of the serum be marked, they are less satisfactory in doubtful cases, which would be returned merely as "suspicious," for owing to the bacilli being dead we no longer see those characteristic movements made by the bacilli in their efforts, as it were, to free themselves, which so often attract attention and lead us to examine the blood again a day or two later. The routine use, therefore, of dead cultures would thus seem to be hardly advisable, though for emergency use they are of great value.

We may now ask, What reliance may be placed upon the test if it be performed in the manner suggested, that is to say, using a very sensitive eighteen-hour broth culture, a dilution of 1 in 20, and a time limit of one hour, a "positive reaction" only being returned when the clumping is marked and general, and when the few bacilli not clumped are rendered motionless? In the first place, it may be said that, tested by experience at St. Bartholomew's Hospital, even though here as a rule a time limit of two hours has been allowed, this low dilution does not seem to have failed. During the last three years, 1897 to 1899, the reaction has been tested and the result noted on 546 occasions. Of the cases so examined over 200 proved themselves later by their clinical course, verified not uncommonly by *post-mortem* examination, to be not typhoid fever, and in only one of them was the reaction positive.

The one exception was a case of great interest. It was that of a woman who while in the hospital had symptoms resembling those of typhoid fever. The Widal reaction was returned as "just positive." At her death, however, a few days dater, the case proved to be one of septicæmia. No typhoid lesions were found at all, nor was the typhoid bacillus found in her spleen. This organ, however, contained the staphylococcus pyogenes aureus in enormous quantities. It seemed at first sight as though the reaction was here at fault. Inquiries, however, were made by Dr. Drysdale, and it was ascertained that four months before her death the patient had been treated at home for typhoid fever. An easy explanation was thus afforded for the presence of the agglutinating reaction during her stay in the hospital.

Mr. H. E. Durham has shown that the serum of a patient suffering from typhoid fever may react strongly to the bacillus enteritidis (Gärtner), and there can be no doubt that the agglutinins of Gärtner's bacillus as well as the typhoid agglutinins are present in the blood in many cases of typhoid fever. But is this any reason against using a 1 in 20 dilution in performing the test, as has been urged? It would seem not, for it was found that the serum of an animal artificially immunised against Gärtner's bacillus does not clump the typhoid bacillus in a 1 in 20 dilution (microscopical method, time limit one hour) until the serum is capable of agglutinating Gärtner's bacillus itself, at least in a dilution of 1 in 1,000. Now such a condition of affairs rarely if ever occurs in human typhoid fever or in cases resembling it clinically. If, then, the serum of a case which suggests typhoid fever produces complete clumping of the typhoid bacillus within one hour in a dilution of 1 in 20, then only in the rarest cases can this be due to the presence of Gärtner rather than the true typhoid agglutinins.

Rare Cases in which the Reaction is at Fault.—It should be noticed, however, that a positive reaction obtained with a 1 in 20, or even a 1 in 40 or 1 in 50 dilution and a one-hour time limit is not an absolute proof that the patient is suffering from typhoid fever. Such reactions have been obtained in a few cases which afterwards proved themselves to be not typhoid fever; not a few of them were possibly due to anterior attacks of typhoid fever, or occurred in the earlier days as the result of faulty technique, too long a time limit, for example, being allowed.

Conclusion.—For all practical purposes a 1 in 20 dilution with a short time limit (one hour) gives admirable results. A positive reaction so obtained has a diagnostic value about equal to that of the eruption, that is to say, that in extremely rare cases both may be observed in cases which are not typhoid. If, however, in any given case we require from the test absolute infallibility, then we must use in addition greater dilutions, such as 1 in 100, or even higher, employing of course the same time limit (one hour). But to use such dilutions as a matter of routine would be an error, since we should thereby wilfully diminish the value of the test by excluding many cases of typhoid fever (nearly 20 per cent.) which never reach even the 1 in 100 limit during any part of their course. It is probable that in 97 per cent. of all typhoid fever cases the reaction can be obtained in a dilution of 1 in 20 at some period of the disease. If, however, a 1 in 100 dilution be used as a routine, then the percentage falls very greatly. Widal's cases show that under these circumstances out of every 100 cases 17 would never show the reaction, while Lorrain Smith's cases would place the percentage of negative results even higher.

Value and Duration of the Reaction.

Date of Appearance of Reaction.—Dr. Churchill was able to analyse 40 of the positive cases at St Bartholomew's Hospital in which the commencement of the illness could be fixed, and

he found that the average date of the first appearance was not later than the thirteenth day, though 9 of the 40 cases gave a positive reaction between the fifth and eighth days. We may say, then, that while the reaction may occur before the end of the first week this is unusual. It is more common for it to make its first appearance during the second week, but not rarely it may be delayed until the third or fourth week or even beyond this period.

Complete Absence of the Reaction throughout the Disease.—It has been stated that the reaction is not to be obtained in roughly 3 per cent. of all cases of typhoid fever. Possibly even this number may be too high, for conceivably some of the cases may not have been really typhoid fever. There is no doubt, however, that cases proved bacteriologically to be typhoid do exist, in which throughout the whole course of the disease no reaction can be obtained. Three cases of this kind have been recorded, and a fourth was recently observed in St. Bartholomew's Hospital (under the care of Dr. Church).

Duration of Reaction.—The only way of ascertaining how long the reaction persists after recovery is to follow a series of cases month by month until the final disappearance of the clumping power be noticed. Fourteen cases were examined in this way. In 2 it was never obtained after defervescence, in 5 it disappeared within six months, in 4 within one year, while in 2 it was still present at periods of one year and six months and two years respectively after the attack. In other words, we may say that in half the cases the reaction was no longer observed after six months, while in the great majority (12 out of 14) it had disappeared by the end of a year.

Prognosis.—It has been suggested by some observers that it is possible to use the reaction as a means of prognosis as well as of diagnosis. So far as my own observations extend, I have seen nothing which lends support to the view. A very weak serum reaction, even in a severe case, is no bar to a complete recovery without relapse and complication, and should not therefore indicate a bad prognosis.

The Origin and Nature of the Agglutinating Substance.

[The lecturer at this point discussed the nature of the agglutinating substance, advancing evidence to show that it was of the nature of an enzyme.]

Concerning the mode of origin of the agglutinins, the view which originally suggested itself was that the agglutinins are secreted by the body cells, much in the same way as are the antitoxins. It should be noted, however, that recently a totally different theory has been put forward, according to which the agglutinins are a direct secretion of the bacilli themselves.

[The lecturer examined the evidence on this point, and arrived at the conclusion expressed in the following sentence:]

The evidence at present in our possession points strongly to the view that the agglutinins are ferments not directly secreted by the bacilli themselves, but produced by the cells of the body, and especially those of the spleen, the lymph glands, and the bone marrow (Deutsch)[35] under the influence of the stimulus produced by the invading micro-organism.

[The mechanism of agglutination and the relation of agglutinins to lysins and the connection of the former with immunity were then discussed. In regard to the latter point the lecturer summarised his views as follows:]

Agglutination is a reaction of infection. But at present we have no direct evidence proving that it takes a share in the production of immunity probable though this is. It may be that agglutinated bacilli are more sensitive than others to the action of the alexins or bactericidal bodies, and that the object of agglutination is therefore really to prepare the way for the action of the latter. This, however, is not yet proved, and meanwhile we must remember that a patient or an animal may be rendered absolutely immune to typhoid fever or cholera without the blood ever acquiring agglutinative properties at all, so that agglutination in the ordinary sense cannot be necessary for the production of immunity. It is possible, however, that even in these cases traces of the agglutinins may by slightly affecting the bacilli further the action of the lysins and thus assist in bringing the immunity about.

Antitoxic Power.

Does the blood acquire antitoxic as well as agglutinative and bacteriolytic properties? At present we have no evidence whatever that such formation takes place. Sanarelli,[36] Pfeiffer and Kolle,[37] and Funck[23] are all agreed on this point, and the result of their observations, both on typhoid patients as well as on immunised animals, shows that, just as in cholera, so also in typhoid fever, antitoxins, if developed, are formed only in such small quantities that their presence cannot be demonstrated.

The Value of Urotropin in Typhoid Fever.

I desire, in conclusion, to bring before you the marvellous effects which are produced by the administration of urotropin in cases of typhoid bacilluria and cystitis. Urotropin is formed by the action of formalin on ammonia, and was recently introduced into medical practice by Dr. Arthur Nicolaier[39] as a urinary antiseptic. It was soon found to have considerable value in checking the decomposition of the urine in cases of ammoniacal cystitis, the effect being due, as Dr. Nicolaier has shown, to the liberation of free formalin from the drug after its passage into the urine. It is true that in the acid cystitis produced by bacillus coli its effect is almost *nil*, so that it cannot be regarded, as some too hastily have thought, as a specific for all forms of urinary infection. So far, however, as one variety is concerned it does deserve the name. I allude to its effect on the true typhoidal affections of the urinary tract. Attention was called to the matter last year by Richardson,[40] who in nine cases found that the typhoid bacilli rapidly disappeared from the urine after its use, and I may say at once that my own observations most strongly support his results.

The following photographs represent more clearly than any figures could do the valuable action of the drug:

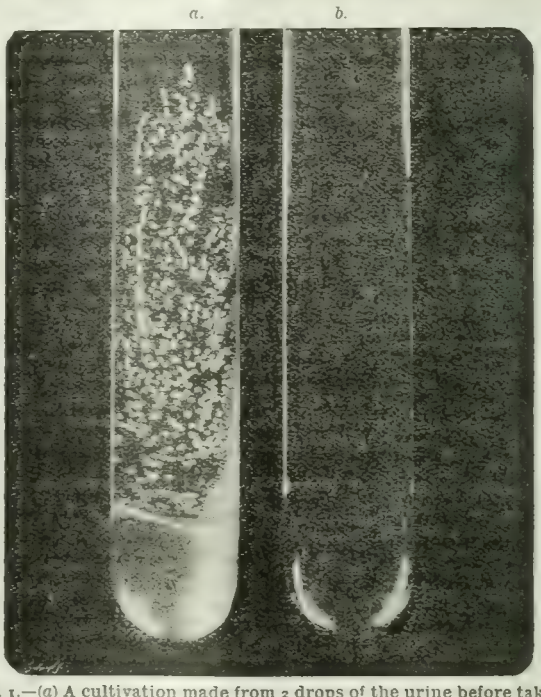


Fig. 1.—(*a*) A cultivation made from 2 drops of the urine before taking urotropin; many typhoid colonies seen (the slightly opaque appearance of the colonies is due to their having sunk a little from the surface into the gelatine owing to the very hot weather). (*b*) From 2 drops after taking 30 grs.; nothing grown.

Fig. 1 shows two tubes of gelatine. Tube *a* was inoculated on the twenty-fourth day of the illness with two drops of the patient's urine. A pure cultivation of what proved to be the typhoid bacilli developed (the slightly opaque appearance of the colonies being due to their having sunk a little from the surface into the gelatine owing to the very hot weather). The patient was then put on urotropin, 10 grains three times a day; and on the twenty-sixth day of his illness, after 30 grains of the drug had been taken, cultures were again made. Tube *b* shows such a one made with two drops of urine. Nothing, however, grew. The typhoid bacilli had all been destroyed and eliminated, and though the drug was stopped after 60 grains had been given, cultures made on four subsequent occasions never showed any return of the typhoid bacilli.

Fig. 2 shows a somewhat similar result. Tube *c* represents a gelatine tube inoculated with a trace of urine of September 16th (the fifty-first day).

A pure culture of typical typhoid colonies is seen. The patient was then put on urotropin, 10 grains three times a day, and in tube *d* we see a gelatine tube over the surface of which three drops of urine were spread, the urine having been obtained after 30 grains of the drug had been taken. Again the cultivation proved sterile. The typhoid bacillus had been



Fig. 2.—(*c*) A cultivation made from a trace of the urine before taking urotropin; many typhoid colonies seen. (*d*) From 3 drops after taking 30 grs; nothing grown.

eliminated and destroyed. The drug was, however, continued until 120 grains had been given (four days in all), but the typhoid bacilli did not return, as proved by subsequent cultivation of the urine.

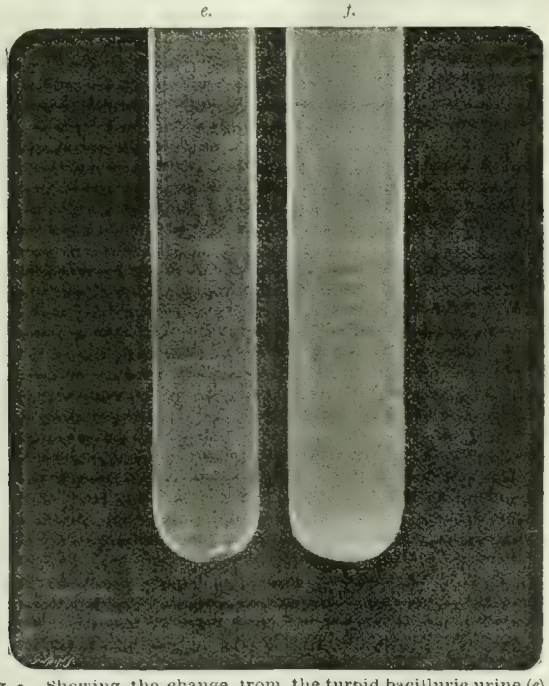


Fig. 3.—Showing the change from the turbid bacilluric urine (*e*) to a normal clear urine (*f*) after 30 grs. of urotropin; cultures proved the absence of the bacilli.

Fig. 4 represents the same result, but in a somewhat different way. In this case a drop of the urine itself was stained before and after the administration of 30 grains of the drug. In the one case enormous numbers of typhoid bacilli are seen, in the other none were visible. Cultures also showed their absence. The drug was continued until 120 grains had been given and it was then stopped; the bacilli, however, did not return.

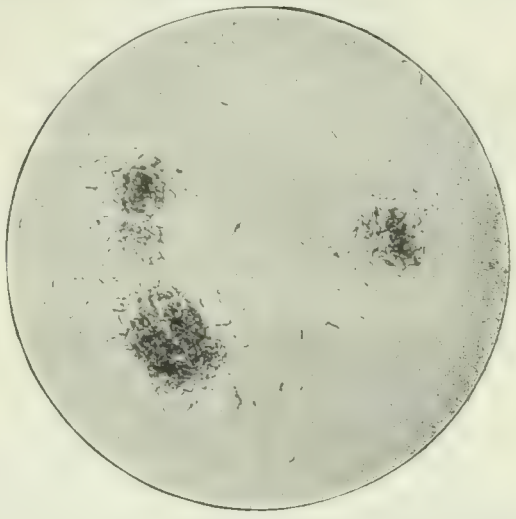


Fig. 4.—A drop of the urine dried and stained, showing innumerable typhoid bacilli. A drop prepared in the same way after taking 30 grs. of urotropin showing no typhoid bacilli; their absence was confirmed also by cultivation.

Fig. 3 shows the marvellous naked-eye change which is produced in the urine by the administration of the drug; *e* represents the urine itself, on the eighteenth day, turbid as it was with bacilli; *f* shows the test tube full of urine passed on the following day, after 20 grains only of the drug had been taken. It was now quite clear to the naked eye. Cultures also made with three drops of the urine showed no growth. Further examination, however, proved that in this case a few bacilli were really present, even after 60 grains had been taken, and that, therefore, to be quite certain of curing the condition, it would always be wise to continue the use of the drug for about a week.

The photographs happen to deal with cases of bacilluria, but in cases of typhoid cystitis, as the detailed record of the cases shows, the effect of the drug is almost as instantaneous, the pus as well as the bacilli disappearing within one, or at most two, days.

If, then, we sum up the effect of the drug on cases of typhoid bacilluria and cystitis we may say that the immediate effect of the drug is extraordinary. If the urine has been turbid before with bacilli, at the end of twenty-four hours—that is to say after 30 grains have been given—the urine will be found quite clear. Possibly cultures may reveal a few bacilli, but this is not always the case. So marked and immediate, indeed, is the effect of the drug that, if the urine is not clear at the end of twenty-four hours, we may at once suspect most strongly that the bacillus present is not the typhoid bacillus, but one of the varieties of bacillus coli. If the drug be continued a permanent cure will be effected (unless possibly in the event of reinfection from the blood). Such a permanent cure may sometimes be effected by 60 grains of urotropin, but to make certain it would be well always to continue the drug for at least one week.

Under what circumstances, then, should the drug be given in cases of typhoid fever? Evidently whenever a urinary complication due to the typhoid bacillus has occurred. But seeing that at the present time the bacilluria and even the cystitis most often passes unnoticed from the patient complaining of no symptoms, and seeing that they are always a source of danger, the question arises whether the drug should not be given (30 grains daily) in all cases of typhoid fever, throughout its whole course and during the first three weeks of convalescence, as was first suggested by Richardson, with the intention of preventing these complications. It should be added that, taken in such doses, and during such a prolonged period, the drug produces no ill-effect beyond occasionally some urethral pain if the urine is allowed to become concentrated. It may be combined, too, with any ordinary medicine, and therefore interferes in no way with the usual routine treatment of the disease. There can be little doubt, therefore, that the drug should be so given, for no nursing, however good, no care taken with the urine, can

possibly prevent some soiling of the linen and the possible spread of infection if the case be one of typhoid bacilluria. In hospital practice, however, with good nursing, the matter is of less importance. In private practice among the poor the case is very different. Since in all probability in such cases, as I have elsewhere pointed out, the urine rather than the fæces is chiefly at fault, it is permissible to hope that by eliminating the former source of danger altogether a very sensible diminution in the spread of the disease may in time be brought about.

[In an appendix to his lecture Dr. Horton-Smith gave the exact details concerning four cases of typhoid bacilluria and cystitis treated with urotropin. These demonstrated clearly that if the drug be given for a week (10 grains three times a day), an almost certain cure of the condition can be brought about. Often, indeed, much smaller amounts were in reality sufficient.]

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THE ACTION OF VARIOUS DRUGS AND DIETS ON THE EXCRETION OF NITROGEN IN GOUT.*

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THE study of the elimination of nitrogen in gouty cases is of special importance on account of the relationship which uric acid holds to gout, and the consequent view that gout is essentially a disease of disordered metabolism. The object of this series of observations was to determine, if possible, the variations in nitrogenous elimination occurring in a case of gout under ordinary conditions, and to note the effect of different diets and certain drugs. For this purpose urea, uric acid, alloxur base, and ammonia were all separately determined—the urea to serve as a measure of the total nitrogenous changes—the uric acid and alloxur base as a possible sign of modified production of these bodies, and the ammonia as an indication of the general amount of inorganic acid dealt with during the day's metabolism. There are two alleged sources of uric acid:

1. It may be a derivative of the alloxur base combined within the molecule of the nucleo-proteid of cells, or similar substances in the food.

2. It may be produced by synthetic processes in the liver or elsewhere from simpler nitrogenous compounds such as ammonia.

If the former view be the correct one, variations in the amount of uric acid excreted must simultaneously produce variations in the final waste products resulting from the disintegration of nucleo-proteid, one of which—phosphorus—we can follow. For this reason the phosphorus pentoxide excretion was also determined, but it must be remembered that the main amount of phosphates excreted in the urine has been derived from the phosphates taken as such in the food. The amount of ammonia excreted has been shown to depend largely, if not entirely, on the excess of mineral acid over fixed bases available, and consequently fluctuations in its amount follow variations in the diet.

* Read before the Medical Society of London.

I am indebted to Dr. Barrs for the opportunity of investigating the following case of chronic gout:

G. D., aged 65, a well built man, 6 feet in height and weighing 12 st. 4 lbs., who followed the curious vocation of tailor and dancing master, was readmitted into the Leeds General Infirmary on November 2nd, 1899. His family history revealed little of positive importance. An uncle had suffered from gout; but while his father, dying at the age of 67, was believed to have shortened his life by over-indulgence in alcohol, he had never been affected by gout. There was, however, a history of rheumatism in his case. The patient's mother, aged 77, at the time of her death, was always free both from gout and rheumatism. The patient's past record was excellent. Apart from the affection for which he was admitted, and an attack of erysipelas twenty-three years previously, his health had been very good. The history of gout covered five years. At the beginning the patient attributed the swelling of the joints to the fact that his feet ceased to perspire profusely. The recurring attacks were ushered in by shooting pains, the joints becoming red, swollen, and very hot. These symptoms gradually subsided after two or three days, with exception of the swelling, which persisted. At the time of readmission his general health was good, and no disease of internal organs could be discovered. Gouty changes were marked both in the hands and feet, the enlargement due to deposits being indeed extreme. In the hands the metacarpo-phalangeal and first interphalangeal joints were mainly affected The dorsum of the left wrist was occupied by a considerable swelling. The elbow of the same arm was affected at two points, there being a very hard swelling in connection with the ulna, and a softer one forming a cushion-like expansion of the apex of the joint. At the back of the internal condyle of the other elbow-joint was a nodulated enlargement equalling a filbert in size. The fifth metatarsal joint of the left foot showed a large hard swelling, and a similar enlargement existed on the outer side of the fifth toe, with a smaller one on the dorsum of the fourth. The lower part of the tendo Achillis was irregularly swollen. The small toe of the right foot was enlarged dorsally, a smaller swelling affecting same surface of the first and fifth tarso-metatarsal joints. The tendo Achillis was in a condition similar to that described in the case of the left foot. The patient stated that the joints gave rise to no pain, except when at long and irregular intervals an inflammatory condition supervened.

The case was interesting from the fact that although the first manifestations of gout presented themselves only five years before, the deposits described were so large as to render it almost unique. A feature of interest, from an etiological point of view, was the abstemiousness of the patient combined with his active habits. Except for a slight hereditary taint no possible clue in relation to its causation was obtainable. The urine, repeatedly examined, was free from albumen, albumose, and peptone; and throughout the investigation was acid in reaction.

Methods of Analysis.—The urea was estimated by the hypobromite method and uric acid both by Hopkins's and Salkowski's processes. Schlösing's method was adopted for ammonia and titration by uranium nitrate for the P_2O_5. The alloxur bases were estimated by Salkowski's recent method described in a former paper on gout.

While under observation the patient was placed on the subjoined diets:

Fixed Diet.—Cocoa 1 pint, tea 2 pints, milk 1 pint, tea cake 2 oz., bread 11 oz., butter 1 oz.; dinner, 1 lb. 6 oz., including 4 oz. of meat and 1 apple.

Vegetable Diet.—This consisted to a large extent of peas and beans. Milk $1\frac{1}{2}$ pint, oatmeal porridge $\frac{1}{2}$ pint, pea soup $\frac{1}{2}$ pint, peas porridge $\frac{1}{2}$ pint, bread 11 oz., butter 1 oz., peas, beans, and other vegetables 1 lb. 8 oz.

Animal Diet.—Milk $1\frac{1}{2}$ pint, lemonade 1 pint, meat 10 oz., bread 10 oz., butter 1 oz., potatoes 4 oz., and 1 apple.

In addition to being dieted, the patient took the same amount of exercise each day.

The results obtained are tabulated on p. 835.

Referring first to the estimations made before the administration of drugs and the adoption of experimental diets—that is to say, under ordinary conditions—it will be observed that the fluctuations were well within physiological limits with the exception of urea, which was somewhat low, a common feature in connection with hospital patients, resulting, of course, from the small quantity of nitrogenous food taken; but in this case the alternative possibility of a nitrogen retention must be borne in mind. Taking into consideration the patient's age, the uric acid excretion must be regarded as normal. The bases also bore the usual relationship to uric acid. The estimation of the bases gains much interest from the important researches of Minkowski, who administered adenin to four dogs in doses varying from 0.25 to 0.5 gram several times a day. Three of the animals were killed about the fourth day, and the other died on the second day. After 2 grams vomiting ensued, and the other symptoms noted were violent action of the heart, a heaving pulse, and an increase in blood pressure. The urine contained albumen, leucocytes, casts, and epithelial cells. *Post mortem* crystals of biurate were found deposited in the convoluted and Henle's tubules, but not in the glomeruli. There was also cellular infiltration of the connective tissue.

It is certainly striking that this train of symptoms, with

Table I.—*Showing the Analytical Details of the Urine in the 24 Hours.*

Date.	Diet.	Drugs.	Total Quantity in c.cm.	Specific Gravity.	Urea in Grams.	Uric Acid in Grams.	P_2O_5 in Grams.	Alloxur Bases in Grams.	Ammonia in Grams.	Remarks.
Nov. 3	Fixed diet.		1720	1011	17.200	0.401	1.21	0.055		Temp. normal.
,, 4	,,		1420	1013	18.460	0.367	1.27	0.051		
,, 5	,,		1360	1014	21.760	0.480	1.37	0.061		
,, 6	,,		1430	1012	19 305	0.509	1.51	0 067	0.486	
,, 7	,,		1095	1018	18.615	0.409	1.20	0.050		
,, 8	,,		1535	1013	20 327	0.457	1.41	0.057	0.582	
,, 9	,,		1435	1015	21.455	0.476	1.48	0.048		
,, 11	,,		1380	1017	20.735	0.545	1.57	0.053	0.455	
,, 12	,,	Sodium salicylate	1555	1017	24 824	0.529	1.59	0.075	0.509	
,, 13	,,	20 gr. ter die	1600	1015	21 612	0.491	1.56	0 075	0.489	
,, 14	,,		1170	1019	20.061	0.544	1.70	0 058	0.457	
,, 15	,,		1330	1015	19 951	0.449	1.31	0.060		
,, 16	,,		1673	1012	20.076	0.601	1.68	0.061	0.615	
,, 17	,,	Guaiac. resin, 18 gr.	1900	1010	19.164	0.600	1.44	0.054	1.113	
,, 18	,,	ter die	1800	1010	17.864	0.708	1.36	0.051	0.724	
,, 19	,,		1320	1012	17.820	0.842	1.18	0.053	0.516	
,, 20	,,		1850	1014	20.905	0.749	1.38	0.057	0.757	
,, 21	,,		1495	1013	20 115	0.688	1.61	0.059	0.685	
,, 22	,,	Potassium iodide,	1655	1013	23.170	0.606	1.45	0.058	0.787	
,, 23	,,	5 gr. ter die	1505	1013	21 070	0.547	1.44	0.052	0.613	
,, 24	,,		1733	1012	23 048	0.571	1.59		0 561	
,, 25	,,		1620	1015	24.312	0.701	1.62		1 046	
,, 26	,,		1230	1015	24.986	0.618	1.75		0.701	
,, 27	,,		1002	1015	19.038	0.453	1.48		0.530	
,, 28	,,		1210	1014	22.990	0.584	1.63	0.045	0.636	
,, 29	,,	Vin. colchici, 15 m.	1813	1011	22.263	0.552	1.59	0.068	0 738	
,, 30	,,	ter die	1814	1012	19.954	0.501	1.46	0.055	0.678	
Dec. 1	,,		1645	1013	22.207	0.595	1.64	0.053	0.672	
,, 2	,,		1870	1012	20.944	0 492	1.51	0 042	0.572	
,, 3	,,		1450	1015	20 385	0.476	1.40	0 044	0.394	
,, 4	,,	Quinæ sulph., 3 gr,	1900	1012	24.264	0.560	1.70	0.051	0.613	
,, 6	,,	ter die	1680	1013	23.522	0.573	1.54	0.048	0.504	
,, 7	,,		1245	1016	22.416	0.512	1.46	0.069	0.463	
,, 8	,,		1175	1016	19 387	0.501	1.53	0.051	0.407	
,, 9	Vegetable diet		1465	1016	22.172	0.498	1.77	0 054	0.572	
,, 10	,,		1530	1020	19.925	0.618	1.99	0.069	0.520	
,, 11	,,		1975	1014	21.725	0 711	2.66	0.073		
,, 12	,,		1480	1016	19 240	0.674	2.47	0.063		
,, 13	Animal diet		1225	1016	23.275	0.666	2.12	0 061	0.699	
,, 14	,,		940	1016	23.623	0.458	1.47	0.039		
,, 15	,,		930	1018	24.180	0.557	2.35	0.054		
,, 16	,,		875	1020	23.625	0.543	1.88	0.058	0.609	
,, 17	Animal diet + tea		1134	1017	25.484	0.688	2.25	0.055	0.941	
,, 18	,,		1010	1018	23.735	0.649	1.11	0.057	0.709	Temp. 103°.

deposition of biurate, should be experimentally induced by one of the alloxur bases, and this suggests that one or more of them may be a factor in the evolution of gout. As negative evidence of such a causative relation there is the further fact that uric acid has not been shown by experiment to produce any such symptoms—a statement of special significance as regards the circulatory disturbance. The extreme insolubility of uric acid also points to the possibility that, with an advancing knowledge of the pathology of gout, it may be relegated to a secondary position in the causation of that disease. Apart from xanthin, the amount of alloxur bases appearing in the urine is so exceedingly small that their separate estimation is a matter of great difficulty. Supposing, therefore, the excretion of adenin were diminished or increased, such a variation would only in a slight degree alter the total quantity of the bases; hence the fact of the bases varying within normal limits in proportion to the acid does not exclude the possibility of adenin being retained in the system, and thereby determining the deposition of biurate in the tissues. It is to be regretted that this line of research has not been extended; but pure adenin is almost impossible to obtain at present.

Regarding the supposed nuclear origin of uric acid which links it with the output of phosphorus pentoxide, its proportionate relation to that substance was not so consistently maintained as was anticipated from previous observation. On several occasions during the first fortnight through a misunderstanding there were slight but, as regards phosphates, possibly effective variations in the fixed diet. It is of course necessary in order to observe the relation in question that the diet should remain absolutely unchanged both in quantity and quality. Dr. Chalmers Watson, in a paper of much interest, has thrown doubt on the parallel variations in the excretion of these two products as tentatively advanced by me in a former communication. Possibly he overlooked the statement that in gouty cases retention is a perturbing factor. Another disturbing factor to which, however, no reference was made in my paper is excessive excretion of uric acid such as follows the exhibition of eliminative drugs. An example of this will be found in the tables. As regards his case it was not stated that the patient's food was weighed, and further potassium iodide was being administered during the major part of the investigation. It has occurred to me that the discrepancy may be dependent upon either or both of these circumstances. For the estimation of uric acid Dr. Watson used a modification of Salkowski's silver method. Silver having a greater affinity for iodine than for uric acid, it follows that unless sufficient silver were added to precipitate both the iodine and the uric acid a part of the latter would remain in solution. In Table II an average has been taken of the estimated constituents of the urine, the last three days average under ordinary conditions being placed first for comparison.

Table II.

	Averages, in Grams.				
	Urea.	Uric Acid.	P_2O_5.	Alloxur Bases.	Ammonia.
Fixed diet (3 observations)	20.839	0.492	1.48	0.052	0.567
Sodium salicylate (3 ,,)	22.165	0.521	1.61	0.069	0.485
Guaiacum (3 ,,)	18.282	0.716	1.32	0.052	0.784
Potassium iodide (3 ,,)	22.429	0.574	1.48	0.056	0.653
Colchicum (4 ,,)	21.853	0 558	1.56	0.050	0.681
Quinine (2 ,,)	23.892	0.566	1.62	0.049	0.558
Vegetable diet (4 ,,)	20.565	0.625	2.24	0.064	0.546
Animal diet (4 ,,)	23.675	0.556	2.00	0.053	0.654
Animal diet + tea (1 observation).	25.484	0.688	2.25	0.055	0.941

It is unnecessary to trace in detail the effect of the drugs given, as this is apparent in the tables. Contrary to expectation, after sodium salicylate there was only a small increase

in uric acid, with a slight augmentation of the alloxur bases relative to the acid. Under guaiacum, on the other hand, while the urea fell somewhat, the uric acid was markedly increased; but neither the phosphorus pentoxide nor the bases showed a corresponding increase, thereby denoting that this drug probably acts not by increasing the production of uric acid, but by eliminating a part of that stored in the blood. The bearing of this fact on the treatment of chronic gout will be appreciated. It is also noticeable that the increased excretion of uric acid was maintained for some time after cessation of the drug, the patient's condition being at the same time ameliorated. It is satisfactory to note that the experimental evidence adduced confirms the opinion, based on empirical knowledge, expressed by Sir Alfred Garrod that guaiacum was a powerful prophylactic agent in gout, this opinion being subsequently corroborated by Dr. Luff.

The raised excretion of uric acid with potassium iodide is probably attributable to the maintained effect of guaiacum. The value of potassium iodide in chronic gout is founded rather on its apparent power of retarding cardio-vascular and renal changes, and reducing albumen in the urine. Under colchicum a slight advance in the uric acid occurred. That it has an invariable effect on the excretion of uric acid is extremely doubtful. The result with quinine on the excretion of uric acid is contrary to the diminution usually observed. This again may be accounted for by the continued improvement in the patient's condition.

The results obtained with the experimental diets are not in agreement with the generally accepted view upon which the dietetic treatment of gout is frequently based. There is matter for reflection in the fact that a diet consisting largely of leguminous principles should so markedly increase the uric acid, the phosphorus pentoxide, and alloxur bases.

On the second day after tea was added to the animal diet the patient developed a temperature due to a chill which terminated the observations, so that no reliable inferences can be drawn from the record with regard to the influence of tea upon the urinary constituents estimated.

THE GELATINOUS FORM OF SODIUM BIURATE AND ITS BEARING ON THE TREATMENT OF GOUT.*

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I DO not propose in this paper to touch upon the debatable questions of the seat or seats of formation of uric acid, or of the compounds from which that body may be derived. I believe, however, that it is a practically indisputable fact that the deposition of a salt of uric acid—namely, sodium biurate—is intimately related to the gouty attack, and I propose to briefly bring forward to-night the results of some experiments which I think throw some light on the therapeutics of gout.

I strongly share the view of the late Sir William Roberts that uric acid, when first introduced into the blood, exists solely therein as the sodium quadriurate. This substance is, in the dissolved state, a very unstable body, and soon changes into the sodium biurate, which first assumes the gelatinous and soluble form. This gelatinous modification, if not eliminated in the urine, is converted either slowly or rapidly, according to various conditions, into the crystalline and almost insoluble variety, which is then precipitated, and, by its deposition in various structures, causes the gouty paroxysm. It is obvious that if by any means the conversion of the soluble gelatinous biurate into the insoluble crystalline form can be delayed, then the advent of the gouty paroxysm is also delayed, and if, during this period of delay, the elimination of the soluble gelatinous biurate is promoted, then the gouty paroxysm may either be considerably diminished in severity or may even be averted altogether.

I have for some time been studying the physical and chemical properties of this gelatinous form of the biurate, and especially the effects exerted by certain drugs on its conversion into the crystalline form. The drugs the influence of which on the gelatinous biurate I have experimentally investigated are sodium bicarbonate, sodium phosphate, potassium bicarbonate, potassium citrate, lithium carbonate, lithium citrate, piperazine, and lysidine. In a paper which I communicated to the last meeting of the British Medical Association,[1] I showed that by increasing the alkalinity of blood serum with sodium bicarbonate the conversion of the gelatinous biurate into the crystalline form is accelerated in time and increased in quantity, whereas when the alkalinity of the serum is increased by the addition of potassium bicarbonate the conversion of the gelatinous biurate into the crystalline form is delayed as regards time, and is considerably diminished as regards quantity. I have now carried out a similar series of experiments with the other drugs previously mentioned.

Briefly stated, the results show: (1) That sodium salts considerably accelerate the conversion of the gelatinous biurate into the crystalline variety, and that their employment in the treatment of gout is apparently not desirable; (2) that potassium salts delay the conversion of the gelatinous biurate into the crystalline form, and also that when the conversion is once started it is slowed by the presence of these salts; (3) that lithium salts, although they do not delay the initial conversion of the gelatinous biurate, yet when the conversion is once started it is slowed by the presence of these salts, and especially by the lithium carbonate; (4) that piperazine does not delay the initial conversion of the gelatinous biurate, and but slightly slows the conversion when once started; and (5) that lysidine, although it delays the conversion of the gelatinous biurate into the crystalline form, yet when the conversion is once started it has practically no effect in slowing it. From the results of these experiments it appears that for the special purpose referred to in the treatment of gout the potassium salts are the most useful, that the lithium salts rank next, and that piperazine and lysidine are not nearly so useful. I may mention that these results are entirely in accord with my clinical experience.

I do not for one moment contend that the beneficial action of the salts of the alkali metals in the treatment of gout is to be solely gauged either by their solvent action on deposits of sodium biurate, or by their inhibitory action on the conversion of the gelatinous biurate into the crystalline form. Undoubtedly many of them are extremely useful in the gouty state by their stimulating effect upon metabolism, by their remedial action upon the gastric and hepatic functions, by their diuretic action, and by their diminishing the acidity of the urine. I should like to remark here that the purport of a paper published by me in the *Lancet* of June 11th, 1898, has been somewhat misunderstood. In that paper I showed by experimental evidence that potassium, sodium, and lithium salts, and piperazine and lysidine exercised no appreciable solvent action on gouty deposits. I did not, however, question—still less deny—the utility of many of these drugs in the therapeutics of gout, for I am constantly employing many of them in the treatment of various phases of that disease; but I wished to point out that the oft repeated statement that most of these drugs are useful for their great solvent action on gouty deposits is a loose and erroneous statement which it would be wiser in future to avoid.

Another important point demonstrated by these experiments is that the higher the alkalinity of the blood from the presence of sodium bicarbonate, the more rapid and the more complete is the conversion of the soluble gelatinous biurate into the comparatively insoluble and crystalline form. This point is of great interest, since I believe that the alkalinity of the blood of gouty patients is always higher than the normal alkalinity of blood. I know that this view is opposed to the prevailing view that gout is associated with what is called an "acid dyscrasia"—whatever that may mean—and that consequently the alkalinity of the blood of gouty subjects is below the normal. This view, however, so far as I can ascertain, is a pure assumption, and has apparently never been based upon any actual determinations of the alkalinity of the blood of gouty individuals. It received its first shock five years ago, when Klemperer showed by actual determinations of the blood of gouty subjects that the alkalinity was not below that of healthy blood. I have since made a number of determinations of the alkalinity of the blood of healthy and gouty individuals, with the result that I have so far found in

* Read before the Medical Society of London.

every gouty patient whose blood I have examined that the alkalinity is higher than the average alkalinity of the blood of healthy persons. The results that I have up to the present obtained show that, whereas the alkalinity of the blood of healthy adults varies from 0.161 to 0.185 per cent. of sodium carbonate, with an average of 0.167 per cent., the alkalinity of the blood of gouty patients varies from 0.193 to 0.251 per cent., with an average of 0.217 per cent., which is nearly one-third higher than that of normal blood. Now since this increased alkalinity of the blood is due to a higher proportion of sodium carbonate or bicarbonate, and since these substances both accelerate the conversion of the gelatinous biurate into the crystalline variety, and hasten the precipitation of the latter, it is intelligible why such blood is prone to hasten and to augment the formation of gouty deposits.

REFERENCE.

[1] BRITISH MEDICAL JOURNAL, vol. ii, 1899, p. 1163.

AN OPERATION PERFORMED FOR COMPLETE ATRESIA VAGINÆ.

By J. M. COTTERILL, M.B., F.R.C.S.E.,

Surgeon to the Edinburgh Royal Infirmary; etc.

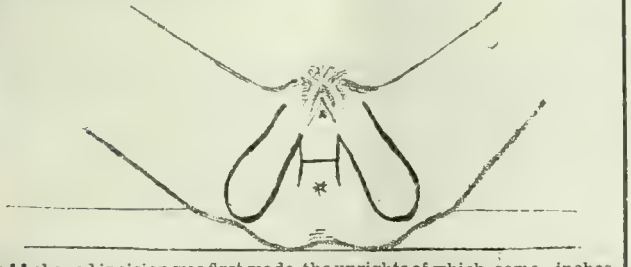
SOME time ago, in consultation with Dr. Venters, of this city, I saw a young married lady, aged 28, who was said to be suffering from malformation of the vagina. Her history is briefly as follows:

She had always enjoyed robust health, though she had never menstruated, nor had she ever suffered from any vicarious hæmorrhages, nor shown any indications of any periodic disturbance, such as abdominal pains, headache, or the like. No medical advice had ever been sought with regard to her amenorrhœa, and two years ago the patient married. Coitus had been found impossible, and the patient now sought relief from her distressing condition. In order to make a thorough examination of the pelvic organs chloroform was administered, when the following conditions were noted:

The patient was well developed, though rather thin; the mammæ were somewhat above the average size, and the nipples were well formed. The mons veneris and labia majora were normal, the labia minora somewhat short and deficient in bulk. The clitoris and urethra were normal. Between the meatus and the anus there was a perfectly flat area of thin skin, which at its centre (that is, opposite the spot at which the vagina ought to have been) presented a somewhat pinkish and moist appearance and partook slightly of the nature of mucous membrane. There was no infundibuliform depression, however, at this situation. On rectal examination the urethra could be felt very distinctly under the finger, but there was no trace whatever of a vagina. By the bimanual method a small atrophic uterus, about the size of an almond, was easily felt, as were the ovaries, also much below the normal size, the left being slightly the bigger of the two and about the size of a haricot bean. The small uterus could be pushed freely about in the pelvis, and there was no distended upper vaginal segment or *cul-de-sac* present, as is often the case.

It was evident from this examination, as well as from a consideration of the menstrual history of the patient, that the uterus and ovaries were functionless, and, consequently, that any operation which could be performed would only be for purposes of cohabitation, and not of maternity.

This state of matters was explained to the patient and her husband, and they expressed a very strong desire to have the operation, done as the patient was suffering a great deal from the mental distress commonly met with in such circumstances, and had lately been losing flesh rapidly. The patient being chloroformed and put in the lithotomy position, the following operation was performed:



An H-shaped incision was first made, the uprights of which, some 3 inches in length, ran from the lower extremity of the labia minora to a little beyond the anus on each side; the horizontal limb of the H (1½ inch in length) lay midway between the meatus and the anus. The flaps formed by these incisions were then reflected back to their respective bases; the loose cellular tissue in the recto-vesical space was then freely opened up with the fingers and a large vaginal opening made. In the course of this part of the operation the small uterus was distinctly felt and was pushed upwards with its peritoneal covering, the peritoneum not being opened.

A second pair of flask-shaped flaps, about 7 inches in length and 3 inches wide, were then raised by making an incision which began on each side just below the tendon of origin of the adductor longus, passed obliquely downwards and outwards parallel to the buttock fold, and was brought back to meet the top of the upright of the H incision on each side respectively. These two large flaps were then slid to meet each other in the middle line, with in the first instance their raw surfaces laid flat against one another, and they and the two small flaps were then united along their free edges with a continuous suture of fine catgut until a body somewhat resembling a large penis, entirely covered on its outer surface with skin, projected from the middle line opposite the new vaginal opening which had been made. All that now remained to be done was to invaginate this into the opening whose walls it was designed to clothe, and by the introduction of a large plug of iodoform gauze to keep the raw surfaces of the new vaginal opening and its covering in close apposition with each other.

When the legs were brought down from the lithotomy position, it was found that the edges of the large buttock wounds fell together so accurately that a few horsehair stitches kept them in position without the least tension, and healing took place by first intention, a mere linear cicatrix being left along the line of the buttock fold.

The iodoform gauze plug was left *in situ* for ten days, and when it was removed it was found that the whole of the internal parts had entirely healed with the exception of one small spot about the size of a split pea, which soon cicatrised. In order to prevent cicatricial contraction in the new passage, a difficulty which has been found by many operators so hard to obviate, I had a dilatable indiarubber bag made, 6 inches long by 2½ inches wide, with a stem and stop-cock attached, so that being rolled up and introduced empty it could be dilated to any desired extent with air by means of a Higginson's syringe. This bag was worn for half an hour twice a day after the gauze plug was finally removed, and the patient still introduces it occasionally as a precaution against contraction. The vagina is about 5½ inches in depth, and the bag is pushed in almost its entire length.

The patient's bowels were kept confined for 10 days after the operation, and her water was drawn off thrice daily. The pain and constitutional disturbance were almost *nil*, and in three weeks she was allowed to get up on the sofa.

A few days ago I received a letter from her, in which she says "... I can walk quickly, and have no discomfort except after being overfatigued or sitting too long on hard seats. Marital relations are quite easy, and Mr. —— and I agree in pronouncing the operation an unqualified success. I am already a good deal fatter!"

Two points of interest suggested themselves with regard to the skin flaps which covered the walls of the new vagina: First, how far the skin of the buttock would take on the characters of mucous membrane similarly to what one finds in the skin of the cheek when used to fill up gaps in mucous surfaces in plastic operations about the face; and secondly, how far and how soon the nerves of the new vaginal walls would give the patient the sensation that they belonged to her vagina and not to her buttocks.

With regard to the first point, it was interesting to notice that, as usually happens under such circumstances, there was a complete desquamation of the epidermis covering the flaps in the shape of a cast, which separated about a fortnight after the operation. The skin lining after this appeared to remain somewhat redder and smoother, but sufficient time has hardly yet elapsed to judge what further change in this direction may happen.

In regard to the innervation, at first the patient had very little sensation when the vaginal skin-covering was touched with a probe, but was rather inclined to refer this slight sensation to the buttock. After four weeks she felt it as being "in front of the bowel." She now reports it as feeling as more decidedly in the position of the vagina, though sensation is still rather dull. Here, again, it will be interesting to notice any further change that may happen in the course of time.

In an interesting digest of the Recent Literature on Atresia of the Vagina, Dr. Ballantyne[1] mentions a case of atresia operated upon by Paul Walton.[2] Here there was evidence of a functionating uterus and ovary, and Walton accordingly opened Douglas's pouch, pulled down the cervix, opened it, and stitched it to skin flaps taken from the vulvar infundibulum. In such a case, however, as the present one such a step as opening the peritoneum was not called for; but where there are evidences of physiologically active uterus and ovaries, it would appear to be the most certain and satisfactory method.

Sneguireff's method of excising the coccyx, dividing the rectum, making a new anus in the coccygeal region, and utilising the lowest portion of the gut to make a new vagina, will probably for various reasons not commend itself to many operators.

REFERENCES.

[1] *Scottish Med. and Surg. Journal*, June, 1899. [2] *Belgique Méd. Ann.* 5, 354. 1898.

THE Congress of the Italian Obstetrical and Gynæcological Society will be held in Pavia in October.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A NOTE ON THE TELEPHONE PROBE.

I OBSERVE that Mr. Treves, during his recent experience in South Africa, found a telephone probe of great use in cases of gunshot wounds in demonstrating the presence and situation of bullets, etc. He speaks of the probe as having been recently suggested by Dr. Hedley. It may be of interest to note that an almost exactly similar instrument was used by me in the Aberdeen Royal Infirmary upwards of thirteen years ago.

The case was that of a woman who received a pistol wound in the face. Ordinary modes of examination as to the situation of the bullet failed to give any information; but my then much esteemed colleague, Mr. M'Kenzie Davidson—now of London—suggested the use of a telephone probe, which he most kindly prepared for me, and with which the presence of a bullet was at once shown. Next day I removed it from the antrum, where it was lying quite loosely.

A few days afterwards I delivered a clinical lecture on the case, and subsequently gave a demonstration at a meeting of the local Branch of the British Medical Association, which was, I think, noticed in the pages of the BRITISH MEDICAL JOURNAL at the time.

The telephone probe is, I believe, variously known as "Hedley's" or "Pratt's," but, if priority in use is to go for anything, both names are misnomers; and, although the idea of applying the telephone to the purpose now under notice did not actually originate with McKenzie Davidson, he was, so for as I know, the first to prove its practical value, which has recently been so strongly attested by so high an authority as Mr. Treves.

J. C. OGILVIE WILL,
Consulting Surgeon, Aberdeen Royal Infirmary.

INCOMPLETE INVERSION OF THE UTERUS.

HAVING seen a case of complete inversion reported in the BRITISH MEDICAL JOURNAL of March 10th, and being struck with the rarity of the accident as shown by statistics, I venture to think the following case may seem of some interest:

On the morning of March 5th I was called to attend a woman, aged about 30, in labour at the seventh month. She was a weakly woman, and had had twelve pregnancies in nine years. There was almost complete inertia, but eventually a living child was born naturally. Fifteen minutes later I expressed the placenta, which was nowhere adherent. When I left the patient, about fifteen minutes later, she expressed herself as being quite comfortable and free from pain, and the uterus was well contracted. About half an hour later, while in attendance on another confinement in the same street, I was hurriedly summoned back to the patient I had just left, who was said to be "in a fit." I found her in a condition of extreme collapse, almost pulseless, with the hands and feet quite cold. She complained of extreme pain "in the body." On examining the uterus through the abdominal wall, which was very thin; a cup-shaped depression could be distinctly felt in the uterus, and on digital examination the fundus could be felt low down, presenting a convexity corresponding to the depression felt from the outside. I was able to push the fundus up with the fingers, using counterpressure from the outside, and it remained in place. After warmth had been applied to the feet, and the patient had swallowed a little brandy, she soon recovered, although the pain persisted for a few days to a less degree. She is now (March 21st) quite well. There was but slight hæmorrhage.

Kippax, near Leeds. J. H. WILSON, L.S.A.Lond.

A CASE OF PUERPERAL ECLAMPSIA IN A PATIENT AGED 15 YEARS: RECOVERY.

ABOUT 8.30 P.M. on January 5th, 1900, while acting as *locum tenens* for Dr. Thomas Thyne, of Barnet, I received an urgent message to see a girl who was in labour. I was told that she was "unconscious and that they could not get the child away." On my arrival I found the patient pale, cold, and collapsed from having lost a considerable quantity of blood. The child, weighing 7½ lbs., was separated before my arrival. I was told she had had two fits before the birth of the child. She was unconscious, with pupils dilated and fixed, and the pulse, 140, was small, weak, and thready. She was apparently dying. After a hypodermic injection of ether, chloroform was cautiously administered as convulsive movements were again commencing. Meanwhile Dr. William Thyne, who had accompanied me, proceeded to deliver the placenta and to suture the perineum, which was torn as far as the recto-vaginal septum. The patient, whose condition had somewhat improved, was then removed to bed from the couch on which she was delivered, warmth was applied and chloroform again administered to check another convulsion. Hæmorrhage and collapse again threatening, hypodermic injections of ergot and brandy were freely given. About 9.30 P.M., when she partially regained consciousness, a mixture of bromide and chloral was given. This was repeated at intervals during the night. The fits, decreasing in violence, recurred during the night at intervals of from fifteen to forty minutes until 4.30 A.M., when they ceased, to commence again about 7 A.M. The final convulsion occurred at 11 A.M. Complete consciousness was not regained till about an hour later.

The patient, aged 15, had begun to menstruate when 14. She had not had scarlatina nor infantile convulsions. She was employed as a domestic servant at a house three miles away. She walked home on the afternoon of the day she was confined, but had no recollection of having done so. There was no œdema. The urine, obtained by catheter, contained a small quantity of albumen, its reaction was acid, specific gravity 1013. Microscopic examination of the centrifugalised deposit failed to reveal the presence of casts or renal cells. A week later the urine was normal. Recovery, apart from the resulting anæmia, was uninterrupted. The chief points of interest in the case are the youth of the patient and the complete recovery from an almost desperate condition.

High Barnet, Herts. DAVID R. G. CORRIGAN, M.B.Dub.

WHEN IS CANCER CURABLE?

THE communications of Mr. Jalland and Dr. Fison on the above question in recent issues of the BRITISH MEDICAL JOURNAL not only expose the fallacy of the three years' time limit when speaking of the operative cure of cancer, but also open up other and hardly less important subjects of inquiry. As bearing upon the length of time a patient may remain without recurrence, the two following cases are of interest:

(*a*) A lady, aged 70, was operated upon by me a few months ago for malignant disease of the rectum who eighteen years before had excision of the breast performed for cancer. In the interval there had been complete freedom from the disease.

(*b*) A patient, aged 55, in January, 1891, had her left breast and axillary glands removed by me for scirrhus, remained well for five years, at the end of which time in consequence, as she thought, of a blow upon the scar, there developed an atrophic form of the disease, which seen by me in June, 1899, was found to have advanced very little, gave her hardly any trouble, and seemingly did not affect her general health. The slow growth of some forms of malignant disease is well shown in the above case, and also in the following: Mrs. R. aged 55, began with atrophic cancer of the left breast in 1880, and from then till 1896 was under my observation, during which time its progress was very slow and limited. It gave her no pain, and had no effect apparently on the general health. In 1898, in answer to a letter, she said the breast condition remained pretty much as before, and in 1899 she died from old-standing lung trouble.

These and many other cases which are no doubt stored away in the experiences of many, go to show the need of reconsidering our position with regard to (1) our prognosis after operation, and (2) in giving opinions to patients or friends of the probable duration of life in cancerous trouble.

Nottingham. GEORGE ELDER, M.D.

MEDICAL STUDENTS IN SWITZERLAND.—The total number of students of medicine in the five universities of Switzerland in the first semester of the academic year 1899-1900 was 1,252. They were distributed as follows: Basel, 142; Bern, 291; Geneva, 327; Zürich, 348; and Lausanne, 144. In the whole number there were 599 foreigners, and 411 women. Among the latter there were only 22 Swiss. The only university which has no women among the students regularly entered in its medical faculty is Basel.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

MEDICAL COLLEGE HOSPITAL, CALCUTTA.

A CASE OF POST-HEMIPLEGIC ATHETOSIS.

(Under the care of Lieutenant-Colonel G. H. A. Harris, I.M.S., First Physician, to the Hospital).

[Reported by U. N. Brahmachari, M.A., M.B., House-Physician.]

The following case is of interest in that it is an example of athetosis occurring in an adult after almost complete recovery from hemiplegia.

A Hindu male, aged 25, belonging to the railway mail service, stated that on July 7th, 1899, twelve hours after a fatiguing swim, he began to suffer from giddiness and weakness of the left side. Two or three days later he was admitted into the hospital with paralysis of the left side, but without any sensory disturbance. There was no history of syphilis, but one of occasional fits of unconsciousness for about a year. The patient left hospital almost recovered. About a month after leaving the hospital he was awakened from sleep by an involuntary flexion of the left middle finger, which since then has more or less persisted in a series of mobile spasmodic movements. This condition gradually increased and affected the other fingers, interfering very materially with his work, and it was on this account that he again sought relief on December 12th, 1899.



On admission he was found to have a slight disorder of sensation in the fingers of the left hand. A grasp with the left hand of 20 lbs., while that with the right hand was 70 lbs., and athetoid movements in the fingers of the left hand. There was a slow mobile spasm affecting mostly the interossei and the lumbricales of the left hand. The amount of spasm in these muscles varied from time to time, and thus slow, successive inco-ordinate movements of flexion, extension, pronation, and supination of the fingers were produced. During the execution of some of the movements the interphalangeal joints passed into a state of subluxation. Sometimes the distal phalanges were extended, showing that the long extensor also partook in the spasm. Sometimes the first phalangeal joint of the middle finger was strongly flexed with the thumb closely pressing against it, and sometimes there was flexion of the last phalanges of one or more fingers, showing that the long flexors of the fingers also partook in the spasm. This implication of the long flexors is noteworthy, as Gowers says this never takes place. Rarely the fingers assumed a position which has been compared (Charcot) to that of the contracture of the type of extension in chronic articular rheumatism. Occasionally there was a simulation of some of the above movements by the fingers of the right hand, though they were hardly so marked as to justify the case being regarded as one of double athetosis (two of the positions assumed by the fingers are given in the accompanying photographs). Rarely there was an involuntary hyper-extension of the left big toe, and subsequently of the other toes, especially during walking. The movements disappeared during sleep, and could be controlled and limited only for a short time by position and extraordinary effort of the will. The phenomena, as pointed out by Von Ziemssen, seemed to have partially the character of associated movements, for while the fingers moved the arm became rigid and hard. The spasm disappeared when the wrist or the fingers were rigidly flexed, but after a time it started again, sometimes slowly and sometimes suddenly. The spasm markedly interfered with a voluntary act, so that the patient had to wait till it passed off. There was not the slightest permanent contracture in any of the fingers. Besides the above there were the negative symptoms of absence of motor paralysis of any cranial or spinal nerves and of wasting of any groups of muscles.

Remarks.—The diagnosis of a case of athetosis as a post-hemiplegic state is simple when one is alive to the character and significance of its symptoms. The condition, as Drewry says, is impossible to be imitated, even by the most skilful malingerer. The seat and nature of the lesion in athetosis have not as yet been satisfactoriiy worked out. Hammond, who first described the condition, supposed the seat of the affection to be in the intracranial ganglia or in the upper regions of the spinal ganglia. He also states that one probable seat of lesion is the corpus striatum. Von Ziemssen supposed it to be due to changes, partially circumscribed, of the centres of motor innervation, while Hitzig supposed it to be due to irritation of these centres. Beevor considers it to be due to lesions in the motor regions of the cortex, and in favour of this view might be cited his case in the British Medical Journal for 1890. Osler, however, says that in cases of athetosis occurring in adults, the lesion is not in the cortex. Gowers says that a distinction must be made between the cases occurring in adults and those in childhood. He thinks that in the former the disease is situated in or outside the optic thalamus or in some cases in the posterior part of the internal capsule. In Gould's *Yearbook of Medicine and Surgery* for 1899, it is stated that von Kunn collected 14 cases from literature, in 7 of which there was localised disease of the corpus striatum, in 4 of the optic thalamus, in 2 of the pons, and in 1 a softening involving the optic thalamus and corpus striatum. As regards the nature of the lesion, it has been supposed to follow mostly cerebral softening, causing "extensive slight damage." James Taylor, in his article on cerebral palsies of children, states that cases of paralysis followed by athetosis in adults are mostly the results of accident. In the present case no history of accident could be discovered. The history of hemiplegia following on over-exertion might be suggestive of embolism, in which case, however, the paralysis would more immediately follow the over-exertion; nor are there at present any signs of heart lesion which might be suggestive of a possible source of emboli. On the other hand, the excited action of the heart and increase in blood pressure consequent on the over-exertion in swimming might have led to rupture of some diseased vessels in the motor tract of the brain. The diseased condition of the vessels might have been the result of syphilis, of which the patient, however, denies any history. It may be that the association of the over-exertion with the hemiplegia was an accidental one, and that the occasional transient fits of unconsciousness might represent the minor

form of epilepsy (*petit mal*) with which the athetosis was connected as many of the recorded cases have been. The present case is of interest, as it is a case of athetosis in an adult unassociated with hemianæsthesia and vasomotor change, and following an attack of marked hemiplegia after it was almost completely recovered from; also because the long flexor and extensor muscles of the fingers were to some extent affected.

COLONIAL HOSPITAL, PORT OF SPAIN, TRINIDAD, W.I.

ASCARIDES LUMBRICOIDES IN AN ADULT.

(Under the care of E. A. G. DOYLE, M.R.C.S., L.R.C.P., Resident Surgeon to the Hospital.)

C. J., aged 24, unmarried, female, was admitted to the hospital on November 22nd, 1899, with a history of abdominal pain, vomiting, and diarrhœa of three days' duration. She had passed 15 round worms previous to admission. She had been suffering for some considerable time from indefinite stomach disorder, chiefly colic and anorexia. About November 15th she was suddenly seized in the early morning, while fasting, with severe abdominal pains. She became very pale and fainted in the ward whilst on duty. After an hour or two she was able to go on with her work, but felt giddy; the abdomen was a little swollen and painful.

On admission, she was found to be a well-nourished but pale young woman; her abdomen was distended, tender, and painful; she had nausea with vomiting, and complete loss of appetite. Her temperature was 101°. I ordered two powders, each containing 5 grs. of santonin and 2 grs. of calomel, to be taken every six hours, and followed by a dose of castor oil. Belladonna and glycerine were applied to the abdomen with hot poultices. On November 23rd she passed 9 living large round worms; on the 24th she passed 45 large round worms alive and matted together; and on the 25th she passed 1. As she complained of abdominal discomfort she was given 6 grs. of santonin in a dose of castor oil.

On November 26th she passed 13 very large round worms. On the 27th the santonin was repeated. On the 28th 2 worms were passed, and on the 30th another, making 86 in all. She was then discharged much improved.

On January 18th, 1900, she began to complain again of abdominal pains, *malaise*, and loss of appetite, and similar treatment was adopted.

On the following day she passed 18 large round worms, alive.

On January 24th she was given an iron tonic, and on February 15th, at the time of writing, the patient has put on flesh, and her colour and spirits are much improved.

REMARKS.—The case is interesting because of (1) the age of the patient—24; (2) the large number of worms passed—104 in all; (3) the indefinite and misleading constitutional symptoms—*malaise*, anorexia, anæmia, and fainting; (4) the worms were passed alive and not dead, although 10, 6, 6, and 11 grains of the anthelmintic were administered; (5) the exhibition of the santonin mixed with the oil, as suggested by Küchenmeister, appeared more effective than when the two drugs were given separately.

THE LABORATORY OF THE NEW YORK ASYLUMS.—Some time ago pathological laboratories were established by the New York State Legislature in connection with the lunatic asylums of the State. These laboratories fulfil the same function in regard to the investigation of the pathology of insanity as the Laboratory of the London County Council Asylums at Claybury, which, under the direction of Dr. Mott, has already done such excellent work. The New York State Legislature, however, appears to be inclined to give up its laboratory. It was originally intended as a place in which work for the different asylums of the State should be done, and no other; but we learn from the New York *Post-Graduate* that statements have been made to the effect that the money has been diverted from the purpose for which it was intended, and that the hospitals for insane and nervous people do not get their specimens examined, nor the subjects in which they are interested elucidated. The Medical Society of the State of New York recently passed a resolution urging the Legislature to continue its annual appropriation for the laboratories.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

A. PEARCE GOULD, M.S.Lond., Vice-President, in the Chair.

Tuesday, April 3rd, 1900.

THE BLOOD IN DISEASE.

A DISCUSSION upon this subject was opened by Dr. SIDNEY MARTIN, F.R.S., who spoke as follows: The changes which occur in the blood in disease are of great importance from a pathological as well as from a clinical point of view. Consisting as it does of plasma, red and white corpuscles, and blood plates, the blood has from time immemorial been the subject of laborious research, both from the point of view of the phenomena of coagulation and the nature of the corpuscles. In disease, not only do the plasma and corpuscles show great changes, but we have a great number of known effects of bacteria which have received great attention of late years. In the present communication the changes of the blood in disease will be considered under three headings: (1) changes in coagubility; (2) changes in the corpuscles, both red and white; (3) the presence of toxic substances, and the relation of the blood to infection. In the short time at my disposal it is impossible to deal at all fully with any one of these points; and there are many speakers here who are more competent than I am to speak with authority upon them. My province is by way of introduction to suggest the lines of the discussion which is to follow. (1) *Changes in Coagulability in Disease:* The phenomena of the coagulation of shed blood has received great attention from experimenters at all times, and the simple statement by Schmidt that the formation of fibrin was due to the interaction of the so-called fibrin ferment on fibrinogen does not make the whole matter clear, for it does not take into account the close relation which exists between the formation of fibrin and the presence of lime salts. Among the many ways, for example, of preventing coagulation of blood is the removal of the lime by adding sodium oxalate to blood as it is shed, in the proportion of 1 to 1,000. In this way you get an oxalate plasma which clots only after a long period, but readily on the addition of calcium chloride, as in the formation of casein in milk. Therefore, lime salts are essential in the formation of fibrin in the blood, so that the phenomenon of coagulation has been ascribed to the interaction of lime salts with one or other of the proteids present in the blood. The subject has been developed of late years by the study of the class of bodies which are called nucleo-proteids. These nucleo-proteids contain phosphorus, and are by digestion separated into a body called nuclein, and a proteid which is capable of digestion. They exist widely distributed in the body and in the blood itself. They exist in the red and white corpuscles, in the blood plates, and in the plasma. Fibrin ferment is considered by Pekelhäring as a lime compound of a nucleo-proteid. These nucleo-proteids are the same bodies with which Wooldridge worked in his experiments on intravascular clotting. On the one hand they have some relation to the class of proteid bodies called globulins, and on the other to the albumoses which are products of digestion. Without it being quite clear as to what exactly happens during the formation of fibrin from the blood, the nucleo-proteids are an important class of the organic constituents of the body, especially of the cells, and not improbably play a great and important *rôle* in disease. Wooldridge showed that the intravascular injection of what he called tissue-fibrinogens, which are really nucleo-proteids, caused a clotting of the blood in the vessels during life in the majority of instances, although in some cases no clotting occurred, and the blood was more fluid than normal. Intravascular clotting was therefore produced in this case without any injury to the vessel wall, there being by the injection of the substance a change in the blood which led to the formation of fibrin. Similar intravascular clotting was produced by Pickering with his artificially prepared colloids, and also by snake venom. Intravascular clotting frequently occurs without disease of the vessel wall in cases of infection, but what actually occurs in such cases is not at present known. It may be that the toxic substances produced by infective agents may liberate a certain amount of nucleo-

proteid in the blood, and so produce coagulation. There is some evidence that perhaps during the growth of bacteria fibrin may be formed. In some experiments which were performed with the colon bacillus by growing it in a serum which had been sterilised by filtering through a Chamberland filter, I found that in many instances the continued growth of the bacillus resulted in a clotting of the serum, which was at first quite limpid. The colon bacillus is one which has practically no digestive action, although it secretes a very powerful poison. Its power of coagulating serum may show that the thrombosis occurring in infective disease is due to the action of the infective agent itself, but further research is necessary before any light from this source can be thrown on the phenomenon of the formation of fibrin. Increased fluidity of the blood is frequently observed in infective disease, and it may be produced artificially by many different substances. The most familiar instance is by the injection of a certain amount of albumoses into the circulation of the dog or cat; the blood remains fluid in such cases after withdrawal. Similar results, however, are not obtained in the rabbit. The "peptone" blood which is obtained by this means can be made to coagulate by passing carbonic acid through it, by diluting it with water, by adding calcium chloride, nucleo-proteids, or lymph cells. Albumoses as such do not exist in the body, and do not remain any length of time in the circulation when injected. How exactly the injection of albumoses into the blood stream produces a fluidity of blood is not yet explained, but similar results have been obtained by the injection of malt diastase, of emulsin, of extract of leech heads, and extract of crayfish muscle; and fluidity of the blood is observed in poisoning by abrus, and by some of the poisonous substances formed by bacteria. (2) *Changes in the Corpuscles in Disease:* The number as well as the character of the red and white corpuscles in health varies between only small limits in adult life. Red corpuscles, which we will first consider, appear during development in the vessels before the white. They are mesoblastic in origin, and before birth they are formed inside the cells. During the growing period in adult life, the red corpuscles are constantly being formed, mainly from the red marrow. The erythroblasts which are there found are nucleated, often having two nuclei, tinged with hæmoglobin and varying not only in size but in shape; some being round, some oval, and some pear-shaped. The variation in size, in shape, and in nucleation of the developing red corpuscle, is of importance in consideration of the changes which are observed in the red discs in disease. The red discs are the seat of the growth of the malarial parasite, which causes the destruction of the corpuscle affected, but does not produce any marked change in the unaffected corpuscles; so the changes here observed are different from the more generalised changes which have to be considered. The increase in the number of red discs is in some cases temporary, as when there is a concentration of blood, as in profuse discharges from the body; but it is noticeable that both in phosphorus and in carbonic oxide poisoning an increase in the number of discs has been observed. Nothing need further be said upon this point, as the changes in the red corpuscles which are associated with anæmia require to be more fully discussed. This condition of the blood in anæmia is usually divided into two groups: primary, which includes chlorosis and pernicious anæmia; secondary, or symptomatic anæmia, which results from previous or coexisting disease, such as infective febrile disease, malignant disease, chronic suppuration, dysentery, and cirrhosis of the liver and kidney, intestinal parasites, and certain poisons, such as lead and arsenic. The variations in the corpuscles which are met with in disease may be considered under variations in shape and size, and variations in structure Variations in shape consist chiefly in a loss of the dumb-bell form, that is of the central cupping of the corpuscle, and in the discs becoming either oval or pear-shaped. In size we have small corpuscles called microcytes, and those larger than normal called macrocytes. Variations in structure consist chiefly in the presence of nuclei in the red corpuscle. Nuclei may exist in small corpuscles or in very large and deformed corpuscles, and may show signs of division and of degeneration. Vacuolation of the corpuscle is also frequently observed in profound anæmias. These changes in shape recall the different varieties of erythroblasts found in the normal red marrow. They are corpuscles which do not undergo a normal transformation into the adult red corpuscle, but when discharged into the blood undergo degeneration. They are to be considered, therefore, as examples of arrest of development of the red corpuscle. To return to the consideration of anæmias. In secondary anæmia there may be various degrees; in some, hæmoglobin alone is diminished; in a more advanced condition the hæmoglobin is diminished, but without any marked diminution in the number of the red corpuscles. These show the changes both in shape and size which have been described previously, and with this change in shape, a loss of rouleaux formation occurs. These changes are observed in malignant disease, lead poisoning, and most of the other conditions previously enumerated. In other cases of secondary anæmia both the hæmoglobin and the number of corpuscles is diminished, and in still other cases, in addition to these changes, nucleated red cells appear in the blood, which presents then much the same signs as are found in anæmia of the pernicious type. In chlorosis the pale watery blood coagulates rapidly, while showing only a slight diminution, it may be, of the number of red corpuscles, there is a great diminution in the amount of hæmoglobin. Changes in the shape of the cells occur, but not to any great extent, although undersized red cells are frequently seen. The colour index of the blood is always low, that is, below 1. The pale watery blood of pernicious anæmia is very slow in coagulating, the red corpuscles show no rouleaux formation; and while there is a great diminution in their number, show rather a higher percentage of colouring matter: so that the colour index is usually over 1. The red cells also show great changes in shape and size, and nucleated corpuscles are frequently observed. It is impossible to consider the changes of blood in pernicious anæmia without thinking of a condition of poisoning. Such a great change in the blood, showing deficient formation of corpuscles as well as destruction of the cells, cannot arise spontaneously, and appears more likely to be the result of some profound change induced by an intoxication of the body. What exactly this intoxication is has not yet been clearly defined; but there are sources of chronic intoxication which are known, and which have to be considered as agents in the production of the disease. Such is the intoxication which is the result of bacteria in the alimentary tract, both in the upper and lower parts; and there is some evidence to show that chronic intoxication from this source may be one of the agents in the production of pernicious anæmia. Of the white corpuscles of disease there is but little time to speak. The full discussion of this important subject I must leave mainly to others. The normal variations in the number of white corpuscles is greater than that of the red, both according to age and according to the physiological processes of digestion and of pregnancy. In diseased conditions an increase in the number of leucocytes occurs in many different conditions, which may, however, be divided into two great classes, the first class including those cases which occur as the result of infective disease, of definite poisoning, such as gas poisoning, quinine, the action of salicylates, and of ether as an anæsthetic, and those that occur in the course of malignant disease. All infective disease does not lead, however, to leucocytosis, notable examples being typhoid, malaria, and tuberculosis. The second great group of cases occurs under the heading of leukæmia, with its two varieties of splenic-myelogenous leukæmia and lymphatic leukæmia, in the former of which the great feature as regards the blood, besides the enormous increase in the number of white corpuscles, is the presence of myelocytes which are derived from the marrow, and which are not present in normal blood. In lymphatic leukæmia the increase of leucocytes is not so great, and in both conditions, at any rate in the early stages, no changes in the red corpuscles are observed. Later on, however, nucleated corpuscles occur, and there is an anæmia developed. Both these forms, as well as in some other forms of anæmia without leukæmia, an enlargement of the spleen occurs, which I can only just mention; but the presence of an enlargement of the spleen is of interest as indicating a possible toxic origin of these conditions. (3) *The Effect of Certain Toxic Substances in the Blood:* The effect of certain toxic substances in the blood has already been mentioned, and it is impossible to study many of the conditions under consideration without feeling that an explanation

of their occurrence may be that of an intoxication of the body. Toxic substances not only have a general action which may lead to death of the body, but they have a specific action, selecting certain tissues and organs of the body for their special effect; and may produce by their effects not a sudden death but a gradual death, which may show itself in slow changes in form and composition of the cells of the body. A prolonged action, however, of toxic substances has to be taken into relation with a degree of resistance of the individual; so that in a resistant individual there may be signs of reaction to the effects of a poison, and this is more particularly seen in the effects which are noticed as the result of the injection into the body of the poisons of bacteria. In certain doses they may kill; in smaller and repeated doses they lead in certain conditions to the formation of substances which are of two kinds: either simply inimical to the life of the bacterium or inimical both to the life of the bacterium and to the effects of its poison, that is, antimicrobic and antitoxic. These are new substances in the blood, inasmuch as even if present in normal conditions they must exist in extremely minute quantities.

Professor SHERRINGTON, who dealt with the pathology of the blood, said he felt the subject, though wide in scope, should and would pivot round chemical rather than histological data. He would be hindering rather than helping the objects of the meeting were he to dwell at length on other aspects of the subject than those toward which he had been invited more especially to speak. There was the histology of normal and morbid blood, and foremost among histological features the red corpuscle—the erythrocyte. No cell in the body was better known. The monotonous coin-like regularity of size and shape of the red corpuscles was suprising. A feature common to many morbid states of blood was deviation of the red corpuscle from this uniformity. When they recalled the constant destruction and reproduction of red corpuscles that must occur normally, as evidenced by the diurnal excretion of pigments derived from hæmoglobin, the steady maintenance of the standard value of the blood, and the rapid restoration of hæmoglobin after hæmorrhage, it became clear that the exact uniformity of the red corpuscles must be apparent rather than real even in normal life. Some of them must be young, others senile, the latter soon destined to be withdrawn from circulation, and to die in the liver, spleen, mesenteric lymph glands, etc. Differences between them could be shown. Professor Hamburger had introduced the red corpuscle as an index in the examination of the osmotic tension of various fluids, especially of certain organic fluids of the body. Professor Sherrington was not sure that the most interesting aspects of Hamburger's work might not prove to be the facts they yielded less regarding the fluids than regarding the corpuscles themselves—for instance, their power of maintaining themselves undisintegrable for long periods in plasma and serum of which the osmotic tonicity differed widely from the normal. Greater resistance was shown by nucleated erythrocytes than by non-nucleated. When, therefore, the individual corpuscles in one and the same specimen of blood were seen to possess widely-different powers of resistance, it might mean that the more resistant forms were the younger. What the normal mode of destruction of the red corpuscle is we do not know. The absence of even traces of hæmoglobin from the plasma may mean that the corpuscles normally have their ending by destruction inside the body of phagocytic cells that have devoured them. Such phagocytosis can be studied in process in the spleen. But certainly in some diseases phagocytosis does not seem to account for the whole of the destruction—for instance, in paroxysmal hæmoglobinuria and in blackwater fever, where a large quantity of the respiratory pigment of the blood is suddenly excreted by the kidneys. In the paroxysm of malaria the red corpuscle was burst, perhaps by the activity of the sporing parasite within it. He was told by Major Ross that even then there occurred a much greater destruction of red corpuscles than could be accounted for by the destruction of those simply containing ripe parasites. It would be interesting to know what the osmotic resistance of the corpuscles was in such cases; also the osmotic tension of their blood plasma. V. Lunbeck had examined the corpuscular tonicity in a few of the anæmias, and found it altered. But his seemed to be the only published observations of the kind. The globulicidal action of one blood upon another was a related problem. The Grünbaum-Widal agglutination reaction for typhoid serum was probably another. Mr. Shattock had recently examined an allied phenomenon—nnmely, the clumping of corpuscles in pneumonic cases. Sir Lauder Brunton had demonstrated that discs and rods greased and immersed in water ran together and clumped or kept apart according as the water was rendered faintly alkaline or faintly acid. Observations showed that the more alkaline the blood and the higher its osmotic tension, the less did its corpuscles withstand dilution of the medium. Observations on the alkalimetry of blood were still, in spite of the labours of Professor Wright and others, much needed. So much attention had in recent years been paid to the hæmic leucocytes, that it was scarcely possible to epitomise the results. The late Professor Kanthack had bequeathed a good natural system of their classification, a system now generally adopted. Quite recently a careful standard of the normal percentages of the different kinds in human blood had been furnished by Dr. Phear. Professor Sherrington urged the advantages of counting the leucocytes and the red corpuscles in one and the same film. He believed also that the ease of obtaining differential counts in living films was not realised to the full extent it might be. A good and innocuous fluid was the following: Water 300 parts, sodium chloride 1.2 part, neutral potassium oxalate 1.2 part, Ehrlich's methyl blue 0.1 part. The nuclei of the leucocytes became tinged in this while the cells were still living. The living film if sealed with a little oil preserved its appearances perfectly for many hours. Satisfactory as was the knowledge of the leucocytes for the diagnosis of certain forms of blood disease, all solid ground for theory of their life-history and functions was still sadly wanting. Whether the various forms were different species, or whether they were individuals of one species with a polymorphic existence, and to what extent they reproduced themselves within the blood, these were questions still without satisfactory answer. The use or constitution of their granulations was still really unknown. An old view related the coarse oxyphil granules to hæmoglobin. Their ignorance of the manner of upbuilding of that great respiratory pigment was still very profound. He had himself found the coarse oxyphil granulation to be rich in phosphorus, a result confirmed recently with improved microchemical methods by Professor Macallum, of Toronto. The granules had been found by Barker to be also rich in iron. The part played by the blood leucocytes in inflammation had become gradually fairly clear in outline. The blood leucocytes were, so to say, a mobilised force, which could be drafted to the seat of irritation quickly, and these contributed by their phagocytic elements to the defensive phagocytosis, by their secretory elements to the outpouring of defensive substances. It was further clear to his mind, partly from experiments conducted by Mr. Ballance and himself, that the leucocytes of the blood did not contribute formative elements to the process of repair, although they perhaps served as pabulum for formative cells different in origin to themselves. Regarding the enormous general leucocytosis in the blood which accompanied some febrile and most acute local inflammatory states it was noteworthy that the coarsely granular oxyphil cells diminished in number, although the other forms increased; the increase did not seem to be explicable by multiplication of the cells within the blood stream; but it must be remembered that it was only the cutaneous blood that was usually under examination. The present discussion would serve a useful purpose if it indicated the relative practicability and reliability of the now numerous methods for the clinical examination of blood. The measurement of the specific gravity of the blood—namely, of corpuscles and plasma together—could easily be accurately and quickly performed with use of a single drop of blood, and could by use of the centrifuge be most usefully amplified by measurement of the density of the plasma obtained from a second drop. This method had led to the detection of great and rapid changes occurring in the quantity of circulating blood when extensive traumata, either accidental or surgical, occurred, especially such as involved the abdominal cavity or induced symptoms of collapse. Observations by Dr. Copeman and himself and

by Dr. Cobbett and the late Professor Roy had shown that the volume of blood in the body might in the course of a few hours be enormously reduced. The reduction fell entirely on the plasma. Hence the thirst which was frequently a distressful after-effect of abdominal operations. The percentage of corpuscles in each unit volume of blood rose. The blood was in short inspissated. The specific gravity of the blood increased therefore, though that of the plasma of the blood might remain unaltered or become even less than previously. He had seen the specific gravity rise twenty degrees in a few hours. This greater corpuscular richness must affect seriously the viscosity of the blood. By far the greater part of the work of the heart was spent in overcoming the frictional resistance of the blood in its movement through the blood vessels, especially in the capillaries. In that part of the circulation where the blood flowed without a plasmotic zone being found between the axial core containing corpuscles, and the vessel wall, the increase of the corpuscular richness must vastly add to the resistance offered to the mechanical power of the ventricle. The "resistance" to the propulsion of blood along the district of the minute arterioles, capillaries, and venules, which was the district offering the greatest resistance to the heart's force, must very greatly increase. Opportunity to realise the gravity of the strain that such concentration and inspissation of the blood could impose upon the cardiac action arose in the case of Asiatic cholera in the algid state. He could not help thinking that death in that stage of cholera was often traceable to the cardiac failure to meet an enormous demand put upon the heart's power by increase of the frictional resistance of the blood due to the inspissation. In collapse of traumatic origin a similar kind of strain was imposed. The drinking of a certain amount of fluid would then, besides relieving the thirst, assist the circulation, mitigate tendency toward collapse, and do general good rather than harm.

[The discussion was adjourned.]

MEDICAL SOCIETY OF LONDON.

Frederick T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, March 26th, 1900.

The Pathology of Gout.

Dr. Luff and Dr. William Bain read papers on this subject, which are published at pp. 834 and 836.

Dr. Sansom commented upon the facts that gouty deposits were soon got rid of in some cases and persisted in others, and that pain was present in some cases. Sodium salts were said to promote the deposition of the crystalline form from the soluble quadriurate, while the potassium salts retarded this change, yet a mixture of the two salts gave remarkably good results.

The President agreed that the combination of sodium and potassium salts gave good results. He referred to a case of his own in which a young man with slight hereditary tendency, a teetotaller and vegetarian, had remarkable gouty developments without anything to account for them.

Dr. Luff, in reply, pointed out that the persistence of the deposits or otherwise was entirely dependent upon the condition of the blood in respect of alkalinity. If this remained high the deposits could not be dissolved. If the deposits were formed slowly there need be no pain, sudden and rather copious deposit being necessary for its production. He did not think that the cases associated with acute necrotic changes in the joints were true cases of gout, but rather rheumatoid arthritis in which gout had supervened. Dr. Bain had not told them for what relative lengths of time his patient had been put on the different forms of treatment, but he could not help thinking that the patient's gouty condition must have been greatly influenced by the previous treatment. He expressed his confidence in the efficacy of guaiacum in many forms of chronic gout, in irregular gout, and also as a prophylactic of gout, given preferably in tabloid or cachet form.

Dr. Bain, in reply, explained that the patient was given each of the drugs for three days, except colchicum, which was given for four days. There was an interval of three days between each drug. Sir William Roberts had suggested that the absence of pain in some cases depended (1) on the rapidity of the deposit, and (2) on sensory nerves being involved.

LONDON POLYCLINIC.

The Present-Day Treatment of Syphilis.

Mr. Jonathan Hutchinson gave a lecture on this subject at the Polyclinic on March 28th. He commenced by observing that the mortality from syphilis had been reduced by one-third in recent years, and that this was in accordance with what all observers had noticed as to the milder character of the disease. With regard to present-day treatment he said at once that mercury had gained the day, and was now almost universally used as an antidote to the disease, yet it is not absolutely essential to treatment, since syphilis, like other specific fevers, might run its course and die out, or there might even be spontaneous recoveries without treatment, time as well as mercury being essential to recovery. What, then, were the advantages of using mercury? If given early enough it might prevent any secondary symptoms, or if it did not prevent would render them milder. As to the way in which it was useful, Mr. Hutchinson suggested that it was antagonistic to the low organisms on which the disease depends. Discussing the question, Why was not mercury accepted earlier? the lecturer pointed out that it was possible for those who opposed its use in the earlier days to say that the relapses after its use were quite as frequent and often quite as severe as when it had not been employed; this was because it was used in too large quantities and for too short a time. Coming to the details of modern treatment, the question of the early removal of a chancre was discussed. This, if it could be done early enough, had a good basis in common sense, but there were practical difficulties in the way, principally due to the case not being seen early enough and to the insidious way in which the virus got into the system; if seen, however, within a week or a fortnight of being exposed to contagion removal might be effectual, and even if not preventing further symptoms altogether would render them milder. Mr. Hutchinson used a Paquelin's cautery, and as to local applications black wash was the best. Answering the question, At what period should we commence the internal administration of mercury? Mr. Hutchinson said the earlier the better. He had no doubt that mercury would cause a hard chancre to soften and disappear. We should not therefore wait for the appearance of secondary symptoms, but give mercury with the object in view of suppressing the disease altogether. His experience was that in nineteen cases out of twenty, if mercury were given from the fourth to the fifth week after infection, and persevered in long enough, no further symptoms appeared. The methods of giving mercury Mr. Hutchinson divided into three: (1) The temporary, in which mercury was given for chancre while it continued, for rash while it continued, and so on. (2) The interrupted method, where it is given for a couple of years, with interruptions. (3) His own continuous method of giving it for a long period without interruptions. He had found that if given for a year and then discontinued, an eruption might appear, but it would be mild, and if mercury were given again would soon disappear. As to the most convenient form of administration there were great differences of opinion. Mr. Hutchinson introduced it by the mouth, others on the Continent and elsewhere by inunction or injection. So long as mercury was introduced into the system it did not very much matter in what way, but there were drawbacks to both inunction and injection which prevented him using them, the chief of these being that the dose of mercury given in these ways was uncontrollable, and might cause ptyalism and even death. Mr. Hutchinson gave 1 grain of grey powder in pills, three times a day for a week, then four times a day, and at the end of a fortnight five times a day. He combined opium with it in $\frac{1}{4}$-grain doses to prevent diarrhœa, and directed the patient to go on for a year with this treatment, to be warmly clad, and fear no ill-effects. He used to think that if he gave quinine it might interfere with the effect of the mercury, but now often ordered iron or quinine in a mixture while the mercury pills were being taken. In tertiary syphilis iodide of potash might be required, but it also should be given in a separate mixture and not combined with any mercurial.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

A. C. O'SULLIVAN, M.D., President, in the Chair.

Friday, February 23rd, 1900.

EFFECT OF CERTAIN VARIETIES OF THE NUTRIENT MEDIUM ON THE GROWTH OF THE TYPHOID BACILLUS.

PROFESSOR E. J. MCWEENEY stated that the results of a serious of experimental cultures made by him, and exhibited at the last meeting, went to show that (*a*) the growth improved with increasing addition of $\frac{N}{10}$ NaOH to the unneutralised gelatine up to the beginning of alkalinity (indicator phenolphthalein): (*b*) the addition of salt, in quantities varying from 0.1 to 1 per cent., to the fully neutralised gelatine (same indicator) made no difference in the amount of growth; (*c*) the omission of both salt and peptone exercised no appreciably unfavourable influence on the growth in gelatine made with meat decoction; (*d*) addition of quantities of phenol to gelatine in the proportion of 0.05 to 0.5 per cent. exercised an inhibitory influence on all growths when the addition exceeded 0.07 per cent.; between 0.05 and 0.07 the effect was to check the anaërobic growth; and (*e*) Parietti's solution added to ordinary bouillon suppressed the growth of typhoid, when B. coli was also present. The addition of 9 drops (0.3 c.cm.) to 10 c.cm. bouillon, to which was subsequently added a few drops of a mixture containing both B. typhoidi and B. coli (for example, bile from a patient dead of typhoid), caused such retardation of the growths produced by plating out the tube on gelatine as to make them closely resemble true typhoid colonies. Tests, however, proved that nothing but B. coli grew in the Parietti tube, although ordinary agar plates from the same material yielded an abundance of typhoid colonies. It was on the suppression of typhoid by the Parietti test that the speaker desired to lay special stress.

HISTOLOGY OF TUBERCULOSIS OF INTESTINES AND LIVER.

Professor MCWEENEY showed naked-eye and microscopical preparations of this condition taken from a patient who had died of diarrhœa due to tuberculous enteritis in Dr. Dempsey's ward at the Mater Misericordiæ Hospital.

The floor of the very extensive ulcers was composed of granulation tissue consisting of cells with simple and polymorphous nuclei, but seemingly devoid of giant cells. Enormous multitudes of tubercle bacilli were lying between these cells, and were often actually in contact with, but not within, them; yet the tissue showed practically no sign of caseation. The liver sections showed tubercles in the very earliest stage of development, when they consisted of only a few epithelioid and lymphoid nuclei. He had arrived at the conclusion that many of the tubercles began by proliferation of the nuclei of intralobular capillary endothelium. The products of such proliferation were the "epithelioid" cells, with which a certain number of uninucleated "lymphoid" elements were *ab initio* associated. A certain amount of fibrin was present from the very commencement, and formed a reticulum between the cells of the young tubercle. The first effect on the surrounding liver cells was compression and flattening. He had arrived at the conclusion that the hepatic cells immediately adjoining the tubercle underwent metaplasia, and became converted into "epithelioid" elements. The giant cells began to make their appearance when the tubercle attained a diameter of 0.2 mm.; between 0.1 and 0.2 mm. giant cells were absent. They were at first so bigger than an epithelioid cell, but were characterised by a more distinct margin and a plurality of nuclei, which were the closer packed the younger the giant cell. He had convinced himself that in this case at least the multiplication of nuclei took place either by direct division or by a sort of sprouting. He had failed to observe mitoses in young giant cells.

Dr. McWeeney, in reply to the PRESIDENT, said he agreed with the statement that Parietti's solution was of no use for the analysis of milk. On plating out with gelatine they got a number of things which they could not say definitely to be true B. coli or pseudo-coli. He acknowledged the justice of the correction with regard to the reaction—he should have said decrease of acidity.

CORNEAL DERMOID TUMOUR OR PATCH.

Mr. ARTHUR BENSON and Dr. H. C. EARL described and showed specimens of a dermoid tumour removed from the globe of a [illegible] years. It grew, contrary to the usual custom, at the [illegible] and extended almost to the corneal apex. The sections showed that it was an island of true skin. It had been removed because of the irritation it produced, and because the parents were of opinion that it was growing larger. The causes usually assigned for the occurrence of these growths were stated to be an arrest of development: fœtal invagination of the external germinal layer (Remak), or a circumscribed adhesion between the amnion and the surface of the eyeball (von Duyse).

Dr. BENSON, in reply to Dr. WALTON BROWN (Belfast) said the wound took about two weeks to heal up, which it did without any undue irritation, and the resulting cicatrix was a perfectly smooth leucoma, such as they would have after an ulcer.

THE SCOPE OF X RAYS IN DENTAL PATHOLOGY.

Mr. GEORGE J. GOLDIE demonstrated the extreme usefulness of the *x* rays in obscure conditions where other methods of diagnosis had failed. The older methods of visual examination—palpation and probing—along with the history of the case, were often insufficient, and in such cases the Roentgen rays could be employed with almost certain results. The conditions in which he found the new agent most valuable were: (1) Fracture and dislocation of teeth in the jaw; (2) fracture of the jaw itself; (3) the diagnosis of inflammation round the roots of teeth; alveolar abscess; (4) the diagnosis of inflammation round the roots of teeth, giving rise to symptoms remote from the seat of lesion—neuralgia, trismus, etc.; (5) the treatment of impacted and in-coming wisdom teeth; (6) the normal eruption of the permanent teeth following the temporary or milk teeth; (7) the abnormal eruption of the same; (8) the absence or presence of any missing tooth in the jaw when its eruption had been abnormally delayed; (9) the regulation of teeth malposed in the jaw; (10) many purely clinical dental conditions which could only be mentioned without being described; (11) exostosis of roots of teeth; (12) foreign bodies in the antrum of Highmore. He illustrated each of these conditions by lantern slides of *x*-ray photographs taken in cases from practice, of which, during nearly four years, he had done over 300. His conclusions were that in dental practice *x* rays afforded a means of (*a*) corroborating or disproving existing diagnosis; (*b*) of establishing a diagnosis where that had not otherwise been found possible; and (*c*) of demonstrating these to the patient. The credit of having first used *x* rays in dental pathology was due, at all events in Ireland, to Dr. Richard Theodore Stack.

Mr. WILLIAM S. HAUGHTON gave a practical demonstration of the process, in which he skiagraphed an unerupted canine tooth in a patient aged 20 years. The skiagraph was taken, developed, and projected as a lantern slide, the whole process occupying just half an hour.

The PRESIDENT said the taking of a skiagraph would save patients having teeth drilled to see whether the nerve was alive or dead.

SPONTANEOUS RUPTURE OF THE ŒSOPHAGUS.

Professor MCWEENEY exhibited a specimen from an alcoholic male, aged 40. The man had retched violently before going to his work. His face and neck became swollen and his breathing difficult, so that he was forced to go to the Mater Hospital, where he died a few hours after admission. At the necropsy there was enormous swelling of the face and neck, due to subcutaneous emphysema. The origin of this was traced into the posterior mediastinum, the contents of which were coated with grey pultaceous matter, which could be seen escaping through a longitudinal rent half an inch long in the anterior surface of the œsophagus just above the diaphragm. The immediate cause of death was intense œdema of both lungs, associated with failure of a fatty right heart.

FŒTAL DEFORMITIES.

Dr. H. C. EARL exhibited (1) a specimen of cyclopian fœtus, with supernumerary fingers and diaphragmatic hernia, and (2) a fœtus with hernia funiculi umbilicalis.

MIDLAND MEDICAL SOCIETY.

E. RICKARDS, M.A., M.B., F.R.C.P., President, in the Chair.

Wednesday, March 7th, 1900.

PYLOROPLASTY.

MR. CHAVASSE showed a man, aged 42, a carpenter, upon whom, in July, 1899, he had performed pyloroplasty.

The man had suffered from symptoms of pyloric obstruction for more than two years, and his stomach was much dilated. At the operation, the stricture was found to be of a fibrous nature, and since its division his health and digestion had been excellent, and he had gained a stone in weight.

Other Communications.

Dr. Stacey Wilson showed a series of casts of the heart with dilatation of the right ventricle, illustrating his views on the origin and conduction of the pulmonary artery systolic murmur.—Dr. Foxwell read a paper on the function of the pericardium.

Wednesday, March 21st, 1900.

E. Rickards, M.A., M.B. F.R.C.P., President, in the Chair.

Nomination of Officers.

The officers for the ensuing year were nominated.

Osteitis Deformans.

Dr. Duncan Lawrie showed two photographs illustrating this disease—a front and a side view.

The bones that were chiefly affected were those of the legs, but the bones of the forearm were also much thickened and curved, and there was marked exaggeration of the dorsal curve of the spine. The head apparently had not increased in size. The patient was aged 43, and the disease had existed four years. The patient had, until incapacitated by the disease, been a clog-dancer.

Dr. Lawrie referred to over-exertion as factor in the etiology. He also referred to the tendency of cases of osteitis deformans to die from malignant disease, and suggested that the same physical degenerative condition which led to osteitis deformans was equally conducive to malignant growth. The patient in this case was badly nourished, and had a pulmonary systolic murmur due to anæmia, but there was no sign of malignant disease. The treatment which had been adopted consisted of rest and the administration of iodine of potash, iron, and cod-liver oil.

Hysterical Mutism.

Dr. Billington showed a woman, aged 31, who for nine years had been unable to understand spoken language, and had suffered from mutism. The onset was ascribed to a chill caught at a dance. After this she was for some weeks unable to see, hear, or speak, and lay in a lethargic state. Subsequently she recovered her sight, but during the past nine years she had been unable to speak properly, or to understand what was said to her. At the present time the patient could hear noises and voices speaking but was unable to make out the meaning of the words, and all questions had to be put down in writing. Her speech was syllabic, each syllable being repeated quickly several times, but there was no true aphasia and no aphonia, though it was practically impossible to make out what she said. Her vision was fairly good, and she could read and understand what she read. Her fields of vision were very much contracted, her field for colour vision was also much contracted, but about proportionally with the general contraction. Mentally the patient was intelligent and rather emotional. During the eight weeks she had been under close observation she had been quiet and had had no hysterical attack. During this time also her speech had never changed, and she had never given evidence of understanding spoken words. Her general health was very good, and there was no evidence of any organic disease, nervous or otherwise. Powerful faradism had been applied persistently both to the outside and to the inside of her larynx without any appreciable results.

Paper.

Dr. Stacey Wilson read a paper on some diagnostic difficulties which were apt to arise in dilatation of the right ventricle.

British Balneological and Climatological Society.—At a meeting on March 8th, Dr. Ivor Murray, President (Scarborough) in the chair, the discussion on the Treatment of Nervous Diseases and Affections by Baths and Climate, introduced by Dr. Harry Campbell on January 26th, was resumed by Dr. Leonard Williams, who said that inasmuch as the graver forms of nervous disease such as tabes, general paralysis of the insane, and the like were essentially diseases of city life, it was reasonable to suppose that better results were to be obtained by removing patients from such surroundings than by drug treatment alone. He instanced cases to illustrate the good effects of climatic treatment in these affections. Dr. Alexander Morison said the general principles to be observed were regulated by the need of sedative or soothing on the one hand and stimulating on the other. Moderately high altitudes and moderately cool baths stimulated; moderately low altitudes and moderately warm baths were sedative. For the rest the three factors in organic action were to be borne in mind—the cell, the blood, and the nerves; and health resorts, climatic and hydrotherapeutical, selected according as one or other of these factors was predominantly affected, and on the principles of general therapeutics. Dr. Hedley considered that the health resort played very much the same part in diseases of the nervous system that it did in other classes of disease. By means of various physical and natural agencies which the health resort represented metabolism could be altered, the inherent recuperative power of the living cell could be aroused, and thus the natural defences of the organism against the encroachments of disease strengthened. Dr. Knowsley Sibley had for some years been accustomed to treat various forms of nervous diseases by the local application of dry hot air, and generally with undoubted success. The cases which did well were insomnia, epilepsy, many forms of neuralgia and neuritis, together with various paralyses of hysterical origin. Chorea was especially amenable, the movement frequently quite ceasing while the limb was under treatment. Ménière's disease appeared also benefited. Old-standing cases of paralysis, especially those caused by lead palsy and those of traumatic origin, often improved. He had been disappointed with the result of this treatment in marked cases of tabes, paralysis agitans and writer's cramp. Dr. Felkin said one practical difficulty was to decide whether to send patients to a British health resort or abroad, and he confessed that up to recently he had advised Continental health resorts because patients there received greater civility and attention from the attendants than at spas in this country, and he also considered that the thorough change in environment was most beneficial. He referred to the treatment of nervous diseases in Egypt, and suggested that in cases of insomnia due to mental strain and city life camping out in the desert would prove very beneficial. Mr. Thompson (Buxton) said that his experience of the treatment of organic nerve lesions by baths and climate was that only temporary alleviation of symptoms could be attained. With regard to the functional neuroses, on the other hand, the results were mostly satisfactory. In cases of neuritis, where the pain was severe, very hot mineral water baths, supplemented if necessary with the vapour douche, gave relief without the help of drugs. Dr. Shirley Jones (Droitwich) said warm saline baths had a decidedly beneficial effect upon some nervous diseases. A hot saline bath acted chiefly as a nerve sedative, and a tepid bath as a nerve tonic. He ordered a bath at as high a temperature as the general condition of the patient would admit of, without producing any marked feeling of lassitude, and as the pain decreased in intensity the temperature of the bath was lowered.—Dr. William Bain (Harrogate) read a paper entitled the Effects of Luminous and Heat Rays on the Local and General Temperature.

Epidemiological Society.—At a meeting on March 16th, Dr. Franklin Parsons, President, in the chair, Mr Robinson, M.O.H. to the County of Leicester, read a paper on the distribution and control of epidemic measles, based on an experience of over 2,000 cases during an epidemic at Burton-on-Trent in 1898, when he was medical officer of health to the borough.

The estimated population was then 51,664, mostly artisans and brewery employees, occupying houses with four to six rooms. Measles had been scheduled in the Notification Act since 1893, and in the course of the six following years there had been three biennial epidemics. The average annual number of deaths, and the mean death-rates from measles in the successive quinquennia since 1889 had been 16, 18, and 32·4 deaths, giving rates of 0·37, 0·39, and 0·64 per 1,000, the higher figures in the last period being wholly due to the excessive mortality in the epidemic of 1896. The average number of notifications in the last five years was 1 360, but in 1898, with which he was now concerned, it rose to 2,048 with 31 deaths, equal to a case fatality of 1·5 per cent., and a death-rate of 0·60; the notifications represented probably 95 per cent. of the cases. The ratio of children under school age (babies) to those in infant schools (infants) attacked was as 80 to 100. He traced the outbreak to a tea meeting and entertainment, and it was remarkable that two infants were attacked whose mothers had been to the meeting, leaving them at home. At a later period two Sunday schools evidently contributed to the spread of the disease in their districts. Of the "babies" constituting the first cases in their respective houses, 26 per cent. were in houses next door to which cases had already occurred, 11·5 per cent. were two doors, and 5·5 per cent. three or four doors removed from such foci of infection.

The general conclusions to be drawn from a study of this epidemic were: (1) That measles introduced into a district through infant school, Sunday school, or day school spread with a rapidity and to an extent inversely proportionate to

the previous frequency of epidemics in the district, unless early and prompt closure of the schools were enforced; (2) that when introduced into a district by means of isolated cases, it did not spread to any extent until the infant schools became infected; (3) that Sunday schools played an important part in spreading the disease; (4) that "babies" might under certain circumstances be attacked before, but that the great majority were attacked after the invasion of the schools; and (5) that house-to-house infection was a serious danger to "babies," the greater the proximity of the infected house. As regarded control, the closure of a day school or Sunday school so soon as it was found to be infected—that is, within three days—was the only effectual check; and it was noticed that, in districts where the outbreaks had recurred biennially, the incidence was almost confined to the infant departments; while in those in which there had been no epidemic for six or more years the boys and girls were attacked in proportions of from 10 to 20 per cent. He concluded, therefore: (1) That closure as hitherto practised was nearly always enforced too late; (2) that the closure, if carried out before the infant schools had been infected, would be of great benefit, not to the infants only but also to the "babies"; (3) that where biennial epidemics had prevailed the infant schools only need be closed; (4) that the sanitary authority should be empowered to close Sunday schools under similar circumstances; and (5) the temporary closure of any school, even for a few days only, might be the means of averting a threatened epidemic. Compulsory notification was obviously the means of obtaining information, but it should be supplemented by others, and the people should be educated, so that the plea of ignorance of the nature of an infectious disease should no longer be admitted. The case-fatality in notifying towns varied between 2.5 and 5.0 per cent. being often lowest in epidemic years, possibly as a result of notification. The paper was discussed by Dr. Dudfield, Mr. Shirley Murphy, Dr. Newsholme, Dr. Bond, and the President, and Mr. Robinson replied.

Sheffield Medico-Chirurgical Society.—At a meeting on March 15th, Dr. Duncan Burgess, President, in the chair, Dr. A. J. Hall showed cases of (1) congenital syphilis, (2) lichen syphiliticus, (3) tuberculous syphilide simulating lupus; and read notes of a case of iodide of potassium eruption.—Mr. W. Dale James showed: (1) A case of pityriasis rubra pilaris in a man aged 30. It began when he was 8 years old upon his right shin, which was the only patch he had. He had been reported frequently, having four years ago been under Dr. Payne at St. Thomas's. The mortar-like accumulation and the presence of plugs in the follicular openings were very highly diagnostic; (2) a beautifully developed tertiary macular syphilide.—Mr. Snell introduced the following patients: (1) A youth aged about 20, with a large solitary tubercle of iris (left eye); the lungs were free from disease, but there was thickening of the left epididymis; (2) a boy with ectropion treated with Thiersch graft; (3) two cases of symblepharon treated with Thiersch grafts; (4) a man with a piece of steel embedded in the retina; (5) a child with palsy of both external recti, after diphtheria; (6) a woman with very marked periarteritis of the central retinal artery. Mr. Snell also exhibited:

(*a*) A water colour drawing of a congenital papilloma of the conjunctiva which was sufficiently long to protrude through the palpebral fissure and to rest on the lower eyelid; (*b*) a series of stereoscopic photographs, including amongst them three instances of rodent ulcer, microscopical sections of which were also at the same time shown; (*c*) embolism of a branch of the central artery of the retina. Perimeter charts of four cases. Mr. Snell also showed a beautiful work which was illustrated by photographs from large water-colour drawings of forest and other rural scenery done by a patient who had several years since undergone cataract extraction at his hands. The same gentleman had since the operation been a successful exhibitor at the Royal Academy.

—Mr. R. J. Pye-Smith showed two cases in which he had performed leparo-pylephleb-anastomosis, the operation introduced by Dr. Drummond and Mr. Rutherford Morrison in 1899.

Case I.—A girl, aged 18, had been under the care of Dr. Burgess at the Sheffield Royal Hospital with enlarged liver and spleen and ascites for three years. She had been tapped frequently, and the abdomen refilled in a month. Dr. Burgess requested Mr. Pye-Smith to operate. At the operation (on November 10th, 1899) the capsule of the liver was found to be thick and the spleen greatly enlarged. The liver, spleen, and omentum were attached to the anterior abdominal parietes. During the four months that had elapsed since the operation a considerable quantity of fluid had gradually accumulated, but the improvement in this and other respects had been very great. Case II.—A man, aged 31, was admitted to the Sheffield Royal Hospital, under the care of Dr. Burgess, in September, 1899, for hæmatemesis. Whilst in the hospital slight ascites developed, but subsided under medicinal treatment. There was an alcoholic history, and Dr. Burgess diagnosed cirrhosis, and asked Mr. Pye-Smith to operate. At the operation (on January 16th, 1900) a hobnailed condition of liver was found with an enlarged spleen, but no ascites. The left lobe of the liver was attached to the anterior parietes, and the omentum fixed along the edge of the wound. The patient was now, two months after the operation, in a comfortable condition. It was, of course, too early to judge of ultimate results in either of these cases.

—Dr. Sinclair White showed (1) unusual gall stones, (2) a boy on whom Estlander's operation had been done five years previously; the lung on the affected side had regained almost its normal size, and there was no lateral curvature of the spine and very little deformity; (3) a rapidly-growing sarcoma of the scapula in a man, who was subsequently dealt with by total excision of the scapula; (4) a woman with early cancer of the left breast, the right mamma having been removed for cancer six months previously. There was no evidence of cancer elsewhere.—Dr. Stanley Riseley showed a man, aged 44, who seven years ago was struck on inner side of right cornea by a piece of coal. He said that three years afterwards a growth appeared in the same situation, and that eighteen months subsequently part of the growth was removed. He came under Dr. Riseley's care four months ago with a growth firmly attached to the cornea and conjunctiva, which on microscopic examination proved to be an epithelioma. Apparently no glands were involved. The growth had rapidly increased in size. The patient would not consent to operation.

North of England Obstetrical and Gynæcological Society.—A meeting held at Leeds on March 16th, Dr. J. B. Hellier (President) in the chair, was devoted to a discussion on the treatment of fibromyoma of the uterus. The special points selected for discussion were: (1) Choice of route; (2) myomectomy; (3) total *versus* supravaginal hysterectomy; (4) the treatment of the appendages; (5) technique; (6) drainage; (7) after-results of operations. A large number of specimens and drawings were exhibited by Drs. Stanmore Bishop, Briggs, and the President. Dr. T. B. Grimsdale (Liverpool) said that the indications for operative interference might be divided into relative and absolute. The relative indications comprised all the various well-known symptoms, including the mere presence of a tumour. The absolute indications covered all the possible accidents which might happen calling for immediate operation. Of these he had met with tumours obstructing delivery, torsion of the pedicle of a subperitoneal tumour causing acute peritonitis, suppurating fibroid tumours which might result sometimes from thrombosis of the vessels, and ascites from chronic peritonitis, especially in calcifying tumours. The relative indications might be divided into vaginal and abdominal. Amongst these there might be: (1) Rapid growth of the tumour due sometimes to cystic degeneration; (2) pain due to pressure and often to accompanying disease of the appendix; (3) size and weight incapacitating a patient; (4) pressure symptoms, especially on bladder, rectum, or ureters; (5) severe hæmorrhage; (6) fœtid vaginal discharge, which usually indicated a tumour protruding into the vagina. With respect to the choice of route, generally speaking vaginal symptoms required the vaginal route, while abdominal symptoms indicated the selection of the abdominal route. The combined method was often a confession of failure to complete the operation undertaken in the first place. In the choice of route various questions must be considered. The mortality after either abdominal or vaginal operation was mainly due to sepsis, and experience had seemed to show that it was easier to avoid infection from without by operating *per vaginam*, but now the results of abdominal operation were so good that it might be considered as safe as the vaginal route. The avoidance of hernia and absence of a scar in vaginal operations were not factors of great importance. Against the vaginal route were: (1) Difficulty of diagnosis in some cases, (2) tedious operation, (3) myomectomy could rarely be carried out efficiently. Dr. Grimsdale preferred the method of Baer for abdominal hysterectomy, and did not use any drain. Myomectomy, which could be performed either by the mucosa of the uterus or through the peritoneum, had

enormous possibilities of usefulness. In conclusion, he referred to the value of oöphorectomy and ligature of the uterine arteries in certain cases. Mr. E. S. Bishop considered that the combined method of operation was of great value in certain cases, and might be adopted as a method of choice. Dr. H. Briggs (Liverpool) exhibited a series of water-colour drawings selected from 133 cases of uterine fibroids treated by him. By the vaginal route he had operated on 45 cases with uniform success. By the abdominal route the mortality had only exceeded 5 per cent. in old-standing broad ligament tumours placed deeply in the pelvis and often very adherent. Dr. Braithwaite (Leeds) pointed out that most operations for fibroids were mutilating procedures, and strongly recommended an extension of myomectomy in these cases. Dr. A. Donald (Manchester) thought asepsis was of more importance than the choice of method of operation. In certain cases oöphorectomy, which was distinctly safer than abdominal hysterectomy, gave excellent results. Dr. T. E. Gemmell (Liverpool) endeavoured whenever possible to perform myomectomy. Dr. Lloyd Roberts considered that in young women myomectomy should always be performed if possible. Frequently, however, complete removal would be required, and he believed the abdominal method was preferable in the great majority of cases. The combined method certainly shortened the duration of the operation and allowed for good drainage *per vaginam*. Dr. Arnold Lea said that in any doubtful cases abdominal section should be performed. He showed a modification of the corkscrew tenaculum and a curved knife, which were of value in vaginal enucleation of fibroids. The President showed a uterus removed by pan-hysterectomy illustrating some of the points under discussion. He strongly advocated vaginal drainage after these operations, since there was often a considerable amount of effusion into the pelvis.

Glasgow Southern Medical Society.—On March 29th this Society entertained Dr. Edward McMillan, of Pollokshields, to dinner, and presented him with an illuminated address on his retirement from practice. Dr. Hugh Kelly, President, occupied the chair, and among others present were Professors Sir W. T. Gairdner, T. McCall Anderson, and Glaister. After the usual loyal and patriotic toasts Sir W. Gairdner proposed "Our Guest." He had known Dr. McMillan for a long period. He had always regarded him as the ideal type of the family physician. At all times a thorough sympathiser with every medical organisation, Dr. McMillan bore a particular regard for the Southern Medical Society. He had won for himself during his long career the love and respect of everyone. Speaking as a retiring man himself, to a retiring man, he expressed the hope that Dr. McMillan would enjoy many happy days in the remaining evening of his life. Dr. Robert Pollok then formally presented Dr. McMillan with the illuminated address, and made reference to the spontaneous manner in which the movement of appreciation had been initiated, and to the hearty way in which it had been carried to a successful issue. Joining the Society in the year 1858 the various offices held by Dr. McMillan were referred to, as well as to his term of six years as representative of the Society on the Board of the Victoria Infirmary. Dr. Pollok assured him that in his retirement he carried with him the best wishes of the members of the Society. Dr. McMillan, in replying, returned thanks for the very kind words that had been said regarding him, and cordially thanked the Society for the illuminated address. He then entertained the company with some very interesting reminiscences of the early days of the Society and of the original members.

French Congress for the Advancement of Science.—The meeting of the French Congress for the Advancement of Science will be held this year in Paris from August 2nd to 9th, under the presidency of General Sébert, member of the Académie des Sciences. The President of the Section of Medical Science is Dr. Kelsch, Director of the Military Medical School of Val de Grâce; that of the Section of Hygiene and State Medicine is Dr. Henrot, Director of the Medical School of Rheims. There is a Subsection of Medical Electricity, of which Professor D'Arsonval is President.

REVIEWS.

SOME RECENT WORKS ON OPHTHALMOLOGY.

The fourth volume of Norris and Oliver's *System of Diseases of the Eye*[1] consists of upwards of 900 pages, and the text is profusely illustrated with plates, reproduced photographs, and also with woodcuts. The chapter on anomalies of the motor apparatus has been entrusted to Dr. Landolt, who treats it in the masterly manner we should expect from so well-known a worker in this branch, and we are pleased to find that the mathematical knowledge required to follow the points does not lead us into the higher branches. The part which relates to miners' nystagmus is to a great extent taken from the work of Snell of Sheffield. Diseases of the cornea are well described by Nuel, and this forms a very complete and up-to-date article on a most important subject. Norris has written an interesting and complete chapter on diseases of the lens, and has also given some historical detail regarding cataract and the views held in former times concerning it. The operations performed for its relief are not given in detail, but the author prefers the so-called simple operation without an iridectomy. We ought not to complain with a book edited in the States of the somewhat foreign and extremely American words and phrases which we meet with, but the chapter on ametropia, by Oliver, is a little trying for Englishmen in this respect. Several well-drawn ophthalmoscopic chromolithographs illustrate Haab's chapter on ocular lesions dependent upon diseases of the circulatory system, and there are some other reprints from his *Atlas* illustrating retinal and other intraocular hæmorrhages. Swanzy of Dublin has written an exhaustive article on eye diseases and eye symptoms in their relations to organic diseases of the brain and spinal cord. It is thoroughly up to date, and gives references to all the recent literature on the subject. Lawford has illustrated his chapter on ocular lesions dependent upon disorders of the secretory and excretory organs, with both ophthalmoscopic and microscopic pictures of the parts involved, and he goes very fully into the diseases of the eye dependent upon kidney diseases and diabetes, as well as those due to affections of the skin and digestive organs. The ocular lesions in various acute diseases, such as variola, erysipelas, dysentery, cholera, and yellow fever are described by Story and Santos-Fernandez; while Parinaud contributes a chapter on the ocular manifestations of hysteria. A short chapter on Graves's disease and herpes zoster is written by J. Hutchinson, jun.; while the motor changes in the ocular apparatus associated with functional neuroses is described by Myles Standish. De Schweinitz has done so much admirable work on the toxic amblyopias that we are not surprised to find him responsible for this section, and it is needless to say that a more complete article does not exist. Salzmann describes in a lucid manner the entozoa of the human eye, and gives several illustrations of the conditions met with. The volume is brought to a close by a chapter on simulated blindness by Baudry, and another by Gayet on the ocular signs of death. The fourth volume brings the *System of Diseases of the Eye* to a conclusion. It is the most complete work we have in the English language. The different articles have been written by men who have made the subjects on which they write peculiarly their own, and although some few of them fall a little short of what we should expect, yet on the whole the editors are to be congratulated on the success of their enterprise; while the whole profession is indebted to them and their colleagues for their efforts to secure so practical and useful a work of reference, which will be of the greatest utility for many years to come.

Dr. W. A. Nagel, in his work on the diagnosis of congenital anomalies of colour vision which are of practical importance,[2] after some preliminary remarks on total and partial colour blindness and "weak colour sense," gives a description of those methods which he considers most useful for the

[1] *System of Diseases of the Eye.* By various authors. Edited by W. F. Norris, A.M., M.D., and Charles A. Oliver, A.M., M.D., of Philadelphia, U.S.A. Vol. iv. London and Philadelphia: J. B. Lippincott Company. 1900. (Roy. 8vo, pp. 962. 21s.)

[2] *Die Diagnose der praktisch wichtigen angeborener Storungen des Farbensinnes.* Von Dr. W. A. Nagel. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1899. (Roy. 8vo, pp. 40, 3 illustrations. 1s. 3d.)

practical examination of suspected colour-blind people, those who wish to enter the railway or marine services, and of malingerers. He discards methods, however correct scientifically, which demand expensive apparatus or the expenditure of much time in their application, or which call for more than ordinary powers of observation on the part of the persons examined. The methods he selects are (1) Holmgren's: (2) his own "colour-equalisation apparatus" (1898); (3) Stilling's pseudo-isochromatic colour cards (1889); (4) Pflüger's contrast method: (5) his own colour cards (1898; see British Medical Journal, January 20th, p. 148); (6) Daae's wool cards. As a rule he trusts to the combined use of Nos. 1 and 5. As a confirmatory test, and especially for the detection of simulation, he thinks Pflüger's method valuable. For those who are familiar with the vision in colour blindness, and where a large number of people have to be examined, he recommends his own colour-equalisation apparatus. In his opinion Holmgren's test does not render it possible to discriminate with sufficient ease between colour blindness and "weak colour sense"—a distinction which he holds to be of importance, for the latter condition need not in all cases exclude a man from railway or other employment. The book may be recommended to those concerned with the examination of the sight for the different services.

The first edition of Dr. de Schweinitz's textbook[3] appeared in 1892, the second in 1896, and now the third has been published. It has been revised throughout, and much new material has been added. The whole subject of ophthalmology, including a description of the errors of refraction, is treated in 22 chapters. Considerable attention has been paid to conjunctival diseases, and those which have recently been proved to be of bacterial origin have been fully discussed in the light of new facts. Some of the new material which has been inserted, and to which reference is made in the preface, gives but the meagrest account of the condition under consideration. We might especially mention favus of the eyelids, which is described in the space of a line and a half; while the Roentgen rays, which have proved so useful in detecting foreign bodies within the eye as well as elsewhere, are dismissed in a few words, and with no directions as to their employment; possibly it is thought to be too special a subject to be dealt with in a textbook. Dr. de Schweinitz's work on the toxic amblyopias is so well known that but little need be said, except that the subject is treated in the masterly manner we should expect. The chapter describing the anomalies of the extrinsic muscles is carefully written, and the book ends with a section devoted to a description of the various operations usually performed upon the eye and its appendages, the technique necessary for the preparation of the patients and the instruments is given in detail. The volume forms a comprehensive textbook, which is thoroughly reliable, and which will prove useful not only to the student but also to the ophthalmic surgeon.

Dr. Suter's handy little book[4] on optics has been written to aid students of ophthalmology. "Simplicity has been sought for so far as this is not incompatible with thoroughness." Many authors on optics seem to take it for granted that all ophthalmic surgeons are proficient mathematicians, but Dr. Suter is less severe in his demands, and there is little in the book that he cannot followed by anyone having an ordinary knowledge of algebra, while for others who wish to revive an elementary acquaintance with trigonometry a short appendix is added. The book can be recommended to those who wish to obtain a knowledge of optics more advanced than that found in the ordinary textbooks, without it being necessary to resort to the higher branches of mathematics for its due appreciation.

Mr. Percival tells us that his volume on optics[5] "is designed primarily for the use of ophthalmic students," and that he has "endeavoured to place at the reader's disposal, within a reasonable compass, such a knowledge of optics as would be of use to an ophthalmic surgeon in his daily practice." It is certainly extremely interesting to be told why the sky appears blue, and what part the meteoric dust which remains suspended in the air takes in its production, and the theory of instruments such as the sextant is interesting also, though how this can possibly aid the ophthalmic surgeon is difficult to understand. To appreciate the book completely the reader must be familiar with the higher branches of mathematics as well as with the differential calculus, and we fear these demands will be rather keenly felt by the majority of those for whom it is written. By those who are making a special study of optics the book will be found concise and useful.

[3] *Diseases of the Eye: A Handbook of Ophthalmic Practice for Students and Practitioners.* By G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the Jefferson Medical College, etc. Third Edition. London: Rebman, Limited. 1899. (Roy. 8vo, pp. 606. 24s.)

[4] *Handbook of Optics for Students of Ophthalmology.* By William Norwood Suter, B.A., M.D., Professor of Ophthalmology, National University, Washington, D.C. New York and London: Macmillan and Co. 1899. (Cr. 8vo, pp. 209. 5s.)

[5] *Optics: a Manual for Students.* By C. S. Percival, M.A., M.B., Trinity College, Cambridge. London: Macmillan and Co. 1899. (Crown 8vo, pp. 400. 5s.)

NOTES ON BOOKS.

The greater part of No. 4 of vol. xi of the *United States Department of Agriculture Experiment Station Record* is devoted to botany, horticulture, and agriculture. It contains, however, a brief account of some experiments on Texas fever in cattle, which, it will be remembered, appear to be due to a protozoön carried by a cattle tick. Some experiments with the defibrinated blood of animals which had recovered or were recovering from the disease are recorded; inoculation with a view of producing immunity was practised with favourable results, though the experiments were not sufficiently numerous to be conclusive. Dipping in a vat of petroleum was found to kill the ticks which serve as hosts, while causing only passing inconvenience to the cattle.

The object which Dr. Edmund Hobhouse, the editor of *Health Abroad: A Medical Handbook of Travel* (London: Smith, Elder, and Co.; 1899, Crown 8vo, pp. 386, 6s.), has had in view is to give persons travelling abroad advice on the preservation of health, and to supply information until such time as medical advice is obtained as to the treatment of the more common ailments, especially those met with in warm countries. It may be stated at once that the book fulfils the purposes indicated in the preface. Fully one-third of the work is devoted to health and travel in Africa, and the several writers entrusted with the articles devoted to the Dark Continent have done their part well. North Africa, including Egypt, is admirably handled by Dr. Leigh Canney; the article on South Africa is agreeably written by Dr. Guillemard, and that on Central Africa by Dr. C. H. Battersby should be read by all contemplating a residence near the Tropics. Dr. Hobhouse and Dr. G. H. Pennell, of Buenos Ayres, give a very readable and highly instructive account of life in North and South America respectively. Dr. Hobhouse also describes succinctly and yet comprehensively the climate and health resorts of Australia and New Zealand. The difficult and enormous subject of Europe is treated by Dr. Stuart Tidey in a manner at once authoritative and useful, while Dr. Hobhouse adds a few pages specially devoted to the Riviera. Professor W. J. Simpson's article on India is an able exposition of all the traveller or resident in India requires to know, and will no doubt be highly appreciated. A chapter devoted to the treatment of wounds, and an addendum on alcohol, complete a most useful work. Should another edition be called for, we would suggest the addition of a few maps, which would contribute much to the convenience of the reader. We are surprised that no mention is made of travel in Japan, where so many British and American folk sojourn.

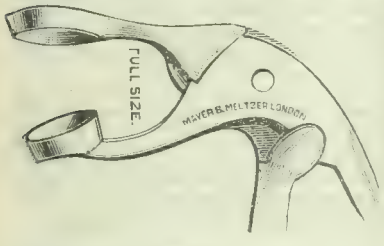
In the *Healing of the Nations*, Dr. J. Rutter Williamson, M.B.Edin., late Chairman of the British Student Volunteer Missionary Union (London: Student Volunteer Missionary Union. 1899. Cr. 8vo, pp. 100. 2s.) has provided an outline of medical missions, and more than justifies their existence by a statement of the crass ignorance and superstitions of the native doctors and their patients amongst uncivilised peoples and of the monstrous remedies applied for even slight disorders. "Christianity alone has established hospitals for an alien race on the simple ground of a common human brotherhood." The value of the medical missionary to other missionaries far away from other medical assistance

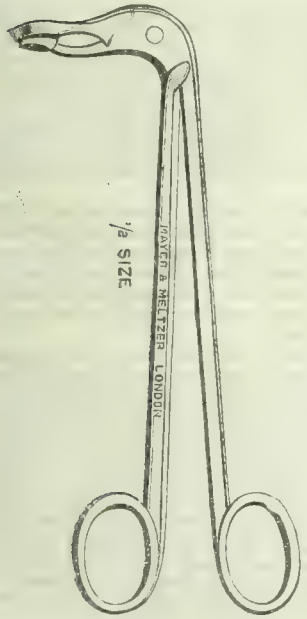
in time of sickness is very great, whilst the results of medical missions as pioneer agents of civilisation and Christianity—results magnificent and far-reaching from humanitarian points of view—can scarcely be over-stated. One of such results is the elevation of the position of women. The book finally describes the technical and spiritual preparation of the medical missionary and the qualifications needed, these latter being earnest Christianity, medical efficiency, good health, and good teaching powers.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

A New Tonsil Forceps.—Dr. H. Tilley, F.R.C.S., Surgeon, Golden Square Throat Hospital, writes: The accompanying diagram illustrates a tonsil forceps or "punch" recently made for me by Meyer and Meltzer, 71, Great Portland Street, W., for the removal of large flat tonsils which cannot be engaged in the ring of an ordinary guillotine. In such cases the tonsil is elongated in a vertical direction, and the great advantage possessed by this instrument is that its cutting action is from before backwards, and not from above downwards as in Ruault's and Kretchmann's forceps. The latter action creates a difficulty which will be at once appreciated by those who are familiar with the latter instrument. By the instrument made for me the largest tonsils can be efficiently removed in the course of two or three sittings, and with as little, if not less, pain than is caused by other methods. The great saving of time by the process of *morcellement* constitutes a marked advantage over puncture by the galvano-cautery as a means of reducing enlarged tonsils.





Centrifugal Case for Clinical Thermometer.

Messrs. S. Maw, Son and Thompson (Aldersgate Street) ask us to state that the idea of the thermometer case described by Dr. W. Aickin, of Belfast, in the British Medical Journal of March 17th, p. 646, is, in their opinion, not novel, as they have for the last two years made a thermometer case in which the index is brought down by centrifugal action.

Education of Backward Children in Italy.—An institute for the education of backward and defective children has recently been opened at Florence. The President of the Managing Committee is Duke Leone Strozzi, and Dr. E. Modigliano is the Director.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

List of Presentations of Books, etc.

Presented by the Authors:
- Gadd (H. W.). Synopsis of the British Pharmacopœia. 1898.
- Gore (Surgeon-General A. A.). Medico-Statistical Sketch of the Operations of the North-West Frontier of India. 1897-8.
- Steell (Graham). The use of the Sphygmograph in Clinical Medicine. 1899.

Presented by H. L. Bowles, Esq., M.D., London:
- Several Volumes of the International Journal of the Medical Sciences and of the Practitioner.

Presented by Ballière, Tindall, and Cox, London:
- Stewart (Clark). A Biography by S.E.S.C. 1898.

Presented by Dean and Son, Fleet Street:
- Rutlidge. Guide to Queensland.

Presented by L. M. Griffiths, Esq., M.R.C.S., Bristol:
- Pharmaceutical Journal. Vols. 14-24. Not quite perfect.

Presented by Dr. G. M. Gould, Philadelphia:
- The American Yearbook of Medicine and Surgery. 1899.

Presented by Johns Hopkins University, Baltimore:
- Report of the Johns Hopkins Hospital. Vol. 7. 1899.

Presented by G. S. Middleton, Esq., M.D., Glasgow.
- Glasgow Hospital Reports. Vol. 2. 1899.

Presented by the Editor of the British Medical Journal:
- Allbutt. System of Medicine. Vol. 8. 1899. Nervous System. Mental Diseases. Skin. Malaria.
- Archives of Neurology from Pathological Laboratory of the London County Asylum, Claybury. 1899.
- Brouardel, Gilbert. Traité de Medicine. Tome 6. 1899.
- Burdett, Sir H. Hospitals and Charities. 1899.
- Encyclopedia Medica. Vol. 1. Abdomen—Bone. Vol. 2. Brachial Plexus—Digestion. 1899.
- Goodhart. Diseases of Children. 6th Ed. 1899.
- Henoch, E. Vorlesungen über Kinderkrankheiten. 10 Aufl. 1899.
- Kelynack. The Pathologist's Handbook. 1899.
- Phocas. Etudes de Gynécologie Opératoire. 1899.
- Smith, Eustace. Wasting Diseases of Children. 6th Ed. 1899.
- Snell, S. On the Prevention of Eye Accidents Occurring in Trades. 1899.
- Stewart and Cuff. Practical Nursing. Vol. 1. 1899.
- Tilden, W. A. Short History of the Progress of Scientific Chemistry. 1899.
- Yellow Fever. Report of a Commission of Medical Officers. Washington. 1899.
- And other Papers.

Transactions and Reports have been received from the following bodies:
- American Climatological Association. Vol. 15. 1899.
- American Otological Society. 1899.
- Association of American Physicians. Vol. 14. 1899.
- British Orthopædic Society. Vol. 3. 1899.
- British Pharmaceutical Conference Yearbook. 1899.
- Clinical Society. Vol. 32. 1899.
- Edinburgh Medico-Chirurgical Society. Vols. 17, 18. 1899.
- Edinburgh Obstetrical Society. Vol. 24. 1899.
- Jenner Institute. Vol. 2. 1899.
- New York State Board of Health. 1897.
- Ophthalmological Society of the United Kingdom. Vol. 19. 1899.
- Pan-American Medical Congress. 3 vols. 1893.
- Reading Pathological Society. 1898-9.
- Royal College of Surgeons Calendar and Report. 1899.
- Royal Medical and Chirurgical Society. Vol. 82. 1899.
- Society of Anæsthetists. Vol. 2. 1899.
- West Kent Medico-Chirurgical Society. 1899.

Books Needed to Complete Series:

The Librarian will be glad to receive any of the following volumes which are needed to complete series in the Library:
- American Climatological Transactions. Vols. 1, 4, 5, 6.
- American Dermatological Association Transactions. Vols. 5, 7, 8, and 11.
- American Journal of the Medical Sciences. New series, vols. 4, 5, 1842-43; vols. 14, 15, 1847-48; vols. 18-30, 1850; vol. 33, 1857; vol. 46, 1864-65; vol. 59; or any parts of these vols.
- American Journal of Ophthalmology. Vols. 1-9.
- American Laryngological Association. Transactions. Vols. 1-6, 8, 9.
- American Otological Society. Transactions. Vol. 3, part 2, 1883.
- Annals of Surgery. Vols. 1-11; 13-16; and 26-27.
- Archives Générales de Médecine. 1831-39 inclusive; 1846-1855 inclusive; 1857-64 inclusive; 1871; and April, 1899.
- Archives of Ophthalmology. Vols. 1-3, 6, 7, 14-21.
- Archives of Otology. Vols. 1-7, and 20, 21, 22.
- Asylum Journal of Mental Science. Vol. 1, 1854, and Title vol. 2.
- Bentley and Trimen. Atlas of Medicinal Plants.
- British Journal of Dermatology. Vol. 2, part 3.
- Caledonian Medical Journal. Vol. 1 prior to 1894.
- Centralblatt für Augenheilkunde. Hirschberg. 1891, January-July, 1892, January, September, and May, 1897.
- ——— für Bakteriologie. Bound volumes prior to 1899.
- ——— für klinische Medicin. 1880-1883; all 1888, 1891, No. 26 1892, No. 17.
- ——— für medicinischen Wissenschaften. Vols. 1-19.
- Congrès Français de Chirurgie. Transactions 1, 2, 3, 6, and 10.
- Dermatological Congress. Paris, 1889; Vienna, 1892.
- Edinburgh Medical and Surgical Journal. Vols. 67-82. 1847-1855.
- Edinburgh Obstetrical Society. Transactions. Vol. 5.
- Fothergill. Midwifery.

Glasgow Medical Journal. 1833-1853. Nos. 2, 5, 9, 10, 12, 13. 1856-1858. And No. 4, vol. 2, 1870.
——— Pathological Society. Transactions. Vols. 1 and 2.
Gray's Anatomy.
Hamilton. Legal Medicine. Vol. 2, 1894.
Hare. Therapeutics. Vols. 3-4.
International Congress of Hygiene. Congresses 1 to 6.
International Ophthalmological Congress. Transactions of 5th, New York, 1876.
Journal of Anatomy and Physiology. Pp. 149-152, vol. i, 1867.
Journal of Laryngology. Vols. 1-9.
Larrey (J.). Mémoires de Chirurgie Militaire et Campagnes. Tomes 3, 4, 5. 1812-17.
Neurologisches Centralblatt. No. 21. 1898.
Ophthalmic Review, January, 1882.
Pharmaceutical Journal. April 21st, 1888; June 22nd, 1889; August 9th, 1890; December 6th, 1890; April 18th, 1891.
Provincial Medical and Surgical Journal. 1840. Being the first 52 numbers before October 2nd, 1841.
Recueil d'Ophtalmologie. 1891, Jan.-June; 1892, Dec.
Registrar-General's Annual Summary of Weekly Returns. 1865-73, 1876, 1880, 1887.
Revue Générale d'Ophtalmologie. Prior to 1888, and 1891-92.
Salter (H. H.). On Asthma. 1860.
Semaine Médicale. Prior to 1890, and title and index to year 1892.
Society for Study of Inebriety. Transactions, No. 53, 1897.
South African Medical Journal. February, April, 1895. And Titles for vols. 3 and 4.
Starling Physiology.
University College Hospital Reports. Before 1877 and 1892-93.
Virchow's Archiv. Any vols. prior to 151.
Wiener klinische Wochenschrift. Nos. 5 and 6. 1889. Titles 1892 and 1888.
Willcock. Laws of the Medical Profession. 1836.

Applications for duplicates from medical societies forming libraries may be addressed to the Librarian, 429, Strand.

LITERARY NOTES.

THE *Revista Medico-Hidrologica Española*, the first number of which appeared in Madrid on March 10th, is a monthly periodical devoted, as its title page imports, "to fostering modern medical studies, particularly those having relation to the hydrological speciality and to defending the professional interests of the body of medical directors of baths and minero-medical waters." The editor and proprietor is Dr. Rosendo Castells Ballespi.

The Warren Triennial Prize was founded by the late Dr. J. Mason Warren, of Boston, Massachusetts, in memory of his father, and is awarded every three years for the best dissertation on some subject in Physiology, Surgery, or Pathological Anatomy. The amount of the prize for the year 1901 will be 500dols. A high value will be placed on original work. Particulars as to the conditions of competition will be found in our advertising columns.

Major J. D. F. Donegan, R.A.M.C., whose name has been more than once honourably mentioned in the reports from the front, is well known in the army as a past master in the art of stage management. He has published under the apologetic heading, "Digressions from Science," a little book entitled *Camp-fire Songs and How to Sing Them* (Madras: Higginbotham and Co. 8 annas). In the preface he states that he publishes the songs at the request of friends who have from time to time heard them, both on the concert stage and in private life. He modestly anticipates that many people will consider them silly doggerel, but he is careful to assure the public that the idea of forwarding a copy of the book to her Majesty the Queen-Empress with a request to be made Poet-Laureate on the death of Lord Tennyson never entered his brain for a minute. He further promises that unless he improves greatly he will refrain from making a similar application on the demise of the present incumbent of that high office should he be spared till that tragic event occurs. He asks that before being condemned his songs may be sung, not merely read. He gives useful hints as to the pronunciation of words in singing and as to singing in the open air. The camp-fire songs themselves appear to us to be admirable of their kind. Major Donegan promises that the next edition will contain songs set to regimental marches; we hope he will carry out this intention, as we agree with the opinion of the Commander-in-Chief, to which he refers, that singing is a most useful recreation for the British soldier.

In a recent number of the *St. George's Hospital Gazette*, Dr. John W. Ogle quotes the narrative of an interesting dream—which, as Byron says, was not all a dream—of the late Archbishop Benson. In 1879 the Archbishop Benson, who kept a diary in which he seems like Laud to have recorded his dreams, awoke one morning with a pain in his chest, which had, he says, caused him an odd dream. He dreamt that he had been suffering so severely that Mr. Sharp, his doctor, had been sent for. After examining him the doctor told him he had angina pectoris. The Archbishop in his dream exclaimed with indignation, "Angina, angina, angina, if you please." And he woke repeating "Angina." He was so struck by his dream that he related it to his family at breakfast. The impression of the dream grew so strong upon him that he said to himself how odd it would be if it were angina after all, and if the dream were a relic of some correction upon the ordinary pronunciation which he had found and forgotten. He looked up Forcellini and found angina. But about a week after the dream he dined in hall at Trinity, sitting at the right hand of the Master; H. A. J. Munro, Professor of Latin in the University of Cambridge, sat next to him. The conversation turned on the death of Arnold, the famous headmaster of Rugby. Munro said to Benson, "Did he not suffer greatly for some hours before he died?" Benson replied, "Yes, he died of angina pectoris." Munro smiled grimly, and said softly, "Of angina, as we now call it." Benson remembered his dream, but did not mention it; he merely said "Do we? why so?" Munro replied:

There are only two passages where it occurs in verse; one is in Lucilius; "Una angina sustulit hora," and the old editors were so persuaded that it was angina that they spoilt the hexameter itself by altering it to "una angina abstulit hora." It occurs also in Serenus Samonicus at the beginning of a line: "Angina tum vero," and there, too, the editors changed it into "Tum angina autem," or something of the kind.

The following communication, addressed to Dr. Ogle by Professor R. B. Clifton, of Oxford, adds further testimony in favour of angina:

I have consulted the Rev. A. Walton about "angina," and he has made inquiries from other scholars. They consider the evidence in favour of the short *i*. Dr. Murray, in the new dictionary, gives both pronunciations, but states that angina is correct. He told me he had no doubt about the *i* being short, and that he had specially consulted Professor Robinson Ellis, Corpus Professor of Latin at Oxford, on the subject. You will find the evidence in Lewis and Short's Latin Dictionary. They make the *i* short. The word does not seem to occur often in classical works, at all events in poetry, but it appears in a line of Lucilius quoted by Nonius, in Plautus, and in Quintus Serenus Samonicus. According to Dr. Murray the last of these three instances is the most conclusive as to the quantity.

Mr. F. L. Nicholls, of Cambridge, sends us an extract from an old medical work as being of some interest at the present time, when the effects of heredity are so much discussed. The work is entitled *An Anatomical and Mechanical Essay on the whole Animal Œconomy in One View*, by John Cook, Student in Physick, and late of the College in Edinburgh, March 20th, $17\frac{33}{36}$. The following is the extract:

Again one Argument more I may add as a further Proof of this Theory, of Pre-existence of Animalcula, *in semine masculino*, which is this: Suppose a man was to lose his Arms, Ears, Lips, Legs, and Thighs; in short, all the Parts of his Body but what are directly necessary for Life and Procreation; and the Woman he begot upon be in the like Case: yet his Children shall have all and each Part of their Bodies whole, perfect, and intire; though their Parents had them not themselves, and so could in no ways communicate them to their posterity. This wonderful Phenomenon can no ways be accounted for, but by this doctrine of Animalcula which supposes all their parts to pre-exist and be intire of themselves, and owe nothing to Father and Mother but proper place and Food. And indeed it cannot be otherwise, in as much as no Parent can anyways supply their Children with those very Members they wanted themselves. Wherefore it of necessity follows that as Children of lame People always have those very Parts their Parents were deprived of; they took not them from them that were not able to give them but they wanted themselves, but come by them another way, and from a quite different Cause.

John Cook's opinion was that every living human being actually and materially originated in the "loins of Adam," and that though the *male* animal (human or otherwise) carries on the succession by the spermatozoa or *tadpoles*, as he calls them, these little "men and women" (*sic*) only receive a habitation and nourishment from either parent until able to exist independently. He says:

And thus we come to the clear knowledge of those Passages, as speak of the Doctrine of Animalcula in Scripture; as that *Levi*, together with all his sons, was yet in the Loins of his Father's Grandfather, yea, and great Grandfather *Abraham* when *Melchisedeck* met him; and which is more, paid Tithes to him, and if *Isaac*, *Jacob*, and the whole Tribe of Levi were once in the Loins of *Abraham* we need not doubt but that we were all in like manner once wholly in *Adam*, and consequently are all propagated from him not virtually according to the old Cant, but literally and actually according to the aforesaid Theory.

THE MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

Annual Meeting.

The first annual meeting of the Medical Graduates' College was held on March 28th, Sir William Broadbent, President, in the chair.

The report of Council—the adoption of which was moved by the Chairman—traced the origin of the College to the "London post-graduate course," which since 1890 had been endeavouring to supply the profession with opportunities similar to those found in the graduates' polyclinics in America and on the Continent. Classes in connection with this course had been held at different hospitals with varying success, and those interested in the subject had become strongly impressed with the necessity of securing a central home for the institution, which led to premises in Chenies Street being secured in 1898. The burden of financial responsibility was undertaken by Mr. Hutchinson, a provisional Committee was formed, and the College was incorporated under the provisions of the Board of Trade. The actual work of the Polyclinic commenced on May 1st, 1899, and officers and Council were temporarily chosen in October. The Council now reported progress since that date, and in doing so they felt it to be their first duty to express their sense of deep gratitude to Mr. Hutchinson for the active and leading personal interest he had taken in the establishment of the College, and for the unceasing energy with which he entered into a large part of the work now being carried on. The present number of members and subscribers was 606, and donations to the amount of over £3,500 had been received, Lord Iveagh, Lord Strathcona, and Dr. Theodore Williams having been conspicuously liberal in their donations. A total amount of £15,000 was required to meet the initial expenses. Plans for a handsome museum had been passed by the Council, and the building for this purpose, which adjoins the College premises, was in course of erection; a comprehensive library was being formed, 4,000 volumes, including many important works of reference, being already on the shelves, and the Council acknowledged with thanks donations of books from the British Medical Association.

Sir William Broadbent, in moving the adoption of the report, said that it was desired to elicit the opinions of members on the several subjects touched on in the report for the future guidance of the Council, and therefore he would ask them to consider it paragraph by paragraph before putting it as a whole to the meeting.

Mr. Hutchinson, in seconding, said the report represented the College as being on a perfectly sound basis, but members would do well to remember that organisation depended on life, and not life on organisation. Each member must help in promoting the life of the Polyclinic. The open Committee meetings gave them opportunities with reference to such important subjects as leprosy and tuberculosis.

The report was then considered, paragraph by paragraph, and in the end unanimously adopted.

Sir Wm. Kynsey moved the re-election of the Council who had safely steered them through their opening difficulties. Mr. Hutchinson had been the guide, philosopher, and friend of the College, and but for him it would not have had an existence.

The motion having been seconded was also carried.

Dr. Seymour Taylor proposed the election of Dr. Patrick Manson to the Council in place of Mr. Herbert Page, who retired.

Dr. Snape, while not opposing the election of Dr. Manson, suggested that there should be more general practitioners on the Council—four out of a Council of eighteen being, he thought, too few.

Dr. Little agreed with Dr. Snape both in not wishing to oppose Dr. Manson's election and in desiring to see a larger proportion of general practitioners on the Council. His experience had shown him the necessity of having the active co-operation of those in general practice, while their knowledge of the needs of their fellows was essential.

The Chairman, in putting the motion, said the suggestions which had been made would receive the careful consideration of the Council, and would probably be carried out next year.

Dr. Theodore Williams (Treasurer) moved the re-election of the auditors, and in doing so made his financial statement. He said that to keep up the establishment cost about £2,000 a year, while the subscriptions of members and fees from classes only produced between £700 and £800 a year. A suggestion having been made that the State might be asked to help, Dr. Williams said he did not believe that much would be obtained from that source. The members must get their friends to help pecuniarily, not only those belonging to the profession but the public generally.

A vote of thanks to the Chairman concluded the meeting.

THE SCHOOL BOARD AND THE OPHTHALMIC DEPARTMENTS OF HOSPITALS.

The following paragraph appeared a few days since in the *Times* and possibly in other papers:—

The London Hospitals.—Miss Honnor Morten writes from the offices of the London School Board:—"This Board has lately inquired as to the eyesight of the children attending its schools and has found it necessary to advise many children to seek professional help at the different hospitals. The result has been protest and outcry on the part of the present hospitals, as witnesssed by the following quotation from a letter from the Hon. Sydney Holland, Chairman of the London Hospital:—'The hospitals cannot possibly treat all the children. You must open an eye department.' Now, sir, if voluntary hospitals cannot deal with such an important thing as the eyesight of the poorer children of London, let us have municipal hospitals and a hospital rate. But why should the School Board be driven to start an eye department out of its already overburdened rate and under an utterly non-medical body?"

We hardly know whether so transparent a misstatement of the case is worth refutation, but we would just say on behalf of "the London hospitals" (which, by the way, are not the same thing as the Chairman of the London Hospital) that they have never said that they "cannot deal with the eyesight of the poorer children of London." On the contrary, if Miss Morten had any practical acquaintance with our hospitals she would know that their ophthalmic departments are constantly occupied in dealing with this very thing. They did complain, and very reasonably, of the folly and the inconsiderate cruelty of sending crowds of children and mothers, without any notice, into out-patient departments, already overcrowded, and where the time necessary for examining the eyesight of such large numbers rendered it absolutely impossible to see them all. We have heard tales of 200 such cases coming at the same time, and with no notice given; of patients and medical officers detained till 8 or 9 o'clock at night, etc. Besides this absence of notice there had been no previous examination into the circumstances of the parents, and very scanty proof of the defective eyesight of the children, for many of those sent were found to have normal sight. Yet in spite of the perverse stupidity of the way in which the call was made on them, the hospitals did all they could to meet the expectations naturally raised in the parents of the poor children so inconsiderately thrust on them. In a speech recently delivered at the annual meeting of the Royal Eye Hospital, Southwark, Mr. MacHardy dealt with the subject in a manner which must convince the School Board managers of the unreasonableness of their demands on the hospitals. Mr. MacHardy sums up the case thus:

Working early and late, the staff and appliances as they existed, could not master the conditions safely and satisfactorily. This may be judged when it is known that at this hospital alone, in one week, upwards of 800 such School Board referred, picked, defective-sighted children were counted among the new attendances, who included doubtless many more such children, whose origin was not detected. By extending the staff's hours of attendance until as late as 7, 8, and even 9 P.M., by precluding them for the time from scientific and patient investigation and study of rare cases, by abstaining from all attempt at clinical instruction, it was possible to see every new case, and, after ascertaining that serious harm would not result from the delay, to refer the time-taking Board School children's spectacle-needing eyes for future investigation, when the days would be longer, the light better, and the appliances and assistants reinforced. This was the best that could be done, but it was done at much cost to all concerned, and at great and avoidable hardship to the poor children and their parents, who made futile journeys in the depth of winter, and spent hours of their bread-earning time in fruitless waiting in unduly crowded hospital halls.

Yet in the face of this Miss Morten charges "the London hospitals" with being unable to deal with the matter!

Why, then, were these masses of children "dumped down" without any notice on the ophthalmic departments? Again, Mr. MacHardy furnishes the answer. It was in order to provide the parents with medical certificates excusing the child's non-attendance, and it was done no doubt in pure ignorance of the time required for an examination which would have justified the surgeon in signing such certificates and giving the parents trustworthy advice how to treat the child. "Such a

case," he says, "will often claim from ten to thirty minutes' individual attention—say a mean of twenty minutes."

We have no wish to identify Miss Morten with the London School Board, which must surely contain some members of more experience; but this action of theirs furnishes a very poor argument for handing over the control of our hospitals to them or any similar municipal authority.

Finally, Miss Morten asks why the School Board should be driven to start an eye department. The rate, she says, is overburdened, and the Board is "an utterly non-medical body." Well, the School Board is not more "non-medical" than are the Metropolitan Police or the Post Office, which employ plenty of doctors—nor, in fact, than all private patients are. The addition to the rates would be very trivial, hardly perceptible in comparison with the new developments which are being constantly added to the work of the Board. But the great reason for the addition is that the work cannot be done efficiently except from within. A hospital surgeon can tell the condition of a child's eyes at the time of examination, give advice, and prescribe spectacles. But only a skilled observer with access to the schools can settle the far more important point—a point really of national moment—whether the arrangements of the school itself are or are not calculated to impair the sight of the rising generation. It is a common belief that in Germany defective eyesight is so common because children are kept poring so much over miserable ill-printed books. Without saying that it is so, we are justified in saying that it may be so. And surely it is worth while to spend a little money to ensure as far as possible that our compulsory educational arrangements do not ruin our children's eyesight, and the expense would be a "fleabite" in comparison with Miss Morten's "municipal hospital rate."

THE R.A.M.C. SOUTH AFRICA FUND.

We are requested to state that owing to the increase in the work necessitating larger premises the office of the Central Committee of the Fund has been moved to 77, George Street, Portman Square, W. Unfortunately this change has involved the loss of Miss Maxwell-Müller's valuable services as Honorary Secretary, her other duties preventing her coming so far. Mrs. Skey Muir, the wife of the Deputy Director-General, has consented to take up the duties of Honorary Secretary. It is added that the men require for the cold weather especially shirts, socks, cardigans, short flannel drawers, and body belts.

THE HALF-CROWN SUBSCRIPTION LIST.

	Half Crowns.
Mr. A Coleman (London) ...	4
I.M.S. (Aberdeen)	2
Dr. W. M. Buxton (Blackpool)...	1
Miss J. M. C. Gray, L.R.C.P. (Lucknow)	1
Major R. J. Windle (Rajpootana)	10
Dr. F. T. Roberts (London) ...	1
Dr. Herbert Taylor ,, ...	1
Mr. C. Andrews ,, ...	2
Surgeon W. E. Marshall, R.N. (H.M.S. *Melita*)	1
Per Dr. W. C. Beatley (Newcastle-on-Tyne):	
Dr. W. C. Beatley	1
Dr. T. A. Dodd	1
Dr. T. W. Hay	1
Dr. G. H. Hume	1
Dr. J. W. Leech	1
Dr. J. Limont	1
Dr. R. P. R. Lyle	1
Dr. T. Lyle	1
Dr. J. S. McCracken	1
Dr. J. R. Morison	1
Dr. H. J. Mathews	1
Dr. W. G. Richardson ...	1
Dr. W. L. Ruxton	1
Dr. W. H. Vickery	1
Per Dr. Henry Waldo (Clifton):	
Mr. W. R. Ackland	2
Mr. Herbert W. Kendall ...	1
Dr. Theodore Fisher ...	1
Dr. A. E. Blacker	2
Mrs. Thomas	1
Per Dr. W. T. Van Dyck (Beyrout):	
Dr. Wortabet	1
Dr. Brigstocke	4
Dr. C. A. Webster	1
Mrs. C. V. A. Van Dyck ...	2
Miss Van Dyck...	2
Dr. and Mrs. W. T. Van Dyck	4
Per Mr. W. M. Beaumont (Bath):	
Mr. Fredk. Parsons (Frome)	1
Mr. C. R. Dykes (Evercreech)	1
Dr. Norburn (Bath)... ...	1
Mr. E. C. Ashford ,, ...	1
Dr. Hardyman ,, ...	1
Dr. Wilson Smith ,, ...	1
Mr. F. S Cowan ,, ...	1
Dr. Rattray (Frome) ...	1
Dr. King Martyn (Bath) ...	1
Per Mr. A. Thomson (Maidenhead):	
Mr. E. C. Montgomery ...	1
Per Mr. Edward Mathews (Redditch):	
Dr. Bodger (Studley)... ...	2
Per Matron (Smallwood Hospital):	
Rev. Canon Newton	1
Mrs. Newton	1
Mrs. J. W. Kinmond... ...	2
Dr. Firth (Baildon)	1
Per Mr. Arnold Thomson (Maidenhead):	
Dr. Playne	1
Dr. J. W. Mason	1
Dr. A. Edge	1
Mr. A. Thomson	1
Mr. A. Starling	1
Mr. A. Pallant	1
Dr. Mills (Cookham)... ...	1
Per Dr. E. L Fenn (Colchester):	
Mr. C. E. Addison	1
Dr. Fenn...	1
Mr. E. A. Hunt	1
Mr. Laver	1
Dr. Macgregor	1
Dr. Maybury	1
Dr. Nicholson	1
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Dr. Edmond	2
Per Mr. F. C. Torbit (Nuneaton):	
Mr. Moxon	1
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Dr. W. S. Nason	1
Mr. Cookson	1
Dr. A. A. Wood	1
Mr. E. Peacock	1
Mr. A. Joseph	1
Mr. F. C. Torbitt	1
Per Dr. J. Harper (London):	
Dr. Bathurst	1
Dr. Bellis	1
Dr. Buckland	1
Mr. Baker	1
Dr. Miles...	1
Dr. A. K. Thomson	1
Dr. Roberts	1
Mr. Prime Bartlett	1
Mr. Atkinson	1
Dr. Vicars	1
Dr. McCaskie	1
Mr. Mennell	1
Dr. Cooper	1
Dr. Daniel	1
Dr. Ford	1
Per Mrs. Rooney (Edinburgh):	
Dr. Stewart (Leith) ...	1
Dr. Harman (Mid Calder) ...	1
Dr. Horsburgh (Musselburgh)	1
Dr. J. Thomson	4
Dr. B. Murdoch	4
Dr. R. Stephens	2
Dr. W. Elder (Leith)	3
Dr. J. Whitelaw (Portobello)	4
Mr. A. G. Millar	1
Dr. J. Sinclair (Bowness) ...	2
Sir Henry Littlejohn ...	2
Dr. C. M. Pearson	2
Dr. W. G. Sym	1
Dr. Ronaldson...	4
Dr. C. Clegg (Mid Calder) ...	2
Dr. R. A. Lundie	2
Dr. S. Stewart	1
Dr. Proudfoot	4
Dr. R. Cross (Rosslyn Castle)	1
Dr. F. R. Mackay	1
Dr. A. Robertson	2
Dr. Cumming and friends...	16
Dr. M. Murray	8
Dr. G. L. Chiene	2
Lady Russell	2
Mrs. Macpherson	4
Lieutenant-Colonel Alexander	4
Dr. Ronaldson...	1
Dr. Drummond	1
Mrs. Russell	2
Per Mrs. Alexander (Portobello)	5
Miss Robinson	1
Dr. Clouston	8
Mrs Smith	2
G. D.	1
Practitioner (Leith)	4
Dr. Macdonald (Dunbar) ...	5
Miss Milne	1
Dr. Grey	1
Dr. B. Orr	1
Dr. Nicoll, R.N.	8

We have also received, per Mrs. Rooney (Edinburgh), £1 1s. from Dr. H. Rainey, £1 1s. from Dr. J. Wilson, £1 1s. from Dr. J. C. Renton, £1 1s. from Major Macdonald, I.M.S. (Inverness), and, per Brigade-Surgeon-Lieutenant-Colonel Maconachie (Aberdeen), £1 1s. from Professor Finlay.

In addition to those gentlemen whose names have already been published as willing to receive subscriptions from gentlemen residing in their neighbourhood, the following have expressed their readiness to do so:

Dr. Robert Anderson, 4, Gladstone Terrace, Gateshead-on-Tyne.
Dr. W. Crump Beatley, 4, St. Mary's Terrace, Newcastle-on-Tyne.
Mr. F. C. Torbitt, Appleton House, Nuneaton.

Cheques and postal orders sent direct to the Editor should be made payable to the "R.A.M.C. South Africa Fund" and crossed "Holt and Co."

THE TREATMENT OF JUVENILE OFFENDERS.—In a paper read recently before the Royal Statistical Society Miss Rosa M. Barrett, the writer of the Howard Medal Essay, expressed the opinion that the criminal statistics of various countries show that there is no general decrease of crime among the population between the ages of 16 and 21 years. Though there is for the most part a decrease of juvenile prisoners, an actual decrease of juvenile crime is recorded only in New York, Massachussetts, Ireland, Canada, and some of our Colonies where preventive work has been most active. In England prisoners under 16 years of age are decreasing, but still constitute 14.3 per cent. of the total of prisoners; those from 16 to 21 are increasing and form 19 4 per cent. These figures are a disquieting commentary upon the lasting moral efficacy of the spread of Board School education. France, indeed, shows an increase both in adult and juvenile crime, and in Belgium special measures have been adopted for keeping under State care juvenile offenders until they reach the age of 21. The question of the best treatment of juvenile offenders is one that bristles with difficulties. The old adage that "prevention is better than cure" especially applies. The timely special training of weak-minded children who when neglected are apt as they grow up to pass into the criminal ranks may help in its solution.

THE SERUM TREATMENT OF TETANUS IN THE FRENCH ARMY.—By a recent order of the French Army Medical Service medical officers are directed to use injections of antitetanus serum in large and repeated doses in all cases of pronounced tetanus. This order is based on the fact that experience has shown that such injections have a favourable effect in many cases.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 7TH, 1900.

THE COMPANIES BILL, 1900.

In the article on this Bill in the British Medical Journal of March 10th attention was drawn to the urgent necessity which exists for the retention in the Companies Acts Amendment Bill of the clauses with regard to the practice by companies introduced into the Bill by the Lord Chancellor last year. Reference was made in the article in question to an inquest held at Eastbourne, in the course of which it appeared that the deceased had been taking the remedies of the Viavi Company, and had not consulted any registered practitioner. At that inquest it was disclosed that the medicines in question supplied to the deceased were a box of ointment, 36s.: box of capsules, containing 84, 36s.; bottle of Viavi liquid, 36s.; box of tablets, 36s.; and the high price thus charged for these articles gave rise to the presumption that advice and treatment were indirectly charged for. We thought it desirable in the public interest to make some inquiries into the Company's affairs, and we have now before us a copy of the Memorandum of Association of the British Viavi Company, Limited.

Among the objects of the Company in question there is no provision which we have found in some other cases for carrying on the practice of physicians and surgeons in express terms, but we do find among the objects for which the Company is established the exclusive right of sale in the United Kingdom, the Channel Islands, and the Isle of Man, of certain American remedies known as the Viavi Remedies (whatever they may be) and the establishment of special agencies to promote and push the sale thereof, also the right to carry on the business of chemists and druggists, and dealers in pharmaceutical, medicinal, and other preparations, etc.

The British Viavi Company was registered at the Joint Stock Companies' Registry Office on October 26th, 1899, with a nominal capital of £20,000, divided into 20,000 shares of £1 each. The subscribers to the Memorandum of Association are 7 (each of whom takes one share) as required by the Companies Acts. Their signatures are attested by Henry Woodward, 1, Devonshire Street, Portland Place, W., who describes himself as "Doctor of Medicine." It is, perhaps, unnecessary to add that we do not find the name of this gentleman in the *Medical Register*. There is no record in the file of proceedings at the Joint Stock Companies' Office of any further capital having been taken up or subscribed. The registered office of the Company is notified as being at Regent House, Regent Street, W., and on inquiry there for the purpose of inspecting the register of shareholders we were met with an evasive reply. No register of shareholders was forthcoming on a subsequent visit, but a document was sent to the applicant, which purports to contain a list of persons holding shares in the British Viavi Company, Limited, on March 12th, 1900, showing their names and addresses and an account of the shares so held. This list is as follows:

List of persons holding shares in the British Viavi Company, Limited, on the 12th day of March, 1900, showing their names and addresses and an account of the shares so held.

Surname.	Christian Name.	Address.	Occupation.	Date of Membership.	Shares held on March 12th, 1900.
Minorgan	John Glassford	10, Hyde Park Mansions, W.	Medical Student	Oct. 26th, 1899	One
Broadway	Blanche	Pine Villa, Quex Road, West Hampstead	Widow	Ditto	One
Pegler	Ernest Charles	Strathmore Lodge, Sydenham Park	Accountant	Ditto	One
Bamber	Elizabeth	8, Northumberland Mansions, W.	Spinster	Ditto	One
Harris	Mabel Charlotte	5, Trossachs Road, Dulwich	Spinster	Ditto	One
Tollworthy	Mary Frances	54, Allan Road, Stoke Newington	Spinster	Ditto	One
Guest	Beatrice Kate Eliza	43, Carminia Road, Balham	Spinster	Ditto	One

M. Blake, Secretary.

On comparing this list with the Memorandum of Association we find that the names are the same as those subscribed to such Memorandum of Association.

Here then is a company duly registered, with a nominal capital of £20,000, but whose whole capital nearly eight months after its incorporation would appear really to consist of £7 subscribed, or purporting to be subscribed, by the signatories to the Memorandum of Association.

Apart altogether from the dangers attending the supply or application of remedies for the cure of disease by unqualified persons, surely it is contrary to the whole spirit of the Companies Acts that a company should be allowed to remain on the *Register* of Joint-Stock Companies and carry on its business under the circumstances above detailed. The unwary person giving credit to a company which has not and never has had any capital would have no safeguard, and for any act of negligence rendering the company liable in damages there would in all probability be no pecuniary redress.

THE REMOTER CONSEQUENCES OF GONORRHŒA.

It is not so very long since syphilis was regarded, even by the profession, as the only venereal disease of serious importance. In recent years this view has been largely modified, and the grave results which are liable to follow gonorrhœa, especially in women, are now more generally appreciated; but in the minds of the large majority of the laity, at any rate, it is ranked rather as an inconvenience than as a serious disease. The *New York Medical News* has published recently an interesting article by Professor

Neisser of Breslau, the discoverer of the gonococcus, in which the importance to the community of a correct estimation of the gravity of gonorrhœa is insisted on. He calls attention to the great prevalence of the disease in all civilised countries, and urges that, in addition to being far more frequent than syphilis, its effects are more serious to humanity. Though the general mortality is not largely influenced by gonorrhœa, the morbidity of the population is increased by it to an enormous extent; and this is largely due to the persistence of the latent malady and the frequent want of efficient treatment.

The importance of gonorrhœa as an etiological factor in the diseases of women is now very generally recognised by gynæcologists, and it is probably responsible for more chronic invalidism amongst women than any other affection. The frequency of serious sequelæ in the female is, as Professor Neisser points out, largely due to the long persistence of its infectiousness, even in spite of apparently effectual treatment and cure, and to the fact that it so often occurs in women without giving rise to marked or noticeable symptoms. Saenger states that in his experience of women infected with gonorrhœa 50 per cent. develop serious complications, such as salpingitis; Schültz puts the proportion at 33.3 per cent. It is undoubtedly a potent cause of sterility in both sexes, and Neisser says "there is scarcely a doubt left now that more than 50 per cent. of the involuntarily childless marriages and limitations of the number of children is due to gonorrhœa and its sequelæ in man and woman." Lier-Ascher found that out of 227 cases of sterility 121 were due to this cause, and Noeggerath counted 49 absolutely sterile women amongst 81 patients with gonorrhœa, whilst the remaining 32 women had borne only 39 children. Professor Neisser cites ophthalmia neonatorum as an instance of the havoc wrought by the disease, and statistics certainly bear out his contention. Thus, the Committee of the Ophthalmological Society in 1884 reported that 30 to 41 per cent. of the inmates of four blind asylums in England owed their blindness to *post-partum* ophthalmia. Reinhard found that in 22 asylums for the blind in Germany 658 cases out of 2,165 (that is, nearly 30½ per cent.) had lost their sight from the same cause; and the British Royal Commission on the Condition of the Blind estimated that there were about 7,000 persons in the United Kingdom blind as the result of this disease; that is, about 22 per cent. of all the blind persons in the country. The amount of monetary loss to the community, to say nothing of individual suffering and the waste of useful lives, represented by these figures is appalling. Of course, all these cases cannot be ascribed to gonorrhœa; but the majority are almost certainly due to it, and Neisser says that in Germany alone there are some 30,000 blind people whose affliction is the result of this affection, and he estimates the blindness due to gonorrhœa at 10 to 20 per cent. of the total number of cases. This result of the malady has been very greatly mitigated by the general adoption of prophylactic treatment of the eyes of infants at birth, which is enforced by law in most Continental countries. But Professor Neisser scarcely exaggerates when he says that "thousands and even tens of thousands of people are to be found in every civilised country, whose health has been seriously undermined, whose capacity for work has been greatly lessened, and who owe their state of chronic invalidism to gonorrhœa." He urges, with much reason, that it is high time to sound a warning in the matter; that gonorrhœa is a social danger, and requires the most careful attention from the authorities responsible for the public health. The small importance attached to the disease by the public is aptly illustrated by an article dealing with the question of the Contagious Diseases Acts in the current number of the *Westminster Review*, in which the statement appears that "the effects of gonorrhœa are not of the slightest importance to any Government." The writer declares that "the vast majority of cases of venereal disease are as trivial as trivial can be"; from which it would appear that he is equally optimistic in regard to syphilis. But the public can only be enlightened on such subjects by the medical profession, and it is a matter for regret that medical men themselves do not realise more thoroughly the serious character of gonorrhœa, and take more pains to impress the fact on their patients. Until lately the difficulties of accurate diagnosis were very great, but recent researches have largely remedied this. The gonococcus can now be recognised without great difficulty. It is the only organism which possesses the three characteristics of (1) intracellular distribution in the pus; (2) decolorisation by Gram's method; and (3) inability to grow at blood temperature on ordinary agar. Professor Neisser justly urges that by making use of all the means with which scientific medicine has equipped us we can lessen very materially the serious consequences of gonorrhœa; and it is to be hoped that, with the multiplication of clinical laboratories and the spread of bacteriological knowledge, the disease will be more certainly diagnosed in the future, and its dangers and significance impressed upon the public.

ANTIVACCINIST MARTYRS.

IT ought by this time to be perfectly well known to the public everywhere that by obtaining from a Court of Petty Sessions a certificate of conscientious objection, and subsequently registering the certificate thus obtained, a parent can free himself from all legal obligation to get his child vaccinated, and therefore from all possibility of incurring any money penalty for neglect of vaccination. When, therefore, a fine is now imposed under the Vaccination Acts, it is in cases in which parents have not taken advantage of the conscience clause, and where imprisonment follows it is because the fine so incurred has not been paid. Ever since the passing of the latest Act it has been a question of pressing importance to the Antivaccination League, and of interest to the informed spectator, whether England contains any communities so grossly ignorant as to lend themselves to the purposes of organised agitation and demonstration over such imprisonments.

An ideal community of this sort has now apparently been discovered in the favourite health resort of Eastbourne. Three local antivaccinists recently submitted to incarceration under the above circumstances. They had neither allowed their children to be vaccinated, nor registered, as required by the Act of 1898, their objection to vaccination, nor paid the fine of ten shillings imposed on them consequently on this double neglect, and for non-payment of this fine they were sent to prison.

Their liberation one after the other has been made the occasion of three successive antivaccination demonstrations. The second of these was taken part in, or witnessed by, thousands of people who had congregated at the station and on the route. There was the usual procession, the usual brass band, the usual banners, and the usual speeches in glorification of the martyr and the "cause." The crowd were told by one speaker that the victim "had suffered imprisonment that they might have their liberty," a declaration which, whatever may have been its meaning or application, was received with a shout of "good on him." The further assertion that the individual object of the demonstration "was as good as his creed" was received with further cheers, and yet may be regarded as a doubtful kind of compliment, looking to the value of his creed. Their first martyr, it seems, had been offered in prison the dietetic compound euphoniously called "skilly," but number two had, according to his own testimony, "been supplied with boiled eggs and other luxuries," and in spite of the cold of the prison he said he would again go there "with a willing heart," and the newspaper reporter records that on hearing this handsome offer "the crowd here cheered wildly, and sang 'For he's a jolly good fellow.'" The second demonstration, of which these elevating proceedings formed a part, was evidently the climax of the local antivaccination success. The reports of the first turn-out had probably stimulated public curiosity to see the crowd and hear the noise, but these desires were easily satisfied, as when the third prisoner came home, and the same programme was attempted, the onlookers had diminished from thousands to hundreds, and the proceedings are thought worthy of only a few lines of newspaper reporting. This fact gives a very useful indication of the line which should be followed by those who have charge of administering the law in Eastbourne. In the end it will be hopelessly impossible to maintain any real or fictitious public excitement regarding such utterly ridiculous martyrdom as was undergone by the three antivaccinators. Parliament has been at the pains to make special provision for the relief of persons who believe they have serious objections to the Jennerian prophylaxis, and no community, however deeply steeped it may be in ignorance and perversity, can long resist the penetration of this simple fact, or can long keep up any loud pretence of indignation over the imprisonment of parents who will not take the trouble to free themselves, by means of the conscience clause, alike of vaccination and fine and imprisonment. The martyrs themselves, intoxicated by the shouting and the speeches and the music, may indeed offer "with a willing heart" to repeat their silly performance, but the reward in the shape of public ovation will very soon cease to be granted to them, and then no doubt the play will be withdrawn.

Meanwhile, the condition of Eastbourne as regards the risks of small-pox prevalence is of interest not merely to the medical men practising there, but to the whole medical profession who are in the habit of advising their patients as to the best and safest health resorts. In recent years the vaccination default has been very high in Eastbourne. In 1893 it was 58 per cent., in 1894 71 per cent., and in 1895 (the latest year for which exact figures are available) it was 70 per cent. Moreover, in the Parliamentary return of certificates of successful vaccination issued last August, while many unions show an enormous improvement, there is very little change at Eastbourne. Between the first half-year of 1898 and the first half-year of 1899 the certificates of successful primary vaccination received increased only from 79 to 122, both figures being, of course, practically negligible as regards the vaccinal protection of the town. We do not suggest a boycott of Eastbourne. Any intending visitor who cares to take the trouble can by thorough vaccination and revaccination of himself and his household safely defy small-pox either at Eastbourne or Scarborough—which is also a defaulter in this matter—but if families about to select a seaside residence have not adopted, or are not prepared to adopt, as a preliminary this personal protection, but prefer to supplement the protection which their original vaccination still affords by residing in a town which is itself reasonably guarded against small-pox, then obviously their medical adviser cannot but have conscientious scruples against sending them to either Eastbourne or Scarborough, and in such a matter the medical practitioner has at least as much right as the antivaccinist to follow the guidance of his conscience. If medical scruples of this sort were ever in any degree to affect the material prosperity of the members of the bellowing crowd who took part in these Eastbourne proceedings, they would have only themselves to thank for the after-effects of that neglect of vaccination which has culminated in the recent public absurdities.

THE JUBILEE OF THE ROYAL METEOROLOGICAL SOCIETY.

The Royal Meteorological Society celebrated its Jubilee on Tuesday and Wednesday, April 3rd and 4th. On Tuesday afternoon a meeting was held, when the President (Dr. C. Theodore Williams), addressed a large number of Fellows of the Society and delegates of other societies. He began by explaining that the late Mr. G. J. Symons, who had been elected President for the Jubilee year, had, before his fatal seizure of apoplexy, prepared an address tracing the beginning of meteorology in this country, and the history of the Society. Mr. Symons stated that the earliest observer was the Rev. William Merle, whose records, made at Driby, in Lincolnshire, from 1337 to 1344, were still preserved in the Bodleian Library. After referring to Robert Boyle and Dr. Plot, Mr. Symons pointed out that Sir Christopher Wren, the architect of St. Paul's, was the inventor of the first recording rain gauge. An English Meteorological Society had been founded in 1823, but did little work. Another society was founded in 1836, but did not take any part in the formation of the present society, which was founded on April 3rd, 1850, at the house of the late Dr. Lee, F.R.S., of Aylesbury, under the name of the British Meteorological Society. In 1866 a Royal Charter was obtained, and the Society assumed its present name. Mr. Symons urged that the Government, which provided a home for some of the richer societies at Burlington House, ought to build a proper centre for the smaller societies, and his address concluded with a sketch of the work done by the Royal Meteorological Society. Dr. Theodore Williams, after a short appreciation of the character and work of the late Mr. Symons, gave an account of the scientific work which is now being carried on by the Society. At the conclusion of Dr. Williams's remarks each of the delegates attending the meeting was presented with a medal struck in honour of the occasion. In the evening a *conver-*

sazione was held, and on Wednesday morning a visit was paid to Greenwich Observatory. In the evening a dinner was held over which Dr. Theodore Williams presided. Mr. W. N. Shaw, the Secretary of the Meteorological Council, who gave the toast of "The Royal Meteorological Society," enumerated some of the phenomena which still awaited explanation, and insisted on the necessity of co-operation both among meteorologists themselves and between them and workers in other sciences. The toast having been suitably acknowledged by the President, Mr. Bayard gave that of "The Delegates from other Societies," for which Professor Silvanus Thompson responded.

THE REJECTION OF THE LONDON WATER BILLS.

The House of Commons by a majority of 83, on the advice of the President of the Local Government Board, has thrown out the Bill of the London County Council which had for its object the purchase by the Council of the eight metropolitan Water Companies' undertakings. Mr. Stuart, in moving the second reading, claimed that the verdict of Lord Llandaff's Commission was emphatically in favour of purchase, and that the decision as to the authority to purchase and subsequently administer the water supply of London might reasonably be left to the Committee, the London County Council, for whom he spoke, being willing to give due attention to the claims of outside areas. We had hoped wiser counsels might at the eleventh hour had prevailed. It is fully fifty years ago that the Central Board of Health, the precursor of the Privy Council and the Local Government Board as the central national health authority, condemned the supply to London of such a communal necessary as water by trading companies. But now for this session, and probably for the life of this Parliament, nothing is likely to be done to put an end to this hoary anomaly. The second Bill for purchasing a water-bearing area in Wales was withdrawn without a division, and the augmentation of London's water supply, so urgently needed if famines are not annually to recur, must apparently be obtained by utilising the stored flood water of the Thames, which is polluted by sewage from many towns above the intakes. The late Sir George Buchanan recorded his mature opinion that presumption ought to be against the use of an initially polluted water supply, requiring careful filtration to make it potable for the supply of a large town like London. But water-bearing areas, innocent of such contamination, are few and far between, and are rapidly becoming appropriated by lesser towns. The peddling policy of dealing with this great sanitary question is meanwhile to continue until we suppose some epidemic visitation substitutes panic-stricken legislation for the matured and timely provision to which Parliament has refused its sanction.

THE FIRST CASE OF PLAGUE IN SYDNEY.

Dr. Ashburton Thompson, the chief medical officer of the New South Wales Government, and President of the Board of Health, has issued his report on the first recognised case of plague in Sydney. It appears that the case was reported by Dr. Sinclair Gillies, who encountered it in the ordinary course of his practice. On January 19th the patient, while driving a lorry on a very hot day, was seized with giddiness, vertical headache, and pain in the region of the stomach, which necessitated his lying down for a time, but he was afterwards able to finish his day's work. That afternoon he felt pain in the left groin, and discovered a small lump in this region. At night he vomited, and continued to suffer from headache, thirst, fever, and pain in the gastric region and in the groin. The next day he was found dozing, but was easily aroused, his face was flushed and a little puffy or heavy looking; his eyes were slightly suffused, the temperature was 104.9, and the pulse rapid and bounding. There was no delirium, nor anxiety, nor interference with speech. The lowest gland of the femoral chain of the left thigh was enlarged; it was just visible, and about the size of an unshelled almond, indurated, and but slightly tender on pressure. The swelling was well defined, and limited to the gland itself, there being no infiltration of the surrounding tissue. Next day the temperature fell to 102.2° F. and the patient felt better. He continued to improve, although there was marked prostration and the gland increased in size until the twelfth day, when it began to resolve. The clinical symptoms did not therefore do more than establish a well-defined suspicion, and the illness might easily have been overlooked. The bacteriological test, however, removed all doubt. Dr. Frank Tidwell proved by the morphological cultural appearances of the bacillus found in the gland, and its behaviour on mice and guinea-pigs, that the case was one of undoubted plague. Notwithstanding a very careful investigation made by the health authorities it has been found impossible to ascertain how the man became infected. All that can be said is that the patient lived in the vicinity of the harbour and came into business relations with ships that traded with infected ports. It is very improbable that this case was the first. The mildness of the illness and its anomalous characters presented by this case have been so frequently observed in the earlier cases in a new locality that it becomes a question whether there be not a natural law which involves a gradual exaltation of the virulence of the virus. Dr. Ashburton Thompson writes that at the time of the completion of the report no information regarding mortality or sickness among rats have come to hand. We know that since then this unpleasant phenomenon has manifested itself, and a Reuter's telegram, dated Sydney, April 3rd, states that in all 70 cases of plague have occurred with 20 deaths.

THE DEATHBED OF CLAUDE BERNARD.

Father Didon, who died the other day, is known to have studied physiology for several years under Claude Bernard, and to have visited him on his deathbed. Indeed, it has recently been stated by more than one Paris paper that the famous Dominican actually closed the eyes of the great physiologist. This, however, does not seem to be strictly accurate, and it may be of interest to some readers to know the exact facts on the authority of Father Didon himself, who embodied them in an article published in the *Revue de France* not long after Claude Bernard's death. For a knowledge of this publication we are indebted to the *Chronique Médicale* of April 1st: "The first time," says Father Didon, "that I introduced myself to Claude Bernard he appeared surprised; he had seen me attentively following his lectures and he said to me, 'It is very fine to see men seeking for truth wherever it is to be found.' I answered him quietly. 'Nowhere is truth indifferent to us, and scientific truth is here in a lustre such as may well attract and seduce even the profane.' He then offered of his own accord to initiate me privately in a more detailed knowledge of the science which he was creating. I saw him two days before his death. His mind was still clear, and was in that state of slight excitement which is caused in those about to die by the slow fever that consumes them. He made me sit down by his bedside and we talked for a long time. His soul opened itself to me with a cordiality which I shall always remember with emotion. I spoke to him about science, and remembering an expression of mine at a previous interview he recalled it to me, saying: 'Father, how pained I should have been if my science had in anything whatever troubled or opposed your faith. It has never been my intention to make the slightest attack on religion.' I said to him, your science does not lead away from God, it leads to Him. I have had personal experience of this; in regard to this matter I recalled to him a sublime expression which had struck me in one of

his last lectures at the College of France. Speaking of the determinate conditions which give rise to phenomena he had said, 'these conditions are not causes, there is but one cause, the First Cause.' 'The First Cause,' said I, 'science is compelled to recognise every instant without being able to reach it, and in this respect science is eminently religious.' 'Yes, Father, you say well. Positivism and Materialism, which deny it, are in my eyes senseless and untenable doctrines.' I praised his immortal book—*Introduction à la Médecine Expérimentale*. 'It is assuredly, in my opinion,' said I, 'one of the most important works written in our time. I should, however,' I added, 'make certain reserves with regard to the earlier pages.' He replied 'That is a work of youth; I have always wished to write that book, but in reality I have never finished it.' 'You have done better,' said I, 'you have realised it in your life.' I thanked him for all he had done for the furtherance of truth, and I told him that that First Cause, unreachable by science, would place it to his credit. He replied with a modesty and an emotion which went to my innermost heart, 'I have suffered much in my life, physically and morally; I have struggled hard, but I don't wish to say anything about all that; it would look as if I wished to boast . . . And then I have only done what I have been able to do, no more, consequently I have only done my duty. . . . But it is not good to tread on the tail of some men's principles. . . .' We parted, with promises to meet again; he gave me his hand affectionately; his soul was turned towards God; he looked like a soldier mortally wounded, leaving with regret the field of battle filled with his high deeds, and appearing to think that it was too early to depart, and that there were still victories for him to win. I was not to see him again till he was in the last agony, with the death rattle in his throat."

MIDWIFERY IN BULGARIA.

In a thesis recently presented to the Medical Faculty of the University of Lille Dr. Gountcheff Ivanoff gives an account of the state of midwifery practice in Bulgaria. The trained midwife is unknown, and the women of the people have to depend entirely on "matrons" who have no knowledge but such as they may have derived from having had children themselves, and having reached a pretty advanced stage in the journey of life. The matron makes her first visit about a month before the expected date of the confinement, when she tries to impress her future patient with confidence in her skill, and gives advice. The worth of her advice may be gathered from the prophylactic measures which she recommends against miscarriage. When this has occurred two or three times previously she recommends the woman to wear during the whole period of gestation a belt made of fragments of wool picked up off hedges in the shelter of which sheep have lain. An important preparation for the confinemement is the manufacture of a belt for the baby. This is a cord 5 or 6 yards in length, of the thickness of the human thumb, and made of strings of various colours. The child is put between two little mattresses, and the cord is tightly rolled round, only the head being left out. The matron expedites the process of parturition by taking the woman by the shoulders and making her dance. Naturally, no shadow of antiseptic precautions is used; the matron merely washes her hands when all is over. When delivery is difficult the matron introduces two fingers, and even the whole of the hand, lubricated with oil, with the avowed object of "making a way for the child." If nothing comes of these manœuvres the unfortunate patient is again made to dance. Tears of the perineum are treated by the application of cowdung. One is therefore prepared to hear that the death-rate is very high both among mothers and children in Bulgaria. The author urges the establishment of an order of trained midwives capable of managing a natural labour and with some notions of nursing and the hygiene of infancy, in place of the ignorant and meddlesome matron.

THE AFTER-CARE OF FEEBLE-MINDED CHILDREN.

A conference of those interested in the National Association for Promoting the Welfare of the Feeble Minded and in other kindred associations was held on March 28th at the Examination Hall, Victoria Embankment, under the presidency of Mr. W. H. Dickinson, Chairman of the London County Council. Its special object was to discuss, in the first place, the best means of providing for those young women at present in the homes of the Association who, although neither imbecile nor lunatic, are yet unable to earn their living or, indeed, to protect themselves, and, not having benefited by the training they have received, are considered insusceptible of material improvement; and, in the second place, to concert measures for the care of the morally depraved among the feeble-minded. Miss Clifford (a Bristol guardian) moved that voluntary industrial homes should be established throughout the country for the permanent protection and maintenance of the feeble-minded, and that the Association should take the steps necessary to this end. Miss Louisa Twining seconded the motion, which, after discussion, was adopted. The Association, which has been working for nearly five years, has now connected with it four homes, which are partly industrial and partly educational, containing 75 boys and girls, varying in age from 6 to 20, who have mostly been sent by Boards of Guardians. The motives of this Society must appeal strongly to the general conscience. That those members of the community who are born with mental power below the irreducible minimum necessary for earning a subsistence should in early life be given rather more than less attention than is given to the average individual, and that those whose small mental capacity is incapable of development should be protected both from themselves and from the evil disposed, are objects that we must all recognise as worthy of the utmost sympathy and help.

THE WEST AFRICAN FRONTIER FORCE.

We have received from the Secretary of State for the Colonies a copy of the Medical Report of the West African Frontier Force, drawn up by Dr. Wordsworth Poole, Principal Medical Officer. It covers a period from September, 1897, to March 31st, 1899, and treats of the health of both Europeans and natives, chiefly at the stations of Lokoja and Ibadan. Dr. Poole states that the Europeans, military and civil, sent out were chosen with great care, at a minimum age of 23; but as a number of them landed at the break-up of the dry season in March, and were indifferently provided with suitable shelter, there was a high rate of sickness and considerable mortality up to September. Drier weather and better accommodation in wooden huts then improved matters. In the period April 1st, 1898, to March 31st, 1899, in an average strength of 156 Europeans, the deaths in the country and among invalids sent away, including 3 from violence, were 32, or 20.5 per cent.! In Nigeria itself the annual death-rate was 17.30 per cent. Malarial fever and blackwater fever accounted for the great number of deaths. The incidence of these two fevers does not coincide; the former occurs chiefly in wet and hot weather, the latter in the cold and dry, so that the element of "chill" comes into its causation. The health of the Madrasee Sappers was not good, and even the African troops suffered a good deal. The medical officers, though serving with a military force, were civilians; and Dr. Poole considers that the same amount of knowledge would not have been obtained in any other way than by the employment of the class of medical men selected. The employment of non-commissioned officers of the R.A.M.C. for so long a period in tropical Africa is a new departure. They adapted themselves to the

somewhat new conditions, and did excellent service. They were especially useful in looking after the native troops, and in taking charge of out-stations. The employment of nursing sisters under rough conditions and far from civilisation was an experiment which was fully justified by the results, and Dr. Poole recommends the increase of the staff by one, in order that there may be two sisters at Lokoja and two at Jebba.

THE PAINLESSNESS OF DEATH

Lord Bacon in his second essay "Of Death" wrote: "It is as natural to die as to be born, and to a little infant, perhaps, the one is as painful as the other." Recently, however, Professor Nothnagel of Vienna delivered a lecture before the Society of Vienna Authors and Journalists in which he maintained that death is almost invariably actually painless, that the *articulus mortis* is, except in quite exceptional circumstances, free from even the feeling of distress. The fear of death common to all is not of course a part of death itself; it is a psychical state of life. The actual and ultimate cause of death is undoubtedly in the large majority of cases the failure of the heart's action, and consciousness is generally lost before the heart ceases to beat. As he pointed out, even in the case of gunshot injuries causing death the fatal result occurs before the painful impression has had time to reach the brain from the skin. In drowning and in all forms of suffocation the anæsthetic effect of the carbonic acid gas which has accumulated in the blood exerts its full influence long before life terminates. The struggles of asphyxia have obviously no relation with consciousness; they are in no sense voluntary, but are the effects of the dissolution of the subconscious organic vital centres. In death from acute diseases the toxins which accumulate in the blood so dull the mechanisms of consciousness as to anticipate by, it may be, hours the bitterness of death; thus in a large minority of cases that state of feeling described as the fear of death is itself not experienced. The last stages of consciousness have indeed been described by a man resuscitated from the drowned state as eminently pleasurable. It would seem that the place hitherto occupied in the popular imagination by the "dolours of death" should be replaced by the idea of a general euthanasia.

NAPOLEON'S SURGEON AT ST. HELENA.

The publication of Barry O'Meara's Talks with Napoleon at St. Helena is continued in the *Century Magazine* for April. This last instalment of the diary is mostly a record of the captive's railing against his gaoler, Sir Hudson Lowe. The Emperor's language with regard to him would hardly do discredit to one of Mr. Kipling's "Soldiers Three" or to a London costermonger. On medical matters there are one or two pronouncements which, though of no importance in themselves, are interesting from a psychological point of view. Thus on one occasion we find Napoleon declaring that it was foolish for one of his suite to take medicine. He ought, in the Emperor's opinion, to have dieted himself for some days, drunk a great deal of water, and eaten nothing. Medicines, said Napoleon, are only for old people. A man ought not to begin to take medicine before he is 60. His dislike of drugs manifests itself in another place. One morning, when O'Meara presented himself, Napoleon, who was dressing, exclaimed, "*Oh, sono morto con questo catarro!*" [Oh, this catarrh is killing me!"], giving the doctor at the same time a smart slap in the face. It is not altogether clear whether this was by way of reproach or a proof of affection, like the ear-pulling, with which the great man often favoured people whom he liked. He went on to say, "I have coughed a great deal all night, and was tormented by it, but now I am better." O'Meara advised him to take a composing and diaphoretic potion at night. "What" said Napoleon, "Opium?" The doctor hastened to assure him that he would give him one without opium. But the illustrious patient said, "No, no, none of your drugs" . . . He then asked about the liver, what its use was, where it was, putting his hands nearly in the region of it, and what effect the climate had on it. While rubbing with the flesh brush he asked if its use was not very conducive to health. On O'Meara replying in the affirmative, "Then," said he laughing, "I will give a little more of it to the liver," rubbing a little more than customary over the right hypochondriac region. One day the Emperor spoke of suicide. He said, "They perhaps think that I will put an end to myself; no, there is greater courage in supporting it. A gamester or a harlot may finish themselves, but it becomes not a man of my character. True, I could do it in an instant beyond your help." He did not do it, however, but died in his bed at 52. A medical critic jealous for the credit of his art might perhaps be disposed to say that his premature decease was owing to his not having begun to take medicine early enough.

THE SUPPRESSION OF SEA-SICKNESS.

In these days the sanitary reformer is abroad even more than the schoolmaster. One result of the epidemic prevalence of the reforming spirit is the formation of leagues against whatever appears to the perfervid sanitarian to be out of joint in the world. Leagues against tuberculosis have lately sprung up in almost every country of the world; there are leagues against alcohol and against tobacco; there is, or was, a league against cancer in France, but we do not know what has become of it. Now it seems we are to have a league against sea-sickness. A French physician, Dr. Madeuf, is the originator of the movement. The object of the league is to suppress sea-sickness—a consummation devoutly to be wished. For this purpose the means of prevention and cure of the evil are to be closely studied. It may, of course, be assumed that congresses will be held where sufferers will compare their experiences, and, like Voltaire and Frederick the Great, tell each other their *bonnes fortunes* in the matter of remedies. Scientific excursions will doubtless also be organised, so that suggested means of prevention may be tested, and clinical observations may be made "where men sit and hear each other groan"—and retch. We wish Dr. Madeuf all success in his crusade against an affliction which is a sore trial to human dignity, and which in the case of weakly persons may be a serious evil. But we hardly think he will be more successful in suppressing sea-sickness than Sir Peter Laurie was in "putting down" suicide.

SATURNINE PALSY OF THE HAND.

In his earliest writings upon lead paralysis Duchenne remarked that the small muscles of the hand remained free. When he met with atrophy of the muscles of the right thumb in painters, he attributed the defect to pressure exerted by the handle of the brush upon these muscles, and not in any way to the toxic influence of lead. Seventeen years afterwards he withdrew this opinion, and ascribed the atrophic paralysis of the muscles of the ball of the thumb to lead poisoning. Since then atrophy of the small muscles of the hand has been frequently observed under circumstances that strengthen the supposition that it is the result of lead. In most cases, it is true, the phenomenon is noticed along with the forearm type of paralysis—that is to say, a concurrent paralysis of the extensors of the wrists and fingers, but without involvement of the supinators. The supinators are not free in all cases of saturnine paralysis, but when they are affected the biceps and brachialis also suffer. In a form of paralysis described by Madame Déjerine Klumpke, and known as the Aran-Duchenne type, the thenar, hypothenar, and interosseous muscles are affected. Among file makers a form of paralysis is observed which seizes the small muscles of

the left hand, but as file cutters are in the habit of tightly gripping the chisel with the fingers of their left hand, the element of muscular strain has always entered into our consideration of the cause of the lesion. Bernhardt has observed two cases of isolated paralysis of the small muscles of the hand in painters.[1] One patient was a painter 19 years of age, who had worked at his trade for five years. He had had repeated attacks of colic. At the time of observation there was a faint blue line on the gums. There was no albuminuria. The muscles of the left hand were free, but those of the ball of the right thumb were almost entirely atrophied, and gave the reaction of degeneration. In this man Bernhardt could find no history of any over-exertion of the affected muscles. The other patient was also a painter, aged 41, who had followed his occupation for twenty-six years without ever having experienced colic. Shortly after having been engaged in protracted ceiling painting he felt his right upper arm and shoulder weak, but under treatment by massage and sulphur baths he recovered and returned to work. Six months afterwards the interosseous muscles of the right hand became affected. These muscles gave the reaction of degeneration. It would appear therefore as if there was an increasing amount of evidence to show, not from Bernhardt's cases only, but from others, that paralysis of the small muscles of the hand may be one of the earliest manifestations of saturnine paralysis, and that while this circumstance has hitherto been recognised in file makers only, it occurs also under circumstances where the element of muscular strain may be eliminated to a very large extent. The small muscles of the hand and thumb may, in saturnine paralysis, become affected before the extensors of the wrists and fingers. It is interesting to note that the affected muscles do not exhibit any marked fibrillation, and in this respect, and in the fact that the lesion advances very slowly, lies the difference between it and progressive muscular atrophy, which it so closely simulates.

[1] *Berl. klin. Woch.*, January 8th, 1900.

THE CRIMINAL ANTHROPOLOGY OF THE BICYCLE.

Professor Lombroso, who combines what Huxley called the heaven-born thirst for truth of the scientific investigator with the instinct of the journalist for the sensational, has thrown a new and lurid light on the demoralising influence of the bicycle in modern life. In the *Pall Mall Magazine* for March he denounces it as an instrument of crime. He goes so far as to say that if a young man gets into trouble nowadays, the old maxim, *cherchez la femme*, might with advantage be replaced by *cherchez la bicyclette*. The popularity of the bicycle, and the use that can be made of it for combining pleasure with profit, in themselves furnish what theologians call "occasions of sin." Then there is the increased intercourse among men to which it leads; and this, according to Lombroso's teaching, always leads to increase of vice. This is especially the case we now learn in young men of extraordinary agility who have a strong propensity to crime. The longing for distinction—or rather notoriety—by persons who have no special ability is one of the signs of the time, and Lombroso says it is "most marked among youths who, not being rich enough to buy a bicycle which shall enable them to 'break the record,' are moved to crime to gain their end." The born criminal, he adds, unlike the average man, is a *neophile*, and as such is naturally attracted by that pleasing novelty, the bicycle. The prophet of criminal anthropology is plausible, if not altogether convincing, as long as he confines himself to theory; but when he comes down to plain fact he illustrates the truth of the proverb that from the sublime to the ridiculous is but a step. He quotes two or three examples of lads who stole bicycles. Two of these had "projecting lower jaws, another had a hydrocephalic skull and a squint; furthermore, he had had a blow on the head in infancy and so was *probably* epileptic." In one instance a youth of 19, who was a butcher, and the son of a butcher and yet was as tender as Mr. Robert Buchanan might be about killing a wasp, committed a murder. When arrested he feigned madness, dressed up like Hamlet, spouted verses and refused food; but Lombroso unmasked him. This malefactor felt no remorse for the murder because it was justified by the great object of becoming the best bicyclist in the world. May not this have been part of his feigning? Of thieves who make a speciality of stealing bicycles Professor Lombroso has a good deal to say, but he does not seem to suggest that there is any cranial or other deformity peculiar to these criminals. Nor is there anything particularly enlightening in his remarks on the bicycle as a means of highway robbery. We doubt whether cyclists will agree with him in counting among "minor cycle crimes" the tricks of naughty boys who scatter nails on the ground or puncture tyres with pins, or who run under bicycles on purpose to upset them, and to get knocked down so that they may claim damages. We are not altogether disposed to accept his explanation of the proclivity of roughs to assault harmless cyclists as arising from "sheer hatred of something new." There are still parts of this civilised country where strangers are held to be legitimate marks for half bricks and other handy missiles. The whole pith of Professor Lombroso's formidable indictment against the bicycle when analysed is simply that the bicycle, like other toys, has an attraction for weak minds with deficient power of resistance to temptation; and that it affords facilities to evildoers of getting quickly away from the scene of their misdeeds. Though he begins by cursing the harmless, and in these days almost necessary, machine, he is driven, like Balaam, to bless it in the end. It promises, he says, to be a means of improving the human race. It makes men healthier, and therefore better; it protects us against neurasthenia, which threatens to become endemic. It is the most effective remedy for alcoholism. Finally, rapt to future times, he predicts that the "cyclo-anthropos" of the twentieth century will suffer less from his nerves and will be more muscular than the man of the nineteenth. "Certainly, for one evil which the bicycle now provokes, it will yield us a hundred benefits in time to come." With this admission, the most zealous defender of the fair fame of the bicycle may well be content.

A NEW SCHOOL OF MEDICINE IN PERSIA.

A medical school has (as we learn from the *Archives Orientales de Médecine et de Chirurgie*) recently been founded at Tauris in Persia by Dr. Loghman-ol-Mamalek, a graduate of the Paris Faculty, and principal physician to the Crown Prince of Persia. In addition to a president there are three professors, each with an assistant. Only Musulmans between the ages of 8 and 16 are admissible as students. The ages suggest that the school is only preparatory, but the programme of study is of a most comprehensive character. It includes instruction in the Persian alphabet, grammar, and language; Arabic dialogues, writing and literature; arithmetic, history and geography, gymnastics and physical exercises, English (optional), Russian (optional), French (compulsory), the Ottoman tongue (European Turkish), geometry, topography, painting and drawing, algebra, cosmography, physics, chemistry, botany and geology, zoology, anatomy, physiology, histology, pharmacology, surgery, ophthalmology, hygiene, general medicine, dentistry, photography. The curriculum extends over seven years. An examination has to be passed twice a month before a jury composed of the president and the professors. Another is held every six months before the notabilities of the district. A further examination has to be passed at the end of each

year. Students who have satisfied the examiners are given at the end of the curriculum a certificate which entitles them to receive a diploma from the Minister of Public Instruction. In connection with this school is a scientific society which publishes a journal. The school possesses a library, a pharmacy, and a collection of surgical instruments. There is an out-patient department where medical advice and medicines are given free to the poor. There is also a vaccination station, and it is hoped to collect sufficient funds to build a hospital.

RELICS OF OLD PLAGUE EPIDEMICS.

In the lazaretto of Frioul, over against Marseilles, there is a collection of instruments formerly employed as part of the equipment of quarantine when persons suffering from or suspected of plague were isolated there. Among these are gigantic cavalry sabres and pikes which were used to open buboes at a safe distance; and long silver rods, by means of which the last sacraments were given to the dying. There is a formidable-looking apparatus which might be taken for an instrument of torture used by the Holy Inquisition; this is a gigantic pair of pincers, in shape resembling the claws of a lobster, known as the corpse tongs; with these the bodies of those who died of the plague were consigned to the waters of the Mediterranean. The depressing effect of these ghastly relics is somewhat mitigated by others of a less funereal kind. Among these is the sedan chair of H.R.H. the Duchess of Angoulême, who in 1820 was in quarantine at Frioul on her return from Naples.

THE CONTROL OF SYPHILIS.

Some time ago we alluded to the action which is being taken by a committee of ladies with reference to the occurrence of syphilis among women of the lower classes, with a view to holding in check the prevalence of the disease in this country. It may be pointed out that the field at present at the disposal of the Ladies' Committee is restricted, being confined to houses of refuge and the like, where the sufferers are generally only too glad to avail themselves of the help and treatment held out to them. Another, and much more extensive field, is to be found among the women who frequent the Poor-law casual wards. In those institutions are frequently to be found a proportion of outcast females, who from time to time leave their accustomed haunts, and for one reason or another seek shelter; it may be merely as a temporary escape from the squalor and rowdiness of their usual surroundings. Others, again, undoubtedly repair to the casual ward in the hope that they will be detained by the officials for treatment, though many women so stricken do not at such time draw attention to the disease from which they suffer. On the male side of such establishments the diseased condition of the casual may be apparent, or may be at once recognised by the attendants during the cleansing process. On the female side, however, this is not so, and the power to enforce a due examination, even when there may be ground for suspicion, does not exist. It is possible, however, that much good might be effected by the offer of medical attention and treatment to women who had gained admission to the casual ward in the ordinary course of events. At present the opposite idea prevails among these unfortunates, and many believe that no treatment is to be expected in such places, but that the infected must seek the needed help at a general hospital. No doubt most of the cases of venereal disease admitted to the workhouse or infirmary under the Poor Law are thoroughly dealt with. In many instances the authorities of such places are empowered to pass on the cases they encounter to the Female Lock Hospital, where they are retained until cured, at the expense of the parish from which they are sent. Still, we believe, few of the workhouses and infirmaries of London set apart any special wards for the treatment of primary syphilis in either sex. When Sir William Gowers prosecuted his classical researches into the effects of syphilis upon the nervous system, not a little of his material was obtained from the wards of the metropolitan infirmaries. Should a similar inquiry be instituted with regard to primary syphilis, it is not probable that many cases would be found in those institutions. On the other hand, we believe that could a systematic examination of the frequenters of casual wards be rendered possible, or even if no more were done than to make an offer of treatment by the parochial authorities to such persons, one hotbed of syphilitic infection would be deprived of much of its activity.

THE TUBERCULOSIS CONGRESS AT NAPLES.

According to the Italian medical papers there is every prospect of a large attendance at the Congress on Tuberculosis which opens in Naples on April 18th. Among the communications promised are the following: Professor Baginsky, of Berlin, on the Question of Sanatoria for Tuberculous Infants; Professor Lortel, of Lyons, Tuberculosis and the Roentgen Rays; Professor Dubelir, of Moscow, Tuberculosis in the Russian Army; Professor De Giovanni, of Padua, Predisposition to Tuberculosis; Professor Sanarelli, of Bologna, the Prophylaxis of Tuberculosis on Railways. Numerous representatives from foreign Governments and scientific and philanthropic associations are expected. The badge of membership is the reproduction of a Greek medal of exquisite workmanship representing the Goddess of Hygiene. Members on paying their subscriptions will receive a card, presentation of which will ensure a reduction of 30 to 50 per cent., according to distance, of railway fares, free admission to the museums of Naples, to Pompeii and Herculaneum, gratuitous trips to Pompeii and the Gulf of Naples, and admission to the entertainments arranged by the Syndic and Municipality of Naples. Early application should be made by those who intend to take part in the Congress to the Secretary of the Executive Committee, Professor Alfredo Rubino, Ospedale Clinico, Napoli.

TEMPERANCE TEACHING AND PHYSIOLOGY.

At the annual conference of the department of superintendence of the American National Education Association recently held in Chicago, Professor W. O. Atwater, of Wesleyan University, delivered an address on Alcoholic Physiology, in which he criticised somewhat severely the scientific temperance instruction given in the public schools. He was careful first to define his own position. So far from regarding the results of scientific experiments as showing that the moderate use of alcoholic liquors was generally to be recommended, he said he believed that the more advisable course was habitual abstinence, and he especially emphasised the importance of abstinence for young persons. But he went on to declare that to teach that alcohol, even in moderate quantities, was always harmful and never useful was a subversion of the truth. The injury done by such teaching he said was twofold; the boy learnt later that he had been mistaught, and lost faith, so that the effect was to undo much of the good that was intended. Furthermore, the child got the idea that deception was allowable in a good cause, and that the end justified the means. This utterance has naturally fluttered the temperance dovecotes in America, and Professor Atwater has been denounced with an intemperance of language which seems characteristic of the advocates of temperance in the matter of drink. Professor Atwater claims to have proved by a series of experiments that alcohol, though not a food, is a physiological fuel, and may therefore in certain circumstances serve a useful purpose. It appears that this doctrine is in contradiction to what is taught on the subject under the auspices of the temperance societies in many American schools. Reason-

able men will, however, agree with Professor Atwater that false teaching even for the promotion of temperance is not only morally wrong, but likely to discredit and damage the cause which it is intended to support. Unfortunately Professor Atwater's doctrine has been seized upon by the whisky dealers, and distorted abominably. They impudently advertise in the boldest type that "Professor Atwater Proves that Alcohol Is the Greatest Brain Food Known to Science." Professor Atwater's attention having been called by a correspondent to this statement replied as follows: "You ask, 'Would you ever advise a student, young or mature, to use alcoholic drinks regularly as a brain food?' Most certainly not. It is difficult for me to conceive how any one at all familiar with the fundamental principles of physiological chemistry could think of alcohol as a brain food. So far from advising my students to use alcohol, it has been my custom in a lecture upon this subject which forms part of a course of physiological chemistry, to call especial attention to the great evil which comes from its habitual and excessive use." We fear, however, that Professor Atwater will have to explain himself a great many times yet before he ceases to be a victim of misrepresentation. We have a vivid recollection of our own experience in connection with certain statistics as to temperance and longevity which were published by the Collective Investigation Committee some years ago.

THE BATTLE OF THE CLUBS IN CANADA.

The battle of the clubs, as we learn from the *Dominion Medical Monthly*, is being waged in Victoria, British Columbia. The increasing exactions of the local benefit clubs having worn out the patience of the doctors, the latter have formed themselves into a mutual protection society, the members of which undertake to have nothing to do with "lodge practice." The clubs have held indignation meetings and passed resolutions protesting against the action of the doctors. From which it would appear that the benefit clubs of the great Dominion have nothing to learn from those of the Mother Country in point of impudence.

Dr. G. T. Beatson has been appointed Surgeon to the Glasgow Western Infirmary to fill the vacancy on the staff caused by the resignation of Professor Buchanan, who has been appointed Consulting Surgeon.

We are asked to state that the Council of the Royal Medical and Chirurgical Society have decided not to hold a meeting of the Society during the month of April. The next meeting will be held on Tuesday, May 8th.

We regret to announce the death of Professor Josef Gruber, the distinguished Professor of Otology in the University of Vienna, which occurred on March 31st after a brief illness. Professor Gruber was in his 73rd year. We hope to publish fuller notice of his career in a later issue.

The London County Council has of its own mere motion raised the salary of Dr. Mott, F.R.S., Pathologist to the County Asylums Laboratory at Claybury from £700 to £1,000 a year. This is a proof of an enlightened appreciation of the value of the work done at Claybury, on which the Council is to be congratulated not less than Dr. Mott.

By an exhaustive ballot of the whole Progressive Party in the London County Council, Dr. W. J. Collins was again elected leader of the party. He has, however, informed the Whips that his professional duties prevent him assuming the leadership. It is understood that Mr. Mackinnon will be requested to lead the party.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Bill is kept on the paper for the report stage almost daily, but it can hardly come on for consideration until after Easter. The resolution for expenses has to pass the House before any effective progress can be made, and so far this has been carefully watched and blocked. Colonel Milward has put down an amendment to omit words in the second clause of the Bill so as to limit the penalty of £5 to the assumption of the title of midwife, and exclude habitual attendance on women in childbirth. This would protect all the country midwives from penalty, and go far to make the Bill even more useless as a protection to the public than it is. There are sure to be a number of amendments on the report stage, and the definition of midwife in the Bill as "a woman who undertakes for reward to attend women in childbirth, where no registered medical practitioner is engaged or employed," is regarded by many members of the House as far too wide, and more calculated to create a new class of practitioners than to encourage the education and training of women engaged in attending patients in childbirth, which was the avowed object of the original promoters of this legislation.

The Lunacy Board (Scotland) Salaries Bill occupied a good deal of time on Monday, and in the end the criticism which came from all sides of the House induced the Government to promise to reconsider the second clause of the Bill. In that clause it is proposed to allot £300 a year to the Chairman and the other two unpaid Commissioners as fees or remuneration for the extra duties likely to be thrown upon them. The general feeling in the House was against this proposal. It was felt that the sum was quite inadequate for any proper return for the services rendered, and that as these positions had always commanded the services of excellent men as places of honourable distinction, it would be better to increase the strength of the Medical Commissioners by another appointment. This view was so strongly urged that the Lord Advocate promised to submit it to the Secretary of Scotland with a view to modification of the clause in the Committee stage

The London Water Bills occupied a long time last week, and there was a very animated discussion between the advocates of purchase on the one side and the defenders of the existing system on the other. In the end the House decided against the Bill of the London County Council for purchase by a majority of 83 in a House of 300 members. The Bill for acquiring a new supply from Wales was afterwards withdrawn. The debate turned mainly on questions of the rights of the companies, and the expediency of entrusting the control to the County Council. The question of public health was relatively little considered; but a protest was entered towards the end of the discussion by Sir Walter Foster in favour of public control as more conducive to effective health administration.

The Army Medical Staff in South Africa was the subject of a question by Mr. Weir on Monday with reference to the rate of pay. The Under-Secretary for War stated that the highest pay drawn by offices is £1,752 per annum, and the lowest £336 17s. 6d. All the civil surgeons in South Africa receive £428 17s. 6d. a year, and the consulting surgeons £5,000 a year each. Over 3,000 offers of service have been received from medical men, but no record has been kept of those who offered gratuitous service. Mr. Wyndham was able, however, to state that the late Dr. Grigg and Sir Thomas Fitzgerald had offered gratuitous service, which had been accepted. Mr. Weir also elicited on Tuesday that the total number of nurses in South Africa is 514. The rates of pay vary from £30 a year with allowances in the case of the army nursing service, to £2 2s. a week in the case of those employed locally or accompanying invalids home. Some 2,000 applications for employment as nurses have been made, but no record has been kept of the offers of gratuitous service.

The Easter Vacation will commence on Tuesday next and last until April 26th. The Companies Bill and the Lunacy Bill will in all probability be considered by the House of Commons early in May.

THE WAR IN SOUTH AFRICA.

THE RELIEF OF LADYSMITH.

By FREDERICK TREVES, F.R.C.S.,
Consulting Surgeon with the Forces.

Durban, March 9th, 1900.

THE FIFTEEN-DAYS' BATTLE.

No. 4 Stationary Field Hospital reached Chieveley on Sunday, February 11th, after a very tedious march, during which we felt the heat severely. The heat on the two following days was intense, and on Wednesday, February 14th, I watched the army moving out for the fourth time. The men were not in the best of spirits, and had not forgotten the circumstances under which Colenso was approached on the last occasion. On Thursday, February 15th, firing began, and from that day until Thursday, March 1st, there was fighting every day and all day. There is no doubt that these fourteen days represent the very hardest part of the campaign. The men were moving forward through a terrible country, and as soon as one ridge or kopje had been taken another had to be faced. There was seldom a night during which we did not hear rifle firing. This in most cases came from the Boers, who were in constant terror of a night attack, and would fire furiously from their trenches on the least alarm. The casualties during these fourteen days were comparatively few, but among them were many serious cases. The men, moreover, were exhausted by the continued fighting, and were often lying out for some time before they could be reached by the stretcher-bearers. Thus, many were lying out all night, and one man I talked to was unfortunately out two nights and a day. The Boers gave him water to drink, and at the same time relieved him of all he had on him.

WOUNDS PRODUCED BY EXPANDING BULLETS.

If was during these fourteen days that we began to have experience of "explosive" bullets. The wounds made by bullets so named are easily recognised. They are marked by a small point of entry—the usual Mauser wound—and by a large and terrific wound of exit. This wound may form an open cavity as large in diameter as half-a crown. At the same time there is great shattering of the bone. As certain statements as to the extensive use of explosive bullets by the Boers have appeared in newspapers from time to time it may be well to state precisely what has been the experience gained among our wounded. In the first place, practically all the wounded who have fallen in the Natal campaign from the Battle of Colenso (December 15th) to the Relief of Ladysmith have passed through the Field Hospital to which I have been attached. The only exceptions are represented by some few convoys of wounded (mostly slight cases) who went down to the base direct by ambulance train. We have, therefore, dealt with some thousands of instances of shot and shell injury. At the first battle of Colenso and at Spearman's Camp we met with isolated instances in which the injury was probably due to a Martini-Henry bullet or to a missile from a "sporting rifle." In these cases, however, the lesion was marked by a comparatively large point of entry and was hardly typical. Some may have been due to "explosive bullets," but it was not until after February 15th that I came across examples of injury due undoubtedly to bullets of this type. We have admitted a good many instances of these particular wounds, although the proportion among the whole number of the wounded is quite small. Moreover a large quantity of soft-nosed bullets have been found among the ammunition left by the Boers in their flight. I have myself found many on my visits to the Boer trenches and am bringing specimens home.

THE GREEN BULLETS.

I am also bringing back a box or so of "poisoned bullets" (as our soldiers call them) found among the Boer ammunition. These bullets are covered with a bright green composition. I do not for a moment suppose they are "poisoned." The coating appears to me to be a mixture of sulphate of copper and tallow, and is probably used to keep the rifle barrel clear. I propose to have this green material examined chemically when I return to London. I have turned over many heaps of Mauser ammunition in the Boer rifle pits and trenches, but have found no examples of the split or decapitated bullets which have been picked up by some. They must, I think, be uncommon. We have not met with any in No. 4 Hospital.

VAGARIES OF BULLETS.

The vagaries of bullets are apparently without end. I have seen now several instances of wound of the prostate and base of the bladder both with communication with the bowel and without. When the prostate has been involved epididymitis has not been uncommon. In one or two instances of abdominal wound a fæcal fistula has followed without any peritonitis. We have had several cases in which isolated nerve trunks have been cut across without other injury. In a case under the care of Dr. Elliot the Mauser penetrated the lower end of the thigh, wounding the popliteal artery, and causing a fracture of the femur which involved the knee-joint. A large traumatic aneurysm followed with great swelling of the whole limb. The knee-joint was filled with blood which showed a visible pulsation. This case was treated by rest and elevation, and when last seen was doing well. Certain traumatic aneurysms with distinct and widespread pulsation have vanished with rest.

FIVE BULLET WOUNDS IN THE SAME ENGAGEMENT.

As an instance of extensive Mauser wounds I may mention the case of an officer recently in "No. 4." His experience is, I imagine, unique. He was shot in an engagement and fell. He rose and tried to walk towards a fellow officer. He was again shot and fell. He got up and made a second attempt to move when he was shot a third time. He could move no more, and when lying on the ground was shot a fourth time. In due course the stretcher bearers arrived, and as he was being carried down he was shot a fifth time, and one of his bearers was shot at the same moment, so that his stretcher was dropped to the ground. Of the five injuries four involved the limbs and back. The third wound received was a penetrating wound of the abdomen below the level of the umbilicus, the bullet escaping (apparently) at the buttock. The poor fellow was much collapsed on admission, had some abdominal pain, some tympanites, and slight vomiting. Following the indications taught by this campaign I advised no operation. He made an excellent recovery, thanks largely to his pluck and fine health and the care of his surgeon (Major Kirkpatrick).

A MAXIM BULLET.

I may here mention that I have seen only one intact Maxim bullet extracted. The man was under Dr. Elliot's care. The bullet caused a long gutter fracture of the skull in the temporal region, opened the meatus, and was cut out in the neck near the clavicle. There was a considerable escape of brain matter. The bullet was detected by the telephone probe.

THE TRENCHES ON FORT WYLIE.

On Sunday, February 25th, I paid a visit to the Boer trenches on the north side of Colenso, and was especially interested in the entrenched hill called Fort Wylie. This kopje was literally covered with burst shell and with shrapnel bullets. On the face towards the river almost every stone showed a mark of lead. The Boer trenches, on the other hand, contained such a quantity of empty Mauser cartridge cases that it is evident the enemy had not been inactive on this historic hill. The trenches were

wide and beautifully made, and were nearly neck deep. In some the earth had been scooped out in front so as to form a retreat when a shell burst. The Boers had in all cases provided the trenches with a means of escape, and had made elaborate attempts to ensure some comfort. In many trenches there was straw, and in one an iron bedstead. Among the *débris* in the trenches I was struck by the strange number of patent medicine bottles. They were almost as numerous as the gin bottles. The Boers had provided themselves with ingenious coverings against the rain, but they left behind the impression that they had little regard for cleanliness.

Colenso Village.

The pretty little village of Colenso was represented by a woebegone street of broken-up and ruined houses. There was not a sound pane of glass in the place. In one ruined cottage the sole relic of the time of peace was a child's battledore. The railway station was little injured, but was rendered unattractive by the fact that the Boers had left a dead horse in the booking office. The animal had been long deceased. Colenso railway bridge, with its fine spans, was a fantastic ruin, a chaos of broken iron hurled into the rushing stream, a mere muddle of bent beams, hanging bolts, and twisted bars. Some precarious planks placed from one piece of wreckage to another formed the sole means of crossing the Tugela on the day of my visit. Not long after I had left this much-deserted village the Boers began to shell it again from Grobler's Kloof. Poor Colenso! Through all the glorious days of the summer now passing away there has been little but death and riot among the gardens which made the sleepy hamlet homely, and among the cactus and the mimosa which made it beautiful.

The Storming of Pieter's Hill.

Late on the afternoon of February 27th we were able to view from our camp at Chieveley the grandest spectacle of this campaign—the storming of Pieter's Hill. The hill formed a long ridge, or series of ridges, immediately in front of Umbulwana. The afternoon was a little cloudy, but a wide patch of sunshine rested upon this fateful ridge and made it luminous against the gloomy walls of Umbulwana. A more terrific display of artillery fire could hardly be imagined. It was incessant. The sound was as the roar of some uncanny sea. The air above the ridge was alive with the little white clouds of shrapnel, and on the ground itself were flashing lyddite and common shell and brown columns of dust, which rose up and were made brilliant by the sun. When the artillery ceased the rifle fire could be heard, and later on we knew that the trenches had been taken at the point of the bayonet, and that the way to Ladysmith was open.

The Journey to Ladysmith.

About 6 P.M. on Wednesday, February 28th, our cavalry reached Ladysmith, and on Thursday, March 1st, General Buller reached the long-beleaguered camp. On the following day, Friday, I had the good fortune to enter the town. My journey to Ladysmith was not accomplished without difficulty. I had to follow the road the army had taken, as the main road was not known to be free from the enemy, and moreover, the bridge leading to it had been blown up. The distance from Chieveley to Ladysmith by the route I took was between 23 and 24 miles. I took my covered cart (called in the camp the "bus"), with ten mules and two of my Kaffir boys. My servant rode in front to pick out the road. With me came my remaining nurse, Miss McCaul, and Mr. Day, an army chaplain. Miss McCaul was the first woman to enter Ladysmith after the siege. We took provisions, water, and forage for two days. We left Chieveley at 6.30 A.M., and the first part of the journey was over the battlefield of Colenso. We came across the skeletons of Colonel Long's horses, the horses attached to the lost guns; they were lying in a line as they fell, their bones were whitened, but still attached to them were the collars and harness. The road now became very rough—over ridges and down into dongas, over boulders and deep into ruts; now the mules would be at a fair trot, and now they would be dragged to a standstill. At last we reached the hill commanding the pontoon bridge over the Tugela. At the top of this precipitous height was the mighty convoy of ox waggons with food for Ladysmith. The waggons could be counted by hundreds and the cattle by thousands. The hubbub could not be surpassed. The lowing of the oxen, the shrieking of the Kaffir boys, the bellowed orders of the convoy conductors, the groaning of colliding waggons made a compound of sound worthy of the scene. Among the rabble would be seen ambulance waggons, water carts, isolated gun carriages and ammunition waggons, bread carts, mounted officers hurrying through, weary pickets returning to camp, and a few "Tommies" tramping along with a cheery indifference to the restless struggling crowd. Owing to the kindness of the staff officer I was able to get my cart over the pontoon without delay.

Crossing the Tugela.

The actual road above the pontoon was the very steepest declivity I have ever seen negotiated by structures on wheels. In England it would no doubt be indicated by a placard, "This hill is fatal to cyclists." The 'bus (empty of all occupants) slid unsteadily down the incline, rocking like a ship in a troubled sea, and the mules had to put on their best pace to keep clear of the onrushing wheels.

The river at the point of crossing is exceedingly picturesque. The steep rugged banks are rendered beautiful by mimosa and cactus, and below the pontoons the torrent breaks into foaming rapids, while up-stream is the celebrated waterfall of the Tugela. From the river the road wound on of its own sweet will to the foot of Umbulwana. It ran across plains and down into valleys, and over spruits and across boulders, and through mimosa groves and over dusty wastes. We had to ford a river at the foot of the great hill, and as the mules were nearly carried off their feet and our waggon was flooded with the stream we were glad to land on the opposite bank. We were by this time many miles ahead of the slow-moving food convoy, and had the advantage of seeing the country undisturbed.

Boer Camps.

We passed the Boer camps, which showed every evidence of a hurried departure. The cooking pots were still on the camp fires; the rude shelters under which our hardy enemy had lived were still intact. The ground was strewn with refuse, with the remains of the last meal, with discarded articles of clothing, with empty bottles and barrels, with fragments of chairs and tables, with empty flour sacks, and above all with the straw which is quite a feature of a Boer settlement. There were no tents. The shelters were made of boughs, of beams of wood from adjacent farms, of iron railings, of barbed wire, of plates of corrugated iron, and of casual patches of canvas, and of old sacks. In some of the trenches the shelters were very elaborate, and varied from an almost shot-proof retreat to a simple tent, made out of two raw cow skins stretched over bamboos. These wild camps, amid a still wilder country, suggested a brigand's stronghold, and indeed one could not help being frequently reminded of certain familiar theatrical scenes which professed to represent the conventional "brigand's retreat". The only evidences of a gentler mood were provided by a discarded concertina and by a letter I picked up on the road side. The letter was from a Boer wife at the home farm to her husband in the trenches. As we passed along the road we met with many evidences of a hurried flight. The dead horses were very numerous, and left by the road side, with traces cut, were carts, light spider carts, water carts, waggons, and such cumbrous impedimenta as wheelbarrows and a smith's forge. One waggon had fallen headlong into a donga in the dark, and was an utter wreck.

The First Sight of Ladysmith.

At last on mounting the summit of a little ridge we saw before us a wide green plain of waving grass, and beyond the plain and under the shelter of purple hills lay the unhappy town of Ladysmith. Ladysmith looks very pretty at the distance—a cluster of white and red roofs dotted about among trees, and surmounted by the white tower of the Town Hall. The military camps were placed at various points about the town.

The Garrison.

The first of these camps we reached was that of the gallant King's Royal Rifles. They had made some sort of home for themselves on the side of a barren and stony hill. They had, of course, no tents, but had fashioned all sorts of fantastic shelters out of stone and wood and wire. They had even burrowed into the ground, and had returned to the type of habitation common to primeval man. Among the huts and burrows were many paths worn smooth by the restless tread of weary feet. The path the most worn of all was that which led to the water tanks. The men themselves were piteous to see. They were thin and hollow-eyed, and had about them an air of utter lassitude and weariness. Some were greatly emaciated, nearly all were pale, nearly all were silent. They had exhausted every topic of conversation it would seem, and were too feeble to discuss even their relief.

I reached Ladysmith at 2.30 P.M., and the food convoy did not arrive until late the same evening, so we had the sad opportunity of seeing Ladysmith still unrelieved—unrelieved so far as the misery of hunger was concerned. I had no food at my disposal, but I had fortunately a good quantity of tobacco, which I doled out in pipefuls so long as the supply lasted. It would have taken many pounds, however, to satisfy the eager, wasted, trembling hands which were thrust forward on the chance of getting a fragment of the weed. We outspanned at the outskirts of the town, and the first person to come up to me was a skeleton of a Kaffir, who offered me a shilling while he pointed repeatedly to his mouth. He was really starving, and devoured the biscuits I gave him like a wolf. There is no doubt that the coloured people left in Ladysmith have suffered very severely.

"Starvation City."

The town is composed almost entirely of single-storeyed houses built of corrugated iron, with occasional walls of brick or cement. In the suburbs of the town these houses are made as villa-like as possible by means of verandahs and flower gardens and creepers. The main street of the town, however, has no pretensions to beauty, and is merely a broad road with corrugated iron shops on either side. On walking into "Starvation City," one's first impression was that of the utter emptiness of the place. Most of the villas were unoccupied, were closed up and, indeed, barricaded. The gardens were neglected and everything had run wild. The impression of desolation was accentuated by an occasional house with a hole in its roof or its wall due to a Boer shell. All the people we met were pallid and hollow-eyed, and many were wasted. All were silent, listless, and depressed. There were no evidences of rejoicing, no signs of interest or animation—and, indeed, as I have just said, Ladysmith was still unrelieved. Nearly every shop was closed or even barricaded. Sign-boards showed that here was a coach builder and there a grocer. The chemist's shop appeared to be empty of everything except the coloured water in the large bottles in the window. Such shops as were open were dark and desolate.

There were many grim evidences of better days. Thus one restaurant presented, among other cheery signs, the announcement of "Meals at all hours." Another establishment was gay with placards of "Ice creams." Notices of groceries of all kinds for sale made radiant a shop which was empty of everything but a table and some rough chairs.

Such was the aspect of the weary town. Streets empty of all but a few tired and listless men; stores without goods, shops without customers, a railway station without passengers, a post office without letters, stamps, or post-cards. No words, indeed, can fully describe this city of desolation, this little colony of the almost hopeless, this poor, battered, worn-out, hungry town of Ladysmith, with a bright summer sun making mockery of its dismal streets. The wretchedness of the place was not mitigated by the horrible smells which greeted one at every corner, nor by the miserable, dirty river which crawled slimily through the place.

The Return Journey.

We left the town about 5 P.M., and met on our way back the long convoy of waggons with food. It was dark when we reached the river by Umbulwana, and as it was dangerous, and indeed impossible, to cross the rift except in daylight, we outspanned by the river bank, and made a pretence of sleeping. When yet it was dark on the following morning the mules were put in, and with the earliest streak of dawn we crossed the river and made for Colenso. The waggons were still toiling onwards towards Ladysmith.

The road, as I have said, was very rough, and my poor cart, which had served me well for three months, began to show signs of giving out. It broke down at last, one of the wheels coming to pieces. We were then some seven miles from Colenso and the vehicle was beyond all repair. So it was left by the road side among other wreckage, a forlorn relic of what was once a smart "'bus." Our very scanty luggage was packed upon the mules' backs, our remaining food was distributed among the passers-by, and we proceeded to walk to Colenso. The mules with my servant kept to the road, but we walked along the railway. There was a blazing sun and the walk was tedious. The line took us through a district where fighting had been very heavy, and we were all the way sickened by the hideous smell of numerous dead horses and of still more numerous dead and imperfectly buried Boers. The hill sides and the very line presented the cases of countless shells; here was a huge yellow hole in the ground due to our lyddite and there was a rail bent and contorted by a blow from a solid shell. Cartridge cases, heaps of ammunition, empty meat tins strewed the way, and on each side of the line were graves, marked usually by a wooden cross, where our gallant men were buried.

By good fortune a trolly came along, and the men in charge of it kindly gave Miss McCaul a lift for the last five miles. The line was, however, broken in so many places that the trolly did not reach Colenso railway bridge many minutes before we did. At each break the trolly had to be lifted across. From Colenso we travelled to Chieveley by a casual goods train, sitting on the floor of an open truck, as there was no guard's van. We reached Chieveley on Saturday at 1 P.M., very tired and very dirty.

Siege Rations.

I have made no mention of the life of the besieged at Ladysmith, of their strange food, of their remarkable messes, of their numerous sick, and of the way they spent their time. All this will have been fully recorded in the daily papers. We saw the lump of bread, made from mealies and starch, which constituted a ration, and were willing to believe that an excellent blancmange was made out of starch and violet powder.

A Good Samaritan.

I may mention one incident of our Ladysmith journey which will serve to explain why the Kaffirs are attached to the English and very anxious for our success.

On returning from Ladysmith we bivouacked on Friday night near the drift, as I have already mentioned. The night was dark, and just before we turned in a conductor

of an ox waggon—a sturdy Scotchman—found his way to my 'bus to ask if any of us "knew anything of doctoring" as one of his Kaffir boys had been ridden over. I at once went off with a lantern. I found the "boy" under the shelter of a waggon, naked but for his loin cloth. He had been crushed by a passing team and some four of his ribs were broken. I asked for something to bind him up with, but there was nothing, not even an empty sack or a piece of canvas. I suggested a shirt, whereupon the conductor said, "Oh, if you want a shirt here is one!" and at once proceeded to divest himself of his own flannel shirt. I bound this round the "boy" and made him comfortable, while the good-hearted conductor spent the whole of a very chilly night with nothing on his shoulders but a thin drill coat. Only those who know how bleak the South African night often feels after a scorching day can appreciate the kindness of this Good Samaritan.

THE IRISH HOSPITAL.

By Sir William Thomson,
Chief Surgeon.

Naauwpoort, March 12th, 1900.

The stay at Capetown, due to the congested state of the railway traffic, came to an end on March 8th. The Hospital Corps started by train at half-past five carrying a few waggons, and leaving the mules to be carried forward in a day or two. The journey lasted just fifty hours. In that time we travelled by successive climbs to a height of 4,884 feet, where a portion of our hospital is now encamped. The country through which we passed gave one an idea of the difficulties which the troops have had to contend with. People at home are apt to think of a war carried on over practically smooth plains, with here and there a ridge; but for the first 400 miles of the journey we were always passing through mountains and abrupt small hills or kopjes, covered on their slopes with huge bare boulders, or presenting a precipitous face almost as straight as if it had been cut. The space of level ground between was no more than a mile, often it was less, and this looked in colour and consistence like sea sand, in which had been planted at varying intervals small shrubs about a foot or eighteen inches high. Approaching De Aar, and afterwards to this place, the aspect changed. There were fewer hills and larger spaces. These sometimes stretched for twenty or thirty miles almost flat, showing, as one glanced along the surface of the scrub, the appearance of some fertility. But of grass there was none, not more than there is on a well-used macadamised road, until we got into a region where rain had recently fallen. Then we found the young grass just giving a flush of green over what had a day before been sun-scorched sand.

We pitched our camp yesterday near No. 6 General Hospital, which is under the command of Colonel Large, R.A.M.C. The position is not ideal, but it is the best to be had for the present. By noon ten large marquees were up, and we were having a well-earned rest when a telegram came from Lord Kitchener asking that a section should be sent at once to De Aar. Our boxes were still unopened; a great deal of personal baggage and stores had not arrived, but we set to work with a will. Everyone wanted to go, and I finally selected Dr. George Stoker, second surgeon; Mr. Friel, fourth surgeon; with Dr. Counihan, and Mr. MacElwaine, and fifteen hospital orderlies and drivers. Everything was soon ready, and the party left by train at 9.30, the officers travelling in the guard's van and the men in open wagons. They had a wild send off from their comrades.

This section consists of five ambulance waggons drawn by strong mule teams, which we brought out from Ireland. A few square bell tents are carried, but the officers and men only took great coats and blankets. They will be attached to a quickly-moving force, the destination of which you will know before this reaches home.

There remains here, even after this depletion, tent accommodation for 100 patients, and in a day or two we shall be fully occupied. All the staff are in excellent health, but the heat is very trying.

NOTES ON THE WOUNDED FROM PAARDEBERG.

By G. H Makins, F.R.C.S.,
Consulting Surgeon to the Force in South Africa.

Capetown, March 13th, 1900.

Changed Character of the Wounds.

The hospitals both at Wynberg and Rondebosch have been very full since the battle at Paardeberg and the subsequent advance of Lord Roberts's army. There have been material changes in the nature of a large proportion of the wounds, and the after-course has also been unfavourably modified as a result of the less satisfactory possibilities of transport dependent on the departure of the troops from the immediate vicinity of the railway.

Transport Difficulties.

With the advance of the troops the exigencies of transport led to the cutting down of the number of ambulance waggons to each field hospital to two only, hence almost the only means of transport for the sick has been by ox waggons, often with insufficient covering. Beyond this the various battalions have been so widely disposed that it has been necessary to keep patients in camp one or two days before they could reach hospital. The journey by ox waggon from Paardeberg to Modder River takes three days, and although this journey is short compared with that which wounded men often have to undergo on foreign service, none the less its effects are sufficiently obvious in the case of many of the wounds. Thus hæmatothorax has certainly been much more common after chest wounds than was the case earlier in the campaign, and, again, suppuration of the wounds has been more frequent.

Wounds by Expanding Bullets.

The other marked difference has been the larger proportion of wounds apparently the effect of expanding bullets. Although few bullets of this nature have been extracted, large quantities have been found amongst the captured ammunition, and there can be no doubt that they have been largely used. Such wounds have naturally been most striking in connection with fractures. I have seen several in which a typical Mauser wound of entry had opposite to it an exit wound as large as $2\frac{1}{2}$ in. by $3\frac{1}{2}$ in. with extruded muscle, everted torn skin edges, and great disorganisation of the limb. Beyond these, however, many wounds involving the soft parts only have exhibited similar characters quite foreign to any ordinary Mauser or Martini wound. Hence primary amputations have been slightly more numerous, and as a result of the increased difficulty of keeping such wounds clean suppuration has been more common.

Wounds in the Early Stage of Enteric Fever.

Another recent complication may be mentioned—namely, the occurrence of wounds in men during the initial stage of enteric fever. Several subjects of slight and some of serious wounds have proved on observation to be suffering from this disease, and in one case death has resulted. Notwithstanding these difficulties, however, the general progress of the wounded may still be regarded as highly satisfactory.

A WEEK'S WORK IN A FIELD HOSPITAL.

The following account will give a very good idea of work at the front after a trying march:

The field hospital left Modder River on February 10th, proceeding by rail to Eslin, and then by route march to Graspan; next day to Ramsdam, thence to Waterfall Farm, arriving at the Reit River at noon, and crossing the drift about 9 P.M.

On February 14th the hospital marched at 1 A.M., reaching Wegdraai Drift at 10 A.M., and left same evening at 5 to Klip Drift, where in heavy rain it halted and bivouacked.

On February 15th the hospital crossed the drift at 8 A.M. and encamped on the north bank of Modder River. Next day it recrossed and bivouacked till 3 A.M., and then marched to Klip Kraal, resting there a few hours.

On February 17th, at 5 P.M., the hospital marched towards Paardeberg, arriving at daybreak of February 18th in sight of the enemy, who were holding a position on the north bank of the river.

The action commenced soon after daybreak on February

18th. The field hospital was pitched in rear of a battery of artillery which was shelling the Boer position. During the day wounded were continually being brought in, and several operations were performed in the operating tent, dressings applied, etc., until, between 4 and 5 P.M., hospital work had to cease as the enemy had taken possession of a hill some 500 yards from it, and were opening a heavy rifle fire on our mounted infantry who were passing in detachments on the further side of the hospital. A distant Boer battery also opened fire, and shells fell close to the hospital on either side, but luckily no damage was done, as they did not explode. The rifle fire, however, was sweeping through the tents, so that the position was untenable, and it was necessary to remove the wounded to a place of safety. Accordingly, the most serious cases were placed in ambulances and hospital waggons: those who could walk did so, and the remainder were carried by R.A.M.C. officers and men on stretchers. The hospital tents had to be abandoned.

By the time the tents were evacuated it was getting dark; and after carrying the wounded a distance of between two and three miles it was necessary to bivouac in the open. A serious misfortune had happened earlier in the day—the loss of the hospital water carts, which had been captured by the enemy when sent to fill at the river. The wounded suffered considerably on that account, as well as through the discomfort of lying in the open. At daylight, however, it was found possible to carry the whole of the wounded (two had died in the night) some two miles further to the river bank, and fortunately some milk was procured from a kraal not far off. An officer of the West Riding Regiment had given valuable assistance in carrying the wounded, by placing 25 of his men at the disposal of the R.A.M.C. The tents and one water cart were subsequently recovered.

The following figures show the number of men treated in this hospital during the week ending February 23rd:

Admitted: Officers 15, of whom 13 were wounded.
" Men 267, " 231 " (12 deaths).

Of these, 5 officers and 136 men were sent to the nearest stationary hospital, others were discharged to duty, and 90 wounded men remained till well enough to proceed also towards the base.

As regards the nature of the wounds, the following details are interesting (all were rifle wounds):

Head, face, and neck	Officers 3,	men 22	(1 fatal).
Chest	" 2,	" 14.	
Abdomen	" 2,	" 13	(6 fatal).
Back and spine	" —	" 15	(3 fatal).
Upper extremities	" 5,	" 79.	
Lower "	" 2,	" 88.	

WITH THE SOUTH NATAL FIELD FORCE.

From an Occasional Correspondent.

Medical Cases.

On the whole the health of the troops in Natal has been excellent since the war began. Only three diseases have been at all prevalent—namely, diarrhœa, dysentery, and simple continued fever. The two former are, perhaps, the most preventable of diseases. Carefully guard against abdominal chills, and especially against chills during sleep, and diarrhœa and dysentery will cease to give trouble. Unfortunately this is what the soldier will not, and often cannot, do. The admission-rate for diarrhœa and dysentery has, therefore, been high. In the treatment of the latter ipecacuanha sine emetine tincture—which is the only preparation of the drug supplied in the field medical panniers—has been found practically useless. By far the best results, both in diarrhœa and dysentery, have been obtained from a mixture containing liq. hydrarg. perchlor. ℥j and tinct. opii ℥x, an exclusively milk diet only being allowed.

Simple continued fever is almost always the result of exposure to the direct rays of the sun. The temperature ranges from 102° to 104° or more, and persists for five or six days, when the cases generally end with critical sweating. Antipyrin while the temperature remains high, and quinine later on, give the best results.

Surgical Cases.

In quite 40 per cent. of the wounded the lower extremities were involved, a preponderance which is certainly remarkable. As the cases reached the field hospitals they were quickly examined. When the wounds were slight, and the original dressings clean and well applied—which happened in a large proportion of cases—they were not disturbed. If displaced, bloodstained, or otherwise soiled, they were removed. The wounds were then thoroughly washed with perchloride solution, 1 in 1,000, covered thickly with sal alembroth wool, and firmly bandaged. In probably 10 per cent. of the cases one of the long bones was fractured, most frequently the femur. In several instances both bones of the leg were fractured by bullets, which passed transversely through the limb. When the fractures were caused by rifle bullets little, if any, comminution occurred. These cases were invariably put up in splints, and were at once despatched to the base. Many interesting cases of perforating wounds of the head occurred, several of which did well without any operation. In the field hospital under the command of Major G. H. Younge were two cases in which a Mauser bullet had entered at the vertex, and had passed downwards and slightly forwards through the brain, the orbit, and the hard palate. In both there was extensive extravasation of blood into the orbit. Both cases were treated simply with boric dressings, and when they left for the base the patients were perfectly conscious and rational and free from head symptoms. Uncomplicated wounds of the lung did remarkably well, many of the patients having apparently recovered in a week. In many cases, however, the bullets passed from above downwards, involving both the chest and abdomen. Such cases were invariably fatal. The experience gained in the present campaign will probably greatly modify opinion as to the necessity for laparotomy in gunshot wounds of the abdomen. A number of perforating wounds have recovered completely without operation, and the impression is steadily gaining ground that symptoms of internal hæmorrhage alone call imperatively for an immediate operation. There can be little doubt that since the action at Colenso some at least of the Boers have taken to using explosive bullets. A number of cases were seen at the battle of Spion Kop which clearly demonstrated this. The wounds of entrance were blackened with burnt powder, whilst the wounds of exit were torn and lacerated, and from 3 to 4 inches in diameter.

The Royal Army Medical Corps.

The conduct of the R.A.M.C. since the campaign began and the success of the entire medical arrangements in South Africa are the best answers to the hostile criticisms which have been hurled at the Department during recent years. The critics stated that the officers only asked for military rank and titles so that they might sink their profession and strut in borrowed plumes. An overwhelming answer is now forthcoming; since the commencement of the war, the Corps has steadily come to the front until at the present moment it stands acknowledged by the verdict of every officer in South Africa whose opinion is worthy of notice as the only really efficient branch of the service, excepting only the Army Service Corps. The bestowal of substantive rank has been more than justified. The opinions of medical officers are now listened to with respect, and carry a weight which was formerly unknown. For this reason the Medical Department in South Africa has succeeded to a degree which its keenest well-wishers had hardly dared to hope, and would have been impossible under the old *régime*. With one or two further concessions—such, for instance, as the granting of independent transports—the Corps will, I believe, become a model one, which other branches of the service might well try to emulate. Apart altogether from professional skill the officers of the Corps have shown a degree of physical courage which could not be excelled. At the battle of Colenso, Major W. Babtie, C.M.G., R.A.M.C., rode through a hail of bullets close up to the Boer trenches to succour men of the Royal Artillery who lay wounded and exposed to the enemy's fire. At Spion Kop Captain E. M. Morphew, R.A.M.C., braved the hottest fire from the Boer trenches, and returned time after time to the fighting line, when to show oneself for a moment meant almost certain death, to collect and dress men who were wounded. On the second day of the battle of Vaal Krantz, the rearguard, with the transport, field hospitals, and bearer companies were packed behind a steep ridge. Suddenly the Boer "Long Tom" began to drop shells into the position, and a

movement of unsteadiness became perceptible. Major G. H. Younge, R.A.M.C., restored confidence by the ingenious device of sitting down in an open space and, taking a razor from his haversack, quietly proceeded to shave himself. By the time the operation was completed "Long Tom" had been silenced by the naval guns, and complete confidence was restored.

Bearer Companies.

The experience gained in the present war shows that radical changes are necessary in the constitution of bearer companies. At present these are independent units, quite separate from the field hospitals. As soon as the work of collecting wounded is over the establishment, consisting of 3 officers and 58 non-commissioned officers and men, remains idle until the next action, which may be a matter of weeks or even months. Thus a valuable supply of trained officers and men is kept in idleness, whilst oftentimes the field hospitals are greatly overworked. The only rational way out of this difficulty is to make the bearer companies an integral part of the field hospital. The officer commanding the latter would then be enabled to detail by roster officers and men for duty with the former when an action was impending, and could at other times utilise their services in the field hospital.

The Natal Volunteer Ambulance Corps.

This corps was organised by Colonel Gallwey, R.A.M.C., C.B., at the commencement of the war. They are commanded by unattached regimental officers, who have taught the men the rudiments of company drill. The corps has been a complete success, and has proved conclusively that volunteers are capable of performing satisfactorily all the duties of bearer companies.

THE SICK AND WOUNDED IN DURBAN HARBOUR.

By George Ashton, M.B.Vict.,
Civilian Surgeon to H.M. Hospital Ship *Nubia*.

Durban, Natal, March 9th, 1900.

The Hospital Ships.

At the present moment there are no fewer than eight hospital ships lying in Durban Harbour, and they each have accommodation as follows:

Spartan	120	patients,	belonging	to the	Union Steamship Co.
Trojan	120	,,	,,	,,	Union Steamship Co.
Lismore Castle	160	,,	,,	,,	Castle Steamship Co.
Nubia	300	,,	,,	,,	P. and O. S. N. Co.
Maine	218	,,	,,	,,	Atlantic Transport Co.
Orcana	166	,,	,,	,,	Pacific Steam Navigatn. Co.
Sunrise	6	,,	,,	,,	Royal Yacht Squadron.
Golden Eagle	6	,,	,,	,,	Royal Yacht Squadron.

Durban Harbour alone thus has accommodation for 1,100 sick and wounded soldiers. The *Spartan* and *Trojan* were the first hospital ships to be sent out at the commencement of the war, and were fitted up for hospital purposes at Southampton last October.

The *Spartan* leaves for Capetown to-morrow with a full complement of sick, who are to be transferred to the base hospital at Wynberg. The *Trojan* has been acting as base hospital for General Gatacre's column at East London, and has been sent to Durban in order to have some alterations made in her interior with the view of providing accommodation for an additional 30 cases. The American hospital ship, *Maine*, leaves in a few days' time for home with patients who are incapacitated from taking any further part in the present campaign. She is always most gaily decorated, and the series of flags she flies is unique in the history of the world. At the foremast she flies the Red Cross flag in accordance with the terms of the Geneva Convention; at the mainmast proudly floats the Union Jack, presented by Her Majesty the Queen; at the mizzenmast the most conspicuous and noteworthy of all flies the Stars and Stripes; whilst her poop staff is adorned with the Blue Ensign with the yellow anchor, denoting Admiralty Transport Service. It is needless to remind your readers that the *Maine* is the first ship that has sailed under the combined flags of Great Britain and the United States, and I am sure they will cordially re-echo the hope that she may be the forerunner of many. The *Lismore Castle*, *Nubia*, and the *Orcana* have all been fitted up for hospital purposes in Durban, and so are entirely a Colonial production. The *Golden Eagle* and the *Sunrise* are luxuriously fitted up steam yachts belonging respectively to Sir Samuel Scott and Mr. Jesse Coope, and have been placed by their owners at the disposal of the Government during the present crisis for the reception of convalescent officers. The *Golden Eagle* is attached to the *Nubia*, whilst the *Sunrise* will be an annex to the *Lismore Castle*.

The "Nubia."

Considerable alterations have been made in the *Nubia* recently. When fitted up in January she was able to accommodate 474 patients, of whom 174 were provided with cots, the other 300 being distributed amongst the convalescent wards. These convalescent patients had their meals at mess tables, and slept in hammocks suspended overhead, which in the daytime were taken down and stowed away; in fact, their daily routine was almost precisely the same as that of a transport at sea. This is now altogether changed, and the two convalescent wards have been fitted up with cots. The other five wards have all received additional cots, every square foot of available space being utilised. The net result of these changes is that the *Nubia* can now accommodate 300 cot cases, whilst before the alterations she could accommodate 174 cot cases and 300 slight or convalescent cases. The need of an *x*-ray apparatus was keenly felt, and upon representing the matter to Colonel Clery, R.A.M.C., P.M.O. of the Lines of Communication, he immediately had a complete Roentgen-ray apparatus placed on board. A first saloon cabin has been fitted up as a dark room, with a supply of fresh water, sink, and a table resembling an operating table for patients to lie on while they are being skiagraphed. Already some excellent skiagraphs have been taken and developed, and they have proved of the greatest service, especially in shell wounds, as with their aid the presence of small particles of shell have been ascertained and their position localised, thus enabling the surgeons to cut down and remove them with the least possible delay and danger to the patient.

Dysentery and Rheumatism.

We received our first instalment of patients on January 11th, and from that date up to to-day, we have had on the *Nubia* 962 cases, of whom 288 are now on board. It is a most significant fact, and one that gives rise to grave thought, that out of these 962 cases, only 289 have been suffering from gunshot wounds, disease accounting for the large remainder of 673. Of these 673 cases, dysentery claims the most victims with 230; rheumatism stands second with 82. Fortunately we have only had 7 cases of enteric on board. These figures show that the casualties, even in this war, are due less to wounds than to the wear and tear of war; to exposure to unfavourable climatic conditions, as sudden changes of temperature, especially felt whilst on outpost and picket duty at night; to irregularity of feeding and food sometimes of an indifferent kind; to impure water, and over-ripe or under-ripe fruit.

Progress of Patients.

However, there is great matter for congratulation and thanksgiving in the fact that out of the 674 cases discharged from the *Nubia* no fewer than 443 have returned to the front, fit to resume their duties there. To-day 32 have been returned to the depôt at Maritzburg to be sent on to their different regiments. It is quite a common thing for the hospital trains, after bringing down their freight of sick and wounded, to return with a load of men who have recovered and are eager to again try conclusions with their country's enemies. The number of men sent home as unfit for further service is 170; some incapacitated for months; others, alas! for ever incapacited from again proceeding on active service. The remaining 61 have been transferred to Wynberg, in the hope that a change of scene and climate may facilitate and hasten their recovery.

Total number of cases, January 11th to March 10th ...	962
Discharged fit for duty	443
Discharged unfit for further service	170
Transferred to Wynberg (will probably return to duty)	61
Remaining on board	288

Twenty-six operations have been performed; of these, 11 were for the removal of either Mauser bullets or pieces of shell.

It is with deep regret we have to record two deaths: a seaman, belonging to the Naval Brigade, as the result of purulent meningitis following old mastoid disease, which had been aggravated by exposure at the front; and Lieutenant Lock-

wood, of the Scottish Rifles, who had been sent down with a bullet wound of the shoulder, received at Spion Kop. The wound was progressing favourably, when he unfortunately developed enteric fever, perforation of the bowel ensuing. They were both interred with the fullest military honours. The good people of Durban, by providing luxuries, are doing great things.

Comforts and Luxuries.

At first, owing to the hurried manner in which the ship was prepared, and for other reasons, there was naturally a little trouble and friction in getting things to work smoothly, but now everything in this respect is all that can be desired. No expense has been spared, and patients, be they officers or men, will be very hard to please if they are not satisfied. Tommy must have his "smoke," and he suffers no stint in this respect, as only last week a present of 10,000 Egyptian cigarettes were sent on board by a Durban resident. Sir William MacCormac, Sir William Stokes, and Mr. Treves have each in turn visited the ship, and, as far as I can gather, have expressed the greatest satisfaction regarding the progress of all the cases and the admirable manner in which the patients' comfort and their welfare is looked after. The tins of chocolate sent out by the Queen as a New Year's gift to her troops have been distributed to the men on board, and are naturally greatly prized by the fortunate recipients. These tin boxes will be a most valuable memento of the South African war, and they are already fetching fancy prices; only last week one was sold in Durban for 35s. The "Marked Testaments" have also arrived on board and have been given out. They are small portable books in a strong red binding, and enclosed in a suitable case. They have "South Africa, 1900," printed in large gilt letters on the front, and 200 selected verses have been underlined in red and black ink.

It only remains to be said that the patients are thoroughly satisfied with the ship and fully appreciate the efforts made for their comfort and enjoyment, and, if there is such a thing as feeling regret at leaving a home of pain, the inmates of the *Nubia* feel it when they get their discharge, although of course it is combined with a keenness to get back to the front again. Everyone is cheerful and good-tempered, and there is not a sour or discontented face in any of the beds. This fact particularly struck the American doctors from the *Maine* when they paid a visit. "It is wonderful!" they said. "A lot of these men are badly smashed, and yet they are cheerful and light-hearted. How is it?" A possible solution to this interesting query is that Britons not only know how to fight with pluck, but also how to suffer with fortitude, and that their fellow men and women are continually working to make the sufferers' pillows easy and their time of pain brimful of comfort and sympathetic tenderness.

NEW HOSPITAL HUTS AT ALDERSHOT.

In consequence of the expected arrival in this country of many more sick and wounded from South Africa it has been determined to erect huts for 700 patients at Aldershot.

Huts for 160 patients are being built at the Cambridge Hospital, near enough to that establishment to permit of their being administrated from it.

At the Connaught Hospital in the North Camp, where more space is available, huts are being put up for 540 patients, but as they are somewhat more distant from the hospital, kitchens are to be added. They are, however, near enough to be administered from the hospital, which is an advantage to all concerned.

Each hut will afford accommodation for 20 patients giving ample cubic space and superficial area. The walls and roof are of corrugated iron lined with matchboarding, groined and tongued with an intermediate layer of felt. The floor is a foot above the ground, and composed of white pine boarding. The walls of the hut are supported on iron stanchions bedded in concrete. There is permanent ridge ventilation from end to end of the hut, draughts being prevented by minutely perforated zinc inside and out. In each hut there are ten windows, the lower part of each window opens outwards and the upper part inwards into a hopper.

Each hut is heated by two Magnet stoves, and there is the usual lavatory and closet accommodation at one end, cut off from the ward by doors.

The lighting is for the present by oil lamps, as electric lighting, although in principle decided on, has not yet been introduced into Aldershot.

The foul drainage is connected with the general system by glazed earthenware pipes.

DESPATCHES: MEDICAL OFFICERS R.N.

The *London Gazette* of March 30th publishes despatches received from Rear-Admiral Sir Robert Harris, Commander-in-Chief on the Cape of Good Hope and West Coast of Africa, reporting the proceedings of the Naval Brigade with Lord Methuen from the time they joined his headquarters up to the date of the battle of Graspan; and also the proceedings of the Naval Brigade with Sir Redvers Buller at the battle of Colenso on December 15th.

After describing the course of the engagement, Captain A. E. Marchant, Royal Marines, the officer in command, mentions the services of the officers engaged, and adds: "Fleet-Surgeon James Porter, who was with the firing line, and Surgeon Beadnell with the guns, did gallant and most excellent service under trying conditions, under fire nearly the whole time."

And Lieutenant Dean, R.N., in his report says: "I found Surgeon Beadnell at Belmont Station; he had been invalided by a medical Board that day, and was waiting for the hospital train. Though in bad health, he gladly accepted my order to remain with the guns in view of the pending engagement, and on Saturday he rendered invaluable aid to our wounded, working close up to the guns, where shrapnel balls were showering every other minute."

At the battle of Colenso, Lieutenant Ogilvy, who was in command of six 12-pr. guns attached to the Second Brigade, says in his report: "Surgeon Macmillan, R.N., and Lieutenant Palmer, R.A.M.C., were conspicuous in their attendance to the wounded."

CASUALTIES AMONG OFFICERS R.A.M.C.

Major James Minniece, R.A.M.C., who died at Ladysmith on March 17th of enteric fever, was the youngest son of the late Mr. James A. Minniece of Londonderry, and was educated at Foyle College, Londonderry, and Queen's College, Belfast. He took the degrees of M.D., M.Ch. of the Royal University of Ireland in 1881, and was for some time Medical Officer in charge of the Ardara Dispensary District, county Donegal. He passed into Netley in August, 1886, and received his commission as Surgeon-Captain in 1887. After being stationed at Aldershot, he was sent at the commencement of the hostilities in Egypt to the base hospital on the Nile at Assiout, and subsequently was stationed for four years at Cairo and Alexandria. He then returned to England, but subsequently proceeded to India, where he was stationed at Rawal Pindi; from thence he proceeded, on the breaking out of the Boer war, to South Africa with the Indian contingent, being in charge of the 5th Dragoon Guards, with which he was shut up in Ladysmith. He was promoted Major R.A.M.C. in February, 1899.

Lieutenant Francis Stephen Irvine, R.A.M.C., who is reported as killed in the action near Bloemfontein Waterworks, qualified as M.B., B.Ch. R.U.I., in 1899. He only entered the army in November last. At the time of his death he was attached to the Royal Horse Artillery.

Lieutenant A. W. Hall, of the Volunteer Medical Staff Corps, who died at Mooi River from enteric fever on March 20th, qualified as L.R.C.P. and L.R.C.S.Edin. in 1893, and became F.R.C.S.Edin. in 1895. He obtained the Gold Medal for Senior Anatomy in 1891. Mr. Hall was in practice at Durban when the war broke out, and was one of the first to volunteer, joining the Durban Light Infantry. Unfortunately he met with a serious gunshot accident to his leg upon the Durban rifle range, and was in hospital for several weeks, but he left for the front as soon as he was able to move about. Mr. Hall was appointed second in command of the Frere Hospital, where at the time of the operations upon the Tugela River and the relief of Ladysmith from 80 to 200 wounded were brought in daily.

THE WELSH HOSPITAL.

Major John W. Cockerill, R.A.M.C., has been selected for the appointment of officer in charge of the hospital. Major Cockerill served with the Wuntho Field Force in Burmah in 1891 as medical officer in charge of a column (medal and clasp). He served in 1898 99 in Sierra Leone on the Kwalu Expedition, and afterwards in the country of Bai Bureh, the leader of the rebellion, and was present at his capture (medal and clasp). Major Cockerill was, we believe, the first officer under fire after the warrant forming the R.A.M.C. was issued. He has received also the Royal Humane Society's medal.

The staff of the hospital was inspected by the Prince of Wales, who was accompanied by the Princess of Wales, on April 3rd. After the inspection the Prince expressed his satisfaction with the appearance of the staff, and said he felt sure they would discharge creditably the arduous duties which awaited them in South Africa. It was a matter of great satisfaction to know that the Principality of Wales was taking its part in the movement for the amelioration of the sufferings caused through the war. He concluded by wishing the staff a safe journey out to South Africa and a safe return home. Major Cockerill responded on behalf of the staff.

HOSPITALS IN SOUTH AFRICA.

Mr. Langman received a telegram on April 4th from his son, the secretary of the hospital which he fitted out, stating that the hospital had travelled *viâ* East London to Bloemfontein, and that it was immediately being filled up.

A telegram from Surgeon-Major Kilkelly, received by the Committee in this country states that the Portland Hospital will be moved to Bloemfontein on April 8th.

We are informed that Mr. G Lenthal Cheatle, one of the consulting surgeons with the forces in South Africa, was first attached to the Guards' Brigade Field Hospital with Lord Methuen's force at the Modder River. Subsequently, at his suggestion, Glover's Hotel, situated on a point of land at the junction of the Modder and Riet rivers, was turned into a hospital for severe surgical cases unable to travel, and the formation of the hospital was placed by Lord Roberts in Mr. Cheatle's hands. It contains 20 beds, and has been largely used. Mr. Cheatle is assisted by Messrs. Crispin and Hawksworth, both old house-surgeons at King's College Hospital, and by Miss Goode. The nursing is done by the orderlies of the R.A.M.C. and Northumberland Regiments, 14 in all.

We are informed that Professor Chiene, of Edinburg, who is on his way to South Africa as Senior Surgeon to the Scottish Hospital, has been requested by the War Office to act as a Consulting Surgeon to the forces.

AN AMBULANCE FROM INDIA.

The tonga ambulance train offered by a Parsi gentleman for service with the troops in South Africa left Pindi for Calcutta by special train on February 9th. It comprises 50 horses with harness and belongings, and 20 vehicles, 12 large with stretchers, and 8 small without stretchers. The animals are country bred, thoroughly trained and broken to harness. The tonga is built to supply a want much felt on field service as a means of quickly transporting sick and wounded of mounted troops moving faster than the rest of the army. The tonga is hung with springs, and can be used either with or without stretcher. In the latter case it accommodates two in a recumbent posture, or, if the patients can sit up, the large conveyance can hold five and the smaller three. The stretchers, easily foldable, can be packed on the splash board. Each tonga has waterproof purdahs on all four sides It is adaptable to bullock draught with slight modifications in harness. The tent is a simple twofold cloth stretching from the arch of the tonga top to the ground, the outer fold made of millerained khaki drill impervious to rain, the inner fold of millerained thin lining. The lightness enables it to be rolled up and carried on the tonga cover. The tongas were freely used during the Tirah Field Force operations for bringing sick and wounded from front to base, and were most favourably reported on. They were also tried during the cavalry camp exercise at Delhi and at Attock manœuvres, and, under the orders of the Commander-in-Chief in India, are in daily use on cavalry field days.

The Metric System in Russia.—The metric system is about to be introduced in Russia, a project of law, prepared by the Minister of Finance, has received the approval of the State on the condition that regular assistance is furnished by scientific societies and universities for the verification of the weights and measures used in commerce. Since 1896 the system has been compulsory in the pharmacopœia of the Russian army.

THE MIDWIVES BILL.

A meeting of medical and lay constituents of the boroughs and divisions of South-East London and adjacent parts of Kent and Surrey, to consider and adopt measures to resist the registration of midwives, and particularly the Bill now before Parliament, was held at the Cannon Street Hotel, London, on April 4th.

The chair was occupied by Mr. George Brown, Direct Representative for England on the General Medical Council, who in his opening remarks said that the public ought to know that the medical profession was not altogether indifferent in regard to the Midwives Bill now before Parliament. The meeting might be somewhat belated, but in 1892 before the Committee of the House of Commons the suggestion was made that the medical opposition was dictated by pecuniary motives. This was at once repudiated. The Bill was opposed because it would not do what the promoters of the Bill said that it would do: it would not remove a danger from the public, it would not render midwifery safer, and the mortality would not be less. The Bill did not propose to prevent the practice of midwifery by those who were uneducated; it proposed to put on the roll all the ignorant women now practising midwifery, and stamp them as legalised to do so. That would not contribute to the safety of the public. A three months' training could not qualify these women to be practical midwives. The contention was, as stated in the evidence given by him in 1892, that none should practise midwifery but those who were fully qualified in midwifery, medicine, and surgery. It was the duty of the State to put fully qualified medical aid within the reach of the poor lying-in women. It ought not to be necessary for medical men to protest against the Bill. The public ought to demand from the Legislature that none but those who were properly qualified should be allowed to attend midwifery cases. The principle of the Midwives Bill had unfortunately received the sanction of the House of Commons, and he maintained that had been done through the representatives of the Government deliberately ignoring public opinion and refusing to be instructed by the medical profession in this matter. It was not fair to the medical profession nor to the public nor to Parliament that the Lord President had not received deputations representing the medical profession to put this matter before him in the true light when he had received deputations from the promoters of the Bill. As a profession they did not maintain that no legislation was necessary, they believed that some legislation was necessary, but they certainly believed that ignorance should not take the place of learning and incompetence the place of skill. Had they had an opportunity of speaking to the Lord President of the Privy Council, and through him to the members of Parliament and to the public they would have made plain that whilst they were anxious that those women who desired to be attended by persons of their own sex should have every opportunity of doing so, they maintained that they should prove themselves to be thoroughly competent and thoroughly fit to deal with every emergency before being put on the roll.

Mr. R. B. Anderson read letters explaining their absence from Lord Hugh Cecil, M.P. (Greenwich), Mr. A. H. A. Morton, M.P. (Deptford), and Colonel Edwin Hughes, M.P. (Woolwich). A telegram was read from Mr. Victor Horsley stating that an urgent operation detained him at his hospital. Mr. Anderson read the following letter from Dr. Glover declining to be present at the meeting:

25, Highbury Place, N.,
March 31st, 1900.

Dear Dr. Toogood,—I hope you and your colleagues will not think me unkind or unreasonable in asking to be excused at a proposed conference on Wednesday next to resist the Bill now before Parliament, and any measure of the sort.

As one of those who have never concealed the opinion that the profession cannot prevent such legislation, though it may be able to influence important details, I should stultify myself by attending such a conference.

May I be allowed, too, to say—in which I am sure you will agree with me—that the direct representatives should have been consulted before they were committed by public notices to such an attitude as your circular of invitation suggests. I shall be glad if you will read this note to the meeting.—Believe me, yours very truly,

J. G. Glover.

Mr. Anderson then read the following answer to Dr. Glover, which had been sent:—

The Infirmary, Lewisham,
April 4th, 1900.

Dear Dr. Glover,—Our preliminary circular in no way suggested that you were committed to the attitude of the meeting.

It was impossible to place the matter before you in the precise shape we were fully decided it should take except by a preliminary circular, and we respectfully claim as your constituents the right to express our views at a public meeting and invite our direct representatives to support our views, or, as you do, join issue with us.

We feel that the utter failure to "influence important details" should convince those who have trifled with this retrogressive and disastrous measure of the impolicy of that course,—I am, dear sir, yours faithfully,

J. T. Toogood.

Dr. Lorimer Hart obtained leave to postpone a resolution he wished to proposed till a later period of the meeting.

Mr. C. J. Parke (President of the West Kent Medico-Chirurgical Society) proposed, and Dr. F. S. Toogood moved a resolution which, as amended on the proposition of Dr. Watt, read as follows:

That this meeting of medical constituents of the boroughs and divisions of South-East London and adjacent parts of Kent and Surrey condemns the registration of midwives, and especially the Bill now before Parliament for that purpose, as a retrogressive measure, a reversal of the humane and enlightened policy of the Medical Acts, a violation of the statutory rights of medical practitioners, and a breach of public faith; and as mischievous and degrading class legislation endangering the health and lives of poor women and infants by providing attendance in midwifery of less efficiency than that provided under the Poor-law Acts and Orders.

Mr. H. W. Forster, M.P. (West Kent), said that he had come not to give his views, but to gather information upon a question admittedly difficult. When the question came before the House of Commons he would give all that had been said his most careful consideration. He could not help thinking that some of the objections taken to the Bill were objections which a close perusal of the measure itself would do a great deal to overcome. For instance, in minor points an objection had been taken to the limited amount of training which these midwives proposed to be certified would receive, but all the circumstances of the training of these midwives would lie in the hands and in the discretion of a Board which would be appointed for that purpose. Neither the Government nor the House of Commons laid down the amount of training which they should receive, and it would lie in the hands of the members of the medical profession to establish the minimum amount of training. He was certain that all of them wished to approach the subject in a fair-minded manner, and so much was left to the discretion of the Board to be appointed under the Bill that he thought the various objections would be overcome by that Board. He had discussed the question with his friends, and with a person who was well qualified to judge, —that is to say with his wife—and speaking for himself, and giving her views too, he frankly said he would like to see established trained nurses taking charge of these cases subject to and not independent of the supervision of proper medical officers. That was a scheme which he would like to see adopted, and it would remain for them to see how near to it they could get.

Mr. John Penn, M.P. (Lewisham) said he came to obtain information as to their views of the measure which had progressed a considerable degree in the House. As the Bill was now in the Report stage, it was a little late to move in the matter, but he was certain that members must be interested in the facts which had been so carefully placed before them. He only wished such a course had been taken earlier. In the course of the discussion of the second reading of the Bill one of the members of the House of Commons said, and no one contradicted him, and he (Mr. Penn) would like to have the views of the meeting on that point because it was an all-important point, that the Bill had the approval of the General Medical Council. [Cries of "No, no," "Yes, yes."] Mr. Penn said that he wanted to get an expression of opinion from the meeting. It was further said that the Bill had the approval of the Royal College of Physicians and of the Royal College of Surgeons. [Cries of "No, no."] That was a considerable weight of medical opinion and testimony to be quoted in favour of any measure, and must carry much weight in the House of Commons, where men had not enough technical knowledge to judge of the value of those bodies. [Cries of "Close boroughs and Corporations."] Mr. Penn concluded by saying that, in their opinion, it evidently did not carry the amount of weight that had been attached to it. [Loud cries of "No, no."] That was exactly what he wished to elicit from the meeting.

Dr. Myrtle (Mayor of Harrogate) said that the General Medical Council did not give their consent to the Bill. The Colleges of Physicians and Surgeons gave their consent through their Councils, wherein the general medical practitioner's aims, objects, and wants were not considered. In regard to what Mr. Forster had said, there were no minor objections; the general practitioner objected to the general principle of the Bill.

Dr. Macnaughton-Jones, speaking as an obstetrician, said the Bill was a danger to the public and to poor suffering women.

The amended resolution was carried unanimously.

Mr. Frank Sturges, L.R.C.P., L.S.A. (Beckenham) proposed the following resolution, which was seconded by Dr. J. P. Henry (Lewisham):

That members of Parliament for the boroughs and divisions represented by this meeting, and the direct representatives on the General Medical Council, are earnestly invited to unite with their constituents in resisting such registration, and particularly the Midwives Registration Bill now before Parliament.

Mr. Anderson read a letter from Mr. Lloyd-George, M.P., who wrote:

I very much regret that I am unable to attend your meeting this afternoon. May I suggest that the most effective method of either amending or killing this rotten Bill would be for each medical man associated with you in opposing it to communicate direct with his own member—a personal interview with a member if possible, failing that a letter. Circulars are of very little use, and resolutions of still less use.

Dr. Drysdale and Dr. Macnamara having addressed the meeting, the resolution was carried unanimously.

The following resolution, proposed by Dr. Lorimer Hart, and seconded by Mr. A. Primrose Wells (Beckenham), was carried:

That this meeting resolves itself into a committee to co-operate with the societies which have organised this meeting and other medical societies for the purposes of the foregoing resolutions; and particularly to arrange for a deputation to the Lord President of the Privy Council.

Dr. Lorimer Hart moved the following resolution:

That whereas the General Medical Council and others who support the registration of midwives on the mistaken expectation of "influencing important details," have signally failed to amend the worst provisions of th Bill before Parliament, it is time that honestly-mistaken supporters o such registration should cease to trifle with a public danger, and in view of the *plébiscite* recently taken by the *Lancet* indicating the sense of a great proportion of his electors, this meeting, regretting Dr. Glover's attitude of indifference to these considerations, invites him by resigning his seat and seeking re-election to afford to his constituents a just opportunity of reconsidering their relations to him.

Mr. George Brown retired from the chair, which was then taken by Dr. Toogood.

Dr. Lorimer Hart said that for several years Dr. Glover had taken up a position in support of the Bill. They were logically correct in asking him to put himself in such a position that they could show their confidence in him or otherwise.

Mr. Sturges said it was not right to bring forward a motion which had not been put on the paper, and to ask men to pass a resolution, when the room was empty, which would be described as passed by everyone who had attended. He could not help thinking it was absolutely out of order for any resolution which had not been published to be brought forward at that meeting when, out of over 90 members who had been present, only 17 remained.

The Chairman said he must rule the resolution not out of order. Mr. Sturges would have an opportunity of proposing an amendment.

Dr. Lorimer Hart said he had received permission to postpone his resolution till the end. How could Dr. Glover's letter be answered without a resolution?

Mr. Joseph Smith said that Dr. Glover had not served the interests of the general practitioner. He thought that the resolution could be fairly put.

Mr. Sturges said it was not a question whether Dr. Glover had done his duty or not. When the meeting started the room was full, and now it was empty, or, rather, comparatively empty, and he moved as an amendment that the meeting had become so small——

The speaker was proceeding, when

Dr. Lorimer Hart said as a point of order it was not a proper amendment. He considered there was ample opportunity of knowing that this matter was to be brought forward.

Mr. Sturges then moved the previous question, but not finding a seconder the resolution was put to the meeting by the Chairman and declared carried unanimously.

The proceedings then terminated.

REFORM OF THE HOUSING OF THE WORKING CLASSES ACT.

At the last meeting of the London County Council a report of the Housing Committee was received by the Council.

The Committee, which had previously taken steps with a view to obtaining certain amendments of the Housing of the Working Classes Act, 1890, now observed that it was a matter for regret that the Government Bill for the amendment of the Act introduced into the House of Commons by the President of the Local Government Board, while conferring additional powers to establish or acquiring lodging-houses outside its district on the Council was not more comprehensive in its provisions. As amendments of Parts I and II of the Act cannot be made in the Government Bill, since the Bill deals only with Part III of the Act, the Committee considered that the Government should be asked to introduce amending clauses in the Bill dealing with the following important points:

1. The extension of the period for the repayment of the capital cost of working-class dwellings from 60 to 100 years.
2. The value of the land on which the dwellings are erected being taken as an asset against debt instead of being repaid within the sinking fund period as at present.
3. The amalgamation of accounts, so that where land is acquired under Part III of the Act for the purpose of relieving schemes under Part I or Part II, or street improvements from rehousing obligations, thereby freeing surplus lands under such schemes for disposal at commercial value, the Council may be empowered to make such transfers as between a Part I, Part II, or Street Improvements account, and the Part III account, as shall cause the accounts to show the proper cost of the schemes with which they deal.

Clauses embodying these points have been drafted.

The Council adopted the report, as also the recommendation that a deputation should wait upon the President of the Local Government Board with a view to urging upon him the desirableness of the amendments referred to being introduced by the Government in their Bill.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

The annual general meeting of the London and Counties Medical Protection Society was held at 12, New Court, Lincoln's Inn, on April 3rd, with Dr. G. A. Heron in the chair.

The annual report of the Council showed that during the year ending December 31st, 1899, the Society had gained both in numerical and financial strength. A large number of the members had had occasion to ask for help, and a successful issue had been obtained in every case which had to be taken into the law courts. Much work had arisen in dealing with actions threatened against members for alleged malpraxis, but in not one single case had the charge been sustained. A most important class of cases was that in connection with slanderous reports of various kinds, but as a rule a communication from the Society terminated the matter satisfactorily for the member concerned. The Council had reported to the General Medical Council several cases of alleged "infamous conduct" on the part of professional men. Before reporting such cases the Council made most careful inquiry into the justice and validity of the complaints submitted to them. Of the cases thus reported some did not go beyond the Penal Cases Committee, although supported by sworn statutory declarations which appeared to prove conduct usually deemed "infamous" in a professional respect, not merely by medical men generally, but by the General Medical Council itself. The grounds on which these cases were refused a hearing by the General Medical Council were not known to the Council of the London and Counties Medical Protection Society, and they felt bound to further express their opinion that the existing arrangements of the General Medical Council did not deal adequately with matters of this sort, which affected not only the interests of the medical profession but also those of the public at large. Last year a definite proposal for amalgamation had been made to the Medical Defence Union. The proposal suggested the appointment of an arbitrator whose award should be final, but the Medical Defence Union thought well to decline the offer, and the Council of the London and County Protection Society felt that they had done all that they could possibly do in the matter. On January 1st, 1900, the reserve fund had been increased to £1,083, the cash in hand and at the bank amounted to £200, and there was no liability of any sort against the Society.

The Chairman, in moving the adoption of the annual report and balance sheet, referred to the unsatisfactory nature of their communications with the General Medical Council. He also pointed out that it would be better for members to attend the annual general meeting in considerable numbers, and by so doing show they took an interest in the affairs of the Society.

The resolution was seconded by Mr. F. Greaves, and passed unanimously.

On the motion of Dr. H. F. Laurenson (Highgate), seconded by Dr. J. C. P. Muir (Notting Hill) the council were re-elected with the exception of Sir Hugh R. Beevor, Bart., and Dr. G. Potter, who resigned, their places being taken by Mr. J. S. E. Cotman and Dr. T. Colcott Fox.

Dr. Lorimer Hart (Sydenham) proposed the re-election of the Treasurer, the Honorary Secretaries and the Auditors.

This was seconded by Dr. J. C. P. Muir and carried unanimously.

NOTES ON HEALTH RESORTS.

New South Wales as a Health Resort.—In this little pamphlet[1] the author endeavours to show the influence of the climate of Australia, especially New South Wales, upon health and longevity. The climate, he thinks, which is evolving such a fine type of man as the representative Australian is, must also now be producing special effects on longevity and health. Repeated actuarial investigations have, he says, shown that in the colonies of New South Wales and Victoria the death-rates are decidedly lower in childhood, early manhood, and middle life than in the United Kingdom. At the higher ages there is more difficulty in estimating the relative mortalities of the parent country and Colonies, because in the Colonies the higher the age the larger is the proportion of the British-born population. However, the author thinks that Australian children inherit a fairer prospect of life and health than those of any other country. He goes on to explain the climatic conditions of different portions of the colony, and their probable influence in regard to diseases of the respiratory organs, etc.

Aix-les-Bains.—Professor von Leyden has recently given his opinion of this famous spa of Savoy.[2] The spa has many attractions for both patient and tourist. There are pleasant promenades, excursions on the Lac de Bourget, the ascent of Mont Revard by the railway, and the view from its summit on to Mont Blanc. In regard to the spa itself there are its beautiful situation, its interesting Roman remains, its Casino, concerts, etc, to be mentioned, but it is the special thermal treatment which has made Aix so well-known in modern times. The Aix douche massage can now be obtained at several other health resorts, but Aix still remains the headquarters for the treatment. The attendants direct the hot stream of water on to the patient whilst they apply the massage; the douche and massage acting simultaneously on the same part produce very decided effects. Weak patients are then carried to their rooms in a *chaise porteur*, and rest for some time after the treatment. The diseases treated at Aix include many varieties of joint affection (Leyden saw several cases there of the ossifying spondylitis much talked of recently), neuralgias of different kinds, some muscular atrophies, and syphilitic disorders. Scarcely half an hour distant from Aix is the sulphur spring of Marlioz, with an establishment for treatment by inhalation, gargling, etc.

[1] Reprint of a paper read before the Insurance Institute of New South Wales on June 22nd, 1899, by W. R. Dovey.

[2] *Zeitschrift für diätetische und physikalische Therapie.* 1900, vol. iii, p. 539.

Dr. Bentley's little book on the *Maintenance of Health in Egypt*[3] should find many readers, since every year Egypt is becoming more and more visited by invalids and tourists. He describes the climate and the indication for wintering at Egyptian health resorts for various diseases, as well as the drawbacks of a winter in Egypt and the cases which should not be recommended to go there. One of the disadvantages which he rightly mentions is the unfortunate habit of invalids not to consult any local medical man until they find themselves attacked by a serious illness, a disadvantage which Egypt shares with the Riviera. The stations of Assouan, Luxor, and Helouan, and the Nile voyage are all separately referred to, and advice is given in regard to the proper dress to wear during residence in Egypt, etc. Helouan, the desert resort close to Cairo, will doubtless attract a greater number of invalids than formerly, owing to the recent opening of its new baths (with excellent thermal arrangements) and on account of the newly established Tewfik Palace Hotel, of which the author is medical director.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

ALTHOUGH the present epidemic of plague is now in the twenty-third week of its existence in Bombay, there are no signs of abatement. During the second week of March 736 deaths occurred in Bombay from plague. Of the ten chief fatal maladies, there was an increase as compared with the previous week in respiratory diseases, measles, cholera, dysentery, fevers, phthisis, and plague; and a decrease in small-pox, relapsing fever, and diarrhœa. It is worthy of note that the respiratory diseases keep pace with the plague mortality: so closely is this the case that the correctness of the diagnosis of many of the cases as simple respiratory diseases may be doubted.

The area of the epidemic in Calcutta is spreading, and the number of plague deaths in the city averaged over 100 daily during the past week. On March 8th, 9th, 10th, 11th, 12th, 13th, and 14th respectively there occurred 89, 129, 118, 111, 100, 127, 116 fresh cases of plague, and 78, 105, 110, 90, 91, 107, and 93 deaths from the disease. Owing to the serious prevalence of plague the native quarters in Calcutta have been thrown into a state of intense excitement. Numbers of natives, chiefly Marwaris, are leaving the town for their native villages; fully 6,000 having left by one railway line alone during March 15th, 16th, and 17th. It is, however, in the Bengal province outside the city that the greatest mortality prevails, Patna accounting for 1,581 deaths from plague during the week ending March 17th.

In the Punjab plague seems to be again active, especially in the Jullundur district. Curiously enough, however, the villages in which it has appeared were not affected during the recent outbreaks, and it says something for the thoroughness and possibilities of disinfection that the old seats of plague have not as yet been revisited by the disease. The villages and towns infected in the Jullundur district are Nawashahr, Jethu Mozorna, Bhurt, Dosanjh, Burnala, and Bhains. None of the villages are large, only a few hundreds of people in each, but they represent a widely and severely infected district.

In Karachi plague is increasing, but not to an alarming extent; from March 4th to 10th 81 cases and 53 deaths occurred.

ADEN.

A few cases of plague were reported at Aden on March 17th.

BURMAH.

At Rangoon a native passenger after arrival from Calcutta died in the town; so far, however, there have been no further cases reported at the port.

HONG KONG.

Plague seems to be practically in abeyance; the latest report to hand states that during the week ending February 24th no fresh case of plague had occurred in the Colony, and but 1 death from the disease.

MAURITIUS.

For the week ending March 29th, 6 fresh cases of plague and 5 deaths from the disease were reported in the island.

NEW SOUTH WALES.

Our special correspondent in Sydney writes, under date February 27th: Since the first patient who was proved to be suffering from bubonic plague was removed to quarantine no other case has been reported till this week. It has been known, however, that the rats which abound in the neighbourhood of the wharves have been dying in large numbers from some disease. This disease has now been proved to be the bubonic plague. At the end of last week the first victim to the disease died. He was a ship chandler, whose stores were close to the wharves, and he himself had assisted in removing a number of dead rats from his stores. Since then another case has been reported, and proved to be one of plague. He is a wharf labourer, and has been removed to quarantine, together with all the inmates of his house. This morning he is reported to be in a precarious condition. No other cases are reported from any other of the Australian Colonies.

[3] By A. J. M. Bentley, M.D. Third edition. London: Simpkin, Marshall, Hamilton, Kent, and Co. Crown 8vo, pp. 82, 20 illustrations. 1s.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of April next, at 2 o'clock in the afternoon.

The following Committees will also meet:

Tuesday, April 10th, 1900.—2.0 P.M., Premises and Library Committee.—3.0 P.M., Conciliation Board Committee.—3.30 P.M., Trust Funds Committee.—4.0 P.M., General Practitioners and Ethical Committee.—5.0 P.M., Parliamentary Bills Committee. *Wednesday, April 11th, 1900.*—10.0 A.M., Journal and Finance Committee.

April 3rd, 1900. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on April 11th, July 11th, and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The spring meeting of this Branch will be held at Abergavenny on Thursday, April 26th. Notices of nominations, papers, etc., to be sent in by Monday, April 9th.—ALFRED SHEEN, Cardiff, D. ARTHUR DAVIES, Swansea, Honorary Secretaries.

NORTH WALES BRANCH.—The spring intermediate meeting of this Branch will be held at Bala on or about April 19th. Members having any paper or case to communicate should kindly intimate their intention to do so before April 12th. Members having medical men to propose as members of the Association and Branch should apply at once for forms of membership to be filled up. Those already members of the Association should make a written application for membership of the Branch.—W. JONES-MORRIS, Portmadoc, H. JONES ROBERTS, Pen-y-groes, Honorary Secretaries.

SOUTH-WESTERN BRANCH.—The spring intermediate meeting of this Branch will be held on Tuesday, April 10th, at Truro, at 4.15 P.M. Tea and coffee at 4 o'clock. The following papers, etc., have been promised:—Mr. N. E. Norway: On Palermo as a Health Resort. Mr. Paul Swain: A Case of Gastro jejunostomy. Dr. Bushnell: A Note on a Sanatorium. Specimens:—Dr. Bushnell: Stomach showing "Hourglass" Contraction. Mr. Whiteford: Horseshoe Rod for Use in Enterostomy.—H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

ERRATUM.—The Chairman of the meeting of the East Kent District of the South Eastern Branch (BRITISH MEDICAL JOURNAL, March 31st, p. 793), was Dr. Gosse of Sittingbourne, and not as printed.

BATH AND BRISTOL BRANCH.

A MEETING of this Branch was held at Bristol on March 28th, Dr. A. J. HARRISON, President, in the chair. Forty-six members were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Communications.—Communications from the General Secretary and from the South-Western Branch were referred to the Council of the Branch for consideration and report to the next meeting at Bristol.

Rupture of Liver.—Mr. T. Carwardine showed a patient who had recovered from a ruptured liver.

The man was admitted to the Bristol Royal Infirmary in a state of collapse and was pulseless when operated upon. On opening the abdomen a rent was found which extended almost through the liver, and was large enough to admit the fist. The patient made an uninterrupted recovery.

Dr. J. Swain said diagnosis in such cases was often difficult, because contusion of the abdomen without rupture of viscera might give rise to shock, and on the other hand shock might be absent in cases of rupture. The important point was that if collapse was persistent and increasing the abdomen should be opened, if it was diminishing the patient should be left alone. In doubtful cases delay operation, but not longer than twelve hours.

Tabes Dorsalis.—Dr. Watson Williams showed a patient with symptoms of tabes dorsalis of four years' duration, in whom there were paresis of the abductors of the vocal cords and increased frequency of the pulse. The association of these symptoms pointed to organic disease in the medulla; the latter symptom might be attributed to affection of the cardio-inhibitory centre. He said that paresis or paralysis of the laryngeal muscles might precede all other symptoms in tabes, and laid stress on an examination of the larynx in all such cases. Dr. Waldo said that the frequency of the pulse was generally increased in tabes dorsalis. Dr. Stark mentioned a case similar to that shown by Dr. Waldo, in which there was abductor paresis, but full abduction of the cords occurred on deep inspiration after coughing, and Dr. Michell Clarke gave examples of the way in which other motor nuclei were affected in tabes, and of other symptoms held to be due to implication of the medulla, and said that in cases of abductor paralysis it should not be forgotten that thoracic aneurysm might complicate tabes dorsalis.

Ether Administration.—Mr. J. Freeman read a paper on 3,000 administrations of ether. He thought that the alleged tendency of ether to produce after-effects on the respiratory system had been exaggerated. It was a curious fact that such effects varied very much for different anæsthetists. He had given ether without any bad effects to the aged and very young; also in cases of emphysema and phthisis, and for very prolonged operations. He advised and practised the use of a weak ether vapour. He had had only two cases of acute bronchitis as a result of administration of ether. Pneumonia might be accounted for sometimes by inhalation of vomited matter during anæsthesia. He had given ether in many cases of nephritis; in two only was the albumen increased. The great points in favour of ether were its safety and ease of administration. He did not consider it a perfect anæsthetic in abdominal operations. In patients who were very exhausted Clover's apparatus should be replaced after the commencement of anæsthesia by the mask and free access of air. Dr. Symes had found children take ether well; he had three times seen bronchitis follow administration of ether to adults. Dr. Rogers said that it appeared from recent discussions that bronchitis was more apt to follow after abdominal operations, perhaps partly on account of the exposure and wetting of the surface of the body. He thought gas and ether better than ether alone, especially in getting alcoholic patients under, and that it was often useful to begin with chloroform and go on with ether. Children took ether well. Mr. Harsant said that it was interesting to see how the old controversy as to the relative merits of chloroform and ether had died down in favour of the latter, a result largely due, he thought, to the introduction of the method of giving gas as a preliminary to ether administration. Drs. Watson Williams and W. Swayne also spoke in favour of gas and ether, and Dr. R. P. Lansdown gave his personal experiences of chloroform and ether. Dr. Stack spoke in favour of prolonged administration of gas, a method of inducing anæsthesia very useful in many cases; he had once given gas for thirty-five minutes with good results. Dr. Roxburgh alluded to the fact that in the North chloroform was still more generally used than ether, and remarked on the vomiting, bad taste, and discomfort experienced after the latter. Dr. Markham Skerritt doubted the practicability of giving gas for long periods in cases where heart or lung disease existed, in which ether is now safely administered. Dr. Chas. Hayman preferred Hewitt's apparatus for gas and ether, and Mr. C. H. Walker said that this apparatus, fitted with larger valves than usual, was very successfully used in small operations on the eye. Mr. Freeman, in reply, said the taste of ether was its chief drawback, and that patients might be kept fully under with a more dilute vapour than was generally taught.

Intracranial Abscess.—Dr. F. Crossman read the notes, and showed the brain from a case of abscess of the middle lobe of the cerebellum in a boy.

The illness lasted ten weeks, and followed a blow on the head. The symptoms were very equivocal, began with headache, irritability, disinclination to move, the boy lying curled up on his side, followed by diplopia, some retraction of the head, and mental derangement. The temperature was subnormal. A remarkable remission of all symptoms occurred for a short time before death, which was sudden, and probably due to the rupture of the abscess, no cause for which was discovered.

Dr E. W. H. Groves remarked on the cause of sudden death in these cases. He also showed the brain of a girl containing a small abscess in the right lateral lobe of the cerebellum following on otorrhœa of five years' duration.

The acute symptoms lasted three weeks, and consisted of severe unilateral headache, vomiting, and temperature of 102° to 103° F., and the scalp behind the right ear was reddened, œdematous, and very tender over the site of the abscess. The case was seen too late for operative interference to be successful, although the diagnosis was clear.

Dr. Michell Clarke showed the brain from a girl, aged 17, who was admitted to the Bristol General Hospital comatose and with right hemiplegia.

The illness began suddenly a week before admission. There was no optic neuritis, and no clue to the position or exact nature of the lesion could be obtained from the symptoms. *Post mortem* an abscess the size of a tangerine orange was found in the upper part of the white matter of the left cerebral hemisphere, near the convexity, and this had pressed upon the internal capsule which lay below it. A careful search was made, but no cause could anywhere be found for the abscess; all the viscera were healthy and the middle and internal ears, mastoid, ethmoidal, and frontal sinuses free from disease.

Dr. Ewens narrated a case of abscess in the right lateral lobe of the cerebellum following ear disease, and Dr. Waldo gave some instances of sudden death in similar cases which had occurred in his experience. Dr. Frith pointed out that pressure on the respiratory centre was often the cause of death, and that in such cases the respiration stopped some time before the pulse. In cases of intracranial abscess a sudden accession of symptoms might be due to bursting of the abscess, spread of suppuration, or of the surrounding area of œdema. Dr. Fisher also discussed the causes of sudden death, and mentioned that he had lately made a *post-mortem* examination of a case in which, as in Dr. Michell Clarke's patient, an abscess was found in the left cerebral hemisphere for which no cause could anywhere be discovered.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A meeting of this Branch was held in the Hall of the Royal Infirmary on March 21st; Dr. Herbert Williamson in the chair.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

New Member.—Dr. James Smart (Rosemount Place) was after ballot unanimously admitted a member of the Branch.

Cases.—Cases were shown by Drs. Edmond, Ashley Macintosh, Usher, McKenzie Booth, and Riddell.

YORKSHIRE BRANCH.

The Spring meeting of this Branch was held at Sheffield on March 28th, Dr. Kilner Clarke, President, in the chair.

New Members.—The following gentlemen were elected members of the Association and Branch: Drs. and Messrs. P. S. Scannell, Selby; W. Carnes, Leeds; L. Johnson, Normanton. As members of the Branch: Drs. G. Mould, Rotherham; A. S. Robinson, Redcar.

Reports of Meetings.—The question of appointing a reporter to give fuller extracts of the meetings of the Branch was discussed and referred back to the subcommittee.

Papers.

The following papers were presented: Dr. Campbell (Bradford): Some remarks on the treatment of heart disease, with special reference to the Hill heart.—Dr. Arthur Hall (Sheffield): On some rarer forms of skin disease illustrated by patients, photographs, and drawings.—Mr. Pye-Smith read notes of (1) a case of traumatic dislocation of the head of the fibula; (2) a case of headache caused and cured by reversing a cylindrical lens.

CASES.

The following cases were shown: DR. DALE JONES (Sheffield): (1) macular tertiary syphilide; (2) pityriasis rubra pilaris; (3) painting of a factitious rash.—MR. SINCLAIR WHITE (Sheffield): (1) four cases of resection of the large intestine for cancer; (2) cancerous rectum removed by the method of Kraske; (3) Two cases of Estlander's operation for intractable empyema; (4) illustrative cases of arthrectomy of ankle-joint through an anterior incision; (5) unusual cases of gall stones.—MR. SIMEON SNELL: (1) Illustrated work by artist after a cataract operation; (2) abortive treatment of suppuration of the eyeball; (3) embolism of a branch of central artery of retina; perimeter charts of four cases; (4) cases illustrating the use of Thiersch's grafts for symblepharon and ectropion; (5) case of tubercle of iris; (6) case of large congenital papilloma of conjunctiva (drawing); (7) series of stereoscopic photographs, illustrating clinical cases.—DR. GILMOOR: Pathological specimens from the South Yorkshire Asylum.

Dinner.—Forty-five members were present at the meeting. Twenty-four members dined at the Royal Victoria Hotel.

Next Meeting.—It was decided to hold the next meeting at Scarborough on the last Saturday in June.

BRITISH MEDICAL ASSOCIATION.

SIXTY-EIGHTH ANNUAL MEETING.

THE sixty-eighth annual meeting of the British Medical Association will be held at Ipswich on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1900.

President: JOHN WARD COUSINS, M.D.Lond., F.R.C.S.Eng., Senior Surgeon Royal Portsmouth Hospital.

President-Elect: WILLIAM ALFRED ELLISTON, M.D. Senior Surgeon East Suffolk and Ipswich Hospital.

President of the Council: JOHN ROBERTS THOMSON, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

Treasurer: ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery.

An Address in Medicine will be delivered by PHILIP HENRY PYE SMITH, M.D., F.R.S., Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by FREDERICK TREVES, F.R.C.S., Surgeon Extraordinary to H.M. the Queen.

An Address in Obstetrics will be delivered by WILLIAM J. SMYLY, M.D., F.R.C.P.I., Examiner in Midwifery, Royal College of Physicians, Ireland.

The Scientific Business of the Meeting will be conducted in Thirteen Sections, as follows, namely:

A. MEDICINE.

President: THOMAS BUZZARD, M.D. *Vice-Presidents:* MRS. E. GARRETT ANDERSON, M.D.; SAMUEL J. BARTON, M.D. *Honorary Secretaries:* FREDERICK WILLIAM BURTON-FANNING, M.D., 1 St. Faith's Lane, Norwich; THOMAS WARNER, M.D., 12, Museum Street, Ipswich.

B. SURGERY.

President: HOWARD MARSH, F.R.C.S. *Vice-Presidents:* SAMUEL HERBERT BURTON, F.R.C.S.; THOMAS HERBERT MORSE, F.R.C.S. *Honorary Secretaries:* WALTER GEORGE SPENCER, M.S., 35, Brook Street, W.; HERBERT HENRY BROWN, M.D., F.R.C.S., 3, Museum Street, Ipswich.

C. OBSTETRICS AND GYNÆCOLOGY.

President: WALTER SPENCER ANDERSON GRIFFITH, M.D. *Vice-Presidents:* MICHAEL BEVERLEY, M.D.; MRS. MARY ANN DACOMB SCHARLIEB, M.D. *Honorary Secretaries:* JOHN DAVID MALCOLM, M.B., F.R.C.S., 13, Portman Street, Portman Square, W.; SAMUEL OLIVER EADES, L.R.C.P., Manor House, St. Peters, Ipswich.

D. PUBLIC MEDICINE.

President: JOHN CLOUGH THRESH, M.D., D.Sc., D.P.H. *Vice-Presidents:* HENRY HANDFORD, M.D., D.P.H.; HARRY COOPER PATTIN, M.D., D.P.H. *Honorary Secretaries:* GEORGE VINCENT, M.D., D.P.H., North Lodge, Anglesea Road, Ipswich; EDWARD PETRONELL MANBY, M.D., D.P.H., Public Health Department, Municipal Buildings, Liverpool.

E. PSYCHOLOGY.

President: R. PERCY SMITH, M.D. *Vice-Presidents:* EDMUND LEWIS ROWE, L.R.C.P.; WILLIAM ALDREN TURNER, M.D. *Honorary Secretaries:* CECIL ANTHONY PERRIER OSBURNE, F.R.C.S.Edin., The Grove, Old Catton, Norwich; JAMES RICHARD WHITWELL, M.B., County Asylum, Melton, Suffolk.

F. PHYSIOLOGY.

President: Professor WILLIAM DOBINSON HALLIBURTON, M.D., F.R.S. *Vice-Presidents:* EDWARD WILLIAM WACE CARLIER, M.D.; Professor CHARLES S. SHERRINGTON, M.D., F.R.S. *Honorary Secretaries:* W. H. THOMPSON, M.D., Queen's College, Belfast; WILLIAM LEGGE SYMES, M.R.C.S., Physiological Department, St. Mary's Hospital Medical School, W.

G. PATHOLOGY.

President: EDWARD E. KLEIN, M.D., F.R.S. *Vice-Presidents:* WILLIAM MILLER CROWFOOT, M.B.; Professor ROBERT MUIR, M.D. *Honorary Secretaries:* ALEX. GRANT RUSSELL FOULERTON, F.R.C.S., "Dunsdale," Mulgrave Road, Sutton, Surrey; SYDNEY HERBERT LONG, M.B., 46, Prince of Wales Road, Norwich.

H. OPHTHALMOLOGY.

President: WILLIAM ARTHUR BRAILEY, M.D. *Vice-Presidents:* HAYNES SPARROW ROBINSON, M.R.C.S.; HENRY WORK DODD, F.R.C.S. *Honorary Secretaries:* CHARLES DEVEREUX MARSHALL, F.R.C.S., 10, Devonshire Street, Portland Place, W.; WALTER WILLIAM SINCLAIR, M.B., 16, Museum Street, Ipswich.

I. DISEASES OF CHILDREN.

President: FREDERICK TAYLOR, M.D. *Vice-Presidents:* RICHARD WILLIAM BROGDEN, M.B.; JOHN THOMSON, M.D. *Honorary Secretaries:* WILLIAM SOLTAU FENWICK, M.D., 8, Devonshire Street, Portland Place, W.; ALFRED M. GOSSAGE, M.B., 54, Upper Berkeley Street, W.

J. PHARMACOLOGY AND THERAPEUTICS.

President: Professor WALTER GEORGE SMITH, M.D. *Vice-Presidents:* EDWARD LIVEING FENN, M.D.; CHARLES ROBERTSHAW MARSHALL, M.D. *Honorary Secretaries:* ALAN REEVE MANBY, M.D., East Rudham, Norfolk; WALTER ESSEX WYNTER, M.D., 30, Upper Berkeley Street, W.

K. LARYNGOLOGY AND OTOLOGY.

President: SCANES SPICER, M.D. *Vice-Presidents:* HERBERT TILLEY, M.D.; WILLIAM MILLIGAN, M.D. *Honorary Secretaries:* HARRY LAMBERT LACK, M.D., 48, Harley Street, Cavendish Square, W.; ARTHUR YOUNG PRINGLE, L.R.C.P., 64, St. Matthew Street, Ipswich.

L. TROPICAL DISEASES.

President: Colonel KENNETH MCLEOD, M.D. (ret. I.M.S.). *Vice-Presidents:* Surgeon-Lieutenant-Colonel OSWALD BAKER, M.D., I.M.S.; Major RONALD ROSS, I.M.S. *Honorary Secretaries:* ANDREW DUNCAN, M.D., M.R.C.P., School of Tropical Diseases, Albert Dock, E.; GUTHRIE RANKIN, M.D., 4, Chesham Street, Belgrave Square, S.W.

M. NAVY, ARMY, AND AMBULANCE.

President: Inspector-General BELGRAVE NINNIS, M.D., R.N. *Vice-Presidents:* Surgeon-General HENRY SKEY MUIR, M.D., A.M.S.; Brigade-Surgeon Lieutenant-Colonel G. S. ELLISTON, V.D. *Honorary Secretaries:* JAMES HARPER, M.D., 25, Rosary Gardens, South Kensington, S.W.; FRANCIS AUGUSTUS BROOKS, M.D., St. Felix, Felixstowe, Suffolk.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 31ST, 1900.

9.30 A.M.—Meeting of 1899-1900 Council.
11 A.M.—Church Service.
2 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
8.30 P.M.—Adjourned General Meeting from 2 P.M. President's Address.

WEDNESDAY, AUGUST 1ST, 1900.

9.30 A.M.—Meeting of 1900-1901 Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, AUGUST 2ND, 1900.

9.30 A.M.—Meeting of Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

Friday, August 3rd, 1900.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Address in Obstetrics.

Saturday, August 4th, 1900
Excursions.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-eighth meeting of the British Medical Association will be arranged in the following Sections:

Section A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

Section B.—Instruments, comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

Section C.—Books, including diagrams, charts, etc.

Section D.—Sanitary appliances and ambulances.

Two very good halls, practically adjoining each other, have been obtained for the Museum.

Sections A and D will be held in the Public Hall, Westgate Street, a fine well-lighted and ventilated room. Length 119 feet, width 49 feet.

Sections B and C will be held in the Old Museum Rooms, on the first floor, close to the Public Hall. Length of room, 71 feet, width 25 feet.

Both halls are very central.

Exhibitors (other than members of the medical profession) will be charged for table, floor, and wall space as follows: In Sections A, B, and C from 3s. 6d. per square foot, depending on the position of the table, tables 3 feet and 3 feet 6 inches wide being provided. In Section D 6d. per square foot for floor space (all fittings to be provided by the exhibitor). Wall space (where available) for advertisements will be charged for at 6d. per square foot.

Advertisements in Museum Catalogue.—A catalogue will be printed, and 2,000 copies distributed gratis to members of the Association. Prepaid advertisements, to be sent before June 20th, will be inserted. Further particulars will be sent on application.

The plans of the hall, and forms of application for space, will be ready early in April.

Regulations.

1. All communications on general matters connected with the Museum, and all applications for space, should be addressed to Mr. C. K. Moseley, 14, Northgate Street, Ipswich, before June 1st. N.B.—No space will be allotted before that date.

2. A brief description of each exhibit for insertion in the Museum Catalogue must be in the hands of the Secretary before June 19th.

3. Space will as far as possible be allotted in the order of application and in proportion to the amount applied for, the Committee reserving power to give preference to *bonâ-fide* inventions and improvements not previously exhibited, and also to refuse any exhibit they may consider unsuitable.

4. In the event of more space being applied for than is actually available, the allotment will be made at the discretion of the Committee.

5. The Committee reserve to themselves the power to utilise any of the floor space set apart for Section D (if it is not all required for sanitary exhibits) for the erection of additional tables, or for any other purpose they may think fit.

6. All exhibits should be addressed to the Secretaries of the Museum, British Medical Association, Public Hall, Ipswich, with the name of the Section for which they are intended, with the exception of those for Sections B and C, which should be addressed, The Old Museum Rooms, Ipswich. Packages should not be addressed to a firm's representative at the Museum.

7. All exhibits must be delivered between July 26th and July 28th, and each package must bear a card showing the name and address of the exhibitor.

8. All exhibits must be placed in the allotted space by 2 P.M. on July 30th.

9. No signs or placards will be allowed in the hall which may interfere with neighbouring exhibits. No exhibit or placard on the central tables must reach higher than 2 ft. 6 in. from the table. The arrangements of signs, placards, exhibits, etc., will in every case be subjected to the approval of the Committee.

10. Intimation of the space allotted to each exhibitor will be sent as promptly as possible after June 1st, marked upon a plan. On receipt of cheque for the cost of such space, a card for the admission of the exhibit will be sent.

11. All cheques to be made payable to Mr. C. K. Moseley, 14, Northgate street, Ipswich.

12. No exhibits will be received except on the understanding that the above regulations are strictly complied with.

429, Strand, W.C., March 12th, 1900.

RAILWAY ARRANGEMENTS.

Arrangements have been made by which the railway companies of Great Britain and Ireland will issue to members and their friends attending the annual meeting at Ipswich *return tickets* at a *single fare and a-quarter*. These reduced tickets will be available from July 28th up to August 6th, both dates inclusive.

Those members and their friends desirous of taking advantage of this concession must produce, for the information of the railway booking clerk, a certificate signed by the General Secretary of the British Medical Association. A separate certificate will be necessary for each ticket required, and these certificates can be had on application to the General Secretary, 429, Strand, London, W.C.

SPECIAL CORRESPONDENCE.

MONTREAL.

Post-Graduate Classes.—Typhoid Fever and the Milk Supply.—Proposed Hospital for Infectious Diseases.—Strathcona's Horse.

The Post-Graduate Course in Medicine in McGill University, which will begin on May 1st and continue for six weeks, will comprise laboratory instruction in clinical microscopy and bacteriology, by Professors Adami and Wyatt Johnston and Dr. C. F. Martin; special clinical demonstrations by Professors Finley, J. C. Cameron, and Burgess, Dr. Elder, and Dr. Ruttan. Clinical classes will be held at the Royal Victoria Hospital—in surgery by Professor Bell and Dr. Garrow, and in medicine by Professor James Stewart, Professor C. F. Martin, and Dr. W. F. Hamilton; at the Montreal General Hospital by Professor Shepherd and Dr. Elder in surgery, and by Professors Blackadder, Finley, and Lafleur in medicine. Special classes will also be given in the hospital dispensaries in the departments of ophthalmology, dermatology, laryngology, and gynæcology.

A recent outbreak of typhoid fever in the City of Montreal—doubtfully attributed to contaminated milk furnished by some of the dairies in the vicinity of the city—has led to the question of milk supply being discussed at great length by the Montreal Medico-Chirurgical Society. In order to supply an adequate method for the maintenance of a proper sanitary inspection of milk supplies a Committee, consisting of Professor Wyatt Johnston (bacteriologist), Professor R. F. Ruttan (chemist), and Dr. McEachran (veterinary physician), has been appointed by the Society, and all milk dealers will have the privilege of applying to this Committee, who will thereupon overlook the dairies and make a thorough sanitary inspection of them, with special reference to the condition of the animals and stables, chemical and bacteriological examination of water supply, and bacteriological examination of the milk itself. The routine work in bacteriology will be under the immediate charge of Dr. J. Alban Williams, of McGill University. It is hoped by this means that the milk dealers of the city will be encouraged to take all available precautions against the delivery of impure or contaminated milk, while, on the other hand, it will be possible for the public at large to discover which dairymen are taking advantage of this opportunity for a scientific inspection of their milk.

A movement is on foot to establish a hospital for infectious diseases, probably to be located in Westmount, the largest suburb of Montreal. The total cost of such a hospital would

be about £75,000, and a considerable part of this sum has already been subscribed.

Lord Strathcona's Horse, which recently passed through Montreal *en route* for Halifax, evoked a large amount of enthusiasm from residents of Montreal and McGill University students, the latter turning out in a body to do the military full honour. Among the members of Strathcona's Horse was Dr. Keenan, a McGill graduate, and recently resident surgeon at the Royal Victoria Hospital, who now has the post of Chief Surgeon to the Strathconas.

PHILADELPHIA.

The Water Supply Again.—Antivivisectionists.—Pay Hospitals for Contagious Diseases.—Hospital and State Care for Consumptives.

COMPLAINTS about the bad condition of the city water continue to pour in upon the Health Bureau. Stories of widespread typhoid at Trenton (20 miles up river from Philadelphia), because of pollution of the Delaware river, have awakened no little interest. The new plans of the Water Department provide for taking most of the city's water from the Delaware instead of the Schuylkill. As the purpose of the Engineering Department to tap the Delaware just this side of Trenton is becoming known, the Health Department is being besieged with questions as to the precautions to be taken to purify the water for domestic use. Dr. Benjamin Lee, Secretary of the Pennsylvania State Board of Health, asserts that "the Delaware is as badly polluted as a river can be; that it really contains more of Philadelphia's sewage than the Schuylkill." In this opinion he is joined by Dr. Mitchell of the New Jersey State Board of Health, although on what grounds these two gentlemen base their statements does not yet appear.

The American Antivivisection Society in concluding its seventeenth annual meeting issued the following pronunciamento: "Vivisection of human beings is the legitimate outcome of vivisection of animals. There is no longer any doubt as to the truth of the account that numbers of most atrocious and inhuman experiments have been, and are being, made upon poor patients in the hospitals of various European cities, and in at least one of our own States, namely, Massachusetts." A Mrs. Enoch Totton came on from Washington, where she has been labouring in the interests of the Gallinger Antivivisection Bill now before Congress, the virtues of which Bill she held up to her misguided sisters. Most of the members of the Association are women who have wholly surrendered themselves to a morbid sentimentality little short of fanaticism. Sentiment is admittedly the province of women, but these women are wildly gone off after false gods. And "pity 'tis, 'tis true," there are a few of Philadelphia's respected physicians who have fallen under this strange witchery.

Hospitals abound in Philadelphia, and yet, strangely enough, there is no place where people with contagious diseases can be received and attended by their own physicians. A very large and increasing number of our citizens make their homes in apartments, hotels, and boarding-houses. When one falls ill with a contagious disease, serious difficulties arise. The great problem with proprietors in such cases is how best to protect their remaining guests from infection without dealing harshly with the stricken one. Naturally they deplore the need of thrusting the unfortunate precipitately out of doors, but at present they have no escape from this unpleasant duty. Out of this need has grown an organisation composed of members of the Philadelphia County Medical Society and interested citizens whose object is to secure and maintain such accommodations. No little money has been collected, but much more is needed to ensure the success of the project.

It seems rather strange that at the recent joint meeting of the Philadelphia County Medical Society and the Pennsylvania Society for the Suppression of Tuberculosis no mention was made of the splendid work being done at the Rush Hospital for Consumptives in our own city. Tuberculosis is now regularly catalogued by many among the preventable diseases, and it hardly seemed necessary to insist upon and reiterate the fact as was done at the meeting. The burning question now is methods and means. Out of seven papers there was but one directed to this phase of the matter. Great attention was paid to Dr. Da Costa, who, in closing, said:

> The State must step in if anything is to be accomplished. Individual work is but a drop of relief in an ocean of woe. Koch's discoveries have only added to the hardships of the consumptive by making him a source of danger in the public eye. Hence the duty of the community to succour the patient whose lot has been made really harder by these discoveries.

There was perfect agreement as to the need for the establishment of special sanatoria where incipient cases might be given all the advantages of institution and country life at one and the same time. But what shall be done with the poor consumptive? And is he not most frequently the consumptive? This is overwhelmingly the case in the experience of the Rush Hospital for Consumptives. The need most felt there is for a sanatorium in a high dry well-wooded district, transformation to which shall be furnished the convalescent and incipient cases. With such an institution as the complement of the receiving hospital in the large city little remains to be desired.

INDIA.

The Countess of Dufferin's Fund.—Rapid Spread of Plague in Bengal.—The Famine.

THE fifteenth annual meeting of the Countess of Dufferin's Fund was held in Calcutta on February 27th, the Viceroy in the chair, when the annual report was presented last year. The Association was held under very disadvantageous circumstances, on account of the presence of both plague and famine, which, in addition to the panic and scare produced by them, also caused a reduction in the staff of workers, the services of some of whom were required by the Government. In one native State alone there was a decrease of nearly 50,000 patients from these causes, so that it is all the more satisfactory to be able to record that there was "a steady and satisfactory expansion of the work throughout the country," and that for the first time in the history of the Association over a million and a-half women in India were medically treated by women. The invested funds amount to nearly 22 lakhs of rupees, but the year closed with a balance which is dangerously low, and a special appeal for subscriptions is made. It is often said that this fund does not really reach the *purda nashin* class for whom it is specially intended. As far as treatment in the hospitals is concerned, there is much truth in the statement. For example, a fine building called the Victoria Hospital was opened in Calcutta last year by Lady Elgin, which was intended exclusively for *purda nashin* ladies, but it has been unoccupied for the last twelve months. However, the Lieutenant-Governor of Bengal stated at the meeting that in the five hospitals in Behar, which are managed solely by lady doctors, the wards are full, and they had several *purda nashin* ladies, so that the Calcutta experiment need not yet be despaired of. However, as Lord Curzon very wisely said, it appears to be best to advance along the lines of least resistance, and to carry medical aid by means of lady doctors to the houses of these native ladies rather than expend large sums on beautiful hospitals for them, which remain nearly, if not quite, empty. In fact, it is a question if too much of the Association's funds are not spent in bricks and mortar, to the detriment of the more essential part of obtaining and training medical women, although efforts are now being made to extend this latter portion of the work. It is pleasant to note that Lord Curzon did not forget to pay a just tribute to the gratuitous work which is done by the civil surgeons of India for this fund, when dilating on the great extent to which the Association is dependent on honorary officials. The work is a great one, and deserves every encouragement, and in Lady Curzon it possesses a Lady President of great ability and assiduity, who takes the deepest interest in it.

The most remarkable feature of the medical history of India during February was the way in which plague has advanced by leaps and bounds in the province of Bengal. In my last letter I drew attention to the serious nature of the outbreak in the Patna division, but during the month of February the deaths there have increased steadily each week from 620 in that ending on February 5th, to 1,444 in that ending on February 28th. But this, serious as it is, is not all, for besides appearing in fresh districts of Western Bengal, notably in Manghyr (with 121 deaths last week) it has also suddenly

risen, together with the general mortality, in Calcutta, from 106 deaths three weeks ago, to 261 in the last week of February. The returns of plague in Calcutta cannot be regarded as being at all accurate, but the coincident rise of the general mortality of the city to a marked extent, in the absence of any other cause for it, and the appearance of cases of plague in several of the surrounding districts points to an increase of the disease beyond what it has ever previously attained in Bengal. This is the time of the year when it has previously shown a tendency to rise in Calcutta, so it is to be hoped that the outbreak may be a short one, nevertheless it will be watched with great interest, as should it really get a firm hold of the teeming population of Bengal it will be far more serious than it has ever been in Bombay, and will be a most serious tax on the Province and on the medical profession.

The famine returns show a steady if somewhat slower increase, over four million persons now being on the relief works, but as in other respects the closing year has been a very favourable one financially, there is no reason to doubt that the resources of the country will be equal to the unprecedented strain, especially as the currency reforms may now be looked on as a decided success, so that Indian credit never stood higher than it does to-day.

LIVERPOOL.

The Proposed Branch of the National Society for the Prevention of Tuberculosis.—The Hospital for Consumption and the Proposed Sanatorium.—The District Nursing Association.—New Law at the Royal Infirmary.

On March 28th a large and important deputation waited upon the Lord Mayor in the Town Hall with the object of requesting him to call a public meeting with a view to forming a local branch of the National Association for the Prevention of Consumption. The deputation was introduced by the Chairman of the Health Committee (Mr. Alderman Cookson), and consisted of Mr. Edgar Browne (President of the Medical Institution), Sir William Banks, Dr. Glynn, Dr. Caton, Dr. Carter, Professor Boyce, Dr. Vacher (M.O.H. for Cheshire), Dr. Marsden (M.O.H. for Birkenhead), Dr. Hope (M.O.H. for Liverpool), Councillor Shelmerdine, Alderman Menlove, Dr. Dickinson, Mr. Parker, Dr. Permewan, Dr. Bushby, Dr. Bradshaw, Dr. Barr, Dr. Buchanan, Dr. T. Clark, C.C., Dr. Warrington, and Dr. Nathan Raw (Honorary Secretary). Mr. Edgar Browne, who opened the proceedings, pointed out that during the Lord Mayor's year of office 2,000 persons might be expected to die of some form of tuberculous disease in the city under his jurisdiction. In other words, every four hours a life was lost which might under more favourable conditions have been preserved. Sir William Banks followed, and related facts in his own experience which tended to show that the finest natural conditions, both as regards personal constitution and climate, were no protection against tuberculosis in the absence of proper sanitary conditions in the homes. The Lord Mayor, who received the deputation most cordially, expressed his hearty concurrence with its objects, and agreed to call a public meeting at the earliest convenient date. It will probably take place in the first week of May, and the Earl of Derby, who is a vice-president of the National Association, has promised to attend and to do everything in his power to further the scheme.

The thirty-sixth anniversary of the Hospital for Consumption and Diseases of the Chest took place at the Town Hall on April 2nd. The report stated that the Committee had been closely and earnestly engaged upon the question of the site and plans of the proposed sanatorium. After much careful investigation and consultation with the highest authorities, a position has been finally selected in Delamere Forest, on the side of the hill towards Kingswood, which, while it is at a considerable elevation, has the advantage of being easily reached from Frodsham. The Building Committee have visited the sanatoria already in existence in England, and have finally decided upon plans for a sanatorium to accommodate from forty to fifty patients, constructed upon the most modern principles. The financial position of the hospital has been steadily, if slowly, improving for some years, but the present amount of support would be quite inadequate for the maintenance of patients in the proposed sanatorium, for whom a good and abundant food supply will be essential. It is estimated that an addition of £2,000 a year will be needed for this object. In the course of the proceedings Professor Boyce said that there was scarcely a large city in Europe which had not by this time established its sanatorium. The statistics of the open-air treatment of consumption amply testified to its success. As regards the connection of the bacillus of Koch with consumption, he said that an American doctor who was working in the Pathological Laboratories of University College had made a house-to-house visitation in Liverpool, in order to discover whether the germ of the disease lurked in the houses. In one house in which four deaths from tuberculous diseases had occurred, he found the germ in large quantities in the dust on the walls and in the cracks of the flooring boards. In such a state of things these open-air sanatoria were not merely hospitals for the cure of consumptives, but were also centres for diffusing sound sanitary knowledge among the mass of the public. The stamping-out of consumption was a matter of immediate public interest, for no disease made its victims more chronically incapable of useful work or threw a greater burden on the rates.

The annual report of the Queen Victoria District Nursing Association shows that the institution is prospering in every way. It employs 32 trained nurses, who reside in four homes situated in different parts of the city. The central home, which contains the offices for administration, has been provided and furnished by Mr. Levy and the David Lewis Trustees, and the other three homes have been presented by various private individuals. In the course of the year 131,009 visits have been paid and 5,939 cases nursed. The annual expenses of the Association are about £2,800, which is not quite 10s. a case. The influence for good of these trained nurses in the homes of the poor must be very great, and it is difficult to imagine any kind of charity so little liable to abuse. To Liverpool belongs the credit of introducing the system of district nursing which was originated by Mr. W. Rathbone 38 years ago. It is interesting and gratifying to note that the originator of the movement was present at the annual meeting, and seconded one of the resolutions.

At the last annual meeting of the Royal Infirmary a law was passed constituting the assistant physicians and surgeons and the medical officers to the special departments *ex-officio* trustees of the institution.

CORRESPONDENCE.

THE EFFICACY OF GLYCERINATED CALF LYMPH.

Sir,—I have noticed in the medical papers reports as to the unreliability of glycerinated calf lymph. My experience is just the reverse. For three years I have been using the lymph supplied to me by the Lymph Association, 12, Pall Mall East, for revaccinating the metropolitan police recruits. The following tables, which have been compiled from books kept at Scotland Yard, may be of interest at the present time.

Table A.

1899. Quarter ending	Tubes. Recruits Revaccinated.	Tubes. Insertion made.	Tubes. Vesicles Obtained.	Tubes. % Vesicles per Insertion.	C.P.P. Recruits Revaccinated.	C.P.P. Insertion made.	C.P.P. Vesicles Obtained.	C.P.P. % Vesicles per Insertion.
March 31st	137	411	371	90.2	16	48	48	100.0
June 30th	164	492	442	89.8	34	102	95	93.1
September 30th ...	135	405	349	86.1	63	189	183	97.1
December 31st ...	188	564	540	95.7	73	219	214	97.7
Totals	624	1,872	1,702	90.9	186	558	540	96.7

Table A shows that during each quarter of the year 1899 there has been little variation in the good results obtained, and, in my opinion, the heat of the summer weather is not the true cause of the unreliability. The method of revaccination is, in my opinion, the important factor in the results obtained. In Table A two methods were used. The skin was scratched with a row of four broken needles set in a holder about $\frac{1}{16}$ inch apart; by this means the epidermis is torn off with scarcely any appearance of blood. The lymph is then laid on the raw surface with a lancet, which is also used to slightly prick the skin. In other cases I have used charged pin points, by which I am able to rub the lymph well into the raw surface. I find both modes efficacious, but the rubbing process the more so, the main precaution being to avoid the flow of blood.

TABLE B.

	Tubes.		C. P. P.	
Number of recruits	624	97.8 %	186	97.4 %
Revaccinated (see A), number proved insusceptible (revaccination attempted twice)	12	2.2 %	5	2.6 %
Number passed as insusceptible (revaccination attempted once)	2		0	
	636	100.0 %	191	100.0 %

Table B shows the number of men revaccinated who were insusceptible from my original revaccination. A few words are here necessary to explain the rule applied to decide between the susceptible and insusceptible. The men (12 and 5) appearing in this table as insusceptible were each attempted with others at the same time and with the same vaccine, but showed no sign of vesicles, while the others showed good arms. They were then placed with others and again operated on with different vaccine, and again with the same results. The two men passed as insusceptible after the first revaccination were not operated on again because of the excellent marks of the original vaccination. It follows, then, that of the 638 men who were attempted with the tube vaccine, 624, or 97.8 per cent., were susceptible, and 14 only, or 2.2 per cent., insusceptible by the original vaccination. Again, of the 191 men attempted from the new charged pin-points, 5 only, or 2.6 per cent., were insusceptible. This shows great need of careful revaccination.

TABLE C.

	Tubes.		C. P. P.	
Quality (*a*)	1,493	87.8 %	505	93.5 %
Quality (*b*)	209	12.2 %	35	6.5 %
Totals (see A)	1,702	100	540	100.0 %

Table C is a comparison of the results obtained from the two modes of vaccination. The total number of vesicles obtained by each (see Table A) is divided in order to compare the vesicles of the good (*a*) and second quality (*b*) obtained from each mode. Here, as in Table A, the results are decidedly in favour of the charged pin-points, the tube method giving 12.2 per cent. of second quality, while the charged points give 6.5 per cent. only.—I am, etc.,

THOS BOND, F.R.C.S.,
Surgeon to A Division Metropolitan Police.

Westminster, March 28th.

THE MIDWIVES BILL.

SIR,—It seems certain that this Bill will become law and nearly as certain that but few amendments will be made in it. The action of the promoters of the Bill in opposing Colonel Milward's amendment that a midwife should apply to a registered practitioner "in cases presenting abnormality or danger," etc., shows this, and further their intention to make these most imperfectly educated women irresponsible for malpractice the result of ignorance, and also their entire disregard for the safety of the poor patient. The General Medical Council insisted on some such clause as Colonel Milward moved being introduced into the Bill, and at the meeting of the Executive Committee held in February last a representation to this effect was addressed to the Lord President of the Privy Council. I should hope this important provision so manifestly needed for the safeguarding of the public, especially the poor, will be insisted on by the profession.

With respect to the proposed alterations of the title of the Bill to that of "Midwifery Nurses" clearly that will not be agreed to, but it is possible than an amendment terming these women "Midwives and Midwifery Nurses" might be carried. In a letter published in the BRITISH MEDICAL JOURNAL in April, 1898, I advocated this, and pointed out that the certificates given to the women educated at the Rotunda stated that they were midwives and nurses, and I contended that no woman should be licensed to act as a midwife who was not also trained as a midwifery nurse.—Yours, etc.,

April 2nd, 1900. LOMBE ATTHILL, M.D.

SIR,—While we are all obliged to you for the exposure of the very grave faults in the Midwives Bill, and which appeared in the BRITISH MEDICAL JOURNAL of March 31st, I would, in fairness to myself, ask space to contradict a very misleading statement in your editorial. Your statement is as follows: "So far as we have been able to ascertain no amendments were submitted to the Committee in the interests of the medical profession except those of the Council of the British Medical Association." I beg to enclose a copy of the printed amendments which I forwarded to each of the 83 Members of Parliament of the Law Committee. I also sent these and the "Reasons against" the Bill to the 124 and 34 members who voted for and against the second reading of the Bill. I also sent out about 150 to different practitioners, asking them to try and induce their M.P.'s to take charge of some of them. If you will refer to the report of the Law Committee you will see that some of my amendments were moved. I shall be glad if you publish this statement, as that made in your editorial is in direct conflict with my statements to practitioners as to what I had done.

There are some other points I would call attention to. One is that our best thanks should be given to the Irish Royal College of Physicians in having ceased to grant a midwife diploma. It is now more than five years since I asked their Council to do so. Another is that the Irish College wishes the Bill extended to Ireland. This, you will see, is contained in my enclosed amendments (see No. 19). I hope the Scottish Colleges will make a similar request.

I would again urgently request each practitioner to ask his M.P. to vote against the Bill. I have no doubt but that the Bill will be rejected if they do so. The discussion on the Bill before the Law Committee now exposes to full light of day the real aim of the promoters of the Bill. Clause 2 (5) provides that the midwife "shall not be qualified to grant any medical certificate, or any certificate of death, or of stillbirth, or to attend cases of abnormal labour, or of disease or danger to the mother or the child." Mr. D. Lloyd-George proposed that if the midwife did any of these things she should be liable to a penalty of £5. The chief promoter of the Bill—Mr. H. Johnstone—would not accept this amendment, although the Solicitor-General stated that there was no existing Act by which a midwife could be so punished. From this it follows that, *so far as the Bill itself now stands*, a midwife could conduct *on her sole responsibility* all natural or abnormal labours, use forceps, turn, or perform any obstetric operation, medically treat the mother and infant, vaccinate, and give certificates of cause of death or of stillbirth. Does the Council of our Association propose to allow this Bill to pass without going as a deputation to the Privy Council, Home Office, and Local Government Board? I do not ask this question so as to shut out my opinion that practitioners themselves will be grossly remiss in their duty if they fail to organise a keen opposition to the Bill. The gross apathy of one is no excuse for another practitioner being apathetic.—I am, etc.,

Liverpool, April 1st. R. R. RENTOUL.

*** The paper enclosed by Dr. Rentoul contains twenty-three amendments; of these he obelises three, of which two were moved: "(1) That the word 'midwife' be replaced by 'midwifery nurse.'" This was moved by Mr. Lloyd-George. "(2) That a penalty should be pro-

vided for infringing any provisions in Clause 2 (5)." An amendment in this direction was moved by Mr. Lloyd-George at the request of the Council of the British Medical Association. The third amendment referred to by Dr. Rentoul proposed to extend the Bill to the United Kingdom. This was not moved, but several friends of the Bill expressed the hope that Mr. Heywood Johnstone would introduce Midwives Bills for Scotland and Ireland.

THE MIDWIVES "ACT."

Sir,—At the Bristol meeting in 1894 a vote of censure was proposed upon the action of the late Editor of the British Medical Journal for constantly encouraging the agitators and lending the pages of the Journal to the advancement of their Bill.

The Manchester Medico-Ethical Association and the Lancashire and Cheshire Branch of the British Medical Association and the Special Committee of that Branch have offered the most persistent opposition to this Bill, and have again and again exposed the tactics of its promoters. These bodies have from time to time interviewed Cabinet Ministers, individual members and Committees of both Houses of Parliament, and induced lay members of the House constantly to oppose the second reading of the various Bills.

At this late stage you present your readers, now it is too late, with the most powerful criticism and condemnation of the Bill that we have had, but you make the most extraordinary assertion that the Council of the Association is alone in its opposition in endeavouring to amend the Bill. It would be far more accurate to say that the Council of the Association was the only authority worth consideration which had neglected to give any determined or intelligent opposition to the Bill. Others with myself have constantly and persistently insisted upon every objection you at the eleventh hour raise, but we have never had the slightest support from the Council or the Journal.—I am, etc.,

Old Trafford, April 3rd. Jas. Brassey Brierley.

*** Dr. Brassey Brierley a little misrepresents what was said last week. We said that so far as we had been able to ascertain "no amendments were submitted to the Committee (that is, the Standing Committee on Law) in the interests of the medical profession except those which had been suggested by the Council of the British Medical Association at its meeting last week." We believed this to be the case, and subject to any correction which may be necessary owing to what Dr. Rentoul says above, we still believe it to be correct, for the amendments put down by Mr. Lloyd-George and Sir George Pilkington in the Standing Committee on Law (see British Medical Journal, March 31st, p. 799), with the exceptions mentioned, were put down by them in consequence of a request made to them on behalf of the Council of the British Medical Association. Dr. Brierley is at least premature in calling the measure an "Act;" it has yet to pass the report stage and third reading in the House of Commons and all stages in the House of Lords.

DIPHTHERIA IN MAN AND "GAPES" IN BIRDS.

Sir,—In 1882 I examined the body of a pigeon which was supposed to have died of the gapes. Dissection, however, disclosed a well-formed membrane extending from the tongue through the trachea into the lungs. This membrane, like diphtherial membranes in the human subject, was not adherent to the trachea, but hung free, attached to the glottis like a wind sail. I made a microscopical examination of the trachea, lungs, blood, and other tissues, but failed to discover any micro-organisms. As regards the membrane, of course it was far otherwise; this was the habitat of organisms in quantity both as to numbers and variety. Scrapings of the membrane inoculated into the pharynx of the pigeon caused the development, not of a distinct membrane (in fact, I have only seen a membrane on one occasion), but of a pultaceous white deposit, which frequently extended to the nasal mucous membrane and the conjunctivæ. I next inoculated pigeons with diphtherial membrane taken from the human subject, and obtained similar results. I may be asked why I did not isolate the organism, cultivate, and identify it. This was not done for three reasons: First, at that time the growth and identification of the bacillus diphtheriæ was, to say the least, difficult. Secondly, I was hampered by the iniquitous law which disgraces the nation, and by which I was liable to a penalty of £50 for each experiment. Thirdly, I was compelled to carry out my experiments in my private house and premises on which my children lived.

The following year diphtheria occurred at the small village of Braughing; many persons were attacked, and for a long time I failed to discover the cause, until a farmer complained to me of losing his fowls. I then made inquiries, and found that the human disease followed the fowl disease up the river valley. This was reported to the Local Government Board. I then paid particular attention to isolated cases of diphtheria occurring in lonely cottages, etc., amongst persons who had not been away from home, and, usually where fowls were kept, I found a certain number suffering from the complaint.

In 1886 I was employed to make an investigation as to the origins of diphtheria for the Local Government Board, and I found the disease concurrent in the neighbourhood of Aldershot, Derby, and Nottingham; in every single instance I found diphtheria associated with the same disease amongst fowls, turkeys, and pheasants. I reported to this effect to the Local Government Board, and that report was published.

At that time my theory was that a certain form of throat disease amongst fowls was communicable to human beings, not that all kinds of throat disease amongst birds were. The theory was, to say the least, pooh-poohed by the bacteriologist pure and simple, both in England and Germany; they were convinced from laboratory experiments that the disease amongst fowls and men was totally dissimilar, and, despite my positive experiments in 1883, declared that human diphtheria was not communicable to birds.

About 1893 or 1894 I came across an extensive epidemic amongst fowls at an isolated farmhouse in Hertfordshire. The fowls were dying fast, and though the Notification Act was in force, no diphtheria was known in that district or those immediately surrounding it. I took the trouble to carry two live birds suffering from the disease some miles to the rail; one I kept, the other I sent to a well known bacteriologist in Government employ. He, however, was so convinced he could not possibly be mistaken in his previously expressed opinion that he did not experiment with the fowl. This was unfortunate, because from the throat of the other bird I isolated an organism which was morphologically similar to the bacillus diphtheriæ. Moreover, the farmer's wife, who flattered herself that she could cure the birds, put some of them into a small yard near her kitchen, and swabbed out their throats two or three times a day with some nostrum she had devised. I do not know what became of the fowls, but I do know that this woman had diphtheria first, and her son and daughter followed. *Nota bene* the diagnosis of diphtheria was made by a medical man who knew nothing about the fowls, and who notified the occurrence to me in the ordinary way.

It would take up too much space to relate several instances in which the importation into a house either dead or alive of fowls and turkeys affected with avian diphtheria, was followed by disease amongst men and women, especially children.

I see in the *Transactions* of the Jenner Institute of Preventive Medicine (second series, pages 113 to 125) an exceedingly interesting paper by Dr. Alfred Salter describing the transformation of the non-pathogenic pseudo-bacillus into the well-known Klebs-Loeffler, eventually acting on guinea-pigs exactly like the originally virulent form.

No one, I trust, would accuse me of wishing in any way to disparage the science of bacteriology. I have spent a considerable amount of time since 1878, often under disadvantages, in the practical study of bacteriology. The benefits derived from it are universally recognised. I think, however, that if the bacteriologist would occasionally raise his head from the eye-piece, and take an intelligent look round he might achieve results having a wider and a firmer basis in a shorter time.

I well remember the reception I met with, courteous of course, when I urged several junior men to take up the question of the transference of diphtheria from men to birds and *vice versâ*, although I hinted that more things might be supposed to take place in the wide wide world than in a test tube, no one would seriously consider the matter. I came away

with the impression that at the very best they looked on me as an amiable old gentleman with a fad.

The bacteriologists rather remind me of our friends the Portuguese; they deny that plague has occurred at Lourenço Marques because the fact is not officially known, and are highly indignant with me because from extra-official information I am convinced of the occurrence. So the bacteriologist too frequently denies the evidence of his senses unless supported by experiment. In my humble opinion this is putting the cart before the horse. Experiments carefully conducted are of inestimable price, but I am not disposed to doubt the origin of rinderpest, small-pox, etc., from a contagion vivum simply because I have never been able to see or cultivate the organism.

I have noticed diseases giving rise to diphtheria amongst other animals, and though the fact was at first disputed, it is now in most instances generally accepted. I further believe that occasionally diphtheria is spread by infected water, and yet hope to live to see this also admitted.—I am, etc.,

GEORGE TURNER,
Medical Officer of Health for the Colony of the Cape of Good Hope; late Chief of the Government Rinderpest Experimental Station, Kimberley

March 5th.

DEFECTS OF THE CLUB SYSTEM.

SIR,—I am glad that we are all agreed on two things—the importance of combination and that we must be practical. Now may I offer three very practical suggestions to all club doctors?

1. Join the local Branch of the British Medical Association, go to the local meetings, stay to the dinner. You will learn what your neighbours think on new methods of practice and on medical politics.

2. Keep a careful account of exactly what your clubs cost you. Charge to this account everything—time, materials, letters, stamps, drugs, interest on capital, assistance—at the full value. On the other side put your receipts, and if the two do not balance at midsummer say so.

3. Never mind names. The mediæval guilds were what we call now "associations of masters," "trades unions," "societies." If you do a trade over the counter you must be in a traders' union. If you are a purely professional man you will gravitate to an association. What does it matter so long as you gain your end? A fair day's wage for a fair day's work, neither more nor less. One of the mediæval lawyers said every Englishman was noble because everyone was free. Trades unionists have won their freedom. Have we?

I hope to write no more on this subject.—I am, etc.,

March 31st. GRAY'S.

TREATMENT OF LEAD POISONING.

SIR,—I notice that Dr. Allan writes to correct your report of the meeting at Trentham, at which I had the honour of reading a short paper on the electrical treatment of lead poisoning. Dr. Allan also attacks my paper, and by his letter shows how easy it is to give one-sided or incorrect accounts of things. He implies that I dealt only with "alternating" currents, but his implication is not correct. He says further that I have only treated one case from the Potteries at St. Bartholomew's; but that again is incorrect. He says that in one case I admitted an unsatisfactory result. That is so, certainly, but at least the patient has recovered from the wrist-drop with which he came to London.—I am, etc.,

Wimpole Street, April 3rd. H. LEWIS JONES.

SIR,—As the subject of lead poisoning and its treatment—rather the later stages of the treatment has been discussed in the BRITISH MEDICAL JOURNAL lately, I should like to speak of the treatment in the acute stage, when the severe pain in the bowel is complained of, the colic stage, and a very severe pain it is too; only those who have seen many such cases can fully realise what intense suffering is produced.

I have had for many years to attend workmen employed in a lead ore smelting works as well as spelter works in which there is a considerable percentage of lead in the zinc ores. I believe the correct explanation of pain in such cases is an irregular peristaltic action of the bowels, hence always, or nearly always, constipation. It is nearly useless to give purgatives in such cases, nor do enemas have more than a small effect. My experience soon led me first to relieve this irregular peristaltic action and also allay the pain. The best thing is a good dose of morphine, ½ to 1 grain locally by hypodermic injection. Time after time have I found that as soon as the spasm of the bowels has been arrested the bowels will act without any further trouble. Hence here is a simple remedy which in my hands has relieved hundreds of very severe cases, and invariably have I been asked by patients who have had previous attacks to give them the same pricking in the bowels. This plan—for I have not come across the suggestion in any works treating on the subject—may be of use to some who are occasionally called upon to treat such cases.—I am, etc.,

Morriston, Glamorgan, R.S.O., April 2nd. E. RICE MORGAN.

SIR WILLIAM BANKS ON CANCER.

SIR,—In reference to the increased consumption of nitrogenous food of late years in Great Britain being a possible factor in the increase of cancer, as noted by Sir William Banks, it would, I think, be interesting to ascertain the statistics bearing upon the prevalence of that disease in Australia and New Zealand, where, "up country," in the extensive tract of cattle farms, the daily dietary is chiefly, I learn, if not wholly nitrogenous.—I am, etc.,

W. EAMES,
H.M.S. *Theseus*, Suda Bay, Crete, March 25th. Staff Surgeon, R.N.

DERMOID CYST SIMULATING A MENINGOCELE.

SIR,—With reference to Mr. F. Marsh's interesting case of frontal dermoid in the BRITISH MEDICAL JOURNAL of February 24th, p. 443, it will perhaps interest him to know that a case exactly similar is to be found in vol. ii, p. 108, of the *Transactions* of the South Indian Branch of the British Medical Association published in 1888, which are filed in the Association Library, London. It was under the care of Surgeon-General Charles Sibthorpe, C.B., I.M.S. (retired) in the General Hospital, Madras, and the illustration he published with the notes of the case is exactly like that which accompanies Mr. Marsh's case.—I am, etc.,

JOHN SMYTH, M.D.,
Mysore, March 14th. Major I.M.S., Durbar Surgeon.

OBITUARY.

WILLIAM CHAPMAN GRIGG, M.D.EDIN., M.R.C.P.LOND.

Formerly Assistant Obstetric Physician Westminster Hospital.

WE are indebted to Mr. G. H. Makins, Consulting Surgeon with the Forces in South Africa, for the following note on the circumstances of the death of Dr. W. Chapman Grigg, who, as already briefly announced, died at Wynberg on March 12th. Mr. Makins writes from Capetown, under date March 13th, as follows:

"Many of your readers will hear with concern and regret of the death of Dr. W. C. Grigg, which took place at No. 1 Military Hospital, Wynberg, at 5 A.M on Monday, March 12th, from enteric fever. Dr. Grigg arrived in this country in January last, and placed his services at the disposal of the Medical Department. These were accepted by Surgeon-General Wilson, and Dr Grigg was sent to the camp at Modder River to take part in the treatment of the cases of enteric fever in hospital there as a volunteer physician. From the first the trying circumstances of life at Modder River, the heat, dust, and somewhat restricted and indigestible diet, severely tried him, and when I saw him there early in February I tried to persuade him to relinquish his duties, as his digestion was disordered, and he was far from well. He was then living in No. 2 Divisional Field Hospital, but on the departure of the Highland Brigade to the front, he went into a room at the hotel building. There he became acutely ill and some ten days ago was brought down to Wynberg in the ambulance train and placed under the charge of Major Simpson, R A.M.C., and Dr. Jameson; he was also seen in consultation several times by Dr. Tooth, Physician to the Portland Hospital. The disease was supposed to have reached the nineteenth day, and the temperature on admission and several days afterwards was very high although a hopeful patient at first, his

strength began to fail with some rapidity; on the last three days there was constant diarrhœa and several small hæmorrhages, and he died of exhaustion, his intellect, with slight occasional wanderings, remaining clear to the last. Dr. Grigg fully recognised his condition, but bore his illness with great patience and resignation, and very much appreciated the visits of his neighbours from London, Sir W. MacCormac, Dr. G. Stoker, and Mr. Osborn, who were in Capetown at the time, and he had the comfort of being skilfully and tenderly nursed by a fellow parishioner. He was buried at Wynberg Cemetery with full military honours in the presence of a few friends on March 13th. Dr. Grigg's services were not of the character to qualify him as a recipient for the Victoria Cross, but none the less he gave his life with the bravery and devotion to the service of our country happily so conspicuous in the present crisis. Blessed with abundant means and with nothing to gain, he placed his services unreservedly at the disposal of the military authorities for the benefit of his sick countrymen, and he will find his reward."

We learn from friends in this country that in the last letter received from him Dr. Grigg said that he felt ill but was determined to stick to his work, and his closing words were: "Should you never again hear from me, remember I have sacrificed my life in the cause of my country." This he did, for he received no remuneration from Government, he was under no sort of engagement to remain, and could have left when he chose, and by taking a respite might have been restored to health.

Dr. Grigg, who was 60 years of age, was educated at Queen Elizabeth College, Guernsey, and always entertained a great affection for the school, and on the night before his sailing he was anxious that a paper from the College requesting particulars of his career in after-life should be accurately filled in. He studied medicine at Birmingham, Bristol, King's College, London, Vienna, and Edinburgh University. He qualified as M.R.C.S.Eng. in 1863 and L.S.A. in 1864, graduated M.D. at Edinburgh in 1870, and became M.R.C.P.Lond. in 1872. He was House-Surgeon to the Lock Hospital, and for a short time was in general practice in Maida Hill; but from 1874 to 1893 he was Assistant Obstetric Physician to the Westminster Hospital, and for a time Joint Lecturer in Forensic Medicine at its medical school. He was also Physician to Queen Charlotte's Lying-in Hospital and the Victoria Hospital for Children, and Physician-Accoucheur to St. George's Dispensary. He was a Fellow of the Royal Medical and Chirurgical and of the obstetrical societies; a member of the Pathological and Clinical Societies; and a past President of the British Gynæcological Society, in the formation of which he was largely instrumental. He contributed a paper on Antiseptics in Lying-in Hospitals to the British Medical Journal in 1885.

For many years he was Honorary Secretary of the Metropolitan Counties Branch of the British Medical Association in conjunction with the late Dr. Alexander Henry, and represented the Branch on the former Committee of Council, and after its reorganisation on the Council of the Association. He was in office in 1878 when the Association decided to undertake the printing of its journal, and he was much opposed to that venture. Indeed, chiefly by his efforts a requisition was signed which resulted in the holding of a special general meeting of the Association at Birmingham on April 2nd, 1878, at which he moved a resolution in accordance with his views, but the great majority of the meeting was in favour of the new departure, whilst the result has been a success greater than was then dreamt of by anyone. But although Dr. Grigg was mistaken in this instance he continued for another ten years to do yeoman service for the Association, and the number of members of the Metropolitan Counties Branch grew to exceed 1,000 before his retirement from the secretaryship. He was a man of great energy and public spirit, and keenly interested in public affairs. He was hospitable and fond of society, and had ample means wherewith to gratify his tastes in these respects. His wife predeceased him by about fourteen months. They had no family.

A memorial service was held at Christ Church, Down Street, Mayfair, on March 21st, at which a large congregation was present. The Vicar, the Rev. H. R. Rowsell, spoke very feelingly of the deceased, who had for twenty-five years been churchwarden of the church.

LAWRENCE STORRAR MACKENZIE, M.D.,

Bradford.

The medical profession of Bradford and the suffering public have suffered a great loss in the death of Dr. Lawrence Storrar Mackenzie, which took place on March 31st in that city. Dr. Mackenzie, who was 54 years of age, was born at Yoker, on the Clyde, about nine miles from Glasgow, where his father was for many years an officer in the Inland Revenue. He was educated at Renfrew, and showed at an early age the possession of the talents which became fully developed as he grew older. His proficiency in mathematics was of great advantage to him in his engineering studies, for he served his apprenticeship to an eminent firm of civil engineers in Glasgow, and was a fully-qualified member of that profession. In connection with his firm he was engaged in several very large engineering undertakings. But his heart was not in the work, and he was not deterred from making a fresh start on the long and difficult task of studying medicine. The energy and indomitable determination with which he carried out his design were thoroughly characteristic. While continuing to reside at Yoker, and still working at his engineering as a source of income, he went through his whole medical course at Anderson's College, Glasgow. Every day he walked the nine miles to Glasgow, and as many back. This may seem a task beyond human strength in these days, when everyone travels by tram or bus, or train or bicycle. It was even necessary to get leave to do his dissections at special hours, and 6 A.M. saw the courageous young student at work in the dissecting room every day. His assiduity was well rewarded by numerous successes in almost every subject of his professional course. In 1872 he took the diploma of L.R.C.P. and L.R.C.S.Edin. He paid for the whole of his medical education out of the earnings he received for work as an engineer, going from the medical school to the office stool between lectures.

Shortly after taking his diploma he settled in Batley, but removed to Bradford about a year later. In 1871 he took the degree of M.D. St. Andrews by examination. Tall, and of dignified appearance, he exhibited always the same physical energy of his early life, almost up to the very beginning of his fatal illness. He was a member of the various local medical societies, and had held the highest offices in them. At the beginning of this year he was elected President of the Bradford and West Riding Medical Union. It was feared at the time of his election that his illness might prevent him taking an active part in the work; but the members unanimously elected him, all desiring that the compliment might afford some pleasure to one whom they delighted to honour. The fatal nature of the symptoms which from time to time had troubled him for about a year was not recognised until a few weeks before the end, when he consulted Mr. Mayo Robson, of Leeds, who was obliged to make the sad communication that he had not many weeks to live. This was strictly verified, for he never left his bed. If "a good name is better than great riches," Dr. Mackenzie was richly endowed. By all who knew him, by his patients, his friends, and his professional brethren, he was held in the highest esteem. Above all things, his character was marked by a straightforwardness and frankness, indicated both by manner and word, which impressed everyone who came in contact with him. He was a model of a successful general practitioner; active, methodical and businesslike, punctual, and always kind and sympathetic. He was in the habit of doing a considerable amount of operative surgery, and was very successful in this line. The care with which his books were kept was remarkable; they were written in a text like copper-plate engraving, and all were preserved from his early days up to the latest date in perfect order.

He took an active part in the discussion as to the abuses of the Bradford medical charities a year ago, and felt very keenly that charity funds provided for the sick poor should not be used for the benefit of persons with trivial ailments, and without inquiry as to the incomes of applicants. He maintained his views both in the press, with other members of the profession, and in the debates at the Medico-Ethical

Society. He is a great loss to Bradford, and leaves many sorrowing friends. A widow, his only daughter, and one son survive, the latter being well qualified to carry on his father's practice.

THE name of Mr. ROGERS FIELD is one which ought to be held in grateful remembrance by all who take an interest in public health. He received his preliminary training in the office of Mr. Thomas Wicksteed, an eminent water engineer, but from an early stage of his career devoted himself especially to drainage work. He was the inventor of a highly ingenious automatic flushing tank, which he designed especially for use in connection with the drainage of country houses and groups of cottages, but which is equally applicable to larger works. He was a man not only of great knowledge and experience in his profession, but of quite extraordinary enthusiasm in all sanitary matters. He willingly devoted to the elucidation of principles bearing on his favourite subject time and money—how much of both he gave was known probably only to himself. He was for many years an active member of the Council of the Sanitary Institute, and was one of those who brought about the amalgamation with it of the Parkes Museum, to the formation of which he had contributed most liberally. He contributed largely to the funds of the Institute for special purposes, and in particular for the rearrangment and cataloguing of the museum. For many years he carried on experiments with regard to ventilation, which it is to be hoped will now form the basis for a report which will be his best memorial. He was elected a Vice-President of the Institute only a week before his death, which occurred on March 28th.

DR. GEORGE OWEN MEAD, of Newmarket, who died in that town on March 11th, was Coroner for the Newmarket Division. He was born in 1857, and was the elder son of Dr. George Borthwick Mead, formerly of Newmarket. He received his medical education at St. Bartholomew's Hospital, and was Brackenbury Scholar in 1877. He took the diplomas of M.R.C.S.Eng. and L.R.C.P.Edin. in 1879. He was Assistant House-Surgeon to the West Suffolk Hospital, and went through the Russo-Turkish war as Surgeon to the British National Aid Society, receiving from the Sultan the Order of the Medijeh (Third Class) at the end of the war. Subsequently he settled in practice with his father in Newmarket, and became Surgeon to the Rous Memorial Hospital there. As one of the County Coroners for Suffolk he exhibited a high sense of duty, and as Medical Officer of Health he rendered the Newmarket Urban District Council valuable assistance, more particularly in their main drainage scheme. Soon after settling in Newmarket he entered the 2nd V.B. Suffolk Regiment as Lieutenant of the Newmarket Company, which he afterwards commanded. Subsequently he accepted a commission as Captain in the 3rd (Militia) Battalion of the regiment, and was a very keen officer. In every relation of life he was extremely popular, and was deservedly held in high esteem by all classes. Dying as he did in the prime of life and after a painfully brief illness his decease elicited the deep sympathy of the whole community for his relatives. In accordance with his wish to be buried near his mother he was interred at Mepal, near Sutton, in the Isle of Ely.

WE regret to record the death, at the early age of 31 years, of Dr. JOHN CADWALADR WILLIAMS, of Grange Road West, Middlesbrough, which took place at his home, Brynymor, Penygroes, Carnarvonshire, on March 12th. His death was due to pneumonia, traced to a chill contracted at the funeral of his father, the Rev. J. J. Williams. Dr. Williams was educated at the University and Royal College of Surgeons, Edinburgh, gaining the silver medal in Anatomy, and holding the post of Demonstrator of Anatomy at the latter school. He took the degrees of M.B. and C.M.Edin. in 1891. Subsequently he became a ship surgeon, and on his return continued his studies at Guy's Hospital, London, and took the diplomas of M.R.C.S.Eng. and L.R.C.P.Lond in 1897. Shortly afterwards he settled down in Middlesbrough as partner with Dr. W. J. Williams, Grange Road West, where he rapidly gained the confidence of his patients, and by his kind, thoroughly upright and honourable disposition, formed a large circle of friends who mourn his loss. He also held the office of Public Vaccinator for the Middlesbrough district.

WE regret to have to announce the death of Mr. JAMES MCALISTER, which occurred on March 22nd, at Kilmarnock, where he was born in 1831, and where he practised for thirty-three years. He received his medical education at the university town nearest to his home, attending classes both at the University of Glasgow and in Anderson's College. It was necessary for him while doing so to earn his own livelihood, and this he did, with characteristic patience and bravery, as assistant to a Glasgow druggist. In 1858 he took the diplomas of Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and Licentiate in Midwifery. Shortly thereafter he became an assistant in a large colliery practice at Seaton Delaval, near Newcastle-on-Tyne, and subsequently partner in the same practice. He especially distinguished himself as a prompt and courageous helper in several large mining disasters. After the Burradon colliery explosion, for example, he, with the foreman of the mine, was the first to descend the workings in order to afford assistance to the sufferers. After spending seven years in Northumberland he returned in 1865 to Kilmarnock, taking over the practice of Dr. Thomson, of that town. He became both Factory Surgeon and Prison Surgeon, and, in due course, Surgeon to the Kilmarnock Infirmary and Fever Hospital. He was an enthusiastic Volunteer, becoming Surgeon-Lieutenant-Colonel of the 1st Volunteer Battalion Royal Scots Fusiliers. His amiable disposition and professional skill rendered him a trusted adviser and an esteemed friend to a wide circle of patients and acquaintances. He was particularly successful in obstetric practice. He retired from actively following his profession in 1898, and had since then been in failing health, but he continued to move about among his friends in the town to within eight days of his decease.

DR. ST. GEORGE MIVART, who died somewhat suddenly on April 1st, was in his 73rd year, and was best known to the world as a naturalist, who for the greater part of his life accepted with enthusiasm the doctrines of the Roman Catholic Church, which he defended from attacks on the scientific side with remarkable acumen and no little literary skill. He at first intended to make the Bar his profession, but, following his natural bent to scientific research, became lecturer at St. Mary's Hospital Medical School in 1862. In 1884 he became Professor of the Philosophy of Natural History in the University of Louvain. Some years ago he gave up this Chair and settled in London; his resignation was perhaps not unconnected with a certain change in his mental attitude on theological questions, a change which finally led him a few weeks ago to address a letter to Cardinal Vaughan, which practically severed his connection with the communion which he had joined in the enthasiasm of youth in 1844.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Professor Sylo-Saxtorph, of Copenhagen, who first introduced the Listerian treatment into surgical practice in Denmark, aged 77; Dr Beauregard, Professor in the Superior School of Pharmacy of Paris; Professor Murillo, Dean of the Medical Faculty of the University of Santiago, Chile; Dr. Cavaliere Alessandro Barbera, the trusted medical adviser of Garibaldi, whom he accompanied through all the campaigns for the independence of Italy, aged 75; and Dr. Salomon Hajek, formerly Librarian to the Vienna Medical Society, aged 51.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE SUPPLEMENTARY ESTIMATES.

THE supplementary estimates of £23 000,000, voted in October last, is accounted for in an abstract recently issued by the Treasury.

Of that large sum, which chiefly went in transport, remounts, and field stores, the medical establishments only received £120,000, disposed of as follows: £30,000 augmented

pay of officers, men, and nurses of the Army Medical Service; £50,000, pay of civilian practitioners; £40,000 for medicines, etc. It thus appears that the system of keeping the regular service in an undermanned and practically starved condition in no way avoids the inevitable when the tug of war comes. Medical aid must be provided, and at an enhanced cost, as these estimates disclose.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty:—Herbert Newsome, Surgeon, to the *Excellent*, March 28th; Ernest A. Shaw, Surgeon, to the *Resolution*, March 6th; William A. Whitelegge, B.A., M.D., Staff Surgeon, to the *Phœnix*, on promotion, August 17th, 1899; Oswald Rees, M.D., Surgeon, to Royal Marine Depôt, Deal, April 1st.

ROYAL ARMY MEDICAL CORPS.

Surgeon-Lieutenant J. P. G. Macnab, 1st Fife Volunteer Artillery, is granted the temporary rank of Lieutenant while serving in South Africa, April 4th.

INDIAN MEDICAL SERVICE.

Lieutenant J. C. G. Carmichael, M.D., Bengal Establishment, Principal Medical Officer Presidency District, is permitted to retire from the service from May 2nd. He was appointed Assistant Surgeon, April 1st, 1868, and became Surgeon-Colonel, March 29th, 1895. He was with the Mahsood Wuzeeree Expedition in 1881; in the Egyptian war of 1882, being present at the battle of Tel-el-Kebir (medal with clasp and Khedive's star); with the Burmese Expedition in 1886-87 (mentioned in despatches, medal with clasp); and in the campaign on the North-West Frontier of India under Sir William Lockhart in 1897-98, with the Malakand Field Force and Buner Field Force as Principal Medical Officer, including the capture of the Tanga Pass (twice mentioned in despatches, medal with clasp).

Deputy-Surgeon-General H. Cayley, Retired List, is granted the temporary rank of Colonel whilst employed with the Scottish National Red Cross Hospital, April 4th.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Captain L. W. A. Keiffenheim-Trubridge, M.D., resigns his commission, April 4th.

THE VOLUNTEERS.

The undermentioned officers are borne as supernumerary whilst serving with the Royal Army Medical Corps in South Africa, dated April 4th: Surgeon-Lieutenant J. Clay, M.B., 2nd Volunteer Battalion the Northumberland Fusiliers; Surgeon-Major E. L. Freer and Surgeon-Lieutenant A. H. McDougall, 1st Volunteer Battalion the Royal Warwickshire Regiment.

Mr. Angers J. Grant, M.D., is appointed Surgeon-Lieutenant in the 7th Volunteer Battalion the Royal Scots (Lothian Regiment), April 4th.

Surgeon-Lieutenant R. B. Sidebottom, 4th Volunteer Battalion the Cheshire Regiment, is promoted to be Surgeon-Captain, April 4th.

Surgeon-Captain J. B. Simpson, 1st Sutherland (the Sutherland Highland) Rifles, resigns his commission, and is appointed Lieutenant, April 4th.

THE P.M.O. OF NATAL.

A correspondent takes exception to the remark of our correspondent ("Surgeon-General Retired") that in Natal "administration (medical) had struggled on without a responsible head, the senior on the spot, doing his best to keep matters going, but really responsible to no medical superior," and construes it into a reflection on Colonel Gallwey C.B., whose able administration there we, in common with all others, have fully acknowledged. He also takes exception to our gloss that at the eleventh hour the matter should be remedied; not, as he wrongly infers, by superseding Colonel Gallwey, but by at least giving him the local rank and status of Surgeon General while doing the duty of one, and thus placing the medical service on the usual footing accorded to all other branches under similar circumstances.

We are absolutely certain our correspondent "Surgeon-General" would be the first to disclaim any unworthy reflections on Colonel Gallwey's administration, in being called upon, without apparently any acknowledgment by the War Office, to perform the highest medical duties without receiving the requisite rank. Our own remarks were entirely confined to that point without any reflection on individuals.

VALUE PLACED ON EFFICIENT SERVICE.

A correspondent writes: The War Office does not apparently set high value on the services of retired medical officers; for, whereas it pays inexperienced and untrained civilian practitioners at the rate of £270 a year, it only gives £150 to a retired medical officer when re-employed. It is nothing to say he has a pension, because he has already earned it, and it has nothing to do with work done afterwards.

*** The remuneration at the rate of £150 per annum given to retired officers, for very important and often harassing duties, is certainly very poor. We hear that at several of the stations the compounders have been drafted away to the war, and the retired officers employed have to do their own compounding. It is little wonder that many such appointments go a-begging.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

MEDICAL ADVERTISING.

A correspondent sends us the following handbill for an expression of opinion:

In Practice at
No. 1, Paget Street,
Grangetown,
Dr. Martin,
Late of Klerksdorp and Pretoria.

Dr. Martin was at the commencement of the war in South Africa commandeered by the Boers, and after some months with their forces on the Western Border and in Pretoria, escaped *viâ* Lorenço Marques in December last, for which the whole of his property has been confiscated by the Boer Government.

Surgery Hours: 9 to 12 A.M.
2 to 8 P.M.
Charges strictly moderate.

*** The handbill is an advertisement pure and simple, and we do not see how the General Medical Council can object to medical aid societies for advertising and touting to get patients unless it is also prepared to take similar objection to registered members of the medical profession who do the same thing. We are informed that Dr. Martin is not a member of the British Medical Association, but the local Ethical Committee or the Branch Council might try the effect of a remonstrance, for Dr. Martin, having only recently returned to this country, may be unacquainted with the views expressed by the General Medical Council on the subject of advertising.

STILL *v.* MORRIS.

In this case, which was heard on March 16th in the High Court of Justice, Queen's Bench Division, before the Lord Chief Justice and a Special Jury, Mr. Mellor appeared for the plaintiff, and Mr Dickens, Q.C., and Mr. Hugh Fraser, instructed by Messrs. Hempsons, for the defendant.

This was an action by Edward James Still, a fireman in the service of the Metropolitan Fire Brigade, claiming damages for negligence and libel.

The plaintiff alleged that as such fireman he was entitled to medical attendance and advice from the defendant who had attended him at the end of January, 1899, when he was suffering from enlarged and inflamed groinal glands, and again on February 3rd, 1899 for a rash on plaintiff's body and arms, and had negligently and unskilfully diagnosed the plaintiff's symptoms and had treated the plaintiff for syphilis and had given a certificate to that effect to the Metropolitan Fire Brigade, in consequence of which the plaintiff was dismissed from or compelled to resign his employment and had suffered damage.

Mr. Charles A. Morris, the defendant, pleaded that he was District Medical Officer to District 4 of the London County Council, and that it was his duty as such medical officer to attend members of the Metropolitan Fire Brigade stationed in the said district, and to furnish certain reports and certificates, and that he had attended plaintiff on the dates mentioned and certified to the authorities that the plaintiff was suffering from syphilis and he had treated him accordingly, and denied any negligence or want of skill or breach of duty towards the plaintiff.

The plaintiff in his evidence stated that what he was suffering from was not due to any disease, but to injury sustained in the course of his employment as a fireman.

Mr. Arthur Shillitoe also gave evidence on his behalf, as to having examined plaintiff on February 13th, 1899, and found no trace of syphilis.

Defendant gave evidence in support of his certificates and also of the symptoms present when such certificates were given, and at the close of his evidence the jury stopped the case and returned a verdict for the defendant, upon which the judge gave judgment with costs.

SCENE AT A CORONER'S COURT.

A Durham County Practitioner writes to inform us that he has been a witness at many inquests held by Coroner Graham, and that he is sure all medical men attending his court will agree that he is one of the most courteous and considerate coroners of the present day, and that he is always ready to study the convenience and save the time of the medical witnesses. With regard to what occurred at a recent inquest, as reported in last week's British Medical Journal, our correspondent is of opinion that the medical witness must have been lacking in discretion and judgment not to have complied at once with the cononer's request, even if there were no legal power to enforce it, as the written report asked for is a saving of time to the medical witness, as well as to the court. From further local newspaper cuttings enclosed we notice that the same medical witness has come into collision with the Gateshead magistrates and their clerk, and these reports seem to confirm the opinion expressed by our correspondent as to the cause of what occurred at the recent inquest.

INTRODUCING A SUCCESSOR.

A correspondent desires to know what is meant by an agreement by the vendor to give an effectual introduction of all the patients of a practice for twelve months. Would a circular introducing the successor be considered sufficient? Is a personal introduction necessary, and would this merely apply to the patients attended during that year? Should

the vendor call with the successor, or is it sufficient if the former indicates to the latter where he should call and introduce himself?

*** To give an effectual introduction to the patients of a practice, a personal introduction is necessary. This introduction should be given not only to patients attended during the twelve months, but to all old patients of the vendor that the latter can influence. It is not sufficient for the vendor merely to indicate to his successor where he may call. In all cases he should accompany the latter.

UNIVERSITIES AND COLLEGES.

VICTORIA UNIVERSITY.

The following have passed the Final Examination in the Faculty of Medicine:

Part I.—G. Ainsworth, Owens; E. W. Anderton, Yorks.; M. B. Arnold, Owens; J. L. Beddoes, Univ.; J. H. Billing, Univ.; G. Binns, Owens; J. L. Beddoes, Univ.; J. H. Billing, Univ.; G. Binns, Owens; J. W. H. Brown, Yorks.; F. Bullough, Owens; R. T. Forster, Yorks.; J. P. Good, Owens; W. Hickey, Owens; J. McIlraith, Owens, A. F. Martin, Yorks.; E. Saville, Yorks.; H. Slater, Owens; J. H. Sutcliffe, Yorks.; G. Taylor, Owens; H. Terry, Owens; T. Tierney, Owens; W. H. Tomlinson, Owens; J. W. Watson, Owens; H. M. Williamson, Owens; F. P. Wilson, Univ.; W. J. Woodyatt, Owens.

Part II.—T. P. Allen, Owens; W. E. Bamber, Owens; W. H. Broad, Univ.; H. H. Bywater, Owens; S. S. Depree, Univ.; A. E. Finney (Second Class Honours), Owens; W. A. Helm, Owens; E. F. Hill, Owens; J. F. Hodgson, Owens; H. Holt, Owens; S. K. Hutton, Owens; C. J. N. Longridge (First Class Honours), Owens and St. George's Hospital; F. T. A. Lovegrove, Univ.; F. A. Morrison, Owens; W. H. Morrison, Yorks.; H. Scholefield, Owens.

The successful candidates in Part II were presented for degrees on March 30th.

The following have passed the Second Examination in the Faculty of Medicine in the subjects undernoted:

Anatomy and Physiology.—A. Anderson, Yorks.; J. W. Anderton, Owens; R. Appleton, Yorks.; J. B. Barnes, Owens; H. M. Berry, Univ.; J. P. Bligh, Univ.; *L. R. Braithwaite, Yorks.; W. Briggs, Owens; G. H. Brown, Owens; G. G. Buckley, Owens; A. Burkhard, Yorks.; *A. G. Christian, Owens; E. H. Cox, Owens; A. J. Edmonds, Owens; R. B. Fletcher, Owens; A. H. Gregson, Owens; P. T. Harding, Owens; J. L. Hawkes, Univ.; F. W. Hayes, Yorks; H. E. Heapy, Univ.; A. Hodgkinson, Owens; A. S. Hopper, Univ.; A. Howard, Owens; J. R. Hutchinson, Owens; A. E. Johnson, Owens; J. A. Johnson, Univ.; C. O. Jones, Univ.; J. A. Jones, Owens; G. W. N. Joseph, Univ.; W. G. Kinton, Owens; R. E. Knowles, Univ.; R. G. M. Ladell, Yorks.; A. W. Latham, Owens; J. A. Longley, Yorks; J. Longworth, Owens; H. Maffin, Yorks.; M. B. Potts, Yorks.; A. H. Radcliffe, Yorks.; W. E. Rothwell, Owens; F. W. Schofield, Owens; P. K. Steele, Yorks.; F. Sugden, Yorks.; B. Suggit, Yorks; S. W. Swindells, Owens; A. F. Thompson, Owens; A. B. S. Todd, Yorks.; A. E. Townley, Owens; F. E. Tylecote Owens; D. Walker, Owens; T. B. Wolstenholme, Owens; H. F. Woolfenden, Univ.; W. S. Wrigley, Owens; F. W. B. Young, Yorks.

* University Scholarship.

Materia Medica and Pharmacy.—J. Brunshill, Owens; L. T. Chadwick, Yorks.; A. Cran, Owens; R. Haslam, Owens; E. W. Henstock, Owens; A. G. Jackson, Univ.; C. P. Lapage, Owens; H. F. Lee, Owens; J. Longworth, Owens; J. H. Nichol, Owens; G. G. Parkin, Owens; W. B. Ramsden, Owens; J. O. Sergeant, Yorks.; F. Sugden, Yorks.; A. B. Sykes, Univ.; A. B. S. Todd, Yorks.; A. E. Townley, Owens; G. F. C. Walker, Univ.; S. A. Winstanley, Owens.

CONJOINT BOARD IN ENGLAND.

The following gentlemen have passed the Second Examination of the Board in the subjects indicated:

Anatomy and Physiology.—A. E. Fiddian, R. V. L. A. Redwood, A. C. Story, University College of South Wales, Cardiff; J. D'Ewart and H. Bentley, Owens College, Manchester; H. Smith and C. E. W. Lyth, University College, Sheffield; F. Yates, St. Mungo's College, Glasgow; T. St. J. Barry, T. L. Booth, University College, Liverpool; M. T. Whitehouse, Mason University College, Birmingham; A. M. Webber, Guy's Hospital; W. Gillitt, Middlesex Hospital; C. F. Hardie, Cambridge University and University College, London; C. W. S. Woods, Cambridge University and St. George's Hospital; G. C. Adeney, St. Thomas's Hospital; W. L. Hawkins, King's College, London; W. E. Lee, Cambridge University and St. Bartholomew's Hospital; C. C. Robinson and A. Hamilton, St. Bartholomew's Hospital; G. H. Rodolph, London Hospital; L. L. Thomson, St. Mary's Hospital; W. H. Scott, St. Bartholomew's Hospital; N. I. Spriggs, E. H. B. Milsom, W. F. Box, G. Carlisle, S. C. Bowle, H. C. Winkworth, Guy's Hospital; F. B. Skettle, C. J. H. Gunning, St. George's Hospital; R. Jones, Edinburgh University and St. Mary's Hospital; A. L. Jones, St. Mary's Hospital; H. R. Minkley, St. Mary's Hospital and Mr Cooke's School of Anatomy and Physiology; H. S. Turner, King's College, London; J. A. Kilpatrick, University College of South Wales, Cardiff, and King's College, London; H. S. Bennett, L. S. Hooper, F. W. W. Smith, and E. L. Moss, St. Thomas's Hospital; G. S. Hett, F. H. Alexander, University College, London; R. A. Slater Sunderland, St. Bartholomew's Hospital; A. G. Payne, F. J. Pierce, Charing Cross Hospital; W. Bain, I. D. Jones, Middlesex Hospital; and J. A. Milne, London Hospital.

Physiology only.—E. W. Toulmin, St. Mary's Hospital.

Twenty-two gentlemen were referred in both subjects, and one in physiology only, for three months.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examination.—Dr. Thomas Joseph O'Donnell, Gorgaum, Mysore State, India, having passed the necessary examinations, has been admitted a Fellow of the College.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 7,090 births and 4,753 deaths were registered during the week ending Saturday last, March 31st. The annual rate of mortality in these towns, which had been 20.3 and 21.6 per 1,000 in the two preceding weeks, declined again to 21.4 last week. The rates in the several towns ranged from 11.9 in Croydon, 13.5 in Huddersfield, 13.8 in Burnley, and 14.3 in Brighton, to 27.2 in Manchester, 29.4 in Preston, 31.3 in Liverpool, and 33.8 in Wolverhampton. In the thirty-two provincial towns the mean death-rate was 22.0 per 1,000, and exceeded by 1.7 the rate recorded in London, which was 20.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the death-rate was 1.8 per 1,000, while it averaged 2.5 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Cardiff, 3.9 in Bristol, 4.6 in Blackburn, 5.2 in Salford, 5.7 in Preston, and 6.4 in Wolverhampton. Measles caused a death-rate of 2.3 in Wolverhampton, 2.6 in Plymouth and in Bristol, 3.0 in Cardiff, and 3.5 in Preston; scarlet fever of 1.1 in Blackburn and 1.3 in Burnley; whooping-cough of 1.8 in Portsmouth and in Liverpool, 1.9 in Bolton, and 3.5 in Wolverhampton; and "fever" of 1.0 in Derby and in Huddersfield. The 80 deaths from diphtheria in the thirty-three towns included 31 in London, 9 in Leeds, 9 in Sheffield, 5 in Leicester, 4 in West Ham, and 4 in Salford. One fatal case of small-pox was registered last week in Liverpool, and one in Hull, but not one in any other of the thirty-three large towns. Three cases of small-pox were under treatment in the Metropolitan Asylums Hospitals on Saturday last, March 31st against 5 at the end of each of the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 3,578 to 1,715 at the end of the nineteen preceding weeks, had further fallen to 1,590 on Saturday last; 178 new cases were admitted during the week, against 147, 181, and 170 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, March 31st, 985 births and 705 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 31.7 to 22.2 per 1,000 in the five preceding weeks, rose again to 22.8 last week, and was 1.4 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 11.3 in Leith, and 16.9 in Perth, to 25.2 in Glasgow and 25.3 in Edinburgh. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Paisley and Greenock. The 360 deaths registered in Glasgow included 9 from measles, 4 from scarlet fever, 7 from diphtheria, 13 from whooping-cough, and 6 from diarrhœa. Three fatal cases of diphtheria, 3 of whooping-cough, and 4 of diarrhœa were recorded in Edinburgh; 2 deaths from measles and 2 from "fever" occurred in Dundee; 6 from whooping-cough in Aberdeen; 2 from measles and 2 from whooping-cough in Paisley; and 3 from diphtheria in Greenock.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE NEW INFIRMARY OF THE CENTRAL LONDON SICK ASYLUM DISTRICT.

This new infirmary at Hendon was opened on Thursday, March 29th, by Dr. Thomas Prescott, Chairman of the Board of Managers, who unveiled a memorial tablet in the hall of the building and received a master key bearing an inscription. This district, which embraces the Strand Union, the Westminster Union, and the Parishes of St. Giles and St. George Bloomsbury, was formed in 1868 for the purpose of providing an asylum for their sick poor. In 1873 the present asylum in Cleveland Street was opened, and by 1875 accommodation for 264 patients was provided. In 1890 the Local Government Board required that at least 350 more beds should be provided, and, as the cost of obtaining a sufficiently large site in that neighbourhood was prohibitive, it was decided to build an infirmary as far out of town as was permissible. Accordingly, after inspecting several sites, one was selected about midway between Hendon and Edgware, in a healthy, elevated, and quite open district. The foundation stone of the new building was laid on June 8th, 1898.

The grounds consist of 27½ acres, and are easily reached from the Edgware Road. The buildings are composed of a main block, with the house for the medical superintendent, detached, on the one side, and a comfortable nurses' home, also detached, on the other. In front and in the middle of the main block are the official buildings, and on the wings are two ward pavilions each two storeys high, and giving room together for 240 patients; separate from these are two other smaller wards for children and isolation cases, bringing the total number of beds up to 274. The wards are airy and well warmed; the buildings generally are plain, but

quite comfortable, and arranged on most approved hygienic principles. There is an excellent operating room, lined with glazed tiles and having a plate-glass front wall and roof. The kitchens, store rooms, and laundry are in the rear of the main block, and the mortuary is a detached building.

The purchase and the preparation of the site required £12,428, and the building and furnishing amounted to £115,000.

The medical superintendent of both the infirmaries, Mr. John Hopkins, F.R.C.S., has been connected with the institution since January, 1879. The Board of Management is to be congratulated on having built so commodious and sanitary a home for the sick poor quite away from the surroundings in which they had lived before they became ill.

MEDICAL NEWS.

A meeting of the Northern and Midland Division of the Medico-Psychological Association will be held at the County Asylum, Whittingham, near Preston, Lancashire, on Wednesday, April 18th, 1900. A discussion on the new Lunacy Bill will be opened by Dr. Mould, of Cheadle, and papers will be read by Mr. F. O. Simpson and Miss C. M. Blackwood.

Bacteriology in Russia.—State bacteriological institutes are being established in various parts of Russia. Among those recently founded are one at Vladivostock in Eastern Asia, and one in Merv in Central Asia. The latter is of special importance in view of the fact that the Steppes of Central Asia are believed to be the source of many epidemic diseases.

German Public Health Association.—The annual meeting of the German Public Health Association will be held this year at Treves from September 12th to 15th. Among the subjects proposed for discussion are the Measures to be taken for the Prevention of the Plague; Small Dwellings in Towns, their Condition and Betterment; Causes and Prevention of the High Mortality among Sucklings; and the Hygiene of Cycling.

Medical Theology.—The Archbishop of Montreal, feeling strongly that a course of medical theology would be of great use to medical practitioners, is said to be considering the advisability of founding a chair of that subject in the Laval University. We are not at all sure that we quite know what is meant by medical theology, but whatever it is we earnestly hope that it will not be added to the curriculum of the already overburdened medical student in these isles.

Professor Schenk, whose fame was in all the newspapers a short time ago in connection with his alleged discovery of a method of regulating the sex of progeny, has been invited to resign his chair in the University of Vienna. It is stated that he has announced his intention of shaking the dust of that ungrateful city off his feet and betaking himself to the free air of America, where he may have scope for the practical application of his theories untrammelled by the professional prejudices still prevalent in our effete old world.

The London School of Tropical Medicine.—We are informed that since the London School of Tropical Medicine was opened in October last year, 52 students have gone through the course of instruction there given. Of these students, the majority have been medical officers of the Army, Navy, and Colonial Service, or in the employ of trading corporations and missionary societies. A certain number have been private students. Of the latter, 6 have been women possessing degrees and diplomas in medicine.

Leprosy in the United States.—According to the New York *Medical News*, Father L. W. Mulhane, who has done much for the lepers in the United States, has been studying the leprosy problem in Cuba. He is of opinion that leprosy is increasing in Cuba and in the United States, and that it is likely to become formidable in the States by introduction from the new colonial possessions unless the American Government takes steps to establish a home where the lepers can be kept isolated from the rest of the community. Father Mulhane believes that there are now 5,000 lepers in the United States.

A Proposed Crematorium for Madrid.—At a recent meeting of the Municipal Council of Madrid, Señor Arcas submitted a proposal for the establishment of an apparatus for the cremation of dead bodies. He strongly urged the sanitary advantages of cremation as compared with earth burial. He pointed out that the crematorium, besides the purpose which it was more immediately intended to serve, might be used for the incineration of the bodies of stillborn children, fragments of dissected bodies, limbs, etc., removed in hospitals, and remains taken out of old cemeteries.

A Monument to Hahnemann in America.—A joint resolution granting permission for the erection of a monument to Samuel Hahnemann, the founder of homœopathy, has passed both Houses of Congress and has been signed by the President. The Committee to which this Bill was referred, reported it back to the House favourably, and recommended that the Chief of Engineers, United States Army, and the Chairman of the Monument Committee should select a site. The monument is to be of grey granite with statue and bas-reliefs of bronze. It is expected that the corner stone will be laid on April 11th, the one hundred and forty-fifth anniversary of Hahnemann's birth.

Proposed Taxation of Medical Practitioners in Turkey.—According to the *Moniteur Oriental* the Turkish Government has hit upon an ingenious device for checking unqualified practice and at the same time levying a tax on the legitimate practitioner. It is proposed to make the use of prescription books bearing a Government stamp compulsory on all medical practitioners. It is estimated that this would yield to the Treasury a revenue of 300,000 or 400,000 piastres a year, while quacks would be hindered in their depredations by the fact that in each prescription book the name of the doctor using it and the number of his diploma must be inscribed. The proposal has been referred to the Directing Committee of Military Schools. Similar plans have been suggested more than once before, and have been rejected, and it is thought unlikely that the present proposal will be more successful.

Honours to Italian Medical Officers Fallen in War.—A bronze tablet in memory of the medical officers of the Italian Army who died in the wars of Independence and in the Crimean and African campaigns, was solemnly unveiled in the courtyard of the Military Hospital on the Cœlian Hill in Rome on March 18th, in the presence of the King and Queen. Among those present were Signor Pelloux, Minister of the Interior, and many officers of the army and navy. Addresses were delivered by the Inspector of the Sanitary Department of the Army, Colonel Postempski, who spoke in the name of the Red Cross Society, and others. The King and Queen congratulated the relatives of the officers whose names are inscribed on the tablet, and a magnificent bronze crown presented by the King was hung up near the tablet. Their Majesties afterwards visited the hospital, and spoke to several of the patients.

The University of the United States.—A Bill has been introduced into the Senate, establishing a University of the United States. The Bill provides that the government of the University shall be vested in a Board of Regents to be composed of the President of the United States, who shall be President of the Board; the Chief Justice of the United States, who shall be Vice-President of the Board; the Commissioner of Education, the President of the University; the Secretary of the Smithsonian Institution, the President of the National Academy of Sciences, the President of the American Association for the Advancement of Science, the President of the National Educational Association, the President of the American Association of Agricultural Colleges and Experimental Stations, the President of the American Historical Society, the President of the Washington Academy of Sciences, the Presidents of the ten institutions of learning exclusive of State Universities having the largest number of graduate students doing systematic original work; the Presidents of the ten State Universities having the largest number of graduate students engaged in like manner; the Presidents of the ten other institutions, in as many States, not otherwise represented, having the largest number of students in the senior class

of the academic departments, and six other citizens, who, with their successors, shall be appointed by the President of the United States, by and with the advice and consent of the Senate.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary, £150 per annum, with allowance of £30 per annum for cab hire and furnished rooms, etc. Applications to the Secretary by April 23rd.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund Street.—House-Surgeon. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to the Secretary.

BIRMINGHAM: QUEEN'S HOSPITAL.—Assistant Ophthalmic Surgeon. Honorarium, £50 per annum. Applications to the Secretary by April 18th.

CAMBERWELL: PARISH OF ST. GILES.—Assistant Medical Officer for the Workhouse, Gordon Road; between 24 and 35 years of age. Salary, £120 per annum, with furnished apartments and allowance. Applications, on forms provided, to be sent to the Clerk to the Guardians, 29, Peckham Road, S.E.

CORWEN UNION.—Medical Officer and Public Vaccinator for the Western District. Salary £20 per annum, with fees. Knowledge of Welsh necessary. Applications to the Clerk, Union Offices, Corwen, by April 26th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £100 a year, with board and residence. Applications to the Medical Superintendent.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator at the Hospital. Honorarium, £50 per annum. Applications to the Dean by April 23rd.

DOWN (COUNTY) DISTRICT ASYLUM, Downpatrick.—Assistant Medical Officer, not exceeding 32 years of age, unmarried. Salary, £100 per annum, with furnished apartments, board, washing, and attendance. Applications to the Resident Medical Superintendent by April 14th.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to Surgeon, unmarried. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. Tate by April 19th.

DUNDEE COMBINATION: EAST POORHOUSE AND HOSPITAL.—Resident Medical Office. Salary, £80 per annum, with board and furnished apartments. Applications to the Clerk of the Council, Parish Council Chambers, Dundee, by April 23rd.

EDINBURGH UNIVERSITY.—Professor of Medicine. Applications to the Secretary, 66, Frederick Street, Edinburgh, by April 14th.

EVELINA HOSPITAL FOR CHILDREN, Southwark, S.E.—Clinical Assistant in the Out-Patient Department. Applications to the Honorary Secretary, Medical Committee.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—(1) Assistant House-Surgeon. Salary, £40 per annum, with board, lodging, and washing. (2) Junior Assistant House-Surgeon. Appointment for six months, but eligible for one of the senior posts should a vacancy occur. No salary, but board, lodging, and washing provided. Applications to the House-Surgeon.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, lodging, and washing. Applications to Mr. R. F. E. Ferrier, Hon. Secretary, 33, Hall Plain, Great Yarmouth, by April 25th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications to the Hon. Secretary.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon, unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by April 11th.

HEREFORD GENERAL INFIRMARY.—Junior House-Surgeon, unmarried. Appointment for six months, but eligible for re-election as Senior. Salary, £17 10s. and £40 respectively, with furnished rooms, board, etc. Applications to the Secretary, 37, Bridge Street, Hereford, by April 11th.

INFIRMARY FOR CONSUMPTION, Margaret Street, W.—Pathologist. No salary. Applications to the Secretary by April 23rd.

ITALIAN HOSPITAL, Queen Square, W.C.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Secretary by April 18th.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon: unmarried. Salary, £140, increasing to £170 per annum, with rooms and attendance. Applications to the Secretary before April 23rd.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, apartments, and washing. Application to the Secretary, 24, Friar Lane, Leicester, by April 21st.

LEEDS: GENERAL INFIRMARY.—Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. Applications to Mr. Moynihan, Secretary to the Faculty, by April 23rd.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum. Applications to the Secretary of the Faculty.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Honorarium, £10, with board, residence, and washing. Applications to the Secretary by April 14th.

LONDON COUNTY ASYLUM, Horton.—Medical Superintendent, not over 40 years of age. Salary, £1,000 per annum, with unfurnished house, etc. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 66, Waterloo Place, London, S.W., by May 1st.

MORPETH DISPENSARY.—House-Surgeon, unmarried. Salary, £100 per annum, with furnished rooms, coals, gas, and attendance. Applications to Mr. N. I. Wright, Beechfield, Morpeth, by April 20th.

NORTH RIDING COUNTY ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried, age not exceeding 35. Salary, £150, rising to £200 per annum, with board, apartments, etc. Applications to the Medical Superintendent by April 20th.

NORTHAMPTON GENERAL INFIRMARY.—Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Board, washing, and residence provided, and honorarium at the rate of £50 per annum. Applications to Dr. M. F. Squire at the Infirmary, 285, Harrow Road, W., by April 23rd.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary, at the rate of £50 per annum, with board and residence. Applications to the Hon. Secretary by April 14th.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, washing, etc. Applications to the Secretary by April 21st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. (2) House Physician. (3) House-Surgeon. (4) Casualty House-Surgeon. Appointments for six months, no salary, but board, etc., provided for the three latter. Applications to the Secretary by April 23rd.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Assistant Physician; must be F. or M.R.C.P.Lond. Applications to the Secretary by April 23rd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with furnished apartments, board, and washing. Applications to the Secretary by April 17th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, King Street, Regent Street, W.—Honorary Physician. Applications to the Committee by April 19th.

ST. SAVIOUR'S UNION.—Second Assistant Medical Officer at the Infirmary, East Dulwich Grove, S.E. Salary, £100 per annum, with residential allowances. Applications, marked "Applications for Second Assistant Medical Officer," to be sent to the Clerk, Union Offices, John Street West, Blackfriars Road, S.E., by April 19th.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer; unmarried. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch.

SEAMEN'S HOSPITAL SOCIETY.—House-Physician for the Dreadnought Hospital. Salary, £75 per annum, with board and residence. Applications to the Secretary by April 11th.

SHREWSBURY: COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary, £130 per annum, rising to £150, with board, lodging, and washing. Applications to the Medical Superintendent by April 11th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary, at the rate of £40 per annum, with board and washing. Applications to the Secretary.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY, Stoke Newington, N.—Assistant Resident Medical Officer. Salary, £100 per annum, with board and residence. Applications to Resident Medical Officer.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to the Secretary by April 17th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100, with board and residence. Applications to the Chairman of the Medical Board by April 28th.

SWANSEA GENERAL AND EAR HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, apartments, etc. Applications to the General Secretary by April 9th.

UWCHALED RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £30 per annum. Applications to the Clerk of the Council, Union Offices, Corwen, by April 26th.

WAKEFIELD: WEST RIDING ASYLUM.—Locum Tenens. Salary, £3 3s. per week. Applications to the Medical Director at the Asylum.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications to the Honorary Secretary by April 17th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by April 19th.

WORKSOP VICTORIA HOSPITAL.—Honorary Surgeons. Applications to Mr. C. A. Whall, Worksop, by April 20th.

YORK COUNTY HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, residence, and washing. Applications to the Secretary by April 11th.

MEDICAL APPOINTMENTS.

ALLEN, Dexter, M.B.Lond., appointed House-Surgeon to the Oxford Eye Hospital.

BONE, B. M., M.B., C.M.Edin., reappointed Medical Officer of Health to the Towyn District Council.

BALDWIN, Aslett, F.R.C.S.Eng., appointed Acting Assistant Surgeon to the West London Hospital.

EVANS, T., M.R.C.S.Eng., appointed Senior Assistant Medical Officer of the St. Pancras Workhouse.

GANE, E. P. S., M.R.C.S., L.R.C.P., appointed Honorary Visiting Physician to the Christchurch Hospital, New Zealand.

MILLIGAN, W. Anstruther, M.A., M.B., C.M.Aberd., F.R.C.S.Edin., appointed Assistant Anæsthetist to the Great Northern Central Hospital, Holloway Road, N.

RANSOME, A. S., M.B., B.C., D.P.H.Cantab., reappointed Medical Officer of Health to the Southgate Urban District Council.

WATSON, G. Trustram, M.A., M.B.Cantab., F.R.C.S.Eng., appointed Surgeon to the Hastings Branch of the Surgical Aid Society.

MACKAY, Henry John, M.D.Edin., appointed Certifying Factory Surgeon for the Borough and Rural District of Devizes.

WYCHE, E. M., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Civil Parishes of Haddenham, Wilburton, Stretham, Grunty Fen, Wentworth, Sutton, Mepal, and Witcham.

WATSON, A. E., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Borough of Torquay, the Urban District of Cockington and St. Mary Church, and the Civil Parish of Stoke-in-Teignmouth.

LUKE, Thomas D., M.B., Ch.B.Irel., appointed Anæsthetist to the Dental Hospital, Edinburgh.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Clinical Cases. Mr. Muirhead Little: Late Rickets (with Skiagraphs). Dr. T. D. Savill: Macular Leprosy under Treatment by Chaulmoogra Oil. Dr. A. Eddowes: General Ichthyosis. Dr. H. A. Caley: Abdominal Aneurysm. Dr. L. Guthrie: Myotonia Congenita (Thomsen's Disease?).

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. Galloway: Consultation. (Skin). 5-7 P.M.—Dr. Dundas Grant: Class. Practical Otology. Dem. XI.

TUESDAY.

Society for the Study of Inebriety, 11, Chandos Street, Cavendish Square, W., 4 P.M.—Annual Meeting. Dr. Milne Bramwell: On Dipsomania and its Treatment by Suggestion.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. Theo. Williams: Consultation. (Medical.)

WEDNESDAY.

Hunterian Society, London Institution, 8.30 P.M.—Cases will be shown.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Dr. W. Miller Ord: Clinical Lecture. The Clinical Character of Arthritis.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

MCCREERY.—On January 16th, 1900, at Phœnix Camp, Phœnix, Mauritius, the wife of Major B. T. McCreery, R.A.M.Corps, of a son.

ROGERS-TILLSTONE.—On March 30th, at 7, Welbury Avenue, Hove, Sussex, the wife of Hermann Rogers-Tillstone, M.D., of a son.

DEATH.

RICHARDS.—On March 17th, at "Fronolen," Barmouth, John Richards, M.B., C.M.Edin., aged 35.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, I.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p. M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.0; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

H. S. desires to hear of a home or institution willing to take charge of an elderly lady without means, with hypochondriacal tendencies and with goitre of many years' standing. She is in good health and condition. Friends would pay a moderate sum.

WORKS ON HYGIENE.

B. G. asks for a good book on hygiene, suitable for the use of a lecturer under the Local Government Board.

*** A good textbook would be Dr. Louis Parkes's *Hygiene and Public Health*, Lewis's Practical Series, 5th edition (London: H. K. Lewis, 1897, 10s. 6d.). *A Treatise on Hygiene and Public Health*, by Stevenson and Murphy (J. and A. Churchill, £4) should be used for reference by the lecturer.

ASYLUM FOR ADULT IDIOT.

H. S. writes: I have been asked to find a suitable asylum for a hopeless idiot aged about 30. He is troublesome, dirty, requires feeding, and will wear little clothing. He has also congenital absence of the eyeballs. The vicar of the parish offers a substantial donation to an institution which will take him, but no other maintenance is forthcoming.

*** The only refuge for the pitiable case described is the workhouse or the county lunatic asylum. No existing idiot institution would receive him.

WEIR-MITCHELL TREATMENT.

G. E. S. desires to hear of a reliable institution or home where a female patient in poor circumstances could be treated by the Weir-Mitchell method.

*** We are not aware that there are any special institutions for the Weir-Mitchell treatment in England or Scotland. It could, however, be carried out in any nursing home.

MEDICAL EXAMINATION IN LIFE ASSURANCE.

A. asks for the titles of standard works on the medical examination for life assurance, in addition to Pollock's and de Havilland Hall's, which he finds very good, but not sufficiently detailed on some points.

*** The following works may be mentioned: *The Medical Adviser in Life Assurance*, by Sir E. H. Sieveking. Second Edition. (London: J. and A. Churchill. 1882. 6s.) *The Life Insurance Examiner*, by C. F. Stillman. (New York and Chicago: The Spectator Co. 1888. 15s.) The latter is probably the most complete work on the subject. Our correspondent might consult the proceedings of the Section of Medicine in Relation to Life Assurance at the annual meeting of the British Medical Association in Edinburgh published in the BRITISH MEDICAL JOURNAL, 1898, vol. ii, p. 757.

FEES PAID TO FRIENDLY SOCIETY DOCTORS.

GLASGOW asks for information as to the usual fees paid by Rechabite societies to the lodge surgeons, and as to the duties of the surgeon.

*** The Rechabite societies, as a rule, pay very small fees to their surgeons, 7s. a member per annum being about the highest rate. The duties are the same usually as those of the surgeons of other friendly societies, but may be modified by special contracts.

ANSWERS.

THE HYPERMETROPIA OF INFANCY.

PRACTITIONER.—Children at birth are almost invariably hypermetropic, as a rule to the extent of about 3 dioptres, though many children have a much higher degree. During the first few years of life in many cases this disappears, and, should the eye continue to grow too fast, myopia will be the result. It is utterly impossible to state what is the average amount of hypermetropia present at each year of infancy and childhood; statistics as to this would be valueless, and almost impossible to obtain. No recent work has, as far as we know, been done on this subject, but an account of the circumstance can be found in Norris and Oliver's *System of Diseases of the Eye*, vol. iv, p. 421, and in other textbooks.

TREATMENT OF ENURESIS IN THE ADULT.

M.B.LOND. writes in reply to "L.R.C.P.":—Enuresis is a symptom, not a disease, and is almost always in my experience invariably the result of excess of uric acid, either free or in combination. In every instance the urine is too acid or of high specific gravity due to urates. Potash, lithia, and magnesia, either separately, or better still given together, and very plentifully diluted give a very prompt result, but of course the treatment should be discontinued by about 6 P.M. Enuresis originating in adolescence and mature age has many times come under my notice, and as in that of childhood is not a "weakness," but the direct result of the presence in the bladder of irritating urine. Medicines which, like iron, ergot, belladonna, nux vomica, and all such as increase arterial tension and therefore the amount of filtration through the glomeruli, may at times afford improvement in those patients who take abundant fluid, but are eminently calculated to aggravate the condition in those whose ingestion of fluid is small. Such drugs certainly do not go to the root of the matter.

DR. GEORGE DALTON (Strand, W.C.) writes: "L.R.C.P." will find that local treatment is more effective than medicinal in obstinate cases. If he will irrigate the bladder and prostatic urethra by passing in a gum elastic or metal irrigating tube, the openings of which should be just outside the bladder in the posterior urethra, attaching the irrigator to a siphon can, and allow a quart of warm solution such as antipyrin gr. x to the ounce, or ichthyol (2 per cent. solution) to flow partly into the bladder (which should be well distended with the fluid) and partly to well wash out the prostatic urethra, the washings to be performed

once daily until improvement results. Urotropin, gr. 7, three times daily in a wineglass of soda water, may be tried with cold water rectal injections daily in conjunction with the irrigation.

NOTES, LETTERS, Etc.

MR. EDWARD EAST, who continues to receive clothing for the beneficiaries of the British Medical Benevolent Fund, asks us to state that his address is changed to 26, Linden Gardens, W.

EMPLOYMENT OF UNQUALIFIED ASSISTANTS.

SOUTH WEST writes: The remarks of "Fair Play" on this subject are very much to the point. I know of one instance in this district where there has been regular visiting and prescribing by an unqualified man ever since the explicit declaration of the General Medical Council. At the same time it seems hardly fair to expect medical men to act as policemen towards their professional brethren. It is very desirable that it should be known that the Council's regulations have by no means put a stop to the practice. The columns of the BRITISH MEDICAL JOURNAL have recently had advertisements which seemed to imply the contemplated employment of unqualified men.

*** We think our correspondent must be mistaken in saying that advertisements for unqualified assistants have appeared in this JOURNAL recently. All advertisements are carefully examined, and any that have an appearance of asking for unqualified assistants are refused or required to be altered to be in accord with the regulations of the General Medical Council.

MEDICAL GOLF TOURNAMENT, 1900.

By kind permission of the Wembley Golf Club, the annual tournament will this year be held at Wembley on Thursday, May 10th. Play will be under medal play regulations. The following arrangements have been made by the Committee: Competitors to form two classes—Seniors (handicaps of 12 and under) and Juniors (over 12 handicaps); Wembley members 2 less than in handicap. One round of 18 holes to be played. First, second, and prize for best last 9 holes to be given in each class. Competitors may play over the links before their medal round, which must by started by 3 P.M. Entrance fee 5s., to be sent with entry, stating lowest handicap, on or before May 7th, to the Honorary Secretary, Mr. Rolf Creasy, Windlesham, Surrey. Foursomes will be arranged in the afternoon, Consultants *v.* Practitioners. Gentlemen wishing to play should notify the Honorary Secretary, with entry.

LIFE INSURANCE AND ALBUMINURIA.

DR. KNOWSLEY SIBLEY (Duke Street Mansions, W.) writes: In the BRITISH MEDICAL JOURNAL of March 31st it is said: "We do not know of any assurance company which would accept the life of a lady, aged 48, with albuminuria of some years' standing." This is hardly correct at the present time, for the New York Life Insurance Company (Trafalgar Square, W.C.) have recently introduced an adjustable accumulation plan on which they will accept substandard cases or those of ordinary chronic diseases on certain terms. This Company hopes before long to be able to make a life insurance offer to individuals afflicted with almost every disease.

ADVERTISEMENTS BY MEDICAL AID SOCIETIES.

THE practice of advertising sometimes leads to strange collocations. In a recent issue of the *Surrey Comet*, under the head of "Hampton Hill," we find first of all an advertisement of some old-established undertakers and next the following advertisement headed "Hampton Hill and District Medical Aid Society. Medical Officer, A. D. Howard, Esq., M.D. Persons residing within three miles of Hampton Hill Post Office are eligible for election. Subscription 1s. 3d. per quarter. Chas. Hallt, Windmill Road, Hampton Hill, Hon. Sec. [Advt.]" The advertisement is also an illustration of the methods pursued by medical aid societies, methods which are entirely contrary to the well-established customs of the medical profession.

THE RISKS OF MEDICAL PRACTICE.

DR. J. R. BUCHANAN (Glasgow) writes: The following incident that occurred in my practice several years ago was embarrassing, and might have been disastrous: I was called to see a child in a family which I had attended for years. As soon as I entered the house the patient's mother said to me, abruptly, "Doctor, why did you put your arm round my neck the last time you were here?" I was astounded, but was able, after a moment's hesitation, to say that I had "not done any such thing; it was impossible I could have done so." As she persisted in her statement, I explained that as I had to examine her chest on my last visit it was possible that I had placed the tips of my fingers on her shoulder, but I had no recollection of the circumstance. Nothing more was said; and I have attended the family ever since. This woman's family was "queer." A brother had been in an asylum, and at the time referred to her sister lay in bed for weeks together, with nothing whatever the matter with her. But this was the first time I had observed any mental aberration in my patient. Had she been erotic as well as neurotic the result might have been very serious. When charges of this kind are made public a previously unblemished character seems valueless, and a simple denial does not count for much in the opinion of censorious people. As a plain fact, a doctor's reputation is at the mercy of every hysterical woman.

HYSTERICAL APHONIA IN A YOUNG MAN.

DR. ROBERT JARDINE (Glasgow) writes: About 9 P.M. on New Year's Eve I was asked to see a man who had suddenly lost the power of speech. I found a strong, apparently healthy, young fellow of 21, who could not articulate a single word. He had not been drinking. He and his friends were in a terrible state of panic. The history was that about two months previously his wife had given birth to "a dog-faced monster." From the description it had evidently been an anencephalic fœtus. He had been kept in the dark regarding the matter, but quite recently he had been annoyed by vague rumours. On the evening of December 29th he had separated from his wife after a violent quarrel. On the evening of December 31st, about 6 P.M., he insisted on having the truth told him. He was so much enraged when he heard of the "dog-faced monster" that he began to curse his wife. In the midst of his cursing he stopped speaking, and on his friends anxiously inquiring what was wrong he wrote on a piece of paper "I cannot speak." They were all firmly convinced that God had struck him dumb. I explained to them that he had not had "a stroke," and that he would recover his speech. Not being a theologian I confined myself to the medical aspect of the question, and gave him a large dose of bromide. The result was satisfactory, as he began to speak about two hours later. I got no history pointing to former hysterical tendencies.

SUBNORMAL TEMPERATURE.

R. S. writes: Like your correspondent, "W. F. B." I discovered long ago that my temperature in the axilla was generally below 97°, and that if above 98° there is some other symptom of fever. It is usually lowest at 11 P.M., especially when fatigued, and highest at 4 or 5 P.M. It has been 95.1° when on low diet. Janssen (EPITOME of the BRITISH MEDICAL JOURNAL, December 15th, 1894, par. 473) enumerates the diseases in which temperatures are low, and says that 33° C. (91.4° F.) is by no means rare. Dr. Charles (BRITISH MEDICAL JOURNAL, August 12th, 1899, page 396), quotes Pembrey and Nicol to prove that the temperature of the urine is higher than that of the mouth, and that of the rectum nearly 1° F. higher than the latter. Dr. Phillips (BRITISH MEDICAL JOURNAL, October 28th, 1899, page 1184) finds the temperature in the axilla from 97° to 98.4° in health, and that the latter is a maximum figure under ordinary circumstances. There are many objections to taking the temperature in the axilla, particularly in thin people, and the mouth is still worse. The rectum can seldom be used in private practice; but gives the best results. Perhaps a stream of urine directed on to the bulb of a thermometer might be used more than it is.

LETTERS COMMUNICATIONS, ETC., have been received from

A A. G. .; C. J. H. Aitken, M.B., Bedford; Alpha; A. G.; Dr. L. Attlill, Monkstown: Assurance; Mr. M. A. Alabone, London. **B** Benedick; T. Bond, M.B., London; Mr. F. C. Bryan, London; Dr. A. Bronner, Bradford; Dr. J. B. Brierley, Manchester. **C** Mr. A. Cooper, London; Chiropodist; Dr. J. M. Clarke, Clifton; Mr. A. H. Cheatle, London; Hon. Stephen Coleridge, London; Mr. G. Christy, London. **D** Mr. A. A. Dighton, Cheltenham; Durham County Practitioner; Mr. T. D. Dutton, London; T. A. Dukes, M.B., Croydon; Dr. H. Drinkwater, Wrexham. **E** Dr. W. Ewart, London; Enquirer; Mr. E. Easton, London. **F** Mr. W. T. Freeman, Reading; F. E. W. **G** Glasgow; Mr. J. Gutch, Cambridge; C. H. Golding-Bird, M.B., London; Gray's; Mr. J. E. Godson, Droysden; E. W. H. Groves, M.B., Bristol. **H** Mr. R. G. Hebb, London; Mr. R. M. Hugo, Purley; H. M. R.; Dr. T. W. Hime, Bradford; J. C. Hall, M.B., Monaghan; Hospital. **I** Inquirer. **J** J. E. G.; Dr. H. L. Jones, London. **K** Messrs. Kühner, Henderson, and Co., London; Mr. J. Keen, Waddesdon. **L** Mr. C. S. Loch, London; Sir F. H. Lovell, Trinidad; W. H. Lewis, M.B., Llansantffraid; C. T. N. Longridge, M.B., London; Mr. M. Lomax, Leamington Spa. **M** Dr. A. W. Mackintosh, Aberdeen; M.R.C.S., L.R.C.P.; M.B.Lond.; Mr. S. Malone, London; Mr. E. D. Marriott, Nottingham; Mr. R. Maples, Newbury; W. McAlister, M.B., Kilmarnock; Member; Medical Officer of Health; Mr. J. Moir, London; Mr. E. R. Morgan, Morriston; Dr. D. MacKinder, Hove. **N** Mr. J. Neal, Birmingham; Neurotic. **O** Observer. **P** Dr. C. H. Phillips, Hanley; Mr. J. Poland, London; Practitioner; P. M. Dr. W. H. Peake, Mardeh; Paterfamilias; Mr. T. Prescott, London. **R** Dr. R. R. Rentoul, Liverpool; J. D. Robson, M.B., Maxwelltown. **S** H. Stanley, M.B., Ashford; Dr. F. N. G. Starr, Toronto; W.W. Sinclair, M.B., Ipswich; Sanitas Co., Manager of, London; Dr. H. Snow, London; South-West; Mr. R. Stewart, London; Mrs. Charters Symonds, London; Dr. H. Stedman, London; Mr. E. T. A. Smith, London; Dr. W. K. Sibley, London. **T** Mr. P. Turner, London; Mr. C. E. P. Tyler, London; Dr. J. A. Thompson, Sidney; Dr. E. B. Thomson, Plymouth; Dr. H. Tilley, London. **W** Mr. C. H. Whiteford, Plymouth; Dr. J. C. O. Will, Aberdeen; Dr. H. Woods, London; Mr. G. A. Wilson, London; A. Wauchope, M.B., Glasgow; Dr. H. W. Webber, Plymouth; Mr. T. Wilson, London; Dr. T. J. Wood, Bradford, etc.

BOOKS, ETC., RECEIVED.

L'Hypertrophie Sénile de la Prostate. Par Dr. A. Guépin. Paris: Vigot Frères. [illegible]

Practical Manual of Diseases of Women and Uterine Therapeutics. By H. Macnaughton-Jones, M.D., M.Ch. Eighth Edition. London: Baillière, Tindall, and Cox. 1900. 18s.

Ulcer of the Stomach and Duodenum and its Consequences. By S. Fenwick, M.D., F.R.C.P., and W. S. Fenwick, M.D., M.R.C.P. London: J. and A. Churchill. 1900. 10s. 6d.

Atlas d'Histologie Normale. Par Dr. E. Rabaud et F. Mouillard. Paris: G. Carré et C. Naud. 1900. F.2½.

A Surgical Operating Table for the Horse. By J. A. W. Dollar, M.R.C.V.S. Edinburgh: David Douglas. 1900. 2s. 6d.

Ueber Die Behandlung der Fettleibigkeit. Von Dr. R. von Noesslin. Munich: J. F. Lehmann. 1900. M.0.80.

The Student's Handbook of the Surgery. By A. E. Maylard, M.B., B.S. London: J. and A. Churchill. 1900. 8s. 6d.

*** In forwarding books the publishers are requested to state the selling price.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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A page	5 5 0

An average line contains six words.

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Post-Office Orders should be made payable to the British Medical Association at the General Post-Office, London. Small amounts may be paid in postage-stamps.

N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A LECTURE
ON
NON-DIABETIC GLYCOSURIA.

Delivered at the London Polyclinic on March 14th, 1900.

By ROBERT SAUNDBY, M.D., LL.D., F.R.C.P.,
Professor of Medicine, Mason University College; and Physician to the General Hospital, Birmingham.

Side by side with the all-important subject of diabetes it is necessary to study the occurrence of non-diabetic glycosuria, so that we may have as much knowledge as possible of the conditions under which it may be met with, and be prepared to give a satisfactory answer to the practical questions so frequently arising respecting the diagnostic and prognostic value of the presence of sugar in the urine.

Every practitioner who follows the commendable habit of making a routine examination of the urine of each new case must find from time to time sugar indicated by the ordinary copper test. The frequency with which this is encountered is very differently stated by different persons, but in my experience it is certainly not anything like so common as the presence of albuminuria. Some years ago when engaged in out-patient work I tested systematically the urine of each patient with Fehling's solution, with the result that the number of casual instances in which traces of sugar appeared to be present was so small and revealed so little of interest, that I gave it up. It is in my private chamber practice that I have seen most of these cases, but in looking over my books for the last fifteen years I have only managed to collect some sixty-nine examples of non-diabetic urine which reduced copper, and of these in eleven cases the reduction was not due to sugar. When it is remembered that I have for some years devoted special attention to urinary diseases, and have had many diabetics under my care, and that consequently I am liable to have sent to me people whose urine has shown indications of sugar, I do not think the number at all large.

Pseudo-Glycosuria.

The method of examination invariably used by me is to boil a few drops of urine with about a drachm of Fehling's solution previously ascertained to be not liable to spontaneous reduction. Any change from blue to green or still more a green or yellow precipitate indicates more or less complete reduction and calls for further investigation. It is well known that the reduction of copper is not by itself a certain proof of the presence of sugar, as there are many other reducing agents occasionally present which may give this reaction. Of these uric acid, creatin, and creatinin are normally present in the urine, but not in sufficient quantities to cause reduction unless the urine is concentrated. Besides these, reduction may be caused by such abnormal substances as glycuronic acid, chloroform, chloral, salicylic acid, etc., which when present cause a very well marked precipitate of suboxide of copper. Whenever we are confronted by the unexpected indication of the presence of sugar, we are therefore bound to attempt by some confirmatory test to settle definitely the question whether the reducing substance present is sugar or not. The most satisfactory proof of the presence of sugar undoubtedly is the production of carbonic acid gas by fermentation with yeast, but the fermentation of minute quantities of sugar is attended by fallacies, because yeast frequently contains traces of sugar sufficient to give a bubble of gas in the receiver.

No doubt this may be removed by carefully washing the yeast, but even then the process takes several hours, and it is often important to answer the question at once; another plan is the production of glucosazone crystals after the method of von Jaksch, but even this takes a good deal of time and requires careful manipulation. I have for some years used the method recommended by the late Sir William Roberts of filtering a few drachms of the urine repeatedly, that is, seven or eight times, through animal charcoal in a small filter. This can be very easily done, and only takes about ten minutes. The filtration removes all other reducing substances except sugar, while the reduction if due to sugar becomes even better marked than before. I have followed this plan for the last two or three years in all doubtful cases, and have every reason to express myself as satisfied with it.

Examples of this pseudo-glycosuria are not uncommon, and as a class it is by no means unimportant. For instance, wherever a presumably healthy person is undergoing examination for life insurance or for admission to the public service, it is right and proper to examine the urine for sugar; if reduction occurs its significance should be determined at once, and this can be done by the above-described method very readily.

Alimentary or Physiological Glycosuria.

It is well known that the urine in health contains minute traces of sugar, but not sufficient to reveal its presence by the ordinary method of testing. Apart from this small quantity it appears to be the rule that healthy persons utilise in the body all the sugar taken either as food or drink, but a number of recent experiments have shown that this only holds good when the quantity of sugar remains within certain limits which we may call normal. While the capacity for assimilating sugar is by no means fixed, it has been shown that in all persons it is possible to produce glycosuria by administering a sufficient dose of grape sugar, this dose varying in different individuals between 300 and 500 grams of syrup of grape sugar.

It has been suggested by some observers that those persons who manifest glycosuria after a relatively small dose of sugar may have a tendency to become diabetic, but hitherto there has been no sufficient evidence in favour of this proposition. It is, however, certain that some persons do become glycosuric after eating or drinking an unusual but nevertheless not very excessive quantity of sugar as is illustrated by the following example:

Case I.—A chartered accountant, married, aged 36, was sent to me to be examined for life insurance on October 12th, 1891. He weighed 9 st. 7 lbs., and measured 5 ft. 5 in. He was slightly developed, but fairly nourished, and his physical signs were normal. He said he had had influenza in the previous May, but could recollect no other illness. I found his urine loaded with sugar, but free from albumen. Three days later he sent me a specimen of twenty-four hours' urine, which amounted to 45 ounces. It was acid, clear, pale amber coloured, and did not reduce copper. On October 16th he passed urine in my presence which was quite free from sugar. He explained that before coming to see me on the first day he had taken a very sweet cup of coffee and had eaten a bath bun. On the evening after seeing me he went on to a neighbouring town, where he had relations, and where his urine was examined by a medical friend who confirmed my statement that it contained sugar.

Another case of transient glycosuria was also an applicant for life insurance, but there was no evidence that he had taken more than an usual quantity of sugar, and therefore I am not certain that it ought to be included under this head. The details are as follows:

Case II.—A gentleman, aged 53, was sent to me on December 15th, 1891, to be examined for life insurance. He believed himself to be in perfectly good health, except that he had a slight cold in his head. He had never had any serious illness or gout, nor was there any history of gout, rheumatism, or diabetes in his family. He weighed 10 st. 3 lbs., and presented no evidence of any disease except that his urine contained sugar in considerable quantities. The same evening his urine was examined by his own doctor, who confirmed the presence of sugar. I examined the urine again two days later, and found it free from sugar, but another specimen contained sugar. He was dieted, and on January 5th his urine was found to be free from sugar. He was allowed to eat potatoes, and on January 27th his urine was 1022, and contained no sugar, while his weight was 10 st. 4 lbs.

Another case, which is much more remarkable than the last, came under my notice as an applicant for life insurance, but I am quite unable to know how to classify it unless we assume it to be one in which alimentary glycosuria is habitual.

Case III.—A. M., aged 32, metal roller, was sent to me on January 6th, 1887, to be examined for life insurance. He was a stoutly-built man, weighing 12 st., and measuring 5 ft. 6 in. He considered himself to be in perfectly good health, and presented no indication of any disease except that his urine was loaded with sugar, and of specific gravity 1029. On July 18th he was re-examined; the specific gravity of his urine was

1026, and it was still loaded with sugar. The presence of sugar was proved by fermentation. On May 23rd, 1888, he weighed 12 st.; his urine was: specific gravity 1023, and contained sugar. On February 16th, 1895, he weighed 12 st. 9 lbs.; his urine still contained sugar, but he considered himself to be in perfectly good health. I have recently made inquiries of his family medical attendant, and hear that he is in good health, but I have not been able to examine another specimen of water.

If this glycosuria is to be regarded as pathological, it is strange that it should have lasted so long without having produced any obvious effect upon the patient's health. It differs from all my other cases of non-diabetic glycosuria by its constancy as well as by its duration. The quantity of sugar was always sufficient to cause a marked reduction, but I have only one note of the actual amount, which was on February 16th, 1895, when it was 1.2 per cent. As will be seen later on, I attribute many cases of glycosuria to alcoholism; but although A. M. was not above suspicion there was no evidence that he was intemperate, and certainly when I first knew him he was a picture of manly strength. I suspect he does not care to be reminded that there is anything wrong with him, and so long as he keeps well prefers to have nothing to do with doctors, as he has taken no notice of my recent invitation to him to call upon me again.

I have notes of two other life insurance cases where the subjects believed themselves to be in perfectly good health, and presented no other evidences of disease except the presence of glycosuria.

CASE IV.—A gentleman, aged 29, consulted me on May 6th, 1889, because he had been declined by the Royal Insurance Company. He considered himself to be in perfectly good health, and could remember no illness since he had typhoid fever as a boy at school. He had never met with any accident, nor was there any tendency to consumption or diabetes in his family. His father, who was living, was 73 years of age, and suffered from gout. Mr. L. weighed 9 st. 6 lbs., and measured 5 ft. 8½ in., his chest measurement being 35½ inches. He was a total abstainer; his physical signs were normal; the urine amber, clear, 1028, no albumen or sugar. He sent me a specimen of his urine two days later, which contained sugar; the quantity for twenty-four hours measured 40 ozs. It was pale, clear, acid, 1022, and contained sugar, but no albumen. In the following October, after he had been taking modified diet for some months, his urine still contained a trace of sugar, but there had been no polyuria or thirst.

I have not been able to learn the subsequent history of the case.

CASE V.—A gentleman, aged 43, was examined by me early in June, 1887, for life insurance, and was rejected on the ground that he had sugar in his urine. He weighed 13 st. 9 lbs., and measured 5 ft. 7¼ inches. He was in the habit of drinking about three glasses of beer daily. His physical signs were normal; urine 45 to 60 ozs., specific gravity 1028, acid, amber, a little sugar, a haze of albumen. He came back to see me on November 11th, when he had gained 3 lbs. in weight, and was passing 45 to 50 ounces of urine daily, which contained a faint trace of sugar. During the interval he had made no alteration in his diet.

I unfortunately omitted to keep the addresses of either of these patients, and so have been unable to communicate with them. It is quite possible that they ultimately became diabetic, and my only reason for putting them in this group is that they believed themselves to be in good health, and presented no symptoms or signs apart from the state of the urine to suggest that there was anything the matter with them.

PATHOLOGICAL GLYCOSURIA.

In all my other cases the patients have been ill. They had sought medical advice, and the sugar was found in the course of a medical examination made for diagnostic purposes. I have tried to classify these cases so as to reduce them to some sort of order. By far the largest number—22—come under the head of the alimentary system, and these again may be subdivided according to their most obvious phenomena, as chronic gastritis 9, alcoholism 7, chronic hepatitis 5, and biliary colic 1. The next most numerous group is the diathetic, which includes 8 cases; gout 3, muscular rheumatism 3, uric acid calculus 1, oxalate calculus 1. The nervous system claims 7, of which 2 followed cerebral hæmorrhage, and 5 were associated with neurasthenia. Infective processes were responsible for 8 cases, after influenza 2, boils and carbuncles 3, abscess 2, ulcers (?) 1.[1] Falls and injuries account for 2, senile decay 2, cancer of rectum 1, and lactation 1. The last case illustrates how very necessary it is that attention should be drawn to the occurrence of non-diabetic glycosuria in order to avoid very serious mistakes.

CASE VI.—A married woman, aged 29, was sent to me on October 23rd, 1896, by her own doctor as a case of diabetes mellitus. She had been ailing since her baby was born, and had become weak and easily tired. There was no definite history of loss of weight, and although she said she passed water frequently, it had not been measured, and she had never suffered from thirst. When the urine was collected, it was found to measure only 50 ounces in the twenty-four hours. It was pale, yellow, acid, specific gravity 1022, and quite free from sugar. In response to my inquiry, her husband writes under the date February 20th of this year to say that there has been no return of the symptoms.

The case was unfortunate, as the medical attendant had committed himself to a serious prognosis and had insisted upon the necessity for the adoption of a strict diabetic diet. He wrote me some letters, which I hope did something to relieve the annoyance he no doubt felt.

Many of the groups which I have enumerated are very well known; therefore I do not propose to take up your time by attempting to illustrate all of them, so that I may be able to devote more time to those which are less familiar.

ALCOHOLIC GLYCOSURIA.

I desire especially to draw attention to alcoholism as a cause of glycosuria. This may be intermittent or constant, and perhaps in this respect it depends upon the intermittence or constancy of the cause. The following case is very well marked, and shows that when the cause is removed the effect ceases:

CASE VII.—A manager of a public house, aged 36, consulted me in March, 1896, for morning sickness and loss of appetite. He admitted taking alcohol in considerable quantities, and said that he had been ill for two or three years, but had been much worse lately. He had recently lost 19 lbs. in weight, and his present weight was 11 st. 9 lbs. He was in a very shaky condition, and appeared to be very near delirium tremens. His urine was turbid, acid, specific gravity 1028, loaded with sugar, but free from albumen. He was advised to become a total abstainer, and his gastritis was treated by the usual remedies. He returned a week later and reported himself as being very much better, but a little sugar still remained. On March 31st his urine was free from sugar, specific gravity 1014; he had gained 5 lbs. in weight, and said that he felt "a wonderful lot better."

Besides the cases in which an alcoholic history was forthcoming were 5 cases in which the liver was much enlarged and which had been grouped under the title of chronic hepatitis. One of the cases of chronic hepatitis was malarial, but the other 4 were people who had always lived in this country and whose cases presented nothing to throw any light upon the processes which had caused enlargement of the liver. Undoubtedly the abuse of alcohol is in this country the most common cause of such enlargement, and it would not be unfair to suspect that some at least of these cases should by rights be included amongst the alcoholic group.

The same remarks apply to at least a certain number of the cases which are classified under the heading of gastritis, so that I do not think there can be any doubt that we may attribute to alcohol by far the largest share in the production of these cases of glycosuria. In one of the cases which I have classed under alcoholism it is probable there was cirrhosis of the liver, as the liver dulness was absent. In another case the patient had been known to me for some years, and I had often warned him to give up taking spirits, but he was an uneducated man who had been successful in business, and was totally destitute of any taste or capacity for employing his leisure time except by smoking or drinking or playing billiards. He was 60 years of age, and the sugar was found in 1896 when he was undergoing an examination preparatory to increasing his life insurance. The reduction was quite slight,

but the urine fermented and formed glucosazone crystals. I saw his death in the papers a few months ago.

Of the other cases two were sufferers from habitual intemperance, in both of whom the amount of sugar was quite small. Another had been intemperate and still takes a free allowance of alcohol. In this last case the liver is enlarged and the amount of sugar considerable. It is nearly two years ago since I first saw this case and the sugar still persists. He has recently promised to abstain completely, and I hope when I publish these notes to be able to record the result. As this case is of some interest I subjoin an extract.

Case viii.—A gentleman. aged 40, consulted me on the 5th of April, 1898, on account of having accidentally discovered in the previous January that his urine contained sugar. He weighed 14 st. 12 lbs., and had never been heavier. He did not complain of polyuria or thirst, and on physical examination his liver was found to come down half way to the level of the umbilicus. He said that at one time he had taken alcohol in excess and still took a fair amount. His urine was sp. gr. 1026, no albumen, sugar 1.6 per cent. When seen again on March 1st of this year he weighed 14 st. 8 lbs., and said he had no polyuria or thirst and he considered himself in good health. His liver was about the same size and his tongue was clean. He was in the habit of taking one or two glasses of whisky and the same quantity of beer daily. He took no sugar, and very little potatoes but made no restriction in the quantity of bread eaten. His urine was sp. gr. 1024, no albumen, sugar 2.5 per cent. He promised to abstain from all alcohol, but was required to make no other alteration in his diet.

Since I have been engaged in preparing this lecture I have had two fresh examples of alcoholic glycosuria brought under my notice.

Case ix.—One of these was a mining engineer, aged 39, who had forfeited his position and driven his wife away from him by his intemperate habits. He came to see me at the hospital on account of depression and suicidal impulses. I thought this was just such a case as I should expect to present glycosuria. He said there had been neither thirst nor polyuria nor loss of weight. The urine when examined proved to reduce Fehling abundantly and continued to do so after careful filtering through animal charcoal; I have admitted the case into hospital in order to have him under observation, with the result that the sugar has completely disappeared, and he has lost all his disagreeable feelings. The urine passed on admission formed glucosazone crystals and by Fehling's method contained 0 6 per cent. of sugar.

The other case is one on which there might be some difference of opinion, as it was sent to me by a medical practitioner as a case of diabetes.

Case x.—The patient was a commercial traveller, aged 57, who said that he was feeling very well, but that his doctor desired him to see me, as since August last he had been suffering from glycosuria. When he first came under medical observation he was suffering from irregular action of the heart and great mental depression. His urine then measured 70 ounces, and contained 4 per cent. of sugar and one-eighth of a column of albumen. When I saw him his pulse intermitted every third or fourth beat, and was going at the rate of about 60 a minute. His urine was about 60 ounces daily, specific gravity 1012, sugar 1.5 per cent., albumen a dense cloud. There was no thirst. His heart was enlarged, the area of dulness extending at least an inch to the left of the vertical nipple line. There was no murmur. He weighed 13 st., but said that formerly he had been as much as 14 st. 7 lbs.

I am anxious that this patient should try the effect of total abstinence, and he has promised to do so.

The form of alcohol which was taken in these cases has been, I believe, invariably whisky, but in talking over this subject with my friend Mr. Barling he related to me a very good case in point which had come under his own notice where the patient drank beer.

Hepatic Glycosuria.

Although some of my cases of alcoholic glycosuria have had evidence of chronic hepatitis (cirrhosis) and some of the cases classified as hepatic glycosuria may, as already suggested, really be alcoholic there were others which seemed to me to be above suspicion, of which the following is an example:

Case xi.—This was a solicitor, aged 49, a bachelor, an exceedingly fidgety little man, who consulted me on November 19th, 1895, complaining of flatulence and of being easily tired. He attributed his illness to a fall from his horse in May, 1894, but dated the commencement of his symptoms from the autumn of that year. In January, 1895, sugar was discovered in his urine, for which he was put upon diabetic diet, but as he suffered greatly from giddiness he went to consult Dr. Buzzard. Dr. Buzzard regarded him as a case of tabes with symptomatic glycosuria, and in favour of this diagnosis were the following facts: He was not quite steady in Romberg's position; the knee-jerks were gone, and there were some neuralgic pains in his legs. The pupil reflex was normal. He complained of morning sickness, and I found that his liver extended downwards to the level of a line drawn about an inch above his umbilicus. The specific gravity of his urine was 1030, acid, contained a moderate quantity of sugar but no albumen. He was intimately known to a medical friend, who sent him to me, and neither his appearance nor his manner, nor what I could judge of his character suggested the smallest suspicion of intemperance. On strict diet the sugar nearly disappeared and he improved much, but his indigestion returned. When I saw him two years later he had gained 5 lbs., his urine reduced copper very slightly, but he was complaining of indigestion.

In answer to my inquiries I learnt that his urine is now at the present time quite free from sugar, and he still suffers from indigestion and from neuralgic pains in the legs, but the tabetic symptoms have made no progress. I must confess that I never had a suspicion that alcohol played any part in the causation of this case until I was preparing this lecture. But on reading over my notes I was puzzled what to answer when I asked myself what grounds I had for exonerating this patient from the suspicion which undoubtedly extends to all patients suffering from glycosuria, gastritis, and enlarged liver.

I felt I had no answer except my own impression, so I determined to write to an intimate friend of the patient, who is also a medical practitioner. To my surprise he replied: "I am inclined to think your surmise as to ——— is correct. I do not mean to suggest for one moment that he ever takes too much, but he lives a somewhat solitary life, and dwells upon his ailments, and I fancy often takes little nips."

On the other hand, here is a case of which I had great doubts:

Case xii.—A manufacturer, aged 40, was sent to me in November, 1894, to be examined for life insurance, and was rejected on account of the presence of albumen and sugar in his urine. On December 6th following he consulted me about his health. He was a pale flabby man, measuring 5 ft. 10 in., weighing 12 st. 10 lbs., who said he often suffered from "bilious attacks." He had never had any serious illness. There was some catarrhal sounds over the lungs, and the heart's apex was in the vertical nipple line, but I could find nothing else the matter with him, and on that occasion the urine was free from albumen and sugar. His urine when collected for twenty-four hours measured 50 ozs., and contained 1 per cent. of sugar, no albumen. Under treatment the sugar disappeared and the albumen did not return. I had opportunities of verifying the absence of sugar and albumen in April, 1895, and in October, 1897. On January 1st last he returned complaining of sickness, sleeplessness, and cough. He looked very wretched. His tongue was furred; his liver extended an inch and a half below the costal margin, and his urine contained both sugar and albumen. He was very weak upon his legs; his knee-jerks were absent, and there was considerable tenderness of the calf muscles. He admitted taking alcohol pretty freely lately, but said that he did so because he was unable to eat. I could not obtain from him or his friends any admission of habitual excess, but in view of my recent experience the symptoms and physical signs were sufficiently significant to induce me to write to his doctor and tell him my suspicions. A few weeks later, as I was anxious to know the progress of the case, I wrote to the gentleman's doctor, and got back a letter to say that the patient was much offended with me for having suggested alcohol as the cause of his symptoms, that he insisted on calling in another physician, who agreed with the writer of the letter in his view of the case—namely, that it was a case of

"glycosuric neuritis," and that he did not suppose the patient would be willing to let me have any water for examination. I see by the papers that he died on March 22nd.

If in the above cases the etiology of the hepatitis is doubtful, the following example of glycosuria occurring after malarial hepatitis and hepatic abscess will be accepted without hesitation.

CASE XIII.—A surgeon-captain in the I.M.S., aged 31, consulted me in March, 1895, for attacks of fever accompanied by hepatic pain and sometimes followed by jaundice. He had had seven years' service in India, and had suffered from intermittent and remittent malarial fever in Burmah. In 1894 he developed a hepatic abscess, which was eventually opened and drained. He was sent home and the abscess wound had healed, but he had remained subject to these febrile attacks. He looked worn and lean, and weighed 10 st. 11 lbs. There was no ascites or œdema; the liver was not enlarged or tender; spleen normal; bowels confined; heart sounds normal; pulse 72; urine phosphatic, no albumen or sugar. During 1895 his attacks became less frequent and less severe, and I saw him occasionally during the next three years. In February, 1898, his urine was found to contain 1 5 per cent. of sugar; its specific gravity was 1028, and it was free from albumen. He was 2 lbs. lighter than he had been three years before. In reply to my inquiry as to the progress of this patient, I have heard from him that under diet and exercise he has kept in capital health, but he is 6 or 7 lbs. lighter than he was. He believes the sugar was found when he went up to be examined at his medical board, which was just after my examination. It subsequently disappeared and he believes had not returned, but I have not been able to get any more definite information upon this head.

I have had another case almost exactly similar of a patient suffering from febrile attacks with pain over the liver after the healing of a tropical hepatic abscess, but I have not been able to find any sugar in his urine up to the present.

I have several times observed the association between gall stones and glycosuria, but during attacks of biliary colic the glycosuria generally disappears, and in a case which is mentioned in my *Lectures on Renal and Urinary Diseases* (p. 256) it is stated that after the disappearance of the jaundice the sugar did not return. I did not see this gentleman again, but I know that he lived for many years afterwards, and died at an advanced age two or three years ago.

The case which I have found among my recent notes is not a very striking one.

CASE XIV.—The patient, a lady aged 58, consulted me on March 1st, 1895, for attacks of colicky pain accompanied by vomiting, and followed by jaundice with coffee-like urine, to which she had been subject for the last six months. A distended gall bladder could be felt below the costal margin. No examination of the urine was made on that occasion, but a fortnight later, there having been no attack during the interval, the urine contained a little sugar, but the distended gall bladder could no longer be perceived.

We must not forget that Hirschfeld has described cases of diabetes which were preceded for many years by attacks of colic, in which he believes the colic to be due to the passage of pancreatic calculi, diabetes supervening only when the pancreas has undergone complete atrophy as the result of the calculous disease. The impaction of such a calculus at the opening of the common duct would cause jaundice, and would with great difficulty be distinguished from an attack of biliary colic, but I do not think it would give rise to distension of the gall bladder.

GASTRIC GLYCOSURIA.

The 9 cases which I have grouped together under the heading of gastritis presented many clinical differences. In none have I seen any reason to suspect alcohol, although this factor is, of course, possible. In 2 the amount of sugar was considerable—that is to say, 5 per cent. in one case, and 3 per cent. in the other.

CASE XV.—A small manufacturer, aged 51, was sent to me on June 30th, 1896, because sugar had been found in his urine. He said that he felt in perfectly good health, but he felt sure that he had recently had a slight attack of influenza, to which he attributed his present condition. There was no thirst or polyuria. He had lately lost a stone in weight. He complained of some muscular pains. His tongue was foul; bowels confined; urine 1032, acid, no albumen, sugar 3 per cent. He was treated for gastritis. I did not see him again, but for the purposes of this lecture I wrote to inquire, and in reply I received the following letter:

"Dear Sir,—In answer to yours of yesterday, I am glad to say that I have been in fairly good health since the time you mention in June, 1896. I have never had to call in a medical man since that time, and I take this opportunity to thank you for your good advice upon that occasion, also for your kind inquiry."

Of course it is possible that this may have been a post-influenzal glycosuria; but so far as I could make out there had been no definite illness which could be called an attack of influenza. The patient merely meant to say that he believed he must have had influenza, but that it had not been recognised.

The other case where sugar was abundant was as follows:

CASE XVI.—A shopkeeper in a large way of business, aged 50, consulted me on October 1st, 1891, for sickness and debility, which had been troubling him all the year. At that time his urine contained no sugar, but there was a haze of albumen. I saw him again on January 12th, 1895, when his urine contained 5 per cent. of sugar, and was phosphatic. Under treatment the sugar disappeared, and he remains perfectly well up to the present time.

All these cases included under alcohol, liver diseases, and gastritis probably have some connecting link, which, could we discover it, would throw light upon the true etiology of glycosuria. It is probable that this factor is some derangement of one of the important organs concerned in digestion. From the well-known relation of the liver to sugar production it would certainly seem most reasonable to regard this organ as the one most likely to be in fault. The probability is that in these conditions there are sudden discharges of sugar from the liver into the blood in quantity greater than can be used up in the body.

NEURASTHENIC GLYCOSURIA.

I believe that a few years ago Dr. Goodhart said that he had frequently found sugar present in patients suffering from neurasthenia. I thought at the time that he overstated the frequency, as having had a good many cases of neurasthenia under my care for special treatment, I had not observed it as at all a common symptom. But from the standpoint of glycosuria I find that I have 4 cases which I can only classify under the heading of neurasthenia; and I believe we must recognise the fact that glycosuria does occur in a certain number of neurasthenic cases without other discoverable cause. The following case seems to me to be a good illustration:

CASE XVII.—A metal broker, aged 31, consulted me on November 16th, 1899, complaining of headache, want of energy, and of frequent bad colds in his head. He said that twelve or fourteen years ago he had post-scarlatinal albuminuria, and that he had never enjoyed very good health. He was a tall, thin, cadaverous-looking man, with an earthy complexion; height 5 feet 10 inches; weight 9 st. 10 lbs. He lived at home with his father and mother, but his business took him all about the district. He described his business as being one that gave him a good deal of worry. His habits were regular; he rarely took any stimulants; his tongue was a little furred posteriorly, but he had no pain or discomfort after food. His thoracic and abdominal organs appeared normal. His urine was: specific gravity 1025, clear, acid, no albumen, sugar 0.5 per cent. It deposited a fleecy cloud of small oxalates. My treatment was directed towards his neurasthenic condition so as to improve his general health, and when I saw him last on February 1st of the present year he had gained 7 lbs. in weight, and the sugar had completely disappeared from his urine.

CASE XVIII.—A young lady, aged 19, was sent to me in 1894 by Dr. Lupton, of Stratford-on-Avon, because he had found sugar in her urine. Her father was the subject of chronic glycosuria. She complained of feeling tired, of loss of weight, and of constipation. She had never had any serious illness. Her doctor said that the specimen of water he examined was specific gravity 1034. She was a languid, ill-nourished girl, but I could not find anything wrong in any of her organs, and the urine I examined contained no sugar. In answer to my

recent inquiry, her doctor has informed me that she has been for some time married, and has left the neighbourhood; but he knows that a short time ago she was very well.

Case xix.—A manufacturer, aged 26, consulted me in June, 1893, on account of the presence of sugar in his urine. He had lost 9 lbs. in weight during the previous four or five months, but had not suffered from polyuria or thirst. He complained of having had a great deal of worry in his business. I could find nothing wrong in his chest or abdomen, but the urine was specific gravity 1030, and contained 0.75 per cent. of sugar. A few weeks later he had much improved in health, and the sugar had disappeared.

The next instance is a somewhat more complex one.

Case xx.—A medical practitioner, aged 43, consulted me on November 19th, 1897, for loss of weight and glycosuria. He had been ailing for three years, but before that time had enjoyed fairly good health. During the last four months he had lost 17 lbs. in weight, but there had been no polyuria or thirst. After every meal he said that his body temperature rose slightly. He weighed 10 st. 2 lbs., and the amount of urine in twenty-four hours was 50 ounces. I have no note of the amount of sugar.

I wrote to him a few weeks ago to ask him to report upon his present condition. He tells me that he is now 9 st. 11 lbs. in weight; that his urine is generally from 30 to 35 ounces in twenty-four hours, and never exceeds 50 ounces; that he takes ordinary diet; and that his urine at times contains a trace of sugar. He sent me a specimen of his urine, which was amber, turbid from urates, acid, specific gravity 1018, contained a trace of sugar, and a haze of albumen. He still considers that his temperature is affected occasionally, but I have not been able to get from him any actual figures. He complains of a feeling of fulness in the epigastrium, which he associates with a flow of urine of low specific gravity and loss of weight. He says he is always better when the specific gravity of his urine is from 1020 to 1025, and always worse when it is from 1005 to 1010. He attributes his condition to a neurosis.

Senile Glycosuria.

The only other special form of glycosuria to which I wish to draw your attention is that which occurs in old people who are suffering from senile decay. This glycosuria is not associated with any of the symptoms of diabetes, but is sufficiently marked to cause a free reduction of copper.

Case xxi.—An old gentleman, aged 72, consulted me in July, 1889, on account of flatulence, sickness, and failing health. In 1864 he had rheumatic fever, but had enjoyed very good health up to six weeks ago, except that he had always been troubled with indigestion. He had worked very hard at his business, by which he had acquired a large fortune. When I examined him his heart was dilated, but there was no murmur. The pulse was slow and intermittent, and his feet became œdematous towards night. His urine was free from albumen, but contained sugar. He was evidently breaking up, and died not very long afterwards.

Case xxii.—Another case was an old patient, aged 71, who was sent to me by Dr. Young, whom he had consulted on account of his eyesight. There was a cataract in the left eye, and in the right eye there were striated hæmorrhages round the yellow spot. On examining the urine Dr. Young found sugar. There had been no polyuria, wasting, or thirst, and I found the urine, which was of specific gravity 1018, to contain a moderate amount of sugar; it was free from albumen.

As the glycosuria in these cases must be regarded as a symptom of a general tendency to break down, care must be exercised in ordering strict diabetic diet. From what has been said in the preceding parts of this lecture, it will have been seen that I do not advocate the treatment of these cases of non-diabetic glycosuria by diabetic diet, and where this may have been ordered it has been only for experiment, in order to see what influence it has upon the glycosuria. In these old people it is especially necessary to be cautious, and while there can be no harm in stopping sugar and sweet wines, I should hesitate to deprive them of bread or potatoes, or any farinaceous food they are in the habit of taking.

The purpose of this lecture is not to discuss questions of treatment, for which the time at my disposal is not adequate; but to draw your attention to the conditions other than diabetes under which we may meet with the occurrence of sugar in the urine, in order that you may be able to estimate correctly the value of this symptom when you encounter it, and to avoid some grave errors of diagnosis and prognosis.

Note.

[1] With reference to the occurrence of glycosuria in association with boils and carbuncles (a fact known to and first recorded by Cheselden), it is interesting to note that Professor Lépine, of Lyons, has recently reported to the Société de Biologie (*La Semaine Médicale*, March 7th, 1900) that he has observed in numerous experiments made on dogs that half an hour or an hour after the introduction into the veins of a pure culture of staphylococci a more or less considerable increase of sugar occurs in the blood, which decreases rapidly, and may be followed by an actual reduction below the normal amount.

THE LUMLEIAN LECTURES
ON
SOME CIRRHOSES OF THE LIVER.

Delivered before the Royal College of Physicians

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Lecture III.
TREATMENT.

Treatment of Cirrhosis.

The treatment of cirrhosis resolves itself chiefly into an attempt to preserve the *status quo*, as far as the liver is concerned, to prevent the disease advancing, and to relieve any difficulties or imperfections which may arise in the bodily condition, as the result of the hepatic inefficiency. No remedy will remove the fibrous tissue which has choked the liver cells; no drug will restore the cells thus destroyed. The only condition in which the invading agent can be removed to some extent by treatment is in the early stage of syphilitic cirrhosis, when the gummata are not yet organised, and the arteritis and perihepatic inflammation are comparatively recent. For the rest, all that can be done is to attempt to relieve the injured machinery and supplement its powers, so that the crippled organism may survive. When the injury is not extreme this can be done, and the cirrhotic patient hold on to life in fair health and comfort, sometimes for years.

With regard to the first great canon of treatment, the prevention of increase of fibrosis and destruction of liver tissue, absolute abstention from alcohol and all stimulating ingesta is of course the prime necessity. It is as essential in the syphilitic and malarial cases as in those of direct alcoholic origin. There is, however, one reservation to be made. When the last stage of emaciation and exhaustion has been reached, the total privation of alcohol, as we often see in hospital wards, hastens the final collapse. And in the same way, all foods which tax especially the physiological function of the liver, and therefore tend to embarrass and engorge it, such as those rich in fats and sugar, should also be given in reduced quantity, or altogether prohibited. The diet should be restricted to milk, eggs, the simpler proteids, bread, and fresh fruit and vegetables.

It is to be remembered that not only is the passage of nutriment prepared by gastric and intestinal digestion for distribution by the systemic vessels, interfered with by the portal obstruction, but that the glandular structure of the liver is partly destroyed and its physiological function necessarily impaired also. We are too apt, I think, to look upon the question of nutrition in cirrhosis as one of mere difficulty of transport, whereas it is largely one of preparation for absorption and assimilation and of elimination. The secretion of bile, the glycogenic conversion of the carbonaceous elements of food, the mysterious part played by the liver in the metabolism of nitrogenous waste, are all interfered with, and the general nutrition of the body suffers in like degree.

In all cases, therefore, where signs of defective nutrition appear, such as wasting, anæmia, debility, it is well to supplement the work of the digestive machinery by artificial means. Predigested foods, especially pancreatised preparations, or pancreatin in keratin capsules, given with food, are useful aids to the defective liver function.

Further, taking into consideration the embarrassment of the portal circulation and the consequent engorgement of all the viscera, whose venous drain lies through the portal, this condition should be relieved by mild laxatives, such as salts of soda and magnesia. Rhubarb, or cascara, or other unirritating drug of the kind, may be added to quicken the action of the salines if necessary, but anything like hard purging should be avoided. To these laxatives, iron also, or the bitter tonics, as quinine or nux vomica, may be added on occasion.

In the flatulent dyspepsia which so often troubles the cirrhotic patient, full doses of sodium bicarbonate with aromatics, or sodium hyposulphite, or creosote, or carbolic acid, may be given to arrest fermentation.

There are, however, three drugs which more than all others are capable of signal service in appropriate cases: they are mercury, potassium iodide, and digitalis.

Mercury and the iodides, especially the latter, sometimes effect a marvellous change in syphilitic cirrhosis, in virtue of their power in arresting gummatous formation, endarteritis, perihepatitis, and their consequences. The usual rule laid down is that if there is any reason to suppose the affection to be syphilitic, potassium iodide should be given. I would however, urge that these remedies should be given, not only when there is reason to suppose the cause to be syphilitic, but given also steadily in all cases where, by any remote possibility, the syphilitic factor may be concerned. even when the patient is convicted of alcoholism. As I have pointed out, the social connection between syphilisation and alcoholism is naturally a close one; moreover, the syphilitic liver frequently closely imitates the alcoholic liver, and a mistake may be fatal.

In a case recently under my care the liver was studded with gummata, bound down by abundant perihepatitis, and tucked away under the diaphragm, so as to present all the physical signs of a small contracted liver. The patient was a butler. There was no history of syphilis to be made out on minute inquiry. He was a married man with a family of healthy children. Antisyphilities were given at first; and then unfortunately, under the strong presumption of alcoholism, they were abandoned and the chance of recovery lost.

Digitalis, again, is of material service in those numerous cases in which there is weakness and dilatation of the heart. The enfeebled, dilated state of the heart so commonly present in cirrhosis and the condition of the cardiac muscle found after death explain the often beneficial influence of digitalis and other cardiac tonics.

The Treatment of Ascites.

The main interest in the treatment of cirrhosis, however, centres in the ascites. In the majority of cases it is this symptom which betrays the existence of the disease. It is a sign that tension in the portal vein, and its tributaries in the peritoneum, has been raised to the oozing point, or has set up inflammatory effusion; that the flow of nutriment from the alimentary canal into the general circulation is gravely impeded; that the liver function is seriously impaired.

It is not, however, from this point of view alone that the advent of ascites becomes so important. It is rather the mechanical effect of the distension of the abdomen with fluid which is so serious. The diaphragm is pushed upwards so that abdominal respiration almost ceases, and the lungs are imperfectly inflated. Congestion, collapse, and basal bronchitis follow, and not infrequently effusion into the pleura in addition. The heart is pressed upwards and embarrassed, and the impediment to the circulation, already existing in the pulmonary and systemic vessels, thereby greatly increased. The movements of the stomach are hampered, and the circulation in that organ, so vital to digestion, already interfered with by the portal blockage, is made still more difficult. In the same way the spleen, the pancreas, the intestines, the liver itself, all suffer from the pressure of fluid upon them, and upon the vessels of the portal system, and the vicarious flow through venæ communicantes is interfered with in like manner. The kidneys, indeed, which do not discharge into the portal system, are not directly affected by the venous block there. The renal veins are, however, affected by the pressure of the effusion into the abdominal cavity, and the congestion of the kidneys which arises in extreme ascites affords significant evidence of the disastrous effect of this simple mechanical pressure. The urine becomes scanty, high coloured, albuminous, and sometimes contains casts. There ensues, in fact, a nephritis, disturbance of the renal function; a uræmia, adding systemic poisoning to the other disorders.

Although there may be difference of opinion as to the course to be pursued in order to remove the fluid, and to relieve this general oppression of the vital organs, there can be none, I think, as to the necessity for doing so by some means or other. The only question is when and how it should be done.

There is no more painful clinical picture of hopeless disease and helpless therapeutics than these cases of ascites left unrelieved in their increasing exhaustion and distress. The question is not one of mere relief of distress, however; it is one of releasing the embarrassed vital organs from fatal pressure; of improving the general pathological condition, and making temporary recovery possible; for, as I have shown, ascites does not arise in the last hopeless stages of atrophic cirrhosis only, but now and again appears earlier, when more than mere temporary relief may be hoped for. The practice adopted for this purpose of old was to attempt to carry off the fluid by hydrogogue purgatives and by diuretics.

Purgatives.—With regard to the former, it may be affirmed without hesitation that hard purging is in these cases a pernicious and fatal practice. It is in most instances absolutely ineffectual as a means of reducing the dropsy; it is most effectual in reducing the strength and nutrition of the cirrhotic patient, already enfeebled by the difficulty of drawing a minimum of aliment through the obstructed vessels. This difficulty is increased by purgation. The nutrient fluid is hurried through the alimentary canal too rapidly for absorption. The flow is set outwards instead of inwards. The plan of giving the purgative in the early morning before food is taken mitigates but does not neutralise the ill-effects, a large amount of nutrient material remaining from previous meals is drained away. Further, this favours the onset of diarrhœa, which is only too apt to set in spontaneously, is most difficult to control, and of evil augury. The expression "purged to death" is not infrequently sadly appropriate to the records of cirrhotic ascites. Therefore, although a few sharp purges may be useful at the outset, when the patient is comparatively robust, free purging is a fatal device when the patient is enfeebled, and in any case is to be deprecated as a continued treatment.

Diuretics.—It may be said that where the kidneys are sound diuretics are harmless, where diseased, injurious. They are, however, constantly futile. Cases are indeed recorded where the action of diuretics is credited with the cure of abdominal dropsy. I have tried them all, and, as a means of removing the copious effusions of hepatic ascites, with entire want of success. As a matter of fact in this condition, as Murchison pointed out, "diuretics are of little avail." The pressure on the renal veins so interferes with the circulation through the kidneys that diuresis becomes impossible. It has been found that whilst the most powerful diuretics have failed to excite the flow of urine in ascites, the removal of fluid by paracentesis is often followed by a copious flow even without the aid of diuretics.

Restriction of Fluids.—In a paper published more than twenty years ago,[1] I discussed the treatment of dropsy of various forms on the plan of restricting the inflow of fluid by restricting the drink of the patient, thus compelling the body, by limiting the intake, to reappropriate some of the outflow, and thus favouring absorption of effusions. I found that in cases of renal dropsy it was unquestionably injurious, lessening the flow of urinary excretion—in cases of cardiac dropsy of doubtful service—but in hepatic ascites usually well borne, and of some value as an adjunct to other treatment. In a recent article on Dropsy, Dr. Dickinson[2] cites two cases of hepatic ascites in which this method proved successful.

Paracentesis.

The only reliable plan of removing the abdominal fluid, however, is to draw it off by mechanical means. The postponement of the operation until the vital machinery is seriously embarrassed is, I am convinced, a fatal error. Why should we persist in exhausting our debilitated patient in the vain attempt to remove fluid by drugs, through the roundabout channel of bowel and kidney? and whilst we waste time in these futile endeavours, allow the vital organs to become

more and more engorged and injured, when the fluid can be withdrawn directly and more effectually by the simple agency of a Southey's trocar. The good effected is great, the risk in these days of antiseptic surgery of the smallest.

I presume that the main reason for the tardy adoption of earlier paracentesis lies in the fear of septic peritonitis; and the fact that the weight of authority has been overwhelmingly against it except as a last resource—Sir Thomas Watson, Niemeyer, Thierfelder, Aitken, Bristowe, chiefly on the ground that it was useful only for the relief of suffering; Frerichs objected to it on the ground that the counter-pressure of the ascitic fluid upon the peritoneal vessels lessened the rapidity of effusion. Murchison objected on account of the loss of albumen involved. Murchison and Bristowe, however, modified their views at a later period, and sanctioned paracentesis before an extreme stage was reached.

I have known only four instances in which paracentesis proved fatal from resultant peritonitis. Two were in the period before antiseptic precautions were observed; the third was due to accidental displacement and infection of the drainage tube; the remaining one was unexplained. It is true that when the operation is postponed until the patient is in the last stage of cachexia and exhaustion, tapping sometimes hastens the final failure; but I have never seen this in the earlier stages before the general health has been gravely impaired.

As a matter of curious interest, I may say I have recently had under my care at St. Mary's a man aged 49, who (as a child) was tapped for ascites in St. George's Hospital, I think by Mr. Cæsar Hawkins, forty years ago.

The first physician to insist upon the advisability of tapping early was, I think, Dr. Austin Flint, in America, as long ago as 1863. Writing in 1883[3] he says:

> In concluding my clinical report on ascites twenty years ago, I used the following language: "Unpromising as are the majority of cases of ascites, I cannot but believe that, as regards prolongation of life, and as much improvement as is compatible with existing structural disease, the success of medical practice would be enhanced by employing less than has been the custom, diuretics, hydrogogue cathartics, and depressing remedies, and by resorting earlier than is usually done to tapping. After the added experience of twenty years, I hold to the same belief with a strong conviction of its correctness, as based on reason and clinical facts."

He gives 10 cases showing favourable results in support of this opinion. In 1872 Dr. Frederick Roberts[4] advocated repeated tapping, and also gave a series of cases as evidence of its success. In 1873 Dr. McCrew,[5] and in 1881 Dr. Duncan,[6] expressed similar conclusions.

When I ventured to urge the employment of early and repeated paracentesis in hepatic ascites, in a discussion on the subject at the meeting of the British Medical Association in Nottingham eight years ago, opinion upon the subject proved to be still much divided. At that time all the text-books of medicine, as far as I know, with a solitary exception, agreed in repeating without question the old stereotyped rule that the operation should be postponed as long as possible. Now, however, this view has been modified, in so far that paracentesis is sanctioned by most authorities when the pressure of the fluid is obviously causing embarrassment of the viscera.

As a matter of my personal experience, in every instance of well-marked hepatic ascites which has done well early and repeated paracentesis has formed an essential part of treatment. Before this was adopted, the results—in my practice, at all events—presented one long, uniform list of melancholy failures; and in the vast majority of cases of hepatic ascites recorded, where the condition has been successfully treated by others, repeated paracentesis has also formed a main feature of treatment.

In the least favourable form of atrophic cirrhosis even, where the good effected is only transitory and nothing can reasonably be hoped for beyond a respite of a few months, paracentesis is beneficial if not left too late. The early removal of the ascitic fluid enables the patient to live longer in comparative comfort, instead of suffering a shortened life in hopeless unmitigated distress.

In discussing the question of viability and prognosis in the preceding lecture I instanced a number of cases which support this view. In most of those which proved fatal the correctness of diagnosis was proved by *post-mortem* examination afterwards. The only explanation of the less favourable results attained by some others which I can offer is that possibly the operation was postponed to too advanced a stage of the disease, or not systematically repeated at proper intervals and the case retained under close observation and treatment throughout. Tapping in the very last stage of cirrhosis frequently hastens death; and a single paracentesis without repetition, or repeated only too late when symptoms again become urgent, is of little service. In the successful cases I have to record the patients were retained in hospital or under constant medical care in private until fluid ceased to return and health was fairly restored. "Tap and turn out" is a most unsatisfactory practice, futile and delusive.

The removal of fluid by continuous drainage has been practised with some success by Dr. Cuillé and Dr. Elliot in America, and by Dr. Urso in Italy. In some cases of mine where the puncture of paracentesis has remained open the results have been satisfactory, except for the manifest discomfort involved. A more drastic plan of promoting adhesions of the liver and spleen to the parietes by surgical operation has been advocated, with the idea of aiding the development of new vascular channels. It seems at first sight somewhat like the partial closure of a safety valve, preventing automatic easing of the portal vascular distress. Nature's operations in this direction of adhesions in cirrhosis are not apparently very favourable, and associated with the most intractable cases; they do not suggest an imitation of her methods.

The course of these cases of cirrhosis which have resulted in restoration to health for lengthened periods—cases in which the return to health has been such as to warrant the term "recovery"—is most satisfactorily illustrated, perhaps, by a brief description of some of the most remarkable amongst them.

The first was that of a patient sent into St. Mary's Hospital in October, 1883, as suffering from Bright's disease. He was a man of 30, of great stature and fine build, slightly jaundiced, and he had lost a good deal of flesh. The ascites was extreme, the legs below the knee œdematous, but there was no general dropsy. The liver was greatly enlarged and hard, reaching half way to the umbilicus, the heart displaced upwards, but the sounds normal, the lungs clear. The urine contained one-sixth albumen and both hyaline and granular casts, but no blood.

The patient was a carman, and confessed to taking 7 to 8 pints of beer a day with half a quartern of rum before breakfast and he suffered from morning diarrhœa. The case was regarded as one of alcoholic cirrhosis, and treated in orthodox fashion by cathartics and diuretics and tonics, paracentesis being postponed until urgent symptoms might arise. The man got steadily worse, the lungs became engorged, distension extreme, dyspnœa and distress great. Then, *secundum artem*, a paracentesis was performed as a mere matter of relief, 400 ounces being drawn off. The patient slept well that night for the first time for many weeks.

At this juncture the patient complained of sore throat and a small ulcer was observed on the soft palate. It was then remembered that he had had both testicles removed, one for "strumous disease" five years before and the second eighteen months ago for "tuberculous affection." On further inquiry, it was ascertained that he had suffered from venereal disease fifteen years ago, and chancre scars were visible. Although the condition of the liver itself was not suggestive of syphilis, it was recognised that even surgeons were human and might be fallible, and that probably the affection of the testicles was syphilitic not tuberculous. Potassium iodide was accordingly given in doses of 10 grains three times a day. This was not followed by any improvement, and in three weeks the man had fallen back into his former condition of extreme distension and urgent distress.

Paracentesis was again performed and the iodide continued. From this time improvement set in and was continuous. Albumen disappeared from the urine; appetite returned. Tapping was repeated four times more. The intervals between the tappings grew longer, the amount of fluid withdrawn less, and after the sixth operation returned no more. The patient was finally discharged seven months after admission, to all appearance strong and hale, without a trace of renal or cardiac disease. The liver, however, remained large and hard as before. The man came to hospital for examination a year and a half afterwards; he had remained well and robust, had walked ten miles with his horses the day previous. The liver was enlarged and hard as before.

This case was especially interesting to me because up to this time I had never seen one of recovery from hepatic ascites, when the dropsy, emaciation, and exhaustion had progressed to such an extent as in this instance. In all previous cases, in spite of treatment, and I am afraid too often in consequence of treatment, the patients invariably went from bad to worse. In one or two cases I had seen ascites disappear, but never the patient get well.

The relief afforded to the oppressed organs by the removal of the ascitic fluid, the absence of any material progress under potassium iodide, until the general deadlock was relieved by a second tapping, followed by repetition, before serious visceral engorgement recurred, compelled the opinion

that blind following of the routine practice of postponing mechanical relief as late as possible was a mistake, and that not only were the patients' sufferings thus needlessly aggravated, but their chance of life seriously endangered or destroyed. Subsequent experience has amply confirmed this judgment. The absence of improvement under iodide at first, and the favourable effect of tapping, leave it uncertain how far alcohol and how far syphilis were factors in the case; probably both played a part.

The next case is adduced as an example of the marked syphilis of which I have spoken. It is that of a woman, aged 42, with enormous ascites, the abdomen measuring 43¾ inches; thin, emaciated not cachectic, and not jaundiced. The liver was just felt below the margin of the ribs after tapping. The body had begun to swell nearly two years before, and she had already been tapped five times. She had had much pain in back and side, and five months ago her legs began to swell. There was no sign of heart or renal disease. There was no history of alcoholism, and the woman had not the appearance of a drinker. There was no history of syphilis nor sign of it. The patient was a married woman with one healthy child, and had had no miscarriages.

Physical examination showed that the dropsy was not ovarian, and that there was no matting of intestines or omentum suggestive of tuberculosis. Alcoholism, heart disease, peritonitis due to kidney disease, or tuberculosis seemed all precluded, and it was judged to be most probable that the affection was syphilitic cirrhosis with perihepatitis, a condition so often neither indicated by history nor betrayed by physical evidence.

This diagnosis was strongly confirmed by the subsequent progress of the case. Pleurisy, pericardial friction, slight hæmoptysis, suggested the presence of gummata in the lung—a condition found to exist in another case of syphilitic cirrhosis. She was treated by potassium iodide, tapped three times more, and discharged four months after admission, plump and well, free from all signs of cardiac, pulmonary, or renal disease: the urine, specific gravity 1022, free from albumen or casts.

Five months later she came back for examination, and was found to all appearance in robust health, without sign of any dropsy, kidney disease, or heart disease, the liver being felt as before, just below the ribs.

The next case was that of a woman aged 46, admitted to St. Mary's Hospital in 1885 for malignant disease of the liver, great ascites, and marked jaundice, which had lasted for six months, and rapid loss of flesh. The liver was greatly enlarged, hard, and somewhat uneven of surface, and it was tender. She was tapped and given potassium iodide, and went out apparently well; she came in again the following year, was treated in like manner, and again went out in good general health.

Two years later she was admitted for the third time, was again treated by paracentesis and iodide, and went out well.

She remained under observation and free from ascites for five years more, when she had an attack of hæmatemesis; a year later the hæmatemesis returned, from which and intercurrent erysipelas she died. No *post-mortem* examination could be obtained, but the liver remained greatly enlarged and hard to the last.

The next case which I have to bring forward is one in which the affection was purely alcoholic in origin.

The patient, a publican, whom I saw in consultation on November 5th, 1890, was a tall, powerfully-built man; he had lost flesh, but was still somewhat stout, and not cachectic in appearance. His abdomen was distended with fluid, measuring 40 inches in circumference at the umbilicus. The superficial veins were full and conspicuous. The liver was greatly enlarged, the edge reaching to within 3 inches of the umbilicus, its surface smooth, very hard, and slightly tender; the legs were œdematous. The heart was not appreciably enlarged, the sounds regular and free from murmur. The lungs were normal, except for some bubbling *râles* at both bases. The urine was scanty, high coloured, and contained one-fourth albumen. No casts or blood could be found on microscopic examination.

The account given by the patient was that he had noticed his abdomen steadily increasing in size for about six months; his legs had only begun to swell during the last fortnight. He had never had rheumatic fever, or any other serious illness. He had never had syphilis, nor was there anything suggestive of it. He attributed his illness to working in a damp cellar; and the cellar was no doubt a factor. He acknowledged to drinking enormous quantities of beer daily, spirits only on occasion.

It was agreed that paracentesis should be performed, and repeated as required. This plan was duly carried out. The distension usually returned again, so as to cause discomfort in two to three weeks. Paracentesis was performed nineteen times between November and the following July, a period of upwards of eight months, amounts varying from 580 to 220 ounces being withdrawn. Iodide of potassium was given for some weeks as a measure of precaution, but without good effect, and it was abandoned, and grey powder substituted for a time. No drastic purges were given, the bowels being simply regulated by a mineral water. The albumen rapidly disappeared from the urine, after the first tapping, returning fitfully from time to time for short periods with the increased pressure of reaccumulating fluid. The urine remained scanty—about 20 ounces only.

Shortly after the eighteenth tapping, however, the patient, who had previously been lying on his back on bed and couch, got up and took a short drive and walk to record his vote at an election. On his return home, *post hoc* or *propter hoc*, diuresis set in, and continued for some days to the amount of 100 to 120 ounces in the twenty-four hours. The fluid in the abdomen did not altogether disappear, and a nineteenth and last tapping was performed, after which there was no return of the ascites. The man's health continued to improve, and when he called upon me a year after my first visit to him he was apparently hearty and well, except that the liver was large and hard as before. There was no sign of heart disease; the urine was normal. He was able to resume an active life; he had remained a rigid abstainer.

From that time I lost sight of him, but his regular medical attendant, to whom I am indebted for most of the details of the case, tells me that the patient remained well, leading an active life, until about two years ago, a period of eight years in all, when he fell a victim to influenza pneumonia. From the commencement of the first illness until his death he had entirely abstained from alcohol.

The next example of hypertrophic cirrhosis of purely alcoholic origin with extreme ascites is, perhaps, the most satisfactory of all, since the subject survives to this day—nearly twelve years after first coming under treatment:

In this instance the patient was a married woman of 32, admitted into St. Mary's Hospital for jaundice and ascites in May, 1888. She acknowledged to being a heavy drinker—of spirits chiefly—and on one occasion gave material evidence of it by coming to the hospital in a state of riotous intoxication. There was no history of syphilis or suspicion of it.

The woman was fairly nourished, not thin or cachectic, although she stated that she had lost much flesh. Her face was covered with acne rosacea and venous stigmata, and she was jaundiced. The abdomen was greatly distended. The superficial veins were full and tortuous; the liver was enlarged, reaching 4 inches below the ribs, extremely hard, smooth, or slightly granular. The heart sounds were normal, the urine free from albumen. There was some œdema of the ankles.

The patient was tapped seven times in the course of the five months for which she remained in hospital, large quantities of fluid being drawn off. Potassium iodide was given for a few weeks, but discontinued since no improvement followed, and iron and digitalis substituted. After the seventh tapping the dropsy did not return, and the woman went out at the end of five months apparently well, and so remained for five years.

She, however, took to drink again, and was admitted for the second time in October, 1893, in a condition of enormous ascites. The abdomen measured 50⅝ inches, the liver was large and hard as before, distinctly felt 7⅛ inches below the costal margin as far as the umbilicus, the hepatic dulness commencing above the sixth rib. The heart was normal; the urine free from albumen. She was tapped twice—386 ounces—and treated by potassium iodide for a short time and then by diuretics. The latter failed to promote diuresis even after tapping. The ascites did not return, and she went out well in January, 1894, three months after admission.

She was admitted for the third time in 1895, tapped several times, and then discharged well.

She was admitted for a fourth time in December, 1896, and again went out relieved by tapping.

She was admitted for the fifth time in December, 1897, tapped and relieved, but on account of the enormously extended flaccid abdomen all the fluid could not be removed. She was supplied with an abdominal belt, and directed to return.

She failed to reappear; but was sought out and induced to come into hospital again in December, 1899, to complete the cure of her ascites, and this further tapping has been successfully done. She had remained in good health since her last visit two years ago. The following is her condition as ascertained two months ago, before the last paracentesis:

The patient looks fat and well except for some marking of the skin of the face from dilated vessels. The abdomen is very large, flaccid, and pendulous from previous distension, and measured 43 inches. It contains a considerable amount of fluid, which the patient says has remained since the last incomplete tapping two years ago. The liver is large and very hard with a sharp edge 6 inches below the ribs; it is therefore somewhat smaller than it was two years ago. The spleen is not enlarged; the superficial veins of the abdomen are conspicuous but not distended. There is no œdema of the ankles, the heart is not enlarged, there are no *bruits*, the sound and action normal. The urine is acid lithatic, specific gravity 1027, free from albumen and casts. The fæces are normal in appearance, and show a good amount of biliary colouring.

The permanence of the liver enlargement in this case, the preservation of nutrition, the absence of all signs of renal disease or of heart disease are notable. The case remains as an example of hypertrophic cirrhosis, due to alcohol, uncomplicated by any other disorder, the patient surviving in fair health up to the present time, twelve years since cirrhosis and ascites were recognised.

I may quote another example of alcoholic hypertrophic cirrhosis with ascites, which has for two years past followed a favourable course.

The patient, a gentleman of 47, was referred to me as suffering from Bright's disease and ascites. He was a broad-set, burly man, full fleshed, his face turgid, and he had some dyspnœa. The abdomen was highly distended with fluid, the veins of the surface being swollen and conspicuous. The liver was of great size, with flat, hard, woodlike surface, and sharp unyielding edge, extending 4 inches below the margin of the ribs; the legs and thighs were œdematous, but there was no general anasarca, œdema of loins, or puffiness of face. The heart was somewhat enlarged, the apex beat just outside the nipple line, and the area of cardiac dulness increased laterally to the right margin of the sternum. Its action was quiet and regular, the first sound somewhat short, the impulse not increased. A mitral *bruit* could be heard just over the apex. The pulse was 80, soft, regular, and of rather low tension. The lungs were clear except for slight basic catarrh. The urine was diminished in quantity, high coloured, and very acid, specific gravity 1024, contained albumen estimated at $\frac{1}{10}$. Careful microscopic examination revealed neither blood nor casts.

The patient had indulged in alcohol habitually to great excess up to the commencement of his illness, having, as he told me, taken sometimes as many as twenty-four glasses of whisky and soda or more in a day. For the last eighteen months, however, he had been a total abstainer. There was no history or sign of syphilis.

The condition was clearly hepatic ascites, due to alcoholic cirrhosis, with some dilatation of the heart and renal congestion dependent upon the cardiac and hepatic lesions. In view of the great abdominal pressure and distress I advised that paracentesis should be performed without

delay. This was carried out by his medical attendant in the country, and 300 ounces drawn off. The leakage continued for some time afterwards. Saline laxatives and digitalis were given internally.

The effect of the removal of the fluid was remarkable. When I next saw the patient four weeks afterwards, the abdomen was lax but still contained some fluid, the liver hard and large as before, reaching to within 1 inch of the umbilicus. The œdema of the legs had almost gone. The area of heart dulness reached to midsternum. The urine was free from albumen, of specific gravity 1021. He was already so active and free from dyspnœa, and so well, that he had been walking about the streets, and paid a visit to the Admiralty on business. His appetite was excellent, indeed exceptional, and he expressed himself as feeling perfectly well but for his remaining ascites.

To sum up, he was subsequently tapped four times more, the last time in August, 1899. Since then the ascites has not returned, and the medical man under whose care he has been reports in January of this year that he remains well in all respects, the enlargement of the liver, and the slight, local, mitral *bruit*, being the only marks of disorder.

Such is the course of the case since it came under my personal observation.

The previous history, for which I am indebted to the kindness of the medical men under whose care the patient came earlier, is of great interest, since it throws light upon the relation of the cardiac, hepatic, and renal disorders to the present condition of a more simple, hepatic ascites.

In November, 1897, a little more than a year before I first saw him, the patient came under the care of his medical adviser in the country in a critical condition; great ascites, anasarca, albuminous urine, irregular pulse, feeble failing heart. He was tapped, and given digitalis, and he shortly recovered sufficiently to resume his duties away. He quickly broke down again, however, and in August, 1898, came under the care of the eminent practitioner who has kindly sent me the following account of his condition at this juncture:

"There was a history of kidney disease, enormous anasarca, and ascites. The heart was greatly dilated with a mitral *bruit*, irregularity of action, reduplication of first sound, and venous pulsation; there were marked symptoms of uræmia. The urine had a specific gravity of 1024, was highly albuminous, containing oily and epithelial casts. The liver was greatly enlarged. He was tapped nine times to the extent of 18 gallons and 3 pints, between August, 1898, and January, 1899. Various drugs were given; digitalis was ill borne; but strophanthus, strychnine, and salines were distinctly beneficial."

It seems clear that in the first instance there was great cardiac dilatation and a congestive nephritis, in addition to the cirrhosis and engorgement of the liver, the cardiac dilatation being due to the enfeeblement of the cardiac wall from alcoholism. The enlargement of the liver was due partly to alcoholic fibrosis, partly to engorgement from the heart state; whilst alcoholic irritation, cardiac inability, and ascitic pressure were probably factors all engaged in the production of the congestive nephritis. With rest, abstention from alcohol, cardiac tonics, and the removal of fluid pressure, all the disorders dependent solely upon temporary and removable conditions subsided, the heart contracted, the nephritis ceased, the general dropsy disappeared. The condition of the liver, however, depending not only upon venous engorgement, but upon fibrosis also, could not be so remedied. The cirrhosis remained, and the ascites returned from time to time, until the development of vicarious circulation and the increased cardiac vigour eased the portal circulation.

That the course of events ran closely on these lines is shown, I think, by the immediate and great relief afforded by paracentesis, evidenced by the cessation of dyspnœa, rapid subsidence of œdema of the legs, disappearance of albumen from the urine, and all signs of renal disorder. The dropsy in the last stage was not a general dropsy, due to cardiac and renal disease, but a hepatic ascites.

The course of the disease in the preceding case suggests that cardiac inefficiency is sometimes an important agent in determining the occurrence of portal dropsy in cirrhosis. I have now under my care at St. Mary's a man with extensive mitral disease and secondary tricuspid disease, and an enormously enlarged pulsating liver, who has very extensive ascites but hardly any general dropsy.

In speaking of the intercurrent ascites of mitral disease of the heart in the first lecture, I suggested that it might be due to the engorged condition of the liver, *plus* the moderate cirrhosis which follows on prolonged venous hyperæmia. The addition of systemic obstruction to that of the fibrosis and capillary dilatation, thus causing greater intravascular pressure in the portal veins than in the systemic, determines transudation in the portal area—a portal dropsy only, not a general systemic dropsy. Evidence was adduced from morbid anatomy proving how gravely the muscular structure of the heart is often affected by degenerative changes in cirrhosis.

It is, I think, probable that in these cases of hypertrophic affection, when ascites supervenes earlier than the fibrosis of the liver alone seems to warrant, the increased portal stagnation induced by heart dilatation and inefficiency, added to the cirrhotic obstruction, may be the last straw, the determining factor of peritoneal effusion. Two other cases which have come under my observation lend support to this view.

In 1894 I was asked to see a young man, aged 32, in wealthy circumstances, said to be suffering from Bright's disease, with the statement from his medical attendant in the country that he had been a confirmed and excessive spirit drinker since he was 12 years old. He told me indeed himself, with great pride in his own acuteness, that the waiters at the club where he stayed in London had orders to make all his glasses of brandy double ones.

When I saw him he was breathless on movement, in great distress from dyspnœa, and had extreme anasarca of the lower half of his body, with marked ascites. The heart was greatly dilated; there were mitral and pulmonary murmurs, and moist sounds at the base of both lungs. The liver was greatly enlarged and hard, its edge reaching three fingers-breadths below the ribs in the nipple line. The urine was high coloured, and of specific gravity 1032, loaded with albumen, and contained abundant granular and hyaline epithelial casts.

Under absolute rest, digitalis, absence of alcohol, and the care of a doctor and two nurses, he quickly recovered; and two months later astonished me by walking briskly into my room, expressing himself as well, and looking well. The dropsy had gone, the cardiac murmurs had gone, although there was still evidence of dilatation. The casts had disappeared from the urine, which had specific gravity 1022, a mere trace of albumen alone remaining. The liver remained enlarged as before. The alcoholic habits were renewed after a time, and a year later the liver had enlarged still further and become enormous, reaching halfway to the umbilicus; the heart was larger than normal, with short first sound, but no murmurs.

There was no return of dropsy. The next stage, which I anticipated would speedily ensue—namely, ascites—did not follow. The patient died suddenly of syncope a few months later.

In this case the same series of events followed as in the preceding case with one exception—cardiac degeneration, general dropsy with disproportionate ascites, progressive fibrosis; the final stage of cirrhotic ascites alone was wanting.

The second case is one I have already mentioned as an instance of alcoholic enlargement of the liver in a young fellow of 29 years of age. He has some dilatation of the heart, palpitation, dyspnœa, considerable enlargement of the liver, but no dropsy. This exhibits the earliest stage of hepatic engorgement and commencing fibrosis. Can there be much doubt that if the exciting cause continues in operation the stages observed in the other more advanced conditions will follow in due course?

If cardiac debility and dilatation play an important part in the production of an early ascites in certain cases of hypertrophic cirrhosis, it will help to explain why these cases run a more favourable course than others. It is a condition which can be materially influenced by treatment; a condition capable of great relief if not of cure; and its removal makes more easy and possible the removal of the ascites, which may finally disappear, as it does in the analogous condition of the ascites of mitral dropsy.

There is another point connected with this relation of cardiac inability and hepatic stagnation which deserves consideration. Is it not possible that this may explain not only why in these cases of hypertrophic cirrhosis the liver remains large, but also why the fibrosis affects partly the finer branches of the interstitial tree, instead of the large trunks only as usual in atrophic cirrhosis? The character of the fibrosis is certainly not determined by the nature of the alcoholic stimulant, as has been suggested—according as it is beer or spirits.

In three of the four cases related the patients were spirit drinkers, one only a beer drinker. The enlargement, moreover, is not due to fatty deposit. My observations agree with those of Dr. Foxwell[7] that fatty infiltration is no more common in the large than in the small livers.

The enlargement is probably due in part to chronic venous engorgement and dilatation of hepatic venules and capillaries—such as is found in the nutmeg liver of cardiac cirrhosis. If the specimen of pure cardiac cirrhosis is examined and compared with that of alcoholic hypertrophic cirrhosis, it will be seen that the two conditions are almost absolutely identical. There is the same mixed coarse and fine fibrosis, the same appearance of fresh formation of biliary ducts—the same enlargement.

Moreover, it might well be that in alcoholic cirrhosis with early enfeebled heart the effect of the alcoholic poison would be felt where the blood stream is most delayed, as the region of the hepatic vein in the lobule is approached, producing a

fine fibrosis there; and that this region would escape in an alcoholic cirrhosis, where the heart factor did not come in, and a simple coarse cirrhosis only with atrophy in that case result.

Be this how it may, however, I believe that cardiac inefficiency, even when not advanced enough to disclose itself by the usual physical signs of heart disease or a general dropsy, is a factor in the causatisn of the more acute cirrhosis of the enlarged alcoholic liver, and of the ascites which may accompany it.

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ON DIPHTHERIAL STOMATITIS.*

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By diphtherial stomatitis is here understood a stomatitis produced by the diphtheria bacillus associated or not with other microbes. The term does not include cases in which the membrane or exudation is present on the uvula and adjacent soft palate, for this localisation of the lesion is included under faucial diphtheria and is not uncommon, although in such cases the tonsils are mostly also implicated. Diphtherial stomatitis is therefore restricted to cases in which the characteristic lesion is situated on the inner side of the lips or cheeks, the floor of the mouth, tongue, or hard palate. It may be either primary or secondary, according as the membrane or exudation appears first in these situations or follows upon a faucial diphtheria. The following are instances of primary diphtherial stomatitis:

CASE I.—A man, aged 35, had been ill for some five or six days with soreness of the mouth and gums, and fœtor of the breath, but there was no change from the normal in the temperature, pulse, or respiration. Two elongated patches of membranous exudation appeared on the under surface of the tongue parallel to the frænum. The tongue was not swollen. It was thought at first by Dr. Hawtin, who was in attendance, that the case might be one of mercurial stomatitis, but the patient had not taken any mercury, nor was there any evidence of syphilis. In addition to the appearances above named, there was also a patch of membrane on the inner side of the lower lip when I saw him a few days later. The patches were made up of a thick dirty-white looking membrane and a bleeding surface was left when the membrane was stripped off. The glands under the jaws were slightly enlarged. The patient was treated with disinfectant mouth washes. A bacteriological examination was made of the membrane, and a short bacillus obtained from it having the morphological appearances of the short diphtheria bacillus. It stained unevenly, often presenting a lighter centre with a constriction opposite this centre. It gave Neisser's reaction. The individual bacilli were often arranged in parallel fashion. As very little change was noticed in the mouth during the next few days, 2,000 units of antidiphtherial serum were injected. In a day or so the patches of membrane gradually became less and eventually disappeared, so that the patient was well in a week.

There were one or two difficulties in this case. As regards the bacteriological examination, it might be urged that the bacillus found was the so-called pseudo-bacillus. The short diphtheria bacillus is admittedly much more apt to give rise to doubt as regards its identity than the long segmented form. To those who recognise the pseudo-bacillus as such, the distinctions between it and the short diphtheria bacillus are based on several features, but more particularly on its non-pathogenic properties. Unfortunately no experiments were made upon this point in my case. As mentioned above, the micro-organism gave Neisser's reaction, but all are not by any means prepared to look upon this reaction as distinctive of the diphtheria bacillus. To sum up, in the above-named case a bacillus was found morphologically indistinguishable from the short diphtheria bacillus, and this microbe was obtained from a lesion bearing all the appearances of diphtherial membrane. Under these circumstances, I think it right to conclude that the micro-organism was the bacillus of diphtheria.

The clinical difficulty consisted in the absence of general symptoms. Nevertheless, cases of unquestionable diphtheria are occasionally seen where there is a more or less complete absence of general symptoms. There are also well-authenticated cases of membranous rhinitis due to the diphtheria bacillus where there have been absolutely no other symptoms than the slight local ones. From some such cases true faucial diphtheria has been known to arise in other members of the household. This absence of symptoms has been mentioned by some writers on diphtherial stomatitis (Forchheimer,[1] Goodall,[2] and others). The first-named observer says that diphtheria of the mouth, when primary, may run its course insidiously, and is overlooked or is not recognised until further complications develop. The absence of general symptoms cannot therefore be looked upon as excluding diphtheria.

CASE II.—A girl, aged 15, was suffering from what Dr. Shaw, her medical attendant, thought was an ulcerative stomatitis. A swab was forwarded to the laboratory of the Leeds Medical School. The diphtheria bacillus was obtained from it by cultivation. The case was removed to the Fever Hospital, and by the kind permission of Mr. A. E. Pearson, the medical superintendent, I saw the child there on January 28th. There were at this time five patches, three on the upper and two on the lower lip on the inner side. The longest patch was oval, about ¼" in diameter, of a whitish blue colour, and intimately adherent to the mucous membrane. A swab was taken from one of the patches. The child was observed to be constantly wiping the patches with her handkerchief. Mr. Hardwicke, the assistant medical officer, kindly forwarded me this handkerchief for examination. Tubes containing coagulated hydrocele fluid, sheep's serum, and agar respectively were inoculated from the swab. An abundant growth of the diphtheria bacilli was present in the serum tube in about seventeen hours, and a sparse growth in the hydrocele tube. A typical Neisser's reaction was obtained. The growth on the agar tube consisted almost exclusively of the staphylococcus pyogenes aureus. After several attempts the diphtheria bacillus was separated out and obtained in pure culture; the difficulty consisted in the agar plates being constantly overgrown with the staphylococcus. This was no doubt due to the fact that what appeared to be a single colony of the diphtheria bacillus really contained some staphylococci, as was proved on more than one occasion by microscopical examination. The bacillus was eventually grown on the various media, and all the varieties (long, short, medium-sized, as well as the long and short clubbed forms) were obtained. Six small pieces were cut out of the handkerchief mentioned above, and hydrocele tubes were inoculated from them. In each case a short diphtheria bacillus was obtained. The other microbes present were the staphylococcus aureus and the sarcina lutea. In three weeks' time six more tubes were inoculated as before, and the short bacillus again developed in all the tubes.

The staphylococcus now hardly grew at all, but the sarcina abundantly. It was thus quite easy to plate out the diphtheria bacillus, and to obtain it in pure culture. Various media were inoculated, and the different morphological forms were obtained. Thus inoculation was successively made upon hydrocele fluid, agar, glycerine agar, and glucose agar. Specimens prepared from the last-named medium showed diphtheria bacilli of all lengths, including some enormous clubbed forms as well as short clubs. Taking into account the morphological appearances and the staining reactions, as well as the characters of the colonies on the various media, I do not think that the micro-organism which was obtained both from the swab and also from the handkerchief could be any other than the true diphtheria bacillus. [A similar examination of the handkerchief was made at the end of a further two and four weeks respectively with similar positive results.]

The subsequent history of the case, kindly furnished to me by Mr. Hardwicke, was as follows: The patches remained in the same state for about a week; they were then frequently painted with carbolic acid in glycerine (1 in 10). They rapidly diminished in size, and the patient left the hospital quite well on the thirty-sixth day of the disease. There were never any general symptoms, nor was there any albumen in the urine.

Case II was undoubtedly one of genuine diphtherial stomatitis. So far as was known, the child had not been exposed to the diphtherial infection. The ease with which the diphtheria bacillus could be obtained from the handkerchief afforded a striking illustration of one possible method of spread of the disease. The handkerchief kept in a sterilised bottle contained living diphtheria bacilli seven weeks after the child had last used it. I intend to further examine it from time to time until I obtain negative results. It was also interesting to note that the staphylococcus aureus perished before the diphtheria bacillus.

A primary genuine diphtherial stomatitis is undoubtedly very rare. Many textbooks hardly mention it. In Baginsky's recent work upon diphtheria it is only barely referred to. The best accounts that I have been able to find of it have been by Henoch,[3] Forchheimer,[1] Schech,[4] Sanné.[5] Henoch says that diphtheria may begin upon the mucous membrane of the lips as greyish white patches (ultimately becoming confluent) which resemble the plaques of aphthous stomatitis. In one case seen by him the disease began on the mucous membrane of the lips, then spread to the tongue and finally proved fatal by laryngeal complications. In three cases seen in his clinic Henoch thought that the diphtherial infection must have ensued upon erosions in the mouth. In two cases which he refers to the disease affected the floor of the mouth and the ligaments of the tongue, and one of these cases recovered. Forchheimer has seen two cases in which a primary diphtherial stomatitis spread to the larynx. Schech says that he has also seen two cases. In one case the patient had used a

* A paper, with some additions, read before the Yorkshire Branch of the British Medical Association, January, 1900.

tooth-brush belonging to an individual who had diphtheria. While admitting the error committed by Bretonneau and first refuted by Bergeron[6] of looking upon ulcero-membranous stomatitis as genuine diphtheria, Sanné in 1876 recognised and described a genuine diphtherial stomatitis which might be not only secondary but also primary.

On the other hand, Holt[7] says that in his experience diphtherial stomatitis has always been associated with deposits upon the tonsils and pharynx.

Recently Goodall[2] has related a case in a woman, aged 36 in whom there was a diffuse swelling in the floor of the mouth, and a fold of membrane was seen running antero-posteriorly on each side. There were no general symptoms and no fœtor *ex ore* except that from carious teeth. A wedge-shaped piece was excised. A fibrinous exudation was present in which numerous bacilli having the characters of the diphtheria bacillus were found. No cultivation experiments were made.

Flexner[8] gave details of two cases in which membrane or exudation was found in the mouth during the last few days of life, death being due to other causes. In one case of a man, aged 67, with granular kidney, the lesion was present on the lips and gums. The diphtheria bacillus was found, but experiments showed it was of only slight virulence. In the other case, in a man aged 37, the lesion was on the lips. The diphtheria bacillus was found, but its virulence was also small. In the ward where the first patient was, a nurse developed characteristic diphtheria.

Wharton[9] recorded a case in a boy aged 6. There was a patch of membrane on the tongue, which latter was much swollen. A deep incision was made into the tongue, as pus was suspected, but none was found. The glands were swollen, and the temperature 101°. The patient recovered. The bacteriological examination was made by Revenel and A. C. Abbott. Diphtheria bacilli were found, which were fatal to a guinea-pig in seventy-three hours.

Thiercelin, quoted by Jurist,[10] saw a case in a woman aged 30, in which the membrane was situated on the under surface of the tongue and floor of the mouth. The glands were enlarged, and there was much fœtor of the mouth. The diphtheria bacillus was obtained by cultivation from the lesion.

It is interesting to note that the diphtheria bacillus has been discovered in noma of the mouth. Freymuth and Petruscky[11] related such a case in a boy aged 8, who was convalescent from typhoid fever. Here the disease involved the mucous membrane about one of the upper teeth and the corresponding part of the cheek. A thorough bacteriological examination was made by Petruscky. It may be mentioned that the same authors[12] had previously recorded a case of noma of the vulva and diphtheria of the fauces. The diphtheria bacillus was also found in the vulvar lesion.

Both these cases were treated with antidiphtherial serum, and both recovered.

It is thus obviously important to bear in mind that the diphtheria bacillus (associated with other microbes) may possibly cause noma.

Secondary diphtherial stomatitis is also rare but is commoner than the primary form. Some authors like Schech,[4] Lewis Smith,[13] Henoch,[3] say that it mostly begins in fissures and ulcers already present in the mouth. The membrane may be found on the inner side of the cheek, tongue, lips, and has sometimes been known to extend beyond the mucous membrane of the lip on to the skin (Osler[14]). The presence of the diphtheria lesion in the mouth as well as on the fauces is usually taken as indicating a severe attack of the disease. Quite recently I saw a case of this kind with Dr. Umanski (Leeds) in a child, aged 4. The whole of the uvula and soft palate were covered with membrane. There was a patch of membrane on the inner surface of the lower lip about the size of a threepenny-piece. The child died about the fifth day of the disease. It was injected with antidiphtherial serum (4,000 units), but this treatment was only begun late in the disease, within the last twenty-four hours of life.

Among 400 cases from which I have examined material from suspected diphtheria during the last two years, in only 4 was the membrane stated to be in the mouth. In 2 of these (Cases I and II) the diphtheria bacillus was found. In the other 2 cases a staphylococcus and a streptococcus with the staphylococcus respectively were alone found. Serum or hydrocele fluid media were used in all cases.

Diagnosis.

The question naturally arises as to whether it is possible to have a membranous or ulcero-membranous stomatitis which is due to some other cause than the diphtheria bacillus. The result of the teaching of the Tours School was such that for many years cases of ulcero-membranous stomatitis were looked upon as diphtheria until Bergeron proved that an ulcero-membranous stomatitis occurring in epidemics among soldiers was not diphtherial in character. Sevestre and Gastou[15] showed in 1891 that the staphylococcus pyogenes aureus could give rise to an ulcero-membranous stomatitis. Mongour criticised the results obtained by Sevestre and Gastou, and one objection raised by him carries with it great weight. The authors only used agar or gelatine media, and not serum. In Case II, certainly and probably also in Case I, the diphtheria bacillus would have been overlooked if serum media had not been employed. Notwithstanding this it appears to be proved that the staphylococcus can set up a membranous or ulcero-membranous stomatitis.

More recently Beco[16] described a diphtheroid stomatitis. Out of 13 cases, 7 were observed in the convalescent stage of scarlet fever. In nearly all cases he found the staphylococcus aureus. It is stated that the small plaques of membrane could be picked off with the forceps. I do not propose to discuss the exudation or membrane found in the throat in some cases of scarlet fever. The streptococcus has been frequently found in it, but in some cases of the combined scarlet fever and diphtheria infections the diphtheria bacillus has also been present.

Hall[17] recorded a case in a girl, aged 19, with acute nephritis, in which there was membrane on the tongue and also on the inner side of the cheeks and lip. Dr. Alexander found the staphylococcus aureus and albus present. Some twelve years ago E. Fraenkel[18] stated in an interesting contribution to the study of aphthous stomatitis that he had found the staphylococcus citreus in 2 cases and the staphylococcus flavus in 1 case of this complaint. He supported by his pathological investigations Henoch's view that the earliest stage of aphthous stomatitis is not vesicular, but that the lesion consists of a fibrinous exudation. It is also interesting to note in this relation that Rupp[19] saw a case in an infant, aged 22 months, in whom there was diphtheria of the fauces and aphthæ on the lips, tongue, and floor of the mouth.

Jurist[10] has recently recorded a case in which the floor of the mouth and under surface of the tongue were covered with thick membrane. A careful bacteriological examination was made by Dr. A. C. Abbott, but only the streptococcus was found. Bernheim[20] has also described a diphtheroid stomatitis which might be mistaken for diphtheria. He investigated 30 such cases. The microbe found presented several points of resemblance to the diphtheria bacillus. The author was, however, quite unable to cultivate it on the ordinary media in use.

There can thus be no doubt that a membranous stomatitis may be due to several different microbes, including the diphtheria bacillus, and that it may be impossible to distinguish a genuine diphtherial stomatitis from other forms (conveniently classed at present as diphtheroid stomatitis) by a mere inspection of the mouth or by the presence or absence of general symptoms. Hence the importance of making a bacteriological examination in cases of membranous stomatitis in order to recognise the actual contagium of the disease, and to isolate the cases of genuine diphtherial stomatitis. The ease with which this last-named disease could be spread is well illustrated by the second of my cases recorded above.

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SWELLING OF THE EYELIDS WITH INTERMITTENT ALBUMINURIA IN CHILDREN.

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Two papers have recently appeared in the pages of the BRITISH MEDICAL JOURNAL upon the presence of traces of albumen in the urine in the "apparently healthy." The subject is an important one, and though the following notes of cases of intermittent albuminuria are incomplete, they may be of interest. The term "apparently healthy" could not perhaps be applied with justice to the general condition of the children who were the subjects of this albuminuria, but they were not distinctly ill. In popular language they would be described as weakly or delicate. The aspect was that of listlessness, associated on some days with a swelling of the eyelids, which was absent on others.

Although some children who present swelling of the eyelids may be found to have occasional traces of albumen in the urine in others repeated examination of the urine may fail to discover it, but I have seen one case of intermittent swelling of the eyelids in which albumen was always present in the urine, and yet the child did not seem to suffer worse health than those whose urine was always free.

The three following cases are examples of swelling of the eyelids associated with the occasional presence of albumen in the urine.

CASE I.—A boy, aged 4½, attended the out-patient department of the Bristol Hospital for Sick Children on April 13th, 1898, with very marked swelling of the eyelids. The upper eyelids, moreover, were markedly discoloured, being yellowish-brown, like a disappearing bruise. Below the left lower eyelid there was a purplish tinting. The mother stated that eighteen months before the eyelids had been similarly "puffed up." The recent swelling had been present for six weeks, but had varied in amount, sometimes disappearing altogether. There was no œdema of the legs. Urine passed in the out-patient room did not contain the faintest trace of albumen. On April 18th two specimens of urine were examined—one passed the same morning, the other in the middle of the previous day. There was a trace of albumen in the morning urine, but none in the other specimen. The urines were tested twice carefully with the same result. On April 25th three specimens were tested, from the morning, evening, and middle day. No albumen was found in the first and third, but a trace was present in the second. The eyelids were less swollen. On October 18th, 1899, when I saw the boy again, he appeared to be in perfect health. No swelling of the eyelids had occurred since July, 1898. Two specimens of urine were afterwards obtained, and neither contained any albumen.

CASE II.—A boy, aged 10, who was brought to the hospital on January 30th, 1899, was rather thin and lethargic-looking, but intelligent. Nothing could be found wrong in the physical signs of the heart, lungs, or abdomen. On February 6th the mother mentioned that the boy's eyelids often became swollen. They were not swollen at the time; there was, on the contrary, a somewhat sunken hollow appearance about the eyes. Urine passed in the out-patient room contained no albumen. On February 20th three specimens of urine were tested: that of the morning and evening contained not the least trace of albumen, but that of midday gave a very marked ring with cold nitric acid. On March 6th and 28th three specimens were again tested, but they were all free from albumen. However, on October 12th, 1899, the boy was visited at his parents' home. He was still lethargic in appearance and disposition. Two specimens of urine were obtained, both of which contained albumen. The morning urine gave a very faint ring with nitric acid, but in the evening specimen the ring was very marked.

CASE III.—A girl, aged 10, attended the hospital on August 3rd, 1898, marked swelling of the eyelids and face was present. Nine months before, when she had seen me for the same affection, I had tested three specimens of her urine but found no albumen. On August 6th the swelling of the eyelids and face had disappeared. Of two specimens of urine examined, one, that of the previous evening, contained no trace of albumen, but the morning specimen gave a very marked ring with nitric acid, and on boiling, a deposit which was sufficiently abundant an hour later to occupy a third of the height of the urine in the tube. Apparently I did not examine the urine again, but the girl was seen recently. During the nine months that had elapsed since her visit to the hospital, swelling of the eyelids had occurred from time to time. Three specimens of urine were examined. There was no trace of albumen in the morning or in the evening urine, but that of the middle day gave a very marked ring with nitric acid.[1]

It should be stated that in none of the above cases could a history of scarlet fever be obtained.[2]

As I have previously mentioned, cases closely resembling the above are not uncommonly seen, in which there is occasional swelling of the eyelids associated with lethargy, but repeated examination of the urine may fail to show any albumen in the urine. The following two cases are examples:

CASE I.—A boy aged 10 was brought to the hospital on August 8th, 1898. He was stated "to be languid and easily got tired" and that his eyelids were puffy at times. There was some swelling of the eyelids on the day of his first visit. The urine passed in the out-patient room contained no albumen. On August 22nd two specimens of urine were tested, but no albumen was found in either. On September 19th two specimens were tested; no albumen in either. On October 3rd one specimen showed no albumen. The boy was seen again on October 12th, 1899, when the eyelids were still said to swell occasionally, and the boy's aspect was not that of good health. Three specimens of urine were tested; all were free from albumen.

CASE II.—A girl aged 7 attended the hospital on October 11th, 1899. She was brought up for general weakness, and was said to suffer from headache. For two years there had been occasional swelling of the eyelids, especially in the morning. The swelling was said sometimes to be very marked, and when it passed away left a discoloration like that of a bruise, especially in the right eye. During subsequent visits five specimens of urine were tested; two passed in the morning, two in the evening, and one in the middle day. All were free from albumen.

In the following case albumen was apparently always present, yet the general condition of the child did not seem to be worse than that of most of the preceding.

Case of Occasional Swelling of the Eyelids in which Albumen was always Present.—A girl, aged 3, was brought to the hospital on September 3rd, 1896, with a history of having had occasional swelling of the eyelids for over a year. There was no history of scarlet fever. At the time of the first visit the eyelids were markedly swollen, but on the second visit the swelling had disappeared. The urine, however, was found to contain albumen and the child was admitted. The urine was frequently tested and albumen was always found to be present, but the amount was "variable." Three years later the child was again seen. She was then thin and delicate-looking, with a somewhat sunken appearance about the eyes. The eyelids, however, were said to still swell occasionally, but the right eyelid more than the left. The right hand and right foot were also said to swell at times. The swelling was said to come on after some unusual exertion, such as "dancing round a barrel organ" or after excitement such as a quarrel with her brother. Four specimens of urine were examined; all contained albumen.

In an interesting paper upon albuminuria in children Le Gendre[3] speaks of the presence of intermittent albuminuria. His description of the children in which it occurs could be well applied to most of the above cases, whether albumen was present or absent. They are said to be "ailing, pale, and tired, and to take no pleasure in play." The sister of one boy, the subject of occasional swelling of the eyelids, who attended the Bristol Hospital for Sick Children, said it was a standing joke against him that his play was to "watch the pigeons."

In England transient albuminuria in youth rather than in childhood has attracted attention. Dr. Clement Dukes has frequently written papers upon the subject. At first Dr. Dukes was disposed to think lightly of the presence of traces of albumen in the urine occurring occasionally, but later expressed a less favourable opinion as to the probable prognosis.[4] The frequency with which Dr. Stirling[5] found albumen present in boys—in 12·8 per cent. of those in training ships—would suggest that the mere existence of albuminuria need not indicate organic disease. It is inconceivable that all the boys who were the subjects of this mild form of albuminuria had lesions of the kidneys. Probably the albuminuria was in most instances of the nature of the "exertion albuminuria" of Dr. Herbert Hawkins. That work or strain was in great measure responsible for the appearance of the albumen is suggested by the fact that the percentage of cases of albuminuria was much higher in boys who played in the band. While, however, in children, as in adults, albumen may appear under some circumstances in the healthy; in others it may indicate deviation from the usual health, or from what we may call a healthy standard. It is difficult to say whether some children, whom we describe as delicate, are the subjects of a mild form of chronic disease, or whether they have been born with a constitution fitted only to take life quietly. Intermittent albuminuria may be considered to be either pathological or constitutional. The swelling of the eyelids associated with it is suggestive of nephritis, but the fact that similar swellings frequently occur without any albuminuria, seems to indicate that the albuminuria when present is comparatively unimportant, and merely a symptom of a condition that has not its primary seat in the kidneys.

It is probable that there is a form of nephritis that commences insidiously, and is seen eventually on the *post-mortem* table as the variety of the small white kidney to which Dr. Rose Bradford has drawn attention. This kidney, when it occurs, is most frequently seen in young adults. Usually there is nothing in the history to indicate when the disease commenced, but it is perhaps reasonable to suppose that some cases have existed from childhood. This form of nephritis is, however, rare; too rare, I think, to be a sequel of the majority of cases of intermittent albuminuria in children.

Examination of cases in which intermittent albuminuria

has been known to exist for several years may throw light upon the nature of the ailment, but until it has been proved that the prognosis is serious I should wish to look upon the occasional appearance of albumen in the urine, and the swelling of the eyelids associated with it, as evidence of some vasomotor instability or defective metabolism.

Notes and References.

[1] Cold nitric acid is mentioned as the test used, but where a ring with nitric acid was obtained there was also a precipitate on boiling in every instance. [2] A fourth case of swelling of the eyelids with intermittent albuminuria occurring in a boy, aged 10, is at present under my care at the Brisfol Children's Hospital. [3] *Medical Week*, 1895, p. 25. [4] *Lancet*, 1891. p. 1323. [5] British Medical Journal, i. 1889, p. 807; *Lancet*, ii, 1887, p. 1157.

THE SEAT OF PAIN IN BILIARY COLIC.

By J. H. KEAY, M.A., M.D.,
Greenwich.

In that comparatively small region of the body that lies between the diaphragm and a line drawn at the level of the umbilicus is to be found a large proportion of those diseases that call for treatment in everyday practice. The close proximity and intimate connection between such important organs as the stomach, duodenum, pancreas, liver, gall bladder, and bile ducts, and the fact that these organs can for the most part be only indirectly explored, render the diagnosis of disease in that region specially difficult. Not seldom do the most skilled and careful investigators find great difficulty in deciding whether they have to deal with a case of ulceration or malignant disease of stomach, contraction of pylorus, malignant or other disease of the gall-bladder and bile-ducts, or even a wandering kidney or appendicitis. As these various diseases demand such different treatment, medical and surgical, any contribution, however slight, that may serve as a guide to a correct diagnosis, may not be unacceptable.

A long and painful experience of biliary colic, a careful observation of the seat of pain before calculi were at various times passed, and, as was natural, a more than usually minute inquiry into the symptoms of those who have similarly suffered, have led me to the conclusion that the seat of pain has seldom, if ever, been correctly described in text books. The description given by Naunyn, Mayo Robson, Kehr, Waring, and others, is mostly in the same terms. It would be too tedious to quote what is said by the many writers on the subject. Naunyn's description comes nearest to my own personal experience, and to what I have observed in others, but does not quite accord with it:

> The pains usually commence in the epigastrium and afterwards spread into both hypochrondria and to the back, while they are often felt not only to the right but on both sides of the vertebral column. Sometimes they extend upwards to the head and neck, or downwards to the lumbar, and even to the sacral region. Now and again they radiate into the upper part of thy thigh and along the arms even to the finger-tips.

It may seem absurd that from my own personal experience, and an inquiry into only a limited number beyond those I have met with during over twenty years of private practice, I should call in question statements made, for example, by Kehr, whose book recently published gives an account of the 433 operations he has undertaken during the past few years for diseases of gall bladder and bile ducts. But, as Kehr himself admits, his cases were mostly operated on a day or two after they came to his clinic, and he further insists that if we are to arrive at a right appreciation of those symptoms that lead to diagnosis of gall stones, we must look not to the surgeon or consultant, but to the medical man who is called on to treat the patient when acutely suffering, and is in daily or it may be hourly attendance.

I do not know that I can better express my own experience than by giving the statement of a patient who has long suffered from biliary colic, and refused operation. In answer to a leading question suggesting that the pain must be over the gall bladder, she answered, "You know better. When the pain begins there I know I am to have a slight attack, and don't mind it much; but I know I am in for it when the pain begins in the back." If patients were not influenced by the suggestion of the medical attendant that the pain is in the region of the gall bladder, or questioned about it afterwards, when, even if otherwise observant, the severity of the pain or the effect of opiates has dimmed the recollection, but asked to carefully note during further attacks the onset, progress, and disappearance of the pain, I think it would then be found that my experience is by no means unique. Long before an acute attack there are generally pains in the back often mistaken for lumbago or some spinal mischief; but when a calculus is fairly lodged and trying to find its way through the bile ducts the pain begins about the tenth or eleventh dorsal vertebræ, gradually passes round, and though not quite disappearing, gives place to excruciating pain in the right and often in the left hypochondrium, middle or lower abdomen, frequently above the right nipple, but practically never the right shoulder. Immediately before the pain subsides, and when in all probability the stone is just entering the duodenum, a peculiar gliding sensation is sometimes felt about two inches to the right of the tenth to twelfth dorsal vertebræ.

That pain often begins in the right hypochondrium and then radiates elsewhere I readily admit; but I have not found these attacks followed by the passage of gall stones, and in carefully going over the history of numerous cases operated on by Kehr, I cannot but conclude that this pain is practically always due to the fact that the gall bladder is distended with calculi, unhealthy bile or pus, that there is hour-glass contraction, or a localised peritonitis or adhesions.

When a medical man is called to a patient suffering from the passage of a biliary calculus, the pain may be shooting, tearing and dragging in all directions, and the torture so exquisite, that little can be learned from the patient as to past history or the nature or seat of pain, a diagnosis is by no means easy. In my experience, however, a whiff of chloroform not sufficient to produce unconsciousness will often remove the difficulty. Under chloroform the distant or referred pains gradually cease, and the order of cessation to anyone cool enough to observe it is often interesting, and there remains only a distinctly localised pain at the bile ducts. This is what one might naturally expect from the similar effect of chloroform on neuralgia proceeding from a carious tooth, or sciatica when the pressure is on some particular part of the nerve.

NOTES ON A CASE OF BRIGHT'S DISEASE COMPLICATED WITH GANGRENE.

By ALEX. D. H. LEADMAN, L.R.C.P.Edin., etc.,
Pocklington.

The extreme rareness of gangrene in Bright's disease leads me to think that it will be worth while to record the following case. During an experience of more than thirty years I have never seen a case like it, nor can I find any record of one.

Early in March, 1899, I was called to see Mr. G. S., a gentleman aged 46, strong and active, widely known in agricultural circles, and the representative of a long line of highly respected owners of the estate on which he lived. The symptoms at first were bronchial, following an attack of influenza, for which he had treated himself previous to sending for me. As swelling of the legs came on, the urine was examined, and found to be: specific gravity 1010, with much albumen and slight sugar. He was most unwilling to lie in bed, and would not only walk out, but also superintend and even help with the work. One day, after some unusual exertion, the heart's action became very irregular. There was no murmur, but very tumultuous action, intensified at times, and causing attacks of dyspnœa. At last he was prevailed upon to lie in bed for fourteen days, during which time the sugar entirely disappeared, the albumen lessened in quantity, and the heart's action improved so much that he could lie down night by night in comfort. He got comparatively well, able to go about, take long journeys, and act as judge at several large agricultural shows. The general treatment was nutritious food, warm clothing, avoidance of chills, cheerful company, change of scene, and an effervescing saline, in which digitalis largely figured. He called at my house periodically, and remained under continuous treatment the rest of the year, during which period the albumen on two occasions nearly disappeared. I advised removal to a warmer climate and a more level country, but this he would not hear of, as he preferred his native home in the bosom of the Yorkshire Wolds.

On January 14th, 1900, I was invited to dine with him but was prevented. Two days later I received an urgent letter to visit him. The friends I was to have met on that Sunday told me how ill he seemed to be then. When I saw him the legs were very much swelled, there was intense dyspnœa, with tumultuous action of the heart. He was at once sent to bed. The urine was scanty, specific gravity 1010, highly albuminous, but no sugar. There was no atheroma of the arteries. On January 24th I met Dr. Parkin, of Hull, in consultation. Our prognosis was unfavourable. On February 6th, whilst Mr. S. was washing himself close to the bed, violent pain came on suddenly in both legs. He could not move, and had to be helped back to bed. The

legs became icy cold, and it was some time ere warmth came back. Of course I suspected gangrene and treated it accordingly. On February 7th gangrene commenced to invade not only the foot but above both knees. On February 8th I met Dr. Parkin again, when it was still spreading up the thighs. There was not the slightest pulsation in either femoral artery. So things went on from bad to worse. On February 24th I had another consultation with my old friend, Mr. Teale, of Leeds. On February 27th septic symptoms set in, there were severe rigors, delirium, etc., whilst nourishment, which up to February 24th had been taken well, now was often refused. On March 1st uncontrollable diarrhœa set in, with occasional vomiting. On March 4th there was extreme tympanites, and from this day nothing but a little weak whisky and water was swallowed in teaspoonfuls only, until the end came on March 10th at 10.30 A.M. The urine was examined from time to time, the last taken two days before death, with the same result; specific gravity 1010. Copious albumen—in a column of urine 4 inches high in the test tube one-half would be albumen of such solidity that if turned upside down it would remain unbroken—no sugar. Before death the gangrene spread over the whole of both lower extremities, whilst from above the knees downwards mortification was complete.

I returned the causes of death: Chronic interstitial nephritis, two years; hypertrophy of the heart, ten months; occlusion of the lower part of the abdominal aorta, causing gangrene of both lower extremities, one month; and consequent exhaustion, six days. I must add that this gentleman was not in any way a drinker, in fact, he was most abstemious, but being an inveterate sportsman, he had over and over again been out shooting his own covers, and away with friends on wet days, and many a time had never changed his clothes. No *post-mortem* examination was obtained.

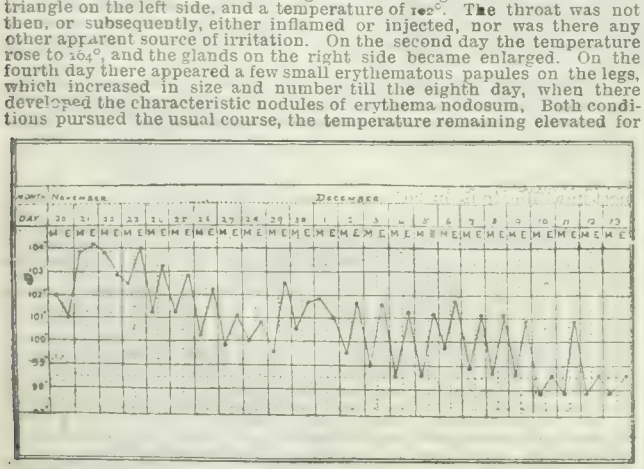
A CASE OF GLANDULAR FEVER ASSOCIATED WITH ERYTHEMA NODOSUM.

By BERTRAM THORNTON, M.R.C.S., L.R.C.P.,
Surgeon to the Royal Sea-Bathing Hospital, Margate.

THERE is a condition of enlargement of the glands of the neck, associated with certain definite symptoms, which is described by Dr. Dawson Williams in Allbutt's *System of Medicine* under the name of "glandular fever" (*Drüsenfieber*).

The clinical history of this disease is fairly familiar, but the causation still remains obscure. The general description of its course and symptoms, however, appears to suggest some constitutional infection. It is, of course, impossible to draw reliable conclusions from an isolated case, but the association of this disease with erythema nodosum in the case I am about to record was sufficiently remarkable to suggest that the poison of rheumatism may have produced both the enlargement of the cervical glands and the erythematous nodules.

G. W., a healthy girl, aged 5½, with a family history free from tubercle or rheumatic fever, was accidentally found to have a mitral systolic *bruit* in March, 1899; this was attributed to a vague indisposition in the previous year for which no medical advice had been sought. On November 20th, 1899, the child was suddenly taken ill with stomach ache, severe pain in the neck, followed by enlargement of the glands in the anterior triangle on the left side, and a temperature of 102°. The throat was not then, or subsequently, either inflamed or injected, nor was there any other apparent source of irritation. On the second day the temperature rose to 104°, and the glands on the right side became enlarged. On the fourth day there appeared a few small erythematous papules on the legs, which increased in size and number till the eighth day, when there developed the characteristic nodules of erythema nodosum. Both conditions pursued the usual course, the temperature remaining elevated for



about 26 days, when the nodules disappeared and the glands began to subside. Anæmia was early and marked; perspiration was considerable and of distinctly rheumatic character; at first there was constipation and latterly slight mucous diarrhœa. Convalescence was slow, the debility and anæmia being very persistent, and it was fully three months before the child regained her normal health, the glands on the left side having completely subsided. Sodium salicylate was given on the first day the erythematous papules were observed, but without apparent effect. The marked anæmia and debility that persist after glandular fever are special features of this disease; they are also special features of the convalescent stages of acute rheumatism. An acute local adenitis due to some obvious lesion in the throat, mouth, or elsewhere is not as a rule associated with such prolonged debility and anæmia, and it is usually unilateral. This leads one to search for some general systemic infection to account for the symptoms. Acute tuberculous enlargement of the cervical glands is, in my experience, not associated with such persistent anæmia and debility. Incidentally I should like to express my opinion that there seems to be too great a tendency to consider that most enlarged cervical glands are necessarily tuberculous; owing to this tendency operations are not infrequently urged before the glands have had a fair chance to subside with the assistance of good food, abundance of fresh sea or mountain air, and bright sunshine. Enlarged glands, whether tuberculous or otherwise, should have, if possible, several months of open-air treatment, unless there is some decided call for operation.

In the particular case which has been described above the rheumatic poison is, to my mind, strongly suggested as the cause of the typical attack of glandular fever; whether it may also be the source of the disease in other cases further observation will doubtless show.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

AMPUTATION WITHOUT ANÆSTHESIA.

IN the BRITISH MEDICAL JOURNAL of March 31st, page 761, is an interesting memorandum under this title from Mr. Jasper Cargill, L.R.C.P.Lond., of Monathie, Jamaica, in which he describes a case of amputation of the leg of a black woman, between 30 and 40 years of age, after the ill-effects of chloroform had passed off, and the natural sensibility had been restored,

Mr. Cargill reports that, on being informed "that the operation would not be proceeded with, and why," his patient calmly said, "Please cut it off, doctor; I can stand it without chloroform." The leg was afterwards removed, dressed, etc., without the slighest movement or the utterance of a groan from the woman.

Now some people may be ready to exclaim that in the negro race there must be some obtundity of sensibility, the colour of the skin indicating a less advanced development, and consequently less resolution or heroism is necessary for the endurance of acute suffering. But is it so? My experience is antagonistic to such a theory.

Unlike Mr. Cargill, my surgical days were in the "ante-anæsthesia," as well as since that wonderful evolution in the science and art of our noble calling; and I remember, after ether and chloroform were known as pain-annihilators, having to amputate the breast of a highly-refined lady of the pallid, nervous temperament, and nearly 40 years of age, who objected to take chloroform, fearing its lethal consequences.

During the operation she never moved and never said "Oh!" but simply compressed her lips. She quietly smiled or said "Thank you" when all was over. Did that lady not feel acutely? Certainly she did; and her suffering must have been intense, but her moral courage was so much under the influence of an invincible petticoat government which regulated all her actions that the operator could only wonder and admire, and wish that she and all such women were the mothers of all the masculine world.

One man I once saw with a kindred nerve, but he was a big athlete who had so injured one of his fingers that I deemed amputation imperative. When told so he replied, "You know best; get to work." I suggested ether, but he would have none of it, and the idea of pain he laughed at with scorn, and kept laughing and joking all the time I was operating, the legitimate minute being prolonged through the splitting of our sympathetic sides.

What is pain? Some of your very philosophic penmen can perhaps tell us, and guess what the people are made of who can suffer and smile at the same moment, and with apparently equal enjoyment or ease.

Hove, Sussex. D. MACKINDER, M.D., F.R.C.S.E.

IN the BRITISH MEDICAL JOURNAL of March 31st Mr. Jasper Cargill reports having amputated the leg of a black woman below the knee without an anæsthetic. As I too have had to operate

under similar circumstances, a short report of the case may have some interest.

My patient was a large stout woman, 70 years of age, who had for years had a mitral obstructive murmur. In the year 1880 the late Mr. Young amputated her right leg above the knee for gangrene without an anæsthetic. Two years after she developed gangrene in the left leg produced by occlusion of the popliteal artery. She was not a person that could bear pain patiently, for during the development of the disease I was obliged to push opium until her daily allowance was 12 grs.

From her former experience she was fully aware that her leg could not be saved, and told me from the first that I was on no account to give her anything to "make her sleep."

As chloroform was the anæsthetic she dreaded, I did my best to persuade her on the evening before and on the morning of the operation to allow me to give her ether, as I did not at all relish the idea of operating without it; however, she stuck to her point, so there was nothing for it but to go ahead, which I did, amputating between the lower and middle thirds of the thigh, and from start to finish she never uttered a sound or moved in the very least.

She made a most excellent recovery. Strange to say—although I frequently tried to elicit some information from her as to her feelings during the operation—she absolutely refused to say one word on the subject to me or anyone else.

J. Campbell Hall, M.B.,
Surgeon, co. Monaghan Infirmary.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

COLONIAL HOSPITAL, PORT OF SPAIN, TRINIDAD.

EXCISION OF KNEE-JOINT IN A MAN AGED 51 YEARS: RECOVERY, WITH A USEFUL STRAIGHT LIMB.

(By E. A. Gaynes Doyle, L.R.C.P., M.R.C.S., Resident Surgeon.)

The following case is of interest on account of the advanced age of the patient at the time of operation.

R. G., aged 51, was admitted into the hospital on December 10th, 1894, with a history of a chronic swelling of the right knee, which he had had for a long while. He had a fall and hurt the same leg a few weeks previous to his admission. He was a fairly nourished man, with chronic enlargement and thickening of the right knee-joint, which was in a semi-flexed position; motion was limited, extreme flexion or extension not being possible. Manipulation gave much pain. The urine contained neither sugar nor albumen, and there was no organic disease of lungs or heart. Local applications and internal administration of the usual drugs, with gradual extension, were tried from December 10th, 1894, to February 13th, 1895, when I found that the symptoms were getting aggravated. There was loss of sleep, constant pain in the joint and leg, and a daily rise of temperature. The patient had lost his appetite, was getting thin and weak, and the joint was not smaller.

Under an anæsthetic I opened the joint by an anterior curved incision below the patella. The joint was completely disorganised, and infiltrated with pulpy matter. I excised the ends of the tibia and femur, and also removed the patella, scraping away as far as I could all the degenerate tissue. Owing to the weak condition of the patient's heart the anæsthetic (A.C.E.) had to be suspended several times. I was therefore unable to remove all the pulpy tissue. The parts were thoroughly washed with mercurial lotion—1 in 500—and the wound closed. The limb was then put up securely on a straight splint, with an interruption at the joint. The temperature rose to 102°F. on February 16th, but fell soon after to 99°F.

The wound healed kindly, but several abscesses formed around, and later, in the incision scar. These had to be opened after giving rise to much constitutional disturbance. Some of these abscesses contained a considerable quantity of thick pus. He was put on cod-liver oil, with syrup of the iodide and phosphate of iron.

On March 14th he had an attack of influenza, small abscesses still showing themselves. On May 22nd he had another attack of influenza, but on June 12th he was walking about, and was discharged June 25th, 1895, well.

I saw the patient some time in December, 1895, and again in 1896; he had picked up flesh, and was then apparently in good health, doing his work as manager of a sugar estate, having to be in the saddle the greater part of the day. The joint was quite straight, and I could not detect any movement between the bones. The appearance of the parts was highly satisfactory.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Alban Doran, F.R.C.S., President, in the Chair.

Wednesday, April 4th, 1900.

Incarcerated Retro-Displaced Gravid Uterus.

Dr. J. Munro Kerr (Glasgow) read a paper in which he pointed out that three varieties of backward displacement of the gravid uterus might be met with, namely, "retroflexion," "retroversion," and "partial or incomplete retroversion." Each form was illustrated by a case.

Case I.—An incarcerated, retroflexed, gravid uterus, which after several fruitless attempts at replacement righted itself. This occurrence was pointed out to be not very uncommon. Case II.—This case was reported in full by Professor Murdoch Cameron, in the British Medical Journal October 31st, 1896. It was one of incarceration of the retroverted gravid uterus, in which the uterus could not be replaced until Professor Cameron opened the abdomen, then performed cystotomy and emptied the bladder of a large quantity of blood clot. He then stitched up the bladder and abdomen. The pregnancy continued to full time. The treatment adopted in this case was discussed. Case III.—Partial retroversion (sacculation) of the gravid uterus caused by a myoma in anterior wall. Reduction of the displacement; continuance of pregnancy. The causes of this form of retro-displacement were described. Case IV.—Extrauterine pregnancy simulating and mistaken for a retroflexed gravid uterus. Some reported cases were referred to, and the differential diagnosis of the two conditions discussed.

The President had seen a case of retroverted gravid uterus in which the cervix was to the right and the elastic fundus to the left, exactly simulating extrauterine pregnancy, but a few days' delay cleared up the diagnosis. When examining such a doubtful case under anæsthesia, care should be taken lest a gravid tube be palpated roughly. He referred to Unterberger's case, where a gravid uterus, displaced by a fall in the first month, caused distension of the bladder, which forced open the urachus and allowed the urine to flow from the umbilicus. Rupture of an ovarian cyst through the umbilicus was diagnosed, but Unterberger emptied the suspected cyst by passing a catheter through the umbilical opening and another through the urethra. The uterus, retroverted and retroflexed, sacculated, and partially incarcerated, righted itself, and delivery occurred at the fifth month.

Dr. Arthur Giles had reported to the Society two cases in which extrauterine gestation had been mistaken for retroversion of the gravid uterus, and he now narrated a case which he had seen with Dr. Martin, of Clapham, where a retroverted uterus simulated ectopic gestation, The mass in Douglas's pouch was reduced under anæsthesia, and was then found to be distinctly bilobed, the left lobe feeling like a gravid tube. In a fortnight's time, however, the uterus had recovered its normal shape, and abortion ensued two months later.

Dr. Lewers criticised the treatment of the author's second case. He did not consider abdominal section should be recognised as a method of treatment. He had seen many cases at the London Hospital where the retention of urine had been extreme, over five pints of urine having been drawn off, and in at least two of these there was hæmaturia, but in none had abdominal section been suggested. His treatment was, after emptying the bladder, to replace the uterus, preferably under anæsthesia, or to encourage the uterus to rise spontaneously by rest in bed and regular evacuation of the bladder. Such spontaneous reposition was not unusual. In Professor Cameron's case (Case II) he suggested that the urethra might have been dilated and the clots removed by forceps and irrigation, and if the bladder had been kept empty for a few days,

and the patient kept in bed, he believed the uterus would have been spontaneously replaced.

Dr. Boxall emphasised the advantage of rest, and specially of anæsthesia, in reducing the impacted uterus. As an instance of spontaneous reduction occurring after rest in bed, he narrated a case of retroverted gravid uterus with a fibroid in the posterior uterine wall, which had been mistaken for an extrauterine pregnancy. He failed to reduce the uterus by gentle manipulation, but a few days in bed, followed by an anæsthetic, allowed the uterus to spontaneously regain its position. This at once revealed the true nature of the case.

Dr. Charles Morris referred to a case he had seen in the late Dr. Matthews Duncan's wards in which there was extreme retention of urine with hæmaturia. An entire cast of the bladder was subsequently passed *per urethram*, and complete recovery ensued. He thought few cases would call for abdominal section, the possible exception being where the uterus was bound down by firm adhesions, but in such cases abortion would probably take place at an earlier period than an operation would be contemplated.

Dr. Hubert Roberts asked if Case iv, where an extrauterine gestation had been diagnosed as a retroverted gravid uterus, was one of intraperitoneal hæmatocele following a rupture. He thought the best way to differentiate between these two conditions was, as Dr. Cullingworth had insisted, to examine bimanually under anæsthesia, when in the case of hæmatocele, the body of the uterus would be felt to be lying above the pubes in front of the swelling. Dr. Roberts did not believe that abdominal section could ever be necessary to effect reduction of a retroverted gravid uterus, and could find no evidence that such a course had ever been adopted at St. Bartholomew's Hospital.

Dr. Amand Routh had seen a case of impacted retroverted gravid uterus diagnosed as hæmatocele, but an examination under anæsthesia would always clear up the diagnosis. Every case he had seen had been capable of reposition without abdominal section. He had now in his ward at Charing Cross Hospital a case where retention of urine with this condition had persisted, with overflow, for the fourteen days before admission, and where 154 ounces of urine had been drawn off. It had taken three weeks for the bladder to nearly recover its muscular tone, and even now there was about an ounce of residual urine, and pus was still present in the deposit.

Mr. Butler-Smythe asked how long efforts at reduction had been persisted in previous to the operation in Case ii. He thought abdominal section in such cases was uncalled for, as it increased the risk to the patient.

Dr. Herbert Spencer had not yet seen a case of retroversion of the gravid uterus in which it had not been possible to replace the organ. Sometimes the replacement had not been effected at the first attempt, and sometimes the organ had righted itself after ineffectual attempts at replacement had been made. In some cases the replacement had at first not been complete (possibly owing to slight adhesions), but by rest, and keeping the bladder empty, the uterus had been enabled to return to its normal position. He considered that the only cases requiring abdominal section were those in which the retroverted organ was fixed by strong adhesions.

In reply, Dr. Munro Kerr admitted that cases requiring abdominal section were very rare, but there was absolutely no doubt that in some cases the uterus could not be replaced by the ordinary measures. As evidence of this he quoted Dr. W. Hunter's classical case where, at the *post-mortem* examination, the fundus could only be raised after the symphysis had been divided. Olshausen and others in such irreducible cases had advised extirpation of the organ, and Jacobs, after opening the abdomen, had only succeeded in raising the uterus after separating the dense adhesions which fixed it to the pouch of Douglas. He thought in these difficult cases abdominal section was preferable to either extirpation or incision of the uterus.

Specimens.

The following were shown:—Dr. Cullingworth: Incarcerated fibromyoma in an unusually young subject.—Dr. A. F. Stabb: Myxomyoma (? sarcoma) of uterus.—The President: Tubal mole with three-quarter inch fœtus, in perfect preservation.—Dr. W. Duncan: Tubo-ovarian mole.—Dr. Addinsell: Fibroma of the ovary.—Dr. Macnaughton-Jones: Ovarian cystoma complicating pregnancy.—Dr. Arnold Lea: Sarcoma vaginæ in a child aged 3 years, with microscopical section.

LIVERPOOL MEDICAL INSTITUTION.

Edgar Browne, F.R.C.S.Ed., President, in the Chair.

Thursday, April 5th, 1900.

Cases of Skin Disease.

Dr. Stopford Taylor exhibited (1) a case of dermatitis repens involving the back of the hand and fingers. The disease had been arrested, and was proceeding rapidly towards recovery under a dressing of powdered iodoform forcibly rubbed in with the finger. (2) A case of tuberculous ulceration of the skin on the right side of the neck corresponding to the shirt collar band. The ulcer was 6 inches in length and 2 in width, and had spread rapidly, having been in existence but four months.

Dr. T. R. Bradshaw showed a woman, aged 30, the subject of diffuse scleroderma. The condition was almost universal, but affected the hands and forearms to an extreme degree, the fingers being hidebound, and almost fixed in a position of slight flexion. The affection seemed to involve the sheaths of the flexor tendons, as was shown by the existence of creaking on passive movement. The onset was acute a year ago, and was marked by pain, redness, and swelling in the fingers.

Dr. F. H. Barendt considered this case to be typical of the disease; the pathological process involved brought scleroderma and Dupuytren's contraction of the palmar fascia—sclerodactyly—and those rheumatic nodules known sometimes as Heberden's nodes into the same category. He suggested the administration of thyroid extract, rapidly pushed till physiological reaction occurred. The prognosis was not always unfavourable; in fact cases were recorded where the disease not only was arrested, but a certain degree of involution took place.

Embolism of Mesenteric Arteries.

Dr. W. J. Allen related a case of embolism of the mesenteric artery occurring in a patient after a normal labour, and associated with mitral stenosis. Symptoms of collapse came on some time after delivery. There were no signs of hæmorrhage or rupture of the uterus to account for such collapse, and the condition was discovered on examination after death.

Femoral Aneurysm.

Mr. R. W. Murray showed a man, aged 40, upon whom he had operated for aneurysm of the femoral artery in Hunter's canal. The aneurysm was of recent date and was increasing; it was as large as the closed fist, and was buried in the thigh muscles. The general health was good and there was no sign of vascular disease. The sac was excised as far as possible after ligature of the artery above and below. The excision was only partial, owing to extensive gummatous infiltration of the adjacent structures. The man had resumed his work of ship's engineer.

Mr. K. W. Monsarrat remarked that the unusual site of the aneurysm was probably to be explained by the affection of the arterial walls having been secondary to the tertiary syphilis of the muscles in the vicinity and a direct extension from the latter.

Bulbar Paralysis.

Dr. T. R. Glynn exhibited a man, aged 39, with bulbar paralysis.

The duration of the disease was 16 months. The family history was good; there was a history of ague, but not of syphilis. The affection commenced with speech trouble, followed in three months by difficulty in deglutition. The tongue was completely paralysed, the seat of fibrillary tremors, and atrophied. Speech was lost, he emitted a laryngeal sound of nasal quality in answer to questions. The lips were partially separated and saliva escaped, the mouth was elongated laterally, owing to the action of the muscles of expression. The palate reflex was absent, the pterygoids were paralysed, the temporal and masseter muscles normal, vocal cords normal.

The case was one of amyotrophic muscular atrophy, there being atrophy of some of the intrinsic muscles of the hands, presence of masseteric reflex, over-extension of great toes, exaggerated on producing plantar reflex.

Colectomy.

Mr. George G. Hamilton showed a patient upon whom he performed the operation of colectomy for carcinoma of the sigmoid flexure, and advocated the use of Murphy's button in such cases, with special reference to the correct application of the button.

Thyroid Extract as an Emmenagogue.

Dr. Glynn read a note on the use of thyroid extract as an emmenagogue. He had met with many cases of young girls, who through slight developmental changes had a temporary amenorrhœa, or a delay in menstruation. In such cases the administration of thyroid extract in doses of ½ gr. once a day, generally given at bedtime, proved sufficient to re-establish or start the function of menstruation.

Dr. Wm. Carter observed that the cases mentioned by Dr. Glynn were those of young people, and from the well-recognised influence of the thyroid secretion on developmental changes, he thought that its effect in such might be different from those in people of mature age; as it had been established by Chéron, and his results had been copied into the most recent books on therapeutics, that a marked effect of thyroid extract was to diminish and even check all forms of uterine hæmorrhage.

Drs. Buchanan, Barr, Gemmell, and Wilson also took part in the discussion which followed; and Dr. Glynn replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Obstetrics.

A. V. Macan, M.D., President, in the Chair.

Friday, March 16th, 1900.

Rotunda Hospital Report.

Dr. Purefoy, in reply to criticisms,[1] said Professor Smith had suggested that some of the cases described as accidental hæmorrhage were more probably cases of low insertion of the placenta. Dr. Purefoy did not know that there was any good ground for that. It was true that when dealing with hæmorrhage in the sixth month of pregnancy it might be quite impossible to determine whether the placenta was low down or not. They examined the cases as carefully as possible, and the diagnosis in each case was confirmed. Dr. Smyly had formulated the very serious charge of introducing a new and unwise treatment of puerperal eclampsia. Dr. Purefoy failed to see how he deduced from the narration of the case any grounds for suggesting that they had adopted a new mode of treatment. They shared to the fullest extent Dr. Smyly's feelings as to the urgent need for obviating the grievous results to patients from the ignorance and stupidity of midwives. He was not sure that the establishment of a new register would deal with the difficulty or lessen the risks in any appreciable degree. Dr. Jellett referred to the abuse of the curette. Dr. Purefoy thought many cases of abortion could be treated with the finger. It was true that in the hospital the curette was used in a number of cases, but most of the cases coming in were cases of incomplete abortion, with a discharge for days before, and in that condition they were not beneficial occupants of a ward where there were other patients. As to the President's remarks *re* use of the curette in the treatment of abortions, he thought that probably the emptying of the uterus with the finger, which was possible in most of these cases, required more dexterity than treatment with the curette. He endeavoured, in speaking to the class, to impress how much could be done with the fingers. The President thought the forceps were used too frequently. Dr. Purefoy referred him to the report of the hospital which he (Dr. Macan) published in 1889, dealing with 1,000 cases. The percentage of forceps cases was five—distinctly above the percentage in the report. Regarding the occurrence of icterus, the President thought the percentage in infants ought to be 80. The report gave it as between 15 and 20, and they would not concede that the returns were not as accurate as any similar ones.

Atmokausis and Zestokausis.

The President read a paper on atmokausis and zestokausis.

Dr. Hastings Tweedy thought the method had a great future before it. If even a part of what was claimed for it was realised it would almost revolutionise the treatment of endometritis. When used for septic endometritis, where the germs had penetrated to a considerable degree, he feared if the cauterisation could destroy these germs, it would destroy the whole endometrium.

Dr. Jellett said that, judging from the effect of steam on the hand, a ten or fifteen second application would not give in any ordinary case a very deep amount of cauterisation of the uterus. The instrument would be an adjunct to the curette, but he could see no ground for supposing that it would take its place. If it were a good cauterising agent why should it not be used for a short time after the curette, and avoid bringing on a slough in parts of the uterus that had been very much thinned? Even if there were a slight amount of danger attaching to its use, he thought, in cases of hæmophilia, it might be the means of saving a woman from the loss of her uterus.

The President, replying to Dr. Gordon, said he did not intend to give an opinion of the instrument. He had given the results of some 800 cases from the reports of the most eminent gynæcologists in America and Germany. In a very short time the instrument had met with an extraordinary reception abroad, and was looked upon as one of the best additions to therapeutics. The depth of cauterisation was regulated by the time the instrument was allowed to act. If it were desired to close the cavity altogether it would probably require two operations. As to sterilisation of the mucous membrane, Dr. O'Sullivan had told him that he had used superheated steam at 110°, and found it did not kill streptococci.

Exhibits.

Dr. Smyly showed: (*a*) Ovarian abscess removed by cœliotomy; (*b*) myomatous uterus removed by abdominal hysterectomy; (*c*) ovarian cyst removed after four tappings.

Dermatological Society of Great Britain and Ireland.—At a meeting on February 28th, Dr. H. Radcliffe Crocker in the chair, cases were shown by the President, Mr. Jaffray (introduced), Mr. T. D. Savill, Dr. P. S. Abraham, Dr. D. Walsh, Dr. A. Eddowes, and Mr. Pernet. Mr. Pernet also read a note of a case of tinea versicolor of the face, by Dr. Arthur Powell, of Kalain, Cachar, East Bengal. Photographs of the case were shown, and the fungus prepared from scrapings was also exhibited under the microscope. The President, Dr. Rufenacht Walters, Mr. T. J. Hitchins, Dr. P. S. Abraham, Mr. Pernet, Dr. W. Warde, Dr. D. Walsh, Dr. T. D. Savill, Dr. H. Phillips-Conn, and Mr. Hope Grant joined in the discussions.—At a meeting on March 28th, Dr. Radcliffe Crocker in the chair, cases were shown by the Chairman, Dr. C. F. Marshall, Dr. D. Walsh, Dr. A. Eddowes, and Dr. T. D. Savill.—Mr. G. Pernet read notes of a case of multiple cancer of the skin, by Dr. Allworthy, of Belfast. Specimens of some of the tumours were passed round, and it was pointed out by Mr. Pernet that on section occasional melanotic patches were visible. No melanosis was observable on the surface of the skin or tumours. A section was also exhibited under the microscope. Microscopical sections of Dr. Crocker's case of rhinophyma, shown at the previous meeting, and also of Dr. P. S. Abraham's case of anomalous acne, were exhibited by Mr. Pernet.—Dr. D. Walsh read notes of the progress and end of a case of mycosis fungoides, previously shown to the Society. He also brought a drawing of a case of a peculiar lobulated condition of the face in a woman. It was believed to be due to syphilis.

Laryngological Society of London.—A a meeting on March 3rd, Dr. de Havilland Hall, President, in the chair, Mr. Charles Heath showed a woman, aged 31, with sinuses in the vault of the nasopharynx. Two elliptical openings could be seen just behind the upper edges of the choanæ. Dr. Wm. Hill, Mr. Cresswell Baber, Dr. Dundas Grant, Dr. Scanes Spicer, and others thought the sinuses were formed by the remains of adenoid tissue, a view opposed by Sir Felix Semon, Mr. Spencer, and the exhibitor, who regarded the condition as the result of maldevelopment.—Dr. StClair Thomson showed a case of unilateral nasal obstruction from antral affection of uncertain origin, which was discussed by Mr. de Santi, Dr. Dundas Grant, and Mr. Spencer.—Dr. Fitzgerald Powell showed a case of unusual laryngeal growth, which Sir Felix Semon suggested might be malignant, as it much resembled a case he had seen of fibrosarcoma.—Sir Felix Semon showed a young man with a pseudo-membranous adhesion in the anterior commissure and symmetrical thickening below the anterior parts of the vocal cords.

Mr. Luke showed: (1) A case of bulbous middle turbinates; (2) a case of growth in arytenoid region; (3) specimen of ony spur from ethmoid.—Dr.

[1] British Medical Journal, March 17th, p. 640.

FURNISS POTTER showed a case of pharyngeal and laryngeal growth, probably malignant.—Mr. LAWRENCE showed a case of advanced atrophic rhinitis in a girl aged 14.—A case of suppurative cyst of the inferior turbinate shown by Dr. HENRY A. DAVIS gave rise to much discussion, Dr. TILLEY, Mr. LAKE, Dr. GRANT, and Dr. HILL believing it to be an example of disease of the middle turbinate with ethmoidal cell, or frontal sinus suppuration.—Dr. DAVIS also showed a case of extreme hypertrophy of the inferior turbinates in a boy, aged 13, and the methods of treating these cases were discussed by Dr. TILLEY, Dr. SCANES SPICER, Dr. GRANT, Mr. BABER, and Dr. POWELL.—Dr. SCANES SPICER showed a case of extensive ulceration of the throat for diagnosis, and many members spoke, opinions varying as to whether it were a syphilitic or chronic tuberculous lesion.—Mr. DE SANTI showed: (1) A case of hoarseness and aphonia of long standing; (2) a case of obstructed subdermal lymphatics of the face, in which frontal and antral disease had been suspected.—Dr. JOBSON HORNE showed a case of ulceration of the larynx; Dr. HERBERT TILLEY a case of fibroangioma of the nasal septum, and Mr. CHARLES PARKER a case of pachydermia laryngis.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 20th, Mr. HORROCKS, President, in the chair, cases and specimens were shown by Dr. BRONNER, Dr. KERR, Dr. CAMPBELL, Dr. LANKESTER, Dr. JASON WOOD, Mr. ALTHORP, Dr. ANGUS, and Dr. EURICH.—Dr. J. METCALFE read notes of a case of appendicitis.

The attack commenced with vomiting, constipation, and fever. A swelling was felt in the right iliac region which was dull to percussion but never became fluctuant. The fever showed intermissions several times. During the fourth week of illness, when the temperature had been normal for some days, the patient had a sudden attack of pleurisy on the right side: signs of fluid were present but none was obtained by exploratory aspiration. The patient was quite well at the end of seven weeks.

Dr. Metcalfe considered the pleurisy as due to direct infection along the lymph channels. The treatment of cases of appendicitis was discussed. The view was expressed that surgical interference was advisable only in cases of recurrent appendicitis or in cases where there was direct evidence of pus being present. Appendicitis was stated to be more common in boys than in girls; and this was attributed to their habit of "bolting" their food, of eating very indigestible things, and their greater liability to direct injury from blows, etc. Ribbert's investigations as to the length and calibre of the appendix at different ages were alluded to, and the suggestion was made that irritating matters were more likely to be retained in the relatively longer appendices of young people. A discussion on the treatment of appendicitis followed, in which several members took part.

IPSWICH CLINICAL SOCIETY.—At a meeting on March 15th, Mr. BRANFORD EDWARDS in the chair, Mr. A. W. PATERSON read notes of a case of hyperpyrexia.

This occurred in a man suffering with acute rheumatism, with endocarditis and pericarditis. The case was at first a mild one, and on the evening of June 6th the temperature was 103° F. At 4 A.M. Mr. Paterson found him comatose, with a temperature of 109.4°. Towels wrung out of cold water were applied, and in an hour the temperature was 108.4°. He was then put in a cold pack, and this brought the temperature down to 100.° The chest and arms were rubbed with pieces of ice, and an ice-water enema was given: these measures brought the temperature down to 99.2°. In spite of this and repeated injections of ether and strychnine, the profound coma persisted. During the two following days the patient's condition improved. The conjunctival reflex and the pupil reflex, which had been lost, both returned. On the fourth day from the hyperpyrexia he became worse; a considerable quantity of blood came from the bladder, and at 11 P.M. he died. The temperature had been kept down to from 99° to 101° by constant ice rubbing.

The case was said to be interesting from the failure to recover consciousness after the temperature was reduced, and from the considerable interval with partial improvement which elapsed between the hyperpyrexia and the fatal ending. So distinct was the improvement that at one time there seemed to be hope that he might recover. Mr. Paterson also read notes of a case of hysteria in which the patient produced a large number of small pebbles from the urethra daily.—Mr. J. F. C. HOSSACK showed a case of malignant cystic disease of the breast.

The patient was a middle aged woman. There was great enlargement of the breast. The aspirator drew off two and a half pints of clear amber-coloured fluid, but the cyst refilled rapidly. Numerous adenoma-like nodules could be felt, and the glands were enlarged. The patient refused operation.

—Mr. SINCLAIR read a paper on sympathetic disease.

ASSOCIATION OF REGISTERED MEDICAL WOMEN.—At a meeting on April 3rd, Mrs. SCHARLIEB, M.D., M.S., in the chair, Miss C. STURGE, Mrs. KEITH, and Mrs. STANLEY BOYD read reports of cases of induction of labour undertaken for the following reasons—unusual size of children, morbus cordis, and contracted pelvis. A discussion followed in which several members took part.—A paper by Miss WICKHAM (Rajkot, India) on two cases of retained menstrual fluid, due to imperforate hymen, treated in the Hospital for Women, Rajkot, was read by the SECRETARY.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on March 29th, Dr. DUNCAN BURGESS, President, cases were shown by Dr. SINCLAIR WHITE, the PRESIDENT, Dr. PORTER, and Mr. H. HALLAM.—Dr. GODFREY CARTER read a paper on Electric Heat and Light Baths, and illustrated more especially the system of Greville and Dowsing. He pointed out that the hot bath flourished in England in the first three centuries of the Christian era; it then fell into disuse, but was transmitted through the intervening centuries by the Turks. The Turkish bath was introduced into England about fifty years ago. Its great disadvantage was that the patient breathed the hot air of from 125° to 240° F. Few people could, however, inhale hot air at a temperature of 150° to 200° F. without incurring great risks. The human body was capable of supporting with impunity exposure to an atmosphere of a temperature far above that of boiling water provided that the air be dry and not inhaled. In the Dowsing system both heat and light were utilised. Exposure of the part to be treated usually extended from twenty to forty-five minutes, beginning at a temperature of 240° F., which was gradually raised to 350° and 400° F. The cases most benefited were those of sciatica and lumbago, as well as chronic gout and rheumatism, painful and stiffened joints, and such lesions as football sprains. The Dowsing apparatus was exhibited in operation.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—At a clinical meeting held on March 23rd, Professor C. J. WRIGHT, President, in the chair, cases were shown by Mr. MAYO ROBSON, Dr. BARRS, Mr. LITTLEWOOD, Dr. WARDROP GRIFFITH, Mr. B. G. A. MOYNIHAN, Mr. R. L. WHITEHEAD, Dr. CHURTON, Mr. SECKER WALKER, Mr. LAWFORD KNAGGS, Dr. E. F. TREVELYAN, and Dr. W. H. BROWN.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 4th, Dr. MICHIE, President, in the chair, the following resolution, proposed by Dr. RANSOM, and seconded by Dr. HUNTER, was carried unanimously:

That the Nottingham Medico-Chirurgical Society desires to call the attention of the medical profession to the frequency with which diachylon is now bought for internal use, and to the great dangers attending such use, and suggests the advisability of measures to restrict its indiscriminate sale.

—Dr. HUNTER read a note on gastralgia, in which he expressed the opinion that many of the so-called cases of dyspepsia in young women were true neuroses, and were benefited by quinine and ordinary diet rather than by bismuth and milk.—Dr. HANDFORD read notes on a case of posterior basic meningitis in a girl aged 5 years, who died after an illness of fourteen weeks.

The following cases and specimens were shown:—Mr. ANDERSON: (1) A patient, aged 61, after prostatectomy of the middle and lateral lobes by the suprapubic operation; 10 ounces of gland tissue were removed with complete relief to all former symptoms; (2) a large pedunculated cylindroma of the bladder removed by operation; (3) primary carcinoma of the bladder.—Mr. CHICKEN: (1) Gall stones, those from the gall bladder being laminated, while one which was encysted in the duct was formed by agglomeration; (2) portion of bowel removed by operation for intussusception in a child aged 5 months.

HOSPITALS FOR TUBERCULOSIS IN NEW YORK.—The Finance Committee of New York State has recommended the appropriation of 150,000 dollars (£30,000) for the establishment of a State hospital in the Adirondacks for the treatment of cases of incipient pulmonary tuberculosis. It is said to be becoming increasingly difficult for tuberculous patients to obtain admission into the existing hospitals, and the State finds itself face to face with the fact that 14,000 new cases occur every year, for whom there is practically no hospital accommodation. On March 14th Dr. Henry, of New York, introduced in the State Legislature a Bill for the establishment of a hospital for cases of tuberculosis in or near New York City. The Bill provides that the hospital shall be in charge of the Department of Health.

REVIEWS.

Kirkes's Handbook of Physiology. Sixteenth edition. By W. D. Halliburton, M.D., F.R.S. London: John Murray. 1900. (Demy 8vo, pp. 890, 668 illustrations. 14s.)

The ever-increasing popularity of this handbook is shown by the fact that the fifteenth edition, consisting of some thousands of copies, has been exhausted within the space of a year. This result, gratifying alike to author and publisher, is due to the clear and simple style and wealth of illustrations with which Professor Halliburton has clothed the science of physiology. We regret to learn that Messrs. William Wood and Co., of New York, while publishing an unauthorised edition of *Kirkes*, have not only "conveyed" a large amount of Professor Halliburton's original work without acknowledgment and in the teeth of protest, but have issued the book under the names of Mr. Morrant Baker and Dr. Vincent Harris. Mr. Baker is in fact dead, while Dr. Harris retired from the editorship of the handbook four years ago. We trust that this American edition will not be recommended in the universities of the United States.

Few alterations have been made in the present edition, and this is as it should be, for although many important researches have been published in the last year, the facts and conclusions to be drawn therefrom have not as yet been confirmed and sifted into their proper place. The handbook admirably suits the requirements of the average medical student, owing to the fact that the author shows a proper discrimination in selecting the essential facts and theories of physiological science. The mental digestive powers of the average medical student are notoriously overloaded, and in view of the increasing claims of pathology, bacteriology, etc., there is need for greater restraint in the scope of the teaching of the preliminary medical sciences. The sciences of physiology and anatomy should be taught constantly with a view to their application to the practice of medicine and surgery, and in our opinion the anatomists might with great advantage to medical education reduce the size of the student's anatomical textbook to that of *Kirkes's Handbook of Physiology*.

There are a few statements in the handbook which require modification in the next edition. For example, on page 362 it is stated that the gases are set free in the blood vessels when the oxygen pressure falls below 7 per cent., and that oxygen pressure may be increased without marked effect even to the extent of 8 or 20 atmospheres. At an oxygen pressure of 7 per cent., the hæmoglobin is more than 95 per cent. saturated with oxygen (Hüfner), while, according to Bert, death rapidly follows when the pressure of the air is increased until the oxygen tension reaches 300 and 400 mm. Hg. When the atmospheric pressure is lowered, death occurs from want of oxygen and not, as stated, from the setting free of nitrogen in the blood. The latter may be the cause of death when an animal is decompressed after exposure to high atmospheric pressure. On page 284 it should be stated that the measurements of blood pressure are only true relatively to the horizontal posture, and on page 240, in estimating the work of the heart, the mean arterial pressure of man is not probably 150 mm. Hg., but about 110 mm. Hg. On page 247 the statement that the ventricle apex possesses no nerves requires modification in the light of recent investigation. The fact that the coronary arteries, when cut, spurt most forcibly during systole, cannot be justly regarded as proving that the coronary circulation is most active during systole. The experiments of Chauveau and Lortet with the hæmodromograph have shown that the coronary blood flow may be momentarily decreased during the later stage of systole.

The Causes of Consumption, with Special Reference to its Prevalence in the Isle of Man. By Charles A. Davies, M.D. Douglas: Brown and Sons. 1899. (Cr. 4to, pp. 66. 2s. 6d.)

Dr. Davies has published as a pamphlet the thesis which gained for him his Doctorate of Medicine of the Victoria University, with the note "highly commended." It is an excellent piece of work to have performed—cut off, as its author points out, from the laboratories and hospitals of large English towns, and doubtless written amidst the disturbing surroundings of a busy country practice. The facts which have been gleaned by Dr. Davies in the midst of his work at Ramsey are certainly not to be despised, and while all of them demand careful attention from the authorities of the Isle of Man, some of them are of no little intrinsic value when added to those which are being accumulated elsewhere.

The first part of this work is devoted to a general consideration of the causes of consumption, and gives a satisfactory and well-balanced exposition of the various factors at work. The second part deals with consumption as it particularly affects the Isle of Man, and contains many original observations. It may come as a surprise to many to hear that in this beautiful little island, with a thriving population and an air practically unpolluted by large manufactories, the death-rate from tuberculosis may be roughly estimated as twice that which obtains in England and Wales. It is to the elucidation of the causes of this excess that Dr. Davies addresses himself. He fails to find a sufficient cause either in climate, soil, malnutrition, occupation, or impure air. He shows, by some interesting researches, that the Manx, by the inbreeding of centuries, have been reduced to a high state of consanguinity, and expresses the conviction that consanguinity is responsible for producing the pronounced proclivity to consumption which exists on the island. This "pro-phthisical" constitution, *plus* the many opportunities for contagion that a profound ignorance of the nature of the disease brings about, causes, in his opinion, the high phthisis mortality which is the bane of the ancient and historic Manx people. We quite agree with the writer that it is high time that both the medical profession and the government of the island should realise the gravity, if the canker that is eating out the heart of a thrifty, intelligent, and honest little nation is to be eradicated. This should be done with relative ease, for the island possesses in an exceptional degree those natural factors which will aid in stamping out this insidious disease.

Periodic Respiration. By Alexander McAldowie, M.D., F.R.S.E. London: Simpkin, Marshall, and Co. 1899. (Demy 8vo, pp. 71, 10 plates, 55 figures. 2s. 6d.)

This book consists of an inaugural address delivered by the author as President of the Staffordshire Branch of the British Medical Association at its annual meeting held on November 1st, 1898, at Stoke-upon-Trent. It is a clinical study of Cheyne-Stokes breathing and the allied forms of periodic respiration, based upon 49 cases that have occurred in the author's practice. The author discards the name "Cheyne-Stokes respiration" in favour of the term "periodic respiration," because he believes that all the varieties of intermittent breathing are physiologically identical. There are, however, functional disturbances of respiration which, although periodic, have not the Cheyne-Stokes rhythm, and are not associated, as far as we are aware, with the secondary phenomena—as, for example, the variations in the size of the pupil, which characterise this, the best-known form of spaced breathing, Exception is also taken by the author to the term "dyspnœic phase," in conjunction with the apnœic phase, of the respiratory cycle, and it must be admitted with considerable force. The author bases this objection chiefly on the grounds that there are no signs of early asphyxia with the "dyspnœa," the expiratory portion of each respiration being as large as the inspiratory, and that he failed to restore the natural rhythm by the transfusion of blood or normal saline solution, or by the administration of oxygen. He maintains, in short, that the respiratory disturbance is primarily nervous, and is not due to an excess of carbonic acid in the blood, and therefore suggests that the term "hyperpnœa" is preferable.

He quotes some of the almost innumerable theories that have been advanced in explanation of the phenomena, and formulates one of his own, this is, that the condition is due to a relaxation of the controlling influence of the highest level centres (following the doctrine of Hughlings Jackson) with a corresponding disorder of dissolution in the respiratory nervous mechanisms of the middle level, the different phases depending on the alternate augmentation and neutralisation of successive respiratory nerve waves from the coinciding of their crests or the reverse. We gather that Dr. McAldowie considers that this intermittent respiration is invariably pathological, and can be studied only from the clinical stand-

point. But a periodic respiration occurs in the newly born of some mammals and in hibernating animals: it may occur also in so-called functional or hysterical states, and it has, we believe, been produced experimentally.

As a contribution to our knowledge of the subject, the value of this book is due not so much to the theoretical considerations which it contains, although they are highly philosophical and closely reasoned, but to its well observed and well-recorded clinical facts. It is a good illustration of the great advantage which the general practitioner has over the consultant in seeing the earlier stages of disease. To both the work should prove suggestive and stimulating in a high degree.

ZUR LÖSUNG DES PROBLEMS DER HEILBARKEIT DER LUNGENTUBERCULOSE. (A Contribution towards solving the Question of the Curability of Phthisis.) Von Dr. CAROSSA. Munich: Seitz and Schauer. 1899. (Roy. 8vo, pp. 31. M. 1.20.)

VON ZIEMSSEN once ventured to prophesy that a "specific" would never be found for tuberculosis. Dr. CAROSSA, however, is bolder or more credulous, for he believes that he has found in a combination of pilocarpin and eugastrin (the active principle of condurango) an unfailing remedy for phthisis. The eugastrin prevents the gastric disturbances which pilocarpin alone sets up. The specific should only be given (we are not told in what dose) when the patient is lying down, and should be administered for from four to seven months. Relapses after apparent cure are not uncommon. This "cure" may advantageously be combined with the "open-air cure," but appears to be incompatible with the "cold-bath cure." Warm baths, fortunately, are not contraindicated. Under the benign influence of pilocarpin extensive tuberculous areas, we are assured, clear up in a few days' time. In one case, that of a patient who had right apical dulness for four years, the dulness disappeared in a fortnight.

Dr. Carossa does not consider the presence or absence of tubercle bacilli as of much importance in reference to prognosis, nor to diagnosis apparently, for he finds that they disappear with the dulness and expectoration.

When we hear of numerous cases of phthisis, all tuberculous, all rapidly cured by the administration of pilocarpin, we cannot but be reminded, without being morbidly sceptical, of the reply given by the gentleman who was informed that a friend always caught cold after eating walnuts: "If true, curious."

NOTES ON BOOKS.

PROFESSOR RUATA of Perugia, in his short essay on the treatment and cure of pulmonary tubercle, entitled *Cura e Guarigione della Tuberculosi Polmonare* (Città di Castello: S. Lapi. 1900. Demy 8vo, pp. 102. L 2.50) gives an account of the principles of treating phthisis by the open-air method, aided by inhalations, diet, etc. It is stated that at no very distant date pulmonary tubercle should be banished if unremitting care be exercised in dealing with every case; for, as the duration of the disease is cut short by energetic treatment, there is less liability of its spreading. The writer describes the details of the open-air method as carried out at various places, especially in England. While there is no very original matter in the essay, it is interesting reading.

In his book entitled *Le Lesioni Traumatiche dei Centri Nervosi* (Roma: *Il Giornale Medico*. 1900) Dr. S. Salinari, an army surgeon, gives an excellent and up-to-date account of the various injuries of the brain and spinal cord, with their complications, sequelæ, and treatment. In the cases where authorities differ—for example, as to the wisdom of trephining or not in certain conditions, or as to laminectomy *versus* reduction in dislocation—the author is careful to state the opposing views, but the reader would like to have had some more decided expression of the opinion of the author. Probably some of the questions now in debate may find a solution through the experience of military surgeons in the present war.

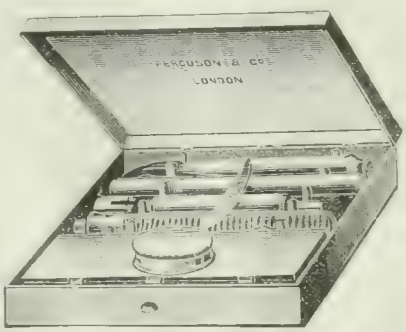
That another edition of the late Professor CHARTERIS'S *Practice of Medicine* (Eighth edition, edited by F. J. CHARTERIS, M.B., Ch.B. London: J. and A. Churchill. 1899. Crown 8vo, pp. 655, 9 plates, and 21 figures. 10s.) has been called for shows that it satisfactorily fills a place of its own in medical education. It has all the advantages of a simple map, portraying its subject with bold curves in clear outlines, without obscuring detail. It is well adapted to serve as a general *vade mecum* for students of medicine who are just commencing attendance on dispensary practice. Its valuable appendices on prescriptions and prescription writing should prove especially helpful.

The second edition of Dr. JUDSON S. BURY'S *Clinical Medicine: A Manual for the Use of Students and Junior Practitioners* (London: Charles Griffin and Co. 1899. Demy 8vo, pp. 532, with numerous illustrations and coloured plate. 21s.) will be welcomed. The first edition was noticed in these columns on October 6th, 1894, and the volume remains one of the best of the more recent guides to the investigation and diagnosis of disease. It has been carefully revised, and many important additions have been made. The chapter on the examination of the urine, which has been revised, and supplemented from his own original investigations by Dr. Dixon Mann, must take a leading position in the subject of the diagnosis of renal diseases and the symptomatology of renal complications. A useful chapter has been contributed by the same author on the examination of the deeper structures of the body by means of the Roentgen rays. The chapter on skin affections contains additional matter from the pen of Dr. Wild. For the senior student and for the busy practitioner this book affords an accurate and an up-to-date representation of clinical medicine which must prove of the utmost use, and one that is not surpassed in the English language.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Aseptic Vaccination Case.—Mr. CHARLES CORBEN, The Grove, Caldecott, Mon., sends a description of an aseptic vaccination case designed to fulfil the requirements of the new Vaccination Act for public vaccinators, which has been made for him by Messrs. Ferguson and Co., Giltspur Street, E.C. On account of its size, $3\frac{1}{2} \times 2\frac{1}{2} \times \frac{7}{10}$ inches, it should, he considers, prove useful to public vaccinators who have long distances to travel, often on horse or cycle, and to whom the large cases are inconvenient. The antiseptic pads can be carried in a separate case. The contents of the case are—spirit lamp; tube for soloid sodii hydrarg., g. j; (1 soloid, in $\frac{3}{j}$ ijss. = 1 in 1,000) aseptic vaccinator, tube for lymph, and a blower.



DEATH CERTIFICATION IN NEW YORK.—A Bill is to be introduced in the New York State Legislature making it unlawful to make any of the ordinary preparations for burial until the body has been examined by a medical practitioner, and the fact of death duly certified by him. It is said to be the general practice throughout the United States to give a death certificate without any other evidence that death has occurred than the medical practitioner's anticipation that death would occur, and the statement of some more or less responsible person that the expected event has actually taken place.

THE WAR IN SOUTH AFRICA.

AN ADVANCED BASE HOSPITAL.

By Sir William Thomson,
Chief Surgeon, Irish Hospital, Field Force, South Africa.

Naauwpoort Camp, March 19th, 1900.

War's Delays.

War, as well as law, has its delays. Lord Roberts's victory at Paardeberg and the surrender of Cronje and his force blocked the line with trains of prisoners, and kept us at Capetown for days, and now, when we are within the war area, we are stopped by the circumstance that the Boers have blown up the railway bridge at Norval's Pont, across which we hoped to be carried last week, to join Lord Roberts's army. Thus we kept here, our waggons packed, and only a few tents pitched, waiting anxiously to comply with the orders telegraphed to us from headquarters to be ready to proceed to Bloemfontein on the shortest notice, but the way is not open. The Railway Pioneer Regiment, mainly composed of Johannesbergers, which has done such splendid work in this campaign, left this two days ago with several trains full of material, and they are striving day and night to make good the spans which have been destroyed; but when three spans of 100 feet and one pier are gone the task is not an easy one, and it will take some days yet before we can be carried further north. Meanwhile the Irish Hospital has been able to take its share in helping the sick and wounded. As I stated in my last letter, I was able to send Dr. George Stoker, Dr. Friel, Dr. Connihan, and Mr. MacIlwaine, and a number of waggons and orderlies, to join Lord Kitchener's force, operating in the Prieska and Carnarvon districts, a couple of hundred miles to the west of this, where the rebels have risen in considerable numbers. Their expedition will not be protracted, and they will then join us up-country.

Naauwpoort Town and Camp.

Naauwpoort (pronounced "Noport") is not a stately town. A few red-brick cottages, and some dozens of more pretentious single-storeyed cottages, all with roofs of corrugated iron; two stores or general shops; a railway station; the Standard Bank, which occupies a tiny two-roomed shanty; these practically comprise the town of Naauwpoort. It is, however, an important railway junction, and only three weeks ago the camp was being sniped. For the moment the population has increased from a few hundreds to several thousands, but the addition is formed of troops of all kinds, who are gathering here ready to move up to the Free State, but detained for the same reasons as we are. White tents and stately marquees cover the dusty ground by the hundred; there is all the bustle of a great community bracing itself for war, and in the town itself, and far out on the plain, entrenched positions and redoubts show preparation for a possible struggle. Round about, and within easy shot, are kopjes from 50 to 500 feet high, from which any force could easily play havoc with the town. They are all typical South African hills, some flat topped as if they had been fashioned by man's hand, some precipitous and unclimbable, some with steepish slopes, over which lie boulders of all sizes producing only crops of the all-prevailing scrub. The camp is pitched on the sandy veld parallel with the railway line, above which it is elevated from 20 to 50 feet. No particle of green is to be seen save here and there a blade of grass struggling into life after a rain shower. But the air is South African air—clear and bright, utterly upsetting judgment of distances as one knows them at home. What we walk on is greyish dust, differing in this respect from the red of Capetown. It is very light and easily raised, and now and then, when a fierce gust comes over the hills, it is raised like a dark wall and hurried along; it sweeps through open tent doors and windows, insinuates itself into every crevice, and lays upon every person and thing the tangible marks of its visitation.

The Climate.

But, for all that, the climate is excellent. Just now we are fast approaching winter. The mornings are fresh, crisp, vitalising; then come many hours of day when the sun is extremely hot and almost burns. Then sundown. The light breeze, fresh and clean, comes up from the south, with delightful refreshing, and in a few minutes we have passed into a temperature decidedly cool, when every wise man puts on a thicker coat. As night goes on the cold is sharp, and you are glad to pile on more blankets. These changes are trying, and are apt to produce intestinal troubles; but, on the whole, with a good water supply and an elevation of 5,000 feet above the sea level, Naauwpoort is not an undesirable place from a health point of view.

No. 6 General Hospital.

I have taken advantage of my enforced stay to pay some visits to No. 6 General Hospital, which has been formed here under the direction of Colonel Somerville Large as P.M.O. He has on his staff Colonel Falvey and Major Osborne, who are in charge of the medical and surgical divisions respectively; while Major Jennings is the Secretary. In addition there are several junior officers and thirteen civil surgeons.

Three weeks ago the work of organisation here began. To-day there is a town of tents and marquees, and just now there are over 600 patients under treatment. The marquees are of the usual pattern, but they might very well be improved upon. For their size and weight they do not give the accommodation that one might expect. But for all that the patients are very comfortable. The floors are regularly boarded, the men sleep on "wire-woven" mattresses on iron bedsteads; there are tables and easy chairs, and nothing is omitted which could make the lot of the men as happy as possible.

Typhoid Fever.

There are about 70 cases of enteric fever under treatment. These have come from various places at the front, and, practically speaking, no case has developed in this camp. The type is not very severe—not more severe, in the opinion of my colleague, Dr. Coleman, than one meets at home. That there should be many cases is not to be wondered at when the conditions are remembered. Water is very scarce on the field, and when great masses of men and horses are moving through the streams they must soon become polluted; often the rivers are the receptacles of dead men and horses. Directions given to the average soldier as to the avoidance of such water are almost useless. After marching for hours in a broiling sun and going through the excitement of an engagement, little water remains in his bottle, and when a pool is reached men drink what they can get without considering the question of possible danger. A distinguished staff officer who was in the recent fighting which culminated at Paardeberg told me that he was glad to "drink his fill" of the Modder water and to replenish his bottle with it. True there were dead men and horses in it, and it was like the dirtiest puddle; but he must at any cost assuage his thirst, and enteric fever had no terrors for him at such a moment.

Surgical Cases.

In the surgical wards it would be hard to see a finer or healthier lot of men, for although some of the wounds have been very dangerous, they have followed the usual course here. They are healed or healing. There were only a very few cases in which suppuration had occurred, and, for the rest, once the immediate effect of shock had passed, the patients' good condition and training in the open seemed to have asserted themselves, and most of the men looked to be in rude health.

I have seen many interesting cases, some of which may be shortly noted here:

Bullet Wound of Pelvis.—A private of the Oxfordshire Light Infantry received a bullet below and 2 inches behind the anterior spine of the left ilium twenty-five days ago. It came out close to the posterior inferior spine on the right side. The course was through the lower part of the abdomen. The patient passed blood for four days, and he has still a little urinary irritation occasionally, but the wounds are entirely healed, and he is moving about.

Bullet Wound of Abdomen and Pelvis.—A private of the Bedfords was hit 3 inches below the umbilicus, half an inch to the left of the median line. The bullet passed from before backwards, and came out to the left of the base of the coccyx. He passed blood in the urine once. The injury was received on February 24th. He never had any fever or elevation of temperature, and he is well.

Bullet Wound of Mouth and Chest.—A private of the Duke of Cornwall's Light Infantry received a bullet in the mouth. It removed the upper central incisors, passed beneath the tongue on the left side, and escaped below the spine of the left scapula. There was some bloody expectoration. He has paralysis of the deltoid, but is otherwise quite well.

Bullet Wound of Chest.—A private of the South Wales Borderers was wounded at Paardeberg. The bullet entered below the angle of the right scapula, and came out three inches below the coracoid on the same side. The wounds are all healed. But there are evidences of damage to the artery and nerves. No pulse can be felt in the radial, brachial, or axillary arteries. There is loss of sensation on the radial side and drop wrist. The nerve lesion is improving.

I saw another case of a like character also.

Bullet Wound of Chest: Hæmo-pneumothorax.—A man of the O.L.I. was struck beneath the left clavicle near the inner third, and the bullet came out in the ninth intercostal space posteriorly. There was great dyspnœa. The heart was pushed to the right side. Aspiration was practised on the left side, and two pints of blood were removed; and subsequently eight ounces. There is a considerable hæmo-pneumothorax. There is no pulse on the left side from the axillary artery down, but all wounds are healed and the man is doing well.

Bullet Wound of Temporal Bone.—In the case of a private of the Bedfordshire the bullet entered above the scapula on the left side, came out, and again entered from behind the mastoid process. The bullet was removed in the field hospital at Paardeberg. As suppuration continued from a long sinus this was opened up. A great portion of the mastoid was necrosed, and was then removed. The squamous portion of the temporal was fractured. There is deafness on the same side, but there is no other symptom.

Bullet Wound of Pelvis.—A private of the O.L.I. was struck at Klip's Drift on the right side of the pelvis, 2 inches below the crest of the ilium and 2 inches behind the anterior superior spine. The bullet passed transversely, and escaped on the right side through the abdominal wall, over the cæcum. He has never had a symptom.

Wound of Femoral and Circumflex Arteries.—I saw one man in whom the femoral artery had been ligatured and divided. He was attacked by severe secondary hæmorrhage in the train, and on being brought into hospital was collapsed. The wound was at once opened up, and it was found that the circumflex artery had been divided by a bullet close to its origin. Since the operation everything has gone well.

The surgical work here has been very well done, and Colonel Large speaks highly of his staff. The results will, of course, appear hereafter, and the full details of the cases will no doubt be published by the surgeons concerned. The death-rate on the surgical side, where over 500 cases have been treated, is *nil*, and this will give the best idea of the thoroughness and success with which the work on the field and in the hospitals is being done. For those at home who have wounded relatives here it will be some consolation to be assured that they could not be better served at home. When we consider the conditions which necessarily belong to a campaign, the completeness of the arrangements for the sick and wounded will always remain a credit to our country.

NOTES ON THE BASE HOSPITALS IN CAPE COLONY.

FROM OUR SPECIAL CORRESPONDENT IN CAPETOWN.

March 21st, 1900.

ENTERIC FEVER.

AFTER a lull, during which the hospitals here have been surgically almost devoid of interest, there is again somewhat of a rush and a good deal is to be seen. All the base hospitals are tolerably full up, the medical side however being fuller than at earlier dates. Enteric fever is increasing steadily everywhere, and I understand that No. 6 General Hospital at Nauuwpoort has a large number of cases. On the whole, the results of this disease appear to be fairly good, although at some of the hospitals up-country treatment has been a little hampered by the difficulty of obtaining a sufficient supply of fresh milk. The same thing, indeed, has sometimes happened even here. No one is to blame for it. At times it is simply unobtainable. Patients tire of even the best brands of condensed milk and will not take as much as is desirable.

"OPEN-AIR" TREATMENT OF ENTERIC FEVER.

Comparing notes with a good many military surgeons, one conclusion seems to me obvious, and that is that, given a fairly protected situation, typhoid patients do better under canvas than in permanent buildings. I lay stress on the requirement of a "protected situation," for it is obvious that a camp exposed to the tremendous South African winds cannot be placed under conditions of comfort, nor can the tents be kept open; but at No. 3 General Hospital at Rondebosch, one has an almost ideal position for open-air treatment, the camp being surrounded by trees, which very materially break the force of the wind. At this hospital only 3 deaths have occurred in 124 cases, and I can discover nothing special in treatment or dietary to account for statistics much more favourable than are obtained generally in this country, either in military or civil practice. The value of the open-air *régime* in typhoid was shown very conclusively many years ago by the late Dr. Fitzgerald, at the Grey Hospital at Kingwilliamstown. He had pavilions erected in the grounds of that institution, and, although I have not the figures by me, I remember he reported that patients did very much better in the pavilions than in the permanent wards. I saw a great deal of typhoid in the Kaffir and Zulu campaigns in 1878-79, and noticed precisely the same thing.

DRUGS IN TYPHOID FEVER.

No special plan of treatment seems to be more favoured than another. Some use salol largely, others swear by Yeo's free chlorine and quinine mixture; others, again, use quinine simply. Apparently no difference in results is traceable to their divergences of treatment. At the Woodstock Hospital a trial has been made of the eliminative treatment on Woodbridge's or, rather, on Thistle's principle—powders of salol and calomel being administered at frequent intervals, in combination with small doses of magnesium sulphate. The medical officer in charge of the typhoid wards informs me, however, that after a short trial he has definitively abandoned this line. He found it more or less unmanageable. A violent exacerbation of diarrhœa would sometimes set in quite suddenly, and apparently without reason, and prove very difficult to check. At first he thought the treatment cleaned the tongue and relieved abdominal tenderness, but later he found that patients so dealt with seemed, independently of any complication, to take on a very asthenic aspect, and more or less to collapse. One point has been brought out clearly at both the Woodstock Hospital and No. 3—the great value of monsonia ovata in checking diarrhœa and hæmorrhage in typhoid fever. Colonel Wood, at the latter institution, who adopted it at the suggestion of Dr. Darley-Hartley, of the former, is most enthusiastic in its praise. One point must be borne in mind. The tincture, unless freshly made, is of very little use. Pneumonia does not seem to be a very frequent complication anywhere; I have not yet heard of more than a couple of cases in which it could be assumed to be the cause of death.

RELAPSE, RECRUDESCENCE, AND LONG-CONTINUED PYREXIA.

Relapses are fairly common, and the great trouble is continued, irregular, febrile temperature, running into the sixth or seventh week, or longer. I do not think that these prolonged high temperatures are relapses, although they are often recrudescences, a short, nearly normal interval, being often interpolated. The temperature will run on in this way for weeks, without any return of the original symptoms. As I mentioned on a former occasion, the fact that inoculated people convalesce without this prolonged fever is very notable. The evidence, thus far, does not, however, go to prove that inoculation is a prophylactic. So far as I have been able to observe, I should say that the proportion of soldiers who contract typhoid is as large amongst the inoculated as the other, and this at a period when the inoculation is very recent. But we may regard it as fairly proved that inoculated cases run a very mild course and are singularly free from complications. At No. 3 General Hospital phenacetin and its congeners appear to be freely used as antipyretics in typhoid; at Woodstock these are eschewed as the plague. Curiously enough, the charts at the two hospitals show that at the former there are far more cases of hyperpyrexia than at the latter, where I am told a temperature to cause any alarm is very rarely met with, and if it is, yields to a simple cold sponging or ice rubbing. At Woodstock nothing but milk is given until the temperature drops, and much reliance is placed on the injection of large quantities of soda water and barley water, whilst at Rondebosch broths and other light proteid foods are pretty freely given. Whether this has anything to do with the higher run of the temperatures is an open question.

DYSENTERY.

Comparatively few cases of dysentery are coming down, except quite in the convalescent stage. The treatment generally adopted is by magnesium sulphate, followed in some clinics by opium, in others by monsonia. Some stick to ipecacuanha, but it is, I think, becoming generally admitted that this drug is not nearly so successful here as in India.

The following cases are of interest:

Calcified Mesenteric Gland.—I was shown the other day a calculus fully the size of a bantam's egg, which looked exactly like an ordinary mulberry vesical calculus. It had been taken from a patient who had died of typhoid fever at Woodstock, and was a calcified mesenteric gland. Another gland was calcified, but was much smaller. Now, one is familiar with calcification as a late change in these cases, but it is impossible to conceive that time had elapsed for this to be due to the attack of typhoid in question. Careful search was made for any old tuberculous mischief, but none was discovered, and there was no history of a previous attack of enteric fever.

Perforating Bullet Wound of Chest: Suppuration.—At No. 3 General Hospital I was shown a patient whose chest had been traversed by a bullet, which entered the second intercostal space and emerged through the scapula. At the wound of entrance appeared a tumour, which gave all the signs of a hernia of the lung. One night, however, it suddenly opened and evacuated a pint of pus. Physical examination now revealed signs of a large cavity on the right side in front, and of an extensive collection of fluid in the pleura behind. He had a high temperature and other hectic signs. A puncture with a hypodermic syringe brought away pus. A resection was done, and no fluid but a perfectly healthy pleura was found. The lung was then punctured through the wound (it filled the chest normally) and still no pus was obtained. The wound was then closed up, and the patient is apparently slowly improving. Dr. Tooth has seen the case, and like all others is much puzzled. The only explanation he can suggest is that there is, or was, extensive purulent infiltration of the lung, the organ being so completely sodden as to give the flat note of pleuritic effusion. Why, however, the puncture of the lung during the operation revealed no pus it is very difficult to imagine.

Trephining in Bullet Wounds of the Skull.

Evidence is constantly accumulating to show how very extensive are the injuries to the inner table caused by even slight bullet injuries of the skull. The practice at No. 3 and the Portland Hospital is very plain on this point, and the surgeons at both are unanimous in advising trephining in every case of bullet fracture. Unfortunately many of the patients, feeling no symptoms, will not consent. They will probably regret it in after-years. There have been several cases in which mere grazes of the cranial vault, mere scalp wounds apparently, have led to extreme splintering of the inner table. The head cases when operated upon continue to do remarkably well.

Gutter Fracture: Epileptiform Convulsions: Trephining: Evacuation of Cerebral Abscess: Recovery.—A patient at No. 3 General Hospital had what he apparently thought was a mere scalp wound. He got characteristic epileptiform convulsions. A gutter fracture was found with the whole inner and outer table along the bullet tract depressed below the level of the surrounding bone, the outer table right through forming the floor of the fracture, not its sides. The outer table of the piece was pretty complete, the inner table splintered in all directions. On removing the bone just a drop of pus was seen, but its source could not be discovered. Careful search showed that one spot in the brain was a little softer than the rest, and that the pia mater over it was a little over-vascular. The dura was incised over this spot, and the brain cut into about the posterior part of the superior parietal convolution. About half an ounce of pus came away. The patient is now almost well.

Value of Skiagraphy.

Many cases in No. 3 and the Portland Hospital illustrate the extreme difficulty of locating modern bullets without the *x* rays. One skiagraph exhibited a Mauser bullet lodged just in front of the right coracoid process. It had entered just above the outer fourth of the clavicle and gone downwards, evidently turning upon itself, for the nose was upwards. Major Keogh, R.A.M.C., tells me that it is not at all uncommon to find that these bullets, when fired from long ranges, turn in this way. One would have imagined that a bullet in this situation could have been felt; nevertheless, the most careful examination failed to locate it. Another case illustrates this even more strikingly.

Bullet embedded in Tibialis Posticus.—A bullet had entered the upper part of the calf. A skiagraph showed it plainly. An incision was made as directed in the classical but not practical operation for ligature of the posterior tibial artery in the upper third. The gastrocnemius was turned aside and the soleus was separated from its tibial attachment, and the tibialis posticus exposed. Careful exploration by more than one surgeon failed to find the bullet, and it was then surmised that it might be in front of the interosseous membrane. Major Keogh, however, determined to go a little further and divided the tibialis posticus freely, eventually finding the intruder in the fibres of that muscle, but just on the interosseous membrane. Still another more striking instance of the inefficiency of the tactus eruditus. A skiagraph showed a bullet lodged absolutely on the palmar surface of the head of the metacarpal bone of the index finger, and yet Major Keogh assures me that no one could feel it. Without the *x* rays there is no doubt a large number of Mauser and Lee-Metford bullets would never be located. One interesting picture shows how a difficult diagnosis was cleared up.

Diagnosis of Cause of Pain.—A soldier complained of persistent acute pain about the hip. He had no bullet wound, but several little scratches as if from splinters of bullet or shell. The skiagraph showed several little splashes about the head of the femur and great trochanter. Apparently some fragments are deeply lodged and one or more of them is causing the pain. However it was thought too risky to explore for such tiny bits, and the case was left alone. He is still in hospital and the pain is gradually getting less.

Spinal Injuries.

The spinal injuries continue to be the saddest cases in the hospitals.

Bullet Wound of Cervical Vertebra: Sudden Death from Hæmothorax.—A case of a bullet wound about the seventh cervical vertebra, with complete paralysis, died suddenly in the Portland Hospital recently from hæmothorax, a merciful termination of his sufferings; the cord was found to have been barely grazed, although the paralysis was complete.

Fracture of Fourth Dorsal Vertebra.—Another spinal case in No. 3 General Hospital is remarkable, from the fact that for weeks he has been anæsthetised twice a day, as he could not otherwise bear washing. He has the most agonising pain on the slightest attempt to move him. He has absolute incontinence of urine and fæces. A bullet entered about the fourth dorsal vertebra. A skiagraph shows that it has smashed the transverse process of that vertebra, and is lodged in the thoracic cavity just in front of the neck of the rib. There was incomplete paralysis of both legs; the reflexes were exaggerated on the right side, absent on the left, and Walinski's signs, which latter is now disappearing. The pain in back and legs is intense, and there is some idea that it may be functional.

New General Hospitals.

No. 8 General Hospital is under orders for Bloemfontein. The sisters left two nights ago, and the civil surgeons are here waiting for the equipment and *personnel* to arrive by the *Cephalonia*.

No. 5A General Hospital is here, and in a day or two takes over the Woodstock Station Hospital, which now will be classed as No. 5 General Hospital. By the erection of additional huts its capacity will be raised to 700 beds; it now has about 500. It will be remembered that the original *personnel* of No. 5 was broken up. Colonel Williamson is in command. A recreation room is to be added, and the electric light is being laid on everywhere.

The Boer Prisoners.

A hospital with 100 beds is to be opened at St. Helena for the accommodation of Boer prisoners. Two or three civil surgeons will be sent there and ten orderlies, who are being recruited from the civil population. Some 2,000 prisoners will be located on the island.

At Simonstown the "Palace" building has been fitted up as a hospital, with 50 beds. Civil Surgeon Carré, late of No. 1 General Hospital, is in charge there with two sisters. The Boer prisoners at Green Point are to send their sick to the new station hospital there. They will be located in the dieted portion thereof, which has been formed out of the Corporation Infectious Hospital.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

[From our Special War Correspondent.]

Second Thoughts.

Further experience derived from the wounded in the military hospitals in Natal, while confirming generally the conclusions already expressed in the British Medical Journal, has revealed certain exceptions in some cases, and has added to the list of curiosities. I may be allowed briefly to run over some of the different classes of injuries that have already been mentioned in previous letters, in order that by summing up the knowledge gained by many additional cases I may confirm, correct, or supplement the opinions already put forward.

Nerve Injuries.

Nerve injuries are met with in abundance in almost every hospital, but the cases in which surgical treatment is of any avail are still very infrequent. When the patient is suffering acute pain it is difficult to withhold such chance of amelioration as may be brought about by surgical interference. But however justifiable the exploration the results are very far from encouraging. The most hopeful cases appear to be those in which a nerve trunk is absolutely involved in a cicatrix. If the nerve be dissected out and set free there should be a prospect of improvement, and this has been successfully done in cases in which the sciatic, the median, and other nerve trunks were implicated. In many instances in which it appeared likely that the nerve was divided, operation has merely revealed that it was intact. Indeed, I have not met with any instances in which formal nerve suture has been practised, though I have witnessed many operations in which it was hoped that this result might be achieved.

Thus, a man in the General Hospital at Fort Napier had a transverse Mauser bullet wound of the thigh in the lower part. The flexors of the leg were intact, but the muscles of the leg were all paralysed, and sensation was lost in the foot over the area supplied by the sciatic. The leg was much wasted. The course of the bullet was obviously close to the nerve, and it was thought probable that the bullet might have divided all fibres of a sciatic nerve that divided low down. Operation seemed advisable in this case, as, the wound being transverse, the degeneration of the nerve which follows so readily in a bullet wound that damages any extent of the trunk, would probably be very limited. The nerve was readily exposed, but to all appearance was perfectly natural. The track of the bullet passed exceedingly close to the nerve trunk, but had not actually touched it. Some blood was extravasated into the tissues around, but not in sufficient quantity to cause any pressure.

A young Australian, who had received a wound through the shoulder, had severe, but only occasional, attacks of pain along the course of the nerve of Wrisberg. Possibly, division of the nerve high up might have relieved him, but there seemed good prospect of complete recovery without interference, and he was advised to wait for a time. The man rather resented this advice, for he did not cherish very friendly sentiments towards the Boers, whom he accused, very circumstantially, of "playing possum" when wounded on one occasion and shooting down some of his comrades at short range. In fact, he himself had received his wound in this way at, undoubtedly, a range of only a few yards. No one out here can doubt that the feeling of enmity between the Boers and the Colonial and Irregular corps is far more bitter than it is between the enemy and the regular troops. Our Colonial troops have done grand service and fought magnificently, but in some matters they may probably learn a lesson from the "Tommies," as the regular troops are now universally and affectionately called. They may learn that it is possible to fight for all you are worth with your enemy and yet shake hands with him immediately after, and they may learn that in hospital, as well as out of it, it is possible to exhibit a philosophic temperament and to accept whatever is provided without complaint, without grumbling, if without apparent effusive display of gratitude.

Three very remarkable cases were all in the Mooi River Hospital (No. 4 General) together, in which Mauser bullets had cleanly perforated nerve trunks. These are likely to be reported at length, and need only be briefly mentioned now. The first case was that of a man who accidentally shot himself with a Mauser pistol. The bullet raked up the inner side of the arm, injuring the brachial artery. This vessel was tied, and in the course of the operation it was found that the bullet had passed through the median nerve, making a slit in it like a buttonhole, and leaving on either side strands of the nerve trunk intact. Sensation was partly lost over the distribution of the nerve, and the motor function, although impaired, was not wholly lost. The wound, which was a recent one, was healing satisfactorily, in part by granulation, and there seemed good prospect of considerable if not complete restoration of the nerve. In a second instance a Mauser bullet had passed through the musculo-spiral nerve just where it bends backwards in the axilla. The main artery was wounded, but no hæmorrhage took place at the time. At the time of operation it was discovered that the nerve had been pressed back into the vessel, thus plugging up the opening and preventing bleeding. On drawing out the nerve the hæmorrhage started immediately. The artery was tied. The nerve function promised to be regained. In a third case the median was cleanly perforated lower down in the arm. In none of these cases was there any of the intense neuralgia that is so frequent a concomitant of bruised nerves, and it would almost seem as if the perforation of a nerve trunk were a less serious injury than the passage of a bullet close to it.

Traumatic Aphasia and Agraphia.

In a former letter a remarkable case was mentioned in which a gunshot wound of the left side of the head was accompanied by aphasia and agraphia. The patient is still in No. 4 General Hospital at Fort Napier. The scalp wound (at the end of February, the wound having been received on December 15th, and trephining performed a week later), which closed in part by granulation, was healed soundly save for one minute point of granulation possibly due to an escaping crumb of bone. There was no tendency to hernia cerebri. The face was slightly drawn to one side in smiling or showing his teeth. The eyelids could be perfectly closed. The power of speech was completely restored, and the man could talk rapidly and clearly without hesitation or apparent effort at searching for his words. He wrote fairly well and rapidly, and with much more rapidity and accuracy than he did a month previously. The memory appeared to be quite unaffected, and indeed, absolute recovery in all respects appeared likely to take place. No mental troubles had been observed by those who were associated with him, and he showed neither undue irritability nor depression. Indeed, some of the newer arrivals, who had been undergoing the continuous strain of severe fighting, were, though only slightly wounded or moderately sick, in an infinitely more sensitive nervous state. It is to be hoped that the ultimate history of cases of severe brain injury of a more or less similar description will hereafter be forthcoming. An opportunity has been furnished by this campaign of acquiring knowledge on the subject of what may perhaps be termed surgical psychology, of which the most should be made.

Treatment of Head Injuries.

Additional experience of head injuries has greatly strengthened the conviction that there is scarcely any class of cases in which surgery can effect more in modern military practice. Numerous cases of gutter fracture continue to occur, and almost without exception, so far as I have been able to gather, trephining, when performed, has been amply justified. In one such case, after removal of the crown of trephine, a circular fragment of the inner table was found to have been detached, and was lying loose in the dura mater, but the piece was so much larger than the opening through the outer tables that a second crown had to be removed before the broken piece could be cut up and removed. Some of these cases are still left untouched. Some refuse operation, though this appears to be generally advised, and in a few instances no operation has been recommended. As a general rule, there is little doubt that the latter counsel is unwise. The skull is seldom drilled clean through without any comminution of the inner table, but this may happen. Thus in one patient in No. 4 Hospital a Mauser bullet had traversed the skull transversely, penetrating both temporo-sphenoidal lobes, grazing the upper surface of the corpus callosum on one side, and just making a laceration through the fornix into the ventricle on the other side. Both ventricles were found *post mortem* to be full of blood, but no fragments of bone were discovered in the track of the wound. The inner table at the wound of entrance was cleanly cut. Numerous small splinters were broken off from the outer table at the wound of exit. The case, a very remarkable one, is likely to be described in full, and I may here only draw attention to the effect produced by the bullet on the bone.

Spinal Injuries.

There is little to be added to what has already been said on this subject. Unhappily these are still frequent. In no cases is the insufficiency of the nursing and orderly staff more felt. There is no doubt that though the lives of these most unfortunate victims could not be saved, in the huge majority of cases their condition might be rendered more tolerable if it were possible to assign special attendants to each. Such an arrangement, with the present staff, even when that staff is at its full complement, is entirely out of the question. To assign night and day special orderlies to each one of the worst cases of enteric, or to patients dying slowly from gunshot wounds of the spine, would be to strain the nursing resources of the hospitals to breaking point. Offers of voluntary help come in abundance from ladies who have had some little nursing experience, and such offers are still more frequent from those who have had no training at all, but are simply actuated by a most praiseworthy desire to give practical help. It is to be feared that such volunteers would not readily undertake work of so unattractive a nature, and it is to be hoped that the authorities would always, as now, flatly decline, for the sake of the patients, to saddle amateurs with duties so responsible. This is, however, neither the time nor

the place to enter at length into the most difficult and important question of the nursing and orderly service of military hospitals in the field. It suffices to say that the whole matter must be most seriously and thoroughly considered in all its aspects—and they are many—when the proper occasion arises.

A singular case of spinal injury may be here cited, as it presented features of interest. The bullet—a Mauser—entered almost exactly in the middle line of the back over the spine of the seventh dorsal vertebra. The bullet was extracted from beneath the skin just to the left of the sternum in the fifth intercostal space. The end of the bullet was found to be slightly flattened and bent, the condition so often seen when the elastic shaft of a long bone has been struck. There was some loss of power in the legs and feet, and sensation was impaired. Movements of flexion and extension of the leg were perfect, so that the innervation of the muscles of the thigh was clearly not interfered with. The nutrition of the limbs was good, and there was no tendency to the formation of any trophic lesions. There was some difference of opinion about this case. Some held that inasmuch as Mauser bullets almost invariably travel straight through the body, the entrance and exit wounds were really in a straight line. If so, the case was absolutely unique, for the spinal cord, the thoracic aorta, to say nothing of the lung and heart, must all have been wounded. There was, however, no sign of wound of any of the thoracic viscera. It is infinitely more probable that the bullet, fired at long range, bent up slightly in the spinous process, and travelled half way round the body, superficial to the rib, in the same way that was so frequently noticed in the days of round bullets. The partial paralysis was probably due to concussion. No fracture of the spine or ribs could be detected. On the other hand, it is certainly rare for Mauser bullets to behave in this manner. When bent up, without rupture of the sheath, as this bullet was, they may deviate slightly from the straight line, particularly when they come into contact with the elastic shaft of a long bone. I can recall one or two instances where it was thought that Mauser bullets had been diverted by the ribs, but in none of these was the evidence very clear. It is often difficult or impossible for a patient to remember accurately the precise attitude he was in when hit, and the direction from which the bullet came is constantly a matter of pure conjecture. There was no track of tenderness, cicatricial cord, or bruising over the side of the body in the course of the track that the bullet must have taken had it gone round the body. At the outset, however, this track was beneath the spinal muscles, and from this outwards the bullet may have travelled subcutaneously. The cicatricial cord is generally more distinctly felt when the bullet had passed through muscle than when through cellular tissue. The patient was able to sit up, and was not a little proud of the discussions that his case aroused. The prognosis seemed favourable.

Clinton T. Dent.

THE SICK FROM LADYSMITH.

[From an Occasional Correspondent.]

Durban, March 17th.

The first batch of sick and wounded came down from Ladysmith this week. They were taken by train to the Tugela River, were carried in stretchers across the foot bridge, and entrained for Durban. At Durban they were distributed amongst the various hospital ships, *Nubia*, *Maine*, *Lismore Castle*, *Trojan*, and the newly fitted out and admirable *Oreana*, belonging to the Pacific Steam Navigation Company. If one thought the hale and well from Ladysmith (many of whom we have seen here lately, such as the officers and men of H.M.S. *Powerful* and *Terrible*) looked pinched and fine-drawn, what must one have thought of the sick and wounded, worn down and emaciated as they are to the last degree? Never, since the Madras famine of 1875 have I beheld such a heartrending sight as the appearance of the officers and men who arrived yesterday. The sufferings of the strong in the siege were bad enough in all conscience, reduced as they were to a biscuit and a quarter, with ¾ lb. horseflesh, including bone, per diem. What must those of the sick have been? The medical arrangements at Ladysmith, as elsewhere throughout this campaign, were excellent, and all the fresh milk and eggs were commandeered for the hospitals, but it was a starvation diet to all intents and purposes that perforce was administered to the unfortunate sick. The bad and insufficient food, added to the depressing moral effect of the siege, for the guns continually fired from Bulwana over the Intombi Camp, and the apparent hopelessness of relief, told its own tale, as the 500 dead lying there amply testifies. The difficulty of feeding the sick is well illustrated by a circular issued by the Mayor of Ladysmith asking for eggs:

Ladysmith, Feb. 12.

Sir,—In a letter from Colonel Ward, A.A.G., Natal Field Force, he refers to the great number of soldiers who are now suffering from enteric fever and other diseases of a similar character, and Colonel Graham, the principal medical officer, informs him that, if 200 eggs could be procured a day, the greatest benefit would ensue to these sick men; in fact, in the majority of cases, material assistance would be rendered towards a satisfactory recovery. At the request of Lieutenant General Sir G. White, Colonel Ward has written me upon the subject, and it is suggested that, if only a certain number of the inhabitants would give a few eggs, the required number could be obtained. I shall be pleased to know from you, at the earliest date possible, whether you will kindly assist by giving a few daily, and upon hearing from you to that effect I shall be pleased to receive and forward same in accordance with the wishes of the military authorities herein expressed.—Your obedient servant,

J. Farquhar, Mayor.

It would seem that this polite appeal did not produce the result desired, for on February 24th a "corporation notice," signed by the Mayor, and headed "Eggs for Sick and Wounded," appeared. It announced that by request of the General Officer Commanding, owners of fowls within the borough must hand over all eggs to the municipal authorities for the use of the sick and wounded. It was further notified that owners who failed to comply within two days would be compelled by the military authorities, with no exception, "to hand over their fowls for the purpose of supplying the eggs now so urgently required."

The sum paid for any food at all out of the common tells the same tale. This is shown by the following, taken from a list of prices realised at public auction, and certified as correct:

	£	s.	d.
1lb. bottle of jam	1	11	0
1lb. tin marmalade	1	1	0
14lb. oatmeal	2	19	6
Condensed milk, per tin	0	10	0
1lb. beef, fat	0	11	0
1lb. tin coffee	0	17	0
2lb. tin tongue	1	6	0
1 sucking pig	1	17	0
Eggs, per dozen	2	8	0
Fowls, each	0	18	6
4 small cucumbers	0	15	6
Small plate grapes	1	5	0
1 small plate apples	0	12	6
1 plate tomatoes	0	18	0
1 vegetable marrow	1	8	0
1 plate eschalots	0	11	0
1 plate of potatoes	0	19	0
3 small bunches carrots	0	9	0
1 glass jelly	0	18	0

The hospital ship *Maine* leaves to-day for England *viâ* the Cape, St. Helena, and Madeira, and may possibly go to Gibraltar and Nice also; she has done a good work out here. The Princess Christian Hospital Train, sent round from the Cape to Durban, has been put together at the Natal Government Railway Works, and runs her trial trip to-day. To-morrow, all being well, she starts for Ladysmith direct, and will be the first train to cross the Tugela River at Colenso by the newly erected trestle bridge. This train, which consists of seven corridor carriages with through communication, will supply a much-felt want, for however excellently the hospital trains in this Colony have been administered, they have scarcely been suitable conveyances for the sick and wounded. The fact of there being no through passage from one carriage to another, and the necessity for the medical officer to scramble along the footboard in all weathers, to get from one set of patients to another, often at great risk to life and limb, is enough to condemn them.

There are over 2,000 sick in Ladysmith at present, of whom no fewer than 800 are cases of enteric fever.

Dr. Davies, who was one of the "reform prisoners," won golden opinions as principal medical officer in charge of the Imperial Light Horse in Ladysmith during the siege. He was, as has been already pointed out, twice taken prisoner by the Boers, but on each occasion, to their credit be it said, was liberated. One of the Cape papers remarks that as a surgeon and in every other way during the siege of Ladysmith he earned the gratitude of numbers of sufferers.

A MOBILE HOSPITAL IN NATAL.

READERS of the interesting series of letters from Mr. Treves which have been published during the last three months in the BRITISH MEDICAL JOURNAL will be pleased to see the accompanying photographs taken by Mr. Treves of the hospital with which he worked. They give a very good idea of the difficulties of transport and of the rough and ready conditions under which the surgical work had to be done.



Fig. 1.—An encampment of No. 4 Field Hospital. Mr. Treves's tent in the foreground.

The hospital was No. 4 Stationary Hospital, but the term "stationary" must be understood in a Pickwickian sense, for the hospital was in fact not stationary but mobile. However, it was not technically a field hospital, although at the battle of Colenso and during the fighting about Spion Kop its officers managed to get it up not very far from the fighting line. Major Kirkpatrick, R.A.M.C., was the officer in charge, and the other officers were at first Major Mallins and Lieutenant Simson. On December 11th, 1900, it was established at Frere, a station on the line from Maritzburg to Ladysmith a few miles south of Chieveley, and Mr. Treves, with his two nurses, Miss McCaul and Miss Tarr, went up with the hospital. A day or two afterwards the nursing staff received a valuable reinforcement in the person of two sisters of the Army Nursing Service. The general appearance of the hospital camp is seen in the first photograph (Fig. 1), which shows both the large marquees and the small bell tents, in one of which—that in the foreground—Mr. Treves was established. The army moved off from Frere Camp on December 13th, and early on December 15th, the day of the first unsuccessful attempt to force the passage of the Tugela at Colenso, No. 4 Stationary Hospital was ordered to move up with all speed to Chieveley, where it was established about three and three-quarter miles from Naval Hill, where the British big guns were firing. There it remained for that day, and until December 17th, when a retirement to Frere was rendered necessary by the fact that the camp at Chieveley was within reach of the Boer shells. During these two days an enormous amount of work was done by the staff of the hospital which Mr. Treves rejoined on the evening of the day of battle (December 15th), after a heavy afternoon's work with the field hospitals established immediately behind Naval Hill and under its shelter. The tent in which all the operations were done is seen in another photograph (Fig. 3), which shows the improvised operating table of biscuit boxes. When it is remembered that the temperature in the shade on December 15th and 16th was 100° F. and on December 18th 104° F., and that at Chieveley water was scarce, it will be understood that these were very trying days both for the wounded and their surgeons and nurses. Mr. Treves pays a warm tribute to the patient courage of the wounded, to the excellent work done by the R.A.M.C. officers, and to the devotion and cheerful endurance of the four nursing sisters, and it does not require much reading between the lines of his graphic letters to perceive that Mr. Treves spared himself not at all, but worked as hard and cheerfully as anybody.

At Frere the hospital remained, gradually passing on its wounded to the base hospitals at Pietermaritzburg or to the hospital ships in Durban harbour, but filling their places with cases of dysentery and typhoid fever until January 13th, 1900, when the order to move to Springfield, on the Lesser Tugela 18 miles away to the west, was received. Colonel Gallwey, C.B., R.A.M.C., the Principal Medical Officer with General Buller, had determined that the hospital should follow the troops, and had enlarged it to 300 beds. This involved the transportation of 60 tents and 10 marquees in 16 waggons, each drawn by 16 oxen, with nearly 100 more oxen for water carts, bread carts, and so on. There were in addition 5 ambulances, each drawn by 10 mules, and Mr. Treves's own Scotch cart with 16 mules, with which he had been liberally provided by the P.M.O. so as to be able to move independently to any point where his services might be most required. Lastly, there were the saddle horses for the medical officers, whose numbers had now been raised to 12. The camp was awake at 3 A.M., the tents were struck by 4 A.M., and the huge column was in motion by 5.15, and pushed on until 7.30 A.M.;



Fig. 2.—Hospital train showing the way in which the wounded were entrained, and also the disposition of some of the beds in the carriages.

after a rest of two hours it got under weigh again, and reached Springfield at 2.30 P.M. This, considering the oxen, the roads, and the hot weather, was reckoned a good performance. In Fig. 4 is seen one of the ambulances, with some of its mules, waiting to cross a drift, and gives a fair idea of one

of the minor difficulties which attend transport in a country where every stream is, as it were, sunk in a deep trench with precipitous sides.

On January 18th the hospital moved on six miles to the Great Tugela, and the tents were pitched under Mount Alice, where the big naval guns were placed, not far from Spearman's Hill. On January 23rd, the day before Spion Kop, orders were suddenly received to increase the hospital by 100 bell tents, which meant being ready for 500 more patients, or



Fig. 3.—The operating theatre of No. 4 Field Hospital, showing the operating table made of biscuit boxes. The officer standing at the tent door is Major Mallins, R.A.M.C., and the lady is Miss McCaul, one of Mr. Treves's nurses.

800 altogether, although no increase of the staff was possible. The tents were ready, however, by the next day, and on January 25th the wounded began to pour in until late at night, carried by the Volunteer Ambulance Corps (organised by Colonel Gallwey) and the coolie bearers. Some 300 wounded were at once sent on the 25 miles to Frere, but the hospital that night contained some 600 others. Additions later brought up the total which the hospital had to accommodate to about 700. Altogether the hospital stayed three weeks at



Fig. 4.—One of the ambulances of No. 4 Field Hospital waiting to cross a drift.

the camp near Spearman's Hill, and dealt with over 1,000 wounded in that time. The army began to retire on February 8th, and when, on the next day, the order came to the hospital to move, there were still about 150 serious cases under treatment. These were all carried by hand on stretchers across the veld 25 miles to the railway at Frere. By transporting the wounded in this way instead of in the ambulance waggons, which are of a clumsy pattern made strong to go anywhere, much suffering was prevented, and in Mr. Treves's opinion many lives and limbs saved.

At Frere, which was reached on February 11th, the wounded were again placed in the hospital, and as soon as possible moved on by train to Mooi River Base Hospital, or to the hospital ships at Durban. These trains were improvised by Major Brazier-Creagh, R.A.M.C., who did wonders with the material at his disposal. Unfortunately the carriages had no through communication, and it was difficult to arrange their conversion. However, by hard work and the expenditure of much energy and ingenuity, Major Brazier-Creagh overcame all superable obstacles, and made the best of insuperable defects. Fig. 2 is from Mr. Treves's photograph of one of these trains, and shows the bearers at work getting the wounded into the carriages. Through the windows the white bed linen of the upper tier of beds can be seen. It was part of the general unpreparedness that there were no hospital trains in Natal. This defect has recently been repaired by the arrival of the Princess Christian Hospital train built for the Red Cross at Birmingham, and despatched to South Africa after the battle of Colenso was fought—not a conspicuous example of the alleged superiority of voluntary effort over official methods. The War Office has no train ready and does not prepare one; the Red Cross has no train built, but does set to work to build one (one for three armies resting on three different lines of railway), and manages to get to work six months or thereabouts after the beginning of the fighting.

WITH THE SOUTH NATAL FIELD FORCE.

From an Occasional Correspondent.

The Fight into Ladysmith.

To appreciate fully the magnitude of the task accomplished by the troops under Sir Redvers Buller, one must have seen the district around Colenso. Opposite this village the Tugela is a broad and rapid river with steep and rugged banks, which changes its course continually. For months past it has been unfordable, and the only bridges crossing it had been destroyed by the Boers. On either side of the river are irregular ranges of hills, which are divided by deep ravines into innumerable kopjes of every conceivable shape. These vary in height from 500 to 2,000 feet above the surrounding plain. Many of them are almost perpendicular, and most of them are thickly covered by dense mimosa scrub and huge boulders, so that an army corps could be hidden amongst them without a man being visible. Each kopje bristled with strong and deep trenches so skilfully constructed that as each one was captured it was exposed to a withering fire from all sides. To add to our difficulties, the plain between Colenso and Ladysmith is studded with kopjes, which completely command both the road and the railway. The seeming impossibility of the task might well have caused even the bravest troops to hesitate, and it was only after four stubborn attacks, which extended over a period of 28 days' hard fighting, that the position was finally carried.

The strain which this entailed on our troops can only be realised by those who were present. Imagine an attack which lasted continuously for 17 days, as did the final one on the Boer position. During the whole of that time the troops slept on the hillsides, amidst thunder storms and rain, with not even a great coat to cover them. No words can do justice to their courage, heroism, fortitude, and cheerfulness under all the hardships and privations to which they were exposed.

Ladysmith, the goal of all our hopes during so many long and weary days, may be described as a town in corrugated zinc situated in an oasis of palms and eucalyptus trees. Stretching away to eastward of the town is a large circular plain some six miles in diameter. On the south-east margin of the plain rises Umbulwana Hill. Except to eastward the town is surrounded by barren stone-clad hills, prominent amongst them being the famous Wagon Hill, with Cæsar's Camp to the south. Whilst wandering through Ladysmith, one is forcibly struck by its wonderful state of preservation. An angle knocked off the clock tower of the Town Hall, another off the porch of the Roman Catholic chapel, and an occasional circular hole through some stray house is all that remains to

tell of the fierce and long-continued siege and bombardment which it so successfully resisted. Amongst the troops and inhabitants, however, languid movements and pale and haggard faces showed clearly the effect of restricted rations and days and nights of broken rest. Considering the number of men and animals that were shut up in the town for four long months its sanitary condition is marvellous. Noxious smells are absent, and our entrance into Ladysmith was attended by an almost complete relief from the swarms of flies which plagued us at Colenso. The health of the garrison has naturally suffered much. At the time of the relief there were considerably over 2,000 sick and wounded in hospital, 800, it was said, were suffering from enteric fever. It is currently rumoured that the Principal Medical Officer, Colonel T. J. Gallwey, C.B., is making arrangements to send as many of the Ladysmith sick as possible to Durban, where they will be placed on board hospital ships and sent for a sea voyage.

Medical Arrangements.

As the relief column advanced against the hills south of the Tugela the field hospitals were steadily pushed forward from Chieveley until they rested on the south slopes of Monte Cristo and Hlangwana Hills. On February 21st the 5th (Irish) Brigade captured Colenso. The same evening the brigade crossed the Tugela and occupied the hills around Fort Wylie. On February 22nd four field hospitals were moved across the pontoon bridge, which had just been constructed, and encamped on a large plain east of Fort Wylie, on the north side of the river. Whilst in this position the hospitals were vigorously shelled by the Boers, especially those under Lieutenant-Colonel G. T. Goggin, Major N. R. Cree, and Major G. H. Younge.

As the troops worked round the Boer left flank it was found impossible to send the wounded back in the direction of Fort Wylie, as the greater part of the road was exposed to the enemy's fire. The hospitals were, therefore, ordered to recross the Tugela, and to advance along its south bank in the direction of Ladysmith.

The evacuation of the field hospitals is unfortunately becoming increasingly difficult owing to the hospitals at the base and on the lines of communication being blocked with sick and wounded.

The Red Cross.

Numerous complaints have from time to time appeared as to the Boers failing to recognise the Red Cross. For instance, the field hospitals were repeatedly shelled at Spion Kop, at Vaal Krantz, and again at Fort Wylie. I do not believe for a moment, however, that this was done intentionally. It must be remembered that the Boer guns were firing at ranges varying from 6 to 8 miles, or even more, and at these distances it would be manifestly impossible to see the Red Cross flag. The hospital tents being the most conspicuous objects in the field naturally attracted the enemy's fire. In future campaigns, however, it would be well if all tents and ambulances were khaki-coloured. These would be practically invisible at long ranges, and would in every way be a very great improvement on the present light-coloured tents and ambulances.

Lyddite.

During the actions around Colenso we had many opportunities of studying the effects of lyddite amongst Boer prisoners who were brought in wounded. Some of the wounds were quite ghastly. In one prisoner, admitted into the 5th Brigade Field Hospital, a fragment of shell had carried away the upper part of the sternum, several of the upper ribs, and the greater part of the adjoining shoulder, leaving the lung exposed to view. Part of the same shell had smashed the right femur, and opened the knee joint. The patient was, however, progressing favourably when he left for the base. The exposed parts of the skin of many of the prisoners was stained of a bright yellow colour by the lyddite fumes, and washing had no apparent effect on the discoloration.

Dry Antiseptic Dressings.

The dislike, not to say suspicion, which both officers and men entertain towards dry antiseptic dressings is very remarkable. This arises in part from a desire to have the wounds exposed daily, so that they may see how they are progressing; and in part from an inability to understand the advantages of antiseptic surgery. Wounded men will adopt almost any device, such, for instance, as deliberately soiling the bandages to ensure a change of dressing. If the dressings are not changed daily, many of them believe that they are being grossly neglected. The advantages of dry antiseptic dressings have, however, been clearly demonstrated during the present campaign, and it is certainly time that the army generally grasped the principle which underlies them.

Boer Ammunition.

At the battle of Colenso the bullet wounds were without exception caused by ordinary Mauser bullets. Not a wound was seen which even remotely suggested an expanding bullet. At Spion Kop, however, several of the wounds showed that expanding bullets had been used. When the Boer position at Monte Cristo was captured quantities of their ammunition fell into our hands. Amongst this were found Martini-Henry, Mannlicher, sporting Lee-Metford, sporting soft nosed, and Jeffrey's sporting cartridges. The latter are especially destructive. The tip of the envelope is removed and the nickel coating is scored longitudinally at four points. When it strikes a part of the bullet breaks and fattens out like a mushroom, inflicting a truly ghastly wound.

Numbering of Field Hospitals.

Before leaving England the field hospitals were numbered consecutively from No. 1 upwards without any reference to the brigade to which they belonged. On taking the field it was found that this gave rise to constant mistakes and inconveniences. Finally the number of the hospital was changed to correspond with that of the brigade to which it belonged (as for instance the 1st Brigade Field Hospital)—a change which greatly simplified matters. This system should certainly be adopted in future campaigns, as under it the number of the hospital at once denotes the brigade to which it belongs.

During the attack on Pieter's Hill it was rumoured that Captain J. H. Campbell, R.A.M.C., attached to the King's Royal Rifles, had been recommended for the Victoria Cross. Captain Campbell was informed that some men of the regiment lay wounded on a kopje about 400 yards away. He walked to the kopje through a fire which was so fierce that he was almost hidden by the dust which was raised by the bullets. Strange to say he escaped without a scratch, but was wounded a day or two later whilst on duty with the regiment.

Charges against Hospital Management.

Since writing the above I have learnt from the British Medical Journal of February 10th that certain charges of defective management have been brought against some at least of the hospitals in South Africa. These charges have been officially contradicted by both Lord Roberts and Sir Redvers Buller. How easily charges of this kind may originate is shown by an incident which occurred after the battle of Colenso. Two wounded men complained to their commanding officer whilst he was visiting the hospital, that they had had nothing to eat for two days. On inquiry it turned out that both the men were severely wounded, and were for good reasons only allowed fluid nourishment. An ample supply of milk and beef-tea had been ordered for them, and they admitted that they had received the whole of it. As, however, they had not had solid food they complained that they had had nothing to eat.

The Pasteur Institute of Algiers.—The *Annales de l'Institut Pasteur* of March 25th contains a report by Dr. Trolard, Director of the Pasteur Institute of Algiers, of the work done at that institution from November 1st, 1894, when it was opened to December 1st, 1898. Since its foundation the Institute has received 1,836 persons who had been bitten by rabid animals. The animals which inflicted the bites were dogs in 1669 cases, cats in 130, asses in 9, jackals in 6, monkeys in 3, oxen in 2, goats in 2, while a mule, a horse, a sheep, and a hare are each accountable for 1. In addition to the 1,836 cases, preventive treatment was carried out in 10. Among the whole number there were 9 deaths, a mortality of 0.49 per cent.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 14TH, 1900.

PROFESSOR EHRLICH ON IMMUNITY.

The Croonian Lecture delivered before the Royal Society by Professor Paul Ehrlich, of Frankfort-on-Maine, dealt with "immunity with special reference to cell life." In it Professor Ehrlich expounded what is known as his "side-chain theory" of immunisation. He began by a historical review of the subject, stretching from Jenner's discovery of the fact itself a hundred years ago to Behring's observation that protective antitoxins were present in the blood of immune animals. He then pointed out that the relation of toxin to antitoxin was not a purely chemical one, because they did not combine in definite and fixed quantities. He showed, moreover, that when a toxin, as of diphtheria, was injected into the animal body, followed by an antitoxin, the toxin had a twofold and independent activity: the one a poisonous action, the other a combining action with the antitoxin. He pointed out that while the former might, and often did, become weaker—for example, it may vary with the age of the toxin—the latter remained qualitatively constant. This he explained by assuming that the "toxin" had consisted of two distinct combining portions, one to which he applied the term "haptophore group" (presumably from ἅπτω—I seize or lay hold of), which was stable, and combined in constant proportions with the antitoxin, and another which he called the "toxophore group," which was the unstable, deteriorating, and poisonous portion of the toxin molecule. He then alluded to experiments on the fixing of the toxins by the cells of the body and the distribution of this fixation of different poisons in different animals; for example, the poison of tetanus was fixed solely in the central nervous system of the guinea-pig, but in the cells of the body generally in the rabbit.

Professor Ehrlich elaborated his theory with great fulness. He distinguished in the first instance between substances which become an integral part of the protoplasm complex as food stuffs, and those which are merely taken up and remain free within the protoplasm as methyl blue granules and the alkaloids. He contended that it was necessary to consider that the protoplasmic molecule consisted of two portions, a functioning core which did the work proper to the cell and certain atomic groups which fixed the food stuffs. These atonic groups he called "nutritive side chains." He assumed that the food stuffs had corresponding atomic groups with a maximum affinity for the side chains of the protoplasm molecules. These two sets of atomic groups, of the food stuffs and those forming the side chains of the cell, had a specific relation to each other as of a lock to its key.

The first point in Professor Ehrlich's theory then is that the toxin maintains a relation to the cell in the same manner as the food stuffs, that is, by means of side chains. He holds that the haptophore group of the "toxin" enables its poisonous or toxophore group to unite with the cell, and that this same haptophore group unites with the antitoxin in the blood and enables it to keep the toxophore group from exerting its poisonous action. When the side chains are all occupied by the haptophore group of the "toxins," then the food stuffs are kept from uniting with the cells. As a consequence new side chains are thrown out, and their formation once started is continuous, and so much in excess of the demand that they are detached, and accumulate free in the blood ready to take up any toxin molecules that may subsequently be introduced, uniting with their haptophore group, and thereby rendering their toxophore group or poisonous portion innocuous. The side chains thus produced in excess and thus set free in the blood constitute the antitoxin itself. According to this theory then the process of immunisation depends on the formation of this habit of an excessive regeneration of side chains.

This is the gist of the lecture, and it was illustrated by reference to numerous experiments, many of which were the bases of the steps in the theory. The lecturer's views undoubtedly harmonise and explain many of the very diverse facts of immunity and the relation of toxin to antitoxin. It is well that English science should have had an exposition of this valuable working hypothesis direct from its originator and developer.

THE MATHEMATICAL THEORY OF EVOLUTION.

Professor Karl Pearson and his assistants are indefatigable in their attempts to bring evolutionary phenomena into the domain of statistical computation. In a paper read recently before the Royal Society[1] Professor Pearson once more turns the dry light of mathematics upon various questions which are interesting both in themselves and as subsidiary to the central doctrine of evolution. One of these has reference to the suggestion put forward by Darwin of a causal connection between the tides as determined by the lunar phases and the periodical recurrence of the menstrual period, in which, he says, "we apparently still retain traces of our primordial birthplace, a shore washed by the tides." This ingenious speculation derives no support from the figures investigated by Professor Pearson and his assistants—Messrs. Yule and Bramley-Moore. The inquiry did not take the form, as might have been expected, of a direct analysis of dates of recurrence of the menstrual function, with a view to ascertaining whether they showed any tendency towards grouping about a definite point in the lunar period. The method employed was an indirect one, and the question actually dealt with was that of a possible monthly period in the birth-rate; there being, as Professor

[1] On the Magnitude of Certain Coefficients of Correlation in Man, etc. by Karl Pearson, F.R.S., University College, London. *Proc. Roy. Soc.*, 1899.

Pearson says, "an indisputable correlation between birth and the date at which a monthly period would have taken place had pregnancy not intervened." This latter mode was no doubt selected on account of the comparative ease with which the appropriate data can be obtained. As a result of the computation of 6,000 cases, it appears that there is "little or no correlation between lunar phase and birth frequency;" and consequently that "if lunar or tidal influence ever fixed the period of the menses, sensible correlation between the two has now disappeared."

Another computation, resting on measurements of 1,000 infants of each sex taken at birth, confirms a view previously expressed by Professor Pearson to the effect that the male infant is at birth more variable in length and weight than the female. So far as weight and height are concerned, both absolute variability and correlation diminish with age, but in females much less rapidly than in males, who soon lose their initial advantage. Coefficients of variation and correlation have also been determined for the weight, height, strength of pull, and head-index in adults, generally of both sexes. The importance of these data rests on the fact that, as the author puts it, "until we have accurate determinations of the change in the correlation between organs with growth, it is impossible to attempt to measure quantitatively the influence of a selective death-rate on growing living forms." The results at present obtained tend to show that, in regard to the characters above mentioned, "the changes in variation and correlation are due to growth or nurture; or, if there be selection, it is to a large extent screened by these causes." That is to say, that the diminished variability of adults is not due to the better chance of survival of average forms, but to a certain individual tendency towards the mean during growth. A determination which Professor Pearson hopes to make is that of the correlation between shape of head and intellectual capacity. It would be interesting to know how he proposes to measure the latter.

The last point dealt with in the paper before us is the correlation of fertility with homogamy, or similarity of structural qualities between husband and wife. Professor Pearson was led into this investigation, which involves a somewhat intricate piece of reasoning, by observing the very close correlation of stature that obtained in 1,000 couples taken apparently at random—a correlation, he thinks, greater than can be accounted for by the amount of conscious assortative mating that no doubt exists. Nor did it seem that the residual effect could be entirely due to the unconscious assortative mating that may occur between members of the same local race. Hence he was led to inquire whether there was any reason why he himself should have unconsciously selected homogamous marriages; and the possible explanation suggested itself that, as he was more likely to have obtained his returns from larger families than from smaller ones, the homogamy might have made its appearance in his results as a consequence of correlation with fertility. Should such a correlation be shown to exist, it would undoubtedly be of much importance for the theory of evolution, especially in view of his suggestion of "genetic selection."[2] Further investigations, in which Professor Pearson was assisted by Mr. K. Tressler and Miss Alice Lee, D.Sc., were undertaken with a view to the determination of this point. Unfortunately, however, the data proved insufficient, and although the results so far as they went were in favour of correlation, the limits of probable error were so wide that the question could not be taken as definitely settled. It was, however, established that fertility is in some degree dependent on the relative size of husband and wife, the relatively taller mothers having the larger families.

Professor Pearson is careful to note that the influence of homogamy may be more or less dominated by that of endogamy (or inbreeding). It is obvious that the respective effects of the two factors require to be carefully disentangled. But he goes somewhat beyond what is warranted by the present state of our knowledge in assuming, as he seems to do, that endogamy in all cases tends towards sterility. The provisions that exist for the prevention of self-fertilisation in plants are well known; but these cases require to be balanced by others in which the contrary condition prevails, the structural arrangements being such as to favour self-fertilisation instead of impeding it. Moreover, there are instances in which both kinds of fertilisation occur, and in which it is demonstrable that the endogamous union is the more productive of the two. The whole subject of inbreeding calls for fresh investigation. There can be no doubt of its importance from the medical point of view, and it is satisfactory to know that so competent an experimenter as Professor Cossar Ewart[3] is devoting himself to its elucidation. Meantime the factor of endogamy must in most cases be considered as of unknown value, and unless it can be altogether eliminated from such problems as those now under consideration, we must at present be content with somewhat doubtful results.

[2] BRITISH MEDICAL JOURNAL, July 29th, 1899, p. 294.

HEROES OR DEGENERATES?

IN a thesis recently presented to the Medical Faculty of the University of Toulouse, Dr. A. Bosc brings a serious indictment against most of the "Noble Greeks and Romans" immortalised by Plutarch: that while they have been held up to the schoolboys of more than twenty centuries as bright ensamples of heroism and virtue they really were written down degenerates with all the characters known to criminal anthropology.

Take Themistocles for instance: did not his father disinherit him? and did not his mother hang herself "for very care and sorrow she took to see the lewd life of her son?" Plutarch, by the way, says that these are fables, but the mere question of fact is a trifle to a disciple of Lombroso. But granting for the sake of argument that Themistocles was cut off with the proverbial shilling, is that a sufficient reason for classing him as a degenerate? Surely it might with greater cause be urged that a father who disinherited such a son must himself have been a degenerate, though we are not aware that what Charles Surface calls a "d——d disinheriting countenance" has yet been classed among the stigmata of degeneracy.

But there is more against Themistocles. Let us take the evidence on which his accuser relies from the

[3] *The Penycuik Experiments.* By J. C. Ewart, M.D., F.R.S. London: A. and C. Black. 1899. 10s. 6d.

lips of Sir Thomas North, whose charming version of Plutarch has recently been republished in the Temple Classics:—"In the first part of his youth his behaviour and doings were very light and unconstant, as one carried away with a rash head and without any order or discretion; by reason whereof his manners and condition seemed marvellously to change and ofttimes fell into very ill-favoured events, as he himself did afterwards confess by saying: that a ragged colt oftimes proves a good horse if he be well ridden and broken as he should be." A rash head can scarcely be accounted an abnormality in a boy, and the falling into ill-favoured events in youth is part of that unprofitable agricultural enterprise of sowing wild oats in which men who do not labour under the least suspicion of genius engage in their salad days.

But then, says Dr. Bosc, Themistocles did such odd things. For instance—again we quote North, for the pleasantness of his quaint speech—"When he was but a young man, and scantly known, he earnestly entreated one Epicles, born at Hermiona, an excellent player of the citherne, and counted at that time the cunningest man in all Athens with that instrument, that he would come and teach his art at his house; and all was no more but that many people being desirous to hear him play should ask for his house and come thither to him." All this, we submit, merely shows that Themistocles was a pushful young man, with a notion of self-advertisement apparently far in advance of his day. The same motive doubtless led him one year, at the Olympic games, to keep open house for all comers, to have his tent richly furnished, and to keep a great retinue of servants; and another time to pay the cost of production of a tragedy, for which he was awarded a prize, a fact which he recorded on a tablet set up in a temple. Does not "degeneracy" of this kind often lead to social, to political, and even sometimes to professional success?

Demosthenes was, it appears, another degenerate. Of obscure origin, he passed the early years of his youth in debauchery and idleness. He wore long flowing garments, and had an effeminate carriage. On attaining his majority, which in Athens was fixed at the age of 17, he brought an action against his guardians who had mismanaged his patrimony. When judgment was given in his favour, he did not exact his pound of flesh from them, although he had been very eager in the prosecution. Bosc refuses to see in this evidence of a generous nature, but fails to explain how it is to be looked upon as a sign of degeneracy. He simply asks us to believe that the great orator was a sycophant because, forsooth, having been insulted and struck in public, he proceeded against the aggressor, but withdrew the charge on being offered the sum of 3,000 drachmas. Apparently your unhappy great man is not allowed to accept compensation like humble mortals. Demosthenes has especially hard measure meted out to him, for he is held to be equally mean-spirited whether he lets those who do him wrong go free or accepts damages.

On another occasion he appeared in a case for both parties in a suit, accepting fees from each of them. We do not defend the morality of this procedure; but after all it is only one step further than taking a fee from one party and not appearing at all—a practice which seems not to be considered "degenerate" or disgraceful by our own most honourable profession of the Bar.

Later, Demosthenes was present at the battle of Cheronea—or, to be strictly accurate, at part of it, for he ran away, doubtless that he might live to fight another day. He returned to Athens *médiocrement couvert de lauriers*, like de Grammont after one of his campaigns. Possibly to make up for the want of laurels, Demosthenes claimed the gold crown which was awarded to conquering heroes—a fact which seems to show that he had Danton's, at least, cardinal virtue of audacity in a heroic degree.

But the most unexpected figure in this new batch of heroes led captive to grace the chariot wheels of the triumphant criminal anthropologist is Cato the Censor. It would appear that he took a long time to degenerate; at any rate, it is on the follies of his old age that Dr. Bosc rests his case. Having been, like Werther, a moral man for the greater part of his life, Cato gave way to the lusts of the flesh when he was declined into the vale of years. His conduct was reprehensible, no doubt, but may we not assume that senile changes in the brain had undermined his *atrox animus?* The fact that towards the end of his life he became less austere in his diet and habits of life, which is adduced by his accuser in evidence of his degeneracy, might by the same method of argument—if that term may be applied to such nonsense—be held to be a proof of regeneration.

OPIUM IN CHINA.

The annual meeting of the Society for the Suppression of the Opium Trade was held at Exeter Hall on Friday, April 6th. The annual report was read, and its adoption proposed by Sir Joseph W. Pease, Bart., the President of the Society, and seconded by Sir Matthew Dodsworth, and unanimously agreed to by an audience of some thirty-five persons. The speakers lamented the little progress they had made, but believed that by the efforts of the Society the trade between India and China in opium had been materially lessened. The revenue of India from opium in 1885 exceeded £7,000,000, but at the present moment the opium revenue had fallen to £1,600,000. The British Government had systematically refused to advise the Indian Government to give up the revenue from this source, but as the sum derived from the opium traffic had now fallen to so low a figure, it did not seem as though there would be much financial difficulty in renouncing this small source of income altogether. At the present moment some 500,000 acres of land are under cultivation for the produce of the poppy, and, according to the Chairman, the area has been increasing of late years, although it was officially declared by the Gladstone Government that no increase would be allowed. Mr. Samuel Smith, M.P., in his speech, lamented the impossibility of getting the Indian opium question brought up in the House of Commons, owing to the difficulty of private members obtaining a hearing. He deplored the fact that not only the opium question but that all efforts for the moral benefit of the people was being set at naught by the present militarism now rampant in England. He declared that the sensitiveness of the national conscience was being weakened by reading the accounts of bloodshed in the daily papers, and that there was no chance for the delicate senses of morality, righteousness, and truth. Opium, it was declared, was being introduced into China against the will of the people, and Mr. Cousins, of Wu-Chang, China, stated that the great Viceroy, Chan-Chih-Tung, in his writings, advocated that opium should be "cast out" from China. Mr.

Cousins stated that in Wu-Chang the opium habit was very prevalent, and that as much harm was caused in China by opium as was caused by drink in England. We are not sure that this statement is calculated to rouse the energies of British folk to interfere with the Chinese and their indulgence in opium. It surely behoves us to remedy the evils at our doors before attempting to interfere with our neighbours; and, if drink is the curse it is stated to be, we should prefer to give support to men who would rid us of its consequences, and thereby set an example to the natives of China. The Chairman upheld the report lately issued by 100 physicians on the opium question, but referred to the report of the Government Commission on the opium habit as "prejudiced garbage." We presume that enthusiasm carried Sir Joseph Pease away when he made so unfortunate a statement. At the same time such statements explain why the members of the "Society for the Suppression of the Opium Trade" cannot get a hearing in the House of Commons, and have but a small following in the country.

OSMAN PACHA AND HIS WOUNDED SOLDIERS.

The death of Osman Pacha recalls the fact that he was at one time the object of much severe criticism in the English newspapers for his supposed indifference to the sufferings of the wounded soldiers whose stubborn courage won for him the laurels of the "Hero of Plevna." In justice to the memory of a brave man we think it right to quote in rebuttal of this odious charge the testimony of a competent witness who had the best possible opportunities of knowing the exact facts. Dr. Charles Ryan, now of Melbourne, was with Osman in Plevna for five months, and has recorded his experiences during the famous siege in his interesting book *Under the Red Crescent*. He says that the Turkish general was a strict disciplinarian, and had a hearty dislike of newspaper correspondents. But the accusations so freely made against him of neglect of the sick and wounded, and indifference to suffering, are simply untrue. Unsparing of his troops in battle, Osman never forgot his wounded men when the fighting was over. He regularly visited the hospitals, encouraging the wounded with kindly words. He let it be understood that all the members of the medical staff who worked well would be decorated. When the road to Sofia was opened up for a time, a party of British surgeons sent by the Stafford House Committee brought into Plevna a supply of medical stores and offered their services. Osman had, however, made up his mind to send the bulk of his wounded to Sofia where they could receive better treatment than in Plevna, where food was beginning to be scarce and the hospitals were overcrowded. He therefore declined the offer of the British surgeons, who complained that they had been discourteously treated and made formal protest against the "gross inhumanity" of the course decided on by the Turkish General. One easily gathers from Dr. Ryan's own account that Osman, "always a brusque and stern man at the best," was in no mood at that time to tolerate any interference with his plans on the part of philanthropic outsiders. Dr. Ryan holds that the Muchir was fully justified in what he did, in the interest of the wounded themselves. The accommodation for them was very insufficient. Many of the hospitals consisted of houses without windows, and they were all fearfully overcrowded, thirty men often being packed in a room only large enough for ten. There were no beds, nor was there any wood to make them. Pyæmia and hospital gangrene raged unchecked. The food supply was scanty, and quite unsuitable for invalids, only the barest necessaries, such as biscuit and meat, being available. Of 4,500 wounded men, all but the worst cases, numbering some 250, were sent to Sofia. Most of them, according to Dr. Ryan, were cases of flesh wounds by bullets which in the ordinary course of things would heal in twenty to thirty days. There were also between sixty and seventy cases of fracture, in most of which union had already taken place. He does not deny that many of the wounded suffered much during the rough journey, and not a few died. But he maintains that the proportion of deaths would have been much larger if they had been left amid the septic surroundings of Plevna. From a military point of view the removal of the wounded, when the chances of war left the way open for a time, was an imperative necessity. Although Osman was eventually forced by starvation to surrender, he could not have held out so long as he did if the food wanted for his fighting men had gone, in larger measure than was absolutely necessary, to useless mouths. On the whole we get a pleasing impression of Osman from Dr. Ryan, who served under him as a regularly commissioned officer of the Ottoman army for fifteen months. The following little incident shows him in a very kindly light. Quite early in their acquaintance on the march from Widdin to Plevna, Dr. Ryan, being thoroughly done up, took possession of the best room of a village inn and there fell fast asleep. "When I woke up," he says, "I found Osman Pacha and his staff in the room talking. I apologised for my presence, and he was most good natured about it. 'A soldier sleeps when he can, my boy,' he said, 'for he never knows when he may get another opportunity.'" The language even of a British colonel in similar circumstances would probably have made the roof of the room desecrated by the presence of the doctor a "sulphurous canopy." Clearly even if Mr. Gladstone was right in calling Osman coarse, the hero of Plevna was neither callous nor cruel.

THE DOCTOR AND HIS FOOLISH FRIENDS.

He was a wise man indeed who cried, "Save me from my friends!" There are many kinds of friends from whom one would wish to be saved. For instance, there is the candid friend who chastens us by telling us all the unpleasant things that are said of us behind our backs; the fussy friend who pesters us with unsolicited advice; the superior friend who points out the artistic demerits of our furniture; the frivolous friend who "looks us up" when we are earning our bread with the sweat of our brow just to see how we are getting on; the serious friend who bores us about the higher life, and the hypochondriac friend who bores us about his liver; the easy-going friend who borrows a "fiver" which he remembers to forget to pay; the inquisitive friend whom we cannot get to understand that

> Not e'en the tenderest heart and next our own
> Knows half the reasons why we smile or sigh.

But worse than all there is the foolish friend. To medical men the foolish friend is more than an annoyance; he is a serious affliction. In his mildest form he sings the praise of the doctor whom he oppresses with his patronage at the dinner table and in the smoking room. In his most virulent form he is the editor of a society paper, and the name of his pet physician appears in it as regularly as the head of Charles the First in Mr. Dick's memorial. People get as tired of hearing his name as the Athenian voter was of hearing Aristides called "the Just." Sometimes the unfortunate doctor is treated even worse, and his portrait appears—it may be with that of the reigning professional beauty and the favourite for a coming prize fight—with a biography almost as detailed as if he were a fashionable criminal. When the foolish friend can find no other literary vent for his devotion to his doctor, he advertises his gratitude in a local newspaper. This kind of public thanksgiving, though by no means unknown in this country, is, we think, more common in the Colonies; and it would seem to be particularly prevalent in Australia. At least, so we are led to conclude by the frequent complaints of less favoured practitioners in the medical journals

of the southern hemisphere. In that happy clime gratitude doubtless blooms more luxuriantly than in the colder latitudes of the north. The following choice specimen is taken from the *Australasian Medical Gazette* of January 26th:—

THANKS.

The undersigned desires to very sincerely offer his Warmest Thanks to Dr. ——, the matron and nurses of —— Cottage Hospital, for the very kind and skilful attention they bestowed upon him during the five weeks he was an inmate of that institution. Also to —— for the innumerable acts of generosity and loyal friendship performed by him.

Another sufferer in the fulness of his gratitude "drops into poetry" like Silas Wegg. He makes proclamation *urbi et orbi* to the following effect:—

The undersigned desires to return his Heartfelt Thanks to those who sympathised and otherwise assisted him during his wife's sudden illness; more especially to Dr. ——, for if any man possesses Christian humanity that gentleman does; and for his kind attention I will never forget.

For two long weary nights, my wife he watched,
Every change to detect,
And administering each kind of medicine
That he thought would take effect.

W——————.

We present our respectful sympathies to the victim of this metrical outrage. The authors of such effusions doubtless mean well, but their clumsy manner of expressing their gratitude must be nearly as embarrassing to those whom they wish to thank as the attentions of the bear in the fable who, to rid his master of a troublesome fly, smashed his head with a large stone.

BACKWARD CHILDREN IN POOR-LAW SCHOOLS.

We have received from the House and Visiting Committee of the Brighton Road School, South Metropolitan School District, an interesting report (to be sent to the Local Government Board) with regard to the "backward boys" under their supervision. It would appear that early last year the Board of Management of these schools directed that special classes should be formed for the instruction of such boys, and asked permission of the Local Government Board to form a special class of half-timers for certain backward cases. This very reasonable request was refused, in view of "the approaching termination of the school district," and because the proposed half-time employment of the children seemed "open to much objection." Meanwhile the Committee industriously pursued their investigations, and with the aid of their medical officer, Dr. Rice, and of their head teachers, have tabulated facts which point to the urgency of something being done. The system of the special instruction of defective children in elementary schools has received the formal sanction of the Legislature and of the Education Department, so that it may now be said to have passed the merely experimental stage. Why a similar system should not be at once adopted in Poor-law schools throughout the country it is hard to say, especially as the investigations of Dr. Warner and others in a certain number of Poor-law schools tend to show that it is amongst pauper children that mental dulness and defect are most often met with. It is true that the Metropolitan Asylums Board have undertaken the charge of the pauper children in the London District who require special training; but although the Local Government Board Order giving them this charge is dated April 2nd, 1897, we are not aware that more than twenty children of this class are at the present time actually provided for under the Metropolitan Asylums Board. It seems, therefore, unreasonable that obstacles should be placed by the central authority in the way of pauper school committees making at any rate provisional arrangements for the special instruction (including a due amount of manual training) of children still in district schools; for the plastic age at which alone educational impressions can be made will not wait for the perfecting by the Metropolitan Asylums Board of its arrangements. We cordially endorse Dr. Rice's plea for smaller classes, and for a special curriculum to meet the needs of these unfortunate children.

THE NEMESIS OF QUACKERY.

The death of Dr. Leslie E. Keeley, the inventor of the "gold cure" for inebriety, was recently mentioned in the British Medical Journal. Dr. West Hughes, of Los Angeles, California, states in the New York *Medical News* of March 10th that he was called to attend Dr. Keeley just before his death. "As I walked into the house," he says, "he gave a few gasps and fell back dead. He was surrounded by 'Christian Scientists,' who had been in constant attendance for several days, treating him for an attack of the grip. I was informed that he had been under the same scientific (?) treatment for several years, being a sufferer from chronic heart disease." Surely this is a melancholy instance of a man's intellect becoming subdued to that it worked in, like the dyer's hand. Dr. Keeley was for many years an orthodox practitioner of medicine. Then he left the broad highway of legitimate practice, and took a short cut to fortune by a secret path. He was a man of keen intelligence, and, it might have been thought, had sufficient scientific knowledge to recognise humbug when it came before him. Yet here we find him fallen among quacks, and on his deathbed accepting the ministrations of the most foolish and futile of all pretenders to the power of healing. Morison died swallowing his own pills, but then Morison was not an educated physician. Quackery is in its effect opposite to mercy—it curses him that gives as well as him that takes. No man can deal in it without suffering impairment, not only of his moral, but of his intellectual sense. The manner of Dr. Keeley's death was a sad illustration of the Nemesis of quackery.

HYPNOTISM BEFORE THE INQUISITION.

The Catholic Church, like Terence's oft-quoted character, deems nothing human foreign to herself, and so looks upon medical science as falling in some degree within her sphere of jurisdiction. Naturally, therefore, among other matters she has had occasion to consider the question of hypnotism in its theological aspect. Though hypnotic phenomena are looked upon with some suspicion as savouring of diabolic agency, hypnotism has never, we believe, been formally condemned. But the consciences of the faithful are apt to be uneasy, and a physician who is an obedient son of the Church recently brought the question before the proper authorities. It may be of interest to some of our readers if we give here the statement of the case and the answer of the Holy Office: N. N., Doctor of Medicine, for the tranquillity of his conscience, besought the Holy See to be good enough to declare if it be lawful to take part in the discussions held in the Society of Medical Sciences of R. as to hypnotic suggestion in the treatment of sick children, having regard to the fact that not only experiments already made are to be dealt with, but also other novel experiments which it may or may not be possible to explain by natural causes. The Holy Inquisition, leaving aside the general question as to the lawfulness or unlawfulness of hypnotic experiments confined itself to deciding the case submitted in the following manner: "As to experiments already made they may be permitted, provided there be no danger of superstition and scandal, and further that the petitioner be prepared to obey the mandates of Holy Church and do not play the part of a theologian. As to novel experiments, if it be a question of facts which certainly exceed the powers of Nature they are unlawful; but if there be a doubt on this point, on condition of making a preliminary protest that it is desired to take no part in preternatural matters, they may be tolerated, provided there be no risk of scandal." (*Quoad experimenta jam facta, permitti posse, modo absit periculum superstitionis et*

scandali, et insuper orator paratus sit stare mandatis S. Ecclesiae, et partes theologi non agat. Quoad nova experimenta, si agatur de factis, quae certo naturae vires praetergrediuntur, non licere. Sin vero de hoc dubitetur, praemissa protestatione nullam partem haberi velle factis praeternaturalibus, tolerandum, modo absit periculum scandali.) The decision is dated July 26th, 1899. The document is a somewhat curious one, and if not quite so ambiguous as the utterances of the Delphic oracle, is distinctly vague in its terms. The cardinal point in the judgment appears to be that physicians who are faithful sons of the Church must have nothing to do with "preternatural" matters, that is to say, things transcending the power of Nature. But no glimmer of guidance is vouchsafed as to the criteria by which the quality of preternaturalness can be recognised and safely predicated in any given case. It would have been interesting, and perhaps instructive, to have had a definite pronouncement from this high tribunal as to the exact position of the boundary line which separates natural from preternatural phenomena. Another point in the decision seems to require explanation. It may be gathered that while the Holy Office accepts the *fait accompli* in the matter of experiments, it is reluctant to allow of any new departures. But it gives us no light as to how progress in scientific investigation is possible if the inquirer is restricted to the consideration of *experimenta jam facta*.

OVARIAN PREGNANCY.

OF late years the possibility of true ovarian pregnancy has been denied by the majority of observers of repute, particularly in this country, and it has practically come to be the accepted opinion that all varieties of ectopic gestation are primarily tubal. In the older textbooks on obstetrics and gynæcology ovarian pregnancy was always included in the list of varieties of extrauterine fœtation, and the change of opinion is due chiefly to the influence of the late Mr. Lawson Tait, who, in his very able and lucid pamphlet on the subject published in 1888, enunciated the principle that all forms of ectopic pregnancy have their starting point in the Fallopian tube. The researches of Clarence Webster, Bland-Sutton, and J. W. Taylor have tended to strongly confirm this opinion. Webster holds that the ovum can only be grafted upon such tissues as can respond to the genetic influence—that is to say, undergo decidual changes—and he considers that there is no reason to believe that the Graafian follicles can undergo this "genetic reaction," and no proof that a pregnancy has ever started in them. Bland-Sutton sums up his views on the subject as follows: "Until some specimen is forthcoming in which an early embryo in its membranes can be demonstrated in a sac inside the ovary, we need not trouble ourselves to discuss ovarian pregnancy." A paper by Van Tussenbroek in the *Annales de Gynécologie et d'Obstétrique* would seem to reopen the question; it embodies the results of a very careful examination of the specimen removed and clinically described by Konwer in 1893, and the conclusion arrived at, on apparently very strong evidence, is that the case was a genuine example of pregnancy within a Graafian follicle. The ovary, which was practically healthy, was separated from the tube by a considerable mesovarium, and the two organs were unconnected by adhesions. A recent corpus luteum was seen in the ovary, and Graafian follicles in various stages of development, but none of them approaching maturity. The tube was normal save for slight twisting and agglutination of its fimbriæ, and its orifice was patent. The ovisac, which formed a tumour about the size of a nut on the surface of the ovary with a broad base, appeared to be a gravid Graafian follicle. At the base of the sac a sort of diverticulum extended into the substance of the ovary, and the wall of this portion had the structure of an ordinary corpus luteum. The rest of the walls of the sac consisted of the same structures thinned out by the pressure of the growing ovum. Decidual membrane or cells such as are found both in tubal and uterine pregnancy were not present. A fœtus, 12 mm. in length, surrounded by amnion and chorion, lay within the ovisac. Numerous chorionic villi, some in contact with maternal tissue, could be demonstrated between the chorion and the maternal wall of the sac. The conclusions arrived at are: (1) That ovarian pregnancy is a fact which can no longer be disputed; (2) that ovarian pregnancy signifies pregnancy in a Graafian follicle; (3) that as in this specimen the follicular wall does not show any transformation into decidual tissue, the conclusion must be drawn that Webster's decidual reaction is not a *sine quâ non* for the implantation of the ovum; (4) that the regular development in this specimen of normal syncytium constitutes a new and incontestable proof that the syncytium has no connection with the uterine epithelium, but is a derivative of the fœtal epiblast. The importance of this case is enhanced by the fact that it shows the conditions existing at an early stage. Previously described specimens have generally been too advanced to allow of any certain deductions as to their primary origin or the true relationship of the parts. It would, indeed, appear doubtful whether a true follicular gestation could reach an advanced stage of development if there is no decidual change in the maternal tissues, as this case would indicate. The paper is illustrated with very clear coloured drawings of microscopical sections and a photograph of the entire specimen.

THE PATHOGENESIS OF CANCER.

IN the *Edinburgh Medical Journal*, January, 1900, there appears a communication (read before the Medical Society of London) on the infectivity of malignant growths, by Mr. G. Bellingham Smith and Dr. J. W. Washbourn. In this are briefly set forth the chief theories regarding the pathogenesis of new growths, and such questions are discussed as auto-inoculation and the accidental inoculation arising from operative procedures. Some of the cases illustrating the last-named phenomenon are interesting, though the source of the danger itself has now been for some time recognised. With respect to the cultivation of parasites from tumours, the authors express themselves as not satisfied that parasites existing during life have yet been isolated from cancers in the human subject. Turning to the reproduction of carcinoma be the injection of such cultures, Sanfelice claims a positive result in the mamma of a bitch with the blastomyces obtained by himself from fermenting fruit juice. But these results must not only be repeated, but the tumours so produced must satisfy other observers experienced in the study of new growths. The experimental production of malignant growths by cultures of various kinds has in fact been so many times claimed as to render this imperative. We have to be sure that a local mastitis with epithelial proliferation has not been taken as the result expected and called a carcinoma in the pardonable zeal to solve the etiology of this most important section of pathology.

SUNSHINE AND WIND.

EAST coast watering places continue to boast of the large number of hours of sunshine which they enjoy at this season of the year. We cannot help thinking, however, that the publication of isolated facts as to the number of hours of sunshine, without at the same time any statement as to the temperature and the force and direction of the prevailing winds, is distinctly misleading. Incomplete statements of this kind as to the climate of health resorts are to be deprecated, both in the interests of the general public and of the resorts. If an invalid is led by

the announcement that some place on the east coast of England has a large number of hours of sunshine in the spring to go there in the expectation of a warm climate, and finds the sunshine, perhaps, but an east wind coming straight from somewhere near the North Pole, and keen enough to make him shiver in his warmest greatcoat, he is apt to think that he has been deceived. He has not been deceived, but he has deceived himself by not giving weight enough to the obvious fact that the amount of sunshine is only one element in a climate. The east coast is a wonderful restorative for those who can react with sufficient readiness to its stimulating properties, and it is of immense value to many strumous children, but it is a remedy which in the spring should be used by others only under medical advice.

SIR DOUGLAS MACLAGAN.

Sir Douglas Maclagan was a fine specimen of the clear-headed, high-principled, cultivated Scotsman, and the world is the poorer for his death. He was one of seven brothers, all men of singular gifts, the youngest of whom is now the Archbishop of York. Sir Douglas Maclagan was a link between this generation and that which shed so much lustre on Scotland at the end of the last and the beginning of this century. He had known Sir Walter Scott, and, having been born in the same town of Ayr as Robert Burns, was christened by the same clergyman, the Rev. Dr. Dalrymple, who had christened Burns 53 years before. During his studies in Germany he met and spoke with Goethe. Among the many claims which he had upon the gratitude of the medical profession perhaps the chiefest was that he so extended the duties oi the Chair of Medical Jurisprudence in the University of Edinburgh, to which he was appointed in 1862, that it came to include instruction in public health. He thus paved the way for the foundation of the first Chair of Public Health, which was founded in 1898. To him, too, belongs the credit of having brought about the institution of the two public health degrees of the University of Edinburgh. But he by no m eans confined his attention to forensic medicine and public health; he was an accomplished professor of clinical medicine, and here he also broke new ground by directing his lectures chiefly to dermatology and by founding a separate department for skin diseases in the Royal Infirmary, of which, from 1887 to 1891, he was one of the managers. At the weekly meeting of the managers last Monday the Lord Provost made a sympathetic reference to the death of Sir Douglas Maclagan, and the managers resolved to record on their minutes their deep sense of the loss which the institution had sustained. He took a foremost part in founding the Longmore Hospital for Incurables, and to the last felt a deep interest in it. In the biographical notice published elsewhere, reference is made to Sir Douglas Maclagan's brilliant social qualities and to his not inconsiderable efforts as a poet, and those who were present at one of the recent annual dinners of the New Town Dispensary will remember the gratification with which he received the gift of a wreath of laurels as a public acknowledgment of the appreciation felt for his songs, many of which were composed for these dinners.

MEDICAL WOMEN IN ITALY.

The medical woman is no new thing in Italy. There were *medicæ* and *clinicæ*, besides midwives, in Imperial Rome. Pliny often quotes female physicians; Galen more than once does them the honour of adopting their prescriptions. The Roman law put them on the same footing as male practitioners; in legal speech a doctor was *medicus, sive masculus, sive fœmina.* As early as the eleventh century the *mulieres Salernitanæ* were renowned not only for their skill in healing but for their medical learning. Magistra Trotula was the author of numerous treatises on subjects ranging over nearly the whole field of medicine. Mercuriada wrote on fevers, and Rebecca Guarna on the urine, while one strong-minded lady named Abella is credited with the authorship of a scientific poem *De Naturâ Seminis Humani.* In the sixteenth century Alexandra Gigliani taught anatomy at Bologna, and the famous Laura Bassi took the degree of Doctor of Medicine in the same university in 1731. In the eighteenth century Anna Mazzolini was Professor of Anatomy at Milan, and near its close Maria Petraccini lectured on the same subject at Ferrera. As late as 1842 Anna Maria delle Donne taught midwifery at Bologna. The fame of these learned ladies has been eclipsed in our own day by Professor Cattani, whose name is associated with that of Professor Tizzoni in the discovery of tetanus antitoxin. But in spite of these traditions and examples, Italian women show no great liking for the study of medicine. Dora Melegari, in a recent number of the *Contemporary Magazine*, says that the Italian universities have been open to women for twenty-two years. After a period of enthusiasm, during which a certain number of women obtained degrees in law, medicine, philosophy, and the fine arts, a pause occurred. These studies led to no practical results for those who had given up their youth to them. At Turin Signorina Lidia Poet had the same experience as Mademoiselle Jeanne Chauvin in Paris; after a brilliant university course she was not allowed to practise her profession as a lawyer. The condition of the women doctors is much more favourable; they have the same rights as men, can compete for the same situations, and obtain the same positions in hospitals and sanitary institutions. Signorina Montessori is attached to the Roman hospitals, where she occupies a position identical with that of her male *confrères.* Some others have entered the profession, but they are few in number and not very successful. The Italian woman is indolent; hard study soon tires her, and those who persevere have a terrible struggle to go through. Theoretically there is no obstacle in the way, but practically they are ceaselessly in conflict with the jealousy and ill-will of the male professors and doctors, who look upon them as rivals. Even this, says Signora Melegari, would be nothing—since, if some masculine competitors oppose, others support them—if they had not to reckon with the hostility of their own sex. Who would naturally be a female doctor's patients? Women and children. Now Italian women have no confidence either in the skill or the good faith of their own sex. They would prefer for themselves and their families the medical attendance of any chemist from round the corner to that of the most brilliant woman graduate of the University of Rome or of Turin. Medical degrees are consequently less in request than they were some years ago. At the present moment in Italy there are barely 140 female students on the books of the different universities. As there are more than twenty universities in the peninsula, this gives a total to each of fewer than seven women occupied with advanced study or meaning so to occupy themselves; for many make a beginning and do not persevere.

LAMBETH VESTRY BACTERIOLOGICAL LABORATORY.

The Lambeth Vestry and their medical officer, Dr. J. Priestley, are to be congratulated upon the success which their laboratory has attained. Although it has only been in existence for a year, 389 specimens have been examined either for the Lambeth practitioners gratis or in connection with the sanitary administration of Lambeth. Ninety specimens of sputum yielded 33 positive results, 81 Widal reactions showed that 40 of the cases were enteric, and 216 examinations for diphtheria bacilli revealed their presence in 100 cases. From a public health point of view, the laboratory has more than justified its existence during the small epidemics of enteric and

diphtheria which occurred in Lambeth. Many doubtful or suspected cases of enteric were definitely shown to be real cases, and were, of course, forthwith isolated. This prompt action must undoubtedly have prevented the epidemic from spreading. In a school in Lambeth there was an outbreak of sore throats, and a bacteriological examination of the throats showed that at least three of the scholars had the true Klebs-Loeffler bacillus in their throats, and, what is more striking, this organism was found in the slimy deposits in the waste pipes of the lavatory basins.

GRADUATION CEREMONY AT ABERDEEN.

THE graduation ceremony which took place on April 4th in the Mitchell Hall at Marischal College was the object of more than ordinary interest, inasmuch as it was the occasion of the first official public appearance of the new Principal, Dr. Marshall Lang. In his address, which was subjected to more than the usual amount of interruption from the personal comments of the more loquacious occupants of the galleries, the Principal paid a warm tribute to the memory of his predecessor, and spoke generally of the importance of extension in the University, not only of the facilities for research, but also of the University's influence on the community. Among those who received the honorary degree of LL.D. was John Mitchell Bruce, M.A., M.D., F.R.C.P., of London.

ABOLITION OF PUBLIC EXECUTION IN SPAIN.

THE Spanish Legislature has recently made an important reform in the manner of inflicting the last penalty of the law. The execution of criminals is no longer to be carried out in public. Moreover, condemned criminals are no longer to be exposed to the morbid curiosity of people in search of a sensation in the prison chapel for twenty-four hours before execution. The object of this custom was to give the criminals an opportunity of preparing for death; but as the public was admitted professedly to join in prayer for the soul about to pass out of the world, the sands of the dying sinner must have been rudely shaken by the ceaseless rushing of a stream of sightseers. The measure is mainly due to the persevering efforts of Dr. Angel Pulido, one of the medical members of the Spanish Cortes.

THE first *conversazione* of the Royal Society will be held on Wednesday evening, May 9th.

MR. B. MOORE, M.A., Professor of Physiology at the Sheffield Medical School, and lately Assistant Professor of Physiology at University College, has been appointed Lecturer on Physiology at the Charing Cross Hospital Medical School.

DR. PATRICK MANSON, C.M.G., has been elected a Foreign Associate of the Paris Académie de Médecine. Professor Ernst von Bergmann was elected at the same time. Dr. Manson received 50 and Professor von Bergmann 49 votes out of a possible total of 59. Three voters returned blank papers.

WE are informed that the Government of India, on the advice of Professor Fraser, has decided to place Captain Robert H Elliot, M.B., B.S.Lond., F.R.C.S.Eng., I.M.S., Madras, on special duty at an early date. We published recently a preliminary report by Captain Elliot upon a research into the nature and action of snake venom, and we shall publish shortly a further contribution from him on the same subject. We understand that Professor Fraser has promised to place his laboratory in Edinburgh at Captain Elliot's disposal should he decide to carry out any part of the work at home.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Midwives Bill will not now come on till after Whitsuntide. It is put down for June 27th, but it had a narrow escape of getting into the report stage on Friday in last week. The debate on the adjournment for Easter collapsed early in the sitting in consequence of a notice of motion on the paper which prevented the speakers dealing fully with the South African question. The Finance Bill which came next was read a third time by half-past eight, and so while the evening was young there remained only some small Government measures to be discussed before the Midwives Bill came on for the report stage. The Government business, however, led to more discussion than was expected, and was not disposed of till 11 o'clock. There then remained only a small Scotch Bill before the Midwives Bill, but as this was a private member's measure the Government were no longer obliged to keep a house, and the number of members in the chamber rapidly lessened. A little judicious criticism of the Scotch Bill sufficed to occupy the time till a member called the attention of the Speaker to the fact that there were not 40 members present, and so at a quarter-past eleven the House counted out and the Midwives Bill had lost its chance. Its promoters were all there and had resolved to get the Bill into the report stage if possible, but on the other hand the opponents of the Bill were present too, and prepared steadily to oppose. During the last week there has developed more and more doubt about the Bill, and if the time is wisely used in informing members of the defects and dangers of the proposed legislation, the opposition to the measure will gain great strength. The Government attitude will greatly depend on the representations made to them between now and Whitsuntide; and, as by most people the Bill in its present shape is admitted to require amendment, there is an unexpectedly favourable opportunity for modifying or opposing the proposed legislation. The resolution for the Treasury grant for expenses incurred by the General Medical Council under the Bill is down on the paper for the first day after the recess, and will have to be watched by the opponents of the Bill.

The Health of Boer Prisoners was the subject of a question the other day, and elicited the following information from the Under-Secretary for War. Three thousand eight hundred and ninety-nine prisoners have been confined on board ship, of whom 9 have died; 13 deaths have occurred among the prisoners not on ship board. There have been altogether 120 cases of measles, 75 of enteric fever, and about 30 of other ailments. At the present time 2,700 are on ship board, of whom 2,000 will be sent to St. Helena, and the remainder kept on shore. The number of deaths among the prisoners on shore has been far in excess of those on board ship. The enteric cases have been transferred from the ships to the shore, and provision has been made for the adequate medical treatment of those sent to St. Helena.

Foot and Mouth Disease.—The steamship *Ethelida* brought early last week to Deptford a cargo of 240 cattle and 1,100 sheep from Argentina. A large number of the cattle were found to be affected with foot and mouth disease. The animals were landed for slaughter at the special wharf, and steps were taken for the disinfection of persons and things which had been in contact with the animals, and of the hides, skins, and offal by which infection might be spread. The President of the Board of Agriculture also said that an order had been made prohibiting the importation of animals from Argentina.

Business after Easter.—The First Lord of the Treasury announced on Monday that the first two days after the Easter recess would be devoted to Civil Service Estimates, and that the Post Office vote would probably be among the votes taken. On April 30th the Burials Bill will be taken, and the Lunacy Bill will also be on the paper as fifth order. The latter, if not reached, will most probably come on for second reading on the Thursday following, May 3rd. The Companies Bill, the Factory and Workshops and the Housing Bills will come on later in May.

THE R.A.M.C. SOUTH AFRICA FUND.

Gifts in kind to this fund should be sent to the Office of the Central Committee, 77, George Street, Portman Square, W. Cheques and postal orders should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co.," and forwarded to Mrs. Charters Symonds, 58, Portland Place, W. Cheques and postal orders for the Half-crown Subscription List, sent to the Editor of the British Medical Journal, should be drawn up and crossed in the same way. The following are the subscriptions received since our last list down to and including April 9th:

THE HALF-CROWN SUBSCRIPTION LIST.

	Half Crowns.
Lieutenant-Colonel J. P. H. Boileau (Trowbridge)	10
Per Mr. C. T. Quiller (London):	
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Dr. E. Marett	1
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Dr. M. Le Cronier	1
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Dr. P. Chappius	1
Per Surgeon-Major E. C. R. Ward, A.M.S. (retired) (Castle Connell):	
F. W. Kennedy, M.B., Limerick	8
Brigade-Surgeon Lieutenant-Colonel H. T. Brown, M.D.	1
M. J. Malone, M.D. (Limerick)	1
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Mr. J. G. Cumming	8
Mr. A. C. Cumming	2
Dr. A. Lilian Cumming ...	2
Mrs. Dykes	1
Dr. Freeland Fergus... ...	4
Dr. Thomas Lapraik... ...	2
Sir J. N. Cuthbertson ...	4
Dr. Brown Kelly	4

We have also received per Mr. D. Cotes-Preedy (Blakedown) 10s. 6d. from Mr. and Mrs. Adley Wells, and 10s. 6d. from Mrs. Merrall.

THE REGISTRAR-GENERAL'S ANNUAL REPORT.

The sixty-first annual report of the Registrar-General, dealing with the vital statistics of England and Wales for the year 1898, has just been issued. Although the earlier publication of quarterly returns somewhat discounts the interest attaching to the principal statistical facts of the year, the report now published contained a large amount of information relating to the causes of death and the age at death necessary to the true appreciation of the death-rate.

The marriage-rate during 1898 showed a further increase upon that recorded in recent years, and was higher than in any year since 1876. For four years past the marriage-rate has shown a steady and substantial rise. The births registered in England and Wales during 1898 numbered 923,265, and were equal to an annual rate of 29.4 per 1,000 of the estimated population; this is the lowest rate on record since the establishment of civil registration in 1837. As usual, the highest birth-rates were in the mining or manufacturing counties of Warwickshire, South Wales, Monmouthshire, Durham, and Staffordshire, their populations containing a large proportion of young married persons. To each 1,000 births of females there were 1,032 male births, which was slightly below the average proportion.

The 552,141 deaths registered during the year 1898 were equal to a rate of 17.6 per 1,000 of the population, or 0.8 per 1,000 below the mean rate in the ten preceding years. With the exceptions of the rate in 1894, in 1896, and in 1897, the rate in 1898 was the lowest on record. The lowest county death-rates were 13.4 in Westmorland, 14.0 in Middlesex, 14.1 in Oxfordshire, and 14.2 in Surrey; and the highest rates 19.0 in Warwickshire, 19.3 in North Wales, 19.4 in Lancashire and in Durham, and 19.1 in Staffordshire and in Northumberland. With regard to the mortality at different age-periods, the death-rates of both sexes at the age-groups between 5 and 20 years were the lowest on record; and at the groups between 20 and 35 years the mortality was almost the lowest on record. The proportion of deaths of infants under 1 year of age to registered births was 160 per 1,000, and exceeded the average. Infant mortality among males considerably exceeds that among females; in equal numbers born the deaths of males to the deaths of females under 1 year of age were in the proportion of 121 to 100. The urban death-rate during 1898 was equal to 18.3 per 1,000, and the rural rate to 16.0 per 1,000, of the respective populations; both these rates were considerably below the average.

With reference to the causes of death in England and Wales during the year under notice, the mortality from zymotic or specific febrile diseases, although below the average, showed a further increase upon that recorded in the two preceding years, mainly owing, as was the case in 1897, to the greater fatality of both influenza and diarrhœa. The mortality from diphtheria and from enteric fever also exceeded the average, but that from small-pox, measles, scarlet fever, and whooping-cough was below the average. The fatal cases of small-pox, which had been 820, 223, 541, and 25 in the four preceding years, rose again to 253 during 1898; no fewer than 242 of these occurred in the north of England, of which 212 were registered in Middlesbrough. Of the 253 persons who died of small-pox in 1898, 107 were returned as vaccinated and 59 as not vaccinated; while, with respect to the remaining 87, no statement appeared in the certificates. The deaths directly attributed to influenza during 1898 were 10,405, and showed a marked further increase upon the numbers recorded in the two preceding years, which were 3,753 and 6,088 respectively. Hydrophobia was the certified cause of only two deaths during 1898, the lowest number in any year on record. The mortality from intemperance, both among males and females, was higher than in any preceding year. The mortality from constitutional diseases was slightly below the average, but the death-rate from cancer among both sexes was the highest on record; the male rate was higher by nearly 20 per cent., and the female rate by 10 per cent. than the corresponding mean rates in the ten preceding years. The mortality from phthisis continues to decline, and, with one exception, was lower in 1898 than in any preceding year.

The causes of 23,039, or 4.2 per cent. of the total deaths during 1898, were so unsatisfactorily stated in the registers as to be useless for purposes of classification. Such cases would have been still more numerous but for the inquiries which are systematically addressed by the Registrar-General to medical practitioners concerning indefinite certificates of causes of death. As many as 4,104 replies were received in the course of the year 1898, with the result that nearly 2,938 contained information which led to the more accurate classification of the cause of death. For example, 685 deaths from vague headings, such as tumour, or disease of liver, ovaries, uterus, etc., were transferred to cancer, 131 to puerperal fever, and 91 to syphilis.

Medical Magistrate.—Dr. Lionel Smith has been appointed a Justice of the Peace for the District of Bulawayo.

THE UTILITY AND THE ETHICS OF EXPERIMENTS ON ANIMALS.

We have received the following letter from Mr. Stephen Coleridge, Honorary Secretary and Treasurer of the National Antivivisection Society, Victoria Street, S.W.:

Sir,—I hope I may be afforded a little space in the British Medical Journal for a few remarks on your article on March 31st, which deals with my review of Mr. Paget's book on vivisection.

In the first place there can be no doubt that what Lord Lister said at Liverpool on October 8th, 1898, was:

Of animal suffering I need hardly speak, because, in truth the actual pain involved in these investigations is commonly of the most trifling description. Anæsthesia has come to the aid of experiment on animals, just as the electric telegraph did for railways. Anæsthesia enables needful operations to be done without disturbance from the struggles of the animal, while it affords to the operator the unspeakable comfort of knowing that he inflicts no pain.

The speech was reported in the *Yorkshire Daily Post* on October 10th, and on October 11th a letter of mine drawing attention to Lord Lister's utterance appeared in the *Standard*, *Daily Chronicle*, and many other papers which were sent to him marked.

The December number of the *National Review* contained an article of mine with the title of Lord Lister's Anodyne to Public Conscience, which dealt at length with the unscientific inaccuracy of Lord Lister's assurances; a copy of this article was sent him. Lord Lister, therefore, has had his attention frequently drawn to the matter, but has never attempted to deny the speech that he is reported to have made.

You suggest that he may have "come round" on this important matter to the view of those who disputed the accuracy of his own former statements, and whom he now describes as being "well-meaning persons whose actions are based upon ignorance," but I imagine that a more simple explanation is available in the supposition that I properly diagnosed the speech at Liverpool when I described it as being intended to apply an anodyne to public conscience. On this hypothesis I can sincerely accept your statement that you have "excellent reasons to suppose that Lord Lister's views have been consistent throughout," and we mutually can agree to regard the Liverpool utterance as evidence that his speeches are not always regarded by Lord Lister as necessarily expressing his views.

The position you take up, that vivisection necessarily involves torture, but that the benefit to mankind from vivisection entirely justifies that torture, seems to me to be an honest and straightforward one, but even if we were to accept such a position as morally justifiable, which we certainly do not, it still leaves the burden of proof upon you that the benefits you claim are real.

In my review I show conclusively from the irrefragible evidence of the death-rates chronicled at Somerset House that in many of the very maladies for which Mr. Paget claims that a beneficial treatment has been discovered by means of vivisection the death-rate has gone steadily up instead of down; and when I deduce the inevitable inference that a treatment of any particular disease cannot in common logic be accepted as of any value the adoption of which synchronises with a rise and not a fall of the death-rate from it, you tell me that you are "not careful to assert that in some half-score years (I took from 1861 to 1895 for my review of the death-rate from diabetes) successes have been so definitely and widely matured as to withstand hostile advocacy, a larger view than this must be taken of the matter."

But if, on discovering that the statistics of thirty-five years are against the value of your treatment, you can only plead for a "larger view" in the credulous hope that future statistics will belie those of the past, how can you reasonably claim that the discovery of this hitherto valueless treatment justifies at all the torture of animals?

Next, I come to the familiar allusions to antivivisectors who eat meat. This involves an elementary confusion of thought—to kill is to kill, to torture is to torture; they are entirely different moral acts, and anyone who honestly confuses them has not taken the trouble to master the fundamental principles of conduct.

In common with other antivivisectors, and also, I trust, with all manly folk, I consider that the right to kill carries with it the clear obligation to kill with as little pain as possible. I would enforce by Act of Parliament the utmost possible abridgment of pain in slaughterhouses and wherever and whenever life is taken.

Opposition to the torture of animals in laboratories is the logical corollary of this rule of conduct, and not, as you would persuade yourself, something inconsistent with it.

I congratulate you on your repudiation of the doctrine that it is admissible to make use of hospital patients for any purpose other than their individual benefit, and welcome your definite axiom that "something like an absolute sanctity ought to protect man from man," and I can only wish that you had found voice to enunciate it last November when you printed without condemnation Sir J. Burdon Sanderson's depreciatory allusions to those of us who still think it "unjustifiable" for surgeons to "disregard for the moment the benefit of the sufferer" in the hospital wards in order that they may investigate "the causal relations between certain morbid changes and the conditions which give rise to them."

I am not at all surprised that you have received no answer to the argumentative narrative concluding with a question which you say was addressed to the Friends' Society. The story needs amendment.

When the physician told the postulated antivivisector that his child would die unless antitoxin was injected into her, the parent, having taken the trouble to study the statistics, was already aware that the death-rate from diphtheria per million living had steadily risen instead of fallen ever since the antitoxin treatment was introduced in this country, and, not being a person whose credulity exceeded his reason, he naturally declined the proferred "cure." The answer to the question whether he was right or wrong so to refuse is that he was quite right, and let us hope that his good sense was rewarded by the recovery of his child.

In conclusion, let me say that I am sure all those who share my views of vivisection will appreciate the reasonable and courteous tone of your article. We desire nothing but fair controversy.

We have, and can have, no motive for our efforts but the desire to suppress cruelty, and to elevate conduct. We sincerely believe that it is far better for us all that we should fail to gain certain items of even useful knowledge than that pity should be crushed out of our hearts. We believe that to torture a helpless animal is a wicked act, and that the man who does it has forgotten his manhood; and you will never succeed in persuading us that science acquired at the expense of mercy is for the good of the world.—I am, etc.,

Victoria Street, S.W., April 2nd. Stephen Coleridge.

We have referred Mr. Coleridge's letter to our reviewer, who writes:

In reply to Mr. Coleridge I must touch first upon the two personal matters: the one concerning Lord Lister, the other concerning Sir John Burdon Sanderson. In respect of the first, Mr. Coleridge, by inadvertence, no doubt, seems to suggest that Lord Lister may palter with the truth, or with his own convictions; such an interpretation I am sure Mr. Coleridge would be the first to regret. The matter is one of a past controversy which I have not followed, and at the present time cannot take up. On the face of it it does not appear to contain more difference than different men may find in the same subject. Mr. Coleridge seems to have been good enough to supply Lord Lister with some information which, in Mr. Coleridge's opinion, conflicts with a certain speech of Lord Lister, and his lordship has not replied. Lord Lister may not attach the same value to this information which Mr. Coleridge does, or, in any case, may not think it such as to shake the position he took up. In any case, surely Lord Lister may refrain from further controversy on the point, or reserve it for a later occasion.

So far as I see, Lord Lister deprecated what he regarded as an exaggeration—even a violent exaggeration—of the sufferings of animals in the course of physiological investigation; he might from his point of view have called such language a "Stimulant to the Public Conscience." His deprecation Mr. Coleridge calls an "Anodyne to the Public Conscience." If we are to speak in figures (which, indeed, are better avoided), does Mr. Coleridge's use of this medical figure advance the matter? Lord Lister he accuses of "unscientific inac-

curacy;" presumably, that is, of inaccuracy not in science but in matters of contemporary history. Mr. Coleridge will scarcely claim that his version of contemporary history is, in presence of another version, to prevail until he is formally contradicted; to prevail, indeed, so far as to be a test of the consistency of his opponents?

In the next place, concerning Sir J. Burdon Sanderson, Mr. Coleridge implicitly, or indeed explicitly, attributed to Sir John a disposition to deal with hospital patients, even to their hurt, as subjects of pathological or therapeutical experiments. I have the paragraph from Sir J. Burdon Sanderson's speech before me, but to cite it in full would be to occupy too large a space. I find, however, that the speaker reasoned with persons, "whose opinions are well worthy of respect," who object to methods of investigation which, disregarding for the moment the benefit of the sufferer, are concerned only with the "scientific study of disease." Now the speaker's words, however fully quoted, would not present any suggestion of methods of investigation which, directly or indirectly, might be detrimental to any patient; and I am sure Sir J. Burdon Sanderson would repudiate any such imputation. If Mr. Coleridge replies that he did not mean so much as this, but that such a pursuit, if harmless, argues an indifference to the well-being of the patient, I do not know that I need contest the point. For herein Mr. Coleridge is surely confusing indifference with carelessness. One who perchance passes the gates of a hospital may well be indifferent to the sufferers within, but very far indeed from careless of them. Does Mr. Coleridge really mean that the pathologist to a hospital may not observe and (within limits) investigate cases of disease which, in respect of cure or palliation, are under the care of a medical colleague with whom it would be mischievous to interfere? The pathologist will pass from bed to bed making his observations as a naturalist would do, and will even meddle with patients so far as he may do so with their individual consent and without risk of doing them harm. The eyes of the pathologist are fixed not upon the use of present means of cure—means poor enough perhaps—but upon the discovery of those laws of disease which to-morrow will strengthen the hands of the physician, perhaps enormously.

It may be replied that such indifference will lead to carelessness. This is a matter of experience rather than of argument, and I must be content to deny it absolutely, in the assurance that every man of experience in the like kind will agree with me. And indeed I will add that even the physician or surgeon himself, if he is to use his knowledge and his skill calmly and decisively, must at the bedside regard his patient with some detachment of mind. Yet that this "indifference" (in the proper sense of this word) leads to callousness is belied by the whole history of our profession, as I am sure Mr. Coleridge will gladly admit. It is well known, indeed, that for lack of this detachment of mind few medical men are fit to exercise their art upon members of their own family or close personal friends.

Mr. Coleridge's time is very valuable, and it would ill become me to call upon him to read with care what I say; but some of his valuable time he might save did he read whatsoever he proposes to answer with a little more attention. I did not take up the position "that vivisection necessarily involves torture, but that the benefit to mankind from vivisection entirely justifies that torture." He will find, if he be good enough to refer, that I definitely demurred to the word "torture," which word, Mr. Coleridge will remember, was his own.

To torture an animal means, to the common ear at any rate, to inflict injuries upon a conscious animal, under which it writhes. Mr. Coleridge's word is understood in this sense by virtually all his lay readers. For instance to wound an animal while deprived of consciousness so that, let us say, one limb remained palsied afterwards, may or may not be cruel, but it is not torture. What I do say is that physiology, like all other science, can be investigated by one method only, namely by the experimental method, and that, if this method be denied us, the laws of life must remain unknown, and mankind must remain a prey to disease. For those whose first thought and business are to prevent human suffering and the wreck of mind which it entails, this is a grave dilemma, and their duty seems to be to ascertain how the experimental method can be carried on with the least possible suffering or death in lower animals.

Again, Mr. Coleridge makes me argue that to kill animals for food is immoral in the same sense as to experiment upon them. A little more attention to my article would have shown him that I never said anything so unreasonable. I said that to kill animals for food—which is not strictly necessary, by the way—proves that we assume that animals are given to us for our use, and that to kill and eat them proves that we all of us interpret the terms of this gift very liberally.

To pursue Mr. Coleridge into the fields of statistics would carry us far, and, it seems to me, into scarcely relevant matter. The point is not whether the experimental method has already forged arms against disease, but whether, in such case, it is morally justifiable. When this question is made an open one, and one dependent upon the probabilities of the practical success of the method, it will be time enough to argue about our results. But, in passing, let me ask how long Mr. Coleridge would allow an adverse witness—an engineer, let us say—to quote gross and absolute figures, figures unrelated and unanalysed? In the present instance he would insist, of course, that the fact that more persons die of diabetes or diphtheria is no approach to a proof that the case mortality is greater in either.

Finally, I really must protest against a device which Mr. Coleridge has adopted, contrary, I believe, to his own daily experience and practice. As an expert counsel he knows perfectly well that I am at liberty to put even a hypothetical case not in itself inconceivable or incredible, and to ask for a plain answer of Yes or No. Mr. Coleridge every week of his life puts such questions to witnesses, and, if he be as his brethren are, insists even irritably upon a direct answer. Yet Mr. Coleridge actually allows himself, before answering my question, to alter the supposed case in important details. He well knows this is not according to the rules of the game. I put it again in more general terms: A father, or other guardian, being opposed to experiment upon animals, and being, as a consistent man, unable, therefore, to take advantage of remedial means thus discovered and thus continuously procured, on behalf of his charge sick of diphtheria, takes upon himself to refuse the antitoxin, and therewith a substantial chance of cure. This is the case; the question is whether this father, or guardian, be right or wrong? It is an evasion to say that the chance of cure is not substantial. I put the case that it is substantial, and I have a right so to put it, as this condition is neither inconceivable nor incredible. In the instance of diphtheria, indeed, the testimony of every physician in charge of fever wards at home or abroad is unanimous that the chance of cure by this means is substantial; but this testimony is not essential to any question, nor to my right to an answer of "Yes" or "No."

The Reviewer.

Sir,—Mr. Stephen Coleridge has published a "review" of a book that I lately wrote on this subject. I only wish to notice here what he says about anæsthetics, about diphtheria, and about rabies.

1. The Home Secretary, speaking last July of the restrictions imposed by the Home Office, is reported to have used these words, "serious operations in which the use of anæsthetics is wholly or partly dispensed with." Mr. Coleridge has, of course, caught at this phrase; but *all* operations on the higher animals, even those that may fairly be called painless, are regarded as "serious" by the Home Office, and are closely restricted. Unless Mr. Coleridge has blundered heavily here, confounding "serious" and "painful," his sentence is unintelligible.

2. He gives the number of deaths, and the death-rate, from diphtheria in 1897, but does not give the case-mortality. The use of the antitoxin began in 1894 in this country, on a small scale. The proportion of deaths to cases in London is as follows:

1894	23.9 per cent.
1895	20.6 per cent.
1896	19.7 per cent.
1897	17.7 per cent.

3. He says that his Society, "with the sole desire of elucidating the truth," has made a list of a thousand persons who "have died of hydrophobia after having been cured by the

treatment." This is that notorious leaflet, *M. Pasteur's Hecatomb*. I do not know what the *Hecatomb* was like in 1887, when one of the witnesses before the Lords' Committee said he believed it was accurate; but I know what that witness would say about it now. It is sheer nonsense, not worth the paper it is printed on. It includes:

(*a*) Cases accepted on the authority of *Le Petit Journal*, *L'Intransigeant*, *L'Ami du Peuple*, *La Croix*, and *Le Petit Parisien*.

(*b*) Cases giving neither the name of the patient, nor the date of the bite, nor the date of the treatment, nor the date of the death.

(*c*) Cases that died while the treatment was going on.

It conceals the fact that all cases at the Pasteur Institute are divided into classes (A, B, and C). And, worst of all, it gives the date of the first inoculation, not of the last inoculation; thus escaping the question whether a fortnight elapsed between the end of the treatment and the outbreak of the disease.—I am, etc.,

April 6th. STEPHEN PAGET.

THE FRIENDS ON VIVISECTION.

SIR,—I was interested by your reviewer's dealing with the Friends' Antivivisection Association. As this Association appears to be a product of this locality you may care to hear of my success in combating it.

I find opponents are nearly always kind-hearted people who simply object to useless and unnecessary infliction of pain; so it is my custom to deny that physiologists ever do such "grievous torture," and to challenge proofs. Then it is easy to show in the instances adduced that if any suffering at all was caused, in which they are usually mistaken, at least it was neither useless nor unnecessary. But, sir, though I have induced the Chairman of this Friends' Association to withdraw or qualify nearly the whole of their offensive pamphlet, I have been unable to wring from him references to any single experiment. Hence I wrote, turning his phrase against the author: If the Chairman of the Physiologists' Anti-Quakerism Association wrote a pamphlet to the clergy, saying:—

"It is not right to deliberately torture our weaker fellow creatures—the little children in our power—however much spiritual satisfaction it may give. It lowers the moral tone, hardens the heart, and is essentially degrading. We earnestly invite your help in the strong conviction that Quakerism is causing grievous torture to myriads of unoffending little children."

And when challenged to prove these statements wrote:

"I have no objection to Quakerism, except in so far as it teaches us to torture children. Unaware of the extent to which Quakerism may involve grievous torture—I should be glad to be assured that 20,000 is below the mark—but that ethical belief must from its nature be degrading, for its practice involves in a high degree a disregard for the suffering of unconsenting victims, etc."

Then, I think, a Friend would feel that he had a grievance against the Chairman of the Anti-Quakerism Association if he had to write to him five times and then could not get him to mention a particle of so-called evidence in support of his charges, nor yet to own that they were unwarrantable.

This analogy touched my opponent so keenly that I regret to relate the worthy Friend closed the controversy as being too "personal."—I am, etc.,

Croydon, April 2nd. T. ARCHIBALD DUKES.

WE have received for publication the following letter which Dr. Raven has addressed to the officers of the Friends' Antivivisection Society, in compliance with an intimation in a pamphlet recently circulated by that Society:

Broadstairs, March 29th, 1900.

GENTLEMEN,—I recognise in the appeal which you have addressed to the medical professson a tone very strongly in contrast with the raucous mendacity and abuse with which some leaders of medical science have often been assailed by antivivisectors. No imputations have been too gross, and no abuse too violent, to shower upon men who have given, and are giving, their most strenuous energies for the relief of human suffering, and the prolongation of human life.

But I also recognise the usual tendency—arising, doubtless in your case from imperfect information—to exaggerate the painful aspect, and to minimise the beneficial side of vivisection. It seems to me that the phrases "deliberately tortured," and "intensity of torture to myriads of unoffending creatures" are as unjustifiably exaggerated as the terms "current laboratory theories" and "some relief to human suffering" are utterly inadequate to indicate the achievements of medical science brought about through the agency of experiments upon animals. On these vital points I would venture to recommend you to thoroughly acquaint yourselves with the facts which may be found in Mr. Stephen Paget's work *Experiments on Animals*, recently published by Fisher Unwin. In the meantime it appears that what would gain your sympathy would be a lazy acquiescence in the fatal tendency of those diseases which can be remedied only through the agency of vivisection. Such an attitude would scarcely strengthen "such national qualities as compassion, justice, manliness, and sympathy with weakness"—to use your own language—nor would it cultivate in the doctor "chivalrous tenderness towards creatures weaker than himself," for such are his patients. English doctors have not yet learned in the face of difficulties to shrug their shoulders and to ejaculate "*Kismet*," like the Turk of whom we have heard so much.

Allusions to the *morale* of the medical profession, "the lowering of its moral tone and the hardening of its heart," we are never spared and well accustomed to, and it is enough to say in reply that the medical profession has as high a sense of its moral obligations as any society for the prevention of knowledge can have; perhaps higher, for we are consistent in our aims, while the antivivisection societies take no notice of the crimping of live skates and the boiling of living lobsters. Their members consume the flesh of "myriads" of unoffending creatures" slain to promote their "well being." A very eminent statesman, a co-religionist with the members of the Friends' Antivivisection Society, was an enthusiastic fisherman, but I have never heard that he was remonstrated with on account of the "deliberate torture" inflicted with the hook upon the salmon or the mangling of its body with the gaff, nor has any notice been taken of the numberless wounded birds that escape from the sportsman to slowly die in starvation and agony. And yet it might have been supposed that no really useful end being in view your Society might have begun with an effort to stop field sports rather than to interfere with work which has for its object the saving of life and the relief of suffering.

But the matter does not end here. If human interests should be subordinated to those of the lower animals, the liberties of mankind would be very greatly restricted. I do not understand how a consistent member of your society could reconcile it with his conscience to "deliberately" take a woodland walk, for in the course of a few miles he would crush the life out of a number of unoffending insects—ants, beetles, and such-like. Even on a high road his coachman might destroy many harmless worms, and in the dark there is no knowing what harm might be done. Spiders, rats, mice, cockroaches, fleas, etc., might be treated with less circumspection, but another generation may see a society formed for their protection also. In fact, if pursued to its logical conclusion, your proposition would end in a *reductio ad absurdum*. Chaos—at least, social chaos—would come again, and the earth would be overun by those animals which, either by the greatest power of reproduction—as rabbits—or by superior physical force—as the carnivora—would obtain predominance.

I am a member merely of the rank and file of the profession, and have neither time, opportunity, nor talent for physiological experiment, but I should consider myself utterly unworthy of the trust reposed in me if I did not to the best of my power utilise the wonderful discoveries that have been made by vivisectors for the good of those "little brothers"—to employ your own quotation—who come under my care. And, to take but two instances, I should be guilty of grave breach of duty were I to allow little children to die of diphtheria when I might save them with antitoxin, or to let them run the risk of small-pox by failing to vaccinate them; and neither could diphtheria have been successfully combated nor small-pox effectually prevented had it not been for experiments upon animals.

All scientific truth I regard as being just as surely God's truth as that which is found in Holy Writ, and I hold it as wrong to neglect the one when it comes in the path of duty as to ignore the other.

For my part, I should not have brought in the name of our Saviour, but as you have chosen to introduce the "example and precepts of Christ," I must remind you of the Gospel narrative in which we are told that, in effecting the cure of a man possassed with devils, a large herd of swine was sacrificed by Christ himself.

As you have invited replies to your communication, I make no apology for addressing to you this rejoinder, which, however expressed, is courteously intended.

I am, yours faithfully,

THOS. F. RAVEN

CONTRACT MEDICAL PRACTICE.

CHARGES FOR A TEMPORARY INFECTIOUS HOSPITAL.

HOSPITAL writes: A. B. is surgeon to a company which pays him a retaining fee, but his regular payments come from the workmen. An epidemic breaks out among the children, for whom he is not paid, and the surgeon's advice being taken, a house is set aside as an isolation hospital, and is carried on for three months. Is A. B. entitled to charge the company for attendance on the children at the hospital (the workmen object to pay because the children have been removed from their homes)? If so, at what rate? The company undertook all expenses of hospital nurses, food, etc.

*** It is no part of A. B.'s duties under such circumstances to attend the children without payment. He must make his own terms with the company, and he is himself the best judge as to what his charge should be; the rate should depend on the time and labour required.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY.

DR. W. B. WINSTON, New Southgate, N., Honorary Secretary of the Wood Green and District Medical Society, informs us that at a special general meeting of the Society held on April 4th, 1900, the following resolutions were unanimously adopted:

1. That the Wood Green and District Medical Society, having carefully considered the present and proposed new rules of the National Deposit Friendly Society, Limited, consider that, to make that Society one that

it can recommend to the profession, it shall alter its rules as regards medical pay as follows:

(*a*) That each "intermediate visit in dangerous cases" shall be paid for at 2s. 6d. per visit.

(*b*) That the removal of cancerous or other tumours of magnitude shall be paid for at the rate of £5 instead of £3.

(*c*) That there shall be a minimum fee for attendance in midwifery cases as follows:

(i) For patients drawing up to 3s. per day sick pay, ordinary labour £1 1s.; instrumental labour or cases of version, £1 11s. 6d. (major operations excepted). Where anæsthetic is used, 10s. 6d. extra to above fees.

(ii) For patients drawing from 3s. to 5s. per day, 10s. 6d. extra to above fees.

(iii) For patients drawing over 5s. per day, £1 1s. extra to above fees.

Also that such fees shall be paid direct by the Society to the medical attendant and deducted from the patient's "sick pay" or "deposit" if sick pay be insufficient.

(*d*) That the fee to be paid by all candidates for admission shall be at least 2s. 6d. for their medical examination for entry.

2. That there is no reason why "medical officers" should be appointed for districts, inasmuch as all registered medical practitioners are eligible to attend members and sign all certificates, and that by appointing a particular medical man as "medical officer," he is given an undue preference over other practitioners, as evidenced by proposed new rules (Rule IV, Section VI; Rule XVI, Section XIV).

3. That the certificate of health of candidates for admission shall be sent direct to the district secretary, and not returned to the candidate.

4. That the patient may obtain the advice of a consulting surgeon upon the same terms as proposed in the new rule (XVI, Section XIV, Subsection V) *re* consulting physician.

5. That no member shall be eligible for medical pay at above rates (Rule XVI, Section XIV, Subsections I, II, III, IV, V) whose average income exceeds £5 per week.

6. That copies of the above resolutions be sent to the medical press, the Ilford Medical Society, and the East Suburban Medical Protection and Medico-Ethical Society, Limited.

THE MIDWIVES BILL.

A meeting of the West Kent Medico-Chirurgical Society was held at the Royal Kent Dispensary on Friday, April 6th. The President, Dr. C. J. Parke, occupied the chair.

Dr. F. S. Toogood introduced the discussion, and moved the following resolution:

That this meeting of the West Kent Medico-Chirurgical Society, whilst cordially welcoming fully-qualified lady doctors, protests against the proposed Midwives Registration Bill as tending to create an inferior order of midwifery practitioners, and as being contrary to the spirit of the Medical Acts, which were designed to protect the public in general and the poor in particular. That this meeting thanks the Council of the Society for co-operating in convening the meeting to resist the registration of midwives, and will support the Council (pecuniarily or otherwise) in carrying on that resistance as resolved by the South-East London meeting.

The resolution was seconded by Dr. Chisholm Williams, and strongly supported by the President, Drs. Barnett, Hart, Herschell, Anderson, Weekes, Keay, and Henry.

It was carried unanimously, and ordered to be forwarded to members of Parliament and the press.

The Cannon Street Hotel Meeting.

We have received from Dr. Glover (with a request for its publication) the following letter in reply to the resolution passed at the meeting in Cannon Street Hotel, reported in the British Medical Journal of April 7th:

25, Highbury Place,
April 9th, 1900.

Gentlemen,—

I have received from you a letter covering the following resolution, moved by Dr. Lorimer Hart and seconded by Mr. Joseph Smith, at a meeting presided over by Mr. George Brown, and in its later and attenuated stage by Dr. Toogood:

That whereas the General Medical Council and others who support the registration of midwives on the mistaken expectation of "influencing important details" have signally failed to amend the worst provisions of the Bill before Parliament, it is time that honestly mistaken supporters of such registration should cease to trifle with a public danger, and in view of the *plebiscite* recently taken by the *Lancet* indicating the sense of a great proportion of his electors, this meeting, regretting Dr. Glover's attitude of indifference to these considerations, invites him, by resigning his seat and seeking re-election, to afford to his constituents a just opportunity of reconsidering their relations to him.

It is pleasant to have the assurance conveyed in your covering letter that no personal unfriendliness is meant by such a resolution. I accept the assurance, though it is very difficult to construe the procedure of the gentlemen concerned in this matter as either reasonable or courteous. The impression produced on others affected by your views and methods may perhaps be gathered from the fact that two only of a large number of members of Parliament whom you invited attended, and that the great profession to which we belong was in the end, with its 23,000 members, represented by seventeen persons, who thought it seemly to ask a direct representative to resign because of a disagreement with him as to the best means of dealing with the question of midwives.

I am sure nothing would more effectually surprise you, or lower me in the esteem of the great body of the profession, than that I should take such a resolution seriously. I shall only remind my constituents generally that as a matter of fact my vote in the *Lancet* ballot was given against this Bill, and will still be given so until I am satisfied that the midwives to be licensed shall be required in all unusual cases to appeal for help to the medical profession.

It is only fair to the General Medical Council to say that it has in most important ways influenced the details of this Bill. Even as the Bill stands at present the Council has secured a control over licensed midwives which would probably not have been conceded if Parliament had thought that the profession was represented by the seventeen modest gentlemen who ask me to resign a trust which was given me, for the third time, by thousands of practitioners, on the explicit understanding that I would support such legislation on conditions.

Believe me, Gentlemen,
Yours very truly,
J. G. Glover.

F. S. Toogood, Esq., M.D.Lond., etc.
John P. Henry, Esq., M.D.Dub., etc.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

The usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on March 30th. There were present: Dr. de Havilland Hall (in the Chair), Dr. J. B. Ball, Dr. G. E. Herman, Mr. J. Brindley James, Dr. J. W. Hunt, Mr. F. S. Edwards, Dr. M. Greenwood, Mr. Frederick Wallace, Dr. F. J. Allan, Dr. Alfred Gubb, Dr. Walter Smith, and Dr. W. Knowsley Sibley.

The list of current sickness claims presented to the Committee was, as is usual in the spring, rather heavy, but compares well with the experience of the Society at the same season last year. The influenza epidemic appears to have nearly exhausted itself, the sickness claims arising from this cause being less both in number and duration than in the earlier part of the year.

A considerable number of claims are received during the first three months of each year arising from bronchial affections and similar ailments. General practitioners in the provinces are naturally more liable to these than medical men engaged in practice in cities, so that the list of country claims is always long in the past quarter of the year. These claims are, for the most part, of short duration, and do not cause a very heavy draft on the funds. On the other hand, medical men in large towns seem more liable to suffer from the effects of overstrain, and the claims arising from nervous breakdown, although fewer in number, are of much longer duration. Most of the chronic or permanent claims belong to this latter class, and these cost the Society about £40 a week at present, and show no signs of decreasing in the future.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

The Pasteur Institute at Antananarivo, the capital of Madagascar, was, we learn from the *Times*, opened on March 30th.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THE number of fresh cases of plague in Bombay on March 14th, 15th, 16th, 17th, 18th, 19th, and 20th were, respectively, 134, 159, 132, 147, 136, 128, and 134, and the number of deaths from plague on the same dates were 127, 115, 95, 122, 116, 107, and 96. The hot weather has now set in in Bombay, but there is apparently no abatement in the virulence of the disease. The slight diminution in number on March 16th, combined with a sharp rise in temperature on that day, led to the hope that, with the increasing heat, a turning point in the epidemic had been reached. This welcome result has not, however, obtained.

Next to Bombay, no port on the western littoral of India is of such importance as Karachi. It is the port of entrance and exit to most of the commerce and passenger traffic of the North-West of India, and its importance grows yearly. It is therefore disappointing to find that plague is still on the increase in Karachi. During the five days ending March 20th, 115 fresh cases of plague and 94 deaths from the disease were recorded. Since the commencement of the present recurrence 446 plague cases and 342 plague deaths have occurred.

In the Bengal Presidency outside the city during the week ending March 17th, there were but 646 deaths from plague, fewer in fact than in the city of Bombay alone.

With an average daily total mortality of 89, as judged by the quinquennial average, the death returns of Calcutta at present are alarming and extraordinary; for no fewer than 222 persons died in the city on Monday, March 19th. The largest number of deaths were due to plague, for of the total 124 were officially ascribed to plague. On March 16th, 17th, 18th, 19th, 20th, and March 21st the fresh cases of plague were returned as follows: 148, 119, 136, 117, 124, and 139; and the deaths, 133, 112, 109, 101, 116, and 136 respectively. The concealment of cases by certain sections of the native population is operating against the authorities in Calcutta. The plague regulations are being worked in the mildest manner, and every precaution is taken not to offend religious susceptibilities or to obtrude unnecessarily into native domestic life; but still popular prejudice cannot be overcome. The natives, especially the Marwaris, are fleeing from the city, and take everything they possibly can with them, thereby spreading disease to the country districts around the metropolis. During the week ending March 17th there were 8 deaths in the Allahabad district from plague, 34 in the Jullundur district, and 19 at Aden.

The following plague cases and deaths were reported from the Mysore Province during the week ending March 9th: Bangalore city, 6 cases and 5 deaths; cantonment, 10 cases and 8 deaths: Bangalore district, 13 cases and 11 deaths; Kolan district, 13 cases and 10 deaths; Tumkur district, 2 cases and 1 death; Mysore city, 8 cases and 8 deaths; Mysore district, 18 cases, 12 deaths; total, 70 cases, and 55 deaths.

Owing to several cases of plague having occurred in Rangoon on board a steamer from Calcutta, ten days' quarantine has been imposed upon all vessels coming to Rangoon from Calcutta.

AUSTRALIA.

A telegram from Sydney, dated April 9th, states that since the outbreak of plague in the city, 93 cases of plague have occurred, and 29 deaths from the disease. Considering the short time that has intervened since plague appeared in Sydney, these numbers point to a serious state of affairs.

Our Special Correspondent in Sydney writes, under date March 6th:

New South Wales.—Two additional cases have been reported in Sydney this week, making 5 in all since the outbreak, and 4 deaths. The cases have been in scattered parts of the city, and every effort is being made to prevent the spread of the disease.

New Caledonia.—The plague in Noumea is slowly dying out, only 1 case being reported since February 10th. The disease has, however, broken out amongst the convicts working at the nickel mines at Nepoui, on the West Coast. Up to February 16th 8 cases had occurred, and 2 deaths.

MAURITIUS.

During the week ending April 5th but 1 fresh case of plague occurred in the island, and 1 death from the disease. It would really seem as if the outbreak was at an end in Mauritius.

LITERARY NOTES.

AMONG medical book collectors should be mentioned Edmund Bailey O'Callaghan, M.D., LL.D., who was born at Mallow in Ireland in 1797, and emigrated to Canada in 1823. In 1827 he began to practise his profession in Quebec. In 1836 he was elected a member of the Assembly of Lower Canada, but after the insurrection removed to the New York State, and was long employed in the office of the Secretary of State at Albany in editing the records of the State. In 1870 he removed to New York, where he died in 1880. His library was formed with special reference to the history of New York as a colony and a State. Everything bearing even collaterally upon that subject, historical, descriptive, and biographical, in Dutch, English, French, and other languages, he gathered for his own study and use as the author of the *History of New Netherland*, and the sole editor of the great and invaluable series of volumes of its records and historical documents published by the State Government of New York. The collection was sold in 1882, and realised nearly £2,500. For these particulars we are indebted to a note by Mr. Robert F. Roden in *Contributions towards a Dictionary of English Book Collectors*, Part xiii.

The last issue of the *Journal of Experimental Medicine* (vol. iv, Nos. 5 to 6) contains several papers of much interest to those engaged in pathological research. Amongst them will be found a description of a new species of micrococcus—the M. zymogenes, which is regarded as one of the numerous infective agents of acute endocarditis; a paper on lymphoma; observations on leukæmic lesions of the skin; an attempt at the classification of water bacteria; and a paper on the perplexing points, many of which are still unsettled, relating to the bacillus pyocyaneus and its pigments. The most important contribution from a practical point of view gives the results of an experimental investigation by Dr. Elsberg, of the treatment of wounds of the heart by means of suture of the heart muscle. This observer has been led to the conclusions that suture of a wound of the heart may often be found justifiable, and that such procedure in man as in animals is devoid of the danger of sudden arrest of the heart, due to the manipulation of this organ incident to the suturing, unless Kronecker's co-ordination centre be injured. Elsberg's paper is full of instruction on both the scientific and strictly surgical aspects of traumatic lesions of the heart.

According to statistics compiled by the J. C. Hinrichs' Buchhandlung, and published in the Leipzig *Börsenblatt*, the number of new books on medical science which appeared in Germany in 1899 was 1,626. In 1898 the number was 1,572.

In the *Revue des Traditions Populaires* Achille Robert gives an account of popular notions on syphilis held by the Arabs. They call the disease El Adou (the enemy) and Mord-chine or Mord-el-Rébir (the great evil). It is very common among all the natives of Northern Africa. It is treated by one or other of the following methods; 1. A hedgehog is cooked whole in a new earthenware pot till it is reduced to ashes; the ashes are then taken on three days consecutively. If the disease resists this treatment it must be persevered with for seven days longer. (2) By inhalation of the fumes of red sulphate of mercury thrown on burning coals; the patient holds his head wrapped in a burnoose over the brazier. This method is said invariably to produce intense mercurial salivation. (3) Another method is after a week of low diet to surround the patient with linen coverings, and for three days to make him take every morning a certain quantity of powdered sarsaparilla root and corn; he then drinks for three days water in which sarsaparilla has been macerated; finally, low diet for another week. The course lasts twenty days.

According to the *Athenæum* of March 31st the library of the late Mr. Charles Leeson Prince, M.R.C.S., sold at Messrs. Sotheby's on March 10th, included a lot (No. 1,002) which in effect adds a new name to the list of Elizabethan authors. The lot in question was a MS. on 178 pages quarto, with the title—quoted *verb. et lit.* from the catalogue—"Christianus Medicus, in qua cum primis Galenus Vindicatur à 4 Calumniis," etc., dated 1572, the author being Simon Trippe, M.D., who dedicates his work to Robert Dudley, Earl of Leicester. Trippe was a celebrated physician of Queen Elizabeth's time and practised chiefly at Winchester. He entered Corpus Christi College, Oxford, in 1559, as from Devon, was elected a Fellow in 1563, although according to Foster's *Alumni Oxonienses* he did not take his B.A., degree until the following year; he was elected Fellow of Exeter College March 3rd to May 19th, 1565. There does not appear to be any previous record of him as an author, and the above MS. was presumably never printed; but *The Loseby Manuscripts*, edited in 1835 by A. J. Kempe, includes a very curious letter (pp. 263-5) from Trippe to George (afterwards Sir George) More, whose third daughter married Dr. John Donne. The letter is dated September 18th, 1581, and relates to a professional visit he was about to make to Mr. More. This letter, as Mr. Kempe pointed out, exhibits the prejudices which physicians of the time entertained for administering or avoiding remedies on certain days.

A Biological Section of the *Kaiserliche Geisundheitsamt* was recently founded for the following objects: The study of the conditions of life of the animal and vegetable enemies of cultivated plants, and the best means of combating their attacks. The study of animals and vegetables which are either directly or indirectly of value to cultivated plants. The study of micro-organisms which are either useful or harmful to cultivation, the examination of damage done to cultivation through inorganic influences. Observation and

publication of the occurrence of important diseases or enemies of plants. The results of the work in this section are, we learn from Messrs. Williams and Norgate's *Book Circular*, to be published in a series of *Arbeiten*, of which the first part has just been issued. Its contents are: "Magenuntersuchungen land-und forst-wirthschaftlich wichtiger Vögel," by Professor Rörig; "Der Erbsenkäfer, seine wirthschaftliche Bedeutung, seine Bekämpfung," by Professor Frank; "Beeinflussung von Weizenschädlingen durch Bestellzeit und Chilisalpeter-Düngung," by Professor Frank.

Dr. J. P. zum Busch, Finsbury Square, E.C., has sent us the following interesting communication:—

In your note about the once famous "L'homme à la fourchette" you say that "this was the first instance in which a foreign body was removed from the stomach by a surgical procedure, though it was not strictly speaking a gastrotomy." This is not quite correct, as the first case of gastrotomy was done by Florian Mathis of Brandeburg in 1612. The patient, a Bohemian peasant, tried to imitate an itinerant juggler, and accidentally swallowed a pocket-knife, 0½ inches in length. Seven weeks later Mathis cut down upon the point of the knife, which could be felt through the abdomen, and removed the foreign body after incision of the stomach. The patient made a speedy recovery, probably due to the fact that the stomach had before the operation become adherent to the parietal peritoneum. Similar successful cases of gastrotomy have been reported by Daniel Schwabe of Königsberg (1635), Wiesener (1692), Hübner (1720), and several others. Dr. Kaiser, in a paper published in 1877 (the time of M. Labbé's operation) was able to collect 13 cases with 11 recoveries. The foreign bodies comprised forks and knives, a spoon, a piece of lead, and a catheter which had been used in a case of tracheotomy. The interval between the accident and the operation varied from 11 days to several years, but there is no doubt that in the greater part of the cases the stomach had to be opened to remove the foreign body. I may add that the first gastrostomy was done in 1849 by Sédillot, but his case, as well as the following 31 cases which were operated between 1849 and 1871, all died; in 1876 Verneuil succeeded in curing his patient, a lad of 17, who suffered from impermeable stricture of the œsophagus.

We may add that M. Leon Labbé's original report of the case of "l'homme à la fourchette" was published in the *Comptes Rendus de l'Académie des Sciences de Paris* (1876, t. lxxxii), under the title, "Note relative à un fait de gastrotomie pratiquée pour extraire un corps étranger (fourchette) de l'estomac."

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on July 11th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

Members are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

Border Counties Branch.—The spring meeting of this Branch will be held at the Buccleuch Hotel, Moffat, on the afternoon of Friday, May 4th. Members intending to read papers, etc., and gentlemen desirous of joining the Branch, are requested to communicate as soon as possible with the Honorary Secretary, W. F. Farquharson, M.D., Garlands, Carlisle.

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held at the Children's and General Hospital, Orford Road, Walthamstow, on Thursday, April 19th, at 4.30 P.M. The chair will be taken by Dr. F. J. Smith, Vice-President of the District. Dr. Savage will read a paper entitled Insanity of Conduct as Defect of Social Accommodation. Visitors are invited.—C. J. Morton, 56, Orford Road, Walthamstow.

South Wales and Monmouthshire Branch.—The spring meeting of this Branch will be held at Abergavenny on Thursday, April 26th.—Alfred Sheen, Cardiff, D. Arthur Davies, Swansea, Honorary Secretaries.

North Wales Branch.—The spring intermediate meeting will be held at the White Lion Hotel, Bala, on Thursday, April 19th, at 1.30 P.M. Papers have already been promised by the following: Mr. Rob Parry (Carnarvon): Gastric Ulcer. Dr. Richard Jones (Blaenau Festiniog): Hydatids of Liver. Mr. H. Briggs (Liverpool): Ovarian Cases. Mr. W. Thelwall Thomas: Cases of Hernia. Mr. J. Craig (Llandudno): Disease of Liver. Dr. J. Hill Abram (Liverpool): Pneumonia. Mr. H. E. Jones (Liverpool): Middle-ear Disease. Dr. E. T. Davies (Liverpool): Ovarian Disease.—W. Jones Morris (Portmadoc) and H. Jones Roberts (Penygroes), Honorary Secretaries.

GLASGOW AND WEST OF SCOTLAND BRANCH.

The winter meeting of this Branch took place on April 5th, in the Faculty Hall, Glasgow, by the kind permission of the Faculty of Physicians and Surgeons. The new President, Dr. D. C. McVail, of Glasgow, occupied the chair.

Increase of Membership.—At the business meeting a large increase in the membership was reported.

Bacteriological Demonstrations.—A demonstration of bacteriological subjects was given by Professor Muir, of the Western Infirmary; Dr. McCrorie, of the Royal Infirmary; and Dr. Buchanan, of the City of Glasgow Health Department. By means of cultures, microscopic specimens, and lantern slides, these gentlemen demonstrated many points of interest in the different departments of bacteriology.

Dinner.—In the evening the members dined together.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.

A meeting of this District was held at Portsmouth on December 14th. Dr. J. Watson presiding.

The late Mr. F. Morley.—A vote of condolence with the family of the late Mr. F. Morley was unanimously passed.

New Members.—The following were elected: H. Rochefort Hunt, M.B., Gosport; Montague H. Way, M.B., Portsmouth; Fleet-Surgeon Brown, R.N., Southsea.

Election of Auditors and Honorary Secretary.—Dr. Garrington and Mr. Newby were elected auditors. Dr. Blackman was elected Honorary Secretary in succession to Dr. C. C. Claremont, who was thanked for his services.

Clinical Cases.—The following were shown:—Dr. J. Watson: A case (1) peripheral neuritis; (2) hepatic abscess, practically cured after incision and drainage. Mr. H. Rundle: Two patients who had sustained transverse fracture of a patella treated by subcutaneous wiring. Dr. Carling: Hypertrophic pharyngitis and post-nasal catarrh.

Pathological Specimens.—The following were shown:—Dr. J. Ward Cousins: Myoma of the broad ligament, weighing 7½ lbs., removed from a woman aged 25. Mr. Rundle: Calvarium of a man who had died from a penetrating wound of the frontal bone.

SPECIAL CORRESPONDENCE.

PARIS.

The Liverpool School of Tropical Medicine.—Professor Raymond's Lectures at the Salpêtrière.—Reorganisation of the Paris Hospitals.

M. Laveran, on April 3rd, before the Académie de Médecine, read his report on the work of the mission to Sierra Leone, organised by the Liverpool School of Tropical Medicine, and Instructions for the Prevention of Malaria, published by the same school, which documents had been presented to the Académie by the President of the Liverpool School. M. Laveran observed that while the theory of infection by mosquitos is in harmony with the majority of the facts that are known about the etiology of paludism, it must be remembered that this theory does not explain all these facts. It had been stated that malaria is unknown in some regions where mosquitos abound, and has been observed in localities where there are no mosquitos. In non-malarial localities, although mosquitos are in abundance, only the *Culex* is found—that is, culicidæ which do not seem capable of propagating the dis-

ease. M. Laveran said that while travelling last summer in Camargue and at Aigues-Mortes, he found *Anopheles* (*A. claviger*) in the most unhealthy localities, while in the spots where malaria was not endemic he only found the *Culex*. Among specimens of mosquitos sent from Algeria and Madagascar, he had always found the *Anopheles* when the mosquitos had been collected in unhealthy localities. The existence of malarious districts entirely free from mosquitos was not yet demonstrated; whenever competent observers had visited localities with this reputation, they had always succeeded in demonstrating the presence of the *Anopheles*, often in great numbers. If it were admitted that the *Anopheles* were only harmful when they had sucked the blood of people affected with malaria, how was the fact to be explained that, a traveller who passed the night in the open air near a marsh, or a sportsman who at nightfall went into an uninhabited spot in a marshy district, were very liable to infection? The authors of the report remarked that it was difficult to establish scientifically that the fever was contracted in an uninhabited spot; men were rarely isolated; travellers in such countries had servants and porters, and traversed native villages and often stayed in them. M. Laveran said that he was not convinced by these: "It is difficult," he said, "for me to believe that a malarious district would be rendered completely healthy either if we made all the people leave who suffered with malaria, and were thus capable of infecting the *Anopheles*, or else if we put them under a rigorous course of treatment with quinine; this, however, is the conclusion we arrive at, if we admit that in the healthy season, the germs of paludism exist only in the blood and spleen of patients suffering from malaria in a more or less latent form. It is probable that we do not yet know the whole truth concerning the life of the germs of malaria outside the human body. Several hypotheses are admissible: (1) The *Anopheles* may perhaps be able to infect themselves by sucking the blood of animals. Hæmatozoa closely allied to the hæmatozoon of malaria have been found, more particularly in the monkey and bat. (2) It is possible that the infection is transmissible from one mosquito to another. (3) Perhaps there exists a resistant form of these germs, which is preserved in the water or the soil of malarious districts, and which on the return of summer heat infects the man or the *Anopheles*. This last hypothesis seems to me to be *a priori* a fairly likely one. For a time it seemed possible that the elements described by Ross under the name 'black spores' might represent this resistant form of the malaria germ, but this view has so far not been verified; on the contrary, many considerations tend to the opinion that they represent involution forms of the 'blastes.'" M. Laveran spoke highly of the value of the *Instructions for the Prevention of Malaria* published by the Liverpool School, which he considered would certainly be of immense service. It is desirable, he said, that similar instructions in French should be distributed in all the regions of France and her colonies wherever malaria is endemic, making known the fact that mosquitos are able to inoculate malaria, and also the measures necessary to avoid being bitten by mosquitos.

Professor Raymond, who has been absent through illness for some months, recommenced his clinical lectures at the Salpêtrière on April 3rd. Following the traditions of Charcot, his predecessor in the Chair, Professor Raymond devotes Tuesdays to showing four or five selected patients, whom he questions, and thus teaches the student how to make a correct diagnosis. During this summer the Friday lectures will be devoted to the study of the various forms of muscular atrophy, with practical demonstrations of electrical diagnosis.

The Prefect of the Seine, in accordance with a wish expressed by the Municipal Council in July last, has just issued a very extensive and comprehensive plan of reorganisation of the hospitals under the Assistance Publique. This splendid programme consists of two distinct schemes, both equally urgent, but which could not be undertaken simultaneously without making the hospital accommodation inadequate during the progress of the work. The first part of the undertaking, which is estimated to cost 73 millions of francs (£2,920,000), consists of the following items: The rebuilding on their present site of the following five hospitals, that is, La Pitié, Cochin, Ricord, Broca, and Broussais; the construction at Ivry of an isolation hospital for contagious diseases, to replace the existing hospital at Aubervilliers; the construction of a new laundry and linen store; the construction of two new hospitals on the right bank, and of one new hospital on the left bank of the Seine the construction of a group of pavilions at Brevannes; the extension of the *maison de retraite* La Rochefoucauld; extensive repairs in the various hospitals; the following hospitals are to be pulled down: Laënnec, Andral, Bichat, also the annexe of Hôtel Dieu; new linen is to be bought, etc. To meet this expenditure of 73,000,000 francs the administration proposes to float a new loan for this sum, repayable in 75 years. To meet the interest and the redemption an additional annual tax will be levied, to be called the Centimes d'Assistance. The second part of the programme comprises an estimated expenditure of over 11,000,000 francs (£450,000), which it is hoped will be covered by the sale of the sites of the hospitals to be demolished. The proposals are: The building of a fourth hospital and of an establishment reserved for patients with tuberculous bone disease; the reconstruction of the Sick Children's Hospital; the suppression of the Hospice Dubois, the municipal *maison de santé*; the demolition of the two following hospitals, La Charité and the Beaujon; the formation of a special fund to provide for measures against tuberculosis.

PHILADELPHIA.

The Public Water Question.—Medical Inspection of Public Schools.—Scandal in Medical Examinations.

At last there is a prospect that some time in the near future Philadelphia will be supplied with clean safe water. The Bill appropriating 15,000,000 dollars for the purpose has just passed both municipal legislative bodies, and has been signed by the Mayor. To prevent further pollution of the Schuylkill (from which our present supply is drawn) definite steps are to be taken by the State Board of Health by instituting proceedings against the city of Norristown, sixteen miles up stream. In speaking of the proceedings, Dr. Benjamin Lee, Secretary of the State Board of Health, said:

> We have been waiting to get evidence which we thought would be sufficient to induce the Board to act. We had not been able to show that the water when it first reaches Philadelphia gives indication of pollution by excrement. I therefore instructed our bacteriologist to take samples of the Schuylkill water at Shawmont, which is the uppermost pumping station within the Philadelphia city limits. From him I have just heard that he finds evidence of gross fæcal pollution at this point.

Either the City Attorney or the Attorney-General of the State will take up the case. The whole matter will furnish an interesting test as to whether such wholesale contamination of a city's drinking supply cannot be legally checked. The plans for improvement of the present water supply are based largely on the sand filtration plant now in operation at Albany, New York State. A similar experimental plant to cost about 200,000,000 dollars is to be established, and, if successful, the whole water supply will be subjected to sand filtration. The extravagance of using filtered water for extinguishing fires and flushing streets while cleaning them will render it necessary to use one, if not two, of the present reservoirs for the storing of unfiltered water, which will be pumped directly to them and reserved for these two purposes.

Philadelphia is now enjoying a system of public school medical inspection. The joint Committee drawn from the Board of Education on the one hand and the Philadelphia County Medical Society and the various medical colleges on the other, has just finished its task of selecting 300 physicians for the work. Each one has been assigned to one or more neighbouring schools, which he is to visit each morning at 9 o'clock, and look into its general sanitary arrangements. He concludes his work by making careful examination of any children whose condition may have aroused the suspicion of the teacher as to the inception of any of the diseases of childhood. Already two cases of early diphtheria that might easily have led to endemics have been detected, and steps taken to avert further trouble. As the teachers become better acquainted with the early symptoms of the exanthemata, larger fruits of the inspection will likely appear.

The report of the investigation of the scandal growing out of the alleged sale of examination questions last fall to applicants for licences to practise medicine in the State of Pennsylvania

was made public last week. The evidence is not complete. Nevertheless, it points very strongly to the office of the public printer as the probable source of the leakage of the questions. Directly after the publication of this report it leaked out that some of the students at the University of Pennsylvania had passed certain of their final examinations at the University last spring by substitution. By which is meant that after these students had presumably finished their papers in certain branches, they adjourned to some convenient place hard by, where they were furnished, by some obliging and sympathetic person, with duplicates of their original papers and answers thereto, which of course they were to so modify in phraseology as to allay suspicion on the part of the authorities. These duplicate papers and answers were afterwards substituted for the originals—just how is not known. It is said that some sixteen or eighteen men resorted to this means to seeure satisfactory averages in their final examinations. Only by the collusion of some one associated officially in some way with the examinations could the fraud be completely carried out and covered up. It is humiliating to have to know that among those knocking for admission to the guild there are men who can stoop to such things. It promises much tares among the coming professional wheat. The University of course is above reproach in the matter, and is making every effort to bring these men face to face with their crime against the University, themselves, and the profession at large.

MONTREAL.

The Montreal General Hospital. — Hepatic Cirrhosis with Sarcoma.—Casts without Albuminuria. — Excision of the Larynx.—The Toronto Medical Society.—McGill Medical School.—Course for the D.P.H.

The quarterly meeting of the Board of Governors of the Montreal General Hospital was held recently in the Governors' Hall of the hospital. It was reported that during the quarter 638 patients had been treated in the wards, of whom 47 died, a death-rate of 7.37 per cent. The average number treated daily was 100, and the average time of retention 23.5 days. The ambulance made 245 trips, an increase of 24 as compared with the corresponding quarter of last year. In the outdoor department 9,381 consultations were held in all departments, an increase of 870 over 1899.

A case of cirrhosis of the liver combined with sarcoma has been reported recently by Drs. Finley and Johnston. It is one of the few cases of this nature recorded in America. The combination of cirrhosis and carcinoma was noted several years ago by Drs. Adami and Finley, of Montreal, while Drs. Fussell and Kelly in the States, a short time later, brought forward two additional cases.

Drs. Martin and Jones made a report recently on a series of examinations of urine made to determine the presence of casts without the evidence of albumen in apparently normal individuals. This report evoked a spirited discussion in the society before which it was read, and many examples were cited by the members in which similar conditions were found.

Dr. James Bell has reported a very interesting case of excision of the larynx for carcinoma in which the entire organ was removed. The patient has made a complete recovery. Following this report, a few days later Dr. Bell performed a similar operation at the Royal Victoria Hospital, and has thus had three successful cases of this operation within as many months.

The last two meetings of the Toronto Medical Society were devoted to a discussion on suppuration of the middle ear. It was opened by Dr. R. A. Reeve, who was followed by Dr. J. A. Macallum on complications, and by Drs. J. D. Thornburn and Price Brown on treatment. Among other interesting cases reported were instances of Friedreich's paralysis and of chronic suppurative pancreatitis by Dr. A. McPhedran, and of appendicial abscess by Dr. W. Oldright.

The examinations of McGill Medical School are beginning at this time so that the students taking those given by the Medical Board of the Province of Quebec may combine the two sets. The examinations in pathology are under the immediate charge of Professor Adami assisted by Dr. Nicholls, while Professor Shepherd is holding the examinations in anatomy.

The members of the course for the diploma of Public Health have just begun the course in sanitary chemistry under Dr. R. F. Ruttan. This course will last for from four to six weeks, after which the instruction in bacteriology will be given by Professor Wyatt Johnston. A series of clinical lectures at the Civic Hospital, with special reference to infectious diseases, will commence within a few weeks.

CORRESPONDENCE.

DIPHTHERIA IN MAN AND "GAPES" IN BIRDS.

Sir,—I have read with much interest the letter on the above subject in the British Medical Journal of April 7th. My own experience has led me to regard so-called "gapes" in birds as a highly infectious disease giving rise to septic throats, especially in children.

This was first brought to my notice a few years ago when I was in practice in a country district where poultry were largely kept by the residents. I was at a loss to account for so many of the children being affected with septic throats, till one day a mother said to me, "Whenever my children have bad throats, Mr. So-and-So"—naming a gentleman next door who kept a lot of birds—"has some of his poultry ill with 'gapes.'" At this time I did not think any further of the matter, putting it down to mere coincidence, or consoling myself with the fact that bacteriologists did not regard throat disease in fowls as communicable to human beings. However, the fact remained that a large proportion of cases did occur in the houses of those who had poultry affected with "gapes."

Quite recently I attended several children in a house all affected with septic throats. As I knew poultry were kept on the premises, I asked had any been ill? I was informed that several birds had died of "gapes," and that three were ill in the kitchen and not expected to live long.

I will not trespass on your space any further, as I think what I have stated is enough to show that there is a throat affection in fowls highly infectious. I will only say in conclusion that none of these cases were diagnosed as diphtheria, none were fatal, nor was the Klebs-Loeffler bacillus looked for.—I am, etc.,

Bromley, Kent. J. Brooke Ridley, M.D.Edin.

UNQUALIFIED PRACTICE.

Sir,—One gets very tired reading almost every week various suggestions for the General Medical Council to adopt this, that, or the other reform. As far as safeguarding the interests of the practitioner the General Medical Council's utility is *nil*. When the employment of unqualified assistance was prohibited, surely the profession had a right to expect that the Council would see that discarded unqualified assistants did not indulge in independent practice. Such, however, is not the case.

Here in the town where I practise we have a man who was for years an unqualified assistant here, and who now not only practises medicine, surgery, and midwifery with impunity, but who has successfully run the gauntlet of a couple of inquests. Now, I ask, where is the use of having a qualification when such a state of things is allowed to exist?—I am, etc.,

April 4th. M.D.Dublin.

IS CANCER CURABLE?

Sir,—As cancer is an infective disease, may it not be inferred that, when long-continued immunity has followed an operation, the disease has been cured? It does not necessarily follow that, because the disease recurs, the patient has been suffering from it during the interval. A patient may get well of pneumonia and yet die of a second attack. Why not also of cancer?—I am, etc.,

Broadstairs, April 9th. Thos. F. Raven.

THE TELEPHONE PROBE.

Sir,—From communications that I have received, and comments that I have seen, it would appear that the differences between the electro probe known as "Pratt's" and the telephone probe described in my book on *Therapeutic Electricity* are not always quite clearly understood. Without asking for

space to go into the electrical question, I should like to state that one of the chief practical differences between these two instruments lies in the fact that the last named requires no battery; or, to speak may more correctly, the body becomes its own battery. The placing of one or more voltaic cells in circuit is not only unnecessary, but in my opinion a possible source of error.—I am, etc.,

Mansfield Street, W., April 9th. W. S. Hedley.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

MODIFIED UNIFICATION.

The author of the anonymous pamphlet on *Medical and Sanitary Reform in India*, writes: In your article (British Medical Journal, February 3rd, 1900, page 271), on "A Militia Medical Service," you state: "We do not at present discuss the exact form of such a revival (of the Militia Medical Service), whether it should be regimental or unified, or a combination of the two," etc. If you will refer to my pamphlet, page 12, you will see it was just such a combination of the two that I advocated, as possessing many advantages over either singly.

INDIAN PAY AND PENSIONS.

A correspondent writing from India takes some exception to what he otherwise characterises as our "able article on Army Medical Reform" (British Medical Journal, January 21st). He says, "invidious and what is worse incorrect comparisons" are made between the I.M.S. and the R.A.M.C. Particularly he objects to the statement that the latter have "scarcely less tropical service" than the former; again, it is incorrect, he states, to say that the home service draws less pension than the Indian, as both receive the same, namely, £365 after twenty and £500 after twenty five years' service. He points out that the R.A.M.C. is the only branch of the British service which draws a pension as great as the corresponding branch of the Indian. Cavalry and infantry draw less pension than the Staff Corps. Does the writer of the article think it would be just to give the R.A.M.C., with their limited hours in India, the same pay as the I.M.S., who spends all his life in this unhealthy climate?

*** We must leave others to deal with these allegations, but may point out that the pension of £500 after twenty-five years' service pertains to the late rank of Brigade-Surgeon.

INVITED TO RETURN

A correspondent writes: Full five months have elapsed since retired medical officers were invited to return to duty, in time of need, and with a high sense of patriotism responded; yet not a word has yet been spoken as to the terms on which they are serving—whether the time will count towards extra pension or promotion. They are the only body not recalled, and not engaged for a fixed period, and who have not received any allowance for provision of uniform, for which militia officers get a grant of £100; yet they are expected to appear in uniform. Was the invitation instead of recall with the object of saving expense to the State? Why are the medical treated differently from any other body of officers? Those now serving, bringing great experience, and saddled with much responsibility, are working for a few shillings a day beyond their already earned pensions. Why were they asked to volunteer in preference to being recalled? There must be a reason. Their case should be inquired into before it is too late.

MEDICAL ADMINISTRATION IN SOUTH AFRICA.

A correspondent writes: It is not the custom, except in India, to confer on a medical officer the higher rank while performing the duties of the superior grade. But it is quite unfair, because it deprives him of the higher emoluments. It is invariably done in the combatant ranks as a matter of course. Why should P.M.O.'s be differently treated from brigade or divisional commanders?

LATE MEDICAL WAR UNITS.

A correspondent writes to state that the detail of No. 11 General Hospital, given in the British Medical Journal of March 31st, page 778, is rather misleading. There were only three officers R.A.M.C.; the others were of the Volunteer force, with temporary commissions in the R.A.M.C. In the same hospital it is stated there were only about eight or ten N.C.O.'s R.A.M.C., the rest of the *personnel* being made up of a civilian compounders, Volunteer Medical Staff Corps and brigade bearer companies, and St. John Ambulance.

MEDICO-LEGAL AND MEDICO-ETHICAL.

"Enquirer."—We do not see anything in the letter sent to us which is specially unusual or objectionable. Our correspondent should remember that where appointments upon the staff of a hospital are determined by the votes of the whole of the governors or subscribers there is necessarily a very great deal of most undesirable broadcast distribution of testimonials, letters of application, and letters in support of candidates. For this reason it is now usual to limit the electoral body to a small number of the governors chosen annually by ballot. Everyone who can remember what used to take place under the former system in London and many of our large towns must admit that the proceedings on behalf of various candidates often amounted to a grave professional scandal. We do not think it would be fair to single out for complaint the particular letter of which our correspondent sends us a copy.

THE DIAGNOSIS OF DIPHTHERIA.

E. B. T.—We have read this correspondence over very carefully, and the impression left upon our mind is that our correspondent is angry without just cause. In the present state of our knowledge it is excusable for anybody to overlook the diagnosis of a case of diphtheria, and he certainly has not shown conclusively, as he might have done by a bacteriological examination, that his son was not infected. We think the gentleman of whom he has complained has written him very courteous letters. He has disclaimed any intention to reflect personally upon our correspondent, and has explained that in expressing an opinion upon the facts related to him he did so without knowing anything about the identity of the case. As he says he has no recollection of having informed his personal friends about the matter, and as furthermore he says he is "extremely sorry if anything he has said or done has given our correspondent "pain," we think that quite enough has been done in the way of apology, and that our correspondent should not pursue the matter any further.

CHARGING FOR A PRESCRIPTION.

J. E. G.—Our correspondent is entitled to make a moderate charge for supplying a copy of the prescription, but if the patient disputes it we should not advise him to insist upon it.

THE COURTESY TITLE OF "DOCTOR."

H. M. R.—It is generally recognised in England that the holder of a degree of Bachelor of Medicine may assume the courtesy title of "Doctor," and need not fear any adverse criticism by so doing. At the same time we should advise our correspondent to take his M.D. degree if he can do so.

AN ALLEGED SLANDER.

M. A. A.—Our correspondent has addressed to us the following complaint: He says that a patient came to his house with a cut hand, which he dressed on two occasions. Finding him not at home at her next visit she went to a neighbouring doctor, who, it is said, told her that the hand had been dressed badly. Our correspondent wants to know what he ought to do. We should strongly advise him to take no notice whatever of the alleged slander. He has very probably been misinformed, but even if the story is true it will do him much less harm than he imagines. Everybody is liable to detraction, and the sooner a young man makes up his mind to pay no attention to it the better for his peace of mind. We would further advise our correspondent to try to get on terms of personal friendship with his medical neighbours, as he will find this afford him the best guarantee against a recurrence of such an annoyance.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE CITY OF DUBLIN HOSPITAL.

On Monday, April 9th, H.R.H. the Princess Christian performed the interesting ceremony of laying the foundation stone of the new nursing home in connection with the City of Dublin Hospital. For a number of years the majority of the medical staff of the hospital have been working for this much-needed reform, and only a few months ago it was decided by the directors of the hospital that their connection with the City of Dublin Nursing Institution should terminate, and that the nursing of the hospital should in future be entirely under their own control. The ceremony, which was witnessed by a large number of the friends and supporters of this important institution, was in itself sufficient evidence that the necessary funds for the completion of the building would be easily raised.

THE CITY ORTHOPÆDIC HOSPITAL.

The annual meeting of Governors of the City Orthopædic Hospital, Hatton Garden, was held on March 28th, under the presidency of Mr. Walter Abbott. During the past year the whole building has been reconstructed, the drainage has been made efficient, two wards have been opened, an operating room has been built and fitted up, a large waiting-room has been constructed, a new heating apparatus has been fitted into the basement, and the whole building has been fitted with electric light. The report of the medical staff shows that a large amount of relief has been afforded to a very difficult class of surgical cases. It was announced that Lord Mansfield had accepted the office of Chairman of the Committee of the hospital, in the place of the Earl of Aberdeen, who had resigned.

THE DUNFERMLINE COTTAGE HOSPITAL.

The fifth annual report of the Dunfermline Cottage Hospital bears testimony to a large amount of valuable work achieved. During the past year 323 patients have been under treatment, the daily average number of beds occupied has been 27.3, and the average yearly cost of maintenance has been £45 a bed. Among the surgical cases were 22 laparotomies, 3 trephinings, 6 herniotomies, and many amputations. Of 323 patients treated 249 were cured or improved, 18 were unrelieved, and 30 died, 13 of the latter having died within 48 hours after admission. We congratulate the Cottage Hospital on its good work.

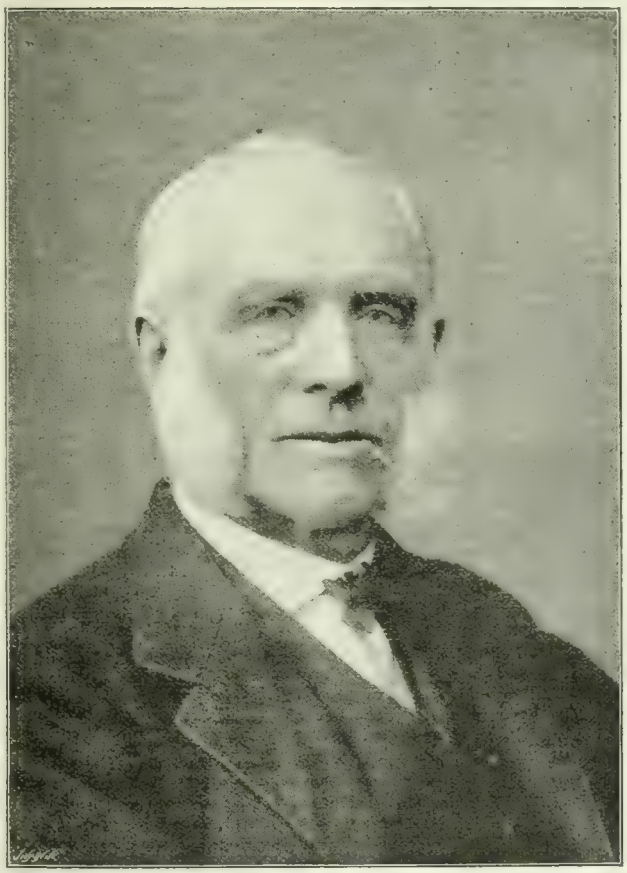
Tuberculous Persons and Public Schools.—In Oakland California, the Board of Health has adopted measures for excluding from the public schools of the city all teachers and pupils suffering from pulmonary tuberculosis. All suspected persons will be examined by a competent bacteriologist at the city's expense, and the final action of the Board of Education will be based on the bacteriologist's report alone.

OBITUARY.

SIR ANDREW DOUGLAS MACLAGAN, M.D., F.R.C.P.E., F.R.C.S.E., LL.D. (EDINBURGH AND GLASGOW),

Late Professor of Medical Jurisprudence and Public Health in the University of Edinburgh; Consulting Physician to the Edinburgh Royal Infirmary, the New Town Dispensary, etc.

ONCE again, and all too soon, the Edinburgh medical profession has to mourn the loss of one of its most brilliant members, Sir Douglas Maclagan, who died at his home at 28, Heriot Row, on April 5th, within twelve days of the completion of his 88th year. He was the last of that fine old courtly and courteous type of physician for which Edinburgh was once notable, and of which she was justly proud. Death has been hard on Edinburgh of late: William Rutherford, John Struthers, John Duncan, Grainger Stewart, Douglas Maclagan—all are gone. It is not easy to see how their places are to be filled.



Andrew Douglas Maclagan was born in the town of Ayr on April 17th, 1812, a notable year in the history of the world and of the British army. "Ciudad Rodrigo and Badajos were taken by storm during the spring of that year, and three days before Napoleon crossed the Niemen (June 24th) in his march on Moscow, Wellington crossed the Agueda in a march on Salamanca. Wellington made his entry into Madrid in August and began the siege of Burgos; two French armies forced him to retreat to the Portuguese frontier on October 18th, the day before Napoleon began the more fatal retreat of the Grand Army from Moscow" (Green's *Short History*). All this is of special interest here because Douglas Maclagan's father served with great distinction in the Peninsular war, was Physician to the Forces of His Majesty George III, and, at a later period of his life, Surgeon in Ordinary to the Queen for Scotland.

Andrew Douglas Maclagan was the son of Dr. David Maclagan, "that splendid specimen of a Scotch gentleman and family doctor, who left seven gifted sons, the eldest of whom, Sir Douglas, is still with us" (1897. Harveian Oration: Joseph Bell). The College of Surgeons' Record is worth quoting:

331. David Maclagan, M.D. Entered the College July 16th, 1816. Of an Edinburgh family. He married Jane, daughter of Dr. Philip Whiteside, of Ayr. Went through the greater part of the Peninsular War. Was physician to the forces. Father of No. 398 (Andrew Douglas Maclagan), of Dr. Philip Maclagan, of Berwick, and of Dr. J. M. Maclagan, of Hexham. See No. 369. [*Footnote.* 369. George Johnston, M.D., Berwick. Entered 6th April, 1824. Much devoted to natural history. Had a large practice. His daughter married Dr. Philip Maclagan, son of No. 331. Died 30th July, 1855, æt. 58.] Held the President's chair, 1826-7. Born 8th February, 1785. Died 6th June, 1865. An active and eloquent citizen, who made himself useful in many public positions in Edinburgh. He became a Fellow of the Royal College of Physicians (1848), and was elected President of that body for 1856-57.

To this brief record we must add that the last of the "seven gifted sons" is the present Archbishop of York, and that Sir Douglas Maclagan had, like his father, the unique distinction of having been President of both the Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh, an honour which only these two men have had in the history of the Colleges. Still transcribing from the Records of the Surgeons' College:

398. Andrew Douglas Maclagan, M.D., entered June 18th, 1833. Born April 17th, 1812. Held the President's chair 1859-60. Lecturer on Materia Medica, and Professor (1862), in the University of Edinburgh, of Medical Jurisprudence and Police. F.R.C.P. Edinburgh, May 3rd, 1864. President of the Royal College of Physicians, 1885-86. Father of the late Dr. David Philip Maclagan, and of Dr. Robert Craig Maclagan. Son of No. 331.

Thus the three generations of Maclagans gave us no fewer than six doctors, all men of outstanding merit.

In 1818 Douglas Maclagan entered the High School of Edinburgh, and later he passed to the University, of which he became an M.D. in 1833, admitted thereto by the Commissioners appointed, at the request of the University, by the Royal College of Physicians. He had in 1831 been made a Licentiate of the Royal College of Surgeons of Edinburgh, and in 1833 he received his Fellowship. Because his father was a Fellow of the Royal College of Surgeons he was exempt from the apprenticeship to a surgeon, the mode of acquiring clinical knowledge then in vogue. After graduation he studied in London, Paris, and Berlin, and then settled in practice in Edinburgh. He was shortly thereafter appointed an Assistant-Surgeon to the Royal Infirmary, but soon abandoned this and became in 1845 a Lecturer on Materia Medica in the Extra-Academical School, where he laid the foundation of his future great knowledge of toxicology. He held this appointment for nearly eighteen years.

In 1862, on the death of Professor Thomas Stewart Traill, he was appointed by the Crown to the Chair of Medical Jurisprudence and Medical Police in the University of Edinburgh, which chair he held till his retirement in 1896, after thirty-five years of zealous and brilliant work, in which he won the esteem and affection of both colleagues and students. He was characterised by dignity of bearing, courtesy, courtliness, culture, and a wide and minute knowledge of his subject. He constantly urged the importance, the gravity, and the responsibility of medical men in giving evidence as skilled witnesses in medico-legal cases. He was himself an ideal skilled witness. Soon after his appointment he began to give lectures on public health, and during the later years of his professorship he gave a special spring course on this subject. In 1884 he succeeded in obtaining a public health laboratory for the University. Now the subject of public health is separated from forensic medicine, and there was, in 1898, established the first Chair of Public Health. The existence of the Chair and of the Public Health degrees was due to Maclagan.

On his appointment to the Chair of Forensic Medicine and Public Health Douglas Maclagan became *ex officio* one of the Assistant Professors of Clinical Medicine, and lectured in the infirmary in rotation with Bennet and Laycock. In course of time he became Senior Professor of Clinical Medicine, and during the later years of holding this position he lectured almost entirely on dermatology. It was due to his influence

that a separate department of skin diseases became recognised within the Royal Infirmary and Edinburgh School.

He was a leading authority on the analysis of poisons, and almost all the medico-legal cases of Scotland demanding a knowledge of this kind came into his hands. His contributions to the literature of forensic medicine, and specially of toxicology, were numerous and important. Scarcely less so were his papers on materia medica and therapeutics.

Douglas Maclagan was much more than a physician. He might have adorned any profession. In fact his abilities and writings were not wholly given to medicine. He was a poet, and a man of great and genial humour. He had a playful fancy and a pretty wit. His lays or poems or songs were possessed of high artistic merit. Naturally many were on professional or academic themes. They usually appeared first at some of the medical and social club dinners, and later many of them were found in magazines. Some are of larger human interest and contain lines of beauty and delicate pathos. In 1850 a collection was published under the title *Nugæ Canoræ Medicæ*. One of these is the *Alma Mater*, set to music by Professor Sir Herbert Oakeley and translated into English by Professor John Stuart Blackie.

While yet a young man he was elected a Fellow of the Royal Society of Edinburgh, and succeeded Sir William Thomson (now Lord Kelvin) in the President's chair. He was, of course, a member of the Royal Society Club, which only the other year celebrated his jubilee. His high social attractions, his geniality, his conviviality were not confined to the Royal Society Club. In 1837 he became a Fellow of the Edinburgh Harveian Society. In that same year his predecessor in the Forensic Chair (Thomas S. Traill), James Syme, and Andrew Wood also became Harveians. "In 1845 Maclagan wrote and sang a splendid ode (at the Harveian Festival), in consequence of which he received his diploma as Doctor Hilaritatis" (1897 Harveian Oration; Joseph Bell). In 1854 he was President of the Harveian Society, and in 1882 he had the singular honour of being elected President for the second time on the occasion of the Centenary Festival. He was at his death the senior member of the Æsculapian Club and an honorary member of the Medico-Chirurgical Club. He was a regular attender at the annual dinners of the New Town Dispensary, and a number of his songs were composed and first sung, in his capacity of Poet Laureate of that dispensary, at the old Douglas Hotel in St. Andrew Square. At one of the last of those dinners Maclagan, as Laureate of the Club, was fittingly crowned with a wreath of laurel, a pleasing tribute which Sir Douglas valued most highly. At all these gatherings Maclagan was a most welcome guest; indeed, the evenings were often flat if he were absent.

We have already stated that he had been in succession President of the Royal College of Surgeons of Edinburgh, of the Royal Society, and of the Royal College of Physicians. Of the latter College he was elected President for a third year—an honour very seldom accorded. In 1886 Her Majesty conferred on him the honour of knighthood. In 1881 the University of Glasgow conferred on him the honorary degree of LL.D., and in 1897 his Alma Mater honoured him with the same degree.

He was a keen sportsman, and an athlete. In 1859 he was foremost in furthering the Volunteer movement. He was Surgeon-Major to the Queen's Brigade of that day. He was a member of the Royal Archers, the Queen's Bodyguard for Scotland, from which he retired a year or two ago with the rank of Brigade-Surgeon.

He was a good musician, and took a warm and practical interest in the University Musical Society. He was a many-sided and versatile man. To the last almost he kept up his reading of the great classics of Greece and Rome.

He is survived by his son, Dr. R. C. Maclagan, who resides in Edinburgh.

An old friend who had been closely associated with him in medico-legal work writes:

Sir Douglas Maclagan succeeded Sir Robert Christison as Medical Adviser to the Crown in criminal cases, and there can be no doubt that his skill as a chemist and his robust common sense enabled him to prove himself a competent successor to so eminent a toxicologist.

He was at this time engaged in private practice, and therefore had little time to devote himself to original research. He made some interesting observations with regard to the toxic properties of ordinary commercial oil of bitter almonds, and showed that the method then adopted of securing the innocuousness of the oil for domestic use by the use of lime could not be trusted to, and that a more powerful base, such as iron, was required. The oil thus treated was found to have its peculiar odour unaffected.

Dr. Maclagan was called upon to appear for the Crown in many important cases. On one occasion he appeared for the defence, in the notable instance of Madeleine Smith; but in the case of Thomson, charged with poisoning with prussic acid, and the more celebrated case of Dr. Pritchard, he acquitted himself with marked ability on the side of the prosecution.

A gentleman of the old school, the last of that eminent class of Scotch physicians who preserved a certain amount of courtly manners and directness of address, his appearance in the witness-box always gave satisfaction; while his evidence, founded upon a rapidly-increasing experience, was always listened to with respect. His varied knowledge, as one who mixed much in the best society, a physician of experience, and a dextrous surgeon, at all times rendered him a most acceptable and interesting witness.

He carried the same qualities into the lecture room, and there can be no doubt that he made himself not only one of the most popular professors, but at the same time gave to his prelections an amount of interest and graphic detail which arrested the attention of his large classes, and impressed upon them with singular force the leading facts of forensic medicine.

Dr. John Smith writes:

The social aspects of Maclagan's life were by no means the least interesting. His genial and warm-hearted disposition gathered around him a coterie of the old school practitioners of Edinburgh, now all but passed away. It was, however, to such men that the great Edinburgh Medical School owed many of its peculiar characteristics, and when Maclagan was elected to the "Æsculapian" in 1843, he found then and subsequently as his colleagues such men as Pulteney Alison, John Thatcher, Thomas Stewart Traill, Charles Bell, Nasmyth, John Burt, Balfour, James Syme, Andrew Wood, James Gillespie, J. Y. Simpson, Matthews Duncan, Haldane, Sanders, Lister, and others of a kindred spirit, but too numerous to mention here. Verily there were giants in those days. Among the many original contributions by the members of these social medical clubs so distinctive of Edinburgh, Maclagan's was at times as full of festive humour as at others beautiful in their touching pathos, while in either case, especially when sung by himself, they were always welcome and delightful. In many of these there is shown his love of field sports, both the rod and the gun being with him favourite pastimes. Even in his later years any one who has "been out" with him must have been struck by the light and athletic figure of the old man as he would "blithely tread the bloomin' heather," as his own song has it. It may just be added that Sir Douglas Maclagan was at the period of his death the senior member of the "Æsculapian," and honorary member of the Medico-Chirurgical Club; the only one upon whom this distinction had been bestowed.

Sir Douglas Maclagan's last illness was mercifully painless. He took to his bed some seven weeks ago, and died of exhausted powers. He had been dealt a heavy blow by the death of his daughter some years ago. He was never the same man again. He was attended by his old and devoted friend and former University student of 1869 79, Dr. Affleck.

The funeral took place on April 9th, from St. Stephen's Church to the Dean Cemetery. During the time the mourners were taking their places in the church, the Pipe-Major of the 3rd Battalion Gordon Highlanders, by wish of the deceased, played on the bagpipes the plaintive wails of "The Flowers of the Forest" and "Lovat's Lament." The Senatus of the University was represented by the Principal and others; the Royal College of Physicians by, among others, the President (Dr. James Andrew), and the Vice-President (Sir John Batty Tuke); the Royal College of Surgeons by Dr. Hume Maclaren, Dr. Dunsmure, Dr. John Smith, Dr. Douglas Argyll Robertson, and others; the Royal Society of Edinburgh was represented by Professors Crum Brown and Sir William Turner.

Among the pall-bearers were Dr. R. C. Maclagan, son; and the Archbishop of York, brother.

Major WALTER KIDDLE, M.D., R.A.M.C.

Major Walter Kiddle, who was murdered by Frontier tribes at Mongkaw, Upper Burmah, on February 9th, whilst serving with the Burmah-China Boundary Commission, was born in 1864, and received his education at the Royal Naval School, New Cross (now Eltham), and afterwards at Trinity College, Dublin. His record at the University was a brilliant one, as he carried off many prizes, and obtained his B.A. with honours and the gold medal of Senior Moderator. He qualified in medicine in the autumn of 1884, and then was elected House-Surgeon to Sir Patrick Dun's Hospital, Dublin, where he had obtained the clinical medal for Surgery.

He entered the service in February, 1886, obtaining his commission in July of same year, and winning the Parkes memorial medal for Hygiene. He obtained the diploma of Public Health, Dublin, as well as D.P.H.Glasgow and D.P.H. Edinburgh, besides taking the B.A.O., M.D., and qualification in State Medicine of Dublin University. He became L.R.C.P.I. in 1885. He was promoted Major in July, 1898.

At the time of his death Major Kiddle was in medical charge of the escort of the Burmah-China Boundary Commission which left Mandalay last November, and is now operating in the "Wa" country, a rugged unsurveyed district inhabited by head-hunting savages. The news which was transmitted by helio and runner from Mongkew through Lashio and Maymyo, is to the effect that Major Kiddle and Mr. Sutherland (a political officer) were murdered, and Mr. Fitton (our new consul at Ssumao) wounded by "Was" on February 9th.

A fellow officer in a letter dated Mandalay, February 14th, writes: Major Kiddle was well known and much liked in Mandalay, where he had been stationed for the last year. Personally I knew him well, as we had several tastes in common, and there are few places of interest round Mandalay that we have not visited in our antiquarian rambles. Only last week I got a letter from him, in which he speaks of the anticipated troubles having evaporated. A cultivated gentleman and a most able and energetic officer, his opinion carried weight not only in professional matters but in the manifold questions of everyday life, where his shrewd common sense, his courteous manner, and a fund of quiet humour would carry conviction in cases where tact and judgment were required to overcome prejudice and obstruction. He was a generous man, a well-known Freemason, and his charities will be missed by many in Mandalay. Perhaps his most prominent characteristics to those who knew him well were his fine sense of duty and honour, and a punctilious courtesy which, joined to a rather reserved manner, gave him an air of somewhat old-world formality. In him the service loses a brilliant officer, and the Royal Corps a trusty, well-beloved comrade. That a man of his gifts, the highly-trained product of civilisation, should be cut off in his prime by the chance arrow of a barbarous savage is one of "life's little ironies" that illustrate the incongruities of our age.

..... Sed improvisa leti
Vis rapuit rapietque gentes.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Pasquale Sgrosso, Professor of Clinical Ophthalmology in the University of Naples, and author of numerous contributions to the literature of his speciality, aged 43; Dr. Wilhelm Marcuse, of Berlin, whose name is associated with original work in physiology, aged 40; and Dr. Marchal, one of the most respected practitioners of Lorraine, author of works on medical hydrology, aged 74.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF PHYSICIANS.

An extraordinary general meeting of the Fellows was held on Monday, April 9th, the President, Dr. W. S. Church, in the chair.

The Prince of Wales.

The President communicated to the College the terms of a telegram sent by him in the name of the College to H.R.H. the Prince of Wales, congratulating him on his escape from assassination.

The University of London.

A report received from the Council on a reference as to the way in which the two representatives of the College on the Senate of the reconstituted University of London should be elected was adopted, and it was resolved that the two following by-laws appended to the report be enacted for the first time and then submitted for the approval of counsel.

"*By-Law LXV. B.*—The two persons appointed by the Royal College of Physicians of London to be Members of the Senate of the University of London, pursuant to the statutes made by the Commissioners appointed under the University of London Act of 1898, shall always be Fellows of the College.

"*By-Law XXIX. B.*—The Members of the Senate of the University of London, appointed by the College, shall be elected at a general meeting of the College in the manner following:

"For each vacancy the Council shall nominate a Fellow of the College whom they recommend for the office, and the nomination shall appear on the summons to the College meeting at which the election is to take place.

"At the time of the election the names of any other Fellows may be proposed by any present, and, if duly seconded, these shall be added to the name or names recommended by the Council, and from the list so formed each Fellow present, when voting, shall write on a slip of paper and place in the urn the name of one Fellow for each vacancy to be filled. If more names are written than there are vacancies, the vote shall be null and void. The Fellow or Fellows who shall be found on a scrutiny to have the highest number of votes shall be declared elected.

"In the event of any such Fellow declining to serve, the one who has received the next highest number shall be substituted for him. In the case of an equality of votes among two or more Fellows, a second ballot shall be taken to decide between them, and, this likewise failing, the President shall have a casting vote."

Congress on Tuberculosis at Naples.

A communication was received from the Home Office enclosing a letter from the President of a Congress on the Prevention of Tuberculosis to be held in Naples from April 25th to the 28th, and inviting observations from the College. It was resolved to be desirable that a representative of England should be present at the Conference

PRESIDENT'S ADDRESS.

The President then delivered his annual address, in which, after referring to the professional honours conferred during the year, to the financial condition of the College, to communications received from the Government, and to many valuable gifts to the College and to the Library, he, according to custom, gave short obituary notices of the thirteen Fellows of the College deceased during the year.

On the proposal of Dr. Pavy a cordial vote of thanks was unanimously accorded, together with a request from the College to the President that he would permit the publication of his address.

Dr. Church then vacated the chair.

ELECTION OF PRESIDENT.

The ballot for the election of President took place, and Dr. W. S. Church was re-elected President by an almost unanimous vote.

COMMITTEE OF MANAGEMENT.

A report from the Committee of Management, dated March 12th, was received and adopted. The Committee recommended that the course of laboratory instruction in Public Health at the University College of South Wales, Cardiff, be recognised as fulfilling the requirements of the Regulations for Part I of the examination for the Diploma in Public Health. The Committee also recommended that the course of lectures on Pharmacology and Therapeutics at the University College of South Wales, Cardiff, be recognised as fulfilling the requirements of Clause 5 (e) paragraph 2, Section 1 of the Regulations of the Examining Board in England.

"RETURN CASES" OF SCARLET FEVER.

A communication was received from the Metropolitan Asylums Board, asking the guidance of the College on a question which has arisen with regard to certain cases of scarlet fever and diphtheria alleged to prove sources of infection on returning home. After some discussion, in which Sir Dyce Duckworth, Dr. Bridges, Dr. Simpson and others took part, it was resolved that the letter of the Board should be referred to a committee to be nominated by the President, such Committee being authorised to direct any clinical or laboratory work which may be required. The President nominated Dr. J. H. Bridges, Dr. Simpson, Dr. Sidney Phillips, and the Senior Censor (Dr. Pye-Smith) as members of this Committee.

INTERNATIONAL MEDICAL CONGRESS.

A communication was also received from the President of the 13th International Congress on Medicine, to be held in Paris from August 2nd to 9th, inviting the College to send a representative, and Dr. Pavy was appointed as the representative of the College.

COMMUNICATIONS.

Communications were also received from: (1) The Secretary of the College of Surgeons, reporting certain proceedings of the Council on February 8th; (2) the Secretary of the Incorporated Society of Medical Officers of Health; and from two gentlemen resigning their Membership and returning their diplomas.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on April 5th, Mr. H. G. Howse, Vice-President in the Chair.

DONATION TO THE MUSEUM.

The thanks of the Council were given to Mr. N. C. Macnamara for his presentation of casts of portions of the skeleton of pre-historic man.

JACKSONIAN PRIZE.

The prize for the year 1899 on The Pathology, Diagnosis, and Treatment of Inflammatory Affections of the Nasal Fossæ, and the associated Sinuses and Air-cells, was awarded to Dr. Lambert Lack, F.R.C.S. The subject chosen for the ensuing year, 1901, is The Diagnosis and Treatment of Bullet Wounds of the Chest and Abdomen.

JOHN TOMES PRIZE.

The prize founded by the dental profession in honour of the late Sir John Tomes, F.R.S., was awarded to Mr. J. H. Mummery, Member and Licentiate in Dental Surgery of the College.

ALTERATION OF BY-LAWS.

The Council approved the alteration in Section XX, given below. The by-laws have again to be submitted to the Council, after which they will be forwarded to the Government authorities for legal sanction. The alteration relates to the admission to the Fellowship by examination, and provides that a candidate who is not a Member, but possesses a qualification recognised by the Council for the purpose, may apply after four instead of after five years of professional study.

RESIGNATION OF MR. J. N. C. DAVIES-COLLEY.

The Council passed a resolution to the effect that in accepting the resignation of Mr. Davies-Colley, they expressed their deep regret that illness should be the cause of such resignation, and their appreciation of his services to the College both as a member of the Council and of the Court of Examiners.

ELECTION OF FELLOWS.

The following Members of twenty years' standing were elected Fellows: Surgeon-Major-General William Roe Hooper, C.S.I.; Frederick Page.

THE PRINCE OF WALES.

A telegram was sent to His Royal Highness the Prince of Wales expressing the congratulations of the Council at his recent escape from assassination.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

HONORARY FELLOWSHIP.

AT the stated meeting of the Royal College of Physicians of Ireland, held on April 6th, the President admitted Sir James Reid, Bart., K.C.B., to the Honorary Fellowship of the College. The President having alluded to the distinguished undergraduate career of Sir James Reid at the University of Aberdeen, referred to the responsible position which he now occupied as personal physician to Her Majesty the Queen. Sir James Reid, in a few felicitous remarks, thanked the college for the honour which had been conferred upon him, and mentioned in particular the cordial relations which existed between the London and Irish Colleges of Physicans.

THE COMPANIES BILL, 1900.

When the Companies Bill of last year was under discussion, the Pharmaceutical Society of Ireland asked the support of the Royal College of Physicians of Ireland to a memorial praying that pharmacists should be included in the scope of the Bill. The College gave their approval to the Bill, but informed the Pharmaceutical Society that legislation in the direction which they advocated was inadvisable.

In connection with the Companies Bill which is now before Parliament, and which contains a clause (2) that to a certain extent protects the pharmaceutical chemists, the Society again approached the College of Physicians, this time to ask their interest in obtaining the entire exclusion of the said clause from the Bill, and the introduction of the words "pharmaceutical chemists" after dentists in the medical clause (3) of the Bill. To this request the College have replied that they are unable to accede, but in order to meet the objection which was raised to Clause 2 by the Pharmaceutical Society, namely, that companies would thereby be enabled to carry on any number of branch businesses under the nominal management of one qualified person, the College have decided that they will support an amendment that after the word business in Clause 2, line 3, there shall be inserted "as well as each separate branch of the same." This would require that a duly registered pharmaceutical chemist or chemist and druggist should be in charge of each separate branch, as well as of the chief business conducted by a company.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE QUEEN'S VISIT.—The Council of the Royal College of Surgeons in Ireland have decided that, in honour of the Queen's visit, the half Fellowship of the College shall be allowed to all students who have up to June next passed the ordinary Conjoint Professional Examinations in Anatomy, Physiology, and Histology, which are the only subjects required for the half Fellowship Examination.

UNIVERSITY OF EDINBURGH.

THE following have passed the First Professional Examination in the subject undermentioned:

Chemistry.—Farhat Ali, M. I. Ali Khan, J. Allan, D. I. Anderson, K. G. Archer, W. F. Archibald, M. Ashkenazie, M. Ashruff, C. T. Ayana, E. A. Aylward, J. W. H. Babington, F. Bailie, Agnes Balfour, J. M. Barkley, R. B. Barnetson, G. G. Bartholomew, W. J. Basson, B. Baty, W. P. Beattie, M. M. Sujjad Beg, C. M. Begg, A. R. Berrie, J. M. Beyers, A. S. L. Biggart, J. W. Bingham, F. T. Bowerbank, D. Brown, W. S. M. Brown, G. L. Brunton, R. B. Calwell, Mary T. Cameron, T. F. Campbell, T. E. Carlyle, R. A. Chapman, D. M. C. Church, J. Clarke, M. L. Cohen, A. G. Cock, T. E. Coulson, R. W. Craig, J. Craw, W. H. Davison, T. H. Easton, C. G. Edmonston, E. J. Elliot, H. Ferguson, J. J. H. Ferguson, J. M. R. Flament, F. S. B. Fletcher, W. H. Forsyth, W. J. Fraser, T. Gardner, N. J. H. Gavin, O. M. Gericke, H. M. Gillespie, J. A. Glover, W. Godfrey, H. V. Goldstein, Eleanor A. Gorrie, J. M. Graham, W. W. Greer, J. Grieve, E. J. Griffiths, J. R. Hall, P. A. Harvey, E. Henderson (M.A.), A. W. Hogg, M. A. Huk, M. M. Huk, K. U. A. Inniss, Ada Jackson, J. Jardine, W. Jarvis, W. W. Johns, S. A. Johnston, J. H. H. Joubert, F. Jung, J. Kirk, G. F. S. Landon, A. G. Leitch, A. J. Lewis, C. D. Lochrane, J. B. Lockerbie, A. P. G. Lorimer, D. H. C. MacArthur, A. D. M'Callum, S. A. M'Clintock, W. M'Conaghy, J. S. M'Donald, J. M'Donald, J. W. M'Ewan, H. R. Macintyre, J. Mackenzie, R. J. Mackessack (M.A.), N. M'Leod, Elspeth M. Macmillan, A. Malseed, M. M. Mamourian, D. P. Marais, H. G. Marshall, J. B. Mears, L. S. Milne, K. A. Moody-Stuart, J. Morris, T. B. Mouat, Annie M. Mulholland, W. M. Munby, D. S. Murray, A. W. Neill, A. Oliver, C. D. O'Neal, A. Pampellone, W. J. Patterson, J. L. Pearce, Florence M. S. Price, L. Ram, D. G. Reid, A. O. P. Reynolds, Margaret H. Robertson, T. Robertson, J. Robertson (B.Sc.), C. S. Ryles, J. Saffley, Elsie B. Saunders, A. I. Shepheard-Walwyn, F. R. Sinton, C. J. Smith, E. H. Smith, G. M. Smith, W. A. Wilson-Smith, R. A. L. van Someren, P. Steele, G. Stewart, H. A. Stewart, A. C. Strain, Annie F. Theobalds, H. M. Thompson, A. Todrick, Rose C. Townend, F. L. de Verteuil, A. N. J. Vizarat, R. W. L. Wallace, T. Walsh, R. H. Watt, J. D. Wells, D. C. Welsh, W. H. Welsh, D. P. D. Wilkie, T. Wright.

UNIVERSITY OF GLASGOW.

THE following have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B., Botany; Z, Zoology; P., Physic; C., Chemistry:

S. C. Adam (Z., C.), A. B. Aitken (Z., C.), A. C. Amy (B., Z., C.), A. W. Anderson (Z., C.), H. G. Anderson (Z.,* C.), J. Bain (B.), A. R. Barrowman (Z., C.), G. Beattie (P.), R. D. Bell, M.A. (Z., C.), T. Bennett, M.A. (B. P.), D. Blackley (Z., P., C.*), R. G. Bradford (P.), F. Brechin (Z., C.), T. Brodie (Z., C.), C. Brown (Z., C.*), J. Brown (P.), C. Burns (Z., C.), G. Y. Caldwell (Z., C.), A. Campbell (B., C.), J. C. Christie (B. P.), A. E. Clark (P.), A. Connal (P. C.), W. S. Craig (Z.), J. C. Crawford (B. P.), D. Dickie (P.), A. C. Douglas (Z. C.), A. G. H. Elder (B., P.), H. H. Fulton (Z., C.), W. H. Gillatt (B., Z.), D. L. Graham (Z., C.), D. J. G. Grant (Z., C.), G. M. Gray (Z., C.*), L. L. Greig (Z., C.), C. F. D. Hammond (Z.), A. R. F. Hay (C.), A. Innes (Z., C.), J. R. Kerr (Z., C.), J. Kerr (B., P.), G. N. Kirkwood (B., P.), R. W. Leckie (Z.), W. Main (B., Z.), W. B. M. Martin (Z., C.*), A. Meek (Z.,* C.), G. D. Muir (B. C.), M. Munro (Z.), J. Murdoch (Z., C.), A. A. Murison (Z.), E. A. Murray (Z., C.), T. S. Macaulay (Z., C.), D. C. M'Cormick (Z.), J. F. Macdonald (Z., C.), N. M'Dougal (Z.), J. B. M'Ewan (Z.), T. D. M'Ewan (Z., C.), D. Macfadyen (Z., C.), J. Macfarlane (Z., C.), R. Macfarlane (Z., C.), J. D. Macfie (Z., P., C.), A. S. M. Macgregor (Z.,* C.), R. C. M'Guire (Z., C.), J. M'Houl (Z., C.), R. Mackinnon (Z., P.), N. A. Macleod (B., Z., C.), R. Macleod (B., Z.), A. S. M'Millan (B.), A. B. M'Pherson (B., Z., P., C.), J. A. Macvea (C.), G. C. Nielson (Z., C.*), T. Orr (C.), H. H. Patrick (Z., C.), J. Pearson (Z., C.), A. M. Pollock (Z., C.), J. Porter (Z.,* C.), W. M. Rae (Z., C.), D. R. Reid (Z., C.), D. S. Richmond (B., Z.), J. W. Richmond (B. Z.),

R. T. C. Robertson (Z.), F. D. Scott (C.), E. L. Sieger (B.). J. C. D. Simpson (Z.), J. M. Smith (P.), M. W. Smith (Z.), N. B. Stewart (C.). W. Stewart (B., P.), W. C. Stewart (B., Z., P.), M. R. Taylor (Z., C.), W. R. Taylor (Z., P.), J. W. Thomson (Z., C.*), J. J. Townley (B., Z.), A. M'M. Watson (B.), T. M. Watt (Z.), A. C. West (Z., C.), G. J. Williams (B., Z., P., C.), G. Wilson (B., C.), R. M'N. Wilson (P., C.), J. Young (P., C.).

Women.—A. A. Baird (C.), A. M'C. Black (B., Z.), R. Campbell (P., C.), M. T. Gallagher (P., C.), A. W. Maclean (B.), C. R. Park (P., C.), H. R. L. Reid (B., Z.), J. R. Shaw (P., C.), A. M. Yates, (P., C.).

The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A., Anatomy; P., Physiology; M., Materia Medica and Therapeutics):

A. Anderson (M.), W. K. Anderson (P.), W. Armitage (A., M.), A. G. Banks (A., P.), R. Bryson (A., M.), E. C. Burnett (P.), J. M. H. Caldwell (M.), J. J. Y. Campbell (A.), D. L. Carmichael (A., P., M.), R. P. Cartwright (M.), W. B. Chapman (P.), H. W. Crawford (A., P.), D. W. Davidson (M.), A. R. Dow (P., M.), W. Elder (A., M.), J. Ferguson (P., M.), J. Ferguson, M.A. (A., M.*), T. Forsyth (M.), W. Gemmill (A., P.), W. W. George (P., M.*), J. R. Gilmour (M.), J. M. Gordon (A., P.), J. Guthrie (A., P.,* M.), J. A. Hagerty (A., P.), R. D. Hodge (A., M.*), J. B. D. Hunter (A., P.), N. M'C. Hutchison (A.), E. D. Jackson (A., P.), G. R. Jeffrey (A. P.), W. F. Kay (A., P.), J. T. Kelly (M.), J. Kennedy (A.), A. M. Kerr (A., P.), W. H. Kirk (P.), S. E. Lewis (P., M.), A. Linn (P.), T. Lovett (A., P.), J. P. Lusk (M.), R. Makins (A., P., M.), R. Menzies (A.), J. G. Millar (A.), W. A. Milne (A.,* P., M.), A. J. Mitchell (A.), A. D. Mitchell (P.), J. Morrison (M.*), J. Muir (P.), D. D. M'Dougall, M.A. (A., P.), A. A. MacFarlane (A., P.), A. Macintyre (A., P.), D. D. F. Macintyre (A.), T. M'Laren (A.), H. A. M'Lean (A., P.), J. Maclean (A., P., M.), D. H. Macphail (A. P. M.), J. S. Nicolson (M.), J. D. Nisbet (P., M.), R. Orr (P.), T. Rankine (A., P.), J. M. Reid (A., P.), J. W. Renton (A.), T. Richmond (A., P.), D. Riddell (A., P.), W. R. Blackwood (A.), N. C. Rogers (P.), E. H. Ross (A., P.), J. Smith (A.), J. W. Smith (A., P.), R. C. Smith (A., P.), D. Spence (P.), J. R. Thomas (P.), J. Unsworth (A.), R. Wallace (A., M.), T. I. Wallace (A.), H. F. Warwick (P.), A. B. Watt (A., P.), P. M. Waugh (P.), A. S. Wilson (M.), J. Wilson (A.).

Women.—H. S. Baird, B.A. (M.), G. D. Bostock (A., P.,* M.*), M. E. Bryson (P., M.), E. MacL. Lochhead (A., P.), J. S. MacEwen (A., P., M.*), J. H. M'Ilroy, M.A. (P.), M. H. Scott (A., P.), E. C. Wallace (A.).

The following have passed the Third Professional Examination for the Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):

J. Anderson (P.), T. Anderson (P., M.), W. Archibald (P., M.), R. W. Auld (P.), J. S. Barr (P.), W. M. Brown (P.,* M.*), P. T. Cairns (P., M.), S. J. Cameron (P.*), R. D. Campbell (P.,* M.), E. S. Chapman (P., M.), G. H. Clark (P., M.), J. B. W. Cook (P., M.), J. S. Dale (P.), D. B. Davidson (P.), G. H. G. Davie (P.), A. Doig (P., M.), R. N. Dunlop P., (M.*), G. B. Eadie (P. M.), G. Ferguson (P.), D. J. Fletcher (M.), A. Gow (P., M.), A. P. Granger (P., M.), J. Gregor (P., M.), G. P. Harlan (P., M.), F. J. Henry (P., M.*), J. M. Henry (M.), C. M. Hope (M.), D. W. Hunter (P.,* M.), M. Hunter (P.), W. J. Isbister (P., M.), P. Jones (P., M.), D. R. Kilpatrick (P., M.), D. Kyle, M.A. (P.), J. Lambie (P., M.), J. F. Lambie (M.), F. J. Lochrane (P.), E. Magoveny (P., M.), W. A. Masson (P., M.), R. J. Mills (P., M.), W. A. Milne (P., M.), A. R. Moir (M.), A. H. Muir (P., M.), J. W. M'Dougall (M.), W. J. M'Feat (M.), W. F. M'Glashan (M.), A. Maclean (P.), G. W. M'Millan (P., M.), J. M'Pherson, M.A. (P., M.), R. Patterson (P., M.), J. Paton (P., M.), J. K. Patrick (P., M.), R. Ramsey (P.*), A. Reid (P., M.), P. M. Reid (M.), W. Robertson (P.), T. R. Rodger (P.,* M.), W. G. Rodger (P.,* M.), A. T. Ross (P., M.), C. J. Ross, B.A. (P., M.), D. Steel (P., M.*), J. Stewart, M.A. (P., M.), J. N. Todd (P., M.), J. G. Tomkinson (P.), J. W. Turner (P.), R. W. Valentine (P.,* M.), A. E. Wainwright (M.), J. Walker P., M.*), G. S. Wallace (P., M.), M. W. Williams (P., M.), W. W. W. Wilson (P., M.), W. R. Wylie (P., M.).

Women.—J. B. Higgins (P., M.), C. S. Howden (P., M.), K. M. Myhre (M.), M. J. Pirret (P., M.), E. N. McB. Ross (P., M.), A. B. Sinclair (P., M.), E. H. Smith (P., M.), H. F. Young (P., M.*).

* With distinction.

UNIVERSITY OF ABERDEEN.

AT the Graduation Ceremony on April 4th the following degrees and diplomas were conferred:

Degree of Doctor of Medicine (M.D.).—F. Beaton, M.B.—Thesis: Entero-Colitis of Infants: its Etiology and Treatment; H. G. Cowie, M.A., M.B.—Thesis: Clinical Notes on Diphtheria: A. B. Dalgetty, M.B.—Thesis: Water Itch;* G. B. Scott, M.B.—Thesis: Asthma in Children; its Pathogeny and its Varieties, with two cases; D. Simpson, M.A., M.B., Major I.M.S.—Thesis: Elephantiasis Arabum.

* Worthy of commendation.

Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) (New Ordinances).—H. Fraser† (First Class Honours), H. Peterkin,† M.A. (Second Class Honours), H. B. Tawse (Second Class Honours), A. Westerman (Second Class Honours), W. J. I. Bruce, W. J. Caie, M.A., R. Carnegie, J. Catto, A. R. Davidson, H. A. Davidson, J. W. Duncan, M.A., S. D. Fairweather, M.A., G. G. Farquhar, J. Forbes, J. McC. Fraser, M.A., K. Fraser, W. N. Houghton, W. E. Lawson, D. E. Macdonald, J. McKenzie, M.A., E. H. Nash, W. D. Pringle,† J. Richardson, J. A. Simpson, H. T. Skae, R. A. Slessor,† M.A., C. L. Smith, H. E. Smith, A. L. Sutherland, M.A., J. Taylor, M.A., J. M. S. Wood.

† Passed Final Examination with distinction.

Degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.) (Old Ordinances).—J. Hadfield, F. W. Moir, D. W. K. Moody, W. M. Smith, W. P. Young.

Diploma in Public Health.—J. McR. Cowie, M.B., J. Dawson,‡ M.A., M.B., A. J. Hynd, M.B., J. A. Stephen, M.A., M.B., A. Urquhart, M.A., M.B.

‡ With credit.

UNIVERSITY OF DURHAM.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE (Old Regulations).—The following candidates have satisfied the examiners in the subjects undernoted:

Chemistry with Chemical Physics.—G. Fowler, L.R.C.P. and S., D.P.H. Lond., Madras University; A. M. Watts, M.R.C.S., L.R.C.P., University College, London.

Elementary Anatomy.—E. J. Miller, Middlesex Hospital and Cooke's School of Anatomy.

FIRST EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE (New Regulations).—The following candidates have satisfied the examiners in the subjects undernoted:

Elementary Anatomy and Biology, Chemistry and Physics.—W. Gibbons, College of Medicine, Newcastle-upon-Tyne (First-class Honours); F. Stoker, College of Medicine, Newcastle-upon-Tyne (Second-class Honours); J. A. Bennett, College of Medicine, Newcastle-upon-Tyne; W. Haward, College of Medicine, Newcastle-upon-Tyne; T. C. Hunter, College of Medicine, Newcastle-upon-Tyne; B. W. Lacey, College of Medicine, Newcastle-upon-Tyne; Constance Charlotte Robertson, College of Medicine, Newcastle-upon-Tyne; Janet Arthur Vaughan, London School of Medicine for Women; H. Wolfe, College of Medicine, Newcastle upon-Tyne.

Chemistry and Physics.—A. H. Bateman, St. Bartholomew's Hospital; C. P. Burd, M.R.C.S., L.R.C.P., Mason College, Birmingham, and St. Bartholomew's Hospital; C. Fisher, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; W. W. Jones, Mason College, Birmingham; S. Nix, St. Mary's Hospital; P. M. Rivaz, St. Bartholomew's Hospital; W. Seymour, College of Medicine, Newcastle-upon-Tyne; W. F. Wilson, College of Medicine, Newcastle upon-Tyne.

Elementary Anatomy and Biology.—F. D. Atkins, St. Thomas's Hospital; L. A. H. Bulkeley, College of Medicine, Newcastle-upon-Tyne; F. T. H. Davies, Mason College, Birmingham; H. E. Featherstone, College of Medicine, Newcastle upon-Tyne; A. J. Gilbertson, College of Medicine, Newcastle-upon-Tyne; J. J. Grant, College of Medicine, Newcastle upon-Tyne; A. H. Heslop, Oxford University and College of Medicine, Newcastle-upon-Tyne; Lizzie Evelyn Kendal, College of Medicine, Newcastle-upon Tyne; F. W. Kemp, College of Medicine, Newcastle-upon-Tyne; R. V. Khedkar, Grant College, Bombay; G. E. Lloyd, College of Medicine, Newcastle-upon-Tyne; C. F. F. McDowall, College of Medicine, Newcastle-upon-Tyne; Bertha Mary Mules, London School of Medicine for Women; W. J. Phillips, B.Sc., College of Medicine, Newcastle-upon-Tyne; Mary Raw, College of Medicine, Newcastle-upon-Tyne; C. D. Relton, College of Medicine, Newcastle-upon-Tyne; Olga Schiele, London School of Medicine for Women; F. R. Snell, St. Thomas's Hospital; F. J. Strachan, College of Medicine, Newcastle-uon-Tyne; W. L. Tindle, College of Medicine, Newcastle-upon-Tyne; T. Visser, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy, Chemistry, and Physics.—A. Reid, Guy's Hospital.

CONJOINT BOARD IN ENGLAND.

THE following gentlemen have passed the Second Examination of the Board in the subjects indicated:

Anatomy and Physiology.—S. Bazalgette, J. J. Armitage, F. R. E. Wright, and C. H. Latham, St. Thomas's Hospital; R. R. Garrett, W. H. D. Breton, St. Mary's Hospital; K. Black, C. H. Dawe, P. A. Peall, B. H. Wedd, E. J. Gaffney, Guy's Hospital; C. D. Pye-Smith, University College, Sheffield, and Guy's Hospital; W. L. M. Day, Oxford University and Guy's Hospital; F. R. Edmonds, H. B. Simpson, University College, London; W. B. Clark, King's College, London; C. L. Lakin, S. A. Boyd, Charing Cross Hospital; W. F. Jones, Charing Cross Hospital and Mr. Cooke's School of Anatomy and Physiology; H. H. Bashford, M. Culpin, London Hospital; D. A. H. Moses, St. Bartholomew's Hospital; T. Rose, J. W. Hele, Middlesex Hospital; E. W. Dewey, St. George's Hospital; J. S. Pearson, Cambridge University and St. George's Hospital; G. E. Aubrey, R. J. P. Thomas, F. M. Bishop, A. F. Forster, St. Bartholomew's Hospital; D. Brodie, H. S. Faber, St. George's Hospital; A. C. Birt, S. H. Pitcairn, and J. C. F. D. Vaughan, St. Thomas's Hospital; H. M. Goldstein, H. W. Wallis, R. Larkin, G. S. Robertson, Guy's Hospital; O. M. Bartlett, St. Mary's Hospital; R. L. Ridge, F. W. Jones, London Hospital; E. G. Kellgrew, Cambridge University; W. B. Davy, Middlesex Hospital; W. Garton, Westminster Hospital.

Anatomy only.—F. F. L. How, University College, London.

Twenty-one gentlemen were referred in both subjects and two in Physiology only.

SOCIETY OF APOTHECARIES OF LONDON.

PRIMARY EXAMINATION, PART II.—The following candidates have passed in:

Anatomy.—C. E. Adams, Guy's Hospital; C. M. L. Cowper, Guy's Hospital; L. Denny, Royal Free Hospital; E. M. de Wilton, St. Mary's Hospital; W. Garton, Westminster Hospital; W. Hunter, Durham; H. Jacques, London Hospital; F. H. Maberly, Birmingham; H. J. May, London Hospital; F. Murray, Royal Free Hospital; A. R. Phelps, Cambridge, and St. Thomas's Hospital; C. H. Pring, Bristol and Westminster Hospital; W. P. Taylor, Sheffield and Bristol.

Physiology.—C. E. Adams, Guy's Hospital; W. H. Bush, Guy's Hospital; P. S. Cooke, Charing Cross Hospital; C. M. L. Cowper, Guy's Hospital; L. Denny, Royal Free Hospital; A. W. Ellis, Edinburgh; H. R. Grellet, Guy's Hospital; H. Jacques, London Hospital; S. A. Mahmood, University College Hospital; H. P. Margetts, St. Bartholomew's Hospital; S. Newmark, Edinburgh; H. A. Parker, St. Thomas's Hospital; A. R. Phelps, Cambridge and St. Thomas's Hospital; C. H. Pring, Bristol and Westminster Hospital.

PRIMARY EXAMINATION, PART I.—The following candidates have passed in:

Biology.—E. Renouf, Royal Free Hospital; J. A. Renshaw, Manchester.

Chemistry.—B. F. Board, Royal Free Hospital; L. V. Hill, Sheffield; R. L. Jones, Charing Cross Hospital; C. Kellgren, Royal Free Hospital; D. Mann, Royal Free Hospital; J. E. Mondon, Glasgow; E.

Renouf, Royal Free Hospital; J. A. Renshaw, Manchester; C. A. Sampson: J. M. Worswick, Manchester.

Materia Medica and Pharmacy.—T. M. Burton, Royal Free Hospital; W. H. Cotton, Dublin; A. T. Harvey, London Hospital; F. P. Jescelyne, Leeds; J. A. Renshaw, Manchester; C. M. Scott, Royal Free Hospital.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,802 births and 5,120 deaths were registered during the week ending Saturday last, April 7th. The annual rate of mortality in these towns, which had been 21.6 and 21.4 per 1,000 in the two preceding weeks, rose again last week to 23.0. The rates in the several towns ranged from 15.0 in Derby, 16.5 in Birkenhead, 17.2 in Gateshead, and 17.3 in Sunderland to 31.0 in Manchester, 31.6 in Liverpool, and 32.9 in Preston. In the thirty-two provincial towns the mean death-rate was 23.7 per 1,000, and exceeded by 1.7 the rate recorded in London, which was 22.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.2 per 1,000; in London the death-rate was equal to 2.0 per 1,000, while it averaged 2.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.0 in Salford, 4.4 in Preston, 4.7 in Wolverhampton, 5.3 in Blackburn, 5.9 in Cardiff. Measles caused a death-rate of 2.4 in Oldham, 2.5 in Huddersfield, 2.9 in Wolverhampton, 3.1 in Plymouth and in Halifax, and 4.6 in Cardiff; scarlet fever of 1.7 in Nottingham, and whooping-cough of 1.7 in Wolverhampton, 1.8 in Manchester, 1.9 in Salford, and 2.3 in Norwich. The mortality from "fever" showed no marked excess in any of the large towns. The 78 deaths from diphtheria in the thirty-three towns included 32 in London, 13 in Sheffield, 5 in Portsmouth, 5 in Leeds, and 4 in Blackburn. Two fatal cases of small-pox were registered last week in Liverpool, but not one in any other of the thirty-three large towns. The number of small-pox patients in the Metropolitan Asylums Hospitals, which had declined from 11 to 3 at the end of the six preceding weeks, had further fallen to 2 on Saturday last, April 7th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1,713, against numbers decreasing from 3,578 to 1,696 on the twenty preceding Saturdays; 185 new cases were admitted during the week, against 181, 170, and 172 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 7th, 1,023 births and 672 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 22.2 and 22.8 per 1,000 in the two preceding weeks, declined again to 21.7 last week, and was 1.4 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.4 in Dundee, and 16.6 in Leith, to 24.3 in Glasgow, and 25.8 in Greenock. The zymotic death-rate in these towns averaged 2.0 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 347 deaths registered in Glasgow included 9 from measles, 4 from scarlet fever, 3 from diphtheria, 10 from whooping-cough, 3 from "fever," and 8 from diarrhœa. Three fatal cases of diarrhœa were recorded in Edinburgh; 3 of measles in Dundee; 3 of whooping-cough in Aberdeen; and 3 of diarrhœa in Leith.

INDUSTRIAL LEAD POISONING.

HOUSE PAINTERS AND PLUMBERS.

IN a recent number of the BRITISH MEDICAL JOURNAL the attention of the medical profession was drawn to the necessity of notifying all instances of lead poisoning occurring in places covered by the Factory Acts. At that time lead poisoning in plumbers, for example, was not strictly included in the requirement, but the Home Office has now issued a Memorandum supplementing that of December, 1898, so as to include cases (1) occurring under certain condition in house painters and plumbers, and (2) recurring attacks in the same person. There is no country in the world where statistics of industrial lead poisoning are more complete than in our own. By extending the sphere of notification, information would be obtained of dangerous conditions that have hitherto escaped official notice, but the Home Office is handicapped by statutory limitations. Plumbism acquired through drinking contaminated water or caught in some industrial occupation outside the pale of the Factory Acts cannot be dealt with by the Home Office, nor can the usual fee under these circumstances be paid to the notifying medical practitioner. It is absolutely essential that the patient reported by the practitioner should have contracted lead poisoning in a factory or workshop. When a painter who is spending some part of his time in a factory or workshop, occupied by his employer grinding lead pigments or mixing lead paints, contracts plumbism, there is naturally some doubt as to whether the illness was contracted in the indoor work. The Home Office is now prepared to accept certificates dealing with these cases, and to pay the usual fee of half a crown on the assumption (*a*) that the practitioner is in a position to say that the patient is employed in connection with a given factory or workshop in which, from the nature of the work carried on, risk of lead poisoning may reasonably be anticipated; and (*b*) that no case will be notified in which this is not so. The notification certificate must state the particular factory or workshop. Reported cases of lead poisoning among plumbers and house-painters will be referred to the factory inspector of the district, and by him to the certifying surgeon when necessary, and these cases will be classed and published separately in the returns. A house-painter who contracts plumbism in outdoor work—in other words, away from the factory or workshop—does not therefore come under the above category.

RECURRING ATTACKS OF PLUMBISM.

Doubt has been felt by practitioners as to how far recurring attacks of lead poisoning in the same individual should be reported. The Chief Inspector of Factories now makes it known that where the affected person continues to work in lead, successive attacks, if clearly ascertained to be distinct from those preceding, are each to be notified. The utility of this requirement is obvious. Not only is that particular case watched, and its history preserved, but the attacks of plumbism recurring in the same individual would point to the need possibly for more stringent regulations or for a longer suspension from work of that individual should the certifying surgeon deem it necessary. It is different with persons who are suffering from chronic lead poisoning, and who have ceased to work. Since in these there has been no fresh exposure to lead, and in all probability these cases have been already notified, there is no further obligation on the part of medical men to report them, nor is it expected. This fresh memorandum of Dr. Whitelegge places medical practitioners in possession of the information that many of them wanted, and is a step in the right direction.

THE ISOLATION OF SCARLET-FEVER PATIENTS.

DR. EDWARD DEAN MARRIOTT (St. Ann's Wells Road, Nottingham) writes: In your review of my booklet (March 24th, p. 743), perfectly fair and just as all your criticisms are, I notice you fall back on the fallacious statistical method. You evidently do not share the growing scepticism regarding statistical information. Mr. Jonathan Hutchinson said quite recently: "I distrust all statistics—no one more than I," and I think most of us share his opinion. While it is impossible to dispense with statistics altogether, they cannot, I submit, be accepted as reliable argument unsupported by strong collateral evidence. The diminished zymotic mortality-rate is the one argument, and I shall show that it is a method of reasoning which cannot be leaned on very heavily.

It is beyond question that there has been a great saving of life in recent times so far as zymotic diseases are concerned. Marvellous, indeed, would it be were this not the case when we consider the gigantic sums of money which have been spent lavishly by the municipalities of this country on public health. Of the debt of £252,000,000 which has been raised by local authorities (thanks to the manner in which these same authorities have contrived to defeat the provisions of the Borough Funds Act, which was passed to give ratepayers control over reckless expenditure) immense sums have been spent on the sanitary betterment of our large towns and cities, apart altogether from the money expended on isolation hospitals. We had, therefore, a right to expect that the better hygienic conditions under which we have been living would bear fruit in diminishing mortality-rates. This we know to have taken place, but to attribute this saving of life to a system the universally admitted evils of which go to grove that by no chance whatever could it be a success, is illogical. Isolation hospitals have played no part in the diminution of zymotic mortality-rates. The saving of life commenced long before compulsory notification or hospital isolation were dreamed of. It has been maintained, *pari passu*, in towns under no system of notification and in notification towns where the percentage of removals has been so small as to be a negligible quantity. In places like Nottingham, where 93 per cent. of all notified cases have been segregated, and where as a consequence (for it will be found that the percentage of removals bears a definite ratio to the spread of the disease) we have, in a practically ascending scale, increased the number of notified cases from 384 in 1884 to 1,164 in 1894, and from this figure to 2,500 in 1899, the saving of life has been steadily maintained, in spite of this gigantic increase in the number of cases, in spite of secondary infection, in spite of comparatively large numbers of return cases, in spite of the high mortality-rate of these cases (as pointed out by the medical officer of health).

The Notification Act was passed in 1889. Let us take the Registrar-General's returns for England and Wales from 1856 to 1890 in quinquennial periods, and we shall see that there was a steadily progressive saving of life from scarlet fever in those periods, with which notification Acts and isolation hospitals could have little to do:

1856 to 1860 ...	0.89	1876 to 1880 ...	0.68
1861 to 1865 ...	0.08	1881 to 1885 ...	0.43
1866 to 1870 ...	0.96	1886 to 1890 ...	0.24
1871 to 1875 ...	0.76		

In the same period there was a similar diminution in the death-rate from diphtheria, which was not maintained after the passing of the said Act.

So also may be observed the same lessening of the mortality-rate from phthisis and other tuberculous disease. The figures are:

1856 to 1860 ...	2.57	1876 to 1880 ...	2.04
1861 to 1865 ...	2.53	1881 to 1885 ...	1.82
1866 to 1870 ...	2.45	1886 to 1890 ...	1.65
1871 to 1875 ...	2.22		

In these diseases, of course, isolation, as we understand it, was not practised at all. Finally, it is interesting to note that the same steady improvement is observable if we take the 7 principal zymotic diseases together:

1858 to 1860 ...	4.03	1876 to 1880 ...	2.94
1861 to 1865 ...	4.22	1881 to 1885 ...	2.32
1866 to 1870 ...	4.08	1886 to 1890 ...	2.25
1871 to 1875 ...	3.76		

We are thus able to discern that the various Notification Acts were passed at a time when more legitimate methods were accomplishing great results, which results have been laid claim to by sanitarians as the triumph of these un-English compulsory enactments.

You concede the seriousness of the "return cases" question, but you are of opinion that such cases need not often arise; on the contrary "it passes the wit of man" to devise any scheme to prevent their occurrence. Premature discharge is not a factor in their production, for they occur most frequently as a result of lengthy detention. Want of air space must receive acquittal, because they arise in half-empty hospitals in slack times.

A question which urgently calls for a definite reply is this: Are hospital isolated scarlet fever cases ever anything else but a danger to the community on their discharge? I submit they are not. If

but one patient being discharged "cured," after lengthy detention, is able to communicate to others the disease in a bad form. I say this is evidence, *prima facie*, that all such patients are sources of danger. The evidence ceases to be circumstantial when we find that healthy people who have been sent to hospitals through errors of diagnosis have, on their return, given rise to cases of great type-severity. If any lingering doubt still remained, it would be resolved by the admission of sanitary authorities in large centres, that from 50 to 100 "return cases" arise annually in those centres. That is to say, that this large number of cases arises in the homes within three weeks of the return of patients from the hospital.

The significance of this admission will be grasped when it is borne in mind that discharged patients do not confine their attentions to their homes. In this city the sanitary authority publishes a handbill declaring its inability to guarantee freedom from infection in patients discharged from their isolation hospital. They recommend the sending of such patients into the country for at least a fortnight before allowing them to return to their homes. A case came under my notice in which a lady was sent straight from the hospital to a distant county, where she promptly spread the disease.

Let it be granted for the purpose of argument that I am right in my contention that all hospital isolated cases are on their discharge a source of public danger, then the natural corollary will be great dissemination of the scarlet fever poison and multiplication of the number of notified cases. Is this the way it works out? By the courtesy of medical officers of health I am in possession of the results attained by most of the thirty-three large and some of the smaller towns. I find that while in many towns there has been a steadily progressive increase in the number of notified cases out of all proportion to the increase of population, there is not a single instance in which any material reduction can be shown. I find towns which began the stamping-out process with hundreds of notified cases turning with amazing rapidity these hundreds into thousands. Here are a few examples:

Registration County of London.

1890	...	15,330	1892	...	27,093
1891	...	11,398	1893	...	36,901
		Manchester.			
1891	...	1,138	1894	...	2,230
1892	...	1,671	1895	...	2,302
1893	...	2,031	1896	...	2,389
		Liverpool.			
1891	...	1,176	1893	...	3,538
1892	...	1,554	1894	...	3,963
		Bradford.			
1881	...	424	1899	...	2,287
1891	...	1,163			
		Bolton.			
1879	...	204	1899	...	1,226
1889	...	1,256			
		Hull.			
1890	...	397	1895	...	1,062
1891	...	305	1896	...	1,454
1892	...	497	1897	...	1,494
1893	...	769	1898	...	760
1894	...	744	1899	...	1,034

The experience of some of the smaller towns is even more remarkable, but I must not trespass on your valuable space. It is especially significant that a high percentage of removals is followed by a proportionate increase in the number of notified cases with startling regularity.

If, then, it is contended that the system in question has been the cause of diminished mortality-rates, the conclusion must be arrived at by the strange method of reasoning that the way to stamp out a contagious disease is to provide machinery by the agency of which the number of cases of the particular disease may be largely increased—which, of course, is absurd.

I submit, then, that I have demonstrated the extreme improbability of hospital isolation having played any part whatever in lessening the death-rate from scarlet fever. I contend that I have produced abundant evidence that the system has been, and can have been, nothing but a drag on the wheels of sanitary progress.

P. writes: In the British Medical Journal for March 24th I notice on page 743 your remarks on the pamphlet published by Dr. Marriott. Having had charge of an isolation hospital since 1886, I can fully agree with the remarks that you make, and with reference to one especially I should like to call attention and also to ask for advice from other medical men in charge of similar institutions. I refer to "return cases." The hospital of which I have charge originally had three blocks, two so-called twelve bed-pavilions, one three-bed, and one two-bed. The Board decided to take scarlatina patients into the hospital in 1888, and as it was to supply the need of a population of 100,000 inhabitants it was very speedily found to be wanting in accommodation. They then decided to supply an equal number of cots without any additions to the buildings, thus doubling the number of the patients. Two years ago they decided to double the size of the hospital, by adding two more twelve-bed pavilions and two more small wards, bringing the number of beds from 29 to 57, also providing an equal number of cots. When the hospital had the smaller number of patients to accommodate, return cases were rare. Since the opening of the new buildings in December, 1898, return cases have been more frequent, although every case is isolated at least 8 weeks, some having been kept in for 16 weeks—that is, until all desquamation had ceased and all sores healed or discharges from nose and ears quite ceased. We have a splendid discharging block, quite separate from all of the other pavilions, with three rooms, and always employ two nurses, one to undress the patient and remove infected clothing, the second nurse to bathe and dress with clothing that is brought fresh to the hospital on discharging day. Patients are washed daily during their stay in hospital either with Sanitas or carbolic soap, and eucalyptus oil inunctions freely used. Every care is taken to prevent the spread of scarlatina; yet we get return cases, having had 4 per cent. during the year 1899—that is, 24 return cases in 610 patients. Why is it? What more can be done? Any suggestions will be very welcome. Our cubical space per patient averages 1,092 feet per bed and cot. I would say that we have been so full during the last two years that the wards have never had a day's rest, and I am of opinion that every ward should have at least one week's rest every three months, with all doors and windows open and walls washed down, stoved with sulphur, and ceilings whitened at least once each year. We are provided with Sherringham valves, four on each side, under the beds, windows that open inwards at the top, good ventilators in roofs, and Shoreland's patent ventilating stoves. Our cases of nephritis are very rare—not 0.5 per cent. Our death-rate was 4.5 per cent. last year. I should like to know what is the average percentage of return cases in large hospitals or in any isolation hospital, and what other means are adopted to prevent them.

HEALTH OF EDINBURGH.

During the last few weeks 7 cases of typhus fever have occurred in the city of Edinburgh. The origin of the disease has not been ascertained. Apparently the first cases were mild, and were not diagnosed. Now all who have been in contact with the cases had been put in quarantine, or under strict observation. The number of cases of the other infectious diseases continued low, as did also the number of cases in the City Hospital, which on Tuesday, April 3rd, stood at 173.

RAILWAY CARRIAGES AND INFECTION.

It is reported that the Minister of Public Works in France has submitted for the consideration of the railway companies a report on the question of prevention of infection in railway carriages, which was recently presented to the Société de Médecine Publique et d'Hygiène Professionnelle by M. Vallin. The chief recommendations of this report are briefly as follows:—

1. That notices be put up in all carriages, station waiting-rooms, etc., informing the public that in order to prevent the spread of infectious diseases, and especially of tuberculosis, passengers are strictly forbidden to spit on the floor of the carriages or on any part of the station premises.
2. That spittoons, filled with a suitable antiseptic solution and admitting of easy cleansing and renewal, be provided in stations and carriages.
3. That wet cleaning processes be as far as possible substituted for sweeping and other methods calculated to cause dust.
4. That wherever boards cannot be replaced by mosaic, asphalte, etc., they be rendered impermeable and dust-proof by suitable chemical solutions.
5. That all wood work in the carriages be tarred or painted in such a manner as to ensure rapid and easy cleaning with water and a mop.
6. That linoleum, india-rubber, and other impermeable and easily cleansed materials be used for carpets and cushions of carriages in place of cocoa-nut matting, woollen and horsehair fabrics, and the like.
7. That special and stringent regulations be added to those already in force with regard to the conveyance of passengers suffering from communicable diseases, for whom special carriages, subject to a strict system of disinfection, should be provided when necessary.

VERIFICATION OF DOUBTFUL CASES OF ANTHRAX.

It is generally admitted that the complete proof of anthrax is the presence of the bacillus under the microscope. Cases are occasionally cropping up in factories or workshops where the medical practitioner must consider it very desirable to obtain this confirmatory evidence. The Home Office is prepared to offer facilities to practitioners, under certain conditions, for bacteriological examination in suspected anthrax where the infection is believed to have been contracted in a factory or workshop. On receiving the approval of the Medical Inspector of Factories (Dr. T. M. Legge, Home Office), the material may be taken and packed by the practitioner and sent to the bacteriologist appointed by the Home Office. A portion of the excised pustule of an external anthrax, lymph from a vesicle in a sealed vaccine tube, a cover-glass preparation dried but not stained, or a portion of lung and spleen, or of samples of pleural, pericardial, or peritoneal fluid can be sent. Since, however, these are very harmful products to send by post if not carefully packed, the General Post Office has issued certain regulations which must be complied with. These and other necessary requirements are stated in a memorandum recently used by the Factory Department. Further information can be obtained on application to Dr. Legge.

A State Hospital for Inebriates in New York.—The New York *Medical Record* states that a Bill will be introduced into the New York Legislature during the present session to establish an institution for the treatment of victims of alcohol and drug addiction. The Bill provides for the appointment by the Governor of a Board of Managers, who will receive compensation during the time they are engaged in making plans for the institution. After it is ready for the reception of inmates, the managers are to serve without pay, each for a term of three years. The institution is to have accommodation for 300 inmates. Incurables will not be admitted. Inebriates may be committed for terms of five years, but it is proposed to have a parole system similar to the one now in use at the Elmira Reformatory. Commitments will be made by magistrates, although persons seeking to enter for treatment will be accepted when there is room for them. The cost of maintenance of inmates committed by magistrates will be charged against the counties from which they have come.

MEDICAL NEWS.

RUSSIAN UNIVERSITIES.—The total number of students on the books of the University of Moscow at the beginning of the present year was 4,025, of whom 1,148 belonged to the medical faculty. The University of Helsingfors has 1,174 students, of whom 152 are students of medicine.

A BILL providing for the appointment by the Governor of a New York State barbers' examining Board, also requiring the examining and licensing of barbers and the inspection of the sanitary condition of their shops, has been thrown out by the Legislature.

A POST-GRADUATE course of clinical demonstrations on diseases of children will be given by the medical and surgical staff of the Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., on Wednesdays during the summer session, commencing on May 9th and terminating on July 11th. The demonstrations will be given at 4.30 P.M. The fee for the course is one guinea. Further particulars can be obtained from Mr. C. H. Fagge, F.R.C.S., at the hospital.

THE ROYAL INSTITUTION.—At the Royal Institution, after Easter, Dr. Alex Hill will give two lectures on Brain Tissue considered as the Apparatus of Thought; Professor Dewar, four lectures entitled a Century of Chemistry in the Royal Institution; and Dr. Alfred Hillier, two lectures on South Africa, Past and Future. The Friday evening meetings will be resumed on April 27th, when Lord Kelvin will give an address entitled Nineteenth Century Clouds over the Dynamical Theory of Heat and Light; and on May 4th Professor Thorpe will give a lecture on Pottery and Plumbism.

PRESENTATION TO A HOSPITAL SISTER.—A handsome testimonial, engrossed and illuminated on parchment, has been made to Miss May Anderson, the Sister in charge of the nursing at the Government Hospital in Fiji, by the medical officers of that colony. Miss Anderson, who began her training at the same hospital in 1894, has risen to be practically the matron of the institution, though the position is not so styled. After a trying season of tropical heat and rain, and a number of anxious cases to nurse from the naval squadron at Samoa, she was granted vacation leave to visit Australia. The parchment was accompanied by the gift of a free passage to Australia and back by mail steamer, together with a purse of sovereigns.

ASSOCIATION OF AMERICAN UNIVERSITIES.—An Association of American Universities was formally organised at Chicago recently. The Association has been founded for the purpose of considering matters of common interest relating to graduate study. It is composed of institutions on the North American continent engaged in giving advanced or graduate instruction. Its initial membership consists of the following institutions: University of California, University of Chicago, Columbia University, Harvard University, University of Michigan, Clark University, Cornell University, Johns Hopkins University, Princeton University, University of Pennsylvania, University of Wisconsin, Catholic University of America, Leland Stanford Jr University, Yale University. The Association will hold an annual conference at such time and place as the Executive Committee may direct.

THE BIRMINGHAM AND DISTRICT GENERAL MEDICAL PRACTITIONERS' UNION.—The objects of the Birmingham Medical Union are very praiseworthy, and the work already done is by no means unimportant. A vigorous attempt has been made to induce the Birmingham University Council to allow its proposed representatives on the General Medical Council to be elected by medical men only. The attempt was not successful, but Sir Walter Foster sympathises with the contention of the Union, and advises it to go to the Privy Council, and Mr. Jesse Collings has been communicated with. It was through a member of the Council that the police prosecuted "Professor" Wells, so that the Union has deserved well of the public, as of the profession. Another important work has been to take care that as far as possible the profession shall be well represented on local public bodies and charities. By means of its organisation five general practitioners were elected on the Council of the Birmingham Medical Institute in March last. An Executive and an Ethical Committee have been elected; the former is completing the organisation of the Union, while the latter is ready to investigate complaints, and arbitrate between members. A medical club has been established at the Colonnade Hotel where members can meet socially and discuss matters affecting their welfare. The organisation of the Union, which already numbers 180 members, is very simple. Birmingham and District has been divided into fourteen wards, in each of which Branches have been formed. The chairmen and secretaries of each Branch form the Council of the Union. The following are the present officers: President, Dr. Parkes; Vice-Presidents, Drs. Leech and Newton; Honorary Secretaries, Drs. Kirby, Neal, and Robertson; Honorary Treasurer, Dr. Line.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon; unmarried. Salary, £150 per annum, with allowance of £30 per annum for cab hire and furnished rooms, etc. Applications to the Secretary by April 23rd.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by April 28th.

BIRMINGHAM: QUEEN'S HOSPITAL.—Assistant Ophthalmic Surgeon. Honorarium, £50 per annum. Applications to the Secretary by April 18th.

BOOTLE BOROUGH HOSPITAL.—Junior Resident. Salary, £60. Applications to the Secretary.

CORWEN UNION.—Medical Officer and Public Vaccinator for the Western District. Salary £20 per annum, with fees. Knowledge of Welsh necessary. Applications to the Clerk, Union Offices, Corwen, by April 26th.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator at the Hospital. Honorarium, £50 per annum. Applications to the Dean by April 23rd.

DOWNPATRICK: COUNTY DOWN INFIRMARY.—Registrar, Compounder of Medicine, and Assistant to Surgeon, unmarried. Salary, 60 guineas, with board, fuel, and washing. Applications to Dr. Tate by April 19th.

DUNDEE COMBINATION: EAST POORHOUSE AND HOSPITAL.—Resident Medical Office. Salary, £80 per annum, with board and furnished apartments. Applications to the Clerk of the Council, Parish Council Chambers, Dundee, by April 23rd.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, lodging, and washing. Applications to Mr. R. F. E. Ferrier, Hon. Secretary, 33, Hall Plain, Great Yarmouth, by April 25th.

INFIRMARY FOR CONSUMPTION, Margaret Street, W.—Pathologist. No salary. Applications to the Secretary by April 23rd.

ITALIAN HOSPITAL, Queen Square, W.C.—House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications, marked "House-Surgeon," to the Secretary by April 18th.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon; unmarried. Salary, £140, increasing to £170 per annum, with rooms and attendance. Applications to the Secretary before April 23rd.

KING'S COLLEGE, London.—(1) Professorship of Materia Medica and Pharmacology. (2) Obstetric Registrar and Tutor at King's College Hospital. Applications to the Secretary by April 23rd.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer. Salary, £120, with fees, board, washing, and residence. Applications to the Medical Superintendent.

LEICESTER INFIRMARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, apartments, and washing. Application to the Secretary, 24, Friar Lane, Leicester, by April 21st.

LEEDS: GENERAL INFIRMARY.—Resident Medical Officer. Salary, £100 per annum, with board, residence and washing. Applications to Mr. Moynihan, Secretary to the Faculty, by April 23rd.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon, non-resident. Appointment for six months, but eligible for re-election. Salary, at the rate of £125 per annum. Applications to the Secretary of the Faculty by April 19th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £35 per annum. Applications to the Secretary of the Faculty

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100. Applications to the Medical Superintendent, The Lawn, Lincoln.

LINCOLN UNION.—Medical Officer (non-resident) for the Workhouse. Salary, £70 per annum and fees. Applications to the Clerk by April 16th.

LIVERPOOL, CITY OF.—Assistant Resident Medical Officer at the Infectious Diseases Hospitals, unmarried, and not exceeding 26 years of age. Salary, £80 per annum. Applications, endorsed "Assistant Resident Medical Officer," to be addressed to the Chairman of the Port and Sanitary and Hospitals Committee, and sent under cover to the Town Clerk, Municipal Offices, Liverpool, by April 23rd.

LONDON COUNTY ASYLUM, Horton.—Medical Superintendent, not over 40 years of age. Salary, £1,000 per annum, with unfurnished house, etc. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 65, Waterloo Place, London, S.W., by May 1st.

MORPETH DISPENSARY.—House-Surgeon, unmarried. Salary, £100 per annum, with furnished rooms, coals, gas, and attendance. Applications to Mr. N. I. Wright, Beechfield, Morpeth, by April 20th.

NORTH RIDING COUNTY ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried, age not exceeding 35. Salary, £150, rising to £200 per annum, with board, apartments, etc. Applications to the Medical Superintendent by April 20th.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Board, washing, and residence provided, and honorarium at the rate of £50 per annum. Applications to Dr. M. F. Squire at the Infirmary, 285, Harrow Road, W., by April 23rd.

PRESTON ROYAL INFIRMARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, washing, etc. Applications to the Secretary by April 21st.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. (2) House-Physician. (3) House-Surgeon. (4) Casualty House-Surgeon. Appointments for six months, no salary, but board, etc., provided for the three latter. Applications to the Secretary by April 23rd

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Two Assistant Physicians, must be F. or M.R.C.P.Lond. Applications to the Secretary by April 23rd.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road, E.C.—House-Physician. Appointment for six months. Salary at the rate of £40 per annum, with furnished apartments, board, and washing. Applications to the Secretary by April 17th.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, King Street, Regent Street W.,—Honorary Physician. Applications to the Committee by April 19th.

ST. SAVIOUR'S UNION.—Second Assistant Medical Officer at the Infirmary, East Dulwich Grove, S.E. Salary, £100 per annum, with residential allowances. Applications, marked "Applications for Second Assistant Medical Officer," to be sent to the Clerk, Union Offices, John Street West, Blackfriars Road, S.E., by April 19th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £80 per annum, with residence, board, and washing. Applications to the Honorary Secretary by April 24th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

HOREDITCH: PARISH OF ST. LEONARDS.—Second Assistant Medical Officer for the Infirmary. Appointment for six months. Salary, £80 per annum, with rations, washing, and furnished apartments. Applications, upon forms provided, to be sent to the Clerk to the Guardians, 213, Kingsland Road, N.E., by April 23rd.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications to the Secretary by April 17th.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100, with board and residence. Applications to the Chairman of the Medical Board by April 28th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and laundry. Applications to the Hon. Secretary, Bank Buildings, Taunton.

UNIVERSITY COLLEGE, London.—(1) Professorship of Medical Jurisprudence. (2) Surgical Registrar in the Hospital. (3) Resident Medical Officer in the Hospital. Applications to the Secretary for the first by May 14th, and for the two latter by May 7th.

UWCHALED RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £20 per annum. Applications to the Clerk of the Council, Union Offices, Corwen, by April 26th.

WEST HAM.—Superintendent of the Borough Asylum. Salary, £600 per annum, with unfurnished house, light, washing, and garden produce. Applications, on forms provided, to be sent to the Clerk, Town Hall, West Ham, E., by April 28th.

WESTON-SUPER-MARE HOSPITAL.—House-Surgeon, unmarried. Salary, £100 per annum, with board and residence. Applications to the Honorary Secretary by April 17th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by April 19th.

WORKSOP VICTORIA HOSPITAL.—Honorary Surgeons. Applications to Mr. C. A. Whall, Worksop, by April 20th.

WREXHAM INFIRMARY.—House-Surgeon. Salary, £80 per annum, and washing. Applications, on forms provided, to be sent to the Secretary by April 21st.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary, £110 per annum, with board, washing, and attendance. Applications to be addressed to the Committee and sent under cover to the Secretary by April 24th.

MEDICAL APPOINTMENTS.

BIENEMAN, A. J., M.B.Edin., appointed Medical Officer for the Farnham Royal District of the Eton Union, *vice* W. S. Dibbs, M.R.C.S., L.R.C.P., resigned.

BURRELL, L. C., M.A., M.B., B.C.Camb., appointed Medical Officer for the Kew District of the Richmond Union, *vice* G. R. Cundell, M.D.Durh.

COOPER, C. E., M.B., B.C.Camb., appointed Medical Officer for the Second District of the Plympton St. Mary Union, *vice* J. M. Randle, L.R.C.P., M.R.C.S., resigned.

COOPER, C. E., M.B., B.C.Camb., appointed Certifying Factory Surgeon for the Urban District of Ivybridge, the civil parish of Ugborough in Totnes Rural District, and the civil parishes of Cornwood, Harford, and Ermington in Plympton St. Mary Rural District.

JONES, J., L.R.C.P.Edin., L.F.P.S.Glasg., appointed Medical Officer for the Dolgelly District of the Dolgelly Union, *vice* E. Jones, M.D.St.And.

KNOWLES, Miss B., M.B.Lond., appointed Assistant Medical Officer to the Bethnal Green Workhouse, *vice* G. Gatenby, M.B.Edin., resigned.

MARTIN, E. T., M.D., appointed Medical Officer for the Southport District of the Ormskirk Union, *vice* A. Storr, resigned.

MASON, G. B., M.R.C.S., L.R.C.P., appointed Medical Officer for the Sixth District of the Lutterworth Union, *vice* H. N. Baron, L.R.C.P., M.R.C.S., resigned

MUIR, J. C., M.B., B.C.Camb., appointed Senior Assistant Medical Officer at the Crumpsall Workhouse, Manchester, *vice* H. J. Crossley, M.R.C.S., resigned.

PATTON, J., M.B., C.M.Edin., appointed Medical Officer for the Stamford Bridge District of the Pocklington Union, *vice* F. Wright, L.S.A., resigned.

SEDDON, A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Frome District of the Frome Union, *vice* F. E. Pearse, M.D.St.And.

SISSONS, A. T., M.B., B.Ch.Vict., appointed Second Resident Medical Officer at the Crumpsall Workhouse, Manchester, *vice* J. C. Muir, M.B., B.C.Camb.

SMITH, F. J., M.D., F.R.C.P.Lond., appointed Physician to the National Orthopædic Hospital.

WIGG, J., L.R.C.P.Lond., appointed Medical Officer for the Second Ward of the Parish of St. Pancras, *vice* L. B. Claremont, M.R.C.S., resigned.

YOUNG, Meredith, M.D., Mast.Surg., D.P.H., appointed Medical Officer of Health for the County Borough of Stockport, *vice* Dr. Charles Porter.

DIARY FOR NEXT WEEK.

THURSDAY.

Harveian Society of London.—Stafford Rooms, Tichborne, Street Edgware Road, 8.30 P.M.—Clinical evening.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

MASON.—On April 6th, at 45, George Street, Portman Square, the wife of G. A. Mason, M.A., M.B., B.C.Cantab., of a daughter.

STEPHENS.—On April 8th, at [illegible]ynt, N. Devon, the wife of D. R. P. Stephens, M.B., F.R.C.S., of a daughter.

MARRIAGE.

BUTLER—REED.—On March 20th, at the Cathedral, Capetown, by the Dean, Thomas Harrison Butler, B.A., M.B., B.Ch.Oxon., M.R.C.S.Eng., L.R.C.P.Lond., of Port Elizabeth, South Africa, oldest son of Rev. G. W. Butler, of Broad Mayne, Dorchester, to Ellen, second daughter of W. H. Reed, Esq., M.R.C.S., L.S.A., of Allersleigh, Westbury, Wiltshire.

DEATHS.

GRUMPELT.—On January 9th, at Barkly West, Cape Colony, Sophia Chamney, M.D.Bern, L.R.C.P. and L.R.C.S.Edin., wife of Albert Grumpelt, in her 42nd year.

OLDHAM.—On April 4th, at Hazelmere, Thornton Avenue, Streatham Hill, S.W., the residence of his mother, after a long illness, George St. John Oldham, L.R.C.S., L.R.C.P., late of Clapham, eldest son of the late George St. John Oldham, M.D., of Castleknock, co. Dublin.

MACKECHNIE.—On April 2nd, at Branstone Road, Burton-on-Trent, David Mackechnie, J.P., L.R.C.P.E., L.F.P.& S.G. L.M., aged 73, formerly of Bute Cottage, West Hartlepool.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W, F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1 p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S., 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, 1.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, 1.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, 1.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, 1.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F., S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, I.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 2; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—1.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Tu., 2; (Throat), M., 2.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

BLACKPOOL desires to hear of a home where an epileptic could be received at about 7s. 6d. a week.

O. X. wishes to be recommended an institution where he can have a course of massage and baths at moderate charges, and to be informed as to the length such a course should be in a case of spinal sclerosis in order to derive full benefit.

MOTOR CYCLE.

CYCLIST writes: I wish to get a motor tricycle for winter work, but am not sure whether it is more than an expensive toy. Would any member who has experience tell me whether these vehicles are suited for winter work on country roads, where four or five miles would be far enough to have to ride a bicycle unless in frost? The tricycle seems to me superior to the motor car, inasmuch as in a case of breakdown you can ride home and you can help the machine up hills.

EYESIGHT OF CANDIDATES FOR NAVAL CADETSHIP.

PATERFAMILIAS writes: If a candidate for a naval cadetship can read Snellen's type with each eye separately, but nevertheless should have some latent error of refraction, to be detected only when the accommodation is paralysed, would that disqualify him?

*** The rules for the physical examination of candidates for naval cadetships are to be obtained from the Admiralty. We believe that, as a rule at least, the candidate is only required to read Snellen's types with each eye separately tested, no test with a paralysed pupil being employed.

THE DUTIES OF A MATERNITY NURSE.

J. F. G. asks what are the duties of a maternity nurse who lives in and is engaged for a period of six weeks, and says she has been trained at one of our large hospitals.

1. Is she expected to wash the baby's linen? 2. Is she expected to prepare the patient's food? 3. Is it usual to go out for three or four hours daily and leave patient and baby? 4. Is it usual to have her meals with the family?

*** 1. Only such washing as may be required on an emergency, not regular laundry work. 2. Only special invalid cookery, not a cook's ordinary work. 3. No. 4. No.

ANSWERS.

A. G.—Pulse tracings can be made permanent by any transparent varnish: probably a weak solution of white shellac in spirit is the best. The varnish should be sprayed on, or the tracing can be dipped into a shallow saucer containing a little.

FEES PAID TO FRIENDLY SOCIETIES' DOCTORS.

BELFAST writes in reply to "Glasgow": The fees paid by all friendly societies are regulated by the central councils of the various societies, and these arrange the different funds, and fix the fraction of member's subscription which is allowed to go to each. The Rechabite Society in Belfast pays 2s. 6d. a member per annum for medicine, certificates, and attendance; the Free Gardener Society, 3s.; the Shepherds, 3s. 1d.; the Ancient Order of Foresters, 2s. 6d., with 4s. more when the whole family is included. As these societies have their headquarters in England and Scotland, we cannot congratulate our Scotch and English brethren on the value placed on our services; 4s., although often quoted, is seldom paid by a friendly society.

NOTES, LETTERS, Etc.

P.M., ENQUIRER, AND A.G.P.—Our correspondents have omitted to forward their names and addresses.

THE NOISE NUISANCE.

NEUROTIC writes: In your article in the BRITISH MEDICAL JOURNAL of March 31st on "the noise nuisance," you omit to allude to the "milk cart" pest, which in many streets of London has become, between 5.30 and 7.30 A.M., a perfect curse. I think it is about time that we had legislation to protect the "brain worker," who, after all, is the salt of the community.

THE LATE PROFESSOR HUGHES.

MR. BALMANNO SQUIRE (London, W.) writes: I notice that in your accounts of the "Hughes bequest," by which the munificent gift of nearly half a million sterling has been divided between four of the more important hospitals of London, the late Professor Hughes is briefly described as "the eminent electrician." But he was a good deal more than this. He was a genius of an extraordinary kind, and his bequest, princely as it is, is by no means the greatest of the benefits that he has conferred upon humanity. It is to him that we owe the telephone as a practical reality. The telephone, it is true, was not invented by Professor Hughes, but by Professor Graham Bell; but the telephone *per se* was speedily found to be for practical purposes almost useless. Shortly after the first introduction of the telephone into this country, I obtained an introduction to Professor Bell, and promptly tried a pair of his telephones on a "private wire" which ran for about a mile through the central part of London. I could hear nothing from it but a sound resembling that produced by the frying of bacon, the result of induced currents set up in my wire by messages transmitted through neighbouring telegraph wires. To hear the voice through the telephone it was necessary to keep its wire throughout far away from any telegraph wires. Everybody saw what a wide sphere of usefulness such an instrument possessed, or rather might possess, if it could only be made to work, and everyone bemoaned its want of success. At this juncture Professor Hughes realised the universal wish by his invention of the microphone, which enabled the human voice, as heard through the telephone, to ring loud and clear above the sound as of the "crackling of bacon," so that speech could be heard distinctly not only through a mile of wire in the centre of London, but from London to Paris. I remember my astonishment at this time when I first listened through the microphone to the crawling of a house-fly across a card and heard it sound like the trampling of an elephant in the room above me. The discovery of the principle on which wireless telegraphy is conducted was made by Professor Hughes long before the recent introduction of that system. Half a century ago my father took me to see a collection of telegraph instruments arranged by W. O'Shaughnessy, M.D., at that time Director-General of Telegraphs in India. These were on view at the Mansion House in order that opinions might be collected as to which might be the best for general use in India. Amongst them was one which struck my youthful fancy immensely. It resembled in many respects what is now known as the typewriter, only that it could print its type miles or hundreds of miles away. At the time I speak of this instrument was a marvel. One evening a year or two ago, at a *conversazione* given by the Royal Society, I saw to my surprise this very instrument. I recognised it at once. Happening to meet Professor Hughes there I told him my story, and took him to see the instrument. He smiled, and told me it was his own invention, which he had exhibited at the Mansion House on the occasion I had mentioned. Soon after the invention of the microphone I was desirous of adapting it to the needs of deaf persons, and consulted Professor Hughes on the subject. He showed me a much simpler and equally efficacious way of attaining my object. From this, however, I learnt, on trying it, that, although I was able thereby to make my voice painfully loud to people who were pretty deaf, I was yet unable in the case of some who were distressed by the loudness to make them comprehend what I was saying, however distinct and slow my articulation. It is perhaps curious that the title of "Professor," borne by each of the two great geniuses of the telephone, had in neither case any reference to the subject in connection with which their names will live. Professor Hughes derived his title of Professor solely from the fact that he was at one time Professor of Music in a college in America: not that he was an American—he was an Englishman. Professor Graham Bell (who is an American) on my asking him told me that he was professor of "vocal physiology" in a college in America, explaining that this meant that he was an instructor of the deaf and dumb in lip reading and in the art of speaking.

LETTERS COMMUNICATIONS, ETC., have been received from

A A. W.; Mr. W. I. Addison, Glasgow; Association of Registered Medical Women, Secretary of, London; Mr. W. F. Adams, Dera Ghazi Khan. **B** H. J. Blackler, M.B., Redhill; J. E. Blomfield, M.B., Sevenoaks; Blackpool; Mr. G. Brown, London; Belfast. **C** Dr. C. Campbell, Saddleworth; Mr. W. C. S. Clapham, Rotherham; Dr. J. W. Cousins, Southsea; Mr. C. J. Cornish, Chiswick; Mr. B. G. Corney, Suva, Fiji; Dr. C. C. Claremont, Southsea; Dr. H. Campbell, London; Curious. **D** Mr. A. A. Dighton, Cheltenham. **E** Mr. E. East, London; E. M.; Enquirer; Dr. G. Elliott, Toronto. **F** C. H. Fagge, M.B., London; Fair Play; Dr. W. F. Farquharson, Carlisle; Mr. J. B. Fry, Maidstone. **G** Mr. W. Gosse, Sittingbourne; Mr. Graham, Sunderland; Mr. V. T. Greenyer, Hove; Dr. J. E. Gemmell, Liverpool; Mr. J. P. Gummow, Northfield; Dr. J. G. Glover, London. **H** Mr. J. L. A. Hope, Addlestone; Helidon Spa Water Co., Manager of, Brisbane; Dr. J. P. Henry, London; Mr. A. Harman, London; Dr. W. S. Hedley, London. **I** Inkpot. **J** Dr. R. Jardine, Glasgow. **K** Mr. C. R. B. Keetley, London; Mr. J. N. Kaye, London; Mr. J. Keen, Waddesdon; Mrs. Kiddle, Eastbourne. **L** Mr. H. L. Lock, London; Mr. A. Leche, Axbridge; Mr. J. Long, London; J. D. Leigh, M.B., Scarborough; Mr. A. D. H. Leadman, Pocklington; Mr. T. Laffan, Cashel. **M** A. Macphail, M.B., Glasgow; M.D., Dublin; Mr. D. Mason, Cheltenham; Dr. T. H. Moorhead, Cootehill; Mr. G. Macara, Glasgow; Dr. C. J. Morton, Walthamstow; Mr. W. Marriott, London; Member; Dr. R. B. Mahon, Ballinrobe. **N** J. H. Nicoll, M.B., Glasgow; Mr. W. F. H. Newbery, London. **O** Mr. A. P. Ormiston, Edinburgh. **P** Dr. J. Priestley, London; Mr. S. Paget, London; Mr. R. D. Penley, London; Mr. H. C. Phillips, London; Plasmon Syndicate, Manager of, London. **R** R. S.; Dr. J. Reid, Dover; Rusticus; G. A. Reid, M.B., Southsea; Mr. T. F. Raven, Broadstairs; Retired Temporarily Employed; Dr. R. R. Rentoul, Liverpool; Mr. J. B. Ridley, Bromley. **S** Dr. J. Swain, Clifton; Mr. S. N. Scott, Plymstock; Dr. W. Sykes, Torquay; Mr. C. Sanders, London; Dr. W. J. Smyth, Bournemouth; Mr. S. Stretton, Kidderminster; Scorns. **T** Mr. P. T. Tolputt, Stanley; C. H. Thompson, M.B., Manchester; Thirty Years' Service; Mr. G. S. Taylor, Trowbridge; Mr. J. Thrussell, London. **W** A. Westlake, M.B., Great Grimsby; Mrs. Walker, Hove; W. H. R.; Mr. D. Wright, London; **Y** Dr. M. Young, Crewe; etc.

BOOKS, ETC., RECEIVED.

Die Prophylaxe der Krankheiten der Kindesalters. Von Dr. R. Fischl. Munich: Seitz and Schauer. 1900.

L'Irritabilité dans la Série Animale. Par Dr D. Courtade. Paris: G. Carre et C. Naud. 1900. F.2.

*** In forwarding books the publishers are requested to state the selling price.

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A CLINICAL LECTURE
ON
THE "RIDING FRAGMENT" IN FRACTURED LEG.

Delivered at Guy's Hospital.

[*With Special Plate.*]

By C. H. GOLDING-BIRD, M.B.Lond., F.R.C.S.,
Surgeon to Guy's Hospital.

Gentlemen,—I should by rights commence this—a clinical lecture—with an account of one or more cases taken from our wards; but as the remarks that I have to offer will be founded on the experience of very many, it is somewhat difficult to select individual instances in illustration of the subject before me. I shall therefore only use the skiagraphs of two recent cases of fracture to prove some of the assertions I shall make, and have to ask you to accept.

General Considerations.

Strictly speaking, my subject is the "riding fragment" in fracture of the leg; but, at the same time, we shall be led to discuss the general value of operative treatment in simple fracture—a subject that has been much in evidence for the last five years, some surgeons even going so far, as you are aware, as to say that splints are superfluous. That an exaggerated estimate of the value of operation in simple fracture is largely held, I, as an examiner in surgery, can vouch for. At examinations frequently, in reply to the question, "What will you do in such and such a fracture?" I am told "I should try splints; but if I do not succeed I should at once cut down and wire." This phrase, "cut down and wire," seems to have become almost a password amongst students nowadays. It doubtless has its value; but there is distinct limit to its applicability. You know that there is nothing new in screwing and pegging of bones for compound fracture, or for ununited fracture. That was done very long ago; but operating for simple fracture is a thing of recent date, and its value, or at least the opinion I hold with regard to its value, will come out in the course of my lecture.

I first draw your attention to one or two general points, and, I would ask, What is the test of the value of any treatment in fracture? The answer is a double one. The less the time the patient takes before he gets about the better the treatment, and if that can be brought about by operating in a case of simple fracture, we are usually justified in adopting that course. For example, in fracture of the patella or of the olecranon, you will none of you doubt that the patient's return to work may be calculated by weeks where wiring has been performed, whereas, if an operation is not undertaken, months at least will supervene. Then the perfectness of restoration of the bone to the normal shape and solidity would be another test of the value of a treatment in fracture, and it is in obtaining this last that I think operation for simple fracture has been carried to extremes.

Evidently some fractures must be restored to the normal condition as nearly as possible for æsthetic reasons—for example, in fracture of the cheek bone or of the nasal bones. In others, the end that the surgeon has in view is purely utilitarian—as, for example, in a broken leg, where, in my opinion, he would not be justified in operating merely to avoid slight deviation of the axial line or irregularity in the union which the skiagraph would show, but which would not be detrimental to the patient.

I would here warn you all of a danger in skiagraphy. I know that it has happened for a patient to have his limb skiagraphed, after he had been properly treated, and because the picture showed an exceedingly slight irregularity along the edge of the bone indicating the position of fracture, he went from one surgeon to another to obtain an expression of opinion that the union of the fracture was not perfect, in order that he might sue for damages the gentleman who had treated him. You will find that few fractures would bear the test of photography in that sense, and I should warn you against appealing to it in your own work as proof of the goodness of your treatment, lest you should be called to account for not having produced a union of the bone absolutely as perfect in appearance as it was prior to the accident, although its utility now may be in no way impaired. To merely satisfy, therefore, the demands of photography, I do not consider operations in simple fracture to be justifiable.

Yet I do not wish to underrate the value of this operation, and there are two great gains that result from it—one, the more certain adaptation and fixation of the ends of the bones in fractures of peculiar shape, to which I am about to refer; and, the other, an effect similar to that produced by massage.

Massage, as you know, is the removal of extravasated blood and lymph by a process of upward kneading. This end is more expeditiously attained by free incision, and so great is the gain in many instances that it might have been employed, in my mind, as one of the strongest arguments by those who have advocated operation in simple fractures as preferable to treatment by splints. I may remind you of a fact not mentioned in the textbooks, but which you find in Pott's original monograph on the fracture which bears his name, where he speaks not only of the fracture and deformity, but lays great stress on the injury inflicted on the joint by extravasated blood. Indeed, as you know, the argument that has been employed for operating in Pott's fracture is that those who treat this fracture by splints have great difficulty on account of the subsequent stiffness; and that argument is good. The reason of the stiffness not being present where an operation has been performed is that the extravasated blood has been allowed to escape, and not, I think, so much because the fibula has been operated upon.

There is one serious drawback, at least in the leg, to operation in simple fracture, although it is in fracture of the tibia that operation is perhaps most called for. Owing to the thinness of the tissues over the shin bone, the skin rapidly gets its vitality impaired, and death of the skin over—it may be quite a limited area—frequently occurs, whilst the tender condition in which the fracture has placed it materially interferes with its being rendered aseptic. Hence, wiring of the shaft of a tibia is by no means always certain to run a purely aseptic course.

The "Riding Fragment."

After these general remarks I now come to the special subject of my lecture—namely, the "riding fragment." The illustrations that I shall give will be taken entirely from the leg; the remarks that I shall offer you can apply yourselves to other parts of the body. You will, in the first place, agree with me that a dresser finds much more difficulty in setting a broken tibia than he does in setting a broken femur; and I do not think that the explanation is that the thighbone, being hidden in a mass of muscle, is not so evident to the examining eye and finger as is the tibia, and that hence malunion is common but unobserved. For, were that the case, we should obtain results which certainly in my wards we do not often see—namely, considerable shortening as well as axial deformity.

A consideration of the anatomical connections of the femur and tibia will make clear, I think, to you why the one should be more easy to treat than the other. The femur is a single bone surrounded by two layers of muscle; the deeper layer lapping closely round the bone, the more superficial consisting of powerful muscles attached only by their extremities, which, from that very circumstance, exert a greater influence upon the bone when its shaft has been broken; of course I refer to the hamstrings and the extensors in front of the thigh. Now, in the leg we have to deal with two bones intimately united above, with no movement between them, and united through the greater part of their length by a stout interosseous membrane. In fact, instead of having to deal with a rod-like bone as in the thigh, we have to regard the leg bone as forming a flat plane or parallelogram, bounded by bones and filled in by the membrane stretched between them. The muscles, too, which deform the leg in fracture, are not free of these bones, as in the case of the thigh; for even the muscles of the calf are but partly attached at their extremities beyond the limits of the leg bones, the soleus, which forms part of the calf, having its attachment actually to the bones in question, and hence, when extension is applied to the foot in practice, the gastrocnemius is stretched, but the soleus is made to pull upon the broken upper fragment, and would have a distinct tendency, amongst other things, to approxi-

mate the fibula to the tibia, especially when the fibula is fractured high, as it usually is when the leg is broken indirectly.

It would seem, therefore, that I am making out a very bad case for the employment of extension in fracture of the leg. I admit I am doing so: but Hamilton years ago pointed out the same thing. Indeed, extension of the leg might almost be considered harmful, for the deep muscles are so attached all round the fragments that, if extension is made on the foot, the various extensors and flexors which are thus pulled upon exert their influence directly upon the fracture both above and below it; and hence, on purely anatomical grounds, it would seem to the surgeon that muscle relaxation in treatment of leg fractures would prove to be better than muscle extension, and I think that your own experience will bear me out that this is the case. The shaft of the femur, when broken, shows, as you know, great distortion; but, for the reasons that I have explained, it is equally free for restoration by extension to its natural position. But the shaft of the tibia, when it is broken, is not free to be restored with great ease, and that, partly because the shape of the fracture, when there is a "riding fragment," is, as I will show you, very peculiar, and because the very circumstances which held the bones firm during their entirety will equally hold them out of position when once they have been broken.

You know when the tibia alone is broken the fibula frequently acts as a splint, and there is practically no deformity; but let both bones be broken and displaced, and you will find—at least I shall hope to convince you—that the fibula is the great opponent to the restoration of the tibia to its normal line. This fact has already been pointed out, as you are aware, by my colleague, Mr. Lane, in connection with Pott's fracture; and although I do not happen to have met with the difficulties in that fracture that he seems to have met with, yet I am clearly of opinion that where, in the so-called "oblique fracture of the tibia" one fragment appears to ride over the other and is difficult of replacement, it is the fibula, rather than muscular spasm, which is one of the causes of this. That muscle spasm has little to do with the "riding fragment" is shown by the fact that, even under chloroform, the fragment can frequently not be replaced; and this, further, cannot be attributed to the bone perforating the fascia or muscle; for, when operating and freeing the bones entirely from all their connections the same difficulty of replacement remains.

Whatever share the ordinarily accepted causes of displacement may have in an ordinary fracture, I am confident that they do not exert any influence in producing or maintaining "riding fragments." The causes usually quoted are extravasated blood and inflammatory effusion, but both of these are got rid of when a fracture is cut down upon, and yet the difficulty of dealing with the "riding fragment" remains.

MODES OF FRACTURE.

In order that you may appreciate the dilemma in which I have placed you with regard to this "riding fragment," and in order that I may safely conduct you out of it, I must ask your attention briefly to the way in which bones are broken. Those of you who are acquainted with Helferich's work on fractures will be familiar with most of what I am about to tell you, but to many of you it is probably not a familiar subject. When a bone is broken indirectly like a stick across the knee, the strain first causes the tearing of the bone on its outer aspect. Presently the stress on the bent side of the bone or stick becomes such that the rent no longer can continue across the bone, but takes a line of least resistance to one side or the other, or both, and thus, when the stick is broken in two, you will observe that it began at first to snap across, leaving afterwards a long splinter standing out at the end of one piece, and a corresponding depression on the other; whilst if the fracture had run symmetrically this projecting piece would have become completely separated, and the stick would have been broken into three portions. This is what Helferich classes as a "greenstick, or indirect fracture;" or what Dr. Joseph Griffiths, of Cambridge, who has been working much at this subject, calls "the Y-shaped fracture." For, if you were to draw across the shaft of a bone or stick an inverted Y, the vertical stem of the Y would represent where the first strain caused the bone or stick to part: the limbs of the Y representing the lines the strain takes when the stress becomes too great for it to continue in the original direction. Let these two limbs of the Y be completed, and the fragment of a bone breaks off as a splinter somewhat rhomboidal in shape. The fibula in Skiagraph A (Special Plate) shows this perfectly. Let only one leg of the Y be complete, and you have a fracture with a long fixed

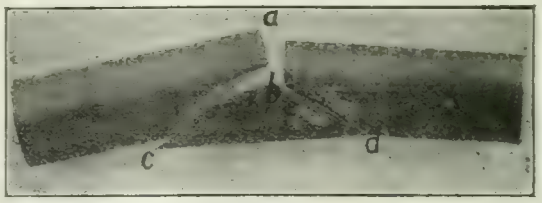


Fig. 1.

splinter (Fig. 1, *b*), and the less in extent the vertical stem of the Y is (Fig. 1, *a b*), the nearer will this fracture approach the true oblique fracture. Indeed, it is impossible to explain in a bone a true oblique indirect fracture in any other way than this. Transverse fracture is either the result of direct violence or may be produced indirectly if a bone or stick be held firmly just at the point of fracture: but when the indirect force breaking it is applied some distance from where the bone will yield, as is usually the case, the "grain" of the bone renders a transverse fracture an impossibility, there being always a greater tendency in bone for vertical than horizontal cleavage. It is evident that an oblique fracture of the form I have just indicated to you will have a greater tendency to overlap or to "ride" it being impossible to butt two inclined surfaces against each other without their slipping; hence, the "riding fragment" may be anticipated where such a fracture exists.

But you will see at once that there should be no difficulty in reducing or setting such an oblique fracture by mere extension; nor do I think there is. And yet I maintain that for the most part the "riding fragment" in a broken leg is not reduced by mere extension. Either, therefore, our extension, as applied, is inefficient, or we are not dealing with an oblique fracture when we think we are. This latter you will find to be the truth.

THE "SPIRAL FRACTURE."

There is another class of fracture altogether, long recognised and known by various names as the spiral fracture, or the fracture *en bec de flute*, but considered to be of infrequent occurrence, not to say rare. This I believe to be a mistake; and it is because we have not recognised the fact that this spiral fracture is of very frequent occurrence that surgeons have often failed to place the broken tibia in good linear position after fracture by the means of extension and muscular relaxation usually employed. Not infrequently pads are applied over the "riding fragment" to try and press it into position, and prevent it ulcerating through the skin.

My attention has been especially drawn to this fracture by Dr. Griffiths, the Reader in Surgery at Cambridge, to whom I have already referred. He has been working experimentally on this subject for some time, and, though his results are not yet published, he has permitted me to refer to them, and any Cambridge men present to-day will be familiar with the specimens of fracture that he has artificially produced and placed in the Museum at Cambridge. When first he told me that he thought that the spiral fracture was the most common form of fracture, I was very sceptical; but I am convinced that he is right, at least as far as the tibia is concerned. Two circumstances have forced this belief upon me. One, that in every case of "riding fragment" of the tibia in which I have felt bound to operate, I have found a spiral fracture, and the other that Mr. Shenton, who, as you know, has been skiagraphing every form of fracture for a long time past, tells me that out of the immense numbers of skiagraphs that he has made of fractures in this hospital, by far the greater are spiral in character. This fracture, and the way it produces the "riding fragment," I illustrate to you by these models, which you can make for yourselves out of strawboard postal tubes (see Figs. 2, 3, and Skiagraph A). Mark a short spiral occupying about 4 inches of the length of the tube and going not quite



Fig. I.—Skiagraph of bullet fracture of humerus.



Fig. II.—Skiagraph of bullet fracture of radius and humerus.

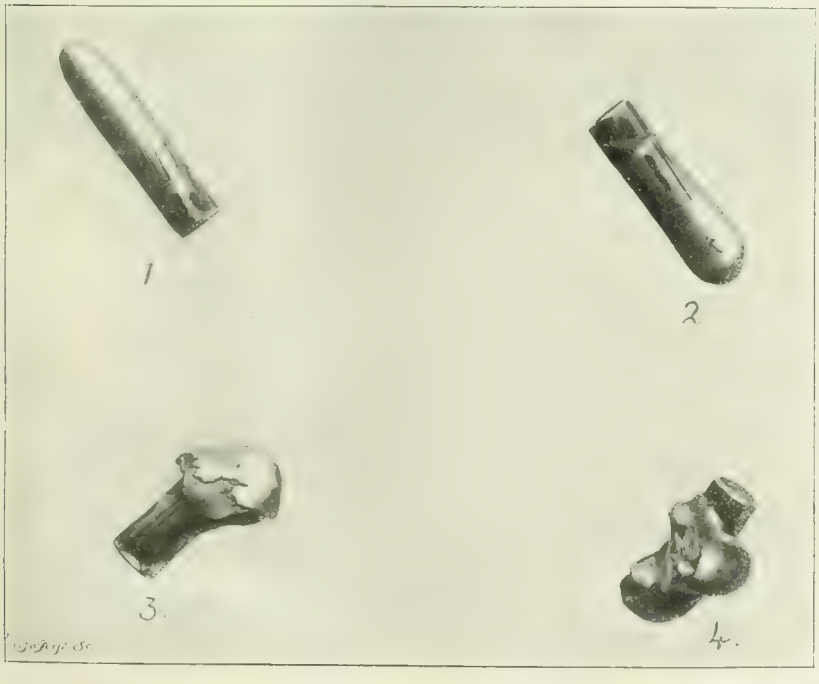


Fig. III.—Mauser bullets distorted by striking bone (from a photograph by A. Allerston, Pietermaritzburg).



Fig. IV.

A, Mauser; *B*, Lee-Metford.



Skiagraph A. Skiagraph B.

TO ILLUSTRATE MR. C. H. GOLDING-BIRD'S PAPER.

completely round it. Unite the ends of the spiral by a straight line. Follow the pencil marks with a knife, and the tube is now divided into two. If you replace the portions in position, you will find that you can axially rotate one fragment on the other round the straight line uniting the two ends of the spiral, and thus open or close the fracture, as on a hinge. This line Dr. Griffiths speaks of as the hinge of the fracture. It results from a snapping of the bone at its weakest part after the rotary strain has first produced a spiral fissure. This "weakest part" is a line uniting the ends of the fissure (Fig. 2, *a*—*c*). Spiral fissures in bones exist, but unless united by a vertical split the bone remains unseparated into two fragments.



Fig. 2.

Imagine the case of a man being thrown to one side, the foot being fixed at the moment on the ground, whereby the tibia becomes torsed or twisted, and the spiral strain thrown on the bone results in a spiral fissure, which is converted into a complete fracture by the snapping of the bone along a line joining the two ends of the spiral represented in the model by the straight line to which I have referred. When the spiral fissure completely encircles the bone or tube—that is, when the ends of the spiral are in the same vertical line as the axis, or even overlap it—then the bone may snap in two more or less parallel lines between the ends of the spiral, as shown in Fig. 2, *a*—*c*, *b*—*d*, and thus the fracture opens with what may be termed a double hinge. As a matter of fact, however, the rhomboidal or triangular piece of bone between these two lines becomes separated, and we have thus a spiral fracture with a third fragment. This is well-shown in Skiagraph B (Special Plate). These spiral fractures are good examples of pure strain, stress not entering into their composition, the result of a twisting force. In a sense you might almost regard them as twisted oblique fractures, but they differ from the oblique fracture in two very important particulars: one, their mode of formation, which I have already described; and the other, that when fitted together any amount of pressure may be exerted on the ends of the bones in the direction of the long axis without the fracture being displaced. In a word, the fractured ends lock completely. This I show you upon this model. I can press with impunity on each end when the spiral is locked as though the tube had not been cut at all. If, however, I hold one end firmly on my hand and rotate the other inwards or outwards, according to the direction of the spiral, at the same time giving the slightest axial displacement, so as to cause the pointed extremities of the spiral to leave the receding angles (Fig. 3, *a*) in which they both lie, you will perceive that I have at once produced an angular projection which, were this a bone, would form a "riding fragment."



Fig. 3.

You will naturally say, if you have followed my description, there is nothing easier than to give a twist in the opposite direction and replace the point, and thus set the fracture. This would be true if a leg were a single bone and nothing else; but I shall show you when I apply my present remarks to practice that there are other factors that prevent our so easily disposing of this "riding fragment." You will also observe that the "riding fragment" thus produced necessitates no shortening of the bone or tube, because no force has been applied to either end of it in the direction of its axis, but merely a rotary force at right angles to it; and thus the paradox of a "riding fragment" and yet no shortening is explained. But a "riding fragment" in an oblique fracture which is really an overlapping must be attended by a certain degree of shortening; and hence, whatever value extension may have in getting rid of the "riding fragment" in the latter it is, for mechanical reasons, of no use in the former.

Diagnosis of the Spiral Fracture.

If these views I have laid before you of the "riding fragment" in fracture of the tibia be correct, it is clear that the methods of treatment would not be the same in both oblique and spiral fractures. When called upon to treat one of these cases, our first endeavour should be to determine if we are dealing with the so-called oblique or spiral fracture. At first sight both look alike. There lies the patient with perhaps a very bruised and swollen leg; and, on passing the finger down the shin bone, the projecting point, perhaps threatening to cut through the skin, is to be felt. The common explanation of this is that the calf muscles are drawing the lower fragment underneath the upper. If this is the case, a careful measurement with the tape will reveal a perceptible shortening; but I must admit that the use of the tape in fractured leg is not very satisfactory for many reasons, not the least being that you have to measure over a swollen limb, and are thereby more likely to err on the side of lengthening than of shortening. We will suppose, however, that there is evident shortening. If, now, extension be made, the knee being bent, we should expect, and we find that it occurs, that the limb regains its original length, and the bones slide into their proper position, so that practically the "riding fragment" disappears, to reappear the moment extension is removed. Such cases give dressers great trouble, for they say "This was all right when we put it up, but two hours after was as bad as ever." Yet my experience is that my dressers say more frequently, "We have tried extension, even under chloroform, but could not get the bones into position"—a fact alone that would make me at once suspect that they were not dealing with an oblique but a spiral fracture. But we will now suppose that on accurate measurement you have found no shortening—at least not enough to account for the marked projection and apparent overlapping of the upper fragment. You try by extension to "set" the fracture, and you fail. You turn the foot to bring it into its proper line with the rest of the limb, and in this you succeed, yet the fragment still projects. If, now, whilst having done all that you can, you will accurately compare the two limbs by means of the tape applied to the anterior iliac spine, the middle of the patella, and the ball of the great toe, you will see on the sound side that these three points are in one straight line; but on the fractured side you will find, in all probability, that the tape applied to the iliac spine above and the middle of the patella below does not touch the ball of the great toe, but passes to its inner side, thus suggesting that the foot is rotated outwards, although it may be very slightly. This outward rotation is explained by the fact that the fracture is a spiral fracture, and that therefore your efforts to correct the distortion have been unavailing. I am bound to say that I do not myself feel always at all certain as to the form of fracture that I am dealing with, whether oblique or spiral, especially when there is much swelling about the leg; for, as you can show on these models or on a bone spirally broken, a very small amount of rotation suffices to render very prominent the "riding fragment." And, considering that limbs are not formed to gauge as are the parts of a delicate machine, it is not strange that we sometimes mistake for a twist inwards or outwards what is really a natural peculiarity in the limb. The difficulties, therefore, of being certain of the form of fracture are very considerable, so that after all, when the question arises, Is this a case in which operation is called for in order to replace the fragments satisfactorily? we have to answer the question not so much by our positive knowledge that it is such and such a fracture, as by our failure accurately to adjust it by the various non-operative and manipulative methods at our disposal.

The Replacement of the "Riding Fragment."

I must now try to answer the question, Why is it that the "riding fragment" in the tibia is so difficult to replace?

and I assume in these remarks that the difficulty has arisen from the fact that the fracture is spiral, for, as I have already told you, it is the far more frequent form of fracture. Early in my lecture I referred to anatomical details, pointing out that the tibia, unlike the femur, was not a free agent. It has by its side a second bone to which it is united, especially above, very firmly, and all down its length, by a stout membrane. When a twisting force is applied and about to produce a fracture, what happens is that the twist tells first on the unyielding tibia, and that bone having given way the fibula snaps at its weakest point, that is, towards its upper end (see Skiagraph A). We know this to be the case, for we see constantly in skiagraphs the tibia broken spinally, the fibula snapped. It is what we should expect mechanically. The twisting force which would twist both bones at the same time would have to be so powerful that, in my opinion, the ligaments of the knee would sooner yield; for, as I have already told you, the tibia and fibula with their membrane form a flat surface like a board, which it would be most difficult to torse as a whole.

Having, therefore, to deal with a spiral fracture in the tibia and a snap of the fibula, when we attempt on grasping the foot to restore the tibia by mere axial rotation to its proper position, which in theory we should be able to do in every case, we are met by a very evident opposing force.

As long as the skin remains entire it is almost impossible to say what this opposing force is: but I have no doubt in my own mind to what to attribute it, from the experience that I have gained from skiagraphy and by treating these cases by open operation. With the tibia fully exposed, the fragments absolutely free from any intervention of muscle or fascia, without anything visible to oppose the restoration of the spiral by suitable rotation, yet over and over again have I found this to fail. Attempts at fitting the fragments together, as one can do in a model, being frustrated by the sense of a spring, as it were, forcing the fragments back into their false position; and when I have succeeded in at length "setting" the fracture, it has required firm wiring or screwing to keep the bone *in situ*. It is clear, if my observations are correct, that some hidden force is working against us, and what that hidden force is I think you will see by looking at this Skiagraph A. You observe the tibia shows a most beautiful spiral fracture; not only with a "riding fragment," but the bones have been so completely displaced that there is considerable shortening. It is more than a mere opening of a spiral. The fibula, you will see, is also broken into at least three pieces, the third detached rhomboidal fragment being very marked. Now, in this case I exposed the tibia. There was nothing apparently to prevent an easy adaptation of the ends, yet I was manipulating for a considerable time before I could achieve my end, and then only after somewhat roughly, apparently, bending the fracture in a way I should not have dared to do had I not been able to see what I was about. I succeeded in locking the spiral, yet it required firm pressure with the thumb on the part of my dresser to keep it locked, otherwise we could see it gradually opening with a kind of spring action, and yet nothing to account for it. We wired it, and the result seemed quite satisfactory. A few days afterwards I saw the man in bed, and my attention was drawn to two facts. First, that the skin had sloughed over the fracture, exposing part of it. The sloughing was due to the simple fact that the skin was in a very unhealthy condition at the time I operated, and we predicted that its death was likely to occur. But the second thing I saw was even more unsatisfactory. My spiral fracture had deliberately unrolled itself on its hinge, and there was—to a very slight extent I must admit—the sharp pointed end of the upper fragment projecting. The same force which opposed me at the operation was evidently still acting, and but for the wire holding firmly would, I have no doubt, have completely reproduced the original deformity.

There is but one explanation of this circumstance, as also of the general difficulty that everyone finds in keeping the "riding fragment" in its place, and that is the action of the fibula. We have but to suppose that the jagged end of the broken fibula, as seen in Skiagraph A, has been driven at the time of the accident into the surrounding fibrous connections and firmly held there in a false position, to understand how a rotary action applied to the tibia to lock the spiral would, for anatomical reasons, give an equally rotary action to the fibula, the fracture of which bone, not being spiral, would not be similarly influenced. Hence the fractured ends of the fibula, forced, as you see them to be, out of their axial line into the surrounding soft parts and there fixed, were twisted by the surgeon's hand, only to exert their spring action the moment the force of his hand was taken away; or, as in this particular case, to continue their spring action until they had, as far as possible, unlocked the adapted spiral in the tibia. This idea I do not claim as altogether new. Mr. Lane, as I have told you, has already applied a similar remark to the difficulties in reduction in Pott's fracture; but I would expand his view and say that I believe the fibula the main cause of the great difficulty constantly found in setting fractures of almost any part of the shaft of the tibia. Further, the fact that the fibula is broken at a higher level than the tibia gives the lower fragment a greater power of leverage than if they were broken on the same level.

INDICATIONS FOR OPERATION.

Now as far as the subsequent utility of the fibula is concerned, I am quite unaware that a slightly angular union of that bone is any great detriment; but, as an obstacle to the perfect restoration of the axial line of the whole limb, the fracture of the fibula becomes a very important matter. My experience has now been such in these cases that where I shall in future decide in a fractured tibia that operation for adaptation is required I shall not hesitate, if I meet with what I call the "spring-action difficulty" in retaining the tibia in position, to cut down on the fibula as well, and place its ends in their proper relation. If you agree with the views that I have placed before you as to the causation of the "riding fragment" in fracture of the tibia, the treatment that I shall propose to you will be evident from what I have already indicated—namely, that where the suitable manipulations required by the oblique or the spiral fracture fail to give a good position, adaptation by operation is called for—not of necessity wiring, or even screwing, for sometimes the fragments when replaced do not tend to move. This, however, is not generally the case, and the addition of a wire which does not add to the gravity of the treatment makes assurance doubly sure. What degree of "riding fragment" calls for operation must be determined by the surgeon in each case. To operate in order to obtain an absolute linear adaptation of the shin bone that will stand the test of a skiagraph is not, as I have already said, in my opinion justifiable. A slight displacement—say one-eighth of an inch—looks large with photography, and can certainly be felt by the finger, but is not only of no importance, but will have disappeared by the natural modelling processes that take place in the course of a few months: where, however, the "riding fragment" threatens to become compound, or where there is shortening, or where the foot cannot be placed in its proper line and retained there, then it is (circumstances permitting, and if best results are to be obtained) that operation is in my opinion called for.

The two cases from which the skiagraphs are taken have been recently in our wards, and I have selected them as typical examples of the ordinary forms of fractured leg. Case A I have further chosen on account of the illustration it affords not only of the difficulty in reduction of the deformity at the time, but as emphasising the continued effect of the deforming force, where that has not been sufficiently overcome at the time of operating.

The strictly clinical details of the cases are not worth giving, as they show nothing out of the way. In both cases, every attempt had been made by extension, muscular relaxation, the administration of anæsthetics, and in one the division of the tendo Achillis to overcome the difficulty of replacing and fixing the "riding fragment," and not until these simpler means had proved ineffectual did I consider operation called for.

The operations in both were identical, namely, free exposure of the fracture, thorough removal of extravasated blood, forcible replacement of the fractured ends with (in Case B) the removal of the rhomboidal third fragment, as, owing to the position it occupied, it prevented the locking of the spiral fracture. Once in position, the fractures were wired with stout silver wire, partly by perforating and partly by encircling the ends of the bones.

I am indebted to the courtesy of Messrs. Shenton and Kirkman, of Guy's Hospital, for the admirable skiagraphs illustrating this lecture.

CALCULI IMPACTED IN THE URETERS,

PATHOLOGY, SYMPTOMS, AND SURGICAL TREATMENT.

By DAVID NEWMAN, M.D.Glasg.,
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Numerous cases have been recorded where all the symptoms clearly pointed to the presence of a calculus in the renal pelvis, but when the kidney was explored no stone was found. Doubtless in many of these the stone had descended into the ureter, and so escaped observation. Now the rule is to explore the ureters, as calculi may be arrested at any part of their course.

Considering the anatomical arrangements of the ducts one would expect stones to become embedded where the pelves become narrowed to form the ureters, and where the ureters become constricted in their passage through the walls of the bladder, and from the statistics of cases of calculous anuria collected by Morris,[1] this is shown to be the case. He states that in 56 cases where the situations of the calculi were noted, obstruction took place as follows:

"1. In the renal pelvis and blocking of the upper orifice of the ureter, 7 cases. In 4 of these both ureters were blocked at the renal orifices.

"2. In the upper end of the ureters 30 cases. Both ureters were blocked in 5 of these cases. In 3 there was another stone impacted lower down (2 in the mid-part, and 1 near the bladder).

"3. In the middle portion of the ureter in 7 cases. In 1 case both ureters were blocked, and in 2 others there was a second blockage by calculus higher up.

"4. In the lower end of the ureter in 10 cases. In 1 of these there was an impacted stone also higher up, in 3 of them both ureters were obstructed.

"5. In 2 cases complete suppression was caused by obstruction of both kidneys by a large vesical calculus."

When the calculus is stopped at the upper end of the ureter it usually protrudes into the renal pelvis, and when it is embedded at the lower extremity of the canal it may, covered with vesical mucous membrane, project into the cavity of the bladder.

The impaction of calculus in the ureter is one of the most common causes of total obstruction to the escape of urine. When this occurs it is more certain to cause complete plugging than if the stone is lodged in the pelvis of the kidney. Should the ureter be suddenly and completely occluded, by the impaction of a stone in the lumen of the tube, the effect upon the corresponding kidney is very different from what is produced by incomplete and transitory blocking of the passage, as exemplified in cases of calculus in the renal pelvis, in the twisting of the ureters met with in movable kidney, or by the obstruction caused by the pressure of pelvic tumours.

The pathology may be examined under the following heads:

(1) Calculus impacted in one ureter, the other kidney being competent.
- (*a*) The stone causing complete occlusion of one ureter.
- (*b*) The stone causing incomplete plugging, with the escape of urine at intervals.

(2) Calculus in one ureter, the other kidney being incompetent.
- (*a*) The stone causing complete occlusion of the ureter of the working kidney.
- (*b*) The stone causing incomplete plugging, with the escape of urine at intervals.

The first class of cases to be studied are those where the patient possesses one active healthy kidney, the ureter of the other becoming blocked by a stone, which may cause either complete or partial obstruction to the escape of urine. When the lumen of one ureter is suddenly and completely closed, the backward fluid pressure of the urine very soon causes a marked diminution in the flow of blood through the kidney, atrophy of the organ rapidly takes place, and in most instances this is followed by a compensatory hypertrophy of the gland at the opposite side. The destruction of the renal tissue is brought about in two ways: (1) By the insufficient blood supply consequent upon the pressure of the fluid in the capsules of the Malpighian bodies; and (2) by the pressure of the fluid within the pelvis causing dilatation. The pressure exerted by the urine which accumulates behind the obstruction leads to the expansion of the calices and flattening of the papillæ. When the blocking is sudden and complete wasting of the kidney takes place without the pelvis becoming distended sufficiently to produce a swelling in the loin. The pelvis and calices of the kidney are not liable to sudden distension, they are only capable of slow and gradual dilatation. Should a stone becomes impacted, the secretion is arrested by inhibition of the corresponding kidney. If, on the other hand, the obstruction is incomplete or transitory, and the urine is permitted to flow into the bladder at intervals, advanced unilateral hydronephrosis develops. When relief occurs the previous high pressure within the uriniferous tubules and Malpighian capsules is suddenly diminished, and the vessels of the glomeruli being relieved from external pressure a considerable hyperæmia is induced, followed by rapid secretion of urine containing albumen. Supposing, however, instead of a sudden relief of the constriction, there is stricture rather than transitory obstruction, and only leakage from the narrow passage is possible. In these circumstances the activity of the gland is maintained, with sudden and occasional varying pressure within its cavity. If this be long continued, considerable hydronephrosis will result. There are, therefore, two conditions which cause marked distension, partial obstruction of the ureter with leakage, and complete transitory blocking associated with rapid and sudden collapses and dilatations of the upper urinary tract.

When the plugging of the ureter is incomplete, and the urine is allowed to escape at intervals, the pelvis of the kidney gradually becomes distended by the retained excretion and hydronephrosis results. It is in such cases when hydronephrosis reaches its highest degree of development, dilatation of the pelvis takes place behind the obstruction. The pressure exerted upon the structures leads to an expansion of the calices. Gradually the parenchyma of the kidney disappears and is replaced by fibrous tissue. As the pelvic cavity and the capsule approach one another, the renal form of the organ is rapidly lost, the outer surface may become rough, irregular, and lobulated, the depressions behind the lobules corresponding to the connective tissue within the sac, which indicates the remnants of the calyces of the kidney. The pouches communicate freely with one another, and in most instances with dilated pelvis, but in a few rare cases the sacs may be shut off from the pelvis by fibrous tissue. In the highest grades of hydronephrosis the kidney may be represented by an enormous membranous sac, which can only be recognised as renal in its origin on account of its relation to the ureter and colon. To the latter it is frequently adherent, but it may also be bound to other organs, such as the spleen, liver, pancreas, or it may be united to the peritoneum, omentum, or mesentery.

These changes are only possible when the kidney on the opposite side is able to perform its function in a way competent with life.

It is not often that both ureters become blocked at the same time, but the course of events may be as follows:

There is a history of repeated attacks of renal colic on one side, associated with the presence of hydronephrosis and other physical signs of obstruction. The symptoms become suddenly relieved, coincident with the escape of a large quantity of clear urine and some gravel, and followed by slight and transitory hæmaturia. These symptoms are repeated from time to time, then suddenly cease; the last attack is more prolonged than former ones, and the relief, in place of being sudden, is slow. There is no abrupt rush of urine, no escape of gravel, and no transitory hæmaturia. A stone has become firmly impacted in one ureter, and this accident will be followed by rapid and complete atrophy of the corresponding kidney and by hypertrophy of its neighbour. Years pass, these old attacks of nephritic colic are forgotten, but in the course of time the only working kidney becomes the seat of the old disease; a calculus forms in its pelvis, and, passing down into the ureter, becomes impacted there, and may cause either complete occlusion, followed by anuria, or the plugging

may be partial, and permit of the occasional escape of urine at intervals.

Suppression of urine means that the ureter of a working kidney has become completely blocked, while the other kidney has from some cause been rendered *hors de combat*. The nature of the injury or the character of the disease causing this varies greatly; they may be classified as follows:

1. Reflex inhibition of the function of the opposite healthy kidney.
2. Impaction of a stone at a previous date followed by hydronephrosis, or atrophy of the kidney on the opposite side to the one recently attacked.
3. Other unilateral diseases of the kidney, such as tuberculous nephritis, pyonephrosis, or congenital absence of one kidney.
4. Bilateral disease of the kidneys, including the various forms of Bright's disease, cystic degeneration, etc.

Suppression of urine may occur as a consequence of reflex inhibition of a disorganised kidney without the impaction being such as to mechanically close the ureter; the irritation of the calculus may produce suppression of urine. While the kidney, with the old-standing lesion, has had its function seriously impaired by disease, it may have been doing some work up to the time that the ureter of the working kidney became blocked. But when sudden obstruction occurs, not only is the escape of urine from the corresponding kidney checked, but the already impaired action of the other kidney is suppressed by reflex inhibition of its function. The activity of a diseased neighbour may be suppressed in this way, so also may the work of a healthy kidney be suddenly stopped. Examples of reflex inhibition of the functions of the kidney are numerous. Complete suppression of urine may follow the passage of a catheter and be succeeded by hæmaturia for some days. Then, again, cases occur of unilateral obstruction, such as is produced by the presence of a calculus in one ureter, causing complete anuria, which may last for a considerable time; or, in cases of transitory hydronephrosis from angular insertion of the ureter into the pelvis above, or into the bladder below, or from torsion of the ureter in movable kidney. When the obstruction on one side reaches a certain point, the kidney on the opposite side may fail to act, even while the hydronephrosis continues to increase in size.

Although symmetrical impaction of calculi is not very uncommon, the blocking of both ureters by stones passing downwards simultaneously from their corresponding kidneys must be very rare. Amoden records a case where a large stone embedded in the trigon area of the bladder obliterated the orifices of both ureters, and Morris states that a case illustrating the same condition occurred in the Middlesex Hospital.

Impaction of stone at a previous date, followed by hydronephrosis and atrophy of one kidney is the most common factor in predisposing to obstructive anuria. This question has been fully investigated by Lugueu and Morris: the former writer points out that in an analysis of 30 cases on the side last obstructed, there was obliteration of the ureter in 23 instances, and stone in the kidney in other 7, on the opposite side there was atrophy of the kidney, or other changes consequent on calculus in 20, occlusion of the ureter in 6 and congenital absence of the kidney in 3. He found only 2 cases of fatal anuria where one kidney was sound. Morris states,[2] as a result of his statistical inquiry, that "in 28 cases of those in my lists, in which the state of the two kidneys is given, the condition of the principal kidney was enlarged in 8, enlarged and congested in 4, small in 2, pyronephrotic in 6, and hydronephrotic in 8. The condition of the opposite kidney was as follows: No trace existing in 6 cases; marked atrophy in 8, in 2 of which the ureter had become impervious; almost entirely disorganised by calculus in 11; destroyed by a hydatid cyst in 1; enlarged in 2."

Other unilateral diseases of the kidney, such as tuberculous nephritis, pyonephrosis, and congenital absence of one kidney predispose the patient to an attack of anuria. In tuberculous nephritis and pyonephrosis the functional activity of the kidney may be altogether impaired; indeed, in tuberculous disease the whole mass of the organ may be replaced by caseous *débris*. In congenital absence of one kidney the remaining single kidney is very liable to disease, chronic nephritis, renal calculus, tuberculous disease, hydronephrosis, pyonephrosis, and abscess being the most common maladies met with. When only one kidney exists, and that an "unsymmetrical" organ, there would seem to be a considerable disposition to renal calculus. Of 12 cases of "unsymmetrical" kidney collected by Mosler in 9 death was due more or less directly to calculus. Cases of calculus in "single kidney" are also published by Rhodius, Jobi, Rokitansky, Rayer, C. Julia Fontenelle, Everard Home, and Sylvaticus.

Probably the most important bilateral disease which predisposes to anuria is cystic degeneration of both kidneys. Even when the disease is advanced there may be no symptoms to indicate impairment of the renal functions, but if one ureter becomes even partially blocked anuria, frequently of a rapidly fatal character, sets in. The same statement also applies to cases of advanced chronic interstitial nephritis or chronic tubular nephritis, but not perhaps to the same degree.

The symptoms depend upon whether the morbid processes involve one or both kidneys. When one organ is free from disease and a stone becomes embedded in the ureter of the other kidney, the phenomena are regulated by the amount of obstruction caused by the impacted body. If the plugging is complete the indications are generally acute but short in duration, and unless the obstruction is speedily relieved the corresponding kidney is rapidly destroyed. The blocking of the ureter is generally preceded by symptoms of stone in the corresponding kidney, renal colic on one side coincident with the presence of blood in the urine. The injury produced by an impacted calculus seldom causes much bleeding, but in some instances considerable hæmaturia may occur. The following case is an example of this, due to a stone impacted in the ureter at the point where it passes over the brim of the pelvis.

Case 1. *Renal Colic on Three Occasions from Impaction of Renal Calculus in the Left Ureter: Transitory Hydronephrosis and Hæmaturia.*—A lady, aged 28, who had suffered from two attacks of acute renal colic, consulted me during the third onset of the disease. The patient was thin and the abdomen extremely lax. On palpating the left kidney the renal pelvis was found to be occupied by a hydronephrosis, and on passing the hand along the tract of the left ureter, on deep pressure a very painful spot was discovered just at the point where the ureter passes over the brim of the pelvis. The distended ureter could be traced down to the same point, and an examination *per vaginam* in the elbow-knee position showed the lower segment of the left ureter to be normal; the bladder and orifices of the ureters were also healthy. After the calculus had been impacted for five hours relief was obtained and 16 ounces of blood-stained urine was passed, the colour being like dark port wine. When a week had elapsed after the onset of the attack the left ureter was carefully massaged three times daily, and nine days after this treatment had been instituted a smooth uric acid calculus, the size of a lentil seed, dropped into the bladder.

In other cases the quantity of blood present in the urine may be very small, this is generally so when the calculus is little and its surface smooth, and when it is impacted close to the orifice of the ureter. When the patient is suffering from an attack of renal colic there may be little or no blood in the urine, but if there is even a little it may be taken as evidence that the ureter is not completely obstructed by the stone, unless possibly the blood is escaping from the ureter of the unaffected side. When the attack passes off, either as a consequence of the escape or from displacement of the calculus a small quantity of blood is almost certain to be found in the urine if a careful watch is kept for it.

The dull and aching pain is for a time localised in the lumbar region only, but suddenly it shifts to the groin, and on pressure with the hand over the line of the ureter the suffering of the patient is markedly increased, at the same time it may be observed that the hæmaturia is suddenly stopped. Disappearance of blood from the urine coincident with sudden shifting of the locality and an increase in the severity of the pain are symptoms strongly in favour of the diagnosis of a stone fixed in and completely plugging the ureter. While the ureter on one side is blocked, and no urine is being excreted by the corresponding kidney, the organ on the opposite side may be over-active and secreting a large quantity of urine of low specific gravity.

There may be calculous disease of both kidneys without the development of pronounced or permanent symptoms. Several instances have come under the notice of the writer where death has resulted from other maladies, and at the *post-mortem* examinations calculous disease was discovered in both kidneys, although careful inquiry into the previous history failed to elicit any information pointing to

renal trouble. A remarkable instance of double calculous disease of the class just referred to was placed in the Museum of the Glasgow Royal Infirmary by Dr. Charles Workman, and he has allowed illustrations to be taken from the specimens. (Figs. I and II.) The following description is from the journal of the *post-mortem* room:



Fig. 1.

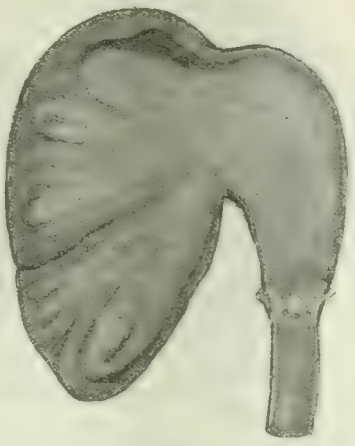


Fig. 2.

"The right kidney (Fig. I) is greatly enlarged by enormous distension of the pelvis and calyces which are filled by numerous calculi, one of them being very large and branched or lobulated. The left kidney (Fig. II) is greatly atrophied, its pelvis is much distended, and the ureter at its junction to the pelvis is blocked by a group of small rough calculi and a villous tumour on which the calculi appear to be entangled."

From the appearance of the specimens it is evident that the left kidney had long ago been rendered functionally useless by a complete obstruction due to the presence of a fimbriated papilloma of the ureter, in the network of which several small calculi had become entangled. The right kidney was the working organ. Although its pelvis was occupied by a perfect quarry of stones, the whole organ was enlarged, and there was an actual hypertrophy of renal parenchyma.

Calculus in one ureter causing complete occlusion, the other kidney being incompetent, leads very soon to complete suppression of urine. Before suppression occurs the patient experiences in the region of the affected kidney pain which may be limited to the lumbar region, or it may extend along the line of the ureters to the bladder or down the thighs. This may be associated with considerable vesical irritation and a desire to micturate, even although the bladder is empty or nearly so. The course of events that follows depend upon the nature of the obstruction and the degree to which the function of the kidney on the opposite side is impaired. Calculous anuria may last for many days without the development of symptoms of toxic poisoning, and if the kidney has previously been the site of hydronephrosis the period will be more prolonged than if the organ is not so affected. This delay in the development of so-called "uræmic symptoms" is the feature which distinguishes obstructive anuria from suppression of urine due to disease of the renal parenchyma. Indeed, in calculous anuria death may occur without the occurrence of any of the ordinary symptoms of uræmic poisoning. The early appearance of symptoms of toxic poisoning in the anuria of organic disease of the kidney is explained by the circumstance that during a long period prior to the actual suppression of urine there has been a steady impairment to the elimination of waste products, and a gradual storing up of toxins in the system, so that when the kidneys stop working the poisoned state of the circulation cannot be relieved sufficiently by the complimentary action of other organs, such as the skin, the lungs, or the alimentary tract.

Calculous anuria may be divided into two stages—the tranquil term, and the toxic period.

The symptoms of toxic poisoning do not necessarily immediately follow the obstruction to the escape of urine or the total inhibition of the excretion. Sir William Roberts states that when suppression is complete life is generally prolonged for from nine to eleven days from the onset. In studying the recorded cases it will be found that after urine has ceased to flow the outburst of indications of toxic poisoning is sometimes delayed only for a few hours, while in other cases many days may pass without any serious toxic symptoms showing themselves. As a rule for some days the suppression of urine is unassociated with any serious symptoms. The pulse, respirations, and temperature are normal, the appetite may be good, the tongue clean, and there may be a total absence of digestive disturbance. There may be frequent or occasional desire to micturate, but no urine is passed except in small quantities and at long intervals. Sometimes a few ounces of urine of low specific gravity, slightly albuminous or even tinged with blood, may be voided; days pass, and the only obvious change is rapidly diminishing muscular strength, with at first occasional, at a later period frequently repeated, muscular twitchings. The mouth, tongue, and palate become dry, and all appetite for food is lost.

It is otherwise in the suppression of urine observed in the various forms of Bright's disease, and in zymotic diseases. In the latter, not only is there a stoppage to the excretion of the healthy constituents of urine, but the kidneys as eliminators of the toxins of disease are no longer working. It is now well known that in diseases such as scarlatina, pneumonia, cholera, influenza, erysipelas, and diphtheria, etc., specific poisons are eliminated by the kidney. It is also recognised that in many organic diseases of the kidney the functions of the organs are seriously impaired and excrementitious matter is allowed to accumulate in the tissues and in the blood, and it is a storing up of these waste products of the tissues which produces an intolerance of them and give rise to so-called uræmia.

After non-obstructive suppression, the return of the secretion of urine is slow, the quantity is small, the urine is of a high specific gravity, deeply coloured, and generally albuminous or may even contain blood, and therefore presents a complete contrast to what is observed in cases of obstructive suppression.

After calculous anuria is relieved the excretion is rapid and copious, and the urine is of low specific gravity, deficient in the constituents of healthy urine, and may contain a trace of albumen and some blood, but if the kidney is otherwise healthy the urine rarely deposits tube casts. There is no sudden escape of a large quantity as in transitory hydronephrosis, but in other respects the character of the excretion is similar. An occurrence sometimes happens which is apt to be misleading. In place of the irritation of the impacted calculus producing an inhibition of the impaired kidney on the opposite side, it may be stimulated to action of an inefficient kind, and a polyuria may be produced. While little more than water is eliminated, such escapes of urine must be carefully watched and not be allowed to draw the attention away from the main and important features of the case, namely, that the waste products are not being eliminated, and that toxic poisoning will soon develop. A by no means uncommon experience is to find uræmic symptoms in persons who are excreting a fair quantity of urine of normal specific gravity, so that while on the one hand we may have complete anuria, and an increase of urea in the blood without evidence of toxic poisoning, we may have evidence of toxæmia without diminution in the quantity of urine.

When anuria is continuous other organs endeavour to take up the task abandoned by the kidneys, but in this they can only succeed in a limited degree and for a short time. The lungs, the skin, and the alimentary tract attempt to do the work, and their vicarious labour is often the first indications of toxæmia. In calculous anuria the patient may show great desire to sleep; this is often one of the earliest indications of approaching toxæmia, and may be the forerunner of convulsions and the other graver symptoms which accompany them. The respirations are generally slow and laborious, and not infrequently the patient may suffer from paroxysms of dyspnœa,

but the breath has no peculiar ammoniacal odour. The pulse is generally full, slow, and wanting in arterial tension, and when the patient does become comatose and the breathing stridulous, considerable cardiac irregularity may be displayed, the strength and character of the pulse varying with the respiratory movements. Very rarely, if ever, is there evidence of venous stasis, as shown by œdema of the feet, diminution in the surface temperature, epistaxis, expectoration of blood-stained mucus, hæmatemesis, or bleeding from the bowel. Examination of the air escaping from the lungs shows it to contain active organic poisons considerably above what is observed in health. The patient may suffer from profuse perspiration, and the sweat is loaded with effete products and animal toxins, but there is never any ammoniacal or urinous odour from the skin.

Sometimes the skin refuses to act, and very occasionally the surface may become much irritated by the storing up of waste products, and even active cutaneous eruptions may be induced. The mental faculties are seldom impaired, intelligence being preserved to the last, and in pure obstructive anuria convulsions and coma are rarely seen.

Diagnosis involves several important questions. The first point is to determine, Is the obstruction of the ureter due to the presence of a stone, and, if so, where is it situated? The occurrence of repeated attacks of renal colic, associated with signs of hydronephrosis and followed by anuria, is not sufficient evidence that there is a calculous condition present. The proportion of cases of hydronephrosis in which a palpable abdominal swelling is discovered during life is small in all cases, but especially so when the disease is bilateral. The methods employed in making a differential diagnosis may be considered first, and, after they have been described, the diseases with which impacted calculus are likely to be confused may be discussed.

By palpation through the abdominal parietes much information may be gained when the stone is situated above the brim of the pelvis, provided the walls are flaccid and the patient thin; but when the muscles are rigid, which is often the case, or the patient is corpulent, the detection of a stone in the upper part of the ureter is almost impossible. Pressure with the hand, however, generally elicits tenderness in the locality of the stone, or may even induce acute pain.

When the calculus has passed to the lower third of the ureter, examination with the finger in the rectum or in the vagina, according to the sex, may lead to the detection of the stone and the exact situation occupied by it. A sound should be passed into the bladder, and with the left index finger in the vagina or rectum the back of the instrument is made to press upon the line of the ureters and their orifices. In the female the urethra may be dilated and the bladder explored by the finger.

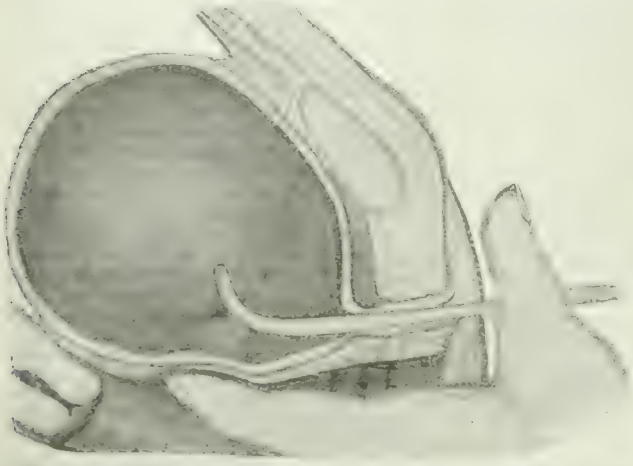


Fig. 3 represents the position of the swelling in the bladder and the method of examining with the finger and sound when the calculus is caught at the vesicle orifice of the ureter, as in Case III.

Cystoscopic examination of the bladder may give valuable information. This is not the opinion held by Mr. Henry Morris, who says[3] "the cystoscope in the cases of anuria is quite unnecessary and out of place, as it can give no information which is not more fully ascertained by a rectal or vaginal examination and a sound in the bladder. Valuable time will be lost by such explorations of the ureter, and it would be far better to resort to exploration of the kidney."

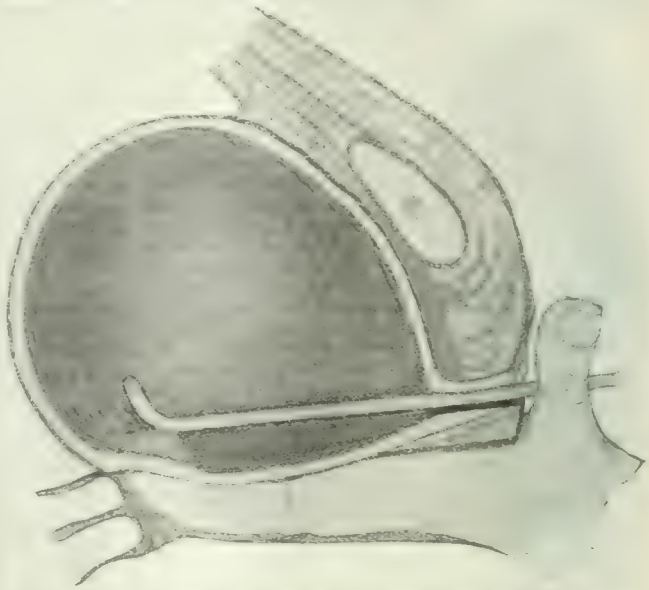


Fig. 4 shows the relationship when the stone is caught in the ureter before it passes through the bladder wall, as in Case II.

A point of some importance in diagnosis is the appearance of the orifice of the ureter as seen by the cystoscope. It may be stated as a general observation that when there is distinct evidence of irritation at the orifice of one ureter, while the other is normal in appearance, it may be safely inferred that the lesion if unilateral is on the side of the morbid ureter. The following case illustrates this:

Case II. *Sudden Severe and Prolonged Attacks of Renal Colic: Suppression of Urine: Sudden Relief: Recurrence in Three Weeks: Microscopic Quantity of Blood in the Urine.*[4]—A woman, aged 26, was on November 26th, 1896, suddenly seized with a severe attack of renal colic on the right side, with suppression of urine for 24 hours. The pain suddenly subsided, three hours afterwards the patient passed 5 ounces of concentrated urine, and the following day she was practically well. Three weeks afterwards she had a second attack, exactly the same as the first. On examination no renal swelling could be made out, but the right kidney was extremely tender and painful on pressure. No albumen or pus was found in the urine, but when present blood could be detected by the guaiacum test and by a microscopic examination of the deposit. The cystoscope revealed nothing abnormal in the bladder, except that the orifice of the right ureter seemed to project unduly and the mucous membrane surrounding it was deeply injected. No blood could be seen escaping from either ureter. On introducing the ureter catheter an obstruction was met with 1 inch from the orifice, and on passing the probe a calculus the size of a large horse bean was found in that situation; it was subsequently removed by operation through the bladder by rapid dilatation of the ureter.

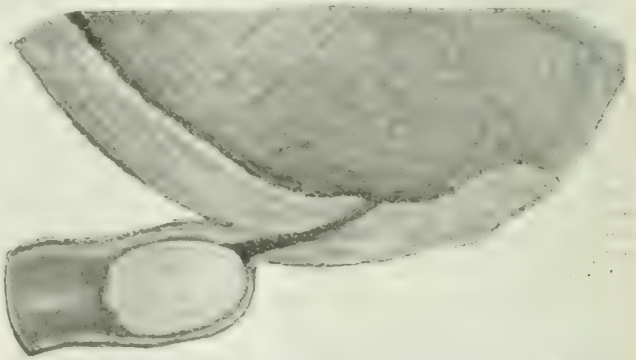


Fig. 5 shows the relationship of the calculus to the vesical wall. The stone was caught at the point where the ureter enters the muscular wall, and the duct was considerably distended above the obstruction.

In some instances the calculus may pass along the ureter through the muscular portion of the bladder wall and become gripped only by the mucous membrane at the the orifice of the ureter, so in place of passing through into the cavity of the bladder, the calculus, by obstructing the flow of urine, leads to the mucous membrane being pushed away from the muscular portion of the bladder, and a rounded tumour-like mass is formed which may be mistaken for a tumour of the bladder.

Case III. *History of Repeated Attacks of Renal Colic without Suppression of Urine, but followed by Hæmaturia: Marked Irritation of the Bladder, Frequent, but not Painful, Micturition, and latterly almost constant presence of Blood: No Renal Symptoms: Swelling in Bladder Diagnosed a Tumour, but at Operation Discovered to be a Small Calculus included in Mucous Membrane of Bladder.*—J. H., aged 35, a marine engineer, first suffered from renal colic on a homeward voyage from India in December, 1893. The first attack lasted for about twenty-four hours only. Complete relief from pain followed, and lasted for seven weeks. Travelling from London to Leeds brought on a second seizure, which lasted for five hours, but although shorter in duration the suffering was more severe in this than in the first attack, and when the pain passed off the patient noticed that the urine contained blood. During 1894 the patient suffered from seven attacks, three of which were followed by hæmaturia. At no time were there any symptoms suggestive of suppression of urine nor of hydronephrosis. Towards the end of 1894 the patient complained greatly of frequent micturition; during the act he suffered little or no pain, but on many occasions blood appeared in the urine in moderate quantities. Only twice could the hæmaturia be described as profuse. There were no symptoms pointing to any renal lesion, nor could swelling or tenderness be made out in either lumbar region. No information was gained by rectal examination. No tube casts and no albumen were in the urine except from the presence of blood. A cystoscopic examination showed the presence of a rounded swelling immediately over the orifice of the right ureter, about the size of a small cherry, very vascular on the surface, but smooth and free from ulceration. The swelling was diagnosed as a fibroma of the bladder pressing upon the orifice of the ureter and so causing an obstruction to the escape of urine. Suprapubic cystotomy was performed, and the swelling was seized with ring vulsellum forceps. Immediately pressure was made, the swelling cracked, and a little traction brought away a calculus and a thin but complete covering of mucous membrane as shown in Fig. 6.

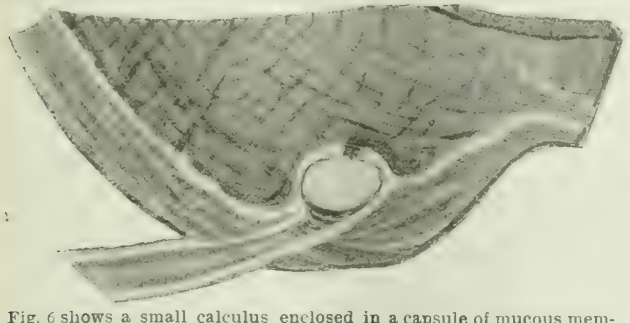


Fig. 6 shows a small calculus enclosed in a capsule of mucous membrane at the orifice of the right ureter.

Case IV.—*History of Rapid Profuse Hæmaturia with Irritable Bladder but without Attacks of Renal Colic or Suppression of Urine, Enlarged Prostate, Calculus in Bladder and at Orifice of Right Ureter.*—Mr. M., aged 54, was admitted to the Sandyford Home in April, 1898. He had suffered from pain in the bladder for several years, and hæmaturia at intervals for eighteen months prior to admission, and recently the bleeding has become so severe that he has been unable to follow his occupation. No calculi have been passed, or is there any history of pain in either lumbar region, and the symptoms from the beginning of the complaint until admission all pointed to vesical rather than renal disease. Previous to coming to the home two attempts were made to examine the bladder with the cystoscope, but the passage of the instrument caused so much bleeding that no observation could be made. The middle lobe of the prostate was greatly enlarged, soft, and spongy; behind the prostate a stone was discovered with the sound. Suprapubic cystotomy was performed on April 20th, and on opening the bladder a soft phosphatic stone was found immediately behind the enlarged lobe of the prostate, but on further examination a little rounded nodule was discovered at the orifice of the right ureter; it had the appearance and size of a small red cherry. On laying hold of it with the vulsellum forceps it was found to be hard, but on even moderate pressure it broke, and several fragments of the calculus escaped between the rings of the forceps. Neither before nor after the operation were there any symptoms indicating impediment to the escape of urine from the right ureter.

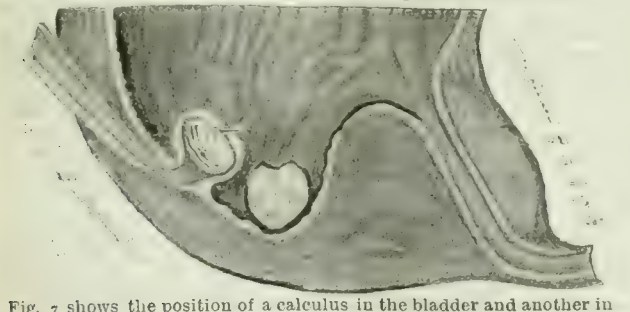


Fig. 7 shows the position of a calculus in the bladder and another in the dilated end of the right ureter; also the enlargement of the prostate gland with the sulcus formed immediately behind.

The ureters may be explored with the sound from above, or they may be examined through the bladder from below. In the female the sound may be easily passed into the ureters by Kelly's method. Sounding has also been performed through an incision in the vagina, and by suprapubic cystotomy. These latter methods are, however, unsatisfactory.

Renal or ureteral calculus is so frequently simulated by other affections that any new aid to diagnosis has been eagerly employed; thus, when the properties of the Roentgen rays were discovered the hope was at once entertained that a useful and exact means might be introduced to detect and locate the position of the stone. Experience has, however, shown that the difficulties in employing the rays are so great, and the possible fallacies so numerous, that no reliance can be placed in the observations made by this method. We on several occasions failed to detect a stone which was afterwards proved to be present. No doubt within the last few years various observers have succeeded in demonstrating the presence of calculi in the kidney, and it has been proved that oxalate of lime gives the deepest shadow, uric acid the faintest, while the shadow of phosphatic stones occupies an intermediate position. The thickness of the parietes, the chances of the stone being overshadowed by bone, and the movement of the kidney during respiration are all difficulties to be overcome beyond the improvement required in technique. The subject has been carefully worked out by Albarran, Ringel, Braatz, Wagner, and others, who have shown that even with the most careful attention to detail the results from radiography are only valuable in exceptional cases, where probably the diagnosis could have been made without the aid of the rays.

Supposing all these devices of gaining information have failed; the patient is stout, or the abdominal muscles are rigid, and no stone can be discovered by digital examination; if the obstruction is unilateral expectant treatment may be employed, but if it is bilateral the kidney last involved must be explored, and if no calculus is found in the pelvis a sound should be passed from above into the ureter.

The conditions other than calculus which may cause obstruction to the ureter are very numerous. The following table[5] shows the causes of acquired hydronephrosis in 665 cases:

	Hydronephrosis.	
	Double.	Single.
Simple or malignant tumours of pelvic organs causing pressure on ureters	143	41
Stricture of the urethra, enlarged prostate with hypertrophy of the bladder	195	39
Tumours or abscesses of pelvic organs leading to torsion of the ureters	23	9
Tumours or abscesses of abdominal organs	17	7
Displacement of pelvic organs, causing torsion of ureters	23	20
Bands and adhesions	7	5
Renal calculi	17	51
Displacements of the kidney	1	16
Tuberculous disease of the bladder	13	17
Tumours of the bladder	3	7
Ureter entering renal pelvis at acute angle	6	5
	448	217
	Total, 665	

One important distinction between the course of events in calculous obstruction and that due to pressure from without is that while the latter is gradual and almost always produces considerable dilatation of the pelves of the kidneys, the former is sudden, and on one side at least is unassociated with hydronephrosis. It is unnecessary to discuss in detail the points of distinction between pressure symptoms as induced

by the diseases above enumerated and the obstruction produced by calculus.

As a general rule, the disease causing pressure upon the ureters is itself so prominent that it is not likely to escape observation. But while a lesion may be discovered in one of the pelvic organs which may reasonably account for the obstruction, the surgeon must not conclude that a ureter is not also impacted by a calculus. A very striking example of this came under the observation of the writer. A woman with a large uterine fibroid complained of symptoms resembling renal colic, followed by suppression of urine, which lasted on several occasions for more than twenty-four hours, after which relief came with the escape of a large quantity of urine of low specific gravity. The conclusion come to was that the hydronephrosis and anuria were due to pressure of the tumour upon the ureters, but after death a calculus was found impacted in the left ureter as it passed over the brim of the pelvis. The most important cases to distinguish from calculous obstruction is where the flow is impeded by kinking of the ureter, as in movable kidney, or where the impediment arises from angular insertion of the ureter. Transitory hydronephrosis is met with in cases where the ureter is occluded only occasionally. Sudden accumulation and rapid subsidence of the swelling is an important characteristic of transitory hydronephrosis produced in this way, and while on the affected side the pelvis is still filling and becoming more and more tense, on the healthy side there may be complete inhibition of the function of the kidney. But while anuria may last sometimes for days, it is hardly ever so prolonged as to endanger the life of the patient.

The treatment must depend upon an exact appreciation of the state of the patient and of the morbid condition present. If there is reason to believe that one ureter only is blocked, and that the kidney on the opposite side is healthy, it is advisable to wait the course of events, as in many instances the obstruction is relieved spontaneously within a short time and no permanent harm results. This is especially to be recommended when there is evidence that the obstruction is incomplete or transitory. In such cases the use of massage, shampooing, and the application of fomentations sometimes relieves the spasm. Pain may be alleviated during an attack by the administration of anodynes such as morphine, belladonna, and opium, but the latter drug must be employed with great care, as even a small dose may produce alarming effects when there is any interference with the proper action of the kidneys. It is much safer to employ hot fomentations, emollient enemata, and hot baths; should the pain be extreme it may be necessary to place the patient under the influence of an anæsthetic, which may not only have the effect of relieving the suffering of the patient for the time being, but may also by abolishing spasm facilitate the passage of a calculus from the ureter. Under similar circumstances it has also been advised to give warm diluents and diuretics with the view of forcing the calculus down by an increased secretion of urine, but probably the beneficial action of these remedies is due more to the power they possess in reducing the irritating qualities of the urine than to any mechanical effect the pressure of urine may exert. Changes in the position of the patient sometimes cause relief from suffering either by altering the situation of the stone or by dislodging it from the ureter, in the same way external manipulation in the renal region or along the course of the ureters has been recommended. If the stone escapes well and good, but it must be remembered that in other respects the patient is in the same position as he occupied before the calculus showed itself. Another one may form unless precautions are taken.

When the ureter of the only working kidney is sealed, it is evident that the first point to attain to is immediate relief of the obstruction. In most cases there is a short period during which medicinal remedies may be employed, but unless relief is very speedy valuable time must not be wasted in waiting for the action of drugs. The only working ureter is plugged, and the obstruction can be removed by the surgeon, or an artificial exit can be made in the loin so as to provide a channel for the passage of urine. In this way the immediate danger to life may be removed and a more careful search can be made for the stone later on and a method devised for its removal.

The operative procedure depends upon the position occupied by the stone:

(*a*) When the stone is sufficiently low down to be detected by digital examination in the vagina or rectum.

(*b*) When the stone is too high up to be felt by the finger, but occupies the middle third of the ureter.

(*c*) When the stone is in the upper third of the ureter.

If the stone had passed through the muscular wall of the bladder, and pushed the mucous membrane in front of it, the appearances presented by the cystocope are liable to be mistaken for those of tumour. In this situation the stone may be removed by dilatation of the urethra in the female, by suprapubic cystotomy in the male, or by perineal opening. When the stone has become impacted above the vesical portion of the ureter, but still within the reach of the finger, it should be attacked from below.

In removing a stone from the ureter by an operation through the bladder, it may be possible to grasp the impacted body with forceps, and by a careful manipulation drag it away without making any incision in the vesical wall; but if the stone is too large for this, it is well to make a small incision and dilate the ureter with sinus forceps before attempting to extract the calculus.

Ceci has removed a ureteral calculus through the rectum, and Fenwick has employed a perineal incision, the removal through the vagina has been employed by Emmett, Cubot, Collerall, Fenwick, Reguey, and others. In such cases above the point of obstruction the ureter is dilated so that it can be easily felt with the finger. The ureter and the stone should be fixed by a small sharp hook, an incision is then made through the vaginal wall by cutting on the stone; when the incision is completed a rush of urine takes place and the calculus escapes along with it. The opening may be closed with sutures, but probably it is safer to keep it open by passing a drainage tube into the dilated ureter.

When the stone cannot be felt with the finger, it must be reached through the abdominal parietes. The ureter may be exposed without opening the peritoneum through an incision similar to the one used in ligaturing the common iliac artery and by retracting the peritoneum. The line of incision usually employed is one commencing an inch below the last rib at the outer edge of the erector spinæ muscles, and extending inwards and downwards in front of the anterior superior spinous process. The distance to which the incision is extended inwards depends upon the necessities of the individual case. If the patient is short and stout, the space may be extended by making a T-shaped incision through the above, or by incising a portion of the quadratus lumborum. When the transversalis fascia has been exposed and divided, the colon is seen. It should be retracted, and the hand introduced through the wound behind the peritoneum, when the kidney can be easily felt imbedded in its adipose capsule. The capsule is enclosed in a delicate connective-tissue envelope, which should be caught up with pressure forceps and divided, when the light yellow adipose tissue of the fatty capsule will pout out through the opening. This soft fat is easily separated from the kidney; when the organ has been fully exposed, a systematic examination must be made before the organ is disturbed from its natural bed. The ureter should be carefully searched, and if a stone be found, it may in many instances be readily pushed up into the pelvis and removed by an incision through the convex border of the kidney.

An incision through the substances of the kidney heals more readily than one through the wall of the pelvis. Supposing, however, that a stone is not found in the first examination with the kidney in its normal position, the attachments of the organ must be freed and the organ brought out through the wound sufficiently to permit the surgeon making a thorough inspection. When the hand fails to discover the presence of a stone, an incision should be made through the kidney on its outer aspect, and through the wound a digital exploration of the pelvis and calices should be made, and if a stone is found it may be removed. After the stone is extracted, a ureteral catheter or sound should be passed down the ureter into the bladder, so as to ensure that the passage is clear. It is not uncommon to find calculi both in the pelvis and ureter. If a stone is discovered in the lumen of the duct, an attempt should be made to press it up towards the kidney,

and generally this is easily accomplished, as the ureter is dilated above the point of impaction of the stone, but if it is firmly fixed an incision should be made through the wall of the ureter, and after the calculus has been extracted the incision may be closed by sutures.

References.

[1] *Hunterian Lectures*, 1898, p. 93. [2] *Loc. cit.*, p. 106. [3] *Loc. cit.*, p. 109. [4] Cases II, III, and IV were brought before the Glasgow Pathological and Clinical Society meeting, December 11th, 1899. [5] Newman, *Lectures on Surgical Diseases of the Kidney*, 1888, p. 114.

LARGE SARCOMATOUS NEUROMA OF THE INTERNAL POPLITEAL NERVE.

By GEORGE BUCHANAN, A.M., M.D. LL.D.,
Professor of Clinical Surgery in the University of Glasgow.
[With a Pathological Report by Dr. Muir, Professor of Pathology.]

A large sarcomatous tumour of the trunk of a main nerve is a very uncommon occurrence. The following is a short clinical account of the case:

R. G., aged 20, had received about nine months earlier a blow from a piece of wood on the front of the thigh just above the knee. It gave him no trouble and he forgot all about it. Three months after he discovered a little lump the size of a filbert in his popliteal space. There was no pain or annoyance, but it gradually increased in size. For the last six weeks it has been enlarging more rapidly till it attained its present size.

Condition on Admission to Professor G. Buchanan's Ward in Western Infirmary, November 14th, 1899.—The popliteal space is completely filled up by an ovoid tumour, resistant and elastic, and quite movable from side to side. The opinion was that it was an adenoma or a sarcoma, probably of a lymphatic gland. The patient can walk quite well, while motion and sensation were perfect down to the toes, except some anæsthesia of the sole of the foot; so there was no indication that the popliteal nerve was unduly pressed upon. There was no œdema below the knee, so the probability seemed to be that the tumour could be removed without any injury to the nerve or vessels of the popliteal space. Accordingly, on November 21st, an incision 6 inches in length was made over the tumour, and the capsule was exposed. The soft parts were easily stripped from the capsule over the front and sides, but on the back it was firmly adhering to the popliteal nerve. It was now found that the capsule was simply the nerve sheath expanding into and forming the capsule, and that the nerve itself was lost in the tumour, either by the nerve strands separating and enveloping the capsule, or passing through the tumour. In these circumstances the only course was to amputate the thigh, but as that had not been contemplated the patient and his parents had not been asked for permission if the tumour proved to be malignant. Therefore a small slice of the tumour was excised for examination, the edges of the cut capsule brought together, and the wound united by continuous suture. The piece was subsequently examined by Professor Muir, who pronounced it a round cell sarcoma. Next day the father arrived from the country, but refused to allow amputation. However, when the nature of the growth was explained to him, he went home and consulted his wife, and returned with full permission, which the patient himself quite frankly consented to. On November 28th amputation was performed and the patient has progressed well. Immediately after amputation the tumour was exposed by a longitudinal section extending from the trunk of the nerve above to that below. It presented a greyish appearance, in consistence of a soft and pulpy nature, in the superficial half, but in the deep half more tough and fibrous, where it seemed to be continuous with nerve strands attached to the capsule. But it was impossible by the naked eye to discover in what way the nerve above communicated with the nerve below, so the limb was sent to the pathologist, who will give the pathological report. The length of nerve involved in the tumour is about 5 inches.

Pathological Report by Dr. Muir.

A large somewhat fusiform tumour occupied the popliteal space: its extreme length was nearly 5 inches, its greatest width being 2 inches, and it tapered off above and below. It was somewhat adherent to the vessels beneath it, but these were not incorporated with it. The upper limit of the growth was just below the division of the great sciatic into internal and external popliteal nerves. (The division of the main trunk appeared to be a little lower than usual.) The tumour is apparently in the interior of the internal popliteal nerve, the sheath of the nerve being stretched over it and forming its capsule. On section, strands of nerve fibres can be seen passing through the tumour growth, a considerable dissociation of fibres having taken place.

The tumour was composed of soft cellular tissue of a greyish colour, in parts however very vascular and showing hæmorrhages. There are also yellowish areas, apparently the result of degenerative changes. One of these was of the size of a small plum and situated in the part of the growth nearest the large vessels. The external popliteal nerve coursed over the surface of the tumour and was somewhat flattened, but was apparently free from infiltration.

Fresh sections microscopically examined showed the growth to be sarcomatous, most of the cells presenting a rounded form. In sections prepared after fixing the tissue in corrosive sublimate the cells have either an oval or pyramidal form with very little protoplasm. There is very little intracellular stroma. There are numerous hæmorrhages and necrosed patches. Strands of fibrous tissue with nerve fibres running through the growth at intervals are noted. The tumour tissue is nowhere observed to penetrate the fibrous tissue sheath externally.

A portion of the internal popliteal nerve was removed below the growth, and treated by Marchi's method. It showed marked degeneration in one or two small fasciculi, and a few degenerated fibres scattered here and there in the larger bundles. The great majority of the fibres, however, showed no degenerative change.

The condition is interesting as illustrating the fact that nerves may be extensively infiltrated and disassociated with comparatively little degeneration resulting, both the clinical facts and the microscopic examination in this case showing that only a small proportion of the fibres had suffered.

A CASE OF ENTERECTOMY BY END-TO-END SUTURE IN A BOY AGED 7.

By F. C. WALLIS, F.R.C.S.,
Assistant Surgeon to Charing Cross Hospital.

The case described below may be taken as a type of the condition which always occurs when the small intestine has to be opened and a fæcal fistula formed. The fluid contents of the intestine are constantly oozing from the opening, and therefore the skin is constantly in contact with this fluid, which, having powerful digestive properties, promptly begins to digest the skin. The epidermis soon disappears, and around the opening is an area of raw papillæ, which bleed readily, and, as may be imagined, are most painful when touched. Such being the fact, any attempt to clean the surface or wash the part is immediately followed by strong contraction of the abdominal muscles; this contraction forces out the contents of the intestine, and so it goes on. The higher up the intestine the opening has been made the stronger will the effect of the secretion be on the skin, and (which may be much more serious) the length of intestine left for digestive purposes may be so curtailed as to make the question of nutrition of the patient a matter of anxiety.

In this case it was obvious that the intestine had been opened high up, both from the condition of the skin, and also from the fact that food appeared at the opening 2½ hours after it had been swallowed. The boy was quite thin but otherwise healthy. Since the operation (December 1st) he has increased half a stone in weight. This in itself is a matter of interest, because for over ten months the greater part of his intestine was "out of action," and a certain amount of general atrophy had taken place. I should judge that the functions of the intestine below the join were in good working order after the ninth day, as after that time the motions became formed and normal, and before that, that is between the the third and the ninth day, they were loose and offensive. Custard was given on the eleventh day, fish on the thirteenth, and meat on the fourteenth day. I mention this to strengthen my statement as to the probable time at which the intestine resumed its functions. As soon as the motions were of a normal character I felt I could with impunity increase his diet and put him on solid food, and his rapid increase in weight shows how he responded to it.

G. H., aged 7, was admitted to St. Monica's Home, Kilburn, on August 5th, 1899, with a fæcal fistula, a marked prolapse of the bowel through the opening, and with the skin acutely tender and inflamed for an area of about 1½ inch round the wound, this last condition being due to partial digestion of skin by the fæcal discharge.

History.—The previous history of the boy was that in 1895 he had tuberculous peritonitis, for which he was admitted to St. Bartholomew's Hospital, where he remained thirteen weeks. After this he kept well for three years, but on January 20th, 1899, he developed acute intestinal obstruction, for which he was readmitted to St. Bartholomew's, and an operation for its relief was performed on that night, an incision being made in the mid-line below the umbilicus, and a coil of small intestine above the obstruction was opened and stitched to the skin. Some time before his discharge from the hospital (August 3rd, 1899) an unsuccessful attempt was made to close the fæcal fistula. When admitted on August 5th his condition was as described above, and was a most pitiable one. Attempts were made to get the skin into a less septic condition and to endeavour to lessen the prolapse. At the same time, as it was doubtful what part of the small intestine had been opened, various foods were given by the mouth such as cooked and uncooked rice, and it was noticed how soon afterwards any appeared at the opening. Boiled rice appeared in three hours forty minutes; raw rice showed itself two and a-half hours after it had been swallowed. The boy's weight was 2 stone 8 lbs. On November 22nd, acting on a suggestion of the nurse in charge of the boy, the patient was turned on his face, a firm band was placed over the lower part of the wound, leaving the bowel free, and the discharge was received into a bedpan covered with a round air cushion. This was continued for a week with such a satisfactory result as far as the skin was concerned that I decided to operate on December 1st.

Operation.—When the boy was anæsthetised, the skin was washed with soap and water, then ether, and finally with 1 in 500 perchloride solution. An incision was made through the skin about half an inch away from the opening of the bowel, and continued above and below so as to form an ellipse. All the tissues were cut through until the peritoneum was reached. Before this was opened the sides of the fæcal fistula (into the opening of which a small sponge had been inserted) were closed by one or

two sutures. The bowel was now freed, with the margin of skin around it, and dragged out of the wound, the skin of the abdomen being covered with sterilised butter cloth; 3½ inches of intestine were resected, and an attempt was made to unite the ends over one of Bailey's decalcified bone tubes, but the intestine was of too small calibre to admit this, and at the upper end an enlarged gland on the mesenteric border still further hampered matters, and it was necessary to resect another 1½ inch of intestine. The two cut ends were then united by a series of interrupted sutures. This was followed by another ring of sutures surrounding the bowel, and taking up the serous and muscular coats. A few additional sutures were put in at the mesenteric border, and the mesentery itself was tied up in a bunch. The gut was washed with boracic, and then returned into the abdomen. The edges of the incision were brought together by silkworm gut sutures passing through all the structures. The skin was drenched with iodoform powder, and the dressings consisted of dry cyanide and white wool.



Fig. 1.

At the end of the operation the boy was somewhat faint, but not in any alarming condition. After coming round from the anæsthetic he was very sick, and this sickness, accompanied with hiccough, continued intermittently until the seventh day, when it ceased.

He was fed entirely by the rectum for nearly forty-eight hours, after this he was allowed fluids by the mouth in gradually increasing quantities, and on the seventh day he took 25 ounces by the mouth and 12 ounces by enemata. The enemata were stopped on the ninth day.

The bowels acted on the third day, and acted daily from that date. The action was at first loose and offensive in character; but after an attack of diarrhœa on the ninth day the motions became formed and normal, and have remained so ever since.

The wound was dressed on the eighth day, and two stitches removed. I was afraid to remove more, because the boy strained and cried to such an extent that it was felt that the whole wound might give way. The remaining stitches were taken out a few days later, when the wound was quite healed. On the sixteenth day a small area broke down over the site of the fæcal fistula, and a drachm of dark-stained serum escaped, but this disappeared in the evening of the next day. With this slight exception the boy made an excellent recovery, and is now in the best of health.

The photographs show fairly well the condition of the prolapsed bowel, and also that of the skin, which, as I have already said, was exquisitely painful, even to the lightest touch. The one anxiety about the case was that, owing to the old tuberculous peritonitis shutting off the peritoneum in various places, a proper investigation of the condition of the rest of the bowel could not be made. It was, therefore, quite possible, that I had merely united the cut ends into a *cul-de-sac*. However, our suspense was soon relieved, as the bowels acted on the third day, and on this point caused no further anxiety.

All surgeons who are in the habit of operating upon the intestines will, I think, agree that however well the operation may have been done, and however able the assistance (and I was helped most materially by Dr. Owen Lankester), yet the main issue of the case depends upon the way in which the after-nursing is done. I cannot speak too highly of the nursing in this instance. It was admirably and intelligently carried out, and was the main factor of success in a somewhat unusual case.

Having regard to the great discomfort of the condition just described, it occurs to one that it would be extremely desirable to adopt some other procedure than that of forming a fæcal fistula in cases in which acute intestinal obstruction occurs, and no doubt there are certain cases and certain conditions which admit of other means being tried at the time when the relief operation is being carried out.

I do not believe that any royal road can be laid down for these cases; each one will have to be dealt with on its own merits; and although a few main principles may hold good in all cases, it would be futile, possibly worse, to lay down any fixed rules.



Fig. 2.

Treves, in his work on *Intestinal Obstruction*, gives, in the chapter on the Anomalous Forms of Obstruction due to Isolated Bands and Adhesions, the following classification:

1. Strangulation over a band.
2. Occlusion brought about by acute kinking due to traction upon an isolated band or adherent diverticulum.
3. Obstruction effected by adhesions which retain the bowel in a bent position.
4. Obstruction by means of adhesion which compress the gut.
5. Obstruction by matting together of coils of intestine.
6. Narrowing of the bowel from shrinkage of the mesentery after inflammation.

In the first three the onset of the obstruction would be quite sudden and acute; indeed in the first five this would generally be so. The case under discussion was probably caused by either 4 or 5 in the list.

Three methods of treatment are available in the acute stage in these cases:

I.—*To Remedy the Obstruction and Return the Intestine.*

This method is only occasionally available because in the first place the case is not, as a rule, seen early enough; and again, the apparent well-being of the bowel is often deceptive, as the sequel unfortunately too often shows. The following is an example of this:

A woman, aged 53, was admitted under my care to the Metropolitan Hospital with acute intestinal obstruction of three days' duration. Laparotomy was performed, and a band was found binding together a loop of intestine about a foot long, and another coil had slipped through the loop, but this was not strangulated.

The band was divided and the intestine carefully examined; it seemed in such good condition that there was no thought of doing anything but returning it. The woman died three days after with symptoms of perforation, and *post mortem* it was found that not only had the gut perforated, but that the whole loop was gangrenous.

No doubt in the light of events it would have been better to have opened the intestine and brought out the whole loop,

or else there and then to have resected, yet I believe that anyone else who had examined the gut at the time of the operation would have thought that it was in sufficiently good order to return.

II.—*To Resect the Bowel.*

This can be done in only a few cases at the time of the relief operation. The main reason against it is the time which it takes. Yet I remember two cases of strangulated hernia in the two extremes of life, in which gangrenous bowel was resected with the happiest results. One was a boy under the care of Mr. Lockwood at St. Bartholomew's; the bowel was resected and sutured end to end. The other was a woman over 70 years of age, under Mr. Bloxam's care at Charing Cross Hospital. In this case the bowel was resected and the ends brought together by a Murphy's button. Both these cases have been published. But such cases are exceptional, especially the second, having regard to the age of the patient.

The main points to be taken into consideration in a proposed primary resection of the intestine are, first, the condition of the patient; and, secondly, the rapidity with which the operator can work; and of these the first is of paramount importance.

III.—*To Remedy the Obstruction by Opening the Bowel.*

This method is probably the safest in most cases of acute intestinal obstruction, when there is any doubt as to the condition of the gut, and when the patient's condition is such that any prolonged operation would greatly add to the danger to life.

The operation, whether the obstruction has been found or not, takes only a few minutes; the relief is complete, and the question of intestinal paralysis need not be considered. Finally, if for any reason it is not thought desirable to give a general anæsthetic, the whole operation can be performed under eucaine.

The case recorded above was treated originally by this method, and, although the final operation of resection was for one reason and another somewhat unduly postponed, yet it was eventually undertaken at a time when the general health was very good, and the patient, therefore, in the best condition to undergo what proved a long and rather difficult operation.

ON DOUBLE CASTRATION FOR TUBERCULOSIS OF THE TESTES.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,

Surgeon to the Manchester Royal Infirmary; Lecturer on Operative Surgery, Owens College.

As tuberculosis of the testis is frequently bilateral and in many cases leads to complete disorganisation of both glands, the question of removing the disease by double castration must often arise. It is a somewhat strange fact that though most works on surgery recommend the removal of the affected testis when the disease is unilateral, little or no reference is made to the propriety or otherwise of removing the remaining gland when it becomes similarly involved by an extension of the tuberculous process.

Morris, in his treatise on *Injuries and Diseases of the Genital and Urinary Organs*, does not refer to the question of double castration under these circumstances. Jacobson, in his work on *The Diseases of the Male Organs of Generation*, briefly discusses it, and approves of its adoption when multiple caseating deposits are present in both testes. Senn is apparently not in favour of this procedure, for in his recent monograph on *Tuberculosis of the Genito-urinary Organs*, he expresses the following opinion: "It seems to me that the cases are exceptional in which double castration is justifiable" (p. 77); and he mentions tuberculosis of both testes as one of the positive contra-indications to castration (p. 74).

The question has recently been discussed at some length by Watson Cheyne[1] in his Harveian Lectures on The Surgical Treatment of Tuberculosis, and it is interesting to note that he is opposed to double castration for this condition, on the ground that the loss of both testes exercises a very deleterious effect on the patients; for afterwards they often lose interest in their affairs, becoming lazy, irritable, morose, and in some cases demented or maniacal; "a very considerable proportion have ultimately committed suicide."

These mental disturbances are attributed to the psychical effect of the loss of the testicles and the fear of consequent sterility, and also to the loss of their internal secretion, which is believed to exert a great influence upon the well-being of the patients.

Having during the last few years performed double castration for bilateral tuberculosis of the testes in four patients, a brief mention of the cases may perhaps be of interest, for so far they do not present any of those mental symptoms of which Watson Cheyne forewarns us. Two of the patients (Cases I, III) are following their occupation with their usual interest and energy; one (Case II) is wintering abroad, and was in good health and spirits when last seen shortly before his departure; the fourth (Case IV) is at present in hospital, as mentioned below, suffering from tuberculous disease of the ankle-joint. It is perhaps too early to say what their future will be, but so far the removal of the local disease has had a beneficial effect on their comfort and general health, and as yet there is no evidence of the tuberculous process having extended further onwards since the operation to other parts of the genito-urinary tract. Brief details of the cases are given in the following table, the body of the testis as well as the epididymis being in each instance more or less disorganised, and therefore necessitating removal.

Cases of Double Castration for Tuberculosis.

No.	Age.	Family History of Tubercle.	Date.	Operation.	Other Evidences of Tubercle.	Present Condition.
1	28	Yes	Sept., 1896 Jan., 1899	Left testis Right testis	Both vesiculæ seminales enlarged and indurated at second operation; traces of pus in urine	Good; works as a weaver; no bladder or other symptoms, though vesiculæ seminales are still indurated, and a trace of pus is still present in urine.
2	35	Yes	April, 1898 June, 1899	Right testis Left testis	History of recent pulmonary phthisis; and evidence of disease of right mediotarsal joint at time of first operation	Pulmonary disease quiescent; mediotarsal joint quite recovered; no bladder or other fresh symptoms: general condition good when last seen.
3	24	No	July, 1898 Oct., 1898	Left testis Right testis	Vesiculæ seminales and prostate slightly enlarged and indurated at time of first operation	Good; has gained weight; worked on railway since last operation; free from any bladder or other symptoms.
4	42	No	Sept., 1899	Both testes	Right ankle-joint affected at time of operation on testes; excision of joint performed on Jan. 6th, 1900	Good; no bladder symptoms; ankle-joint healed without suppuration.

Cheyne, in the lecture referred to, expresses his opinion that the operation of epididymectomy, which Bardenheuer was the first to advocate, is worthy of more consideration than it has yet received in this country; and in suitable cases, that is, when the tuberculous disease is confined to the epididymis, recommends its adoption in preference to castration.

I have recently had an opportunity of carrying out this plan of treatment, as a patient, aged 36, whose left testis I removed in July, 1899, for tuberculosis, has again come under my care with a recurrence of the disease in the right epididymis. On January 18th I removed the epididymis and 4½ inches of the vas deferens, leaving intact the body of the testis, which was unaffected. The wound healed readily, and though only a short interval has as yet elapsed since the operation, the result up to the present time is most satisfactory.

Reference.

1 British Medical Journal December 30th, 1899, p. 1781.

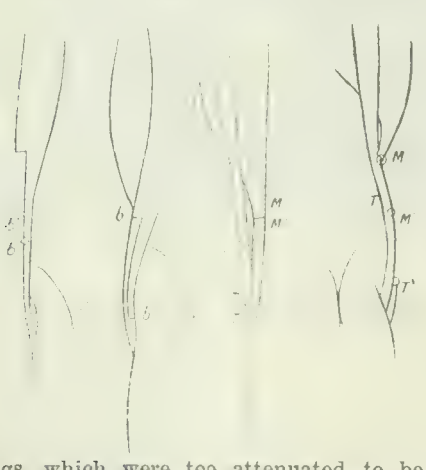
LENGTHENING OF HAMSTRINGS BY OPERATION FOR CONTRACTURE AFTER BURN.

By W. F. BROOK, F.R.C.S.,
Senior Surgeon, Swansea Hospital.

D. H., aged 14 years, was admitted in February, 1899, for contraction of the left knee-joint, due to a burn at the age of 3 years. An extensive cicatricial web stretched from the middle of the leg to a point two-thirds of the way up the thigh, preventing extension beyond a right angle. The head of the tibia was displaced backwards and outwards, the condyles of the femur standing prominently forward. The patella was about half the size, and the anterior surface of the tibia about half the width of those of the other leg; the tibia and fibula, however, were not shortened. He walked with a crutch, the toes only of the left foot reaching the ground.

On March 10th the web was dissected away and fascial bands divided, allowing the knee, with a little force, to be extended to about 135 degrees. Further straightening was impossible without dividing the hamstrings. The biceps tendon was split for 3 inches near its insertion, divided and sutured as shown in Figs. 1 and 2, *b*, *b*.' The inner

Fig 2 Fig 1. Fig 3.



hamstrings, which were too attenuated to be split with safety, were divided transversely at different levels 3 inches apart (Fig. 1, *T T'* and *M M'*). The proximal end of the semi-tendinosus, which had been cut at the lower level, was sutured to the distal end of the semi-membranosus, which had been cut at the higher level (Fig. 3, *T M'*). The other ends were shunted into their neighbours and sutured (Fig. 3, *M* and *T'*). Further extension was still impossible, owing to the shortening of the popliteal nerves and gracilis, but especially the former. It was decided to overcome these by gradual weight extension. The wound was then covered in as far as possible by undermining the surrounding skin and lacing the edges towards each other. This had the effect of completely covering the sutured tendons. The limb was put up in a semi-flexed position on an angular splint.

The wound was dressed on March 18th, the stitches removed, primary union having taken place where the skin edges had been made to meet. Extension from the ankle was now adopted, a 5 lb. weight being applied.

On April 1st the knee was only about 15° from the straight line. The popliteal space presented a large granulating wound. Two days later flaps were raised on either side of the patella and laid across the popliteal space. A fortnight later a similar flap was lifted about 4 inches higher and the upper part of the popliteal space completely covered in. He was discharged on June 3rd with the knee straight, but wearing a Thomas's knee splint and pattern. He dispensed with these a fortnight later, and when seen again in September had complete range of flexion and extension.

On February 15th, 1900, when shown at the clinical meeting of the South Wales Branch of the British Medical Association he walked without a limp and without the slighest effort.

The interesting features of this case are the unexpected ease with which the marked displacement backwards of the head of the tibia was remedied, and the means adopted for lengthening the hamstrings. Splitting is the preferable method, but for the reason mentioned it was considered inadvisable in the case of the inner hamstrings. The mixed action of the muscles, resulting from the procedure adopted, was deemed of little importance in view of the displacement already existing at the joint. And although this displacement has been fully reduced, the power of flexion has not perceptibly suffered. That lengthening is preferable to simple division in contracture of the hamstrings is obvious. The result of the latter is uncertain, loss of power being probably the rule rather than the exception.

FIVE CASES OF COMPLETE FORWARD DISLOCATION OF THE KNEE-JOINT OCCURRING SIMULTANEOUSLY.

By ERNEST V. EAMES, L.R.C.P.&S.Ed., L.F.P.&S.Glasg.,
Heanor, Notts.

The following five cases of true dislocation of the knee-joint may be interesting to readers of the British Medical Journal., not alone on account of the rarity of the accident, but the fact that all the injuries occurred at the same time, which is, I believe, unique. I would also draw attention to the results, which are, I think, instructive, and which to a certain degree may be of assistance in the prognosis of similar cases.

The accident which caused the injuries occurred at the Shipley Collieries, Derbyshire, on April 26th, 1899. A cage in which eighteen men were being lowered into the pit, 200 yards deep, ran away—that is, the engineman lost control of his engine when the cage was about 60 yards from the bottom. Consequently the men were precipitated down the shaft at a terrific speed, which was stopped by the impact at the bottom. At the bottom of the shaft is a hole filled with water called the "sump hole." Across this hole are placed thick planks on which the cage rests when let down. The cage has also two platforms, an upper and lower. The men during transit stand in a rather stooping posture, with, I believe, the legs straight and head and shoulders bent. The dislocations occurred on both platforms. The cage on reaching the planks crashed through them and got jammed before going deeper.

In consequence of delay in reaching the injured men, the miners belonging to the ambulance fixed the injured limbs in temporary splints, and in due course they were conveyed to the Ilkeston Cottage Hospital two miles off. For the sake of clearness I shall describe each case. All the injured men are miners.

Case I.—F. W., aged 30.

Condition of Joint.—On superficial examination of the right knee-joint, I was puzzled as to the exact nature of the injury; the deformity was so great. On closer examination the condyles of the femur were seen to be very prominent, projecting backwards, so that the skin behind the joint seemed ready to burst. The head of the tibia together with the fibula was shot up on to the anterior surface of the femur for quite 2 inches. The effusion, curious to say, was slight.

Reduction.—Under an anæsthetic the dislocation was easy of reduction in the following manner: Facing the patient's feet, traction on the foot was made by one operator, the other used the fingers of both hands on the condyles behind as a lever while the thumbs in front forced the head of the tibia into its place without difficulty.

After-treatment.—The immediate after-treatment consisted in placing the joint on a cushion, without splints, in the position of greatest comfort, and applying hot anodyne fomentations.

After the injury had been diagnosed in one case it was easy of recognition in the others.

Case II.—J. T., aged 27. The deformity in this (left) limb was the same, only not so well marked, the limb being much more fleshy than in Case I. The dislocation was exactly similar, but in addition this man's skin was split across the back of the joint for the whole width, but the wound did not open into the cavity of the joint. There was a large amount of effusion, and also a considerable amount of ecchymosis from the hip to the ankle.

Reduction was easily effected in a way similar to that adopted in Case I, and the after-treatment was the same.

Case III.—C. R., aged 33. This case was similar to Case II. The left knee was split across the back of the joint, and there was great effusion and ecchymosis.

Reduction was easy, and the same after-treatment was adopted.

Case IV.—T. B., aged 21. This case was rather different to the others, owing to the fact that he sustained an oblique fracture of the tibia as well as dislocation of the knee.

The skin was split at the back of the joint in the same way as in Cases II and III. Having reduced the dislocation without trouble the fracture presented some difficulty owing to its obliquity. It was found necessary to put on extension in order to keep it reduced. After about ten days this was replaced by plaster-of-paris. The ecchymosis and effusion into the joint was in this man very great, the former extending in one continuous broad black patch from the great trochanter to the foot.

This was the only really bad result; the man at the present time has a flail joint. He has also got paralysis of the extensor muscles of the foot owing probably to some injury to the anterior tibial nerve at the time of the accident. I have no doubt that the result was not improved by the extension, which was absolutely necessary in order to keep the fracture reduced, but was, I think, the lesser of two evils. He has not improved under electricity and massage.

Case V.—T. C., aged 29. The dislocation (left knee) was the same as the previous cases. The effusion was large in amount, as was also the ecchymosis. The skin was not ruptured at the back of the joint. The dislocation was easily reduced, and the after-treatment was the same as before with the exception that the joint was put up in plaster-of-paris three weeks after the accident. The man got out of bed before he was allowed and tried his weight on the joint, which shot out of place and appeared to be quite useless.

Gentle movement was commenced in all the cases, except IV and V, at the end of a fortnight.

As soon as the men were allowed to move about without crutches I had leather kneecaps made for them, extending well above and below the joint and laced on the outside. These they wore for about three months, some two only, then one by one they discarded them, although they were told that they ought not to leave them off for twelve months, which treatment is in accordance with my teaching. However, colliers will be colliers, and usually under any treatment which becomes irksome will take the reins into their own hands and do as they like. The result in this case being that all the men (except Case IV, who does not improve) were at work under five months from the date of the accident with practically sound knees of the same appearance as before, and of equal usefulness.

I often ask the men if they feel anything of the knee. The answer is invariably "when there's a change in the weather," but the fact remains that they can walk well both above and below ground, and do collier's work, which is no sinecure. The roads in pits are often very stony and uneven, and are in consequence more injurious to a knee-joint than any other, notwithstanding which I have only had one man consult me since they started work (Case III), and that was soon after he began. A few more weeks' rest put him right, and he has not missed a day's work since he once got properly started.

What exactly happened to the ligaments of the respective joints, especially the internal ones, it is not quite possible to say. Undoubtedly the crucial ligaments were ruptured, as the joints appeared to be "flail-like" for some weeks after the injury. In Case IV the knee is still quite unsteady and loose, although he can walk with a support. That the ligaments were to a great extent repaired there can be no doubt, as the men have useful and firm joints with perfect extension and flexion, otherwise they could not do miner's work.

One man, named J. N., aged 45, had his right leg broken just above and below the knee-joint, also about 4 inches above the ankle, but the knee-joint appeared to be uninjured. This would, perhaps, point to less elasticity of bone than in the younger men. Several others had synovitis of the hip, knee, or ankle-joints.

In conclusion, I have to thank Dr. Willis, M.O.H. of Ilkeston, for valuable aid in reduction and in the after-treatment of the cases.

TWELVE CASES OF MAUSER BULLET WOUNDS.

By GEORGE ASHTON, M.B.Vict.,
Civil Surgeon to the Hospital Ship *Nubia*.

The Mauser, which is the official bullet of the Boers, is 1.21 inch in length, weighs 172.83 gr., and is 0.275 inch i diameter. It leaves the rifle with a muzzle velocity of 2,38 feet per second, and the bullet while passing down the rifle barrel makes one complete turn to the left in every 9 inches. It is interesting to note for purposes of comparison that the Lee-Metford bullet, Mark II, used by our troops in South Africa is 1.25 inch in length, weighs 215 gr, and is 0.303 inch in diameter. It leaves the muzzle of the rifle with a velocity of 2,000 feet per second, and the bullet while passing down the rifle barrel makes one complete turn to the right in every 10 inches. The following cases of Mauser bullet wounds are examples of the injuries met with in the present campaign:

Case I. *Penetrating Wound of Thigh.*—Sergeant ——, aged 31, of the King's Royal Rifles, was wounded at Spion Kop on January 24th. He was running to the attack to take a machine gun from the Boers when he was hit in the right thigh. He fell down and bled profusely. He commenced to apply his pocket field dressing when another bullet knocked his helmet off, so he left the dressing alone and lay perfectly still for seven hours, being within the zone of fire all this time. He was then found by the ambulance party and carried four miles on a stretcher to the field hospital. He was admitted to the *Nubia* on January 29th. There was a small black scab on the front of the right thigh, almost exactly in the line of the femoral artery and 2 inches below the middle of Poupart's ligament, and another black scab precisely similar in appearance in the middle line of the back of the thigh and 1 inch below the gluteal fold. He had no constitutional disturbance, took a full hospital diet, and complained of no pain. The scabs came away on February 4th, leaving small cicatrices. He resumed his duties at the front on March 9th, and said his leg feels as strong and well as ever.

Case II. *Penetrating Wound of the Chest.*—Lieutenant ——, aged 25, of the 1st Border Regiment, was wounded at Colenso on December 15th. He was superintending the working of a Maxim gun, when he was hit in the left shoulder. He compares the pain to that of being struck with a large stone. He stood up, in a dazed condition for 30 seconds, but felt a great tightness round his chest, gasped for breath, and began to cough up blood. He fell down and remembers being placed on a stretcher, but then fainted. When he recovered consciousness, he was in an ambulance waggon. He coughed blood for 10 days. Emphysema appeared, extending from the lower costal margin to the clavicles, and was especially marked in the left axilla. All the emphysema disappeared in 7 days. The *x* rays were used and the bullet was localised and removed 14 days after the receipt of the injury on the inner side of the right armpit. He was admitted to the *Nubia* on January 10th. There was then a small cicatrix on the outer side of the left deltoid, 1¾ inch below the angle formed by the junction of the spine of the scapula and acromion and so slightly posterior to the humerus. There was a linear cicatrix 1½ inch long on the inner side of the right axilla over the third and fourth ribs. There was no sign of empyema, no pain on taking a deep breath, nothing abnormal on auscultation or percussion of the lungs. He was very short-winded, even on slight exertion, and had attacks of spasmodic coughing, but no expectoration. Sir William Stokes, when on a visit to the *Nubia*, saw this case, and was literally amazed at the course this bullet must have taken amongst the large blood vessels of the heart. The patient was sent to England on February 2nd.

Case III. *Perforating Wound in Neighbourhood of Elbow: Complete Recovery.*—Private ——, aged 20, Durham Light Infantry, was wounded at Krantskloof on February 5th. He was lying on his face firing, when he was struck in the left elbow. He says it was not very painful, but his arm became numb and useless. He applied the pocket field dressing, and walked two miles to the field hospital. He was admitted to the *Nubia* on February 10th. There was then a small cicatrix on the posterior surface of the left upper arm, 2½ inches above and slightly external to the olecranon. The exit wound also quite healed, was on the anterior surface of the left forearm, rather inclined to the outer border, and 1¾ inch below the elbow fold. There was no swelling and no pain in the left elbow-joint. The circumferences of the left and right elbow-joints were equal. The patient, who resumed his duties at the front on March 9th, said his arm is as well as ever.

Case IV. *Bullet Wound of Pelvis.*—Private ——, aged 27, of the West Surrey Regiment, was wounded at Colenso on December 15th. He was lying on his face firing, when he felt a sharp pain in his left side and also a simultaneous pain inside his right knee. He crawled eight yards to a donga (an empty watercourse), where the field dressing was applied by a comrade to the wound in his side. He then managed to walk 100 yards to a stretcher party, and was carried to the field hospital. For the next five days he passed blood in his urine, and the bullet was removed from the inside of his right knee on December 20th. The *x* rays were not used. He was admitted to the *Nubia* on January 13th. There was a small cicatrix ½ inch above the left iliac crest and 3½ inches posterior to the left anterior superior iliac spine. There was a linear cicatrix 2 inches long on the inner side of the right thigh, the lower end of the cicatrix reaching to the internal condyle of the femur. The urine was free from albumen or blood, and he complained only of a cutting pain in the lower part of the abdomen when he coughed or took a deep breath. He was sent to England on February 2nd.

Case V. *Perforating Bullet Wound of Chest.*—Private ——, aged 30, of the Lancashire Fusiliers, was wounded at Spion Kop on January 24th. He was lying on his face firing when a bullet hit him in the back. He compared the pain to that of being struck by a brick. He at once began to cough blood, and continued to do so in small quantities for three days. The pocket field dressing was applied by a comrade, and he attempted to walk to the field hospital, but after walking ten yards he fell down and fainted, and was carried off by the stretcher party. He was admitted to the *Nubia* on January 29th. There was a small black scab exactly in the middle line of his back, and between the tenth and eleventh dorsal spines. There was another black scab on the right side of the chest, exactly 1½ inch below the right nipple. He had no spinal symptoms, the knee-jerks were good, and he had no paralysis, anæsthesia, or shooting pains in the legs. There was no cough, and the lungs to percussion and auscultation were normal. He complained simply of a general feeling of lassitude and weariness. He slept well and ate well. On February 4th he was allowed to walk a little about the wards, and the scabs came away. On February 10th he left for Netley Hospital.

Case VI. *Bullet Wound of Back.*—Private ——, aged 27, of the West Surrey Regiment, was wounded at Colenso on December 15th. He was lying on

his face firing, when he felt as if he had been struck two heavy blows simultaneously with a hammer, over the left shoulder blade and the bottom of the back. He was unable to walk, and was carried off the field by the stretcher party. The *x* rays were used, and the bullet was removed over the sacrum on December 25th. He was admitted to the *Nubia* on January 11th. There was a small cicatrix ½ inch below the spine of the left scapula and 6½ inches from the middle line of the back. There was a linear cicatrix 1½ inch long over the sacrum, slightly to the left of the middle line. The distance between the cicatrices was 18½ inches. On admission, he complained of shooting pains over the whole of his back, but these gradually disappeared, and he resumed his duties at the front on March 7th.

CASE VII. *Four Wounds produced by the Same Bullet.*—Bugler —, aged 18, of the Dublin Fusiliers, was wounded at Colenso on December 15th. He was advancing to the attack, and was holding his haversack to his side with his left hand, when he was struck by a bullet, which hit his left hand, and then passed through his left thigh. He compares the pain in his hand to being struck with a stick, and felt no pain in his thigh. He went on running for five minutes, but then became faint and fell down, and was removed by the stretcher party. He was admitted to the *Nubia* on January 11th. There was a small cicatrix on the back of the left hand, about ¼ inch above the head of the third metacarpal bone, and an irregular cicatrix about the size of a shilling in the centre of the palm. The third metacarpal bone was thickened and had evidently been smashed. In the left thigh there was a small cicatrix ½ inch above the great trochanter of the left femur, and the exit wound was also quite healed, being situated in the left buttock, 2 inches from the anus. The distance between the two cicatrices in the thigh measured 16 inches. This was a good example of one bullet causing four distinct wounds. He resumed his duties at the front on January 7th, having good use in the fingers of his left hand.

CASE VIII. *Bullet Wound of Chest: Rapid Recovery.*—Lieutenant —, aged 26, of the West Surrey Regiment, was wounded at Fabiana on January 21st. He was leading his company in the advance, when a bullet went through his helmet, and a few minutes afterwards another bullet struck him in the left breast. This was at 9.30 A.M. He compared the pain to that of a heavy blow with a stick. He went on running for twenty yards, but then stopped as he felt his wind go; he lay down and applied his field dressing. He stayed there for six hours, and then crawled down the hill and lay at the foot of it for another three hours, smoking his pipe. He then walked as best he could to the field hospital, arriving there at 9 P.M. He did not cough any blood, and had not been troubled with a cough, nor had he any pain on taking a deep breath. He was admitted to the *Nubia* on January 30th. There was a small black scab 2 inches above the left nipple, and another one 1½ inch outside the angle of the left scapula. He was very fit and ate and slept well, and returned to his duties at the front on February 2nd, having only been twelve days on the sick list.

CASE IX. *Perforating Bullet Wound of Arm: Rapid Recovery.*—Sergeant —, aged 38, of the Inniskilling Fusiliers, was wounded at Colenso on December 15th, 1899. He was lying on his face firing, when he was hit in the right arm. He compared the pain to that of a red-hot poker burn; his arm became numb and useless, but did not bleed much. He walked a quarter of a mile to a stretcher party, who bandaged his arm, and then, as he did not feel weak, walked two miles to the field hospital. He was admitted to the *Nubia* on January 14th. There was a small cicatrix on the anterior surface of the right upper arm at the level of the insertion of the deltoid muscle to the humerus, and another small cicatrix on the inner side of the arm 2 inches distant from the entrance cicatrix. He resumed his duties at the front on January 20th, his arm being quite well.

CASE X. *Perforating Bullet Wound of the Thigh.*—Lieutenant —, aged 23, of the York and Lancaster Regiment, was wounded at Venterspruit on January 20th. He was lying down on the crest of a hill, when he was hit in the left thigh, at a distance of 700 yards. He compared the pain to that of a blow with a coal hammer. The wound began to bleed, so he applied his field dressing and crawled ten yards to cover where he lay for two hours. He was then carried to the foot of the hill, as he was unable to walk, his leg being quite useless. He was left there for another five hours, the rain meanwhile descending in torrents, and was then carried to the field hospital. He was admitted to the *Nubia* on February 8th. There was a small cicatrix on the anterior surface of the left thigh, slightly to the outer side, and 5½ inches above the upper border of the patella. The exit wound was also represented by a small cicatrix on the posterior surface of the thigh, 4 inches above the centre of the popliteal space. The distance between the cicatrices measured round the outer side of the thigh was 6 inches. He walked very well, never had any constitutional disturbance, and only complained of slight pain when he flexed the knee to the uttermost. He resumed his duties at the front on March 2nd.

CASE XI.—*Three Bullet Wounds of Limbs.*—Corporal —, aged 22, of the West Yorkshire Regiment, received three wounds at Willow Grange on November 23rd. He had been in action for two hours, and was lying on his face firing, when he was hit in the right leg. It was very painful, and he tried to get up to retire, but was unable to stand on his right leg, so he lay down again and went on firing again for another hour, when he was hit in the left leg. He did not feel this very much, and lay quiet. He was then hit in the left shoulder, and the pain of this he compared to having a red hot iron applied to the part. The Boer fire was so heavy that his comrades had to retire and leave him, and he was captured by the enemy. He stated that the Boers took him to a farmhouse, which they were using as a field hospital. They dressed his wounds and treated him with the greatest kindness, and sent him back to his own lines the next day. He was admitted to the *Nubia* on January 14th, and was able to walk up the gangway with assistance. (1) There were two small cicatrices on the outside of the left calf, the entrance wound being 2 inches below the head of the fibula, and the exit 4 inches distance from the entrance, lower down and slightly anterior. (2) There was small cicatrix in the middle of the inner surface of the leg over the right tibia, and a linear cicatrix an inch above the ankle-joint, between the tibia and the fibula, where the bullet was removed on December 1st. The middle third of the tibia was greatly thickened and painful on pressure. The bullet was bent, and the cupro-nickel casing torn, forming a jagged fringe. He stated that his right leg was on a back splint for three weeks, and then in plaster-of-paris for a fortnight. He could not bear the weight of his body on his right leg, and walked with a crutch. (3) There was a small cicatrix in the posterior part of the left deltoid muscle, 1 inch below the acromion, and another small cicatrix in the middle line of the back, between the spines of the fifth and sixth dorsal vertebræ. He was sent to England on February 2nd, as unfit for further service in the present campaign.

CASE XII. *Bullet Wound of Humerus.*—Private —, aged 32, of the Dublin Fusiliers, was wounded at Colenso on December 15th. He was lying on his face firing, when he was hit in the right arm. He thought at the time his arm had been knocked off. He dropped his rifle, as his arm was useless. The wounds bled profusely, but when the field dressing had been applied he was strong enough to walk two miles to the field hospital. He was admitted to the *Nubia* on January 13th. The wound of entry was represented by a discharging sinus in the middle of the posterior surface of the right upper arm. Some necrosed bone could be felt on probing, and the middle third of the humerus was greatly thickened and painful. The exit wound, situated in the middle of the anterior surface of the upper arm was quite healed. He refused to submit to having the sequestra removed, and was sent to England on February 2nd.

In the above series of cases the term "small cicatrix" has often been used. I see that Mr. Makins compares the cicatrices left after an uncomplicated Mauser bullet wound to the scars resulting from a large acne pustule, and I know of no better comparison.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

TWIN PREGNANCY WITH CENTRAL PLACENTA PRÆVIA.

A SHORT time ago I was hastily summoned to attend Mrs. W., aged about 40, who had been suddenly seized with very severe hæmorrhage. As she lived about four miles from my house I did not arrive on the scene until about an hour and a half after the messenger had been sent. I found the patient collapsed, almost bloodless, with very weak pulse, and slight pains coming on at regular intervals. On examination the os was found dilated to about the size of half a crown. The bleeding had been most profuse, and still continued with each pain: the whole cervix, as far as I could feel all round, was occupied by placenta, and I could not reach the membranes at any spot. I therefore proceeded to perforate the placenta with my finger, thus giving exit to the liquor amnii, which came away freely. The hæmorrhage, however, still continued with the pains; I therefore introduced my hand carefully into the vagina, and gradually enlarged the opening in the placenta till it admitted my hand, with which I seized a foot, and bringing it down, speedily delivered the woman of a living boy. I then reintroduced my hand through the torn placenta, and delivered her of another living boy in a similar manner. The placenta was expressed about ten minutes afterwards with complete membranes. It was a very large single placenta, with the two cords attached, and had a large hole almost in the centre, through which the children were born. The children were fully developed, and survived. The mother was very weak for a time from loss of blood, but quickly rallied under treatment, and made an uninterrupted recovery.

The interesting point in this case is that the placenta was single and central in position, the large size making it very difficult, if not almost impossible, to separate it, so as to rupture the membranes and perform version. I would like also to draw attention to the ease and rapidity with which the placenta was perforated and version performed with safety to mother and children; for in cases such as these, time is certainly a most important consideration.

Dunmurry, co. Antrim. DAVID P. GAUSSEN, M.D., M.R.C.S.

A CASE OF URÆMIA CLOSELY SIMULATING CEREBRAL HÆMORRHAGE.

W. T., aged 65, was first seen by me on January 29th about 10 A.M. The history given was that about an hour previously he had been found lying unconscious in the road. He had been dragged into the nearest house by two men, where I found him lying back in an armchair in a semicomatose condition. He was pale, with an irregular pulse of high tension and rate about 60 per minute; the arteries were thickened

and tortuous. The apex beat was in the fifth interspace in the left nipple line. The area of cardiac dulness was otherwise normal. There were no cardiac murmurs. He occasionally put his left hand to his head, but he could not move his right arm or leg, which were quite relaxed and flaccid and fell helplessly down on being lifted up. The angle of the mouth was drawn down to the left side when he tried to show his teeth. He became more conscious after a short time and then on being asked questions he became manifestly uneasy, and could only ejaculate "Yes" or "No" now and then. He vomited twice. He remained in this condition until about 3 P.M., when he became somewhat suddenly quite comatose, breathed stertorously and then had some convulsive twitchings on the right side in face, arm and leg—not on the left. The twitchings ceased after a minute or two, but the muscles of the right arm and leg remained contracted and rigid for some time. In about half-an-hour this passed off and he became quite relaxed and remained so for about another half-hour. The respirations continuing stertorous and the right cheek being puffed out with each expiration. Then he quickly regained consciousness, and in about ten minutes could answer any question rationally, and could move all his limbs quite well. It was found that he had bitten his tongue during the convulsions, and had passed his urine under him. He remained dull and heavy for thirty-six hours, and complained of pain on the left side of the head—the parietal region. He slept a good deal, but afterwards he got up, dressed, and went home, a journey of twenty miles by train. He had passed no urine for twenty-four hours after regaining consciousness; then, on the evening of January 30th, the urine contained a large cloud of albumen. On the following morning it contained a slight cloud of albumen, and 3.4 per cent. of urea and abundant water.

This, then, was evidently a case of uræmia. It is interesting as showing how closely uræmia may simulate an ordinary attack of hæmorrhage. Osler points out that cases of uræmic hemiplegia are not uncommon, but I do not think that the attacks often resemble those due to hæmorrhage so closely as in this case. The history of a fit, followed by complete right hemiplegia with aphasia, in a man of advanced age at once suggests the diagnosis of cerebral hæmorrhage on the left side, and the continuance of the condition would make it practically certain. The subsequent convulsive attack, limited to the right side and followed by rigidity, might be explained by a further extension of the hæmorrhage. The prognosis would be consequently very bad. The unconscious micturition and the biting of the tongue in this case during the convulsive twitchings might possibly have helped to a correct diagnosis, as these epileptiform manifestations are so common in uræmia.

I regret that it was impossible to examine the urine when the patient was first seen and find the percentage of urea. This might have afforded valuable information. The case shows how necessary such a proceeding is in cases like this, no matter how clear the diagnosis may seem to be.

Bala, N. Wales. CECIL FIRMIN LILLIE, M.A., M.B.Cantab.

SCLEREMA NEONATORUM.

On February 17th I was asked to see a male child, 3 days old, who presented the following appearances: The skin of the body was very dry and hard—quite hidebound; the scalp was very thick and encrusted with muddy-looking scales with fissures between. The eyelids were tense and thick, the skin of the face almost immobile, but without crusts or scales. The tongue was thick, dry, and red. The skin was especially thick at the back of the neck. The hands and feet from just above the wrists and ankles were quite black and cold, glistening, and seemed asphyxiated and about to become gangrenous, though no sores had appeared. The general temperature was 97°. No abnormal heart sounds were heard, but the heart's action was slow, 60 a minute.

The child cried, though feebly. It could only with difficulty be fed with a spoon. It was anointed with olive oil. Death occurred on February 19th, from asthenia. A necropsy could not be obtained.

The mother was 30 years of age, had several healthy living children. She had a miscarriage, which she said was brought on by a fall, in the seventh month, previous to the birth of the patient. She considered the child was only an eight months child, but it had every appearance from size and weight of a nine months child.

Bristol. JOHN WM. TAYLOR, M.C.R.S., L.R.C.P.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ST. BARTHOLOMEW'S HOSPITAL, ROCHESTER.

ARSENICAL POISONING IN A CASE OF CHOREA.

(Reported by PERCY D. BARKER, M.R.C.S., L.R.C.P., Senior House-Surgeon to the Royal Infirmary, Sheffield.)

A DELICATE-LOOKING little girl, aged 10, was brought to the hospital on February 26th, suffering from diarrhœa and vomiting of a week's duration. There was much languor and great discoloration of the skin. Upon questioning the mother, it was elicited that in January the patient had chorea, and in the early part of the month was taken to a hospital, where she was treated as an out-patient for six weeks. About the end of January the mother first noticed that the skin of the child was assuming a dark colour, this coloration being most marked around the knees and in the axillæ, but this was not mentioned at the hospital. Gradually the pigmentation became deeper and extended to other parts of the trunk, and, as the child was leaving the town where she had been under treatment, her mother thought it wise to seek advice with regard to the coloration above mentioned.

On examination it was found that the whole of the chest, abdomen, back, hips, legs, and buttocks were intensely pigmented, the skin assuming the colouring one sees among Arabs, and that of the axillæ and groins being somewhat darker than the rest. The face and neck were quite free from discoloration, as were the hands and feet. The eyes were inflamed and suffused. The knee-jerks were absent, the patient complaining of aching pains in the calves. The bowels were very relaxed and had been so for six or seven days. Vomiting had been present also for a similar period. As it was thought to be a case of arsenical poisoning she was admitted into the hospital. No medicines were given, and she was put upon a milk diet. The urine was examined for traces of arsenic, which were detected by two different methods. She vomited several times after admission; this symptom, however, subsided after twenty-four hours, and the diarrhœa also ceased in about two days.

At the end of a week the eyes had assumed their normal appearance and the little girl was taking her food well. The skin was now slightly less dark than on admission. At the end of three weeks the pigmentation was very much less marked and in places (the legs and chest) the skin was commencing to resume its normal colour. The knee-jerks were still absent and the patient still complained of feeling very weak on her legs. Upon making inquiries at the hospital where she had been previously under treatment, it was ascertained that she had been taking liquor arsenicalis in gradually increasing doses. Commencing with 2 minims and for the last three weeks 7 minims thrice daily.

Remarks.—This case appears to be of interest on account of (1) the extreme discoloration of the skin produced; (2) the short period over which arsenic had been administered to produce such grave effects; (3) the unusual susceptibility of the patient to this drug; (4) the small doses administered to produce toxic effects; (5) the rapid convalescence of the patient after omitting the drug; (6) the entire absence of any signs of chorea when the patient first attended this hospital as an out-patient.

ISOLATION HOSPITALS IN TURKEY.—As the result of a report presented by Dr. von Duhring Pasha, Professor of Dermatology in the Imperial School of Medicine, Constantinople, the Turkish Government has made a grant of £20,000 for erection of several hospitals for infectious diseases in the Castamoni Vilayet. Eight young medical officers of the Ottoman army have been sent there to take charge of the hospitals.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

F. T. ROBERTS, M.D., F.R.C.P., President, in the Chair.

Monday, April 9th, 1900.

CLINICAL EVENING.

MYOTONIA CONGENITA (THOMSEN'S DISEASE).

DR. L. GUTHRIE showed a boy, aged 10½, who showed general tonic contractions of the muscles of the upper and lower extremities on voluntary movement with difficulty in relaxing the muscles. The spasms were increased after rest and lessened by exercise or by distracting his attention, and persisted during sleep. Gait jerky, no pain or other disorder of sensation. Reflexes and electrical reactions normal. No family history of Thomsen's disease.

Dr. ORMEROD questioned the diagnosis of Thomsen's disease, and recalled a similar case which had been diagnosed as Little's disease.

Dr. SAVILL mentioned the case of a man, aged 35, in whom the spasm could also be brought on by cold. A Committee of the Clinical Society had been unable to arrive at any conclusion as to diagnosis.

Dr. MAGUIRE did not believe that the case was one of Thomsen's disease. The pathological condition, he suggested, was a lack of higher cerebral control. He thought the patient might improve after puberty.

Dr. GUTHRIE, in reply, said it was purely a disease of the muscles, and in advanced cases the muscle striæ had been shown to be much wider than normal.

A PIGMENTED SKIN AFFECTION.

Dr. T. D. SAVILL showed a case presenting a curious pigmented skin lesion, which went on to vesiculation not belonging to any known type of disease.

The patient was a woman, aged 24, who had come under his care for severe headache associated with marked visual error. One lung was also the seat of tuberculosis. For eight or nine years the skin lesions in question had appeared in succession on different parts of the limbs and trunk. Each lesion was preceded by a smarting pain, followed by the appearance of a bruise, which subsequently swelled up and became an erythematous area varying in size from a bean to a half-crown. One or two days later a vesicle would appear on the top of the swelling containing dark-brown serum. These lesions appeared in succession at irregular intervals of a few days. One or more generally came after a severe attack of headache. She had never more than two or three at a time, but at the present moment she had some ten or twelve in different parts of the body showing different stages of the eruption. The patient was also the subject of leukoderma, and in one or two instances the bullous lesion appeared in the centre of a patch of leukoderma, but not generally. The lesions were acutely tender. They did not seem to depend upon injury, and no cause could be discovered.

Dr. Savill remarked that he would be very glad if the Fellows of the Society could throw any light on the case. It seemed in some respects to resemble hæmorrhagic pemphigus, but it did not correspond to the descriptions of that disease.

Dr. EDDOWES asked whether the patient was peculiarly susceptible to bruises, and recalled a case in which an exaggerated susceptibility of this kind had led to a suspicion of illusage.

Dr. SEYMOUR TAYLOR suggested that the lesions might be tuberculous.

The PRESIDENT said that he had never seen any tuberculous skin lesions resembling these.

A CASE OF LATE RICKETS.

Mr. MUIRHEAD LITTLE, showed a girl, aged 17, who had been sent to him by Dr. Frank Cowan of Strood.

She was well until she was 5, when knock-knee appeared and splints and instruments were worn. When 7 years old she took to crutches and had used them ever since. She was said to have broken both thigh bones, one 5, the other 6 years ago. She had never menstruated. Although pale and delicate looking she was well nourished. The height recumbent was 44 inches when first seen six months ago. The head and ribs showed evidences of rickets, the breasts were very ill-developed, the liver and spleen were not enlarged. The lower ends of the radii and ulnæ were much enlarged: there was severe knock-knee and consequent scissor-legged progression, but the tibiæ were straight. On one knee Macewen's operation was performed, but the bones were found to be unusually soft. Skiagraphs showed the bones to be unusually pervious to *x* rays. The lower ends of the radius and ulna showed in a skiagraph marked changes as compared with skiagraphs of normal bones. The length of the patient was increased 3 inches by correction of the knock-knee. The patient's weight was now 49½ lbs. The quantity of calcium present in the urine was less than one-half the average percentage in health. Otherwise the urine was normal. Similar cases recorded by Dr. Drewitt and Mr. Clutton were referred to.

Mr. Muirhead Little said cases of bending of the long bones and the production of knock-knee, etc., were not very uncommon in adolescents, but it was doubtful if they were due to rickets. The marked enlargement of epiphyses in this and similar cases distinguished them from so-called rachitis adolescentium.

Dr. KELLOCK observed that it was more like a disease affecting the bones as a whole—mollities or fragilitas ossium or a combination of the two. It was not usual for the bones to be fragile in rickets, especially if of old standing, and the softness of the bones above the epiphyses was not consistent with rickets. The use of crutches suggested that the patient had pain on standing. He referred to a similar case in which osteotomy of the tibia was followed by non-union, and later both femora fractured. The patient's mother and sisters had both suffered from the same condition in childhood.

The PRESIDENT thought it was probably a case of rickets, though the changes in the chest were not such as one got in the very early cases.

Mr. LITTLE, in reply, said it surprised him to hear that rickets only affected the epiphyses, and that fracture of bones was uncommon in that disease. He pointed out that the enlargement of the epiphyses seen in this case was not met with in mollities or fragilitas ossium; moreover in the latter the urine would contain an excess of lime salts.

ABDOMINAL ANEURYSM.

Dr. H. A. CALEY showed a man suffering from abdominal aneurysm.

There was a history of syphilis 16 years ago. The patient came under treatment owing to a varicose condition of the veins of the left leg and thigh; no history of pain in the abdomen or back. There was a tumour with marked expansile pulsation in the umbilical region, and extending along the course of the right common iliac artery. The sac appeared to have originated in the abdominal aorta, close to the bifurcation, and to have involved both common iliacs, the right more than the left. No perceptible pulse in right external iliac or femoral arteries, but exaggerated pulsation along the course of left external iliac, which suggested some associated dilatation of that vessel. The left femoral pulse was unaffected. With absolute rest, restricted diet, and large doses of potassium iodide, the pulsation had much diminished, the tumour was more solid, and the distension of the veins of the left leg had almost disappeared.

The chief points of interest were the absence of pain, the considerable vertical extent of the arterial lesion, and the marked improvement under strict treatment.

PSORIASIS AND OSTEO-ARTHRITIS.

Dr. ALFRED EDDOWES showed a case of psoriasis and osteo-arthritis in the same patient, a married woman, aged 31.

She was well grown, but slight; married ten years, no children; no history of rheumatism or gout in family. The outbreak of psoriasis commenced seventeen years ago simultaneously with the appearance of menstruation, a coincidence not uncommon. Five years ago she suffered a good deal of worry and mental strain, and four years ago the enlargement of the joints commenced.

Gouty and rheumatic symptoms often accompanied psoriasis, but seldom in such a marked degree as in this case. Dr. Eddowes showed photographs illustrating a similar combination of disease in a male patient, aged 33. His third case exhibited was that of a youth suffering from simple general ichthyosis.

Dr. KINGSCOTE referred to a similar case successfully treated by keeping the patient in a continuous bath for three weeks, and administering thyroid extract, the improvement being maintained subsequently by Turkish baths.

DIVERS' PARALYSIS.

Dr. ROBERT MAGUIRE showed a deep-sea diver, who, after coming abruptly to the surface from a depth of about 170 feet, was found to be suffering from paraplegia, due probably to the sudden diminution of pressure on the peripheral vessels. He had had several previous attacks, and was improving.

Dr. GOSSAGE said the patient had been under his care several times with similar symptoms. There had been some loss of sensation in the legs.

Dr. CALVERT mentioned that there had been two cases of divers' paralysis during the last five years at St. Bartholomew's.

CASE OF OLD FRACTURED PATELLA WITH HYDRARTHROSIS.

Mr. F. C. WALLIS showed a patient, aged 69, who fractured his left patella thirty-five years ago, and had refractured it twice since, the last time four years ago. He had followed his occupation (carpenter), and the joint was now much swollen.

HARVEIAN SOCIETY OF LONDON.

W. H. Lamb, M.B., President, in the Chair.

Thursday, April 5th, 1900.

Chronic Purulent Nasal Discharges.

Mr. Edmund Roughton, in introducing a discussion on the diagnosis and treatment of chronic purulent discharges, said that a diagnosis should be sought for by means of (1) questions, (2) rhinoscopy, and (3) certain special methods of examination.

(1) Questions: By questioning one ascertained the nature of the discharge, whether it was unilateral or bilateral, continuous or intermittent, affected or not by change of posture, offensive to the patient or to others, and whether it was accompanied by pain or headache; (2) by rhinoscopy, aided with the nasal probe, one endeavoured to localise the situation of the pus, at the same time directing attention to the occurrence of polypi or granulations, atrophy of the mucous membrane, crusts, ulcerations, necrosis, adenoid growths, nasal obstruction, and the possible presence of a foreign body; (3) special methods of examination were employed when the information gained by questions and by rhinoscopy led to a suspicion of disease of the accessory sinuses.

He limited his remarks on treatment to diseases of the accessory sinuses. In antral empyema the indications for treatment were (*a*) removal of cause, (*b*) evacuation and drainage of pus, (*c*) antiseptic irrigation, (*d*) removal of morbid material when present. In most cases the treatment should be commenced by alveolar drainage, using a good sized tube. When this method failed after a fair trial, recourse should be had to the radical operation through the canine fossa. The treatment of empyema of the frontal sinus was divided into intranasal and extranasal. The former comprised removal of the anterior part of the middle turbinate and irrigation of the cavity through the infundibulum. These methods should have a fair trial, and should always precede extranasal treatment. The external or radical operation was recommended as being free from danger, and offering a very good prospect of cure at the expense of a scarcely visible scar. The operation should be urged when there was pain or other evidence of imperfect drainage. The treatment of ethmoidal suppuration consisted in removing the middle turbinate and scraping out the affected cells, taking care not to transgress the anatomical limits of the lateral mass of the ethmoid. Any direct operative attack upon the sphenoid should only be undertaken after most careful consideration. Mr. Roughton agreed with Dr. Dundas Grant that dulness on transillumination was caused more by thickening of the antral lining than by pus in its cavity, and consequently that absence of shadow should be regarded rather as a favourable prognostic than a negative diagnostic sign. The fatal results referred to by Dr. Tilley and Dr. Lack were more often due to the disease than the operation; when really due to the operation they were attributable to two causes acting in combination, namely, sepsis and absence of efficient drainage.

Dr. Herbert Tilley agreed that the pain in chronic suppuration of the accessory cavities was due to the accumulation of pus under pressure, and not to inflammation of the nerves in the walls of the sinuses, as had recently been suggested by Mr. J. G. Turner. In support of his opinion, Dr. Tilley cited cases of antral and frontal sinus suppuration in which the pain disappeared immediately free drainage had been secured by removal of a tooth, irrigation of the antrum from the nose, or removal of the anterior half of the middle turbinal and of obstructing polypi and granulations from the region of the middle meatus. The mucous membrane cushion between the middle turbinal and the outer wall of the nose was not pathognomonic of antral suppuration; it occurred most frequently in conjunction with that disease, but was sometimes present in other chronic inflammatory conditions, especially when these were located in the middle meatal region. In testing for the presence of pus in the antrum by transillumination, the patient's comparison of the subjective sensation of light in the eyes was sometimes of more value than the surgeon's comparison of the facial illumination. The speaker strongly supported alveolar drainage as, at any rate, a preliminary measure in all cases of antral suppuration. It was a simple mode of treatment; it often cured cases, and, furthermore, it afforded the patient the easiest means of treating himself in the intervals between his visits to the surgeon. Puncture in the canine fossa he had relinquished because of the inflammatory swelling of the soft parts produced by the traumatism; the head of the tube was apt to become embedded in the swollen tissues, and drainage did not occur from the lowest part of the cavity. Intranasal drainage was advisable where alveolar puncture would necessitate the removal of a sound tooth, an uncommon contingency in the speaker's experience. Intranasal drainage necessitated a more serious surgical operation, and many patients found great difficulty in finding the naso-antral opening. To obviate this difficulty it might be necessary to remove the anterior end of the inferior turbinal. If the alveolar method failed after a fair trial, as a general rule the speaker advised the radical operation which Mr. Roughton had described. Failure to cure by this means was sometimes due to insufficient curettage of the upper and inner region of the antrum, which was cellular in structure, and in close relationship with the anterior ethmoidal cells, which were often diseased. The speaker had tried irrigation of the frontal sinuses in a few cases of chronic suppuration, but they were only benefited, never cured. The solutions used included boric acid, carbolic lotions, hydrogen dioxide solution, and iodoform emulsion. There were undoubted risks in the radical operation, and at least six fatal cases of septic osteomyelitis had been recorded, but the present method of treatment reduced such risks to a minimum. The speaker advised: (1) Preliminary intranasal treatment involving removal of the middle turbinal and all chronic inflammatory products from the middle meatal region; (2) providing free drainage into the nose at the radical operation; (3) removal of all degenerate mucous membrane from the sinus by curettage and then packing it frequently until a healthy mucous membrane was produced. The external wound might then be allowed to close, and remarkably little scarring was produced. If the sinus was small, the whole anterior wall was removed and the cavity obliterated. If the sinus was a very large one, only a portion of the anterior wall was removed, and the cavity treated as already stated. In the treatment of suppurating ethmoiditis he advocated thorough intranasal treatment before adopting external operations. By the adoption of the former method a cure might sometimes be brought about, but even failing it the improved condition was so marked that the patient would often consider himself cured.

Drs. Scanes Spicer, Dundas Grant, Wm. Hill, StClair Thomson, and Lack also took part in the discussion.

HUNTERIAN SOCIETY.

Dundas Grant, M.D., F.R.C.S.Eng., President, in the Chair.

Wednesday, March 28th, 1900.

The Therapeutics of Gout.

Dr. David Ross read a paper on some points in the therapeutics of gout. Despite extensive research, the pathology of gout remained enveloped in a cloud of theories, deduced or implied from a mass of conflicting experimental facts. Uric acid had been searched for so keenly, that observers might have overlooked other quite as important causal factors. Even the late Sir W. Roberts declared that he himself was getting more and more in doubt whether uric acid covered the whole field of gout. From an extensive experience with both media, he denied that uric acid and its compounds behaved exactly in the same way with the so-called standard solvent as with blood serum, as asserted by Roberts. He was also opposed to the quadriurate theory, and believed that the uric acid compound existed as a mixture of biurate and uric acid in loose combination and in varying proportion of the molecules. He believed that goutiness was induced by abnormal albuminous disintegration, chiefly caused by deranged hepatic metabolism, and that the initial difficulty was a digestive one. He considered that uric acid was a normal constituent of blood, hence one had to look elsewhere for the materies morbi of gout. While different opinions were entertained as to whether the original deposition of biurate was the cause, the accompaniment or the result of the local affection, an explanation of the gouty paroxysm was still wanted. He reviewed the theories of Klemperer, Berkart, Schmoll, Kolisch, and others, and concluded that they did not possess such knowledge of the pathology of gout as would be required to formulate a scientific course of treatment. At present the man rather than the ailment had to be treated; the diet and general regimen had to be adopted

in every individual case. A pill of colchicum and mercury given over-night, and followed by a saline aperient in the morning, not only improved the general condition in goutiness, but very often warded off declared gout. Differing from Sir W. Roberts and Dr. Luff, he considered sodium salts very useful in the gouty state, and could not believe that they were capable of inducing paroxysmal gout. Although no adequate scientific explanation of the nature of its action could be given, colchicum was the remedy *par excellence* in acute gout. Its action was probably that of a powerful cholagogue, and of a cardio-vascular depressant. While the evidence as to the efficacy of sodium salicylate was contradictory, he saw no necessity for calling those cases rheumatic in which it had succeeded when colchicum had failed. Dr. Ross then described in detail the result of his experiments with piperidine, piperazine, lysidine, and urotropine as solvents for uratic deposits, and concluded that piperidine was found to be the best solvent.

Dr. A. P. LUFF stated that although the composition of sodium quadriurate might be found on analysis to vary in different samples, it did not destroy his faith in the existence of that body. It was a very difficult substance to prepare, owing to its extreme instability. The presence or absence of pain in different cases of gout depended, he believed, upon the rapidity of deposition. It was the suddenness of the deposition which caused the pain. In his opinion the gout producing or inducing properties of some wines and beers were due to the presence of ethereal salts, which in all probability powerfully affected the metabolism of the liver, and possibly of other organs. His own experience was that, although sodium salicylate was of great use in rheumatic conditions, it was not of use in true gouty conditions.

Dr. FORTESCUE FOX held that, whilst the chemistry was still in doubt, gout might accurately be called a disorder of metabolism. It was often hereditary, often brought about by changes and phases in the individual—such as the changes incident to the epoch of middle age—and often also unaccompanied by articular manifestations. He believed that alcohol in all forms tended to provoke and increase this disorder. In some cases a very minute quantity of wine aggravated all the symptoms. Elimination was the secret of successful treatments, and waters and baths were only operative as they effected a gradual restoration of normal elimination. Setting aside the internal use of waters, very much could be done by baths alone, as at Aix-les-Bains, in encouraging elimination by the skin. Such treatment in his experience usually produced a recrudescence of acute symptoms, a more active phase of disorder replacing the chronic phase; but this, if not excessive, was, he believed, of favourable augury. He anticipated that in time it would be recognised that all cases of gout should be treated by balneological methods.

Dr. GLOVER LYON pointed out the impossibility of framing a chemical method of treatment founded upon the present imperfect knowledge of the chemistry of gout. Too much stress was laid on mere solvents in the removal of urates from the cartilages, which after all were living tissues, and capable of taking an active part in expelling deposits. He advocated mixed and varied diets as being the most easily assimilated.

Dr. HINGSTON FOX said that the cases of gout which came before him were mostly connected with sedentary habits and over-eating and over-drinking. He thought that much of the benefit of spa treatment was due to the insistence on early rising, walking in the fresh air, and regulated diet.

After some remarks by Dr. A. DAVIES,

Dr. BUTLER HARRIS drew attention to the mitigating effect of collodion painted on an inflamed gouty joint. The pain was speedily relieved, and the inflammation lessened by such treatment. He had first learned the method from Dr. Vivian Poore. He remarked on the influence of other diseases in producing acute attacks of gout; and instanced a case in which, after several attacks of influenza, the patient invariably was laid up with acute articular gout, each time in a different joint. As regarded the etiology of gout he mentioned that clinically the evidence was as obscure as it was experimental. Two cases recently had come under his notice: the attack was evidently brought on by worry in the case of the first patient, who was lean and ill-nourished. In the case of the second, a plethoric woman, by insufficient exercise during a long and trying winter. Both patients were teetotalers. All one could say clinically was that the attacks were the accumulated effects of insufficient metabolism—effects of widely different origin.

The PRESIDENT was surprised to hear Dr. Luff's depreciation of the value of sodium salicylate; he prescribed it with great frequency in combination with potassium bromide in cases of gouty cachexia or irregular gout, and found it of immense value in such manifestations as were apt to come under his notice. He was often guided in his diagnosis by the existence of nervous irritability, increased pulse tension, the history of typical gouty attacks in the patient or his predecessors, especially when arthritic disturbances were excited by dietetic rather than meteorological conditions. His friend, Dr. Ogier Ward, had related to him a very striking instance of freedom from gout following the habitual use of cider instead of malt liquors. He thought that vegetable acids might be more used, both dietically and therapeutically, than at present. In Germany the acid of the apple was used in the preparation of malates and pomates.

Dr. DAVID ROSS briefly replied.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

J. W. MOORE, M.D., P.R.C.P.I., President, in the Chair.

Friday, March 9th, 1900.

A FATAL CASE OF CONGENITAL BULLOUS ERUPTION.

DR. R. H. KENNAN read a paper on this subject. He discussed the two great classes of cases in which bullæ appear on the infant—the so-called pemphigus neonatorum and the pemphigoid eruption of hereditary syphilis. He also referred to Dr. Wallace Beatty's paper on Epidermolysis Bullosa, published in the *British Journal of Dermatology*, vol. ix, p. 301, August, 1897. The principal points of interest in his case were the fatal termination, the remarkable localisation of the bullæ, the complete absence of history or sign of syphilis in either parent or surviving child, and of evidence of this taint *post mortem*, though the organs, epiphyses, and skin were carefully examined microscopically. What etiological factor produced the disease he was obliged to leave an open question.

After remarks from Dr. LANGFORD SYMES,

Dr. WALTER SMITH said that bullæ were produced on the skin under such diverse conditions that it was doubtful how far they were to accept a particular generic word such as pemphigus. He objected to placing a skin affection due to a distinct etiological factor, say syphilis, under the same name as one not due to a distinct cause. He agreed with Dr. Kennan as to the non-syphilitic character of his case. They often saw pemphigus in connection with acute dermatitis, such as erysipelas, and even in ordinary scabies he had seen very large bullæ occur, as well as in cases of neuritis, such as herpes zoster and traumatic affections of nerves. He would be inclined to define pemphigus as "an eruption of abruptly defined, fragile, thin-walled bullæ, upon a non-inflamed surface, symmetrical, and prone to relapse." They might be content to leave Dr. Kennan's case in the class of those due to an unknown cause, though the big word, trophoneurosis, might please some. Even in cases of ordinary pemphigus of a relapsing sort repeated bacteriological examination had revealed nothing definite.

Dr. KENNAN briefly replied.

A CASE SIMULATING A PERFORATING GASTRIC ULCER.

Dr. J. W. THOMPSON related the following case as illustrating the difficulty of diagnosis in some cases of perforating gastric ulcer.

A woman, aged 23 years, with a tuberculous family history, five or six weeks previously, commenced to suffer from stomach trouble. At first she had discomfort and flatulency after food, with a tendency to nausea and a failing appetite. Later she complained of pain, at first localised to the pit of the stomach afterwards extending to the back, which commenced shortly after food and lasted a couple of hours, and was frequently followed by vomiting. She never suffered from constipation. About one hour after having bread and milk for supper, which was followed by the usual pain and discomfort, the pain in the epigastrium became suddenly severe and agonising, and was followed by vomiting. The vomited matter was said to be dark, and reddish in colour, otherwise there was no evidence of hæmorrhage. The pain got worse during the night and became more diffuse. The patient looked thin and anæmic. The epigastrium and upper portion of the abdomen extending towards the left was distended, rigid, and tender on percussion; the liver dulness

was not affected. She was admitted to Jervis Street Hospital, and it was decided to operate. Just before operation, and about fourteen hours after the supposed perforation, all the abdominal symptoms had become more aggravated, the temperature was 102°, pulse feeble and 140 per minute, and respiration shallow and thoracic, and 34 per minute.

Mr. Conway Dwyer described the operation.

The abdomen was opened by an incision extending from the ensiform cartilage to a point slightly to the left of the umbilicus. Owing to the great rigidity of the left rectus, which persisted even under deep ether narcosis, it was found necessary to enlarge the incision transversely before sufficiently free access could be obtained for exploration. The anterior wall of the stomach presented nothing abnormal. Before examining the posterior wall it was deemed advisable to explore the abdominal cavity lower down. The incision was accordingly enlarged in a downward direction, and a coil of jejunum was brought into view in an intensely congested condition, and having on its surface two gangrenous patches situated closely together, and involving a third of the calibre of the bowel. No perforation had then taken place, but such a result was inevitable had the operation been delayed. The coil was drawn out, isolated by gauze (iodoform) strips, the contents of the loop gently pressed downward, clamp applied, and resected; the junction of the divided intestine effected with a Murphy's button, the abdominal cavity was flushed with sterile saline solution. The wound was closed, all but the lower angle, through which was carried a gauze drain, and placed close to the sutured bowel. The subsequent history was uneventful. The bowels moved five days after the operation, and the button came away on the eighteenth.

The case was of interest as exhibiting the liability to error in interpreting the precise conditions producing severe abdominal symptoms. The previous history, the sudden nature of the attack, the localisation of the pain, all pointed to a perforating gastric ulcer—in fact, the physical signs and symptoms of this condition were present in their due sequence and severity, with the single exception of unaltered area of liver dulness; the absence of this last had, however, frequently been noticed. The lesion present was, he thought, due to infarction. The lesson to be learned from such cases was to operate at once.

Remarks were made by Dr. R. Travers Smith, Dr. Craig, Dr. Doyle, Dr. Kirkpatrick, Dr. Croly, Dr. Littledale, Dr. Peacock, Dr. Parsons, and the President; and Dr. Thompson and Mr. Dwyer replied.

Cases.

Dr. Conolly Norman showed cases illustrating the relations of insanity to tabes dorsalis, on which remarks were made by Dr. Walter Smith and Dr. W. R. Dawson.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Professor C. J. Wright, President, in the Chair.

Friday, April 6th, 1900.

Return Cases of Scarlatina and Length of Infectivity. Mr. A. E. Pearson introduced a discussion on the infectivity of scarlatina. As an aid to diagnosis of scarlet fever and kindred diseases he urged a more frequent resort to bacteriological examination, and drew attention to Dr. Klein's reports to the Local Government Board on the micro-organism of scarlet fever. By systematic bacteriological examination, in private and in hospital practice, errors of diagnosis and the so-called "return cases" might in a measure be prevented. The length of infectiousness of cases of scarlet fever might also be more accurately determined. Many discharged scarlet fever patients, though having passed through a fairly long isolation period, and though apparently quite well, appeared in some cases to be the cause of further dissemination of the disease. A bacteriological examination of supposed scarlet fever throats would in many cases be the means of excluding diphtheria from the diagnosis. He mentioned a case presenting all the signs of scarlet fever of an anginosa type from which he was able to cultivate diphtheria organisms. He read extracts from Dr. Klein's reports on the subject of the scarlet fever micro-organisms, and showed several specimens of the streptococcus conglomeratus or streptococcus scarlatinæ (Klein). Mr. Pearson has made 100 consecutive cultivations for this organism, and was able to demonstrate its presence in 38 cases. He was inclined to urge from a somewhat cursory investigation that this streptococcus was the specific organism of scarlet fever. Mr. Pearson then dealt with hospital "return cases" of scarlet fever. In defining a "return case," he thought a specific limit of the "interval" (or incubation period) elapsing between the infecting and infected case should be insisted on. This should not exceed a week. If longer some other cause of infection was probable. He suggested that in some cases infection remained latent in houses from which scarlet fever patients had been removed. Several second cases, admitted from the same house, occurring before return home of the first case, and with a seven or eight weeks' interval, had come from time to time under his notice. The percentage of return cases (having "intervals" of over and under one week) were about 1.5 per cent. to total cases admitted. The possible length of infectiousness of scarlet fever patients was next discussed. Mr. Pearson thought it unfortunate that a six weeks' isolation had become so fixed in the minds of the public as a sufficient limit. Often from his own experience (and he would draw attention again to the result of Dr. Klein's investigations) it was several months. He thought that most often the cause of infection in long cases lay in the nasal and aural cavities. Mr. Pearson drew attention to the greater persistency and more frequent occurrence of otitis and rhinitis in the winter and spring months. He thought that perhaps a chill during disinfection and occasionally altered conditions of life after leaving hospital tended to restart otorrhœa and rhinorrhœa. He would increase the minimum isolation limit to eight weeks in winter and seven weeks in summer. Mr. Pearson thought that in some cases the cause might be traced to inefficient or incomplete disinfecting methods. Steam, used for clothing or bedding, when allowed to pass from a saturated to a superheated state became ineffectual. It was necessary to urge this on workmen using steam disinfectors. Again, chemical disinfectants were often wrongly used, neglecting their strengths as germicides and the relation of germicidal strength to bulk of infected matter. He suggested two exposures of infected clothing to saturated steam. Another possible cause of reinfection in previously infected houses was the disposition of householders to withhold articles from a disinfecting process which they thought might damage them. These were often brought out on the return of the patient.

Dr. Spottiswoode Cameron regarded the duration of the period of infectivity as an unknown quantity. Mr. Wheelhouse, he believed, used to speak of the period of isolation for scarlet fever as three months. There were probable cases in which there was comparatively little risk of the patient himself conveying infection at so short a period as three weeks from the commencement of the illness. There were, however, strong grounds for supposing that infection had been conveyed by patients themselves even after three months. For his own part, when asked, he was inclined to measure the duration of the infective period by months rather than by weeks. It seemed to him likely that the patient remained infective until he was well. The scarlet fever germ was probably present, and capable of being conveyed in an active form, until the tissue had so far recovered as to be able to destroy it. As long as there was catarrhal discharge from the nose, throat, ears, and possibly the kidneys, it was probable that that stage had not been reached. Whether the scarlatina germ was Klein's streptococcus, again described by Kurth as S. conglomeratus, or not, did not appear to have been decided. It did seem, however, as if patients kept in the ordinary wards were liable to get their discharges reinfected. In any case he thought the proper course was to place convalescents after a proper disinfection of nose, mouth, and pharynx, as well as clothes, in an uninfected ward. He should prefer after a time to transfer them again, after a second disinfection, to another ward before finally sending them home. The practical difficulty, however, was one of accommodation. Although it was right to canvass very carefully the causes of any return cases, fortunately after all these were not very numerous in proportion to those isolated in hospital; and while a few cases of scarlet fever might thus occur, they were very few indeed compared with the large number that were prevented by an early isolation of patients.

Dr. Cheetham, Dr. Long, Dr. Hellier, Dr. Eddison, and the President also joined in the discussion; and Mr. Pearson replied.

A Case Simulating Perforation of the Stomach.

Dr. J. Stewart read a paper on a case in which he had performed laparotomy for symptoms suggestive of chronic gastric perforation.

The patient, aged 25, had had double oöphorectomy performed for severe pelvic pain two years before. There had been several attacks of hæmatemesis before that, and afterwards all the signs of ulcer of the

stomach, but no hæmatemesis. On Tuesday, May 16th, 1899, she was seized with acute pain in the upper part of the abdomen on the left side, with pallor of face and rapid pulse. A dull area subsequently developed in the stomach area, and at a consultation with Mr. Moynihan chronic gastric perforation with limiting adhesions was diagnosed. Several attacks of this kind took place, so the abdomen was eventually opened. The stomach was found quite healthy and nothing abnormal found, but the patient had made a satisfactory recovery from her pain, ate a good solid diet, and attended to her duties.

Mr. Moynihan and Dr. Churton took part in the discussion; and Dr. Stewart replied.

Cases and Specimens.

Cases and pathological specimens were shown by Dr. E. O. Croft, Mr. Littlewood, Dr. Bronner, Mr. B. G. A. Moynihan, Dr. T. Wardrop Griffith, Dr. Algernon Wear, Mr. Secker Walker, Mr. Walter Thompson, Mr. Lawford Knaggs and Mr. P. J. Cammidge, Dr. Hellier, Mr. Jessop, Mr. Constable Hayes, Mr. W. H. Brown, Dr. Barrs, Mr. P. J. Cammidge, Dr. Trevelyan, Mr. A. L. Whitehead, and Dr. Churton.

West London Medico-Chirurgical Society.—At a meeting on April 6th, Dr. J. B. Ball, President, in the chair, Mr. Percy Dunn read a paper on purulent ophthalmia in children and its treatment. He discussed the subject under the three heads etiology, prophylaxis, and treatment. In regard to the second, he laid great stress on the value of Credé's method, and showed by statistics how vastly it had been instrumental in reducing the prevalence of the disease. For treatment he relied on a weak solution of nitrate of silver (1 gr. to an ounce of water) frequently applied, together with a solution of sulphate of zinc. By means of these solutions the parents of the patients could be safely allowed to carry out the treatment for themselves. When corneal complications arose he advocated the instillation of eserine, which was most valuable. He condemned the use of perchloride of mercury solution in these cases, as they frequently excited irritation, and, moreover, because the perchloride was not an astringent. Remarks were made by the President, Drs. Herbert Snow, T. R. Atkinson, G. D. Robinson, H. P. Potter, and Messrs. H. Rogers, W. McAdam Eccles, and Kenneth Scott. Mr. Percy Dunn replied.—Dr. Herbert Snow read notes of 3 cases illustrating the clinical behaviour of gall stones.

Case I. A small gall bladder with rigid fibrous walls densely packed with gall stones closely simulating cancer of the stomach; cholecystectomy; recovery. Case II. Removal of gall stones from common duct and drainage of gall bladder, followed by biliary fistula; cholecystectomy. Recovery, with nocturnal emission of bile groin fistula. Case III. Abdominal tumour simulating malignancy. Suppuration and discharge of gall stones. Spontaneous cure of the mucous fistula.

Remarks were made by the President, Messrs. Richard Lloyd and McAdam Eccles. Dr. Snow briefly replied.—Mr. Percy Dunn then proposed the following resolution:

That a Subcommittee of the Society be appointed to consider and report upon the advisability of recommending that ophthalmia neonatorum be made a notifiable disease in all cases attended by midwives.

Dr. G. E. Shuttleworth seconded the motion.—After some remarks by Drs. Snow and Atkinson, the following gentlemen were elected members of the Subcommittee with power to add to their number—Drs. G. E. Shuttleworth, G. D. Robinson, H. P. Potter, T. R. Atkinson, and Messrs. Percy Dunn and Kenneth Scott.

REVIEWS.

SOME RECENT WORKS ON SURGERY.

The object which Mr. Stonham had in view in preparing his new *Manual of Surgery*[1] was, we learn, to give a succinct account of advanced surgery in both its pathological and clinical relations, and thus to present for the use of practitioners and students a complete manual in which he had embodied so far as possible the results of his experience as a hospital surgeon and teacher. Mr. Stonham, though he has conceived a good arrangement of the different subjects of surgery, has, it must be acknowledged, failed to carry out a very satisfactory scheme in accordance with the number of his volumes. The first volume deals strictly with general surgery, but the second volume on injuries and the third on regional surgery both contain subjects which seem out of place under these respective headings. It would probably have been more convenient both for author and reader had the simple Continental method been followed in this case, the first volume being devoted to general, and the other two volumes, each of equal size, to special surgery. This is essentially a student's book, and well fitted to meet the requirements of those who for examination purposes need a thorough training in the general principles and the scientific bases of surgical work. References to old and obsolete matter—to so-called classical topics—is carefully avoided. Much of merely historical interest has been purposely avoided, and a repetition of what is already in print, but now out of date, has been regarded as undesirable. Certain rare conditions are only treated of briefly. The surgery presented is in all respects quite modern. The author, in dealing with his very abundant material, has evidently endeavoured to render his book comprehensive, and so his descriptions are often, through too much compression, both dry and obscure. The first volume being devoted to general surgery, deals, for the most part, with matter of pathological interest. The chapters on the degenerations, on inflammation, and on suppuration will be found a very useful introduction to special and more elaborate treatises on these subjects. A very lucid and instructive, though brief, review of bacteriology is followed by a full and sound description of septic and infective diseases. The chapter on the important subject of tumours is disappointing, being far too much compressed to afford any satisfactory instruction on many forms of new growth. The concluding section on deformities seems to be of unequal merit, some of the subjects—spinal curvatures and genu valgum, for instance—being ably and fully discussed, whilst others are not adequately treated. Surely in a comprehensive treatise on surgery a single page is far from sufficient for a practical review of the malformations of the rectum and anus. The chief features of the second volume, in which are described methodically, though here and there too briefly, the different forms of both general and local surgical injuries, are good and very instructive chapters on the treatment of wounds, on hæmorrhage and injuries of the spine and cord, and also an excellent chapter by Mr. Donald Gunn on injuries of the eye. The third volume, which we regard as the most satisfactory part of this manual, affords, on the whole, a very useful review of the clinical features and the treatment of surgical diseases. The chapters on the diseases of the large cavities are good, though occasionally faults both of omission and commission have to be noted. We find no description of interstitial and properitoneal hernia, and the author's views on the treatment of appendicitis do not seem to be very sound or in accordance with recent opinion. The statement that a retained appendix after an attack of suppuration "does not cause any subsequent harm" surely is not in accordance with general experience. As there are now so many excellent special works on operative surgery, varying in size and cost, and adapted to the needs of student or practitioner, we are disposed to regard any detailed references to this branch of surgical work in a general treatise as so much waste of space. Certainly Mr. Stonham has not dealt so fully with this part of his subject as to render reference to other works unnecessary. His directions on ligature of special arteries are clear and correct, but are too compressed. The descriptions of the special amputations are in most instances far too brief for practical purposes, and we fail to find any references to certain amputations; for instance, Farabeuf's long external flap operation on the leg and the different forms of elliptical amputation, which fully-trained students are expected to know. The *Manual* is supplied abundantly with good and clear illustrations, many of which are original; whilst of those taken from other sources most are new to English students, and have been selected with much care and judgment. The efforts made by the author to render his book complete and thoroughly useful are indicated by the addition at the end of each volume of a full and well-arranged index.

A general welcome will be given to a further edition of this *Textbook*,[2] which has, as might have been antici-

[1] *A Manual of Surgery.* By Charles Stonham, F.R.C.S.Eng., Senior Surgeon to the Westminster Hospital; Lecturer on Surgery and on Clinical Surgery, and Teacher of Operative Surgery, Westminster Hospital, etc. In three volumes. London: Macmillan and Co., Limited. 1899. (Demy 8vo, pp. 1,451. 446 illustrations. 25s. 6d.)

[2] *An American Textbook of Surgery for Practitioners and Students.* By Eleven Authors. Edited by William W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. 2 vols. Third Edition, thoroughly revised. London: Rebman Limited. (Roy. 8vo, pp. 1228. 535 illustrations. 42s.)

pated, on account of its intrinsic merit and of the high repute of the editors and their co-workers, been widely accepted in America as authoritative. In its revised form it presents a complete review of modern surgery, and Dr. Keen and Dr. White may be congratulated on the success of their efforts to render every reissue of their book a full and useful source of information, both to student and practitioner, of the latest developments of surgical work. The tendency of works of this kind to increase in course of time to an inconvenient bulk has so far been prevented by the exclusion from the present edition of chapters on the surgery of the eye and ear; a course taken with much reluctance, as the contributions on these subjects were much appreciated by the editors. The careful revision of previous editions and the numerous additions made to the book in its latest issue will undoubtedly render it still more acceptable to surgeons on both sides of the Atlantic. The new sections on skiagraphy, serumtherapy, the use of dry heat in surgical treatment, and the forcible reposition of the spine in cases of Pott's disease, show that the editors have not failed to deal in their new edition with the latest methods of surgical research and treatment. Several additions have also been made to the illustrations, the number of which was a marked feature in the earlier editions. They are, however, of unequal merit, some being excellent and really in advance of those presented in many surgical works of a like character, whilst others are indistinct and too suggestive of almost obsolete types of surgical literature. The ghastly woodcut on page 90 cannot, we think, serve any purpose of instruction, and the illustration on page 455, showing a perineal dislocation of the hip, evidently needs the attention of a skilled draughtsman.

We have to welcome the third volume of the seventh edition of Professor König's classical textbook of surgery.[3] It deals with the diseases and injuries of the spinal column and extremities. The work is brought fully up to date, and has undergone a careful revision. The chapter on spina bifida has been rewritten by Dr. Hildebrand; three varieties of the form described by Bland-Sutton and later English authorities as myelocele are distinguished—rhachischisis totalis and partialis, and when fluid is also present, as myelo-meningocele. The term "myelo-cystocele" corresponds to syringo-myelocele as employed by us. The operative treatment of spina bifida was practised first by König, then of Göttingen, in 1881, and is spoken of with enthusiasm. Of 13 cases operated upon 3 died of sepsis, while in 8 recovery was permanent. The subject of deformities of the spine is dealt with exhaustively, especially so far as the methods of treatment are concerned. The etiology of scoliosis, however, receives scant notice, and the experiments of Judson and Bradford and Lovett are not referred to. In connection with congenital dislocation of the hip the bloodless method of Lorenz is considered, on the whole, the safest and best, but in its successful application is limited to children not older than 6 years. Lorenz has a chloroform mortality of 1 per cent. The arrangement of this work is, to English readers, conspicuously bad. The diseases of the knee-joint are described in Diseases of the Lower Extremity; of the elbow with Diseases of the Upper Extremity, and much needless repetition is thereby inevitable. The index, though unusually good for a German work, is very poor. In the text scoliosis is spelt with a "c," in the index with "k," and there are many omissions and some inaccuracies.

The cases related and discussed by Dr. Newman in his volume entitled *Renal Cases*,[4] are of unequal interest. The first series are intended to "illustrate increased vascular tension in the kidney, a cause of renal pain, hæmaturia and albuminuria with or without tube casts; symptoms relieved by surgical treatment." Some of the cases occurred many years ago, when our knowledge of such condition was inconsiderable, and a study of them in the light of present-day experience is interesting, as explaining "cures" which were then thought unaccountable. Case VII seems rather out of place. It is apparently an instance of acute intestinal obstruction affecting the small intestine, and going on almost to gangrene. As is usual in such cases, the urinary excretion was considerably diminished. Dry cupping was resorted to on three occasions. Eventually abdominal section was performed. Dr. Newman's comment is that the intestinal condition "produced reflex spasm of the renal vessels or of the walls of the ureter, which led afterwards to a very marked hyperæmia of the kidney." Movable kidney is then considered in its relation to hydronephrosis; cysts of the kidney, general cystic degeneration, and other forms of cystic transformation, are described and then follows a chapter on traumatic lesions causing hæmaturia, which justifies the publication of the book. Hæmaturia is a sign of considerable importance, and it is one which requires thoughtful investigation to unravel its message. The remarks of Dr. Newman are sound, and the cases he relates are of considerable interest and importance. This volume suffers by comparison with former work of Dr. Newman.

Dr. Oscar Stoerk's volume of Contributions to the Pathology of the Mucous Membrane of the Urinary Tract,[5] consists of a reprint of three contributions to the *Beiträge zur path. Anat. und zur allgemeinen Pathologie*. (1) A case of papillomatosis of the pelvis of the kidney, of the ureters, and of the bladder; (2) a peculiar form of œdema of the mucous membrane of the bladder; (3) the development of cysts in the mucous membrane of the genito-urinary tract. The last alone calls for special mention. The development of cysts is described as follows. There is a massing of epithelium, forming a spherical group. In the centre of this epithelial nest fluid forms. The fluid may be a degeneration, but is more probably a secretion from active cells. The fluid increases, and a cyst, lined by epithelium, results. The analogy with malignant disease is at once apparent, and Stoerk definitely affirms that in one case he has satisfied himself of the development of a "cystitis cystica" in carcinoma of the bladder. There is no recognition in pathological literature of the possibility of this transformation. Cohen, however, records a case of bladder epithelioma in which there were "multiple cysts of the mucous membrane," and in this case the sequence of events may have been that suggested by Stoerk. The illustrations depicting this condition are certainly convincing in their clearness.

Professor Braquehaye's little pamphlet on *Gastrostomy*[6] contains a very complete account of the operation, its history, the various methods hitherto adopted for its performance, its application, scope, and results. Gastrostomy is defined as an operation devised for the purpose of affording an opening into the stomach for the introduction of food when the œsophagus is impermeable or threatening to become so, for putting at rest the œsophagus and allowing thereby an obstructive spasm to disappear, and for allowing an œsophageal stricture, whenever possible, to be attacked from below. The operation was first planned by a Norwegian military surgeon, who had learnt, from the classic cases of Voigtel and Beaumont, that a patient could survive after the infliction of a gastric fistula. At first the stomach was merely opened, but as leakage led to the most serious inconveniences, methods had to be evolved which tended to prevent this accident. Howse suggested for this purpose the splitting of the fibres of the left rectus muscle, and in recent years many "valvular" methods have been practised. Of these Franck's method and Kader's are perhaps the most popular. In this small work probably all the methods of any interest or permanence are described. The mortality of the operation in the days when only the moribund were considered as desirable subjects for interference was considerable. Latterly the "precocious" operation has become general, and the mortality consequently is considerably lower. M. Braquehaye rightly pleads earnestly for early operation in all malignant cases.

[3] *Lehrbuch der speciellen Chirurgie.* Für Aerzte und Studirende. Von Dr. Franz König, Ord. Prof. der Chirurgie, Director der chirurgischen Universitäts-Klinik und Poliklinik der kgl. Charité in Berlin. Seventh Edition. Third volume. Berlin: August Hirschwald. 1900. (Roy. 8vo, pp. 906. M.14. 134 woodcuts.)

[4] *Renal Cases.* A Series of Selected Clinical Reports and Surgical Studies. By David Newman, M.D., Surgeon to the Glasgow Royal Infirmary. Glasgow: J. Maclehose and Sons. 1899. (Demy 8vo, pp. 151. Figs. 4. 6s.)

[5] *Beiträge zur Pathologie der Schleimhaut der harnleitenden Wege.* Von Dr. Oskar Stoerk, Assistenten am pathologish-anatomischen Institut in Wien. Jena: Gustav Fischer. 1899. (Royal 8vo, pp. 80, 2 tables. M.10.)

[6] *La Gastrostomie.* Par J. Braquehaye, Professeur Agrégé à la Faculté de Médecine de Bordeaux. Chirurgien en Chef de l'Hôpital Civil Français de Tunis. Paris: J. B. Baillière et Fils. 1900 (Cr. 8vo, pp. 96, 3 figures. F.1.50.)

THE WAR IN SOUTH AFRICA.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

(With Special Plate.)

[FROM OUR SPECIAL WAR CORRESPONDENT.]

INJURIES OF THE LONG BONES.

FEW injuries met with in the military hospitals are of greater surgical interest than bullet wounds of the long bones. These injuries may not possess the almost sensational interest that attaches to some of the more remarkable penetrating or perforating wounds of the cavities of the body or of the head; but they exhibit very remarkable features, and tax the skill and patience of the surgeons to the utmost. It is of course premature, in commenting on these as on any other class of injuries, to deduce, at present, too definite conclusions. The opinions that seem to be now generally entertained, so far as I have been able to gather them from others, and supplement them by my own observations, may be greatly modified by further experience. It must also be freely acknowledged that on several points opinions are by no means unanimous, as, for instance, the difference of effect noted in injuries received at short or long range. At the same time, it is tolerably safe to assert that the "humane" character of the small-bore bullet wound is just as strikingly exemplified in lesions of the long bones as in other varieties of injuries. Not only limbs but lives are saved that previous military surgical experience would have been led to consider hopeless; but I believe it to be true, however unflattering the statement may appear to be, that this gratifying result is mainly due to the character of the wound, and but little to any general advance in surgical procedure, or even to any perfection in carrying out from the first the antiseptic treatment. Hitherto pyæmia, erysipelas, and the like preventable disorders, if they have been met with at all, have been of the very rarest occurrence. Nothing can be more gratifying or satisfactory, but this admirable result must be ascribed to its true cause. Even suppuration is rare, but there is no doubt that it is beginning to be seen more frequently than at first. The next campaign may take place under very different conditions of climate to the present war, and amidst unfavourable surroundings the enormous value of antiseptic treatment of wounds is likely to show out much more clearly; for, truth to tell, there is a good deal that might sometimes be justly criticised in the military hospitals with regard to the carrying out the details of antiseptic treatment. The undoubtedly successful results shown by the hospitals constitute rather a triumph for the open-air method than for antiseptic principles as ordinarily practised.

DISTORTION OF THE MAUSER BULLET.

It is desirable at once to modify the opinion expressed in a previous letter with regard to wounds from ricochet bullets. At first it was imagined that most of the bullets that were much distorted and showed splitting up of the nickel sheath (such as Nos. 3 and 4 in Fig. III, see Special Plate) were ricochet shots. Some of them may be, but there is no doubt whatever that prodigious distortion may be produced in a Mauser bullet if it strikes the shaft of a long bone. The Mauser bullet has a much thinner sheath than the Lee-Metford. The illustration (Fig. IV) shows a Mauser and a Lee-Metford bullet side by side, of the natural size. The bullets were on precisely the same plane when the photograph was taken, and the comparative sizes can therefore be easily gauged. A section has been made through the upper portion of the bullets, so as to show the respective thicknesses of the nickel sheath. It will be interesting, hereafter, to learn whether the effect on the long bones, and in the bullet, differs at all in the case of the Lee-Metford. Doubtless some opportunities have been afforded of judging of the nature of the wounds made by our rifle, though the remarkable returns of casualties furnished by the *Standard and Diggers' News*, or issued from Pretoria, do not seem to hold out any great probabilities in that direction.

CONDITIONS INFLUENCING EXTENT OF DAMAGE DONE TO BONES.

The extent of damage done to the bone depends, of course, materially on the portion that is struck, the effects on the elastic shaft, with its large amount of compact tissue, being different from the effects on the cancellous ends. Again, the range must be taken into account. There is, however, great difficulty in obtaining reliable information on this point. Apart from the not unnatural tendency on the part of the men to assume that their wounds were inflicted at very short range, the conditions under which many of the engagements were fought must have rendered it almost impossible to estimate the range. Too often our men have been exposed to fire from many quarters, and with an almost invisible enemy using smokeless powder little more than a vague guess can be expected. In certain actions, however, it is probable that the bulk of the wounds were inflicted at short range. Thus the Highland Brigade at the battle of Magersfontein were beyond question very close to the enemy. In others, such as the action of Willow Grange, the wounds were inflicted at long range. Judging by skiagraphs and by close examination of the very numerous cases met with in the hospitals, the difference between the injuries inflicted at short and long range is less than would be expected. It is imagined by some that a small bore projectile, travelling at very high velocity and rotating rapidly through a bone, exerts a kind of expanding action in the bone, bursting it, in fact, and producing the same sort of effect as at short range it certainly does in the skull. The evidence of such effects is not very conclusive.

A further point that must be taken into account is the angle at which the bone is struck. The bullet may hit the shaft full in the centre, strike it more or less obliquely in its length, just touch the edge of the diaphysis, or groove the bone transversely. The line drawn between the apertures of entrance and exit, when both openings are present, does not afford a very reliable clue. Nor, it must be admitted, in many instances does skiagraphy. The difficulties, for example, of getting a satisfactory skiagraph of a fractured femur in a muscular young man are very considerable. In the hospitals the patients have to be transported a long distance, and the good that might be gained from a skiagraph showing the nature of the fracture would be more than balanced by the harm that would result from rousing the patient and disturbing the part. Skiagraphy therefore in injuries of the long bones of the lower extremity is usually deferred until some union has taken place. The appearances then are misleading, for the callus is pervious to the rays.

BULLET WOUNDS OF CANCELLOUS BONE AND JOINTS.

Bullets striking the enlarged and highly cancellous extremities of long bones appear to drill cleanly through only in certain situations. Thus many cases are met with in which the condyles of the femur must unquestionably have been drilled through without fracture taking place. The patella is usually drilled (but may be simply fractured), and cases are numerous in which the course of the bullet shows that the end of the femur must have been perforated as well as the knee-joint. The recoveries from such injuries are now so familiar as almost to have ceased to excite especial interest. Here the range, as far as can be judged, has little effect in determining the extent of the injury. At very short range we should expect, if any bursting action were exerted on the bone, that fractures of the lower end of the femur extending into the knee-joint would be common. I have scarcely been able to find any. Hæmarthrosis is a frequent symptom, but the swelling usually subsides rapidly. A major in the R.A.M.C., who had seen active service in Chitral, remarked to me on the astonishing contrast between wounds about the knee in that campaign and the present one. A bullet striking the patella and injuring the femur in that campaign was likely to convert the cavity of the knee-joint into a mere bag of comminuted fragments of bone. Amputation was the only resource. In the present campaign it seems scarcely necessary to put on a splint for a few days. Strangely enough the upper end of the tibia does not seem to behave in the same way. I have at any rate seen several instances in which this portion of the bone was extensively splintered by bullets, and the fracture might then extend into the knee-joint. Much the same effect is seen when the lower end of the tibia is struck, and, indeed, some of the most troublesome cases to deal with, as regards saving the limb, are those in which the lower end of the tibia is

broken up, and where the injury extends into the ankle-joint. The clavicle is often simply fractured, and not a few cases have been seen in which this bone has been broken by a bullet that had previously passed through the neck or through the skull. I have met with no cases in which the head of the humerus was cleanly drilled without fracture, though some such may have been recorded. The lower end of the humerus may be drilled, but it is more common for a large fragment to be broken off. Here again, when the bullet has traversed the elbow-joint, surprisingly little trouble follows. Complete restoration of mobility is the rule, unless (and this is common) the amount of callus thrown out limits the movement. The lower end of the radius might be drilled, if the bullet entered on the anterior or posterior aspect, just as the carpal or tarsal bones may be drilled. Of such injuries to these small bones mention has been made in a previous letter.

Bullet Wounds of the Shaft of Long Bones.

It is stated by some, and the opinion seems to be borne out by experiments in the cadaver, that at very close range a bullet striking the shaft of a long bone will sometimes break clean off and carry out through a large aperture of exit a portion of the entire shaft of the bone some inches in length. It is difficult to understand how such an injury is mechanically brought about by a small-bore bullet, but any such observation resting on a sound experimental basis is conclusive. I have met with no such cases in the wards, though this of course does not imply any question of their occurrence. The only instance resembling the injury I saw in the Fort Hospital at Pietermaritzburg. A large portion of the ulna had been carried clean away. But this injury was inflicted by a small shell fired from a Nordenfeldt or Hotchkiss gun, and the aperture of entry is of course proportionately large. Compound fractures showing a small aperture of entrance and a large one of exit are common enough, but the tendency of the fracture seems almost invariably to be oblique. The Mauser bullet at short or long range, will break up the bone it passes through into numerous little fragments, which it carries up to or through the aperture of exit. In Fig. V, for instance, taken from

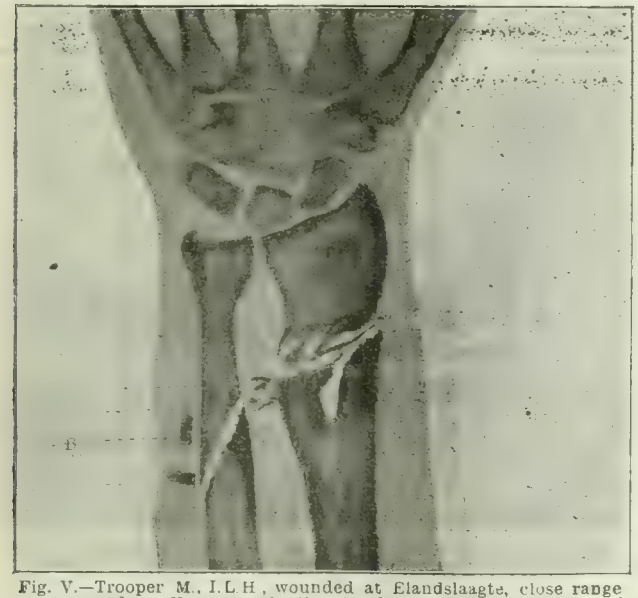


Fig. V.—Trooper M., I.L.H., wounded at Elandslaagte, close range (150 yards). X-ray examination to show nature of fracture and slight displacement of fragments. (Drawn by Dr. J. F. Briscoe from a skiagraph the property of Dr. L. G. Irvine.)

the arm of a private in the Imperial Light Horse, wounded at Elandslaagte, the range was certainly very short, though it may have exceeded the estimate given of 150 yards. The radius is seen to have been transversely grooved. The bullet, entering on the radial and passing out on the ulnar side, has carried away a number of small fragments of bone and spread them along its track. The aperture of exit was small. The radius in this case was completely fractured, the break having but a slight obliquity. The fragments, as seen, are scarcely at all displaced. The large aperture of exit, when it is found, is usually the result of a number of broken pieces of bone, many of them of considerable size, being carried through the wound. In its action on the shaft of a long bone, therefore, the Mauser bullet may behave like the old round bullet. And these effects may be produced when the bullet undergoes no alteration whatever in shape, but passes clean through the limb, making an aperture of exit the same in size and character as that of entrance. In such cases, of course, the comminuted fragments of bone are not driven out of the limb, but merely displaced more or less. It does not at all follow, therefore, that because a bone is extensively comminuted, or even that there is great laceration of the soft parts, that the provisions of the Geneva Convention have been necessarily infringed. That bullets are in some instances "doctored," and that forbidden kinds of bullets are occasionally used, is beyond all question true, for such bullets have been removed; but it is but just to state that instances of the kind are of extreme rarity. In any kind of contest the mere suggestion of unfair play is apt to make people lose their heads quickly, and when in warfare the question of infringement of methods sanctioned by civilised communities is raised, exaggeration is prone to run riot on very slight evidence and on very insufficient data. That Mauser bullets, when they impinge on the elastic shaft of a well-grown bone in a young man, may undergo much distortion, though they have not been submitted to any previous tampering, seems perfectly clear. The bullets shown in Fig. III, all of which were extracted, furnish proof enough. No 1 was removed from beneath the infraspinatus muscle. The bullet had struck the humerus obliquely, and caused an oblique fracture of the bone. It had then probably altered its course, and glanced upwards, lodging beneath the muscle. The bullet is seen to be slightly bent over at the point, and flattened at the base, but the distortion is really greater than it appears in the photograph. The bullet was almost certainly fired at long range. The aperture of entry was that of a normal Mauser bullet, so that (as also in the case of the other bullets shown in the illustration) the distortion must have been produced by striking on the bone. It may be noted with regard to this case that, though the Mauser bullet appears invariably to make a perfectly straight track from entrance to exit when it remains of normal shape, it may when bent up deviate more or less, possibly in some cases behave like the round bullet in former days, which, if it struck an elastic bone like a rib, might glance half way or more round the body.

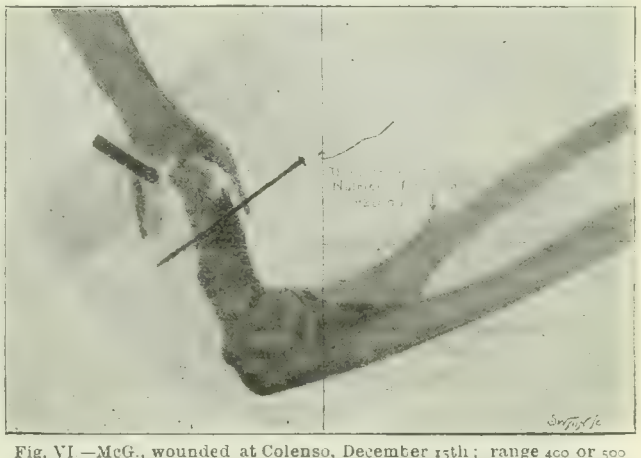


Fig. VI.—McG., wounded at Colenso, December 15th; range 400 or 500 yards. Fracture of humerus. Bullet is No. 2 of Photograph III. Considerable comminution. At operation humerus was found to be fissured into joint. Bullet extracted. Entrance 2 inches external to middle line of arm, just above bend of elbow. (Drawn by Dr. J. F. Briscoe from a skiagraph the property of Dr. L. G. Irvine.)

Fractures of the Arm and Forearm.

No. 2 bullet (Fig. III) had struck the humerus almost at right angles. The range at which it was fired was probably 400 or 500 yards. The shaft of the bone is obliquely fractured and

distorted. A plate of bone was broken away from the posterior surface, and carried backwards, but not wholly detached. In addition, a fissure extended from the site of the main fracture downwards into the elbow-joint. The bullet is seen to be considerably bent over at the point and flattened. The nickel sheath is not split. Here, again, the distortion of the bullet is actually greater than appears in the photograph. The bullet was extracted and the case did well. As invariably happens when a plate of bone is partly detached, and does not separate, the amount of callus thrown out was very great. The nature of the fracture is shown by Fig. VI, drawn from a skiagraph.

No. 3 (Fig. III) shows the effect produced on a bullet that struck the middle of the femur at a range of 600 or 700 yards. The bone was extensively splintered and the amount of callus thrown out was very great. The bullet is greatly distorted, and "mushroomed." The nickel sheath has been burst, but, as can be seen, the covering on the point of the bullet is intact. If such a bullet had been picked up in the ground it might have been thought that it had been tampered with before firing. But the whole of the distortion was evidently the result of the impact on the bone, for the entrance wound showed the exceedingly small scar of a normal Mauser bullet and it was extracted from under the skin in the postero-internal aspect of the limb at the junction of the upper and middle thirds. The bullet had therefore probably glanced upwards after striking the bone.

No. 4 was fired at a longer range than any of the others shown, probably about 1,300 yards. The wound of entrance, again, was that of a normal Mauser bullet, and was situated in the mid-line of the thigh in its anterior aspect. The course of the bullet was in an upward direction, and the bone was struck obliquely. The bullet was removed from beneath the skin, some 3 inches below the great trochanter, in the postero-external aspect of the limb. The splintering of the bone was extensive, and a large plate of bone partly detached from the posterior aspect of the femur had been shifted backwards towards the wound of exit. The bullet shows remarkable distortion. The sheath over the point is not split, but the anterior quarter is twisted round and bent back so that the top of the bullet lies half way down and is attached by the nickel sheath only. The split portions of the sheath project like wings. The distortion of the bullet was certainly not in this instance due to a ricochet, for the aperture of entrance was that of a normal Mauser. The track of the bullet from the entrance down to the bone was such as might be seen in a flesh wound, and there was no undue laceration of the soft parts. The chief mischief was in the direction of exit.



Fig. VII.—Private M., wounded at Colenso, December 15th; ? 700 yards. Entered posterior surface of arm in middle line. Bullet extracted. Bullet was bent over at the point and flattened, but nickel not burst. (Drawn by Dr. J. F. Briscoe from a skiagraph the property of Dr. L. G. Irvine.)

For the specimens and photographs, as well as for many notes on cases of bullet injuries of the long bones, and for much valuable information, I am greatly indebted to Dr. L. G. Irvine, one of the civil surgeons in charge of patients at the Fort Hospital, Maritzburg. Fractures of the long bones caused by the small-bore bullet at almost any range are, as will be seen, commonly, if not almost invariably, oblique, and sometimes very oblique. The lines of fissure, starting from the point of impact, radiate out in different directions and often to a great length, even when the bullet meets the shaft almost at a right angle. Fig. VII may be cited as a good case in evidence. The probable range was about 700 yards. The wound of entrance was over the posterior aspect of the arm. The bone is obliquely fractured, and one or two loose fragments are seen lying in the soft tissues. The bullet, which was embedded in the bone, was bent over at the extremity and flattened, but the sheath was not split.

Fig. I (Special Plate) is a reproduction of a skiagraph showing a rather more extensive injury to the humerus, though the range was probably longer; as far as could be judged, about half a mile. The bullet in this case passed through the left mamma and great pectoral muscle, and struck the bone full on the inner side some 5 inches above the elbow-joint. Numerous fragments of bone are seen to have been carried outwards and backwards by the bullet. The aperture of exit was large. The bone again is fractured obliquely. This patient is making a good recovery, and union promises to be good.

The treatment generally of cases of fractured humerus leaves little to be desired, and it is abundantly evident that the fractures are most efficiently put up in the field hospitals.

Fig. II (Special Plate), also a reproduction of a skiagraph, shows an injury of which several examples have been shown by skiagraphy, and illustrates the point that whether a long bone is struck obliquely or directly, the fracture is likely to be very oblique. The man was carrying his rifle at the slope, over his shoulder, when he was hit, and his arm was therefore flexed at about a right angle. The bullet has fractured and split the radius; one or two small fragments of bone are seen lying near the elbow in the soft parts. The lower end of the humerus is also fractured, and a large plate of bone is slightly displaced backwards. The fissure probably extended into the elbow-joint. The bullet may have traversed or may have just missed the elbow-joint. The wound of exit in this case was large. The range was estimated at five hundred yards. This wound was received in the fighting by the Tugela river on January 24th. Union was progressing favourably. In the Fort Hospital was an almost exactly similar case as regards the injury to the bones (Fig. VIII). The range

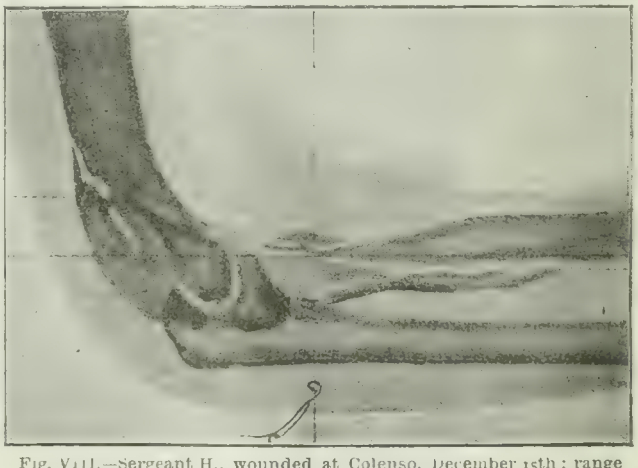


Fig. VIII.—Sergeant H., wounded at Colenso, December 15th; range 400 or 500 yards. Entrance on posterior surface of forearm at juncture of middle third just to radial side of ulna. Entrance in a line with internal condyle and ½ inch nearer middle line of arm. Both normal Mauser wounds. Fair movement five weeks after. (Drawn by Dr. J. F. Briscoe from a skiagraph the property of Dr. L. G. Irvine.)

was the same. The bullet in this latter instance had certainly traversed the elbow-joint, and the wound of exit was precisely like that of entrance. The patient, a sergeant, was wounded at Colenso on December 15th. Good union had taken place. The movements of pronation and supination were free, but owing to the amount of callus thrown out round the fractured humerus, flexion of the elbow was limited. No

surgical measure short of a complete excision of the joint could have restored full mobility, and any such operation appeared quite unjustifiable.

Fractures of the Femur.

In previous wars compound fracture of the femur high up was reckoned as almost inevitably a fatal injury. The septic complications that so continually ensued carried off the patient, and amputation very high up or at the hip-joint was almost uniformly fatal. With improved methods of operating, and with the enormous additional security of antiseptic treatment, it was thought probable by many, at the outset of this campaign, that a fair percentage of recoveries might be looked for in this class of injuries. Such is certainly the case, but the gratifying, if rather unexpected, feature has been that these patients recover at times without amputation. Here again the nature of the wound, which admits little or no air into the depths of the limb, the fact that portions of clothing or other foreign bodies are rarely carried into the wound, and the absence of septic influences, all influence this desirable consummation. The excellence of the result, to be candid, is not due so much to the perfection of the antiseptic surgical practice as to the fact that the surroundings of the patients are highly favourable. I am far from suggesting that the most elaborate and thorough precautions should not invariably be taken in every surgical detail, small or large. It is impossible to have too many lines of defence, to borrow a military phrase. I simply want the true explanation of the satisfactory results to be given, so far as I am competent to judge.

Another point—and a very important one—tells greatly in favour of the remarkable recoveries so often witnessed. The men are not only healthy, strong fellows, but they are also in exceedingly good condition. The hardships and privations of a campaign must always be considerable. With a lack of good organisation they may become intolerably severe, and the effect is quickly seen in the surgical practice of a hospital. The good organisation of the Transport and Commissariat Departments is a matter of infinite moment to the surgeon anxious that all his cases should progress well. The medical officers would, I believe, be perfectly unanimous in acknowledging that the Commissariat Department is doing its work most admirably, and few really are better able to form a judgment on the point. No department, it appears to the civilian, is more singled out for blame when anything goes wrong, and no department is less likely to receive its due meed of praise when matters go right.

An instance of fracture of the femur high up may be quoted as an example. The bullet struck the femur just below the lower trochanter, and fractured the bone, as far as can be judged by the skiagraph, almost transversely. Indeed this case shows the nearest approach to a purely transverse fracture that I have been able to find. The range was certainly a long one, in all probability not less than 1,000 yards. There was but little splintering of the bone. It is to be noted that the bone was not struck at an elastic part. Some would ascribe the good result (for the case did well) to the length of the range and the fact therefore that no expanding action was exerted in the bone as the bullet passed through. But in the face of the other cases mentioned above, where the injury was inflicted at quite as long a range and where extensive splintering resulted, the line of argument is hardly convincing.

Complications of Fractures of Long Bones.

Of the complications attending fractures of the long bones there is, happily, not very much that need be said. The chief trouble is often impairment of mobility in the neighbouring joint owing to the large amount of callus thrown out. The great amount of thickening so often observed is, of course, due to the frequency with which the bones are split up and expanded, and also to the frequency with which large plates of bone are partly detached from the main shaft maintaining their hold by the periosteum, which preserves its vitality. A frequent complication of fracture of the upper part of the shaft of the hemerus, as might be expected, is impairment or complete destruction of function of the musculo-spiral nerve. Many instances of this are met with. Such cases seem, for the most part, beyond the reach of surgery, and the paralysis when present is likely to be, in most instances, permanent. Of less frequency, but still occasionally met with, are cases in which the median or ulnar nerves in the arm or the peroneal nerve in the leg have their functional activity destroyed.

While nearly all the fractures unite soundly with a tendency, as pointed out, rather to excessive formation of callus, no union or soft union is met with now and again. There are two patients now in the Fort Hospital with delayed union: one, an officer, with an exceedingly oblique fracture of the middle of the femur, has very imperfect union, if any, at the end of two months; another, a private, has soft union, after a splintered fracture of the lower part of the shaft of the tibia. In the latter case consolidation seems likely to take place. The wound had been sustained about eight weeks previously.

Occasionally blood vessels have been injured by splinters of bone. In one rather remarkable case in which the bullet had apparently perforated the shaft of the tibia about the centre, hæmorrhage took place on several occasions from the anterior wound. Finally, a considerable swelling formed in the calf of the leg. This, on being cut down upon, proved to be blood, the result of a perforation of the posterior tibial artery. There was, however, no pulsation or *bruit* in the swelling. The clots were turned out, and it was found necessary to ligature both the anterior and posterior tibial arteries. Free collateral circulation had, however, been established, and the case did well, though the wound is not yet entirely healed, and it seems probable that a small sequestrum may separate.

Amputation has been resorted to in but few instances, and it is likely that the statistics of operations which will be forthcoming at the end of the war will show that conservative surgery has been the rule.

Osteomyelitis seems to be unknown so far as I have been been able to ascertain.

The treatment of fractures of the femur has not in all cases been as satisfactory as could be wished for at first; at any rate the supply of extension apparatus was inadequate, and moreover the bedsteads are too often unsuitable for the proper management of fractures of this description.

Maritzburg, Feb. 17th. Clinton T. Dent.

AT NAAUWPOORT.

By Sir William Thomson,
Surgeon-in-Chief, Irish Hospital, Field Force, South Africa.

Naauwpoort Camp, March 26th, 1900.

No. 6 General Hospital.

No. 6 General Hospital has been here for four weeks, and up to March 23rd about 1,400 sick and wounded had been admitted for treatment. Five days after Colonel Somerville Large and his staff arrived from England they were able to receive about 500 men, and since then the accommodation has gone on increasing until now about 650 beds are available; 200 more have arrived, and will be prepared as soon as possible.

Sick and Wounded.

Of the cases, 400 were gunshot injuries; the rest comprised all sorts of affections—enteric fever, dysentery, diarrhœa, pneumonia, etc. These have nearly all come from other camps at the front. The enteric cases—of which there have been 105, are from the Modder, Rensberg, Norval's Pont, and Kimberley. Most of them have been in the record week of the disease, have been exposed to all the hardships of the campaign, and have been walking about since the disease was running its course. The deaths have been 16, or 15.23 per cent. of those treated. From time to time the hospital train arrives and removes 100 patients who are convalescing, and these are carried to the Cape, or a few hundred miles nearer the hospitals there. Thus the strain upon the advanced hospitals is relieved, although at times it is considerable. In the period of quiet which has elapsed since Paardeberg no wounded men have arrived here.

Staff and Equipment.

The staff which has this great hospital in charge is—
Lieutenant-Colonel Somerville Large, P.M.O.
Lieutenant-Colonel Falney (Medical Division).
Major R. Jennings (Registrar).
Major J. Osburne (Surgical Division).

Lieutenant H. C. R. Hime.
Captain Osborne (Canadian Medical Staff).
Civil Surgeons J. A. H. Brincker, P. C. P. Ingram, R. D. Maxwell, H. T. Murrell, J. Owen, W. M. Parham, E. C. Parry-Edwards, F. Pershouse, H. T. Shea, J. Stevenson, S. Wells, and R. D. Parker.

The marquees in which the patients are accommodated are excellently equipped; most of them have been provided with boarded floors by the Engineers, and the remainder have waterproof sheeting: but these will in turn be made like the others. The bedsteads are, as I have said in a former letter, iron, with wire-woven mattresses. There are tables, forms, and easy chairs. Each bed has clean cotton sheets, and each patient a pair of bedroom slippers. There is plenty of literature, and those who are able to be up occupy their time in reading or in playing games with their comrades who are still in bed. The food is good, and varied according to the needs of the individual. Men who have served in many campaigns tell me that the hospital arrangements are a great advance upon anything that they have seen before on active service; and taking No. 6 as a type, I can well understand that.

Civilian Aid.

But it must also be remembered that all this efficiency has only been secured by a departure from previous methods. Never before was so large a civilian element imported into our army medical arrangements in a campaign. The present Royal Army Medical Corps could never have dealt with the demands upon it had it not received help. At certain places the work would have been excellent, but it must have failed in keeping up that standard in the many scattered places and on the field itself. But the corps as a framework has been judiciously expanded, and civil surgeons have been fitted into it, and in this way the necessary machinery has been effectively worked. What is obvious is, first, that the R.A.M.C. is entirely undermanned for any unusual demand upon it; that it is deficient in the number of surgeons, orderlies, and nurses; and that some time in the future, when the experiences of this war come to be weighed, a new and better scheme must be adopted. More nurses are wanted at the base hospitals; their number at present is inadequate. And when this part of some future scheme comes to be considered it will be necessary to see that no amateur nurses are permitted to join—even in an emergency.

The German Hospital at Jacobsdal.

I met a few evenings ago the Colonel of Highland Light Infantry, who was commandant of Jacobsdal after its capture. There he found a German hospital equipped for service with the Boers. He told me that the arrangements were excellent, and that nothing could exceed the kindness of the medical officers and the whole staff to Boers and British alike. I am glad to record this testimony, which may in this way reach the generous people who provided funds for the hospital.

The Camp.

At this camp we have had between 7,000 and 8,000 men; they are coming and going daily; some are from England, some from the Modder, all are on the journey northward. Then there are thousands of horses and mules, and a crowd of Bengalis and local natives in charge of remounts. As is usual in such circumstances, there is a good deal of mild dysentery. When such a crowd of living beings is gathered about a small town where sanitary arrangements are in a rather elementary state, this is to be expected. The danger is that in course of time what at present is only a threat of trouble may become a reality. So far only one or two cases of enteric have been admitted from the camp, and they were probably infected before arrival; but with regiments arriving from a district where enteric fever is rife these isolated cases may be only the forerunners of a greater number; therefore the most rigid precautions as to sanitation around the camp must be enforced everywhere. Colonel Large is fully alive to this, and has taken steps to meet possibilities.

Winter Storms.

The winter appears to have come. The temperature has fallen, and we have had some winds as penetrating as those of March at home. But our worst experience has been a combination of rain and storm. The night before last this combination operated with great suddenness, and everyone had to turn out at midnight to loosen tent ropes and keep the pegs in the ground. But last night the rain fell for hours in torrents, making sleep almost impossible by the crash upon the canvas. It filled the deep trenches to overflowing and swept across the camping ground in sheets. Fortunately there was no such catastrophe as happened to the hospital a couple of weeks ago, when nine marquees came down in a storm of rain, and the patients had to be rescued in the midst of a hurricane. This morning everything looks at its worst. The crowd of glistening white tents looking so bright and clean in the sunshine is now only a series of bulks of muddy grey, "moist, unpleasant bodies." The spaces between them, usually crowded by soldiers drilling or preparing food, are now quite deserted. No one is to be seen abroad save the sentries or the cooks working here and there at the camp kitchens in a rain that searches everything it reaches. The white scorched surface sand has been washed away, and the dull brown of the deeper layer adds to the desolation. The water sweeps everywhere down the slopes in rivulets that quickly deepen in the sand, or in broad shallows. Across the breastwork the veld is covered with sludgy, greasy mud. The Bengalis cower in their tents, or, if they must attend to their horses, look wizened and shrunken in the cold rain. The sky is without a break. The clouds cover the lowest kopjes round about, and everywhere, instead of men's voices, there is only the slushy sound of a deluge. But we are after all fortunate. It is not precisely home life, nor are our comforts of the drawing-room, but our fighting line has gone through this, and worse, without cover, and has won victories, and we have at least a protecting canvas.

The Irish Hospital Section at Prieska.

I have heard from Dr. George Stoker and his section, who have been working at Prieska. They have been with the column under Lord Kitchener, operating against the rebels there. They have had plenty to do. Now they are marching to rejoin us, which I expect will be this week.

Proposed Move to Bloemfontein.

We are promised a new bridge at Norval's Pont on Wednesday; then the congestion here will be relieved, and we shall go to Bloemfontein.

[From a telegram received on April 17th it appears that this intention was carried out, and that the Irish Hospital had been moved to Bloemfontein.]

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XX.

Boer Ambulances.

Dr. Korteweg, Professor of Surgery at Amsterdam, has written to the *Times* of April 3rd calling attention to my letter in the British Medical Journal of March 10th on Boer ambulances. In this I quoted from a telegram published by the *Times* from its St. Petersburg correspondent, stating that the Dutch Committee there had received news from Professor Korteweg in Amsterdam. Dr. Korteweg has already pointed out in the Journal of March 17th that the statements concerning the Boers were erroneously attributed to him, and in contradiction with letters published in the Dutch medical journals. It is unnecessary to point out that whatever errors may have arisen in this matter are due to the St. Petersburg telegram. On again referring to it, however, I confess I do not see any statement contained in it which, from my knowledge of the Boers, I should regard as improbable. It may be admitted that although a Boer is distrustful of a stranger, if he once gets to know a medical man his confidence is soon established. Dr. Korteweg, however, denies the whole of the statements attributed to him, and it is only just that I should frankly accept his repudiation of these statements, and express my regret that I have quoted a telegram in reference to him the accuracy of which he denies.

Cases in the Base Hospitals.

A surgeon in one of the base hospitals near Capetown sends me some interesting notes with regard to the cases under his care. He says that during the week previous to writing they had been receiving cases from Paardeberg.

Among them was one of the C.I.V.'s, who was struck with a Mauser bullet on the outside of the left upper arm, just above the insertion of the

deltoid; the humerus immediately below its surgical neck was splintered, the bullet finally lodging in the axilla, near the costal arches. The patient, it is satisfactory to hear, is doing well. The case is of interest, as showing that even the Mauser bullet, with its enormous velocity, does not invariably penetrate, and in this instance was apparently lodged against the ribs.

He relates another case of a man shot in the prone position in the outer third of the left clavicle. The bullet made an exit posteriorly 2½ inches from the spine, between the twelfth rib and the crest of the ilium on the right side. From this it will be seen that the whole of the thorax and a portion of the abdomen were traversed by the bullet. He says that several cases shot clean through the chest showed no symptoms beyond pleuritic pain and slight hæmoptysis.

As illustrating the small holes made by the Mauser bullet, with scarcely any bruising of surrounding tissue, my correspondent mentions two cases in his wards.

In one of these the first phalanx of the left thumb was pierced by a Mauser bullet, the injury healed, and the thumb remained a perfectly useful one.

Another soldier had the second phalanx of his second right toe pierced, the wound healing without amputation being necessary.

The general administration of the hospital, my correspondent concludes, reflects great credit on the Principal Medical Officer and the R.A.M.C.

Impure Water Supply.

Dr. T. Wilson, who returned recently from South Africa, offers some interesting notes with reference to the water supply:

The impure quality of the water used by our troops in South Africa being mainly responsible for the prevalence of typhoid amongst them, it may be of interest to point out briefly the causes of pollution.

In the first place, the supply not being plentiful on the veld, the camp is pitched on a healthy spot close by a river. This, no doubt, ensures quantity, but not unfortunately quality. Wounded animals make their way to the rivers to drink, with the result that it has not been unusual to find as many as fifty horses during the present campaign in a state of advanced decomposition. Another agent in pollution is the practice of the Boers in burying their men who have fallen in battle. They throw the bodies into the rivers to be carried away by the current. This has the double advantage, from their point of view, of quickly disposing of their dead and of hiding their losses from the enemy. A permanent source, however, of mischief in this direction, and one which, unlike the two factors before mentioned, has no reference to the war, is the habit of the natives of bathing in the rivers and of polluting the water in other ways. When it is borne in mind that soldiers after a long march slake their thirst on the first opportunity without regard to hygienic considerations, the part played by impure water in increasing the mortality of our soldiers can be readily apprehended. Filters, of course, are supplied to the troops, but most of them easily get out of order, often becoming unworkable after a week or so. The Berkfeld filter I have heard much recommended, as it has the advantage of being easily cleaned and exceedingly portable.

THE SPECIAL HOSPITALS.

The Scottish National Red Cross Hospital.

The Scottish National Red Cross Hospital, which has been accepted for service in South Africa, is being provided by the St. Andrew's Ambulance Association, which is incorporated by royal charter, and has branches all over Scotland. The first section of this hospital, which makes provision for 100 beds, is to sail from Southampton in the *Pembroke Castle* on Saturday, April 21st; it will be utilised as a base hospital or a hospital on the lines of communication. The officer in charge appointed by the War Office is Deputy-Surgeon-General Cayley, the late Professor of Medicine at Netley. Professor Henry E. Clark has been appointed Chief Surgeon, and will be assisted by Mr. Duke, Dr. John M. Cowan, and Dr. A. S. Boyd will act as physicians, while the junior medical officers are Dr. Aitken and Dr. Garrod. Six nursing sisters have been appointed, and will be under the supervision of Miss Shannon, who has been the night matron in the Western Infirmary, Glasgow; while eighteen medical students from Glasgow University and St. Mungo's College go out as dressers and first-class orderlies. The remainder of the staff, which numbers 60 in all, will be made up of carefully selected civilians.

The hospital will take tortoise tents, having 10 beds in each, and the first section will provide 100 beds. In addition, suitable accommodation is provided for the staff, for cooking, etc., and a special operating tent. The hospital, which has been accepted for service for six months, is equipped with all modern requirements, for example, Roentgen ray apparatus, electric light for operating tent, refrigerator, etc., and will be very complete in all its details. The St. Andrew's Ambulance Association, besides providing the hospital, is to pay the staff and all the expense of the upkeep of the hospital, while the War Office agrees to convey the hospital and staff from Glasgow to South Africa, to provide the usual rations, and to send the hospital home again at the termination of six months or when the services of the hospital and staff are no longer required. It is expected that the second section of the hospital, which will provide 200 additional beds, will be ready to sail early next month.

On April 11th a special service, conducted by the Rev. Dr. McAdam Muir, Principal Story, Principal Marshall Lang, and the Rev. Dr. George Adam Smith, was held in the Glasgow Cathedral. On the same afternoon the staff, tents, and equipment of the hospital were inspected by General Chapman, the General Commanding the Forces in Scotland. In the evening an enthusiastic meeting was held in the Queen's Rooms to give a "send off" to the members of the staff. Addresses were delivered by the Lord Provost of Glasgow, Sir William Gairdner, and others; and the proceedings concluded with the singing of "Auld Lang Syne."

The Langman Hospital.

Mr. John L. Langman has received the following telegram from Lord Roberts from Bloemfontein:

I inspected your hospital here yesterday, and congratulate you heartily on the efficient state in which I found it. Its value to our R.A.M.C. and wounded cannot be overestimated.—Roberts.

The Welsh Hospital.

The Staff of the Welsh Hospital sailed from Southampton in the *Canada* on April 14th.

DEATHS OF OFFICERS, R.A.M.C.

The late Captain G. S. Walker.

We published in the British Medical Journal of March 10th, page 604, a short obituary notice of Captain George Stanley Walker, R.A.M.C., who died of enteric fever at Ladysmith on February 23rd. Captain Walker's relations have since received a letter from the officer commanding the 2nd Battalion Gordon Highlanders, in the course of which he writes:

My brother officers and I sympathise with you most sincerely, and I assure you we all feel his loss. He devoted himself to the care of the battalion, and I am afraid his death is due in a great measure to his sense of duty. He had been unwell for some time, but would continue his work to the last, although now we know he must have been suffering all the time. In action he was the bravest of the brave. Always in front with the firing line, and attending to the wounded under the heaviest fire, and after a fight, though tired and done up, he never rested till all his wounded had been carefully attended to. His memory will always be with us.

A letter has been received also from Lieutenant-Colonel J. A. Coxhead, R.A., in the course of which, after stating that Captain Walker's death was universally deplored, he says:

He literally died in harness, and gave up his life to save others, amongst whom I was one. He was a noble fellow.

Captain Hall Owen, of the Victoria Militia Medical Staff, whose death from enteric fever is reported from Chieveley on April 5th, took the diploma of M.R.C.P.I. in 1883, and that of M.R.C.S.Eng. in the following year. He was a Justice of the Peace for the Central Bailswick, and ex-Mayor of South Melbourne, as well as Honorary Surgeon to the Melbourne Benevolent Asylum.

GENERAL LYTTELTON ON THE WORK OF THE R.A.M.C. IN SOUTH AFRICA.

On March 20th at Sunday River Camp, Elandslaagte, Natal, Major-General the Hon. W. G. Lyttelton, on leaving to assume command of the Fourth Division, bade farewell to the troops of the 4th (Light) Brigade which he had commanded so successfully in the recent operations for the relief of Ladysmith.

Addressing the *personnel* of No. 9 Bearer Company and No. 9 Field Hospital, R.A.M.C., attached to the 4th Brigade, the gallant general said:

Officers, non-commissioned officers, and men of the Royal Army Medical Corps,—On vacating the command of the 4th Brigade, I wish to record my high appreciation of the valuable work done by the R.A.M.C. in the recent campaign. You have been with me during the past four trying months. This is not the first campaign I have served in by a good deal, and I desire to say that, though I have always seen the members of the Medical Department perform their duties meritoriously, in no previous campaign have I seen the work of the R.A.M.C. rise to such a high standard. Not only have you done valuable work in connection with your own Brigade, but, from the reports I have received from senior officers, I understand you have been "maids of all work" wherever medical assist-

ance was required. The grateful thanks of the officers and the men of the Brigade are due to you for the excellent and efficient manner in which you have carried out your duties. Having had you with me from the commencement, I would have liked to have led you to Pretoria; but this is not to be. However, I feel I shall not be far separated from you. And now I wish you farewell.

At the conclusion of his speech three hearty cheers were given by the officers and men of the Royal Army Medical Corps for one of the most popular and distinguished generals in the British army.

It may be remembered that the above-mentioned units who have earned such high praise in South Africa were mobilised at the Royal Infirmary, Dublin, last October, and embarked in the ss. *Servia* at Queenstown for South Africa on November 3rd. On November 29th, at Mooi River, Natal, they joined their (4th) Brigade, which they accompanied in all the subsequent operations of the campaign, including the battles of Colenso, Spion Kop, Vaal Krantz, and the fourteen days' fighting on the Tugela, ending with the brilliant victory at Pieter's Hill and the relief of Ladysmith. They were the first medical units to reach the beleaguered city, and took part in the triumphal entry of the relieving army on March 3rd.

NOVA ET VETERA.

MAN'S PLACE IN THE LONDON DISPENSATORY.

IN 1678 William Salmon, Professor of Physic, presented the world with a translation of the *London Dispensatory, lately reformed by the Fellows now living, of the Colledge of Physicians: being a Compendious Collection of the choisest Medicaments whether Gallenical or Chymical yet known or in Request*. The work is divided into six books, treating of simple vegetable medicaments, of animals, of minerals, of compounds internal and external, and of the practice of chymistry. All the sections well repay perusal, but the most remarkable is the first chapter of the book "of Animals, their preparations, Virtues and Uses." This chapter treats of man, and the parts are considered as they are taken, (1) from a living body, and (2) from a dead body.

The first item taken from the living body is hair used as a powder, as ashes, as an oil, as a distillation, and as an electuary. Hair cures the jaundice, the simple ashes stop bleeding, and an oil distilled from it with bone, anointed on bald places, causes hair to grow.

The nails in powder or infusion are said to cause vomiting, but they cure dropsies if laid on the navel. Fasting spittle rubbed on oftentimes cures pimples, the stinging of serpents, and the biting of mad dogs. Woman's milk is an emollient made more powerful if a grain or two of white vitriol be dissolved in it.

Menstrua, sanguis menstrualis, taken from virgins, dried, and given inwardly is prevalent against the falling sickness and stone; outwardly applied it cures gout, and worn as an amulet is good against the plague.

A drop or two of the blood of the navel-string being first given to a newborn child in a little breast milk prevents convulsions and all other fits, and very wonderfully revives it almost dead. The secundine calcined and given in southernwood water every day, half an ounce while the moon decreases in light, wonderfully cures the King's evil.

Sperma experience has found good against witchcraft, and some use it to make a magnetic mummy to serve as a philtron to cause love. Stone taken from the kidneys or bladder dissolves and expels the stone and gravel from all parts, and opens obstructions, being given a drachm at a time in powder. Stercus, the dung is emollient, anodyne, and maturative. It ripens plague sores being applied, and dried, powdered, and mixed with honey it cures inflamed wounds and the quinsy. The ashes given two drachms at a time in agues cures them. Occidental civet is made hereof so like the true civet that it shall be difficult to discern the difference.

The urine opens obstructions of the liver, spleen, and gall; is good against the dropsy and jaundice and causeth easy delivery to women in travel. Boy's urine dropt into the ears cures their soreness and opens obstructions there. It is used as spiritus, as a volatile salt, as an essence, as a magisterium or salt, and as an oil. Some say that blood drunk hot cures epilepsies. The owder or ashes of it applied to any flux of blood stops it. The preparations of it are a mummy of blood, a water and oil, a balsamum arthriticum which is of strange force in the gout and an antepileptic spirit of man's blood.

Among the substances derived from the dead body the most important was mummy.

"Mummy" is fivefold: (1) Factitious Pissasphaltum, made of bitumen and pitch. (2) Flesh of a carcass dried by the sun, in the country of the Hammonians between Cyrene and Alexandria, being passengers buried in the quicksands. (3) Egyptian, a liquor sweating from carcasses embalmed with pissasphaltum. (4) Arabian, a liquor which sweats from carcasses embalmed with myrrh, aloes and balsam. (5) Artificial, which is modern. Of all which the two last are the best, but the Arabian is scarcely to be got; the second and third sorts are sold for it. The artificial is thus made: Take the carcase of a young man (some say red-haired) not dying of a disease, but killed; let it lie 24 hours in clear water in the air, cut the flesh in pieces, to which add powder of myrrh and a little aloes, imbibe it 24 hours in the spirit of wine and turpentine, take it out, hang it up 12 hours, imbibe it again for 24 hours in fresh spirit, then hang up the pieces in a dry air and a shadowy place, so will they dry and not stink.

Various preparations were made from this precious substance. There was first the tincture or extract of mummy, used as a counter-poison. It prevents the plague and resists all manner of infection being taken only to a scruple, and cures being taken to a drachm or two drachms. A treacle was prepared from it. The elixir mumiæ has all the virtues of the tincture, besides which it is more speedy in the cure of the plague.

Balsamum Mumiæ, a sweet-scented red oil which has such piercing qualities that it pierceth all parts, restores wasted limbs, consumptions, hectics, and cures all ulcers and corruptions if gr. iij, v. or vi, be given twice every day in a proper vehicle.

A few other curious formulæ for preparations made from the dead body may be reproduced:

Aqua Divina.—Take the whole carcase of a man violently killed with the intrails, cut it in pieces and mix them, distil it from a retort twice or thrice. It is reputed to have a magnetic power. If to 1 drachm of this water you put a few drops of the blood of a sick person and set them on the fire and then mix, the sick recovers; if not the sick dies. For want of blood take the urine in a larger quantity.

Adeps, Grease, or Fat.—It is emollient, discutient, anodyne, and cosmetic. It is said to fill up the pits after the small-pox.

Man's Bones.—They stop fluxes, astringe, and take away the pains of the gout. They are taken either levigated into a fine powder with water or calcined in a potter's furnace to ashes. By a retort you may distil an oyl from them which is very anodyne; their marrow is of excellent use to cure contracted sinews and members.

The Skull is a specific in the cure of most diseases of the head; the triangular bone in the temples is the most specificial against the epilepsie. The preparations are the magisterium made by dissolving the skull in spirit of vitriol and then precipitating. The galreda paracelsi, the tinctura cranii quercetani, the aqua and oleum cranii humani and the salt of man's skull, which is a perfect cure for the falling sickness, vertigo, lethargy, numbness, and all head diseases. The dose in peony water or other convenient vehicle is from a scruple to half a drachm. There is also the essence of man's skull, and the spiritus cerebri humani a noble antepileptic made from the brain of a young man slain, distilled with misletoe and sack. The oleum cerebri humani has the virtue of the spiritus.

Man's gall, an extract of it with spirit of wine dropt into the ear cures deafness.

Cor hominis, the powder of it drunk cures the epilepsy.

The various ingredients here detailed appear to us horrible, but instead of looking upon those who used them with contempt should we not rather re-echo Harvey's noble maxim—one of the best proofs of the liberality of his mind—"Not to praise or dispraise other anatomists, for all did well; and there was some excuse even for those who are in error." At a time when chemistry was in its earliest infancy some of these preparations of the human tissues might serve as a means for giving salts which could not otherwise be obtained in an isolated form. The act of swallowing in a newborn child might often rouse a latent vitality, and this was held to prove the value of blood. Sperm still acts as a love philtre, and cowdung poultices are not unknown as applications within twenty miles of London. The value of blood drunk hot as a cure for epilepsy lingers in the mind of the public, and science teaches us that powdered blood might stop a flux.

AN INTERNATIONAL TEMPERANCE CONGRESS.—The next International Anti-alcohol Congress will be held in Vienna in 1901. An Organising Committee has been formed, with Professor Max Gruber as Chairman. Among the members are representatives of the State and local authorities, the professors of the universities, and the Austrian temperance and abstinence societies. Dr. von Hartel, Minister of Worship and Public Instruction, is to be the Honorary President of the Congress. All communications should be addressed to Dr. Daum, I. Bezirk, Verein gegen Trunksucht, Plankengasse No. 5, Vienna.

THE R.A.M.C. SOUTH AFRICA FUND.

The winter would appear to have commenced in South Africa at the end of last month, and one of the causes which, it may be assumed, have led to the long halt at Bloemfontein is the necessity for putting the men into woollen khaki. In another column will be found a graphic description by Sir William Thomson of the bad weather experienced at Naauwpoort Camp about a month ago. His observations combine with other evidence to show that the need for warm clothing is considerable, and it is satisfactory that the matter should have been taken in hand in this country in time enough to permit many of the parcels to have already arrived in South Africa.

We are enabled to acknowledge the following additional subscriptions to the half-crown fund received down to and including April 18th since our last list:

THE HALF-CROWN SUBSCRIPTION LIST.

	Half Crowns.
Dr. T. J. Paton (Sowerby Bridge)	2
Surgeon-Major S. Daly (Manchester)	2
Mr. F. C. Porter (Nottingham)	8
Dr. C. J. Evers (Faversham)	1
Per Dr. W. Johnson Smyth (Bournemouth):	
Dr. George	1
Per Mr. C. T. Quiller (London):	
Mrs. Neal	1
Miss Champness	1
Dr. Busfield	1
Dr. Atkinson	2
Per Dr. St. Clair Boyd (Belfast):	
Surgeon-General J. Sinclair	8
Per Dr. J. Harper (London):	
Dr. Vere Nicoll	1
Dr. J. T. Griffith	1
Mr. S. Parsons	1
Dr. Stewart	1
Per Dr. Henry Waldo (Clifton):	
Dr. D. S. Davies	1
Per Dr. J. Ruxton (Blackpool):	
Mrs. Ruxton	1
Mr. F. C. Sprawson, F.R.C.S.	1
Dr. Butcher	1
Dr. Barton	1
Dr. Forbes	1
Dr. Walter	1
Mr. Turner	1
Mr. Wilson	1
Per Brigade-Surgeon-Lieut.-Colonel G. A. Maconachie (Aberdeen):	
Miss Gordon	4
Miss Thorn	2
Per Dr. H. Peck (Chesterfield):	
Dr. J. G. Shea (Chesterfield)	1
Dr. A. W. Shea ,,	1
Dr. Worthington ,,	1
Dr. J. K. Goodall (Brimington)	1
Dr. W. Howe Lee (Pilsby)	1
Rev. W. R. Winder (Staveley)	1
Per Mr. W. M. Beaumont (Bath):	
Mr. W. J. A. Adye (Bradford)	1
Mr. Donald Ackland (Bath)	2
Mr. A. L. Fuller ,,	1
Deputy-Inspector-General G. Molloy, R.N. (Bath)	1
Per Mr. J. W. Fry (Maidstone):	
Dr. Oliver (Maidstone)	1
Mr. W. E. Fry (Wateringbury)	1
Dr. Edgar (Maidstone)	1
Dr. C. P. Oliver ,,	1
Dr. Hoar ,,	2
Dr. Shaw ,,	2
Mr. H. Barham ,,	1
Mr. J. W. Fry ,,	1
Mr. A. B. H. Hallowes	1
Dr. Boyce	1
Mr. J. Palmer (Snodland)	1
Mr. D. L. Freeland ,,	1
Brigade-Surgeon Pont (Yalding)	1
Mr. V. Harcourt (Maidstone)	2
Dr. Collier (Barming Asylum)	1
Dr. Hopkins (Barming Asylum)	1
Dr. Pike (Barming Asylum)	1
Dr. Webber (Sutton Valence)	2
Dr. Holt ,,	4
Per Dr. Arthur Helme (Manchester):	
Dr. W. H. Dobie (Chester)	1
Dr. Arthur Helme (Manchester)	1
Dr. Edgar Helme (Manchester)	1
Dr. Larmuth (Manchester)	1
Dr. A. B. Ritchie ,,	1
Dr. Alex. Wilson ,,	1
Dr. W. Walter ,,	1
Dr. Berry (Wigan)	1
Dr. Chronnell ,,	1
Dr. Wolstenholme (Wigan)	1
Dr. Rees ,,	1
Dr. Monks ,,	1
Dr. Cook ,,	1
Dr. Blair ,,	1
Dr. Neville ,,	1
Dr. Benson ,,	1
Dr. Kenyon ,,	1
Dr. Graham ,,	1
Dr. Cowan ,,	2
Dr. Isherwood ,,	1
Dr. Wilding ,,	1
Dr. Parker ,,	1
Dr. White ,,	4
Dr. Rigby (Adlington)	1
Dr. J. Brassey Brierley (Manchester)	1
Dr. Frederick Cox (Manchester)	1
Dr. Anna Dahms (Manchester)	1
Dr. M. M. Fenn (Manchester)	1
Dr. W. J. Heslop ,,	1
Dr. J. W. Moore ,,	1
Dr. J. M. S. Preston ,,	1
Dr. J. S. Prowse ,,	1
Dr. Walter Whitehead (Manchester)	1
Dr. Samuel Woodcock (Manchester)	1
Dr. Hodgson (Preston)	1
Dr. Rigby ,,	1
Dr. P. O. W. Browne (Alderley Edge)	6
Dr. H. W. King (Chester)	2
Dr. E. J. Geary (Warrington)	1
Dr. W. Hodgson Carruthers (Runcorn)	1
Dr. Averill (Macclesfield)	1
Dr. D. J. Mackenzie (Glossop)	1
Dr. Charles J. Renshaw (Ashton-on-Mersey)	1
Dr. G. H. Doman (Westhoughton, Bolton)	1
Dr. J. J. Barnes (Bolton)	2
Dr. A. Cosgrave (Bradshaw Brow, near Bolton)	1
Dr. George H Whitaker (Bolton-le-Moors)	1
Dr. F. H. Pearce (Manchester)	1
Dr. C. Carruthers (Manchester)	4
Dr. Andrew Westwood (Manchester)	2
Dr J. W. Grange (Manchester)	2
Dr. H. G. Brooke (Manchester)	1
Dr. J. W. C. Herbert (Manchester)	1
Dr. McKeown (Manchester)	1
Dr. G. Newton (Hadfield)	1
Dr. G. H. Greenhalgh (Stockport)	1
Dr. Foster (Barrow)	1
Dr. G. K. Pitcairn (Littleborough)	1
Dr. V. J. Rigg (Littleborough)	1
Dr. E. J. Longton (Ulverston)	1
Dr. M. H. Sayars (Alsagar)	1
Dr. H. Cruthley ,,	1
Dr. E. Knight (St. Anne's)	1
Dr. R. Settle (Bolton)	1
Dr. Fraser (Clitheroe)	1
Dr. Trimble (Preston)	1
Dr. S. H. Day (Stalmine)	2
Dr. J. J. Crawford (Burnley)	2
Dr. Starkie (Poulton)	1
Dr. Simcock (Heaton Chapel)	1
Dr. W. E. C. Burnett (Bowdon)	1
Dr. Mary E. Rye (Southport)	1
Dr. McNaught (Waterfoot)	1
Dr. Alan McDougall (Cheadle)	1
Dr. A. Walsh (Rochdale)	1
Dr. E. Jackson (Chorley)	1
Dr. W. Edgecombe (Harrogate)	1
Dr. Owen Gwatkin (Grange-over-Sands)	2
Dr. J. Holmes (Anfield)	1
Dr. H. B. Woodgate (Winsford)	1
Dr. J. Welsh (Winsford)	1
Dr. H. Leek ,,	1
Dr. A. F. Shoyer (Lancaster)	1

We have also received per Mr. A. Thomson (Maidenhead) £2 2s. from the Windsor and District Medical Society; and per Dr. Arthur Helme (Manchester) 10s. 6d. from Dr. F. A. Ernest Barnardo (Birkdale).

Cheques and postal orders should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co.," and forwarded to Mrs. Charters Symonds, 58, Portland Place, W. Cheques and postal orders for the Half-crown Subscription List, sent to the Editor of the British Medical Journal, should be drawn up and crossed in the same way.

THE QUEEN IN IRELAND.

On Wednesday, April 18th, the Queen was graciously pleased to accept in person the following addresses from the President and Fellows of the Royal College of Physicians of Ireland and the President, Vice-President, and Council of the Royal College of Surgeons in Ireland:—

THE ROYAL COLLEGE OF PHYSICIANS.

To Her Most Gracious Majesty Victoria, of the United Kingdom of Great Britain and Ireland, the Colonies and Dependencies thereof, Queen, Defender of the Faith and Empress of India.

May it please your Majesty, we, the President and Fellows of the Royal College of Physicians of Ireland, take the auspicious opportunity of your Majesty's visit to your Kingdom of Ireland and City of Dublin to give renewed expression to our devoted loyalty and attachment to your Majesty's throne and person, and to assure your Majesty of the gratification we feel in the fact that you have been graciously pleased once more to honour our city and country with your august presence.

As physicians we recognise with grateful appreciation the favour which your Majesty has ever extended to our profession, and the kindly interest you have taken in its efforts for the advancement of medical science as well as the preservation and improvement of the health of the nation. On our part, we have on all occasions striven to further these great interests, which have been entrusted to us both by your Royal predecessors and by your Gracious Majesty in the successive charters of our College.

We are deeply and gratefully sensible of the generous impulse which has prompted your Majesty at this time to visit Ireland and its capital—a gracious recognition of the heroic and conspicuous part which your Majesty's Irish troops have played in the war in South Africa. In this season of trouble you have—as you have ever done—made the trials and sorrows of your people your own, thus drawing their thoughts and hearts ever closer to your Royal person by ties of affectionate regard.

That the Almighty may be pleased to spare your Gracious Majesty to guide through years to come the destinies of the vast empire over which you have so long and so nobly ruled is the earnest prayer of us, your Majesty's loyal subjects and dutiful servants, the President and Fellows of the Royal College of Physicians of Ireland.

JAMES CRAIG, M.D Univ.Dub., Fellow and Registrar.
JOHN WILLIAM MOORE, M.D.Univ.Dub., President.

THE ROYAL COLLEGE OF SURGEONS.

May it Please Your Majesty,

We, the President, Vice-President, and Council of your Majesty's Royal College of Surgeons in Ireland, avail ourselves of your presence in Dublin to renew to you the assurance of our devotion and allegiance to your Majesty's throne and person.

Our College was incorporated by your Royal ancestor, King George the Third, in the year 1784, with the primary object of providing properly trained and educated surgeons for His Majesty's navy and army.

Since that date many thousands of our countrymen, as Fellows and Licentiates of this College, have served as surgeons in the naval and military forces of the Empire.

At the present moment a very large proportion of the officers of the Royal Army Medical Corps serving with such distinction in South Africa are Fellows or Licentiates of this College, and it is to us a legitimate source of pride and satisfaction that the valour and devotion displayed by our countrymen serving as combatants in the ranks of your army have been equalled by the devotion and self-sacrifice exhibited by our Fellows and Licentiates as officers of the Royal Army Medical Corps.

We humbly desire also to convey to your Majesty the expression of our gratitude for having recently granted to the officers of the Army Medical Service the status and prestige of a Royal corps. Such action on the part

of your Majesty will enable this College to co-operate with your Majesty's advisers in making the Royal Army Medical Corps even more successful in the future than it has been in the past. To assist by every means in our power in all measures intended to strengthen the naval and military forces of the empire is the highest object of our ambition.

In conclusion we humbly pray that it may please God to spare your Majesty for many years to direct and guide the affairs of your great empire, and to enjoy the love and devotion of all your subjects.

R. L. SWAN President.
T. MYLES, Vice-President.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the week ending March 31st the mortality from plague subsided considerably in Bombay, the actual number of deaths from the disease being 648. The other epidemic ailments have have also declined in their virulence, and it is evident that with the approach of the hot weather the health statistics are slowly reverting to a more normal condition. It is interesting to note also that during the same period a decline in the numbers receiving relief owing to famine fell to the extent of 174,329.

On March 23rd, 24th, 25th, 26th, 27th, 28th, and 29th, the cases of plague reported in Karachi were respectively 36, 23, 21, 27, 30, 28, and 39, with 23, 21, 16, 21, 17, 27, and 19 deaths from the disease. Since the commencement of the present outbreak in Karachi 683 cases of plague have occurred, with 510 deaths.

Plague has appeared at Hadon, a large village in the Patiala territory. This outbreak is particularly to be lamented, as hitherto plague has never appeared in the Punjab south of the Sutlej.

The 12th Bombay Infantry have been detained at Sibi on the way to Quetta, owing to two cases of suspected plague in the regiment. The authorities have taken all possible precautions, and the question is being dealt with bacteriologically.

The plague returns for Calcutta on March 22nd, 23rd, 24th, 25th, 26th, 27th, and 28th, were respectively 126, 139, 117, 168, 159, 132, and 147, with 112, 136, 116, 148, 138, 119, and 120 deaths from the disease. The outbreak has been confined for the most part to two wards of the city. Fresh cases of plague in disinfected houses seem to be extremely rare, but the death-rate has run up with appalling rapidity, and the exodus of well-to-do natives from the town is assuming large proportions. Trade is disturbed, the markets are dead, and the effects on the mills and their work is serious.

The distribution of the disease in Bengal is peculiar—it is confined to Patna and four other districts of Behar, and to Calcutta and four districts in its immediate vicinity. No cases are reported from Central or Eastern Bengal, or from Orissa, and the natives of Lower Bengal have a strong conviction that plague cannot live in the alluvial soil which forms the main geological element in Bengal. What justification there is for this belief time alone will show.

It is satisfactory to note that a very considerable measure of success has attended the attempts to popularise inoculation for plague both in the Bombay and the Bengal Presidencies.

FORMOSA.

During the first week of March the Japanese authorities reported 83 cases of plague in the island of Formosa.

MAURITIUS.

During the week ending April 12th one fresh case of plague only occurred in the island. No death from plague took place during the week.

AUSTRALIA.

Our Special Correspondent in Sydney writes under date March 13th: Since last week 8 new cases have developed in different parts of Sydney. Of these so far three only have died. Two children were admitted into the Hospital for Sick Children and Sydney Hospital respectively, and were later found to be suffering from plague. The Hospital for Sick Children and the ward in the Sydney Hospital in which the patient died have since then been in quarantine. No new cases have been reported from any other part of the Australian Colonies.

It is announced by telegram that up to April 17th 118 cases of plague and 41 deaths from the disease had occurred in Sydney since the commencement of the outbreak in the middle of January. The energetic measures of the Government are credited with having prevented the disease assuming an epidemic form. Between 2,000 and 3,000 men are employed in cleansing the dirtier portions of the city.

PHILIPPINES.

From the fact that a Spanish steamer has arrived at Barcelona, Spain, with the report that on the voyage between Manila and Spain 3 cases of plague occurred, it would appear that the disease exists in the Philippines, but we have no direct evidence of the extent to which the disease prevails there.

RIVER PLATE.

Our Special Correspondent in Buenos Aires writes under date of March 27th:—In Rosario, where the plague first appeared, the malady has taken but little hold and can scarcely be said to be "spreading." Special precautions are still being taken with regard to the ships that leave the port and with the passengers on the railways. In Buenos Aires some cases are reported in connection with some flour mills and grain depôts, where it is supposed the bacillus has been imported in the bags of grain from Rosario (the granary of the Republic). But it cannot be said that we have an "epidemic" in our midst. Nevertheless, both Monte Video and Rio Janeiro have closed their ports against us. In Asuncion (Paraguay) the disease has disappeared, no fresh case having been reported during the last 25 days.

CONTRACT MEDICAL PRACTICE.

THE NATIONAL DEPOSIT FRIENDLY SOCIETY.

DR. R. HANSON WOLSTENHOLME (Salford) writes: I am much interested in Dr. Winston's letter on the subject of the above Society. Undoubtedly, if the alterations suggested by the Wood Green Medical Society were enforced there would be less to complain of in the medical fees, but even if persons whose incomes exceed £260 a year were excluded is it suggested that 1s. 6d. is a sufficient fee for consultation and medicine for two days? and are we to be called upon to accept 1s. for a "fresh supply of medicine for two days?" The Medical Guild, Manchester, has had this Society again brought before its Council, and has for a second time determined not in any way to recognise it, and that, I think, ought to be the attitude of the entire profession, mainly on the ground that it encourages an outside business agency to intervene between us and our patients, doubtless for business reasons.

THE REGULATION OF CLUB AND CONTRACT WORK.

MR. GEORGE BROWN recently gave an address to the Ilford Medical Society dealing with the club and contract system of medical practice. He stated that his own experience, based on over 25 years' practice, was altogether opposed to it from a financial point of view. He thought that club members were largely made up of those who would most likely come to the doctor privately, except for the temptation of obtaining his services on the cheap. For many years he had refused to accept clubs, but he had often had club members as private patients, and he was of opinion that they had paid him more in the gross than he would have received from the clubs to which they belonged had he been their club surgeon. He admitted that there were districts in which it was necessary for the medical practitioners to take clubs, but he contended that the present system was most unsatisfactory. Club patients expected far too much attendance from their doctor. If he gave them the slightest cause they complained to the secretary, and the doctor would not improbably be called upon to defend himself before a committee of working men—a most undignified position for a member of a learned profession. If it were admitted that club practice was necessary then the following principles should be laid down:—

(1) No one able to pay ordinary medical fees ought to be admitted to the benefit of a medical club and the doctor should have an absolute right to object to the placing of any member on his list who, he thought, was in a position to pay as a private patient.

(2) All club members ought to pay higher fees than at present. Five shillings a member per annum should be a minimum, and this should be increased when the member resided more than a mile from the doctor's surgery.

He thought that a system of payment at a fixed rate for work actually done, such as that of the National Deposit Friendly Society, would be preferable to the present one. But even in the case of that Society care ought to be taken to exclude unsuitable persons. Of late years in large towns and populous places friendly societies had amalgamated, and employed their own doctors at fixed salaries. Such associations should be avoided altogether; they were injurious both to the public and to the profession, as the terms offered were a direct incentive to the doctors to scamp their work. In Great Yarmouth the local profession had manfully resisted the friendly societies, and substituted their medical service in the place of the dispensaries of the latter, but to resist clubs it was absolutely necessary that all medical men should be loyal to one another.

INTEMPERANCE, ETC.

ENQUIRER asks whether it is usual for club payments to include medical attendance on patients suffering from the direct effects of drink or immorality—for example, delirium tremens, gonorrhœa, etc. In the Oddfellows' rules he finds that, although sick pay under such circumstances is expressly forbidden, it is not distinctly stated that members do not get medical attendance. He has sent in an account to a club member for attendance in an attack of delirium tremens, but has been refused payment.

*** Most friendly societies exclude their members from all benefit where illness has been brought about directly through drink or immorality. Probably our correspondent would be able to recover his charges in the county court, but he must not forget that intemperance is not always the immediate determining cause of delirium tremens.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 21ST, 1900.

THE CLASSIFICATION OF DIARRHŒA DEATHS.

A Committee of the Home Counties Branch of the Society of Medical Officers of Health have been collecting valuable evidence as to the various names used in death certificates in respect of deaths caused by epidemic diarrhœa. As a result of representations made by the Society of Medical Officers of Health to the Royal College of Physicians, a Committee of the latter body has recommended, and the College has sanctioned, the use of the term "epidemic enteritis" (or if preferred by the practitioner, "zymotic enteritis") as a synonym for epidemic diarrhœa, the latter being the official title authorised by the *Nomenclature of Diseases*, ed. 1896, p. 9. The College also recommends the entire disuse, as synonyms of epidemic diarrhœa in medical certificates of death, of such terms as "gastro-enteritis, "muco-enteritis," or "gastric catarrh."

This recommendation is sound, and it appears desirable that medical practitioners should avoid these terms, using instead the words "epidemic diarrhœa" or "epidemic enteritis." It is only by a general and loyal acceptance of the recommendation laid down by the Royal College of Physicians that great confusion in statistics can be avoided. For this reason, we wish to give the widest publicity to these recommendations, in the hope that they may be universally acted upon. The statistics of the Registrar-General will in future be compiled in accordance with this recommendation, and we hope that local medical officers of health will follow the same rule in their reports, as otherwise the statistics of different districts will not be truly comparable.

Although we recommend practitioners to use the prefix "epidemic" in certifying deaths from diarrhœa or gastro-enteritis, it must be confessed that it will appear somewhat illogical to follow the recommendation of the Royal College of Physicians when the death from diarrhœa occurs at a time of year when diarrhœa is not strictly speaking epidemic. All the same, it is most desirable that deaths from enteritis should have a prefix, which will cause them to be classified with diarrhœa, and, as we are not prepared with an alternative to "epidemic"—the word "zymotic" represents a somewhat doubtful view of the pathogenesis of the disease—we suppose this word must remain.

The most sanguine will probably agree that for many years to come a large number of deaths will continue to be returned as "enteritis" or "gastro-enteritis," which are really caused by epidemic diarrhœa. Unless these have the prefix "epidemic," they will, we suppose, be classified under diseases of the digestive system. It is to be hoped, however, that their number, instead of increasing, as it has done in recent years, will now steadily or even rapidly decline, and that the numbers under the heading "epidemic diarrhœa" will more nearly represent the truth than they have done during the last ten years. But in view of the perplexing transferences that will be taking place in official returns, we venture to think that during the next ten years it will be advisable for medical officers of health to maintain separate entries in statistical tables for epidemic diarrhœa and epidemic enteritis, though in the calculation of the diarrhœal death-rate, and in the calculation of the death-rate from the seven chief infectious diseases, both these would be included. Thus under "specific febrile diseases" we should find "epidemic diarrhœa" and "epidemic enteritis," and under "diseases of the digestive system" the entry "enteritis" would appear. It is easy to maintain a separate entry for a few years, but very difficult to separate items when once they have been fused.

In conclusion, we congratulate the Society of Medical Officers of Health on having brought about what promises to be an important reform in death classifications, and we urge upon practitioners the importance of avoiding "gastro-enteritis" and "enteritis" in death returns, without the prefix "epidemic," when the cause of death is what is also known as "epidemic diarrhœa."

EGYPT AND THE SOUDAN.

Lord Cromer's reports on Egypt have always been among the most readable of Parliamentary papers, and this year his report on the Soudan, which follows that on Egypt proper, adds not a little to the interest of the document. The record of good work done is one which may be read with legitimate pride by every British citizen. The pacification of the Soudan is proceeding satisfactorily, and the hope is expressed that the expenses of the civil government may at no distant date be covered by the revenue from land, post office, telegraphs, and railways. A penal code and a code of criminal procedure have been enacted; the cramped teaching of the village schools has been supplemented by two normal primary schools, native schools are to be established in each of the large towns, and a primary school at Omdurman to prepare Soudanese boys to reap the benefits of the technical teaching of Gordon College, is now being built in rebuilt Khartoum. The people are showing themselves to be industrious, fresh villages are springing up, and more and more land is being brought under cultivation. Major R. H. Penton, D.S.O., R.A.M.C., the Principal Medical Officer of the Egyptian army, is able to report that vast improvements in sanitation have been effected in the town of Omdurman since its occupation by the Egyptian army. Its condition was at first such as to render it quite unfit for human habitation. The numerous cesspits, stagnant pools of water, and other nuisances have been abolished, with the result that disease directly attributable to filth, including dysentery, have

been greatly diminished. Cerebro-spinal fever has been entirely absent, while in 1898 it spread as an epidemic, causing great mortality. Malarial fever, the curse of the Blue Nile, was less prevalent and less severe, but Major Penton observes that Egyptians are far more liable to attacks than Soudanese, who enjoy a comparative immunity. We are glad to note that at the Hygienic Institute at Cairo Dr. Bitter has instituted researches on the relation of certain species of mosquitos to malaria. The health of the troops employed in Khartoum and to the north, including detachments of the Royal Irish Fusiliers and the Seaforth Highlanders, stationed for short periods at Khartoum, is reported to have been excellent.

In the report on Egypt proper the passages of greatest medical interest are those which describe the means taken to check the outbreak of plague last May in Alexandria. Sir John Rogers, who was Director-General of the Medical and Sanitary Department at the time, was succeeded as Director-General of the Sanitary Department during the course of the year by Mr. H. H. Pinching, and a memorandum by the latter officer is attached to Lord Cromer's report. The disease was recognised officially on May 20th, 1899, and it is thought that only two cases had occurred previously. As soon as the truth was known the emergency was boldly faced. Money was voted by the Government, and the whole responsibility for carrying out the necessary sanitary measures was taken over from the municipality by the Sanitary Department. A person found to be infected was isolated immediately in hospital. If death had already occurred, the body was removed to the mortuary. In either alternative, all persons who had been in contact with the patient were taken to the quarantine station, where they were kept for seven days, being fed meanwhile and compensated for loss of time. On arrival at the quarantine station these "contacts" were required to remove all clothing, take a bath, and dress in clothes provided by the Government while their own were being disinfected. Only one case of plague occurred among the "contacts." In dealing with an infected house, all clothing, bedding, furniture, carpets, etc., were removed in special carts and disinfected by superheated steam. The house was disinfected with 1 in 1,000 mercury perchloride by a gang of trained disinfectors, who were followed by another gang who limewashed the house with a solution of freshly-slaked lime, and strewed the mud floors with quicklime. The house was then closed until the proprietor came out of the quarantine station. Before this, all rubbish, such as old grass mats, soiled rags, cushions, etc., had been taken outside the city and burnt, the mats and cushions being replaced by new ones at the expense of Government. These energetic measures were rewarded, for no second case of plague occurred in any house which had been disinfected. Whenever a succession of cases was reported from any part of the city, a systematic cleansing of the whole quarter was at once undertaken; and the houses were cleansed and limewashed. The last case was notified on November 2nd, and the total number of known cases was 93. Of these, 65 were natives, 25 Greeks, 2 French, and 1 Italian. The total number of deaths was 45. As no fewer than 21 deaths occurred out of hospital, the system was put to a severe strain, out of which it came triumphantly. Mr. Pinching, whose memorandum is dated January 30th, 1900, is careful to observe that, "Whether the disease has been entirely extinguished in Alexandria, it is yet too soon to say; it is now nearly three months since the last typical case occurred, though a single suspicious case was reported as recently as the 7th instant. The mortality of the town since June has been lower than the average of the last ten years." He adds that all the precautionary measures, inspection, limewashing and cleansing of dirty quarters and examination of the dead, were being carried out with the greatest strictness, and would not be relaxed for at least two months. No cases have since been reported, and it seems reasonable to hope that the triumph of sanitation is permanent, though continued vigilance will be necessary to detect either a recrudescence of the old infection or the importation of new cases. The sanitary officers of Egypt were more fortunate than those of India in not meeting with any serious opposition from the inhabitants, who appear to have contented themselves with a little grumbling.

In dealing with the epidemic reliance was placed entirely on sanitary measures, and Mr. Pinching expresses the belief that, when early notification of the first cases is received and stringent measures are at once taken, the disease may be dealt with as effectually as small-pox or scarlet fever—a comparison which will be thought by some in this country rather ominous than reassuring. As a precautionary measure, however, large quantities of Haffkine's prophylactic fluid were prepared in the bacteriological laboratories in Cairo and Alexandria, but it would appear that none was used. It should be added that attention is being given to measures for the improvement of both the water supply and the drainage of Alexandria.

Lord Cromer is able to report that since the reforms suggested by Dr. Cooper Perry were carried out the School of Medicine has gained in popularity, and he predicts with confidence that it will continue to turn out a number of well-trained medical men sufficient to meet the demands of the country. During the year over 22,000 cases were treated in the Government hospitals; a new hospital has been opened at Chibin-el-Kom, and another at Assiout will shortly be ready for occupation. The lunatic asylum at Cairo has been enlarged, but is not yet large enough, and the first step to be taken is the provision of separate accommodation for criminal lunatics. One of the chief causes of mental disease would appear to be the abuse of hashish, for Dr. Warnoca reports that of 454 males admitted to the asylum in 1899, 125 were suffering from the effects of this drug. This is a percentage of 27.5, which is slightly lower than that which obtained in 1898, when it was 28.3. Great efforts are made by the coastguard to check the importation of hashish, and over 10 tons were seized, most of it in the neighbourhood of Alexandria; but Lord Cromer admits that a great deal is still smuggled into the country at various points, and that it is very difficult to watch the coast line, which extends some 240 miles from Alexandria to Tripoli.

The estate of the late Dr. F. C. Turner, Physician to the London Hospital, has been entered at the sum of £55,033 4s.

MEDICAL LAW IN THE UNITED STATES.

We have from time to time endeavoured to explain, so far as any explanation can by the ordinary intelligence be derived from the writings of its votaries, the doctrines of osteopathy. A case has recently been heard in the Jefferson Circuit Court, Law and Equity Division, by Judge Sterling B. Toney, in which one Harry Nelson brought a suit in equity against the State Board of Health of Kentucky, to enjoin it from instituting, or causing to be instituted, against him a criminal prosecution for treating, or attempting to treat, in that State sick and afflicted persons by the system and method of healing known and called "osteopathy," and for practising, or attempting to practise, medicine or surgery in the State according to the said system. A full report of the judgment is published in the *Journal of the American Medical Association*,[1] and it is of interest both as an exposure of osteopathy and as giving an instructive glimpse of the practical working of medical laws differing in some important respects from our own.

It appears that certain enterprising individuals in the State of Kentucky had founded a College of "Osteopathy." Practically osteopathy would seem to be massage, though an endeavour has been made to throw around it some of the glamour which in the eyes of the unknowing pertains to the bone-setter. In the United States medical legislation is controlled by the Legislatures of the individual States, and not by the Federal Congress, and the law differs in the various States. The founders of this so-called college obtained a charter from the Kentucky Legislature which in many respects placed them in the same position as any regular medical institution, and under this charter they granted degrees in osteopathy.

The State laws seem to afford little real check on the establishment of any sort of quack or bogus institution for granting degrees, and America is the happy home of many such. But there is in most States some means of control, for the diploma granted by any chartered institution, no matter how high its standard may be, confers no right to practise. The licence to practise is granted by medical Boards appointed under various titles and under various conditions, but generally having certain discretionary powers. In the case of Kentucky, the State Board of Health is required to furnish a licence to practise to anyone who possesses a diploma from a reputable medical college legally chartered in that State, or from a similar body in any other State whose status is endorsed by its own Board of Health or analogous body. In Kentucky the Board can, for the purpose of issuing its licence, examine any person who was in practice prior to 1884. Its functions are therefore practically limited to ascertaining whether the college which issues the diploma is legally chartered, and, if so, whether it is "reputable," and the decision in this particular case establishes that its verdict on this matter is final. But it does not appear from any data before us that the Board has any power to investigate the quality and good faith of the examinations conducted by a college, unless, indeed, they be of such a character as to enable them to declare it not "reputable," and it may be questioned whether mere lowness of standard would bring it into this category. Hence it seems a fair inference that, so far as regards standard of qualification, the system is likely to result in laxity, and is not one to imitate.

But if a person practises without the licence of the State Board he may be fined 50 dollars on conviction, and 100 dollars or thirty days' imprisonment, or both, on any subsequent conviction. Practice is defined as "opening an office for such a purpose, or announcing to the public in any way a readiness to treat the sick," while the judge in his judgment stated that "it is the policy of Kentucky to exclude charlatanry and empiricism and quackery from the State." That the law can be and is enforced is illustrated by the pathetic plaint of the osteopath against the Board of Health quoted above. Hence, while so long as the colleges confer degrees upon their own students without any effective outside supervision the standard is almost sure to be low, actual unqualified practice is dealt with by the State laws with commendable stringency, and the definition of what constitutes practice is one that should be remembered whenever any amendment of English medical law is attempted.

It is notoriously difficult to get patients to come into the witness box; most people do not relish a public proclamation of the fact that they have been made fools of, and the necessity for procuring evidence of the kind is done away with by making the act of opening an office or offering to treat patients constitute the offence.

The character of the particular institution was such as to enable a judgment as to whether it was a reputable medical college exceedingly easy, but cases might arise in which the more or less bogus nature of an institution was more successfully veiled. The college was first cousin to the one-man companies of which we have heard so much of late; its Board of Trustees consisted of one A. T. Still, his three sons and one daughter, with perpetual succession, and this Board was empowered by charter to teach, by means of a faculty, the subjects usually taught in medical schools, and to grant degrees for a period of 50 years. Anatomy, the judge tells us, was taught by plates and a mummified cadaver, so hard that only a chisel could make any impression upon it, and he remarked that probably a painted Indian used for a cigar shop sign would have done as well. The show professor of the faculty possesses the diploma of the Royal Colleges of Surgeons and Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow; he appears to have some four or five criminal indictments pending against him, of all of which he may of course be innocent; still, it is a good many for one person at one time. Yet such is the power of quackery that the Professorship of Jurisprudence is filled by a judge who assisted in getting the Bill for the charter through the Legislature. The course of study at this precious diploma mill is twenty months, and the fees 500 dollars. It was stated in evidence that there were 550 students, which is not bad for a young institution.

It appears that there is a rival school at Kansas City, Missouri, at which a witness in this case had presented himself to the principal, "told him fairy tales, told him straight out that I wanted to buy a diploma, and secured it." The principal alluded to is himself a graduate of the Kentucky School, but "his osteopathic character is that of an outcast."

It is useless to pursue the subject further in this

[1] January 13th, 1900.

direction; it remains to discuss what, if any, useful lessons we may derive from it. In the first place, we see that in a democratic country, and in very numerous legislative bodies (there are forty-four States in the Union), unqualified medical practice, without any circumlocution as to use of titles, etc., is almost universally stringently prohibited. Yet we are often told that it would be impossible to induce our Legislature to pass any measure to this effect. On the other hand, the facility with which charters can be obtained in the States leads to the multiplication of colleges which are under no control so long as they are "reputable"; and this is interpreted to mean that they have the necessary facilities for teaching and a competent teaching staff. Further than this the powers of a State Board in refusing a licence to practise to the graduates do not, in Kentucky at all events, appear to go. Hence if any question of reciprocity in the recognition of American degrees should ever arise, it would be found quite impracticable to determine which were worthy of recognition and which were not.

The general impression which we gather is that whilst the various American States are much better off than we are in the powers possessed for the suppression of unqualified practice, this advantage is neutralised to a great extent by the facility with which a qualification of low grade can be obtained; so that perhaps each country may have something to learn from the miscarriages of the other.

THE FALLACY OF THE CRIMINAL TYPE.

The science of criminal physiognomics as expounded by Professor Lombroso is, as we have more than once hinted, a danger to society, because what Johnson would have called its potentialities of application are simply unlimited. The mildest and most blameless curate may be branded to the world as a sleeping volcano of criminal tendencies by the mere fact of his possessing a Mongolian cast of feature, large lobed ears, or a misshapen skull. The method of the Turin professor is, if we may quote that famous "degenerate" and "psychopath" Hamlet, as easy as lying. You take a known criminal and, like Captain Cuttle, make a note of any peculiarity or physical conformation which he may present. You repeat the process with two or three more. Then all the abnormalities observed are put together as a kind of composite photograph, and the result is the criminal type.

Unfortunately, living illustrations of the type appear to be more often found among law-abiding citizens than among thieves and murderers. Dr. Laborde, in an exhaustive study of Vacher, the French Jack the Ripper, presented to the Académie de Médecine, has recently stated that the head offered in its conformation no anomaly whatever. On the other hand, Mr. Samuel G. Smith, in *Appleton's Popular Science Monthly* for March gives an account of an experiment which brings Lombroso's theories to the test of actual fact, with results, which, though comic in themselves, are of serious practical import. Mr. Smith requested the warden of a prison, with whom he had been very familiar for many years, to send him photographs of a dozen or so of the men whom he regarded as the most representative criminals of all the inmates, numbering some 500 souls. The warden was not told of the use it was intended to make of the material, and supposed it was for illustration in university class work. Later, the warden gave him the Bertillon measurements of the men, with an epitome of their history. A number of these men Mr. Smith had known for years. So far from the selection supporting the theory of a criminal type, it confuted it most signally. The abnormalities were slight, and there was just as much diversity among the men as is seen in the non-criminal population. To complete the experiment, Mr. Smith submitted these portraits to a number of gentlemen, and to no two of them at the same time, for their opinions on the cases. This informal committee represented the different professions which might be expected to fit men for observation, for it included a lawyer, a physician, a railway president, a criminal judge, and a college professor, each of them eminent in his special field. The committee was asked to name the crimes, and to group the men according to their criminal record. Each opinion differed from the other, and all were wide of the mark. But while the committee was at work on the photographs, Mr. Smith was at work on the committee, and actually discovered more anomalies of organisation in these distinguished citizens than were to be found in the criminals. In view of this painful fact Mr. Smith naturally thinks it necessary to withhold their names, though some of them are among the most distinguished of that nation of prominent citizens, the United States.

This, we think, may be taken as a *reductio ad absurdum* of the "science" of criminal anthropology. The system is useless to the policeman, and the only purpose to which it can profitably be put in practice is as an instrument in moral training. The charity that thinketh no evil might perhaps be developed by systematically interpreting the supposed marks of criminal proclivities as dreams are—by attaching an opposite meaning to them.

THE REPRESENTATION OF EDINBURGH AND ST. ANDREWS.

The death of Sir William Priestley, which we record with great regret in another column, creates a vacancy in the parliamentary representation for the Universities of Edinburgh and St. Andrews. The constituency is very largely composed of medical men, and we are glad to learn that Sir John Batty Tuke has consented to become a candidate; we understand that his decision has caused much satisfaction in Edinburgh. Sir John Batty Tuke, who is Vice-President of the Royal College of Physicians of Edinburgh, was recently President of that College, and has been its representative on the General Medical Council since 1887. He is a Yorkshireman, having been born in Beverley in 1835, but he received his education at Edinburgh, and graduated M.D. in the University of that city in 1856. Sir John Batty Tuke is well known to the profession throughout the United Kingdom as a teacher and writer on mental diseases, and has always held most enlightened views as to the treatment of insanity and the management of asylums; he has also done most important work for the profession as Chairman of the Education Committee of the General Medical Council. We hope that the statement that his candidature will not be opposed may turn out to be correct, for medicine and science are so inadequately represented in the House of Commons that this opportunity of strengthening that representation ought not to be lost. Sir John Batty Tuke is a Conservative, and his election will cause no change in the balance of parties.

CORONERS: MEDICAL OR LEGAL.

The office of coroner for Swansea county borough has become vacant, and at a largely attended meeting of the medical profession held on April 14th, at the Swansea Hospital, under the presidency of Dr. Griffiths, Dr. J. A. Rawlings (Swansea) was asked to become a candidate for the appointment, and has accepted the invitation. We sincerely hope, in the interests of the public and of the due administration of justice, that he will be elected. It has long been a truism with all who have had any occasion to give serious attention to this subject, that the office of coroner ought to be held by a medical man. Under the old law there was a curious anomaly by which a deputy coroner was required to be a barrister or solicitor, but the Legislature in 1892 repealed this provision, thus indicating that it did not hold the view that the duties of a coroner were such as a lawyer was particularly well qualified to discharge. The object of a coroner's inquiry is to ascertain whether a death has been a result of violence, a natural or an unnatural one. Those who support the candidature of lawyers for election to the office of coroner sometimes argue that the object of the inquiry is not to ascertain the cause of death, but who caused it, thus showing that they completely misapprehend the position of the coroner's court in our judicial system. This misapprehension has in the past frequently led to great expense being quite unnecessarily thrown upon the rates. Moreover, it is unfortunately true that this same misapprehension has too often led to miscarriage of justice. Further, it must be remembered that the very important duty of, in the first instance, deciding whether an inquest should or should not be held in any given case rests upon the coroner. A great many deaths are reported to every coroner as to which he finds, after preliminary investigation, that no inquest is necessary. It seems almost needless to argue that in coming to a decision on such a point medical knowledge and training are of far more value and weight than legal. In the vast majority of such cases the coroner must be guided in his decision by his special knowledge of disease and the causation of death. There is no provision for giving a legal coroner medical assistance in arriving at his decision, from which, it should be added, there is practically no appeal. It is, however, unnecessary to labour these points, because it must be evident to every enlightened citizen that an inquiry as to the cause of death must be most likely to end in a satisfactory decision or verdict when the presiding officer is a medical man whose whole training has been particularly directed to fit him for such duties.

THE MEDICAL SERVICE AND THE WAR.

In the British Medical Journal of March 31st, p. 786, we referred to the first of a series of important letters by the special correspondent of the *Times* at Capetown, entitled Our Wars and Our Wounded. Within the past week four more letters of the series have appeared. The second letter is more or less complete in itself, and may be considered here, but the later letters open up various subjects without completing their discussion. In his first letter the writer stated that he criticised the sufficiency and efficiency of the Army Medical Service less as to the quality than the quantity of it, measured first by its numerical strength, and secondly by its power of automatic expansion on emergency. His second letter elaborates these points. The questions of sufficiency and efficiency cannot be separated; they mutually act, react, and hang together. "For many years," he affirms, "the department of healing has not advanced *pari passu* with the department of maiming." There has, in fact, been a see-saw like the shifting power of guns *versus* armour. While quick-firing, high-velocity, and long-range weapons rapidly fill ambulances and hospitals, they at the same time prevent and diminish the effectiveness of skilled assistance to the wounded; inasmuch as "the brave army surgeons and bearer companies, who move in the fire-swept zone of modern warfare, are subjected to greater risks than before." For the same reason there is difficulty and danger in rendering effective skilled surgical assistance at the earliest possible moment after the infliction of wounds; yet by such early treatment not only is suffering relieved, but, as recent experience proves, the chances of ultimate recovery and cure are immensely increased. Now, it must be clearly kept in view, in all schemes for the perfecting of the medical service in the field, that this all-important first surgical aid can only be afforded by regular officers and trained men, almost in the fighting line, and therefore must remain practically outside the sphere of civil aid. Three methods of improving and bringing the medical service more in line with the conditions imposed by modern warfare are suggested by the *Times* correspondent. First, the regular medical establishments must be increased, as relatively and absolutely they have of late years "numerically gone back instead of forward." We have frequently urged such increase, in justice both to the medical service itself, and to the soldier; but there has been no increase even to keep pace with recent additions to our combatant strength. The correspondent affirms that "the Medical Services should have a proportionate place in the Estimates;" but of that, as regards the officers, we find no trace in the late Estimates—only a stereotyped sum set apart as in former years for the maintenance of an insufficient establishment. Secondly, besides increased regular establishments, he advocates a proportionate augmentation of our slender Medical Reserves, which in future must be real and not nominal, and fully available for rapid mobilisation; they should be trained in connection with the auxiliary forces, and recruited from men willing and able to leave their civil avocations when suddenly called upon to do so. Thirdly, with the two first methods of augmentation legitimately carried out he would, further, through "improved elasticity in the existing organisation," admit the full and free use of civil medical aid, for the employment of which, he truly says, there are the "strongest reasons, both economic and practical." In this way, it is believed, a *personnel* capable "of performing many of the remaining duties now allotted to Regulars in a war establishment could readily be found in civil life." He alludes, no doubt, to the organisation of base hospitals on a fuller civil footing. To these propositions we give cordial assent; always provided that such civil aid is to be regarded and reckoned as auxiliary and supplementary to an efficient regular service, and not as a ready excuse for neglecting and starving the latter. We would utter a warning against a growing fallacy that in the present war we are learning all we need know of future army medical requirements. It may not be so. Our salvation in it has no doubt lain in the great possibilities of civil aid, both home and local. In this sense, through the the salubrity of the climate and the presence of a colonial civilisation, an amount of help has been received which we may not hope to obtain should the theatre of our next great war be in a foreign, an unhealthy, or a semi-savage country. We cannot always calculate on abounding civil aid, so that our future medical organisation must meet and anticipate our world-wide requirements. Meanwhile there seems to be a general agreement on three points: (1) An actual and proportionate increase in regular establishments to meet world-wide duties in peace, and the wants of an army of at least three corps in the fighting line; (2) that such establishment must be supplemented and fed by properly trained and truly available reserves; (3) that civil aid must be effectively secured both in *personnel* and *matériel* by improved elasticity in existing organisation and regulations.

AMATEURS IN SOUTH AFRICA.

SOME time ago we had occasion to draw attention to the fact that the zeal shown by a number of ladies in proceeding to South Africa in the hope of rendering assistance to the sick and wounded had been a source of some embarrassment to the military, and especially to the military medical authorities. We are therefore not surprised to find that the High Commissioner has addressed a telegram to the Colonial Secretary which refers to this matter in very outspoken terms. Sir Alfred Milner in his telegram, which is dated April 10th, says "that the number of visitors to South Africa is constantly increasing, and includes many, especially ladies, who seem to have no particular call of duty or business. I am sure," he adds, "this would not be the case if it was realised at home that visitors, who at ordinary times would be most welcome, may, under existing circumstances, be a source of serious inconvenience, interfering with the work of military and civil officers, and putting a strain on our limited means of accommodation which are urgently required for those who have duties to perform here or are invalided from the front. . . . . I think that many whose coming here is prompted by nothing more than a general interest in the war would elect to stay at home if they knew that their presence was a hindrance rather than a help. For persons travelling merely for health or recreation—and, above all, for ladies so travelling—no place could be less suitable at the present moment than South Africa." Sir Alfred Milner concludes his telegram by stating that he had shown the message to Lord Roberts, who fully concurred in the views expressed. As will be seen from a letter by Sir William Thomson, published in another column, he also is impressed by the necessity for regulations with regard to the admission of amateur nurses to the hospitals, and says that such persons should not be permitted to join even in an emergency. We sincerely hope that Sir Alfred Milner's very broad hint will be taken.

PLAGUE IN SOUTH AFRICA.

THE announcement contained in a Reuter's telegram from Capetown, dated April 16th, that there are five cases of plague in the quarantine station there is distinctly disquieting. It is reported that they are all progressing favourably. The Customs inspector who boarded the *Kilburn* from Rosario, Argentina, has died of pneumonia. The plague bacillus was not found, but we have no doubt that the health officers are fully alive to the significance of the coincidence. It will be remembered that the *Kilburn* arrived at Capetown about March 5th, when it was reported that the master had died on the voyage, as was believed, from plague. When the five cases now in quarantine at the Cape arose we do not know, as the last report was to the effect that no fresh cases of plague had occurred. Both Rosario and Buenos Aires must still be reckoned infected, though few cases have occurred in either city.

PILGRIM TRAFFIC IN THE RED SEA.

MR. WILFRID BLUNT'S letter to the *Times* giving an account of the circumstances of the recent wreck of the pilgrim ship *Chebine* in the Red Sea, and on which he was a passenger, is deserving of special attention because it reveals a condition of things prevailing in the pilgrim traffic to and from Egypt which is a grave international danger. According to Mr. Blunt's story, the *Chebine*, belonging to the new English "Khedivial Company," left Suez for Jeddah and Suakim, having on board, besides the mails and the cabin passengers, 300 deck passengers, pilgrims booked for Jeddah at fares of £2 10s. each. The pilgrims carried their own provisions with them except drinking water, which was supplied by the company. Most of them were from northern lands: Tartars from Russia, Bokharists, Persians, Osmanlis; there were also Egyptians, some Arabs from the Holy Cities, and three Indian British subjects who had been in Egypt. They camped on the deck as they might have done in the desert. On the morning following the departure from Suez the ship was wrecked, and the crew and passengers were only saved after the fourth day by Her Majesty's gunboat *Hebe*. Mr. Blunt states that at the court of inquiry instituted by Lord Cromer, the evidence showed that there was no attempt on the part of the company to comply with any regulations appertaining to the pilgrim traffic, either for the safety of the passengers or the well-being of the ship. The defence raised was somewhat astounding. It was that the vessel was outside British mercantile law and the Passengers Act, because, though registered as a British vessel, it did not ply to or from any port in the United Kingdom. This defence, ridiculous as it may seem, was sufficient in law, and the company escaped the penalties to which it might otherwise have been liable. Mr. Wilfrid Blunt brings the case before the public with the hope that before the next pilgrim season comes round some way may be found to bring pilgrim ships which fly the British flag under the control of British law. With this hope we heartily concur. It is surely absurd that a ship sailing under the British flag from ports under British protection should be exempt from the laws that are found necessary to regulate a traffic liable to the gravest abuse and open to many risks of importing or exporting epidemic disease. The Indian Government regulates and supervises in a most careful manner the pilgrim traffic between India and the Hedjaz; so do the French and the Russian Governments their pilgrim traffic to the Holy Cities. Over and over again in the BRITISH MEDICAL JOURNAL it has been urged that all pilgrim traffic should be under supervision and control. By universal consent that traffic is a constant menace. Egypt is acknowledged to be one of the gateways to Europe for cholera and plague, and we had hoped that every care was being taken, and that the sentinels were wide awake and all-powerful. Mr. Wilfrid Blunt's unpleasant experiences of four days on a stranded pilgrim steamer reveal an amount of laxity and slackness that is far from reassuring. If we cannot always with success impress on the Egyptian authorities the importance and dangers of the pilgrim traffic, we might at least expect to see English boats or vessels under the British flag made subject to regulations which are absolutely necessary not only for the welfare of the pilgrims themselves, but for the safety of Europe.

MEDICINE AND CIVILISATION.

IN his speech at the opening of the Paris Exhibition M. Millerand, the Socialist Minister of Commerce, paid an eloquent tribute to the work which science, and particularly medical science, is doing for the benefit of mankind. While the intensity and power of life are infinitely increasing, death itself, he said, recoils before the victorious march of the human mind. The genius of a Pasteur, a pure benefactor of mankind whose glory is unsaddened by any shadow, has increased a hundredfold the power of surgery and medicine. Disease, grappled with at its source and isolated, gives way, and the happy time seems near at hand when epidemics which ravaged cities and decimated peoples will no longer be anything but terrifying recollections and mere legends of the past. Science has thus with admirable prodigality multiplied the means placed by it at the disposal of man to bend external forces under its laws or to fortify him against their operations. Then turning to another aspect of science he spoke of the services which it had rendered to mankind by showing him the real secret of the material and moral greatness of communities. We are heirs, he said, of the faults as of the merits of our fathers, and we are already writing the history of our sons. One with our ancestors as we are, how

should we fail to be so with our contemporaries? The houses of the poor where lurk the germs of disease, the uncultivated brains in which superstition and hatred ferment, are perils the speedy disappearance which scientific foresight has taught us to regard as necessary. Was there, M. Millerand asked, any higher or more urgent social duty than to triumph over ignorance and to vanquish poverty? If altruism were not the most generous and most agreeable of sentiments, and thus its own reward, it would derive its most solid justification from personal interest. Its effects, he said, are not limited by frontiers; for interests, ideas, and sentiments mingle and intersect throughout the surface of the globe like the thin wires on which flies human thought. M. Millerand may be a Socialist, but he has a strong grasp of one of the chief problems which await solution by true statesmen.

THE HOUSING OF THE POOR.

We referred recently to the action that is being taken by the London County Council in regard to the housing of the working classes. Every activity in this direction exhibited by the local authorities is to be welcomed. It is in a very good sense a *fin de siècle* phenomenon that the Heir Apparent of the British throne and some of the more influential members of the House of Peers should manifest an active interest in the opening of healthy homes for the British poor in districts which were formerly among the worst of the slums. The term "slum," although of doubtful etymology, may be taken, in intent, to connote conditions which lead to lowered vitality and diminished resistance to disease, physical uncleanliness, and consequently a decreased power to throw off *materies morbi* both of external and internal origin and, in the last resort, immorality and an associated psychical disturbance acting in a vicious circle as cause and effect. Slum life means overcrowding and, following in its track, a diminished air-space, languor, ill-health and disease. One of the great and early factors in producing pulmonary tuberculosis is doubtless the breathing of vitiated air, and this depends to a great extent, as a matter of observation, on the cost of artificial warmth. When fuel and food are alike dear, and the outside temperature is below freezing point what wonder is it that the ignorant poor should crowd together in still narrower limits and sacrifice ventilation to a degree of comfort in regard to temperature? In proportion as warmth is costly so is cleanliness difficult; and in proportion as cleanliness is neglected, whether personal or domestic, so are disease germs, and more particularly the streptococci and tubercle bacilli, not only rife but flourishing. It would seem to the ordinary intelligence that human workers, however poor they may be, should receive as good general treatment as say, for example, our horses; and that in return for their work they should have at least as much of the necessaries of life as those who either cannot or will not work gratuitously receive from the State. They should have well-built and well-lighted dwellings, with a sufficiency of air space and good ventilation, their dwellings should be kept at a healthy temperature in cold weather, and they should have the use of warm water at a reasonable cost. In this relation it seems lamentable that so much valuable caloric should be wasted by our public bodies, and by private manufacturers and others. How these and other necessaries of life are to be brought to the deserving but unclamorous poor of our large cities in particular is indeed a difficult problem; it is almost the most important of problems. It is certainly, however, an encouraging reflection for the end of the century that a Lambeth landlord, in the person of the Heir to the Throne, should have publicly bewailed his inability to do what he would for those who are technically his tenants to make them healthy, happy, and moral in so far as a hygienic environment can be effective to these ends. Surely a larger freedom should be given to landlords thus minded; and potential landlords otherwise disposed should with equal fitness be recognised and suitably dealt with. If the fresh-air treatment of slum life cannot be carried out at home the sufferers should certainly be transported to the open country for such treatment. What the fresh-air treatment of consumption means is well known; may not its principles be applied as a preventive of disease? It would be even more satisfactory thus than as a merely probable cure.

REFUSE REMOVAL.

The London County Council has decided to summon a conference of representatives from the City Corporation and the vestries to consider *inter alia* (*a*) the best method of removing house refuse, (1) the best kind of portable receptacle for use by householders, and (2) the best contrived vehicle for the conveyance of house refuse through the streets so as to avoid nuisance; (*b*) the best method of cleaning and sprinkling the roads; (*c*) the best means of preventing, as far as possible, the casting of objectionable litter or dangerous substances in the streets. If the conference, which we understand will be called together by the General Purposes Committee shortly after the Easter recess, successfully provides remedies for the nuisances indicated, Londoners may yet learn to name the County Council without a murmur and endure an enhanced rate without resort to the Englishman's proverbial privilege. It is but recently that in several parishes a weekly collection of house refuse has been uniformly adopted. This, though an improvement on a pre-existent state of neglect, is far from adequate. Overflowing dustbins or dust receptacles are of constant occurrence, and the call of the dustman is apt to intermit at times when such calls are most urgently required. The conveyance of house refuse when collected is on windy days frequently the occasion of a further distribution of ashes and paper in the public thoroughfares, while the "tipping" of the dust into barges at the riverside is often performed in the most scandalously slovenly fashion. As to the "tipping" of the dustman, it is as universally expected as it is stringently forbidden. The scavenging of the streets is carried out with varying inefficiency and often at most inconvenient hours. The prevalent suspicion that wood paving, by virtue of its porosity, gives rise to noxious exhalations may possibly engage the attention of the conference, and the representations of the city may perhaps induce some of the vestrymen to follow the example set by the City Fathers in the prompt removal of street refuse and the flushing of main thoroughfares during the night.

RACE IN RELATION TO LIFE ASSURANCE.

Dr. Theodore Williams in his presidential address to the Life Assurance Medical Officers' Association, discussed this question. The data at his command were of too limited a nature to allow of any very definite conclusions, but from a table of the expectation of life of various British and foreign offices, it appears that at age 20 and upwards the American expectation is slightly better than the British; then, with about the same interval, comes the French; and lastly, the German, which is decidedly below the French. In all the offices, except the French, the figures are for the male sex only; the French are for both sexes. The great diminution in the death-rate which has taken place throughout Europe in the last twenty-five years would point to the probability that to a certain extent assurance offices have profited by the improved health of the community. It would be interesting to compare the assurance experience of Norway, with a death-rate of 15.4, and Hungary, with that of 28.4, but we have no figures at our disposal for this purpose. In process of time we may expect to have the data whereby to

estimate the value from a life assurance point of view of Indian, Chinese, and Japanese lives, but at present, though some offices undertake these risks, anything like accurate information is wanting. Dr. Williams's address should stimulate actuaries and medical officers to collect all the material at their disposal on this subject, in view of the great extension of life assurance to which the opening up of the East will probably lead.

FORENSIC MEDICINE IN EDINBURGH.

IT may be interesting to note that the late Sir Douglas Maclagan was only the fifth—or perhaps, more strictly, the fourth—occupant of the Chair of Forensic Medicine in the University of Edinburgh. Andrew Duncan *Secundus*, who was appointed in 1807, was the first Professor. It was Andrew Duncan *Primus*, the father, who moved the Town Council to found the Chair, but it was from the son that the idea had first come. He it was, too, who called the attention of the profession of his day to what the Germans called State medicine. Fitly enough, the Chair was first bestowed on him who had devised it. The class in his day remained outside the medical curriculum, and even Sir Robert Christison did not attend it, though he afterwards became (virtually) the second Professor. William Pulteney Alison was the temporary occupant of the Chair in 1820-21, and in 1822 Robert Christison, *ultimus Romanorum*, was appointed. He was acknowledged by the Scottish judges of his time to have been the best medical or scientific witness that ever came before them, the most upright and unbiassed, and at the same time the most clear and definite as to what he had to testify. His first *cause célèbre* was the trial of Burke and Hare in 1829, and in the case of the Rugeley murders it was always said that Christison "hanged Palmer." In 1829 his great *Treatise on Poisons* was published. In 1832 he was succeeded by Thomas Stewart Traill, who continued lecturing till within twelve days of his death, and died in the middle of his thirtieth session, in his 81st year, in 1862. In 1862 Sir Douglas Maclagan was appointed. Like Christison, he was a man of uprightness, honour, and truthfulness, and an ideal scientific witness. He had no bias. He saw straight. In 1896 he retired from the chair, and was succeeded by Sir Henry D. Littlejohn, the present incumbent.

INFANTILE DISEASES AND DEGENERATION.

A PAMPHLET, addressed to the medical officers of health of the County of Surrey, by Mr. W. Welch, Chairman of the Sanitary Committee of the County Council of Surrey, contains an interesting summary of possible means for the prevention of infantile mortality. The statistical tables accompanying the report do not make out such a strong case for the necessity of action as could be framed were the statistics of our large industrial centres to be utilised. But if, as the result of the Conference appealed to by Mr. Welch, Surrey succeeds in rendering its relative position as to infantile mortality still better than it is at present, this will form an additional incentive to other counties to make efforts in the same direction. As matters now stand, medical officers of health in other parts of the country may be inclined to envy Surrey on the fact that its urban districts in the years 1889-98 had an average mortality of only 119, and its rural districts of only 101 per 1,000 births, as compared with 151 per 1,000 births in the whole of England and Wales. Naturally among means for diminishing infantile mortality, the importance of teaching the elements of home nursing and hygiene in schools, of giving plain health talks at mothers' meetings and village gatherings, and of visits by lady health visitors are emphasised, and it is certain that great good can be done in these directions. The importance of pure milk, free from decomposition and free from the tubercle bacillus, not diluted with water nor impoverished by the abstraction of cream—a too common contributory cause of rickets in these days of separated milk—also need be emphasised. In a rural and suburban county like Surrey much can be done in these directions by an efficient and enlightened enforcement of the Dairies and Cowsheds Regulations and of the Food and Drugs Acts. We are tempted to join issue with the remark in Mr. Welch's address, implying that the recent rejection of so many volunteers for the South African campaign means degeneration of the race. This degeneration of the English race still remains to be proved. It has on several occasions been clearly "proved" by statistics as to recruits, but the real explanation is that the varying proportion of rejections of the unfit depends upon the standard set up. When trade is prosperous recruits are few, and the standard has to be lowered to bring in the necessary numbers. When trade is poor, or when the war fever is at its height, the choice is wider, and embraces a larger proportion of those who are classed as unfit. This is, however, a side issue. We welcome Mr. Welch's address, and shall hope to find in Dr. Seaton's future reports evidence that the campaign thus inaugurated has been productive of great good.

THE TUBERCULOSIS CONGRESS AT NAPLES.

WE are asked once more to call the attention of the medical profession of this country to the forthcoming Congress on Tuberculosis which is to be held at Naples next week. We have already given an outline of its organisation. Its objects are virtually the same as those of the Congress held in Berlin last year. It is under the patronage of Her Majesty the Queen of Italy, and will be presided over by His Excellency Professor Guido Baccelli, Minister of Public Instruction. As Italian Congresses are somewhat of the nature of movable feasts, and several different dates have been announced from time to time, it may be well to mention that the Congress will open on Wednesday, April 25th, and close on Saturday, April 28th. The Italian railway companies will grant a reduction of from 30 to 50 per cent., according to distance, on their regular fares, to all members of the Congress. This reduction holds good till April 28th for the journey to Naples, and from April 25th to May 5th for the return journey, giving the right to stop at intermediate stations. Among the representatives of foreign countries who are expected to take part in the proceedings are Professors Senator, von Leyden, Ewald, Baginsky, Köhler, Flügge, Petruschky, and Posner from Germany, and Professors Bouchard, Landouzy, Lortet, Richet, Héricourt, Arloing, Courmont, and Nocard from France. The German Emperor will be officially represented by the Duke of Ratibor, the French Government by M. Monod, the Russian Government by Dr. Berthenson, the Spanish Government by Drs. Mendoza and Espina y Capo, and the Greek Government by Professor Kallivokas.

DEGREE DAY of the University of London has been fixed for May 9th. The ceremony will take place in the new home of the University at South Kensington, and it is announced that the Prince of Wales has expressed his intention to be present.

THE *Medical Register* for 1900 was received on April 17th. It contains 1,793 pages, of which 1,711 are devoted to the *Register* proper. It contains 35,836 names as contrasted with 35,057 names last year; ten years ago it contained 28,348 names. This year the volume weighs 5 lbs. 13 ozs.; in 1891 it weighed 4 lbs. 2 ozs. The price is 6s., and the volume is published for the Council by Messrs. Spottiswoode and Co.

THE MIDWIVES BILL.

The Ethics of Direct Representation.

Under the above heading Dr. Glover forwards to us the following correspondence with a request for publication:

The Infirmary, 282, High Street, Lewisham, S.E.,
April 9th, 1900.

Dear Dr. Glover,—I enclose a copy of notice and agenda for a meeting. In doing so I must mention that whilst your presence to support our efforts to avert the imminent repeal of the Medical Acts would afford us the greatest gratification, this occasion is not one for discussing whether the registration of midwives is desirable, but for organising resistance to it.

Whatever your personal views we claim that you know the mind of your constituency, and occupy your seat on the General Medical Council for the purpose of representing not your own views, but those of your constituents.

I am, dear Sir, yours faithfully,
F. S. Toogood.

Dr. J. Grey Glover, Highbury Place, N.

25, Highbury Place, N., April 18th, 1900.

Dear Dr. Toogood,—I telegraphed, as you will know, to Mr. Brown that I could not attend the meeting summoned by the Emergency Committee at the Charing Cross Hotel.

Referring to your personal letter, accompanying the printed circular of the "Emergency Committee of Public Safety against Midwives Registration," let me say that I do not agree with you as to the "imminent repeal of the Medical Acts" being involved in the passing of the Midwives Bill. But I do not propose to argue this point here. You clearly intimate to me that my duty is not to argue but to obey. I may take another opportunity of arguing with more reasonable opponents. My immediate object in writing you is to enter an emphatic protest against the doctrine expressed in the closing paragraph of your letter to me, which runs as follows:

> Whatever your personal views we claim that you know the mind of your constituency and occupy your seat on the General Medical Council for the purpose of representing not your own views but those of your constituents.

I demur entirely to the truth of this paragraph, either as regards the mind of my constituency or my duty. I was sent to the Council by those who well knew my views to vote not mechanically but after grave deliberation with twenty-nine other gentlemen representing, though too indirectly, the profession and the medical authorities as well as the State. I maintain that no real and intelligent friend of direct representation inspired this paragraph of your letter. The doctrine involved in it would reduce direct representatives to mere voting machines, to receive the last mandate of any clique of the profession that thought itself a saviour of society and gave its orders to its slaves.

I have a higher conception of direct representation. I did not receive my office on such terms or by the help of the group of men—well known and defined—who are at your back with such degrading and disastrous views of the principle of direct representation, which is struggling for extension, not to say for existence. On the contrary, I received it after the honest expression of my views as in the following extract from my address before the election of 1896:

> The question of midwives is being clarified by discussion. All are agreed that the lives of poor women must be guarded from the coarse risks of the perilous ignorance of so-called midwives. While I feel this very strongly I am fully alive to the importance of maintaining the principle of the Act of 1866 that midwifery is one of the three branches of the art of medicine, and that those who are not qualified in the other two can only act subordinately to members of the medical profession; and my endeavour shall be in regard to any legislation with respect to midwives to secure the clear recognition of this principle.

Such are the principles which I have always held, which I held when asking the votes of the profession, on which I was elected, and which I have done my best to have asserted or involved in the Midwives Bill. I should despise myself if, to gain a little temporary praise, I accepted the dictation of gentlemen who, no doubt, honestly differ from me on the midwives question, but who entirely fail to understand the morality and the strength of direct representation. I resent such dictation, as a great man did in a larger electoral sphere. He said:

> *Authoritative* dictation, *mandates* issued which the member is bound blindly and implicitly to obey, to vote and to argue for, though contrary to the deepest convictions of his judgment and conscience, these are things utterly unknown to the laws of this land and which arise from a fundamental mistake of the whole order and tenour of our constitution.

I abstain here from all discussion of the merits of the Midwives Bill. But in the interest of direct representation more than in my own I am compelled, though very reluctantly, to write this letter.

Believe me, yours very truly,
J. G. Glover.

Dr. F. S. Toogood, Lewisham.

P.S.—I am sending copies of this correspondence to the British Medical Journal and the *Lancet*.

Mr. Joseph Smith (Bedford Park, Chiswick) writes: May I ask the favour of space for personal explanation to acquit myself of Dr. Glover's serious charges, which otherwise may be taken to attach to my conduct as the seconder of the resolution of which he complains, suggesting that he should resign and seek re-election as a direct representative?

Our procedure he implies was unreasonable, discourteous, unseemly, and immodest, owing to the smallness of the meeting, and of the number present when the resolution was put; to the success of the General Medical Council in securing control over licensed midwives, and in some other respects; and to the fact that his "trust" as a direct representative was given him for the third (? and last) time by thousands of registered practitioners on the explicit understanding that he should support legislation under such conditions.

Dr. Glover might have some ground for his charges against me and others if his statements were correct.

The meeting was held in Room A of the Cannon Street Hotel, to accommodate 160, was during the greater part of the time full, or even crowded; and as I had no part in organising it, I can the better testify that it was one of the most successful and unanimous meetings I ever attended. Dr. Glover's complaint in his letter, read by his special request, that his name was used and he apparently committed to the objects of the meeting, was shown in the reply read to be without foundation, and his object in making such a complaint seems doubtful, unless it was to discredit the organisers of the meeting with possibly more than two members of Parliament, the importance of whose presence, brought to a medical meeting by the direct request of their own constituents, Dr. Glover can fully understand. When Mr. Sturges objected to Dr. Hart's motion on the ground that the room was comparatively empty, I counted thirty present, which shows how full the room had been.

Would such a motion, depending on the main business of the meeting, and involving and prejudicing the issues have been in order before that business was disposed of? Or could the meeting, in postponing it, have known whether the attendance (not then full) would be less or more? Or when Dr. Glover writes a letter scolding his constituents for what they have not done, does he expect them to receive his misconstruction and censure in awe-struck silence?

Has Dr. Glover's descent in three candidatures from the top to the bottom of the poll of successful candidates, only on this question of dealing with midwives, no lesson for him? Is he not aware that his estimation in the eyes of his constituents continues to lessen as they become more and more alive to the real issues involved? Did those who adopted the resolution he complains of base their suggestion of his resignation on their own votes, or on the result of the *Lancet's* postcard poll? and the failure of Dr. Glover and his friends to influence important details, which is the *ignis fatuus* by which they have too long beguiled so many.

Is the control he boasts has been gained over midwives by the General Medical Council in any sense a real control, or is it now with the expectation to influence other details shown to be such a mere will-o'-the-wisp? Has not Dr. Glover's position, and especially any claim on his constituents to longer trust in such modifying influence been totally changed by the second reading of the Bill as it stood by a large majority; and by the proceedings in Committee, when the promoters of the measure clearly demonstrated, and triumphed in, their determination to make the midwife an independent practitioner of midwifery, and to keep out of the Bill all restrictions of that independence and limitations of her practice; whilst mocking the profession by referring them for these restrictions to a Board "chiefly of medical men," which they well know, if Dr. Glover does not, will not in law be competent to resist any rights given or implied by the Act it is to administer but cannot override?

Do such meetings as those at Newcastle, where he wisely avoided this subject, and those of Hull, of West Ham, and of Cannon Street, fail to convince Dr. Glover of the awakening of his constituents to the dangers involved in this pernicious measure to create an inferior order of practitioners? And though I say the conditions are now totally changed, even if they were not, but the great body of his constituents had changed their views whilst he retained his own, has Dr. Glover never heard of a high-spirited representative considering such a change a sufficient reason for resigning an office he can no longer hold with mutual satisfaction to himself and his constituents; or at least, which is the most that is suggested by our resolution, as a reason for conclusively testing whether he still retains, or by his own fault or theirs has lost the confidence of his constituents, or at least has ceased to represent a competent majority? And are not the returns to the *Lancet* poll and such strikingly unanimous meetings as I have instanced, sufficient reasons for a doubt he might, as a high-spirited representative, desire to satisfy? In one thing at least I cannot gainsay him. Many of us would be surprised if he adopted the suggestion and believe he will be content whilst he represents the views of the few constituents interested in the success of the London Obstetrical Society.

For my part, what Dr. Glover calls a disagreement with him as to the best means of dealing with the question of midwives, I regard as a difference whether or not the Medical Acts are to be repealed; a question involving the safety and lives of the people, and the rights of the profession; and though we were able to tell Mr. Penn and Mr. Forster that the General Medical Council and Royal Colleges in no sense represent the

profession, Dr. Glover's case as an elected representative will be so much more difficult to explain to inquiring members of Parliament at the conference at the House of Commons that, having assented to the previous resolutions, I feel I should have failed in my duty, however humble a member of his constituency, if I had not helped to faithfully represent to Dr. Glover the falseness of his present position.

Objections to the Midwives Bill.

Dr. F. Lorimer Hart (Sydenham) writes: Had Dr. Glover been present at the crowded and enthusiastic meeting at Cannon Street Hotel, which unanimously adopted the resolutions against the principle of the Midwives Bill and the views of those who like him support such registration, I cannot doubt he would have taken a different attitude to that indicated by his letter of this week. A prolonged meeting, especially consisting of busy medical practitioners, is one calculated to become "attenuated," but the meeting never numbered fewer than thirty at any stage of the proceedings, and represented South-East London only. His refusal to co-operate with a large majority of his constituents (as proved by the *Lancet plébiscite*) having been read to the meeting, at his own request, those present had no alternative but to reply in the form of a resolution. The meeting was unanimous in adopting the rejoinder which Dr. Glover has received.

But passing from this to the merits of the question, the Cannon Street Hotel meeting expressed what are the views of an overwhelming majority of the profession. We are opposed to the principle of a Midwives Bill whereby women who have acquired a superficial training of a few months will be licensed as proficient in the practice of midwifery as independent practitioners. This we hold would be opposed to the spirit and a reversal of the Medical Acts, which were instituted for the guidance and safety of the public. It would further be seriously detrimental to the advance of the science of midwifery.

On the other hand Dr. Glover and his friends, who have been supporting the principle of midwives' registration and playing with this Bill with the false hope of "influencing details," are beginning to see that their efforts have been abortive, and we are awakening to the fact that our ruling and so-called representative councils may rule but do not represent us, and have by inertia and compromise endangered the interests of science and the life of our nation in the future.

The Act as now before the country does not provide for the midwife calling in medical aid in cases or danger, it certainly does not provide for punishing her should she fail to do so; and, if it passes, no Midwives Board could limit the powers given to her by Act of Parliament. But assuming it will acquire this authority, we are also asked to assume that it will extend in some miraculous manner to the midwife (be she "trained," or untrained as many thousands will be on the passing of the Act) a power of diagnosis and a tactile sensibility the acquisition of which frequently taxes the best of us.

Take the attitude of the Council of the British Medical Association as typical of the compromising view. They are not quite satisfied with the present Bill, and propose to perfect it by adding among other suggestions for a "Midwives Bill as amended" a Schedule A, published in the British Medical Journal of March 24th, to which I refer your readers. The following are some of the cases in which the midwife (for I suppose the words "midwifery nurse" occurring in this schedule is a printer's error) is required to demand medical assistance: (*a*) In the case of a pregnant woman having a narrow pelvis, or in hæmorrhage, or when patient dies suddenly; (*b*) in the case of a woman during labour, in abnormal positions of the child, in smallness of the pelvis or largeness of the child's head, in excessive pains followed by exhaustion, in hæmorrhage presenting placenta, ruptured perineum, threatened danger or death, in the apparently dead newborn child, and so on.

To my mind it seems preposterous for any body of medical men to suggest legislation which assumes that it is in the power of a woman after so many months' superficial training to diagnose, and that at the earliest stages, abnormalities which are of frequent occurrence; or even to assume that her place is other than extra vaginal. This attempt to cobble up a retrogressive Bill suggests the two blacks which make a white, and I should indicate to the normal conscience and intellect that there is a vital flaw in the nature of the material, a rottenness at the root of such a growth.

Dr. H. Elliot-Blake (Sloane Square, S.W.) writes: Law and legislation do very foolish things at times, and are not infallible, and this Bill supports this view. A woman's question from the first, it hopes as an extra fussy inspiration to introduce women inspectors for lying-in houses. It has outbounded restraint with a full motto of "Get all and grab at it." A nice outcome of this is the random and unlimited definition of "midwife." The "midwife" at once is not to embrace midwifery except a normal labour. Elsewhere rules can be made to get behind Clause xviii, and yet the different limits are not supposed to be contradictory, which is absurd. It registrates yet fears to keep strictly to a registration Act. It sets out to enforce proper training yet it considers three months, and none in some cases, is sufficient. It bids for the whole field of midwifery.

Luckily the shock of rejecting the amendments has alienated our press. The unimproved Bill, through disappointing supporters, may well hope to meet opposition as the lack of technical merit at its back deserves. The promoters have flaunted tail pieces and little points skilfully and partially extracted from the British Medical Association, the Royal Colleges of Surgeons and Physicians, and the Council of Medical Registration, as times served; when the truth now is that each of these bodies has virtually been betrayed and their essential saving clauses wiped out as follows:—The first, from its Journal and editorial criticisms, is almost entirely opposed to the Bill in its present shape. The Council of the second held the brief of the Privy Council, and insisted on medical control and supervision, but the Bill gives it to the influence of the county councils, and especially ladies *in extenso*. The Colleges are opposed to the infringements of the present practitioners of midwifery, yet the Bill actually refuses limitations. Mr. Johnstone's boast, therefore, that "the Bill created no new class" gives no credit to the new standing. A supporter says there is no fear of the loss of medical emoluments, but if one case goes on the "qualified" and "recognised" ticket, apart from thousands, this will not be true.

The Bill has transgressed its legitimate object of succouring the poor with the relief of trained midwifery nurses, with legal permission to attend ordinary labour (and, as I hope, under a medical supervisory visit), and has degenerated into one to provide a new and cheap calling for women without being properly qualified in the whole curricula, above all to legalise the Obstetrical Society's certificates, and to get midwifery work into the hands of women in great part. The Continental system, other than with midwifery nurses, is not necessary to a tiny island like ours, giving easy call to medical help, and which is not resented. To end, what have these self-dubbed midwives, for the most part successful nurses, done to be given a new class position without a direct medical supervisory visit? If this Bill gives us nothing, the medical profession risks being debased by being again exploited for no adequate returns.

Joint Committee to Oppose Midwives' Registration.

A meeting of the Joint Committee to Oppose Midwives Registration, which was constituted at the meeting of the Cannon Street Hotel on April 4th, was held at the Charing Cross Hotel on April 12th, when the chair was taken by Mr. George Brown.

The following address to members of Parliament, designed to be signed by constituents of such members, was approved:

An Address by Constituents.

1. As your constituents we beg, in the interests of public safety, to earnestly invite your personal and Parliamentary support of the Joint Committee to oppose midwives' registration; especially in opposing the Midwives Bill, 1900, now before Parliament
   - (1) By signing the "whip," copy herewith, to convene a conference of members of Parliament at the House of Commons, to receive a deputation representing us, as opponents of this measure; and, by attending the conference, to assist in affording us a fair hearing as to the grounds of our objections, and in eliciting the fullest explanations.
   - (2) If satisfied of the validity of such objections, by joining the committee and assisting in its objects.
   - (3) Especially by promoting and assisting in deputations to lay before the Lord President of the Privy Council and the Leader of the House of Commons, the grounds which appear to demand the rejection of the measure.
   - (4) By opposing, in Parliament, the adoption of the report upon, and the third reading of the Bill; unless amended into the form of useful and proper provision for the training and registration of midwifery nurses; not authorised to act in any case as practitioners of the art and science of midwifery, without medical education and registration.
2. In inviting such action on your part (though it be beyond the usual courteous promise of careful consideration) we are convinced that we are asking in the public interest no more than is being done contrary to the best interests of the public by many members of Parliament, who without any request of their constituents are actively promoting and combining to carry a measure which, we respectfully desire to submit, would be no less a public danger than it would be a breach of public faith with a great body of loyal subjects, who in no way merit deprivation of their statutory rights.
3. In support of these views we enclose a brief epitome of the considerations which we conceive justify this earnest appeal to you as our representatives in Parliament.

Proposed Association for Opposing Midwives' Registration.

Dr. R. R. Rentoul (78, Hartington Road, Liverpool) writes: In 1810, when what is now the Apothecaries Act was introduced into Parliament, it contained a clause proposing the

registration of midwives. At once an association of 10,000 practitioners was established to oppose this clause, and with the result that it was withdrawn. I propose we shall now establish a similar association. Surely we can accomplish in 1900 what was done in 1810. The aims of this association will be:

A. To oppose any proposal to establish any order of midwifery, or medical or surgical practitioners, other than that now recognised under the Medical Acts.

B. To petition the General Medical Council to rule it to be "infamous conduct in a professional respect" when any medical practitioner, other than those now empowered by the Medical Acts, grants any document which professes to empower the holder to practise any branch or part of obstetrics, or medicine, or surgery.

C. To ask Parliament to pass a Bill making it an offence if any person, other than those now empowered by the Medical Acts, grants any medical, surgical, or obstetric diploma or certificate.

D. To induce Boards of Guardians to put the Extra Midwifery Fee Order, 1847, and the order relating to their appointing district obstetric nurses, 1892, into active operation, and to agree that any poor woman with a Poor-law note may choose, at the expense of the guardians, the services of any practitioner to conduct her confinement.

E. To ask for the opening of Poor-law infirmaries for the clinical instruction of students in practical obstetrics.

F. To increase the educational requirements of students in obstetrics.

G. To support a Bill for the training and supervision of obstetric and other nurses, but with nurse's duties only.

The above wide programme will require ample funds, and I suggest that each practitioner pay any sum from 7s. 6d. upwards. Why practitioners act as if they thought any public work can be brought to a successful issue without funds I cannot tell. Why they also act as if they really believed that disunion, non-co-operation, and disintegration will ensure success has always been a puzzle. When asking men who are active in politics to help they have repeatedly asked me if there is any organised society to oppose midwives' registration, and, if so, they would wish to be put into communication with it. When the late Dr. Waters of Chester was working for the granting of direct representation of practitioners upon the General Medical Council he had an organised association of practitioners at his back. In 1867 there was a large Medico-Political Association working hard for the passing of the present Medical Act, 1886. No persons in this country will to-day receive the slightest political attention or respect unless they are organised, powerful, and influential.

I suggest that this proposed association have a council, a small executive committee, a salaried solicitor, and an honorary secretary. Surely with 28,659 practitioners in the United Kingdom we shall obtain 10,000 members. One of the very first duties of such an association will be to supply each member of Parliament—1,247 in number—with objections to to the registration of midwives. Since February, 1897, I have expended £75 in opposing the Bills, and I think about £2,500 will be required to carry the above programme to a successful issue. In the meantime I shall be glad to receive names for membership.

THE LEE VALLEY.

Sewage Farms.

Some months ago attention was drawn to the poisoning of fish in the river Lee owing to the pollution from sewage works and farms, the effluents from which are allowed to run into the stream.

This matter was taken up with considerable fervour at the time by the sporting papers, as it affected the numerous angling associations on the river, which have a large membership. There is, however, another and more serious side to the question.

This constant pollution of a river forming the water supply of 2½ millions of people in the East End of London is a great and standing danger to the public health. It has therefore been thought desirable at this juncture to point out the defects in the present state of affairs, and the arrangements which might with advantage be carried out in the near future for the more efficient protection of the public.

The Lee has a drainage area of some 600 square miles, and a course of about 70 miles, with a fall in the whole distance of 400 feet, and it is evident that with the number of locks it possesses on the navigation and its winding nature, the main stream is very sluggish, and in many parts absolutely dead.

Sources of Pollution.

At Hertford, the termination of the navigable portion of the Lee, some malting effluent is allowed to run into the river, which subsequently undergoes decomposition and causes a grave nuisance.

At Ware, lower down the river, not only is the malting effluent allowed to pollute the stream, but the effluent from the Hertford sewage works, *vid* the "Manifold Ditch," is allowed to pass into the Lee. The filthy condition of this effluent must be seen and smelt to be thoroughly appreciated.

At Rye House the sewage from Ware flows over land often much waterlogged, the "carriers" are most offensive, and in a very rickety and tumbledown condition; they are, however, now being repaired and renewed. There is a catchment ditch all round the farm, and no effluent.

The Hoddesdon Sewage Farm close by lies on high ground; the farms mentioned are all on low-lying land.

Below Broxbourne there is a farm on which the sewage of that place flows by gravitation, and where also that of Wormley is treated—pumped, we believe, on to the land by hand; the effluent runs into a small brook, which flows into the "Small Lee," a tributary of the main river.

At Waltham Abbey the whole of the sewage is treated on a piece of land, part of which is low-lying and sodden; the effluent is allowed to run into "Cobbins Brook," which finds its way directly into the Lee.

At the Waltham Government Works the sewage is dug into the ground. "Where?" "Oh! anywhere that is convenient," was the cheerful reply.

At the Royal Small Arms Factory at Enfield Lock, there is an irrigation farm, again low-lying land and at times most unsavoury.

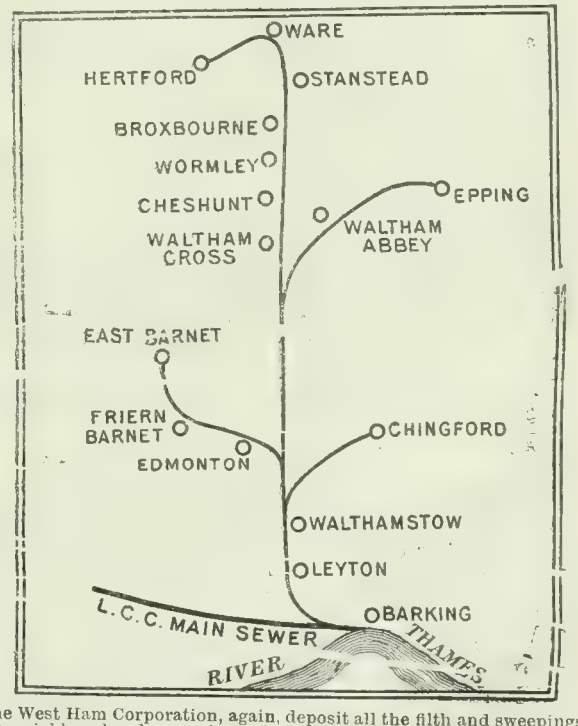
The Cheshunt Sewage Farm partakes more of the nature of a morass, and is generally most offensive. The effluent flows into an "Intercepting Ditch," which although carrying it past and below the intake of the East London Company at Ponder's End, does not tend to improve the state of the river on its entrance further down below Tottenham Lock.

Below Ponders End and adjoining Picketts Lane is another farm which receives the sewage from Enfield. This place is constantly waterlogged, and is an evil smelling piece of ground both in winter fogs and summer drought. Trains passing this spot on the adjacent line are noticed to go by with all compartments "close tyled."

To the East lies Chingford, where there is a low-lying sewage farm, the effluent passing into the "Ching brook," a tributary of the Lee.

The sewage of Edmonton and Southgate is taken further down the river on another low-lying farm. This place is most objectionable, especially in summer.

PLAN OF THE LEE VALLEY MAIN DRAIN.



The West Ham Corporation, again, deposit all the filth and sweepings of their neighbourhood on a piece of waste land lower down called "West Ham Tip." This is a most abominable place. There is a fœtid stream polluted by the refuse of a skin-dressing establishment, as well as numerous evil-smelling "runs" from the neighbouring filth deposits. This stream adds its bouquet to the Lee, flowing into it at "Carpenters Road."

At Walthamstow the sewage is first treated chemically and then allowed to run over land. The sludge is pressed and dug into the ground. The land is in close proximity to the reservoirs of the East London Company. The effluent passes into on one side the Leyton level ditch, a stream of very low volume, and on the other into the old Lee at a point near to the bathing pool of the London County Council at Hackney Marshes.

At Leyton there is also chemical treatment. The sludge is burnt in a destructor. In both these latter places land is set apart for overflow rude sewage.

At Hackney the sewage of Tottenham is received and passed through the Hackney sewer to the main outfall of the Metropolitan sewers. There have been many complaints of the overflow of sewage into the basements of houses in the neighbourhood during rainy weather, due to want of capacity in the sewers.

Although no epidemic of typhoid, as far as we are aware, has been traced to sewage farms, it is by no means outside the bounds of probability that such an event might not occur. That this has not already happened is no argument that it never will. Cholera has certainly, in one case at all events, been traced to a sewage farm in Germany. The sewage from an asylum, in which there was a case or cases of cholera, passed over the land of a farm which became frozen, and the effluent ran into the river Saale, immediately above the pipe which conveyed the water to Neitleben lower down for drinking purposes. Cholera broke out at Neitleben, the cholera vibrio being found by bacteriological examination in the Nietleben supply pipe.

Dysentery has been conclusively proved to be due in many instances to fæcal pollution of the soil. At the Cumberland and Westmorland Asylum in 1864 and 1865, and again in 1868, there were epidemics of dysentery due to the sewage from the asylum being allowed to flow over a field, and the subsequent fæcal pollution of the soil and effluvium therefrom.

Sewage farms in many cases give rise to nuisance; those in the Lee valley are no exception. The important point to decide is—whether these sewage farms are at the present, or might become in the future, a possible source of danger.

These low-lying farms are so constantly sodden with sewage that the soil must become very greatly polluted, its powers overtaxed, and the work of purification lessened to almost vanishing point.

Although the bacillus typhosus is not believed to be able to exist more than a week at the outside in crude sewage, it may probably live in a polluted soil for a very much longer period. It has been shown experimentally that the bacillus typhosus will continue to live and spread in polluted soils at ordinary temperatures, but in virgin soils dies out. In soils experimentally inoculated, and treated at intervals with bouillon, the bacillus has been found after the lapse of weeks, whereas in soils inoculated, but not so nourished, no trace of it has been discovered after the lapse of a few days.

The persistence of the bacillus typhosus in the soil appears to depend on its getting liquid nourishment: therefore a waterlogged soil, rich in organic matter, is the one in which the bacillus typhosus is most likely to flourish.

Although attempts to prove that aërial conveyance of the organism from liquid filth have failed, the effluent from any such collection of fæcal matter as a sewage farm should certainly be prevented from contaminating any source of water used for drinking purposes. According to Pettenkofer, there are three conditions necessary for the spread of typhoid epidemics:

1. The presence of the typhoid bacillus.
2. Pollution of the soil accompanied by certain hygrometric conditions, such as an increase of the earth temperature, and a lowering or decrease of the subsoil water.
3. The presence of inhabitants predisposed to the disease.

As regards the first postulate, there may or may not be typhoid bacilli in the soil of these farms which might at any time be washed by surface drainage or carried by the effluent into the river. The pollution is certain and persistent, but of the hygrometric conditions we know little. Lastly, the presence of inhabitants predisposed to the disease could only be ascertained after the disease broke out by the number and proportion of people attacked.

There is no doubt that low-lying sewage farms can create a nuisance, and they may even be a potential source of danger. The risk of an outbreak may be slight, but it would be wiser to dismiss once and for all any possibility of such an event by entirely doing away with these low-lying sewage farms. One can never be certain what the effluent carries with it, and the consequences to people, not only in the immediate neighbourhood—using well, springs, etc.—but to those living lower down the river and below the source of pollution may be serious.

The London County Council has decided to construct additional main sewers, the present system being deemed incapable of dealing with the constantly-increasing sewage of London. These sewers will discharge at the Northern Main Drainage Works, Barking. Would it not be possible to construct a main sewer in the Lee Valley which would take away bodily all the sewage at present allowed to pollute both land and water? The sewage would be disposed of by being carried into the new and improved London drainage, and thence on to Barking. The benefit both to the Lee Valley and to those others who consume its waters would be very great. Engineering difficulties there are none, and the cost, which would be borne by the ratepayers of the districts drained, we are assured would be quite inconsiderable. If public attention, backed by the opinion of authorities who perceive the advantages which would be gained by the adoption of this system was once thoroughly aroused, opposition—Parliamentary, municipal, or other—would have to give way before the pressure brought to bear on it.

ASSOCIATION INTELLIGENCE.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held on Thursday, May 10th, at the Hôtel Métropole, Bexhill. The chair will be taken at 4 P.M. by Dr. Wills. Notice of intended communications should be sent at once to J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this Branch will be held at the Greyhound Hotel, Croydon, on Thursday, May 10th, at 4 P.M., Dr. John Redfern (Croydon) in the chair. Agenda: (1) Minutes of Upper Norwood meeting. (2) To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., will be read:—Dr. Gustave Schörstein: The Treatment of Gastric Ulcer. Mr. Frederic Eve: The Treatment of Hernia in Adults and Children, especially in regard to Radical Cure. Dr. Phineas S. Abraham: On the Treatment of some Common Diseases of the Skin. Mr. S. W. MacIlwaine: The Future of the Profession and of the Association. After Mr. MacIlwaine's paper the Honorary Secretary will at once propose: "That the Editor of the BRITISH MEDICAL JOURNAL be requested to publish this paper in the JOURNAL, and that the discussion on it with the consequent vote be postponed until the next meeting." Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M. (charge 7s., exclusive of wine). All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—HENRY J. PRANGLEY, Tudor House, Anerley, S.E., Honorary Secretary.

BORDER COUNTIES BRANCH.—The spring meeting of this Branch will be held at the Buccleuch Hotel, Moffat, on the afternoon of Friday, May 4th. Members intending to read papers, etc., and gentlemen desirous of joining the Branch, are requested to communicate as soon as possible with the Honorary Secretary, W. F. FARQUHARSON, M.D., Garlands, Carlisle.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The spring meeting of this Branch will be held at Abergavenny on Thursday, April 26th.—ALFRED SHEEN, Cardiff, D. ARTHUR DAVIES, Swansea, Honorary Secretaries.

ABSTRACT OF PROCEEDINGS OF COUNCIL.

Dr. ROBERTS THOMSON, President of the Council, in the Chair.

AT a numerously attended meeting of the Council, held in the Council Room at the offices of the Association, 429, Strand, W.C., on Wednesday, April 11th, 1900, it was

Resolved: That the Financial Statement for the year ending December 31st, 1899, as certified by the auditors, be approved and published in the BRITISH MEDICAL JOURNAL in accordance with By-law 26.

[*The remainder of the Proceedings of the Council will be published in a future number of the* BRITISH MEDICAL JOURNAL.]

BRITISH MEDICAL ASSOCIATION.

FINANCIAL STATEMENT FOR THE YEAR ENDING DECEMBER 31ST, 1899.

BALANCE SHEET.

LIABILITIES.

DR.	£ s. d.	£ s. d.
To Subscriptions paid in advance	610 7 1	
,, Advertisements ,, ...	568 5 5	
,, Publishing ,, ...	4 14 6	
,, Library...	27 5 7	
,, Contributions	618 6 0	
,, Reporting	53 16 7	
,, Engraving	60 15 6	
,, Printing Journal	467 19 4	
,, Paper for Journal	694 14 4	
,, Miscellaneous Printing	145 11 11	
,, Stationery	46 4 10	
,, Repairs...	31 17 0	
,, Legal Charges	97 3 8	
,, Rates and Taxes, Insurance, and Electricity Supply	247 16 9	
,, Plant and Type	27 18 0	
,, Sundries	30 14 0	
,, Editorial Expenses	15 15 0	
,, Interest on Mortgage	255 0 0	
	4,004 5 6	
	£ s. d.	
,, Loan on Mortgage of Freehold	38,000 0 0	
,, Less Paid off in 1899	4,000 0 0	
	34,000 0 0	
TOTAL LIABILITIES...	38,004 5 6	
,, Amount written off towards depreciation of Furniture ...	1,442 9 11	
,, Surplus Account—	£ s. d.	
Balance on Jan. 1st, 1899	69,721 14 0	
Profit for 1899 brought from Revenue Account	6,272 8 9	
,, Balance, being total of excess of assets over liabilities	75,994 2 9	
	£115,440 18 2	

ASSETS.

CR.	£ s. d.	£ s. d.
By Subscriptions—Amount due		2,505 14 4
,, Advertisements—Amount due		3,725 0 5
,, Sundry Sales—Amount due...		128 17 4
,, Furniture and Fixtures at cost		2,576 5 5
,, Library		2,271 10 6
,, Plant and Type		1,680 18 9
,, Interest accrued on Investments and Rents due		280 10 11
,, Freehold of 2 and 3, Harvey's Buildings		4,640 0 0
,, Freehold of 429, Strand, 2, 3, 4, and 5, Agar Street	79,000 0 0	
,, Redemption of Land Tax	880 0 0	
		79,880 0 0
,, Investments (English Railway Debenture Stock) at cost		10,813 9 7
,, Cash, namely :—	£ s. d.	
At London and Westminster Bank current account	1,938 10 11	
Deposit account	5,000 0 0	
		6,938 10 11
		£115,440 18 2

Revenue or Profit and Loss Account for Year ending December 31st, 1899.

	£ s. d.	£ s. d.
Editorial Expenses (Salaries, Contributions, Engraving, Reporting) ...	5,324 9 9	
Expenses of Printing Journal (Printing, Postage, and Paper) ...	21,214 1 8	
Office Expenses (Rent, Taxes, Office Postage, etc.)	2,114 6 2	
Office Salaries and Wages...	2,847 7 9	
Association Expenses (Scientific Grants, Scholarships, Expenses of Committees, etc.) ...	3,341 12 0	
Interest on Mortgage	995 0 0	
Plant, written off towards Depreciation	500 0 0	
	36,336 17 4	
Subscription Losses from Deaths, Resignations, etc.	644 10 4	
	36,981 7 8	
Profit for Year carried to Balance Sheet	6,272 8 9	
	£43,253 16 5	
Subscriptions		19,871 13 8
,, former years		140 16 3
Advertisements		19,328 4
Sundry Sales of Journal		1,728 15 5
Sundries—Reading and Binding Covers, etc., ...		124 13 7
Reprints		88 16 9
Interest on Investments and Rents		945 14 11
Scientific Grants unused and returned		95 13 2
Sale of Waste, etc.		19 3 7
Discount on Printing, Paper, etc.		812 9 5
Unexpended Grants to Committees		72 15 0
Wood Fund—amount now credited to Revenue, as per Resolution of Council		25 0 0
		£43,253 16 5

STEWART FUND.

£579 invested in 4 per cent. Caledonian Railway Debenture Stock, in the name of the British Medical Association.

1899.	£ s. d.	1899.	£ s. d.
Jan. 1. To Balance brought down	58 0 2	Aug. 15. By award, Surgeon J. F. Abercrombie Dalton, R.N.	50 0 0
Dec. 31. ,, Interest one year on £579	22 7 10	Dec. 31. ,, Balance carried down	30 8 0
	£80 8 0		£80 8 0

MIDDLEMORE FUND.

£666 13s. 4d. invested in 3 per cent. North British Railway Debenture Stock in the name of the British Medical Association.

1899.	£ s. d.	1899.	£ s. d.
Jan. 1. To Balance brought down	62 11 4	Dec. 31. By Balance carried down	81 18 0
Dec. 31. ,, Interest one year on £666 13s. 4d.	19 6 8		
	£81 18 0		£81 18 0

We have examined the foregoing Accounts with the Books and Vouchers of the Association, and find the same to be correct.

PRICE, WATERHOUSE & CO.,
3, Frederick's Place, Old Jewry, E.C.

March 12th, 1900.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this District was held at Brighton on March 29th, Dr. MACKEY in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Next Meeting.—It was resolved to hold a meeting at Bexhill early in May.

Medical Reform.—A circular from the Wood Green and District Medical Society enclosing resolutions *in re* medical reform and the Midwives Bill, etc., was referred to the Branch Council.

Case.—Mr. WRAY (Croydon) showed a middle-aged man whose left upper eyelid he had removed for rodent ulcer, and for whom he had fashioned a new lid from a flap cut from the skin of the cheek. The levator palpebræ having been preserved and attached to the new lid, the result was a movable eyelid of almost normal appearance.

Papers.—Mr. GEORGE MORGAN read a paper on retro-pharyngeal abscess.—Dr. MAYNARD: A case of pancreatitis hæmorrhagica with specimen (to be published in the BRITISH MEDICAL JOURNAL).—Dr. MACKEY: A man, aged 40, who, after enteric fever, developed a group of symptoms which had been described by Osler as "typhoid spine," and from which he gradually recovered.

Dinner.—There were 27 members and visitors present, 14 of whom dined together after the meeting.

SOUTH-WESTERN BRANCH.

THE Spring Intermediate Meeting of this Branch was held on April 10th at Truro, Dr. MARK JACKSON (Barnstaple), the President, in the chair. Eighteen members were present.

Refreshments.—Tea and coffee were served at 4 o'clock.

Confirmation of Minutes.—The minutes of the last meeting at Plymouth were read and confirmed.

Papers.—Mr. N. E. NORWAY read a paper on the treatment of tuberculosis at Palermo by Professor Cervello's method—a combination of open-air and antiseptic inhalations. The paper was founded on a visit to the institution at Palermo. Dr. MONTGOMERIE and Mr. C. H. BUTLIN joined in the discussion. —Dr. BUSHNELL read a note on a sanatorium.—Mr. PAUL SWAIN read a paper on gastro-jejunostomy, in the light of a recent case. He expressed his preference for anastomosis on the posterior aspect and for the use of Murphy's button. Dr. HUGH SHARP and Dr. MONTGOMERIE took part in the discussion.

Specimens. — Mr. PAUL SWAIN showed two branched calculi removed successfully from the kidney of a female patient. — Dr. BUSHNELL showed (1) stomach with hour-glass contraction, (2) (for Mr. LUCY) fluid from a case of chylous ascites, (3) (for Mr. WHITEFORD) horse-shoe-shaped metal rod for use in enterostomy.— Dr. CARLYON showed (1) a biliary calculus the size of a small walnut which had become impacted in the ileo-cæcal valve, producing fatal intestinal obstruction, (2) congenitally malformed right hand from an infant (with photographs).

SIXTY-EIGHTH ANNUAL MEETING.

ANNUAL MUSEUM.

The Annual Museum in connection with the sixty-eighth meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments, comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary appliances and ambulances.

Two very good halls, practically adjoining each other, have been obtained for the Museum.

SECTIONS A and D will be held in the Public Hall, Westgate Street, a fine well-lighted and ventilated room. Length 119 feet, width 49 feet.

SECTIONS B and C will be held in the Old Museum Rooms, on the first floor, close to the Public Hall. Length of room, 71 feet, width 25 feet.

Both halls are very central.

Exhibitors (other than members of the medical profession) will be charged for table, floor, and wall space as follows: In Sections A, B, and C from 3s. 6d. per square foot, depending on the position of the table, tables 3 feet and 3 feet 6 inches wide being provided. In Section D 6d. per square foot for floor space (all fittings to be provided by the exhibitor). Wall space (where available) for advertisements will be charged for at 6d. per square foot.

Advertisements in Museum Catalogue.—A catalogue will be printed, and 2,000 copies distributed gratis to members of the Association. Prepaid advertisements, to be sent before June 20th, will be inserted. Further particulars will be sent on application.

The plans of the hall, and forms of application for space, will be ready early in April.

REGULATIONS.

1. All communications on general matters connected with the Museum, and all applications for space, should be addressed to Mr. C. K. Moseley, 14, Northgate Street, Ipswich, before June 1st. N.B.—No space will be allotted before that date.

2. A brief description of each exhibit for insertion in the Museum Catalogue must be in the hands of the Secretary before June 19th.

3. Space will as far as possible be allotted in the order of application and in proportion to the amount applied for, the Committee reserving power to give preference to *bonâ-fide* inventions and improvements not previously exhibited, and also to refuse any exhibit they may consider unsuitable.

4. In the event of more space being applied for than is actually available, the allotment will be made at the discretion of the Committee.

5. The Committee reserve to themselves the power to utilise any of the floor space set apart for Section D (if it is not all required for sanitary exhibits) for the erection of additional tables, or for any other purpose they may think fit.

6. All exhibits should be addressed to the Secretaries of the Museum, British Medical Association, Public Hall, Ipswich, with the name of the Section for which they are intended, with the exception of those for Sections B and C, which should be addressed, The Old Museum Rooms, Ipswich. Packages should not be addressed to a firm's representative at the Museum.

7. All exhibits must be delivered between July 26th and July 28th, and each package must bear a card showing the name and address of the exhibitor.

8. All exhibits must be placed in the allotted space by 2 P.M. on July 30th.

9. No signs or placards will be allowed in the hall which may interfere with neighbouring exhibits. No exhibit or placard on the central tables must reach higher than 2 ft. 6 in. from the table. The arrangements of signs, placards, exhibits, etc., will in every case be subjected to the approval of the Committee.

10. Intimation of the space allotted to each exhibitor will be sent as promptly as possible after June 1st, marked upon a plan. On receipt of cheque for the cost of such space, a card for the admission of the exhibit will be sent.

11. All cheques to be made payable to Mr. C. K. Moseley, 14, Northgate street, Ipswich.

12. No exhibits will be received except on the understanding that the above regulations are strictly complied with.

RAILWAY ARRANGEMENTS.

ARRANGEMENTS have been made by which the railway companies of Great Britain and Ireland will issue to members and their friends attending the annual meeting at Ipswich *return tickets* at a *single fare and a-quarter*. These reduced tickets will be available from July 28th up to August 6th, both dates inclusive.

Those members and their friends desirous of taking advantage of this concession must produce, for the information of the railway booking clerk, a certificate signed by the General Secretary of the British Medical Association. A separate certificate will be necessary for each ticket required, and these certificates can be had on application to the General Secretary, 429, Strand, London, W.C.

LITERARY NOTES.

Messrs. John Wright and Co. will in a few weeks issue a volume entitled *Operative and Practical Surgery*, by Mr. T. Carwardine, Assistant Surgeon to the Bristol Royal Infirmary. It will be illustrated with over 500 original drawings by the author, and numerous woodcuts. The book is described as "essentially of a practical character, and designed to supplement the many excellent works on scientific surgery."

We occasionally receive complaints about our index, but in most cases they prove to be ill-founded, the complainant having either not looked at all or looked in the wrong place for what he wanted. Sometimes the fault rests with the binder, who has put together discordant elements in the shape of a volume for one half-year with the index for another. But after all, as even an index-maker is human he is liable to err, and we are not bold enough to affirm that no mistakes or omissions are to be found in our index. *Aliquando bonus dormitat Homerus.* We have sometimes had trouble with what Lord Randolph Churchill called "double-barrelled names," and we once unintentionally conferred the honour of knighthood on a worthy practitioner who rejoices in a Christian name which bears the seal of canonisation, by changing the "St." into "Sir." Such mishaps are, however, so rare as to deserve to be regarded as exceptions which prove the rule. Its very correctness makes our index dull reading. How entertaining an index may be, the following example (which we take from the April number of the *Practitioner*) shows:

The eccentricities of the index maker are sometimes almost as amusing as the vagaries of the printer's "devil." The following, even if it be not new, is good enough to be repeated. A learned clerk of Oxenford, who was interested in the subject of the Immaculate Conception, wished to consult a rare work on that theological dogma, which he had been told was in the library of a certain college. The catalogue, however, gave no clue, and, after exhausting his ingenuity in the matter of possible entries, the divine was driven to apply to the custodian, who, with the weary smile of one who has had long experience of human stupidity, at once directed him to the subject heading "Obstetric Anomalies," where, sure enough, the elusive tractate was found!

It was, if we remember aright, the prophet Habakkuk of whom Voltaire profanely said that he was *capable de tout*. He might with less irreverence and more truth have said this of the index maker.

M. F. Pérot recently published in the *Centre Médical* an interesting essay on Jean Aubery (1559-1623), who was physician to the King of France at Moulins, and medical superintendent of the mineral and medicinal waters of the Bourbonnais. Among Aubery's works was one on the same subject as Ovid's *Remedium Amoris*; it was published in 1599 under the title *L'Antidote de l'Amour, avec un ample discours contenant la nature et les causes d'iceluy, ensemble les remèdes les plus singuliers pour se préserver et guérir des passions amoureuses.* This work was made the subject of the following epigram by J. Pontoise, a friend of the author, and the latter was so pleased with it that he printed it on the title page of his second edition:

Rien ne nous sert la médecine
Contre les amoureux appas.
Les simples sont bons pour la mine,
Mais cela ne nous guérit pas.
Voulez-vous savoir un remède,
Pour en guérir tout en un jour?
Il ne faut qu'une femme laide,
C'est un vrai remède d'amour.

This being holiday time we have ventured to act in the spirit of the maxim, *Dulce est desipere in loco*, by Englishing these lines as follows:

Against the wounds of Cupid's dart
No salve is found in leech's art;
Medicine may make the pale cheek glow
But cannot cure the lover's woe.
Love's raging fever to allay
And cure the sufferer in a day,
Just give him an ill-favoured mate:
That's a specific for his state.

Climate, the new quarterly journal of health and travel, ably edited by Dr. C. F. Harford-Battersby, quotes some interesting letters from former students of Livingstone College, now at work in various parts of the world. Among these is one from Mr. Jackson, which gives a good idea of the benighted state of the natives of Inland China in regard to medicine. He says:

Mr. Eccles little thinks of the nuisance he is preparing for the Chinese patients by forcing his students to believe in asepsis! The Chinese believe dirt helps to cure, and are not at all willing to have soap and water applied to their wounds. The wife of the boys' Chinese teacher of our school came crying one day with pain around her eye. She had first, two days previously, consulted a Chinese doctor, and obeyed his instructions by rubbing her eye with a raw onion! A soldier, whom I was called to see, had deep cuts in the muscle of the anterior region of the thigh caused by an explosion from a gun. The flesh was literally torn open in all directions, and blood still escaping. But sighting the blood vessel was no easy matter, for daubed and plastered all over the wounds and surrounding flesh was a dark-brown, sticky substance, in parts quite three-quarters of an inch thick. This, I was informed by the Mandarin, was a mixture of wild rhubarb and eggs, made up by the native doctor. The soldier was unwilling to have it removed, because it would pain him, though I told him his life depended on it. He was very pale and weak though loss of blood and one could see death was sure unless the escape of blood was stopped. The Mandarin came here in the evening, and apologised for the soldier's unwillingness, and excused him, saying he did not understand. The soldier died the following morning.

In a work just published (*Histoire d'un Visionaire au XVIII Siècle*) Dr. Gilbert Ballet, *professeur agrégé* in the Paris Faculty of Medicine, discusses the personality of Swedenborg from a psychological and pathological point of view. Swedenborg was the most original of the mystics who have been the subjects of hallucinations, and he was also the most prolific in publishing his visions. He was the "Prince of Seers."

Dr. Henrot presented to the Académie de Médecine, at its meeting on April 3rd, a History of the Medical School of Rheims. The old University of that city was once in great favour with British students, who for one reason or another found a difficulty in getting a medical degree in their own country. Its most brilliant period was from 1550 to 1774, when it enjoyed the same privileges as the "Facultas Saluberrima" of Paris. During the two centuries referred to, Rheims conferred the doctor's degree on 4,000 candidates. In the present century Rheims has been at different times a secondary and a preparatory school of medicine. It is now simply a "school" without university rank.

CORRESPONDENCE.

NON-DIABETIC GLYCOSURIA.

Sir,—Dr. Saundby's interesting lecture on this subject suggests forcibly to my mind that we must not omit the nervous factors when dealing with these cases. Last summer I had a rather heavy mental strain, besides the work of ordinary practice, and though well in every other respect sugar to an appreciable extent was discovered in my urine. This was only found out by accident, and in this way. I was taking out at the time an insurance, and as a matter of form a medical friend tested the urine, and surprised me greatly by informing me that sugar was present, with a specific gravity of 1040. I had had no polyuria, no thirst, or other diabetic symptom. Proper diet soon reduced the amount, but did not entirely eradicate it, but when the mental strain was taken off, even with ordinary diet the sugar disappeared *in toto*, and there has been no return since.—I am, etc.,

Hastings, April 16th. J. Stenson Hooker, M.D.Durh.

FEES OF LOCUM TENENS OF DISPENSARY MEDICAL OFFICERS IN IRELAND.

Sir,—I beg to acknowledge the receipt of the following sums towards defraying the expenses of Dr. Henry; the circumstances have been explained in the British Medical Journal of March 31st. It would be well, however, to quote a few extracts from the letters which have accompanied the contributions:

"I do not think there was ever a more important case than Dr. Henry's, which will settle by the decision of the Superior Courts whether the Local Government Board or the guardians can fix the amount of the fees of the *locum tenens* in workhouses and dispensaries, and also which Board has the right to grant holidays."

"An important case."

"I wish him every success, and hope he may receive the practical sympathy of dispensary medical men throughout Ireland. My *locum tenens* was nearly in the same position."

"This should be helped on by all dispensary doctors."

At the autumn meeting of the North of Ireland Branch of the British Medical Association (October 26th, 1899), the following resolution was unanimously carried, and, as it bears closely on the subject, I venture to quote it:

That with a view to secure uniformity of fees for extra-professional assistance rendered under the New Dispensary Regulations in Ireland, and of fees for services as *locum tenens*, and to prevent friction between the Boards of Guardians and their medical officers, this meeting suggests

that the Local Government Board be requested to issue a scale of fees applicable to varying circumstances, etc.

—I am, etc.,
WILLIAM CALWELL, M.D.

Belfast, April 9th.

	£	s.	d.
*Dr. J. J. Adams, Antrim	1	0	0
Dr. E. E. Goodbody, Great Hardfield, Essex ...	1	1	0
Dr. Chas. C. Deane, co. Armagh	1	1	0
Dr. Robt. Gray, Armagh	1	0	0
Dr. S. Fergus, Blackwatertown, co. Armagh ...	1	0	0
Dr. H. W. Cuningham, Londonderry	0	10	6
Dr. S. H. B. Allison, Londonderry	0	10	6
*Dr. Theodore Bell, Warrenpoint, co. Down ...	0	10	6

* Promised.

HOSPITAL MANAGEMENT.

SIR,—A few days since I had the pleasure and advantage of hearing Mr. Keetley read a short paper on the above subject at a meeting of the Charity Organisation Society. To the general propositions of that paper I heartily assented—namely, (1) that the hospitals should "be governed by the people who find the money, the time, and the skill to carry them on;" (2) that the usual method of management by a committee of a limited number of the governors only imperfectly fulfils this condition, and (3) that "reform would mainly consist in placing the government of each hospital in the hands.....of all living persons who support them by gifts of money, time, or skill." I have omitted in this last quotation from Mr. Keetley's paper the words "in fairly adjusted proportions," which seem to point to some plan for restricting the proportion of the medical to the lay element in the governing body; because, if that is their intention, I should dissent from it. In speaking to Mr. Keetley's paper, I contended that all persons, medical or others, who choose to subscribe the sum fixed by the regulations of the hospital should be equally eligible as governors, and that all governors should have equal rights of speaking and voting at the Managing Board; and I pointed out that this system had been in action at St. George's Hospital for generations—I believe ever since its foundation, some 170 years since—not only with no detriment, but with all possible advantage to the purity and vigour of its management.

It may be, of course, because my whole hospital life, now more than half a century, has been passed under this free and open system that I am so deeply imbued with a sense of its merits, but I cannot refrain from pressing the point on your readers whether the main reform which our present hospital system (admirable as on the whole it is) requires is not the disuse of management by committees in favour of that by an open Board—which involves the admission of all governors, medical as well as lay, to the same privileges. The two most common objections which I have heard to this form of government are:

(1) That it gives too much power to the medical officers; and

(2) That the functions of the Board are after all illusory, for the details of business must be settled by committees, and the Board merely registers those settlements.

Neither contention is, so far as my experience goes, founded on fact. Medical men are not remarkable for unanimity; and I can only recall one instance at our Board when a proposal brought up by a lay governor was resisted by the whole medical staff, and then the proposal was carried. And I am bound to say that subsequent experience has shown us that the lay governors were right. As to the committees, it is, of course, true that their recommendations are usually accepted, because those recommendations relate usually only to the details of business, of which the principles have already been settled. But it is far from uncommon to find a committee's report closely criticised, and even referred back, by the Board. And I may add that these committees are elected annually by ballot, under regulations providing for the constant admission of fresh members.

I tried, as well as I could after a very hasty perusal of the paper as the meeting was proceeding, to show how this scheme of management meets the various defects which Mr. Keetley alleges (with more or less justice) against the present system of most hospitals, such as the uselessness of the annual general meeting, the want of interest generated in subscribers who have no share in the management of the hospital, the preponderating influence of cliques, the discouragement of acts of generosity, such as endowment of beds, the stereotyping of the management in the hands of a perpetual chairman, the exclusion of governors for sectarian reasons, etc. But I am conscious that I did this very imperfectly, and I should be greatly obliged to you if you will allow me to bring the matter more directly before your readers.—I am, etc.,

T. HOLMES,
Consulting Surgeon and Treasurer to St. George's Hospital

Sussex Place, W., April 10th.

ETHICS AND UTILITY OF EXPERIMENTS ON ANIMALS.

SIR,—In reading the remarks on the above-mentioned subject by Mr. Coleridge and your reviewer in the BRITISH MEDICAL JOURNAL of April 14th it struck me that the mutual and somewhat excessive courtesy of these gentlemen had tended to obscure in some degree the real points at issue. It were better, in a matter like this, to fight with the gloves off: to speak out, even at the cost of a reciprocal hostility which must be recognised as implacable.

The position of the antivivisectionist—stated in the most moderate terms—is that all experiments on animals that cause pain and are undertaken with the object of gaining any knowledge which may not be proved to the mind of the antivivisectionist to be of direct benefit to mankind are wrong; and wrong because such experiments interfere with the rights of animals on the one hand, and demoralise the experimenter and human conduct generally on the other. Many, perhaps most, antivivisectionists go further than this, and either say or imply that no infliction of pain on an animal in the course of an experiment with a scientific object is justifiable, whether or no it can be proved indisputably to the "man in the street" that the result of such an experiment is a marked benefit to humanity. All antivivisectionists apparently agree in the conviction (which is their usually suppressed major premiss) that all scientific experiments are useless, and therefore conclude that all are unjustifiable. In controversy, however, many of their champions dispense with the logically equivocal weapon furnished by the animal rights theory, and rely mainly on their own efforts to prove the inutility of all experiments on animals which as yet have been performed.

It is quite clear that the antivivisector's eagerness and arrogation of ability to prove this inutility must necessarily imply a charge against the so-called vivisector of much more than making ill-arranged and practically useless experiments in the name, and for the promotion, of science; and really accuse him of being essentially brutal, and so indifferent in the matter of giving pain to animals as to be as happy in amusing his curiosity at their expense as a schoolboy, learning chemistry, in mixing reagents at random in order to see the resulting colours. This implied charge against experimental physiologists and pathologists lies at the root of almost all antivivisectionist controversy, though it be often more or less sedulously suppressed, and is the informing spirit of all the popular applause accorded to the platform orators of this sect. A few Sundays ago Mr. Bernard Shaw, modestly and justly disclaiming any knowledge of any science at all, roused the general enthusiasm of a large audience to a high pitch by his expressed opinion that the experimental physiologist had greater pleasure in the sight of the torture he inflicted than in the discoveries he claimed to make. It is to be regretted (I have thought since, though I hissed Mr. Shaw at the moment) that this frank method of controversy is not adopted by a really serious antivivisectionist like Mr. Coleridge, but left to frivolous and irresponsible dealers in verbal paradox like Mr. Shaw. The courtesy and compliments of Mr. Coleridge appear to have somewhat disarmed and humbled your reviewer, who fails, I think, to bring out with sufficient clearness in his otherwise most admirable reply the equivocations and misrepresentations and omissions which mark the arguments of his opponent as well as those of almost all other propagators of the antivivisectionist cause.

The position of those who defend experiments on animals is that it is justifiable to inflict pain with the object of gaining knowledge which may reasonably be expected to develop physiological or pathological science, and thus tend to increase our means of preventing or antagonising disease. The defender of such experiments also holds that all wanton infliction of pain is unjustifiable and horrible, and in practice inflicts no more than his justifiable object necessitates. There is, of course, no evidence or presumption whatever that the

qualities of mercy and tenderheartedness towards man or animals are, or need be, any less in a practical physiologist than in any other man or woman.

Discussion as to the probable or certain scientific value or the resulting utility of physiological experiment is, of course, futile and barren when opponents are not fully equipped with due knowledge of the subject. This is emphatically the case with antivivisectionists, who are mostly unable to judge of the matters they are criticising, or biassed at the outset by the above-mentioned suppressed major premiss. Most of them have both, nearly all (if not all) one, of these radical disqualifications for fair and equal contest.

Some of the methods of controversy, however, which the antivivisectionist delights in may, perhaps, with advantage be exposed even more distinctly than in the reply of your reviewer to Mr. Coleridge's remarks, which furnish so many excellent illustrations thereof. Such methods consist mainly in equivocal use of words, suppression of unwelcome truth, sophistical arguments put forward with an air of finality, and gratuitous attribution of motives to opponents. Take only a few examples from Mr. Coleridge's letter: The word "vivisection" is used as equivalent to experimentation on animals. Vivisection, or dissection of living animals, plays only a small part among physiological experiments; but the word is blessed and very precious, and an omnipotent weapon in disingenuous hands. The misuse of the word "torture" has been dealt with by your reviewer; but I would add that torture, which always means the infliction of excruciating pain, is boldly and almost universally used by antivivisectionists as synonymous with all pain inflicted on, or inconvenience suffered by, animals in the course of an experiment conducted with a scientific object.

I am reminded here of the substance of what Sir William Jenner said long ago in connection with this controversy—namely, that, according to the antivivisectionist teaching, any man presumably may drown kittens, but that if anyone should measure the period of drowning by his watch he must be punished, or at least licensed, as a brutal or scientific experimenter. He is guilty, in fact, of the sin of scientific torture. Of course it is perfectly well known to all antivivisectionists who have any claim to notice that torture plays a very small part in physiological experiment, and that anæsthetics are used to a much greater extent than antivivisectors generally admit, especially when speaking from the platform, and when not tied down by the necessities of ostensibly fair argument.

"Cruelty," again, is a word wilfully and constantly substituted by antivivisectionists for "infliction of pain." The gross *mala fides* of this misuse of a word is apparent, for "cruelty" is a word implying a motive. To cut off a healthy man's leg would be cruel; to perform the same operation, inflicting exactly the same pain, in the case of disease, is an imperative duty.

Mr. Coleridge's strictures on Lord Lister's words and subsequent silence have been fully disposed of, and, I think, far too leniently criticised by your reviewer. They appear to me to be as foreign to ingenuous controversy as they are unworthy of Lord Lister's notice. There is no shadow of justification either for the insinuation contained in the title of Mr. Coleridge's article, "An Anodyne for the Public Conscience," or for his offensive conclusion that Lord Lister's speech did not represent his views.

As one more illustration of the methods of controversy alluded to, take Mr. Coleridge's reply to the "familiar" argument that antivivisectors eat meat. This reply has also been fully dealt with by your reviewer; but Mr. Coleridge must know full well that this same example of meat eating is only one—and not by any means the strongest one—out of many other actions involving death or infliction of pain on animals, which are encouraged or condoned, or certainly not decried, by antivivisectionists generally, such actions being approved apparently on the ground that they are not carried on in the name and for the sake of science or the actual needs of man. Much could be said in illustration of this, but I will only ask the antivivisector whether the suffering of the war horse, wounded by shot or shell, or flogged and goaded uphill or into action with the gun, is not fully as worthy to be labelled "torture" as that of the most prominent victim of the scientific laboratory.

Perhaps, when wars cease, knowledge need no more increase; but, until then, the lion of antiscientific fury will never lie down with the lamb of philosophic research, and the logic and righteousness of physiological experiment, endorsed (*pace* Mr. Coleridge) by both "manhood" and "mercy," will remain inviolable.—I am, etc.,

Harley Street, W., April 16th. H. B. Donkin.

THE EFFICACY OF GLYCERINATED CALF LYMPH.

Sir,—Much interest has lately been taken in the above subject, and comment has been made in the British Medical Journal on the lymph from various sources of supply. I should therefore like to refer to my own experience of lymph supplied by Dr. Hime, of Bradford. During the epidemic of small-pox in Halifax I vaccinated several thousand persons in a comparatively short period, with scarcely a single failure. The only vaccine I used was from the above source. It was provided for me by the local sanitary authority on the recommendation of the medical officer of health for the borough, who had frequently used it with most satisfactory results. More than this, my results were so satisfactory that practically no complaint was made by the people, though the prejudice against vaccination in this district is very strong, and they are ever ready to raise a cry against vaccination. In giving evidence before the Royal Commission I had an opportunity of stating my experience of Dr. Hime's glycerinated calf lymph used in my official capacity as public vaccinator, at a time when, according to the regulations of the Local Government Board, I was not allowed to use glycerinated calf lymph. However, the central authority has progressed a little with the times, and we are now instructed to do what in point of fact I have been doing for six or seven years.—I am, etc.,

Arthur Drury, M.B.,

Halifax, April 10th. Public Vaccinator for the Borough of Halifax.

IS CANCER CURABLE?

Sir,—Whether cancer be or be not a parasitic disease, will you kindly allow me to express concurrence with Dr. Raven's view that there are reasons for thinking that when long-continued immunity has followed an operation the disease has been cured? Although I do not intend (like Dr. Raven) to compare cancer with pneumonia, nevertheless it does not necessarily follow because the disease recurs that the patient has been suffering from it during the interval.

Without referring to my records, I specially recollect confirming in 1888 the diagnosis of a practitioner that a middle-aged spinster was suffering from rapidly-growing cancer of a breast, and also added that an operation of sweeping character should immediately be performed.

An operation was performed, but the operator seemed to have thought it would suffice to remove merely the growth which was then about as large as a medium-sized apple, and he left the circumferential portions of the breast untouched. The diagnosis of malignancy was confirmed by microscopical examination, and within a few weeks the patient reapplied to me with recurrence in the scar tissue.

The patient and her friends believing my opinion that the difference between recurrence and non-recurrence would lie in the extent of the operation, and that in this region of the body a comparatively large amount of tissue could be removed without danger to any vital organ, desired me to operate without any restriction as to what I should do, and although I then removed a large amount of tissue I kept well within the limits of prudence so far as danger to life from surgical interference was concerned.

In the result this patient was free from recurrence when I last saw her some seven years after my operation, and for all that I know to the contrary she is still (more than eleven years after its date) quite secure from recurrence and likely to remain so.

Upon this case I argue as follows:

There was recurrence (in its proper sense) after the first operation, because there was recurrence within a few weeks of it; therefore portions of disease must have been left behind. If at my operation I had left germinal portions of disease, why has not the disease recurred within seven years? If a cancerous growth were now to appear in the scar tissue,

would it not be more reasonable under the circumstances to infer that it was a new and distinct outbreak of disease, perhaps occurring in scar tissue as more liable than normal tissue to cancerous growth than to infer recurrence?

Having regard to the comparative rarity with which cancer occurs primarily in both breasts, I would suggest that if one breast be removed for cancer, the other then being apparently healthy, and if the second become the site of cancer some time afterwards, such outbreak should be considered as entirely independent of and disconnected with the first.—I am, etc.,

Seymour Street, W., April 12th. CHARLES E. JENNINGS.

THE TELEPHONE PROBE.

SIR,—As my name has been mentioned in connection with this probe, I shall be obliged if you will insert in the BRITISH MEDICAL JOURNAL the following facts:

The telephone probe which I arranged for Dr. Ogilvie Will many years ago, and which he used so successfully and mentioned in the BRITISH MEDICAL JOURNAL of April 7th, had no battery in circuit, and was exactly the same as the one Dr. W. S. Hedley described and which he gave to Mr. Frederick Treves. The similarity is not remarkable, because 2½ years ago, when Dr. Hedley was bringing me cases to test my method of precise localisation by means of *x*-rays, I was using the telephone probe (of which he had not previously known), and I demonstrated its utility to him in a case of a bullet in the wrist (on November 19th, 1897) which he had brought to me from the London Hospital.

To whom belongs the credit of having devised this delicate and useful probe I do not know. Many years ago I noticed it suggested in an article, in the *Lancet* I think. I at once constructed one, and tried various experiments, using gold probes and plates, as well as silver, etc.; and it was shown and demonstrated in the practical surgery class in the University of Aberdeen as early as 1884.

The telephone probe known as Pratt's has a battery in circuit, and is dependent on entirely different principles for its action.—I am, etc.,

Portland Place, W., April 14th. JAS. MACKENZIE DAVIDSON.

DIPHTHERIA IN MAN AND "GAPES" IN BIRDS.

SIR,—Dr. George Turner's letter in the BRITISH MEDICAL JOURNAL of April 7th, upon "Diphtheria in Man and 'Gapes' in Birds," raises some interesting points. With reference to "gapes" it may be pointed out that this disease in poultry is due not to a micro-organism but to a nematode worm (*Syngamus trachealis*). Further, the organisms that have hitherto been found in connection with membranous exudations occurring spontaneously in birds have nothing in common with the diphtheria bacillus of man (for example, B. diphtheriæ avium, B. diphtheriæ columbarum). The Klebs-Loeffler bacillus may, however, produce a diphtheria-like process in birds on experimental inoculation, and the possibility of the transmission of the disease through the lower animals is therefore not excluded.

Dr. Turner states that in the course of an extensive epidemic amongst fowls he isolated from the throat of one of the affected fowls an organism morphologically similar to the B. diphtheriæ. I have had occasion to investigate this point in conjunction with Dr. Hewlett. We have found that not only in diseased but also in healthy birds bacilli resembling the diphtheria bacillus in morphological and cultural peculiarities, in short, in everything save in its specific pathogenic properties, are of frequent occurrence. These diphtheria-like organisms are to be widely met with in healthy birds (for example, pigeons and fowls). It is not unlikely that it was an organism of this class which was isolated by Dr. Turner. It may be as well to draw attention to this fact, in order to warn other other investigators of a possible source of fallacy.—I am, etc.,

ALLAN MACFADYEN.

Jenner Institute of Preventive Medicine.
London, April 11th.

SIR,—The title of Dr. George Turner's letter in the BRITISH MEDICAL JOURNAL of April 7th leads to the belief that the writer associates "gapes" in birds with diphtheria in man, although in the text of his letter Dr. Turner employs the indefinite terms "epidemic" and "throat disease" in referring to birds.

Now Dr. Turner and Dr. Brooke Ridley,[1] if I mistake not, are in error in comparing gapes with diphtheria. Gapes is a definite disease due to the presence of the *Sclerostoma syngamus* in the windpipe. The disease affects the turkey, pigeon, domestic fowl, lapwing, magpie, etc. Dr. Spencer Cobbold cleared up the pathology, etiology, and treatment of the malady many years ago, and his paper on this subject will be found in the *Transactions* of the Linnean Society.

Without wishing to be too dogmatic on the subject, I suggest that the writers most likely mean the indefinite disease called by the name "roup" in the North of England. This affection is sometimes mild, at other times highly fatal, thus resembling in this respect diphtheria in the human subject. The mild and the malignant forms may be both "roup," or the mild form may be "roup" and the malignant form really fowl glanders. So little is known of the subject, that one cannot be sure whether both forms of the so-called "roup" are really one and the same disease, or that one is "roup"—shall we say?—and the other fowl glanders. I have investigated this subject five years ago, and I am at present engaged in condensing my notes.—I am, etc.,

Leeds, April 14th. GORDON SHARP.

THE PREVENTION OF RHEUMATIC ENDOCARDITIS.

SIR,—In the recent discussion on the treatment of rheumatism, the most anxious consideration in the minds of the speakers was evidently and naturally a desire to secure the therapeutic measure best calculated to prevent the development of cardiac complications. The various suggestions and records of experience advanced in the discussion will, no doubt, be carefully studied by the profession, and in this way, it is to be hoped, the subject will be placed on a more practical basis. There is, however, one aspect of the question to which I find no explicit reference, and I shall be glad if you will allow me, through the columns of the BRITISH MEDICAL JOURNAL, to draw attention to it.

It is admitted that in a considerable proportion of cases valvular disease develops in children and adolescents without any serious degree of arthritis, and often with but slight constitutional disturbance. The experience is only too common in which one finds an endocardial murmur with no more definite history than an admission of slight pains in the limbs, or an attack of sore throat, or some other symptom known to be included among the rheumatic manifestations common in early life, the event at the time having been considered a trifling affair demanding neither rest in bed nor medical advice. With a view to prevent these disastrous occurrences, what I venture to suggest is that those responsible for the education of the profession should include in their teaching the proposition that it is the duty of every practitioner who discovers in any family under his care the evidences of rheumatism, to warn the parents that even an apparently slight illness in any one of their children may be a rheumatic incident carrying with it the risk of heart disease. It is only in this way that the early and complete rest universally admitted to be the best protection against endocarditis can be secured for these children, and it seems reasonable to anticipate that, were such a measure generally adopted, the number of cases of heart disease developing under the circumstances just referred to would be sensibly diminished. In any event, the practitioner could at least console himself with the reflection that he had done his best to secure the prevention of this grave calamity. So far as I have seen, the responsibility which it is here suggested rests upon the profession is not insisted on in the teaching of the day. Hence I venture to ask your assistance in emphasising it.—I am, etc.,

Weymouth Street, W., April 14th. C. O. HAWTHORNE.

[1] BRITISH MEDICAL JOURNAL, April 14th.

ARSENIC IN MANUFACTURES.—The Committee on Public Health of the Massachusetts Legislature has under consideration a Bill to restrict the use of poison as a colouring matter. The Bill is aimed at arsenic, and seeks to prevent the manufacture and sale of textile fabrics and papers containing that mineral. An exception is made of dress goods containing no more than one-tenth grain of arsenic to the square yard.

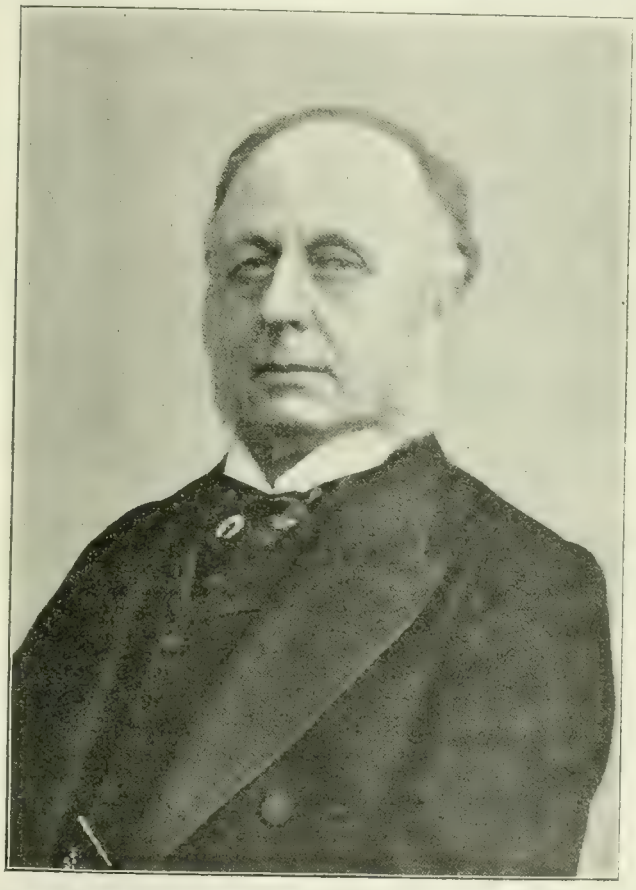
OBITUARY.

Sir WILLIAM OVEREND PRIESTLEY, M.D., LL.D., M.P.,

Consulting Physician to King's College Hospital.

We reget to learn that Sir William Priestley, the eminent obstetric physician and gynæcologist, and representative in Parliament of the Universities of Edinburgh and St. Andrews, died at his residence in Hertford Street, Mayfair, on April 11th, in his 71st year, after a long illness which had incapacitated him from his Parliamentary duties throughout the whole of the present session.

William Overend Priestley was born on June 24th, 1829, at Morley Hall, near Leeds, the residence of his father, Mr. Joseph Priestley, who was a nephew of the famous chemist. William Priestley received his early education in Leeds; thence he proceeded for his medical education to Edinburgh, where he distinguished himself as a zealous student. During his residence in Edinburgh he found time to devote himself to subjects beyond those of the ordinary medical curriculum, and in 1850 he published a paper in the *Annals of Natural History*, entitled Remarks on British Carices. He took the degree of M.D. in 1853 with high honours, and was awarded the gold medal.



Before this he had shown his bent to obstetric subjects by publishing in 1851 a paper on Pelvic Cellulitis and the Fasciæ of the Pelvis in the Female. This is one of the best pieces of work he ever did; it was illustrated by numerous beautifully-executed dissections which are still extant. This early work probably led to Priestley's intimate friendship and connection with Sir James Simpson, which may fairly be described as the stepping stone which led to his future successful career. Simpson was then in the zenith of his fame; his rooms were crowded with patients from all parts of the world, and the post of his private assistant was much coveted, not only for the experience it gave, but for the numerous and valuable introductions to which it necessarily led. Several eminent obstetricians and gynæcologists were indebted to the same piece of good fortune for obtaining a start in practice of much value, amongst whom may be mentioned Matthews Duncan, Keith, and Watt Black.

Priestley came to London in 1855, when the knowledge that he represented Simpson and his work stood him in good stead. He was soon appointed to the Middlesex Hospital and to the Samaritan Hospital for Women. Modern gynæcology, as distinguished from midwifery, was then in its infancy, and it can hardly be said to have been represented at all in the metropolis, unless by Henry Bennet, whose work on *Inflammation of the Uterus* had excited considerable attention, and had certainly led to much mischievous and reprehensible practice from the injudicious use of the speculum. Priestley's antecedents and introductions, added to his charming personality, soon gained for him a considerable practice, which rapidly increased. In 1863, on the retirement of Dr. Arthur Farre, he succeeded that physician as Professor of Midwifery in King's College, and Obstetric Physician to King's College Hospital. This appointment gave umbrage to those who thought that it should have been given to someone trained at King's College, and it led to the resignation of the two assistant obstetric physicians, Drs. Tanner and Meadows. It was, however, amply justified by Priestley's skill as a lecturer and eminence as a physician. His private practice had now rapidly increased, and for many years he certainly enjoyed the largest and most fashionable practice in London as an obstetrician.

In 1864 he had a severe attack of diphtheria, which was followed by diphtherial palsy, from which he recovered but slowly. His place as lecturer was taken that year by the late Dr. Charles West. This illness and the calls which his private practice made on his time induced him to resign his appointments at King's College and the hospital at the early age of 43. So far as his scientific reputation was concerned this was much to be regretted, since it is obviously impossible for a man to devote himself exclusively to private practice and yet keep himself in the forefront of progress, especially in such a speciality as gynæcology. Certainly he did not maintain the position he had made for himself for a length of time, and it must be admitted that for many years his views and practice in obstetrics and gynæcology were not such as commended themselves to the more progressive in these departments of medicine. Possibly, however, it is not a bad thng in the long run that someone in a position such as Priestley's should entertain opinions which are calculated to act as a drag on rash and over-enthusiastic practitioners.

In 1893 Priestley received a knighthood, and in 1896 he was elected to represent the Universities of St. Andrews and Edinburgh in Parliament. He entered the House of Commons too late in life to make a conspicuous success, but he filled a useful place, and made several excellent speeches on professional matters. Although he did not take a very strong line on mooted points, he certainly filled with dignity and acceptance this important academic seat, which had previously been occupied by such men as Lyon Playfair and Balfour.

His contributions to medical literature were not very numerous. The most important were his Lumleian Lectures, delivered in 1887, on the Pathology of Intrauterine Death, a subject which had always interested him; and articles on Hæmatocele in Reynolds's *System of Medicine*, and in Allbutt and Playfair's *System of Gynæcology*.

In 1856 he married a daughter of Robert Chambers, the eminent publisher, a lady in every way a helpmeet for him, and herself well known for her excellent writings on topics connected with health and sanitation. By her he leaves two sons—one in the medical profession and one at the Bar—and two daughters.

Sir William Priestley became a Fellow of the Royal College of Physicians of Edinburgh in 1858, a Member of the Royal College of Physicians of London in 1850 and a Fellow in 1864

He was a member of the Council of the College 1878-80, delivered the Lumleian Lectures in 1887, and was a Censor in 1891-92. He was the President of the Obstetrical Society of London in 1875, and of the Metropolitan Counties Branch of the British Medical Association in 1895. He was also the President of the Section of Obstetric Medicine at the annual meetings of 1887 in Manchester and of 1895 in London. On his retirement from King's College Hospital he was made Consulting Physician, and remained a member of the Council of the College. He was an honorary member of the Obstetrical and Gynæcological Societies of Berlin and Leipzig, of the Obstetrical Society of Edinburgh, and of the American Gynecological Society, and a Vice-President of the Paris Medical Society. He was also an honorary LL.D. of the University of Edinburgh, and had held the appointments of Physician Accoucheur to the late Princess Alice of Hesse and to the Princess Christian of Schleswig-Holstein.

Priestley's chief characteristic was his singular charm of manner and his sweet and amiable disposition, which gained for him troops of friends. It cannot be said of everyone that during a long and successful career he probably never made an enemy.

The funeral took place on April 14th. The first part of the service was held at Christ Church, Mayfair. It was attended by, among others, Dr. Church (President of the Royal College of Physicians), Lord Glenesk, Sir James Crichton-Browne, Sir J. Dick, Sir Charles Gage Brown (President of the St. Andrews Graduates' Association, and Mr. Alban Doran as President of the Obstetrical Society. The interment took place at Warnham, Sussex, and was attended by, among others, Sir Dyce Duckworth, representing the Edinburgh University. Lady Priestley has received a kind message of sympathy from the Queen, and letters of condolence from Princess Christian of Schleswig-Holstein and Lord Lister.

HIS many medical friends will learn with regret of the death of Dr. JOHN PATERSON, of Capetown, on April 6th, after a trying illness. Dr. Paterson was educated in Glasgow University, graduating M.A. in 1888, and M.B., C.M., with high commendation in 1892. While at the University, in addition to gaining many distinctions in his classes, he took a leading place in the conduct of the students' societies, and especially of the Students' Union, of which for a time he was President. After spending some time in practice in Wales Dr. Paterson returned to Glasgow in the capacity of Superintendent of the Victoria Infirmary. This post was relinquished after about two years, and the discovery that he was suffering from chronic nephritis necessitated his seeking a warmer climate in which to practise his profession. After visiting New Zealand and Australia he settled in Capetown, where his health considerably improved, and where he was rapidly making his way in practice, when a few months ago the sudden onset of hæmorrhagic retinitis showed that his old illness was advancing. Though remissions have occurred in his symptoms since then he has gradually succumbed to this remorseless malady: and the profession is the poorer, for Dr. Paterson was one who, with ordinary health, would have taken a high position. Much sympathy is felt for the young widow who is left to mourn his loss.

R. GLASGOW PATTESON, B.A., M.B., B.CH. UNIV. DUB., F.R.C.S.I.,

Surgeon to the Meath Hospital, Dublin.

IN the prime of life, with a bright career behind him and the promise, had he lived, of a brilliant future before him, Robert Glasgow Patteson passed quietly away on Wednesday, April 11th, at his mother's home in Dundalk. Thither he had gone a few weeks before, hoping soon to return to his work in Dublin freed from a troublesome attack of asthma which had disturbed his nightly rest for the previous month. Encouraging reports continued to reach his friends in the metropolis, who with his relatives were little prepared for the sudden end, and, indeed, it was not until the day preceding his sudden death that the hopeless nature of his illness was fully appreciated. Pneumonia had suddenly supervened on chronic nephritis. On Saturday, April 14th, his remains were followed by a large company of mourners to the quiet little country graveyard where "he sleeps well," overshadowed by his native hills.

Born in 1862, Robert Glasgow Patteson was educated at the Dundalk Grammar School, which at that time, under the guidance of Dr. Flynn, turned out many brilliant scholars, not the least of whom was Patteson. He entered Trinity College, Dublin, in 1879, and at once took honour rank as a student. He distinguished himself particularly in English literature, and soon developed a style and expression which subsequently became a pleasant characteristic of his speaking and writing. He obtained the degree of B.A. in 1883, and two years later, after he had gained the Houghton Clinical Medal at Sir Patrick Dun's Hospital, he secured first place at the examination for M.B., and a high place in that for the B.Ch. In the following year he gained the Surgical Travelling Prize of £100 in the School of Physic. He then proceeded to the medical schools of London, Vienna, and Berlin, where he gave special attention to the study of pathology and affections of the skin.

On returning to Dublin and finding that the expected appointment of a pathologist in the Trinity School would not then be made, Mr. Patteson accepted an offer to become Assistant Surgeon to St. Vincent's Hospital. There he did much valuable work until the death of Sir George Porter occurred in 1895, when he was elected to fill the surgical vacancy thus created in the Meath Hospital. Immediately afterwards an attack of nephritis laid him aside for many months, but he returned to work it was hoped permanently cured, and soon established a reputation as a brilliant surgeon. To his influence was due in no small degree the erection in the Meath Hospital of the new operating theatre, with all necessary adjuncts for carrying out modern aseptic surgery.

He became a Fellow of the Royal College of Surgeons in Ireland in 1890, and his election from 1896 to 1899 on the Surgical Court of Examiners in the College was marked by a very appreciable increase in the standard required to obtain either the Licence or the Fellowship of that body. In this, as in every other position, he acted with the most conscientious motives. For many years he reviewed surgical works for the *Dublin Journal of Medical Science*, and few surgeons were better acquainted than he with surgical literature. His own contributions to the subject were numerous, and included the following: *A Synopsis of Diseases of the Skin and Hair* (1891), on Trichomycosis Nodosa—a Bacillary Disease of Hair (which was published in the British Medical Journal in May, 1889); Cases of Tetanus treated with Antitoxin Serum (1898); Adenoma of the Breast in Childhood (1892); Intracranial Complications of Chronic Otitis Media (1890); Disarticulation at Hip-joint, with observations on Method of Operating (1897); Suturing Fractured Patellæ by an improved method (1899). He had also written several articles for the new *Encyclopædia Medica*, of which two had already appeared in the first volume, one dealing with Boils and Carbuncles, and the other with Diseases of the Axilla. A perusal of these short articles will confirm the statement as to the author's ability to write both well and scientifically.

In private life Dr. Patteson has left many friends to mourn his loss; to those who knew him well he was "the heart of honour, the tongue of truth," loyal, unselfish, and straightforward. By his death the medical profession in Ireland has lost a well-trained and brilliant intellect, a truly scientific mind, and an able surgeon who had few superiors among his contemporaries.

JOSEPH EDWARD KENNY, L.R.C.P.&S.Edin., L.A.H.Dub.,
Coroner for the City of Dublin.

Dr. J. E. Kenny, the Coroner for the City of Dublin, died at his residence, 15, Rutland Square, on April 9th, after a brief illness. The immediate cause of his death was stated to be blood poisoning following on the extraction of a tooth, but among his more intimate friends in the profession it was known that for several years he had been the subject of albuminuria, and the underlying renal mischief no doubt lessened the power of resisting the effects of an alveolar abscess; at any rate, the news of his death came upon the public with almost startling suddenness.

Dr. Kenny was 55 years of age, and for the last twenty years or more occupied a conspicuous place in Irish politics. He was born in the neighbourhood of Dublin, and was educated at Dr. Matthew Quinn's school in Harcourt Street. He then became a pupil in the Catholic University School of Medicine, and obtained the L.A.H.Dub. in 1868. He further pursued his studies in Edinburgh, and in 1870 became a Licentiate of the Scottish Colleges. Two years later he was brought into prominence by the skill and devotion with which he combated a severe epidemic of small-pox in the North Dublin Union. Subsequently he became one of the Dispensary Medical Officers, and then Visiting Medical Officer to the North Union Hospital. In 1892, on the death of Dr. Nicholas Whyte, Dr. Kenny was elected City Coroner, a position which he filled in the most satisfactory manner up to the time of his death. He was loyal and considerate in his attitude to the members of his own profession, and in no case more so than in his official dealings with the house-surgeons and youthful practitioners, who were always loud in their praise of the kindness with which the Coroner had treated them.

Dr. Kenny was a remarkable man and few of his contemporaries were better acquainted than he with all the political ramifications of the Parnell agitation in Ireland. He was treasurer of the Land League, of the National League, of the Evicted Tenants' Association, and of the Tenants' Defence Association. In 1880 he was arrested as a "suspect" and lodged for some time in Kilmainham Gaol. In 1885 he entered the House of Commons as the representative of South Cork, and for several years he continued to represent that constituency. When the great split in the Irish party occurred Dr. Kenny took the side of his old leader and close friend, and strongly advised Parnell against undertaking the fatal journey to Creggs from which the "chief" returned to his death-bed. From 1892 to 1896 Dr. Kenny represented in Parliament the College Green Division of Dublin, and although he was not remarkable for any great gifts of oratory he was none the less a strong man and a power in the Parnellite party.

In private life the late coroner was one of the most genial entertaining and winning of men. He had hosts of friends and reckoned among his closest and best many who held political and religious views of an opposite nature to his own.

We regret to have to announce the death of Mr. John Richards, of Barmouth, North Wales. He died on March 17th, at the age of 35. He received his medical education at Owens College, Manchester, and at the University of Edinburgh. He took the degrees of M.B. and B.Ch. at Edinburgh in 1885. He subsequently held several residential appointments, both medical and surgical. He was House-Physician at the Royal Edinburgh Infirmary, House-Surgeon at the Royal Infirmary and at the Maternity Hospital of Glasgow, and also at the Royal Alexandra Hospital in Brighton. He acted as Assistant Medical Officer at the Crichton Royal Institution, Dumfries, and at the Fife and Kinross District Asylum. He was also Assistant Demonstrator of Anatomy at the Edinburgh Medical School. For several years he practised at St. Helens. He took an active part in the work of his profession until within three months of his death. He was greatly respected and widely popular, and will be much missed by his relatives and numerous friends.

The late Dr. Mackenzie.—Dr. L. A. Mackenzie (Helenslee, Bradford) writes: With reference to the obituary notice of the late Dr. Mackenzie, of Bradford, which appeared in the British Medical Journal of April 7th, I should like to state that my father was attended by, and received great kindness from, Dr. Campbell of Bradford, Mr. Mayo Robson, Dr. Mitchell Bruce, Dr. Dobbs of Folkestone, and Dr. Mackenzie of Leytonstone. Although a positive diagnosis was not possible until Mr. Robson had made an exploratory laparotomy, all, in common with Dr. Campbell, were alive to the possibility of malignancy. To Dr. Campbell especially we are indebted for his many acts of kindness and assiduous attendance during the three months which intervened between the onset of alarming symptoms and the fatal termination.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

The monthly Army List for April discloses the following changes in the distribution of officers of the Army Medical Service:

Distribution in the April Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks: Seconded.
Surgeon-Generals ..	5	1	4	—	10	—
Colonels	7	9	11	—	27	3
Lieutenant-Colonels...	13	22	39	—	74	1
Majors	25	201	188	4	418	6
Captains	12	77	96	—	185	5
Lieutenants	1	102	35	—	138	4
Total	63	412	373	4	852	19

The total establishment (852) of medical officers is 2 fewer than in March; 1 died from disease, 1 was killed in action. But as 19 are seconded the real effective strength is 833.

The number (63) at home shows a decrease of 12; but, further deducting the administrative and other staff the total executive officers available for general duty is only about 40.

We hear Sir Redvers Buller has recently demanded an augmentation of over 50 medical officers for Natal alone; where they are to be found we do not know.

Time brings its revenges, and this is one; Sir Redvers was strongly opposed to granting medical officers the army status they lately received; and thereby is partly responsible for

the present scarcity. He is now, under stress of war, calling for the very men he sought to discourage in peace.

The number of medical officers in South Africa (412) shows an increase of 23; at other foreign stations 373, a decrease of 13. It thus appears that the seat of war has been supplied partly from home, and partly at the expense of our foreign garrisons.

At present over 92 per cent. of our army medical officers are abroad, leaving no practical margin for casualties, which, indeed, are likely to show progressive increase as the strain of the war is prolonged. We constantly hear of the splendid work our medical service is doing in South Africa, but must remember that it is working at very high pressure, and might be thrown out of gear by a big battle.

About 122 retired medical officers are employed, of whom 4 are at the seat of war. Of 63 quartermasters on full pay, only 10 are at home, but are supplemented by 15 recalled from the retired list.

THE ROYAL NAVY MEDICAL SERVICE.

Sick Berth Staff.

In the British Medical Journal of March 3rd we notified that in the First Lord's statement explanatory of the Navy Estimates 1900-1, a most important and long-required reform of the sick berth staff—or naval male nurses—was foreshadowed, and the necessity for it was dwelt on.

By Order in Council, dated March 3rd, 1900, these reforms were approved, and the Right Honourable the Lords Commissioners of the Admiralty were directed to give the necessary directions accordingly. Provision was there made, as follows:

For "the establishment of three positions of warrant rank for the sick berth staff, namely, one at each of the hospitals at Haslar, Plymouth, and Chatham, with the title of 'Head Wardmaster,' and the following scale of pay:

On promotion, per day	5s. 6d.
After five years, per day	7s. 0d.
After ten years, per day	8s. 0d.
After fifteen years, per day	9s. 0d.

on the understanding that these rates of pay will be strictly inclusive, the officers, however, being granted the usual allowance of £25 towards outfit on promotion; also, that the age for compulsory retirement, and the scale of pension, widows' pensions, and compassionate allowance to children will be on the same footing as in the case of gunners, boatswains, and carpenters."

The Lords Commissioners of Your Majesty's Treasury have signified their concurrence with these proposals.

The other sick berth staff rates of pay have all been increased, as will be seen by the following comparative statement:

Former Rates of Pay.	Per diem. s. d.	Future Rates of Pay.	Per diem. s. d.
		Probationary sick berth attendant (under training) ...	1 4
Sick berth attendant* ...	1 4	Sick berth attendant:	
After 3 years' service as such	1 6	Under 3 years' service as such	1 8
		After ,, ,,	2 0
Second sick berth steward...	1 0	Second sick berth steward:	
After 3 years' service as such	2 0	Under 3 years' service as such	2 3
		After ,, ,,	2 6
Sick berth steward	2 5	Sick berth steward:	
After 3 years' service as such	3 6	Under 3 years' service as such	2 10
		After ,, ,, ,,	3 2
		,, 6 ,, ,,	3 6
		,, 9 ,, ,,	3 10
Chief sick berth steward ...	4	Chief sick berth steward:	
		Under 2 years' service as such	4 2
		After ,, ,, ,,	4 6
When acting as wardmaster in Royal Naval Hospitals to be paid store allowance at	6	When acting as wardmasters in Royal Naval Hospitals to be paid store allowance at	0 8

* Apparently under instruction as well as when qualified for the rating.

From April 1st, 1900, the age for entry is to be between 18 and 22 years; previously the age was from 21 to 25 years.

The engagement is in the first place for "twelve years' continuous service," a gratuity of £2 10s. towards outfit is given on engaging, and £1 for bedding when discharged to the service afloat after training; if re-engaging after this first period of service for a further period of ten years, these gratuities are repeated.

These male nurses are employed alternately in hospitals, harbour ships, and sea-going ships. In common with all naval ratings they have facilities for allotting from their pay to any relative or person they may name in the United Kingdom, Malta, Gibraltar, and Halifax, N.S. Pensions after twenty-two years' service range from £15 to £47, and if they are in all respects suitable they may serve to the age of 50, when a maximum pension of £58 can be earned; if disabled in the service, either gratuities or pensions (temporary or permanent) are granted, and, if deserving of them, good-conduct gratuities from £5 to £15 are given under certain conditions on being pensioned; the widows and children of men killed or drowned on duty are eligible for pensions and allowances.

Physical Standard.

Height not under 5 ft. 4 in. Chest measurement not under 32 in. Vision not less than ⅔ normal, candidates being able to read D 06, with each eye separately, and both eyes being tested separately for long-distance vision.

Remainder of physical examination as for other branches of the naval service.

The introduction of a minimum physical standard was urged in vain during the last naval medical administration, and the defective physique of many of the former entries is thus accounted for; under the present Admiralty a minimum physical standard is at length established.

There will be further regulations as to the training of probationers, and, indeed, they may have been authorised, but regarding this we are unable to furnish any information, as also for the rules for promotion from one rating to a higher.

THE OLIVER COLLECTING STRETCHER.

A supply of this stretcher, which we shortly described on December 9th, 1899, left Halifax last month for use by the Strathcona Horse serving in South Africa. The inventor, Colonel Oliver (Deputy Surgeon-General A.M.S. Retired) has already received most favourable communications about them, not only from South Africa, but from India, Australia, Jamaica England, and the Rossland Mining District, British Columbia.

ROYAL NAVY MEDICAL SERVICE.

Fleet-Surgeon R. Gavin Brown, M.B., has been placed on the retired list, with the rank of Deputy Inspector-General, April 15th. His commissions are dated: Surgeon, September 30th, 1871; Staff-Surgeon, March 30th, 1884; and Fleet-Surgeon, November 13th, 1802. He was Senior Medical Officer in the Niger Expedition in 1896, and landed in medical charge of the landing party against several tribes on the Niger. He afterwards took part in the blockade of Dahomey.

The following appointments have been made at the Admiralty:—Ernest J. Finch, Surgeon, to the *Defiance*, April 5th; William R. M. Young, Staff-Surgeon, to Malta Hospital, April 10th; Charles S. Woodwright, Staff-Surgeon, to the *Andromeda*, April 10th; George T. Bishop, Surgeon, to the *Pyramus*, undated; Joseph C. Wood, Surgeon, to the Jamaica Hospital, April 17th; Percy V. Jackson, Surgeon, to the *Britannia*, April 17th; Alexander Maclean, M.B., Surgeon, to the Royal Marines, Portsmouth, April 17th; Joseph Chambers, B.A., M.B., Surgeon, to the Royal Marines, Plymouth, April 17th.

Fleet-Surgeon Joshua Pasley Courtenay died on April 8th. He entered the Royal Navy as Surgeon, January 26th, 1860; became Staff-Surgeon January 20th, 1872; and Fleet-Surgeon February 24th, 1882. He retired from the service October 22nd, 1890.

Surgeon Arthur William Nourse died on April 8th at the Naval Hospital, Chatham, at the age of 26, after a very short illness. He was the eldest son of Colonel Nourse, commanding the 2nd Regimental District, Guildford, and joined the service May 15th, 1899.

SCOTS GUARDS.

Surgeon-Major George S. Robinson is promoted to be Surgeon-Lieutenant-Colonel, March 6th. He was appointed Surgeon, March 6th, 1880, and Surgeon-Major, December 31st, 1887. He joined the 2nd Battalion Scots Guards, January 12th, 1881, and has remained with it uninterruptedly till the present time. He was with the battalion in the expedition to the Soudan in 1885, and was in the engagement at Hasheen and at the destruction of Temai, for which he has a medal with clasp, and the Egyptian bronze star.

ARMY MEDICAL SERVICE.

Brigade-Surgeon John Alexander Scott died at Nahun, Sirmur State, Punjab, on February 4th, suddenly. He was appointed Assistant-Surgeon, October 11th, 1859; Surgeon, March 1st, 1873; Surgeon-Major, March 11th, 1875; and Brigade-Surgeon, December 16th, 1885. He went on retired pay, August 20th, 1890. He was in the New Zealand war in 1861-2, and in the Beer war in 1881.

Deputy-Inspector-General Thomas Frederick Wall died at Omagh, Ireland, on March 9th. He was appointed Assistant Surgeon, November 20th, 1846; Surgeon, January 12th, 1855; Surgeon-Major, November 20th, 1866; and Honorary Deputy-Inspector-General on retirement, January 10th, 1872. We learn from Hart's Army List that he served in the Crimean campaign from December 19th, 1854, including the siege and fall of Sebastopol and attack of June 18th, 1855 (medal with clasp, and Turkish medal); and with the 38th Regiment in the Indian Mutiny campaign from November, 1857, including the capture of Meeangunge, siege and capture of Lucknow, affairs of Barree and Nuggur (medal with clasp).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Majors, having completed twenty years' full pay service, are promoted to be Lieutenant-Colonels, dated March 6th: F. R. Barker, M.B., A. Keogh, M.D., C. B. Hill, H. J. Michael, A. W. P. Inman, M.B., T. M. Corker, M.D., T. B. Moffitt, C. A. Webb, H. Martin, M.B., A. E. J. Croly, R. O. Cusack, W. D. A. Cowen, R. H. Forman, M.B., S. J. Flood, J. Watson, M.D., O. Todd, M.B., J. D. Day, M.B., J. G. Harwood, R. D. Donaldson, M.D., H. L. E. White, A. H. Burlton, E. North, G. F. Poynder, G. F. A. Smythe, H. L. Battersby, A. Hewett, P. Mulvany, T. F. MacNeece, A. P. O'Connor, D. Wardrop, M.B., G. T. Goggin, J. M. Jones, A. Asbury, F. B. Maclean, R. W. Barnes, J. L. Hall. The records of such of these as have war experience are as follows: Lieutenant-Colonel Hill—Waziri Expedition in 1881. Lieutenant-Colonel Corker—the campaign on the North-west frontier of India in 1897-98 with the Mohmand and Tirah Field Forces (mentioned in despatches, medal with two clasps). Lieutenant-Colonel

Moffitt—operations in Chitral in 1895 with Relief Force. Lieutenant-Colonel Webb—Soudan campaign in 1898, including the battle of Khartoum (mentioned in despatches, British medal and Khedive's medal with clasp). Lieutenant-Colonel Martin—the Zhob Valley Expedition in 1884. Lieutenant Colonel Croly—the campaign on the North-West Frontier of India in 1897-98 with the Tirah Expeditionary Force (medal and two clasps). Lieutenant-Colonel Cusack—the Manipore Expedition in 1891 as Senior Medical Officer with the column under Brigadier-General Graham (mentioned in despatches, medal and clasp). Lieutenant-Colonel Flood—the Bikaneer Field Force in 1883-84 in medical charge of British troops, the Zhob Valley Expedition under Sir O. V. Tanner in 1884 in medical charge of the 2nd Battalion of the North Staffordshire Regiment, which on its return suffered from a severe outbreak of cholera in the Bolan Pass, for his conduct during which he received the thanks of his Commanding Officer and of the Director-General of the Army Medical Staff; the Soudan Expedition under Sir Gerald Graham in 1884 (medal and Khedive's star); the operations in the Hinterland of Sierra Leone in 1898-99 as Senior Medical Officer (medal with clasp). Lieutenant-Colonels Watson and White—operations in Chitral in 1895 with the Relief Force (medal with clasp). Lieutenant-Colonels Smythe and MacNeece—Soudan campaign in 1898, including the battle of Khartoum, Lieutenant-Colonel Smythe being mentioned in despatches (British medal and Khedive's medal with clasp). Lieutenant Colonel A. P. O'Connor—the Burmese Expedition in 1885-86 (medal with clasp). Lieutenant-Colonel D. Wardrop—the Kaffir war in 1878 as Civil Surgeon in the operations against Sekukuni, and in the Zulu war in 1879 (medal with clasp); Soudan campaign in 1898, including the battle of Khartoum (mentioned in despatches, British medal, and Khedive's medal with clasp). Lieutenant-Colonel Jones—as Civil Surgeon during the Zulu war in 1879 (medal with clasp). Lieutenant Colonel Barnes—the campaign in the Soudan in 1898, and present at the battle of Khartoum (mentioned in despatches, British medal, and Khedive's medal with clasp).

The following, among others, are reported as discharged from hospital for duty during the week ending March 25th: Lieutenant H. Hime, Major Nicholson, Major F. Harris, Lieutenant G. Goddard, Lieutenant G. Delap.

The Lieutenant Irvine, reported killed at Sanna's Post, in the Orange Free State, should be Lieutenant G. H. Irvine, attached to Royal Horse Artillery, and not Lieutenant F. S. Irvine, as formerly stated.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel C. Little, M.D., Madras Establishment, is appointed Inspector-General of Civil Hospitals and Sanitary Commissioner, Burmah, with the rank of Colonel, from February 12th.

Colonel J. H. Newman, M.D., Bengal Establishment, on the termination of the tenure of his appointment as Principal Medical Officer, Lahore District, is permitted to reside out of India.

Lieutenant-Colonel J. T. B. Booke, Bengal Establishment, is granted the temporary rank of Colonel from February 23rd, while officiating as Principal Medical Officer, Lahore District.

HONOURABLE ARTILLERY COMPANY OF LONDON.

Surgeon-Lieutenant E. H. Myddelton-Gavey is promoted to be Surgeon-Captain, April 18th.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant J. H. P. Graham, from 4th Volunteer Battalion the Liverpool Regiment, to be Surgeon-Lieutenant, April 11th.

THE VOLUNTEERS.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated April 11th: Robert C. Robertson, M.B., 1st Ayrshire and Galloway Artillery; Charles E. Lansdown, 1st Gloucestershire Engineers; John R. Ryan, M.D., 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment); George D. Logan, M.B., 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers; William S. Malcolm, M.B., 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders); Edmund P. Isaacs and Samuel F. Holloway, 2nd (South) Middlesex Rifles; Thomas Dixon, 1st Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment); Sidney F. Barber, 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment; Francis J. Sadler, M.B., 2nd Volunteer Battalion the York and Lancaster Regiment.

Surgeon-Major J. Little, M.D., 1st Cumberland Artillery, resigns his commission, retaining his rank and uniform, April 11th.

Second-Lieutenant Josiah F. Hall, M.B., 3rd Volunteer Battalion the Queen's (Royal West Surrey Regiment) resigns his commission, and is reappointed Surgeon-Lieutenant, April 11th.

Surgeon-Lieutenant D. G. Newton, M.B., 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment, is promoted to be Surgeon-Captain, April 11th.

Surgeon-Major S. Johnston, M.D., 2nd Volunteer Battalion, the Prince of Wales's Own (West Yorkshire Regiment) is promoted to be Surgeon-Lieutenant-Colonel, April 11th.

Surgeon-Lieutenant J. C. Potter, M.B., 2nd Volunteer Battalion the Durham Light Infantry, resigns his commission, April 11th.

The undermentioned are appointed Surgeon-Lieutenants in the corps respectively specified, dated April 18th:—Henry W. Webber, M.D., 2nd Devonshire Artillery (Western Division Royal Garrison Artillery); John H. C. Fegan, 2nd Volunteer Battalion the Queen's Own (Royal West Kent Regiment); Selby W. Plummer, M.B., 4th Volunteer Battalion the Durham Light Infantry.

Surgeon-Lieutenant C. A. K. Renshaw, 3rd Volunteer Battalion the Cheshire Regiment, is promoted to be Surgeon-Captain, April 18th.

Surgeon-Captain S. H. Moore, 2nd (South) Middlesex Rifles, is promoted to be Surgeon-Major, April 18th.

Surgeon-Captain H. A. Collinson, M.B., 4th Volunteer Battalion the Durham Light Infantry, resigns his commission, April 18th.

VOLUNTEER MEDICAL STAFF CORPS.

Quartermaster W. F. Dickinson, the Manchester Companies, is granted the honorary rank of Captain, April 18th.

Mr. George A. Wright, M.B., is appointed Surgeon-Lieutenant in the Manchester Companies, April 11th.

CHANGES OF STATION.

The following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Colonel W. H. McNamara, M.D., C.B.	Gibraltar	South Africa.
Lieut.-Col. J. Martin	Aldershot	Londonderry.
,, R. C. Gunning	South Africa	Chester.
,, R. Drury, M.D.	,,	Curragh.
Major O. Todd, M.B.	Bengal	South Africa.
,, H. J. Barnes	Colchester	,,
,, M. Dundon, M.D.	Malta	,,
,, F. H. M. Burton, M.D.	Punjab	,,
,, R. H. Clement	Woolwich	,,
,, H. N. Thompson, M.B.	Bombay	,,
,, H. J. Fletcher, M.B.	Egypt	,,
,, J. Meek, M.D.	Barbadoes	Aldershot.
,, C. L. Josling	—	South Africa.
,, R. I. Power	Madras	,,
,, H. Carr, M.D.	Dover	,,
,, H. W. Austin	Devonport	St. Helena.
,, D. M. O'Callaghan	Aldershot	South Africa.
,, H. E. H. Smith	—	Egypt.
,, J. W. Cockerill	—	South Africa.
,, E. M. Hassard	Portland	,,
Captain A. F. Tyrrell	Punjab	,,
,, G. S. Mansfield, M.B.	Aldershot	,,
,, H. W. K. Read	—	Bombay.
,, P. Evans, M.B.	Portsmouth	South Africa.
,, G. St. C. Thom, M.B.	Aldershot	,,
,, H. E. Staddon	Bombay	,,
,, J. H. Campbell	Madras	,,
,, J. Grech	,,	,,
,, C. F. Wanhill	Egypt	,,
,, L. Addams-Williams	Netley	,,
Lieutenant H. B. G. Walton	Aldershot	,,
,, H. P. W. Barrow	Dublin	,,
,, D. Harvey, M.B.	Netley	,,
Quartermaster W. M. Clarke	,,	,,
,, W. G. Holway	—	Chester.
,, J. B. Conolly	—	South Africa.
,, E. Houghton	—	,,
,, R. Scott	—	,,
,, A. Wilson	—	Mauritius.
,, H. W. Glover	—	South Africa.

Lieutenant-Colonel J. Macartney, M.D., retired pay, has been transferred from Aberdeen to Canterbury.

Surgeon-Lieutenant-Colonel A. O. Francis, Militia Medical Staff, has been appointed Medical Officer to the 3rd Battalion Sherwood Foresters (Derbyshire Regiment).

Lieutenant-Colonel C. Healy, retired pay, has relinquished the medical charge of troops at Cork.

Lieutenant-Colonel M. Knox, retired pay, has been transferred from Londonderry to Aldershot, and Major J. E. Nicholson, retired pay, from Aldershot to South Africa.

The undermentioned retired medical officers are appointed to the stations named: Captain H. V. Dillon, Woolwich; Major J. Semple, Dublin; Lieutenant-Colonel F. Howard, M.D., Home District; Lieutenant-Colonel J. A. Anderson, M.D., Shorncliffe; Captain W. H. P. Lewis, Home District.

ARMY MEDICAL DUTIES.

Thirty Years' Service writes: The complaint in the House of Commons of the lax medical examination which allowed men suffering from chronic diseases to proceed to the seat of war is one which should be explained by both administrative and executive medical officers. Where lies the blame? The truth is that these officers have been for the past six months overtaxed and called upon to perform important duties with the help of assistants who could barely sign their names. The incapacity of the so-called clerks, wardmasters, and stewards, supplied in the emergency, has been notorious, while genuine hospital duties are, as usual, sacrificed to the Juggernaut of statistics. It is high time medical officers should be relieved of such routine duties for their special professional work, and that P.M.O.'s should be trained to be consulting surgeons and physicians instead of mere office officials. The multitudinous statistical duties should be relegated to trained clerks.

*** To a certain extent we sympathise with our correspondent. He revives a question which used to be canvassed thirty or forty years ago. Much has happened since then; at that time medical officers despaired of ever obtaining any genuine military status, and in default said, Then make us pure professional civilians. Now, however, they are the officers of a Royal Corps, the command and interior economy of which they must undertake in addition to their professional duties, and they mu t be efficient in both. These duties are not incompatible, as shown in hundreds of instances. No doubt returns and statistics are in not a few cases made unnecessarily troublesome, especially when, as at present, competent clerks are not forthcoming. But hospital returns are an essential part of a military medical officer's duty, and should not be entirely delegated to subordinates. Some of the best P.M.O.'s have been t efficient both professionally and in office work. The two

duties cannot in the nature of things be divorced. P.M.O.'s, while they should be able to give professional advice, must also be administrators, and this involves successful office work. If army medical officers are to be in any proper sense military officers, with the secretarial functions pertaining thereto, they must do or superintend the office work.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

FEES OF MEDICAL WITNESSES.

RUSTICUS.—Unless the prosecutor agreed to pay the fee asked, it does not appear that more could be obtained than has already been paid.

RESPONSIBILITIES OF A CHIROPODIST.

P. asks whether there is any remedy against a chiropodist holding no surgical qualification, who, after advising a patient to have a soft corn removed, made a circular cut and drew out the corn and the tissues, an operation followed by deep-seated inflammation and lameness; or whether an action would fail, as the patient knew he held no qualification.

*** It appears to be settled law that where a person, whether qualified or not, professes to deal with the life or health of others, he is bound to have and employ competent skill. If, therefore, the chiropodist in this case treated the person negligently or ignorantly, he would be liable in damages.

MIDWIFERY ENGAGEMENTS.

L.—(1) If a patient engages A. for her prospective confinement, but does not call on A. to attend her owing to its having been brought off by the "old women," is A. entitled to his usual fee? (2) If he is called to attend a woman in confinement who only does so because the midwife cannot manage the case, and no previous engagement has been made with A., can A. decline to give his services?

*** (1) Yes; but our correspondent should remember the costliness and uncertainty of legal proceedings before he sets them in motion. (2) Yes; but our correspondent will lay himself open to unpleasant charges of inhumanity, etc., if he refuses.

THE APOTHECARIES' HALL, DUBLIN.

MEDICUS asks: (1) In the case of L.A.H.Dublin 1882, is the licentiate entitled to practise medicine and surgery? (2) In the same case, is he entitled to take charge of medical and surgical wards in a general hospital? (3) While keeping open a druggist's shop is he entitled to practise medicine?

*** (1) Yes. (2) Yes, unless local rules debar him. (3) Yes.

MONTHLY NURSES.

N. sends particulars of a case in which a monthly nurse, after being engaged, threw up the engagement for another case with a larger remuneration, and asks the following questions: (1) Was the nurse justified in cancelling her engagement? (2) Is she legally liable for damages?

*** (1) No. (2) Possibly; but the damages would not be enough to compensate for the expense and trouble of legal proceedings.

QUESTIONS AS TO FEES.

PERPLEXED sends three questions: two refer to cases in which he was summoned to attend the sudden illness of persons who are the patients of other doctors. His third question has reference to a case in which he received late one evening a message from a lady to attend her hysterical servant; the lady asked him to sleep in the house, which he did.

*** With regard to the first two questions we think that our correspondent would be well advised to look upon his visits as having been paid for the practitioners who usually attend the patients in question. With regard to the third question, a reasonable fee would be two guineas; or, if the people are really well-to-do, three guineas.

POISON BOTTLES IN NEW YORK.—It is proposed to introduce into the New York Legislature a Bill providing that any bottle containing poison shall be of a shape making it readily distinguishable in the dark by the touch, the style of such bottle to be determined by a committee of the State Medical Society, acting in conjunction with the State Board of Health.

BELGIUM has established a botanical garden and experimental station at Coquilhatville in the Congo Free State.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF EDINBURGH.

HONORARY DEGREES.—At the spring graduation ceremonial of the University of Edinburgh on Saturday, April 14th, the honorary degree of LL.D. was conferred on

Miss Eleanor A. Ormerod, F.R.Met.Soc., F.E.S., the distinguished entomologist; on Dr. C. D. F. Phillips, London; and on Dr. Anderson Stuart, Professor of Physiology in the University of Sydney.

In presenting Dr. Phillips for the degree, the Dean of the Faculty of Law (Sir Ludovic Grant) said: While it is fitting that all departments of learning should be represented at our graduation ceremonial, there is no department which has a stronger claim upon this University than medical science, and in Dr. Phillips we are proud to recognise one who is peculiarly worthy to be regarded as a representative of medicine. Dr Phillips not only enjoys an enviable reputation as a practitioner, but he has also, by teaching and writing, won himself a foremost place among living scientific pharmacologists. For many years he acted with great acceptance as Lecturer on Therapeutics in the Westminster Hospital, London, and he has held the office of Examiner in this subject both in this University and the University of Glasgow. He has prosecuted important researches on the physiological and therapeutical action of many organic and inorganic substances, of which perhaps the most noteworthy are those relating to the influence of certain drugs upon the circulation and upon renal secretions; and the results of his investigations have been embodied in articles and books which are universally recognised of the highest value to students and teachers of materia medica. He has been appointed to many of the high offices which are the prerogative of those who have risen to eminence in medical science, and now the University of Edinburgh most gladly follows the example of his own Alma Mater, Aberdeen, by conferring upon him her highest academic distinction.

Of Professor Anderson Stuart he spoke in these terms: A distinguished student and graduate of our own, Professor Anderson Stuart is now bringing fresh lustre to the University of Edinburgh as a school of medicine by the admirable work which he is achieving in a distant land. He has not only shown himself in his capacity as Professor of Physiology in the University of Sydney to be a very able and successful teacher, but he has also given proof of high administrative abilities and of a genius for organisation. It is, indeed, mainly due to his influence that the University of Sydney now possesses a fully-developed medical school—many of the Chairs in which are held by graduates of this University—and that the hospitals in the city have been brought into the service of the University, and have been so organised as to fit them for the highest purposes of medical instruction. It is now more than a year since the Senatus offered this degree to Professor Anderson Stuart, and as there seems no likelihood of his being able to return to this country in the immediate future, they have resolved that the bestowal of this honour should no longer be delayed, though they greatly regret that he is not here to receive it in person.

The following is the official list of candidates who have passed the various professional examinations for degrees in Medicine and Surgery at the recent sittings of the Examining Board.

First Professional Examination.—Farhat Ali, M. Ashkenazie, Agnes Balfour, C. M. Begg, A. R. Berrie, J. M. Beyers, A. S. L. Biggart, F. H. Borthwick, F. S. Brennan, J. Brennan, A. Buchanan, R. B. Calwell, M. C. Cowper, R. W. Craig, C. S. Crichton, G. Cunningham, W. H. Davison, J. R. Dobbin, T. H. Easton, C. G. Edmonston, J. J. H. Ferguson, F. S. B. Fletcher, N. C. Forsyth, R. H. Fothergill, H. M. Gillespie, J. A. Glover, L. C. V. Hardwicke, G. Harrison, E. Henderson, M.A.; G. S. Husband, R. J. Irving, S. A. Johnston, I. C. Keir, J. Kirk, E. A. Klein, W. E. Knight, C. A. Lawrence, C. D. Lochrane, J. B. Lockerbie, A. P. G. Lorimer, J. M'Donald, R. J. Mackessack, M.A.; Elspeth M. Macmillan, D. P. Marais, J. B. Mears, C. R. P. Mitchell, Helen Morison, T. B. Mouat, C. F. A. Oberländer, A. Oliver, F. O'Neill, E. H. Price, L. Ram, W. Readman, A. E. C. Rees, D. G. Reid, A. O. P. Reynolds, W. H. Robertson, L. C. Robinson, J. Saffley, S. W. Smith, W. A. W. Smith, H. A. Stewart, H. J. Stewart, A. C. Strain, Annie F. Theobalds, T. T. Thomson, E. A. Turpin, D. C. Welsh, L. West, R. M. M. White, D. P. D. Wilkie.

Second Professional Examination.—A. K. Baxter, H. Beveridge, B.A.; B. Blacklock, C. H. Bösenber, J. R. Bosman, E. A. Braine, G. B. Brand, R. D. Brown, A. Brownlie, D. M. Callender, M.A.; C. M. Campbell, M.A.; D. G. Carmichael, T. F. Cavanagh, A. M. Caverhill, J. H. Connolly, P. D. Cremona, T. M. Cuthbert, F. I. Dawson, J. Dommisse, H. J. Dunbar, J. F. Duncan, J. Dunlop, S. A. Ellerbele (with distinction), S. C. Ellison, A. N. Fell, A. P. R. Fennell, S. Gilford, A. Gillespie, A. M. Gloag, D. P. Goil (with distinction), W. Goodchild, A. Grant, J. P. Grant, J. A. Gray, J. F. Haegert, T. B. Hamilton (with distinction), H. Harding, A. W. M. Harvey, H. Herd, M.A.; M. Holmes, C. H. Houghton, R. C. Irvine, J. M. Johnstone, H. Kerr, J. Kirkwood, H. A. Knight, W. S. Laidlaw, Norah Lenwood, W. Lilico, J. C. London, R. C. Low, J. G. M'Caughey, D. R. MacGregor, B.Sc.; I. N. M'Keand, V. C. M'Laren, E. Macmillan, R. P. M'Neil, C. E. Marshall, W. E. Marshall, J. B. Mason, J. K. Matheson, P. Mathews (with distinction), R. J. Mayberry, T. Mill, W. S. Milne, A. Moll, J. H. Montgomery, S. A. Moore, R. Morison, R. Murray, C. Nelson, W. Newlands, E. G. O. Nixon, T. H. Osler, J. Politachi, A. B. dos Remedios, H. H. Robarts, A. B. Ross, T. W. E. Ross, A. J. Rowan, A. L. Roxburgh, J. Scobie, J. S. Sewell, A. M. Sharp, M.A.; E. S. Sharpe, C. J. Shaw, W. F. Smeall, J. M. Smith, M. S. Sodhi, D. L. Wall, B. P. Watson (with distinction), J. Wier, S. A. K. Wilson.

Second Professional Examination (Old Regulations).—M. N. Bose, M. G. I. Cadell, S. Dawood (with distinction), J. H. Meikle, M.A., B.Sc.; A. C. Peterson, D. R. Rees, W. H. Swaffield.

Third Professional Examination.—May Agnew, J. F. Allan, C. M. Anderson, R. T. Baillie, A. C. Begg, R. A. Belilios, V. C. de Boinville, R. J. Bradley, A. J. Brock, J. Brocket, E. E. Brown, G. M. Brown, W. Brown, J. Brownlee, L. Bruce, R. W. Buchanan, H. Buist, G. C. Bur-

gess, E. P. Calder, K. Chapel, C. C. Choyce, P. T. Copeland, W. J. Crow, B. M. Cunningham, J. Dalgliesh (with distinction), W. S. Dickson, W. E. C. Dickson, B.Sc.; T. G. B. Dodds, H. Dodgson, C. Douglas, J. L. Duncan, W. A. Duncan, J. M. Dupont, J. R. Edwards, W. Eggeling, J. W. Falconer, S. Garvin, E. M. Glanville, R. A. Glegg, T. Graham, R. M. Grant, A. L. Gurney, A. R. Hallam, J. Halliday, A. M. Hamilton, W. Hamilton, N. C. R. Hansen, R. A. J. Harper, E. R. Henderson, D. C. Henry, C. W. Howe, A. Hunter, M.A., B.Sc.; A. E. Hunter, A. R. Johnston, E. Jones, A. C. Keay, J. P. Kennedy, P. V. Langmore, A. R. K. Lauddie, W. Lee, J. G. M'Bride, J. B. M'Cutcheon, W. MacDougall, P. F. M'Farlan, G. M'Farland, F. D. S. MacKenzie, J. M'Keszie, K. D. C. MacRae, W. Mair, A. M. Malcolmson, A. F. G. Masson, E. C. C. Maunsell, G. R. Mill, W. Miller, M. C. Morgan, J. Morrisom, D. Munro, J. G. Munro, G. S. Murray, P. Murray, D. A. Ogilvie, J. F. Orr, J. L. Palmer, W. S. Patton, S. G. Peill, G. Pereira, H. G. Pesel, L.W.Pole, W. H. Prentice, M.A.; H. St. J. Randell, H. M. Roberts, G. C. I. Robertson, M. W. Robertson, W. A. Robinson, L. Rundall, C. W. Saleeby, T. B. Shaw, M. M. Smith, T. A. Smyth, Kate Southon, H. L. Shark, A. J. de Spiganovicz, M. M. Stevenson, D. A. Stewart, T. L. Thomson, E. A. Walker, A. R. Wallis, E. Wells, T. S. B. Williams, F. E. Wilson, J. Woods, D. Young, R. T. Young.

CONJOINT BOARD IN SCOTLAND.

The quarterly examinations of the above Board in Edinburgh were concluded on April 10th, with the following results:

First Examination, Five Years' Course.—W. H. Woodger, Lilian Mary Grandin, W. B. Hendry, L. F. Bianchi, J. Stark, V. St. J. Croley, J. St. A. Maughan, W. J. Purves, and C. E. F. Gaitskell.

There were 24 candidates; 3 passed in Physics, 6 in Elementary Biology, and 2 in Chemistry.

Second Examination, Four Years' Course.—S. G. Kinloch, P. J. Kerwin, J. Levack, and R. E. Turner.

There were 5 candidates.

Second Examination, Five Years' Course.—C. R. Martin, J. O'Regan, W. S. R. Dick, R. H. Brierley (with distinction), J. Dick, H. F. Walker, H. Watson, W. J. Shorten, W. V. Sutton, W. J. Gray, H. Carlaw (with distinction), J. H. Stewart (with distinction), R. W. J. Pearson, and H. S. Christoffelsz.

There were 20 candidates.

Third Examination, Five Years' Course.—H. F. Wilkin (with distinction), A. B. Timms, A. T. Hoskins, G. C. Ghose, H. E. J. Batty, T. Huston, W. H. E. Brand, R. Thompson, Helen Mary Serjeant, K. C. Edwards, W. C. Brown, B. Gowing, A. L. White, J. W. Wood, J. T. O'Connor, and G. Kee.

There were 25 candidates; 2 passed in Materia Medica.

Final Examination.—Fanny Wood, J. H. Bennett, W. Daley, R. O. Jones, G. C. Hobbs, G. Day, C. H. Farquharson, W. Pattsells, R. McLaren, R. F. M. Fawcett, Elizabeth Morton Johnston, Jessie Jane Graham, A. Graham, W. P. Warburton, W. T. Finlayson, F. W. Harlin, G. Potts, D. McD. Robertson, V. A. Hart, C. G. Thomson, T. M. R. Leonard, W. A. Benson, Edith Anna Wynne-Edwards, H. F. Stilwell, J. Robertson, J. H. Moag, A. A. Bearne, A. E. Salkeld, E. Bennett, and V. St. J. Croley.

There were 59 candidates; 2 passed in Medicine and Therapeutics, 1 in Surgery and Surgical Anatomy, 2 in Midwifery, and 4 in Medical Jurisprudence.

UNIVERSITY OF DURHAM.

Second Examination for the Degree of Bachelor in Medicine.—The following candidates have satisfied the examiners in the subject undernoted:

Anatomy, Physiology, and Materia Medica.—*C. H. Crass, College of Medicine, Newcastle-upon-Tyne; †B. Glendenning, Guy's Hospital; †C. W. M. Hope, College of Medicine, Newcastle-upon-Tyne; †Q. Fisher, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; †B. E. Spurgin, College of Medicine, Newcastle-upon-Tyne; †T. E. Pemberton, Mason College, Birmingham; T. E. Amyot, College of Medicine, Newcastle-upon-Tyne; S. T. Cochrane, Queen's College, Belfast; J. Cooper, B.Sc., F.C.S., College of Medicine, Newcastle-upon-Tyne; C. H. Cox, Mason College, Birmingham; Martha Georgina Isabella Cadell, L.R.C.P. and S.Edin., L.F.P.S.Glasg., Edinburgh University; J. F. Dover, College of Medicine, Newcastle-upon-Tyne; W. R. L. Drawbridge, St. Bartholomew's Hospital; E. J. Evatt, Royal College of Surgeons, Ireland; G. B. Gill, College of Medicine, Newcastle-upon-Tyne; J. H. McDowall, College of Medicine, Newcastle-upon-Tyne; Flora Murray, London School of Medicine for Women; F. O'Neill, College of Medicine, Newcastle-uon-Tyne; R. R. Pirrie, College of Medicine, Newcastle-upon-Tyne; P. M. Rivaz, St. Bartholomew's Hospital; A. Reid, Guy's Hospital; T. Rowell, College of Medicine, Newcastle-upon-Tyne; B. S. Robson, College of Medicine, Newcastle-upon-Tyne; A. Smith, College of Medicine, Newcastle-upon-Tyne; G. W. Smith, Guy's Hospital; J. M. Shaw, College of Medicine, Newcastle-upon-Tyne; C. R. Stewart, St. George's Hospital; H. C. Sturdy, M.R.C.S., L.R.C.P., Guy's Hospital; O. B. Travers, Guy's Hospital; R. Younger, College of Medicine, Newcastle-upon-Tyne.

* First Class Honours.

† Second Class Honours.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

A meeting of this College will be held on Tuesday, May 1st, to elect the following examiners: Two Examiners in Anatomy; two Examiners in Surgery; two Examiners in Physiology and Histology; one Examiner in Biology; two Examiners in Ophthalmology; one Examiner in Pathology and Bacteriology; one Examiner in Pathology; one Examiner in Midwifery and Gynæcology; one Examiner in Sanitary Law and Vital Statistics; one Examiner in Engineering and Architecture; two Examiners in Chemistry and Physics; two Examiners in Dental Surgery and Pathology; two Examiners in Mechanical Dentistry; one Examiner in Languages; one Examiner in Mathematics, Physics, Dictation, and English Essay.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

On Friday, April 6th, Sir James Reid, Bart., K.C.B., Honorary Physician to the Queen, was admitted to the Honorary Fellowship, and Dr. A. C. O'Sullivan and Dr. G. J. Peacocke to the Ordinary Fellowship of the College.

CONJOINT BOARD IN IRELAND.

First Professional Examination.—Candidates have passed this Examination as undernoted:

In all Subjects.—Honours (in order of merit): Miss I. C. Hargrave, M Lochrin, P. Maher. Pass (alphabetically): T. C. Leslie, K. P. Neary, I. Parker, I. Quirke.

Completed Examination.—J. M. J. Carolan, T. C. Fitzgerald, L. Kelly, I. Kelly, P. Kinsella, J. J. A. M'Kenna, R. E. I. Sheridan, L. P. Stokes.

Anatomy.—I. M. G. Foley, W. F. B. Loughnan, D. de C. O'Grady.

Biology.—C. I. R. Clarke, W. I. Delany, I. M. G. Foley, W. F. B. Loughnan, T. Moran, E. C. MacDermott, V. H. MacSweney, C. P. Shaw.

Chemistry and Physics.—W. I. Delany, I. M. Moriarty, E. C. Macdermott, D. de C. O'Grady.

Pharmacy.—W. S. Carter, C. I. R. Clarke, W. F. B. Loughnan, E. C. MacDermot, C. P. Shaw.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.

At the recent examinations held at the end of the winter session, the following medals and prizes were awarded: The Mead Medal to Mr. R. B. Kinloch; the Cheselden Medal to Mr. T. H. Edwards; a prize of £10 to each of the following: Mr. F. C. Eve (Medicine), Mr. W. H. O. Woods (Surgery), Mr. T. S. Taylor (Midwifery and Diseases of Women), Mr. J. E. H. Sawyer (Pathology), Mr. J. L. Lock (Pharmacology), Mr. R. B. Kinloch (Forensic Medicine and Insanity), Mr. W. B. Fry (Public Health). The Peacock Scholarship (£38 10s.) and a College Prize of £20 were divided between Mr. H. S. Bennett and Mr. F. W. W. Smith (second year). The William Tite Scholarship (£27 10s.) to Mr. K. Takaki (first year).

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE HEALTH OF EDINBURGH.

Population and Death-rate.

The annual report of Sir Henry Littlejohn, as Medical Officer of Health for Edinburgh, has just been issued. The population of the city, including Portobello, at the middle of the year 1899 was 298,927, or an increase of 3,299 over the year 1898. The number of births during the year was 8,218, which gives a birth-rate of 27.49 per 1,000, or slightly above that of 1898. The number of deaths was 5,858, a death-rate of 19.2 per 1,000 of the estimated population; of these deaths, however, 462 were those of persons who came from various parts of the country for treatment in the public institutions, or who died during a temporary residence in the city; so that if these deaths be deducted, we have a total of 5,396 deaths of citizens, giving a death-rate of 18.05 per 1,000. In 1898 the mortality was 5,320, and the death-rate 17.9, so that the year 1899 shows an increase of 70 deaths, which is amply accounted for by the greater mortality from whooping-cough. The highest mortality in 1899 occurred in February, when for two weeks in succession the deaths amounted to 148, equal to a death-rate of 25.7 per 1,000. Much of this high mortality was due to deaths from zymotic diseases, mainly measles and whooping-cough. The lowest weekly death-rate occurred in the last week of July, the deaths amounting to 79, equal to a death-rate of 13.7 per 1,000. From a table giving the population, deaths, death-rate, births, and birth-rate of various years from 1861 to 1899 we extract the following:

		Death-rate per 1,000.		Birth-rate per 1,000.
1861	...	23.15	...	33.40
1871	...	27.86	...	34.89
1881	...	18.86	...	32.23
1891	...	20.06	...	28.17
1896	...	15.46	...	27.52
1899	...	18.05	...	27.49

Note that 1891 in its later part had the great influenza epidemic.

The death-rate under 5 years was 62.41 per 1,000 of the population, as compared with 62.02 in the year 1898. The death-rate amongst males for the year was 19.4 per 1,000 living, as compared with a death-rate of 16.8 for females.

Causes of Death.

The number of deaths from zymotic diseases was high during the first quarter of the year, while during the other three quarters a remarkable freedom from zymotic mortality existed. During the first week of December, 1899, no deaths

of a zymotic character occurred, a circumstance almost unique in Sir Henry Littlejohn's experience of the city. The zymotic death-rate (excluding diarrhœa) for the year was 1.3 per 1,000, the same rate as for 1898.

Measles caused a death-rate of 0.27 per 1,000, as against 0.45 per 1,000 in 1898. As has been remarked by many observers, measles is chiefly fatal in the second year of life, and thereafter the mortality-rate rapidly diminishes. Thus in 1899 there were 19 deaths under 1 year, 35 between 1 and 2, 12 between 2 and 3, 7 between 3 and 4, and 1 between 4 and 5.

Scarlet Fever gave a death-rate of 0.16 per 1,000 against 0.24 per 1,000 in 1898; 43 out of the 50 deaths in 1899 occurred under 10 years of age, and since both the death-rate and fatality of the disease rapidly decline with each year of life, it shows how important it is to ward off the disease, every year diminishing not only the chance of attack, but also the chance of a fatal issue in the event of the disease being contracted.

Diphtheria and Membranous Croup produced a death-rate of 0.10 per 1,000 against 0.12 in 1898, while the average rate during the five previous years was 0.20 per 1,000. A very marked reduction in the case-mortality from this disease took place last year, due probably to the effect of antitoxin treatment. Of the total 32 deaths 21 occurred under 5 years of age, and 10 between the fifth and tenth years.

Whooping-Cough gave a death-rate of 0.64 per 1,000, the average death-rate of the previous five years was 0.44 per 1,000; 189 out of the total 192 deaths occurred under 5 years. The other zymotic diseases in the same period of life only caused 128 deaths, indeed whooping cough caused very nearly as great a mortality as all other zymotic diseases at all ages. Probably the true mortality is even greater.

Typhus Fever, which was imported in the end of 1898, produced 3 deaths in 1899, but this was an accidental legacy.

Enteric Fever caused a death-rate of 0.13 per 1,000: 1 death under 5, and 27 between 5 and 25.

Influenza was stated to have caused 61 deaths, of which the majority were persons of advanced age. In 1898 there were 93 deaths from this cause. In neither year was true influenza epidemic.

Diarrhœa caused 96 deaths, of which 79 occurred under 5 years, and 88 were in infants under 1 year of age. Sir Henry refers to Dr. Newsholme's recent paper on epidemic diarrhœa, which prevails in July, August and September, is a zymotic disease and causes an appalling mortality in infants. In one of Dr. Newsholme's tables where the diarrhœa death-rate per 1,000 births is given (mean of seventeen years 1882-98), Edinburgh occupies the fifth position, beginning with the towns having the lowest death-rate. Dr. Newsholme states that in some towns (Edinburgh among them) diarrhœa has the character of an endemic disease, persistently present through every season of the year, while in other towns it partakes much more largely of the nature of an epidemic disease. Sir Henry gives a table showing graphically the deaths from diarrhœa in Edinburgh under 2 years of age, and alongside of that the deaths certified as "enteritis," and on this he remarks:

"It is well known that different practitioners employ various terms to signify what is practically the same disease, and one difficulty in estimating the true death-rate of diarrhœa throughout the country lies in this fact. Thus children who die from diarrhœa may be certified by different medical attendants to have died from gastro-enteritis, enteritis, enteric catarrh, etc. That the majority of deaths certified as "enteritis" in Edinburgh are probably due to the same cause as those certified as diarrhœa is, I think, proved by the deaths from enteritis which occurred last year in children under 2 years of age, portrayed on the chart for each week. The similarity of the two curves is very striking, the practical absence of cases of diarrhœa and enteritis during the first two quarters of the year, with the marked and increasing prevalence of both diseases commencing at the end of July, and rapidly reaching a maximum in both instances during the first week of September, and thereafter declining with equal rapidity, till no deaths from either disease were registered in the second week of October. From this time to the end of the year there was only 1 death from diarrhœa, but the enteritis chart shows that this latter disease continued to a considerable extent until the end of December. Thus the diarrhœa death-rate of Edinburgh, considered only in relation to deaths certified as due to diarrhœa, is not a true death-rate, and that this disease is really more prevalent in Edinburgh, especially in the third quarter of the year, than Dr. Newsholme's statistics would appear to indicate. The experience of last year does not tend to substantiate the epidemicity of diarrhœa in Edinburgh; but of course it must be remembered that we are only dealing with the statistics of a single year, whereas those of Dr. Newsholme cover a period of seventeen years and are therefore entitled to due weight, and, so far as regards the question of relative seasonable prevalence, probably afford a true representation of the facts."

Septic Diseases caused 38 deaths—erysipelas 8, puerperal fever 7, and septicæmia 23. It is very questionable whether these figures represent all the deaths which should properly be attributed to these causes.

Constitutional Diseases caused 1,150 deaths, of which 1,066 were due to cancer and tuberculous disease. "In Edinburgh, where the standard of medical education amongst members of the profession is high, it is very regrettable that many deaths continue to be certified under such vague terms as cachexia, tumour, abscess, hæmorrhage, while in a large number of cases where the cause is stated to be cancer there is no indication of the seat of the disease, or it is merely referred to vaguely as 'abdominal.'"

Tuberculous Diseases accounted for 790 deaths, of which 574 were phthisis.

Other Diseases.—The number of deaths attributed to developmental diseases was 478, to diseases of the nervous system 641, to diseases of the circulatory system 552. On this last group it is unsatisfactory to have 139 certified as due to syncope, 11 of these so-called deaths from syncope being in children under 5. Syncope is often a mere symptom due to other definite and primary disease which ought to be stated in the certificate. Diseases of the respiratory system gave 721 deaths, the digestive system accounted for 455 deaths, 135 deaths were due to diseases of the urinary system, 149 were due to accident or negligence, there were 19 suicides, and 204 deaths were due to ill-defined and non-specified causes. The mortality as to occupation is then given in a series of tables.

Notification. There were 5,365 notifications of infectious disease, of which 3,600 were measles, 1,185 were scarlet fever, 289 were typhoid, 279 were diphtheria, and 12 were typhus fever. Enteric fever became prevalent in May, and gave most cases in September. The Old Town of Edinburgh was most affected by enteric fever, and the New Town with diphtheria. Enteric fever was most rife in the poorer class of property and among the poorer inhabitants. The opposite was the case with regard to diphtheria. The scarlatina notifications were fewer than they have been in any year since 1891, in fact, only thrice during the last twenty years have they been so low. The question of milk as a source of infection is then discussed, and particulars of four outbreaks given.

City Hospital.—The number of patients treated in the City Hospital was 2,010, and there was a death-rate equal to 5.37 per cent. of the total cases treated. Of the 117 deaths, 11 occurred within 24 hours after admission, 7 within 48 hours, 16 within 7 days, 24 within 14 days, and 39 after 14 days.

A series of interesting and valuable tables is appended to the report.

INCREASE OF SALARIES OF POOR-LAW MEDICAL OFFICER.

WE note with some satisfaction that Mr. Lockhart Stephens, who is Medical Officer of the Workhouse and No. 1 District of the Westbourne Union (Hants), has obtained an increase of salary for each of these appointments, that for the workhouse having been raised from £12 per annum to £20, for the District from £62 to £80. We regret, however, to be obliged to state that in our opinion, even with the addition to these salaries now granted by the Westbourne Board of Guardians, the pay cannot be regarded as fair remuneration for the responsibilities incurred and the services rendered. We therefore sincerely hope that this matter will at no distant time be reconsidered by the Board and salaries fixed which will be more in accordance with the rate paid for professional services in other provincial unions.

VITAL STATISTICS OF LONDON SANITARY DISTRICTS DURING THE FIRST QUARTER OF 1900.

IN the accompanying table will be found summarised the vital statistics of the forty-three sanitary areas of the metropolis based upon the Registrar-General's returns for the first, or winter, quarter of the current year. The mortality figures in the table relate to the deaths of persons actually belonging to the various sanitary areas, and are the result of a complete system of distribution of deaths occurring in the public institutions of London among the various sanitary areas in which the patients had previously resided.

The 34,797 births registered in London during the three months ending March last were equal to an annual rate of 30.4 per 1,000 of the population, estimated at 4,589,129 persons in the middle of this year; this rate was 0.4 per 1,000 below that recorded in the corresponding periods of each of the last two years, and was 1.5 per 1,000 below the average rate in the first quarters of the ten preceding years, 1890-1899. The birth-rates in the various sanitary areas showed, as usual, wide variations, owing principally to the differences in the sex and age distribution of the populations. In St. George Hanover Square, Westminster, St. James Westminster, Hampstead, St. Martin-in-the-Fields, and City of London the birth-rates were considerably below the average; while they showed the largest excess in St. Luke, St. George-in-the-East, Mile End Old Town, Poplar, St. George Southwark, and St. Olave Southwark.

The 25,938 deaths of persons belonging to London registered during the three months ending March last were equal to an annual rate of 22.7 per 1,000, against 18.0, 21.3, and 20.1 in the first quarters of the three preceding years; in the first quarters of the ten preceding years the death-rate in London averaged 22.3 per 1,000. The lowest death-rates in the various sanitary areas were 14.7 in Hampstead, 16.3 in Stoke Newington, 18.3 in Wandsworth, 19.1 in Kensington and in Plumstead, and 19.3 in Lee; the highest rates were 29.3 in Strand, 32.0 in St. Olave Southwark, 32.5 in City of London, 33.3 in Holborn, 34.7 in St. George Southwark, and 35.7 in St. Luke. During the quarter under notice 2,054 deaths resulted from the principal zymotic diseases in London; of these, 1 was referred to small-pox, 602 to measles, 84 to scarlet fever, 524 to diphtheria, 518 to whooping-cough, 194 to enteric fever, and 131 to diarrhœa. These 2,054 deaths were equal to an annual rate of 1.79 per 1,000, against an average rate of 2.27 in the first quarters of the ten preceding years, 1890-1899. In the first quarters of the three preceding years the rates had been 1.64, 2.90, and 1.68 respectively. The lowest zymotic death-rates last quarter were 0.35 in Strand, 0.66 in St. Giles, 0.67 in Paddington, 0.68 in St. Martin-in-the-Fields, 0.69 in Hampstead, and 0.78 in Stoke Newington sanitary areas; the highest rates were 2.83 in Poplar and in Bermondsey, 2.90 in Bethnal Green, 3.32 in Rotherhithe, 3.49 in Fulham, 4.05 in St. Luke, and 4.79 in St. Olave Southwark. Measles showed the highest proportional fatality in Hammersmith, Fulham, Chelsea, Newington, St. Olave Southwark, and Rotherhithe; scarlet fever in Stoke Newington, Hackney, Clerkenwell, Shoreditch, Limehouse, St. George Southwark, and Woolwich; diphtheria in Poplar, St. George Southwark, Newington, Bermondsey, Rotherhithe, and Lee; whooping-cough in Clerkenwell, St. Luke, Bethnal Green, Poplar, St. Olave Southwark, and Bermondsey; enteric fever in St. Pancras, Stoke Newington, Mile End Old Town, Poplar, St. Saviour Southwark, and Battersea; and diarrhœa in Fulham, Holborn, St. George Southwark, St. Olave Southwark, and Lewisham. The fatal case of small-pox belonged to Woolwich sanitary area.

During the first quarter of this year 2,326 deaths from phthisis were registered in London, equal to an annual rate of 2.03 per 1,000, against 1.98 and 1.97 in the corresponding periods of the two preceding years. Among the various sanitary areas the lowest phthisis death-rates last quarter were recorded in Kensington, Hampstead, Stoke Newington, Hackney, Wandsworth, and Lee; and the highest rates in St. Giles

Analysis of the Vital and Mortal Statistics of the Sanitary Districts of the Metropolis, after Distribution of Deaths occurring in Public Institutions during the First Quarter of 1900.

SANITARY AREAS.	Estimated Population middle of 1900.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Typhus.	Enteric Fever.	Simple and Undefined Fever.	Diarrhœa.	Phthisis.	Deaths of Children under 1 year of age to 1,000 Births.
LONDON	4,589,129	34,797	23,938	30.4	22.7	1.79	2,054	1	602	84	524	538	—	194	—	131	2,326	138
West Districts.																		
Paddington	130,104	757	631	23.3	19.5	0.67	22	—	3	3	10	3	—	1	—	2	47	143
Kensington	173,603	982	825	22.7	19.1	1.34	58	—	35	1	7	4	—	5	—	6	55	131
Hammersmith	110,203	827	568	30.1	20.7	1.74	48	—	28	—	13	2	—	2	—	3	45	131
Fulham	136,383	1,139	733	33.5	21.6	3.49	119	—	61	3	19	16	—	9	—	11	57	130
Chelsea	96,715	621	570	25.8	23.6	1.36	33	—	22	3	4	1	—	1	—	2	50	134
St. George Hanover Sq.	81,133	334	404	16.5	20.0	1.10	22	—	3	1	6	5	—	3	—	4	33	111
Westminster	51,657	261	342	20.3	26.6	1.40	18	—	4	1	4	7	—	2	—	—	41	192
St. James Westminster	21,457	104	113	19.4	21.1	1.13	6	—	4	—	1	—	—	—	—	1	12	144
North Districts.																		
Marylebone	139,777	1,087	804	31.2	23.1	1.09	38	—	12	4	9	3	—	3	—	7	88	115
Hampstead	81,766	428	300	21.0	14.7	0.69	14	—	1	2	7	1	—	1	—	2	23	103
St. Pancras	245,651	1,712	1,486	28.0	24.3	2.01	123	—	39	3	19	32	—	18	—	12	134	134
Islington	351,541	2,475	1,822	28.2	20.8	1.52	134	—	66	8	24	23	—	9	—	4	179	132
Stoke Newington ...	35,718	212	145	23.8	16.3	0.78	7	—	—	2	1	—	—	3	—	1	12	99
Hackney	225,519	1,704	1,137	30.3	20.2	1.82	102	—	6	8	23	47	—	15	—	3	75	136
Central Districts.																		
St. Giles	36,870	296	196	32.2	21.3	0.66	6	—	2	—	1	—	—	1	—	—	32	98
St. Martin-in-the-Fields	11,865	51	78	17.2	26.4	0.68	2	—	—	—	1	1	—	—	—	—	7	157
Strand	22,748	128	166	22.6	29.3	0.35	2	—	2	—	—	—	—	—	—	—	26	133
Holborn	29,188	202	242	27.8	33.3	1.63	12	—	3	—	3	2	—	2	—	2	22	208
Clerkenwell	66,007	544	437	33.1	26.6	2.60	43	—	4	4	5	26	—	2	—	2	42	149
St. Luke	40,655	476	362	47.0	35.7	4.05	41	—	5	—	7	26	—	1	—	2	42	174
London City	26,922	108	218	16.1	32.5	0.90	6	—	2	—	4	—	—	—	—	—	22	231
East Districts.																		
Shoreditch	120,641	1,067	790	35.5	26.3	2.00	60	—	16	5	16	17	—	3	—	3	80	155
Bethnal Green	128,831	1,250	888	38.9	27.6	2.90	93	—	14	1	19	46	—	6	—	7	79	150
Whitechapel	82,220	721	473	35.2	23.1	1.38	28	—	10	2	6	4	—	3	—	3	62	144
St. George-in-the-East	48,875	611	313	50.1	25.7	1.07	13	—	3	—	2	4	—	3	—	1	36	118
Limehouse	58,944	466	404	31.7	27.5	2.12	31	—	10	2	4	12	—	2	—	1	41	187
Mile End Old Town ...	113,781	1,085	688	38.2	24.3	1.91	54	—	12	1	10	21	—	9	—	1	58	134
Poplar	170,968	1,605	1,044	37.7	24.5	2.83	121	—	15	2	36	50	—	15	—	3	82	157
South Districts.																		
St. Saviour Southwark	23,854	200	173	33.6	29.1	1.67	10	—	3	—	3	1	—	3	—	—	19	155
St. George Southwark	60,597	546	524	36.1	34.7	2.65	40	—	6	3	15	8	—	2	—	6	69	187
Newington	125,138	1,112	809	35.6	25.9	2.41	75	—	28	1	27	13	—	1	—	5	77	137
St. Olave Southwark ...	10,909	114	87	41.9	32.0	4.79	13	—	6	—	1	5	—	—	—	1	10	132
Bermondsey	85,920	717	601	33.5	28.1	2.83	61	—	6	2	23	20	—	5	—	5	58	188
Rotherhithe	41,246	332	290	32.3	28.2	3.32	34	—	20	1	9	1	—	2	—	1	17	175
Lambeth	312,152	2,372	1,737	30.5	22.3	1.59	123	—	32	3	38	28	—	13	—	9	161	142
Battersea	178,100	1,393	963	31.4	21.7	2.01	89	—	37	2	8	25	—	15	—	2	78	133
Wandsworth	217,004	1,523	986	28.1	18.2	1.32	71	—	24	3	22	9	—	12	—	1	70	120
Camberwell	268,457	1,937	1,375	28.9	20.5	1.39	93	—	22	3	55	6	—	6	—	1	103	125
Greenwich	184,582	1,528	972	33.2	21.1	1.86	85	—	9	5	28	29	—	9	—	5	75	125
Lee	40,722	219	196	21.6	19.3	1.28	13	—	—	—	11	—	—	1	—	1	12	142
Lewisham	93,548	684	460	29.3	19.7	1.76	41	—	6	3	14	8	—	3	—	7	36	118
Woolwich	41,600	335	273	32.3	26.3	2.32	24	1	9	2	2	8	—	1	—	1	31	140
Plumstead	65,558	532	313	32.5	19.1	1.58	26	—	12	—	7	4	—	2	—	1	28	130

Strand, St. Luke, City of London, St. George Southwark, and St. Olave Southwark.

Infant mortality, measured by the proportion of deaths under 1 year of age to registered births, was equal to 138 per 1,000 last quarter, against 127, 140, and 129 in the corresponding periods of the three preceding years. Among the various sanitary areas the rates of infant mortality were lowest in St. George Hanover Square, Marylebone, Hampstead, Stoke Newington, St. Giles, St.George-in-the-East, and Lewisham; while they showed the largest excess in Westminster, Holborn, City of London, Limehouse, St. George Southwark, and St' Olave Southwark.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,996 births and 4,998 deaths were registered during the week ending Saturday last, April 14th. The annual rate of mortality in these towns, which had been 21.4 and 23.0 per 1,000 in the two preceding weeks, declined again last week to 22.4. The rates in the several towns ranged from 15.6 in Burnley, 15.8 in West Ham, 16.6 in Sunderland, and 18.2 in Portsmouth to 28.5 in Liverpool, 29.0 in Salford, 30.3 in Wolverhampton, and 30.5 in Manchester. In the thirty-two provincial towns the mean death-rate was 23.4 per 1,000, and exceeded by 2.4 the rate recorded in London, which was 21.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.1 per 1,000; in London the death-rate was equal to 1.8 per 1,000, while it averaged 2.4 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.2 in Blackburn, 4.6 in Cardiff, 4.8 in Oldham, and 5.8 in Wolverhampton. Measles caused a death-rate of 2.7 in Oldham, 3.1 in Plymouth, 3.2 in Cardiff, and 3.9 in Bristol; scarlet fever of 1.4 in Oldham; whooping-cough of 1.5 in Liverpool, 1.7 in Wolverhampton, 1.8 in Norwich, and 2.1 in Salford; and "fever" of 1.2 in Wolverhampton. The 51 deaths from diphtheria in the thirty-three towns included 19 in London, 7 in Sheffield, 4 in Leeds, 3 in Birmingham, and 3 in Preston. Two fatal cases of small-pox were registered last week in Liverpool, but not one in any other of the thirty-three large towns. There were 3 cases of small-pox under treatment in the Metropolitan Asylums Hospitals on Saturday last, April 14th, against numbers decreasing from 11 to 2 at the end of the seven preceding weeks; one new case was admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,696 and 1,713 at the end of the two preceding weeks, had declined again to 1,694 on Saturday last; 189 new cases were admitted during the week, against 170, 172, and 185 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, April 14th, 1,002 births and 659 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 22.8 and 21.7 per 1,000 in the two preceding weeks, declined again to 21.3 last week, and was 1.1 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 16.6 in Leith, and 18.3 in Aberdeen, to 23.3 in Paisley, and 40.5 in Perth. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Aberdeen and Perth. The 302 deaths registered in Glasgow included 13 from measles, 3 from scarlet fever, 8 from whooping-cough, 3 from "fever," and 6 from diarrhœa. Two fatal cases of whooping-cough, and 2 of diarrhœa were recorded in Edinburgh; 2 of measles and 6 of diarrhœa in Dundee; 3 of whooping-cough and 5 of diarrhœa in Aberdeen; 2 of whooping-cough in Leith; and 2 of diphtheria in Greenock.

MEDICAL ATTENDANCE ON BOARDED-OUT PAUPER CHILDREN.

G. C. T., who is a provincial district medical officer, writes to ask whether he can be legally called upon to give medical attendance, when such is required, to two children boarded out by a London union and

resident in his district, which children he has regularly visited quarterly, and received 2s. 6d. for each visit.

*** If our correspondent will refer to the contract he has with the guardians, he will probably find that he has undertaken to give medical attendance to all paupers resident in his district when requested to do so by any proper authority, but even if he has not specially contracted for this, we are advised that he cannot claim any extra fee.

HOSPITAL AND DISPENSARY MANAGEMENT.

ROYAL PORTSMOUTH HOSPITAL.

A MEETING of the Committee of the Royal Portsmouth Hospital was held on April 6th, under the presidency of Sir William King, for the election of three honorary assistant physicians and three honorary assistant surgeons. These appointments are new, it having been found necessary to increase the existing staff. There were nineteen applicants for the vacancies, and the following were elected, the voting being by ballot: Honorary Assistant Physicians: Dr. John Phillips, Dr. C. C. Claremont, and Dr. W. F. McEldowney. Honorary Assistant Surgeons: Mr. C. P. Childe, Mr. T. A. M. Forde. Mr. A. B. Wright, who stood third, did not receive in the ballot the votes of a majority of those present; his name was then proposed and seconded, and he was declared duly elected.

EDINBURGH ROYAL INFIRMARY.

THE following appointments are announced: Messrs. W. Morrison Milne, M.A., M.B., C.M., and H. Douglas Wilson, M.B., Ch.B., appointed Clinical Assistants to Dr. Alexander Bruce at the Medical Waiting-room, and to Dr. C. W. Macgillivray respectively. Mr. W. J. Barclay, M.B., Ch.B., re-appointed Resident Physician to Professor Simpson for the ensuing six months.

MEDICAL NEWS.

DR. A. KINSEY-MORGAN has been elected Coroner for the County Borough of Bournemouth.

DR. JOHN RUTHERFORD SKINNER was elected Mayor of the ancient borough of Winchelsea on April 16th.

THE German Otological Society will hold its ninth annual meeting this year at Heidelberg on June 1st and 2nd.

VENEREAL DISEASES IN JERUSALEM.—The erection of a hospital for venereal diseases in Jerusalem is said to be in contemplation. The hospital will be situated at Ghaza, and will provide accommodation for 90 patients.

A CONGRESS of Polish medical men and scientists will be held at Cracow in July. In connection therewith will be a medical and scientific exhibition limited to Polish firms and such foreign firms as produce articles which are not made in Poland.

MEDICAL MAGISTRATES. — Mr. S. Stretton, M.R.C.S., of Northcliff, Kidderminster, has been appointed a Justice of the Peace of the County of Worcester. Lieutenant-Colonel S. J. Thomson, C.I.E., I.M.S., of Chartham, has received a similar appointment for the county of Kent.

VACCINATION COMPULSORY IN CONSTANTINOPLE.—Vaccination, it is announced in the *Archives Orientales de Médecine et de Chirurgie*, has been made compulsory in Constantinople. Parents neglecting to have their children vaccinated are punishable by a fine of 150 piastres.

BATHS IN NEW YORK SCHOOLS.—In all the new school buildings of New York space has been provided for the installation of a system of shower baths. Baths are now ready in two or three of the schools on the east side, where bathing facilities are most needed. Children are required to supply their own towels and soap.

THE NEW MEDICAL FACULTY OF ODESSA.—Dr. Podwyssotzki, Professor of Pathology in the University of Kieff, will be the Dean of the new Faculty of Medicine of Odessa, which is to be opened in the course of the present year. The election of professors will take place in May.

A SANATORIUM AT TURIN.—The Turin Savings Bank is promoting the establishment of a sanatorium for the tuberculous poor belonging to the Commune and Province of Turin. It has assigned 150,000 lire (£6,000) towards the erection of such a sanatorium, which it is intended to build when funds sufficient to maintain 40 beds are available.

UNIVERSITY OF PADUA.—The University of Padua, which was closed not long ago on account of riotous behaviour on the part of the students, has been reopened by order of the Minister of Public Instruction. The Rector of the University has made an appeal to the students to refrain from disorderly manifestations which might lead the Government to take strong measures for their repression.

THE PREVALENCE OF VENEREAL DISEASES IN PRUSSIA.—With the object of obtaining accurate information as to the prevalence of venereal diseases in Prussia the Cultus-Minister, with the co-operation of the Medical Councils, has sent a circular to all medical practitioners asking them to state the number of patients coming to them for treatment between April 1st and 30th for gonorrhœa and its sequels, for soft sores, and for syphilis, primary, secondary, or tertiary.

THE MEDICAL CORPS OF THE UNITED STATES NAVY.—The Secretary of the United States Navy has prepared a Bill intended to attract men to the Medical Corps, in which, as in the case of our own Army Medical Corps in recent years, there are more vacancies than candidates. It is proposed to raise the rank of Assistant Surgeon to that of Junior Lieutenant instead of Ensign, as it has been ever since the Civil War. This, it is hoped, will remove the objection arising from the inferior rank which medical officers at present hold on entering the service.

A STATE SANATORIUM FOR CONSUMPTIVES IN ILLINOIS.—The Illinois State Board of Health has recommended the establishment of a State sanatorium for consumptives. The matter has been investigated by a Committee appointed by the Governor. The Illinois Society for the Prevention of Tuberculosis has also been urging plans of its own, and it is said that the Legislature is likely to appropriate 50,000 dollars (£10,000) to the purchase of land and the erection of buildings.

THE Bristol Hospital Sunday Fund has, like many other charitable collections, suffered from the war, for in spite of a larger number of churches and places of worship taking part this year, a smaller sum has been received. In 1899 there were 182 collections; this year the number has increased to 220, but this augmentation is chiefly from churches or chapels in poor districts or in neighbouring villages. The amount collected up to the present is £1,374 17s. 2d., being less by about £100 than the collection of last year. The falling off is general, but the long list which was published in the local daily papers speaks well for the universal character of the Fund.

SEASIDE CAMP FOR LONDON WORKING BOYS.—This branch of the work of the London Diocesan Council for the welfare of lads commends itself to those who have at heart the physical as well as moral welfare of the youthful denizens of this great metropolis. Much has lately been urged, on patriotic grounds, as to the desirability of military drill for schoolboys, but even more may be said from the social and sanitary points of view as to the combined good effects of discipline and fresh air in saving from "Hooliganism" the London lad, who, without resource at holiday times, is too apt to become a loafer. The Secretary of the Seaside Camp Fund is Mr. Abel Bloxam, Northumberland Chambers, Charing Cross.

BRISTOL CONVALESCENT HOME.—At a meeting of the Governors of the Jubilee Convalescent Home held on April 4th, an interesting and well-merited presentation was made by the Chairman, Mr. J. Storrs Fry, to the Honorary Secretaries, the Rev. G. Glover, D.D., and Mr. J. N. C. Pope. The former of these gentlemen was one of the prime movers in the starting of the Home in memory of Her Majesty's Jubilee, and was selected to read the address at the opening ceremony to the Queen. It may be of interest to mention that Dr. Glover is a brother of Dr. Glover, one of the direct representatives on the General Medical Council. To him was presented a cheque for £500 to make him a Life Governor of the Home, and a silver tray of antique design and engraved with a suitable inscription; while to Mr. Pope was given a silver cup. The meeting was marked by eulogistic speeches from the chairman and several gentlemen.

The New York State Legislature and Tuberculosis.—Among the Bills now before the New York State Legislature is one relating to the establishment of hospitals for pulmonary tuberculosis. This is a section of the general city law, and changes the law by inserting "cities of the first class," instead of "a municipal corporation" having the right to establish such hospitals without the corporate limits. The Legislature has also before it a Bill by which it is proposed "to establish a State hospital in the Adirondacks or in some other suitable locality for the treatment of pulmonary tuberculosis." The Bill proposes to appropriate 200,000 dollars for the purpose.

Presentation.—On April 5th, under the chairmanship of Mr. William Phillips, Chief Constable of the County, a testimonial, consisting of an address, a brougham, and a purse of gold amounting to £120, contributed by his numerous friends and patients, was presented to Surgeon-Captain William Howell Lloyd, M.R.C.S.Eng., L.S.A.Lond., of Llandilo, Medical Officer of Health and Deputy Coroner for the Eastern Division of the county of Carmarthen, in commemoration of his silver wedding. The presentation was made by the Hon. Gwenllian Rice, the youngest daughter of Lord Dynevor. In the evening a complimentary dinner, to which a goodly number sat down, followed, presided over by the Vicar, the Rev. Lewis Price. Numerous speeches were delivered during the course of the presentation and after the dinner, all bearing testimony to the high appreciation of Dr. and Mrs. Lloyd, and Dr. Lloyd made suitable replies.

An Italian Physician's Charitable Legacies.—The late Professor Lorenzo Bruno, whose death was recently announced in the British Medical Journal, has bequeathed more than 160,000 lire (£6,400) for medical charities of one kind or another in Italy. Forty thousand lire are to be employed in the foundation of two Alpine colonies; the hospital of St. John, Turin, gets a like sum, together with the Professor's surgical instruments. Twenty thousand lire are bequeathed to the Mutual Society of Piedmontese Physicians and Surgeons; 20,000 for the benefit of poor members of the profession in Perugia; 20,000 to the Piedmontese Marine Hospital, with several smaller legacies to other medical associations and institutions. To the Academy of Medicine of Turin Professor Bruno leaves his library, and 2,000 lire for its arrangement.

The Adirondacks Cottage Sanitarium.—This well-known sanitarium has recently issued its fifteenth annual report. During the year, 254 patients were treated, 46 entirely free of cost. The free cases are provided for by a free bed fund and by charitable individuals, and the paying patients are able to enjoy the benefits of the institution at comparatively little personal expense, through the liberality of contributors to the sanitarium. Not only have the running expenses of the institution been fully met by the contributions of its friends, but repairs and improvements have been carried out and paid for. A new stone cottage will be erected and equipped by the liberality of one lady, and a small skating rink has been opened for the patients. The increase of applicants makes the establishment of a reception hospital in Saranac Lake village a necessity. As invalids in an advanced stage of consumption, and often without funds, come to the village in the hope of obtaining admission to the sanitarium, it is satisfactory to hear that the usefulness of the Adirondacks Sanitarium is in no danger of diminution from want of support. Dr. Trudeau, who is the President and physician in charge, is to be congratulated on another year of prosperity for the institution with which his name is so intimately associated.

Society for Relief of Widows and Orphans of Medical Men.—A quarterly Court of the directors of this Society was held on Wednesday, April 11th, Dr. Church, treasurer, in the chair. Three new members were elected, and the deaths of six reported. Applications for grants were read from 48 widows, 8 orphans, and 6 recipients from the Copeland Fund, and it was resolved to distribute £1,173 10s. among them at the next Court. A first application for a grant was made from a widow, and a grant at the rate of £50 per annum was given her. A special grant of 50 guineas was made to a widow under By-law 70. Grants were made to two orphans of £25 each towards their self-maintenance. The report of 1899 was read. The following gentlemen were nominated for election at the annual general meeting to fill the vacancies among the officers of the Society:—*President:* Mr. Christopher Heath. *Vice-Presidents:* Mr. W. H. Bennett and Mr. Manley Sims. *Directors:* Mr. Borlase Hicks, Mr. Simmonds, Mr. L. Read, Mr. Willis, Mr. Milburn, Dr. Buzzard, and Dr. Morison. It was decided to hold the annual general meeting on Wednesday, May 30th, at 5 P.M.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH ROYAL UNITED HOSPITAL.—Resident Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by April 24th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodenurch Road, Birkenhead.—House-Surgeon. Salary, £75 per annum, with board, residence, and laundry. Applications to the Honorary Secretary by April 25th.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary, £150 per annum, with allowance of £30 per annum for cab hire and furnished rooms, etc. Applications to the Secretary by April 23rd.

BIRMINGHAM GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. No salary, but residence, board, and washing provided. Applications to the House Governor by April 28th.

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund Street.—House-Surgeon. Salary at the rate of £60 per annum, with board, lodging, and washing. Applications to the Secretary.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, rations, etc. Applications on forms provided to be sent to the Clerk to the Guardians, Parish Offices, Edmund Street, Birmingham, by April 23rd.

BOLTON INFIRMARY AND DISPENSARY.—Junior House-Surgeon. Salary, £80 per annum, with apartments, board, and attendance. Applications to Mr. Peter Kevan, Honorary Secretary, 12, Acresfield, Bolton, by April 24th.

CAMBERWELL PARISH OF ST. GILES.—Assistant Medical Officer for the Workhouse, between 21 and 30 years of age. Salary, £120 per annum, with furnished apartments and allowance. Applications on forms provided to be sent to the Clerk to the Guardians, 25, Peckham Road, S.E.

CORWEN UNION.—Medical Officer and Public Vaccinator for the Western District. Salary £20 per annum, with fees. Knowledge of Welsh necessary. Applications to the Clerk, Union Offices, Corwen, by April 26th.

CUMBERLAND AND WESTMORLAND ASYUM, Garlands, Carlisle.—Junior Assistant Medical Officer. Salary, £100 per annum, with board and residence. Applications to the Medical Superintendent.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence, £80 per annum, with board, residence, and washing. Applications to the Secretary by May 10th.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester Square.—Demonstrator at the Hospital. Honorarium, £50 per annum. Applications to the Dean by April 23rd.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary commencing at £80 per annum, with board and residence. Applications, endorsed "House-Surgeon," to the Secretary by May 1st

DUNDEE COMBINATION: EAST POORHOUSE AND HOSPITAL.—Resident Medical Office. Salary, £80 per annum, with board and furnished apartments. Applications to the Clerk of the Council, Parish Council Chambers, Dundee, by April 23rd.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—(1) Assistant House-Surgeon. Salary, £40 per annum. (2) Junior Assistant House-Surgeon: appointment for six months, but eligible for election as Senior should vacancy occur; no salary. Board, lodging, and washing provided in each case. Applications to the House-Surgeon.

FARRINGDON GENERAL DISPENSARY, 17, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £120 per annum, with apartments, coals, and gas. Applications to the Honorary Secretary.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried, and not over 35 years of age. Salary, £150 per annum, with board, apartments, etc. Applications to the Medical Superintendent by May 3rd.

GLASGOW SAMARITAN HOSPITAL FOR WOMEN.—House-Surgeon (female). Applications to the Honorary Secretary, 89, West Regent Street, Glasgow, by April 25th.

GLASGOW UNIVERSITY.—Examiner for Degrees in Medicine, with special qualifications to examine in Practice of Medicine (Systematic and Clinical). Salary, £50 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by May 23rd.

GREAT YARMOUTH HOSPITAL.—House-Surgeon. Salary, £90 per annum, with board, lodging, and washing, and £10 for lectures to probationers. Applications to Mr. R. F. E. Ferrier, Honorary Secretary, 33, Hall Plain, Great Yarmouth, by April 25th.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—Assistant House-Surgeon. Salary, £50 per annum, with board, residence, and laundry. Applications to the Honorary Secretary.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon, unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary by April 25th.

HALIFAX UNION WORKHOUSE, St. Luke's Hospital.—Assistant Medical Officer for the Hospital and Workhouse, unmarried, not over 35 years of age. Salary, £160 per annum, with midday meal provided. Applications on forms provided, and endorsed "Assistant Medical Officer," to the Clerk to the Guardians, Union Offices, Halifax, by April 30th.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30. Applications to the Secretary by April 30th.

INFIRMARY FOR CONSUMPTION, Margaret Street, W.—Pathologist. No salary. Applications to the Secretary by April 23rd.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon, unmarried. Salary, £140, increasing to £170 per annum, with rooms and attendance. Applications to the Secretary before April 23rd.

KING'S COLLEGE, London.—(1) Professorship of Materia Medica and Pharmacology. (2) Obstetric Registrar and Tutor at King's College Hospital. Applications to the Secretary by April 23rd.

LANARK COUNTY ASYLUM, Hartwood, Glasgow.—Third Assistant Medical Officer. Salary, £120, with fees, board, washing, and residence. Applications to the Medical Superintendent.

LEEDS: GENERAL INFIRMARY.—(1) Resident Medical Officer. Salary, £100 per annum. (2) Two House-Surgeons; appointments for twelve months. (3) Two House-Physicians; appointments for six months. Board, lodging, and washing provided in each case. Applications to the Secretary to the Faculty for the first by April 23rd, and for the four latter by April 25th.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum. Applications to the Secretary of the Faculty

LIVERPOOL, CITY OF.—Assistant Resident Medical Officer at the Infectious Diseases Hospitals, unmarried, and not exceeding 26 years of age. Salary, £80 per annum. Applications, endorsed "Assistant Resident Medical Officer," to be addressed to the Chairman of the Port and Sanitary and Hospitals Committee, and sent under cover to the Town Clerk, Municipal Offices, Liverpool, by April 23rd.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary, 34, Woodfields, Liverpool.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—Junior House-Surgeon. Salary, 60 guineas. Applications to the Chairman of the Medical Board before April 28th.

LIVERPOOL STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications, endorsed "House-Surgeon," to be sent to the Honorary Secretary of the Medical Board by April 27th.

LONDON COUNTY ASYLUM, Horton.—Medical Superintendent, not over 40 years of age. Salary, £1,000 per annum, with unfurnished house, etc. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 66, Waterloo Place, London, S.W., by May 1st.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Honorary Secretary of the Medical Committee by April 30th.

MANCHESTER CORPORATION.—Junior Assistant to the Medical Officer of Health. Salary, £250 per annum. Applications, endorsed "Appointment of Medical Assistant," to be sent to the Chairman of the Sanitary Committee by April 21st.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Appointment for six months, with prospect of re-election as Senior. Salary, £40 per annum, with board, attendance, and washing. Applications to the Secretary by April 28th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Two Assistant Physicians. Applications to the Secretary by April 30th.

NORTHAMPTON GENERAL INFIRMARY.—Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL, W.—House-Surgeon. Appointment for six months. Salary at the rate of 50 guineas per annum, with board and residence. Applications to the Secretary by April 28th.

PADDINGTON INFIRMARY.—Resident Clinical Assistant and Second Assistant to the Medical Superintendent. Appointment for six months. Board, washing, and residence provided, and honorarium at the rate of £50 per annum. Applications to Dr. M. F. Squire at the Infirmary, 285, Harrow Road, W., by April 23rd.

PAISLEY INFECTIOUS DISEASES HOSPITAL.—Resident Physician. Salary, £50 per annum, with board, washing, and attendance. Applications to the Clerk to the Local Authority, Municipal Buildings, Paisley, by April 30th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £65 per annum, with board and residence. Applications to the House-Governor by May 12th.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser, unmarried. Salary for first year £70, with board and lodging. Applications to the Honorary Secretary.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—(1) Senior Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. (2) House Physician. (3) House-Surgeon. (4) Casualty House-Surgeon. Appointments for six months, no salary, but board, etc., provided for the three latter. Applications to the Secretary by April 23rd

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge Road, S.E.—Two Assistant Physicians, must be F. or M.R.C.P. Lond. Applications to the Secretary by April 23rd.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Three Assistant Surgeons, must be F.R.C.S.Eng. Applications to the Secretary by April 30th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House-Surgeon. Salary, £80 per annum, with residence, board, and washing. Applications to the Honorary Secretary by April 24th.

SHOREDITCH: PARISH OF ST. LEONARDS.—Second Assistant Medical Officer for the Infirmary. Appointment for six months. Salary, £80 per annum, with rations, washing, and furnished apartments. Applications, upon forms provided, to be sent to the Clerk to the Guardians, 213, Kingsland Road, N.E., by April 23rd.

SHREWSBURY: COUNTY ASYLUM.—Junior Assistant Medical Officer. Salary to commence at £130 per annum, rising to £150, with board, lodging, and washing. Applications to the Medical Superintendent by April 28th,

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—(1) House-Surgeon. Salary, £120 per annum. (2) Assistant House-Surgeon. Salary, £80 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by May 3rd.

SUNDERLAND INFIRMARY.—House-Surgeon. Salary, £80 per annum, increasing to £100, with board and residence. Applications to the Chairman of the Medical Board by April 28th.

SWANSEA GENERAL AND EYE HOSPITAL.—House Surgeon. Salary, £50 per annum, with board, apartments washing, and attendance. Applications to the Secretary by April 30th.

TAUNTON AND SOMERSET HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £30 per annum, with board, lodging, and laundry. Applications to the Hon. Secretary, Bank Buildings, Taunton.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and allowance. Applications to the House Committee by April 23rd.

UNIVERSITY COLLEGE, London.—(1) Professorship of Medical Jurisprudence. (2) Surgical Registrar in the Hospital. (3) Resident Medical Officer in the Hospital. Applications to the Secretary for the first by May 14th, and for the two latter by May 7th.

UWCHALED RURAL DISTRICT COUNCIL.—Medical Officer of Health. Salary, £20 per annum. Applications to the Clerk of the Council, Union Offices, Corwen, by April 26th.

WESTERN DISPENSARY, Rochester Row, S.W.—Resident Medical Officer. Salary, 100 guineas per annum, with residence, coals, gas, and attendance. Applications to the Secretary.

WEST HAM.—Superintendent of the Borough Asylum. Salary, £600 per annum, with unfurnished house, light, washing, and garden produce. Applications, on forms provided, to be sent to the Clerk, Town Hall, West Ham, E., by April 28th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary, £110 per annum, with board, washing, and attendance. Applications to be addressed to the Committee and sent under cover to the Secretary by April 24th.

MEDICAL APPOINTMENTS.

ANDERSON, John, M.D., appointed Health Officer for the Shire of Heytesbury, Victoria.

YEES, W., M.D., appointed Medical Officer for the Second Kingswinford District of the Stourbridge Union. *vice* A. Conway, M.R.C.S., L.R.C.P., resigned.

BRAND, G. H., L.R.C.P., L.M.Irel., L.S.A.Lond., appointed Honorary Medical Officer to the Northampton and County Association for the Blind.

DARBY, W. J., L.R.C.S.I., appointed Surgeon of H.M. Prison, Auckland, New Zealand.

EMERY, W. d'E., M.D., B.Sc.Lond., M.R.C.S., appointed Lecturer on Hygiene to the Birmingham and Midland Institute.

FERRIER, David, M.B., Ch.B.Edin., appointed Resident Physician to the Edinburgh Royal Infirmary.

FISHER, T. Carson, M.D., appointed Government Medical Officer and Vaccinator at Bowral, New South Wales.

FOSTER, M. B., M.R.C.S., L.R.C.P. Lond., appointed Medical Officer for the First District of the Ware Union, *vice* H. F. Baland, L.R.C.P., L.R.C.S.Edin., resigned.

GOW, W. B., M.D., appointed Medical Superintendent of the Lunatic Asylum, Wellington, N.Z.

HAYES, A. Herbert, M.R.C.S., L.R.C.P., appointed Medical Officer to the Casualty Department at the East London Hospital for Children, Shadwell, E., *vice* C. Frank Steele, M.R.C.S., L.R.C.P., resigned.

HOLDEN, H. C., L.S.A., appointed Assistant Medical Officer to the Woolwich Union Infirmary, *vice* W. Cowie, M.B.Aberd., resigned.

KINGSTON, H. F., M.B.Dub., appointed Medical Officer for the Alsager and Odd Rode District of the Congleton Union.

KINSEY-MORGAN, Augustus, M.D.Durh., M.R.C.S.Eng., appointed Coroner for the County Borough of Bournemouth.

KNIGHT, H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Third District of the South Stoneham Union, *vice* G. H. Weston, M.B.Camb., D.P.H., resigned.

LORD, S. T., M.R.C.S., L.R.C.P., appointed Medical Officer of Health to the Castleton Urban District Council, *vice* W. H. Sharples, L.R.C.P.Lond., M.R.C.S.Eng.

MACMILLAN, J. G., M.B., appointed Health Officer for the Shire of Wimmera, Victoria.

MARTIN, J. Middleton, M.B., D.P.H.Camb., appointed Medical Officer of Health to the Stroud Rural District Council, *vice* Thomas Partridge, M.R.C.S., resigned.

PEARSON, Sydney Vere, B.A., B.C.Cantab., appointed House-Surgeon to the East London Hospital for Children, Shadwell, E., *vice* A. Herbert Hayes, M.R.C.S., L.R.C.P.

PHILLIPS, James, M.R.C.S.Eng., L.R.C.P.Lond., appointed Senior House-Surgeon to the Bradford Royal Infirmary.

SCHLINK, R. H., M.D., appointed Health Officer for the Shire of Wodonga, Victoria.

SILLS, C. H., M.R.C.S., L.R.C.P., appointed Medical Officer for the First District of the East Ashford Union, *vice* A. M. Watts, M.R.C.S., L.R.C.P., resigned.

SIMONS, C. N., L.R.C.S.I., L.S.A., appointed Government Medical Officer and Vaccinator at Campbelltown, New South Wales.

TITLEY, F. L., M.R.C.S., L.R.C.P., appointed Medical Officer for the Swinefleet District of the Goole Union, *vice* G. Anderson, M.B., resigned.

VATYE, Gopal G., M.D., appointed Assistant Darbar Surgeon to the Albert Edward Hospital, Kolhapur.

WASSELL, Joseph, M.B., appointed Assistant Health Officer at Brisbane.

WOLFHAGEN, J. E., M.B., C.M.Edin., appointed Honorary Medical Officer to the Hobart General Hospital.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation. (Skin.)

8.30 P.M.—Mr. T. Bryant: The Relative Frequency of Cysts of the Breast: their Diagnosis and Treatment. Dr. Campbell Pope: Twenty-three Years' Death Certificates in General Practice.

Medical Society of London.

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent: Consultation. (Medical.)

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Professor J. Dreschfeld: Clinical Lecture.

THURSDAY.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, 5 P.M.—Informal exhibition of Cases at 4.30 P.M.

British Balneological and Climatological Society, 20, Hanover Square, 8.30 P.M.—Dr. A. S. Myrtle (Harrogate): Personal Experiences of Gout. Dr. Laing Gordon (Forest Hill): The Climate and Hospitals of Rhodesia. Illustrated by lantern slides.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

FRIDAY.

Clinical Society of London, 8.30 P.M.—Clinical evening. The following cases will be shown:—Dr. Norman Dalton: A case of Aortic Regurgitant Murmur heard in the Pulmonary Area. Dr. Habershon: A case of Tuberculous Gland in the Anterior Mediastinum, with a Radiograph. Dr Percy Kidd: A case of Lymphatic Leucocythæmia. Dr. Harry Campbell: A case allied to Recklinghausen's Disease. Mr. Charters Symonds: A Patient after complete removal of the Clavicle. Sir Hugh Beevor: A case of Diffuse Lipomata of the Limbs. Dr Norman Dalton: A Boy with (apparently) Tuberculous Mediastinal Glands pressing on the right lung. Mr. Lunn: A case of Osseous Tumour of the Arm, with a skiagraph. Dr. Thomas D. Savill: A case of Macular Leprosy improving under chaulmougra oil Patients will be in attendance at 8 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Dundas Grant: Consultation. (Ear and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

KERR.—On April 17th, at London Road, Sheffield, the wife of W. S. Kerr, M.B., of a son.

LORRAIN-SMITH.—On April 11th, at Westbourne, Windsor Avenue, Belfast, the wife of J. Lorrain Smith, M.D., of a daughter.

MARRIAGES.

BENHAM—ROUSSIN.—On April 14th, at Christ Church, New Road, Brighton, by the Rev. T. A. Gorton, Charles Henry Benham, M.D., of 96, Sackville Road, Hove, eldest son of Henry James Benham, M.D., of 40, Rue Boileau, Auteuil, Paris, to Alexandra, eldest daughter of the late Louis Roussin, of Ladbroke Grove, London

BRYANT—FRY.—On April 18th, at St. Luke's, West Norwood, by the Rev. B. S. Lloyd, Vicar of St. Martin's, Lower Edmonton, assisted by the Rev. H. T. Hughes, Vicar of St. Luke's, West Norwood, John Henry Bryant, M.D., B.S., M.R.C.P.Lond., Assistant Physician to Guy's Hospital, eldest son of the late William Mead Bryant, of Ilminster, Somerset, to Stella Beatrice, sixth daughter of Richard Henry Fry, Grecian Villa, Beulah Hill, Norwood.

JAGO—AITKEN.—At Paul Parish Church, on April 18th, by the Rev. R. W. Aitken, assisted by the Rev. R. J. Martyn, Rector of St. Buryan, Ashby Tilsed Jago, M.R.C.S.Eng., L.R.C.P.Lond., youngest son of Edwin Jago, Paymaster-in-Chief, R.N., to Mabel Georgina, the third daughter of the Rev. R. W. Aitken, Vicar of Paul.

WOODHEAD—WILLANS.—On Wednesday, April 11th, at Milton Congregational Church, Huddersfield, by the Rev. C. Silvester Horne, M.A., cousin of the bride, assisted by the Rev. Carey Bonner and the Rev. J. S. Drummond, Herbert Miall Woodhead, M.B., of Sale, Cheshire, third son of Joseph Woodhead, Longdenholme, Huddersfield, to Mabel Cecilia, eldest daughter of J. E. Willans, Rose Hill, Huddersfield.

DEATHS.

LAWTON.—On April 1st, at 18, Hamilton Square, Birkenhead, aged 30 years, Ruth, dearly beloved wife of William Lawton, M.B.

RYAN.—On April 15th, Marion Weston, wife of P. H. Ryan, M.A., M.D., 1, Lynvale Villas, Lyncombe, Bath, daughter of J. Murray Lindsay, M.D., F.R.C.P.Edin.

UNDERWOOD.—On April 10th, at 24, Wellington Square, Hastings, John Underwood, M.D.Edin. (1841), M.R.C.S.Eng. (1842), L.S.A. (1841), in his 84th year.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 3; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Tu., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 3; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations.*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 3; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M., Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

FIBROID would be grateful for any information as to the present position in gynæcology of the electrical treatment of fibromyoma of the uterus, and also for reference to literature on the subject.

M.D. wishes to know, from those having experience, the best way to proceed in transferring one practice and taking on another, in order to save an intermediate residence, where an introduction of six months is entertained.

DR. J. GUEST GORNALL (Latchford, Warrington) asks what measures have been found to be of use in poisoning by potassium cyanide or hydrocyanic acid. He is informed that subcutaneous injections of hydroxyl (2 per cent.) have been used with a view to oxidizing it into cyanate. He wishes to know what quantity of such a solution can be safely used, or to be referred to any authorities on the subject.

FEES PAID TO DISTRICT SURGEON.

A CORRESPONDENT desires to know what are the usual fees paid to the district surgeon by the Hearts of Oak Friendly Society.

*** They seldom, if ever, exceed 4s. a member per annum.

SALICYL COMPOUNDS IN RHEUMATISM.

C. J. T. writes: In Osler's *Principles and Practice of Medicine*, second edition, p. 299, referring to salicyl compounds in acute rheumatism, occurs the following: "R. P. Howard's elaborate analysis shows that they do not influence the duration of the disease." Can anyone say where the account of Howard's work is recorded?

PROPOSED ANNUAL CONTRACT.

"MEMBER" asks if it is legal to attend a patient for a fixed charge each year and what this charge ought to be.

*** There can be no question as to its legality. In order to recover the charge in a court of law the arrangement would have to be in the form of a contract between the patient and doctor, which must fulfil the conditions required by the law relating to contract, that is, in some cases it might require to be in writing. As to the particular charge to be made to a patient for an annual contract to attend him, this must depend entirely on the social position of the patient and the labour likely to be thrown on the doctor.

TREATMENT AND PREVENTION OF FLAT-FOOT.

M.R.C.S. writes: My daughter, a delicate girl of 12 years, has somewhat suddenly developed complete collapse of both arches, following the use of high heels and pointed toes, worn without my knowledge for a few months.

I have now ordered her heelless shoes with Jenner's patent spring to support the arch, and square toes. I should like to know if support of this kind is desirable or not. Should the child be allowed to walk? What exercises, if any, should she practise? Is the deformity likely to persist for life? Should she be allowed to walk down a steep hill near her home? I fear the effect will be the same as a high heel.

I should be much obliged if any experienced reader would advise me on these points, particularly as to amount of walking exercise.

ATLASES OF ANATOMY.

D. desires to be recommended an atlas of human anatomy of moderate price, to assist one who is unable to attend a dissecting room or museum in reading up anatomy.

*** Good atlases are never very cheap. The following may be mentioned: *An Atlas of Human Anatomy*, by R. J. Godlee, 1880, £4 14s. 6d.; *Atlas of Human Anatomy and Physiology*, by W. Turner and W. Goodsir, 1890, £1 5s.: *Dissections Illustrated*, by C. G. Brodie, in 4 parts (London: Whittaker and Co. 1892-5, £1 18s. 6d.); *Anatomischer Atlas*, by Dr. C. Toldt (Vienna and Leipzig: Urban and Schwarzenberg). The last-named work is comparatively inexpensive, and though only a certain number of the figures are of the full natural size, the others are adequate.

INCOME TAX.

W.H.R. writes: (1) When the Government in paying, say, a civil surgeon's salary, deducts income tax off it, and the civil surgeon's total income for the twelve months (April to April) is not over £160, is it customary to apply for repayment of the amount charged?

(2) Has a person's income to be £160 or over for three years before he is liable to the tax?

(3) Would anything in the way of board or lodging, or partial board or lodging, have to be reckoned as salary or income when the engagement requires you to be on the spot (indoor)?

*** These questions have been referred to the Income Tax Repayment Agency, 6, Chichester Road, Paddington, W., and the following replies have been received: (1) W.H.R. is certainly entitled to a refund of the whole income tax deducted, and the agency is prepared to assist him in obtaining it. (2) A person is liable to tax if his first year's income is over £160, or if the average of his first two or three years' income is over £160. With a second or third year's income over £160 he would not be liable if his average did not exceed £160. With a public appointment, as average is not taken into account, a person becomes liable as soon as his income exceeds £160. (3) Nothing in the way of board and lodging is to be reckoned as salary or income, although money allowance in lieu thereof is assessible.

Cottage Hospitals.

A. K. raises the question whether the governors of a cottage hospital are under the necessity of rendering accounts to annual parish meetings of the parishes for whose benefit the hospital exists? The position, as a parochial charity, of a cottage hospital in which he is interested seems, it is thought, to bring it under the Local Government Act of 1894. It is supported by voluntary contributions, by weekly patients' payments, which in some cases are paid by the Board of Guardians, and by the proceeds of several legacies.

*** The question whether the hospital comes under the provisions of the Act ought, we think, to be referred to the legal advisers of the institution. But whether the cottage hospital is under any "necessity" to furnish accounts or no, we think that every motive of duty and of interest would prompt it to do so. The parishioners of the district for whose benefit it exists have surely a right to information enabling them to judge how far it fulfils its purpose, and all the more so if the money of the ratepayers is used for its support; while the hospital if, as we willingly assume, it is doing its work well has every reason to take all legitimate opportunities to prove to the inhabitants of the district that such is the case.

ANSWERS.

Veritas.—We do not think the proposed position of "professional exhibitor" suggested is a very dignified one, and, under the circumstances disclosed, we should advise our correspondent not to accept it.

Precedence of Hospital Officers.

J. V. B.—If the candidates for the posts of honorary medical officers are selected from a field of others by voting, they would, it is presumed, take precedence according to the order of their appearance on the list of the poll; and if any two or more tied, a second vote might be taken to determine their order. But if all are appointed simultaneously, without any question of number of votes, then it seems reasonable that they should rank according to seniority of standing in the profession, so that the three qualified in 1890 would take precedence of the one qualified in 1894. As regards the order of the three qualified in 1890, if they qualified at different times of the year, the one who qualified earliest would take precedence. If any two or more qualified in the same examination, there seems to be no natural principle of precedence except that of seniority in point either of age or of settlement in the locality. The latter perhaps is the better principle.

Complaint against a Doctor.

S M.—Our correspondent's complaint, even if well founded, seems to be one which is not suitable for consideration in the columns of the British Medical Journal.

Subnormal Temperature.

Dr. H. W. Spaight (Porlock, Somerset) writes: In reply to "W. F. B.," I would suggest that the subnormal temperature after cold bathing, the fatigue after slight exertion, and the increased pulse-rate of 30 in the minute when standing, point to loss of tone in the cardiac muscle as a sequela of influenza. The obvious indications would be to improve the tone of the heart, and to give it less work to do. The cold bath should be given up, as it throws more work on the heart by constricting the superficial blood vessels. Cold bathing is supposed to act as a tonic, but it is only a tonic when followed immediately by a healthy glow. Tepid sponging is much safer. Strychnine and digitalis should be given steadily, with iron and arsenic. The patient should live well, taking a sufficiency of animal food. He should avoid unnecessary exertion, as there is some danger of its producing permanent dilatation. It will be safer, therefore, to give up all active exercise until the heart regains its tone.

Nocturnal Enuresis.

Dr. FitzJames Molony (Porlock, Somerset) writes: "L.R.C.P." will find that most cases of nocturnal enuresis are caused by the patient sleeping on his back. The condition is usually brought on by eating meals shortly before bedtime, or by some irritation, such as ascarides, which make a person restless at night. The usual history is that the patient eats his last meal shortly before bedtime; the process of digestion is in full swing when he falls asleep; he then tosses about in his sleep, and finally turns over on his back. The contents of the bladder then press on the sphincter; the nerve influence which ought to keep the sphincter contracted is diverted by the process of digestion, and consequently the urine flows away. The presence of worms is supposed to cause enuresis; but it is more probable that they only act by causing that restlessness which ends in a patient sleeping on his back.

I have found the following treatment successful: Let the patient take nothing to eat or drink for four hours before going to bed. Let him empty the bladder at bedtime, and let him be awakened at intervals of three hours by an alarum clock for the same purpose. To ensure that he shall not sleep on his back, apply a blister (not cantharidine) to the sacrum, or tie a cotton reel or knotted towel round the waist, so that the reel or knot may press on the spine if he should attempt to turn on his back. It is likely that sleeping on the back conduces to enuresis principally by its effect on the position of the bladder; but it may be that the accompanying pressure on the spine, and especially on the sacral plexus, may cause some disturbance of the nerve supply to the bladder. The usual treatments prescribed for this condition seem somewhat fussy and unnecessary. Some of them cure the enuresis by making the bladder so sensitive that it will not retain urine for any length of time, to the great discomfort of the patient. The change from enuresis by night to frequent micturition by day is like a change from the proverbial frying-pan to the fire.

NOTES, LETTERS, Etc.

Club Rates.

Gray's writes: Will Dr. Cuming Askin, "Club Doctor," and others who think that the General Medical Council should fix a minimum fee tell us how it is to be done? So far as I see the process must be as follows: The Council will issue an order that the minimum fee must be, let us say, a shilling a visit. Any practitioner asking less will be deemed to have been guilty of infamous conduct. This will have to be communicated to every registered practitioner. Imagine the storm of indignation far and wide, and then imagine the consequences. The first man who accepts elevenpence is struck off after having given the Council great difficulty in proving the case against him. He appeals. *De minimis non curat lex.* The court would most certainly go against the Council, and probably add some very severe remarks on "the utter unfitness of this professional tribunal." The Council would go to a higher court, at great expense, and incur even greater denunciation. "You have struck a man off the *Register* for a penny. For this paltry offence you have deprived him of his living." The odium brought on our profession would be enormous. Supposing the Council could get a judgment in its favour at any stage, a further objection would undoubtedly be taken in the clauses of the Acts I quoted in my last letter. Probably the Acts would be repealed and the Council would lose what little power it has. If it escaped extinction and succeeded in its appeals years would be passed in haling club doctors before it, and the weary Council would in the end either take no proceedings or give up its well meant but impracticable attempt to fetter "freedom of contract." In the meantime the army of quacks would have increased by recruits from the rebel practitioners.

Two Little Accounts.

According to the French journals M. Poncet, the well-known surgeon of Lyons, who was called in to treat the victims of the recent railway accident at Péage de Rousillon, has presented the Paris-Lyon-Mareille Company with a bill amounting to 385,000 francs (£15,400). M. Ponteu, a *masseur* of credit and renown at Lyons, asks the modest sum of 24,360 francs (£974) for his services to some of the injured. The company considers that the fees in each case are excessive, and the difference of opinion on the subject is to be settled in a court of law.

LETTERS COMMUNICATIONS, Etc., have been received from

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BOOKS, Etc., RECEIVED.

A Pocket Medical Dictionary. By G. M. Gould, A.M., M.D. Fourth Edition. London: H. K. Lewis. 1900. 5s.

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Die Untersuchung des Harns und sein Verhalten bei Krankheiten. Von Dr. C. Beier. Leipzig: C. G. Naumann. M.2.

Pathologisch-anatomische Diagnostik nebst Anleitung zur Ausführung von Obductionen sowie von pathologisch-histologischen Untersuchungen. Von Dr. J. Orth. Sechste Auflage. Berlin: A. Hirschwald. 1900. M 16.

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A CLINICAL LECTURE
ON
BULBAR PARALYSIS AND ITS COUNTERFEITS.

Delivered in the Royal Infirmary, Edinburgh.

By G. A. GIBSON, M.D., D.Sc,
Senior Assistant Physician; Lecturer on Medicine and on Clinical Medicine, Medical School of the Royal Colleges, Edinburgh.

In the realm of Nature the most whimsical resemblances often occur between different plants as well as different animals absolutely unconnected with each other save by contiguity. Many examples of such mimicry are to be found in the works of our naturalists. The similarity that exists to all outward seeming between the humming-bird moth and the humming bird has been described in the delightful work of Bates, while the likeness between the gentle oriole and the savage friar bird may be found in the no less charming work of Wallace. The unconscious efforts of the mimics in such remarkable instances may well entitle them to the phrase "masterly imitators" employed in another connection by Isaac D'Israeli. They are so far from rare that numberless instances might be culled from the works of natural historians past and present, and they have been very thoroughly studied by Poulton. Among those aspects of the ever-changing web of life which come under our clinical notice, and which may well be termed the natural history of disease, there are also many curious resemblances. The simulation of diseases, which consist in structural alterations, by others in which the symptoms, so far as our means of investigation as yet permit us to determine, are those of purely functional disturbance, is a well-known and fertile source of difficulty in diagnosis. The converse of this is not so well recognised, yet it is certain that many diseases of a real organic kind may present to the superficial observer a wonderful counterfeit of certain purely dynamic affections, and Buzzard conferred a real benefit upon medical science when he delivered his Presidential Address before the Neurological Society on the Simulation of Hysteria by Organic Disease of the Nervous System.



Fig. 1.—Glosso-labio-pharyngo-laryngeal paralysis of bulbar origin.

We are fortunate to-day in being able to consider two most interesting cases of nervous disease which afford at once considerable superficial resemblance and wide intrinsic divergence; they are therefore excellent illustrations of the subject to which reference has been made. Let me without further preface show you the patients and demonstrate their symptoms. The first case is that of a married woman, aged 57, sent to me from Shetland on account of difficulty in speaking and in swallowing. There appear to be no hereditary tendencies to disease, but there are certain difficulties in obtaining a valid history on account of the tragic results that have accrued from the dangers to which her family has always been exposed. Her father was lost at sea, and her mother died in extreme old age. Two of her brothers were, like their father, drowned. The two remaining enjoyed perfect health, and she never had a sister. Her husband shared the fate of her father and her deceased brothers. She herself has had seven children, six of whom are perfectly well; one died when a few weeks old. Her surroundings are satisfactory in all respects. Her house has two rooms, and it is dry and warm. Her occupation and that of her daughters is to look after the house and a small farm while the sons are at sea. As regards food and drink there seems to have been no room for improvement, and it may more particularly be added that she has not been in the habit of taking much tea. There have been no previous diseases of importance excepting measles as a child, but there has been a tendency to catarrh throughout most of her life. The present illness began exactly one year ago, and its first symptoms were noticed by her friends, who began to have some difficulty in understanding what she said. When her attention was directed to this point, she was conscious, not merely of some indistinctness in her utterance, but of some change in the tone of her voice. Shortly afterwards there was some trouble in swallowing both solids and fluids, and one of the catarrhal attacks to which she is subject having made its appearance about the time referred to, she found that her cough had undergone considerable change. These different symptoms became gradually more marked, and as no improvement appeared to follow the treatment of her doctor, he recommended her to come to the infirmary.

The patient (Fig. 1) is very thin. Her expression may be described as one of apathetic melancholy. The cheeks are sunken, the mouth is large, with thin relaxed lips which have a tendency to fall in when the face is at rest. There is external strabismus, but this is of an alternating character. On asking the patient to open the mouth, the tongue is seen to be small and tremulous. It manifests a lack of symmetry, its right half being long and narrow, while the left is short and broad. As it lies in the floor of the mouth it shows beautiful fibrillary movements. There is great difficulty in protruding it, and on testing the strength by holding the tongue between the thumbs and index fingers it is found that both sides are feeble. The palate is relaxed, and moves very slightly with the respiratory movements. Swallowing is a matter of considerable difficulty. The patient is able to take a little solid food, which is swallowed slowly and in small quantities. Fluids very frequently find their way into the nasal passages. The voice is of low tone and hoarse character; it is also absolutely monotonous. Another important point is that when the patient coughs the sound produced, as you hear for yourselves, is not that of an ordinary cough; it is very similar to the cough of the herbivora, and has therefore been termed "bovine" by my friend and colleague, Dr. Wyllie. The explanation of the modified voice and altered cough is easily found on examining the larynx. On phonation the vocal cords are seen to have some diminished movements of abduction, adduction not being obviously interfered with. When the patient coughs the false cords do not close over the space which they ought to bridge in this act, hence the resemblance of the patient's cough to that of the ox, in which animal there are no false cords. Her utterance is extremely indistinct

and guttural; she is unable to pronounce palatals, dentals, and labials in any degree.

On investigating the sensory nervous system it is found that there is absolutely no impairment of ordinary sensibility in any part of the body. All ordinary stimuli, from the slightest to the most severe, elicit immediate and correct response. In the same way the muscular sense is intact. The acuity of sight and the fields of vision are almost perfect, the fundus is healthy, the discs well coloured, and the vessels of ordinary size. There is not the slightest trace of neuritis or other fundal alteration. As regards the movements of the eyeball, in the investigation of which I am indebted for assistance to my friend and colleague Dr. Sym, there is divergence of either eye according to whichever happens to be the fixing one at the time. The movements are quite free. There is no weakness of any muscle, and the divergence is what is to be seen in patients who have never had, or have early lost, the power of binocular fixation. Hearing, taste, and smell are acute. The muscular sense is absolutely unimpaired in any way.

Turning to the motor functions, the organic reflexes as regards the lower portion of the spinal cord are unaffected. Deglutition, as has been mentioned, is interfered with, and on tickling the fauces the soft palate does not give the usual response. It is, as has been described, relaxed, and moves very slightly with respiration. The breathing is of a somewhat shallow character, and increased frequency, being usually about 30 per minute. The pulse has a rate of between 80 and 90, but it is perfectly regular and shows no nervous disturbance. We may therefore conclude that, while the reflex act of deglutition is diminished and that concerned in the respiration is probably modified to a slight extent, there is no disturbance of the reflex mechanism concerned in the circulation. The cutaneous reflexes are all present, and seem to be within the limits of health. The tendon responses are also unimpaired. The knee-jerks are active, possibly even slightly exaggerated, but there is no increase in the responses as regards the upper extremity, and there is no clonus in any part. Voluntary movements are diminished, not merely in the regions mostly affected, but throughout the whole muscular system. On inquiring closely into the condition of the muscles of the face it is found that the buccinators are weak, while whistling is an impossibility on account of inability to use the lips. The tongue movements have already been sufficiently described. As regards the movements of the extremities, it is found that all the muscles are feeble. The grasp of the right hand registers 30 with the dynamometer, while the left only reaches 18. The same diminution of muscular energy is found in the lower extremities, although there appears to be no inequality between the strength of the two limbs. The muscles generally are flabby, and this condition is particularly observable in the neck and arms. The interossei are somewhat atrophied, especially those of the left hand. There is a considerable amount of fibrillation in the wasted muscles of the hands. Tested by means of electricity there are considerable differences in the reactions of the different accessible muscles. You are able to observe for yourselves that in response to the faradic current there is diminished response in the orbicularis oris and in the intrinsic muscles of the hands, with a ready contraction to galvanism, which appears about equally to the closing anode and cathode. The cerebral functions are quite unimpaired. The patient answers slowly when she is spoken to, but this is entirely due to her difficulty in speaking, and not to any deficiency in her understanding. Her attention and memory are good.



Fig. 2.—Glosso-labio-pharyngo-laryngeal paralysis of cortical origin.

In this case the diagnosis cannot for a moment be matter of doubt. The wasting of the muscles, the fibrillary movements which they exhibit, and the altered electric reactions that you have seen afford ample evidence that the lower neurons are affected, while the distribution of the symptoms point unmistakably to an affection of the great nuclei in the pons and medulla or their efferent tracts. The patient, in a word, furnishes an excellent illustration of the disease first described by Duménil and Duchenne, commonly known as chronic bulbar paralysis, but termed also, in the more recent nosology of the nervous system, "polio-encephalitis inferior chronica." This is a somewhat cumbrous designation, but it is one that serves to distinguish it from the analogous lesions of the nuclei in the region of the Sylvian aqueduct, first noticed by Jolly and Hutchinson, and now very generally called "polio-encephalitis superior chronica." The patient, however, cannot be regarded as an instance of uncomplicated bulbar paralysis; she manifests symptoms showing, as is so common in such cases, that the morbid processes have involved other nerve centres. It is highly improbable that there is any structural change in the oculomotor nuclei, since the external muscles of the eye have perfectly free movements, and there is no change in those of the iris and ciliary muscle. In short, there is no ophthalmoplegia. But it is very obvious that there is some progressive muscular atrophy. There is not only wasting of the muscles of the hands, but they also show fibrillary movements and altered electric reactions. The patient, then, has evidently some chronic poliomyelitis as well as chronic inferior polio-encephalitis.

The evidence clearly leads to the conclusion that degeneration has occurred in the hypoglossal nucleus and, probably to a less extent, in the combined nuclei of the glosso-pharyngeal and vagus nerves with the accessory nucleus of the latter, as well as in the facial nucleus. We know very well how variable is the distribution of the morbid changes found after death in this disease; one of the most striking proofs of this fact is to be found in a very interesting case described by Howard Tooth and Aldren Turner. In this instructive example of the disease the motor nucleus of the trigeminal nerve and the nuclei of the facial and hypoglossal nerves had undergone atrophic processes, while the glosso-pharyngeal, pneumogastric, and accessory nuclei were healthy.

The second patient whose case we have to consider to-day is a man, aged 59, belonging to Moray, but occupied for many years in Edinburgh as a skinner. He complains of defects in his speech, stiffness in his back, and weakness of his legs. His father died of diabetes after a short illness, and his mother of heart disease, which was likewise of brief duration. His brothers and sisters are alive and well, as are also all the

members of his own family. His general surroundings are in every respect perfectly comfortable, and his habits have throughout his life been eminently worthy of praise. His occupation, however, has not been such as to conduce to health, as his work exposed him to all kinds of weather, in which he had frequently to stand for hours with water up to his knees. He has, further, had extremely heavy weights to carry up and downstairs. With the exception of some attacks of bronchitis and a broken leg, he cannot remember having had any previous disease. The present illness began, about five years ago, with an attack of bronchial catarrh, for which he came to the medical waiting room and saw me. My attention was at once attracted by the monotonous character of his voice and the clumsiness of his utterance. Even at that early period of his disease there was some sluggishness in the movements of the lips and tongue, and on examination of the larynx it was obvious that there was some interference with the approximation of the vocal cords. The patient is quite certain that up to that time neither he himself nor his friends had noticed any alteration in his speech beyond a hoarse monotony which they attributed to cold. Shortly after this, however, they observed some thickness in his speech, which was more marked at night when he was tired, or if he tried to read aloud for any length of time. His fellow-workmen began about the same time to have some difficulty in understanding him, and they used to laugh at him on account of his thick speech, which they said might lay his conduct open to suspicion. At the same time, or very shortly afterwards, he began to find a difficulty in swallowing, which rendered him liable to choke, and to allow food to pass up into the nose. A couple of years afterwards some weakness in the legs was first observed. It gradually increased, yet the patient was able for a time to continue his work. When, however, a short time later the arms began to lose their power, he found it necessary to give up his work. Since that time the weakness in the extremities has progressively but slowly increased, and the change has been much more rapid in the right arm and leg than in the left. During the last two years speech and swallowing have, if not improved, at least become no worse, although the patient is still liable to choke if he attempts to swallow quickly. The treatment which has been adopted, and which certainly seems to have been useful in retarding the progress of the disease, consisted in the hypodermic injection of strychnine, with massage of the muscles accessible to this method of treatment.

The patient is a healthy-looking man of average height and more than average bulk. His attitude on standing is slightly stooping, with the feet rather widely separated. He walks very slowly and with some difficulty, often dragging the right foot to some extent. Although he can walk without assistance he prefers to use a stick. His gait is somewhat unsteady, and he keeps his eyes fixed on the ground unless this is perfectly smooth. When asked to turn round, he does so slowly, as if afraid of falling. He says he often feels as if he would fall, and that he has done so several times on attempting to turn quickly or on being stopped suddenly by anyone crossing his path. He knows that very little would knock him down, and he cannot walk on a windy day. When asked to rise from the sitting posture, he does so slowly and with difficulty. This he says is due to the stiffness in the back and legs. If he stoops he is very apt to fall forwards; otherwise he has noticed no tendency to fall in any definite directions.

The patient's face in repose is rather melancholy, as you may see (Fig. 2), but he is easily roused. He has himself noticed that a very trifling circumstance amuses him, and that when he begins to laugh he cannot readily control himself. There is no change in the natural lineaments of the face when at rest save a slight degree of apathy. The eyes can be shut and opened perfectly well though somewhat slowly. When the patient is asked to open his mouth he does so widely but gradually. He is able to approximate the lips and to purse them up, but not sufficiently well to whistle. When the mouth is open the tongue is seen to have no trace of atrophy; it can be protruded, slowly, indeed, but fully and without any loss of power. The soft palate moves perfectly with deep respiratory efforts. There has been some difficulty in swallowing, but this has apparently improved during the last two years. Lately there has been little tendency towards the passage of anything up into the back of the nose, but without care there is a liability to choke. The voice is low in tone and husky in character, but it is not absolutely monotonous, for, as you are able to make out for yourselves, he can sing two or three low notes of the register.

The patient complains of shooting pains in the legs, more particularly on the right side, where they extend from the heel to the thigh, but are worst at the knee. Sensibility to tactile, thermal, and painful stimuli are practically normal both as regards locality and acuity. The muscular sense is quite unimpaired. His sight, he tells us, is good for his age; the pupil reflex is active, all the movements of the eyeball are perfect, and convergence is good. The hearing is slightly diminished in both ears. Taste and smell are normal. The muscular sense is free from impairment. The organic reflexes are almost intact, except as regards deglutition, which is still somewhat imperfect. The cutaneous reflexes are very easily elicited. All the muscle and tendon responses are excessive. The supinator and wrist-jerks are much increased, especially on the right side. The knee-jerks are greatly exaggerated, especially on the right side, and ankle clonus is present in both extremities, but is more distinct on the right side. Voluntary movements of the muscles of the upper part of the face are but slightly impaired, although rather slow, but there is great sluggishness of the muscular movements of the lips and tongue. The patient can move his arms perfectly well, and the co-ordination of their movements is unimpaired. The strength of the left hand, however, is much greater than that of the right. The dynamometer registers 46 on the right and 86 on the left side. As you can see for yourselves, the patient is able to lift a chair to the level of his shoulder with the left hand, while he can only with difficulty raise it from the floor with his right. He complains of weakness of the legs, and this is more marked on the right side. There is perfect freedom of movement in both legs, but on testing their strength, by making him flex the knee and then push against the resisting hand, the right leg is obviously weaker than the left. As already mentioned, the gait is rather unsteady as well as very slow, with a slight tendency to drag the right leg. He says that he feels the ground under his feet to be quite natural. He is easily tired, and the sensation of fatigue comes on more easily in the right leg than in the left. There is no alteration in the size of the extremities of the different sides of the body, but the muscles on the left side show more firmness and better tone than on the right. No rigidity is present in any part. There is no wasting of any muscle in the body, and there is not a vestige of fibrillation to be observed. The electric reactions, as you see on stimulation with faradism and galvanism, are quite unaltered. The speech is thick and slurring, but quite intelligible. When we ask him to repeat our common test sentences, the syllables are apt to run into each other. Labials appear to give the greatest difficulty amongst the consonants, but the dentals and palatals are also modified. One most interesting point about the patient is that his cough is usually, although not invariably, of the bovine character. This is explained by examination of the larynx, which shows not only some slowness in the movements of the vocal cords, but diminution in the approximation of the false cords on coughing.

In attempting to form a mental picture of the processes at work in this rather unusual case, where must we place the lesions? It is perfectly clear that they are to be sought in the upper neuronic realm. The absence of any wasting or fibrillation, and the existence of normal electric reactions in the muscles, are sufficient to prove that the lower neurons are not primarily implicated. The increased cutaneous reflexes and the exaggeration of the tendon responses furnish ample evidence of some interference with the control of the lower by the higher neurons. The disease in this case is what is commonly termed pseudo-bulbar paralysis of organic origin. With such widespread symptoms may there not be multiple lesions? In many cases of this kind, which are to be found in medical literature, lesions have been discovered in the lenticular region, but in such instances there have been definite hemiplegic attacks, often separated from each other by long intervals of time. Here we have no such history; the onset has been eminently gradual. It seems to me that we must in this case assume a chronic degenerative process

affecting the motor cortex of both sides almost symmetrically, and producing lesions of descending degeneration; we may term it cortical glosso-labio-pharyngo-laryngeal paralysis. Such a widespread but uniform change is much more probable than a series of scattered and incoherent lesions, for we must ever remember that the words of Newton are singularly applicable to the processes of disease: "*Natura enim simplex est, et rerum causis superfluis non luxuriat.*"

When we compare and contrast these two cases, we find how great apparently is the superficial likeness—how profound really the underlying difference. In both there are difficulties in the movements of the lips and tongue, in the act of swallowing, as well as changes in the character of the voice and the manner of coughing. There is, however, in the first case atrophy of muscles, together with fibrillary movements and degenerative electric reactions in those so affected. In the second case there is no wasting, no fibrillation, and no reaction of degeneration. In these points lie the essential and intrinsic differences. There are, moreover, other clinical features more accidental in their presence, yet linked to the central facts in a manner most interesting—on the one hand, symptoms of the spread of the degenerative processes to other nuclei; on the other, the invasion of the descending motor tracts.

Before concluding, let me say in few words that there is another malady which sometimes mimics true chronic bulbar paralysis of organic nature. It is the affection known by the name of asthenic bulbar paralysis, first recognised by Jolly and Strümpell, whether following, as it sometimes does, an acute disease, or arising, as is more common, without any definite antecedents; the group of symptoms produced is not so definitely connected with the bulbar mechanism; there are frequently disturbances of the oculo-motor and masticatory functions showing some changes in the third, fourth, fifth, and sixth pairs, and there are also almost as commonly alterations in the functions of the extremities. In this very interesting form of disease the symptoms are of a neurasthenic kind, and the feebleness of the affected muscles is always more marked towards evening. There is in asthenic bulbar paralysis no wasting of muscles, no fibrillary movements, and no electric changes, unless such an easily induced muscular exhaustion by electric stimuli as was seen in the case described by Jolly. The outlook in cases of this kind is serious, and a considerable proportion have died from respiratory failure. In several instances no changes were found on *post-mortem* examination, but a case described by Widal and Marinesco revealed some disintegration of the chromophilic cells. It seems probable that such cases are of toxic origin.

Bulbar paralysis of organic nature and progressive course may therefore be imitated by affections which may be truly organic, although with lesions situated elsewhere—cortical, as in the case you have seen, or basilar, as in some cases of chronic meningitis, or neuritic, occurring in multiple neuritis, or, so far as our present lights allow us to determine, functional.

It was no part of my intention to discuss the treatment of such affections to-day, and the only further remarks to be made concern etiology.

The two cases which have been brought before you to-day belong to the great group of chronic degenerative processes. In both of them the causal factors are obscure, unless we accept the fact of diabetes in the paternal parentage of the second case as proof of a neuropathic inheritance of which in our own time we hear so much. They are also insidious and gradual. We may well apply to the etiology of such diseases those words of Seneca which so aptly served as the motto for Playfair's memorable *Illustrations of the Huttonian Theory of the Earth*—"*Nunc naturalem causam quærimus et assiduam, non raram et fortuitam.*"

The Seventeenth Exposition of Hygiene, conducted under the auspices of the Belgian Association Internationale pour le Progrès de l'Hygiène, will be held in Brussels in June next.

A General Census in Portugal.—A decree has recently been signed by the King of Portugal ordering a census of the population of that country and the adjacent islands to be taken on November 30th, 1900.

ABSTRACT OF A REPORT ON THE ACOUSTIC PRINCIPLES AFFECTING THE CONDUCTION OF SOUND BY THE BONES OF THE HEAD.*

By ALBERT A. GRAY, M.D., F.R.S.E.,
Aural Surgeon to the Glasgow Central Dispensary.

The object of this investigation was to find out the acoustical principle upon which the tuning-fork tests depend. The difficulties of accounting for the increased or diminished duration of sound conveyed to the ear by the bones of the head are considerable. It is found that the same result may be brought about by apparently opposite conditions; thus if the air in the meatus be rarified the duration of sound by bone conduction is diminished, but it is also diminished if the air in the meatus be condensed, at least to any considerable extent. Again, if the fingers be inserted into the meatus the duration is greatly increased, but is diminished again if the finger is applied very firmly, and in nearly all affections of the middle ear the duration of the bone-conducted sound is increased.

As regards the effect of condensing the air in the meatus, the writer has found that it is not entirely correct to say that the bone conduction is shortened. For by condensing the air very slightly the sound of the tuning-fork placed on the teeth is heard rather longer than when the meatus is open, but if the pressure of the air is increased more than to this very slight extent, then the sound of the tuning-fork is not heard so long by bone conduction.

The chief effect of all these experiments must obviously be to produce changes in the tension of the tympanic membrane and ossicles, and in some of them to alter the pressure in the labyrinthine fluid.

In order to study further the effect of changes of tension of the membrane upon the duration of bone-conducted sound the following experiment was carried out: A friend kindly permitted himself to be experimented on, and he was kept in ignorance of the principles involved, in order to obtain unprejudiced answers to the questions put. The membrane was illuminated by means of an instrument specially designed for these investigations, and the stem of a vibrating tuning-fork was then placed upon the upper incisor teeth. The writer then passed a very fine probe into the meatus, and pushed it forward till it touched the handle of malleus gently. On making slight pressure on this part the subject in answer to a question, replied that the tuning-fork sounded much louder in that ear. On increasing the pressure a little, but taking care to avoid any pain, the sound became still louder. When the end of the probe was removed from the malleus, the sound at once became faint again. The same experiment was repeated several times on the same subject, and again upon another individual, the results obtained being always identical. The tip of the probe was wrapped round with cotton-wool to prevent the rigid silver coming in contact with the bone or membrane, and thus possibly giving rise to a fallacy.

It is evident, therefore, that movement of the handle of the malleus inwards is associated with increase in the intensity of bone-conducted sound. Yet in spite of this plainly-established fact, movement of the tympanic membrane inwards as a whole is followed by diminution in the intensity of bone conduction; because, as stated above, when the pressure of air in the meatus is increased to any considerable extent the membrane is pressed inwards, and at the same time bone conduction is diminished. Another experiment was performed in order to elucidate this matter. The tympanic membrane was elucidated as before, and the same subject employed, and still kept in ignorance of the principles. The probe was passed into the meatus and the tuning-fork set vibrating on the head as before; but instead of touching the handle of the hammer, various parts midway between that bone and the margin of the membrane were gently pressed in; the result of this was that the intensity of the sound was slightly diminished. When a small piece of stiff paper was attached to the end of the probe so that a broader surface of

* The expenses of this research have been defrayed by a grant from the Scientific Grants Committee of the British Medical Association.

the membrane could be pressed inwards when the probe was applied to it, the result was more pronounced, that is to say, the bone conduction was considerably diminished.

These things being so, it is evident that the crux of the matter lies in the manner in which pressure is applied to the tympanic membrane and the handle of the malleus. Can we account for the fact that pressure inwards of the outer parts of the membrane and pressure inwards of the manubrium produce opposite results?

It would appear that the answer to this question is to be found in the anatomical structure and shape of the tympanic membrane. Now the circular fibres become more abundant on passing from the handle of the hammer towards the periphery. The radiating fibres converge from the periphery towards the handle of the hammer, especially to the tip. The result of this arrangement, as Helmholtz[1] pointed out, is to give the membrane its peculiar shape—namely, that of a funnel with its apex pointing inwards, and its sides convex outwards, as in the diagram. It is somewhat similar to that

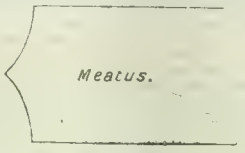


Fig 1.

of a spider's web when the centre is drawn perpendicularly away from the plane of the web. It is evident, then, that if pressure be applied to these convex sides of the funnel the radiating fibres will be relaxed and the circular ones will become tense. When this occurs the former fibres become worse conductors of sound, and the latter become better conductors, because increased tension of a fibrous substance produces increase in its sound-conducting power, and the converse produces diminution of that power;[2] but in the particular case in hand the increased tension of the circular fibres avails nothing, because however well they may conduct sound, they do not run from the margo tympani to the handle of the hammer. The radiating fibres are the structures which must do this work, because they take up the sound from the bony margin and conduct it right on to the manubrium, from which it is transmitted to the anvil, then to the stapes, and so to the labyrinth. In the case under consideration—namely, where pressure is brought to bear upon the convex surface of the membrane—the radiating fibres are relaxed, hence the intensity of the sound conducted to the hammer is diminished.

When, however, the probe is applied to the handle of the hammer the results as regards tension are quite different. The apex of the funnel is pressed inwards, and it is evident that the tension of both the circular and radiating fibres, particularly the latter, will be increased. Now, as before, the change of tension of the circular fibres makes little or no difference, because the paths for the conduction of sound from the margo tympani to the handle of the hammer are the radiating fibres. The latter are tenser than when the membrane is in its normal condition, and hence the sound is conducted without so much loss to the ossicles, and thence to the labyrinth.

Now, as the explanation just given accounts for the changes in intensity of sound conducted by the bones of the head when the tension of the drum membrane is altered by means of a probe, so also it accounts for changes in intensity when the air is condensed or rarefied in the external meatus. But the manner in which changes of atmospheric pressure cause alterations in the tension of the membrane is quite peculiar and requires consideration. Were the membrane equally strong in all its parts and not attached to the ossicles, obviously, when the atmospheric pressure was increased or diminished, the movements of the membrane would be greatest in the middle at the umbo. Now, for very slight increase of the pressure of air in the meatus this is true; the tip of the handle of the hammer and centre of the membrane move more than the outer parts. This causes increase in the tension of the radial fibres, and hence increase in the subjective intensity of the sound conducted by the bones of the head, and this is the explanation of the fact above cited in the experiment where only slight changes in the air were produced.

This movement of the centre of the membrane and handle of the hammer stops very soon, partly because the ligaments of the ossicle come into play, but also because the cog at the head of the hammer catches on the incus and further movement inwards is prevented or only produced to an insignificant extent.[3] When, therefore, this point has been reached the force of the increased atmospheric pressure is spent, not in pushing the handle of the hammer inwards, but in flattening the convex portion of the tympanic membrane, or, in other words, overcoming the tension of the circular fibres. Now this produces relaxation of the radiating fibres, and, as a result, a diminution in their sound-conducting power.

It must not be supposed that the description of these movements of the membrane is merely the result of conjecture. The movements may be seen by means of Siegle's pneumatic speculum, and aurists know them. The first movement of the tip of the handle of the hammer inwards appears very slight, but this is because we look at it in the direction of the axis of movement; it can be seen more plainly on the dead body when the tympanum has been opened. The second movement is very clear, and can always be seen in a healthy living ear; it is more extensive than the inward movement of the handle of the malleus.[4]

The cause of the changes in bone conduction when the air is condensed in the meatus seems therefore to be this: At first, under very slight increase of pressure, the centre of the membrane with the handle of the hammer is drawn slightly inwards, while the remaining parts of the membrane increase their convex form; this increases the tension of the radiating fibres, and hence their sound-conducting power; so that with very slight increase of pressure of the air increased intensity of the sound conducted by the bones is produced. If, however, the pressure be increased to more than a slight extent the centre of the membrane remains stationary, while the convex surfaces of the membrane become flattened; hence relaxation of the radiating fibres occurs, and diminution in the intensity of bone-conducted sound takes place. The changes are shown diagrammatically in the figure.

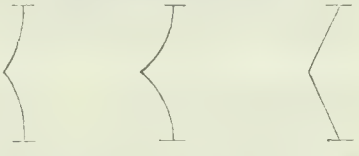
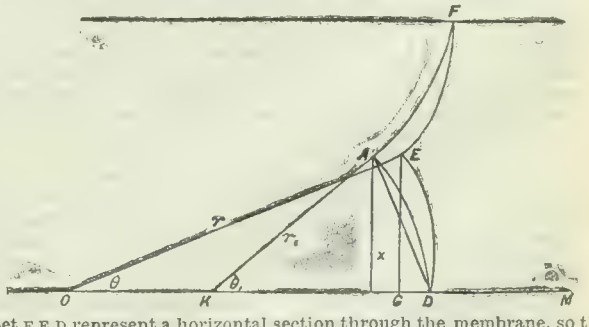


Fig. 2.—1, normal membrane; 2, membrane under slight increase of pressure; 3, the membrane under considerable increase of pressure.

The changes in length and hence also of tension just described, may be expressed mathematically as follows:



Let F E D represent a horizontal section through the membrane, so that D E and E F represent radial fibres passing from the margo tympani to the tip of the handle of the hammer at E. Let r be the radius of curvature of the arc E D, and θ the angle E O D, and suppose the tangent at D is perpendicular to the wall of the meatus D M; from E draw E G = x perpendicular to O D. Then, differentiating the inverse circular sine:

$$\text{Arc E D} = r\left(\frac{x}{r} + \frac{x^3}{6r^3} + \frac{3x^5}{40r^5} + \text{diminishing terms of } x\right) \quad \ldots\ldots(1)$$

Let the centre of the membrane now be pushed inwards perpendicular to its plane, so that the fibre is now represented by the arc A D, then:

$$\text{Arc A D} = r_1\left(\frac{x}{r_1} + \frac{x^3}{6r_1^3} + \frac{3x^5}{40r_1^5} + \text{diminishing terms of } x\right) \quad \ldots\ldots(2)$$

when r_1 is the new radius of curvature.

By subtracting Equation 1 from Equation 2 we obtain the difference in length between the two arcs E D and A D:

$$\text{difference in length} = \frac{x^3(r_2^2 - r_1^2)}{6 r_2^2 r_1^2} + \text{etc.} \quad \ldots\ldots(3)$$

Equation 3 therefore represents the increased length of the fibre after the centre of the membrane has been driven in. This produces a corresponding increase of the tension of the fibre, and hence an increased intensity of the sound conducted by the fibre.

Suppose the centre of the membrane to be now fixed by the locking of the malleus against the incus so that an increase of the pressure of the air in the meatus tends to flatten the arch formed by the fibre. The resistance of the circular fibres will be overcome and the radial fibre will become straightened; hence the arc A D now becomes the cord A D; thus: $A D^2 = A K^2 + K D^2 - 2 A K . K D . \cos \theta_1$ (where $\theta_1 = [A K D.) = 2 r_1^2 (1 - \cos \theta_1)$

$\therefore$ chord A D $= r_1 \sqrt{2 (1 - \cos \theta_1)}$.

Replacing $\cos \theta_1$ by its equivalent $\frac{\sqrt{r_1^2 - x^2}}{r_1}$,

expanding and simplifying we obtain:

$$\text{chord A D} = x + \frac{x^3}{8 r_1^2} - \text{etc.} \quad \ldots\ldots (4)$$

Subtracting Equation 4 from Equation 2:

$$\text{difference in length} = \frac{x^3}{24 r_1^2} + \text{etc.} \quad \ldots\ldots(5)$$

Equation 5 therefore represents the shortening of the fibre which occurs when the centre of the membrane is arrested in its inward movement and the fibre becomes straightened. This produces a diminution in the tension of the fibre, and hence a diminution in the intensity of the sound on reaching the handle of the hammer. This accounts for the fact that when the finger is pushed tightly into the meatus the sound is heard with less intensity than if it is only applied lightly.

These changes in length are of course very small, but it must be remembered that the number of radial fibres is considerable. The close proximity also to the inner ear makes differences in loudness which would be insignificant at some distance, quite noticeable.

For the sake of simplicity a horizontal section through the membrane has been taken. This gives us an arc whose tangent at the margin is sufficiently nearly perpendicular to the direction of movement. A vertical section would give us a different figure; but, without going into the mathematical detail, it may be stated that the results would be similar, indeed the changes in length and tension would be rather greater.

It is to be noted in this connection that when the air in the meatus is condensed by placing the finger in the meatus the effect upon the membrane is the same as that produced by inserting a tube into the meatus and blowing into it. In both cases there is a preliminary increase in the tension of the radial fibres and then a diminution in this tension. In the case of inserting a finger into the meatus, however, another factor is introduced, because the sound waves which would otherwise escape are prevented from doing so, with the result that the duration of the sound conducted by the bones is still further increased. This explanation was given originally by Mach,[5] and there is no doubt that it is correct in the particular case, though of course it does not explain the increased duration of bone conduction of sound in other cases, whether they are pathological or experimental.

In the opposite condition to those described—that is, in rarefaction of air in the meatus the explanation is more simple. In this case the handle of the hammer swings outwards, and though the membrane does not become quite flat the circular fibres prevent any outward bending of the radial ones sufficient to make up for the shortening produced by the outward swing of the handle of the hammer.

The practical application of the investigation to the testing of the hearing by bone conduction in the deaf will be described in a later publication.

Besides the matter described above, experiments were made with the view of investigating the part played by the tympanic membrane in the generation of differential tones. The results of this investigation, however, will also be published later.

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A FAMILY WITH ADDISON'S DISEASE.

BY

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Resident Physician, Royal Infirmary, Edinburgh.

THE following record of the occurrence of what appears to be Addison's disease in a mother and her four children seems to be worthy of record:

The Mother.

Mrs. H., aged 28, came to the Western Dispensary complaining of weakness, diarrhœa, and pain in the region of the heart.

Family History.—Her father and mother are alive and healthy. One brother died of pleurisy and typhoid fever. One sister died in infancy, and the only surviving sister is healthy. Her mother's mother and an aunt on the mother's side died of cancer.

Personal History.—The patient's work has been very hard since she was 13 years of age. She has had five children, one of whom died in infancy of "inflammation of the bowels." Her home is comfortable, although her husband is a working man in receipt of a small wage. Previous illnesses call for little comment; she has had the usual ailments of childhood, scarlet fever, measles, and whooping-cough, and she has been delicate from childhood upwards, and especially liable to bilious attacks.

Present Illness.—Her present illness may be dated from her first pregnancy, at which time she became darker in colour. She suffered during her pregnancy from great weakness, and every one noted the change in her complexion, which was put down to her condition. After her confinement she suffered from a mammary abscess. With each successive pregnancy she has experienced an increasing degree of debility, and especially was this so with her last pregnancy. She was treated in the Royal Infirmary, in Professor Simpson's wards, during the winter of 1897 for retroflexion of the uterus, and the uterus was curetted early in 1898.

Condition when First Seen.—Mrs. H. came under our notice first at the Western Dispensary in July of 1898. Her skin was extremely dark, the nipples being deeply pigmented, and there were a number of small dark, almost black, spots scattered over the whole body. These had only appeared comparatively recently, and many of them the patient had not previously noticed. She complained of great weakness and prostration, and said that she had many times suffered from attacks of giddiness and faintness, and apparently causeless and severe diarrhœa and vomiting. She complained of pains in the back shooting up to the shoulder. She was a slightly-built woman of medium height, with dark hair and a sad, wearied-looking face. When she was first seen there was no pigmentation on the mucosa of the mouth or gums, although the teeth were very bad; the tongue showed no abnormal colour. Within the past few months, however, the mucous membrane of the mouth had become very markedly pigmented. Nausea and fulness after food were frequent, and the repeated causeless attacks of vomiting and diarrhœa, sometimes together, often separate, were specially complained of. Giddiness and faintness were often present, frequently with the attacks of vomiting and diarrhœa. Palpitation and pain over the heart and constant breathlessness on exertion were troublesome. The pulse was weak and dicrotic. There was no obvious cardiac *bruit*. The respiratory system appeared to be normal. The pigmentation of the skin was darker in summer than in winter but had gradually become deeper with each pregnancy, and the nipples and external genitals were very deeply bronzed. The moles were of black colour, varied in size from a millet seed to a lentil, and were scattered over the face, back, and abdomen in greatest numbers. They increased in number during the period of observation of the patient, but not rapidly. The urinary system was normal. She suffered from severe dysmenorrhœa and leucorrhœa, with the usual accompanying pain in the "small of the back." Headaches were frequent and severe, usually frontal, and general inability for mental effort was always present.

The Children.

1. Girl, aged 7. The skin was noticed to be specially dark four years ago, after an attack of gastritis; she has been getting much darker lately. The nipples are very dark, and there are black spots or moles all over the body. She has complained of frequent attacks of causeless sickness and diarrhœa for some time past. Headaches are frequent, and sometimes for a week at a time, from no apparent reason, she is quite unable to go to school or to endure any exertion bodily or mental.

2. Girl, aged 4. Her skin began to darken one year ago after a slight attack of eczema, and she has become much darker lately. There are numerous black spots all over the body. She is very subject to diarrhœa, with occasional attacks of sickness unconnected with taking food.

3. Boy, aged 3½. He has always been a dark child. Black spots scattered all over the body appeared first six months ago. He complains of frequent attacks of sickness, specially at night, and sometimes diarrhœa.

4. Girl, aged 2½. A fair child, but she has been getting distinctly darker during the last four or five months. Two black spots have appeared, one on the abdomen and another on the thigh. Occasional attacks of diarrhœa are present.

The question may be asked whether these five individuals, all members of the same family, are in reality all true cases of Addison's disease. If they are, then the family have the most undesirable distinction of being, so far as we can find out, the first recorded instance of the kind, and the prognosis must be considered grave in the extreme. The mother shows

all the typical clinical features, including pigmentation of the mucous membrane of the mouth and lips, while the children, in order of age, demonstrate the same phenomena in decreasing severity and distinctness. The moles, placed so prominently in the list of important clinical features by Addison, Greenhowe, and others, are specially characteristic of this family group. If less significance is attached to them, then the correctness of our diagnosis is much more open to question.

The cases were shown at a meeting of the Medico-Chirurgical Society of Edinburgh on February 1st, 1900.

Why should it not be conceivable that a tuberculous lesion so often hereditary might not exist in the same family in every child? But why is it that in so many recorded cases of Addison's disease, amounting now to several hundreds, so seldom is any reference made to plurality of cases in one family?

The future will clear up the mystery as far as this family is concerned, and the record is published in the hope that by directing attention to investigation into family history, more carefully than has been done in the past, similar instances may be met with.

PRELIMINARY NOTE ON A NEW QUANTITATIVE METHOD FOR SERUM DIAGNOSIS.

BY

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[From the Jenner Institute of Preventive Medicine.]

For the successful application of the agglutination test ("Widal" method) in the diagnosis of disease, it is universally admitted that some dilution of the blood is desirable, a dilution which should be approximately known, and which varies in practice between 1 in 10 and 1 in 100, while for the investigation and comparison of the specific agglutinating power of the blood in different cases or diseases, and under varying conditions, an accurate quantitative method for carrying out the dilutions is a necessity.

Of the various methods employed for diluting, the following may be mentioned:

1. Dilution by means of a platinum loop (McWeeney, Delépine, and others). This at the best can be but approximate.
2. Dilution by means of a capillary pipette (Wright). This is more suitable for serum than for the whole blood.
3. The dry-blood method (Johnson). This is subject to many inaccuracies; for example, variability in the amount of solids in the blood and in the dryness of the film, and the difficulty of weighing out so small a quantity as 1 milligram.
4. The hæmoglobinometric method, the blood being diluted to a given standard colorimetrically by its contained hæmoglobin, a very variable factor.
5. The capillary-tube method (McFarland). Independently of McFarland, we carried out experiments with the capillary-tube method, and early abandoned it, for we found it impossible to obtain capillary tubes of even approximately the same internal diameter, while accurate calibration by capillarity is attended with great difficulties.

We do not mean to imply that the above methods are useless, all of them give satisfactory results for rapid clinical diagnosis or in those cases where an approximation suffices, but we believe that the capillary pipette method (No. 2 above) is the only one which has any claims to accuracy. We have, therefore, devised the following quantitative method, which is suitable not only for serum but also for the whole blood, and is capable of the greatest accuracy.

Ordinary vaccine tubes are taken, the large, the very small, and any irregular ones being discarded. We prefer those varying in diameter from about 0.9-1.2 mm., they are boiled in strong nitric acid, thoroughly rinsed in tap, and then in distilled water and dried; a large number can thus be treated at one operation. The selected tubes are charged with the blood to be examined, being preferably one-half to two-thirds filled, and are carefully sealed by melting their ends in a flame in the ordinary way. In the laboratory the length of the column of blood between the bases of the two menisci is first measured by means of a scale graduated to half millimetres assisted by a lens mounted to avoid parallax. The end of the tube is then cut off by means of a fine file or writing diamond, and its internal diameter is measured. This, the most important of all the manipulations, is carried out in the following manner:—

The tube is supported in the axis of the microscope by means of two iris diaphragms carried respectively by the stage and by the substage. These close concentrically and support the tube, at the same time cutting off all light reflected from the mirror. The opaque blood in the interior of the tube in the same way cuts off all light that might pass through the lumen of the tube. The only light that thus reaches the optical system is that transmitted by the glass walls of the tube. In the field of vision the lumen of the tube now appears as a black circle surrounded by a brilliantly-illuminated annulus. Owing to the extreme sharpness of the image the measurement of the diameter of the tube can be carried out with great accuracy by means of an eye-piece micrometer arranged to give readings to the one-thousandth of a millimetre. From the formula

$$V = D^2 \times L \times 0.7854,$$

Where V = volume of the cylinder,
D = diameter of the cylinder,
And L = the length of the cylinder,

the volume of the blood is calculated. If many measurements have to be made, a Fuller's slide-rule greatly expedites the calculations. It is of the utmost importance that the diameter of the tube be accurately measured, and therefore the adjustment of the eye-piece micrometer must be carried out with great care, and the scale by which it is set should be one the accuracy of which is undoubted. For, considering the formula ($V = D^2 \times L \times 0.7854$), it will be seen that any error in the measurement of D will be increased in a geometrical ratio in the final result, hence the comparative inefficiency of a capillary-tube method in which D is measured indirectly and with less accuracy.

We have controlled the accuracy of the method by filling tubes with distilled water, ascertaining the amount of water by direct weighing, and afterwards calculating the weight of the water by the formula given above; it is easy to obtain results which are within 0.5 per cent. of the true weight. Having ascertained the volume of blood, it remains to carry out the dilutions; this is accomplished as follows:

The capillary tube is placed in a vertical thick-walled glass tube of slightly larger bore, the lower end of which is submerged in the required amount of the diluting medium (measured out by a graduated pipette) contained in a hollowed-out block of glass, such as is used in histological and microscopical work. The capillary tube with its contained blood is then crushed *en masse* by means of a soft iron plunger, and the interior of the containing tube is washed out several times by drawing up the diluting medium into its lumen, either with the mouth or by means of an indiarubber teat. The powdered glass quickly falls to the bottom, and the mixture may be employed for conducting the serum reaction either by the microscopic or by the macroscopic method.

On a future occasion we propose giving further data and details, but we may say in conclusion that this method has been tested at the Jenner Institute of Preventive Medicine, and has proved to be easily carried out, and to give satisfactory results, while the time consumed in the whole of the manipulations (5 to 10 minutes) is comparatively short.

ON THE VALUE OF THE AGGLUTINATION TEST AS A MEANS OF DIAGNOSIS OF THE B. TYPHOSUS FROM COLIFORM ORGANISMS.

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The difficulties which surround the correct interpretation of the agglutination test are well shown by the following bacteriological examination of a drinking water derived from a polluted upland surface. The water was sent for analysis as there had been several cases of enteric fever amongst the consumers, though no real epidemic, such as might be attributed to a polluted water supply, had occurred. On arrival at the laboratory the water was found to contain a large number of micro-organisms, so the usual plan of concentrating the sample by pumping one or two litres through a Berkefeld bougie had to be abandoned. Consequently 1 c.cm. of the water was added to each of twelve broth tubes containing 0.05 per cent. of carbolic acid; all the tubes were then incubated at 37° C. At the end of twenty-four hours some of the tubes were hazy in the upper half and some in the lower half, and three tubes were turbid throughout. These three tubes were then plated out in gelatine containing 0.05 per cent. carbolic acid. After seventy-two hours' incubation at 22° C. the plates made from two of the tubes showed almost pure cultures of coliform colonies, whilst the plates made from the third tube showed numerous colonies of B. megaterium. Nearly all the coliform colonies were fished and their cultural characteristics studied. It was then found that the coliform organisms could be arranged in three groups.

Group I (Cultures A_3, B_2) showed the following characteristics:

Colonies on Gelatine Plates.—The surface colonies appeared as thin bluish films with an irregular margin; under a low power the centre of the colonies had a yellowish tinge and surface markings of ridges and valleys running irregularly from the centre to the periphery were seen.

Stab Gelatine.—Surface growth resembling the colonies, and a thin white growth along the stab.

Milk.—Unchanged in appearance after six days' incubation at 37° C. Neutral litmus whey tested with $\frac{N}{10}$ alkali, and compared with a control tube of the same milk kept for the same time at 37° C., showed a slight increase in acidity.

Glucose Gelatine (Shake).—Marked gas formation after twenty-four hours at 22° C.

Peptone and Salt Solution.—No indol produced after seven days' incubation at 37° C.

Potato.—Thick yellowish-white growth.

Gelatine (25 per cent., incubated at 37° C.).—Marked film on the surface after forty-eight hours' incubation.

Microscopical Characters.—A small motile bacillus.

Agglutination Test.—Typhoid serum, diluted 1 in 10, produced no traces of agglutination.

Group II (Culture A) showed the following characteristics:

Colonies.—The same as Group I.

Stab Gelatine.—The same as Group I.

Milk.—Unchanged in appearance; litmus whey showed a slight increase of acidity as compared with a control tube.

Glucose Gelatine (Shake).—No gas formation.

Peptone and Salt.—No indol produced after seven days' incubation at 37° C.

Potato.—A yellowish-coloured growth, yellow tinge not so marked as in Group I.

Gelatine (25 per cent., incubated at 37° C.).—No film on the surface: a diffused growth through the tube.

Microscopical Characters.—A small motile bacillus, about the same size and same motility as Group I.

Agglutination Test.—Typhoid serum, diluted 1 in 10, produced no traces of agglutination.

Group III (Cultures B_3, B_4, B_5, and B_6) showed the following characteristics:

Colonies on Gelatine Plates.—Identical with those of Groups I and II.

Stab Gelatine.—Surface growth the same as the colonies, which appeared to grow more slowly than B. coli and more quickly than B. typhosus planted out at the same time.

Gelatine Slope.—A thin growth which did not show the crenated margin of B. coli but was distinctly wider than B. typhosus, though not so wide as B. coli planted out at the same time. After about ten days' incubation distinct granules appeared down the centre of the streak.

Glucose Gelatine (Shake).—No gas formation.

Peptone and Salt Solution.—No indol produced after seven days' incubation at 37° C.

Milk.—Unchanged in appearance; litmus whey rendered slightly acid as compared with a control tube.

Potato.—Yellowish growth. The colour and extent of the growth varied, but when compared with B. typhosus planted out on the same potato, there was always a more marked yellowish tinge after several days' incubation.

Agar.—A white growth, not characteristic.

Gelatine (25 per cent. incubated at 37° C.).—No film appeared on the surface, but a diffused growth took place through the tube.

Microscopical Characters.—A small motile bacillus resembling B. typhosus closely.

Flagella.—Long and wavy, average number 6.

Agglutination Test.—The bacilli were completely agglutinated in thirty minutes by typhoid serum diluted 1 in 20. The cultural characteristics of the members of this group were in many ways so like the B. typhosus that cultures of them and also a pure B. typhosus were planted out at the same time on the various media, so that the growths might be compared from day to day. It was then found that the members of this group differed from B. typhosus in three ways, namely: (1) Quicker growth, (2) a tendency to produce a yellow growth on potato, and (3) the flagella averaged only six. The agglutination reaction with antityphoid serum was also further tested as follows: A twenty-four hours' agar growth of the different organisms was made into an emulsion with broth; equal quantities of the emulsion and antityphoid serum diluted with broth were then mixed so as to form dilutions varying from 1 in 10 to 1 in 2,000,000. The dilutions were examined by (*a*) the rapid hanging-drop method and (*b*) the slow method in capillary sedimentation tubes. The capillary tubes were kept at the laboratory temperature for twenty-four hours, and then examined macroscopically for sedimentation, and microscopically—namely, the tubes were opened and the contents blown out on to cover glasses and then examined in a hanging drop—for agglutination. A twenty-four hours' broth culture of the organisms was also prepared and mixed with antityphoid serum diluted with broth so as to form the same series of dilutions. A true typhoid culture was also put up at the same time with the serum in the same dilutions. Controls of the emulsions were preserved in capillary sedimentation tubes and examined at the end of twenty-four hours for traces of agglutination. Two specimens of antityphoid serum were employed; one possessed an extremely powerful agglutinating action on the B. typhosus, but the other was weak, and when highly diluted required considerable time to bring out the specific action. The following results were obtained:

Powerful Antityphoid Serum.

Dilutions of Serum.	Culture of B. Typhosus.		Culture of Coliform Organism (Group III).	
	Hanging Drop (2 Hours).	Capillary Tube (24 hours).	Hanging Drop (2 Hours).	Capillary Tube (24 Hours).
1—10	Complete agglutination	Complete agglutination	Complete agglutination	Complete agglutination
1—20	,,	,,	,,	,,
1—40	,,	,,	,,	,,
1—80	,,	,,	Incomplete (large clumps)	,,
1—160	,,	,,	Incomplete (small clumps)	Incomplete (large clumps)
1—320	,,	,,	*Nil*	Incomplete (small clumps)
1—640	,,	,,	,,	*Nil*
1—1,280	,,	,,	,,	,,
1—2,500	,,	,,	,,	,,
1—5,000	,,	,,	,,	,,
1—10,000	,,	,,	,,	,,
1—100,000	,,	,,	,,	,,
1—2,000,000	,,	,,	,,	,,

Weak Antityphoid Serum.

Dilutions of Serum.	Culture of B. Typhosus.		Culture of Coliform Organism (Group III).	
	Hanging Drop (2 Hours).	Capillary Tube (24 Hours).	Hanging Drop (2 Hours)	Capillary Tube (24 Hours).
1—10	Complete agglutination	Complete agglutination	Complete agglutination	Complete agglutination
1—20	,,	,,	,,	,,
1—40	Incomplete (large clumps)	,,	Incomplete (large clumps)	,,
1—80	*Nil*	Incomplete (large clumps)	*Nil*	Incomplete (large clumps)
1—160	,,	,,	,,	,,
1—320	,,	,,	,,	Incomplete (clumps small)
1—640	,,	Incomplete (clumps small)	,,	*Nil*
1—1280	,,	Incomplete (clumps small and few in number)	,,	,,

The control hanging drops and capillary tubes showed no traces of agglutination.

An examination of the above results shows that, when working with a powerful antityphoid serum, the quick examination by the hanging drop at once brings out marked differences between the true B. typhosus and allied coliform organisms. But if a weak serum is employed, the specific action is so slow that the hanging-drop method quite fails to differentiate between the organisms, and it is necessary to prolong the examination for twenty-four hours, when distinct differences in the agglutination become apparent.

Both the serums employed were prepared by inoculating horses with cultures of B. typhosus, and it appeared possible that the agglutinative action of the serums on the coliform organisms might not be specific but simply the result of agglutinins present in the normal serum of the horse. In order to test this point the coliform organisms were examined in exactly the same manner as before; but, instead of using the anti-typhoid serums, normal horse serum was employed. The following results were obtained:

Normal Horse Serum.

Dilutions.	Culture of Coliform Organism (Group III).		Dilutions.	Culture of Coliform Organism (Group III).	
	Hanging Drop (2 Hours).	Capillary Tube (24 Hours).		Hanging Drop (2 Hours).	Capillary Tube (24 Hours).
1—10	Complete agglutination	Complete agglutination	1—160	*Nil.*	Incomplete (large clumps).
1—20	,,	,,	1—320	*Nil.*	Incomplete (a few clumps).
1—40	Incomplete agglutination	,,	1—640	*Nil.*	*Nil.*
1—80	,,	,,			

An examination of this table shows at once that the agglutinative actions of the antityphoid serums and the normal horse serum on the coliform organisms were practically identical.

As a final test of the nature of these organisms it was determined to immunise a rabbit with a broth culture of one (B_3) of the members of Group III. This was kindly done for me by Major Leishman, R.A.M.C. The serum so obtained was then tested, in the same manner as before, with a twenty-four hours' agar culture of B. typhosus, and a twenty-four hours' agar culture of the same organism which had been used to immunise the rabbit. The results shown in the table were obtained.

Anticoliform Serum (B_3).

Dilutions.	Culture of B. Typhosus.		Culture of Coliform Organism (B_3).	
	Hanging Drop (2 Hours).	Capillary Tube (24 Hours).	Hanging Drop (2 Hours).	Capillary Tube (24 Hours).
1—10	No traces of agglutination	No agglutination.	Complete agglutination	Complete agglutination
1—20	,,	,,	,,	,,
1—40	,,	,,	,,	,,
1—80	,,	,,	Incomplete	,,
1—160	,,	,,	*Nil*	Incomplete (large clumps)
1—320	,,	,,	,,	,,
1—640	,,	,,	,,	,,
1—1280	,,	,,	,,	Only a few small clumps

It is, therefore, clear that the coliform organisms contained in Group III are not typhoid bacilli, though as regards their cultural reactions they differ very slightly from Eberth's organism. It is also evident that the correct interpretation of the agglutination test may be a matter of considerable difficulty. The experiments given show distinctly that there are at least two important factors which enter into the reaction, namely (1) the strength of the serum employed, and (2) the time during which the serum is allowed to act on the microbe, consequently no fixed dilution of typhoid serum can be laid down which will enable the B. typhosus to be at once distinguished from coliform organisms. It may be said that an organism which fails to agglutinate with typhoid serum is certainly not the B. typhosus; but, on the other hand, it does not necessarily follow that an organism is the B. typhosus because it is agglutinated by fairly dilute typhoid serum. With our present knowledge it appears essential to work with a powerful serum, also the suspected organism should be tested with the serum diluted to the highest degree which has been found capable of agglutinating a true B. typhosus.

INOCULATION WITH TYPHOID VACCINE AS A PREVENTIVE OF TYPHOID FEVER.

By R. W. MARSDEN, M.D., M.R.C.P., Etc.,
Medical Superintendent, Monsall Hospital, Manchester.

One can in these days, without fear of contradiction, make the statement that typhoid fever is only too readily contracted by those who are administering to patients suffering from this disease. From my own experience of an institution where considerable numbers of these patients are treated, I can affirm that the occurrence of typhoid fever amongst the staff is a not infrequent and a very real cause of anxiety, despite the most explicit instructions for the prevention of infection; whilst the occasional occurrence of a fatal termination casts a temporary gloom over the whole establishment. A consideration of the table given below as regards the $4\frac{3}{4}$ years from 1895 to September, 1899, will only too readily give an idea of the reality of this anxiety.

In September last it seemed to me desirable to offer facilities to the staff for the injection of typhoid vaccine, and I accordingly made application to Professor A. E. Wright, of the Army Medical School, Netley. (I wish to take this opportunity of thanking Professor Wright for the extremely prompt and courteous manner in which he has responded to my requests, and I am all the more sensible of his kindness, seeing that my applications have been made at a time when the Army Medical Department has been more than usually occupied owing to the war in South Africa.)

I am well aware that the time which has elapsed since the adoption of the prophylactic measure is too short to draw any conclusive inference, yet the results so far observed are, I think, sufficiently marked to warrant this report, and even embolden one to hope that, at any rate for a limited period, either an immunity against typhoid can be thus produced, or at least one may give "an increased power of resisting infection by living typhoid bacilli."

Concerning the procedure followed in making the injection, it is sufficient to say that the instructions issued by Professor Wright along with the vaccine were carefully attended to with two exceptions. The first injection revealed the fact that the local tenderness remained after the general indisposition had disappeared, and thus caused discomfort in wearing the natural clothing, so that future injections were made over the insertion of the deltoid.

In the second place, as the nurses are usually only employed in the typhoid fever ward for a period of three months, the inoculations have only been repeated on two occasions. The inoculation has not been made compulsory upon the staff. I have simply recommended it to those attending the typhoid patients, and I have not been disappointed in the ready manner in which it has been accepted.

During the six months concerned 22 nurses have been engaged, of whom 14 received the typhoid vaccine. Of the remaining 8, 4 had previously been under my care for typhoid fever contracted during the performance of their duties, whilst the other 4[1] did not wish to submit to inoculation.

In general the clinical symptoms have agreed with those detailed by Professor Wright, but I should be inclined to add that headache has been consistently present in all; in several it was accompanied by general pains or aching, whilst one nurse complained of "cramps in the legs and feet." Frequently also there was nausea, and on two occasions vomiting. At the end of thirty-six hours the constitutional symptoms had disappeared, but local tenderness sometimes persisted for two or three days longer. By inoculating, therefore, in the evening the nurses were allowed to have one day in bed, and returned to duty on the following day.

Taking now the occurrence of typhoid fever amongst the staff since 1895, the following table shows the number of typhoid patients admitted in each year and the number of attacks contracted during the corresponding periods.

Table I.

Year.	No. of Patients Admitted.	Cases of Typhoid in Staff.
1895	229	3
1896	238	3
1897	302	4
1898	426	8
To end of September, 1899	163	5
From September, 1899, to March, 1900	146	0

Concerning the 5 cases occurring in 1899, it should be men-

tioned that during the season 1898-99, typhoid fever was more than usually prevalent, and that 3 of the 5 cases occurred in the early part of the year. But as typhoid is so markedly a seasonal disease, probably a closer, more accurate, and weightier comparison is made, by considering the different autumnal and winter epidemics, since one may justly state that the typhoid inoculations have been performed during the season 1899-1900. Omitting, therefore, the cases which have in past years occurred during the spring or summer, the following list gives the seasonal occurrence:

TABLE II.

Season.	No. of Nurses Who Contracted Typhoid.
1895-6	3
1896-7	2
1897-8	8
1898-9	6
1899-1900	0

The numbers are, of course, very variable, largely dependent on the severity of the epidemic, and the consequent number of patients under treatment, still it seems a significant fact that the season 1899-1900 should be only one during which no undoubted case of typhoid has been contracted by the staff, even though the epidemic during the last autumn and winter has been exceptionally light.

It may be that in both instances the figure 0 is not strictly accurate, as one of the nurses inoculated in the first week of October, 1899, suffered from an indefinite febrile attack in January of this year. The facts are as follows:

During the second and third weeks in January she felt tired, lost her appetite, and complained of "chilliness." On January 18th she had headache, and on January 21st there was slight cough, epistaxis, and shivering. I saw her on January 22nd, when the temperature was 100.6° F. The abdomen seemed a little full, but there was no pain nor tenderness; the spleen was slightly enlarged to percussion and just palpable, and the tongue was red and moist. There was persistent frontal headache, a pulse of 88 per minute without any peculiar features, and an examination of the chest failed to disclose any physical signs to account for the slight cough which existed. The evening temperature was 103° F., the physical signs being unaltered. Next day—that is, January 23rd—as the headache continued, 10 grs. of phenacetin were given. This was followed by profuse perspiration, whilst the temperature fell rapidly, and with the exception of 99.4° on January 24th was not raised on any subsequent occasion. On January 26th there seemed to be some injection of the nasal and pharyngeal mucous membranes, but with this exception no other symptoms or signs were observed. On January 30th an examination failed to show any enlargement of the spleen either to percussion or palpation, and it is this fact, coupled with the history, which necessitates the consideration whether one had to deal with an abortive attack of typhoid fever.

Unfortunately the presence or absence of the Widal reaction loses its diagnostic efficacy in such cases after the use of typhoid vaccine. But supposing one granted that this ephemeral fever was a genuine attack of typhoid, then I think its very mildness and evanescent nature would speak only too strongly for the contention that there is "an increased power of resisting infection by living typhoid bacilli," and certainly the occurrence of such attacks would never be a cause of anxiety.

NOTE.

[1] Two of these four nurses were for different reasons only kept in the typhoid ward for short periods of two and three weeks.

ANTITYPHOID VACCINE.

BY T. WILSON, L.R.C.P.

MY experience of the use of the antityphoid serum of Professor Wright, of Netley, among troops in South Africa, is that if it does not render the typhoid bacilli innocuous, it at least will modify favourably an attack of typhoid fever. In my opinion it is advisable for all who are going to the seat of war to be treated by it.

In inoculating the men belonging to the City Imperial Volunteers I made them

1. Abstain from alcohol for three days.
2. Take an aperient on the morning of the fourth day. On the morning of the fifth day I inoculated.

The men were arranged daily in batches of about 40 in number. The first lot to be inoculated were rather funky; and a few almost fainted while waiting for their turn. These I kept back until the following morning, when they appeared to be all right. I was fortunate enough to get assistance from Staff-Surgeon Bradley and Miss Jessie Southwell, Nursing Sister.

The following case will illustrate the course of illness after inoculation:

A gentleman travelling by the *Garth Castle* to South Africa with his regiment was inoculated with antityphoid vaccine on January 24th. He was 35 years of age. He weighed 15st. and had always enjoyed good health. The loin was the place selected for inoculation; the part was cleansed well by soap, then washed with solution of perchloride of mercury. The syringe and needle were sterilised as directed with boiling olive oil, the syringe filled with antityphoid vaccine, the loose skin caught between the forefinger and the thumb of the left hand, the skin punctured in the centre of this fold by the needle, and 1½ c.cm. injected. The needle was then withdrawn and the part dressed with absorbent wool and flexible collodion. (At this stage the patient is apt to faint, and it is necessary to order rest for twenty-four hours.) Six hours after inoculation the temperature was 99.6° F., pulse full, bounding, face flushed, slight frontal headache, suffered from loss of appetite. At 10 P.M. (six hours later) the temperature was 101° F. He complained of thirst, severe headache, rigor, and darting pains in the groin, back, chest, and axilla; the tongue was dry and furred. There was a red patch surrounding the seat of inoculation. Thin red lines running to the groin and axilla were very distinctly marked and tender to the touch. On the morning of January 25th the temperature was 102° F. He had passed a restless night, the headache was worse, and the tongue was dry and thickly furred. He felt thirsty and complained of pain on movement in bed; the lymphatic glands were still inflamed. The temperature in the evening was 99° F. He felt much better, suffered only slightly from headache, and the tongue was almost clean. On the morning of February 26th the temperature was 98.6° F., the headache gone, the tongue clean, the red lines (lymphatics) had almost disappeared, and the patient partook of a hearty breakfast and walked on deck before noon feeling fit and well.

The following case in which the antityphoid serum appeared to have a favourable effect on gonorrhœa is of interest:

A member of the City Imperial Volunteers on his way to Capetown consulted me complaining of great pain on urination; the lips of the meatus urinarius were red and swollen; there was a copious discharge of a thick yellowish green colour. I had arranged to inoculate forty volunteers on the following morning with antityphoid vaccine, and the patient's name was on the list. At 10.30 A.M. on January 25th I inoculated the patient in the groin with 1½ c.cm. of antityphoid vaccine; perfect rest was ordered for the two following days. The temperature in the evening was 100.8° F., and on the following morning 98° F. The lymphatics of the groin and penis were red, swollen, and painful to the touch. The glans penis was red, swollen, and of a bright red colour. There was no longer pain on urination. The discharge had ceased to flow on the evening of the inoculation. After three days the inflammatory trouble disappeared, and when I last saw the patient on February 4th the parts were perfectly healthy.

In the following case of chronic gleet the serum had a beneficial effect, and I believe recovery would have been permanent had the patient carried out instructions:

A gentleman consulted me about a chronic gleet which troubled him very much. I tried the usual remedies for a week without any definite result, and as he was going on active service (Modder River) I proposed inoculation with antityphoid vaccine. The result was at first very satisfactory. The temperature was 100.4° F. the same evening, and on the following morning 97° F. The running ceased, and the lymphatics were only marked around where the needle entered. On the second day after the inoculation he celebrated his birthday too well but not wisely. He drank several whiskies and soda and a bottle of champagne (against strict instructions to the contrary), and the third day the old symptoms reappeared.

EPIDEMIC LARYNGITIS AND TRACHEITIS AMONG TROOPS ON THE VOYAGE TO SOUTH AFRICA.

BY CHARLES GIBBS, F.R.C.S.,
Surgeon to the Langman Field Hospital; Assistant Surgeon to Charing Cross Hospital; Surgeon to the Lock Hospital.

ON board the steamship *Oriental* we had 600 of the 3rd Royal Scots Militia, a draft of Essex men, a draft of Warwickshire men, and a draft of Royal Engineers, making more than 1,000 men all told. We had also 60 officers. After the first day's sail we settled down to medical work, which was under the administrative charge of Major Drury, R.A.M.C. The non-commissioned officers and men of the Langman Hospital

attended the sick in a very convenient hospital of 20 beds, while I looked after the sick in hospital and the sick who came as out-patients. We had about 120 cases of laryngitis and tracheitis. The symptoms, which were very similar in all the cases, came on quite suddenly. The patient often had a shivering fit or vomiting with nausea; 3 cases were admitted to hospital with rigors; the temperature rose to 102° or 103°, in some cases to 104° at the outset, in one case to 105°. The patient complained of sore throat, referring the pain to the thyroid cartilage and the region of the thyro-hyoid membrane. No swelling of the neck and no enlargement of glands was noticed in any of the 120 cases; there was much pain in swallowing referred to the same parts, and referred internally to below and on each side of the epiglottis. At night the patients were more troubled than during the day, the pain being often very acute, and in most cases there was a small amount of spasm of the glottis and much distress from this condition. Coughing—worse at night—was incessant for the first day or two. Expectoration was small in amount, and consisted of mucus only. After the first day or two the inflammation obviously spread to the trachea and produced sternal pain, soreness, and tenderness.

The progress of the disease was very similar in each case; The temperature remained about 101.2° for about a week, and then descended by lysis, arriving at the normal in about ten days from the onset. The cough continued, and was the most distressing of the symptoms after the spasm of the glottis, which only occurred at night and for the first two or three days of the disease had passed off. On examining the throat there was never any redness or swelling of the tonsils or soft palate, and only a slight redness could be seen in the pharyngeal mucous membrane in a few of the worst cases, the voice was husky and harsh at first for a day or so, it then became faint and stridulous, and often on the fourth or fifth day was entirely lost. It returned as the inflammation spread to the trachea. The nasal mucous membrane and the conjunctivæ were quite normal. One or two cases developed slight attacks of bronchitis. In no case was the Eustachian tube affected in any way; apparently some germ settled on the mucous membrane of the larynx and infected it.

As regards the diagnosis, the disease is not like any of the ordinary forms of laryngitis; there were no signs of measles, scarlet fever, diphtheria, syphilis, whooping-cough, or any other acute specific disease. The cases increased in number as we approached the line, the weather getting hotter and hotter each day, so it can hardly have been "rheumatic" in nature or caused by "cold"; in fact, I asked most of the patients if they had any signs of "cold in the head," and they nearly all said "No; the trouble was all in their throats and chest." The officers suffered less than the men, but in 4 who did the symptoms were the best marked of any out of the 120 cases.

The treatment adopted was entirely palliative; fomentations, inhalation, poultices, expectorants, and so on; nothing produced very much effect however. Our supply of drugs and other conveniences was, however, not very great. It may be interesting to note that our first 3 cases in hospital were ordinary cases of acute pneumonia, who were left at Queenstown.

REPORT OF A CASE OF TETANUS TREATED SUCCESSFULLY BY SERUM.

By G. LLOYD ROBERTS, M.B.Edin.,
Carnarvon.

The following case of tetanus, apart from the question of treatment, presents features of interest and some rarity:

On July 7th, 1899, I was called to see O. H., aged 33, a farmer, who was said to be suffering from severe abdominal pains, when I found that he had been laid up for the previous five days and treated for rheumatism and colic. He was lying in the position of slight opisthotonos, the head rigid and retracted, and an appreciable risus sardonicus. He could open his mouth about ½ inch. He had had persistent vomiting for the last two or three days, and was sweating profusely. The chest muscles were fixed and the breathing was abdominal in type. The abdomen was hard, tense, and extremely tender. The muscles of the upper arm were in spasm, and more on the left than on the right side. The muscles of the forearms were unaffected and he could move his legs freely. The superficial and deep reflexes were exaggerated. There was obstinate constipation, and slight mental perturbation was evident.

I ascertained that on June 7th the patient cut his hand while shearing sheep. He says the cut was about 1½ inch long, and went down to the bone. I observed its situation on the back of the left hand over the third metacarpo-phalangeal articulation. It bled profusely at the time of infliction, and, in order to arrest the hæmorrhage, he was advised to cover it with a plug of tobacco which one of his mates was in the act of chewing. This seems to have fulfilled its purpose temporarily for he went on working. Subsequently he worked at a potato field, and, the wound being insufficiently dressed, became contaminated by the soil. In due course there was suppuration in the wound, and he incised it himself with a pocket clasp knife. In the course of the next few days it appears to have closed several times only to be opened again by his knife. On June 29th, twenty-two days after the infliction of the wound, the wound was said to be healing satisfactorily, and, to "facilitate its recovery," he put on a large layer of cobbler's wax over the seat of injury, which remained on till the wound was fairly healed. On examining the site of the wound I saw nothing but the usual scab with the surrounding parts healthy. On pulling off the scab a dark red granulation was observed about the size of a pea, which when picked up revealed a little yellowish serum.

His first complaint was of pain in the back on Wednesday, June 28th, but he attributed this to strain. During the next few days, however, it increased in severity. On July 2nd he observed a slight difficulty of mastication. On July 4th his jaw was distinctly stiff, as also were the muscles of the neck, and later in the same day he experienced a severe stabbing pain below the angle of the right scapula. He went to bed, as the pain and stiffness increased. On July 5th medical advice was sought, and on this date, the 6th, and early part of the 7th, he was treated as stated above until the evening of the 7th, when I was called in and observed the appearances described.

Being now quite satisfied as to the nature of the condition, I gave a large enema to relieve the constipation, with a satisfactory result. Doses of 5ss of bromidia were ordered every two hours, and he was fed on milk and beef tea by an œsophageal tube. Later in the day I gave gr. ¼ of morphine to promote sleep, and wired the same day for a supply of Burroughs and Wellcome's antitetanus serum.

The progress of the case was as follows:

On July 8th, at 10 A.M., the rigidity was more marked, and there was inability to move the limbs, with marked opisthotonos and severe seizures. The vomiting had ceased. At 6 P.M., after having had several seizures during the day, he was sweating profusely. Then 10 c.cm. of serum were injected for the first time deeply into the thigh. The dose of bromidia was increased to 5j every two hours.

On July 9th, at 10 A.M., a marked change for the worse was evident; opisthotonos was complete, and there was total rigidity of limbs and trunk, with severe seizures on the least excitement, as on touching the skin, shutting the door, or on a stream of light entering the room. The wound was well scraped, cauterised, and left exposed to the air; 10 c.cm. of serum were injected, and ½ gr. morphine administered. At 4 P.M. the patient was in a state of acute tetanus. Full doses of chloral and bromide of potassium were given instead of the bromidia. Diplopia and ptosis were now observed for the first time. The platysma reflex was well marked. He suffered considerably from pain and hæmorrhage, due to biting of the tongue during the seizures; this exaggerated the spasms and interfered with sleep. At 8 P.M. gr. ½ morphine was administered.

On July 10th, at 10 A.M., the seizures were more severe and more frequent. At 2.30 P.M. I injected 10 c.cm. of serum, and at 11 P.M. ½ gr. morphine hypodermically. An enema was given while the morphine was having its effect. On July 11th, at 2 P.M., not being satisfied with the appearance of the wound, I decided to thoroughly excise and scrape it, with careful antiseptic precautions. Then 20 c.cm. of serum were injected into the flank. At 8 P.M. the muscles of the abdominal wall were not so tense, and the patient was obviously in a less critical condition. Chloral was stopped, as it appeared to induce coughing, peristalsis, and vomiting, and bromidia was given instead.

On July 12th, at 10 A.M., the patient was distinctly better; the sweating had disappeared, the abdomen was lax, and the patient could move his legs slightly. There were not many seizures during the night, and the pain was greatly diminished. The temperature had fallen to 100° F. At 8 P.M. I injected 10 c.cm. of serum.

On July 13th I was called to see him hurriedly about 6 A.M., and found him in a critical condition owing to spasm of glottis with retention of mucus. He was relieved by the ejection of a large quantity of mucus through the nostrils. I gave him ½ gr. of morphine. At 10.30 A.M. the rigidity was less marked and the wound healthy. Any attempt at movement, however, produced a seizure. I injected 10 c.cm. of serum, and later in the day a second dose of 10 c.cm. in order to attain the maximum dose of serum (120 c.cm.) as soon as possible. His reflexes were still increased.

On July 14th, at 6 P.M., after having had several slight seizures during the day, he described his breathing and swallowing as distinctly easier. I injected 10 c.cm. of serum. On July 15th the rigidity was again less marked, the risus being not so pronounced. Ptosis and diplopia had disappeared. I injected 10 c.cm. of serum. On July 16th he could move his head slightly, and the rigidity was less marked, with the exception of the left arm and left side of the neck. I injected 10 c.cm. of serum. On July 17th there was another spasm of the glottis. On this date costal breathing was noticed for the first time. I injected 10 c.cm. of serum. From this date forwards the condition of the patient improved steadily until July 31st, when he could lift himself into the sitting posture.

His diet consisted during the acute stage of peptonised milk only. Later eggs were added, until as many as six were taken in the twenty-four hours. Beef-tea and dilute doses of brandy were also given until the eighteenth day, when solid food was taken.

His bowels were kept well opened by enemata and large doses of calomel, which were found most efficacious. The importance of keeping the bowel empty cannot be overestimated. It may be possible that the seat of inoculation in some cases is at some part of the alimentary tract. It is certain that in horses at least a so-called idiopathic form of tetanus has been proved to be due to infection by the swallowing of the gadfly, which has been seen in great numbers in the stomach in the necropsy.

The temperature did not at any time exceed 102°, as taken by thermometer in the axilla.

The following points are, I think, worthy of note: (*a*) The

source of the poison. The patient was directly exposed to inoculation on three different occasions: (1) The shears with which he was cut; (2) the pocket knife with which he incised the original wound; (3) the earth of the potato field which contaminated the wound. Moreover, the bacillus being anaërobic, every opportunity was afforded for the development of its toxins by the subsequent conduct of the patient in the treatment of his wound. The soil of the potato field above referred to had been contaminated some thirty years previously by being used as a deposit ground for the excreta of patients during a severe cholera epidemic in the town of Carnarvon.

(*b*) The usual period for development of the toxic effects of the organism has been variously given as from 1 to 22 days, and it has been further held that the longer the incubation period and the less severe the wound, the less acute the disease and the better the prognosis. In this case it is noteworthy that so far as one can ascertain definitely no marked symptom was observed for at least 22 days, and the wound was in no sense a severe one.

(*c*) Effects of the antitoxin: These were distinctly well marked, and I attribute the success of the treatment to its early administration, which undoubtedly prevented the case from getting into a prolonged acute stage. At first the effect was, apparently, to increase the severity of the tonic state; but after the minimum dose had been administered (50 c.cm.), the symptoms began to show signs of diminution. Every subsequent injection produced a further though less marked diminution of symptoms until the maximum dose (120 c.cm.) was reached, after which no immediate changes were visible for some time. The temperature and pulse rose after the injections, but fell again in a few hours. The reflexes were more marked after each injection. The greatest number of injections were introduced into the cellular tissue of the flank, but I am not sure whether deep intramuscular injections into the thigh are not better, as absorption is quicker and, owing to the depth of the injected fluid, there is less chance of suppuration. In this case, however, no injection point suppurated. Frequent injections of small doses were found to be better than a single injection of a large one.

(*d*) Excision of the wound: During this process the arterial blood was observed to be very dark and coagulated instantly; so much was this the case that it attracted the notice of the patient himself. Scraping and cauterisation were by no means so satisfactory as the complete excision wide of the cut eventually performed.

(*e*) The nervous symptoms: The left arm and left side of the neck showed a distinctly localised tonicity of a higher degree than any other part of the body. The left shoulder-joint was completely immobile, the elbow-joint flexed, and the fingers flexed into the palm. The muscular pains were also more intense in these situations. It is difficult to explain the concentration of the poison in these areas, and whether the cause was central or peripheral. Again, the eye muscles were affected, although they are by no means usually so. The diplopia may be explained as being the result of unequal contractions, just as the spasm was specially intense in the left arm. The ptosis, which was present persistently for several days, is also an uncommon condition. The reflexes are, I believe, commonly increased in tetanus, and ankle-clonus has been noticed (Strümpell). Spasm of the glottis was a serious complication of this case, thus again demonstrating the fact of localised areas of concentration of the poison.

(*f*) Bacteriological examination: The bacilli were discovered plentifully in scrapings taken from the shears, in the soil of the field at the spot where the patient had been working, and in considerable quantities in the excised wound.

I am indebted to Dr. F. N. Menzies for help in the drafting of this report.

The annual dinner of the Pharmaceutical Society of Great Britain will take place on Tuesday, May 15th, at the Whitehall Rooms, Hôtel Métropole, London.

The Association of Military Surgeons of the United States.—The ninth annual meeting of the Association of Military Surgeons of the United States will be held in New York on May 31st, June 1st and 2nd, 1900, at the New York Academy of Medicine, under the presidency of Colonel C. H. Alden, Assistant Surgeon-General, United States Army.

"GROWING PAINS" AS A SYMPTOM OF RHEUMATISM.

By E. M. BROCKBANK, M.D., M.R.C.P.,
Physician to the Ancoats Hospital, Manchester.

The accounts of the valuable discussions at the Clinical Societies of London and Chelsea on the treatment of rheumatism and the prevention of valvular disease as a complication, which appeared in the British Medical Journal of March 17th, afford an excuse, if one be needed, for referring to the important and well known, though often neglected, indication of an attack of rheumatism in children, namely, "growing pains." In this part of the country this term is usually applied, especially outside the profession, to certain vague aches and pains which are supposed to assail the rapidly-growing anæmic boy or girl before or about the age of puberty. These pains mostly occur in the legs, and sometimes in the arms, and are looked upon as being the result of "overgrowing the strength," and apart from the discomfort they cause and the warning they give that the subject of them must "not do too much," and "ought to rest a good deal," they are not supposed to signify anything serious, and are certainly not worth consulting a doctor about. They are also soon forgotten, and no information about them is volunteered in later life, though they are readily remembered when asked after.

But there is no doubt that these growing pains are often—if not always—of rheumatic origin, and the physician inquiring into the cause of a diseased heart, especially of mitral stenosis, should not give up the rheumatic quest without making special mention of them in his investigations, though he has asked about previous attacks of rheumatism, chorea, or even "pains in the joints." The value of the question as being a means of finding out about previous attacks of rheumatism has been impressed on me this year by the experiences of 4 cases which, with another interesting one of earlier date, I will briefly relate:—

Case I.—A youth, collier, age about 20, was admitted to the Manchester Royal Infirmary with mitral stenosis. He was quite sure that he had never had chorea or rheumatism and had not seen a doctor until just before entering the hospital. When asked about "growing pains" he at once replied, "Oh yes, I had growing pains in my legs when I was at school." He was not laid up with them and did not stay at home, but they were severe and he had to walk slowly to school, keeping up against the wall. They lasted for a week or ten days. Breathlessness on exertion developed four or five years afterwards, and for this he was eventually admitted into hospital, where it was found he had mitral stenosis.

Case II.—A woman, aged 55, is at present in one of my beds at the Ancoats Hospital suffering from mitral stenosis, with cardiac irregularity and extreme dyspnœa. She is certain she never had chorea or rheumatism, but remembers very well having "growing pains" as a child at the age of 10 and 12. They were very severe, making her cry, and her legs had to be wrapped in flannel, but she was able to sit by the fire and had not to go to bed. She does not remember whether the joints swelled. After this age she was never considered to be "strong," and for fifteen years at least has suffered from dyspnœa.

Case III.—A man, aged 30, under the care of Dr. Ledward in the Ancoats Hospital, suffering from mitral stenosis, with regurgitation supervening on some slight form of congenital heart disease, probably perforate foramen ovale, for he has been slightly "blue" from birth. He never had chorea or rheumatism, but when young suffered from severe "growing pains" in his knees. He was not kept to bed by them but was unable to walk.

Case IV.—This case is interesting as being evidence of the wide use of the term "growing pains" in the artisan classes. She is a woman, aged 32, with mitral stenosis in an early stage, and was in Ancoats Hospital up to March 19th. When I first questioned her she was very emphatic in stating that she had never had chorea or rheumatism. She was equally certain that she had suffered from growing pains, beginning from when she was 8 years old. The pains were in her knees, ankles, wrists, and back, and were severe enough to keep her in bed for a week on several occasions, some of which were after her marriage. In this case a doctor was seen, and he called them "growing pains." On my next visit she told me that she had asked her mother about the pains, and she said they were due to rheumatism.

Case V.—A girl, aged 17, was recently in Ancoats Hospital with typical mitral stenosis. She had eighteen months previously been in the hospital with rheumatism and heart disease. Before her first stay in the hospital she had not had chorea or rheumatism, but when aged 12 she was troubled for six or seven months with "growing pains" in her arms and legs, which were worst in her knees, and severe enough to make walking uncomfortable. She was not obliged to stay at home.

In all these cases, if the inquiry after previous rheumatic attacks had terminated with the history of no rheumatism, chorea, or pains in the joints, the valvular lesion would have appeared to have been non-rheumatic in origin, whereas the specific question about "growing pains" obtained a history

revealing the true nature of the origin of the cardiac trouble. As is well known, the younger the subject of rheumatism, the less are the joints affected and the more likely is endocarditis to attack the valves of the heart, and therefore any mention of pains in the limbs of a child, however slight and unimportant they may appear to the parent, should at once excite the suspicion of the medical man and direct his attention to the heart. Frequent auscultatory examination should be made, and probably endocarditis would often be found assailing the valve structures to a decided degree, though not to an extent which would of itself yield visible signs to the observers, and direct attention to the condition of the heart. The recognition of endocarditis at such an early stage of life, followed by prophylactic treatment directed against the crippling of the valves along the lines indicated in the discussions at the Clinical Societies of London and Chelsea, would diminish the severity if it did not ward off altogether the development of the insidious inflammation which leads to the condition of the heart found in later life.

FAILURE OF RESPIRATION DURING ETHER ADMINISTRATION.

By G. P. SHUTER, M.A., M.B., B.C.Cantab.,
Anæsthetist to the West London Hospital; late Senior Resident Anæsthetist to St. Bartholomew's Hospital.

Ether has come to be considered so safe an anæsthetic when administered in a Clover inhaler, and accidents during the administration have become so very rare, that facts as to any marked divergence from the normal course of events must be of considerable importance to physiologists and to others interested in the action of the drug on man.

From this point of view the following case is worth recording for comparison with that related by Mr. W. J. McCardie, of Birmingham, in the British Medical Journal of January 20th, page 138.

In the summer of 1892 a strong, healthy woman, aged 40, was admitted to St. Bartholomew's Hospital to undergo a radical operation for the cure of inguinal hernia.

I gave the patient nitrous oxide gas and ether in the ordinary way with a Clover inhaler of the usual pattern to the top angle tube of which I had fitted a smaller tube supplied with a stopcock for the admission of nitrous oxide gas to the bag. The patient took the anæsthetic extremely well, these were no unusual symptoms, no coughing, no sickness, or struggling or rigidity, while the pulse and colour were good. About midway through the operation, however, the respiration began to be less vigorous, and the lips became a little pale. I at once ceased to give the anæsthetic and removed the inhaler. At this time the pulse was still good, and I saw no reason to interrupt the operation. Gradually the respiratory movements became more feeble, until at last they entirely ceased several minutes after I first observed the signs of failure of breathing. The pulse still remained strong and regular, the colour was fairly good, there being very little cyanosis; the pupils were small, there was no corneal reflex, and the patient was sweating freely. I immediately started artificial respiration and injected 5 minims of liq. strychninæ into the wall of the thorax, at the same time I satisfied myself that the air passages were free. The head was lowered, the lower limbs were raised, hot towels were placed on the chest, and the battery was applied to the neck synchronously with the movements for artificial respiration. When the artificial respiration was stopped for a moment no signs of any automatic movement of the chest walls could be seen.

Meanwhile, the patient became increasingly cyanosed, so much so that the lips were of a blue-back colour; the heart slowly failed until no pulse could be felt at the wrist, and the pupils became widely dilated. When these serious symptoms occurred I had been performing artificial respiration for about eight minutes, then followed gradual recovery. The patient began to make some efforts to breathe. She would give two or three slight gasps, and then the chest wall would again be motionless. Her colour slowly improved. Artificial respiration was continued until the breathing had returned to its normal automatic regularity. The pulse continued to improve, the patient eventually assuming the appearance of health that she wore before the onset of the alarming symptoms. The operation was resumed, and as the patient began to show signs of returning sensation, I commenced to give chloroform on a square of folded lint, and continued to do so to the end of the operation, which was completed without any further difficulty.

The next day I made a thorough examination of the woman. Except for some pain in the back, where the edges of the table had pressed on her spine, and also for some pain in the chest, due to partially ruptured pectoral muscles, she had experienced no ill-effects from her grave condition on the previous day, nor, in fact, did she in any way appreciate her narrow escape. I found the heart and lungs quite sound and healthy. She could not remember suffering from any shortness of breath, palpitation of the heart, or œdema of feet, nor had she ever had any symptoms that might have led me to act more cautiously or to anticipate difficulties in administering ether.

It will be seen that this case had a general agreement with that recorded by Mr. McCardie. But I must confess that the explanation which he offers—that of spasm of the glottis—did not at that time, or since, ever cross my mind. The sequence of symptoms, indeed, was by no means such as might have been expected on such a hypothesis. They are, for instance, quite different to those of laryngismus stridulus. In Mr. McCardie's case ether had only just replaced nitrous oxide, and hence his explanation that spasm of the glottis occurred as a result of the new stimulus of the ether is perhaps plausible. But in the case which I have just recorded the patient had been under ether for a quarter of an hour or more, and was well under the influence of the drug—so far anæsthetised, in fact, as to make reflex muscular spasm of any sort a very unlikely event.

In cases of this kind it is essential on theoretical grounds to commence artificial respiration at once. If we perform tracheotomy we waste valuable time, and a few moments lost at this period may be literally a matter of life or death. In fact, it may be said that a few moments during which the air remained stagnant in the lungs may be sufficient to place the patient beyond hope of resuscitation; to lose any time between the cessation of respiration and the commencement of artificial respiration is to court disaster. Is not the whole question one of keeping the patient alive until the respiratory centre has had time to recover itself? It appears to me that direct action of ether upon the respiratory centre of the brain, leading to its failure, is the probable explanation of the occurrences in question. Why they happen in a small number of cases of ether inhalation, and do not happen in the vast majority, it is not easy to explain. But it is no more easy to explain the exceptional readiness with which a minority of patients are occasionally found to respond to doses of other drugs which on the majority are almost without effect. Alcohol is an instance in point.

Most anæsthetists will agree with Mr. Barling that serious laryngeal spasm during the administration of anæsthetics is very uncommon, and, indeed, any spasm at all is very unusual after the first few minutes of the operation if the patient is kept deeply enough under. When a patient has taken enough chloroform or ether to abolish his corneal reflex, we should hardly expect the muscles of his glottis to respond readily or vigorously to the delicate stimulus of the fumes of ether or even to the coarser stimulus of the tip of a finger introduced into the larynx. If the patient is not kept deeply enough under the influence of the anæsthetic, any irritation of the glottis may be sufficient to cause spasm; but spasm of the larynx produced under these conditions need not cause the operator any anxiety provided that no foreign body has found its way into the larynx.

ON SOME PRACTICAL POINTS IN CONDUCTING THE ADMINISTRATION OF ANÆSTHETICS.

By H. BELLAMY GARDNER, M.R.C.S.Eng., L.R.C.P. Lond.,
Anæsthetist to Charing Cross Hospital; Assistant Anæsthetist to the Dental Hospital of London.

The administration of an anæsthetic must be regarded as an art, in which, as in every branch of surgery and other arts, perfect facility is only attainable by constant, long-continued, careful practice.

Few members of our profession appreciate surgical dexterity more keenly than the practised anæsthetist, and, conversely, the proficient surgeon sets the highest value upon a trained administrator's skill.

A smooth performance is the outcome of very careful forethought and appropriate training, but these factors in the art of the anæsthetist are apt to receive less attention than is due to them. The minutest details of procedure must be considered in order to gain success, and no action should be neglected which will contribute to the finish of the result.

The moving of a patient from his bed to the operating table often requires a little strategy, even when both are close together in one room. Those who lift a patient should never stand on opposite sides of his body for two reasons: (1) Because the lifters take up too much space to easily traverse an ordinary furnished bedroom; and (2) because the lifting power is much greater when the patient's body can be held close up

to the lifter, that is, when the latter can bring his feet beneath the centre of gravity of his own body and the lifted weight.

Two persons standing side by side can lift almost any ordinary patient, one supporting the weight of his head, shoulders, and back, and the other that of his pelvis and legs. The head-lifter should pass one hand beneath the patient's shoulders and grasp his further arm above the elbow, allowing the patient's head to rest upon his own biceps. He should pass his other hand and arm beneath the patient's back, whilst the foot-lifter takes the pelvis and legs. They then both raise his body up to the level of their own chests and walk sideways (which is quite easy if even step be kept) to the table for operation.

The position of the table with regard to the bed is the point which is often unconsidered. The rule should be the following: Place the foot of the table towards the head of the bed at a right angle to it, or *vice versâ*; the head of the table towards the foot of the bed at a right angle to it; then move the table into position. Thus the lifters, standing within the angle formed, will only need to turn a quarter-circle in order to deposit the patient upon the table. Now, this rule "Head towards foot at a right angle" holds good even when the bed and table are not close together, but separated by a long interval.

It will be seen, if this be borne in mind, that after carrying a patient from one room to another the lifters will arrive at the proper side of the table, and then, by making a quarter turn, will complete the movement of the patient. What could be more awkward than the bungling of a patient from table to bed if placed pillow to pillow, side by side? In that case, if the lifter stands between the bed and table, he either himself arrives upon the bed with the patient's body on his lap, or if a half turn be made the patient's head arrives at the foot end of the bed. By another bad method, the feet and the shoulders are seized by persons at either end, and the patient may drop to the floor while they shuffle him laterally from one couch to the other.

When an operation is just completed, supposing the table to be at right angles to the bed, and its head towards the head of the bed, all that is needed to avoid the lifters being in their own way is to turn the table parallel to the bed, with "head to foot," a clear space being left between the two, by lifting the patient through a half-circle turn the movement will be completed.

It will be seen, then, from the foregoing account that "bed and table—head to foot, at a right angle," involves only a quarter-circle turn of the patient and "bed and table—head to foot—parallel," with a clear space between them, involves simply a half-circle turn of the patient.

As a rule, if a patient has to be carried up a winding staircase or any distance, a stretcher or carrying-chair is used, and to the stretcher I do not refer, except to recommend, in passing, that the "feet-up" portion should always be adopted in carrying a partly anæsthetised patient up and downstairs, for two reasons, (1) that any vomited matter cannot then be inhaled into the trachea, and (2) that the force of gravity acting upon the patient's circulation when thus carried prevents faintness from cerebral anæmia. A carrying-chair should be placed in the same relation to the operating table as the bed, in order to ensure the same facility in the transfer of a patient.

A CASE OF INTESTINAL OBSTRUCTION CAUSED BY A BAND AND AN ENLARGED UTERUS.

By C. HAMILTON WHITEFORD, M.R.C.S., L.R.C.P.,
Medical Officer to the Provident Branch of the Plymouth Public Dispensary.

THE following case appears worthy of record on several grounds:

History.—On March 1st, 1899, at Dr. Clay's request, I saw Mrs. F., aged 26, married three years, no pregnancies, no amenorrhœa, last period three weeks ago. She complained of abdominal pain, with nausea and occasional vomiting and irregularity of bowels.

Condition When First Seen.—Patient was very thin and rather anæmic, and had lost flesh during the last three weeks. Extending 2 inches above the pubes could be felt a globular smooth firm mass, nearly fixed, and inclining slightly to the left side, dull on percussion over its centre, the dull note shading off into resonance laterally and above. Emptying the bladder made no difference in the mass. On vaginal examination the cervix was found to be high up, far back, and fixed. The mass in the abdomen appeared continuous with the cervix. On rectal examination the same globular mass was felt through the anterior wall of the rectum. There were no signs or symptoms of pregnancy. She had undergone an operation for rectal fistula, and during the last three years has suffered from intermittent attacks of abdominal pain. She had five foul ulcers on the front of the left lower leg. At 10 A.M. the temperature was normal and the pulse 112. At 3.30 P.M. the temperature was 101.5° and the pulse 120. At 9 P.M. the temperature was 101° and the pulse 132. At 9 P.M. she was beginning to vomit, the abdomen was tense and moderately distended. As she was rapidly going from bad to worse, I decided to operate without delay.

Operation.—At 2 A.M. on March 2nd I opened the abdomen through the left rectus below the umbilicus. The first thing seen was the bladder drawn up 3 inches above the pubes. The incision was prolonged upwards 2 inches, and on further opening the peritoneum the omentum was found firmly and universally adherent to the parietal peritoneum; after dissecting this off laterally for some 2 inches, I decided to get at the intestines through the omentum, which was incised vertically. After breaking down many soft adhesions between small intestines and pelvic mass, a globular swelling, exactly resembling a uterus four months pregnant, came in view, tucked away beneath the bladder and entirely filling the pelvis. I then traced the small intestine, which was collapsed, and ¾ inch in diameter, upwards from the cæcum. At the middle of the jejunum I found a band 3 inches long running from a loop of jejunum across a piece, not a loop, of jejunum, and ending in one of the sigmoidal appendices. The lumen of the compressed bowel was only partially obliterated by the band, which was removed. The bowel above the obstruction was distended to a diameter of 1½ inch. On the mesentery in one place was a cartilaginous nodule the size of a pea, and one deposit resembling tubercle was seen on the bowel. The abdomen was closed with mass sutures of chromic catgut, ½ pint of hot saline solution was poured into the peritoneum (there was no room for more), 6 pints of hot saline solution, with 1 oz. of brandy, were injected into the right cephalic vein at the end of the operation, which lasted two hours.

After-history.—During the next twenty-four hours there was absolute constipation, with considerable collapse, but under stimulation by hypodermic injection of liq. strychninæ (40 minims in ten hours) she gradually revived, the bowels and kidneys acting freely. Henceforth recovery was uneventful but slow. The abdominal incision suppurated freely. On July 1st (four months after operation) the uterus was felt bimanually to have shrunk to the size of an orange, and on January 18th, 1900, patient reported herself strong and well.

At the operation I considered pregnancy to be the cause of the uterine enlargement, but the after-history negatives this, as the patient did not miscarry and menstruated regularly, the uterus decreasing in size. Her general appearance and history of rectal fistula, with the conditions found in the abdomen, suggest tubercle as the cause of the peritonitis, which was apparently undergoing a natural cure, and which, but for the accidental formation of a band, would probably not have needed an operation. This band at first only partially obstructed the bowel beneath it; the enlarging uterus, by crowding the intestine out of the pelvis into the upper abdomen, caused increasing obstruction. It was the steadily increasing toxæmia with rapid increase of the pulse-rate which made me operate at 2 A.M. instead of waiting till the morning. I find intravenous injection of hot saline solution of the greatest value in such cases of toxæmia. Hot saline solution left in the abdomen (when there is room for it) by filling the peritoneum, prevents any large secretion of peritoneal fluid, which I have seen produce fatal collapse four hours after an operation for ruptured tubal pregnancy. The solution also acts as a reserve supply of fluid, which is gradually absorbed and excreted later on. The saline intravenous injection supplies fluid to the excretory organs, especially the kidneys (as in this case), and enables them to dispose of the poisons absorbed. It mechanically aids the heart by giving a sufficient volume of fluid on which it can contract. It also tends to alleviate the intolerable thirst from which these patients so often suffer. An operation of two hours is far too long for a case of intestinal obstruction, but owing to the difficulties caused by adhesions I could not complete the operation in less time. Bearing in mind the collapse which occurred during the first twenty-four hours, I am convinced that if I had deferred operation till the morning, or omitted the intravenous injection, the patient would have died.

THE CAMPAIGN AGAINST TUBERCULOSIS IN ITALY.—On the initiative of Donna Teresa Duchess Ravaschieri and the Marchesa di Campolattio, a committee of ladies who are members of the League against Tuberculosis has been formed in Naples. The President of the Committee is the Duchess Ravaschieri, to whom Professor Baccelli has addressed a letter of congratulation and encouragement.

MEN AND HORSES PARTIALLY INCAPACITATED BY THE BITES OF SIMULIUM (SAND FLY) IN A HAMPSHIRE WOOD.

By JAMES CANTLIE, M.B., F.R.C.S.,
Surgeon to the Seamen's Hospital Society, Victoria and Albert Dock Hospital.

On Saturday, April 14th, 1900, whilst some 200 men of the London Scottish Volunteers were engaged in manœuvres in woods about six miles to the westward of Winchester, about one-third of the force engaged were severely bitten by "flies." The insects attacked the bare knees of the men. Little or no sensation was caused, either when they alighted on the skin or whilst they bit; but on being brushed off a small red spot was observable, around which speedily developed a circumscribed ecchymosis. In many instances only one or two bites occurred, but in the majority there were from twelve to thirty bites on each knee.

On the evening of April 14th—that is, about four hours after being bitten—one of the men of the corps felt cold and shivery and then get very hot, and noticed that the skin of the knees was becoming puffy and painful. Being a medical student he happened to have a thermometer with him, and on taking his temperature he found it 102.5° F. This was but the forerunner of several dozens of cases, for within twenty-four hours a considerable number of those bitten presented the following signs and symptoms: Fever from 100 to 102.5° F.; shivering, and waves of heat and sweating; pain and stiffness round the knees; and œdema extending from half way down the thighs to the ankles. The œdema was excessive, especially over the legs below the garter, and therefore below the exposed and bitten surface. In several, erythema extended from the middle of the thighs to below the knee, and in a few the groin glands were swollen and tender. Even in those who had been bitten by one or two insects only the feeling of feverishness and local pain and œdema were distinct. In most instances hot boracic fomentations allayed the erythema and soothed the pain, and as a rule in thirty-six hours the acute symptoms disappeared; but in a few cases the limbs were so injured that a week passed without the man being able to get about as usual. The horses with the troops also suffered severely, especially along the abdomen and about the genitals. They were very restless during the afternoon of April 14th, and on the following day the parts were swollen considerably and tender to the touch.

The people about Winchester and the ostlers in the stables were totally unacquainted with this pest and could give no explanation of the circumstance. The insect was somewhat smaller than a house fly, presenting a blackish head, thorax, and abdomen on the upper surface, but striped black and white along the under surface of the abdomen. The wings appeared white and transparent. As the condition was so unusual I sent specimens to Professor Nuttall at Cambridge, and he replies as follows:

> The flies are a species of simulium, vulgarly called "sandflies," and known to be a great pest at times. Personally I have suffered intensely from a similar species in Canada; such flies are very widely distributed and have been known to actually kill cattle when present in great numbers, as is the case in Hungary, where the *Columbaczermücke* occurs. In the United States the dreaded "southern buffalo gnat" (*Simulium pecuarium* Riley) occurs, and causes much suffering. Protection is afforded against their attacks by means of smoke or tar preparations, which repel the insects through their odour. Unless you wish the specimens returned I shall keep them here.

I have deemed this attack by insects as sufficiently important to be placed permanently on record, and should be glad to hear of similar experiences. There were two medical men present with the volunteers besides myself, and a number of medical students, all of whom can bear testimony to this report, several of them unfortunately from personal experience.

Presentation.—At the men's mess room at the New Cross Station of the London, Brighton, and South Coast Railway the members of the ambulance class presented a gold-mounted umbrella to Dr. Carvell bearing the following inscription: "St. J.A.B. Presented to Dr. J. M. Carvell by the members of the New Cross and Willow Walk division." The presentation was made by Mr. E. W. Trangmar, C.E., the superintendent of the division.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

AN OBSTINATE CASE OF NEURASTHENIC INSOMNIA.

In a case of neurasthenia, when we cannot command the Weir-Mitchell treatment in its entirety, and when all probable contributing causes have been removed—or the patient removed from their influence—after constipation, insomnia becomes the next fortress to be attacked.

A perusal of Professor Clifford Allbutt's exquisitely finished picture of neurasthenia, in his *System of Medicine*, vol. viii, suggests that a recent experience in the attack on insomnia may be worthy of record.

The patient is a married woman, aged 26, with two children, aged respectively 3 years and 10 months. Up to the time of her marriage she had been worked very hard as a schoolmistress. She never in her recollection had been a good sleeper, and since the birth of her first child had not averaged more than three or four hours' sleep in twenty-four hours. For the past few months, as her infant was very cross, she had had only "cat's sleep," and when my services were requested she appeared to be on the verge of insanity.

Constipation was an old trouble. ℥j of castor oil, with ℥j of "terps" added to warm it up, produced no effect, neither did ℥ij of Epsom salts, with ext. cascaræ ℥ij, etc., administered in twenty-four hours; 5 grs. of calomel might as well have been sugar, whilst 3 drops of croton oil only acted slightly after an interval of twelve hours. However, the constipation was overcome; the insomnia was still an urgent question.

I shall only mention the maximum doses of each drug given in the endeavour to induce sleep. The patient was kept in semi-darkness during the day, fully fed, and the bromides in combination with cinchona administered continuously. Oatenmeal gruel, hot milk, cocoa, or strong beef tea were always given either with, or a short time before, the final sleeping "draught."

1. R Butyl croton chloral ℥ss, tr. hyos. ℥j, tr. lupulin ℥j, at bedtime.
Result.—No use; the patient never "lost herself," or from her nurse's description, ceased "to fidget."
2. R Sulphonal gr. 60, thoroughly dissolved, and taken hot.
Result.—"Cat's sleep," "fidgeted all night." Next day intense stupor, but no sleep. As to the dose of sulphonal, note that Dr. Sutcliffe, of Cheadle Royal Asylum, records in the *Journal of Mental Science*, October, 1899, that after 50 grains had been administered to a patient "in a state of great excitement.....without apparent result.....60 grains were given, after which he slept almost continuously for three days." In my case 60 grains gave no sleep.
3. R Chloral hydrate ℥j, tr. hyos. ℥j, nepenthe (Ferris) ℥ss.
Result.—This was tried on three occasions, without useful result.
4. R Trional ℥j (60 grains) dissolved in hot draught stout.
Result.—The first dose of this strength (50 grains had done nothing) gave 6 hours' easy sleep, the second 8 hours, and the third 9½ hours.

Messrs. Mottershead and Co. inform me that the largest dose of trional they have ever dispensed is 30 grains.

Saddleworth. Colin Campbell.

HYPODERMIC ADMINISTRATION OF MERCURY IN SYPHILIS.

With reference to Dr. Fosbery's queries *re* treatment of syphilis by intramuscular injections of mercury, in the British Medical Journal of January 13th, page 74, I would like to state that I cannot understand why he has met with such pain and induration in the two cases he has treated. During the year that I was stationed at Colchester I had about 104 men attending for the treatment, and many were cavalry and artillery soldiers. I use Major Lambkin's original prescription. I cannot remember the quantities, but think they are: Mercury, ℥j; lanolin, ℥j; carbolic oil, 2 per cent., ℥ij. Of this I inject deeply into the muscles of the buttock, high up near the iliac crest, 5 minims. I use a syringe which holds 20 minims; four men stand in a row, and the needle is pushed into the first up to the hilt. The piston is pushed down to the required distance, finger removed from the piston, and the needle rapidly withdrawn. It is then wiped on wool soaked in 1 in 20 carbolic, and the process repeated until the syringe is empty. If any of the injection is left in the skin, or if it is injected hypodermically, induration and pain are bound to result.

My patients return to duty and come on the following Sunday. They then receive an injection into the other buttock. As a rule, the gums become touched after the fourth or fifth injection. The men then attend monthly, and get no further injection until the soreness of gums has disappeared. In rare instances as many as 16 injections have been given. I never increase nor diminish the dose. I never give mercury to syphilitic patients in any other way.

My records are not, of course, available here, but there is no doubt that the admissions for secondary syphilis to the Station Hospital at Colchester were for the months January to October, 1899, greatly lessened. I endeavour to keep the men under treatment for at least one year.

Paardeberg. F. J. W. Porter, Captain R.A.M.C.

TOLERANCE OF LARGE DOSES OF STRYCHNINE WITHOUT TOXIC SYMPTOMS.

A woman, aged 64, had an inoperable mass of pelvic cancer compressing the rectum, for which I performed transverse colostomy. For some days after the operation her pulse was weak and intermitted once or twice in the minute, and was only steadied by liquor strychninæ in 5 minim doses, given at first hypodermically and afterwards by mouth. During the first 15 days she had 395 minims. In the following 49 days she had 5 minims every 4 hours, or 1,470 minims, making a total of 1,865 minims in 64 days. At the end of this time she returned to her home in the country. During the 9 weeks she also had daily 8 ounces of brandy and $\frac{1}{2}$ grain of morphine at night. At no time did the strychnine produce toxic symptoms. While she was under my care the cancer grew rapidly and general emaciation was marked, but her appetite and general condition were wonderfully good. As she did so well on 30 minims of liquor strychninæ a day, I did not feel justified in experimentally decreasing the dosage.

That cancer in its growth produces toxins or allied bodies is generally admitted, but whether these bodies are capable of neutralising such a potent drug as strychnine is at present undecided. The other alternative is to say that the patient has an idiosyncrasy, which is tantamount to saying that we know nothing about it. The dosage of strychnine usually employed is often too small, and in cardiac failure I frequently give 20 to 30 minims of the liquor in 24 hours, but until recently have not continued this dosage for any great length of time. Larger doses than this are on record as having been occasionally given, but the fact which I wish to emphasise is that strychnine may often be given with advantage in doses which many consider unorthodox or even dangerous.

Plymouth. C. Hamilton Whiteford, M.R.C.S., L.R.C.P.

CHLOROFORM POISONING: STOPPAGE OF HEART'S ACTION: INJECTION OF ARTIFICAL SERUM *PER ANUM*: RECOVERY.

A young Spaniard came to consult me for enlargement of the inguinal glands, the result of a soft chancre; every local means had been tried to reduce the glands to their normal size without result, hence I decided to operate. I applied chloroform on a towel, and the patient was very soon under the influence of the anæsthetic. The operation itself did not last more than ten minutes, as I was able to enucleate the glands with my finger. I applied a dressing, and left the case in charge of my assistant, thinking all was right as the patient had regained consciousness, when I was suddenly summoned to his bedside. On trying to feel the pulse I was astounded to find that the heart had apparently stopped beating, the breathing was extremely feeble, considerable intervals intervening between each respiration; the face had an ashy hue, the extremities were cold, in fact I began to consider the case hopeless. However, I straightway began artificial respiration, I applied hot cloths to the precordial region, I injected 20 minims of ether hypodermically, and finally, seeing things were looking very black, I called for artificial serum, a litre of which I injected far up the rectum. The result was all that could be desired, as in about five minutes my patient began to breathe fairly regularly, his pulse at the same time becoming gradually perceptible, and in a very few minutes more he was quite out of danger.

I publish this case in defence of artificial serum, as I am firmly convinced that if I had not had it at hand, my patient could not possibly have been saved. I may state that the patient's heart was perfectly sound, that, in fact, he was in every way a healthy young man.

Herbert J. Walker, M.B.Edin.

Durazno, Central Uruguay, S. America.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

BIRMINGHAM CITY INFIRMARY.

A CASE OF SYRINGOMYELIA.

(By T. Sydney Short, M.D., M.R.C.P., Physician to the Infirmary, and Assistant Physician to the General Hospital, Birmingham.)

[From notes by Dr. A. O'Dowd, Assistant Medical Officer.]

E. S., aged 41, a single woman, came under my care in July, 1899, complaining of weakness and wasting of the hands with stiffness and pains in the legs. She is a bright and intelligent woman, and gave the following account of her life: Never a robust child, she could nevertheless run about and play games like other children. At 16 years of age she noticed a peculiar numbness which attacked the right side of her body. It began in the right half of the trunk, and passed gradually into the limbs; she thinks the arm and leg were affected simultaneously. At first it was limited to the right side, but after about four weeks she noticed the left side was also going numb, the trunk being first affected, as on the other side. This numb feeling over her body and limbs has never left her, but during the first few months was more intense than it has since been. Eighteen months after she first felt the numbness she suddenly lost the use of both legs when walking in the street. They felt weak, her knees gave way, and she fell. She was taken to a hospital, where she remained for five months. On the second day after admission she could just stand. The power in her legs came back to her very slowly, so that when she left the hospital, at the end of the five months, she could walk a little with assistance, but dragged both feet along the ground, and soon tired. She steadily improved for about two years, and at the age of 20 could walk from two to three miles a day. From 20 to 36 she remained in much the same condition, and earned her living in a warehouse at light work. She then noticed the legs were gradually getting weak again (five years ago). Her hands have been gradually getting weak and wasted for about two years. The wasting began in the muscles of the right thumb, and she thinks it was quite a year before the hollows appeared between the bones of the hand (interossei).

During the time she was in the hospital she suffered from dull aching pains in the legs. These pains have never left her, and have been getting gradually worse during the last five years. Ever since the numbness first attacked her she has noticed a curious loss of appreciation to pain. On several occasions she has burnt her fingers at the bars of the fire and felt no pain. Large blebs and blisters have risen on her hands either from burns or scalds which she did not know she had received. Several times she has found her fingers bleeding from cuts unnoticed at the time. Whilst sewing she has not only stuck pins into her flesh without pain, but has sewn her fingers into her work and not noticed it until she shifted her hand forward; then she used to tear the cotton through the flesh to save herself the trouble of having to resew a cut stitch. The scalp must have suffered from this analgesia for many years, as she remembers on several occasions sore places have resulted from hairpin wounds. She only found out the cause of the wounds by discovering a hairpin struck deeply into the scalp one day. Her own impression is that this failure to appreciate painful impressions has been present for twenty years, and has been more marked during the last six. Ten years after the attack of paraplegia she began to have trouble with her water. It ran from her very easily, and ever since that time she has passed both

motions and water in the bed, and even into her clothes, unless she could obey the call at once. She had scarlet fever at 5 and erysipelas at 12; beyond some prolapse of the uterus she has had no other illness. When 19 she was struck on the back with a bar of iron, but there appears to be no reason to associate this especially with her illness. There is no history of fits or of any nervous disease in her family.

Present Condition.

Motor System.—She is feeble and weak bodily, walking slowly with evident stiffness of the legs. She can walk about fifty yards with a stick, getting very tired towards the end. The thenar and hypothenar muscles and the interossei of both hands are wasted, the right more so than the left. There is commencing clawing of the hands, with flexion of the fourth and fifth fingers. The fibres of the trapezius attached to the spine of the scapula are wasted on the right side, but not on the left. The atrophied muscles exhibit fibrillary contractions.

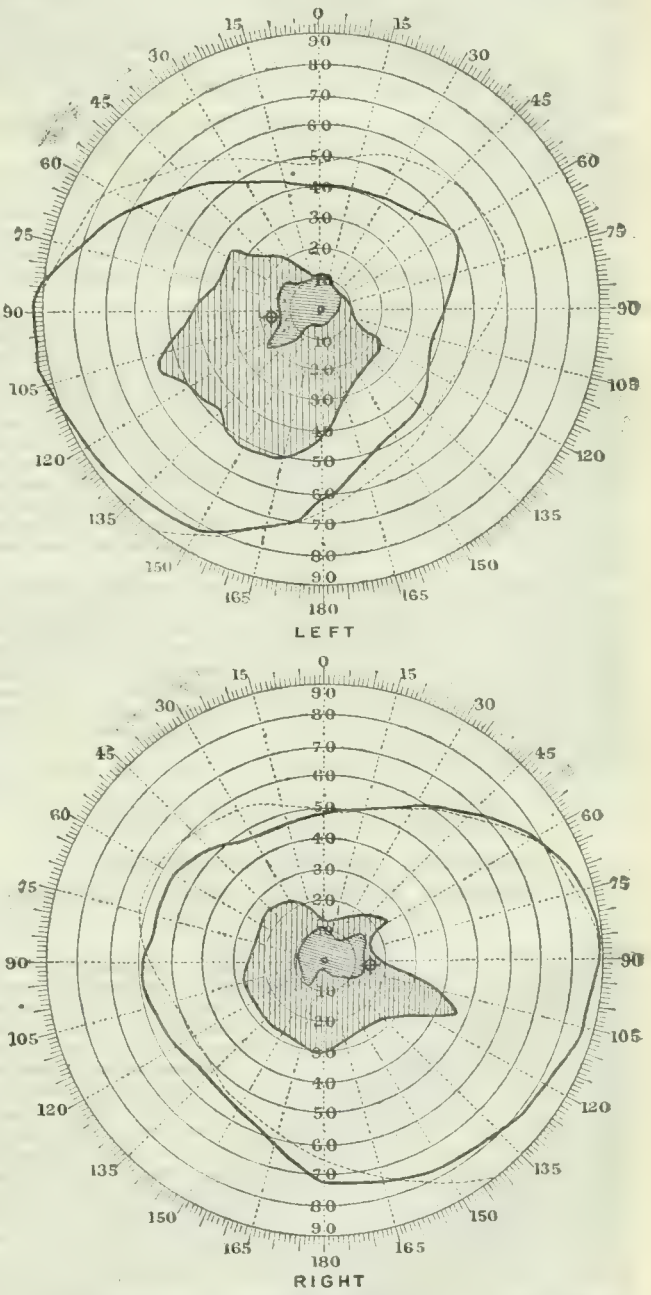
Electrical Reactions.—October 28th: No reaction in the atrophied muscles can be obtained with a constant current of 31 volts (20 × No. 4 E.C.C. cells Int. Resist. = 0.95). Contraction was obtained with a powerful interrupted current too strong to be borne on the normal hand on account of the pain produced. The patient had no pain when the current was applied; she said it felt as if it were tingling her.

The arm muscles of both sides are thin, but there is no wasting or paralysis of any muscle beyond those named. The legs are subject to spastic contractions; these often come on at night with flexion of the knees. After about ten minutes they pass off completely.

Sensory System. (*a*) *Subjective.*—In addition to the numbness already described she has aching neuralgic pains, which start in her back between the shoulders, and shoot down into both legs. These pains feel to her as if in the bones. They last a few minutes and pass off. They are often associated with spasms of the legs. They are not severe enough to make her call out, but keep her awake at night. She suffers almost daily from headache (in the early hours of the morning). Attacks of dizziness are frequent, both when she is up and in bed. They come on suddenly, and are preceded by a visual phantom of a tiny circle just before her eyes, with a black border and misty blue centre. It enlarges, and when it gets a certain size, generally of that of a crown piece, she goes giddy, and would fall if not supported. If in bed she feels as if the bed were rocking under her. (*b*) *Objective* (1) *Touch.*—Normal all over the body. She can distinguish between the head and point of a pin accurately and at once. She can detect the difference between silk and cloth material. With her fingers she can tell at once whether the edges of a book are gilt or not. (2) *Temperature.*—Defective all over the body, but varies in degree and kind from day to day, and even during the same examination. The sensation of heat, however, is lost altogether. Over the face, ears, and buttocks hot feels as cold to her, and cold feels simply like something touching her. Over the rest of the body she generally says both hot and cold feel cold. Her replies, however, vary from time to time; for example, over the legs the same spot will be insensitive to any feeling beyond that of touch one moment, and directly afterwards will give her the sensation of cold from both hot and cold, but she never feels either as hot. There is, however, a portion of the body between the upper part of the mamma and two fingers' breadth below the edge of the ribs on the left side, reaching from the middle line from back to front, and supplied by the spinal nerves from the fourth to the eighth dorsal, where she sometimes seems to feel some difference between hot and cold; but even here she is as often wrong as right. (3) *Pain.*—The skin of the whole of the body is very deficient to painful sensations, with the exception of the front half of the scalp and the whole of the face, where she feels a pin-prick as pain; but over this area a test tube of hot water, too hot to be held in the hand, neither gives her pain nor the feeling of heat. This is worthy of note.

Ocular Symptoms.—Nystagmus is present in each eye when looking outwards, especially towards the left. The palpebral fissure is narrower on the right than on the left. The pupils are rather smaller than average size. Both react normally to light and accommodation, and also dilate readily in darkness. Cervico-pupillary reflex is also present on both sides. *Ophthalmoscope.*—The fundus in each eye is normal.

Special Senses: Sight.—Acuity of vision is about normal; she reads books, but soon tires. There is no double vision. *Field of Vision.*—White is practically normal, red contracted, green greatly contracted. (The accompanying chart kindly taken for me by Dr. Jameson Evans shows very well the contraction of the visual field to green.) *Hearing.*—Normal both sides.



Perimeter charts to show fields of colour vision in Dr. Short's case of syringomyelia. * = blind spot. White field = single outline. Red field = vertical shading, thus ||||. Green field = horizontal shading, thus ≡.

Smell.—Normal, both as regards the olfactory and the fifth nerves. Detects and names ammonia, vinegar, wild thyme, and eau de cologne. Differentiates between but cannot name lavender, mint, sage, roses, and violets.

Taste.—To sweet, acid, and bitter it is normal, but is somewhat deficient to salty substances. She detects and names brandy, sherry, tea, and coffee. There appears to be no difference between the front, sides, and back of tongue.

Muscular Sense.—Normal on both sides. She can describe and imitate limb positions when blindfolded. Judges accurately between different weights with both hands and both feet.

Reflexes.—Deep: On the right side all absent. Ankle clonus was obtained several times during July and August of last year, but has gradually ceased to be elicited, and is now absent. On the left side the knee-jerk is increased and ankle clonus is well marked. *Superficial:* Right side all absent. Left abdominal, epigastric, and plantar all obtainable, but not excessive.

Bladder and Rectum.—Incontinence of urine and fæces unless she is very quick to obey the call.

Sweats.—These are well marked and profuse. They occur almost every day, but about once a week she is subject to profuse general sweats which occur in bouts, and necessitate change of garments. She has herself noticed that she sweats more on the left side over the face, neck, and arms, and on the right side more over the trunk and legs. It has been noted that this is so.

Negative Points.—Trophic signs are absent; there is no joint or bone lesion, and no history of whitlows or perforating ulcers. There are no medullary symptoms; the tongue and speech are normal, and the motor branch of the fifth is not affected, so that she has had no difficulty in chewing. The vagus is not affected; there is no difficulty in swallowing, and the cough is normal. No irregularity of the heart is present. She complains, however, sometimes of a cold feeling in her stomach, as if she had swallowed cold water. The mucous membranes are normal; she can tell the difference between hot and cold substances in her mouth, and if she bites her tongue or cheeks she feels the pain. No tremors have been noticed.

REMARKS.—The points in this case especially worthy of note are: (1) The well-marked wasting of the hands, the alteration of sensation to temperature and pain, and the profuse sweats; (2) the absence of the reflexes on the right side, and their presence in an exaggerated form on the left; (3) the presence of nystagmus; (4) the loss of sensation to heat over the whole of the body while that to pain remains over the face and front of the scalp; (5) the great contraction of the field of vision to green rays.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

F. T. ROBERTS, M.D., F.R.C.P., President, in the Chair.

Monday, April 23rd, 1900.

CYSTS OF THE BREAST.

MR. BRYANT read a paper on cysts of the breasts, their relative frequency, diagnosis, and treatment. The communication was to be regarded as a sequel to one read before the Medical Society of London in 1896. It was based on an analysis of 242 consecutive cases of breast disease as seen in private practice during the last ten years. The analysis was undertaken with the object of determining the relative frequency of the presence of simple cysts in the breast gland, and from it the following definite conclusions were drawn: (1) Simple cysts of the breast are far more common than they are generally believed to be; (2) they are chiefly found in women during the same period of life as that in which cancer is met with; (3) they are mostly quite amenable to treatment without the sacrifice of the breast gland in which they are situated; (4) there is no reason to believe that women who have these cysts are more prone to cancer than others who have not. To prove the first conclusion, it was shown that, after eliminating 12 of the cases which had no reference to the diagnosis of cysts, there were 163 cases of diagnosed cancerous or sarcomatous tumours to 67 of diagnosed cystic disease, this latter or cystic group bearing to the former or solid group the proportion of 29 to 70; and, even when the cases as proved by operation were separated from those simply diagnosed, the conclusion was practically the same: "That of every 4 cases of breast disease simulating cancer 1 will prove to be an example of cyst disease." With respect to the sound conclusion that these cases of cyst disease of the breast were found in women at the same period of life as that in which cancer was met with, the author demonstrated that, of the 67 cases of diagnosed cyst disease, 77 per cent. were found in women over 40 years of age, and that in the groups of cases diagnosed and of cases proved by operation the proportion was identical. The author then passed on to show how confidently these cysts could be treated without the sacrifice of the breast gland, and that this result was secured in all his 44 cases of diagnosed cyst disease which were submitted to operation, either by simply laying open the cyst and plugging its cavity with iodoform gauze, after its inner surface had been destroyed by liquid carbolic acid or solution of iodine, or by the dissection of the cyst from the gland when anything like an intracystic growth was to be seen attached to its walls. He added that in no one of the cases tabulated had anything but a good and permanent recovery taken place, and that the same might be said of his antecedent practice. He pointed out, however, that when a cyst was found to contain solid cancerous or sarcomatous growth, the whole gland should be removed. He had been called upon to follow this practice on two occasions, and these cases had been classed with the solid tumours. The author was unable to bring forward any evidence to support the view that women who had these cysts were more prone to cancer than others. In the cases he had treated no such development had taken place, although he had no doubt that if such cases were allowed to take their course untreated nervous trouble might be anticipated. After dwelling upon the pathology of cystic disease, and upon the collateral symptoms of cancer and cyst disease as bearing upon their diagnosis, he pointed out the influence of the facts his analysis of cases had brought out should have upon practice; for if it were true that in one out of every four cases of tumour of the breast simulating cancer, one would be of a cystic and simple nature; and if all well-marked examples of cancer were eliminated from consideration, and the argument applied to those alone of a doubtful kind, in which there were no collateral symptoms of cancer to support a diagnosis, it did not appear to be wrong to conclude that in every two cases of doubtful breast tumour one would be cystic. Under these circumstances it would be wise for practitioners to apply in any individual case of breast tumour not clearly cancerous the argument of probability, and instead of assuming at once that the disease was probably cancerous, suggest that the case was as likely to be one of a simple cystic nature, for with such a possibility a line of treatment would be recommended and probably adopted, in which by an exploratory incision the true nature of the tumour would be made clear; when, if the lump were due to a cyst, it could be dealt with without the loss of the breast; and if it were cancerous the glands could be removed at a time at which the most favourable results might fairly be expected.

Dr. G. C. STEELE PERKINS mentioned two cases to show how very able men might make mistakes in the diagnosis of these tumours.

One was at Guy's Hospital under the care of the late Mr. Cooper Foster. He showed the case to the students as a typical example of carcinoma of the breast, but on incising the tumour pus escaped, whereupon he turned to the class and told them to take the lesson to heart. The second case was that of a lady, aged 38, who, nine months after a slight injury to the breast, came to him with a lump the size of a walnut, which, after careful examination, he judged to be an abscess. An eminent surgeon, however, was called in and diagnosed it to be cancer, and advised immediate removal. On operating, however, his incision gave issue to pus.

Dr. CAMPBELL POPE observed that general practitioners saw these cases in the early stage, when the diagnosis often presented great difficulty. There was often a history of injury in cases which ultimately turned out to be cancer. He asked what significance was to be attached to enlargement of the glands which, he added, might be present with inflammatory lesion. Personally, he attached most importance to involvement, and especially to dimpling, of the skin.

Mr. BRYANT, in reply, said he had only dealt with cysts of the breast, and not with cancer or abscess. He thought that if one utilised the information afforded by the history, they might, after careful examination, arrive at a correct diagnosis. He did not think enlarged glands had any significance in regard to the tumour being cancerous.

Twenty-four Years' Death Certificates in General Practice.

Dr. Campbell Pope, in reading this paper, had in view one method for preventing waste of scientific results in general practice. Whereas in hospital practice results were tabulated, nearly the whole of the experience of general practitioners died with them, and thus enormous wastage of useful material took place. The series of deaths tabulated consisted of 595 cases. These consisted of the deaths actually occurring in the period, exclusive of all urgent cases save one—a death under chloroform which appeared under the heading of pneumothorax. The series was divided as follows: Carcinoma 51 deaths, kidney diseases 14, diseases of the lungs 170, of the heart and circulation 46, scarlatina 9, typhoid 4, diphtheria 5, measles 18, rheumatism 11, diabetes 8, senile decay 8, influenza 18, general tuberculosis 2, tetanus 2, hæmophilia 2, liver diseases 14, gout 9, anæmia 3, purpura 1, debility and malnutrition 62, diseases of the brain and nervous system 69, erysipelas and septic disease of extrauterine gestation 1, ovarian and uterine diseases 2, parturition 8, hernia 1, diseases of the digestive system 42, lymphadenoma 1, bladder diseases 5, inflammation of lower jaw 1. The conclusions drawn were far different from what was anticipated by the author at the commencement of the inquiry, namely, that the district of West London in question would seem to be more afflicted with respiratory diseases, especially bronchitis, than anything else. Secondly, that infectious diseases were not very prevalent or fatal, owing to the excellent arrangements of the Hammersmith Medical Officer of Health and the fine gravel subsoil. Thirdly, that cancer appeared more frequently than was supposed—1 in 12 of all deaths. And finally, that influenza was not a remarkably fatal disease, and that there was a lamentable and unnecessary wastage of young human life.

BRITISH GYNÆCOLOGICAL SOCIETY.

W. J. Smyly, M.D., President, in the Chair.

Thursday, April 19th, 1900.

The Treatment of Uterine Myomata.

Mr. F. Bowreman Jessett showed: (1) two cases of vaginal hysterectomy for carcinoma of the cervix uteri; (2) a case of vaginal hysterectomy for myoma of the uterus and broad ligament; (3) a case of subperitoneal hysterectomy for myoma uteri.

Dr. Macnaughton-Jones showed a specimen of uterine myoma removed by supravaginal hysterectomy; he also read the notes of a case of hydrosalpinx, and the pathological report on a specimen of ovarian sarcoma shown at the previous meeting.

The President showed three specimens of uterine myoma removed by panhysterectomy, two of them being removed by the abdominal route by Doyen's method, and the other by vaginal hysterectomy.

In the discussion on the cases of myoma, Dr. Fred. Edge (Wolverhampton) remarked that in view of the fact that some of these supposed myomata turned out to be in reality sarcomata, he did not think that the leaving of the cervix was justified, especially since no one could tell beforehand whether the tumour would prove to be sarcomatous or not.

Dr. Macnaughton-Jones asked the President what he thought of the value of Doyen's angiotribe. Inasmuch as Doyen's operation consisted essentially in the employment of this instrument, he thought it would be useful if every Fellow of the Society who might use it were to report its results. It was being much used in Vienna, Berlin, and other places.

Dr. William Duncan said that up to the present time he had had 68 cases of intraperitoneal hysterectomy, of which an account would be found in the current number of the *Lancet*. Of these cases 4 had died, but one of the fatal cases occurred suddenly from embolism, when the patient had so far recovered that she was about to leave the hospital; this case could not, therefore, be attributed to the operation, and he might reckon his mortality at 3 in 68, or 4.4 per cent. He did not agree with Dr. Edge that they ought always to perform panhysterectomy, for in the vast majority of cases they had to do with a true myoma, and not with a sarcoma. He preferred to leave the vagina unopened whenever this was possible.

Dr. Herbert Snow said the malignant degeneration of myomata was quite exceptional, occurring in certainly not more than 5 per cent. of cases; if the cervix alone were left, he could not see that there could arise any danger from return of myomata, so it did not seem to him that the small risk of malignancy rendered it worth while to incur the increased risk of danger to the ureters involved in panhysterectomy.

After some remarks by Mr. Jessett,

The President said that by "Doyen's operation" he did not understand any one method of hæmostasis; but rather the plan of opening first the posterior vaginal vault, and then drawing up the cervix, which would be found to shell out very easily from its bladder connections. In this process the uterine arteries were separated from the cervix, until they could be secured in the upper portions of the broad ligament, where they were very small, instead of at the base of the broad ligament where they were large; moreover they could then be secured close to the ovarian vessels, so that one ligature would suffice for both. He thought that if Dr. William Duncan could show a mortality of only 3 in 68 cases, he might well adhere to his present plan of operating; for his own part he had had very good results from panhysterectomy.

The Treatment of Cancer Based on the Parasitic Theory.

Dr. Inglis Parsons read a paper on this subject. The mortality of cancer in England and Wales was still over 20,000 annually. The present methods of treatment could not be considered satisfactory in the light of this fact. Sanfelice's discovery of a definite parasite opened up a possibility of treating the disease through the medium of the circulation, eradicating it entirely. The investigations of Pasteur, made more than twenty years ago, showed that the saccharomycetes could obtain everything required for their nourishment in the human body, while Schutzenberger had demonstrated that they could extract oxygen from the red corpuscles through a thin membrane. The human body, therefore, was quite a suitable habitation for these fungi, except that their main food—sugar—could only be obtained in small quantities. This served to explain the slow growth of the parasites as compared with their rapid growth in fermentation with abundance of sugar. He thought that the two methods of propagation, by budding and sporing, would explain the great variations observed in the periods of recurrence, because when spores were formed they might remain quiescent for years before commencing active growth. The rapidity of growth in cancer of the liver, and in stout persons could be explained because the liver was the storehouse for sugar, and in stout persons there was often an excess in the circulation which might even be found in the urine. They could now understand why the disease was more prevalent in the watersheds and along the course of rivers, because the saccharomycetes flourished in moisture and damp atmosphere. Judging from Pasteur's work, there was no toxin formed by the yeasts. This would account for the clinical symptoms of cancer being different from the microbic group of diseases; in fact, he considered that Sanfelice's statement explained nearly everything in connection with the disease, and was probably correct. He then indicated the lines on which treatment might be successful. Various bacilli were hostile to these fungi, and some toxin might be found which would kill them without doing harm to the cells of the body. Various drugs and salts destroyed these saccharomycetes; a selection of those that might be safely administered could be tried. As phagocytosis did not take place, further knowledge might show how to induce it. An antidiabetic diet, so as to reduce the sugar as much as possible, was worth trying.

Paper.

Dr. Ralph Worrall, of Sydney, N.S.W., read a paper on pregnancy complicated by uterine myoma and ovarian cyst.

Society of Anæsthetists.—At a meeting on April 6th, Dr. Silk (President) in the chair, Dr. Percy Noble made a casual communication upon a case of paralysis of the respiratory centre under chloroform, with recovery after the relief of intracranial pressure due to disease.

The child, aged 3½ years, was suffering from basal meningitis, and was operated upon on three occasions at short intervals. At the third operation he stopped breathing before the operation was commenced, and no attempts to resuscitate him were successful, although the heart continued beating regularly. The operation was then rapidly performed,

and a large quantity of cerebro-spinal fluid escaped, and the child quickly recovered consciousness. Death occurred four days later, and at the *post-mortem* examination a small cyst was found in the third ventricle.

Dr. Noble was of opinion that owing to the presence of this cyst the dependent position of the child's head had produced undue pressure of the cerebro spinal fluid upon the respiratory centre, which pressure was relieved when the cerebro-spinal fluid was allowed to escape.—The PRESIDENT referred to a somewhat similar case, in which death had occurred after a considerable interval following an operation for caries of the atlas and axis.—Mr. EDGAR WILLETT read a paper on the administration and choice of anæsthetics for young children. The limit of age for the cases to which he referred he fixed as being under 6 years, and he did not include cases of operations for adenoids. In his opinion chloroform alone did not give the best results in children. Among other objections to ether was the terrifying effect of the apparatus. In cases of cleft palate, etc., and eye operations he thought that chloroform was undoubtedly the best, but with these exceptions he thought that children under six might advantageously be anæsthetised with a mixture of equal parts of chloroform and ether dropped on to lint or a Skinner's inhaler. Another question raised by Mr. Willett was, Does shock ever occur from insufficient anæsthesia? Personally he did not think that it did. Mr. CROUCH, with regard to shock, cited cases in which it had appeared to him that death had occurred from insufficiently deep anæsthesia. He thought that chloroform produced less strain on the heart. Dr. BARTON said that the majority of patients over 2 years of age anæsthetised at the North-Eastern Hospital for Children were given A.C.E, and that the results were better than those from chloroform. Mr. WHITE thought that with the exception of cleft palate and similar cases ether was the best anæsthetic at all ages. Dr. BAKEWELL had tried both ether and chloroform, but on the whole he preferred chloroform for young children. Mr. MCCARDIE always preferred to give ether whenever possible, very often commencing the inhalation with a small quantity of A.C.E. To children over 4 or 5 he gave gas and ether, and recently he had been giving gas and oxygen even to small children. Dr. NOBLE had used the mixture of equal parts of chloroform and ether with better results than with chloroform alone. Mr. CARTER BRAINE under 2 or 3 years of age administered the A C.E. mixture on a Skinner's frame, beyond that age he used a mask. Dr. FOWLER had tried both ether and A.C.E, but generally came back to chloroform. Dr. DUDLEY BUXTON thought every case in which an anæsthetic was given to a child should be regarded as a separate problem. Shock was an interference with the vasomotor mechanism of the body. Chloroform also interfered with the vasomotor mechanism. He did not think, therefore, that surgical shock could be prevented by profound chloroform anæsthesia, especially in children, whose vasomotor mechanism was extremely unstable. His experience was that children took ether and gas remarkably well, and that A.C.E. was better for weakly children than chloroform. Chloroform was by no means safe for children, and if given it should be remembered that when anæsthesia had been induced, very little more of the drug was necessary to maintain it. Dr. PROBYN-WILLIAMS thought that a complicated apparatus was not necessary for the administration of ether to young children, but had found that it might well be given upon a small felt cone. In 1,118 cases of anæsthetics given to children up to the age of 6 at the London Hospital, ether was given in 42 per cent., A.C.E. in 27 per cent., and chloroform in 31 per cent. Mr. GRANT MORRIS had used the mixture advocated by Mr. Willett for some years, and was pleased with the results. The PRESIDENT agreed with the dictum that patients under 6 did not take ether well. As far as his experience went, shock certainly did not depend upon light anæsthesia. Mr. WILLETT, in reply, said that he thought that one advantage of the mixture he proposed was that the ether in it stimulated the breathing, and the child did not merely go to sleep. When giving the mixture for eye operations, he was prepared to add a little pure chloroform if the patient was not sufficiently anæsthetised.

HARVEIAN SOCIETY OF LONDON.—At a meeting on April 19th, Mr. T. B. PEYTON BEALE, Vice-President, in the chair, Dr. LACK showed a curtain ring which he had removed from the larynx of a child aged 9 years. The ring was swallowed at 9 months of age. For years it had caused no symptoms. The upper edge was free in the post-nasal space, the lower part lay free behind the arytenoids, while the two sides were firmly embedded beneath the mucous membrane of the lateral pharyngeal walls. The ring was cut through with bone forceps. The importance of the coughing and choking attacks following a history of swallowing a foreign body was emphasised; attention to these symptoms would lessen the number of these cases which have been overlooked.—Dr. HERBERT TILLEY showed a large cholesteatoma which he had removed from the mastoid antrum of a boy aged 14. The main symptom was an intractable purulent discharge from the auditory meatus. The patient made an uneventful recovery. The author could offer no satisfactory explanation of the pathogenesis of cholesteatoma. Drs. ALFRED EDDOWES, GUTHRIE, and DUTCH also took part in the discussion of this case.—Dr. C. H. MCILRAITH reported a case of congenital laryngeal obstruction in which sudden death occurred from laryngeal spasm.

The patient was a girl, aged 6 months, who had suffered from persistent respiratory stridor since 6 weeks of age. The child had congenital syphilis. On examination of the larynx the epiglottis was seen to be sharply folded and incurved on itself. The aryteno-epiglottic folds seemed to extend from the tip of the epiglottis to the tips of the arytenoids as thinned bands, which were closely approximated to one another. The child died suddenly two months later, apparently from laryngeal spasm. A *post mortem* examination had been made, and the larynx was shown. It gave the appearances much the same as seen during life, except that there were evidences of considerable relaxation of the mucous membrane over the arytenoids.

From the *post-mortem* appearances it was impossible to consider otherwise than that the stridor was purely mechanical, produced by the valvular action of the upper aperture of the larynx, depending partly on the peculiar malformation and partly on the flaccidity of these parts in infants. If post-nasal adenoids affected it at all, it could only be by rendering the tissue more liable to relaxation, and thus producing still more narrowing of the upper lumen of the glottis. Dr. LACK said the specimen was an extremely interesting one to him, as it was a further proof of the correctness of the views Dr. Sutherland and he had expressed in the *Lancet* in 1897 as to the pathology of this disease, and was fatal to the hypothesis of those who had ascribed the disease to adenoids. Dr. HERBERT TILLEY pointed out that Avelis (Frankfort) had stated that in some cases congenital laryngeal stridor was due to pressure on the trachea of an enlarged thymus gland, and in such cases the stridor and difficulty of breathing was at once relieved by removing portions of the gland or stitching it forward to the sternum, or by inserting a tracheotomy tube with a long cannula which would reach beyond the obstruction. Replying, Dr. MCILRAITH stated that the thymus gland was of usual size, and that in a case he had seen of pressure on the trachea by an enlarged thymus, the character of the stridor was quite different, and was both inspiratory and expiratory, chiefly expiratory.—Dr. SIDNEY PHILLIPS showed a man suffering from bradycardia. The pulse frequently fell as low as 30, and drugs had little or no effect upon the rate. The case was discussed by Drs. GUTHRIE, J. BROADBENT, and Mr. JAFFREY.—Mr. STANSFIELD COLLIER showed (1) intrauterine injury to skull, (2) congenital dislocation of hips. The VICE-PRESIDENT and Mr. ED. ROUGHTON discussed the cases.—Mr. HUBERT C. PHILLIPS showed a case of hypospadias with complete absence of urethral aperture. On the second day after birth he made an incision at the apex of the glans penis, and after some difficulty succeeded in passing a probe into the urethra. There was absolutely no opening elsewhere in the urethra. Urine had passed normally since the operation. Remarks were made by Mr. JAFFREY, and, in answer to Dr. EDDOWES, Mr. PHILLIPS stated that there was no specific history.

SOUTH-WEST LONDON MEDICAL SOCIETY.—At a meeting on April 11th, Dr. W. G. DICKINSON, President, in the chair, Dr. RICHARDS showed a case of persistent branchial cleft in a girl.—Mr. RYALL showed a case of an ovarian tumour that had been removed, and a patient having an anus produced by the trans-sacral operation for the more complete removal of malignant growths of the rectum, and which appeared to be in a very satisfactory position.—Dr. BARKWELL showed a skiagraph and read notes of a case of recovery from a bullet wound of the

thorax without operation.—A demonstration on the production of the Roentgen rays was given by Mr. J. H. Gardiner, F.C.S., illustrating the production of cathode and Roentgen rays, by means of a powerful induction coil and highly exhausted vacuum tubes. The different appearances of the discharge were shown, in air between a ball and point, in moderately exhausted vacuum tubes known as "Geissler tubes," and in highly exhausted "Crookes's tubes." With an experimental tube in this latter state the cathode rays were shown to travel in straight lines from the surface of the cathode, to possess mechanical power, and to be capable of deflection by a magnet. The action of cathode rays in giving rise to Roentgen rays was explained, and by means of diagrams the early forms of Crookes's tubes and the modification by Mr. Herbert Jackson, of King's College, now exclusively used for the production of Roentgen rays, were illustrated. The effects of the rays were shown with the aid of a luminescent screen.—Mr. James Wimshurst, F.R.S., then showed his "influence" machine, consisting essentially of a series of six pairs of circular glass plates with lead foil slips at intervals near their circumferences, rotated by hand, the plates of each pair in opposite directions. Very long sparks could be produced, but the current appeared to be quite harmless; the hand could be placed in the line of discharge without injury. Using this machine instead of an induction coil and battery with a modified Crookes's tube, Roentgen rays were produced of great power, with the advantage that the apparatus needed no preparation and the rays could be produced at any moment by merely turning the handle. After the demonstration an opportunity was given for the examination by the aid of the rays of several cases of interest to the members.

Manchester Pathological Society.—At a meeting on April 11th, Mr. W. Thorburn, the President, who was in the chair, introduced a discussion on the pathological relations of the thyroid gland. After referring to the general functions of the thyroid gland and of thyroiodin, he considered athyroidea, or deficiency of thyroiodin, as produced in animals by experimental, and in the human subject by surgical, removal of the gland. Myxœdema or acquired, and cretinism or congenital, athyroidea were considered, and the relation of athyroidea to goître was discussed. Hyperthyroidea was described under four headings: (*a*) poisoning by ingestion of thyroid; (*b*) "chronic iodism"; (*c*) exophthalmic goître; and (*d*) acute thyroid auto-infection as observed after certain surgical operations upon the gland. Thyroiodin as an antitoxin was illustrated by reference to certain conditions observed during pregnancy, and to some septic processes. The treatment of lupus and of syphilis by thyroid extract was also mentioned in this connection. Goître of the hypertrophic type might be regarded as a compensatory overproduction of antitoxin. The effects of thyroiodin in goître and congenital goître were also referred to. Dr. E. S. Yonge, Dr. T. Harris, Dr. J. J. Cox, Dr. T. A. Wilkinson, Dr. Rodochanachi, Dr. J. J. Berry, Mr. W. P. Montgomery, Dr. Brazil, Dr. W. E. Fothergill, Dr. T. C. Railton, and Dr. Eurich took part in the discussion.

Birkenhead Medical Society.—At a meeting on April 6th, Dr. H. Nazeby Harrington, President, in the chair, Dr. Riddell read clinical notes on (1) lead poisoning; (2) rupture of lung; (3) acute nephritis; (4) rupture of facial artery.—Dr. R. Owen Morris read a paper on dilatation of the stomach. The following classifications were adopted: (*a*) Obstructive causes. (1) Stenosis of the pylorus. (cancerous, cicatricial puckering after an old ulcer or after corrosives, fibrous thickening, polypoids, kinking due to adhesion to gall bladder, etc., pressure due to tumours of liver, etc., spasm of pylorus in painful ulcer); (2) stenosis of duodenum due to growths, cicatrices, twisting in displacement of stomach, pressure of tumours from without, movable right kidney. (*b*) Non-obstructive causes: (1) Due to enfeeblement of the muscular coat (in ulceration and cancerous infiltration, inflammatory conditions, such as peritonitis or gastritis, fatty and other degenerations, venous congestion, adhesion due to old inflammatory bands thus impairing the movements of the organ, in general constitutional diseases such as anæmia, chlorosis, acute rheumatism, etc., causing atony of the muscular wall and possibly owing to their toxic effects, in hysteria and other affections of the nervous system); (2) due to faults in contents—excessive in quantity or indigestible in quality or unsuitable in form; (3) due to faulty chemistry—(α) scarcity or excess of some of the juicy; (γ) stagnation and consequent fermentation of contents leading to formation of gases and acids which weakened and distended the wall. Vomiting, pain, thirst, scanty urine, constipation, emaciation were severally discussed as symptoms, and the nervous symptoms dwelt upon by Allbutt were specially dealt with and also the indirect symptoms enumerated by Broadbent, namely, (1) palpitation, (2) anginoid pain coming on during rest and not during exercise; (3) sleeplessness after the first sleep, (4) vertigo on rising. The physical signs alone were reliable in the diagnosis of the condition. They were discussed in detail. The diagnosis, prognosis, and treatment were also fully dealt with.

REVIEWS.

Muret-Sanders Encyclopædic English-German and German-English Dictionary. Abridged edition. Vol. I. English-German by B. Klatt. Pp. 877. Vol. II. German-English by H. Baumann, M.A.Lond. Pp. 913. Berlin: Langenscheidtsche Verlagsbuchhandlung. London: H. Grevel and Co. 1900. Two volumes in one 15s.)

The word "abridged" in the title of this dictionary must be taken in its literal sense, and in relation to a still more colossal work of the same nature planned by the same publishers. The book before us is a very large volume. It contains nearly 1,800 pages, each page is large, and on each are three columns closely printed. Its editors, however, have had to deal, to quote the words of the preface to the unabridged edition, with the vocabularies of the two richest languages of the modern world, and have sought to produce a dictionary equally useful to the German and the Englishman or American, to the newspaper reader and the man of business, to the literary student and to the man of science, to the schoolboy and his father. Whether Herr Klatt and Mr. Baumann have succeeded in pleasing the schoolboy we do not venture to say; he is a creature apart, and seldom reveals his real sentiments on books, but we feel sure that everbody else who uses the book will feel the liveliest gratitude to them. Herr Klatt, in the first sentence of his preface, which in its somewhat old-fashioned construction recalls the opening lines of Rasselas, says: "He who in reading a book looks for a word in a dictionary, naturally hopes to find that word in the sense in which it occurs in the book, and hopes also to find it quickly and easily." But we who do not "listen with credulity to the whispers of fancy" nor "pursue with eagerness the phantoms of hope," hardly expected to come across any lexicographers who would take so much pains to remove stumbling blocks out of the way of the unwary, and to guide the feet of the translator in the path he should go.

In dealing with each word the general plan is to give first "the most important signification, which is, of course, not always the primary sense of the word." This is, for practical purposes, a very sound principle. The subsidiary meanings or the various uses of a word either alone or in combination are then given under various heads, and the employment of the word familiar, scientific, slang, and so on, is indicated by a special sign. These signs are in a way the least satisfactory part of the book, but the editors say truly that to have dispensed with some device of this kind would have involved either sacrificing one of the main objects aimed at, or nearly doubling the size of the volume. The signs are not very numerous, and many are suggestive: thus a miniature gallows indicates a word used by the criminal classes, crossed swords a military term, a cogwheel a term used in mechanics, and a comet a rare word. Past participles of strong verbs are given in their proper alphabetical place, and not in a table after the annoying manner of most dictionary makers; proper names are also inserted in the general vocabulary, a somewhat doubtful blessing, though one which can be defended on grounds of general convenience. Initial letters in common

use as contractions are also given in the alphabetical vocabulary: thus we find M.R.C.S. correctly explained, but not, curiously enough, L.R.C.P. So far as a short test can go we have found the English-German section singularly complete, and the same is probably true of the German-English, though it is less easy for an Englishman to form an opinion. The vocabularies include a large proportion of medical words in ordinary use, but will not altogether do away with the need for a special dictionary, such as that of Treves and Lang.

The Races of Man: An Outline of Anthropology and Ethnography. By Dr. J. Deniker. London: Walter Scott. 1900. (Cr. 8vo, pp. 636. 6s.)

A handy modern textbook of anthropology has long been a desideratum, but the extent of the subject is so vast that he who in the present state of science attempts to give within the limits of some 600 pages the "essential facts of anthropology and ethnography" is a bold man. Such an adventurer is Dr. Deniker, the learned librarian of the Museum of Natural History in Paris, and he has achieved a success which is well-nigh phenomenal.

An introductory chapter deals with the nature of ethnological classification, or, as the author puts it, "the relation between ethnic groups and zoological species." Like all authorities since the time of Darwin our author considers the question whether there is one or more species of the genus *Homo* of secondary importance, and, leaving it on one side, he discusses the division of humanity into "races," based on bodily structure, and "ethnic groups," based on languages, customs, distribution, and the like.

Chapters I and II deal with morphological characters, beginning with those that differentiate man from the other Primates, and then dealing with the various portions of the body, and showing the extent and direction of their modifications. To the skull, as might be expected, the most detailed treatment is accorded, its discussion occupying some two dozen pages, exclusive of an elaborate table of cranial measurements in the Appendix.

In Chapter III (physiological characters) we have a brief account of the anthropological significance of the functions of the body, such as acuteness of the senses, expression of the emotions, and the influence of environment. They are succeeded by four chapters (IV-VII) treating of the characters of man in societies, which will probably be the most interesting of all to the general reader. A wonderful amount of information on all the diverse faculties of human life is contained in them.

The concluding portion of the book, comprising Chapters VIII-XIII gives a systematic account of the races of the world; it is very complete and well executed, considering the limits of space, but is decidedly too condensed to be readable, and will therefore be chiefly valuable for reference. The numerous footnotes giving references to original sources of information and the well-chosen and carefully-executed illustrations greatly enhance the value of the work, which we do not hesitate to pronounce the best small treatise on its subject which has appeared of recent years in our language.

RECENT WORKS ON SURGERY.

Dr. Keegan, in his little volume on *Rhinoplastic Operations*,[1] describes his experience of rhinoplastic operations during a long service in India. The book claims the attention of Indian medical officers especially, for not only is mutilation of the nose vastly more common in India than in Western Europe, but, as such mutilation amongst Hindus is in most instances the result of traumatism, the scope and success of operative treatment are greater than in cases in which the organ has been deeply and extensively ravaged by disease. An introductory review of the different operative methods of dealing with the mutilated nose, and an interesting account of the causes of such lesions, are followed by a full description of the modifications of previous operations which Dr. Keegan has in the course of his experience been led to adopt. His method of operation, which was described at the meeting of the Association in 1895 and is here given at full length, is not only very ingenious but, as may be seen in the clear illustrations that abound in this book, is evidently capable of affording in skilled hands much benefit from a cosmetic as well as from a strictly therapeutical point of view.

A book concerning the means of distinguishing the dangerous from the non-dangerous forms of aural suppuration, by such a recognised authority on the dangerous sequelæ of suppurative otitis as Professor Körner,[2] must excite the greatest interest both among aurists and general surgeons. He lays great stress on the complications incident to acute suppuration of the middle ear, which he illustrates by some important statistics; thus out of 81 cases, erosion of bone extended into the groove for the lateral sinus seventeen times and into the middle fossa of the skull six times (p. 42). In his experience profuse suppuration of the middle ear which did not undergo any marked diminution at the end of four weeks was always accompanied by involvement of the bony tissue. The absence of high temperature was no criterion of the absence of complications. Professor Körner attaches considerable importance to percussion of the mastoid in cases in which the soft parts over the process are unaffected. He insists on early paracentesis of the membrane and the use of the icebag rather than leeches or counter-irritants to the mastoid process. He draws important distinctions between genuine cholesteatoma—a primary neoplasm—and the pseudo cholesteatoma secondary to suppuration and produced by a proliferation of epidermis through the perforation into the tympanic cavity. He considers operation less urgently called for in the latter condition than has generally been held. On the whole, he steers a middle course between conservative and radical extremes; and although it must be admitted that the responsibility of operating is in doubtful cases smaller than that of leaving the operation undone, Professor Körner's work shows how much consideration is necessary before either of these responsibilities is finally accepted. The book should command a wide circulation.

Dr. John B. Roberts's little volume on the *Modern Treatment of Fractures*[3] shows that he has studied the subject in a thoroughly practical spirit, and with the intention of testing by personal experience the dictates of surgical authority. The essays here brought together represent the views he has held at various times as results of independent thought, and an endeavour to abandon false theories. It is asserted, with some truth we think, that a blind reliance upon therapeutic dogmas, and the adoption of routine measures, without due consideration of the mechanical and pathological problems presented, have led to many disasters in this department of surgery. Dr. Roberts advocates simple appliances in cases of fracture in which reduction can be readily and completely effected, and points out that the best splints are those which are moulded to the limb after reduction. In recent cases in which the fragments cannot be brought into close apposition, and in old cases of faulty or vicious union, he advises free exposure of the seat of injury, and secure restoration of the normal relations of the fragments by fixing these together by an aseptic wire nail. Most of the ordinary fractures are dealt with in this work, and in the remarks on the treatment of each many useful and suggestive hints will be found. Special attention is paid to the treatment of fracture of the lower end of the radius, and the author's teaching on this subject seems likely to be of service in enabling the practitioner to overcome the difficulties so often presented by this common injury. The essay indicates that under the influences of skiagraphy and the aseptic treatment of wounds a revolution is now being rapidly effected in the treatment of fractures.

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[1] *Rhinoplastic Operations, with a Description of Recent Improvements in the Indian Method.* By D. F. Keegan, M.D.Trin.Coll., Dub., F.R.C.S.Eng., Indian Medical Service (Retired). London: Baillière, Tindall, and Cox. 1900. (Demy 8vo, pp. 72. Thirty-two illustrations. 5s.)

[2] *Die Eitrigen Erkrankungen des Schläfenbeins, nach klinischen Erfahrungen dargestellt.* Von Professor Otto Körner in Rostock. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1899. (Roy. 8vo, pp. 164; 3 photographic plates; 20 illustrations. 7s.)

[3] *Notes on the Modern Treatment of Fractures.* By John B. Roberts, A.M., M.D., Professor of Surgery in the Philadelphia Polyclinic. London and New York: D. Appleton and Co. 1899. (Cr. 8vo, pp. 162, 39 illustrations. 6s. 9d.)

THE GERMAN SURGICAL CONGRESS.

[From a Correspondent.]

The twenty-ninth Congress of the Deutsche Gesellschaft für Chirurgie was opened in Berlin on April 18th. Professor von Bergmann, the President, gave an address on the Development of Surgical Science and the Influence of other Natural Sciences upon Surgery. Among the members of the Society who had died during the past year he especially mentioned Sir James Paget, who had been a member for many years.

The Operative and Palliative Treatment of Cancer.

The first day was devoted to the question of cancer. The general aspects were first considered, and then the nature of cancer of the rectum and the operations for its relief; lastly, malignant tumours of the large intestines were discussed. Afterwards some papers on the surgery and pathology of the skeleton and the joints were read.

Professor Czerny (Heidelberg) read a paper on the treatment of inoperable cancers. He estimated that about 75 per cent. of known cases of cancer were inoperable, and that in Germany nearly 40,000 patients died yearly of this terrible disease. The treatment of inoperable cancer was therefore a most important question, and one which had not received sufficient attention. It was to be regretted that at the present day many surgeons lost interest in a case of incurable cancer, so that as there was no radical remedy nor operation for it, the patients were allowed to fall into the hands of quacks. Cases in which ulceration had occurred called in particular for skilled treatment. By careful bandaging and by keeping the ulcers clean much might be done to relieve the patients. The application to such surfaces of zinc chloride, by the use of gauze bandages dipped in solutions, varying in concentration from 10 per cent. to saturation, had a very good effect, and in some such cases recovery even took place under this treatment. Of course this was very exceptional, but in nearly all cases the patients were considerably relieved. In suitable cases the use of zinc chloride in solution or paste should be preceded by cauterisation or scraping. For cauterisation he preferred the actual cautery. The pain produced by the corroding action of zinc chloride did not last long, and could easily be kept within moderate limits by morphine. Subcutaneous injections of solutions of formalin were too painful. Sometimes arsenic had a remarkable effect upon these cases; it could be given internally as by subcutaneous injection, or used as a paste or ointment. Potassium iodide was of value for the verification of the diagnosis. After mentioning different applications, ointments, and lotions which had proved themselves of value as palliatives, Professor Czerny stated that organotherapy had not given him satisfactory results, but he considered the treatment by the toxins of erysipelas was worthy of careful study in order that a definite opinion on its value might be formed. The mortality due to cancer was increasing, especially in the densely populated towns, as that produced by tuberculosis was diminishing. In conclusion Professor Czerny suggested the erection of a German cancer hospital after the example of the English cancer hospital, of which he gave a brief description. The discussion was not productive of any novel views, but it it was pointed out that the corroding effects of zinc chloride were sometimes attended by the danger of destroying the walls of a blood vessel, with consequent serious bleeding.

Operative Treatment of Cancer of the Rectum.

Professor Kroenlein (Zurich) gave statistics for the last year of operations for cancer of the rectum by different methods and by different well-known operators. They exhibited great variations, owing, as Professor Kroenlein believed, to differences in the accepted indications for operation, and to different methods of operation and after-treatment. He classified the methods of operation as perineal and sacral. The perineal methods were designed for the excision of the rectum by an incision through the perineal raphé, anterior or posterior, with or without excision of the sphincter. The perineal methods were not advisable in cases of very extended disease extending high up towards the sigmoid flexure and little movable; for such cases the sacral, perineo-sacral, or, in a very limited number of cases, the abdomino-sacral method was the best. There was no one method applicable to all cases; in every case the method must be selected. Of the cases operated on 50 per cent. died of sepsis. *Post-mortem* examination of cases of cancer of the rectum in which no operation had been performed showed that in nearly 50 per cent. no metastases to other organs had occurred. In 70 cases operated on recurrence occurred in 42, but was local only. Kroenlein classified a case which had remained without recurrence for three years after the operation as a temporary success, and found that one-seventh of all operated cases fell into this class. In some of these cases recurrence occurred later. He considered that the indications for operation should be somewhat narrowed. Growths fixed in the pelvis by adhesions and those which have involved other organs, especially the bladder, should not be touched. A point of great importance was the power to retain the fæces. There might be (1) absolute continence, that is, the patient could retain fluid contents and even flatus; or (2) relative continence, the patient being able to keep back solid contents, but not fluid fæces nor flatus; and (3) incontinence. Of his own cases, 30 per cent. had absolute continence, 60 per cent. relative, and 10 per cent. complete incontinence. In order to get a good result in this respect it was very important to preserve the external aperture of the anus as carefully as possible.

Professor Rehn (Frankfort), after discussing some anatomical details, described a method of operating from the perineum. He makes two incisions one in front and the other behind the anus, detaches the sphincter, and excises the rectum without opening it, pulls down the upper end of the rectum, connects it with the sphincter, and fixes it in the external aperture with a suture. He inserts two rubber drains, one in the front and the other in the hinder wound. This method gave better drainage than the sacral methods, but he had sometimes seen gangrene of the pulled-down rectum. With this method even high tumours could be removed. It was not advisable to open the peritoneum; if it was necessary to do so it should be closed carefully again. The rectum must be amputated far from the tumour, but the muscles must be preserved as carefully as possible.

Professor Hochenegg (Vienna) said that the Medical School of Vienna adopted the widest indications for the operation. If there were no metastases in the other abdominal organs nor contraindications in the general condition, operation would be undertaken. He would operate on every cancer of the rectum, even those in which the tumour was fixed in the pelvis. He generally preferred the sacral method as modified by himself. Long preparation of the patient with laxatives or special diet was unnecessary and even unadvisable. In cases in which a free passage existed it was unnecessary, and in cases of stenosis useless. Whether the peritoneum was opened or not was a matter of no importance. The preservation of the anus involved often the danger of relapse; he preserved the anus only in cases which were very little advanced. In other cases he made a sacral anus. His mortality was 8 per cent., and his percentage of temporary success (*Dauererfolge*) was 21. He very seldom saw mortification of the pulled-down rectum after fixing it in the anus.

Professor Schurhard (Stettin) gave some details concerning the shortening of the rectum in some diseases, which made the fixing of the central end in the anal aperture sometimes difficult, or even impossible.

Professor Koerte (Berlin) discussed the operative treatment of malignant tumours of the large intestine. If the tumour formed a ring it produced narrowing of the passage with the usual symptoms, but in a good many cases obstruction was not noticeable. More than half of the cases were examples of tumours of the sigmoid flexure. Of 54 cases 19 were radically cured.

Professor Kraske (Freiburg) gave his experience of the sacral method of operation for tumours of the rectum. In some cases he found it best first to perform laparotomy and after that the extirpation of the tumour by the sacral route.

Professor Gussenbauer (Vienna) operated in all cases in which no visceral metastases were discoverable. In male patients he preferred the sacral, in female the perineal method.

Other Papers.

Dr. Stubenrauch (Munich) said that the bones of animals (dogs, pigeons, guinea-pigs) fed with phosphorus showed

thickening of the superficial layer and of the trabeculæ of the spongy tissue. Skiagraphs showed thickening of the cortical layers in workmen in match manufactories, and a very distinct dark line in the place of the epiphysial line which he had not found in other cases. It seemed to be pathognomonic of the chronic phosphorus poisoning.

Professor KOENIG (Berlin) described how he performed aseptic operations on joints without touching the field of operation with his fingers. Cases of suppurating joints he first treated by tapping and washing out. If that did not produce sufficient effect he opened the joints widely, and left them open until they were healed. He had very satisfactory results with this method even in cases of gonorrhœal arthritis.

Professor NICOLADONI (Graz) showed a case in which he replaced a cut-off part of a finger with the first toe.

TREATMENT OF CALCULUS OF KIDNEY AND URETER.

Professor ISRAEL (Berlin) read a paper at the second session on operation for calculus of the kidney and the ureter. In the course of some historical remarks he referred to the fact that Hippocrates was the first who operated on the kidneys. He then discussed the difficulties of diagnosis, and observed that even in cases in which no calculi were found operation was sometimes of great importance and benefited the patient. Operation was imperative in case of anuria due to calculus. In some rare cases the stone was eventually passed and the anuria relieved without operation, but in the great majority of cases the issue was fatal. As long as paroxysms of pain were persistent there was a slight hope that the calculi might be passed. Evidence of acute infection of a kidney containing calculi, with shivering, vomiting, and other grave symptoms rendered operation necessary as soon as possible. In chronic cases with enlargement of the kidneys atrophy by pressure was imminent, and it was advisable to operate as soon as possible. Exhausting bleeding and suspicion of malignancy were further indications. As to the question whether cases in which no paroxysms of pain well known to have occurred should be operated on or not, Israel expressed the opinion that (1) if there was pus in the urine, or (2) if there were chronic disturbances of the abdominal organs (dyspepsia, sickness, chronic vomiting, etc.), operation was advisable. It was not advisable in cases in which small round smooth calculi were passed after an attack of pain. If recurrence took place in a case which had been operated on the operation should be repeated. The two methods of operating were pyelolithotomy and nephrolithotomy. In the former, the old method, the renal pelvis was opened, but a good view of the field of operation was not afforded, and the palpation of calculi in the calices was impossible. The best method was to incise the convex surface of the kidney somewhat towards the dorsal surface. This method did not involve any danger of fistula if the ureter was pervious. In every case the ureter should be examined with a probe, and the kidney should be lifted out of the fatty capsule, but the fibrous capsule must not be wounded except for the incision mentioned, because after the wound was closed it afforded pressure—the best protection against bleeding—by its elasticity. The incision in the capsule should not be too tightly stitched together, as otherwise gangrene of the kidney might occur. In the one case Israel had lost death was due to bleeding; in this case he had pulled off the fibrous capsule. If the urine were acid, the ureter free, and the parenchyma of the kidney healthy, the wound should be closed. If there were suppuration, or if the ureter were not pervious, the wound must be left open and at first stuffed with gauze, a drainage tube being used afterwards. The course to be followed in cases of calculus in the ureter were very similar. In most of the cases it was advisable to open the kidney, and, if the stone could not be reached from the kidney, to incise the ureter, remove the stone, close the wound in the ureter, and leave the kidney open to secure the healing of the ureter. As it often happened that both kidneys contained calculi, it was sometimes very difficult to say on which side the stone was impacted. The last attack might sometimes be deceptive. The best guides were distinct pain on pressure and hardness of one side of the abdomen, but they were not present in all cases.

Professor CZERNY (Heidelberg) said that he had lost a case in which calculi were present on both sides; he operated on one side, but it was impossible to diagnose the calculus on the other one.

In the discussion which ensued it was pointed out that calculi consisting of oxalate and urate were shown by the *x* rays, those consisting of phosphates and calcium only in some instances.

Dr. ZANDERK (Berlin), from a study of anatomical distribution of the blood vessels of the kidneys, agreed with Professor Israel as to the direction in which the incision in the kidney should be made.

Dr. KUEMMEL (Hamburg) insisted on the usefulness of catheterisation of the ureters and the examination of the urine of both kidneys separately. He had examined the freezing-point of the blood in cases of diseased kidney and finds that lowering of the freezing-point indicated insufficiency of both kidneys. The normal blood froze at a temperature of —0 56°C.; —0.57 0.58 was a contraindication to removal of a kidney. If one kidney was healthy the blood (of a vein of the forearm) froze at —0.56. In chronic (alcoholic) atrophy of the kidneys the freezing-point of blood sometimes sank to —0.58° C.

Dr. BARTH (Danzig) had seen gangrene of a part of the kidney after Israel's operation. Professor Israel believed that it had been caused by too tight suture of the fibrous capsule.

PLASTIC OPERATIONS ON THE BLADDER.

Dr. ENDERLEN (Marburg) exhibited a preparation, and explained a method of forming a urinary bladder from a piece of gut.

Dr. AUSCHULTZ (Breslau) showed a case of congenital defect of the bladder in which the bladder had been replaced by a piece of small intestine.

Professor TRENDELENBURG (Leipzig) explained his method of pressing together the ossa ilii in such cases, to diminish the tension of the suture.

Dr. REISINGER (Mainz) related a case in which he made an anastomosis between a large hydronephrotic sac and the bladder. The case was perfectly cured.

TREATMENT OF UTERINE MYOMA.

Professor OLSHAUSEN (Berlin) after pointing out that the ovaries were, especially before the climacteric period, very important organs, expressed the opinion that they should always be preserved if possible. Myomata should only be operated on if they cause considerable trouble. When small, as a general rule, they should not be touched in view of the fact that they might grow very slowly. In suitable cases he removed myomata through the vagina. In one case in which the growth involved the portio vaginalis, he was able to amputate the part and to conserve the corpus. In this case menstruation appeared regularly after the fifth week. The cavity left after enucleation of a myoma should be stitched together with sutures of catgut in several layers. In recent years he had seen about 320 cases of myomata and had operated on only 16 per cent. He concluded by indicating the dangers to which the operation itself was open.

SURGERY OF THE PANCREAS.

Dr. BRENTANO (Berlin) related a case of extensive necrosis of the pancreas due to perforated ulcer of the stomach, which healed after incision of the abscess. The patient still suffered from diabetes (6 per cent.).

Dr. BESSEL-HAGEN (Charlottenburg) related a case of pancreatic cyst in which he had operated through the stomach. The patient recovered.

CHOLELITHIASIS.

Professor KEHR (Halberstadt) spoke on the subject of relapses after the operation of cholelithiasis. It was necessary to distinguish between real relapses, in which after all the calculi have been removed the return of symptoms was due to formation of fresh calculi and so-called false relapses, cases of which he had seen no instance, and which must be very rare. In most of the false relapses some been left behind at the first operation (in 4 per cent. of the cases calculi were thus left behind), or the symptoms were caused by adhesions, etc. The safest method was to remove the gall bladder, and to open and drain the hepatic duct. This method was free from danger. In his experience most cases came too late into the hands of the operator.

Professor Loebker observed that it was not the mere presence of calculi, but the consequences of their presence, which afforded indications for operation. He agreed with Professor Kehr that it was advisable to remove the gall bladder and to open the duct freely. In cases of very extended adhesions he found it necessary to perform gastro-enterostomy.

Dr. Petersen (Heidelberg) said that according to the experience of the Heidelberger Klinik it was not necessary to remove the gall bladder. If it were drained for some time it became free from bacteria.

Professor Koerte (Berlin) preferred to remove the gall-bladder.

Bottini's Operation on the Prostate.

Dr. Frendenberg (Berlin) related his experience of Bottini's incision of the prostatic gland. Two-thirds of the cases had been healed and nearly one-third relieved; the average mortality was 5 per cent. He filled the bladder with air before operating, and found it absolutely necessary to palpate the situation of the instrument per rectum before cutting. If this were not carefully done there was a risk of cutting into the prominence of an ureter or into the trigone. He had constructed a combined instrument, with which it was possible to see the cutting instrument by means of a cysto-scope.

Dr. Wossidlo (Berlin) said that he had invented a very similar instrument.

Professor von Frisch (Vienna) said that hitherto the result of the operation had been uncertain, and the detachment of the eschar might even after a considerable interval cause severe bleeding.

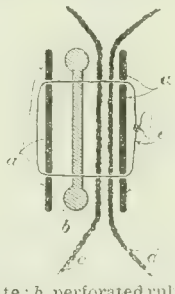
Treatment of Rupture of the Intestine.

The third session of the Congress was devoted to the surgery of the abdomen.

Professor Angerer (Munich) said that during recent years he had operated on 9 cases of contusion of the abdomen with rupture of the bowels; 2 recovered, 7 died. The mortality increased in the direct ratio of the hours elapsed after the injury. Subcutaneous ruptures of the bladder, kidneys, and other organs, without visible injury of the abdominal walls, were easily diagnosed in most of the cases; but the diagnosis of rupture of the bowels was very uncertain, and when signs of peritonitis made the diagnosis sure, it was nearly always too late to save the patient. An important aid to diagnosis was long-lasting, sometimes even increasing, shock, which went far to justify operation. Sometimes the patient felt very well after the blow for some time; in some cases the patients were even able to walk considerable distances or to work for some time; afterwards in most instances severe shock set in. Deterioration of the patient's condition, taking place some time after the injury, was always a very serious symptom. The presence or absence of pain was of no importance. An exact history of the case sometimes gave important hints. Blows by blunt-pointed instruments—as, for instance, the shaft of a carriage—very often produced rupture in persons with relaxed, thin abdominal walls by pressing the bowels against the spinal column or the walls of the pelvis; when the intestine was full it might burst by the suddenness of internal pressure. Improvement of the pulse for a short time was no argument against rupture, but if the pulse became continuously worse it was a very serious sign. The character of the respiration was an important help in diagnosis. In every case of rupture there was vomiting. Pain should not be treated by narcotics, which gave temporary relief, but increased the difficulties of the diagnosis. Sometimes a small rupture of the gut was closed for a short time by contraction of the muscular wall of the gut and by mucosa, which acted like a button, but all these cases were later on subject to the dangers of peritonitis. Contraction of the abdominal muscles was a sign of severe injury of the bowels. In a considerable number of cases micturition was difficult and painful, or impossible. Blood in the stools was often met with in rupture of the mucosa, which in many cases was followed after some days by perforative peritonitis. In 160 cases of expectant treatment of ruptures, 149 died, and 10 suffered from fæcal fistula. All such cases should be operated on as soon as possible, even during the shock. The patients should be kept warm, and the heart stimulated with camphor. It was better to use general anæsthesia by ether than to operate under local anæsthesia. As to the operation, he considered that it was advisable to make a long incision in the linea alba, and to search along the whole bowels, beginning at the plica duodeno-jejunalis. Angerer washed out the abdominal cavity with salt solution. In some cases the lacerated edges of contusions underwent necrosis, and it was necessary to cut them away before striking the intestinal wound. After such operations the abdomen should be drained.

Professor von Bergmann (Riga) read a paper on entero-anastomosis in cases of volvulus. He distinguished between cases of ileus by obstruction produced by the bowels themselves, their walls and contents, and ileus by strangulation, produced by the mesentery and dislocation of the intestine. Of all parts of the intestine the sigmoid flexure was most subject to volvulus. After some remarks on the great difficulty of diagnosis and on the palpation of large parts of the gut, only possible in some cases under deep narcosis, he expressed the opinion that resection followed by circular suture was the best method of operating, but in some cases it was necessary to make an artificial anus. In 56 cases of ileus upon which Professor v. Bergmann had operated, there had been 14 patients recover.

Professor Credé (Leipzig) described an instrument which he had invented for entero-anastomosis; it consisted of two silver plates and a rubber plate between them. One silver plate with the rubber plate was introduced into the one part of the bowels through a small incision, the other silver plate



a, *a*, Perforated silver plate; *b*, perforated rubber plate; *c*, *d*, intestinal walls; *e*, silk thread.

into the other part of the bowel or the stomach. The plates were tied together with a strong silk thread, so that the walls of the two organs were pressed together between the silver and rubber plate on the one side, and the silver plate on the other.

Dr. Steinthal (Stuttgart) mentioned a case of chronic relapsing volvulus of the sigmoid flexure in which he removed the affected parts of the bowels. The patient recovered.

Professor Rehn (Frankfort) referred to a case in which all the typical symptoms of rupture were present, but operation showed only a very limited spasmodic contraction of the gut. The patient recovered.—Dr. Szuman (Posen) stated that he had seen a similar case.

Dr. Stolper (Breslau) observed that injuries of the spine might produce the same symptoms as rupture of the gut—spinal meteorism.

Dr. Perthes (Leipzig) described an instrument for measuring the blood pressure in cases of abdominal bleeding. The observations were repeated at short intervals, a fall of pressure was pathognomonic of bleeding. A rubber tube filled with mercury was placed round the patient's upper arm, and the pressure increased by a manometer of mercury. The method depended on the pressure required to obliterate the pulse.

Dr. Kehr (Halberstadt) mentioned a case in which a second operation showed that the communication between stomach and jejunum made by means of a Murphy's button had become so narrowed as to be nearly impassable.

Professor von Eiselsberg (Königsberg) referred to several cases within his own experience in which ulcers of the stomach had healed after gastro-enterostomy.

Stenosis of the Pylorus.

Dr. Loebker said he had seen several cases of congenital stenosis of the pylorus in babies. The symptoms commenced in all these cases a few weeks after birth, and the child had

no action of the bowels, but no peritonitic symptoms; there was vomiting, with extreme wasting away. Gastro-enterostomy was successful in several cases.

Professor Kehr (Halberstadt) had operated on some cases successfully, and believed that a considerable number of cases could be saved by early diagnosis and operation.

Other Papers.

Dr. Brann (Göttingen) read a paper on inflammation of the omentum, and tumours of that structure caused by inflammation.

Dr. Krause (Altona) described a forceps *à crémaillère*, similar to that of Dupuytren, which he had devised for operating on fistula stercorialis. It leaves the lowest parts of the walls free and makes the communication in a higher place.

Dr. Bessel (Hagen) mentioned a modification of the operation for abdominal ruptures in the linea alba by dividing the rectus and its fascia in the direction of their fibres in two parts, first uniting the fascia, then of the wounds of the rectus by turning the two medial halves of it together so that the wounds can be united by means of a suture.

(To be continued.)

NOVA ET VETERA.

MORE MEDICAL HEROES OF THE '45.

Dr. W. A. Macnaughton, one of the editors of the *Caledonian Medical Journal*, has given in a recent number of that periodical the results of a further search for forgotten medical heroes of the '45. He acknowledges the help which he has received from Dr. James Neil, of the Warneford Asylum, Oxford, who has been independently making researches on the same subject. He has also received additional names from Mr. W. B. Blaikie, author of the *Itinerary of Prince Charles Edward Stuart*, and from the Duke of Atholl, who has compiled from all available sources a roll of over one thousand officers and gentlemen who held commissions in the army of Prince Charles.

In this additional list we note the name of William Balfour, to whom reference is made in Stevenson's *Kidnapped*, and again in *Catriona*. It will be remembered that the maiden name of Stevenson's mother was Balfour, and there may have been a distant relationship between him and the surgeon who marched with the Gregara clan, and cured the leg of MacGregor's brother when it was broken at Preston Pans.

We also find the name of Peter Barry, a London physician, who acted for several years before the rising as the trusted agent of the exiled Royal family, then settled in Rome. He is repeatedly mentioned in the recently published *Memorials of John Murray of Broughton*. Barry was committed to Newgate, and afterwards to the Tower, from which it may be inferred that he refused to betray his party, but of his ultimate fate nothing seems to be known.

The list also includes Dr. Farquharson, Laird of Brougdearg, who studied medicine in Italy, and completed his professional training under the rather questionable auspices of the quack Cagliostro, of whom and of whose "Pentacle of Rejuvenescence" there is copious mention in Carlyle's famous account of the Diamond Necklace. Farquharson took service as a surgeon in the Prince's army, and after Culloden was sheltered by his kinsman Farquharson of Invercauld. He appears to have escaped capture, but the rest is silence. Probably owing to his connection with Cagliostro some curious legends have gathered about his name in Braemar; he is said to have been infallible in his treatment of disease owing to his having tasted the decoction of a white serpent against the orders of his master Cagliostro, whose vengeance he escaped by a miracle. He foretold that another white serpent which would cure all diseases would be found at the medical wells of Pannanich, near Ballater. As far as we are aware, however, this precious reptile has not yet been found.

Angus MacEachin, surgeon in Glengarry's regiment, was a son-in-law of Angus MacDonald of Borradale, under whose roof Prince Charlie slept the first night after he landed. MacEachin twice risked his liberty in order to befriend him whom he looked upon as lawful king. One of the places where he hid the Prince, in the Braes of Morar, is still pointed out as MacEachin's Refuge.

Dr. Murdoch Macleod was a son of Malcolm Macleod VIII of Raasay, and was wounded in the shoulder by a musket ball at Culloden; the bullet was extracted the next day by the Dr. Palfour already mentioned. Macleod afterwards settled at Eyre, near Portree, and we get a glimpse of him in 1773, where he welcomed Johnson and Boswell on their arrival in Raasay. From his lips and those of his brother Boswell took down the narrative of the Distresses and Escapes of the Grandson of King James II, which is embodied at full length in his journal of a *Tour to the Hebrides*. Johnson, who was a Jacobite at heart, must have been specially interested to see a man who had done and suffered so much for the cause as Dr. Murdoch Macleod. Macleod himself would appear to have accepted the *fait accompli*, for one of his sons was a lieutenant in the Royal Navy, and was at Trafalgar with Nelson on the *Victory*, while another was a lieutenant in the 92nd Highlanders, and died in Egypt of a wound received at the battle of Aboukir.

Dr. John Trotter, who looked after some of the sick of the Prince's army at Tynron in Dumfriesshire, belonged to a family of which every generation for the last two hundred years has furnished medical men in unbroken succession; and as we learn from Dr. Peel Ritchie's recently published work, *The Royall Colledge of Phisitians, Edinburgh*, there are at present five members of the family practising medicine, while six of their sons are in training to follow in the paternal footsteps.

Joseph Warner, who was associated with Samuel Sharp in the lectureship of anatomy at Guy's, was one of the volunteer medical officers who accompanied the Duke of Cumberland's forces to Scotland. Another was Cowell, a young Quaker, whose zeal for the Hanoverian cause seems to have been tempered by a regard for his own interests which was not altogether to the taste of some of his colleagues. In the course of the campaign news of a vacancy at St. Thomas's reached Cowell, who at once returned to London without thinking it necessary to tell his friends of his intention, and secured the appointment for himself. By this he earned the undying hatred of Warner, who, however, was soon afterwards elected surgeon to Guy's. Cowell was the first surgeon who tied the common carotid artery, an operation which he performed in 1775. He was a Fellow of the Royal Society, and author of several work, among which may be mentioned *Cases in Surgery* and a *Description of the Human Eye and its Diseases*.

Sir John Wedderburn, who came of an intensely Jacobite family, his father having been taken prisoner at Culloden, and afterwards hanged on Kennington Common, held a position as lieutenant in Lord Ogilvy's regiment. By 1747 he had found his way to Jamaica, where he practised as a surgeon and acquired considerable wealth in trade. He returned to Scotland, and died in 1803. His son, Sir David Wedderburn, M.P., who died in 1858, was the last holder of the office of Postmaster-General of Scotland. The family is now represented in the direct line by Sir William Wedderburn, M.P. for Banffshire. James, a younger brother of Sir John, was also out in the '45, and afterwards emigrated to Jamaica, where he had a prosperous career as a medical practitioner.

Anæmia in Porto Rico.—A circular recently issued by the Board of Health of Porto Rico shows that no fewer than 2,000 persons died in Porto Rico from this cause alone during the two months of October and November last, fifty-seven municipalities reporting 1,000 deaths from this cause in October alone. The cause of this anæmia had previously been regarded as an existing malarial infection. Recently, however, it was demonstrated by Lieutenant Bailey K. Ashford, Assistant Surgeon United States Army, that this anæmia was due to ankylostomiasis, and he was able to determine the presence of the ankylostoma duodenale in 19 out of 20 cases of grave anæmia which came under his care in the Ponce Provisional Hospital.

The American Dead in the Philippines.—Since last November, when the work was begun, about 1,100 bodies of American soldiers who have died in the Philippines have been shipped from Manila to San Francisco. About 500 bodies are said to still remain in the Philippines, nearly all in the vaults of the several cemeteries around Manila. These bodies the War Department would have also removed had not the citizens of Manila objected to their disinterment during the summer months. The work of disinterment will be resumed in November.

THE MIDWIVES BILL.

The Ethics of Direct Representation.

Sir,—Dr. Glover is to be congratulated on the firm and dignified position he adopted in his reply to Dr. Toogood and the "Emergency Committee of Public Safety against Midwives Registration." Whatever may be the views we hold on this and other questions, it cannot be too emphatically understood that our direct representatives on the General Medical Council are not delegates. No really good man would consent to accept such a position if he is to be considered a delegate.

On this particular Bill there is plenty of room for difference of opinion as to the details. It seems that legislation for the protection of parturient women of the poorer classes is inevitable. Instead of trying to wreck the Bill, supported as it is by many eminent authorities, it is better statesmanship to concentrate all our efforts in inducing Parliament to insist on clauses which will keep these women as far as possible under the intimate supervision of the medical profession.

The position of direct representatives at this juncture is a difficult one. Dr. Glover is an old and tried representative of the profession. His past actions and published opinions surely justify us in trusting him to do what is best under the circumstances. He knows the opinions of all parties, and from his practical knowledge of medical politics is in a position to judge the best course to adopt to protect the interests of all concerned.—I am, etc.,

Margate, April 23rd. Bertram Thornton.

Objections to the Midwives Bill.

Dr. F. S. Toogood sends us the following correspondence, with a request for publication. The correspondence appears to begin in the middle, but we imagine that our readers will consider that, as it is, it is already sufficiently lengthy:

[Copy.]

Lewisham Infirmary,
April 16th, 1900.

Dear Mr. Horsley,—In reply to your letter to me of 11th instant, the general meeting at the Charing Cross Hotel on 12th instant, which took the name of "The Joint Committee to Oppose Midwives' Registration," hoped that the enclosed draft address of constituents to M.P.'s for their boroughs or divisions would satisfactorily define our position (in accordance with your election addresses and expressions) as not opposing the registration of midwifery nurses but maintaining the principles of the Medical Acts, and resisting the creation of an inferior order of practitioners of midwifery; and that we should have your support, both at the proposed conference at the House of Commons and also in an extraordinary general meeting to be at once convened with the same objects by requisition of members of the British Medical Association

Our highest ground for this resistance, which we are sure is not what you would wish to characterise as childish, is the danger to the living-in women you so well illustrated at the West Ham meeting by the instance of death from *post-partum* hæmorrhage before medical attendance can be procured.

With this explanation I am to convey the following "recommendation" in the report of the Executive adopted by the meeting, "That direct representatives be invited to be Honorary Presidents of the Committee," to act on public occasions as may be arranged to their mutual convenience; and to express the earnest hope of the meeting that in this crucial position we shall have the advantage of your influential support.

I am, dear sir,
Yours very faithfully,
(Signed) F. S. Toogood.

[Copy.]

25, Cavendish Square, W.
April 19th, 1900.

Dear Toogood,—After I have waded through the Andersonian effusion which you have sent me, and after I have given it the fullest consideration, I find that your Committee propose to deal with the midwives' registration question in the following manner: In the first place they have abandoned the barren negative policy of no legislation to which Mr. George Brown and others up till a month ago were pledged, and in the second place they propose now to deal with the question by reviving the old matter of midwifery nurses which was brought forward several years ago by others besides myself in the British Medical Association as a solution of the problem, which was very fairly and fully considered by the Association, and was finally rejected on vote. The same solution of the question was also handled by the General Medical Council, I think in a very fair way, and also rejected. The promoters of the present Bill before the House in the Grand Committee on Law, which has just passed the Bill through, have had the point before them, and have emphasised their intention of having nothing to do with the midwifery-nurse aspect of it by specifically altering the definition of the term "midwife." I really honestly think that to again take up as a method of dealing with the subject that which the British Medical Association and the General Medical Council and now the House of Commons have all said they will have nothing to do with deserves the appellation "childish." For a number of years I have spent a great deal of time on this subject endeavouring to free the various proposed schemes of legislation from objectionable points which would injure the profession, and I shall continue to do what I can on behalf of the profession, but I must decline with all respect to spend any time on methods which have already been dealt with and finally put aside.

Yours sincerely,
Victor Horsley.

[Copy.]

The Infirmary, Lewisham, S.E.
April 25th, 1900.

Dear Mr. Horsley,—I have written on behalf of the South-east London meeting and my joint Committee. You compel me by your remark to infer that an "Andersonian effusion" means unanswerable arguments you prefer to avoid; at least you do not attempt to deal with mine, but misstate my communication, and answer your own misstatement, which now appears an epidemic method of avoiding difficulties.

Only two and a half, scarcely "several" years ago, during your candidature for the General Medical Council, you fully and formally approved of the policy of registering midwifery or obstetric nurses, provided that such nurses were not to render any medical attendance in any case. We do not advocate or promote such a measure, but do not reject it as a compromise; and we cannot correctly be said to "revive" it because, as a compromise, we never relinquished it.

That you should cite (the Council of) the British Medical Association (for the Association in general meeting has, I believe, never abandoned registration of midwifery nurses as an acceptable compromise) or the General Medical Council, as authorities for giving up any policy, or contention, is indeed both "new and strange," and is explicable only on the supposition that you are much in need of countenance in a predetermination.

Acceptance of defeat in Parliament, incurred when we were prepared for no effective resistance, and when that defeat is far from final, would be an abject turning of the cheek to the smiter we should least of all have expected you to advise.

What is a "barren negative"? Is it a direct and determined negative to the repeal of the Medical Acts, and systematic creation of inferior orders or practitioners?

Do you mean by that equivocal stigma, that such a direct negative is "barren" because it cannot succeed? If so, the reply is obvious that this cannot be known until it is tried, and that it has not yet been tried. If tried by constitutional means it cannot fail with your powerful help; possibly not without it, if withheld.

Our policy—a policy to which, when a candidate, you fully assented—is not merely "negative."

We affirm the Medical Acts, and propose to enforce and amend the law, and so to abate illicit midwifery.

If, however, you mean that any policy is a "barren negative" which does not recognise and regulate the illicit practice of midwives as a measure of public safety, I reply that we object to no measure, or name, so long as persons not medically educated are not to be recognised as competent and entitled to perform medical functions, which would not be for the public safety, but the reverse.

Have you any objection to state explicitly: (1) Whether or not you consider diagnosis of presentation a medical function? (2) Whether you consider it consistent with public safety to entrust that function to persons not medically educated? (3) What remedy, if any, has been found for public dangers such as you indicated at West Ham, instancing that *post-partum* hæmorrhage "might kill a woman before a midwife could send for a medical practitioner"?

I hope you will have no objection to give equally plain answers to these plain questions, and to satisfy grave misgivings as to whether you are for us or against us upon the principles they involve; and that we may receive your co-operation, which we believe we are entitled to expect, in the further very vigorous and practical measures we are taking to render the maintenance of the Medical Acts very much the reverse of a "barren negative."

I am, dear Mr. Horsley, Yours very truly,
[Signed] F. S. Toogood.

A Question of Fees.

Fair Play writes: If a midwife has an abnormal case—say one requiring chloroform and forceps, or version, and if her case is a private one and unable to pay the fee of a doctor, how will she get over the difficulty? Unbooked confinements are seldom taken by medical men unless assured of their fee before leaving the house, and it is not an unusual occurrence to be told by patients that they have tried in vain for three hours at a stretch to get a medical man to attend. Will it be a greater inducement to attend on a notice from the midwife knowing that the case is an abnormal one, and that one's time, trouble, and anxiety bring nothing but weariness of body and no fee? Humanely speaking, let the framers of the Bill, if law it is going to become, make adequate arrangements so that we shall have no distressing scenes of relatives ringing up the medical men of the neighbourhood at all hours to obtain what is, and I am afraid what will be, often refused. Of course this does not apply to midwives attending cases from an institution whence they can always get help if required.

Gateshead Medical Association.

At the April meeting of the above Association the Honorary Secretary was instructed to write to Messrs T. P. O'Connor, Lloyd-George, and Sir George Pilkington, Members of Parliament, expressing the warm thanks of the Association for their attitude of opposition to the registration of midwives and to the Bill at present before the House of Commons. Also to ask them to continue their opposition to the principle of the Bill, and, failing its rejection at a later stage, to support the amendments of the British Medical Association. The Secretary was also instructed to send a statement of the attitude of the Association on this question to Mr. W. Allan, M.P. for Gateshead; also to Mr. Heywood Johnstone, M.P., and Mr. Atherley Jones, M.P.

Dr. Charles E. Flemming desires to be referred to some account of the establishment of the association in 1810 to oppose the registration of midwives, to which Dr. Rentoul refers in the British Medical Journal of April 21st, page 986.

CONTRACT MEDICAL PRACTICE.

The National Deposit Friendly Society.

The thirty-first annual report of the National Deposit Friendly Society shows that in 1899 the business has been vigorously conducted, with the result that a large increase has been made both in the number of members and the reserved fund.

The Society provides its members with sickness pay, including confinement allowances, old-age pay, funeral grants, and grace money, and the interest in its operations may be gathered from the fact that on December 31st, 1899, the number of members was 45,804, and the funds amounted to nearly £200,000. The operations of such a society present many features of interest to medical men, not the least perhaps being the evidence they afford of the great extent to which the system of the "club doctor" exists among the working classes of this country. For the most part the club doctor is paid such a trifling sum for his services that it would seem impossible for him to give a reasonable amount of attention to his club patients; and whatever opinion may be held as to the desirability of bringing the system of contract practice to an end altogether, it is at the present moment interesting to know that this Society represents a system under which the services of the medical men it employs are paid for at a rate which, if not very remunerative, is at least better than the miserable pittance which too many societies seem to consider sufficient.

In the summary of the annual report supplied to us by the General Secretary, Mr. Frederick Litchfield, it is stated that "The medical pay averages per member 2s. 5½d., or just 1s. for each day's sickness experience." And in the full report we find that the whole amount disbursed as medical pay was £5,650 13s., on a total sickness experience of 19,660 weeks. Now, the average sickness experience of an ordinary friendly society is for all ages about a week and a-half per annum, and it therefore follows that in the words of Mr. Litchfield "if the ordinary societies paid the same rate for medical attendance as this Society their annual payments per member would be 10s. instead of 4s."

That so large and successful a society as the National Deposit Friendly Society can pay 1s. a day for medical attendance on its members ought to be a final answer to those who argue that the ordinary rate, which is under 6d., is as much as societies of this kind can bear, and a knowledge of the fact may be useful to those members of the profession who are engaged in the "battle of the clubs." The sickness experience of the National Deposit Friendly Society is certainly very light, especially when the age of the business is considered, and the following table shows a decreasing rate:—

Year.	Members.	Sick and Medical Pay.
1893	11,632	£6,463
1897	25,395	£10,408
1899	45,804	£19,426

We find nothing in the report to explain this very unusual feature, and can only hope that it arises from careful selection.

The Dignity of the Profession.

Expurgans writes: In the British Medical Journal of April 14th, page 944, "Belfast" informs us that the fees paid by the friendly societies to their doctors vary from 2s. 6d. to 4s. a member per annum, the latter maximum being rarely attained. I have often wondered how our profession can talk about their dignity, when such large numbers (the majority) accept such a contemptible wage. We should either alter our methods, or expunge the word "dignity" from our vocabulary.

Fees Paid to Friendly Societies' Doctors.

B. writes: I have been surgeon to Oddfellows for about twenty years. For the first seventeen or eighteen years I was paid 3s. a member per annum, with a radius of four miles, any member beyond that radius to pay for visits on the usual scale. Three or four years ago it was voted in the lodge that I be paid 4s. a member per annum, provided I consented to an extension of the radius to five miles. This I agreed to, but the lodge took quite two years to obtain the consent of the central authorities to this, so that I was done out of two years' increase of salary. This morning I received a communication from the secretary of the lodge, informing me of the following resolution: "That the salary of the surgeon be reduced from 1s. per quarter per member to 10d., the said reduction to take place in June next." I should feel greatly obliged if any of the subscribers to the Journal would favour me with an opinion on the above facts, and also as to the position I should take up in the matter. I should be glad to have replies to this as soon as possible.

IRELAND FOR HEALTH.

Easy Travelling.

The happily-timed and most auspicious visit of the Queen to the "Emerald Isle" has naturally directed attention to the many advantages which Ireland possesses as a health resort, and an objective for a spring, summer, autumn, or even winter holiday. The floating palaces provided for the traveller to the sister country by the City of Dublin Steam Packet Company and the London and North-Western Railway Company have reduced to a minimum the discomforts of the sea-passage between Great Britain and Irelaud. Between Holyhead and Kingstown only two and three-quarter hours are spent in covering the 64 miles of sea, and the somewhat longer voyage of 70 miles between Holyhead and the North Wall, Dublin, takes but three-and-a-half hours, or rather less when made by the London and North-Western Company's new screw steamers—the *Cambria*, the *Hibernia*, and the *Anglia*.

The Climate.

The climate of Ireland is, in the fullest sense, an insular one, free from extremes of heat and cold—except on very rare occasions, and characterised by rather clouded skies, a high degree of humidity, a prevalence of brisk winds—chiefly from westerly points of the compass, and a frequent but not excessive rainfall. The absolutely largest annual rainfalls are at Kylemore, co. Galway (89.40 inches), Toffany, co. Down (72.26 inches), and Derreen, Kenmare, co. Kerry (69.40 inches). A rainfall of 40 inches a year, or upwards, occurs over about half the surface of Ireland. The east coast is relatively drier than the south and west. On the east coast, however, the precipitation reaches or exceeds 40 inches in the mountainous districts of Wicklow, Down (the Mourne Mountains), and Antrim.

On the other hand, the annual rainfall is well below 30 inches in Dublin and its vicinity, the number of "rainy days" (or days on which at least five-thousandths of an inch of water —0.005 inch— are caught in the rain gauge) being each year on an average 195 in the capital itself, with a rainfall of 28.36 inches.

In common with Great Britain and the adjacent islands Ireland owes its mild, equable climate in great measure to the proximity of the North Atlantic Ocean and its surface current of warm water, usually called the "Gulf Stream," because its head springs arise in the Gulf of Mexico. Another obvious cause of the mildness of the climate is the overwhelming prevalence of south-westerly and westerly winds, which are both warm and moist. Only in spring do these periodic "equatorial" or "oceanic" winds give place to northerly and easterly breezes, which may well be called "polar" or "continental" winds.

History and Romance.

Ireland is, in truth, a land of poetry and romance. Enshrined in the name of every hill and glen, of every mountain, brook, or flowing river, of the moorland or the wave-washed crag, often even of the busy town, is some poetic thought of deep pathos or germ of legendary lore. Many traces of the Danish dominion survive in the names of places in and near the capital. Oxmantown, a district of the city of Dublin, north of the river Liffey, was originally Ostmanby—that is, the "town of the Eastmen," or Danes. The bold promontory which forms the northern boundary of the beautiful Bay of Dublin, is called Howth, in which name it is not difficult to recognise the Danish *Hoved*, "a head." Dalkey, which bounds the same fair bay on the south-east, means "Thorn Island" in Danish, the more ancient Irish name being Delginis, from *delg* "a thorn," and *inis*, "island."

Tourist Facilities.

The most ample facilities for journeying through Ireland by rail and road and water now exist; and the serious hindrance to travel which inadequate and uncomfortable hotel accommodation presented in bygone days is fast being removed. In some of the provincial towns the hotels and inns are still second-rate, but in all parts of the country first-class hotel accommodation is to be met with in connection with the chief lines of tourist traffic. The Southern Hotels in Kerry, the Golf Links Hotel at Lahinch, on Liscannor Bay, co. Clare; the Midland Great Western Railway's Hotels at Recess, Connemara, and Mullaranny, co. Mayo; the Great Northern Railway's Hotel at Bundoran, co. Donegal, and the splendid hotel at Newcastle, co. Down; the Rosapenna and Portsalon Hotels, co. Donegal; the London and North-Western Hotel at Greenore; the hotels at Malahide, Howth, Kingstown, Bray, and Greystones, all near Dublin, with many other hostelries, leave little to be desired in respect to site, accommodation, and moderation in charges.

No part of Ireland is without attraction for the visitor. In the first place, the novelty of many things in the country has an exhilarating effect upon the jaded brain and tired frame, and the charm of the Irish character in its hospitable relations cannot fail to please. The man who shoots or hunts, the angler, and the sea-fisherman are all well catered for. And, lastly, the scenery in its beauty and variety has a character of its own.

In a delightful little book published in 1898, and well named *The Sunny Side of Ireland*, the author, Mr. John O'Mahony, thus describes the beautiful country the traveller passes through over the system of the Great Southern and Western Railway:

A beautiful country it truly is, be it approached from Athlone, its north-western gate, by the Shannon, where

In the quiet watered land, the land of roses,
Stands Saint Keiran's city fair,

or from its south-western side, in the kingdom of Kerry, where the ocean leans against the mountains, and the storm-swept peak of Skellig Michael makes the most westerly citadel of Christ in the Old World! Everywhere within its broad borders, swift rushing rivers, mirror-like lakes, and mountains tiaraed in the skies, delight the vision and gladden the heart.

Lord Macaulay, in his *History of England*, describes the scenery of the fiords and lakes of Kerry in the following passages, which are indeed a poem in prose:

The south-western part of Kerry is now well known as the most beautiful tract in the British Isles. The mountains, the glens, the capes stretching far into the Atlantic, the crags on which the eagles build, the rivulets brawling down rocky passes, the lakes overhung by groves in which the wild deer find covert, attract every summer crowds of wanderers sated with the business and the pleasures of great cities. The beauties of that country are indeed too often hidden in the mist and rain which the west wind brings up from a boundless ocean. But on the rare days when the sun shines out in all his glory, the landscape has a freshness and a warmth of colouring seldom found in our latitude. The myrtle loves the soil. The arbutus thrives better than even on the sunny shore of Calabria. The turf is of livelier hue than elsewhere; the hills glow with a richer purple; the varnish of the holly and ivy is more glossy; and berries of a brighter red peep through foliage of a brighter green.

The East and South.

The County Wicklow, which has been well-named the "Garden of Ireland," is within easy distance of the capital. East Wicklow and the coast line are served by the Dublin, Wicklow, and Wexford Railway. The mountainous districts and rich foothills of West Wicklow are reached by the Dublin and Blessington Steam Tramway and by the Tullow Branch of the Great Southern and Western Railway. Over this last great system also the exquisite mountain, river, and coast scenery of the south and south-west from Waterford to Kerry is approached. The poetic genius of Edmund Spenser has immortalised the rich beauty of the River Blackwater, sometimes called the "Irish Rhine," and has cast a mantle of romance around the neighbouring mountains and plains. In Queenstown, Glengarriff, Parknasilla, and Waterville are boundless possibilities for health resorts.

The West.

In Clare the splendid bathing and sea air of Kilkee, the golf links at Lahinch, and the stupendous cliffs of Moher are all well worth a visit. From Galway the Arran Islands, with their wonderful ecclesiastical ruins, may be visited by the venturesome. The romantic "Citie of the Tribes" is also the starting point for tours to Lough Cong, Recess, the wilds of Connemara, the magnificent natural harbour of the Killeries, from the waters of which the precipices of Muilrea tower to the height of nearly 3,000 feet; and so on to Westport and Clew Bay with its many islands, upon which the lordly Croagh Patrick looks proudly down.

North of Clew Bay the Achill extension of the Midland Great Western Railway carries the visitor first to Mullaranny, where one of the finest hotels in Ireland commands a superb view of Clew Bay, Croagh Patrick, and the mountain ranges of Connemara. Further afield, the railway ends at Achill Sound, whence well-appointed "long cars" run to Slievemore and other parts of the strange and wild scenery of Achill Island, that veritable "Ultima Thule" of the kingdom of Ireland.

The town of Sligo is the key to another district celebrated for its beauty—Lough Gill, Glencar, the majestic rocky buttresses of Benbulben mountain, the curious conical hill—Knocknarea—where the fabled Queen Maev is said to lie buried (hence the name, which means the "Hill of the Queen"), and Rosses' Point, a charming bathing place on Sligo Bay—all these places will delight the visitor.

The North.

Still further north is Bundoran, a watering place of repute, within touch of the far-famed scenery of Lough Erne and of the historic town of Enniskillen. The north shores of Donegal Bay are traversed by the Donegal Light Railway, with its western terminus at Killybegs. A few miles westward of this picturesque town are the mighty precipices of Slieve League. From Killybegs a char-a-banc runs north and north-east one hundred miles through the wild yet beautiful scenery of the Donegal Highlands, the northern *point d'appui* being the Rosapenna Hotel, on the shores of Mulroy Bay.

Further east is Lough Swilly—the "Lake of Shadows," as the name means. Here, too, ample accommodation is provided for the traveller or visitor both at Portsalon Hotel on the western shore of the Lough, and at Buncrana on the east.

The North-East.

The coast of Antrim is celebrated for its beauty, and also for its charming seaside resorts. Of the latter the best known is Portrush, near the Giant's Causeway, and not far from the thriving town of Coleraine, with its rapidly developing spinning and weaving factories. Newcastle, co. Down, is one of the most fashionable, as it is one of the most beautiful, of Irish watering places. It stands at the foot of Slieve Donard, the loftiest of the Mourne Mountains, on the western shore of Dundrum Bay. The climate is delightful, the air being exhilarating, and combining the properties of mountain and sea air in a remarkable degree.

South of the ancient and historic town of Drogheda, which stands on the river Boyne, some four miles from its mouth, the coast line is studded with seaside resorts—Laytown, Balbriggan, Skerries, Malahide, and Howth, all claiming popular favour as summer residences for those who prefer the north side of Dublin Bay. The coast line south of Dublin is charming. Along the coast are Kingstown, Dalkey, Killiney, Bray, Greystones, and Wicklow, to each of which crowds of visitors flock each summer. Many of the places we have named are also excellent winter health resorts.

Dublin.

Dublin, the metropolis of Ireland, stands at the extreme western end of the beautiful Bay of Dublin, close to the mouth of the River Anna Liffey, along both north and south banks of which the city extends for a distance of some two miles. It comprises an area within the municipal boundary of 3,733 acres, containing in 1891 25,764 inhabited houses, and a population of 245,000. But these figures by no means represent what may be called "Greater Dublin," or the Dublin Registration District. This consists not only of the city proper, but also of several populous suburban districts. The population of this "Greater Dublin" was in 1891 349,594, and its extent is 24,693 statute acres. The site of Dublin was originally not only beside a pool of dark water (*Duibhlinn*), but in a swamp, for the prefix "Anna" in the name Anna Liffey signifies literally a watery place, a marsh or swamp, annagh (*eanach*) being derived from *ean*, water. It is this untoward circumstance, perhaps, which in modern times has gained for Dublin an evil reputation for the endemic preval-

ence of enteric fever, and for a susceptibillty to diarrhœal diseases in summer and autumn.

Dublin is a handsome and, in parts, a picturesque city. Many of its public buildings can lay claim to considerable architectural beauty. Its water supply is one of the finest in the world. The city is well supplied with "lungs" in the splendid squares on both north and south sides of the intersecting river. One of the largest of these open spaces is the ancient and far-famed University of Dublin, with its quadrangles and far-stretching gardens and College Park. The grave defect, which does much to neutralise the beneficial effect of the situation and surroundings of the capital upon public health, is the housing of the poorer classes. There is now a reasonable prospect that this great question will be successfully grappled with, and that Dublin will soon be as healthy as it is undoubtedly beautiful.

THE UTILITY AND THE ETHICS OF EXPERIMENTS ON ANIMALS.

WE have received the following letter from Mr. Stephen Coleridge, Honorary Secretary and Treasurer of the National Antivivisection Society, Victoria Street, S.W.:

SIR,—The note appended to my letter in the BRITISH MEDICAL JOURNAL of April 14th by your reviewer undoubtedly calls for a reply from me, for which I crave the hospitality of your columns.

First, as to Lord Lister's statement at Liverpool in October, 1898. My contention is and always has been perfectly clear. Lord Lister in effect assured the public on that occasion that it was unnecessary to torture animals for scientific purposes since the discovery of anæsthesia, and his words, whether so intended or not, were calculated to leave the impression on the public mind that animals were not tortured in English laboratories.

I described this speech in my article in the *National Review* as "Lord Lister's Anodyne to Public Conscience." I brought forward clear evidence culled from the vivisectors' own publications that shocking tortures did take place in English laboratories. I take leave to say that if Lord Lister has never perused the *Journal of Physiology* he should not lend the weight of his name to statements as to what does or does not go on in English laboratories; and that if he has read that journal his Liverpool assurances are entirely at variance with many of its pages; for example, page 86 in Vol. xv, where Dr. Stewart describes how the dog he was dissecting alive "could not be got properly under morphia," and that he therefore "injected 20 mg. of curara into blood," and proceeded with his operations, which he describes as follows:

Isolated right vago-sympathetic below thyroid, and separated vagus from sympathetic.

This took place at 2.42 P.M., and the torturing of this miserable dog continued till it "died suddenly 7.55." And therefore I have said, and now repeat, that

Lord Lister must reconcile his statement (at Liverpool) with these confessions of the vivisectors as best he may. He is the guardian of his own reputation. He has been good enough to say that he respects the humanity of those who are struggling to put an end to these horrid practices. We ask of him no sympathy, but he might do *himself* the justice to confess that his statement at Liverpool was inaccurate.[1]

Lord Lister's silence may be very dignified, but it is quite consistent with a reluctance to acknowledge himself in the wrong, not unknown among the most exalted personages. Neither Lord Lister, nor any vivisector, nor your reviewer, has ever attempted to suggest that to cut up a dog alive without anæsthesia but with curare is not to torture it.

Next, as regards Sir J. Burdon Sanderson's remarks that I have quoted, I would remind your reviewer when he endeavours to give them an innocuous meaning that the person who used them was a part author of that fearsome volume of recorded horrors which a respectable witness before the Royal Commission described as "dangerous to society"[2] that he is the person who has himself described how he has tied india-rubber bags over the noses of dogs and then chronicled their struggles as they slowly died of prolonged suffocation,[3] and that these performances make it more probable that he meant what his words most naturally would express than something else.

Next, your reviewer is perfectly correct in supposing that when I use the word torture I do mean shocking and horrible agony, and that I most clearly and deliberately charge vivisectors with inflicting this agony upon their victims on the evidence of their own writings. Your reviewer said on March 31st:

Mr. Coleridge objects to Mr. Paget that "he simply assumes that if torture (of animals) be useful to man, it is justifiable." Well, passing by the dyslogistic word "torture," Mr. Paget does assume it, and so do most thoughtful men.

If I understand him aright, he now practically says that this passage only meant that Mr. Paget and thoughtful men, himself included, recommended the "experimental method" as essential to advance. I may venture to hope, therefore, that they will all be ready to support the Bill I have prepared, which has for its objeet the legal abolition of all torture in laboratories by enforcing the universal employment of complete anæsthesia in all painful physiological experiments.

As to the hypothetical case your reviewer put to me, concluding with a question, I beg leave to say that were a counsel to ask a witness in court, who had already denied that he was in the Bournemouth express on a certain day, whether he had bought a tea-basket at Basingstoke *en route*, the witness would be entitled to refuse to answer the question, and would be upheld in his refusal by the Court. Your reviewer's hypothetical case included an assumption I deny. He assumes that his serum is efficacious, which is begging the whole question in dispute.

With regard to Mr. Paget's letter which follows your reviewer's note, I will reply to his paragraphs *seriatim*.

1. The Home Secretary having in a moment of candour told us that serious operations are performed on animals in which the use of anæsthetics is wholly or partly dispensed with, Mr. Paget now says I have heavily blundered in supposing that the words "serious operations" mean serious operations. He declares that the real meaning of the words "serious operations" is trifling operations on the higher animals. The vivisectors must be in their last ditch before their champion could attempt to explain away a plain statement in Parliament in such a manner.

2. Mr. Paget does not give his authority for the figures he now produces; until he does so I need not deal with them.

3. I quoted the hecatomb leaflet to show that 1,000 persons treated by the Pasteur inoculations had nevertheless died of hydrophobia. The list is kept up to date by reference to all available sources of entirely independent information, including of course newspapers. I have said that the tables compiled at the Pasteur Institute in Paris include, among the figures of those treated, persons who have been bitten by dogs only suspected of rabies, and I have said that by treating enough of these persons the average mortality can be reduced to any desired percentage. Mr. Paget accidentally omits to answer that. I have also pointed out that since the introduction of the dog muzzle hydrophobia has practically been stamped out in England; but as this obvious and sensible preventive does not need any vivisection, Mr. Paget has nothing to say for it.

I have not hitherto alluded to one omission from Mr. Paget's book, from which I should have known, without searching the Government reports, that he must have been himself a licensed vivisector; I refer to the entire absence of any expression of sympathy for the sufferings of vivisected animals.

I have carefully studied for some time past the publications of the physiologists, I have read the recitals of their doings in the *Journal of Physiology*, I have read whole volumes such as Dr. Crile's describing the fearful vivisections he has performed, and I have read Mr. Paget's book defending these practices, but in all my experience of such writings I have never yet discovered a single phrase of sympathy for the animals, or a single expression of regret that such cruelties were necessary.

To a person who is not a licensed vivisector the dog, as we know it, is a being that for countless generations has been the humble friend of man, yielding, in return for our protection and companionship, a perfect faith, love, and devotion, that not seldom may put us to shame. To the vivisector the dog is merely a four-legged animal most easily available for dissecting alive.

[1] *National Review*, December, 1898.
[2] Question 1351.
[3] *Handbook for the Physiological Laboratory*, p. 320.

Is there no moral question here? Has the dog no rights? Is it not already legally protected from being used to drag vehicles? Then is it not cowardly and immoral to deliver it to be carved alive by vivisectors on the gruesome altar of scientific research? Surely a science in the pursuit of which it is necessary to reward trust with betrayal, and love with torture, can only lead us to degradation of conduct and depravity of thought.—I am, etc.,

Victoria Street, S.W., April 17th. STEPHEN COLERIDGE.

P.S.—Since writing the above letter I have seen your issue of April 21st, with Dr. Donkin's appeal to your reviewer and me not to be courteous to each other. Dr. Donkin has certainly given your reviewer a demonstration of how much simpler and easier it is to be rude to me than to answer my arguments. He mentions in safe general terms my "equivocations and misrepresentations," but he does not produce against me a single specific instance of an equivocation or a misrepresentation. I can hardly be expected to reply to mere incivility, and Dr. Donkin's deprecation of politeness in argument I feel sure lacks any endorsement from his urbane neighbours of Harley Street.

We have referred Mr. Coleridge's letter to our reviewer, who writes:

It is satisfactory to note that Mr. Coleridge and myself are agreed upon the meaning of the word "torture." Mr. Coleridge assumes, I see, the truth of a proposition which for a short time had some currency even among physiologists, namely, that under curare an animal, while bereft of all muscular power, and therefore of all power of betraying consciousness, is conscious nevertheless. This most improbable opinion was never widely held by physiologists; indeed, it obtained currency on very slender testimony. At any rate, to the best of my knowledge competent physiologists do not hold this opinion at the present day; and Lord Lister probably does not accept it. Were it true, or even probable, Lord Lister would no doubt take account of torture so inflicted, and deal frankly with the moral problem therein contained. For my part, then, in opposition to Mr. Coleridge's surmise, I do assert that "to cut up a dog alive under curare" is not—to the best of my belief—to torture it.

As regards Sir John Burdon Sanderson, I really cannot follow Mr. Coleridge when, on citing the words of the Oxford Professor, he endeavours to put a gloss upon them derived from a study of other works of his. I do not assert that the method is in itself illegitimate, but that, when confined to the columns of a journal, we must keep within the four corners of the document selected by Mr. Coleridge himself.

In the next paragraph Mr. Coleridge is correct in reducing a statement of mine to this, that by the experimental method only has any science been advanced; that this general conclusion from history is as true of physiology as of the other branches of science; that without this method our knowledge of the laws of life must stand still, or rather must fall into decay, and that therewith all hope of substantial prevention and relief of human suffering must be extinguished. I earnestly hope, and I have strong grounds for believing, that this method, with all the verification essential to it, can be followed at the present day without "torture" to animals.

As a spectator I have been familiar with physiological and pathological laboratories in England more or less all of my adult life, and I have never yet seen an animal tortured, nor any evidence of such a thing, but of course I cannot allege a universal negative. Whereupon Mr. Coleridge asks me if I am prepared to support a Bill to enforce the universal employment of anæsthesia in painful experiments. For reasons of obvious convenience I have used the first person in this argument, but it must not be forgotten that I do not thereby avoid the responsibility under which I write as a representative of the BRITISH MEDICAL JOURNAL. The policy of the JOURNAL is not to be determined by one humble individual in its ranks, but I may perhaps go so far personally as to say that were such a Bill before me it would have my full and benevolent consideration; but I frankly add that if the Bill were likely to arrest or gravely to hinder investigation into the laws of life I should, however reluctantly, oppose it.

I am amused by Mr. Coleridge's wily evasion of my "hypothetical case;" if he will not answer it he must take the consequences of evasion. Mr. Coleridge knows that the discussion between us is one not of fact but of opinion, and that the case dealing with fact, which he opposes to it, is no parallel. As a counsel Mr. Coleridge, in dealing with an expert, would put such a hypothetical case as mine, would insist upon a direct answer, and in default of such answer would rely upon the inference of the Court that the witness could not answer. Nay, to take Mr. Coleridge's case: if a witness had denied he was in a certain Bournemouth express, yet, if counsel were instructed that the witness had bought a tea-basket on that journey, and if the counsel had respectable evidence behind him to this effect, the question would assuredly be allowed. Far more assuredly is the hypothetical case permissible in a matter of expert evidence and in matters of opinion.

Now I am instructed that diphtheria is subject in great measure to antitoxic serum—that if given before attack the serum will prevent it, and that if given in the earlier stages and in sufficient dose it will mitigate an attack. My witnesses are unimpeachable and innumerable. I will cite but a few of those whose evidence is before the public. In England, out of many representative men, I will produce Dr. Goodall, of the Homerton Fever Hospital, from Berlin Professors Baginsky and Heubner, from Munich Professor Ranke, from Graz Professor Escherich, from Paris Professor Comby, not physiologists, but Professors of the Diseases of Children, who number daily under their care cases of diphtheria by the ward full. In the United States I will name Dr. Jacobi, Professor of the same subject in the Columbia University; and it is not impertinent, I trust, in this place to add, one of the gentlest and tenderest of men. He, in his work on the *Therapeutics of Infancy* (Philadelphia, 1896), discusses the serum therapeutics fully, cautiously, and without prepossession, and he is brought to the conclusions I have already formulated.

Against this testimony, so far as I am aware, the voice of no expert has been heard. Professors Ranke and Baginsky have told me that since the introduction of the serum the whole aspect of their diphtheria wards is changed. Suffocation and agony, once so pitiable and distressing, are almost banished. Such expert evidence can be multiplied indefinitely; and Mr. Coleridge, I am sure, does not pretend that his personal opinion is worth anything in the matter. With such witnesses behind me, then, I claim once more the right to a direct answer to the question put now for the third time. This serum, discovered and continuously supplied by operation upon animals, we will assume, for the present at any rate, to be efficacious; that this is no unreasonable assumption I have shown. Now is a parent or guardian who is opposed to vivisection, and at liberty therefore to refuse the serum in his own case, justified, if on behalf of child or ward exposed to diphtherial infection or attacked by the disease he decline the remedy on moral grounds; and if the attack end in death, is he free from all moral responsibility? To this fair question I ask again, as I have a right to ask, for a plain answer of Yes or No.

THE REVIEWER.

THE "ZOOPHILIST."

SIR,—You allowed me, recently, to answer Mr. Stephen Coleridge's article in a recent number of the *Zoophilist*. Let me now give examples of the general style of that journal. They are taken at random from some odd numbers that were at hand; and from those pages only for which the editor is responsible. First, may come instances of the *Zoophilist* in a playful mood:

1. "The *Lancet* appears to keep a tame theologian in the office, or possibly the office boy reads the *Catholic Times*."—July, 1896.

2. "Experimenters have established the fact that all warm-blooded animals, except the donkey, are victims to tuberculosis. Why the donkey escapes our researchers cannot say. Perhaps the act of braying has something to do with his immunity."—June, 1898.

3. (Of the spread of malaria by mosquitos.) "The scientists who are bitten by this fad propose to kill all the mosquitos by pouring petroleum on the swamps and stagnant pools where the insects most do congregate, but why not destroy them by putting salt on their tails?"—November, 1899.

4. "The prices of the 'summer serums' are 'marked down,' as the drapers say. The autumn fashion will be enzymes."—October, 1899.

5. "Good old bacteria, they are not so black as they are painted after all."—January, 1900.

Next to these "fool-born jests" may come the things that are offensive, but not exactly brutal:

1. "No wonder that bacteriological institutes spring up. There is money in the business."—June, 1899.
2. "Thimble-rigging is not 'in it' with this sort of thing."—December, 1898.
3. "Horse-juice is cheap to-day."—January, 1899.
4. "If the patient live long enough for the operator to take his fee, is not that a successful case?"—November, 1898.
5. "Our own scientific method is essentially different (from witchcraft in Central Africa). With us the doctor comes before instead of after the funeral, and his inoculations are usually the cause instead of the consequence of the disease."—June, 1898.
6. (Of the "scientific physician.") "He pours without inquiry any filth produced by Koch, Pasteur, and Co. into the life-stream of his unfortunate patients."—June, 1898.
7. "Many medical men are subject to the influence of the 'half-crown bacillus. For notifying cases of diphtheria to the sanitary authorities the doctors are paid a half-crown fee. If the ravages of this money-bacillus be interfered with, bacteriology will be unpopular."—February, 1899.

Next, things that are both offensive and brutal:

1. 'The Boulevard de Vaugirard in Paris has just given place in name to the Boulevard Pasteur. By and by, and rather sooner than later, Pasteur will be forgotten, or despised, or both."—October, 1896.
2. Do the ghosts of the 500 victims of the inoculations hover round the tomb, we wonder?"[1]—December, 1899.
3. (Of the death of a student from accidental inoculation during his work). "It is well for experimenters to bear in mind that even the 'germ will turn.'"—June, 1896.
4. (Of the death of a doctor from tetanus from an experiment made on himself). "We have no right to complain that experimenters kill themselves after this fashion."—December, 1898.

All these sixteen paragraphs occur in the "Notes and Notices," for which the editor is responsible. And the small print—letters, lectures, reports of drawing-room meetings etc.—contains things so bad that it would be unfair to hold even the editor responsible for them. With such gross faults of style, "Notes and Notices" are naturally vague as to matters of fact:

1. "There is no such thing as antitoxin; as the *Medical Brief* for August says, 'its existence never has been and never can be demonstrated.' It is simply a nasty mixture of blood serum with carbolic acid. If we call it carbolate of albumen we shall be scientific, but the albumen only serves to damage the carbolic acid; water would dilute it better, but that would spoil the trade."—September, 1898. (The *Medical Brief* is an American journal).
2. "No experiments on all the millions of animals sacrificed in the scientific laboratories have saved forty, nor even four, human lives."—January, 1896.
3. (Of inoculation against typhoid fever). "It is a crime, and the perpetrators should be prosecuted as conspirators against the nation. The undiscriminating public confides in these scientists, and the soldiers bare their breasts to the inoculating syringe, believing it to be for their good. Yet that inoculation is an attack on the man's vital power, and can do no other than pave the way for disease or death."—February, 1900.
4. (Of inoculation against plague). "This filthy diseased liquid is to be forced upon and into the Hindus under pain of an accusation of rebellion against the imperial authority."—January, 1899.

Such is the style of the *Zoophilist*. Take for final instance the recent article by Mr. Stephen Coleridge, the honorary secretary of the Victoria Street Society:

1. "Perhaps I shall be told that the cholera of the Far East and the cholera of Somerset House are totally different diseases."
2. "No one, of course, could doubt these performers' confident belief in their own nostrums, and it is, therefore, disappointing to find that the figures and statistics offered us are in every case compiled by themselves."

Yet, though he is thus careful about statistics, he gives the death-rate of diphtheria (1897) without giving the case mortality; and actually dares to appeal to that notorious leaflet, "M. Pasteur's Hecatomb." It is amazing that the members of the Victoria Street Society should suffer the *Zoophilist* to represent them, and to drag their cause through the mud in this way.—I am, etc.,

STEPHEN PAGET.

THE FRIENDS ON VIVISECTION.

SIR,—Although I have declined for personal reasons to continue the controversy with Dr. Dukes, to which he alludes in the BRITISH MEDICAL JOURNAL of April 14th, perhaps I may draw your attention to one point. He asserts that I have been induced "to withdraw or qualify nearly the whole of" the "offensive pamphlet." If so, how is it that he cannot get me to own that the "charges" of that pamphlet were unwarrantable?—I am, etc.,

Croydon, April 24th. LESTER REED.

[1] The reference here is to M. Pasteur's tomb. The 500 victims are of course reckoned by the *Zoophilist*.

MESSRS. HUTCHINSON are about to publish a diary of the Siege of Kimberley, by Evelyn Oliver Ashe, M.D.Lond., F.R.C.S.Eng., Surgeon to the Kimberley Hospital

DEATHS FROM ANÆSTHETICS.

IT is well known that a considerable number of deaths occur every year during or shortly after the administration of anæsthetics, and especially of chloroform. It must be confessed that this is a very unsatisfactory state of things, and that the means which can be taken to diminish this mortality is a subject which calls pressingly for the attention of the profession.

Most of the cases, probably all, are the subjects of inquiry by coroners, but it cannot be said that very much light has hitherto been shed upon the subject by such inquiries. The failure to obtain more satisfactory information is probably due to a large extent to the fact that the majority of coroners in this country are not medical men. The matter to be inquired into is essentially a medical question, and we are therefore glad to see that Dr. Danford Thomas, coroner for Central London, has given his attention to the matter, and has drawn up a schedule of questions which it is proposed should be answered by the medical practitioner who administered the anæsthetic in any fatal case. The schedule is somewhat formidable in length, but there can be no doubt that the accumulation of evidence of this kind would eventually supply a mass of information, which if carefully analysed is likely to be of great value. The schedule, which is to be handed to the coroner at the inquest, contains the following questions:—

1. What anæsthetic or anæsthetics were administered, and what influenced your choice?
2. Where and when was the anæsthetic administered? State if in an operating theatre, casualty room, out-patient department, or private house?
3. What was the temperature of the operating room? Had the room, previous to the operation, been well ventilated?
4. Was the anæsthetic given by artificial light? State what kind. If gas, was the flame exposed?
5. For what purpose was the anæsthetic administered? State nature of operation, with name and address of surgeon operating.
6. How many patients were placed under anæsthesia by you that day, and how much time was occupied in producing complete anæsthesia in each case?
7. Was there any, and if so what reason, for administering the anæsthetic quickly?
8. How was the anæsthetic administered? If by means of an inhaler, state what kind and make.
9. How was the mixture of air with the vapour of the anæsthetic secured, and in what proportion?
10. What quantity of the anæsthetic was used?
    (*a*) From the beginning of the administration until complete anæsthesia was produced.
    (*b*) From then until the administration was stopped.
    (*c*) Was the anæsthetic applied by drops or by measurement?
11. How was the deceased prepared for the anæsthesia (*re* food, clothing, etc.)
    Was there any mechanical or other obstruction to the respiration?
12. What was the condition of the heart, lungs, and kidneys of the deceased, previous to the administration?
    Were you satisfied that the patient was in a safe condition to be placed under the anæsthetic?
    Had the patient previously been under anæsthesia?
13. Was the deceased, at the time of the administration, suffering or recovering from any acute or chronic illness, or from alcoholism?
14. Was the deceased excited or violent during the first stage of narcosis?
15. Was the pulse and respiration watched during the administration, and, if so, by whom? State the conditions observed.
    What was the state of the pupils, and of reflex irritability generally?
16. At what period during the administration of the anæsthetic was the first symptom of impending death noticed? What was it?
    Did deceased vomit at any time? If so, when and how often?
17. Did the deceased die during the administration of the anæsthetic? If so, how long after it had been discontinued?
    Was the operation then completed? If so, for how long?
18. What efforts were made to restore animation, and how long were they continued?
19. To what immediate cause do you yourself attribute the sudden death of the deceased?
20. In how many cases have you given an anæsthetic previously? If any fatal cases, say how many?

RAILWAY AMBULANCE COMPETITION.—At the Ambulance Challenge Prize Competition, held at Crewe, on March 29th, in connection with the London and North-Western Railway, Surgeon-Major Marshall and Dr. Trimble acted as judges. The championship was won by the Wolverton team, with 492 marks out of a total of 600. Five practical questions were first given to be answered *vivâ voce*; the men were then confronted with five extemporised patients, who, although able to stand, needed active treatment; they were next called upon to treat a prostrate patient supposed to be suffering from a severe fracture and wound of a large artery; they were finally required to attempt to resuscitate an apparently drowned person. The work done was highly creditable both to the teams and to their instructors.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

Subscriptions to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, APRIL 28th, 1900.

THE CONSUMPTION OF ALCOHOLIC BEVERAGES FROM AN INTERNATIONAL STANDPOINT.

The figures given by Mr. H. Bence-Jones, in a paper read before the Royal Statistical Society on April 24th are full of interest for all classes. They possess a special interest for the medical profession as well as for the temperance reformer and the sociologist. Without attempting to moralise upon them, we shall content ourselves with stating their salient features. As brandy is still the spirit which is chiefly prescribed in acute illnesses, it is interesting to note on what an increasing scale this is prepared from cider, and not from its normal source in wine. The production of cider in France in recent years has approached that of wine, and in some years almost as much cider as wine has been converted into brandy. The percentage proportion of brandy prepared from wine in France has fallen from 31.9 per cent. in 1876 to 1.9 per cent. in 1898. In the latter year, of the total quantity of spirit distilled in France, 37.2 per cent. was derived from beetroot, 29.4 per cent. from molasses, 28.4 per cent. from farinaceous substances, 2.3 per cent. from waste products, lees, etc., 1.9 per cent. from wines, 0.4 per cent. from cider, and small proportions from other substances. Physicians prescribing brandy may well bear these facts in mind.

Next, as to the relative amounts of wine, beer and spirits consumed in different countries. Of wine, France consumes *per capita* of the population on an average 24 gallons, Italy 20 gallons, and Spain 18 gallons. In the United Kingdom the average of a series of years from 1885 to 1898 shows that the average consumption of wine *per capita* has varied only between 0.36 and 0.41 of a gallon. The fluctuations in consumption of wine from year to year are remarkably small. Of the net revenue of 34 millions sterling derived from alcoholic drinks, only one-twenty-fifth part is contributed by wine.

The consumption of beer is quite another story. It has advanced in this country by leaps and bounds. Between 1885-6 and 1897-8 the consumption *per capita* has risen from 27 gallons to over 31½ gallons a year. It is unfortunately impracticable to separate England from Ireland and Scotland; if this could be done England would occupy a much higher position among the beer-drinking countries. During the same period the consumption of beer in Germany rose from 19½ to 26 gallons a head, so that although the average amount is hitherto less in Germany than in the United Kingdom, the ratio of increase is double. In Germany, as in the United Kingdom, it is desirable to separate different portions of the empire, and happily this is practicable for the statistically-minded Germans. Germany owes its reputation as the beer-drinking country *par excellence* to Bavaria, where the consumption of beer is no less than 56 gallons a head. In Wurtemberg it is 43 gallons, and in Baden 36, while in the Baltic provinces spirits take the place of beer. Belgium stands first as a beer-drinking country, with 45 gallons a head; next comes the United Kingdom, approaching 32 gallons; Germany, with 27 gallons; Denmark, 20 gallons; Switzerland, 15 gallons. The United States, Sweden, and Austria-Hungary come close together with 13, 10, and 9 gallons respectively. France and Norway each consume about 5 gallons a head; other nations scarcely touch beer.

Denmark tops the list as regards spirits with a consumption of over 3 gallons a head. In France, Germany, Austria, Holland, Belgium, and Sweden the consumption of spirits is nearly 2 gallons a head; while in the United Kingdom, the Russian Empire, the United States, and Switzerland the approximate amount is 1 gallon a head. In the United States during the last four years the consumption of spirits has been persistently below 1 gallon, and in the four preceding years persistently above it. With this exception the consumption *per capita* in the different countries has only varied to a slight extent. These figures bring out the important fact that, taking the total consumption of alcoholic drinks, it is a question in nearly every country almost entirely of home and not of foreign production, imported drinks bearing a very small proportion to those produced at home.

We must not omit from our review of Mr. Bence-Jones's statistics those relating to "Greater Britain." The Canadian statistics show that the inhabitants of the Dominion drink less of the various kinds of alcoholic beverages than the inhabitants of any country in the world which has reliable statistics, and surpass even Norway, the inhabitants of which are the most abstemious people in Europe. In the other colonies very little alcohol is drunk. The comparison of Canada with the United States brings out some interesting points. In Canada the consumption of spirits declined from 0.95 gallon in 1890 to 0.55 of a gallon in 1898; in the States it declined from 1.17 to 0.92 gallon in the same interval. The figures as to consumption of coffee throw a useful sidelight on social conditions. Thus in the United States the consumption of coffee was 8 lbs. a head in 1890, increasing to 11 lbs. a head in 1898; while in Canada it was 0.64 lb. in 1890, and 0.97 lb. in 1898. The figures should be contrasted with the consumption of less than three-quarters of a pound of coffee a head in this country, of 3½ lbs. in France, and 5 lbs. in Germany.

Statistics are oftentimes wearisome, but the preceding may safely be said to be interesting to all. They tell their own story, and whatever deductions may be drawn from them, they bring out facts which deserve careful consideration.

Medical Practitioners in Vienna.—According to recently-published statistics, the number of medical practitioners in Vienna at the beginning of the present year was 2,336 in a population of 1,617,160. This gives a proportion of 1 practitioner to 692 inhabitants.

THE UNIVERSITY OF LONDON.

On May 9th the presentation of degrees conferred during the preceding year by the University of London will take place, as already announced, at the new offices of the University in the Imperial Institute Buildings. His Royal Highness the Prince of Wales, who has shown great interest in the accommodation of the University in its new home, has consented to be present, and it is understood that the scholars and prize winners will be presented to him by the Chancellor, Lord Kimberley. Sir Michael Foster, the new member for the University, is expected to speak. A few weeks later the University in its present constitution will cease to exist; the new Senate will be elected and existing senators will be reduced to being Fellows for life, but stripped of all executive capacities.

We observe that activity is already being displayed in various directions in regard to the composition of the new governing body of the University. Under the new constitution the graduates in Convocation will elect sixteen members of the Senate, and these members, with the Chancellor, the Vice-Chancellor, the Chairman of Convocation, and nine other members of the Senate to be elected by the Senate, will form the Council for External Students, which will advise the Senate upon all matters affecting the regulation and conduct of the examinations for external students including the equalisation, as far as possible, of the standards of knowledge and attainments prescribed for the degrees conferred upon internal and external students respectively, the appointment of examiners for such students, and generally upon all matters relating to external students. This Council will therefore have to do mainly with the continuation of the work which the University has hitherto done. It is therefore of importance that the persons to be selected by Convocation to represent it on the Senate should be chosen after full consideration and in complete understanding of the importance of the duties with which they will be entrusted. To this end a University of London Graduates Association has been formed, and will seek, we are told, to secure the return of graduates who, whilst desirous of aiding the development of University teaching in London, are yet anxious that the existing work of the University should be continued. The President of this Association is Mr. Fletcher Moulton, Q.C., M.P., and it might, perhaps, have been better had the members of the Provisional Committee been more representative of the various opinions upon University organisation which have found expression during the prolonged debates on this matter. The founders of the Association, however, express the desire that its membership should not be confined to graduates who have in the past taken any particular line, although it would be inconsistent with the objects of the Association to ask for the co-operation of those who would regard the interests of the external students as of secondary importance, or subordinate them to those of the internal students.

The Faculties, which will consist of the teachers of the University, will likewise elect sixteen members of the Senate, and these with the Chancellor, the Vice-Chancellor, and one member of the Senate elected by it, will form the Academic Council, whose function it will be to advise the Senate upon any matter relating to the internal students, and we understand that meetings of the Faculties will shortly be held for this purpose.

The twofold change in the University of site and constitution occurring contemporaneously, will probably for a time dislocate some of its work, but the infusion of new elements into its composition will, we make no doubt, be followed by increased vitality and expanded usefulness.

It appears that a few arrangements have yet to be completed in order to ensure the comfort and convenience of graduates and undergraduates in the Imperial Institute buildings. In some quarters a more complete and absolute severance from the associations of the Imperial Institute, which have not been always of an academic character, have been desired. We learn that the road in which the main entrance is situated will probably be rechristened University of London Road, in place of Imperial Institute Road; and attempts are being made by a Committee of Convocation to ensure prior rights for graduates in those portions of the building not exclusively devoted to the University. The supply of refreshments, an important matter in view of the hundreds of candidates who congregate for the preliminary examinations, is not all that could be desired, and is apparently in the hands of a syndicate whose agreement with the Institute authorities has yet some years to run. We are yet in the dark as to the final arrangements made between the Office of Works, the Treasury, and the Senate, but we trust that the needs and the comfort of students of limited means will receive the attention they deserve.

PUBLIC SANATORIA FOR CONSUMPTIVES OF THE POORER CLASSES.

The provision of sanatoria for the open-air treatment of consumption tends to fulfil two important requirements—these institutions benefit not only the individual sufferer from the disease, but they serve to prevent the spread of tuberculosis, and are thus also of advantage to the nation at large.

The success which has attended the hygienic treatment of consumptives in sanatoria justifies the foundation of such institutions for the large number of sufferers from tuberculous disease amongst the poor, whether by private philanthropy or by public authorities. As a means of preventing tuberculosis sanatoria probably furnish less valuable aid than would institutions for the reception of advanced and incurable cases of consumption. Nevertheless the gain to the community by the cure of early cases of consumption amongst the working population is considerable, and would *pro tanto* diminish the number of advanced cases, which are so dangerous to others. Private sanatoria are primarily established for the benefit of the individual sufferer, and can after all only provide for a small number of the more wealthy class. Amongst the richer classes the danger to the community from the individual consumptive is not great, for he generally puts himself under medical care, and his means allow of the carrying out of such precautionary measures as his medical adviser suggests.

There is, however, a real danger to the community from the poorer patients, whose poverty prevents their isolation,

whose ignorance causes neglect of precautionary measures, and whose families and neighbours are specially susceptible to infection from the unhygienic conditions under which they live. It is, therefore, by providing for the poor that the greater safety of the community is secured, whilst the individual is restored to his place amongst the workers. Hitherto, however, little has been done in this direction. The special hospitals for consumption are few in number, and can provide for a very small proportion of the cases which need treatment away from their homes. Even those who gain admission in the early stage of the disease cannot be kept in hospital sufficiently long for cure to be completed. The necessity for sanatoria for the poorer classes, where patients can remain for the long period which is generally necessary for complete cure, is recognised, but few have as yet been actually established. Owing largely to the liberality and energy of Dr. Paget-Tomlinson of Kendal, the county of Westmorland has now a sanatorium for the poorer classes of consumptives belonging to the county. Only those in the earlier stages of the disease are admitted, the primary object being the cure of the disease. There is accommodation for 16 patients, 8 male and 8 female, and the necessary sum to cover the cost of maintenance for a trial period of five years has already been promised. The sum of £50 will secure a free bed for one year, and the 16 beds have been subscribed for by the town of Kendal (4), Windermere and Bowness (2), the Kendal Corporation (1), S. W. Rural District Council (1), Board of Guardians of Kendal Union (1), Sedgwick and Endmoor (1), Arnside, Beetham, and Milnthorpe (1), Ambleside District (1), Kirkby Lonsdale (1), Appleby and Kirkby Stephen District (1), Burneside (1), Heversham and Levens (1). Dr. Paget-Tomlinson has equipped the sanatorium throughout and given the rent for five years. The Westmorland Sanatorium was opened on March 8th by the Earl of Derby, and we may congratulate Dr. Paget-Tomlinson on the successful establishment of an institution of great public benefit, which owes its existence mainly to his efforts and liberality.

We notice also that at the annual meeting of the Devon and Cornwall Branch of the National Association for the Prevention of Consumption, held at Plymouth under the presidency of the Mayor, on April 20th, the Council presented a report showing the steps which had been taken to organise the work of the prevention of consumption throughout the district. A subcommittee had considered the local needs for a sanatorium for the poorer class of consumptives, and it was proposed to formulate a scheme and gauge the amount of support it would receive from county and municipal councils and other bodies. This proposal was received with favour by those present at the annual meeting; and, seeing that the death-rate from consumption in Devon and Cornwall is higher than the average, it seems desirable that a sanatorium for the treatment of consumption amongst the poorer classes should be established. The Honorary Secretary of the Branch, Dr. Bushnell, is taking great interest in the scheme, which will in all probability be brought to a successful issue.

The Philosophical Faculty of the University of Göttingen has awarded the Volbrecht prize for scientific research to Dr. Gegenbauer, Professor of Anatomy at Heidelberg. The prize is of the value of 12,000 marks (£600).

THE PRINCE OF WALES.

At the last meeting of the Council of the British Medical Association, it was resolved to send a telegram to the Prince of Wales congratulating him in the name of the Association on his escape from the dastardly attempt on his life. A telegram in suitable terms was sent, and the following reply has been received by the President of Council: "I sincerely thank the British Medical Association for kind congratulations on escape in recent attempt at Brussels.—Albeert Edward."

THE ARMY MEDICAL REPORT FOR 1898.

The issue of this elaborate report a few days ago, scarcely behind the average date of its annual appearance, is a proof of the efficiency of the Director-General's staff, considering the very heavy duties which must have been thrown on his office during the past six months of the war. This fortieth volume displays the same extreme accuracy as its thirty-nine predecessors. Its statistics and facts are marshalled with the usual clearness, and the volume is enriched by twelve valuable appendices, which extend over 200 pages. The following are the broad facts set forth in comparing 1898 with the averages of a previous decade. With an army strength a little greater, the ratios of sickness per 1,000 of strength in 1898 showed an increase in certain directions over the decade; the increases were in admissions, deaths, and invaliding, but not in those of constantly sick, or the duration of cases. The increases, excepting those in China and the Straits Settlements, were almost wholly connected with the Khartoum expedition and the operations in Crete; and are reflected in the returns from Egypt, Malta, and Cyprus. Enteric fever and dysentery were the chief elements in the increase. In 1898 the ratio of admissions per 1,000 of strength were 981.9, against a decennial average of 966.3; the deaths 10.82 against 8 86, and the invaliding home 41.41 against 24.55. The health of the army in India did not depart from the average. It is satisfactory to note that both at home and abroad inefficiency through venereal diseases shows a small decrease. Recruiting was on an average scale during 1898; returns show a slight increase in the number of recruits raised in England and Scotland, with a small proportionate diminution from Ireland. The volume is unusually rich in important appendices, consisting of a number of reports on various medical subjects. Among them are contributions from the Netley Professors, Colonels Notter, Macleod, and Stevenson, and by Majors Dick and Semple. Surgeon-General Taylor contributes a very interesting report on the Soudan campaign, in which the chief cause of disease seems to have been bad water. There are also excellent reports on various operations in West Africa, contributed by Majors Wilson, Sutton, Burke, and Hosie, Royal Army Medical Corps.

THE MEDICAL SERVICE AND THE WAR.

The third, fourth, and fifth letters from the Capetown correspondent of the *Times* relate chiefly to the organisation and administration of base military hospitals. With the laudable object of ascertaining the extent of the "adaptability of the Army Medical Department to admit civil aid into its organisation in war time," without at the same time confusing the efforts of "public and private philanthropy to send self-contained hospitals, ships, ambulances, and such like to the British forces," the correspondent contrasts Base Hospital No. 3 at Rondebosch with the civil Portland Hospital at the same place, which was the first of its kind at the seat of war. The army hospital, of over 500 beds, he describes as in all its parts a model of military precision, while the civil Portland Hospital of over 100 beds, if less rectangular and regular in form, has merits of another kind. The matters he touches on do indeed open up questions both military and civil of a wide, difficult, and even delicate character.

These able and entertaining letters are timely contributions to matters of truly national importance. We are able to endorse many of the writer's conclusions; but certain of them, especially those relating to medical administration, are apt to be misconstrued, to the detriment of the Army Medical Service. The writer holds that the civil aid, which is necessary and to be encouraged, can only in war be properly applied at base hospitals, while the field hospitals in the fighting line must be manned by the regular medical service. In contrasting the military with the civil hospital he declares that the "tortoise" tents of the Portland "reign triumphant" over the military marquees in being half the weight, and yet affording greater floor-space; nevertheless the greater height of the marquee permits a deeper vertical air-space, which is of much importance in a hot climate. The chief difference between the two hospitals lies, however, in the much more expensive *personnel* and equipment of the civil, on which the expenditure had been on a scale which no usual Army Estimates would cover. The chief members of the medical and surgical staff of the Portland are paid at the rate of £2,500 a year, a sum £1,000 greater than the salary of the Director-General of the Army Medical Service himself. By such lavish expenditure the hospital, it is said, secures a "higher class of professional assistance." The correspondent does not seem to wish to disparage the Army Medical Service in making such comparisons. That service is at least on a high average level with medical men in civil life, and the public could hardly look for more. The correspondent is perhaps most likely to be misunderstood in his somewhat ambiguous description of the administration in military hospitals. He describes the two moving spirits of a base hospital as a P.M.O. of the rank of colonel, with a secretary and registrar of major's rank, who command and administer without directly taking part in professional work strictly so-called. That work devolves on two senior officers, the medical and surgical heads respectively of divisions. That arrangement the correspondent considers faulty, inasmuch as the administrative seems to be considered higher than the professional duty. Clearly, a great military hospital wants no little commanding and administering; and the time of the two officers described must be fully occupied with such work. It is the administrative and not the professional work which, he says, leads to promotion; but we are not prepared to accept this statement without qualification. The colonel must himself have gone through the mill like his divisional subordinates, and by that means earned his promotion. It was an old stock argument in former days, of those who, jealous of medical officers having the smallest authority even in their hospitals, said they should be relieved of all administrative functions; in the nature of things that is not feasible. The result of dual authority in a hospital, when tried, was the direst confusion and inefficiency; no one, we hope, could now even contemplate any such retrograde action. A soldier in hospital is still a soldier; and in his own best interests, and in the interests of discipline, he should not be allowed to lose sight of that fact. On this account a senior army medical officer is appointed to a civil aid hospital to maintain the necessary military link. The correspondent also tilts at the principle of seniority dominating merit; but it is difficult to see what better system could be adopted than seniority tempered by selection. Promotion purely by merit would engender suspicions of favouritism, and make army service so distasteful and uncertain that few would care to enter it.

MR. KIPLING ON A HOSPITAL TRAIN.

MR. KIPLING also is among the prophets who have risen to bless the splendid organisation for dealing with the sick and wounded in South Africa evolved by the officers of the Royal Army Medical Corps. In his four letters which have been published in the *Daily Mail*, the last on Wednesday, he gives a picture drawn with the graphic pen which probably he alone among modern living writers can command, of the journey made by one of the hospital trains from Capetown north to Modder Station, to bring down some of the wounded from Paardeberg. He describes how, when the waggons came down from the hospitals "the doors of the cars flew back; orderlies went to their stretchers: the side boards were ripped out of the bunks: the cook put the last flavouring to the big stock-pot; the sisters stood to attention, each in her ward—a doctor and a sister are responsible for half a train apiece—and the blessed morphine needles were made ready. They want rest from pain, our wounded. Food and clean sheets will often bring it, but on occasion we must help Nature." He describes the long journey down to Wynberg, the good-humoured, even humorous, talk of the wounded, the quiet efficient work of the surgeons, and the beneficent tyranny of the sisters. But the letters should be read by everybody who takes any interest in the wounded and the people who look after them.

THE DISEASES OF SOUTH AFRICA.

DR. KOLLE, who has just returned from South Africa where he has been studying bovine plague, has given the Medical Society of Berlin the benefit of his views as to the diseases of that part of the world. In beginning his address he volunteered the opinion that the war, which he regards as a racial struggle, will end in the victory of the Boers. It may be surmised that on this point the wish was father to the thought, for Dr. Kolle went on to point out that when Great Britain ceases to be predominant in South Africa that region will form a convenient "dumping ground" for the large number of superfluous practitioners of medicine who are turned out every year from the universities of the Fatherland. Dr. Kolle stated that the Boer nation numbers some 800,000 souls, and is spread over the whole of South Africa, whilst the British are found only near the sea coast, and in certain commercial centres. There are six times as many negroes as whites. The climate presents every intermediate degree between temperate and tropical, and is one of the healthiest in the world. There is, however, a great scarcity of good water. Nearly everywhere surface water is used, which the domestic filters fail to make wholesome. Consequently typhoid fever is frequent, and is so fatal that the mortality which it causes is regarded by some as the result of a mixed infection of typhoid and malaria. Next in the order of prevalence comes dysentery. Malaria is frequent, and occurs in the tertian and tropical types. Dr. Kolle points out that although mosquitos are found all over South Africa there are many places where there is no malaria; he admits, however, that the mosquitos may not be all of the same species throughout the country. Plague, yellow fever, and cholera have on several occasions made casual appearances in South Africa, but have not struck root. Dr. Kolle attributes the fact that the plague did not spread last summer from Delagoa Bay to the absence of indigenous rats, and to the care which was taken to prevent suspected ships from discharging their cargoes, and thus introducing imported colonies of these rodents. Scurvy is met with in a serious form among the negroes; Europeans also suffer from it when they are exposed to privations. Pellagra is almost unknown. Syphilis rages as a veritable scourge among the negroes, showing itself in the most acute forms so as often to be unrecognisable till the results of specific treatment show the nature of the disease. Tuberculosis is almost unknown among the Boers. Leprosy, however, obtained a footing among them at the beginning of the century, and the sufferers from that disease are now estimated at from 8,000 to 10,000. Dr. Kolle explains their freedom from tuberculosis by their open-air mode of life.

Pneumonia assumes so formidable a type in negroes that it has been thought to be a distinct disease; the etiological factors, however, are the same as in Europe, and the gravity of the disease arises from alcoholism, which is universal among the natives. Dr. Kolle goes so far as to say that alcohol is the chief factor in the mortality of the negro population. Another cause of the progressive disappearance of the negro race is the great infant mortality, which is largely due to artificial feeding. The Boers' children, on the other hand, are nursed by their mothers, and the infant mortality among them is very low. The Boers are very prolific, families of twelve children being by no means rare, and patriarchal figures, such as twenty-four and upwards, are not seldom reached. On the whole, the ravages of epidemic disease in South Africa are slight in the human race, but it is far otherwise in regard to domestic animals. From this point of view South Africa offers an immense field for the study of infectious diseases.

THE BICYCLE IN MILITARY MEDICAL SERVICE.

According to a regulation recently issued, all men belonging to the medical service of the German Army must learn to ride a bicycle sufficiently well to use it either on the march or in cantonments. For a considerable time past several commanding officers of regiments in the French army have allowed medical students serving as assistants to medical officers to use bicycles on the march and in attendance at manœuvres.

LABORATORY OF THE SCOTTISH ASYLUMS.

It appears from the annual report of the pathologist (Dr. W. Ford Robertson) that during 1899 nine gentlemen have passed through a laboratory course of instruction—four were assistant medical officers of the associated asylums, two were from English asylums, and three were unattached. The valuable neurological library associated with the laboratory has grown; it received all the most important home and foreign journals, and these were sent on loan to those who wished them. The pathologist had been asked to give a gratifying increase in assistance in research during the year. Only seven reports were issued during the year, while the examination of material from 10 cases had been unavoidably postponed, because the pathologist had been fully occupied with the work required for the textbook of pathology in relation to mental diseases, which had been undertaken with the consent of the Committee. The demonstration sets of microscopic preparations were again largely in request. It had been provisionally arranged that the pathology of the acute insanities should be made the subject of special investigation in the laboratory. This will necessitate researches extending over several years. The pathologist next sets forth the work and functions of the laboratory, and the difficulty and complexity of such investigations, and then proceeds to detail what is being done in England, the United States, Italy, Germany, and France in regard to the pathology of insanity. He refers in particular to the Pathological Institute of the New York State Hospitals, with its eight departments of normal histology, pathological histology, cellular biology, bacteriology, physiological chemistry, psychology, anthropology, and comparative neurology. Scotland was far behind in all such investigations. Seventeen out of its twenty-four asylums united in the support of a central laboratory with a single worker, and one of these asylums had in addition a pathologist of its own. Dr. Ford Robertson then indicates the various lines along which investigation should be made, not merely by histological, but also by chemical methods; this involved the services of a trained chemical physiologist. The laboratory, therefore, should be amply endowed, and not left to be maintained by the Scottish Asylums, and he urges that this question is well worthy of the consideration of wealthy philanthropists. Were these claims fully understood doubtless they would meet with ready and ample response. That were only commensurate with the humane treatment, the jealous legal guarding of the insane in Scotland, and the great care taken to secure the highest available medical skill for their treatment. To the pathologist's report there is appended the report of the General Board for 1899. The income for the year was £718 0s. 9d., including a balance of £57 11s. 3d. at the beginning of the year, while the expenditure was £630 6s. 1d., a balance of £87 14s. 8d. being carried forward. The Board have decided to accept the offer of the Royal College of Surgeons to occupy its laboratory when the lease of their present premises expires in August. Dr. Campbell Clark of Hartwood was elected Chairman of the Executive Committee for the year, and Dr. Clouston was asked to continue as Secretary and Treasurer.

SIR FRANCIS LOVELL.

The members of our profession are probably, both individually and collectively, more indifferent to conventional honours and distinctions, to what, in short, Carlyle would describe as "clothes," than those of any other of the professions, but it has always been felt that it was becoming that the State should recognise eminent services rendered to it or to the public in the same way as it is the custom to recognise services rendered by other professions. In regard to some of the colonies, however, it has been felt that a share of the State recognitions of merit which are showered on the judges and other civil servants might well fall to the medical branch of the service. Accordingly the congratulation expressed in an illuminated address which was presented to Sir Francis Henry Lovell, C.M.G., Surgeon-General of the Colony of Trinidad and Tobago on March 13th last, was all the more enthusiastic from the the rarity of such a cause of congratulation. It was a unique event in the medical history of the Island of Trinidad, and unique, moreover, in that it was the first instance of a knighthood being conferred upon a member of the Colonial Medical Service during his tenure of office, not merely on his retirement. At the meeting at which the presentation took place Dr. W. M. V. Koch, President of the Trinidad and Tobago Branch of the British Medical Association, called upon Sir Louis de Verteuil, who occupied the chair, to make the presentation. The address, which was signed by the representatives of the Medical Board of Trinidad and of the Trinidad and Tobago Branch of the British Medical Association, after congratulating Sir Francis Lovell, stated that the signatories recognised that the dignity had been worthily bestowed as a reward of long and honourable service, and added that in view of his representative position as president of the Medical Board and head of the Medical Service, the profession might claim a share of the distinction as reflecting on the whole medical profession in the colony. Sir Francis Lovell returned his heartfelt thanks for the compliment, and stated that it had been especially pleasant to receive the congratulations of the medical profession from the hands of Sir Louis de Verteuil, a colleague venerated by all, and one who had so long been a distinguished member of the medical profession. While he highly appreciated the honour personally, he experienced still more satisfaction in recognising that honour had thereby been conferred upon the medical profession. He concluded by thanking his colleagues in the medical service for the cordial co-operation and ready assistance they had invariably rendered to him in the discharge of his duties. Dr. A. Lota, who spoke in French, also offered his congratulations, and Dr. Laurence and Dr. de Wolf spoke in a similar strain.

THE STATE CHILDREN'S ASSOCIATION.

Perhaps never so much as to-day has the national conscience so clearly seen its obligations in regard to uncared-

for children. We have before us as one evidence of this the third annual report of the State Children's Association, the present Chairman of which is the Right Hon. Earl Grey, who was preceded by Lord Peel and the late Lord Herschell. One of the main objects of this Association is to break up the large massed schools of kinless children in our country into small family groups in which individual attention is possible. It is, as we believe, an admirable characteristic of the Jewish community that it declines to recognise pauperdom in its people, and we believe that another religious body, of which by Dr. Bowman Stephenson, of the Victoria Park Children's Home, was the spokesman, is organising a plan whereby its orphan children may be removed from a workhouse environment and all that it means positively and negatively. A second main object of this Association is similarly to dissociate children from all connection with the workhouse and its officials. It is a moot point whether the State should not give power to local bodies to take young children from the "care" of neglectful parents and guardians—for example, from those who through vice or disease are confirmed inebriates—and give them an every-day life in which healthy growth is possible. The influence of heredity is incontrovertible, but so also is the influence of home-life exerted in early years in the formation of character. Among the special activities of the Association during the past year have been the passing of the Poor-law Act of 1899, an Act almost identical with one framed by the Association and introduced by Mr. Ernest Flower, M.P., in 1898; an effort to arrange that the Sutton school children shall not be sent to attract money from persons going to and from the Derby; efforts to facilitate the emigration of State-supported children, with many other laudable achievements and endeavours. The report concludes with an eloquent and pathetic appeal to the men and women of our country to see and feel the needs of child-life, and particularly the need of home influence, with its "freedom and change, the power to choose and to dare, and the sense of being loved and wanted."

HEALING HORSES.

REFERENCE was made in the BRITISH MEDICAL JOURNAL a few weeks ago to a sorrel nag belonging to the laboratory of our Cuban contemporary, the *Cronica Medico-Quirurgica de la Havana*, which has supplied 74,000 cubic centimetres of serum, and is estimated to have thus benefited 1,850 individuals suffering from diphtheria. We thought at the time that this was what sporting men call a "record," and doubtless on that ground the paragraph has been extensively quoted in the foreign medical press. In the *Journal Médical de Bruxelles* of April 5th, however, there is a letter from Dr. Funck, in which he claims the honour of the "record" in serum supply for a horse now in the Institut Sérotherapique of Brussels. This horse was inoculated from January, 1895, to December, 1898. During that period he received 30,201 grams of diphtheria toxin, and has given 166,250 cubic centimetres of blood in twenty-four bleedings, equivalent to 83,250 cubic centimetres of therapeutic serum, or 8,325 curative doses. Dr. Funck adds that this record will soon be beaten by a horse immunised since March, 1898, which has already given in eighteen bleedings 143,000 cubic centimetres of blood. Clearly the horse has a far better right than the eccentric Marquis de Mirabeau to the title of *L'ami des hommes*.

A DEPLETING PRACTITIONER.

OUR highly respectable French contemporary *Le Temps* does not include "queer stories" in the intellectual bill of fare which it places before its readers. We may therefore take it that the following strange eventful history recently told in its columns is true in substance and in fact. A young man from the country who fancied that he had consumption went to Paris to consult some of the medical oracles of the City of Light. Knowing that the opinions which are got from them are in a literal sense golden, he followed the counsel of Iago, and put money in his purse to the amount of 20,000 francs. With a thick bundle of banknotes in his pocket he reached the capital in safety. Feeling somewhat tired he went into the Garden of the Tuileries and sat down on a chair. By-and-bye a neighbouring chair was occupied by an elderly stranger of most respectable appearance. He had a benevolent, clean-shaven face, white hair and whiskers, black frock coat, with a rosette in the buttonhole; fair round belly, affording space for the display of a massive gold watch chain; silk hat, with broad brim—in fact, like Dogberry, with everything handsome about him. The benevolent stranger looked with interest at the young man who was coughing, and engaged him in conversation. The patient was easily induced to tell his pitiful story, adding that he had come to Paris to see the high priests of medicine. "This is a lucky coincidence," exclaimed the venerable stranger, "for I happen to be Dr. Brouardel. You need not go to any of the others. They would take your money; and as, between you and me, they are all asses, they would not cure you. I am interested in your case, and shall be glad to do what I can for you without a fee. Allow me to begin by auscultting you." And, suiting the action to the word, the "eminent physician," making the young man open his coat, put his ear to his chest, and then proceeded to percuss and palpate him with the most scrupulous care. Having completed his examination, the doctor tore a leaf out of his pocket book, scrawled a prescription of the most orthodox illegibility, and handed it to the patient, saying: "Your disease is serious, no doubt, but I will answer for your life if you will follow the treatment which I have prescribed. Come to my consulting room to-morrow and I will make a more thorough examination." And declining even thanks the great man hurried away, leaving the young man overwhelmed with his kindness. But, alas! the flower of gratitude quickly fades in a patient's breast, and in this case it did not even live *ce que vivent les roses, l'espace d'un matin*. His feelings underwent a change only a few minutes after his interview with the philanthropic physician. The patient, wishing like a more famous fool to draw his dial from his poke found that it had vanished. On further search he made the unpleasant discovery that his pocketbook and money had gone the same way. The "physician" was evidently a thorough-going believer in depletion. To percuss out a £5 note in a man's breast pocket has sometimes been held up to neophytes in the art of physical examination as the ideal to be aimed at. The "doctor" who figures in the interesting story just narrated had evidently attained a degree of perfection far beyond that ideal. His *tactus eruditus* enabled him not merely to localise, but without the need of an anæsthetic, to evacuate what Rabelais calls the *aposthume pécuniaire*. The story itself has several morals. The most obvious of these does not particularly concern us. We need only warn guileless young men—and women—from the country or otherwise that, as the cowl does not make the monk, so a benevolent countenance, with white hairs giving their effect of gravity, and even that massive and concrete guarantee of respectability, a heavy gold chain, do not make a physician. Evil-minded persons might add that anyone calling himself a physician who volunteers professional advice to a perfect stranger without a fee is on that ground alone to be regarded with wholesome suspicion.

THE PREVENTION OF MALARIA.

WE understand that all the arrangements have now been made for the carrying out of the experiments as to the prevention of malaria which were referred to by Dr. Manson in his recent address at the Colonial Institute. A mosquito-proof

malaria hut has been constructed by Messrs. Humphrey of Knightsbridge, and will be sent out to Italy about the first week in May. The experiments, the cost of which is to be defrayed by the Colonial Office, will be begun in June and continued till October, thus covering the malaria season. Dr. Luigi Sambon, Lecturer at the London Tropical School of Medicine, and Dr. G. C. Low, a distinguished student of the school, have volunteered to be the subjects of the experiment by occupying the hut throughout the period indicated. Their business will be to keep themselves from being bitten by mosquitos. Professor Celli has kindly offered every assistance in furtherance of the experiments, and will select a site for the huts within the area of his own field of experimental work on malaria. The Italian Government has also expressed its sympathy with the objects of the expedition, and Professor Baccelli has promised his assistance. A series of correlative experiments will be made in England by exposing healthy Britons to the bites of malaria-infected mosquitos, which will be supplied for the purpose by Professors Bignami and Bastianelli, of Rome. In this case, too, several persons have already offered themselves as subjects of the experiments. For the information of Mr. Stephen Coleridge and his fraternity, we may state that among these volunteers is Dr. Manson's own son.

THE THIRTEENTH INTERNATIONAL CONGRESS OF MEDICINE, PARIS, AUGUST, 1900.

The near approach of the International Medical Congress, which is to be held in Paris from August 2nd to 9th, makes it necessary for everyone who intends to be present to provide himself with a ticket of membership as soon as possible. Application forms can be obtained from the Secretaries of the National Committee for Great Britain and Ireland, Dr. A. E. Garrod, 9, Chandos Street, or Mr. D'Arcy Power, 10A, Chandos Street, Cavendish Square, London, W. Each form should be returned to the Secretaries duly filled up and signed, together with a visiting card attached and a cheque or postal order for 20s. The application forms are then sent to Paris, and in due course the applicant receives a card of membership which entitles the holder to attend the meetings of any section of the Congress, and to obtain from the office of the Secretary-General at Paris (21, Rue de l'École de Médecine) badges and the various publications two days before the official opening of the Congress. After the conclusion of the Congress each member will receive an abstract of the proceedings in all the sections and the detailed proceedings of the section in which he is especially interested, as shown by his placing it first upon his form of application. The ticket of membership is further accompanied by a non-transferable form securing to the bearer a free return journey from Paris to the frontier by the same route and in the same class of carriage as he entered France. This order is available for the return journey from July 20th to August 20th, 1900. It must be *visé* at the departure station, certified in Paris, and exchanged for a ticket on the return journey. The English railway companies are willing to issue tickets at reduced rates to members of the Congress who present their cards of membership at the time of booking. The South-Eastern and Chatham and Dover Railway charges first class 58s. 4d., and second class 37s. 6d. for return tickets available for fourteen days by the 2.45 P.M. service *viâ* Folkestone and Boulogne, and by the 9 P.M. service *viâ* Dover and Calais. Each ticket will entitle the holder to a free allowance of 56 lbs. of luggage, and will be available to return from Paris by the 3.45 P.M. or 9 P.M. services. The London, Brighton, and South Coast Railway has made arrangements to issue fourteen-day excursion tickets from London or any station on the Brighton Railway to Paris and back at 39s. 3d. first or 30s. 3d. second class to members of the Congress. These tickets can be extended to twenty-five days if desired, and they allow the journey to be broken at Brighton, Lewes, Newhaven, Dieppe, and Rouen both going and returning.

THE ANTITUBERCULOSIS CONGRESS.

The International Antituberculosis Congress, attended by more than 1,000 delegates, was opened in the San Carlo Theatre, Naples, on April 25th, in the presence of King Humbert, Queen Margherita, the Prince and Princess of Naples, and the Duke of Genoa, who were accompanied by General Pelloux and Signor Baccelli. The delegates present included representatives of the Governments of Germany, Austria-Hungary, France, Spain, Portugal, Sweden and Norway, Greece, Roumania, Russia, and the United States. The audience included many scientific notabilities, both Italian and foreign. His Excellency Professor Baccelli, the Minister of Public Instruction, delivered the inaugural address; the Mayor of Naples, the Rector of the University, and one delegate from each of the States represented also spoke. The first sitting of the Congress, held the same afternoon, was devoted to a discussion on the prophylaxis of tuberculosis.

A SURGICAL BLESSING IN DISGUISE.

Cases are on record in which assault and battery committed on the human frame has had a curative effect probably not intended by the perpetrator. In one of these a garotter, who relieved a distinguished physician of his watch, is said to have relieved him at the same time of a goître by the pressure applied to the throat *secundum artem*. We have also heard of a post-pharyngeal abscess being ruptured by throttling, with the result that the patient was cured. So far as we know, however, there is no instance, modern or ancient, in which a stab in the belly has proved to be a surgical blessing in disguise. Such, however, if we are to believe the *Philadelphia Medical Journal*, was the result of a wound recently inflicted in a free fight in Williamsburg. One of the combatants suffered from appendicitis, but had never been able to screw his courage to the sticking point of operation. In the fray someone considerately stabbed him in the abdomen, and when taken to the hospital the surgeon found the way to the peccant part opened for him by the assailant's knife, and removed the offending appendix with the greatest ease. The stab must have come at an opportune moment, for the man is said to have been in a bad way, and an operation was urgently needed. He is reported to be doing well, and it is to be hoped feels grateful to the involuntary benefactor who performed the preliminary part of the operation.

COUNT SPONGES AND INSTRUMENTS.

Abdominal surgery involves special anxieties, and one of the worst is the fear that a forceps, sponge, or other foreign body has been left behind in the peritoneum after closure of the abdominal wound. Dr. Neugebauer of Warsaw has published a monograph on this terrible accident which will not reassure us.[1] He classifies 101 cases, so that many operators are laudably candid, whilst necropsies tell terrible tales. In 38 cases the foreign body was only found at the *post-mortem* examination. In this grim list it is not surprising to find that in 19, or precisely half the cases, the object left behind was a sponge. In 14 cases the foreign body was spontaneously discharged through the anus. This occurrence must imply grave risk to the patient. In 12 cases the body was discharged through an abscess opening through the parietes or into the vagina. In 3 cases the body was missed, searched for and found, just before closure of the abdominal wound. In 7 it was missed just after closure of the wound, the

[1] "Zufällige Zurücklassung eines sub operatione benutzten Fremdkörpers (Arterienklemme Schwamm, Tupfer, etc.) in der Bauchhöhle," *Monats. f. Geburts. u. Gynäk.* Bd. XI., ii., 4, 1900.

wound was opened and the body removed. There is reason to believe that such an accident is so frequent that to these 10 cases several hundreds might be added. The remaining cases include later operations for removal of foreign bodies, also one in which several years after laparotomy Douglas's pouch was opened through the vagina and the body—a signet ring—removed, and 2 in which the missing body was left in the peritoneum in the hopes that it would be discharged through an abscess. These 3 cases were not treated according to the generally-accepted rules of surgical practice. To calculate the proportion of fatal cases in which the body was detected or came away before a necropsy would be of no value, so different were circumstances in different cases. The operator should remember that sponges seem very deadly, forceps nearly as dangerous, whilst gauze pads more readily tend to come away by the bowel. But the success or failure of secondary operations must depend in part on the severity of the laparotomy itself. Neugebauer notes 2 cases where the abdomen was reopened on a false alarm, nothing having been left behind. Such an occurrence might turn the scale against a severe case. This monograph of Neugebauer's is grave reading, but it must be read.

SUICIDE AMONGST PHARMACISTS.

ACCORDING to statistics recently published by a German contemporary, it would appear that pharmacists, though the means of suicide lie always temptingly within reach of their hands, show somewhat less disposition than the average of mankind to adopt that bad plan of opposing the sea of troubles which is life. During a period of fourteen years the mortality among them from this cause has been 2.05 per 10,000 as against 2.1 in the population at large. Pharmacists, as might be expected, as a rule make their quietus not with a bare bodkin, but with the contents of a poison bottle. According to the statistics quoted the proportion who have chosen this mode of death during the period referred to has been 56.7 per cent. In 1898 it was as high as 80 per cent., but in 1899 the proportion fell to 50 per cent., a good third of the whole number having for some reason preferred the bullet to the bowl.

THE American Medical Association will hold its annual meeting this year in Atlantic City, New Jersey, on June 5th, 6th, 7th, and 8th.

MR. TREVES, who has returned to London, will give an address on Military Surgery in South Africa at the meeting of the Royal Medical and Chirurgical Society on Tuesday, May 8th.

A COMPLIMENTARY dinner is to be given at the Reform Club on Saturday, April 28th, to Sir William Mac Cormac and Mr. Treves on the occasion of their return from the seat of war in South Africa. The Earl of Rosebery will preside.

THE *Allgemeine medicinische Central-Zeitung* states that Professor Kitasato, of Tokyo, has discovered a second bacillus which he considers to be an etiological factor in the production of plague. The distinguished Japanese bacteriologist has also prepared a new plague serum.

A DINNER in honour of the first successes of the cricket and Rugby teams of St. Mary's Hospital, London, in the Inter-hospital Cup ties will be held at the Trocadero Restaurant on Tuesday, May 8th, at 7 P.M. Mr. George P. Field will be in the chair, and plans of a proposed new sports ground will be displayed. Tickets, price 5s. without wine, can be obtained from the Honorary Secretaries, Messrs. B. W. Gonin and Wilfred Harris, or from the Librarian at the Hospital.

HOW BABTIE WON THE VICTORIA CROSS.

The "London Gazette" for April 20th announces that the Queen has been graciously pleased to signify her intention to confer the decoration of the Victoria Cross on the undermentioned officer, whose claims have been submitted for Her Majesty's approval, for his conspicuous bravery at the battle of Colenso, as stated against his name:

Regiment.	Name.	Act of Courage for which Recommended.
Royal Army Medical Corps	Major William Babtie, C.M.G.	At Colenso, on December 15th, 1899, the wounded of the 14th and 66th Batteries, Royal Field Artillery, were lying in an advanced donga close in the rear of the guns without any medical officer to attend to them, and when a message was sent back asking for assistance, Major W. Babtie, R.A.M.C., rode up under a heavy rifle fire, his pony being hit three times. When he arrived at the donga, where the wounded were lying in sheltered corners, he attended to them all, going from place to place exposed to the heavy rifle fire which greeted anyone who showed himself. Later on in the day Major Babtie went out with Captain Congreve to bring in Lieutenant Roberts, who was lying wounded on the veld. This also was under a heavy fire.



Major WILLIAM BABTIE, V.C., C.M.G.,
Royal Army Medical Corps.

[We are enabled to reproduce this photograph by Messrs. Wyal and Son, Aldershot, through the courtesy of the Editor of the *Daily Graphic*.]

THE battle of Colenso was fought on December 15th, on the morning of a brilliant summer's day. At dawn the men had marched out eagerly and in keen spirits, and with a swing of the shoulders which told of a certain victory. Before sundown they were beaten back, more than 1,000 dead and wounded were lying on the field, the hospital tents were crammed to overflowing, and the waggons which were prepared to move forwards were moving back.

The small hamlet of Colenso stands on the south bank of the river, and clings about the railway as a homely unpretending little settlement made up of a few corrugated iron cottages on either side of a single street.

It looks almost like a toy village, and its prim formality

is tempered by a friendly growth of cactus, aloes, and mimosa, by a few trees and by many gardens. Behind Colenso is the veld, which here extends southwards as a vast undulating plain to Chieveley, Frere, and Estcourt. Between Chieveley and the river the veld is smooth, and is broken only by ant hills, by a few Kaffir kraals, and by the precise line of the railway. The plain is green but it is not the luxuriant green of England, and in the early morning, and about the time of the setting sun, tints of yellow and brown and pink spread over the wold, and render the place strangely beautiful.

During the glare of noonday the veld gives simply a blinding sense of scorched and faded green, and its monotony and its boundlessness and the utter lack of shade and variation make the expanse dreary as a desert. Beyond the village the brown torrent of the great Tugela tears seawards between high banks and under broken bridges and among the *débris* of pitiless ruin. Across the river are the bare, stony, trench-lined kopjes and hills held for so many long weeks by the Boers. About the foot of these bastion-like ridges is the squalour of a neglected camp, and on all sides are rifle pits and trenches and stone shelters and hidden holes. Man seems on this river bank to have gone back to the savagery of the cave dweller, and to be once more crawling on the earth. Beyond these low hills are the grey heights of Umbulwana towering over Ladysmith. It was to the right of Colenso that the battle raged fiercest on December 15th, 1899. It was here that Colonel Long's batteries of field artillery were surprised by the enemy and were abandoned after a hideous sacrifice of horses and men. It was here that Lieutenant Roberts received his fatal wound, and it was here that Babtie won the Victoria Cross. The batteries were moving towards the river with the usual British unconcern, and in the quiet of a summer's morning. Suddenly there was poured upon them from the shelter of a mimosa wood such a torrent of lead that in a few moments there was scarcely a horse or a man standing.

Grobler's Kloof. Mimosa Wood.



Part of the battlefield of Colenso. In the foreground is the body of one of the horses belonging to the lost guns. To the right is the mimosa wood in which the Boers were hidden. Colenso village was just to the left of the picture. The kopjes in the distance were on the opposite side of the river and were heavily entrenched. The high flat topped hill is Grobler's Kloof.
[*From a photograph by Mr. Frederick Treves.*]

The men faced the wood as only the British soldier can face death. The gallant attempts made to save the guns led only to further loss of life. Colonel Long had been shot down, some fifty horses had been sacrificed, and the scanty ranks of the English were thinning rapidly. Still the cry went up, "Hold fast to the guns!" and when the last forlorn hope had been attempted and had failed, the green veld was littered with the wounded, the dying, and the dead. Near by the guns was a donga, and into this many of the wounded had crawled. The galloper who took up the news of the disaster reported the need of help for the injured. To this call Major Babtie at once responded as a volunteer. His duty did not take him to the battlefield. He rode down to this Inferno. He might as well have ridden before a row of targets during the smartest moment of rifle practice. Three times was his horse shot under him before he reached the donga. Here in the face of a galling fire he dragged the wounded into shelter, and a little later he ventured out under a rain of lead to bring in Lieutenant Roberts, who was lying in the open desperately wounded.

For some seven hours Babtie kept by the wounded in the shallow donga, no one daring to lift a head above the edge of the dip. He alone had a water bottle, and he doled out what water he had in a 60 minim measuring glass. He was also able to relieve pain by morphine, and when not otherwise occupied he sheltered poor Roberts's face from the scorching sun by holding above it a letter he chanced to have in his pocket. It was not until darkness was setting in that it was possible to venture from the scant shelter the donga provided.

The scene of this heroic act was a level stretch of green veld lying between the river and a brown road which led with many desultory turns to Hlangwani. To the left were the village and gardens of Colenso, and to the right the grove of mimosa trees in which the Boer force was hidden. Beyond the river rose the enemy's entrenchments and the grim ridge of Grobler's Kloof.

The last time I passed over this spot was on the day after our cavalry had reached Ladysmith. It was on a day of peace. The sky was cloudless and no breath of air stirred along the grass. The bodies of the horses belonging to the lost guns were lying in a long line across the veld. Their bones were as white as are the bones of museum skeletons, for the vultures and the ants had done their work thoroughly. The hides were still drawn over the bleaching bones and round the necks of these ill-fated beasts were still the collars and the harness by which they had dragged the guns into action. There was an absolute stillness over the whole scene. To the left a train was being shunted at Colenso Station with leisurely persistence, for the day was hot and the sun dazzling. To the right were the mimosa groves, glorious with yellow blossom, in the shadows of which the Boers had hidden.

It was strange that it was from these dainty woods that the hellish fire had poured forth which laid low so many gallant English lads, for on this quiet day the trees were busy with complaining doves. By the banks of the donga

which had been for a whole summer's day a valley of the shadow of death, a Kaffir was crooning over a concertina, from which came a lazy dirge-like music.

The railway engine, the doves, and the rapt Kaffir were the sole moving objects in this garden of peace, and in the blue distance was the ridge of Grobler's Kloof, no longer belching fire and shell, but standing out delicately against the tender sky.

No brave deed had ever a gentler setting.

FREDERICK TREVES.

THE R.A.M.C. SOUTH AFRICA FUND.

THE Central Committee of this Fund has issued a third edition of its circular, which is practically a report on the work done up to the present time. The Fund was founded to supply supplementary warm clothing and other comforts to the non-commissioned officers and men of the R.A.M.C., and to all those engaged in attending on the sick and wounded. The Indian Ambulance Corps has not been forgotten, for the Committee have, through the Principal Medical Officer in India, ordered warm clothing and putties for the Indian dhoolie bearers. The plan followed with regard to the non-commissioned officers and men of the R.A.M.C. and the British and Colonial Ambulance Corps has been to make up a parcel for each man, and to send out at one time sufficient for each command: for example, 250 parcels to each Principal Medical Officer of a Division. The Committee has thus despatched 2,800 parcels, each containing nine or ten articles This fact alone will give some idea of the amount of work done by Mrs. Skey Muir, Mrs. Meredith, and the other ladies who are assisting in packing up the parcels, and generally in carrying out the objects of the generous donors to the Fund.

The work of the Central Committee has been reinforced by committees formed by members of the medical profession, and the ladies of their families in Birmingham and in Leeds.

The Local Committee for Birmingham and the district around has collected nearly £265. The bulk of this has been sent to the Central Committee in London for distribution, but the sum of £23 collected in Lichfield has been sent direct to Surgeon-General Wilson in Capetown. In addition to the money collected, garments of various kinds, numbering nearly 4,000 in all, have been sent to the London Committee. The Committee will still remain in existence in case further demands are made by the prolonged stay of the troops in South Africa.

The Leeds Committee has sent £50, and large consignments of very excellent warm clothing.

The Principal Medical Officer in nearly every home centre has co-operated, the officers and men of the R.A.M.C. at Malta have sent a handsome donation, many retired medical officers have started subscriptions and interested others in the Fund, and liberal donations have been received from members of the Committee and their friends. The Central Committee acknowledges the sum of £365 11s. 3d., the produce of the half-crown subscription opened in the BRITISH MEDICAL JOURNAL, and further subscriptions to this fund have been received since the date of the report. Altogether the subscriptions received by the Treasurer, Mrs. Charters Symonds, 58, Portland Place, London, W., amounted at the time the report was issued to £1,795 6s. 6d. The first list of subscribers was published in the advertisement columns of the *Times* on February 27th, and a third list appeared on April 21st.

When the report was issued comforts had been sent to all the divisions in the field, and parcels were being sent to the eleven general hospitals and to the hospitals on the lines of communication, as well as to the hospital trains. Lord Roberts has notified that the following articles of clothing are most needed: "Woollen drawers and vests, flannel shirts, cardigans, socks, towels, handkerchiefs, slippers or canvas shoes, and neck mufflers." Among the comforts sent must be mentioned tobacco, which is best given through the Committee, who can purchase and forward it in bond.

The Honorary Secretary of the Fund is Mrs. Skey Muir, to whom communications should be addressed at the new offices of the Fund, 77, George Street, Portman Square, London, W.

Cheques and postal orders should be made payable to the R.A.M.C. South Africa Fund and crossed "Holt and Co.," and forwarded to Mrs. Charters Symonds, 58, Portland Place, W. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be drawn up and crossed in the same way.

THE HALF-CROWN SUBSCRIPTION LIST.

The following additional subscriptions to the Half-crown Fund have been received down to, and including, April 25th since our last list:

	Half Crowns.
Mr. H. J. Sharpe (London) ...	1
Dr. Snow (Bournemouth) ...	1
Mr. H. D. Hartham (Manchester)	2
Mr. W. E. Pain (London) ...	1
Per Dr. L. P. Black (Braintree):	
Dr. Scott	1
Dr. Harrison	1
Dr. Black	1
Per Mr. D. Cotes-Preedy (London):	
Mrs. S. S. McCormick ...	1
Rev. R. Haseler	1
Mr. S. S. McCormick... ...	1
Dr. G. H. Griffiths (Deganwy)	1
Per Mr. W. M. Beaumont (Bath):	
Mr. R. L. Mackenzie... ...	1
Mr. G. E. Bloxam	2
Per Dr. H. Leslie Jones (Manchester):	
Mrs. Lang	1
Miss E. Statham	1
Mrs. King	1
Mrs. Hawarth (Windermere)	16
Rev. C. Leslie-Jones... ...	1
Mr. F. A. Leslie-Jones ...	1
Miss A. V. Leslie-Jones ...	1
Per Dr. J. W. Johnson (Bury):	
Dr. Williams	1
Dr. Lees	1
Dr. Sellars	1
Mrs. Sellars	1
Dr. Wardleworth	1
Dr. Poole...	1
Miss Poole	1
Dr. W. Nuttall	1
Dr. Bailey	1
Dr. France	1
Mrs. France	1
Collected by Miss Rene and Master Baron Baird ...	29
Collected by Mr. Johnson...	8
Collected by Mr. D. Wardleworth, jun.	40
Per Dr. J. Harper (London):	
Dr. Whitley Stokes	4
Anon.	1

We have also received, per Dr. R. Wilson, £4 5s. from the Glasgow Eastern Medical Society.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

PLAGUE during the first week of April, as compared with the last week in March, showed an increase in the city of Bombay, the actual number of plague deaths being 685 and 648 respectively. With the advance of the hot weather an opposite result was hoped for, and it is very disappointing to find that plague continues so virulent. Most of the other epidemic diseases show signs of abating, small-pox especially being less prevalent. The death-rate from respiratory diseases keeps high, however, and there seems little doubt that the respiratory ailments and cases of plague increase and decline together; in other words, that many of the so-called respiratory troubles are cases of plague.

In Karachi plague continues and extends. On April 1st, 2nd, 3rd, and 4th there were 49, 31, 54, and 60 cases of plague, and 34, 28, 33, and 42 deaths from the disease respectively. The total number of cases and deaths since the commencement of this, the fourth epidemic of plague in Karachi, amounts to 792 and 667 respectively.

In the Jullundur district plague is spreading to fresh villages. From the Patiala State and in the towns of Benares and Moglud Serai plague cases are reported. From the cities of Agra and Aligarh it is stated that cases of plague have occurred in villages a few miles from their walls. The evidence points to a widespread infection throughout the Bengal Presidency.

In Calcutta the plague cases and deaths on April 1st, 2nd, 3rd, and 4th were 109, 111, 93, and 103 cases, and 99, 109, 104, and 89 deaths respectively. A steady exodus of natives from Calcutta set in during March, and is still being maintained. A considerable number of people actually suffering from plague have been refused permission to travel by the railway, and the inspecting staff is greatly overworked.

HONG KONG.

No report of plague has reached us during the past six weeks from Hong Kong.

JAPAN.

On April 23rd plague was reported to be still prevalent in Osaka, which is the great commercial and manufacturing city of Japan. It is one hour's journey inland from Kobe at the head of the Inland sea.

AUSTRALIA.

Up to April 23rd 137 cases of plague were reported from the city of Sydney, and 48 deaths from the disease. On April 23rd 8 fresh cases of plague and 2 deaths from the disease were reported, showing that there are no signs of abatement at present. An alarming statement has been telegraphed from Melbourne bearing date April 23rd, to the effect that plague-infected rats have been found in the wharves of Melbourne (Victoria), Brisbane (Queensland), and Auckland (New Zealand). This would point to a widespread infection.

MAURITIUS.

For the week ending April 19th one fresh case of plague is reported. No death.

TURKEY.

There seems a prevalent belief in Egypt that plague exists in the Hedja district, in Arabia, and also at Yenho and in the vicinity of Mecca. The Turkish authorities have in part admitted the infection of these places, and the Egyptian Quarantine Board has declared them to be infected. Every precaution is being taken to prevent infection entering Egypt, and pilgrims will be subjected to the strictest quarantine at El Tor, a seaport on the Arabian side of the Gulf of Suez.

THE WAR IN SOUTH AFRICA.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

[From our Special War Correspondent.]

Pietermaritzburg, Natal.

SECOND THOUGHTS—(*Continued*).

Injuries to the Long Bones.

The study of a large number of skiagraphs and inspection of a considerable additional number of cases of injuries of the long bones leads me unreservedly to adhere to the opinions in this class of cases already communicated to the British Medical Journal. I was told of one case in which the shaft of the femur, very high up, was perforated cleanly by a Mauser bullet, but this is a very exceptional injury. The head of the humerus may, in all probability, be drilled by a small-bore bullet, but I have seen no actual demonstration that this does happen. Injuries about the shoulder are extraordinarily common, and doubtless the head of the humerus has often been struck. Unless the bone is fractured no skiagraph is likely to be taken, for nothing would be seen; and as cases of wound of the shoulder usually do extremely well, save when caused by shells, there is no opportunity of ascertaining precisely the effect produced.

It may be mentioned here, though not strictly germane to the subject, that while Mauser bullet wounds of the pubes usually cause fracture and comminution, often tearing away entirely large pieces of the bone, the fossa of the ilium is generally drilled clean through. The sternum may be perforated cleanly. In one remarkable instance of wound of the sternum the patient had a most fortunate escape. The bullet was almost certainly fired at long range, very probably at about 1,500 yards. It struck the sternum full, exactly in the centre, midway between the attachments of the third costal cartilages, exactly over the origin of the systemic aorta therefore. The bullet was deeply embedded in the bone, which it had actually just perforated, but had not passed through. It was easily drawn out backwards. The patient was within decidedly less than an inch of death, but was recovering fast without any troublesome symptoms at all. The resisting powers of the bone struck are of course considerable in a muscular man, but in all probability the elasticity of the chest wall contributed largely to the escape. It is possible that the wound was received during the act of expiration, a much more favourable moment than during inspiration, when the sternum would be advancing to meet the blow.

Wounds of Arteries and Veins.

Wounds of arteries and veins are, as may be supposed, fairly common, and traumatic and arterio-venous aneurysms are to be met with in all the hospitals. Arteries of large calibre, as far as can be judged, are very seldom, if ever, entirely divided, and the wound inflicted on them by the Mauser bullet appears to be a clean cut through all the coats, leading as a consequence to severe, possibly often to fatal, hæmorrhage at the time of injury. A private in the Highland Brigade, for instance, was shot through the knee, the bullet passing out through the popliteal space. As the man was wearing a kilt he was able, as he lay on the ground, to see the blood spirting out through the wound of exit, an alarming symptom of which he gave a very graphic description. He endeavoured to apply his field dressing, but every movement attracted fire and he had to desist. Faintness led to cessation of the hæmorrhage, and after awhile he was able to apply his dressing and maintain some pressure. Some blood soaked through into the dressing, but coagulated rapidly under a very hot sun. He lay for a good many hours—probably between twenty and thirty—before he was removed by the stretcher bearer company. At the dressing station the bandage was left untouched, but at the field hospital it was removed. As no bleeding occurred a fresh dressing was put on. The man was then transferred to a hospital train and conveyed to the base hospital, a journey of some thirty hours. Then followed a journey in the ambulance waggon of about one mile. The medical officer removed the dressing for the purpose of examining the wound, and immediately severe hæmorrhage occurred. The patient was immediately transferred to the operating theatre. A clean cut, partly dividing the popliteal artery, was found. The vessel was ligatured on both sides of the cut, and the man made a rapid recovery.

Operations under Difficulties.

The recurrence of the hæmorrhage in the ambulance train would have been a serious business. To cut down on the popliteal artery and ligature it in a moving train would have taxed the skill of any surgeon to the utmost. Very considerable difficulty has been experienced in such cases in performing the operation with good assistance, and all the surrounding conditions as favourable as they should be in a proper theatre and a well-equipped civilian hospital. Even simple formal operations in military surgery often make demands on the resource, the patience, and the dexterity of the operator that would hardly be realised by those accustomed to work amidst surroundings where every difficulty has been foreseen or learned by experience, and so provided for; yet operations highly difficult in themselves, and often rendered much more trying by the surrounding conditions, have often to be entrusted—or, at any rate, often are entrusted—to very junior men.

Regarded from the surgeon's point of view every allowance must be made for those who, working under such adverse conditions, fail to do themselves complete justice. Regarded from the patient's point of view questions of such moment and such delicacy are involved that for the present the subject must stand on one side. It is, however, one that must be boldly faced and discussed, without either fear or favour, when the proper time arrives.

Cases of a kind very similar to that last narrated have been met with, though few perhaps in which the escape was more remarkable. The cut through the vessel is usually so clean that it is difficult to understand how the hæmorrhage is spontaneously arrested at all. In the instance given above the pressure applied was very slight, and there was no large extent of extravasation into the limb sufficient to compress the vessel.

The curious case in which a wound in the brachial artery was plugged by the musculo-spiral nerve wounded by the same bullet has been already mentioned.

Traumatic Aneurysms.

A fair number of traumatic aneurysms of large vessels, such as the femoral and the popliteal, have been met with, but these present no special feature for comment. Hunter's operation has been generally practised, and the results have been on the whole very satisfactory. Occasionally, as when the popliteal has been apparently wounded close to its bifurcation, the aneurysm has been dealt with locally, but I have not met with any cases in which it was judged expedient to dissect out the aneurysm—a needlessly severe proceeding in some of the cases in which in civil practice it has been performed. The remarkable rapidity with which the collateral circulation is re-established in these young healthy soldiers is very striking—a condition which, however favourable to the integrity of the limb, materially enhances the difficulties against which the operator has to contend.

A patient in the Fort Hospital, who had been shot through the right shoulder, the bullet (a Mauser) making its exit through the axilla, showed a well-marked traumatic aneurysm of the second portion of the axillary artery. The bullet wounds healed immediately; and, indeed, the scar of the entrance wound was barely visible some three weeks after the wound, which had been inflicted in the fighting by the Tugela River, had been received. The aneurysm was well-marked but small, the sac being capable of holding an ounce or so of blood. Pressure in the subclavian artery at once controlled the pulsation. The aneurysm, being situated in the loose cellular tissue of the axilla, seemed likely to increase. A proposal to deal with the aneurysm by cutting down in the axilla was very properly overruled. The third portion of the subclavian artery was tied, eventually, with a silken ligature drawn tight. The venous hæmorrhage was rather free at the operation. The case did perfectly well, and a fortnight after the ligature the aneurysm was scarcely to be felt. A case

such as this could probably have been readily cured by compression.

As a curiosity, and showing how even small vessels may be partially divided by a clean cut by Mauser bullets, may be cited the case of a man of the 1st Border Regiment, wounded in the fighting near Acton Homes. The case may be narrated in some little detail, as from several points of view it had features of interest. The Mauser bullet in this case entered 1 inch behind the angle of the lower jaw, and 1 inch below the lobe of the ear on the left side. The exit wound was about half an inch above the upper margin of the orbit, in a vertical line with the external angular orbital process of the frontal bone. The facial bones had been traversed and broken up to some extent, but without any disfigurement. The bullet had passed through the right eyeball, and the remnants of this had been removed. It was doubtful whether the bullet had actually penetrated the cavity of the skull. The man lay unconscious for some hours after receiving the wound, and had vomited blood on two occasions. The skin wounds in this case had healed in the most typical fashion, with almost invisible marks, in which, however, close examination revealed the crescentic scar so frequently seen when the bullet enters at a right angle to the plane of the skin. The man did well, but his temperature remained high, though there was nothing evident to account for this. Probably the raised temperature was due to former attacks of malarial fever. It is an everyday experience to find wounded patients with high or irregular temperatures when their wounds are progressing perfectly. The wound may run a perfectly aseptic course, and there may be no symptoms whatever of malarial fever, but the temperature remains irregular. Often this is of no consequence whatever, but it may, as in this instance, lead to doubt. There had been at the time one or two fresh cases of enteric fever, obviously originating in Maritzburg, and some of the symptoms pointed to that disease. Again, there might be serious mischief going on in the head, for there was some tenderness over the frontal bone at the seat of the wound. A swelling was then noticed by the parotid gland, just posterior to the ascending ramus of the jaw on the left side, and it was thought probable that an abscess was coming forward at this point, thus accounting for the symptoms. But the swelling, on careful examination, proved to be a minute aneurysm of the temporal artery. It was little larger than an almond. Pressure on the carotid controlled the distensile pulsation at once, and allowed the sac to be emptied. The temporo-maxillary artery was not involved, and the pulse in the anterior and posterior temporal arteries was quite unaffected. No treatment was adopted, for the man, who was to be invalided home to England, suffered no discomfort from the aneurysm, and had ascertained that affections of the kind might at examination time be turned to profitable advantage. It appeared, however, likely that the aneurysm would be cured by the method of manipulation, formerly so much advocated by Sir William Fergusson, inasmuch as the case excited considerable interest.

In No. 4 General Hospital was a remarkable case in which the temporo maxillary vein was probably implicated. The bullet entered over the upper part of the ascending ramus of the jaw, apparently drilling the bone without fracture. An aneurysmal swelling could be felt just behind the ramus, extending inwards to some depth. There was a very loud and characteristic buzzing thrill, audible for some distance over the skull. It was uncertain whether the internal maxillary itself or some one of its branches was implicated. The condition excited little distress, and no operative treatment had been adopted.

Arterio venous Aneurysm.

In a few cases of arterio-venous aneurysm of the thigh, operations had been undertaken.

In all such the difficulties were formidable and the proceedings very protracted, while the operations were not uniformly successful. Many of these cases were left alone, and the condition, though it entailed prolonged rest in bed, gave no trouble. Experience of these cases seems on the whole to point to non-interference. It is quite certain that many of the patients may after a time return to active life, and find that the abnormal condition leads to comparatively slight inconvenience, and does not tend to get worse. There seems no reason for supposing that an arterio-venous aneurysm caused by a wound from small-bore bullet need differ in any respect from other cases with which military surgeons who have been on active service are familiar enough. There is, in short, nothing special to note about these cases, interesting though they doubtless are. Surgeons do not now seem much inclined to extend the field of operative surgery unduly in this direction any more than in abdominal operations.

Although the artery is not occluded, and the pulse indeed below is but slightly modified when the patient is kept at rest, a very considerable alteration appears to take place in the circulation through the limb. Large unnamed branches are likely to be met with if any operation is undertaken, as numerous and difficult to deal with as if the main artery had been ligatured some time previously, and an extensive collateral circulation established. Operation must always be formidable—to the patient as well as to the surgeon—in such cases, and should not be undertaken without very full consideration, without the fullest sense of the responsibility involved, and without the very clearest and indeed imperative symptoms demanding its performance.

If operation is undertaken in the early stage shortly after the wound, the difficulties are equally great, though they differ from those likely to be encountered later on. Much blood is likely to be extravasated in the limb, landmarks are hard to recognise, bleeding points are hard to catch and harder still to ligature successfully when the tissues are soft and friable. In the later stage hæmorrhage from multitudinous bleeding points is at once a source of embarrassment to the operator and danger to the patient. Very deep dissection may be required, even though the aneurysm appears to lie at but a slight depth below the surface. A protracted operation must be anticipated, and the risks of protracted operations, with their consequent chilling, do not seem to be sufficiently recognised. The dissection may have to be carried far up and down the limb before the implicated vessels can be satisfactorily dealt with.

This much is certain: that no surgeon without ripe experience and without perfect confidence in his own coolness, resource, and quickness, should undertake any proceeding of the sort without the strongest necessity. Such qualities cannot be looked for in all. The perfect confidence is the attribute most likely to be found, but it is not the one that will prove to be of chief service in the moment of difficulty.

Arterio-venous aneurysms have been met with during the present campaign in most of the larger vessels. In one remarkable case the bullet (a Mauser) had either wounded the innominate artery itself and the vein, or else the subclavian vessels close to the origin of that artery. No active treatment had been adopted in this case fortunately, and none seemed likely to be called for. In one patient in whom an apparent injury to the peroneal nerve had attracted chief attention, the existence of a well-marked arterio-venous aneurysm in the popliteal space had apparently been overlooked, for the patient knew nothing of it until it was detected in one of the hospital ships. The man had been moving about a little, so far as the condition of partially paralysed limb allowed him, but had suffered no apparent ill-consequences. There was no obvious enlargement of the veins of the leg.

Clinton T. Dent.

Erratum.—Mr. Dent asks us to correct a slip of the pen which occurred in his article published last week at page 969, 16 lines from the top of the second column; he there referred to the Geneva Convention instead of the St. Petersburg Conference and the Hague Conference.

SOME EXPERIENCES AT THE MILITARY HOSPITAL, MOOI RIVER, NATAL.

By Sir William Stokes, F.R.C.S.I.,

Surgeon-in-Ordinary to Her Majesty the Queen in Ireland; Consulting Surgeon to the Field Forces, South Africa.

There are few places I have been in that present greater advantages for a military hospital than that at Mooi River. It is situated on the side of a hill covered with grass and wild flowers, which slopes gently down to the swiftly-flowing Mooi River, which pursues its silent but rapid course through the apparently interminable veld until it debouches into the Tugela. Its banks at the village of Weston, which is within easy reach of the hospital, are thickly wooded with fine specimens of weeping willow, which, dipping their branches into

the river, aid in forming a sylvan scene of exceptional beauty. The air is fresh and invigorating, in striking contrast to that of Maritzburg or Durban, which I found as stifling as it was relaxing. The ground on which the camp is pitched in a situation judiciously selected by the P.M.O. of Natal, Colonel Gallwey, the plans and details being carried out by Colonel Clery, the P.M O. of the hospital, assisted by Major Freyer, R.A.M.C., is sandy, and even after the terrific torrents of rain which not infrequently fall, becomes after an hour or two apparently perfectly dry. The river furnishes an unlimited supply of water, that required for drinking purposes being carefully filtered twice and then boiled before being used. Berkfeldt and Pasteur filters are to be seen in great numbers throughout the camp.

The Staff.

There is accommodation for nearly 1,000 sick and wounded in the hospital, the surgical cases being largely in the majority. The hospital is divided into a medical and a surgical section. The medical staff consists of the energetic and able P.M.O , Colonel Clery, aided by Major Lucas, the Registrar and Secretary, Majors Johnston and Freyer, who are in charge of the medical and surgical divisions respectively, Major Hackett, who is in charge of the officers' wards, and Lieutenant Blackwell, who presides with great efficiency over the *x*-ray department. In addition there are 13 civil surgeons, 2 warrant officers, 134 non-commissioned officers and men, and in the nursing department a lady superintendent and 18 trained nurses.

The Surgical Division.

In the Surgical Division, that in which my work chiefly lies, I find excellent arrangements for operation, with due regard to the principles of antiseptic surgery. The operating theatre, although hastily constructed, is admirably lit, the light being so diffused that the operator never, as so often happens in operating theatres, gets into his own light, and it is well ventilated. The floor is cemented and sloped, so that after every operation it can be freely flushed. The operating table is simple in construction, but convenient both as regards height and width. There is an ample supply of sterilised water always at hand for flushing and irrigation, of antiseptic dressings and of surgical instruments of the latest design and pattern suitable for every surgical emergency and all operation necessitated by gunshot wounds. The attendants are skilful and experienced, and although it may not be possible in any temporary hospital to have in the operating theatre the perfection of detail that is found in some civil hospitals, yet I can assert that all the essentials for successful operative work are, thanks to the foresight and experience of Colonel Clery and Major Freyer, to be found in the operating theatre of this hospital.

At the opposite or southern side of the river, close to the railway station, is the hotel which has been converted into an officer's hospital. Acting on my suggestion, however, Colonel Clery, P.M.O., transferred any cases requiring operation of exceptional severity to the camp, as I am strongly of opinion that convalescence in such cases is greatly assisted by the patients, at this season of the year at all events, being in the fresh cool air of a tent, an advantage which is not attainable at all to the same extent in any building, especially one not originally constructed for a hospital. It is gratifying to be able to record that all the amputations and other serious cases so transferred have progressed most favourably.

At present (March 14th) there are in the hospital a large number of cases of exceptional severity and surgical interest. These are, for example, traumatic aneurysms of the femoral, axillary and popliteal arteries, arterio-venous aneurysms in various situations, wounds of arteries, penetrating gunshot wounds of the head, chest, and abdomen, and compound comminuted fractures of the femur, tibia, fibula, and bones of the upper extremity. The bones are, as a rule, not merely shattered but pulverised, the soft tissues even at a considerable distance from the fracture being, as it were, infiltrated with bone dust. It has been asserted—and I think with every probability of the statement being true—that of late the Boers have been employing a much more destructive bullet than they did at the commencement of the campaign. Certainly I was not prepared, after hearing the optimistic views of some of the principal army medical officials at Capetown as to the comparatively trivial nature of the wounds I might expect to see and treat, to find that the effects of the projectiles both on bone and soft tissues were fully as severe—if not more so—than any I had formerly seen inflicted by the now, I believe, obsolete German *Zundnadelgewehr* or needle gun. Not only are the bones often shattered and pulverised, but the bullets themselves break up, the nickel covering breaking into several pieces. These fragments, as well as the contained lead, assume the most irregular and grotesque shapes, often rendering their extraction a matter of extreme difficulty and danger, especially when situated in the neighbourhood of large vessels or important organs. The fact is that the destructiveness or otherwise of the Mauser bullet depends on whether the range be a long or a short one. It has been ascertained beyond a doubt that at long ranges the Mauser bullet, if not tampered with, is much more likely on striking a bone to penetrate or tunnel it than to shatter it, and it has been asserted that the same comparative harmlessness is observed when at long ranges the bullet penetrates the brain, the lungs, or the abdomen. Certain it is that there has been a very large proportion of cases observed and recorded in which a surprising and unexpected recovery has taken place, even though the brain had been penetrated from one side to the other. Time, however, can alone tell whether these almost immediate recoveries are permanent. It will be most interesting to observe six months or a year hence what the condition of these penetrating wounds of the brain is.

Should Bullets be Extracted?

Among the many operations which are of daily occurrence here, those for the extraction of bullets or their fragments form a large proportion, and I am glad to learn that there is a predominant feeling here in favour of undertaking such operations. There is, as is well known, a wide divergence of opinion on this subject. It has been stated by some authorities of repute that it is unwise and unnecessary to remove a bullet which is not giving rise to pain or other inconvenience or trouble, and that as silver wire sutures or nickel-plated screws which are so often used for fixing together fractured bones give rise to no trouble, therefore bullets may be regarded as innocuous, and should be left alone. In this opinion I cannot concur. The analogy between bullets, silver-wire sutures, and screws, is apparent, not real. The latter are fixed, whereas bullets and their fragments are movable and liable to reach situations where their presence may be a source of pain or even danger. Quite recently, Colonel Hensman, the Principal Medical Officer of the *Maine* Hospital Ship, has told me of two cases of bullets lodged in the arm which had not been discovered. One day, while the patients were exercising with dumb bells, the bullets were forced by muscular action from their deep situations to points underneath the skin, where they could be distinctly felt and easily removed. This proves how mobile such bodies may be in the system when affected by muscular action. In these cases they were fortunately found under the skin, but it is quite conceivable that under similar circumstances they might have been forced into some locality from which their removal might have been attended with peril.

But there is another important reason why the extraction of bullets should be undertaken when there are no exceptional contraindications present, and that is the mental quietude and the freedom from apprehension on the part of the wounded soldier as to future complications and dangers. These advantages are effectually obtained by the removal of the foreign body. This is, in my opinion, in most cases a sufficient reason to justify removal. It is always a pleasing thing to witness the unconcealed delight of our brave soldiers when they are shown the extracted bullet, and I think the accurate knowledge now obtained of its exact locality by the aid of the Roentgen rays removes many of the dangers and difficulties formerly experienced in such operations.

The great rapidity in the healing of wounds, even those of operations of the greatest severity, such as amputations of the thigh, arm, and leg—the necessity for which has unhappily been very frequent of late—has impressed me very forcibly. This fortunate tendency to primary union has been attributed to various causes such as (1) the aseptic atmosphere of this district due to the great prevalence of sunshine,

(2) the youth and good general health of the patients, (3) in bullet wounds, the antiseptic first dressing that the soldiers all carry with them into action, (4) in cases where the wound is inflicted at a long range, the reduction of the damage done to the vitality of the tissues to a minimum, there being none of the bruising that is observed when the range is short, or in shell wounds, or those produced by expanding or explosive bullets.

Another theory that has been held in reference to the rapidity with which at times Mauser bullet wounds heal is that, owing to their extreme velocity, heat is generated which possibly acts as a germicidal agent along the track of the bullet. In an interesting communication I had recently from Dr. Dawes, of Grey's Hospital, Pietermaritzburg, he inclines strongly to the opinion that the rapid healing of the wounds is mainly due to the aseptic atmosphere, a condition brought about by the great prevalence of sunshine. "Even a large proportion of wounds," he observes, "due to shell or any other cause do well, the slough produced through bruising coming away with no suppuration or hectic fever." Dr. Dawes spent two years among the Zulus in Umsinga, where he saw and treated every kind of wound among them. Even under apparently the most unfavourable circumstances when, for instance, all sorts of filthy substances supposed by the natives to have a curative action had been rubbed into the wound—the same satisfactory result of union without suppuration or fever was observed.

The Medical Division.

In the Medical Division the cases are chiefly enteric fever and dysentery. In reference to the former, Colonel Clery has drawn out a series of eminently practical instructions for the guidance of ward masters and orderlies. They relate chiefly to the thorough disinfection of excreta and soiled linen of patients suffering from enteric fever, all the clothing of such patients being at once removed from the ward and placed in a solution of mercury perchloride (1 in 1,000) for two hours, and then exchanged wet at the linen store. Orderlies and all persons in attendance on enteric cases have to wash their hands in a solution of carbolic acid (1 in 20) after being in contact with excreta from these cases, and in washing their hands have to use a nailbrush. Every precaution is directed to be taken to prevent unauthorised food being supplied. I am indebted to Major H. H. Johnston, R.A.M.C., for the following note, which gives full details in reference to the precautions taken to prevent the spread of enteric fever.

The stools and urine of enteric fever patients are received into bed pans and urinals containing a 5 per cent. solution of izal. They are removed direct from the wards in these utensils to iron receptacles provided with lids, kept in a special enclosure near the hospital. This enclosure is 20 feet by 10 feet, provided with a Portland cement floor coated with coal tar, and walled in with corrugated iron to a height of 6 feet above the ground. In the enclosure there are twelve iron receptacles for excreta, and two 56-gallon wooden barrels, raised on stands and provided with stopcocks and lids; one barrel contains corrosive sublimate solution (1 in 500) for washing the bedpans and urinals with, and the other contains izal solution (1 in 20) for placing in those utensils before they are returned to the wards. The excreta are removed by natives daily in the iron receptacles to a large boiler in which, after having been mixed with sawdust, they are boiled down to dryness, and the solid residue burnt in the boiler fire. The floor of the enclosure and ground round the walls of the hospital marquees are periodically disinfected with izal solution by means of a garden rose. The odour of the izal is also useful in driving away flies.

The soiled linen is removed in baskets labelled "For disinfection," to disinfecting boilers, where, after having been boiled for half an hour it is returned in another basket labelled "Disinfected" to the steward's soiled linen store, before being sent to the laundry. The boilers for the excreta and soiled linen are situated about a quarter of a mile from the hospital, and the disinfection arrangements are carried out by natives under the supervision of a European corporal and private.

Enteric fever patients are strictly prohibited from drinking out of the soda water bottles (a common practice with soldier patients), and to prevent this practice each ward is provided with tumblers for the patients' use.

In conclusion, I desire to acknowledge with gratitude the able assistance I have at all times received from the military and civil officers in the large amount of operative work which it has fallen to my lot to do since I was attached to the Mooi River General Hospital, and to bear my testimony to the zeal, earnestness, and enthusiasm displayed by all from the highest to the humblest official who are working hard to promote the health and welfare of our brave soldiers. The happiest and most cordial relations exist between the military and civil element in the medical and surgical staff, due largely to the tact and kindliness of the Principal Medical Officer, Colonel Clery, as well as to the example he has shown of unremitting energy and industry. The importance of the great work that is being done is fully recognised by all engaged in it, and among them happily no ill feeling or element of jealousy is to be found, as all are actuated solely by an elevating and ennobling rivalry in discharging conscientiously and efficiently the important duties connected with their daily and happy toil.

THE SICK AND WOUNDED AT BLOEMFONTEIN.

We understand that immediately after the occupation of Bloemfontein Colonel W. F. Stevenson, R.A.M.C., who is Principal Medical Officer to Lord Roberts's force, and was with Lord Roberts during the march from Graspan to Bloemfontein, at once opened hospitals in various buildings, in which 500 beds altogether were provided. These were rapidly filled up. A large number of cases of enteric fever showed themselves in the force, and are believed to be attributable to the fortnight's delay at Paardeberg, where the Modder River was full of filth, including dead horses and oxen, and many dead bodies of Boers from Cronje's laager. The wounded were got out of this laager under the direction of Colonel Stevenson on the day of the surrender. They had not been treated in any way, and all the wounds were septic to the last degree, some of the large shell wounds being in a terrible condition. As many of the wounded as survived were sent down to Kimberley and Modder.

GERMAN CONGRESS OF MEDICINE.

[From our Special Correspondent.]

Wiesbaden, April 19th, 1900.

Opening Ceremonies

Once more this Congress is holding it annual meeting at Wiesbaden, to which it attracts not only our German colleagues, but also that large class of German-speaking professors and others hailing from Austria, Switzerland, Holland, Russia, and Italy. This semi-international character adds considerably to the interest of the meeting. All subjects and papers announced are taken consecutively in one room, thus allowing visitors to keep in touch with every subject and speaker. Professor v. Leyden, the originator of the Congress, is always a conspicuous figure at its meeting, and the members as a whole follow the proceedings very conscientiously, though they occupy the greater portion of four days.

Professor v. Jaksch (Prague), President for this year, opened the Congress on the morning of April 18th, being followed by delegates representing the Government of the district, the Imperial Army Medical Department, the Ministry of Education, etc. After brief addresses by these gentlemen,

Professor F. Mueller (Basle) referred in a few sympathetic words to the loss sustained by the Congress owing to the death of three of its members during the past year, giving at the same time a short history of their lives and medical achievements.

Pneumonia and its Treatment.

This first subject set down for discussion was introduced by Professor von Koranyi (Buda-Pesth), who began by reasserting his old opinion that primary fibrinous pneumonia is identical with the asthenic variety. In reviewing the various methods of treatment he began by dealing with those resulting from modern researches as to changes in the blood. The recognition of specific bacteria and toxins led to the development of a system of serumtherapeutics as regards which the speaker was satisfied that no injurious effects could be produced, and that in a number of cases some good might result, though he was not convinced that any serum as yet possessed a specific action. He also regarded as unsatisfactory attempts to produce an artificial leucocytosis by means of pilocarpin, antipyrin, nuclein, etc. As was known, chemical and physical examination of the blood in cases of pneumonia showed a deficiency of sodium chloride, and a consequent raising of the freezing point, which led to the advantageous employment of oxygen inhalations by himself and Douglas Powell. Von Koranyi further regarded venesection in cases of excessive hyperæmia and œdema of the lung as of vital importance, at the same time refuting the theoretical and practical objections

which had been raised. He also advocated saline intravenous injections, which assisted the heart while promoting diuresis. With regard to hydrotherapeutics and the use of alcohol, the speaker referred to the want of unanimity in these directions. After dwelling on the variety of drugs he specially referred to his own line of treatment, which was principally symptomatic. For an antipyretic effect he invariably relied upon quinine and sodium salicylate; in cases of asthenia he resorted to cold baths; in delirium to leeches and ice. Among external preparations he expressed a preference for large mustard poultices, and in cases of collapse he administered hypodermic injections of ether. He also advised prophylactic measures, such as cleansing of the mouth and nose. In conclusion, von Koranyi advocated some joint action for the investigation of many of the points concerning which there was at present much difference of opinion.

Professor Pel (Amsterdam) contributed a paper on the same subject, and while regretting that it was not possible to achieve much in the treatment of pneumonia, pointed out that in the case of those who were healthy the disease generally followed a normal and favourable course, whereas unusual symptoms often depended upon an abnormal constitution, such as existed in diabetic or alcoholic subjects. In discussing the numerous drugs he was unable to name one substance which could shorten or favourably influence the course and duration of the disease. As opposed to the preceding speaker, Pel considered that quinine was suitable to certain cases only. Taking digitalis next, he reviewed its adoption in various countries, and stated that in Holland its use found no advocates. While pointing out that on the whole in a normal case of pneumonia the physician's assistance should be restricted as much as possible from the therapeutic point of view; on the other hand, he would pay every attention to hygiene and other measures directed towards prolonging life. Pain might be relieved not only by the use of Dover's powder, but also locally by means of morphine injections. As regards alcohol, he insisted on the necessity of its administration at the right moment without using it to excess. While advocating tepid or cold applications, the speaker insisted that the danger of the pyrexia might be overestimated, and referred to those cases in which the temperature was only moderately raised. Cerebral and cardiac symptoms, on the other hand, were alarming. After an experience of 1,200 cases he was compelled again to admit that nothing was known which could directly influence the course of the disease. On the other hand, heroic measures might often do harm. Nevertheless, much could be done in a prophylactic sense, for instance, by securing a ready and efficient action and result from the use of alcohol by protecting the constitution in other respects, and more particularly by avoiding excesses and over-fatigue of every kind while in good bodily health. He pointed out that it was not in vain that the old wise men of Greece inscribed on the temple at Delphi the all-important words, "Nothing must be overdone." Finally, he expressed a hope that the coming century would teach a better appreciation of the French dictum, *Prévenir vaut mieux que guérir*.

The discussion was opened by Army Surgeon Mueller, who on behalf of his department submitted statistics showing the incidence, mortality, and death-rate from pneumonia in the army. This disease and phthisis stood uppermost as causes of death in the army, but on the whole the disease was no longer as prevalent as formerly. Great attention was paid to dietetic and physical treatment; every soldier on recovery receiving four weeks' leave of absence.

Professor Rumpf (Hamburg) said that with a large experience of a general hospital he had only twelve times resorted to saline injections.

Professor Rosenstein (Leyden) had found dilatation of the heart to the right and the condition of the pulse to be the principal factors in determining a prognosis.

Professor Schultze (Bonn) did not attach much importance to the pain of pneumonia, nor did he advocate a liberal use of alcohol.

Professor Naunyn (Strassburg) thought that potassium iodide was useful in certain cases with a history of chronic bronchitis. He also expressed faith in ergotin used in cases of collapse to constrict the smaller vessels as first suggested by Spielmann of Nancy in treating the collapse of enteric fever.

Professor Lenhartz (Hamburg) was inclined to consider death usually due to the heart and bacteræmia. He therefore employed bacteriology as a means of arriving at a diagnosis, and claimed to have been successful.

Professor v. Nothnagel (Vienna) laid much stress on hydrotherapeutics in any form which had succeeded in critical cases where other means had failed.

Professor Senator (Berlin) also dwelt on the value of hydrotherapeutics and of the liberal administration of warm and mineral waters where the expectoration was viscid and tenacious. The old axiom, "*Ubi stimulus ibi affluxus*" probably proved to be the explanation in those individual cases which benefited by this treatment.

Professor Pick (Prague) did not trust ergot or its derivatives as having any influence on the vessels of any but gravid subjects, with regard to which he had made many researches.

Professors Baeumber (Fribourg), v. Juergensen (Tübingen), and Bessler (Leipzig) also made remarks, to which in conclusion the two original speakers replied.

Mediterranean Fever from the Clinical Aspect.

Professor E. Neusser (Vienna) referred to the localities affected by this malady, which also extended down the Red Sea as far as the East Coast of India. Cases had even been noticed over the tract extending to Hong Kong, and to the westward in Venezuela and Porto Rico. He attributed the disease to Bruce's micrococcus melitensis. He showed a patient who attributed his disease to residence on the Black Sea, and who not only showed the clinical symptoms but gave bacteriological evidence of the disease. As regards treatment Professor Neusser had tried quinine, salicylates, and other antipyretics, but without success; failures also resulted from climatic treatment. Wright's experiments with a therapeutic serum were mentioned by the speaker, but he stated the result to be unknown, while the whole subject in his opinion deserved further study.

The Physiological Explanation of Arrhythmia.

Dr. K. F. Wenckebach (Utrecht) discussed the three main functions influencing a regular cardiac action: (1) The automatic irritability of cardiac muscle; (2) the power to transmit irritation from muscle cell to muscle cell; (3) the contractility. All these fundamental functions might be influenced by the nervous system, and the disturbance of each, according to the speaker, produced a specific form of arrhythmia. They might coexist or be found separately. If due to functional derangement of the cardiac muscle they were likely to become permanent; if due to nervous influence they would probably be transitory.

Gouty Affections of the Stomach and Intestines.

Dr. K. Grube (Neuenahr) thought that these ailments did not receive enough attention in Germany, though they were fairly frequent. He considered a case to be gouty if the patient had suffered from gout, if he had other symptoms of gout or if there was a history of gout. The dyspeptic troubles of gout he classified in the following way: (*a*) those of chronic articular gout, (*b*) those of atonic gout without articular affections, (*c*) those which preceded and accompanied the appearance of gouty attacks and the preponderance of abnormal fermentive processes was characteristic of all the different forms of gouty dyspepsia. With regard to the gouty affections of the stomach Grube made a distinction between those without alteration of the mechanism of the stomach and those in which the mechanism as well as the motor power were disturbed. The chief symptoms of gouty intestinal troubles was chronic constipation with a deficient absorption and abnormal decomposition of food. Severe attacks of pain and the passing of large quantities of mucous had also been observed. Grube described these symptoms in detail.

Dr. Minkowsky (Strassburg) referred to the practice existing in England of ascribing an excessive variety of ailments to a gouty constitution, and doubted whether the series of symptoms described were really gouty in nature.

Professor v. Noorden (Frankfort) in his hospital experience had not had an opportunity of observing the conditions described.

Professor His (Leipzig) doubted the possibility of gastro-intestinal gouty affections owing to the rarity with which

uric acid deposits were found in and around the peritoneum.

Dr. Grube, in reply, stated that he regarded uric acid as merely symptomatic while dwelling on the variability of symptoms as shown in various countries.

Influenza and Chronic Cardiac Diseases.

Dr. H. Schott (Nauheim) described three groups of cardiac affections which he considered were produced or aggravated by influenza (1) primary cardiac disease; (2) diseases of the heart resulting secondarily from diseases produced by influenza; (3) aggravation of existing cardiac troubles. In the first group he described cardiac affections of nervous origin which lead to tachycardia, bradycardia, pseudangina, real angina, and cardiac neurasthenia. Among the diseases produced by influenza and causing heart diseases were affections of the respiratory organs, of the cerebro-spinal system and intestinal tract. Any one of these might lead to valvular disease, diseases of the cardiac muscle, and cardiac neuroses. Among predisposing causes were corpulence, gout, diabetes, and arterio-sclerosis. Finally, those patients already affected with heart disease were often seriously and fatally influenced. A large number of congenital heart cases died in consequence of influenza, and, on the other hand, many latent cases and others temporarily cured were reawakened.

The Etiology of Acute Digestive Disturbances, especially Cholera Nostras, in Infants.

Dr. Sonnenberger (Worms) regarded as the principal factor in the production of these diseases an intoxication very easily produced in infants, owing to the readiness with which poisons are assimilated by them. In contradistinction to a bacterial intoxication, the speaker described a group of symptoms which might be produced by a merely chemical milk intoxication. This fact he explained by the circumstance that milk is both a secretion and an excretion, voiding in many cases a large proportion of poisonous herbs, of which cattle might consume a large quantity without any disease or symptoms being produced, thus differing from carnivora. He then called attention to the variety and quantity of weeds consumed by some cows, and the poisons introduced with them. Many of these poisons the author considered to be the cause of gastro-enteritis in children and others.

The Pathology of Paroxysmal Tachycardia.

Dr. A. Hoffmann (Düsseldorf) first described the pathology of paroxysmal tachycardia. Though the causes were very variable and unreliable, the attack always ran the same course in individual patients. His *post-mortem* investigations yielded no satisfactory explanation, and he considered that clinical and physiological studies would in future give the most satisfactory clues. His experience extended over 126 cases, and in all instances the main features were a sudden onset and as sudden a cessation of the symptoms, accompanied with more or less temporary dilatation of the heart. In many cases he had an opportunity of watching carefully the excretion of urine. In 11 instances it was normal before the attack; ten minutes after the attack a large quantity, specific gravity 1002, was passed; after two hours the specific gravity had only increased to 1012-1018. Other symptoms were inequality of pupils, perspirations, and vomiting. He was consequently inclined to regard the disease as of central origin, the seat probably being in the medulla oblongata. Physiologically he regarded the disease as an accumulation of extra systoles or as a cardiac tetanus, toxic or reflex in origin. Though always presenting similar symptoms, he could not admit tachycardia to be a disease *sui generis*, but was disposed to regard it merely as a symptom complex.

Professor Nothnagel was able to confirm the majority of Hoffmann's observations, but differed in regarding tachycardia as a disease *sui generis*. He proceeded to draw an analogy between tachycardia and epilepsy, both as regards causes and suddenness of onset. He therefore located the disease near or in the medulla oblongata, and, in the absence of further knowledge, referred to the disease as a neurosis.

Professor Rosenstein (Leyden) related the case of a patient who, while in a medical man's waiting room, was seized with an attack, which he cured by promptly standing on his head. Another case developed hemiplegia during a tachycardiac attack, the hemiplegia persisting to the present day. He believed that the immediate cause of tachycardia was a sympathetic paresis, and, as regards the morbid anatomy, he expressed a belief that in many cases anatomical changes might be found in the heart.

Dr. Determann (St. Blasien) referred to the frequency of sudden changes of position of the body as causes of other neurotic disturbances.

Dr. Hoffmann, in his reply, remarked that the disposition to tachycardia remained for life.

Albumen in the Diabetic Diet.

Dr. Lenné (Neuenahr) stated that not only the general diet but also the quantity of albumen administered should be regulated by the weight of the diabetic patient. The quantity of albuminous foods introduced must correspond to an excretion of 2½ grs. of urea for every 1lb. of body weight during twenty-four hours. The greater the demand for albuminous food constituents and the more difficulty there was in lowering the excretion to the above standard the more grave was the condition of the patient, and *vice versâ*.

A New Constituent of Spinal Fluid.

Professor Gumprecht (Jena) described cholin as a product arising from the destruction of lecithin. In the course of many investigations he had never failed to find it, often even in the brain and nerves. He therefore regarded the decomposition of lecithin as an expression of the physiological metabolism. Similar products were also found in spinal fluid, and he therefore compared the subarachnoidal space to a large drainage area for the rapid evacuation of decayed nerve matter.

Methods for Raising the Proportion of Albuminous Compounds in the Organism.

Dr. Bornstein (Landeck) said that an increase of albuminous compounds in the organism could be produced in several ways. He first referred to the well-known Weir-Mitchell procedure, in which, however, every food constituent was liberally supplied which Bornstein only considered necessary in cases of floating kidneys, where excess of fat was to be produced. The method advocated by the speaker was to arrest as much as possible the combustion of proteids in the organism. His favourite preparation was one of the casein-albumens, such as lutrose, plasmon, or sanatose, which could be added in variable quantities to a normal diet. He claimed the results to be superior to those obtained by the Weir-Mitchell treatment, and more agreeable to the patient.

New Methods of Ascertaining the Cardiac Boundaries.

Dr. A. Smith (Marbach) maintained that skiagraphy had shown the unreliability of percussion of the heart as hitherto practised. He admitted, however, that the difficulty in connection with skiagraphy made this form of examination generally impracticable. Bianchi's friction method had given good results in the hands of Italians, who, however, probably had a finer sense of touch. In addition to these objective methods, he described a subjective method designed by himself. When he placed the indifferent electrode on the patient's back, preferably to the left, the other electrode over the area of cardiac dulness, and gradually increased the strength of the secondary faradic current, there came a moment when the sensation on the part of the patient extended to the deeper parts. In this way by beginning outside the cardiac area, and proceeding round the periphery, he arrived at an area of dulness which corresponded with that obtained by the other methods.

Annual Banquet.

This terminated the business of the first two days. In the evening of the second day the annual banquet took place.

(To be continued).

Election of Coroner for the City of Dublin.—The Corporation of Dublin have elected Dr. Louis Aloysius Byrne to be Coroner of the city in the room of the late Dr. J. E. Kenny. Dr. Byrne obtained the Licence of the Royal College of Physicians of Ireland in 1886, and the Fellowship of the Royal College of Surgeons in Ireland in 1889. He is Surgeon to Jervis Street Hospital, but this position, it is understood, he will be required to resign. It is satisfactory to find that the office of coroner again devolves on a medical man.

DR. NINIAN FALKINER.

On Thursday, April 12th, Dr. Ninian Falkiner, whose appointment as Medical Superintendent of Statistics in the General Register Office in Dublin has given general satisfaction, was entertained at dinner in the Dolphin Hotel by his late colleagues in the Poor-law Medical Service. Sir Charles Cameron, C.B., occupied the chair, and a most enjoyable evening was spent. The following address was also presented to Dr. Falkiner, to which he feelingly replied:

To Ninian Falkiner, Esq., M.B., D.P.H. University of Dublin, F.R.C.P.I.

Dear Doctor Falkiner,—We, the Poor-law and Medical Officers of Health of the Dublin Metropolitan Registration Area, have learned with great pleasure of your appointment to the important position of Superintendent of Vital Statistics in the General Register Office. It is a position the duties of which you are eminently qualified to discharge; but we hope and trust that it is but your first step on the official ladder.

During the 13 years that you have spent in the public services you endeared yourself to all with whom you came in contact. Your kindness to the poor, and your skilful treatment of them when suffering from illness, will long be gratefully remembered in the district with which you were so many years officially connected.

As a sanitarian you earnestly endeavoured to improve the condition of the homes of the poor, and you succeeded in accomplishing many reforms in your district.

We shall always remember with pleasure the kindly feelings which subsisted between us.

Although we naturally feel regret that you have ceased to be our colleague, yet we rejoice that your new position will enable you to review our work and to keep in touch with us.

Wishing you long life and much happiness,

We remain, Dear Dr. Falkiner, faithfully yours,

Charles A. Cameron, Knt., C.B., Chairman.
J. Garland, L.R.C.S.I. } Secretaries.
Geo. P. Cope, L.R.C.S.I. }

On behalf of the following:

Dr. Edgar Flinn, F.R.C.S., Medical Inspector, L.G.B.	Dr. William Green.
Dr. John Barton.	Dr. Henry Davy.
Dr. Albert Croly.	Dr. O'C. J. Delahoyde.
Dr. Henry W. Oulton.	Dr. S. M. Thompson.
Dr. M. Strahan.	Dr. Cullen.
Dr. Thomas Donnelly.	Dr. Joseph G. Burne.
Dr. Joseph A. Ryan.	Dr. Richard J. Hearn.
Dr. John J. Gibbs.	Dr. Henry G. Day.
Dr. Herbert U. Byrne.	Dr. A. O. Speedy.
Dr. J. H. McAuley.	Dr. George A. Stritch.
	Dr. W. J. Gibson.

LITERARY NOTES.

Hart's Quarterly Army List, vol. ccxlvi, has just been issued, and, besides its usual contents, gives: Lists of the Officers of Imperial Yeomanry, Lord Lovat's Corps, Lord Strathcona's Corps, Colonel Lumsden's Corps, the City of London Imperial Volunteers, and of the Volunteer Officers serving in South Africa, in all cases with their war services (if any).

A second edition of Mr. Mark Hovell's *Treatise on Diseases of the Ear, including Affections of the Naso-Pharynx*, is now in the press.

The *Athenæum* states that Messrs. Smith, Elder and Co. will immediately publish a short book entitled *The Origin and Character of the British People*, by Mr. N. C. Macnamara. F.R.C.S., author of *The Story of an Irish Sept* and the *History of Asiatic Cholera*. The work is described as an attempt in a popular form to explain the racial origin of the British people in the light of the science of craniology, and to follow the racial changes which took place amongst the inhabitants of these islands prior to the Norman conquest. Later chapters deal with the physical characteristics of the peoples of Europe of to-day as tested by their cephalic measurements. The volume includes upwards of thirty reproductions of photographs of typical skulls taken from the collection of the Royal College of Surgeons.

In a recently published book entitled *Child Life in Colonial Days* (Macmillan and Co.), by Mrs. Alice Morse Earle, the sufferings of American children in the "good old colony times" are said to have been largely due to the way in which they were physicked. Of the medical treatment inflicted on them an idea may be gathered from a letter written in 1769, which Mrs. Earle quotes. The writer, who was presumably a doctor, begins by recommending as the best corrective a syrup made from black cherries, doses of which were to be given twice or thrice a day. But his practice was not all of this mild character, for he goes on:

If you Dip your Child, do it in this manner: viz.: naked in the morning, head foremost in Cold Water, don't dress it Immediately, but let it be made warm in ye Cradle and sweat at least half an Hour moderately. Do this 3 mornings going and if one or both feet are Cold while Parts sweat (which is sometimes ye Case) Let a little blood be taken out of ye feet ye 2nd Morning and yt will cause them to sweat afterwards. Before ye dips of ye Child give it some Snakeroot and Saffern Steep'd in Rum and Water, give this Immediately before Diping and after you have dipt ye Child 3 Mornings Give it several times a Day ye following Syrup made of Comfry, Hartshorn, Red Roses, Hogbrake roots, knot-grass, petty-moral roots, Sweeten ye Syrup with Melosses.

The author had the courage of his convictions, for he adds: "These directions are agreeable to what I have practiced for many years." The Spartan teaching of Locke's *Thoughts on Education* was in great favour with American parents of the last century. Mrs. Earle gives some examples. The following will perhaps suffice:

Josiah Quincy was the suffering subject of some of this instruction; when only three years old he was taken from his warm bed in winter as well as summer (and this in Eastern Massachusetts), carried downstairs to a cellar kitchen, and dipped three times in a tub of cold water fresh from the pump. He was also brought up with utter indifference to wet feet; he said that in his boyhood he sat more than half the time with his feet wet and cold, but with no ill results.

The children who survived this method of upbringing must clearly have had exceptional constitutions. If a humane voice was here and there raised against the massacre of the innocents caused by this treatment combined with constant drenching with physic, it was promptly drowned by the clamour of public indignation. Mrs. Earle says that a book published in 1647 entitled *A Most Desperate Booke written against taking of Phissick* was promptly ordered to be burnt. The systematic drugging of children continued in America far into the present century, and is still practised in country places.

ASSOCIATION INTELLIGENCE.

PROCEEDINGS OF COUNCIL.

At a meeting of the Council held in the Council Room of the Association, 429, Strand, W.C., on Wednesday, April 11th, 1900.

Present:

Dr. John Roberts Thomson, President of the Council, in the Chair.
Mr. Andrew Clark, Treasurer.
Dr. John Ward Cousins, President.
Dr. William Alfred Elliston, President-elect.

Dr. Edgar G. Barnes, Eye.
Dr. James Barr, Liverpool.
Dr. T. Beattie, Newcastle-on-Tyne.
Dr. Michael Beverley, Norwich.
Dr. Thomas Bridgwater, LL.D., Harrow-on-the-Hill.
Dr. J. Brassey Brierley, Old Trafford.
Mr. Langley Browne, West Bromwich.
Mr. James Cantlie, London.
Dr. Alfred H. Carter, Birmingham.
Mr. T. H. Cheatle, Burford.
Dr. H. Radcliffe Crocker, London.
Dr. George W. Crowe, Worcester.
Dr. P. Maury Deas, Exeter.
Dr. T. M. Dolan, Halifax.
Dr. W. Dyson, Sheffield.
Mr. George Eastes, M.B., London.
Professor David W. Finlay, Aberdeen.
Dr. John H. Galton, Upper Norwood.
Dr. Alfred Godson, Cheadle.
Dr. Bruce Goff, Bothwell.
Dr. C. G. Gooding, London.
Dr. David Goyder, Bradford.
Dr. Ogilvie Grant, Inverness.
Dr. Joseph Groves, Carisbrooke, Isle-of-Wight.
Dr. Henry Handford, Nottingham.
Mr. John D. Harries, Shrewsbury.
Dr. T. Arthur Helme, Manchester.
Dr. Holman, London.
Mr. T. Vincent Jackson, Wolverhampton.
Mr. T. R. Jessop, Leeds.
Mr. Evan Jones, Aberdare.
Mr. R. H. Kinsey, Bedford.
Mr. Jordan Lloyd, Birmingham.
Dr. Roderick Maclaren, Carlisle.
Mr. N. C. Macnamara, London.
Mr. H. J. Manning, Salisbury.
Dr. C. H. Milburn, Hull.
Dr. J. W. Miller, Dundee.
Mr. W. Jones Morris, Portmadoc.
Dr. James Murphy, Sunderland.
Surgeon General T. F. O'Dwyer, Aldershot.
Mr. C. H. Watts Parkinson, Wimborne.
Dr. Charles Parsons, Dover.
Dr. Robert W. Philip, Edinburgh.
Dr. H. H. Phillips-Conn, Reading.
Dr. Frank M. Pope, Leicester.
Dr. A. Brown Ritchie, Hulme.
Mr. H. Betham Robinson, M.S., London.
Dr. Robert Saundby, LL.D., Birmingham.
Dr. Alfred Sheen, Cardiff.
Dr. G. E. Shuttleworth, Richmond Hill.
Dr. E. Markham Skerritt, Clifton, Bristol.
Dr. R. Somerville, Galashiels.
Mr. Henry Stear, Saffron Walden.
Dr. W. J. Tyson, Folkestone.
Dr. A. R. Urquhart, Perth.
Mr. T. Jenner Verrall, Brighton.
Dr. W. L. Winterbotham, Bridgwater.
Dr. S. Woodcock, Old Trafford.

Read letters of apology for non-attendance from Sir Walter Foster, Dr. G. H. Philipson, Dr. Henry Barnes, Dr. R. W. Batten, Dr. J. Campbell, Brigade-Surgeon-Lieutenant-Colonel Drake-Brockman, Dr. Freeland Fergus, Mr. R. S. Fowler, Dr. McVail, Dr. J. W. Moore, Dr. C. G. D. Morier, Dr. Isambard

Owen, Dr. Rolston, Dr. W. Russell, Dr. L. W. Sedgwick, and Mr. C. S. Tomes, F.R.S.

The minutes of the last quarterly meeting, together with the minutes of the special meeting of March 21st, having been printed and circulated, and no objection having been received, were taken as read and signed as correct.

Resolved: That the Council of the British Medical Association desires to offer its very sincere and hearty congratulations to H.R.H. the Prince of Wales upon his providential deliverance from a dastardly assault.

Resolved: That the Council desires to record its sense of the great loss sustained by the profession, the Medical School in Edinburgh, and by this Association, in the death of Sir Thomas Grainger Stewart. As President of the annual meeting in Edinburgh in 1898, the Council recalls the ability with which he carried out the responsible duties of the office, and recognises that the great success of that meeting was in no small measure due to the energy and zeal which he showed throughout the proceedings, and his genial and courteous bearing to all. The Council desires to convey to Lady Grainger Stewart and to the family of the late Sir Thomas its sincere sympathy with them in their bereavement.

Resolved: That the Council of the British Medical Association desires to offer its sympathy with the family of the late Dr. Grimshaw upon the sad loss they have sustained. Dr. Grimshaw was for five years their colleague and representative of the Dublin Branch. During this period the Council had the experience of his amiable character and his many good and sterling qualities. His valuable help and advice were always at the service of the Council. Dr. Grimshaw was also an active and valued member of the Dublin Branch, of which he was President when the Association held its last annual meeting in Dublin in 1887. He was President of the Section of Public Medicine in 1879, when the Association met at Cork; and at Carlisle in 1896 he moved the resolution on the Prevention of Tuberculosis, which has since received such universal attention.

Read reply from the Colonial Office in reference to minutes of Council instructing the General Secretary to obtain all information possible upon the question of lists of registered practitioners in the Colonies, etc.:

Downing Street, March 10th, 1900.

Sir,—Referring to your letter of March 20th last enclosing a list of questions on various points of medical practice in the Colonies upon which the Council of the British Medical Association desire to obtain information, I am directed by Mr. Secretary Chamberlain to transmit to you, for the information of the Council, copies of the replies which have been received from the Governors of the Colonies, as noted below, to the questions which were sent out to the Colonies in circular as arranged with the Council:

Newfoundland	Bahamas	Gold Coast
Victoria	Trinidad	Lagos
Queensland	Barbados	Niger Coast Protectorate
Tasmania	Grenada	(Now South Nigeria)
South Australia	St. Vincent	Gibraltar
New Zealand	St. Lucia	Malta
Fiji	Bermuda	Cyprus
Jamaica	Falkland Islands	Hong Kong
Turks Islands	Natal	Mauritius
British Honduras	St. Helena	Seychelles
British Guiana	Sierra Leone	Straits Settlements.

I am also to forward, for the information of the Council, copies of the laws and regulations on the subject in force in the Colonies named, which it has been found possible to supply, and to state that others can be seen, if necessary, on reference to the Librarian of this Department.

I am to add that on the receipt of replies from those Colonies which have not yet replied to Mr. Chamberlain's circular despatch, a further communication shall be addressed to you.

I am, Sir, your obedient servant,

H. Bertram Cox.

The General Secretary, British Medical Association.

Resolved: That the communication from the Colonial Office be referred to the Public Health Subcommittee.

Read acknowledgment from the General Medical Council to Resolution 4826, namely:

That in view of the great advance in the science and art of midwifery and diseases of women during the last few years, this Council urges the General Medical Council to insist that wherever possible medical students should learn practical midwifery in a lying-in hospital or in the extern midwifery department of a general hospital, and, failing this, that every case of labour shall be attended by them under the supervision of a duly qualified medical practitioner.

299, Oxford Street, London, W.,
February 23rd, 1900.

Sir,—I am directed to acknowledge the receipt of your letter of the 22nd instant, which shall have attention.—Yours faithfully, H. E. Allen,
Registrar and Secretary.

F. Fowke, Esq., British Medical Association.

The President of Council reported that the following memorial, signed by members of the Council, respecting the Companies Acts Amendment Bill had been forwarded to the President of the Board of Trade:

To the Right Honourable
Charles Thomson Ritchie, P.C., M.P.,
President of the Board of Trade.

THE MEMORIAL OF MEMBERS OF THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

THAT we, the undersigned members of the Council of the British Medical Association, which Association numbers upwards of 18,000 members, beg to urge upon Her Majesty's Government the importance of passing Clause 3 of the Companies Acts Amendment Bill, which was originally drafted and printed as a separate measure under the directions of the Lord Chancellor.

The companies whose operations it is intended to check constitute a very considerable and a growing evil. They foist upon the public, under conditions which lead them to suppose that they are obtaining the advice of qualified medical men, the services of absolutely unqualified and incompetent persons, and thus deprive the public of that protection which is intended to be afforded by the various Medical Acts, in many cases with serious and even fatal consequences, and legislation upon the subject is urgently required.

And your memorialists will ever pray, etc.

[Signatures followed].

3. *Companies not to act as Doctors, etc.*—It shall be unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife, and if any company contravenes this enactment it shall be liable, on summary conviction, to a fine not exceeding £5 for every day during which the contravention happens. (Bill No. 79.)

The Board of Trade's reply:

Board of Trade,
Whitehall Gardens, S.W.,
March 22nd, 1900.

Sir,—I am desired by Mr. Ritchie to acknowledge receipt of your letter of yesterday, enclosing a memorial signed by members of the Council of the British Medical Association, whose views upon Clause 3 of the Companies Bill will have his careful consideration.

I am, Sir,
Yours faithfully,

Francis Fowke, Esq. Garnham Roper.

Read reply from the National Association for the Prevention of Tuberculosis to the resolution of the Council informing them of the appointment of delegates on behalf of the British Medical Association.

Read reply from the Duke of Devonshire to the communication of the President of Council asking him to receive a deputation on the subject of the Midwives Bill:

Privy Council Office, London, S.W.,
April 2nd, 1900.

Sir,—I am directed by the Lord President of the Council to acknowledge the receipt of your letter of the 30th ultimo, on the subject of the Midwives Bill now before Parliament.

I am to point out to you that this Bill is not a Government measure, and to inform you that until it reaches the House of Lords his Grace does not consider it necessary to receive a deputation on the subject.

I am, Sir, your obedient Servant,

A. W. Fitz Roy.

J. Roberts Thomson, Esq., M.D.,
President of the Council of the
British Medical Association,
429, Strand, W.C.

Read letter from the Hon. Secretary to the Navy, Army, and Ambulance Section.

April 7th, 1900.

Dear Sir,—The Committee of this Section will be glad if the Council will give leave for them to invite Sir John Furley and Sir Herbert Perrott to read papers on ambulance work at the Section meetings at Ipswich, and also to invite the presence of Lords Knutsford and Wantage, and Surgeon-General Sternberg, U.S. Army, as visitors.

All four names are, of course, well known in connection with St. John Ambulance Association.

I am, dear Sir,
Yours very faithfully,

Francis Fowke, Esq. J. Harper, Hon. Sec.

Resolved: That the application from the Navy, Army, and Ambulance Section be granted.

Read communication from the Royal Statistical Society respecting the Census Bill:

9, Adelphi Terrace, Strand. London, W.C.,
March 8th, 1900.

Dear Sir,—The Council of the Royal Statistical Society directs me to ask your Council to use its influence to induce Parliament to include in the Census Bill now under consideration a provision for the taking of an intermediate census of a simple and comparatively inexpensive character in the year 1906, so as to afford to statisticians and others the benefits of a quinquennial numbering of the people.

The cost, as I have said, would not be great, and it would not have to be met for some years to come. But unless the Government can be induced to make provision for it at the present time, when the Bill for the taking of the usual decennial census is before Parliament, no opportunity will occur for another ten years.

Our Society has already made representations to the Government in connection with the matter, and I beg to enclose you a note which gives the substance of our recommendations, and shows also the considerable measure of success which they have attained. It also sets out the reasons

which impel the Royal Statistical Society to invite the co-operation of of other bodies.

The Statistical Society feel sure that if public bodies and scientific societies, to whom especially the results of a census are of practical value, insist upon the importance and necessity of what we ask, and will make representations to that effect to their local representatives, the Government will gladly meet the wishes of the country in this regard.

I have the honour to be, Sir,
Your obedient servant,
J. A. HAINES,
Honorary Secretary.

Abstract of recommendation:

[The Statistical Society, however, has not recommended that the enumeration should be on each occasion in the full detail of a decennial census, which is the plan adopted abroad, but has always held that the population by sex and age will suffice at the intermediate period. The project, though supported by the Departmental Committee of 1890, was shipwrecked on the rock of expense, but this consideration carries less weight if it be held that the intermediate census is a necessary supplement to that of the decennial period, and that without it the latter loses a great part of its value after a few years. The simple enumeration, it is estimated, would cost less than half as much as a general census, and for £50,000 or so would maintain the continuity of observation to an extent to which all those interested attach the highest value.

The Subcommittee, accordingly, express the hope that they may rely upon the co-operation of their colleagues, and also upon that of medical, sanitary, actuarial, and economic bodies in bringing home the importance of this question to members of Parliament, in order to get, if possible, the interpolation in the Bill of some such provisions as the following:

(1) In the title, line 1, the addition of "s" to year, and in the margin the words "and 1906."

(2) In the next line, after "one," add "and one thousand nine hundred and six."

(3) Add to Clause 1 the words "also in the year one thousand nine hundred and six, on a date to be fixed hereafter by the Local Government Board."

(4) In Clause 4 (*b*), add after Subsection (*d*) the following Subsection:

"(*e*) At the census of one thousand nine hundred and six, particulars of name, sex and age, and none other shall be required to be entered."]

Resolved: That this Council co-operate with the Royal Statistical Society in its effort to induce Parliament to include in the Census Bill a provision for the taking of an intermediate census.

Read resolution passed by the County of Durham Medical Union on the representation on the General Medical Council.

Resolved: That the communication from the County of Durham Medical Union be referred to the Parliamentary Bills Committee.

Read application for a further grant from the Liverpool School of Tropical Diseases.

Resolved: That the Council will be pleased to consider the application from the Liverpool School of Tropical Diseases for a further grant if they will first furnish the Council with the particulars of other subscriptions and a general financial statement of the position of the School.

Read translation of circular from the Tuberculosis Congress to be held in Naples from April 25th to 28th, and asking the Association to appoint delegates.

Resolved: That Dr. J. J. Eyre of Rome, Dr. M. W. Gairdner of Naples, and Dr. W. Allen Sturge of Nice be requested to act as representatives of the British Medical Association at the forthcoming Congress at Naples.

Resolved: That it be referred to the Journal and Finance Committee to prepare a draft of standing orders for submission to an early meeting of the Council.

Read resolutions passed by the Lancashire and Cheshire Branch.

3, St. Peter's Square, Manchester,
March 14th, 1900.

Dear Sir,—I am requested to bring to your notice the following resolutions which were passed at a meeting of the Council of the above Branch held this day, and to ask you to be so good as to bring them before the next meeting of the General Council of the Association.

Resolution 1.—That Dr. Ritchie be instructed to bring before the General Council of the Association the following resolutions passed at a meeting of the Lancashire and Cheshire Branch of the British Medical Association, and that the other representatives of this Branch on the General Council be requested to urge their adoption by the General Council.

The following are the resolutions above referred to:

(*a*) That this Branch is of opinion that, when matters of general policy or affecting the profession at large are about to be discussed by the Central Council, the Branches should have an opportunity of expressing an opinion on such, and that, as a means to that end, the agenda of a Central Council meeting should be received by the members thereof at least fourteen days before such meeting, and that such matters should not be considered private and confidential to members of Council.

(*b*) That the meetings of the Branch be held, as far as possible, within fourteen days of the meetings of the Central Council.

Resolution 2.—The Council of the Lancashire and Cheshire Branch requests the General Council of the British Medical Association to use all the means in its power to prevent the passage of the Midwives Bill, at present before Parliament, into law.

Yours very truly,
T. ARTHUR HELME.

Resolved: That this Council accepts the principle of the necessity of consulting the Branches on all important questions.

Resolved: That the communication from a Committee of the Manchester Medical Guild, dated December 29th, 1899, be further considered, namely:

Trafalgar Square, Ashton-under-Lyne,
December 29th, 1899.

To the Council of the British Medical Association.

Gentlemen,—A Committee of the Medical Guild, Manchester, has been, since September last, engaged in the work of convening a Conference of delegates from the various medical societies in the country. The idea has met with widespread approval, and the Conference will meet next May either in London or Manchester. I enclose copies of a circular letter which has just been issued, and of rules which have been drafted. These will give you a fair idea of our objects, and as it is very desirable that all phases of opinion on questions of medical politics should be represented, my Committee are anxious that the British Medical Association should be represented by a delegate, and have much pleasure in inviting the Council to elect some gentleman to attend in that capacity. Similar invitations have been extended to all the Branches of the Association in England and Wales. Trusting that this matter may have your favourable consideration.

Believe me, yours sincerely,
SAML. CRAWSHAW, M.B.,
Honorary Secretary to the Provisional Committee.

Resolved: That Dr. Woodcock be requested to act as delegate at the Conference.

Resolved: That the 155 candidates whose names appear on the circular convening the meeting be and they are hereby elected members of the British Medical Association.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Journal and Finance Committee contain a vote of £25 to the Editor for the payment of the revision of manuscripts for the quarter, the accounts for the quarter amounting to £8,702 17s. 8d., the Auditors' report, a grant of £100 to the Tuberculosis Congress, and increases in the salaries of the General Secretary, the Financial Secretary, and the Assistant Secretary. Also a resolution respecting the payment of the railway fares of Committees. The Treasurer reported that he had paid off a further amount of £6,000 of the mortgage debt, and in reference to the claim for corporation duty which had been resisted by the General Secretary intimation was received from the Board of Inland Revenue abandoning the claim.

The financial statement for the year ending December 31st, 1899, was then considered.

Resolved: That the financial statement for the year ending December 31st, 1899, as certified by the auditors as correct, be received and approved and published in the JOURNAL in accordance with By-law 26. (See page 989.)

Resolved: That the minutes of the Premises and Library Committee of April 10th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Premises and Library Committee contain an estimate and resolution for carrying out certain alterations in the office with a view to improving the present ventilation, the account for the quarter amounting to £19 3s., the report of the Librarian, and instructions to purchase certain books.

Resolved: That the minutes of the Conciliation Board Committee of April 10th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Conciliation Board Committee contain copies of correspondence between the President of Council and Dr. J. G. Glover, respecting the drafting of a scheme dealing with the formation and constitution of a Conciliation Board to include the adjusting of relations between friendly societies and the medical profession. Also a resolution recommending a joint meeting between the Committee of the British Medical Association and the Conciliation Board Committee of the General Medical Council.

Resolved: That the minutes of the Trust Funds Committee of April 10th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the Trust Funds Committee contain recommendations: (1) That the Middlemore Prize be fixed at £50; (2) that Mr. N. C. Macnamara, Dr. Argyll Robertson, and Mr. Henry Power, be requested to act as adjudicators; and (3) that the prize be awarded for the best essay or work on any subject in the department of ophthalmic medicine or surgery.

Resolved: That the minutes of the General Practitioners and Ethical Committee of April 10th be received and approved, and the recommendations contained therein carried into effect.

The minutes of the General Practitioners and Ethical Committee contain recommendations respecting the principle of manufacturing firms reprinting articles from the JOURNAL for the purposes of advertising, the question of a wage limit for the Coventry Provident Dispensary, and various resolutions dealing with medico-ethical subjects.

Resolved: That the minutes of the Parliamentary Bills Committee of April 10th be received and approved, and the recommendations contained therein carried into effect.

For the minutes of the Parliamentary Bills Committee see below.

Resolved: That the Treasurer, Mr. Macnamara, and Dr. Groves be appointed a Subcommittee to investigate the case of Dr. Kaye.

Resolved: That the General Council of the British Medical Association is of opinion that the Midwives Bill as amended by the Grand Committee on Law, and at present before Parliament, if it became law, would be a direct danger to the public safety.

Resolved: That copies of this opinion be sent to all members of Parliament and to the local Secretaries of the various Branches of the Association, requesting them to use all local influence in their power to obtain amendments to the Bill.

Resolved: That the Council be requested to ask Sir John Gorst and the Solicitor-General to receive a deputation on the Midwives Bill.

Resolved: That the President of Council, Dr. Saundby, Dr. Helme, Mr. Langley Browne, Mr. C. H. W. Parkinson, and Dr. Woodcock, as members of the Council, be appointed a deputation to wait upon Sir John Gorst and the Solicitor-General respecting the Midwives Bill, and that Mr. Victor Horsley and Dr. Dawson Williams should be asked to join this deputation.

Resolved: That Dr. Farquharson, M.P., as Chairman of the Parliamentary Bills Committee, be requested to introduce the deputation in the event of Sir John Gorst and the Solicitor-General agreeing to receive one.

Resolved: That the minutes of the Inebriates Legislation Committee of February 26th, 1900, be received and approved, and the recommendations contained therein carried into effect.

Resolved: That the President of Council, the Treasurer, and Mr. George Eastes be appointed a Subcommittee to draw up the annual report of Council.

PARLIAMENTARY BILLS COMMITTEE.

A MEETING of the Parliamentary Bills Committee was held at the office of the Association, 429, Strand, W.C., on Tuesday, April 10th, 1900. Present:

Dr. R. FARQUHARSON, M.P., in the Chair.
Dr. J. ROBERTS THOMSON, President of Council.
Dr. J. WARD COUSINS, President.
Dr. W. A. ELLISTON, President-elect.
Mr. ANDREW CLARK, Treasurer.

Mr. S. H. AGAR, Henley-in-Arden.
Mr. D. B. BALDING, Royston.
Dr. R. L. BOWLES, London.
Dr. T. R. BRADSHAW, Liverpool.
Dr. T. BRIDGWATER, Harrow-on-the-Hill.
Mr. GEORGE BROWN, London.
Mr. COLIN CAMPBELL, Saddleworth.
Dr. W. A. CARLINE, Lincoln.
Dr. ALFRED COX, Gateshead-on-Tyne.
Dr. P. MAURY DEAS, Exeter.
Dr. W. DOUGLAS, London.
Mr. GEORGE EASTES, London.
Dr. R. ESLER, London.
Dr. BRUCE GOFF, Bothwell.
Dr. DAVID GOYDER, Bradford.
Dr. MAJOR GREENWOOD, London.
Dr. J. GROVES, Carisbrooke.
Mr. J. D. HARRIES, Shrewsbury.
Dr. HOLMAN, London.
Mr. VICTOR HORSLEY, F.R.S., London.
Mr. EVAN JONES, Aberdare.
Dr. C. W. MARRIOTT, Reading.
Dr. W. J. MICKLE, London.
Dr. C. H. MILBURN, Hull.
Dr. J. W. MILLER, Dundee.
Mr. W. JONES MORRIS Portmadoc.
Dr. W. NEWMAN, Stamford.
Mr. C. H. W. PARKINSON, Wimborne Minster.
Dr. F. M. POPE, Leicester.
Mr. A. BROWN RITCHIE, Hulme.
Mr. C. R. STRATON, Wilton.
Dr. J. C. THRESH, Chelmsford.
Insp.-Genl. ALEX. TURNBULL, R.N., Emsworth.
Dr. A. R. URQUHART, Perth.
Dr. DAWSON WILLIAMS, London.
Dr. W. L. WINTERBOTHAM, Bridgwater.
Dr. S. WOODCOCK, Old Trafford.

The minutes of the last meeting having been printed and circulated were taken as read and signed as correct.

Letters of apology for non-attendance were read from Dr. R. W. Batten, Brigade-Surgeon-Lieutenant-Colonel E. F. Drake-Brockman, Dr. C. G. Gooding, Dr. A. J. Harrison, Dr. J. C. McVail, Dr. J. W. Moore, Dr. J. Rolston, Dr. W. Russell, Dr. G. E. Shuttleworth, and Mr. T. J. Verrall.

THE MINUTES.

Dr. WOODCOCK said he would like to move that the minute of the last meeting of the Committee with reference to the Subcommittee appointed to amend the Medical Acts be rescinded. He considered it had been passed under a misapprehension. It had not been approved by the Council afterwards. Indeed, it limited the action of the Subcommittee appointed to deal with the Medical Acts Amendment Bill to one part of the question. A resolution was passed at the annual meeting at Portsmouth, stating that any draft Bill for the amendment of the Medical Acts should contain, *inter alia*, provision for further direct representation of the profession on the General Medical Council, and the establishment of a one-portal system of qualifying examination. On May 12th the resolution of the Council was that the Medical Acts Amendment Bill, as amended, be referred back to the Parliamentary Bills Committee with a request that they redraft the Bill and submit it to a future meeting of the Council. That was after a discussion, when some attempt was made to limit the scope of the work of the Subcommittee, and on July 11th, 1899, the Parliamentary Bills Committee reappointed the Subcommittee to reconsider, and amend if necessary, the draft Bill of the Parliamentary Bills Committee, and referring to the Subcommittee in redrafting the Medical Acts Amendment Bill the resolution passed at the annual meeting in August, 1899. At the last meeting of the Parliamentary Bills Committee, a resolution was sprung upon them limiting the scope of action, and it was passed, as he maintained, under a misapprehension. At the meeting of the Subcommittee held that day, a resolution had been adopted to the effect that, taking into consideration the facts mentioned, the Subcommittee, in redrafting the Medical Acts Amendment Bill, did not see their way to do so in accordance with the resolution passed at the last meeting of the Parliamentary Bills Committee; they declined to be limited in the way that the resolution proposed to limit them.

Mr. HORSLEY, in seconding the resolution, said that as a matter of history it had been at first proposed to have a one-clause Bill. When the matter was gone into more fully the Committee decided that a one-clause Bill would not do what was necessary, but that a Bill should be prepared dealing with the constitution of the General Medical Council, the duties of universities and medical corporations, and so on. The Subcommittee were then instructed to draft a Bill in accordance with all those points, and the resolution passed was of necessity in flat contradiction to the previous decision of the Committee.

The PRESIDENT OF THE COUNCIL said some difficulty arose on the matter at the January meeting of the Council. When the minutes of the Parliamentary Bills Committee were under discussion in the Council, Dr. Woodcock, who was a member of the Subcommittee, moved that the particular resolution should be disagreed with. In his opinion such a resolution should not have been submitted to the Council for the reason that when a Subcommittee was dealing with business which was still unfinished, that particular business ought not to be discussed in the Council, or any body superior to the originating Committee. It was highly inconvenient that the Council should interfere by resolution or otherwise between a Subcommittee and the Committee which had appointed it while the business was going on. In his opinion the Council would have full and perfect power when, the Subcommittee having finished its labours and reported to its Committee, the matter came before the Council in the Committee's Report.

After some further discussion, in which Dr. BROWN RITCHIE, Mr. GEORGE BROWN, and Dr. DOUGLAS took part, the resolution was carried, 18 voting for it and 2 against.

THE MIDWIVES BILL.

The CHAIRMAN said that the report stage of the Bill in the House of Commons had been postponed until June 27th.

Mr. GEORGE BROWN said he had received a communication from a Committee consisting of certain medical societies in South-East London, which had been formed with a view to concentrate opposition to the Bill. A letter, of which he had a copy, had been addressed to the Parliamentary Bills Committee inviting them to appoint delegates to this opposition Committee with the view to bring pressure upon the Lord President of the Privy Council to receive a deputation from the medical profession. They knew the Council of the As-

sociation had failed to induce the Lord President of the Privy Council to receive a deputation from the Association, while he had put no difficulty in the way of the promoters of the Bill when they desired to approach him. It was essential that the Legislature should be informed as to the views of the profession. If they united with other active bodies he believed that they would be able to bring such pressure to bear upon the Lord President that he would receive a deputation.

Mr. Horsley said he was glad Mr. Brown had changed his attitude with regard to the question, and was in favour of legislation of some kind. It was unreasonable to oppose all legislation. The Bill before the House was a piece of bad legislation, and the question was how to get it amended. Practically the Bill was being carried through by the Government *sub rosâ*. A recent interview with the Solicitor-General, at which he was present on behalf of another body, had convinced him that this was the case. He had ascertained, however, that the Lord President was not the member of the Government to whom they ought to go; the person who really had the Bill in hand was Sir John Gorst, the Vice-President of the Council. He would move:

That the Council be asked to request Sir John Gorst, the Vice-President of the Privy Council, and Sir Robert Findlay, the Solicitor-General, to receive a deputation on behalf of the Association, to urge upon the Government amendments to the Midwives Bill.

Dr. Dawson Williams said he would like to support what Mr. Horsley had said. Sir John Gorst was undoubtedly the member of the Government in charge of the Bill. All the financial amendments to the Bill in the Standing Committee on Law were put down in his name. He really held the Bill in the hollow of his hand. The Bill could not be proceeded with in its present state, for Clause 6 in the Bill as read a second time had been omitted, and the Bill now did not contain this clause, which provided for the Treasury payments. The clause could not be put into the Bill until a special resolution of the House of Commons authorising such payments had been passed. That resolution was, and had been, on the paper for the last fortnight or more, but it had never been taken, and until it was passed the Bill could not be proceeded with. He had much pleasure in seconding the resolution.

Mr. Colin Campbell, in the course of some remarks, said that in the Bill now before Parliament there was no police system, and it was therefore certain that whatever restrictions were placed by the measure upon midwives the offences of these persons would in reality go unpunished.

Dr. Alfred Cox said that he thought the British Medical Association had given moral support to the idea and had helped on the matter. But, while the Association believed in the idea, it did not agree with the present Bill. He was given to understand that when the Bill was before the House the supporters of the measure had scores of friends, but the gentlemen who did oppose the Bill complained that they received extremely little support.

The President of Council said he had communicated with the Lord President of the Privy Council, asking him to receive a deputation, but he had replied that the Bill was not a Government measure, and that it was not yet in the House of Lords. The Council of the Association had held a special meeting and had discussed the position, spending the whole afternoon in considering the amendments, and selecting those amendments which were of the greatest importance. Dr. Dawson Williams had taken much trouble in arranging that the amendments should be brought forward in the Grand Committee. A little of what he had done was shown in a report he had presented, which had been drawn up in the form of a letter to the President of Council, but it only represented a small part of the trouble which he (Dr. Dawson Williams) had taken. The Council had made every effort to get the Bill amended in the Grand Committee on Law, but unfortunately with little success.

Dr. Ward Cousins thought that members of the Government in the House of Commons should be approached while the Bill was in that House, in order to obtain those alterations in the Bill which were absolutely necessary.

Mr. George Brown thought that Mr. Horsley's motion did not go far enough, and proposed the following amendment, which was seconded by Dr. Cox:

That in the place of the words "to urge upon the Government amendments to the Midwives Registration Bill" to include the words "to show cause why the Midwives Bill now before the House of Commons should not receive the sanction of the Legislature."

Dr. Woodcock said that before the deputation waited upon Sir John Gorst and Sir Robert Finlay it must be clear whether they were in favour of some sort of legislation or were opposed to all legislation. The Association had already agreed to the principle of legislation.

Mr. Jones Morris said that during the previous week he had been called to three cases of puerperal fever all attended by the same old woman, where probably three lives would be lost. Under the Bill such an occurrence would not be repeated, as the old woman would be suspended. He thought the Bill would be a help to the profession. As a near neighbour though a political opponent he would like to express his appreciation of the services rendered by Mr. Lloyd-George in the Standing Committee in trying to get the Bill amended.

The amendment having been put from the Chair, was declared to be lost.

The original motion was then put as a substantive resolution and carried.

Medical Officers of Health and Sanitary Inspectors Bill.

The Chairman reported that in accordance with the request of the Committee he proposed to introduce the Medical Officers of Health and Sanitary Inspectors Bill on the reassembling of Parliament. The Bill would be backed by Sir Walter Foster, Mr. Wason, Sir George Pilkington, and Sir Francis Powell.

Medical Officers to Government Railway Works.

A communication with reference to the case of a medical practitioner *re* his dismissal from the post of chief medical officer of the Government railway of the Gold Coast was submitted; and on the motion of Mr. Victor Horsley, seconded by Dr. Major Greenwood, it was resolved:

That the Council be asked to appoint a small Subcommittee to consider the matter, and, if satisfied, support Dr. Kaye's appeal to the Colonial Office.

Payment of Fees to Public Vaccinators.

A communication from the Local Government Board acknowledging the receipt of a memorial respecting the compulsory payment of fees to public vaccinators by Boards of Guardians and the tenure of office of public vaccinators was read.

BRANCH MEETINGS TO BE HELD.

South-Eastern Branch: East Sussex District.—The next meeting of this District will be held on Thursday, May 10th, at the Hôtel Métropole, Bexhill. The chair will be taken at 4 P.M. by Dr. Wills. Notice of intended communications should be sent at once to J. W. Batterham, M.B., Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

South-Eastern Branch: East Surrey District.—The next meeting of this Branch will be held at the Greyhound Hotel, Croydon, on Thursday, May 10th, at 4 P.M., Dr. John Redfern (Croydon) in the chair. Agenda: (1) Minutes of Upper Norwood meeting. (2) To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., will be read:—Dr. Gustave Schörstein: The Treatment of Gastric Ulcer. Mr. Frederic Eve: The Treatment of Hernia in Adults and Children, especially in regard to Radical Cure. Dr. Phineas S. Abraham: On the Treatment of some Common Diseases of the Skin. Mr. S. W. Macllwaine: The Future of the Profession and of the Association. After Mr. Macllwaine's paper the Honorary Secretary will at once propose: "That the Editor of the British Medical Journal be requested to publish this paper in the Journal, and that the discussion on it with the consequent vote be postponed until the next meeting." Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M. (charge 7s., exclusive of wine). All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—Henry J. Prangley, Tudor House, Anerley, S.E., Honorary Secretary.

South-Eastern Branch: North Kent District.—A meeting of this District will be held at the City of London Asylum, Dartford, on Thursday, May 3rd, at 3 P.M., Dr. White in the chair. The Chairman invites members to tea at the end of the meeting. All members of the South-Eastern

Branch are entitled to attend, and to introduce a professional friend. Agenda:—To nominate two members of the District for the Branch Council. To appoint an honorary secretary. Visit to the asylum and grounds. Papers:—Dr. White: Early Treatment in Mental Cases. Dr. Tennyson Smith: Some Notes on the recent Lightning Accident at St. Mary Cray.—A. TENNYSON SMITH, M.D., The Birches, Orpington, Kent, Honorary Secretary.

BORDER COUNTIES BRANCH.—The spring meeting of this Branch will be held at the Buccleuch Arms Hotel, Moffat, N.B., on Friday, May 4th, at 3.15 P.M. A meeting of the Council will be held at 3 P.M. Order of Business:—Minutes of last meeting. Election of new members: Association and Branch: Francis R. Hill, M.B., C.M.Glasg., Stanwix; proposed by Dr. McLachlan, Langtown; seconded by Dr. Farquharson, Carlisle. Branch: George R. Livingston, M.B., C.M.Edin., Dumfries. To consider nominations for election to the Royal Medical Benevolent College, Epsom. The President, Dr. J. R. Hamilton, Hawick, will open a discussion on The Present-day Abuse of Drugs. Dr. D. Huskie, Moffat, will read a paper on Fracture and Dislocation at Elbow-joint, with Uncommon Complication, and will show the patient. Dinner will be served at the Hotel at 6 P.M.; price of dinner, 5s., exclusive of wine. Members intending to dine are requested to notify Dr. Huskie, Moffat, of their intention by May 3rd at latest.—W. F. FARQUHARSON, Garlands, Carlisle, Honorary Secretary.

BORDER COUNTIES BRANCH: SECTION FOR THE COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES.—A meeting of this District will be held in Earlston on Friday, May 11th, at 4 P.M., at the residence of Dr. Young, Dr. Blair of Jedburgh presiding. Members are requested to send notices of papers to be read to the Honorary Secretary at the earliest possible date.—W. HALL CALVERT, The Laurels, Melrose, Honorary Secretary.

DUNDEE AND DISTRICT BRANCH.—The annual meeting will be held in Dundee Royal Infirmary on Friday, May 25th. By the courtesy of the Directors, the new Caird wards (Gynæcology and Obstetrics) will be shown to the members. Members having business to bring forward or patients to show at the Clinical Congress are requested to communicate with Dr. Buist, Dundee, as early as possible.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A meeting of this District will be held at the Polyclinic, 22, Chenies Street, W.C. (by kind permission of the Council), on Wednesday, May 9th, at 3.15 P.M.; J. Pickett, M.D., Vice-President, in the chair. Agenda:—Mr. Jonathan Hutchinson, LL.D., F.R.S., will give a short demonstration, and act as guide to the College. Colonel Kenneth McLeod, LL.D., M.D., will lecture on Elephantiasis at 5 P.M. (to which the members are invited). Tea and coffee.—THOMAS DUTTON, M.D., 13, Holland Park Avenue, W., Honorary Secretary.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The half-yearly meeting of this District will be held at 5, Pembroke Road, Portsmouth, on Thursday, May 10th, at 4 P.M. Notice of intended communications should be sent at once to the Honorary Secretary, J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING of the Branch was held in Aberdeen on April 18th, Dr. J. OSBERT WILSON (Huntly), Vice-President, in the chair.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

New Members.—Dr. Oliphant (Bucksburn) and Dr. Wallace (Stonehaven) were, after ballot, unanimously admitted members of the Branch.

Communications.—Dr. A. H. LISTER read notes and exhibited skiagraphs of a case of sarcoma of the clavicle, in the treatment of which Coley's fluid had been found serviceable.—Professor STEPHENSON read notes of cases from the gynæcological ward of the infirmary of a mainly chronic uterine nature, and outlined the plans of treatment.—Dr. SCOTT RIDDELL read a paper on mercuric potassium iodide as an antiseptic.

NORTH WALES BRANCH.

THE spring intermediate meeting of this Branch was held at Bala on April 19th, Mr. W. JONES-MORRIS, President, in the chair.

New Members.—Drs. C. F. Lillie (Bala) and John Thomas (Sarn) were elected members.

Treasurer's Report.—The Treasurer's report for the year 1899, which showed a balance in favour of the Branch, was read and adopted.

The Branch and North Wales University College.—The following members were elected to represent the Branch on the Court of Governors of the University College of North Wales for the next five years: Drs. Samuel Griffith (Portmadoc), A. Eyton Lloyd (Rhyl), Emyr. O. Price (Bangor), H. Jones-Roberts (Penygroes), and John Roberts (Chester).

The Welsh Hospital for South Africa.—The PRESIDENT called attention to the Welsh Hospital for South Africa, remarking that its organising secretary (Professor A. W. Hughes) as well as one of the members of the staff (Mr. R. H. Mills-Roberts) were members of the Branch. It was unanimously resolved to issue an appeal for subscriptions with a view to endow a bed at the hospital, to be called the North Wales Branch bed.

Communications.—The following papers were read:—JAMES CRAIG, M.B. (Llandudno): Changes in Hepatic Percussion Dulness.—J. HILL ABRAM, M.D. (Liverpool): The Use of Digitalis in Pneumonia.—W. THELWALL THOMAS, F.R.C.S. (Liverpool): Two Cases of Hernia in which Portions of the Intestine were Removed, Recovery.—H. E. JONES, M.R.C.S. (Liverpool): Note on Glaucoma.—Professor H. BRIGGS (Liverpool): (1) Short Notes of Four Cases of Puerperal Sapræmia; (2) a case of Puerperal Perimetric Abscess.—Professor RUSHTON PARKER (Liverpool): Unusual Deformity of Nose and Lip remedied by Operation.

Specimens.—E. T. DAVIES, M.D. (Liverpool) showed gynæcological specimens.

Luncheon.—The members lunched together at the White Lion Hotel, and, through the kindness of Mr. Roger Hughes (Bala), enjoyed a drive on a delightful spring day around Bala Lake.

SPECIAL CORRESPONDENCE.

PARIS.

The Rapid Diagnosis of Hydrophobia in the Suspected Dog.—The Notification of Infectious Pneumonia and Broncho-Pneumonia.—The Removal of Household Refuse.

M. CORNIL read recently to the Académie de Médecine a paper by M. Babès of Bucharest on the rapid diagnosis of hydrophobia by microscopical examination of the medulla of the suspected dog. At the present time, although the inoculation of the bulb gives a positive diagnosis, this result is not certain till at least 15 to 20 days have elapsed. It would be unwise to wait so long before commencing the treatment at the Pasteur Institute. If the question could be settled in a few hours patients would avoid the anxious period of suspense and the loss of time and money which the treatment entails. In the antirabic department of M. Babès all dogs suffering from rabies which have bitten men or animals, as well as dogs which have been used in experimental research on hydrophobia, and occasionally the control animals dead from other causes, are examined by the two following methods: (1) a portion of the brain is injected into rabbits by the intracranial method; (2) a transverse slice of the medulla is hardened in alcohol with formol, sections are then cut, and stained the following day with carbol fuchsin and methyl blue, and examined under a low power. It can be affirmed with certainty that the suspected dog was suffering from rabies if nodes of embryonic cells are found in the grey substance, and if at the same time there exists a perivascular or generalised embryonic condition of leucocyte infiltrations, with chromatolysis of the chromatic elements. Since 1891 M. Babès has systematically examined the medulla of 487 suspected dogs. In every case, after trephining, one or two rabbits were inoculated. In 42 cases the rabbits died of another disease or accidentally, 35 rabbits survived, while 410 rabbits died of hydrophobia in seven to thirty-six days after the operation. In 384 cases M. Babès had diagnosed hydrophobia after the microscopical examination of the medulla, in 37 cases he had decided against such a diagnosis, and in 67 cases he was undecided in his opinion owing to the section being injured, or the spinal cord being too decomposed, or because a portion of the brain had been taken for examination which was less characteristic than the medulla of the cord. In the 384 cases, when, after microscopical examination, a positive diagnosis had been given, all the inoculated rabbits died of rabies, while the 35 rabbits who survived corresponded exactly to the 35 cords examined and declared free. In the two remaining cases diagnosed as not hydrophobia the rabbits succumbed to another disease, one on the second and the other on the fourth day of the inoculation.

Van Gehuchten affirms that the diagnosis of hydrophobia in animals or man can be made by the examination of the spinal ganglia and of the vagus ganglion. M. Babès, however, has not found such characteristic lesions as in the medulla, at least in the dog. At the next meeting of the Académie M. Nocard gave the results so far obtained by MM. Cuillé and Vallée, who at the veterinary school of Toulouse are carrying out a research on this question. They have examined the plexiform ganglia of the pneumogastric nerves. In 9 dogs which had died of hydrophobia the alterations described by van Gehuchten and Nelis were present in the nerve cells and in the endothelial capsules. In order to ascertain whether these lesions are produced at an early stage of the disease, Cuillé and Vallée inoculated 6 dogs, each with half a centimetre cube of an emulsion prepared from the brain of a dog which had died of hydrophobia. Three dogs developed rabies, and were killed soon after the appearance of the first symptoms; in only one of these animals, however, were the lesions in the nerve ganglia at all characteristic.

After full discussions on March 20th, 27th, and April 3rd on the question of mortality and disinfection in infectious diseases, the Académie de Médecine has voted that it is advisable to add infectious pneumonia and broncho-pneumonia to the list of diseases which entail compulsory notification.

The removal of house refuse in 1893 cost the municipality 1,885,900 francs (£75,436); this year the estimated cost is 3,200,000 francs (£128,000). The Council placed the matter in the hands of a committee to decide on the most economical and hygienic method for the collection and disposal of this refuse. M. Le Breton recently presented his report, which was adopted by the Council. The conclusions are: (1) The existing method shall be continued in the 11th to 20th arrondissements for a period of five years—that is, from July 16th, 1901, to July 15th, 1906. (2) In the first ten arrondissements the Council will put up to contract the collection and removal in closed and covered carts of all household refuse. (3) The refuse coming from these arrondissements shall be treated by crushing. The annual expense is estimated at 2,306,480 francs (£92,259). The plan of erecting a destructor at Bondy is thus abandoned for the present.

LIVERPOOL.

Refusal to be Revaccinated followed by Death from Small-pox.—The Poor-Law Tuberculosis Hospital.—The Samaritan Hospital.—Reception to Principal Dale at the Medical Institution.—The Pathological Diagnosis Society.—The Education of Natives of Tropical Colonies as Medical Practitioners.

At a recent meeting of the Select Vestry it was announced that the ward mistress in charge of the female lunatics had died of small-pox. She had persistently refused to allow herself to be revaccinated.

At the same meeting an order from the Local Government Board was read combining the unions of Liverpool, West Derby, and Toxteth for the purpose of providing a joint hospital for paupers suffering from tuberculosis. The Board at the same time called attention to Article 9 of the order, which places a limit on the outlay which may be incurred by the joint Committee, so that if an additional expenditure should be incurred an amended order would be necessary.

The fourth annual meeting of the Samaritan Hospital for Diseases Peculiar to Women has just taken place, and the report which was presented shows that the charity is steadily gaining ground both in respect of the extent of its operations and also in the amount of financial support it receives. The number of patients attended during 1899 was nearly double that in the preceding year. The institution has been placed on the list of the Charity Organisation Society, and an appeal is about to be made for a grant from the Hospital Sunday Fund. A considerable addition to the funds of the institution has been given or promised, and the Committee feel justified in taking steps to secure for it larger and more convenient premises than those which it at present occupies in St. James Place. Several excellent sites have been suggested, but no final decision has yet been reached. The proposal is to rent or purchase one of the large houses which on account of the exodus of the population to the suburbs can often be obtained at a moderate price. The chief limitation on the choice of a site is the desire of the committee to keep the hospital in the district of Toxteth Park, where no other institution of the kind exists with which it could enter into competition.

On April 23rd a reception was given by the President (Mr. Edgar Browne) and the Council of the Medical Institution to meet the Principal of University College (Mr. A. W. W. Dale). Mr. Browne, in the course of a speech conceived in his well-known spirit of geniality and humour, expressed the pleasure the members of the medical profession felt at the appointment of Principal Dale, and welcomed him to Liverpool. Principal Dale made a suitable reply. During the evening Mr. F. T. Paul showed a number of lantern views of great beauty, chiefly illustrating seascapes and cloud effects; and Dr. Murray Cairns showed a series of views illustrating life in Japan.

The report of the Pathological Diagnosis Society for the present year has just come out. The work continues to grow, upwards of 800 reports on specimens having been sent out during the past twelve months. The report contains useful directions as to the best way of obtaining and transmitting specimens.

Mr. A. L. Jones, whose name has for some time been associated with the School of Tropical Medicine, has set on foot a scheme for assisting natives of our tropical colonies to come to Liverpool to study medicine and obtain a qualification to practise. The African Steamship Company has consented to convey to and from this country any natives of Africa who desire to avail themselves of this arrangement at a greatly reduced cost, and it is calculated that it will be possible for them to fulfil the five years' curriculum and obtain their qualification to practise at a cost of about £600, including the passage money and the expenses of living. Messrs. Elder, Dempster and Co. have addressed a circular to the respective Governors of the West African Colonies, asking them to bring the scheme to the notice of schoolmasters and others in touch with secondary education, and seeking for information as to how far the education in the colony is organised to admit of natives being prepared for one of the preliminary examinations recognised by the General Medical Council. It is intended to include West Indian natives in the scheme.

CORRESPONDENCE.

THE ORGANISATION OF THE PROFESSION.

Sir,—I well remember the time when the North Wales Branch passed the resolution to which you refer in the British Medical Journal of December 2nd, 1899. I was at the time in practice near Chester. It was desired to emphasise the necessity of the united organisation of the whole profession, to insist upon the one-portal system, and to depreciate the recently started "General Practitioners' Association," this last tending to split up all those in practice in the country. As you are aware, there was at that time no General Medical Council, and the Medical Act of 1858 had not been passed. This unity sought for was in part to bring up the level of well-educated practitioners and physicians in the country districts more nearly to that of the London consultants and the London medical colleges, who, generally speaking, stood aloof from their country brethren.

At that time the clever young qualified practitioner was not encouraged to obtain further qualifications than those of the college and hall; then the London College of Physicians did not offer to confer their Licence on young men in England who did not care to cross the Tweed to obtain it by examination.

The resolution shows how thoroughly the North Wales Branch wished to discourage any sectional benefit for the general practitioner, for whom more especially Sir Charles Hastings had founded the "Provincial Medical Association."

There is now a brighter prospect of a united profession than there was in 1850.—I am, etc.,

Salisbury. J. Lardner Green.

CONFERENCE ON MEDICAL ORGANISATION IN MANCHESTER.

Sir,—I desire, through the medium of the columns of the British Medical Journal, to make known to the profession the arrangements that have been made in connection with the forthcoming Conference on Medical Organisation, etc.

It will be remembered that the conference has been convened at the instance of the Medical Guild, Manchester, and that the decision as to where it should meet was taken by a vote amongst the various societies. The voting papers were issued last December to all known societies, and to all the Branches of the British Medical Association in England and Wales, and had to be returned by March 1st. The places selected as most suitable were London and Manchester, and the result was by a small majority in favour of the latter city. The Memorial Hall, in Albert Square, has accordingly been engaged for the purpose.

Up to date, thirty-five societies and five Branches of the British Medical Association have promised to send delegates, but the Committee still hope to receive the names of a few more societies willing to co-operate.

The expenses are to be defrayed by a contribution of 6d. per member from each society represented, with the proviso that no society should be asked to send a larger sum than £7 10s., and this should be sent to the Honorary Treasurer, Dr. S. Bagley, West Gorton, Manchester.

The meetings of the Conference will be open to all members of the profession who care to come, though none but delegates will be allowed to speak or vote, and it is hoped that many practitioners in the neighbourhood of Manchester, at least, will avail themselves of the opportunity, and show by their presence that they are in sympathy with the objects of the Conference.

All societies sending delegates were invited to frame resolutions for discussion at the Conference, and to send them to the Secretary by March 1st. From these and the papers promised the agenda has been prepared, and was distributed to the delegates and the secretaries of all societies in the first week of April. In order to make the decisions of the Conference really representative of the opinions of the profession, it is necessary that these resolutions should be carefully considered by all societies, and their delegates instructed how to vote.

The meetings will take place on May 1st, 2nd, and 3rd, with two sessions on each day, the morning session commencing at 10 and the afternoon at 2.

The formal opening of the Conference will be by Mr. Alderman Walmsley, J.P., the President of the Medical Guild, and the actual proceedings will be commenced by a paper by Mr. Victor Horsley on the Medical Acts, and subsequently resolutions on the same subject and on the General Medical Council will be considered. At the afternoon session Mr. R. B. Anderson, F.R.C.S., will read a paper on Medical and Corporate Reform and thereafter the midwives' question and the subject of medical education will be discussed

On the second day the morning session will be opened by Mr. George Brown (London), with a paper on Medical Charities: their Relations to the Public and the Profession, and resolutions bearing on the management and abuse of these will be discussed, while the remainder of the session will be devoted to the subject of death certification reform. The afternoon session will be opened by Dr. T. Whiteside Hime (Bradford), with a paper on Professional Secrecy and our Relations with the Criminal Law. Thereafter a resolution on the working of the Vaccination Act will be discussed, and then four papers and a resolution on various aspects of contract practice will be considered. The papers are by Dr. Cox (Gateshead), Dr. Alex. Stewart (Manchester), Mr. George Jackson, F.R.C.S. (Plymouth), and Dr. Murtaugh Houghton (Ilford)

The subject of medical organisation will be the burden of the third day, and the proceedings will be commenced by Dr. Glover with a paper on Some Debated Points in the Politics of the Profession, followed by Dr. Jepson with a paper on Medical Organisation. The two previous days will have demonstrated clearly the utility or otherwise to the profession of a conference on these lines, and at the morning session resolutions will be submitted with the object of eliciting the opinions of the profession as to the general character of future organisation and of coming to some decision on the subject. At the afternoon session a statement of accounts will be rendered by the Honorary Treasurer, and a paper will be read by Dr. Garrett Horder, of Cardiff, on the British Medical Association from a General Practitioner's Point of View. A resolution asking the Conference to appoint a committee to carry out its decisions will then be considered, and the discussion of a further resolution instructing this committee what action to take to give effect to the decisions of the Conference on the questions of organisation will bring the labours of the delegates to a close.

In conclusion, my Committee venture to hope that this will prove to be the first of a series of annual conferences on similar lines, fully believing that such a result will be of the utmost benefit to our profession and calculated to add to its dignity and status.—I am, etc.,

S. Crawshaw, M.B., Hon. Sec.

Ashton-under-Lyne, April 16th.

The *Graphic* this week contains some interesting views of the Imperial Yeomanry Hospital at Deilfontein.

HOSPITAL MANAGEMENT.

Sir,—A question has arisen at St. Thomas's Hospital as to the regularity and consequent validity of certain appointments in connection with the medical staff of the hospital. The appointments in question were made or purported to be made by the Grand Committee, and were confirmed or purported to be confirmed by the governors. The irregularities complained of were in the proceedings of the Grand Committee.

Thinking that I and others had been wrongfully denied the opportunity of competing for the posts in question, I presented to the Court of Governors a petition calling attention to the irregularities, and praying that they might be inquired into and rectified.

The petition was considered by the governors at a General Court at which twenty governors were present, of whom twelve were members of the Grand Committee. At this Court the petition was read, and the Treasurer (who was the Chairman of the Court, and had also been Chairman of the Grand Committee when the proceedings complained of took place) informed the Court that two alternatives were open to them; (1) To refer the matter to the Grand Committee (the very body whose proceedings were challenged); or (2) to order it to lie on the table.

The Court, without making any inquiry or giving me any opportunity of being heard, accepted an *ex parte* statement by the Treasurer with regard to the matters in question as conclusive, and ordered the petition to lie on the table.

Conceiving it to be of extreme importance that the rules of the hospital should be observed, especially in relation to the election of officers, I took the joint opinion of two counsel (one an eminent Chancery Q.C.), and was advised that the rules of the hospital had not been observed on the occasions of the appointments in question, and that such appointments were consequently invalid. I was further advised that it was open to me to present a petition to the Crown as Visitor of the hospital, submitting that the appointments were invalid, and asking that proper appointments should be made.

I subsequently sent a circular letter with a copy of the petition and opinion to all the governors of the hospital. This letter was brought before the governors at a recent meeting, at which again there were only 8 governors present in addition to 12 who were members of the Grand Committee at the times referred to. The Treasurer again occupied the chair. At this meeting no inquiry whatever was made, and the letter was simply ordered to lie upon the table. The result is that, notwithstanding that I have, to say the least, established a strong *primâ facie* case, the governors of St. Thomas's Hospital not only refuse to rectify the irregularities complained of, but they even decline to make any inquiry into the matter or to take any steps whatever to secure that their rules shall be complied with in the future.

The constitution of St. Thomas's Hospital is unfortunately such as to render a result of this kind only too probable. The practical management of the hospital is entrusted to a Grand Committee, consisting of the President, the Treasurer, the 4 almoners, and 30 other governors; 6 of the 30 governors retire every year, and are ineligible for re-election for one year, and the vacancies are supposed to be filled up by election by the governors. There are about 400 governors, mainly consisting of—in addition to the Lord Mayor, Aldermen, and 12 of the Common Council of the City of London, whose other duties leave them little leisure to devote to the affairs of the hospital—contributors to the hospital funds. Only 20 or 30 of the governors, comprising chiefly Grand Committeemen, attend the June Court when the election of the Grand Committee is made; then the Grand Committeemen who retired the previous June are re-elected, any vacancy being filled up by persons who in almost every case may be said to be mere nominees of the Treasurer.

The excessive authority which attaches to the office of Treasurer at this hospital did not escape the notice of the Select Committee of the House of Lords on Metropolitan Hospitals, who stated in their report:

In the case of the three endowed hospitals the Committee are of opinion that the system of administration does not on some points compare favourably with that which exists at the other general hospitals. It throws too much power and responsibility into the hands of one individual, the treasurer, though at St. Thomas's a larger share in the administration is assigned to committees than at the other two.

I have only to add that I do not propose to apply to the Crown. Such an application would lead to a public trial, and would involve a greater expense than I feel myself justified in incurring.

I append a copy of the circular letter above referred to, and of the rules involved, and of counsel's opinion (so far as material), omitting names throughout. The irregularity with reference to the home referred to in the letter has since been rectified, and the non-retirement of a certain member of the Grand Committee is now admitted to have been improper.—I am, etc.,

Lambeth Palace Road, S.E., April 21st. WALTER EDMUNDS.

*** The documents are too lengthy for reproduction here.

OBITUARY.

JAMES MACNEE, M.D.,

Inverness.

THE medical profession and the suffering public of Inverness have sustained a heavy loss in the death of Dr. James Macnee, which took place at his residence in that town on April 16th. Of late years his health was far from robust, but no one expected that the end would have come so suddenly. On the morning of his death he was found kneeling at his bedside, death having evidently resulted from cardiac failure. Some eight years ago he met with a serious carriage accident, and sustained a fracture of the neck of the femur, which laid him aside from the more active duties of his profession ever afterwards.

Dr. Macnee was born in 1838 in Glenlochy, Perthshire, his father being a farmer in that county. He studied medicine in Edinburgh, and took the degree of M.D. in 1861. Shortly after graduation he started practice in Munlochy, in Rossshire. The seven or eight years he spent there were laborious in the extreme, which was the price he had to pay for his great popularity; but he soon became well known over a wide district. In 1869 he removed to Inverness, the capital of the Highlands, where he found more scope for his energy and usefulness. Here he rapidly rose in the estimation of his medical brethren and the general public, and he soon acquired a large and important practice. He read extensively, and kept himself abreast of the times, not only in his own profession, but also in general literature. For years he was President of the Inverness Medical Society, before which he read several very thoughtful and suggestive papers; and he always took a keen interest and an active part in the Society's debates. As the father of the profession in Inverness and neighbourhood, he was often called in consultation by his younger brethren, and they always felt they could thoroughly rely on his wise and judicious advice. For many years he was on the staff of the Northern Infirmary, and at the time of his death he was Consulting Physician to that institution and also to the Northern District Lunatic Asylum.

The distinguishing features in Dr. Macnee's character were his wonderful patience, his tender sympathy, and above all his high moral rectitude. Of him it could truly be said that he ever lived in his "great Taskmaster's eye." No one could for a moment doubt his honesty and sincerity. If, as we believe, "only a good man can be a good doctor," he was certainly both. He took an active interest in moral and religious work, and Inverness loses by his death one of her most important and useful citizens.

Dr. Macnee suffered sore family bereavements. Out of a family of eight only two daughters survive, who, with their mother, mourn his loss. In one day three of his children were buried in one grave. On that occasion he received a very kind and sympathetic letter of condolence from the late Dr. Tait, who was then Archbishop of Canterbury, and who had suffered a similar bereavement in his own family.

MANY members of the profession in Roxburghshire and in South Africa will hear with deep regret the announcement of the sudden and premature death of Dr. WILLIAM BRYDON, on March 11th, while on a voyage from Madras to Durban. Dr. Brydon graduated in Edinburgh in 1881, and after being for a year and a-half Resident Medical Officer in the British Hospital at Paris, joined his father in practice at Hawick, where his kindness and skill endeared him to his patients, whilst his generous nature and high personal character made him a favourite with his professional brethren. In 1894 he was induced to leave for South Africa, to take up a position in the gold mines, where his devotion to duty won him the respect and affection of a large number of miners of whom he had the care. He remained in the Rand until the Jameson Raid, and after that unfortunate occurrence spent some time in several parts of South Africa. He had gone to Madras from Durban in the service of the Natal Government, and it was during the return voyage that he died, after an illness which only lasted two days.

A REUTER telegram from Beirut, published in the *Times*, states that on April 10th there died there at an advanced age a former physician to the Sultan Abdul Aziz, an Englishman named Temple Bey, who is stated to have been a relative of the Archbishop of Canterbury. Originally a surgeon in the British army, he entered the Turkish service after the Crimean war, and became one of the favourite medical attendants of the Sultan. On the death of Abdul Aziz, Temple Bey was sent into the interior of Asia Minor, and afterwards to Aleppo and Damascus. Finally he came to Beirut, where he died almost unknown. He was supposed by the Turks to be an Ottoman subject, for he took pains to conceal his nationality.

THE death of Mr. ALLAN JOHNSON at Bloemfontein was a cause of sadness to many at Aberdeen. Mr. Johnson began his career at the University of Aberdeen with a scholarship held on condition of his becoming a minister of his church. He renounced that aim, and became in succession a schoolmaster, then a journalist, and finally had almost completed his professional course in medicine, when he accompanied Dr. Gray to South Africa as a member of the Sivewright ambulance party. The services of the party being refused, Mr. Johnson joined the Cape Medical Staff Corps, and after passing through a time of fatigue and privation, which he has described in the press, fell a victim to enteric fever at Bloemfontein. Mr. Johnson was appreciated by those who were his intimate friends as a thoughtful man of many cultured tastes; he was known by a very large circle for his admirable talent on the amateur stage and as a reciter. His death leaves a real sense of loss in the town.

WE regret to have to record the death of Dr. JOHN UNDERWOOD, of Hastings, which occurred, after a long illness, on April 10th. He was born at Pitsford, in Northamptonshire, on November 16th, 1816, and was consequently in his 84th year when he died. He received the degree of Doctor of Medicine from the University of Edinburgh in 1841, and took the Membership of the Royal College of Surgeons of England in 1842. In the same year he commenced practice in Battle, but in 1855 he removed to Hastings, where he lived for the remainder of his life. At one time he was Assistant Surgeon to the East Sussex Infirmary, and at the time of his death he was the oldest member of the East Sussex Medico-Chirurgical Society. He retired from the active practice of his profession in 1893. Among many good traits of his character a high sense of duty and an absolute devotion to his profession were most conspicuous. He was deservedly held in high esteem both by his patients and by his fellow townsfolk. His funeral was attended by a large number of the medical practitioners of the town and district.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Pietro Cavallo, who, in conjunction with Salvatore Tommasi, founded in 1857 *Il Morgagni*, the journal which was the pioneer of the renascence of medical science in Italy; Dr. Maroy, General Secretary of the Société Royale de Médecine Publique et de Topographie Médicale de Belgique; Dr. Stocherbakoff, some time Professor of Physiological Chemistry in the University of Kasan; Dr. J. B. Léonce Malherbe, formerly Professor of Clinical Medicine at Nantes and Senior Physician of the hospitals of that city, aged 80; Dr. E. Buchheim, of Vienna, author of a work, *Ueber Versicherungsdiagnostik*, one of the first in which the subject of life assurance was handled from the point of view of

medical science, aged 75; and Dr. Eugen von Farkas, Sanitary Inspector of Buda-Pesth, who had won distinction in experimental surgery as well as in sanitary science, aged 35.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: George R. MacMahon, B.A., M.B., Surgeon, to the *Sphinx*, April 19th; James G. Watt, Surgeon, to the *Esk*, additional, and for recommissioning, April 23rd; B. Connolly, to be Surgeon and Agent at Bar of Lough and Barrow, April 23rd.

ROYAL ARMY MEDICAL CORPS.

Major Whaite, Lieutenant Adams-Wylie, Quartermaster Dallas, Civil Surgeons Stevenson, Dunlop, Tyndale, and Halberds are among those discharged from hospital for duty during the week ended April 8th. Lieutenant-Colonel J. Armstrong, serving in Natal, is also reported as having returned to duty.

Assistant Surgeon Jackson, 21st Battery Field Artillery, died at Pretoria on April 21st of typhus and dysentery.

INDIAN MEDICAL SERVICE.

Surgeon-General C. E. M'Vittie, Madras Establishment, Honorary Physician to the Queen, and Principal Medical Officer, Madras Command, is permitted to retire from the service, from April 1st. He joined the department as Assistant Surgeon, March 31st, 1866, and became Surgeon-Major-General, April 1st, 1895. He served in the Afghan war in 1879-80 (medal), and with the Burmese expedition in 1886-88 (mentioned in despatches, medal with two clasps). He was granted a reward for distinguished service, May 18th, 1894.

Lieutenant-Colonel C. H. Joubert, M.B., Bengal Establishment, is appointed Principal Medical Officer, Lahore District, *vice* Colonel J. H. Newman, M.D.

It is announced that Captain S. H. Burnett, M.B., Bombay Establishment, will continue as Personal Assistant to the Surgeon-General with the Government of Bombay.

THE VOLUNTEERS.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated April 25th: Julius H. Beilby, M.B., Worcestershire Yeomanry (the Queen's Own Worcestershire Hussars); Percival E. Barber, 4th West Riding of Yorkshire Artillery (Western Division Royal Garrison Artillery); Edward Gray, 2nd Cheshire (Railway) Engineers; John Bruce, M.B., 1st Volunteer Battalion the Lincolnshire Regiment; George P. Chappel, M.D., 1st Volunteer Battalion the Duke of Cambridge's Own (Middlesex Regiment); Henry B. Perkins, 15th Middlesex Rifles.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated April 25th:—L. W. Pockett, 1st Lincolnshire Artillery (Western Division Royal Garrison Artillery); J. C. Wright, M.B., 2nd West Riding of Yorkshire Artillery (Western Division Royal Garrison Artillery); R. Emmett, 1st Hampshire Engineers.

Mr. Redmond Roche is appointed Acting Surgeon in the 1st Cadet Battalion the King's Royal Rifle Corps, April 25th.

VOLUNTEER MEDICAL STAFF CORPS.

Mr. Joseph Collier, M.B., is appointed Surgeon-Lieutenant in the Manchester Companies, April 25th.

NEW COLLAPSIBLE FIELD STRETCHER DHOOLIE.

The Committee which assembled at Jutogh on October 28th, 1899, by order of His Excellency the Commander-in-Chief, for examining and reporting on various articles of ambulance equipment, have expressed the following opinion of Major Kay's collapsible field stretcher dhoolie: "They consider it very valuable for the following reasons: It is easily packed and carried, its basis is the Mark IV stretcher, which should be universally adopted, and its component parts are each available for the carriage of wounded, so that in case of necessity four men could be carried by making use of the one dhoolie." They have, we understand, recommended that six dhoolies and six additional seats be made under the personal supervision of the inventor, for trial on active service and at next hill manœuvres. Should the invention stand the trial test, Major Kay is to be congratulated, as it should prove a great boon, especially for wounded in hill warfare, and in all climates. The seats or end pieces only weigh 6lbs., and are very handy and easily carried. The total weight of the whole dhoolie is 60lbs., or 20lbs. less than the one at present in use.

THE EXPENSES OF THE ARMY MEDICAL DEPARTMENT IN THE PHILIPPINES.

The cost of the war in the Philippines has been given officially in a statement of expenditures by the United States War Department covering the military operations in the Philippine Islands, and including outstanding liabilities, so far as can be determined, for the period from May 1st, 1898, to November 1st, 1899. The information was sent to Congress in response to a resolution passed January 30th, 1900. The total amount reported is, in round numbers, 49,000,000 dollars (£9,800,000), and of this sum the charge against the medical department is 1,206,137 dollars (£241 227). The American Army and Navy Register (quoted in the *Journal of the American Medical Association*) compliments Surgeon-General Sternberg on this report in the following terms: "The expenditure under the medical department is another surprise. It is entirely to the credit of the Surgeon-General of the Army that his admirable administration of his well-organised and efficient department in the Philippines has been conducted at no greater cost. This economy does not in any sense approach parsimony, and there is no evidence that the health of the troops has suffered or the wants of the sick and injured have been ignored on account of any false harbouring of public funds under the medical department."

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

THE CONJOINT BOARD.

Curious.—We have never heard that the Conjoint Board of London has framed any by-laws for the regulation of the conduct of its diplomates. Questions of conduct are considered by the Councils of the College of Physicians and College of Surgeons if referred to them. We think our correspondent might very properly address his inquiry to the Registrar of the Royal College of Physicians.

COURTESY ATTENDANCE.

A. D. D.—We think the answer previously sent is sufficiently explicit. There can be no doubt that the words in the *Code* "legitimate practitioners" must be taken to mean legally qualified practitioners whether in practice or not. The words to which we direct our correspondent's attention, and which are italicised, are that such persons are only entitled by *professional courtesy* to receive medical assistance gratis. Our correspondent is perfectly at liberty to make a charge if he wishes to do so. We pointed out to another correspondent some time ago who, being a retired practitioner, complained that he was charged, that he had no right to expect medical services without payment, and that he ought to have tendered a fee.

MEDICAL CERTIFICATES IN CONNECTION WITH EMPLOYERS' LIABILITY INSURANCE.

A. had a patient who met with an accident. Some days subsequently the local agent of an Employers' Liability Assurance Company sent to A. a claim form bearing the name of the patient's employer, and a medical certificate to be filled up in connection therewith. A. is given to understand that the fee for this certificate payable by the assured will be sent through the agent, but, after filling up the certificate, is told to apply direct to the employer for payment of his fee. The employer when applied to denies liability, evidently believing that his premium will cover any medical or other fees. Our correspondent inquires who is liable to pay his fee under the circumstances.

*** So far as can be gathered from the facts, the employer appears to be under no direct liability to our correspondent. He was engaged by the assurance company to give the certificate and not by the employer, and he should apply to the former for his fee.

PROFESSIONAL ETIQUETTE.

B. R.—We have no hesitation in expressing the opinion that it is improper conduct for a medical practitioner to attempt to displace a colleague from a public appointment, but we cannot say that the newspaper cutting sent affords any evidence that such an offence has been committed.

ADVERTISING.

J.—Our correspondent complains of the action of a medical man living in a provincial town who, in addition to the plate upon his own door, has fixed two brass plates upon houses within ten minutes' walk, giving his name, and stating that messages may be left there for him. Our correspondent further states that these houses are not places at which a branch practice is carried on, nor does any medical man reside at either of them.

*** We agree with our correspondent that under the circumstances described by him brass plates are unnecessary, and would appear to have been placed where they are for the purpose of advertisement. Our correspondent seems to be under the impression that the General Medical Council has made a pronouncement on the subject of advertising by medical practitioners. Unfortunately up to the present time it has not done so, although it has warned medical aid societies against seeking to obtain practice by such means.

THE LAW OF TRESPASS IN SCOTLAND.

Inkpot understands that gaugers, in their business as searchers, etc., are legally entitled to enter lands and buildings, and wishes to know if Scottish law gives any similar right to medical men to take the nearest way to their patients, even if it be through private policies or over farm lands, and asks for a reference to any statute or case bearing on the point.

*** We are advised that the only Act that confers any right on excisemen to enter lands is the Gun Act. By this Act they are entitled to enter any lands and challenge any person carrying firearms. For purposes of search it is necessary for them to obtain a warrant. If they have no

warrant they are in the same position as any member of the community. According to Green's *Encyclopædia*, by the law of Scotland a proprietor is entitled to prevent any stranger intruding on his lands. Such intrusion is termed "trespass"—a word borrowed from English jurisprudence. Apart from some culpable purpose, such as poaching or malicious mischief, trespassing is not a criminal offence. There is a popular superstition to the contrary, and the country abounds with placards threatening trespassers that they will be prosecuted with the utmost rigour of the law. These are idle threats. The only remedy competent against the trespasser is an action of interdict against his return on a subsequent occasion. It is a valid answer to such an action that the alleged trespass was for an urgent purpose, such as the suppression of fire, or the prevention of crime, and this might reasonably include an urgent visit by a medical practitioner. The Trespass Act (1865) renders certain kinds of trespass criminal. It states: "Any person who lodges on any premises or occupies or encamps on any land being private property, without the consent and permission of the owner or legal occupier of such premises or lands, and every person who encamps or lights a fire on or near any private road or any enclosed or cultivated land, or in or near a plantation, or on or near any turnpike road or other highway, shall be guilty of an offence punishable, the penalty being 20s. or fourteen days for the first offence."

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF OXFORD.

Examination in Preventive Medicine and Public Health.—An examination for the diploma in Public Health will be held in the Michaelmas term commencing November 22nd, 1900. The names of the candidates must be transmitted to the Secretary to the Boards of Faculties, Clarendon Building, Broad Street, Oxford, not later than Thursday, November 8th. The fee, which must be paid at the time of entry, is for each of the two divisions of the examination £5.

Examinations for the M.B.—The first and second examinations for the degree of Bachelor of Medicine will commence on Wednesday, June 20th, 1900. The names of the candidates must be received by the Secretary to the Boards of Faculties not later than Wednesday, June 6th.

Examination for the M.S.—The examination for the degree of Master in Surgery will commence on Thursday, June 28th, 1900, and notice must be given to the Secretary to the Board of Faculties not later than Monday, June 11th.

UNIVERSITY OF CAMBRIDGE.

Addenbrooke's Hospital.—Under the new agreement with the University, Dr. Porter, Dr. D. MacAlister, Mr. Clay, Mr. Taylor, and Mr. Finch have been elected members of the Advisory Council of the hospital; and Professor Clifford Allbutt has been elected an honorary physician.

Delegates.—Professor Adami, M.D., of Montreal, will represent the University at the Centennial of the New Brunswick University, which will be celebrated next month. Mr. G. Cunningham will represent the University at the International Dental Conference to be held in connection with the Paris Exhibition next August.

Examination in Sanitary Science.—The following candidates have satisfied the Examiners in both parts of the Examination:

H. T. Bury, J. S. de Silva, J. M. Gardiner, L. Gilbert, S. G. V. Harris, W. McCallim, B. MacCarthy, W. McG. Montgomery, A. K. Mudali, D. Munro, H. B. G. Newham, J. V. R. Roberts, R. F. Seervai, S. D. Thomson, G. L. Travis, M. Watson, Mary Frances Williams, B. M. Young, H. W. P. Young.

UNIVERSITY OF GLASGOW

Graduation Ceremony.

The spring graduation of Glasgow University took place in the Bute Hall on April 17th. There was a very large attendance of students and friends of the graduates, and the proceedings passed off with but little interruption. The Principal was accompanied by Emeritus Professor Lord Kelvin, the members of the University staff, and representatives of the Glasgow Corporation and other public bodies in the city. Amongst the degrees conferred were:

Doctors of Medicine (*M.D.*).—John Guy, M.B., C.M. (Thesis: Studies on Lobar Pneumonia); Andrew John Laird, M.B., C.M. (thesis: Perforative Peritonitis in Enteric Fever, with special reference to early diagnosis); William Lawson, M.B., C.M. (thesis: The Diseases of Exposure; their frequency and distribution in relation to the seasons.)

Bachelor of Medicine and Bachelor of Surgery (*M.B., Ch.B.*).—Lucy Buckley, B.Sc.

Doctor of Science (*D.Sc.*).—William Henry Lang, B.Sc., M.B., C.M.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

The following is the Winter Session Prize List.—Descriptive Anatomy: Junior—J. S. Shiell, 1st prize (£3) and medal; J. J. Connolly, 2nd prize (£1) and certificate. Senior—J. Cockburn, 1st prize (£3) and medal; R. W. Burkitt, 2nd prize (£1) and certificate. Practical Anatomy: First year—Miss J. C. Hargrave, 1st prize (£3) and medal; A. N. Crawford, 2nd prize (£1) and certificate. Second year—E. C. Byrne, 1st prize (£3) and medal; R. G. Allen, 2nd prize (£1) and certificate. Third year—A. Charles and T. A. Dillon (equal), 1st prize (£3) and medal; C. W. Ewing, 2nd prize (£1) and certificate. Practice of Medicine: A. Charles, 1st prize (£3) and medal; J. F. Peart, 2nd prize (£1) and certificate. Surgery: C. W. Ewing, 1st prize (£3) and medal; J. F. Peart, 2nd prize (£1) and certificate. Midwifery: W. R. Meredith and J. F. Peart (equal), 1st prize (£3) and medal; Miss M. J. Shire, 2nd prize (£1) and certificate. Physiology: J. P. Ziervogel, 1st prize (£3) and medal; R. W. Burkitt, 2nd prize (£1) and certificate. Chemistry: B. H. Peters, 1st prize (£3) and medal; F. O'D. Fawcett, 2nd prize (£1) and certificate. Pathology: J. M. S. Levis, 1st prize (£3) and medal; T. J. Tallon, 2nd prize (£1) and certificate. Physics: Miss J. C. Hargrave, 1st prize (£3) and medal; M. Lochrin, 2nd prize (£1) and certificate.

Primary Fellowship Examination.—In recognition of the Royal visit, the Council has resolved to grant this examination to all students of the College who pass the Second Professional Examination on or before July 31st, 1900, on fulfilling the other necessary conditions. This resolution applies to licentiates, whether under or over ten years' standing, and to all students who pass the Second Professional Examination for the conjoint diploma of the two Royal Colleges. The Second Professional Examination and the Examination in Physiology must be completed. All persons wishing to obtain the benefit of this resolution must claim the benefit before July 31st, 1900. All applications are to be addressed to the Registrar of the College.

CONJOINT BOARD IN IRELAND.

Second Professional Examination.—Candidates have passed this Examination as undernoted:

In all Subjects.—F. G. McCaughey, W. I. O'Doherty, C. Robinson, F. C. Yorke.

Completed the Examination.—W. H. Anderson, J. E. Brereton, C. H. Bryan, H. M. Clarke, M. T. Donovan, C. D. Downing, W. I. Greehy, I. P. Falls, T. Farrell, I. P. Fitzmaurice, A. H. B. Hartford, R. E. Humfrey, T. E. Johnston, I. B. Logan, I. Murphy, I. Murray, R. P. McDonnell, M. A. A. O'Brien, I. P. Ryan, W. Scott, C. I. Waters.

In Anatomy.—A. H. R. Duncan, J. Dwyer, R. T. Gordon. T. Keogh, P. McDermott, J. P. Ziervogel.

In Physiology.—J. J. Gibney, T. Keogh, J. J. McInerney, M. C. Sage, P. M. Sheridan, J. P. Ziervogel.

In Materia Medica.—R. M. Alkin, B. D. Gibson, E. O'Grady, P. M. Sheridan, S. H. Raverty.

In Histology.—J. Dwyer, H. B. Evans, B. D. Gibson, R. T. Gordon, T. Keogh, P. McDermott, E. O'Grady, J. P. Ziervogel.

In the Pass List of the First Professional Examination published in the British Medical Journal of April 21st, the name of Mr. J. M. G. Foley should have been included in the list of those who had completed the examination and that of Mr. D. de C. O'Grady in the list of those who had passed in Pharmacy.

SOCIETY OF APOTHECARIES OF LONDON.

Pass List, April, 1900.—The following candidates passed in:

Surgery.—A. St. J. Bateman (Section I), King's College Hospital; W. A. C. Cox (Section I), St. Mary's Hospital; H. S. A. Davies (Section I), Michigan; R. F. Ellery (Section I and II), St. Bartholomew's Hospital; F. E. Feilden, St. Bartholomew's Hospital; R. T. Forster (Sections I and II), Leeds; J. E. Howroyd (Section I), Leeds; D. T. C. Jones (Section II), University College Hospital; O. E. Lemin (Section II), London Hospital; J. C. S. Rashleigh (Section I) St. George's Hospital; G. E. Seville, Manchester.

Medicine.—F. R. Featherstone (Section I), Guy's Hospital; R. T. Foster (Section II), Leeds; W. D. French (Section II), University College Hospital; J. S. Goodall (Section I), Middlesex Mospital; T. E. Holman, Guy's Hospital; J. E. Howroyd (Section I), Leeds; C. Johnson (Section I), Durham, and London Hospital; O. E. Lemin (Section II), London Hospital; G. M. Smith, St. Thomas's Hospital; C. E. Williams, Royal College of Physicians and Surgeons, Kingston, Ontario.

Forensic Medicine.—A. St. J. Bateman, King's College Hospital; F. R. Featherstone, Guy's Hospital; J. S. Goodall, Middlesex Hospital; T. E. Holman, Guy's Hospital; J. E. Howroyd, Leeds; C. Johnson, Durham, and London Hospital; R. O. Jones, Guy's Hospital; W. Miles, Middlesex Hospital; G. M. Smith, St. Thomas's Hospital; C. E. Williams, Royal College of Physicians and Surgeons, Kingston, Ontario.

Midwifery.—P. D'E. Burrell, St. George's Hospital; W. T. Harris, St. Thomas's Hospital; W. T. Meagher, Cork; D. V. Muller, Charing Cross Hospital; R. C. Rumbelow, Middlesex Hospital; H. Smith, Birmingham.

The diploma of the Society was granted to P. D'E. Burrell, R. F. Ellery, F. E. Feilden, R. T. Forster, T. E. Holman, D. T. C. Jones, O. E. Lemin, and G. E. Seville.

PUBLIC HEALTH

AND

POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,523 births and 4,747 deaths were registered during the week ending Saturday last, April 21st. The annual rate of mortality in these towns, which had been 23.0 and 22.4 per 1,000 in the two preceding weeks, further declined to 21.3 last week. The rates in the several towns ranged from 12.9 in Birkenhead, 13.0 in Burnley, 13.8 in Swansea, and 15.5 in Brighton, to 26.9 in Liverpool, 27.2 in Oldham, 28.8 in Manchester, and 30.6 in Plymouth. In the thirty-two provincial towns the mean death-rate was 21.8 per 1,000, and exceeded by 0.8 the rate recorded in London, which was 20.6 per 1,000. The zymotic death-rate in the thirty-three towns last week averaged 1.9 per 1,000; in London the death-rate was 1.6 while it averaged 2.2 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.8 in Cardiff, 4.1 in Oldham, 5.1 in Plymouth, and 5.3 in Blackburn. Measles caused a death-rate of 2.3 in Wolverhampton, 2.4 in Cardiff, 2.6 in Bristol, and 4.6 in Ply-

mouth; scarlet fever of 1.0 in Oldham; whooping-cough of 1.1 in Birmingham, 1.2 in Wolverhampton, 1.3 in Liverpool, and 1.4 in Manchester; and diarrhœa of 1.0 in Oldham and in Gateshead, and 1.5 in Blackburn. The mortality from "fever" showed no marked excess in any of the large towns. The 56 deaths from diphtheria in the thirty-three towns included 17 in London, 8 in Sheffield, 4 in Cardiff, 4 in Leicester, and 4 in Leeds. Three fatal cases of small-pox were registered last week in Liverpool, but not one in any other of the thirty-three large towns; and four small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, April 21st. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,713 and 1,694 at the end of the two preceding weeks, had further fallen to 1,676 on Saturday last; 165 new cases were admitted during the week, against 172, 185, and 189 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 21st, 1,041 births and 650 deaths were registered in eight of the principal Scotch towns. The annual rate o mortality in these towns, which had been 22.8, 21.7, and 21.3 per 1,000 in the three preceding weeks, further declined to 21.0 last week, and was 0.3 per 1,000 below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 18.4 in Edinburgh and 18.6 in Paisley, to 22.6 in Aberdeen and 25.3 in Perth. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Leith and Perth. The 306 deaths registered in Glasgow included 11 from measles, 5 from scarlet fever, 10 from whooping-cough, 3 from "fever," and 4 from diarrhœa. Three fatal cases of measles and 3 of diarrhœa were recorded in Edinburgh; 2 of measles in Dundee; 2 of whooping-cough and 2 of "fever" in Aberdeen; 4 of whooping-cough in Leith; and 2 of whooping-cough in Perth.

THE EXAMINATION OF SANITARY INSPECTORS.

SINCE January 1st, 1895, in accordance with the Public Health Act, 1891, it has been required of every sanitary inspector appointed in London that "he shall be the holder of a certificate of such a body as the Local Government Board may from time to time approve, that he has by examination shown himself competent for such office, or shall have been, during three consecutive years preceding the year 1895, a sanitary inspector or inspector of nuisances of a district in London, or of an urban sanitary district out of London containing according to the last published census a population of not less than 20,000 inhabitants." The intention of the Legislature was clearly to secure a higher class of sanitary official than the ex-policeman or old soldier, who formerly exhibited in too many cases a maximum of Bumbledom with a minimum of competency.

London occupies a unique position in relation to this question, since it is the only county in which sanitary authorities are compelled to appoint certificated inspectors, and the London County Council pays half the salaries of such inspectors.

Until recently the Sanitary Institute was the only body which had secured recognition of its examination for sanitary inspectors by the Local Government Board, although other bodies advanced claims to similar recognition. In August, 1898, however, a Sanitary Inspectors' Examination Board received the approval of the Local Government Board, and on February 3rd, 1899, obtained incorporation under the Board of Trade. The objects of this Association are:

(A) To institute examinations for the office of sanitary inspector or inspector of nuisances under Section CVIII (2) (*d*) of the Public Health (London) Act, 1891, or subsequent Acts or Orders of the Local Government Board.

(B) To prescribe courses of study and technical training for persons desirous of qualifying for the above offices, but the Association shall not themselves give instruction.

(C) To make and maintain a register of certificated persons.

The members shall be:

(*a*) Such number of representatives of the Sanitary Institute as shall, with three members nominated by the Local Government Board, with the approval of the Institute, make as nearly as practicable five-twelfths of the total number of members.

One representative of the			Royal Institute of British Architects.
One	,,	,,	Worshipful Company of Plumbers.
One	,,	,,	National Health Society.
One	,,	,,	Incorporated Association of Municipal and County Engineers.
One	,,	,,	Royal Institute of Public Health.
One	,,	,,	Incorporated Society of Medical Officers of Health.
One	,,	,,	Worshipful Company of Carpenters.

(*b*) Three persons nominated by the Local Government Board with the assent of the Sanitary Institute.

(*c*) Such number of persons as may be fixed by the Local Government Board, and may be elected by such additional bodies as may from time to time be approved by that Board.

The number of the representatives of any of the elective bodies may be varied from time to time by the Association with the consent of the Local Government Board.

Doubtless the composition of this Joint Board was conceived rather with a view to reconcile conflicting claims than from a conviction that a body thus thrown together would be the ideally best for the purpose. At the present time when registration is the rage, when midwives and plumbers, nurses and sanitary inspectors, are desirous of obtaining the protection which is held to appertain to registration, it is all-important to scrutinise the composition and competency of the body which shall determine the nature and method of the registration so coveted.

We confess to some doubt as to whether the principle which appears to have dictated the composition of the Board in question is a satisfactory one.

The London County Council appears to share this view, and from the fact that the report from which we have quoted was referred back unanimously we infer that that body intends dealing with the question.

We understand that the City and Guilds of London Institute and the Association of Technical Institutes have both applied to the Local Government Board for representation and have both been refused.

Now the London County Council, through its Technical Education Board, is dealing, as an educational body, with the very subjects which it is important for a sanitary inspector to know on a scale vastly greater than any of the bodies which have succeeded in commending themselves to the Local Government Board. Not only does it spend some £170,000 of public money annually on technical education, but the Council also pays half the salaries of the sanitary inspectors when appointed. The London County Council has from the first exhibited a laudable zeal in sanitary questions, and notably in the inspection and registration of houses let in lodgings, a zeal which recent experience in the matter of by-laws in Bethnal Green has shown has not been always emulated by the department over which Mr. Chaplin presides. A few years ago, in the catch-phraseology of the time, the schoolmaster was abroad; at the present time the sanitary inspector is coming daily into greater prominence. To educate him up to his important duties, to give him adequate remuneration and reasonable independence, should be the aim of all who are earnestly concerned for the vigour and success of local self-government.

REFUSAL OF RELIEVING OFFICER TO GRANT EXTRAS.

T. L. H., a district medical officer, writes saying that two "orders" given by him for mutton and oatmeal to be supplied to two puerperal patients under his care were refused by the relieving officer. He asks whether this official has a right to refuse to supply these extras when applied for by the patient's friends.

*** No Poor-law medical officer has the power to give "orders" for any extras whatever to be supplied to paupers not in a workhouse. When a district medical officer in attendance considers any extras are required to enable him to treat the case properly it is his duty to certify to this effect, and, having done so, he should then take care that his certificate is brought to the notice of the relieving officer and the Board of Guardians, who are quite at liberty to refuse to grant the extras if they consider they have reason for so doing, not of course on the ground that such extras are not necessary, but because the patients may be considered able to provide these themselves. As to this the relieving officer is probably the best judge, it being one of his duties to ascertain what means all pauper patients possess.

It follows from this that certificates given by district medical officers for medical extras are recommendations only, and not orders. Of course, if such recommendations are given in writing and not complied with, some considerable responsibility is incurred by the refusal, but the power to refuse no doubt exists. Should a pauper patient die after extras had been certified for as necessary, and then not given, this might justify the holding of an inquest, and the grounds for refusal might then become the subject of inquiry. The opinion of the jury and the public would probably not be in support of the refusal, and the relieving officer might then be considered to be guilty of an error of judgment and be censured by the Board of Guardians or by the Local Government Board.

FEES FOR LUNACY CERTIFICATE.

O. L. writes as follows: A medical man was called in by a magistrate to sign a certificate of lunacy, and he expected to receive a guinea as a fee for the duty. The relieving officer afterwards sent him half-a-guinea, saying that the magistrates would not allow more. Our correspondent asks whether he cannot claim a guinea, this being the amount which would appear to have been paid for previous certificates of the same character.

*** We should recommend O. L. to make a special application to the magistrate who called him to act in the case to order the usual guinea fee to be paid. Should the magistrate decline to make such order, it would then be open to O. L. to appeal to the Court of Quarter Sessions for a proper fee under Section CCCI of the Lunacy Act of 1890, which is as follows: "Any person aggrieved by the refusal of an order by any justice.....may appeal to a Court of Quarter Sessions upon giving to the justice against whom the appeal is made fourteen clear days' notice."

RATEPAYER'S RIGHT TO USE OF HOSPITAL.

M.B., B.CH. writes: A child is taken ill with scarlatina, and there being no means for proper isolation in the cottage, the parents, on the recommendation and through the agency of the ordinary medical attendant, ask the sanitary authority to remove the child to the isolation hospital where there is ample accommodation (in fact it is empty). This request is refused by the medical officer of health of the district. The question our correspondent asks is: Can the parents as ratepayers legally enforce the child's removal?

*** We do not think they can. The authorities as owners of the hospital have entire control as to what kind of cases they will admit, and under what circumstances of urgency. Their officer of health is certainly the official best fitted to carry out their wishes in the matter. It is conceivable he may have strong reasons for refusing a particular kind of case at a particular time, or even for wishing to keep his wards empty for the moment. Our correspondent does not say whether he has personally communicated with his *confrère*.

MEDICAL NEWS.

The Aberdeen University Club.—The annual meeting and May dinner of this club will be held at the Trocadero Restaurant on Wednesday, May 16th, at 7 P.M., Sir James Westland, K.C.S.I., LL.D., in the chair. Further information can be obtained from Dr. James Galloway, 54, Harley Street, W., one of the Honorary Secretaries.

Riberi Prize.—The tenth award of the Riberi prize of 20,000 lire (£800) will be made by the Royal Academy of Medicine of Turin on December 31st, 1901, for the best printed or manuscript work, or the most important discovery, during the quinquennium 1897-1901 in the domain of experimental pathology, hygiene, or forensic medicine.

The Typhoid Bacillus in the Urine.—The New York City Board of Health has issued a bulletin calling attention to the frequent presence of the typhoid bacillus in the urine of persons suffering from that disease, and urging upon practitioners and those in attendance on the sick the importance of disinfecting the urine in such cases.

An Anatomical Congress at Pavia.—The Anatomical Society held its annual meeting this year at Pavia from April 18th to the 21st, under the presidency of Professor Gustav Retzius of Stockholm. Among those who contributed papers were Professors Waldeyer, His, von Kölliker, Giacomini, and other well-known anatomists.

A Medical Veteran.—Dr. Rudolf Amandus Philippi of Santiago, Chile, who recently celebrated the seventieth anniversary of his graduation as Doctor of Medicine, was born at Charlottenburg, Prussia, 92 years ago. He devoted himself to natural history, and acquired such a reputation by his writings on that subject that he was appointed Professor in the Industrial High School of Cassel. In 1850 he accepted an invitation to occupy a chair in the University of Santiago. Dr. Philippi's name is well known in connection with ethnological and anthropological researches.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHNAL GREEN: PARISH OF ST. MATTHEW.—Assistant and Second Assistant Medical Officers for the New Infirmary; unmarried. Salary, £150 and £120 per annum respectively, with board, lodging, and washing. Applications, on forms provided, to be sent to the Medical Superintendent by May 9th and 10th respectively.

BIRMINGHAM CITY ASYLUM.—Resident Clinical Assistant. Applications to the Medical Superintendent.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries, £60 per annum each, with board, washing, and attendance. Applications to the Secretary, Steelhouse Lane, Birmingham, by May 9th.

BRISTOL ROYAL INFIRMARY.—Casualty Officer until August 31st. Apartments, board, and washing provided, and honorarium of £10. Applications to the Secretary by May 7th.

CARLISLE DISPENSARY.—House-Surgeon. Salary, £130 per annum, with apartments. Applications to the Honorary Secretary, Mr. G. A. Lightfoot, 23, Lowther Street, Carlisle, by May 9th.

CHELSEA HOSPITAL FOR WOMEN, Fulham Road, S.W.—Clinical Assistant. Application to the Secretary.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence, £80 per annum, with board, residence, and washing. Applications to the Secretary by May 10th.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary commencing at £80 per annum, with board and residence. Applications, endorsed "House-Surgeon," to the Secretary by May 1st.

FARRINGDON GENERAL DISPENSARY, 17, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £120 per annum, with apartments, coals, and gas. Applications to the Honorary Secretary.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried, and not over 35 years of age. Salary, £150 per annum, with board, apartments, etc. Applications to the Medical Superintendent by May 3rd.

GLASGOW UNIVERSITY.—Examiner for Degrees in Medicine, with special qualifications to examine in Practice of Medicine (Systematic and Clinical). Salary, £50 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by May 23rd.

HALIFAX UNION WORKHOUSE, St. Luke's Hospital.—Assistant Medical Officer for the Hospital and Workhouse, unmarried, not over 35 years of age. Salary, £160 per annum, with midday meal provided. Applications on forms provided, and endorsed "Assistant Medical Officer," to the Clerk to the Guardians, Union Offices, Halifax, by April 30th.

HOSPITAL FOR WOMEN, Soho Square, W.—House-Physician. Appointment for six months. Salary, £30. Applications to the Secretary by April 30th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Assistant Physician to the Out-patient Department. Applications to the Secretary by May 1st.

JERUSALEM: BRITISH OPHTHALMIC HOSPITAL.—Surgeon. Appointment for eight months. Honorarium £100, with travelling expenses and maintenance. Applications to Mr. Brudenell Carter, 31, Harley Street, London, W.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum. Applications to the Secretary of the Faculty.

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent, The Lawn, Lincoln.

LIVERPOOL EYE AND EAR INFIRMARY.—House-Surgeon Salary, £80 per annum, with residence and maintenance. Applications to the Secretary, Knowsley Buildings, by May 5th.

LONDON COUNTY ASYLUM, Horton.—Medical Superintendent, not over 40 years of age. Salary, £1,000 per annum, with unfurnished house, etc. Applications, on forms provided, to be sent to the Clerk of the Asylums Committee, 66, Waterloo Place, London S.W., by May 1st.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of 50 guineas per annum, with residence, board, and washing. Applications to the Secretary by May 17th.

LONDON THROAT HOSPITAL, 204, Great Portland Street, W.—(1) Surgeon. (2) Assistant Surgeon. Applications to the Honorary Secretary of the Medical Committee by April 30th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Two Assistant Physicians. Applications to the Secretary by April 30th.

NORTHAMPTON UNION.—District Medical Officer. Salary, £70 per annum. Applications, on forms provided, to be sent to Mr. W. Fawkes, Clerk to the Guardians, 14, Guildhall Road, Northampton, by May 7th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months; the Junior is eligible for election to the Senior post. Salary at the rate of £50 per annum attached to each. Candidates to attend meeting of the Medical Committee on May 21st.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £150 per annum, with board, apartments, and washing. Applications to the Medical Superintendent by May 10th.

PAISLEY INFECTIOUS DISEASES HOSPITAL.—Resident Physician. Salary, £50 per annum, with board, washing, and attendance. Applications to the Clerk to the Local Authority, Municipal Buildings, Paisley, by April 30th.

PLAISTOW: ST. MARY'S CHILDREN HOSPITAL.—Assistant Resident Medical Officer. Appointment for six months. Salary at the rate of £80 per annum, with board, residence, laundry, etc. Applications to the Secretary by May 1st.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £50 per annum. Applications to the Honorary Secretary by May 5th.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £65 per annum, with board and residence. Applications to the House-Governor by May 12th.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer for about four months. Salary, £3 3s. per week, with furnished apartments and board. Applications to the Medical Superintendent.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser; unmarried. Salary, £70 for first year, with board and lodging. Applications to the Honorary Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Three Assistant Surgeons, must be F.R.C.S.Eng. Applications to the Secretary by April 30th.

ST. THOMAS'S HOSPITAL.—Resident Assistant Physician. Applications to the Treasurer's Clerk by April 28th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary, 74, King Street, South Shields.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—(1) House-Surgeon. Salary, £120 per annum. (2) Assistant House-Surgeon. Salary, £80 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by May 3rd.

STOCKPORT INFIRMARY.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon and Visiting Surgeon. Residence, board, and washing provided with each appointment. Applications to the Secretary by May 1st.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Surgeon. Salary, £50 per annum with board, apartments, washing, and attendance. Applications to the Secretary by April 30th.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 a year, with board, lodging, and washing. Applications to the House Committee.

UNIVERSITY COLLEGE, London.—(1) Professorship of Medical Jurisprudence. (2) Surgical Registrar in the Hospital. (3) Resident Medical Officer in the Hospital. Applications to the Secretary for the first by May 14th, and for the two latter by May 7th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—(1) Assistant Physician to the Out-patients. (2) Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by May 12th.

WESTERN DISPENSARY, Rochester Row, S.W.—Resident Medical Officer. Salary, 100 guineas per annum, with residence, coals, gas, and attendance. Applications to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) House-Physician. Salary, £100 per annum. (2) Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum. Board, lodging, and washing provided in each case. Applications to the Chairman of the Medical Committee.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary, £110 a year, with board, washing, and attendance. Applications to the Committee by May 21st.

MEDICAL APPOINTMENTS.

ANDERSON, Norman Wm., M.B., C.M.Aberd., appointed Certifying Factory Surgeon for the Civil Parish of Strathmiglo, co. Fife.

BIRD, G. W. Harvey, M.A., M.B., B.C.Cantab., M.R.C.S., L.R.C.P., appointed Surgeon to the Bridgwater Infirmary.

BOX, Charles Richard, M.D., B.S., B.Sc.Lond., M.R.C.P., F.R.C.S., appointed Assistant Physician to St. Thomas's Hospital.

BROWN, A., M.R.C.S., appointed Medical Officer for the Masham District of the Bedale Union, *vice* R. W. T. Ewart, M.B., C.M.Edin., resigned.

CAIE, W. J., M.A., M.B., Ch.B., appointed Resident Physician and Surgeon to the Aberdeen Royal Infirmary.

CRAVEN, R., M.B., appointed Medical Officer for the Chipping District of the Clitheroe Union, *vice* R. Patchett, L.R.C.S.Edin., resigned.

HEARDER, Thomas S., M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Urban District of Ilkley, and the Townships of Nesfield-with-Langbar, Middleton, Denton, Askwith, Great Timble, Little Timble, Blubberhouses, and Fewston.

HOLLINGS, C. E., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Driffield Rural District, *vice* Richard Wood, M.D.St. And., resigned.

JONES, Williams D., L.R.C.P., L.R.C.S.E., L.S.A.Lond., appointed Medical Officer and Public Vaccinator to the Rotherham No. 1 District, *vice* Dr. Branson, resigned.

MACPHERSON, J. F., M.B., C.M.Edin., appointed Medical Officer for the First District of the Basingstoke Union, *vice* C. F. Webb, M.D.Durh., resigned.

MASSEY, David, L.R.C.P., L.R.C.S.I., appointed Medical Officer for the Berriew District of the Forden Union.

PETERKIN, H., M.B., Ch.B., appointed Resident Physician and Surgeon to the Aberdeen Royal Infirmary.

SHARP, H., M.B., appointed Medical Officer of Health to the Corporation of Truro.

SPON, H. J., M.R.C.S.Eng., D.P.H.Camb., appointed Visiting Medical Officer to the City Dispensary, College Street, E.C.

SPROULLE, A. E., L.R.C.P., L.R.C.S.I., reappointed Medical Officer of Health for the Withernsea Urban District.

WALKER, J. D., M.B., appointed Medical Officer for the Fontmell District of the Shaftesbury Union, *vice* H. A. Bryant, M.R.C.S., L.R.C.P., resigned.

WILLIAMS, Lionel H., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Civil Parishes of Thornbury, Olbdury-upon-Severn, Littleton-upon-Severn, Rockhampton, Falfield, Tortworth, Charfield, Cromhall Abbotts and Cromhall Lygon, Rangeworthy and Tytherington in the Thornbury Rural District.

WOOD, James Miller Swanson, M.B., Ch.B., appointed Assistant Medical Officer at James Murray's Royal Asylum, Perth.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. W. Anderson: Consultation. (Skin.)

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. F. Payne: Consultation. (Medical.)

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—The adjourned discussion on the Changes of the Blood in Disease will be resumed by Professor Almroth Wright, Dr. Drysdale, Dr. William Hunter, Dr. Lorrain Smith, and others.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. James Cantlie: Surgical Consultation.

Obstetrical Society of London, 8 P.M.—Specimens will be shown by Dr. Tate and others. Papers—Dr. Thomas Wilson: The Relations of Organic Affections of the Heart to Fibromyoma of the Uterus. The President (Mr. Alban Doran): A case of Extrauterine Gestation, in which Fœtal Death occurred at the eighth month after Spurious Labour; Abdominal Section two months later.

THURSDAY.

Ophthalmological Society of the United Kingdom.—Cases and Specimens at 8 P.M. Chair at 8.30 P.M. Papers: Mr. Nettleship: Note on Opaque Nerve Fibres of the Retina. Mr. Critchett: Optical Iridectomies for Lamellar Cataracts. Mr. F. M. Ogilvie: Eye Changes in a case of Bullet Wound of Head. Mr. Reginald Bickerton: Case of Protrusion of Eyeball on Stooping. Mr. W. T. Lister: Affection of Choroid. Mr. Juler: (1) Emile Berger's Binocular and Stereoscopic Lens; (2) Proptosis with Ophthalmoplegia Externa. Mr. Treacher Collins: Case with a Congenital Notch in the Margin of each Lower Lid. Messrs. Higgens and Ormond: Specimen of Sarcoma of Choroid.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Roentgen Society, 20, Hanover Square, 8 P.M.—Demonstrations by Professor F. R. Barrell, Dr. Dellpratt Harris, Mr. Chisholm Williams, and Mr. Mackenzie Davidson. Exhibits by the President, Mr. Bowron, Mr. J. H. Gardiner, Mr. Isenthal, Dr. F. H. Low, Messrs. Parsons and Eachus, Mr. E. H. W. Shenton, and Mr. Wimshurst.

Harveian Society of London, Stafford Rooms, Tichborne Street, Edgware Road, 8.30 P.M.—Mr. J. D. Malcolm: The Selection of Cases for Abdominal Section.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Treacher Collins: Consultation. (Eye.)

West Kent Medico-Chirurgical Society, Royal Kent Dispensary, Greenwich Road, 8.45 P.M.—Mr. Charles J. Parke will deliver his Presidential address on What shall we do with our Inebriates? to be followed by a smoking concert.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases will be shown by Drs. Watson Williams, Logan Turner, Lambert Lack, Tilley, Bronner, and Jobson Horne, and Messrs. Charters Symonds, Paget, and Waggett.

West London Medico Chirurgical Society, West London Hospital, Hammersmith Road, W., 8.30 P.M.—Pathological Specimens—Mr. Bidwell: A Series of Gall Stones. Papers—Dr. Barry Blacket: Treatment by Ultraviolet Rays. Dr. Seymour Taylor: Notes on two cases of Membranous Colitis. Dr. L. Dobson: Notes on (1) a case of Foreign Bodies in the Mammary Gland; (2) a case of Impacted Fracture of the Head of the Femur complicated by Infantile Paralysis.

Society of Anæsthetists, 20, Hanover Square, W., 8.30 P.M.—Casual communications. The ordinary meeting will be followed by the annual meeting for the election of officers, etc.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BARTON.—On April 17th, at 17, Redcliffe Gardens, South Kensington, S.W., the wife of Charles N. Barton, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

BENSON.—On April 6th, at 301, Fulwood Road, Sheffield, the wife of H. Mitchel Benson, M.B., C.M.Edin., of a daughter.

FLEMING.—At 10, Chester Street, Edinburgh, on the 18th instant, the wife of Robert A. Fleming, M.D., F.R.C.P.E., of a daughter.

HOPKINS.—On April 12th, at 5, Cotham Grove, Bristol, the wife of F. G. Hopkins, M.B., Colonial Medical Service, of a son.

PARRY.—On St. George's Day, at the Turret House, Youlgreave, Derbyshire, the wife of T. Wilson Parry, M.A., M.B., B.C.Cantab., L.R.C.P.Lond., M.R.C.S.Eng., of a son.

SCOTT.—On March 29th, at Southdown House, Silverdale Road, Eastbourne, the wife of H. Scott, M.D., C.M., etc. (late of Westminster), of a son.

MARRIAGES

DWYER—BROWN.—On the 18th instant, at All Saints, Fulham, by the Rev. Thomas Calvert Brown, brother, and the Rev. C. P. Calvert, uncle of the bride, assisted by the Rev. M. H. Bowden, Hubert de Burgh Dwyer, M.R.C.S., L.R.C.P., of Blackfriars, S.E., youngest son of the late Henry Dwyer, of Grosvenor Gardens, St. Leonards-on-Sea, to Lydia Ann, younger daughter of Thomas Brown, Esq., Guion Road, Fulham, S.W., and granddaughter of the late Rev. Thomas Calvert, M.A., F.S.A., Sandystike, Cumberland.

ELKINS—PEACH.—On the 19th instant, at All Saints, Leavesden, Herts, by the Rev. J. R. B. Watson, Chaplain of Leavesden Asylum, assisted by the Rev. Arthur Wilson, M.A., Vicar of the Parish, Frank Ashby Elkins, M.D., Medical Superintendent Metropolitan Asylum, Leavesden, eldest son of Joseph Elkins, Stanford Mear, Yelvertoft, Northants, to Caroline (Lena), fourth daughter of the late William Henry Peach, Waingroves Hall, Derbyshire.

EMBRY—NOWELL (PERRY).—April 18th, at Old Market Street Chapel, Bristol, by the Rev. Wilfrid J. Moulton, B.A., Walter d'Este Embry, M.D., B.Sc.Lond., M.R.C.S., of Birmingham, to Edith Mary Nowell ("Ditha Perry"), of the Wilderness, Redland, Bristol, daughter of the late William Nowell.

LYALL—NORRISH.—On April 19th, at the Church of the Holy Cross, Crediton, by the Rev. A. F. de Gex, Rector of Meshaw and Creacombe, assisted by the Rev. Prebendary C. Felton Smith (Vicar), David William Knyvett Lyall, M.B., C.M.Edin., of Shepton Mallet, Somerset, eldest son of D. R. Lyall, Esq., C.S.I., to Mary Ayre, younger daughter of D. M. Norrish, Esq., of Fordton House, Crediton, Devon.

WILKINSON—FISHER.—On April 21st, at Holy Trinity Church, Anerley, S.E., Robert Wilkinson, M.D.Brux., M.R.C.S.Eng., L.R.C.P.Lond., of Branksome House, Hamlet Road, Norwood, son of James Wilkinson, Esq., of Vernon Place, Uckfield, to Beatrice Mary, daughter of Robert Fisher, Esq., of Beverley Road, Anerley.

DEATHS.

AINLEY.—On April 24th, at Bournemouth, Daniel Ainley, M.R.C.S., M.O.H. County Borough, Halifax, aged 65 years.

ARCHDALL.—In London, on Friday, April 20th, 1900, Henry Stewart Archdall, aged 32, M.R.C.S., L.R.C.P., late Surgeon R.N.

HODGSON.—April 22nd, at his residence, 64, Fishergate, Preston, James Birkett Hodgson, M.D.St.Andrews, aged 64 years.

JEFFREYS.—April 21st, 1900, suddenly at Brighton, Richard Parker Jeffreys, M.R.C.S. (late of Chesterfield), aged 59 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—I.-p., Tu., 2.30; o.-p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F., 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopedic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 8.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A MEMBER asks what is the usual rate of payment for translating articles, pamphlets, books, etc., from French or German into English—medical works only.

SPERO asks any correspondent can suggest to him a means of treatment for a girl of 8, who for two years persists in defæcating in her garments. The sphincter appears normal; there is no looseness of the motions, which occur twice daily; no worms nor apparent irritation of the vagina. Moral treatment is ineffectual. The child is intelligent and in no other way negligent in habits.

CHARGES FOR DRUGS.

STAND SURE writes: A. has a resident patient practice. B. has recently joined him and has a share in the outside practice, but not in the resident patient practice. As A. had a stock of drugs, etc., before B. came and uses them for his own patients, an arrangement has been made that A. supplies all drugs and charges B. so much per mixture, draught, etc. What would be a fair all-round sum to charge B. for mixtures, draughts, etc., taking the expensive with the cheap?

*** We are advised that a rate of one penny an ounce would form a fair basis for such an arrangement.

SERJEANT-SURGEONS.

W. B. writes: In the article on serjeant-surgeons in No. 2045 of the BRITISH MEDICAL JOURNAL Ronjat is left out. In *Tristram Shandy* Uncle Toby insisted that the surgeon should heal up his wound or he would send for Monsieur Ronjat, the King's Sergeant (*sic*) Surgeon, to do it for him. (Vol. ii, chap. 4.) Is anything known of Ronjat?

*** We have referred this question to the writer of the article in question, who replies that he is entirely unable to trace any details of Monsieur Ronjat. The date is fixed as July, 1700, for it was at the end of the third year of "My Uncle Toby his Hobby-Horse," and at this time Thomas Hobbes and Thomas Gardiner were the two Serjeant-Surgeons. It is possible therefore that Monsieur Ronjat was one of the surgeons attached to William III, who may have appointed him a serjeant-surgeon extraordinary. Ronjat wrote nothing that has survived; he is not mentioned in any of the usual biographies, he had no precedence in—even if he were a member of—the United Company of Barbers and Surgeons, and he was either dead before 1731 or was not of sufficient importance to obtain an obituary notice in the *Gentleman's Magazine*.

ANSWERS.

A MEMBER of the New Zealand Branch who writes to us from Otaki has forgotten to send his name or enclose the circular to which his letter refers.

DR. CUMING ASKIN.—The pictures are certainly offensive to the taste of the vast majority of medical practitioners in this country, but protests have previously been made without, it would appear, producing any effect.

A. E. P.—An abstract of Professor Maragliano's account of his treatment of tuberculosis was given in the BRITISH MEDICAL JOURNAL of August 17th, 1895, p. 444. Further reports on it will be found in the JOURNAL of November 16th, 1895, p. 1,252, and in the EPITOME of April 18th, 1896, para. 299, and May 16th, para. 371.

ELECTRICAL TREATMENT OF UTERINE MYOMA.

DR. J. INGLIS PARSONS (London) writes: In answer to "Fibroid," the constant current properly applied will arrest the hæmorrhage (if the sound can be passed) in 90 per cent. of all cases. Reduction in size and disappearance of pain and pressure symptoms also follow in a good proportion of cases—about 50 per cent. The shorter the duration of the tumour the more likely is this to follow. The tumour itself very rarely disappears, and in some cases will continue to grow. The patient need not lie up. Two applications are given each week for 10 to 15 minutes. The number of applications required depends on the case.

DR. T. GERALD GARRY (Liverpool) writes: I should advise "Fibroid" if he is interested in electricity in gynæcology to visit Apostoli's clinic in Paris, from which I have only just returned. He will see there much for reflection. For literature I would recommend *Electricity in Diseases of Women*, by Massey (Davis); *Electricity in Gynæcology*, by Gradon; Bigelow's *Gynæcological Electro-Therapeutics*; *Manuel d'Electrothérapie Gynécologique*, by L. Brivoris, or Apostoli's works, some of which are translated into English. I shall be happy to send "Fibroid" some pamphlets written by myself on this subject on learning his address.

TREATMENT AND PREVENTION OF FLAT-FOOT.

DR. GEO. STEELE PERKINS (Wimpole Street, Cavendish Square, W.) writes: In answer to "M.R.C.S.", low square heels, with pad to support arch, and square toes are correct. How much the child should be allowed to walk depends on the case, and cannot be stated without an examination. Exercises would be beneficial which develop the flexor longus pollicis, flexor longus digitorum, and tibialis posticus, especially making the child walk on tiptoe with foot turned slightly inwards. She should always walk with feet straight or very nearly so. Massage of the same muscles would be beneficial. "M.R.C.S." should watch for scoliosis, as flat foot is a frequent cause of this trouble.

DR. F. W. FORBES ROSS, (Gower Street) writes: "M.R.C.S." will find that his daughter probably has some slight valgus tendency; if this is the case the trouble will grow worse in spite of the Jenner spring. What he really requires here is a boot with the arch of the foot built up on both sides, and the heel extended along the inner side of the boot. This tending to obviate the valgus and convert it to a varus incline will rest the plantar ligaments, and give them time to recover. The O'Connor Extension Company's boot for flat-foot and talipes plano-valgus will be here useful, as in other cases known to me. This ingenious boot was shown at Portsmouth at the British Medical Association meeting. For other details "M.R.C.S." should apply to the Company, 2, Bloomsbury Street, London, W.C.

DOMESTIC MEDICINE.

A.V.L., R.C.V.—The following books may be suggested: *Household Dictionary of Medicine, Preventive and Curative*, by Dr. F. R. Walters (2nd edition. 1895. 3s. 6d.); *Gardner's Household Medicine and Sick-Room Guide*, 13th edition, revised by W. H. C. Staveley, F.R.C.S. (London: Smith, Elder, and Co. 1898. 8s. 6d.); *Dictionary of Domestic Medicine and Household Surgery*, by S. Thomson, 31st edition, revised by J. C. Steele and G. Reid. (1896. 10s. 6d.). For the tropics we do not know of any better work than the *Manual of Family Medicine and Hygiene*, by the late Sir William Moore (London: J. and A. Churchill. 12s.).

MOTOR CYCLES.

CYMRO writes in answer to "Cyclist" in BRITISH MEDICAL JOURNAL of April 14th: I have used a motor tricycle for twelve months. I find it useful and rapid, dirty and cold in winter, and although dusty very pleasant in hot weather. I have run between 2,000 and 3,000 miles, have used up two sets of dry-cells and one trembler, have upset twice and had to have considerable repairs done, and have now sent it to be done up. It is made by the Motor Manufacturing Co., of Coventry, who treat their customers very well, send parts by return, etc. I recommend the tricycle, but advise clipper tyres and Brampton's multi-spiral saddle for motor tricycles. I also use a bicycle and a horse and trap. I should be glad to hear the experience of medical men as regards motor cars.

THE UNION HOSPITAL, MIDDLESBROUGH.

DR. L. G. DAVIES (Medical Officer Workhouse and Hospital, Visiting Medical Officer Broomlands Children's Hospital, Middlesbrough) writes: As the Middlesbrough Board of Guardians are advertising for a workhouse medical officer, will you allow me, out of a dearly-bought experience, to warn intending candidates to ascertain exactly what will be expected of them by this Board, and to compare the extent of work and responsibility with the entirely inadequate remuneration and "residence" (which is at the back of a steam laundry) provided. I may mention that I am resigning voluntarily, and if any intending candidate cares to write to me I will give him particulars.

NOTES, LETTERS, Etc.

THE IRISH LOCAL GOVERNMENT ACT.

DR. THOMAS LAFFAN (Cashel) writes: A great deal of additional clerical work is being thrown on the physicians to the union hospitals by the Local Government Board. All the old forms were issued under sealed orders which remain unrevoked, and this new clerical work is being issued, as seems plain to me, under the authority of the above Act and not under that of any new sealed order. If this contention be correct, these physicians are entitled to additional remuneration under the terms of the Act. A letter has been forwarded to the Dublin medical press inviting their assistance and that of the Irish Medical Association. Irish union hospital doctors should appeal to the Local Government Board in every case. It is not *ad rem* at all to say that the work is being done under the Poor-law system, for apart from the point raised by me, that system is now incorporated with that of the Local Government Act. The class affected will, I trust, take note of the attitude both of the newspapers and that of the Irish Medical Association.

IMMUNITY OF RIGHT SIDE OF HEART IN ACUTE RHEUMATISM.

DR. WM. DOWNING (Birmingham) writes: In the report of the Chelsea Clinical Society in the BRITISH MEDICAL JOURNAL of March 31st, the immunity of the right side of the heart in acute rheumatism was referred to, and the reasons why the left side should so much more frequently be implicated were discussed. May it not be probable that the endocardium of the right side is naturally more resistant to septic influences on account of being accustomed to impure blood circulating through its cavities, whilst the endocardium of the left side falls an easier prey to infection for the contrary reason?

THE URINE IN GOUT.

DR. JOHN HADDON (Denholm) writes: There have appeared in the BRITISH MEDICAL JOURNAL of late some very interesting and suggestive observations on the analysis of the urine in gout. The value, however, of such observations would be very much greater if they were prefaced by observations of the analyses of the urine in health under different diets. I have had occasion to watch the urine when eating different kinds of food, and also when eating twice or three times during the day, and have been astonished at the change in its quantity as well as in its quality. From my observations I feel convinced that if those who have the opportunity and are able to make an exhaustive analysis of the urine would do so while eating a known quantity and quality of food twice or three times a day, most valuable results would be arrived at which would help to explain the cause of gout.

The diets I would suggest are:

1. Five ozs. whole wheat-meal bread, 2 ozs of butter, and two ripe raw apples. First at 8 A.M., 2 P.M., and 8 P.M., and then at 8 A.M. and 4 P.M.

2. Five ozs. of white bread, ½ lb. of ham, and a teaspoonful of tea in ½ pint of water and 1 oz. of cream at 8 A.M.; 1 lb. of potatoes and ½ lb. of beefsteak at 2 P.M.; 5 ozs. of white bread, a teaspoonful of tea in ½ pint of water and 1 oz. of cream at 6 P.M.

3. Two ozs. of rice boiled in ½ pint of milk and 2 ozs. sugar at 8 A.M., 2 P.M., and 8 P.M. The same at 8 A.M. and 4 P.M.

4. Two lbs. of potatoes at 8 A.M., 2 P.M., 8 P.M. The same at 8 A.M. and 4 P.M.

5. One lb. of potatoes and ½ lb. of steak at 8 A.M., 2 P.M., and 8 P.M., the same at 8 A.M. and 4 P.M.

Nothing else should be put into the stomach during the observations, and a week at least on each diet would be necessary to show its full effect. I submit these suggestions to those interested and inclined to work at a subject which will pay.

CLIMATIC TREATMENT OF GONORRHŒAL RHEUMATISM.

A. writes: A man, aged 25, exposed himself to infection about Christmas, 1899. He placed himself in the hands of a quack, who treated him with strong injections of potassium permanganate and copaiba capsules. At the end of the third week, according to the patient's testimony, the discharge had disappeared, and he migrated to London, where for three weeks he practised alcoholic and sexual total abstinence. On his return he experienced a relapse, with copious discharge but no pain. He returned to his treatment by injection. I found him suffering from orchitis and ophthalmia, and in the course of a week pronounced symptoms of arthritis set in. There was swelling and great pain of the right knee, which at night was agonising. No other joint became affected. The patient is a pale anæmic man. The ophthalmia yielded in two weeks to 5 per cent. solution of protargol followed by washing out with a solution of zinc sulphate 2 grs. to 1 oz. The orchitis yielded to ordinary treatment, and the discharge to complete rest in bed and copious alkaline draughts. For the arthritis he was ordered complete rest in bed between blankets and a simple milk diet. strapping was also resorted to. After three weeks no effusion remained, and he was able to walk. In a few days, however, the pain and effusion reappeared, but again yielded to two weeks of the same treatment. A second relapse followed, and as he would yield to no remonstrance and remain in bed I advised him to go to some friends of his in Naples. One week of Italian warmth succeeded in banishing every symptom. He has now been a month at home with no trace of his previous symptoms.

CANNABIS INDICA.

DR. CUVIER R. MARSHALL (Detroit, Michigan, U.S.A.) writes with reference to the correspondence which took place recently in our columns as to the action of cannabis indica, to state that in his opinion clinical experience has plainly demonstrated the utility of cannabis indica in the treatment of many painful and spasmodic conditions. For example, in the dystocia of neurasthenic individuals a full dose of a physiologically standardised fluid extract of cannabis indica will bring about the happiest state of affairs, relieving the acute severity of the pains, while it increases the force and frequency of the uterine contractions, much after the manner of chloral hydrate. It relieves the suffering of neuralgia, gout, and rheumatism almost as effectually as opium, and it tends to subdue the spasmodic muscular action of chorea, hysteria, and tetanus. It is one of the best remedies we have for the alleviation of headache. In the treatment of mental depression, delirium tremens, puerperal mania, and the various types of insanity, cannabis indica has few equals as a safe and efficacious anodyne.

HYSTERICAL APHONIA IN YOUNG MAN.

DR. W. M. MORISON (Co. Durham) writes: Dr. Jardine, of Glasgow, gives an interesting account of what appears to be a hysterical condition in a young man, the inciting cause being of a rather uncommon nature. Hysterical conditions in male subjects, in this country at any rate, are not very common, although on the Continent we hear of many cases. About three years ago I was called in to see a young man, probably about 24 years of age, who had suddenly, while in the act of articulating, lost his voice. He had left his parent's house to accompany to her home the young lady whom he afterwards married, and when walking along his speech failed him. I saw him soon after, with his throat vigorously poulticed. He was vomiting when I entered, emetics having been administered. These remedies were, however, of no use. He could swallow perfectly well, had no pain, and did not appear to be excited, although all those about him were. I advised them to discontinue those things they were using, and that he would soon have his speech absolutely restored. Within a week he was quite well. I diagnosed a hysterical condition, knowing before that his mother was a perfect specimen of the neurotic temperament, along with the fact that he was engaged to be married shortly. Soon after his marriage he had a nervous "breakdown," and several times since, although he has never lost his voice. Is it not probable that some of those unsatisfactory cases that come before us occasionally, and that baffle all attempts at treatment, in males, may have an element of hysteria at bottom?

MÜLLERINE.

DR. JOHN REID (Dover) writes: It may interest readers of the BRITISH MEDICAL JOURNAL to know that Dr. Schüchardt of Görlitz failed to crystallise müllerine, and stated his difficulty to the late Baron Sir F. von Müller of Melbourne. Crystals were exhibited by me at the Intercolonial Congress in 1889. I have obtained them (1) by dialysis, (2) placing the evaporated solution between folds of bibulous paper, and (3) by evaporating in a capsule rapidly and allowing to cool (very uncertain). Care is required in the preparation of müllerine to exclude other constituents of pyrethrum, as they depress the heart. Müllerine has been used with success in phthisis and sea-sickness. If critics digest müllerine pure with dilute H_2SO_4, and test with potassium picrate or ammonio-cuprate they will find whether my suggestion that the drug is a glucoside is correct.

PHENYL-URETHANE AS AN ANTIPYRETIC IN INFLUENZA.

DR. HENRY W. SPAIGHT (Porlock, Somerset) writes: Phenyl-urethane is not a new drug in the treatment of various pyrexial affections, but I do not think its usefulness in treating influenza has been heretofore noted. It is rapid in action, the temperature falling in from twenty to fifty minutes after administration. The pulse and respirations are reduced in proportion to the fall. The effect lasts from five to seven hours, or even longer. There are no unpleasant after-effects, the patients in all cases feeling more comfortable. If given alternately with some other drug of the same class, such as antipyrin, the result is better. Any febrile patient can take with ease 15 to 20 gr. a day, given either in a wafer or dissolved in wine. Phenyl-urethane gr. 5 in half a wineglassful of port, three times a day, is the pleasantest method of taking it, and gives the most satisfactory results.

LETTERS COMMUNICATIONS, ETC., have been received from

A A. E. P.; Dr. T. C. Askin, Woodbridge; "Answers," Editor of, London. **B** Mr. J. M. Barbour, Swansea; A. A. Barclay, M.B., Bacup; W. M. Bergin, M.B., London; "British and Colonial Druggist," Editor of the, London; G. Barling, M.B., Birmingham; Dr. J. Biernacki, London; Dr. R. J. M. Buchanan, Liverpool; Sir H. Burdett, London; Barrister; Dr. J. G. Blackman, Portsmouth. **C** C. G. Campbell, M.B., Christchurch, N.Z.; Mr. G. W. Cheavin, London; A. Cox, M.B., Gateshead-on-Tyne; S. Crawshaw, M.B., Ashton-under-Lyne; Dr. W. H. Calvert, Melrose; Cymro; Mr. J. M. Carvell, London; Dr. F. G. Clemow, London; Hon. S. Coleridge, London. **D** Dr. H. M. Duncan, London; Dr. L. G. Davies, Middlesbrough; Dr. T. Dutton, London. **E** Enquirer; E. H. Edwards, M.B., London; Dr. W. Edmunds, London; Expurgans. **F** Mr. C. E. S. Flemming, Freshford; Dr. W. E. Fothergill, Manchester; Dr. W. F. Farquharson, Carlisle. **G** Dr. G. A. Gibson, Edinburgh; W. R. Gore, M.B., Whitchurch; H. Gouldie, M.B., South Shields; G. P. S.; Dr. I. G. Garry, Liverpool; Mr. J. W. Gill, Liskeard. **H** G. Halley, M.B., Dundee; F. G. Haworth, M.B., Darwen; Dr. W. Hunter, Nottingham; Dr. J. B. Hellier, Leeds; Dr. J. Haddon, Denholm; H. E. B.; Dr. J. P. Henry, London; Mr. W. H. Hillyer, Wolverhampton. **J** Dr. A. B. Judson, New York. **K** Mr. J. Kempster, London. **L** Mr. F. Litchfield, London; W. Leask, M.B., Birkenhead; Mr. O. Lowsley, Reading. **M** Mr. E. R. Morgan, Morriston, M.D.; Mr. F. M. Mackenzie, Inverness; Medicus; Dr. A. G. McIntyre, Lenzie. **O** Old P. V.; Omega; Mr. G. H. Oliver, Clayton. **P** Messrs. Parke, Davis and Co., London; Dr. L. A. Parry, Hove; W. A. Payne, M.B., Ilfracombe; Dr. O. Pritchard, London; Dr. J. I. Parsons, London; Mr. F. P. Philp, London; Dr. R. J. Probyn-Williams, London; Dr. G. C. S. Perkins, London; Mr. H. C. Phillips, London; P. F. G. **R** Mr. J. A. Rawlings, Swansea; S. J. Ross, M.B., Carnforth; Dr. G. D. Robinson, London; Dr. J. Reid, Dover; Mr. C. C. Rushton, Macclesfield; Mr. H. J. Roberts, Pen-y-Groes; Mr. L. Reed, Croydon; D. Richmond, M.B., Rochdale. **S** F. J. Sadler, M.B., Barnsley; South-West London Medical Society, Secretary of, London; P. S. Sturrock, M.B., Bagdad; Mr. H. B. Sleeman, London; S. A. J.; Spero; Mr. R. Stewart, London; Spinal J. S. T.; Dr. E. M. Shirtliff, Ryde, I. of W. **T** Dr. F. S. Toogood, London; Dr. J. F. Tuohy, Hove; E. C. Thomas, M.B., Llanybyther; Mr. C. G. Thorp, Kirton Lindsey; Mr. M. Tod, Edinburgh; Mr. B. Thornton, Margate. **W** W. B.; Mr. F. C. Wood, Ripley, Derbyshire; E. B. Waggett, M.B., London; etc.

BOOKS, ETC., RECEIVED.

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A CLINICAL LECTURE
ON
SECONDARY SUTURE OF THE BRACHIAL PLEXUS.

BY WILLIAM THORBURN, F.R.C.S.,
Assistant-Surgeon, Manchester Royal Infirmary.

GENTLEMEN,—The case which I propose to bring before you to-day presents several points of interest. It is an admirable example of the result of complete rupture of the brachial plexus, and it is also, I believe, the first case in which suture of that plexus has been effected long after the original injury. To the various minor details which it illustrates I shall refer after describing the symptoms presented.

At the end of August, 1895, a girl, then aged 16, was caught by some machinery in a mill in which she was working, but the exact nature and mechanism of her injuries could not be ascertained, there being apparently no witnesses, while the girl herself was unconscious, and remained so for about an hour. She was treated for ten weeks in hospital, and was then discharged as incurable. She came under my care in the Manchester Royal Infirmary on March 21st, 1896, seven months after the accident, and she then presented the following condition:

The whole of the left upper limb was absolutely paralysed, flail-like, and much wasted. Of the intrinsic muscles of the limb none were capable of any response to voluntary, faradic, or galvanic stimulation. The condition of the extrinsic muscles and of those about the shoulder-joint requires a rather more detailed description. The deltoid, pectoralis major, latissimus dorsi, and teres major were totally paralysed and wasted; the trapezius presented slight wasting, but was not paralysed; the serratus magnus could be seen and felt to contract upon voluntary or electrical stimulation, and the scapula was readily moved thereby; contractions of the subclavius could also be felt through the wasted pectoralis major; the fulness of the scapular fossæ indicated that there was no marked wasting of the supraspinati and infraspinati and their voluntary contractions were thought to be felt through the trapezius. The pectoralis minor, subscapularis, rhomboids, and levator anguli scapulæ could not be defined, but the mobility of the scapula was little if at all interfered with, while rotation of the humerus was impossible, so that the rhomboids and levator anguli were probably unaffected, while the subscapularis was probably paralysed. The pupils were equal in size, and reacted well to alteration of light; the palpebral apertures were equal on both sides. The diaphragm was unaffected.

Anæsthesia was absolute in the hand and forearm, as well as in the anterior and posterior aspects of the upper arm, but it presented no sharp boundary. On the outer aspect of the limb sensation extended over the deltoid muscle to about 3 inches below the level of the clavicle and of the spine of the scapula; on the inner side a band of sensation extended from the axilla to within an inch of the internal condyle of the humerus. Although no sharp definitions were possible it was thus clear that sensation was retained in the distribution of the cervical plexus above and over the deltoid, and in that of the branches of the second or second and third dorsal nerves on the inner aspect of the arm, but that there was complete anæsthesia of the region supplied by the brachial plexus proper.

In addition to the wasting of the limb there was an indication of vasomotor and trophic changes in its coldness (temperature records were not made) and in the "glossy skin" of the hand. The joints appeared to be perfectly normal, and the whole limb was flaccid and occupied the position of gravitation. Beyond the confines of the brachial plexus the nervous system was perfectly normal.

It is not my intention to-day to discuss the general question of injuries of the brachial plexus. The above case is sufficiently typical of the class and could not be confused with any other injury. The most common diagnostic error is the mistaking of a hysterical monoplegia for an injury of the plexus; but in the present case the absence of any other hysterical manifestations, such as hemianæsthesia or affections of the field of vision and colour sense, taken together with the completeness and unaltering character of the symptoms and the limitation of anæsthesia in accord with the distribution of the nerve roots, render such error impossible.

More important is the question of the precise localisation and nature of the injury, and upon these points we can speak with considerable precision. The anæsthesia was that of a lesion of the entire plexus, the area of lost sensation involving the distribution of all its roots. So far as the sensory symptoms alone are concerned, the roots of the plexus might have been torn away from the spinal cord, or the injury might have been inflicted at any lower level down to the general breaking up of the plexus into its various branches. On the other hand, the completeness and persistency of the anæsthesia, which remained absolute at the end of seven months, are sufficient evidence of the serious nature of the injury, and could only result from a complete rupture or from a contusion which had produced local injury and subsequent degeneration, at least as serious as that following upon complete rupture. Section of the plexus was eliminated by the absence of any external injury, and the injury was clearly not associated with fracture of the clavicle or other bone. Thus, then, we have established a rupture or contusion of the plexus of maximum intensity, but of doubtful localisation.

The motor symptoms enable us to take a further step, and to define the localisation of our injury. The roots of the brachial plexus pass between the anterior and middle scalene muscles, and at or close to the outer border of the latter the two upper roots unite together, as do also the two lower roots, thus yielding three great cords. Close to the junction of the two upper roots arise the nerve to the subclavius and the suprascapular nerve, which supplies the supraspinatus and infraspinatus. Above this point the roots give off no sensory branches but supply motor branches to the scaleni, the longus colli, the rhomboids, the serratus magnus, and the dilator iridis and muscle of Müller. Below the origin of the suprascapular nerve is a region from which no branches arise until the plexus begins to break up into its ultimate branches of distribution.

The muscles supplied from the plexus and its roots are in our case divisible into three groups, namely, those which are shown not to be paralysed, those which are equally proved to be paralysed, and those whose condition was doubtful. In the first group we have the dilator iridis, muscle of Müller, serratus magnus, subclavius, supraspinatus, and infraspinatus. In the second we have the latissimus dorsi, teres major, pectoralis major, and all the intrinsic muscles of the upper limb. In the third group we have the scaleni, longus colli, rhomboids, subscapularis, and pectoralis minor. If we assume that the scaleni, longus colli, and rhomboids were intact while the subscapularis and pectoralis minor were paralysed, we have a perfect clinical picture of an injury situated in the body of the plexus, but beyond the outer border of the scalenus medius and the junction of the roots into three cords; above this level we have all the branches intact, below it all are paralysed.

To sum up: We have here an injury of the brachial plexus situated in an accessible region of the neck, external to the scalenus medius; the motor fibres above that level are intact, those below it are paralysed; the sensory fibres all arise below it, and are all paralysed. The plexus has been torn across or hopelessly contused in the region named, but its roots have not been torn away from the spinal cord. On these grounds a plastic operation was regarded as possible.

The operation of secondary suture was performed on April 13th, 1896, or seven and a half months after the injury. A long incision was made in the posterior triangle of the neck parallel to and just in front of the anterior border of the trapezius, commencing opposite the level of the hyoid bone, and extending across the clavicle between the origins of the deltoid and great pectoral muscles, and thence for 2 inches further on to the chest. The clavicle was divided at the point indicated and a hole drilled in each end of the bone, through which were passed strong ligatures allowing of thorough retraction. The lax soft tissues of the neck were readily dissected away and the great cervical vessels held inwards by retractors. The outer borders of the scaleni were now well defined; the omo-hyoid muscle was drawn downwards and inwards; the subclavian vessels, fully exposed, did not interfere with the operation. Immediately outside of the scalene muscles the brachial plexus was represented by an

irregular cicatricial mass, which, when artificially dissected from its vaguely-defined surroundings, formed a dense cord about 2 inches in length and ¾ inch in diameter. On dissecting this upwards the five main roots of the brachial plexus could readily be defined, each entering the cicatricial mass. They were thick and bulbous as far back as they could be traced, and the junction of the fifth and sixth cervical and of the eighth cervical and first dorsal respectively could not be clearly differentiated from the general mass. The nerve to the rhomboid muscles and the suprascapular nerve were distinguished as they left the upper part of the cicatrix; no other branches were sought for or recognised. Immediately below the level of origin of these two nerves the cicatrix was somewhat artificially separated into three cords, each of which was secured by a few fine silk sutures to which the needles were left in attachment. The cicatrix was then cut away from them below these sutures with sharp scissors. Peripherally, and at a distance of about 2 inches from the last incision, the peripheral ends of the nerves could also be defined; they were freed from their general adhesions and cut cleanly away below the main cicatricial mass. By means of the holes drilled in it the ends of the resected clavicle were now secured to one another and tension thus removed from the shoulder. The sutures passed through the central nerve ends were now carried through the peripheral ends, when it was found possible to approximate the cut surfaces without tension. No precise differentiation of the peripheral ends was possible, as they contained a good deal of cicatricial tissue; they were—to some extent artificially—separable into five cords; to the upper proximal end were attached the two higher peripheral trunks, to the lower proximal end the two lower peripheral trunks, and to the middle proximal end the remaining or middle peripheral cord. The cicatrix removed in the operation was carefully examined for me by Dr. Craven Moore, whose report thereon is detailed at the end of this lecture.

Wound healing was by primary union, and was uneventful. On the fourth day after the operation there ensued a violent arthropathy of the elbow; the joint became greatly swollen, hot to the touch, and of a dusky-red colour, œdema extending throughout the forearm and the lower part of the arm: this condition was unassociated with pain or with rise of general temperature: it gradually subsided in the course of two or three weeks, and left no fixation of the joint. The patient remained under observation in the Manchester Infirmary and the Cheadle Convalescent Hospital for four months, during which period there was no sign of recovery of function. From that time I did not see her until recently—namely, on February 22nd, 1900.

I now learn that in October, 1896, the girl returned to work in the mill, her left arm being still completely paralysed. About a month later, or, as nearly as she can remember, in the beginning of November, 1896, she "began to move her arm a little," six months and a-half having then elapsed since the date of the operation. She can give no information at all as to the order in which the functions have been restored: all that can be ascertained is that there has been a gradual improvement up to the present time. She has carried out no accessory treatment, and has entirely neglected to use warmth, friction, or movement; she is utterly apathetic and indifferent about the matter, and simply says that she "gets along very well as it is." To this carelessness must probably be attributed the want of a much better result than is now to be described.

On February 22nd, 1900, or nearly four years after the operation, the limb is still much wasted, and the hand is not used for any of the practical duties of life, but the forearm is employed for carrying articles which can be thrown over it, and the upper arm is also used for carrying by apposition to the chest. The patient has occasional subjective sensations of heat and cold, and at rare intervals pain about the point of the shoulder. There is sensation throughout the entire limb, but localisation of touch is defective. In the hand sensation is least developed, and there is only a general impression of contact with localisation within the limits of each finger, and, roughly, of the area of the hand which has been touched; a warm and cold test tube are not distinguishable. In the forearm the tactile impressions are clearer, but contact is liable to be localised as far as about two inches from the point actually touched: as a rule the touch is localised a little higher than the point at which it is actually made; heat and cold are here readily distinguished. In the upper arm sensation is blunt, but by no means seriously defective; no boundaries can be defined between the areas of varying sensibility, and the different grades of comparative anæsthesia shade very gradually one into another. The tactile sense bears no relation to root areas, but appears to be determined solely by proximity to the shoulder. The sensation of pain is appreciable throughout the limb.

As regards muscular power, it is only possible to define the gross movements of the limb, individual muscles can be felt to contract only in the case of a few of the more prominent masses. Abduction of the shoulder is slight, but can be performed, and the deltoid can be felt to harden; adduction is more powerful, and the arm is used for carrying light articles pressed against the chest; the contractions of the pectoralis major are well defined; advancement and retraction of the arm are effected within a short range, and with little power; no rotation of the shoulder can be elicited; the shoulder-joint itself is capable of tolerably free passive movement; but abduction is not quite complete. At the elbow-joint flexion is fairly powerful, and the forearm is habitually carried at a right angle, clothes, etc., being carried lying thereon; the contractions of the biceps are readily seen and felt; extension of the elbow is very feeble, nor can contractions of the triceps be detected; the elbow-joint presents no abnormality. The wrist can also be flexed with considerable power; the power of extension is insufficient to support the weight of the outstretched hand; pronation and supination are indicated only by the slightest movements. The fingers are semiflexed at all their joints, and stiff but not ankylosed; their flexion is capable of slight voluntary increase and decrease, so that the extensors and flexors of the fingers present some activity. Adduction and abduction of both the thumb and the little finger are manifested, but only very slightly so. In brief, almost all the movements of the limb are recognisable, but all except flexion of the elbow and wrist and abduction and adduction of the arm are very feeble. There is no confusion of movement; within its limited range the movement asked for is correctly performed in every case. Muscular sense and localisation are perfectly normal. The skin of the wasted fingers is somewhat glossy, but not more so than would be explicable by its disuse. No acute "trophic" lesions have presented themselves since the operation, and a few slight injuries which have been received in the anæsthetic area healed normally.

The above case presents several points of interest to which I wish now to call your attention.

In the first place, I bring it before you now because it is not improbable that we shall shortly see in England a good many similar cases resulting from the present war. The soldier lying prone under fire is obviously peculiarly liable to be struck in the region of the neck and shoulder, and bullet wounds of the brachial plexus inflicted from above the clavicle may reasonably be expected. Possibly some at least of these will be sent home as incurable, and may be greatly benefited by secondary suture.

Secondly, I believe no operation similar to the above has as yet been recorded. Primary suture of the brachial plexus or of parts of it has been resorted to upon several occasions, generally in association with open wounds or with injuries of the clavicle in which the broken ends of the bone have required resection, but I can find no recorded example of deliberate secondary suture of this important collection of nerves.

Thirdly, the question may fairly be asked, Was operation really called for in this case? The uselessness of the limb was obvious; but was there no chance of recovery without operation? The question thus becomes, At how late a period may complete motor and sensory paralysis resulting from injury of the brachial plexus first show signs of recovery? Upon this point I can obtain no precise information. Personally I have seen many injuries of the brachial plexus, but in none have the symptoms remained absolute for seven and a-half months, after which time recovery has commenced; nor can I find any such case in medical literature. In all in which function has been at all restored there have been

indications of its restoration at some earlier date. Our own case confirms this view, as it is beyond question that the severance of nerve fibres was complete at the time of the operation, but in spite of this there were indications of recovery six and a-half months later. The original injury could not have caused a more complete severance of nerve fibres, and the want of all recovery after seven and a-half months therefore suggests some absolute bar to regeneration. The development of changes in the elbow-joint within a few days of the resection of the cicatrix appears to indicate *primâ facie* that the operation sacrificed at least some nerve fibres which were previously intact, but such evidence must be received with caution; we are still too ignorant of the significance of "trophic lesions" and the importance of vasomotor changes in their production to assert or to deny that these changes were not evoked by the general disturbance of a severe wound in the neighbourhood of the subclavian vessels, or by traumatic injury of the elbow during anæsthesia, or during subsequent bandaging of the limb. The cicatrix which was removed presented no clear evidence of having been directly traversed by untorn or regenerated nerve fibres, in continuity between the peripheral and distal ends.

A further difficulty which was raised before operation was the impossibility of attaching the torn cords correctly to their proper peripheral ends, and it was suggested that the spinal nuclei might on regeneration be attached to muscles other than those for which they were intended, and that hopelessly confused movements might thus result. In my opinion this is a matter of little moment. When we perform secondary, or even primary, suture of a single motor nerve, it is unimaginable that the central axis cylinders grow into peripheral tubes, with which they were formerly connected, and that each eventually leads from its spinal cell to the muscle plate originally associated therewith. Hopeless anatomical confusion must occur in all cases, but there is no evidence of any ultimate physiological difficulty. In the case of the brachial plexus there is no new factor to disturb our results; it is a mere accident that the various fibres lie in five bundles instead of in one; the confusion can hardly be greater than in ordinary cases. In the case with which we are dealing to-day there is no evidence whatever of difficulty in moving the muscle which it is desired to move, and there is no ataxia. Sensory localisation is unquestionably imperfect, but such confusion is common after nerve injuries: in our case it differs only in degree, and not in kind, from that which is generally observed, and there is no indication of gross confusion, such as persistent mistaking of one part of the limb for another distant part.

Lastly, we have to inquire how far the operation was justified by results, and what hope is offered to us by it in similar cases. That the plexus is capable of repair after complete resection and secondary suture is clearly proved. The extent of recovery is disappointing, but its promise for other cases is less unsatisfactory than appears at first sight. Both sensation and motion have been partially restored in the whole upper limb, and even the small muscles of the hand have acquired some power. So much having been gained, there can hardly be a doubt that much more might have been gained by the aid of systematic massage, and by a little effort on the patient's part; the very fact that the flexors of the elbow and wrist and the adductors of the shoulder, which are the only muscles she has attempted to use, have improved much more than have other groups is an indication in this direction.

Even at this date slow improvement is in progress, and between two examinations which I made at an interval of seventeen days there was distinct improvement both in the sensation of the hand and in the mobility of the fingers, the interval having been devoted to education of the limb. On the experience thus gained there can be no doubt that old injuries of the brachial plexus located within an accessible region should be submitted to operation rather than condemned as hopeless—a position which has even led to amputation for the removal of a useless encumbrance. It is only in those cases in which the plexus is torn away from the cord that operation is impossible, and a careful examination on the lines indicated in an earlier part of this lecture will readily distinguish such cases.

ADDENDUM.

REPORT ON CICATRIX REMOVED FROM THE BRACHIAL PLEXUS.
By F. CRAVEN MOORE, M.D., Pathologist to the Manchester Royal Infirmary.

The specimen, which had been preserved in alcohol for some time, apparently consisted of a number of nerve trunks imbedded in dense fibrous tissue. The continuity of the nerve trunks could be traced towards one end of the specimen and then it was lost in a mass of fibrous tissue. Sections cut parallel to the long axis of the specimen and stained with borax carmine, and according to the method of Van Giessen, showed the following appearances.

A number of large nerve trunks, separated from each other by dense white fibrous tissue, could be traced from one end of the section to within 2 cm. of the other end, where they abruptly terminated in a mass of fibrous tissue; beyond this, short pieces of nerve trunks were present in the extreme opposite end of the specimen. The nerve fibres composing these trunks were degenerated, the great majority consisting merely of neurilemma sheaths containing large numbers of nuclei; here and there, however, a nerve fibre appeared to have escaped, and showed a well-defined axis cylinder. The tissue between the individual nerve trunks differed from the normal in its greater density, and obviously indicated the occurrence of inflammatory changes, culminating in the formation of dense cicatricial tissue. The mass of tissue which interrupted the continuity of the nerve trunks was of a similar nature. It consisted of white fibrils closely arranged, with but few cells and few vessels. A few nerve fibres could be seen in the midst of this cicatrix; they possessed well-defined axis cylinders and nuclei; the neurilemma sheaths were less well defined. Their course was very irregular, curving round in various directions, and not apparently passing directly from the nerve trunks at one end to those at the other. The exact meaning of these fibres it is somewhat difficult to estimate. They might represent either regenerated nerve fibres or fibres which had escaped destruction. The apparently adult constitution of the fibres is somewhat against the former hypothesis, but is discounted by the fact that more than seven months had been allowed for regeneration between the time of injury and the date of removal of the cicatrix. In consideration of their curiously irregular course, and of the difficulty in imagining how, if persisting nerve fibres, they had escaped destruction during the inflammatory changes which led to the extensive cicatrisation present, it is probable that they must be regarded as evidences of regeneration.

CLINICAL NOTE ON A CASE OF FRACTURE OF THE CARPAL SCAPHOID.

BY SIR WILLIAM STOKES, F.R.C.S.I.,
Surgeon-in-Ordinary to H.M. the Queen in Ireland.

(SEE SPECIAL PLATE.)

THE signal aid which we now so frequently derive from *x*-ray photography, in the diagnosis of osseous lesions especially, is in no instance better illustrated than in its application to some of the forms of carpal injury. In their recognition it must, I think, be regarded as one of the most obvious examples of its practical value. Previously to the discovery of this latest development of photographic art no surgeon, however skilful a diagnostician he might be, could with any accuracy form a true estimate of many of these injuries. The case is different now, however, and it is no exaggeration to say that they can, as a rule, be recognised and differentiated as easily as any of the ordinary fractures or dislocations the surgeon has to deal with.

I feel confident this favourable estimate of the practical value of Roentgen-ray photography will be accepted by most persons interested in surgical diagnosis, especially in reference to the obscurer injuries which occur at or in the immediate vicinity of joints.

This opinion, however, cannot be said to be of universal acceptance, as witness the published views, among others, of Professor Stimson in his well-known and excellent work on fractures. He observes: "While the *x*-rays have been of interest and value in showing details of certain fractures, especially at the wrist, elbow, and ankle—yet it cannot fairly be said that they have yielded much information and practical value which could not be obtained by palpation. Probably their usefulness will be increased by improvements in methods and apparatus, but at present the information which they give needs to be sifted with great care from among many misleading appearances."

Such views as these will not, I venture to think, be endorsed by most surgeons, even by those of comparatively limited experience.

As a rule, the assistance derived from Roentgen photography will ever be gratefully remembered by surgeons, not only in the recognition of carpal and radio-carpal injuries, but also in many of the obscurer lesions—fractures, dislocations, or a combination of both—which occur at the elbow or ankle-joints. For example, it is hard to understand how by

"palpation" alone the various forms of fracture of the lower end of the radius, as classified by R. W. Smith, Voillemier, Chiene, Bennett, and other notable authorities, could be accurately differentiated; or how in a recently severely-injured elbow-joint, one in consequence probably enormously swollen, a surgeon could, under such circumstances, recognise the exact nature of the lesion. Many other instances I might adduce in which *x*-ray photography is in such cases of distinctive value.

The following instance of the comparatively rare lesion—fracture of the carpal scaphoid—is one about which I was recently consulted, and of which the following are the principal details:

R. M. M., aged 30, by profession a Clerk in Orders, whilst engaged as temporary chaplain at Badenweiler in Germany in the autumn of 1898, met with the accident in the following manner: He was going up the stairs of his hotel, and seeing the lift he determined to ascend by it to the floor where his room was situated. Not waiting for or summoning the lift attendant, he incautiously opened the door and stepped in. The lift, however, being at the time at a higher level, he fell down to the floor of the basement storey, a distance of about 21 feet. The mistake he made he attributed to the fact that the electric light was not "on." "I can hardly remember," he observed, "how I felt falling, but think I remember putting out my left arm as a sort of protection." He felt as if someone had twisted his wrist "right round." The case was treated by a local German practitioner who recommended the application of dry cold. The injured wrist was subsequently bandaged and kept at rest in a sling. For several days great pain was experienced, so much so that anodynes had to be employed both locally and internally. Four days subsequently, the arm being carefully fixed on a splint, the patient went to Heidelberg, and from there returned to England by easy stages, but suffering great pain in the wrist all the time. On reaching home the wrist, hand, and forearm close to the wrist were found greatly swollen, most probably due to acute synovitis of the wrist and carpal joints. Poultices were diligently applied, which afforded much relief, and the arm kept on a splint. This treatment was continued for about four weeks. Massage and passive exercises were then recommended, which were attended with "great pain." At this time an *x*-ray photograph was made of the wrist, from which the illustration (Special Plate) is taken, and in which the fracture of the carpal scaphoid is clearly seen. The skiagraph was forwarded to me, and my advice asked as to the further treatment of the case. While concurring in the main with the treatment previously adopted, I urged the importance of great caution being employed in the use of passive exercises of the joint, especially as they were followed at times by great pain in the wrist. At the present time, under the influence of rest, occasional massage, and the cautious use of passive exercises, the motions of the joint, though still limited, are to a great extent regained, and a fairly good recovery may, I think, be confidently anticipated.

As a proof of how these injuries, which, I believe, occur much more frequently than has up to this been believed—a view in which Professor Stimson concurs—have been left unnoticed is the fact that in few of the systematic treatises on fractures, and in none of the older ones, is any mention made of them. This is the case even in the beautifully illustrated work on fractures by Helferich (1897), of which an admirable translation by Mr. J. Hutchinson, jun., has recently been published by the New Sydenham Society. Malgaigne, in his classical treatise on fractures, speaks of these cases as being "extremely rare." He mentions that Cloquet[1] met with them in 2 cases which occurred in persons who had sustained falls on the wrist, and that M. Jaijaray[2] has also described a case produced in a similar manner.

In the last edition of Hamilton's work on *Fractures* the author states that in all the cases that have come under his observation the fractures have been compound and complicated, and resulted in the complete loss of the hand or serious mutilation or maiming. In no instance was treatment adopted that had special reference to the fracture with the object of insuring apposition and union of the fragments. The author apparently is of opinion that simple carpal fractures demand very little surgical interference, and that they will generally unite without any considerable maiming; that probably some degree of ankylosis may supervene between the adjacent surfaces, but that in the normal condition of things there is so little motion that the complete loss of it would not be much felt. The author, however, apparently forgets that the injury that produced the carpal fracture could hardly occur without more or less serious damage being done to the radio-carpal and other carpal articulations, and that in order to avoid the unfavourable consequences of such injury the treatment in the early stages, at all events, of immobilisation and rest is distinctly indicated.

In Dublin the only cases of this fracture that have been noted are two, both observed by Professor Bennett of Trinity College. One of these occurred in a case in which there was evidence of previous chronic rheumatic arthritis. It was a *post-mortem* observation. The other case was observed during life, and was recognised by the aid of an *x*-ray skiagraph. The particulars of both these cases were discussed by Professor Bennett at a meeting of the Dublin Biological Club last session, and will, I hope, eventually be published.

In making the diagnosis in these cases we cannot rely on either symptoms or external physical signs—pain, swelling, crepitation, loss of power, may all be present in the absence of any carpal fracture, and in the absence of Roentgen-ray photography no accurate diagnosis can possibly be made as to the nature or exact situation of the lesion producing these signs and symptoms.

The etiology, too, of these injuries is involved in much obscurity, especially in the cases where the injury is produced by force indirectly applied. It is especially hard to understand how excessive dorsiflexion, as held by Hamilton, could produce a scaphoid fracture. M. Bouchet,[3] however, in making forcible flexion and extension of the hand in the dead body, found among other lesions one or more fractures of the bones of the wrist. Probably a more usual etiological factor is that in falling, when the hand is thrown forward for purposes of protection, at the moment of impact with the ground, the axis of the forearm is at or nearly at a right angle with the wound, and the direction of the force, instead of passing, as it usually does under these circumstances, obliquely through the carpus and lower end of the radius, passes through the "ball of the thumb," scaphoid, and directly upwards in a line corresponding to the axis of the forearm, and not in front of it, as it is believed to do in the production of Colles's fracture of the radius. The results of such a fall as is mentioned above would be more likely to be either a fracture or luxation of the carpus, or a luxation at the elbow, than fracture of the radius. The former occur when at the time of impact the angle between the axis of the forearm and the ground is greater than 60°, a fact pointed out many years ago by Professor Chiene of Edinburgh.

The peculiar, somewhat oval, concavo-convex shape of the carpal scaphoid would, I think, render it more liable to be affected by such an injury than any of the other carpal bones, and hence the greater liability of its being fractured than any of the others in its immediate vicinity.

REFERENCES.
[1] J. Cloquet, art. Main, *Dict. de Méd.* [2] Jaijaray, *Thèse Inaug.*, Paris, 1846.
[3] Sur les Luxations du Poignet, *Thèse de Paris*, 1834.

THE SO-CALLED "STAVE OF THUMB," OR BENNETT'S FRACTURE.

BY GEORGE THOS. BEATSON, B.A.CANTAB., M.D.EDIN.,
Surgeon, Glasgow Cancer Hospital; Senior Assistant Surgeon, Glasgow Western Infirmary.

(SEE SPECIAL PLATE.)

IT was as far back as August 1st, 1885, that Professor E. H. Bennett, of Dublin, drew special attention in the BRITISH MEDICAL JOURNAL[1] to the fact that museum specimens show that fracture of the metacarpal bone of the thumb is more common than that of any other of these bones; and, further, that when the fracture occurs in the metacarpal bone of the right thumb, it is not "just above the middle," as is usually asserted, but that it is situated at the base of the bone. This teaching of Professor Bennett has not, I am afraid, received that general recognition that it deserves, and reference to



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.

TO ILLUSTRATE MR. R. E. SCHOLEFIELD'S PAPER.



Fracture of the carpal scaphoid. *(To illustrate Sir William Stokes's Paper).*



Fig. 1.—"Stave of thumb"; before reduction.



Fig. 2.—"Stave of thumb," after treatment.

(To illustrate Dr. G. T. Beatson's Paper).

late editions of what are regarded as standard works on the subject of fractures shows that this injury is not even mentioned.

In his recent study of fractures of the upper extremity I am glad to see Mr. Platt gives it proper notice, for, as Professor Bennett has pointed out, not only does it somewhat simulate a dislocation in the living subject, but the pain and swelling that accompany it so mask crepitus that the injury is generally regarded as a "sprain of the thumb." It is true that, even if untreated, the fracture unites with a trivial deformity after all, but at the same time a hand so injured "remains under the best of treatment long disabled, and without treatment for a greatly longer time" (Bennett). This statement receives confirmation from the following case, which is also of interest in that the skiagraph I took of the injury corroborates in every detail Professor Bennett's original description of it, and, further, in that the accident happened to a medical man, who had simply regarded his right thumb as being "badly bruised."

When I first saw the patient 16 days had elapsed since the accident, which had been caused by a fall during rough weather down the stairs leading to the cabin of the steamer on which he was acting as surgeon. When he fell the terminal phalanx of the right thumb happened to be flexed on the first phalanx, and he struck the point of this latter against a projecting bit of woodwork. As he said, he thought he had severely bruised his thumb, and the only treatment used was hot bathing and a soothing liniment, but recovery was so slow that he consulted me on his return to Glasgow.

Even after the lapse of 16 days I thought I could still detect some crepitus, and an *x*-ray photograph confirmed the existence of a fracture of the base of the first metacarpal bone.

Reference to Fig. 1 shows that the fracture there depicted is exactly that described by Professor Bennett. It is oblique, detaching the palmar half or more of the articular surface of the metarcarpal bone facing the trapezium; while, in addition, the entire metarcarpal bone, except the little piece so separated, has slipped backwards, no doubt through the action of the extensor ossis metacarpi, and thus simulates a subluxation of the bone in this direction. Both these points are clearly brought out in the skiagraph.

It may be as well to allude here to the kind of disablement which this fracture causes, especially as it is very well illustrated by this case. Summed up briefly, the leading feature of it is the inability to oppose the thumb to the index finger. It was interesting to hear from the patient in how many ways this was felt. Thus, while dressing he found he could not button his collar stud, nor could he make a bow on his tie. He could grasp his boot lace and push it through the eyelet holes, but he could not pull it through. He could hold a pair of scissors but he could not cut his nails, nor could he pick up a pin off the table. When washing his face he could only do so with the palm of his hand, as, owing to the pain it caused, he had to keep off the ball of the thumb. Again, being a smoker he found he could hold a match but he could not strike it. At the piano he could with difficulty stretch an octave, and he could not come down on the notes with any force. Writing, too, was out of the question, and professionally he was very much handicapped, for though he could hold a bistoury he could not make an incision with it. These illustrations indicate how much such an injury cripples the hand, and how much it is felt in many of the little details of everyday life. The cause of this injury is usually some force applied directly to the point of the thumb, as when the carpenter in using his plane strikes against any obstacle, or when a person falls and the end of the digit comes in contact with the ground. The treatment of these cases is to extend and fully abduct the thumb, retaining it in this position by a suitable apparatus. This was what was done in the present case. I extended and fully abducted the thumb, and when it was in that position I moulded a poroplastic splint to it. After two and a half weeks of treatment I took another skiagraph (Fig. 2), and it shows how satisfactory has been the apposition of the fragments as well as the reposition of the displaced metacarpal bone on to the trapezium. By this time, too, there was a decided improvement in the usefulness of the hand. Later on all disablement quite passed away, and the patient resumed his duties as surgeon on a large steamer.

This case illustrates well the practical utility in surgical work of the Roentgen rays, and it teaches the lesson that all so-called "sprains of the right thumb" should be subjected to them, as otherwise a "Bennett's fracture" is liable to be overlooked.

REFERENCE.
[1] BRITISH MEDICAL JOURNAL, August 1st, 1885, p. 200.

A CASE OF FRACTURE DISLOCATION OF THE SPINE,

WITH COMPLETE DESTRUCTION OF THE CORD IN THE UPPER LUMBAR REGION.*

BY ASHLEY W. MACKINTOSH, M.A., M.D.,
Assistant Physician, Aberdeen Royal Infirmary.

ALTHOUGH so much attention has been given to the subject within recent years—notably by Ross, Thorburn, Starr, Head, Sherrington, Bruns, and Kocher—there is still no certainty as to the exact localisation of the motor and sensory functions of the various cord segments and spinal roots. It seems therefore desirable that all cases bearing on the subject should be put on record, especially those in which it was possible to obtain not only an accurate clinical record, but also an exact knowledge of the site and extent of the lesion as shown by a necropsy. Last year[1] I gave in the BRITISH MEDICAL JOURNAL the notes of a case of spinal caries, and drew therefrom some deductions as to the distribution of certain sensory spinal roots. On the present occasion, as on the last, I have to express my great indebtedness to Professor Ogston for affording me every opportunity of observing and recording a most interesting case of spinal lesion. A comparison of the two cases is instructive, as the spinal roots affected are very much the same in both, whereas the deductions to be drawn as to the sensory localisation of certain root areas seem to be different; whether it is impossible to reconcile the two will be considered later.

The following is an abstract of the notes of the case of fracture dislocation of the spine which is the subject of the present paper:

Synopsis.

A strong, healthy man, aged 32, as the result of a fall, showed depression of the eleventh dorsal spine and prominence of twelfth dorsal and first lumbar spines. From the onset complete paraplegia: lower limbs quite flaccid and reflexes abolished (knee-jerks, plantar, and cremasteric); loss of sensation of all forms on legs and lower trunk, on right side up to level of umbilicus, and on left side two and a-half inches lower; upper limit of total analgesia and thermo-anæsthesia higher and sharper than that of total anæsthesia; a zone of incomplete anæsthesia; marked constipation and incontinence of fæces; reflex or intermittent incontinence of urine, with imperfect emptying of bladder. During course of illness, rapid wasting and loss of faradic excitability in all leg muscles; vasomotor and trophic changes in anæsthetic area; cystitis and, later, diminution in capacity of bladder and simple dribbling of urine; uræmic symptoms; death in three and a-half months.

Necropsy: Fracture dislocation of the eleventh and twelfth dorsal vertebræ; complete division of cord below origin of twelfth dorsal roots; destruction of upper three (or four) lumbar segments; sacral cord much compressed and disintegrated; eleventh intervertebral foramen on right side obliterated by callus; complete degeneration of eleventh dorsal posterior root right, not left; also of both twelfth dorsal posterior roots; anterior sacral roots considerably degenerated.

J. S., aged 32, a strong and healthy man, fell over a railway cutting, about 30 feet deep, at 8 P.M. on August 29th, 1897. He was admitted into the Aberdeen Royal Infirmary, under Professor Ogston, at 4 A.M. next day.

He was found on admission to be in a state of extreme collapse and partially insensible, probably due partly to concussion and partly to alcohol; the temperature was subnormal, and the radial pulse almost imperceptible. There was a compound fracture of the left humerus, and a deformity of the spine in the lower dorsal region. The legs were completely paralysed and flaccid, and the lower half of the body quite anæsthetic; no knee-jerks could be elicited.

On August 31st he had recovered complete consciousness, and a more minute examination could be made, which revealed the following conditions:

There was swelling and ecchymosis in the neighbourhood of the eleventh and twelfth dorsal and first lumbar spines, and an abraded contusion to the left of the eleventh dorsal spine and another over the sacrum. The eleventh dorsal spine was depressed, the twelfth dorsal and first lumbar spines prominent. There was absolute paralysis of the legs, which were quite flaccid; the abdominal muscles were very flabby. Patient did not complain of any pain. Objectively, sensation of all forms was found to be abolished on the legs and lower part of the trunk; the upper limit of loss of the various forms of sensation followed very much the same lines as those given later in detail, and figured (Fig. 1), except that, on the right side intact sensation of all forms were noted to extend for about an inch beneath the umbilicus.

* Read before the Aberdeen, Banff, and Kincardine Branch of the British Medical Association.

There was no girdle sensation or zone of hyperæsthesia, and no appreciation of the position of the lower limbs or of their passive movement. On passing a catheter there was no sensation in the urethra or in the bladder, and sensation in the rectum was also absent. There were no knee-jerks and no ankle clonus; the plantar and cremasteric reflexes were also absent, the epigastric reflexes well marked. Patient had no control over the bladder and rectum; if the bladder was allowed to distend it reached a point when a gush of urine came, partially emptying the bladder, which then filled up again without further dribbling. About 5 ounces of urine were always left in the bladder after each gush. The patient was not conscious of the need of micturition when the bladder was distended. There was no priapism. There was a tendency to vasomotor paralysis on the legs and lower part of the abdomen.

The patient was catheterised regularly, and his condition remained unchanged—the temperature normal and urine acid—till September 10th, when it was noted that the legs had wasted considerably, and the temperature began to fluctuate, reaching usually 99.5° to 101° F. in the evening. There was also decubitus on the heels, and a branny desquamation of the skin over the anæsthetic area; the abrasion on the sacrum showed no sign of healing. Signs of cystitis now appeared; the urine became alkaline and turbid, and deposited pus and phosphates. The bladder was washed out with antiseptic lotions, but although the urine occasionally showed signs of improvement, the tendency to cystitis remained to the end.

On September 14th patient complained of a pain over the right false ribs, and, two weeks later, of a girdle-like pain on the right side, a little below the level of the umbilicus. About the same time he sometimes felt a "fluttering" sensation running down his legs, which were still quite anæsthetic.

On October 19th it was noted that the legs had wasted very greatly. The patient had now some vague sensation in or about the bladder; he knew when it was distended, and felt pain over the region of the bladder when the urine was being drawn off; he seemed even to have some slight perception of the presence of a catheter when it was moved about in the bladder.

Towards the end of October, when I saw the patient for the first time, his condition was as follows:

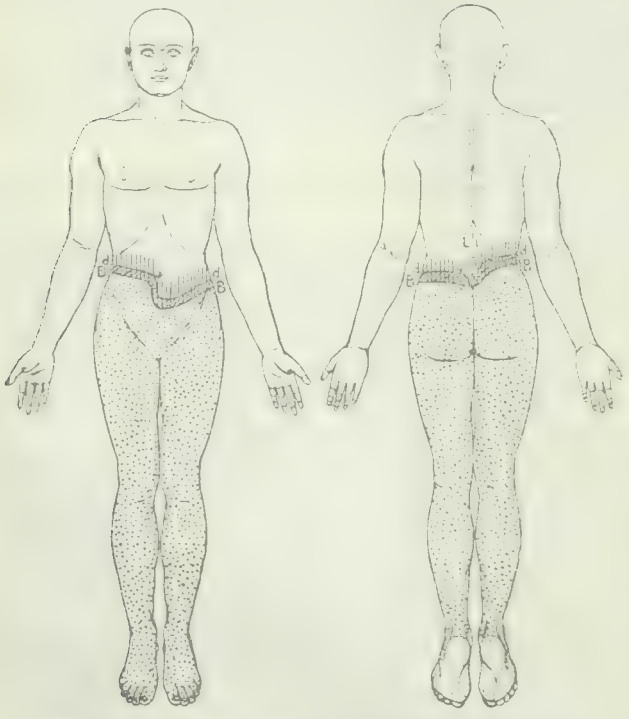


Fig. 1.—The dotted portion denotes total anæsthesia, analgesia, and thermo-anæsthesia. /// denotes total analgesia and thermo-anæsthesia. ||| denotes imperfect tactile sensibility. L 1, 3, 5 denote the level of the corresponding lumbar spines. The zone dB is ¾ inch wide. The line BB denotes the upper limit of total anæsthesia. The line dd denotes the upper limit of total analgesia and thermo-anæsthesia; it starts in the middle line in front at the level of the umbilicus on the right side, and 2½ inches lower on the left side.

The eleventh dorsal spine was depressed, the twelfth dorsal and first lumbar spines prominent; there was no special point of tenderness on deep pressure, but the whole prominence was more or less tender. There was marked wasting of all the muscles of the legs, which were absolutely flaccid, and gave no reaction to faradism. The knee-jerks, plantar and cremasteric reflexes were absent; the epigastric reflexes were present on both sides, more actively on the left. On the right side no abdominal reflex could be elicited below the level of the umbilicus, while on the left side a distinct reflex was got on stroking the abdomen as low as the upper limit of analgesia (See below). The condition of the sphincters remained as noted on August 31st. Constipation had been marked throughout. There was marked vasomotor affection of the legs and lower part of the abdomen; the bright red line of hyperæmia obtained on scoring with the nail lasted several minutes. All forms of sensation were lost on the legs and lower part of the abdomen, as shown in Fig. 1:

Sensations of Pain, Heat, and Cold.—There was an absolutely sharp line—dd—up to which there was complete analgesia and thermo-anæsthesia, while above this line the sensations of pain and temperature seemed quite intact. On the right side this line—dd—started in the middle line from the umbilicus, sloped slightly upwards so as to reach within half an inch of the tenth rib, and ran round to the back at the level of the third lumbar spine, dipping down somewhat near the middle line. On the left side the line occupied a lower level: it started in the middle line in front at a point 2½ inches beneath the umbilicus, ran outwards and very slightly upwards just above the crest of the ilium, and dipped down posteriorly at the level of the fifth lumbar spine.

Sensation of Touch.—The upper limit of total anæsthesia was demarcated by a tolerably sharp line, BB, not quite so sharp as the upper limit of analgesia and thermo-anæsthesia. This line BB ran parallel to the line dd with remarkable closeness, but three-quarters of an inch beneath it. Above the line BB there was a zone about two inches in breadth, over which there was defective sensation of touch, and there was no absolutely sharp line separating this zone from the part above where sensation of touch was perfect. The patient volunteered the information that on the zone dB he felt the touch of a pin or test tube, but had no painful or thermal sensation.

The sense of position or of passive movement was entirely absent in the legs.

There was no zone of hyperæsthesia at the upper limit of the anæsthetic area, and patient did not complain of pain or girdle sensation.

About the beginning of November the condition of the bladder began to alter. Its capacity diminished very much, so that from November 11th onwards only 3 ounces of lotion could be introduced; if an attempt was made to inject a larger quantity pain was caused over the region of the bladder. He was now quite incontinent, the urine dribbling away almost continuously without distending the bladder; the urine became very thick and turbid, deposited a large amount of pus and phosphates, and had a foul ammoniacal odour. The temperature began to fluctuate very much, sometimes reaching 102° F. in the evening, sometimes being normal. On December 1st the total quantity of urine began to diminish; the dribbling continued; the catheter drew off less than 2 ounces of very foul urine, and only the same amount of lotion could be introduced. On December 3rd the patient became drowsy and apathetic, and complained of headache. The uræmic symptoms deepened. The quantity of urine in the bladder gradually increased for a few days. On December 8th, 6 ounces were drawn off. Death occurred on the evening of December 12th, three and a-half months after the accident.

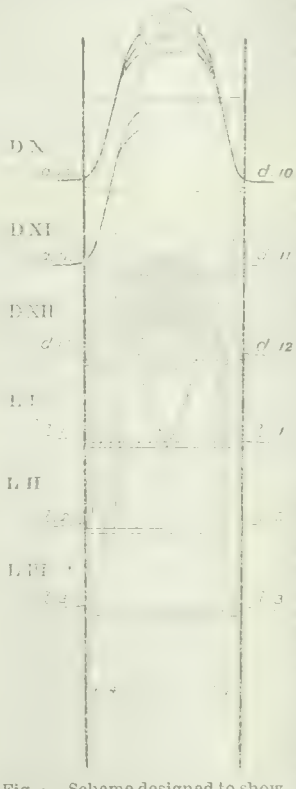


Fig. 4.—Scheme designed to show (1) the relations of origins of the posterior spinal roots (*d.* 10—*l.* 4) to vertebræ (D X—L III); and (2) the relative affection of the cord and roots in the case of J. S., described in the text. The finely-drawn roots are degenerated, the thick are intact. The part of the cord entirely destroyed is shaded dark, while the part compressed and greatly disintegrated is marked with dots. [After Schultze (Oppenheim,[2] p. 288) and Gowers[3] (p. 200).]

NECROPSY.

Only a very partial and hurried necropsy was permitted, and, by the kind permission of Professor Hamilton, it was performed by Dr. J. Stewart Milne and myself on December 13th. It confirmed the conclusion arrived at during life as to the spinous processes, which were depressed and prominent, the eleventh dorsal being depressed, the twelfth dorsal and first lumbar prominent. When the spinal canal was opened it was seen that the cord was completely divided, and the ends—separated by about an inch—were connected only by dura mater. The upper segment of the cord ended below at the lower border of the body of the eleventh dorsal vertebra, while the lower segment began opposite the middle of the body of the twelfth dorsal vertebra (Fig. 2). The remains of a large extradural bloodclot lay over the back of the cord opposite the twelfth dorsal and first lumbar bodies. The eleventh dorsal vertebra was dislocated forwards and to the left (Figs. 2 and 3) carrying with it an oblique fragment of the left half of the upper segment of the body of the twelfth dorsal vertebra, the body of the twelfth dorsal being fractured in an obliquely transverse manner and the cancellous tissue of the body much comminuted, so that spicules projected into the canal. Owing to the dislocation of the eleventh dorsal vertebra, the upper segment of the cord lay on a plane considerably anterior (about three-quarters of an inch) and to

the left of the lower segment of the cord, the dura mater which joined the two segments thus running posteriorly and to the right over the spicular upper part of the body of the twelfth dorsal vertebra. The dura mater round the lower end of the upper segment of the cord was firmly adherent to the bone as far up as the origin of the ninth dorsal roots. There was also a perpendicular fracture (Fig. 3) involving the posterior parts of the bodies of the twelfth dorsal and first lumbar vertebræ, and running about half an inch antero-posteriorly through the bodies. The effect of this perpendicular fracture was greatly to widen out laterally and narrow antero-posteriorly the spinal canal at this part, and the cord here was correspondingly flattened and wide. On careful dissection by Dr. Milne, the eleventh dorsal nerve was seen to issue apparently quite intact on the left side, but on the right side the corresponding intervertebral foramen was completely obliterated by callus (Fig. 3). Firm bony union of the parts had taken place, a good deal of callus being present. The right twelfth rib was found to be broken. The kidneys were in a state of consecutive nephritis, parts suppurating, parts quite gangrenous.

The spinal cord was preserved in Müller's fluid, and, after being sufficiently hardened, it was examined more carefully both macroscopically and microscopically. Fig. 4 is a scheme designed to show diagrammatically the condition found as regards the cord and posterior roots:

Notes of Macroscopic Examination.—There is complete absence of cord substance for a distance of apparently about an inch; it is probable, however, that considerably less than an inch of the cord is destroyed, as the parts here were seen at the necropsy to be so stretched. The two segments of the cord are connected only by dura mater, continuous with that covering the posterior part of the cord above and below.

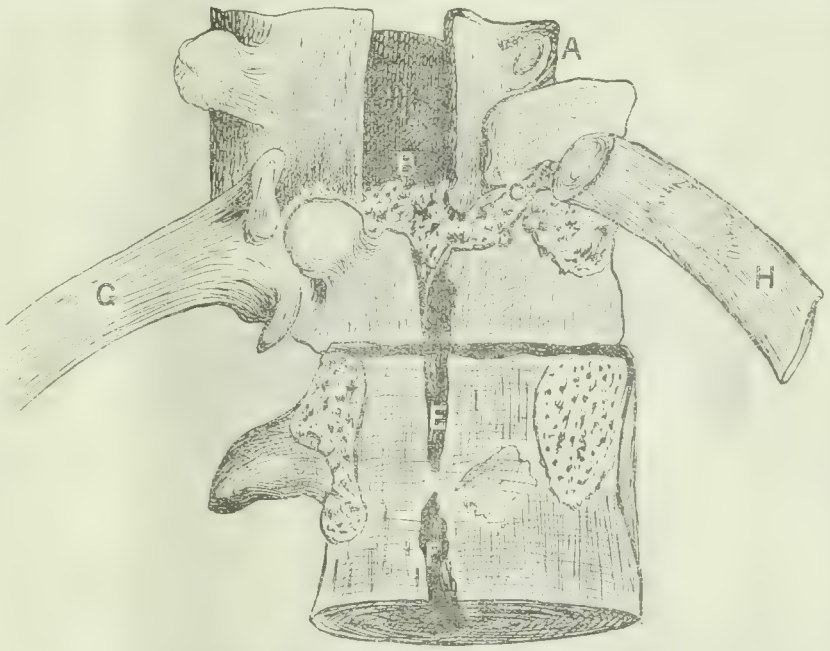


Fig. 2.—View from behind. Laminæ removed to show spinal canal. A, Eleventh dorsal vertebra dislocated forwards and to left; B, lower end of upper cord; C, cancellous tissue of twelfth dorsal body comminuted; D, upper end of lower cord; E and F, longitudinal fracture of bodies of twelfth dorsal and first lumbar; G, left twelfth rib. H, right twelfth rib.

I am indebted to Dr. J. S. Milne for the sketches which Figs. 2 and 3 represent; they were taken from a careful bony preparation made by him of the spine from the eleventh dorsal to the first lumbar vertebra.

Examination of the segment of the cord above the lesion shows that the dura mater is thickened and its outer surface rough (that is, where it was adherent to the bony canal) as far up as the origin of the ninth dorsal roots, a distance of 8 cm.; the dura is, however, not adherent to the cord, except in its lower half-inch, where it cannot be separated from the cord without tearing. The lowest roots which can be seen leaving the cord are the twelfth dorsal; they issue from the cord 1½ cm. above its lower end, and descend inside the dura to become implicated in the cicatricial mass at the lower end of the upper segment of the cord; they cannot be traced further. The eleventh dorsal roots leave the cord 4 cm. above the site of lesion, and descend inside the dura to pierce it just above the lower end of the cord; on the right side the eleventh dorsal posterior root seems distinctly smaller than on the left side, and is lost in the adhesions between the dura and the cord, while on the left side it is seen to pierce the dura and issue quite normally. The tenth dorsal roots pierce the dura about 2½ cm. above the site of the lesion, and appear quite intact. Section of the hardened cord at various levels shows to the naked eye well-marked ascending degeneration.

The segment of the cord below the lesion is evidently very much compressed and flattened antero-posteriorly. The coccygeal and all five sacral roots appear of fairly normal size; the same is true of the fifth lumbar roots, which leave the cord just below its upper end. The fourth lumbar roots are very much smaller than the fifth, and the upper three lumbar roots are mere threads: all these, when traced upwards, get lost in the cicatrix at the upper end of the cord. Thus, the part of the cord which is destroyed is that which gives origin to the upper three (or four) lumbar roots.

Notes of the Microscopic Examination.—Sections of the cord at different levels were stained with Wiegert-Pal's hæmatoxylon, Marchi's osmic acid method, methylene blue, and eosin, etc. In the upper segment of the cord there is splendidly-marked ascending degeneration, but, apart from this, nothing abnormal can be detected except a few small, scattered patches, apparently myelitic in origin, lying in the white matter, mainly on the lateral aspects of the anterior horns; these are seen in sections as high as the level of origin of the twelfth dorsal roots, but they quite cease above that level. By Marchi's method the twelfth dorsal posterior roots are seen to be quite degenerated on both sides; the same is true of the right eleventh, while there is no trace of degeneration in the left eleventh, and the tenth and higher roots are quite intact on both sides. The lower segment of the cord, as shown by Marchi's method, is so degenerated at every level that it is impossible to trace any special tracts of degeneration. The cord is also very much deformed, being compressed antero-posteriorly; this is specially seen at the level of the third and fourth sacral roots, where the central part of the cord is much disintegrated. There is well-marked degeneration in the anterior roots of all the sacral nerves, while the posterior roots show only slight traces of degeneration in a few fasciculi.

Remarks.

In attempting to arrive during life at a diagnosis of the nature, site, and extent of the spinal injury in this case, the first conclusion drawn was that there was a complete transverse lesion of the spinal cord. The complete and permanent anæsthesia of all parts below the site of the bony lesion, and the absence of paræsthesia or hyperæsthesia on the anæsthetic area seemed to point distinctly to this conclusion, while the flaccid condition of the leg muscles and abolition of the reflexes, although somewhat equivocal in their significance (*v. infra*), were regarded as being in favour of the same view. In the light of the necropsy, which proved beyond doubt that this view was correct, it is not easy to explain satisfactorily the later observations, that patient sometimes felt a "fluttering" sensation running down his legs, and had some vague sensations about the bladder, that is, he knew when it was distended, and felt some pain over it when the urine was being drawn off, and later, when fluid was introduced, and he seemed even to have some slight perception of the presence of a catheter when it was moved about. For the "fluttering" sensation in the legs I can suggest no other explanation than that it was due to irritation of the corresponding sensory fibres in the upper segment of the cord, probably from contraction of the cicatrix at its lower end. The vague bladder sensations cannot have been related to the sensory nerves which supply the mucous membrane of the bladder, as they arise from the cord far below the site of complete transverse division of the cord (probably second, third, and fourth sacral segments). Head[1] finds that in over-distension of the bladder (for example, from stricture), and consequent straining against the obstruction, pain is diffused as high as the distribution of the eleventh dorsal segment; the bladder sensations in the case of J.S. may have been, at least partly, of this nature, and perhaps also partly due to the condition of cystitis and its effects on adjacent structures, for example, ureters and kidneys, which could cause pain to be referred along roots lying above the lesion.

In trying to form some idea of the site and extent of the lesion, we considered (1) the manifest spinal deformity, (2) the height to which the conducting functions of the cord—namely, motion and sensation—were abolished, and (3) the extent of the cord along which the central functions, especially muscular nutrition and reflexes, were affected. The upper limit of any cord lesion is determined mainly by the second point mentioned, namely, the height of the muscular paralysis and anæsthesia, taken in conjunction with the position of girdle pains or zone of hyperæsthesia, which point to irritation of the lowest sensory roots leaving the cord above the

site of lesion; these were strikingly absent throughout the greater part of the course of our case. It is manifestly difficult to tell to what level muscular paralysis extends on the trunk, and hence in cases of lesion of the dorsal cord we depend mainly on the height of the anæsthesia.

The relation of the upper limit of anæsthesia to the level of the bony lesion varies very considerably. It is a well-known fact, and one of importance to surgeons, that in the great majority of cases the upper limit of anæsthesia is distinctly below the level of the bony lesion. There are, at least, two reasons for this: (1) In a compression or crush the cord often suffers, while the roots, being firmer and more resistant, escape; the upper limit of anæsthesia will then be below the level of the crush by the length, at least, of the intravertebral course of the roots which arise from the cord above the crush but leave the canal below it.*

2. In many cases of crush of the cord, especially where very severe, the roots suffer as well as the cord; the roots may suffer close to and along with the cord, or at their exit through the intervertebral foramina—the latter was the case with the right eleventh dorsal root in the case of J. S. The upper limit of anæsthesia will then be relatively higher, corresponding to the highest root implicated. Even in this second group of cases, however, the level of anæsthesia is usually well below the level of the crush: thus in the dorsal region it will be found to be three or four spines lower than the point of exit of the highest intercostal nerve involved; in the case of J. S., for instance, the eleventh dorsal root was implicated on the right side, yet the anæsthesia did not extend higher than the third lumbar spine. This difference of level is sufficiently explained by the researches of Sherrington[6], who found experimentally, by section of the posterior roots, that the areas of cutaneous supply of the posterior roots overlap so enormously that each cutaneous area is supplied by two or even three sensory roots. Thus in a crush affecting the roots there will not be complete anæsthesia up to the upper limit of the region supplied by the highest root involved, as sensation in that area will be supplied, at least in part, by the root (or roots) higher up.

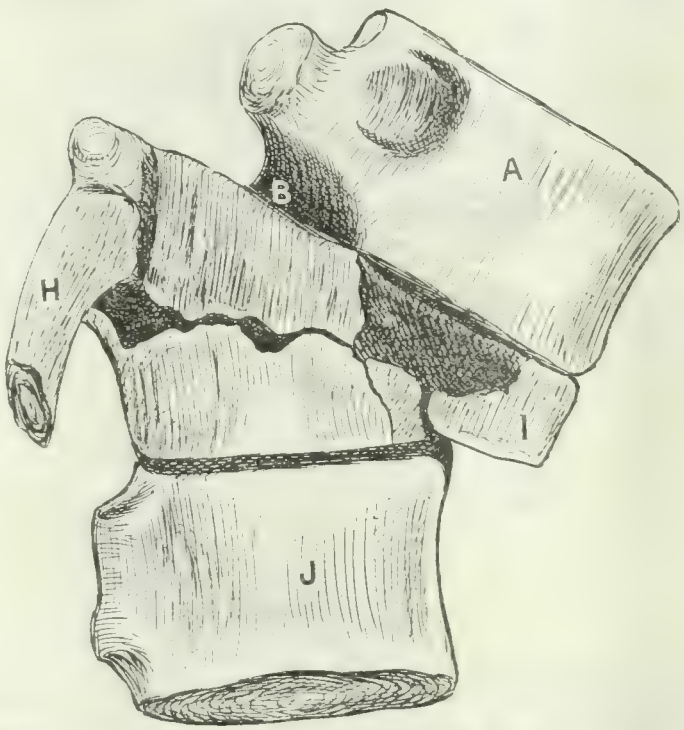


Fig. 3.—Lateral view, from the right side. A, body of eleventh dorsal; B, callus obliterating eleventh intervertebral foramen on right side; H, right twelfth rib; I, anterior upper part of twelfth dorsal body carried forward with eleventh dorsal; J, body of first lumbar.

In a few cases a high level of anæsthesia has been found to be due to myelitis, or more often hæmorrhage—the result of the trauma—extending along the cord above the level of the bony lesion.

Now, in the case of J. S., the spinal deformity showed that the eleventh dorsal vertebra was dislocated forwards, and, as total fracture dislocation is commonest at the lower dorsal vertebræ (Kocher), one was not surprised to find at the necropsy that there was also fracture of the twelfth dorsal vertebra. The cord is usually bruised and compressed by the lower fragment (Gowers[3], p. 283), hence our conclusion was that the upper limit of lesion of the cord lay not higher than opposite the interval between the bodies of the eleventh and twelfth dorsal vertebræ. A glance at the diagram framed by Gowers[3] (p. 200) to indicate the relations of the origin of the several nerve roots to the bodies of the vertebræ (these are followed in Fig. 4, *q. v.*) will show that this level corresponds to the origin of the first lumbar roots. So far, then, as the crush of the cord itself was concerned, one would not have expected the anæsthesia to extend higher than the region of distribution of the first lumbar roots; this was so in a case recorded by Thorburn[7] (Case XXVIII, p. 74) in which the spinal deformity was very similar to that of J. S. Oppenheim[2] (p. 211), indeed, says that, "as a rule," in fracture of the twelfth dorsal vertebra, and sometimes in luxation of the eleventh, the uppermost lumbar segments are spared.

In the case of J. S., however, the anæsthesia reached the level of the umbilicus on the right side and somewhat lower on the left side. The relation of the umbilicus to the cutaneous areas supplied by the spinal segments or posterior roots is uncertain, and, quite probably, is variable; Head[1] places it as high as the junction of the ninth and tenth dorsal fields, and the case of spinal caries recorded by me[1] supports this view; Gowers[3] (page 270) says it "corresponds to the tenth dorsal nerves:" Kocher[8] shows it opposite the middle of tenth; while *Quain* places it between the tenth and eleventh; and Thorburn[9] (page 368) is inclined to adopt this view, and thinks it lies "certainly no higher than the lowest part of the tenth." Even if the view were adopted that the umbilicus lay as low as the eleventh dorsal field, it was evident that the anæsthesia in the case of J. S. was too high to be explained by a lesion of the cord which did not extend higher than the first lumbar segment; much more so, if the higher position of the umbilicus relatively to the dorsal cutaneous fields was accepted. In order to explain the high position of the anæsthesia two alternative views suggested themselves: either that the spinal roots were affected simultaneously with the cord, and higher on the right side than on the left, or that there was—as often happens in crushes of the cord—a hæmorrhage into the cord, extending above the level of the crush, especially on the right side. I do not knew any certain point of distinction between these two conditions, but I inclined to the latter and—as the necropsy showed—erroneous view from these two conditions: (1) the marked absence of root symptoms (for example, girdle pain or hyperæsthesia) throughout the greater part of the course of the case, and (2) the exactness of demarcation of the upper limit of analgesia and thermo-anæsthesia; both Head[1] and Thorburn[7] believe there is evidence to show that the cutaneous areas supplied by the spinal segments are more sharply defined than are the root areas; and, indeed, the absence of overlapping of his areas is Head's main reason for believing that they correspond to

* In this connection it is important to remember that, as Professor Reid[5] has shown, the level of origin of the nerve roots relatively to the vertebræ varies very considerably: this will help to explain the varying levels of anæsthesia found in different cases in which the bony lesion appears identical.

the supply of spinal segments and not of posterior roots. The necropsy, however, leaves no possibility of doubt that the upper limit of anæsthesia in the case of J. S. was a root anæsthesia, and Fig. 1—which was repeatedly confirmed—may be taken as a tolerably accurate representation of the state as regards impairment of sensation, caused by a lesion whose upper limit on the right side was the eleventh dorsal root and on the left side the twelfth dorsal root. This statement, however, in view of Sherrington's researches,[6] does not imply that the upper limit of the cutaneous supply of the eleventh dorsal root is, as the chart shows, at the level of the umbilicus, and that of the twelfth dorsal root 2½ inches lower; but the case is interesting, as it shows with remarkable clearness, in the difference of the levels of the anæsthesia on the two sides, the effect of abolition of function of the eleventh dorsal root. With regard to the position of the umbilicus relatively to the root areas, this case would point to its occupying a high position, at least as high as the junction between the tenth and eleventh dorsal areas. On the other hand, the case of spinal caries[1] recorded by me seemed to point to a distinctly higher position of the umbilicus; there was pressure on the eleventh and twelfth dorsal roots, which were much atrophied, and the upper limit of anæsthesia was 2 inches beneath the umbilicus, so that the deduction drawn was that the area supplied by the eleventh dorsal root did not reach so high as the umbilicus. Such discrepancies in he localisation of the umbilicus have been noted before, and may be, as Thorburn[10] says, "dependent upon details of anatomy." It is, however, worthy of note that the character of the lesion was different in the two cases, and it is not impossible that this may explain the difference in the level of the anæsthesia. In the case of spinal caries the damage was slowly produced by pressure, and in such cases it is notoriously difficult to draw any certain conclusion from the persistence of sensation, or to say when the pressure on a nerve tract is sufficient to abolish sensory conduction. In the case of fracture dislocation the lesion was acute, and conduction was absolutely abolished in the roots which formed the upper limit of lesion. Thus the difference in the degree of impairment of function of the highest root involved in the two cases may explain the difference in the height of the anæsthesia. It seems possible in any case to draw more certain and reliable deductions from the case of fracture dislocation, with acute destructive lesion of the roots, than from the case of caries with slow compression of the roots.

It is interesting to note that—as appears the rule in lesions of the cord (*cf.* Thorburn,[7] Starr,[11] Bramwell,[12] Foggie[13])—the extent of total analgesia and thermo-anæsthesia was greater than that of total anæsthesia, and that the limits of the former were more sharply defined than the limits of the latter. There was a sharp line separating the region where the sensations of pain and temperature were abolished from the region where these sensations were intact; the upper limit of total anæsthesia was also fairly sharp, but above this there was a zone of partial anæsthesia, gradually shading off. Such "disassociated" distribution of the sensory disturbances is regarded by Bramwell as strongly in favour of a cord lesion as against a root lesion, and the greater sharpness of the limits of, and the greater extent of analgesia and thermo-anæsthesia as compared with anæsthesia, have led Head to conclude that the mechanism for the sensation of touch in the various spinal segments must overlap, while that for the sensations of pain and temperature does not overlap, at any rate to the same extent. The case of J. S. would seem to show that the same may hold good of spinal roots, although Sherrington, in his experiments on the posterior roots, apparently found the root areas of tactile and painful sensation identical.

The higher limit of the anæsthesia on the right side in Fig. 1, as compared with the condition noted earlier, may have been due to more complete abolition of conduction in the right eleventh root by the growth of callus. I have not found it possible to decide whether the degeneration in that root, as shown by sections, is more recent than in the other parts affected, but the increase in the height of the anæsthesia and the late appearance of a girdle-like pain on the right side a little below the level of the umbilicus suggest that an active process, such as callus formation would readily account for, was at work.

So far we have considered the upper limit of lesion, and it is chiefly with regard to it that the case of J. S. appears instructive. In order to determine the lower limit one had to consider the extent downwards through which the central functions of the cord, especially the reflexes and muscular nutrition, were abolished. The exact significance of the complete flaccidity of the leg muscles and of the abolition of the reflexes (knee-jerk, plantar, cremasteric) was doubtful at the onset. There is still difference of opinion as to the effect of a complete transverse lesion of the cord on the state of the reflexes and muscles supplied by the cord below the lesion. The old view was that there was a spastic condition of the muscles and increase of reflexes; this is certainly the rule in a partial lesion of the cord. Bastian's[14] view, however, which is supported by many clinical observations (for example, that of Bruns),[15] is that injuries causing total interruption of the cord are accompanied by flaccid paralysis and absence of reflexes in the parts below; according to Oppenheim[2] this is "the rule." Gowers[3] still adheres to his old opinion that disease above the lumbar enlargement causes *per se* no persistent loss of reflex action in the legs, and that, where this exists, it is usually due to a descending myelitis, or, exceptionally, to the specially irritative character of the descending degeneration in the pyramidal tracts. No other explanation than that of Bastian seems to me to explain clinical facts satisfactorily. In the case of J. S. the rapid wasting of the leg muscles and their loss of faradic excitability roused the suspicion that there was grave destruction of the lumbar enlargement, and that this explained the complete muscular flaccidity and loss of reflexes in the legs. The lower limit of this acute destruction was not quite clear; the fact that the glutei muscles and all the muscles below the knees shared in the rapid wasting and loss of faradic excitability pointed to the lesion extending at least as low as the upper two sacral segments. The centres concerned with the musculature of the bladder and rectum were also evidently affected; these are located in the lower sacral segments of the cord, third and fourth (Oppenheim, Head), fourth and fifth (Bramwell). As in the case of the tendon reflexes, so with regard to the bladder and rectum, there is difference of opinion as to the effect of a total transverse lesion of the cord higher up; the usual view is that, where the lesion is distinctly above the centres for the bladder and rectum, there is reflex incontinence, but it has been more recently asserted that this reflex emptying of the bladder and rectum may fail. In the case of J. S., the condition for about two months from the time of injury was one of reflex incontinence of urine; the fact, however, that from the very onset the bladder was never emptied by the reflex gush pointed to weakness of the detrusor action, and made it probable that the corresponding centre was partially affected. This was confirmed at the necropsy, as there was evidently much compression of the whole sacral cord—from the epidural hæmorrhage and the longitudinal fracture of the bodies of the vertebræ—and the anterior sacral roots were found to be considerably degenerated. The condition of the bladder altered later; its capacity diminished very markedly, and simple incontinence developed; this may have been due, partly at least, to the local condition of cystitis, but it may also have been partly caused by secondary changes, the result of the compression, and probably myelitic in character, affecting the lower sacral segments, and it is possible that the contracted condition of the bladder was due to detrusor spasm, just as retention is not rarely due to sphincter spasm.

I desire in conclusion to express my gratitude to Professor Ogston for giving me the opportunity of observing the course of this case; to Professor Hamilton for allowing me to examine it pathologically; and to Dr. J. Stewart Milne, without whose help the record of the case would have been much less complete.

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THE THERAPEUTICAL VALUE OF THE X RAYS IN MEDICINE.*

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Until two years ago scarcely anything was known respecting the influence of the *x* rays on the human body. Only now and again a statement would appear in the papers respecting inflammation of the skin or falling off of hair. Yet so vague was the form of these notices that one was at a loss whether to take them seriously. About that time Dr. Freund had a remarkable case under his observation of a child whose back was covered with a thick-haired nævus pigmentosus pilosus. The case seemed a desperate one, for, with the methods of treatment then in vogue one could do nothing. Dr. Freund, however, decided on making an experiment with the Roentgen rays. He began the irradiation by exposing the back of the little patient two hours daily to the *x* rays. After twelve days the hair, to our astonishment, fell out in thick tufts, so that in a short time the irradiated place was quite hairless. That was the first instance of a genuine and scientifically-regulated treatment and cure effected with the Roentgen rays. Unfortunately, in consequence of too long irradiation, an extremely violent inflammation set in subsequently on a circumscribed spot, which took a long time to heal. But this untoward circumstance proved highly instructive, seeing that it put into our hands the means of thenceforward avoiding such disagreeable drawbacks. By carefully moderating the length of the sittings all troublesome incidents could soon be avoided.

The powerful efficacy of the *x* rays shown in these experiments suggested to me the idea of employing them in the treatment of severe skin affections having their seat in the deeper layers of the cutis. The experiments I next instituted for lupus vulgaris yielded very favourable results. The first case of treatment and cure was that of a girl who for many years had been treated medically, surgically, and with Koch's lymph in vain. This girl I was able after a few months to present to the Vienna Dermatological Society as cured with Roentgen rays. [I wish here to take the opportunity of stating my priority in having been the first to treat and cure lupus with Roentgen rays.] The method according to which we proceed is as follows:

The set of instruments needed for treatment with the Roentgen rays consists, as is well known, of, first, the screen of the current (obtained from the main or from accumulators with suitable resistances); secondly, a transformer (Rumkorff's induction coil); thirdly, vacuum tubes (large tubes are to be recommended); fourthly, an ampèremeter and a voltmeter inserted in the primary circuit; and, fifthly, protective material (sheets of pasteboard covered with lead foil $\frac{1}{25}$ in. in thickness) for those parts of the body which are not to be exposed to the rays.

In Freund's opinion there is ground for assuming that the therapeutic effects obtainable by these means are due to electric waves arising in the case of the electric discharges in the vacuum tube under the same potential of discharge as *x* rays. As far as our present knowledge goes, these electric waves appear to possess a more intense physiological action than those waves which arise in the production of d'Arsonval's high frequency currents, and by the action of the statical machines, an action which often goes a long way beyond the mark, and, far from working curatively, may operate injuriously on the organism.

For this reason it is advisable to take note of these factors, which in our practice proved deleterious. These are as follow: (*a*) A too great strength of the primary current ($1\frac{1}{2}$ ampère with 12 volt tension should never be exceeded); (*b*) a too high tension on the pole screws of the secondary coil of the transformer (induction coils of over 30 c.cm. striking distance should never be used and the mercury vessel should not be screwed too high to the interrupter); (*c*) too long and too frequent irradiations; (*d*) the too short a distance of the vacuum tube from the skin.

Obviously certain factors which for purposes of illumination are very useful prove unsuitable for treatment with Roentgen rays. Such are the larger induction coils, greater intensities of the primary and higher tensions of the secondary currents. The rapidity with which the interruptions of the primary current occur is in inverse proportion to the tension of the opening currents. For purposes of treatment 800 to 1,000 interruptions per minute were found to answer. Among the effects of the Roentgen rays, those produced on the skin were first observed, studied, and therapeutically utilised. There are certainly communications to hand according to which the *x* rays exercise an intense influence on the whole organism and certain diseases affecting it, such as neuralgia, rheumatism, and tuberculosis. These facts, which are intelligible in the light of the analogous effects of the high frequency currents and of the electric waves, which are in all probability the most operative in both procedures, require however still further investigation.

The influence of the *x* rays on the skin consists first in a relaxing effect on the deep vessels of the corium, an effect with which is certainly associated a slight exudation into the tissues of the epidermis and cutis. This process causes a swelling of the hair papilla on hairy parts of the body, and consequently also the detachment of the hair bulbs. In cutaneous affections, with inflammatory infiltration and new growth of young tissue, the cellular formative elements get altered in their molecular composition and thus prepared for absorption. Whether the *x* rays operate injuriously on the micro-organisms, or whether it is only that phagocytosis, becoming more pronounced under the inflammation, proves serviceable in parasitic affections of the skin, has not yet been determined. As indications calling for treatment with Roentgen rays are to be enumerated: Abnormal growth of hair and all cutaneous diseases caused or rather prolonged by the presence of hair, as sycosis, favus, wounds of the hairy parts of the body, and trichorrhexis nodosa; and as furunculosis, acne, lupus vulgaris, lupus erythematodes, eczema, and elephantiasis.

The method is very simple. The Roentgen tube, at 15 cm. from the skin, is so disposed that the anticathode stands exactly opposite and parallel to the irradiated field. Sittings are daily held, lasting at first five, later on ten to twenty minutes. The distance of the tube may also be slightly and gradually lessened. The parts not to be irradiated must be protected with pasteboard sheets coated with lead. As soon as the skin appears turgid, or shows a pale pink or brownish tint, or when at the place in question the hair becomes loose, then the irradiation of this part must be stopped. This is the case with hypertrichiosis after 17 to 25 sittings, and with sycosis and favus after 7 to 13 sittings.

In the case of a general growth of hair on the face, it is of advantage to treat both cheeks at the same time, and after these have been depilated, to treat the chin. Occasionally there are disagreeable occurrences, such as slight conjunctivitis, pruritus, and erythema. Conjunctivitis may be avoided by the use of lead masks, and by advising the patient during the sittings to close the eyes. For the rest the usual astringent collyria proves effective. Against erythema and pruritus the 15 per cent. boracic lanolin acted in all occasions as an excellent remedy. Both these symptoms, as well as conjunctivitis and the slight bronzing of the complexion to which many women are averse, disappear spontaneously in two to three days. In the case of lupus, the irradiation may be more intense, and one need not be afraid of the appearance of slight dermatitis. As we have already in several publications insisted, the affection proceeds by imperceptible stages towards cicatrisation. The scars, moreover, are very tender, and resemble the normal skin. Quite striking, too, is the improvement that takes place under this treatment in the complexion disfigured by scars, pustules, comedones, and this may be due to the circumstance that in the uppermost layers of the skin a small exudation stretches the epidermis, and therefore removes elevations and depressions.

With this treatment, however, the cure is not yet completed. Hypertrichosis, especially, still needs for its radical removal a long after-treatment, consisting of 3 to 5 short

* The author of this paper, which was contributed to the Section of Pharmacology of the meeting of the British Medical Association at Portsmouth, prefaced his remarks by alluding to the general bearing of the *x* rays on medical science, the development of the original apparatus, and the use of the rays in diagnosis.

sittings held at intervals of from four to eight weeks. Should this after-treatment be neglected, the hair at the depilated places will in by far the majority of cases begin to grow again in about two and a-half months. Only in some cases did the first treatment suffice to accomplish a radical cure.

I would here call attention to the fact that the results of the ingenious Finsen method of treatment by light correspond to those obtained with Roentgen rays, as far as regards lupus. It should, however, be noted that the Finsen treatment seems suitable only for smaller lupus patches, whereas for large areas the Roentgen treatment is preferable.

When we consider what progress towards the well-being of humanity still lies in store from the discovery of the *x* rays, we may congratulate our century on such an achievement, and must not refuse the meed of our admiration for the man to whom we owe it.

TREATMENT OF LUPUS BY THE *X* RAYS.

By ROBERT ERNEST SCHOLEFIELD, M.A., M.B.Oxon.,
Blackheath, S.E.

[See Special Plate.]

In connection with the interesting account of phototherapy as conducted by Professor Finsen, of Copenhagen, which was given in the British Medical Journal of September 30th, 1899, it will be of interest to some of your readers to observe from untouched photographs what effect may be obtained in the treatment of a serious and disfiguring form of disease—namely, lupus—by the action of the *x* rays. The result of surgical interference with such cases has been uniformly disappointing, not only in often intensifying the virulence of the growth but in the destruction of the parts which are the seat of the same, and, in the case of the nose—which was affected in my patient—productive of a hideous deformity, which the greatest skill in plastic operations, even if the disease has been completely removed, suffices barely to make presentable.

When the patient, from whom the photographs were taken, came under my care, the disease was so extensive that, before submitting him to any surgical interference, I decided to try the effect of the rays, of whose efficacy I had read in the annals of the Roentgen Society. With great kindness my friend, Mr. William Webster, F.C.S., who possesses a most excellent apparatus of extreme power, offered to carry out the details of the treatment, and it is also to his skill that the excellent photographs are due.

The history of the patient is as follows:

B. H. A., aged 18, first noticed the affection of the nose in September, 1897. He then underwent various kinds of treatment, in which the nose was submitted to the action of ointments, powders, douches, etc.; and even on one occasion in December, 1898, a slight scraping or scarification was undertaken, luckily of a very superficial kind, otherwise a great loss of tissue would, I think, have inevitably followed. For some months before I saw him he had, under the advice of a medical man, been poulticing it, but the disease had steadily advanced from the tip of the nose, where it was first noticed, till both alæ and the bridge were affected, and isolated nodules were to be noticed almost as high as both inner canthi, though they hardly show in the Skiagraph No. 1.

On June 30th he was first exposed to the rays from a Jackson high vacuum tube attached to a Newton-Apps coil giving an 18-inch spark, a hammer break of ordinary kind being employed. An important condition in the tube was aimed at—namely, the so-called "sun effect" first described by Webster in October, 1896, at his demonstration at the Royal Artillery Institute. The rays, under this condition, are capable of taking a photograph of the bones of the hand in a fraction of a second, or of penetrating a ¼-inch steel plate in ten to fifteen minutes' exposure. The face, other than the affected area, was protected by a rubber mask of some thickness, and exposed to the rays for ten minutes at each sitting at about 5 in. to 6 in. distance from the tube. Sittings were given every other day throughout August, and it was noticed that the exposed skin dried into a scaly condition and peeled off, the lupoid area, where thickest, forming a kind of scab, as shown in Skiagraph No. 2.

On September 1st, 1899, the patient informed us that the nightsweats, which for some months had been profuse, were much alleviated, and though no treatment was undertaken in September, by October 9th they were reported to have quite ceased and have not reappeared up to the present. There are now no signs of disease in the lungs, though I regret that I did not examine them before treatment was commenced. On October 9th hardly any trace of lupus was to be found, but as a few pinkish or brownish nodules were to be seen high up on the nose he was exposed on alternate days up to November 12th when the final skiagraph, No. 4, was taken.

The peeling of the skin as in severe sunburn is well shown in Skiagraph No. 3, and the retraction of this hardened layer produced slight ectropion and epiphora as shown in that skiagraph also. From this he has recovered since.

These results are sufficiently startling in their similarity to those produced by Professor Finsen to make one wonder whether the rays from the tube and the ultra-violet or photochemical rays of the solar spectrum and the electric light may not be identical.

Still further, the most important element is the penetrative power of the *x* rays, and the conclusion cannot but be drawn from this case that if dermal tuberculosis may be cured, why not pulmonary. Nay, further, may we not take the relief of profuse night sweats as an indication of some such effect? May we not then hope to go even a step further than the fresh-air treatment towards the cure of phthisis and supplement it with either concentrated sunlight or exposure to concentrated *x* rays?

AN EXAMPLE OF THE USE OF THE *X* RAYS IN THE EXAMINATION OF ENLARGED METATARSO-PHALANGEAL JOINTS.

By GEO. H. RODMAN, M.D.,
East Sheen.

Skiagraphs of the two following cases were shown at a recent meeting of the Thames Valley Branch of the British Medical Association, and, at the request of Mr. Edmund Owen, who expressed great interest in the pathological condition therein found, are published.

The abnormal processes of bone, for such they appear to be when photographed by means of the Roentgen rays, were in both cases unexpected, and, as far as I have been able to discover, have not been described previously. Whether the gouty diathesis, which appears to be common to the two cases, is more than a coincidence and in any way productive of the outgrowths, I am unable at present to state, but I trust that, with the light of future investigation of similarly enlarged joints, we may be able to arrive at some more definite conclusion as to the causation and frequency of the condition. The similarity in their shape and of the position from which these processes spring is a striking feature. Radiographs of the corresponding joints in hands, crippled by gouty enlargement, do not apparently show bony outgrowths of a like character.



Fig. 1.

Case 1.—The skiagraph in this case shows what appears to be an exostosis growing from the outer aspect of the head of

first metatarsal bone. The patient was a gentleman aged 38, who had for several years suffered from enlargement of the first metatarso-phalangeal joint, which, from time to time, is the seat of pain of a burning character. This patient had never had an attack of typical gout, but had a strong family taint of that disease from his maternal grandfather. Periodically the joint has become red and more swollen, and when thus affected locomotion has been attended by considerable discomfort. The displacement inwards of the phalanges of the three outer toes is probably produced by a peculiar gait caused by efforts to save, as far as possible, the weight of the body being thrown upon the enlarged joint.



Fig. 2.

Case II.—This is a case of hallux valgus, with what seems to be an exostosis similar in shape to that shown in the skiagraph from the first case. In this instance the radiograph was obtained from a gentleman aged 70, who has had several typical gouty attacks in the first metatarso-phalangeal joint—an outgrowth of like density, shape, and seat of insertion is seen to be springing from the inner side of the head of the second metatarsal bone, and by its extremity closely approaches the extremity of the growth on the adjoining toe.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

ROETHELN.

To school medical officers are frequently afforded very favourable opportunities for observing the symptoms of infectious ailments from their earliest inception, as, when a case occurs in school, it is all-important in order to prevent an epidemic, that a careful individual scrutiny of the pupils be made daily. An intelligent and observant housekeeper is, in such circumstances, an invaluable aid to the medical officer as she isolates a "suspect" at once for examination by him.

Two points in connection with rötheln had in several epidemics struck and interested me, and I was on the look out for an opportunity to verify or qualify my previous observations. The first was the possibility of recognising the primary invasion of the system; the other, alluded to but not, I think, made enough of in text-books, the importance of the grandular involvement for diagnostic purposes.

In a large girls' school of which I have the medical supervision, an epidemic of rötheln occurred recently. On the appearance of the first case all the girls were cautioned to report themselves if indisposed in any way. Eight out of the 50 who were ultimately attacked presented themselves, complaining of slight headache, and the temperature was found to be from 0.5° to 1.0° F. above normal; on the neck and chest there was more or less distinct subcutaneous mottling, morbillary in character. Each of these girls was isolated and kept under observation for four days, but as the symptoms were found to disappear I did not consider that I was justified in detaining them longer from school, and they accordingly returned to work. But on the fourteenth to sixteenth day—counting from that on which I had first seen them—I found them again isolated for my inspection, and now the developed symptoms of rötheln were evident. It seems to me that such cases go to show that on the first invasion by the poison an impression is made sufficient to cause the symptoms noted, and that during the subsequent "incubation" period they disappear, until the maturation process is complete.

At this later stage, in practically every case of this epidemic, glandular involvement was pronounced and unmistakable, the mastoid, posterior cervical, and occipital regions being affected, all, one or other. Glandular swelling and tenderness generally preceded the "rash" by a few days, and so characteristic did I come to look upon these symptoms that in several cases presenting no other quarantine was imposed, with the result that in all of them a development of the disease occurred within the next two, three, or four days.

As rötheln, like true measles, is an ailment in which infection is strongest at the outset, both the points to which I have alluded are of practical value when there is reason to fear an outbreak, as attention to them may greatly assist in stamping out an epidemic.

St. Andrews. John Wilson Moir, M.D.

THE TREATMENT OF PNEUMONIA.

As it would appear that the treatment of this affection has been considered by many members of the profession a *quæstio vexata*, I thought it might prove instructive to give a brief outline of what has proved in my hands a very successful course of procedure in several severe cases during the present and late epidemics of influenza in which inflammation of the lungs has been so often a fatal complication.

During the initial congestive stage a combination of quinine and hydrarg. c. cretâ, and concurrently liquid ext. of ergot, the latter in 20-minim doses, was regularly administered. The ergot seems to cause contraction of the capillaries of the lung and promote resolution. During the second or exudative stage, when the expectoration was profuse and deeply sanguineous, a mixture containing digitalis, tr. ferri perchloridi, quinine, and dilute hydrochloric acid was given at regular intervals with the most happy results. If the case were asthenic small quantities of stimulant were also given at intervals. The digitalis and quinine acted as antipyretics, controlled the engorgement of the lungs, and limited the amount of sputa. The hydrochloric acid and iron are valuable constructives, and their administration need not be held to be contra-indicated even by the fur-coated condition of the tongue, which soon disappears on defervescence taking place.

J. Latchford, M.B.,
Bodmin. Lieutenant-Colonel, R.A.M.C.

AMPUTATION WITHOUT ANÆSTHESIA.

I remember about twenty-six years ago, when I was acting as an assistant to Dr. Davis, Bryngolwg, Aberdare, a man, about 65 years of age, having his hand and forearm chopped off by a chaffcutter worked by steam, up to within an inch of the elbow-joint. After being extricated, he walked a distance of about a mile to the surgery, the arm in the meantime having been tightly bandaged above the elbow. He refused to be carried to his home (another good mile), which distance he walked. When submitting himself to have his arm taken off above the elbow, he refused point blank to have any chloroform. He went on the table unaided, put himself in position, and held out his arm to be operated on. Whilst the old doctor was operating he never winced nor uttered a murmur.

Old Colwyn, North Wales. Price Morris, L.R.C.P.E.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

THE MAUD HOSPITAL, EXMOUTH.

A CASE OF SEVERE HÆMATEMESIS FROM PROBABLY A DUODENAL ULCER: INTRAVENOUS INJECTION OF SALINE SOLUTION: RECOVERY.

(Under the care of R. Stanley Thomas, M.A., M.D.Cantab.)

A lamplighter, aged 34, was admitted into this hospital on November 28th, 1899, with the following history:

He had enjoyed very good health up to November, 1898, when he suffered from a poisoned wound of the right thumb, which took three months to get well. In January, 1899, before the thumb was well, he began to suffer from pain after eating. It commenced within an hour after taking food, became worse during the next two hours, and then gradually subsided. It started generally to the right of the epigastrium and just below the eighth costal cartilage, and darted round the right side to between the two shoulder blades, where the pain was of a dull aching character. He never vomited, but at times had very acid eructations. On August 9th, 1899, he had a severe attack of hæmatemesis, from which he slowly recovered, and resumed work on the following September 23rd. The pain began gradually to return, and in November he suffered constantly after each meal; it was always at its worst about two to three hours after taking food. On November 27th he felt faint, and soon after vomited about a pint of blood, and the following day he was admitted into the Maud Hospital Capsules of turpentine (mv) were given every four hours, and he was fed *per rectum*.

On December 1st, as there had been no recurrence of hæmorrhage since November 27th, and, as he complained greatly of thirst, he was allowed peptonised milk in tablespoonful doses every hour. On December 2nd, at midnight, he had a severe attack of hæmatemesis and also passage of blood *per rectum*. He was given turpentine again by the mouth. At 1 A.M. he vomited more blood, part of it being bright red. His pulse was very feeble. Two pints of warm saline solution were then given by rectal injection and retained, and an icebag was applied to the epigastrium. At 2 A.M. he again vomited blood. The pulse at the wrist could not be felt; the skin was covered with cold perspiration; his voice was feeble, and he complained of his "head going round," and, in fact, he had every appearance of dying. Two pints of saline solution were injected into the median basilic vein with marked improvement. Pil. plumbi c. opio (gr. v) was given and repeated every four hours; turpentine capsules of mv were also given every hour. At 8 A.M. his condition had improved considerably; there was no return of the hæmorrhage. He was fed by rectal injections.

The patient made an uninterrupted recovery, commencing to take food by the mouth on December 11th, after having been fed *per rectum* for ten days. On December 25th he had minced chicken, and he went to his home on January 1st, 1900, still very anæmic, but able to take milk diet and minced chicken or mutton without causing any pain. On March 12th he was able to go to work again, being quite free from pain, but still exercising great care in diet.

Remarks.—The situation of the pain and the time of its occurrence after taking food point to the ulcer being situated in the duodenum. As the patient said, all his troubles began after he had poisoned his finger, and it is possible that the ulcer was due to an embolism following the septic condition of the thumb, as is occasionally seen following suppuration from severe cases of burns. The treatment by intravenous injection of saline solution is seldom resorted to in cases of collapse from intestinal hæmorrhage, and is certainly, as a rule, contra-indicated in cases where the hæmorrhage is internal and the means of its immediate arrest beyond direct control, but in this case, after rectal injection had been tried, the condition of the patient was desperate, and demanded prompt relief, and the transfusion was apparently the means of saving his life. The infusion was carried out by means of a glass funnel attached by india-rubber tubing to a nozzle inserted in the vein, and two pints of water at a temperature of 99° F., to which were added two teaspoonfuls of "table salt," were injected.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

A. Pearce Gould, M.S.Lond., Vice-President, in the Chair.

Tuesday, May 1st, 1900.

Adjourned Debate upon the Changes of Blood in Disease.

Professor A. Wright, after referring to the methods in common use for the examination of the blood, more especially as aids in clinical diagnosis, remarked that further and new methods were indicated. One of these related to the estimation of the coagulability. His particular method of timing coagulation was to fill a series of capillary tubes, and blow out the blood at stated intervals. Many indications of practical importance arose out of such observation. In cases of hæmoptysis, the coagulability was reduced, and he had suggested the use of calcium chloride with the object of increasing the lime in the blood, the coagulability of which varied with the amount of lime salts it contained. In the treatment of inoperable forms of aneurysm, again, the same measure would tend to facilitate coagulation within the sac. A treatment by reduced diet really diminished the coagulability, unless it was pushed to an unjustifiable degree. In the treatment of menorrhagia a similar line of treatment might in some cases be of service. Not only in true hæmorrhage, but in what he might call serous hæmorrhage the use of lime was indicated. By "serous" he meant the serous effusion seen in Bright's disease and in urticaria, etc. In urticaria, whether arising from the use of antitoxins or errors of diet, or even the use of normal articles of diet in particular individuals, the coagulability of the blood was diminished. The urticaria arising from the use of acid fruit the author thought possibly due to a certain degree of neutralisation of lime in the blood, and a consequent diminished coagulability. The production of urticaria after the use of soap enemata, he suggested, was due to some absorption and alteration in the lime salts in the blood. The estimation of lime salts in the blood could be carried out by means of potassium oxalate. In two cases of ununited fracture he had found the blood to contain less lime than normal. In phthisis there was, again, a deficiency of lime. When administered therapeutically, the absorption of lime varied in different persons, and the only means of judging of the absorption was by testing the blood. In some cases of urticaria lime was of no use; in one such there was found a diminished number of polymorpho nuclear leucocytes, which would account, in another manner, for the reduced coagulability. In this particular case the administration of thymus tabloids was of marked benefit. The alkalinity of the blood was another factor worth examination. In some obscure cases of fever the only discoverable change might be a diminished alkalinity of the blood, as if there were an acid intoxication. The estimation of the agglutinins was of value in prognosis. In Malta fever, if there was a good production of agglutinin, the disease would run a short course; in typhoid the same was probably true. An "agglutinin curve" would be as useful as a temperature one. If agglutinins were in good amount, moreover, relapse was less liable to occur. These observations suggested a therapeutical use of agglutinins.

Dr. Lorrain Smith discussed the subject of anæmia. After noting Quincke's method of estimating the hæmoglobin, the author described the method devised by Dr. Haldane and himself. The problem was how to measure the total volume of blood and the total amount of hæmoglobin. The principle consisted in saturating the blood to a measured degree with carbon monoxide (which is inhaled in known amount by the patient), and estimating the result from the colour by means of a standard carmine solution. The capacity of the blood for oxygen was the same as that for carbon monoxide. Theoretically there might be two forms of anæmia; in one the volume of blood was increased by an increase of plasma, in

the other there was, as in the anæmia of hæmorrhage, an actual loss of blood. The method above noticed enabled a determination to be made between the two. In chlorosis it was the volume of the blood that was increased; the oxygen capacity remained normal. On the contrary, in pernicious anæmia the percentage capacity of oxygen was much diminished, the condition being of the type of the anæmia of hæmorrhage.

Dr. J. H. Drysdale spoke upon the histological examination of the blood, pointing out the obscurity as to the source of the different cells and the danger of hasty dogmatism as to their clinical significance. In making blood counts the red cells must always be estimated with the leucocytes; the absolute number of different kinds should be given. There was a fallacy attaching to the examination of the peripheral blood as an index of the whole, but this was unavoidable. That the source of the lymphocytes was the lymphatic glands was shown by their diminution in destructive disease of these glands and their increase in lymphatic hyperplasia, but the sources of other cells was largely conjectural. The presence of myelocytes was not diagnostic of spleno-medullary leukæmia; it was noticed in other conditions.

Dr. W. Hunter, whose remarks were curtailed for want of time, observed that infections of the blood were the more interesting causes of change, since the change was here qualitative. He referred more especially to pernicious anæmia, in which the hæmolysis of the red blood corpuscles was so highly pronounced that it could be observed in blood drawn from the peripheral circulation, whereas in health such hæmolysis was confined to the blood in the portal circulation.

Dr. A. Whitfield spoke upon the histological examination of the blood. Amongst other points, he could confirm the observation that in cases of syphilis treated by mercury the hæmoglobin at first fell and afterwards rose as the agent produced its effect; the phenomenon was not observed in other conditions, and might be of use in the diagnosis of syphilis.

Card Specimens.

Mr. A. Poland: Separation of the lower epiphysis of the radius and compound dislocation of the elbow-joint.—Dr. P. Weber: (1) A peculiar form of cirrhosis; (2) furrowed liver.—Dr. Corrie Keep: Colloid carcinoma of the mamma.—Dr. C. D. Green: Chronic mastitis in the male.

CLINICAL SOCIETY OF LONDON.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, April 27th, 1900.

Clinical Evening.

Aortic Regurgitant Murmur heard in the Pulmonary Area.

Dr. Norman Dalton showed this case, the patient being a man, aged 26.

The points of interest apart from the physical signs were: (1) That the patient had never had rheumatic fever, and that the endocarditis was undoubtedly due to scarlet fever with nephritis at the age of 14; (2) that the man had remained undeveloped since the scarlet fever, having no hair on the face; (3) that he had been under observation by different observers for three years, and that the physical signs had always been the same. The heart's dulness was enlarged, but did not extend behind the sternum. On auscultation, a diastolic *bruit*, together with a systolic *bruit* and an accentuated second sound, was heard at the third left costo-sternal articulation, and not at the right as would be expected. Further, this diastolic *bruit* was not conducted downwards as it should be if due to aortic regurgitation, but was well heard under the clavicle and all over the back. There was also a diastolic thrill in the situation of the diastolic *bruit*. Other points of less consequence were that there was a long systolic *bruit* at the apex, that the spleen was large from infarctions, and that the kidney had never recovered from the scarlatinal nephritis, and was now in a condition of contracted large white kidney. The important points concerning the physical signs were a diastolic murmur audible in the pulmonary area, not conducted downwards, and, synchronous with the murmur, an accentuated second sound. A diastolic murmur in that position should mean pulmonary regurgitation, probably of congenital origin, particularly as the patient was so ill-developed; but this could scarcely be the case because there was no cyanosis and the heart trouble dated from the age of 14.

Seeing that all the symptoms, the pallor, the arterial pulsation pointed to aortic regurgitation, it might fairly be concluded that the case was one of aortic regurgitation, with the diastolic *bruit* audible on the left side, instead of on the right. The reason for this abnormal position was probably that the heart as a whole was displaced to the left and kept there by adhesions. These adhesions might be pleuritic, but it was possible that the fixation of the heart might be due to pericarditis and extrapericardial cellulitis occurring during the scarlet fever and nephritis. The abnormal position of the heart explained the abnormal position of the diastolic *bruit*, but did not altogether explain the fact that that *bruit* was not conducted downwards. Still, with the heart too far on the left side, the ascending aorta must be stretched and rendered more horizontal, so that its axis would be more at an angle with the axis of the left ventricle—a fact which would certainly prevent conduction, and possibly divert it towards the back.

The President had seen three cases of pulmonary regurgitation, all being secondary to long-standing mitral stenosis. He inquired if the pulmonary regurgitation came on subsequently to the mitral disease, and after what interval; and remarked that splenic infarction was common in mitral stenosis, but rare in aortic regurgitation unless of infective origin.

Dr. Chapman considered that the loud second pulmonary sound was opposed to the idea of pulmonary regurgitation.

Dr. Dalton, in reply, pointed out that the case was one of aortic, not pulmonary, regurgitation.

Tuberculous Gland in Anterior Mediastinum.

Dr. Habershon exhibited a child in whom he suspected tuberculous glands in the anterior mediastinum. He also showed four skiagraphs of the case, but did not consider that they confirmed the diagnosis. He thought that physical signs of the disease were much more reliable for the purpose.

Recurrent Tumour of Frontal Region.

Mr. W. H. Battle showed a patient from whom he had removed a recurrent tumour of the frontal region of carcinomatous character more than two years before with the underlying bone, which had been perforated.

The patient, a married women, aged 37, was under treatment at the Royal Free Hospital more than two years ago for a recurring tumour of the forehead, the first signs of which had been noticed eight years previously, but the growth for which she required treatment at that time only for two years. The tumour (which was shown to the Society, and was in the museum of the Royal College of Surgeons) measured 4½ inches from side to side, 3 inches from above downwards, and projected 3½ inches from the level of the skin. It was irregular, fungating, vascular without pulsation, and not covered by skin. It bled freely at times. She was thin, worn, and anxious-looking. Operations had been done in three stages: (1) removal of the very vascular soft growth, an elastic band being first bound round the head so as to control the hæmorrhage; (2) removal of the underlying bone, which had been penetrated by the tumour at one point and at other points eaten away; (3) grafting of the dura mater when it had become covered with granulations. The dura mater had not been implicated in the disease. Microscopically the growth was a spheroidal-celled carcinoma. The operation scar was firm without any bone in it, and the patient completely concealed it by brushing her hair so as to cover it. She was in good health and spirits, and six weeks ago gave birth to another child.

Case allied to Recklinghausen's Disease.

Dr. Harry Campbell showed a girl who six years ago had been admitted into a home with angular curvature.

Two years ago she had to take to bed in consequence of paraplegia; the legs were now rigid, and showed excessive myotatic irritability, leading to frequent clonus. The patient was anæmic. The glands in the axillæ and supraclavicular regions were enlarged. In certain regions, but especially in the right humeral region, the right posterior thorax, and to a less extent the left humeral region, were to be felt nodular massses, apparently consisting of hypertrophied subcutaneous tissue; they appeared to be somewhat tender to the touch. The skin in these regions was very loose, being most so where the nodular masses were most pronounced. The skin over the right forearm was, however, very loose, and here there was a little subcutaneous hypertrophy. The skin was curiously pigmented. The pigment was deposited in patches varying in colour from light yellow to dark brown, and in size from a pinpoint to several square inches. It was most marked over the subcutaneous masses. Thus the entire right humeral region was coloured brown, the colour being deepest where the masses were thickest. The trunk was also pigmented, chiefly in the form of minute spots, which showed a decided tendency to symmetrical arrangement. Thus on the abdomen there were two spots about the size of a florin, one on either side of the middle line above the umbilicus, and a similar spot in the middle line just below the umbilicus. There was practically no pigmentation in the lower extremities. When the patient was first admitted into the home the condition described was limited to the right humeral region, which presented much the same appearance as did the left humeral region now—that was, there was moderate subcutaneous hypertrophy over the triceps, the overlying skin being pigmented; it was not till about a year ago that this latter region became involved. Since admission the disease had steadily advanced. The right hand was congenitally deformed. The first and second fingers and their metacarpal bones were fairly normal, but all the remaining phalanges and metacarpal bones were remarkably mobile, as though their several joints were devoid of ligaments, and were not fixed by tendons and ligaments. The hand had a flattened and splayed appearance. The second and third fingers were spindle-shaped. The patient was perfectly intelli-

gent. She read and did fancy work, though with difficulty owing to the condition of the right hand.

The President hoped that when the case was published another name than that of the discoverer of the disease would be appended. That method of naming diseases should not be practised by that Society.

Dr. Rolleston said that where three different symptoms characterised the disease, the name, if it were to embody the principal features of the malady, would be more cumbrous than that of "Recklinghausen's disease." It had been called "generalised neuro-fibromatosis." It was, he suggested, one of the congenital diseases in which the mesoblast had suffered some aberration, especially in its superficial parts, where it was in contact with the skin, causing the pigmentation, etc. He believed the case of the so-called "elephant man" at the London Hospital some few years since was an instance of disease attacking the deeper layers of the mesoblast, the fat, etc. He thought Dr. Campbell's case was progressing, and that it would probably end in the development of sarcoma in the neuromata.

Mr. Clement Lucas mentioned a case sent to him by Dr. Abraham. The patient was a woman, aged 27, who had a huge mass of pigmented loose skin hanging from the buttock to below the knee. By three or four operations he (the speaker) had removed large masses of the fibrous tissue, and now the patient was nearly well. The growth removed consisted of hypertrophied cellular tissue, and had enormous veins running through it. In another case which he had under his care the disease was noticed soon after birth, even if not directly after that event.

Mr. Battle had described a similar case in the *Lancet* some years ago, in which he had removed the redundant pigmented skin. The disease was similar to that called "fingers and toes" in turnips; it had not recurred since the operation.

Dr. Campbell, in reply, remarked that Dr. Rolleston's view that it was a disease of the mesoblast appealed to him, especially as there was the malformation of the hand.

Excision of Subclavian Aneurysm.

Mr. Lediard (Carlisle) showed a man, aged 39, from whom a subclavian aneurysm had been successfully removed on January 21st.

Ligature of the first part of the subclavian had been done on April 14th, 1899, without benefit. The first part of the axillary was also tied on August 4th without result. The arm became useless and painful, so that interference was imperative. Two and a-quarter inches of the collar-bone were removed prior to the excision of the aneurysm, and the operation only lasted three-quarters of an hour. Recovery of the arm was almost immediate, and the wound healed without trouble. The aneurysm was as large as a hen's egg, and the under-surface of the clavicle was somewhat worn from pressure.

Diffuse Lipomata of the Limbs.

Sir Hugh Beevor exhibited a patient with multiple lipomata to whom he had administered 15 gr. of thyroid extract daily for a fortnight, with a slight improvement.

Mediastinal Glands (Apparently Tuberculous) Pressing on the Right Lung.

Dr. Norman Dalton showed a boy, aged 12, who was well until five months ago.

He had a tuberculous aspect and well marked remittent fever. The physical signs of importance were dulness over the upper half of the sternum and over the adjacent portion of the right lung. Over the dull area the heart's sounds were very loud, harsh breathing could be heard. Beyond the dull area the upper half of the right lung in front was comparatively dull, while the breathing there was deficient and the vocal fremitus diminished. The veins over the front of the chest proceeding from the sternum were dilated, and when the head was retracted the veins in the neck stood out prominently. There was a rather large and hard gland in the left axilla and the superficial epigastric veins were a little large, but nothing could be felt in the abdomen.

Probably the dulness behind the sternum and the deficient resonance, breath sounds, and vocal fremitus in the upper lobe of the right lung were produced by a solid mass extending from the mediastinum and compressing the bronchus leading to the upper lobe of the right lung. The tuberculous family history was not positive, and in the last fortnight the physical signs had increased almost too rapidly for tuberculous glands, so that while it was still most likely that the mass was tuberculous, it is not quite certain that it was so, for sarcomatous or lymphadenomatous growths extending from the mediastinum into the lung by the side of the bronchi would produce the same physical signs.

Dr. H. A. Caley inquired why the disease was ascribed to tuberculous adenitis rather than to lymphadenoma. Had arsenic in big doses been tried?

Dr. Whitfield thought that an examination of the blood might settle the diagnosis.

Dr. Habershon thought a skiagraph might be of use, and that the dulness was partly due to condensation of the lung from pressure and not to the growth itself.

Macular Leprosy.

Dr. T. D. Savill exhibited a case.

The patient was an intelligent lad, aged 14, born in Demerara. He had left that place and come to England at the age of 11. The disease began when he was 10 with erythematous and pigmented patches slightly raised, scattered in different parts of the body, for the most part symmetrically distributed. The patient said that he had been unable to fee in most of these patches, and he had other places where there was no pigment or erythema which were also without sensation. The patient's sk was inclined to be a little dark, and he presented the appearance of a half-caste. At the present time there were scattered over the arms and legs a series of ovoid, slightly pigmented areas. These areas were quit flat, and presented no alteration in texture at the present time, but in many of them the pigment was rapidly disappearing. Both the ulnar nerves, but especially the left, were thickened; they had previously been more so.

The chief interest of the case lay in the administration of choulmougra oil. The patient had taken this remedy for nearly a year in gradually increasing doses, beginning with 12 drops daily, until now he was taking 100 capsules, each containing 4 minims of the oil, per diem. The swelling and erythema had entirely disappeared, and the pigment was fast disappearing. No anæsthesia could be anywhere made out, and the ulnar nerves were decidedly less thickened than they used to be. These immense doses of the remedy did not upset either the digestion or the general health of the patient.

Aneurysm of the Subclavian Artery.

Mr. J. Hutchinson, jun., showed a man, aged 47, with aneurysm of the subclavian artery.

He had syphilis fifteen years ago, and had treatment for seven weeks with mercury. Eighteen months ago he noticed pain on the left side of the neck on turning his head, then a throbbing swelling over the collar-bone on the left side. He had been treated by a doctor for eighteen months with iodide of potassium up to 40 to 50 grs. daily. He complained of pain down the arm with numbness in the fingers, and had attacks of dizziness. There was a small expansile tumour above the inner third of the clavicle, stationary, not adherent to the skin, with a distinct *bruit* on auscultation. The pulse on the left side was delayed as compared with that on the right. Tension about the same. Left carotid tension was distinctly less than that on the right. The subcutaneous veins on the left side of the chest were dilated. The circumference of the arm on the left side was 2 inches more than that on the right. Clubbing of the fingers was marked in the left hand.

Mr. Charters Symonds inquired as to the condition of the artery beyond the aneurysm; which might be operated upon if the vessel beyond was healthy.

Mr. Stanley Boyd remarked that many such aneurysms remained stationary for years, and that a few even underwent spontaneous cure; so that in the absence of other symptoms one might hesitate to operate.

Mr. Hutchinson said the urine was non-albuminous, but for other reasons he shrank from doing any extensive operation on the patient.

Miscellaneous Cases.

Mr. Charters Symonds showed a man, aged 47, whose entire clavicle he had removed for sarcoma in February, 1899. The movements of the arm were perfect. The growth proved to be a spindle-celled sarcoma.—Dr. Percy Kidd showed an elderly woman with a new growth on the base of the skull which was associated with unilateral paralysis of the first, second, third, fourth, fifth, sixth, and twelfth cranial nerves.—Dr. St Clair Thomson showed a man with one-sided paralysis of the soft palate, probably of diphtheritic origin.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Medicine.

J. W. Moore, M.D., P.R.C.P.I., President, in the Chair.

Friday, April 6th, 1900.

Croup.

Dr. Langford Symes [read a paper on the clinical significance of the various diseases embraced by the term "croup." There were five chief croupy symptoms: (1) Laryngeal stridor; (2) cough, with a barking, "croupy" sound; (3) night attacks; (4) restlessness; and (5) recession of the chest. These were the symptoms popularly called croup. Three main species of disease must be clearly differentiated: (1) Diphtheria (of

which there appeared to be several varieties); (2) laryngitis, (*a*) "acute laryngitis," (*b*) "laryngitis stridulosa;" (3) laryngismus. Laryngismus was an entirely different condition from the other two, and should not be included in the term, for it did not produce true croupy symptoms. It was mentioned for the purpose of elimination and distinction. True croup was diphtheria, and most deaths registered as croup were really diphtheria.

Dr. Travers Smith, Dr. Drury, Dr. Doyle, Sir George Duffey, Mr. Croly, Dr. Parsons, and the President made remarks; and Dr. Langford Symes, in reply, said he believed there were many varieties of the disease commonly called diphtheria. Why the night attacks which he had mentioned came on he could not tell, and it could not be said that they were indicative that the case was not diphtherial, because he thought it was possible that a diphtheria case could have a violent spasm of the larynx as well as another.

Pemphigus, with Concurrent Erythema (Iris).

Dr. H. C. Drury described the case of a boy, aged 14, who was under his care in Sir Patrick Dun's Hospital suffering from a severe attack of acute pemphigus, with concurrent erythema. The erythema was the "iris" form, and was very extensive over all parts of the trunk and extremities. Many circles becoming confluent, formed very large irregular patches. The pemphigus was also very extensive, and was found on all parts of the body, sparing the conjunctivæ. The bullæ varied in size from that of a hempseed to large, irregular bags of fluid more than 3 inches by 2 inches. Into many of these hæmorrhage occurred. They occupied the site of the erythema, but were not so extensive. A febrile disturbance appeared early, and increased regularly till the tenth day, then gradually subsided till normal temperature was reached on the eighteenth day. During this period the patient was in a very critical condition, and from the position and extent of the bullæ their rupture and ulceration was inevitable, causing considerable suffering. He made a satisfactory recovery. He was given the acid solution of arsenic in gradually increased doses up to 7½ minims, three times a day, with iron.

Exhibit.

Dr. Conolly Norman showed a case of chorea apparently associated with trauma and complicated with melancholia, which was discussed by Mr. Croly, Dr. Doyle, Dr. Travers Smith, Dr. Parsons, Dr. Langford Symes, and Dr. Knott.

LIVERPOOL MEDICAL INSTITUTION.

Edgar Browne, F.R.C.S.Edin., President, in the Chair.

Thursday, April 26th, 1900.

Pulsus Paradoxus.

Dr. James Barr read a paper on "the so-called pulsus paradoxus." He said that he had been working more or less at the pulse for a quarter of a century, and he had never been able to find the paradox, though he was well acquainted with the condition of the pulse which became smaller or disappeared during respiration. Since the appearance of Kusmaul's paper and erroneous interpretation of this phenomenon in 1873 an undue importance had been given to the condition, which was merely an exaggeration of a perfectly normal state of the pulse. Anyone having a good respiratory pump and moderately low arterial tension could develop the so-called pulsus paradoxus in himself, and such a one by carrying out the Valsalva method could completely obliterate his pulse at the wrist for several beats. He looked upon the condition as a decided advantage to the individual both in health and disease, seeing that it was evidence of the integrity of the respiratory pump which was a great aid in carrying on the circulation.

Dr. John Hay thought that Dr. Barr seemed inclined to magnify the recognised effects of abnormal respiratory efforts on the normal pulse and to minimise the fact that a paradoxical pulse during normally quiet breathing might occasionally be of value in diagnosis. Normal respiration in a normal individual failed to produce that rhythmical and marked variation which was called pulsus paradoxus. This variation when pronounced was in his experience always associated with some pathological condition, and what was necessary was rather to locate and give proper value to it as a physical sign.

Dr. A. G. Gullan thought that the fact that the pulsus paradoxus, as shown by Dr. Barr, could be produced artificially by a simple physiological experiment, in persons with low pulse tension, agreed with those recorded cases where it had been noticed in children while asleep, and also with the fact that pathologically it was almost always found in pulses of low tension.

Drs. Abram, Buchanan, Grünbaum, and Lloyd-Roberts also took part in the discussion; and Dr. Barr replied.

Cases, etc.

Mr. Bark showed a man, aged 30, with cysts in the glosso-epiglottic fossa, the largest, having a diameter of a quarter of a inch, was a yellowish white globular swelling on the right of the glosso-epiglottic frænum and there were two others on either side of the frænum about the size of a split pea. The symptoms produced were excessive secretion of saliva, with a constant desire to swallow, which produced a sensation of a lump at the back of the tongue. Mr Bark proposed to remove them by means of laryngeal punch forceps.—Mr. F. C. Larkin read notes of cases of fracture involving the anterior fossa of the skull with nasal hydrorrhœa. A man, aged 20, met with a cycle accident which rendered him unconscious for three to four hours. This was followed by a profuse discharge of fluid from the nose, the character of which was cerebro-spinal, and the flow lasted about six weeks. He was only off work altogether for a few days, and complained only of headache and of being bothered by the fluid coming from his nose. After the discharge ceased the headaches continued. Eight weeks later he was seized with symptoms of cerebral meningitis and died. The necropsy showed considerable fracture of the orbital plates of the frontal and of the ethmoid, and that a wide communication existed between the cranial cavity and the nose, the track running by way of the anterior ethmoidal cells and the antrum of Highmore. The parts implicated, with photographs and sketches, were exhibited.—Dr. J. M. Hunt showed a case of dysphonia spastica in a hysterical man, aged 30, who lost his voice suddenly six months ago without apparent cause, and since then had been either quite aphonic, or had spoken in a high falsetto. On attempted phonation the cords were so strongly approximated that the right vocal process crossed over the top of the left. If the patient made an effort to speak during the periods of aphonia his face became livid, and the muscles were convulsed. The normal voice could be restored by pressing on the epigastrium, but immediately disappeared on removing pressure.—Dr. Nathan Raw showed a specimen from a patient who had suffered from acute œsophagitis for over six months. After a violent fit of choking he expelled a complete cast of the œsophagus, which appeared to consist of the epithelial and mucous lining of the tube. The specimen was 8½ inches long, and in a perfect state of preservation. The man was recovering, although he still had great pain and difficulty in swallowing. Dr. Raw also showed a man on whom he had operated for a large liver abscess. The patient had been abroad for twenty years, and six years ago had dysentery; he presented all the symptoms typical of the affection with the exception that the exploring needle failed to find the pus. The abdomen was opened in the right Langenbuch's line, and the liver found to be adherent to the costal arch in its upper two-thirds. The abdominal wound was closed, and an opening made through the seventh interspace, and 32 ounces of chocolate-coloured pus withdrawn. The patient made a good recovery, and is now following his employment.

Pathological and Microscopical Section.

Thursday, April 19th, 1900.

T. B. Grimsdale, M.B.Cantab., in the Chair.

Specimens.

Mr. W. Thelwall Thomas showed (1) three specimens of undescended testicles removed for various causes:

The first consisted of a rudimentary epididymis, with radiating tubules in a flattened mass which caused great pain, in a man aged 35 years. The second undeveloped testicle in a man aged 33 had herniated through a hole in the omentum which, contracting, had gripped the groove between the body and the epididymis to such a degree that the body of the testicle could not be drawn back again without lacerating the omentum. The patient complained of almost persistent painful chronic erections of the penis. The third specimen was removed in the course of an operation for radical cure of a large hernia complicating it; the sac of the hernia lay behind the complete tunica vaginalis in the groin, but owing to efforts to reduce the omental hernia a lacerated communication existed between the sac and the tunica vaginalis, and a hæmatocele existed. The patient was aged 50 years.

(2) a fibroma removed from the inguinal canal of a woman aged 56 years:

Symptoms suggestive of strangulated hernia led to its removal. The growth was the size of a small hen's egg, had a small cyst in its centre, and was considered to be a fibrous thickening round a cyst of peritoneum (processus of Nuck).

(3) a cæcum, vermiform appendix, spermatic cord and testicle removed from a patient aged 56 years:

During an operation for radical cure of an irreducible hernia growths were found involving the cæcum and spermatic cord, so the whole lot was removed. Microscopically the growths appeared to be fibrous and cellular, but not carcinomatous. The patient made a good recovery.

—Mr. Keith W. Monsarrat showed a case of imperforate septum at the ileo-cæcal junction, illustrated by microscopic specimens and lantern slides.—Dr. Hubert Armstrong showed a specimen of double tongue, illustrated with microscopic specimens and lantern slides.—Mr. Murray exhibited a specimen of papilloma of the larynx from a boy who had had

thyrotomy performed on him three times.—The CHAIRMAN showed a papilloma of the vagina removed from a woman aged 65.

Two years previously a growth had been removed from the cervix uteri which was said to have been clinically "very suspicious," but was pronounced innocent by the microscopist. The present tumour had given rise to blood-stained discharge for about six months. It was a bright red rounded swelling about the size of a strawberry, and it protruded through the vaginal orifice: in appearance it resembled a urethral caruncle; it bled easily on touch; it grew from the anterior wall of the vagina, close to the meatus urinarius, but did not involve it. Dr. R. J. M. Buchanan made the sections of the tumour which were shown.

—Dr. W. GRAHAM showed a specimen of innominate aneurysm the size of a small orange, and associated with dilatation of the aorta; the sac was intimately adherent to the inner end of the clavicle. The aortic valves were healthy, but there was acute endocarditis of the tricuspid valves; the trachea was flattened, causing death from asphyxia. The specimen was from a man aged 54, who had had a syphilitic history. Dr. Graham also showed two cases of dilatation of the aorta associated with aortic regurgitation: (1) the heart weighed 39 ozs.; there was great thickening of the aortic valves and calcareous plates in the aorta; (2) the aortic valves were affected with fusion of the anterior and right posterior cusps. The coronary arteries were narrowed with atheroma, causing frequent and progressive attacks of angina pectoris, in one of which the patient died. Both patients were men aged 52, and both had a syphilitic history before 30.—Dr. J. HAY showed five specimens of atheromatous and dilated aortas.

One was a rare example of marked dilatation of the ascending aorta associated with phthisis, the whole of the left upper and lower lobes forming one large quiescent cavity. There was no aortic regurgitation and no hypertrophy of the heart. The patient, a woman, died at the age of 56 of hæmoptysis. The second case presented, in addition to irregular dilatation of the ascending aorta, aneurysmal dilatation of each subclavian artery the size of a walnut at the origin of the thyroid axis. There was no history of syphilis in either case. The other 3 cases were examples of marked dilatation of the aortic arch associated with regurgitation: there was a syphilitic history in 2 of the cases. The specimens were illustrated by numerous photographs.

—Mr. NEWBOLT showed a case of hydatids of the liver.—Dr. LOGAN showed specimens of muscle in pseudo-hypertrophic myopathy in the early stage, also vermiform casts of the intestinal mucous membrane.—Dr. WARRINGTON, in continuation of previous studies on the relation existing between the function and structure of nerve cells, showed sections of the spinal cord: (1) Chromatolysis in the anterior cornual cells after extradural section of the afferent roots in a puppy: (2) chromatolysis in Clarke's cell column after (*a*) section of the afferent roots, (*b*) section of the cerebellar tracts, (*c*) complete section of the spinal cord.—Dr. C. A. HILL showed a series of cultures of bacteria producing H_2S.—Dr. G. STOPFORD TAYLOR showed specimens of monilethrix hair, trichorrhexis nodosa, leptothrix hair, and sclerodermia.—Dr. MURRAY CAIRNS showed a specimen of a monster which had given rise to difficult labour necessitating evisceration.

THE AGGLUTINATION OF RED CORPUSCLES.

Dr. GRÜNBAUM made a preliminary communication on the use of agglutination of red corpuscles for diagnostic purposes. After reference to the work of Bordet, Landsteiner, Shattock, and others, he pointed out that so far as his experiments at present went, while the serum from a case of typhoid (or a guinea-pig immunised against typhoid) would clump the corpuscles in the blood from another disease, it did not clump the corpuscles from the same disease, the same held good for scarlet fever. The absence of reaction might be used as an aid to diagnosis, and it was hoped would prove of more general application than the method of serum diagnosis described four years ago, since no bacteria were required. The observations were not yet complete, and Dr. Grünbaum reserved to himself the further investigation of the subject.

After some remarks by Dr. WARRINGTON,

Dr. R. J. M. BUCHANAN asked Dr. Grünbaum if he had made any experiments to investigate whether the serum of normal health in one individual would clump the corpuscles from another healthy individual. He could not find any record of this having been done in recent communications on the subject of agglutination.

Dr. J. HAY and Dr. GIVEN also entered into the discussion; and Dr. GRÜNBAUM replied.

WIGAN MEDICAL SOCIETY.—At a meeting on April 5th, Mr. R. H. COWAN, President, in the chair, Dr. E. J. YOUNGE gave details of a practical scheme for post-graduate instruction in diseases of the throat and nose. A discussion followed, in which Messrs. WHITE, BENSON, JONES, MONKS, FLETCHER, BRADY, and the PRESIDENT took part.—The HONORARY SECRETARY read a paper on pharmaceutical and therapeutical snapshots, advocating reliance on the drugs found in the *British Pharmacopœia* rather than the use of the drugs and synthetical remedies so largely advertised by manufacturing chemists. Messrs. ROOCROFT, BRADY, WHITE, BENSON, COOKE, MONKS, and the PRESIDENT discussed the paper, and the HONORARY SECRETARY replied.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 6th, Mr. CLARK, President, in the chair, Dr. ROBERT KENNEDY demonstrated a number of cases illustrating the regeneration of nerves.

(1) A man was shown who was operated on for cicatricial compression of the brachial plexus, causing total paralysis of the arm, and who had almost completely regained function. (2) A second case was reported (photographs being shown) in which there was brachial plexus paralysis due to the pressure of a large axillary aneurysm. In this case Antyllus's operation was followed by complete restoration of sensation and partial restoration of motion; but the patient was suffering from phthisis pulmonalis, from which he died. (3) A young man was shown whose ulnar nerve was sutured three months after division, who recovered sensation on the day following operation, and who had now completely regained the use of the hand. (4) Two patients were also shown whose median nerves had been sutured, one three months after division, and the other one month after division. Both had now recovered the use of the hand, and were able to work.

Dr. Kennedy pointed out the rapid recovery that took place in these cases in regard to sensation, and the more gradual restoration of motion. He also insisted that the distal part of a divided nerve did not atrophy, but contained in itself the elements of regeneration.—Dr. J. MCGREGOR ROBERTSON and Dr. J. SOUTAR MCKENDRICK gave a demonstration of microscopic specimens illustrating the alterations of the blood in leukæmia and in pernicious anæmia. The method of preparing and staining the blood films was described.—Dr. T. K. MONRO narrated a case of hæmorrhagic infarction of the intestine in the course of enteric fever, and showed the specimens.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—The annual general meeting of the above Society was held at the Guildhall, Windsor, April 25th, Mr. W. B. HOLDERNESS, J.P., President, being in the chair.—The PRESIDENT, in moving the adoption of the annual balance sheet, called attention to the very satisfactory state of the finances, in consequence of which the Society was enabled to give a subscription of 2 guineas to the Royal Army Medical Corps.—In the annual report Dr. HULBERT, the Honorary Secretary, referred to the fact that while the number of members at the inaugural meeting of the Society in July last was 52, they now numbered no fewer than 100. The total number of meetings held was nine, all of which had been well attended.—The following gentlemen were elected officers for the ensuing year: *President:* Mr. W. B. Holderness, J.P. *Vice-Presidents:* Dr. G. E. Barron (Ascot), Mr. J. Brickwell (Slough), Dr. W. D. Mour (Virginia Water), Mr. W. A. N. Thomson (Maidenhead), Mr. T. H. Scott (Staines), and Mr. J. Startin (Egham). *Treasurer:* Mr. J. W. Gooch (Windsor). *Committee:* Dr. A. J. Anderson (Ashford), Dr. J. S. Ferris (Uxbridge), Mr. G. G. Graham Hodgson (Chertsey), Dr. H. T. Newman (Ives), Dr. E. S. Norris (Eton), and Mr. W. Tinker (Virginia Water). *Secretaries:* Drs. C. R. Elgood and G. E. Hale. Amongst various subcommittees an Original Investigations Committee was formed, consisting of Dr. T. S. Pembray (Windsor), Dr. A. J. Anderson (Ashford), Mr. E. W. Adams (Slough), Dr. A. Charpentier (Uxbridge), and Mr. W. H. Gossage (Chertsey), and a list of subjects for investigation was adopted, of which a copy was to be sent to every member of the Society.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—At a meeting on April 12th, Dr. BURGESS, President, in the chair, Dr. CAIRNS exhibited: (1) An anencephalus, showing also umbilical hernia and talipes varus; (2) a case of abnormality in the distribution of the tendons at the wrist.—Mr. N. MILNER read notes of a case of progressive pernicious anæmia in a boy, aged 12, and showed specimens.—Dr. SINCLAIR WHITE showed a myomatous uterus.—Dr. R. GORDON read notes of a case of cirrhosis of the liver in an infant aged 14 months:

He first saw the case in December, 1899, when he found slight enlargement of the liver. This increased in size until it could be felt below the umbilicus. In February ascites was present, and on April 2nd it was necessary to tap, when five pints of clear straw-coloured fluid was withdrawn. The following day the liver was found to be considerably contracted, the edge being felt beneath the ribs. The spleen was not enlarged, and there was no jaundice. The fluid was collecting again, and the present condition was such that the child could live much longer. The parents were both healthy, and there was no history of either alcoholism or syphilis. There had been four children; the first suffered from curvature of the spine, the second was healthy; the third suffered similarly to the present case, the illness pursued a similar course, and ended fatally in about six months, *post mortem* examination revealing cirrhosis of the liver.

These two children were reared in different parts of the city, and the latter case was brought up entirely on sterilised milk for six months. Having after careful examination excluded alcoholism and syphilis, it was difficult to assign a cause for the cirrhosis in these cases.—Dr. ARTHUR HALL read a paper on hysteria in boys. A short account of 6 well-maked cases was given, in all of which during some part or other of their existence the diagnosis of central or cerebellar organic disease was made. In the different cases cerebral injury, tumour, or meningitis were simulated, and the persistency with which symptoms were kept up day after day and week after week was quite surprising. Unhappiness in surroundings either at school or at work was the common factor, and a slight injury or illness the immediate starting point. The diagnosis and exposure of the true condition by no means removed the symptoms at once.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At a meeting on April 13th, Dr. NEWSHOLME, President, in the chair, Dr. E. W. GOODALL read a paper on Difficulties in the Administration of Fever Hospitals, which he divided into those arising with the public, the general practitioner, and the sanitary authority, and those incident to the special character of the hospital itself. A frequent and not unreasonable ground of complaint was the occurrence of "return cases," the contracting by the patient in hospital of other diseases than that for which he was admitted, or the recurrence of the same. Much, however, might be done to avoid these accidents by careful examination—nasal and pharyngeal—of every patient before discharge, and instructions to the parents as to the symptoms of infectivity, and of probable sequelæ. The difficulties with the medical profession arose almost exclusively from alleged errors of diagnosis, for the detention of a non-infectious case exposed the patient to risk of infection, while his prompt discharge discredited the practitioner in the patient's opinion. Dishonest notification deserved no consideration, but otherwise every allowance should be made for the difficulties incident to early diagnosis. Those with the sanitary authorities arose only when a hospital received cases from other districts where different views were held as to the evidence of diphtheria, the period of detention in particular cases, etc. The most trying and responsible duties of the medical officer were, however, those connected with the management of the staff, and the appearance of infectious diseases other than those for which the patients had been admitted, especially if occurring just when they were about to be discharged. These might be avoided by isolation and observation, though where the occupied beds were counted by hundreds such second infections would occur. Another and more embarrassing class of cases were those of diseases not received in the hospital. He admitted scarlet fever, diphtheria, and enteric fever, but apart from the few cases sent in as scarlatina through errors of diagnosis, measles, whooping-cough, and mumps broke out from time to time among patients already in hospital for a week or a fortnight. These were all diseases of long incubation, and had doubtless been contracted by the patient before his admission, an accident that could not be avoided, though the spread of the disease to other patients might be prevented if the medical officer were informed of the existence of cases of such diseases in the same or adjacent houses, when he might put the patient in an observation ward for the requisite time. But it was not rare to find a case admitted with diphtheria develop scarlatina some days, or even a week, later under circumstances excluding the supposition of infection in the hospital. Here two explanations were possible: either that the symptoms of the one masked for a time those of the other, or that the appearance of the latter was delayed by the former, and its incubation period prolonged. Cases of diphtheria had communicated scarlatina to others in the ward, the diseases having coexisted, the angina being concealed by the exudation, and the rash being absent. Eighty such cases were admitted last year as diphtheria, and a very few as scarlatina only. To guard against such contingencies every fever hospital should be constructed with numerous small wards, not only for isolation and observation, but for the separation of different diseases, irrespective of the ages of the patients. The greater cost was the sole difficulty. There was no advantage in providing separate hospitals for different fevers, for other diseases would always creep in. A large proportion of the patients were infested with pediculi on admission, and the parents of clean children were naturally annoyed if they became infected. The best plan he had found to be that of cutting off the hair ostensibly on account of the fever, to which no objection was made, and there was ample time for it to grow again before the child returned home. Lastly, there were the difficulties connected with the larger staffs and the stricter discipline requisite in fever hospitals than in others. It was not easy to obtain a sufficient number of really highly-trained nurses. He found it best to keep up a full establishment, giving the nurses holidays during the slacker months; the necessity of this was evident when one considered that in some years no fewer than 25 per cent. were ill not so much from infectious diseases as from overwork. Dr. W. G. WILLOUGHBY allowed parents to see their children through windows and to converse by telephone, and in consequence perhaps of this indulgence the admissions at Eastbourne were over 90 per cent. of the notifications. Drs. MEREDITH RICHARDS (Croydon), KENWOOD, T. W. BOND. GWYNN, FIELD, and others having taken part in the discussion, the PRESIDENT said he had never found doubtful cases contract scarlatina in hospital; more often they had begun to desquamate when about to be discharged as simple sore throats. He believed that in many cases supposed to be post-scarlatinal the infection of diphtheria had been present from the first, but its manifestation delayed; and, on the other hand, that some of Dr. Goodall's post-diphtheritic scarlatina cases had been scarlatina alone, the intensity of the angina simulating diphtheria, but he examined all throats alike, and if the Klebs-Loeffler bacillus were found in any scarlatinal case it was sent to the "mixed" ward. Dr. GOODALL replied.

FORFARSHIRE MEDICAL ASSOCIATION.—At a meeting on April 6th, Dr. C. TEMPLEMAN, Vice-President, in the chair, Professor MACEWAN showed a private of the Royal Highlanders who was suffering from the effects of a Mauser bullet wound received at Magersfontein. The wound of entrance was to the right of the seventh cervical vertebra, and the wound of exit was between the tenth and eleventh ribs on the right side. There was some wasting of the scapular muscles, right trapezius, supraspinatus, and infraspinatus muscles, some anæsthesia over right shoulder, and also some difficulty in deep breathing, with slight cough.

Professor KYNOCH showed: (1) Two multilocular ovarian cysts removed by abdominal section; (2) papillomatous ovarian cyst the size of a child's head, causing retention of urine, and removed by section through the posterior vaginal fornix; (3) a uterus with a calcified fibroid in the anterior wall simulating vesical calculus, and removed by vaginal hysterectomy; (4) adeno-carcinoma of the body of the uterus removed by vaginal hysterectomy.—Dr. J. S. Y. ROGERS read notes of a case of labour complicated by a dermoid cyst. He dealt with the difficulty experinced in this case and the prognosis. Dr. R. C. BUIST read further notes of the case and the treatment adopted—namely, the removal of the cyst after delivery. He showed the cyst, and made some remarks on the specimen. Dr. STEELE MOON and Professor KYNOCH spoke, and Dr. ROGERS briefly replied.

—The VICE-PRESIDENT gave a short summary of 70 cases o typhus fever he had had under his care in the fever hospital during the last two years. As regards age, 21 were between 5 and 10; there were none between 15 and 20; only one above 60. As regards mortality, of 42 under 30 only one ended fatally; of 23 under 30, 11 were fatal. The time of the year when most cases occurred was referred to. The incubation period in a large number was longer than 12 days. The clinical features were next dealt with, and the complications which occurred.—Dr. STEELE MOON, Professor KYNOCH, and Dr. HUSBAND (Rajpootana, India) spoke on the paper. The VICE PRESIDENT replied.

REVIEWS.

RECENT WORKS ON SURGERY.

DURING the past few years several works dealing with intubation and tracheotomy have issued from the French press; but in most if not all of them the operations have been studied solely from the point of view of their application in diphtheria. In Dr. SARGNON'S work on tubage and tracheotomy,[1] however, this disease is expressly excluded, and the respective merits of the two measures are discussed with reference to their value in other forms of obstruction in and about the larynx. A considerable portion (260 pages) of the book is occupied with an account of intubation and tracheotomy considered solely as operations. The necessary instruments and the steps of the operations are described in detail. None of the tracheotomy tubes mentioned or figured are, in our opinion, so good as those known in this country as Parker's. Following this account we find a discussion of the accidents and complications that may arise during and after these operations. This part of the book is very well done. The author's observations on the difficulties experienced in getting certain children to do without their tubes after tracheotomy, and the causes and treatment of these difficulties are excellent. Considered merely as an operation we believe, with Dr. Sargnon, that intubation is preferable to tracheotomy. Being a woundless operation it is likely to be more acceptable to the friends of the patient, it leaves no scar, and it leads to none of those complications which may accompany or follow tracheotomy (sepsis, hæmorrhage, emphysema, broncho-pneumonia, stenosis of the trachea, etc.) Nor does it require an anæsthetic; though on this point Dr. Sargnon is evidently of the opinion that for tracheotomy local anæsthesia (cocaine) is preferable to general. Deaths during operation are more frequent in tracheotomy than in intubation. On the other hand, for the beginner, intubation is, perhaps, more difficult than tracheotomy; and intubated patients certainly require more personal supervision on the part of the medical attendant than those who are wearing a tracheotomy tube. We remark that Dr. Sargnon apparently agrees with a statement previously made by other French writers, to the effect that the future of a child who recovers from tracheotomy is more gloomy than that of one who recovers from intubation. The major portion of the book (some 380 pages) is devoted to a discussion of the indications for tracheotomy, intubation, or measures of a like nature, according to the character and site of the lesion. All forms of obstruction, acute or chronic, except diphtheria, are dealt with. Here, again, Dr. Sargnon has performed his task exceedingly well. His observations and conclusions are enhanced by accounts of cases illustrative of a particular line of treatment or clinical point. It is impossible to enter into details, so many and various are the conditions described. It may be said briefly that, in the author's opinion, intubation is indicated in cases of curable and dilatable stenosis of the larynx and upper part of the trachea, but tracheotomy when the stenosis is due to some incurable condition, or is situated low in the trachea. We feel sure that this book would be a welcome addition to the library of any practitioner to whose lot it falls to have to treat even a few cases of obstructive disease of the larynx apart from diphtheria, and we may add that there is much of it which would prove valuable reading to those who have the care of more than the average number of cases of the latter affection.

Mr. T. W. NUNN'S volume on *Cancer*[2] consists of fifty reports, of varying length, of cases of cancer, preceded by some remarks on the structure, life-history, regional frequency, age liability, and other points in connection with this disease. The clinical reports, which make up more than half the book, will not be found to afford much interesting reading, but the preliminary observations, though not dealing at length with modern views and problems relating to cancer, certainly claim perusal in consideration of the large experience of the author.

We have before us new editions of *Pye's Surgical Handicraft*[3] and WHARTON'S *Minor Surgery and Bandaging*.[4] The claim of these two works for renewed acceptance and approval on the part of those members of the profession for whom they are especially intended, is proved by the fact that in each case four editions have been issued in the course of eight years. Each work in its latest form has been thoroughly revised and enlarged, the former by Mr. BERTRAM ROGERS, the latter by Dr. Wharton himself. Those who have benefited by former editions of the late Mr. Walter Pye's work, will doubtless be gratified to find that notwithstanding the necessary extent of revision, Dr. Rogers has preserved, as far as possible, the characteristic and lucid style of the original author. Dr. Wharton has done much to improve his work, which by reason of its clear type and profusion of excellent illustrations, as well as by its lucid teaching, seems very likely to maintain its repute as a useful handbook for both practitioner and student.

Professor LESER, of Halle, has written a *vade mecum*[5] for the purpose of giving to the young practitioner called upon to operate such instruction as will enable him quickly to recall the salient points of any operation. In the 190 pages practically all the common operative procedures are described. Special stress is laid upon those methods—tracheotomy, herniotomy, and the like—which are called for in cases of urgency, and very properly so; but in such a work as this the academic methods for the excision of joints—the wrist, for example—hardly demand insertion. The work is succinctly and clearly written, and is well up to date. The illustrations on the whole are good and helpful, but it is really time that some of them, reproduced from Billroth and Pitha and other obsolete works, should be superseded.

Dr. J. C. DA COSTA has presented us with an English translation of the *Atlas* of operative surgery of Dr. Zuckerkandl,[6] the original German edition of which we reviewed in 1898 (see BRITISH MEDICAL JOURNAL, vol. ii, p. 1436). The coloured plates and the illustrations are apparently printed from the blocks of the German edition and require no further comment. The aim of the translator has been to give the spirit rather than the exact words of the author, and on this account he has added a few explanatory notes. We cannot say that Dr. Da Costa has succeeded well in this undertaking. In many places there are long-involved sentences which betray their origin from the German, and are very difficult to understand. In other places the terminology is not well chosen; thus, on page 316, when discussing intestinal anastomoses, the following occurs: "Murphy's button renders possible rapid effectuation of accurate union of divided intestinal lumen, as well as the establishment of anastomoses between portions of the intestinal tract." The anatomy is also occasionally at fault; thus, on page 72, in the figure, the adductor group of muscles are called the abductors, and the text on page 74 referring to this figure makes the same mistake, although later on in the same paragraph the muscles are correctly named. As we said in our former review, many of the illustrations are well executed, but the text is incomplete.

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[1] *Tubage et Trachéotomie, en dehors du Croup, chez l'Enfant, et chez l'Adulte.* [The Use of Intubation and Tracheotomy in all Diseases except Diphtheria in the Child and the Adult.] By Dr. A. Sargnon. Paris: J. B. Baillière et Fils. 1900. (Roy. 8vo, pp. 658, 3 plates and 47 figures. Fr. 10.)

[2] *Cancer.* Illustrated by One Thousand Cases from the Registers of the Middlesex Hospital and by Fifty Selected Cases of Cancer of the Breast. By Thomas William Nunn, F.R.C.S., Consulting Surgeon to the Middlesex Hospital. London: Henry J. Glaisher. 1899. (Crown 8vo, pp. 89. 21 illustrations. 2s.)

[3] *Pye's Surgical Handicraft.* A Manual of Surgical Manipulations, Minor Surgery, etc. Fourth edition. Revised and edited by Bertram M. H. Rogers, B.A., M.D., B.Ch.Oxon. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1900. (Crown 8vo, pp. 566; 264 illustrations. 10s. 6d.)

[4] *Minor Surgery and Bandaging.* By Henry R. Wharton, M.D., Demonstrator of Surgery in the University of Pennsylvania, Surgeon to the Presbyterian Hospital and the Children's Hospital. Fourth edition. London: Rebman, Limited. 1899. (12mo, pp. 594; 562 illustrations. 14s.)

[5] *Operations-Vademecum für den praktischen Arzt.* Von Professor Dr. E. Leser, Professor au der Universität Halle. Berlin: S. Karger. 1900. (Demy 8vo, pp. 190, 144 illustrations. M.5.)

[6] *Atlas and Epitome of Operative Surgery.* By Dr. Otto Zuckerkandl. Edited by J. C. Da Costa, M.D. London: The Rebman Publishing Company. 1898. (Crown 8vo, pp. 396, 217 Illustrations and 24 Coloured Plates, 12s. 6d.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICINAL AND DIETETIC PREPARATIONS.

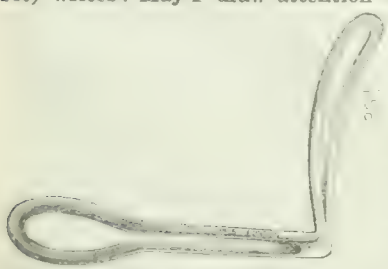
Fortoin, Preparation of Cotoin.—Overlach (*Centralbl. für Inn. Med.*, March 10th, 1900) has found true cotoin, which is a crystalline substance extracted in 1875 by Jobet from coto bark, all that has been claimed for it by Albertoni, Yeo, and others, in the treatment of the most diverse forms of diarrhœa. But he considers fortoin better than cotoin. Fortoin is formaldehyde cotoin or methylendicotoin, the formula being:

$$CH_2 < \begin{matrix} C_{13} H_9 O_3 \\ C_{14} H_{11} O_4 \end{matrix}$$

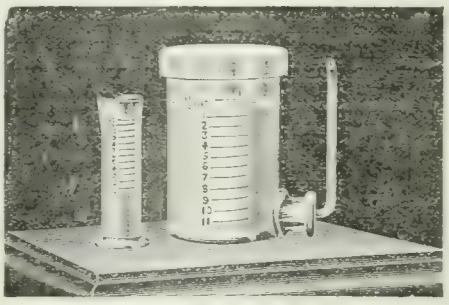
It is a yellow, tasteless, crystalline powder, smelling faintly of cinnamon, readily soluble in chloroform, acetone, and glacial acetic acid, slightly soluble in alcohol, ether, and benzol, insoluble in water, but very soluble in alkalies. This body has recently been prepared by Zimmer and Co. by the action of formaldehyde on cotoin. Overlach considers it preferable to cotoin, because it is tasteless, and has far greater bactericidal power; its one disadvantage, which it shares with cotoin, is its expense. The most active dose for adults is 4 gr. three times a day; larger doses—up to 7½ gr.—are well borne, but unnecessary. In 30 cases of diarrhœa, both acute and chronic, many of which had proved intractable to other drugs, Dr. Overlach obtained surprisingly rapid cures, being equally successful in the epidemic diarrhœa of infancy and the chronic diarrhœa of phthisis. Like cotoin, it acted neither as an astringent nor as a narcotic, but produced an active dilatation of the intestinal vessels, and a consequent improvement in the nutrition of the intestinal mucous membrane, and a rapid regeneration of its cast-off epithelium. For this reason Overlach believes that recovery is permanent, while under tannin preparations it is often temporary, since with the latter drug the defective epithelium is not restored. The bactericidal action of fortoin is also of importance, and renders it useful as an application in such diseases as septic tonsillitis and gonorrhœa. Severe cases of the last-named disease were cured in fourteen days, and slight in three days, with injections of a fortoin emulsion made by mixing 1 gr. of fortoin with 10 c.cm. of 95 per cent. alcohol and 150 c.cm. of water, and adding a teaspoonful of this to 100 c.cm. of water. Fortoin was also tried in 8 cases of enteric fever, in 5 with excellent, and in 3 with negative results. It never caused hæmorrhage, though it would be probably contraindicated in severe intestinal congestion.

MEDICAL AND SURGICAL APPLIANCES.

Perineum Guard.—Dr. J. M. BARBOUR (Swanage, Dorset) writes: May I draw attention to a simple instrument which will be found useful in preventing perineal laceration during childbirth? In conception and application it is suggestive of the "shoe-horn," and similarly lends itself to a double movement: (*a*) A forward scooping one in which the fœtal head is brought forward under the pubic arch, and (*b*) a backward one, in which stretching of the perineum may be accomplished without the repeated introduction of the fingers, and where the instrument may be left *in situ* during the interval between the pains. It is in its first application, however, that it will be found especially useful, for this forward movement of the fœtal head can be only imperfectly assisted by digital manipulation of the greasy vertex, and is less offensive than the suggested introduction of the fingers into the patient's rectum for this purpose. It may be had from Messrs. Down Brothers.



Domestic Production of Humanised Milk.—Dr. H. J. BLACKLER (Redhill) had devised the apparatus, depicted in the accompanying photograph, to facilitate the alteration of cow's milk so as to resemble human milk in its composition. A pint and a half of fresh cow's milk is strained through clean muslin, and the large jar is filled up with it to the upper mark. The jar is then covered with a glass cover and set aside in a cool place for eight or twelve hours, or in a refrigerator for two hours, when nearly all the cream will have risen to the surface. The amount of cream can then be estimated. Having decided on the degree of dilution desired, the glass tube is turned downwards and the under part of the milk run off until the upper margin of the cream reaches the desired number; the tube is then turned up again. The smaller measure is then filled with sugar of milk up to the same number as that on the milk jar. This quantity of sugar is added to the milk; boiled water or cold fresh barley water is then added to make up the quantity to a pint and a half. The milk thus prepared can be sterilised in bulk, or bottles if desired. The apparatus is simple, and the required modification of the milk ought to be easily carried out by any intelligent nurse. The apparatus is called the lupa humaniser, and can be obtained, price 10s. 6d., from Messrs. W. Toogood, Heddon Street, Regent Street, London, W.



LITERARY NOTES.

DR. J. WHITRIDGE WILLIAMS, Associated Professor in Johns Hopkins University, Baltimore, is writing a textbook on obstetrics, which is intended to be the successor of the late Dr. Lusk's classic work on the same subject. It will contain much original work and many original illustrations in histology.

Theses for the Doctor's degree in the German universities had to be written in Latin till about thirty years ago. Another step towards the abolition of Latin as the official academic language in the Fatherland is now contemplated, as it is said to be intended to use German instead of Latin in Doctor's diplomas and other official documents.

Mr. Joseph C. McGuire, a well-known archæologist of Ellicott City, Maryland, contributed to the reports of the Smithsonian Institution in 1897 a monograph entitled *Pipes and Smoking Customs of the American Aborigines Based on the Material in the United States Museum*, which last year was published as a separate volume. The pipes of numerous tribes are illustrated; they are made partly of stone or wood, partly of terra-cotta and clay. A large number of them were found in the mounds of the Ohio and Mississippi valley. The bowls are fashioned in the most varied shapes, representing birds, mice, and other rodents, toads, frogs, lizards, men in a recumbent, sitting, or squatting posture, human hands and faces, etc. The tubular shape was widely in use in ancient America, and pipes of this apparently inconvenient form are found in stone, pottery, steatite, copper, and bone. There are also stone urn-shaped bowls, stone bowls with thong holes, antler pipes, fossil pipes, various kinds of trade pipes, brazed iron pipes, tomahawk and monitor pipes. The author has collected passages referring to pipes and smoking in the historians of past centuries, and gives his ideas about the formation of types in smoking implements. Mr. McGuire thinks that the use of tobacco for snuffing was peculiar to South America, and the uncleanly habit of chewing is but seldom and indistinctly referred to in any part of the western world.

THE WAR IN SOUTH AFRICA.

THE MARCH FROM MODDER RIVER TO BLOEMFONTEIN.

By W. Watson Cheyne, F.R.S., F.R.C.S.,
Consulting Surgeon with the Field Force, South Africa.

Bloemfontein, April, 1900.

A short account of Lord Roberts's great march from Modder River to Bloemfonteln may be of interest to readers of the British Medical Journal, more especially as it illustrates the difficulties attending the treatment of the wounded under conditions different from those encountered during the earlier operations of this war.

Before this march began the various actions had taken place in close proximity to a railway line on which admirably-fitted hospital trains were at hand to carry off the wounded with comparatively little disturbance, and lodge them in well-appointed stationary hospitals within a short time. Indeed, in such places as Modder River the field hospitals were able to accommodate the more seriously wounded till such time as it was safe to move them—in fact, they more resembled stationary hospitals. Further, there was ample transport from the field of battle, and only a short distance for the wounded to travel; hence, they were rapidly collected and quickly lodged in tents, where they could remain till it was safe to send them to the base.

Difficulties of Transport.

The conditions on this march were very different. In the first place, as a matter of military necessity, it was considered essential to cut down the number of ambulances with each division from the normal number of ten to two. The possibility that very serious difficulty and delay in collecting the wounded from the battlefields might result from this decision was repeatedly and emphatically pointed out to the military authorities by the medical department, but without avail. The justice of this warning was fully borne out at the battle of Driefontein. Not only was the number of the ambulances cut down, but all the other equipment, tents, etc., had also to be reduced, and as a result, many of the wounded, more especially at Paardeberg, had to bivouac under the shade of the trees, where available, or, failing them—and there are no trees in this country except along the river beds and around farmhouses—under temporary shelters made with blankets. This diminution of baggage affected all the arrangements: for example, it was often impossible to get boiled water, mainly because, owing to the small number of kettles carried, all were required for cooking. In part, however, this was due also to the difficulty of getting fuel and to the small amount of water obtainable. Such water as could be got was not only small in quantity but often extremely muddy so that the ordinary charcoal filter did not clear it properly, and very soon became so choked up that the water ran through very slowly; for the latter reason the Berkefeld and similar filters were of very little use.

In some of the field hospitals operations had to be done in the open, as the operating tent was required for the serious cases, and if a dust storm came on in the middle of the operation the conditions as regards asepsis were by no means ideal. At Paardeberg antiseptic dressings ran out at one of the hospitals, but I was able to tide over this difficulty, because, owing to the generosity of Lord Lister, I had with me some double cyanide powder with which we were able to impregnate sufficient material.

In this march, as has been said, we were away from a railway, the distance from the base increasing day by day. Yet the sick and wounded had to be sent back; they could not be left on the veld. It is a very different thing to transport wounded a short distance to a comfortable ambulance train, well supplied with every convenience, from putting them into buck or ox waggons, and sending them for two, three, or (in the case of Poplar Grove) four days' journey over the veld, with no roads, in springless carts, without suitable protection from the sun or rain, and without the comfort which a recently-wounded man requires. The agony which must be endured under such circumstances by many cases such as compound fractures, and the harm which may result to the patient, must be very great. In more than one case the result of the movement was to precipitate a fatal issue. Under the existing circumstances, however, no other course seemed possible. Military considerations prevented our carrying the wounded on with us (which, indeed, would have been almost as bad) and were equally against leaving them behind when we moved on. The ideal plan would have been to have sent back all those whom it was safe to move, and leave the serious cases behind at a field hospital at each stopping place with the necessary medical and other attendants. It was not, however, considered safe to do so at Paardeberg; there would have been difficulty in providing food and attendance, there was no house, and tents could not be spared. At Driefontein, on the other hand, though the communications with Kimberley had been closed, and there were no empty waggons available to take on the wounded, there was a house, and tents could also be spared, as no further fighting was expected until the army reached the neighbourhood of Bloemfontein. This impossibility of transporting the patients was a very fortunate thing for them. They were left behind with great advantage to their prospects of recovery.

Food, Water, and Sickness.

The amount of sickness in the force during the long and trying march was remarkably small; and probably in no other climate would so little harm have resulted. During the day the heat of the sun was scorching, and at first quite a number of men suffered more or less severely from heat stroke and exhaustion. On the other hand, in the early morning before dawn the cold was often great, while on several nights rain fell, and, of course, as no tents were carried, everybody got soaked, and did not get dry till the sun came up. For the first few days the thirst was terrible, and many who had campaigned in India said that the thirst here was much worse. All good resolutions about boiling or filtering water were thrown to the winds; water, no matter how muddy, had to be got as quickly as possible. For some time we were on half rations, and the fresh meat was often so tough as to be quite uneatable. On several occasions, where the marches were long, the convoys did not arrive till late or not at all, so that even the half rations were not obtainable. The man, therefore, who had not taken the precaution of carrying something in his saddle-bags had to go supperless to bed. "To bed" is rather a euphemistic expression, for when the baggage did not come in, "bed" simply meant lying down on the veld without covering of any kind. And yet, in spite of all this, after a few weakly members had been weeded out in the early period, the health of the troops was excellent.

The main trouble and one from which almost all the force has suffered at one time or another has been diarrhœa, or, as it has come to be more elegantly called "Modders" or "Riets," according to the river water which was being drunk, and according to the severity of the case, the former being considered more severe than the latter. In some cases it has been so severe as to necessitate the admission of the patients to the field hospitals, or even their return to the base. In the great majority of cases, however, the trouble has been slight and easily controlled, and was probably due either to salines dissolved in the water or to the irritating effect of the mud. Since our arrival in Bloemfontein enteric fever is making its appearance among the troops. The disease was probably contracted at Paardeberg; indeed, considering the state of the Modder River at that camp produced by the waste from Cronje's laager above, and the impossibility of preventing the troops using that water, it is surprising that the result was not much more serious.

From Modder River to Jacobsdal.

It may perhaps be of most interest to your readers if I give a short account of the march from February 12th, when Lord Roberts left Modder River, to March 13th, when he entered Bloemfontein, referring more especially to the points bearing on the treatment of the wounded.

On Friday, February 9th, while at Orange River, I received a telegram from Colonel Stevenson, R.A.M.C., Principal Medical Officer with Lord Roberts's force, asking me to join the headquarters' staff, which I accordingly did at Modder River on Sunday, February 11th. Next morning (February

12th) early we left Modder River by train for Enslin, and subsequently rode to Ramdam in Free State territory, a distance of about 12 miles. Thence we went next day (February 13th) to De Kiel's Drift, on the following day to Waterval Drift, on Thursday (February 15th) to Wegdraai, and on Friday to Jacobsdal. This completed the first part of the expedition, and during this time General French's division had preceded us and entered Kimberley, and General Kelly-Kenny's division had followed more slowly in his tracks. This was in most respects the most trying part of the march. The heat during the day was very great, and on the first and second days especially led to a considerable number of men falling out from fatigue and heat stroke, and some 60 had to be sent back. Beyond some scrub there was no vegetation, and the passage of large numbers of troops and the enormous lines of transport stirred up the dust, so that dust storms were frequent. Further, the convoy arrived very late, on the first day especially, and those unaccustomed to this sort of campaigning, and unprovided with food in their saddlebags, had to go without.

From a surgical point of view there was little of importance during this part of the march. On arriving at De Kiel's Drift on the Tuesday (February 13th) we found that General French had had a slight engagement on the previous evening, and that four wounded had been left behind. With the exception of a little bugler boy who was wounded in the foot—a perforating wound through the front part of the foot—while running up the river bank, as he said, to get a shot at the Boers, the cases were not serious. The next wounded with whom we had to deal were at Wegdraai on Thursday, February 15th. A small fight took place between there and Jacobsdal, in which a few were wounded, while some others were brought in from Waterval Drift. We had left that drift about 5 A.M. on Thursday morning, and, after the army had gone on, a considerable force of Boers attacked the rear part of the convoy, which had not yet moved on, and captured a considerable number of waggons. About 16 wounded were brought in and treated early on Friday morning, February 16th. With one or two exceptions, however, the wounds were comparatively slight, and the wounded were taken on to Jacobsdal in the afternoon and sent to Modder River.

The German Ambulance.

At Jacobsdal we visited the German ambulance, meeting Drs. Kettner and Hildebrand, assistants of Professors Bruns and Esmarch. They very kindly showed us all their arrangements and cases, many of the latter being of considerable interest. Their hospital was established chiefly in the school buildings, and was very completely fitted out. A large proportion of the wounds were from shrapnel, and, as opposed to the experience on the English side, they told us that they had only met with a small proportion of bullet wounds. Consequently the skin wounds were frequently large, and in a considerable proportion suppuration was going on—indeed, had already begun when they were admitted. The experience of the surgeons to this ambulance in abdominal wounds was not very good, but on the whole they were inclined to leave them alone, in the first instance at any rate. They had not had a large number of wounded. After the battle of Magersfontein they had about 100.

Paardeberg.

We left Jacobsdal on the morning of Monday, February 19th, at 4 A.M., and rode through to Paardeberg, a distance of about twenty-seven miles, with a halt of two hours at Klip Kraal drift. On arriving there about 1 P.M. we found an action going on, chiefly artillery, and heard that a big fight had taken place on the previous day in which over 800 had been wounded. In the evening we took up our quarters on the banks of the Modder River, about three miles below Cronje's laager, and in the immediate neighbourhood of the two field hospitals of the Sixth Division, under Majors Pike and Ford respectively, one of the field hospitals of the Ninth Division under Major Murray, and the Australian field hospital under Major Fiaschi; the other field hospital of the Ninth Division, under Major Sawyer, was at a drift about a mile further down the river. During the previous day's fight the field hospitals had been shelled by the Boers without, however, anyone being hurt, but they had had to shift their quarters. As the result of the battle the Boers had retired higher up the river, the banks of which at this part were pretty high, but sloping, and lined with small trees (acacias, etc.). The hospital tents were pitched just above the banks of the river, where there were fortunately also some larger trees which gave shade to those patients who could not be accommodated in tents. We bivouacked halfway down the bank, and might have been picnicking on the banks of the Thames but for the occasional booming of big guns and the rattle of rifles.

Below Cronje's Laager.

The water of the Modder was, as its name (Mud River) implies, thick with mud and foul smelling from the dead animals and refuse from Cronje's laager. Water bottles containing it when opened frequently went off with a pop, and the gas which escaped was of a distinctly disagreeable odour. Hence, as far as possible, drinking water was brought in the water carts from a farm about five miles away. There was not enough of this drinking water, however, to spare for surgical purposes, so that the only supply available was from the river, while owing to the small number of kettles it was impossible to get a sufficient quantity boiled. The plain around the camp very soon became a sandy desert, so that the air was always full of dust, and dust storms were frequent. For some days the number of the wounded was so great that the operating tent in one of the field hospitals had to be utilised for the patients, and operations had to be undertaken in the open. Although the greater number of the patients were those wounded in the fight of February 18th, still a few came in every day, either as the result of small fights with those trying to relieve Cronje or as the result of sniping.

During our stay at Paardeberg the weather was fairly good, but on two nights there was much rain. On Saturday, February 24th, and during the night, it rained heavily, and the river rose considerably, with the result that during the whole of Sunday there was a constant procession down the stream of dead and putrid horses and other animals from the Boer camp. Several hundreds were counted, and as a rule as many as fifteen or twenty were to be seen at one time. The stench from these animals was very bad, especially if they happened to be temporarily arrested by branches of trees, and so on. Hence the greatest care had to be exercised in the sanitation of the camp, and it says a great deal for the arrangements adopted that no illness, except the ever-present "Modders," developed. It was, however, impossible to prevent the men drinking the river water: and that is, I believe, the source of the considerable number of cases of enteric fever which have developed since our arrival at Bloemfontein. Indeed, the state of the river was so bad that the removal of the camp had become a necessity when the brilliant attack of the Canadians during the early morning of February 27th fortunately brought Cronje's dogged resistance to an end.

Above Cronje's Laager.

Above the laager the conditions were very different. There the water was good, though muddy: the veld had not yet become trodden down, and the troops stationed there were in good condition. Since our arrival here the number of cases of enteric fever developing among these troops has been quite small. In company with Major Bond, R.A.M.C., I rode over on February 23rd to the part of the field hospital of the Seventh Division under Major Franklin, which was located on the banks of the river about two miles above the laager, and saw several interesting cases. The camp was very pleasantly situated on the banks of the river, and the wounded were doing well, and were, as indeed was the case in all the field hospitals, excellently looked after.

In Cronje's Laager.

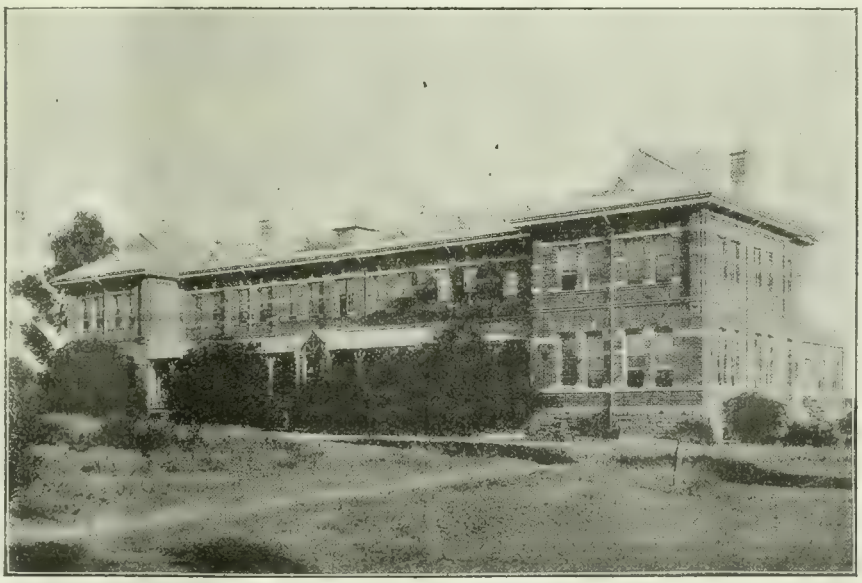
On the morning of Tuesday, February 27th, after Cronje had come in, Colonel Stevenson, Major Sylvester, R.A.M.C., his secretary, and I rode out to the Boer laager to see what assistance was necessary for the Boer wounded. The laager presented an appalling picture of devastation, and the stench was frightful. Dead animals in all stages of decomposition were lying about everywhere; a house close to the drift, in which a large number of horses had been stabled, had had its gable blown in, and was full of dead horses. The greater

number of the waggons were in ruins, some overturned, some more or less completely burnt, while others were represented by a mass of broken wood and iron. The ground around was pitted and yellow from the lyddite shells, and strewn with fragments of shell, shrapnel, broken carts, and all sorts of *débris*. The laager was in most parts surrounded by trenches—or, rather, rifle pits—each holding one or two men, and completely sheltering them. The banks of the river were full of deep burrows in which the men had lain, and in which the wounded were found.



Grey College, Bloemfontein.

So well concealed were these burrows that it was only after repeated search that one could be sure that all the wounded had been found; their condition was lamentable in the extreme. Their doctors and ambulances had left them and gone into Jacobsdal when the flight from Magersfontein took place. The wounded had been lying in the foul laager without medical attendance or dressings of any kind, and as a consequence the wounds were very foul, and many of the patients were in a deplorable condition from sepsis. The septic state of the wounds is very well illustrated by the fact that next day, while we were again out at the place where the Boer wounded had been collected, secondary hæmorrhage occurred in two cases, and would have proved fatal had we not happened to be on the spot.



Dame's Institute, Bloemfontein.

Cronje's resistance for so long a period may possibly indicate bravery, but his inhumanity in keeping his men for days in this deathtrap, long after it was fully evident that escape was impossible, and in opposition to the wishes of the great majority of his followers, cannot be too strongly condemned. Suspecting the state of matters, Lord Roberts, several days before the surrender, offered to take over the wounded, and have them carefully attended to, and when Cronje refused that he offered to send in medical men to dress the wounds and attend to the patients. This offer was also refused by Cronje unless the medical men stayed with him altogether, a condition to which Lord Roberts naturally could not accede. Lord Roberts's humanity was also strikingly illustrated by the way in which he limited his offensive operations to what was necessary to keep up pressure, and convince Cronje of the hopelessness of his case, without destroying more lives than could possibly be avoided. Having collected the wounded, of which we counted 159 (a few more were subsequently discovered), and dressings having been applied by several members of the Royal Army Medical Corps who had come out, they were carried across the drift on stretchers, for the water was too deep for ambulance waggons to cross, and were deposited on the river bank in a nice shady spot about a quarter of a mile higher up the river. Two of the Boer doctors having in the meantime arrived from Jacobsdal, they were provided with dressings, food, and such covering as could be spared, and the wounded were handed over to their charge. I fear that there was not very much done for them, however, in the surgical way, for several cases—such as gangrene—requiring immediate operation were left alone. A few days later some of the patients were sent back to the German Hospital at Jacobsdal, and the majority to the hospitals at Kimberley.

The Action at Poplar Grove.

We stayed in the camp at Paardeberg till March 1st. Then we moved on about five miles to Ossfontein, where there was a farmhouse, and where we remained for a few days to allow the horses to recruit, and to get up supplies. As transport became available, the sick and wounded were sent back to Modder River, and later to Kimberley, in detachments, so that it was not necessary to take any on to Ossfontein.

On the morning of March 8th we left Ossfontein. The Boers, who were in large force in the immediate vicinity, were attacked and after some hours completely driven back, with very little loss on our side. In fact, with the exception of

some of the mounted troops, who had about twenty men wounded at Poplar Grove, where the last stand of the Boers was made, there were no losses. The army bivouacked at Poplar Grove that evening, and most of the troops remained there till March 10th. Of the wounded 6 were serious cases: 1 head case (which I trephined), 2 compound fractures, and 3 abdominal cases. All but the 3 abdominal cases were sent back to Kimberley on March 9th, but it was thought best to take on the latter with us for one day's journey and keep them under observation rather than to send them back four days' journey to Kimberley.

The Battle of Driefontein.

On March 10th we moved to Driefontein, where the Boers were again met with in force, and where another battle was fought which resulted in their utter rout and the clearing of the road to Bloemfontein. In this battle we had about 400 wounded, and it was here that the deficiency of ambulances became most evident. The greater number of the men were wounded on a ridge in front of the camp, and fell to the lot of the field hospitals of the Sixth Division, especially to Major Pike's. The action was not over till dark, and, though assistance was obtained from other bearer companies, the wounded were not all found and collected till well on in the night. Only 4 ambulances were available for carrying them to the field hospital, and as the distance was considerable and as each ambulance only takes 2 lying-down cases and 4 sitting up, it may be readily understood that a good many hours elapsed before all the wounded were got to the hospital. In fact, next morning about 11, when Lord Roberts was riding over the battlefield on his way to the next stopping place, he came on a group of wounded, who had been collected but had not yet been removed. As a consequence probably of this incident, he has ordered up the rest of the ambulances, and has issued an order in which he states that as under the system necessary on this march such delay was unavoidable, he desires that, should similar circumstances arise in future, help should be afforded to the R.A.M.C. in collecting and bringing in the wounded by fatigue parties sent by the officers commanding the regiments and corps to which the wounded belong.

As transport was not available to take these patients on with us, and as the communications with Kimberley were no longer kept open, it became necessary to leave the patients behind. The field hospital was therefore moved down to a farmhouse in the valley, and left there with supplies and medical attendance. Thus, although the patients had to be moved about two miles on March 11th, they were spared the long journey in buck and ambulance waggons till some days after the injury. This absence of transport was, I believe, a very fortunate thing for the patients. Wherever possible, the severely wounded should be left in the field hospitals for some days and not hurried back to the base. On March 16th, waggons were despatched to bring in the wounded to Bloemfontein (three days' journey), and at the same time Colonel Stevenson sent word to Major Pike telling him to use his discretion about sending on his patients, and advising him to keep back the serious cases. This advice was acted on, and they followed a week later. The further three days' march and entry of the army into Bloemfontein on March 13th has already no doubt been fully recorded in the newspapers, and I need not describe them.

The Work of the R.A.M.C.

In my next letter I shall make some remarks about the progress of the wounds, but before going any further I may here express my opinion that under the difficult circumstances which I have fully referred to, the work of the R.A.M.C. is deserving of the greatest praise. The task with which Colonel Stevenson had to cope of carrying out the medical arrangements of this large force (more especially the temporary accommodation and transport of the sick) with very insufficient materials, was done without a hitch, while each individual member of the R.A.M.C. strove not only to do his best for the sick and wounded, but also to add to the reputation for efficiency which the Corps has already deservedly won in this campaign. Attention is now being directed to the lessons taught on this march, and in the further course of the campaign an attempt will be made to overcome the difficulties as regards water for surgical purposes, dressings, etc., to which reference has already been made.

Bloemfontein.

Bloemfontein is a pretty town of about 6,000 inhabitants, lying in a hollow at the base of kopjes which rise highest on the north, while a plain stretches out from it for miles eastwards; the streets are wide, the houses one-storeyed, and surrounded by trees, and there is no drainage system, earth closets being everywhere adopted. The water supply consists in part of rain water, every house being provided with large tanks for its collection, in part of well water, and in part of water recently brought from the Modder River, from a distance of about 22 miles. The town is very healthy, with the exception of enteric fever, which seems to be endemic in most South African towns. Its origin here is difficult to trace. Of water the well water is that to which the disease is most often ascribed, but I cannot but think that the dust and flies have much to do with its persistence and spread.

Improvised Hospitals.

Bloemfontein has a considerable number of public buildings, more especially schools; it is, indeed, the chief educational centre for the Free State. At the present time these schools, naturally enough, are empty, and they as well as some other public buildings, have been taken over for hospitals by Colonel Stevenson. In one week Colonel Stevenson and his Secretary (Major Sylvester) took over, fitted up, and fully equipped with medical and nursing staffs, buildings holding, in all, 510 beds. The buildings taken over, so far, are St. Michael's Home and Cottage Hospital, a large girls' boarding school carried on by Anglican Sisters; here 100 beds have been established, and the nursing is being done by the Sisters of the home, and by the R.A.M.C. orderlies. The Dame's Institute, another large boarding and day school for girls, has also been in part taken up and fitted with 150 beds. Grey College, the advanced school and college of the State, which was founded by Sir George Grey, provides 100 beds. The old Free State barracks have also been converted into a hospital, with 100 beds. The Convent furnishes 60 beds, and the industrial home—a school for boys—has 50 beds. All these institutions were in full working order and full of patients ten days after our arrival here, the patients being partly sick from the troops around and partly the wounded brought up from Driefontein. The work involved in doing all this will be readily appreciated by those acquainted with hospital organisation. Further accommodation has now been provided in the Raadszaal (Parliament House), which has been turned into a stationary hospital of 100 beds, and as soon as the railway is in working order No. 5 Stationary Field Hospital (with 510 beds), and the Portland, Irish, and Langman Hospitals will come up. In fact, it is probable that Bloemfontein will now become the hospital base instead of Capetown, as the weather at Capetown in winter is cold and wet, and not at all agreeable, while here it is dry and healthy.

MOVEMENTS OF BASE HOSPITALS.

From Our Special Correspondent in Capetown.

April 4th, 1900.

Hospital Arrangements at Bloemfontein.

Arrangements are being rapidly made to constitute Bloemfontein an advanced medical base. No. 8 General left here last week by sea *viâ* East London; the Portland is under orders to follow. Four buildings have so far been taken over at Bloemfontein for hospital purposes: the Dame's Institute, the Grey College, St. Michael's Home, and the Industrial Institute. The Dame's Institute is the principal girls' high school of the Free State; and the Grey College, a similar institution for boys. Both are fine, well-built structures, with spacious dormitories and class rooms, and an abundance of smaller rooms. The latter, especially, might have been built for hospital purposes. The Dame's Institute is made up to about 150 beds, and the other three to about 100, but without any difficulty St. Michael's and the Grey College could each take another 50. Adjoining St. Michael's, which is a Church of England institution, partly a girls' school and partly a home for waifs and strays, carried on by the All Saints' Sisters, is the Bloemfontein Cottage Hospital, also under the management of the Sisters. This was, until a few

years ago, the only hospital in Bloemfontein. It is now being used for officers. It has about a dozen beds. The magnificent Raad Zaal, or Parliament House, is also being taken over for hospital purposes, but is not yet equipped. Besides these buildings, the large and very well fitted Volks Hospital is being utilised, and there are several field hospitals under canvas. It is evident that there need be no lack of suitable accommodation at Bloemfontein. Supplies are a little short still, owing to the insuperable difficulty of getting things up in sufficient quantity by railways, crippled with broken bridges and overweighted with work, but the military medical authorities are doing their level best to overcome difficulties. Colonel Stevenson, who is now Principal Medical Officer of Lord Roberts's force, is on the spot, and directing all arrangements, assisted by Major Sylvester, who has been withdrawn from Wynberg to return to his old post as Colonel Stevenson's secretary. Two more capable organisers hardly exist in the army. Nursing sisters of No. 9 have already gone to Bloemfontein, and the whole hospital is to follow.

An advance Medical Stores Depôt has been established at Bloemfontein, under Captain Connor, R.A.M.C., and the Red Cross Society is following up the troops most energetically. Lady Edward Cecil and Lady Charles Bentinck have just gone up to Bloemfontein in order to personally supervise the supply of comforts, and with a view to meeting the altered conditions of the campaign, which will henceforth be carried on very much apart from the railways; they have taken up two Red Cross waggons, which will be used to carry comforts to the isolated field hospitals.

Enteric Fever.

Enteric fever is frightfully prevalent everywhere. No. 6 at Nauuwpoort is almost a typhoid hospital, and the same is to be said of the station hospitals. At No. 1 about two-thirds of the medical cases are of this disease, at No. 5 fully half, and the proportions elsewhere are somewhat similar. At Kimberley the hospitals are almost enteric wards; and yet, curiously enough, there is still a comparative absence of dysentery. There have been only a moderate number even in the field hospitals, and at the base very few indeed, the latter fact proving that even the cases at the front must be of a mild character or they would have found their way down here, as dysentery cases form a class which are invariably cleared out of field hospitals whenever they assume a chronic character. Most of the cases have done remarkably well, and the majority have gone back to duty in a few weeks.

Sickness at Kimberley.

The Canadian Red Cross Society has the direction of affairs at Kimberley, where there are four hospitals, accommodating a thousand patients, and nearly full. Enteric fever is again the staple there, and the results are appallingly bad, probably owing to the utterly broken-down condition of the men who have had to face the disease after a course of starvation during the siege. The Cape Police are suffering very severely. One enteric ward in the Kimberley Hospital (civil) is almost entirely occupied by them, and I am informed that for a week or two they had about one death a day out of some 40 beds. Another factor accountable for the bad results is the difficulty of obtaining sufficient fresh milk. Nobody can help this. Milk cannot be got; but its absence is sorely detrimental to enterics. At Bloemfontein a fair supply of milk was obtained locally almost at once. The farmers there had of course not been harried as was the case at Kimberley. Too much praise cannot be given to the medical authorities for the rapid way in which they are getting things into shape at both these places.

THE IRISH FIELD HOSPITAL WORK.

By Sir William Thomson,
Surgeon-in-Chief, Irish Hospital, Field Force, South Africa.

Naauwpoort, April 2nd.

The Prieska Expedition.

I mentioned in a former letter that in obedience to a telegram from Lord Kitchener I despatched a section of the Field Hospital to De Aar on March 11th, under the command of Dr. George Stoker. With him were Dr. Friel, with Dr. Counihan and Mr. MacIlwaine as dressers, a ward master, 18 orderlies, with 10 Cape boys, the equipment consisting of 6 waggons, 2 Scotch carts, 1 water cart, 66 mules, and 4 ponies. Dr. Stoker reports to me that they arrived at De Aar on March 12th at 1 A.M. The column which they were to accompany consisted of 2,000 men. The hospital started on March 15th. The first march was to Britstown, thirty-one miles. At 5 o'clock on March 16th they were ordered to push on, being the only field hospital available, and they reached Upwater at 2 A.M. on St. Patrick's Day. Here there were many casualties and sick to deal with. Ten bad cases were sent back to a stationary hospital at Britstown under charge of Mr. MacIlwaine and Wardmaster Hamilton. A small hospital was established at Upwater in a farmhouse, and 19 cases were left there under charge of Dr. Counihan. The hospital continued its course through Dornbergsfontein and Karabeek, attending to the sick and injured there, and on March 21st Prieska was reached. On the way Dr. Friel and the Hon. Rupert Guinness went out some miles with a stretcher and Cape cart, and brought back an injured man safely.

On the return journey Dr. Stoker was appointed S.M.O., with instructions to evacuate all the sick and injured from various places. De Aar was reached on March 27th. The work was most arduous. The rain fell in torrents for three consecutive days, as well as at intervals, and clothing and bedding were drenched. The staff never slept in a tent. The entire march was 238 miles. The number of cases under treatment was 202, and 56 were transported by wagons. Dr. Stoker states that the commissariat department was beyond praise.

In a report on the medical aspects of the expedition Dr. Friel says the water was bad. It was filtered or boiled, and tea was the safest drink. What struck him as one of the trying conditions for the soldiers was that they had to start on a hard day's work with an insufficient breakfast. The hospital staff rose early, and had a warm meal before starting, and to this he attributes the fact that they all came through the work in excellent health. There were all degrees of diarrhœa as regards the severity of the accompanying pain, the frequency of the motions, and the passage of blood or not. Some of the dysenteric cases were in a most pitiable condition from exhaustion and want of sleep. Lead and opium were most frequently given, and acted well in many cases. There was no death. Patients when first seen were given boiled milk and bovril, preferably the former. Cases treated thus in the early stages rapidly improved and returned to duty. The patients from the regular army were not nearly so numerous as from the Yeomanry and other volunteer corps. Some cases of typhoid and of fractured skull were placed in hospital at De Aar. He cannot point to any single circumstance as a cause of the diarrhœa. It seemed to be caused by a combination of overwork, exposure to the sun, chills from sleeping in wet clothes, unsuitable food, and impure water. He recommends the early treatment of these cases to consist of condensed milk and bovril, with some selected medicine.

The work done by the hospital was excellent under the most trying circumstances, and I am glad to be able to send you a copy of the following letter which I have received from Lord Kitchener:

De Aar, March 27th, 1900.

Dear Sir William,—I am sure you will be glad to hear that the Irish ambulances did most excellent work with the column that marched to Prieska and back. They proved themselves thoroughly efficient in every way, and though we had more cases than I anticipated owing to very wet weather, they showed themselves quite equal to the occasion. I have been most pleased at the willing way in which all hands worked the whole time under Dr. Stoker.—Yours sincerely,

Kitchener.

Firing on Hospitals.

Before I left home I had read on many occasions of the firing on hospitals in camp or on the field by the Boers. These reports gave rise to natural indignation as a piece of wanton savagery. I have no means of knowing, of course, how far these actions were deliberate. But since I have been here I have come to understand how a hospital may be shelled by an enemy in utter ignorance of what it really is. The truth is that under certain circumstances the Geneva Red Cross is useless as a protection. This morning was hot and still. There was hardly a sign of motion in the air. I said to a distinguished officer, "If this camp were attacked by the

enemy now how could they identify your hospital?" "Oh," he said, "we have our Red Cross flags up." I asked, "Where?" He answered, "There, and there, and there." "Oh, yes," I said, "they are up, but who could see them at a thousand yards off?" And I pointed out that the flags were lying motionless along the flagstaff in folds. Now days like this are not uncommon in South Africa, at all events, and I therefore understand how an enemy could send shell after shell into a hospital camp under the belief that he was attacking a combatant portion of the army. The Red Cross is not made a sufficiently distinctive feature. On the waggons it is quite too small, and it is not recognisable at a comparatively short distance.

I suggest that every marquee and bell tent used for hospital purposes should have a very large Red Cross on the roof and sides, repeated on various aspects, and made as obvious as possible. At present the enemy only sees a group of tents which are precisely like those used by the fighting men, and if the wind is not sufficient to extend the flag there is nothing to tell him that he is firing on a crowd of sick and wounded men. In every case there ought to be a light canvas in a wire frame bearing a large Red Cross, which could be hoisted instead of the flag when that is useless. There would be no difficulty about this. It would enable a hospital to have the protection which it has not at present, and we should hear less of outrages against the Geneva Convention. The Red Cross is on easy chairs and buckets and boxes of dressings, but it is not exhibited as it ought to be in all places where it is most required. I have tested my opinion as to the uselessness of the flag as a sign in calm weather. I am able to declare that although I knew the exact place to look for the flagposts, the flags themselves were absolutely indistinguishable at 200 yards. I could see the thickening at the top of the poles formed by the limp folds of the flags, but nothing more. There was no Red Cross visible from end to end of the camp, although the flags were duly hoisted. But nowadays rifle fire is effective at more than 2,000 yards, and when we come to big guns we are dealing with ranges counting miles. Even a careful search with a telescope would not, in the absence of wind, enable anyone to identify the hospital. The dimensions of the Red Cross badge were decided on years ago, before the days of the small-bore rifle. They are quite inadequate now. I have called attention to this matter because I have seen the system at work and have noted its defects. A prompt remedy is needed on the lines which I have suggested, for the matter is of the first importance to every civilised nation concerned in the operations of war.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

[FROM OUR SPECIAL WAR CORRESPONDENT.]

Capetown, March 20th, 1900.

SECOND THOUGHTS—(*Continued*).

So many of the wounded who are either convalescent or rendered unfit for active service have now been sent home that the sight of wounds from Mauser bullets must be almost as familiar at home as it is out here. Among the cases invalided are not a few likely to need further treatment, in some instances in the form of operation. The occasion, therefore, may be appropriate for reviewing the surgical experience of the past few months with regard to the treatment of the various classes of injuries.

ABDOMINAL INJURIES.

In previous letters little mention has been made of the operative treatment of abdominal injuries. It seemed wiser to wait until a fair amount of evidence had been collected, and until the opinions of the bulk of those who could furnish information of value could be got together. Many hoped, at the outset of the war, that the opportunity had at last arisen for showing that abdominal surgery could extend its sphere of usefulness into a new and hitherto almost unexplored field. Great hopes were built on the experience of the last twenty years' work in this branch of surgery, and not a few probably looked forward with more interest to the results of the operative treatment of abdominal injuries than to any other department of surgery in the field. Intestinal surgery has of late made such advances, and so much attention is paid to it by all operating surgeons that it did not appear too sanguine to imagine that a perfect revolution was likely to be effected in the treatment of this formidable class of cases.

Possibly some such revolution has really come about, though hardly in the way or in the direction that was anticipated. I do not think I am exaggerating in the least—and I fancy opinion is in reality tolerably unanimous in the matter—when I say that the results actually obtained up to the present are, in a sense, of the most disappointing nature. It is true that the proportion of patients who have recovered from penetrating gunshot wounds of the abdomen is much larger than in any previous campaign. That much may be safely asserted, although statistics with regard to the present campaign are not yet available, and works of reference relating to military surgery in the past are not readily accessible here; but these fortunate patients have not been saved by operation. So few indeed have recovered after laparotomy, and so many with obviously grave abdominal injuries have recovered without being submitted to any operation at all, that it is at least questionable whether the better practice is not to leave this class of injuries alone altogether as far as operation is concerned.

We hear much, and probably shall continue to hear much, of the occasional cases that have recovered after suture of perforations or excision of lengths of intestine. But these rare successes must not blind us to the absolute facts. The percentage of mortality after laparotomy for gunshot wounds of the abdomen will certainly, when the figures come to be published, be shown to be appallingly large. The percentage of recoveries when the patients have been left untouched will be strikingly great when compared with previous records. Were it not for the latter fact we should, of course, be disposed to think that with further experience and by so modifying procedure as to meet more effectively the special conditions, better results might be obtained. Possibly this is true, but it would still be a question whether laparotomy, save in the most exceptional instances, is good practice or even justifiable surgery.

One of the German surgeons sent out to study gunshot wounds in this way is said to have remarked that abdominal surgery in war was pure "phantasy." Others had previously, and more have since, come to much the same conclusion.

THE TIME FACTORS.

Several points must be borne in mind in this connection. One is that, in the cases operated on, the laparotomy has, for the most part, been performed under the most unfavourable conditions. Time is a factor of the first importance. The patient may have been lying out for some hours before being picked up by the stretcher-bearers. A further delay follows before he is brought into the field hospital. If an isolated case, he might be there attended to immediately, but it is almost certain that under the only conditions in which a field hospital is likely to be near at hand an engagement is going on, and he finds himself one of many who require treatment. The work in the field hospitals is got through swiftly enough, but it is obvious that many patients must, justly, take precedence of a case requiring an operation of a very protracted nature and for which somewhat extensive preparations have to be made. Cases, for example, of hæmorrhage or fracture must be attended to first, for it is of prime importance to clear the field hospital as rapidly as possible. Hours may elapse, therefore, when the patient is actually in the field hospital before his turn comes, and these are hours of hard work for the surgeons and for the orderlies. At the end of this time, when the inrush of wounded is over for the day, the most indefatigable surgeon would hardly feel that he was justified in commencing an operation that may last an hour or more, even if he considers that, with the means and assistance at hand, he is justified in undertaking it at all. The condition of the patient may possibly settle the question, and the surgeon has to choose between operating on a patient suffering more or less profoundly from shock or allowing the precious hours to slip away if operation is likely to be of real benefit. For the most part then the question is settled in one way, and the patient is transferred back to the nearest suitable stationary or base hospital. Usually from forty-eight to seventy-two hours have elapsed after the reception of the wound before the laparotomy can be performed. It is obvious, of course, that under the best

imaginable conditions, the surroundings and the provisions for asepsis must be less complete and perfect in a field than in a base or stationary hospital. The latter, in the present campaign, is, as I have repeatedly urged, much less of a disadvantage than might be supposed. The onlooker, with his critical faculties completely in abeyance, who is familiar with surgical work in London or in large cities, will not be profoundly impressed with the standard of asepsis aimed at or the precautions thought necessary to reach that standard by either the nurses or orderlies working in the military hospitals. The surgeon whose lines are cast in places where the climatic conditions and the pure air do not do so much for him as in South Africa, and who has learnt by sad experience how much depends on the most rigid observance, by everyone concerned in an operation or dressing, of details calculated to secure asepsis, would probably be horrorstruck at much of what he would see done by orderlies and nurses (for the most part) in their surgical work. It is worse than idle to point to results and to assert, as can be asserted with truth, that there has been no case of pyæmia, erysipelas, tetanus, "hospital" gangrene, or the like. The next war in which England is engaged may not be fought in South Africa or in the Soudan. But the same assistants may be called upon to do the same work. Amidst unfavourable surroundings, unless far more stringent precautions are taken than are as a rule observed in the military hospitals in South Africa their deficiencies will be found out, and these grim enemies of the surgeon will once again, as in times past, work havoc. The nurse and the orderly are links in the antiseptic chain. Unless they are as rigidly careful as anyone else concerned, as the operator and his immediate assistants, the continuity is interrupted, and the patient suffers.

It must not be supposed that I am arguing that for abdominal cases special antiseptic precautions are necessary. As a matter of fact this does not seem to be the case, and anyhow there should be no sort of distinction. The most perfect attainable asepsis should be secured in every case whether abdominal or not, and whether the injury is severe or trifling.

Bullet Wounds of Liver, Spleen, and Kidney.

But even if a special hospital were provided in the field with every sort of provision for the most effective and early treatment of patients with abdominal wounds it is more than doubtful whether laparotomy would often be necessary or even advisable in the case of penetrating wounds due to small-bore bullets. The extent of injury to the viscera from which a patient can recover is still quite uncertain when only palliative treatment is adopted; and again, the extent of injury is largely a matter of conjecture.

It is quite certain that a small-bore bullet may penetrate the whole thickness of the liver, from side to side or from before backwards, without setting up fatal mischief, sometimes even without giving rise to symptoms of any moment. Even if large blood vessels are partially divided in the liver the hæmorrhage need not be serious. A very small laceration of this viscus is likely to prove a more serious injury than the most extensive perforation, and small-bore bullets do not lacerate. There are cases enough that have come under treatment where the wound of the liver has been complicated with that of other viscera—the lung, kidney, or intestines, for example—and where the patient has made a good recovery. Anatomical considerations make the diagnosis of wound of the liver certain in most cases. Sometimes there are practically no after-effects at all, sometimes hæmatemesis occurs. Unless there were evidence of extensive effusion of blood taking place into the peritoneal cavity, there is no indication for laparotomy, and not even the most enthusiastic young surgeon joyfully finding himself emancipated from control, or even the most ardent "specialist" would dream of advocating operation.

Probably the same remarks apply to the spleen, though in this case the diagnosis must be as a rule conjectural. The abdomen might be opened in these cases and some blood sponged out, or something might be sutured, and the patient might recover, but no one would doubt that if such a surgical misdemeanour were perpetrated the recovery would be *post* and not *propter*.

Bullet Wounds of Stomach and Small Intestines.

Anatomical considerations do not, however, guide the surgeon clearly to a precise diagnosis when the intestinal area is involved. It is even uncertain whether the stomach, in many instances of apparent wound of that viscus, is really injured. In the case of the commencement or termination of the large intestine, tolerable certainty can be felt as to whether it is wounded or not, and a fairly accurate idea can be gathered, judging by the direction of the wound, as to whether perforation is single or multiple.

But when the area of the small intestine is invaded it is profoundly uncertain whether there are few or many perforations, and whether blood vessels of any size are damaged in the mesentery. The small intestine may almost entirely escape when it seems incredible, judging by the wounds of exit and entrance, that anything short of the most extensive injury should have been inflicted; and on the other hand the number of perforations may be so large from a penetrating abdominal wound of no great length that the arrangement of the intestines as the bullet passed through them is quite inexplicable, however oblique the wound. Thus a case is reported in which no fewer than thirty-six different perforations were discovered. On the other hand, the bullet may take so fortunate a direction that only some four or six holes may be made, and these may lie all close together and involve but a small length of the gut. It is impossible to predict the condition likely to be found on opening the belly. The degree of shock affords no criterion. Abdominal exploration is therefore at best a very experimental proceeding, and the uncertainty as to the actual extent of the injury must necessarily involve much searching among the viscera.

These unfavourable features entail other grave drawbacks to operation. First, that the operation is likely—indeed almost certain—to be protracted; and, secondly, that much exposure and chilling of the viscera is sure to take place. Now, surely, the great factors for success in abdominal surgery are that the contents of the abdomen are not unduly exposed, are kept warm, and that the operation is conducted with all possible rapidity. It is hardly possible to approach too closely the limit that divides speed from haste. These all-important conditions cannot, from the very nature of the case, be observed.

The most favourable condition for the stomach or intestines to be in when the bullet passes through them would seem to be one of emptiness and collapse. Under these conditions a small-bore bullet may probably pass through, often making little more than a slit, and the perforation is practically valvular from the first. Presumably, if the edge of the collapsed intestine is struck a piece is cut out and leakage is likely to take place into the peritoneal cavity. The same seems to be true of stomach wounds, though in this instance one would imagine that the opening is even more likely to close spontaneously, without permitting escape of contents, than in the case of the intestine. Lymph is very rapidly effused, and it is very likely that in the course of an hour or two the fate of the patient is decided. If even a small amount of the contents of the intestine escapes before the wound is sealed by natural means, the issue is likely to be fatal, and the progress of the case is not likely to be diverted into a more favourable course by abdominal section. And if no extravasation of the contents of the hollow viscera of the abdomen has occurred no real good will come of exploration, while much harm may ensue. Not only will an operation have been done that was really needless, but the natural process of cure may be gravely interfered with.

Exploratory operation is probably more justifiable when there is good reason to suppose that the stomach is wounded than when the alimentary tract lower down is the seat of injury. But here experience of civil surgery shows that the element of time, though a consideration of the first moment, is a less cardinal factor than when the intestine is involved. In cases of perforating gastric ulcer, for instance, the prognosis, while grave if more than twenty-four hours have elapsed, is by no means hopeless (with operation) if the patient is not seen till much later. But the mere mention of a disease such as gastric ulcer compels me to emphasise the essential, the vital, difference as regards treatment between the perforation due to a destructive exsanguine breaking down and that

caused by traumatism, such as the perforation of a bullet in a healthy, vigorous man.

Wounds of Large Intestine.

Many cases have been met with in which the large intestine has presumably or almost certainly been wounded, and it appears to be pretty well agreed that these cases are best left alone so long as no untoward symptoms arise. The following is a fairly typical example, as regards its progress, of a wound that involved the large intestine, possibly even perforating it:

A private was shot at a range of 800 or 900 yards. The bullet entered just below the crest of the ilium, just on the outer edge of the left erector spinæ. The ilium was pierced (this bone usually is drilled by small-bore bullets without any great breaking up) and the bullet, which preserved the usual direct course throughout, passed out beneath the pubic arch and ran down the inner side of the right thigh, lodging finally at the back of the femur close to the adductor tubercle, in which situation it was detected by the Roentgen rays and subsequently extracted. The bladder was injured, and for five days the man had hæmaturia. The chief interest of the case, however, lay in the intestinal injury. For some ten days there was marked distension over the course of the descending colon. Over the abdomen generally there was pain and tenderness and some general distension.

The symptoms were so far marked and the condition appeared so grave that many surgeons familiar only with civil practice would not have hesitated to explore. Had this been done, and had the patient not succumbed, the successful result would have been attributed to the operation and it would have constituted another (probably published) triumph for abdominal surgery. However, nothing in the way of operation was perpetrated. The symptoms gradually, as in many other cases that I have seen before and since, subsided and recovery followed. There was a slight degree of cystitis present when he was discharged from hospital.

Wounds of the Bladder.

Wounds of the bladder are not very frequent, and are liable to be extensive and lacerated, for while the ilium is usually drilled, the rami of the pubes and ischium tend to break up extensively. In a few instances recovery has taken place after a urinary fistula has formed, the water being discharged direct from the bladder into the perineum or groin, but the prognosis is generally unfavourable, and these patients are always anxious cases.

Nursing in Abdominal Cases.

It is in injuries of this nature that the weakness of the nursing makes itself felt. Every patient requires a special nurse. The nursing sisters do not attend to such cases—more's the pity!—and thus the patients are looked after by the orderlies. However hard these men work (and in many instances they work with the utmost industry and intelligence) they seem incapable of bestowing the same patient, unremitting, watchful care on a distressing and ungrateful case that a nurse (if worthy of the name) always has it in her power to give. Very slight influences will tip the balance one way or the other, and really good nursing may in cases of the kind absolutely determine the issue. There is not much of romance about a patient with a urinary or a fæcal fistula, or a case of fractured spine with paralysis of the sphincters. Most women can effectively sit by the bedside of a patient, fan away the flies, and put eau-de-cologne on the forehead, persisting in these simple duties with a quiet patience that appeals very directly to the sympathies of those who do not understand what nursing really is or can be. But the hardworking, practical, conscientious woman, who keeps one of these distressing cases always dry, who can ward off bedsores, and who, in short, does a world of invaluable work that does not show, and does not appeal to anyone save the medical officer, gets little credit for what is real nursing.

Diagnosis and Prognosis.

It is not of course possible in many cases of probable injury or perforation of the large intestine to assert what the lesion actually is, or indeed sometimes, even though the abdominal symptoms are strongly marked, whether there is any real lesion of the gut. The best rule of practice, however, appears to be to wait on events. It will seldom happen that any more formidable operation will be called for than the opening of an abscess in the later stages.

Gunshot wounds of the small intestine still remain very formidable injuries. Some, indeed, doubt whether recovery can take place, and are inclined to urge therefore that, however great the mortality after operation, however unfavourable the condition of the patient and his surroundings, abdominal exploration gives the only, though admittedly a very faint, chance. Opinions appear to differ. I may be allowed, meanwhile, to express the most emphatic opinion against laparotomy in these cases as a routine measure to be adopted whenever the circumstances appear to justify its performance at all. The routine practice should be to avoid operation, and the instances where it might be proper to operate will, I believe, be found to occur so rarely that they may here be neglected.

It will of course have been understood that in all the foregoing remarks on penetrating abdominal wounds I have been referring to what may be called primary laparotomy. Various operative proceedings, including abdominal section, may obviously be needful during the progress of the case.

Grave doubts have been expressed, and by competent judges, as to the possibility of recovery after penetrating wounds of the small intestine even with the normal Mauser or Lee-Metford bullet. No doubt the injury is one of the very gravest kind, and probably in the vast majority of cases fatal. There seems, however, no reasonable ground for doubting that recovery does occasionally take place by natural means. Thus a man received a wound from a Mauser bullet which entered close to the umbilicus and passed out through the liver. It was almost impossible to conceive how in this case the small intestine could have escaped injury, and such injury necessarily implies perforation. The immediate after-symptoms were grave. Much distension, as usually happens, occurred and for days life hung in the balance. Convalescence was interrupted some three weeks after the injury by a severe attack of abdominal pain associated with vomiting that persisted for some twelve hours. But this formidable attack subsided without serious consequences, and convalescence once re-established promised to proceed to complete recovery.

In another patient the bullet entered close to the posterior superior spine of the ilium on the right side and made its exit between 3 and 4 inches to the left side of the umbilicus and level with it. Here again, owing to the oblique direction of the wound, the small intestine can scarcely have escaped injury. The man had been long without food and the intestine throughout was presumably collapsed when wounded. Distension soon followed and increased for two days, but then subsided. There was no vomiting in this case. Recovery was rapid and permanent.

In no case where the intestine has been wounded is it safe to predict recovery under three or four weeks. A painfully dramatic case that occurred in the early part of the campaign exemplifies the wisdom of withholding any positive prognosis for a long time.

A man had been shot through the abdomen. The immediately grave symptoms had passed away, and everything seemed to be progressing favourably. Indeed the case occupied a sort of post of honour in the ward as one of sensational recovery. Some two or three weeks after the wound was received (I speak from memory only as to dates) the patient raised himself suddenly in bed, exclaiming, "Why, I am going to die, after all." The verdict was true. Distension of the abdomen began and increased with startling rapidity, and the man sank and died in a few hours. Probably in this case a gangrenous patch of bruised gut gave way suddenly, or there was hæmorrhage from a large vessel.

Need for Pathological Investigation.

It must be admitted that, up to the present, the *post-mortem* records of these and other classes of cases of great pathological and surgical interest and value are rather meagre. There is no pathologist provided for general hospitals by the regulations, and the medical officers have to look after this all-important department themselves. In this connection it may be remarked that the instruments supplied for making *post-mortem* examinations were neither numerous nor adequate for the work. The boxes were hardly fitted up in the most modern or convenient way. The difficulties were in consequence much increased. In a hot climate it is no very light or pleaaant task to make a systematic necropsy, and in times of pressure of hospital work the duty is apt to be neglected when the performance of the examination depends solely on the energy and interest in work of the medical officer. Moreover, it is far from being desirable, or even proper, that a medical officer in charge of surgical patients, and who may at any time be called upon to perform operations, should conduct *post-mortem* examinations at all. At the same time I desire here most gratefully to acknowledge

the kindness and zeal of some of the civil surgeons who in various hospitals have performed necropsies at my instance, and primarily, for my benefit. It is devoutly to be hoped that the fullest records, published in an accessible form and not too long delayed, will be in due course forthcoming as to all abdominal cases. There is an opportunity of ascertaining from perfectly reliable statistics what is the best treatment for these serious cases and of knowing positively what (so far as figures can prove the point) the real value of laparotomy is for penetrating wounds of the abdomen. In civil work it is almost hopeless to expect that we shall hear of all the failures, while the successes are made to loom large in print. For it is the successes that we want others to bear in mind, though it may be that the failures are what we bear most in mind ourselves.

Factors in Prognosis.

The conditions of surgery in the field are very different at all times from those of civil practice, and in no class of cases perhaps is the distinction more marked than in the category under consideration. Penetrating wounds of the abdomen, however, are of such rare occurrence in civil practice that the information derived from so large a number of cases cannot fail to be of the greatest value, and may possibly largely modify the views at present held.

The fact is that penetrating abdominal wounds caused by small-bore bullets are novelties to all surgeons. Experience has to be built up by each one. The "abdominal specialist" has not the slightest advantage over anyone else. Indeed, he is at a distinct disadvantage with the hospital surgeon, who is probably far more familiar with cases of injury. Experience of previous campaigns, too, counts for little. If we want to seek for parallel cases to the remarkable recoveries which have of late excited so much attention, to recoveries after penetrating wounds of the abdominal or of the thoracic cavity, we must go back not to the last—or, for fear of starting again a question that is as tiresome as it is interminable, let me say the nineteenth century—but to the days of duelling with the small sword, or to the times when Ambroise Paré was the leading authority on military surgery. It is wholesome, though it may be a little surprising or even humiliating, to find that these miraculous recoveries were not wholly unknown in pre-antiseptic and pre-anæsthetic times, and when the more elaborate surgical operations were not even contemplated in the field. Pending the publication of full reports, which will include, it is to be hoped, detailed records of all operations performed, we can but summarise the experience gained. At the same time, I have little fear that with more elaborate returns of abdominal wounds the general views that have been expressed above with regard to their operative treatment will be upset.

A few cases of appendicitis came under treatment, and some cases of abscess of the liver, following old dysentery.

Enteric Fever and Perforation.

I did not hear of any instance in which it was thought proper to open the abdomen in order to deal with perforation of the intestine from typhoid ulceration. The type of enteric fever was a bad one, and the operation—of questionable value in most cases—could hardly have been seriously entertained.

Clinton T. Dent.

THE PRINCESS CHRISTIAN HOSPITAL TRAIN IN NATAL.

By George Ashton, M.B.Vict.,
Civil Surgeon to the Hospital Ship *Nubia*.

Durban, Natal, March 23rd.

The original intention was to appropriate this train for the Cape lines, and it was landed in Capetown in the belief that it would be used between the northern divisional field hospital camps and the large base hospital at Wynberg. Lord Roberts, however, apparently considered that the two improvised hospital trains on the Natal Government Railway needed supplementing in view of the seriousness of the engagements of General Buller in the relief of Ladysmith, and accordingly ordered the Red Cross train on to Durban. Unavoidable delay occurred in the reshipment of the numerous heavy packages at Capetown; and, owing to the crowded harbour here, there was some delay in landing the packages, consisting of sections of the train packed in large crates. All the available mechanical men on the staff at the locomotive workshops were put upon the construction of the train, that is, the sections ready to be fitted together as they arrived from England; and so great was the expedition and the energy shown in the work that the complete train was hauled out on March 16th, just three days after the receipt of the last cases. Next evening the train left for the front, and has already brought down several loads of sick and wounded men. This was the earliest opportunity that could be taken, as the trestle bridge over the Tugela was only then completed. Amongst those who were present at the trial trip were Sir John Furley (Chief Commissioner of the British Red Cross Society in South Africa), Colonel Forester, Mr. Frederick Treves, and many doctors from the various hospital ships in port. The engine was most gaily decorated with evergreen, the Irish flag flying alongside the Union Jack in honour of St. Patrick's Day and the Queen's gift of shamrock to her soldiers, and also bore on the front a large portrait of Her Majesty, whose practical interest in the train embraced the presentation of its blankets. It was intended at first to have a train of ten carriages, but it was found that one of seven would be more suitable, considering the narrow gauge and steep gradients of the South African railways.

The carriages are spacious; they run on bogies, and are fitted throughout with the vacuum brake. Each carriage is 36 feet long, 8 feet wide, and 8 feet high. There is excellent ventilation provided in the roof. The doors are wide, and broad portable steps are provided, thus affording easy access from the ground at places where there are no platforms. The train is made up in the following order:

No. 1 contains three compartments. The first is fitted all round with cupboards for linen, etc., the whole of the extreme end being occupied by a large chest for soiled linen, lined with zinc, and ventilated from outside, the zinc lining and the constant passage of air throughout preventing any offensive effluvia from entering the carriage. The next contains beds for two invalid officers. These beds are lounges and lockers by day, and at night are converted into beds. The next compartment has a similar arrangement for the two lady nurses, with the addition of curtain which can be drawn in front of each.

No. 2 car is also divided into three compartments, and may be called the doctors' quarters. The first is for two medical officers, and the fittings are similar to No. 1. Next to this is the officers' dining room, where half a dozen people can enjoy themselves confortably. The next compartment is the surgery. Along one side runs a wide bench, to be used for dispensing, fitted underneath with drawers. Occupying about one-half of the opposite side are shelves and racks contrived to hold bottles and glasses, etc., without any danger of their being upset by the movement of the train. Sufficient space is left for an operating table.

Nos. 3, 4, 5, and 6 are the hospital wards, and are all fitted alike. Each carriage contains 22 beds—18 for invalids and 4 for attendants—ranged on either side in three tiers, with a passage 2 feet 6 inches down the middle of the carriage. The bed consists of a light iron frame, with a netting of wire across, on which is placed a hair mattress, tightly sewn down in transverse rows of stitches forming a series of rolls 4 inches wide. These do not interfere with the comfort of the patient, and allow of the mattress being folded or rolled up into a comparatively small space, and to better withstand the rough usage it will doubtless have to undergo. The frames, with the beds on them, are laid on iron brackets secured to the sides of the compartments, the upper portion having a slot the entire length, corresponding with a small projection on the upper part of the bed frame, which enables the bearers to slide the frame into position, and keep it secure when there. The upper parts of the brackets are upholstered in leather, in case the patient below should come into contact with them; a small matter, but showing the thoughtfulness displayed even in small things. When wanted for use the bed is taken down, and the invalid transferred to it from the ambulance. It is then lifted into the carriage, and gently raised by pulley blocks fixed to the roof to the required level and adjusted on the brackets. The use of the pulleys enables one man standing clear of the bearers to raise the bed, leaving the two bearers free to guide it to the proper position and look after the patient. Without an arrangement of this description the bearers would be fully occupied lifting the bed, and would not have their hands free to assist the patient, an assistance which could not be rendered by a third person owing to the narrow space between the beds. To protect the patient from sun and rain whilst being transferred to the bed, an awning supported on telescopic posts can be hooked up over the door outside the carriage.

No. 7 carriage consists of a businesslike and comfortable kitchen containing a 4 feet 6 inches cooking range, well fitted up with utensils, two large filters, refrigerators, cisterns for storage of water, a bunker for coal and all other necessaries for cooking for nearly 100 people at a time. Adjoining is the compartment for the guard of the train, and beyond that again is the larder or pantry and the cook and his assistant are kept there when not working, it being their sleeping compartment as well as a pantry. Here there are a number of conveniences provided, and the natty manner in which these are all stowed away was sufficient to excite the envy of the ladies who inspected them on Saturday. Every carriage has a lavatory and closet and a small stove with a kettle for heating water. All the available space has been utilised for drawers and lockers, racks and shelves, and all sorts of conveniences, even the roof being pressed into

service; two lockers for storing linen having been constructed in the "upper storey." At both ends of each carriage is a doorway opening on to a gangway connecting with the next carriage, and as there is a centre corridor running through the vehicles free communication is secured from one end of the train to the other.

As it stood at the railway station it looked a handsome train, the pleasant brown of the highly-varnished teak, of which it is built, throwing up in bright relief the large Red Cross on a white square ground, pointed on each carriage to indicate its purpose, in accordance with the provisions of the Geneva Convention.

THE HOSPITAL SHIP "NUBIA."

Return to England.

The hospital ship *Nubia*, which left Durban on April 1st, arrived at Southampton on May 1st with 28 sick and wounded officers and 270 non-commissioned officers and men from Durban. Most of the invalids came from Intombi and Mooi River hospitals, and had gone through the vicissitudes of the siege of Ladysmith.

The *Nubia* is a P. and O. steamer that for some years past has been chartered by the Admiralty as a transport. An account of her conversion at Durban into a hospital ship was given in the British Medical Journal of February 17th, p. 408, and Sir William Stokes referred to the excellence of the arrangements made in his letter published in the Journal of March 17th, p. 663.

Captain Gordon Kelly, R.A.M.C. Militia, is the medical officer in charge, and under him there is a staff of 5 surgeons and 7 nursing sisters.

Analysis of 100 cases of Mauser Bullet Wounds.

Mr. George Ashton, M.B.Vict. (Surgeon to the *Nubia*) sends us the following observations on the Mauser bullet wounds treated on the *Nubia* during the three months ending March 31st, for which the ship was stationed in Durban harbour, and was used as a base hospital. As the result of careful analysis of the first 100 cases admitted to the *Nubia*, all of whom were wounded at Colenso or Spion Kop, I am able to give the following figures:

Return to Duty.—Of these 100 men, 40 returned to the front fit and able to resume their duties there; the other 60 were invalided to England as unfit for further service in the present campaign. These results at first sight seem disappointing, but it must be remembered that the slightly wounded men would not have been sent to the *Nubia*, which was the base hospital at the utmost limit of the lines of communication. So these 100 cases may be looked upon as those coming under the head of "severely wounded," when a return of 40 per cent. to the fighting lines is a matter for congratulation.

Duration of Illness.—The average time these 40 cases took to resume their duties was 36.3 days, or a little over 5 weeks. Two men returned in the incredibly short space of 10 days, one in 13 days, and another in 19 days; the longest in this series of cases was 64 days.

Multiple Bullet Wounds.—Two men were hit with 3 bullets; 9 men were hit with 2, whilst the remaining 89 had one bullet apiece; these 100 cases thus represent 113 bullets. In three cases 1 bullet caused 4 distinct wounds, passing in 2 cases through both legs, and in the third through the hand and leg, an excellent testimonial to the enormous penetrative power of these modern protectiles.

Site of Wounds.—The parts of the body hit were as follows:—Head, 2; face, 5; neck, 3; chest, 17; back, 6; abdomen, 2; upper extremities, 41; lower extremities, 37. The upper extremities were naturally hit the most, as the present style of warfare largely consists in firing in the prone position behind a rock or kneeling in a trench, and so the shoulders and arms are the regions most exposed. It was a matter of surprise, however, to find that of these 41 wounds in the upper extremities, 21 were in the right. I should have supposed that the left extremity would have more frequently been hit, as in the position of firing a rifle, the left arm and shoulder are well to the front. Of these 113 bullets, no fewer that 24 were retained, so my experience does not accord with that of Mr. Makins, who in the British Medical Journal of February 17th states that retained bullets are uncommon; of these 24 retained bullets 12 were removed, one through the original wound, whilst the other 11 necessitated a counter opening. The 12 remaining bullets were either localised in places where it was dangerous to attempt their removal or were causing no inconvenience, and so were left alone; their positions were: chest, 7; face, 1; groin, 1; knee, 1; elbow, 2. The *x* rays were applied in 19 cases. Bone was struck in 26 cases and 18 operations were performed, of which 4 were amputations (all fingers), 12 for removal of bullets, and the remaining 2 for removal of necrosed bone, in both cases following gunshot fracture of the humerus. Four finger amputations as the result of 113 bullet wounds would have seemed incredible seven months ago.

Shock.—As showing the small amount of shock caused by the Mauser bullet, in only 15 cases did the man struck become unconscious or faint, and the parts struck were, chest, 1; head, 2; face, 1; neck, 2; shoulder, 2; thigh, 2.

Age.—As regards the age of the men, the average worked out at 25.9 years; 2 were 18 and 19 respectively, 75 were between 20 and 30, 22 between 30 and 40, whilst 1, a colour sergeant, was 41.

The Field Dressing.—The pocket field dressing was applied in 62 cases, either by the wounded man himself or by his comrades, and as some of these wounded men lay on the field of battle at Spion Kop for twenty-four hours before they were removed by the stretcher parties, this dressing may to an extent account for the total absence of septic cases in this series of wounds. Many surgeons from the front whom I met in Durban expressed their surprise and approval of the excellent way in which the men had bandaged one another and extemporised splints and tourniquets from rifles, bayonets, and handkerchiefs.

Finally, I desire to state in justice to the Boers that there was not a suspicion of any of these 113 wounds being due to the so-called explosive or expanding bullet.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XXI.

Rhodesian Field Force.

Inasmuch as the despatch of a force under General Sir Frederick Carrington to Rhodesia constitutes a new departure in military policy, the movement will be followed with considerable interest. It has for some time been felt by the authorities that the forces there were scarcely adequate to protect that country from any determined effort on the part of the Boers, and 5,000 picked soldiers will be a very welcome addition to the defences of Rhodesia. A portion of the force has already landed at Beira and others are to follow, from thence they will proceed through the low-lying, and in the summer the unhealthy country of the Pungwe Valley to the Transvaal frontier. Marandellas is a station on the Beira railway, and the route which the troops should take from this point has been the subject of a good deal of discussion among men who know the country. It is useless to disguise the fact that one of the enemies, and perhaps the chief enemy which this force will have to encounter, will be the unhealthy conditions of certain low-lying districts within Rhodesia, where malaria among men and horse-sickness among horses are both severe and even deadly during the summer months. The valley of the Pungwe up which the Beira railway proceeds has an evil reputation for these diseases, and there are other low-lying tracts of country which if not quite, are very nearly, equally objectionable. It is true that the summer months are past, and that May may be fairly regarded as one of the winter months. At the same time it is not unusual to get a certain amount of malaria even as late as this. The route, therefore, which will be taken by the force from Marandellas is one of moment. It will be possible for the force to march by way of Victoria and across the Lundy river, and through a portion of the bush veld to Tuli. The alternative route would be by way of Salisbury, Gwelo and Bulawayo to Palachwe. The former route would be shorter, but would be through a much more low-lying and less healthy district than the latter, which would offer not only the advantages of higher and healthier ground but a railway over a considerable portion of the distance. For these reasons we cannot help hoping that in spite of rumours to the contrary the Rhodesian force will be taken along what is practically the top of the watershed, through Gwelo and Bulawayo. It must be borne in mind that both horses and men are fresh to the country and therefore particularly susceptible to those diseases which are local in their origin.

Alcohol and the Native Population.

I see from the British Medical Journal of April 28th that Dr. Kolle, who had just returned from South Africa, where he has been studying bovine plague, has been giving the Berlin Medical Society the benefit of his views as to diseases in that part of the world. What the value of Dr. Kolle's observations on bovine plague may be I do not attempt to estimate, but if they are no more accurate than the political and other opinions which he appears to have given expression to in the course of his paper, the Berlin Medical Society will not have gained very much. With reference to Dr. Kolle's statement that alcohol is "the chief factor in the mortality of the negro population," I would point out that alcohol is only a deadly factor in the mortality of such negro population as can obtain alcohol. An unrestricted supply of alcohol, as a matter of fact, has been obtainable in the past wherever, with the honourable exception of the Free State, the Dutch have been masters of the situation.

Thus in the western provinces of the Colony, and on the Transvaal gold fields, the liquor traffic has been practically unrestricted and deadly in its effects. Fortunately, however,

the great bulk of the negroid races have been protected from the calamity arising from the wholesale introduction of alcohol, and protected entirely by the efforts of Her Majesty's Government, and by enlightened legislators in the Cape Colony and Natal. Thus, throughout Rhodesia and in Natal, the trade is under the severest restrictions, and is practically prohibited for natives. In Bechuanaland the same prohibition obtains, while in Basutoland, a huge native reserve under British protection, alcohol is absolutely forbidden. Fortunately, even among the large native territories recently added to Cape Colony severe restrictions have, in spite of Bond opposition, been placed upon the liquor traffic. The great bulk of the native races therefore is, thanks to the efforts of British statesmen, untouched by the evils of alcohol. Wherever it has been freely obtainable, throughout the whole of Africa, alcohol has played havoc among the negroid population. So far then, Dr. Kolle's observation is correct. But, inasmuch as the great bulk of the negroes throughout South Africa never get alcohol at all, it cannot be said to be one of the chief causes of mortality among them. He further speaks of the progressive disappearance of the negro races. If, as this observation would appear to imply, he is under the impression that the negro races of South Africa are diminishing in number, he has entirely failed to acquaint himself with one of the cardinal facts of the history of that country. As a matter of fact, one of the great problems for future statesmen to deal with is the rapid increase of all the Bantu tribes (who are by far the majority of the native races.) Wherever they have been placed under some form of settled government, and where such peace and order have been established as obtains in the native reserves under British control, the Bantu or Kaffir tribes are as hardy and virile a race of men as exists on the face of the globe, and more prolific even than the Boers themselves. In Basutoland, for instance, the Bantu tribes have increased with phenomenal rapidity; the only natives who have practically disappeared are the Bushmen. The Hottentots, who have been the greatest victims of alcohol, and were practically enslaved by the Dutch, have certainly not increased in number of recent years, but even to-day it is a moot point whether even they have actually diminished. But with regard to the Bantu there can be absolutely no doubt. Their increase can only be compared to the increase of the native population in India since the establishment of law, order, and authority in that Government.

BASE HOSPITALS.

My correspondent with one of the base hospitals says of the Boers recently sent down:

Many were in a sad plight, having come from Kimberley and Jacobsdal. The Boer on his admission to a civilised hospital has to learn several things—to go to bed without his trousers, boots, and hat; to wash himself occasionally as a matter of form; to cease smoking during certain of the twenty-four hours of each day; to limit his appetite in accordance with the army supplies; to read literature other than the Bible; not to sing hymns at midnight, but allow our poor Tommies to sleep. As a patient he is not to be compared to Tommy Atkins; he is like a big baby, and hates bed. He clamours for a solid diet when he has an attack of enteric fever, and persists in rising from his bed when not actually under observation. It is an interesting fact that many of the cases admitted to the hospital for gunshot wounds developed enteric fever after being in for over a fortnight or three weeks. I am trying to get to the front, but as everyone is doing likewise, there is little chance of my being moved. The "front" is the hope and the ideal of the civilian surgeon, but few are chosen.

AMERICAN CLIMATOLOGICAL ASSOCIATION.—The American Climatological Association held its seventeenth annual meeting at Washington on May 1st, 2nd, and 3rd, under the presidency of Dr. Abraham Jacobi of New York. Among the papers read were the following: Dr. Arnold C. Klebs, Chicago, the Construction and Management of Small Cottage Sanatoria for Consumptives; Dr. Charles Denison, Denver, the Educational and Legislative Control of Tuberculosis; Dr. H. P. Loomis, New York, Some Personal Observations on the Effect of Intrapleural Injection of Nitrogen Gas in Tuberculosis; Dr. E. R. Baldwin, Saranac, N.Y., Bacterio-Therapeutics, with Especial Reference to Tuberculosis; Dr. J. Edward Stubbert, Liberty, N.Y., Subsequent History of a Patient Apparently Cured by Antitubercle Serum; Dr. W. D. Robinson, Philadelphia, Petroleum Oil in the Treatment of Phthisis; and Dr. Andrew H. Smith, N.Y., the Inadequacy of the Physical Signs as Indicating the Gravity of Pneumonia.

GERMAN CONGRESS OF MEDICINE.

[FROM OUR SPECIAL CORRESPONDENT.]

(*Concluded from page 1056.*)

Wiesbaden, April 21st, 1900.

ENDOCARDITIS: ITS RELATIONSHIP TO OTHER DISEASES. THIS, the other and remaining subject set down for discussion at this Congress, was introduced by

LITTEN (Berlin), who first referred to the ulcerative form which he divided into that variety of purely septic origin, and the other affection which is secondary to acute rheumatic diseases, peliosis, purpura, chorea, or gonorrhœa, though the latter variety might very much resemble the true ulcerative disease, differentiated the two, owing to the clinical, anatomical, and bacteriological modifications. Further classification he based on clinical and etiological factors, because every degree of severity could be found between mere valvular alterations and actual ulcers. An essential feature of the pure ulcerative disease was the parasitic nature of the progress towards necrosis and ulceration excited by a microbe. The ulcerative appearance was not always reached by the patient, who often died while only exudation was apparent. Litten, therefore, distinguished the following forms: Benign endocarditis, malignant but non-ulcerative endocarditis, and malignant ulcerative endocarditis, taking, moreover, with each the etiological factor into consideration. Benign endocarditis was not an independent disease, but only a complication of some other disease. It did not always show its presence, and was recognised by its consequences. The author proceeded to describe the well-known symptoms of ordinary endocarditis. Its complications were fibrinous pleurisy or even pericardial effusions, and should death occur during the acute attack it was invariably due to the exciting disease. He described the pathological changes, and laid stress on the fact that there was great inclination towards a favourable metamorphosis, namely, sclerosis, leading to sclerosis retraction and shortening of the valve. Absolute absorption might occur, but often a chronic stage supervened with further development of valvular defects. The susceptibility of the left side of the heart he attributed to the greater amount of work it had to perform. When due to gonorrhœa, bacteriological proof was easy. As to bacteria of acute rheumatism, the author mostly found negative results, but often discovered diplo strepto-staphylococci. Nevertheless, he was convinced that endocarditis and rheumatism, when existing together, depended on the same exciting factor. As to gonorrhœa, it might produce both benign and malignant endocarditis, and might be followed by permanent valvular trouble or resolution. Affection of joints was not a necessary connecting link between the onset of gonorrhœa and the cardiac affection. In gonorrhœa both affections were gonococcic metastases, which might appear together or independently. Another rheumatic affection having a connection with endocarditis was purpura hæmorrhagica, which the author regarded as a specific infectious disease. This cardiac affection was invariably benign. The affections of the heart accompanying chorea, acute exanthemata, or pregnancy were not necessarily of rheumatic origin, but often part of the individual disease. Fatal cases of chorea were due to delirium or collapse following a large number of attacks, and not the result of any endocarditis. In the above cases bacteriological investigations gave no positive results. The malignant non-ulcerative variety never occurred spontaneously, but was always accompanied by a severe disease, and by itself constituted a grave danger to life. Thus it was found in cases of acute rheumatism, chorea, and gonorrhœa if with chorea as part of a severe rheumatic complication. Thus both with gonorrhœa and rheumatism the more severe cardiac affection presented a higher degree of infection, and from the clinical point of view this cardiac affection lay between the benign and the purely septic varieties. Therefore the symptoms sometimes inclined towards the one, at other times towards the other disease. The prognosis was not absolutely bad. Anatomically the changes were either warty or ulcerative, sometimes both being present at the same time, but without pyæmic deposits. The symptoms appeared accompanied by pyrexia after subsidence of the rheumatic pains. In other respects they were much like those of the benign form, but there was a more serious general condition, such as enlarge-

ment of the spleen, diazo-reaction, retinal hæmorrhages, acute hæmorrhagic nephritis, and petechiæ. This disease might also affect the right side of the heart. When ulceration had occurred a *bruit* was discovered with remarkable suddenness and loudness more particularly should an aortic valve be perforated. Death supervened especially when dyspnœa, cyanosis, and cerebral symptoms appeared, absorption though rare was possible, especially in the gonorrhœal variety. *Post mortem* there might be bland infarcts in lungs and brain or even mechanical necrosis. Salicylic acid could only arrest rheumatic pains, but could not differentiate separate varieties of rheumatic disease which might each lead to a distinct cardiac affection. Septic endocarditis, commonly called ulcerative endocarditis, was conditioned by bacterium pyogenes album, bacillus aureus citreus, streptococcus pyogenes diplococcus, and bacillus griseus. It had no tendency to stand still or lead to contraction of the valves, but was always progressive, and led to metastases, abscesses, etc., in any or all organs, it being immaterial which valve was affected. Therefore the endocarditis was not the main factor of the disease, but only a symptom of pyæmia. In this variety hæmorrhages were also present. Death almost invariably occurred, the temperature being erratic, the pyrexia sometimes quotidian, tertian, or irregular. The course of the disease might be very prolonged, and even extend over weeks. The source of the disease might be diphtheria of the placental site or intestine, of the soft palate, the vulva, diphtherial endometritis, phlegmonous parametritis, and mixed causes. Endocarditis in the course of pneumonia was by the author considered to be pyæmic. Traumatic endocarditis, according to Litten, might occur in two ways: either inflammation might directly result from the trauma, or the injury might produce an entrance for a general infection. The former group clinically was similar to the benign variety. With an experience of three cases, the author considered, in view of other observations, that a chronic lesion generally resulted. The second group comprised cases of septic pyæmia.

SCHOTT, v. JUERGENSEN, and others took part in the discussion, one speaker doubting the sharp distinction drawn by Litten between malignant non-ulcerative endocarditis and septic endocarditis. LITTEN however, in his reply, expressed himself as convinced that in the former class of cases infarcts were found which from the first were non-suppurative, and never afterwards broke down.

BEHAVIOUR AND REACTIONS OF URIC ACID IN SOLUTION.

HIS, jun. (Leipzig), in conjunction with PAUL, undertook a series of researches in order to ascertain the behaviour of uric acid and its salts when in solution. These investigations to some extent completed our knowledge of these bodies from the chemical and physiological points of view, and they also furnished means not only to understand but also to determine beforehand the behaviour of dissolved uric acid towards known acids and bases. In the first place the solubility of uric acid in warm water was found to be 1 in 38,000, therefore it was less soluble than had hitherto been believed. The circumstance had not been taken into account that after cooling the solution for a time remained over-saturated. His opposed the current idea that uric acid was more soluble in hydrochloric or sulphuric acids. The presence of urates in no way affected the solubility, but the coexistence of other soda salts again reduced the amount of uric acid that could be dissolved. Again the addition of potassium, lithium, and other salts did not increase the solubility, because many of them were extremely unstable. Those which were the easiest dissolved were precipitated when their limit was reached, or even were the last to come into solution. It was therefore impossible to dissolve gouty uric acid concretions by the use of potassium or lithium salts. After a brief discussion His referred to the porosity of crystals, even diamonds being able to absorb foreign matter, as was proved by the means possessed of altering the colour of yellow diamonds. Even the ancients were able to dye the onyx, and this property of crystals explained, according to His, the presence in uric acid crystals of foreign substances which influenced the reliability of researches with the acid.

THE RÔLE OF NUCLEIN IN METABOLISM.

WEINTRAUD (Wiesbaden) pointed out that though the increased excretion of uric acid after the consumption of a diet containing nuclein was considered a direct consequence of such diet, this view had lately been contradicted. It had been maintained that thymus extract free from nuclein had produced similar results. Moreover, exact hourly observations as to the elimination of nitrogen, uric acid, and phosphoric acid after thymus diet and a thymus extract diet free from nuclein had confirmed these observations. As regarded the occasional increase of hippuric acid excretion with a nuclein diet, he considered that it was not glycocoll but benzoic acid which became available, benzoic acid being chemically related to hippuric acid. He did not believe in an antagonism between the respective formations of hippuric and uric acids in so far that as regards both glycocoll should be considered, and that excess of one acid led to corresponding diminution of the other. They were both independent processes, and according to Weintraud therapeutic measures directed towards producing hippuric acid with a view to diminishing uric acid were theoretically unsound.

A RARE FORM OF HYSTERICAL PARALYSIS.

F. PICK (Prague) described a strange phenomenon which appeared to afford an explanation of the motor troubles arising more particularly in cases of hemiplegia. The patient was seized with left hemi-anæsthesia with total loss of motor consciousness of the same side; he was unable to raise the arm higher than the level of the shoulder and the dynamometer showed a power of 15 kilos. as compared with 50 kilos on the right side. With closed eyes the patient was absolutely unable to move the arm. Passive movements on the left side were not perceived by the patient nor copied by the right side. On the other hand, passive movements of the right arm were imitated by the left. This phenomenon the author ventured to term "parallelokinesis" and he had not found a similar instance in medical literature. Anton of Graz had described 3 cases of localised lesions of the cerebral motor zone, though he added that he had sought for the symptom in vain in cases of hysteria. This phenomenon the author considered analogous to the motor disturbances in the shape of aphasia which has been termed transcortical motor aphasia.

RESEARCHES IN CONNECTION WITH BENCE-JONES PROTEID.

MAGNUS-LEVY (Strassburg) stated that he had made further researches with this body but had arrived at some very different results to those now described. Until now this substance had been regarded as an albumose, but the author found it to be identical with albumens owing to the conditions under which it was precipitated and owing to the products of its decomposition. He had isolated the material in a crystalline state. Its more or less constant presence in certain tumours affecting bone-marrow (myelomata) had led to the opinion that the substance was formed in them. This opinion could not be retained when one took into consideration the enormous quantities of albumen excreted (up to 2½ ounces per day). The author concluded that the substance must originate elsewhere, perhaps in the liver, perhaps in the intestinal wall.

THE ORIGIN OF PNEUMONIA.

MUELLER (Leipzig) investigated the manner in which dissemination of bacteria took place in cases of croupous pneumonia. In cases affecting the vagus the origin appeared to be in the lymphatic spaces, thence passing into the lymphatic vessels. In early cases of pneumonia bacteria were found in the alveolar spaces where the disease was progressing and early passage into the lymphatics took place. The pain in the side indicating the commencement of hepatisation and reaching its maximum before consolidation had taken place he explained as being a lymphangitis of the pleural lymphatic vessels.

THE FUNCTIONS OF THE STOMACH.

H. STRAUSS (Berlin) read a paper emphasising a function of the stomach not usually sufficiently considered—namely, the regulation of the osmotic pressure. That function varied between $\Delta = 0.38$ and $\Delta = 0.44$, and rarely exceeded 0.55 or descended below 0.32. Fermentation of lactic acid caused the higher figure, and this condition Strauss attributed to a "hydrorrhœa gastrica." Furthermore, the osmotic pressure influenced the secretion and absorption in the stomach, at the same time regulating excessive osmotic tension of the blood. This latter function was, however, not performed in an ideal

manner, because in the animal osmotic blood pressure could be raised to 0.73 without the appearance of uræmia. From the therapeutic point of view it was necessary in certain cases to avoid the administration of highly concentrated solutions—for instance, where motor insufficiency of the stomach existed. In other cases, however, accompanied by hyperacidity, such solutions might be of use when it was desired to render the gastric contents less acid.

THE SITUATION OF THE KIDNEYS AS INFLUENCED BY CHANGE OF POSITION.

WOLF BECHER (Berlin) and R. LENNHOFF (Berlin) had made investigations with a view to determining the normal position of the kidneys in the female, where, as a rule, they could be more readily palpated. For this purpose native Samoan women were examined, and a figure was thus obtained as the result of various measurements which served as an idea for the succeeding investigations. These were extended to works of art such as classical statues and modern paintings, and naturally to the modern woman, whose figure was influenced and modified by clothing. A series of interesting photographs was handed round, illustrating the measurements taken.

NEW INVESTIGATIONS REGARDING SERUMTHERAPEUTICS.

WASSERMANN (Berlin) referred to the interest awakened by the introduction of Behring's antidiphtheria serum and the many attempts made to extend his discoveries to other directions. These efforts had proved fruitless, but now Ehrlich and Bordet had shown that in a therapeutic serum two substances were required, one of which existed in the organism of immunised animals, the other in the organism of normal animals. The speaker stated that all research had been directed towards obtaining the former, the latter ingredient having been neglected. He therefore began by applying this method of reasoning to animals infected with typhoid bacilli, and succeeded in convincing himself that animals merely treated with immunised serum perished, whereas those injected according to his new method were all cured. He referred to the advantage with which this method might henceforth be applied to other devastating maladies such as plague, cholera, etc.

EHRLICH (Frankfurt) expressed faith in the results of Wassermann's experiments.

SOME CANCER STATISTICS.

BOAS (Berlin) related his investigations with regard to some 200 cases of cancer affecting the digestive tract, from the œsophagus to the rectum. He called attention to the care with which statements as to heredity should be received. On the other hand, he was very much struck by the frequency with which two or three cases occurred among relatives living under the same roof. These apparent infections had generally taken place within two years, and he suggested the necessity for prophylaxis pending further research.

OTHER PAPERS.

Many other papers were read, among them being:

STARKE (Berka), who referred to the doubts thrown by the younger school on the old assumption that altitude increased in a normal manner the number of red corpuscles. He, on the other hand, inclined to the belief that the increase was apparent only, and due to the external higher barometric pressure.

MICHAELIS (Berlin) gave his experience with oxygen inhalations, which he found very successful. The idea was first put into practice in Germany in 1774, but afterwards abandoned, as pure oxygen could not be readily manufactured.

MERKEL (Nürnberg) had occasion at the same time to treat two patients suffering from carbon monoxide poisoning. One treated with oxygen recovered more rapidly, though more seriously affected, than the other one, in whom only artificial respiration was practised.

MORITZ (Munich) explained a method by which Roentgen photography might be employed to map out the size of the heart. The tube was placed vertically, and the outline of the heart obtained in less than 30 seconds.

TUERK (Vienna) and LOEWIT (Innsbruck) discussed somewhat warmly their respective views concerning the bacteriological factors of leukæmia. The latter had at the last Congress described some organisms which he regarded as "specific," whereas Tuerk endeavoured to show that Loewit's results were partly based on errors.—At the request of the PRESIDENT the discussion was adjourned for an hour to allow the speakers to show their microscopical preparations.—TUERK, who spoke last, considered the whole subject to be as yet insufficiently investigated.

QUEIROLO (Pisa) showed a new method for determining the gastric boundaries. For this purpose a light airbag with an indiarubber tube attached was inserted into the patient's stomach.

A. SMITH (Marbach) described his investigations with galvanic electricity applied to the heart, which he found to have similar effects to heat through producing dilatation and discomfort. Faradic currents, on the other hand, caused contraction, disappearance of depression, etc.

BICKEL (Berlin) had artificially generated a remarkable series of symptoms by the direct application of gall preparations to the cerebral cortex. They comprised convulsions, contractions, and attacks accompanied by fury. These experiments had been performed on rabbits.

CONCLUSION.

The business at the seven meetings was this year conducted in a very methodical manner. Every speaker's time limit was strictly enforced, every paper was taken in order, and in consequence the programme was carried through in its entirety. As on former occasions, an exhibition of drugs, appliances, etc.; was held in an adjoining room. In addition to the hours set down for papers, two special meetings were held, one devoted to therapeutics, the other to Roentgen photography. The nineteenth congress will take place next year at Berlin, Professor Senator having been elected President.

THE GERMAN SURGICAL CONGRESS.

[FROM A CORRESPONDENT.]

[*Concluded from page 1034.*]

THE VOICE AFTER LARYNGECTOMY.

AT the fourth session of this Congress Dr. GOTTSTEIN (Breslau) and Dr. GLUCK (Berlin) showed cases of total extirpation of the larynx, and contended that in some of these cases a satisfactory voice could be produced without the use of instruments.

TORTICOLLIS.

Mr. HOFFA (Wurzburg) showed three cases of torticollis from which he had removed parts of the sterno-mastoid muscle, together with part of the posterior fascia of the muscle. The result was very satisfactory in all the cases. In the discussion upon this paper, while some speakers insisted on the importance of removing a part of the fascia, others related good results after simple tenotomy.

DISINFECTION OF THE HANDS.

Dr. SARWEY (Tübingen) described a large series of careful experiments which he had made on the disinfection of the hands by different methods. He considered that the best method of bacteriological examination was to rub a sterilised piece of hard wood on the hands, previously moistened with sterilised water. Washing and brushing the hand, even for hours, with ordinary soap and water did not diminish the number of microbes upon the skin to any considerable degree, nor did washing with "Schleich's Marmorseife." There was no method which rendered the hands absolutely free from microbes, but the method of Mikulicz with soap spirit gave relatively the best results, diminishing the number of microbes considerably. The same was true of Ahlfeld's method of disinfecting with hot water and alcohol.

Dr. VOLLBRECHT (Düsseldorf) described a solid alcohol soap composition (similar to the "solid alcohol") which when brought into contact with the hands and brushed became fluid. With this it was impossible to disinfect the hands without water. It had the same excellent disinfecting effect as the method of Mikulicz, and had the great advantage, especially in the field, of disinfecting the skin without a drop of water.

Various speakers spoke on the use of rubber gloves for operating, and on the disinfecting of such gloves, but no new points were brought out.

STERILISATION OF CATHETERS.

Dr. KABZENSTEIN (Berlin) described an apparatus for sterilising catheters by means of heated formalin vapour which was sent through the catheter. A small apparatus had been constructed on this principle, which enabled the medical man to sterilise this instrument on the way from one patient to the other with a small pocket thermophore in ten minutes.

Dr. SUDERK (Hamburg) demonstrated an instrument for trephining. It consisted of a short round piece of steel with a small smooth knob at its end. The steel piece was roughed and if rotating it cut easily through the skull in every direction and worked very quickly. The knob protected the dura mater. The instrument was worked by the electromotor and

elastic transmission. At the beginning of the operation a small hole has to be bored through the skull to introduce the instrument.

The Blood Vessels in Gangrene of the Limbs.

Dr. Bunge (Koenigsberg) read a paper on the minute anatomy of the blood vessels in cases of peripheral gangrene of limbs, and described the occurrence of microscopical details, proliferation of the intima and arterio-sclerosis. Before amputating in such cases he considered that it was necessary to ascertain the condition of the arteries by means of the sphygmograph. A typical symptom in some of these cases was intermittent pain in walking. Preparations of iodine had a specific effect upon the progress of the arterial lesions described.

Suture of Arteries.

Dr. Payr (Graz) described a method of uniting the ends of a severed artery by means of a small tube of magnesium, a metal which was very easily absorbed. The magnesium tube was slipped over one end of the artery, which was then turned back over the tube, as the sleeve of a coat was turned up. The intima was thus exposed. The other end of the artery was then slipped over the inverted portion, so that intima was in contact with intima. The parts were then secured in position by a ligature. The lumen of the artery was only very little narrowed, and no foreign body was brought into contact with the inside of the vessel. Magnesium disappeared in a few weeks. Experiments on dogs had given very satisfactory results.

Treatment of Scoliosis.

Dr. Schanz (Dresden) discussed the treatment of severe scoliosis. After mobilising the scoliosis by exercises as much as possible, he applied at intervals of about four days a succession of plaster-of-paris jackets until the highest degree of correction was obtained. The last jacket was worn for fourteen weeks, and was then replaced by an orthopædic apparatus to keep the spine in the right position. Cases showing very satisfactory results were exhibited.

At the close of the Congress, Professor Czerny (Heidelberg) was elected President for the next year by acclamation. He called for cheers for Professor von Bergmann, the President of this year, which were given with enthusiasm.

THE R.A.M.C. SOUTH AFRICA FUND.

The Half-Crown Subscription List.

We are informed that at a meeting of the Central Executive Committee of the R.A.M.C. South Africa Fund on May 1st, Mrs. Charters Symonds in the chair, a vote of thanks to those medical men who had so kindly made appeals locally and received subscriptions was adopted, on the motion of Mrs. Meredith seconded by Mrs. Hale White.

The following additional subscriptions to the Half Crown Fund have been received down to, and including, May 2nd, since our last list:

	Half Crowns
Lieutenant-Col. F. W. Wright, I.M.S.	8
Dr. H. D. Didama (Syracuse)	8
Sir Walter Foster, M.P. (London)	4
Lady Foster ,,	4
Dr. J. A. Wegg (Port of Spain, W.I.)	2
Mrs. J. Braxton-Hicks (Lymington)	1
Dr. J. Thornley (Bolton)	1
Dr. J. M. Thornley	1
"B" (London)	1
Per Dr. J. Harper (London):	
Dr. Dickson	1
Dr. Pedler	1
Per Dr. H. Waldo (Clifton):	
Dr. Leche (Axbridge)	4
Dr. E. B. Garland	1
Per Dr. T. Arthur Helme (Manchester):	
Dr. H. W. Boddy (Manchester)	1
Dr. H. A. Bold (Manchester)	2
Dr. W. F. Boycott ,,	1
Dr. J. G. Clegg ,,	1
Dr. A. Hill Griffith ,,	1
Dr. J. Dreschfeld (Manchester)	1
Dr. I. Harthan ,,	1
"J.N." ,,	1
Dr. Murphy ,,	1
Dr. T. Porter ,,	1
Dr. H. C. Smith ,,	1
Dr. W. J. Stothard ,,	1
Dr. Watson ,,	1
Mr. G. A. Wright ,,	4
Dr. John J. Berry (Pendlebury)	1
Dr. F. Hepworth (Eccles)	2
Dr. C. L. Serra	1
Dr. J. G. G. Corkhill (Birkdale)	1
Dr. Watterson (Morecambe)	1
Dr. W. White (Hadfield)	1
Dr. L. M. McIntosh (Anfield, Blackpool)	1
Dr. A. Wallace (Rochdale)	1
Dr. W. Carter (Liverpool)	1
Dr. A. Meeson ,,	1
Dr. Baildon (Southport)	1
Dr. R. Harris ,,	1
Dr F. Mathews (Nantwich)	1
Dr. Gledhill (London)	1
Dr. Agar Renshaw (Altrincham)	2
Dr. Booth (Dukinfield)	1
Dr. Clarke ,,	1
Dr. Park ,,	1
Dr. A. W. Collins (Ulverston)	1
Mrs. Collins ,,	1
Miss Collins ,,	1
Dr. J. A. Coutts (Waterfoot)	1
Dr. Mill (Upholland)	1
Dr. Wright (Wigan)	2
Dr. Kirk (Hindley)	1
Dr. J. Cowe (Liverpool)	1
Dr. C. W. Thorpe (Todmorden)	1
Dr. A. Higginson and family (Bolton)	4
Per Mr. W. Beaumont (Bath):	
Mr. T. G. Drake (Limpley Stoke)	1
Dr. Goodridge (Bath)	1
Dr. Cave ,,	1
Dr. Carruthers (Batheaston)	1
Mr. C. Harper	1
Mr. D. L. Hamilton (Timsbury)	2
Per Dr. I. W. Johnson (Bury):	
Dr. Hitchon (Heywood)	1
Dr. Cook	1
Mrs. Cook	1
J. H.	1
Mrs. J. H.	1
Per Miss Kerr (Bury):	
Miss Kerr	2
Dr. Kerr	1
Mrs. Halliwell	2
Mr. Shaw	1
Mr. R. Hall	1
Mr. D. Hall	1
Mrs. A. Barlow	1
Miss Westerdale	1
Mrs. Packman	1
Per Dr. Barr (Bury):	
Dr. Barr	1
Mrs. Barr	1
Miss Openshaw	1
Canon Blackburne	1
Miss Pickering	1
A Friend	1
Mrs. Brown	1
Dr. Brown (Bacup)	1
Per Dr. Mitchell (Bury)	86
Per Dr. T. R. Bradshaw (Liverpool):	
Mr. G. E. Walker (Liverpool)	1
Dr. James Barr ,,	1
Mr. Damer Harrisson ,,	1
Dr. George Duffus ,,	4
Dr. George Pollard ,,	1
Dr. H. T. Shaw ,,	1
Dr. A. A. Mussen ,,	1
Dr. R. H. Carse ,,	1
Mr. A. W. German ,,	1
Dr. Nathan Raw ,,	1
Dr. Armand Bernard ,,	1
Brigade-Surg.-Lieut.-Col. Wills (Bootle)	2
Dr. E. A. Smith (Southport)	1
Dr. J. FitzG Blood (Birkenhead)	2
Dr. J. Carruthers (Rockferry)	1
Miss Amy Urlin (London)	1
Per Dr. G. W. Crowe (Worcester):	
Dr. Crowe (Worcester)	1
Mr. Bates ,,	1
Dr. MacCarthy ,,	1
Mr. Jostling ,,	1
Mr. Coombs ,,	1
Dr. Read ,,	1
Dr. Pollard ,,	1
Mr. Budd ,,	1
Mr. Till ,,	1
Mr. Fosbroke ,,	1
Mr. Harthan ,,	1
Mr. Wilding ,,	1
Dr. East (Malvern)	1
Mr. Horton ,,	1
Mr. Cowan (Leigh Sinton)	1
Mr. Sheppard (Worcester)	1
Mr. Corder ,,	1
Mr. Hyde ,,	1

We have also received, per Dr. Arthur Helme (Manchester), 4s. 6d. from Dr. E. J. W. Carruthers (Congleton).

The amount received for the Half-Crown Fund, up to and including Wednesday, May 2nd, by the Editor, is £499 14s. 3d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the British Medical Journal, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

Insanity in the United States' Army.—According to the *Medical News*, Secretary Root has had prepared a statement which fully disproves the many charges that have been made as to a large percentage of cases of insanity and suicide cases in the American Force in the Philippines. It shows a smaller rate of insanity among the troops in the Philippines than in the regular army for ten years. From July, 1898, to March 20th, 1900, 35 cases of insanity have been reported in the Philippines. During this period the mean strength of the force under General Otis was 32,000 men. Based on this strength, the rate of insanity for twelve months was 31.3 cases. The mean strength of the regular army for the ten years ending July, 1898, was 29,000 men with a rate of insanity of 33 1. Seven officers and twenty-two enlisted men committed suicide in the Philippines between April 11th, 1899, and March 27th, 1900.

The New York Pasteur Institute.—The record of the New York Pasteur Institute, founded in December, 1889, shows that during its first decade 1,367 cases have been treated, with 19 deaths, 3 of the latter being before completion of treatment, and 7 within fifteen days after its completion. According to the rule established by Pasteur, these 10 are therefore to be excluded, making the mortality 9. Of the patients, 154 were bitten on the head or face, 746 on the hands, and 467 on other parts of the body. In 1,287 the wounds were inflicted by dogs, in 70 by cats, in 5 by man, in 2 by horses, in 2 by cows, and in 1 by a polecat. In 447 instances the animals inflicting the wounds were proved rabid by inoculation into rabbits or guinea-pigs. In 268 cases the animals were declared rabid by clinical or veterinary examination. In the remaining 652 the animal had disappeared or had been killed, in each instance action leading to the suspicion of rabies.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 5TH, 1900.

THE ANTIVIVISECTIONIST PROPAGANDA.

WE publish in another column a report of an action for libel brought by Mr. Charles Adams, Editor of the *Verulam Review*, against the British Medical Association, which was heard on April 30th, before Mr. Justice Lawrance and a special jury. The jury, without leaving the box, returned a verdict for the defendants, and judgment was accordingly given with costs, thus amply justifying the course which had been adopted by the BRITISH MEDICAL JOURNAL in defence of those members of the medical profession whose reputation or professional competence had been unwarrantably assailed.

The circumstances attending the controversy will doubtless have passed from the minds of many of our readers, and it may be well therefore briefly to recapitulate the facts.

The *Verulam Review* is a quarterly journal which preaches the doctrines of the antivivisectionists. On August 5th, 1898, the Editor of that periodical addressed a letter to the Home Secretary in which he referred to a statement made by the Home Secretary to the effect that certificates dispensing with anæsthetics under the Act 39 and 40 Victoria, cap. 77, were never issued for any experiments other than inoculations, etc., and directed his attention to Table IIIA, column 5, of the Inspector's latest report, "from which it would appear that no fewer than 190 separate experiments other than inoculations, etc., were not only performed, but performed upon dogs and cats, animals placed by the Act under especial protection." The plaintiff concluded his letter by stating that "as this is a matter of public interest I have the honour to request I may, for the purposes of my *Review*, be provided with an explanation."

In the reply of the Home Office, dated September 9th, 1898, Mr. Adams was informed that he was "in error in thinking that the 190 experiments alluded to were not performed under anæsthetics." Notwithstanding this reply, Mr. Adams addressed the circular letter which was printed in the BRITISH MEDICAL JOURNAL of October 22nd, 1898, and is reproduced in this issue at page 1116, not only to the gentlemen who performed the 190 experiments in question, but also to many others who had no concern with these experiments.

In this letter Mr. Adams made certain charges, which he desired to saddle on the Home Secretary, against the persons to whom it was addressed. He asserted that these gentlemen had applied for and obtained a certificate authorising experiments on dogs, etc., without anæsthetics, and then, notwithstanding the certificate, performed them under anæsthetics. This he treated as a slur on either their good faith or their professional competence, and proceeded to inquire whether the accuracy of the statement were admitted, since, if so, the recipient need not take the trouble to write, as silence would be taken as assent. One of the gentlemen who received this circular letter forwarded it to us, and in the BRITISH MEDICAL JOURNAL of October 22nd, 1898, the letter in question was published, in order to exemplify the methods of the opponents of vivisection.

The article in question pointed out that the statements contained in the circular letter "may be classed as inaccurate, misleading, and threatening; to drag the name of the Home Secretary into such a circular is misleading, for the facts are obtained from a printed paper to be purchased by anyone who is interested in the matter. The serious part of the letter is the absolute incorrectness of the implied charge of obtaining a licence to perform experiments without anæsthetics, and then violating the terms of the permit by administering an anæsthetic." It is unnecessary to quote the whole of the article, but it concluded with the observation that the Editor of the periodical in question (the *Verulam Review*), "either ignorant of the terms of the licence or too careless to understand them, impugns the good faith of the members of the medical profession who choose to devote themselves to advance their art by experimental methods. The minatory clause is too feeble to be worth notice."

In the JOURNAL of October 29th, 1898, there was published a letter received from the Editor of the *Verulam Review*, and also a letter received from the Under-Secretary of State by one of the gentlemen to whom the Editor of the *Verulam Review* had written the circular letter to which we had referred. These letters will be found in the report of the action at page 1115. In commenting on the correspondence at the time we drew attention to the fact that the letter of the Editor of the *Verulam Review* was founded upon a blunder due to his want of acquaintance with the terms of the Act and of the licences and certificates granted under it.

Mr. Adams subsequently sent to us for publication some very voluminous correspondence with the Home Office consisting of several long letters from him to the Home Office, and a single brief reply to which reference is made above. Considerations of space prevented us from publishing this correspondence, and in consequence of the comments which had appeared in the JOURNAL Mr. Adams issued a writ against the Association on September 17th, 1898, claiming £500 damages for libel.

In the statement of defence the Association admitted the publication of the paragraph in question, denied the innuendos set out by the plaintiff, and pleaded that the words, in so far as they consisted of allegations of fact, were true, and as to other than allegations of fact were fair comment upon matters of public interest. Great delay in the hearing of the action was caused by the inability of the plaintiff to appear in court owing to ill-health. As it seemed to the legal advisers of the Association that it was very desirable in the interests of justice that the plaintiff

should be cross-examined in the witness-box before the jury, it was thought to be preferable to await his recovery rather than that the case should proceed in his absence. The plaintiff, however, did not appear, and medical evidence was given that there was no prospect of his being able come to London.

As will be seen from the report evidence was given on behalf of the defendants proving that the statement contained in the letter of the Home Secretary to the Editor of the *Verulam Review* that he was "in error in thinking that the 190 experiments alluded to by you were not performed under anæsthetics," was true. It was also proved that the gentlemen to whom Mr. Adams had addressed his circular letter had *not* applied for certificates authorising experiments with anæsthetics, and then notwithstanding the certificates performed such experiments under anæsthetics, as asserted by the plaintiff. The experiments to which he intended to refer were no doubt those performed under Certificate B *plus* EE, which in combination authorise experiments on animals, including cats or dogs, with anæsthetics of sufficient power to prevent the animal feeling pain, but with the permission to allow the animal to live after recovery from the anæsthesia.

It is incomprehensible to us that any difficulty should have been experienced by the plaintiff in understanding the true nature and effect of the licence and certificates granted under the Vivisection Act. The most ordinary care would have enabled anyone to ascertain by reference to the report of the Inspector prefixed to the return that anæsthetics were used in the experiments in question, and yet the plaintiff wrote the circular letter as to which Mr. Justice Lawrance said, "a more impertinent letter was never written by one man to another," and that letter was written by the man "who is asking you for damages because his character has been assailed." The jury had no hesitation in returning a verdict in favour of the defendants.

If the cause of antivisection has to be bolstered up by the methods adopted by the Editor of the *Verulam Review*, it must be in a sorry plight indeed. What, however, we have mostly to concern ourselves with at present is the attack made by the plaintiff upon the professional honour or competence of the holders of the certificates to whom, among others, he addressed his circular letter, and it is gratifying to find that the Court has condemned this unwarrantable attack in unmistakeable terms.

HOLIDAYS FOR IRISH DISPENSARY DOCTORS.

The sealed orders of the Irish Local Government Board are not models of drafting. For years past these orders have been so worded as to lead to muddling, and not seldom the judges have made short work of the solemn dicta of the Board: for example, in the case of the sealed order *re* consultations in Poor-law cases. Such incidents are not calculated to inspire the local bodies under its control with respect for the Board or its orders.

When the new Local Government Act for Ireland came into force a year ago, the Irish Local Government Board issued a set of new rules for the management of dispensaries. All that need be said about these rules is that they made many changes and few improvements. Most of the changes have proved more or less impracticable, and of the improvements only one betters the condition of the medical officer. Article 28 provides that "Every medical officer of a dispensary district shall be allowed an annual vacation not exceeding four weeks, and the guardians shall pay to the medical practitioner employed temporarily to discharge the duties of the medical officer for that period such reasonable remuneration for his services as the Local Government Board shall approve or direct." What the Board meant by the above order was that every dispensary medical officer should have four weeks' holiday if he chose to take it, and that the guardians should pay a substitute. We know this was their intention because it was so stated in the House of Commons by the Attorney-General; and if the man in the street had wanted to say this he would have written in plain English, "Every medical officer shall be allowed an annual vacation of four weeks," and there could be no more dispute about it. The order as actually drafted has given rise to any amount of litigation. It was received with howls of execration by the newly-elected representatives, and in many places every obstacle thrown in the way of those medical officers desirous of availing themselves of its provision. Many Boards of Guardians offered remuneration to the *locum tenens* which they refused to accept, and when brought into court the judges utterly repudiated the proposal of the Local Government Board to "approve or direct" for what remuneration a medical practitioner should give his services. The judges wisely retained that discretion in their own hands.

Other Boards of Guardians read the words of the order "not exceeding four weeks" as giving them the option of curtailing the holiday as much as they thought proper, and the opinions of eminent counsel have been given both for and against this view. Recently two cases turning on this point have been decided against the guardians. One of these had reference to the Pettigo district and was heard by Judge Webb at Lifford Quarter Sessions. Dr. Gilbert sued the Donegal Board of Guardians to recover two weeks' salary as *locum tenens* for Dr. Aiken, Medical Officer of Pettigo Dispensary. Dr. Aiken had applied for four weeks' leave; the guardians would only give him two weeks, but he took the four weeks, and his *locum tenens* sued the guardians for the extra two weeks. Judge Webb decided against the guardians in this case, but we presume this and other similar cases will be ruled by the decision of the Court of Queen's Bench, which on April 24th had before it the case of Dr. Henry *v.* the Antrim Guardians on a case stated by Judge Gibson from Belfast Assizes in respect of an appeal by the defendant from a decree for £5 6s., obtained by the plaintiff, Dr. Moses Henry. Dr. Henry had been *locum tenens* for Dr. Torrens, the Medical Officer of Connor Dispensary District, and the Antrim Guardians having refused to give him more than two weeks' leave he adopted the same course as Dr. Aiken, of Pettigo. After a prolonged argument the Court of Queen's Bench directed notice to be served through the Registrar on the Local Government Board, in order that they might have the case reargued if so advised and be represented by counsel. Judgment was accordingly reserved.

If the ultimate decision is adverse to the plaintiff, either the dispensary medical officers will have to go without their holidays or the Local Government Board will have to issue a new sealed order, which we hope will be couched in plain English and free from illegal provisions.

THE PRACTICAL APPLICATION OF LIFE TABLES.

IN a valuable address to the North-Western Branch of the Society of Medical Officers of Health, Dr. Hayward, of Haydock, Lancashire, has given a very interesting illustration of a practical application to which the life-table method of vital statistics can be put. Having worked out a life table for England and Wales by a modified short method, which has been recently fully described by him in the *Journal* of the Royal Statistical Society, he proceeds to work out other life tables by the same method, on the assumption that some disease, for instance phthisis, has practically ceased to exist, and is thus enabled to give us the chance of living from one year to the next at each age, the number of survivors at each age out of a given number born, and the expectation of life under these altered circumstances.

The results for phthisis and for cancer are particularly interesting. Thus by excluding phthisis the expectation of life at birth would be increased 2½ years, becoming 45.9 years for males and 49.2 years for females, instead of 43.3 and 46.7 years respectively. This offers a somewhat marked contrast to the result produced by excluding cancer from the death returns. The effect of the latter operation would be to increase the expectation of life at birth in males 0.39 and in females 0.83 year, a comparatively insignificant result as contrasted with that produced by the elimination of phthisis from the death returns. The reason of this is obvious. Cancer is chiefly a cause of death after middle life, while phthisis attacks adolescents and young adults in large numbers.

If we contrast the effects of eliminating phthisis and cancer after the age of 35, a somewhat different result is shown, though even then the effect of eliminating phthisis is greater than that produced by eliminating cancer. Thus, at and after the age of 35, the removal of phthisis would increase the male expectation of life 1.81 years and the female 1.35 years, while the similar removal of cancer would increase the subsequent expectation of life 0.56 year for males and 1.17 years for females.

Much can be learnt from Dr. Hayward's figures as to the relative importance from a statistical standpoint of the prevention of various diseases. On the basis of the death returns in 1881-90 the removal of enteric fever would increase the male expectation of life at birth 0.30 year, the removal of scarlet fever 0.53 year, that of diphtheria 0.24 year. By excluding diarrhœa as a cause of mortality during the first five years of life the male expectation of life at birth is increased 0.95 year. By similarly excluding measles and whooping-cough in the first five years of life it is increased 0.68 and 0.63 year respectively. It is manifest from the preceding examples that phthisis is more important—as well as being happily more amenable to preventive measures—than measles, whooping-cough, or diarrhœa.

HONOUR TO WHOM HONOUR IS DUE.

THE dinner given by the Reform Club on Saturday to two distinguished members, Sir William Mac Cormac and Mr. Treves was an honour paid not only to them but to all the eminent surgeons who answered the call of the Government for help in dealing with the wounded in South Africa. It was also a tribute to the work done by the Royal Army Medical Corps, and Lord Rosebery said nothing more than the simple truth when he declared that our medical and hospital service has been "practically perfect." His lordship further praised the devotion to duty and the heroism of the medical officers in the field in terms the warmth of which is particularly gratifying as coming from a man who has been and is likely again to be the First Minister of the Crown. We hope his words will be taken to heart by the military advisers of the Government who have too often shown a grudging spirit in their appreciation of the services of medical officers which contrasts unpleasantly with the generous recognition of them expressed by Lord Rosebery. Especially do we recommend the powers that be at the War Office to mark and inwardly digest his plain-speaking as to the unfairness with which medical officers are often treated in the distribution of honours, notably in regard to the Victoria Cross. Sir William Mac Cormac and Mr. Treves bore emphatic testimony to the efficient organisation and admirable working of the whole medical service in South Africa. The President of the Royal College of Surgeons can speak with special authority on this point, for he has had an almost unrivalled experience in the surgery of war. The fact that judges so thoroughly competent have expressed such unqualified approval of the arrangements made for the care of the sick and wounded, and of the manner in which they are carried out, cannot fail to be comforting to the many who have relations and friends at the front, and satisfactory to the country at large. It is greatly to be regretted, therefore, that in regard to this matter a false note should have been struck in a quarter which makes it sound with a loudness out of proportion to its real importance. The *Times*, which is often unfortunate in its choice of sources of inspiration on medical matters, in a leading article on the dinner at the Reform Club, stated that Sir William Mac Cormac and Mr. Treves had been sent out by the War Office "to provide for the organisation of the base hospitals and the supervision of the field hospitals." The implication was that to them belonged the credit of the successful working of the Army Medical Service. The error was at once pointed out by Sir William Mac Cormac and Mr. Treves, who in a letter published in the *Times* of May 1st stated that the organisation of the medical arrangements of the campaign was no part of their duty. They were sent out solely to afford professional advice and assistance as consultants to the army medical officers. In the exercise of those duties they were "happily able to testify to the admirable and effective organisation of the Medical Department of the army, for which the officers of the medical service are alone responsible." The Royal Army Medical Corps has done, and is doing, work which makes praise even from such men as Sir William Mac Cormac and Mr. Treves superfluous, but it must be none the less pleasant to the officers of the Corps and to the chiefs of their branch of the service to have their efficiency so frankly and fully recognised by the highest authorities in their profession.

THE GENERAL MEDICAL COUNCIL.

THE day appointed by the Standing Orders for the commencement of the next session of the General Medical Council is May 22nd. It seems probable that the session will be a long one, as the consideration of a large number of questions already partially dealt with was postponed to this meeting. Among these may be mentioned the standard of preliminary examination, the controversy

with the Royal College of Physicians in London as to the recognition of science schools, the curriculum for the D.P.H., reciprocity with foreign countries, the report of the Committee on Personation, a question as to the copyright of the *British Pharmacopœia*, the financial position of the Irish Branch Council, which may lead to important changes in the financial system of the Council, and last, but not least, the Midwives Bill. Altogether the business dealt with by the Council during any session has probably never been more voluminous and important than that which ought to come before it this month.

THE UNVEILING OF THE HUXLEY MEMORIAL STATUE.

In the Great Hall of the Natural History Museum, South Kensington, on April 30th, a large and representative gathering came together to witness the unveiling by His Royal Highness the Prince of Wales of the Huxley Memorial statue. The members of the Executive Committee of the Memorial Fund present were Lord Shand (Chairman), Sir Joseph Fayrer, Sir Henry Thompson, Sir Joseph Hooker, Sir John Donelly, Sir Michael Foster, M.P., Sir A. Geikie, Sir J. Norman Lockyer, Sir Spencer Walpole, Mr. Briton Riviere, R.A., Mr. P. L. Sclater, and the Honorary Secretary. Among others present representing medicine were Dr. W. S. Church (President of the Royal College of Physicians), Sir J. S. Burdon Sanderson, Professor Clifford Allbutt, Dr. Charlton Bastian, Sir Lauder Brunton, and Mr. Victor Horsley. Professor Ray Lankester, Director of the Museum, briefly explained the nature of the proceedings. He told how that at the meeting of the Memorial Committee held on November 27th, 1895, under the chairmanship of the Duke of Devonshire, the idea of the present statue was adopted. From all parts of the world, including every State of Europe, India, the United States, and our remotest Colonies, subscriptions had poured in, amounting in all to £3,380. He said that the memorial statue of Huxley was the expression of the admiration, not only of the English people, but of the whole civilised world, for one who as discoverer, teacher, writer, and man must be reckoned among the greatest figures in the records of our age. Sir Joseph Hooker then handed over the statue to His Royal Highness, who graciously acted as the representative of the Trustees of the Museum. He drew a comparison between the careers of Sir Joseph Banks, Mr. Darwin, and Professor Huxley, whose statues were adjacent, in that they all began by circumnavigation for the purpose of research under the flag of the Royal Navy: both Sir Joseph Banks and Mr. Huxley were Presidents of the Royal Society, Trustees of the Museum, and Privy Councillors. Professor Sir Michael Foster supplemented the words that "the beloved Nestor of biological science" had spoken by saying what English science thought of Huxley's work, which Sir Joseph Hooker, as his oldest and closest friend, his comrade, and helper, could not fittingly say. He pointed out that to many Huxley was known only as the brilliant expositor of Darwin's views, but that was only a small part of what he had done for biological science. The biologists of to-day—of the whole world of science, themselves a monument of Huxley's influence—were proud at the unveiling of the visible monument in the British Museum. The Duke of Devonshire, representing the Memorial Committee, in presenting the statue to His Royal Highness on behalf of the trustees of the British Museum, said that the real memorial of the man was to be found in his writings and in the influence which he exercised, and was still exercising, upon the minds of younger men, many of whom, it might be hoped, would in the future emulate his noble example. The Prince of Wales then unveiled the statue, and said he had not forgotten that fifteen years ago he had similarly unveiled the statue of Charles Darwin, which stood near. He added his personal tribute to Huxley's memory as an illustrious man of science and a great thinker, expressing the pleasure it gave him to take over for the trustees of the British Museum the statue of another great man of science. The statue, which is a beautiful work of art, is inscribed:

THOMAS HENRY HUXLEY.
Born May 4, 1825.
Died June 29, 1895.

THE LIFE-HISTORY OF FILARIA NOCTURNA.

WE have lately had an opportunity of examining some remarkable microscopical preparations showing the development of filaria nocturna in the mosquito. By embedding in celloidin filariated mosquitos procured from China, India, and Australia, and afterwards sectioning and staining them, Dr. Manson has succeeded in demonstrating the filaria *in situ* in the blood in the insect's stomach, in the thoracic muscles, and, at a later stage, in the tissues of the prothorax and abdomen. By a happy stroke of the sectioning knife, passing through the entire length of the proboscis of a filariated mosquito, Dr. E. C. Low, who has been working under Dr. Manson for some time at the London School of Tropical Medicine, has been able to bring strong evidence to prove that the filaria leaves the mosquito by way of the proboscis. In the section referred to the parasite can be seen coiled up in the head of the mosquito, lying under the cerebral ganglia, and stretching along the entire length of the proboscis. This preparation seems to show that the filaria is communicated to man by the bite of the mosquito. This important discovery not only revolutionises our ideas as to the precise way in which the mosquito conveys the filaria to man, but by analogy lends support to the truth of Ross's inoculation theory of malaria.

LOCAL AUTHORITIES AND TUBERCULOUS FOOD.

THERE is abundant evidence that public opinion is at last awakening to the dangers of tuberculous contagion. While an Association under Royal patronage is devising means to prevent and is disseminating information respecting the transmission of tuberculous infection, it is satisfactory to observe that the reports of the recent Royal Commissions which have dealt with the dangers incurred by the ingestion of tuberculous food are receiving due attention at the hands of local sanitary authorities. At a meeting of the London County Council last month a report from its Health Committee on the sale of tuberculous milk in London was under consideration, and last week a very important Conference on the prevention of tuberculosis was held in Glasgow under the presidency of Lord Provost Chisolm, at which nearly all the county and burgh authorities in Scotland were represented. The conclusions suggested in each case are that in the first place in the matter of tubercle our pathological knowledge has outrun the statutory and other executive powers at present within reach of local sanitary authorities, and in the second place the distribution of suspected or infected food defies the arbitrary limits of local authorities, and, in virtue of foreign importation, the question becomes one of international importance. It appears that some 97 samples of country milk collected in London were submitted to Dr. Klein; 7 of these were found to be tuberculous; 3 of the infected samples were traced to Essex, while the remaining 4 came from Surrey, Sussex, Wiltshire, and Derbyshire. Although in each case the attention of the local authority concerned was called to the infection of the milk, it appears that in only 1 case has a veterinary examination of the cows been made, and the London County Council has been duly requested to pay the veterinary surgeon's fee, and has as promptly replied that it has no authority to incur expenditure for such purpose outside its own county. At the Glasgow Conference a resolution was unanimously

carried urging the importance of taking action under the Milkshop Order of 1899, and especially for the regular veterinary inspection of dairy cattle by every local authority. It was further agreed that provision should be made for definite places for the inspection of animals slaughtered for food purposes, and that meantime the standard of condemnation to be applied should be that described in the report of the Royal Commission. From a case which has recently occurred in St. Pancras, it would seem that this "standard of condemnation" will, in the near future, excite a good deal of interest and attention on the part alike of butchers and of sanitary officials.

A PUBLIC-SPIRITED RECTOR AND HIS REWARD.

ALL our readers will sympathise with the Rector of Barthomley, who, by the failure of the Nantwich Rural District Council to recognise and accept a liability of £51 for the isolation of two parishioners suffering from scarlet fever, finds himself under the obligation of paying the amount himself. The facts are briefly these. The Nantwich Rural District Council has, despite the representations of its medical officer of health, hitherto neglected to make any provision within its boundaries for isolating cases of dangerous infectious disease; and as two cases of scarlet fever, in the opinion of the medical officer, urgently required isolation, the rector in his capacity of chairman of the parish council guaranteed the expenses of their isolation in the neighbouring fever hospital at Crewe. When recently the account of £51 was presented by the Crewe authority to the rector, he forwarded it to the Rural District Council, pointing out that he took the steps not dreaming that he would be assuming any real personal responsibility, and pleading that if the burden of payment were laid upon him, he could only meet it by borrowing the money, which would be a great hardship. Although the Council had passed a resolution empowering the medical officer to send cases requiring isolation to the Crewe Fever Hospital only a few days subsequently to the rector's action, the Council by a large majority refused to pay the bill. The grounds for their action are quite unintelligible. The sanitary authority has the duty cast upon it of taking the necessary measures to check the spread of infectious disease, and they have the powers given to them to incur the expenses thus entailed, and it is an every-day occurrence for many district councils to meet the expenses of the isolation of their infectious sick in the hospital of a neighbouring authority. Doubtless the District Council of Nantwich were influenced in their decision by the inference of the clerk that the account of £51 would be surcharged by the Local Government Board auditor. When this misapprehension is dismissed, as it safely may be, it is to be hoped that the Council will rescind its resolution, and not inflict a hardship and an injustice upon one who authorised a necessary measure in the public interest.

ACTRESSES, ACCIDENTS, AND OPERATIONS.

DRAMATIC artists are not, perhaps, fonder of advertisement than folk of common clay, though one often wonders, with that ornament of the stage, Mr. Vincent Crummles, how the most trivial details of their daily lives get into the newspapers. It is true that their lives appear to be vastly more full of incident than those of ordinary people. Accidents of the most varied kind happen to them so frequently that assurance offices might well pause before accepting the risk of a popular actress's life. When she is not being thrown out of a cab she is being capsized in a boat, or in peril of her life from fire, or shipwreck, or earthquake, or the "all-dreaded thunderstone." She seems to bear a charmed life, for the most fatal accidents cannot kill her. When she is not a prey to one or other of the elements she is still the victim of a curiously malevolent fate, for her jewels are stolen, or she gets married or divorced, or falls sick. To judge from the frequency of these distressing occurrences there can be few more unhealthy occupations than that of a famous actress. The illness varies according to what Sydenham would have called the "epidemick constitution," or shall we say the fashion? The present fashion, in France at least, runs strongly in the direction of operative surgery. It is only a few weeks since the Boulevards were thrilled from day to day by bulletins as to the progress of a music-hall singer who had had nephrectomy performed by a surgical celebrity, whose deeds of derring-do with the scalpel were duly descanted on by admiring scribes. It turned out afterwards that there had been no operation or only a trivial one, but that is a detail of no importance when the matter is considered from the right front of view. Quite lately the Paris papers have been full of rumours as to the health of Madame Sarah Bernhardt, who was said to be in such a plight that a serious operation was imperative, and therefore she would have to give up the part of the Duke of Reichstadt in *L'Aiglon*. The lady has issued a manifesto in which she characterises the rumour as a piece of April fooling, which she at first thought she might treat with contempt. She has, however, felt obliged to abandon this attitude, and she calls on all who love her to be of good cheer, for she is in no danger of again falling into the hands of the surgeons. Her health is such as should delight her friends and confound her enemies. We congratulate the distinguished actress on her health and spirits, but there still remains a little mystery which perplexes our unimaginative souls: How is it that the surgeon's knife seems so often in these days to be thirsting—fortunately in vain—for the blood of beautiful actresses?

MUCH ADO ABOUT A MONUMENT.

A MONUMENT which it is proposed to erect to Tarnier, the distinguished obstetrician, is giving rise to a good deal of heartburning in certain sections of the medical world of France. The design approved by the Committee shows in relief the illustrious professor giving advice to a woman with a child in her arms. He is surrounded, to quote the official description, by a group of his most brilliant disciples, some of whose names are given, the rest being denoted by the inclusive formula "etc." It is this sentence that has aroused anger in celestial souls, especially in those of pupils who are not included among the elect. Some austere critics go so far as to denounce the statue as a mere puff of the brilliant disciples aforesaid, and feeling has run so high that many who had put their names down for subscriptions have withdrawn them. Moreover there are other disciples who take it ill that their individuality should be lost in a too comprehensive "etc." are asserting their claims and proving by documentary evidence the esteem in which they were held by the great master. By serious persons the controversy will doubtless be regarded as a melancholy illustration either of the morbid passion for advertisement which springs eternal in the human breast, or of the equally morbid jealousy which leads professional men to see an advertisement in every mention of a rival practitioner's name. To those who like Tammas Haggart of Thrums have an eye for the humorous side of things, the incident will appear an amusing example of the pettiness of the human mind even when enlightened by scientific culture and elevated by practice of the noblest of the liberal arts.

ANTHROPOLOGY AT CAMBRIDGE.

THE proceedings of the summer meeting of the Anatomical Society of Great Britain and Ireland which was held in the Anatomical Schools, New Museum, Cambridge, last July, contains the notes on the anthropological collection in the Museum of Human Anatomy, Cambridge, made by Mr. W. L. H. Duckworth. The collection contains a representative series of the crania of the various human races which has

been brought together by the late Sir George Humphry and his successor in the Chair of Human Anatomy at Cambridge, Professor Macalister. This extensive collection numbers some thousands of specimens. Among other objects alluded to were skulls of Finlanders and of Lapps, crania of the now extinct Tasmanian aborigines, aboriginal Australians, Melanesian and Polynesian crania, Egyptian crania, skulls of Eskimo and natives of Peru, Vancouver's Island, and of British Columbia; also crania of the inhabitants of the British Islands, of the neolithic Long Barrow race, succeeded by the Round Barrow race, the British races of the Roman conquest, and later the Saxon and Anglian types, together with casts of the Neanderthal skull and other classical examples of crania of prehistoric man. Cambridge is certainly to be congratulated on possessing so valuable an anthropological collection.

DISCOVERY OF A TEMPLE OF ÆSCULAPIUS.

A discovery was recently made at Stankeny in the island of Cos, which, it is hoped, will lead to the bringing to light of the famous Temple of Æsculapius. On April 4th a Mussulman labourer who was planting a vine struck with his spade a stone cupola. He at once notified the authorities, and excavations were undertaken under the direction of a Kaimakan, which exposed a mausoleum of 30 to 45 square metres in area, in which were a number of bones and fragments of pottery. The monument, which is built of brick, appears to date from the Roman period; a ladder 2 to 3 metres in length leads down into the interior, which has the appearance of a chapel. Opposite the entrance are three niches, each capable of containing a coffin, above there is an opening in the form of a low door, and on each side are two other niches. No inscription has been discovered, but there are certain indications which in the eyes of local archæologists give ground for the supposition that in the immediate neighbourhood there was a temple or some other public establishment, and it is thought not improbable that it may be the Temple of Æsculapius.

THE ROYAL VISIT TO DUBLIN.

Her Majesty's visit to Dublin has been signalised by the great interest which the Queen herself and the Royal Princesses have taken in the city hospitals. The Princess Christian, in addition to laying the foundation stone of the new Nursing Home in connection with the Royal City of Dublin Hospital, visited the Mater Misericordiæ, the Hospital for Incurables, and the Children's Hospital in Temple Street. Princess Henry of Battenberg paid a special visit to St. Vincent's Hospital, while Her Majesty, accompanied by the Princesses, honoured with her presence the Adelaide, the Meath, the Mater Misericordiæ, and the Royal Hospitals, and on each occasion directed that the staff should be presented to her. Nor were the nurses forgotten during this memorable visit. Sixty-eight of the Queen Victoria Jubilee nurses were reviewed and entertained at the Viceregal Lodge by Her Majesty, and thirty-three matrons from various institutions were likewise received and treated with gracious hospitality. As a final act of generous sympathy Her Majesty has directed the Lord Lieutenant to distribute on her behalf £1,000 among the charitable institutions in the city.

ELECTION OF SURGEON TO THE MEATH HOSPITAL, DUBLIN.

The vacancy on the surgical staff of the Meath Hospital and co. Dublin Infirmary created by the lamented death of Mr. R. Glasgow Patteson has been filled by the election of Mr. William Taylor, F.R.C.S.I., one of the Assistant Surgeons to the institution. Mr. Taylor was a distinguished pupil of the hospital. He obtained the conjoint licences of the Irish colleges in 1893, and was afterwards House-Surgeon in the Meath Hospital for a considerable period. He then engaged in private teaching, and became attached to the College of Surgeons School as a Demonstrator of Anatomy and of Operative Surgery. In 1898 he obtained the Fellowship of his College, and in the same year was appointed Assistant Surgeon to the Meath Hospital.

MR. KIPLING'S HOSPITAL SKETCHES.

In the *Daily Mail* of May 1st and 2nd Mr. Rudyard Kipling continues his graphic sketches of the wounded in the military hospitals which he has recently visited. Incidentally he bears witness to the splendid stuff, physical and mental, of which the Colonial volunteers, who are fighting their Mother's quarrel so bravely, are made. He sees in these young men the best hopes for the future development of the land which has been "starved by policy and craft through many years lest an incompetent race should be found out before the face of the nations." We may assume, he says, that among the hospitals there are 300 Canadians of the very stamp and breed we require—young, sound, clean, intelligent, well educated, of whom 75 per cent. hold or have held land. These men, he urges, should be induced to settle in South Africa. Mr. Kipling gives a vivid picture of the sufferings and hopes and fears of our wounded soldiers now lying in the hospitals of South Africa, and of the efficiency and devotion with which they are tended.

THE REGULATION OF MEDICAL PRACTICE IN AMERICA IN THE LAST CENTURY.

To the *Philadelphia Medical Journal* of March 10th Dr. Francis W. Packard contributes an interesting article on the regulation of medical practice in America "in good old Colony days." Before there were any medical colleges in the United States to grant diplomas, certificates from the physicians whose pupils they had been were all that many practitioners could show as proof of fitness for their calling. It has been estimated that at the outset of the War of Independence there were upwards of 3,500 persons in the American Colonies practising medicine and calling themselves physicians, of whom not more than 400 possessed a medical degree of any kind. The following is the form of certificate issued to pupils of the Pennsylvania Hospital in the middle of the eighteenth century:

> This is to certify that.....son of.....entered regularly as a pupil of the Pennsylvania....., 1763, and continued his attendance with Diligence and Application to..... 1764, during which time we hope and have reason to believe he has made considerable Progress in the Knowledge of Anatomy and the Practice of Physick and Surgery, therefore wishing Happiness and Success we give from under our hands and the seal of the Corporation this Testimonial of our Esteem and Approbation.

The feature that will probably strike most readers of this document is the carefully guarded terms in which it is drawn up. No definite statement is made as to the recipient's fitness to practise. His teachers "hope and have reason to believe" that he has made "considerable" progress, and they testify not to his knowledge or capacity, but to their own "esteem and approbation" of him. The first man to receive a medical diploma in North America was Daniel Turner, to whom an honorary degree of Doctor of Medicine was given by Yale College in 1720. Turner had been a munificent benefactor of the College; hence the letters M.D. appended to his name were interpreted by the wags of the day as signifying *Multum Donavit*. But the most humorous point in the proceeding does not seem to have struck them. Yale, which had no medical department till 1813, in conferring the degree of Doctor of Medicine, was giving what did not belong to it to bestow—a cheap and easy way of displaying its gratitude. The earliest law that Dr. Packard has been able to find, and apparently the only one in existence till many generations later, making any distinction between men who had a regular diploma in medicine and those who had no degree is "An

Act for regulating the Fees and Accounts of the Practicers of Physic," which was passed by the Virginia Assembly in 1736. According to this enactment, "Surgeons and apothecaries who had served an apprenticeship to those trades" were to charge at a certain rate, and "those persons who have studied physic in any university and taken any degree therein" were permitted to charge at a higher rate. The words "any degree" appear to be rather elastic according to modern ideas, but perhaps it was assumed that a university man who wished to practise medicine would graduate in that faculty. On the other hand, the mere possession of "any degree" may have been held to make the holder superior to those who had no academic stamp of any sort. Twenty years later the profession seems to have been in a state of chaos in New York, for in 1758 William Smith, in his *History of New York*, wrote: "A few physicians among us are eminent for their skill. Quacks abound like locusts in Egypt, and too many have been recommended to a full practice and profitable subsistence; this is less to be wondered at as the profession is under no kind of regulation. Loud as the call is, to our shame be it remembered we have no law to protect the lives of the King's subjects from the malpractice of pretenders. Any man at his pleasure sets up for physician, apothecary, and chirurgeon. No candidates are either examined, licensed, or were sworn to fair practice."

A SPANISH FORMULARY OF THE FOURTEENTH CENTURY.

DR. LUIS COMENGE has recently published a manuscript preserved in the Municipal Archives of the city of Manresa, entitled *Receptari de Manresa*. It is mainly a collection of medicinal formulæ of the fourteenth century. It begins as follows: "In the name of God and of the Blessed Virgin Mary let this work be begun, which thus will serve for the benefit of the body and the salvation of the soul; it is a book of medical prescriptions from the hands of masters and bachelors and other noble and good practitioners and surgeons. Anno Domini MCCCXLVII the first day of Lent. Bernardus des Pugol, Apothecary." To most of the prescriptions is appended the name of the patient, and sometimes that of the prescriber is given. For instance, there are five prescriptions for Don Jaime, Count de Urgel, younger brother of King Pedro the Third of Catalonia and Fourth of Arragon as we learn from the following heading: "For His Highness the Infante Don James Count de Urgel, first ordered by Master Gueran de Gerona, Master in Medicine, and Master R. de Berge, and Master Marti de Vich and Master P. de Pau de Tarrega and Master Cresques, the Jewish physician of our Lord the King of Arragon. All those physicians prescribed these medicines for the said noble Lord the Infante." The name of the Jewish physician here mentioned appears in other documents as Cresgues, Crexgues, and Crexguas. The other four "Masters" were leading physicians of Catalonia. Dr. Comenge finds in these prescriptions evidence that the Count of Urgel died a natural death. His royal brother has been accused by some historians of poisoning him. By comparing the treatment laid down in the textbooks of medicine most in repute in the fourteenth century with the prescriptions of the physicians who were called in consultation to the Count, Dr. Comenge has satisfied himself that Don Jaime did not suffer from hectic, or pneumonia, or gastric affection; that he had neither *synocha*, nor putrid fever, nor disease of the brain, intestine, or pleura, nor epilepsy. Nor does he believe that the trouble was stone in the bladder, as might seem to be suggested by the amount of diuretics prescribed. He is inclined to think that the Count suffered from malarial fever, probably quartan, in the cachectic stage. Dr. Comenge calls attention to the remarkable fact that the *Receptari* contains no prescriptions of the disgusting kind so common in mediæval therapeutics; neither dung, nor urine, nor bones, nor entrails figure among the remedies. Charms, amulets, and prayers are also conspicuous by their absence. The work shows that medicine was, if not more scientific, at any rate more free from absurdity and superstition in the fourteenth century in Catalonia than it was in other parts of Europe. Dr. Comenge seems to us to have opened a new vein of historical criticism by this laborious investigation of the causes of the death of the Count de Urgel. It was a happy, and, as far as we know, a novel idea to attempt to make a diagnosis by comparing the treatment with the authoritative teaching of the time. There are, of course, some sources of fallacy which have to be guarded against in such researches. The most obvious of these is that in any given case the diagnosis or the treatment, or both, may have been at fault.

TOBACCO AMBLYOPIA IN THE TEMPERATE.

DR. DOWLING, of Cincinnati, has published in the *Journal of the American Medical Association* some recent examinations made to determine the influence of tobacco on vision among men and women at work in the tobacco factories of that city. These factories employ over 2,000 people; more than one-half are females. Dowling examined 153 males and 50 females. Of the males 23 were more or less affected with tobacco blindness; of the 50 females only 2 had that affection. The males examined were between 35 and 65 years of age, and were all known to be heavy smokers or chewers of tobacco. As a rule, they did not indulge in both habits. The chewers suffered much more than the pure smokers. This discovery should come as a relief to the British votary of the Virginian weed. It is satisfactory from a moral aspect, and interesting and important from a medical point of view, to find that not one of the 153 men were drinkers. Two hard drinkers that were amblyopic were therefore excluded, as the series gave so good an opportunity of studying the effects of tobacco poisoning alone. Most of these men were thrifty Germans who either drank only a glass or two of beer after working hours or did not drink at all. Dr. Dowling notes that Swanzy has already shown us that tobacco blindness is more common in Great Britain and Ireland than in Germany, where milder tobacco is consumed, but Dowling adds that we must remember that the Teuton also takes milder forms of alcohol. Of the two women neither either drank alcohol or took tobacco in any form. A great many boys in the factory smoked or chewed tobacco, but none suffered from amblyopia. The hot air laden with tobacco, so characteristic of the factories, does not seem to cause the ophthalmic lesion, though it caused severe anæmia and nervous affections in young girls. It is remarkable that though the women examined were non-smokers and only one twenty-fifth were amblyopic, most had contracted pupils. Dowling finds that under proper care fully 60 per cent. of the cases recover; but in long-standing cases a moderate improvement is all that can be expected.

MEDICAL INSPECTION OF SCHOOL CHILDREN IN GERMANY.

THE schoolmaster, it is well known, is abroad in Germany, but, fortunately for the children, so is the school doctor. During the last three years a regular system of medical inspection of schools has come into being. In this reform the example was first set by Wiesbaden, and by degrees the large towns are following suit. At Frankfort during the past year 11 medical officers to the schools of the town have been appointed. Each of these receives a salary of 1,000 marks a year, and inspects on the average 1,700 children. He attends once a fortnight for two hours at each school. Each of the 19,000 children of the elementary schools receives a book of health certificates which accompanies him throughout his school life. Each child, before

admission to the school, has to pass a medical examination; if evidence of the presence of any disease is found, a notification of the fact in writing is sent to the parents. The school doctor has nothing at all to do with treatment, he only decides as to the total or partial exemption of children from school attendance on the score of health. He also indicates those whom he thinks suitable for special schools (idiots, defective children), for school colonies, etc. Medical inspectors of schools have also been appointed by Leipzig, Magdeburg, Königsberg, Erfurth, Nürnberg, and Heilbronn, and already there is statistical evidence of the usefulness of the system. Among 547 children examined in two schools at Leipzig there were found 2 suffering from pulmonary tuberculosis, 11 from heart disease, 10 from spinal curvature, 63 from adenoid vegetations of the nose and pharynx, 75 with defects of vision, and 10 with defects of hearing. In Berlin the schools are not yet under a system of regular medical inspection. A year ago the Minister of Public Instruction ordered a medical inquiry to be held on the children in country schools. The points to which attention was specially invited were as follows:—Are the children admitted likely to be a source of danger to the others (contagious diseases, want of cleanliness, etc.)? Can they without danger to their physical development take part in the whole course of instruction, or should they be exempt from some of it, as, for instance, gymnastics? In regard to this point it was particularly enjoined that the nature of their constitution should be precisely determined, and the hereditary constitutional states (tuberculosis, scrofulosis, syphilis, epilepsy, etc.) indicated. As a proof of what might almost be called the tender solicitude of the German Government for the school children, home lessons—which are responsible for much of the over-pressure that is a too general result of our own educational methods—are absolutely forbidden by law.

FRANCE AND THE MALARIA QUESTION.

At a meeting of the Académie de Médecine on April 24th, M. Laveran presented a report urging the necessity of organising research as to the prophylaxis of malaria in French colonies. He proposed that a Malaria Committee should be appointed, and that an expedition should be sent to Algeria to study the part played by mosquitos in the production of the disease, and the best means of prevention. The proposals were adopted.

The annual oration before the Medical Society of London will be delivered by Dr. J. Kingston Fowler on Monday, May 21st. The subject will be Science and Medicine in the Eighteenth Century.

At the meeting of the Royal Medical and Chirurgical Society on Tuesday next Mr. Frederick Treves and Mr. Clinton Dent will give addresses on the Wounded in the Present War. Sir William Mac Cormac will be present and speak. The lectures will be illustrated by lantern slides from photographs by Mr. Treves and Mr. Dent.

A dinner in aid of the funds of the Medical Graduates' College and Polyclinic will take place on Thursday, May 31st, at 7.30 p.m., at the Trocadero Restaurant, Piccadilly Circus, the Right Hon. Lord Strathcona and Mount Royal in the chair. As preparatory to the dinner there will be a *conversazione* held in the College on Saturday, May 26th, from 4 p.m. to 7 p.m., to inspect the new museum.

A general meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at 11, Chandos Street, Cavendish Square, London, W., on Thursday, May 10th, at 4 p.m., under the presidency of Dr. J. B. Spence. Papers will be read by Dr. A. W. Campbell, Pathologist of the County Asylum, Rainhill; by Dr. W. J. König, Physician to the Lunatic Asylum of the city of Berlin; and at about 5 p.m. Dr. Maudsley will open the discussion on The New Psychology: Critical Remarks on its Methods and Aims, especially in reference to Psychology of Children and Psycho-physical Research. The members will dine together after the meeting at the Café Royal.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Bill, when Parliament met after the recess, was found to be down for consideration on the report stage on June 27th. The resolution for providing the expenses incurred by the General Medical Council under the Bill from the Exchequer was, however, down on the paper for the first day, April 26th. It only came on after midnight, and was promptly blocked by the words "I object," and it met the same fate again on Monday last. It has now been put down again for next Monday. The opponents of the Bill will, no doubt, block this resolution for the expenses until the decision of the Government is known as to the progress of the measure. There has grown up, from the necessary consideration of the amended Bill by departments of the Government, a feeling by no means favourable to the form of the proposed legislation. The difficulties of administration are very obvious, and it is the duty of departments like the Home Office to consider these matters, and before the Bill passes to see how it can be made to work easily and effectively. The feeling is growing that in its present form the Bill will not prove satisfactory either to the central or the local authorities, and we may therefore expect much discussion and modification before any legislation is carried. The amendments of the British Medical Association are already down upon the paper, and Mr. Lloyd-George has also given notice to substitute the words "midwifery nurses" for "midwives" throughout the Bill.

The Lunacy Bill was down for second reading on Monday last, but was not reached, and will now most probably not come on till next week. There is some movement among members to raise the question of compulsory compensation for all asylum officers injured during the discharge of their duties, as the clause in the Bill is not regarded as sufficiently strong. The question of superannuation is also likely to be raised, as well as the subject of the shortened period for urgency orders.

The Vaccination Bill, which has been introduced by Mr. Pickersgill, was down for May 2nd, but had to be postponed as the Bill had not been printed. The measure would seek to preserve the old rights of Boards of Guardians over their vaccination officers as regards prosecutions, but there is little or no chance of the Bill being discussed, much less passed, this year.

Deaths from Carbolic Acid Poisoning were the subject of a a question by Sir John Leng, who pointed out that, while the scheduling of poisons had greatly diminished the number of fatalities, deaths from the carbolic acid alone amounted to 206, or nearly as many as for the whole of the scheduled poisons. The Home Secretary, in reply, stated that the Home Office and Privy Council were giving careful consideration to the matter in conjunction with the Pharmaceutical Society, and he held out hopes that something would really be done, either by adding carbolic acid to the second part of Schedule A of the Pharmacy Act or in some other way, to prevent the many cases of suffering and death which had hitherto occurred.

The Medical Officers of Health and Sanitary Inspectors Bill was introduced and read a first time on Tuesday. Dr. Farquharson provides in his Bill for superannuation and security of tenure for all health officers. As the sanitary inspectors have already introduced a Bill for the same object as regards themselves, and are willing now to join forces with the medical officers of health, it is to be hoped that support will be given to these Bills, or rather to the more comprehensive one, from both sides of the House. Dr. Farquharson has selected May 16th for the second reading.

ADAMS *v.* THE BRITISH MEDICAL ASSOCIATION.

[Before Mr. Justice LAWRANCE and a Special Jury.]

VERDICT FOR THE DEFENDANTS.

THIS was an action brought by Mr. Charles Adams, the Editor of the *Verulam Review*, against the British Medical Association, and the statement of claim alleged that on October 22nd, October 29th, and November 5th, 1898, certain libels upon the plaintiff were published in the BRITISH MEDICAL JOURNAL. The defendants admitted publication but denied the innuendos, and pleaded that the words taken in their ordinary meaning were true and a fair comment on matters of public interest.

Mr. Rawlinson, Q.C., and Mr. George Elliott appeared on behalf of the plaintiff, and Mr. McCall, Q.C., and Mr. Boydell Houghton on behalf of the defendants.

Mr. Rawlinson, in opening the case for the plaintiff, said that Mr. Adams was probably well known as having taken an interest in questions affecting the use of vivisection by the medical profession. Counsel then described the effect of the Act commonly called the Vivisection Act and of the certificates granted under it, and said that the plaintiff, having read that the Home Secretary had made a statement in Parliament to the effect that no experiments were performed upon cats or dogs without anæsthetics, had addressed a letter to the Home Secretary as to 190 experiments returned in the inspector's report as having been performed under Certificates B and EE. In reply he had received the following letter, dated September 9th, 1898:

Whitehall.

SIR,—I am directed by the Secretary of State to acknowledge the receipt of your letter of the 2nd instant, and to say that you are in error in thinking that the 190 experiments alluded to by you were not performed under anæsthetics. The Secretary of State, however, regrets that he cannot undertake to correspond with you on this or any other subject for the purposes of your *Review*.

I am, Sir, your obedient servant,
HENRY CUNYNGHAME.

Mr. Adams then had an apparent contradiction that 190 experiments had been reported as having been performed under the certificates which permitted experiments to be performed on cats or dogs without anæsthetics, while the Home Office informed him that they had been performed with anæsthetics. That being so he sent a letter to the gentlemen who carried on these experiments asking them to explain, but apparently had sent it to one or two gentlemen not concerned in the 190 experiments. Counsel then read the following paragraph, printed in the BRITISH MEDICAL JOURNAL of October 22nd, 1898:

THE ANTIVIVISECTIONIST PROPAGANDA.

The methods of the opponents of vivisection are well exemplified in the following letter, which has been circulated amongst various holders of licences under 39 and 40 Vict., c. 77:

Harewood House, Keyhaven, Milford-on-Sea,
Hampshire, Oct. 17th, 1898.

Sir,—The Home Secretary informs me that having, in the course of your work last year, applied for and obtained a certificate authorising experiments on dogs, etc., *without anæsthetics*, on the express ground that the experiments in question could only be so performed, you then, notwithstanding the certificate, performed them *under anæsthetics*, thereby plainly showing the incorrectness of the ground on which your application was based.

Please observe that the statement is Sir Matthew White Ridley's, not mine. And as it certainly appears to cast a serious slur either upon your good faith or your professional competence, I think it only right, before making use of it, to ask whether you admit its accuracy. If you do so, pray do not trouble to write. Silence will be taken as assent.

Your obedient servant,
The Editor *Verulam Review*.

The statements contained in this letter may be classed as inaccurate, misleading, and threatening. To drag the name of the Home Secretary into such a circular is misleading. For the facts are obtained from a printed paper to be purchased by anyone who is interested in the matter. The serious part of the letter is the absolute incorrectness of the implied charge of obtaining a licence to perform experiments without anæsthetics, and then violating the terms of the permit by administering an anæsthetic. The particular certificate to which allusion is made seems to be EE, which is issued with the following provision, that the experimenter "is duly authorised to perform on living animals certain experiments..... such animals being, during the whole of the initial operation.....under the influence of some anæsthetic of sufficient power to prevent their feeling pain," though it dispenses with the statutory obligation to kill the animal on which the experiment is performed before it recovers from the influence of the anæsthetic. It is clear, therefore, that every holder of this certificate is bound to perform the whole of the actual operation whilst the animal is anæsthetised, and if his experiment is to be successful he must see that the healing of the wound is aseptic. But it may be some time before the object of the experiment is attained, and it would be impossible to keep the animal in a condition of narcosis during the whole of this time. The irresponsible Editor of the periodical in question, either ignorant of the terms of the licence, or too careless to ascertain them, impugns the good faith of the members of the medical profession who choose to devote themselves to advance their art by experimental methods. The minatory clause is too feeble to be worth notice.

Counsel maintained that this impugned the plaintiff's responsibility and want of good faith in what he had done. Counsel then read part of the letter by Mr. Adams, published in the JOURNAL of October 29th, 1898, and said that there was no sort of withdrawal, but that the following was printed:

The following copy of a letter received from the Permanent Under-Secretary of State, Home Office, by one of the persons to whom the Editor of the *Verulam Review* addressed the lithographed letter which we published last week, is a sufficient answer to the first part of the letter printed above (that is, in the BRITISH MEDICAL JOURNAL of October 29th, 1898):

The Under-Secretary of State,
Home Office, London, S.W.
Whitehall, October 25th, 1898.

Sir,—With reference to your letter of the 18th inst., I am directed by the Secretary of State to acquaint you that it is not the fact, as alleged by the Editor of the *Verulam Review*, that he has ever stated that you have performed experiments on animals under anæsthetics which, under the certificates held by you in respect of such experiments you were authorised to perform without anæsthetics.

I am, Sir, your obedient servant,
KENELM E. DIGBY.

With regard to the second part, the fact appears to be, as we pointed out last week, that the letter of the Editor of the *Verulam Review* is founded upon a blunder due to his want of acquaintance with the terms of the Act, and of the licences and certificates granted under it.

Plaintiff had then written a long letter explaining affairs, but instead of publishing the letter, or any sort of explanation or apology, defendants had published the following:

THE ANTIVIVISECTIONIST PROPAGANDA.

We have received a further letter from the Editor of the *Verulam Review* in which he requests us to publish a very voluminous correspondence with the Home Office. The correspondence, we may observe, consists of several long letters written by the Editor to the Home Office, and of a single brief reply from the Home Office. Considerations of space render it quite impossible to comply with his request, more especially as all the letters are founded, as we have already pointed out, upon a misapprehension of the Act and of the report of the inspector.

Defendants had done nothing to withdraw, and plaintiff, being anxious to obtain such withdrawal, had commenced this action. Plaintiff's solicitor had subsequently submitted to defendants a form of apology which they had refused to insert. Counsel submitted that this ought to have been done, and that the plaintiff was entitled to damages; he did not ask for substantial damages, but moderate damages sufficient to show that the jury was of opinion that the attack should not have been made on the plaintiff, and that the justification for the attack contained in the defence, which said that the libel was true in substance and in fact, should not have been put on the record. Counsel regretted that he was not able to call the plaintiff, who was too ill to attend.

Mr. McCall said that the defendants admitted publication.

Mr. Edward F. Chinery, L.R.C.P., F.R.C.S.Edin., said that since just before Christmas he had been in medical attendance on Mr. Adams, who was suffering from dilatation of the heart and great weakness. He was not in a fit state of health to undertake a journey to London; such a journey would be very dangerous. If an adjournment for a month were made, he would not be likely then to be able to travel to London.

Cross-examined by Mr. McCall, witness said that he believed Mr. Adams was continuing to edit the *Verulam Review*. He had seen him writing in bed, but he believed that he dictated to his wife. The dilatation of the heart did not interfere with his dictating, and would not prevent his answering questions, but his memory appeared to be very bad. Witness had heard that he was very irritable, but he had not seen any particular irritability.

In re-examination by Mr. Rawlinson, witness said that Mr. Adams suffered also from glycosuria, but that had been better lately. The real trouble was dilatation of the heart, owing to which he was unable to walk upstairs, and any excitement would be dangerous.

Mr. McCall, in opening the defendant's case, said that under other circumstances he would, without calling evidence, have submitted that there was no libel and no cause for the action, and that the plaintiff had no ground to complain of the com-

ments that had been made upon the public discussion which he had initiated and brought upon himself. He did not take that course because, as representing the British Medical Association, he thought it better in the interest of the Association and in the interests of the public that the jury should hear the whole story of what was a subject which caused a considerable amount of irritation, not merely to Mr. Adams, but to others who took strong views on it. He would, therefore, call witnesses who would make clear what was the cause of the discussion and what was the blunder Mr. Adams had committed, and, having committed, had unfortunately made serious imputations upon the character and conduct of men of high honour and reputation, and beyond reproach. The defendants in this action — the British Medical Association—represented in the United Kingdom and in the Colonies some 17,000 members, and amongst its members were the best representatives of that great profession whose duty it was, and whose practice it was, to give up time and life itself in combating human disease and in alleviating human pain. The duties of medical men made it almost absurd to suggest that any member of that great profession would inflict pain upon the lowest of God's creatures without having some definite purpose in view, some great end to gain, some distinct human pain to alleviate, some great chance of rescuing human life; and the experiments made under the Act were experiments that had that view, and that view alone. He would endeavour to state, first, what was the scheme of the Act; and, secondly, what was the practice which had been followed by the Home Secretary. This he would do, not in the interests of the Home Secretary (whom he did not represent), but in the interests of the great profession, whose character was to some extent involved in this case, to show that in all they had done they had not merely acted under the Act of Parliament, and under the certificates of the Home Secretary, but in the interests not merely of scientific research, but in a spirit of mercy and tenderness even to the animals experimented on. In the year 1876 the Legislature passed an Act entitled "An Act to amend the Law Relating to Cruelty to Animals," 39 and 40 Victoriæ, chapter 77. Under that Act the Home Secretary, to whom the administration of the Act was committed, was authorised to grant licences to gentlemen, who must be distinguished scientific men, to make experiments, and licences for the places where the experiments were to be made. The Home Secretary must be satisfied that the application made and supported was an application on behalf of scientific men who were the right and proper persons to carry out these experiments, and those experiments must be carried out at a particular place which an inspector of the Home Office had satisfied himself was a suitable place. Under the licence, when granted, the licensee, subject to certain restrictions, was entitled to make experiments; but the Home Secretary had taken the additional precaution, which probably he would not be bound to take under the Act—it was not worth while to stop to consider that point—to issue certificates bearing the title of the first letters of the alphabet, and under those certificates the kind of experiments, the duration of the experiments, and the application of the anæsthetic, were all laid down and carefully provided for. The Act required that the scientific gentleman who was the inspector and responsible for carrying out the Act, should make to the Home Secretary each year a return specifying the gentlemen who held the licences and certificates, specifying the licences and certificates which had been issued to them, giving their full names and addresses, stating the character of the experiments, and the number of the experiments that had been carried out by them during the year. That document was an official paper, and the certificates were printed by the Queen's printer, so that any person who chose could buy for a few pence the whole of the printed documents, which showed what had been done under the Act. One imputation made by the plaintiff, and made more than once, was that the Home Secretary, who had no interest in this matter except to discharge his duty, had shrouded in mystery the practice under this Act in the interest of protecting those who were making experiments, not for the purpose of science, but with a reckless disregard of the pain that was undergone. When the documents were examined it would be seen on the whole face of them, perhaps with too great a minuteness but with a wealth of detail of which nobody could complain, that the whole practice under the Act was put before any person who chose to read it. Very strong feeling had been aroused by this controvery, and possibly the strongest feeling had found expression in Mr. Adams, who started a *Review* for the avowed purpose of condemning the medical men who carried on these experiments, and from beginning to end he had used strong, vigorous, and abusive language. When he got the return for 1897, which was published in April, 1898, he wrote a letter which Mr. Rawlinson, with a keen appreciation of his client's style, thought it was better he should not read, to the Home Secretary of August 5th, 1898. This man, who was complaining that his sense of honour was so keen and so high that even the use of the word "irresponsible," when applied to him, shocked him beyond endurance, and drove him into an action for libel, wrote the following letter, which was the beginning of the controversy.

With reference to your statement that certificates under the Act 39 and 40 Vict. c. 77, dispensing with anæsthetics are never issued for any experiments other than inoculations, etc., I have the honour to direct your attention to Table III. A., column 5, of your inspector's latest report, from which it would appear that no fewer than one hundred and ninety (190) separate experiments 'other than inoculations, etc.,' were not only so performed, but performed upon dogs and cats, animals placed by the Act under special protection. The drawing by the inspector in the same report of special attention to the fact that the certificate allowing anæsthetics to be altogether dispensed with is always coupled with another certificate dispensing with the obligation to kill before recovery from the anæsthetic which has not been used would seem to suggest that either in the issuing or the recording of the certificates there must have been somewhere some little confusion which may possibly have been the cause of the apparently flat contradiction given to your statement by the inspector's report. Especially as that same statement is repeated by him in that same report which so flatly contradicts it. As this is a matter of public interest, I have the honour to request that I may for the purposes of my *Review* be furnished with an explanation.

Ministers must, no doubt, expect to have letters of that kind written to them by persons who are interested in these questions, but he submitted that this particular report, upon the face of it, was abundantly clear. With regard to certificates granted to licencees one, Certificate A, authorised experiments which were simple inoculations. Everyone knew it was unheard-of to put a human being under anæsthetics for that purpose. The experiment under Certificate A was inoculation and inoculation alone. Certificate B referred to the class of experiments in which an operation was done under an anæsthetic and the animal was allowed to survive, and this was the class over which Mr. Adams had signally blundered. As an example he might take the experiment for removal of the spleen, which showed that an animal could live after the spleen had been removed; the removal of the spleen was an experiment within the meaning of this Act, and perhaps under the terms of the Act it might be said that it was a continuing experiment during the life of the animal, although after the removal of the spleen the animal lived in health as perfect as it had before. According to this certificate, while the operation was being performed the animal must be under an anæsthetic; but after the operation was over, and the treatment had been completed and the pain had ceased, no purpose would be served in keeping that animal continually under anæsthetics; it would be cruel and it would defeat the scientific object of the experiment to kill it. In order to carry out those experiments on dogs and cats the Certificate B was extended by a certificate called EE. One provision of the Act was that experiments that might be made on other animals could not, without a particular certificate, be made upon dogs and cats. An experimenter with the Certificate B *plus* EE could make the experiment of removing the spleen of a dog or a cat, and after it had recovered from the anæsthetic and the pain had ceased allow that animal to live. One of the schedules in the return for 1897 gave the number of experiments under the heads B and EE. They numbered 190, and the column showed that the total number of experimenters was 32. What the medical profession complained of, and what the defendants complained of and wrote about, was that Mr. Adams had come to the conclusion, upon reading this column, that Certificate B *plus* EE referred to an experiment made without anæsthetics, which was a blunder, and he sent out to some 73 gentlemen, 41 of whom had no connection whatever with these experiments, the extremely impudent circular which Mr. Rawlinson had read. Mr. Adams had then read this return; he had written this letter to the Home Sec-

retary. The Home Secretary, or at least the Under-Secretary of State, on September 9th had told him specifically: "You are in error in thinking that the 190 experiments alluded to by you were not performed under any anæsthetic." If he had not been blinded by prejudice against vivisection what would he have done? Surely he would have turned back to this report and looked to what the report itself stated. The figures were prefaced by a statement by Dr. Poore, who was at that time Inspector to the Home Office. Dr. Poore, in this report, which was printed and open to everyone, stated specifically:

In each of the preceding reports which I have had the honour to make I have drawn attention to the fact that the only experiments performed without anæsthetics are of the nature of inoculations or hypodermic injections, but in order to lessen the chance of any misapprehension on this matter I have placed these experiments in a class by themselves.

And then he repeated what anyone would see by looking at the column already quoted, that under the Certificate B. *plus* EE, 190 were performed. With that before him Mr. Adams, blinded by his prejudice against vivisection, sent out the circular—a most offensive circular when it was addressed to the thirty-two gentlemen who performed the experiments, but much more offensive when it was addressed to men who had not performed the experiments at all. What right had Mr. Adams to say to some of the best representatives of the medical profession that they had made an application based upon a fact which they must have known to have been untrue, or for a kind of experiment which they were not going to perform? Then Mr. Adams went on to say, "Please observe that the statement is Sir Matthew White Ridley's, not mine." That letter was addressed to men who had not seen the correspondence that had taken place, and it was made to them for the purpose of inducing them to believe that Sir Matthew White Ridley had specifically made in reference to this specific person the charge already quoted. That was obviously untrue, and it was difficult to see how any person, with an honest desire to state the truth upon this vexed question could make such a statement as that. The circular went on: "And as it certainly appears to cast a serious slur either upon your good faith or your professional competence." What right had Mr. Adams to scatter broadcast such a circular? That statement meant that Sir Matthew White Ridley's communication to Mr. Adams cast a serious slur upon the good faith of the medical men and their professional competence. "I think it only right before making use of it to ask whether you admit its accuracy." Accuracy of what—professional incompetence or bad faith? Then the circular went on, "If you do, pray do not trouble to write. Silence will be taken as assent." That meant, "Silence would be taken as your assent to this: that you were either guilty of bad faith, or that you were professionally incompetent." This was the gentleman who complained of the tone of the attack. His own tone, it might be thought, required a little amending, unless it was written under that feeling of irritation which the doctor who attended him said he suffered from. But if he desired to get at the actual truth, the actual truth was before him in the report; if he had desired to receive the statement of the high official at the Home Office, that statement was contained in a letter which was before him. But he chose to enter into this controversy with the preconceived notion that everyone, from the highest official down to the lowest who was engaged in working this Act, was working it for the purpose of protecting cruelty and trying to keep the public in the dark. For that charge there was not the slightest ground. He asked the jury to think twice and to hesitate long before giving to a man who wrote such a letter as that to men who were as honourable and tender as himself damages for what he was pleased to call "a want of tone." The last statement, "silence will be taken as assent either to your incompetence or bad faith," reminded him of the story told of the difficulty of answering a question in cross-examination which involved two branches. Rightly or wrongly it was said that a cross-examiner once asked an unfortunate witness, "When did you leave off beating your mother-in-law?" and insisted upon an answer Yes or No, which was very like the question which Mr. Adams put, "The Home Secretary says you acted either in bad faith or you are professionally incompetent; if you admit this, do not take the trouble to write and silence will be taken to be assent"; and Mr. Adams was himself to be the judge whether the gentleman addressed acted in bad faith or was professionally incompetent or not. A number of the medical men who received this impudent letter sent it on to the Editor of the BRITISH MEDICAL JOURNAL and the BRITISH MEDICAL JOURNAL published the paragraph now complained of. Having regard to the circumstances of it, and the Editor of the BRITISH MEDICAL JOURNAL knowing what was contained in the Home Office report, did he go one hair's breadth beyond the limit of his duty to the profession when he published the article of October 22nd? The substance of that article is "You have no right to drag the name of the Home Secretary into this"; and that is perfectly true. Then the explanation counsel had already given as to the Certificate EE was given, and these words were added: "The irresponsible Editor of the periodical in question, either ignorant of the terms of the licence, or too careless to ascertain them, impugns the good faith of the members of the medical profession, who choose to devote themselves to advance their art by experimental methods." What was there to complain of in that? Did Mr. Adams, when he sent out this circular, and published it afterwards in his *Review*, act with a sense of responsibility—the proper sense of responsibility to the public that he was misleading, or to the medical men whom he was impugning? Mr. McCall ventured to say he did not, and that the statement in the BRITISH MEDICAL JOURNAL might have been made a good deal stronger without overstepping the limit of fair criticism upon a matter which, Mr. Adams himself said, was a matter of public interest. The facts stated could be inferred from these documents alone, and they might have been submitted without calling any witnesses, but he thought it better that the jury should see the distinguished man who had made the report which was impugned there, and one or two others who received the circular, and hear from them what the course of practice was.

Dr. George Vivian Poore, examined by Mr. Houghton, said that he had been Home Office Inspector under the Act. By Section II it was provided that persons should not perform on a living animal any experiments calculated to give pain, except subject to the restrictions imposed by the Act. A penalty of £50 was provided for the offence, and for a subsequent offence imprisonment or a fine of £100, in the discretion of the Court. Subsection I of Section III required that an experiment must be performed with a view to the advancement by new discovery of physiological knowledge, or of knowledge which would be useful for saving or prolonging life or alleviating suffering. Subsection III provided that the animal must, during the whole of the experiment, be under the influence of an anæsthetic; and Subsection IV, that it must, if the pain were likely to continue after the effect of the anæsthetic had ceased, or if any serious injury had been inflicted, be killed before it recovered from the anæsthetic. Experiments might be performed under Certificate A without anæsthetics on such certificate as is prescribed by the Act being given, to the effect that insensibility could not be produced without frustrating the object of such experiment. Certificate A was not granted except for inoculations, hypodermic injections, and feeding experiments. Certificate B permitted experiments to be performed without the experimenter being under an obligation to cause the animal to be killed before it recovered from the anæsthetic, if certified that so killing the animal would necessarily frustrate the object of the experiment; that certificate, in fact, allowed the animal to be kept alive after it had recovered from the effect of the anæsthetic which must be given under the terms stated. Certificate E extended A to cats and dogs, and Certificate EE extended B to cats and dogs. No experiment at all could be performed except under licence, and under the licence alone the animal must be killed before it recovered from the anæsthetic. He had prepared the report for 1897, which was the subject of Mr. Adams's letter to the Home Secretary. In that paper he had stated as follows:

Table III is divided into two parts, A and B, for the purpose of separating experiments of the nature of inoculations and hypodermic injections, or similar proceedings from the rest. In each of the preceding reports which I have had the honour to make, I have drawn attention to the fact that the only experiments performed without anæsthetics are of the nature of inoculations or hypodermic injections, but in order to lessen the chance of any misapprehension on this matter I have placed these experiments in a class by themselves.

That was the fact. In Table III A, showing the number and nature of experiments performed other than those of the

nature of inoculations, hypodermic injections, or similar proceedings, a column was devoted to experiments under Certificate B *plus* EE. The table gave the name of the licensee and the particular kind of certificate held.

Mr. Houghton: Is it a fact that there were only thirty-two gentlemen who actually experimented under B *plus* EE, although there were 190 experiments?

Witness replied that he had not counted them.

Mr. McCall observed that that was the number of experiments.

To obtain Certificate B *plus* EE, a certificate must be furnished by two eminent men of science, who were particularised in the Act, that a dog or cat was necessary, and further, that recovery from the anæsthetic was necessary.

Mr. Houghton then read Section XI of the Act:

Any application for a licence under this Act and a certificate given as in this Act mentioned must be signed by one or more of the following persons—that is to say, the President of the Royal Society; the President of the Royal Society, Edinburgh; the President of the Royal Irish Academy; the Presidents of the Royal Colleges of Surgeons in London, Edinburgh, or Dublin; the Presidents of the Royal Colleges of Physicians in London, Edinburgh, or Dublin; the President of the General Medical Council; the President of the Faculty of Physicians and Surgeons of Glasgow; the President of the Royal College of Veterinary Surgeons; the President of the Royal Veterinary College, London; but in the case only of an experiment to be performed under anæsthetics, with a view to the advancement by new discovery of veterinary science, and also (unless the applicant be a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica or surgery in a university in Great Britain or Ireland, or in University College, London, or in a college in Great Britain or Ireland incorporated by Royal Charter) by a professor of physiology, medicine, anatomy, medical jurisprudence, materia medica, or surgery in a university in Great Britain or Ireland, or in University College, London, or in a college in Great Britain or Ireland incorporated by Royal Charter.

Dr. Poore: The experiment on the spleen referred to by Mr. McCall was an example of a case where the Certificate B *plus* EE had been used with great advantage to the human race. Surgeons had been in doubt as to whether it would be possible for an animal to live without its spleen, and it was a revelation that an animal could live quite well without that organ. The experimenter who wished to perform that experiment would have to obtain first of all a licence, and then Certificate B *plus* EE, the whole being to ascertain whether the animal could live without its spleen. He did not believe that the animal suffered pain under the circumstances, being given an anæsthetic and treated aseptically afterwards. It was quite true to say, as had been said in the British Medical Journal, that every holder of Certificate B *plus* EE was bound to perform the whole of the actual operation while the animal was anæsthetised, and that if his experiment was to be successful he must see that the healing of the wound was aseptic. The facts as stated by the British Medical Journal were true, and Mr. Adams was entirely mistaken. If Mr. Adams had purchased the certificates he would have seen at once that he was under a misapprehension.

Mr. Justice Lawrance: There is one thing I have never been able to understand, and that is this. In the letter of October 17th, the plaintiff's letter, he says they have taken out certificates authorising them to experiment on dogs without anæsthetics, and they have gone on in spite of that and done it with anæsthetics. I could understand it if it had been the other way on—that would be a very serious imputation—that you have taken out a certificate to perform the experiment with anæsthetics, and then gone on in violation of that certificate and performed it without anæsthetics. You may see your way out of that, but I cannot at the present moment. You see what I mean, gentlemen?

A Juryman: Yes.

Mr. Rawlinson: The explanation of that letter is this. The certificate must show that the experiment could not be performed without anæsthetics. Then the plaintiff found in a large number of instances, although the certificate was given, that these gentlemen did it with anæsthetics. He was not complaining of the gentlemen who had done the operation; he was complaining of the person who gave the certificate saying it could only be done without anæsthetics. That was the position.

Mr. Justice Lawrance: No, that may be the explanation, but it is not the letter as it stands.

In reply to Mr. Houghton, witness said that none of the gentlemen whose names appeared as having obtained the Certificate B *plus* EE had obtained the certificate to perform the operation without anæsthetics,

In cross-examination, Mr. Rawlinson asked whether there was anything in Certificate A to restrain the holder from doing anything he liked without an anæsthetic.

Dr. Poore pointed out that the nature of the operation was upon the face of the certificate. The matter was in the discretion of the Home Secretary.

Mr. Rawlinson: But assume a Certificate A *plus* E to be given, as far as the certificate was concerned the holder might have the power to cut the leg off a living dog without an anæsthetic.

Witness: Clearly not; no such certificate has ever been given.

Mr. Rawlinson: Assume that it was given.

Witness: But it never has been given.

Mr. Rawlinson: As far as the certificate is concerned the Home Secretary exercising his discretion does not grant certificates, but in Certificate A there is nothing confining it to inoculations.

Mr. McCall: There is nothing in a blank certificate.

Mr. Justice Lawrance: It is like a blank cheque, is it not? There is nothing on a blank cheque of value until someone fills it in and puts his name at the bottom.

Mr. Rawlinson: If you say that Certificate A can only be used for inoculation, I will take it in that form.

Witness: It is only used for inoculations.

Mr. Rawlinson: You do not suggest that Certificate A is drawn up in the form applicable to inoculation?

Witness: No. I think that the Act never contemplated trivialities like inoculations, and they were never really provided for by the Act.

Mr. Rawlinson: The Act never meant Certificate A to apply to inoculations at all?

Witness: Now you are saying more than I should like to say. I do not think inoculations were ever really provided for by the Act.

Mr. Rawlinson: I suggest to you that Certificate A was never meant to apply, and is not drawn in such a way as would naturally lead you to believe that it was to apply to inoculation at all.

Witness: I say in my report, "and yet the wording of the Act is such that the administration of anæsthetics can in no case be dispensed with except by a certificate (A), stating that 'insensibility cannot be produced without necessarily frustrating the objects' of such experiments. Notwithstanding that the wording of Certificate A is not wholly applicable to the circumstances, it is nevertheless allowed for inoculations."

Mr. Rawlinson: You admit that Certificate A was not meant originally for inoculation, and that it is merely the discretion which the Home Secretary is exercising—I must take your word for that—which prevents Certificate A from being used for such operations as I suggested—namely, under A and E together, cutting a dog's leg off during life.

Witness: Except that there is no possible object in it.

Mr. Rawlinson: I admit that, but what I am suggesting is that Certificates A and E can be used and were intended to be used for serious experiments other than inoculations upon cats and dogs.

Witness: They never have been so used.

Mr. Rawlinson, after some further questions, said: I suggest to you that the object of Certificates A and E was for serious experiments on cats and dogs other than inoculations without anæsthetics. Is that your view?

Witness: Possibly; I will not go further than that.

Mr. Justice Lawrance: If you wanted to inoculate a rabbit you would have to have Certificate A; if you wanted to inoculate a cat or dog then you would have to have A and E.

Mr. Rawlinson: Yes, my lord, but where I differ from the witness is that A only applied to inoculations.

Mr. Justice Lawrance: You do not differ from him. You say that with Certificate A you can—again to put your favourite illustration—cut off a dog's leg without anæsthetics. The witness says that if you put that in the certificate you would not get it, and he points out in his report that Certificate A or the Act does not adequately deal with the question of inoculation, which is quite a minor matter, much smaller than the experiments that the Act provided for, but for fear that anybody should think that inoculation is a thing which involved cruelty to a rabbit

we will say, then they are put under Certificate A, although it is not in form specially adapted to that. What you say is practically that inoculations are put under Certificate A, but that that certificate would cover this, that you, say, cut an animal in half and sew him up again, and the answer to that is you would not have leave to do it. I think this seems rather a waste of time.

Mr. Rawlinson to witness: In your report for 1897 you include under the heading "Permitting Experiments on Cats or Dogs without Anæsthetics" not only experiments on cats and dogs which are carried through entirely without anæsthetics from beginning to end, such as inoculations, but also those experiments like removing the spleen while under anæsthetics and then allowing the dog to become conscious again before it is killed.

Witness: Yes, but you did not read the heading quite completely.

Mr. Rawlinson: I will read it again: "Permitting Experiments on Cats or Dogs without Anæsthetics. E or EE (always coupled with A or B)."

Witness: The whole of that is explained in the body of the report.

Mr. Justice Lawrance: You say you have placed some of them by themselves—where do I find that?

Witness: It is Table III; experiments of the nature of inoculations, hypodermic injections, and similar proceedings.

Mr. Justice Lawrance: The effect of that table is to say that by far the greater number of experiments were under Certificate A.

Mr. Rawlinson: To go on to Certificate B *plus* EE, do you say that when an animal becomes conscious again after the removal of the spleen it suffers no pain?

Witness: I have never seen any evidence of it, any more than in a human being after a similar kind of operation.

Mr. Rawlinson: Assuming the aseptic treatment not to be successful, then I presume the pain would be excessive?

Witness: The operation would fail, and the animal would die at once. In his view it could be ascertained whether the operation had failed or not in a few hours.

Mr. Rawlinson: But a large number of people differ from you.

Witness: Not people who have seen what I have seen; it is people who sit at home and write, and do not see the things themselves.

Mr. Rawlinson: You say that notwithstanding the terrible accounts in the Blue Books.

Mr. McCall: Are there any terrible accounts in Blue Books? If so, I must ask to have them proved.

Mr. Justice Lawrance: I have not taken any part of this down, because the only point of suffering I have heard about is that which is supposed to have been suffered by the plaintiff.

Re-examined by Mr. McCall: Mr. Rawlinson had refrained from asking any questions about what his client complained of, but asked questions about what his client has not complained of. Has any case ever occurred in which a person had obtained a Certificate A *plus* E in order to perform not inoculation but to take the illustration given to remove a limb, or could any such case possibly occur?

Witness: No. In the whole of the ten years during which I have been employed as inspector or assistant inspector I have never known a case of fraudulent use being made of these certificates.

Mr. Rawlinson: I never suggested fraud in any shape or form.

Mr. McCall: If it does not mean fraud it means nothing.

Mr. McCall: Is there any ground for saying that in 190 experiments performed under Certificates B *plus* EE by 32 persons there was any cruelty inflicted?

Witness: None whatever.

Mr. Rawlinson then put a further question to Dr. Poore, and inquired whether in the report for 1898 the heading with regard to Certificates E and EE had not been altered?

Witness replied in the affirmative, and said that the alteration had been made in order to make misunderstandings less possible.

Mr. Houghton: You say that mistakes had in fact been made. Mr. Adams made a mistake.

Mr. Rawlinson: So you say.

Mr. Houghton: So it has been proved.

Dr. Sims Woodhead, Professor of Pathology in the University of Cambridge, examined by Mr. Boydell Houghton, said that he had received in October, 1898, one of the circular letters sent by the Editor of the *Verulam Review*. In the year 1897 he held the Certificates A and A and E. During that year he had performed inoculation experiments under Certificate A only. If anyone had taken the trouble to refer to the Home Office return it would have been quite clear that he had not performed any of the 190 experiments under Certificate B *plus* E E, and it would also have been seen that he had performed experiments under Certificate A only. It was quite untrue that he had applied for a certificate to perform operations without anæsthetics and then performed them with anæsthetics. There was not the slightest foundation for any such statement as that contained in the circular letter. He had not forwarded the letter to the BRITISH MEDICAL JOURNAL. In his experience he had not in 1897 known a certificate to perform experiments without anæsthetics being granted except for mere inoculations or hypodermic injections, or trivial experiments of that kind, and he was at the head of a large laboratory at the time, and a considerable number of applications of various kinds had passed through his hands.

Mr. Justice Lawrance said that he did not know that it was necessary to go into this matter, because it was not the allegation, although it might be so in one sense.

Mr. McCall said it was not easy to say what the allegation was.

Mr. Justice Lawrance intimated that as the case had shaped itself this allegation was not persisted in, and he thought it was unnecessary to go into it.

Cross examined by Mr. Rawlinson, witness said he held the certificate of A *plus* E during the year 1897, but did not use it. It was necessary in connection with work which might come in to have the certificate in case it might be wanted, but as a matter of fact he did not use it. Leaving out inoculation experiments, he had not seen in his laboratory an experiment upon a living cat or dog without an anæsthetic; such things had been done abroad, but he did not know of any published records under the Act in which it had been done. He knew that a considerable number of experiments were performed in which anæsthetics were given at the beginning, and the animal was allowed to come to consciousness; those came under the heading of the report for 1897, "Permitting Experiments on Cats or Dogs without Anæsthetics, E or EE always coupled with A or B," where returns were shown of Certificates A *plus* E, and B *plus* EE. Under Certificate C for teaching purposes the animals must be kept under anæsthetics until the time it was killed.

Re-examined by Mr. McCall, witness said that his name did not appear in Table IIIA, which gave the names of those who performed the 190 experiments under B *plus* EE, the experiments, namely, to which Mr. Adams referred in his letter to the Home Office. He assumed that it was in reference to them that Mr. Adams sent him one of the circulars, but he was not in the list, and had nothing to do with the list there referred to at all. He had no experience of any painful experiments performed upon animals in this country without anæsthetics, and he considered that he would be more likely to know of them than the plaintiff.

Dr. R. T. Hewlett, Bacteriologist to the Jenner Institute of Preventive Medicine, examined by Mr. McCall, said his name appeared in Table IIIA in two places, but he did not hold the Certificate EE at all. He held Certificate A, Certificate B, and Certificates A *plus* F, the latter for experiments on horses. He had not done any of the 190 experiments mentioned in the plaintiff's letter of August 5th to the Home Secretary, nor had he anything to do with those experiments. There was no ground whatever for saying that the Home Secretary's letter or the Home Secretary's return cast a slur either upon his good faith or of his professional competence. He could not suggest any excuse for Mr. Adams addressing him at all if he had read the report properly. He had had some correspondence with Mr. Adams. He learned in January, 1900, for the first time that this correspondence had been published in the *Verulam Review*. The circular letter of the Editor of the *Verulam Review*, dated October 18th, was sent to him at the Veterinary College, where it was opened by another gentleman of the

same name, and was eventually sent on to him by the Director. At the time of the correspondence he did not know the name of the Editor of the *Verulam Review*.

Witness was cross-examined by Mr. Rawlinson as to the correspondence. He did not remember receiving a letter during the course of the correspondence signed with Mr. Adams's name. He had received a draft of a circular letter of apology from the Editor of the *Verulam Review*, stating that owing to the inexplicable confusion of the way in which the Home Office report had been made, and of which it was hardly possible to conceive as accidental, two or three copies of the circular letter might possibly have been addressed by mistake to persons who were not themselves concerned in the 190 experiments, but who had been nevertheless been muddled up by the Inspector with those who were in the same column of the only table which gave the name and address. Certificate E coupled with A authorised experiments on dogs and cats without anæsthetics, that is to say, inoculations.

Mr. Justice Lawrance observed that anybody could see that for themselves. It was as clear as anything could be, except to those who did not want to see it.

Witness, continuing, said that when he wrote to the Editor of the *Verulam Review* that E coupled with A authorised experiments on dogs and cats without anæsthetics he intended to limit himself to experiments in the nature of inoculations only. So far as he was concerned he accepted the apology of the Editor of the *Verulam Review*.

Re-examined by Mr. McCall, he said he had never understood that Mr. Adams's point was that Certificate A authorised painful experiments without anæsthetics; and Mr. McCall observed that nobody concerned in the case had discovered that point until Mr. Rawlinson had put it.

Professor John Penberthy, Professor of Medicine at the Royal Veterinary College, and formerly President of the Royal College of Veterinary Surgeons, examined by Mr. McCall, said that he had received one of the circulars, dated October, 1898. For the year 1897 he had held the certificate of A *plus* F, authorising inoculations in horses and mules. He did not hold any certificate of the Class B or Class EE, and his name did not appear in Table III A, where the 190 experiments under such certificates were mentioned. As he had received the circular, he presumed that he was one of the gentlemen described as having made his application in bad faith or through incompetence. He did not know the Editor of the *Verulam Review*, and could see no excuse for his sending that impudent circular to him. He had not taken the trouble to reply to it. He had never in his life performed any experiments except operations in the nature of inoculations.

Mr. Rawlinson said that the circular ought not to have been sent to the witness. The whole dispute was as to cats and dogs.

Witness said that he had received the insult, but not the apology.

Mr. Justice Lawrance said that the witness would probably get that from Mr. Rawlinson.

Mr. Rawlinson asked the witness whether he had received a postcard or circular of apology similar to that received by the previous witness.

Witness said he had not received it.

Mr. Justice Lawrance: He did not write, and therefore his silence was taken as admitting the truth of the suggestion. It is a new way of doing things. You put a pistol to a man's head and say, "You are a thief, and you have robbed me of this, that, or the other, and if you do not write and say you have not done so, I shall assume that you have done so." That is a new way of doing things. If you do not write back to a gentleman who writes to you in this way, it is taken that you are a thief.

Mr. Rawlinson: You did not receive the postcard saying that it was sent by mistake. You can see obviously it was sent to you by mistake, and you had nothing to do with the cats and dogs experiment at all.

Witness: I can see it was obviously sent to me as an insult.

Mr. Rawlinson: A personal insult to yourself?

Witness: Letters are usually personal, and that was enclosed in a letter, and I took it as a personal insult.

Mr. Rawlinson: I am sorry if it hurt you.

Witness: It did not hurt me.

Mr. Rawlinson: My client will be sorry because you are outside the dispute, but, as my lord has suggested, if you feel it at the present day—

Witness: Not the slightest.

Mr. Rawlinson: I hope you will not feel it any more; that is all I can say.

Mr. McCall said that that was the case for the defendants. He would not trouble the jury with many observations, but he would ask them to consider who Mr. Adams, Editor of the *Verulam Review*, was, who was so thin-skinned that he brought that action because someone had said that he was an irresponsible person? He had endeavoured to tell them that morning the way in which he spoke of the Home Secretary. Certainly, judging by his own style and his own tone, he was about the last person who should complain of either style or tone on the part of any person, any journalist, or any publication. In No. 46, volume viii, the January to March number of the *Verulam Review*, he had said of Professor Poore's report: "Its initial absurdity and incredibility was accentuated by the fact"—this is shockingly edited—"that in another table of the same report is set forth what, also on the face of it, is a plain and flat contradiction." Here was a gentleman who could not nave a controversy about a fact without not merely suggesting, but stating, that what his opponent was saying was not a misconception but a lie. On the same page he said: "In such a thrice-confounded fog of confusion as the Home Secretary and his Inspector have poured round these unrevealable abominations, it is well to take but one thing at a time." Now what ground had this individual living down in the country at Milford-on-Sea for accusing the distinguished man who controlled these certificates of having to do with "unrevealable abominations," and who charged the Home Secretary with being a party to the concealment of the true facts? What suggestion had been made of anything to conceal or that had been concealed in regard to anything that was referred to in the report? Vague suggestions were made by Mr. Rawlinson, founded more or less on the criticism of the form of these certificates; but as to the substance of the thing, the evidence was all one way. The distinguished men he had called as witnesses had said: "In our experience in England, whatever may be done in Germany or in France, no painful experiment without anæsthetics has been performed at all." Where was the evidence the other way? Was the jury seriously asked to find that the statement that these gentlemen had made it untrue because Mr. Adams did not know, and his counsel could give no better reason than this, that some statement recited in a Government return did not possess the accuracy which one would expect in a plea of demurrer? Men of reputation and position were not to be accused of either practising unrevealed abominations or of telling lies because a Government return was not so clear as it should be. The substance of the plaintiff's complaint, and the total amount of the complaint, was in the sentence in his letter of August 5th, 1898, in which he said, "I have the honour to direct your attention to Table IIIA, col. 5, of the Inspector's latest report; from which it appears that no fewer than one hundred and ninety (190) separate experiments 'other than inoculations, etc.,' were not only performed, but performed upon dogs and cats, animals placed by the Act under special protection." That was the ground, and the only ground, for this action. It was in reference to that, and only to that, that the Home Secretary wrote and said, "You are entirely in error." A baby in science, whose eyes were untrammelled by the mist of prejudice which had gathered round this vivisection controversy, looking at Table III A would have seen, and Mr. Adams, if his eyes had not been clouded, would have seen, that his whole charge in his letter was an absolute misconception, and that he had made an absolutely palpable blunder. When the blunder was reiterated in that impertinent letter which he sent out in October, what was the representative Journal of the British Medical Association to do? Was it to say less than it had said? Not a single criticism upon that article worthy of a man's consideration for a moment had been put before the jury, except the criticism upon the word "irresponsible." Mr. Rawlinson had cross-examined the witnesses to anything and everything, and to every part of the report except the report of which his client complained, to every certificate except the

certificate of which his client complained, and to every suggestion that could be drawn from these documents, but he had carefully refrained from saying that the substance of that complaint was proved or could be proved. Counsel claimed that the British Medical Journal was only doing its duty, only vindicating the reputation of the great profession it represented, when it said, "These statements are made without responsibility, and they are unfounded in fact." The man who had made this complaint ought to have apologised; the apology should have come from him. He had started this discussion in terms in which he had shown no respect for those who were his equals in every respect, and probably his superiors in a great many, and he had no right to complain. He had appealed to the public, and he had no right when he had done that to come into a court of law and say, "Protect me from a discussion which I have brought upon myself."

Mr. Rawlinson submitted that whoever wrote the article complained of went further than he ought to have done and made suggestions against Mr. Adams which he ought not to have made. The writer of the article had not been put in the box, otherwise he would have asked him what the meaning of the article was, and what was the meaning of the insinuation which was made against the plaintiff, and why the British Medical Journal did not say that, as far as Mr. Adams was concerned, they had nothing to say against him or to impute against him. There had been an attempt to go into the question of vivisection, as to whether or not the British medical profession has acted well or ill in the cause of vivisection. In opening the case he had said that the circular letter of Mr. Adams was sent to some people by mistake. What was the use of calling Professor Penberthy and Dr. Hewlett, who had nothing to do with the question in dispute between the parties? Those witnesses were called for the purpose of prejudicing the mind of the jury against Mr. Adams for having circulated those documents by mistake. The report classed under one heading "Certificates held by each licensee permitting experiments on cats or dogs without anæsthetics, E or EE always coupled with A or B," that was the whole heading. As far as A and E were concerned, experiments were made without anæsthetics. As regarded B and EE, experiments with anæsthetics during the first part, and during the last part the animals were allowed to become conscious, and remain in that state till death or as the case might be. A statement was made by the Home Office that no experiments were made on cats or dogs without anæsthetics. It was in reply to that that the letter was sent which had been read. It was not correct to call the tone of that letter bad. It was a letter which asked for an explanation of an apparent contradiction between the heading as to experiments on cats and dogs without anæsthetics under which 190 experiments had been made and the Home Secretary's statement. The Home Office wrote back a letter saying "you are in error in thinking that 190 experiments had been conducted without anæsthetics." That was either an error or else it meant to say without anæsthetics through any part of the operation; either it was a slip or it meant "you are in error in supposing that there were 190 experiments and that anæsthetics were not used in any part of the operations, whereas they were used in the earlier part and not in the later part." That being so, Mr. Adams acted rightly in writing to the different people who had done the 190 experiments, and asking them to explain this contradiction. The consequent correspondence showed he was acting properly in sending for an explanation instead of writing at once in the *Verulam Review*. It was a matter of the utmost importance that these matters should be watched, and that the certificates and licences, which were granted, it is true, under the direction of the Home Secretary, as Dr. Poore had described, should be watched. The plaintiff sent out his circular, and then it was that the British Medical Journal pulled this matter out into controversy, nothing having been put into the paper at that time, and they began the attack upon the plaintiff. They said "to drag the name of the Home Secretary into such a circular is misleading, for the facts are obtained from a printed paper to be purchased by anyone who is interested in the matter." The facts had never been obtained in that way but in a better, and when it was put to the proprietors of the British Medical Journal, instead of inserting an explanation and saying "We quite understand you have got a letter from the Home Office, but we take an opposite view to what the plaintiff does in the matter, and these are our reasons," they simply put in a letter from the Home Office in the same words as that sent to Mr. Hewlett, which they must have known was sent to a person to whom the circular had been sent by mistake. It implied to any reader that the answer from the Home Office meant to say that the original letter received by Mr. Adams never existed at all, and was a total misapprehension. The letter of course of Sir Kenelm Digby was undoubtedly written to Dr. Hewlett and properly written, because the plaintiff ought never to have circularised Dr. Hewlett at all. He never had a certificate in connection with cats or dogs, and he never had a certificate E or EE. He had a totally different one, and therefore the circular ought not to have been sent to him. After that, although the correspondence was sent to them fully, they never published the letter from the Home Office, which was the whole basis of the criticism, but they simply wrote back the letter which had been read to the jury. Then withdrawal in the columns of the paper was asked for, but none was given. The medical profession might be, and was no doubt, a great profession, but every professional journal was very apt to take a very severe view of any member of the public who criticises their profession in any shape or form. That applies not only to doctors, but to other professions, like the army, navy, or the law. It was of the utmost importance that the public should criticise professions, but the organs of the profession viewed with the greatest possible resentment any sort of criticism of it. It was idle to shut one's eyes to the fact that young medical men in their search for science were anxious to make experiments over and over again for the purpose either of practice or for seeing some particular experiment carried out. If the experiment was to be done for the purpose of finding out something which was not known at the present time, then by all means let certificates be granted, but the greatest care should be taken to see that the experiment was not carried out when it was unnecessary. He had tried to avoid the trail which had been drawn across the case—namely, the question of the goodness or badness of vivisection, but he protested against a professional journal, however anxious it might be to protect a man who desired to advance medical science, making such an attack as had been made against the plaintiff, who was only doing what he thought was right—namely, keeping a watch as the public should on this matter, which was one of great importance. There was nothing to justify the attack which had been made in the defendants' paper, and nothing to justify the refusal to insert the short paragraph which would have put the matter at an end, and there was nothing to justify the attack made even now upon the plaintiff. Mr. Adams was a gentleman in very bad health, an old gentleman, and was irritable from heart disease, and counsel ventured to suggest that such expressions as had been read should not come from the representatives of the most humane profession in the world, when dealing with those who were ill. Such remarks concerning a gentleman like Mr. Adams, who was never likely to be able to travel again on account of heart disease, only added insult to the injury already given by the original article. That being so, he would ask the jury to give the plaintiff not excessive damages, but such damages as would mark their sense of the conduct of the defendants.

Summing Up.

Mr. Justice Lawrance: Gentlemen of the Jury, I will detain you but a very short in summing up this case. The question between the parties lies in a very small compass. The plaintiff, Mr. Adams, brings this action to recover damages for what he says are libellous words which have been used by the defendants. I will call attention to what those words are directly; but before doing so I must call attention to this fact, that the plaintiff is the editor of a periodical or review called the *Verulam Review*. That is a sort of medical review as far as I can make out, because I see among the contents there is "Lord Lister: What he Says, What he Does." "The Home Office Report: Is it Honest or not?" "Mr. Balfour on Research." "Unqualified Practice at the Hospitals," and so on. It seems, although I have not read it, to direct attention if not to the practice of medicine at all events to medical matter,

and the Editor undoubtedly, looking at the numbers which are before me is what is called a strong antivivisectionist, that is to say, a man who takes a very strong view rightly or wrongly as everybody has the right to take, even if he is a pigheaded, obstinate, and ignorant person, on this particular question. Everybody has the right to do that, but they have not the right to take away the character of other people. The question, gentlemen, you have to decide here when you have looked at the case from both sides, is whether the plaintiff has put himself in such a position as to entitle him to your verdict in this action. The plaintiff complains of the insertion on October 22nd, 1898, in the BRITISH MEDICAL JOURNAL of the paragraph headed "The Antivivisectionist Propagaganda." We all know that there are people who take very strong views on both sides in these questions. It began, "The methods of the opponents of vivisection are well exemplified in the following letter which has been circulated amongst various holders of licences under 39 and 40 Vict., c. 77"; and then the letter dated "Harewood House, Keyhaven, Milford-on-Sea, Hampshire, October 17th, 1898," is set out. This, gentlemen, is a letter written by the plaintiff, who is asking you for damages for an attack which has been made upon his character. You begin with this. I do not think I can thoroughly realise this case. I could have understood it if any of the members of the profession who had received this letter had brought an action against the plaintiff. I could then understand what would have taken place. It seems to me a most extraordinary start, but this is the whole thing: "The Home Secretary informs me"—that is a report, I suppose—

Mr. Rawlinson: No, my lord, it is a letter of September, 1898.

Mr. Justice Lawrance: We will see what the letter is: "The Home Secretary informs me that, having in the course of your work last year"—that is you, the person to whom he wrote—he wrote to A. and B., and several other people, I do not know how many; nobody has been called to give an account of that; whether anybody could have been called I do not know. The plaintiff could not be called, so how many of these things were sent out we do not know. "The Home Secretary informs me that having in the course of your work last year applied for and obtained a certificate authorising experiments on dogs, etc., without anæsthetics, on the express ground that the experiments in question could only be so performed, you then, notwithstanding the certificate, performed them under anæsthetics, thereby plainly showing the incorrectness of the ground on which your application was based." Now if it stopped there, it would be rather strong, would it not? I do not know what you may think about it, or what your feeling would be if you had received such a letter saying that you fraudulently had got a certificate for one thing, and used it for another. But if there is any doubt about it, let us see what follows: "Please observe that the statement is Sir Matthew White Ridley's, not mine." I shall want that letter presently, because I have seen no letter that justifies this, "and as it certainly appears to cast a serious slur either upon your good faith or your professional competence." The suggestion is that you have done one of two things, either you have written in bad faith, or you are professionally incompetent. It goes on. "I think it only right before making use of it, to ask whether you admit its accuracy." I sympathise with that gentlemen who came from the Veterinary College, who said "I took no notice of it," but I venture to say a more impertinent letter was never written by one man to another. It finishes up with this: "If you do so"—that is to say if you admit its accuracy—"pray do not trouble to write. Silence will be taken as assent." So that a man can write to you to tell you you have done one of two things: either that you have made fraudulent application for a particular certificate and used it for another purpose, or that you have got a certificate and were incompetent to deal with it, and had to give anæsthetics, which would come, I suppose, properly under another form of certificate. Is this true, writes this gentleman, either one of these two things? "If it is true, don't take the trouble to write; I will take silence as assent." That is the beginning of it. You must remember this is not the letter which is complained of as being written against him, but it is the letter written by him; it is written by the plaintiff himself. I could have understood it if it had been the other way. I have never yet been able, and I am afraid I cannot now, put myself in a position to understand thoroughly the position of the parties in this case. This is the man who is asking you for damages because his character has been assailed, who starts with this circular, because he finds in the Parliamentary Return of 1898 that 190 experiments under a certain certificate, which I will call attention to shortly, have been performed in the course of the year. So careless is he about them that when he is writing about them he sometimes calls them 190 experiments and sometimes 190 certificates. Now, the comment is: "The statement contained in this letter may be classed as inaccurate, misleading, and threatening." He does not complain of this. I observe that it has been kept out of the statement of claim altogether. "To drag the name of the Home Secretary into such a circular is misleading, for the facts are obtained from a printed paper to be purchased by anyone who is interested in the matter." That means the papers as published may be obtained by anybody on payment of a few pence, as a return is made every year under the statute. "The serious part of the letter is the absolute incorrectness of the implied charge of obtaining a licence to perform experiments without anæsthetics, and then violating the terms of the permit by administering an anæsthetic. The particular certificate to which allusion is made seems to be EE." Perhaps you have heard enough of the certificate, but EE is the certificate which brings cats and dogs which are exempt into one or other of the certificates; in this case bringing it under Certificate B, which is issued with the following provision, that the experimenter "is duly authorised to perform on living animals certain experiments . . . . . such animals being, during the whole of the initial operation . . . . . under the influence of some anæsthetic of sufficient power to prevent their feeling pain," though it dispenses with the statutory obligation to kill the animal on which the experiment is performed before it recovers from the influence of the anæsthetic. It is clear, therefore, that every holder of this certificate is bound to perform the whole of the actual operation whilst the animal is anæsthetised, and if his experiment is to be successful he must see that the healing of the wound is aseptic. But it may be some time before the object of the experiment is attained, and it would be impossible to keep the animal in a condition of narcosis during the whole of this time. "The irresponsible editor"—this is what he complains of, being called "irresponsible"—this gentleman who says if you have done this you will have either a serious slur upon your good faith or upon your professional competence—"The irresponsible editor of the periodical in question, either ignorant of the terms of the licence"—which turns out to be the fact—"or too careless to ascertain them"—which also turns out to be the fact, because he sends this circular to a number of wrong persons, and when you have the list in your hand, as you shall have, you will see there was absolutely no reason for sending it to those gentlemen who did not appear in the list; the names are put down in the list as clearly as possible—"impugns the good faith of the members of the medical profession who choose to devote themselves to advance their art by experimental method." Now, the question you have to decide is, Is that a matter that entitles him to receive a verdict at your hands and damages? Now, I want to see that letter of the Home Secretary's.

Mr. Rawlinson: It is set out in the reply, my lord. It is in the correspondence, and is admitted.

Mr. Justice Lawrance: This is a letter signed by Sir Henry Cunynghame, from the Home Office. A letter was sent by the plaintiff to the Home Office, and he received this letter in reply on September 9th, 1898. [The judge then read the letter printed on p. 1115.] That is all. Upon that, having heard from the Home Secretary, he says: "The Home Secretary informs me that having in the course of your work"—you, Mr. A. or B. or C.—"last year applied for and obtained a certificate authorising experiments on dogs, etc., without anæsthetics." It is founded on that. That is the first part of his complaint. Then he sets out in his pleadings—why I do not know—a letter of October 24th, 1898, which the plaintiff wrote to the Editor of the BRITISH MEDICAL JOURNAL: "When in the BRITISH MEDICAL JOURNAL of October 22nd you assert that I have made misleading statements by dragging the name of the Home Secretary into a letter, the facts of

which have been obtained from a printed paper, you make a deliberate and gross imputation upon my good faith and truthfulness. Your assertion is false. Be good enough to inform me upon whose authority you venture to make it. Your statement as to my 'implied charge of obtaining a licence,' etc., is also false. There is no implied charge in my letter at all. The plainly expressed charge, if charge you think well to call it, is made, not by me, but by Dr. Poore and Sir M. W. Ridley." That, I suppose, is the report made by Dr. Poore. You have heard of the report from Dr. Poore and have had it explained by him, and you will say whether you think that explanation is correct or not. I do not know, gentlemen, if you care to go through it again.

A Juryman: No, no.

Mr. Justice Lawrance: The proper thing would have been, instead of charging people with breach of faith or incompetence in their practice, to write for an explanation. There are certain people who are anxious to obtain knowledge wherever it can be obtained. If he had written to the Home Office and asked for an explanation of the way in which the things were carried out I dare say he would have got an answer. But to make these charges without making such an inquiry seems to me not to be the best way of starting a matter of this kind. Then there is the report of Dr. Poore. I do not propose to read it all through. It is followed by the different tables. There seems to be no difficulty in understanding the table on the part of anybody who wants to understand it. But if you approach things for the purpose of finding fault, then of course you cannot understand them, and it is difficult to appreciate them. Table I is long because it contains the whole of the lists. Table III is the one we want to get at—"Number and nature of the experiments performed; A, experiments other than those of the nature of inoculations, hypodermic injections, or similar proceedings. N.B.—In experiments performed under the licence alone or under Certificate C the animal suffers no pain, because complete anæsthesia is maintained from before the commencement of the experiment until the animals are killed." I need not trouble about that. We are not trying whether vivisection is a good thing or not. Then we come to the name of the licensee and the certificates held. The whole question is whether the defendants in setting out what they did in their JOURNAL have gone too far. The most they have called him is an "irresponsible" person, which seems very mild after what has been said on the other side. You must take the whole circumstances of the case into your consideration, and say whether the plaintiff has satisfied you that he is entitled to any damages at your hands from the defendants for having libelled him; or whether the answer that they have given is not the proper one—namely, that these things are in effect true in substance and in fact, and that they were matters of public interest. That they were matters of public interest there can be no doubt. That is a matter for me, but you will agree with me that they are matters of public interest. I quite agree with what Mr. Rawlinson has said on behalf of the plaintiff, that it is well that every profession should be watched. A man may have wrong-headed and exaggerated ideas, and so forth, but we are not trying whether the plaintiff has been guilty of libelling others. The action is not brought by the defendants against the plaintiff, but is brought by the plaintiff against the defendants. It is for you to say whether the defendants have done more than they ought to have done in a matter which is a matter of public interest. They may have used, as people sometimes do, strong language, and strong language may be used in some cases. The strongest language complained of, as far as I can see, is calling the plaintiff an "irresponsible" person. From that he wishes you to draw the conclusion that he is a man of straw, and that they could not get any remedy out of him. That is going a long way. They have used the expression "irresponsible" person—that is to say, a person who, without having any knowledge of what he was talking about, did publish in his paper that which they are not complaining of seriously enough to-day. That is the difficulty of dealing with this case, because the defendants are not the plaintiffs. They are the persons who, having been accused of professional incompetence, or want of faith themselves, turn round when the whole matter has been dealt with by the plaintiff, and say that he is an irresponsible person, and has taken a wrong view. I do not know if you want these papers in your hands. You have heard how the mistake arose, and how it might have been avoided immediately. You must look at the case all round; you must look at the conduct of the parties from the very beginning, and you must keep in view the letter which was the beginning of the matter which was written by the plaintiff to these people, and you must then say whether he is justified in asking for damages at your hands.

(The jury consulted for a moment.)

The Associate: Have you agreed?

The Foreman of the Jury: Yes, we have decided for the defendants.

The Associate: You find a verdict for the defendants?

The Foreman of the Jury: Yes.

Mr. McCall: Then, my lord, I ask your lordship for judgment and a certificate for a special jury.

Mr. Justice Lawrance: Yes.

Mr. McCall: As my learned friend said in opening the case, it was adjourned three or four times in consequence of the plaintiff's illness. Those costs, or some of them, were reserved to be dealt with by the Judge at the trial. Of course, those are made costs in the cause?

Mr. Justice Lawrance: Yes.

CONFERENCE ON MEDICAL ORGANISATION.

THIS Conference was opened on May 1st at the Memorial Hall, Albert Square, Manchester, by Mr. Alderman WALMSLEY, J.P., who welcomed the delegates of the various medical societies represented. In the course of his address he referred to the changes that had taken place during the last twenty years. He said that the general practitioner in the old time was taken little account of, but as time went on his position had improved, and as an eminent statesman had said, the future of the profession was in his hands. He referred to the degradation brought on the profession by unworthy members, and the necessity of upholding its high position.

Mr. WRIGHT, of Manchester, was then unanimously elected Chairman of the Conference.

Dr. George Jackson, of Plymouth, Dr. Hime, of Bradford, and Dr. Jepson, of Durham, were elected vice-presidents, and Dr. Nicol and Dr. Nash were chosen scrutineers of the voting.

The code of rules governing the Conference were formally proposed and agreed to.

The CHAIRMAN then called on Mr. Victor Horsley.

THE MEDICAL ACTS.

Mr. VICTOR HORSLEY said that he greatly appreciated the honour of being invited to address the first Conference of this kind, which he hoped would not be the last. He did not wish to multiply medical societies, and he was personally a strong supporter of the British Medical Association, but it could not be denied that that body did not meet all the requirements of the profession, and he specially condemned the Council for not carrying out the directions of the annual meetings. With regard to amendment of the Medical Acts, the first necessity was to reform the General Medical Council. A large part of the community were satisfied with the present representatives of the profession on that Council, and it was difficult to go to the House of Commons with proposals to change them. The General Medical Council differed from other bodies in that it possessed judicial powers over every member of the profession. It was true individual practitioners had a slight voice in the election of its members, but this was practically a farce, and the sympathy of the House of Commons might be gained by pointing out the justice of practitioners having a voice in the election of those who had such powers over them. Next with regard to medical education, owing to the fact that many of the members of the General Medical Council were selected out of those who had retired from active practice, that body as at present constituted was not fitted to decide many questions of importance to the profession. He thought it was better to have more men in touch with those in active practice. This was shown in regard to the "reciprocity" and "midwife" questions. In the first case, the Privy Council had been misled by the General Medical Council, which refused to be guided by the British Medical Association; and the present

difficulty in Italy was the outcome of this. He thought that all difficulty on this subject would be got rid of by making any enactment on this subject not retrospective. He thought, also, that reciprocity between English and Colonial practitioners was very necessary. With regard to the midwife question, the Privy Council was not favourable to the profession, and he thought that the latter could not oppose the trend of popular opinion, and that much nonsense had been spoken on this subject. The Government had stated that the present measure was not a Government measure, but during the last two or three years it had given it every assistance. As the General Medical Council occupied such a position that it was the only body the Legislature could turn to for advice in medical matters, general practitioners were entitled to be better represented on it. Next, as to finances. The present financial state of the General Medical Council was one of chaos. At the present time there was a Central Council and Branch Councils, but the latter were absolutely useless, and a central one was alone necessary. With regard to finance, he thought that, like the lawyers, the doctors should have an annual registration, with the payment of a small annual fee, which would give the General Medical Council sufficient funds to do their work properly. He thought it would be the duty of the Conference to enforce the desirability of this annual fee in spite of opposition emanating from certain quarters of the profession. As to command of votes in the House of Commons, it was notorious they had no votes. The Government always showed a tendency to protect vested interests. Vested interests had been conferred on medical men by the Medical Acts; one was a right to practise, which was by implication withheld from all others. Magistrates did not trouble to confine themselves to the Medical Acts, but followed their own ideas as to what was the law, and so often differed one from the other. The Alabone case was one to the point. The lawyers presented this case to the magistrate in such a way that the latter thought the defendant carried on a regular practice and had registrable degrees, although it might be incomprehensible to medical men how a magistrate could come to such a conclusion. The only remedy was for the profession to support loyally the amendment of the Medical Acts promoted by the Parliamentary Bills Committee of the British Medical Association. This had already been before the Council of the Association, which had excised all the important parts and had left that which was of no use to anyone.

The CHAIRMAN thanked Mr. Horsley for his paper. He said there was no provision for discussion provided by the rules, but if any delegate wished to make remarks on it he hoped he would do so.

Dr. BRASSEY BRIERLEY thought that outside resolutions were not enough. Proper men ought to be sent to the General Medical Council to represent the profession. The men sent were too apathetic. The profession ought to work through the British Medical Association.

Dr. REES had doubts as to being able to work through the Association. He did not agree with all that Mr. Horsley said as to "reciprocity"; he thought there ought to be free trade in medicine between all countries of the world.

Dr. HIME thought the Council of the Association ought to carry out the legitimate demands of general meetings. He did not take so despondent a view as Mr. Horsley as to obtaining votes in the House of Commons. Medical men could often influence votes by their power to influence Parliamentary voters.

Dr. RATCLIFF-GAYLARD said it was, before all things, necessary to deal with practical points. He quite approved of the registration fee suggested by Mr. Horsley. If the profession provided £40 000 per annum for the General Medical Council they might at least claim a voice in spending it.

Dr. BROADBENT thought the Council of the British Medical Association wanted as much reform as the General Medical Council.

Dr. WHITTAKER (Yarmouth) objected to the Council of the British Medical Association being compared with the General Medical Council. The latter was largely appointed by Government for the benefit of the public. If the profession took up the view that the General Medical Council ought to work not for the public but for the profession alone it would fail. It must be shown that the reform desired was for the public and not for their own interests. As to the Council of the Association, the electoral districts were too large. In his own district (East Anglia) practitioners in Yarmouth had little to do with those in the rural districts, and meetings of the whole Branch at Norwich were sometimes only attended by very few members.

The CHAIRMAN thought a vote of thanks should be accorded to Mr. Horsley.

Dr. HIME proposed and Dr. Tomlin seconded that

This meeting accorded a hearty vote of thanks to Mr. Victor Horsley for his paper.

Mr. VICTOR HORSLEY replied shortly.

In the absence of Dr. Owen Morris (Birkenhead) Dr. WILKINSON moved:

That, in the opinion of this Conference, the Medical Acts require amendment, especially in regard to protection against illicit practice, and in the matter of death certification, and the Inebriates Acts.

He thought that illicit practice should be restrained by medical defence societies, and not individual practitioners, and that fines were not enough to deter delinquents; imprisonment should also be given. With regard to death certificates, they ought to be a sealed document for the registrar only, as it was most objectionable to have to tell relatives that the death was due to various vices. The present Inebriates Acts only touched the criminal classes; to be effective they ought to reach habitual soakers.

Dr. BROADBENT seconded, and pointed out the necessity of some control over temporary drunkards.

Dr. HIME said a medical man was only bound to state the cause of death and nothing else in the statutory death certificate. He thought it was a disgrace that these certificates were not paid for. He thought the registrars throughout the country were badly qualified to perform their duties, and were not competent to exercise discretion as to reference to the coroner of suspicious cases. In Ireland the Poor-law medical officers were the official registrars, and this arrangement was better for the community.

Several amendments were proposed to this resolution, some of the delegates thinking it would be better to adopt the principle of amending the Medical Acts without specifying the particular forms this amendment should take. These, on being referred to the meeting, were rejected, and the original resolution was carried.

Dr. COX (Gateshead) then proposed:

That believing that general practitioners are insufficiently and inadequately represented on the General Medical Council, this Conference is of opinion that there is an urgent necessity for an increase in the number of direct representatives, and appeals to the universities and corporate bodies to reform the mode of election of their respective representatives: that the representatives be chosen from amongst and by the medical graduates of universities, and from amongst and by the diplomates of the corporate bodies.

This resolution was ordered by the meeting to be taken together with another standing next on the list, moved by Dr. JEPSON (Durham):

That this Conference is of opinion that the medical profession is not sufficiently nor properly represented on the General Medical Council, and strongly recommends that all representatives from universities and corporations be elected by the individual votes of medical graduates of universities and members of each corporation.

The mover said that, failing voluntary action, he thought a clause should be put in any amendment of the Medical Acts; he thought such a resolution might help the hands of the Subcommittee which was framing the amendment of the Parliamentary Bills Committee of the British Medical Association. It was very necessary to have an increase in the number of the representatives of the general practitioners, and this might be obtained by the universities and corporations electing their members in a manner more in consonance with modern ideas.

Dr. WHITTAKER seconded the resolution.

The CHAIRMAN then ruled that the next resolution on the list,

That it is desirable that the constitution of the General Medical Council be so altered that at least 50 per cent. of its members be elected as direct representatives of the profession, and that in any amendment of the Medical Acts a clause be inserted to effect this,

was in effect an amendment of the foregoing resolution, as had been clearly pointed out by Dr. Woodcock and others.

Dr. TINKER (Hyde) consented to move the resolution as an amendment; and this was seconded by Mr. GEORGE JACKSON, who was in favour of it because he objected to the principle that a practitioner should have as many votes as qualifications; the true principle, he thought, was one man one vote.

The amendment on being put to the vote was lost and the resolution carried.

At the afternoon session, in the absence of the Chairman, Dr. HIME took the chair, and Mr. R. B. ANDERSON read a paper on A Medical Polity: Corporate and Medical Reform.

THE MIDWIFE QUESTION.

Dr. COX, in introducing his resolution,

That this Conference protests against any legislation that will have the effect of giving a legal status to midwives as a class,

said that he meant to object to the principle of registering midwives as midwifery practitioners. He had been told it was now too late, but none the less he brought that resolution forward. The opinion of the profession had been repeatedly shown to be opposed to this legislation. It was bad for the public, and he thought the profession should honestly express their opinion on the subject, and if, in spite of that, the public chose to insist on this legislation, the harm that was likely to follow would be at the door of the public. He did not think it necessary to give reasons why the registration of midwives would be so harmful to the public, as he thought the delegates there must know as well as he did what they were.

Dr. DOLAN seconded the resolution, and a discussion ensued in which Drs. WHITTAKER, WOODCOCK, RITCHIE, NASH, LANGLEY BROWNE, REES, and RATCLIFF-GAYLARD opposed the resolution.

Mr. VICTOR HORSLEY also spoke against the sweeping character of Dr. Cox's resolution, and said that if the Conference adopted it, it would practically put the other resolutions on the subject that followed out of order.

Dr. MAJOR GREENWOOD asked Dr. Cox if, by his resolution, he objected to any legal status being given—as, for instance, that of an obstetrical nurse. He asked this question, as Dr. Ritchie had said that any control given by legislation implied a legal status, and it could hardly be said that no control was admissible.

Mr. ANDERSON, Dr. HELME, Dr. BROADBENT, and Dr. BRASSEY BRIERLEY agreed with the resolution.

Dr. COX, in answer, said he did not mean by his resolution that all control was inadmissible, but that there should be no legislation to recognise them as practitioners of midwifery. Because they existed it was not necessary for the profession to support them, any more than it was necessary for them to try to exterminate them. The only extermination that could be brought about would be by educating the public to see the wisdom of not employing them.

The resolution was put by the CHAIRMAN, and was carried, 19 voting for the resolution and 16 against.

The CHAIRMAN then ruled that the resolutions dealing with midwife legislation put down by Dr. Owen Morris (Birkenhead) and Dr. Ratcliff-Gaylard were now out of order and could not be considered.

MEDICAL EDUCATION.

Dr. STEWART (Manchester) then moved:

That while appreciating the action of the General Medical Council in raising the standard of preliminary education, this Conference is of opinion that a still higher standard would further raise the status of the profession, collectively and individually, and promote the public welfare.

This was seconded by Dr. WILKINSON, and after some discussion was carried.

Dr. CRAWSHAW then moved:

That it is desirable that every medical student should subsequently to the date of his passing the examination in anatomy, physiology, and materia medica, be compelled to spend, as part of his curriculum, twelve months with a general practitioner.

The mover said that the recent action of the General Medical Council in disapproving of unqualified assistants had become a means of depriving students of a certain kind of practical knowledge. It might be that that knowledge was not of a scientific character, but it was of a necessary kind and such as he could not get at the hospital. It should be limited to twelve months, and the pupil should be protected from having too much to do.

Dr. GEORGE JACKSON seconded the resolution, but he said he only approved of it *sub modo*.

Dr. REES objected to it.

Dr. WOODCOCK said it was really a return to the old unqualified assistants.

After some discussion the resolution was put to the vote and lost by a considerable majority.

There were present at the Conference 33 delegates. At different times during the day about a dozen practitioners attended as spectators of the proceedings.

SIR WILLIAM MAC CORMAC AND MR. TREVES AT THE REFORM CLUB.

THE Reform Club gave a dinner on April 28th to Sir William Mac Cormac and Mr. Frederick Treves, both of whom are members of the club, in recognition of their conspicuous services to the wounded in South Africa. The EARL OF ROSEBERY presided, and amongst the company, which exceeded 100 in number, were Lord Russell of Killowen, Lord Burghclere, Sir H. Fowler, M.P., Mr. H. Gladstone, M.P., Sir N. Lockyer, Dr. Farquharson, M.P., Dr. Stephen Mackenzie, Mr. Malcolm Morris, Dr. Mapother, Sir C. Nixon, and several other medical members of the Club.

After giving "The Queen," LORD ROSEBERY proposed the toast of the evening, "Sir William Mac Cormac and Mr. Treves." He said that in a war in which there had been such diversity of opinion, there had been unanimity only on one point—and enthusiastic unanimity—that the medical and hospital service had been practically perfect. The Government had been able to obtain the men and give the supplies which these men had used. The Government sent for the two most eminent men they could think of, and the Government gave them a free hand. All honour to the Government and all honour to the men. Without a second thought they left their great connections in this country and went out for six months to take a share in the hospital and surgical work for the army. Their names needed no mention from him, Sir William MacCormac's name was a household word. He had been for four successive years chosen President of the College of Surgeons, an honour he believed almost unprecedented, if not unique. In the Franco-Prussian war, in the bloody and thunderous scene at Sedan, Sir William Mac Cormac was continuously carrying on surgical operations. He had brought his experience and skill to bear upon our war and soldiers in their turn. Mr. Treves, too, had left a great practice, and applied his unrivalled surgical skill in the same way. His name was a household word among them, and he need not expatiate upon it. But he had seen it stated in a paper that he was about to enter Parliament. It was stated that he had been consulted about it, and that he had said he would rather enter the grave. He trusted that if this was authentic he would take the opportunity to explain it. Lord Rosebery concluded by saying that they were not merely honouring two eminent men and two fellow-members of the Reform Club; they were not merely honouring a consummate act of patriotism on their part, but they were paying honour to the non-combatant members of the army. They were glad to see that one, Major Babtie, received the other day the Victoria Cross. He was not sure that the non-combatant members of the army had received their fair share of the Victoria Cross. Their heroism was not less than the heroism of those engaged in forlorn hopes; and they had shown that they were as incapable of fear as much as the soldiers whom they tend.

Sir W. MACCORMAC, in reply, after returning thanks for the honour done him, said he went out to South Africa with some reluctance, he might now admit, but deemed it right to go from a sense of duty. Our soldiers had fought under conditions which might well dissuade the bravest, in a country of appalling difficulties, advancing in the open against an unseen enemy, who poured a pitiless hail of bullets into them like rain, and who themselves were practically unseen and safe from our assault. To illustrate this he referred to the

battle of Colenso. On that day we had some 1,140 casualties. We all believed, rightly or wrongly, that Boer statements on the subject of their losses were not very trustworthy. He had had an opportunity of learning, he thought on good authority, what the Boer losses were on that occasion. He heard from the other side, from the German officers who were there watching the methods of Boer warfare, and the statement was subsequently most positively confirmed by the Free State Secretary, Mr. Fischer, with whom he had several conversations, that the total loss of the Boers on that day was 5 killed and 25 wounded: and this, he thought, might well be true, for our people never caught sight of a Boer the whole day. Commandant Albrecht, the Boer artillery captain, calculated that 12 Boers were killed and 40 wounded for every 1,000 fired of our shells. The comparative want of gravity in the wounds inflicted by the Mauser bullet was very remarkable. Men recovered after being shot through every part of the body, and 96 per cent. of those treated in the base hospitals recovered from their injuries. Another very remarkable fact was the fewness of the amputations performed. During the first four months of the war only twenty amputations were performed at the No. 1 General Hospital at Wynberg. Our Lee-Metford projectile inflicted a very similar kind of wound, but the Boer wounded were not so well treated as ours were. The Boers did not possess, as our troops did, a first field dressing, whose speedy application doubtless saved much life and suffering. During his stay in South Africa he had an opportunity of examining the medical arrangements both throughout the Cape Colony and Natal, and he did not himself believe it would be possible—and he was able to contrast what he had seen with his experience of former wars—to have anything more complete or better arranged. On the part of the Government authorities there was nothing that was suggested, nothing that money could purchase, that was not forthcoming, when and where it was wanted. The supply of medical requirements was lavish, and, what was above all praiseworthy, these enormous supplies did not remain heaped up at Capetown, Durban, or Port Elizabeth, but were distributed to the various hospitals over many hundreds of miles of country. In spite of all the difficulties of provisioning such a large army so many miles from their base, he found that, wherever he might be, the soldier received a daily supply of fresh meat and bread, and that, therefore, except perhaps during the actual hours of fighting, the hardships experienced by our men in the matter of commissariat might be counted as not worth mentioning. Officers and men received the same supplies, and his own actual experience proved on many occasions the excellence of these commodities. After referring to the good effects of the war in uniting the Colonies to the Mother Country, he said of the medical arrangements that they were better than they had ever been before. Of the medical officers it might be said that they had shown themselves to be without fear, as most certainly they were without reproach.

Mr. Treves endorsed what Sir William Mac Cormac had said about the treatment of the sick in South Africa. It was perfectly true that there had never been a campaign in which the horrors of war had been so mitigated and where the treatment of wounded had been so complete. His lot was cast with the field hospital which followed the Ladysmith relief column from beginning to end. He was present at every engagement, from the battle of Colenso to the relief of Ladysmith, and their hospital, small as it was, received the wounded during the whole of the Natal campaign, with the exception of the slight cases. After one night's battle, Spion Kop, 715 wounded were put into the hospital camp. One afternoon they had orders to clear the camp of wounded before sunrise next day, and men were borne on 150 stretchers by hand to Frere, twenty-six miles, a thing which he believed had never been done in a campaign before. The medical men serving in the war owed much to General Buller, who took a remarkable interest in the surgical necessities of the campaign, and showed great anxiety about the accommodation of the sick and wounded. During the time he himself was at the seat of war he saw much of the common soldier. He was struck not only with the patriotism and admirable pluck of these men, but with their almost feminine kindness to each other and their extreme unselfishness. So far as the sick were concerned there were two plagues in South Africa—the plague of flies and the plague of women. The flies could be got rid of by means of horsehair wisps, gauze, and other appliances, and the flies disappeared at night. But the women mentioned in Sir Alfred Milner's proclamation were absolutely a terror. They came out in the guise of amateur nurses, having exhausted every other form of excitement; they took up the time of the officers, and, in fact, had the camp to themselves. Considering the kind of war in which we were engaged and the number of lives lost, the picture of a number of elaborately-dressed ladies masquerading in summer toilets and arranging picnics about Capetown was a blot on the campaign.

The Lord Chief Justice proposed the health of "The Chairman," and Lord Rosebery in responding said Mr. Treves forgot to rise to the fly he threw over him about entering Parliament. He was inclined to think it was from a merciful consciousness that if he did choose to enter Parliament he would cut out most of the leaders in rhetoric that adorned those two chambers.

THE EFFECT OF SMALL DOSES OF ALCOHOL ON THE BRAIN.

The second Lees and Raper Memorial Lecture was delivered by Mr. Victor Horsley, F.R.S., on April 27th at St. James Hall.

The chair was taken by Mr. Augustine Birrell, Q.C., M.P., who, after the Hon. Secretary of the Lees and Raper Memorial Fund had stated the facts concerning the inauguration of these lectures, said that they were met to hear Mr. Horsley, who was known as a fearless investigator of truth and the servant of science. He was a great authority on the brain, and what the country now wanted more than anything else in the supreme councils of the nation, on the battlefield, in literature and philosophy, was brains; and if Mr. Horsley could tell them anything as to how they were to maintain the little brain they had got and how they could increase that store his services would be in demand, not only by the temperance party, but by every political, literary, scientific, philosophic, and religious agency which existed in the country at the present time.

Selective Action of Alcohol.

Mr. Horsley said that it was his duty to present to them from the scientific standpoint a plain statement of the present state of knowledge as to the effect produced on the brain by small doses of alcohol. It probably was not generally known that all drugs had a selective action on the organs and tissues of the body, that is to say, they affected by reason of their chemical affinity some organs or parts of organs and spared others, and this was particularly true of alcohol. As Professor Ehrlich had pointed out, it was merely a question of chemical affinity. They must, therefore, first familiarise themselves with the various elements of the nervous system, which investigation had shown to be the commonest point of attack. The speaker proceeded to give a rapid survey of the central nervous system, illustrating the subject by means of lantern slides. In considering the effect of small quantities of alcohol on the central nervous system it was necessary to discuss its effect on ideation, that is, the intellectual thinking apparatus, next on the voluntary action apparatus, and then on the cerebellar apparatus for the regulation of movement and equilibration. The activity of the highest psychical centres of the brain was estimated in various ways. The activity of the brain in executing the decision of a thought arising from the stimulation of a special sense centre could be estimated either by measuring the time the brain took to do some small task allotted to it, first in the natural state and secondly when under the influence of alcohol, or by estimating the amount of work done in a given time.

Increased Reaction Times.

The time occupied by the nervous system in observing and recording the simplest thing was called "the reaction time," and was so appreciable that in all minute and accurate records astronomers had to measure their reaction period, and to account for it. The lecturer then demonstrated by an experiment the method of measuring the reaction time. This plan in all forms and varieties had been very largely employed by Professor Kraepelin, whose investigations had been so thorough

and complete that they explained the somewhat contradictory results obtained by Warren and other observers, and had established on a thoroughly scientific basis the direct influence of alcohol on the higher centres of the brain. The effect was that very speedily after taking the dose of alcohol the reaction time was shortened, but this shortening, that is to say, this apparent quickening of the cerebral act, lasted only a few minutes, and then marked slowing set in, and for the rest of the time during which the alcohol acted, varying from two to four hours according to the individual, the cerebral activity was diminished. The diminution was shown by a noteworthy lengthening of the reaction period—in other words, it took longer for a person who had had a small quantity of alcohol to think.

Slowing of Other Mental Processes.

A further method employed by Kraepelin was to estimate the ability with which the addition of simple numbers was carried out, and also the learning by memory of twelve places of figures, and in all these tests the slowing of intellectual vigour was shown. In regard to the occasional acceleration observed at the commencement in some experiments, Kraepelin made the remarkable personal observation that during this period of acceleration, that is during the first few minutes after taking a dose of alcohol, he had the subjective sensation that it was much easier to learn the figures, but when he came to examine the records he found that so far from having achieved his intellectual task more easily, it had, as a matter of fact, been accomplished more slowly. This observation was confirmed also by two other investigators in the same laboratory on whom a similar experiment was performed. This was a striking instance of the deceptive effects of alcohol on the higher intellectual centres of the brain. This deception was not, of course, limited to alcohol, for one of the common subjective sensations of small doses of the ordinary anæsthetics was that a person possessed great muscular strength, and had a sensation of making powerful efforts which were in fact not in any way extraordinary. In this connection the lecturer exhibited by means of lantern slides a record of an experiment which he had made upon himself with nitrous oxide to show how easily an elementary intellectual operation could be blotted out. The experiment consisted in writing threes in two rows, the figures alternating in position, and while these were being written at regular intervals the nitrous oxide was quickly respired so as to produce complete unconsciousness for a few seconds, and then during recovery of consciousness an assistant urged him (Mr. Horsley) to resume writing. The slight extra intellectual addition of writing the figures in alternate rows had been blotted out by the very slight and fleeting poisoning of the cortical centres by the laughing gas, with the consequence that the figures were written in one line. The effect of a poison like alcohol on the cerebral centres for voluntary action was readily estimated; some voluntary muscular act was selected, and the amount of force evolved by the sensory motor cortex and exhibited by the muscular contraction measured. The simplest experiment of the kind was one described by Kraepelin, in which he measured on himself and a colleague the force with which they could grasp the dynamometer at regular intervals during the hour or more that the experiment lasted. The result of the experiment was to show that though there might be at first a slight increase of the work put out, very soon a constant and marked failure in the work occurred. An interesting parallel series of experiments was made by the same observers under the influence of tea, the effect of which was to improve the output of the physical work for a long time, and to avert to a certain degree the fall due to natural fatigue. Kraepelin had pointed out that though the primary accelerating effect of small doses of alcohol was frequently observed in simple reaction experiments and in the experiments on the volitionary motor centres, it was not found in his complicated thought-measuring experiments. In these only the hampering influence was shown. It was clear, therefore, that there was something peculiar about this apparent stimulation of the nervous centres by alcohol, and the explanation might be that the first toxic effect of alcohol on nerve centres was the quicker liberation of motor impulses. Numerous investigators—Aikin amongst others—who had studied this point had suggested—and indeed the greatest Continental authority, Professor Bunge, had taught—that the action of the drug was from the very first an inhibitory or paralysing one. The primary accelerating stage, therefore, when it was observed, might in accordance with these views be considered to be due to the inhibition of the higher centres or the controlling apparatus which was known to exist in relation with motor centres; in fact, to use an ordinary analogy, every one recognised that directly the governor of an engine was prevented from acting the machinery at once tended to race and to work irregularly. Aschaffenburg had made a very careful series of observations on the dietetic use of alcohol in connection with skilled volitionary work. It occurred to this investigator to experiment on certain compositors who had offered themselves for the research at his suggestion. They were skilled artisans, three of whom were accustomed to drink small quantities of alcohol and the fourth occasionally drank to excess. Small intervals of time were taken and the total number of letters composed was observed under normal circumstances from which the necessary averages and observations of fatigue effects were obtained. The relative number of letters set up in the second, third and fourth quarters of an hour after the commencement of the experiment showed that the maximal difference and chief inhibitory effect of the alcohol was most apparent during the second quarter of an hour and remained obvious until towards the end of the experiment when the effects were passing off. The disadvantageous effect of alcohol on persons performing muscular work was well known, and it had been proved from the records of military expeditions that the best physical results were obtained under total abstinence from alcohol. The evidence, therefore, was overwhelming that alcohol in small amounts had a most deleterious effect on voluntary muscular work.

Influence of the Cerebellum on the Regulation of Movement and Equilibration.

The cerebellum was intimately connected with the cerebrum, and it was known that injury to it was necessarily followed by the loss of the regulation and control of movements, which was especially true of the muscles of the lower limbs. The legs were most particularly associated with the cerebellum, and co-ordination in standing and walking depended on the normal action of the cerebellum. One of the further effects of alcohol taken in slightly larger doses was to destroy this special function of the cerebellum, and to produce a sensation of tremor and weakness in the lower limbs, so that the individual staggered slightly, and standing became a matter of difficulty. Anyone who had observed slight alcoholic poisoning, and compared it with the disordered equilibrium of a certain degree of disease of the cerebellum, could not fail to note the close similarity of the two conditions, or hesitate to accept the view that alcohol particularly poisoned the cerebellum. According to the recent researches of Dr. Risien Russell the cerebellum played a part also under normal circumstances of damping the tremor accompanying the discharge of energy from a nerve centre. Hence in alcoholic poisoning the exaggeration of the natural intermittent discharge of the nerve centres producing tremor might be due in part to the loss of cerebellar-controlling influence, as well as to the affection of the cortical portions of the cerebrum. In regard to the structural changes produced in nerve corpuscles by small doses of alcohol, it had to be remembered that with existing means of investigation it was not possible to demonstrate such changes. The vital processes of the body were so delicate that it was not possible to show any change in the protoplasm of the nerve corpuscles corresponding to the physiological alterations referred to as produced by small doses of alcohol. It was, therefore, worth while to show the destructive effects produced by the continued use of alcohol. The lecturer then demonstrated by means of lantern slides the disappearance under the influence of alcohol of the granular masses in the Purkinje nerve corpuscles, and how the protoplasm of the body of the corpuscle lost its characteristic structure and the nucleus became altered in shape. The toxic influence of chronic alcoholism on the pyramidal cells was also demonstrated in a similar manner, and the effect of alcoholic poisoning on the normal pigmentation in nerve cells was illustrated by a slide representing degenerated nerve cells, from the *Archives of Neurology*, edited by Dr.

Mott, and published under the auspices of the London County Council. Mr. Horsley concluded his lecture by stating that from a scientific standpoint the contention so often put before them that small doses of alcohol, such as people took at meals, had practically no deleterious effect could not be maintained. He had only touched on a very small part of the subject, but if they considered the observations of Parkes on physical work, of Ridge on small doses of alcohol on vegetable protoplasm, and of Abbott and others on the influence of alcohol in rendering animals more prone to microbic invasion, they could only come to the one conclusion—that from a scientific standpoint total abstinence must be their course if they were to follow the plain teaching of truth and common sense.

The Dean of Canterbury (the Very Rev. F. W. Farrar) moved a vote of thanks to Mr. Horsley, which was seconded by Dr. W. J. Collins, who said he was glad to see that members of Boards of Guardians were present, and he trusted they would apply practically the information which had been imparted scientifically to them.

Sir Wilfrid Lawson moved a vote of thanks to the Chairman in a humorous speech, and referred to public houses as "the styes which law has licensed."

Mr. T. P. Whittaker, M.P., seconded the resolution, which was responded to by the Chairman, who said that as a moderate drinker he agreed that some of the pictures which were thrown on the sheet were of a disagreeable character, and he could only say that they would receive from him the very careful consideration that they deserved. He confessed that when Mr. Horsley pointed out in the brain the particular spot for the operation known as winking, he could not but think of how frequently leading politicians on both sides of the House had winked their eye whenever the temperance question was mentioned, and he had not thought before that night that they had been exercising their brain power when so engaged, but he now knew that a merciful Providence had fashioned for them an apparatus to enable them to go through that process. But the brain also compelled their movements and directed their legs, and what he wanted to see was the legs of members of Parliament directed into the right lobby, and for that purpose the electorate played the part of the cerebellum.

THE MIDWIVES BILL.

Amendments Necessary.

Sir,—May I be allowed, through the columns of the British Medical Journal, to draw attention to the important resolution on the midwives question which I had the honour to propose, and which was unanimously adopted, at the last meeting of the Council of the British Medical Association?

This resolution clearly defines the position of the Council and unites all of us—whether opposed to legislation or compelled, however unwillingly, to recognise that legislation is inevitable—in an emphatic and unanimous condemnation of the Midwives Bill at present before Parliament, inasmuch as, in the expressed opinion of the Council, the present Bill, if it became law, would be a direct danger to the public safety.

Long ago the Lancashire and Cheshire Branch, after mature deliberation, and foreseeing the present state of matters, decided to be prepared with a clearly-defined scheme which might at once be launched in opposition to any Bill of the Midwives Committee that threatened to become law. In this scheme the following points were laid down as absolutely essential in order to prevent the so-called "registration of midwives" from being a grave disaster for the well-being of the State:

1. Definition of midwife: This must (*a*) impose attendance on the mother and child after, as well as during, labour; and (*b*) restrict her practice to natural labour.
2. There must be a statutory penalty for practice as well as for the assumption of title.
3. There must be a statutory penalty for malpraxis or misconduct.
4. Constitution of Midwives Board: Necessity of direct representation of medical practitioners.
5. Compulsion of midwife to send for doctor in case of anything abnormal or illness.
6. Direct medical supervision of midwives necessary.

Needless to say not one of these essential conditions is safeguarded in the present Bill except Point 2, and as to this point the promoters of the Bill have actually promised that any amendment, which shall make the penalty apply only to those who assume a title, shall be "benevolently considered."

The resolution I proposed at the last Council meeting directed the General Secretary to write to all Secretaries of Branches, urging them to use all local means in their power "to obtain amendments to the Bill."

May I suggest that every Branch should have a special meeting at the earliest possible date, adopt the following amendments (which would secure the above principles), and, using all local influences, approach their local members of Parliament (directly and through the local political associations, especially the women's committees), urging them to vote for the adoption of these amendments, and in case of failure to vote solidly against the third reading?

The following are the necessary amendments:

I.

Page 2, Clause 2, Sect. v, line 2.

Mr. Lloyd-George has given notice that he will move to insert at the end of line 2 the following words: "and if any woman certificated under this Act shall do or purport to do anything which by this subsection it is declared that her certificate does not confer upon her a right or title to do she shall be liable on summary conviction to a fine not exceeding five pounds.'

This will secure Point 3.

II.

Page 2, Clause 4, line 14.

Dr. Farquharson has undertaken the following:

After "practitioners," leave out to end of subsection (1), and insert "to be appointed by the General Medical Council as follows: One practising in the London and South-Eastern Registration Divisions, one practising in the South-Western, West Midland, or Welsh Registration Divisions; one practising in the Eastern, North Midland, or South Midland Registration Divisions; and one practising in the Yorkshire or Northern Registration Divisions, as from time to time defined by the Registrar-General."

This will secure Point 4.

III.

Page 3, Clause 4. Subsection v, line 11.

After the word "misconduct," insert "and so that for the purposes of this Act the omission to summon a registered medical practitioner in a case of abnormal labour or danger to or illness of the mother or child, shall be deemed to be misconduct."

This will secure Point 5.

IV.

Page 4, Clause 9, lines 20 to 24.

Omit the words from the beginning of the clause down to the word "borough" (inclusive) in line 24, and substitute, "Every county council of any administrative county and county borough throughout England and Wales shall, on the passing of this Act, appoint a committee of not fewer than three registered medical practitioners, two of whom shall not be teachers nor examiners of midwives, as the local supervising authority over midwives within the area of the said county."

This would partially secure Point 6.

V.

Page 6, Clause 18, line 30.

Sir George Pilkington has undertaken the following:

Leave out all the words from "childbirth" to "employed," both inclusive, and insert "in natural labour but not in cases which presen tabnormality, danger, or disease, on the part of the mother or of the newborn child."

In order to secure Point 1 it would be necessary that this amendment should read "in natural labour and during the lying-in period, etc."

VI.

In regard to Point 2, Colonel Milward has given notice of the following:

Clause 2, page 1, line 17. Leave out from the second "or" to "childbirth," in line 18.

This amendment should be strenuously resisted.

If these points could be secured the Bill would be rendered much less harmful, otherwise we shall, I fear, live to regret the absence of "medical union."—I am, etc.,

Manchester, April 30th. T. Arthur Helme.

THE PLAGUE.

Prevalence of the Disease.

India.

In the Bombay Presidency the total number of plague deaths during the week ending April 1st numbered 1,462, of which 659 occurred in the city of Bombay itself. Subsequently the mortality from plague did not seem to diminish. On April 5th, 6th, 7th, 8th, 9th, 10th, and 11th the number of new cases of plague were respectively 139, 177, 143, 131, 119, 119, and 125; and the number of deaths 98, 94, 109, 131, 89, 112, and 97, making the total deaths from plague for the week ending April 10th 720.

In Karachi plague is reported to have assumed a virulent orm and to be spreading to an alarming extent. The return for the six days ending April 10th shows 433 new cases and 315 deaths from the disease. Since January 1st, 1900, to April 5th 1,052 cases of plague have occurred in Karachi and 756 deaths. Seeing that nearly half the deaths have occurred

during the six days ending April 10th, it is plain that the increase during April has been unprecedentedly severe.

In Calcutta the severity of the plague epidemic is reported to be declining, but the figures to hand scarcely justify the hope that such is the case. On April 5th, 6th, 7th, 8th, 9th, 10th, and 11th the number of fresh cases of plague were respectively 93, 103, 110, 115, 86, 89, 111, and the number of deaths from the disease were 104, 89, 108, 72, 82, 92, and 101. The exodus of natives from Calcutta continued without abatement; not only the Marwaris but every community seemed to join in the rush from the city.

The prevalence of plague in other districts of India is limited. For the week ending April 1st there were 10 deaths from plague in the Madras Presidency, 33 in the Mysore State, 11 in Hyderabad, 22 in the Central Provinces, and 61 in the Punjab.

HONG KONG.

A telegram dated April 28th states that during the present year 98 cases of plague have occurred in Hong Kong, and of these 52 occurred during the last fortnight. This is disheartening news, as the behaviour of plague in Hong Kong affords some indication of the course it may follow in other countries and cities. In spite of the most strenuous efforts plague continues to hold Hong Kong in its grasp. The district of Tai-ping-shan, condemned in 1894, is still untenanted, involving great loss to the Government, and apparently with no beneficial results as to the prevalence of plague. The wisdom of closing a large area of any town during an epidemic is doubtful, as thereby the surrounding districts of the city must be overcrowded.

AUSTRALIA.

On April 23rd 8 fresh cases of plague were reported in Sydney, and 2 deaths from the disease. It appears that of all Australian towns Sydney is the dirtiest. The streets in the lower part of the town are seldom clear of the refuse of hide and wool scourings that give off emanations to a humid atmosphere. When one finds a medical officer of health describing the condition of Sydney as "most appalling," there can be little wonder that imported plague would acquire a hold in the city. It is satisfactory to know that "Sydney is awaking to the incompetence of a system of municipal management that allows such a state of things." In almost every city of Australia precautionary measures against plague are being adopted.

From Brisbane a case of plague is reported on May 1st.

MAURITIUS.

For the week ending April 30th 2 fresh cases of plague occurred in Mauritius, and 2 deaths from the disease. This indicates a slight recrudescence as compared with last week.

NEALE TESTIMONIAL FUND.

THE following subscriptions have been received by Mr. MacAlister for this fund. It is proposed to close the list very shortly, and it is, therefore, earnestly hoped that those who intend to subscribe will send in their subscriptions to Mr. MacAlister without delay.

Cheques should be made payable to "Bearer," and crossed "Neale Testimonial Account, National Provincial Bank."

	£	s.	d.
Sir William Turner, F.R.S.	1	1	0
E. Wolfenden Collins, M.D.	1	1	0
Thomas Bryant	3	3	0
Amand Routh, M.D.... ...	2	2	0
T. Stretch Dowse, M.D. ...	3	3	0
W. Nutt Galton	1	1	0
George P. Field	2	2	0
C. J. Cullingworth, M.D. ...	2	2	0
E. Noble Smith	3	3	0
T. Clifford Allbutt, M.D., F.R.S....	1	1	0
E. F. Cooper	0	10	6
K.	0	10	0
G. Fielding Blandford, M.D.	1	1	0
Sir T. Lauder Brunton, M.D., F.R.S....	5	5	0
R. J. Pye-Smith	1	1	0
Eliz. Garrett Anderson, M.D.	1	1	0
Christopher Heath	1	1	0
Henry Power	1	1	0
Frederick T. Roberts, M.D.	1	1	0
The Bristol Medical Library	1	1	0
Sir Douglas Powell, M.D....	2	2	0
Malcolm Morris	1	1	0
Sir William Broadbent, M.D., F.R.S.	5	5	0
F. W. Pavy, M.D., F.R.S....	2	2	0
A. Pearce Gould	1	1	0
Alban Doran	1	1	0
Sidney Martin, M.D., F.R.S.	1	1	0
Sir Thomas Smith	1	1	0
J. Ford Anderson, M.D. ...	1	1	0
J. Moorhead, M.D.	1	1	0
W. P. Herringham, M.D. ...	1	1	0
A. Foxwell, M.D.	1	1	0
Byrom Bramwell, M.D. ...	5	0	0
Wharton Hood, M.D. ...	1	1	0
T. F. Chavasse, M.D. ...	1	1	0
Edward Nettleship	1	1	0
E. W. Goodall, M.D. ...	1	1	0
Sir Edwin Saunders ...	1	1	0
Herbert Allingham	2	2	0
J. Abercrombie, M.D. ...	1	1	0
Thomas Buzzard, M.D. ...	2	2	0
R. Clement Lucas	1	1	0
A. P. Luff, M.D.	0	10	6
G. H. Savage, M.D.	1	1	0
H. Cooper Rose, M.D. ...	1	1	0
W. S. Church, M.D.... ...	1	1	0
H. H. Clutton	1	1	0
Lord Lister	5	0	0
J. J. Macwhirter Dunbar, M.D.	1	1	0
E. Unwin Berry	2	2	0
T. D. Savill, M.D.	0	10	6
Charles Coates, M.D. ...	5	5	0
A. B. Carpenter	1	1	0
C. B. Keetley	1	1	0
Edward Wood...	0	10	6
W. B. Cheadle, M.D.... ...	1	1	0
D'Arcy Power...	0	10	6
W. Adams Frost	2	2	0
A. Fraser, M.D.	1	1	0
K. Grube, M.D.	1	1	0
A. Donald, M.D.	0	10	6
F. P. Weaver, M.D.	1	1	0
W. Allen Sturge	1	1	0
S. J. Sharkey, M.D.	1	1	0
E. Clifford Beale	1	1	0
T. Holmes	1	1	0
G. Sims Woodhead, M.D....	1	1	0
James Little, M.D.	2	2	0
G. Anderson Critchett ...	2	2	0
W. H. Bennett	2	2	0
P. Horrocks, M.D.	1	1	0
F. de Havilland Hall, M.D.	1	1	0
H. G. Howse	3	3	0
P. H. Pye-Smith, M.D., F.R.S.	2	2	0
J. Adams Rawlins	0	5	0
R. A. Gibbons, M.D. ...	1	1	0
John Ewens	0	2	6
A. Haig, M.D.	1	1	0
Total ...	£119	0	6

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on July 11th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.—The next meeting of this District will be held on Thursday, May 10th, at the Hôtel Métropole, Bexhill. The chair will be taken at 4 P.M. by Dr. Wills. Notice of intended communications should be sent at once to J. W. BATTERHAM, M.B., Bank House, Grand Parade, St. Leonards, Honorary District Secretary.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.—The next meeting of this Branch will be held at the Greyhound Hotel, Croydon, on Thursday, May 10th, at 4 P.M., Dr. John Redfern (Croydon) in the chair. Agenda: (1) Minutes of Upper Norwood meeting. (2) To decide when and where the next meeting shall be held, and to nominate a member of the Branch to take the chair thereat. The following papers, etc., will be read:—Dr. Gustave Schörstein: The Treatment of Gastric Ulcer. Mr. Frederic Eve: The Treatment of Hernia in Adults and Children, especially in regard to Radical Cure. Dr. Phineas S. Abraham: On the Treatment of some Common Diseases of the Skin. Mr. S. W. MacIlwaine: The Future of the Profession and of the Association. After Mr. MacIlwaine's paper the Honorary Secretary will at once propose: "That the Editor of the BRITISH MEDICAL JOURNAL be requested to publish this paper in the JOURNAL, and that the discussion on it with the consequent vote be postponed until the next meeting." Members desirous of exhibiting specimens or reading notes of cases are invited to communicate at once with the Honorary Secretary. Dinner at 6 P.M. (charge 7s., exclusive of wine). All members of the South-Eastern Branch are entitled to attend and to introduce professional friends. The Honorary Secretary would be much obliged if members would kindly inform him by post-card whether they intend, if possible, to be present at the meeting, and if likely to remain to dinner. By so doing they will very materially facilitate arrangements and promote the success of the meeting.—HENRY J. PRANGLEY, Tudor House, Anerley, S.E., Honorary Secretary.

LANCASHIRE AND CHESHIRE BRANCH.—A meeting of this Branch will be held on Wednesday, May 16th, at 2 P.M., at the Memorial Hall, Albert Square, Manchester, to consider medico-political and business matters. Gentlemen wishing to propose new members or to bring forward any business are requested to communicate, before May 8th, with T. ARTHUR HELME, 3, St, Peter's Square, Manchester, Honorary Secretary.

DORSET AND WEST HANTS BRANCH.—The next meeting will be held at Weymouth on Wednesday, May 9th, 1900. The business meeting will be held at the Royal Hotel at 3 P.M. Agenda: Secretaries' accounts for 1899. Report of election of Branch council. Election of a representative of the Branch on the Council of the Association. Election of a representative of the Branch on the Parliamentary Bills Committee. Election of new members of the Branch. Place of summer meeting. Communications from the East York and North Lincoln Branch and the Hull Medical Society relating to the Registration of Midwives Bill and medical reform. Communication from the Lancashire and Cheshire Branch. Discussion: Appendicitis; its Symptoms and Treatment; to be opened by Dr. Ramsay, one of the vice-presidents. Communications: Dr. Moorhead will exhibit a patient cured of Myxœdema by Thyroid Extract. Mr. Pridmore: A case of Tumour at the Base of the Brain (patient to be shown). Dr. Lawrie: The Indications for the Removal of the Uterine Appendages. N.B.—No paper, except on the subject of discussion, must exceed ten minutes in length, and no subsequent speaker must exceed five minutes. The members of the Branch resident in Weymouth request the

pleasure of the company of all members and friends to lunch with them at the hotel from 1.30 P.M. Members intending to be present are requested to intimate their intention to Dr. Lush by May 7th.—WILLIAM VAWDREY LUSH, M.D., Weymouth; C. H. WATTS PARKINSON, Wimborne, Honorary Secretaries.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.—A meeting of this District (the last of this Session) will be held at the London Temperance Hospital, Hampstead Road, on Wednesday, May 16th at 4.30 P.M. Dr. Morton will preside. Election of officers. Dr. Thomas D. Savill will open a discussion on Occupation Neuroses, and will exhibit cases of Drapers' Palsy, Pianists' Cramp, Machinists' Tremor, and Telegraphists' Cramp. The District Committee will meet at 4.15 P.M.—H. J. MACEVOY, Brondesbury, N.W., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A meeting of this District will be held at the Polyclinic, 22, Chenies Street, W.C. (by kind permission of the Council), on Wednesday, May 9th, at 3.15 P.M.; J. Pickett, M.D., Vice-President, in the chair. Agenda:—Mr. Jonathan Hutchinson, LL.D., F.R.S., will give a short demonstration, and act as guide to the College. Colonel Kenneth Macleod, LL.D., M.D., will lecture on Elephantiasis at 5 P.M. (to which the members are invited). Tea and coffee.—THOMAS DUTTON, M.D., 13, Holland Park Avenue, W., Honorary Secretary.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—The half-yearly meeting of this District will be held at 5, Pembroke Road, Portsmouth, on Thursday, May 10th, at 4 P.M. Notice of intended communications should be sent at once to the Honorary Secretary, J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth.

BORDER COUNTIES BRANCH: SECTION FOR THE COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES.—A meeting of this District will be held in Earlston on Friday, May 11th, at 4 P.M., at the residence of Dr. Young, Dr. Blair of Jedburgh presiding. Members are requested to send notices of papers to be read to the Honorary Secretary at the earliest possible date.—W. HALL CALVERT, The Laurels, Melrose, Honorary Secretary.

DUNDEE AND DISTRICT BRANCH.—The annual meeting will be held in Dundee Royal Infirmary on Friday, May 25th. By the courtesy of the Directors, the new Caird wards (Gynæcology and Obstetrics) will be shown to the members. Members having business to bring forward or patients to show at the Clinical Congress are requested to communicate with Dr. Buist, Dundee, as early as possible

MIDLAND BRANCH.—*Preliminary Notice.*—The annual meeting of this Branch will be held at Nottingham on Thursday, June 14th. Mr. A. R. Anderson, F.R.C.S., President-elect, will preside. The following papers, etc., have already been promised. Address by the new president. Dr. H. Handford: Three cases of Cerebro-spinal Meningitis. Dr. Pope and Dr. Astley V. Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks as to the possible Connections of the Two Diseases. Members wishing to show cases or read papers are requested to communicate as soon as possible with FRANK M. POPE, 4, Prebend Street, Leicester.

SOUTHERN BRANCH: ISLE OF WIGHT DISTRICT.

THE twentieth annual meeting of this District was held on April 20th at Ryde, Dr. J. GROVES, Vice-President, in the chair, in the absence of the President.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Letters.—Letters were read as follows: (1) From the President gratefully acknowledging the vote of condolence passed at the last meeting, sympathising with him in his late bereavement; (2) from the General Secretary of the Association, enclosing a draft letter on Revaccination and Vaccination at School Age. Dr. GROVES proposed and Dr. COWPER seconded:

That a copy of the draft letter be sent to every member of the District

Carried *nem. con.*

Financial Statement.—The accounts for the year 1899, showing a balance to the District of £8 5s. 10d., having been duly audited by Drs. Buck and Brereton, were passed and adopted.

Introduction of New President.—The PRESIDENT, in a few graceful words, introduced Dr. T. A. Buck as President for the coming year.

President-elect and Honorary Treasurer.—Dr. Cowper and Dr. Shirtliff were then elected as President-elect and Honorary Treasurer and Secretary respectively.

President's Address.—The PRESIDENT, after moving a vote of thanks to his predecessor for his conduct as President during the late year, which was unanimously carried, gave an address entitled "Thirty-five Years' Retrospect in the Profession, including some of my Experiences, chiefly Surgical," which will be published. The address was warmly received, and was followed by a general discussion, a cordial vote of thanks being awarded to the President.

Death Certification.—Time not permitting, Dr. GROVES promised to introduce the subject of death certification at the next meeting.

Next Meeting.—The next meeting was fixed for the third Friday in July at 4 P.M. at the Pier Hotel, Sandown.

NORTH OF IRELAND BRANCH.

THE spring meeting of this Branch was held in Belfast on April 26th. Dr. J. C. MARTIN (Portrush), President of the Branch, occupied the chair, and forty-five members were present.

Confirmation of Minutes.—Dr. CALWELL (the Honorary Secretary) read the minutes of the last meeting, which were confirmed.

Annual Meeting of Branch.—It was proposed by Dr. M'KEOWN, seconded by Dr. DARLING, and passed unanimously:

That the annual meeting of the Branch be held on July 5th at Portrush, and that the best thanks of the meeting be given to Dr. Martin for his kind invitation.

Irish Dispensary Doctors and Guardians.—The Honorary Secretary was directed to write to Dr. Moses Henry and convey to him the sympathy of the meeting, with the hope that it would be shown in a practical manner when the costs of the appeal were settled (*vide* correspondence in the BRITISH MEDICAL JOURNAL of March 31st, p. 804).

New Members.—The following gentlemen were elected members: Dr. Wm. M. Hunter (Antrim), Dr. David McKee (Bandalstown), Dr. Thos. K. Greenfield (Holywood), Dr. J. W. West (Belfast), Dr. Mandale Byers (Belfast), Dr. A. M. D'Evelyn (Ballymena), Dr. W. H. W. McWhirter (Ballymena), Dr. A. Duncan (Ballymena), Dr. G. J. B. Lake (Ballymena).

Communications.—Dr. HAWARD SINCLAIR (Rostrevor Sanatorium, Warrenpoint) read a paper on Twelve Months of Open-air Treatment of Consumption in Ireland, proving the applicability and success of this method of treatment in suitable sites in Ireland. Drs. CAMPBELL, CALWELL, and the PRESIDENT congratulated Dr. Sinclair on his paper and results.—Dr. JOHN CAMPBELL (Belfast) read a short account of three successful excisions of the cæcum for cancer, and showed the specimens. He also showed specimens of several fibroids, an œdematous myoma, several ovarian cysts, a tubal gestation, a cancerous uterus removed by vaginal hysterectomy, a fibroid uterus with malignant degeneration of the endometrium removed by combined vaginal and abdominal hysterectomy.—Dr. ISAAC A. DAVIDSON (Belfast) read notes of a case of plastic bronchitis, and showed characteristic specimens of the sputum.—Dr. THOS. B. PEDLOW, surgeon, read notes of a successful case of emergency tracheotomy performed with a penknife and hairpins. Drs. MITCHELL and CARSON remarked upon the encouragement held out by such cases.—Dr. S. T. BEGGS read notes of an interesting and rare case of ovarian tumour removed six weeks after delivery by Dr. St. Clair Boyd; the tumour had undergone suppuration some time before, but had not interfered with parturition.—Dr. CALWELL explained some results obtained in percussing the stomach in different positions of the body, and showed some diagrams.

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session was held at Bath on April 25th, A. J. HARRISON, M.B., President, in the Chair, and there were 26 members and 2 visitors present.

New Members.—The following gentlemen were elected members of the Association and of the Branch: Dr. A. B. McKnee and Dr. F. N. Cookson, both of Bristol.

Communications.—Dr. MELSOME showed a patient suffering from œsophageal pouching.—Mr. R. J. H. SCOTT read notes of a successful case of enterectomy for malignant disease of the transverse colon causing intestinal obstruction, and remarks were made by Dr. HARRISON.—Dr. A. E. CARRUTHERS read a paper on two cases of intussusception in infants. It was discussed by Dr. CAVE and Dr. MELSOME.—Dr. CAVE described a case of septicæmia simulating acute rheumatism and ending in recovery. In the discussion which ensued the following took part: Dr. BROOKER, Mr. SCOTT, Dr. MELSOME, Mr. POLLARD, Mr. GOODRIDGE, Dr. PARKER, Dr. HARRISON and Dr. CARRUTHERS.—Mr. LACE read notes on two cases of ectopic gestation, and Mr. FLEMING and Dr. CARRUTHERS referred to cases which had come under their notice.

SPECIAL CORRESPONDENCE.

BIRMINGHAM.

The University Charter.—The Report of the Advisory Committee on Universities in the United States.—Proposed Technical School.—Larger Site recommended.—Commercial Department.—Further Funds needed.

THE new Birmingham University has during the past few months been awaiting two things: the grant of the Royal Charter, and the report of the Advisory Committee appointed last autumn to advise upon the best method of employing the funds promised by Mr. Carnegie and an anonymous donor for scientific and commercial training. The Charter is in process of being granted, and the Advisory Committee have just issued their report.

In view of the important recommendations made by this Committee, it may be of interest to mention a few of the more important conclusions arrived at by them. The Committee visited and made a careful examination of many of the colleges and universities in the United States and Canada, including those of Harvard University, the McGill University, Montreal; the Cornell University, Othaca; the University of Chicago, the Johns Hopkins University, Baltimore; the University of Pennsylvania, Philadelphia, and the Columbia University, New York.

In their report they recommend a complete technical university upon the American model, with chairs of Mining, Metallurgy, and Applied Chemistry and Engineering. The students attending would be divided into two classes: (1) Those who take a four-years' course in Mechanical (including Electrical), Civil or Mining Engineering, Metallurgy, or applied Chemistry, and who would study for a Master's degree in any one of those subjects; and (2) those taking a course of one to three years' instruction in any one of those subjects with a view to acquiring a special practical knowledge of them.

They are convinced that it will be necessary to acquire a fresh site for the accommodation of this part of the University, and recommend the acquisition of a site of some twenty-five acres on the outskirts of the city, leaving the present College buildings available for the teaching of pure science and literary and commercial subjects. It is estimated that the purchase of such a site and its thorough equipment will involve a capital outlay of some £155,000. The cost of maintenance they estimate at about £10,500 or £11,000 per annum, but this sum would probably be almost if not entirely met by students' fees.

With regard to the commercial department of the University the Advisory Committee submit recommendations for a course and diploma, commencing at the age of 20, for students who have already taken a degree in arts. The subjects to be embraced would include such subjects as a general knowledge of commercial law, the theory of banking and exchange, the study of modern languages, shorthand, some knowledge of accountancy, a knowledge of shipping and railway practice, etc. The capital outlay is here put down at about £6,000, but, in addition to the anonymous donor's gift, some £24,000 more will be required to endow the commercial faculty.

In conclusion if, as is probable, the recommendations of the Advisory Committee are followed, it will be necessary to find another £129,000 in addition to the £326,000 which has already been either raised or promised to endow the new University. This will bring the total sum to nearly half a million, truly a large sum, but one by no means too large for its purpose or one which it should be impossible to raise.

CORRESPONDENCE.

CONSERVANCY OF THE RIVERS AND BROADS OF NORFOLK.

SIR,—Having spent a most delightful holiday last summer upon the Broads, and knowing how deservedly popular this district is, it has been a matter of surprise to me that some organised attempt has not been made for the proper conservancy of its waters and of the adjacent banks. Conservancy entails a certain amount of trouble upon those who have to carry it out, and needs supervision. Once the necessity is recognised and a simple system is adopted there should be no real curtailment of the liberty of action which is one of the characteristic features of life on the Broads.

It seems to me the duty of the holiday seeker to support the efforts made by riparian owners, and to take an active personal part in preserving for their own as well as others' enjoyment those parts which are not protected in any way.

The disposal of refuse from houseboats and other pleasure craft is at present absolutely unregulated. Everything goes the nearest way overboard into the water or on to the land. The great increase of craft plying upon the rivers leads to a sensible pollution of the water and disfigurement of the banks. Picture to yourself the more extreme case of some twenty or thirty boats of every kind, each carrying from one to a dozen passengers, moored within a boat's length of each other, and lining opposite banks of a river 40 yards wide, as occurs at any of the regatta meetings. There is very little movement of the water beyond the varying tidal flux, which in some places is very slight. The morning sees the men—and sometimes ladies—over the side for their matutinal swim; then there comes the toilet; and, next, breakfast; all relics of breakfast go overboard; utensils of every description are washed in water drawn from the same source; and so on for the remainder of the day. Boats are not always on the move, but are often moored for several days in the same spot, and the signs of recent occupation can always be recognised.

Only earth closets should be allowed upon vessels which are intended for navigation upon the Broads. Refuse of every description ought to be deposited in localities provided for the purpose, or buried and properly covered, say, 2 feet to the landward side of the dyke walls or at a suitable distance from the water's edge. Lavatory accommodation should be provided for public use at a small charge in those places in which boats are in the habit of congregating, and this could be made of an ornamental nature without any difficulty, and so be no eyesore. The expenditure to which the localities would be put could be met by a small capitation charge upon the occupants of boats, and could be named "conservancy charge." This could be supplemented by the county council under whose medical officer such a scheme should be carried out and controlled. The localities should bear their share of expense in recognition of the pecuniary benefits derived from visitors. Good sources of water supply for use on boats, instead of the mere caution that well water is not always safe, should also be officially notified. There are difficulties in introducing new regulations, and much may be said upon the subject of tidal waters, sea-going vessels that come on to the Broads, etc., but these, I venture to think, are more technical than real, and are questions to which the local authorities would find a solution.

Some useful hints could be obtained from the regulations made by the Thames Conservancy for dealing with these matters.—I am, etc.

Leeds, April 28th. DE BURGH BIRCH, M.D.

A REMARKABLE COINCIDENCE IN DENTAL SURGERY.

SIR,—About 1870 I was requested to remove a bicuspid tooth. I think it was from an adult bugler of the Royal Marine Light Infantry on board a Gun Vessel in which we were serving. The tooth was extracted, and he immediately after "sounded off" on his bugle—"Cooks of Messes" for the men's dinners. To his astonishment and alarm the side of his head from which the tooth had been extracted swelled up enormously, and he rushed back to exhibit his condition. It was a case of traumatic emphysema, and he was assured that a cure would be soon effected, as it was.

He was a somewhat eccentric man and very self-important, impressing others that in virtue of his calling he was a "professional man." He ultimately landed in a lunatic asylum; the nature of his insanity I never learned.—I am, etc.,

Emsworth, May 1st. ALEXANDER TURNBULL, M.D., R.N.

THE HOLMGREN WOOL TEST.

SIR,—In the BRITISH MEDICAL JOURNAL of March 17th Mr. Bickerton conclusively demonstrates the perilous inadequacy

of Holmgren's test for dyschromatopsy. It would be instructive to know whether the defect of colour sense in the cases cited by Mr. Bickerton would be revealed by a test that has quite recently been reintroduced by Professor Hermann Cohn of Breslau. This method of determining the acuteness of colour perception is based on the phenomenon of simultaneous contrast, and in the form arranged by Professor Cohn it is, he maintains, a much more sensitive detector of colour blindness than are the wools. The results obtained by me during the short time the test has been at my disposal accord with that opinion: certain individuals who betray no deficiency by Holmgren's method wholly fail to discern Cohn's type until supplied with the appropriate monochromatic corrective medium.—I am, etc.,

Wakefield Asylum, April 17th. E. Birt.

OBITUARY.

GEORGE VINER ELLIS, F.R.C.S.,

Emeritus Professor of Anatomy, University College, London.

We regret to announce the death of Professor Viner Ellis, well known to several generations of University College men as their Professor of Anatomy. He passed away at an advanced age on April 25th at his residence, Severn Bank, Ministerworth, Gloucester. He received his professional education at University College, and became M.R.C.S. in 1835. On December 11th, 1843, he was elected one of the original Fellows of the Royal College of Surgeons of England. He was for many years demonstrator in University College under Professor Richard Quain, whom in 1850 he succeeded in the Chair of Anatomy. This he continued to fill till 1877, when he resigned, with the title of Emeritus Professor. Since then he has lived in retirement in the country.

To the present generation Professor Ellis is only *magni nominis umbra:* but in his day he was one of the ruling spirits of the world of anatomy in this country. He gave his whole working life to the study and teaching of his chosen subject. Though too austere and unsympathetic in manner and strict in discipline to be popular with the great body of students, he was held in the highest respect by all, and in almost affectionate regard by a chosen few. Though he disdained the art of clothing the dry bones of anatomy with any flesh of human interest, his lectures were so exact in detail and so clear in expression that they were always listened to with close attention if not with pleasure. Ellis always had perfect command of his class. On one occasion when Professor Robert Grant, at that time extremely old and feeble, found his class unmanageable he called Ellis to his aid. The redoubtable Professor of Anatomy had a brief but convincing interview with the unruly spirits, who thenceforth displayed the most lamblike demeanour in "poor old Grant's" lecture room. Ellis had a great objection to smoking and would not suffer the practice in his dissecting room. The students, it is said, once petitioned the Council for leave to purify the atmosphere of the practical anatomy rooms with tobacco: the petition was granted, whereupon the Professor at once tendered his resignation, which was withdrawn only when he had received assurances that he should never again be asked to tolerate the accursed thing. Some men whose names are now well known in the profession will doubtless remember his anger when, returning unexpectedly after a short absence, he found a comfortable party of smokers round one of the stoves.

Ellis was a most conscientious teacher, and had the credit of his College greatly at heart. Nothing distressed him more than any disaster to his students at the examination table; and on one occasion when University College had cut a particularly poor figure in the lists, he appealed to his class, with tears rolling down his face, to remove this disgrace from him. He spent the greater part of his time in the dissecting-room, and many readers will remember his habit of looking in after his midday lecture and sniffing the air as if to get an appetite for his lunch. In the afternoon he would go round from one dissector to another and, as Napoleon used to pull the ears of officers whom he distinguished with his favour, Ellis would show his liking for an industrious worker by patting him on the shoulder with hands too visibly subdued to that they worked in—a mark of approval not always properly appreciated by the object of it. To some specially privileged ones the old man would often unbend in playful gossip, the hard face wrinkling every now and then into kindly smiles. On such occasions, if he found a sympathetic listener, he would reveal unsuspected depths of knowledge and feeling, telling stories of the resurrection men, some of whom he had known, and discoursing on subjects so remote from the supposed narrow rut of his interests as the Elizabethan poets.

As an anatomist, he was an expounder rather than a discoverer. He was described in a college epitaph as

> Beloved by few, and feared by many,
> Discoverer of the corrugator ani.

The discovery of the interesting muscle here referred to by no means exhausted Ellis's additions to the sum of anatomical knowledge, but his chief work was in the rigorous verification and systematisation of what was already known.

Professor Ellis was more than once examiner in the University of London, but he resolutely declined to discharge the same function at the College of Surgeons, as in those days examiners at Lincoln's Inn Fields had to test the knowledge of candidates in surgery as well as in anatomy. His name was a household word to students of anatomy throughout the whole English-speaking world. This reputation he owed to his *Demonstrations of Anatomy: being a Guide to the Knowledge of the Human Body by Dissections*, which was published in 1840. This work quickly found almost universal acceptance as a guide to practical work in the dissecting room, not only in this country, but in America. It has passed through many editions, the last in this country (the eleventh) having appeared in 1890. He was co-editor with Sharpey of the sixth edition of *Quain's Elements of Anatomy*, published in 1856. The description of the nerves is in great part due to Ellis, who devoted much attention to that branch of anatomy. In 1863, in conjunction with Mr. G. H. Ford, he published *Illustrations of Dissections* in a series of original coloured plates, the size of life, representing the dissections of the human body. The work was originally published in parts, but subsequently in two volumes imperial folio. The drawings were beautifully executed from Nature on stone by Mr. Ford from dissections made by Professor Ellis. Besides the above works he contributed several papers on scientific subjects to the *London Medical Gazette*. He was a Fellow of the Royal Medical and Chirurgical Society, and a member of Council of the Society in 1863-64.

In his retirement Professor Ellis gave much attention to horticulture, and was very successful in the cultivation of apples. He lived apart, "the world forgetting, by the world forgot"—at least, as far as concerns the professional world with which he had never at any period of his career cared much to mingle. He was not a man who wore his heart upon his sleeve, and although he did not a few acts of benevolence to students who were in need of help, he hid his generous deeds as most men hide their sins.

In George Viner Ellis almost the last of the older race of great teachers who made University College one of the foremost schools of medicine in this country has passed away.

Capetown has recently lost one of her best known and most popular medical men by the death of Dr. George Bailey Silke. He was one of the oldest members of the Capetown Branch of the British Medical Association, and was secretary and member of the Council on several occasions. He was also a member of the Colonial Medical Council, and would but for imperfect health have maintained the high promise of his university career. He died of pneumonia after influenza on March 26th, aged 47. Dr. D. J. Wood, of Capetown, Honorary Secretary of that Branch of the Association, writes: "He was an eminently lovable man, and is deeply regretted by his many friends." Dr. Silke was educated at the Edinburgh University, and throughout his medical career in Capetown was closely identified both with general practice and public health work. At the time of the small-pox epidemic at Capetown in 1883 his labours amongst the poor and the coloured races were indefatigable. Among the many public services which he rendered to the community at Capetown his advice on this occasion will for ever be remembered.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE ARMY MEDICAL REPORT FOR 1898.

We referred last week to the issue of this valuable report, but it contains various points which deserve attention.

Ratios of Sickness, Invaliding, and Mortality.

One of these is the true or real value of ratios, especially if limited or circumscribed, in time or space, or based on small numbers. Without in any way seeking to impugn the arithmetical accuracy of these returns and ratios, which is beyond cavil, it may be pointed out that some unavoidable and fallacious elements pervade ratios of vital statistics in general, for which due allowance should be made.

To illustrate our meaning we take the ratios per mille which in 1898 relate to the vital statistics of troops quartered in the three divisions of the United Kingdom.

We find the average strength of soldiers was over 72,000 in England, under 4,000 in Scotland, and over 20,000 in Ireland, these men presumably living under very similar vital conditions; yet the range of sickness and mortality presents remarkable and unexplained variations, for which there must be reasons.

Instead of expressing ratios per thousand, which of course gives greater accuracy, these variations (and discrepancies) are more easily grasped if expressed in shorter percentages. Thus, during the year 1898, the admissions to hospital were about 70 per cent. of strength in England, 61 in Ireland, and 48 in Scotland; invaliding in England and Ireland were much alike, together 1.65, against 0.74 in Scotland; constantly sick, in England 4, Ireland $3\frac{1}{2}$, and Scotland $2\frac{1}{2}$; average sick time to each soldier, England $14\frac{1}{2}$, Ireland over 12, and Scotland under 9 days; duration of each case somewhat less in Scotland and fractionally less in Ireland than in England.

But notwithstanding this better record in Scotland, when we consider deaths we find they were proportionately nearly 5 in Scotland to 3 in England and $2\frac{1}{2}$ in Ireland; it is, however, explained that the deaths of soldiers in Scotland in 1898 exceeded the decennial average by 2.70 per mille, an increase equivalent to 45 per cent. The total deaths in Scotland were, however, only 22; yet this small and undoubtedly accidental mortality by comparison seems alarming; the excess in deaths is explained, but there is no clue as to why the admissions, invaliding, constantly sick, etc., should be habitually lower in Scotland than in England or Ireland.

Probably the very much smaller number of men quartered in Scotland has much to do with these lower ratios; and the moral to be drawn is this: that annual ratios in small stations and strengths of garrisons do not reflect broad conditions so fully as in larger stations, and that only wide averages in time, such as a decade, should be taken to arrive at conclusions from which inferences can be safely drawn.

European Troops in India.

In the report of the health of European soldiers in India we notice new charts—something like weather charts—of deaths and invaliding at different ages, which have the merit of readily appealing to the eye. It is satisfactory to note that there were only 9 cases of plague among European soldiers in India and 2 deaths. The infectious nature of the disease is shown in the fact that 6 of the 9 cases were in men employed in so-called "plague duty." The disease was, it is stated, kept from the Europeans by placing all infected bazaars and cities out of cantonment bounds.

Appendices.

As we mentioned before, the appendices in this volume are unusually large and interesting.

The report of Colonel Notter, Professor of Military Hygiene at Netley, on the progress of hygiene in 1899 (one year ahead of the statistical returns) is very interesting, especially his notes on the administrative control of tuberculosis.

There is a report by Colonel Stevenson, Professor of Military Surgery, and Major Dick, Assistant Professor, upon cases treated, especially wounded men from India, Omdurman, and Crete. What their report for the year 1900 will be when it comes to be written we can only leave to the imagination.

Colonel MacLeod, Professor of Military Medicine, has some interesting observations on Mediterranean fever.

The reports on the Khartoum expedition by Surgeon-General Taylor, and of field operations on the African hinterland of the West Coast by five army medical officers are very interesting.

Lastly, there is a very exhaustive report by Major Simpson, R.A.M.C., on the prevalence of enteric fever in Pietermaritzburg, which, in view of the havoc that disease has recently worked in Natal and elsewhere in South Africa, is of great interest and importance.

VOLUNTEER MEDICAL ASSOCIATION.

The next proficiency class of this Association will commence at the headquarters of the Volunteer Medical Staff Corps, 51, Calthorpe Street, Gray's Inn Road, W.C. (by kind permission of the Commanding Officer), when the first lecture of the series will be given by Surgeon-Captain Rory Fletcher, on May 22nd, at 5 P.M. The correspondence class will commence in the same week. All information can be obtained from Surgeon-Captain Harper, 25, Rosary Gardens, South Kensington.

COMPOUND TITLES.

A correspondent writes that he fully agrees that the former compound titles should be authoritatively discontinued in the case of such retired officers as still bear them, on the ground that these titles now being used only by medical officers of the auxiliary forces there is nothing to show whether a retired officer had belonged to the regular or volunteer forces. He appeals to the Director-General to get this done.

*** As we remarked before, there is no little force in this contention, which has only recently been put forward. We notice that in South Africa medical officers bearing the compound titles get simple military ones with local rank.

LOCAL SUPERIOR RANK.

Onlooker writes: The War Office should give immediate attention to the granting of local rank to junior officers of the Royal Army Medical Corps employed in positions and commands appertaining to officers of senior rank. This applies to many medical officers at the seat of war, and is a system adopted in all other branches of the army but the medical.

EMPLOYMENT OF ARMY MEDICAL RESERVE OFFICERS.

Fairplay and Justice writes, that the reason why officers of this reserve have been ignored in the present emergency is clearly evident on an examination of Articles 601A, 601B. 601C, and 601D of the Pay Warrant. The unjust economy of the War Office is the reason for non-employment.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

PROSECUTION UNDER THE LUNACY ACT.

From the reports in the local press we learn that recently in Bournemouth a medical practitioner was summoned, at the instance of the Commissioners in Lunacy, for "unlawfully, for payment and not under the provisions of the Lunacy Act, 1890, taking charge of..... a lunatic, in an unlicensed house," from March to October, 1899. According to a local paper, it was stated for the prosecution "that the proceedings were taken under Section cccxv of the Lunacy Act, 1890, which provided that any person contravening the section was guilty of a misdemeanour. In order to place a person under this restraint the magistrates had to sign a reception order, and this could not be made except on a petition, supported by the certificate of two medical practitioners. It would be alleged in this case that the defendant received into his house a gentleman.....without having complied with the provisions of the Act." Counsel "understood the case was to be contested by setting up the defence that the patient in question was not a lunatic within the meaning of the Act. The definition clause as to what a lunatic really was set out that an idiot or person of unsound mind was to be so regarded. The case for the prosecution was that this gentleman was a person of unsound mind, as would be proved by the evidence which he should call for the prosecution." In this evidence it was stated that the patient had been in a lunatic hospital for about three and a half months up to the day of being taken care of by the defendant, and whilst at that institution had been distinctly of unsound mind during the whole of the time. He was deluded and suicidal there, it was stated, and was discharged therefrom as "not improved" at the time he passed into the defendant's care. The Bench decided that there was a *primâ facie* case to answer, the defendant was formally charged, and evidence for the defence was taken. The defendant gave evidence that whilst the patient was under his care he "considered him of a perfectly sound mind." Also "he should say that for two months before he came to witness he was not a lunatic." Other medical evidence admitted the patient's unsoundness of mind, yet considered the case not a fit one for certification under the Lunacy Act. The Court adjourned.

On the case being resumed next day the defendant's legal representative, Mr. Hempson, solicitor to the Medical Defence Union, stated that he was bound to say that the evidence called against the defendant "established a technical offence to which he was bound to advise him to plead guilty." Whereupon counsel for the prosecution stated on behalf of the Commissioners in Lunacy that the defendant having pleaded guilty he should not press the penalty, the maximum penalty being £50. He did not suggest impropriety against the defendant, and would go further and say the patient was well treated. The Bench inflicted a fine of £15 and costs.

STYLE *v.* OWEN AND MARRIOTT.

On April 30th Mr. Justice Ridley delivered a considered judgment in the case of Style *v.* Owen and Marriott. The action was brought by the plaintiff, a surgeon residing in Cambridge Road, Bethnal Green, to recover damages from Dr. William Owen, of Shore Road, Hackney, and J. R. Marriott, the Relieving Officer of the Hackney Union, for imprisoning the plaintiff's wife and depriving him of her society. It seems that the plaintiff and Dr. Owen had been on terms of friendship for several years. The plaintiff's wife had been confined in an asylum, but had recovered and returned home; but her malady reappeared and she conceived a violent dislike of her husband. On the night of May 13th she ran away from home and was traced to the house of Dr. Owen. The plaintiff then sent to Dr. Owen's house to try to induce his wife to return home, but she refused to go. The plaintiff was at this time intending to send her to a private lunatic asylum. On the following day Dr. Owen sent Mrs. Style to the Hackney Workhouse, an order for admission to which had been signed by the relieving officer.

The record as against the relieving officer was withdrawn in the course of the case.

Dr. Owen, in reply to the charge of imprisoning the plaintiff's wife, said that she absolutely declined to return to her home, that she went to the workhouse of her own free will, and that in his opinion she was not insane.

Witnesses were called to prove that Mrs. Style went to the union of her own free will, and that she could have applied for a discharge whenever she liked.

In the course of his judgment Mr. Justice Ridley said that, although it was difficult to say what the motives of Dr. Owen were in acting as he did, he (the learned judge) was of opinion that he had acted from motives of humanity towards the plaintiff's wife. He therefore gave judgment for the defendant, but without costs.

The finding of Mr. Justice Ridley that the defendant had acted "from motives of humanity" had a very important bearing upon the legal aspect of this case. It was decided, in the case of Winsmore *v.* Greenbank, which was heard in the Court of Common Pleas in 1745, that an action lies against a person who persuades or entices a wife to continue absent from her husband, whereby the husband loses her comfort and society. In a later case of Philp *v.* Squire (1820, Peake 82), Lord Kenyon said: "Where a wife is received on principles of humanity the action cannot be supported. If it could, the most dangerous consequences would ensue, for no one would venture to protect a married woman."

DEBTS DUE TO OLD FIRMS.

A CORRESPONDENT, who has recently bought a practice, wishes to know whether bills for old accounts should be sent out in his own name or in the name of his predecessor.

*** Unless the same business name is retained after a change in the principals, old accounts should be sent out in the name of the old firm; otherwise, a notice ought to be served on the debtors of an assignment of the debts to the new firm, after which the latter might lawfully demand them.

COUNTY-COURT JUSTICE.

RESPICE FINEM sends us the details of two cases in which he was compelled to have recourse to the county court to recover his fees, and in which he considers he got scant justice. In the first he was sent for to see a child in a moribund state, who died shortly after he had prescribed for it, and for which he gave a death certificate. For this attendance he charged the modest fee of 3s. 6d., but at the county court the mother swore that the child was dead before he arrived, and the judge disallowed the charge on the ground that no charge could be made for visiting dead people. In the second case he sued a woman for attendance in illness occurring just before and after a confinement for which he had received a fee at the time. Here the defence was that no such illness had occurred; and the judge declared that he had no evidence before him to prove or disprove the statements on either side, though he seems to have believed the doctor, for he made an order for payment at the rate of 3s. a month.

*** In the first case our correspondent did not receive justice, but we cannot help thinking that there must have been some defect in the way in which the case was put before the judge. A death certificate was given, and accepted by the defendant, in which it was clearly set down that the child was alive when seen by the plaintiff. As the defendant accepted this certificate without demur and registered it, she would not be allowed in a court of law to gainsay its accuracy. So that even if the law did not allow a charge to be made for visiting dead people—a somewhat startling *obiter dictum* on the part of the judge, and open to very considerable doubt as to its validity—our correspondent would still have been entitled to a verdict. In the second case there is not much to be said. Where two opposed parties allege contradictory statements, the judge may naturally demand corroboration and refuse to believe either as against the other. No mention is made of any other evidence being forthcoming on the doctor's part; and as in the end the judge decided for him, we do not see what better result he could expect.

CIRCULARS.

GAS.—In issuing any circular such as our correspondent proposes, he must be very careful to send it only to *bonâ fide* patients of his own practice. If he is careful in this respect it does not matter whether the circular is written or printed.

TESTIMONIALS

DR. REUEL ATKINSON.—There is no doubt at all that the apparatus to which our correspondent refers does constitute a weak galvanic battery, but more than this we cannot say. If asked to advise, he will no doubt be able to say how far the application of a weak galvanic current as suggested can be of any utility. The history of the testimonials is a very old story, and there can be no doubt that they were given without any anticipation of modern methods of advertising. Nearly all the donors are dead or out of practice, and the pamphlet in question has constituted for many years a serious warning to the leaders of the profession against the incautious giving of testimonials, but our correspondent may remember the difficulty which occurred a few years ago owing to the use made of favourable expressions of opinion given by certain leaders of the profession upon a Zander Institute.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following have satisfied the Examiners:—

Part I. Surgery and Midwifery.—G. F. Barham, B.A., Cai.: A. E. Bodington, M.A., Cai.: A. R. M. Brenan, B.A., Trin.: J. M. Brydone, B.A., Jes.; F. J. Child, B.A., Christ's; H. N. Clarke, B.A., Cai.: J. S. Clarke, B.A., Cai.; J. G. Cooke, B.A., Sid Suss.: K. E. Crompton, B.A., Cai.; G. W. Deeping, B.A., Trin.; J. B. Dunlop, B.A., Sid. Suss.: W. E. M. Ede, B.A., King's; A. Emerson, B.A., Cai.: R. L. V. Foster, B.A., King's; T. B. Gilbart-Smith, B.A., Trin.; W. H. C. Greene, B.A., Corp. Chr.: E. B. Leech, B.A., Christ's: N. Maclaren, B.A., Trin.: A. S. Mellor, B.A., King's; C. H. Miller, B.A., Trin.; J. C. Newman, B.A., Trin.: G. H. Orton, B.A., Trin.: T. W. Paterson, B.A., Cai.; J. S. S. Perkins, B.A., Joh.; J. C. S. Rashleigh, M.A., Trin.; L. Reynolds, B.A., Trin.: H. H. Riddle, B.A., Pet.; J. C. A. Rigby, B.A., Cai.: E. W. S. Rowland, B.A., H. Selw.: L. B. Scott, B.A., Christ's: G. A. C. Shipman, B.A., Trin.; J. L. Timmins, B.A., Emm.; R. H. Urwick, B.A., Trin.; H. Walker, B.A., King's; T. H. E. Watts-Silvester, B.A., Cai.; R. F. Williams, B.A., Cai.; W. W. Wingate-Saul, M.A., Trin.; H. C. S. Woodward, M.A., Down.

LECTURESHIPS.—The General Board of Studies propose that University Lectureships shall be established for Dr. Haddon and Dr. Nuttall, the former in Ethnology, the latter in Bacteriology and Preventive Medicine. A stipend of £250 a year is to be assigned to the Lectureship in Chemical Physiology, now held by Mr. Hopkins.

DEGREES.—At the Congregation on April 26th the following degrees were conferred:—*M.D.*: G. A. Auden, M.A., M.B., of Christ's College. *M.B. and B.C.*: B. R. B. Truman, B.A., of Trinity Hall.

UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.—A general meeting of Convocation will be held on Tuesday next, May 8th, at the University's new building at South Kensington, in the East Conference Hall, at 5 P.M. Dr. Silvanus Thompson, D.Sc., F.R.S., will present the report of the Standing Committee and move its reception. The report states that, as it is not possible for the Royal Assent to be given to the statutes of the Commission earlier than May 16th, the election of the members of the new Senate to be appointed by Convocation will have to be undertaken at a special meeting to be called for that purpose at the earliest possible date after the statutes have become law. The removal of the University to its new premises, although begun, has not yet been completed. Dr. Thompson will also move a resolution to regulate future elections to the Senate, so that on the list of candidates the names only of the ten persons whose names appear first on the paper nominating each candidate shall be printed. Mr. Bassett Hopkins has three resolutions standing in his name, which he will move: they refer to the arrangements for the supply of refreshments in the new building, and to the arrangements agreed upon between the Government and the authorities of the University respecting the portion of the Imperial Institute buildings to be transferred to the University.

UNIVERSITY OF DUBLIN.

AT the First Summer Commencements in Trinity Term, held on Saturday, April 21st, 1900, the degree of Doctor in Medicine (*in absentiâ*) was conferred on Mr. James Gregg.

ROYAL UNIVERSITY OF IRELAND.

SECOND EXAMINATION IN MEDICINE.—The following candidates have satisfied the Examiners:

Upper Pass.—*S. K. Adams, Queen's College, Belfast; *P. Dwyer, Catholic University School of Medicine; *N. d'E. Harvey, Queen's College, Cork; J. McA. Holmes, Queen's College, Belfast; *T. D. Liddle, Queen's College, Belfast; *F. C. Smyth, Queen's College, Belfast; *S. Stockman, Queen's College, Belfast; J. H. Thompson, Queen's College, Belfast; C. B. F. Tivy, Queen's College, Cork; S. H. Whyte, Queen's College, Belfast.

Pass.—S. Broderick, Catholic University School of Medicine; E. Clements, Queen's College, Belfast; Florence M. M. Condon, Catholic University School of Medicine; J. W. Dale, Queen's College, Belfast; A. Dick, Queen's College, Belfast; Mary E. Jeremy, B.A., London School of Medicine for Women; G. Kelly, Catholic University School of Medicine; S. J. Killen, Queen's College, Belfast; A. D. O'Carroll, Catholic University School of Medicine; P. M. O'Dwyer, Catholic University School of Medicine; E. D. Rutherford, Queen's College, Belfast; W. J. Sheehan, Catholic

University School of Medicine; W. A. Simpson, Queen's College, Galway; J. E. Wilson, Queen's College, Belfast.

THIRD EXAMINATION IN MEDICINE.—The following candidates have satisfied the Examiners:

Upper Pass.—Marion B. Andrews, Queen's College, Belfast; *A. L. Black, B.A., Queen's College, Belfast; J. Clements, Queen's College, Galway; S. R. Hunter, B.A., Queen's College, Belfast; P. O'Doherty, Catholic University School of Medicine; *W. Phillips, B.A., Queen's College, Belfast; *A. J. Quirk, Catholic University School of Medicine.

Pass.—H. M. Agnew, Queen's College, Belfast; R. Best, Queen's College, Galway; Catharine L. Boyd, Queen's College, Belfast; W. H. N. Bright, Queen's College, Belfast; D. R. Campbell, Queen's College, Belfast; R. H. Caughey, B.A., Queen's College, Belfast; J. Carker, Queen's College, Belfast; G. Ebrill, Catholic University School of Medicine; J. H. Ferris, Queen's College, Belfast; A. T. Frost, Queen's College, Cork; J. P. Harold, Charing Cross, London; P. Heffernan, B.A., Catholic University School of Medicine; W. M. P. Keogh, Queen's College, Galway; M. J. Macauley, Queen's College, Cork; J. McMurray, Queen's College, Belfast; S. B. W. Moore, Queen's College, Belfast; W. F. O'Connor, Queen's College, Cork; J. J. O'Hare, Catholic University School of Medicine; H. Ross, Queen's College, Cork; W. B. Sampson, Catholic University School of Medicine; F. W. Stewart, B.A., Queen's College, Belfast; J. J. Walsh, Catholic University School of Medicine.

M.B., B.Ch., B.A.O. DEGREES EXAMINATION.—The following candidates have satisfied the Examiners:

Upper Pass.—*F. J. Allen, Queen's College, Cork; J. F. Begley, Catholic University School of Medicine; E. V. Cantillon, Queen's College, Cork, and Catholic University School of Medicine; *D. J. Farnan, Catholic University School of Medicine; P. Gavin, Catholic University School of Medicine, *R. McCarrison, Queen's College, Belfast; W. McCarthy, Queen's College, Cork; W. Starkey, Catholic University School of Medicine.

Pass.—J. H. Barbour, Queen's College, Belfast; W. R. Beatty, Queen's College, Belfast; J. S. Cargin, Queen's College, Belfast; J. M. Dunne, Catholic University School of Medicine; M. J. Forde, Queen's College, Galway, and Catholic University School of Medicine; J. McC. Gibson, Queen's College, Belfast; G. Graham, Queen's Colleges, Galway and Belfast; B. Hanlon, Queen's College, Cork; A. F. Kennedy, Queen's College, Belfast; R. Lee, Queen's College, Cork; T. J. Little, Catholic University School of Medicine; P. E. O'Flaherty, Queen's College, Belfast, and Catholic University School of Medicine; O. M. Praeger, Queen's College, Belfast; W. A. Rice, B.A., Queen's College, Belfast; J. J. Robb, Queen's College, Belfast; M. L. Rowan, B.A., Queen's College, Belfast; M. G. Taaffe, Catholic University School of Medicine; J. Tierney, Queen's College, Belfast; J. Waddell, Queen's College, Belfast; R. White, Queen's College, Belfast.

Candidates marked thus (*) may present themselves for the further examination for Honours.

UNIVERSITY OF WALES.

AN extra-collegiate meeting of the Court of the University of Wales was held recently at Wrexham. Dr. Isambard Owen was re elected Senior Deputy-Chancellor, and the Hon. G. T. Kenyon was elected to the junior post. It was announced that the University had received a bequest of about £5,500 for the foundation of scholarships from the executors of the late Mr. Price Davies. There was a financial deficit of £288 on the year.

UNIVERSITY OF DURHAM.

THIRD EXAMINATION FOR THE DEGREE OF BACHELOR IN MEDICINE.—The following candidates have satisfied the Examiners:

Honours—Second Class.—S. D. Turner, M.R.C.S., L.R.C.P., St. Thomas's Hospital; G. Mack, College of Medicine, Newcastle-upon-Tyne; H. C. Sturdy, M.R.C.S., L.R.C.P., Guy's Hospital.

Pass List.—S. C. Clapham, M.R.C.S., L.R.C.P., Guy's Hospital; Mary Evelyn De Rusett, College of Medicine, Newcastle-upon-Tyne; Alice Maud Dodd, London School of Medicine for Women; Mary Jane D'Vaz, London School of Medicine for Women; W. R. D. Daglish, College of Medicine, Newcastle-upon-Tyne; E. J. Evatt, Royal College of Surgeons, Ireland; H. W. Furnivall, College of Medicine, Newcastle-upon-Tyne; J. H. Graham, College of Medicine, Newcastle-upon-Tyne; J. A. Giles, College of Medicine, Newcastle-upon-Tyne; A. Hines, College of Medicine, Newcastle-upon-Tyne; L. M. Markham, College of Medicine, Newcastle upon-Tyne; E. E. Norman, College of Medicine, Newcastle-upon-Tyne; R. W. Nevin, College of Medicine, Newcastle-upon-Tyne; M. J. Quirke, Mason College, Birmingham; C. A. Ryman, St. George's Hospital; A. Reid, Guy's Hospital; R. S. Renton, College of Medicine, Newcastle-upon-Tyne; R. Walker, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; H. Widdas, College of Medicine, Newcastle-upon-Tyne.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE ordinary Comitia of the College was held on Thursday, April 26th, the President (Dr. W. S. Church) in the chair. The minutes of the previous meeting having been read and confirmed, the President announced that a few copies of a portion of the report of the Indian Plague Commission had been received, and were available for the inspection of Fellows.

MEMBERSHIP.

Mr. J. R. Charles, M.B.Cantab., was admitted a Member of the College.

LICENCE.

The licence was granted to 114 gentlemen, of whom 29 only came under the four years' curriculum; whilst 2 were under the old regulations before the establishment of the Conjoint Board.

MURCHISON SCHOLARSHIP.

The Murchison Scholarship of 20 guineas was awarded to Mr. T. C. English, L.R.C.P., a student of St. George's Hospital.

ELECTION OF FELLOWS.

On the nomination of the Council the following Members were elected to the Fellowship: Clement Dukes, M.D.Lond.; Robert Bridges, M.B. Oxford; Seymour Taylor, M.D.Aberd.; Amand Jules McConnel Routh, M.D.Lond.; Charles Montagu Handfield-Jones, M.D.Lond.; Richard Thomas Williamson, M.D.Lond.; Leonard George Guthrie, M.D.Oxford; Frederick Foord Caiger, M.D.Lond.; Herbert Morley Fletcher, M.D.Camb.; Henry Albert Caley, M.D.Lond.; Henry Head, M.D.Camb.; Fleming Mant Sandwith, M.D.Durh.

REPORTS.

A report from the Committee of Management was received and adopted, recommending:

1. That time spent as Assistant in one of the hospitals attached to the army in South Africa, not exceeding a period of six months, be allowed to count for the equivalent period of medical and surgical hospital practice and for three months of the required period of surgical dressership, on the understanding that allowance will only be made for the number of months, not exceeding six, during which the student shall be in the service of the hospital, and for which a satisfactory certificate from the principal medical officer of the hospital shall be produced.

2. The Committee also recommend that the Southampton Fever Hospital be added to the list of fever hospitals recognised by the Examining Board in England.

The quarterly reports of the Finance Committee and of the Examiners for the Licence were also received and adopted.

A report of the Laboratories Committee was received and adopted, giving a list of those engaged in work at the laboratories, and announcing that the Committee have awarded the sum of £50 to Mr. W. P. Bloxam from the Goldsmiths' Research Grant as a recognition of his work on the subject of the Chemical Properties of Antitoxic Serum. The Superintendent of the Bacteriological Department reported that during the past quarter 10,000 doses of diphtheria antitoxin, each containing 3,000 units, had been supplied to the hospitals of the Metropolitan Asylums Board, making a total of 30,000,000 units; and under the grant from the Goldsmiths' Company 103 doses of antitoxin containing 3,000 units, and 385 doses of 2,000 units had been supplied to the general and children's hospitals in or near London since December 8th last.

CONJOINT BOARD.

Communications were received (1) from the Secretary of the Royal College of Surgeons reporting the proceedings of the Council of that body in so far as they related to matters of joint interest to the two Colleges; (2) from the General Medical Council relating to a proposed relaxation in one respect of the requirements as to the course of study for the Diploma of Public Health. This matter was referred to the Committee of Management.

THE UNIVERSITY OF LONDON.

A copy of the Statutes made for the University of London by the University Commissioners as laid before Parliament, and also a copy of the Regulations relating to the same were received, and the thanks of the College accorded to Dr. Allchin for his labours on behalf of the College in this matter for many years.

CONJOINT BOARD IN SCOTLAND.

THE following candidates have passed the respective examinations as under:

First Examination, Five Years' Course.—B. H. Watch, Anderson's College; J. Watson, St. Mungo's College (with distinction); T. W. Roberts, St. Mungo's College; I. Campbell, Anderson's College; T. E. Flitcroft, Anderson's College.

First Examination, Four Years' Course.—W. Pritchard-Airey, Anderson's and St. Mungo's Colleges; J. C. Grant, Newcastle; St. C. G. Ballenden, Mason College, Birmingham; L. E. Jarrett, Owens College, Manchester; E. A. Shanks, Glasgow University and Anderson's College.

Second Examination, Five Years' Course.—W. G. Macdonald, St. Mungo's College; J. B. L. S. Scott, Owens College; A. E. Griffith, Catholic University School of Medicine; R. Lewis, University College, Liverpool, and Anderson's College; J. Walsh, Edinburgh School; T. Foley, Queen's College, Cork; C. A. Bruce-Whyte, Edinburgh School; E. O. Roberts, St. Mungo's College; G. W. Smithwick, Melbourne University; T. Russell, University College of Medicine, Newcastle.

Second Examination, Four Years' Course.—H. D. Pitt, Mason University College; W. Pritchard-Airey, Anderson's and St. Mungo's Colleges, J. Dunlop, Edinburgh School; M. Lyons, Queen's College, Cork; A. Macleod, Edinburgh University.

Third Examination.—J. R. Smith, Anderson's College (with distinction); J. M'Intyre, St. Mungo's College; T. A. Welch, Owens College; W. H. Duncan, Anderson's College and Glasgow University; K. J. O'Brien, Edinburgh School; H. M. Roberts, St. Mungo's College; T. E. Harty, Queen's College, Cork; J. W. Isbister, St. Mungo's College; A. MacMillan, Anderson's College (with distinction); A. H. Corley, Queen's College, Belfast; H. W. Williams, St. Mungo's College; L. E. Staynes, Westminster Hospital; H. De Mel, Ceylon Medical College.

Final Examination.—J. C. Douglas, St. Mungo's College (with honours); T. B. Adam, Anderson's and St. Mungo's Colleges; D. S. C. Reid, Anderson's College; Helen Sinclair Macdonald, London School of Medicine for Women and Queen Margaret College; W. A. Ogilvy, St. Mungo's College; J. T. Moore, Dublin School; S. S. Menzies, London School and Mason University College; A. H. Wilson, Mason University College; M. O'Halloran, Edinburgh; G. Nag, Medical College, Calcutta; A. F. Jack, St. Mungo's College; O. F. M'Carthy, Queen's College, Cork; S. G. Gomes, Ceylon Medical College; W. Mason, Anderson's College.

CONJOINT BOARD IN IRELAND.

THIRD PROFESSIONAL EXAMINATION.—Candidates [have] passed this examination as undernoted:

In all Subjects.—C. R. Boyce, I. F. Brogan, G. Downing, I. Dundon, I. L. Gilmartin, J. S. Lane, H. S. Maxwell, A. A. W. Merrick, T. J. Tallon.
Completed Examination.—G. F. Alderdile, I. F. Ailen, A. T. Benson, R. A. Campbell, W. H. Dodd, A. D. Dunwoody, C. H. Falvey, D. A. Faris, F. S. G. Martin, J. O'Leary, E. M. Pennyfather, T. N. Smith, A. B. Stephenson, E. R. Townsend.
In Medicine.—R. Allison, S. Browne, E. Duffy, M. Graham, I. F. Peart, A. L. Tyndall.
In Surgery.—V. F Connor, I. F. Peart.
In Pathology.—R. Allison, I. R. Magee.
In Therapeutics.—R. Allison, M. Graham, I. F. Peart.
In Forensic Medicine, etc.—R. Allison, H. M. Clarke, M. Graham, I. R. Magee, I. F. Peart.
Anatomy.—T. Studley.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

ENGLISH URBAN MORTALITY IN THE FIRST QUARTER OF 1900

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE vital statistics of the thirty-three large English towns dealt with by the Registrar-General in his weekly returns are summarised in the accompanying table. During the three months ending March last, 89,630 births were registered in the thirty-three towns, equal to an annual rate of 31.0 per 1,000 of their aggregate population, estimated at 11,610,296 persons in the middle of the year. In the corresponding periods of the three preceding years the birth-rates in these towns were 31.7, 31.3, and 30.8 per 1,000 respectively. In London the birth-rate last quarter was 30.4 per 1,000, while it averaged 31.3 in the thirty-two provincial towns, among which it ranged from 23.3 in Halifax, 23.4 in Bradford, 23.9 in Brighton, and 24.0 in Huddersfield, to 36.8 in Wolverhampton, 37.0 in Gateshead, 38.4 in Liverpool, and 38.6 in Sunderland.

During the quarter under notice 68,222 deaths were registered in the thirty-three towns, corresponding to an annual rate of 23.6 per 1,000, against 20.6 in the first quarters of each of the two preceding years. In London the rate of mortality was 23.2 per 1,000, while it averaged 23.8 in the thirty-two large provincial towns, among which it ranged from 15.5 in Cardiff, 17.9 in West Ham and in Huddersfield, 18.5 in Swansea, and 18.6 in Bristol, to 27.1 in Manchester. 29.8 in Salford, 31.4 in Liverpool, 31.6 in Wolverhampton, and 33.8 in Preston. The 68,222 deaths registered in the thirty-three towns last quarter included 5,851 which were referred to the principal zymotic diseases, equal to an annual rate of 2.02 per 1,000, against 1.69, 2.38 and 2.75 in the corresponding periods of the three preceding years. In London the zymotic death-rate last quarter was equal to 1.82 per 1,000, while it averaged 2.16 in the thirty-two provincial towns, among which it ranged from 0.44 in Birkenhead, 0.51 in Gateshead, 0.81 in Croydon, 0.86 in Brighton, in Swansea, and in Huddersfield, to 3.56 in Sheffield, 4.08 Wolverhampton. 4.44 in Salford, and 6.00 in Preston. The 5,851 deaths referred to the principal zymotic diseases in the thirty-three towns during the quarter under notice included 1,622 which resulted from measles, 1,591 from whooping-cough, 1,229 from diphtheria, 514 from "fever" (principally enteric), 456 from diarrhœa. 413 from scarlet fever, and 26 from small-pox. The fatal cases of measles, which had been 1,226 and 1,336 in the two preceding quarters, further rose to 1,622 during the three months ending March last, and were equal to an annual rate of 0.56 per 1,000; in London the death-rate from this disease was 0.53 per 1,000; while it averaged 0.58 per 1,000 in the thirty-two provincial towns, among which measles was proportionally most fatal in Cardiff, Wolverhampton, Salford, Preston, Halifax, and Sheffield. The deaths from scarlet fever, which had been 337, 359, and 458 in the three preceding quarters, declined again to 413 during the three months under notice, and were equal to an annual rate of 0.14 per 1,000; in London the scarlet fever death-rate was only 0.07 per 1,000, while it averaged 0.19 in the thirty-two large provincial towns, among which this disease showed the highest proportional fatality in Oldham, Burnley, Blackburn, Preston, Halifax, and Bradford. The fatal cases of diphtheria, which had been 888, 1,013, and 1,521 in the three preceding quarters, declined again to 1,229 during the three months ending March last, and were equal to an annual rate of 0.42 per 1,000: in London the death-rate from this disease was 0.47 per 1,000, while it averaged 0.40 in the thirty-two provincial towns, among which diphtheria was proportionally most fatal in Portsmouth, Leicester, Blackburn, Preston, Leeds, and Sheffield. The deaths from whooping-cough, which had decreased from 1,417, to 761 in the four preceding quarters, rose again to 1,591 during the three months under notice, and were equal to an annual rate of 0.55 per 1,000; in London the death-rate from whooping-cough was 0.45 per 1,000, while it averaged 0.61 in the thirty-two large provincial towns, among which this disease showed the highest proportional fatality in Portsmouth, Wolverhampton, Norwich, Liverpool, Bolton, and Salford. The deaths referred to different forms of "fever" (including typhus, enteric, and simple and ill-defined forms of fever), which had been 352, 607, and 1,014 in the three preceding quarters, declined again to 514 during the three months ending March last, and were equal to an annual rate of 0.18 per 1,000; in London the "fever" death-rate was also 0.18 per 1,000, and corresponded with the average rate in the thirty-two provincial towns, among which the mortality from these diseases was highest in Wolverhampton, Birmingham, Derby, Bolton, Preston, and Bradford. The 456 fatal cases of diarrhœa were equal to an annual rate of 0.16 per 1,000; in London the rate of mortality from this disease was 0.12 per 1,000, while it averaged 0.19 in the thirty-two pro

Analysis of the Vital and Mortal Statistics of Thirty-three of the Largest English Towns during the First Quarter of 1900.

Towns.	Estimated Population in middle of 1900.	Births.	Deaths.	Annual Rate per 1,000 Living. Births.	Deaths.	Principal Zymotic Diseases.	Deaths from Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-Cough.	Fever.	Diarrhœa.	Deaths of Children under one year of age to 1,000 Births.	Rate per cent. of Ascertified Deaths.
33 Towns	11,610,296	89,630	68,222	31.0	23.6	2.02	5,851	26	1,622	413	1,229	1,591	514	456	152	1.4
32 Provincial Towns	7,021,167	54,833	41,709	31.3	23.8	2.16	3,777	25	1,020	329	696	1,073	310	324	161	1.9
London	4,589,129	34,797	26,513	30.4	23.2	1.82	2,074	1	602	84	533	518	204	132	139	0.6
West Ham	314,472	2,361	1,407	30.1	17.9	2.65	161	—	44	5	40	45	17	10	151	1.9
Croydon	131,186	788	619	24.1	18.9	0.81	26	—	3	2	5	12	1	3	128	—
Brighton	124,148	740	640	23.9	20.7	0.86	27	—	—	6	15	1	2	3	130	0.5
Portsmouth	194,955	1,354	994	27.9	20.4	1.93	94	—	1	5	28	50	2	8	126	1.4
Plymouth	102,161	774	643	30.4	25.2	1.58	40	—	26	1	3	2	3	5	167	—
Bristol	324,973	2,362	1,509	29.2	18.6	1.53	124	—	47	8	23	11	18	17	114	0.5
Cardiff	194,247	1,326	752	27.4	15.5	2.06	100	1	57	4	21	11	5	1	134	0.5
Swansea	105,472	732	487	27.8	18.5	0.86	23	—	—	—	14	3	3	3	178	0.8
Wolverhampton	89,598	823	705	36.8	31.6	4.08	91	—	35	2	3	33	10	8	219	1.1
Birmingham	519,610	4,518	3,396	34.9	26.2	2.21	285	—	46	17	24	115	49	24	180	2.7
Norwich	114,855	828	704	28.9	24.6	1.37	39	—	—	—	4	31	2	2	181	0.9
Leicester	219,169	1,576	1,071	28.8	19.6	2.73	149	—	37	15	68	20	6	3	145	2.2
Nottingham	242,676	1,780	1,434	29.4	23.7	1.05	64	—	11	13	11	4	11	14	172	0.6
Derby	107,991	740	576	27.5	21.4	0.97	26	—	8	5	—	—	7	6	149	—
Birkenhead	117,170	823	584	28.2	20.0	0.44	13	—	7	—	1	1	2	2	158	1.2
Liverpool	634,780	6,074	4,967	38.4	31.4	2.59	412	2	40	38	48	218	26	40	165	4.6
Bolton	164,240	1,182	961	28.9	23.5	2.15	88	—	7	5	6	45	10	15	165	0.8
Manchester	548,768	4,673	3,713	34.2	27.1	2.37	324	—	84	28	34	117	19	42	158	1.3
Salford	220,816	1,940	1,641	35.2	29.8	4.44	244	—	73	19	17	101	11	23	210	1.1
Oldham	153,297	931	905	24.4	23.7	2.35	90	—	27	17	10	18	6	12	186	0.2
Burnley	116,730	733	556	25.2	19.1	1.92	56	—	10	24	3	6	2	11	183	2.5
Blackburn	137,107	929	884	27.2	25.9	3.30	113	—	29	15	30	23	7	9	202	2.9
Preston	118,902	950	1,002	32.0	33.8	6.00	178	—	108	13	18	16	9	14	229	3.7
Huddersfield	104,484	626	465	24.0	17.9	0.86	22	—	7	2	1	7	3	2	99	3.0
Halifax	100,710	585	596	23.3	23.7	1.84	46	—	27	10	4	—	4	1	150	3.9
Bradford	291,535	1,699	1,520	23.4	20.9	1.64	120	—	51	33	6	8	10	3	134	1.2
Leeds	431,287	3,298	2,538	30.7	23.6	2.25	242	1	43	5	73	95	17	8	173	0.4
Sheffield	365,922	3,289	2,272	36.1	24.9	3.56	324	—	99	19	166	14	17	9	157	3.5
Hull	238,736	2,085	1,387	35.0	23.3	1.95	116	21	54	6	5	14	7	9	152	2.7
Sunderland	147,398	1,418	910	38.6	24.8	1.27	47	—	25	5	6	2	6	3	142	2.0
Gateshead	109,403	1,009	555	37.0	20.3	0.51	14	—	—	2	2	6	3	1	147	1.1
Newcastle-on-Tyne	234,369	1,887	1,316	32.3	22.5	1.35	79	—	14	5	7	44	6	5	146	1.0

vincial towns, among which diarrhœa showed the highest proportional fatality in Wolverhampton, Bolton, Salford, Burnley, and Preston. Of the 26 deaths from small-pox in the thirty-three towns last quarter, 21 were of persons belonging to Hull, 2 to Liverpool, and 1 each to London, to Cardiff, and to Leeds.

Infant mortality in the thirty-three towns, measured by the proportion of deaths under one year of age to registered births, was equal to 152 per 1,000 during the three months ending March last, against 139, 145, and 141 in the corresponding quarters of the three preceding years. In London the rate of infant mortality was equal to 139 per 1,000, while it averaged 161 in the thirty-two provincial towns, among which it ranged from 99 in Huddersfield, 114 in Bristol, 126 in Portsmouth, and 128 in Croydon, to 202 in Blackburn, 210 in Salford, 219 in Wolverhampton, and 229 in Preston.

The causes of 977, or 1.4 per cent., of the deaths in the thirty-three towns during the three months ending March last were not certified, either by a registered medical practitioner or by a coroner. The proportion of uncertified deaths in London did not exceed 0.6 per cent., while it averaged 1.9 in the thirty-two provincial towns. The causes of all the deaths during the quarter were duly certified in Croydon, Plymouth, and Derby, and only two were uncertified in Oldham; while the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Preston, Huddersfield, Halifax, and Sheffield.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,119 births and 4,509 deaths were registered during the week ending Saturday last, April 28th. The annual rate of mortality in these towns, which had been 23.0, 22.4, and 21.2 per 1,000 in the three preceding weeks, further declined last week to 20.3. The rates in the several towns ranged from 12.9 in Birkenhead, 14.0 in Newcastle, 14.3 in Burnley, and 15.6 in West Ham, to 24.5 in Plymouth, 26.0 in Liverpool, 26.1 in Manchester, and 30.8 in Wolverhampton. In the thirty-two large provincial towns the death-rate averaged 20.7 per 1,000, and exceeded by 1.1 the rate recorded in London, which was 19.6 per 1,000. The zymotic death-rate in the thirty-three towns last week averaged 2.1 per 1,000; in London the rate was 1.9 per 1,000, while it averaged 2.3 in the thirty-two provincial towns, among which the highest zymotic death-rates were 4.8 in Cardiff, 5.2 in Wolverhampton, 5.4 in Oldham, and 7.1 in Plymouth. Measles caused a death-rate of 2.4 in Bristol, 2.9 in Wolverhampton, 3.2 in Cardiff, and 4.6 in Plymouth; scarlet fever of 1.0 in Oldham, and 1.1 in Sunderland; whooping-cough of 1.4 in Birmingham and in Oldham, 1.5 in Liverpool, and 1.8 in Norwich; and diarrhœa of 1.0 in Plymouth, and 1.2 in Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. The 54 deaths from diphtheria in the thirty-three towns included 20 in London, 5 in Leicester, 5 in Leeds, and 4 in Cardiff. Four fatal cases of small-pox were registered last week in Liverpool, 1 in London, and 1 in Cardiff. There were 6 cases of small-pox under treatment in the Metropolitan Asylums Hospitals on Saturday last, April 28th, against 2, 3, and 4 at the end of the three preceding weeks; 5 new cases were admitted during the week, against 2 in each of the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,713, 1,694, and 1,676 at the end of the three preceding weeks, had further fallen to 1,647 on Saturday last; 170 new cases were admitted during the week, against 185, 189, and 165 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, April 28th, 1,092 births and 672 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had declined from 22.8 to 21.0 per 1,000 in the four preceding weeks, rose again to 21.7 last week, and was 1.4 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.2 in Perth and 16.6 in Leith, to 24.0 in Greenock and 24.6 in Glasgow. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 352 deaths registered in Glasgow included 2 from small-pox, 20 from measles, 5 from scarlet fever, 14 from whooping-cough, and 5 from diarrhœa. Four fatal cases of diphtheria and 2 of whooping-cough were recorded in Edinburgh. Four deaths from whooping-cough and 4 from diarrhœa occurred in Aberdeen.

REFUSAL OF A DISTRICT MEDICAL OFFICER TO ATTEND BEFORE A MEDICAL ORDER WAS GRANTED.

E. C. T., a provincial district medical officer, writes to say that in consequence of his refusal to attend a certain patient until an order had been applied for and granted, when attendance was at once given, a formal complaint has been laid against him and that one of the Board of Guardians is anxious to pass a vote of censure upon him for refusing his attendance. As E. C. T. contends that he has "done nothing illegal," he asks whether he is justified in insisting on an apology.

*** E. C. T. appears to us to have a good defence to the charge against him, and we cannot think that the majority of the Board would think otherwise. In any case, however, we cannot see that anything is to be gained by demanding an apology, and unless the proposed vote of censure should be passed we should recommend our correspondent to take no further steps in the matter.

THE VACCINE LYMPH OF THE LOCAL GOVERNMENT BOARD.

AN OLD P.V. writes: I should be much obliged if some public vaccinators who are using the Local Government Board lymph would kindly inform me if it is now satisfactory. Since the breakdown last summer of the Local Government Board lymph I have been using Dr. Chaumier's lymph with the best results, but I fear that in the hot weather it will be too lively. Even with the present weather the vesicles are very inflamed.

MEDICAL NEWS.

DR. J. S. CRONE, of Kensal Rise, has been unanimously elected Chairman of the Willesden District Council for the ensuing year.

THE annual meeting of the Association of Asylums Workers will be held at the house of the Medical Society of London on Monday, May 14th. The President, Sir J. Crichton-Browne, will take the chair at 4 P.M.

A DINNER of the past and present members of the West London Hospital will take place at the Trocadero Restaurant, London, on Monday, May 21st. The chair will be taken at 7.30 P.M. by Dr. Donald Hood.

THE annual dinner of old students of King's College, London, will be held at the Holborn Restaurant on June 18th. The Hon. J. A. Cockburn, K.C.M.G., M.D., Fellow and Associate of King's College, now Agent-General for South Australia, will be in the chair, and the Duke of Cambridge will be present.

THE LEICESTER INFIRMARY.—At the last anniversary meeting of the Leicester Infirmary the rules relating to the election and qualification of the honorary staff were altered. In future the staff will be elected by the Council, a body consisting of forty Governors elected at the annual meeting, together with the Weekly Board and the Honorary Staff. The qualifications for Physicians are to be M.D. of a British University or F. or M.R.C.P.Lond. For Surgeons, M.S. of a British University or F.R.C.S.Eng.

PRESENTATION.—At a valedictory meeting held in Brechin, Dr. H. M. Robertson was recently presented with an illuminated address and a purse of sovereigns on the occasion of his leaving to take up practice elsewhere, after having practised for six years in that town. Mr. Lamb, in making the presentation, said that he and his friends were met to pay a tribute of respect and gratitude to Dr. Robertson for his services and kindnesses in the past, and to express their best wishes for the future. At the same time a presentation was made to Mrs. Robertson.

MEDICAL VACANCIES.

The following vacancies are announced:

BETHNAL GREEN.—PARISH OF ST. MATTHEW.—Assistant and Second Assistant Medical Officers for the New Infirmary; unmarried. Salary, £150 and £120 per annum respectively, with board, lodging, and washing. Applications, on forms provided, to be sent to the Medical Superintendent by May 9th and 10th respectively.

BIRMINGHAM GENERAL DISPENSARY.—Resident. Locums for two or three months. Terms 4 guineas per week, with furnished apartments. Applications to the Secretary by May 28th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by May 14th.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries, £60 per annum each, with board, washing, and attendance. Applications to the Secretary, Steelhouse Lane, Birmingham, by May 9th.

BRISTOL ROYAL INFIRMARY.—Casualty Officer until August 31st. Apartments, board, and washing provided, and honorarium of £10. Applications to the Secretary by May 7th.

CARLISLE DISPENSARY.—House-Surgeon. Salary, £130 per annum, with apartments. Applications to the Honorary Secretary, Mr G. A. Lightfoot, 23, Lowther Street, Carlisle, by May 9th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £130 a year, rising to £150, with board and residence. Applications to the Medical Superintendent.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence, £80 per annum, with board, residence, and washing. Applications to the Secretary by May 10th.

DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary, £170 per annum rising to £220, with rooms, board, laundry, and attendance. Applications to the Medical Superintendent.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—(1) Assistant House-Surgeon. Salary at the rate of £100 per annum, (2) Junior Assistant House-Surgeon. No salary. Appointments for six months. Board, lodging, and washing provided in each case. Applications to the House-Surgeon.

FARRINGDON GENERAL DISPENSARY, 17, Bartlett's Buildings, E.C.—Resident Medical Officer. Salary, £120 per annum, with apartments, coals, and gas. Applications to the Honorary Secretary.

GLASGOW UNIVERSITY.—Examiner for Degrees in Medicine, with special qualifications to examine in Practice of Medicine (Systematic and Clinical). Salary, £50 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by May 23rd.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary.

HOSPITAL FOR DISEASES OF THE THROAT, Golden Square, W.—Senior Clinical Assistant. Applications to the Secretary by May 7th.

LEEDS: GENERAL INFIRMARY.—(1) Resident Medical Officer. Salary, £100 per annum, with board, residence, and washing. (2) House-Surgeon. Board, lodging, and washing provided. Applications to the Secretary to the Faculty by May 8th.

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent, The Lawn, Lincoln.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary, 34, Moorfields, Liverpool.

LIVERPOOL.—ROYAL SOUTHERN HOSPITAL.—Second and Third House-Surgeons. Salary 50 and 30 guineas per annum. Applications to the Chairman of the Medical Board by May 14th.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of 50 guineas per annum, with residence, board, and washing. Applications to the Secretary by May 17th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with residence, board, and washing. Applications, endorsed "House-Surgeon," to be sent to the Chairman of the Board of Management by May 12th.

MANCHESTER ROYAL INFIRMARY.—Surgical Registrar. Salary, £50 per annum. Applications to the Chairman of the Medical Board by May 12th.

NORTHAMPTON GENERAL INFIRMARY.—Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary.

NORTHAMPTON UNION.—District Medical Officer. Salary, £70 per annum. Applications on forms provided, to be sent to Mr. W. Fawkes, Clerk to the Guardians, 14, Guildhall Road, Northampton, by May 7th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months; the Junior is eligible for election to the Senior post. Salary at the rate of £50 per annum attached to each. Candidates to attend meeting of the Medical Committee on May 21st.

NOTTINGHAM: CHILDREN'S HOSPITAL.—House-Surgeon, non-resident. Appointment for six months but eligible for re-election. Salary at the rate of £100 per annum. Applications to the Secretary.

NOTTINGHAM CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary, £150 per annum, with board, apartments, and washing. Applications to the Medical Superintendent by May 10th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon; unmarried. Salary, £140, all found except board. Applications to the Secretary.

POPLAR HOSPITAL FOR ACCIDENTS, E.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £65 per annum, with board and residence. Applications to the House-Governor by May 12th.

PLAISTOW: ST MARY'S CHILDREN'S HOSPITAL.—Assistant Resident Medical Officer: unmarried. Appointment in first instance for six months. Salary at the rate of £80 per annum, with board, residence, laundry, etc. Applications to the Secretary by May 14th.

PLYMOUTH: SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but renewable. Board and residence provided, and salary at the rate of £50 per annum. Applications to the Honorary Secretary by May 12th.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer for about four months. Salary, £3 3s. per week, with furnished apartments and board. Applications to the Medical Superintendent.

ST. GEORGE'S UNION.—Second Assistant Medical Officer at the Infirmary, Fulham Road, S.W. Salary, £70 per annum, with board, residence, and washing. Applications to Dr. H. B. Webster at the Infirmary.

SALFORD ROYAL HOSPITAL.—Honorary Medical Officer for the Pendleton Branch Dispensary. Applications to the Secretary by May 7th.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £50 per annum, with residence, board, and washing. Applications to the Honorary Secretaries by May 9th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTH SHIELDS: INGHAM, AND SOUTH SHIELDS AND WESTOE DISPENSARY. Junior House-Surgeon. Salary, £50 per annum, with board, and residence. Applications to the Secretary, 74, King Street, South Shields.

SURREY COUNTY ASYLUM, Brookwood.—Third Assistant Medical Officer; under 30 years of age and unmarried. Salary, £120 per annum rising to £150, with board, lodging, attendance, and laundry. Applications to the Medical Superintendent.

THREE COUNTIES ASYLUM, near Hitchin.—Second Assistant Medical Officer, under 30 years of age, and unmarried. Salary, commencing at £150, with board, apartments, washing, and attendance. Applications to Mr. F. C. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by May 21st.

UNIVERSITY COLLEGE, London.—(1) Professorship of Medical Jurisprudence. (2) Surgical Registrar in the Hospital. (3) Resident Medical Officer in the Hospital. Applications to the Secretary for the first by May 14th, and for the two latter by May 7th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—(1) Assistant Physician to the Out-patients. (2) Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by May 12th.

WAKEFIELD: CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY. Senior House-Surgeon, unmarried. Salary (during the war), £150 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by May 11th.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary, £110 a year, with board, washing, and attendance. Applications to the Committee by May 22nd.

MEDICAL APPOINTMENTS.

ARMSTRONG, J., L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the Ballymanon Dispensary District, co. Longford.

BINNEY, E. H., M.B. and Ch.M. Sydney, appointed Honorary Surgeon at the Hospital for Sick Children, Glebe Point, Sydney, New South Wales, *vice* Dr. W. Chisholm, resigned.

BUCHANAN, Hill, M.A., M.B., C.M., M.R.C.P.E., appointed an Assistant Physician to the Leith Hospital.

EASON, John, M.B., C.M., M.R.C.P.E., appointed Assistant Physician and Registrar to the Leith Hospital.

ELLIOTT, J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Islandshire District of the Berwick-on-Tweed Union, *vice* J. Lambie, M.B., resigned.

HADFIELD, P. Heywood, M.A., L.R.C.S. & P.E., L.F.P.S.G., appointed Senior House-Surgeon to the Stanley Hospital, Liverpool.

HAMILTON, Graeme, M.B., Ch.B.Edin., appointed Senior House-Surgeon to the Children's Infirmary, Liverpool.

HAWTHORNE, C. O., M.D., M.R.C.P., appointed Assistant Physician to the Royal Hospital for Children and Women, Waterloo Bridge Road, London.

LYS, G., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Bere Regis District of the Wareham and Purbeck Union, *vice* F. D. Lys, M.R.C.S., resigned.

MACKINNON, W. J., M.B., C.M.Glasg., appointed Certifying Factory Surgeon for the Biggar District, co. Lanark.

NOLANS, Francis, L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the Gorey Dispensary District, co. Wexford.

SMITH, Henry B., M.B., C.M.Glasg., appointed Junior Assistant Medical Officer to the County Asylum, Bicton Heath, near Shrewsbury.

SYMPSON, E. Mansel, M.A., M.D., B.C.Cantab., M.R.C.S., appointed Honorary Physician to the Lincoln and Lincolnshire Home for Girls, *vice* Dr. G. Mitchinson, deceased.

THAIN, L. L., M.R.C.S.Eng., appointed Medical Officer for the Kentchurch District and the Workhouse of the Dore Union, *vice* W. M. Jennings, M.B., B.Ch.Dub., resigned.

WALKER, Francis John, M.D., appointed Coroner for the Spilsby Division of Lincolnshire, *vice* Walter Clegg, deceased.

WOODFORDE, R. E. H., M.R.C.S., L.R.C.P., appointed Medical Officer for the Third District of the Royston Union, *vice* J. G. Robertson, M.D.Edin.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. Pringle: Consultation. (Skin.)

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Adjourned discussion on Mr. J. F. Colyer's paper on The Treatment of Superior Protrusion. Casual communications will be given by Mr. H. Baldwin, Mr. J. A. Fothergill, and Mr. W. R. Acland.

Otological Society of the United Kingdom, 11, Chandos Street, Cavendish Square, W., 4.30 P.M.—Cases will be shown by Messrs. F. C. Abbott, Charles A. Ballance, Arthur Cheatle, C. H. Fagge, and E. Waggett; and by Drs. Dundas Grant, Macnaughton-Jones, Urban Pritchard, and Herbert Tilley. Specimens and notes of cases by Dr. Jobson Horne, Dr. Macnaughton-Jones, Dr. Wm. Milligan, and Professor Urban Pritchard.

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. R. L. Bowles: Consultation. (Medical.)

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. Frederick Treves and Mr. Clinton Dent will give addresses on The Wounded in the Present War. The addresses will be illustrated by lantern, and Sir William Mac Cormac will speak.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Colonel Kenneth Macleod: Clinical Lecture.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Dr. Nestor Tirard: On Some Forms of Pneumonia.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Dr. Beevor: On Hemiplegia.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Charing Cross Hospital. Post-Graduate Course, 4 P.M.—Dr. J. Mitchell Bruce: Cases in the Wards.

Neurological Society of London, 11, Chandos Street, W., 8.30 P.M.—Pathological Evening. Dr. Wakelin Barratt: Subdural Blood Cyst. Dr. F. E. Batten: Cyst in Seventh Posterior Spinal Root Ganglion, associated with Subcutaneous Hæmorrhages following Distribution of the Root. Dr. James Taylor: Changes in the Cells of the Third and Sixth Nuclei from a Case of Ophthalmoplegia Externa.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Thursfield: Pathological Demonstration.

British Gynæcological Society, 8.30 P.M.—Specimens will be shown by Drs. Wm. Walter, Winson Ramsay, and Arthur Giles, and by Messrs. Fred. Edge and Furneaux Jordan. Papers: Dr. Herbert Snow: Notes of Two Cases of Vagino-Rectal Excision for Cancer. Mr. Rutherford Morison: Some New Methods of Pelvic Operations in the Female.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Treacher Collins: Consultation. (Eye.)

British Laryngological, Rhinological, and Otological Association, 11, Chandos Street, Cavendish Square, 8.30 P.M.—Dr. Macintyre of Glasgow: A Demonstration on the Use of X Rays in Diseases of the Upper Respiratory Tract.

Anatomical Society of Great Britain and Ireland, London Hospital Medical College, Whitechapel, E., 4.30 P.M.—Dr. Arthur Robinson: (1) Specimen of Diaphragmatic Hernia; (2) Embryological Notes. Mr. F. G. Parsons: A Note on the Semilunar Cartilages in the Knee-joint of Primates. Mr. Llewellyn Phillips: Specimens showing Abnormal Arrangement of the Ribs. Mr. J. H. F. Wilgress (introduced by Mr. Keith): A Note on the Development of the External Malleolus.

Clinical Society of London, 8.30 P.M.—Dr. F. E. Batten and Dr. Prickett: A Case of Acute Encephalitis in a Child following Influenza. Mr. Battle: Three Cases of Choledochotomy. Mr. Bland-Sutton: A Case in which a Gall Stone impacted in the Duodenal Orifice of the Common Bile Duct was extracted through an Incision in the Bowel: Recovery. Dr. Parkes Weber: Pneumothorax without Effusion in an apparently Healthy Man.

BIRTHS, MARRIAGES, AND DEATHS.

BIRTHS.

CARRUTHERS.—On Monday, April 30th, at 44, Central Hill, Norwood, the wife of S. W. Carruthers, M.D., of a daughter.

CHEYNE.—On April 28th, at 75, Harley Street, Cavendish Square, W., the wife of W. Watson Cheyne, F.R.C.S., F.R.S., etc., of a daughter.

CLAYTON-MORRIS.—At Carton Lodge, Chester Road, near Birmingham, on April 28th the wife of Richard W. Clayton-Morris, L.R.C.P., L.R.C.S.Edin., of a son.

MORGAN.—April 24th, at 89, Chesterfield Road, Bristol, the wife of Albert T. Morgan, M.D., of a daughter.

SCOTT.—On April 26th, at Madeira House, Shanklin, I.W., the wife of W. Whitelaw Scott, L.R.C.S.I., L.K.Q.C.P.I., of a son.

MARRIAGES.

AINSLIE—BROOM.—On April 25th, at 47, Kersland Terrace, Hillhead, Glasgow, by the Rev. R. S. Duff, D.D., Free St. George's, Glasgow, assisted by the Rev. A. Ritchie, M.A., Greenock, Alexander Cruickshank Ainslie, M.A., M.B., C.M.Edin., to Mary Rennie, younger daughter of the late David Broom, Glasgow.

BOWEN-DAVIES—BURTON.—On April 26th, at St. Mary's Church, Denbigh, by the Rev. J. A. Burton, cousin of the bride, assisted by the Rev. Dan Davies, Rector, and H. Eaton Thomas, Senior Curate, Wm. Lloyd Bowen-Davies, M.R.C.S.Eng., L.R.C.P. Lond., St. Asaph, second son of Wm. Bowen-Davies, Broad Oak House, Golden Grove, Carmarthen, to Harriette Alice, only daughter of Frederick Burton, Gwaynynog, Denbigh, and Hopefield, Pendleton, Manchester.

FINLEY—MCKELVIE.—On April 25th, at St. John's Church, Hensingham, Cumberland, by the Rev. G. E. Gilbanks, M.A., of Abbey Town, assisted by the Rev. W. H. Wilkinson, Vicar of the parish, Harrey Finley, M.D.Lond., of West Malvern, Worcestershire, to Lilian, elder daughter of the late John McKelvie, of Whitehaven, and of Mrs. McKelvie, the Cross, Hensingham.

JOB—FREEMAN.—On April 20th, at Kirkly Church, Lowestoft, by the Rev. G. Ward Saunders, Incumbent of St. James's, Jersey, brother-in-law of the bridegroom, assisted by the Rev. T. Cockayne, Vicar of the parish, Henry Percy Job, M.R.C.S.Eng., L.R.C.P.Lond., only son of Samuel Job, Esq., J.P., surgeon, Newark, Notts., to Geraldine Marie Cecilia Freeman, second daughter of the late F. G. Freeman, Esq., of Great Yarmouth.

PRICE—BRADLEY.—On April 26th, at St. Michael's, Tividale, by the Rev. G. R. Wynn-Griffith, Vicar, Thomas Henry Price, M.R.C.S.Eng., L.R.C.P.Lond., to Edith Eleanor, only daughter of the late Albert Bradley, M.R.C.V.S.

DEATHS.

JONES.—Died, deeply regretted, on April 30th, 1900, at his father's residence, Dr. William Jones, of Ty Newydd, Ruabon, Mr. Evan Jones, aged 40 years, only and surviving son of Dr. Jones. Public funeral on Saturday, May 5th, 1900, at 2 P.M.

LILWALL-CORMAC.—On April 25th, at 51, Branstone Road, Burton-on-Trent, Adelaide Irene Esmé Lilwall-Cormac, only daughter of Dr. James and Mrs. Lilwall-Cormac, and granddaughter of the late Dr. Mackenzie, J.P. (formerly of West Hartlepool), aged 6 months.

WISE.—On April 28th, at 36, Duke Street, Manchester Square, W., Annie Martha, wife of Walter Wise, after a week's illness.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females. W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

A. E. P. asks for information as to Berlioz's organo-serums.

DR. HENRY LISTON (Sunderland) asks which is the best dressing to be used after vaccination, and where can it be obtained?

MEDICUS desires to hear of a home (preferably that of a medical man) where a young lady, aged 20, of weak intellectual power and backward in education, could be received at a cost of about 25s. a week.

HOME FOR CASE OF DIABETES MELLITUS.

DURHAM wishes to hear of a home or institution—either in or within reasonable distance of the county of Durham—in which a patient suffering from diabetes mellitus can be received. The patient is the wife of a miner, who could pay about 7s. 6d. or 8s. a week.

THE M.D. DURHAM.

"PHYS. AND SURG." would be obliged to any of the candidates at the recent examination for M.D. for Medical Practitioners of Fifteen Years' Standing, at Durham, if he could obtain from them some idea of the questions given at the tables; what specimens shown; what cases at infirmary; and if a "grind" at Newcastle is necessary previous to the examination.

ACCIDENT CLUB FEES.

H. writes: I have lately been appointed surgeon to a large engineering works employing about 2,000 hands. They have paid for each patient they sent me who sustained an accident at the factory, but they now want to make a regular fixed payment to avoid all trouble. I should be glad of any information as to what is the usual charge per head per man for accidents only. I take it that a certain annual sum per head should be charged.

HYGIENE OF CAMPS.

A CORRESPONDENT wants to know what good books he could consult as to the hygiene of camps (not hospitals).

*** We do not know any books specially devoted to this subject, because the hygiene of a camp is pretty much the hygiene of that belonging to any other community of men and animals living on a given space. In works on general hygiene, such as *Parkes's Manual*, and in various official regulations of the army, the hygiene of camps is treated of in relation to soil, subsoil, drainage, elevation, exposure to winds, water supply, and general conservancy as applied to disposal of excreta, cooking, tent shelter, etc.

ANSWERS.

X. Y. Z.—Eulexine is, we believe, a preparation of jambol made in America. It has been tested for us in three cases of diabetes without any discoverable benefit ensuing during the period of trial.

SCORUS.—(*a*) The publishers of the *Transactions* of the last International Medical Congress are Messrs. Haas and Co., 2, Langham Place, W. (*b*) Some letters on the subject of cleanliness during the monthly period will be found in the BRITISH MEDICAL JOURNAL of October 15th, 1898, page 1207; October 22nd, 1898, page 1296; and October 29th, 1898, page 1384.

SHIP SURGEONCIES.

R. J. H.—Application should be made direct to the owners or general managers of the line, and should be supported by whatever commercial or personal influence can be obtained.

MILK IN INFANT'S BREAST.

P. J. T.—The appearance of a fluid presenting all the chemical and microscopic characters of milk in the mammary glands of infants of either sex is a physiological process. It usually begins about the third or fourth day of life, and is in most cases attended by some swelling of the glands, which begins to subside about the eighth or ninth day of life. Rough manipulations of the gland while in this state of functional activity, such as are practised by some old-fashioned nurses, are a cause of mastitis.

NOTES, LETTERS, Etc.

WE must again point out to several correspondents that we cannot take notice of anonymous communications.

MEDICAL GOLF TOURNAMENT.

COMPETITORS are reminded that entries (with 5s. entry fee) should be sent by Monday, May 7th, to Mr. Creasy, Windlesham, Surrey. The competition this year is by handicap medal round of 18 holes at Wembley on May 10th, senior and junior classes.

IRISH DISPENSARY DOCTORS AND GUARDIANS.

DR. W. CALWELL, Honorary Secretary of the North of Ireland Branch of the British Medical Association, 1, College Square, N. Belfast, writes to acknowledge the following additional subscriptions which have been received on behalf of the Dr. Moses Henry "Legal Expenses" Fund, particulars of which were published in the BRITISH MEDICAL JOURNAL of March 31st, p. 804.

	£	s.	d.
To amount already acknowledged	6	13	6
Dr. Mussen (Glenavy) ...	1	1	0
Dr. Taggart (Antrim)	1	1	0
Dr. Vesey (Rostrevor) ...	0	10	6
Dr. Torrens (Connor) ...	0	10	6
Dr. Carson (Crumlin) ...	0	10	6
Dr. Agnew (Lurgan)	0	10	0
Dr. Brownrigg (Moira) ...	0	5	0
	£11	2	0

Motor Cycles

Dr. W. W. Hardwicke (East Molesey) sends a reply to "Cymro," in the course of which he writes: The motor cycle is cheaper to purchase, but is very dusty in dry weather, very dirty in wet weather, and without shelter from rain. The saddle and the vibration are decidedly uncomfortable, for the cycle is not a carriage and lacks its comforts. Pneumatic tyres, which are a *sine qua non* in the cycle, keep the mind in a continual state of anxiety for fear of a puncture. Solid tyres can be, and are, used with light motor cars without any loss of comfort worth mentioning.

By way of experiment I bought a Benz dogcart with movable hood last October, and have used it with few exceptions every day since, all through one of the worst winters possible for such a trial, and my opinion is that neither horses—which are always a trouble to medical men—nor motor cycles can compare for convenience and comfort with a good well-set-up motor car. It can be taken out and started at a moment's notice: there is no waiting to "get up steam," as some people appear to imagine; there is no horse to be harnessed or considered: and if your "*chauffeur*" (late coachman) is not about, any member of your household can accompany you.

The Benz engine is the simplest, and therefore the most suitable for medical men. There is no vibration to the hand and wrist in steering, which is effected by a perpendicular handle working round a flat motionless disc, upon which the hand rests comfortably. Duplicates of all parts likely to break or loosen are carried, besides all necessary tools. The explosions are produced by the electric accumulators, and in the event of these running out, two spare ones are carried ready for attachment at any moment. These generally last about three months. Replenishment costs 1s.

The initial outlay is large—about £200—but the upkeep is considerably less than that of a horse, though probably about the same as a motor cycle. The cost of petrol works out at about 2d. an hour. The saving over a horse is also obtained in harness, shoeing, veterinary account, and the loss sooner or later in horseflesh. If a car is properly sent out from the carriage builder, and all parts thoroughly and exactly adjusted—and as to this the purchaser cannot be too particular—there need be no further expense for six months. New belts always stretch, more especially in wet weather, but this can be rectified in a few minutes. A pair of good belts, if well soaked at first in castor oil, ought to run for six months, and in dry seasons twelve months.

No one should decide to run a motor car unless he is prepared to make a study of his engine and learn it thoroughly. Before attempting to drive it himself, he ought to take two or three drives with an experienced driver. The theory can be learned in an hour, but the handling of the car is only to be learned by practice. Nearly all motor car accidents occur, not from any fault in the car, but from the want of immediate action on the part of the driver in an emergency. A man may be able to drive his car along a good straight country road with little or no traffic upon it, and yet be hopelessly at sea in the busy traffic of a street. He may be driving comfortably enough along until he gets to a sharp corner where he suddenly comes upon a sleepy van driver creeping slowly round the corner on his wrong side. Unless he is an experienced hand, he loses his head, and either does the wrong thing or omits to do the right thing, and a catastrophe happens. In town practices it is better to be driven.

Change of Address: A Warning

A Victim writes: As a warning to others, may I ask you to give this letter a place in the British Medical Journal? When qualified and duly registered I entered upon the uphill work of general practice, and have gone on steadily ever since 1889. I have changed my address twice during that period, and to my surprise I heard that my name had been removed from the *Register*. I accordingly wrote to the Registrar and asked the reason. He stated that he had, in accordance with the Act, written to me and had failed to get an answer to his letter, hence the removal. I received no letter or communication from the Registrar of any kind, and being a busy man did not think of sending my change of address. Yesterday the coroner of my town wrote me saying that my name was not on the *Register* for 1900. I went and saw him, and produced my original certificate of registration. He said it would not do, and that I could not be regarded as a properly qualified practitioner, and at the inquest said I could not legally give the certificate of death. Now all this may be true, but it is very unfair to the medical practitioner, and in my opinion calls for some improvement, such as that every letter so written by the Registrar giving notice of removal should be registered, as cases of this kind are apt to do a great deal of harm to the unlucky man so removed.

Caffeine in Renal Disease

Dr. J. Snowman (Brick Lane, E.) writes: The effect of the note appearing in the Epitome of the British Medical Journal of March 3rd, p. 35, on the dangers of caffeine is calculated to injure the reputation of a drug which may undoubtedly be used to great advantage in the very cases which the writer regards as absolutely contraindicating its use. I have lately had a striking illustration of its great value in Bright's disease. A patient, the subject of gout, chronic interstitial nephritis, and greatly addicted to alcohol, began to develop symptoms of renal asthma last autumn. The dyspnœa became very troublesome, and with this supervened indications of an attack of acute parenchymatous nephritis. The usual high tension pulse fell to low tension, the heart threatened to fail, and on one occasion death was imminent. But improvement actually took place, and for some weeks the condition of the patient was favourable. Soon, however, the symptoms of another inflammatory attack appeared, and this time uræmic symptoms appeared, with wandering, extreme diminution of urine, and very considerable albuminuria. There was at this time Cheyne-Stokes respiration, and the prognosis seemed hopeless. At this stage citrate of caffeine, in 3-grain doses every four hours, was given, and its administration was continued without any intermission for three weeks. Under this treatment the uræmic symptoms rapidly vanished; the œdema, which had extended half-way up the back, diminished, and has now practically disappeared; the quantity of urine became quite profuse, and the breathing resumed its normal condition. The convalescence has certainly been very protracted, and there is an occasional tendency to cardiac involvement and secondary dyspnœa, but the resumed exhibition of caffeine for a day or two has effectually combated these symptoms.

Immunity of Right Side of Heart in Acute Rheumatism.

Dr. J. Foster Palmer (Royal Avenue, S.W.) writes: The reason for this immunity suggested by Dr. Downing was put forward, though in rather different terms, at the meeting of the Chelsea Clinical Society by Dr Burney Yeo, and was, I think, generally accepted. For its full acceptance, of course, the bacterial origin of acute rheumatism must be demonstrated, and it is at present only surmised. Dr. Yeo suggested that the endocardium on the right side was protected by the condition of the blood—that is to say, by the presence of carbonic acid, which might act either by interfering with the action of the rheumatic toxin, or by rendering the endocardium less susceptible. For the protection of the left side he suggested the inhalation of carbonic acid, as practised by Dr. Ewart. I presume that the presence of carbonic acid in the blood is what Dr. Downing refers to as impurity.

The question of "growing pains" brought forward by Dr. Brockbank is also a most important one. This unfortunate phrase, representing as it does a condition which has no real existence, and is a mere cover for ignorance, is doubtless responsible for the neglect of many cases of rheumatism, and the consequent supervention of endocarditis and chronic valvular mischief, all of which might have been prevented by a recognition of the primary disease. It can never be too strongly impressed on the public mind that "growing pains" is a misleading term, and represents something far more serious than it implies; that, in short, growth does not cause pain.

LETTERS COMMUNICATIONS, Etc., have been received from

A Mr. H. W. Armit, St. Austell; Messrs. Arnold and Sons, London; Æsculapius. **B** Mr. W. M. Beaumont, Bath; Dr. de B. Birch, Leeds; A. A. Barclay, M.B., Bacup; Mr. H. A. Barrow, London; Dr. F. G. Bushnell, Plymouth. **C** S. Crawshaw, M.B., Ashton-under-Lyne; Messrs. T. Christy and Co., London; Dr. H. A. Clowes, London; Dr. F. G. Clemow, London; Dr. A. J. Campbell, Uley; Club Doctor; Dr. W. Calwell, Belfast; W. Colquhoun, M.B., Glasgow; Dr. G. D. Collen, Semilong; Mr. J. S. Crone, London; Cottage Hospital. **D** Dr. T. B. Darling, Edinburgh; Mr. A. Dukes, Croydon Durham. **E** Mr. F. H. Edmonds, Georgetown, Demerara; Dr. C. R. Elgood, Windsor; Mr. H. Elliot-Blake, London. **F** Dr. W. Fearnley, Harrogate; Mr. W. G. FitzGerald, London; Mr. C. H. Fagge, London; C. Forsyth, M.B., Southend-on-Sea. **G** Dr. J. Galloway, London; Mr. F. Goddard, London; E. W. H. Groves, M.B., Bristol; J. E. Gemmell, M.B., Liverpool; T. E. Gordon, M.B., Dublin; Mr. H. Grey, London; Dr. A. W. Gilchrist, Nice; Mr. D. P. Gage, Kilwinning; Dr. A. S. Gubb, London. **H** Dr. F. W. N. Haultain, Edinburgh; Dr. W. W. Hardwicke, East Molesey; Hospital Surgeon; Dr. T. W. Hime, Bradford; H. H. P.; Dr. J. Harper, London. **I** In Arduis Fidelis; S. Irwin, M.B., Tockington. **J** Dr. H. W. Jacob, Great Malvern; Mr. B. Jones, Liverpool; Junior. **K** Dr. A. Keith, London. **L** Dr. W. G. V. Lush, Weymouth; Dr. A. B. Larking, Folkestone; Mr. H. Liston, Sunderland; Dr. A. W. W. Lea, Manchester. **M** Dr. E. Magennis, Lurgan; Mr. N. J. McCaske, London; Member B.M.A.; Dr. H. J. Macevoy, London; Mr. G. D. Macdougald, Dundee; Mr. P. Morris, Colwyn; Mr. J. H. Mumford, London; Dr. E. D. Mapother, London; Mr. J. Y. W. MacAlister, London. Member; Mr. J. McKay, London. **N** H. O. Nicholson, M.B., Edinburgh. **O** Dr. J. Oldfield, London; Old Member. **P** Mr. H. C. Phillips, London; Point, Brighton; Mr. J. F. Palmer, London; F. M. Pope, M.B., Leicester; Phys. and Surg.; Mr. V. G. Plarr, London. **R** Dr. F. W. F. Ross, London; Mr. R. Roche, London; Rex; R. J. H.; Mr. W. H. Rowthorn, Rotherham; Mr. J. D. Rhodes, London; Dr. R. R. Rentoul, Liverpool; D. Richmond, M.B., Rochdale; Mr. C. Ryall, London. **S** Messrs. Speaight, London; Dr. D. W. Samways, Mentone; Dr. H. Snow, London; Mr. W. W. Stocker, London; Dr. W. Sykes, Torquay; Dr. J. Smyth, Naas; Mr. R. Stewart, London. **T** Dr. F. S. Toogod, London; Dr. S. Taylor, London. **V** Victim; Mr. W. Vincent, London. **W** Messrs. Wyrall and Son, Aldershot; D. J. Wood, M.B., Capetown; Miss M. Wardell, Stanmore; Dr. F. Willcocks, London; Mr. E. W. Wallis, London; Workouse Medical Officer; E. W. White, M.B., Dartford; Messrs. J. Weiss and Son, London; Warwick, etc.

BOOKS, Etc., RECEIVED.

Traité de Chirurgie d'Urgence. Par F. Lejars. Deuxième Edition. Paris: Masson et Cie. 1900. F.25.

On Neuroma and Neuro-Fibromatosis. By A. Thomson, F.R.C.S.E. Edinburgh: Turnbull and Spears. 1900. 21s.

Passmore-Edwards Institutions. Founding and Opening Ceremonies. By J. J. Macdonald. London: Strand Newspaper Co. 1900. 2s. 6d.

Manuel Complet de Gynécologie Médicale et Chirurgicale. Par A. Lutaud. Nouvelle Edition. Paris: A. Maloine. 1900.

Die angeborene Luxation des Hüftgelenkes. Von Dr. M. Schede. Hamburg: Gräfe and Sillem. 1900. M.8.

The Physical Signs of Pulmonary Disease. By G. Steell, M.D. Second Edition. Manchester: J. E. Cornish; and London: Simpkin, Marshall and Co. 1900.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

REMARKS
ON
PLAGUE IN THE LOWER ANIMALS.

BY FRANK G. CLEMOW, M.D., D.P.H.

THE association of epidemic disease in human beings with disease in the lower animals is as old as the history of epidemic disease itself. The spirit of modern inquiry is, however, far from content with the scanty and superficial evidence which has too often in the past been considered sufficient to establish the identity of a disease in animals with that prevailing in man. The great historical epidemics of influenza, cholera, and small-pox have frequently been associated in this indefinite way with a murrain among horses, cattle and sheep, and, at times, with a disease in wild animals. But this coexistence of disease in man and brute appears to have been most often and most definitely met with in the case of plague.

Modern research, while throwing doubt upon some of the earlier historical statements, has clearly established the fact that the infection of plague not only can produce a disease closely resembling plague in man when artificially introduced into the tissues of certain animals, but that it not infrequently does so under natural conditions. What these animals are it will be the object of this paper to show. Each group of animals will be discussed in turn, and the phenomena presented by the disease in them in nature and in the laboratory will be discussed separately.[1]

Not only the great group of *Vertebrata*, but also certain families of the *Invertebrata* have been shown to be either liable to an attack of plague or to be capable of affording growth to the plague bacillus when artificially introduced into their tissues. Among the *Vertebrata* the mammalia are more susceptible to plague than either birds, reptiles, or fishes; it is indeed open to doubt whether any of the last three groups of vertebrates are capable of becoming the hosts of the plague bacillus, at any rate under ordinary conditions.

Amongst the *Mammalia* the group of animals most often affected by the disease, and apparently the most susceptible to the plague poison, is that of the rodents. It will, however, be more convenient to consider the various groups of animals in the descending order of the zoological scale, beginning with the Primates.

MONKEYS.

a. Under Natural Conditions.—On at least three separate occasions monkeys have been observed to sicken and die from a disease resembling plague at the time of an epidemic of that disease in man, and on each occasion the specific nature of the disease in these animals was proved bacteriologically. The first instance was at Kankhal, near Hardwar, in the Saharanpur district of the North-West Provinces. In October, 1897, a considerable number of these animals died, and in several of the bodies the plague bacillus was discovered by Mr. Hankin, the Government bacteriologist.[2] It was impossible to kill the surviving monkeys on account of the religious feelings of the natives, but a large number were trapped and kept in confinement until the epizoötic was at an end. The outbreak lasted some fifteen days. Mr. Haffkine[3] has stated in regard to this outbreak that "out of 21 monkeys found dead in the streets, and 50 which died in captivity, only 6 showed buboes, and contained microbes similar in appearance to the plague bacilli." "In none," he adds, "was the microbe finally identified." But as just stated Mr. Hankin successfully isolated the plague bacillus in some instances, and there appears, therefore, to be no doubt that the disease in these animals was the plague.

The second instance occurred in Jawalapur, apparently about the same time. In at least one monkey the plague bacillus was abundant in the nasal secretion, and was isolated from the internal organs after death.

The third instance occurred in Gadag, near Dharwar, in the Bombay Presidency, in December, 1898. In the course of a few weeks as many as 7 of these animals were seen to fall dead from the trees. In 2 the discovery of a bubo and the isolation from the tissues of the plague bacillus left no room for doubt as to the cause of death. These monkeys were thought to be the bonnet monkey (*Macacus sinicus*)[4].

b. Under Artificial Conditions.—Both the common brown and the common grey monkey are very susceptible to the action of the plague bacillus when pure cultures are artificially introduced into their tissues. The grey monkey (*Semnopithecus entellus*) was found by the German Plague Commission to be very much more susceptible to the disease than the brown (*Macacus radiatus*).[5] Both these species were largely employed by the German and Russian Plague Commissions for experimental purposes. The latter found them so sensitive to the bacillus that an invisible prick in the palm of the hand with a needle moistened with a culture of plague bacilli invariably produced death.[6]

It will be seen from the above that the monkeys most commonly met with in India can and do suffer from plague. There is, however, little proof that they act to any considerable extent in spreading the disease. In view of their unusual susceptibility to the disease under artificial conditions[7] it is, indeed, surprising that they apparently suffer so rarely under natural conditions. It is clear, however, that they can aid, and perhaps have aided, in spreading the disease, and the fact is one that cannot be forgotten in plague administration.

INSECT-EATING MAMMALS AND BATS.

There is, so far as I am aware, no evidence that any of these animals have ever become the hosts of the plague bacillus, either under natural or under artificial conditions.

RODENTS.

The *Rodentia* are, as already stated, the most susceptible to plague of all animals. The principal rodent animals in which plague has been observed to occur, either naturally or experimentally, are: Rats, bandicoots, mice, squirrels, guinea-pigs, porcupines, and marmots. Each of these may be briefly considered separately.

Plague in Rats.

a. Under Natural Conditions.—It has been proved beyond question that rats frequently suffer and die from plague, and it can scarcely be doubted that they play a considerable part in the spread of the disease from one part of a town or village to another. Until recently it appeared possible that the rat was among the most important factors in the spread of plague, and the fact that the geographical distribution of plague had corresponded hitherto, to some extent, with that of a particular species of rat, the *Nesokia*, lent some colour to this belief. The recent spread of plague, however, to the southern hemisphere, and particularly to Madagascar and to South America, where the *Nesokia* is unknown, has rendered the view that the distribution of plague on a large scale is dependent upon the movements of these animals no longer tenable.[8]

When rats are attacked with plague they usually leave their underground habitations and migrate, often for a considerable distance. This migration may perhaps in some instances precede the occurrence of disease in them, but of this there is no certain evidence. Migrations of rats are not uncommon apart from disease, and under these circumstances they may sometimes be seen advancing in immense numbers over fields or along country lanes, even in this country. An occurrence of this sort in connection with the appearance of plague among rats has not, so far as I am aware, been recorded. The migrations which undoubtedly occur appear to be on a smaller scale, less organised, and more prolonged and gradual. In most instances the actual migration is not observed, and its occurrence is only inferred from the disappearance of rats from one neighbourhood and their appearance in unusual numbers in some other neighbourhood. This was what occurred in Bombay in 1896.[9] A similar observation was made in Karachi,[10] and in Hyderabad (Sind).[11] In Calcutta, where plague appeared in the city in April, 1898, the rats almost disappeared from the native quarters, where before they had swarmed. Among those which remained a considerable mortality occurred, which was proved in certain instances to have been due to plague.

This appears to be what usually happens when plague breaks out as an epidemic and epizoötic; the larger number

of rats migrate, the remainder are attacked by the disease. It certainly occurred in Karachi[11] as well as in Calcutta and Bombay. It was also observed in Canton in 1894.[13]

The extent of the mortality in rats is not easy to determine. An increase in rat mortality may be partly apparent, due to the observer's attention being specially called to these animals in times of plague, and partly artificial, as the result of a campaign against rats when plague is prevalent. In some instances very large numbers of rats are said to have been infected, apparently more or less simultaneously. At Mengtsz, in the Chinese province of Yunnan, such rats are said to have left their holes "in troops."[14] The same was observed at Pakhoi.[15] On the shores of the Yangtse, opposite Nanking, in 1881, rats died "in hundreds," and baskets and boxes were filled with them.[16] In Mandvi, the quarter of Bombay first attacked, "thousands" of rats were said to have died about a month before the plague appeared in human beings.[17] In a single infected house in Mokundpur, in the Punjab, as many as 200 dead rats were discovered.[18] In Canton the dead bodies of 22,000 rats were brought in as the result of an offer of a small reward for every rat killed.[19] More often the rats die in small numbers; the epizoötic extends more slowly and is prolonged over a considerable time. This was certainly the case in Calcutta in the summer of 1898 and early part of 1899.

The symptoms of plague in rats under natural conditions appear to vary considerably. Buboes, it is known from *post-mortem* examinations, may occur in rats. Whether rats may be affected by the pneumonic form of the disease in nature would appear to be uncertain.[20] That it can be produced in them artificially has been conclusively proved.[21] The disease appears usually to become septicæmic before the death of the rat, and the bacillus can be found in many parts of the body. Severe affection of the nervous system is also evidently present, just as in man, as indicated by spasmodic and paralytic symptoms, and by a dazed appearance and staggering gait. Sometimes there is a limping jerk or spasm of the hind legs,[22] and sometimes the hind legs are dragged along the ground as though paralysed.[23] In some instances rats have been seen to rush about madly without fear of man, and after capering round the room to fall dead at the feet of the observer.[24] At other times they have been seen to move about listlessly in back gullies, sinks, and bathing places,[25] or to jump up suddenly and, turning round, to fall dead, or to "spring continually upwards from their hind legs as if they were trying to jump off something."[26]

The appearances after death vary. In a rat which I dissected in Calcutta, and from whose tissues I obtained plague bacilli in pure culture, the following were the principal *post-mortem* appearances:

> The rat was recently dead, rigor mortis was present and fairly marked. The animal lay prone on its belly, with all four limbs extended. (Rats dead from ordinary causes are more usually found lying on one side, with the limbs flexed.) The body was not swollen, and there was no external sign of the cause of death. On opening the body the lungs were found deeply engorged; on section they exuded frothy blood; they were crepitant throughout, and there was no pneumonic consolidation in any part of them. The spleen was much enlarged and deeply engorged with blood. The liver was intensely congested; it was not enlarged; its outer margin presented a mottled appearance; on section it was found to be full of blood, and the liver substance was somewhat friable.[27] No hæmorrhages were seen anywhere. Agar tubes were inoculated with blood from the lung, spleen, and liver. The lung tubes showed contaminations, but from the spleen and liver pure cultures of the plague bacillus were obtained. No buboes, it should be added, were present in this rat. They have, however, been frequently observed in other rats.[28]

SOURCES OF INFECTION OF RATS.

The most important and obvious sources from which these animals might be expected to contract the disease are the following:

a. The soil.
b. Grain or other food stuffs.
c. The tissues of other animals (including human beings) dead from plague.
d. Infected rags, articles of clothing, or dressings from plague patients.
e. Infected insects.

a. From the Soil.

That rats may become infected from the soil is probable. It is among the oldest beliefs in regard to the causation of plague that the disease arises from some miasmatic exhalation from the earth. Modern observation lends little support to this view; but it has shown that the soil or its surface can, under certain conditions, receive and retain for a time the virus of plague in an actively infective state. That the plague bacillus ever passes deeply into the earth must be doubted, as it appears to be an organism requiring abundance of oxygen for its growth. Yersin claimed to have found the bacillus in the soil at a depth of 5 cm.; but though this bacillus presented all the morphological, cultural, and staining characteristics of the plague bacillus, it was not toxic to animals.[29] Lowson and Takaki failed to find the plague bacillus in earth.[30] Kitasato only once succeeded in infecting an animal with plague by injecting into its tissues the dust of an infected room.[31] Okada failed in his experiments with dust obtained from a like source, but succeeded in a certain number of instances with soil obtained from the surface of earthen floors, and from "below the floors" of rooms in which plague patients had lain. With soil obtained from 26 different sites, 57 mice in all were inoculated; of these 14 died of plague, as shown by the discovery of the plague bacillus in their tissues; 8 died of tetanus; 3 of malignant œdema; 6 from some other cause, the plague bacilli not being found in their tissues; and 24 remained alive and healthy. This author concludes that if the soil is rich in organic matter, contains a certain amount of moisture, and is only slightly exposed to air (*sic*) and light, it may retain the plague bacillus for a considerable period. In some of his successful experiments the soil was kept for as long as eleven days before being inoculated.[32]

It may be regarded as proven, then, that the soil may, under certain circumstances, contain the virus of plague. Rats, living in burrows in the soil, and when on the surface constantly grubbing with their noses in the dust and surface layers of the soil, might in this way become infected. The ease with which the earthen floors of native houses in India and China may become infected from the discharges, etc., of plague patients scarcely requires to be pointed out.[33]

b. From Grain.

The possibility of rats contracting plague from infected grain cannot be overlooked. When a rat epizoötic is once started, diseased animals must almost certainly infect any grain stores to which they gain access, either by means of their dejecta,[34] their sputa, or by the dead bodies of such as die among the grain. Whether a rat epizoötic can be started by infected grain brought from a distance is less certain. Hankin's[35] experiments tended to show that the plague bacillus, when artificially mixed with grain of various kinds, or with flour, dies out in from four to six days, but that it may survive for periods extending up to thirteen days. He failed to find the bacillus in specimens of grain from many sources, including grain which had been exposed to infection by rats sick and dead from plague. Negative evidence of this character is, of course, only presumptive and not conclusive proof that grain does not, under natural conditions, sometimes harbour the plague virus. The behaviour of the plague bacillus obtained from cultures on artificial media is probably quite different from its behaviour in nature, and the plague bacillus is probably very difficult to detect in grain as it is certainly difficult to detect in soil. On the other hand, the frequent occurrence of rat epizoötics in the neighbourhood of grain stores or other food stores (as observed in Bombay, Calcutta, Alexandria, Mauritius, and innumerable other places), is no proof that the disease is started or spread by infected grain or other food, as a rat epizoötic must of necessity be observed where rats most abound, that is to say, in the neighbourhood of grain or other food stores. For the present, therefore, it must be regarded as very probable, though as not absolutely proved, that rats can be and are infected with plague from grain or other food.

c. From the Flesh of Other Animals.

That a plague epizoötic in rats may start, and also be perpetuated by their eating the dead bodies of infected animals—including human beings and also other rats—is certain. An instance of rats becoming infected through eating the tissues of a human plague cadaver came under my own observation in Calcutta. A native died early in the morning of June 15th, 1898. I saw the body at 7 A.M., four hours after death. The *post-mortem* signs and the history of the illness left no doubt that the man had died from plague, and this was further proved by the isolation of plague bacilli from the bubo (in the

left groin) and from the liver. In examining the body I observed that one big toe had been partly eaten away, evidently by rats. In the godown where the body had lain, three dead rats were discovered shortly after, and dead and dying rats were seen on the adjoining premises during the next week or two. On June 30th—fifteen days after the occurrence of the first case—a European sickened with plague in the adjoining house. In this case—which will be referred to again later in connection with the question of dogs and plague—the patient stated that, two or three weeks before his illness, his dog brought a dead rat and put it on his bed; the patient had touched the rat in removing it from his bed. Seven days after this patient sickened, a Eurasian female, living in a house four doors from where he lived, and three doors from the house of the original patient, was attacked with plague. It was ascertained that dead rats had been found in her garden, and that she was in the habit of gardening, and of spending much time among the flower beds where the dead rats were found. Dead rats were also seen in the premises of the next house to hers. Thus, in five out of six houses, in one street and all adjoining, a mortality among rats was observed immediately subsequent to the incident above described—the consumption by rats of the tissues of a human plague cadaver. Human cases of plague occurred in three of these houses (including the original case). There is scarcely room for doubt that the disease was spread by the rats.[36]

An incident of precisely the same character is reported to have occurred at Khankhanan in the Punjab. The patient in this case was an elderly native woman; she died, and the body was locked up in a room to await medical inspection. Next morning it was found that the nose and part of one cheek had been eaten away, almost certainly by rats. During the next few days, in every house in the block of buildings in which the corpse had lain, cases of plague developed, and many dead rats were found in these houses when they came to be disinfected.[37]

Possibly other instances of this nature have been observed elsewhere. The risk which plague cadaver offers as a means of infecting rats is recognised in most plague hospitals, where a cover of wire or other material is or should be provided to protect bodies from the attacks of these animals.

That rats may also contract plague from feasting on the bodies of other rats dead of the disease is exceedingly probable, though I am aware of no positive proof of their ever having done so. In earlier times it was believed that birds and beasts of prey would not touch the body of an animal that had died of, or in times of, pestilence, as though some instinct warned them of the danger to themselves; but in regard to rats there is certainly no evidence of any such squeamishness or cautiousness, and it is very unlikely that such notorious cannibals as these animals are would refuse to eat the body of another rat that had died of plague.

d. From Rags.

The possibility of rats becoming infected by sniffing at or eating rags, clothing, or poultices or dressings from a plague patient is obvious, though whether such an occurrence has been absolutely observed I am not in a position to say.

e. By Insects.

Finally there is very good reason to believe that plague may be and is spread to rats from other rats, and perhaps from human beings, by insects, of which probably the flea is the most important.

Mode of Infection in Rats.

The manner in which the virus of plague enters the tissues of a rat is uncertain. It probably enters either through the respiratory organs, through a discontinuity of skin, or through the alimentary canal. The absence of conclusive evidence that a primarily pneumonic form of plague develops in rats under natural conditions may be held to indicate that the first mode of invasion—through the respiratory organs—is at least rare. The presence of a bubo or of many enlarged lymphatic glands in some rats would point to an invasion through the skin, with consequent production of the disease in its bubonic or septicæmic form. The discovery of marked changes in the alimentary canal, and in at least one instance of sand and earth in the stomach,[38] would point to an invasion of the virus through the alimentary passages.

Transmission of Infection from Rats to Man.

If the manner in which rats contract plague is to a great extent uncertain, it is no less uncertain how the disease is usually transmitted to man from these animals. That it is sometimes so transmitted is certain. In rare instances it has seemed possible to state definitely that an infected rat has given the disease directly and immediately to a human being, either under circumstances which leave no doubt as to the manner in which the infection is transmitted (as by a bite) or in some manner less obvious (as by merely touching the animal). But in the large majority of instances the mode in which the infection passes from rat to man is quite uncertain, and there is often much room to doubt whether any such transmission has in fact taken place, or whether men and rats have not both caught the infection from some common source to which they have been exposed.

Direct transmission of plague from rat to man by means of a bite from an infected animal must be extremely rare. I am aware of only two instances in which such an occurrence has been observed. In one the patient had been bitten by a rat on both great toes; the skin was penetrated, and blood oozed from the wounds; an attack of plague followed, from which he ultimately recovered.[39] The second instance occurred in Mandvi (Bombay) about the same time. In this case gangrene developed round the wound, and the patient died.[40] Details are, however, lacking to prove that the rats who bit these persons were infected, and that the disease was the result of the bite, and not due to other causes. This mode of infection from rats, from the extreme rarity of the conditions under which it can occur, may be passed over with little comment. The part such a mode of infection plays in spreading plague must be infinitesimal.

Of much more common occurrence is the development of plague in persons who have actually handled a living or dead rat infected by the disease. Many examples of this kind have been recorded from the time of the epidemic in Jehangir's reign to the present day. Unfortunately in most of these instances details are wanting to show how the infection may be supposed to have passed from the animal to the human being, and this is equally true of the two cases of rat-bite just mentioned. It would be all-important to know whether in these cases the bubo developed in the upper extremity of those persons who have touched the rats, and on the same side as the hand which touched the animal (when only one hand had done so); or in the glands corresponding to the limb bitten by the rats in the other cases. It is conceivable that when a person handles an infected animal, alive or dead, some of the infecting material may be conveyed directly from the body of the rat to the person's hand, and may be subsequently rubbed in to some minute scratch or hang-nail or other skin-discontinuity; or it may be transferred to food (Indian natives invariably convey their food to their mouths in their fingers), and so gain access to the mouth and upper alimentary or respiratory passages. But that this does occur is at present only a matter of speculation and inference.

In the vast majority of instances where plague in rats is associated with or followed by plague in human beings there is no evidence that the affected persons have touched these animals, and it is necessary to suppose either that the transmission of the disease from rat to man has been effected in some mediate manner—as, for example, through the soil, food, fomites, or insects—or that the rats and the persons affected have become so from some infected source common to both. Probably both occur. Of the four mediate means of transmission just named, it is very possible that insects will prove to be the most important. A very plausible case has, indeed, been made out for the spread of plague from rats to man by means of insects. This question is briefly referred to later.

Rat Sickness and Human Plague.

A very large number of instances of the association of sickness and death among rats with a plague epidemic in human beings have now been recorded; and though it has not been proved, in a large proportion of these instances, that the sickness and death among rats were due to plague, this has been conclusively established in a very considerable number. It is, therefore, exceedingly probable that, even in those instances where it has not been proved, the affection of rats

was nevertheless of a specific character. The following, among other examples, came under my own observation in Calcutta.

1. A punkah coolie employed in a European house was attacked with plague on May 11th, 1898. The house was a fairly good-class masonry building, but the servants' quarters where the patient was in the habit of sleeping were very close and insanitary. The smell of dead rats had been noticed since April 30th, and in the interval the bodies of four dead rats had been found about the premises. As the smell continued, I had some boards taken up in the floor of the drawing-room, and here the decomposed bodies of four other rats were discovered. This room was a ground-floor room, and the servants' quarters were just opposite its windows, and separated from it by about 10 feet. The house was temporarily evacuated and disinfected and there was no recurrence of rat mortality. The inmates all stated that the death of these rats was a most exceptional occurrence and that they had never known the like to happen before.

2. A similar instance occurred about the same time and in the same neighbourhood as the one just described. A native employed in a small *modi* shop, the principal wares of which were grain, flour, oil, spices, and similar articles of food, suddenly died. An examination of the body left no room to doubt that he had died of plague. On inquiry I learnt that twelve dead rats had been found on the premises during the preceding "week or two" (closer accuracy was impossible). The shop and its contents were thoroughly disinfected, and some of the latter burnt—measures which raised a storm of abuse in the native press, but which were successful in preventing any further spread of the disease in that neighbourhood.

3. A little later, on May 31st, 1898, a death occurred in a shop of exactly the same character as the last, but even smaller, closer, and darker than that one had been. This shop formed part of a native bazaar, made up, as most such bazaars are, of a series of narrow passages with stalls on either side. Meat, fish, fruit, vegetables, stuffs, and dry goods of various kinds were exposed for sale, mostly upon low, wooden platforms, raised about one foot from the surface of the earth. The passages were either unpaved or imperfectly paved, and the earth could be seen riddled with rat-holes in all directions. Upon inquiry from the caretaker of the bazaar I learned that rats had been dying in considerable numbers for some time before the death of the native in question occurred; the bazaar was closed and locked up at night, and on opening it each morning the dead rats were found on the stalls or in the passages. As many as 25 rats had been found on one day. A similar mortality in rats had never been known to occur there before. The bazaar was disinfected, and I made arrangements to have the whole floor of the bazaar watered daily with a disinfecting solution. The rat mortality ceased, and there was no recurrence of it for at least six months afterwards. On July 4th, however, a case of plague occurred in a native hut some fifty yards from the bazaar, and at the opposite end from where the first death had occurred. No dead or dying rats had been seen in this or the adjoining huts, and the source of infection in this case could not be ascertained. Possibly the rats had been driven out of the bazaar by the measures of disinfection adopted, and had carried the infection to this hut.

4. On March 12th and 13th, 1899, two boys, brothers, were attacked with plague. They were the sons of the Madrassee butler in a very large European house in one of the best parts of Calcutta. They lived in a small but very clean masonry house in the compound. They were attacked about a fortnight after returning from Madras to Calcutta. Both were removed to hospital, where both subsequently died. The house from which they were removed, and some of the neighbouring outhouses and surface drains, were thoroughly disinfected. On March 24th, ten days subsequent to the removal of the boys to hospital, I learnt that two dead rats had been found on the previous day on the premises of another large European house on the opposite side of the road from the first. I then made personal inquiries at several of the neighbouring houses, and learnt that at one (one of the leading clubs) two dead rats had been found on the 23rd and a dead cat on the 24th; a dead cat had also been found there "about a fortnight" previously. At another house, though no dead rats had been observed before, one was reported to me on the 26th, and the body was kept for my inspection. In this rat I found the *post-mortem* appearances already described, and isolated the plague bacillus from liver and spleen. In the meantime there had been no observed rat mortality on the premises where the two boys had died, nor was there subsequently. Those premises had, it will be remembered, been thoroughly disinfected, and equally thorough disinfection was practised on the other premises where the rats had died. No further rat mortality and no subsequent cases of plague in human beings were observed in the neighbourhood. To explain this sequence of events it seems almost necessary to suppose that the thorough disinfection in the first instance drove the rats away from the premises first infected to the adjoining premises, where a small, localised epizoötic was slowly developing when it was cut short by the measures of disinfection put in practice there.

A very large number of examples analogous to those just adduced might be quoted, both from my own notes and from the recent literature of plague. For the present it must, I think, be admitted that rats can and do suffer from plague under natural conditions: that they can and do act as a means of diffusing infection and transmitting it to man; but that the extent to which they are responsible for the diffusion of the disease and the distance over which they diffuse it is uncertain. It is probable that they are an important, but not the sole, means of spreading the disease.[41] In a group of 32 cases of plague which I investigated on this point in Calcutta in 1898, I found positive evidence of the death of rats in 7 only. It is, however, quite possible that in many others rat mortality had occurred; in many of the cases it was most difficult to get any accurate or trustworthy information at all, and most of the patients were drawn from a class of natives who would probably pay little attention to the discovery of a sick or dead rat.

In like manner it is uncertain how far rats may carry the infection of plague. In Bombay they were believed to have carried the disease from Mandvi, on the south-east of the island, to Malabar Hill on the west, some three miles away; to Sion, Worli, Mahim, etc., on the north, some six miles away; to Bandra, some eight miles away; and to many places on the island of Salsette, a dozen or more miles away. Whether, however, a single rat, or troops of rats, could carry the infection so far is uncertain. In all these instances the spread was not particularly rapid, and there was time for the occurrence of successive short emigrations of rats, with successive production of local epizoötics farther and farther removed from the original outbreak. I am aware of no instance in which migrating rats have been proved to carry plague infection over longer distances than this: or in which infected rats have been carried by train (in grain or goods waggons, for example); or, finally, in which rats have been proved to carry plague infection from one port to another on board ship.

In regard to the possible carriage of living infected rats by train, with consequent introduction of infection into a place from a distance, the matter is not a wholly simple one, and it has, perhaps, not yet received the attention which it deserves. I have not succeeded in finding any published observations bearing upon this point; those which I was myself able to make related to but one town and one set of circumstances, and they led to a negative result.

My inquiries related to the outbreak of plague in Calcutta in 1898; they were made of the station master, goods superintendents, passenger and goods guards, and clerks attached to the godowns of the Howrah Station, the terminus of the lines of railway which bring all the goods and passenger traffic from the west of India to Calcutta. I learnt that grain (with which rats are so constantly associated) is packed in sacks and not in bulk; and that goods and grain waggons travel very slowly, taking fourteen or fifteen days to accomplish a journey done by passenger trains in two days. None of my informants could recall a specific instance in which he had seen a live or dead rat in a waggon, but more than one thought he might have seen one and forgotten, as he would not pay much attention to such an occurrence. One guard had seen a very large dead rat on the footboard of a waggon; he thought it had been carried some considerable distance in that position, but how far he could not say. It would be possible for a rat to gain access to a waggon while it was being loaded, as a flap connects it with the platform, and a waggon might be left for a time with the doors open and the coolies away. Once inside and the door sealed, it is a question how long a rat could survive; there would be abundance of food and probably of air, but there would be no water, and in India the heat would be intense. On one occasion, shortly before my inquiries were made, a dog had been accidentally shut up in a waggon, and travelled for twelve hours before the sound of its whining led to its release. Supposing a plague-infected rat to gain access to a waggon, it would probably not survive any great length of time; it would die and its body would be found at the end of the journey. How long the plague bacillus can survive in the body of a dead rat is uncertain; I have never succeeded in finding it in bodies where decomposition had already set in.

It would seem probable, then, that the infection of plague might be carried by train in the body of an infected rat over a distance which a goods train can traverse in one day or, probably at the most, two days. It is unlikely that a plague-infected rat would survive longer than this and be in a condition to escape at the end of the journey and diffuse the infection amongst its fellow-rats in the new locality. It is very unlikely that a plague-infected rat would be carried in a passenger train. There remains the possibility of the plague virus being carried by train in grain or other goods contaminated by the dejecta of plague-infected rats.

Whether the plague infection has ever been carried over short distances by train in the bodies of living infected rats, or over longer distances in rat dejecta, I am aware of no evidence to show. Plague has often been carried by train in the bodies of infected persons, but I know of no proved instance in which it has been carried by train in the bodies of rats or in rat dejecta.

RATS ON SHIPBOARD.

In regard to the carriage of plague-infected rats on board ship from one port to another, such a mode of transport of infection is generally believed to be possible. The fact that in Calcutta, Bombay, Alexandria, Oporto, Maurítius, and many other places, the earliest cases of plague occurred in the neighbourhood of the docks, or in persons employed among shipping, lent great probability to the view that the infection was in these instances imported by sea; and as in no instance was it possible to prove its introduction in the body of an infected person, or in infected fomites, and as in some of these instances a rat mortality near the docks accompanied or preceded the outbreak in human beings, it has seemed exceedingly probable that infected rats, or articles contaminated by them, have been the means of introducing the infection. There is great difficulty, however, in finding proof of such an occurrence. On no recent occasion, it would seem, has it been possible to trace an outbreak of plague to a definite introduction of the infection by sick or dead rats upon a certain known ship. On the other hand, sickness and death of rats might so easily occur on board a ship without being discovered, or, if discovered, without their significance being realised, that this negative evidence is no proof that the infection has not been brought by sea in infected rats or articles contaminated by them. A plague epidemic always takes some time to develop, and by the time it is recognised the ship which brought the infection may have left the port; or such an ordinary circumstance as the finding a few dead rats on board many weeks before may have been quite forgotten.

I am aware of only three recorded instances, though probably others have escaped my notice, in which the development of human plague cases on board a ship has been associated, or believed to be associated, with a mortality among rats. They are the following:

a. The ss. *Shannon* left Bombay for Aden some time in March, 1898; the day before she sailed "several dead rats" were found in the purser's storeroom on board, and the day after she sailed a postal official on board developed symptoms of plague.[42]

b. A French barque, the *Duchesse Anne*, arrived at San Francisco from Hong Kong on October 28th, 1898, having been seventy-four days on the voyage. According to the telegrams to the daily press at the time, the captain had died on board of plague "in August," a member of the crew had died of the same disease "in September," and "all the rats" on board had died of what was believed to be plague. Fuller details of the incidents, however, throw great doubt on all these statements. The captain, it is true, died on the fifth day of the voyage, but of what disease could not be ascertained. A sailor died on the thirty-fifth day out of what appeared to have been phthisis. One or two rats were trapped (when is not stated), but no dead ones were found. There was no reason to suppose that the captain had died from plague.[43]

c. In May, 1898, several cases of plague occurred among the crew of the ss. *Mahallah*, a ship belonging to the Khedivieh Company, and employed on postal service in the Red Sea. The infection seemed to cling to this ship in a remarkable manner, successive cases of plague developing during a whole month, in spite of repeated disinfections. During the earlier disinfecting processes dead bodies of rats were, it is stated, found in the boat, and other rats were seen, still living, which ultimately died of what was believed to be plague. Sick animals were seen even after the second process of disinfection.

The details hitherto published in regard to all these cases are too scanty to allow of any deductions being drawn as to the parts played by the rats in their production. In the other published instances of plague occurring on board ship at a distance from an infected port—such as those in the Thames in 1896, on the *Golconda*, *Carthage*, *Bhundara*, *Caledonia*, *Dilwara*, *Patna*, *Peninsular*, *Berenice*, *J. W. Taylor*, *Kilburn*, or *Montevideo*—the accounts which have appeared in the daily or weekly press have either made no mention of sickness or death among the rats on board, or have definitely stated that nothing of the kind had been observed.

INFECTION OF RATS UNDER ARTIFICIAL CONDITIONS.

The high degree of susceptibility of these animals to plague has been shown experimentally by a large number of observers. The disease has been communicated to them by inoculation with pure cultures of the bacillus, by implantation of fragments of organs from plague cadavers under the skin of rats, by feeding with infected material, by intraperitoneal injection of plague material, and by placing fragments of organs or a portion of a pure culture of the bacillus in the nostrils or in the conjunctiva.[44]

Plague in Bandicoots.

This animal (*Nesokia bandicota*), which is common enough in India, though much less common than the ordinary house rat, has been known to become the subject of plague. Recorded observations of the kind are, however, scanty, and I am aware of only one positive instance in which these animals contracted the disease. Mr. Hankin[45] has stated that in Upper Colaba, a district of Bombay, in the twentieth week after plague first appeared in that city, an outbreak of the disease occurred in bandicoots in a particular house. The symptoms of the disease in these animals and the numbers attacked are not given. A servant who each day disinfected the house and removed the dead animals contracted plague, and Mr. Hankin himself developed an attack of the disease six days after investigating the occurrence. I have never observed plague in bandicoots in Calcutta, nor was any sickness or mortality recorded as occurring in these animals in that city during 1898 or the early part of 1899. It would appear that though bandicoots may occasionally become infected by plague, they cannot be regarded as of the same importance as the ordinary house rat in the spread of this disease.

Plague in Mice.

Though mice of all kinds are very susceptible in the laboratory to plague, there is little evidence that they suffer from it to any great extent under natural conditions. The fact is a remarkable one, for these animals would appear to be quite as much exposed to the ordinary sources of infection as rats, and in the laboratory they are quite as sensitive to the plague bacillus as rats are; yet in the wild state they have not hitherto been observed to contract the disease to anything like the same extent as the larger animal. In Bombay there has been no evidence of any epizoötic among mice during the successive epidemics of plague which have visited that city. In 1896-97 it was definitely observed that the mice were well and lively, while the rats were dying in large numbers.[46] In one or two instances the discovery of a dead mouse was associated with the occurrence of plague in a human being.[47] At Bandra, near Bombay, some dead mice were found, while plague was epidemic, but no proof has been published that they died from plague.[48] In Calcutta, in 1898 and the early part of 1899, I never heard of a single instance of mice dying under suspicious circumstances, although rats were undoubtedly dying of plague. At Kankhal and Jawalapur, where a smart outbreak of plague occurred in 1897, only two dead mice were seen, and in neither could the plague bacillus be detected.[49]

On the other hand, in some recent instances of plague elsewhere, a mortality among mice has been observed to coexist with plague mortality in rats and human beings. Thus at Tai-Ho-Kou, in Formosa, in September, 1897, both rats and mice are said to have died at the same time as the indigenous cases of plague occurred in human beings.[50] In like manner, during the small outbreak of plague at Jeddah in March, 1898, large numbers of sick mice are said to have been seen. Some were so ill that they could be caught by the hand. In four dead mice the plague bacillus was detected in their tissues (whether more were examined with negative results is not stated).[51] In Alexandria dead mice were found, in addition to dead rats, in a certain rag and bone store, in March, 1899, at a time when plague was believed to be in the city. No proof is, however, offered that the animals had died from plague.[52]

Plague epizoötics in mice would, then, appear to be rare, though other instances might be quoted from the accounts of past epidemics—as, for example, in the outbreak of plague in the Punjab and Kashmir about 1611,[53] and the more recent occurrence of mortality among mice (and rats) in Barkuri village, Danpur Pargana, Kumaon, a known centre of *mahamari*, or hill plague, though this mortality was not at the time accompanied by any mortality from plague in human beings.[54] Generally it would seem that mice play a very much less important *rôle* than rats in spreading plague.

Plague in Squirrels.

On at least one occasion these animals have been proved to contract plague in the wild state. In December, 1898, a grey-striped squirrel was picked up dead at Gadag, in the southern portion of the Bombay Presidency, where plague was at the time prevalent. There was no bubo in this animal, but the spleen was enlarged and plague bacilli were isolated from its tissues.[55] On another occasion, in Poona, two dead squirrels were picked up in the lines of the 2nd Bombay Lancers,

among whom plague was at the time prevailing. The belief was expressed that the animals had died from plague, but no positive proof of this is adduced.[50] Experimental evidence of the susceptibility of squirrels to plague is apparently lacking. These animals are extremely common in India, and the rarity of recorded instances of their contracting the disease must be taken to indicate that they are not highly susceptible to the virus. The part they take in its spread must be an extremely small one.

Plague in Guinea-pigs.

In the laboratory these animals are very susceptible to the virus of plague, and they are among the most convenient for experimental purposes. I am aware of no published evidence that these animals have contracted the disease in a natural state.

Plague in Porcupines.

The single reference that I have seen to the occurrence of plague in these animals is the following brief statement published last autumn: "It is reported at Mysore that several porcupines have died in the Zoological Gardens from bubonic plague."[57] In view of the great susceptibility of other rodents to plague, there is no *a priori* reason why porcupines should not be liable to it. Detailed observations upon the manner in which animals with so impenetrable an epidermic covering contracted the disease should prove interesting.

Plague in Marmots.

In the Transbaikal province in Eastern Siberia, a marmot known as the Tarbagan (*Arctomys bobac*) suffers at times from a disease believed to be plague, and this disease is occasionally transmitted to human beings. In an endemic plague centre in Eastern Mongolia there is also some evidence that these animals contract the disease. I have elsewhere[58] discussed in detail what is known of these two centres of disease and the part taken by the marmot in its spread.

Rabbits.

These animals, though susceptible to the disease in the laboratory, do not appear to have ever contracted it under natural conditions. Should plague, which has now for the first time in history reached Australia, spread at all widely there, it will be of great interest to observe whether these animals, which abound so in Australia, suffer at all from the disease.

NOTES AND REFERENCES.

[1] The present discussion of the subject will be confined to recent evidence. [2] *Thirtieth Annual Report of the Sanitary Commissioner with the Government of the North-West Provinces.* [3] *Ibid.* [4] *Indian Medical Gazette*, March, 1899. *Plague in Monkeys and Squirrels.* By Alice Corthorn, M.B. [5] *Report of the German Plague Commission*, p. 299. [6] *Report of the Russian Plague Commission*, p. 16. [7] In at least one instance a monkey has been artificially infected by being allowed to chew a piece of sugarcane which had been smeared with a pure culture of plague bacilli. (Wilm, *Indian Medical Gazette*, June, 1897.) [8] The principal families of the *Murinæ*, the zoological group to which rats and mice belong, are the *Mures* and *Sigmodontes*. The former are confined to the Old World, the latter to the New World and Madagascar. The most noteworthy genus of the *Mures* is the *Nesokia*, of which the most remarkable member is the pig-rat or bandicoot (*Nesokia bandicota*) (*Encyclopædia Britan.*) It was the last-named animal whose geographical distribution was believed to coincide to some extent with that of plague (Cantlie, *Epidem. Soc. Trans.*, N. S., vol. xvi, p. 19). The recent spread of plague to countries where the bandicoot is unknown, and the infrequency with which this animal is infected in countries where it exists have shown that this view can no longer be held. [9] The course of the rat migration in Bombay is traced in detail in the Municipal Commissioner's report for that city, 1896-7, pp. 9-10. [10] *Ibid.* [11] *Indian Medical Gazette*, 1897, p. 307. Surgeon-Lieutenant-Colonel Henderson, on Plague in Sind. [12] *Ibid.* [13] Rennie, quoted by Cantlie (*loc. cit.*). [14] Baber, in Parliamentary Papers, 1878. China, p. 6. [15] Lowry, *Medical Reports of the Chinese Imperial Maritime Customs*, No. 24. [16] McGowan, *Ibid.* [17] *Times of India*, September 30th, 1896. [18] *Report of the Sanitary Commissioner with the Government of India*, 1897, p. 91. [19] Whether a large proportion, or any, of these rats had died from plague is not stated. [20] Lowry (*loc. cit.*) found the lungs of rats dead from plague deeply congested; the same was observed at Lienchow, and in the districts of the southern Kiangtsi in 1886, but no mention is made of pneumonic patches in the lungs. During the prevalence of plague in Yunnan nearly a century ago "it happened that in the daytime strange rats appeared in the houses, and lying down on the ground perished with blood spitting," which may have indicated a lung affection. (Mr. Kumagusu Minakata in *Nature*, February 16th, 1899.) [21] Batzaroff, *Annales de l'Institut Pasteur*, May, 1899. [22] Cantlie (*loc. cit.*) for Hong Kong. [23] A. Happer, *Chinese Customs Medical Reports*, 1880. [24] *Bombay Plague Committee Report*, 1898, p. 205. [25] McGowan, *loc. cit.* [26] Baber, *loc. cit.* [27] Compare the description of a necropsy on a rat dead from plague, by A. Rennie. (*Medical Reports of the Chinese Imperial Maritime Customs*, No. 48, p. 69.) [28] *Municipal Commissioners' Report*, Bombay, 1897, p. 9. Also Rennie, *loc. cit.* [29] Yersin, *Annales de l'Institut Pasteur.* [30] *Epidem. Soc. Trans.*, N.S, vol. xvi. [31] Kitasato. *First Report on the Cause of Bubonic Plague.* [32] Okada, *Sei-i-Kwai Medical Journal*, Tokyo, October 31st, 1899. [33] It is beyond the scope of the present article to discuss the many other questions connected with the infection of soil with plague virus. So far as published experiments indicate it would seem that it is only the soil of rooms in which plague patients have lain, or in which rats have perhaps died of plague that becomes infected. There is nothing to support the view that the virus spreads through the soil of a district or country like a patch of ringworm spreading from a centre, as some have suggested. [34] The plague bacillus has been found in the dejecta of rats. [35] Government of India, *Report upon Plague in India*, 1896-7, Appendix I. [36] The diagnosis in the cases of plague in human beings was beyond doubt. Unfortunately an acute attack of fever, followed by absence from Calcutta on sick leave, prevented me from obtaining any bodies of the rats for bacteriological examination, and from investigating the series of events until a week or more after their occurrence. [37] *Report of the Sanitary Commissioner with the Government of India*, 1897. [38] Rennie, *loc. cit.* [39] McCabe Dallas, quoted by Weir, *Indian Medical Gazette*, 1897; this or the following is possibly the same case as that referred to by Dr. Weir at p. 55 of the *Municipal Commissioners' Report on Plague in Bombay*, 1897. [40] *Ibid.* [41] It can scarcely escape notice that in a large number of historical epidemics no mention is made of an affection of rats; that in some recent local prevalences of plague in India no affection of rats has been observed; and that a plague epidemic, once started, can last a long while after all the rats have apparently left the place in which it is raging. [42] Indian daily press of March 19th, 1898. [43] *Public Health Reports*, Marine Hospital Service, Washington, 1899, p. 1345; report of Dr. M. J. Rosenau, dated Angel Island, California, November 12th, 1898. [44] The literature of experimental plague in rats and other animals is very extensive; among the published observations upon this subject may be mentioned those of the German and Austrian Plague Commissions"; of Haffkine and Hankin in India; of Lowson, Wilm, and Yersin in China; of Roux and Simond in France; of Vysokovitch and Zabolotny and others in Russia; of Batzaroï, of Roumania, and many others. To have attempted in the text to summarise, however briefly, the results obtained by these observers would have extended the present paper far beyond its intended limits. [45] *Annales de l'Institut Pasteur*, November, 1898. [46] *Health Officer's Report on Plague in Bombay*, 1896-7, p. 70. [47] Childe has recorded a doubtful instance of the kind (*Report of the Bombay Plague Research Committee*). [48] Simond, quoted by Hankin, *loc. cit.* [49] Hankin, *loc. cit.* [50] J. J. Matignon, *Janus*, July-August, 1898. [51] Noury Bey, *Annales de l'Institut Pasteur*, September, 1898, p. 604. [52] La Peste à Alexandrie en 1899 (report of the Commission appointed to inquire into the origin of the epidemic), p. 10. [53] *Bombay Gazetteer*, vol. iv, chap. xii. [54] Hutcheson, *Transactions* of the First Indian Medical Congress. [55] Dr Alice Corthorn, *Indian Medical Gazette*, March, 1899. [56] *Report of the Sanitary Commissioner with the Government of India*, 1897, Section iii, p. 83. [57] *Lancet*, September 30th, 1899, p. 910. [58] *Journal of Tropical Medicine* February, 1900, Plague in Siberia and Mongolia and the Tarbagan; by the author.

(To be continued).

AN ACCOUNT OF SOME RESEARCHES INTO THE NATURE AND ACTION OF SNAKE VENOM.

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II.

ON THE SOURCE OF IMMUNITY WHEN COBRA VENOM IS TAKEN BY THE MOUTH.

In a paper published in the BRITISH MEDICAL JOURNAL of July 17th, 1897, Professor Fraser wrote as follows:

> The failure of so highly toxic a substance (serpents' venom) to produce poisoning when it is administered by the stomach might be due to chemical changes produced upon it by the secretions of the stomach and intestines, or to non-absorbability into the blood from the stomach and intestines. It is already known that the toxicity of venom is not reduced materially by gastric digestion.....As serpents' venom introduced into the stomach is not rendered innocuous by the stomach secretions, while notwithstanding it fails to cause poisoning, it may be assumed that the stomach walls are incapable of absorbing it also. If, like other poisons, it can be absorbed from the intestines, the explanation of the failure to produce toxic symptoms when it is administered by the stomach might depend on a chemical or physiological destruction of its toxic properties by some substance or substances which it encounters soon after entering the intestinal canal, and most probably, therefore, by the bile or the pancreatic secretion. To explain the innocuousness of stomach administration fully would accordingly require that the effects on venom of the biliary and other intestinal secretions should be investigated, and also the absorbability of venom through the intestinal walls.
>
> As a contribution to the settlement of the question I have made a number of experiments with the biliary secretion, and whatever may be the influence of the other secretions, or of intestinal absorption, that of the bile has been found to be so decided as to be in itself sufficient to account for the innocuousness of stomach administration.

The object of the present paper is to fill in some of the gaps suggested by Professor Fraser in the above very interesting sentences.

Another possibility occurred to me—namely, that the source of protection might perhaps lie in the action of intestinal epithelium during absorption. This idea was suggested by the fact that the epithelium of the serpents' venom glands has the power of so altering the fluid passing through it as to

change it from an innocuous fluid into a highly poisonous one, might not the action of intestinal epithelium during absorption be to invert this process?

In order to test the truth of this suggestion it was necessary experimentally to so introduce venom into the alimentary canal as to exclude the action of the various juices on the poison. With this end in view a series of experiments was undertaken which will be dealt with *seriatim*. It will be found that another explanation has been forthcoming, and that, therefore, the theory above stated has had to be abandoned. It is only mentioned as it formed the starting point of the series of experiments which are about to be described.

Feeding an animal with cobra venom after excluding the bilary secretion from the alimentary canal.

Two experiments were performed on dogs, thus: The abdomen was opened, the common bile duct securely tied, and an artificial biliary cutaneous fistula established; the intestines were swept clear of bile by purgatives, and the dog was so controlled that it could not reach the escaping bile with its mouth; a large dose of cobra venom was then given by the mouth, in one case in the dry state on meat, and in the other dissolved in milk; in both cases the dose of venom was repeated to make security secure; neither of the animals showed any sign of being the worse for the venom (*vide* Appendix A).

In view of the above facts it was obvious that, assuming the venom to have been absorbed, we must look farther than the action of bile for the immunity exhibited by the animals. It is obviously necessary to dispose of this assumption first. Later on in this paper I shall deal with the question of the influence on certain other animals of the ingestion of cobra venom by the mouth, and I hope there to show good cause to believe that venom taken by the mouth produces a marked constitutional effect upon the animal; this fact in itself would dispose of the question of absorption of venom through the intestinal walls, but more direct proof is not wanting. A reference to Appendix A, Experiment II, will show that the small gut was empty throughout twenty-four hours after the administration of the milk; the stomach was also empty. Final and convincing proof is, however, obtained when we come to the result of Experiment I of Appendix B; here we find that the venom introduced dissolved in milk fifty-five minutes earlier through an artificial opening in the small gut, had been so rapidly absorbed as to cause death in this short time; that the venom had been absorbed through the small gut was evident, not merely by its lethal effect, but also by the local changes produced, which were strictly comparable to those seen when venom is injected subcutaneously; there was, in fact, a gelatinous swelling of the intestinal and submucous membranes which closely resembled the gelatinous swelling we are familiar with in the subcutaneous tissues after injection of poison there. This absorption, be it noted, took place through an unbroken epithelial surface.

Having thus disposed of the question of the power of the intestine to absorb cobra venom, we may pass on to the next series of experiments.

The injection of cobra venom through an artificial opening in the small gut, the conditions being so arranged that the contents of the gut above the artificial anus passed out through that orifice, the peptic, pancreatic, and biliary secretions being thus shut off from the lower segment of gut, into which the venom was injected.

The above conditions were fulfilled by drawing out a loop of small gut through a 2-inch abdominal incision, fastening this gut in position, and later establishing an artificial anus in it. Time was allowed for the parts to heal soundly, and then the cobra venom was injected into the lower segment of gut dissolved in milk (*vide* Appendix B).

A reference to Experiment I of Appendix B will show that the venom, under these conditions, was rapidly absorbed and powerfully lethal. It will be noted that in this experiment the dose was but little in excess of that which the two dogs dealt with in the experiment of Appendix A took with impunity; a reference to Experiment II of Appendix B will show that one-tenth of this dose injected into the bowel did not produce any marked symptoms, while half this large dose given some two days later killed the animal in an hour and a-quarter. It is to be borne in mind that even the small dose, which when injected into the small gut proved ineffective, would have been speedily fatal had it been given subcutaneously.

From the above facts we may draw two conclusions—namely:

1. That cobra venom can be absorbed through the walls of the small gut, but not so readily as through the channels of subcutaneous tissue.

2. That some change or changes are wrought in swallowed cobra venom before it has time to reach a rapidly absorbing area.

Professor Fraser has shown in the very valuable paper I have already referred to that the bile is capable of protecting the organism from the toxic action of serpents' venom. I have repeated many of Professor Fraser's experiments, and have satisfied myself of the accuracy of his conclusions as to the antidotal powers of bile. The experiments of Appendix A point, however, clearly to the fact that bile is not the only protective agent. In the remarks already quoted Professor Fraser suggested that pancreatic juice might digest and neutralise serpents' venom. I have tested this and found that trypsin is capable of reducing very materially the lethal properties of cobra venom when the two are kept at a temperature of 100° F. over a water bath in an alkaline solution. A summary of the experiments which have led up to this conclusion will not be out of place.

First Series (October 26th, 1899).—Four rabbits were used, one being a control and the other three receiving respectively venom digested with pepsin in 0.2 per cent. solution of hydrochloric acid, venom digested with trypsin and sodium carbonate, and venom mixed with 0.07 gram of cobra bile. In the whole series 0.0007 gram of cobra venom per kilo. of the rabbit's body weight was used. The indications were not conclusive, but it appeared (1) that the pepsin had had no action on the venom, (2) that too much sodium carbonate had been given, and (3) that the bile had acted protectively.

Second Series (October 28th, 1899).—This series practically confirmed the above conclusions. They were performed before the results of the former series had had time to be known, and therefore one was unable to profit by the experience the results of the first set ultimately brought.

Third Series (November 16th, 1899).—In this series the dose was raised to 0.0008 gram of cobra venom per kilo. of the rabbit's body weight. The bile experiment was omitted as it had been more exhaustively dealt with elsewhere, and an experiment was added to ascertain whether it was likely that the absorption of the products of digestion of proteids in any amount likely to be produced by the action of the digestive ferment or venom would in itself be fatal. The control venom animal died in 6 hours and 50 minutes; the pepsin experiment animal died in 7½ hours, while the trypsin experiment animal suffered but little at the time and survived 20 days; here again it seemed probable that the amount of sodium salt used was too large. In any case, however, a distinct protection had been established. The result of the control experiment on the injection of peptones was death 12 days after injection, but it is to be remembered that 25 times as much egg albumen was used for this experiment as poison in the remaining experiments, and that therefore the products of digestion produced were in great excess of what can have been produced in the venom experiments.

In all these experiments the solution of venom was at a strength of 0.0001 gram per c.cm. of water, and digestion was carried on for two hours at a temperature of 100° F., the correct degree of warmth being maintained by means of a water bath.

The next series of experiments it appears worth while to give *in extenso* in Table I.:

TABLE I.—*Experiments directed to Ascertain whether Pancreatic Digestion Lessens the Lethal Properties of Cobra Venom.**

Date. (Nov., 1899.)	Weight in Kilos.	Dose per Kilo.	Remarks.
21st	1.6720	0.0007 gram venom	Control; died in 34½ hours 10 minutes.
21st	1.9056	0.0007 ,, venom 0.0050 ,, trypsin 0.0050 ,, sod. carb.	There was no marked constitutional disturbance for some days. The rabbit gradually lost flesh, there was some sloughing at the seat of injection, and it died 17 days after the operation.
21st	1.9836	0.0008 ,, venom 0.0050 ,, trypsin 0.0050 ,, sod. carb.	This rabbit closely followed the same course as the previous one, but there was more local reaction. It died on the 17th day.
21st	2.0190	0.0009 ,, venom 0.0050 ,, trypsin 0.0050 ,, sod. carb.	Died in 32 hours.

*The venom (cobra) was dissolved at a strength of 0.0002 gram per c.cm. of boiled water. The solutions were kept at a temperature of 100° F. for 2 hours after the addition of the trypsin and carbonate of soda; they were then injected into the flanks of rabbits.

NOTE.—It is possible that climate had something to do with the deaths

of the second and third rabbits, as they died during a very cold night. Rabbits are very susceptible to cold and damp in the hills of India, and this will obviously work at a greater advantage in lowering conditions of nutrition such as those which follow the injection of snake venom.

It will be at once noticed that the rabbit which received the large dose of 0.0009 gram per kilo. of body weight, and which under ordinary circumstances could not have been expected to live more than two to four hours, survived thirty-two hours, living nearly as long as the control which had only received 0.0007 gram per kilo.; it will also be noted that the two other rabbits which had received trypsinised venom showed a very marked degree of protection, and indeed it is doubtful whether they would have succumbed had the weather been less severe at the time. Owing to the sensitiveness of rabbits to climatic influences, and to their slight resistance to the after-effects of venom, which has been elsewhere referred to, the next series of experiments was carried out on fowls. The facts contained in Table II leave no room for doubt as to the power of trypsin to reduce the lethal properties of snake or at least of cobra venom.

Table II may be divided into three sections, each consisting of a control venom experiment, and three trypsin experiments. In the first section the dose of venom used was 0.0015 gram, in the second 0.00175 gram, and in the third 0.002 gram per kilo. of the fowl's body weight. It had previously been ascertained by experiment that even the smallest dose mentioned was fatal in one or two days, while the highest was more rapidly fatal.

Table II.—*Experiments designed to ascertain whether Pancreatic Digestion Destroys the Lethal Properties of Cobra Venom.**

Date. Dec., 1899.	Weight in Kilos	Dose per Kilo.			Course of Events.
16th	0.69425	0.00166	gram	venom	Dead in 23 hours 40 minutes. Control.
16th	0.92050	0.00150	,,	venom	Sick for 1 day; recovered.
		0.00033	,,	trypsin	
16th	0.78630	0.00150	,,	venom	Never seriously ill; recovered.
		0.00100	,,	trypsin	
16th	1.00590	0.00150	,,	venom	,, ,, ,,
		0.00300	,,	trypsin	
16th	0.80760	0.00175	,,	venom	Died in 60 hours. Control.
16th	1.26100	0.00175	,,	venom	Sick for 1 day; recovered.
		0.00033	,,	trypsin	
16th	0.86427	0.00175	,,	venom	Never seriously ill: recovered.
		0.00100	,,	trypsin	
16th	1.02000	0.00175	,,	venom	,, ,, ,,
		0.00300	,,	trypsin	
16th	0.80050	0.00200	,,	venom	Died in less than 40 hours. Control.
16th	0.80760	0.00200	,,	venom	Sick for 1 day; recovered.
		0.00033	,,	trypsin	
16th	0.89950	0.00200	,,	venom	Never seriously ill: recovered.
		0.00100	,,	trypsin	
16th	0.87200	0.00200	,,	venom	,, ,, ,,
		0.00300	,,	trypsin	

* The venom was dissolved in freshly-boiled cooled water at a strength of 0.001 gram of venom per c.cm. of water. In all but the control experiments the solution was made just alkaline by the addition of sodium carbonate, and the trypsin was then added (Merck's trypsin). All the solutions alike were then placed in a water bath at 100° F., and kept there for 3 hours. At the end of that time, they were removed and injected subcutaneously in the subcutaneous tissue under the wings of the fowls.

Note.—In the first experiment it was intended to give 0.0015 gram of venom per kilo as a control, but, owing to a mistake, 0.00166 gram was given.

A well-marked instance of what has above been called the "personal factor" is to be observed in the order in which these control fowls died; this does not, however, affect the deductions from the series of experiments since all the control fowls did die, while of those which received trypsinised venom every one recovered; it would appear that the smallest dose of trypsin used was rather low, for the fowls which received poison treated with this low dose of the ferment were sick in every case at first. All the fowls alike showed the usual loss of weight, so they were presumably somewhat, though not severely, affected by the venom.

This closes the case for the action of the ferment of pancreatic juice on the lethal properties of cobra venom.

Taking into account that absorption of venom is far less rapid from the gut than from the subcutaneous or muscular tissues, the above shown properties of trypsin will readily explain why venom fails to kill when swallowed, even after the protective influence of bile has been excluded, while it kills certainly, if in large enough quantity, when both the biliary and pancreatic secretions are excluded from the area of intestine which has to deal with the venom.

There are one or two other interesting facts which may be mentioned in this place. The first is that I have been unable to produce symptoms or signs of cobraism by injecting into the rectum of a dog even large doses of cobra venom; as much as 0.5 gram was used for one injection on a 10-kilog. dog, which was carefully watched to make sure the venom was not returned; it had been given dissolved in milk and water.

Another point of interest was the readiness with which venom was taken from the peritoneal cavity; it is a very easy matter to inject a solution of venom into this cavity in rabbits, as the abdominal walls are very thin, and the needle can be felt passing into the sac by the sudden lessening of resistance to its progress; it can then be freely moved in the cavity; it was found that a dose of cobra venom which would take about seven hours to kill when injected subcutaneously, would prove lethal in less than three hours when it was delivered into the abdominal cavity; a farther point of interest was that in all intraperitoneal injections symptoms of poisoning commenced much earlier than in the case of subcutaneous injections of a similar dose of venom.

The Effects of the Ingestion of Cobra Venom in a Healthy Animal.

Professor Fraser, writing in the British Medical Journal of April 18th, 1896, pages 958-959, gives the result of certain experiments he conducted, which led him to the conclusions summarised in the following words:

The extraordinary result was thus obtained that serpents' venom introduced into the stomach in large quantity—in a quantity which, if injected under the skin, would be sufficient to kill 1,000 animals of the same species and weight—while it failed to produce any definite symptoms of poisoning, nevertheless produced *in a few hours* complete protection against the lethal effect of a dose of venom more than sufficient to kill the animal. (The italics are not in the original.)

The British Medical Journal of August 8th, 1896, page 346, in summarising Professor Calmette's valuable address delivered at Carlisle, makes the following noteworthy statement: "*He* (Professor Calmette) *had never obtained immunity by feeding animals on venom.*" (Again the italics are not in the original.)

Table III.—*Experiments directed to Ascertain whether Feeding Rabbits on Cobra Venom affords Protection against the Effects of the same kind of Venom subsequently Injected Subcutaneously.**

Serial No.	Date.	Weight in Kilos.	Dose per Kilo.			Result.
I	27/9/99	1.550	0.1240	gram	by mouth	Died in 2 hours 50 minutes. *Post mortem* examination showed that the injection had been made into the peritoneal cavity. This explained the rapid death.
	2/10/99		0.0210	,,	,, ,,	
	6/10/99		0.0416	,,	,, ,,	
	12/10/99		0.0330	,,	,, ,,	
	13/10/99		0.5000	,,	,, ,,	
	14/10/99		0.0007	,,	injected into the flank	
III	14/10/99	1.542	0.0140	,,	by mouth	Died in 6 hours 14 minutes after the injection.
	15/10/99		0.0154	,,	,, ,,	
	16/10/99		0.0700	,,	,, ,,	
	17/10/99		0.0700	,,	,, ,,	
	18/10/99		0.0890	,,	,, ,,	
	19/10/99		0.7000	,,	,, ,,	
	21/10/99		0.0007	,,	subcutaneously	
XI	21/10/99	1.3390	0.0016	gram	by mouth	1/11/99. Sickened soon after injection; at 10 P.M. was breathing jerkily and with difficulty. 2/11/99. Lying prone and nearly paralysed at 8 A.M.; died at 10.10 A.M.—that is, 19 hours 40 minutes after injection.
	25/10/99		0.0070	,,	,, ,,	
	26/10/99		0.0140	,,	,, ,,	
	27/10/99		0.0560	,,	,, ,,	
	28/10/99		0.0700	,,	,, ,,	
	29/10/99		0.0700	,,	,, ,,	
	30/10/99		0.1400	,,	,, ,,	
	31/10/99		0.7000	,,	,, ,,	
	1/11/99	1.530	0.0007	,,	subcutaneously	

* The poison in all these experiments was dissolved in a small quantity of water and then mixed with chopped cabbage leaves; the animals ate the mixture readily.

I accordingly instituted a number of experiments to ascertain, if possible, what the cause of the discrepancy in evi-

dence was. A review of Tables III, IV, and V given below will show the results obtained.

In the earlier experiments (Table III) no control animal was used, as it was expected that the protection would be too well marked to need control. In view of the conclusions eventually arrived at, we may neglect the first experiment, on the ground that, as the injection was made accidentally into the peritoneum, the test was unfairly severe. Experiments III and XI were free from this objection; it will be noted that a dose of venom was given nearly every day for a week in III, and for a slightly longer period in XI; the earlier doses were comparatively small, while the last dose in each case was one which, if given subcutaneously, would have been fatal to 1,000 animals of the same weight and species. There was no evidence of protection in either of these cases; on the contrary, the animals seemed to have been markedly influenced unfavourably by the swallowed venom, so far as their power of resisting the lethal effects of the venom went.

Two series of experiments were therefore undertaken; the first of these is comprised by Experiments LV-LIX (Table IV). The most noteworthy point here was that during the few days immediately following the injection the control rabbit was decidedly less ill than any of those which had beforehand received venom by the mouth. The control rabbit died in 24 days, while the other 3 died respectively in 7 hours, 11 days, and 37 days after injection. It is evident that no case for protection can here be established.

TABLE IV.—*A Controlled Series of Experiments directed to Ascertain whether Feeding Rabbits on Cobra Venom affords them Protection against the Effects of the same kind of Venom subsequently Injected Subcutaneously.**

Serial No.	Date.	Weight in Kilos.	Dose of Venom per Kilo.	Result.
LV	28/10/99	0.9070	0.0007 gram injected into flank as control	28/10/99. Not seriously unwell. 29/10/99. Unwell, but eating, and decidedly better than rabbits of next three experiments. 21/11/99. Was ill for several days, then improved, but emaciated, and died 24 days after injection.
LVII	27/10/99 28/10/99	0.9068	0.4500 gram by mouth 0.0007 ,, subcutaneously	28/10/99. Very sick to-night. 29/10/99. Very sick, not eating. 3/12/99. Was very sick for several days, then improved, but emaciated, and died on the 36th day.
LVIII	27/10/99 28/10/99	0.8501	0.7000 gram by mouth 0.0007 ,, subcutaneously	This rabbit followed much the same course as the previous one, and died on the 11th day with a sloughy wound at the seat of injection.
LIX	27/10/99 28/10/99	0.8500	0.7000 gram by mouth 0.0007 ,, subcutaneously	Died 7 hours after injection.

* The venom was administered in the same way as in the previous experiments.

NOTE.—The hypodermic injections of venom on the 28th were all made in the flank.

Another series of experiments was undertaken on November 21st and 22nd, and here the indication seemed more clear than ever, for the control lived 24 days, while the two rabbits, which on the previous day had each received by the mouth 500 times the subcutaneous lethal dose, died respectively in 24 hours 50 minutes and 33 hours 40 minutes.

Throughout all these experiments the writer could not help observing that though feeding an animal on snake poison did not appear at the time to affect it injuriously, yet when a dose of poison subcutaneously given was superadded, the symptoms of cobraism were more rapidly developed and more markedly pronounced than would have been the case in an animal which had only the subcutaneous dose of poison to contend with.

From this it is surmised that cobra venom when taken by the mouth passes in some form, probably an altered one, into the general circulation. It is likely that if time is given for the disposal of these products their effect will be found to be in the direction of immunisation, but in the meantime they appear to affect the animal's resistance to the venom prejudicially.

TABLE V.—*Farther Experiments on the Acquisition of Immunity by Feeding Rabbits.**

Serial No.	Date.	Weight in Kilos.	Dose per Kilo.	Remarks.	Result.
85	21/11/99 22/11/99	1.22 1.22	0.3500 gram 0.0007 ,,	By mouth Subcutaneously	*Nil.* Sickened in a few hours, and was dead 24 hours 50 minutes after injection.
86	21/11/99 22/11/99	1.785 1.785	0.3500 ,, 0.0007 ,,	By mouth Subcutaneously	*Nil.* Sickened rapidly, and died in 33 hours 40 minutes.
87	21/11/99	1.813	0.0007 ,,	Subcutaneously	This rabbit was less ill than either of the preceding ones, and, though sick for a few days, gradually got better. It died 24 days after the injection, greatly emaciated.

* The poison was dissolved at a strength of 0.001 gram. per c.cm. of water.

I have noticed a very similar phenomenon with regard to sublethal doses of venom subcutaneously administered; if sufficient time is allowed to elapse between the injections, the animal acquires a protection against the influence of the venom, but if the doses are given at too short intervals, death will result from what otherwise would have been a sublethal dose. These facts appear to point to the inference that it takes the organism some little time to deal with venom, however administered, and that in the earlier stages of this complex and little-understood process the animal is more susceptible to poison than it ordinarily would be. There is no want of analogy in the action of other similar protective processes.

This is not, as it may at first sight appear to be, a question of purely theoretical interest, for on it hinges the correctness or otherwise of Professor Fraser's views as to the source of immunity among snake charmers all the world over. I thoroughly believe those views to be correct so far as Indian snake-charmers are concerned, but I am disposed to disagree with Professor Fraser as to the rapidity with which the immunity can be acquired by animals. It is always to be remembered, however, that it is a common practice of Indian snake charmers to rub the poison of cobra on to the back of one hand with the palm of the other; this habit, which one frequently sees the snakeman practise, must often lead to the absorption of venom through abrasions, even if this is not deliberately aimed at. Possibly it is to this practice that Professor Fraser refers when he speaks of "inoculation of venom" being "apparently sometimes practised" by snake charmers.

It is more than likely that the mongoose owes its large share of immunity against snake venom to its practice of devouring the head of its victim as soon as the victory has been won. I shall have more to say on this subject on a subsequent occasion when dealing with the acquired resistance of the mongoose. For the present it only remains for me to express the regret I feel in differing, even in a minor matter, from one to whom all workers in the field of snake poison research owe so much as they do to Professor Fraser.

There are many to whom I would like to express my acknowledgements did space allow, but I should be indeed remiss did I forgot to mention Lieutenant-Colonel Price, I.M.S. (retired), Captain Samman, R.A.M.C., Mr. C. Grey, and Mr. Balavendaram, all of whom have given valuable assistance in carrying out my experiments. Last, though far from least, I desire to acknowledge the kind and ready assistance given by Mr. C. H. Mounsey, Collector of Coimbatore, and Mr. C. Weir, Collector of the Nilgiri District, in obtaining snakes, animals for experimental purposes, etc.

APPENDIX A.

Experiments Directed to Ascertain whether the Influence of Bile is the Sole Protective Factor when Cobra Venom is administered by the Mouth to Animals.

EXPERIMENT I.

Date.

2/10/99 A black pariah bitch, weight 13.6 kilos., was chloroformed, the abdomen opened with antiseptic precautions, and the common bile duct tied close to the duodenum; the gall bladder was opened, emptied, and sutured to the peritoneum (parietal) at the upper part of the wound, a tube inserted, and the rest of the wound carefully closed, a biliary fistula being thus left; the dog recovered well from the anæsthetic.

3/10/99 No signs of peritonitis: dog doing well.

4/10/99 Dog well and brisk. At 8.13 A.M. a dose of cobra venom (dry), weighing 0.30 gram, was given by the mouth on meat, and a similar dose repeated at 11.45 A.M. The dog thus took an amount of cobra venom corresponding to a dose of about 0.044 gram per kilo. of body weight.

5/10/99 The dog has not been any the worse for the venom. No sign of cobraism appeared. A dose of castor oil was given and the dog was freely purged thereby.

6/10/99 Passed two stools during the night: the first was well bile-stained, the second quite white; bile escapes freely from wound; fresh dose of oil given.

7/10/99 The dog had got free from its bandages during the night, and had been licking the bile from the wound; a fresh dose of oil was given, and the dog was securely tied, so that it could not reach the fistula with its mouth; the dose of oil was repeated in the evening to clear out any bile that had been licked up.

8/10/99 Dog passed quite white stools this morning, and so at 7.30 A.M. she received by the mouth a dose of 0.62 gram of cobra venom, that is, a dose of 0.045 per kilo.; at 10.30 A.M. she was brisk and wagging her tail.

9/10/99 The dog has not been at all sick, and is wagging her tail; seems in excellent health.

10/10/99 The dog is in excellent health; she passed white stools last night; at 7 A.M. a dose of 0.13 gram of cobra venom (0.01 gram nearly per kilo.) was given hypodermically. The dog quickly sickened, and was dead at 3.30 P.M., that is, in eight and a half hours.

Post-mortem Examination at 6 P.M.—Following down the common duct from the external opening of the biliary fistula, it was found that the ligature had been applied to the duct beyond all branches; the contents of the intestines were tested for bile, but the result was quite negative: there was no appearance of bile staining anywhere on the surface of the intestines. The stomach was full of food.

EXPERIMENT II.

Date.

10/11/99 Under chloroform the abdomen of a pariah bitch (weight, 10 kilos.) was opened, the gall bladder drawn out, packed with sponges, and then emptied; the common bile duct was found, pulled out from the gut for the space of ½ inch, and ligatured as close to the gut as possible; the external wound was then closed, an artificial biliary fistula being established externally in the same manner as in the last operation. The gall bladder was very full, as the dog had been fasting over night. To avoid all danger of the animal licking up bile from the wound, it was so fastened that it could not reach any part of its body with the mouth.

11/11/99 Dog doing well; no motion passed.

12/11/99 7.30 A.M.—2 ounces of castor oil given by mouth. 6 P.M.—Bowels acted; the first part of the motion was slightly bile-stained, the last part quite white.

13/11/99 Bowels acted early this morning, colour quite white; 0.5 gram of cobra venom was given by the mouth dissolved in milk at 10 A.M. The dog evidently disliked the taste, and the milk was poured down its throat; all the milk was retained. The dog seemed none the worse for the dose, and was quite brisk in the evening.

18/11/99 The animal did not at any time seem at all the worse for the venom; bile continued to escape freely from the fistula, and daily motions destitute of bile were passed. At 8 A.M. another dose of 0.50 gram of cobra venom was given dissolved in milk; the poison again appeared to burn her mouth, but she was easier after taking some broth; the whole quantity of milk was retained; she made no effort to vomit any of it. On each occasion the dose of poison corresponded to 0.05 gram per kilo. of her body weight.

19/11/99 The dog was in good health, and had shown no signs whatever of cobraism; she was given an overdose of chloroform, and a *post-mortem* examination made at once.

Post-mortem Examination.—The adhesive process around the sutured gall-bladder was firm and healthy; there was no other evidence of peritonitis; the common duct was traced down from the fistulous opening in the gall-bladder, and was slit up till it joined the duodenum; the silk ligature used was found retracted into the walls of the gut, and the duct was quite impervious till the ligature was cut; the whole length of the duct was then slit up into the gut, and a very marked contrast was noticed in the colour of the mucous lining of the duct above and below the site of the ligature; above it was stained a deep brown by bile, while below the surface was white and glistening. The small gut was empty throughout, and was destitute of any trace of bile; the large gut contained fæcal masses also destitute of bile. The stomach was empty, and natural in appearance.

APPENDIX B.

Experiments to Ascertain whether Cobra Venom introduced into the Alimentary Canal of a Dog under such circumstances that the Peptic, Pancreatic, and Biliary Secretions cannot act upon it, retains its Lethal Properties.

EXPERIMENT I.

Date.

23/11/99 The abdomen of a pariah bitch was opened, under chloroform, a coil of small gut was drawn out, and fixed outside the abdominal wall by means of a silk suture passed through the whole thickness of both lips of the incision and the mesentery of the coil; the suture, which was a double one, was fastened by tying its ends over two buttons, one at either side; a small horsehair suture at each end of the incision including the peritoneal coat of the gut made all secure. The dog had been prepared for operation by a dose of oil overnight and an enema in the morning.

25/11/99 The portion of gut above the skin surface was cut away with scissors; the mesenteric or posterior wall of the gut thus projected, forming a spur which effectually shut off the upper and lower openings of the artificial anus from each other.

27/11/99 The edges of the incision in the gut have healed, and the contents of the upper segment are voided freely, and show no tendency to pass into the lower segment's artificial orifice.

4/12/99 The dog has made a good recovery, and is gaining flesh. Its weight is a little over 9 kilos. 0.5 gram of dried cobra venom was weighed out, dissolved in 1 ounce of milk and water, and injected into the lower opening in the gut through a soft rubber catheter passed in about 5 inches; the catheter was withdrawn, and the lips of the orifice were kept closed by the pressure of the finger and thumb, so that no fluid could regurtitate. Within fifteen minutes the dog sickened, and was dead in fifty-five minutes.

Post-mortem Examination.—A *post mortem* examination was performed at once. There was a healthy adhesion of the gut to the abdominal wall, and no other evidence of peritonitis; the artificial anus was found to be in the small gut, 12 inches above its junction with the large intestine; the mesenteric vessels of the area were turgid with blood, and the glands were swollen: the small gut above the artificial anus was flaccid and flattened, while that below stood out as if full of fluid. On slitting up the small gut above and below the artificial opening it was found that the mucous membrane of the lower segment was three times as thick as that of the upper. It presented an appearance closely resembling the gelatinous exudation one sees in subcutaneous tissue after the injection there of cobra venom, and the swelling was obviously of the same origin. This swelling accounted for the turgid state of the gut before it was slit up, for nearly all the fluid injected had disappeared and the gut was empty. The poison solution had evidently been absorbed through the walls of the gut, and in so doing had set up an inflammatory process, the outcome of which was the exudation referred to. There was no infiltration of the subcutaneous tissue around the attachment of the gut to the abdominal walls.

EXPERIMENT II.

23/11/99 Experiment I of this appendix was repeated, with slight variations. The intestine was opened at the time of operation, and the gut edges united at once to the abdominal walls by horsehair sutures; the posterior or mesenteric wall of the gut was drawn well forward into the wound, so as to separate the portion of gut above from that below the opening.

27/11/99 The cut edges of the intestine are healed. The dog has done well in every way.

6/12/99 The dog being in good health, and the artificial anus being in a healthy condition, an injection of cobra venom dissolved in milk and water was made into the lower orifice of the artificial anus. Weight of dog was just under 10 kilos. Total dose of poison given was 0.05 gram; therefore dose per kilo. was 0.005 gram. The dog showed no signs of suffering from this dose.

8/12/99 A dose of 0.25 gram of cobra venom dissolved in a few drachms of milk was administered, as before, by injection into the lower opening of the artificial anus. This represents a dose of 0.025 gram per kilo. of body weight. The dog was dead in an hour and a quarter.

Post-mortem Examination Four Hours after Death.—The opening of the artificial anus was situated 7 inches above the junction of the small gut with the large. As in the previous case a marked contrast was noticed between the thickness of the mucous membrane of the small gut above and below the artificial anus: above the membrane was natural; below it was much thickened, and was gelatinous in appearance; this gelatinous appearance also extended down some 5 or 6 inches of the first part of the large gut; the portions of both large and small gut which were affected in this way also had the mucous surface covered with a thick film of mucous exudation; the remainder of the intestine was normal in appearance.

In future communications it is proposed to deal with the protective properties of the serums of the cobra and Russel's viper, with the cause of the immunity possessed by the mongoose, with the nature of the protection conferred by bile, and with certain other topics.

THE Sanitary Council of Tangier has obtained from the Sultan of Morocco a concession of the island of Mogador as the site of a lazaretto.

MILK POISONING IN MALTA.*

BY T. ZAMMIT, M.D.,
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EVERY year in Malta we hear of whole families being suddenly attacked with severe gastro-intestinal disturbances, so severe, in fact, that occasionally there is a fatal issue. That which is characteristic in these outbreaks is the suddenness of their onset and their occurrence in different points of the island. When a case of this kind occurs in our department we always expect that other reports of a similar nature will follow. The seasons have, apparently, no etiological relation, as we have had attacks in winter as well as in summer, and no variation in the general health of the population has ever been observed.

It was but natural that these outbreaks should be ascribed to local causes. The lay mind, and very frequently the profession as well, have ascribed the symptoms to the effect of poisons, mineral or otherwise. The most superficial observers have always found that milk was constantly an article of food partaken by the persons affected; and it is, therefore, a general opinion that the outbreaks are actually due to unsound milk. I remember, however, a case with absolutely the same symptoms, occurring in a family which had partaken of a meat broth kept for a few hours If the family attacked has had its food prepared in copper utensils the blame goes certainly to the verdigris presumably left unnoticed in the vessel. When copper is not suspected then the goat is held to be at fault. I mention the goat as the population makes use mostly of goat's milk, sheep's and cow's milk being used only exceptionally. In these cases the goat is generally accused of having eaten a poisonous plant. Euphorbiaceous plants, the spurge family, known in the vernacular as *Tenhout*, are believed by many to render milk poisonous. This opinion has been totally discarded by the profession, as a commission appointed for the purpose fed a number of goats exclusively on this spurge, and drank the milk for many days without any ill effect. The opinion of the profession in general leans to the belief that the milk may acquire poisonous properties when the goat is diseased. As a matter of fact, in a case of this nature which had proved fatal to two young children, the goat which was said to have supplied the milk died next day, and was found to be affected with extensive inflammation of the udders. In all the other cases, however, investigated by the officials of the Public Health Department or by a magistrate the goats concerned have always been declared to be healthy. Against this assumption we have also to note that the poisonous symptoms are not apparent immediately after the ingestion of the milk, but some hours after, and that the severity of the symptoms is by no means proportionate to the quantity of milk taken.

Since the researches of Dr. Klein on the relation of Asiatic cholera and cholera nostras, published in the Twenty-fifth Annual Report of the Local Government Board, and the report of the same distinguished bacteriologist on the morphology and biology of the bacillus enteritidis sporogenes, and on the relation of the same to milk, sewage, and manure, it was natural to assume that these sudden outbreaks of gastro-intestinal disturbances might possibly be connected with the micro-organism described by Klein. In order to investigate this possible relation, I soon had an opportunity. On December 25th, 1899, five families of twelve persons were taken ill at Casal Axiak with persistent vomiting, diarrhœa, cramps, and the other symptoms of cholera nostras. Two young children did not rally from the attack, and died a few hours after the ingestion of the milk. An investigation was conducted by a magistrate, and the *post-mortem* examination, made by two medical experts, showed nothing abnormal in he viscera but a slight congestion in patches of the intestinal tract and congestion of the venous system of the brain. In a *post-mortem* examination at which I assisted a few months ago, on a child dead under similar circumstances, nothing abnormal but congestion of the brain membranes could be detected.

About ten days after the occurrence of the cases at Casal Axiak, a report reached our department that a number of cases of milk poisoning had occurred in the suburb of Sliema. In half an hour we were on the spot to investigate the conditions under which the outbreak had taken place, and found that seventeen persons residing in five different houses were suffering from the attack. The symptoms were, with varying intensity—severe diarrhœa and vomiting, acute pains in the bowels and stomach, shrunken face, cramps in the extremities and in the abdomen, the pulse weak and irregular, the skin cold and clammy. The attack had followed in all cases three hours after the ingestion of milk bought in the morning. Several persons in one of the families who had carefully boiled the milk before use did not suffer in the least. All the cases eventually got well. The milk was supplied by the milkman from one can, as it was a rainy day. Other families supplied by the same milkman but directly from the goats did not complain of any ill-effect. An inspection of the shed where the milkman kept his goats was immediately made. The forty-one goats forming the herd were carefully examined by a veterinary surgeon (a M.R.C.V.S.Edin.) and declared to be quite healthy. The shed itself was rather clean, and no obvious sanitary defects were detected.

I tried in vain to obtain a sample of the milk supplied and could only obtain a small quantity of the milk which had been carefully boiled. I caused the milk cans to be brought to my laboratory and a sample of water was also taken from the tank in the milkman's farmhouse. The cans had been already washed and dried, but a smell of sour milk was distinct in them all. The can in which the milk in question had been stored was rinsed with a small quantity of sterile distilled water, which was then examined bacteriologically. The sample of water drawn from the tank and the milk obtained were similarly examined. Sterile milk tubes respectively inoculated with ten drops of the three liquids were heated to 80° C. for fifteen minutes and incubated at 37° C. anaërobically in Buchner's cylinders. On the next day in two of the tubes the milk was found changed in the characteristic manner described by Klein, the frothy whey smelling distinctly of butyric acid. The tube inoculated with the boiled milk remained quite unchanged. In the tubes thus changed numerous bacilli were seen under the microscope corresponding in shape to the bacillus of Klein. Two guinea-pigs were injected subcutaneously with the whey, the one weighing 800 grams receiving 4 c.cm. of one of the tubes, and the other weighing 470 grams receiving 2 c.cm. of the other tube. The first guinea-pig was found dead in the morning with an extensive gaseous tumour in the groin and chest due to gangrene which dissolved the muscular tissue. The offensive sanguineous fluid contained the bacillus in pure culture and in enormous numbers. The bacillus stained easily with Gram's method and gave characteristic growths on gelatine, sugar agar, and blood serum agar. The *post-mortem* examination was made a very short time after death and free spores and spore-bearing bacilli were very scanty. The second guinea-pig, which through a faulty injection received a comparatively small quantity of whey, lived for a couple of days and then died with all the pathological alterations observed in the first one. The animal was opened several hours after its death and in all preparations made from the blood and the gangrenous fluid the spore-bearing bacillus was abundantly found along with numberless free spores. The inoculations of media from this guinea-pig were much more vigorous and characteristic.

These results, in my opinion, leave no doubt that the outbreak of gastro-enterical disturbance under examination was due to the contamination of the milk ingested by the bacillus enteritidis sporogenes. The fact that the micro-organism was detected in the washed and dried cans and in the tank water in the farmhouse point to the extreme importance of enforcing the systematic sterilisation of milk cans, and of keeping a constant supervision over the water supply of milkmen.

With regard to the outbreaks themselves the reason why they are not more frequent is obviously due to some general condition or conditions, which, happily, are detrimental to the virulence or the production of the micro-organism, and this is in a way shown by the observed repetition of these outbreaks at short intervals from one another, whilst isolated cases of poisoning are seldom, if ever, known to occur. To go a point further, I wish to point out that this outbreak affords another demonstration, if any be needed, of the golden rule that all milk should be boiled before use. We in Malta do not generally

* Read before the Malta and Mediterranean Branch of the British Medical Association on March 15th, 1900.

lay great stress on the importance of boiling goat's milk, in part because we know that tuberculosis is a rare affection with the goat, and in part because we think that by having the goat milked at the door contamination of the milk is not possible. The milk is no doubt quite sterile in the udder, but the state of cleanliness of the skin of the animal and of the hands of the milker, combined with that of the tin measure in which the milk is collected, afford ample opportunity for pathogenic microbes to find their way into this important food.

BERI-BERI.*

By FRANCIS CLARK, M.B.DUNELM, D.P.H.CAMB.,

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BERI-BERI may perhaps be best described as a disease characterised by difficulties of movement, often associated with atrophic paralysis, especially of the lower limbs, disorders of sensation, œdema of the skin and of the muscles of the lower extremities, and dropsy of the serous cavities.

It is a disease of many types, for while in one patient the evidences of paresis may predominate, in another the symptoms may appear to centre themselves in the respiratory system, and in a third we may have apparently only interfere with the circulatory organs; and it is not to be wondered at, therefore, that the disease has been described by various authors as two or more diseases, the paralytic type being taken as one disease, and the œdematous type as another. Closer researches, have, however, shown that disturbances of the nervous system generally if not always precede the œdema, and that the predominance of one or other of the various symptoms of the disease does not afford sufficient grounds for assuming a different etiology. A very usual concomitant of the disease is anæmia, but it is not by any means an invariable accompaniment.

One of the earliest symptoms is said to be a slight œdema along the crest of the tibia, while later symptoms are a puffy face, difficulty in walking rapidly or in going upstairs, palpitation of the heart on slight exertion, muscular and nervous electrical reactions of degeneration, isolated patches of slight anæsthesia in the calf of the legs, shooting pains in the limbs, and dilatation of the right heart. The muscular atrophy is not infrequently preceded by a spurious hypertrophy due to degeneration of the muscular fibres.

The disease is essentially a chronic one, the so-called acute variety being almost certainly an acute exacerbation of the disease, the initial stages of which have been unnoticed. Such cases usually succumb to acute paralysis of the heart. The most interesting and the most debated point, however, about beri-beri is its etiology. It is said that dirt, overcrowding, and dampness are predisposing causes of the disease, but that it can occur as a localised epidemic without any of these accompaniments is shown in the recent outbreak at the Berlin Foundling House. Manson also states that the disease is more prevalent during the hot than during the cold seasons of the year, but I find that the converse is the case in this colony.

The exciting cause is by Manson said to be a chemical poison generated by a bacterium which resides in the soil or in fomites, but does not gain access to the human body. By Pickelharing and Winckler it is attributed to bacteria in the blood of the patients; but the researches of these savants do not appear to have been sufficiently verified to warrant us in accepting them at present. It is often said that patients with open wounds may contract the disease from a patient in a neighbouring bed, but otherwise the disease is not directly communicable from man to man.

Owing, perhaps, to the remote similarity in some respects of the symptoms of beri-beri to those of ergotism, there is a very powerful contingent of scientists in favour of a food origin of the disease, and this theory receives strong corroboration from the fact that until recently a very large percentage of the *personnel* of the Japanese navy—as much as 20 to 25 per cent., it is said—suffered from beri-beri, until an improved dietary and better sanitary conditions abolished the disease. In connection with this theory the recent French publications point out the important part played by fat as an article of diet in connection with the causation of the disease. An extensive epidemic of the disease at Chantabun (Siam) was arrested by the addition of this important article of diet in the rations; while at the French penal settlement of Pulo Condor (Cochin China) it was found that the cutting off of fat from the dietary led to an outbreak of beri-beri, and that the epidemic ceased when the fat-containing diet was resumed.

The following is the history of the recent outbreak of beri-beri at the Berlin Foundling House, West Point. It is stated that the Blind Home, a one-storey building, which maintains about 16 children, and is now closed, has had cases of beri-beri among the inmates since July of last year, the first case to occur being said to have been an infant who was admitted suffering from the disease. From the records I find, however, that only one death has occurred at the Blind Home during this period—namely, a female child 4 years old, whose death was registered as due to beri-beri.

The children from the Blind Home attended divine worship at the Berlin Foundling House on Sundays, and a European nurse employed at the latter visited the Blind Home daily, and the authorities of the Foundling House are of the opinion that the infection must have been introduced from the Blind Home in some manner or other. The first two children to be attacked were two who were being (surgically) dressed by the above-mentioned nurse, one for an affection of the eyes, and the other for some skin affection, although I cannot gather that either of them had open wounds. Within two days, however, of these two children showing symptoms of the disease, no fewer than 50 to 60 others were attacked.

Up to December 7th the House contained 102 Chinese children and girls up to 16 or 17 years of age, and on that date 69 school children, all of whom were said to be suffering from beri-beri, were sent to the neighbouring Portuguese colony of Macao with 6 big girls (who were free from the disease) to assist in looking after them, thus leaving 27 healthy children in the House. These latter have remained healthy, although no change has been made in the dietary or source of food supply. Two of the children sent to Macao died shortly after arrival there, but the remainder are reported to be improving in health.

The children who were attacked were all between the ages of 4 and 7 years, and all of them slept in a series of adjacent ground-floor rooms. These rooms are thoroughly well lit and ventilated and have close-boarded floors, which are painted but otherwise bare. Some children who slept in ground-floor rooms in another part of the building were not attacked, nor were any of the girls who slept upstairs. No European cases have occurred.

The children's dietary appears to be a most generous one, comprising rice, eggs, fish (fresh and salt on alternate days), meat (beef or pork) at every evening meal and thrice a week with the morning meal.

The special points about the outbreak seems to be the unusually early age of all the patients (from 4 to 7 years), the absence of overcrowding, and the abundant lighting and ventilation of the premises, the liberal dietary, the fact that all those attacked slept on the ground-floor, and the fact that after the removal of the sick the remaining 27 children have remained free from the disease, although no apparent change has been made in the dietary.

If we adopt Manson's theory we must assume, I suppose, that the infection was conveyed from the Blind Home to the Berlin Foundling House either in the clothing or in the earth adhering to the boots of the children or of the nurse who went from one establishment to the other, that it developed rapidly, and that the children sleeping in certain of the ground-floor rooms were rapidly poisoned by the toxin generated by the infective germ. The fact that the two children who required surgical dressings were the first to develop the disease suggests rather that they were thus more susceptible to the disease than that they communicated it to the others, for the interval betwen their attack and the outbreak among the rest of the children did not exceed two days at the most, and I am inclined to think, therefore, that all the children derived infection from the same source.

* An address delivered at a meeting of the Hong Kong and China Branch

NOTES ON OCULAR LEPROSY.

BY ARTHUR NEVE, F.R.C.S.E.,
Joint Superintendent Kashmir State Leper Asylum.

THE eye is affected in 20 of the 80 lepers now in the Kashmir State Leper Asylum. As would be expected, the proportion is larger in the tubercular cases than in the anæsthetic. In tubercular cases the ocular affection is essentially one of infiltration, and in anæsthetic cases of injury from exposure. The extent and position of the lesion vary greatly. Among the present inmates the ocular manifestations may be classified as follows:

LIDS.

1. *The skin of the lids* is liable to the deposit of nodules just as that of other regions; these seldom attain any large size, and very seldom ulcerate. At present there are only 3 cases of marked tuberculous nodules.

2. *The margin of the lids* is occasionally affected, and there is atrophy of the ciliary follicles. In 3 cases this is complete, in 5 partial.

3. *Paralytic ectropion* is the characteristic eye lesion in anæsthetic leprosy. It is rather a drop of the lower lid than an eversion. It falls away from the eye and leaves it exposed. Owing to displacement of the lower punctum there is lachrymation. The exposed conjunctiva becomes irritated, and often there is ulceration of the lower edge of the cornea. At present there are 9 such cases in various stages.

CONJUNCTIVA.

1. *Conjunctivitis* frequently occurs in lepers, as in all Kashmiris, and there seems no special predisposition, except in those who have paralytic ectropion. Anæsthesia of the lids exposed to special danger from the bites of flies and mosquitos, and to injury by foreign bodies.

2. *Granular conjunctivitis* is only represented by 2 cases—a small proportion for this country.

3. *Leprous nodules* appear in the conjunctiva as elsewhere, but we only have 3 primary cases. On close inspection it is seen that the deposit has extended from the deeper tissues.

Pterygium is occasionally seen; there is 1 case now, it is not specific.

CORNEA.

1. *Keratitis* sometimes occurs, but is not specific, being usually due to traumatism. From the same cause we have

2. *Ulceration*, which is most frequent in the lower limbus. This is seldom deep or actively septic, and under treatment, especially by temporary closure of the lids, it readily heals. There are 2 such cases now.

3. *Infiltration*, which commences peripherally, usually in the sclerotic margin, and gradually extends more or less circumferentially. At the outset there may be a little dotted deposit of a yellow colour, possibly vascular. More often it grows as a distinct nodule, involving the sclerotic, cornea, and iris simultaneously. There is a tendency for both eyes to be somewhat symmetrically affected. There are now 8 such cases in the asylum. I regard this as the characteristic lesion of tubercular leprosy. As stated by Hansen and Looft, the inner margin of the cornea is seldom affected, while a low rampart is formed round the rest of the cornea. We now have one typical case of this condition. The infiltration is usually superficial to Descemet's membrane, and may be dissected off it. In one case where this was done a staphylomatous protrusion has resulted. The infiltration consists partly of the bacilli, but chiefly of cells in a state of brown granular degeneration.

IRIS.

In ocular leprosy the iris is frequently attacked. This is especially the case when infiltration has commenced in the corneal margin. Nodules form in the angle of the anterior chamber, which becomes partially obliterated by them. Less often the nodule may be single, but seldom on or near the edge of the iris. The whole tissue of the iris becomes softened by a chronic inflammatory process, and the deposit of lymph tends to occlude the pupil, causing permanent blindness. When the infiltration begins in the lower angle it closely resembles a hypopyon.

LENS.

I do not remember seeing any case of cataract consecutive on ocular leprosy.

DEEP STRUCTURES.

Deep-seated eye affections are rare in leprosy, and are always secondary to corneo-scleral lesions. I doubt whether nodules ever occur on the retina or choroid primarily. I have seen cases of general infiltration of the eyeball which might be called pseudo-glioma, and atrophy of the globe is, of course, met with as the result of suppuration. The sight as tested in sixty lepers, illiterates, without visible ocular disease, was good. The optic nerve is seldom or never the seat of leprous deposit, but the infiltration spreads to the ciliary nerves from the corneo-scleral region, as also to the ora serrata of the retina (Pollock). Blindness is not as frequent in Kashmir from leprosy as appears to be the case elsewhere. There are only 13 blind eyes; of these, 2 were caused by small-pox, 2 are due to total pannus consecutive on trichiasis, 2 to perforating ulcers, 2 to glaucoma, and the rest to tubercular deposit and occlusion of the pupil.

ACCIDENTS AND INJURIES CAUSED BY LIGHTNING.*

BY OSCAR DUNSCOMBE-HONIBALL, M.D.,
President of the British Guiana Branch.

AFTER some introductory remarks, Dr. Dunscombe-Honiball proceeded:

The literature on the subject of injuries caused by lightning is extremely scanty. Holmes, in his *System of Surgery*, writing on accidents from lightning, says they are very rare at home (about 44 per annum in England, Bowdin), and that it had never fallen to his lot to witness immediately on their occurrence any which called for serious surgical treatment, and he goes on to say that it does not appear to have occurred to any of his countrymen whose experience of this form of injury in tropical climates may have been great to give to the profession any systematic account of the matter. As I have in my more than thirty years' tropical practice seen many cases both fatal and otherwise, I may possibly be excused for taking this somewhat overlooked subject as the text for my address. I am well aware that very little practical result can be looked for as the outcome of an address and discussion of such a subject. Those who die from lightning stroke die with awful suddenness, and for those who recover little beyond stimulation and the usual surgical treatment for injuries received seem to be required. But I will ask your kind indulgence if I do not appear to treat the subject in a very scientific and speculative mode, but rather give a plain account of the appearances and symptoms I have met with in my experience of lightning stroke, both *post mortem* and in those who have not succumbed to this injury. I have not, I regret, kept an exact account of all the cases that have come under my notice, but, roughly speaking, I should say I have had experience of upwards of a score, here and elsewhere. Fortunately, however, I have very accurate and extensive notes, both *post mortem* and clinical, of the last 11 cases coming under my notice, which have occurred within the last half dozen years. Possibly the best plan for me to pursue will be for me to briefly detail these cases, give *post-mortem* appearances and clinical histories, and then make some comments in general on the nature of the injuries.

The first group of cases—I say group of cases because 10 were struck at the same time—to which I wish to draw your attention occurred on November 28th, 1894, on Plantation, Windsor Forest, West Coast, Demerara. A party of male East Indians, to the number of 15, had sought shelter from a severe rainstorm in a small brash hut; in a second, without any warning—I am using the words of one of those present—a sharp blaze of light seemed to strike in, over, and through the hut, accompanied by a terrific thunderclap. All present were blinded for a second or two, but when they had recovered from their first fright and shock it was found that four of their number were insensible (two, as a matter of fact, were dead), and six others injured more or less. They were all brought to the Estates Hospital, where I happened to be at the time. On examination I found two dead, one recovering from insensibility, one still insensible, and six

* Presidential Address of the British Guiana Branch of the British Medical Association.

others showing in varying degrees signs of shock. They (the latter six) appeared dazed, and presented spots, like wheals, on their bodies, in different situations, as though they had been sharply struck with a broad piece of leather, or like exaggerated and isolated spots of urticaria. These six required only temporary treatment, such as the exhibition of stimulants, and a confident assurance that they were all right; next day they appeared quite well, and the wheals had disappeared.

I will now describe the appearance and condition of the two men—Parmessur Sing and Adjoodiab—admitted into hospital. Parmessur Sing, when I examined him in the ward, had recovered sensibility, and was conscious; he was, however, nearly pulseless, suffering from intense shock, cold skin, cold tongue, dazed, and, I think, evidently not quite—or at once—understanding questions asked; his temperature, taken an hour after, was half a degree below normal; the pupils were dilated, and there was lividity of lips and nails; the heart sounds were scarcely audible. The only external injury he had was a fire blast or abrasion (the epidermis only was removed) down the outer aspect of the left arm. Under the use of stimulants, blankets, and hot water jars he rallied in a few hours. The next day, when I saw him, he was quite sensible and self-possessed, but had a frightened look and a peculiar slowness in answering; and I do not think he has ever quite lost the look of fear, although now it is an aspect more of anxiety. The fire blast or abrasion, which after a couple of days looked exactly like a burn in the first degree, was most difficult to heal, and he remained in hospital until December 31st. When discharged he still seemed wanting in rapidity of thought, taking an appreciable time before answering simple questions, and with an evident appearance of forcing himself to comprehend what was said to him; it looked, so to speak, as though the electric wires had been damaged. All along he complained of numbness in the left upper extremity and left side, and had lost some muscular power in the limb. I saw him quite recently, and he still suffers from loss of power, or, to use his own expression, he has never been as good a worker as before the accident.

As to Adjoodiab, who was insensible when I first saw him, he very soon became conscious, but seemed muddled or dazed to a much greater degree than Parmessur Sing. He was utterly depressed, with sighing respiration; pulse fairly good; temperature normal; a most marked expression of fright on his face; he had a slight wheal on the right thigh, which was gone the next day, but on the third day he complained of numbness in this situation, and has never lost this anæsthesia; his mental condition has also been permanently affected; he became irritable and childish, and, although the irritability passed off, he remains decidedly weak minded up to now.

The two men killed were Phakoo and Malhar Sing. Both had been two years in the colony, and were remarkably fine able-bodied men. The *post-mortem* examination was made twenty hours after death. Phakoo: Rigor mortis present and well marked; hæmorrhage from right ear, or, more correctly, the marks of hæmorrhage; perfectly calm and quiet expression of face. An irregular wound of right temple 1½ inch in length, with slightly depressed fracture underneath. On removing the skullcap this fracture was found to pass through the base in the region of the middle fossa, breaking through the petrous bone and tearing the membranes; there was very little extravasation of blood; brain substance firm and normal, and also membranes beyond the zone of fracture; heart firmly contracted and empty. There was scorching or staining of the whole front of the chest, abdomen, and thighs, the marks on the chest being of a distinctly arborescent appearance.

Malhar Sing: Rigor mortis present; the eyes were staring, and there was a look scarcely of fright, more of surprise or astonishment. The only external marks were an abrasion or fire blast on left side of chest over cardiac region, with scorching or staining over left side and chest, and an abrasion below right knee; these abrasions were more like excoriations than anything else, the epidermis only being removed. The heart was empty and firmly contracted. The brain had been undoubtedly injured, its substance being of very much less firm consistency than usual; indeed, in parts almost (diffluent, with scattered pinkish specks (puncta sanguinosa); other organs normal. In both these cases I noticed nothing unusual about the condition of the blood.

The next and last case to which I wish to refer occurred at La Grange, on West Bank, Demerara, on September 30th, 1897, during a heavy downpour of rain; and I may mention, in passing, that I have never known a case of lightning stroke to occur except during rain or immediately after, when the persons injured were wet and the surroundings humid. The patient was an East Indian man, named Salickram; he, with two other men, was walking about on the middle walk all within a distance of each other of from 1 to 2 feet; he had his agricultural fork, four prongs, over his right shoulder, with a tin saucepan slung on the handle. The overseer in charge was about 150 yards away, and from him I gathered these details. Without warning, a vivid flash of lightning, accompanied by deafening, simultaneous thunder, struck the group of three; they all fell down, but two immediately got up, and were not hurt; evidently, therefore, they fell from mere fright; the overseer says he saw smoke, and that the grass there was scorched. Salickram was found to be dead, and his death was instantaneous. I went back, and saw the body; the hat the deceased was wearing was scorched and torn to ribbons, and thrown some yards away; the tin saucepan was smashed in, and I found by means of a small key that the second prong of the fork, which he had over his shoulder, was highly magnetic; there was a ghastly, horrified look upon the face. I found a jagged, irregular wound at the back of the head, a little to the right side, 4 inches in breadth; under this I felt the bone fractured. Eight hours after death I made the *post-mortem* examination. Rigor mortis was present. The brain substance had lost its usual firm consistency, and was very soft and easily broken down. There were three fractures radiating from the right wing of occipital bone, one to vault of cranium, and two passing forwards and downwards to base of skull; no extravasation of blood. The heart cavities were empty and contracted, except the right auricle, which was partially dilated, and contained a little blood. In this case I noted an abnormal fluidity of blood. There was scorching of the right side of the neck and down the right side of the chest and arm; in some parts scorched the skin was like parchment.

I have no existent notes of my former experiences of lightning stroke to go upon, and could only draw upon my memory for any detailed accounts of them, which would be unsatisfactory. As to the oft-repeated statement—which, I think, originated with John Hunter—that there is an absence of rigidity in the cadaver, and also the constant presence of an abnormal fluidity of the blood, you will have seen that the *post-mortem* appearances I have described do not bear these out, but, on the contrary, offer a direct negative, and, although these points may seem slight and unimportant, yet I submit that any authenticated fact is well worth being recorded.

Dr. G. V. Poore says[1] that the effects produced by lightning differ only in degree from those produced by static electricity generated in the laboratory, and that by lightning a person may be killed outright and a *post-mortem* examination reveal no lesion whatever. Now, is this really so? and what are the grounds for the statement? Has an electric shock ever amputated a man's fingers, as I have seen in lightning stroke, or caused compound fractures of skull such as I have described? A case occurred here some little time ago where a stableman was killed by an electric shock. I think, Dr. Anderson made the *post-mortem* examination. I have endeavoured to obtain an account of the *post-mortem* appearances in death from electrocution, but unfortunately have failed. In no case of death from lightning which I have examined has there been a total absence of lesion. There may, it is true, be an absence of gross lesion of the brain, but there has always been some tangible injury. And in this regard I think it well to give one caution: Be not too sure that in every case found dead after a storm, and where no marks are found, that death was due to lightning stroke. A careful examination may show a condition of heart that would fully justify the assumption that death was due to cardiac failure induced by sudden and startling fright.

My own idea is that, although death from lightning stroke is nearly allied to and closely resembles death by electricity,

yet there is, on the one hand, something added, and on the other something absent. Of course this is purely my opinion, and must be taken for what it is worth.

REFERENCE.
1 *Quain's Dictionary of Medicine.*

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

HÆMATURIA AS A CAUSE OF MISCARRIAGE.

ON November 19th, 1898, I saw Mrs. R., aged 32, on account of profuse hæmaturia, with sharp pain in the right lumbar region, which had been continuous for over a week. On examination I found a six months' pregnancy, accompanied with extreme tenderness over the right kidney (unfortunately the enlarged womb prevented my observing the size of the organ. Her temperature was normal, there was no tenderness over the bladder, no frequency or pain on micturition, the amount of urine passed being normal, the blood being intimately mixed with it; neither fragments of tissue nor pus cells were discovered on microscopic examination.

This profuse hæmaturia continued unaffected by treatment until December 8th, on which date, as the patient was rapidly sinking—her anæmia having reached an extreme degree—I decided to induce labour, and by emptying the womb relieve the renal congestion, which I thought was a possible cause of the hæmaturia.

This I accomplished by Krauz's method; the child, a male, survived its birth only twenty minutes. The patient, on recovering from the shock of the operation, made an uninterrupted recovery, and on the seventh day following her confinement was absolutely free from all pain in the lumbar region, the urine was clear, and no trace of albumen was present; from this time she made a rapid recovery.

On December 5th, 1899, I was again called to see her, and found the womb enlarged to the level of the umbilicus, with pain in the right lumbar region and slight hæmaturia, which had been continuous for three days. The hæmaturia gradually increased in severity until January 7th (just five weeks from its commencement), when labour set in, and she was delivered of a female child, apparently of seven months' growth. As in the previous labour, with the emptying of the womb, all the symptoms disappeared, and she made an uneventful recovery. I have since made a most careful examination, and I can detect nothing abnormal in the size or position of either kidney, and the urine is absolutely normal. She enjoys exceptionally good health.

I am inclined to regard the hæmaturia as due to congestion of the kidney, from pressure on the renal vein by the enlarged womb, but why the tenderness and pain should have been confined to the right side I have been unable to decide.

If any member can suggest any possible treatment, so as to avert a recurrence of the hæmaturia in any subsequent pregnancy, I should be most grateful.

Manningtree, Essex. J. S. JAMESON, M.D.(Dub. Univ.).

THE CONSTITUENTS OF HAFFKINE'S ANTIPLAGUE VACCINE.

I HAVE carried out several experiments in order to find out the real immunising constituent of Haffkine's prophylactic. The prophylactic fluid was passed through a Pasteur-Chamberland filter.

1. The sediment found on the bougie consisted of bodies of dead plague bacilli. It was proteid in reaction, and protected rabbits from plague in doses of 300 mg.

2. The filtrate, a clear fluid, also gave proteid reactions, and possessed well-marked protective power even in small doses. It is possible to isolate, after Brieger's method of preparing tetanus toxin, the immunising substance from Haffkine's fluid in a more or less pure condition, and this immunising substance does not respond to any of the known proteid reactions, and possesses well-marked protective power in rabbits against plague in doses of 100 mg. This immunising substance is grey and amorphous, and is soluble in water. It might be termed extracellular, as it is found dissolved in the surrounding media. The immunising substance present in the sediment might be called intracellular, as it is found in the bodies of dead bacilli.

The extracellular immunising substance is formed in the substance of the cells (plague bacilli), and is then thrown into the surrounding media, and this substance is formed most probably when plague bacilli disintegrate.

Plague bacilli produce besides the immunising substance a proteid which produces pus, and this proteid body is found in the bodies of the dead bacilli. I have found that induration at the seat of inoculation occurs whenever Haffkine's fluid is used, especially when it is used subcutaneously, or whenever the sediment on the bougie is used; whereas these indurations never occur when the filtrate of Haffkine's fluid or extracellular immunising substance is used.

I have found also that these indurations generally contain sterile pus. From this it is clear that the pus-producing substance is in the bodies of dead bacilli. This fact also coincides with the clinical facts observed by many.

1. Suppuration never occurs in severe cases of plague, but only in mild cases or in those cases in which the duration of the disease is long—that is, when plague bacilli are dying or disintegrating. Of course it must not be forgotten that suppuration occurs in cases of mixed infection in which plague germs enter the system with pyogenic cocci.

2. It is known that it is impossible to get a culture of plague bacilli, or even to find plague bacilli in buboes when suppuration has advanced. This, however, can be explained in two ways:

(*a*) The plague bacilli are dying or disintegrating.
(*b*) In cases of mixed infection pyogenic cocci might overgrow or outlive plague bacilli; but I have found from my experiments that pyogenic cocci have no direct deleterious influence on plague bacilli, and also they have no prophylactic power whatever against plague. As rabbits previously inoculated with pyogenic cocci invariable die of plague when subsequently inoculated with plague.

Medical School, Hyderabad. S. MALLANNAH, M.B.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

REGIMENTAL HOSPITAL, EIGHTH BOMBAY INFANTRY, AHMEDNAGAR.

POISONING BY CASTOR OIL SEEDS.

(By Lieutenant L. T. R. HUTCHINSON, M.A., M.B., B.C.Camb., Indian Medical Service.)

IN the BRITISH MEDICAL JOURNAL for February 10th, 1900, a fatal case of poisoning after eating a couple of castor-oil seeds is recorded. The two following cases may therefore prove of interest:

A havildar, aged 29, and a private, aged 22, of the 8th Bombay Infantry, were both admitted to the regimental hospital, Ahmednagar, on February 10th, 1900, for poisoning by eating castor-oil seeds.

The regiment had been out for a field day since early morning on February 9th, and, after bivouacking out for the night, were returning to their lines on the morning of the 10th. As they passed through some irrigated fields where the castor-oil shrubs were growing, these two men picked the seeds, and, finding them sweet, ate several. This occurred at 8 A.M. The havildar stated that he had eaten a handful, probable twenty-five to thirty seeds or more; the private that he had eaten eight or ten seeds only. About three-quarters of an hour later they noticed a bitter taste, and began to feel giddy. Shortly afterwards violent vomiting and purging commenced in each case, and they were placed on stretchers and brought to hospital with all possible speed.

They were first seen by me at 1.15 P.M. The havildar was then comatose, and almost pulseless; his skin was moist, his extremities cold, and his pupils dilated. After admission no further vomiting occurred, but he passed two stools which contained almost pure mucus and blood. The condition of

the private was less serious; he was semi-comatose, and appeared to be in great pain, but passed no blood in his stools after admission.

The treatment adopted in each case was the hypodermic injection of half a grain of morphine, the administration of brandy ℥iss, with the application of a mustard plaster to the cardiac area, hot poultice to the abdomen, and hot bottles to the extremities. On regaining consciousness they complained of intense pain in the epigastric region and all over the abdomen. Laudanum (mxx) and gruel were given as soon as they could swallow, and the injection of morphine was repeated next morning. Both men made a good recovery, and were discharged from hospital on February 16th, 1900. On referring to an Indian textbook of toxicology, I find it stated that these seeds are highly poisonous: each seed is said to contain about one-tenth of a grain of ricine, and three seeds proved fatal to an adult in forty-six hours in a case recorded.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. PAVY, M.D., F.R.C.P., F.R.S., President, in the Chair.

Tuesday, May 8th, 1900.

THE WOUNDED IN THE PRESENT WAR.

MR. TREVES lately Consulting Surgeon with the Field Force, Natal, gave an address on this subject. After expressing his sense of the honour done him in asking him to give such an address, he said:

Modern Rifles.

I may, in the first place, draw attention to the weapons that are being used in this particular campaign, especially the Mauser and the Lee-Metford rifles. It is a somewhat extraordinary thing that the development of the rifle as an instrument for carrying the missile long distances with a flat trajectory does not quite coincide with its destructive powers, because although the rifle may be said to be an enormous improvement upon the Martini-Henry, still I suppose that in war the purpose of the rifle is to destroy or disable as many men as possible and as completely as possible. And if that really be considered to be the test of a good rifle, then the rifles used in the present campaign cannot be considered as good perhaps as the old-fashioned weapon. I might perhaps be allowed to mention one or two facts about this weapon.

The Rifling.

The purpose of rifling is to give rotation to the ball in its long axis. Unless that be done the ball as a projectile, if it be a conical ball, is practically futile. A cylindrical bullet, of which I show you an example (Fig. 6), coming from a smooth-bore rifle would begin to rotate on its short axis immediately it left the muzzle, and even at the distance of a few yards would strike a target on the flat; therefore as a projectile it would be useless. A Martini rifle has one complete turn of the barrel in 22 inches, the Lee-Metford actually doubles that, and makes one complete turn in 10 inches. The Mauser makes one complete turn in 8¾ inches, so that as far as velocity in the rotation of the bullet at the muzzle is concerned the Mauser is by far the superior weapon.

The great object in all four rifles is to get a flat trajectory; that means much greater accuracy in shooting in regard to the sighting of the rifle. Much harder hitting is secured, because it is a cleaner hit, and of course a very greatly-increased danger zone, especially with regard to cavalry. The bullet of a Snider, sighted to 2 000 yards, will have to rise no less than 866 feet above the line of shot: the Martini-Henry sighted for 2,000 yards will have to rise 357 feet, which means an enormous zone where a man might walk about at his ease without the least possibility of being hit between the rifle and the target. The Lee-Metford has the same range, but only rises the short distance of 194 feet, and consequently the trajectory is very nearly flat. The muzzle velocity of the Martini-Henry was only 1,350 feet per second; the muzzle velocity of the Lee-Metford is 2,000 feet per second, and the muzzle velocity of the Mauser 2,300 feet per second.

The Bullet.

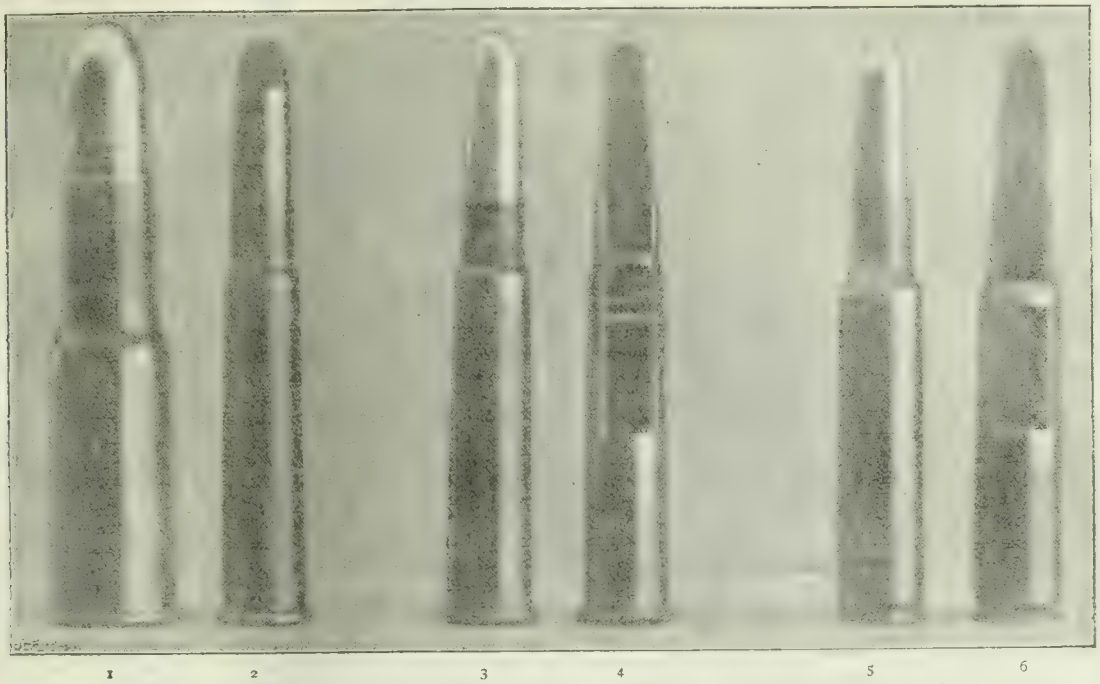
With regard to the shape of the bullet, this bullet of a Lee-Metford (Fig. 3) is supposed to represent the acme of perfection in the shape of a bullet. In a very admirable book published by the War Office authorities as a *Textbook for Military Small Arms*, it is stated that the power of a bullet to overcome resistance must be directly proportional to its weight, and inversely proportional to its cross section. It comes to pass, therefore, that an elongated trajectile such as the Mauser or the Lee-Metford bullet has an enormous advantage owing to its small diameter. This is the reason that there has been a progressive reduction in the bore until it has been reduced to its present small section. Of two bullets of equal weight and of equal diameter the longer bullet has a better range. With regard to the head of the bullet, the particular type which offers the very least resistance is that known as ogival, which means that the curve is made up of a part of the circle, the radius of which is equal to two diameters of the base of the bullet. This is shown perfectly well in a Mauser or in a Lee Metford bullet.

The Lee-Metford bullet is a more destructive bullet than the Mauser. This opinion is based upon the cases of a number of wounded Boers we had at Spearman's Camp after the battle of Vaal Krantz, and also upon the reports, especially the report of Dr. Mackenzie in the *Lancet* of February 17th, who gives an account of a certain number of wounded Boers. These specimens I have brought back are all, without exception, from the Boer trenches, and they have been beautifully mounted by Mr. Shattock, of the College of Surgeons. I should say that all these bullets, including the Lee-Metford and the Mauser—and this is a matter of the utmost importance with regard to bone injuries—are made up of a core composed of lead hardened with 2 per cent. of antimony, and of a shell or thimble made up of 80 per cent. copper and 20 per cent. nickel. So far as I know the thimble or shell of the Mauser and Lee-Metford are exactly the same. The Lee-Metford and the Mauser bullets, both placed on a level base, are shown of natural size (Figs. 3 and 5). The Lee-Metford is the larger missile of the two, but as a matter of fact the difference in size is comparatively slight. For instance, the Lee-Metford measures 1.25 inch the Mauser 1.19. The diameter of the Lee-Metford bullet is 0.311 inch, the diameter of the Mauser is 0.284 inch. The weight of the Lee-Metford bullet is 215 grs., the weight of the Mauser is 173 grs. I may mention that the weight of the Martini-Henry bullet—the most destructive bullet seen in this campaign—is 480 grs., the length 1.27 in., and the diameter 0.45. The Mauser bullet has a groove in the bottom of the cartridge to fix into the clips, for Mauser cartridges are carried in clips of five, which is the size of the magazine. In the section of the Mauser bullet (Fig. 6) and cartridge case, the smokeless powder, which is black and like minute pieces of coal, is seen packed up at the bottom of the cartridge; the core is of hardened lead and the thimble composed of copper and nickel. In the section of bullet and cartridge case the cordite is seen in the Lee-Metford (Fig. 4) arranged in strings like gelatine. The extraordinary thing is that Thomas Atkins extracts this cordite, which is made from nitro-glycerine, from the cartridge and eats it. It is a mild form of stimulant.

I pass now to what I think is a very important matter. This slide (Figs. 8 and 9) shows the thimbles of a Lee Metford and a Mauser bullet. A gunsmith has dissolved the lead out and left the shell intact. An untouched Mauser is also shown. The weight of the thimble varies very considerably, that of the Lee-Metford weighs 33 gr., of the Mauser 22 gr. They are quite different at the apex. The Mauser seems to have been strengthened at the apex. The Lee-Metford is about the same thickness throughout, and the breaking of the cap or the apex of the bullets is a matter of very considerable importance.

The Fine Hitting of the Mauser.

There is, I suppose, no small-bore bullet that can effect the same perforations as this bullet can. I have here a specimen, one of the strangest I have seen. It is a Lee-Metford cartridge which was carried in the cartridge case of a man who was in the assault on Spion Kop. The Mauser bullet has passed through the centre of the cartridge, and the point of entry and the point of exit can be seen. It has hardly bent the cartridge, and the cordite is perfectly intact in the interior. The



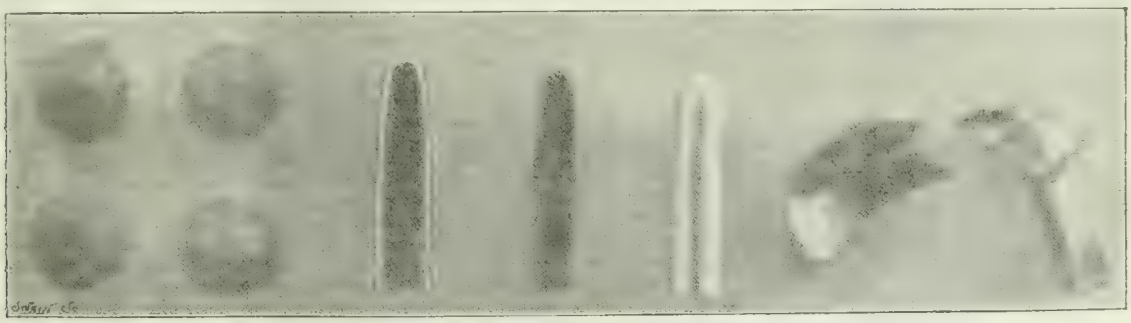
1 2 3 4 5 6

Specimens of Maxim (1), soft-nosed Lee-Metford (2), Lee-Metford (3, 4), and Mauser (5, 6) cartridges.

bullet went through the abdomen and came out through the buttock, and, as not uncommonly happens produced practically, no symptoms. One could hardly have believed that a bullet at long range, as must have been the case here, could have struck a smooth round cylinder of brass like the Lee-Metford cartridge and have gone straight through without exploding the cordite, and gone through the man without producing any ill effect. The ordinary clip of Mausers which the Boers use contains five cartridges. They are carried in a bandolier, which has a series of little pockets, each with five holes to take the five cartridges belonging to each clip. The only piece of sentiment connected with the particular bandolier I show is that it was taken from a dead Boer in a trench at Pieters on the road to Ladysmith, and he had only one single clip of cartridges left. I have left it as it was taken off the body. He was, like many of the Boers in that last engagement, reduced to his very last round. There were several cases on the Mooi River of a nerve being penetrated by Mauser bullet. One bullet which I have made a button-hole opening, and went through a nerve without dividing it. We had several cases of bones perforated by the Mauser bullet, as though a gimlet had been passed through. The most picturesque case of that was a man who was shot in the armoured train fight between Frere and Chieveley. A Mauser bullet went through the middle phalanx of the ring finger, and through the middle phalanx of the little finger, making four perfect holes, and he made an absolutely perfect recovery. When I last saw that man you could not tell that the hand had been wounded. I do not say his bones had been perforated, because they were less in diameter than the section of the Mauser bullet, but the fracture was so clean that he recovered with a useful hand. As far as I have been able to see, I believe the Mauser bullet is never diverted in the body.

Effects at Different Ranges.

There is another very important matter which this war will settle. The textbooks on gunshot injuries all repeat this one formula, that is that the mechanical power of a bullet, the measure of the work it can do, is represented by the formula MV^2, M being the mass and V the velocity. If that be true of course the range is everything. If a man is shot at 150 yards his limb would be smashed; if at 1,500 yards the wound would be trifling. That is said to be based on experiments in which corpses and dead animals had been shot at at various ranges. I feel as certain as I can be of anything that that formula is wrong, and I believe that when the details and data of this war are published that formula will be modified. Of course it is very difficult to get a proper account of the range, for every man says he was shot at a range of 150 or 200 yards. With smokeless powder it is very difficult to get the range in most cases, and in some there had been a cross fire, and it was difficult to know from which side the man was shot. From noting myself men who were struck down in an engagement which I was watching, I was quite certain, being



7 8 9 10 11 12

Specimens of shrapnel bullets (7), thimbles of Lee-Metford (8) and Mauser (9) bullets with core (10), and Mauser bullets distorted by impact (11, 12).

able to form an idea of the range, that range was not everything. Mr. Dent, whose very admirable letters in the British Medical Journal we have all read with such instruction, says that the range matters very little. Perhaps that is a little too strong, but I am quite confident that the range does not mean what that formula MV^2 means.

The "Explosive" Effect.

The next point is as to the explosive effect of these bullets. This unfortunate term has crept into the reports. Of course there is no such thing as an explosive bullet; it is a preposterous term. The term "expansile bullet" may be perhaps justifiable, and the explosive effect depends upon this, that when a man is struck with a bullet it makes a small point of entrance and the rest of the wound is like an inverted funnel. I have seen the point of entrance as big as what a soldier calls a bugbite, and the point of exit the size of a five-shilling piece[1] or bigger, the wound being practically funnel-shaped. It is not a question of the shock of the impact, the wound is blown out, the bone is broken, and the fragments are driven up and down the limb, so that there is a gap between the two ends. This effect is uniform, precise, and easily recognised, and is what is meant when the explosive effect of a bullet is spoken of. There is a very positive cavity, and the bone is separated by a real gap. All the textbooks state that that is solely the effect of the velocity of the bullet, or, in other words, the range of it; but I am confident that that is not accurate in regard to this small-bore bullet. I notice from the textbooks that experiments on animals do not always quite agree. Some say that the explosive effect is shown up to 500 yards and others up to 750 yards. All I can say is that all the cases in which I have seen explosive effects have been at comparatively short range, and I am certain it is not range and range only. I have seen a perfectly clean perforation of a bone at a short range, as for instance at Vaal Krantz, where the firing was from one Boer ridge. It is true that in every case in which explosive effects have been manifest it has been at a short range, and in every instance in which the bullet has been retained it has been found to be deformed.

The Soft-nosed Bullet.

The bullet which I show (Fig. 2) I picked up in the Boer trenches after the Boers had evacuated Hlanganwe Hill. The nickel casing of the bullet has been cut away at the top, exposing the lead core, which is not hardened with antimony. The result is that the lead mushrooms out. It has been said that the Boers use this, that, and the other bullet, but I was through the whole of the Natal campaign, and we never had any evidence of the so-called explosive bullet until the last thirteen days before the entrance into Ladysmith. Then about 10 per cent. of the wounds were due to soft-nosed bullets. I must bear witness that the statements about the use of these bullets are not well founded.

"Poisoned Bullets," So-called.

A point uppermost in the public mind at this moment has reference to poisoned bullets, and I have here an ordinary clip of Mauser bullets which I picked up at Colenso. The bullet is coated with some bright green greasy material, and it is evident the bullets have been dipped into something, for the tallow-like material is seen adherent to the metal. It is positively stated that this is poison. I saw in the *Daily News* of as recent a date as three or four days ago the statement that these bullets had been dipped in verdigris. I understand that verdigris is a basic acetate of copper, and that it is poisonous. Some of these clips, all of which I picked up in the Boer trenches, have been examined by Mr. Hugh Candy, the Lecturer on Chemistry at the London Hospital, who reports as the result of his chemical analysis that the green material is absolutely non-poisonous. The basis of the compound is paraffin, and the colour is due to an oxide of nickel; and as there is 20 per cent. of nickel in the coating of this bullet, it is reasonable to suppose that it is produced from the thimble and not from anything added. Anyhow, Mr. Candy assures me that it has been examined for every reasonable poison, but that the results have been negative; therefore this substance must have been used for the purpose of keeping the barrel free of fouling.

[1] 3.8 cmm.

Shell Wounds.

With regard to shell wounds, I will say nothing except that we met with both common shell and shrapnel. Nothing is more magnificent than the bursting of English shrapnel; and the sight of the last assault at Ladysmith, when there were ninety-four guns playing upon Pieters Hill, was a sight which could not be equalled on this earth. It was towards the end of the evening, the sun was lighting up the edge of the ridge, and at the back was a thunder cloud rising over Umbulwana. The shrapnel, looking like puffs of white snow, afforded a very marvellous spectacle.

Common shell for the 4·7 gun is an explosive cylindrical hollow cell, containing a bursting charge. The effect of the explosion is seen from the dust it raises, and the bits of stone it knocks up. I picked up pieces of shell which were hurled out by the shell bursting, some of the pieces of which might be driven right through a man's head. One particular specimen I have shown is a piece of a shell from "Long Tom," which was fired into a street at Ladysmith. I brought it from there, and it was given me by the man who picked it up. At the bottom of the specimen can be seen what is called the driving band, and a notion can be formed of the gigantic weight of the shell fired by that enormous gun, and how it breaks up into fragments.

Shrapnel I need not say is a conical shell containing from 150 to 200 bullets (Fig. 7), according to whether it is fired from a 12 or 15-pounder. Shrapnel contains a bursting charge set off by a time fuse, the end of the shrapnel is blown out and the bullets acquire the velocity of the missile. All shrapnel breaks in the air, and from a howitzer it breaks high up in the air and descends. The velocity of the descending shrapnel is the velocity of the missile itself and the bullet is not shot out of it by gunpowder. The iron of the shell itself is twisted by the bursting charge. The Boer shrapnel, of which I have a specimen picked up in Ladysmith, and not exploded, is similar in shape to our shrapnel.

A water-bottle belonging to an English soldier at the battlefield of Spion Kop shows the point of entrance or a shrapnel bullet which went through the water-bottle and then through the man; the man recovered without any grave symptoms. The bottle shows that the hole was a very clean one, just taking the shrapnel bullet and not very much more. The size of the shell of the Maxim gun is shown in Fig. 1.

Lyddite.

The Boer prisoners were not pleased with lyddite, but it has nothing like the effect that is ascribed to it. A lyddite shell bursting in soft ground, as it did in a farm near Spearman's Camp, makes certainly a big hole, but if it falls on to well-made ground such as railway road it does not make the enormous cavern that has been described. The fumes are always dense yellow. Several Boers were brought in suffering from concussion produced by lyddite. They remained insensible for one or two days, but without any sign of injury of any sort due to lyddite. The smell of lyddite is very distressing, and the best testimony as to this is from our own men. Some of the King's Royal Rifles in mounting a kopje to take a trench had one of our shells fall within a distance of 50 yards from them. The officer in charge of the line told me that they could scarcely breatne: they had to keep their faces almost on the ground to avoid the awful stench of this explosive. But I think the statement of the terrific effect of lyddite shells is exaggerated. If one came into a room like the one we are in now, it would not blow the whole place right out, and to say that its fumes are absolutely poisonous is untrue.

Expansile Effect.

I show a specimen (Fig. 13) demonstrating the expansile effect of a Mauser bullet. In this case the man was struck on the outer side of the deltoid muscle; the wound was a clean hole which would not have taken more than the point of a pencil. It had produced an ordinary oblique fracture of the bone as was inevitable, and it had blown away the head of the humerus. On examination hardly any fragments of bone were found at all: they had been practically pulverised. The bullet made a kind of trap door into the scapula, and was found close to the vertebra. The bullet has been fixed on the scapula, and is shown

on the photograph. It presents the ordinary deformity, that is to say, the flattening out of the core and a breaking up of the thimble. The case is an interesting one to me because I amputated the entire upper extremity, collar bone, shoulder blade, and upper limb, and it is the first case so treated in the field. The man is now, I am glad to say, in England, and quite well.

The next specimens illustrate how the Mauser bullet is deformed by striking bone. Here is a bullet that is almost in pieces (Fig. 11). The top can be lifted off like a cap, and you can scarcely believe that this bullet fractured a man's femur. It did not, however, pass out of the limb, and I cut it out after the battle of Colenso.

Shrapnel bullets (Fig. 7) are not quite round, the spheres being seldom perfect, but these bullets may pass through liver and kidneys practically without producing symptoms.

Hospitals, Transport, and Ambulances.

Mr. Treves next showed on the screen lantern slides of the photographs reproduced in the BRITISH MEDICAL JOURNAL of April 14th, pp. 914 and 915, and then made the following observation on the ambulances:

The ambulance carts are certainly not adapted to the country in which they are now working. They are magnificently made waggons, will stand anything, and are drawn by ten mules and driven by Kaffir boys; they are very serviceable, but they are very hard to ride in. The Boer ambulance cart, on the other hand, is a modified spider cart, and is admirably suited to its work.

I think you will permit me to show you the next slide, because I really wish to do everything I can to acknowledge the extraordinary kindness and generosity of the authorities of the Army Medical Department. They very kindly put at my disposal this cart (Fig. 14), with sixteen mules, a Scotch cart, a conductor, four Kaffir boys, a horse, and a man. The cart shown in the figure entered Ladysmith; but it broke down coming from Ladysmith and was left in a spruit. According to some of the enterprising war correspondents, this was the cart that Joubert lived in, and as such it has been accurately described.

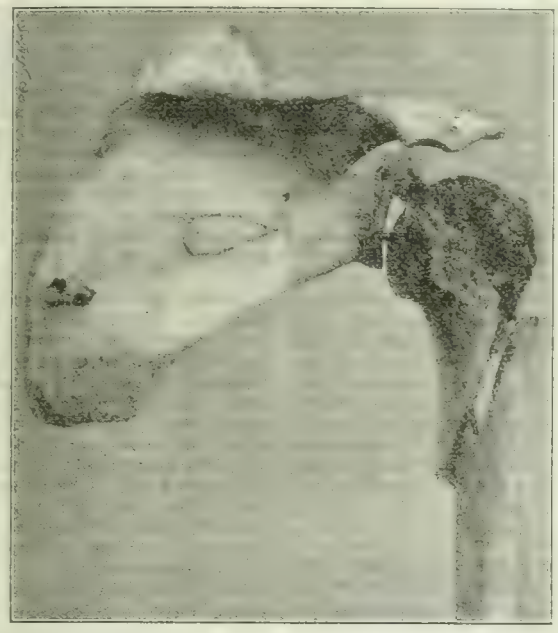


Fig. 13.



Fig. 14.

Mr. Treves then showed photographs of the hospital trains, which he said were managed by the indefatigable Major Brazier-Creagh, and were of enormous service in Natal. Commenting on that reproduced in the JOURNAL of April 14th, p. 914, he said:

We had to fill up the train from the level of the line, and it was very distressing to get the patients on board, because they had to be taken from the army stretchers, then put into the carriage stretchers, and then put into the train.

Wounds of Soft Parts.

The skin wounds are exceedingly simple and very small. The wound of entrance is circular, and Mr. Tommy Atkins always describes it as a bug-bite. The wound of exit is in many cases but little larger; possibly it may be a little larger, but in many cases the entrance and the exit wounds are of exactly the same size. Wounds are very easily overlooked, and primary healing is almost invariable.

The field dressing attached to every soldier's coat is quite admirable, and one of the very best things that has been introduced as a primary dressing. The only criticism is that it contains a piece of mackintosh which it is directed should be put over the wound. In hot weather it is better for that to be omitted, but of course if it is raining it should be used.

In no case have I found any clothing carried into the wound. Once I found a piece of a rifle carried in. In this case the officer was on a stretcher when he was struck in the knee and in the hand, the leaden core of the bullet was left in the knee where it can now quite easily be seen with the *x*-rays. The thimble went into the hand, and I removed it yesterday. I may say this, that in spite of statements to the contrary, I am certain that 20 per cent. of Mauser bullets are retained. They do not go right through the body.

I have picked out three statements from the current textbooks which I merely mention because I think they are not borne out by what has been observed during the present war. It is stated that the entrance and the exit holes decrease in size as the range increases, but that is not my experience. Again it is said that a circular and small wound of exit is rare when a bone is hit, but that is not my experience. I have seen the very smallest hole after the bullet has actually passed through a bone. It is said that the largest exit wounds are those at short ranges, but that again is not my experience.

Shock is always slight in these cases, and it is often slight after abdominal wounds. Some men scarcely know that they are hurt, and the common remark is

that the blow felt as if the man had been struck with a hammer.

Hæmorrhage.

External hæmorrhage of any kind is rare. Colonel Stevenson, in by far the best book on gunshot wounds that has appeared, writes that hæmorrhage from direct hits from the new bullet will certainly be more profuse than was the case in similar injuries with the old spherical bullet, but that has not been borne out, for the hæmorrhage is less. Men coming down with tourniquets are exceedingly few. The ingenuity with which a sailor invents a tourniquet is marvellous; the most perfect I saw was in a case of a wound of the ulnar artery, where the tourniquet on the brachial was composed of a plug of tobacco and the tape of a puttey. Internal bleeding is not uncommon, especially in abdominal cases, and it may be very copious. Extensive subcutaneous hæmorrhages are seen with injuries received at a short range.

I will not trouble you with any bullet stories, for the bullet story is becoming very much worse than the fish story. Bullets have gone through brain, lung, heart almost, and every other part of the body without causing the man anything more than a little interest in his case. I will mention one case, however, which I have already published,[2] and it still remains unintelligible to me. The man was crawling up towards a ridge when he was struck by a bullet which entered above the collarbone in the neck and the bullet came out on the inner side of the opposite thigh without producing literally any inconvenience or any symptoms of any sort whatsoever, except that the man being wounded thought he had better take advantage of it and get the bread and other luxuries that we might have for the wounded.

Injuries of Bones.

I hope you will permit me to take four of the most prominent statements made in the most recent textbooks, which I have picked out because I do not believe that they are accurate; at all events they are not borne out by experience in the present war. The first is that the severity of the injury to bone decreases as the range increases: the second is that explosive effects are produced when a bone is hit at short range, such as 500 yards or under; the third is that fractures are nearly always oblique; and the fourth is that when a bone is fractured the exit wound is always larger than when this does not occur.

The first of these statements is not in accord with my experience; and Mr. Dent, I am glad to find, says also that he is not convinced of the influence of range.

With regard to the alleged obliquity of fractures, I should say deliberately that the great majority of fractures in this war due to Mauser bullets have been transverse. Certainly they are adjusted with the greatest possible ease. The statement that the exit wound is always larger when bone has been struck is not correct. It has not been possible to establish any such rule; I have seen many cases in which the bone has been fractured, in which the wounds of exit and entry were exactly alike.

Transverse fractures of the lower end of the femur going into the joint are uncommon, whereas injuries to the head of the humerus and the lower end of the tibia are more common.

The injuries involving bone are as aseptic as the wounds of the soft parts, with the exception that the very worst element in the treatment of these bone fractures is the long transport which is almost fatal for a gunshot wound of the thigh. But if such a case were allowed to lie in the field hospital for 5 days it was not necessary to look at him any more. If, however, such a case was put into a train and taken for 2 days on the railway down to the base hospital that case would probably end fatally. Long transport was really impossible in gunshot wounds of big bones like the femur. In our field hospital we could keep such patients quiet and they did exceedingly well, and we never had any sort of anxiety with cases of fracture of the femur. We always kept them until we had the usual notice to quit.

I think I am sure that the Director-General will agree with me in saying that that is an advantage of having a big field hospital following the main column, because these cases can kept for four days or so and then allowed to go down. Hard transport or mule train or the big mule ambulance was really impossible.

Trephining.

I can say nothing whatever about the telephone probe because of the want of time, nor about head injuries, except to say that no operations in the field did anything like so well as these. There is no doubt that in head injuries the rule should be not to operate in this case or to operate in that, or to operate under these conditions or under those conditions, but to operate in every single instance of gunshot wound of the head. I have been asked what were the usual fatal cases. A man taking shelter behind a boulder lifts up his head and gets a bullet through it, and though in going over the dead I could not give the exact proportion—I could not even guess at it—yet I think, because probably the head injuries are more easily seen, one came to arrive at the impression that the majority of those killed on the spot were shot through the head.

Abdominal Injuries.

I will say nothing about spinal injuries, but if you will allow me I will say a few words about abdominal injuries. Everyone who went out to this war thought that this was the time for abdominal surgery, because abdominal surgery had been introduced since the last big war. The results, however, have been very disappointing. Two factors must be considered: First of all, the proportion of recoveries without operation is very high; and secondly, operative treatment of gunshot wounds of the abdomen in the field is exceedingly disappointing. I had this advantage, that, being quite close up to the front all the time, we could have our patients brought into the hospital directly, and so there was no question of loss of time. Nevertheless, the results were exceedingly disappointing.

The mortality from abdominal wounds in the American Civil War was over 90 per cent. My impression is that in this war, taking men shot through the belly, 60 per cent. have recovered without operation. How that opinion may be modified when the actual facts are published I do not know, but, as I say, I have come to the conclusion that a Mauser bullet through the abdomen only involved a 60 per cent. risk of death. I will first of all ask, Why do these cases get well without operation? How is it that 60 per cent. get well without any treatment? If the individual is wounded when fasting—and in these long engagements such as Colenso the men were always fasting, and often had been for hours—that circumstances contributes to recovery. Another fact favouring recovery, the importance of which cannot be exaggerated, is easy and short transport. The men that came down from Spion Kop were, from a surgical point of view, hopeless. Spion Kop is very difficult to get up, and almost worse to get down; a long distance had to be done over rocks, and the men had to be brought by hand-carriage down the mule path and then carried by mule ambulance into the hospital. We lost 33 men in seven days after the battle of Spion Kop, having had 750 wounded on that particular night.

The marvellous things that happened are shown by the cases I have published, all in patients who were shot through the belly. Beyond that fact nothing occurred. They were shot through the abdomen, and it was interesting to them to know that, but there was nothing else to notice. One of the cases was that of a bullet wound close to the umbilicus; the bullet came out by the spine of the second lumbar vertebra. What had happened to the structures like the big blood vessels I do not know. One bullet went in in the anterior part of one loin and came out at the other loin, after having traversed the whole belly. One went in exactly over the stomach and came out over the right loin; another went in at the tip of the eleventh rib and came out at the axilla. In none of those cases had the men any more than what would be called trifling symptoms, such as those they would get from eating a green apple. We unfortunately learned by carrying out operations which ought not to have been done that the hole made by the Mauser bullet in the bowel is very minute. It is often quite well closed by two Lembert sutures, and I am certain that the hole is closed almost directly by the apposition of adjacent coils of intestine. I may be wrong, but my impression is that when a man is struck in the abdomen peristalsis stops. I think it physiologically probable

[2] BRITISH MEDICAL JOURNAL, January 27th, p. 227.

that the shock of a wound through the belly would stop peristalsis. I never found a case in which it was necessary to dilate the bowel with hydrogen or anything of that sort. I found in one or two abdominal sections I made that I did nothing but harm, because in searching for the damage I opened wounds which were already closed. That of course one had to learn by experience. I began to search about, when out came some gas, and I said, "Here I have opened a part which was already sealed." I think I learned that the cases that do worst are those associated not with a particular wound here or a wound there, but those associated with copious internal hæmorrhage, and I think that impression is likely to be correct.

The next point is why these operations are so exceedingly disappointing. There are five points I would draw your attention to: First, there is the enormous pressure on time, when men are coming in by ambulance after ambulance, not in tens and twenties, but in hundreds, and there are only ten medical men. Under such circumstances, you cannot really say "We will do an abdominal section in this case." The afternoon would be taken up by it, and there are fifty things which must be done—men who are bleeding, and matters of great urgency to be attended to. Therefore it would be inhuman to say, "We will let all this crowd go, let us do this abdominal section." No department could have been more royally liberal than the Army Medical Department was in this campaign; but of course you cannot flood the place with medical men; you cannot say let us have fifty or sixty. But after a big engagement like that of Colenso, when we had 800 wounded, and after Spion Kop there was great pressure. Then there is great delay in getting the patients in from the field. At Spion Kop the wounded had to lie on the hill many hours before the Boers buried their own dead, and would allow us to touch our wounded. Then there was the difficulty of getting them down. Long transport was another reason for patients doing badly. Think of the difficulties of operating on an abdominal case. I show you a slide of the operating table we had, made of biscuit boxes.[3] There was no water; at least there was water, but it was not anything that we are accustomed to call water. It will be said, Why not boil it? But where is the fuel? There is nothing on the veld but grass; we are twenty-six miles from the railway. Some may say, Why not use methylated spirits? Can you carry that about in any quantity? Others may say, Filter the water. Well, I never could get anything like half a bottle of water filtered without having to take the filter to pieces and clean it, because it was found to be thickly coated with mud. There was no doubt that Jameson was right when he said that the proper way to treat South African water is first to boil it, then pass it through a filter, and then throw it away. You cannot realise starting an abdominal section without towels. You may say, Have plenty of towels, but if we started with 600 towels where are the laundries? There is the veld and there is the Tugela, but the Tugela is covered by Boer rifles. What is to be done? You say well take 1,000 towels. Well, take 1,000—that means 16 more oxen—and even then your towels are no good. It cannot be done; in the country you cannot manufacture water, and you cannot produce in the middle of a deserted place a complete laundry.

Another thing which rendered abdominal surgery almost impossible was the trouble we had from flies. It is easy to imagine it, but I do not think anybody can describe it. One's hands were covered with flies as one operated; put them away as we might they were there again. If a piece of bowel came out it was covered with flies; we kept wisps going, and we tried all sorts of things, but you cannot keep the South African fly away.

Lastly—and I do not wish to say too much about this—of course, the hospital orderly, admirable a man as he may be, is not really quite the man to nurse from first to last an abdominal case. I should like to be very gentle with the hospital orderly; but he has to go and unship a waggon, pitch a lot of tents, and dig a trench for the kitchen. At one time he is handling a spade, at another time a bucket, at another time heavy boxes, and he is not exactly aseptic to look at. There are not unlimited shirts up there. It cannot be helped; if you had millions with you you could not do much better. There remains the fact that the hospital orderly is not quite the person you would entrust with an abdominal case. I might mention this: that I was able to do all my abdominal cases by taking with me sealed tins containing dressings and needles. They do not take up much room, they are all prepared in England, and I took enough to last me all through. The tin is opened by taking hold of a strip and tearing across, as a meat tin is opened. The box makes a tray for sponges. The box contains enough carbolic to make a 1 in 20 solution, and all the ligatures and catgut, in fact all the material necessary for abdominal section. The lid makes an instrument tray, and will take all the scalpels or scissors wanted. I suppose it is true, as Lord Lister said, that an instrument kept for 15 minutes in a 1 in 20 solution of carbolic acid is clean. The sponges are all damp, ready for use. I brought two or three tins back, and they were examined in the bacteriological laboratory at the London Hospital by Dr. Bulloch, who says they are absolutely sterile. I did not want any water, as the sponges were wet; I wanted nothing. Of course, one would like to wash one's hands, but there are clean instruments, clean sponges, and so on.

Conclusions.

I have put down the circumstances that I think I learnt would argue for abdominal section, and the circumstances against it. The circumstances in favour of operation I would enumerate under five heads:

1. If the patient is seen before seven hours, which is not an unreasonable limit.

2. If the patient has had a short and easy transport. We had many of those.

3. An empty stomach. I should say that in some few antero-posterior wounds of the abdomen above the umbilicus it is a *sine quâ non* that it should be a case with an escaped bullet, especially when associated with extensive hæmorrhage. Then I deliberately believe that a patient ought to be operated upon. It might be thought that such cases would be very common; but, in fact they are very uncommon.

The circumstances against operation are:

1. If the patient is not seen till more than seven hours after the wound. I do not say that this is an absolute bar, but it is one argument against operation.

2. If there has been a long and arduous transport.

3. If he has been wounded soon after a meal. That is very improbable.

4. I should exclude all cases of transverse or oblique wounds above the umbilicus, because it is practically impossible to do all that is required. I will not trouble you with the details now, but I did some operations in such cases. I found six, eight, ten, twelve openings in the bowel, and when I had seen to these I had six holes in the mesentery, and very likely wounds in the liver. I am speaking of transverse or oblique wounds.

5. I exclude all cases of retained bullet. We can see the point of entrance, but where is the bullet? It may have gone this way or it may have gone that way; we do not know anything about it. You cannot in the field embark on any of those operations where you can bring out the viscera in the same way as you might *post mortem*. It may be very well in a hospital but it cannot be done in the field. I would not touch such a case.

6. I would exclude all cases of wound of the liver, of the spleen, and of the kidney. We had such cases in large numbers. A certain famous officer, whose name I will not mention, had a shrapnel bullet go through the liver and through the right kidney. He has come home here and is now quite well.

7. Do not operate on most cases below the umbilicus, because they do all right if they are left alone.

8. Lastly, I would not operate upon a case in which I thought the colon was implicated alone (I might except the transverse colon), because the cases did very well if they were left alone. But with an antero-posterior wound with an escaped bullet, which is a *sine quâ non*—that is to say, if where it went in and where it came out can be seen, I believe I have learnt that the bowels do not move after they have been struck.

[3] BRITISH MEDICAL JOURNAL, April 14th, p 975.

It comes to this, that the cases that are suited for abdominal section in the field are, roughly, exceedingly few.

Stationary Hospitals.

The DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT felt that he had some of the credit of the good results of which he had heard that night in that he had had the honour of recommending Mr. Treves for the appointment. A stationary hospital behind the field hospital was not always possible; its possibility depended greatly on whether or not we were getting the best of the battle. The length of transport certainly governed in great measure the septicity of wounds, and doubtless the wounded should be kept in stationary hospitals for days whenever possible. The observations on the plague of women which Mr. Treves had made at home had borne fruit in South Africa, as manifested by the fact that the Royal Engineers had already encircled the hospitals containing enteric cases with a barbed-wire fence.

Surgeon-General MUIR thanked Mr. Treves for his very instructive and able paper.

The meeting was adjourned.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Wednesday, May 2nd, 1900.

ALEXANDER E. MILLER, M.D., F.R.C.S.E., President, in the Chair.

CASE.

MR. COTTERILL showed a patient after laminectomy for paralysis of two years' standing, the result of spinal caries.

SPECIMENS.

Mr. SHAW MCLAREN showed (1) carcinoma of œsophagus and stomach after gastrostomy, (2) bilateral fracture of scaphoid bone of carpus.

CROSS INFECTION (SO-CALLED) IN FEVER HOSPITALS.

Dr. CLAUDE B. KER, medical superintendent of the Edinburgh City Hospital, read a paper on this subject. In the Edinburgh City Hospital a certain number of cases were annually attacked by some infection other than that for which they were admitted. Such accidents could hardly fail to happen in any building with a large population of children. The causes alleged by critics were (1) the carrying of infection by the staff from one ward to another, (2) infection by the air from other wards, (3) mixing of the nurses at meals, (4) inefficient disinfection of wards. In Dr. Ker's opinion, though certain rare cases might depend on those causes, they only accounted for a very small proportion of the second infections. He himself attributed the latter to (1) wrong diagnosis of the practitioner outside, (2) the admission of cases suffering simultaneously from two diseases, only one of which was at first recognised, and (3) most frequently the admission with one disease of a patient who was in the incubation stage of another, and afterwards developed it. Dr. Ker maintained that it was absolutely impossible to prevent outbreaks of a second infection which depended on this last cause. He did not expect a smaller number of such outbreaks in the new hospital, but he suggested that a fewer number of persons would be exposed in each instance owing to it being constructed on the pavilion system.

In the discussion which followed Drs. JAMES RITCHIE, T. R. RONALDSON, JAMES CARMICHAEL, DOWDEN, LUNDIE, WEBSTER, HARVEY LITTLEJOHN, and the PRESIDENT took part.

THE ACTIVITY OF THE SALIVA IN DISEASED CONDITIONS OF THE BODY.

Dr. AITCHISON ROBERTSON read a paper, in which he said that in order to eliminate the fallacy which might arise from the hourly variation in the diastatic power of the secretion, the experiments were always performed at the same hour each evening. Above 100 cases of disease of various kinds were investigated in order to see if the activity of the salivary ferment had undergone any change.

Amongst [illegible] the average amount of sugar formed by the action of 2 c.cm. of saliva on 10 c.cm. of starch mucilage for ten minutes at a temperature of 38° C. was 0.089 gram (the normal average being taken as 0.080 gram). In chronic gastric catarrh this figure varied from 0.078 gram to 0.1 gram. In acid dyspepsia the amount of sugar formed was above the healthy average, while in ulceration of the stomach the amount was generally only slightly below the normal average. In dilatation of the stomach the salivary ferment was found to be almost absent, or, at least, inactive. In cirrhosis of the liver the amount of sugar was not reduced, and in some cases it was greatly increased. In the group of pulmonary diseases the salivary ferment was generally fairly active, and on an average 0.087 gram sugar was formed. In phthisis the ferment was present in normal amount, and in pneumonia the amylolytic power of the secretion was above the normal during the period preceding the crisis, but lower after this event. In the large group of heart diseases the saliva retained its usual composition, and the amount of sugar formed hovered at or about the normal limit. A larger proportion of subnormal cases occurred in the group of nervous diseases, fully 41 per cent. giving a proportion of sugar lower than the normal. In three cases of Addison's disease which were examined the saliva of two showed a marked deficiency in diastatic power, while the third exceeded the normal limit. In the group of renal diseases 55.5 per cent. gave a production of sugar lower than the normal amount. In diabetes the saliva had a very active converting power, and in general the amount of sugar produced was much above the usual figure. In simple anæmia the converting power of the saliva reached the normal limit, but if the affection were associated with dyspepsia then the average was subnormal. In subacute and chronic rheumatism the ferment existed in its normal proportion. In general febrile conditions the secretion of saliva was greatly reduced in amount and this reduction increased *pari passu* with the increase in temperature. This scanty secretion, however, seemed to possess increased amylolytic power.

With regard to the quantity of saliva secreted, the author said that in most cases of acid dyspepsia the amount of saliva secreted was above the normal. In chronic gastric catarrh the quantity was hardly up to the average and the same deficiency was seen in ulceration of the stomach. In those cases associated with diarrhœa or ascites the secretion was often far below the normal amount. In bronchitis and in the early stage of pneumonia the secretion was generally up to the full average and might even exceed it. In chronic phthisis the secretion was always very scanty. In heart affections of a grave character the amount of saliva secreted was always low. In affections of the spinal cord the amount secreted reached and even surpassed the average amount; in some cases of cerebral tumour the reverse occurred. In chronic Bright's disease a scanty secretion of saliva was also found. In simple anæmia, chronic rheumatism, and in Addison's disease, the secretion was subnormal in amount. In many cases where the secretion was scanty its diastatic power was also feeble, and on the contrary where the secretion was copious its proteolytic power was also great. Dr. Robertson described an easy method of estimating the diastatic power of saliva, and stated that it was evident that a full appreciation of the diastatic power of the secretion was necessary when one came to consider the dietetics of disease. In those cases where the secretion was exceedingly scanty, or even in abeyance, or in those cases where ptyalin was absent from the saliva, or again in cases where the secretion was inhibited by drugs, ordinary starchy foods ought not to be given. If they were administered at all the starch must first be rendered soluble by treatment with some of the artificial digestant agents. The author advocated a more systematic examination of the saliva in all diseases of the gastro-intestinal tract, as also in other diseases where ordinary starchy food was found to disagree with the patient.

FOLKESTONE MEDICAL SOCIETY.—At a meeting on April 6th, Mr. READ in the chair, several members spoke as to the inconvenience of so-called "travellers" calling upon them. Others said that, although they did not object to representatives of firms they dealt with calling on them, they objected to those from proprietary medicine firms and such like.—Mr. W. F. CHAMBERS read a paper on operative midwifery. The prevention of sepsis should be carried out with even more care than in a surgical operation. A cocaine tablet in a piece of wool, wetted and then applied to the cervix had done good in two cases. He sterilised the forceps in iodic hydrarg. solution. Axis traction forceps were of assistance, and those of Le Page were simple and economical, but were liable to slip. External version was impossible in most cases of transverse presentation, as the cases were seen too late. The use of a curette directly after delivery or during the lying-in period should be discouraged; the finger nail was more to be trusted. In ruptured perineum he did not suture unless the tear was severe or unless there was a good nurse in attendance. In his experience the sutures gave way. He tied the legs together and kept the wound clean.

INTERNATIONAL ANTI-ALCOHOL CONGRESS.—The eighth meeting of the International Anti-alcohol Congress is to be held in Vienna in 1901. An Organising Committee, with Professor Max Gruber as Chairman, has been formed.

REVIEWS.

DIE PEST [Plague]. Von Dr. H. F. MÜLLER und Dr. R. PÖCH. Vienna: A. Hölder. 1900. (Roy. 8vo, pp. 354. M. 8.40.)

DR. MÜLLER was one of the members of the Austrian Commission that visited Bombay to study the plague there. It will be remembered that this Commission brought back with them to Vienna a quantity of material for research purposes, and that an attendant of the laboratory in which the researches were being carried out contracted plague in its pneumonic form, the infection being later conveyed to Dr. Müller, who after a few days' illness succumbed to the disease.

This book which is now published contains a very excellent account of the experience gained in Bombay and places within reach of the ordinary reader most of the information to be found in the Austrian report. In the first chapter a short history of the plague from the earliest times is given. This is followed by a description of the pathological and anatomical appearances after death. In the next the bacillus of the disease is considered with reference to its morphology, behaviour in cultures, and the results of experiments on animals. The channels of infection, the part which animals play in the spread of plague, the epidemic spread of plague, its endemic centres, and the influence of locality and climate on the disease form an important and well-thought-out chapter on the epidemiology of the disease.

The clinical picture of the disease is good, and the several symptoms are fully described; it is obviously the work of an acute and patient observer. Haffkine's antiplague inoculations and Yersin's and Lustig's serumtherapy form the subjects of the last chapters in an interesting work, the value of which is enhanced by a very excellent reference list to the literature of the subject.

A large number of experiments on animals are recorded which were made by feeding with cultures of plague bacilli, by intraperitoneal injections, by subcutaneous injections, and by intravenous injections. Feeding appears to have produced no positive effect except on guinea-pigs, mice, and cats. Jackals, hyænas, vultures, and pigs consumed large quantities with no ill results. Drs. Müller and Pöch are sceptical as to food being an important medium for infection of the human being, their experiences differing in this respect from the observations of Wilm in the Hong Kong epidemic, in which the mesenteric glands were very frequently found to be affected, owing, as was thought, to the plague bacillus gaining an entrance into the system with the food. The discussion on the probable modes of infection in man is based on much close observation.

BUBONIC PLAGUE: ITS COURSE AND SYMPTOMS AND MEANS OF PREVENTION AND TREATMENT. By Dr. JOSÉ VERDES MONTENEGRO, of Madrid. Translated by W. MUNRO, M.D. London: Baillière, Tindall, and Cox. 1900. (Demy 8vo, pp. 84. 3s. 6d.)

THIS small book, by Professor MONTENEGRO, of Madrid, translated by Dr. W. MUNRO, late District Medical Officer, St. Kitts, W.I., is published at a very opportune moment. It is an excellent summary of the important work that has been done during recent years to discover the cause of the propagation of the plague, and how to combat the attacks. It also includes the greater part of the data in regard to the epidemic in Oporto, obtained from the observations and experiments carried out in that city by the foreign commissions. Beginning with the biological characters of bubonic plague, Professor Montenegro describes the bacillus and its behaviour in cultivations and under the influence of disinfectants and sunlight, and also its action on animals. With reference to the latter he remarks that although the bacillus of plague is pathogenetic, not only in man, but also in various other animals as rats, cats, pigs, sheep, oxen, etc., it is not so to an equal extent in all. Further, he states that the infection of an animal by the pathological products from another of a distinct species does not always give any result, and when it does there appear, in virtue of the transmission, very considerable differences in the intensity of the transmitted disease. He therefore raises the question whether sometimes a different microbe may not be in question.

The different gates of entrance which the body offers to the infecting virus and the mechanism by which the infection is introduced are next dealt with. Infection through the skin, conjunctiva, respiratory organs, digestive tract, and vagina, are all briefly and pointedly discussed, instances and experiments being quoted. Under the vehicles of contagion for the conveyance of plague, its transmission by rats and fleas, by man, by the air and by objects is considered, and the probable mechanism of such transmissions discussed. Then follows a chapter on prophylaxis and local defence, in which there are some very apposite remarks as to the folly of supposing that general measures of sanitation in times of an epidemic, rather than special measures directed to the particular mode of attack of the disease, are necessary. Professor Montenegro has also an interesting account of the modern methods adopted in Spain, in which the resolutions arrived at at Dresden and Venice are closely followed. Early information, local measures for the house and inmates affected, and disinfection, together with inspection on the frontiers, with detention of sick coming from infected centres, are ably advocated, and the powerlessness of sequestration and sanitary cordons is demonstrated.

Chapters on the disease itself, its clinical features, lesions, and treatment curative and preventive by Yersin's serum and Haffkine's inoculations follow, and a most interesting and instructive volume is brought to a close by a description of the plague in Oporto, and an appendix bringing the subject of plague up to the date of publication. We have no hesitation in recommending Professor Montenegro's book on plague to the profession and we congratulate not only Professor Montenegro for his instructive monograph but also Dr. Munro for the able and successful manner in which he has translated it.

THE BRITISH GUIANA MEDICAL ANNUAL FOR 1899. Edited by J. F. S. FOWLER, M.B. Georgetown, Demerara: Baldwin and Co. 1899. (Demy 8vo, pp. 70; 5s.)

THIS interesting publication has reached the eleventh year of its existence, and as usual contains several valuable articles. The Editor complains that the support forthcoming is not encouraging, and fears that the journal will die of inanition. We should regret such an event as a calamity.

Dr. Kennard contributes a valuable clinical paper on ankylostomiasis. He criticises the attribution of anæmia to ankylostomata merely because these worms or their ova are met with in the stools, but "the curing of the intestinal catarrh should be one chief object in the majority of ankylostoma cases."

Dr. Glenmore Ozanne has an article entitled, a Few Remarks and Illustrative Cases of Mydriasis. The ova and larvæ met with on the surface of ulcers and wounds are not always those of the same species of fly, but they are easily got rid of by daily washing with any ordinary antiseptic wash and keeping the part covered with an antiseptic dressing.

Dr. Fowler raises the question of the presence of beri-beri in British Guiana in a paper styled Does Beri-beri exist Undiagnosed in this Colony? Multiple neuritis is met with in Guiana, and cases of paraplegia and of dropsy, but that anyone of these, or even when they are in combination, constitute true beri-beri is the point at issue. Dr. Fowler argues that as "the patients seldom if ever get those sudden violent cardiac attacks," and as "sudden deaths among them practically never occur," it is very doubtful if the cases are really examples of beri-beri. Dr. Barnes is of the opinion "that most if not all the cases of multiple neuritis we get are due to alcohol." The same difficulties as regards the diagnosis of beri-beri exists in other countries, and the same differences of opinion prevail. In almost all instances hitherto, where diagnosis has been uncertain in the case of natives, the disease has proved to be true beri-beri.

Dr. Palmer Ross, C.M.G., Surgeon-General, British Guiana, gives Simple Directions as to the Treatment of Malarial Fevers, Diarrhœa, and Dysentery. In the course of many useful hints Dr. Ross remarks, "An attack of fever, however slight, should be treated with great caution, more especially

after long residence without change to Europe, exposure in the bush, to rain, or the night air. Personally, I do not believe in acclimatisation on the West Coast of Africa, as the longer the residence the greater the liability to blackwater fever and the worst types of fever."

Dr. Walter S. Barnes directs attention to the subject of Phthisis in British Guiana, "in view of its immense importance as one of the most fatal diseases prevalent in this colony." Dr. F. E. Edmonds, in his presidential address, takes for his subject Malaria and Pregnancy. His remarks are of great interest, as they deal with a subject of vital importance to the European community, more especially, in every tropical country. Dr. Edmonds does not believe quinine to be the cause of miscarriage so frequently as is asserted, but holds that "malarial fever is responsible for a large number of stillbirths." Mr. Bell, M.R.C.V.S., contributes a paper on Malaria as it affects the Lower Animals. He showed that the horse, ass, mule, cattle, dog, cat, monkey, etc., are subject to attacks of fever which are no doubt malarial in their origin.

Lepra. Bibliotheca Internationalis Opera Consociata Virorum, etc. Vol. i. Fasc. 1 et 2. London: J. and A. Churchill. 1900. (Imp. 8vo, pp. 92, 6 plates. 20s. per vol. of 4 Fasciculi).

The first two fasciculi of the new serial international publication, the outcome of the Berlin Conference on Leprosy, contain several original papers, numerous references, and six excellently executed plates (five in colours). Under the actual editorship of Dr. Ehlers of Copenhagen, with the assistance of a number of well-known leprologists in various parts of the world, *Lepra* bids fair to be of great assistance in focussing the results of many active workers, thereby proving invaluable as regards a better knowledge of the disease, and therefore of the means to be employed to stem its progress. The present part contains contributions in English, French, and German, some of the abstracts being from the Russian, Norwegian, etc. We may take it as a compliment that some of the German and Norwegian writers make use of the English language, and on the whole successfully. The fact must not be lost sight of that one of the British imperial white man's burdens is the care of the leper and the struggle with leprosy. To us, therefore, such a periodical as *Lepra* should be specially valuable.

NOTES ON BOOKS.

The *Notes on the Therapeutics of Indigenous Vegetable Drugs*, by Lakshman B. Dhargalker, L.M. and S. (Bombay: Iatva-vivechaka Press. Crown 8vo. pp. 132) deal with indigenous drugs procurable in Bombay and furnish brief description of the plants from which they are derived and of their medicinal uses. The arrangement is according to their reputed action as antacids, astringents, etc., and the substances included under each group are designated according to the scientific name of the plant and the native name of the product. A copious index is appended embracing both. The author, in a preface which gives a slight historical sketch of the subject and some references to its literature, refers to the difficulty of identifying indigenous drugs in Indian bazaars and the importance of collecting such materials at particular seasons of the year. His descriptions may assist in identification, but they are meagre and refer to the growing plant rather than to the bazaar article. Times of collecting medicinal products are altogether omitted. There is practically no pharmacy in these notes, and references to therapeutical actions and uses are extremely vague. Such a statement as that the root bark of Toddalia aculeata "is highly useful in effecting a cure in all idiopathic and uncomplicated fevers whether periodical or continued" is very crude; but it is a fair example of the sort of help in practice obtainable from this publication.

That previous editions of *A Pocketbook for Chemists*, by Thomas Bayley, A.R.C.Sc.I. (London: E. and F. N. Spon. 1900. Crown 8vo, pp. 560. 5s.) have been much appreciated is shown by the fact that a new edition is required on an average every five years. The seventh edition contains copious numerical data concerning thermometers, barometers, hydrometers, eudiometers, specific gravities, melting and boiling points, solubilities, and a vast amount of information likely to be useful to analytical chemists.

The Story of the Wanderings of Atoms, Especially those of Carbon, by M. M. Pattison Muir, M.A. (London: Geo. Newnes. 1899. Fcap. 8vo, pp. 192. 1s.) is a sequel to *The Story of the Chemical Elements* by the same author. It is an attempt to make the "structural formulæ" of organic chemists intelligible to the ordinary reader. That the attempt is a bold one will be understood when it is mentioned that even such complicated molecules as those of alizarin and quinine are introduced into the story.

CONFERENCE ON MEDICAL ORGANISATION.

(Continued from page 1125.)

This conference resumed its sittings on Wednesday morning, May 2nd, Dr. Jepson (Durham), Vice-President, in the chair.

A Question of Procedure.

At the commencement of the proceedings a question was raised as to the validity of the voting on the previous day, but after some discussion it was ruled out of order. Dr. Cox (Gateshead) then questioned the right of the Chairman on the previous afternoon (Dr. Hime) to rule out of order the discussion of the resolutions set down by Dr. Owen Morris and Dr. Ratcliff-Gaylard in consequence of the Conference agreeing to the resolution that he had proposed. The Chairman refused to rule Dr. Hime out of order, but accepted a resolution that these omitted resolutions be now considered. This was moved by Dr. Woodcock, seconded by Dr. Helme, and carried by a large majority.

The Midwives Bill.

Dr. Dixon then moved:

That it is not desirable that midwives should be registered according to the provisions of the Bill at present before the House of Commons.

Dr. Helme seconded, and said the present Bill would be very bad for the poor. There was no imposition of fine for fault, no insistence on the mother being attended by the midwife after the birth of the child, and nothing to make it compulsory on the midwife to call in a doctor at all.

As it was decided by the meeting that the next resolution should be taken in conjunction with this, Dr. Ratcliff-Gaylard proposed, and Dr. Tomlin seconded:

That in the opinion of the Conference no legislation for the registration of midwives will be satisfactory to the profession unless it provides for the direct representation of general practitioners on the Central Midwives' Board, and further ensures that the midwife shall also act as nurse.

The mover pointed out the urgent necessity there was for a representation on such a Board of that part of the profession that had chiefly to do with midwives, and that the present measure had reserved no place for them; and that, as it would be the poor who would mostly require the services of midwives, it was absolutely necessary that they should at least assist in the nursing.

Dr. Woodcock thought it was going too far to propose so fully the heads that legislation should take.

Dr. Helme moved as an amendment, and Dr. Ritchie seconded:

That this Conference, recognising the possibility of legislation for the registration of midwives, is of opinion that in order to minimise the danger of such legislation it is essential to provide for the following: (1) The midwife shall attend the mother and child after labour, and shall restrict her practice to natural labour. (2) Imposition of penalty for practice as well as for assumption of title. (3) Imposition of penalty for malpraxis and misconduct. (4) Compulsion of midwife to send for a doctor in case of anything abnormal, or illness on the part of mother or child. (5) Direct medical supervision. (6) Direct representation of general practitioners on the Midwives' Board.

The mover and seconder of the resolution expressed their willingness to withdraw it in favour of the amendment.

It was then put to the meeting and carried by a large majority.

Medical Charities.

Mr. George Brown read a paper on medical charities: their relations to the public and to the profession. He observed that some special hospitals were promoted which

were really the private property of the founders Such were not really public institutions, and ought not to be allowed to compete with regular hospitals. The public were getting educated, however, and the increasing difficulty in getting subscriptions for hospitals might fairly be accepted as evidence that public confidence in the administration of hospitals was shaken. Out-patient mismanagement had occupied the attention of the public for thirty years. In 1898 upward of 95,000 in-patients and about 1,950,000 out-patients were recipients of medical relief at the various metropolitan charitities. Those who attended at the various fever hospitals, lying-in hospitals, and lunatic asylums, or the many thousands who claimed as a right free medical attendance at the Poor-law infirmaries and dispensaries were not included in these figures. It was incredible that nearly half the population of London should need to resort to hospitals in one year, but it must be remembered that many patients went from hospital to hospital in the year, and figured on the return of each hospital, and in other cases the same patient was included two or three times in the same annual return. They might fairly reduce the number by one-half. This would leave about one million as the number of patients above] the rank of pauper who received charitable medical relief each year at metropolitan hospitals and dispensaries. Could they be told that there was that number of deserving poor, not being paupers, who were entitled to free or assisted medical relief? In his opinion, if the pauper class were excluded there was not a tenth part of a million persons in the metropolitan area who could not afford the fees of general practitioners, and the thousands of pounds spent in ministering to the needs of the remaining 900,000 were misspent. This was a great public evil. It had a pauperising effect, while it diverted large sums of money from other channels. The overcrowding, too, of the out-patient department was a public evil; the work of the hospital staff was so increased that it was impossible that proper attention could be given to all the patients. No one should be allowed to appeal to the public for the support of charities without the sanction of the Home Secretary or some public authority, and no new hospital should be started unless its necessity had been clearly established. The interests of the medical officers would be served by a well-devised scheme of hospital reform, and personally he was inclined to hold them responsible for the evils of the present system. They had been deficient in courage, and had not recognised their duty to the public. That they had a right to a predominant voice in the control of hospitals must be conceded, but, as a fact, they had little voice in the management. He was inclined, though reluctantly, to favour State control. At any rate, the State might fairly be asked to pass a law to stop the free trade that existed in founding and running hospitals.

Some discussion followed, in the course of which Mr. GEORGE JACKSON expressed the opinion that the reader had not instanced all that might be done to check hospital abuse, and he pointed out what good had been done at Plymouth by the employment of an investigation officer.

Mr. GEORGE BROWN replied briefly, and said he should be glad of a visitor in the form of State control.

Dr. TINKER (Hyde) then moved, and Dr. CHADWICK (Rochdale) seconded:

That it is desirable to emphasise the fact that hospitals and infirmaries are charitable institutions, and that all persons who receive treatment there are recipients of charity.

The mover said there was no doubt that hospitals were very much abused, and if the charitably disposed people who gave subscriptions to such institutions only knew the amount of abuse it would have a material effect on the way in which such institutions were worked.

Dr. CHADWICK said that the Workmen's Compensation Act was having a disastrous effect on the profession, that the employers of labour having to insure against accidents now refused to pay the doctors for attendance on their employees, who declined to pay themselves, because they thought their employers ought to do so.

Mr. LANGLEY BROWNE thought that many hospitals could no longer be considerable charitable institutions. Some even repudiated that title, as they mainly existed through the subscriptions of those who claimed a right to be treated in return for their subscriptions.

Dr. MURPHY (Durham) said that those likely to subscribe had a much better chance of being attended.

Dr. TINKER then moved in addition:

That it is desirable that the governing bodies of hospitals should decide upon a wage limit, and exclude from the benefits of the charity any person whose income exceeds this; but the operation of this clause shall be waived in cases of accident, or acute illness involving urgent danger to life, and in case of severe operations.

Dr. REES (Wigan) seconded. He thought that the wage limit in hospitals and friendly societies should not be the same. More control certainly ought to be exercised over the out-patient department.

Dr. WHITTAKER (Great Yarmouth) asked what the exact meaning of wage limit was. If it could not be exactly defined it ought to rest on a definite principle. A rigorous wage limit would not be permissible.

Dr. RATCLIFF-GAYLARD thought that income limit would better express the meaning. Income should include receipts from all sources.

Dr. MUIR SMITH (Eastbourne) said that in his district there was a hospital staff of seven general practitioners. They were all on the Committee, and when any doctor wanted a patient admitted, he was required to fill in a paper giving details as to social position, illness, etc., and the medical officer on duty decided as to the eligibility of the applicant.

Dr. NASH (Accrington) thought that no patient ought to be treated at a hospital without a recommendation from his or her doctor.

The resolution was carried.

Dr. TINKER moved:

That in cases of accident the attention at the hospital be limited strictly to first aid, unless the case be one of urgent danger to life, or the patient come within the wage limit.

This was seconded by Dr. BRASSEY BRIERLEY, and after some discussion carried, with the words "reasonable income limit" being substituted for "wage limit."

Dr. HERBERT DIXON (Birkenhead) then moved:

That in the opinion of this Conference there is considerable abuse in connection with the medical charities, and it is desirable that the profession should be directly represented on the Committees by which they are managed.

Dr. HAYNES (Worcester) suggested as amendment that "general practitioners in the district" should be put instead of "profession."

Dr. WHITTAKER objected.

Dr. PEART (North Shields) said that the general practitioners would have to be subscribers to entitle them to be on the Committee.

Dr. WOODCOCK thought that such an amendment would lay the Conference open to a charge of seeking after their self-interest. In the case of large hospitals such an arrangement could not possibly work.

Dr. MAJOR GREENWOOD said that the public would never consent to such a principle. That without subscribing, and simply because he was a medical man, a local practitioner might claim to be on the Committee of the hospital in his district was, in his opinion, an altogether untenable proposition. He thought the profession was adequately represented if all the honcrary medical officers were *ex-officio* members of the Committee.

Dr. WHITTAKER was sure that medical men would never be allowed to vote unless they were subscribers.

Dr. WESTMACOTT (Manchester) thought it would be convenient to have an outside medical man on the Committee, as the staff could avail themselves of his services in bringing medical matters before the Board; but he did not think doctors would ever be allowed to vote unless qualified by subscription.

Mr. GEORGE BROWN said that if the amendment were carried it would put the profession in a ridiculous position.

The amendment was put and lost, and after some further discussion it was proposed by Dr. WOLSTENHOLME, and seconded by Dr. WOODCOCK:

That in the opinion of the Conference there is considerable abuse in connection with medical charities, and it is desirable that the profession be adequately represented on the committees by which they are managed through their staffs.

This amendment was carried by a large majority, and substituted for the resolution moved by Dr. HERBERT DIXON.

Dr. HERBERT DIXON then moved:

That it is desirable that a visitor should be appointed at the various hospitals to inquire into the circumstances of patients applying for relief in order to prevent such abuse.

This was seconded by Dr. MURPHY.

Dr. JEPSON (Durham) said that hospital abuse was notorious. In his own district the whole county was represented socially among the patients. He thought the medical societies of the district should appoint the visitor to the hospital, and pay him according to the number of cases of abuse he brought to light.

Dr. WHITTAKER thought that the hospitals would willingly allow the medical societies to pay the salary of the visitor.

Dr. MAJOR GREENWOOD said that the hospitals would never permit medical societies to appoint their officers. He did not approve of paying a visitor in proportion to the abuse he discovered; it was a direct incentive to make the officer manufacture abuse where he failed to discover it, and would certainly not command the confidence of the public.

Dr. WOLSTENHOLME said that the resolution was obscure; that it was only the principle of appointing a visitor that they desired to lay down.

Dr. RITCHIE thought that there ought to be co-operation in towns where the institutions were too small to pay for a visitor to appoint one in common.

Dr. ANDERSON approved of Dr. Jepson's suggestion, and moved it as an amendment, with the addition that the visitor should be chosen by the medical societies in conjunction with the local profession.

The amendment was lost, and the original resolution carried by a large majority.

DEATH CERTIFICATION.

Dr. CRAWSHAW, in the absence of Dr. Tinker, moved:

That it is desirable in the interests of the community to reform the system of death certification, so that in every case of death it will be necessary to have the cause certified by a registered medical practitioner, failing which an inquiry must be held by the coroner.

This was seconded by Dr. MURPHY.

Dr. NASH asked if by inquiry was meant inquest; if so such a proposal was quite unworkable.

Dr. MAJOR GREENWOOD said it was not only unworkable but unnecessary. No doubt there ought to be an inquiry made by the coroner into every case where a proper certificate had not been given, but it must always be left to that officer's discretion to decide whether an inquest should be held. In many cases an inquest would be utterly unnecessary, and would be a waste of public money. It was a great hardship on working classes to summon them unnecessarily as jurors on formal inquests. In order to make suitable inquiries, and avoid the necessity of an inquest, it was very desirable that the coroner should be a medical man, and he thought that many more inquests might be avoided with safety to the community by a medical than by a legal coroner.

Dr. WOODCOCK said it would be quite impossible for a coroner to hold inquests on all these cases, especially in large towns.

Dr. WHITTAKER thought that too much responsibility was often thrown on the medical man, and that at times he was thrown into conflict with his patient by the coroner insisting upon holding an unnecessary inquest. The law should forbid him to certify unless he had seen the patient within a short time of the death, and had in addition inspected the body.

Dr. RITCHIE proposed as an amendment that "or stillbirth" should be inserted after "death," so that the resolution should read "in every case of death or stillbirth it will be," etc.

This was accepted, and the resolution carried with that addition.

It was then moved:

That the present open method of giving death certificates tends to incomplete statements being given, and thereby prevents the statistics of the Registrar-General being so accurate as they ought to be.

This resolution, after a little discussion, was agreed to.

At the afternoon session the PRESIDENT (Dr. Wright) was in the chair.

FRIENDLY SOCIETY WORK AND THE PROPOSED CONCILIATION BOARD.

Dr. RATCLIFF-GAYLARD, who read a paper on this subject, said that contract work was bad for the profession, that no medical man really liked it, and that few of them would like their own families to be treated on such a system. Doctors had improperly allowed the public to believe they might have the same attendance for the contract pittances as for private fees. Friendly society doctors were often very badly treated and had no security of tenure, being liable to summary dismissal. It would be necessary to educate both the profession and the public before there could be any real reform. The low rates of payment must be raised, and no children accepted at a lower rate than adults. Clubs were worthless as a means of introduction into family practice if women were admitted into them. While he considered it their duty to discourage the further development of contract medical work, they must try and find some method which would satisfy their poorer patients without destroying the self-respect of medical men of insuring the poorer classes against heavy medical bills, and they must in the meantime as practical men try to improve as far as possible the present system. He approved of a Conciliation Board, and he thought the General Medical Council had done good work in this direction. The Board had been accepted by the friendly societies, but not by the profession.

Dr. WOLSTENHOLME did not approve of the formation of a Conciliation Board. It was not the part of the profession to try and conciliate the friendly societies.

Dr. REES pointed out that at Wigan security of tenure had been obtained and underselling stopped. The fees were still ridiculously low, but they had been able to introduce accident clubs, so that the ordinary clubs only covered sickness.

Dr. IRVINE (Birmingham) protested against a *non-possumus* attitude on the part of the profession with regard to a conciliation Board.

Dr. WHITTAKER was of Dr. Irvine's opinion. At Yarmouth they had tried conciliation, but the friendly societies there had refused it. He thought that by going to head-quarters better results would be obtained than by negotiating with local branches.

Dr. MAJOR GREENWOOD observed that in order that an arbitration should be of any use there must be no reservation of essential conditions. The great friendly societies, through their governing committees, had roundly declared that they would not entertain the notion of a wage limit. This being so, how could the profession treat with the friendly societies?

Dr. ANDERSON thought that a conference might result in getting the disputed points thrown into arbitration. If the friendly societies would not consent to this, no good could come of a Conciliation Board.

Dr. RITCHIE thought that the friendly societies ought to make an essential difference between "sick benefit," and "medical benefit"; the wage limit would only apply to the latter.

Dr. DOLAN (Halifax) thought that unless a wage limit were allowed by the friendly societies no good could come out of any conference.

Dr. GLOVER said he hoped the members of this Conference would be willing to give the Conciliation Board a trial, as it would not be binding on those who were dissatisfied with its results. It was a reasonable proposal, and should not be approached with distrust; its value was that it brought the best men forward on each side. He had conferred with working men, and had found them very fair and reasonable, and it would be well to come to a better understanding with these men. It was incorrect to say that the friendly societies had proposed the Conciliation Board; it was proposed in the General Medical Council. It was there suggested that such a body should discuss the matter, as there were many important points to be considered. The inadequate remuneration and the want of independence and respect that friendly society doctors often had to put up with were to come before the Board. The friendly societies would not consent to a wage limit, because they said they could not; but public opinion might alter this. He believed that a Conciliation Board would have a very good effect. At the last conference he had with

the friendly societies he had been told that members of friendly societies who had risen in the world very seldom employed the club doctor. As to the present position of the question, the Council of the British Medical Association had asked him to arrange for a joint meeting between delegates of that Council and the General Medical Council. This would shortly take place. The present fees paid by friendly societies were ridiculously inadequate, and if a conference could be got to see this it would be a great gain. Then, as to women and children, although the right to contract for them could not be denied, it must be at adequate rates. The Conciliation Board notion really originated from an application made by their friends at Yarmouth, who wished to ostracise a professional brother. This was a serious step, and before it was taken surely conciliation ought to be tried. He said that the Manchester and Liverpool societies had intimated that they had given up their medical departments, that is, that they no longer made fresh members.

VACCINATION.

Dr. RATCLIFF-GAYLARD moved:

That it is desirable that those who have the carrying-out of the provisions of the Vaccination Act should perform their duties in such a way as not to trench upon the interests of general practitioners, and that instructions to that effect be issued to public vaccinators.

Public vaccinators, he said, sometimes tried to get the patients of other practitioners to bring their children to them to vaccinate by various improper devices.

Dr. WOLSTENHOLME seconded.

Dr. MAJOR GREENWOOD strongly protested against the resolution. He represented the Poor-law Medical Officers' Association of England and Wales, and in their name—for many public vaccinators belonged to that body—he repudiated the suggestion that any but an insignificant number would be guilty of such dishonourable conduct as that imputed by the mover of this resolution. Because one or two black sheep had been found it did not follow they were numerous throughout the country, and to ask the Local Government Board on such grounds to issue the instructions asked for in the resolution he thought would be scandalous.

Dr. WOODCOCK agreed with Dr. Greenwood. Private practitioners should take better care to see that their patient's children were vaccinated. The public vaccinators were only informed about children where there had been neglect to vaccinate them. What, too, was to be said about those private practitioners who were willing to vaccinate in one or two places only? He thought that such a resolution would be most unjust.

Dr. BRASSEY BRIERLEY thought the resolution ought not to have been brought forward.

Dr. RATCLIFF-GAYLARD said that he did not mean to imply that the majority of public vaccinators did their work improperly.

The resolution was lost by 19 to 17.

PROVIDENT DISPENSARIES.

Dr. STEWART, who read a paper on this subject, said that provident dispensaries were first instituted in Salford and Manchester in 1865, to check hospital abuse, for those who could pay small fees. It might be now inquired what good they had done, and at first it would appear that they caused considerable improvement, for it was found that unsuitable applicants at the hospital had diminished from 42 per cent. to 6 per cent. It was questionable whether this was accurate, for many were now regarded as suitable that were once rejected as unsuitable. The inquiry now was more lax; inspectors often called on doubtful applicants, and left them papers pointing out what sort of wages, or incomes, justified hospital assistance, and the latter took care to make their incomes coincide with the requirements. The out-patients had diminished under proper inspection, but had since grown again. The dispensaries had been established twenty-five years, and the present number of members was about 20,000, not a large number for so large an area. The system had never been taken up warmly by the profession, although it was more profitable than ordinary club work, even if it were granted that club members were usually more healthy than the average member of a provident dispensary. He thought the profession should organise a dispensary system. More was got through such institutions than by endeavouring to collect bad debts.

Mr. GEORGE JACKSON then read a paper on the same subject, in the course of which he said that about thirty years ago the movement for provident dispensaries was initiated at Plymouth. Members were then only accepted at the discretion of the medical officers. As time went on their dispensary was crippled by another institution and by the action of the medical aid association. Owing to loss of members it became necessary to raise the contributions, and this had a disastrous result. He thought the medical officers ought always to be on the committee of management. He instanced the Coventry Dispensary as being all that a provident dispensary ought not to be, 25,000 members having been obtained by that institution out of a population of not more than 50,000. Canvassing was actively carried on there, and there was no wage limit. He thought the medical officers of that institution ought to have resigned and joined the Public Service Association. There could be no question as to the necessity of provident dispensaries, owing to the large number of wage earners who could pay little. The wage limit at Plymouth was 25s. per week for single men and 40s. for married. He thought there was a good deal in the saying of the late Dr. Joseph Rogers: "If you want to reform an abuse you must first point it out clearly to the public, and then convert the profession."

Dr. BROADBENT wished to point out that at Manchester the system was bad, that he and other local practitioners condemned the dispensary that Dr. Stewart approved, and that the practitioners in the neighbourhood of Pendleton especially did so. He handed round to the meeting a printed circular of the Manchester Guild, condemning some of these dispensaries.

Dr. WOLSTENHOLME disapproved of the dispensaries. He gave the statistics of the Pendleton Dispensary, and pointed out that the rate of Dr. Stewart was worse than any of the rates he complained of.

Dr. MAJOR GREENWOOD had understood from Dr. Stewart that members were admitted without examination, and also when suffering from sickness. This was altogether contrary to the principles on which the best provident dispensaries were founded. Why was not a better trial given to a provident system based on payment to the doctor for all work done, such as was attempted by the National Deposit Friendly Society?

Dr. CRAWSHAW objected to dispensaries being ruled by lay committees who paid nothing towards the funds.

Dr. RATCLIFF-GAYLARD said that the Pendleton Dispensary was a reformed dispensary, but that the other Manchester dispensaries were very different. Where these institutions existed they should be in the hands of medical men. He objected strongly to the National Deposit Friendly Society, because it interfered unwarrantably between doctor and patient. He thought a public service society the proper remedy.

Dr. WHITTAKER also objected to the National Deposit Society, because there was no wage limit.

Dr. HERBERT DIXON moved:

That in the opinion of this Conference there should be in contract practice a minimum rate of 5s. per member per annum; and, further, this Conference condemns the practice of canvassing in connection with medical clubs.

Dr. BOWDEN (Warrington) seconded.

Dr. WHITTAKER moved as an amendment:

That in the opinion of this Conference there should be in club practice a minimum rate of 5s. per adult healthy male member, and that contract work should be distributed between all practitioners willing to take such work; and, further, that this Conference condemns the practice of canvassing in connection with medical clubs and insists on the necessity of an income limit being made part of the contract.

The amendment was seconded by Dr. NASH.

Dr. BROADBENT disapproved of the amendment. He thought it would increase club practice.

Dr. RATCLIFF-GAYLARD thought it was calculated to destroy all private practice.

Dr. MAJOR GREENWOOD thought the original resolution was essentially practical, and represented the almost unanimous opinion of the profession that the present club rates were in-

adequate, and might assist club doctors to get better payment. But the addition of Dr. Whittaker was altogether impracticable. Before any such suggestion as that of dividing the club work among all practitioners willing to take such work could be carried out, the club system would have to be abolished. As Dr. Ratcliff-Gaylard said, its effect, too, would be to interfere largely with private practice, and if the club work of the country, instead of being in the hands of the few, was divided among a number the rate would have to be much higher than 5s. a member. At such a rate it would pay nobody.

Dr. Howell thought there would have to be a much higher rate.

The amendment was carried by 13 to 12.

There were present the second day 40 delegates and a considerable number of the local profession.

The Conference resumed on Thursday morning, May 3rd, when the President was in the chair.

The Politics of the Profession.

Dr. Glover read a paper on some debated points in the politics of the medical profession, in the course of which he observed that it was satisfactory that there were only two or three points on which there was much division of opinion. The Midwives Bill was one of them. He regretted he was not present when the matter was discussed on the first day. He had never concealed his opinion; he did not conceal it at Newcastle, where he expressed his view as being in agreement with Mr. Horsley's. He admitted there was room for differences of opinion, but he invited opponents to consider his views. Opponents were too unpractical. The facts were that midwives existed, and attended 200,000 cases annually, and were directly employed by the public. The title was allowed by the law, and any woman might take this title, and attend all varieties of midwifery cases. Even opponents admitted that something must be done. The Bill was said to create a new class of practitioners, but the class existed already. It was impossible to abolish midwives, and to cause all women to be attended by doctors. Some had said that all women unable to pay a doctor's fees should be attended by the parish doctor, but this could only be done by Act of Parliament. The late Dr. Stokes and Sir Henry Acland were keen advocates of the proposed legislation, and they were men whose opinions were worthy of every consideration. In London much midwifery was done by midwives, and medical men there did not refuse to meet midwives. He alluded to the City of London Lying-in Hospital, and said that for the last hundred and fifty years medical men had been in the habit of meeting midwives, and had thought it no crime. He instanced also the Royal Maternity Charity, which had 46 district surgeons and 35 midwives. In the administration of the Poor Law, Boards of Guardians frequently availed themselves of the services of midwives. He claimed to have shown that the present attitude of the profession was very inconsistent, as things could not possibly remain as they were; the profession could not prevent legislation, but it might control it. He wanted to know what sin the gentlemen on the staff of the City of London Lying-in Hospital—one of whom they knew well and was present with them to-day—had done by accepting their offices and meeting midwives, who held the diploma of the Obstetrical Society. He wanted to know, further, if, when gentlemen clamoured to have the representatives of the Obstetrical Society found guilty of infamous conduct in a professional respect for examining and certifying midwives as midwives, they would be prepared to go further and demand the same verdict brought in, with its terrible consequences, against the staff of the City of London Lying-in Hospital and against those who countenanced the Royal Maternity Charity. A midwife with three months' training was better than a midwife with no training at all. Objection was made to the principle; but the fact was that midwives could not be kept out, and the alternative to the present Bill was something worse. He believed the position of midwives under medical supervision was a safe one, but the influence of the profession ought to be predominant in framing the rules to guide them and to enforce discipline. The Government had shown great respect to the General Medical Council, and so to the profession, and, even if irreconcilables were possibly able to defeat the present Bill, such tactics could not prevail in the end. The profession could not have all its own way in this question; if it persisted much longer in opposition, the public would choose to have a Midwives Bill without consulting the profession at all.

Dr. Broadbent objected to the title of Dr. Glover's paper. He thought they ought to have known he intended to discuss the midwife question. Some who were not there would have made a point of being present to answer him. Personally he was altogether against the Bill; it contained no clause for controlling or supervising midwives, but it practically made them independent practitioners of midwifery.

Dr. Wolstenholme observes that while it was true midwives had always existed, they had hitherto had no legal status. The Local Government Board did not recognise the midwives employed by the guardians. A medical practitioner was not dishonoured by taking a small fee if he did his work properly and his patient could not afford to pay more.

Dr. Major Greenwood did not agree with the way in which the question had been put by Dr. Glover. Of course there had always been midwives, and always would be; but the profession might reasonably object to the innovation made in the Medical Act of 1886 by the creation of what were really obstetrical practitioners. The present class of midwives might be improved without so momentous a change. The old practitioner used to call himself "Surgeon and Accoucheur," the latter title intimating to the public his obstetrical calling. The new midwife called herself "Accoucheuse," and, when registered under the new legislation, the public might reasonably conclude that she was on a footing with an ordinary medical practitioner as far as attending midwifery was concerned. Dr. Glover had referred to him personally as being in the habit of meeting midwives together with his colleagues on the staff of the City of London Lying-in Hospital. All medical men were in the habit of meeting them at the present time, while they occupied their present position. But could we be sure that this would be the case if the present legislation were persisted in? Might it not raise up a serious opposition between the profession and the new class of obstetrical practitioners it was proposed to create? The responsibility of this would lie at the door of those who forced such legislation on the profession. It was quite true, as had been remarked, that at present the Local Government Board did not recognise midwives employed by the guardians. But after the passing of the proposed Bill, he did not see why midwives might not claim to be recognised in the same way as the medical officers of the guardians. If midwifery were a branch of medicine, Bills of this nature could only be regarded as measures for legalising unqualified practice.

Dr. Irvine thought it ought to be well recognised that many medical men, who did not oppose all legislation, disapproved strongly of this particular Bill.

Dr. Rees cordially agreed with Dr. Glover, and was surprised at the attitude of the profession. He did not see how evils universally recognised could be got rid of without such a Bill as that now before Parliament. Even if they wished to abolish midwives it was plain they could not do so.

Dr. Glover, in reply, said that he considered the supervision contemplated in the present Bill was very real; it was not true to say there was no control. In spite of what Dr. Wolstenholme had said he thought that doctors who attended midwifery cases for 5s. 6d. were unmindful of the dignity of their profession. The fault of the midwife was when she required recognition as an inferior medical practitioner. He was surprised at Dr. Major Greenwood importing threats into the discussion as to the attitude likely to be taken by the profession if this measure passed. The profession were always law-abiding, and were not likely to depart from their habit in this particular.

Dr. Brassey Brierley moved a vote of thanks to Dr. Glover, which was carried unanimously.

Medical Organisation.

Dr. Jepson read a paper on medical organisation, and observed that for a long time the profession had had no organisation. It often happened all over the country that members of the profession were ground down by various evils

through having no cohesion among themselves, so as to assist one another by mutual help. Local medical societies might prevent this, but there must be more ethical feeling, and friendship must be improved between doctors generally. They were too often suspicious of one another, but he had found that if they could be got to meet together this suspicion was soon dissipated. The chairman of a local medical association ought to be a man of good standing, and it was always wise to have one of the secretaries a lawyer. The council should be in number proportionate according to the number of the members. He thought that the British Medical Association would do a good work in assisting financially in the organisation of the profession throughout the country.

Dr. CRAWSHAW said the main object of the Conference was to point out to the profession the value of delegation. The object of his resolutions was to perpetuate, and make such Conferences annual. There might have been mistakes, but this was the first attempt. He made some explanatory remarks as to the object of particular resolutions. He then moved:

That in the opinion of this Conference no scheme of medical organisation can be considered satisfactory unless it provides the following machinery: (1) Local or district associations formed wholly or partly for the discussion of medico-ethical or medico-political topics, to which all practitioners in the locality shall have the right to belong, such associations to be formed for this purpose where not already existing. (2) An annual conference of delegates from these associations, at which conference only medico-ethical and medico-political topics shall be discussed. (3) A Central Executive Committee, which shall be nominated and elected by the local associations, every member to retire annually, but to be eligible for re-election.

Dr. NASH seconded, and pointed out how successful the practitioners at Accrington had been in uniting and in putting a stop to quack practice, and otherwise looking after their own interests and those of the public.

Dr. WHITTAKER suggested as an amendment to (1)

Instead of "all practitioners" "every registered practitioner willing to conform to the rules."

He was in favour of this because it was desirable to reform practitioners of doubtful character, and they should exclude as few as possible.

The resolutions were carried with Dr. Whittaker's amendment, and with the following alteration in (2) and (3):

In (2), in last line, "shall be discussed and voted for," instead of "shall be discussed." In (3), in the second line, after "local associations" to read "for three years, one-third to retire annually and to be ineligible for re-election for one year."

Dr. COX then moved the following resolution:—

That this Conference is of opinion (1) that the pressing need in medical organisation is concentration; (2) that the multiplication of associations other than those purely local is to be deprecated; (3) that the size, position and wealth of the British Medical Association make it the only practical national medical organisation: and (4) that the efforts of all medico-ethical and similar associations and of the Conference should be directed to the conversion of the Council of the British Medical Association into an energetic body really representative of the majority of the members of the Association.

The multiplicity of associations was bad. The British Medical Association was the proper body, as the real object of that Association was essentially to maintain the "interests and dignity of the profession." That Association had existed 60 years and had attained a position of importance which ought not to be thrown away. If possible no new body should be formed, but the old one should be reformed. This was to be done by all members using their lawful powers as members. If the Branches were properly organised the Council of the Association might be changed.

Dr. CRAWSHAW proposed a slight verbal amendment.

Dr. WHITTAKER wished for a new organisation formed of delegates of local societies.

Dr. BROADBENT objected to the abolition of the Ethical Section at the annual meeting by the Council.

Dr. RITCHIE thought the difficulty of reforming the Association was not so great as supposed by some. Districts might be made in large Branches, and by their means command might be acquired over the Council of the Branch.

Dr. ANDERSON supported Dr. Cox and dissented from Dr. Broadbent. Because the Association had made one mistake it was not bound to make another. It was their part to make them reconsider their mistakes.

Dr. COX's resolutions were put, and carried by a large majority, with the following alterations:

In (3) to read "that the size, etc., of the British Medical Association make it *the most suitable* national medical," etc. In (4) to read "directed to the conversion of the British Medical Association," etc., the words "the Council of" being elided. And at the end of the resolution "*the profession*" being substituted for "that Association."

At afternoon session, Mr. GEORGE JACKSON was in the chair.

FINANCE.

The TREASURER (Mr. Bagley) made a financial statement. He said he had received as yet £39 5s., and there was due from the societies represented at the Conference a balance of about £45.

THE BRITISH MEDICAL ASSOCIATION FROM A GENERAL PRACTITIONER'S POINT OF VIEW.

Dr. GARRETT HORDER thought that the British Medical Association had not the influence it should possess. The mode of government was defective; the Presidents became Vice-Presidents and *ex officio* life members of the Council, and there was too great a tendency to the increase of non-representative members of Council. Their term of office ought to be limited to three years. The doings of the Council, again, were not adequately reported. Redistribution of Branches was urgently wanted, as some were a great deal too large. In London it was most difficult to gauge medical opinion, and the Lancashire and Cheshire Branch was much too large. The Branches should correspond with the Parliamentary areas. Ethical and political matters were not sufficiently dealt with, and more time should be given to the business at the annual meetings. He thought the British Medical Association might have done more to promote the following reforms: (1) To suppress quacks; (2) to support the amendment of the Medical Acts; (3) to increase the direct representation on the General Medical Council; (4) to suppress the medical aid associations. The profession was much disappointed with the General Medical Council for not making clearer at the last session of the Council their intention with regard to those who assisted the medical aid associations, after having distinctly threatened them.

Dr. MAJOR GREENWOOD thought that the difficulty of too large Branches was got over by the formation of districts, and this was in the power of any Branch. In London there were five districts, and much of the work of the Association in the metropolitan area was carried on by them. It was in their power largely to influence the Council of the Branch. General practitioners, too, might be well represented there. The President every third year was by the rules of the Branch chosen from the general practitioner representatives. It would be quite impossible to divide the Metropolitan Counties Branch in accordance with the Parliamentary divisions of that area.

Dr. BROADBENT thought that too extensive Branches might easily form districts.

Dr. WOLSTENHOLME agreed in the main with Dr. Horder.

Dr. COX thought it was useless to pass important resolutions at poorly-attended general meetings of the Association. As the Association was properly a limited liability company, proxy voting might be introduced with advantage, and delegates might have their expenses paid for attendance.

Dr. WHITTAKER thought that districts would not be so good as smaller Branches, which would each elect a representative. He did not think the annual meeting of the Association could ever be a representative one, and proxies would never get over the difficulty. The delegates from different parts of the country ought to meet together and compare notes. The British Medical Association might organise a conference of delegates, but he could not hope that the Association would ever reform itself.

Dr. RITCHIE disagreed with Dr. Whittaker. He thought that important reforms in the Association were imminent. The present rules of the Association were not like the laws of the Medes and Persians; a Medico political and Ethical Section might be formed

Dr. GLOVER referred to a remark of Dr. Horder touching the action of the General Medical Council in regard to medical

aid associations. The General Medical Council had passed a resolution on the subject of "touting," which was approved by the profession, and it would give practical effect to it if a concrete case were brought before it. But such a case must be brought before the Council before it could do anything.

After some remarks from Dr. Hime,

Dr. Brassey Brierley advocated using as far as possible the resources of the Association, which was really their own Association.

Dr. Horder, in his reply, said he did not think that Dr. Glover had satisfactorily answered his questions.

The Proposed Conciliation Board.

Dr. Cox was then called to move a resolution in favour of a Conciliation Board. In doing so he said that, in his opinion, the British Medical Association ought to appoint the delegates. The present Conference had not prestige enough, and there was no other body to do the work.

Dr. Whittaker agreed that the British Medical Association was the only body that could properly appoint delegates. There was no other machinery. He thought the profession must pay respect to public opinion, and we should not get it if we adopted a *non-possumus* attitude.

Dr. Graham did not approve of a Conciliation Board, neither did Dr. Broadbent, who specially objected to the medical delegates of such a Board, if formed, being elected by the British Medical Association; he thought there were other bodies who could better appoint them.

Dr. Ratcliff-Gaylard also objected to the Board, as also did Dr. Rees and Dr. Wolstenholme.

Dr. Ritchie thought that the point at issue was lost sight of. The proposition was to appoint delegates to see if a Conciliation Board would be possible.

Dr. Anderson thought that the British Medical Association was not a suitable body to elect delegates for the profession, but it might appoint a Committee to meet other bodies to appoint the delegates.

Dr. Horder said that the Committee of the General Medical Council gave the case away when they met the delegates of the Friendly Societies.

After some further discussion the following resolution was agreed to:

That, while of opinion that a Conciliation Board was unnecessary, this Conference would be willing to welcome such a body if the medical delegates to it were general practitioners in active practice.

Dr. Wolstenholme then moved:

That the Conference appoint a Provisional Committee to carry out its decisions: (1) To lay such resolution before the Council of the British Medical Association, and request them to organise a permanent ethical epartment on the lines therein described. (2) Failing success with the British Medical Association, to approach the Incorporated Medical Practitioners' Association, the Medical Defence Union, the Corporate and Medical Reform Association, and other bodies of a like nature, with a view to their amalgamation and the formation of such an organisation. (3) Failing success with these, to formulate rules for the formation of an entirely new organisation, on the lines described in that resolution, and to submit the same next year to a Conference similar to the present one for consideration and adoption.

The mover said that these resolutions were very important, and really the backbone of the Conference.

Dr. Whittaker suggested that (2) should be eliminated, and he thought the mover would accept this.

Dr. Wolstenholme moved that twelve of the delegates be appointed a Provisional Committee.

An amendment, that all present constitute the Provisional Committee, was put to the meeting, but lost.

(1) was then put to the meeting, with the following names to constitute a Provisional Committee:

Drs. Dolan, Carline, Cox, Jepson, George Jackson, Rentoul, Hime, Wolstenholme, Broadbent, Crawshaw, Whittaker, Ritchie, Wright, Major Greenwood, Rees, Ratcliff-Gaylard, Muir Smith, Tomlin, Dixey, Bagley, Langley Browne, Garrett Horder, and Macdonald.

This was carried, and power was also given to the Provisional Committee to add to their number and to appoint an executive.

(2) was then put to the meeting.

Dr. Wolstenholme opposed this. He thought it would tend to cause rivalry between the different bodies.

Drs. Greenwood and Whittaker thought it was quite unnecessary.

After some discussion (2) was withdrawn.

(3) was then put, and finally carried, "with these" being struck out in the first line of the resolution, so that it read "Failing success, to formulate rules for the formation, etc."

The Conference then separated, with a vote of thanks to the Presidents and Vice-Presidents.

The following Societies were represented at the Conference: The Bradford and West Riding Medical Union, the Gateshead Medical Association, the Hartlepools Medical Society, the Kidderminster Medical Society, the Lincoln Medical Society, the Manchester Guild, the Oldham Branch of the Corporate and Medical Reform Association, the Plymouth Medical Society, the Rochdale and District Medical Society, the St. Helens Medical Society, the Warrington Medico-Ethical Society, the Wigan and District Medical Guild, the Worcestershire Medical Society, the County of Durham Medical Union, the Corporate and Medical Reform Association, the East Suburban Medical Protection and Medico-Ethical Society, the Poor-Law Medical Officers' Association of England and Wales, South-West London Medical Society, the Ashton-under Lyne and District Medical Society, the Ilford Medical Society, the Eastbourne Provident Medical Association, the Incorporated Medical Practitioners' Association of Great Yarmouth, the Birmingham and District General Medical Practitioners' Union, the Glossop and District Medical Society, the Willesden and District Medical Society, the Woolwich, Plumstead, and Charlton Medical Union, the Birkenhead Medical Society, the Bury and District Medical Society, the Eastern Valley Medical Association, the Newport Medical Society, the Accrington Medical Guild, the Brussels Medical Graduates' Association, the Manchester Medico-Ethical Association, the Middlesbrough and District Medical Society, the Incorporated Medical Practitioners' Association (Limited), the Worcestershire and Herefordshire Branch of the British Medical Association, the West Somerset Branch, the Thames Valley Branch, the Lancashire and Cheshire Branch, the Yorkshire Branch, the North of England Branch, the Council of the British Medical Association.

Dinner.

On Wednesday, May 2nd, at 8 P.M., the members of the Conference dined together at the Albion Hotel. Among those present were Drs. Crawshaw, Jepson, Broadbent, Murphy, Major Greenwood, Whittaker, Ratcliff-Gaylard, Glover, Peart, Cox, Nash, Rees, Helme, Bagley, Garrett Horder, Wolstenholme, and Messrs. Wright, Anderson, and George Jackson. Mr. Wright took the chair, and was supported by Dr. Glover and Dr. Jepson.

After the usual loyal toasts, the health of Dr. Glover was proposed, and that gentleman, in returning thanks, expressed his gratification at the way in which he had been received at Manchester. The health of Mr. Wright, the President, of Dr. Jepson, and Mr. George Jackson, the Vice-Presidents present, and of Dr. Crawshaw, the Organising Secretary, was then drunk with acclamation. These gentlemen replied, and the company spent a very pleasant evening, in the course of which Dr. Glover sang "Nanny's Gane Awa'," Dr. Garrett Horder gave a recitation "In the Gloaming," and several other members assisted with musical contributions.

CONTRACT MEDICAL PRACTICE.

Medical Organisation in the North.

An interesting little pamphlet bearing this title has been received from Dr. Cox, of Gateshead. The writer points out the apathy of many practitioners on matters of vital import to their well-being, and shows the satisfactory results brought about by an organisation in which the local profession was by no means so unanimous as it might have been expected to be. Dr. Cox shows that it is necessary that the medical profession in mining districts should follow the example of the miners in bettering their material position if they consider they are not properly paid by the workmen's unions. They, too, must form strong combinations, and obtain the best possible terms from their employers, and he says with regret that the workmen often show much more pluck in upholding their cause than do many of his brethren; he rightly also condemns the

attitude of members of the profession who take the position of waiting for working members to take the chestnuts out of the fire. The net result of the work of the County of Durham Medical Union would seem to be a membership of 200 out of a possible membership of 430, but it has done much to encourage a healthy self-reliance. Where their efforts have been least successful the medical men say that their pay is at least not less than it was when the contest began, and that with an equal income they have only two-thirds of the work and two-thirds of the former outlay. Everywhere the miners have been pretty plainly informed that the old sweating terms will no longer be passively tolerated, and if anything like unanimity in the profession could be got there is little doubt that the men would voluntarily concede the just demands of the medical practitioners. Dr. Jepson, Dr. Cox, and the others who have worked together in this matter are to be congratulated on the success that has been attained, and it is to be hoped that their example will be copied in other parts of the country.

Medical Aid Officers and their Golden Opportunity.

A Hospital Surgeon writes: A great deal has been written about the conduct of those members of the profession who allow their services to be exploited by medical aid associations, and who, by affiliating themselves with such bodies, countenance their irregular proceedings, and thereby degrade our noble calling. Although I have always regarded their conduct as reprehensible, I could not deny their argument "that if they resigned their appointments there were many other men ready to apply for them." To day no such excuse can be put forward. The profession has been so much depleted, first, by the disappearance of unqualified assistants; and, secondly, by the demands of the war, that there is the greatest difficulty in securing the services of a qualified man. Hospital appointments (which were previously keenly competed for) find no applicants, assistants are almost impossible to procure, and *locum tenens* are only to be obtained at increased fees by few of those requiring them. Now, then, is "the golden opportunity" for these gentlemen to escape from their oppressors and put themselves on a proper footing in their profession. Let them meet together (there cannot be more than fifty of them) and resign in a body. Their associations would not be able to obtain any qualified men, and they would collapse. The officers who resigned could start practice, and would secure most of the club members as their patients. Some think there would be a difficulty about a bond they have signed, but I doubt the legality of such a document. At any rate, the question could be fought without fear of loss because these gentlemen are said to have no means, and, therefore, no damages could be obtained from them. If the law decided against them they could easily change towns, so that the officer of one town would start practice in another where he was not subject to any legal disqualification.

I believe the profession would support such an action. They ought to do so, and I would go so far as to propose that an income equal to that which they at present receive from their association should be guaranteed to them by their professional brethren in the locality for a term of, say, three years. It is probable they would not be asked for much, as the private practice would be more lucrative than the miserable salaries paid by these associations. It is for the medical officers themselves to take action. If they refuse an opportunity which may never occur again, it will be no use pleading in the future that they were not made aware of it.

Consultations.

Enquirer asks the following question: Dr. A. is the surgeon to a friendly society, one of the members of which (who is entitled to his services) is being attended by a Dr. B. Dr. A. is asked to meet Dr. B. several times in consultation about this member. Can he claim fees as a consultant?

*** Although Dr. A. would be within his rights if he declined to meet Dr. B. under such circumstances in consultation about one of his club members, he cannot claim any fee for so meeting Dr. B., as the member is entitled to his professional services under the club contract.

LITERARY NOTES.

The most recent addition to the long list of French medical journals is one somewhat out of the ordinary line. It is entitled *Paris-Théâtre Médical*, and is to be a monthly review which is intended to be the organ of the friendly society of the Société Amicale des Médecins de Theâtre in Paris. The editor is Dr. Droubaix.

The portion of the library of the late Mr. Henry Jones, M.R.C.S.—better known to whist players by the name of "Cavendish"—which Messrs. Sotheby, Wilkinson and Hodge will sell on May 22nd, is, as might be expected, almost solely made up of treatises on card games, notably whist. Several are of considerable rarity and of early date. One of the rarest is the scarce spurious first edition of Hoyle's *Treatise on Whist*, 1743; of the genuine first edition it is said that only one copy—the Bodleian—is known to exist. There is also a copy of H. Neville's *Shuffling, Cutting and Dealing in a Game at Picquet*, 1659, which was reprinted in the fifth volume of the *Harleian Miscellany*.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Midwives Expenses Resolution was on Monday the cause of the heartiest laugh the House has enjoyed for a long time. Mr. Balfour, in order to answer questions as to the business to be taken during the sitting, proceeded to go through the orders on the paper, and, on coming to the words "midwives expenses," said, after a moment's hesitation, "I know nothing about them." The House at once took the point, and enjoyed itself in a long and hearty laugh over the disclaimer of the bachelor Leader of the House, who joined heartily himself in the general merriment. Later on, when the order was reached, Sir Walter Foster objected to the resolution being considered, and it stood over. It is felt that the resolution for these expenses should wait until the General Medical Council has met. It may be that considering the changes in the Bill made in Committee, and the fact that the amendments suggested by the General Medical Council have not been wholly adopted, the Council may not be willing to undertake the duties for which the expenses are to be provided.

The Edinburgh Lunacy Board Bill was read a second time at the time of private business last week after some serious show of opposition. The Board, in order to provide for the lunatics under their care, have purchased an estate 14 miles from Edinburgh on which an asylum to cost about a quarter-of-a-million is to be erected. This was within their statutory powers, but in addition it is proposed to construct a railway 1½ mile in length for goods and passengers, and further to take 1,500 acres of land as a catchment area for the water supply. These additional powers were objected to on the ground that the Lunacy Board ought not to become a water company and a railway company and the proprietors of a sewage farm. The Bill was eventually allowed a second reading on the understanding that it should be referred to a Select Committee to consider the difficulties and novelties of the proposals.

Lucifer Match Factories.—The new special rules regulating the employment of persons in factories where white or yellow phosphorus is used were discussed in the House after midnight on Monday. The main complaint was directed against leaving the chief responsibility on the dental surgeon after the persons were pronounced fit for the work, and relying on his inspection of the teeth every three months without having a medical examination of the general health as well. It was contended that phossy-jaw was not the only injury to be dreaded and that the absence of regular medical examination might be hurtful. The Home Secretary showed that he had been guided by expert advice, and expressed a strong hope that the new methods of manufacture by abolishing the use of yellow or white phosphorus altogether would render the trade much more healthy. The motion to annul the rules was rejected by 98 votes to 37.

The New National Physical Laboratory is not to be erected after all in the Queen's Cottage grounds, or indeed in any other grounds attached to Kew Gardens. It will stand quite outside these gardens on Crown land, under the jurisdiction of the Office of Works. The First Commissioner of Works stated that the buildings will not interfere with the view from the Gardens over the Old Deer Park, and as the laboratory will be only used for delicate scientific work requiring quiet, it will not disturb the seclusion of the Queen's Cottage.

Edinburgh and St. Andrews Universities sent up their new member, Sir John Batty Tuke, to take his seat on Tuesday last. He was introduced by the Right Hon. J. A. Campbell (Glasgow University) and Sir Michael Foster (London University) and was greeted with a cheer from his friends. It was unfortunate that the new member was kept waiting nearly three hours before he could take his seat in consequence of prolonged discussions on private business and privilege.

NOVA ET VETERA.

THE GREAT PLAGUE OF MARSEILLES.

SINCE the Great Plague which wrought such widespread devastation in 1665 this country has not been visited by the scourge. If now and again a case has been imported, the single spark has promptly been stamped out before it could glow into flame. Though some other parts of Europe have been less fortunate, the Western world has on the whole seen but little of the plague whose home is in the East. Almost the last invasion of any importance was the great epidemic which raged in Marseilles in 1720. It caused a panic throughout the rest of Europe, but happily did not spread beyond the confines of Provence, where it is estimated to have caused the death of 87,659 persons out of a population of some 250,000. In this country the memory of the Great Plague was still vivid enough to make the spectacle of the afflicted city in the South of France a cause of the most intense alarm lest the scourge might be brought to our own shores. The Government took counsel with Richard Mead, the great medical oracle of the day, and on his advice instituted severe measures of quarantine at all our ports. Mead's suggestions will be found set forth in his little work entitled *Discourse on Pestilential Contagia*, which was published in 1720, and may still be read with interest.

HOW IT STRUCK A CONTEMPORARY.

A glance at contemporary records may enable us in some measure to realise what has for the past two or three years been going on in some parts of India. Such a record we find in *A Journal of the Great Plague of Marseilles in the Year 1720*, of which an English translation was published in London in 1721. An exact reprint of this was published ten years ago by Dr. Edward Evan Meeres, of Plymouth, who contributed an introduction (London: Simpkin, Marshall, and Co. 1889). The author of the *Journal* was an official of the city who took an active part in fighting the plague. It is an authentic record by a witness who saw what he describes, and it is written in a matter-of-fact tone which makes it all the more impressive. Defoe's famous *Journal of the Plague of London*, which was published in 1722, was in all probability suggested by the appearance of the Marseilles diary. Defoe, who had the journalistic instinct in the modern sense very highly developed, doubtless saw in the circumstances of the time an opportunity of making "copy," and the French work gave him a cue of which he was not slow to avail himself. Defoe's *Journal* is not a historical document, as he was little more than an infant at the time of the plague which he describes. His work, however, has great value as giving a vivid picture of the events which he professes to chronicle, accurate in effect if not in details. The French *Journal* cannot compare with his as a work of art, but it has a value of its own as a genuine historical document. A few extracts from it may be interesting.

SUSPICIONS AND FEARS.

In the following entry we hear the first muttering of the storm:

The Beginning of *May*, 1720, we had advice at *Marseilles* that from the Month of *March* the Plague was rife in most of the Maritime Towns or trading Ports of *Palestine* and *Syria*.

On May 25th a ship commanded by Captain Chataud from Sidon, Tripoli, Syria, and Cyprus arrived at the islands of Chateau d'If, where all ships from the Levant had to stop, as Eastern ports were under constant suspicion of plague. He had a clean bill of health, but he had lost six of his crew on the home journey; the "Physicians of Health" at Leghorn, however, had testified that they died "only of malignant fevers caused by unwholesome provisions." While at Chateau d'If one or two more died, but the surgeons reported that the bodies showed no mark of contagion. Nevertheless, it began to be suspected that the ship was plague-stricken, and on July 7th two servants shut up in the infirmaries to purify the goods brought in it fell sick, and tumours were found in their groins. The surgeon reported that the disease was not plague; he paid the penalty of his wrong diagnosis by dying soon after with part of his family. On July 26th notice was given to the sheriffs that in a part of the old town inhabited only by poor people fifteen persons had suddenly fallen sick. Physicians and surgeons were at once sent to report, but they did not agree as to the nature of the disease. Some held that it was a malignant fever, others a contagious or pestilential fever occasioned by bad food; not one recognised it as the plague. Nevertheless the authorities continued to take precautions, having all cases of death investigated and the bodies burned with lime; but the deaths became day by day more and more numerous, and people began to take flight.

PURIFICATION BY FIRE.

At this juncture two doctors came forward with a proposal for the purification of the infected city by fire.

The 1st of August, M. *Sicard*, Father and Son, Physicians, come to the Town-House, to tell the Sheriffs, that it is not to be doubted the Distemper in the City is really the Plague, but that they make sure account they shall put an end to it, if they will do what they shall prescribe; which is to buy up a great Quantity of Wood, Brushes, and Faggots; to lay them in Piles, at small Distances, along the Walls of the Town, and in all public Walks, open Places, Squares, and Markets; to oblige every private Person to lay a Heap of them before his House, in all the streets in general; and to set them all on fire at the same time, in the Beginning of the night; which will most probably put an End to the Plague.

Every body being willing to make this Experiment; and all the other Physicians, who are called daily to the Town-House to give an Account of the Progress of the Distemper, not disapproving it; the Sheriffs forthwith cause all the Wood, Faggots, and Brushes that can be found, to be brought up; and *M. Audimar* and *Dieudé* go with the utmost Ardour to see them placed along the Walls, and in the Public Walks and Places.

The 2d of August they publish an Ordinance, commanding all the Inhabitants to make each a bonfire before his House, and to light it at 9 o'clock at night, the moment those along the Walls and in the public Places shall be lighted. This is executed. It is a magnificent sight, to behold a circuit of Walls, of so large, so vast extent, all illuminated; and if this should cure the City it would certainly be cured in a most joyful and agreeable manner."

Two days later, however, we read:

As for the Fires advised by the two *Sicards*, they are forborn; Notice is given, that those Two Physicians have deserted the City; besides there is no Wood, Faggots, or Brushes to be had; but a quantity of Brimstone is bought up, and distributed among the Poor, in all Quarters of the Town, and the Insides of all the Houses are order'd to be perfum'd.

COWARDICE OF THE DOCTORS.

The doctors as a class do not seem to have behaved well, for soon after we come upon the following entry:

The 9th of *August*, it is observ'd that some Physicians and almost all the Master-Surgeons, are fled. An Ordinance is issued at my Instance, to oblige them to return; on the Penalty to the former, of being expell'd for ever from the College of their Faculty; and to the latter, of being expell'd the Company of Surgeons, and of being proceeded against extraordinarily.

INVOCATION OF MEDICAL ORACLES.

The oracles of Montpellier were consulted:

The 12th of *August*, M. de *Chicoyneau* and *Verney*, the chief Physicians of *Montpellier*, arrive at the Barrier of *Notre Dame*, to come and examine, by Order of his Royal Highness, the true Nature of the Distemper that afflicts this City: Lodgings are made ready for them, and a Coach is sent to bring them hither from the Barrier.

The 13th, the Marquess *de Pilles*, and the Sheriffs, invite them to the Town-House, whither they had summoned all the Physicians and Master-Surgeons of the City; after they had conferred a long Time upon the Symptoms of the Distemper, they agree among themselves, to go together the following Days, to visit as well the sick in the Hospitals, as those in the several Quarters of the Town, and to make such Experiments as they should judge proper.

SAINT ROCH TO THE RESCUE.

At the same time help was sought from higher powers. St. Roch was believed to have a special influence in quelling plague, and his festival fell opportunely for a united effort to secure his intervention:

The 16th being the Festival of St *Roch*, which has at all Times been solemnized at *Marseilles*, for imploring Deliverance from the Plague, the Marquess *de Pilles*, and the Sheriffs, for preventing Communication, would have the Procession usually made every Year, in which the Bust and Relics of that Saint are carried, be now forborn; but they are obliged to yield to the Outcries of the People, who become almost raving in Matters of Devotion, when they are under so terrible a Scourge as the Plague, whose dire Effects they already feel; they even judge it convenient to assist at the Procession themselves, with all their Halbardiers and Guards, to hinder its being followed by a Crowd, and to prevent all Disorder.

A CITY OF DESOLATION.

Things, however, went from bad to worse, and under date of August 17th we read:

The Town has now an Aspect that moves Compassion; an Air of Desolation appears throughout; all the Shops are everywhere shut; the greatest Part of the Houses, Churches, and Convents, all the publick Markets and Places of Resort are deserted; and no Person is to be found in the Streets, but poor groaning Wretches; the Port is empty, the Gallies have withdrawn from the Keys, and are enclosed within a Stockade on the Side of the Arsenal, where Bridges are drawn up; and high Barriers erected, and all the Merchant Ships and Vessels have left the Wharfs, and gone out to Anchor at a Distance.

UNIVERSAL PANIC.

The panic caused folk to forget the ordinary feelings of

humanity, and even those whom religion should have made superior to the fear of death fled in terror from the doomed city:

The 19th, Persons are chosen in all the Parishes to make Broth for the sick Poor, and to distribute it among them; and a particular hospital is established, which the most moving Accidents such as a Calamity can produce, render absolutely necessary.

Many Women who suckled Children, dye of the Contagion; and the Infants are found crying in their cradles, when the Bodies of the Mothers or Nurses are taken away; no Body will receive these Children, much less suckle, or feed them: there is no Pity stirring in the Time of Plague, the Fear of catching the Contagion stifles all sentiments of Charity, and even those of Humanity: To save as many as possible of these little Innocents, and of so many other unhappy Children of Tender Age, whom the Pestilence had made Orphans, the Sheriffs take the Hospital of *St. James* of *Galicia*, and the Convent of the Fathers of *Loretto*, which were become empty by the Death or Flight of all those Monks; and there care is taken to feed them with Spoon-Meat, or by holding them to Goats to suck. The Number of them is so great, that tho' 30 or 40 die in a Day, there are always 12 or 1300, by the addition of those who are brought in successively every Day.

To lessen the danger of contagion it was proposed that the churches should be shut up. But, says the diarist bitterly:

They have no occasion to desire the Bishop to cause Divine Service to cease in the churches; they are generally shut up already: There are hardly any masses now said anywhere, no administration of the Sacraments, not so much as the tolling of Bells, all the Ecclesiasticks are fled, and even some of the Parish-Priests.

STREETS FULL OF THE DEAD.

The streets were filled with the bodies of the dead, which lay rotting in thousands because there was no one to bury them:

As the Number of Slaves employed to take them out of the Houses, is very insufficient to be able to carry all off daily, some frequently remain there whole Weeks; and there would remain longer, if the stench they emit, which poisons the Neighbours, did not compel them for their own Preservation to overcome all Aversion to such horrid Work, and go into the Apartments where they lye, to drag them down into the streets: They pull them out with Hooks and hawl them by Ropes fastened to the Staves of those Hooks into the streets: This they do in the Night, that they may draw them to some distance from their own Houses; they leave them extended before another's Door, who at opening it the next morning is frighted at the Sight of such an Object, which generally infects him and gives him Death.

Again under date September 6th we read:

The 6th the Sheriffs find themselves reduced to the most terrible of all Extremities; the last Slaves which the Officers of the Gallies had granted, at the Request of the First President, being all either dead or fallen ill of the Distemper; and notwithstanding all the Efforts M. *Moustier* had made the preceeding Days, to get all the dead Bodies possible carried off, above Two Thousand still remaining in the Streets, besides what are in the Houses; they see plainly, that if the Officers of the Gallies will not give them more Slaves, at the rate the Mortality goes on, there must be in less than Eight Days above Fifteen Thousand Bodies in the Streets all putrified; from which will ensue a Necessity of quitting the Town, and abandoning it perhaps for ever, to the Putrefaction, Poison, and Infection which will settle in it.

DEVOTED MINISTERS OF RELIGION.

Not all the clergy failed in their duty, as appears from the following record:

There wanted not, indeed, Servants of the Lord, as well of the Secular as Regular Clergy, who devoted their Lives to the saving of Souls, and assisting and confessing the infected; there wanted not even holy Heroes (for by that name we ought to call all the Capuchins, and Jesuits of the Two Houses of St. *Jeaume*, and of the Holy Cross, and likewise all the Observantins and the Recollets and some others) who with more than heroick Courage and indefatigable Charity and Zeal, ran about everywhere, and rushed precipitately into the most deserted and most infected Houses, into the Streets and places that were thickest strow'd with putrify'd Bodies, and into Hospitals that reeked most with the contagion, to confess the infected, assist them in the Article of Death and receive their last contagious and envenom'd Breath, as if it were but Dew.

..... Forty-two Capuchins have already perished; Twenty-one Jesuits, Thirty-two Observantins, Twenty-nine Recollets, Ten Barefooted *Carmelites*, Twenty-two Reformed *Augustines*, all the Grand *Carmelites*, the Grand Trinitarians, the Reformed Trinitarians, the Monks of *Loretto*, of Mercy, the *Dominicans* and Grand *Augustins* who had kept in their Convent; besides several Secular Priests, and the greatest Part of the Vicars of Chapters and Parishes.

A TRUE SHEPHERD OF THE PEOPLE.

The Bishop showed a bright example of devotion:

In vain from the Beginning of the Contagion was he pressed to leave the City, to endeavour to preserve himself, for the rest of his Diocess; he rejects all such Counsels, and hearkens only to those which the Love the Sovereign Pastor has inspired him with for his Flock, suggest to him: he tarries with unshaken Fortitude, determined to lay down his Life for the Good of his Sheep, if God is pleas'd to require it.

He is not satisfied with prostrating himself at the Feet of Altars, and lifting up his Hands to Heaven to beseech God to mitigate his Wrath; his Charity is active; he is every day in the open Streets, through all Quarters of the Town; he goes up to the highest and worst Apartments of the Houses to visit the sick; crosses the Streets among the dead Bodies; appears in the Publick Places, at the Port, at the Ring; the poorest and most destitute of Friends, those afflicted the most grievously and hideously are the Persons to whom he goes with most Earnestness; and without dreading those mortal Blasts which carry Poison to the Heart, he approaches them, confesses them, exhorts them to Patience, disposes them to die, pours celestial Consolations into their Souls, representing to them the Felicity of Suffering and of Poverty; and drops everywhere abundant Fruits of his generous Charity, distributing Money wherever he goes, and especially in secret to indigent Families, whom holy Curiosity prompts him to seek out and relieve; he has already given away Twenty-five thousand Crowns, and takes up what Money he can upon Pledges, to enable him to distribute more. But I should not blaze abroad what his Humility is careful to conceal, it ought to be left under the Veil which that Virtue throws over it.

The Bishop was Monseigneur de Belsunce. Pope refers to him in the *Essay on Man* in the following lines:

> Why drew Marseille's good Bishop purer breath,
> When Nature sickened and each gale was death?

And Swift, writing to Pope in 1735, says:

I believe your prayers will do me more good than those of all the Prelates in both Kingdoms, or any Prelate in Europe except the Bishop of Marseilles.

NO DOCTORS AND NO DRUGS.

In the middle of September there were neither doctors nor drugs:

"The 11th, there being hardly any physicians remaining and fewer surgeons, the rest having deserted or perished, their art not availing them; the first President sends hither M. *Pons* and *Boutellier*, Physicians of the Faculty of *Montpellier*; and M *Montet* and *Rabaton*, very skilful Master-Surgeons."

The 20th, there are no Medicines nor Drugs to be found in the City, by Reason of the Flight and Desertion of all the Apothecaries, Druggists and Grocers; the Sick dye without being able to use the Liberty of making their Wills, the Royal Notaries having all fled; Women with Child are delivered without any Assistance, the Midwives being all fled likewise; An Ordinance at my Instance is issued by M. de *Langeron*, the Marquess *de Pilles* and the Sheriffs to oblige them all to return within twenty-four Hours on Pain of Death.

A PRESENT FROM THE POPE.

In October the Pope came to the help of sorely-tried Marseilles:

The 9th, the Sheriffs receive News that fills them with Joy and Consolation; they find by a Letter which the Consuls of *Avignon* are so kind to write to them, that the common Father of the Faithful *Roman* Catholicks, moved at hearing of the Calamities of a City, which was the first of all *Gaul* that received the Catholick Faith, by *St. Lazarus* its first Bishop; which in all Times has Preserved in its Purity, no Heresy having ever been able to get footing in it; and which has always had a singular Attachment, with a profound and an inviolable Respect for the Holy See: has not thought it enough to order publick Prayers in all the churches of *Rome*, and Processions at which his Holiness assists on Foot, to beseech the Sovereign Father of Mercies to appease His Wrath against *Marseilles*, and cast away the dreadful Scourge which lays it desolate; but being desirous to succour so many miserable Poor as are in it, and supply them with Bread in their need, has caused to be bought up in the District of *Ancona* two thousand measures (called *Roubies*) of Bread-Corn, which will be forthwith brought hither by vessels that are to take it in at *Civita Vecchia* to be distributed to the Poor in such Proportions as the Bishop shall allot.

THE END.

Soon after this the Plague began to subside, and it finally died out in December, 1720. The *Journal* ends on the 10th of that month, when it is recorded that "The Distemper has so abated throughout the City that no new Patient has been carried into any Hospital."

The total number of deaths caused by the great plague of Marseilles is estimated by different authorities as from 40,000 to 60,000.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

SCOTLAND.

WE are glad to be in a position to deny authoritatively the rumours prevalent on the Stock Exchange to the effect that bubonic plague had appeared in Glasgow.

INDIA.

The severity of the present epidemic of plague in Bombay reached its climax during the second week of April, and since that date the death-rate from plague has gradually fallen. During the week ending April 21st there were 4,100 deaths from plague in India, and of these 1,097 occurred in the Bombay Presidency, and 627 in the city. On April 15th, 16th, 17th, 18th, and 19th the number of fresh plague cases were respectively 98, 114, 130, 56, and 115, and the number of deaths from the disease 78, 80, 93, 71, and 58. It will be observed that on April 17th the number of deaths from plague exceeded the fresh cases by 15, a sure sign that the epidemic is on the wane.

In Karachi the plague deaths during the third week of April numbered between 50 and 70 daily and it would seem that the epidemic has reached the maximum of its intensity.

In Calcutta the plague cases during the days of the third week of April were 72, 58, 69, 52, 48, 43, and 71, and the number of deaths from the disease 73, 51, 61, 48, 49, 41, and 42. The approximation of the number of fresh cases and of deaths to each other is a hopeful sign of a rapid abatement of the epidemic.

In the Bengal Presidency during the second week of April, 1,390 deaths occurred from plague, including 1,168 in Patna, but exclusive of 465 in Calcutta.

In the Mysore Provinces the indigenous cases of plague show a tendency to increase. Since the commencement of the first epidemic until April 16th, 1900, 25,811 cases of plague occurred in the Mysore Provinces, and 20,880 deaths from the disease. The numbers are all the more astonishing as this district has never been considered to have been afflicted by plague to so marked an extent as many other districts of India.

ADEN.

Plague continues to keep its hold on Aden; as many as 73 deaths occurred there during the week ending April 14th. We are without information as to the prevalence of plague in the hinterland of Aden. Although sparsely populated, an investigation of this subject would be of the highest importance, as there seems to be some justification for the belief that Arabia is widely infected by plague, and it is only by the utmost watchfulness on the part of the Egyptian authorities that plague was discovered at various ports of the Red Sea eastern littoral.

EGYPT.

On May 2nd 5 suspected cases of plague were reported at Port Said and the diagnosis of the disease being plague has been fully corroborated. Three of those attacked were Greeks and 2 natives. Up to May 6th 8 cases of plague and 4 deaths from the disease were reported to have occurred at Port Said. It is satisfactory, however, to note that since May 4th no fresh case has been notified. The energetic measures taken by the sanitary administration will, it is hoped, stamp out the disease, and that it will be prevented spreading to other towns in Egypt. With the result of the work of the sanitary authorities during the Alexandrian outbreak before us, we have every confidence that the situation will be successfully dealt with. Port Said has been declared an infected port by the Gibraltar and other authorities.

From Suakin 3 cases of plague are announced, and it would seem as though the towns bordering on the Red Sea were widely infected by plague; this must be regarded as a very serious state of affairs considering the enormous pilgrim traffic continually carried on in this part of the world.

AUSTRALIA.

The number of plague cases in Sydney is diminishing, and it is to be hoped the spread is checked. The authorities have taken stringent steps in dealing with the disease. Every ship entering Sydney from an infected country is inspected, and the rats on board destroyed. Also all rats in stores, warehouses, and all public buildings are to be destroyed, and their bodies burned, and a reward offered for the bodies of rats captured.

MAURITIUS.

No death from plague occurred in Mauritius during the week ending May 3rd, but there was 1 fresh case.

SOUTH AMERICA.

The Paraguayan Government has notified the foreign Consuls that plague is completely extinct within the territory of the Republic.

THE R.A.M.C. SOUTH AFRICA FUND.

CONTRIBUTIONS or donations are requested towards the success of the R.A.M.C. Stall at the National Bazaar to be held at the Royal Palace Hotel, Kensington, W., on the 24th, 25th, and 26th May, 1900. The contributions or donations may be sent to the Honorary Secretary, Mrs. Frank Howard, 28, Cathcart Road, South Kensington. The National Bazaar is to be held in aid of the sufferers by the war, and there will be about seventy stalls representing the various regiments and corps at the front. The President and Vice-Presidents of the R.A.M.C. Stall are as follows:—President, the Lady Wantage; Vice-Presidents, Mrs. Jameson, Mrs. W. Taylor, Mrs. Preston, Mrs. O'Dwyer, Mrs. Cuffe, Mrs. Skey-Muir, Mrs. W. D. Wilson, Mrs. Evatt, Lady Alice Ashley, Lady Jane Cole, Lady Mac Cormac, Mrs. Church, Lady Hanbury, Mrs. Cole Reade, Mrs. Butler Hamilton, Mrs. E. M. Sinclair.

THE HALF-CROWN SUBSCRIPTION LIST.

The following additional subscriptions to the Half-Crown Fund have been received down to and including May 9th, since our last list:

	Half-Crowns
Dr. A. B. Wade (Southampton)	1
Capt. A. Pearse, R.A.M.C. (Hospital Ship *Princess of Wales*)	8
Dr. E. Turner (London)	8
Mr. C. Terry (Newport Pagnell)	2
Dr. G. D. McReddie (Greenhithe)	1
Per Mrs. Horace E. Haynes (Evesham):	
Dr. A. L. Haynes (Evesham)	1
Dr. A. H. Martin ,,	1
Dr. J. S. Slater ,,	1
Dr. H. E. Haynes ,,	1
Mrs. H. E. Haynes ,,	1
Mr. Percy Laws ,,	1
Mr. C. F. D. Lary (Weybridge)	1
Dr. Beadles (Broadway)	2
Dr. T. H. Smith (Alcester)	1
Miss Smith ,,	1
Dr. R. M. Spencer ,,	1
Dr. C. E. Hobbes (Bedford)	1
Dr. Geoghegan (Michleton)	1
Dr. Woodward (Pershore)	1
Dr. Emerson ,,	1
Dr. Dewhurst (Chipping Campden)	1
Dr. Browne (Alcester)	2
Per Dr. R. Mitchell (Bury)	16
Per Major R. C. Lever, R.A.M.C. (retired) (Oxford):	
Dr. Collier (Oxford)	1
Dr. Freeborn (Clifden Hampden)	1
Dr. Dening (Stow-in-the-Wold)	1
Dr. C. S. W. Cobbold (Bathcasston)	1
Mr. D. L. Beath (Bath)	1
Per Mr. J. W. Fry (Maidstone):	
Messrs. Cæsar (Maidstone)	2
Dr. Cartwright ,,	1
Mr. Strouts	1
Per Dr. Irvin Sellers (Preston):	
Dr. Collinson (Preston)	1
Dr. R. C. Brown ,,	1
Dr. Byrne ,,	1
Dr. G. P. Taylor ,,	1
Dr. J. Duncan Howe (Preston)	1
Dr. J. McKeague (Preston)	1
Dr. P. Fraser (Leyland)	1
Dr. A. Petyt (Longton)	1
Dr. F. Walmsley (Preston)	1
Dr. T. Derham ,,	1
Dr. W. McDade ,,	1
Dr. D. W. Brown ,,	1
Dr. A. C. Rayner ,,	1
Dr. J. E. Garner ,,	1
Dr. J. W. Langden ,,	1
Dr. D. Turnbull Smith (Preston)	1
Dr. J. E. Holden (Preston)	1
Dr. A. Dixon ,,	1
Dr. M. B. Ferguson ,,	1
Dr. J. E. Dunn ,,	1
Dr. A. Mooney ,,	1
Dr. W. H. I. Sellers ,,	1
Dr. J. R. Hewetson ,,	1
Dr. M. Talbot ,,	2
Dr. Heurtley Sankey (Littlemore)	1
Dr. Rice (Sutton Courtenay)	1
Per Dr. Arnold Thomson (Maidenhead):	
Dr. Plumbe	1
Per Dr. C. W. Graham (Carlisle):	
Dr. Maclaren (Carlisle)	1
Dr. Barnes ,,	1
Dr. Farquharson ,,	1
Dr. Ogilvie-Ramsay ,,	1
Dr. Macdonald ,,	1
Dr. Bird ,,	1
Dr. Graham ,,	1
Per Mrs. Rooney (Edinburgh):	
Mrs. Argyll Robertson	8
A Friend	1
Per Dr. T. A. Helme (Manchester):	
Dr. A. H. Aldridge (Rochdale)	1
Dr. H. E. Watkins (Newton-le-Willows)	1
Dr. J. W. Watkins (Newton-le-Willows)	1
Dr. R. D. B. Gunn (Droylsden)	1
Dr. T. Aspinall (S. Kensington)	1
Dr. J. W. Ashworth (Heaton Moor)	1
Per Mr. W. M. Beaumont (Bath):	
Mr. A. H. Whicher (Midsomer Norton)	1

We have also received, per Surgeon-Lieutenant-Colonel J. E. Squire, V.M.S.C., £10 10s. from the Officers' Mess, London Companies Volunteer Medical Staff Corps; per Dr. C. Seymour Dowdell, £2 from the members of the Ilford Medical Society; per Mr. C. T. Quiller (London) 10s. 6d. from Dr. Stocks, and per Dr. T. A. Helme (Manchester) 6s. 6d. from Dr. J. T. Marsden (Darwen).

The amount received for the Half-Crown Fund, up to and including Wednesday, May 9th, by the Editor, is £528 8s. 9d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must include details of the precise character and objects of the research which is proposed, and must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C.

Reports of work done by the assistance of the Association grants belong to the Association.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for two of the three Research Scholarships which are vacant, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Forms of application for the scholarships can be obtained from the General Secretary.

FRANCIS FOWKE, *General Secretary.*

429, Strand, May 10th, 1900.

LEPROSY IN THE UNITED STATES.—According to the New York *Tribune*, Dr. Albert S. Ashmead, of New York, and Father L. W. Mulhaney, of Ohio, have drafted a National Leper Law for the suppression and prevention of leprosy in the United States. This Bill, after calling attention to the evident spread of leprosy in every country where isolation is not practised, provides for a square mile to be set aside for a National Leper Home, either in Yellowstone Park or in some other dry climate antagonistic to the life of the leper bacillus. Buildings are provided for in the Bill for the use of the patients, and provision is made only for voluntary submission to the care of the Government. The Bill also provides that lepers shall in future be prevented from entering the United States.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 12TH, 1900.

THE PREVENTION OF PLAGUE.

THE recently-issued supplement containing the report of the Medical Officer to the Local Government Board for 1898-99 brings back to our memories the very great loss which the country has sustained by the death, at a comparatively early age, of Sir Richard Thorne. The introduction to the report is signed by Sir Richard, and it is sad to note that in his remarks he observes that, owing to the ratification of the Venice Convention not having been completed by some of the Powers, he will defer until a future occasion any reference to the Sanitary Conference of Venice, at which he had the honour to act as one of the delegates for Great Britain, and to serve as Her Majesty's Plenipotentiary to sign the resulting Convention on behalf of this country. The good work he did at that Conference will unhappily not be told by Sir Richard, but we hope it will not be forgotten and will be fully recorded in his honour.

The report itself shows unmistakably the high sense of responsibility which the central sanitary authority in England entertains with regard to its duties in connection with the safeguarding of this country from plague. Some 68 pages of the report, in addition to a special chapter in the introductory portion, are devoted to the subject. The system which is adopted in our port sanitary districts as regards vessels that are deemed to be either "suspected" or "infected" in relation to plague briefly consists in the medical examination of all persons on board; the removal to hospital of any person either suffering from plague or suspected to be so suffering; the disinfection of articles believed to have had opportunity of becoming infected, and of those portions of the vessel occupied by the sick; the registering on board of the names and addresses of all the remaining persons, including the crew, such persons being then free to leave the ship and to go to the addresses given; and lastly the transmission to the local sanitary authorities of the names and places of residence of persons leaving the vessel for their respective districts with a view to such persons being kept under supervision by the medical officer of health during the ten days which have been determined on as representing, so far as administrative purposes are concerned, the period of incubation of plague.

The report contains an account by Dr. Bulstrode of the circumstances connected with the occurrence of plague on board of two ships, the *Caledonia* and *Golconda*, during their voyage from India to England. In the case of the *Caledonia*, which started from Bombay, it appears that a day prior to sailing the crew were examined on shore by the Bombay Port Health Officer, and a *pani walla*, or greaser, with a high temperature, and in a debilitated condition, was rejected. Nevertheless, on the examination of the passengers and crew on board ship the next day the *pani walla* was found among them, showing, as Dr. Bulstrode remarks, that there must have been some oversight, neglect, or actual disobedience of orders on the matter, otherwise the examination on shore was useless. On his second examination the *pani walla* was removed under custody to one of the Bombay Hospitals. The bedding and clothing of the native crew were disinfected in the Equifex disinfector on board, and the ship was allowed to start on its voyage. On November 24th, that is, five days after leaving Bombay, a coal trimmer was found to be suffering from a painful and tender swelling in the right axilla, attributed to a slight abrasion produced by shaving the part. He was not isolated, but on November 27th on nearing Suez the ship surgeon called in consultation a medical man on board who possessed experience in plague. The latter suspected plague, but was unable to give a definite opinion. On arrival at Suez the Egyptian authorities who had been previously apprised of the fact that the *pani walla* taken from the ship on its departure from Bombay was in hospital with symptoms of plague ordered the ship to Moses Wells, and there the coal trimmer and two firemen who had been in contact with him were landed, and also a Lascar who, on examination of the crew, was found to be suffering from an enlarged gland in the right axilla. The quarters and effects of the native crew were disinfected, and the *Caledonia* was then allowed to pass through the Suez Canal in quarantine. No further case occurred, and on arrival at Plymouth the ship was treated as "suspected," being allowed to proceed to London after the passengers and crew had been inspected and the names and addresses of the passengers taken. The interest of the *Golconda* case, like those of the *Caledonia*, is in the mildness of the disease. The *Golconda* left Calcutta on November 19th and arrived at Plymouth on December 24th, having on board a case of pestis ambulans, which seems to have escaped attention until a day after the ship left Marseilles. The history of the case, as elicited by Dr. Bulstrode's investigation, is that the patient came on board at Calcutta, and that shortly after leaving Colombo, and seven days out from Calcutta, he suffered from febrile symptoms and from tenderness of the inguinal glands in both groins. This condition continued, and the glands commenced to swell until Suez was reached, when the febrile condition abated. The patient did not regard himself as ill enough to consult the ship's surgeon, and it was only a day after leaving Marseilles and on the twenty-third day of the illness that the glands became so painful as to induce him to seek the advice of the ship's surgeon, who at once diagnosed the case as one of pestis ambulans, and promptly dealt with it as such. On arrival at Plymouth the buboes exhibited a tendency to suppurate, and he was isolated in the quarantine hospital. The ship was treated as "infected."

Next, there is an excellent report compiled by Dr. Low

on the Diffusion of Bubonic Plague. Dr. Low resumes the story of the progress of plague which broke off with Mr. Netten Radcliffe's last contribution in 1879. He supplies as far as he is able the links necessary to a consecutive history of the disease in different parts of the world between 1879 and 1894, and then traces the prevalence and diffusion of the disease since its recrudescence in that year. The summary is valuable, and brings into prominence the obscurity and difficulty which attach to some forms of plague, more especially the ambulatory and the pneumonic. In this connection Sir Richard Thorne draws attention to the striking story recorded by Dr. Low of the state of uncertainty which existed when fatal plague occurred in Vienna, as to the clinical and bacteriological interpretation to be assigned to the indications then being witnessed by experts who had made a special study of the disease in India, and he also advises that those having administrative responsibility for the prevention of plague, in case of doubt, should act rather on the basis that the disease in question is plague until the contrary can with confidence be asserted. Dr. Low, in the course of his history of plague, refers in some places to dead rats at the commencement of the disease. This part of the subject might, if possible, be dealt with more fully, for we cannot have too much information on this aspect of the question. In this sense the essay on plague in the lower animals, the first part of which we publish in our present issue, is an excellent contribution to the subject. Dr. Clemow brings under review in a systematic manner the evidence which has been gathered from modern research in favour of certain animals suffering from plague. He treats his subject from the two aspects of natural and artificial infection, discussing the positive and negative evidence in each, and comes to this conclusion—that though other animals may under certain circumstances contract plague, monkeys, rats, mice, bandicoots, squirrels, and marmots are the most susceptible to the disease under natural conditions, and that the evidence as it at present stands is that rats and mice are the most important agents among the lower animals in the spread of the disease, while the marmot in Transbaikalia and in Mongolia spread a disease closely allied to plague if not plague itself.

PROFESSIONAL SECRECY.

Four years ago the attention of the profession and the public was a good deal directed to the question of how far a medical man can be justified in divulging matters which have come to his knowledge in the course of his professional attendance on a patient by a well-known case in which one question at issue was how far such a communication could be considered as privileged. The unwritten but honourably binding rule of the medical profession was then stated by Sir John Williams and Sir W. Broadbent to be "that professional confidence should be considered inviolate" as a general rule, and that there were only three recognisedexceptions—namely, "(1) when required to give evidence in a court of justice, (2) when the information was wanted in order to prevent the commission of a crime or to convict the party guilty of it, and (3) when the medical man considered it necessary to disclose what he knew in order to protect the honour of his wife and family." The judge, Mr. Justice Hawkins, whose experience in criminal trials was unrivalled, did not altogether accept this list of exceptions as accurate; and pointed out in his summing-up that it rests with the presiding judge at every trial to say whether or not a witness ought to be compelled to give evidence of facts which had come to his knowledge under the seal of professional confidence, and that there certainly might be cases in which he himself would decline to commit for contempt a medical man who refused to give evidence of facts which had been so disclosed. Each case must be governed by its particular circumstances.

It is well to remember that the validity of the first two exceptions deposed to in that case, namely, where called on to give evidence in court, and where the information is required for the purpose of preventing or punishing crime, was not really in question then, and rests on much older and higher authority.

The recent action of Dr. Hunter at Nottingham, in declining to give evidence as to the symptoms of a person whom he had attended in his professional capacity, has again directed attention to them, and to the anomalous state of the law regarding confidential communications to professional advisers. Where a barrister or solicitor is professionally employed by a client—except it be for the purpose of planning or committing a crime—all communications which pass between them in the course and for the purpose of that employment are privileged, and may not be divulged even in a court of law. This rule is old and well established. It has grown up, as Lord Chancellor Brougham pointed out in the case of Greenough *v.* Gaskell, decided in the House of Lords in the year 1833, "not on account of any particular importance which the law attributes to the business of legal professors, or any particular disposition to afford them protection .... but out of regard for the interests of justice which cannot be upholden, and to the administration of justice which cannot go on, without the aid of men skilled in jurisprudence." The principle of this rule, protecting confidential communications to a legal adviser from being made public, might well be thought to guard the privacy of equally confidential statements made to other professional advisers; but the courts have always refused to consider them as privileged, though many judges, including Lord Brougham in the case already cited, have regretted that the privilege was not extended at least to the case of medical advisers. This rule, as recognised by the courts, was laid down clearly and decisively in the year 1881 by Sir George Jessel when presiding in the Court of Appeal. In the case of Wheeler *v.* Le Marchant he said "the principle protecting confidential communications is of a very limited character. It does not protect all confidential communications which a man must necessarily make in order to obtain advice, even when needed for the protection of his life, or of his honour, or of his fortune. There are many communications which, though absolutely necessary because without them the ordinary business of life cannot be carried on, still are not privileged. The communications made to a medical man whose advice is sought by a patient with respect to the probable origin of the disease as to which he is consulted, and which must necessarily be made in order to enable the medical man to advise or to prescribe for

the patient, are not protected. Communications made to a priest in the confessional on matters perhaps considered by the penitent to be more important even than his life or his fortune are not protected. Communications made to a friend with respect to matters of the most delicate nature, on which advice is sought with respect to a man's honour or reputation, are not protected. Therefore it must not be supposed that there is any principle which says that every confidential communication which it is necessary to make in order to carry on the ordinary business of life is protected. The protection is of a very limited character, and in this country is restricted to the obtaining the assistance of lawyers as regards the conduct of litigation or the rights to property. It has never gone beyond the obtaining of legal advice and assistance."

It is thus clear that the courts of this country will not *necessarily* support the refusal of a medical practitioner to disclose what has come to his knowledge as to the condition of his patient in his professional capacity, though they would forbid a solicitor to make such a disclosure as to the affairs of his client.

The distinction appears illogical. If public policy requires secrecy in one case, it ought to require it in the other, or else full disclosure should always be required. But the course of decisions has lasted so long, and been on the whole so consistent, that it seems hopeless now to expect any change. In each case which comes into court the presiding judge must decide whether the secret is to be disclosed or not; and, in order to decide this, he at any rate must be informed with more or less particularity as to what the secret is. One judge may be inclined to maintain the privilege, where another would think all facts should be disclosed. That different men should view facts differently seems inevitable. It therefore seems to be impossible to lay down any general rule which can be observed in all cases. A practitioner when summoned as a witness can protect himself by declining to disclose communications which he considers confidential till directed to do so by the court. Further than this he cannot safely go.

Dr. Hunter based his refusal to give evidence before the magistrates at Nottingham on several grounds, but mainly on the ground of the oath he had taken as a graduate of Glasgow University "to keep silence as to anything he might see or hear whilst visiting the sick which it would be improper to disclose." The magistrates were asked to punish him for contempt of court in refusing to give evidence, under a section of the Summary Jurisdiction Act which empowers justices to order a witness to be imprisoned who refuses, *without a just and reasonable excuse*, to give evidence. They held that the excuse offered by Dr. Hunter was just, and consequently refused to make the order of committal. In this particular instance, therefore, the seal of professional confidences remains unbroken. But nothing has been decided—nor could it be by an inferior Court—to weaken the authority of earlier cases. Secrets known to a medical man are liable to be disclosed in a court of justice when the presiding judge thinks that they ought to be given in evidence. The tendency of modern practice seems, however, to be in favour of maintaining confidence as far as possible.

THE TENURE OF PUBLIC HEALTH APPOINTMENTS.

THE Medical Officers of Health and Sanitary Inspectors Bill of the British Medical Association is now before the House of Commons. It was introduced by Dr. Farquharson, Chairman of the Parliamentary Bills Committee, and is down for second reading on May 16th. It is backed by Sir Walter Foster, formerly Parliamentary Secretary of the Local Government Board, Sir Francis Powell, Mr. Warner, and Sir George Pilkington. Should it receive the earnest support of the individual members of the medical profession, exerted through their representatives in Parliament, it will not improbably become law.

It provides that no medical officer of health or sanitary inspector appointed by any local authority before or after the commencement of the Act shall be dismissed from office without the consent of the Local Government Board, until after attaining the age of 65 years, when he may be required to retire by the local authority. It also provides for a superannuation allowance to these officers after they have attained the age of 60 years, or are required by the local authority to retire after attaining the age of 65 years, or have become incapacitated for performing the duties of their respective offices with efficiency by reason of permanent infirmity of mind or body. This allowance, after ten years' service, is to be equal to ten-sixtieths of their average salary during the previous five years, an additional one-sixtieth being added for each year of service up to forty years, when the maximum allowance of forty-sixtieths is to be paid. The allowance is to be made out of a central fund held by the Bank of England, and administered by the Local Government Board. The central fund is to be provided by deductions by the local authorities, and paid into the fund by them, from the salaries of their officers. The deductions are to be—under five years' service, 2 per cent. of each year's salary; between five and fifteen years' service, 2½ per cent.; and after more than fifteen years' service, 3 per cent. of the salary for each year.

The salaries paid to medical officers of health and sanitary inspectors do not as a rule permit them to make provision for old age or permanent disability; and it would seem to be right that they should be enabled by legal enactment to make provision for themselves in the manner prescribed by the Bill.

At the present time local authorities may, with the consent of the Local Government Board, appoint their sanitary officers permanently; but with few exceptions they are appointed for definite periods. Most of the medical officers of health are appointed for one year, but several are appointed for two, three, or five years. If at the end of the term the local authority declare that appointment vacant, the medical officer of health has no redress. Able officers who had been reappointed again and again, and who had every reason to consider their positions assured, have been suddenly dropped after fifteen or more years of service for no apparent reason; while others who had distinguished themselves by the exceptional benefits their work had conferred upon the community have found their appointments advertised at a lower salary because they had not rendered themselves agreeable to members of their authority who

did not wish insanitary property reported, or because they had become obnoxious to a clique by the conscientious performance of their duties.

These duties are prescribed by law and by the orders of the Local Government Board, which have the force of law. The medical officer of health is required to write an annual report upon the health of his district, in which he is directed to report upon the conditions affecting health in his district, and upon the measures for improving those conditions, and to consider these subjects with reference to the past and future, as well as to the particular year. He has no choice but to obey, and he has to accept the consequences of his obedience, which may be, and often are, in a backward district in which the people especially need the protection which the sanitary law provides, threats of dismissal. The medical officer of health is also ordered to direct the inspectors in their work, and the inspectors, who are usually appointed for one year, are ordered — subject to the superior authority of the sanitary authority—to look to the medical officer of health for directions in their work. Under present conditions, and the change in the *personnel* of local authorities, the due performance of these directions is too often interfered with, and the inspectors, who should be the eyes and hands of the medical officer of health, are encouraged to ignore him. They are consulted about matters which are strictly within his province, and they may give opinions which they are incompetent to give, and if these opinions are acted upon—as they may be, and are—the interests of the public health may be jeopardised. If they do not respond to members of their authority in the manner intended they may find themselves without situations at the end of the year.

Recognising the disabilities to which members of the medical profession who are doing a great public work which is conferring incalculable benefits upon the community are subjected, the British Medical Association is endeavouring to remove the hindrances which exist to the efficient performance of that work in the interests of the people at large, and to redress the injustice which harasses a section of their profession which is engaged in the public service. To this end it is striving to obtain security of tenure of office for medical officers of health by assent of the Legislature to the provisions of the Bill it has prepared; and it looks to the whole profession for assistance in its efforts. It accepted the suggestions of the Council of the Incorporated Society of Medical Officers of Health to include sanitary inspectors in the benefits proposed to be conferred by its Bill—a suggestion which does it honour, as it fully appreciates the necessity of that loyal assistance in the important work in which the medical officer of health is engaged which the law intends, and which the paramount interests of the public health demand.

MR. TREVES AND THE WOUNDED AT THE FRONT.

The address on the Wounded in the Present War, delivered by Mr. Treves before a crowded audience at the meeting of the Royal Medical and Chirurgical Society this week, apart from the extreme general interest of his remarks, which were characteristically clear and incisive, and apart even from their importance as bearing on the problems of military surgery, had in it much of immediate practical interest to the empire. He maintained that as a lethal weapon and as a means of putting the enemy *hors de combat* the Lee-Metford is superior to the Mauser rifle. A pleasant feature in his address was the impartial way in which he "exploded" some of the adverse theories that have been popularly adopted in regard to the military methods of the Boers. For example, he asserted that the so-called "explosive" bullets—meaning thereby expansile bullets—were not used by the enemy during the Natal campaign until within thirteen days of the relief of Ladysmith. But particularly in regard to the so-called "poisoned" bullets was his personal evidence effective. Certain Mauser bullets, which he showed, had a brilliant grass-green coating, and this had been ascribed to the poisonous basic acetate of copper, or verdigris. This material had been analysed at his request, and proved to be a harmless oxide of nickel, derived from the thimble of the bullet by the paraffin with which it had been anointed to keep the rifle from fouling. Although the mechanical effects of the explosion of lyddite are not, he states, anything like so tragic as had been supposed, yet the fumes are distinctly overpowering: he told of an officer with his men stationed fifty yards away from an exploding lyddite shell who were obliged to put their faces close to the ground in order to be able to breathe. Some facts in his address might well, we think, receive, without loss of time, practical application in South Africa. It seems, as the Director-General of the Army Medical Department later in the evening stated, that Mr. Treves's informal strictures in regard to the plague of sight-seeing women has already developed an efficient antidote in that the Royal Engineers have surrounded hospitals containing typhoid cases with an unclimbable wire fence. But it would be the means of an infinite relief of suffering if our ambulance carts—excellent as carts but torturing as ambulances—could be adapted to the exigencies of the country on the type of those of our foes. The reference he made to the pain inflicted on our wounded in the process of filling up the hospital train from the level of the line—removing them first from the army stretchers into carriage stretchers and then into the train—might possibly bear fruit in leading to the adoption of inclined planes which could be made to stretch direct from the ground to the bunks in the train. Another most important practical observation was that long transport—say of two days by rail on the way to the base hospital—meant in many cases, for example, gunshot wounds of the thigh, septicity and death; while a four or five days' rest in a field hospital placed comparatively near the fighting line meant a patient out of danger. The Director-General wisely pointed out that the experience of such field hospitals near the main column depended on whether or not we were getting the better of an engagement; but the wounded are respected by all combatants pretending to be civilised. Whether it be the case or not that gunshot wounds of the abdomen immediately stop peristalsis, it is, we believe, the rule to administer morphine hypodermically as soon as possible after the injury and before the wounded man is removed. Mr. Treves's address is not the least of the services he has rendered to the country; it is the personal first-hand evidence of an observer trained in scientific methods of observation and narration, and deals with many points which must engage public attention in the future.

THE HOUSE-WARMING OF THE UNIVERSITY OF LONDON.

Convocation of the University of London met for the first time in the new home of the University at South Kensington on May 8th. This was the first official act of the University, and with a little thought and heartiness might

have been invested with some dignity. But it was not. The graduates, and any casual stranger who chose to waste his time, were herded by a flustered "bulldog" down a long corridor into a shabby, low, ill-lighted room, with some cheap decoration of snake-like pattern on the walls, a music gallery at one end and a low dais at the other. Rows of cane-bottomed chairs filled up the intervening space, which was traversed by a fierce draught from the door, which shut with a loud slam as any late member entered. Even if the Chairman had not sufficient interest in his duties to have made adequate arrangements for the comfort of Convocation, he might at least have been punctual, but he began the business a quarter of an hour late. It will be said in extenuation that this was the first meeting, and that the time for making arrangements was short. But the first meeting of a parish council in a country village would have been better arranged. The proceedings under these depressing conditions were of the most dreary description. The Chairman suggested that a resolution should be adopted congratulating the Prince of Wales on his escape from assassination, and the suggestion was applauded by Convocation; but no resolution had been prepared, and leave had to be given to Mr. Busk to draft one for himself. Then he and Professor Silvanus Thompson explained at quite inordinate length why the latter could not be nominated to the Senate—an honour which Professor Thompson has well earned—because three names must be sent to the Crown, and nobody had taken the trouble to have two other persons nominated. Then ensued a long, dull, useless discussion which might have been checked by the Chairman at once, on a standing order which was indeed very carelessly drawn, but was eventually passed with certain verbal amendments. In this way about an hour had been wasted, and it had been discovered that the room, in addition to its other disadvantages, was one in which it was very difficult to hear. Members had already begun to go away, although a considerable number stayed on to hear from Mr. Bassett Hopkins that a syndicate had a contract for the supply of provisions in the buildings of any quality and at any price, and to be told by Sir Albert Rollit that the University was thus a "tied house." Matters were improved on the following day, when the new graduates were formally presented for their degrees. It is true that the ceremony took place in a large wooden shed, but it was an ornamental shed with large windows letting in floods of light, and a company which both by reason of their eminence and their many coloured gowns might fairly be called brilliant had assembled in it. The Prince of Wales once more showed his insight into the real importance of things by being present, refulgent in the new gold-embroidered Chancellor's gown of the University of Wales, to welcome the University to its new home, and to present the scholarships and prizes. Victoria University also sent its Chancellor, Earl Spencer, to grace the occasion, and among others present were Lord Lister and the Vice-Chancellor (Sir Henry Roscoe). For the rest the ceremony was much the same as in former years. The new graduates were presented to the Chancellor (Lord Kimberley). The male winners of scholarships and prizes were clapped as usual, and the lady graduates were, as is also usual, received with plaudits rather less discriminating. The Chancellor, as is usual, made a speech. He pointed out how, in spite of all drawbacks and much cold water, the University had grown steadily; recalled that it had been the first to open its degrees to women; dwelt upon the imperial aspects of its work, which were to be continued under the new constitution, and expressed the confident hope that in its new work as a University for London it would be equally successful. Lord Kimberley conveyed verbally to the Prince of Wales the congratulations of Convocation on his escape from assassination, and the Prince in reply expressed his own thanks and those of the Princess. In very cordial terms he added his hope that the University would find its new home conducive to increased prosperity. Then the Member for the University delivered (or may we say intoned?), a most admirable brief allocution on the duties of students and the functions of a university. Sir Michael Foster told how the successful student must look upon his degree not as an end in itself, but as the guinea stamp on the true gold of learning, how the one great function of a university was to foster and disseminate learning, and how finally it was the duty of the country and of individual citizens to find the material necessaries, without which university work must be crippled. This was the end—and a very happy and well-omened end—of an interesting ceremony, which somewhat removed the casual gloom of the day before.

THE ROYAL ACADEMY EXHIBITION.

GENERAL art criticism of a comprehensive and sweeping nature hardly comes within our journalistic limits, but without stepping very far from beyond our proper sphere, we may cordially congratulate the Academy on the undoubted success of their annual show. For once there is a practical agreement between experts and the man in the street, that Burlington House is well worth a visit, and that the 2,057 products of British brushes and chisels have attained a standard of excellence which make this a remarkable if not a record year. Some of the older men who seemed disposed to rest with middle-aged complacency on the easy couch of past laurels have sprung once more to their feet and asserted their position in the foremost rank, and their junior competitors are pressing on briskly from behind. Old Sidney Cooper will not yield an inch of the vantage ground which he has gained during his 97 years of active and successful life, and the vigour and firmness of his work lead us to hope that we may yet have the pleasure of congratulating the Royal Academy on including a centenarian among the number of its elect. Most especially do we draw the attention of our readers to No. 632, where with undimmed eye and steady hand the veteran has reproduced in most suggestive fashion the sort of snowy blizzard so familiar to students of our variable climate. But in addition to the raising of the average of artistic merit which we so gratefully recognise, certain great works stand out conspicuously, and would be themselves sufficient to maintain our national credit. Sargent's smaller portrait of Lord Russell seems to us to be the most complete and satisfying impression we can imagine of the complex and subtly intellectual expression, or rather blend of expressions, which distinguishes the fine face of the Lord Chief Justice; and his group of three ladies—so happily rechristened by the Prince of Wales as the "Three Graces"—has fairly taken the town by storm. May we venture with bated breath to whisper a mild protest against the claw fingers of Miss Tennant's right hand, and their spasmodic contraction, almost suggesting the necessity for surgical interference, as well as the unnecessarily scraggy development of the arms of the figures generally, suggestive of skin and bone and nothing more? But these are merely spots on the sun, and the picture, from its *chic* and "go" and intense vitality and brilliant rendering of texture, is as astonishing a *tour de force* as this generation has produced. Hardly second in technical skill and superior in national interest is Orchardson's "Royal Family," whilst Dicksee's "Two Crowns" and Dance's "Landscape," and, above all, Brock's noble recumbent statue of Leighton, with the peace and repose of death so majestically pourtrayed, are epoch-making creations which mark the end of this century as a new starting-point in the history of art. Diligent inspection of the catalogue and search along the walls have discovered little of special interest from our purely medical standpoint. Subject pictures seem to be going out of fashion, and such as there are seem to run mainly on mythological lines, recalling

long-lost and sometimes bitter memories of Lemprière. We only refer to Richmond's "Orpheus returning from the Shades," a place of convivial resort well known to our forefathers, and, indeed, we are almost justified in suspecting that something stronger than grief and poetic fervour has aided in producing the extravagant display of morbid excitement which Shelley has described. It is clearly dangerous to allow such people to be about, and matter-of-fact folk might suggest that in the interest of the poor young man himself an urgency order should be at once obtained and reasonable restraint enforced before he does harm to himself or others. The only absolutely medical picture hung this year is Small's "Good Samaritan," (No. 614). Here we have a country doctor caught during his rounds and brought in to visit a child in a typical gipsy encampment. His well-appointed gig waits by the road side, and the contrast is forcibly given between his trim frock coat and tall hat and the rough garb of the parents, who anxiously wait for the verdict. What that may be it is hard to say. The child is flushed but not unconscious, and the binaural stethoscope placed towards the top of the sternum indicates heart disease rather than tuberculous mischief, enteric, or eruptive disease. Then we have No. 540, "The Crisis," by Miss Mabel Young, where a mother is bending over a sick child whose case baffles our diagnostic powers, whilst another female figure, presumably an angel—not, we hope, of death, but rather one bringing healing on her rather vague and shadowy wings—stands by in earnest contemplation. "Time the Physician" gives rather a matter-of-fact rendering of a poetic idea, depicting as it does an old man with a long beard applying a surgical bandage rather skilfully to the head of a patient victim. No. 1043, "The Death of Ladas the Greek Runner," is evidently caused by heart disease; and in the "Return of Godiva" Mr. Watts gives a hitherto unrecorded result of that memorable ride, for the fair equestrienne has been assisted from her horse in a physical condition which would undoubtedly make her chances of recovery in the highest degree improbable. There are also some good portraits of medical and scientific men. Noel Flower has rather over-accentuated the superficial sternness of Major Lamorock Flower's expression (No. 98), and Dr. Saundby (No. 131) sits firmly and squarely in his seat, robed in red gown, with an ample inkstand ready to his hand, and a meditative look suggestive of some knotty point before a committee. Sir John Evans beams pleasantly upon us, and Dr. Rayner has found a sympathetic exponent of his pleasant, thoughtful face in the talented son of his old friend, Dr. Hack Tuke, whom we cordially congratulate on his perhaps somewhat tardy admission to the Associate ranks. Professor McHardy seems to have got fatter since we saw him last, but his bust (No. 1,907) gives a careful though not flattered version of a face which combines shrewdness and geniality with a usefully aggressive touch of firmness to be used when needed. Huxley's statue is a truly noble rendering of the strong and thoughtful features of that splendid scientific worker and manly and lofty nature, which finds a place near his great master Darwin in the Natural History Museum. Mr. Brock has been entirely successful in his bust of Mr. Pickering Pick, as, indeed, we might have expected from the hands of the sculptor who has made modern English art his debtor by his splendid rendering of the recumbent form of the late lamented President; and with this we conclude our art notes. The principal toast at the Greenwich dinner of the Reform Club is next year's exhibition. But sufficient for the day is the pleasure, as the evil, thereof: and we have keenly enjoyed this year's stroll through Burlington House, and only hope that the first year of the new century will be as fertile in art progress and art strength.

THE ROYAL SOCIETY CONVERSAZIONE.

THE first *conversazione* of the Royal Society was held on May 9th, and was as usual very largely attended. The guests were received by the President, Lord Lister, and the rooms were filled with a number of exhibits, very few of which, however, had any bearing on medicine or even on biology. The most interesting of the specimens having a relation to these subjects was a section, contributed by Dr. Manson, showing that filaria nocturna, like the malaria parasite, leaves its mosquito host by way of the proboscis. The fact of this discovery and its great significance were mentioned in the BRITISH MEDICAL JOURNAL last week, page 1110. Dr. Garson showed a number of anthropometric instruments for the use of travellers desirous of making observations on native races, and also the instruments and apparatus used in England for making metric observations for the identification of criminals. Mr. J. Wimshurst showed an influence machine, constructed with twelve plates of vulcanite. The size of the plates, and therefore the bulk of the apparatus, had been greatly reduced, and the inventor believes that this pattern is suitable in size, durability, and efficiency for either screen or skiagraphic work in the hospital, or on the battlefield. Dr. T. E. Thorpe exhibited a collection of leadless glazed ware made by various potters, showing what can be done in this direction. During the evening Sir Andrew Noble exhibited some experiments on modern explosives. Dr. Arthur W. Rowe gave a demonstration on the Photomicrography of Chalk Fossils by reflected light, and Mr. F. Enock exhibited in the lantern several series of photographs of living insects; one of the most interesting of the series followed the metamorphosis of one individual nymph of *Æschna cyanea*, from the moment of quitting the water to that of the perfect imago. The photographs were not only beautiful in themselves, but afforded an extraordinary example of patience and perseverance in overcoming difficulties.

THE CHAIR OF MEDICINE IN THE UNIVERSITY OF EDINBURGH.

THE Curators of Patronage met on May 4th, and appointed Dr. John Wyllie to the Chair of Practice of Physic in the University of Edinburgh, rendered vacant by the death of Sir Thomas Grainger Stewart. The new professor is 56 years of age, and has been a member of the medical profession for thirty-five years. On taking his M.D. with honours in 1865, he was awarded a gold medal for his thesis on the physiology of the larynx. He was House-Surgeon in the Royal Infirmary under Professor Spence, House-Physician in the same institution under Dr. Rutherford Haldane, Senior President of the Royal Medical Society, studied in Paris under Trousseau and others, and was for two years House-Physician to the Birmingham General Hospital. He became a Fellow of the Royal College of Physicians of Edinburgh in 1870, and forthwith began to lecture on pathology in the Extra-Academical School. From 1875 to 1877 he was Pathologist to the Royal Infirmary; from 1872 to 1878 he was one of the Physicians to the New Town Dispensary; from 1876 to 1882 he was an Assistant Physician to the Royal Infirmary in charge of fever wards; in 1878 he became a Lecturer on the Practice of Physic in the Extra-Academical School; from 1882 to 1897 he was one of the ordinary Physicians to the Royal Infirmary, during which time he taught clinical medicine to large numbers of students. In connection with his work as an extra-academical lecturer in medicine he gave special supplementary summer courses on medical ophthalmology, laryngology, and medical electricity. In October, 1896, he became Consulting Physician to the City Hospital for Infectious Diseases, part of his duty being to give instruction in fevers. In the winter session of 1898-99 he was asked by the University and by the managers of the Royal Infirmary to teach

clinical medicine during the absence of Professor T. R. Fraser in India in connection with the Plague Commission, and he had charge of Professor Fraser's wards. In the winter session of 1899-1900, during Sir Thomas Grainger Stewart's illness, he acted as interim Professor of Medicine in the University, when he had a class of 343 students. In April, 1897, the University of Edinburgh conferred on him the honorary degree of LL.D., largely in appreciation of his book on *The Disorders of Speech*, published in 1894. He has been for a number of years exclusively a consulting physician in Edinburgh. Dr. Wyllie sent in no testimonials in support of his application, relying solely on the record of his thirty-five years' work and appointments.

THE PARLIAMENTARY REPRESENTATION OF THE UNIVERSITIES OF EDINBURGH AND ST. ANDREWS.

ON Thursday, May 3rd, Sir John Batty Tuke, Vice-President of the Royal College of Physicians of Edinburgh, was returned unopposed as the Parliamentary representative of the Universities of Edinburgh and St. Andrews, in place of the late Sir William Priestley. The election took place in the Senate Hall, the Vice-Chancellor presiding in his capacity of Returning Officer. There was a small gathering of electors. At the beginning of the proceedings Sir William Muir paid a graceful tribute to the late representative, and acknowledged his eminent services. Professor Annandale then nominated Sir John Batty Tuke, and referred to his position in the medical profession, to which profession the majority of the constituency belonged. He thought that a medical man of public experience would be most useful in the Commons House, and Sir John Batty Tuke was not only a highly accomplished member of the medical profession, but a man of wide business capacity, as had been seen in many ways, but notably in his position as Chairman of the Education Committee of the General Medical Council. Professor Scott Lang, St. Andrews University, seconded, and the Returning Officer, there being no other nominations, declared, amid applause, that Sir John Batty Tuke had been duly elected. Sir John returned thanks. He claimed a perfectly free hand in all matters connected with medical, public health, or educational affairs, as the one condition on which he had consented to stand. Had he been a member of the House of Commons when the last Vaccination Bill was passed he could not have voted for it, inasmuch as he was convinced that it was inimical to the common good. He believed that politics would come to be less and less taken into consideration in relation to educational, university, and medical affairs. It was the duty of every individual member of the universities, and particularly of their Parliamentary representative, to enhance in every way they could the well-being of those ancient seats of learning. He thanked the electors for the honour they had done him, and he hoped they would never find their confidence misplaced. The Vice-Chancellor (Sir William Muir) congratulated Sir John on his election, thanked him for his encouraging words, and expressed the certain hope that he would discharge the duties of his high office to the credit and for the benefit of both Universities.

END OF THE STOCKPORT AMBULANCE DISPUTE.

THE differences between the Stockport and District Medical Society and Mr. A. E. Ferns, the late Honorary Secretary of the Stockport Centre, have now been arranged. It will be remembered that the arbitrators in their recent award[1] blamed Mr. Ferns for having entirely lost sight of certain definite duties in his official position as secretary, and expressed the opinion that he had discharged the duties of secretary, and afterwards treasurer, in a somewhat arbitrary manner, and that in his dealings with various medical men in the town in connection with his secretaryship, he comported himself in a manner which cannot be said to have been courteous or conciliatory. Finally, they recommended that if Mr. Ferns were unable or unwilling so to act as, in the opinion of the Committee, to make satisfactory relations with the medical men possible, a new secretary be appointed. Mr. Ferns subsequently addressed to the Chairman of the Local Centre a letter in which he stated that as he (Mr. Ferns) knew, it was the wish of the President (Earl Egerton) that he should continue to be connected with the Centre, and, "acting in what he conceived to be the spirit of the award, he was prepared, in any part he might take in ambulance matters in the future, to work amicably with all concerned in promoting the best interests of the Order, etc." This letter was considered at a recent meeting of the Stockport and District Medical Society, and in a spirit of conciliation to which the representations of Mr. Ferns's friends had contributed, it was resolved that, provided Mr. Ferns inserted the words "the members of the medical profession in Stockport and," before the words "all concerned," the Medical Society would not oppose his re-election. Mr. Ferns inserted these words, and at a subsequent meeting of the Stockport Centre Mr. Arthur Briggs was elected Secretary and Mr. Ferns was appointed Chairman, a position in which unfortunate asperities of manner are less likely to occasion personal conflict with ambulance workers.

[1] BRITISH MEDICAL JOURNAL, January 27th, p. 209.

ST. MARY'S HOSPITAL.

FOR some years the idea that St. Mary's Hospital Medical College should possess a sports ground such as has been secured already by many medical colleges in London has been in a state of solution in the collective mind of students and staff. The recent success of St. Mary's in the Inter-Hospital Cup-ties of the cricket and Rugby teams has brought about precipitation. The collection of the precipitate and its conversion into current coin, or its equivalent, was commenced on Tuesday, when Mr. George Field presided with his customary geniality and tact over a dinner at the Trocadero Restaurant, arranged by the amalgamated clubs. The company at the dinner was large and included many old students, the proceedings were enthusiastic, and the speeches were of a character suitable to the occasion. Mr. Field and Mr. Edmund Owen told again the successes of St. Mary's in the cricket field when the school was a little younger than it is, and chaffed each other to the infinite satisfaction of all present. Mr. Wilson, Mr. Sharples, and Mr. Gonin, who spoke for the students' clubs, while discreetly silent as to the actual state of the negotiations, expressed the confident anticipation that with the co operation of the staff, which was promised by Mr. Field and Mr. Owen, the desired field for a sports ground would very shortly be secured. The speakers who returned thanks for the services took occasion to commend the medical services to their hearers. Thus Mr. N. C. Ridley said that in the Royal Navy Medical Service the surgeon found himself admitted without question to the brotherhood of officers in the ship in which he served, and whose risks and labours he shared. Surgeon-Captain O'Connor said that the Militia Medical Staff had readily responded to the call made upon it by the war, that the vacancies in the ranks of the six county companies had quickly been filled up, and that it was expected that three more county companies would shortly be formed. Surgeon-Captain Callender said that the Volunteer Medical Staff Corps was well represented at the seat of war, and that Surgeon-Captain Sleman in a letter from South Africa had informed him that the men of the corps were in great request, and that nearly all had been appointed non-commissioned officers in various hospitals.

A STRANGE TALE OF PLAGUE BACILLI.

IT may be remembered that some time ago the strange adventures of Dr. Leonard Haydon and the plague bacilli which he took with him to Victoria were related in the BRITISH MEDICAL JOURNAL. He had been sent out from England by the British Government to India as a plague officer, and when there made cultures of the bacilli. With a number of tubes containing these cultures in his possession he arrived at Melbourne. The Board of Health advised the Government that experiments with the bacilli would be a danger to the Colony, and, though Dr. Haydon pleaded that he intended to use them only for the manufacture of protective serum, he was summoned to surrender them. The authorities were at first somewhat puzzled how to act, no provision having been made by the Legislature to meet such a case. But having resolved that, law or no law, the bacilli should be destroyed, they soon found a way. Gelatine is subject to a duty of threepence in the pound in Victoria, and as the preparations were on gelatine, they were confiscated, on the ground that the duty had not been paid. They were then destroyed. By this dainty device of the legal mind the situation was saved, and the Colony was delivered from a deadly invasion. But alas! the Board of Health has since, it is said, had reason to repent its hasty and ill-considered action. With plague at their doors, serum was urgently needed for inoculation, and there was none to be had. Melbourne had to cable to Europe for supplies. May we therefore suggest that the Victorian Government should apologise to Dr. Haydon, and pay him the £300 which he claimed as compensation for the destruction of his property?

HOW TO FREE A TOWN FROM MOSQUITOS.

AT a meeting of the Società Medico-Fisica Universitaria of Sassari, on March 23rd, Dr. C. Fermi gave an account of certain experiments made in Sassari, in conjunction with Dr. Lumbau and Dr. Cossu-Rocca, with the object of freeing the town from mosquitos. He was able to discover all their breeding places in different parts of the city, in drains, cisters, puddles, etc. The method adopted was the destruction of the larvæ by means of petroleum placed in the breeding grounds twice a month. The mosquitos were destroyed in shops by means of chlorine, and in houses by means of other culicicides, such as a mixture of pyrethrum, chrysanthemum flowers, valerian, and calamus aromaticus, or the "zanzoline" of Celli and Casagrandi. The results obtained were so satisfactory that Dr. Fermi concludes from them that it is always possible to free a town from mosquitos unless the conditions are exceptionally unfavourable—as if it be situated in the midst of a swamp. He estimates the expense of freeing a town of 50,000 inhabitants at 1,000 to 1,500 lire (£40 to £60) a year. This includes the wages of the staff required to carry out the measures prescribed. The expense is small in comparison with that of other methods, such as smoke cones, which only some 10 per cent. of the people can be got to use.

THE STUDY OF TROPICAL DISEASES.

THE Craggs Research Scholarship of £300 a year has been awarded to Dr. G. L. Low, M.A., M.B., C.M., a distinguished student of the London School of Tropical Medicine. Mr. Craggs, whose name the Scholarship now bears, is a member of the firm of Craggs, Turketine, and Co., of Coleman Street, E.C. He is well known to all interested in questions relating to hospitals as one of the Honorary Secretaries of the Prince of Wales's Hospital Fund. Dr. Low will, in the first instance, as stated elsewhere, go to the Roman Campagna, where he is to take part in an experiment on the prevention of malaria. Later, he will proceed to the West Indies.

LIVERPOOL POST-GRADUATE COURSES.

ARRANGEMENTS have been made at the Liverpool University College for conducting post-graduate courses in practical bacteriology and morbid histology. They will be held in the Thompson-Yates Laboratories, and will be conducted by Drs. Abram, Grünbaum, and Warrington. A considerable number of medical men have already put down their names for the courses.

WE are asked to state that the laboratory meeting of the Pathological Society, to be held at King's College on Tuesday, May 15th, commences at 8 P.M., not at 8.30.

THE Town Council of Dorchester has resolved to offer the freedom of the borough to Mr. Treves, who was born in the town and received his early education there.

SIR THOMAS SMITH who retires from the Council of the Royal College of Surgeons of England does not intend to seek re-election. Mr. J. Bland-Sutton intends to offer himself as a candidate at the next election in July.

AT the meeting of the Paris Académie de Médecine on May 1st Professors Behring (of Marburg), Golgi (of Pavia), Tilanus (of Amsterdam), and Pawloff (of St. Petersburg), were elected Foreign Associates.

THE discussion on the Wounded in the Present War, at the Royal Medical and Chirurgical Society, will be resumed at the next meeting by Mr. Clinton Dent, who was the correspondent of the BRITISH MEDICAL JOURNAL. Sir William Mac Cormac will also speak.

THE Croonian lectures before the Royal College of Physicians of London will be delivered on Tuesdays and Thursdays, June 19th, 21st, 26th, and 28th, at 5 P.M. by Dr. F. W. Mott, F.R.S., Pathologist to the London County Asylums, who has taken for his subject The Degeneration of the Neuron.

THE Executive Committee in Paris of the International Medical Congress reports that an arrangement has been concluded with the Commissary-General by which members of the Thirteenth International Congress of Medicine to be held at Paris from August 2nd to 9th, will be admitted free to the exhibition. A special ticket entitling members to this privilege will be issued at the offices of the Congress on and after July 31st.

MR. JONATHAN HUTCHINSON, as Emeritus Professor of Clinical Surgery in the London Hospital Medical College, will give the first of a course of lectures in the Clinical Theatre of the hospital on Wednesday next, May 16th, at 4 P.M. The subject will be the Story of Robben Island. Subsequent lectures will be given on May 23rd, 30th, and June 6th.

THE Council of the Royal Society, at its meeting on May 10th, recommended the following fifteen gentlemen for election as Fellows: C. J. Burch, M.A., T. W. Edgeworth David, B.A., J. B. Farmer, M.A., Leonard Hill, M.B., J. Horne, F.G.S., J. J. Lister, M.A., J. G. MacGregor, D.Sc., P. Manson, C.M.G., M.D., T. Muir, LL.D., A. A. Rambaut, M.A., W. J. Sell, M.A., W. Baldwin Spencer, B.A., J. Walker, D.Sc., P. Watts, and C. T. R. Wilson, M.A.

RUSSIAN DOCTORS FOR ABYSSINIA.—The Emperor Menelik is said to be establishing a number of medical schools in Abyssinia, and has requested that twelve Russian doctors and some Sisters of Charity may go out to teach his people.

PROFESSOR KOCH'S INVESTIGATIONS ON MALARIA.

THIRD REPORT TO THE COLONIAL DEPARTMENT OF THE GERMAN FOREIGN OFFICE.

THE *Deutsche medicinische Wochenschrift* of April 26th and May 3rd publishes a third report by Professor Robert Koch, on the work of the Malaria Expedition of which he is the head. A translation of the second report, dealing with the researches in the Dutch Indies, appeared in the BRITISH MEDICAL JOURNAL of February 10th, 1900, p. 325. The following is a translation of the third report which deals with his researches in German New Guinea during January and February, 1900:

MALARIA IN GERMAN NEW GUINEA.

The expedition reached German New Guinea on December 26th, 1899, and after a short stay of Berlinhafen and Friedrich-Wilhelmshafen arrived at Stephansort on December 29th.

For a stay of any length only one of the two last-mentioned places was suitable. We decided in favour of Stephansort, because the New Guinea Company has there extensive plantations with about 600 labourers and a corresponding number of employees, and maintains a hospital for Europeans as well as for coloured people. We might therefore expect to find there all the conditions required for our researches, especially as Dr. Lauterbach, whom we accidentally met on his return from his Ramu expedition, promised us his support as one of the directors of the New Guinea Company as far as we might need it in regard to clinical material.

STEPHANSORT.

Our expectations were very quickly fulfilled. Whereas in Batavia in five weeks we could only find 30 cases of malaria, in the first two months of our stay at Stephansort we found, among 734 persons who came here for the purpose of our researches, 157 cases of malaria, which is equivalent to saying that the population of the region is affected with malaria in the proportion of 21.4 per cent. These figures, however, require to be corrected, inasmuch as the number of sufferers from malaria must undoubtedly be reckoned as considerably higher, because we counted only the cases in which malaria parasites were present in the blood. It is well known, however, that sufferers from malaria have not always malaria parasites in the blood of their fingers, and that, on the contrary, there are not infrequent intervals in which no parasites are to be found. An estimate founded only on the presence of parasites must, therefore, always be too low, and I believe I shall not go wrong if, on this ground, I place the frequency of malaria in Stephansort at the least at 25 per cent. of the population.

This collective result comprises a number of very interesting details, as may readily be gathered from Table I, which embraces the whole material.

For the further completion of this table I add Tables II and III, which show the results of researches on the village population of New Guinea, and the children of natives in Java.

In regard to these tables I may make the following explanatory remarks.

As the results of our observations in Java show, the number of localities in Java which are free from malaria is not so small as would appear to be the case from the statements of the medical practitioners of the Dutch Indies. To prevent any misunderstanding a sharp distinction must be drawn between endemic and imported malaria. Speaking generally there are no places absolutely free from the latter, since a man who has been infected in a malarious region may suffer from the disease not merely for months, but for years, and may carry it about everywhere. If I speak of a locality free from malaria, I mean nothing more than a place that is free from endemic malaria.

CHILDREN AND MALARIA.

The one certain sign of freedom from malaria in this sense is the exemption of the children. They are very susceptible of malaria, they remain as a rule in the place, and they are thus exposed to infection. If we find among them such a percentage of cases as will exclude accidents, they are infected in the place itself, and malaria must therefore be endemic

TABLE I.—*Malaria in the Population of Stephansort.*

	Number of Persons Examined.	Number Affected with Malaria.	Percentage.	Remarks.
I. Europeans	21	12	57.1	In addition to these, malaria was found in 5 Europeans at Berlinhafen, Friedrich-Wilhelmshafen, and on the steamship *Johann Albrecht*. The 12 cases of malaria included 10 cases of tropical fever, 1 of tertian and 1 of quartan ague.
II. Chinese:				
(*a*) Engaged in the years 1891 to 1896 ...	109	5	4.6	
(*b*) Engaged in September, 1898, at Singapore	22	9	40.9	
(*c*) Engaged in December, 1898, at Hong Kong	99	42	42.0	
(*d*) Engaged in December, 1899, at Deli Sumatra)	10	7	70.0	
Total	240	63	26.3	The 63 cases of malaria include 23 of tropical fever, 11 of tertian, and 29 of quartan ague.
III. Malays:				
a) Men:				
Old hands	97	13	13.4	
Recent arrivals	33	19	57.6	
b) Women:				
Old hands	40	3	7.5	
Recent arrivals	39	18	46.2	
Total	209	53	25.3	The 53 cases of malaria include 13 of tropical fever, 5 of tertian, and 35 of quartan fever.
IV. Melanesians:				
1. French Islands	42	1	2.4	
2. Huon Gulf (Jabim)	90	3	3.3	
3. New Pomerania	39	6	15.4	
4. New Mecklenburg	38	9	23.7	
5. Gardner Islands	19	9*	47.7	Arrived at Stephansort in the middle of December, 1899.
6. New Hanover	29	—	0.0	Arrived at Stephansort in the middle of February, 1900.
7. From other places	7	1	14.3	
Total	264	29	10.9	The 29 cases of malaria include 18 of tropical fever, 3 of tertian, and 8 of quartan fever.
Grand total	734	157	21.4	

* The 9 cases of malaria among the fresh arrivals from Gardner Islands are all cases of tropical fever.

TABLE II.—*Malaria among the Natives of Kaiser-Wilhelm's-Land.*

—	Number of Persons Examined.	Number Affected with Malaria.	Percentage.	Remarks.
I. Bogadjim:				Bogadjim, situated not far from Stephansort, consists of 4 separate districts: Lalu, Sarar, Bom, Garima. Inhabited solely by natives. The 13 cases of malaria include 7 of hospital fever, 3 of tertian, and 3 of quartan ague. (Among the adults, one woman, aged 21, was found to have tropical fever; she had come from the island of Bilibili to get married, and had been in Bogadjim only about half a year. She is therefore not counted among the persons belonging to Bogadjim.)
1. Children under 2 years of age	10	8	80.0	
2. Children from 2 to 5 years	12	5	41.6	
3. Persons from 5 to 55	86	0	0.0	
II. Bongu:				Bongu is a large village on the coast of Astrolobe Bay, situated in the neighbourhood of Constantinhafen. The 16 cases of malaria include 11 of tropical fever, 2 of tertian, and 3 of quartan ague. (In Bongu also there was an adult with tropical fever. He had recently come from New Pomerania, and therefore does not belong to the Bongu people proper.)
1. Children under 2 years of age	6	6	100.0	
2. Children from 2 to 5 years	13	6	46.1	
3. Children from 5 to 10 years	17	4	23.5	
4. Persons from 10 to 45 years	39	0	0.0	
III. Tamara:				There is a Catholic mission station on the island of Tamara, belonging to Berlinhafen. The children examined are all pupils of the mission.
1. Children from 2½ to 5 years	5	0	0.0	
2. Children over 5 years	29	0	0.0	

TABLE III.—*Malaria Among the Natives of Java.*

—	Number of Persons Examined.	Number Affected with Malaria.	Percentage.	Remarks.
I. Belonging to the Ambajawa District:				
1. Rawa Bandjir:				A village completely surrounded by swamp. The 8 cases of malaria include 1 of tropical fever, and 7 of quartan ague.
(a) Children under 1 year	37	6	16.0	
(b) Children over 1 year	49	2	4.0	
2. Kampong Bedjalen:				A village situated at the bottom of the valley of Ambarawa, and on the edge of the swamp. The 18 cases of malaria include 5 of tropical fever, 7 of tertian, and 8 of quartan ague.
(a) Children under 1 year	71	11	15.5	
(b) Children over 1 year	70	7	10.0	
3. Kampong Bandoeng:				A village situated at a height of 1,000 metres on the slope of the Oenarang volcano. The 43 cases of malaria include 18 of tropical fever, 15 of tertian, and 10 of quartan ague.
(a) Children under 1 year	59	24	40.6	
(b) Children over 1 year	130	19	14.6	
II. Belonging to Oenarang:				
1. Kalidod:				Situated at a height of about 500 metres above the sea level, almost midway between Ambarawa and the port of Sebarang. The 10 cases of malaria include 3 of tropical fever, 1 of tertian, and 6 of quartan ague.
(a) Children under 1 year	35	3	8.6	
(b) Children over 1 year	79	7	8.8	
2. Genoek:				The 6 cases of malaria include 4 of tropical fever and 2 of quartan ague.
(a) Children under 1 year	33	5	12.3	
(b) Children over 1 year	38	1	2.6	
III. Magelang:				A garrison town, situated at a height of about 600 metres, southward from the valley of Ambarawa, but separated from it by a mountain ridge.
(a) Children under 1 year	61	—	0.0	
(b) Children over 1 year	24	0	0.0	
IV. Tosari:				At an altitude of 1,777 metres (health station).
(a) Children under 1 year	82	0	0.0	
(b) Children over 1 year				
V. Poespo:				At an altitude of 630 metres.
(a) Children under 1 year	35	0	0.0	
(b) Children over 1 year				
VI. Soekaboemi:				At an altitude of 602 metres (health station).
(a) Children under 1 year	164	0	0.0	
(b) Children over 1 year	42	0	0.0	
VII. Patjet:				At an altitude of 1,074 metres (adjoining the health station, Sindanglaia).
(a) Children under 1 year	97	1	6.0	
(b) Children over 1 year	79	0	0.0	
VIII. Tandjong Priok:				On the coast. The port for Batavia, a notorious haunt of malaria. The 28 cases of malaria include 10 of tropical fever, 9 of tertian, and 9 of quartan fever.
(a) Children under 1 year	62	17	37.8	
(b) Children over 1 year	63	11	21.2	

there. Conversely a place in which a considerable number of children are found free from malaria must be free from endemic malaria.

In this manner, in addition to Tosari and Poespo, the places in Java mentioned in my last report, the following have been shown to be free from malaria: Magelang, Soekaboemi, and Patjet, close to Sindanglaia (the malarious child found among 176 children at Patjet I think must be looked upon as having come there accidentally, perhaps owing to the removal of its parents).

ALTITUDE AND MALARIA.

This fact is important inasmuch as it follows therefore that the altitude of a place has a certain, though by no means decisive, influence on its condition in regard to malaria. For instance, Soekaboemi, which is free from malaria, is at a height of 602 metres above the sea level, while Bandoeng, which is grievously afflicted, is at a height of 1,000 metres. Even the presence of *Anopheles* mosquitos cannot be taken as decisive, for in non-malarious Soekaboemi we met with four different kinds of *Anopheles*, each of them in great abundance. Therefore there must come into play other factors which can be discovered only after prolonged researches on the spot.

KAISER-WILHELMS-LAND.

In connection with Kaiser-Wilhelms-Land, our researches enable us to speak only of the small district of Astrolabe Bay, and of it we can say that it yields to no place in the tropics in the matter of malaria. Friedrich-Wilhelmshafen also appears from what we could discover to be in the same case, and there are sufficient grounds for saying generally that the whole coast of Kaiser-Wilhelms Land is infected with malaria. On the other hand, the islands near the coast seem to be partly free from malaria. Thus the results of the examination of the mission pupils in Tamara appear to indicate that that island is free from malaria. But in order to establish this with perfect certainty, children under 2 years of age

must also be examined. The island of Bilibili also appears to be free from malaria. Perhaps an opportunity may present itself to us later of collecting a greater amount of trustworthy material.

ACQUIRED IMMUNITY.

A further fact to be gathered from the tables, which, as far as I know, has now for the first time been ascertained in an incontrovertible manner, is the natural immunity which the inhabitants of malarious regions in the tropics acquire in the course of a few years. Our researches in Java, where, as a rule, there is a much higher mortality among children under 1 year than in those above that age, had already enabled us clearly to recognise a gradually increasing immunisation; but the two New Guinea villages, Bogadjim and Bongu, afford a perfectly classic proof for this purpose. In Bogadjim, among the inhabitants who have passed the 5th year of life, there is not a single one with malaria; on the other hand, among the little children, it is found most abundantly. Bongu is in exactly similar case, only with this difference, that in isolated cases the malaria reaches to the 10th year, completely disappearing after that period. If one were in such a population to be satisfied with examining only the adults, or even the adolescents, and not the children, one would probably not find a trace of malaria, and would arrive at the utterly erroneous conclusion that the population was entirely free from—that is to say, immune in regard to—malaria. I am therefore convinced that in other malarious regions perfectly analogous conditions exist, and I would suggest that similar researches should be made at home as well as in other German colonies, especially in East and West Africa, among the native population.

IMMIGRANTS FROM NON-MALARIOUS REGIONS.

Immigrants coming from non-malarious regions are in exactly the same position as children born in a malarious country. They become infected with malaria, and have to suffer from the disease till such time as they acquire an adequate degree of immunity. In regard to this, the Europeans, the Chinese, and certain groups of Melanesian labourers are especially instructive. The Malays give no such convincing results, as they do not in like proportion come from non-malarious regions, but partly belong to the malarious districts of Middle Java. Of the European settlers here, all must come from non-malarious localities, since they all, soon after arrival at Stephansort or any other place on the coast, sicken with malaria. As a rule, the first onset of the fever occurs within three to four weeks; it is seldom longer delayed. The only exceptions to this rule are the two members of the Malaria Expedition, who up to the present have remained free from the disease, unquestionably as a result of thorough prophylaxis with quinine.

EUROPEAN IMMIGRANTS.

Among 21 Europeans examined, malaria parasites were found only in 12. These, therefore, undoubtedly suffered from malaria at that time. Of the 9 remaining persons, 5 had already been for many years in the Colony; they had previously suffered frequently from malaria, and were evidently so far immunised that they had remained for a more or less considerable period of time free from attack without the prophylactic use of quinine. The other 4 persons were during the period of observation under the influence of quinine prophylaxis, and for that reason had no parasites in their blood.

CHINESE IMMIGRANTS.

In the Chinese also the influence in the length of stay made itself unmistakably manifest. Among the Chinese who had been engaged from 1891 to 1896 only 4.6 per cent. of malarious subjects were found. On the other hand, the two batches of coolies engaged in September and December, 1898, showed a percentage respectively of 41 and 42 suffering from malaria, therefore nearly ten times as many as among those of older standing. Of 10 Chinese who came with the members of the Malaria Expedition, 7 (that is 70 per cent.) suffered from malaria at the time of examination. According to these observations it appears that after three or four years an unmistakable degree of immunity is developed among immigrants just as is the case in the children of natives. The Chinese seem to be very susceptible of malaria, as I did not find a single one who was not suffering or had not previously suffered from the disease; like the Europeans they are visited by the severest form of malaria, and are unfortunately killed by it here in large numbers. The fact is all the more remarkable since the Chinese can acquire complete immunity from malaria. We did not find a single case among the older batches.

MELANESIAN AND OTHER IMMIGRANTS.

The examination of the Melanesians brought to light some striking differences, which, however, can be explained with the help of our observations elsewhere. In the first place it was found that 42 persons from the French islands (not far from the north coast of New Pomerania) were entirely free from malaria, although they had not been in Stephansort long enough for an immunity acquired here to become established; they must therefore have brought their immunity with them into the malariai country, and from this we may conclude that malaria is endemic in the French islands. (One of these people later suffered from a very slight attack of tropical fever).

In a similar position to the inhabitants of the French islands, though not to so pronounced a degree, are the labourers from the Huon Gulf, that is from the line of the coast of New Guinea stretching southward from Astrolabe Bay. This is in no wise to be wondered at, since we have every reason to suppose that this coast in its whole extent, even far beyond the German protectorate, is the home of malaria, and accordingly that its adult population is immune from the disease.

The inhabitants of New Pomerania and New Mecklenburg show notably higher figures in regard to malaria, although among them are a large number of labourers who have already been five years and longer in the service of the Company. If in spite of this they show disproportionately higher figures, it is to be presumed that their native country is wholly or at any rate partly free from malaria.

One can, however, state this with certainty of the inhabitants of the Gardner Islands (lying opposite the east coast of New Mecklenburg. The people engaged from there arrived at Stephansort a few weeks before us, and in a short time 47 per cent. of them were ill with malaria.

The recently imported people from New Hanover (see IV, 6, of Table I) have been in Stephansort too short a time for the occurrence of cases of malaria. Should they continue free from malaria it may be concluded that the island of New Hanover is the home of malaria.

THE HISTORY OF MALARIA.

From the circumstances which have been described the history of malaria as it must occur in our colonies, and as, in point of fact, it has occurred, may be constructed without difficulty. Among the natives of the coast of New Guinea, as the results of our observations at Bogadjim and Bongu teach, malaria has long been prevalent; perhaps it may originally have been imported by traders from the Malay Archipelago or the Moluccas. The first Europeans who held intercourse with the coast suffered severely from malaria, and still more so the first settlers. But things gradually improved as the immigrants became more and more immune. Then medical reports began to state that in consequence of this or the other sanitary regulation, or of the increasing cultivation of the soil, etc., malaria was decreasing. But suddenly it broke out anew, not, as stated in some reports, in consequence of exceptional meteorological conditions, but each time that a large number of new and freshly susceptible labourers was introduced. They, like the newborn children in a malaria country, had first to attain through greater or less suffering the immunity which enabled them to live permanently in a malarious region.

The tribute paid for this to malaria may reach a considerable figure, for of 273 Chinese brought to Stephansort from Hong Kong in December, 1898, there died in the course of one year 125, for the most part of malaria, and many of them are still sickly in consequence of the severe form of malaria from which they previously suffered. Catastrophes of this kind may naturally be looked for again, if susceptible persons are again brought into the colony without being previously protected against infection.

How to Fight Malaria.

Hand in hand with these researches on the conditions in regard to malaria now existing in New Guinea have gone our efforts as far as possible to master malaria. If the view which I have already expressed in my previous reports that malaria is confined to human beings be correct, it must be possible, by destruction of the parasite in the human body, in some measure to cut short the course of malaria, and gradually to cause its disappearance. With this object we treated all the people in whom malaria parasites were found. We were not satisfied with removing the malaria actually present, but we endeavoured further to prevent the occurrence of relapses, for a man is not free from malaria parasites till no further relapses occur. Already, in Berlin, I had made investigations in this direction on patients who had returned from the tropics and had relapses of malaria. I had then observed that the dose of quinine should not be less than a grain, and that this dose should be repeated on the following day, if a result to some extent certain is to be obtained. The only question is, within what period of time these doses of quinine should be repeated, and how long the administration is to be continued.

According to the experiments carried out here on a large scale, it is clear that an interval of seven days between the two days of quinine medication is quite sufficient to prevent relapses of malaria. In case of necessity the interval may be extended to eight days. The method consists in this, that a gram of quinine is given to the sufferer from malaria in the afebrile intervals, therefore almost always in the morning hours, until the malaria parasites have disappeared from his blood; then follows an interval of seven days; then again a gram of quinine on each of two of successive days; then another seven days' interval; again two days of drugging with quinine, and so on, for at least two months.

Mode of Treatment and its Results.

The treatment carried out in accordance with these principles has hitherto proved thoroughly excellent. The number of malaria patients among the coloured labourers has considerably diminished. The few still under observation are almost all cases of relapse, in which the reason for the failure of the quinine treatment was almost always discoverable. Either in consequence of a misunderstanding no quinine had been given, or the patients had taken it with aversion and had brought it up again. Sometimes an insufficient dose was given (gelatine capsules with considerably less quinine than they should contain). In a very few cases the fault lay with deficient absorption of the quinine, owing to impaired activity of the stomach. In these cases we attained our object by the subcutaneous administration of quinine.

Besides these cases of relapse which originate from a former time, only very few fresh cases of malaria have occurred lately, in spite of the fact that the meteorological conditions—alternating rain and sunshine with very high temperature—are just those most favourable for malaria; moreover the labourers are busy in the laying out of tobacco fields, the turning over of virgin forest soil, the cleaning out of ditches full of mud—therefore with work of the kind which, according to the views hitherto held, is the most dangerous. At the same time there has been no lack of mosquitos, and especially of *Anopheles*; they have been in great abundance during the whole period of our stay here.

The health conditions of the Europeans have also greatly improved. Cases of malaria have steadily become less frequent among them, and where relapses still occurred, they were of a very mild type. Only one patient suffering from malaria has been admitted into the hospital for Europeans during the last two months, and he was brought for treatment from on board the steamer *Johann Albrecht*.

Whether this unusually favourable state of things was due to our systematic efforts against malaria, or whether it is only accidental and passing, the future must show. We have the worst time for malaria—the end of the rainy season—before us, and that will show whether in our procedures we are on the right road.

University of Warsaw.—The total number of students in the University of Warsaw is 1,127. Of these 360 belong to the medical faculty.

MOSQUITOS AND MALARIA.

Discovery of the Anopheles in Hong Kong.

In response to a circular despatch issued by the Secretary of State for the Colonies at the end of 1898, the Governor of Hong Kong forwarded two collections of mosquitos on August 18th and November 24th, 1899, respectively, and as the species *Anopheles* was not included in these collections it was thought at the time that it did not exist in Hong Kong.

Mr. C. V. Ladds, M.R.C.V.S., the Colonial Veterinary Surgeon, was, however, not altogether satisfied with these investigations, and in December, 1899, commenced a careful re-examination of the subject. At a meeting of the Hong Kong and China Branch of the British Medical Association on April 2nd he read a paper stating that his search had been successful. His observations were as follows:

After going thoroughly into the matter, and after having cultivated the larvæ of many varieties of mosquito, I at length found that the *Anopheles* undoubtedly did exist in the colony, and was to be found in most of its known malarial districts. I first discovered them close by a Government bungalow at Kennedy Town. The different occupants of this house having been subject to repeated attacks of fever ever since its erection in 1895, I determined to make this place my starting point, and, after a very careful examination, I found a small pool swarming with *Anopheles* larvæ within fifty yards of the building.

Extending my search I found the same species near the Kennedy Town Fever Hospital at Magazine Gap, at Wongnei-cheong village, near a house on Bonham Road, at Quarry Bay, close by the Taikoo Sugar Refinery, all round the camp of the Welsh Fusilier detachment at Kowloon, and in many other places.

This being sufficient evidence of their existence over a considerable area of the colony, and having now no doubt that they were to be found in all the malarial districts, I next proceeded to examine the particular kind of pool which the *Anopheles* appeared to select as most suitable for the propagation of its species.

A small shallow pool containing algæ, or green flocculent water weed, and fungoid growths, abounding in all kinds of aquatic insect life, and which is not quite stagnant—or, if stagnant at the time of discovery, is not likely long to remain so, but is renewed occasionally by small flushes of rain water—appears to be their favourite habitat.

In nearly every instance I found them only in such pools, which were in most cases fed by minute streams issuing from small springs in the hillside, and these, not being of sufficient volume to scour out a channel of their own, just spread themselves over the surrounding lower ground, and so help to form and feed the typical *Anopheles* pool.

They do not seem to inhabit pools which are entirely stagnant (or likely to remain so long) or which contain no water weed, and appear to be particularly careful in their selection, as, although there may be dozens of pools in the locality, only a few of them may contain *Anopheles*.

Having repeatedly found the mosquito hovering round a pool which contained the same species of larvæ, it is probable that the adult insect returns to its original home to deposit its eggs, and this theory may, if correct, account in a measure for their not being found scattered indiscriminately about everywhere. After once seeing the particular kind of pool which these mosquitos affect, it is easily recognised, but it is not quite so easy to describe it correctly; yet I trust that I have given a fair general idea of what to look for.

I find by experimenting that the *Anopheles* larvæ appear to feed upon the algæ or water weed which is found in their particular pools, and also possibly upon some of the animalculæ which they contain. This I proved by placing some larvæ in clear tap water and others in water taken from an *Anopheles* pool which contained water weed; those in the former died quickly, while those in the latter hatched out in due course. I should not say that the larval stage of the insect is a long one, probably about a week or ten days, this depending a good deal upon the nature of the pool; after which time they emerge therefrom as adult mosquitos. The life of the mosquito itself probably extends over a period of several weeks, perhaps longer.

I have so far not succeeded in finding the *Anopheles* larvæ

in any of the healthy districts of the colony or far distant from human habitations, nor have I yet found them in rice fields, in large pools of water, in rapidly-running streams, in pools with sandy bottoms, in wells, old broken pottery, tubs, pans, etc., as in the case of *Culex*, which may be found in almost anything which contains water.

In contradistinction to the *Anopheles*, water weed does not seem to be necessary to the existence of the *Culex* larvæ, they being often found in pools, etc., from which it is entirely absent; a further distinction between the two species being that the former appears to be much more delicate than the latter. It is not necessary here to describe the *Anopheles* larva or mosquito, they being so entirely different from the other species as to be easily recognised after having been once seen.

Having satisfied myself as to the existence of the *Anopheles* in the colony, and having given a brief description of its habitat, etc., I will now pass on to the possibilities of its extirpation from the island. With this object in view I have been testing the effects of various insecticides. I found that kerosene used as described by the African Commission was very effective in still pools, or in those which were temporarily stagnant; gas tar also proved to be very useful, but in my opinion Jeyes' fluid is the best of those which I have tried up to the present.

So far as my experiments have gone, I find that one part of Jeyes' fluid to 10,000 of water kills both *Anopheles* and *Culex* larvæ in a few hours, very much weaker solutions destroying them after a longer interval.

Permanganate of potash appears to be of very little use. In a solution of 1 to 1,200 of water, equal to 1 in 5 of Condy's fluid, the larvæ lived for twenty-four hours, and were as lively as ever at the end of that time; while in a solution of 1 to 500, equal to nearly 1 in 2 of Condy's fluid, they lived for four hours without there being any appreciable effect upon them, and even after twenty-four hours more than half of them were alive.

Hence, by treating all *Anopheles* resorts frequently with Jeyes' fluid, kerosene, or gas tar during the whole of the dry season, when such pools are comparatively scarce, and by paying particular attention to surface drainage in malarial districts, much might be done towards effecting their partial, if not total, extermination.

EXPERIMENTS ON THE PREVENTION OF MALARIA IN THE ROMAN CAMPAGNA.

REFERENCE has more than once been made in the BRITISH MEDICAL JOURNAL to the experiment on the prevention of malaria about to be made in the Roman Campagna under the auspices of our own Colonial Office. In an address delivered at the Colonial Institute on March 13th Dr. Manson announced that the experiments were to be made, and foreshadowed the mode of procedure. He said that a hut, such as would be suitable for the habitation of Europeans in tropical Africa, was to be erected in the most malarial part of the Roman Campagna. The hut was to be furnished with wire gauze door and window screen and other devices to render it mosquito-proof. Two skilled observers and their two servants were to live in this hut from June till October of this year—that is, during the entire malarial season. They would be at liberty to go where they liked during the day, but from an hour before sunset to an hour after sunrise they were to be in the hut. If they escaped fever, Dr. Manson said this would be a proof that by very simple and inexpensive means the human body could be protected from the malarial germ, for to sleep but for one night unprotected in the place selected for the experiment was regarded by the Romans as certain to result in the contraction of a malarial fever of a virulent type. The object of the experiment is not so much to afford additional proof of the doctrine of the transmission of malaria by mosquitos as to give the public an object lesson that will carry conviction and supply a principle of action as regards the means of protection to be adopted against malaria. Mr. Chamberlain has shown the greatest interest in the matter and has made a grant of money to defray the cost of the experiments. Dr. Louis Sambon, Lecturer in the London School of Tropical Medicine, and Dr. G. C. Low, to whom the Craggs Research Scholarship of £300 per annum has just been awarded, have undertaken to live in the Campagna under these conditions throughout this summer. They will leave England for this purpose on or about May 15th.

By the courtesy of Messrs. Humphreys of Knightsbridge we are enabled to give an illustration of the hut in which the experimenters are to live. The principal points to be kept in view in the construction of such dwellings are warmth in winter, coolness in summer, perfect ventilation, with every provision for the rigorous exclusion of mosquitos.

To comply with these requirements Messrs. Humphreys, Limited, have designed a house, the roof of which overhangs the walls to the extent of some 3 feet around the entire building and reaches to within 8 feet of the ground. The window openings are thus protected from the sun's rays, and to guard against mosquitos there is a permanent wire gauze screen of no fewer than seventeen meshes to the inch; the entrance is likewise protected, having double doorways with a mosquito curtain fitted between them.



In regard to ventilation, Messrs. Humphreys have provided that a space about 18 inches deep shall be left open around the entire house immediately under the overhanging eaves (where the cool air collects). This opening is fitted with wire gauze similar to that provided for the windows, and a further precaution against the entrance of the mosquito is taken by having similar wire gauze fitted in the ventilating panels let into the ceilings of all the rooms. The floor is composed of best yellow tongued and grooved boards, the outer walls are covered with inodorous felting, boarded externally with specially struck rusticated rebated boarding, which when painted presents a fairly agreeable appearance. The roof is constructed of tongued and grooved boarding covered with patent wire-wove roofing felt, which is not only watertight, but also airproof, thus preventing the escape of the cool air which at night will find its way into the airtank created by this form of roof. By a special treatment the black appearance which a felt roof usually presents is entirely done away with, and the roof is quite white.

If the result of the experiment is to show that by shutting out mosquitos malaria also is shut out, we understand that it is probable that the Colonial Office will direct that dwellings similar to the one here described be constructed for all colonial servants in Africa. It is likely that this example will be followed by the Government of India.

THE ITALIAN SOCIETY FOR THE STUDY OF MALARIA.

THE second annual meeting of the Italian Society for the Study of Malaria was recently held in Rome. This Society was founded on the initiative of Professor Celli in June, 1898.

Signor FRANCHETTI (Chairman) in his opening speech said that with the modest sum of about 13,000 lire the Society during the past year had done excellent work. Having thanked the Italian railway companies for their contributions to the Society and the facilities accorded to the members, he concluded by stating that the work of the Society was extending not only in the Agro Romano, but also in other malarious regions of the country, where in the coming season the results of the new theories for protecting man from malaria will be applied.

Professor Celli then read his report for the past year, in which he reviewed the work done in malaria by Italian investigators. He said Grassi and his school on the one hand, and Celli and Del Pino on the other, had studied, from one season to the other, the life and habits of *Anopheles* in malarious places, while Ficalbi had added in this connection in his monograph other valuable information; and Celli and Casagrandi had studied the resistance of mosquitos to natural physico-chemical agents which tend to destroy them. Grassi and Celli, independently of each other, had controlled in the guidance of the new theories the laws of the diffusion of malaria in the atmosphere, and the local conditions, as the nature of the soil, water, air, vegetation, that predispose to the development of the specific mosquitos, and consequently of malaria. And in particular Celli analysed and studied regularly under this double point of view the rice fields and marshes in malarious localities. Meanwhile on the farm of Cerveletta on the Rome-Tivoli line Celli and Del Pino, and Dionisi at the farm of Maccarese studied the epidemiology of malaria in relation with the new theories.

And thus before Koch published his note on the malaria of Grosseto, and afterwards more regularly and completely these members of the Society discovered the laws, how the annual epidemic originates, how the consecutive monthly distribution of the various types of malarial fevers happens in all the second six months of the year, how these fevers are prolonged especially with their recurrences in the first six months of the following year, and, in fine, how the epidemic year reopens that ends in June with the recurrents and recurrences in July with the new infections propagated by the mosquitos. Bastianelli and Bignami made similar observations at Ostia.

Celli and Dionisi also investigated the relations between the life of the workers in the Roman Campagna and the course of the malarial epidemic. And then in the Hospital of Santo Spirito Bastianelli and Bignami, Gualdi and Martirano, Lo Manaco and Panichi observed the action of quinine on the sexual and asexual forms of the specific parasites. The results obtained showed the inefficacy of this remedy against the asexual forms, which are, epidemically speaking, the most dangerous, and therefore the impossibility of combating this scourge of malaria with quinine alone.

Celli and Casagrandi also occupied themselves with the means of destruction of mosquitos both in their aquatic and aërial life, and they on the one hand, and Ficalbi on the other, tested and retested the substances that acted as culicufuges, therefore capable of protecting the skin from the bites—always troublesome, frequently pernicious—of mosquitos.

On his own account Celli continued his studies on the conditions capable of creating immunity against malarial infection, demonstrating that by means of euchinin and methylene blue an artificial immunity against experimental malaria, including the æstivo-autumnal, can be obtained. And while Grassi made in the summer an experiment of short duration on artificial protection against malaria with mechanical means of protection of the houses and their inhabitants from the aggression of mosquitos, Celli before and after—that is, from June to November—along the Mediterranean and Adriatic railways demonstrated that during all the unhealthy months persons such as railwaymen can be thus protected from the fevers in the most pestilential districts. The control observations in spots around these lines strengthened and confirmed this possibility; consequently in the coming malarial season a similar prophylaxis will be made on a large scale. In any case it has been demonstrated without doubt that those who live and work in even the most severe centres of malaria can be artificially protected from this disease. Finally, Dionisi continuing his investigations on malaria of pipistrels, the nearest to that of man, proved that it is not fortunately transmissible to us. Consequently it is proved up to now that the circulation of the malarial contagion happens only from man to man by the agency of special mosquitos.

Roumanian Medical Association.—The General Medical Association of Roumania, which was founded three years ago with the object of consolidating the strength and promoting the interests of the profession, has recently been recognised as of public utility by a unanimous vote of the Roumanian Chamber. The Association holds a congress twice a year for the discussion of scientific questions and medical politics.

THE HAMBURG INSTITUTE FOR THE STUDY OF NAUTICAL AND TROPICAL HYGIENE.

The *Board of Trade Journal* of April 12th states that a despatch dated March 26th has been received at the Foreign Office from H.M. Consul-General at Hamburg transmitting a memorandum on the establishment at that port of an institute for the study of nautical and tropical hygiene. The scheme for the erection of a hospital and institute for the study and treatment of tropical diseases and nautical hygiene, now decided on conjointly by the German Imperial and the Hamburg Governments, has long been favourably entertained by the latter authority. The Seamen's Hospital, erected in 1863 on an airy site overlooking the Hamburg harbour, was originally intended solely for the treatment of sick seamen, but, owing to the necessity caused by the rapid and unexpected increase of an industrial population, the Seamen's Hospital could not be used as a training school for ship's surgeons and a centre for the study of transmarine diseases. The inauguration of an imperial colonial policy, however, gave new life to the idea, and led the present port physician, Dr. B. Nocht, late Chief Fleet Surgeon of the Imperial German Navy, to make representations to the authorities, with the result that the immediate installation of the new institute has been decided upon. The opening of new sea routes and the increasing employment of natives of tropical countries on board German vessels, combined with the more rapid speed attained at sea, now bring comparatively fresh cases of malaria, beri-beri, blackwater fever, and other tropical diseases right to the gates of Hamburg.

During the past four years, 200 cases of malaria, 14 of tropical dysentery, and an equal number of beri-beri patients, have been, on the average, under treatment annually at Hamburg. The aim has been to gather all ship and tropical diseases under the roof of one institute, so that separately classed, and, where necessary, isolated, the progress of the ailments, their observation and treatment, may eventually demonstrate whether specific tropical diseases experience variations dependent upon the place of infection, and whether these are constantly due to the same causes and the same germs.

The port of Hamburg was deemed especially favourable for the location of the institute, as being the final point of European centralisation from a great number of tropical places manifestly unhealthy. A further advantage presented itself in the opportunities offered there for enabling the medical staff of such an institute to be able to confer with colleagues on board the vessels under whose treatment the patients had previously been. To this end the surgeons on German vessels have been for a year or two past, and are still, enjoined to keep a journal in which the most minute observation of the progress and treatment of such diseases is noted.

The new institute is to comprise a division for patients, provided with 60 beds and a laboratory. The former will be located in a separate building. The offices of the port physician will also be removed to the institute. The laboratory will be fitted for bacteriological as well as for chemical research, space being provided for twelve investigating medical men. The staff will, at the commencement, consist of the chief physician, two qualified medical assistants, one honorary ditto, and a chemical assistant. Five tables for research will be reserved for qualified military medical aspirants for service with the German Colonial troops or under the German Colonial Department. The course of study of the etiology, symptoms, and treatment of malaria and other grave tropical diseases, of tropical physiology, and tropical hygiene will extend over several months. Attention will also be given to the more general methods of hygienic investigation, so that the students may possess the requisite training for extended research abroad, combined with the ability to report technically thereon.

The near vicinity of the Hamburg meteorological observatory, as well as of the tropical botanical department, will secure to the students opportunities for mastering these collateral branches of their profession.

The additional tables in the laboratory will be placed at the disposal of the naval and mercantile services, as well as of medical men, who, having returned from the tropics, are

desirous of pursuing special branches of research. The course of lectures will be open to all members of the medical profession.

For ships' surgeons special courses will be held, embracing ship hygiene, sanitary water police service necessities, quarantine matters, and such like, with the necessary demonstrations. Shorter courses of study, covering periods of eight to ten days, are intended to meet the convenience of ships' surgeons making short stays in port, at which special attention will be given to microscopic and clinical work, enabling them to master the examination of malarial blood and the therapeutics of malaria. Blackwater fever, of which 10 cases were noted during 1899 on Hamburg ships amongst passengers returning home, will likewise receive attention.

The importance of microscopic work in this direction is causing pressure to be put upon shipowners in Germany, in order that their medical men may be furnished free with efficient instruments for such purposes.

The participation of Professor Koch in the investigation of tropical diseases has greatly assisted the decision of the German authorities in establishing this institute; and it seems worthy of consideration, notwithstanding that it may be rather a premature suggestion, whether it would not prove of material advantage to two great maritime nations if a system of exchange of study were arranged mutually between the Hamburg Institute and similar British establishments.

THE MIDWIVES BILL.

Deputation to the Solicitor-General.

The Solicitor-General, Sir Robert Finlay, Q.C., M.P., received on May 3rd at the House of Commons a deputation respecting the Midwives Bill consisting of the following gentlemen nominated by Council at its meeting on April 11th: Dr. Roberts Thomson, President of Council, Dr. T. A. Helme, Mr. Langley Browne, Mr. C. H. W. Parkinson, and Dr. Woodcock, members of the Council, and Mr. Victor Horsley, F.R.S., and Dr. Dawson Williams, members of the Parliamentary Bills Committee, with Mr. Francis Fowke, General Secretary of the Association. The deputation was introduced by Dr. Farquharson, M.P.

Dr. Roberts Thomson said that he would not enter into the merits of the Bill, but would merely observe that the British Medical Association numbered nearly 18,000 members, and had taken great interest in the Midwives Bill. Efforts had been made on behalf of the Association during the passage of the Bill through the Grand Committee on Law to have amendments introduced so as to bring it more into line with the views of the Association. These efforts had not been attended with success, for the Bill left the Committee very much as it entered it, and the object of the deputation was to explain the changes which were considered necessary in the interests of the public welfare.

Dr. Woodcock said that the British Medical Association had through its Parliamentary Bills Committee for many years taken an interest in legislation as it affected medical matters with the object of assisting the Government and the Legislature to safeguard the interests of the public in such matters. Much consideration had been for years given to the proposed legislation as to midwives in the hope of ensuring that the interests of the parturient poor should be adequately protected; this the Bill before the House failed to do in several particulars.

The Solicitor-General: You are aware, of course, that this is not a Government Bill?

Dr. Woodcock: We are aware of that, but, at the same time, we know that it very much depends upon Government whether the Bill becomes law or not. We know that you have a great influence in the matter, and we ask you to exercise it to prevent legislation which we think dangerous. Continuing, Dr. Woodcock said that the first defect in the Bill was that it contained no penalty for malpractice, and that it would be most difficult to reach an offender. The second point was as to the constitution of the Central Midwives Board. If constituted as proposed it could not exercise sufficient medical control. It would be wiser to make the Board representative of different districts in the country because the methods of practice differed. Under the Bill the Board would probably consist of London men only, who, although they might be distinguished in their profession, would probably have little of the local knowledge necessary for efficient administration. The third point was with regard to the misconduct, which would entail the removal of the name from the Midwives Roll. It ought to be made clear that the failure of a midwife to summon medical aid in cases of difficulty or of disease of or danger to the mother or the child should be regarded as misconduct within the meaning of the Bill. The fourth point was with regard to the local supervision of midwives; that duty was delegated by the Bill to county councils, and the county councils might again delegate it to district councils, which were very small bodies, but there ought to be medical supervision locally. The fifth point was that the Bill did not contain any provision for the inspection of lying-in homes. In many parts of England such homes existed ostensibly for the reception of women during their confinements; but such homes were open to abuse, and practices were carried on which were, of course, illegal, but as to which it was commonly very difficult to obtain legal evidence. For this, among other reasons, such homes ought to be subjected to inspection. The sixth point was with regard to the definition of midwife given in the Bill. It was absolutely necessary that the functions of a midwife should be limited, and that she should not be allowed to undertake duties for which she was not competent. The definition as it now stood in the Bill before the House was: "The term 'midwife' means a woman who undertakes for reward to attend women in childbirth where no registered medical practitioner is engaged or employed." This left it possible for a midwife to regard herself as an independent practitioner, so that after the birth of the child she might retire from the case and leave it to some ignorant, untidy neighbour, who with unwashed hands, or perhaps after sitting up with a child was scarlet fever, might carry infection to the lying-in woman—the very danger which the Bill was designed to prevent. This risk could only be prevented by defining the term midwife to mean a woman who undertakes for gain to attend women during natural labour and the lying-in period. As it was, medical men were frequently called in in the hope that they might repair mischief done through the ignorance of women calling themselves midwives. That risk ought to be distinctly provided against in the Bill. In conclusion, he said that it was felt very strongly that, unless safeguards of the kind which he had indicated for the protection of the parturient poor were introduced into the Bill, a grave responsibility would rest upon those who—no doubt with the best intentions—were promoting this legislation.

Dr. Helme said that he had little to add to what Dr. Woodcock had said. The Association felt that it was its duty to assist the Government in recognising the great responsibility which devolved upon the Legislature in this matter. Speaking as a consulting obstetric physician in a large provincial centre—Manchester—and with a full knowledge of the work of midwives, he felt convinced that the dangers to the public would be intensified if the Bill were passed as it stood. With regard to the definition of midwife, the practical experience proved that it was necessary that it should be distinctly stated that she attended during natural labour. If "natural labour" could not be easily defined positively, it could be very well defined negatively—that is to say, the Midwives Board could frame regulations for midwives which should exclude their attendance on non-natural cases. The definition ought also to show that the midwife was required to give attendance after labour. This requirement existed in Germany and in Austria. The point was not a small one, because the Bill as it stood would not prevent a midwife from attending the mother during labour, and then handing her over to a totally incompetent person. If fever supervened, the midwife, although really responsible, would be able to say, "I have nothing to do with this; it is the attendant who followed me who is responsible."

The Solicitor-General: Could not that be dealt with by rules made by the Midwives Board for regulating the practice of midwives?

Dr. Helme: In the opinion of the British Medical Association it would be very much better if it were made a statutory obligation. Dr. Helme then said that the second point to which he wished to refer was the retention of the penalty for practising as well as for the assumption of title.

There was an amendment on the paper to omit the penalty as to practice.

The SOLICITOR-GENERAL: On that point you are satisfied with the Bill as it stands?

Dr. HELME replied in the affirmative, and added that the third point to which he wished to direct attention was the need for the insertion of a statutory penalty for malpractice and misconduct, including in the term misconduct the omission to send for the aid of a medical practitioner in case of abnormality or illness in the mother or child. The absence of such a penalty would result in this, that the midwife would, in the hope that something would happen to relieve the difficulty, defer sending for a medical man until the damage was done. If fever ensued, the midwife might likewise temporise until the evil was irreparable.

The SOLICITOR-GENERAL said that from what took place in the Committee he had the impression that this point also might be dealt with by rules made by the Central Midwives Board. Removal from the roll would be a very considerable penalty.

Dr. HELME observed that removal would have to be carried out by the Midwives Board, and not by the local supervising authority, so that a wretched midwife would have to be prosecuted before the Central Board for what might be a comparative trifling failure in her duty. He agreed with Dr. Woodcock that the representation of the medical profession on the Midwives Board should be so provided that the different districts of the country were represented. The last point with which he would deal was the absolute necessity for direct medical supervision of the midwives locally. Under the Bill the county council would be the local supervising authority, but might delegate its powers to a district council, which again might delegate them to a committee. But there was no provision that there should be a strong medical voice on such local committee, so that the midwives in a district would be under no sort of medical control, for they would not be compelled to send for a medical man. As an example of one of the directions in which control was needed, he observed that in Germany and in Austria the midwives were compelled to carry with them certain instruments, which they were required to submit to inspection. In order to carry out local medical supervision it was considered necessary that there should be either a special medical officer or a committee of, say, three medical men acting under the local supervising authority, and responsible for the proper working of midwives, to whom any laxity on the part of the midwife could be reported by the husband or friends of the lying-in woman, and the matter dealt with quickly, without the necessity of appealing to a central Board in London.

Mr. VICTOR HORSLEY said that as a member of the Committee of the British Medical Association which had drafted the Bill, which would be forwarded to the Solicitor-General, he would touch upon two points. The first was one which he already had had the honour of bringing to the notice of the Solicitor-General when he had addressed him as a member of a deputation from another body. As a consequence of what had then taken place he had already forwarded to the Solicitor-General a copy of the clause of the Bill of the British Medical Association which dealt with the question of character. The members of the Association felt very strongly that no woman should be able to obtain the entry of her name on the Midwives' Roll to be formed under the Bill unless she produced evidence not only of a certain efficiency, but also of good character. The Association did not consider that the Obstetrical Society should find a place in the statute, because it was merely a private society and was not recognised by the medical profession as a proper body to be given statutory authority. Again, the Royal College of Physicians of Ireland, which was also mentioned in the Bill as a body whose certificates were to be recognised by the Midwives Board, has ceased to grant its certificates. The mention of these two bodies was therefore not only undesirable, but inappropriate. With regard to the definition of midwife, he was aware of the difficulty of drafting a satisfactory definition. He gathered that Mr. Heywood Johnstone, the promoter of the Bill, had promulgated what might be called the last definition, in order that the Bill might not interfere with the duties of "monthly nurses;" he thought that Mr. Johnstone had fallen into an error as to the use of the word "attend." Medically it had a fairly specific meaning: it meant that the person who "attended" in illness was taking over the responsibility of the medical care of that illness. This was not what a monthly nurse professed to do. She professed only to wait upon a woman who was attended by a medical man. Mr. Johnstone had thus raised a bogey which could very easily be disposed of, but not in the way proposed by the definition in the Bill. That definition, if it meant anything at all, meant that a midwife was a person capable of practising midwifery, which implied the practice also of medicine and surgery to a certain degree, without any control from a responsible medical practitioner, and without, as a matter of fact, any help from him. The British Medical Association felt further that nowhere in the Bill was there any statutory prohibition of the midwife continuing to take charge of a case after she herself had recognised that a difficulty or danger had arisen. While the Bill was in the Standing Committee it was said that this matter might be provided for by rules made by the Midwives Board. The deputation desired to point out on behalf of the British Medical Association that the rules of the Board might be one thing, but to compel the Board to carry out the rules might be quite another. It was submitted that no Board would care to assume authority not specifically laid down in the statute in a definite way. This was really a very critical point. The General Medical Council had experienced an analogous difficulty in the administration of the Medical Acts. The only punishment which the Midwives Board could inflict would be removal from the Roll; this was a Draconian punishment which the Board would hesitate to enforce. If a midwife accepted responsibility which she ought not to accept she ought to be suspended, and upon a serious question of this kind the Board ought to have behind it a specific provision in the statute as a reason justifying them in taking a step which would hinder a woman in gaining her livelihood. It was with the view of strengthening the hands of the Board that this point was pressed, and it was hoped that it would be adopted in the form indicated in the draft Bill which the Association had constructed.

The SOLICITOR-GENERAL: Gentlemen, I will only express the pleasure I have had in seeing you, and of hearing your views on the very important matters connected with this Bill to which you wish the attention of the Government to be directed. I shall be very glad indeed to have a copy of the Bill, with the amendments which you consider desirable, and I shall be very pleased if that can be accompanied by a memorandum setting out, tersely, the reasons in support of each amendment which the Council would most desire to urge. I can only say that what you have said, and the representations which I will see in writing, will have the full consideration of the Government before they take any action with regard to this Bill.

Dr. FARQUHARSON having thanked the Solicitor-General the deputation withdrew.

THE UTILITY AND THE ETHICS OF EXPERIMENTS ON ANIMALS.

WE have received the following letter from Mr. Stephen Coleridge, Honorary Secretary and Treasurer of the National Antivivisection Society, Victoria Street, S.W.:

SIR,—Your reviewer, being faced with clear evidence from the *Journal of Physiology* that animals are dissected alive under curare alone, is forced either to admit that animals are dreadfully tortured or to assert that to the best of his belief curare is an anæsthetic, and he chooses the latter horn of the dilemma.

My reply is clear. We say that, after all the evidence on the matter was recorded in a Royal Commission, Parliament enacted that curare was not to be considered an anæsthetic (39 and 40 Vict., c. 77, Sec. IV), and that therefore, by the law of England, to dissect a dog alive under curare alone is to torture it. I enclose a copy of my Bill, which if passed would make all torture illegal, and provide proper means to prevent its occurrence in laboratories. Your reviewer seems to endorse Lord Lister's Liverpool statement that torture is unnecessary, and I shall therefore be glad to know upon what ground he and you and some of the medical profession oppose such a measure.

As to Sir J. Burdon Sanderson's words at the Middlesex Hospital, I think it is your reviewer and not I who has endeavoured "to put a gloss upon them." The words as the Professor used them meant exactly what I originally took them to mean; and when your reviewer endeavoured to put a gloss on them, I was quite justified in pointing to this Professor's actual performances to dissipate that gloss; and I may add that as, according to the heading of this controvery, we are discussing the ethics of experiments on animals, it is interesting to observe the silence of your reviewer on the moral aspect of causing dogs to breathe the same air in and out of india-rubber bags until they slowly die of suffocation. To do such things does not strike some of us as very manly, though it may be wonderfully scientific; and it would be refreshing and would allay much of the bitterness of controversy if your reviewer and other humane medical men would candidly condemn such acts.

Let there be no mistake as to what those acts are. I referred your reviewer to the page of Sir J. Burdon Sanderson's book where he would find the horrible torture of dogs by slow suffocation. The passage begins thus:

"Asphyxia by slow suffocation. When an animal is allowed to breathe the same quantity of air repeatedly and continuously out of a bag, the process being of much longer duration" (than in the case of simply plugging up the windpipe previously described) "the phenomena can be studied with greater facility, etc."

I will not quote further, as to copy out the details of such cruelties really makes me sick; yet with this reference before him your reviewer says that he has "never yet seen an animal tortured, nor any evidence of such a thing." He cannot say that this is not torturing dogs; then let us hear whether he will do us the justice to condemn Sir J. Burdon Sanderson for what he has inflicted without pity and recorded without remorse.

We have been frequently told before by vivisectors that they have never seen any cruelties take place in laboratories. This may be true. There are many policemen who have never witnessed the torture of a child, but I do not therefore doubt that children are tortured. Also I may say that, as the annals of our courts show that persons of all classes from the highest to the lowest have been found guilty of torturing children, I see no reasonable ground for supposing that vivisectors, who by profession must necessarily have peculiar opportunities for cruelty, are exempt as a class from an emotion that has dominated a percentage of mankind since the world began.

As to your reviewer's hypothetical case, I really have no desire to evade any legitimate issue. In effect he asks we whether if I had a daughter she would like cheese. I reply that I have no daughter, which is a perfectly justifiable reply. It is not so long ago that I seem to remember hearing of the marvellous efficacy of a germicide spray in assisting the healing of wounds, and I have an impression that its inventor received a splendid reward for his gift to suffering humanity. What has become of that germicide spray? Its sad fate may soon be shared by the serum syringe. In the meanwhile we shall surely be well advised to decline both spray and serum for ourselves and our families. The hypothetical father was right, and that is my answer; what is wrong is the assertion that the child died for lack of a serum syringe, whose value for diphtheria is entirely hypothetical, and whose effects upon the patient in other ways can hardly be claimed to be beneficial.

As Mr. Paget mentions me in his letter to your paper, I must say a word in reply. With his quotations from the *Zoophilist* I have no personal concern. I am not the editor. When a counsel attacks his opponent's attorney it is accepted as an indication that he has no case. Mr. Paget, despairing of finding any inaccuracies in my criticisms of his book, searches the files of the *Zoophilist* for instances of folly or bad style. I certainly decline to follow him by tediously collecting specimens of abuse of antivivisectors from the medical journals. Apparently, when the *Zoophilist* complies with the recommendation of his friend, Dr. Donkin, and fights with the gloves off, Mr. Paget does not like it. Mr. Paget, however, quotes two sentences out of my own review of his book, and apparently suggests that there is something the matter with them. I must ask him to formulate his complaint and I will then reply to it. His alluding to the leaflet, "M. Pasteur's Hecatomb," as "notorious," does not invalidate its statements, nor does the astonishment he affects that I should quote it as evidence of the number of deaths avail him as an argument. I suppose what really has astonished Mr. Paget is the evidence there accumulated of the terrible number of persons who have died of hydrophobia after receiving Pasteur's treatment.

Mr. Paget complains that I quote "the death-rate of diphtheria (1897) without giving the case mortality." Will he kindly inform me upon what page of the Registrar-General's returns I shall find the case mortality?—I am, etc.,

Victoria Street, S.W., April 30th. STEPHEN COLERIDGE.

We have referred Mr. Coleridge's letter to our reviewer, who writes:

The first paragraph in Mr. Coleridge's reply is to be regretted; if he will reperuse my articles I think he will find that I have expressed my opinions freely and candidly throughout, under no pressure whatever; and the expressions to the contrary in this paragraph should be withdrawn. As to the matter of it, if it be assumed for purposes of argument that curare paralyses the animal without depriving it of consciousness (a point on which my testimony is of as little value as that of Mr. Coleridge) I grant at once that its use would be unjustifiable. The second paragraph of Mr. Coleridge, if free from offence, is, as concerns myself, inaccurate; I have never opposed his Bill; such indeed is my ignorance of current politics that I had never heard of it. I am much obliged to him for sending it to me; but as hitherto we have been studying matters of principle I trust I may put it on one side for the present.

In Mr. Coleridge's first reference to Sir John Burdon Sanderson he was understood by myself and others to adduce a certain speech of his to prove, or to indicate, that Sir John countenances, or would countenance, experiments of an improper kind on the patients of a hospital. I was not and am not of opinion that his words indicated such countenance. It is difficult to go farther without thrusting upon Sir John Burdon Sanderson a championship which he has not sought, does not need, and probably does not desire.

Mr. Coleridge proceeds in unqualified language to describe the "horrible torture" of dogs by Sir John Burdon Sanderson who, as it appears, caused them to breathe the same air in and out of bags until they "slowly" died of suffocation; he adds that the reviewer cannot say that this was not torturing dogs. Well, I do not know offhand what I can assert or deny herein; but in order to come to a provisional opinion I must turn for help to Mr. Coleridge's definition of torture as "shocking and horrible agony." Now I suppose that the animals in the bags suffered as Mr. Coleridge and I suffer when in a railway carriage full of passengers who by tenaciously guarding the closed windows "slowly suffocate" us and themselves. The sufferings of these passengers at the end of a long journey are visible enough in languid limbs and livid cheeks; yet anæsthetised in the process they even angrily resent any mitigation of it. Or, if the dogs were not suffocated quite so slowly as this, the process may be likened to that of the dentist who makes us breathe in and out of bags till we are lost to all things. Such an anæsthetic is carbonic acid; the professor's dogs were not garrotted, but, so far as is apparent in the quotation, were carried painlessly into their endless sleep.

Once more Mr. Coleridge has dealt with my hypothetical case, and I have read his words three or four times over, but without enlightenment; they do not seem to be helpful, and they do seem rather flippant. In my original review I set forth this hypothetical case, and stated that I had put it as a test of principle to the authors of a pamphlet which I shortly described as emanating from the Society of Friends. I added that the subscribers to this pamphlet had not answered me, and I did so under the impression that an answer had been evaded by silence. I desire to withdraw this suggestion; the long delay turns out to have been due to ordinary business causes, and a few days ago I received an answer, the chief part of which had been written before the writer had seen my reflection on the delay. Much to my regret I am unable to make any public use of it, for it is an answer which I have read with much sympathy and interest. Thoughtfully and faithfully the writer deals with my test case, and faces the difficulties which it uncovers without reserve; that his conclusions are not, in all respects at any rate, such as I can personally accept is true, but they are nevertheless the opinions of a candid and penetrating mind.

Mr. Coleridge would seem to think that I had invented this case to tease him or entrap him, and that he is justified therefore in evading it. This is far from my purpose. The test case lies near the root of the problems involved in experiments on animals, and, as it will not be necessary for me to return to the matter, I would seriously invite all persons utterly opposed to these experiments to address themselves to the considerations it introduces. If serious persons, such as my correspondent on behalf of the Society of Friends, will join us in defining the grounds on which to join issue, we shall win our way nearer the truth, or the agreement which we both desire. Experiment upon animals brings us face to face with many grave matters of science and of ethics which cannot be unravelled by the brisk interchange of attack and repartee, by tilting at each other with an eye to immediate victory. I admire the dash of the aweless Dr. Donkin, with his sure opinions and invincible pen, and I admire the spirited combat between him and his undaunted opponent; yet when the scrimmage is over and I turn my eyes back to the scene of it, and in my purblind way endeavour, with the aid of Mr. Coleridge, to find again the tracks of the light foot of Nature which unhappily to me are at all times very hard to find, and very uncertain when found, I discover with dismay that they are all trampled out in the fray, and the search must begin over again. Baffled but not disheartened, we try once more to set out some bearings for our guidance; otherwise, like wandering beggars who, having no home, can never be said to be on their way, we may fare far and be no nearer where we would be. Let us thus set out some such lines as these:

1. By one method only have the foundations of any science been laid and its structure carried upward; namely, by the experimental method.

2. The experimental method consists in verification, and the more complex the phenomena the more the need of verification, that is, of experiment; experiment, therefore, if useful in physics and chemistry is still indispensable in biology.

3. By a knowledge of the laws of life—by the study of biology in a word—and by this knowledge only, can we hope to manage living function and to prevent disease, whether in individuals or communities.

4. As a matter of history, during the interval between Galen and Harvey, when verification was neglected, medicine fell into utter degradation, and instead of a solace became a curse to mankind.

In the seventeenth century the experimental method was applied to physiology and with brilliant success; it will not be asserted by the hardiest sceptic that the achievements of the last two hundred years in this science are but moonshine.

Now let us look again where we are: The next step seems to be to prove that this brilliant illumination of the laws of living function has, as applied science, been prolific in the protection and increase of public health, and in remedies for bodily suffering, whether of man or animal; but before taking this pains the previous question is raised, and properly raised—nay, I will go so far as to say that it is an honour to our country that it has been raised—namely, Are we justified on ethical grounds in pursuing this method, fraught with whatsoever rewards? Until this point is settled, all argument as to the successes of practice is premature, if not irrelevant. This is the meaning of my test case; granting the remedy, granting the protection, are we morally justified in the pursuit? If we are not, the advantages, small or great, must be forgone. Now, I think that Mr. Joseph Fry and his co-signatories answer this question in the affirmative, if I may judge from the private letter I have received from one of them, anxiously as they have weighed the gravity of the issue. Whether Mr. Coleridge has categorically made the same statement or would make it, I cannot say, as he declines to reply to my test of his opinion; probably he shrinks from so grave a decision. Inferentially, he seems to admit that experiment on living animals is justified, as he argues that the rewards are, as yet at any rate, disappointing. With him then the propriety of such experiment would seem to be a matter of how much can be got out of it for the use of man; that if this advantage prove after all to be considerable, the method must go on, the animals so used being preserved as far as may be from possible abuses in the laboratory. If this be not his opinion, why bewilder himself and his lay readers with arguments on pathological appreciations which, extremely complex and deceptive even to professors of the subject, cannot be dealt with by the inexpert, even tentatively, without instant confusion; as witness the crude example of the suffocated dogs?

If it be said that physiologists are likely on their side to exaggerate the value of their own discoveries, the physicians who use their results, not being physiologists, being, indeed, like all English practical men, even too mistrustful of science, will, we may be sure, take down the conceit of extravagant professors. Yet who, taking a broad view of the advance of our knowledge of the laws of life, can be so profoundly faithless as to anticipate no advantage from it in dealing with the perturbations of life? Sir John Burdon Sanderson was pioneer of those who have revealed the intimate nature of tuberculosis in man and animals. Upon experiment on animals the discovery of the intimate nature of cancer is now depending, and may soon by it be brought to light; and so forth concerning a score of diseases, plagues of man and animal alike: the vast uses of such knowledge leap instantly to light: if not in cure in prevention, which is far more than cure. Now is the ethical sanction such as to forbid us to experiment on animals, however considerately, or, born, as are we all, man and animal alike, in a world of pain and death, shall we by some sacrifice make the inevitable toll to fall as lightly as possible?

One more reflection I must make and I have done; but in making it I wish to disavow any thought of Mr. Coleridge: is there not in the untempered and rather fantastic language used about physiologists to be detected some of the grudge which Englishmen, alone in the civilised world, cherish against all science and the professors of it? Not only is the ordinary Englishman (I purposely exclude the Scotchman and the Irishman) averse from science, but he "bites his thumb" at it; he mislikes it sullenly with the moroseness of the undisciplined classes for the civil order. This is, indeed, strange in a nation which can show so great a roll as hers of philosophers and men of science from the time of Alfred to the present day. This wilfulness of the untrained intelligence, contrary as it is to the spirit of France, Germany, or the United States, is probably due to the scantiness of university training in England. Until our own day Oxford and Cambridge not only stood alone, but even they took no pains to reach the middle classes. A better state of things is arising, has arisen, and this jealousy of science will be mitigated; there will be, I trust, no less difference among men, but their arguments will be more urbane, and what is better, more to the points. As regards Mr. Coleridge let me repeat, lest I be misunderstood, that I have to thank him for the courtesy with which he has treated my opinions, but that I do not propose to continue this correspondence.

THE REVIEWER.

TUBERCULOSIS IN GREECE.—According to the bills of mortality published every month under the auspices of the Greek Ministry of the Interior, the disease which claims the largest number of victims in the towns of that country is tuberculosis. Of 261 deaths recorded in Athens in December, 1899, 33 were due to tuberculosis. Another noteworthy point in the mortality of Greek towns of more than 10 000 inhabitants is the great disproportion between the number of male and that of female deaths. Thus, at Athens, of the 261 deaths in the month referred to, only 94 were those of women; of 71 persons who died at Corfu, 31 were women; of 41 at Syria, 25 were men; of 36 at Pyrgos, 21 were men. In only one town—namely, Larissa, did the number of women who died exceed that of the men; there out of a total of 43 deaths 24 were of women.

BEQUEST.—Mrs. Isabella Lewis, of East Farleigh, Kent, who died on January 4th last, has devised real estate in trust to University College Hospital and to the London Fever Hospital. She has also bequeathed £10,000 in trust for the London Hospital and for St. Mary's Hospital, Paddington, subject to the payment of its interest to her survivors. The ultimate residue of her estate is left to the latter hospitals. The estate has been valued at £178,325 gross.

THE WAR IN SOUTH AFRICA.

THE WOUNDED FROM THE ACTIONS BETWEEN MODDER AND DRIEFONTEIN.

By W. WATSON CHEYNE, F.R.S., F.R.C.S.,
Consulting Surgeon with the Field Forces, South Africa.

Bloemfontein, April, 1900.

IT may be of interest if I make a few remarks as to the wounds met with during the march from Modder to Bloemfontein. I can only speak of them in their early stages; as yet I have no means of knowing what happened to them after the men were sent to the base.

PROGRESS OF THE WOUNDS.

From what is said in my description of the march from Modder to Bloemfontein, it will have been clear that anything like thorough asepsis on the field, or even in the field hospitals, was a matter of the greatest difficulty; and yet it is a fact that the great majority of the wounds healed without any trouble. This is no doubt due to the very small size of the wounds made by the Mauser bullet; to the fact that it splits the khaki, and very seldom takes in pieces of clothing; to the small amount of oozing from the wounds; and, lastly, to the dryness of the air leading to rapid evaporation and formation of a scab over the surface, under which healing rapidly occurs. In fact, the cases which have done best are those in which the patients have been wounded in the early part of the day and have lain out for some hours in the sun. The asepsis of the interior of the wounds depends in these cases on the external crust; so long as that is undisturbed the wounds for the most part do well. It is doubtful, however, whether this would be the case in a moister climate. It was found, moreover, quite early in the campaign that it was a mistake to apply the piece of mackintosh which is in the field dressings, because the wounds became septic, and orders have been issued to discontinue its use.

On the other hand, as would naturally be expected where the skin wounds are large, whether caused by expanding bullets or by fragments of bone being driven outwards, an aseptic result is by no means always obtained. But from the report of the engagements on the western frontier, it appears that a considerable proportion even of these wounds scabbed over and healed without any trouble. The experience of such wounds on this march, however, has not been so good; at any rate, almost all those which I have seen two or three days after infliction have been septic, and more especially the compound fractures. Indeed, all the compound fractures with large wounds have become septic, the degree of virulence varying of course in different instances. In several cases amputation was necessary—in one instance for acute spreading gangrene. One or two of the amputation cases have died, while some will no doubt do well.

WOUNDS PRODUCED BY EXPANDING BULLETS.

The proportion of large flesh wounds was also, I understand, greater in this march than in previous ones—perhaps owing to the more frequent use of expanding bullets by the Boers. There seems to be little doubt that expanding bullets of various types are now being largely used by them, for, apart from the increased proportion of large wounds, numbers of these bullets have been found in the bandoliers and wallets and in the captured camps. In the fight at Karee Siding on March 30th a good many men were wounded at long range, and in several cases the bullets had not come out. Three of these bullets which I saw extracted were of the expanding variety; one was soft-nosed, one a Jeffreys sporting bullet, and one an ordinary Mauser with the end filed off.

DRY DRESSINGS.

To get a dry crust on such wounds is not easy in any case, and about Paardeberg especially there was so much extraneous septicity from dead horses, etc., and the water was so foul, that the septicity of the wounds, where trust was almost entirely placed in the drying of the discharge on the surface, is not to be wondered at. With the view of trying to get a better crust I provided two of the bearer companies with pepper-boxes containing various antiseptic powders with which to dust the wounds before applying the field dressings. The powders used were the double cyanide of zinc and mercury and chinosol mixed with kaolin in various proportions. Owing to the distribution of the force I have not yet been able to ascertain whether they were used in the subsequent battles, and, if so, with what result. It seems, however, that better results might be obtained if, at the dressing station or on the field, the wounds were thickly dusted with such a powder before applying the first field dressings; and, where the skin wound was large, if the dressings were removed and the wound thoroughly purified in the usual manner, followed by the application of a fresh cyanide dressing.

REMARKABLE CASES.

So many cases have been published already illustrating the remarkable course which modern bullets pursue without injuring structures which apparently could not escape, that it would be tedious were I to add to their number. I can only explain them by supposing that a wave precedes the point of the bullet in the soft fat, which drives the harder structures to each side, and thus permits the passage of the small bullet.

Injuries of the Skull.

The experience of bullet wounds through the skull seems to show that a good rule to follow is to trephine immediately over the aperture of entrance, however trivial the injury apparently is. On opening up such a wound, portions of the external table are found adhering to the periosteum, or even driven along the track; the skull is perforated, and the inner table is broken into fragments, which are driven into the brain sometimes for a very considerable distance. Where the entrance and exit wounds are near each other, even where the bullet has traversed brain substance between the two openings, I have found in several cases that the skull in about an inch in breadth between the two openings has been broken into small fragments. In many of the cases the symptoms at first are quite slight, until later convulsive attacks supervene, or until, in the case of old septic wounds, symptoms of intracranial suppuration have appeared.

Of 12 cases which I saw at Paardeberg and Poplar Grove some time after the wound, 3 were not trephined; 1 of these died, while 2 were sent back to the base two or three days after the injury, and I do not know with what result. Nine were trephined from two to eight days after the injury, either because they continued unconscious, or more often because suppuration was occurring. One of these was sent to the base on the afternoon of the operation, and the result is unknown. Four died, as was expected, from the injuries to the brain being so extensive; 3 improved very much, 1 being sent to the Boer ambulance, and the other 2 to the base. The last one, who was trephined ten days after the injury on account of suppuration, improved very much during the two following days, and was then sent away, but after a few hours in a buck waggon became worse, and died on the road.

ABDOMINAL CASES.

The remarkable results which have followed penetrating abdominal bullet wounds, where no operative interference has been attempted, have been repeatedly referred to in your pages. When at Capetown I was shown a number of cases in which bullets had traversed the abdomen, and healing had taken place without any trouble. As far as I could gather, only about 20 per cent. of the abdominal cases had died.

In what proportion of the cases, however, perforation of the intestine had occurred it is extremely difficult to judge. From the position of the wounds, from the occurrence of blood in the fæces, vomiting of blood, formation of local peritoneal abscesses during healing, etc., there seems to be no reasonable doubt that in a considerable number of the cases the intestine must have been perforated; I cannot, however, but think that in many it has escaped. When we remember the remarkable way in which other less slippery structures, such as those about the root of the neck, escape, I do not see why the same should not occur in abdominal wounds.

However that may be, the fact that a considerable number of perforating abdominal wounds recover without operation renders very difficult the question of the best treatment of such cases. The difficulty is still further increased by the fact that under the conditions for operation in the field lapar-

otomy is by no means the safe operation that it is in a London hospital. Further, some hours must in any case have elapsed, and the patient been a good deal disturbed before reaching the field hospital. It may be added that the cases in which from the symptoms there can be no doubt that the intestine has been injured, the patients are usually in a very collapsed state by the time they reach the field hospital, and not at all in a condition suitable for operation. From these various considerations I determined that in the first instance, and until I had learned from my own experience what the results in these cases were, I would not operate unless in exceptional instances; hence, up to the present time, I have only opened the abdomen twice for perforating wounds. I regret to say, however, that the results in the cases I have seen have not been nearly so good as I had been led to expect, and I am inclined to think that were the conditions for operation more favourable one might with advantage interfere in a certain number of cases.

In transverse abdominal wounds it is doubtful whether any good result would follow operative interference, because if the intestine is wounded at all it is probably perforated in many places. But in antero-posterior wounds, well to one side, where there is probably only a single injury, and more especially where it is probable that the ascending or descending colon is injured, I think that one might in some cases intervene with advantage. At any rate I intend to keep this point in mind in the future. Perhaps I can best illustrate the results following these injuries by giving my experience of the fight at Karee Siding the other day, where I was able to get notes of all the cases of abdominal injury.

On March 30th I received a telegram from Colonel Gormley, R.A.M.C., P.M.O. of the Seventh Division, saying that a fight had occurred at Karee Siding, about twenty-one miles north of Bloemfontein, on the previous afternoon; that there were a considerable number of serious cases, and asking me to come out as soon as possible. This I did partly by rail to Glen, and thence by horse to Karee, arriving there about 1 P.M. During the afternoon I went over the cases. The number of the wounded was 154, and in 15 it was considered that the abdominal cavity had been penetrated. Of these patients 5 had already died within twenty-four to twenty-eight hours after the injury, and I saw 10 who were still alive. Of these 9 were left alone, and 4 died within the next twenty-four or thirty-six hours; five were still alive when I left Karee on Sunday afternoon, April 1st. On one I operated, but he died on April 2nd.

At Paardeberg and Driefontein I saw 12 cases; of these, 11 were left alone, with 7 deaths, and 4 recovered to a sufficient extent to enable them to be sent to the base; the 1 operated on died. The total result of the 25 cases not operated on is that 16 died and 9 were apparently recovering, but whether they ultimately recovered or not I cannot say. Of course it is only the cases which are recovering which reach the stationary or base hospitals, and this may explain the discrepancy between my results and those formerly published. No doubt many cases recover which one would not have thought could possibly get well, but the above results show that abdominal bullet wounds are still very grave injuries, and must be treated accordingly. I may add that among my cases, which are improving, there are several in which the probabilities are that no abdominal viscus was injured. I should say also that I have been shown some 5 or 6 other cases which may have recovered, but as I did not see them again, and as I could not ascertain the number of cases injured at the same time with their results, they are valueless in enabling one to form conclusions, and their inclusion would only be misleading. The Karee statistics are really the only complete ones which I have as yet been able to obtain. The following are the notes of the cases above alluded to.

Besides the 5 cases of abdominal wounds which had already died, and of which I could get no complete details, the following 10 are cases which I saw from twenty-four to thirty hours after they were shot:

CASES FROM THE ACTION AT KAREE.

CASE I.—The point of entrance was 2 inches to the right of the umbilicus, and the bullet was found lying under the skin far back in the left loin. The patient was pulseless, and there was much rigidity of the abdomen, tenderness, and vomiting. He died a few hours later.

CASE II.—The bullet, coming from the side, had entered the abdomen 4 inches below and behind the right nipple. There was no exit wound. The patient had been vomiting a good deal, but not any blood; the abdomen was very rigid and tender. He was obviously very ill, and died the next morning. The bullet had probably perforated the liver and stomach.

CASE III.—There was a large wound above the right anterior iliac spine (probably the point of exit), and a small opening behind and near the spine on the same side. There was great tenderness and rigidity of the abdomen. He died a few hours later.

CASE IV.—In this case there was a transverse wound of the abdomen, the bullet having entered on the right side in the middle of the lumbar region and passed out on the left side, rather higher up and further back. All the symptoms of acute peritonitis were present. The patient died the next morning.

CASE V.—The bullet had entered the anterior end of the sixth intercostal space on the left side, and was found lying under the skin over the seventh intercostal space on the right side and about 2 inches further back. He had vomited blood on the previous day. The bullet may have perforated the stomach. The epigastrium was somewhat tender, but there were no marked symptoms. On April 1st he was going on well.

CASE VI.—The place of entrance of the bullet was 1 inch in front of the right anterior superior spine, and of exit behind the left sacro-iliac synchondrosis. There was much hæmorrhage at the time. His condition when I saw him was fair, and there was no marked abdominal tenderness. On April 1st his morning temperature was 101°. There were no signs of general peritonitis, and his condition was good.

CASE VII.—The bullet had entered from behind, about the tip of the twelfth rib on the left side, and had left about the middle of the epigastrium, and rather to the left of the middle line. Vomiting was still going on, but not of blood. There was much tenderness and rigidity of the abdomen, and he was almost pulseless. On April first his general condition was better, but the abdomen was very rigid and tender.

CASE VIII.—The point of entrance of the bullet was about 2 inches from the anterior end of the seventh left intercostal space, and of exit rather lower down and further back on the right side. The patient said that he had vomited brown fluid after the injury. There was much abdominal pain, but his general condition was fair. On April 1st there was still much pain, but his general condition was good.

CASE IX.—The bullet had entered about ½ inch in front of the anterior inferior spine on the right side, had gone directly backwards, and had come out in the buttock. The patient, however, suffered very little. On March 31st there was slight tympanites and tenderness in the right iliac fossa. The bowels acted well, and no blood was passed. On April 1st he was very well, and it was considered very doubtful if any viscus was wounded.

CASE X.—The point of entrance was in the middle of the right buttock, a little above the level of the trochanter; the exit was through the anterior abdominal wall in the right semilunar line at the level of the umbilicus. The patient was decidedly ill; the abdomen was a good deal distended, and pressure on it caused an escape of gas through the anterior opening. There was a good deal of abdominal tenderness and rigidity. I opened the abdomen outside the right linea semilunaris, and found a perforation in the anterior wall of the ascending colon, without any adhesions around, which was easily stitched up. The posterior opening was found about 2 inches lower down, with a piece of omentum firmly adherent to it and completely closing it. As the patient was in a bad state, I thought it better, instead of excising the piece of intestine beyond the holes or tearing off the omentum, to leave the wounds alone, merely cleaning out the peritoneal cavity as well as I could and arranging for free drainage. He rallied from the operation very well, and for twenty-four hours it looked as if he might get better; but he gradually got worse and died on April 2nd.

CASES FROM THE ACTIONS AT PAARDEBERG AND DRIEFONTEIN.

CASE XI.—This man was shot on February 18th, and was seen by me on February 23rd. The bullet entered in the middle line, in front, about 2 inches above the pubes, and passed out through the middle of the left buttock, about 2 inches above the trochanter. The patient was in a very bad way, very restless, and losing flesh; his temperature was 101°, and there was much tenderness about the pelvis and buttock. Urine was running from the posterior wound, but the bladder held about 8 ounces. The wound in the buttock was enlarged and drained; but he gradually became worse and died on February 27th.

CASE XII.—This was a Boer, who was shot on February 24th transversely through the abdomen, just above the anterior superior spine. He was extremely collapsed; blood and fæces were coming out of the aperture on the left side. He was too far gone for any operation, but the opening was enlarged so as to allow free escape of fæces. He died the same evening.

CASE XIII.—This patient was wounded on February 18th. The bullet entered behind in the right lumbar region, and came out in front close to the right side of the umbilicus. For two days he had severe peritoneal symptoms, vomiting, etc. These gradually improved, and on February 24th he was much better, and it seemed as if he would recover. While using the bedpan on that day, however, he strained a good deal, and suddenly became collapsed. He complained of violent pain in the abdomen, and died in twenty minutes.

CASE XIV.—This patient was wounded on February 23rd and was seen February 24th. The bullet entered in the right lumbar region, just below the last rib, and came out near the middle line on the left side, about the level of the anterior superior spine. He was very collapsed when admitted. On the 24th there was abdominal pain and tenderness, rigidity, and vomiting. His pulse was 136 and his temperature 100.6°. His condition remained very much the same for two days, and then, on February 26th, fæces began to come through the posterior wound. After that he gradually became worse, and died on March 1st.

CASE XV.—This man was wounded on February 18th and seen on February 24th. The bullet entered at the upper part of the right buttock, about the middle, and came out about 2 inches to the left of the middle line, 1 inch below the level of the umbilicus. There was much vomiting at first. When seen there was still much tenderness of the abdomen, especially about the umbilicus, and the abdomen was rigid, but he was said to be better than he had been. He was passing natural motions. He, however, gradually went down hill, and died February 22nd.

Case xvi.—The patient was wounded on March 8th, and seen on March 9th. The bullet entered a little to the left of the umbilicus, and went almost directly backwards, and slightly downwards, and came out in the upper part of the buttock. When seen on the 9th there was general peritonitis, and fæces were coming out of the posterior wound. He was taken to Driefontein in an ambulance waggon on the next day; he became much worse during the journey, and died on his arrival there.

Case xvii was wounded on March 10th. The bullet entered the ninth interspace on the right side, about 3 inches in front of the mid-axillary line, and came out close to the spine behind, at a little lower level. The patient was very well when first seen, and continued so for some hours later, except that he complained of numbness in his right leg. However, after moving from the field hospital at Driefontein to a farmhouse, he became very ill with uncontrollable vomiting and abdominal pain, and died about thirty hours after the wound.

Case xviii.—This man was wounded on February 22nd, and seen on February 23rd. The bullet had entered behind at the middle of the lower part of the sacrum, and come out in the middle line in front just above the pubes. The urine was clear when drawn off some hours afterwards. He had a good deal of pain about the abdomen and pelvis, with vomiting and rigidity. On the day after I saw him the sickness was less, and the temperature was just under 100°. There had been a good deal of diarrhœa, with some blood in the motions. On the 26th urine began to come through the anterior wound, and a catheter was tied in; otherwise the patient's condition had improved. He was sent to the base on March 1st, steadily improving.

Case xix was similar to Case xi. Urine was coming through the posterior wound when I saw him, and there was a good deal of swelling in the buttock. A catheter was tied into the bladder, and the sinus in the buttock well opened up and drained. He was sent to the base on February 26th.

Case xx.—This man was wounded on February 18th, and seen on February 24th. The bullet had entered in the interval between the eighth and ninth ribs in front on the left side. There was no exit wound. On the 24th there was marked rigidity of the abdomen, with pain and tenderness, and still occasional vomiting. The bowels had not yet acted. An enema was given with good results. On the 27th the patient was rather better, but there was still a good deal of rigidity. He was sent to the base on February 28th.

Case xxi.—The patient was wounded on February 18th, and seen on February 24th. The bullet had entered the tenth interspace on the right side, rather in front of the midaxillary line, and had come out through the ninth left interspace about the same level. There was a good deal of pain about the upper part of the abdomen, lasting for about three days, and also vomiting, but no blood in the vomit. After that the patient gradually improved. On the 24th the abdomen was quite soft and flat, and he was doing well. He was sent to the base on March 26th. It is probable that the liver alone was wounded.

Case xxii was wounded on March 9th, and was seen about eight hours afterwards. The bullet had entered about three inches to the right of the umbilicus, gone backwards and somewhat inwards, and had emerged at the edge of the lumbar muscles. The aperture of the exit was large, readily admitted a finger, and fæces and offensive bloody discharge were coming from it. The patient was much collapsed. I opened the abdomen over the ascending colon, and at once came on the bullet wound close to the mesenteric attachment. On turning over bowel it was found that the posterior opening was to the inside of the reflection of the peritoneum, and did not communicate with that cavity. The operation was done in the middle of the night, with almost no light, and as the patient was almost pulseless I contented myself with closing the anterior opening, cleansing out the peritoneum in the vicinity, and putting a large tube through the posterior opening into the bowel, so as to establish a fæcal fistula. The patient died of acute sepsis two days later.

Case xxiii.—I may add one very interesting case which I saw two days ago. A man was wounded in the fight at the waterworks on April 1st, three days before I saw him. A spent bullet struck the abdomen just to the right of the umbilicus, but did not penetrate the skin. He became much collapsed, and when I saw him he was in the last stage of suppurative peritonitis. He died a few hours later. On *post mortem* examination rents were found in two adjacent coils of the small intestine. In one it was about an inch in length, clean cut, and went transversely through all the coats. In the other it was as if a knife had been drawn obliquely across a wrinkled intestine, so that at three places in its course it divided the serous coat alone, while at one end all the coats were penetrated. Where the bullet struck the skin there was a small slough, still firmly adherent, and underneath it a cavity containing pus, gas, and sloughing tissue, which communicated with the peritoneal cavity by a minute opening.

THE IMPERIAL YEOMANRY HOSPITAL.

As our readers have already learnt from the letter from Mr. Alfred Fripp, M.S., F.R.C.S., Chief Surgeon, published in the British Medical Journal of March 31st, 1900, p. 777, the Imperial Yeomanry Hospital was ordered to be established at Deelfontein on the railway 27 miles south of De Aar, and 474 from Capetown. Some of the initial difficulties encountered in getting the hospital into working order while a single line of railway, already crowded, was the only means of getting up, not merely supplies, but the hospital tents and huts themselves are described in the following letter (delayed in transmission) which we have received from Mr. F. Newland Pedley, F.R.C.S., Dental Surgeon to the hospital:

Early Difficulties.

"We were originally intended to be a base hospital near Capetown, but when we arrived the whole aspect of the war had changed; General Roberts had commenced his victorious invasion of the Free State, and we were wanted near De Aar Junction. So in two days we had left Capetown, and after about forty hours spent on a train we were safely landed at Deelfontein, which consisted of a small railway station and one diminutive general store. It is situated on a sandy plateau 4,000 feet above sea level. On the south side of the railway the ground is flat for miles, whilst on the north side there is a row of kopjes not more than 600 feet high. The site of the hospital is at the base of the kopje. The neighbourhood boasts a few scattered Dutch farms.

"In imagination we found at Deelfontein a hospital complete in every detail and ready for the reception of patients; but as a fact there were only a few tents, a half-built store house, a pile of crates, and our personal luggage: everything else was in Capetown. We soon saw that it would require weeks of incessant labour before we could get the hospital into first-rate working order. In vain did we bombard Capetown with telegrams asking for our stores and material to be sent on immediately. We were compelled to recognise the fact that the railway is only a single line and that an immense army in the Free State has to be supplied with food, stores, and ammunition. We see a daily procession of trains going to the front crowded with men and horses, and at short intervals long luggage trains go panting along under the heaviest load they can carry. Goods and material arrived daily, but not always in the right order. Of all things we were anxious to erect hospital wards for the reception of patients whom the authorities were pressing us to receive, but whilst we had a quantity of sides and roofs for the wards, the parts that represented the foundation were missing for two or three days and work was stopped.

"One week after our arrival orders came that we were to receive 200 patients who would arrive in two days from the receipt of the wire. This demanded redoubled exertion on our part, and Colonel Sloggett decided to remove all his men and the whole of the medical staff to the opposite side of the railway in order to utilise some of the existing accommodation for the reception of patients. The medical staff and the dressers had to work all day long assisting to remove their tents and belongings from the old camp to the opposite side of the line. The tents had to be carried, and although a fatigue party from an adjoining military picket was kindly sent to assist us, we all had a very hot, thirsty, sandy day's work, and the medical staff could easily have been mistaken for a gang of amateur navvies.

"But if life was not quite happy for us what shall we say about Colonel Sloggett, the Commandant? Every detail connected with the installation of the hospital and the feeding commissariat has to be organised and personally superintendent by him, and the task of getting us ready in time requires a man with the strength of an ox, the patience of Job, and a flow of persuasive language. Fortunately for us, Colonel Sloggett possesses all these qualities. His wonderful organising power, his untiring energy, and his marvellous tact in dealing with his men, black and white, strike everyone with admiration.

The Site of the Hospital.

"The site chosen for the hospital is particularly salubrious. The sun during the day is excessively hot, but there is generally a cool breeze, and the evenings are delightful. The sand, which rises in clouds whenever the wind blows, has given many of us a kind of sore throat which we call 'sand throat.' We have scarcely half a dozen trees in sight. The surface of the ground is covered in patches with a low growth of prickly scrub called karroo bush, which is not free from snakes. I have seen several, and we never miss a chance of killing them, for the blacks say they are poisonous."

When all the difficulties of transport had been overcome, the wards, consisting of huts and tents, were arranged in three divisions, two surgical, in charge of Mr. Fripp and Mr. Raymond Johnson respectively, and one medical, under the charge of Dr. Washbourn. Three medical officers were associated with each surgeon and five with the physician, and five dressers were attached to each surgical division. The full complement of beds in each division was three times 58 beds (174). To each 58 beds two day sisters and one night sister were allotted; thus there were eighteen sisters on day duty and nine on night. This left six extra sisters on day, and

three on night duty to be told off by the Superintendent to whichever wards were temporarily overworked. Miss Fisher, the superintendent, Miss Brereton, the operating theatre sister, and Miss Stevenson, the night sister, completed the total of thirty-nine nursing sisters.

PLAN OF THE HOSPITAL.

In the middle of the hospital was a cross shaped building. The two operating theatres, one of which was devoted except in times of stress, to the dental surgeon, form the crosspiece. The short head limb of the cross, separated by a roofed-in lobby from the operating theatres, was occupied by Miss Brereton, who had charge of all surgical instruments and dressings. The long limb of the cross, similarly separated from the operating theatres by a lobby, was occupied as to the end nearest the operating theatre by the *x*-ray department, and as to the foot of the cross by the dispensary. The *x* ray room opened by a 4 foot doorway into each operating theatre, and another 4-foot doorway in the opposite side of each operating theatre rendered it very easy for the patients to be carried on a stretcher, or even in a bed, from the wards into the theatre or into the *x* ray room for photographic purposes. The photographic dark room was placed in the farthermost corner of the dispensary, so that the plates there stored should not be spoilt by the proximity of the *x*-ray apparatus, which has been of great service to us in the diagnosis and treatment of several cases.

The land occupied by the hospital was a narrow strip about 100 yards wide between the railway line and a long kopje The nurses' quarters were at one end of the hospital grounds, and the officers' mess and commandants' office at the other end, close to the railway station. Water was laid down throughout the grounds and fed from the tank at the railway station. There were four kitchens—one for the officers' mess, one for the hospital, one for the nurses and maids, and one for the orderlies. The hospital huts are substantial, rainproof, and comfortable. The tortoise tents with eight to eleven beds, and the bell tents four beds each, were also completely successful; but the hospital marquees of the old type were found quite useless for sleeping purposes, and were all used for mess rooms, offices, recreation rooms, and so on.

THE SURGICAL DIVISION.

Mr. Pedley, in the letter from which we have already quoted, gives the following account of the early working of the hospital:

"Associated with Mr. Fripp and working under him are Messrs. William Turner, A. P. Parker, and H. W. Bruce. In Mr. Fripp's division there are some interesting cases, most of them were wounded in the fight at Paardeberg.

The first was a man who was a good example of a not infrequent injury in which a bullet had passed through one lung, and, as not uncommonly occurs, had only produced slight hæmoptysis. In a second case a bullet had entered through the skin 2 inches above and to the left of the right nipple, emerging 2 inches below and to the right of it. Apparently the track was subcutaneous and had not damaged the ribs, yet there had been considerable hæmoptysis.

Gunshot injury to nerve trunks have been of very frequent occurrence during the war, and immediate symptoms would often seem to indicate much more complete destruction of the nerve trunk than is consistent with the rapid improvement that has frequently ensued. We have several cases which illustrate the difficulty of arriving at an exact diagnosis of the amount of injury actually sustained by the nerve trunk.

One case has a severe shell wound in the middle of the most bulky part of the supinator longus of the right forearm. The posterior interosseous nerve was involved, the muscles supplied by it being almost completely paralysed, but in no individual muscle was the paralysis quite complete. The radial nerve also had been damaged, but only a small part of the cutaneous area supplied by it is anæsthetic.

Another case appears to present all the symptoms of a complete division of the median nerve by a shell wound in the middle of the arm, and the ulnar nerve had been damaged, though probably not quite divided.

"There are 3 or 4 curious cases of bullets tracking for a long distance only just beneath the skin.

In one case the bullet entered just over the lower angle of the scapula and emerged in the middle line just over the first sacral spine. In another the entrance wound was situated opposite the middle of the anterior border of the sterno-mastoid muscle, and the exit wound was about 1 inch to the right side of the second dorsal spine, both on the right side. The only signs that remained to indicate the injury inflicted by this long subcutaneous wound were loss of power and bulk of the rhomboids and the upper part of the trapezius muscles.

Akin to these long subcutaneous tracks there was one case in which a bullet entered the left heel on the plantar aspect and emerged just behind the inner malleolus by such an oblique aperture that it grazed no fewer than 5 inches of the skin on the inner side of the leg before it again penetrated the soft parts from just above the knee to the middle of the thigh on the antero-internal surface.

Another case in which one could not help noticing the good luck of the patient was that of a Highlander who, while on the "double," was shot through both thighs about 5 inches above the knee, the bullet passing in front of the left femur and behind the right femur without touching bone in either case.

"Wounds of the foot seem somewhat disproportionately frequent, the account given by the patient commonly being that they were sitting behind a boulder which was not big enough to provide sufficient cover for their feet without pulling up and exposing their knees. There are four perforating wounds through the metatarsal and metacarpal bones, and in every case there is a great deal of splintering of those bones; enough, indeed, to suggest that there is some particular liability to splintering in these small long bones.

"There is, as usual, in this war a proportion of marvellous cases of penetrating wounds.

In one, for instance, the bullet passed from behind upwards, inwards, and forwards through the ilium, about 1 inch below the centre of its crest, and emerged just to the right of the umbilicus. For the week before he reached the hospital he suffered from constipation and acute abdominal pain. He then suffered for a week from diarrhœa but never passed any blood, and now, with the exception of two scars, there is no sign or symptom of his having been wounded.

THE MEDICAL DIVISION.

"In Dr. Washbourn's section there are numerous cases of dysentery and diarrhœa, several cases of typhoid, many patients with muscular rheumatism, and one or two with cardiac trouble, but nothing of really exceptional interest."

Mr. Fripp adds, in a letter dated Deelfontein, April 15th, that the division was then beginning to receive some cases of pneumonia. Fortunately the hospital had a supply of compressed oxygen, which has already been found useful.

SURGICAL CASES.

Mr. Fripp, in the same letter, states that a considerable number of cases of simple fracture of long bones, due generally to horse accidents, have been received.

He sends also notes of the following interesting cases:

CASE I. *Complicated Bullet Wound of Neck, Face and involving the Sympathetic and the Brachial Plexus.*—A private was wounded by a bullet which entered half an inch outside the angle of the mouth on the right side, and emerged on the same side opposite the seventh cervical spine, 2 inches outside the middle line behind. On its way it (1) smashed the alveolar process and the outer plate of the body of the mandible, and we had to remove three teeth and many fragments which together formed a pit in the cheek, causing an abscess there. The rest of the body was not broken. (2) It divided the cervical sympathetic cord, producing a diminished palpebral aperture retracted globe, and small pupil which does not dilate in the shade; no vessel is damaged apparently. (3) It has damaged the brachial plexus sufficiently to give extreme hyperæsthesia of the entire upper extremity below the area supplied by the circumflex nerve, which is normal, and complete paralysis of almost all the muscles of the limb up to and including the deltoid. But cases of apparently total division of nerve trunks often show a wonderful amount of recovery, as if the symptoms of total division could be produced by extravasation of neuritis or even mere concussion of nerve trunks. This patient had two other bullet grazes, one transversely across the bridge of the nose (a mere graze), yet causing much splintering of nasal bones; and the second an inch and a half long in a vertical direction over the right frontal eminence, without any damage to bone.

CASE II. *Recovery after Eight Wounds.*—An officer received eight wounds in half an hour at the Bloemfontein waterworks: (1) A bullet passed through his right loin just external to the kidney; (2) another went through the soft part of the right thigh; (3) a piece of shell knocked two pieces out of his scrotum and one out of each thigh just below the scrotum. The bullet wounds healed immediately, and the four shell wounds are now granulating up, and in a fortnight he will be every bit as good a man as he was when he sailed from England.

CASE III. *Bullet Wounds of Pelvis and Groin: Recovery.*—A private had a bullet enter just above Poupart's ligature of the right thigh, exactly halfway between the anterior superior spine and the symphysis pubis. There is no sign of damage to the external iliac artery nor to any other important structure. No exit wound can be found, and the *x* rays do not detect any lodged bullet. The same man received another bullet on the inner surface of the thigh, 2 inches below the cruro-scrotal fold. When admitted there was a superficial abscess on the other thigh, exactly corresponding to the position of the entrance hole. This was incised, the bullet found loose and removed, and the finger could then be passed along the track the bullet (a Martini-Henry) had made from the abscess cavity up to the body of the pubes, across the front of the symphysis behind the penis, and down the other thigh to the wound of entrance.

In another letter Mr. Fripp states that everything in connection with the hospital was working well, and that the huts were most comfortable, and in every way a great success. Two hospital trains (Nos. 2 and 3) were working on the line from the north, and a private railway siding had been formed which ran right into the hospital grounds, so that the difficulty of transferring cases from the carriages to the wards was minimised. Special wards had been established for officers. The earlier cases received turned out very satisfactory, but the circumstances were different with the men who came down from Paardeberg; they had had a three days' journey in ox waggons before they reached the hospital at the Modder River, and in consequence their wounds did not run a very favourable course.

A rule had been made to keep 30 beds free for the unexpected arrival of Yeomen. Shortly before Mr. Fripp wrote, No. 2 Hospital Train had brought down 96 cases from the actions around Bloemfontein. In this way all the beds in the hospital were filled up with the exception of five, but by putting up extra stretchers to accommodate the more convalescent

earlier cases 30 beds were again set free. No sooner had this been done than a party of 14 Yeomen arrived.

Two trainloads of convalescents had been sent down to Capetown, where they would be put on transports for England; many men had, however, recovered sufficiently to return to the front, and were sent at once in parties to De Aar.

Considerable difficulty has been encountered in getting the laundry to work, as it was a large matter to provide for the washing of 750 people a week, and, up to the time of writing, sheets had not been available for the convalescent tents nor for the medical staff. As soon as the laundry was completed it would be able to deal with close upon 2,000 sheets a week, in addition to smaller linen. The engine which heated the water for the laundry provided steam also for the disinfecting of beds and bedding, and pumped the water for drinking purposes to the filter tanks.

Mr. Fripp states that the 40 nurses and nursing sisters had proved invaluable.

THE BASE HOSPITALS

[From Our Special Correspondent at Capetown.]

Hospitals in the Cape Peninsula.

The hospitals in the Cape Peninsula are being steadily increased in capacity. No. 3 has now 656 beds. No. 1 has increased its accommodation to 586 beds for men and 129 for officers; this has been brought about by converting the quarters of the *personnel* into wards. Major Burton has taken Major Sylvester's place in charge of the surgical division and Major Elderton has taken over the medical division from Major Barnes, who has charge of the convalescent home for officers at Claremont. Major Simpson is in charge of the officers in No. 1 itself. No. 5 General, formerly the Station Hospital, has about 550 beds, but is being rapidly enlarged. A newly-erected recreation room has been pressed into the service as a ward and will probably be retained as such. It is, I believe, intended to raise its establishment to over 700 beds by building nine huts. Lieutenant-Colonel Williamson is in command, with Major Russel as Registrar, and Majors Archer and Gibson as Divisional Officers. There are now 9 R.A.M.C. officers and about 12 civil surgeons. Of the latter all except two belong to the staff of No. 5 A, Civil Surgeons Darley-Hartley and Simon alone remaining of the original staff. Dr. W. F. Savage has returned to civil work at Bloemfontein. Drs. Troup and Peare have been sent to Kimberley, and Dr. Sterne to Walfisch Bay. Colonel Williamson has a herculean task before him in the attempt to organise No. 5 in face of the tremendous influx of patients every day. It is like remodelling an army on the battlefield. From the nature of the institution and the small *personnel*, the Woodstock Hospital under the old *régime* was worked with less attention to strict regulation than is the case now. It was impossible for it to be otherwise. Indeed Major Tuke deserves enormous credit for carrying it on at all without any serious hitch. When it is remembered that in addition to commanding R.A.M.C. details (one man's work) he had to supervise a hospital of quite the dimensions of a general without a single administrative assistant, and with only a staff of civil surgeons, one cannot but admire his energy. Indeed the R.A.M.C. officers, from the P.M.O. of the Army Corps downwards, have worked like Trojans, and what is more, they have entirely emancipated themselves from red tape and have organised on the lines dictated by their own genius. I do not think anyone who has not been an eye-witness can realise how much personal responsibility the medical chiefs have assumed.

At Orange River there are three field hospitals. A good many huts have been erected, but the majority of the patients are still in tents. They number over 400.

The hospital trains are doing excellent work. The two original trains have conveyed 4,500 patients up to date and all without a hitch. A third hospital train has been put on the East London line.

Dysentery with Rheumatic Complications.

The frequent association of rheumatism, generally in a subacute form, with dysentery, to which I alluded in a former letter, still obtains. I was at first inclined to attribute the coincidence very much to the operation of a common cause, exposure to cold and fatigue predisposing to both, but more extended observation is leading me to doubt this explanation. I have observed that the No. 5 General Hospital, which draws almost all its patients from the base and the transports, shows exactly the same coincidence. The following is a typical case at this hospital:

A staff sergeant of the Ordnance, a man doing purely office work, developed dysentery in a form for South Africa very severe. He had profuse watery and slimy stools, with abundant hæmorrhage, and a fairly high temperature, reaching 100° F. at night, for some days, stools at first 20 to 30 daily. He was admitted early, and given magnesium sulphate. The symptoms did not yield as rapidly as is the usual experience with this treatment, some five days elapsing before the stools became fæcal, and there was much anxiety about him. Ipecacuanha was tried on the third day, but proved an absolute failure, bringing on vomiting in spite of all precautions, and even when some was retained having no effect on the purgation. The magnesium sulphate was given again, and apparently with effect. So soon as the motions became partially fæcal monsonia ovata was exhibited, and the condition began steadily but slowly to mend; but about the fifteenth day, when the motions were still loose and the patient still on milk diet, pains appeared first in one joint and then in another; they were of a shifting character, and there was a slight rise of temperature, but not at all of a pyæmic character. Sodium salicylate was added to the monsonia, and in a couple of days the pains eased, and in a day or two later had gone. There were no signs of cardiac trouble, and the patient had no history of rheumatism.

Another case in No. 1 General Hospital is of a somewhat different character.

The patient had an acute attack of dysentery; then, as this was subsiding, an acute attack of rheumatism supervened, with a high temperature and severe pains. The temperature had not a pyæmic character. Endocarditis followed this attack, a loud regurgitant murmur being audible at the mitral valve, and several attacks of typical angina pectoris followed at intervals after the temperature had gone down. The patient is still anæmic, and still has the murmur, but he has not had any angina for some weeks. The latter was treated in the usual way with nitrites. In this case, also, there is no rheumatic history.

The Boer Prisoners.

The amount of sickness amongst the Boer prisoners is very great. The Palace Hospital at Simonstown set apart for their accommodation is full, mostly with enteric fever, but there are a few cases of dysentery. Unfortunately the results there have been bad, 22 deaths having occurred to date. No. 1 has some fifty Boers, the majority being cases of enteric fever, No. 5 about the same number, and the other hospitals a good share. All the medical officers concur in the opinion that, as a rule, the Boer does not do nearly so well under equal conditions as the Tommy. He stands the pain of a wound bravely enough, but directly he finds himself face to face with a lengthy illness he loses heart, makes up his mind to die, and his prognostication is often justified. Nothing can exceed the kindness with which the prisoners are treated. Every effort is made, as far as possible, to put them under medical men who understand their language. They are, of course, nursed exactly as the soldier, and get many little indulgences from which, for reasons of discipline, the latter would be debarred. The better class quite appreciate this. I was talking the other day to a well-educated prisoner, a pure Transvaaler, who told me that he fully expected the kindest treatment, and that he had been glad when he became sick that he fell into the hands of the English, as the arrangements on his own side were shockingly bad. He told me that unless a man were under the care of one of the foreign ambulances there was very little chance of recovering from anything bad. The actual Boer medical arrangements worked, he said, fairly well at the beginning of the war, but they had utterly broken down later. There was no system at all, and not only a deficiency of doctors, but those doctors appeared "just to wander about as they liked," so that sometimes there were two or three where they were not wanted, and none where they were. Then, again, he admitted to me that it was not at all an uncommon thing for the doctors to take up a rifle and fight. He mentioned this, not apparently with the least idea of its impropriety from a Red Cross point of view, but as a grievance on account of the doctor being wanted to do his own work. And, although this is not strictly a medical matter, another remark he made was interesting. He complained bitterly of being kept in captivity on the ground that the rebels, who were our own subjects and had been fighting, were allowed to go free to their farms on giving up their arms, whilst he and others who were only doing service to their own country, were kept in prison.

DESPATCHES.

The *London Gazette* of May 4th published despatches from General French, commanding the Cavalry Division, describing the operations of the force under his orders in the vicinity of Colesberg from December 15th, 1899, to January 25th, 1900. After narrating in detail the nature of the operations undertaken, General French concludes by bringing to special notice the services of the officers engaged. Among these is the following:

"Major H. G. Hathaway, Royal Army Medical Corps, has been attached to my staff since my arrival at Naauwport. He has been unremitting in his attention to the sick and wounded. He has on several occasions, and at critical times, carried messages to commanders of units in the field, and his services have been most useful."

The *London Gazette* of May 8th contains a despatch, dated February 15th, from Lieutenant-Colonel R. G. Kekewich, describing the military operations in the vicinity of Kimberley from September 13th to February 15th, and the defence of the town up to the latter date, when its relief was effected by the cavalry division under Lieutenant-General French.

Colonel Kekewich relates in detail the measures undertaken for the defence of the town against the Boers, and concludes by bringing to notice the service of the officers under his command. "Lieutenant C. J. O'Gorman, Royal Army Medical Corps, was," he says, "the only officer of his corps in Kimberley, and in consequence had much hard work and responsibility. I consider him a very valuable officer."

Of the medical officers belonging to the volunteer forces, Colonel Kekewich writes: "Surgeon-Major J. A. J. Smith, attached to the Kimberley Regiment, rendered most valuable assistance to the wounded in the field. Surgeon-Lieutenant A. J. Ortlopp, attached to the Diamonds Field Artillery, also rendered considerable assistance to the wounded in the field."

Colonel Kekewich also cites the names of citizens and others who distinguished themselves. Among these, he writes: "Dr. W. Russell, M.D., Resident Surgeon, Kimberley Hospital, rendered services in connection with the reception and treatment of the sick and wounded in the Kimberley Hospital, of which I cannot speak too highly. Dr. T. L. Shiels, M.B., Assistant Resident Surgeon, Kimberley Hospital, did a considerable amount of hard work in attending to the wounded. I cannot speak too highly of the energy and zeal displayed by the following visiting surgeons, Kimberley Hospital: Dr. E. O. Ashe, M.D., Dr. A. H. Watkins, M.D., Dr. J. E. Mackenzie, Dr. J. Mathias, M.D., Dr. W. J. Westerfield, M.D., and Dr. W. W. Stoney, M.D."

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on July 11th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Shropshire and Mid-Wales Branch. The spring meeting of this Branch will be held at the Salop Infirmary on Tuesday, May 29th, at 3 P.M. Members who wish to bring forward any business, to read papers, to show cases or specimens, or to propose any new members, are requested to communicate with the Honorary Secretary, not later than Friday, May 18th.—Harold H. B. Macleod, College Hill, Shrewsbury, Honorary Secretary.

North of England Branch.—The spring meeting of this Branch will be held at the Ingham Infirmary, South Shields, on Wednesday, May 16th, at 3.30 P.M. Dinner at the Royal Hotel at 6 P.M. Gentlemen wishing to propose new members, or to bring forward any business, cases, or specimens are requested to communicate at once with T. Beattie, 3, Ellison Place, Newcastle-upon-Tyne, Honorary Secretary.

Metropolitan Counties Branch: South London District.—The annual meeting of this District will be held at Bethlem Royal Hospital at 4 P.M. on Thursday, May 17th. The election of officers for the next year will take place. Dr. Savage will read a paper on Cases of Unsoundness of Mind not certifiably Insane. Cases of clinical interest from the wards of the hospital will be shown, and demonstrated on by members of the staff. All practitioners, whether members of the Association or not, will be heartily welcomed.—Maurice Craig, Bethlem Royal Hospital, S.E., Honorary Secretary (*pro tem.*).

Metropolitan Counties Branch: East London and South Essex District.—The next meeting of this District will be held at Brook House, Upper Clapton, on Thursday, May 17th, at 8.30 P.M. The chair will be taken by Dr. F. J. Smith, Vice-President of the District. Dr. Stephen Mackenzie will give a demonstration of cases of skin disease. Visitors are invited.—C. J. Morton, 56, Orford Road, Walthamstow, Honorary Secretary.

Metropolitan Counties Branch: North London District.—A meeting of this District (the last of this Session) will be held at the London Temperance Hospital, Hampstead Road, on Wednesday, May 16th, at 4.30 P.M. Dr. Morton will preside. Election of officers. Dr. Thomas D. Savill will open a discussion on Occupation Neuroses, and will exhibit cases of Drapers' Palsy, Pianists' Cramp, Machinists' Tremor, and Telegraphists' Cramp. The District Committee will meet at 4.15 P.M.—H. J. Macevoy, Brondesbury, N.W., Honorary Secretary.

Lancashire and Cheshire Branch.—A special meeting of this Branch will be held on Friday, May 18th (not on Wednesday, May 16th, as previously announced in the British Medical Journal), at 2 P.M., in the Memorial Hall, Albert Square, Manchester, to consider medico-political and business matters.—T. Arthur Helme, 3, St, Peter's Square, Manchester, Honorary Secretary.

Dundee and District Branch.—The annual meeting will be held in Dundee Royal Infirmary on Friday, May 25th. By the courtesy of the Directors, the new Caird wards (Gynæcology and Obstetrics) will be shown to the members. Members having business to bring forward or patients to show at the Clinical Congress are requested to communicate with Dr. Buist, Dundee, as early as possible.

Midland Branch.—*Preliminary Notice.*—The annual meeting of this Branch will be held at Nottingham on Thursday, June 14th. Mr. A. R. Anderson, F.R.C.S., President-elect, will preside. The following papers, etc., have already been promised. Address by the new president. Dr. H. Handford: Three cases of Cerebro-spinal Meningitis. Dr. Pope and Dr. Astley V. Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks as to the possible Connections of the Two Diseases. Members wishing to show cases or read papers are requested to communicate as soon as possible with Frank M. Pope, 4, Prebend Street, Leicester.

BORDER COUNTIES BRANCH.

The spring meeting of this Branch was held at Moffat on May 4th; Dr. J. R. Hamilton (Hawick), President, in the chair.

Confirmation of Minutes.—The minutes of last meeting of the Branch were read, approved, and signed by the President.

New Members.—Dr. Francis R. Hill (Stanwix, Carlisle) was elected a member of the Association and Branch; and Dr. Geo. R. Livingston (Dumfries), already a member of the Association, was elected a member of the Branch.

Congratulations to Lady Buller and Lady White.—The President intimated that he had received the following replies from Lady Buller and Lady White to the telegrams of congratulation sent to them at the last meeting of the Branch:

[Copy of Letter from Lady Audrey Buller.]

Government House, Farnborough, Hants.
March 5th, 1900.

Gentlemen,—I beg to express my heartfelt thanks for your most kind congratulations on Sir Redvers Buller's success. I am deeply touched by the feeling expressed on all sides for Sir Redvers Buller.

Believe me, gentlemen, yours truly,
(Signed) Audrey Buller.

[Copy of Telegram from Lady White to Border Counties Branch, British Medical Association, Hawick.]

Warmest thanks for kind congratulations.—Lady White.

Epsom College.—The President intimated that the Council recommended that the votes of the Branch at the forthcoming elections to the Royal Medical Benevolent College, Epsom, be left in the hands of the Secretary to use at his discretion. This was approved.

Midwives Bill.—The Secretary read a letter received from the General Secretary of the Association, enclosing copy of resolution passed by the Council of the British Medical Asso-

ciation on April 11th, 1900, respecting the Midwives Bill now before Parliament; a letter from "the Joint Committee to oppose Midwives Registration" was also read. A discussion on this subject followed.—Ultimately Dr. OGILVY-RAMSAY moved:

That this meeting approves of the registration of midwives, but disapproves of the present Bill now before Parliament in so far as it does not provide efficient medical control of midwives.

This was seconded by Dr. BARNES, and carried unanimously.

R.A.M.C. South Africa Fund.—The PRESIDENT brought forward the desirability of members of the Branch contributing to the R.A.M.C. South Africa Fund, and mentioned that he had collected numerous subscriptions in his own district. The meeting cordially approved of the President's remarks.—Dr. GRAHAM was requested to collect subscriptions for this purpose from medical men in Carlisle and neighbourhood, and it was directed that the various local secretaries of the Branch be requested to collect subscriptions in their respective districts.

Fracture and Dislocation at Elbow joint.—Dr. D. HUSKIE (Moffat) read a paper on Fracture and Dislocation at the Elbow-joint, with uncommon Complication, and showed the patient.

The case was that of a boy, aged 8½ years, who, after a fall in July of last year, was found to have sustained a fracture at the lower epiphysis of the humerus, and a dislocation backwards of both bones of the forearm. The complication, which was observed for the first time 24 days after the accident, there having been no undue pressure from the splint, was that when the wrist was extended the interphalangeal joints of the fingers were strongly flexed, movements at the elbow were impaired, and for a time sensation was absent in the wrist, hand, and fingers.

Dr. Huskie described the treatment that had been adopted, resulting in gradual improvement. He also discussed the pathology of the complication, and the question of operative treatment, and quoted cases recorded by Mr. H. Littlewood, Mr. Davies-Colley, and Mr. Raymond Johnson. The PRESIDENT and Drs. MACLAREN, BARNES, and OGILVY-RAMSAY made remarks on the case, and Dr. HUSKIE replied.

The Abuse of Drugs.—Dr. HAMILTON introduced a discussion on the Present-Day Abuse of Drugs. He attributed the abuse to three chief causes: (1) Modern advertisement of numerous drugs as specifics for all diseases, (2) prescribing by chemists, and (3) fashion. He referred specially to the treatment of constipation, dyspepsia, and influenza, and advocated more natural treatment by rest, dieting, etc., in preference to indiscriminate drugging. Dr. MACLAREN took exception to the statement that the abuse of drugs by medical men was on the increase. He maintained that medical men now used drugs less than they formerly did, and that they merely classed drugs as agents along with diet, rest, and other forms of treatment. Drs. MUNRO, BARNES, HUSKIE, GRAHAM, OGILVY-RAMSAY, and FARQUHARSON also took part in the discussion, and the PRESIDENT replied.

Dinner.—After the meeting the members dined together in the hotel.

SPECIAL CORRESPONDENCE.

PARIS.

The International Exhibition: The Pavilion of the City of Paris.

IN the exhibition grounds the pavilion of the City of Paris is situated close to the Pont des Invalides on the right bank of the Seine, facing the Italian palace. The ground floor is arranged with a central gallery containing pictures and drawings of historical interest. In the centre is a garden, containing a monumental fountain with four glass compartments, from which will flow water from the four different sources of the Paris supply—that is, the Avre, the Ourcq, the Seine, and the Vanne. On each side of the central gallery runs a slightly raised gallery, the right hand one, starting from the entrance, being of especial interest. We first pass through the section reserved for the Municipal Laboratory, with an exhibition of the different apparatus used in the analysis of alcohol, milk, etc. The next rooms contain the exhibit of the sanitary service of the central markets, with skeletons and wax models showing the pathological appearances due to tuberculosis, actinomycosis, glanders, and other diseases of animals; following this room is a remarkable collection of water-colour drawings of the various edible and poisonous mushrooms.

We now reach the section devoted to the Assistance Publique, which is of great interest. In the hospital section we see a striking contrast between the methods of to-day and of a hundred years ago. On one side of the room the modern installation with an iron bedstead and spring mattress, at the side a practical table with glass and white porcelain utensils, and also the new model spittoon which stands on an iron tripod.

Facing this is a faithful reconstruction of the bed in existence at the Hôtel Dieu at the end of the 18th century. The bed is a four poster (length 5 feet 10 inches, breadth 4 feet 6 inches, height 6 feet) provided with a tester and curtains of red serge in winter, or of cotton in summer. A ticket bearing the words, "Confession No. 80," is pinned to the tester. This bed was for four patients, two at the head and two at the foot, and life-sized models are lying in it. At the head is a shelf with pewter utensils, at the side a wooden night stool, and at the foot a huge jar for *tisane*.

In this room we also see Dupuytren's surgical armamentarium in walnut boxes compared with a modern instrument cabinet of glass with nickel mountings and modern instruments on the glass shelves. Here also are models of the disinfectors and destructors as used in the hospitals, and the apparatus for the sterilisation of dressings, etc. On the walls are plans and photographs of the different hospitals and of their respective departments, with radiographs from the laboratory of the Necker Hospital.

Passing through the section of the Professional Schools we reach the "Section de l'Enfance" of the Assistance Publique. Here is an exact reproduction of a new isolation box with a single cot as constructed in the Sick Children's Hospital. On the walls are plans and photographs; among others of the new Children's Hospital in the Rue Michel Bizot, the Lallier School, at the St. Louis Hospital, for Children with Ringworm. In the "Section de la Première Enfance" we see the tower where abandoned children were left to be taken care of by the municipality. We see an apparatus for the sterilisation of milk and incubators from the wards of Dr. Porak at the Maternity. On the walls are plans and drawings of the different departments of the Maternity Hospital and of the consultations for young infants.

In this gallery we also see models of the disinfection station in the Rue des Récollets, with life-sized models of the employees in their uniforms; on the walls are statistical tables of the total annual disinfections, and details of the disinfections carried out for each of the notifiable diseases during the last decade. The remaining rooms in this gallery are devoted to the meteorological observatories of Montsouris, the Gour St. Jacques, and the Pare Saint Maur.

The left hand gallery, starting from the far end of the pavilion, is devoted to the water supply and drainage of the city, with models and sectional drawings. A large portion of this gallery is devoted to the very complete anthropometric exhibition of M. Bertillon.

The galleries of the first floor are almost entirely devoted to examples of the work done by pupils in the municipal professional schools. The exhibit of the municipal libraries is also of interest; these libraries are 78 in number, 3 being devoted to the industrial arts. In Paris each of the 20 town halls has a municipal lending library, the 55 others being installed in the various communal schools. The books are bound in black linen, but the authorities are now experimenting with a new binding, which is here exhibited; this binding can be washed and disinfected.

NEW ZEALAND.

The Annual Meeting of the New Zealand Branch.

THE fourth annual meeting of the New Zealand Branch, which commenced in Christchurch on February 19th, and lasted for the remainder of the week, was without doubt the most successful meeting ever held in this Colony, and the members of the Canterbury section, under whose auspices it was conducted, have good reason to congratulate themselves on the result. The meeting was a thoroughly representative one, visitors being present from Auckland in the north to Invercargill in the south, and the visiting contingent cannot say enough about the kindness and hospitality they received from their Canterbury brethren. In addition to the scientific

work, there was the usual sandwich of pleasure, including the annual dinner, a trip to the Deaf and Dumb Institute at Sumner, and the meeting of the Canterbury Jockey Club, for which each of the visitors received complimentary tickets from the Club.

At the general business meeting of the Branch, after the adoption of the annual report and statement of accounts (which showed an addition of thirty-one new members and a slight credit balance on the workings of the year), the President (Dr. Scott, of Onehunga) announced that the Council had accepted an invitation to hold the next annual meeting in Wanganui.

The election of officers resulted as follows: *President-Elect* for 1901: Dr. G. R. Saunders (Wanganui). *Chairman of Council:* Dr. W. Fell (Wellington). *General Secretary:* Dr. Graham Campbell (Christchurch). *Parliamentary Secretary:* Dr. J. Malcolm Mason (Otaki): *Editor:* Dr. J. Malcolm Mason (Otaki).

The incoming President (Dr. Walter Thomas, of Christchurch) was inducted at the completion of the business meeting. The question of resuscitating the *New Zealand Medical Journal* came before the meeting and provoked a lengthy discussion, which eventually resulted in a motion strongly urging on the Council the desirability of resuscitating the *New Zealand Medical Journal* at the earliest possible date as the organ of the Branch. In his presidential address, Dr. Thomas discussed the relations between the Colonial Practitioner and the Public. He pointed out the great difference noticeable in the relations between doctor and patient in the Colonies to what was usually found in older-established countries: that the public had a craving for advice from the latest comer irrespective of his experience; that there was a great tendency to stray after strange gods, and consult quacks and take patent medicines; that there was a distinct want of gratitude exhibited by patients, and that instinctive antagonism and opposition were displayed towards the members of the profession. Though laying most of the blame on the shoulders of the patients, Dr. Thomas claimed that medical practitioners themselves were also responsible for a certain amount of the trouble, by their want of the observance of the ordinary rules of etiquette, and the exhibition of petty jealousies. Though agreeing with many of Dr. Thomas's statements, it is difficult to believe that they are all correct, and it seems a little unfair to class the whole community as antagonistic because we find a small minority who are grumblers.

The papers which excited most interest were Diseases requiring Institutional Treatment (Colquhoun), the Prevention of Tuberculosis (Irving), Direct Medication of the Lungs in Tuberculosis (Mason), the Treatment of Insanity (Truby King), Consolidation of the Public Health Act (Scott), and A Minister of Public Health (Mason). Dr. Colquhoun's paper was an exhaustive appeal for the establishment of homes for the treatment of consumptives and inebriates. He showed that in New Zealand we were neglecting our best asset—a good climate—and that phthisis could be successfully attacked only in suitable homes, and not in general hospitals; while for the inebriates he claimed that although there was a law providing for the seclusion of these cases in institutions, it was inoperative from the Government having failed to make the necessary provisions. Dr. Irving's paper advocated the dissemination of information to the general public, giving them certain facts about the prevention of tuberculosis, and the formation of a branch of the National Association for the Prevention of Consumption. Dr. Truby King in his paper on the treatment of insanity showed that there was no provision in the Act regulating admissions to the asylums by which it was possible to take in "voluntary" patients, and asked for the assistance of members in bringing this want before the Government. He also advocated that the legal name of asylum should be altered to "institutions for the treatment of mental diseases," and asked that provision should be made for the establishment of out-patient departments in connection with the general hospital, to which an alienist should be attached.

The fact that bubonic plague has reached Sydney, and will with difficulty be kept out of New Zealand, gave an added interest to the papers on public health read by Drs. Scott and Mason.

Dr. Scott's paper clearly showed the inadequacy of the present Act, and proved that there were many incongruities in it which prevented it being properly administered. In this Colony every local governing body is a local Board of Health, with all the powers and duties imposed by this Act. In consequence, in the large towns—for example, Dunedin, Christchurch, Wellington, and Auckland, with an average population of 50,000, and consisting of several boroughs, each of which is a local Board of Health—the Act is quite unworkable, as the inspectors cannot overstep their boundaries, and are unable to interfere even when they have traced some infectious disease beyond the limit of their jurisdiction. The Central Board, appointed by the Governor in Council, is without any recognised medical expert, or surveyor, and appears never to have issued any regulations for the carrying out of the provisions of the Act. Both papers advocated a Minister of Public Health, with an expert adviser, and the appointment of medical officers of health in the four large centres; the consolidation of small local Boards into one for each district, and a vigorous administration of the Act.

CORRESPONDENCE.

INTERNATIONAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

SIR,—I beg to forward you a copy of a letter to Professor Simpson, of Edinburgh, drafted at a meeting of the past and present teachers of gynæcology and obstetrics in the metropolitan medical schools now practising in London, which was held at my house on Tuesday last.

You will observe that it is signed by everyone who comes under that description, without, I believe, a single exception.

I need only add that our objection to the election of a President is in no way personal to the distinguished obstetrician to whom the enclosed letter is addressed. To many of us—certainly to myself individually, since he is one of my oldest and most valued friends—he would have been a *persona gratissima* for the post.

Our objection is not to the man, but to the manner in which he was elected.—I am, etc.,

Grosvenor Street, W., May 5th. W. S. PLAYFAIR.

To Professor A. R. Simpson, M.D., President-Elect of the International Congress of Gynæcology and Obstetrics.

38, Grosvenor Street, London, W.
May 1st, 1900.

Dear Sir,—We learn from a circular dated "37, Queen Anne Street, April, 1900," that it has been decided to "hold the Fourth International Congress of Gynæcology and Obstetrics in London in 1902" under your presidency.

As past and present lecturers and teachers of obstetrics and gynæcology in the London medical schools, we wish to explain to you, and especially to such of our foreign colleagues as might contemplate attending such Congress, that those who have issued this invitation have assumed a representative position to which they are, in our opinion, not entitled, and which we find ourselves unable to recognise.

We cannot, therefore, take any share in promoting or joining in such Congress, but trust that you will accept our assurance that our decision has been arrived at with regret, and with no intention of discourtesy to yourself or other visitors, either British or foreign.

We are, dear sir,
Very faithfully yours,

(Signed)	J. WATT BLACK AMAND ROUTH T. W. EDEN	Charing Cross Hospital.
	A. L. GALABIN P. HORROCKS J. H. TARGETT	Guy's Hospital.
	W. S. PLAYFAIR T. C. HAYES J. PHILLIPS	King's College Hospital.
	G. E. HERMAN A. H. N. LEWERS	London Hospital.
	W. DUNCAN R. BOXALL	Middlesex Hospital.
	F. H. CHAMPNEYS W. S. A. GRIFFITH	St. Bartholomew's Hospital.
	W. R. DAKIN A. F. STABB	St. George's Hospital.
	M. HANDFIELD-JONES W. J. GOW	St. Mary's Hospital.
	C. J. CULLINGWORTH W. W. H. TATE	St. Thomas's Hospital.
	J. WILLIAMS H. R. SPENCER G. F. BLACKER	University College Hospital.
	J. B. POTTER W. R. POLLOCK	Westminster Hospital.
	MARY SCHARLIEB	London School of Medicine for Women.

OBITUARY.

JOHN NEVILLE COLLEY DAVIES-COLLEY, M.A., M.B., M.C.CANTAB., F.R.C.S.ENG.

WE deeply regret to record the death of Mr. Davies-Colley, which occurred at his country house, Borough, Pulborough, Sussex, on May 6th. Mr. Davies-Colley, who was in his 58th year, was seized in November last by an illness which was recognised as cancer of the liver; he continued, however, to discharge all his public duties at Guy's Hospital and elsewhere until the end of December, when he resigned his appointments and retired from active practice. Whilst the disease was progressing he bore himself with admirable fortitude, and was much cheered by the attentions of colleagues and friends, and especially by an address from hundreds of past and present students of Guy's Hospital, which expressed their admiration for his work amongst them, their gratitude for his services and high example, and their personal sorrow and regret at the breaking of the official tie which had for more than thirty years bound him to them. This address reached him during the last week of his life and gave him great pleasure.



Mr. Davies-Colley was a son of Dr. Thomas Davies-Colley, formerly Senior Physician to the Chester General Infirmary, who died on June 3rd, 1892, and whose professional career was noticed in the BRITISH MEDICAL JOURNAL of 1892, vol. i, page 1336. Mr. Davies-Colley received his university training at Trinity College, Cambridge; he passed out with a good degree in Arts, and became M.A. in 1867. He received his medical education at Guy's Hospital, where he very early attracted the notice of his teachers, and in June, 1868, was appointed Surgical Registrar and Tutor. In that year also he became M.R.C.S.Eng. and M.B. and M.C.Cantab. In 1870 he obtained the Fellowship of the Royal College of Surgeons. He was successively Lecturer on Experimental Philosophy and Demonstrator of Anatomy at Guy's Hospital, and was selected for the post of Assistant Surgeon in 1872, when, Mr. Edward Cock becoming Consulting Surgeon, a vacancy in the senior staff was caused, which was filled by the promotion of Mr. Bryant, the Senior Assistant Surgeon. In 1880 Mr. Davies-Colley succeeded to the full Surgeoncy upon the resignation of Mr. Cooper Forster. Mr. Davies-Colley lectured upon anatomy at the hospital during several sessions, and subsequently for many years gave half the course on surgery. He was also Surgeon and Consulting Surgeon to the Seamen's Hospital, Greenwich. He had been Examiner in Anatomy at the Conjoint Board of the Royal Colleges, for the Fellowship of the College of Surgeons and to the University of Cambridge. More recently he examined in surgery for the Colleges and for his University. He became a member of the Council of the College of Surgeons in July, 1896. He was a member of the Pathological and Clinical Societies and a Fellow of the Royal Medical and Chirurgical Society, and until his withdrawal from practice at the end of last year was most scrupulous in the performance of all his professional duties.

Mr. Davies-Colley was, when illness put a stop to his work, engaged in writing a work on general surgery; but, although he was a frequent contributor of cases and papers to the columns of the JOURNAL and to those of our contemporaries, his name is not attached to any separate work. Nevertheless, his four articles in Heath's *Dictionary of Surgery* on "Carbuncle," "Gonorrhœal Rheumatism," "Injuries and Diseases of the Neck, Throat and Œsophagus," and "Malignant Pustule," and his articles on "Muscles" in Morris's *Treastise of Anatomy* are excellent. His contributions to the *Medico Chirurgical Transactions* were three in number: (1) A case of Resection of the Tarsal Bones for Congenital Talipes Equino-varus, in which he recommended the procedure for cases where ordinary methods had been employed without success or were likely to fail in consequence of the severity of the case; (2) on Malignant Pustule, in which he advocated the excision of the whole of the inflamed area, or at any rate, of the indurated skin, with the subsequent use of iodoform, perchloride of mercury, or a strong solution of nitric acid; and (3) a New Operation for the Cure of Cleft of the Hard and Soft Palate, with an account of 6 cases so treated. All these papers are of a highly practical character, and good examples of the sound, common-sense principles of surgery which he always taught. He edited many volumes of the *Guy's Hospital Reports* in conjunction first with Dr. Frederick Taylor, and subsequently with Dr. Hale White, and papers and reports from his pen have appeared in most of the volumes issued since 1870. The widely different subjects which he attacked afford lasting testimony to the breadth of his surgical acumen and experience.

Mr. Davies-Colley married a daughter of the late Mr. Thomas Turner, for many years Treasurer of Guy's Hospital, and sister of the late Dr. F. Charlewood Turner, Physician to the London Hospital, who died in February last. He leaves several children and his widow to mourn his loss. The funeral took place on Thursday, at the Churchyard, Pulborough.

Mr. Charters Symonds writes as follows: Mr. Davies-Colley devoted so much of his time and energy to the work of his own school and hospital that he was less known to the profession than many surgeons of similar standing. Such devotion commanded the respect and esteem of the governors and staff alike, and the loss which Guy's has sustained is, it can well be believed, one not easily filled. The regard in which he was held by the many students who, since the early Seventies, had profited by his teaching, and the high level of conduct which he displayed, came all unexpectedly to him in his illness. He worked so regardless of reward, he had so high a sense of duty, that he gave always of his best. To the last he attended personally to all emergency cases admitted during the day.

As a teacher he was indefatigable, accurate, painstaking, never missing a visit to his wards, a lecture, or an operating day. He gained the respect and esteem of all his pupils, and it was to him, when preparing for the end, a great pleasure to receive, from the least expected sources, proofs of the value of his teaching.

As a member of the Executive Council and of the many committees on which he served, Mr. Davies-Colley was conspicuous for sound judgment, originality of view, and critical acumen. In financial matters, where large schemes were proposed, the immense value of his evenly-balanced mind and his power of concentrating its whole force on the question rendered his presence on such occasions almost essential.

As a colleague he was the most genial of men. He was always ready to give advice in a difficult case or operation. That his advice was frequently sought by his colleagues is perhaps the best evidence of the respect in which he was held. His large experience was so well ordered and stored in such a good memory, his judgment so sound, that help was always obtained. Then his opinion was always given with such grace and consideration for others as made the occasion one to be sought for. Moreover, though one of the seniors on the staff his knowledge of recent advances was so wide and his boldness as an operator so well known, that he could never, even by the youngest, be looked upon as growing old in surgery. As a surgeon few can show a quarter of a century of such work with fewer fatalities. Following the lead of Mr. Howse, who first introduced Lister's methods to London, Mr. Davies-Colley obtained brilliant results in the early Seventies. Discarding the spray, he advanced with the most forward, and to the last undertook the biggest surgery. Well informed in all recent advances, he carried out the latest methods with an unusual amount of success.

In November last it was obvious to us that he was failing, but no one who watched his daily work imagined that he himself knew he had a mortal disease. With this increasing, and well aware that his strength was failing, he still discharged his duties, completing the first half of the winter session. In December he gave his last lecture before the vacation, visited his wards as usual, and, leaving everything in order, went for the Christmas holiday never to return. To most this was a sad surprise, to him it was intention. Seeing the hopelessness of his condition, he at once resigned his various appointments. One he had not resigned, but, when talking it over, said, "I will do so at once if you think it would be of use to anyone." His Christian resignation, his heroic submission to the blow which had fallen, when so much remained to be done, will long be remembered by those who had the privilege of visiting him.

He had written the greater part of a work on surgery, and even to the last he made an effort to complete some unfinished articles. This book, had he lived to complete it, must have taken a foremost position; for all who knew his work will agree that no inaccurate statement, no half-considered question, could find a place in anything he wrote.

Those who knew Davies-Colley best as a man and a surgeon realise what a loss his school has sustained; but even a wider loss is felt by those who knew the value of his advice as a second opinion in difficult operative questions. From his knowledge, his large experience of operative surgery, his sound common sense, his great intellectual qualities, combined with a remarkable physique, he should rank with the very best men in our profession.

We have to announce with regret the death of Dr. William Stewart, which took place in Sydney, N.S.W., on March 10th. He was born in Rothsay in 1834. He pursued his medical course at Glasgow University, and took the degree of M.D. in 1854. In the same year he took the L.R.C.S.Edin., and a few years subsequently the L.R.C.P. and L.S.A.Lond. When he had finished his course in Glasgow he spent nearly two years in Paris, devoting his attention chiefly to surgery, for which the French school was then famous. When in Paris he made many friends, and conceived an affection for French literature and art which remained with him to the end of his life. He first practised for a short time at Cockermouth, and then settled in Diss, Norfolk, where he enjoyed a large practice and made many friends, as indeed he did wherever he went. He gave much attention to meteorology, and became a Fellow of the Royal Meteorological Society. After practising for about six years in Diss he removed to Southwick Street, Hyde Park, where he practised with success for about twenty years. In 1884 he went to Venezuela, where he remained for three or four years, passing through an epidemic of malarial fever, contracting the disease, and narrowly escaping death. In 1887 he went to live in New Zealand, where he had some relatives, and settled in Oamaru in the South Island, where he resided for about six years. He soon gathered around him a large circle of patients, amongst whom he had many sincere friends to whom he had endeared himself by his genial kindness and every ready help in time of need. Being fond of the sea, and having a desire to see other lands, he latterly became engaged as a surgeon to the vessels of the Australian and Eastern Navigation Company. In this capacity he paid several visits to Japan and China, and wrote many charming letters to his friends descriptive of the life and manners of the people.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. José Andrey Sierra, Vicerector of the University of Santiago and Dean of the Faculty of Medicine, one of the foremost obstetricians in Spain; Dr. Bouchereau, Chief Physician to the St. Anne Asylum, Paris, aged 65; and Professor Alphonse Milne-Edwards, Vice-President of the Académie des Sciences.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF LONDON.

MEETING OF CONVOCATION.

A MEETING of Convocation was held in the East Conference Hall of the University's new building at South Kensington on the afternoon of May 8th. The Chairman, Mr. Busk, presided, and remarked upon the first meeting of Convocation in that building, which, he said, contained ample accommodation, so that, even if the candidates for matriculation became far more numerous than they had been, there would still be room to examine them all within those walls.

Mr. H. E. Allen was appointed Clerk of Convocation.

The Chairman proposed the suspension of the standing orders in order to ask Convocation to pass a vote of congratulation to the Prince of Wales upon his escape from the recent dastardly attack made upon him at Brussels.

The proposal was passed with acclamation.

The Chairman further said that the statutes for the new University were now before the Houses of Parliament, and, if not objected to before May 16th, might be ratified by Her Majesty at any subsequent date. Convocation would then at once be called upon to appoint sixteen members of the Senate. Only one graduate, Dr. Silvanus Thompson, had been nominated for a vacancy on the Senate; but, inasmuch as three persons had to be so nominated that Her Majesty might select therefrom a Fellow of the University, this nomination would not be pressed.

Dr. Thompson concurred, and said, moreover, that he would be unwilling to resign his examinership, which would be required of him if he accepted a seat on the Senate.

Dr. Silvanus Thompson then presented the report of the Standing Committee, and moved its reception.

Sir A. Rollit, M.P., said that the Senate had done its best to secure proper accommodation in the new building for the graduates of the University.

A member called the attention of the House to the fact that several members who were standing for re-election on the Standing Committee of Convocation had attended less than half of the meetings of that Committee during the past year.

The motion was then carried.

Dr. S. P. Thompson proposed a resolution to the effect that on the circular containing the names of candidates for election to the Senate the names of only ten of his nominators should be printed with the name of each candidate.

This proposal was seconded by Mr. Candy, and after much conversation was carried.

(Under the new statutes Convocation will not nominate three persons for each vacancy on the Senate for the selection therefrom of one by the Queen, but Convocation will itself elect the sixteen senators whom it is to choose).

Mr. Bassett Hopkins, M.A., moved:

That this House is of opinion that the arrangements under which refreshments are to be supplied in the new University Buildings are detrimental to the interests of the students, graduates, and officers of the University.

He pointed out that there were very few refreshment rooms near the new University Building, which was admirable in its isolation so far as study was concerned. He stated that a contract existed with a catering syndicate for all refreshments in the building, and that that contract had still two and a-half years to run, and was renewable. The very existence of this contract (which would prevent anyone else from supplying food of any kind) was not known by the Senate until they had signified their assent to the proposals of the Government respecting the building.

Dr. R. M. Walmsley, D.Sc., seconded the proposal, which was carried unanimously.

Mr. Hopkins then moved:

That this House earnestly requests the Chancellor and the Senate to use their best efforts to prevent any departure injurious to the interests of the University from the conditions and arrangements agreed upon in the year 1899, between Her Majesty's Government and the authorities of the University, for the transfer to the University of the Main Block and East Wing of the Imperial Institute Buildings.

That the Chairman of Convocation be requested to bring the matters referred to in the foregoing resolutions to the notice of the Chancellor and the Senate.

That the Standing Committee be instructed to draw the attention of the new Senate of the University to the application made by Convocation on January 16th, 1900, for additional accommodation for the graduates.

He remarked that the Imperial Institute authorities, which had made a good bargain with the Government, were now apparently seeking to retain possession of two rooms which should be allocated to the purposes of the University.

The Chairman remarked that a new refreshment department was in process of construction for the Institute in another part of the building, and he believed the Institute was only retaining possession of the two rooms mentioned by Mr. Hopkins until the construction of its new refreshment department was completed.

Dr. Walmsley seconded all three resolutions, which were carried unanimously.

The election of members of the Standing Committee took place; and in the Faculty of Medicine Dr. H. M. Murray, Dr. Sydney Ringer, and Dr. T. W. Shore were elected.

DEGREE DAY.

THE presentation for degrees and honours took place on May 9th in the the new University Building. The Chancellor, Lord Kimberley, presided, and was supported by the Prince of Wales (Chancellor of the University of Wales), the Vice-Chancellor of the University of London (Sir H. Roscoe), the Chancellor of the Victoria University (Earl Spencer), Sir Michael Foster, M.P., and the Fellows of the University. There was a large company of graduates, medallists, prizemen, and visitors. The Chancellor presented the diplomas to the graduates, and the exhibitions, medals, and prizes were presented by the Prince of Wales. One feature of the afternoon was the large number of women graduates who were presented; for example, of the 176 B.A.s no fewer than 75 were women.

After the presentation the Chancellor conveyed to the Prince and Princess of Wales the congratulations of Convocation on the recent escape of his Royal Highness at Brussels. The Chancellor then congratulated the University on the new building, and commented on the progress which various universities had recently made, which showed that the country had been greatly stirred upon the subject of education. That the University of London was progressing was evident from the fact that in 1898 there were no fewer than 2,780 candidates for matriculation. In regard to the education of women, there had been a marked advance since that University threw open its degrees to women in 1878. During the twenty years following that event over 5,000 women had been candidates at the matriculation examination, But not merely at matriculation were they successful; they had obtained very high honours at some of the highest examinations; and had thus shown their ability to compete with men in the most difficult branches of knowledge. Up to the present time the University had been merely an examining body, and in that respect had set a high example. It was now to become a teaching University as well; but it would still keep its degrees open to all students. Although the University had in its faculties a wide range of subjects, it attached special respect to science and the other modern branches of knowledge. There was now apparent a great movement for the improvement of all the steps in the education of all classes of the community, and ladders were being provided by which poor but clever boys might pass, by means of exhibitions and other assistance, from primary schools to the highest places in the Universities.

The Prince of Wales returned to his audience the grateful thanks of the Princess and himself for their hearty congratulations on his late escape. He was very glad to be present and to give away the prizes. He wished the University full success, and doubted not from all the Chancellor had said that its success was well assured.

Sir Michael Foster, M.P., addressing the graduates who had been presented, said that he must let fall one small drop of bitterness into their present cup of joy. They must not regard the degree as the end of their education. Examinations even were somewhat matters of chance; unseen passages, for example, had sometimes been seen beforehand. The value of a degree was in the work which had led up to it, not in the mystic letters that it added to one's name. It seemed to him that the students of to-day were examined in luxury, and received their degrees from the hands of His Royal Highness on this red-letter day. In his time he seemed to be examined in the street and to receive his degree by post. Their Alma Mater was now so comfortably housed that they would nestle closely to her. All changes were fraught with peril; but he thought there were two guardian angels which would preserve their University in prosperity. London ought to have a University worthy of its greatness, and the Government and the citizens must look to it that the University was not wrecked on the dangerous rock of penury. Lastly, loyalty to science and learning of its graduates would help the University to be of use to the empire at large.

UNIVERSITY OF CAMBRIDGE.

THIRD EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following have satisfied the Examiners:—

Part II. Medicine, etc.—S. Bousfield, M.A., Cai.; J. Bradford, Emm.; H. P. Bradley, B.A., Cai.; G. V. Bull, B.A., Cai.; T. Burfield, B.A., Emm.; C. J. Coleman, B.A., Trin.; B. J. Collingwood, B.A., Cai.; W. S. Darby, B.A., Trin.; W. M. Fletcher, M.A., Trin.; J. H. P. Fraser, B.A., Jes.; O. F. F. Grünbaum, M.A., Trin.; J. Gutch, M.A., Christ's; D. G. Halt, B.A., Emm.; A. C. Hill, M.A., Trin.; T. E. Holmes, B.A., Cai.; G. F. Lobb, B.A., Cai.; J. L. Lock, B.A., Cai.; J. W. Mahm, B.A., Christ's; H. N. Matthews, B.A., Joh.; J. C. Matthews, B.A., Joh.; F. J. Nicholls, Joh.; L. J. Paton, B.A., Cai.; A. C. Pearson, B.A., Sid. Suss.; J. H. Philbrick, B.A., Trin.; G. R. Slade, B.A., Trin.; J. G. Taylor, B.A., King's; T. S. Taylor, B.A., King's; R. A. Walker, B.A., Cla.; A. Whitmore, B.A., Cai.; W. M. Willoughby, B.A., Cai.

Honorary Degree.—The degree of LL.D. *honoris causâ* is on Monday, May 14th, to be conferred on the King of Sweden and Norway. It is expected that the Chancellor, the Duke of Devonshire, will preside at the ceremony.

Colonial Affiliation.—It is proposed to extend the privileges of affiliation to Bachelors of Arts and of Science of the University of Tasmania.

Finance.—It is estimated that the University Chest will show a deficit of £650 next year, owing to the falling off in the receipts from capitation and other fees payable by students now serving in South Africa. Seventeen additional students were matriculated on May 5th.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Tuesday, May 1st, Dr. James Andrew, President, in the chair.

The late Sir Douglas Maclagan.—The President referred in feeling terms to the great loss which the College had sustained through the death of Sir Douglas Maclagan, who had been a Fellow of the College for thirty-six years, and President from 1884 to 1887.

The late Sir Wm. Priestley.—The President further referred to the loss which the College and profession had sustained through the death of Sir Wm. Priestley, for forty-two years a Fellow of the College.

Admission to the Fellowship.—Dr. Charles Henry Fox, M.R.C.P.E., Edinburgh, was admitted by ballot to the Fellowship of the College.

Admission to the Membership.—On a ballot, the following candidates were admitted to the Membership of the College, after examination—namely, Charles Cromhall Easterbrook, M.B., C.M., Edinburgh; John Cumming,

L.R.C.P.E., F.R.C.S.E., Edinburgh; Alexander Dingwall Fordyce, M.B., C.M., Edinburgh.

Admission to the Licence.—The Registrar reported that since last quarterly meeting 45 persons had obtained the Licence of the College by examination.

Recognition of Lecturer on Infectious Diseases.—Dr. Claude Buchanan Ker, M.R.C.P.E. (Edinburgh), was, after examination, recognised as Lecturer on Infectious Diseases, and the President conferred on him the certificate of qualification.

Laboratory.—The President announced that the Royal College of Surgeons of Edinburgh had intimated its intention to contribute £200 per annum towards the maintenance of the College laboratory, and moved that the cordial thanks of the College be given to the sister College for the very handsome contribution.

Bacteriological Diagnosis of Diphtheria and Typhoid Fever.—Intimation was made that the medical officer of health for the city was prepared, in the city hospital, to conduct examinations with a view to the bacteriological diagnosis of diphtheria and typhoid fever for the profession as the College, through its laboratory, had done in the past. It was accordingly resolved that the College should cease reporting regarding diphtheria and typhoid fever from May 15th, excepting for Fellows of the College and of the Royal College of Surgeons of Edinburgh.

Triple Qualification Regulations.—Draft regulations for the triple qualification examinations for the following year were approved. It was intimated that Dr. John Wyllie had been re-elected one of the representatives of the College on the Conjoint Committee of Management of the Triple Qualification for a period of three years.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: SAMUEL KEATS, Fleet-Surgeon, to the *Clyde*, April 20th; JAMES BRADLEY, M.D., Staff-Surgeon, to the *Colussus*, in lieu of a Surgeon, temporary, April 26th; FREDERICK J. A. DALTON, Surgeon, to Malta Hospital, May 7th; GEORGE LEY, Surgeon, to the *Surprise*, May 7th; JAMES P. WILLIS, M.B., Surgeon, to the *St. Vincent*, May 7th; GEORGE E. MACLEOD, Surgeon, to Malta Hospital, April 27th; HAROLD G. T. MAJOR, Surgeon, to the *Ramillies*, April 27th; HENRY W. M. REES, Surgeon to the *Isis*, April 27th; SYDNEY J. HAYLOCK, Surgeon, lent to the *Jaseur*, April 27th; HERBERT P. SHUTTLEWORTH, Staff-Surgeon, to the *President*, for temporary service at the Royal Victoria Yard, Deptford, from May 7th to June 16th inclusive.

ROYAL ARMY MEDICAL CORPS.

FROM Natal it is reported that Civil Surgeon GOODMAN is progressing favourably.

Captain WILLIAM G. BEYTS, from the Seconded List, to be Captain, *vice* M. L. Hughes, killed in action, March 24th. Captain BEYTS was seconded for service as Surgeon to the late Sir W. Lockhart, Commander-in-Chief in India.

Major RAYMOND, Captain THORN, and Captain O'REILLY are among those reported from Capetown as discharged from hospital for duty during the week ending April 22nd.

Surgeon-Captain SIMPSON, Militia Medical Staff; Major THURSTON, R.A.M.C.; and Civil Surgeons SCOTT, GRIFFITHS, ENGELBACH, and LEE have also returned from hospital to duty.

Surgeon-General NESBITT HEFFERNAN, M.B., died at Eton Lodge, Cheltenham, on May 3rd, in his 86th year. He was appointed Assistant-Surgeon, June 11th, 1841; Surgeon, November 7th, 1851: Surgeon-Major, June 11th, 1861; Deputy-Surgeon-General, March 9th, 1867; and Honorary Surgeon-General on retirement, April 28th, 1876. He had no war record in the Army Lists.

Surgeon-Captain SIMON LINTON, 1st Fife Volunteer Artillery, is granted the temporary rank of Captain whilst serving in South Africa, May 8th.

Surgeon-Lieutenant W. MACRAE TAYLOR, 1st Middlesex Volunteer Artillery, is granted the temporary rank of Lieutenant whilst serving in South Africa, May 8th.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN SIMON LINTON is promoted to be Surgeon-Major, April 28th.

Surgeon-Lieutenant CHARLES F. SPINKS, 1st Dumbartonshire Volunteer Rifles, is appointed Surgeon-Lieutenant, May 2nd.

INDIAN MEDICAL SERVICE.

THE undermentioned Lieutenants, having completed three years' full pay service, are promoted to be Captains, dated January 28th: ANDREW A. F. MCARDLE, JASPER M. WOOLLEY, CLAYTON A. LANE, M.D., THOMAS B. KELLY, JAMES H. HUGO, D.S.O., WILLIAM H. KENDRICK, CHARLES H. WATSON, CHARLES H. S. LINCOLN, RAYMOND H. PRICE, EDGAR F. E. BAINES, GEOFFREY O. F. SEALY, REGINALD BRYSON.

The retirement from the service of Lieutenant-Colonels ANDREW DEANE, M.D., and C. B. HUNTER, both of the Bengal Establishment, and which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approval of the Queen.

The undermentioned Majors, having completed twenty years' full-pay service, are promoted to be Lieutenant-Colonels, from March 31st:—*Bengal*—C. P. LUKIS, M.B.; R. R. H. WHITWELL, M.B.; L. A. WADDELL, M.B.; J. CLARKE, M.D.; P. D. PANK, T. R. MULRONEY, M.D.; T. R. MACDONALD, M.B. *Madras*—W. B. BROWNING, C.T.E.; C. M. THOMPSON, M.B.; C. S. RUNDLE, M.B.; J. W. EVANS. *Bombay*—H. P. DIMMOCK, M.D.; C. B. MAITLAND.

The undermentioned Captains, having completed twelve years' full-pay service, are promoted to be Majors, from March 31st:—*Bengal*—D. G. MARSHALL, M.B.; D. M MOIR, M.D.; F. W. GEE, M.B.; H. F. WHITCHURCH, V.C.; J. R. ROBERTS, M.B.; P. W. O'GORMAN, W. H. GRAY, M.B.; G. T. MOULD. *Madras*—A. E. GRANT, M.B.; F. C. PEREIRA, M.B. *Bombay*—J. G. HOJEI, M.B.; H. C. L ARNIM, G. S. THOMSON, M.B.

THE IMPERIAL YEOMANRY.

THE appointment of Mr. DOUGLAS PERCIVAL as Medical Officer, with the temporary rank of Captain, which was notified in the *Gazette* of February 2nd, is cancelled.

Mr. PERCIVAL DAVIDSON is appointed Medical Officer, with the temporary rank of Captain, February 3rd.

THE VOLUNTEERS.

SURGEON-CAPTAIN E. HAYDON, M.B., 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment, is promoted to be Surgeon-Major, May 2nd.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated May 2nd:—J. W. BONE, M.B., 3rd Volunteer Battalion the Bedfordshire Regiment; C. E. GODDARD, 5th (West) Middlesex Rifles; J. G. RONALD, M.B. 4th (Stirlingshire) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders.

Surgeon-Major E. WILLIAMS, from the 1st Lancashire Royal Engineers (Volunteers), to be Surgeon-Major 2nd Volunteer Battalion the Royal Welsh Fusiliers, May 2nd.

Mr. ANDREW F. WILSON-GUNN, M.B., is appointed Surgeon-Lieutenant in the 4th Volunteer Battalion the Cameronians (Scottish Rifles), May 2nd.

VOLUNTEER MEDICAL STAFF CORPS.

MR. WILFRED M. STEINTHAL is appointed Surgeon-Lieutenant in the Manchester Companies, May 2nd.

Messrs. FREDERIC W. WALKER and CHARLES H. LAWTON are appointed Quartermasters in the same companies from the same date.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PARTNERSHIP AGREEMENTS.

X. Y. Z. wishes for information on the following points: (1) A. proposes to buy a share of a practice at an agreed rate, on the condition that he may retire at the end of the third year or any year subsequent to that date. In the event of A.'s withdrawal from the practice, what refund is he entitled to according to custom? (2) What claim, in the event of A.'s death before or after the expiry of three years, would A.'s executors have to the share?

*** (1) In the event of A.'s withdrawing from the partnership, he would be entitled to the value of his share at the time of his withdrawal. Most partnership agreements specify how this value is to be determined. In some cases it is agreed that the retiring partner shall be paid out the sum he pays into the practice when he becomes a partner. (2) In the event of A.'s death, A.'s executors could claim all that A. was entitled to at the time of his death.

"DOCTORS' SHOPS.

P. G. L.—So far as we know, the only medical corporation which imposes any restrictions upon its diplomates in the matter of the sale of drugs is the Royal College of Physicians of London and even in that case the restriction applies only to Fellows and Members. It was a very common custom a generation ago for the apothecary to keep an open shop such as the immortal Mr. Bob Sawyer kept at Bristol with the assistance of his learned colleague Mr. Ben Allen. We know of no medical corporation which imposes any restriction as to the minimum fee to be charged by its diplomates.

DEFINITION OF A CONSULTANT.

REX.—Our correspondent asks us to tell him what is understood by the term "consultant" in the medical profession. The obvious answer is that it is one who practises in consultation; but so many so-called consultants visit patients at their own homes without the presence of another medical practitioner that the term has no such strict meaning as we gather from our correspondent's letter he would like to put upon it.

PRACTICE BY CORRESPONDENCE.

D.R.—The papers sent appear to show that the practitioner in question carries on a practice by means of consultations by letter and by filling up a printed form of questions. In our opinion it is not a proper way to carry on medical practice, but the point has never been raised, and we know of no formal condemnation which has ever been pronounced against it by any of the bodies governing the profession.

We should like, with our correspondent's sanction, to send the papers, but not our correspondent's letters, to the Registrar of the Royal College of Physicians of London, of which body this practitioner is a Licentiate.

BIOGRAPHIES IN NEWSPAPERS.

D.MCK.—We quite agree with our correspondent that the publication of personal notices and photographs of medical practitioners in newspapers is most objectionable, and we should be very glad to see some form of pronouncement against this growing practice on the part of those who have the power to regulate the conduct of the profession. As the lady is a member of the British Medical Association, we will refer the matter to the Ethical Committee.

IN pursuance of a project of forming a Professorship of Urinary Diseases in the University of Rome, the Italian Minister of Public Education offered the Chair to Professor Posner, of Berlin. The invitation has, however, been declined by that gentleman.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE REGISTRAR-GENERAL'S QUARTERLY RETURN.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE Registrar-General has just issued his return relating to the births and deaths registered in England and Wales during the first, or winter, quarter of this year, and to the marriages during the three months ending December, 1899. The marriage-rate was equal to 18.3 per 1,000, and was 0.6 per 1,000 higher than the average in the corresponding quarters of the ten preceding years.

The births registered in England and Wales during the quarter ending March last numbered 239,988, and were equal to an annual rate of 30.3 per 1,000 of the population, estimated by the Registrar-General to be more than thirty-two millions in the middle of this year. This rate was 0.2 per 1,000 above the mean rate in the first quarters of the ten preceding years. The birth-rates in the several counties ranged from 22.4 in Westmorland, 23.1 in Sussex, 23.5 in Rutland, and 23.7 in Berkshire, to 34.4 in Warwickshire, 35.0 in Northumberland, 36.9 in Staffordshire, and 37.0 in Durham. In thirty-three of the largest English towns, including London, the birth-rate last quarter averaged 31.0 per 1,000, and exceeded by 0.7 the general English rate. In London the birth-rate was equal to 30.4 per 1,000, while it averaged 31.3 in the thirty-two provincial towns, among which it ranged from 22.3 in Halifax, 23.4 in Bradford, 23.9 in Brighton, and 24.0 in Huddersfield, to 36.8 in Wolverhampton, 37.0 in Gateshead, 38.4 in Liverpool, and 38.6 in Sunderland.

The births registered in England and Wales during the three months ending March last exceeded the deaths by 58,675; this represents the natural increase of the population during that period. From returns issued by the Board of Trade, it appears that 42,237 emigrants embarked during last quarter, for places outside Europe, from the various ports of the United Kingdom at which emigration officers are stationed. Of these 42,237 emigrants, 15,819 were English, 2,611 Scotch, and 5,306 Irish, while 18,501 others were of foreign nationality. Compared with the averages in the corresponding quarters of recent years, the proportion of English and of Scotch emigrants showed a decline, while that of Irish emigrants greatly exceeded the average.

During the first quarter of the year the deaths of 181,313 persons were registered in England and Wales, equal to an annual rate of 22.9 per 1,000 of the population, the average rate being 18.4 per 1,000 in the corresponding quarters of the ten preceding years. The lowest county death-rates last quarter were 16.4 in Middlesex, 19.4 in Bedfordshire, 19.6 in Essex, and 19.8 in Sussex, while the highest rates were 25.6 in Lancashire and in the North Riding of Yorkshire, 25.7 in Norfolk, 26.0 in Shropshire, and 26.5 in North Wales. In the urban population of England and Wales, estimated at about twenty-two millions, the rate of mortality during the quarter under notice was 23.0 per 1,000; while in the remaining and chiefly rural population of about ten millions the rate was 22.6 per 1,000. These urban and rural rates were 1.8 and 2.7 per 1,000 respectively above the averages in the corresponding quarters of the ten preceding years. Among thirty-three of the largest English towns the mean death-rate was 23.6 per 1,000, or 0.7 in excess of the general English death-rate during the same period. In London the rate was 23.2 per 1,000, while it averaged 23.8 in the thirty-two provincial towns, among which the rates ranged from 15.5 in Cardiff, 17.9 in West Ham and in Huddersfield, 18.5 in Swansea, and 18.6 in Bristol, to 29.8 in Salford, 31.4 in Liverpool, 31.6 in Wolverhampton, and 33.8 in Preston. In sixty-seven other large towns, with an estimated aggregate population of more than four millions, the mean death-rate was 21.8 per 1,000, or 1.8 below the average rate in the thirty-three great towns.

The 181,313 deaths registered in England and Wales during the three months ending March last included 3,241 which were referred to measles, 3,129 to whooping-cough, 2,722 to diphtheria, 1,242 to diarrhœa, 1,211 to "fever" (including typhus, enteric, and ill-defined forms of continued fever), 1,025 to scarlet fever, and 33 to small-pox; in all 12,603 deaths resulted from these principal zymotic diseases, equal to an annual rate of 1.59 per 1,000, which was 0.06 below the average rate in the first quarters of the ten preceding years. The mortality from diphtheria was above the average, that from measles and from "fever" corresponded with the average; while from small-pox, scarlet fever, whooping-cough, and diarrhœa the death-rates showed a decline. Of the 33 deaths from small-pox registered in England and Wales during the quarter under notice, 21 belonged to the borough of Hull.

The rate of infant mortality in England and Wales last quarter, or the proportion of deaths under 1 year of age to registered births, was equal to 148 per 1,000, and slightly exceeded the average rate in the corresponding periods of the ten preceding years. In thirty-three of the largest English towns the rate of infant mortality averaged 157 per 1,000; in London the rate was 139 per thousand, while it averaged 161 in the thirty-two large provincial towns, among which it ranged from 99 in Huddersfield, 114 in Bristol, 126 in Portsmouth, and 128 in Croydon, to 202 in Blackburn, 210 in Salford, 210 in Wolverhampton, and 220 in Preston. The mortality in England and Wales last quarter among persons aged between 1 and 60 years was equal to 11.1 per 1,000 of the estimated population at this group of ages, and was 0.5 per 1,000 above the mean rate in the ten preceding first quarters. In the thirty-three great towns the mortality at this age-group averaged 12.8 per 1,000, and ranged from 8.6 in Croydon, 9.3 in Cardiff and in Huddersfield, and 9.4 in Norwich, to 15.3 in Wolverhampton and in Manchester, 17.0 in Salford, 18.6 in Preston, and 18.7 in Liverpool. Among persons aged 60 years and upwards, the death-rate in England and Wales last quarter was equal to 113.5 per 1,000 estimated population at this age-group, against an average rate of 90.9 in the corresponding quarters of the ten preceding years. In the thirty-three great towns the rate was 119.3 per 1,000, ranging from 72.2 in Cardiff, 90.9 in Swansea, 92.3 in Bristol, and 94.1 in Portsmouth, to 141.5 in Liverpool, 141.7 in Salford, 144.7 in Blackburn, and 164.2 in Preston.

The mean temperature of the air at the Royal Observatory, Greenwich, was 39.2°, and was 0.2° above the average in the corresponding quarters of 129 years; it showed an excess of 3.7° in January, but in February and March it was 0.4° and 2.6° respectively below the average. The rainfall during the quarter amounted to 6.78 inches, and was 1.85 inch above the average.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,896 births and 4,362 deaths were registered during the week ending Saturday last, May 5th. The annual rate of mortality in these towns, which had decreased from 23.0 to 20.3 per 1,000 in the four preceding weeks, further declined last week to 19.6. The rates in the several towns ranged from 13.3 in Gateshead, 13.4 in Portsmouth, 13.8 in Burnley, and 14.0 in Hull, to 27.2 in Manchester, 27.6 in Plymouth, 28.1 in Blackburn, and 30.3 in Wolverhampton. In the thirty-two large provincial towns the death-rate averaged 20.0 per 1,000, and exceeded by 1.0 the rate recorded in London, which was 19.0 per 1,000. The zymotic death-rate in the thirty-three towns was 1.9 per 1,000; in London the rate was equal to 1.8 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.5 in Wolverhampton, 3.8 in Cardiff and in Salford, 4.6 in Plymouth, and 5.7 in Blackburn. Measles caused a death-rate of 2.2 in Bristol, 2.4 in Derby, 2.7 in Blackburn, 3.5 in Cardiff, and 3.6 in Plymouth; scarlet fever of 1.0 in Oldham, and 1.5 in Blackburn; and whooping-cough of 1.1 in Portsmouth, 1.2 in Wolverhampton, 1.3 in Bolton, 1.4 in Oldham, 1.8 in Manchester, and 1.9 in Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 58 deaths from diphtheria in the thirty-three towns included 21 in London, 5 in Leeds, 5 in Sheffield, 4 in West Ham, 4 in Bristol, and 4 in Liverpool. No fatal case of small-pox was registered last week either in London or in any of the thirty-two provincial towns. There were 6 cases of small-pox under treatment in the Metropolitan Asylums Hospitals on Saturday last, May 5th, against 3, 4, and 6 at the end of the three preceding weeks; no new case was admitted during the week, against 2.2 and 5 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had declined from 1,713 to 1,647 at the end of the four preceding weeks, had risen to 1,660 on Saturday last: 176 new cases were admitted during the week, against 189, 165, and 170 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 5th, 1,069 births and 635 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.0 and 21.7 per 1,000 in the two preceding weeks, declined again last week to 20.5 per 1,000, but was 0.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 15.9 in Leith and 17.9 in Paisley, to 21.9 in Perth and 23.1 in Edinburgh. The zymotic death-rate in these towns averaged 2.1 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 296 deaths registered in Glasgow included 11 from measles, 2 from scarlet fever, 14 from whooping-cough, 5 from "fever," and 4 from diarrhœa. Two fatal cases of measles, 2 of diphtheria, and 2 of whooping-cough were recorded in Edinburgh; 3 deaths from diarrhœa occurred in Dundee; and 2 from diphtheria, 5 from whooping-cough, and 4 from diarrhœa in Aberdeen.

THE LINCOLN WORKHOUSE.

THE Lincoln Board of Guardians have got themselves into a curious dilemma. Dr. MacFarland was appointed medical officer of the workhouse some little time ago at a salary of £60 a year. On various grounds he resigned, and the Board resolved to advertise for a medical officer at a salary of £70 a year, but no candidate applied for the appointment, and one of the members of the Board appears to have asserted that this was due to the fact that the Lincoln Medical Society had boycotted the Board. At the meeting of the Board on April 3rd this insinuation was withdrawn, but the Board was still without any candidate. The Chairman expressed the opinion that there were plenty of young men who would be glad of the appointment to start with, and it was resolved to advertise again. We can hardly think that this expression of opinion rests upon any very large experience of the medical profession, and we are inclined to hope that the Lincoln Board of Guardians may yet have materially to increase the remuneration which they offer before finding a suitable incumbent for the post. It is, we think, clear that it is not an appointment which any practitioner not resident in Lincoln will find it desirable to apply for, even at the salary of £80 which has been mentioned.

CERTIFICATES FOR CLOSING SCHOOLS.

T.P. asks: Is the M.O.H. of a district called upon as part of his duty to visit schools *re* infectious disease existing, and give certificates for closing? Is he not entitled to some remuneration beyond what he receives for his ordinary duties? If so, what is customary?

*** We do not find, at any rate in the larger towns, that the M.O.H. makes any charge for signing certificates required for securing attendance grants. In such towns he is often, however, a whole-time officer, and has a staff of inspectors under him. The personal visit to a school is by no means always necessary. The M.O.H. is presumably acquainted with the localities in which infectious disease is prevalent within his district, and the school managers will furnish a list of absentees. If a request to visit is made by the managers for their own benefit, it is of course right that they should pay. If, however, the visit is made in consequence of instructions from the sanitary authority, it is to them that he must look for extra remuneration for special work under Article 14 of the Local Government Board's General Order (officers) of March 23rd, 1891. The authority might, however, be inclined to consider his action as included in advising "the persons.....as to the measures..... required to prevent the extention of the disease ....." (Article 18, Subsection (6) of Order above referred to).

MEDICAL NEWS.

It has been decided to erect a sanatorium for tuberculous poor in the province of Vercelli. This, it is stated, will be the first institution of the kind in Italy.

The midwives of Finland have arranged, with the sanction of the Finnish Senate, to hold a Congress at Helsingfors in June of the present year.

The Association of Military Surgeons of the United States will hold its next annual meeting in New York on May 31st and June 1st and 2nd.

The Leicester and Leicestershire Branch of the National Association for the Prevention of Consumption held its annual meeting on April 27th. The position of the Society, both financially and in numbers of members, was satisfactory, and the amount of work done was gratifying. The Society had made special efforts to induce local agriculturalists to provide larger and better ventilated cowsheds. Sir James Crichton-Browne gave an address on the general subject of tuberculosis.

Medico-Psychological Association.—The spring meeting of the South-Eastern Division was held at the City of London Asylum, near Dartford, Kent, on April 25th; twenty-two members were present. In the morning a visit was paid to the asylum, upon which the Corporation of London have spent £80,000 during the last two or three years. A luncheon followed, after which the general meeting was held, when Dr. Ernest White, the Medical Superintendent of the Asylum and Divisional Secretary, read a paper upon the Remodelling of an Old Asylum, and Dr. Arthur Patterson one upon An Analysis of One Thousand Consecutive Admissions into the City of London Asylum from January 1st, 1892, to December 31st, 1899. In the evening the members and visitors dined together at the Café Monico.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH: ROYAL UNITED HOSPITAL.—House-Surgeon for four months. Salary at the rate of £100 per annum, with board, lodging, and washing. Applications to the Secretary by May 15th.

BIRKENHEAD BOROUGH HOSPITAL.—Visiting House-Surgeon. Salary, £75 per annum, with board, lodging, and washing, and certain fees. Applications to the Chairman of the Weekly Board by May 21st.

BIRMINGHAM GENERAL DISPENSARY.—Resident Locums for two or three months. Terms 4 guineas per week, with furnished apartments. Applications to the Secretary by May 28th.

BIRMINGHAM: GENERAL HOSPITAL.—(1) House-Surgeon. (2) Two Assistant House-Physicians. Appointments for six months. Board, residence, and washing provided, but no salary. Applications to the House-Governor by May 26th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by May 14th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright Street.—Clinical Assistant. Applications to the Secretary of the Medical Committee by June 4th.

BOOTLE BOROUGH HOSPITAL.—Senior Resident. Salary, £100 per annum, with board, etc. Applications to the Secretary.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) House-Physician. Salary at the rate of £50 per annum. (2) Resident Pathologist. Salary at the rate of £40 per annum. Board, washing, and residence provided in each case. Candidates must be unmarried and under 30 years of age when elected. Applications to the Secretary by May 30th and 23rd respectively.

BRISTOL ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum, with rooms and attendance, not board. Applications, endorsed "House-Surgeon," to be sent to the Secretary by May 23rd.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CARLISLE: CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer; unmarried. Salary, £130 per annum, rising to £150, with board and residence. Applications to the Medical Superintendent.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Secretary.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to the Secretary by May 25th.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence at £80 per annum, with board, residence, and washing. Applications to the Secretary.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, commencing at £100 per annum, with board, residence, and washing. Applications, endorsed "House-Surgeon," to the Secretary by May 23rd.

DUNDEE ROYAL INFIRMARY.—Resident Medical Assistant. Appointment for six months. Salary at the rate of £40 per annum, with board, and washing. Applications to Dr. Fraser, Medical Superintendent, by May 16th.

DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary, £170 per annum, rising to £220, with rooms, board, laundry, and attendance. Applications to the Medical Superintendent.

EDINBURGH: CRAIGLOCKHART POORHOUSE AND HOSPITAL.—Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk of the Parish Council, Castle Terrace, Edinburgh, by May 21st.

FULHAM, PARISH OF.—Second Assistant Medical Officer for the Infirmary, Fulham Palace Road. Appointment for six months. Salary at the rate of £60 per annum, with board, [illegible]. Applications to the Medical Superintendent at the Infirmary by May 15th.

GATESHEAD UNION.—Assistant Resident Medical Officer. Salary, £150 per annum, with furnished apartments, rations, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to the Union Clerk, Poor-law Offices, Prince Consort Road, Gateshead, by May 29th.

GLASGOW FEVER HOSPITAL.—Physician Superintendent at Belvidere Hospital, not over 40 years of age. Salary, £400 per annum, with house accommodation, board, and attendance. Applications marked "Physician Superintendent" to Mr. J. Lindsey, Int. Clerk, Corporation of Glasgow, City Chambers, Glasgow, by May 14th.

GLASGOW UNIVERSITY.—Examiner for Degrees in Medicine, with special qualifications to examine in Practice of Medicine (Systematic and Clinical). Salary, £50 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by May 23rd.

GREAT NORTHERN CENTRAL HOSPITAL.—(1) House-Physician. (2) Junior House-Physician. Appointments for six months. Salaries at the rate of £60 and £30 per annum respectively, with board, lodging, and washing. Applications to the Secretary by June 15th.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon: unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Vacancy on the Honorary Medical Staff. Applications to the Honorary Secretary, 13, Kilburn Park Road, N.W., by May 26th.

LEAMINGTON: WARNEFORD HOSPITAL. House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications on forms provided to be sent to the Secretary by May 26th.

LEEDS: GENERAL INFIRMARY.—House-Surgeon. Board, lodging, and washing provided. Applications to the Secretary to the Faculty by May 15th.

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent, The Lawn, Lincoln.

LIVERPOOL DISPENSARIES.—Assistant Surgeon; unmarried. Salary, £100 per annum, with board and apartments. Applications to the Secretary, 34, Moorfields, Liverpool.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by May 24th.

LIVERPOOL: ROYAL SOUTHERN HOSPITAL.—(1) Honorary Physician. (2) Junior House-Surgeon. Salary, including board, £84 per annum, and bonus £5 5s. at the end of every three months. Applications for the first to be sent to the Secretary by May 22nd, and for the latter to the Chairman of the Medical Board.

LONDON TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Assistant Resident Medical Officer. Appointment for six months. Honorarium at the rate of 50 guineas per annum, with residence, board, and washing. Applications to the Secretary by May 17th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary.

MAIDSTONE: KENT COUNTY OPHTHALMIC HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to Mr. M. A. Adams, F.R.C.S. Honorary Surgeon, Trinity House, Maidstone, by May 25th.

MIDDLESEX HOSPITAL, W.—Dental Surgeon. Applications to the Secretary-Superintendent by May 24th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Resident Medical Officer. Appointment for six months, with prospect of re-election as Senior. Salary, £40 per annum, with board, attendance, and washing. Applications to the Secretary by May 12th.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) House-Physician. (2) House-Surgeon. (3) Two Assistant Anæsthetists. (4) Three Clinical Assistants. Candidates must be fully-qualified medical women. Applications to the Secretary by May 30th.

NORTHAMPTON GENERAL INFIRMARY.—Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months; the Junior is eligible for election to the Senior post. Salary at the rate of £50 per annum attached to each. Candidates to attend meeting of the Medical Committee on May 21st.

NOTTINGHAM: CHILDREN'S HOSPITAL.—House-Surgeon, non-resident. Appointment for six months but eligible for re-election. Salary at the rate of £100 per annum. Applications to the Secretary.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary, £140 per annum, with all found except board. Applications to the Secretary.

PENDLEBURY: MANCHESTER CHILDREN'S HOSPITAL.—Medical Officer. Salary, £180 per annum. Applications to the Secretary, Children's Dispensary, Gartside Street, Manchester, by May 16th.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—Assistant Resident Medical Officer; unmarried. Appointment in first instance for six months. Salary at the rate of £30 per annum, with board, residence, laundry, etc. Applications to the Secretary by May 14th.

PORTSMOUTH: ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by May 23rd.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Clinical Assistants. Appointments for six months. Applications to the Secretary by May 26th.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—House-Surgeon; unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Dr. Martin, Claremont Place, Sheffield, by May 22nd.

SHOREDITCH, PARISH OF ST. LEONARD.—Second Assistant Medical Officer for the Infirmary, Hoxton Street, N. Appointment for six months. Salary at the rate of £80 per annum, with rations, washing and furnished apartments. Applications on forms provided to be sent to the Clerk, 213, Kingsland Road, N.E., by May 21st.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHPORT INFIRMARY.—Resident Senior House-Surgeon. Salary, £80 per annum and all found. Applications to the Secretary by May 23rd.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and allowance. Applications to the House Committee.

THREE COUNTIES ASYLUM, near Hitchin.—Second Assistant Medical Officer, under 30 years of age, and unmarried. Salary, commencing at £150, with board, apartments washing, and attendance. Applications to Mr. F. C. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by May 21st.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary, £130 a year, with board, washing, and attendance. Applications to the Committee by May 22nd.

MEDICAL APPOINTMENTS.

Benson, P. L. M.A., M.D., R.U.I., D.P.H.Camb., reappointed Medical Officer of Health for the Rural District of Buckingham.

Boake, Samuel, L.R.C.P., L.R.C.S.I., appointed Medical Officer for the Ilminster No. 1 District of the Chard Union.

Collins, E. Treacher, F.R.C.S.Eng., appointed Surgeon to the Royal London Ophthalmic Hospital.

Edwardes-Kee, G. C., L.R.C.P., M.R.C.S., reappointed Medical Officer of Health to the Woodbridge District Council.

FISHER, J. H., M.B., B.S.Lond., F.R.C.S.Eng., appointed Assistant Surgeon to the Royal London Ophthalmic Hospital.

FLEMMING, Percy, M.D.Lond., F.R.C.S.Eng., appointed Assistant Surgeon to the Royal London Ophthalmic Hospital.

GORDON, Colin, M.B.Edin., appointed Medical Referee under the Workmen's Compensation Act, 1897, to County Court Circuit No. 57, including Taunton, Bridgwater, Chard, Langdon, Wellington, and Williton.

JACOBSEN, G. O., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Fourth District of the Chipping Norton Union, *vice* W. J. Nicholls, L.R.C.P.Edin., M.R.C.S. Eng., resigned.

KENNEDY, Robert, M.A., M.D., D.Sc.Glasg., late Dispensary Surgeon, appointed Assistant Surgeon to the Western Infirmary, Glasgow.

LAWSON, Arnold, F.R.C.S.Eng., appointed Assistant Surgeon to the Royal London Ophthalmic Hospital.

MACDONNELL, E. R. A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Litcham District of the Mitford and Launditch Union, *vice* D. Hopkins, resigned.

M'NABB, H. J., M.B.R.U.I., appointed Assistant Medical Officer to the co. Down Infirmary.

NEWMAN, G., M.D.Edin., D.P.H.Camb., appointed Medical Officer of Health for Clerkenwell, *vice* John Glaister, M.D., deceased.

NORMAN, A. S., L.R.C.P., M.R.C.S.Eng., D.P.H.Camb., appointed Medical Officer for the Second District and Workhouse of the Havant Union, *vice* W. Bannister, M.R.C.S., Eng., resigned.

RENNIE, George E., M.D., M.R.C.P.Lond., appointed Honorary Assistant Physician to Prince Alfred Hospital, Sydney, and Acting Tutor in Clinical Medicine, University of Sydney.

RIMMER, J. F., M.B., Ch.B.Vict., appointed Resident Assistant Medical Officer to the Workhouse of the Birkenhead Union, *vice* A. Ingram, M.B., C.M.Edin., resigned.

ROBERTS, Kilham, M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer of Health for the combined Ampthill and Woburn Rural Districts.

SPICER, W. T. Holmes, M.A., M.B.Camb., F.R.C.S.Eng., appointed Surgeon to the Royal London Ophthalmic Hospital.

THOMPSON, W. G., M.B., Ch.B.Edin., appointed House-Surgeon to the Monkwearmouth and Southwick Hospital, *vice* J. Wilkie Scott, M.B., Ch.B., resigned.

WOLFENDALE, G. A., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Third District of the Northleach Union, *vice* D. Iles, M.R.C.S., deceased.

YOUNG, Alfred A., M.A., M.B., C.M.Glasg., late Dispensary Surgeon, appointed Assistant Surgeon, Western Infirmary, Glasgow.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square.—The following staff promotions and appointments have been recently made:—

Consulting Physicians (retaining charge of a certain number of beds),—J. Hughlings Jackson, M.D., F.R.C.P.Lond., F.R.S.; Thomas Buzzard, M.D., F.R.C.P. Lond.

Physicians.—David Ferrier, M.D., F.R.C.P.Lond., F.R.S.; J. A. Ormerod, M.D., F.R.C.P.Lond.

Physicians for Out-patients.—James Taylor, M.D., F.R.C.P.Lond.; J. Risien Russell, M.D., F.R.C.P.Lond.

Assistant-Physicians.—W. A. Turner, M.D., F.R.C.P.Lond.; F. E. Batten, M.D., M.R.C.P.Lond.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8 P.M.—General meeting for the election of officers and council for next session. 8.30 P.M.—Ordinary meeting. Mr. J. Hutchinson, jun.: Excision of the Gasserian Ganglion for Trigeminal Neuralgia, with series of Cases. Dr. A. Morison: A Clinical Study of the Causes of the First Sound of the Heart.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Radcliffe Crocker: Consultation. (Skin.)

TUESDAY.

Pathological Society of London, Bacteriological Laboratory, King's College, Strand, 8 P.M.—Papers and demonstrations by Professor Crookshank, Drs. Bulloch and Hunter, Dr. Hewlett, Dr. Newman, Drs. Hewlett and Rowland, Dr. MacFadyen, Dr. Drysdale, Mr. Shattock, Dr. Price Jones, and Dr. Nash.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Seymour Taylor: Consultation. (Medical.) 6P.M.—Dr. E. Squire: Class. Applied Anatomy. Demonstration I.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Dr. Risien Russell: Sclerosis of Spinal Cord. (Lantern Demonstration.)

WEDNESDAY.

Royal Meteorological Society, 70, Victoria Street, Westminster, S.W., 4.30 P.M.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Mr. A. H. Tubby: Varieties of Coxitis. Post-Graduate Course.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. R. Harrison: Consultation. (Surgical.)

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. T. H. Kellock: Demonstration of Selected Cases.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Stanley Boyd: Surgical Cases.

Harveian Society of London, Stafford Rooms, Tichborne Street, Edgware Road, W., 8.30 P.M.—Dr. Dudley Buxton: Incidents in Surgical Anæsthesia.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Dundas Grant: Consultation. (Ear.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

COOKE.—At Lanowli, near Bombay, on March 30th, the wife of Dr. E. Hunt Cooke, M.A., of a son.

DUNWOODY.—On May 6th, at The Grange, Ely, Cambs, the wife of W. G. Dunwoody, B.A., M.D., of a daughter.

HICKMAN.—On Saturday, April 28th, at Overton House, Wanstead, Essex, the wife of Herbert V. Hickman, M.B.Lond., M.R.C.S., L.R.C.P., of a son.

PRIOR.—On May 5th, at Mulgrave House, Dalton, Huddersfield, Emma P., the wife of Samuel Prior, M.B., C.M.Glasg., of a son, who was named John Peile.

DEATHS.

HALL.—On March 20th, at the Officers' Hospital, Mooi River, Natal, Arthur William Hall, F.R.C.S.Edin., of Durban, Natal. Lieutenant Natal Volunteer Medical Corps, aged 38 years, of enteric fever and pneumonia, contracted while on active service at the military hospital at Frere.

HIGBET.—At Singapore, on April 7th, Douglas Athelstan Campbell, only son of H. Campbell Higbet, M.D., Physician to the Royal Palace, Bangkok, aged 19 months.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Tu., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Tu., 2.30; Throat, M., 1.30 F., 3; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 3; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9. Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45; o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children), 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th., 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

E.M.S. will be glad to be told of any simple method, without special apparatus, for detecting the presence of animal fat in butter.

VARICOSE ULCERS OF LEG.

L.S.A. asks for suggestions in the treatment of a patient, aged 55, in fairly good health, who has varicose ulcers of the leg, the usual remedies having failed. The ulcers, formerly healthy, are now covered with a thick grey membrane which reforms after removal.

THE CHILD-BEARING PERIOD IN HINDU WOMEN.

POINT (Brighton) asks: 1. At what age are Hindu women considered to be past child bearing? 2. What is the greatest age known at which such a woman has given birth? 3. Would continued residence in Great Britain of such a woman tend to postpone the "change of life," and if so to what extent?

*** No trustworthy information is available. The natives of India, especially women, do not know their own ages. Native women menstruate and conceive earlier than English women, but when they leave off menstruating and conceiving it is impossible to say.

ANSWERS.

COTTAGE HOSPITALS.

H. H. P.—The general rule, as stated in Burdett's *Cottage Hospitals*, is that "Any legally qualified medical practitioner residing in the district shall be allowed to attend cases sent by him to the hospital."

DIRTY HABITS.

DR. W. H. NASH (Dublin) writes: In reply to "Spero," I had a quite similar case in a child somewhat younger. I told the mother to insert a soap suppository at the usual time of defæcation, and keep the child on the utensil till defæcation occurred. To be repeated a couple of times or so. This broke the habit, and effectually stopped it in my case. The child should be set down to stool twice daily at regular times. If soap fail, a small cnema might be given.

INCOME TAX.

J.T.—The facts are scarcely sufficiently stated to enable a decided answer to be given. But if the partner paid J.T. the £500 nett income which he guaranteed, J.T. is clearly liable to tax thereon, less the statutory abatement. If, on the other hand, J.T. received only a share of the practice, he is liable on his nett profits, less the abatement. Our correspondent might consult the Income Tax Repayment Agency, 6 Chichester Road, Paddington.

THE CEPHALIC INDEX.

A. S. G.—The term "cephalic index" was invented and proposed by an illustrious Swedish professor, Anders Retzius, to signify the proportion borne by the maximum breadth of the head to the maximum length of it, the latter being taken as 100. He thought it the most important differential characteristic of the human skull, and employed it as a means of discriminating one race from another. Its value in this respect did not prove quite so great as Retzius anticipated: even in what are commonly described as pure races it may vary in individuals by 6 or 8 unities; but it is still constantly employed by anthropologists. When it amounts to or exceeds 80 the index is "brachycephalic;" when below 75 "dolichocephalic;" when between these figures it is "mesocephalic" or "mesaticephalic." Thus the English, taken *en masse*, are mesocephalic, the Swiss brachycephalic, the Sardinians dolichocephalic. There is a tendency of late years to apply the term "cranial" to the index got from the bare skull, and to confine the term "cephalic" to that got from the living subject, which latter is larger by one or even two figures.

A SMALL LIBRARY.

G.—The following works may be consulted on the various subjects mentioned by our correspondent:

1. *Spas and Mineral Waters of Europe*, by Sir Hermann Weber, M.D., and F. Parkes Weber, M.D. (London, Smith, Elder, and Co., 1896, 6s.); *The Climates and Baths of Great Britain, being a Report of a Committee of the Royal Medical and Chirurgical Society*, vol. i (London, Macmillan and Co., 1895, 10s. 6d.), dealing with the South of England and the chief medical springs of Great Britain.

2. *Hygiene and Diseases of Warm Climates*, edited by Dr. Andrew Davidson (London, Young J. Pentland, 1893, 31s. 6d.); *Tropical Diseases*, by Patrick Manson, C.M.G., M.D. (London, Cassell and Co., 1898., 10s. 6d.).

3. *The Operations of Surgery*, by W. H. A. Jacobson, M.Ch., F.R.C.S., third edition (London, J. and A. Churchill, 1897, 34s.); *A Manual of Operative Surgery*, by L. A. Stimson, B.A., M.D., and J. Rogers, jun., B.A., M.D., third edition (London, H. K. Lewis, 1897, 12s. 6d.); *A Manual of Operative Surgery*, by F. Treves, F.R.C.S., in two volumes (London, Cassell and Co., 1891, 42s.); *Manual of Operative Surgery*, by H. J. Waring (Edinburgh and London, Young J. Pentland, 10s.)

4. *A System of Medicine*, edited by T. Clifford Allbutt, in eight volumes (London, Macmillan and Co., 1896-1900, 25s. each volume); *Textbook of the Principles and Practice of Medicine*, by C. H. Fagge and P. H. Pye-Smith, third edition (London, J. and A. Churchill, 1891, 40s.); *System of Practical Medicine*, by A. L. Loomis and W. G. Thompson, in 4 volumes (London, Henry Kimpton, 1897-98, 25s. each volume); *The Principles and Practice of Medicine*, by W. Osler, third edition (Edinburgh and London, Young J. Pentland, 1898, 24s.); *The Theory and Practice of Medicine*, by F. T. Roberts (London, H. K. Lewis, 1894, 21s.).

5. *Diseases of Women*, by G. E. Herman (London, Cassell and Co., 1898, 25s.); *American Textbook of Gynæcology*, by J. M. Baldy, second edition (London, Rebman, Limited, 1898, 34s.).

6. *Insanity and its Treatment*, by G. F. Blandford, fourth edition (1892, 10s. 6d.); *Clinical Lectures on Mental Diseases*, by T. S. Clouston, fourth edition (London, J. and A. Churchill, 1896, 14s.); *Insanity and Allied Neuroses*, by G. H. Savage (1891, 9s.)

NOTES, LETTERS, Etc.

THE R.A.M.C. IN THE HEARTS OF THEIR COUNTRYMEN.

OBSERVER writes: A straw sometimes shows how the wind blows. On May 7th, when London was swarming on to the Embankment to see the men of the *Powerful* march into the City, I was passing along a well-known thoroughfare a mile away. I heard some shrill boyish voices singing "Rule Britannia," and presently some twenty or thirty small ragamuffins passed, marching two abreast, with brown paper cocked hats and leggings. The rear was brought up by an ambulance detachment. Two rather bigger boys had got a couple of broom sticks, which they had pushed lengthwise through an old sack, thus making a stretcher. In the stretcher was a very small boy, who had been dressed for the part of the wounded man by tying a handkerchief round his head. This incident, trivial in itself, shows, I think, how much the splendid work done by the R.A.M.C. in this war has laid hold of the imagination of the people.

VOLUNTEER MEDICAL STAFF CORPS RELIEF FUND.

SURGEON-MAJOR VALENTINE MATTHEWS, V.M.S.C., Honorary Secretary, Headquarters, London Company, V.M.S.C., 51, Calthorpe Street, W.C., writes: This Fund is established to assist the families, on or off the strength, of non-commissioned officers and men of the Royal Army Medical Corps on active service in South Africa. All moneys received will be handed over to the Royal Army Medical Corps Depôt Mobilisation Relief Fund, Aldershot.

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No. 4 London Company V.M.S.C. (additional) ...	0	2	6

Also a parcel of clothing from Mrs. Hensley, Chepstow.

LETTERS COMMUNICATIONS, ETC., have been received from

A Apothecary; Association of Registered Medical Women, Secretary of the, London; Another Victim; Mr. E. Ackermann, Para. **B** Mr. W. J. T. Barker, London; Mr. G. F. Blatter, Dublin; Mr. G. H. Broadbent, Manchester; Dr. J. Beddoe, Bradford-on-Avon; W. B. Bell, M.B., Wallasey; Mr. J. Bland-Sutton, London; Dr. T. Beattie, Newcastle-on-Tyne; Dr. W. L. Blight, Cardiff. **C** Dr. J. G. Clegg, Manchester; F. W. Clark, M.B., Hong Kong; Dr. M. Craig, London; Dr. J. Calvert, London. **D** Depechery; J. L. Dickie, M.B., Ganhati; Dr. A. Duke, Cheltenham; Mr. J. J. Dales, Middlesbrough; Mr. R. Dennis, London; Derbyshire. **F** G. W. Farmer, M.B., Oxford; Dr. C. H. Frazier, Philadelphia; Dr. W. F. Farquharson, Carlisle; C. H. Fagge, M.B., London; Mr. W. T. Freeman, Reading. **G** General Practitioner; T. H. Godfrey, M.B., London; G. B. B.; A. R. Galloway, M.B., Aberdeen; W. R. Gore, M.B., Whitchurch; Mr. W. Gosse, Sittingbourne; Miss G. H. Giffen, Edinburgh. **H** Dr. J. A. Harris, Chorley; Mr. E. Holthouse, London; Mr. T. G. Horder, Cardiff; Mr. J. G. Head, Capetown; Miss A. Hadwen, Gloucester; Dr. J. P. Henry, London; Dr. W. J. Harris, London; Dr. J. Harper, London; Mr. C. Holthouse, Richmond, Surrey; Mr. R. D. Horne, York; Dr. A. W. Harrison, Mossley; Dr. T. A. Helme, Manchester. **I** I. M. S.; Income Tax: Inquirer. **K** Dr. S. A. Knopf, New York; Mr. J. Keen, Waddesdon. **L** Mr. M. Lomax, Leamington Spa; Lex; L.S.A. **M** Mr. D. McKenzie, Leytonstone; Mr. H. H. B. Macleod, Shrewsbury; M.D.; Dr. J. C. Mackay, St. Columb; F. MacRae, M.B., London; Dr. C. J. Morton, Walthamstow; Member; Metal; Mr. V. Matthews, London; Mr. J. C. McWalter, Dublin; M.D, M.S.; Dr. H. Mackenzie, Edinburgh. **N** Mr. W. H. Nash, Dublin. **O** W. Overend, M.B., Clacton-on-Sea; Outsider; Obstetrical Society of London, Secretary of, London. **P** Mr. G. C. Peachey, Wantage; Dr. W. S. Playfair, London; Mr. H. C. Phillips, London; Public Vaccinator. **R** Mr. A. Renshaw, Sale; Mr. A. R. Rendle, Devonport; Dr. R. R. Rentoul, Liverpool; Dr. H. S. Renshaw, Sale; Mr. J. A. Rawlings, Swansea. **S** Hon. W. F. D. Smith, M.P., London; Dr. S. Sunderland, London; Dr. R. Sevestre, Leicester; Rev. S. D. Sanders, Thornton Heath; A. J. B. Squire, M.B., London; Surgeon-Captain; Mr. R. Stewart, London; Southsea. **T** Mr. C. Terry, Newport Pagnell. **U** Ut Prosim. **W** Dr. F. J. Waldo, London; Dr. T. J. Wood, Bradford; etc.

BOOKS, ETC., RECEIVED.

A Treatise on Nasal Suppuration. By Dr. L. Grünwald. Translated from the Second German Edition by W. Lamb, M.D., M.C., M.R.C.P. London: Baillière, Tindall, and Cox. 1900. 10s. 6d.

A Glossary of Botanic Terms, with their Derivation and Accent. By B. D. Jackson. London: Duckworth and Co. 1900. 6s.

*** In forwarding books the publishers are requested to state the selling price.

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A LECTURE
ON
SMALL-BORE RIFLE BULLET WOUNDS AND THE "HUMANITY" OF THE PRESENT WAR.

Delivered at St. George's Hospital, on May 1st, 1900,

BY CLINTON T. DENT, M.C., F.R.C.S.,
Surgeon to the Hospital.

WE are all, I suppose, a little prone to assume that what is new to us is necessarily new to everyone else; and that of what we have lately learned others must necessarily be ignorant. The mere fact that I mention such a truism may, however, be taken as a proof that I do not share in the belief. In this South African campaign—rather prematurely called in some quarters the Transvaal war—there are so many features of novelty that even the most cursory sketch of some may prove of interest. I do not, of course, lay claim to any profound knowledge or experience of gunshot wounds; and, in drawing comparison with the results of other wars, I have been compelled to resort to books and statistical reports. Fortunately, military medical statistics relating to losses in wars are uniformly reliable; and, indeed, are given with a merciless thoroughness. As far as regards the present campaign I have had a fortunate experience, for in the course of the past few months I have, I suppose, seen between 2,000 and 3,000 wounds—nearer the latter figure, I suspect, than the former. It is easy enough to waste time, for war provides endless distractions and excitement, but during my time I stuck closely to work throughout, disregarding even the fascinations of Capetown. Everywhere, as I most gratefully acknowledge, I received the utmost courtesy and the utmost attention from high civil officials, from staff officers, and from the medical officers of all ranks. To them my very warmest thanks are due. My experience was principally, if not almost entirely, limited to the base hospitals and the stationary hospitals. It is there, after all, as it appears to me, that the civilian is best placed. There one can judge deliberately of organisation as a whole or of medical details; and it is certainly there that, free from the hurry and rush which are absolutely inseparable from work nearer the front, one can best study gunshot wounds and best watch the effects and results of treatment. My mission was a twofold one: first, to study the whole army medical organisation as it was working on a large scale in this present war; and the other was to learn all I could about the effects of gunshot wounds inflicted with the most modern weapons.

ARMY MEDICAL ORGANISATION.

You will pardon me if, on the first of these matters, I preserve silence, beyond making the one remark that it appears to me to be premature at present either to endorse or to question the criticism that has been made in some quarters of the army medical organisation as a whole, or on the other hand to join in the somewhat fulsome, or at any rate full, stream of eulogy and praise which is in other quarters lavished on the entire department. Efficient it is—that much I will say; more efficient beyond all question than any army medical organisation that has ever been in any campaign of any magnitude yet. But I hope that that will not prevent us in the future from striving to make it much better.

THE "HUMANITY" OF MODERN WARFARE.

It is often said that this is a humane war. I am disposed to take the remark as a sort of text for my lecture, and to consider from a broad standpoint the question of the humanity of this war. That statement is chiefly founded on the fact that modern small-bore gunshot wounds display remarkable features; that wounds do well; that operations do well; and that many of the recoveries that have taken place are undoubtedly very remarkable.

Professor Bruns anticipated, as the result of a series of experimental observations made a few years ago, that the next war would be a humane one. The experiments were made on the dead bodies of men and horses. Bullets were fired into them at known ranges, and the effects were noted. The weapons used were small-bore rifles. On the other hand, theorists like M. Bloch, in that remarkable work of his, *Is War Now Impossible?* takes absolutely the opposite view. He thinks war will be so inhumane that it will be impossible. Here we have contrasted the prophetic views of the practical man and of the theorist. I suppose that, judging by experience of the present campaign, in the whole history of literature no theory has ever been more astonishingly wide of the fact than that of M. Bloch has proved itself to be. One is reminded of an old remark of Ambroise Paré at the end of his treatise on gunshot wounds, "See, gentlemen, how I learned to treat gunshot wounds—not by books." Ambroise Paré did not underrate his own superlative merits; but he was a great and a wise surgeon, and recognised that there was but one way of gaining real knowledge of this class of injuries. Indeed, while the theorist is hopelessly wrong, the experimenter has already been shown to be very frequently far from right in his views.

There are other factors of the first importance to be taken into account besides the effects of these small-bore bullets. To these factors I wish first to draw attention. But, before passing on, I may say at once that it has been abundantly proved in the present war that the view is a correct one that the great majority of wounds are inflicted by rifle bullets and do not result from shell fire; that is borne out beyond all question.

SEPTIC DISEASES.

My point, however, is that the humanity of a war is not to be gauged solely by the nature of the bullet wounds. From the broader and purely surgical point of view, a war is humane or not according to the answer to be returned to this question: Are there or are there not present the great class of septic disorders, such as pyæmia, erysipelas, septicæmia, "hospital" gangrene, tetanus, osteomyelitis, and the rest? We know that these diseases are really preventable. Have we succeeded in preventing them? If they are absent, from my present point of view it may be regarded as a humane war; if they are present, as an inhumane one. Hitherto—and I desire to emphasise the fact strongly—these diseases have been almost if not entirely absent in this war. I cannot recall having seen a case of pyæmia or tetanus, or "hospital" gangrene, or osteomyelitis. A satisfactory condition of affairs, you will think. Such it undoubtedly is; and yet I wish at once to touch a discordant note, and to state my decided impression that in some parts of the seat of war wounds are not now doing quite so well as they did at the outset. To this I will allude again later on. Meanwhile, I wish to draw your attention to the various factors that have contributed to the exceptional results that have hitherto been obtained. One is the condition of our men. The sea voyage to the Cape told all in their favour. Of the weak and weedy striplings who, I had been assured, formed the bulk of our army, I saw hardly any examples. If they were put on board the transports in England, they had been got rid of before the troops were landed at the Cape. I saw regiment after regiment disembark; almost uniformly the men seemed a vigorous and healthy lot. The regiment in particular that I went out with, the Second Lancashire Fusiliers, were a remarkably fine set of men for the work in hand. The troops had, as a rule, been well fed on board, and they have, to say the least, been adequately nourished on shore. The good feeding of an army is of enormous importance. We may have in this campaign ignored, to our loss, some of the Napoleonic maxims, but the authorities have realised to the full one of the utmost value, to the effect that "an army moves on its belly."

COMMISSARIAT AND TRANSPORT.

Now, if one department may be praised unreservedly in this campaign more than another, it is certainly the commissariat department. The way they have done their work is marvellous. It seems to me that such a department has its full share of blame when things go wrong, but that it does not get its fair meed of praise when things go right. And on this occasion things have gone right. To those who have been working in hospitals this has been abundantly clear. The progress of a case of sickness and the behaviour of a wound form a very delicate test of a man's condition. As an instance of the difference that it makes whether men are well or ill fed, take the case of the Ladysmith garrison. On January 30th, 1900, there were, out of the Ladysmith garrison, in Intombi

and in Ladysmith itself over 2,500 sick and wounded in hospital—say, one-sixth of the force disabled through sickness and wounds. This condition of affairs was largely owing to the short rations—and the rations were short and uncommonly bad; there is no harm in saying so now. All the more honour to the garrison who stood it all.

Diseases complicating wounds were not much in evidence. The diseases that the medical officers have chiefly had to contend with are, in the first place, enteric. But the enteric is of the most terrible type that I have ever seen. Probably not far short of 30 per cent. of its victims died. Then there was dysentery in its various forms, some of it very mild, much of it not dysentery at all. There was rheumatism to some extent, but comparatively little malaria, save amongst the soldiers who came from India or who had seen service in malarious districts elsewhere. There were probably far more cases of pneumonia on board the transports on the voyage out than in the hospitals in South Africa, where the disease was but seldom seen.

Another factor is the transport. If the transport is bad, or if the conditions under which the wounded soldiers are conveyed back to the field, stationary, or base hospital be unfavourable, the cases are likely to do badly. On the whole the transport has been good. Sometimes the conditions were very trying, as, for instance, after the Spion Kop action, where, after the men crossed back over the Tugela to Spearman's Camp, they had twenty-three miles of rough country to traverse in dhoolies or ambulance carts before they joined the railway line at Frere. There was the same trouble after the action at Vaal Kranz, and after that at Pieters Hill, when the final relief of Ladysmith was effected. Again the battle of Paardeberg was fought a long way from the railway line and the nearest stationary hospitals at Kimberley. In all these instances the difficulties of the return journey and the difficulties of transport were very great. The condition of the wounded soldiers on arrival was proportionately bad. At the extreme front the conditions were good. Never, I suppose, have more efficient and courageous stretcher-bearer companies been organised than in this war. It may be gathered that they were not easily kept in order. Many of them were refugees from Johannesburg and such-like places. All agree that the way they would go out under fire to fetch in the wounded men and the rapidity with which they would get them back to the hospital were deserving of the very highest praise. It would be very seldom that the ordinary stretcher-bearer companies could be got to show the courage under fire that these men did on many occasions; so the wounded were got back from the field quickly. The ambulance trains did their share of the work well. The Cape Government Railway officials worked with a will. On the Natal side that extraordinary organiser, Mr. David Hunter, the general manager of the Natal Government Railways, worked the transport with astonishing smoothness. Consequently the wounded were given every chance to do well.

The Climate.

The climate was absolutely the strongest point in our favour. Consider, in Natal alone, the heights at which the hospitals were. Maritzburg, where the great central base hospitals are placed, is at a height of 2,200 feet above the sea. Ladysmith itself is 2,300, Estcourt 3,000; and one of the best hospitals in South Africa, that at Mooi River, which is No. 4 General Hospital, the altitude is 4,500 feet. In the matter of climate no more perfect place for a hospital than Mooi River could well be imagined. The climate, whether in Natal or in Cape Colony, appears to be surgically almost sterile, a point of the very first importance. The same holds in Cape Colony; the hospitals stand high. From a few hours after leaving Wynberg the railway mounts up by a steep incline, and on to the high veld, a huge tableland which stretches away over the Karoo for hundreds of miles, until the slope begins to fall again towards the Zambesi. You therefore have a huge, elevated, dry plateau, the veld, at a height of 4,000 and 5,000 feet. In this warm, dry climate—sometimes very hot in the middle of the day, and very cold at night, but dry and with a sandy soil—the open-air method of treatment can be practised to an extent that I confess at first staggered me. One saw patients lying in the hospitals in the marquee tents with the door flaps open, and the tent looped up all round, with the windows open and the dust, if there was any wind—and there generally is wind—blowing through, but nothing bad ever came of it. The patients could be dressed, or undressed, or operated on for that matter, practically in the open air, and yet, if due precautions were taken against unnecessary chilling, no harm followed.

The Hospitals.

If one thing was proved more conclusively than another in the Crimean war it was the necessity for air space and light in hospitals, and the experience of this campaign has borne it out. The chief medical authorities have taken this lesson, at least, fully to heart, and their wisdom in so doing has been proved to the hilt. Whenever the climatic conditions permit I should give the preference to tents, of whatever pattern they be, rather than to huts even in base hospitals. Huts are necessarily more close. Public buildings, churches, schools, and the rest are far less suitable.

The wide distribution of the hospitals was another highly advantageous factor. In Natal the hospitals are spread over 180 miles, and between Cape Colony and Bloemfontein the line of communications, dotted over with hospitals, is 750 miles long. In South Africa good sites for hospitals can be found everywhere. Contrast with that the condition of things in the Crimea, where it was hardly possible to find a suitable place to pitch a hospital in the whole peninsula.

Another feature of the campaign itself, from the military point of view, has been in favour of the medical men at the hospitals. At no time has there been any severe strain on the hospitals. There have been a series of sharp engagements, it is true; but these were fought for the most part at distinct intervals and over a large tract of country. The strain was thrown equally on two separate hospital systems, one in Natal, the other in Cape Colony. Lord Methuen's battles at Belmont, Graspan, Modder River, and Magersfontein followed, it is true, quickly one after another. When I first went out, there were some 1,100 wounded in the base hospitals at Capetown, practically all of them coming from the Modder River district. But, though this aggregate was fairly large, the patients had not been all at once thrown on the hands of the medical officers. There had been opportunities of partially clearing the hospitals in front and the wounded had been sent down in batches. In Natal I question whether at one time a strain such as was anticipated could have been adequately met. There is no harm in saying so now, when the fighting in Natal is obviously over. A request had been sent down to get ready at least 5,000 beds when the advance was first made on Ladysmith. However, as it turned out, there were a series of engagements fought, and so the hospitals were never overcrowded.

Antiseptic Treatment.

With regard to antiseptics, this is really the very first war of any magnitude in which the antiseptic system has been used on a large scale. In the Russo-Turkish war it was employed on a small scale, but with the most admirable results, by some German surgeons. The results are even better in this war. There has been an abundance of surgical materials, and the organisation has been well managed, so that all the materials of one kind are not crowded into one place and all those of another kind into another place. The various packages have been intelligently made up, so that, for example, the whole of the chloroform has not been sent into Natal while all the cyanide gauze was sent to Cape Colony. Preposterous mistakes of the sort have before now occurred in war, even with English officials at the head of affairs. Dressings were lavishly supplied, and were lavishly, not to say extravagantly, used. Still, I take it, the British taxpayer will not mind that. In certain details, on the other hand, needless economy seemed to be observed. While the amount of dressings used in the hospitals was perfectly astounding, there appeared to me, to take a single instance, to be a most singular parsimony with regard to the issue of nailbrushes, apparently insignificant but yet really most important articles in a surgical ward or operating theatre. The medical men had often to provide their own. Those who know something of the peculiarities of military methods are aware that it will take you quite as much trouble and possibly quite as long to get a nailbrush as, say, 500 extra bedsteads. All the

men were supplied with field dressings; of the value of these I cannot say much, but I have no doubt they did some good. The dressings in the field hospitals were always abundant, but necessarily in the field hospitals the minute details of the antiseptic system cannot be very thoroughly practised.

With regard to the practice of the antiseptic system throughout this campaign I hardly know what to say; perhaps it will be best at present to say no more than this: that it is abundantly clear that the elaboration of detail which is found absolutely necessary in a London civil hospital may be, and perhaps is, pretty often dispensed with out there. Under less favourable conditions of climate and of the other surroundings I have mentioned they certainly could not have been disregarded with equal impunity. Yet it must not be supposed that all wounds heal by first intention there, and that everything goes on in the best possible way in the best of all possible climates. Suppuration was common enough almost from the first, and it became more abundant as time went on. Many cases of compound fracture came down to the base hospitals suppurating very freely. It is not likely that the behaviour of wounds will improve. Indeed, I think it is getting rather worse; it is worst on the Natal side, where the climate is not quite so good, and some of the hospitals are getting somewhat worn from use. Of course the progress of a fracture depends very greatly on the amount of disturbance of the parts rendered inevitable by transport. But I saw nothing beyond suppuration, with high temperature, when pus was locked up in a wound, or when sloughs were separating from a wound. So soon as the offending part was dealt with—amputated, if necessary—the temperature sank and the case did well. Of pyæmia and septicæmia one saw nothing, and of tetanus nothing whatever; I do not believe there has been a case yet.

With regard to erysipelas, until yesterday I would have said that there had not been a case of erysipelas; but only yesterday I received information of the death of a young officer whom I saw in Natal, from whom a bullet had been extracted, and who died, I regret to say, according to report, from erysipelas. The circumstances I do not yet know, but I must say it seems to me that even if it be a single isolated case it is still of very grave import. I only heard of this long after I had thought upon the subject, and ventured to predict that the cases were not doing so well, and that the staff must keep a sharp look-out for graver septic complications. In some of these the cases are very septic; the septicity was not matter for much surprise. For example, there were some Boers who had been wounded at Paardeberg in the Kimberley Hospital—an admirable hospital—who were not received until a fortnight after the action. Two of them had compound comminuted fractures of the arm involving the elbow. So far as I could learn the only dressings they had applied had been tobacco juice, with tobacco leaves over the wound. They preserved their limbs, but whether in consequence of the tobacco juice I cannot tell you. Indeed I believe they preserved their limbs chiefly by declining altogether to part with them. Ultimately, although at one time the cases did not look at all hopeful, they were on the mend.

The Proportion of Wounded to Killed.

Professor Billroth, writing only a few years ago about the next great war, was convinced that there would be an increase in the number of wounded owing to the adoption of small-bore rifles. He thought too that the proportion of severely wounded would be very greatly increased. That anticipation has not been borne out. The proportion of killed to wounded up to the present in this campaign is about the usual one—about one killed to four wounded. It has often been much higher than that. In the Russo-Turkish war the proportion of killed to wounded on the Russian side during the assault of Plevna was 1 to 2.1. There, as you will remember, the attack was made on an enemy in very strong position, the condition of affairs that has obtained in most of our engagements.

Deaths from Wounds.

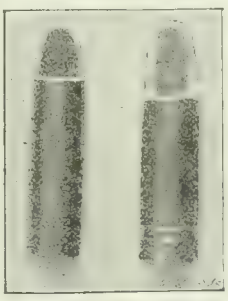
The number of the deaths from wounds is, however, much more to the point. On this topic I must say a word, even at the risk of wearying you with figures, for on the "deaths from wounds" the health of the troops in the campaign may be determined, the efficiency of the hospital system estimated, and, from my point of view, the humanity of the war gauged. It is not merely by the severity of the wound that a particular bullet inflicts, or by the amount of laceration that it entails, that we should judge. We must first take into account wounds which are necessarily mortal, but in which it is possible to transport the patient to hospital. These are comparatively few. In this war, as in others, those who are not killed at once by some such injury as smashing up of the skull or injury to the spinal cord high up, die, if they die in the field, of hæmorrhage. Of the wounds which are likely to be returned as "mortal" we may take some, but very few, to be of the head. Either the man is killed at once or there is a likelihood of recovery. A large proportion of abdominal wounds prove fatal, perhaps 40 or 50 per cent. The same may be said of injuries of the spinal cord, but after a distinct lapse of time, after they get into the hospital. Wounds of the bladder have shown bad results in this campaign; and necessarily also bad compound fracture of the femur high up. But with regard to all the rest, if a man can get into the hospital wounded he has a chance of recovery unless he dies of one of those septic disorders. That is abundantly proved by the returns officially furnished. It is a curious fact that up to a certain date in March we had 4,934 wounded, taking non-commissioned officers and men alone. Now, in the Franco-German war, the Fourteenth German Army Corps up to a particular date had 4,344 wounded. The numbers are very similar. Of these 4,344 Germans, 617 died; and of our 4,934, 239 died. Put into percentages it comes roughly to this: a mortality of "deaths from wounds" amounting to 5 per cent. in our army, and in the Fourteenth Army Corps to 14 per cent. Of the 617 Germans who died, 304 died of pyæmia and septicæmia and 39 of tetanus. If we exclude, then, these preventable disorders, the mortality in the two armies is almost the same—namely, 5 per cent. in our army and 6 per cent. in the German army corps. This result is surely very striking and very instructive.

Shell and Shrapnel Wounds.

And now, with regard to the humanity of the wounds. I have nothing to say about shell wounds: they are very much as before. Comparatively few men are killed by them—at any rate it is a very costly way of destroying or attempting to destroy your enemies. More are killed by shrapnel. But it is abundantly clear on both sides that shell and shrapnel fire, and especially the missiles from quick-firing machine guns have a widespread demoralising effect on the troops.

Bullet Wounds.

Let us consider only the small-bore rifles. Of course, "small-bore" is only a relative term. The calibre of the Mauser is 7 mm., or 0.275 of an inch, and that of the Lee-Enfield 7.7 mm., or 0.303 of an inch. As regards efficiency, there seems very little to choose between the two rifles. It is of the bullet that I wish chiefly to speak. The core in both consists of hardened lead covered over with a mantle or envelope. The envelope in our bullet is made of copper nickel in the proportions of 80 per cent. of copper, and 20 per cent. of nickel. The diameter of the bullet is 0.311 inch. The diameter of the Mauser bullet is 0.284 inch. The bullets are therefore, so to speak, larger than the bore of the rifle barrel. As they are forced through by the explosion they "take the grooving" and the rifling of the barrel imparts the movement of rotation in the longitudinal axis of the bullet. I want you particularly to notice, as shown by the sections (Fig) the relative thickness of the sheath or mantle. The sheath of the Mauser bullet is of steel nickelled over. Ours, as already stated, is of copper nickel.



There is no need to weary you with minute details. The main point is that in modern rifles there is an exceedingly high muzzle velocity. Roughly, the bullet leaves the muzzle of the Mauser rifle at a rate of about 1,500 miles an hour, which is pretty rapid going; at 1,300 yards the velocity works out at between 800 and 900 miles an hour. The muzzle velocity of our rifle is rather lower than that of the Mauser,

but the energy at 1,000 yards is greater. The trajectory is practically flat up to 500 yards—that is to say, if a man is in a trench and holds his rifle on the level close to the ground, the danger zone is 500 yards: in other words, the bullet will not rise more than 6 feet for the first 500 yards. The rifling is intensely sharp; there is a complete turn in 8.66 inches in the Mauser rifle and one in 10 inches in the Lee-Enfield, so that the rapidity of rotation communicated to the bullet is tremendous. The energy of the bullet also is enormous. The energy of a bullet, it is computed, depends on the mass of the bullet multiplied by the square of its velocity, so that a small bullet going with a high velocity may have as much energy as a large bullet going with a low velocity. The weight of the Mauser bullet varies from 172 to 175 grs., and that of our bullet is 215 grs.

Explosive and Expanding Bullets.

Much has been said about "explosive" bullets, and I think people abroad and at home have allowed their feelings to be carried away rather on the subject. No such thing as a truly explosive bullet has been used in this campaign by either side. Explosive bullets were forbidden altogether by the St. Petersburg Conference in 1868, to which England was a consenting party. I do not think the Transvaal authorities were consulted in the matter at that time, so possibly they might claim to be to a certain extent exempt. They have not taken advantage of the circumstance. An explosive bullet is defined to be one in which any missile under 400 grams (14 ozs.) is filled with any fulminating or detonating compound. No such missile has been employed on either side in the present war.

An "expanding" bullet is quite a different affair. There are many different forms. The hard mantle may be incomplete at the top of the bullet, allowing the lead core to show. There may be a cavity extending some way down the bullet and open at the top; or the steel or copper nickel envelope may be slit down the side of the bullet. A common form is the "soft-nosed" bullet. Here the mantle ceases a third of an inch or so from the point, and the lead core projects to that extent. There is no doubt that soft-nosed bullets have been occasionally—but I believe very rarely—used by the Boers. Here are specimens picked up in the Boer trenches at Magersfontein. Note, then, that an expanding bullet may be deliberately made as such, or that a properly covered bullet may with a little trouble be converted into an expanding bullet. For sporting purposes expanding bullets are used. Oddly enough, for big-game shooting expanding bullets are used because they are considered more humane. When used in war they are reckoned inhumane. The inconsistency, however, is only apparent. The sportsman's object is to kill his game and not to wound it. A wounded animal is likely to escape for the time, but to die after a long interval if disabled, for it cannot hold its own in the struggle for existence. A bullet, therefore, is required that has a "stopping" effect. Now, any kind of sporting bullet, such as the soft-nosed bullet, will, if it strikes anything hard, break up and deform, and sometimes if it meets with tough structures such as tendon, it will also "set up" in the same way. The projecting lead core of the soft-nosed bullet flattens out, and the bullet assumes more or less a mushroom shape. As the bullet is rotating while it inflicts the wound, the lead is commonly twisted in the longitudinal axis, and this increases the liability for fragments to break off. The mantle, too, strips up, sometimes becoming completely detached from the core. The torn edges of the hard sheath project. Obviously a bullet so deformed will lacerate more than when it is intact, and it injures the tissues over a wider area, and clearly, too, the liability to hæmorrhage is greatly increased. In soft tissues, therefore, the sporting bullet is very destructive, and the wounds inflicted are very serious.

Confusion arises from the fact that any form of high-velocity bullet may exert, under certain circumstances, an expanding or "explosive" effect. Thus, if a completely covered bullet strikes the shaft of a long bone it will exert an expanding action on the bone; but that is a very different thing from its being an explosive bullet, whether it be a soft-nosed or split bullet, or any one of the hundred kinds of sporting bullets. Again, if any form of high-velocity bullet be fired at short range into a skull, it will burst the skull more or less. These scattered fragments show the effect as obtained experimentally. The skull was filled with plaster, and a bullet was fired into it just as the plaster was beginning to set, and was of about the consistency of brain matter. On an empty skull no such effect will be produced. But the explosive action in the skull is not due to the explosive or expanding nature of the bullet. It is due to the high velocity and the extreme energy of the bullet, not to its particular form. a natural bullet is just as likely to produce this expanding effect as a soft-nosed bullet. Just the same character of effects is shown in the case of the long bones. I show some skiagraphs to illustrate the point. Here the bullet has struck the shaft of the humerus, pierced it, fissured and broken the bone in various directions, and spread the fragments asunder. On the long bones an expanding bullet is rather less likely than a normal bullet to produce this expanding effect. The sporting bullet may yet damage a bone more grievously, and it will inflict a far more lacerated wound. It has long been suspected that the results obtained by experiments on the dead subject would not be borne out in actual practice. Experience in this campaign has strongly proved the correctness of the surmise, and the specimens shown furnish evidence of the fact.

Broadly speaking the injuries caused in the living subject are less serious than would have been anticipated from experiments. In this respect, then, modern war is more humane than it was thought likely to be.

Skin Wounds.

Mauser bullets commonly make a clean hole or slit through the skin, and let in practically no air. Often, it appeared to me, though the view was questioned by some, the bullet knocks in a little flap of skin. Close examination of a scar often reveals a little crescentic mark different from the rest of the cicatrix. The bullet itself is sterile; attempts to get cultivations from it immediately after it has been fired have failed. It is very unlikely to carry any bits of clothing into the wound. The only shreds of clothing found in wounds that I have heard of are bits of the Highlanders' kilts, another argument against that inappropriate and indelicate form of clothing. Shreds of clothing are very likely to be highly septic. The Mauser bullet will go through the skin and soft parts so cleanly that you cannot tell the apertures of entrance from those of exit. At a long range the speed of rotation begins to diminish, and the bullet begins to wobble while still preserving a straight course as it goes through the air. It is less probable then that the aperture of exit will be identical in appearance with that of entrance, but in the bulk of cases you cannot tell one from the other. I can recall the case of one man who was hit by a cross-fire shot in that portion of his frame which, in the words of Ingoldsby, it is considered equally indecorous to turn to a friend or a foe; and where, if I remember right, one of the combatants in the famous triangular duel in *Mr. Midshipman Easy* also met with a similar injury. The patient had four wounds from a single bullet in the gluteal region. All four scars were absolutely identical. John Hunter noted that the orifice of exit of a round bullet very often healed before the orifice of entrance, but I could notice no such difference in the wounds I saw.

The question of exploding and expanding bullets is a very old one. It comes up at every war. At Waterloo the French were accused—and they, of course, accused us also—of using cut bullets, which broke up in the wounds, as you can read in Sir H. Maxwell's *Life of the Duke of Wellington*. The same recriminations went on in the Crimean war; and again in the Franco-German war. They have been used in this campaign; there is no question about that, for we have it on the most unimpeachable authority possible—Lord Roberts himself—who would never bring the charge unless satisfied by the most irrefragable evidence. But, I repeat, for I wish to emphasise the opinion, that such forbidden bullets have been very rarely used. Often, no doubt, at the outset of the campaign, extracted bullets were perfectly honestly supposed to be of the expanding form when they were merely normal bullets that had deformed in striking a bone, or were possibly ricochet shots. Nor have "express" and large-bore bullets been employed against us save in the rarest instances. I have seen two or three express bullets extracted from patients. There is this one enormous difficulty about their use: that an army on active service cannot have

half a dozen different kinds of rifle ammunition; unless there is uniformity of pattern there would be endless confusion. Such confusion there was in the Crimea, when half were armed with the Minié rifle (so-called, though Captain Minié did not invent the rifle but only the bullet fired from it) and half with the old brown Bess.

Injuries of Long Bones: Amputations.

Specimens of bullets which caused fractures and have been extracted show that the natural Mauser bullets may be deformed and resemble expanding bullets after having struck the bone.

Closely bearing on injuries of long bones comes the subject of amputations for those injuries. The figures of course are not yet to hand for this campaign, but I believe that the results of amputations in this war will be very remarkable indeed, and contrast in the most marked manner with those of former wars. In the Peninsular campaign the results were fairly good; in the Crimea they reached the lowest ebb I suppose that surgery will ever reach as regards results. Out of 1,666 amputations of the thigh done in the French army, 1,531 died; the mortality was 91.89 per cent. The mortality on our side was 65 per cent. In the American Civil war the mortality after amputations of all kinds was 64 per cent. We may, I think, safely anticipate that the mortality in the present campaign will at least be twice as low; so it is not only the bullet wounds that heal well, but also the wounds caused by operations. Here, much more markedly than in the case of punctured wounds due to bullets, the surgeon is favoured by those conditions to which I have already drawn attention, and of course by the fact that pyæmia, osteomyelitis, and so on, are conspicuously absent.

Wounds of Joints.

I can only now allude to the subject of joint wounds, though these injuries are of vast interest. Speaking of the Crimean war, Surgeon-General Sir Thomas Longmore said that not a single patient with a wound of the knee-joint recovered with his life and his limb. If the limb was amputated, he had a better chance than if conservative treatment was adopted. But remember 65 per cent. of our cases died after amputation of the thigh. If the limb was not amputated, the man died of the knee-joint wound. In this war I do not think I have seen a single death after a knee-joint wound, and wounds in which the bullet has unquestionably traversed the knee-joint are common. The bullet nearly always pierces the patella cleanly, and it appears to me to make little or no difference whether the range is short or long. I have only seen one case in which it failed to drill a hole through the patella if it struck that bone. Hæmarthrosis usually follows the injury. Experiment shows that a Lee-Metford bullet can go clean through the knee-joint in the extended position without injuring any of the bones. The bullet in one case traversed the ligamentum patellæ. The specimen is of interest, for it has been denied that a bullet can traverse the joint without injuring bone save in the flexed position. There is the proof that it can. Case after case have I seen in which, beyond all shadow of question, the bullet has gone clean through the joint, and in which recovery has been complete, including perfect mobility.

In one extraordinary case a Highlander, wounded at Magersfontein, was shot through the knee-joint. There, I am bound to say, the kilt was a convenience to him. He fell down, saw a hole in his popliteal space, and saw the blood spurting out. His only cover was an ant heap. The moment he moved he was shot at, so he kept still. The bleeding had ceased spontaneously before he got an opportunity of applying his field dressing. He had to wait some twenty-eight hours before he was picked up. He was brought down to Wynberg, a journey of some twenty-eight hours, in the hospital train, followed by a drive up hill to the hospital. There the dressing was removed, and immediately blood spurted out very vigorously. It was found the popliteal artery was wounded. The man recovered.

Another case I saw where the knee-joint was wounded, probably by a shrapnel bullet, and suppuration followed. There was some necrosis about the head of the tibia, and the suppuration extended into the knee-joint through a small opening. In this case the knee joint was laid freely open, and it was found that the whole of the synovial membrane was thickened and inflamed, looking as if the knee-joint was lined with a layer of thick crimson plush. I suggested to the surgeon in charge that it should be dissected out. My hint was taken, and I heard some time after that the man was making a perfectly good recovery. In the history of military surgery I do not think you will find many operations of the sort recorded. Great credit is due, therefore, to the civil surgeon who performed it. I am a little proud of having suggested the proceeding.

Wounds of the Spinal Column and Head.

I did intend to make some remarks about the head cases, but my time has slipped away, and I must trust to be able in some future clinical lecture to draw attention to the subject. But I wish to show you an experimental specimen made by firing a bullet at very short range into the spinal column. The lumbar vertebra is extensively broken up. An exploding and expanding action has been exercised upon the bone by the bullet. The astonishing feature of the preparation is that it shows how a high-velocity bullet can pass between important structures without wounding them. Here the bullet has found its way between the aorta and the vena cava without wounding either. Without such evidence as this it would have been thought impossible that a bullet travelling at such high velocity could cross the track of important nerves or vessels without wounding them. Nerves, I may mention, will show the most profound effects and lose their functional power when a bullet has only passed close by them.

But into so large a subject I must not now enter, and I only allude to such injuries to show how much there is of interest in modern rifle bullet wounds. I hope to communicate some remarks on nerve injuries to the Royal Medical and Chirurgical Society in due course.

Of the head cases I will only say that the question seems to be settled altogether that trephining can be done with the utmost freedom and with the greatest advantage to the patient. Never, I believe, in military surgery, have so many trephinings been done, or with such admirable results, as in the present campaign. Yet trephining is an operation which so great an authority as Sir Thomas Longmore thought hardly justifiable in military surgery.

Conclusions.

I have given you a very cursory—I fear you will question the epithet if I say a brief—sketch of some of the features of surgical interest in this war. Possibly I have adopted too pessimistic a tone. I am conscious that I have not added my voice in any marked degree to the chorus of eulogy that has been almost unreservedly lavished on the Army Medical Department during the present campaign. I do not hint for a moment that such laudation is undeserved. It may be that I am somewhat of Sir Peter Teazle's advice when he remarked "Sir Oliver, Sir Oliver, this is a damned wicked world; and the fewer people we praise the better." But in all seriousness I dread lest the good surgical results be not ascribed fully enough to their proper cause. We know the fearful mortality brought about by overcrowding and by bad hygienic surroundings in the Crimean war, and, for that matter, in the Franco-German, Russo-Turkish, and other later wars. This campaign has already shown that these preventable disasters have been traced to their true source. Air, air, pure sunlight and air, have done more, much more, for our wounded in this war than seems generally to be acknowledged. I dread lest the Army Medical Department commended and patted on the back as it has been and is, may relax its efforts to improve further. If so a terrible awakening is in store for us when we next have to face the hideous horrors of war amidst unfavourable surroundings. But if we look on our present experience just as an indication that we are working in the right direction, then at least the medical profession may feel that it is doing—not that it has done—its best to contribute to the humanity of war.

Lest we forget.

Women Graduates in Italy.—According to the *Riforma Medica* the number of women who have taken degrees in one or other of the faculties in Italian Universities from 1870 to 1897 is 129. Of these 64 graduated in arts, 15 in medicine and surgery, 15 in physical science, 14 in mathematics, 7 in philosophy, and 4 in law. Of the "sweet girl-graduates" in medicine, 3 obtained their degrees at Naples, 3 at Rome, 3 at Bologna, 2 at Turin, while Palermo, Pavia, Florence, and Pisa were each favoured by 1. In the academic year 1898-99 the number of women on the books of the various universities was 261. Of these 37 were registered as students of medicine, and 9 as students of pharmacy. Of the medical students, Florence and Turin had 7 and Rome and Genoa 5 each, Pavia 4, Naples and Catania 2 apiece, Parma 1, Messina 1, and Cagliari 1. Four women graduated in medicine in that year—2 at Turin, 1 at Florence, and 1 at Pavia.

INJURIES OF THE BLADDER OCCURRING IN THE COURSE OF GYNÆCOLOGICAL OPERATIONS.

By JOHN WARD COUSINS, M.D.Lond., F.R.C.S.,

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A few years ago the injury of an organ happening during the performance of an operation within the pelvis was regarded as a far more serious complication than it is to-day. Wounds of the bladder and rectum are especially liable to occur in the removal of impacted and adherent tumours of the uterus and ovary, and they have frequently fallen to the lot of the most careful and skilful operators. Sometimes organs and structures are so matted together by chronic disease that it is difficult to avoid an accident even with the most gentle manipulation. Now, whenever an injury of the bladder does occur, it is very important that it should be recognised at once, for then the indications for treatment are both simple and clear. (1) The urine must be prevented from getting into the pelvic tissues and the peritoneal cavity; (2) the rent in the wall of the viscus should be at once sutured, and means adopted to keep the organ empty and at rest.

I have known an accidental puncture of the bladder indicated immediately by a distinct flow of urine to heal without causing any trouble or the necessity for any surgical treatment. The spontaneous closure of small wounds may generally be fairly anticipated, still it is the duty of the surgeon to secure all wounds, however small they may be, as soon as they are discovered, and then to proceed with the operation as if no accident had occurred. Fortunately, in the majority of cases, with our present precautions there will be little risk of hæmorrhage, extravasation of urine, or septic infection.

The possibility of wounding the bladder in the removal of intraligamentous and adherent pelvic tumours should always suggest to the surgeon the necessity for cautious manipulation. Sometimes the vesical wall is so much drawn up and dislocated from its normal position that it might easily be mistaken for a cyst. In cases of difficulty it is always desirable for the surgeon himself to empty the bladder before an operation and to determine the exact position of the organ with a sound.

Occasionally it has proved a difficult matter to discover the exact seat of the injury, and even to decide whether the bladder has been really wounded. In this dilemma it is an excellent plan to test the condition of the organ by injecting a weak antiseptic solution. In some rare cases the injury has been readily detected, but its position has been so low in the pelvis and so difficult of access that secure suturing of the seat has proved to be impossible. Under these circumstances careful drainage has been wholly relied on, and with this simple treatment patients have recovered by rapid contraction and healing.

There is another kind of accident which may happen to the bladder during a pelvic operation. Unfortunately it cannot be recognised at the time, but its existence is made evident after the lapse of many days by the development of serious and alarming symptoms. The lesion is not caused by a secret wound or laceration, but by an invisible and latent injury occurring during the manipulation, either from the free separation of adhesions or from damage done to the vascular supply of the vesical walls.

Ovariotomy followed by Sloughing of the Bladder Wall, and Free Discharge of Urine through the Lower Angle of the Abdominal Wound: Recovery.—A. K., aged 58, the mother of seven children, was sent to me by Dr. Hann of Portsmouth, suffering from a large abdominal tumour.

History.—The patient stated that her health had generally been very good, and that the catamenia had ceased normally about eight years. The abdomen had been increasing in size three years, and that for a month she had been wholly confined to her bed. Six days before her admission to the hospital four gallons of thick fluid had been removed by tapping to relieve her breathing. The circumference of the abdomen measured 62 inches, the outline was irregular, and the superficial veins much distended. On examination the pelvic cavity was found to be occupied by a solid mass, the uterus was much depressed and displaced against the sacrum. The patient was extremely weak, and her face exhibited a marked expression of prolonged suffering. Ovariotomy was performed on February 2nd, 1899. The tumour was completely covered in front with a firmly adherent and fleshy omentum, and in some places this structure was an inch and a half in thickness. Four gallons of thick and deeply-stained fluid were evacuated, and many smaller cysts were broken up with the hand. The tumour was everywhere adherent, and a great many ligatures were applied to the abdominal organs to control the hæmorrhage. There was no distinct pedicle. The vessels at the base were temporarily clamped, and the pelvic mass carefully enucleated. A glass drainage tube was inserted behind the uterus.

After-History.—The patient rallied well on the second day. Thirty ounces of bloody fluid were withdrawn by the syringe, and the tube was removed on the third day. Her progress was favourable until the eighth day, when the urine became very offensive and thick. The bladder was washed out with sterilised boracic solution. On the eleventh day I was hastily summoned to the hospital in consequence of a sudden and copious discharge of offensive urine from the lower angle of the abdominal wound which completely soaked the dressings and the bed. Many unsuccessful attempts were made to keep the bladder empty, but, in spite of all our efforts, the urine continued to escape through the abdominal wound. On the nineteenth day a large slough was found, protruding from the urethra, and with the help of forceps it was readily withdrawn. It measured 12 inches in length, and at the centre about 1½ in. in breadth. The urine at once escaped again through the normal passage, and in a few days the patient regained complete control over the bladder. The abdominal sinus rapidly contracted, and the wound soundly healed without any further treatment. The patient left the hospital two months after the operation. On February 15th, 1900, she was in good health, and had gained 20 lbs. in weight.

In reviewing this case I think there can be no doubt that the damage to the bladder was done in the enucleation of the pelvic portion of the tumour. The sudden aggravation of the vesical symptoms and the escape of urine through the abdominal wound are noteworthy facts, quite compatible with the opinion that the injury was inflicted upon the organ at the time of the operation. It is certain that the bladder was not wounded with the knife or torn open in the separation of the base of the tumour, as the urine was discharged for days without difficulty or pain. The catheter was regularly used, and on each occasion the instrument was cleansed and the vulva deodorised.

With reference to the direct cause of the accident, I do not think it can be attributed to the pressure of the drainage tube. In some cases of abdominal surgery drainage has been followed by disastrous results. It does occasionally interfere with the intestinal movements and produces tympanitic distension, and cases have occurred in which strangulation and perforation of the bowel have been ascribed to the insertion of a tube. In my case a large quantity of fluid was removed through the drain during the first two days, and every time the syringe was used the tube was gently moved and rotated for the purpose of preventing pressure on any of the viscera. It appears to me that the perforation was caused by one of the ligatures enclosing a portion of the bladder wall, and so arresting the blood supply and inducing softening and necrotic changes in a limited area. In this way it is easy to explain the latent injury of the bladder, the sudden rupture, and the escape of offensive urine through the track left by the drainage tube.

Mirabeau[1] describes some trophic bladder affections associated with gynæcological operations, and expresses the opinion that vesical trouble after vaginal and abdominal operations on the uterus and ovaries may be due to the rupture of an abscess, the contraction of inflammatory products near the bladder, the passage of a ligature into the bladder, or the ligature of blood vessels supplying its walls. He describes two cases in which definite lesions were detected by means of the cystoscope. The mucous membrane was extremely pale, and marked by great œdema of the mucosa near the trigone. The entire mucous surface was also much thinner than normal, and the trabeculæ of the muscular coat could be clearly defined. Mirabeau believes that these vesical changes were purely atrophic, and due to the ligature of blood vessels supplying the bladder.

In cases of rupture or wound of the bladder, the success of immediate treatment depends (1) on the complete disinfection of the seat of injury; and (2) upon the accuracy with which the stitches are inserted. To protect the general peritoneal cavity, sterilised sponges or gauze should be employed and the locality of the wound carefully cleansed. The bladder must then be drawn up and a piece of silk passed through its external coats just at one extremity of the wound. The silk thread can then be used as a retractor, and it will greatly assist the operator in exposing the seat of injury. In some cases the Trendelenburg position will prove a great help. As soon as the wound has been well defined, it should be closed by two layers of catgut or silk sutures. Two layers are always more reliable than one, unless the wound is very small. The first row should take up the mucous and sub-

mucous tissues, and the second should be passed through the serous and muscular walls, and this row should extend a little beyond the extremities of the wound. The surface should now be finally cleansed, then dusted with iodoform, and the ends of the silk retractor cut off.

In some cases a soft self-retaining catheter can be introduced to secure complete rest of the organ. Other patients I have found prefer the introduction of an instrument every two or three hours to any other method of keeping the bladder empty. In extensive injuries the organ can be very efficiently drained by making a temporary vesico-vaginal fistula, and uniting the mucous membrane of the bladder to the mucous membrane of the vagina. As soon as the injured part has healed the mucous surfaces are separated, and the opening closes without any surgical interference.

Dr. Frederick Holme Wiggin of New York City[2] mentions the case of a woman who underwent hysterectomy for a large myoma. The bladder was injured at the fundus during the separation of some extensive anterior adhesions. The wound was closed at once by suture. For ten days the progress was very satisfactory, but then tumefaction took place at the lower angle of the abdominal wound and this was soon followed by a free escape of urine. A vesico-vaginal fistula was made to ensure complete drainage of the bladder. The abdominal sinus was deodorised and curetted, and then closed by suture. The patient rapidly recovered, and the fistula healed without any surgical treatment.

It is sometimes an important question to decide whether the abdomen can be safely closed without any provision for drainage. This must be determined by the severity of the injury, the state of the urine, and the condition of the peritoneal cavity. Surely, if other organs can be injured and the abdominal wound closed, there can be no reason why bladder injuries should not admit of the same treatment. In my case, however, it appears highly probable that the introduction of a glass drainage tube was a fortunate precaution, and materially aided in saving the life of the patient by establishing a channel for the direct escape of the urine. On the other hand, if the abdomen had been completely closed at the time of the operation, the rupture would have been followed by the accumulation of septic fluid within the pelvis, which would have very probably terminated in fatal septicæmia.

REFERENCES.

[1] *Centralbl. f. Gynäk*, No. 11, 1899; EPITOME of the BRITISH MEDICAL JOURNAL, May 6th, 1899, par. 331. [2] *Journal of the American Medical Association*, September, 1899.

ABSTRACT OF THE REPORT OF A COMMITTEE ON THE MEDICO-LEGAL RELATIONS OF THE X RAYS.

Made to the American Surgical Association at its Meeting in Washington, May 1st, 1900.

BY J. WILLIAM WHITE (CHAIRMAN),
Professor of Clinical Surgery, University of Pennsylvania.

THE report begins by stating that at the meeting in 1897, in a paper on the Roentgen Rays in Surgery, the Chairman of the Committee made the following remarks:

Before leaving the subject of fractures it may be well to present for discussion a few questions having a medico-legal bearing, even although it may not be possible at present to answer them finally.

We begin by asking whether skiagraphy has as yet given us a better understanding of fractures in general or has been the means of suggesting more efficient treatment. It is difficult, in reply, to point to any one definite addition to our knowledge of these injuries, and so far as I know no material modification of the general rules governing the treatment either of fractures generally, or of any specific fracture, has as yet resulted; but in individual cases, such as have been described above, it has certainly been of great utility, and is likely to become more valuable as technique improves and experience increases.

The question whether or not the patient has the right to demand as ordinary care that the medical attendant should have a skiagraph of the fracture taken, I would at this time unhesitatingly answer in the negative. Until a much larger number of cases have been observed and the pictures and the clinical results have been compared the routine use of skiagraphy might be more harmful than useful.

There can be no doubt, however, that skiagraphs will figure largely in suits for damages after accidents and in cases of alleged malpractice. They have already been admitted as evidence in such cases, and it is probable that juries will with increasing frequency have to decide whether to place greater weight on deformity as shown by skiagraphs or on expert evidence as to the absence of genuine disability. It seems obvious that each case must be studied by itself, but that it would be injudicious, if not altogether unwarranted, for us to assume at present that clinical experience and the judgment based upon it should be subordinated to the pictorial testimony of the skiagraph.

It is not, however, too soon to advise that in all obscure, complicated, and unusually difficult cases the help afforded by the Roentgen rays shall be secured by the surgeon, even if it is done chiefly with a view to his own protection.

As time goes on it is probable that we shall be better able to estimate accurately the precise clinical value of minor deformities. In the meantime it seems to me we should be careful to avoid the setting up of an impossible ideal as a standard in fracture cases.

After discussion it was on motion resolved that a committee be appointed "to formulate an opinion as to the reliability of skiagraphs," and the result was the formation of this Committee on the Medico-legal Relations of the X-rays.

In 1898 material was collected from current literature and from the personal experiences of the Committee. In February, 1899, a circular letter was sent to every member of the Association asking for an answer to the following questions:

QUESTIONS.

1. Have you found skiagraphy reliable in the diagnosis of (*a*) fractures attended with so much swelling of surrounding tissues that satisfactory palpation of the fragments is impossible? (*b*) fractures about joints? (*c*) epiphysial separations? (*d*) fracture of the neck of the femur? (*e*) ununited fractures?

2. Have you any reliable cases of recognition of (*a*) fracture of the base of the skull? (*b*) fracture or dislocation of the vertebræ? (*c*) fracture of the sternum, scapula, clavicle, or pelvis?

3. Do you know of any cases in which the testimony of the skiagraph in cases of supposed foreign bodies in tissues, or of tumours, gall stones, or kidney stones, has led to ineffective or mistaken operations?

ANSWERS.

The replies to question No. 1 were uniformly in the affirmative, except as to item (*d*), which refers to the neck of the femur. As to that, with but one exception, the replies were negative.

As to question No. 2, they are almost as uniformly in the negative.

Question No. 3 was answered negatively by twelve and affirmatively by six.

In other words, the large majority of the surgeons who replied to the communication had found the skiagraph satisfactory in fractures with great swelling, fractures about joints, epiphysial separation, and ununited fractures, but not in fractures of the femoral neck. The same number had not had reliable pictures of fractures of the base of the skull, of the spine, of the pelvis, sternum, or scapula. A few had used it in cases of fracture of the clavicle, but there it is obviously rarely necessary.

The answers to the third question vary, as during the time of the correspondence rapid improvement was made in the technique, and renal calculus became fairly easily recognisable. Of course, it was not likely that many cases of mistakes as to supposed foreign bodies in the tissue would occur, but the cases recorded serve as a warning as to the possibility of such mistakes.

At the meeting in 1899 the Committee reported progress, and asked to be continued, feeling that the position taken finally on this question should rest upon the broadest possible foundation, and thinking the evidence then available insufficient for the purpose of drawing general conclusions which might serve as a safe guide to both the medical and legal professions in appropriate cases.

In presenting the final report this year the Chairman of the Committee said that in fairness to skiagraphy itself as a surgical aid, it should be stated in advance that many of the errors of which examples are cited in the report are avoidable; that the habit of taking more than one plate and of comparing with plates from the normal region corresponding will lessen them when it is systematically adopted; and that there is no disposition on the part of the Committee to deny or disparage the great usefulness of skiagraphs in surgery. The report proceeds:

"But usefulness and infallibility are not identical. In a thing which purports to be a representation analogous to a photograph, showing only what exists and nothing else, the claim of infallibility, of exact accuracy, is sure to be made by some lawyers, and listened to approvingly by some judges and juries. Your Committee believes that the time for such an attitude has not arrived, and that the facts now before the profession, some of which are herewith presented, justify this conclusion.

"In trying to systematise the material bearing on this subject it has seemed well to classify the evidence, which goes to show:

"1. That there have already been cases of improper use of the skiagraph in court.

"2. That there is real danger for the future from the teachings of some of the profession who have not preserved a judicial mental attitude, but have been led by the many and undoubted advantages of skiagraphy to exalt it beyond its present merits.

"3. That important mistakes have been made in reference to (*a*) fractures, (*b*) foreign bodies, (*c*) renal calculi.

"4. That suits for damages on account of *x*-ray burns and their consequences are now occurring, and that surgeons may suffer thereby, even if not the actual skiagraphers.

"5. That to counterbalance the extremists, many of the profession have called attention to the fallacies of skiagraphs, and to the danger of their use as medico-legal evidence."

Following this classification abundant testimony is cited and many illustrative cases are given. The report finally presented for discussion the following summary of the conclusions thought to be justified by the facts collected under the above headings:

"1. The routine employment of the *x* ray in cases of fracture is not at present of sufficient definite advantage to justify the teaching that it should be used in every case. If the surgeon is in doubt as to his diagnosis, he should make use of this as of every other available means to add to his knowledge of the case, but even then he should not forget the grave possibilities of misinterpretation. There is evidence that in competent hands plates may be made that will fail to reveal the presence of existing fracture, or will appear to show a fracture that does not exist.

"2. In the regions of the base of the skull, the spine, the pelvis, and the hips, the *x*-ray results have not as yet been thoroughly satisfactory, although good skiagraphs have been made of lesions in the last three localities. On account of the rarity of such skiagraphs of these parts special caution should be observed, when they are affected, in basing upon *x*-ray testimony any important diagnosis or line of treatment.

"3. As to questions of deformity, skiagraphs alone, without expert surgical interpretation, are generally useless and frequently misleading. The appearance of deformity may be produced in any normal bone, and existing deformity may be grossly exaggerated.

"4. It is not possible to distinguish after recent fractures between cases in which perfectly satisfactory callus has formed and cases which will go on to non-union. Neither can fibrous union be distinguished from union by callus in which lime salts have not yet been deposited. There is abundant evidence to show that the use of the *x* ray in these cases should be regarded as merely the adjunct to other surgical methods, and that its testimony is especially fallible.

"5. The evidence as to *x*-ray burns seems to show that in the majority of cases they are easily and certainly preventable. The essential cause is still a matter of dispute. It seems not unlikely, when the strange susceptibilities due to idiosyncrasy are remembered, that in a small number of cases it may make a given individual specially liable to this form of injury.

"6. In the recognition of foreign bodies the skiagraph is of the very greatest value; in their localisation it has occasionally failed. The mistakes recorded in the former case should easily have been avoided; in the latter they are becoming less and less frequent, and by the employment of accurate mathematical methods can probably in time be eliminated. In the meanwhile, however, the surgeon who bases an important operation on the localisation of a foreign body buried in the tissues should remember the possibility of error that still exists.

"7. It has not seemed worth while to attempt a review of the situation from the strictly legal standpoint. It would vary in different States and with different judges to interpret the law. The evidence shows, however, that in many places and under many different circumstances the skiagraph will undoubtedly be a factor in medico-legal cases.

"8. The technicalities of its production, the manipulation of the apparatus, etc., are already in the hands of specialists, and with that subject, also, it has not seemed worth while to deal. But it is earnestly recommended that the surgeon should so familiarise himself with the appearance of skiagraphs, with their distortion, with the relative values of their shadows and outlines, as to be himself the judge of their teachings, and not dependent upon the interpretation of others who may lack the wide experience with surgical injury and disease necessary for the correct reading of these pictures."

[These conclusions were unanimously adopted as expressing the views of the American Surgical Association.]

REMARKS
ON
PLAGUE IN THE LOWER ANIMALS.

By FRANK G. CLEMOW, M.D., D.P.H.

(*Concluded from page 1146.*)

Carnivora.

Dogs, cats, and jackals have at some time been believed to become the subjects of plague.

Plague in Dogs.

a. Under Natural Conditions.—Although the few experiments which have been made to test the susceptibility of dogs to plague have given almost negative results, there is some evidence—though far from conclusive in character—that these animals may occasionally suffer from the disease. Even so far back as the Black Death in the fourteenth century dogs were believed in Italy to have contracted plague.[59] In London in 1543, 1563,[60] and 1665,[61] and in Leeds in 1645,[62] dogs were regarded as probable carriers of infection, and were consequently slaughtered in immense numbers. This was also the case in the Great Plague of Moscow in 1770-72. In modern times dogs have been said to suffer from the plague in China.

It will be convenient to refer here to an oft-quoted statement to the effect that, in the endemic centres of plague in China, the rats are attacked first, and then the larger animals, successively, in order of increasing size. This opinion was first enunciated over twenty years ago by Père Fénouil, the French missionary in Yünnan.[63] More recently the same observer, now Mgr. Fénouil, Bishop of Yünnan, has expressed this view as follows:

> In the plains visited by Yang-tzu-ping [or the plague] the first victim is invariably the rat, whose snout is always close to the earth; in succession and regular order the pig, cat, dog, and ox, and finally man, whose mouth is most distant from the soil, are afterwards attacked.[64]

An observation of this kind, could it be confirmed, would be of great interest as indicating to some extent (though not without some obvious fallacies in the mode of reasoning) that the plague virus was a miasma rising from the ground, and decreasing in virulence as the distance from the ground increased. No observation, however, of a similar character has, I believe, been made elsewhere. It is, indeed, for the present, uncertain whether some of the animals named ever contract plague under any circumstances, and it is impossible, therefore, to accept unreservedly the view here stated.

In Mengtsz dogs were believed to have become infected by eating the flesh of human plague corpses, but in Hong Kong, Canton, and Macao no incident of the kind was observed.[65] I have elsewhere recorded a doubtful instance of plague in a dog.[66] In Poona on two occasions, in the lines of the 2nd Bombay Lancers and of the 29th Bombay Infantry respectively, dogs were believed to have contracted plague, but final proof of the nature of the disease in them is not adduced.[67] In Jeddah, both in 1897 and 1898, there is said to have been a great mortality among dogs about the time of the appearance of plague there in man.[68] In Bombay, in the months preceding the recognition of plague there in the autumn of 1896, the number of deaths in dogs was, on the other hand, rather below than above the average.[69]

b. Under Artificial Conditions.—The German Plague Commission found that dogs inoculated with virulent concentrated suspensions of plague bacilli gave hardly any reaction. Of two dogs fed with pure cultivations one remained well, the other became slightly ill; but no plague bacilli were found in the swollen glands.[70] Ogata, experimenting in Formosa on behalf of the Japanese Government, found dogs quite refractory to artificial infection with plague.[71]

It would appear, then, that dogs are but little liable to plague, and that they play, if any, an insignificant part in the spread of the disease.[72]

Plague in Cats.

a. Under Natural Conditions.—In Bombay in January, 1897, a number of sick and dead cats were observed, and it was thought possible that the disease affecting them was plague. Bacteriological examination of some of the bodies led, however, to negative results.[73] In the months preceding the outbreak of plague there in 1896 there was a slight increase in the number of dead cats reported to the municipal authorities, but no proof is adduced that these cats died of plague.[74] The same remark applies to similar observations of the death of cats on Bandra Hill,[75] in Worlee,[76] in Jawalapur,[77] in the outbreaks of plague in Poonah in the lines of the 2nd Bombay Lancers and 29th Bombay Infantry, and near Sirur, in the lines of the 2nd Bombay Cavalry.[78] Similarly at Hong Kong in 1894[79] and at Jeddah in 1897 cats[80] were observed to die during a plague epidemic, but whether from plague or some other disease there is no evidence to show. Almost the only instance where the occurrence of plague in cats was apparently satisfactorily proved was in the endemic centre of plague in Eastern Mongolia. There, in 1891, four kittens were observed to lick up the expectoration of plague patients, and all died shortly after of what is definitely asserted to have been "hæmorrhagic plague pneumonia."[81] A somewhat analogous incident occurred at Hoihow, in China, in 1895,[82] and also in Mauritius in 1899.[83] In Oporto also one cat is said to have suffered from plague in the house of a nobleman where two men-servants had the disease.[84]

b. Under Artificial Conditions.—The German Plague Commission found that cats after injection of plague bacilli suffered from a short attack of fever; in one case a local abscess formed, but the pus it contained was sterile[85]. In Hong Kong Wilm also observed that cats became feverish after inoculation with plague bacilli, but did not die. Two cats were also fed upon portions of a plague bubo; they were both ill for seven days and became very thin, but both recovered[86].

It will be observed that cats are, therefore, but slightly susceptible to plague, either in nature or in the laboratory, and they may be classed with dogs as playing but an insignificant part in the spread of plague. In view of the great attraction which rats dying or dead from plague must of necessity present to dogs and cats, the fact of their low degree of susceptibility to the infection of plague is a fortunate one.

Plague in Jackals.

In China, it is said that "jackals are known to be subject to the disease in Yünnan. They are more prone than either dogs or pigs to consume exposed human bodies, and are likely animals to be infected."[87] Positive proof, however, that jackals have contracted plague in this or some other way, appears to be wanting.

UNGULATA.

Horses, pigs, sheep, goats, and cows have at some time or other been believed to become the subjects of plague.

Plague in Horses.

(*a*) *Under Natural Conditions.*—Though susceptible to the action of the plague bacillus, when injected into their tissues in pure culture, horses appear to escape infection under the ordinary conditions of their existence. No instance has been published, so far as I am aware, of a horse contracting plague in its natural state. In Bombay, in the months preceding the advent of plague in 1896, the number of deaths among horses was strikingly below the average[88].

(*b*) *Under Artificial Conditions.*—Haffkine found that horses when injected hypodermically with considerable doses of virulent plague culture, suffered from an attack of fever "from which they recovered in a short time, with perhaps local swelling and suppuration at the seat of inoculation."[89] The German Plague Commission observed that horses showed less reaction after inoculation than cows, and all the animals experimented on recovered.[90] In the preparation of the so-called curative plague serum the horse is the animal employed. The symptoms produced in these animals by the injection of plague bacilli, or of substances prepared from cultures of the bacilli, have been described at some length by Solovieff,[90] Symmers of Cairo,[91] and others.

Plague in Pigs.

(*a*) *Under Natural Conditions.*—From the time of Boccaccio's observation of the death of two hogs after snuffling at some plague-infected rags this group of animals has been believed to have occasionally contracted plague. In recent years in India no evidence has, I believe, been advanced to show that pigs have suffered from the disease, or taken any part in its spread. In China, on the other hand, this charge has been more than once brought against them, though it would appear that the grounds for such a charge are of a somewhat slender character. In Hong Kong, in 1894 and succeeding years, it was suggested that plague might have been brought to the island by diseased pigs imported from Pakhoi. Lowson has described an outbreak of a disease, believed to have been plague, in some of the imported animals;[93] but apparently the malady was proved to be of some other nature, as later the same observer has stated that no known case of plague occurred in pigs in Hong Kong.[94] Michaud[95] states that he saw dogs and pigs feeding on plague corpses, and that "these animals fell victims to their greed and succumbed to the scourge," but he adduces no details in support of the statement. At Hoi-how, in 1895, three pigs died under circumstances which rendered it possible to hold that they had died of plague; but here, again, nothing in the nature of proof that they did so is forthcoming.[96] In November, 1898, a 'severe epizoötic of plague in pigs was reported in the Indian daily press as occurring at Khed, a subdistrict some 80 miles from Bombay;[97] whether the specific character of this outbreak was ever proved or not I am unable to say.

(*b*) *Under Artificial Conditions.*—Lowson failed to induce symptoms in four young pigs by feeding them on plague spleens in 1895. Later, after inoculating them (apparently the same animals) with cultures of plague bacilli, and implantation of a plague bubo, a slight rise of temperature was obtained, but nothing more.[98] In 1896 Wilm fed a pig on plague spleen, and the animal died twenty-three days later from what appears to have been subacute plague. Bacilli were found in the organs, in the glands, and in the blood. Another pig, inoculated subcutaneously with fragments of a bubo, died of plague in forty days.[99] The German Plague Commission, on the other hand, failed to obtain any reaction in pigs either after inoculation with virulent, concentrated cultures of bacilli, or by feeding them on rats dead from plague.[100]

Briefly, it would seem that pigs have a low degree of susceptibility to the plague virus, and they are probably of little if any importance as agents in spreading the disease.

Plague in Sheep.

(*a*) *Under Natural Conditions.*—The only observation which has apparently yet been published during the recent prevalence of plague pointing to the possibility of sheep suffering from the disease is a return of the number of sheep which died in Bombay in the summer of 1896. In July, August, and September of that year there was a great rise in the mortality of both sheep and goats, but proof that these animals died from plague is wanting.

(*b*) *Under Artificial Conditions.*—Haffkine found that sheep reacted to the inoculation of virulent plague cultures, but recovered in a short time. The German Commission obtained practically the same results.

It would appear, therefore, that sheep are but little susceptible to plague, and cannot be regarded as active agents in the multiplication and spread of the disease.

Plague in Goats.

(*a*) *Under Natural Conditions.*—In Bombay in 1896, as stated above, and also in Jeddah in 1897 and 1898 a greatly increased mortality among goats occurred about the time of the outbreaks of plague in those places in human beings.

(*b*) *Under Artificial Conditions.*—Haffkine found that goats reacted, like horses, cows, and sheep, to the inoculation of virulent plague cultures, but "the goats alone, without developing any acute disease, lost condition, gradually wasted away, and after a considerable time many of them succumbed." The German Plague Commission found that goats

were somewhat more susceptible than pigs, dogs, or cats, but none of the animals died as in Haffkine's experiments.

Plague in Cows.

(*a*) *Under Natural Conditions.*—During the recent period of plague prevalence there is apparently no conclusive evidence that cattle have suffered, or can suffer, from the disease.[101] In 1897 the Government of Bombay instituted an inquiry into the susceptibility of these animals to plague, mainly with the object of determining whether there was any risk of conveying infection by means of calf lymph for vaccination. The conclusions arrived at were that it was very doubtful whether cattle are susceptible to plague, and that there had been no record of any disease or deaths among cattle which could be attributed to plague in any place in the Bombay Presidency where plague had raged.[102] The only evidence tending to point the other way is found in the returns of the number of dead cattle (bullocks, buffaloes, cows, and calves) dealt with by the Bombay Municipality in July, August, and September, 1896, just before plague was recognised in the city. The rise in the deaths among calves was very remarkable, the figure for August being very nearly double that for May. In the case of the other animals named the rise was much less striking or altogether absent.[103] In the absence of figures for other years it is impossible to assert that the rise in mortality among calves was a very exceptional occurrence or not, and in any case proof that the excess mortality was due to plague is wanting.

(*b*) *Under Artificial Conditions.*—The German Plague Commission found that cows showed a considerable reaction after inoculation with pure cultures of plague bacilli; abscesses formed, but the pus they contained was free from plague bacilli; all the animals recovered.[104] Haffkine's experiments led to practically the same results.[105] Lowson, in Hong Kong, also obtained almost identical effects by the inoculation of cattle.[106]

It may be stated, then, that cattle are scarcely at all susceptible to plague, and that they play no part in the multiplication and spread of the disease. In view of the multitude of cattle in India, the close contact with them in which the people live and the use of cowdung by the people for every variety of purpose, it is an extremely fortunate fact that cattle do not suffer from plague.

OTHER MAMMALIA.

No other mammalia have, I believe, been observed to become hosts of the plague bacillus under natural or experimental conditions. It remains to discuss briefly the question of plague in birds, reptiles, and fishes; and, finally, in the *Invertebrata*.

BIRDS.

(*a*) *Under Natural Conditions.*—In Bombay, shortly after the recognition of plague there in 1896, some dead pigeons were found, and suspicion was aroused that these birds were suffering from the disease.[107] The domestic fowl has also been believed to contract plague, as, for example, in Yünnan (China), and in more than one of the great historic epidemics poultry have been recorded as dying of plague. From experimental and other evidence, however, considerable doubt must attach to the view that these birds died of plague. In Hong Kong neither pigeons nor poultry have been infected by the disease. In India, where crows and kites abound, and could easily gain access to plague-infected material, there is no authoritative instance of these birds dying.[108] Vultures, many of which live upon the corpses exposed in the Parsee Towers of Silence, have never, so far as is known, contracted plague, although plague cadavers of Parsees have been amongst those exposed in the Towers.

(*b*) *Under Experimental Conditions.*—London has carried out a series of elaborate experiments on the susceptibility of birds to plague.[109] He employed for his experiments pigeons (*Columba livia*), ducks (*Anas domestica*), crossbills (*Loxia*), yellow-hammers (*Emberiza citrinella*), linnets (*Fringilla linotta*), and canaries (*Fringilla spinus*). He failed to induce plague artificially in any of these birds, either in a healthy state or after their vitality had been lowered by starvation or by exposure to cold. The German Plague Commission also found pigeons, poultry, and geese quite immune to plague.[110] Lowson equally failed in attempting to transmit the disease to pigeons and fowls, and he quotes Kitasato as having been similarly unsuccessful in regard to fowls.[111] A like negative result was obtained by Ogata in Formosa.[112] The sole observer who has obtained positive results in birds is Wilm. He fed poultry upon fragments of organs from plague cadavers, and also with material infected with pure cultures of the plague bacillus; the birds died in three or four days, and their organs were found to contain the bacillus. Pigeons treated in a similar manner remained immune.[113] Giaxa and Gosio succeeded in giving plague to pigeons after withholding food from them for some time.[114]

To sum up this evidence, it would appear that birds are, under ordinary conditions, refractory to plague, and cannot, therefore, be regarded as agents in the multiplication and spread of the disease.

REPTILIA.

a. Under Natural Conditions.—Snakes have, within quite recent times, been believed to be capable of contracting plague and dying from it. It has been supposed that they became infected through eating the bodies of rats that had died from the disease. Much doubt, however, must attach to the supposition, as the only available evidence appears to be of a hearsay character. Thus the Deputy Sanitary Commissioner of the North-West Provinces wrote in regard to the Himalayan centres of plague:

"Moreover, when rats are thus dying, snakes also are said to be found dead about the site in unusual numbers." And he adds, "The theory among the people is that the rats eat the grain (which is often musty) and the snakes eat the rats."[115]

Planck also, writing in 1877, refers to the subject, but is very doubtful whether the theory is based on fact:

I have seen some live snakes near to infected villages, and one particularly live snake which came out of an infected house, but I have never seen any dead snake in connection with an infected house or village.[116]

b. Under Artificial Conditions.—No experiments have apparently been made to test the susceptibility of snakes to plague. Nuttall[117] has found the tortoise immune, while the lizard he places in the list of susceptible animals. He also found frogs immune; but Devill[118] has recorded that one species of frog, the *Rana temporaria*, dies of plague if cultures of the plague bacillus or portions of plague organs be placed in its lymph sac. The reaction in the frog thus treated was slow, and a dose which killed mice in from two to two and a-half days only killed the frog after from thirteen to seventeen days. By passage through a frog, however, the virulence of the bacillus was increased, and it was found to kill other frogs on the fifth day after inoculation.

From the above evidence it can scarcely be seriously claimed that plague is spread by any members of the group of reptilia.

PISCES.

No evidence has yet been published indicating that fishes can become hosts of the plague bacillus under any conditions.

INVERTEBRATA.

The only group of invertebrate animals which has been observed or believed to carry the infection of plague is that of the

Insecta.—A considerable mass of valuable observations upon the part played by insects in the spread of plague has been published by Yersin, Simond, Nuttall, Hankin, Ogata, and others. Space will not permit of a discussion of these observations here, but there is good reason to believe that the disease can be and sometimes is spread by this means. Whether, however, in this explanation lies the whole solution of the problem of the diffusion of plague, as some have ventured to claim, must for the present be open to doubt.

CONCLUSION.

In conclusion, it may be asserted, from the evidence brought forward above, that the following animals are liable to contract plague under natural conditions: Monkeys, rats, mice, bandicoots, squirrels, and marmots. Of these, rats suffer far the most frequently, and are, of all animals, the most important agents in the spread of the disease. Mice are less susceptible, but appear, in some instances, to have suffered considerably, and may have been agents in spreading the infection. Monkeys, bandicoots, and squirrels have on rare occasions suffered from plague, and there is nothing to show that they have ever aided to any extent in diffusing the disease in man. Marmots undoubtedly spread a disease allied to plague in

Transbaikalia, and possibly in Mongolia. The evidence in regard to cats, dogs, and jackals is far from conclusive, but there is no reason to believe that these animals play any great part in spreading plague. The same is true of pigs, sheep, and goats. Horses and cows do not appear to have ever contracted plague under natural conditions, and may be disregarded as active agents in spreading it. Birds are equally immune to the disease, and there is no evidence to show that either birds or reptiles or fishes have ever aided in multiplying and diffusing the infection. Insects, on the other hand, are probably agents of considerable importance in the spread of plague.

NOTES AND REFERENCE.

[59] Auger de Biterris, quoted by Hecker, *Epidemics of the Middle Ages*. [60] Creighton, *History of Epidemics in Britain*, vol. i, p. 314. [61] Boghurst (*Loimographia*, chap. iv), on the other hand, says that no animal of any kind, tame or wild, suffered from plague during the Great Plague of London. [62] Creighton, *op. cit.*, vol. i, p. 558. [63] Quoted in Parliamentary Papers, China, No. 3 (1878), pp. 22-23. [64] Quoted by Michoud, *Medical Reports of the Chinese Maritime Customs*, No. 48. [65] Cantlie, *loc. cit.* [66] *Lancet*, September 17th, 1898. [67] *Report of the Sanitary Commissioner with the Government of India*, 1897, pp. 83 and 85. [68] *Janus*, 1897-98, p. 168; and 1898, p. 145 (Stékoulis). [69] *Health Officer's Report*, p. 63. [70] *Report of the German Plague Commission*, p. 295. [71] *Centralbl. f. Bakt.*, xxi, 20-21. [72] It is noteworthy that probably the oldest experiments on record concerned with the question of plague in the lower animals were performed on dogs. In 1720 Dr. Couzier, in Marseilles, found that both blood and urine taken from a plague patient and introduced into the crural vein of a dog produced the disease. Deidier, on the other hand, failed to give dogs the plague by feeding them on the bile of a plague patient (*The Medical Works* of Dr. Richard Mead, Edinburgh, 1765, vol. ii, pp. 6 and 8). [74] *Health Officer's Report*, p. 62. [74] *Ibid.* [75] *Ibid.*, p. 143. [76] Hankin. *loc. cit.* [77] *Ibid.* [78] *Report of the Sanitary Commissioner with the Government of India*, 1897, pp. 83 and 85. [79] Cantlie, *loc. cit.* [80] Stékoulis, *loc. cit.* [81] Zabolotny. [82] McCandliss, *Chinese Customs Medical Reports*, No. 51. [83] Borel, *Bulletin de la Société de Médecine Maritime*, Marseilles, 1899, No. 4. [84] Shadwell, Epidemiological Society, December 15th, 1899. [85] *Report of the German Plague Commission*, p. 294. [86] Wilm, *loc. cit.* [87] Cantlie, *loc. cit* [88] *Health Officer's Report*, p. 63. [89] Government of India, *Report on Plague in India*, vol. i, p. 38. [90] *Report of the German Plague Commission*, p. 288. [91] *Archives des Sociétés Biologiques*, T. iv, 1898, p. 175. [92] *Centralbl. f. Bakt.*, April 15th, 1899. [93] *Epidem. Soc. Trans.*, N. S., vol. xvi, p. 57, [94] *Indian Medical Gazette*, January, 1897. [95] *Loc cit.* [96] Layng. *Chinese Customs Medical Reports*, No. 51. [97] *The Englishman*, Nov. 24th, 1893. [98] *Epidem. Soc. Trans.* [99] *Indian Med. Gazette*, July, 1897. [100] *Report*, p. 296. [101] The absence of any disease or mortality in the cattle owned by the Highlanders of Garhwal and Kumaon, where plague is endemic, and where the people live in the closest proximity with, and often under the same roof as, their cattle, is strong additional proof that these animals are not liable to plague under natural conditions. [102] Government of India *Report*, i, 38. [103] *Health Officer's Report on Plague in Bombay*, 1896 97. [104] *Report*, p 290. [105] Government of India *Report*, i, 38. [106] *Epidem. Soc. Trans., loc. cit.* [107] *Health Officer's Report*, pp. 62 and 70. [108] It is obvious that birds of this sort might pick up in their beaks and carry to a distance plague-infected rags or other material, and thus aid in diffusing the infection; an analogous statement might, of course, be made of nearly all the other animals mentioned in the text. [109] *Archives des Sociétés Biologiques*, vi, 1898, p. 69. [110] *Report*, p. 296. [111] *Loc. cit.* [112] *Loc. cit.* [113] *Indian Medical Gazette*, June, 1897. [114] Ref. in *Centralbl. f. Bakt.*, xxii, p. 349. [115] BRITISH MEDICAL JOURNAL, September 8th. 1894. [116] Parliamentary Papers relating to the Spread of Levantine Plague, 1879, p. 51. [117] *Centralbl. f. Bakt.*, xxii, 49, 1897. [118] *Ibid.*, p. 382.

A NOTE ON HERPES PROGENITALIS FROM A DIAGNOSTIC POINT OF VIEW.

By ARTHUR COOPER,
Surgeon to the Westminster General Dispensary.

REGULAR herpes is perhaps the best characterised and the most easily diagnosed of all the lesions which occur on or about the genital organs. Irregular herpes, on the other hand, not infrequently leads to mistakes in diagnosis.

In its typical form herpes presents the well-known appearance of a group of small vesicles on a red base and surrounded by a red areola. It is frequently accompanied or preceded by a sensation of itching or burning, and it usually disappears completely within a week without affecting the lymphatic glands. When situated on skin or exposed mucous membrane the vesicles quickly dry up into thin scales, the appearance of which is as characteristic as that of the vesicles themselves, and these soon fall, leaving a healthy surface. When a moist surface which is in contact with another moist surface—that of the prepuce and glans penis for example—is the seat of herpes, the vesicles quickly become erosions, and when the mucous membrane is in a healthy state these heal almost as quickly as when the skin is affected.

Herpes may be irregular either in its distribution or in its course. As regards distribution, the several spots, instead of being grouped in the ordinary way, may be discrete. This should hardly lead to error, as the separate spots have all the other characteristics of herpes. But occasionally there is only one spot, and it is this single-spot herpes that is most likely to mislead, not on account of any peculiarity in the spot itself, but because of a general impression that herpes ought necessarily to be grouped, and the consequent risk of its being mistaken for something else, and thus receiving inappropriate treatment. It should always be remembered that herpes is one of the most sensitive of lesions, and that nothing resents ill-treatment more promptly or more actively.

Irregularities in the course of herpes may be due to various causes. One of the commonest is balanoposthitis. The inner surface of the prepuce and the glans penis are the most frequent seat of herpes, and when the mucous membrane is unhealthy, and especially if the prepuce be long and ill-kept, the irritation set up by decomposing smegma and contact with the urine serves to prolong the course of herpes, and in these circumstances some degree of ulceration often takes place. Herpes may also run an irregular course from some constitutional dyscrasia, and without any obvious local cause. I have at present under observation a patient in whom the herpetic spots habitually run together and form an ulcer, which at a certain period might easily be mistaken for a local or soft chancre. This patient is an old syphilitic, and it would probably be impossible to convince him that these repeated attacks are not part of his old trouble. In such cases as this valuable help in diagnosis may sometimes be gained by careful examination of the edges of the ulcer with the aid of a lens, when what has been called by Fournier its "polycyclic" outline, resulting from the multiple segments of small circles left by the original herpetic spots, may be made out. This sign, however, is of course absent in the case of single-spot herpes, and in any case it is soon obliterated if the ulceration spreads at all widely.

Another cause of irregularity is the use of irritating applications, and whether the irritation be set up by the patient's own secretions or artificially by drugs or in any other way, there is always risk of the inguinal glands becoming affected. In such cases usually only one, or perhaps two, glands are involved, and the inflammation is subacute. Occasionally it is acute, and suppuration may follow. Rarely the adenopathy is indolent, multiple, affects both groins, and resembles that of primary syphilis so closely that if irritants especially nitrate of silver—have also been applied to the sore, and inflammatory hardness thus set up, it may be impossible to make an immediate diagnosis.

The intimate association of herpes with nervous irritation has long been recognised, and the nervous element may play a prominent part in determining an outbreak. For example, a married man who is liable to herpes exposes himself to risk, and in consequence suffers from considerable nervous depression and anxiety, partly from remorse, partly from fear of contagion. This leads to frequent examination and manipulation of the parts, and in a few days an attack of herpes comes on. If, in these circumstances, there happens to be only one spot, as in a case I saw not long ago, and the patient takes it for a "chancre," and irritates it, there may be for a time considerable difficulty in arriving at a correct diagnosis.

If a patient is exposed to contagion while suffering from herpes, the herpetic spot or spots may be inoculated with the virus of the local chancre or of syphilis, in which case the resulting lesion will be single or multiple according to the number of places that "take," just as in the case of vaccination.

In a case of syphilis, again, herpes may chance to appear at the close of the incubation period, so that both syphilitic and herpetic lesions are present at the same time. When this occurs the danger is lest the herpes only should be recognised and the primary lesion of syphilis overlooked.

In the following case it seems probable that herpes was present at the time of infection as well as at the beginning of the primary stage of syphilis: A gentleman who had previously consulted me for herpes came on September 25th complaining vaguely of soreness about the penis, which he had first noticed three days before. The last exposure dated back several weeks. On slightly retracting the prepuce two typical herpetic erosions were seen near the margin, but on complete retrac-

tion four more lesions were discovered. First, on the middle line of the prepuce, close to the furrow, was a round shallow ulcer about the size of a hemp seed, and with a clearly indurated base, and near to it were two other sores similar to the first, except that neither was perceptibly indurated. Further away was a fourth similar ulcer, also without induration. The inguinal glands were enlarged, multiple and indolent on both sides, and a diagnosis of syphilis was made and mercury prescribed. On October 1st the two herpetic spots had disappeared. The two ulcers nearest the first were now also indurated, but the one further away remained unindurated. On October 10th all were healed except the first. The patient was not seen again until November 1st, when all had healed, but the three indurations remained. Roseola was present on the skin, and other signs of syphilis followed in due course.

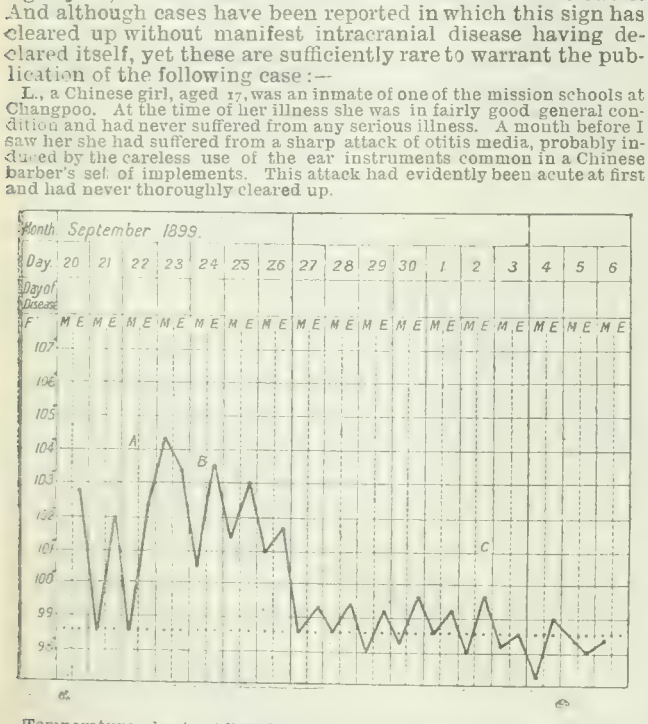
The following points may be found useful to keep in mind in any doubtful case in which sores are present on or near the genital organs: (1) The chances of irregular herpes should always be considered: (2) the lesion or lesions, and also the inguinal glands, should be closely and repeatedly examined until the diagnosis becomes clear; in the meantime (3) do not apply irritants, and (4) do not give mercury.

A CASE OF SUPPURATION IN THE MASTOID WITH OPTIC NEURITIS ON THE SAME SIDE: OPERATION: RECOVERY.

By J. PRESTON MAXWELL, M.B., F.R.C.S.,
Changpoo, South China.

The presence of optic neuritis in the complications which occasionally follow middle-ear inflammation is generally, and rightly so, taken as indicative of serious intracranial trouble. And although cases have been reported in which this sign has cleared up without manifest intracranial disease having declared itself, yet these are sufficiently rare to warrant the publication of the following case:—

L., a Chinese girl, aged 17, was an inmate of one of the mission schools at Changpoo. At the time of her illness she was in fairly good general condition and had never suffered from any serious illness. A month before I saw her she had suffered from a sharp attack of otitis media, probably induced by the careless use of the ear instruments common in a Chinese barber's set of implements. This attack had evidently been acute at first and had never thoroughly cleared up.



Temperature chart. After October 5th the temperature was normal. A, no optic neuritis; B, optic neuritis marked on the left at 9.30 A.M.; C, optic neuritis disappeared.

I was called to see her on September 20th, 1899. She was suffering from an afternoon fever which had been thought to be a quotidian ague, and complained of pain in the left temporal region. A little foul-smelling pus was coming from the meatus and there was a small perforation of the tympanic membrane in front and below. There was slight tenderness over the mastoid processes but no œdema. Regular washing out of the ear with a solution of carbolic acid was at once undertaken and the eyes were examined. Both fundi were perfectly normal.

On September 22nd the pain in the head was much worse, and was confined to the temporal region, and there was slight œdema over the mastoid. The pupils were dilated with atropine, and the fundus in each eye was found perfectly normal. A message was at once sent off to her parents asking for permission to operate, but no reply was received till September 25th, as they lived a day and a-half's journey away. During these two days she became rapidly worse, the pain in the head being continuous and severe, sometimes causing her to cry out, and wrecking her night's rest. The swelling over the mastoid also increased, and some swelling appeared in front of the ear in the temporal fossa. The temperature was now continuously raised, and the pulse generally ranged from 110 to 130. At no time during the illness was there anything like a cerebral pulse. The headache was entirely confined to the left temporal region. On the evening of September 24th I again examined the eyes, and found optic neuritis commencing in the left eye, the disc being swollen, its edges blurred, and the veins full. The patient herself spontaneously complained of the vision of this eye being dim. The fundus of the right eye was normal, and its vision natural.

On September 25th, permission having been obtained, I made the usual vertical incision behind the ear, prolonging it upwards and slightly forwards for about an inch. Having turned the ear forwards, a small abscess was opened at the upper margin of the external auditory meatus beneath the periosteum. Using a chisel and mallet, the antrum was opened, the chisel passing through apparently healthy bone. Immediately it was opened, pus welled up from the mastoid cells. The opening into the middle ear, the edges of which were bare and rough, was enlarged, and the contents of the middle ear—namely, the malleus, incus, and some granulation tissue—were removed with a small Volkmann's spoon. The stapes was not seen. A chain of six silk threads (No. 4) was then passed round, entering at the wound in the mastoid and passing out at the external ear. The parts were irrigated and dressed, iodoform being freely used, and the wound behind the ear packed with gauze. During the next six days the wound was dressed twice a day and thoroughly irrigated with 1 in 2,000 biniodide of mercury lotion. In forty-eight hours the temperature had fallen to normal, and the pain, which persisted for an hour or two after the operation, had entirely disappeared. The optic neuritis quickly subsided, and at the close of a week after the operation had entirely disappeared, the dimness of vision having disappeared within forty-eight hours of the surgical treatment. At the close of ten days the discharge rapidly diminished, and the irrigating lotion commenced to pass into the pharynx, to the great annoyance of the patient. On the twelfth day after operation the silk threads were removed, and the posterior wound rapidly closed. At the end of six weeks the discharge had entirely ceased and the patient was allowed to cease treatment. The middle ear showed no signs of unhealed granulation tissue, and its walls appeared to be covered with scar tissue. A watch was audible on this side at a distance of 1 inch from the external auditory meatus.

As to the surgical procedure, it was simple, the silk thread drain acting admirably. The optic neuritis was quite clear, but as to its cause I am unable to form an opinion. At no time were there signs indicating the presence of an abscess within the cranium, nor, on the other hand, was there any sign of ocular paralysis or irritation of the nerve centres governing the muscular movements. The interest and importance of the case lies, to my mind, in the rapid recovery after free drainage, and the comparatively rapid and complete disappearance of the signs in the left fundus oculi.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

A CASE OF SEPTIC THROMBO-PHLEBITIS TREATED BY INJECTIONS OF STREPTOCOCCUS ANTITOXIN.

In the case which I now report there seems no reason to doubt the good resulting from injections of the antitoxin of streptococcus pyogenes.

Mrs. M., aged 26, a primipara, was confined on November 21st, 1899. No doctor was present. Three days after the confinement the right leg became swollen, pain in the knee preceding the swelling. She got up on November 28th, and moved about the house in a more or less crippled state for some days, but had to take to bed at last. After rest and poultices she recovered somewhat, and got up for some time every day until December 24th, when a painful swelling rather suddenly formed at the saphenous opening of the right thigh. She became very ill, and had to remain in bed. I saw her for the first time on December 28th. She had been having for some days repeated rigors and profuse sweats. Her colour was deadly pale, her eyes sunken, and her hair wet with perspiration. Her temperature was 104° F., and her pulse very rapid and weak. The upper third of the right thigh was greatly swollen, the skin red, the surface temperature raised, and there was great tenderness on movement or pressure. Pain and great tenderness, with some degree of swelling, also existed in the right iliac and hypo-

gastric regions showing the implication of the peri-uterine and ovarian veins from whence the disease had spread to the iliac, femoral, and saphenous trunks. The right leg below the upper third of the thigh presented the familiar appearance of ordinary "white leg." I treated her by absolute rest, belladonna applications, hot fomentations and poultices externally, and gave her 8 gr. doses of salol for a time; subsequently, her strength failing rapidly despite the fact that she took a good deal of nourishment, I gave her bark and heart tonics. Under this plan of treatment the case went rapidly down hill. The temperature kept high, the pulse very rapid and feeble. Profuse perspirations and occasional slight rigors persisted. Sleep was obtained with difficulty, nepenthe acting best as a narcotic. The pain, heat, and redness extended down the limb, and at several points suppuration seemed imminent.

On January 11th, 1900, the left leg began to swell, and the condition of the patient was very bad.

On January 13th I injected 10 c.cm. of streptococcus antitoxin. The patient's temperature at the time of injection was 103° F., her pulse being 125, and very weak.

On January 14th her temperature was 100° F., but otherwise her condition was practically unchanged. Great soreness was complained of at the site of the injection, the interscapular space. I injected another 10 c.cm. of antitoxin, this time, however, under the skin of the abdomen.

On January 16th there was marked improvement. Her temperature was normal, her pulse steady and much slower (96), and the pain and tenderness were subsiding.

The further progress of the case was one of uninterrupted recovery, and no more antitoxin was used. The patient is now quite recovered except for some slight œdema.

The antitoxin was procured from Messrs. Burroughs, Wellcome and Co.

Ballinrobe, co. Mayo. R. B. Mahon, M.D., F.R.C.S.Eng.

ŒSOPHAGEAL FEEDING IN BULBAR PARALYSIS.

The two cases of bulbar paralysis affecting deglutition, so perfectly described by Dr. Gibson in the British Medical Journal of April 28th, present a very hopeless picture of destructive changes, whose most distressing symptom is the slow starvation induced by paralysis of the gullet.

In two cases recently treated in my practice, œsophageal feeding was adopted when the patients were unable to swallow even the saliva. In one case the patient became stout and strong, and lived in comparative comfort for three years, dying at last in a few hours from implication of the vagus centre producing fatal dyspnœa.

The other patient was a person of advanced age; but life was prolonged for eighteen months, with considerable improvement in strength and comfort, dying at last after a few hours' illness, marked by cardiac failure.

In neither case was there any return of the power of deglutition, all food, given three times a day, being taken through an indiarubber tube.

Sale, near Manchester. Herbert Smith Renshaw, M.D.

REMOVAL OF A GLASS PENHOLDER FROM THE ABDOMEN.

On January 30th, 1899, a farmer living in the township of South Cayuga, near the Grand River, told me that his wife, who thought herself two months advanced in pregnancy, had attempted to produce abortion by passing a penholder into the mouth of the womb, and that it had gone beyond her reach. This happened in the morning. I saw her in the afternoon, examined the vagina with a speculum, and could not find the slightest mark or abrasion on the vaginal mucous membrane. I passed a long forceps readily into the uterus, but could find nothing; I then gave chloroform and thoroughly explored the uterus, but could find no signs of the penholder. I questioned her closely as to the possibility of her being mistaken, but she assured me that she could not be, and that she was certain the penholder entered the mouth of the womb, that she had passed it very slowly and deliberately, but that it did not cause the slightest pain or pricking; that for some time after it had left her grasp she could feel it just within the os, and had vainly tried to get hold of it. She further informed me that it was a glass penholder or style, with a sharp grooved point.

With considerable misgivings as to the wisest course to pursue, I sent her to bed and told her husband to let me know if any change took place. Two days later he told me she had kept quiet and had been comfortable until that morning, when on turning in bed she had felt an acute pain in her side, as if something was stabbing her, so intense that she feared to move or breathe, but when she got on her back the pain ceased. This, I think, happened more than once.

I went to see her again and took Dr. Purk, of Fisherville, with me, and he explored both the uterus and bladder without result, and we could discover nothing by palpation. Her temperature was slightly over 100°, but she felt comfortable, and as it was night we left her until next morning when I opened the abdomen, and after exploring the pelvic cavity and abdomen I found the penholder, point forward, nearly touching the diaphragm about its centre. It was upwards of 5¾ inches in length and was loose in the abdominal cavity. I may say my patient made a rapid and good recovery.

Selkirk, Ontario. Thomas T. S. Harrison, M.D.

CASE OF ACUTE LEAD POISONING.

On March 13th, 1900, I was hastily called to a lady aged 60 who had taken one pennyworth of sugar of lead dissolved in a cup of hot water. As she was about three miles away I sent a horse messenger back with instructions to give one tablespoonful of common salt in a tumbler of warm water; this was done, and slight vomiting occurred, followed shortly by purging. On my arrival I found the patient collapsed, with a bluish tongue and much nervous irritability, and pain in the back over the kidneys. I prescribed 40 grs. of sodium sulphate every two hours; purging and black stools resulted. On inquiry I found that the quantity taken was 4 drachms, which had been bought to make a lotion for a bad leg. An uninterrupted recovery followed. As cases of acute lead poisoning are rather rare, the record of the above may be useful.

Liskeard. Jos. Wm. Gill, D.P.H.Lond., M.R.C.S.Eng.

THE LOCAL INCIDENCE OF RHEUMATISM.

In view of the recent expression of opinion in the Clinical Society of London[1] that a fuller knowledge of the prevalence and distribution of acute rheumatism is required, the following facts are recorded, which seem to indicate that the rheumatic poison has a preference for certain localities, thus resembling ague and endemic goître.

As I was in practice in the town of Larkhall, Lanarkshire, for about six years from 1892, I had ample opportunity for observing the distribution of disease in and around that place. The town, with a population of about 10,000, is the centre of a large coal-mining district. It stands upon an elevated and wind-swept plateau, and is flanked by the river valleys of the Clyde and Avon. On the slope and in the hollow of the last-named a portion of the town known as Millheugh has been built, and here about 1,000 people reside. While acute rheumatism was fairly common in Larkhall proper during my residence there, so prevalent was the disease in the Millheugh district that one might fairly have called it endemic. Hardly ever, if at all, was I without a case of rheumatism in that district, especially in the latter years of my practice, and for every case of the disease in Larkhall proper, there were two or three in Millheugh. In one household both parents were sufferers; the father was several times the subject of erythema nodosum, associated with joint pains; the mother had an attack of acute articular rheumatism; one of their sons, aged 18, was confined to bed for a month with endocarditis, in his case there was no history of joint pain; and several of the other children had tonsillitis.

Instances like this, which suggest infection, are by no means uncommon in the literature of rheumatism[2] and Dr. Isaac Newton[3] has recorded an interesting occurrence at Tonbridge, Kent, a low-lying town in the Medway valley, of what seemed to be an epidemic of acute muscular rheumatism. The only difference between the village of Millheugh and the town of Larkhall, is that the former lies in a valley and the latter on a level upland. The soil and the geological conditions are the same for both. The steep incline upon which Millheugh stands prevents the accumulation of surface or subsoil water,

[1] British Medical Journal, March 31st, 1900, p. 767.
[2] Pococks, *Lancet*, 1882; Schäfer, *Berl. klin. Woch.*
[3] British Medical Journal, September 24th, 1894, p. 651.

and the misty exhalations from the river are comparatively speaking infrequent. Scotland is proverbially a wet country, but the rainfall of the Larkhall district is low on account of the sparsity of trees and the absence of high hills.

My experience bears out, therefore, what the Report on the geographical distribution of rheumatism[4] (*inter alia*) teaches that the degree of moisture in any locality has little or no influence upon the occurrence of acute rheumatism. For among the 99 places reported "free" from or "slightly affected" with rheumatism, is one of the small islands in the west of Ireland, the wettest district in the British Isles.

Leytonstone, N.E. DAN. MCKENZIE, M.D.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

A CASE OF HÆMATURIA DUE TO BILHARZIA.

(By JOHN GUTCH, M.R.C.S.)

I AM indebted to Professor Bradbury for kindly allowing me to publish the notes of this case.

H. D., aged 17, who was born at Port Elizabeth in South Africa, and lived there until two years ago, when he came to England, was admitted on February 26th, 1900.

His father was an English engineer; his mother a colonial. The patient had suffered from pleurisy on the right side in 1895. He had been accustomed to bathe frequently since he was a child, both in fresh and salt water, and had also drunk water often from streams, etc.

He first noticed blood in his urine in 1894. He had never passed any gravel or calculi, and had never had renal colic, but experienced some pain along the penis during micturition. The pain was dull, and lasted the whole time that the water was passing. The hæmaturia was not increased by exercise or horse-riding. The blood was always bright red, and came just at the end of micturition, and was never more than 10 or 12 drops, but always with every micturition. He volunteered the statement that most of the boys at Port Elizabeth, both blacks and whites, suffered from blood in the urine. Girls, as far as he knew, did not, but they do not bathe. Since being in England, he has been in two London hospitals, but apparently the cause of his hæmaturia was not made out.

Present Condition.—He was healthy-looking, fairly well-developed, and not anæmic. There were no abnormal signs in the digestive system. He was constipated before admission; but had never passed any blood in his motions. Nothing abnormal was found in the cardio-vascular system. The pulse was 72, soft, regular. There was nothing abnormal in the respiratory system. On the left side of the chest were scars left by herpes. The abdomen was normal; there was no tenderness: the liver was not enlarged, and the spleen was not palpable. He had incontinence of urine at times at night, and said that he slept so heavily that he did not know when he passed urine.

The Urine, specific gravity 1022, acid, was of normal colour and not smoky, and occasionally a sediment was present which, on microscopical examination, was found to consist of red corpuscles, pus, blood, and granular casts, and both ova and living embryos of the bilharzia hæmatobia. The quantity of urine averaged 53 ounces. There was a cloud of albumen on boiling.

During twelve days for which the patient was under observation, the ova were found, with one exception, whenever the urine was examined.

I have repeatedly examined the ova, which have invariably a terminal spine at one end, and I myself have never found a specimen with the spine laterally placed as has been described by some observers. The embryos may be seen in process of hatching out of their shells, which sometimes split at the broader end, or, I fancy more frequently, in a transverse direction across their broadest part. When once free from their shell they move about with great activity, propelled by means of the cilia with which they are covered.

As one of the less common causes of hæmaturia in this country, this case will, I think, be found of interest, especially in view of the prospect of cases which it is only too likely will be met with when our troops return from South Africa.

The patient unfortunately left the hospital before the effect of treatment could be studied with any definite result. The day before he went out he was put upon small doses of turpentine. The following morning the urine contained an excessive quantity of urates, but the amount of blood was not apparently increased. The ova were still present in large quantities but no living ones could be found. Whether this had any connection with the administration of the turpentine or was an accidental occurrence only it is of course, on such a short observation, impossible to say.

[4] BRITISH MEDICAL JOURNAL, January 19th, 1889, p. 113.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

LORD LISTER, P.R.S., in the Chair.

Tuesday, May 15th, 1900.

[This meeting was held at King's College.]

FLAGELLATE PROTOZOA IN RATS.

PROFESSOR E. CROOKSHANK had described the above micro-organisms fourteen years ago in sewer rats. It had been suggested that such were probably diseased, but he had lately found the same organism in healthy field rats, though it occurred in only comparatively a small proportion. The organism was provided with a flagellum at its anterior end, and a stiff, spine-like posterior part; along its side was a fin-like membrane. A similar, if not identical, protozoon was that found in equines and in the camel. He thought it unsettled how far the organism of tsetse-fly disease was or was not identical with that found in the rat, in which animal it produced no pathogenic effect.

APPARATUS FOR CULTIVATING THE TETANUS BACILLUS.

Dr. G. DEAN described a flask which he had devised for the purpose of allowing the escape of the gas produced in broth cultures of the bacillus. The apparatus was provided with a deep trough around the neck, into which a glass cap loosely fitted; the trough was partly filled with mercury, which allowed gas to escape. The use of reducing substances (as sodium formate) in stoppered bottles of broth was attended with danger, arising from the production of gas; the risk of contamination in a stoppered vessel was another drawback. Inoculation of the flask could be carried out with a Pasteur pipette. The apparatus might be used with a reducing broth, or hydrogen could be passed into it.

METHOD FOR SERUM DIAGNOSIS.

Dr. R. T. HEWLETT and Mr. S. ROWLAND exhibited the means devised by them of measuring a volume of serum for purposes of serum diagnosis. It consisted in the use of a vaccine capillary tube; the column of blood in the tube was measured in millimetres; the diameter of the tube was taken by means of an eye-piece micrometer, and from these two data the volume could be easily calculated. The capillary tube was then placed within a second larger, thick-walled tube standing in a hollowed block of glass, and crushed from above with an iron rod, the fluid escaping into the vessel beneath.[1]

THE VIRUS OF AFRICAN HORSE SICKNESS.

Professor J. MACFADYEAN recounted the results obtained by passing the blood of the horse so affected through Chamberland filters. African horse sickness was at times a cause of great mortality. It had at one time been alleged to be anthrax, but this was an error. The author had received a sample of the blood preserved with a certain amount of glycerine. Subcutaneous injection of the blood so preserved into a horse caused death in about a week; no local lesion ensued; no organism could be grown from the blood either

[1] BRITISH MEDICAL JOURNAL, April 28th, 1900, p. 1015.

under aërobic or anaërobic conditions. Death could also be occasioned by the ingestion of such blood. Filtration of the blood from the animals so infected was next tried. The blood was first mixed with pleural or peritoneal fluid and filtered through a Chamberland candle; 100 c.cm. of the clear filtered fluid when injected into the subcutaneous tissue of a horse caused rapid death. When the blood was diluted with water and filtered, a similar fatal result ensued. The author to make the test more rigid used Chamberland "B," a finer filter than those in ordinary use. Four volumes of water were added to the blood; the fluid was passed first through a Berkefeld filter and then through the Chamberland; 40 c.cm. produced the death of a horse on the eighth day. These results opened up the question whether bacilli might not be so minute as to pass through such filters. It had been shown that the bacillus of bovine pleuro pneumonia would pass through a filter. Abbé had calculated that a micrococcus a tenth less than one of usual size would be invisible.

Hæmolytic Action of Toxin of Bacillus Pyocyaneus.

Dr. Bulloch and Dr. Hunter read a communication on the above. In regard to the tetanus toxin, Ehrlich had shown that it consisted of two substances, one a tetano-spastin, the other a tetano-lysin, the latter producing destruction of red corpuscles. In the antitoxin there were antidotes of corresponding kinds. The organism used by the authors was obtained from a child. The filtered culture was fatal to guinea-pigs; added to defibrinated ox blood hæmolysis resulted. The serum of an immunised goat neutralised the result.

Tuberculosis in Animals.

Dr. G. Newman exhibited microscopic sections of the organs of various animals, etc., dying of tuberculosis. The disease was particularly common in birds, the liver being the organ most commonly affected.

Indol-like Reaction in Diphtheria Cultures.

Dr. R. T. Hewlett demonstrated the indol-like reaction given by cultures of the diphtheria and of the pseudo-diphtheria bacillus. The reaction was not obtained in cultures under four days of age, and became more marked in those of two or three weeks. The substance giving the indol-red reaction with a nitrite and acid was not, however, indol, for it was non-volatile on distillation. It was possibly skatol-carbonic acid.

Bacillus Aërogenes Capsulatus.

Dr. Drysdale described three cases in which he had found the above bacillus in "foaming liver." He thought that it was to be encountered chiefly in cases where death had been preceded by hæmorrhage, and in cases of intestinal ulceration. In gangrene accompanied with gas formation the same organism had been regarded as the cause of the gangrene, but this he thought unproved. It was present normally in the intestine, and in upper strata of earth, whence its mode of access to injuries. In rare cases it probably reached the blood during life, but only in conditions of disease.

Streptothrix Cultures from Various Sources.

Dr. B. Jones had cultivated varieties of streptothrix from rum, dung, and other sources. In rum the organism produced turbidity, and was one of the causes of this, commercially, well-known "disease."

CLINICAL SOCIETY OF LONDON.

Leonard W. Sedgwick, M.D., Vice-President, in the Chair.

Friday, May 11th, 1900.

Acute Encephalitis following Influenza.

Dr. Prickett and Dr. F. E. Batten reported this case.

The patient was a boy, aged 9, who in January, 1899, suffered from a slight attack of influenza necessitating his being kept in bed for a day. He rapidly recovered, and although rather languid played with the other children as usual. On the morning of the fourth day after the attack, when the French maid went to wake him for his bath, he spoke to her in French saying he did not want his bath, and that his right arm felt funny. It was then found that that arm was helpless. He was seen shortly after this by Dr. Prickett, who found that the boy was hemiplegic on the right side. He was aphasic, but conscious, and understood all that was said to him. He now became progressively more and more drowsy, passed into a condition of coma, and died seventy-two hours after the onset of the paralysis. At the necropsy nine hours after death the dura mater and the sinuses appeared normal. The surface of the brain was pale, and there was marked flattening of the convolutions, especially on the left side. The vessels at the base of the brain appeared normal, no thrombosis of the larger vessels being visible. On making a horizontal section through the hemispheres it was seen that the subcortical vessels, especially on the left side, were very much injected, and stood out in contrast to the surrounding tissue. The condition was not limited to the left hemisphere, but affected the right also. The basal ganglia and the internal capsule appeared normal. On microscopic examination it was found that there were numerous small extravasations of blood and thrombosis of the finer vessels in the subcortical regions. The examination of the cells of the cortex showed that although the cells were somewhat swollen and their staining was diffuse, yet the nucleus and nucleolus were normal in situation and appearance. The medulla, pons, and cerebellum were normal. The larger vessels at the base of the brain also appeared normal.

The case was thought to be one of thrombosis of the smaller vessels of the cortex due to some toxin of which that of influenza seemed the most probable. Reference was made to the cases published by Strümpell, which, although occurring in adults, correspond both in their clinical picture and pathological condition with the present case.

Three Cases of Choledochotomy.

Mr. W. H. Battle read a paper on three cases on whom he had performed choledochotomy. After commenting on the rarity of the operation as compared with cholecystotomy, and its greater danger, especially where the patient suffered from jaundice, or there were adhesions to the bile ducts, notes on the following cases were read:

(1) That of a fat girl, aged 14, who was under the care of Dr. Hawkins in 1898, and who had had attacks of pain in the abdomen not well localised, sometimes severe, for a period of six months. Nausea and headache accompanied these attacks, and for these morphine was administered. The pain was referred to the umbilicus, and also to the left lumbar region. There were albumen and blood in the urine; no casts. *X*-ray examination was negative. Exploration of the kidney through a lumbar incision showed the absence of stone. During convalescence from this operation she had no more attacks, but after her return home she had a severe attack, and on readmission abdominal exploration showed the presence of a gall stone in the cystic duct. The removal of this relieved all her pain, and when she left hospital some weeks later the albuminuria had almost, if not quite, disappeared. She had continued well. (2) A single woman, aged 60 (under the care of Dr. Sharkey, 1898). She had had attacks of hepatic colic during four months. The gall bladder could be felt forming an elongated tumour rounded below and very hard to the touch; in fact, it felt as if it had contracted down on some large stones. The wall of the gall bladder was very thick, it contained no stones, but one was found in the common duct near the duodenum, and extracted through an incision in the wall of the duct. The result was very satisfactory. (3) A woman, aged 49 (under the care of Dr. Sharkey, 1899), with a history of eighteen years' suffering. She had attacks of paroxysmal pain with vomiting and general prostration. She had passed gall stones and had suffered from jaundice. The gall bladder could be felt. At the operation stones were found in the gall bladder, the dilated cystic duct, and in the common duct (probably the diverticulum Vateri). Those in the ducts were removed through incisions in the duct walls, the opening, being sutured afterwards, as in the other cases, with a single row of Lembert sutures of fine silk. The case did well.

In each case the gall bladder was opened and emptied of its contents, being afterwards sutured in the wound and drained. The stone was held up and steadied whilst the duct was incised over it, and escaping bile (quantity already lessened to a great extent by the incision of the gall bladder) prevented from diffusion by gauze packing. In no case was there any trouble from adhesions, and none of the patients suffered from jaundice. In a recent case of obstructive jaundice which he was exploring he had found a distended gall bladder which diminished in size during manipulation. A stone lying loose in it was removed, and ultimately the jaundice disappeared, making it probable that the stone had escaped into the duodenum during the operation.

Gall Stone Impacted in Duodenal Orifice of Bile Duct, Extracted through Incision in Bowel: Recovery.

Mr. Bland-Sutton related the details of a case in which a woman was operated upon for "gall stones."

In the course of the operation a calculus was detected in the wall of the duodenum impacted in the terminal segment of the common bile duct. As this concretion could not be pushed onwards into the bowel nor upwards into the gall bladder, the wall of the duodenum was incised, and the bile papilla exposed. The calculus could be seen slightly projecting through the orifice, and after nicking the edges of the papilla, a gall stone as big as a Barcelona nut was extracted. The incision in the duodenum was sutured in two layers, and the wound in the abdomen closed in the usual manner. A narrow strip of sterilised gauze was inserted as low as the duodenum. The convalescence was retarded by an attack of suppurative parotitis on the right side due to a staphylococcus. The wound in the abdomen healed without any irritation. The nucleus of the gall stone consisted of a collection of the bacillus coli communis. Six months later the patient was reported to be in excellent health.

The Vice-President remarked that he could not avoid

thinking how horrified Joseph H. Green, J. Flint South, or Samuel Solly would have been at the thought of cutting into an abdomen for gall stones.

Dr. PARKES WEBER said that the house-physician at the German Hospital was examining a man with jaundice, probably catarrhal, whose gall bladder was large, when the tumour suddenly disappeared as he was palpating it; and the stools, which before had been clay-coloured, became natural in colour. Probably in that case the obstruction had not been due to gall stones. In another case the gall bladder suddenly lessened in size under examination, but a hard substance remained. The liquid had apparently passed out of the bladder, and left a stone at the centre. Did Mr. Battle's case correspond with either of the above?

Mr. CHARTERS SYMONDS inquired what means Mr. Sutton took to keep the common duct in its place whilst removing the stone and suturing the duct; both being difficult procedures. Professor Halsted had devised a small hammer for the purpose of overcoming the difficulty. The speaker was wont to employ a silk suture above and below the stone, which, after the removal of the stone, served as guides for the closing sutures. Five times he had done such an operation. In one case in which he had used an interrupted suture a biliary fistula remained for some time. He himself preferred the continuous suture. He inquired with what facility Mr. Sutton was able to reach the duct: he, the speaker, had occasionally found the usual incision along the outer border of the right rectus muscle insufficient; a median incision giving better access to the duct. He had even cut across the rectus muscle and turned up the angle. It was easier to reach the duct in men than in women. In one case of very deep jaundice he found at the operation a hard mass over the head of the pancreas, from which he removed two gall stones. But a biliary fistula subsequently remained, and the patient eventually died of cancer of the lung and head of the pancreas, so that the stones were probably taken from the centre of the latter growth. He put a tampon down to the point of excision in the duct before closing the abdomen. Was it necessary to close the duct at all? It often made a difference of three-quarters of an hour in the conduct of the operation. A good tampon would prevent the extravasation of bile. Halsted had suggested the wrapping of the tampon round with a small layer of guttapercha tissue, which did not adhere to the skin, so that the tampon might be removed at any time without causing distress to the patient. The discovery of bacilli at the centre of the gall stone was very interesting; they were probably the starting point in cases of catarrhal jaundice and the deposition of the solid biliary constituents.

Mr. BLAND-SUTTON, in reply, said that he was not accustomed to suture the gall duct. In a case he reported in vol. xxv of the Society's *Transactions* he also did not suture the duct, and Mr. Hulke considered the procedure very "risky," but the patient had recovered. He usually inserted a good large drainage tube, and found that the bile generally ceased to flow on the third day. And he never now put a suture in the common bile duct.

Mr. BATTLE, in reply, thought the case referred to by Dr. Parkes Weber was one of obstructive jaundice. He (the speaker) after having opened the abdomen was examining the distended gall bladder between the finger and thumb when the obstruction ceased and the swelling grew less. The gall stone in his cases had been brought up to and kept at the surface during the operation by the assistant surgeon's fingers, which he kept there until the suture had been inserted. He had always closed the duct with sutures, preferably the interrupted suture, as being easier to apply.

PNEUMOTHORAX WITHOUT EFFUSION IN AN APPARENTLY HEALTHY MAN.

Dr. F. PARKES WEBER described this case.

The patient was a piano-fitter, aged 31, without previous history of pleurisy, hæmoptysis, or pulmonary disease, and without any family history of consumption. Without any violent strain or excitement, whilst doing his work, he suddenly felt a pain, like a knife sticking into him, on the left side of the chest. His breath gradually became shorter, and the pain was very much increased by attempts to walk. On arriving at the hospital shortly afterwards his respirations were about 30, and his pulse about 65. The movements were equal on the two sides of the chest, but no cardiac impulse could be felt; the cardiac dulness was displaced to the right of the sternum, and there were distinct signs of pneumothorax of the left side. When the patient was kept quiet in bed the dyspnœa and severe pain in the chest rapidly left him. No splash sound or proper metallic tinkling was ever heard, and the signs of pneumothorax gradually disappeared in the course of thirty-two days. The first evidence of partial return to the natural condition was afforded by the absence of the bell sound from the upper front part of the affected side of the chest; the most persistent of the abnormal signs was the displacement of the heart. During recovery from the pneumothorax, the patient did not appear in any way ill. There was never any expectoration or any sign of pleurisy or pleuritic effusion of serum, blood, or pus.

The present case, and similar cases, including the rare cases of recurring pneumothorax, could be best explained on the supposition that a subserous emphysematous bulla had burst, or that a minute tuberculous nodule had broken down and opened up a communication between the air passages and the pleural cavity. Emphysema was commoner in males than in females, and practically all the cases of pneumothorax in apparently healthy persons had occurred in males. On the other hand, some cases, such as one described by Dr. S. West, seemed to have been due to slight tuberculous changes in the lung, insufficient in degree to seriously affect the general health.

Dr. PERCY KIDD described a somewhat similar case in a young man who, without a previous history of any disease, suddenly developed pneumothorax without any known cause. This had disappeared in a fortnight, notwithstanding the patient's complete disregard of almost every precaution, and in five weeks there was no trace whatever of it remaining. There had never been any sign of fluid in that case. Pneumothorax not rarely underwent spontaneous cure.

OBSTETRICAL SOCIETY OF LONDON.

ALBAN DORAN, F.R.C.S., President, in the Chair.

Wednesday, May 2nd, 1900.

HEART DISEASE AND UTERINE FIBROMYOMA.

DR. THOMAS WILSON (Birmingham) read a paper on the relations of organic affections of the heart to fibromyoma of the uterus. He called attention to the necessity for observing the possible evil effects produced on the other organs of the body by the growth of the uterine fibromyomata. He showed that the conjunction of serious organic affections of the heart with the presence of a fibroid was sometimes casual, but in a much larger number of cases the connection between the diseases of the two organs was causal, the heart affection being set up by the growth of the fibroid, or both being dependent on a common cause. Occasionally the heart might be affected directly by the pressure of a very large cystic fibroid, or indirectly by a tumour pressing on the ureters, and so leading to renal degeneration; that in its turn led to cardiac changes. Much more commonly a fibroid of moderate size lead through menorrhagia to anæmia, and thus to cardiac dilatation or degeneration; or, again, in the early stages of the growth of a tumour cardiac hypertrophy might be found, and this latter might give place to dilatation and degeneration. It was not at present understood how the hypertrophy was brought about, but the condition was in some degree analogous to the enlargement of the heart found in pregnant women. There was the important difference, however, that the causing affection, pregnancy, in the latter case was definite in duration, whereas the period of active growth of a fibroid was indefinite.

He described the case of a patient who had an intestinal fibroid for four and a-half years; there had been several attacks of retention of urine and the symptoms of cardiac weakness were decidedly increased by ergot. Double oöphorectomy was performed, and was followed by alarming heart failure lasting several days. The patient eventually made a good recovery, and the condition of the heart showed a gradual but very marked improvement. Six other cases in which organic disease of the heart was apparently caused by the growth of fibroids were shortly related. The nature of the cardiac affection, the varieties of uterine fibroids which were present in the cases, the cardiac symptoms and signs, and the course and prognosis were then in turn considered, and it was pointed out that after a successful operation the heart tended to recover its tone in a really remarkable degree.

The presence of the cardiac disease favoured the occurrence of thrombosis both before and after operation; it formed a contra-indication to the use of ergot in the treatment of the fibroid, but it might be an important and even urgent indication for operative interference. When an operation was undertaken every effort must be made to reduce as far as possible the severity of shock and the risk of subsequent heart failure, and ether should be the anæstetic administered.

The PRESIDENT had himself frequently observed circulatory troubles, independently of anæmia, in patients with fibroid

tumours. One was subject to attacks of syncope at every menstrual period for two years; three years ago he removed the tumour, as it was growing rapidly, with both ovaries. Since then no attacks of syncope had occurred. A year ago he removed a uterus with suppurating fibroid, leaving one ovary. The pulse, irregular before the operation, had been regular ever since. Chavannaz and Fieux, of Bordeaux, had recently reported a somewhat similar case, in which, after removal of a fibroid uterus and both ovaries, the pulse, previously very intermittent, became and remained perfectly regular.

Dr. Amand Routh recalled a case which proved the serious action of ergot in the cases under discussion.

He had elevated a large impacted pelvic fibroid by hydrostatic pressure, in a patient aged 46 years. Her only symptoms had been due to pelvic pressure, and these were at once relieved. Her heart's action was feeble. Against his advice she took ergot in pills, and soon became very weak and ill, and stated that within an hour of taking a dose, she had pains over the cardiac area with breathlessness and palpitation. She was seen by Sir William Broadbent, who stated that he found her arteries were much tightened, and his previous experience of such cases enabled him to fix on the ergot as the cause of the heart trouble, and of the pseudo-angina. The patient slowly improved when the drug was discontinued.

Inasmuch as ergot was so generally given in cases of uterine fibroids, he thought it not unlikely that unsuspected cardiac debility in such cases would be aggravated by the drug, and would explain the asthenia which was not infrequent.

Dr. Herbert Spencer thought that many of the symptoms of heart disease and the murmurs were due to the anæmia caused by the uterine hæmorrhage. Anæmia, thus caused, was an urgent indication for operation, especially in young subjects. It was remarkable how rapidly in some cases the symptoms disappeared, and health was restored even after the removal of the ovaries only, the tumour remaining. He doubted whether fibroids often gave rise to hypertrophy of the heart. In pregnancy the heart was very frequently not hypertrophied.

Dr. Blacker thought that there were considerable difficulties in determining the causal relationship between a fibroid tumour and organic heart disease. He wished to know upon what number of cases of fibroid tumour Dr. Wilson based his experience. With influenza so common, and so often followed by cardiac mischief, the previous histories of the cases under discussion were of great importance, for otherwise it would be difficult, in any given instance, apart from cases of grave anæmia, to say that a dilated heart was due to the presence of a fibroid tumour. He also asked why Dr. Wilson thought that the presence of cardiac hypertrophy with a fibroid tumour was an indication for operation.

Dr. Heywood Smith, in reference to Dr. Spencer's view that hypertrophy and dilatation of the heart were probably due to the anæmia produced by the loss of blood, contended that it was more probably due to the heart having to overcome increased resistance caused by the extended area of circulation produced by the tumour, as well as the resistance through a tissue so unyielding as a fibrous tumour. Dr. Bedford Fenwick some years ago called attention to the fact that a similar hypertrophy and dilatation of the heart was to be observed in many cases of large ovarian cysts, where a large increased area was added to the circulation, giving a greater stress of work to the heart.

Dr. Thomas Wilson, in reply, said that in the cases recorded in the paper the presence of fibroid tumours appeared to be the only probable exciting cause of the cardiac condition. In none of the patients was there a history of influenza or other of the common causes of derangement of the heart's action or nutrition; none of the patients were neurotic in the sense in which this term was generally applied. In many of the cases chronic anæmia seemed to be an important factor, but in several of the cases there was no anæmia. With regard to the relative frequency of heart affections in cases of fibroids, Dr. Wilson was not in a position to give statistics at present.

Specimens.

The following specimens were shown;—Dr. W. W. H. Tate: (1) Large cervical fibroid removed by enucleation, followed by vaginal hysterectomy. (2) Suppurating ovarian tumour obstructing labour, removed by laparotomy.—Dr. P. Horrocks: Fibroids of the uterus with great distension of the Fallopian tubes (due to tubercle).—Dr. C. Hubert Roberts: (1) A uterus with cancer of the cervix and (?) adenoma of the fundus removed by vaginal hysterectomy; (2 myxoma of chorion, expelled at seventh month.—Dr. A. L. Galabin: Double pyosalpinx, intercommunicating.—Dr. H. Russell Andrews: Imperforate rectum with prolapse of uterus and vagina in a child one day old.

MEDICAL SOCIETY OF LONDON.

F. T. Roberts, M.D., F.R.C.P., President, in the Chair.

Monday, May 14th, 1900.

Excision of the Gasserian Ganglion.

Mr. J. Hutchinson, jun., read a paper on excision of the Gasserian ganglion for epileptiform neuralgia of the fifth nerve. He narrated briefly a series of cases in which he had performed this operation by the method of trephining through the floor of the temporal fossa, and lifting up the dura mater and temporo-sphenoidal lobe. The first of these cases was operated on two years ago, and in all the neuralgia had been completely cured.

Atrophy of the masticatory muscles on the affected side, which was a necessary sequence of the operation, caused very little inconvenience, but if the ophthalmic division had been completely divided (which the operator believed to be unnecessary in many cases) there was some risk of the anæsthetic cornea undergoing ulceration, and this might happen at any date after the operation. In only one of the cases brought forward had this unfortunate result occurred, and this patient had suffered from conjunctivitis before the operation.

The writer urged that the temporal route (Hartley-Krause method) was the only one by which the Gasserian ganglion could be really exposed, and mentioned that in one of his cases a prolonged attempt had been made previously by another surgeon to remove the ganglion from below, after division of the zygoma, etc. The neuralgia had returned worse than ever, and at the second operation Mr. Hutchinson found the ganglion and its branches quite intact. He thought it probable that intracranial division of the superior maxillary nerve would supersede the so-called excision of Meckel's ganglion in cases of neuralgia confined to the upper maxillary division, and urged that excision of the Gasserian ganglion should be resorted to in cases of inveterate neuralgia of the fifth nerve, in preference to a series of palliative operations on its branches, and before the patients were completely worn out by pain and want of rest. The deformity left after the operation was trifling, and the relief appeared to be permanent.

The President expressed satisfaction at the prospect of their being able to afford relief in a very distressing class of cases, but he regretted that they could not find some other term than "neuralgia" to express a condition which, in some instances at any rate, was probably due to organic mischief, even though the sections did not show clearly what that mischief was.

Dr. Sansom asked in what class of cases the author would consider the operation justifiable. He agreed that there was in all probability an organic basis for the so-called neuralgic pain, though at present there were no means of distinguishing the organic from the functional cases.

Mr. Hutchinson, in reply, while agreeing that the use of the term "neuralgia" was, from certain points of view, unsatisfactory, preferred to continue using it rather than make unwarrantable deductions from the minute changes seen in the sections. He recalled certain cases in which organic lesions of nerves had been associated with great pain. With regard to the cases in which this operation would be justifiable he said that in none of his cases had the pain lasted less than five years, and he was not disposed to advocate so long a delay inasmuch as the patients were often so pulled down by pain and want of rest as to add a needless risk to this already severe operation. The operation left very little scar, this being hidden by the hair. He thought this operation, known as Krause's, was preferable to the other ingenious but very complicated operations which had been suggested and practised.

Malignant Endocarditis.

Dr. Alexander Morison related a case of malignant endocarditis in which both the mitral and aortic valves were extensively diseased with great enfeeblement of the heart's action, but in which, nevertheless, the cardiac sounds on auscultation were as a rule clear, even loud, and free from murmur. In the course of a clinical consideration of the causes of the first sound of the heart, he regarded the sounds in the above case as having originated chiefly in the right ventricle. He endeavoured to apportion the part played in the production of the first sound of the heart by the valvular and fibrous structures of the heart, by the cardiac muscle, by the blood, and by the thorax itself. He concluded that the

sound was chiefly generated in the blood supported by the aortic and pulmonary valves, and that the characteristic note was due to the valves supporting that blood being suddenly thrust open during systole. He thus agreed on clinical grounds with the conclusions arrived at by Dr. Leaud and Sir Richard Quain, a combination of views which he regarded as representing the truth. The muscular factor, he thought, had been overestimated by physiologists, while the influence of the thorax was practically non-existent, as proved by auscultation in cases of ectocardia.

Dr. Sansom insisted that the first sound was essentially a tension sound, produced in all probability in the right heart. If the heart muscle was thick the sound was more protracted, whereas if thin it was sharp and sudden. He advanced various arguments in support of this view, adding that he could not conceive of the collision of molecules of treacly blood causing any sound at all.

Dr. Maguire referred to the views expressed by the late Sir Richard Quain in respect of the causation of the first sound of the heart, which he thought satisfactorily explained the matter.

Dr. Morison replied.

Election of Officers.

The following Fellows were elected for office for 1900-1901: *President:* John. H. Morgan. *Vice-Presidents:* Samuel West, M.D.; Howard Barrett, Isambard Owen, M.D.; Sir Wm. Mitchell Banks. *Treasurer:* David H. Goodsall. *Librarian:* Sidney Martin, M.D., F.R.S.; *Honorary Secretaries:* Frederick C. Wallis, Arthur F. Voelcker, M.D. *Honorary Secretary for Foreign Correspondence:* William Ewart, M.D. *Council:* William H. Allchin, M.D.; William H. Battle, James Berry, J. Mitchell Bruce, M.D.; Henry A. Caley, M.D.; James Calvert, M.D.; Dennis J. W. Dallaway, George E. Herman, M.B.; Washington Isaac, M.B.; Robert Maguire, M.D.; Alexander Morley, C. W. Mansell-Moullin, J. Baldwin Nias, M.D.; H. Campbell Pope, M.D.; Frederick T. Roberts, M.D.; Humphry D. Rolleston, M.D.; Frederick J. Smith, M.D.; George R. Turner, Herbert F. Waterhouse, Edward G. Younger, M.D.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. Anderson Critchett, F.R.C.S.E., President, in the Chair.

Thursday, May 3rd, 1900.

Clinical Evening.

Opaque Nerve Fibres.

Mr. Nettleship read notes of two cases in which opaque nerve fibres were seen with the ophthalmoscope, but these patches were separated from the disc by a considerable interval. He exhibited drawings of one of the cases in which the condition was depicted at the time when it was first seen, and when the patient had normal acuteness of vision. Another drawing taken three years later showed complete atrophy of the optic nerve, and the patch of opaque nerve fibres could only just be seen, having undergone atrophy with the rest of the nerve.

Mr. Adams Frost had seen a similar case in which, after atrophy of the optic nerve, the opaque nerve fibres had almost disappeared.

Mr. Doyne mentioned a case he had seen similar to those described by Mr. Nettleship in which optic neuritis came on. This subsided without causing atrophy of the nerve, and the patch remained as before.

Optical Iridectomy for Lamellar Cataract.

The President showed a boy for whom he had done optical iridectomies for lamellar cataracts. In such cases in which the opacity was central and the vision much improved by dilating the pupil, he much preferred this operation to that of removing the lens. After the operation the patient saw $\frac{6}{9}$ and J 1.

Proptosis.

Mr. Reginald Bickerton showed an elderly woman whose right eye, on stooping, became proptosed. The sight was defective owing to old ulceration. Under ordinary circumstances there was no enophthalmos. There was a double mitral murmur. In discussing the cause, Mr. Bickerton thought that it was probably a vascular growth or else due to the too free communication between the orbital veins (which had no valves) with the cavernous sinus.

Mr. Doyne mentioned the case of a man, aged 25, who had suffered from a similar condition all his life. Without any obvious cause he suddenly got most severe proptosis with inflammatory signs in the orbit. These all subsided, but the eye became blind, and there was no longer any tendency to proptosis.

Mr. Juler showed a case of proptosis with ophthalmoplegia externa. Five years ago the patient had a similar attack in the same eye, but the sight was not impaired. The pain was severe, but had subsided. Some proptosis and complete loss of movement persisted. The present attack began early this year. In March severe neuro-retinitis supervened. There was no definite history of syphilis or tubercle. Iodide of potassium had been given, but without benefit. The diagnosis of an inflammatory growth intimately involving the optic nerve was probable.

Mr. Beaumont drew attention to what appeared to be a persistent pupillary membrane, and also to the high degree of hypermetropia, due, he thought, to the growth flattening the eyeball from before back.

Mr. Nettleship gave it as his opinion that the retina was really raised by an intraocular growth.

Macular Coloboma.

Mr. W. T. Lister showed a case of macular coloboma associated with old choroiditis. He thought that in this case the coloboma was of an inflammatory origin rather than developmental.

Mr. Lawford discussed the matter, and was also inclined to look upon the origin of such as being inflammatory.

Berger's Lenses.

Mr. Keeling (for Mr. Juler) exhibited Dr. Emile Berger's binocular and stereoscopic lenses. The instrument consists of two decentred convex lenses inclined horizontally to each other. The advantages over a simple lens were said to be the better perception of relief, and the fact that little or no accommodation was necessary.

Notch in Lid.

Mr. Treacher Collins showed a case with a congenital notch in lower lid, with some want of development of the malar bone.

Metallic Deposit in Cornea.

Mr. Sydney Stephenson showed a child with a metallic deposit on the cornea, which probably came about in the following manner:

The patient had suffered from trachoma, and for its treatment the solid stick of pure nitrate of silver had been applied by a practitioner, who had then washed the eye with sodium chloride. The cornea being abraded had got some chloride of silver deposited into it.

The President thought that it might clear a good deal if left alone, and suggested that nothing should be done in order to remove it under six months.

Congenital Displacement of Lens.

Mr. Rayner Batten showed a girl with congenitally displaced lenses, who had also aniridia and glaucoma. She was quite blind in one eye, and could only just perceive light in the other.

Sarcoma of Choroid.

Messrs. Higgens and Ormond exhibited a specimen of a spindle-celled sarcoma of the choroid which had been removed with the eye by Dr. Cole Baker, of Southsea, in November, 1897. The patient was still alive and well with no sign of recurrence.

Bullet Wound of Orbit.

Mr. F. M. Ogilvie showed a patient who shot himself with a revolver in the right temple on December 6th, 1899; the bullet did not emerge. He never lost consciousness, but the sight of the right eye was immediately lost, while that of the left became reduced. On December 10th the right eye was excised, but it was found not to have been perforated as had been supposed, nor was the optic nerve cut. The vision of the left eye improved from less than $\frac{6}{60}$ to $\frac{6}{5}$ and J.4. Ophthalmoscopically the eye showed a very remarkable central lesion. The disc and vessels were normal, but at the macula was

slightly irregular oval area quite sharply defined and depressed below the surrounding fundus looking almost as if a trephine had been applied, and this part of the retina bodily removed, the depression amounting to 2D. The bullet was located with great exactness in the left orbit almost in contact with the posterior and nasal sides. A number of very beautiful skiagraphs taken by Dr. Mackenzie Davidson were shown illustrating this. Mr. Ogilvie concluded by calling attention to the comparatively small amount of damage done by the bullet in its passage through one orbit to the other.

EDINBURGH OBSTETRICAL SOCIETY.

R. M. MILNE MURRAY, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, May 9th, 1900.

PATHOLOGICAL AMENORRHŒA FROM OTHER THAN CONSTITUTIONAL CAUSES.

THE adjourned discussion on Dr. Haultain's paper on this subject, read at the last meeting of the Society and reported in the BRITISH MEDICAL JOURNAL of March 31st, p. 768, was taken part in by Professor SIMPSON, Drs. JAMES RITCHIE, KEPPIE PATERSON, JAMES FOULIS, FREELAND BARBOUR, AITCHISON ROBERTSON, FORDYCE, FERGUSON, and the PRESIDENT; and Dr. HAULTAIN replied.

INTRAUTERINE VAPORISATION.

Professor A. R. SIMPSON read a paper on this subject. For some years before 1895 Professor Sneguireff of Moscow had been making observations on the effect of steam as a hæmostatic. It was stated that vaporisation of the endometrium had an action at once caustic, hæmostatic, anæsthetic, and antiseptic. This among other things made Professor Simpson desirous of visiting Moscow on the occasion of the twelfth International Medical Congress in 1897. He heard Professor Sneguireff's exposition of his invention, and was presented by the professor with the necessary apparatus, consisting of a kettle for generating the steam, and a double catheter for conveying the vapour into and out of the uterine cavity. Dr. Ludwig Tincus of Danzig had rendered important service to the profession by popularising the procedure, testing its applicability in a variety of cases, studying the conditions under which it might be employed with most safety and certainty, and modifying the apparatus in some more or less important directions. "Atmokausis" he called the operation, and "atmokauter" the instrument, and the terms were being widely accepted. In some cases he used a non-fenestrated catheter in which the steam heat was applied to the interior of the uterus through the wall of the outer tube, the steam not being allowed to escape into the cavity of the uterus. This steam-hot catheter he called "zestokauter," and the operation he called "zestokausis." The propositions Tincus had formulated might be cited:

(1) Atmokausis and also zestokausis were both effective and serviceable therapeutic methods. They were not more dangerous than other intrauterine procedure if the technique were fairly understood. (2) The technique of the procedure was settled. The demands and needs of practice only were regarded. (3) The best results were obtained when the method was applied without narcosis and apart from curetting, with rest in bed till separation of the slough in slight cases from the third to the fourth day. (4) A dosage of the cauterisation from a superficial influence to the most complete destruction of the mucous membrane was throughout possible. The dosage depended on the height of the temperature and the consistence of the uterus. From 110° to 115° C. were to be preferred, because the influence even of the shorter application was the same. (5) Both procedures might replace or supplement curettage. They were quite indispensable where the curette failed. (6) The method presented a specific against uterine hæmorrhages from whatever cause. (7) Obliteration ought only to be sought for to prevent the necessity of total extirpation, never for prevention of cancer of the uterus or from other indications. (8) Where atmokausis failed or produced only transitory effect, the contractile elements of the uterus had been lost. (9) Atmokausis in inoperable intrauterine cancer was the best palliative yet known. It was also useful for disinfection before operation. (10) In puerperal sepsis it gave excellent results in the early stages. (11) It was not available for the treatment of submucous myomata or malignant neoplasms. (12) Absolute freedom of the adnexa was a *sine quâ non* for the application.

Professor Simpson had tried the treatment in 14 cases of more or less pronounced endometritis with menorrhagia or metrorrhagia in women of from 30 to 45. Chloroform narcosis was always used, and the application was continued from 45 to 60 seconds. One patient only complained of suffering. Of the 14 cases, 11 were cured, and the remaining 3 improved. The germicidal power of steaming might be doubted if no discarded. The best results were got where the uterine walls were firm and had good power of contraction. One case of perforation by the zestokauter had been recorded in connection with Treub's clinic. The advantage of using this method of treatment without chloroform narcosis was that when the steam had produced its effect there was irritative and painful muscular contractions of the uterus, which gave the signal to discontinue. The patients should go to bed for two or three days. Professor Simpson had in all cases acted under an anæsthetic, and had kept the patients at rest for two or three weeks. The treatment had been drawn attention to in American journals but not in British; yet it was well worthy of more study. The method could also be used surgically—for example, in operations on the liver for stopping hæmorrhage. Steamed wounds healed by first intention.

Remarks on the instrument and its uses were made by the PRESIDENT, by Drs. FOULIS, BARBOUR, and J. W. BALLANTYNE, and some questions were asked. To these Professor SIMPSON replied.

VULVAR HÆMATOMA IN LABOUR.

Dr. J. W. BALLANTYNE read a clinical note on a case of a rapidly developing hæmatoma of the left labium in a parturient patient.

In forty-five or fifty minutes from its start it had attained a size nearly equal to that of a fœtal head. The patient was a primipara aged 20½ years. The pregnancy was without incident. There was no pendulous abdomen. The first stage of labour, lasting about nine hours, was normal. No varicose veins in the labia had been observed by the obstetric pupil in attendance. When Dr. Ballantyne saw the patient she had evidently lost much blood, there was œdema of the lower lids, there was great pain in the left labium majus. The fœtal head was engaged in the pelvic inlet in the O.L.A. position and well flexed. There was no contraction of the brim. Since the hæmatoma was rapidly growing no time was to be lost. As the tumour was actively increasing Dr. Ballantyne hesitated to make an incision into it. He decided to apply forceps. This was done with difficulty. As the head was passing over the perineum the hæmatoma bulged into the fenestra of one of the blades, and ruptured with an almost clean-cut tear. A huge mass of blood clot was expelled along with some fluid blood and serum. The child was not unduly large nor was its head. By the time the placenta and membranes were removed the hæmorrhage from the hæmatoma had almost ceased, but the left labium was still infiltrated with blood and larger than normal. After cleansing the tear was brought together by some sutures, save at the middle, where it gaped; into the gaping part a loose packing of iodoform gauze was put. Some strips of the same gauze were put in the vagina to prevent infection of the wound. The temperature never rose above 100, the patient was up in three weeks, in five months the labium majus had quite returned to its ordinary size. A trace of albumen was found during the first few days of the puerperium, but on milk diet it and the œdema disappeared.

Dr. Ballantyne then made some remarks on the condition. The treatment, he admitted, was not entirely satisfactory. He would have been well advised had he incised the thrombus either before or during the application and employment of the forceps, as he could have made his incision at a point best fitted for drainage. The etiology of hæmatoma was obscure. Most of the cited causes were absent in this case. The albuminuria might have been one of the combined circumstances that determined the effusion of blood. The strain of labour doubtless determined the event. Löhlein reported a hæmatoma vulvæ some hours after labour, where there had been chronic nephritis, and he was inclined to call that disease the *causa disponens*. The pathogenesis was less obscure than the etiology. Perret had found a sliding or displacement of the layers of tissues in the pelvis, and more especially in the vaginal walls, and into the space thus formed blood was poured. In another case a hæmatoma was found on one side of the pelvis, while on the opposite side was an empty cavity the size of a hen's egg.

The PRESIDENT and Professor SIMPSON spoke; and Dr. BALLANTYNE replied.

SPECIMENS.

The PRESIDENT showed a cyclops fœtus that had lived a few hours.—Professor A. R. SIMPSON showed an anencephalic fœtus and a bipartite placenta where there was a single amnion and a single child.—Dr. LAMOND LACKIE showed the bladder and kidneys from a case of suppression of urine.—Dr. MATHESON CULLEN showed a slough of the cervix and radiographs of polydactyly.

INSTRUMENT.

Dr. JAMES FOULIS showed a new handle for axis traction forceps for manipulation behind the patient.

SOUTHPORT MEDICAL SOCIETY.—At a meeting on April 11th, Dr. PINKERTON in the chair, Dr. PENROSE read notes on laceration of the perineum, and advocated the use of hypodermic injections of cocaine into the perineum for the relief

of pain.—Dr. RUSS WOOD showed a case of optic atrophy in a subject in the preataxic stage of tabes dorsalis.—Dr. BAINES gave details of a case of pneumonia complicated by the presence of streptococci in the secretions, and successfully treated with antistreptococcus serum.—Dr. BAILDON showed a good specimen of bipartite placenta.—Dr. A. J. POPERT read a paper on the treatment of impotence, emphasising the importance of treating the inflamed prostatic urethra in these cases.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

R. L. SWAN, P.R.C.S.I., President, in the Chair.

Friday, March 30th, 1900.

INTERSCAPULO-THORACIC AMPUTATION.

AT the request of the PRESIDENT, Mr. JAMESON JOHNSTON described his case of interscapulo-thoracic amputation for sarcoma. The patient was not exhibited.

Dr. DOYLE asked what was the present condition of the woman, and was there any reason to anticipate a return of the trouble?

Mr. BENNETT had seen the case while under Mr. Wheeler's care only a few days before his death. The diagnosis made by Mr. Wheeler, with which he agreed, was that given by Mr. Johnston. The only question was as to how the tumour could be removed, and on that point their opinions had not been formulated.

Mr. HEUSTON asked from what tissue the tumour grew; was it an osteo-sarcoma?

The PRESIDENT thought the question asked by Dr. Doyle was important. Some time ago he had under his care a nurse who developed a myeloid sarcoma growing from the great tuberosity. In the performance of her duties she fractured her arm through the surgical neck. He removed the humerus at the joint, and as it was noticed that the capsular muscles were engaged, the suprascapular muscle and the tendons inserted into the humerus were also removed. She remained well for eighteen months, then went to London, and wrote to him that the tumour was returning. He gave her a letter to Mr. Watson Cheyne, who removed the scapula and a portion of the clavicle. She was going on pretty well at present, but one could not help being doubtful about the future of such cases.

Mr. JOHNSTON, in reply, said the patient was perfectly well until March 17th, when she got a chill and developed a slight pneumonia. If recurrence took place he would give up all hopes of removing sarcoma without recurrence. He thought the tumour was a periosteal sarcoma.

AXILLARY ANEURYSM CURED BY LIGATURE OF THE THIRD STAGE OF THE SUBCLAVIAN ARTERY.

Mr. FRANCIS T. HEUSTON stated that, having shown a case of traumatic aneurysm, subclavio-axillary, cured by ligature of the left subclavian artery in its third stage, at the last clinical meeting of the Surgical Section, he thought it would be of interest to exhibit a case of idiopathic axillary aneurysm caused by ligature of the right subclavian artery in its third stage.

The patient, a car-driver, aged 43, was admitted into the Adelaide Hospital on January 2nd, 1900. In June, 1898, he felt a pain of constant character in his right shoulder, which, with swelling of his arm, caused him to apply for relief at a hospital in this city, where his case was diagnosed as axillary aneurysm. He was admitted in November, 1898, and was treated by instrumental pressure until March, 1899, when he left, somewhat relieved, to resume his work, but, finding the exposure incidental to his employment was giving rise to swelling of his hand and arm with increased pain, he presented himself for treatment at the Adelaide Hospital. On admission, Mr. Heuston found the patient a strong, muscular, well-nourished man. Immediately beneath his right clavicle a considerable swelling existed, which occupied this region to the lower border of the great pectoral muscle. This tumour had a well-marked distensile pulsation, and on palpation gave the sensation as if a very thin wall existed; in fact, it felt as if it must soon burst. On auscultation, a well-marked *bruit* was present. On pressure on the shoulder the *bruit* and pulsation stopped, as did also the radial pulse. On January 11th, 1900, he ligatured the right subclavian artery in its third stage by the usual incision parallel to the clavicle. Considerable enlargement of deep veins and the presence of the lower cord of the brachial plexus in front of the artery gave some trouble in passing the ligature. When the artery was exposed, its coats were found to be remarkably attenuated, so much so as to feel more like the coats of a vein than an artery. Owing to this condition the ligature (strong catgut) was only drawn sufficiently tight to occlude the lumen of the artery, as Mr. Heuston feared its cutting through if pressure was applied. After the operation the progress to recovery was uninterrupted, the wound healing by first intention. The patient left the hospital on January 31st, twenty days after operation.

On examining the patient now, some twelve weeks after the operation, a solid tumour would be found in the axilla without *bruit* or pulsation. It would also be noticed that no radial pulse existed in the right arm; no swelling or œdema of the hand or arm was present. The patient had perfect use of his arm, and said he had had no pain since the operation; so it might be claimed that his aneurysm was cured.

Mr. BENNETT said the sounds audible in the tumour were of such a nature that if heard behind the sternum the question would at once arise whether the man had not aortic aneurysm.

Dr. DOYLE said he felt what he thought was pulsation in the tumour. He did not hear any murmur. He believed the impulse was not in the tumour itself, but came from some of the vessels behind it which had undergone compensatory enlargement.

Mr. LENTAIGNE could hear no heart sounds or murmur of any kind over the tumour.

Dr. KNOTT asked if the man was suffering now, or had suffered previously, from albuminuria.

Dr. GOULDING asked if there was a history of syphilis in the case.

Dr. TRAVERS SMITH could not hear the heart sounds over the tumour. On listening towards the edge the pulsation of the carotid could be heard.

Mr. JOHNSTON asked what was the thickness of the catgut used, and was more than a single strand employed? He was glad Mr. Heuston approved of simply approximating the coats of the artery.

Mr. HEUSTON, in reply, said he was unable to detect any sound over the tumour. As to the condition of the kidneys before operation, the urine was found to be of specific gravity 1026, acid reaction, no albumen, no sugar or deposit. There was no history of syphilis. The catgut used was the thickest variety ordinarily employed in hospital operations. He did not rupture the internal and middle coats because the wall of the artery was too thin. Although it was now laid down that there was no necessity to rupture these coats, still he felt easier in his own mind by rupturing them where admissible.

TUBERCULOSIS OF BONES OF FOOT.

Mr. JOHN LENTAIGNE exhibited a case in which extensive tuberculous disease of old standing, involving the ankle-joint and foot, with caries of the os calcis, astragalus and lower end of the tibia and fibula, with numerous septic sinuses, had apparently been cured by a thorough scraping with Volkmann's spoon, followed by disinfection with chloride of zinc and absolute phenol.

This operation had been performed four months previously, when the patient was in a very bad condition, much wasted and suffering greatly from pain. Since then the limb had been kept in plaster of paris, and the improvement in the patient's condition had been continuous and uninterrupted. The temperature had fallen to normal at once and remained normal. The girl was now, as everyone could see, fat and strong, and she believed herself to be cured. The plaster of paris had only been removed the day before, and consequently the girl walked stiffly and with a limp. The scraping operation had been done without much hope of a cure. It was intended as a cleansing preliminary to amputation or osteoplastic resection of the foot, but the result had been so very satisfactory that Mr. Lentaigne had thought it worth while to exhibit the case. At the operation the bones mentioned were found to be extremely soft and much *débris* was removed; nearly the whole of the astragalus had come away.

The PRESIDENT said the anatomical arrangement of the joint made it very difficult to know when all diseased material was removed. The case was undoubtedly very much improved by the treatment, but he should like to see it at the end of twelve months.

Mr. BENNETT could not regard the joint as healthy, because its temperature was above normal. A point, however, in favour of recovery was that so many sinuses had healed.

Dr. KENNAN was struck with the extraordinarily rapid and ready way in which the second septic infection was controlled after the procedure adopted, and he thought the joint was now in a position to get well of itself.

Mr. LENTAIGNE, in reply, said the limb was now being used for the first time in two years, and had only then been taken out of plaster. It was not strange that the limb should feel warmer to the hand than the other one. He did not believe that all the tuberculous material was removed in excision of the hip or knee, yet these cases got well, especially knee cases. Tuberculous disease was often very amenable to partial surgical operation. In this case he believed a cure had been

effected. All the numerous sinuses had been healed completely and satisfactorily, and now presented the dimple or depression which usually indicated a permanent cure; there was neither pain nor tenderness in the joint nor near it. As the President was doubtful about the permanency of the cure, he intended, if possible, to exhibit the case again after twelve months.

ECTION OF STATE MEDICINE.

Sir C. A. Cameron, M.D., President, in the Chair.

Friday, April 27th, 1900.

Commercial Pepsin.

Sir C. Cameron read a paper on this subject.

Dr. J. W. Moore said it was astounding that drugs of such an inferior quality should be so extensively sent out to the unions in Ireland. He supposed it was partly due to the downward competition of estimates.

Sir C. Cameron remarked that in many cases the substance under discussion was the only drug defective out of many.

Dr. Ninian Falkiner said the last observation gave the key to the solution of the question. In the *British Pharmacopœia, 1898*, they found pepsin described as an enzyme obtained from the mucous lining of the stomach of the pig, the calf, or the sheep. It was quite evident that this enzyme must be prepared by a very elaborate process, and this process was excluded from the last *Pharmacopœia*, so that there was no definition of pepsin except that it was a substance that would dissolve a certain amount of coagulated egg albumen. He thought it would have been better to have adhered to the descriptions of the manufacture of pepsin, as found in the two previous *Pharmacopœias*. He referred also to the extraction of pepsin by means of glycerine, but added that some thought the activity of this substance depended upon the glycerine.

Dr. Delahoyde said this paper showed the necessity for the step the Local Government Board had taken recently in insisting on a periodical examination of medicines as preliminary to recouping half the cost of the medicines.

Sir C. Cameron said, in reply, that in addition to the imperfect method of manufacturing the substance, its instability was in most cases a cause of its ineffectiveness.

Asylum Pathology.

Dr. W. R. Dawson said that for real progress such a degree of knowledge, skill, and experience, and such an amount of time were required as could be obtained only by inducing specially-trained pathologists to devote themselves entirely to the subject. In many of the English and Scottish asylums there was, very properly, a resident pathologist, with a laboratory at his disposal, who was responsible for the pathological work of the institution. But in the bulk of the smaller asylums no such arrangement existed, and only one of the Irish asylums had even a nominal pathologist. Moreover, even when there was a special pathologist, he was usually simply the junior assistant, and was expected to combine with his pathological duties a not inconsiderable amount of administrative work. There being no prospect of advancement in his particular line, he usually, in a year or two, just as he had acquired some real knowledge and skill, accepted promotion to a higher assistancy, dropping to a large extent his pathological studies. The only alternative was that which was adopted by the London County Council, which, in 1892, took steps for the establishment of a central laboratory for the seven asylums under its control. This laboratory it had splendidly equipped and placed under the direction of a scientific man in every way competent to fill the post—Dr. F. W. Mott, F.R.S.—giving him an adequate salary. This experiment had been a complete success. Not only had most excellent work been done—as shown by the first number of the *Archives of Neurology*, which emanated from the laboratory—but, as Dr. Mott stated, his "appointment appears to have been an incentive to pathological work at other asylums." A special clause had been inserted into the new English Lunacy Bill, authorising the combination of asylums for the purpose of establishing similar laboratories. A number of the Scottish asylums also united, in 1896, to start a conjoint laboratory in Edinburgh, under the control of Dr. Ford Robertson, whose work was already becoming known. This scheme, which had now been joined by seventeen of the Scottish asylums, had been from the first a success. In Ireland, on the grounds of economy alone, a central laboratory seemed indicated. The annual expenditure of the Scottish laboratory, which seemed to approximate almost exactly to their requirements, was about £600 a year. In Ireland there were twenty-three district asylums, and several other public asylums, such as the Central Criminal Asylum, St. Patrick's Hospital, and the Stewart Institution, not to mention a number of private asylums; and if all these, or a good majority of them, were to join the scheme, the individual contributions would be comparatively insignificant. The matter, therefore, appeared feasible, and some steps had already been taken to carry it into effect. Dr. Dawson said the idea was publicly mooted for the first time in the inaugural address delivered by himself in November, 1899, as President of the Dublin University Biological Association. Later in the session he brought the subject prominently before the Association, who passed a unanimous resolution in favour of the scheme; and, lastly, it was the subject of a discussion at the meeting of the Irish division of the Medico-Psychological Association of Great Britain and Ireland on April 10th, on which occasion a similar resolution was passed without a dissentient. A committee was accordingly appointed, consisting of Drs. Conolly Norman, Finegan, Woods, Graham, and himself, and steps were now being taken to push the matter forward without undue delay. The scheme, as at present shaped out, was almost identical in its objects with that in Scotland, with this addition, that the institution was also to serve the purpose of a clinical research laboratory for the associated asylums.

After some remarks by Dr. Ninian Falkiner and Dr. Conolly Norman, Sir C. Cameron spoke in favour of a pathological laboratory such as suggested.

It was proposed by Dr. Ninian Falkiner and seconded by Dr. Martley:

That the project of establishing a central laboratory in connection with the Irish lunatic asylums for the study of the pathology of nervous and mental disease is deserving of the support of the Royal Academy of Medicine in Ireland, and that the General Council be asked to communicate with Asylum Boards throughout Ireland on the subject.

The Medico-Legal Relations of General Paralysis.

Dr. Conolly Norman read a paper on this subject. It was natural that the disease, which formed in itself an epitome of all mental affections, should often bring its victims into conflict with the law. But besides the general tendency of all mental disease to cause maladjustment with the social environment, often expressing itself in the form of "crime," there appeared to the speaker to be certain special features in the criminality of the general paralytic which made him of particular interest to the medical jurist. Dr. Norman proceeded to consider the general paralytic's offences under three heads: (1) Violence, of a peculiar brutish and irrational character; (2) sexual impropriety, depending, no doubt, in part upon the lack of judgment, which was the essentual feature of the malady, and partly upon the sexual irritability common in its earlier stages; (3) theft. A number of cases were detailed, exemplifying each form, and some illustrating all. The common notion that the thefts of the general paralytic were characterised by silliness and absence of purpose was quite erroneous. On the contrary, in certain cases which he mentioned, fraudulent acts of considerable subtlety had been the earliest overt symptoms of general paralysis.

Remarks were made by Dr. Dawson, Dr. Doyle, Dr. Martley, and Sir C. Cameron.

Dr. Conolly Norman, in reply, said he meant to convey that the violence was the same kind of unreasoning, intense, and uncontrolled violence as they saw in an epileptic, but he did not associate it with the epileptic phenomena. He had never met with a case commencing with a sudden attack of amnesia.

Dermatological Society of Great Britain and Ireland.—At a meeting on April 26th, Dr. Radcliffe Crocker in the the chair, Dr. Marshall showed a case of lupus erythematosus in a woman.—Mr. G. Pernet brought a case of rodent ulcer in a man.—Dr. T. D. Savill brought two cases: (1) A woman

with ecchymosis on legs, the result of subcutaneous hæmorrhages; small ulcers were situated in the centre of some of the ecchymoses, which were said to have followed bullæ; (2) a case (shown at the last meeting) of a papular eruption on the face resembling a sweat gland acne; the eruption had latterly extended to the trunk, and was more pronounced on the face than when last shown.—Dr. A. Eddowes showed a case of pityriasis rubra developing on eczema, with scaling and much pigmentation.—Dr. Warde showed (for Dr. Abraham): (1) A case of acne in a young man, affecting face, trunk and outer side of thighs; (2) a case of folliculitis of legs in a youth.—Mr. Pernet showed some cultivations of the fungus of tinea nodosa and tinea versicolor.—Dr. Warde showed a number of cultivations from large and small spored ringworm.

MANCHESTER MEDICAL SOCIETY.

T. C. Railton, M.D., President, in the Chair.

Wednesday, April 4th, 1900.

Types of Rectal Cancer.

Mr. W. P. Montgomery read a communication on the types of rectal cancer considered from the point of view of the treatment by excision. A number of specimens and sections were shown in illustration. Two great classes were described—(1) Those in which the extension of the growth took place, more particularly in the submucous tissue, the intramuscular type. The primary seat was usually low down in the first, or at the junction of the first and second parts of the rectum. In this type secondary infection of the liver through the portal system was common, and often found before the primary growth was extensive, and while the case is still apparently most suitable for excision. (2) In the second group the growth, instead of spreading much in the submucous tissue, broke straight through the muscular coats and grew outside them, the extramuscular type. The primary seat was usually in the second, or high up in the first, part of the rectum. In this class there was less tendency to liver infection, but lymphatic infection was common, and the glands of the meso-rectum were early involved. Such cases were more suitable for radical cure than those of the intramuscular type, but wide excision, with removal of the glands and presacral tissues, was necessary, and in most instances would be best done by the abdomino-perineal or abdomino-sacral method.

Papers.

Dr. J. S. Bury made some remarks upon chronic anterior poliomyelitis and allied diseases.—Dr. J. Dreschfeld made a communication upon the cerebral types of influenza.

CLINICAL SOCIETY OF MANCHESTER.

Tuesday, April 24th, 1900.

Judson S. Bury, M.D., President, in the Chair.

Pregnancy complicated by Ovarian Cyst.

Dr. Fothergill described a case of pregnancy complicated by ovarian cyst, and showed the specimen, a thick-walled unilocular cyst, the size of a football, with a solid mass, the size of a fœtal head, in its wall near the pedicle.

The patient was aged 35 years. Her mother and sister died of unoperated ovarian disease. At the beginning of 1899 her abdomen began to enlarge. Menstruation ceased in April. On July 6th, 1899, the cyst was as large as an eight months' pregnant uterus, and the patient was about three months pregnant. Operation was refused. On July 27th she collapsed, owing to the cyst bursting. The shock caused abortion, which ran a septic course, bleeding continuing until August 20th. On September 5th the cyst was as large as ever, and the examination set up an attack of acute peritonitis. On September 9th she was very low, with a falling temperature of 102° F., and a pulse of 140. The cyst was rapidly removed, with a large amount of peritonitic fluid. A gush of pus from the tube was observed as the pedicle was divided. Owing to the circumstances the abdomen was neither washed out nor drained but the patient made a rapid recovery.

Leontiasis Ossea.

Mr. William H. Stephenson showed a case of leontiasis ossea.

The patient was a male, aged 27, married, who first noticed swelling on the left side of the lower jaw when 13 years of age. There was then no pain or discomfort. The swelling had gradually increased in size up to the present. Eighteen months ago a similar swelling began on the right side of the lower jaw, which had also gradually enlarged. During the last year the nasal bones had become enlarged and the left nostril almost occluded. For the last two months there had been severe neuralgic pains in the lower jaw, extending up the left side of the face. The patient when 9 years of age had fallen from a couch. The head was severely cut and bruised, but the jaw was not injured. There was no family history of nervous lesion or specific disease. The whole of the ramus of the lower jaw appeared to be thickened and hypertrophied. The nasal bones were markedly enlarged, especially on the left side. The left superior maxilla and frontal bones were also enlarged. All the other bones were normal.

Leontiasis ossea, which was first described by Virchow, was characterised by overgrowth or hyperostosis of some or all of the facial and cranial bones without any concomitant affection of other parts of the body. Little was known as to the etiology. The disease might occur at any period of life, and affected both sexes. It had been thought to be due to rickets, but facts did not support this theory. Injury had been mentioned as a cause. It seldom seemed to affect the cranial bones alone, but the superior maxillæ and the inner walls of the orbit were frequently affected alone. In the process of growth the affected bones became greatly increased in thickness and density, the open cancellous framework becoming converted into dense compact bone. Cavities such as the ethmoidal and sphenoidal sinuses became obliterated and the contents destroyed. The symptoms varied according to the position and extent of the new bone formation. There was marked deformity and loss of function. The orbit, nose, and mouth might be encroached upon with resulting blindness, prominence of the eyeballs, loss of smell, and difficulties of mastication. Pain was often caused by pressure on the various nerves. The disease tended to extend over years. No treatment was of any avail, but in unilateral cases, or where there was evidence of direct pressure on nerves, resection of a portion of the bone might afford relief.

Cases and Specimens.

Dr. Emrys-Jones showed a case of angioma of the conjunctiva.—Mr. E. Stanmore Bishop showed and described specimens of the following: (*a*) an ovarian cyst with twisted pedicle; (*b*) two specimens of fibro-myoma uteri; (*c*) a large pyosalpinx.

MANCHESTER PATHOLOGICAL SOCIETY.

W. Thorburn, F.R.C.S., President, in the Chair.

Wednesday, May 9th, 1900.

Acute Hæmorrhagic Cystitis.

Dr. Arnold W. W. Lea related a case of acute hæmorrhagic cystitis occurring in a woman, aged 42, after an operation for strangulated femoral hernia.

The symptoms developed acutely on the seventh day; the bladder rapidly became distended with blood and urine. A catheter was passed; a large quantity of purulent and ammoniacal urine mixed with blood was drawn off. The bleeding, however, continued, and was very abundant. The patient died 48 hours later from hæmorrhage and toxæmia. At the necropsy the bladder contained 2 pints of blood and urine, ammoniacal and offensive. There was no ulceration or membranous cystitis. All the other organs of the body were normal. The operation wound was soundly healed. Microscopically the bladder showed intense round-celled infiltration of the mucosa and superficial layers of the muscular coat, with dilated vessels and extensive hæmorrhage. The epithelium had disappeared. The surface showed coagulation necrosis with fibrinous clot. The cystitis was probably the result of some virulent local infection, but no bacteriological investigation was made.

Specimens.

Dr. Trevelyan (Leeds) showed (*a*) six hearts mostly with combined valvular lesions: (1) A heart from a woman, aged 40, with combined aortic, mitral, and tricuspid stenosis. The aortic opening measured only ⅝ inch on the cone, and the mitral ½ inch. The heart was not enlarged, weighing only 10 ozs., and death was due to a purulent bronchitis. (2) and (3) Two hearts showing aortic incompetence and functional mitral incompetence. In one case from a lad aged 18, who had first suffered from rheumatism ten years previously, there were two aneurysmal bulgings on a greatly-enlarged aortic cusp, the other cusps being comparatively healthy. In the other case, in which sudden death occurred, there was a pendulous mass 1½ inch long attached to one aortic cusp, the remaining cusps being very little affected. (4 and 5) Two hearts showing mitral and tricuspid stenosis and aortic valve disease. In one case the patient died at the age of 70. (6) A heart showing mitral stenosis, functional tricuspid incompetence, and slight aortic valve disease. (*b*) A handkerchief from which diphtheria bacilli were cultivated 11 weeks after its last use by a patient with diphtheria of the mouth. The short bacillus was nearly always obtained in the first instance, but other forms were found in subsequent cultures. (*c*) Two brains with multiple tuberculous masses from children, aged 1 and 3 years respectively. In one there was also a central tuberculous mass in the cervical cord. Tubercle bacilli had been found in one of the lesions. There was tuberculosis elsewhere in the body in both cases.—Dr. D. Orr showed three specimens from the pia arachnoid of a case of senile dementia demonstrating an unusual form of hyaline concentric body formation. He pointed out that occasionally concentric bodies might be formed from an unusual degree of hyaline fibroid change affecting the arterioles in the pia arachnoid, causing the vessel to become completely occluded and giving the appearance above described in transverse section.

Case.

Drs. G. J. Robertson and C. Roney Schofield showed a case of innominate

aneurysm due to strain. W. B., a joiner, aged 60, severely strained himself when lifting a heavy plank, and felt a sharp pain in his neck just above the right clavicle. The next day he noticed a small pulsating swelling in that position. He came under observation at the Oldham Infirmary on January 3rd, 1900, three months after the accident. His condition was as follows: A pulsating swelling the size of a tangerine orange above the right clavicle, expansile, and having a patch of skin thin and red at the most prominent part of the tumour. He was kept in bed, dieted, and given potassium iodide. The patient was getting worse, and the aneurysm was apparently on the point of bursting externally. The right common carotid was tied just below the bifurcation on January 10th. There was slight right temporal headache for a few days; no improvement; tumour larger. The right subclavian was tied on January 17th. The result was as after first ligature on January 17th. Several feet of iron wire were introduced on February 2nd. The patient suffered from very distressing dyspnœa from displacement of the trachea through pressure; broncho-pneumonia; aneurysm size of ordinary orange, and apparently at bursting point; skin thin and red. Twelve steel needles were now introduced obliquely into one, so as to project into sac, withdrawn every few days, and fresh introduced; no bleeding; marked improvement; pulsation less; skin firm and healthier; no electrolytic current used. The patient died on February 16th from exhaustion. At the *post-mortem* examination there was found recent firm laminated clot over anterior and lateral walls of sac, which was a large sacculated innominate aneurysm, but not involving carotid artery; aorta atheromatous; slight fusiform aneurysm on commencement of right subclavian; displacement of trachea under left sterno-mastoid; septic broncho-pneumonia and purulent infarct in the left kidney.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

WM. HORROCKS, M.B., F.R.C.S., President, in the Chair.

Tuesday, April 24th, 1900.

CYSTIC TUMOUR OF JAW.

DR. RABAGLIATI read notes of a case in which he had removed a portion of the lower jaw on account of a cystic swelling associated with necrosis of the bone.

The patient was a woman aged 55, who first sought relief on account of caries of the lower jaw in association with a decaying molar tooth. The latter was removed, and about nine months later patient came again, complaining of a swelling near the temporo-maxillary joint. This on examination was found to contain fluid, and was tapped. The fluid was serous in character, and contained cholesterin crystals. There was still a portion of carious bone in the situation of the left lower molar teeth, and the bone was enlarged. The cyst was tapped four times subsequently, but was now found to contain sanguineo-serous fluid. The swelling was considered to be sarcomatous and the lower jaw was divided at the symphysis and at the neck of the left ascending ramus and removed without any external incision. There was very little resulting deformity. A sequestrum about ¾ inch long had separated from the ramus, and in addition a considerable portion in the molar region was found to be denuded of periosteum.

DRS. BERESFORD, WOOD, ALTHORP, and HORROCKS discussed the case; and Dr. RABAGLIATI replied.

SENSORY APHASIA.

Dr. KERR showed four unusual cases of sensory aphasia.

Congenital Pure Word Deafness.—A boy aged 9, very intelligent, without discoverable defect, except that he could not understand words: he had good hearing, but did not speak until taught articulation. He had now been taught to read, write, and speak with a rather limited vocabulary, his word memories being apparently entirely motor and visual. There was no history of birth troubles or infantile illness or fits. The lesion must be bilateral in the auditory word centres. *Two Congenital Cases of Word Blindness with Agraphia.*—(1) A lad aged 19, intelligent in every way except that he could not read a word; although he could copy literally, he wrote gibberish to dictation. Letters he knew, and numbers he could correctly write as figures, but not in words. He could do complicated arithmetic correctly. There was no history of birth troubles or infantile illness. The lesion was probably a slight bilateral affection of both cortical word vision centres in the angular gyri. (2) A boy, aged 11, word blind and agraphic all his life, could also copy literally, but could not do arithmetic. He had speech difficulties (dysarthria), and did not speak until articulation was taught, but attempting the words correctly he failed to render them intelligently, and scarcely used speech; he heard well. There was positive history of normal birth and infancy. *Word Blindness with Crossed Amblyopia.*—A man, aged 55, without albuminuria after a slight hemiplegic attack, came for spectacles and was found word-blind, slightly aphasic, and hemianopic, but the hemianopsia differed from usual cases in that he could see the movement of the smallest point of light in the hemianopic parts of the visual fields, form and colour sense being quite absent. During the past year he had educated himself to spelling out words, but the fields remained unaltered. He wrote correctly to dictation, but could not read what he had written, so that the lesion must be subcortical in the fibres connecting the left angular gyrus with the occipital region.

CASES AND SPECIMENS.

DR. RABAGLIATI showed a specimen of pyosalpinx (left) and of right ovario-salpingitis removed by operation.—Mr. HALL showed: (1) Paro-varian and ovarian cysts from the same patient; (2) sarcoma of clavicle; (3) hernial sac, showing strangulation within the sac; (4) sloughing of fauces, the result of tertiary syphilis.—Dr. WILMOT showed a patient, aged 25, suffering from acute gout.—Dr. LANKESTER showed a patient who had been successfully treated for pernicious anæmia.—Dr. JAMES KERR showed (1) a case of operation for mastoid disease, with marked improvement in hearing; (2) several patients suffering from "word blindness" and other kindred defects (notes appended).—Mr. ALTHORP showed a case of hydatid cysts of liver treated by operation; the patient was a child 3½ years old.

EPIDEMIOLOGICAL SOCIETY.—At a meeting on April 20th Dr. FRANKLIN PARSONS, President, in the chair, Dr. E. W. GOODALL opened a discussion on the infectivity of enteric fever. He said the general belief had hitherto been that the disease was very rarely communicated by direct infection, but almost always contracted through the ingestion of water or some article of food or drink contaminated with the alvine discharges of persons already suffering from the disease. Latterly, however, there had been a reaction, and the majority of medical officers of health and of fever hospitals now believed that it was far more frequently contracted by direct infection than was commonly supposed. He quoted in support of this contention from reports by Drs. Colley, Priestley, Bryett, Boobbyer, Mullins, and others, indisputable instances among members of the same households or nurses and laundrymaids whose duties brought them into contact with the sick or their soiled linen, as well as from the reports of the Asylums Board, which showed a far greater liability of the staff to enteric than to other fevers. These cases could not be due to defective drains, as Dr. Cayley and Mr. Murphy had suggested, for they would not be confined to the attendants, but some, at any rate, of the other patients would have been attacked. Nor could the impunity with which cases of enteric fever had been admitted to general hospitals be urged in disproof of its infectivity, for, as Dr. Bristowe and Mr. Holmes had pointed out in their report on hospitals, many cases of typhus, the infectious nature of which was undoubted, had been treated in St. George's and St. Thomas's in like manner without a single instance of its extension to others. Personally he had no doubt as to the frequency of direct infection by means of the excreta, the urine being as infective as the fæces, conveyed by means of the hands, especially in the dwellings of the poor, and that it did not occur more often in hospitals was owing to the greater cleanliness and stricter precautions enforced. The poison might possibly be diffused and inhaled as dust, but there was no evidence of infectivity of the breath or sweat. Dr. CAIGER said that in his hospital, though the nurses attending on it were but 1 in 15 of the whole number, there had in nine years been 23 cases with 3 deaths. At the same time only one patient had contracted it in the hospital, though 20 per cent. of the cases admitted into the enteric wards were not suffering from that disease. Thanks to the strictness of the regulations, and the practice of removing all soiled linen in closed pails, no ward servant or laundrymaid had ever been attacked. He had no doubt whatever as to the infectivity of the urine. Dr. E. F. WILLOUGHBY considered the difference of opinions apparent rather than real; no one suggested such wide aërial diffusion as occurred with small-pox and measles; and all were agreed as to the infectivity of the fæces and urine; the risk of infection varied inversely as the precautions, or the practicability of carrying them out; and the mode of communication was almost always "eating with unwashen hands." Every instance adduced by Dr. Goodall was thus explicable, and Dr. Caiger's experience of the exemption of the servants lent further confirmation. It occurred only in hospitals and in the dwellings of the poor, never in the houses of the well-to-do, where there was space, time, and means for every precaution. Colonel NOTTER was convinced that the poison was always swallowed, and that when the food was not the vehicle it was conveyed to the mouth by dirty hands. In the army, except in time of war, orderlies and nurses were scarcely ever attacked. He did not believe in the infectivity of the sweat or breath, but gave one instance apparently pointing to the buccal secretion as the means of infection. Dr. BULSTRODE maintained that medical officers of health fully recognised its infectivity. There might have been a change of type, but the apparently greater susceptibility of the nurses under the Asylums Board was easily accounted for by their being much younger than those of the London Fever Hospital. Considering the mode of infection, it was not surprising that nurses should so often contract it, and it was probable that before long these cases would cease to be received in general hospitals. Dr. NIVEN, of Manchester, had traced direct infection in 53 out of 484 cases admitted to the fever hospital in that town. Several other members took part in the discussion.

Harveian Society of London.—At a meeting on May 3rd, Mr. W. H. Lamb, President, in the chair, Mr. J. D. Malcolm read a paper on the selection of cases for abdominal section. In the discussion that followed, Mr. Alban Doran said he considered that the reports of bad cases were far more reliable and instructive than statistical tables of triumphs in abdominal surgery. Exploratory incisions for what proved to be irremovable malignant disease were dangerous unless the surgeon trusted to his eyes and kept his fingers as much as possible off the affected structures. When a malignant tumour was removable the separation of intestinal and parietal adhesions in itself involved peril, for a raw surface bearing a trace of malignant tissue was often the starting-point of general infection. In cases of acute torsion of the ovarian pedicle, immediate operation seemed to be the safer course, as Wiltshire and Salt's well-known cases testified. He himself had recently operated where there was bilateral torsion, removing a pair of dermoid cysts. Had he delayed, extensive adhesions would have formed, a special source of danger in operating on cysts with greasy contents. Mr. Butler-Smythe thought that exploratory incisions might be more frequently employed in doubtful cases. If the operator confined himself to a small incision little harm would be done to the patient, whilst the diagnosis would be made to a certainty. On the other hand, if the surgeon proceeded to break down adhesions and handled the abdominal or pelvic viscera, and in the end failed to remove the cause of trouble, the patient's life was placed in jeopardy. He wished to emphasise the fact that exploratory incisions and exploratory operations were different affairs, the former being almost harmless, the latter decidedly serious. He was much interested in the case mentioned by Mr. Malcolm, "where a patient who had a malignant ovarian tumour died after simple tapping" from heart failure. Three somewhat similar cases were known to him. One occurred in his own practice after removal of a sarcomatous ovarian tumour, the others in the practices of two well-known operators. Curiously enough in none of these four cases could a *post-mortem* examination be obtained; but, judging by the symptoms noted in each case, the fatal termination was undoubtedly due to heart failure, the attacks coming on suddenly when the patients were fairly on the way to convalescence. The cases led Mr. Butler-Smythe to believe that the malignant condition had more to do with such deaths than one imagined. Mr. Malcolm's paper was an example that might well be followed by other surgeons with benefit to their patients and to themselves.

British Palneological and Climatological Society.—At a meeting on April 26th, Dr. Ivor Murray, F.R.S.E., President, in the chair, Dr. Laing Gordon (Forest Hill) read a paper upon the climate of Rhodesia and showed many lantern slides of photographs of various parts of the country. He confined his remarks to Southern Rhodesia (Mashonaland and Matabeleland). The climate of the elevated regions varying from 4,000 ft. to 5,000 ft. above sea level was compared with the climate of the tablelands of the Orange Free State and Cape Colony. The splendid superiority of the Rhodesian tableland in water supply by springs and streams was pointed out. On the other hand, the latter country had more severe and continuous rains in the summer and the heat was greater in the summer than that of the more southerly districts of South Africa. Tables prepared by medical men and others in Rhodesia showing meteorological observations were exhibited. The diseases prevalent in Rhodesia were malarial fever, dysentery, pneumonia, and to a lesser degree typhoid fever. Typhoid fever was practically confined to Bulawayo; pneumonia and dysentery appeared to be on the increase especially among the natives; but malarial fever, which accounted for more deaths in the country than any other disease, was said to be on the decrease. The death-rate from malarial fever for the year ending September 30th, 1898, in the five chief hospitals of Rhodesia was 2.67 per cent. The connection between the mosquito and the malarial fever of Rhodesia had yet to be proved. Meanwhile, it was interesting to record that the malaria parasite was found on the ground and in the grass, especially about sunrise, and that the overturning of virgin soil in Rhodesia as elsewhere frequently caused a severe form of malarial fever. *Anopheles* had not yet been shown to flourish in Rhodesia, and in the elevated plateaux, where malarial fever was undoubtedly endemic to a certain extent, mosquitos were not a pest, although flies were. The route which the Rhodesian Field Force was said to be following from Marandellas to Tuli *viâ* Victoria was through the most malarious districts of Mashonaland. After some remarks by the President, Dr. Alfred Hillier submitted that the positive evidence to establish the theory that the malaria parasite could be conveyed to man only by the mosquito was not complete, and that there were certain facts which appeared to him to militate against it. For instance, very large portions of Rhodesia were uninhabited, and in some districts—the low-lying swampy ground where malaria was most constant and virulent—there was in many instances no population at all. Yet parties of wandering hunters in such districts were often prostrated to a man by malaria. From whom, then, could the mosquitos have derived the parasite? Dr. Leonard Williams made remarks on the importance of obtaining statistics as to the relative humidity of the climate.—Dr. Andrew S. Myrtle (Harrogate) read a paper entitled Personal Experiences of Gout, which was discussed by the President, Dr. Luff, Dr. Bezly Thorne, and Dr. Bowen Davies (Llandrindod Wells). Dr. Myrtle, in reply, gaves his views on dieting in gout.

Laryngological Society of London.—At a meeting held on April 6th, Dr. de Havilland Hall, President, in the chair, Sir Felix Semon showed a case of laryngeal (?) whistling in a boy aged 13. The whistling noise could be made with the laryngoscopic mirror in position, and was apparently produced by the vocal cords.—Dr. Dundas Grant showed (1) a case of rhinoscleroma in a female native of Russia improving under treatment with lactic acid; (2) a case of growth in the nasopharynx, probably cystic; (3) a larynx completely removed on account of sarcoma; and (4) a case of primary syphilis of the fauces.—Dr. StClair Thomson showed a girl with chronic laryngitis from inherited syphilis showing recesses in the cavum formed by Luschka's tonsil.—Dr. Tilley showed (1) six cases of frontal sinus suppuration, in five of which he had performed the external operation; (2) a microscopic specimen of angiosarcoma removed from the nasal septum; and (3) a case of adenoids associated with an abnormal pulsating vessel in the pharynx.—Mr. Charters Symonds showed a case of œsophageal stricture which had apparently been present for two years, and had been treated by tubage for one year. The man was still in good general health.—Mr. Spencer showed a girl with extensive necrosis following suppuration in the frontal and other nasal accessory sinuses.—Mr. Yearsley showed a case of malignant disease of the pharynx and larynx.—Mr. Roughton showed a child in whom there was considerable difficulty in removing a tracheotomy tube which had been worn five months.

West London Medico-Chirurgical Society.—At a meeting on May 4th, Dr. J. B. Ball, President, in the chair, the Subcommittee appointed by the Society on April 6th, 1900, to consider and report on the necessity of the notification of purulent ophthalmia in infants presented a report containing the following recommendations:

(1) Should any midwife having charge of an infant notice that one or both eyes of such infant are inflamed, reddened, or have any discharges therefrom, at any time within two weeks after its birth, it shall be the duty of such midwife, so having charge of such infant, to report the fact in writing within six hours to the medical officer of health of the parish or municipality, and summon a qualified practitioner of medicine to take the necessary steps to obtain the attendance of the district medical officer; any failure to comply with these instructions being punishable by a suitable penalty. (2) That the promoters of the Midwives Bill be invited to receive a deputation from the Society for the purpose of laying the above resolution before them, and explaining the facts by which it can be supported.

The report was unanimously adopted, and the members of the Subcommittee were requested to form a deputation to lay the above recommendations before the promoters of the Midwives Bill.—Dr. Barry Blacker read a paper on treatment by ultra-violet rays, after which he gave a demonstration in the use of Finsen's apparatus for concentrating the rays from an arc lamp on to the diseased area of skin. He also showed a child on whose face a small patch of lupus was under treatment. The skin surrounding the diseased area exhibited in a marked manner the bronzing effects of the rays. Remarks were made and questions were asked by the President, Mr.

George Pernet, and Dr. F. H. Low. Dr. Blacker replied.—Dr. Leonard Dobson read notes of two cases, one in which three needles were removed from the breast of a patient suffering from hysteria; the other was a case of impacted fracture of the neck of the femur in a patient, aged 25, who was suffering from the effects of infantile paralysis of the same leg. Roentgen-ray photographs of both cases were shown. Remarks were made and other similar cases were recounted by Dr. Brindley James, Dr. C. W. Chapman, and Mr. George Pernet.

Glasgow Medico-Chirurgical Society.—At a meeting on May 4th, Dr. W. G. Dun in the chair, Dr. R. Barclay Ness showed (for Sir William Gairdner) a case of probable Addison's disease associated with tuberculosis and leucodermia.

The patient was a young woman of about 20 years of age with a marked family history of tuberculosis. The illness had developed gradually, and had been characterised by early gastric disturbance, great weakness and emaciation, and cessation of the catamenia. Pulmonary symptoms had developed later, and although cough was slight and there was little or no expectoration; the physical signs pointed to some excavation taking place at the apex of the left lung. There was marked pigmentation of the skin of the body generally, and this was associated with the presence of leucodermatous patches. It was rather striking that both nipples and areolæ were free from any pigmentation, being included in the paler patches. There was also an absence of pigmentation of the lips or buccal mucous membranes.

Dr. Ness referred to other published cases of Addison's disease that had been associated with leucodermia, particularly to a case in Addison's original monograph. A discussion followed on the diagnosis and treatment of the case.—Dr. Walter K. Hunter showed two patients:

(1) A boy, aged 15 years, suffering from what appeared to be Friedreich's disease, although some of the typical symptoms were absent. There was, however, spinal curvature, marked ataxia of both upper and lower limbs, and a considerable degree of talipes. In addition some sensory defect was present, also atrophy of one of the legs, although there was no nystagmus and no disturbance of speech. The case was an isolated one. (2) A boy, suffering from well-marked pseudo-hypertrophic paralysis, there being a family history of this disease.

North of England Obstetrical and Gynæcological Society.—At a meeting held in Owens College, Manchester, on April 20th, Dr. Hellier, of Leeds (the President), who was in the chair, related a case of tubal pregnancy, removed by abdominal section after rupture at the end of four months. No symptom was observed until the rupture took place. The specimen consisted of a fœtus at 4½ months, with a well-developed placenta and sac. The patient made a good recovery. The President also showed a specimen of retained menstrual fluid from a case of imperforate hymen. The patient, a girl of 15, with a tumour reaching 3 inches above the umbilicus, had absolutely no symptoms of pain or pressure. Six pints of this chocolate-coloured fluid were removed after excision of the hymen.—Dr. Lloyd Roberts (Manchester) showed two unusual specimens of large fibroid polypi.

Case I.—A firm mass filled the vagina and blocked the pelvis. The patient had never complained of pain, and only slight hæmorrhage had been present. Case II.—A tumour the size of a large fist protruded from the cavity of the uterus nine days after a natural labour at full term.

—Dr. Arnold Lea showed a soft fibroid the size of a child's head removed from the vagina of a nullipara, aged 42.

The growth had caused no symptoms until until twelve hours before the operation, when severe uterine contractions resembling labour resulted in the discovery of the tumour, which was removed by morcellation.

—Dr. Arthur Helme (Manchester) related

(1) A case of ovarian sarcoma in a girl, aged 13 years, and showed the specimen with microscopic sections. The tumour was removed in April, 1899. The abdomen had recently again become enlarged, and abdominal section showed that masses of soft growth were invading the omentum and the general peritoneum. (2) Two specimens of fibroma uteri removed by total abdominal hysterectomy. No drainage was used. Both patients made uneventful recoveries.

—Professor Sinclair read a short paper on the prevention and relief of pain in minor gynæcology. He referred to the necessity of reducing the pain suffered by women in the minor manipulations and operative procedures. In some cases also women were very reluctant to submit to total anæsthesia. In many cases operative measures could be carried out with slight pain by the use of a judicious combination of morphine, alcohol, and cocaine locally. The administration of 2 ounces of alcohol disguised if possible, and followed by a hypodermic injection of morphine, had an excellent effect in diminishing sensitiveness. Under their influence curetting, intrauterine medication, Emmet's operation, and perineorrhaphy could be readily carried out. Cocaine should be used in a 10 per cent. solution locally, and in his experience had never produced any toxic symptoms. Remarks were made by Drs. Martin, Lloyd Roberts, Stallard, Briggs, and the President.

Association of Registered Medical Women.—At a meeting on May 1st, Mrs. Scharlieb, M.D., M.S., President, in the chair, a case of osteitis deformans was shown by Miss Helen Webb, M.B., and one of bony exostosis of the elbow-joints, by Miss Vaughan, M.D.—Mrs. Percy Alden read a paper on two cases of malignant endocarditis successfully treated with antistreptococcus serum. One of the patients, a child of 11 years, was present, and in good health.—Mrs. Stanley Boyd, M.D., gave an account of a case of posterior gastro-jejunostomy, which had been under her care in the New Hospital for Women. The patient was shown.—The annual meeting will be held in the Library, New Hospital for Women, at 3 P.M. on June 12th, and the dinner will take place on the same evening at the Midland Grand Hotel, at 7.30.

West Kent Medico-Chirurgical Society.—The seventh meeting of the forty-fourth session was held at the Royal Kent Dispensary, Greenwich, on May 4th. The President, Mr. Charles J. Parke, delivered his Presidential address on What shall we do with our Inebriates? After the address a most enjoyable smoking concert was held.

REVIEWS.

SOME RECENT BOOKS ON NURSING.

Of writing books on nursing there is no end; the subject matter is the same, the manner of saying it differs. Each matron wishes her nurses to have her lectures in permanent form, and for that purpose commits them to the printing press. In the volume on *Practical Nursing*, by Miss Stewart,[1] nurses are given practical instruction in the details of their duty, and the lectures will remind them of the teaching of their probationer days; we doubt, however, if the book will be of much use to other nurses, as it is written for those who have all the luxurious appliances and ample staff of a hospital at hand, things and people that are not found in many private houses, and certainly not in the homes of the poor. For instance, in describing how a helpless patient should be moved, no alternative advice for the nurse who finds that she has to improvise her machinery and assistant is given. The same remark applies to artificial feeding, and we trust that no nurse single-handed will be tempted to feed a weak child by nasal injection because of the apparent simplicity of the operation. The introductory remarks on the profession of nursing are worthy of study. On page 3 we read that the medical profession holds over-training as the greater evil. The medical profession does not object to over-training, but to misdirected training—training such as befits a medical student and not a nurse, spoiling a good nurse, and not making even a bad doctor.

The fact that Dr. Percy Lewis's work[2] has reached its eleventh edition speaks for itself as to the appreciation with which it has been received. In the present edition the whole of the matter has been revised and brought into line with modern requirements, and some valuable sections have been added on the Weir-Mitchell and Schott treatment of disease, and on mechanical therapeutics. There is a good section on the treatment of convalescence, a period which is sometimes ignored by the nurse, and yet the intelligent management of the convalescent is as important as the nursing of acute ill-

[1] *Practical Nursing.* By Isla Stewart, Matron of St. Bartholomew's Hospital, and Herbert E. Cuff, M.D., F.R.C.S., Medical Superintendent, North-Eastern Hospital. Two volumes. Vol i. Edinburgh and London: William Blackwood and Sons. 1899. (Cr. 8vo. Pp. 256. Illustrated. 3s. 6d.)

[2] *Nursing: its Theory and Practice.* By Percy G. Lewis, M.D., M.R.C.S., L.S.A., A.K.C. 11th Edition. London: Scientific Press, Limited. 1899. (Cr. 8vo, pp. 448, 100 illustrations. 3s. 6d.)

nesses. The author has some sound remarks on the bringing up of infants, but we think that it would have been wise to emphasise the cause and prevention of purulent ophthalmia in the newly-born, a matter in which the best nurses may be careless. The illustrations, especially those of the surgical instruments and splints, are likely to be useful. This work may be recommended to all nurses; those who have passed through the hospital will be helped by it, as well as the probationer entering on her career.

In reviewing a *Handbook for Nurses*[3] it is necessary to approach it from two sides, the author's and the reader's, so as to understand for what purpose it is written, and whether it meets a want. Dr. Watson says in the preface that his object is "to supply in one volume that information which so many nurses at the present time are trying to extract from various medical works, and to present that information in a suitable form." He is therefore of the opinion that the information conveyed in this handbook is of the kind with which nurses should be acquainted. The chapters on anatomy and physiology are quite necessary, but when we come to the pathology and therapeutics which are scattered all through the book we join issue with the author, for he is stepping out of his way to give teaching on matters which are essentially outside the nurses' purview. It may be said that nurses will obtain this information from medical textbooks. But in that case they read of the subjects treated with the reserve which a technical treatise enforces on the lay mind, and they assimilate just so much information as they can make use of. But when these subjects are popularised and placed in their hands by a medical man, the more rash among them may think that the treatment of the patient is within their province. In Chapter xix, headed the Duties of the Nurse in Relation to Operations, both General and Special, the nurse is given minute instructions as to the instruments that will be required; this is misleading, as surgeons differ in the instruments they use, even for the same operation. It is, of course, essential that a nurse should be acquainted with the names of the various surgical instruments so as to hand the right one, but it is outside her duties to select the instruments required. In the same chapter the steps of the operation are explained at length. This is of the utmost interest to the intelligent nurse but quite unnecessary as a matter of instruction, and it is likely to cause confusion in her mind between what she may know and must know. On the other hand, there is an absence of teaching on matters which are essentially within the nurse's province: for instance, orthopædic surgery has been dismissed with one paragraph, and yet there are few branches of surgical nursing which are a greater tax on the ingenuity of the nurse; the same remark applies to diseases of the spinal column. The book is well got up. The marginal headings and index are handy for reference; the illustrations and the various tables which the author has compiled are helpful.

In the second edition of his useful work on *Surgical Ward Work and Nursing*,[4] Dr. Miles has done much to render it acceptable to those needing instruction on all the minor details of modern surgical treatment. The subject matter has been thoroughly revised, in places rearranged, and in all parts considerably extended. The most important additions have been made in the sections dealing with aseptic procedures in surgical operations, and with the after-treatment of surgical cases. The author's comprehensive and lucid teaching, together with a number of good illustrations, cannot fail to render this work in its present form very useful both to junior students and nurses.

NOTES ON BOOKS.

Reports and Transactions.

The thirty-fifth volume of *St. Bartholomew's Hospital Reports* derives a pathetic interest from the obituary notice of the late Dr. Kanthack of Cambridge by Mr. Bowlby. It is illustrated by an excellent portrait which forms a frontispiece to the volume. Mr. Henry Power has written a brief notice of the life of Dr. Reginald Southey. Sir Dyce Duckworth contributes a paper on Rheumatoid Arthritis, Heberden's Nodes, Dupuytren's Contraction, and other Arthritic Conditions, a group of conditions upon which he speaks with authority. Mr. Henry Rundle, F.R.C.S., who writes on the subject of Varicocele in Relation to Admission to the Services, founds his paper on 375 cases treated by operation in the Royal Hospital, Portsmouth, during a period of ten years. The Conditions of Life on a Torres Straits Island are described in an interesting way by Mr. C. S. Myers. Mr. Laurie Lawrence, F.R.C.S., discusses the Functions of the Middle Ear, and concludes that the membrana tympani and ossicles are not so much for conducting sound to the labyrinth as for maintaining pressure on the base of the stapes keeping it in its position, and for breaking up other vibrations than those of sound conveyed to the footplate. Among other articles of particular interest are those on the Relation of the Testes to Prostatic Atrophy by Mr. W. Bruce Clarke, and on the Relation of the Bacteriology to the Pathology and Symptoms of Malignant Endocarditis by Dr. Ware.

The nineteenth volume of the *Transactions of the Ophthalmological Society of the United Kingdom* contains the communications made during the session 1898-99 under the headings of Diseases of the Eyelids, Conjunctiva, Cornea, Iris, and Ciliary Body, Retina, and Choroid, Intra-ocular Tumours, Diseases of the Optic Nerve and the Orbit; Congenital Abnormalities and Injuries of the Eye and Orbit. The proceedings have been reported from time to time in our columns, but we may recall as of special interest papers on congenital ptosis, with associated movement of the lid and jaw, by Dr. E. C. Fischer; on spring catarrh of the conjunctiva, by Mr. Holmes Spicer and Mr. Arnold Lawson; on implantation cysts of the iris, by Mr. Devereux Marshall; several papers on embolism of the central artery of the retina; on foreign bodies of the eyeball localised by skiagraphs; and a paper, by Mr. Kenneth Scott, on traumatic division of both optic nerves, which had been brought about by a bullet traversing the head of an Egyptian native, who did not long survive the injury.

The Transactions of the American Gynecological Society for 1899 contains, among other interesting material, the report of the Committee consisting of Dr. Whitridge Williams, Dr. William Pryor, and Dr. Henry Fry, appointed at the previous annual meeting to investigate the subject of the value of antistreptococcus serum in the treatment of puerperal infection. Their main conclusion was that its employment does not materially improve the results of general treatment. Papers are included on the Abuse of the Curette in Puerperal Fever by Dr. Robert Murray, on Kraurosis Vulvæ by Dr. J. M. Baldy and Dr. H. L. Williams, on Inversion of the Uterus by Dr. Bernard Browne, and on Vaginal Cœliotomy by Dr. Lapthorne Smith and Dr. Riddle Goff. There is also a clinical note on the Use of Thyroid Extract in Fibromata by Dr. Malcolm Maclean, and a dissertation on Interstitial Pregnancy by Dr. Archibald McLaren.

The seventeenth volume of the *Transactions of the Royal Academy of Medicine of Ireland* has been carefully edited by Dr. John B. Story, the General Secretary. It contains a large number of papers which will be valuable for reference, but we are excused from any extended notice by the fact that the proceedings of the various sections of the Academy are regularly reported in our columns. Perhaps the most important paper is that by Dr. Conolly Norman on the clinical features of beri-beri. It is founded on his experience at the Richmond Lunatic Asylum, and contains a very interesting account of the remarkable epidemic in that institution. The Clinical Reports of the Rotunda Hospital, which are always awaited with interest, are also contained in this volume. They have been prepared by the Master, Dr. Purefoy, and the Assistant Masters, Drs. Lyle and H. C. Lloyd.

We have received the tenth edition of M. Bocquillon-Limousin's *Formulaire des Médicaments Nouveaux* (Paris: J. B. Paillière et Fils. 1900. Crown 8vo. pp. 324. F. 3.) The articles which it contains give the names, synonyms, composition, therapeutics, doses, etc., of the newer remedies with

[3] *A Handbook for Nurses.* By J. K. Watson, M.D.Edin. London: Scientific Press, Limited. 1899. (Crown 8vo, pp. 426. Sixty illustrations. 5s.).

[4] *Surgical Ward Work and Nursing. A Handbook for Nurses and Others.* By Alexander Miles, M.D., C.M., F.R.C.S.Edin., Surgeon to Leith Hospital; Assistant Surgeon, Royal Infirmary, Edinburgh. Second Edition. London: The Scientific Press, Limited. 1899. (Demy 8vo, pp, 288. 333 illustrations. 3s. 6d.)

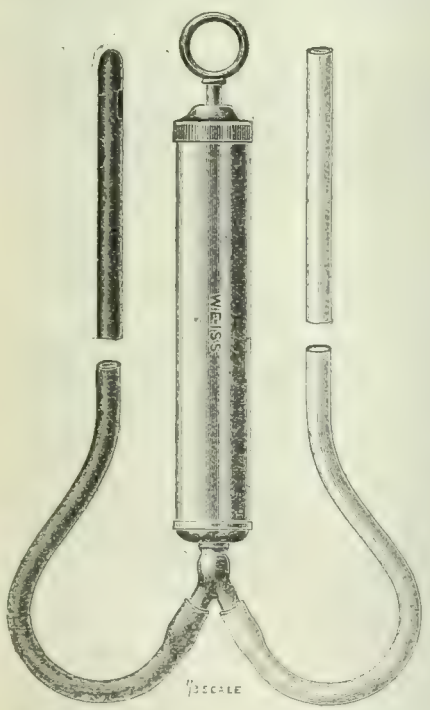
the addition of about 41 substances which have made their appearance during the past year. Among these additions occur the names acoine, anesine, anytene, asterol, bronispene, cosaprine, dionine, echthol, eunol, guilol, iodipin, melarine, phenegol, pipizoac, siroline, tannocol, tenaline, vasothion, etc.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

Iodised Phenol Aseptic Hydrocele Outfit.—Messrs. Arnold and Sons have constructed for Mr. Frederic Deane, of Barbadoes, an iodised phenol aseptic hydrocele outfit. The syringe is easily taken to pieces for cleaning. The trocar resembles the ordinary trocar in every respect, with the exception that the point is conical and not bayonet-shaped, and is without shoulder; the conical point fits tightly into a metal cannula, tapered slightly at the lower end so as to receive the conical-shaped end of the trocar, and thus a continuous conical surface is formed, without shoulder and without split in the cannula. A split in the cannula is objectionable, as after a little wear the split does not close completely, and allows a small quantity of the solution injected to escape into the surrounding tissues, and is apt to produce an extensive sloughing of the scrotum. The finger-grips on the cannula serve to fix it tightly on the trocar or syringe when in use. Before using, the point of the trocar and cannula should be lubricated with a little carbolised oil or vaseline. The trocar packs into a convenient case, in which there is room also for a bottle for iodised phenol.

An Improved Stomach Pump.—The following is a description of a stomach pump designed by Dr. Adair, of Belfast: The barrel and piston are those of an ordinary syringe, but there are two diverging nozzles at the lower end (see figure). To one of these is attached a stomach tube, to the other a strong rubber tube. The pump is held with its lower end in the palm of the left hand in such a way that the proximal ends of the two tubes rest on the left forefinger in such a position that they can be alternately pinched between the left forefinger and thumb. When throwing fluid into the stomach the stomach tube is pinched while the piston is being drawn out. It is then released and the other tube pinched while the piston is being pushed in. The operation is of course reversed when the stomach contents are being withdrawn. Dr. Adair states that the pump, which is made by Messrs. John Weiss and Son, of London, is easy to manipulate, even by the patient himself.



REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD (ENGLAND) FOR 1898-99.

I.

The twenty-eighth annual report of the Medical Officer of the Local Government Board for the year 1898-99 has just been issued. It contains the record of much scientific investigation, the results of which are of permanent importance. Under the heading of auxiliary scientific investigations are found the following:

The Bacillus Enteritidis Sporogenes.

A further report on the bacillus enteritidis sporogenes is presented by Dr. Klein, F.R.S. The earlier report contained a description of the morphology and biology of this bacillus, an account of its distribution in milk and polluted water, and the results of an investigation into its relations with infantile diarrhœa and English cholera. During the past year Dr. Klein has made investigations as to whether or not the bacillus had any relation with the diarrhœa of typhoid fever or with certain forms of epidemic diarrhœa. Over 40 cases of undoubted enteric were submitted to examination, and in almost all the cases during the periods when the stools were "typical"—in 23 out of 25 cases—the spores of the bacillus were found in large numbers, whereas the examination of the dejecta passed in stages of the disease in which the stools were solid either failed to show the spores or revealed them in very small numbers. The fact that the spores might be in such small numbers as to necessitate the examination of a comparatively very large amount of fæcal matter led Dr. Klein to reconsider his former conclusion that the spores of this bacillus were really absent from the stools of non-diarrhœa patients and of healthy persons, on the supposition that the negative result was possibly due to the use of an insufficient amount of the stool for purposes of inoculation. After prolonged investigation he found this to be the case, that the spores are sparsely present in the human intestine in health and in disease. He discusses in the latter part of his report the conditions that govern the pathogenicity of this bacillus in the human subject and its interaction with the typhoid bacillus.

The Fate of Microbes in the Cadaver.

The second report, also by Dr. Klein, deals with the fate of pathogenic and other infective microbes in the dead animal body. The point at which this research directly affects the community is how far cemeteries are of local danger from the contamination of water supply by their effluents. It is well known that, in addition to dead organic matter, the water draining below ground from graveyards contains numerous saprophytic organisms; the point in question is, does it contain pathogenic organisms, and, if not, what becomes of these organisms buried in the bodies of persons who have died from infective diseases? It was intended to determine at the same time the innocence or harmfulness of the bacteria proper to graveyards. Numerous experiments were made by Dr. Klein on rodent animals both in regard to the nature of the bacteria that bring about the final dissolution of their bodies, and as to the fate of pathogenic bacteria which had been growing in their bodies before death. The results obtained are that the disintegrating bacteria are harmless anaërobes, and the process of dissolution is, he believes, due to a particular bacillus, constantly present according to his observation in dead bodies, which he proposes to call bacillus cadaveris sporogenes. The second important result of the research is that the pathogenic microbes present in dead animals, which had been actively multiplying during life, could not survive in their decomposing bodies more than a few weeks.

The Fate of Microbes in Soil.

The third report is by Dr. Sidney Martin, F.R.S.; it is on the growth of the typhoid bacillus in the soil. In a previous report Dr. Martin showed that the typhoid bacillus could grow for an indefinite time in sterilised soils containing organic matter, but not in soils, such as sand and peat, free from organic matter. The question he now investigated was whether the typhoid bacillus could grow in unsterilised soils, that is, in competition with other bacteria. He found that in the very soils which when sterilised formed a good nidus for the

typhoid bacillus in them when unsterilised the bacillus typhosus died out within 24 hours. Assuming then that the typhoid bacillus was unable to survive in the unsterilised soil on account of the activity of the bacteria proper to it he proceeded to isolate the soil bacteria and to submit the typhoid bacillus in competition with each one in turn. He found that in relation to the typhoid bacillus the bacteria of the soil fell into three groups: one consisting of bacteria which quickly suppressed it, another of bacteria which could flourish side by side with it, and a third group which were themselves killed by the micro-organism of enteric fever.

The fourth report is by Dr. A. C. Houston on the viability of certain pathogenic and other microbes when inoculated into soil. The hypothetical problem of this research was what becomes of, say, the cholera bacillus when it is introduced into the soil, in dejecta in the ordinary way, during a cholera outbreak? He made some preliminary observations on the inoculation of soil in the laboratory with the bacillus of diphtheria and with Koch's vibrio, using the non-pathogenic bacillus prodigiosus (like the vibrio, a non-sporing microbe) in a control experiment. He then inoculated a considerable area of soil in the country with Koch's vibrio and the bacillus prodigiosus, sown side by side, so that each was subjected to the same conditions—seasonal, meteorological, and other. It was found that the indigenous bacillus prodigiosus continued to live in the soil, although in reducing numbers, for months, and that after a single sowing; on the other hand, the exotic cholera vibrio, although repeatedly sown in enormous numbers over several square feet of soil, could only with difficulty be recovered from the soil after the lapse of a few days. It was found, moreover, that the addition to the soil of a nutrient substance adapted to the requirements of the cholera bacillus did not materially affect the result. The inference deducible from these experiments, however, as Dr. Houston points out, must not be taken to apply to other soils, or other than its surface layers, other seasons of the year, or other climate than those of the experiments in question.

The Relation of Surface Drainage to Water Supply.

The fifth report, also by Dr. Houston, is on the chemical and bacteriological examination of the "washings" of soils with reference to the nature of the organic matter and the number and character of the bacteria contained in them. In some epidemics clearly due to the contamination of the water supply with surface drainage, chemical tests have failed to detect any evidence of the pollution in action, and bacteriological tests have not been systematically applied. Hence the necessity for a simultaneous chemical and bacteriological examination of surface water from soils adjacent to water supplies. Ten soils were treated with distilled water, and the soil washings were examined in each of these ways. The intensity of the chemical reactions, it was found, in no way corresponded with the relative amount of organic matter present in the soils, and the tests absolutely failed in the cases of recent contamination. Bacterially, on the other hand, forms were invariably found which allowed him to make a positive conclusion as to their origin in surface soil, and in addition a characteristically large proportion were present in spore form. The bacterial conditions helpful in distinguishing whether the flood water was from soil, much or little, recently or remotely, contaminated were of a more hopeful character. In three samples forms of the bacillus coli were found, and in all three the contamination was more recent and considerable than in those where they were not found. Moreover, in these three alone of all the ten samples streptococci were found in conjunction with the coli forms—a fact of special interest because it suggests that the presence of streptococci in soil may be related to its recent contamination. This consideration led Dr. Houston to make further bacterial investigations of water supplies, an account of which is contained in the sixth report entitled a Note on the Bacterioscopic Examination of Drinking Water, with particular reference to the relations of streptococci and staphylococci with water of this class. The research, which is of a preliminary character, attempts to differentiate the harmful bacteria present in water from the harmless varieties. It was found that, although none of the streptococci isolated from eight samples of water were pathogenic as regards mice, some of the staphylococci were.

Bacteriology of Scarlatina.

The seventh section is a further report by Dr. M. H. Gordon on the bacteriology of scarlatina. It is acknowledged to be probable that those persons alone who have the streptococcus scarlatinæ in their throats on returning home from the fever hospital are able to infect others with the disease. Dr. Mervyn Gordon here records the results of his bacteriological examination of these "return cases," and they confirm the inferences that had been previously drawn. The streptococcus scarlatinæ was not found in a single case, out of 12 patients examined, in the ear discharge; in only 2 out of the 12 was it present in the nasal discharge, and in these only very sparsely, but in 27 examinations of the throats of 18 cases it was found in 20, and in 13 of these at a period later than the fifth week of the attack; in 2 cases, in fact, when the patient was about to be discharged from the hospital. When the streptococcus scarlatinæ obtained from the throat of these patients, convalescent from the disease, was injected into mice, a fatal result was brought about on 8 out of 10 occasions, the interval being from 4 to 37 days; and both the mice that survived showed signs of illness for a time.

Bacteriological Evidence of Sewage Pollution.

The eighth report is by Drs. Klein and Houston on the bacteriological evidence of recent, and therefore dangerous, sewage pollution of otherwise potable waters. Starting from the proposition that the bacillus coli and the bacillus enteritidis are much more abundant in sewage than in any other substance not equally objectionable, the presence of these organisms in water, as was shown in the report of the previous year, serves as an index of dangerous pollution, and is of far greater sensitiveness than any merely chemical test. They were able to easily detect the bacillus coli in sewage diluted with 20,000 parts of water. The main object of their present research was to determine whether the numerical relation of the bacillus coli to the bacillus enteritidis, and of both to the other aërobes present in raw sewage, remained constant for each sample in all dilutions. They have come to the conclusion that there is no definite correspondence between the total number of bacteria and the number either of the bacillus coli or of the spores of the bacillus enteritidis, and none between the number of the coli bacilli and that of the spores of the bacillus enteritidis. They found incidentally that the addition of trade waste to sewage did not necessarily appreciably alter the biological qualities of the sewage. Their method of bacteriological examination, however, does not apparently permit of the differentiation of one sort of sewage from another; each separate sewage, in fact, seems to have its own flora, so that it is not possible to conclude as to the general character of the sewage from the number or kind of the bacilli present.

INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

The Tenth International Congress of Hygiene and Demography will be held in Paris this year from Friday, August 10th, to Friday, August 17th, under the presidency of Dr. Brouardel, Dean of the Faculty of Medicine of Paris.

The subjects which will be discussed at the Congress are as follows:

I. Hygiene.

1. The application of microbiology and parasitology to hygiene.
2. The hygiene of food; the application of chemistry and veterinary science to hygiene.
3. Health; the application of engineering and architecture to hygiene.
4. Personal and communal hygiene (infancy, gymnastics, schools, hospitals, prisons, etc.). Cremation.
5. Industrial and professional hygiene. Unhealthy dwellings.
6. Military, naval, and colonial hygiene.
7. General and international hygiene (the prophylaxis of transmissible diseases, sanitary administration and legislation).
8. The hygiene of travel (railways, ships, omnibuses, tramways, and motor cars).

II. Demography.

The price of a member's ticket is 20s. Programmes and forms of application for membership can be obtained from the Secretary of the British Committee, Dr. Paul F. Moline, 42, Walton Street, Chelsea, S.W. Special arrangements for travelling will, it is hoped, be made.

THE MIDWIVES BILL.

THE following is the text of Memorandum sent to Sir Robert Finlay, in compliance with the request expressed by him to the deputation representing the British Medical Association, which had an interview with him on May 3rd (see BRITISH MEDICAL JOURNAL, May 12th, p. 1189.)

Memorandum by the British Medical Association on the
MIDWIVES BILL
(As Amended by the Standing Committee on Law.)

The Medical Acts and the Midwives Bill.

The principle embodied in the Midwives Bill is contrary to the previous course of legislation on medical matters, the tendency of which has been to increase the stringency of the requirements for the registration of practititioners of medicine, surgery, or midwifery.

The Medical Act, 1858, enacted (Section XV) that any person possessing any one or more of the qualifications described in the Schedule (A) to the Act, shall (Section XXXI) "be entitled, according to his qualification or qualifications, to practise medicine or surgery, or medicine and surgery, as the case may be." Section XXXI of the Medical Act, 1858, was repealed by the Medical Act, 1886, which enacted (Section 2) that "a person shall not be registered under the Medical Acts in respect of any qualification referred to in any of those Acts, unless he has passed such qualifying examination in medicine, surgery, *and* midwifery as in this Act mentioned," that (Section 3, Subsection 2) "the standard of proficiency required from candidates at the said qualifying examinations shall be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, *and* midwifery," and that (Section 6) "a registered medical practitioner[1] shall.....be entitled to practise medicine, surgery, *and* midwifery in the United Kingdom," etc.

The Midwives Bill, which would licence a woman to practise midwifery only, in respect of a certificate obtained after an examination in that subject only, would *pro tanto* amend the Medical Acts, and such amendment would be in a direction contrary to the amendment made by the Medical Act, 1886.

Prohibition of Practice of Midwifery by Uncertified Persons.

The Midwives Bill, 1900, Clause 2, Subclause 1, provides that no woman shall use the title of midwife, or any addition or description "implying that she is certified under this Act, or is qualified to act as a midwife, unless she be certified;" while Clause 2, Subclause 2, provides that any woman so certified who "shall take or use the name of midwife, or any other such name, title, addition, or description as aforesaid, or shall habitually and for gain attend women in childbirth," shall be liable to a penalty. There is an amendment (Colonel Milward) on the paper to omit the words "or shall habitually and for gain attend women in childbirth."

The British Medical Association is of opinion that it is important to retain these words, the whole object of the Bill being to bring under control the attendance of women in childbirth by women other than registered medical practitioners.

Midwife not to Attend Abnormal Cases.

Clause 2, Subclause (5) sets out that "The certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner, or that she is authorised to grant any medical certificate, or any certificate of death or of stillbirth, or to attend cases of abnormal labour, or of disease of or danger to the mother or the child," but no penalty is provided.

It is common ground that a midwife should not attend cases of abnormal labour, or of disease of or danger to the mother or the child. The difference of opinion is as to whether the Bill provides adequate means of promptly checking a midwife who might seek to attend such cases. The British Medical Association is of opinion that it does not.

The promoters of the Bill have expressed the opinion that the difficulty might be met by rules framed by the Central Midwives Board, under Clause 4, I (*d*), but it is clear that the Board would feel some difficulty in acting in such matter unless the statutory position of the midwife was more clearly laid down.

Clause 8 constitutes every County Council or council of a county borough the local supervising authority over midwives within the area of the said county or borough, and Clause 9 gives power to a County Council to delegate its power to a District Council. The local supervising authority is given power (Clause 8 (3)), "to investigate charges of malpractice, negligence, or misconduct, on the part of any midwife practising within the district, and, should a *primâ facie* case be established, to report the same to the Central Midwives Board," and by Clause 8 (4), "to suspend any midwife from practice.....if such suspension appears necessary to prevent the spread of infection." A local supervising authority would therefore have no power to suspend a midwife charged with malpractice, negligence, or misconduct, other than misconduct tending to spread infection, but would have to report the case to the Central Midwives Board. This Board would sit, presumably in London, probably not oftener than at most twice a year, and would not have power to take evidence on oath and to enforce attendance of witnesses. If it found the charge proved the only penalty it could inflict would be to remove the name of the midwife from the roll. In the analogous case of the General Medical Council, the want of power to administer oaths, to summon witnesses, and to inflict any penalty other than removal from the *Register* has been a source of difficulty and weakness. The British Medical Association is of opinion that the administration under the Act would be made simpler and more efficient by inserting a penalty at the end of Clause, 2 Subclause 5, and the amendment suggested is as follows:

> "And if any woman certificated under this Act shall do or purport to do anything which by this sub-section it is declared that her certificate does not confer upon her a right or title to do she shall be liable on summary conviction to a fine not exceeding five pounds."

Certificates to be accepted by Midwives Board.

Clause 3 provides that a woman shall be certified under the Act if she holds a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London. The Royal College of Physicians of Ireland has ceased to give such certificates and the Obstetrical Society is not a statutory body, but a private society which is not recognised by the medical profession as having any authority to grant such certificates. The amendment desired by the British Medical Association is:—

> Clause 3, page 2, line 5, leave out the words "from the Royal College of Physicians of Ireland or from the Obstetrical Society of London or such other certificate as may be."

It is further considered to be of the first importance that no woman should be certified under this Act unless she can produce evidence to the satisfaction of the Central Midwives Board that she is possessed of a good character as well as a certain efficiency in carrying out her duties. The amendment on this point desired by the British Medical Association is:—

> Clause 3, page 2, line 5, to insert after "she" the words "bears a good character, and."

Constitution of Central Midwives Board.

Clause 4.—The habits and circumstances of the population and the customs and conditions of practice vary in different districts, and the British Medical Association is of opinion that the Central Midwives Board should be made as representative of the different parts of the country as is possible in the case of so small a body. The provision in the Bill (Clause 4 (1)) would probably, in practice, result in the appointment of practitioners resident in London. The Asso-

[1] The total number of registered medical women is steadily increasing. The number of ladies educated at the London School of Medicine alone, who at the beginning of this year held registrable medical degrees or diplomas, was 254. The number who, after education at medical schools for women in Scotland and Ireland, have obtained registrable degrees or diplomas, must also be considerable. The number of students attending the London School of Medicine for Women in the Session 1899-1900 was 197

ciation would prefer to see the Board elected in the manner shown in Clause 6 of their draft Bill (appended). Failing this the Association desires to see Clause 4 (1) amended as follows:—

Clause 4, page 2, line 14, after "practitioners" leave out to end of Subsection (1) and insert "to be appointed by the General Medical Council as follows: One practising in the London and South-Eastern Registration Divisions one practising in the South-Western West Midland or Welsh Registration Divisions one practising in the Eastern North Midland or South Midland Registration Divisions and one practising in the Yorkshire or Northern Registration Divisions as from time to time defined by the Registrar-General."

Duties of Central Midwives Board.

Clause 4, Subclauses I to VI.

Subclause V. Removal from the Roll.—The British Medical Association is of opinion that it should be distinctly set out that any omission to summon medical aid in case of abnormal labour, or of disease of or danger to the mother or the child, shall be misconduct within the meaning of the Act. Difficulty and danger to the mother or child, or both, may arise in connection with parturition before, during, or after the act of labour itself. The Bill as drafted appears to have regard mainly to danger arising by way of infection after labour. The Association is of opinion that the following amendment is therefore desirable:

Clause 4, page 3, line 11, after the word "misconduct" to insert the words "and so that for the purposes of this Act the omission to summon a registered medical practioner in a case of abnormal labour shall be deemed to be misconduct."

Local Supervision of Midwives.

Under Clauses 8 and 9, by amendments introduced by Mr. Heywood Johnstone, who was in charge of the Bill in the Standing Committee on Law, local supervising authorities are empowered to delegate "any powers or duties conferred or imposed upon them by or in pursuance of this Act, to a committee consisting either wholly or partly of members of the council" upon which women shall be eligible to serve. The British Medical Association is of opinion that the members of any such committee should be registered medical practitioners, in order to ensure that the local supervision shall be effective, otherwise the midwives in the district would not be under any effective medical control, as is essential if the object of the Bill is to be attained. In the opinion of the Association this would be met by an amendment as follows:

Clause 8, page 5, line 9, after "Council" to insert "being registered medical practitioners."

Definition of Midwife.

The British Medical Association takes the strongest exception to the definition of midwife now contained in the Bill (Clause 18). The definition in the Bill as read a second time by the House of Commons, was "the term 'midwife' means a woman who undertakes for gain, and in accordance with the provisions of this Act, to attend women in childbirth." The amendment was made by the Standing Committee on Law owing to an apprehension, which is confidently asserted to be unfounded, that the original definition would have affected women employed as monthly nurses. A monthly nurse does not "attend" a woman in childbirth, but acts as her nurse during the lying-in period, that is to say, before, during, and for some weeks after the act of childbirth.

The present definition, so far as it can be held to have any force at all, would appear to mean that a midwife is a person authorised to practise midwifery, including necessarily to a certain extent medicine and surgery, without any qualifying education or any control by a responsible registered medical practitioner, which is contrary to the scope and intention of the Bill.

The definition recommended by the British Medical Association is—

The term "midwife" means a woman who undertakes for gain to attend women during natural labour and the lying-in period.

It is to be noted that this definition implies that subsequent attendance on mother and child—a matter of first importance—is compulsory, and cannot be deputed to an uncertified person. The want of such a provision would allow the midwife to depute these duties to any uncertified woman, who might be totally unfitted to carry them out, unable to recognise the onset of disease (that is, puerperal fever), and over whom the Bill affords no provision for control.

Recovery of Charges: Prevention of Employment of Uncertified Substitutes.

The British Medical Association, as has perhaps already been indicated sufficiently, believes that a great difficulty in the administration of the Midwives Bill as it stands would arise in preventing women certificated under the Bill from undertaking to attend cases of abnormal labour, or of disease of or danger to the mother or the child, for the proper treatment of which midwives have not the necessary knowledge and skill. The Central Midwives Board might make rules designed to prevent certified midwives from exceeding their functions, but, as has been pointed out above, proceedings against any midwife under the rules of the Board would be cumbrous and expensive, and the inquiry could only have a *quasi* judicial character.[2] Further, the British Medical Association considers that the Bill should provide against the employment by a certified midwife of an uncertified person in substitution for her own services during labour and the lying-in period. The British Medical Association has therefore drafted the following clause providing that a certified midwife only shall be able to recover charges by legal process, and that a certified midwife shall not recover charges for attending cases of a nature which it is directed by the Bill she shall not attend, or for the services of an uncertified substitute:

[New Clause.]

After Section 2 to insert the following section:

3. (1) A certificate under the Act shall entitle a woman to act as a midwife in accordance with this Act and the rules and regulations to be laid down hereunder in cases of natural labour only.

(2) From and after the first day of January, one thousand nine hundred and two, a woman shall not be entitled to recover in any Court any charge for any attendance on, or service to a lying-in woman, unless she is certified under this Act, nor shall any midwife certified under this Act be entitled to recover in any Court any charge for any attendance or service not authorised by this Act, or any charge for attendance or service as midwife, unless in the latter case she has either in person, or by a substitute duly licensed under this Act, performed the duties to be prescribed by the Central Midwives Board, pursuant to this Act.

Inspection of Lying-in Homes.

The British Medical Association is also of opinion that the Bill should contain a provision for the inspection of lying-in homes for the following reasons:—First, it is essential that the sanitary arrangements of the houses into which women are received for their confinement should be good, since insanitary conditions are well known to be one of the causes of puerperal fever; secondly, there is good reason to believe that such lying-in homes have been in the past, and may in the future, be used for illegal practices, which, owing to their nature, are extremely difficult to prove under the common law. If lying-in homes were open to inspection they would be far less likely to be used for such illegal and criminal purposes. The British Medical Association considers that such inspection might best be provided for by the Central Midwives Board, and a new clause to this effect, brought before the Standing Committee on Law by Sir George Pilkington, was not unfavourably received by the promoters of the Bill; but it was pointed out that inspection by the Midwives Board might be inconvenient and expensive, and it was suggested that the duty of inspection should be imposed on the local supervising authority over midwives. Sir George Pilkington has since given notice to move on the report stage the following new clause, which would appear to meet the objection mentioned, while fulfilling the object which the British Medical Association has in view.

[New Clause.]

(1) The County Council or Council of a County Borough shall inspect or cause to be inspected from time to time any premises wherein any woman receives or proposes to

[2] See above under head "*Midwife not to Attend Abnormal Cases.*"

receive as a midwife a pregnant or lying-in woman, and if such premises shall, in the opinion of the Council, be fit for the reception of a pregnant or lying-in woman, the Council shall issue a certificate to that effect upon payment by the midwife of such fee as may be fixed by the Council, and shall enter such premises upon a register to be kept by the Council.

(2) Any woman, whether certified or licensed under this Act or not, who after the first day of January, one thousand nine hundred and two, shall receive as a midwife a pregnant or lying-in woman in premises which shall not have been certified by the County Council or Council of a County Borough as fit for the reception of such a woman under the provisions of this Act shall be guilty of a misdemeanour and on conviction on indictment shall be liable at the discretion of the Court to a fine not exceeding ten pounds, or to imprisonment for any term not exceeding two months, with or without hard labour, or to both fine and imprisonment, or on summary conviction to a fine not exceeding ten pounds.

THE MIDWIVES BILL AND IRELAND.

[*From our Dublin Correspondent.*]

The Royal College of Physicians of Ireland and the Dublin Branch of the British Medical Association have decided that the injury which would accrue to the Dublin lying-in hospitals as centres for the education and training of midwives by the exclusion of Ireland from the provisions of the Midwives Bill, 1900, may be partly met by the introduction of a new clause into the Bill which would secure the recognition of the examinations and certificates of the Rotunda and Coombe Hospitals as equivalent to the proposed examination to be conducted by the Central Midwives Board. It appears that steps have been taken to secure the introduction of an amendment in accordance with these terms, and the promoter of the Bill has expressed his willingness to accept such an amendment.

For several years both the bodies above named have been advocating the extension to Ireland of the provisions of any Bill which would ensure a better education and a satisfactory control of the women who act as midwives in England. While the principle remained unaccepted that if a Bill of this nature were good for England it should also be useful in Ireland, the College and the Branch refrained from thoroughly discussing the clauses *seriatim*, or at all events from proposing amendments such as would have been deemed necessary had the Bill been applied to Ireland. All through the College and the Branch have been representing that by the exclusion of Ireland from the Bill a falling off in the number of women who seek to be trained in the Irish lying-in hospitals would be reduced, for in order to legalise such women to practise in England it would be necessary for them, after passing the examinations and receiving the certificates of the Irish chartered hospitals, to go to the further expense and trouble of presenting themselves for examination by the Central Midwives Board in England.

There can be little doubt that if Ireland were to be brought within the scope of the Bill the representative medical bodies would endeavour to secure an adequate penalty for malpractice on the part of the midwife, and local medical supervision over her, as well as to define her duties so that she could not, after delivery, pass on the case to a "handy" woman. It has been stated that legislation in the direction indicated by the Midwives Bill is not required in Ireland, because there are not the same large number of ignorant and totally unqualified women who practise as midwives in this country as in England. This may be true to a certain extent, but it is also true that in districts where a qualified midwife has been appointed to act under the dispensary medical officer, a larger number of midwifery cases are as a rule attended to by the untrained "handy" women than by the qualified midwife. Surely, however, it would be difficult for such women afterwards to produce satisfactory evidence that they had been "at the passing of this Act in *bonâ fide* practice as midwives." But in any case, even if existing rights had to be considered by allowing some of these women to be placed on the roll, the old order would soon die out, and the handy woman and the ignorant woman would be a thing of the past.

THE ROYAL SOCIETY.

The Council of the Royal Society, at its meeting on May 10th, recommended fifteen gentlemen for election as Fellows. We gave their names last week, and we now give a few details respecting the scientific work of those who are medical men, biologists, or have done work in fields of science allied to biology.

George James Burch, M.A.Oxon., Lecturer at the University Extension College, Reading, well known in connection with physical work in its relation to physiology, author of the following papers: (1) Experiments on Flame (*Nature*, 1885 86); (2) A Perspective Microscope (*Proc. Roy. Soc.*, vol. xlii); (3) Researches on the Capillary Electrometer (*Proc. Roy. Soc.*, vol. xlviii; *ibid.*, vol. lix; *Phil. Trans.*, vol. clxxxiii [A.]; the *Electrician*, July, 1896); On a Method of Drawing Hyperbolas (*Phil. Mag.*, January, 1896). Also joint author of the following papers: (1) Dissociation of Amine Vapours (with Mr. J. E. Marsh) (*Journ. Chem. Soc.*, 1889); (2) E. M. F. of certain Cells containing Nitric Acid (with Mr. V. H. Veley) (*Phil. Trans.*, vol. clxxxii [A]); (3) Effect of Injury in Muscle (with Professor Burdon Sanderson (*Proc. Physiol. Soc.*, 1893); (4) Action of Concentrated Acid on Metals in Contact (with Mr. S. W. Dodgson) (*Proc. Chem. Soc.*, 1894); (5) D'Arsonval Physical Theory (with Mr. L. E. Hill) (*Journ. Physiol.*, 1894); (6) The Electromotive Properties of *Malapterurus electricus* (with Professor Gotch) (*Phil. Trans.*, 1896); On Professor Hermann's Theory of the Capillary Electrometer (*Proc. Roy. Soc.*, vol. lx, p. 328); The Tangent Lens Gauge (*Phil. Mag.*, 1897, p. 256); An Inductor Alternator for Physiological Experiments (*Journ. of Physiol.*, vol. xxi, 1897); An Account of Certain Phenomena of Colour Vision with Intermittent Light (*ibid.*); Artificial Colour Blindness, with an Examination of the Colour-Sensations of 109 Persons (*Phil. Trans.*, vol. cxci, 1899); joint author with Professor Gotch, F.R.S., of the following scientific papers:—The Electrical Response of Nerve to a Single Stimulus as investigated by the Capillary Electrometer (*Proc. Roy. Soc.*, vol. lxiii, 1898, p. 300); The Electrical Response of Nerve to Two Stimuli (*Jour. of Physiol.*, vol. xxiv, 1899); The Electromotive Force of the Organ Shock, etc., in *Malapterurus electricus* (*Proc. Roy. Soc.*, vol. lxv, p. 434, 1900).

T. W. Edgworth David, B.A.Oxon, F.G.S., Professor of Geology in the University of Sydney, N.S.W. Formerly Senior Geologist to the Geological Survey of New South Wales, and author of many reports and maps issued by the Survey. Has published many papers dealing with glacial action in recent, as well as ancient, geological periods; among others: Evidences of Glacial Action in S. Brecknock and E Glamorgan (*Quart. Journ. Geol. Soc.*, vol. xxxix, pp. 39-58, 1882); in Evidences of Glacial Action in the Carboniferous and Hawkesbury Series, N.S.W. (*ibid.*, vol. xliii, pp. 190-197, 1887); on Glacial Action in Australia in Permo-Carboniferous Times (*ibid.*, vol. lii, pp. 289-302, 1896); also many papers and addresses dealing with petrology, vulcanology, and stratigraphical geology in the Southern Hemisphere, published in the journals of the Royal, Linnean, and the Societies of New South Wales. Has superintended and conducted to a successful issue the work of boring the coral atoll of Funafuti, undertaken by the Royal Society and the Geographical Society of New South Wales, with the assistance of the Admiralty.

John Bretland Farmer, M.A.Oxon., F.L.S., Professor of Botany, Royal College of Science, London. Formerly Fellow of Magdalen College, Oxford. Distinguished for his botanical and biological researches. Author of the following papers: On the Development of the Endocarp in *Sambucus nigra* (*Ann. of Bot.*, vol. ii); Contribution to the Morphology and Physiology of Pulpy Fruits (*ibid.*, vol. iii); the Stomata in the Fruit of *Iris Pseudacorus* (*ibid.*, vol. iv); on *Isoetes lacustris* (*ibid*, vol. v); on Abnormal Flowers in *Oncidium splendidum* (*ibid.*, vol. vi); on the Occurrence of Two Prothallia in an Ovule of *Pinus silvestris* (*ibid.*); on the Embryogeny of *Angiopteris evecta* (*ibid.*); on Nuclear Division in the Pollen-mother-cells of *Lilium martagon* (*ibid.*, vii); on the Relations of the Nucleus to Spore Formation in certain Liverworts (*Proc. Royal Soc.*, vol. liv); Studies in Hepaticæ (*Ann. of Bot.*, vol. viii); on Spore Formation and Nuclear Division in the Hepaticæ (*ibid.*, vol. ix); Further Investigations on Spore Formation in *Fegetella canica* (*ibid.*); Respiration and Assimilation in Cells containing Chlorophyll (*ibid.*, vol. v); Ueber Kernthelung in Lilium (*Flora*, 1895); on the Structure of a Hybrid Fern (*Ann. of Bot.*, vol. xi). Joint author of (with J. Reeves): On the Occurrence of Centrospheres in *Pellia epiphylla* (*ibid.*, vol. viii); (with J. H. Williams), on Fertilisation and the Segmentation of the Spore of Fucus (*Proc. Roy Soc.*, vol. lx); (with T. Waller), Observations on the Action of Anæsthetics on Vegetable and Animal Protoplasm (*ibid.*, vol. lxiii); (with J. Brentland), Contributions to our Knowledge of the Fucaceæ, their Life-History and Cytology (*Phil. Trans.*, vol. cxc).

Leonard Hill, M.B., Lecturer on Physiology, London Hospital Medical College. Distinguished as a physiologist. Author of the following works: On Poisoning by Phosphorus (*Lancet*, 1890); On Intracranial Pressure (*Proc. Roy. Soc.*, vol. lv); On Effects of Compression of the Common Carotid Artery (with Moore) (British Medical Journal, 1894); On Formation of Heat in the Salivary Glands (with Bayliss) (*Journ. of Phys.*, vol. xvi); On D'Arsonval's Physical Theory of the Negative Variation (with Burch) (*ibid.*); On a Simple Form of Gas Pump (*ibid*, xvii); Exchange of Blood-Gases (with Nabarro) (*ibid*); On Exchange of Blood Gases in Brain and Muscle (*ibid.*, xviii); On the Influence of Gravity on the Circulation (*ibid.*); On Intracranial Pressure and the Circulation (with Bayliss) (*ibid*); The Physiology and Pathology of the Cerebral Circulation, Hunterian Lectures, Churchill, 1896; On Nervous Pressure and the Pulse (with Barnard and Sequeira) (*Journ. Physiol.*, xxi); Influence of Gravity on the Circulation (with Barnard) (*ibid.*); The Causation of Chloroform Syncope (British Medical Journal, 1897); A Simple Form of Sphygmometer (*ibid.*); On Arterial Pressure in Man (*Journ. Phys.*, xxii); On Rest, Sleep, and Work on Arterial Pressure (*Lancet*, 1898); On Syncope and the Influence of Posture on Rabbits (*Journ. Phys.*, xxii); On the Effects of Cerebral Anæmia produced by Ligation of the Cerebral Arteries (with Mott) (*ibid*, 1898); On Human Cerebrospinal Fluid (*Proc Roy. Soc.*, 1898). In the press: Mechanism of the Circulation (Schäfer, *Textbook of Physiology*); Cerebral Circulation (*Allbutt's System of Medicine*).

John Horne, F.G.S., F.R.S.E. One of the senior geologists on the staff

of the Geological Survey of Scotland. Has been engaged for more than thirty years in the Geological Survey. From 1868 to 1876 he personally studied and mapped large areas of the Silurian uplands of Scotland. From 1876 to 1883 he surveyed extensive tracts in the counties of Nairn, Inverness, Banff, and Aberdeen. From 1884 till the present time he has taken an important share in the investigation and mapping of the complicated geology of the North-west Highlands. In addition to these official researches he has devoted his intervals of holidays to original exploration, and has made important contributions to our knowledge of the glacial and volcanic geology of the Orkney and Shetland Isles. Among his papers are the following: A Sketch of the Geology of the Isle of Man, and the Post-Pliocene Formation of the Isle of Man (*Edin. Geol. Soc. Trans.*, ii, 1874, pp. 323, 329); The Geology of the Island of Unst (*Edin. Phys. Soc. Proc.*, iv, 1878, p. 274); The Volcanic History of the Old Red Sandstone Period North of the Grampians (*Glas. Geol. Soc. Trans.*, vii, 1881, p. 77). Most of his investigations have been worked out in conjunction with Mr. B. N. Peach, F.R.S., but the results have been arranged and described by Mr. Horne. Some of this conjoint work has been of the highest value, both in regard to British geology and to the theoretical treatment of the science. Special reference may be made to the Report on the Recent Work of the Geological Survey in the North-west Highlands of Scotland (*Quart. Journ. Geol. Soc.*, xliv, 1888, p. 378), in which the detailed structure of one of the most intricate geological regions in Europe was worked out and illustrated; to a paper on "The Olenellus-Zone in the North-west Highlands (*Ibid.*, xlviii, 1892, p. 227), which demonstrated the existence and striatigraphical relations of Lower Cambrian Rocks in Scotland; and to the large volume recently published by the Geological Survey, on The Silurian Rocks of Scotland (p. 749), which gives the detailed results of a prolonged and laborious investigation by Messrs. Peach and Horne of the whole Silurian region of southern Scotland. In 1888 was awarded the Wollaston Fund by the Geological Society, and in 1899 received from the same Society, in association with his friend and colleague, Mr. Peach, a duplicate Murchison medal. Received, in 1893, the Neill medal from the Royal Society of Edinburgh, in recognition of the value of his contributions to geology.

Joseph Jackson Lister, M.A., F.Z.S., Demonstrator of Comparative Anatomy in the University of Cambridge. Distinguished as a zoologist. Was Naturalist on board H.M.S. *Egeria* in two cruises, one to Christmas Island (Indian Ocean), the fauna of which he was the first to investigate, and another in the Pacific amongst the Tonga, Union, and Phœnix Islands, during which he made himself well acquainted with the fauna of those islands, and of the Seychelles. His researches on the Foraminifera have thrown important light on the life-history and reproduction of that group. Author of the following papers: On the Natural History of Christmas Island in the Indian Ocean (*Proc. Zool. Soc.*, 1888, p. 512); On Some Points in the Natural History of Fungia (*Quart. Journ. Micros. Soc.*, vol. xxix, p. 359); A Visit to the Newly-Emerged Falcon Island, Tonga Group, South Pacific (*Proc. Roy. Geograph. Soc.*, March, 1890); Notes on the Birds of the Phœnix Islands, Pacific Ocean (*Proc. Zool. Soc.*, 1891, p. 289); Notes on the Natives of Fakaofu (Bowditch Island) Union Group (*Journ. Anthrop. Inst.*, 1891, p. 43); Notes on the Geology of the Tonga Island (*Quart. Journ. Geol. Soc.*, vol. xlvii, p. 590); Contributions to the Life-History of the Foraminifera (abstract, *Proc. Roy. Soc.*, vol. lvi, p. 155; full paper, *Phil. Trans.*, vol. clxxxvi, 1895B, p. 401); A Possible Explanation of the Quinqueloculine Arrangement of the Chambers in the Young of the Microspheric Forms of Triloculina and Biloculina" (*Proc. Camb. Phil Soc.*, vol. ix, part v) (with J. J. Fletcher), On the Condition of the Median Portion of the Vaginal Apparatus in the *Macropodidæ* (*Proc. Zool. Soc.*, vol. lxiii, 1881, p. 976).

Patrick Manson, C.M.G., M.D.Aberd., F.R.C.P.Lond., LL.D.Aberd., Physician and Medical Adviser to the Colonial Office; Lecturer on Tropical Medicine, St. George's Hospital, Charing Cross Hospital, and London School of Tropical Medicine. Distinguished as a physician and parasitologist. Discoverer of filarial periodicity; of the *rôle* of the mosquito in filarial metamorphosis; of filarial ecdysis; and of many other points in connection with the life-history of the filaria nocturna. Discoverer of three other bloodworms of man, namely, *Filaria diurna*, *Filaria perstans*, and *Filaria Demarquaii*. Discoverer of the disease known as endemic hæmoptysis and of its parasitic cause. Discoverer of *Bothriocephalus Mansoni* and of many points in connection with human and animal helminthology. Was the first to describe accurately and to name *Tinea imbricata* and to prove experimentally its dependence on a vegetable parasite. Was the first to point out the significance of the flagellated body as the initial stage of the extracorporeal cycle of the malaria parasite and to enunciate the hypothesis that the mosquito was the host of the parasite at this stage, and therefore an active agent in diffusing malaria, an hypothesis since proved by Major Ross to be correct. Author of a work on *Filiaria sanguinis hominis* and some Parasitic Diseases of Warm Climates, 1883; of Tropical Diseases, 1898; of the Goulstonian Lectures on the Life-History of the Malaria Parasite Outside the Human Body, 1896; of Papers on the Metamorphosis of *Filiaria sanguinis hominis* in the Mosquito (*Trans. Linn. Soc.*, 1883); on the Nature and Significance of the Flagellated Body in Malarial Blood (BRITISH MEDICAL JOURNAL, 1894); and of many other papers on the subjects mentioned above and allied matters.

William James Sell, M.A., Senior Demonstrator of Chemistry, University of Cambridge. Author of the following papers: Volumetric Determination of Chromium (*Trans. Chem. Soc.*, 1879); On a Series of Salts of a Base containing Chromium and Urea, Nos. 1 and 2 (*Proc. Roy. Soc.*, 1882 and 1889); Anhydro Derivatives of Citric and Aconitic Acids (*Trans. Chem. Soc.*, 1892); Salts of a new Platinum Sulphurea Base (*Brit. Assoc. Rept.*, 1893); Studies on Citrazinic Acid, parts I-V (*Trans. Chem. Soc.*, 1893-1897); Note on the Action of Chlorine on Pyridine (*Trans. Chem. Soc.*, 1898); The Chlorine Derivatives of Pyridine, parts I, II (*ibid.*, 1898); Interaction of Ammonia and Pentachlorpyridine (*ibid.*); Constitution of Glutazine (*ibid.*).

W. Baldwin Spencer, B.A.Oxon., M.A.Melb., Professor of Biology in the Melbourne University; formerly Fellow of Lincoln College, Oxford; Hon. Sec. of the Royal Society of Victoria; Corr. Member Zool. Soc., Lond. Distinguished as an original investigator in zoology and comparative anatomy; and as a teacher and organiser. Graduated at Oxford twelve years ago. Has published more than thirty memoirs, among which are: On a New Family of Hydroidea Ceratellidæ (*Trans. Roy. Soc. Vict.*, 1890); The Anatomy of *Megascolides Australis*, and other papers on Australian Earthworms and Planarians (*ibid.*); On New Crustacea and New Mammals, in report of the Horn Expedition to Central Australia (which he organised); On the Pineal Eye in Lacertilia (*Quart. Journ. Micro. Sci.*, 1887); On the Habits, Blood Vessels, and Lungs of *Ceratodus Forsteri*; On a New Genus of Marsupials from Central Australia (*Proc. Roy. Soc. Victoria*, vol. ix); On the Cranial Nerves of Scyllium (*Quart. Journ. Micros. Sci.*, 1881); On the Early Development of *Rana temporaria* (*ibid.*, 1885); The Fauna and Zoological Relationships of Tasmania (Presidential Address to Sect. D., Austr. Soc. Adv. Sci., 1892).

James Walker, D.Sc.Edin., Ph.D. Leipzig. Professor of Chemistry, University College, Dundee. An active and successful worker in chemistry, especially physical and organic. Author of numerous papers, of which the following are among the most important:—Zur Affinitätsbestimmung organischer Basen (*Zeit. physikal. Chem.*, iv., p. 318, 1889); Ueber Löslisskeit und Schmelzwärme (*ibid.* v., 193, 1890); The Dissociation Constants of Organic Acids (*Journ. Chem. Soc.*, lxi, p. 696, 1892); The Methyl Salts of Camphoric Acid (*ibid*, lxi, p. 1088, 1892); The Electrolysis of Sodium Ethyl Camphorate (*ibid.*, lxiii, p. 495, 1893); The Boiling Points of Homologous Compounds (*ibid*, part i, lxv, p. 193, 1894: part ii, lxv, p. 725, 1894); Hydrolysis in some Aqueous Solutions (*Proc. Roy. Soc. Edin.*, vol. xx, p. 255, 1894). Along with Professor Crum Brown, Electrolytic Synthesis of Dibasic Acids (parts i. and ii. *Trans. Roy. Soc. Edin.*, vol. xxxvi, p. 211, 1891, and vol. xxxvii, p. 361, 1893). Along with J. Henderson, Electrolysis of Potassium Allo-Camphorate (parts i. and ii. *Journ. Chem. Soc.*, vol. lxviii, p. 337, 1895; vol. lxix, p. 748, 1896). Along with F. I. Hambly, Transformation of Cyanate of Urea (*Journ. Chem. Soc.*, vol. lxvii, p. 746, 1895). Along with J. R. Appleyard, Transformation of Methylammonium Cyanates into the Corresponding Ureas (*Journ. Chem. Soc.*, vol. lxix, p. 193, 1896).

LITERARY NOTES.

THE *St. Bartholomew's Hospital Journal* for April publishes some interesting "leaves" from Mr. Bowlby's diary in South Africa. On February 28th he was at De Aar while the train bearing the captured Cronje passed through, and then he went on to Modder. He says Rudyard Kipling was in the train the last trip it made, and Dr. Boswell had a piece of shell from Modder which he intended to make into an inkpot, whereupon Mr. Kipling was moved to write the following lines on the shell:

> Beyond the trenches' outer bink
> I flung my message from afar.
> And now I serve to hold the ink
> Whilst men write lies about the war.

We congratulate Dr. Boswell on the possession of a relic of such unique value, inscribed as it is with original lines by the most successful verse maker of the day. But do not the last two lines rather seem to suggest that whoever uses the inkpot will be, like a certain "Paget, M.P.," a liar? We think Mr. Kipling has simply perpetrated "one of those things that one would rather have expressed otherwise." But if Dr. Boswell, as he doubtless will in due course, writes the story of his adventures in the war, we think it would be prudent on his part not to quote this well-meant but awkwardly worded epigram.

In an account of Dr. Elisha Barrett, an American literary physician and philosopher who flourished in the first half of the present century, which Professor Osler recently contributed to the *Boston Medical and Surgical Journal*, there is the following *obiter dictum*:

> It is remarkable how many physicians write poetry, or what passes as such. I have been told of a period in the history of the Royal College of Physicians of London when every Elect (Censor), as they were called, had written verses. Some begin young, as did Bartlett, others became attuned in the deep autumnal tone of advancing years, when, Plato tells us in the *Phædo*, even Socrates felt a divine impulsion to compose and make verses before quitting the prison house. Those of us who have read the epic of the late distinguished Professor George B. Wood, of the University of Pennsylvania, entitled, *First and Last*, published when he was 64, will devoutly hope that professors of medicine when afflicted with this form of madness will follow his example and publish their poems anonymously and in another country. Jacob Bigelow, too, when nearly 70, "darkened sanctities with song", with his American *Rejected Addresses* (Eolopoesis).

We have no knowledge of the poetical effusions of either of these eminent men, nor can we say with any confidence how far the serious charge here made against the Censors of the Royal College of Physicians is well founded. Perhaps their office made them misanthropic, and their indignation at breaches of professional etiquette found vent in the making of verses. It would be interesting to know if modern Censors are in the habit of mitigating the official severity imposed on them by their duties by wooing the Muse. If they do, why, as Sir Toby Belch says, should these things be hid? Are they accounted *secreta Collegii?* As medicine is kin to poetry in their common god, Apollo, it is but natural that the divine afflatus should visit the dingy sanctuary of physic in Pall Mall East. The old order passes, and we can no longer have the *Elegies of an Elect*, but the *Songs of a Censor* would, we are sure, be welcomed by the profession.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 19TH, 1900.

THE HOUSING OF THE WORKING CLASSES.

AT the annual dinner of the Sanitary Institute last week, Mr. T. W. Russell, M.P., Parliamentary Secretary of the Local Government Board, responding to the toast of "The House of Commons," referred, in a speech which we report elsewhere, to the Bill for the Amendment of the Housing of the Working Classes Act now before Parliament, and to the expectations which might be entertained of its effects. He said the Bill had been accused of insufficiency, of not providing a complete remedy for existing conditions; but for this, he said, not one but many Acts of Parliament would be required. He claimed, however, that the Bill made an important contribution to the remedies by giving power to local authorities to provide beyond the limits of their districts dwellings for the working classes.

This action by a local authority is deemed to be necessary for the purpose of reducing overcrowding within its district when the land which is available within the district for artisans' dwellings is insufficient or accommodation cannot be provided at reasonable prices. The working classes must be housed where land is cheap and where rents are within their means, and land within the district can often be acquired only at prices which are prohibitory. Local authorities are expected to exercise their powers for the abatement of overcrowding; the law lays it down, therefore, that they may provide any necessary accommodation within their district, and it is only an extension of this power to go somewhat further afield.

In this connection we may briefly consider what are the circumstances causing overcrowding in our towns, and whether the suggested remedy is likely to be effectual; and it will be convenient to take London as illustration, because the dearth of accommodation for the working classes is probably felt more acutely there than in other towns. It is notorious that, as London districts become more commercial, dwelling-houses are pulled down to make room for business premises, and the dwelling-houses thus demolished are chiefly those occupied by the poor. Where other houses are destroyed, the inhabitants, if able to do so, migrate to the suburbs in or beyond the limits of London, and so, no doubt, in some degree do the working people; but these in much larger proportion struggle to remain near their work. In the more fashionable residential parts of London rents are being steadily increased, and here, again, the poorer population is either driven out or squeezed into more restricted accommodation than that it previously occupied. Hence the poorest population is feeling the stress the most, and for them the inability to make use of train services from the suburbs is the greatest, because of the early hours at which their labours begin.

But the chief difficulty is not so much the demolition of dwelling-houses in central London as the constant tendency of persons, previously resident in rural districts, to crowd into the towns, and there is no doubt that London as the capital suffers in especial degree from this cause. The demand made for accommodation in London has given rise to competition for house room, and the needs of newcomers and old residents alike enable landlords to raise rents and obtain a better return for investments in house property. Hence this pressure towards the centre has to be met and the question is how it shall be met.

The Government in proposing that local authorities shall be empowered to provide house accommodation for the working classes beyond the limits of their districts apparently expects that the working classes will avail themselves of this provision and move into the suburbs. Some will no doubt appreciate the advantages to their families of living under more favourable conditions, if ready means of communication are provided; but experience certainly goes to show that as a whole they will prefer the more limited accommodation which can be obtained in the centre rather than submit to the inconvenience of daily journeys for the sake of better dwellings away from their work. The provision in the outskirts of houses for the working classes by local authorities will not suffice to resist the pressure from the periphery to the centre, and overcrowding in the central districts will continue whatever provision is made outside London, unless some active step is taken to prevent it.

As a rule local authorities have been very lax in dealing with overcrowding. It is a source of immense profit to those who cater for the poor, and such people have no difficulty in making their influence felt by those who administer the Public Health Act. It is the absence of any sufficient administration of the law which has led to overcrowding, for employers of labour have hitherto been able to carry on their business in London, knowing that their workers will be able to crowd into houses at no great distance from the place of employment. Had the law as to overcrowding been steadily enforced, very many of the numerous factories in central London would, owing to the difficulty of obtaining labour, have been compelled to move outside, and a step would have been taken to turn in an opposite direction the current that flows so strongly to the centre.

If working people had desired to live outside London it is highly probable that accommodation would have been provided by the many who are prepared to invest money in building operations. Speaking generally, where there is demand there will be supply, and there is no reason to assume that houses for the working classes of London are an exception to this rule. If accommodation is provided by local authorities in large extent outside London, will the working people avail themselves of it? They will do so probably if the rents are so low as to present a very strong temptation. Local authorities cannot build more cheaply that private persons; indeed, experience goes to show that they cannot build

as cheaply, and hence, unless the rates are used to provide a subsidy it does not appear that they will stand in as good a position as those who build for profit. The fear that local authorities will eventually be tempted to abandon economic principles may have a deterrent effect upon those who otherwise would think of artisans' houses as a safe investment. If the authorities embark in large building operations they may be tempted to seek tenants by offering their houses at rents which are not only not remunerative, but fail to pay the interest on the money they have borrowed. From the moment this course is adopted the action of private persons will be suspended, and the latter state of the working man will be worse than before.

On the whole, therefore, we do not see in this power to provide working men's dwellings a remedy for the conditions all deplore. There is, indeed, no immediate remedy, but efforts may be directed to bringing about the conditions which are necessary to secure the improvement which is needed. With better education the working classes will eventually insist upon living in better houses: they will not be content with the one or two rooms which is all their wages can suffice to procure for them in central London. With the application of the law to prevent overcrowding there will be dearth of labour in London, and employers will have to carry on their manufacturing processes not in London but outside. With better means of transit, better railway services, better tramway services, there will be more possibility for the many of all classes to live outside. Those who will first take advantage of such services will be clerks and others of better education who will value the greater comfort for their families which residence in the outskirts will afford, and whose hours of occupation in London will make the daily journey easy. There is no doubt that private speculation will provide for this class when improved means of transit make the vacant land outside London available for the erection of dwellings, and the houses in London they will vacate will be available for those who must perforce live nearer the centre. But even if houses be built, railway and tramway services provided, there will still remain the pressure towards the centre, and nothing can check or counterbalance this but the enforcement of the law which imposes penalty upon the landlord who overcrowds his house.

THE WAR AGAINST TUBERCULOSIS.

IF tuberculosis could be conquered by congresses, we should be within measurable distance of deliverance from that scourge. Last year a council of war on the subject was held in Berlin; a meeting with a similar object has recently ended its deliberations at Naples; and next year there is to be another in London.

The Neapolitan Congress, reports of the proceedings of which are given elsewhere, appears to have been what is called a brilliant success; so was that at Berlin; so, doubtless, will be that in London. If, however, we ask what is the practical outcome of these assemblies, we fear it must be admitted that so far there has been comparatively little. Many wise things have been said, and there has been a fine display of the enthusiasm of humanity. Physicians and surgeons, philanthropists and social reformers, have vied with each other in eloquent calls to arms; the newspapers have admired and applauded; but the people for the most part have been indifferent. Resolutions have been passed that something should be done; associations and leagues have been founded; the State has been called upon not only to find the sinews of war, but to provide the organisation and machinery for carrying it on. In most countries, however the State has hitherto maintained an attitude of benevolent neutrality, and here at least there is little prospect of its departing from that attitude. As far as the present Government is concerned, we have been plainly told so by Lord Salisbury, who at the meeting held at Marlborough House in December, 1898, said that any desire that the powers of the law should be brought into operation to carry out the objects of the National Association for the Prevention of Consumption was a snare which they should carefully avoid. "You must be content," said the Prime Minister, "with preaching the salutary doctrine which you hold, and must not think of applying it with the secular arm." Hence, so far, the efforts of that Association and of similar bodies in other countries have been limited to the dissemination of knowledge necessary for the public safety, and to the furtherance of action by municipal and other local authorities for the protection of the people for whose health they are responsible.

In Germany the State has taken a more active interest in the question of the prevention of tuberculosis; but, although it freely shed the light of its countenance on the Berlin Congress, it does not seem to be prepared to undertake the management of the campaign. In France the State has hitherto treated the question by the expectant method. In Italy, however, as may be gathered from the opening address of the President of the Congress, Professor Baccelli, who may be taken to speak in the name of the Government, the State is not unwilling to take this burden upon its shoulders. Professor Baccelli announced that the Italian Government has already prepared a new law concerning the prophylaxis of infectious diseases, in which category tuberculosis is recognised to occupy a prominent place. His Excellency himself holds strong opinions as to the duty of the State in regard to the prevention of tuberculosis. He is not satisfied with persuasion, but thinks compulsion necessary. Wherever the arm of the executive can reach—in public offices, in the army, in schools, in factories and workshops, in the cattlemarket and the slaughterhouse, and in private dwellings—there he would have the State play the part of a benevolent despot and suppress consumption *vi et armis*. Professor Baccelli can speak with the authority not only of a leader in science but of a statesman whose voice has weight in the councils of his country. The hope may therefore be entertained that under his guidance Italy will shortly show the world what can be done by the State when it sets itself in earnest to the task of enforcing what the Romans of old held to be the supreme law, the safety of the people.

This utterance of the distinguished Italian Minister of Public Instruction was to our mind the most important feature in the proceedings of the Congress. The resolutions passed as to the need for strict supervision of the milk and meat supply, the compulsory notification of phthisis, the sanitary purification of railway carriages, the disinfection of dwellings, and the

prohibition of spitting in places of public resort are full of practical wisdom; but the pity of it is that in regard to these matters wisdom so often cries aloud in the street and no man regards it. In the present state of public opinion it is almost hopeless to get them transformed from Platonic sentiments into ordinances having the force of law and made effective by the necessary sanctions.

The success of the combined movement now everywhere being organised against tuberculosis seems to be dependent mainly on the education of the people in regard to the means of prevention. The suggestion made by M. Ausset, of Lille, that such education might be begun in the school and continued in the army, is eminently practical as far as concerns countries in which military service is compulsory. Even in our own conscription-hating land a good deal might be done by the sanitary training of soldiers and sailors. If this were properly carried out Thomas Atkins and Jack Mainbrace, on their return to civil life, might be each in his little sphere of influence at once a light and an example.

The proposal seriously made by several speakers that persons tainted with tubercle, or likely from their antecedents to become so, should be prevented from marrying, is, to say the least, distinctly premature. Such an interdict at the present time would be treated with contempt by all but a few sanitary enthusiasts. We have known of cautious lovers who insisted on legal assurances as to healthiness of ancestors from the bride's guardians, but we fear that Cupid still mostly treats Hygeia as a meddlesome intruder. It will be long before the public mind is educated to the point of regarding unions between persons likely to propagate the taint of tuberculosis as an offence of the nature of what lawyers call malice against the human race.

A noteworthy result of the Congress is the establishment of what an Italian newspaper calls a "Triple Alliance" between Italy, Germany, and France for carrying on of the war against tuberculosis. Great Britain as usual occupies a position of "splendid isolation." Yet the London Congress of 1901 is to be "international." What attitude will the new Triplice take in regard to it? The situation at present appears a little complicated.

EMERGENCY RATIONS.

IF a soldier on active service is to keep physically efficient as a fighting unit it is obvious that there is a minimum below which his rations must not be reduced, at any rate for any long period. It has been calculated that he must receive in his diet in each twenty-four hours some 300 grs. of nitrogen and some 10 ozs. of carbon, together with salts and water. So far it has not been found possible to concentrate this necessary nutriment even when dry into less bulk than about 22 ozs. For a limited period, however, say for three or four days, a soldier could be kept fit on 10 or 12 ozs. of water-free food. He would lose weight, but he would retain sufficient energy for active service. This limitation, however, if it is to be practicable, supposes that he is well fed before the period commenced, and that the reduction is more than made up afterwards during a sufficient time of comparative rest to make up lost ground.

As it is the unexpected which happens in war as in politics, a soldier on active service carries an "emergency ration," which is some kind of food concentrated to the smallest possible bulk. It is carried only as a reserve, and it is not allowed to be opened except by order of an officer, or in extremity. One of the earliest forms, introduced by the Germans and at present being issued to some of the troops in South Africa, is what is known as *Erbswurst*, or pease sausage. It consists of pea flour, bacon or beef fat, and condiments enclosed in a waterproof case. It is unfortunately unappetising, the excess of fat tends to upset digestion, and it is certainly less sustaining than fresh meat. The vegetable albumen it contains, although chemically isomeric with animal albumen, is not equally assimilable, and it must always be remembered that it is not what a man eats, but what he digests and assimilates, that nourishes him.

An emergency ration prized in the United States Army is known as "panole"; this consists of ground parched maize 3 parts, and sugar 1 part. One in use and favour in the French army consists of cakes of powdered meat mixed with pepsin; this makes a digestible nutritious food. But of all the numerous forms of prepared food for soldiers two of the best are English—Moir's Soldier's Ration and Maconochie's Service Ration. These consist of beef or mutton, with potatoes, carrots, onions, beans, gravy, and pickles, thoroughly cooked and preserved in small hermetically sealed tins. They possess some of the qualities of fresh meat and vegetables which others lack.

The articles of diet represented by Liebig's extract of meat are in no sense food, but only stimulating extractives. The dried foods of which the Kaffir biltong is a type are unsatisfactory because they are insipid; but pemmican has been found of much service in Arctic regions. It consists of the best dried beef and fat rolled together, with sometimes sugar, raisins, and currants added.

Another emergency ration was that carried by Captain Haldane and Lieutenant Le Mesurier during their escape from Pretoria. It consists of 4 ozs. of "cocoapaste" and 4 ozs. of "pemmican." The paste is a mixture of cocoa-honey and Iceland moss; the pemmican is dried beef with fat, ground into a fine powder. This ration is made in Australia, and each of the two components is packed in a small oval tin open at one end; the two open ends are put together, a strip of tin is wound round them at the join and soldered down, thus binding them together and forming one hermetically sealed case in shape like a short fat pocket flask, and containing half a pound of concentrated nourishment. It is opened in a moment by tearing off the band of tin, which has a handle at the end.

The qualities required in an emergency ration are food of minimum bulk, not liable to undergo change, of high nutritive value, of easy digestibility, included in which is, of course, palatability, and even savouriness. Anything that "makes the mouth water" increases at the same time the flow of gastric juice and, other things being equal, the food value of the ration. It is a question for investigation whether the ration could not be in some degree predigested, either by pepsin, trypsin, or the diastase of malt. Some concentrated foods, for example those rich in fat like the *Erbswurst*, although unsuitable in hot weather, might be quite suitable in cold. The value of theine and caffeine, where tea and coffee cannot be made, as a means

of removing the sense of muscular fatigue, and of the beef extracts as general stimulants to expedite recovery after forced marches or other great exertion, is worthy of careful consideration; as also is the value of sugar in great muscular exertion, whether as cane sugar and chocolate or as glucose in raisins or dates.

THE HOLIDAYS OF IRISH DISPENSARY MEDICAL OFFICERS.

THE Court of Queen's Bench in Dublin gave their decision last week upon the interpretation of Article 28 in the Dispensary regulations, reversing the decrees of two county court judges given in favour of the dispensary medical officers. The Court unanimously agreed that the words in Article 28, "Every dispensary medical officer shall be entitled to not more than four weeks' leave of absence," allows the guardians discretion to give any shorter leave they may think proper. As the guardians have done all in their power to hinder their medical officers from getting leave during the year Article 28 has been in force, we may take it for granted that there will be no more holidays for them unless at their own expense. The Lord Chief Baron, in his admirably clear judgment, said: "These latter words (that is, not exceeding four weeks) were not sufficient to determine the length of vacation. It was plain there must be an Act which should define that leave." There is yet time for the Local Government Board to obtain such an Act; a very short one would suffice. The North of Ireland Branch of the British Medical Association will hold a special meeting on May 22nd at noon at the Young Men's Christian Association, Wellington Place, Belfast, to urge, in as forcible a manner as possible, the Local Government Board to act with energy and justice. We hope the other Branches of the Association in Ireland will support the action about to be taken by the North of Ireland Branch.

MILITARY MEDICAL NEEDS.

THE manner in which the whole of the medical details of the present war have up to the present been carried out is ample evidence that the service has richly merited the name Royal Corps. Certainly its only fault has been its numerical inferiority. How wonderfully the Director-General and his staff have husbanded and expended their slender resources is known only to the few. If the undermanned state of the service, to which we have constantly drawn attention, were generally realised, the Government would be forced by the pressure of public opinion to take immediate steps to rectify it. At the present time there are five different calls to be met: more ambulance men are required for South Africa, a large number for Rhodesia, orderlies for the sick and wounded returning from South Africa, orderlies for the camps at Salisbury and elsewhere, and for the various station hospitals. The demands from South Africa, including Rhodesia, could be met by offering better pay. It is reported that good men for Rhodesia will be taken on at 5s. a day for privates, 1s. and 2s. respectively more given for corporals and sergeants. With regard to the sick and wounded from South Africa, as soon as the pressure becomes heavy, there should be no hesitation in taking up the beds already promised in civil hospitals. For the camps and the station hospitals at home, the men of the Militia Medical Reserve should suffice, but in addition at least four stretcher bearers per company should be trained at once. With regard to the medical officers required for the camps and station hospitals at home, we believe that the volunteer service could and would supply all that is needed provided the officers received relative rank, pay, and allowances, and not the extremely unpopular contract rate. Now is a good time to put the volunteer service on its trial. One way in which the test might be applied would be to put a senior medical officer in charge of the hospital at Salisbury Camp, and let the force provide a volunteer staff to serve the hospitals and train the regimental stretcher bearers; he should draw his non-commissioned officers and men from the Volunteer Medical Staff Corps and brigade bearer companies. Had the War Office years ago, as has often been suggested, appointed an experienced volunteer medical officer with the rank of colonel generally to supervise and inspect the force, under the various principal medical officers of district, there would by this time have been a large serviceable body.

THE DOOM OF THE RAT.

A POET of the last century perpetrated an ode beginning "Come Muse, let's sing of rats." The subject was thought by the critics of the day to be beneath the attention of the Muse. But the lowly rodent which she was invited to celebrate has now risen to such a dignity of evildoing as to be a worthy subject not of a mere ode but of an epic. The part which he plays in the dissemination of plague is somewhat differently estimated by various authorities, but they are practically agreed that he is to be regarded at least with the gravest suspicion. Hence the rat is doomed. He is being ruthlessly hunted down in Australian, German, French, and Russian seaports; a price has been set on his head in Denmark; and Dr. Calmette, urging the same plan on the Belgian authorities, expressed the opinion that a capitation grant of one penny would ensure the destruction of half a million rats. A war of extermination against rats is being organised throughout the civilised world, and Dr. Manson, the Peter the Hermit of this new crusade, holds out the hope that if we can eliminate the rat we shall go a long way towards getting rid of the plague. The sanitary problem of the day is how to suppress the rat *cito, tuto*, and as far as may be *jucunde*. Various plans are being tried. At Altona and some other places poisoned food is seductively strewn about the drains. M. Pierre Apéry recently presented a report to the Sanitary Council of Constantinople, in which he showed the feasibility of compassing the euthanasia of any number of rats in drains, cellars, holds of ships, and other places where they most do congregate. His plan is to convert such haunts for the nonce into lethal chambers by placing in them an apparatus for the generation of carbonic acid gas. When the operation is completed the place must be freely ventilated for some hours, so as to allow of the removal of the bodies. Another scheme has quite lately been proposed by M. J. Danysz of the Pasteur Institute of Paris. He has found a microbe which if introduced *secundum artem* into a population of rats, may be trusted to breed a pestilence among them that will wipe them out, or at least make them a negligible quantity. From field mice suffering from a spontaneous epidemic disease he isolated a cocco-bacillus presenting the general characters of B. coli, and thus resembling Loeffler's B. typhi murium. By an elaborate process (fully described in the current number of the *Annales de l'Institut Pasteur*) of repeated cultures of this micro-organism passed through series of mice and afterwards through rats, he succeeded in intensifying its virulence so as to make it, when eaten, certainly pathogenic for the latter rodents. Having satisfied himself of the fatal effect of the cultures in the laboratory, he had them tried in a large number of farms, warehouses, and other places infested by rats. From the reports of these experiments, amounting to several hundreds, it appears that in 50 per cent. of cases the method resulted in a complete disappearance of the rats, while in 30 per cent. their number notably diminished; in 20 per cent. the method failed. M. Danysz then, with the consent of the authorities, had a section of the Paris sewers, measuring 160 metres in length by 3 in breadth,

sealed up, so that no rat could escape. Into this 200 healthy greyish-brown rats from the neighbouring sewers were introduced, with abundance of straw and food, on February 2nd. On February 12th, all the rats having been seen to be well, twenty tubes of the culture were scattered about on small pieces of bread. By the 20th an epidemic had broken out, and more poisoned bread was scattered about. The sewer was inspected every day till March 2nd, and during that period 80 dead bodies were found. Forty of these were examined *post mortem*, and showed characteristic lesions (congestion of intestine, hypertrophy of spleen). The bodies left behind were devoured by the surviving rats, and on March 2nd only eight rats remained alive. M. Danysz adds that as young rats are much more susceptible in regard to the virus than older animals, the most favourable seasons for introducing the epidemic among them are the spring and the autumn. By systematically destroying the younger generations of rats during one or two years successively, the rodents, he believes, could be completely exterminated. His plan has been tried at Lille by Dr. Calmette; at Hamburg by Dr. Abel, medical officer of the city; at Copenhagen by Dr. Th. Madsen: and at Tunis by Dr. Loir, director of the bacteriological station. In all those places the results have been nearly the same as those obtained in Paris.

LEAD GLAZES AND LEAD POISONING.

IT is satisfactory to learn from a Parliamentary return issued recently that there has been a very marked reduction in the number of cases of lead poisoning in the Potteries within the last three years. It appears that the totals in the earthenware and china trade industry were: 1898, 457; 1899, 249; 1900 (according to the report, which deals, like the others, with the numbers of the previous year) only 62. The result is encouraging, but the complete removal of lead from glazes used for dipping purposes, or its presence therein in an extremely insoluble form, would still further materially diminish the amount of plumbism among potters. There is an increasing disinclination on the part of the general public to believe pottery manufacturers that the presence of lead in glazes is absolutely necessary for all kinds of ware. It has been conclusively demonstrated that certain kinds of ware dipped in a leadless glaze can be just as economically produced, and are not more likely to craze nor to wear worse than that dipped in ordinary lead glaze. If lead is to be allowed to remain a constituent of glazes for pottery, it should be "fritted"—that is, mixed with alkalies and fused, so as to form a kind of glass known as silicate. In this condition lead becomes extremely insoluble. Occasionally, however, the use of "fritts" has been followed by lead poisoning. Professor Thorpe, Director of the Government Laboratory, has analysed a large number of fritts, and described his results in a lecture recently delivered at the Royal Institution. In order to produce the insoluble complex silicate of lead, alumina, and lime, great care is necessary, for out of several apparently insoluble fritts lead can be dissolved by weak hydrochloric acid of a percentage equal to that which is present in human gastric juice. So far as the making of fritts is concerned, Dr. Thorpe has shown that our Continental neighbours are far ahead of our own manufacturers. English fritts yielded a much larger percentage of lead to solvents than those made in Holland, Belgium, Germany, or Sweden. In fact, some of the English fritts as regards solubility differed very little from ordinary raw lead. Taking red and white lead as 100, Professor Thorpe found that from some of the lead silicates sent to the laboratory as much as 99.6 per cent. of lead oxide became dissolved, expressed as the percentage of total lead oxide present. No necessary relation was found to exist between the amount of lead oxide in a fritt and the extent to which it would yield lead to solvents comparable with animal secretions. A large amount of lead may be present in the fritt and yet not be readily soluble. One English fritt, which contained 40.4 per cent. of lead oxide, had a solubility percentage of 0.7, while another fritt containing 52.3 per cent. of lead oxide had a solubility of only 0.4. The amount of lead oxide in fritts may be practically the same and yet their solubilities different—for example, a Swedish fritt which contained 44.1 per cent. of lead oxide gave a solubility of 21 per cent., whereas one English fritt containing 45.8 of lead oxide gave 10.8, and another which contained 37.9 of the lead compound gave 28 per cent. of solubility. The extent to which a fritt gives up its lead to solvents depends (1) upon a definite numerical relation between the basic and acidic oxides in the fritt, and (2) complete chemical union. So long as the ratio of acids to bases is below 2, the nature of the basic oxides has little or no effect upon the amount of lead dissolved. Continental fritts were found by Professor Thorpe to break up with difficulty under the action of acids, and yielded only very minute quantities of soluble matter to solvents, whereas English fritts were more easily decomposed by the same treatment, and readily allowed lead to pass into solution. It would appear that Continental fritts are more stable chemical compounds, for they are more carefully prepared than the majority of those made in England.

THE TREATMENT OF THE INSANE.

AT the London County Council on May 8th, a discussion arose as to a better and less expensive method of dealing with the insane than the system which the London County Councils' Asylum Committee has hitherto adopted, which, in the main, is the same as that in vogue during the jurisdiction of the justices. It appears that a Special Committee has been sitting upon the question since 1896; and although from time to time interim reports have been presented to the Council indicating the need for inquiry as to alternative systems of villa residences, colonies, boarding out, etc., which are in operation in Scotland, on the Continent, and in America and Canada. A year or two ago, when the Asylums Committee suggested that some of the members and officers should visit the institutions and investigate the methods employed abroad, objection was raised to the payment of travelling expenses of councillors out of the rates. We have always admired the austerity of the London County Council in requiring members to pay for their own refreshments even when they attend committees at the asylums, which in some cases are situated many miles from London; but it would seem a case of "penny wise and pound foolish" to forego the necessary information for improving the accommodation of the unfortunate persons committed to their charge for fear of ignorant criticism by shortsighted economists. The boarding-out system as applied to lunatics has been found to work well in Scotland and should the Lunacy Bill now before Parliament become law opportunity will be given to try the experiment in England. The system needs to be safeguarded, as cases are not unknown in which the "boarder" has proved not only a very remunerative inmate, but has also been forced to do a disproportionate amount of labour in or about the house. The Gheel system, which is in operation in Belgium, may be worthy of closer investigation. The feeling in the County Council appeared to be in favour of a less stereotyped system than that hitherto in vogue, and although the motion was lost on a show of hands by one vote it was understood that the suggestions which had been thrown out would receive careful attention.

BETHNAL GREEN AND ITS BY-LAWS.

LAST Tuesday the Health Committee of the London County Council again called attention to the curious action of the Local Government Board in confirming by-laws made by the Vestry of Bethnal Green whereby that Vestry

has secured immunity against the provisions of the Public Health Act, 1891 (Section 101) for failing to register under by-law houses let in lodgings. We have repeatedly pointed out how needful it is, especially in a working-class district like Bethnal Green, that houses occupied by members of more than one family should receive that additional sanitary supervision which follows upon placing such houses on the register. The London County Council protested against the confirmation of by-laws by the Local Government Board, which enabled the Vestry to stultify the intentions of sanitary reformers and legislators in this matter. Asked by the Council to allow a deputation to explain the difficulty in which the supervising authority finds itself placed by the Board's action, and the need of consequential amendment of the law, the Board replies that the difficulty arises from the form of the by-laws in a "particular case," and that no legislation or deputation is required. We trust that the case of Bethnal Green may so far be a "particular case" that it will not be an example and encouragement to other local authorities, and we may express the hope that the attention which has been called to what looks like official oversight in this "particular case" may serve as a warning to the department when confirming by-laws in future.

SEWAGE DISPOSAL.

THE May number of the *Engineering Times* contains the first of a series of what seem likely to prove very interesting articles on the disposal of sewage. After enumerating, with admirable brevity, the chief floating matters, suspended matters, and matters in solution and describing tersely its physical properties, Mr. Wynter Blyth, the author of the first article, has a few words to say on the value of sewage. He mentions in passing that the gases, chiefly marsh gas and hydrogen, formed in the septic tanks at Exeter, have been collected in an experimental gasholder and used to light up the works. He points out, however, that the extraction of the oxygen from the atmosphere or aluminium from the soil or iodine from seawater is more likely to yield remunerative results than the direct separation in even an approximately pure state of the valuable constituents of London sewage, assessed as these are theoretically at as much as a million sterling a year. Mr. Blyth is inclined to accept in the mean time, so far as it goes, the purity standards of the Mersey and Irwell Joint Committee as the most practicable. These are that the effluent should not absorb more oxygen in four hours at 80° F. than a grain per gallon, nor yield more than the tenth a grain of "albuminoid ammonia" in the same quantity. To these requirements he would add, however, one or two others. The effluent should be clear and without appreciable suspended matter; it should have no marked odour, certainly should not smell in the least of sulphuretted hydrogen; it should contain some nitrate, the more in relation to the nitrogen of the sewage the better: if injected under the skin of a small animal it should cause no illness; it should show no sign of putrescence if incubated for a week in a closed vessel at 80° F. The presence of this putrescence he would ascertain by titrating with acid permanganate for three minutes, and comparing the reduction effected with that produced by the same effluent under like conditions before incubation. The paper then recites the elementary bacteriological facts more or less familiar to most people at the present time, although the printer has been allowed some licence in the spelling. The first instalment of this important contribution to the popularising of this important subject concludes with an account of Mr. Law's arrangement for regulating the amount of aluminoferric cake and lime used as precipitants according to the amount, though unfortunately not according to the richness, of the sewage. There is a diagram of the apparatus.

THE LIVERPOOL SCHOOL OF TROPICAL DISEASES.

IN the *Board of Trade Journal* of April 12th an account is given of the Liverpool School of Tropical Diseases. During the year 1899, 176 cases of tropical disease were treated in the special wards of the Royal Southern Hospital: of these 152 were cases of malarial fever, 2 of malarial neuritis, 3 of blackwater fever, 5 of dysentery, 3 of sprue, 1 of diarrhœa, 1 of Malta fever, 5 of beri-beri, 2 of hepatic abscess, 1 of scurvy, and 1 of bilharzia disease; of the whole number only 6 died. The nationalities of the patients were as follows: English, 151; Norwegian, 5; German, 3; Finnish, 3; Swedish, 2; Lascar, 3; Italian, 2; Chinese, 2; and 1 American, Dutch, Spanish, Malay, and Austrian. The interesting points in connection with these figures are (1) the variety of diseases treated and (2) the different nationalities of the patients. With larger accommodation the list will, no doubt, be largely extended, but as it stands, says the *Board of Trade Journal*, it thoroughly justifies the establishment of a tropical diseases school in Liverpool. The important question of specially training nurses for the tropics has not been overlooked, and the School has already received and trained at its own expense, in the Samuel Henry Thompson Ward of the Royal Southern Hospital two nurses sent to Liverpool by the Colonial Nursing Association. This is a branch of the School that may be extended with great advantage.

THE PHARMACEUTICAL SOCIETY.

AT the annual dinner of the Pharmaceutical Society of Great Britain, held at the Hôtel Métropole on Tuesday last, under the chairmanship of Mr. G. T. W. Newsholme, Vice-President, Mr. R. A. Robinson, L.C.C., in referring to the Companies Acts Amendment Bill, 1900, said that there was no question that the Limited Liabilities Acts had done great good to this country, but the fact had been recently recognised that practices had grown up in connection with its provisions, some of which were objectionable, and some of which were fraudulent. He considered that the members of the Pharmaceutical Society had a grievance. By the Pharmacy Act, 1868, it was stated that no person should deal in poisonous drugs unless qualified by that Society. That language might have been thought plain enough, but since the passing of that Act it had been held that a company of persons numbering seven or more who formed themselves into a corporation or limited liability company were exempt from the Pharmacy Act. The late Lord Chief Justice would never listen to that argument, and had said in the Court of Queen's Bench that "no person" meant "no persons." The House of Lords, however, had decided in its judicial capacity that a corporation of seven persons or more did not come under the provisions of the Pharmacy Act of 1868, and therefore a company could do what one person could not. In his opinion it was not the intention of Parliament when the Pharmacy Act, 1868, was passed to exempt companies from its provisions. It was not merely a matter of interest to the Pharmaceutical Society, it was of importance to others—for instance, to medical men and to lawyers. In his opinion, it was not to the interest of this country that any calling which was forbidden to any but qualified persons should be run by companies. Mr. J. F. Remnant, M.P. (Holborn) said that as the Pharmaceutical Society was in his constituency he would undertake to give a very careful consideration to the Companies Acts Amendment Bill, and as far as he could see at that moment there was no reason to believe that he would differ in any degree from what Mr. Robinson had stated. This statement appeared to give great satisfaction to those present. Dr. W. S. Church (President of the Royal College of Physicians) said that every practitioner of medicine must turn with thanks to the Pharmaceutical Society for the purity, the activity, and, above all, for the portability of drugs. He congratulated the Society on their attitude

in regard to the question of the standardisation of serums. He saw no reason why a solution of the difficulty as to the interpretation of the Companies Acts should not be found which would be satisfactory to the Government and to the pharmacists as well as to the medical profession. Mr. T. Bailey Saunders (Secretary, London University Commission) commented on the new scheme for making the preliminary arts examination compulsory in the training of chemists and druggists in the course of the present year, which would help to weed out incompetent men. He mentioned the connection which would henceforth exist between that Society and the University of London; and his statement that Professors J. N. Collie, F.R.S., H. G. Greenish, and J. R. Green were amongst the recognised teachers of the University of London was received with applause.

AMERICAN DENTAL AND MEDICAL LAW.

Another case illustrating the action and powers of State Boards alluded to in our article of April 21st, p. 979, has occurred. In this instance the Wisconsin State Board of Dental Examiners refused to register the diplomas issued by the Chicago Dental Colleges and certain others upon the ground that these bodies had not conformed, inthe matter of preliminary education, with the rules laid down by a National Association of Dental Examiners, a body upon which all the State Boards are represented, but which apparently has no legal status. An action to compel the Board by *mandamus* to recognise the diplomas was brought, and an application to quash these proceedings was refused upon the ground that the State Board was bound to recognise the diplomas of any "reputable" college. The decision is on all fours with that lately commented upon, and in effect limits the supervisory functions of the State Dental Boards, as of the State Medical Boards, to the decision of the question whether a college granting diplomas is "reputable." Accordingly the State Board has bowed to the decision, its path having been smoothed by the National Association of Dental Examiners which rescinded the regulation which was the origin of the contest, and went back to recommending a standard of preliminary education adopted by an Association of dental schools at an earlier date. It may fairly be assumed that this is tantamount to the abandonment of an attempt to enforce a higher standard of preliminary education. It does not augur well for the progress of dental education in the States, and it further emphasises the opinion we expressed that the advantage intended to be gained by the power to issue a licence to practise being confined to the State Boards is in some degree illusory, as the colleges are masters of the situation so long as they keep within the scope of the term "reputable."

THE PREVENTION OF MALARIA IN ITALY.

It is announced that next autumn, with the co-operation of the Mediterranean, Adriatic, and Sicilian Railway Companies, the Società per gli Studi della Malaria will make experiments on a large scale as to the prevention of malarial fever among railway servants in malarious districts in Italy. At all the stations which bear the worst name in regard to this scourge the huts in which the men and the families live will be protected with mosquito netting in the way which proved so successful last year in the Prenestina-Cervara and Magliana-Pontegalera lines. Similar experiments will be made on the Foggia-Barletta and Battipaglia-Reggio lines, on the Pontine Marshes, and in Sicily. Systematic examinations of the blood of sufferers from malaria will also be made in the hospitals of Milan and Crema, with the object of studying the course of the fever in Lombardy. Research stations will be established at Cumignano on the Naviglio in the province of Cremona for the study of malaria in its relation to ricefields, and in the province of Ferrara for the study of the disease in its relation to brackish waters and the maceration of textile plants. Another station will be established at Trinitapolis in the province of Foggia for the study of malaria in the South of Italy, and probably one in the Venetian district. Similar investigations will be pursued in Sicily and Sardinia. By this combination of research it is hoped to gain an accurate idea of the regional distribution and local characteristics of malaria in Italy, and to find means of prevention adopted to the condition of the different parts of the country.

THE RELATION OF DROUGHT TO DISEASE.

The connection of long-continued drought with such a condition as epidemic diarrhœa is not at first sight apparent. Professor von Pettenkofer long ago pointed out that in Munich epidemics of typhoid fever occurred in association with a fall in the ground water. This association has been ascribed to the providing of suitable conditions of growth for particular disease germs between the upper and lower levels of the ground water. But in this country outbreaks of enteric fever have been associated not with a fall in the ground water, but with a rise in its level. The late Sir George Buchanan believed that such association was not one of cause and effect, but that the outbreaks of typhoid were due to the pollution of drinking water in wells by the same floods that caused a rise in the ground water. And in point of fact in late years so-called "water epidemics" have been traced to the contamination of the main water supply by flood water from polluted soil. Speaking in general terms, it may be said that all water is originally surface water. Its degree of purity depends in part on the soil on which it has fallen and on the amount of filtration it has undergone in passing through the deeper parts of the soil before it reaches the springs, wells, or other reservoirs from which we receive it. The mere storage of water may result in a diminution of the number of bacteria it contains, partly by sedimentation and partly by a process of natural selection in the struggle for existence and the survival of the fittest. Its purity depends, too, on the character of the soil through which it has filtered, and especially on the degree of its contamination with organic matter. This character may vary from that of an almost sterile soil, as of clean sand, to a manured soil, or what must surely be the acme of contamination, the sand used in filter beds in India that had been taken from the river side which was used as a sort of cloaca by the Hindus of the district both healthy and diseased. It is necessary to remember that a pollution of such intermediate soil, although very real and very harmful, may yet not be obvious. It is quite usual for the number of bacteria, which perhaps averaged 200 per c.cm. of the water during a period of dry weather, suddenly to rise to 600 or 700 per c.cm. after a storm. It is as if the accumulation of the growth of the organisms during the dry weeks had suddenly been washed into the general water supply. But this increase of number is not *per se* so ominous as a change in the type of the organism, which change may occur without any such increase and may not occur with it. Among the more interesting of the reports of the auxiliary scientific investigations conducted under the auspices of the Local Government Board, which we describe on another page, is that by Dr. A. C. Houston on what may be termed the toxicity, both chemical and bacterial, of soil washings. He showed by means of artificial flood waters, produced by the action of sterilised water on different samples of soil, that the bacillus mycoides, not present or very sparsely so in potable waters, appeared in large numbers in water which had been contaminated with surface washings, particularly from manured soils. What is true for the bacillus mycoides he showed to be true for the cladothrix, also almost peculiar to soil; and if in addition there be found an increase in the proportion of spore forms to the total number of bacteria present,

further if the spores of the bacillus enteritidis sporogenes be present, or especially if coli forms are present, and most conclusive of all if streptococcus forms occur along with the colon bacilli, then it may be concluded with confidence that there has been access of harmful flood water to the water supply, and its condemnability may be considered quite apart from the mere number of the bacteria present. But however important these theoretical considerations may be, the obvious lesson is that if care is to be exercised at one time more than another in the boiling or efficient filtering of drinking water, it is surely on the breaking up of a long drought.

MILK AVERAGES.

WATERING the milk is a form of adulteration at once dishonest and injurious to health. It is especially injurious to the health of those, like young children, whose chief nutriment is supplied by milk. One of the commonest duties of the public analyst is to examine samples of milk sent for analysis under the Food and Drugs Act, and it is important that the standard demanded by law, whilst protecting the consumer, should not, in any case, be prejudicial to the honest provider. The rough and ready test of purity by taking the specific gravity, which is sometimes resorted to in private households, is insufficient unless the percentage of fat (cream) in the sample of milk is also determined. There is a tale told of a public institution which demanded so high a specific gravity in the milk supplied that the supplier could only fulfil his contract by skimming off some of the cream before delivery. The purity of milk is tested by determining both the total solids and the percentage of fat. The composition of milk, however, varies somewhat in different breeds of cattle, and is influenced by the season and by the kinds of food. It is thus impossible to demand an absolute standard, except by fixing a minimum of purity. The Public Analyst for Dundee, Mr. G. D. Macdougald, has published some charts or curves of milk averages, showing the variations in the monthly average quality of 12,069 milks examined from July, 1897, to February, 1900. The average composition of the entire series is as follows: Fat, 3.82 per cent.; non-fatty solids, 8.68 per cent.; total solids, 12.50 per cent. Mr. Macdougald's results support the opinion that a standard of 3 per cent. fat and 8.5 per cent. non-fatty solids (about the usually accepted standard for a good milk) would not entail any hardship whatever on the producer, and that even a 3.25 per cent. standard of fat would not be too high. The curves proposed by Mr. Macdougald show little regularity in the variations for the different months, except that in the months of August and September the non-fatty solids were generally very low.

PROPOSED RESEARCHES ON MALARIA IN FRENCH COLONIES.

AT a recent meeting of the Académie de Médecine in Paris M. Laveran presented an important report on the study of malaria. Referring to the report of Professor Koch on his researches in Java, to which the attention of the Minister of Public Instruction had been called by the French Consul at Batavia,[1] he said that while the German investigator was to be congratulated on the indefatigable ardour with which he pursued his researches in the most unhealthy parts of the world, it would be premature to express any opinion as to the importance of his results. M. Laveran went on to give an account of what had been done by different Governments for the promotion of the study of tropical diseases. After referring to the two schools recently founded in England and to the institute established at Hamburg for the same purpose, he mentioned that in Italy a society had been founded for the study of malaria, and the Belgian Government had founded a laboratory for the study of tropical pathology at Leopoldville in the Congo, while courses of instruction in the same subject were given in the United States at Baltimore and in Holland at Utrecht. In France the subject is on the programme of some of the schools such as Val-de-Grâce, the Naval School of Medicine at Bordeaux, and the School of Medicine at Algiers. But, as M. Laveran pointed out, the teaching in these schools cannot possibly be so complete as in institutions especially created for the purpose. He urged upon his countrymen the importance of taking a more active part than they had hitherto done in the researches now being made on the part played by mosquitos in the propagation of malaria and on the prophylaxis of that disease. In France the foci of malaria are becoming more and more circumscribed; in many places which were formerly very unhealthy it has disappeared, or is rapidly decreasing. Many of the colonies of France, however, offer vast fields for the study of malaria. Without speaking of Madagascar, Senegal, Tonquin, and Guiana, there are still, in spite of the great sanitary betterment which has been achieved, intensely active foci in Algeria. There are in the French colonies, said M. Laveran, well-informed medical practitioners who would be willing to help, and some very interesting information might, he thinks, be got by sending them a programme of work and adequate instructions for carrying it out. M. Laveran concluded by proposing, first, that the Académie should appoint a committee on malaria; secondly, that it should pass a resolution calling on the Government to send an expedition to Algeria to study, in some of the unhealthiest parts of that colony, the relations of mosquitos to malaria, and the most effectual means of prophylaxis. The proposals were supported by Professor R. Blanchard, who, we understand, has already pressed on the French Government the necessity of founding a French School of Tropical Medicine. He mentioned that he had recently made a catalogue of all the species of *Anopheles* now known, which showed that the geographical distribution of these insects corresponds exactly with that of malaria. As already stated in the BRITISH MEDICAL JOURNAL, M. Laveran's proposals were adopted by the Académie. A committee for the study of malaria was appointed, consisting of MM. Kelsch, Laveran, Blanchard, Railliet, and Vallin.

[1] A translation of this report was published in the BRITISH MEDICAL JOURNAL of February 10th, p. 325.

MR. W. H. POWER, F.R.S., M.R.C.S., Principal Medical Officer to the Local Government Board in England, has been appointed by the Crown a member of the General Council of Medical Education and Registration.

THE Council of King's College, London, have appointed Dr. F. W. Tunnicliffe to the chair of Materia Medica and Pharmacology in succession to Dr. Tirard, who was lately appointed Professor of Medicine.

DR. FRANK G. CLEMOW has been appointed by Lord Salisbury to succeed the late Dr. Dickson as British Delegate to the Ottoman Board of Health, and Physician to H.M. Embassy, Constantinople.

AT the annual meeting of the Gloucestershire Branch, held at Cheltenham on Tuesday, May 15th, an address was delivered by Dr. Saundby of Birmingham upon Modern Methods in the Treatment of Diabetes.

AT the suggestion of many friends, Mr. J. Ward Cousins, F.R.C.S., Senior Surgeon to the Royal Portsmouth Hospital, will again be a candidate for election to the Council of the Royal College of Surgeons of England this year. Mr. John H. Morgan, Surgeon to Charing Cross Hospital, and, as we have already announced, Mr. Bland-Sutton, also propose to offer themselves as candidates.

IN his presidential address at the Royal Statistical Society Sir Henry Fowler, M.P., gave some astonishing figures as to the income and indebtedness of local authorities in this country. During the financial year 1897-98 local authorities administered an income of no less than 69 millions sterling, of which 37¾ millions were derived directly from rates. The total local debt at the end of March, 1898, was over 260 millions; of this sum 137 millions had been borrowed for such purposes as poor relief, police, roads, and public health. Over 36 millions had been borrowed for educational and recreative purposes, and 87½ millions for trade and similar purposes. The result of municipal enterprise in waterworks, gasworks, markets, tramways, electric light, piers, quays, etc., which Sir Henry Fowler classed together as trading, had been to pay the working expenses, interest, and instalments on borrowed capital, and a profit of about 0.5 per cent. on the amount of the capital outstanding, such profit going in the reduction of rates.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Medical Officers of Health and Sanitary Inspectors Bill was moved by Dr. Farquharson on May 16th, but the fatal hour of 5.30 had already passed, and several cries of "I object!" sealed its fate. Conspicuous among its opponents was Mr. John Burns, and as that stalwart supporter of the privileges of county councils has expressed his intention of continuing to work on the block system, if necessary till the end of the session, we fear that the fate of this useful measure is sealed for the present. Local authorities bitterly resent the loss of any part of their autocratic power; but Dr. Farquharson has received so many promises of support from all parts of the House that he only needs a fair field and some Government favour to ensure the passing of this concession to justice and professional safety into law.

The Housing Bill gave rise to an animated debate last week, which ended in an adjournment to a later day. In the course of the speeches the public-health aspects of overcrowding were discussed by more than one speaker. The President of the Local Government Board dwelt upon the want of more effective administration on the part of local authorities, and said that "it was sometimes alleged that the medical officer was not supported as he ought to be by the local authority, and that if he persisted in the proper discharge of his duties he was sometimes liable to suffer in consequence." He promised that all the powers of the Local Government Board should be used to secure the independence of the medical officer. In the course of his speech in reply, Sir Walter Foster urged that nothing but security of tenure would help health officers in this respect, and that in the case of annual appointments the Local Government Board had little or no power to save a zealous officer who had offended his local authority. The hon. member also pressed on the attention of the House the grave increase of the death-rate arising from overcrowding, quoting from the last Registrar-General's Return figures to show that while London as a whole, with a density of population of 60.9 to the acre had in 1899 a death-rate of 19.3 per 1,000, St. Luke's, where the density rose to over 170, had a death-rate of 28.4, and St. George Southwark, with a density of 213 to the acre, had a death-rate of over 27.0. As regards consumption, the death-rate in these two overcrowded districts was 3.5 per 1,000, as compared with 1.8 for the whole of London. He further pointed out that this increased death-rate, affecting, as it did, from half a million to 900,000 persons, meant an enormous money loss to the community every year.

The Lunacy Commission came under discussion on the Estimates on May 11th, and complaint was made of the low percentage of *post-mortem* examinations in criminal lunatic asylums. It would be in the interests of science that in all these cases a record should be kept of the *post-mortem* state of the brain, and the attention which was called to the matter by Mr. Caldwell may be expected to bear fruit, especially as the Commissioners themselves have reported on the point. The system of boarding-out criminal lunatics in ordinary borough and county asylums was also criticised as undesirable in the interests of these institutions, but it is a necessity until more State accommodation is provided. As the vote was not passed the Commission may be further debated on some Friday.

The Inspection of Dairies has again become the subject of dispute over a private Bill. The Bradford Corporation Bill was the occasion this time, as the Police and Sanitary Committee had introduced into this Bill the so-called model clauses of the Local Government Board. Representatives of the agricultural interests rather resented this action and preferred what are called the Leeds clauses, which give less power to a town corporation to inspect dairies outside its own area. The House, however, decided for the model clauses in the interests of public health and uniformity of practice.

The Midwives Bill is not likely to trouble the House now till after Whitsuntide. The resolution for expenses to be incurred under the Bill, which had been put down by the Government, was withdrawn at the close of last week. This step was taken because there was no urgency for voting the expenses of a Bill which may even yet not become an Act, and so the resolution was removed from the paper. As the Bill now stands it is third on the order paper for June 27th; but after Whitsuntide Bills will be rearranged according to the stage which they have reached. This rule will, so far as other Bills have progressed up to the present, give the Midwives Bill second place on that day, but the Merchant Shipping Bill will be in front of it, and it is quite possible that another Bill may yet obtain precedence. Under these circumstances the passage of the Midwives Bill on June 27th is by no means assured.

Antityphoid Inoculation excites a good deal of interest among members, and in answer to a question by Mr. Gedge the Under-Secretary of State for War stated that the statistics so far were not large enough to justify any conclusions of importance. It seems that some 20 per cent. of the troops volunteered for inoculation while at sea, but that after landing the operation was not performed for fear of the delay which might be occasioned to men required for active work.

The Registration of Plumbers was brought before the House on Tuesday by Mr. Lees Knowles, who moved a resolution calling upon the Government to take up the question and introduce legislation. The debate did not conclude for nearly two hours, and some interesting speeches were made before the resolution was finally withdrawn. The Secretary of the Local Government Board viewed the proposal to register plumbers with considerable sympathy, but laid it down distinctly that the Government could not be expected to take the matter up until local authorities generally were agreed with the promoters of registration as to the governing body. It was on this point that a Bill was wrecked in 1898, and some understanding must be come to before any Bill will have a chance in this Parliament.

The Public Health (Ireland) Bill, which was read a second time on Monday last, is a small measure introduced by the Government to give the Local Government Board of Ireland power, with the consent of rural district councils, to alter the area of charge for special expenses leviable under the Public Health (Ireland) Acts, 1878 to 1896, or under any enactment directing expenses to be levied as expenses under those Acts.

Lead Poisoning.—The Home Secretary, in reply to Mr. Coghill, told the House last week that there had been a striking diminution in the cases of lead poisoning in the pottery trades for 1899, as compared with the two previous years. The diminution followed closely on the new rules of 1898, and it would appear that the monthly medical examination has contributed materially to the satisfactory result. The Home Secretary was able to acknowledge the help he had received from manufacturers in connection with the enforcement of the rules of 1898.

THE TUBERCULOSIS CONGRESS AT NAPLES.

The Tuberculosis Congress held at Naples, which opened on April 25th and closed on the 28th, was a great success. The attendance, which numbered about 1,200 persons, included nearly the whole profession of Naples and the surrounding district and many practitioners from Northern and Central Italy. Nearly all European countries were represented, Great Britain, however, being conspicuous by its absence. Among the many tongues in which members of the Congress held converse English was but little heard, and the few who spoke it were almost without exception Americans. The official language of the Congress was of course Italian, but most of the delegates of foreign Governments, including those of Russia, Hungary, Norway, and Roumania, as well as the Latin countries, spoke in French.

Opening of the Congress.

The opening meeting was held in the vast theatre of San Carlo, which was tastefully adorned with a profusion of flowers and banners, and illuminated with countless electric lights. Professor Guido Baccelli, Minister of Public Instruction, presided. All the Universities and scientific societies and most of the municipalities of Italy were represented. Among the foreign delegates were the Duke of Ratibor, representing the German Imperial Government; Professors Rudolf Virchow, Rubner, Loeffler, Senator, Gerhardt, Fraenkel, and Panwitz representing Germany; M. Monod, Professor Chantemesse, and Dr. Armaingaud, representing the French Government; Professors von Schrötter, Franz Jamoeck, von Fodor, and Raisiz, representing Austria-Hungary; Dr. Dubelier, representing Russia; Drs. Heiser and Wilson, representing the United States; Dr. C. M. Cortezo, representing the Spanish Government; Dr. Monteviede, representing the Portuguese Government; Dr. Kallibokas, representing the Greek Government; Dr. Militchevitch, representing Servia; Drs. Ustvedt, Klas, Linvolk, and Valler, representing Sweden and Norway; and Drs. Thomescu and Cantacuzeno, representing Roumania. Professor Landouzy represented the Académie de Médecine; Drs. Hochheimer and Schutzen, the Red Cross of Berlin; Professors Ewald and Baginsky, the German Children's Sanatoria Association. The King and Queen of Italy, with the Princes, were present.

The President's Address.

Professor Baccelli delivered an inaugural address in which, after bidding warm welcome to the foreign visitors, he said that at the present time wherever civilisation flourished a holy war against tuberculosis, "that phylloxera of human lives," had been begun. He recalled that Morgagni had first maintained the contagiousness of phthisis against his contemporaries. In Naples and elsewhere the instinct of the people had led them to burn the belongings of those who died of consumption. In the empty anatomo-pathological controversies as to the demonstration of the specific element, in the long period of histological researches extending from Gluge to Lebert, and from him to the Berlin pathologist, as in the fruitless parasitological attempts of Klebs and Toussaint, one sought in vain for a precursor of Robert Koch. The discovery of the tubercle bacillus was one of the most colossal scientific monuments of our time, but it did not in itself furnish anything like a complete solution of the problem. Professor Baccelli reminded his hearers that not long after the date of the discovery he himself had said, "Koch's bacillus is only the histological exponent of tubercle; it is not the whole of tubercle, much less of phthisis." Dealing with the transmission of the disease, he described the sputum as the tuberculous virus *par excellence*, the *materia peccans in optimâ formâ*. Another great channel of infection, though affording less ready access than the air passages, was the alimentary canal. To persuade sufferers not to infect others, to teach the healthy not to infect themselves, belonged at once to private and to public hygiene, and was above all an educational problem. Such education was the first among the duties of the State. Men of the less fortunate classes, when smitten with phthisis, finding themselves treated as outcasts, became desperate often to the point of becoming criminals. Those unfortunates must be persuaded that society was anxious to help them and to lessen their sufferings as far as possible. The State, however, should, he held, go further; it should organise this new national defence and support it with the force of law, compelling local authorities and private individuals to use means for the prevention of contagion. It was the duty of the executive to enforce the observance of the rules of prophylaxis on all employed in public administrative services. It must keep watch over the great industries, impose precautions in schools and public offices, and found public stations for isolation and disinfection. Legislation as to cattle was necessary to secure methodical and continuous elimination of diseased beasts. The Italian Government, at the instance of General Pelloux, the Minister of the Interior, had ready a new law for the prophylaxis of all infectious diseases, particularly tuberculosis. Public competition for the construction of sanatoria in suitable places had already been invited by means of prizes. The plans would be on view in Naples in the Exhibition of Hygiene. Passing to the prevalence of tuberculosis, Professor Baccelli said that accurate statistical tables had been prepared which showed incontestably that in Italy the mortality from the disease was less than in any other European country. It had fallen in one decennium from 2,018 to 1,756 per million of inhabitants, and this, although in the number of victims were included many foreigners who had come to Italy to seek relief from its climate. In 1894 the loss of life from tuberculosis in Prussia alone was 71,000, and in Austria 88,000, whilst in Italy, in practically identical demographic conditions, it was only 30,000. This could only be attributed to the climate. It was a matter of common observation, by those much engaged in microscopic work, that in at least one-third of the persons who died in Italy there were in the lungs or in the glands cicatrices of extinct tuberculous processes. In Italy there were but few cases of chronic phthisis lasting many years such as were frequent in northern climes. In Italy, if climatic influences failed to cure, the end generally came within three years. With the means of early diagnosis now available there was in Italy a much larger possibility than elsewhere of successful prophylaxis. Among the ever new and not seldom delusive efforts of specific treatment, faith in the sovereign virtue of climate still remained unshaken; there was no climate more healing than that of Italy, which was therefore eminently suited for the establishment of luxurious international sanatoria. But provision must also be made for the poor, and funds would be needed not only for the treatment and maintenance of the patient, but for the support of his family; for the treatment of convalescents and for the change of occupation. Professor Baccelli pointed to the example set by England, and now followed in generous rivalry by Austria-Hungary, France, Germany, Switzerland, Russia, Spain, and Sweden, and declared that Italy would not lag behind in this noble race. In an eloquent peroration he recalled the visit of the King to Naples in the dark days of cholera when, prodigal of his life, he warmed within his own the frozen hand of the dying, meriting the name of Father of the People, and said that it was fitting that this latest humanitarian Congress should be held under the august patronage of their beloved Queen.

Other Speeches.

The Syndic of Naples then formally welcomed the visitors. He referred to the great sanitary improvements that had been carried out in Naples during the last ten years, and to the Sanatorio Filangieri about to be established by the munificence of an illustrious lady. Next came the Rector of the University of Naples, Professor Pinto, who paid the inevitable tribute to Koch but did not, like Baccelli, forget Villemin, who, as he justly said, was the first to bring the contagiousness of tuberculosis once more before the profession. He saw in the assembly a homage paid to the medical school of Naples, from which had come a first and vigorous impulse to recent researches. In 1782, a document constituting a true sanitary law of public prophylaxis against tuberculosis had been drawn up in Naples. About 1809 the same law was revived, and the memory of it still lived as a clause in the leases of houses. The medical school of Naples was a continuation of that of Salerno, which had preserved the medicine of the Greeks and Romans, and was the germ of the modern school, and the model and mother of the modern universities. He concluded by

expressing the hope that the resolutions passed by the Congress would become an international and permanent sanitary code like the famous *Regimen Sanitatis* of Salerno.

The next speaker was Professor De Renzi, who welcomed the visitors in the name of the Neapolitan Committee of the League against Tuberculosis, which had instituted and organised the Congress. Professor Lannelongue next said a few graceful words in the name of France; and the Duke of Ratibor, who recalled the fact that he had been President of the Tuberculosis Congress held in Berlin last year, expressed the sympathetic interest of the German nation in the efforts for the prevention of tuberculosis in Italy. Professor Thomescu and Dr. Demetrius Dubelier greeted the Congress respectively in the name of Roumania and Russia.

TELEGRAMS TO CHIEFS OF STATES.

After the speeches the representatives of the foreign Governments were presented to the King by Professor Rubino. Immediately after the opening meeting Professor Baccelli, as President of the Congress, sent the following telegram to the Empress of Germany:

Queen Margaret is at Naples, as your Majesty was at Berlin, patroness of the Congress against Tuberculosis. Angels of charity, shining with the radiance of the throne, you confer on the peoples which love you the greatest benefit in the midst of the admiration of the world.

The President also sent telegrams to the Queen of Spain, the Emperor of Germany, the King of Greece, the Emperor of Austria, the King of Roumania, and the King of Portugal, thanking them for sending representatives to help in the work of the Congress, and saying that when the march of tuberculosis had been happily arrested, the nations would be grateful to those who had once more affirmed the old Roman law: *Salus publica suprema lex esto.*

The same message, suitably modified, was sent to the Presidents of the French Republic and of the United States of America.

SCIENTIFIC WORK OF THE CONGRESS.

The Congress then settled down to work. Abstracts of many of the more important papers will be found in the EPITOME, but a rapid review of the subjects discussed may not be out of place here. Professor De Giovanni, to whose initiative the the movement against tuberculosis in Italy is mainly due, pleaded for the systematic treatment of persons predisposed to the disease in special institutions. All children should be examined with the greatest care, so that physical peculiarities suggesting a phthisical tendency might be discovered at the earliest possible moment, and the case appropriately dealt with. He proposed that a committee should be appointed to draw up a scheme of prophylaxis. Dr. Kallibokas (Athens) presented the draft of a law on the subject. Dr. Rossi Doria (Rome) discussed the question of State intervention. He described what had been done against tuberculosis in England by private initiative and in Germany by the intervention of the State; and he concluded by urging the State, if it did not intervene directly, to encourage the struggle. Dr. Pavoni contended that the prophylaxis of tuberculosis in infancy was even more important than that of the adult. He proposed a resolution, which was passed by a large majority, urging the establishment and development of seaside sanatoria and Alpine stations for children. Dr. Sibilla proposed that the State should make notification of tuberculosis compulsory, but Professor De Giovanni insisted that this was not yet within the sphere of practical politics, and said it would be more profitable to seek to do whatever was at present feasible. Santorini pointed out that the Minister of the Interior had already provided for compulsory notification in certain cases. Perossi recommended reform in sanitary and military legislation for the prevention of tubercle in the army. Plechl, speaking of the prophylaxis of tuberculosis from the administrative point of view, recalled the decree of the Kingdom of Naples in 1782 which enjoined isolation of sufferers and disinfection of their effects and places of abode. Afterwards all this was forgotten. He proposed: (1) That medical administrative authorities be instituted in all cities and communes; (2) compulsory notification; (3) the prohibition of the sale of meat from tuberculous cows, even if compensation had to be paid. He insisted also on the need for an active propaganda as to spitting in railway carriages, houses, and places of public resort. The prohibition of spitting in railway carriages was also strongly urged by Sanarelli. Ausset (Lille) said that the public authorities should go hand in hand with private initiative in the struggle against tuberculosis. In the matter of spitting much might be done in schools by the teaching of elementary rules of hygiene, and this education should be continued in the army. Sanatoria for the people should be combined with gratuitous dispensaries which might also undertake the disinfection of dwellings. A fund should be established to help the families of tuberculous patients. Antituberculosis leagues should be formed in every country to educate the public mind and influence legislation. Ausset pleaded strongly for sanatoria as against general health resorts. Espina y Capo (Madrid) proposed the institution of an international sanitary police to deal with tuberculosis. He urged the prohibition of marriage of tuberculous persons and the enforcement of prophylactic measures in the army. Recruits with any suspicion of tuberculous tendency should be rejected, or they might infect a whole regiment. The age of recruits should be not less than 23, and the chest girth should be raised to 72 centimetres round the nipples. Mennella (Rome) said sanatoria were good for the individual, but of little use to the masses. The greatest social danger of tuberculosis lay in the marriage of tuberculous people. He asked that a resolution might be passed calling on the Government to pass a law forbidding marriage between consumptives. This would be the best means of prevention. Stress was laid by several speakers on the importance of early diagnosis. Maragliano spoke favourably of Koch's tuberculin in latent cases. Landouzy said every individual suffering from tuberculosis should know the truth, and be informed of the nature of the disease for the sake of the people about him as well as for his own. The importance of soil in connection with contagion made it imperative at any price to establish a regular system of puericulture or hominiculture in order to render the human family refractory, or, at any rate, to teach it how to defend itself. As a means to this end he recommended the diffusion of instructions as to the right way of rearing children. Medical men should advise the predisposed as to occupation and the choice of a wife. Petruschky insisted on the necessity of making the first symptoms of consumption as widely known as possible, and of doctors learning to "prediagnose" the disease. Tuberculin was one of the surest means for this purpose, and it had the further advantage that cases diagnosed by its help were often cured by the substance itself. Dubelier (St. Petersburg) produced comparative statistics showing the mortality from phthisis in the Russian and other armies. Marcone dwelt on the great advantages of the tuberculin test in cattle, and insisted on the necessity of supervising the sale of milk from the place of production up to the consumer. From several papers read by Neapolitan practitioners it appeared that Naples was fully alive to the dangers of contamination of the milk supply.

Resolutions were passed as to the enforcement of prophylaxis in public places and in private dwellings; as to the sanitary supervision of the milk supply, and as to the disinfection of railway carriages. Sanatoria occupied a whole sitting. Though no general agreement was come to the debate tended to clearness of view on some points. In the words of Bacon, it was *luciferum* if not directly *fructiferum*.

One of the most interesting proposals made was that of Professor Queirolo, who submitted the following resolution:

The Tuberculosis Congress of Naples thinks it desirable that a chair for the experimental and clinical study of tuberculosis should be established in one of the largest Universities of Italy.

The resolution was carried by acclamation.

CLOSE OF THE CONGRESS.

The proceedings of the Congress were brought to a close on April 28th. Before the assembly dissolved effect was given to a proposal made by Professor von Schrötter at the Congress held in Paris in 1898, that an international Committee should be appointed to take the initiative in organising congresses against tuberculosis, with the object of perpetuating an international league against the scourge. The Committee appointed consisted of Professor Lannelongue, as representing France; the Duke of Ratibor, as representing Germany; and Professor Baccelli, as representing Italy. Power was given to the Committee to add to its number by the co-option of new members equally for the three countries represented.

Professor Renzi then thanked the members of the Congress for their co-operation, and recalled how the idea of the crusade in Italy had come from Professor De Giovanni. In looking at the imposing spectacle before him he felt compelled to say, "We shall conquer." Professor De Giovanni said it made his heart glad to see his dream of twenty years realised in the Congress, which was a concrete demonstration of a new and higher diplomacy—the diplomacy of science. Professor Lannelongue also said a few words; and in conclusion Professor Baccelli said that fortunately not only tuberculosis was contagious, but charity. As an illustration of this he mentioned that Signor Maury, a member of the Italian Chamber, had resolved to give a historical building belonging to him at Delicato (Foggia), capable of accommodating 200 persons, to make a sanatorium. His Excellency then declared the Congress closed.

THE SANITARY INSTITUTE.

THE HOUSING OF THE WORKING CLASSES.

THE annual dinner of the Sanitary Institute was held at the Holborn Restaurant on May 11th, when the chair was taken by H.R.H. the DUKE OF CAMBRIDGE, K.G., President of the Institute.

The toasts of "The Queen" and of "The Prince and Princess of Wales and other members of the Royal Family" having been given by the CHAIRMAN and duly honoured, that of "The Naval and Military Forces of the Empire" was proposed by the BISHOP OF LONDON, who referred to the splendid response which had come from the Colonies, and to the importance of attention to sanitary questions in the management of warlike operations.

The toast was acknowledged by Surgeon-General JAMESON, C.B., Director-General of the Army Medical Department, who in the course of his remarks said that he had recently received two weighty expressions of opinion on the manner in which the medical arrangements for a campaign had been made and carried out. One of these was from two German medical officers who had witnessed all the earlier operations of the war, and had themselves on many occasions rendered valuable surgical assistance to the wounded. They had assured him that, having studied the subject carefully, and having regard to the arrangements in the German army, they were not prepared to suggest any alteration. The other was a letter which he had received from General Sir Redvers Buller, who had spoken in the warmest terms of the way in which Colonel Gallwey, C.B., and the other officers of the Royal Army Medical Corps had carried out their duties under circumstances of great difficulty. The War Office had shown the greatest liberality in providing all medical requirements, but when the war broke out the corps was on an establishment which was small even for times of peace. A good hospital orderly could not be obtained at a moment's notice, no matter what pay was offered. In this emergency the greatest assistance had been given by the Militia Medical Staff Corps, by the Volunteer Medical Staff Corps, and by the Brigade Bearer Companies, and by the St. John Ambulance Brigade, which alone had provide 1,300 men. Altogether there were now 8,000 male attendants employed in the military hospitals in South Africa. In addition there were 536 nurses, and Canada, Australia, and New Zealand, as well as South Africa, had nobly responded to the call for skilled nurses. Their services were invaluable. The only rift in the lute was due to the difficulties created by the untrained ladies who, no doubt with the best intentions, had shown want of discretion and had hampered and hindered the means taken for the restoration to health of the sick and wounded. The matter had been pithily put into a nonsense rhyme by a local poet:

> There was a young maid from North Berwick
> Whose conduct was very hysteric,
> She followed the guns,
> And distributed buns
> To the men who were down with enteric.

The toast of "The Houses of Parliament" was given by Sir W. H. PREECE, K.C.B. The EARL OF STAMFORD replied for the House of Lords. Mr. T. W. RUSSELL, M.P., Parliamentary Secretary to the Local Government Board, responded for the House of Commons. He said that when two years ago he had responded to the same toast at the annual dinner of the Institute, a Bill was passing through the House of Commons which was opposed by the Institute, and about which some very hard things were being said. That was now the Vaccination Act, but as one of the chiefs of the department which administered that Act, he could say that it had been one of the most pronounced successes in English legislation. That success gave him courage to refer to another Bill now being discussed in the House of Commons—the Bill to Amend the Housing of the Working Classes Acts. He did not think it necessary to dwell upon the immense importance of the subject; it ought to be far and away the most important question before the public. Happily it was removed from party strife, but almost every speaker on both sides of the House of Commons in the debate on the Bill had maintained that it was defective, inasmuch as it would not go to the root of the matter. But the real question was not whether the Bill might not be improved, but whether it did not meet a great and clamant need. The root of the matter was much deeper than politicians knew or thought. Not only model dwellings were required but model people to inhabit them. In every large city in the country, but most of all in London, the need was not as some people thought the enforcement of the present law by the local authority, although that was very important and grossly neglected. The truth was that the rigid enforcement of the existing law in London at the present moment would probably lead to results which would startle humanity. People could not be turned out of houses by the thousand without having some other place to go to. It was important to enforce the law where that could legitimately be done, but the real need was space, room to live. He was not one of those who were disposed constantly to pick holes in the work of the London County Council. He believed that the Council was carrying out a great work amid tremendous difficulties, and deserved the gratitude and encouragement of the citizens of London. The real difficulty of the Council in this respect was want of space. What open spaces remained in the metropolis ought not to be built over, but left as lungs. It followed, then, that space for the poor to live in must be found outside, and that was exactly what the Government Bill proposed to give the Council power to do. Therein it met an urgent need, while it did not shut the door to anything else. During the debate in the House of Commons some legal members had contended that the Council had the power already, but he knew officially that the Council did not think it had, and he himself did not believe it had. The Bill did not propose to settle the housing question—that was a question which it would take many Bills to settle—but it proposed to give the local authority in every great city where there was no room within the area to go outside and purchase land compulsorily, so that the people might have air space to live in. It might be said that only touched the fringe of the question, but it would remove a great evil, a great oversight in the legislation of the past, and supply an urgent want without shutting the door to anything else. Mr. Russell then referred to the legislation which provided for the clearing of insanitary areas for the purpose of erecting workmen's dwellings. Here it was not imperfect legislation but the cost of such clearances which stood in the way. It was not possible to spend enormous sums in compensation and then build houses which could be let at rents which working men could pay. It could not be done on commercial principles, and would never be done on principles of philanthropy. When this matter came to be dealt with it would have to be met by an entire change of procedure. Mr. Chamberlain had told the Commission which sat in 1884 that the Corporation of Birmingham had spent half a million more in compensation for cleared areas than it ought to have done; that had to come out of the rates, and such expenditure discouraged and frightened the ratepayer. Mr. Chamberlain had further observed that he could never understand why these gigantic sums were given to the owners of slum property, for had he had to draw the Act of Parliament he could not have drawn it in clearer and more explicit language, and yet the arbitrators gave these large sums. That difficulty could only be met by an entire change of procedure. Mr. Russell concluded by referring to the contention that the Local Government Board should sanction the extension of the time within which a loan was to be repaid, but while he admitted that something might be said for giving a longer period for land, he very much doubted

whether it would be safe or wise to extend the period for mere building loans. Upon the general question of the need for further legislation to meet the great need for the better housing of the working classes, he believed that the country and Parliament were in earnest. He was confident that when the General Election came—and it could not now be far off—this question would be one of the great issues upon which that election would be fought, and he hoped that Parliament would come back to Westminster with a mandate far above any party question or any party feeling, to find a way out of this pressing difficulty.

The toast of "The Sanitary Institute" was given by the CHAIRMAN, who said that as head of the army for many years he had taken a great interest in sanitary questions, and fully recognised the value of the work done by the Sanitary Institute.

The toast was acknowledged by Professor W. H. CORFIELD, Vice-President, who, in the course of his remarks, said that the Council of the Institute had resolved to hold a conference on the housing of the working classes in London at the end of July. The conference, which would be held at the Institute, would continue for two or three days. It was proposed that discussions should take place each morning, and that the afternoon should be devoted to visits to typical buildings. At the same time an exhibition of models and designs would be held in the Parkes Museum of the Institute, and silver and bronze medals would be awarded for the best designs for urban, suburban, and rural dwellings; for temporary dwellings (hop and fruit pickers); for model villages; and for plans and models illustrating the improvement of unhealthy areas. The Institute had also accepted an invitation from the Société Française d'Hygiène to hold a Conference in Paris on August 7th, 8th, and 9th, the days preceding the opening of the International Congress of Hygiene and Demography in Paris. Matters relating to municipal sanitation would be discussed in the mornings, the afternoons being left free for visits, which the French Society would arrange, to important sanitary works.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held on April 27th at 429, Strand, London, W.C. There were present Dr. De Havilland Hall in the chair, Dr. J. B. Ball, Mr. F. S. Edwards, Dr. J. W. Hunt, Dr. Alfred S. Gubb, Mr. William Thomas, Dr. Francis J. Allan, Dr. M. Greenwood, Mr. J. Brindley James, Dr. W. Knowsley Sibley, Mr. Frederick Wallace, Dr. Walter Smith, and Mr. Edward Bartlett.

The Committee were mainly occupied with the draft of the annual report of the Society, which will be issued to the members in a few days. It will show that during the year 1899 the number of members increased to 1,945, and the funds grew from £126,285 11s. 7d. to £132,173 17s. 6d. The amount of sickness benefit paid to the members of the Society during last year was £7,490 15s., the largest sum disbursed in this way in any year, but still within the amount expected and provided for by the rates of contribution. The current sickness list shows that the experience of the Society this year has so far been much more favourable than in 1899, the claims received having been both fewer in number and of less average duration. As the amount of expected sickness is appreciably more this year than last, owing to the increase in the number and in the average age of the members, there seems reason to hope that 1900 will be a good year for the Society. Although the average of the sickness claims is good, the amount payable to those members who are permanently incapacitated steadily grows. In 1899 11 members were in benefit during the whole year, and there are now 14 on the claim list, of whom there is little hope that they will ever be able to resume professional work. To these members half-pay is given continuously until aged 65, and thus what is practically a permanent provision is secured to them.

Prospectuses and all particulars on application to Mr. F. Addiscott, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, London, W.C.

THE WAR IN SOUTH AFRICA.

THE MEDICAL ASPECTS OF THE WAR.

BY A SOUTH AFRICAN CAMPAIGNER.

XXII.

THE ROYAL HERBERT HOSPITAL, WOOLWICH.

ON all hands testimony has been forthcoming to the thorough and efficient manner in which the Army Medical Department have equipped their various hospitals in South Africa, and in every way met the demands of the campaign. It is only fair to say that equal care in providing for the requirements of the sick and wounded has been exercised in England. Already a number of men have been drafted home. Most of them, whether sick or wounded, have much benefited by the voyage, and are progressing to final recovery in the various homes provided by the munificence of private individuals and also in the regulation hospitals at the disposal of the authorities.

I have already described the admirable arrangements and accommodation provided at Netley. Last week I had the pleasure of visiting the healthily situated and commodious Herbert Hospital on Shooter's Hill. This hospital has normally 628 beds. It is built in separate sections united by airy corridors, and, to meet the requirements of the present campaign, its accommodation has been supplemented by the erection of twenty additional pavilions. These temporary pavilions are built of corrugated iron lined with wood, and have a felt interlining whereby they are rendered warm in winter and cool in summer. They are amply furnished with windows, and in addition have a thorough ridge ventilation along the top of the gable over each pavilion. The floor in each case is raised some few feet from the ground. All the pavilions are 60 feet long by 20 feet wide, and each is fitted to contain 20 patients. The hospital accommodation is thus raised to 1,000 beds. The Herbert Hospital offers many points of interest to the visitor. It was built in 1860 at a total cost which averaged £300 a bed. In this respect it compares very favourably with a sister institution on land immediately adjoining it, known as the Brook Hospital, in which the cost per bed was nearly double. The Herbert Hospital has magnificent views both north and south. The interior arrangements provide amply not only for the sick but for the convalescent; thus there is a well-stocked reading room and library, which can also be used as a concert room, and an extensive dining hall.

Lieutenant-Colonel Bourke, R.A.M.C., the P.M.O., very kindly conducted me over every part of the institution. The staff of the hospital consists of 150 men of the Royal Army Medical Corps and ten Sisters of the Army Nursing Service. From the composition of this staff it will be recognised at once that the control of the establishment in almost every department is in the hands entirely of men. Thus the kitchen, which is fitted up with most modern apparatus for cooking on a large scale, was wholly in the hands of men, and reminded me very much of the galley on a large ocean steamer; in fact, what is coming to be known on board ship as the steward system obtains absolutely in the kitchen and household departments. The duties of the ten sisters are entirely with reference to the nursing. This is not perhaps the place in which to discuss the *pros* and *cons* of this system as applied to our military hospitals either in time of peace or war in this country. Whether or no women as nurses, and in connection with the housekeeping department, be or be not desirable in larger numbers in these institutions is a question for consideration. The system of nursing which actually does obtain is for the most part that of nursing by hospital orderlies. The present system has a strong advocate in Lieutenant-Colonel Bourke, who has had wide opportunities of forming a judgment.

Each ward contains 32 beds, is heated by hot water pipes, and also has two stoves, which assist in ventilating as well as heating the ward during the winter. The beds are furnished with a strong wire woven mattress and a horsehair mattress. Up to the present moment there are nearly 500 men invalided home as sick and wounded from South Africa in the hospital, most of them, it is gratifying to note, convalescent. Of these 500 about a fourth are wounded, and the remaining three-fourths

sick. The sick are recovering from enteric, dysentery, and rheumatic attacks, and a considerable number have heart affections, which, in Lieutenant-Colonel Bourke's opinion, were brought on in many cases by the excessive overstrain which must of necessity occasionally arise during an arduous campaign.

Lieutenant-Colonel Bourke then showed me some of the very interesting surgical cases under his charge, and of these I have a few notes:

Case I.—Private —, of the Inniskilling Fusiliers, had a bullet wound through the knee wounding the popliteal artery. This man undoubtedly owed his life to the fact that he had been carefully schooled in the art of rendering first aid to the wounded. Thus during the voyage out he, with the other men of the regiment, had lectures on first aid from officers of the R.A.M.C. From these lectures he learned the nature of arterial hæmorrhage, and also how to control it where possible. When, therefore, he found the blood streaming from his wound, he recognised that the main artery had been severed, and taking the strap of his water bottle he applied it as a tourniquet around his thigh, thus stopping the hæmorrhage and undoubtedly saving his own life.

This case is an interesting object lesson, and shows the extreme importance of instruction in first aid for all soldiers. It might also be extended as a compulsory course with great advantage to many mechanics, builders, and others employed in dangerous trades. The good which the St. John Ambulance classes have been able to accomplish in this connection amongst volunteers, railway employees, and others in South Africa has come under my own observation, and while in South Africa I gave many courses of lectures in connection with this admirable Association.

Case II.—Private B., of the Royal Gordon Highlanders, received a wound at Paardeberg from a Mauser bullet, which penetrated the second phalanx of his big toe, at a range of about 300 yards, and left a small clean round wound, which is now completely healed. He still has, however, a good deal of twitching of the foot, which presumably indicates some peripheral nerve lesion, which is undoubtedly one of the commonest after-effects of the Mauser bullet wound.

Case III was that of a private in the Canadian Corps, also wounded at Paardeberg. In his case the left leg had been penetrated by a Mauser bullet and the tibia fractured. There is some thickening of the bone, but he is nevertheless making an excellent recovery.

Case IV.—Corporal L., of the Royal Scots Fusiliers, received a Mauser bullet wound in the neck. The bullet remained lodged against the spine, between the bodies of the second and third cervical vertebræ. This man has a good deal of stiffness and cicatrisation in the neck. A skiagraph was obtained showing exactly the position of the bullet, which still remains *in situ*. It narrowly escaped the phrenic nerve.

Case V.—Private —, of the 2nd Shropshire Light Infantry, received a bullet below the mastoid on the left side, which traversed the neck, piercing the back of the larynx, and emerging just behind the right sterno-mastoid close to the carotid. The bullet then entered again the intraclavicular region and came out in the centre of the right axilla. The man, with his larynx slightly dislocated and all four scars discernible, is now able to get about. His voice is not in any way impaired.

Case VI.—Private G., of the Royal Irish Fusiliers, was engaged at Colenso. A Mauser bullet entered the larynx, pierced the crico-thyroid membrane, and came out below the fifth rib on the right side. He was lying on the ground at the time, and no doubt in raising his head to fire received the wound described.

Case VII.—Private —, of the Canadian Volunteers, had a bullet pierce his right knee and emerge from the calf of the leg lower down.

One case remains to be described as unique not only in the annals of surgery, but even of Irish pluck. The man, who deserves to be famous, was Lance-Corporal King of the Connaught Rangers. He was engaged at Colenso with Hart's brigade on the Tugela. It will be remembered that this brigade was marched right forward almost to the river's bank, and the men took up a position lying down on the open veld, confronting the Boers under cover at a distance of 350 yards. This man received his first wound through the ankle. Of this he took very little notice, and continued firing. He was then hit a second time in the left arm, but as only the muscles of the upper arm were penetrated he was not disabled, and still continued to fire. He then received his third and fourth bullet wounds, both of them striking him over the right scapula, and both of them emerging after penetrating the right lung between the seventh and eighth ribs low down on the right side. These wounds subsequently were the cause of an attack of empyema, but at the time of receiving them King states that although he was unable to continue firing at the moment he only rested for half an hour, during which he was coughing and spitting up a good deal of blood, and then continued shooting at his opponents. After this he was grazed by a fifth bullet, which crossed the front of his chest, and the sixth shattered his left arm. He was then compelled to cease firing as he could not hold his rifle, and lay down upon the ground bleeding from these six bullet wounds for four hours, when he was removed to the field hospital. To-day he appears somewhat sallow, and is stiff both in the ankle and in the side, the site of the old empyema, otherwise he appears fairly well, and is evidently rapidly recovering. His spirits are of the best. The scars from every one of these wounds are clearly visible, and absolutely bear out the man's account of his injuries.

After leaving the surgical wards I visited several of the medical cases which seem to be well on the way to recovery, although the dieting of men who have suffered from dysentery requires carefully regulating for some time after the disease itself has apparently disappeared. We then visited a large and well-lighted operating theatre in the hospital, provided with a skylight and three windows, and with a Rust's vitrious mosaic floor; the walls are enamelled, and the theatre is well found in all modern appliances. The P.M.O. at the present time has to assist him in carrying out the duties of the hospital no fewer than fifteen civil surgeons, all employed temporarily by the department for service in the various home hospitals.

The Army Medical Depôt.

Another department of great interest at the Royal Herbert Hospital is the Army Medical Depôt. From here all medical stores to South Africa and elsewhere are sent, and the store itself is well worthy a visit, and a more prolonged inspection than time would allow me to bestow upon it. Here are to be seen cases for drugs and dressings, which can be either carried in an ambulance waggon or slung as panniers over a mule or horse; fracture boxes, full of all splints; cases of antiseptic dressings; surgical saddle bags; cases of compressed drugs, put up in most convenient, serviceable, and durable forms. The whole institution impressed me with the thoroughness with which the work of the department is carried on, and also with the many and arduous duties which devolve upon the responsible head of so large an institution.

THE SPECIAL HOSPITALS.

THE SCOTTISH NATIONAL RED CROSS HOSPITAL.

The first section of this hospital sailed from Southampton on April 21st in the *Pembroke Hospital*, and should by this time have reached its destination. The second section, providing 200 beds, has now been organised, and is to leave Southampton in the *Avondale Castle* on Saturday, May 19th, for South Africa. The staff consists of 8 medical men, 12 nursing sisters, 28 medical students (who go out as first-class orderlies), and 33 second-class orderlies, sergeants, corporals, clerks, cooks, etc.

The following are the medical men forming the staff: Dr. Robert Stirling, of Perth Royal Infirmary; Dr. George Macintyre, of Glasgow Royal Infirmary; Dr. P. Kinmont, Royal Infirmary, Dundee; Dr. N. Dunbar Walker, Macclesfield Infirmary; Dr. George Hodge, Knightswood Fever Hospital, Glasgow; Dr. Arthur Robin, Glasgow Western Infirmary; Dr. John Wotherspoon, Glasgow; and Dr. George Graves, Glasgow. The nursing sisters have been admitted to the Army Nursing Reserve, and have been trained in the Glasgow Western Infirmary, the Glasgow Royal Infirmary, the Aberdeen Royal Infirmary, and the Perth Royal Infirmary.

This section of the hospital is partly made up of tortoise tents like those already sent out with the first section. But there are also provided ten Doecker hospital huts, each containing ten beds. These huts, as is well known, are portable, and at the same time well adapted for hospital purposes. Each is 58 ft. in length, 16 ft. 6 in. in breadth, and 12 ft. 6 in. in height, and the whole building and its fittings are made on the collapsible principle, so that they can be folded up and packed away. The sections are constructed of varnished papier maché, fastened in sheets to light iron frames, and are numbered so as to facilitate the work of putting the hut together. This can be accomplished in about a couple of hours. The entire structure can be packed in six flat wooden cases, these being utilised as the floor of the hut when it is erected.

THE LANGMAN HOSPITAL.

Mr. Charles Gibbs, F.R.C.S., Assistant Surgeon to Charing Cross Hospital, and Lecturer on Practical Anatomy in its Medical School, has been appointed Senior Surgeon to the Langman Field Hospital, South Africa, in the place of Mr. Robert O'Callaghan who has returned to England.

THE FUTURE OF THE MEDICAL SCHOOLS IN LONDON.

[From a Correspondent.]

The New University.

There appears to be no reason to doubt that on or soon after May 16th the statutes presented to Parliament by the University of London Commissioners will receive the Royal assent and will become law. The Vice-Chancellor will at once arrange for the election of the Senate, which body will probably hold its first meeting some time in June; but "statutes and regulations will not make a living university" out of a number of independent competing institutions. The Senate, formed largely by the representatives of examining and teaching institutions, must, if it is to succeed in doing anything of value, have the cordial support of the institutions, the work of which it is desired to co-ordinate and develop. One might therefore have expected that during this latent period the various groups of institutions interested in the formation of the Teaching University would have organised some means of exchanging views and of arriving at a decision as to the course most likely to lead their own department of the University to the highest point of excellence.

The Silence of the Schools.

I know not what steps have been taken in faculties other than medicine, but I believe I am correct in saying that no meeting, having any authority whatever from the schools to discuss and report upon great questions of policy, has been held. Some efforts have been made to excite interest in these questions among the school committees, and to bring about an exchange of opinions; they have been met by silence. It would seem, therefore, that the majorities upon the various school committees dread changes of the kind mooted, fearing that they will injure their schools; that they have no well-considered and widely-accepted scheme for the development of a great school of medicine in the University; that, in short, they believe the best policy for the schools is to make no move at present, but to wait and "see what the Senate will do."

It will doubtless be said that it is the business of the new Senate and not the business of the schools to frame such a scheme as I have alluded to. But, as I have already pointed out, the making or marring of the School of Medicine in the new University rests with the twelve independent schools which must form its basis; and if it were conceivable that the Senate would try to carry through a scheme for the School of Medicine which was not suggested by the medical senators and approved by the schools, it would surely have no chance of success. Therefore, as it seems to me, the duty does decidedly fall upon the teachers of considering most seriously what changes, if any, should be recommended in the schools, when they are drawn together in the University.

The Need for Development.

The first point to settle is whether any change is desirable. Some appear to think not. They were trained in a London school; they have for years taken part in its management and teaching; they have given freely of their best in its service, and have made considerable sacrifices to increase its efficiency; they can readily recall many good men who have passed through it, and probably good work done within its walls. The annual entry has had its ups and downs, but on the whole the school maintains its position among its fellows. Does not this justify satisfaction, and, when aided by proper patriotism, even pride? But is there at any purely medical school in London a laboratory which, by its equipment and by the quality and amount of work done in it, can take rank among the great laboratories of the world? Is it not true that, owing to their success in attracting endowments, provincial schools can offer finer laboratories, greater opportunities for work, and higher remuneration than can London schools, and that no school in London can be sure of retaining the services of a teacher upon whose reputation, made in the school, that of the school itself may largely depend? Is it not true that, whilst offering greater emoluments to teachers, provincial schools offer to students at lower fees greater scientific, and at least as great, practical opportunities as can individual London schools? Is it not true that all students may be raised to a higher level by improving the conditions under which they are taught, and especially by working in a school in which research and the advancement of knowledge colour everything? Finally, is it not true that the number of students taking their whole course in London is diminishing? The meaning of these and many similar facts—their bearing upon London as a school of medicine—does not seem to be appreciated by those who are satisfied with the present state of affairs, or hope vaguely that the new University will somehow bring increased prosperity to the existing schools.

A much larger number of teachers feel that improvement is possible. "Of course," they say, "if you had a clean sheet of paper upon which to write a scheme for the Medical School of the University, things would be very different; but you have not a clean sheet of paper!" This is only too true, alas! But because the unorganised endeavours of our predecessors have landed us in a muddle, is that any reason for perpetuating the elements of the muddle, to talk of them as "trusts" which we must carry on and defend? Is it wise on the part of each school to shirk the fullest consideration of the questions which have been raised, to postpone coming to a decision upon them, and to lie low in the hope that it will be able, with the aid of others similarly situated, so to shape the policy of the University as to prevent any serious change in itself as at present constituted?

Lastly, there are some—a comparatively small minority, I fear—who believe that the schools should at once deliberately consider how they can best combine to produce, in course of time, a school of medicine in London more complete than the world has yet seen.

What the London School of Medicine Should Be.

Such a school should offer in every subject bearing upon medicine, the means of study and research under the most encouraging conditions as regards laboratory and other facilities, guidance and example; it should be able to attract and retain the services of the most eminent teachers and workers; its scholarships, bursaries, and scale of fees should bring its advantages within the reach of men of education and ability to whom the expense is now prohibitive; with the other faculties it should make suitable provision for and pay due attention to sports and athletics, and in other ways encourage the meeting together of students of different faculties. To form such a school will obviously take many years; but, probably from the start, and certainly long before it reached its full development, its success would affect beneficially all concerned. Hitherto the immediate object of each school has been to render itself more attractive than its competitors. It is essential to realise that now—with the reorganisation of the University—the immediate object of all is to perfect the University School of Medicine. Success in this will benefit the students, the teachers of the preliminary, of the intermediate, and of the professional subjects, the University, and the public at large. At present the problem is how to start so that success may be most certainly attained, and this is the question which the bodies concerned should combine to consider as soon as possible.

If each of the twelve medical schools of London were well endowed, so that each could do its full work as well as it is possible for it to be done, there would be many advantages in having the twelve centres. But no school is well endowed, few can be said to have any endowment at all. Speaking generally, the remuneration which it is possible to pay to teachers in London medical schools is insufficient, absolutely and also relatively to that offered elsewhere as the result of endowment. Further, the allowances for laboratory expenses are wholly insufficient for research work. In consequence the best teachers and most original workers in the London schools are often attracted to extra-metropolitan centres, to the great detriment of London. This is a most serious matter. An equally serious result, however, is the fact that, again speaking generally, teaching and research in most of the earlier and all the later subjects are necessarily subordinated to success in practice, and that from the scientific point of view the London schools occupy a somewhat low position.

Lack of Pence.

Lack of funds lies at the bottom of these defects. Funds may be increased (1) by endowment, (2) by diminution of

working expenses, (3) by increase in the number of students.

1. If the constitutions and relations of the twelve medical schools remain as at present there seems no reason for anticipating greater and more rapid endowment of them in the future than in the past. Were there a university medical school for which the University could seek support it is probable it would be forthcoming.

2. Something may perhaps be done to reduce expenses and to use existing funds more economically by bringing more students together in fewer centres for theoretical and practical instruction in the preliminary and intermediate groups of subjects; the cost of administration and the number of teachers of the first rank would thus be diminished.

3. If a university school of medicine, such as has been sketched, were started, there can be little doubt that the number of students attracted to London would increase.

CONCENTRATION.

Concentration was strongly recommended by the Gresham Commissioners, and felt to be necessary by the Commissioners appointed to draw up the new statutes, and endeavours have been made to obtain the opinions of the school Committees upon the following points:

1. How is the concentration to be effected? 2. With what portions of the curriculum should it deal? 3. How far should it be carried?

1. There can be little doubt that concentration voluntarily brought about by the action of the schools would be the best. The chief difficulty seems to be mutual mistrust among these bodies. Persistence in this attitude and a refusal to work together for the good of the University (and, really, for their own ultimate advantage) will probably render the reorganisation of the University by the proposed statutes of little avail so far as medicine is concerned. To benefit fully, the schools must recognise that the greatest good of the greatest number will result from a strong University, and that they must work with one another to create it.

2. The Commissioners are probably correct in saying that concentration is desirable for the teaching of the preliminary and intermediate groups of subjects. These subjects are a great source of expense to the schools. Biology, chemistry, physics, and physiology are taught by specialists not engaged in practice, and they must be paid a living wage; this usually requires a large contribution from the general fund of the school. The laboratory charges, too, are heavy and cannot be liberally met. The tendency in the case of anatomy also is to place it in charge of a "pure" anatomist. The result is that in some schools the remuneration of the teachers of final and professional subjects is very small, and may, indeed, be swallowed up by the expenses of the classes when these are energetically conducted. The temptation not to conduct them energetically is clear. It would obviously be an advantage to the teachers of the final subjects if the teaching of the preliminary and intermediate subjects were withdrawn from the schools, together with the fees paid for them, and conducted by the University, provided that they (that is, the teachers) received at least as many students after their intermediate examination as they now receive for the whole curriculum. The whole of the fees paid for the professional subjects could then be devoted to the teaching of those subjects.

What are the objections raised to this concentration?

a. That it would injure and mutilate the schools. It is true, as above explained, that the teaching of the preliminary and intermediate groups of subjects would be voluntarily handed over to the University by all or certain of the schools, and that these institutions would therefore cease to be "complete" in themselves, as they are supposed to be at present. These schools would then be "final schools" of the University, devoting all their energies and increased funds to the teaching of the professional subjects, dealing only with students who have passed the intermediate examination. These students would come from the University intermediate schools, and many would come also from Oxford, Cambridge, and other Universities. Is there any reason for supposing that if the fees for the final and hospital subjects remain (as now) proportionate to the clinical advantages offered by the various hospitals the supply of students to the final schools would be less than at present? The only one I have heard suggested is that certain hospitals would acquire undue influence in the intermediate schools of the University and would turn the current of students towards themselves. The suggestion is based upon misunderstanding of the proposals for securing the independence of the University schools. If there is no reason to fear a falling off of students, concentration, as already explained, should result in advantage to all interested in the present schools. Surely we should consider this at a time like the present and not be guided by notions of "complete" schools, however deeply rooted they may be.

b. It is urged that the preliminary sciences should be taught with a view to preparing students for their later professional studies, and that this is best carried out under the direct supervision of a medical school; that without this supervision and control "pure" anatomists and physiologists would either neglect the medical student or would cram his mind with facts and theories of no practical value; that the tendency of schools under purely scientific control would be to encourage chiefly the scientific treatment and study of the subjects taught, and that the professors would select as demonstrators those who intended devoting themselves to their subjects, whereas at present these posts are of the utmost value as affording training for our rising surgeons and physicians. Lastly, the undoubted advantages of intercourse between the teachers of all subjects in the medical curriculum, of being able easily and quickly to obtain the advice or opinion upon clinical problems of a chemist, physiologist, or anatomist would be done away with.

Taking these points in order, the control of the University would be substituted for that of the School Committees, and there can be little doubt that by joint action of the Boards of Studies in Science and Medicine, by the selection of the best teachers and by arranging for a certain amount of competition between the teachers of the same subjects, the zeal of the pure scientist for his subject could if manifested unduly be moderated. Strong and active schools of pure science are greatly to be desired in the University, and with fair play, such as the Boards of Study and the Senate would certainly secure, the rising generation of physicians and surgeons would have no reason to complain of ill-success in obtaining their share of the demonstratorships and other valuable posts in the University schools. It has been suggested that the hospitals should be entitled by regulation to a certain number of demonstratorships; but this would probably be unnecessary. As to the last objection, although the teachers of the preliminary and intermediate sciences would not be under the same roof as the teachers in the final schools, they would be closely associated in the University, and if found necessary certain groups of teachers might be associated by regulation with certain final schools for purposes of consultation and of work.

c. The change would destroy, it is said, the benefits which result from long and continuous personal intercourse between teachers and taught, and prevent the establishment of that *esprit de corps* which is so marked a feature of our present schools. This would not be so if the University school were made up of separate institutes, none of which should be too large for the heads of departments to know personally all the men under them. The students in these institutes would become attached to their university, they would be "London men"; and later on the hospital and final school which they might happen to join would be to them as their college at Oxford or Cambridge. The *esprit de corps* is at least as marked among men now joining in London after passing their intermediate as among those who take their whole course in London.

d. It is asked, Where are those students—dental, hall, or college—to study who do not intend to take a degree if the whole teaching of the preliminary and intermediate subjects is handed over to the University? The answer of course is: "In that one of the institutes of the University which may be most convenient."

EXISTING SCHOOL BUILDINGS.

e. What is to become of the present school buildings, used chiefly for giving instruction in the subjects which it is proposed that the University should take over? This is a great difficulty, for the buildings have been erected in many cases with hospital (that is, public) money, the school in one form

or another being expected to pay interest on the money sunk. Two suggestions have been made:

(1) The first, adopted by the Commissioners, is to the effect that, as all properly equipped hospitals should have "clinical laboratories, in which elaborate microscopic, chemical, and other investigations may be carried on in close proximity to the wards," the school buildings should be used for these purposes and for the purposes of the final school, while the University should provide accommodation for the teaching of the preliminary and intermediate subjects. It was thought that this would mean the building by Government at South Kensington of one institute into which all intermediate students should be gathered. Such action on the part of the University would deprive the hospitals of most of their interest upon the money sunk in the school, and it would tend to force them to institute and maintain clinical laboratories of large size for which they are not prepared financially. It is, moreover, doubtful whether the staffs, taken as a whole, and trained, as most of them have been, chiefly or entirely in English schools, are prepared at once to take over and work large clinical laboratories. That such laboratories are necessary no one can doubt; but they need hardly begin on such an extensive scale. Many Hospital Committees would probably be forced by circumstances to resist such a change, and their opposition would probably be fatal. Nevertheless, it is said that in one or two schools a majority of the *School* Committee is in favour of this suggestion.

(2) The alternative proposal is that the University should become the tenant, at a rental to be calculated on an equitable basis, of the school buildings of such schools as might be willing to give up the teaching of the preliminary and intermediate subjects; and that the University should at first use some or all of these buildings as institutes, in each of which the intermediate group of subjects should be taught. This would prevent waste of the students' time. The interests of teachers in the schools would be safeguarded and the school plant would be taken at a valuation. These institutes would together constitute the University School in Anatomy, Physiology, and Pharmacology; each should be completely equipped for research and teaching in all branches of each subject, and all would be under the absolute control of the Senate of the University. All fees for study in these institutes would be paid to the University, by which every teacher, from the highest to the lowest, would be appointed and paid. No share in the control or the administration of an institute should be left to any hospital or to the committee of any final school.

The number and situation of the institutes would be determined by the Senate, and would depend upon many circumstances: for example, the number of schools joining in the scheme and the number of students likely to enter the University school, the situations of the school buildings acquired by the University, the possibility of extending them, and so forth. In order that each institute should be self-supporting its annual entry of ordinary students should be not less than 100, if the fee for two years' instruction in the intermediate subjects were £50. On the other hand, the entry should be not greater than 150 ordinary students in any year, or the professor would be unable to maintain touch with each one. Moreover, it is desirable to have more than one institute, in order that, whilst the posts are sufficiently valuable to attract and retain the services of the best men, there may still be sufficient competition to induce the professors to continue working after their election; also by their situation in different parts to suit the convenience of students resident in the various districts of London.

It will be noted that concentration according to this scheme would be quite voluntary. The object of the movement is to "do the thing" as well as it can be done, and some believe that "the thing" can be done better by a combination of schools than by schools singly. If any school believes that alone, or combined with others, a "complete" school can be carried on, in the management of which the University will have no part, there is nothing to prevent the experiment being tried; continued success will show that "the thing" is being done at least as well as in the University school, which is all that can be asked.

These remarks deal entirely with the teaching of intermediate subjects. It would hardly seem right to teach medical students the small amount of science they have to learn in institutes devoted to so limited an object; nevertheless, the objections to over-concentration stated above hold also in science.

Over-Concentration Undesirable.

3. To what extent should concentration be carried? Under the scheme favoured by the Commissioners, it was thought that "complete" concentration at South Kensington was intended—that is, all preliminary and all intermediate students were to be gathered together there. For the reasons given—namely, the avoidance of monopoly in teaching, the establishment of as many centres of teaching and research as can be well supported, the convenience of students in so large a place as London—concentration in more than one centre appears to be a better plan. If, ultimately, the preliminary science and intermediate studies could be carried on outside London in the neighbourhood of playing fields, rifle ranges, river, etc., the best results would probably be achieved.

It is right to mention a third scheme which aims only indirectly at concentration. It has been suggested that the University should found a School of Anatomy, Physiology, and Pharmacology, equip it thoroughly for teaching and research, and open its doors to any who choose to study there; the idea being that all schools unable to stand competition with the University school would be obliged to cease teaching these subjects, to the advantage of the University school. Considering the vitality the medical schools have shown, and the deep roots which even the youngest of them has thrown out, it is highly probable that this scheme would fail, and would only add a thirteenth obstacle to the establishment of a coherent medical school in London.

The suggestions I have shortly mentioned have sprung from comparatively few minds. General interest in the matter would doubtless reveal fresh difficulties, and, I believe, solutions also. With the first elections to the Senate at hand—elections which will carry the University through the first two to four years of its career—it is all-important to send up the right men to advocate the right policy. Are our medical senators—whether representing Convocation, the Faculties, or the Royal Colleges—to be selected because they will resist change or because they are determined to let no difficulty turn them from the endeavour to found a school such as I have faintly outlined?

THE PLAGUE.

Prevalence of the Disease.

India.

During the week ending April 24th a decrease of 735 deaths from plague for India is reported, as compared with the previous week. Since then a telegram, dated May 9th, states that there is a general and material decrease in the number of plague cases throughout India.

In Bombay city during the week ending April 24th there were 473 deaths from plague, being 60 fewer than occurred during the previous week; the deaths from respiratory diseases, however, are still very high (309), and in all probability not a few are of the nature of plague pneumonia. The inoculations against plague in Bombay continue; during the week ending April 11th they numbered over 2,000. Dr. A. Meyer, in an address to the Bombay Medical and Physical Society, stated that the serum treatment of plague was the means of saving 12 per cent. of persons attacked by the disease, a sufficient percentage to warrant its regular use.

In Karachi plague cases during the week ending April 24th numbered over 400, with 398 deaths from the disease. In Calcutta the mortality from plague has been fairly stationary; 393 persons died of the disease during the week ending April 26th.

Australia.

At Sydney, up to May 15th, 227 cases of plague had occurred with 74 deaths. Every port in Australia is adopting stringent precautions, and it will be no fault of local authorities if the disease spreads. War is being systematically waged against rats, especially those on board ship. It would seem that, with the exception of Western Australia, every one of the Australian colonies is at present infected by plague.

Egypt.

On May 13th 2 suspected cases of plague were under treatment in the city of Cairo. At Alexandria 2 deaths occurred from plague on May 2nd; so far no fresh cases have been recorded in the city. Down to May 2nd 16 cases of plague had occurred at Port Said and 9 deaths from the disease.

Turkey.

A suspected case of plague was reported from Smyrna on May 9th. The Inspector-General of the Sanitary Service was immediately despatched from Constantinople to Smyrna to report on the case. All travellers coming to Constantinople are being submitted to strict medical examination. The quarantine for arrivals from Egypt at Constantinople has been extended to ten days.

THE R.A.M.C. SOUTH AFRICA FUND.

By the courtesy of the Military Secretary we received on May 16th a telegram from Capetown stating that the gifts sent out by the R.A.M.C. South Africa Fund are being distributed. This will be a satisfactory piece of information to the numerous contributors to the Fund.

THE HALF-CROWN SUBSCRIPTION LIST.

The following additional subscriptions to the Half-Crown Fund have been received down to and including May 16th, since our last list:

	Half-Crowns
Dr. T. H. Fiske (Aylesford) ...	1
Mr. C. Stiebel (London) ...	1
Per Dr. T. A. Helme (Manchester):	
Dr. F. H. Worswick (Manchester)	1
Dr. T. M. Johnson (Pendleton)	1
Dr. A. Mann (Chester) ...	1
Mr. J. E. Moreton (Kelsall)	1
Dr. Nash (Accrington) ...	1
Dr. Carruthers (Congleton)	4
Dr. Robinson ,,	4
Per Dr. W. Johnson Smyth (Bournemouth):	
Dr. Lawton (Poole)	1
Per Dr. C. A. Sturrock (Dumfermline):	
Dr. Muugle (Kinross) ...	1
Per Mrs. Horace Haynes (Evesham):	
Mr. W. H. Moore (Malvern Wells)	1
Per Dr. E. A. Fox (Warrington):	
Dr. G. W. Joseph and friends (Warrington) ...	28
Dr. Peacocke and friends (Warrington)	24
Dr. White (Warrington) ...	4
Dr. Murray (Penkith) ...	2
Dr. Bowden (Warrington) ...	2
Dr. Adams ,, ...	1
Dr. Curtis ,, ...	1
Dr. Battle ,, ...	1
Dr. Bennett ,, ...	1
Dr. E. A. Fox ,, ...	1
Dr. E. J. Fox ,, ...	1
Dr. Sherratt ,, ...	1
Dr. Lunt (Lymm)	1
Dr. Parker (Stockton Heath)	1
Dr. Willett ,,	1
Dr. Rey-Smith (Warrington)	1
Per Surgeon-Major-General Davis, A.M.S (Southsea):	
Mr. F. Lord	1
Dr. Keeley	1
Mr. C. P. Child...	1
Dr. W. Carling	1
Mr. Montague Way	1
Dr. L. Maybury	1
Mr. L. R. H. Hackman ...	1
Mr. A. Bentham	1
Dr. T. Bentham	1
Dr. C. A. Cole	1
Mr. J. H. F. Way	1
Mr. A. B. Wright	1
Dr. J. G. Blackman	1
Dr. Watson	1
Dr. McEldowney	1

We have also received per Dr. E. A. Fox (Warrington) £1 1s. from Dr. Braide (Warrington), and per Brigade-Surgeon-Lieutenant-Colonel Macomachie (Aberdeen) £1 1s. from Mrs. Simpson (Alford).

The amount received for the Half-Crown Fund, up to and including Wednesday, May 16th, by the Editor, is £543 15s. 9d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

THE HEALTH OF DUBLIN.

THE Report of the Committee appointed by the Local Government Board for Ireland to inquire into the public health of the City of Dublin, together with minutes of evidence, has been issued by the Board, and the following recommendations are made by the Committee:

1. That in "tenement houses" water should be laid on to each floor, and separate sanitary accommodation should be provided for at least every two families.
2. That no stables should be let as dwellings without a licence having been first obtained from the Corporation.
3. That schemes for housing a large number of the labouring and poorer classes should be taken in hand at once, and if suitable sites cannot be obtained in the city, powers should be given to the Corporation to acquire sites outside the city where the buildings can be erected. These blocks of buildings should be erected before any further clearances of areas be carried out.
4. That all streets, lanes, and alleys in the city, whether in charge of the Corporation or not, should be scavenged by them.
5. That all dustbins be covered and emptied into covered carts, and that the contents of dustbins from tenement houses be collected daily.
6. That an additional "destructor" be provided at Marrowbone Lane, and the number of cells at Stanley Street destructor be largely increased.
7. That a more suitable berth should be got for the barge *Eblana*.
8. That the regulations as to dairy yards and cowsheds be most rigorously enforced.
9. That an abattoir be provided for the south side of the city, and the number of private slaughterhouses should be gradually reduced.
10. That more washhouses and swimming and reclining baths be erected in several parts of the city.
11. That the sanitary condition of the public elementary schools should include:
    (a) A sufficient amount of floor space and cubic space should be provided in all instances.
    (b) A sufficient area of playground should be provided in each case.
    (c) Instruction in the elementary rules of hygiene should be given.
    (d) A proper interval for food and recreation between morning and afternoon school.
    (e) Every school should have adequate sanitary accommodation and a sufficient number of lavatory basins properly equipped.
12. That the Corporation should have power to close day schools during epidemics.
13. That notification of infectious disease which is in force in Dublin should be made compulsory at least in all the districts surrounding Dublin, and that a system of voluntary notification of pulmonary consumption should be adopted in Dublin as in Manchester and Liverpool.
14. That arrangements should be made by which the vacant beds in the existing fever hospitals may be made available whenever required for cases of infectious disease.
15. That these hospitals should not be used for small-pox, for which disease a separate hospital should be provided sufficiently distant from populous neighbourhoods. That convalescent homes for patients recovering from infectious diseases should be provided.
16. That the duties of medical officer of health should no longer be discharged by the sixteen dispensary medical officers, but that in future these duties shall be discharged by an assistant medical officer of health, who should receive an adequate salary, and give his whole time to the duties of his office.
17. That in future all sanitary inspectors appointed by the Corporation should be specially fitted for the discharge of their duties by their previous occupation and training, and that the number of lady inspectors should be increased, and their appointments made permanent.
18. That all work now done by the Public Health Department which properly is of an engineering or architectural nature should in future be under the control of the borough engineer or the city architect.
19. That new legislation should be introduced in regard to the letting, licensing, and control of tenement houses, and that the legal procedure in cases of prosecution for sanitary defects and nuisances should be materially shortened, and that there should be no appeal from the magistrates' decision on matters of fact.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

IN 1892 Sir Thomas Smith, Mr. Tweedy, the late Mr. Durham, and Mr. Marsh were elected members of Council. Sir T. Smith and Mr. Tweedy retire, having served their full eight years. Mr. Durham died in 1895, when Mr. Alfred Cooper was elected, and filled his place as substitute; hence Mr. Cooper retires in July. Mr. Marsh, when elected in 1892, filled the place of substitute member for Mr. Berkeley Hill, whose eight years were completed in 1894, when Mr. Marsh was re-elected, so that he retains his seat till 1902. The death of Mr. Davies-Colley makes a fourth vacancy. The candidate who comes in fourth will be his substitute till 1904, as Mr. Davies-Colley was elected in 1896. The President, Sir William Mac Cormac, had served eight years last July, but maintained his seat according to Charter, a member of eight years' standing not going out of office if President till the succeeding year. He retains his seat this year, being President, for the President always retains it for one year after the expiration of his year of office. Sir Thomas Smith will not seek re-election, but Mr. Alfred Cooper, and probably Mr. Tweedy, will once more be candidates.

The election on Thursday, July 5th, will begin at 1.30 P.M. Blank forms of the requisite notice from a candidate, and of his nomination, may be obtained on application to the Secretary, and the same must be received by him, duly filled up, not later than Monday, June 11th. A voting paper will be sent by post to each Fellow of the College whose address in the United Kingdom is registered at the College, on Monday, June 25th. This document is, let it be remembered, a voting, not a proxy, paper.

The Council is at present constituted as follows:

President.—Sir William Mac Cormac, Bart.; C, (1) 1883, (2) 1891; P, since 1896.

Vice-President.—Mr. Howse; C, (1) 1889, (2) 1897.

Vice-President.—Mr. Tweedy; C, 1892.

Other Members of Council.—Mr. Bryant; C, (1) 1880, (2) 1888, (3) 1896; P, 1890-92.

Sir Thomas Smith, Bart.; C, (1) 1880 (substitute), (2) 1884, (3) 1892.

Mr. Macnamara; C, (1885), (2) 1893.

Mr. Reginald Harrison; C, (1) 1886, (2) 1894.

Mr. Willett; C, (1) 1887, (2) 1895.

Mr. Pick; C, (1) 1888, (2) 1896.

Mr. Langton; C, (1) 1890, (2) 1898.

Mr. T. R. Jessop; C, (1) 1891, (2) 1899.

Mr. Marsh; C, (1) 1892 (substitute), (2) 1894.

Mr. H. Morris; C, (1) 1893 (substitute), (2) 1898.

Mr. Mayo Robson; C, 1893.

Mr. J. Hardie; C, 1894.

Mr. Alfred Cooper; C, 1895 (substitute for Mr. Durham till 1900).

Mr. Butlin; C, 1895.

Mr. Treves; C, 1895.

Mr. Davies-Colley; C, 1896.

Mr. Edmund Owen; C, 1897.

Mr. R. Godlee; C, 1897.

Mr. Watson Cheyne; C, 1897 (substitute for Mr. Oliver Pemberton till 1901).

Mr. Cross; C, 1898.

Mr. Page; C, 1899.

The following list shows the proportional representation of

metropolitan medical schools, of special hospitals in London, and of the provinces:

St. Bartholomew's	5	
Guy's	3	
King's College	1	
London	1	
Middlesex	1	
St. George's	1	
St. Mary's	2	
St. Thomas's	1	
University College	2	
Westminster	1	
Total number of members of Council attached to London schools		18
Members attached to special hospitals in London		2
Provincial members*		4
Total		24

* Leeds 2, Bristol 1, Manchester 1.

CONTRACT MEDICAL PRACTICE.

TREATING.

J.—For a medical man to send a sum of money to the general meeting of a friendly society for the purchase of drink when such meeting is about to appoint its surgeons for the coming year, the sender being a candidate for the appointment, would be highly improper.

FEES PAID TO FRIENDLY SOCIETIES' DOCTORS.

X. Y. Z., in reply to "S." (BRITISH MEDICAL JOURNAL, April 28th, 1900, p. 1030), writes: "S." can only take up one of two positions: Either refuse to take the club on the terms offered, in which case there is the chance, a remote one no doubt, that having been the doctor for twenty years they will rather grant the old terms than lose him, but what is more likely to happen is that some kind friend in the shape of a loyal medical brother will at once take on the club at the reduced terms, and so "S." will lose it; or to humbly accept the position and the reduced terms, and thank them for the honour conferred and confidence displayed in again electing him surgeon. How easy it would be, a little loyalty and combination of "S." 's *confrères*, and "S" would not be in the position he now is; but that loyalty and combination will never be. Adjudging the acceptance as "infamous conduct" by the General Medical Council is the only thing to meet this and similar cases, because sad though it be, interfering with the liberty of the subject if you please, until the end of time the undercutter will exist, and taking it out of his power to undersell is the only remedy. "Gray's" asks in a recent number how it can be done, and draws rather a hopeless picture of the attempt, but I do not see, as there seems great latitude in the meaning of the term, and that the Council can make anything "infamous conduct," such very great difficulty. The subject could be mooted at a general meeting and then remitted to a special committee to consider and report; and let us amuse ourselves further by supposing that such a report recommended a certain fixed sum in the case of adult male members, and of course a higher when families were included; then this is passed by the General Medical Council and the *fiat* goes forth. I venture to say all the contract doctors are delighted and forthwith send to the secretaries of their various clubs a copy of the resolution passed by the Council, which quite takes it out of their hands to accept less, and they will readily understand, of course, that it should be useless to try anyone else. Thus, then, would we all be better off, the undercutter included (unless he had his clubs on account of his cheapness), as we would have the same number of clubs with a reasonable, and I only ask a reasonable and fair increase. As to "Gray's" suggestion as to the difficulty of obtaining evidence in case of a transgression of the law. I do not see that it would be any more difficult—albeit disagreeable enough—than in the cases of the unqualified assistant. Again, this resolution is one which only goes to improve the financial position—that *re* the unqualified assistant did not—so I think very few would try to get around it. I sympathise with "S." that after twenty years' hard and faithful service for a totally inadequate remuneration this should be his reward.

P. writes: Having had over 20 years' experience in dealing with club patients, I am one of those anxious to see the time when medical men shall receive better pay. At the same time, from my experience, I am convinced that friendly societies are determined not to pay more than about 3s. to 3s. 6d. per annum, as they can so readily get some medical man to take their clubs at that price. I would suggest that if each medical man holding a club made a stipulation that all club patients must pay either one penny or one halfpenny per bottle for medicine, we should either greatly increase our pay or greatly lessen the demand for physic, for two-thirds of the physic is never taken.

MEDICAL FEES FOR PATIENT IN TWO CLUBS.

R. asks: If a member of a Foresters' Court, who pays for the services of the club surgeon, and is also a member of the National Deposit Friendly Society, in event of his being attended by the club surgeon, can the latter also claim payment from the National Deposit Friendly Society?

*** If the National Deposit Friendly Society contracts with the surgeon who attends any of its members to pay certain fees for such attendance, we are advised that the latter is entitled to receive these fees, in addition to any other fees due to him as surgeon to other societies of which his patient is a member. It is not uncommon for a man to belong to two clubs, and unless he can claim exemption on the score of being a country member, he is obliged to contribute to the medical fund of both clubs. Under such circumstances if both these clubs have the same surgeon he will be entitled to double fees.

NOVA ET VETERA.

THE CONTAGIOUSNESS OF CONSUMPTION FROM A HISTORICAL POINT OF VIEW.

THE history of medical opinion in regard to the communicability of the poison of tuberculosis is not altogether a record of which the profession has reason to be proud. We are all contagionists now, but less than a score of years ago the opposite doctrine was universal, except among some old-fashioned practitioners in out-of-the-way places.

Villemin, who proved that the disease is infectious, was treated with half-pitying contempt, and the "new learning" was looked upon as old foolishness. But the whirligig of time brings in strange revenges, and Villemin is now recognised as the prophet of truth.

Yet the profession was not converted till Koch made visible to the eye the living thing which "horsed on the sightless couriers of the air" carries the germ of consumption about the world, with death sitting *post equitem*.

In this case, as in some others, the popular instinct had been right, while scientific authority was wrong. It is hardly to be wondered at, therefore, that there is now some difficulty in rousing the public to the necessity of dealing with tuberculosis as a highly infectious disease. The notion of its non-infectivity has so penetrated the general mind, owing to the teaching of the profession, that it cannot now easily be eliminated. John Bull, who regards science with the suspicion of the "practical" man, looks upon the present doctrine as a theory which may in its turn again give way to its opposite.

The contagiousness of phthisis was known to the great *maestro di color che sanno*, Aristotle, who says that the breath of consumptives is poisonous to those about them. In the second century of the Christian era Galen warned people that it was dangerous to live intimately with sufferers from phthisis (*Periculosum præterea est consuescere cum his qui tabe tenentur*). Avicenna (980-1037) was a believer in the contagiousness of consumption. In the fifteenth century a French physician, named Baillon, observed the frequency of consumption among those who tended phthisical patients. In the sixteenth century, Montano said that the mere walking barefoot over the sputa of a consumptive was enough to breed the disease in a healthy man. In the same century Fracastorius (*De Contagionibus*, Venetiis, MDLXXXIV) said the contagion of phthisis was conveyed by the exhalations of the patient, and the virus remained active in bedclothes, etc., for two years. Cesalpinus, in his *Questiones Medicæ*, Lib. 1, published at Venice in 1593, wrote: *Multi præterea morbi contagiosi sunt, ut phthisis*, etc.

In the early part of the seventeenth century, Rivière of Montpelier taught that tuberculosis was transmitted by cohabitation, and attached more importance to contagion than to heredity as an etiological factor. Later in the same century Paolo Zacchia discussed from the medico-legal point of view the question whether, if a married person were consumptive, the other partner in the firm was obliged to discharge his or her matrimonial liabilities. The same problem, considered from the theological standpoint, exercised the casuistical mind of Sanchez, whose name has an unsavoury immortality from his treatise *De Matrimonio*, but as we wish to spare the blushes of our readers we refrain from quoting his remarks.

Morgagni (1682-1768) was so convinced of the infectivity of phthisis that he did not care to handle the bodies of persons who had died of the disease. He says: *Ego vero illa [cadavera] fugi, de industriâ adolescens, et fugio vel senex, tunc ut mihi, nunc ut studiosæ quæ me circumstat juventuti, prospiciam.* In 1752 Raulin, in his *Maladies Occasionées par les Promptes et Frequentes Variations de l'Air*, taught the doctrine of contagion, and urged that for its prevention the atmosphere should be purified with a mixture of "acid antiseptic vapours." Van Swieten (1700-1772) also regarded consumption as contagious.

Among the people everywhere this medical doctrine found

acceptance, and the public authorities in many places acted on it. At Nancy, in 1750, the furniture of a woman who had died of phthisis was publicly burnt by order of the magistrates. In Spain deaths from consumption were notified to the proper authorities in Valencia in 1699, and the effects of the deceased burnt under the eyes of the Regidor. A similar regulation existed in Zaragoza in 1729.

Reference was made by Professor Baccelli, Professor Pinto, Rector of the University of Naples, and one or two other speakers at the Congress recently held in that city, to the ordinance issued in 1782 by Frederick IV, King of Naples, for the prevention of consumption, as the first legislative enactment of the kind. This is inaccurate, for in 1754 the Grand Duke of Tuscany sought counsel from the Florence College of Physicians as to the contagiousness of phthisis. The medical oracles gave an ambiguous answer. Nevertheless, an ordinance was passed making the notification of all cases of consumption compulsory on medical practitioners under penalty of fine. In the event of death strict disinfection of the patient's dwelling according to the lights of the time was carried out. It was further ordered that "from time to time free ingress of air should be allowed into the patient's room," and that patients should not spit anywhere except into special vessels of glass or glazed earthenware, which were to be frequently cleansed.

In 1767 the Republic of Lucca passed a similar ordinance.

In 1772, on the strength of an opinion given by the Proto-Medico of Venice, in answer to a question by the Government of the Republic, it was decreed that the clothes or other effects which had been used by persons suffering from phthisis should not be sold or otherwise disposed of in any part of the Venetian territory till after proper disinfection, on pain of death, imprisonment, or the galleys. Notification was made compulsory on medical practitioners, and it is characteristic of the State in which the Bocca di Leone was regarded as an instrument of statecraft that secret notifications were received, and those giving information, authenticated with their names, to the authorities were rewarded. In the same year the Sacra Consulta of Rome issued a circular to all Governors in the States of the Church urging upon them the most vigilant care not to allow the sale of the clothes of persons who had died of that "pernicious communicable disease" (*il pernizioso communicabile morbo di etisia*). Notification was made compulsory, and for articles destroyed in the interest of the public health "limited compensation" was made. Meanwhile like precautions were taken in some parts of Spain. In 1751 the Tribunal del Protomedicato of Barcelona drew up a code of regulations for the repression of phthisis; physicians and surgeons were ordered, under severe penalties, to notify all cases of death from that disease, and instructions for disinfection were given.

The Neapolitan law of 1782, though not the first, was the most stringent of all. Not only cases of death but cases of illness had to be notified, and the penalties for breach of the regulations were extremely severe, ranging from heavy fines to imprisonment and the galleys for several years.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must include details of the precise character and objects of the research which is proposed, and must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C.

Reports of work done by the assistance of the Association grants belong to the Association.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for two of the three Research Scholarships which are vacant, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Forms of application for the scholarships can be obtained from the General Secretary.

FRANCIS FOWKE, *General Secretary.*

429, Strand, May 10th, 1900.

ASSOCIATION INTELLIGENCE.

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on July 11th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.—The next meeting of this District will be held at the Worthing Infirmary on Saturday, May 26th, at 4.30 P.M. Mr. G. B. Collet (Worthing) will preside. Dinner at the Royal Hotel at 6.30 P.M.; charge, 6s. Agenda: To decide place of next meeting, and to elect a chairman to preside thereat; to elect an honorary secretary. Papers:—Professor H. R. Spencer (London): On the Diagnosis of Pregnancy—a lantern demonstration. Mr. Milbank Smith (Worthing): The Advisability of Circumcision, with a note on the operation. Members having communications to make, or specimens or cases to bring forward, are requested to give notice to FRANK HINDS, M.D., 14, The Steyne, Worthing, Honorary Secretary.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.—The annual meeting of this District will be held at the Kent and Canterbury Hospital on Thursday, May 24th, at 3 P.M., Mr. W. K. Treves of Margate in the chair. Agenda:—Dr. Hoggan Ewart: Healthy Metabolism and some of its indications. Dr. Armstrong Bowes: Membranous Colitis. Dr. P. Lewis: Enuresis in Childhood: its Pathology and Cure. The annual dinner will take place at the County Hotel, at 6 P.M. Charge, exclusive of wine, 7s. It is hoped that the dinner will be well attended, and members intending to dine are particularly requested to communicate with the Honorary Secretary by May 22nd, so that adequate arrangements may be made. All members of the South Eastern Branch are entitled to attend and to introduce professional friends.—THOS. F. RAVEN, Barfield House, Broadstairs, Honorary District Secretary.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The annual meeting of this District for the election of officers will be held at the Royal Forest Hotel, Chingford, on Thursday, May 31st, at 6 P.M. At 6.30 P.M. the members will dine together. Tickets 7s. 6d., exclusive of wine. Morning dress. Members intending to be present and to introduce friends are requested to inform the Honorary Secretary on or before Saturday, May 26th.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

STAFFORDSHIRE BRANCH.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, May 31st. The President, Dr. Spence, will take the chair at 4.30 P.M. Agenda: Ballot for New Members; Correspondence; Exhibition of Living Cases. Papers:—Dr. McAldowie: Notes on Forty-two Cases of Inoculation for Typhoid Fever. Dr. Malet: Remarks on Some Cases where Hypodermic Treatment is Necessary. Dr. Codd: Exhibition of Local Electric Bath. Pathological Specimens, etc.—F. MILNES BLUMER, Stafford, Honorary Secretary.

MIDLAND BRANCH.—*Preliminary Notice.*—The annual meeting of this Branch will be held at Nottingham on Thursday, June 14th. Mr. A. R. Anderson, F.R.C.S., President-elect, will preside. The following papers,

etc., have already been promised. Address by the new president. Dr. H. Handford: Three cases of Cerebro-spinal Meningitis. Dr. Pope and Dr. Astley V. Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks as to the possible Connections of the Two Diseases. Members wishing to show cases or read papers are requested to communicate as soon as possible with FRANK M. POPE, 4, Prebend Street, Leicester.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—The annual meeting will be held at the Medical Institute, Edmund Street, Birmingham, on Thursday, June 21st, at 4 P.M. An address will be given by Dr. Milner Moore, President-elect. The annual dinner will take place at the Grand Hotel, Colmore Row, at 6.30 P.M.—WILLIAM F. HASLAM and J. T. J. MORRISON, Honorary Secretaries.

SHROPSHIRE AND MID-WALES BRANCH. The spring meeting of this Branch will be held at the Salop Infirmary on Tuesday, May 29th, at 3 P.M. Members who wish to bring forward any business, to read papers, to show cases or specimens, or to propose any new members, are requested to communicate with the Honorary Secretary.—HAROLD H. B. MACLEOD, College Hill, Shrewsbury, Honorary Secretary.

DUNDEE AND DISTRICT BRANCH.—The annual meeting will be held in Dundee Royal Infirmary on Friday, May 25th. By the courtesy of the Directors, the new Caird wards (Gynæcology and Obstetrics) will be shown to the members. Members having business to bring forward or patients to show at the Clinical Congress are requested to communicate with Dr. BUIST, Dundee, as early as possible.

DORSET AND WEST HANTS BRANCH.

THE annual meeting of this Branch was held at Weymouth on May 9th under the presidency of Mr. DECIMUS CURME. Forty-three members and visitors were present.

Vote of Thanks to Retiring President.—A vote of thanks was accorded to Mr. George William Graham, the retiring President, for his efficient services during his term of office.

Deceased Members.—Sympathetic allusion was made to the three members who had died during the past year: Dr. MacCarthy (Bridport), Mr. Pridham (Broadwey), and Dr. McLean (Weymouth), as well as to the estimable character of the late Dr. Drummond (Portland).

The late Dr. Allan McLean.—The following resolution was passed:

That the members of the Branch record their deep sense of the great loss they have sustained by the death of their former President, Dr. Allan McLean, and desire to convey to Mrs. and Miss McLean their heartfelt sympathy for them in their great sorrow.

Branch Council.—The following gentlemen were elected to fill the vacancies on the Branch Council: Dr. Peter William MacDonald (Dorset County Asylum), Dr. Henry Grabham (Lys), and Dr. William Vicary Snow (Bournemouth).

Representative on Association Council and Parliamentary Bills Committee.—Mr. C. H. Watts Parkinson was re-elected the representative of the Branch on the Council of the Association and on the Parliamentary Bills Committee.

New Members.—The following were elected members of the Branch: Mr. Frank Belben (Bournemouth), Dr. Alexander Bremner McCarthy (Bridport), Dr. George Alexander Reid (Bournemouth), and Mr. Oliver Fereira Naylor Treadwell (Portland).

Summer Meeting.—It was resolved that the summer meeting should be held at Ringwood.

Midwives Bill.—It was resolved to agree with the resolution of the Council of the Association:

That the Midwives Bill as amended by the Grand Committee on Law, and at present before Parliament, if it became law would be a direct danger to the public safety.

Discussion.—A discussion on Appendicitis, its Symptoms and Treatment, was opened by Dr. RAMSAY, one of the Vice-Presidents, and taken part in by Drs. MOORHEAD, LAWRIE, SNOW, WHITTINGDALE, LUSH, and Mr. PARKINSON.

Communications.—Dr. MOORHEAD exhibited a patient cured of myxœdema by thyroid extract.—Mr. PRIDMORE: A case of tumour at the base of the brain (patient shown).—Dr. LAWRIE: The indications for the removal of the uterine appendages.

Luncheon.—The Weymouth members entertained the Branch to luncheon at the Royal Hotel.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.

THE half-yearly ordinary meeting of this Society was held at Portsmouth on May 10th. The PRESIDENT (Dr. F. Lord) occupied the chair, and there were twenty-five members present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Member.—Dr. R. A. Dove was elected a member of the Branch and District.

Correspondence.—Letters were read relating to the following matters: (1) The candidature of Dr. Ward Cousins for election to the Council of the Royal College of Surgeons of England. (2) The Midwives Bill. (3) A letter from Surgeon-General Davis inviting subscriptions to the BRITISH MEDICAL JOURNAL Half-crown Fund for the men of the R.A.M.C. serving in South Africa.

Financial Report.—The financial report for the past year, as audited, was adopted.

The Medical Library.—The report of the Honorary Librarian, which showed increased usefulness and interest amongst the members, was adopted.

Election of Officers.—The following officers were elected for the ensuing year:—*President:* Surgeon-General C. McD. Cuffe, C.B. *Vice-Presidents:* Drs. Hackman and E. W. Phillips. *Council:* Drs. Kelso, Childe, J. Phillips, L. Maybury, McEldowney, and Malpas. *Honorary Librarian:* Dr. F. Lord.

Introduction of New President.—The retiring President having vacated the chair, it was taken by Surgeon-General Cuffe.

Cases.—Dr. WATSON showed a patient suffering from aortic aneurysm with great dilatation and tortuosity of the arteries of the extremities.—Dr. MONTAGU WAY showed a case of an unusual form of erythema. The disease first declared itself six years ago. The patches were of a dark purple colour, and faded very little, if at all, when once established.—Dr. CHILDE related the particulars of a case of bilharzia occurring in a girl, and exhibited a microscopical preparation of the ova.

Pathological Specimens.—Dr. WATSON exhibited a specimen of calcification of the aortic valves.—Dr. CHILDE showed a tumour in connection with a varicose vein which he had recently removed. The growth was in the course of the right internal saphenous vein near the knee-joint, and on cutting into it the communication with the vein was apparent, and it contained a recent blood clot. The exact pathology of the case was thought to be doubtful; either it was an old hæmatoma or an unusual form of pouch-like dilatation.

President's Address.—The PRESIDENT (Surgeon-General Cuffe) gave a brief but interesting address, bearing chiefly on the great advantages likely to result from the present cordial relationship which exists between the military and civil members of the profession, special mention being made of their united action at the seat of war in South Africa.

SPECIAL CORRESPONDENCE.

BRISTOL.

Presentation to Mr. L. M. Griffiths, Assistant Editor of the Bristol Medico-Chirurgical Journal.—The Medical Dramatic Society.—Plague and Rats.

THE final meeting for the session of the Medico-Chirurgical Society on May 9th was the occasion for a presentation to Mr. L. M. Griffiths, who has retired from the post of assistant editor of the *Bristol Medico-Chirurgical Journal* after seventeen years' work. The testimonial consisted of an illuminated address, a silver bowl, a set of books in a bookcase, a book-plate, and a cheque for over £100. The presentation was made by Mr. W. H. Harsant, the President of the Society; and several members who had been associated with Mr. Griffiths in the starting of the *Journal* or had worked with him on the Journal Committee testified to the indefatigable energy, untiring zeal, skill, and patience exhibited by him in his position as assistant editor. When the *Journal* was started the late Mr. J. Greig Smith and Mr. Griffiths were entrusted with the task of editing, and when after some years of success a Committee was appointed to manage it, Mr. Griffiths retained the post of assistant editor. During seventeen years he has thrown much energy into the work, no detail in the editing being too small to be overlooked. So that the subscribers, feeling their great obligation to him, could not let his retirement pass unnoticed. Owing to the skilful manner in which he has done his work, and the consequent success of the *Journal*, the

Society now possesses one of the best libraries in the kingdom, for the profits have been to a great measure expended in buying books, while numerous publications of all sorts are received for review or in exchange, all of which are added to the library. Mr. Griffiths has earned the gratitude of the medical profession of Bristol and the neighbourhood, and the immense amount of work he has done, solely as a matter of love, rendered it imperative that some signal mark of recognition should be made.

The Medical Dramatic Society, after their annual performance, gave a second one on Saturday, May 12th, on behalf of the fund to relieve the distress caused by the Ottawa fire. The piece was the *Professor's Love Story*, and was performed twice before well-filled houses.

The medical officer of health, in his report for the Bristol Port Sanitary District, gives some interesting facts as to the system of "forward notification" of suspected cases of plague. In 1899 three of these were received from London, Southampton, and Cardiff respectively relating to passengers arriving from Spain and Portugal, while seven other passengers from infected ports were watched. Five vessels were disinfected, special efforts being made to exterminate the rats on board, which had been shown in many instances to be the conveyors of the plague bacillus. Dr. Davies calls attention to this fact, citing the experience at Bombay, Karachi, and Karod, and suggests that systematic efforts should be made to kill the rats and means taken to prevent their gaining access to the quay. These methods have been adopted in Denmark and Russia, a flanged iron pipe being slipped over the mooring cable.

CORRESPONDENCE.

CUTTING DOWN SALARIES.

Sir,—When a young man at the end of his five years' curriculum becomes a registered medical practitioner, he is generally supposed to be worth £100 per annum in the labour market, or at least £80 with board and lodging. Let us see how this works out according to the advertised public vacancies in the British Medical Journal of May 12th.

The South Shields Dispensary offers £50, with board and residence, and—perhaps wisely—says the appointment will be terminable by a month's notice.

Tiverton Infirmary and Dispensary offers £75, with board and residence.

Miller Hospital and Dispensary offers £40 for a junior and £60 for a senior resident, with board and washing.

Royal Portsmouth Hospital offers £50, with board and residence, for an assistant house-surgeon.

Teignmouth Hospital offers £50, with board, lodging, and washing for a qualified house-surgeon.

Northampton Infirmary offers a qualified assistant to the house-surgeon an honorarium of £25 for six months, with board, lodging, and washing.

General Hospital, Birmingham, wants two qualified assistant house-physicians, and a house-surgeon without salary, but residence, board, and washing will be provided.

Sussex County Hospital wants a qualified house-physician at £50, and a qualified resident pathologist at £40, with board, residence, and washing.

Great Northern Hospital offers a qualified house-physician £60, and a qualified junior house-physician £30, with board, lodging, and washing.

Liverpool Northern Hospital offers an assistant house-surgeon £70, with residence and maintenance.

Birkenhead Borough Hospital offers a visiting house-surgeon £75, with board, lodging, and washing, but no liquor!

Salop Infirmary wants a registered assistant house-surgeon for £40, with board and washing.

North-West London Hospital offers a resident medical officer and an assistant £50 each, and nothing is said of board and washing.

Birmingham Eye Hospital offers an assistant house-surgeon £60, with apartments and board.

Birmingham Hospital for Skin and Urinary Diseases wants a qualified clinical assistant, apparently with an honorarium!

Leeds General Infirmary wants a house-surgeon, with board, lodging, and washing provided!

Halifax Infirmary wants a third house-surgeon at £50, with residence, board, and washing.

Jessop Hospital for Women offers a house-surgeon £50, with board, lodging, and washing.

New Hospital for Women wants two fully-qualified medical women as assistant anæsthetists and two qualified medical women as house-physician and house-surgeon, apparently without fee or reward!

It is about time that the authorities of our hospitals and dispensaries should learn that registered practitioners are not to be had at about half their market value, and that so-called charities must begin to practise that "charity at home" of which they so often stand in need themselves.—I am, etc.,

May 15th. Observer.

INTERNATIONAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

Sir,—We are directed by the Council of the British Gynæcological Society and by the Organisation Committee of the International Congress to request your kind insertion of the following reply to the letter appearing under the above heading in the British Medical Journal of May 12th.

In the letter signed by the past and present teachers of gynæcology and obstetrics in the metropolitan medical schools, and in the covering letter of Dr. Playfair, two reasons are assigned for the inability of the signatories to take any share in promoting or joining in this Congress:

1. That those who have issued this invitation have assumed a representative position to which they are, in the opinion of the signatories, not entitled, and which they, the signatories, find themselves unable to recognise.

2. That the signatories object to the manner in which Professor A. R. Simpson was elected President of the Congress.

(1) With regard to the first point, the British Gynæcological Society, who issued the invitation, is not concerned to defend itself against the opinion held by the signatories that it "has assumed a representative position to which it is in their opinion, not entitled." If a glance through the list of Fellows of the Society were not sufficient to correct such an opinion, the fact that the Permanent Committee of the International Congress of Gynæcology and Obstetrics, representing the leaders of these branches of medicine on the Continent and in America, requested the Society to repeat the invitation which it issued first in 1896, testifies to the opinion of the Society's representative character which is at least held abroad. In accordance with this request the invitation was repeated at Amsterdam in 1899, being personally presented by Dr. Robert Barnes, Honorary President of the British Gynæcological Society, and an ex-President of the Obstetrical Society of London.

(2) As to the manner in which Professor Simpson was elected—he was nominated at a meeting of Council of the British Gynæcological Society, on whom the duty necessarily devolved. Professor Simpson was nominated on the grounds, first, that he was an ex-President of the Society, and one of its most honoured Fellows; secondly, that before the Society's invitation was accepted his name was suggested by members of the Permanent Committee on the Continent and in America as that of a man who would be acceptable to all the members of the Congress.

In conclusion we can only express our regret that our *confrères*, the teachers of gynæcology and obstetrics at the metropolitan medical schools, should have found themselves obliged to come to the decision expressed in their letter.—We are, etc.,

(Signed) W. J. Smyly,
President British Gynæcological Society.

H. Macnaughton-Jones,
Chairman Organisation Committee of the International Congress of Gynæcology and Obstetrics.

Arthur E. Giles,
Honorary Secretary of the British Gynæcological Society and of the Organisation Committee of the Congress.

May 15th

THE UTILITY AND THE ETHICS OF EXPERIMENTS ON ANIMALS.

SIR,—I did not give you time to send me a proof of my reply to Mr. Coleridge in the BRITISH MEDICAL JOURNAL of May 12th.

Two or three smaller errors scarcely need correction; but one is so serious, I must correct it at once. This error, which no doubt was my own, is in the paragraph referring to Mr. Joseph Fry's pamphlet, wherein I state that Mr. Fry and his co-signatories of the Society of Friends would consider experiments upon animals morally justified if the rewards of it, in the cure or prevention of disease, be substantial. It was my intention to say exactly the reverse. I gathered from their reply to me that no such advantages would in their opinion justify the method. I may add that, illogically, my correspondent went on to weaken his position by arguing that as yet the advantages derived are doubtful. I may be excused, then, for some momentary confusion.—I am, etc.,

May 12th. THE REVIEWER.

THE FRIENDS ON VIVISECTION.

SIR,—Mr. Lester Reed publicly endorsed sweeping and uncompromising accusations against "vivisectors," which when simply turned against "Quakers," he at once feels to be insulting and unwarrantable. Then this same Chairman of the Friends' Antivivisection Society writes to me that he "does not object to vivisection in so far as it is painless;" he merely "objects to such as must involve torture," he is "unaware of the extent to which it may involve grievous torture," "but if it can be demonstrated that in England there is none, so much the better."

Of course, if he only knew it, these reservations do by inference withdraw his accusations. Clearly he has been deceived by the second-hand perversions of fact and question-begging epithets of professional antivivisectors. He supposed "vivisection" was synonymous with "torture." And he described vivisectors as men who care nothing for the tortures they habitually inflict, and are therefore degraded Had Mr. Lester Reed allowed me to prove these fundamental beliefs of his to be without foundation, then I am sure he would have definitely withdrawn the charges he founds upon them. But though I distinctly asked him for any evidence of the existence of this grievous torture which is so degrading, and six times repeated the question, yet on each occasion Mr. Reed avoided any attempt to indicate even a single instance.

Surely when a gentleman petitions the profession to alter its settled convictions, and begs for our support, we have a right to ask what the facts are upon which these appeals are founded?

And I hope you will allow me to remind Mr. Lester Reed that unless he proves those insulting charges publicly made, he must publicly and unreservedly withdraw those charges if he would preserve an honourable reputation.—I am, etc.,

Croydon, May 1st. ARCHIBALD DUKES.

CHEMISTS' TRAVELLERS.

SIR,—Can any of your readers suggest a method of stopping the constant touting for orders by wholesale druggists and other firms? Every day circulars are received through the post or samples forwarded for approval and purchase by medical men. This method is adopted *ad nauseam* by American houses, and the British firms are to a certain extent following the example set. Only the other day I received a letter from an American graduate, who represents a wholesale drug store, recommending some tonic. This is not the only inconvenience. We are troubled by commercial travellers and representatives of various firms, who are constantly gaining admission to the waiting-room during consulting hours and at other inconvenient times.

I have a notice in my hall to the effect that I cannot interview commercial travellers who call on business. This has had some effect in stopping them; but the only way will be for medical men as a body to return or destroy all letters, circulars, or samples received, and to refuse to see any representatives from druggists or instrument makers. A firm with a German name is continually forwarding medical tablets in pill-boxes glued on to the envelope. These I do not open, as I consider that these chemists simply require professional men to find a sale for their drugs and to serve their own ends.

Medical tablets I never recommend or prescribe. Only recently a patient of mine, when in the country, had some maker's ergot tablets written down in a prescription, to be taken every four hours. The consequence was that they were purchased at various shops and at various times and taken *ad libitum!* I discovered this after about 15 or 16 had been taken in about twenty-four hours.—I am, etc.,

May 8th. M.D., M.S.

LIGHT RAYS AND X RAYS IN PHTHISIS.

SIR,—The interesting paper by Dr. Scholefield in the BRITISH MEDICAL JOURNAL of May 5th, on the curative effect of the *x* rays in lupus, and his suggestion with regard to their possible use in the treatment of phthisis, reminds me of a recent conversation with a patient in whom pulmonary phthisis had been arrested for three years. After having spent some weeks at Bournemouth he came to Clacton-on-Sea, and remained here for four months. He soon began to improve, but the lion's share in his recovery he attributed to his habit of sitting for hours exposed to the hot rays of the sun in a prominent position on the pier. The opinion of an intelligent layman is always worthy of consideration, and an investigation into the therapeutic influence of the *x* rays in phthisis cannot fail to be of the greatest importance.—I am, etc.,

Clacton-on-Sea, May 5th. WALKER OVEREND, M.A.Oxon.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

CHANGES OF STATION.

THE following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Lieut.-Col. P. J. Dempsey, M.D.	Bengal	Bombay.
,, J. G. Harwood	Punjab	,,
Major C. J. Addison	South Africa	Devonport.
,, J. McLaughlin, M.D.	Barbadoes	South Africa
,, J. Meek	,,	,,
,, M. L. Hearn	Straits Stlmts	Aldershot.
Captain G. S. McLoughlin, M.B., D.S.O.	Aldershot	South Africa.
Quartermaster H. J. F. Andus	South Africa	Netley.

Lieutenant-Colonel J. Latchford, M.B., has been transferred from Bodmin to Devonport.

Major Sir J. R. A. Clark, Bart., retired pay, has proceeded to South Africa; and Lieut.-Colonel J. S. MacAdam, retired pay, has been placed in medical charge of troops in the Southern District.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: EDWARD T. BURTON, Surgeon, to the *Sandpiper*, May 9th; HENRY R. GARDNER, M.B., Surgeon, lent to Pembroke Dockyard, temporarily, May 11th.

ARMY MEDICAL SERVICE.

BRIGADE-SURGEON WILLIAM LANGWORTHY BAKER died on January 19th last. He was appointed Assistant Surgeon, June 22nd, 1858, and Surgeon-Major, April 1st, 1873. He was granted retired pay, with the honorary rank of Brigade-Surgeon, June 10th, 1880.

Brigade-Surgeon ROBERT HYDE died at Rathmines, Dublin, March 30th. He entered the service as Assistant Surgeon, March 31st, 1864; became Surgeon, March 1st, 1873; Surgeon-Major, April 28th, 1876; and Honorary Brigade-Surgeon on retirement, January 21st, 1885.

COLDSTREAM GUARDS.

MAJOR JOHN F. BATESON, M.B., from Royal Army Medical Corps, to be Surgeon-Major Coldstream Guards, *vice* A. C. A. Alexander, deceased, May 12th. Surgeon-Major Bateson has seen service in various parts of the world, including a tour with the Egyptian Army, but has not previously been in a Guards regiment.

ROYAL ARMY MEDICAL CORPS.

SURGEON-CAPTAIN FRANCIS W. GRANT, 1st Banff Volunteer Artillery, is granted the temporary rank of Captain whilst serving in South Africa, May 12th.

The undermentioned Surgeons on probation are appointed Lieutenants, dated April 25th: THOMAS BIGGAM, M.B., HUGH RICHARDSON, M.B., WM. L. BAKER, FREDERICK W. COTTON, FRANK M. PARRY, M.B., BERTRAM R. DINNIS, M.B., JAMES S. TWIGG, M.B., WILLIAM J. P. ADYE CURRAN, JOHN POWELL, M.B., ROBERT L. ARGLES, JOHN G. FOSTER, M.B., ERNEST G. FORD, M.B., FRANCIS S. WALKER, LYDMAR M. PURSER, M.B., WILLIAM BENNETT, M.B., PHILIP G. STOCK, HAROLD B. FAWENS, M.B., THOMAS E. FIELDING, M.B., EVELYN P. SEWELL, M.B., CHARLES H. STRATON, BASIL S. BARTLETT, ROBERT T. BROWN, M.B., GEORGE CARROLL, DERMOT O'HYDE, M.B., ALBERT E. HAMERTON, GEORGE J. HOUGHTON, JOHN G. CHURTON, ARTHUR D. WARING, M.B., THOMAS H. STEVENSON, M.B., JAS. M. CUTHBERT, M.B., FARQUHAR MCLENNAN, M.B., A FRED F. WESTON

JAMES DORGAN, M.B., CHARLES H. FURNIVALL, JAMES H. ROBINSON, FITZGERALD C. FITZGERALD.

Surgeon-Captain E. J. G. BERKLEY, 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment), is granted the temporary rank of Captain whilst serving in South Africa, May 16th.

Major A. G. KAY, M.B., who is serving in the Punjab Command, has assumed duty as Surgeon to Sir Power Palmer, Provisional Commander-in-Chief in India.

Captain HENRY ESMONDE DOWSE died of enteric fever at Bloemfontein on May 5th, aged 32. He joined the department as Surgeon-Captain, January 31st, 1891, and served with the Chitral Relief Force in 1895, receiving the Frontier medal with clasp. He went to South Africa in October last.

The following officers, serving in Natal, have been discharged from hospital to duty: Lieutenant-Colonel R. W. MAPLETON, Major B. W. C. DEEBLE, Captain W. A. WARD, Captain J. H. CAMPBELL, Lieutenant R. E. G. PHILLIPS.

MILITIA MEDICAL STAFF CORPS.

SURGEON-CAPTAIN W. WARING is promoted to be Surgeon-Major, May 9th.

INDIAN MEDICAL SERVICE.

COLONEL T. J. MCGANN, of the Madras Establishment, is granted the temporary rank of Surgeon-General from April 4th, while officiating as Principal Medical Officer, Madras Command.

Lieutenant-Colonel R. N. STOKER, Bengal Establishment, is permitted to retire from the service from April 2nd. He was appointed Assistant Surgeon September 30th, 1874, and became Surgeon-Lieutenant-Colonel September 30th, 1894. He was in the Afghan war in 1879 (medal), and with the Sikkim Expedition in 1888 (medal with clasp).

Deputy Inspector-General JAMES BOYD FLEMING, M.D., Madras Establishment, died at Edinburgh on May 7th. He entered the service as Assistant Surgeon April 17th, 1846; became Surgeon-Major April 17th, 1866; and retired September 13th, 1871. He was granted the honorary rank of Deputy Inspector-General August 21st, 1872.

THE VOLUNTEERS.

SURGEON-LIEUTENANT COLONEL W. WICKHAM, Gloucestershire Yeomanry (Royal Gloucestershire Hussars), resigns his commission, retaining his rank and uniform, May 9th.

Surgeon-Captain HERBERT BRAMWELL, M.D., from the 2nd Volunteer Battalion the Gloucestershire Regiment, to be Surgeon-Captain in the Gloucestershire Yeomanry (Royal Gloucestershire Hussars), May 9th.

Surgeon-Lieutenant R. G. P. LANSDOWN, M.D., 1st Gloucestershire Artillery, is promoted to be Surgeon-Captain May 9th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated May 9th: JAMES R. BIBBY, M.B., 1st Gloucestershire Artillery; ARCHIBALD W. CUFF, M.B., 4th West Riding of Yorkshire Artillery (Western Division Royal Garrison Artillery); JOHN ORTON, 2nd Volunteer Battalion the Royal Warwickshire Regiment; JOHN G. MOYLES, M.B., 5th (Irish) Volunteer Battalion the King's (Liverpool Regiment); GEORGE T. SINCLAIR, M.D., 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders. The following are dated May 16th: ARNOLD J. GREENE, 2nd Lancashire Artillery; DAVID J. DUHIG, 2nd Middlesex Artillery; FRANK LOUD, 1st Sussex Artillery (Eastern Division Royal Garrison Artillery); WILLIAM G. GALLETLY, M.B, 4th Volunteer Battalion the Norfolk Regiment.

Surgeon-Lieutenants T. H. FISHER, 3rd Volunteer Battalion the King's (Liverpool Regiment), and J. HOWARD-JONES, M.B., 4th Volunteer Battalion the South Wales Borderers, are promoted to be Surgeon-Captains, May 16th.

Surgeon-Captain R. T. C. ROBERTSON, M.B., 2nd Volunteer Battalion the Cameronians (Scottish Rifles) is promoted to be Surgeon-Major, May 16th.

Surgeon-Lieutenant C. B. SCOTT, M.D., 1st Volunteer Battalion the Royal Sussex Regiment, resigns his commission, May 16th.

Lieutenant G. A. STEPHENS, M.D., 3rd Glamorgan Rifles, resigns his commission, and is appointed Surgeon-Lieutenant, May 9th.

Surgeon-Lieutenant A. B. WHITTON, 6th Volunteer Battalion the Gordon Highlanders resigns his commission, and is appointed Captain, May 9th.

VOLUNTEER MEDICAL STAFF CORPS.

MR. WILLIAM L. BENTLEY is appointed Surgeon-Lieutenant in the Manchester Companies, May 9th.

VOLUNTEER MEDICAL STAFF.

THE annual dinner of the Volunteer Medical Staff will take place at the Trocadero Restaurant, Piccadilly Circus, on Tuesday, May 22nd, at 7.30, Surgeon-General Evatt, Principal Medical Officer, Devonport, in the chair. In case any volunteer medical officer has not received notice of the dinner, full particulars can be obtained on application to Surgeon-Lieutenant Bidwell, 59, Wimpole Street, W.

VOLUNTEER MEDICAL STAFF CORPS.

LONDON COMPANIES: PROPOSED VOLUNTEER RESERVE.

PAST members, who have been returned six times efficient in the past ten years, are requested to inform the commanding officer before May 23rd if they are willing to register their names for service in case of invasion. Address the Adjutant, V.M.S.C., 51, Calthorpe Street, Gray's Inn Road, W.C.

VOLUNTEER MEDICAL ASSOCIATION.

THE next Proficiency Class will commence on Tuesday, May 22nd, at the headquarters of the Volunteer Medical Staff Corps (by kind permission of Lieutenant-Colonel J. E. Squire) at 5 o'clock. The Correspondence Class will commence in the same week. For particulars apply to Surgeon-Captain Harper, 25, Rosary Gardens, South Kensington, Hon. Secretary to the Proficiency Class

TEMPORARY EMPLOYMENT OF RETIRED MEDICAL OFFICERS.

WE have received several letters stating that the remuneration given under Article 488 of the Pay Warrant to retired medical officers temporarily employed—namely, £150 a year, less income-tax but *plus* their pensions—is insufficient to meet the expenses and other financial sacrifices, such as keeping up two establishments, which have often to be faced. One correspondent states that all officers, except the medical, who come up for duty at depôts or in the new reserve battalion receive £100 towards providing themselves with uniform, etc. At present retired medical officers in charge of hospitals, it is stated, have not infrequently to act as their own clerks and compounders of medicine, all trained men of the Royal Army Medical Corps having been sent to the war. A comparison is also made between civil surgeons employed at from £270 to £365 a year and the £150 given to retired officers; but the former must have a "living wage" or they would not accept employment at all. Of course, it may be argued that, pensions having already been earned, it is not right to include them in a consolidated "living" salary. But retired medical officers so paid cannot grumble, because it is part of their bargain with the State, even if it be admitted that the practical addition of 7s. 6d. a day to the pension is inadequate for the valuable nature of the services given as well as for family sacrifices which may be entailed. We have hitherto distinctly understood that the retired medical officers who are serving on "invitation" received full pay and allowances; four are actually serving at the seat of war.

ASHANTI.

SIR F. HODGSON, the Governor of the Gold Coast, in his telegraphic report, dated April 30th, to the Colonial Office of the fighting at Kumassi, states that Medical Officer Tweedy and Medical Officer Macfarlane were both slightly wounded.

SUPERSESSION?

JUNIOR writes: Your Capetown correspondent in the BRITISH MEDICAL JOURNAL of March 31st suggests that commissions should be given in the R.A.M.C. to certain of the civil surgeons who have done good service during the war, and adds that some of the older of them might commence with the rank of captain. To the giving of commissions as lieutenants there could be no objection, and the idea is excellent; but to supersede existing lieutenants by bringing in captains over their heads would be unjust, and give rise to serious opposition.

TEMPORARY COMMISSIONS FOR CIVIL SURGEONS.

M.D. writes: The position of civil surgeons now doing most of the medical duties in garrisons is most unsatisfactory. For six months I have had charge of troops at a large station hospital, and had found it necessary to mark men for going sick without due cause, and for other irregularities. I have noticed that, although formerly civil enough, they now refuse to salute me, or stand to attention when I pass. It is quite clear that unless civil surgeons employed are granted temporary commissions, their position remains very unsatisfactory.

*** The position of civilians placed in charge of military hospitals, or otherwise involved in matters affecting the discipline of soldiers, is wholly anomalous, and, probably, in military law indefensible. They have no military status or legal authority over enlisted men, and cannot enforce or carry out a military order, so far as we understand the Army Act. When a soldier salutes an officer, it is not the individual but the Queen's commission which is honoured. A civilian is not entitled to, and cannot enforce or expect, a military salute from a soldier except as a matter of individual courtesy. In military law, the position of a civil surgeon in charge of troops would, if looked into, probably be found to be illegal.

PAY OF MEDICAL OFFICERS WHILE CAMPING.

SURGEON-CAPTAIN would be feel obliged if any one could tell him what pay surgeon-captains of 2½ years' standing are entitled to while camping out this year, whether they draw: (*a*) as a simple combatant captain, (*b*) as surgeon-captain, (*c*) and what the field allowance and other extras are likely to come to.

*** A surgeon-captain will draw the pay of his rank and service in the R.A.M.C., namely, under 5 years' service, £200 per annum; over 5 years' service, £250 per annum. The allowances are: Field allowance, 3s. a day; messing allowance, 4s. a day; lodging (to cover tent furniture) 1s. 6d. a day; servants, 1s. a day. Altogether about 8s. 6d. to 10s. a day. This is only given for at least 14 days in camp.

MEDICO-LEGAL AND MEDICO-ETHICAL.

AN ACTION FOR FEES.

THE case of Anderson and Another *v.* Moeller, which was heard before the Lord Chief Justice and a Special Jury on May 7th, 8th, and 9th, was an action brought by Dr. William M. A. Anderson, of 37, Wimpole Street, and Dr. Robert Fenner, of Birchin Lane, E.C., against Charles Moeller, a clerk in a stockbroker's office, to recover the sum of £144 18s. for medical and surgical attendance. The defence was that the plaintiffs' professional services had been of no value owing to want of skill. The defendant also counterclaimed for damages for negligence.

Mr. Tindal Atkinson, Q.C., and Mr. Eldon Bankes appeared for the plaintiffs, Mr. Lawson Walton, Q.C., and Mr. Shearman for the defendant.

It appeared that the defendant went to Dr. Fenner on April 5th showing symptoms of articular rheumatism. He was sent, with his own consent, to a nursing home in Devonshire Street, where he was attended by Dr. Anderson. On further examination it was found that he was suffering

from endocarditis. Both Mr. Alfred Cooper and Sir Lauder Brunton, who were called in consultation, agreed with the plaintiffs' diagnosis and treatment. While the defendant was at the home phlebitis set in. He was attended until April 20th, when the plaintiffs declined to attend him further, owing to his having taken a dose of antipyrin without their orders.

Among the allegations made by the defendant in his counterclaim and during the case were the following: 1. That they had made a wrong diagnosis of his case. 2. That he had been subjected by the plaintiffs to unnecessary pain by the immersion of his leg in hot soda baths, and that his leg had been heated to 300° F., whereas it was alleged on the other side that footbaths heated to 100° and a proper cylinder had been used. 3. That on two separate occasions the plaintiffs had forcibly straightened his right leg without obtaining his consent; whereas it was alleged for the plaintiffs that Dr. Anderson straightened the limb on May 5th, while the defendant was under an anæsthetic; and on June 16th, the defendant having refused to have an anæsthetic administered, the same operation was performed as gently as possible.

Dr. Anderson gave evidence to the effect that, unless the defendant's leg had been straightened, there would have been a danger of ankylosis. Dr. Fenner said that on June 16th it was found necessary to straighten the limb for the second time, and that the defendant's protests on this occasion were confined to the use of the anæsthetic.

Mr. Christopher Heath, F.R.C.S., and Sir Thomas Smith, F.R.C.S., both gave evidence as to the propriety of the plaintiffs' treatment.

The plaintiffs' charges were two guineas for the first and one for each succeeding visit.

In the witness box the defendant gave the following evidence, together with much more of a similar character: "Dr. Barton came in with his anæsthetic apparatus, and they tried to persuade witness to consent. He refused to give his consent, and told them to leave him. He found that some anæsthetic was being pushed by Dr. Fenner near his face. He then became frightened, and shouted out that they were to leave him. Then Dr. Fenner threw off his coat and said he did not care, the operation should be done. He then seized the witness's leg, and the pain was so great that he fainted." He admitted in cross-examination that Sir Lauder Brunton had written to Dr. Hoffmann (defendant's brother-in-law) to say that the patient was going on very well. He also admitted that he was not anxious to have a stiff leg for life.

A number of witnesses having been called on behalf of the defendant,

The Lord Chief Justice summed up the case to the jury. In the course of his address he said: Doctors are men who depend on their reputation for making their way in the world, and all their interests point to the kindly, careful, and skilful treatment of their patients. Any allegation, therefore, of incompetence or cruelty must be examined with great care. .....With regard to the question whether the plaintiffs' claim for fees was reasonable, there was no law to prevent a medical man from charging what he liked, provided he made a stipulation beforehand. Here no such agreement was made, and it was for the jury to say what were fair and reasonable charges in this case. Dealing with the allegations made by the defendant, his lordship said that he could see no foundation for defendant's claim that the plaintiffs made an incorrect diagnosis. The symptoms were those of articular rheumatism, and there was no evidence of negligence on the plaintiffs' part. With regard to the immersion of the defendant's leg in soda baths or hot-air cylinder, there had been no injurious after-effects, and relief had followed their use. As to the operation of straightening the leg on June 16th, it was admitted on all hands that the operation was a necessary one, and if not carried out lameness would have ensued. Again, the defendant's complaint was that he only consented to the operation if Sir Lauder Brunton was present, and there was evidence that numerous unsuccessful attempts were made to have him present. There was also evidence that the plaintiff actually did give his consent, and the allegation of negligence in the performance of the operation rests only on the evidence of the defendant himself. A medical man was bound to bring to the discharge of his duty only reasonable care, skill, and knowledge, and if there was any valid ground for coming to the conclusion that that had not been done in this case then the jury must award to the defendant on his counterclaim such compensation as they thought proper.

The Jury found a verdict for the plaintiffs for 100 guineas on the claim. They also found for the plaintiffs on the counterclaim and added a rider to the following effect: "We are of opinion that the plaintiffs treated the defendant with all reasonable care and skill, and we attach no blame to them whatever."

*** We have been asked by the plaintiffs to state that the above action was brought by them in order to clear themselves of the aspersions made on their character by the defendant. The amount of the claim in this particular instance and the proverbial reluctance with which all members of the medical profession seek to enforce payment of their fees by action at law would be sufficient to protect the plaintiffs from any charge of bringing an action for mercenary reasons. We are glad to find that the Lord Chief Justice in his summing up, and the jury by a rider to their verdict, have completely absolved the plaintiffs from the imputations made against them.

PRIVATE PATIENTS IN PUBLIC HOSPITALS.

MR. PATRICK J. HAYES, Senior Surgeon to the Mater Misericordiæ Hospital, Dublin, has obtained a verdict for £50 against a gentleman whose leg he amputated in the hospital. The defendant considered that a donation of £10 which he had given to the funds of the hospital cleared him of any further obligation in the matter. However, the jury did not agree with his view and fixed his indebtedness to Mr. Hayes at the sum stated. In the case of the Dublin hospitals which receive a grant from the Hospital Sunday Fund, it forms part of the conditions under which the grant is given that the medical officers shall receive no fees from private patients, but the Mater is not under this obligation.

THE APOTHECARIES' HALL, IRELAND.

F. C. W.—The L.A.H. Dublin, 1882, entitled the holder to be placed on the *Medical Register*.

"DOCTOR'S SHOPS."

DR. RIVERS WILLSON (Oxford) writes: Referring to your reply to "P.G.L. in the medico-legal column of the BRITISH MEDICAL JOURNAL for May 12th, I beg to state that the Royal College of Physicians of London by one of its by-laws, and by the wording of the diploma granted, prohibits the dispensing of medicines by its Licentiates for others than their own patients. This prohibition would certainly debar Licentiates from keeping shops. The Royal College of Physicians of Ireland requires Licentiates to subscribe a declaration, portion of which is an undertaking not to keep an open shop for the sale of medicines. I do not know that the Edinburgh College has any regulation on the subject, but judging from the number of its Licentiates who keep shops in Glasgow and elsewhere I should think there is no prohibition.

SALARY OF ASSISTANT DISMISSED FOR MISCONDUCT.

ENQUIRENS asks whether an assistant, who has given the usual bond, and has been dismissed for drunkenness at a moment's notice, can claim salary due to him up to the time of his discharge.

*** An assistant discharged for misconduct does not forfeit his right to payment of salary already accrued due. As to salary accruing but not yet accrued due we are advised that he cannot recovery anything for the portion of the term he has served, for example, if he had been discharged at the end of a month and he was paid monthly he could claim the month's salary; but if he were discharged for misconduct at the end of the first week of a month he could claim no payment for that month.

DELIVERY OF DEATH CERTIFICATES.

"WARWICK" would like to know if it is a breach of the Births and Deaths Registration Act to send certificates of the cause of death to the undertakers? On the certificate form it is stated that the certificate is to be given to persons qualified to be informants for the registration of the death and "to no other person."

*** The Births and Deaths Registration Act, 1874, makes it incumbent, under penalty, on every medical attendant to give to a person qualified to be an "informant" a certificate of cause of death, and it is the duty of the "informant" (also under penalty) to deliver that certificate to the registrar and to no other person. The medical man's responsibility ends with the delivery of his certificate to the "informant," and the duty of the informant would certainly not have been discharged by anything short of the actual delivery of the certificate to the registrar. If a medical man were to deliver his certificate to an undertaker (who is not a legal informant) this would certainly not be in accordance with the Act.

MEDICAL GUIDES TO MINERAL WATERS.

"H. F. C."—It is too much the custom at home and abroad for the doctors practising at water cure places to publish booklets which, while affording more or less information upon the nature and action of the local waters, serve as an advertisement for the writer, for us to find fault with what use and wont has established. As to the particular features of the booklets sent to us, which contain on one cover a portrait of the author and upon the other a view of the house in which he boards, we agree that there might be something to be said upon the matter, and as the author is a member of the British Medical Association we will refer the matter to the Ethical Committee.

COLLIERY MEDICAL OFFICERS.

LEX writes: A large colliery has two doctors selected by the men. A section of the men desire a third doctor. Can that third doctor accept the post if offered it by a deputation of the men without first intimating the same to the doctors already appointed, or should he refuse the appointment?

*** The number of surgeons at the colliery referred to in "Lex's" letter must be fixed either by the proprietors, or else by rule or resolution passed by the men in general meeting, or made by the committee appointed by the men. Before a third medical man accepts any post he should ascertain from the other medical officers the conditions of their appointment, and make sure that there is a definite vacancy. If the colliery has already decided to increase the number of surgeons, and if the third surgeon would rank equally with the other two, he might accept an appointment; but if he is only asked to attend a section of the men, and would not in doing so rank equally and be under the same conditions as the other surgeons, he should certainly refuse.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Degrees.—At the Congregation on Thursday, May 10th, the following graduates in arts were admitted to the B.C. degree:—J. H. Philbrick, Trinity College; H. N. Matthews, St. John's College: H. P. Bradley and T. E. Holmes, Gonville and Caius College: J. Gutch, Christ's College.

Medical School Buildings.—The plans for these, prepared by Mr. Prior, have been accepted for exhibition in the Royal Academy. They were discussed, with general approval, by the Senate on May 5th. A grace for associating the name of Sir George Humphry with the museum has been sanctioned by the Council. The opportune offer of a large benefaction for the erection of the law library, which with the botany school buildings is about to be undertaken by the University, will probably enable the medical school to be begun at an early date. Meanwhile, similar benefactions are

urgently required for the complete equipment of the latter, as the present buildings are decaying rapidly.

Medical Examinations.—The First and Second examinations for medical and surgical degrees will begin on June 11th. The names of candidates must be sent to the Registrary on or before May 22nd.

UNIVERSITY OF LONDON.

THE New Hospital for Women, Euston Road, has been added to the list of recognised institutions from which the University receives certificates for the purposes of its examinations for the degree of Doctor of Medicine.

UNIVERSITY COLLEGE, LONDON.

SEVERAL changes have recently taken place in the medical staff of University College. Dr. Sydney Ringer has retired from the Holme Professorship of Clinical Medicine, and has been succeeded by Dr. F. T. Roberts. Mr. Christopher Heath has resigned the Holme Professorship of Clinical Surgery, and is succeeded by Mr. Rickman J. Godlee. Dr. Ringer and Mr. Heath have been appointed Consulting Physician and Consulting Surgeon respectively to University College Hospital. Dr. Roberts on taking up the Holme Professorship, has resigned the Professorship of the Principles and Practice of Medicine, and the Council have selected Dr. G. Vivian Poore to succeed him on the ground of "his eminence as a physician and his acknowledged excellence as a lecturer, both as regards the selection and arrangement of material and his power of exposition." Dr. Poore will enter upon his duties as Professor of Medicine at the beginning of next session. Dr. H. Batty Shaw has been appointed an Assistant Physician to the hospital.

ROYAL UNIVERSITY OF IRELAND.

Exhibitions.—An exhibition of the value of £40 has been awarded to Mr. F. J. Allen, of Queen's College, Cork; one of £25 to Mr. R. M'Carrison, of Queen's College, Belfast; one of the same amount to Mr. P. Dwyer, of the Catholic University School of Medicine; and one of £20 to Mr. W. Phillips, B.A., of Queen's College, Belfast.

Degrees.—The degree of M.B., B.Ch., B.A.O., was conferred on the successful candidates whose names are given in the list printed in the BRITISH MEDICAL JOURNAL of May 5th, p. 1135.

UNIVERSITY OF DURHAM.

AT the Convocation holden on Saturday, April 28th, 1900, the following Degrees and Diplomas were conferred:

Doctor in Medicine.—V. Burrow, M.B., B.S.Durh.; E. W. Gilroy, M.B., B.S.Durh.; J. Harris, B.A.Syd., M.B., B.S.Durh.; R. A. R. Lankester, M.B., B.S.Durh.; J. Lowry, M.B., B.S.Durh.; G. Smith, M.B., B.S.Durh.; P. H. Wardell-Johnson, M.B., B.S.Durh. (*in absentiâ*).

Doctor of Medicine (Practitioners of Fifteen Years' Standing).—T. W. Buckley, M.R.C.S., L.S.A.; W. E. Gillson, M.R.C.S., L.R.C.P., L.S.A.; A. G. Mackenzie, M.R.C.P., F.R.C.S.E.; F. W. D. McGachen, L.F.P.S., L.S.A., D.P.H.; G. S. Wild, M.R.C.S., L.R.C.P.; V. H. W. Wingrave, M.R.C.S., L.S.A.

Doctor in Hygiene (D.Hy.).—R. A. Dunn, M.D., B.S., B.Hy.Durh.

Bachelor in Medicine (M.B.).—C. O. Bodman, M.R.C.S., L.R.C.P., University College, Bristol; E. H. Cooke, St. Thomas's Hospital; F. A. Davies, Mason College, Birmingham; G. O. M. Dickenson, College of Medicine, Newcastle-upon-Tyne; R. H. Dix, College of Medicine, Newcastle-upon-Tyne; H. Eggleston, College of Medicine, Newcastle-upon-Tyne; H. R. Ellis, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; J. J. French, College of Medicine, Newcastle-upon-Tyne; C. T. Holmes, College of Medicine, Newcastle upon-Tyne; M. Jacobs, College of Medicine, Newcastle-upon-Tyne; J. Macfadyen, College of Medicine, Newcastle upon-Tyne; J. R. Mitchell, College of Medicine, Newcastle upon-Tyne; E. Swainston, College of Medicine, Newcastle-upon Tyne; W. J. Symes, University College, Sheffield; J. C. Velenski, St. George's Hospital and College of Medicine, Newcastle upon-Tyne.

Bachelor in Surgery (B.S.).—C. O. Bodman, M.R.C.S., L.R.C.P., University College, Bristol; E. H. Cooke, St. Thomas's Hospital; F. A. Davies, Mason College, Birmingham; G. O. M. Dickenson, College College of Medicine, Newcastle-upon-Tyne; R. H. Dix, College of Medicine, Newcastle-upon-Tyne; H. Eggleston, College of Medicine, Newcastle-upon-Tyne; J. J. French, College of Medicine, Newcastle-upon-Tyne; C. T. Holmes, College of Medicine, Newcastle upon-Tyne; M. Jacobs, College of Medicine, Newcastle-upon-Tyne; J. MacFadyen, College of Medicine, Newcastle-upon-Tyne; E. Swainston, College of Medicine, Newcastle-upon-Tyne; W. J. Symes, University College, Sheffield; J. C. Velenski, St. George's Hospital, and Collegeof Medicine, Newcastle-upon-Tyne.

Bachelor in Hygiene (B.Hy.).—H. E. Davison, M.B., B.S.Durh., M.R.C.S., L.R.C.P.

Diploma in Public Health (D.P.H.).—A. J. Collis, M.A., M.B., B.S.Camb., M.R.C.S., L.R.C.P.; S. D. Turner, M.R.C.S., L.R.C.P.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on May 10th, when the chair was taken by Sir William MacCormac, Bart., K.B.V.O., President.

The late Mr. Davies-Colley.—A vote of condolence with Mrs. Davies-Colley was passed by the Council.

Alteration of By-laws.—The formulæ in regard to the above were approved and ordained as by-laws by the Council.

The Prince of Wales.—The President reported that he had received a telegram from His Royal Highness the Prince of Wales expressing "sincere thanks for kind congratulations," in reply to the resolution adopted by the Council at their last meeting.

Bradshaw Lecturer.—Mr. John Langton was chosen for the ensuing collegiate year.

International Medical Congress.—The President stated that he accepted the nomination of the Council to represent the College at the thirteenth Congress to be held in Paris next August.

Royal Institute of Public Health.—Dr. R. W. Reid was nominated by the Council as delegate to the annual Congress of the above Institute, to be held in Aberdeen from August 2nd to 7th, 1900.

CONJOINT BOARD IN IRELAND.

FINAL EXAMINATION.—Candidates have passed this examination as undernoted:

In all Subjects.—R. A. Campbell, J. E. Hannigan, D. L. Harding, E. R. Townsend, H. G. Westropp.

Completed the Examination.—W. J. Anglim, B. M. W. Coffey, P. J. M'Ginn, J. H. O'Connell, J. F. Smyth, J. Verdon.

In Medicine.—R. G. Mostyn.

In Surgery.—A. T. Benson, A. D. Dunwoody, D. A. Faris, J. L. Gilmartin, R. A. Johnston, R. G. Mostyn, D. J. F. O'Donoghue, D. Power, A. B. Stephenson.

In Mental Disease.—D. A. Faris, J. L. Gilmartin, R. A. Johnston, N. P. Kirby, J. D. S. O'Donoghue, D. Power.

In Ophthalmology.—A. D. Dunwoody, D. A. Faris, F. C. Fowler, J. L. Gilmartin, R. A. Johnston, D. J. F. O'Donoghue, A. B. Stephenson.

In Midwifery.—J. L. Gilmartin, R. A. Johnston, D. J. F. O'Donoghue.

OBITUARY.

GEORGE BIRD, M.D.

WE regret to have to announce the death of Dr. George Bird, formerly of Welbeck Street, London, which took place on May 4th at his house at Hampstead. George Bird was born in 1817. He was the eldest of a very large family. His father, James Bird, well known in Suffolk as a poet, died in middle life, and the boys had early to turn into the world, and every one of them made some sort of mark. George was apprenticed to the doctor of the village, Dr. Wilson, known in his day as an authority on gout, and proud of the fact that he was sent for to prescribe for George IV.

In boyhood as in age Bird was always a pioneer. As a lad he wore yellow at a county election when all the neighbours wore blue. Indeed, he was a born Progressist; never wavered, never compromised, and was always eager for education and development in every aspect. From rural Suffolk he passed to London, and studied at University College. In 1841 he took the diploma of M.R.C.S., and in 1859 the degree of M.D. at St. Andrews.

For thirty-four years he practised at 49, Welbeck Street. He always had an affinity for literature, art, and the drama, and he counted many illustrious people among his patients. He attended Leigh Hunt, and knew behind the scenes. He never lost an occasion to bear witness to the fact that the financial reproaches heaped on Leigh Hunt were undeserved. About two years ago he wrote a memorandum, which in due time will prove that Leigh Hunt was a heroic martyr. It was to shield another he stoically bore aspersions on his character. He also attended Sir Edward Bulwer Lytton, Dickens, Frank Stone, Sir Richard and Lady Burton, Thomas Woolner, R. H. Horne, Mrs. Lynn Linton, and many well-known people of the day.

An old friend of Dr. Bird sends us the following estimate of his character:

"To the last he remained young in body and young in mind. He was always fond of athletic exercises, and in his younger days was an excellent boxer, and remained to the last an active cyclist. He was also young in mind—always embraced with eagerness new ideas, and was in everything progressive. He was most kind of heart and cheerful in disposition, and had at his disposal a fund of good stories, which he narrated excellently. He thoroughly enjoyed life, and brought sunshine wherever he went to friends and patients. His patients were all his devoted friends. He leaves a happy memory behind him among his many friends who will sadly feel their loss, and will long cherish their recollection of George Bird."

WILLIAM HONNOR FITZ-PATRICK, M.D.,

M.R.C.S., L.S.A.,

Stoneycroft, Liverpool.

WE regret to announce the death of Dr. Fitz-Patrick, of Stoneycroft, Liverpool, which took place quite unexpectedly at his residence on May 2nd. He was a native of Ireland, and was born in 1823. He studied medicine at the School of Physic of the University of Dublin. He became M.R.C.S.Eng. in 1845, and L.M. of the Rotunda Hospital in the same year. He took the L.S.A. in 1847, and in 1856 graduated M.B. at the University of Aberdeen. Ten years later he took the degree of M.D. of the same University. After a few years spent as Assistant Surgeon in the Royal Navy and at the Royal Naval Hospital, Plymouth, he settled in Knotty Ash

fifty-one years ago, and remained in active practice in the neighbourhood until the day of his death. He was held in the highest estimation by the members of his profession, by an influential circle of patients, and by the general public. For many years he took an active interest in the work of the British Medical Association. He was an energetic member of the old West Derby Local Board, where his courage and the uncompromising way in which he advocated the views which commended themselves to his judgment often brought him into conflict with other members of the Board. He was connected with the Militia, both as Surgeon and as Lieutenant. He was buried in Knotty Ash Church, and leaves a widow and one son.

One who knew Dr. Fitzpatrick well writes: I have known him for many years, and have had frequent opportunities, from meeting him in practice, of forming an estimate of his character. He was a strictly upright, honourable, and straightforward man, and had a keen appreciation of what was duebetween professional men in relation to each other. He was a good sound practitioner, and was much esteemed by his patients. Although he had retired a good deal from practice he was seeing cases the day before his death, and thus may be said literally to have died in harness.

GEORGES APOSTOLI, M.D.

DR. GEORGES APOSTOLI, of Paris, whose name is associated with the electric treatment of uterine fibroids, died on April 27th of influenzal pneumonia. He was the son of a medical practitioner, and was born at Saint-Michel-de-Lanès in the Aude Department in 1847. He was admitted to the School of Military Medicine at Strassburg, where he was a pupil of the well-known surgeon Sédillot. After ten years' service in the army, spent mostly in Algeria, he resigned his commission and proceeded to Paris, where he worked under Tripier. From that time he gave himself wholly to the medical applications of electricity. Through the mouth of his pupil Carlet, whose thesis, presented in 1884, is a landmark in the history of gynæcological electricity, Apostoli made known the results which he had obtained in the treatment of uterine fibroids by the method now generally known by his name. He continued to report his further results, and the modifications in procedure suggested by larger experience, in communications to various congresses in Europe and in America. He was present more than once at the annual meeting of the British Medical Association.

Apostoli was an earnest worker in the field of practice which he chose for himself. As to the value of his work opinions differ, and we do not feel called upon to attempt to offer a definitive judgment. But a method which gained the adhesion of such a man as Thomas Keith cannot be lightly put aside. Nor would it be just to withhold all expression of admiration for a man who, like Apostoli, in the face of much opposition and without the help of academic position, without even the prestige that is given by a hospital appointment, made his name known throughout the medical world.

NICHOLAS TYACKE, M.D., F.R.C.P., J.P.,

Consulting Physician to the Chichester Hospital.

IT is with deep regret that we announce the death of Dr. Nicholas Tyacke of Chichester, which occurred on May 7th, at his residence in that town as a result of bronchitis. He was born at Godolphin, in Cornwall, on October 1st, 1812, and was consequently in his 88th year. After receiving his early education at the County School in Bodmin he commenced the study of medicine in 1830, and in 1831 entered the University of Edinburgh. In 1834 he studied in the medical schools of Paris, and in 1835 he visited the hospitals of Rome, Florence, Milan, and other Continental towns. In 1836 he graduated M.D. at Edinburgh. The following winter he spent in attending some of the London hospitals, and he then returned to Paris for special study of children's diseases and of practical obstetrics. In 1837 he worked in the hospitals of Berlin, at the same time attending lectures at the university, and during the next year he did hospital work at Guy's and St. Thomas's Hospitals. Towards the end of 1839 he commenced practice in Exeter, but in 1840 he removed to Chichester, where he succeeded to the practice of the late Sir John Forbes, who had left the town to become Physician-in-Ordinary to the Prince Consort and Her Majesty's Household. He was at once elected a Physician to the West Sussex, East Hants, and Chichester Infirmary, of which institution he remained a Consulting Physician to the day of his death. In 1860 he became a Fellow of the Royal College of Physicians of London. He was for some time President and member of the Council of the South-Eastern Branch of the British Medical Association.

Dr. Tyacke, who was twice married, leaves a family of grown-up sons and daughters; one of the former is a member of a well-known legal firm in Chichester, another holds the rank of colonel in the army, and a third is an officer in the Irish Constabulary. Dr. Tyacke was a Justice of the Peace for the county of Sussex and also for the city of Chichester, and was twice Mayor of Chichester.

His conspicuous medical skill and his upright character, with his kindliness and courteous bearing, won the sincere respect and lasting goodwill of those with whom he came into contact, and it is felt that his place in the city of Chichester and the Western Division of the county of Sussex cannot easily be filled.

WE regret to have to announce the death of Mr. WEBSTER ADAMS, M.R.C.S., L.S.A., of Ipswich, which occurred on May 11th from pneumonia after only a week's illness. He was born in 1840, and was the son of a medical man, himself a successful practitioner in Ipswich. He received his medical education at St. Thomas's Hospital, and took the diploma of L.S.A. in 1861 and that of M.R.C.S. in 1862. On the death of his father in 1870 he succeeded to his practice in Ipswich, and for 30 years he was actively engaged in practice. He was Medical Officer for the Districts of the Ipswich and Woodbridge Unions, and Surgeon to many friendly societies. He took an active part for many years in municipal affairs. In 1872 he became the representative of the St. Clement's Ward in the Town Council, and remained in office until 1884. Eleven years later, in 1895, he was re-elected, and again in 1898. On account of his attention and considerateness to the sick poor he had a large number of attached patients, and his geniality in social life brought him a large circle of friends.

MR. EDWARD DALZEL DICKSON, Physician to the British Embassy in Constantinople, whose death we have already announced, was born at Tripoli, and received his medical education at the University of Malta, where he graduated M.D. The exact date of his birth is not known, but he was appointed Physician to the British Consulate at Erzerum in 1837, and it is believed that at the time of his death he had attained the age of 95. In 1856 he was appointed to the post which he held at the time of his death. In 1861 he became a British delegate to the International Sanitary Council at Constantinople, in 1866 he was a member of the International Conference on Cholera held at Constantinople. He was also a member of the mixed Commission for revising the Ottoman quarantine tariff in 1867. In 1876, when the deposed Sultan Abdul Aziz Khan committed suicide, it was asserted by many that his death had been brought about by others; to Dr. Dickson was committed the delicate task of presenting a report on this matter. He was able to prove that the suspicion of foul play was unfounded. He was an honorary member of the Epidemiological Society of London, and a corresponding member of the Zoological Society, and some years ago presented a valuable report upon the Fishes of the Bosphorus. Dr. Dickson, though he resided so long in Eastern countries, retained his interest in English affairs, and was an occasional contributor to our columns, his long experience rendering his opinion upon all epidemiological matters of great value.

MR. ALFRED OLLIVANT FRANCIS, M.R.C.S., L.R.C.P.E., who died at Derby on March 23rd, after a somewhat long illness, was born in 1838. After qualifying in 1863 he practised for many years in Derby, both in partnership and alone. He was surgeon to many friendly societies. For many years he acted as medical officer to the Militia from 1877, when he joined as Assistant-Surgeon, to the time of his death, when he was Surgeon-Colonel. He was widely popular in the town and district, both on account of his medical skill and his urbanity and kindness to his patients. He was a member of the Midland Branch of the British Medical Association.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,770 births and 3,968 deaths were registered during the week ending Saturday last, May 12th. The annual rate of mortality in these towns, which had decreased from 23.0 to 19.6 per 1,000 in the five preceding weeks, further declined to 17.8 last week. The rates in the several towns ranged from 11.5 in Cardiff, 11.6 in Birkenhead, 11.8 in Norwich, and 11.9 in Croydon, to 23.9 in Liverpool, 24.0 in Birmingham, 25.0 in Wolverhampton, 25.5 in Blackburn, and 20.1 in Plymouth. In the thirty-two large provincial towns the mean death-rate was 18.7 per 1,000, and exceeded by 2.3 the rate recorded in London, which was 16.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London this death-rate was equal to 1.6 per 1,000, while it averaged 2.2 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.6 in Manchester, 3.7 in Oldham, 5.7 in Blackburn, 6.1 in Plymouth, and 9.9 in Wolverhampton. Measles caused a death-rate of 1.6 in Cardiff, 1.0 in Derby and in Blackburn, 2.4 in Bristol, 4.7 in Wolverhampton, and 5.1 in Plymouth; and whooping-cough of 1.2 in Liverpool, 1.6 in Manchester, 1.7 in Oldham, and 3.2 in Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 61 deaths from diphtheria in the thirty-three towns included 29 in London, 6 in Sheffield, 3 in Birmingham, 3 in Leicester, 3 in Liverpool, and 3 in Blackburn. One fatal case of small-pox was registered last week in London, and 1 in Liverpool; and 5 small-pox patients were under treatment in the Metropolitan Asylums Hospitals on Saturday last, May 12th. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,647 and 1,660 at the end of the two preceding weeks, had further risen to 1,693 on Saturday last; 203 new cases were admitted during the week, against 165, 170, and 176 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, May 12th, 1,025 births and 546 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.7 and 20.5 per 1,000 in the two preceding weeks, further declined last week to 17.7 per 1,000, and was slightly below the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 9.9 in Leith and 12.2 in Aberdeen, to 20.2 in Perth and 21.3 in Paisley. The zymotic death-rate in these towns averaged 2.0 per 1,000, the highest rates being recorded in Glasgow, Paisley, and Perth. The 282 deaths registered in Glasgow included 9 from measles, 4 from scarlet fever, 2 from diphtheria, 16 from whooping-cough, 3 from "fever," and 5 from diarrhœa. Two fatal cases of measles, 2 of scarlet fever, 2 of diphtheria, and 4 of diarrhœa were recorded in Edinburgh; 2 of diphtheria and 4 of whooping-cough in Aberdeen; and 2 of measles in Paisley.

THE PORT OF LONDON.

The report of Dr. W. Collingridge, the medical officer of health for the Port of London, for the half year ending December 31st, 1899, shows that 26,334 vessels were inspected during that period by the sanitary officers in the docks and on the river.

Inspection of Vessels.—The necessity for the prompt isolation of all cases of infectious disease at the earliest possible moment, and the disinfection of the vessels before they reach the crowded parts of the port, is fully recognised by the port sanitary authority: 5,236 vessels were inspected at the entrance to the port by the medical officers stationed at Gravesend, this involving the medical examination of 5,412 passengers, and crews to the number of 19,916. At Sheerness 135 vessels from foreign ports were visited by the medical officer. As a result of such medical inspection 48 cases of infectious disease were discovered and removed to the hospital at the entrance to the port, and these diseases included 2 cases of plague, 6 of small pox, and 15 of enteric fever.

Plague.—In dealing with the plague cases Dr. Collingridge draws attention to the fact that the outbreak at Oporto was concealed for at least a fortnight, in violation of the terms of the International Convention. With reference to ports infected with this disease, the owners of vessels trading from such ports have been asked to co-operate with the London Port Sanitary Authority by having ready on arrival the nominal rolls of all passengers and crews, together with the addresses to which they are about to proceed; and, further, to make suitable arrangements for them to muster for inspection. To this, without exception, they have all willingly agreed, and they have also co-operated by arranging for the capture and destruction, so far as possible, of all the rats found on board.

Shellfish and Typhoid Fever.—Dr. Collingridge draws attention to the gradually accumulating evidence pointing to the circumstance that the danger of infection through the consumption of oysters also extends to the consumption of cockles, periwinkles, and other shellfish which are largely consumed by the poorer classes, and he expresses the hope that on the reintroduction to Parliament of the Bill dealing with oysters its provisions may include cockles, mussels, periwinkles, and whelks.

Food Inspection.—In these reports one is always impressed with the magnitude of the work performed in respect of food inspection. Its high value cannot be questioned, and it is testified to in the increasing quantities reported as condemned in each succeeding report. The present report gives details of the seizure of large quantities of meat, over 11,000 cases of fruit, 2,615 cases of condensed milk, and considerable amounts of sundry other articles of food.

Overcrowding and General Sanitation.—Further items of general interest in the report have reference to overcrowding on foreign vessels, the sanitary condition of training ships, a cargo of filthy foreign rags, the provision of closets on board ship, and notes upon the different "nuisances" dealt with.

THE MEDICAL OFFICERSHIP OF HEALTH AT CREWE.

On the occasion of a recent meeting of the Crewe Town Council, at which the matter of advertising for a medical officer of health came up for consideration, 11 councillors voted in favour of reverting to the system of appointing a local medical practitioner to the office, and of the Council paying the whole of his salary. During the past seven years the medical officer of health of Crewe has devoted the whole of his time and energies to the duties, and the appointment has been made subject to the approval of the Local Government Board; but whereas under this arrangement the Council is refunded one half of the salary of the officer, it cannot dismiss him without the consent of the Board. Although the arrangement has always worked satisfactorily at Crewe—as elsewhere—the spokesman of those in favour of reverting to the old system raised the bogey that a medical officer whose dismissal by the Council was subject to the approval of the Board, was "the master and not the servant of the Council," and held a position which practically made him "a dictator rather than a professional adviser," and he urged that the Council should have a medical officer "whose objects should be not to defy the Council, but to promote its best interests." On being challenged to give the Council an instance of defiance on the part of the medical officer which could be held to justify his fears, he failed to recall a single instance. On this subject one councillor humorously suggested that if they wanted a medical officer who would simply echo the views of the members of the Council, they might just as well get one of those nodding mandarins which were to be seen at tea shops. As a matter of fact the efficient discharge of the duties of a medical officer is largely dependent upon a measure of independence, and the feeling that his authority is not the sole judge of his actions; and although a general practitioner does the work as well as can be expected considering the paltry salary which is usually paid to him, he is often hampered by the conflicting interests of his public work and of his private practice.

A further argument advanced in support of reverting to the original system was based upon a comparison of the vital statistics of the period when the medical officer was a part time official, with those of the subsequent period during which his whole time has been requisitioned. If the illusory figures quoted really indicated—as was seriously contended—that there was less mortality in Crewe when the medical officer devoted less time to the discharge of his duties, the argument carried to its logical conclusion would involve the entire abolition of the office.

Notwithstanding further arguments of the quality that the expenditure of the health department had increased of late years (surely not a surprising or exceptional circumstance in a growing urban community), the majority of the Council declined to take the retrograde step advocated by some of its members.

SECURITY OF TENURE FOR MEDICAL OFFICERS OF HEALTH.

The following petition, which through the efforts of Dr. Jepson of Durham, has been signed by 73 medical practitioners, was on May 10th placed in the hands of the Hon. A. Elliot, M.P. for Durham City, for presentation to Mr. Chaplin:—

Petition to the Right Honourable H. Chaplin, *President of the Local Government Board.*

We, the undersigned medical practitioners, humbly petition the Local Government Board to use its best efforts to obtain security of tenure of office for all medical officers of health throughout the United Kingdom of Great Britain and Ireland.

Security of tenure has already been granted to the medical officers of health of London, and your petitioners feel, that without such security, an injustice is often inflicted on the medical officers of health of the provinces, as well as some limitation placed on the usefulness of the Public Health Acts.

THE M.O.H. FOR LEEDS.

We are glad to observe that the Leeds City Council at its last meeting resolved to increase the salary of Dr. Spottiswoode Cameron, the Medical Officer of Health for the city, from £700 to £800. The warmest testimony was paid to the value of Dr. Cameron's services by many members of the Council, and a proposal that the increase should be larger was made, but the Lord Mayor said that he must with regret rule the amendment out of order.

COST OF ISOLATION HOSPITALS.

Omega asks the cost of erection and maintenance of a hospital for scarlet fever suitable for a population of about 10,000.

*** An infectious hospital intended for only one class of disease is rather an unusual thing. Even if it were intended to use it only for the one disease it would still be necessary to provide a certain amount of isolation accommodation, for, unfortunately, cases of diphtheria will occasionally get in, and it is not always easy to prevent children with measles from being sent in as scarlet fever; any such must be at once separated. There should not be less, we think, than ten beds provided. These might be arranged in a single pavilion with the two ends opening different ways. At each end there should be a room for a charge nurse, communicating with two wards containing three and two beds respectively. In addition there should be a house for the nurses and caretaker, a disinfecting room, and a mortuary. The total cost might be anything between £2,000 and £6,000, exclusive of land. "Omega" might procure the circular issued by the Local Government Board on isolation hospitals and show the plans it contains to a local builder, and get an idea of the cost of erection on the plan he prefers. The maintenance cost would depend upon the number of patients admitted, and would probably not be less than £2 per patient per week, with a minimum of £200 to cover establishment charges.

HOSPITAL AND DISPENSARY MANAGEMENT.

ASSOCIATION OF ASYLUM WORKERS.

THE annual meeting of this Association was held at 11, Chandos Street, on May 14th, Sir J. Crichton-Browne, President, in the chair.

The report (presented by the Honorary Secretary, Dr. Shuttleworth) stated that the number of members at the end of 1899 was 3,006, and that representatives of 31 asylums in the United Kingdom and the Colonies not previously connected with the Association had joined during the year. The financial statement showed a credit balance of £147 8s. 10d. after paying all expenses. Nine invalid nurses and attendants had been sent to "homes of rest" at an aggregate expenditure of £23. The Executive Committee had made representations to Members of Parliament and others as to the desirability on public grounds of a system of satisfactory and assured superannuation allowances for workers in public asylums, with a view to obtain the introduction into the Lunacy Bill now before the House of a pension clause; and Dr. Farquharson, M.P., had given valuable aid in this matter. The improvement of the status of asylum nurses and attendants by training qualifying them for their responsible duties had been constantly kept before the members.

The adoption of the report was moved by Sir J. Crichton-Browne in an eloquent speech, and seconded by Dr. Sidney Coupland, Commissioner in Lunacy, who spoke in appreciative terms of the arrangements for nursing in asylums.

The adoption of the financial statement was moved by Dr. Robert Jones, of Claybury, and seconded by Dr. Harding, of the Northampton County Asylum. The committee and officers were re-elected, with the exception of the honorary treasurer (Miss Evans), who had resigned and was succeeded by Miss Honnor Morten, L.S.B.

In proposing a vote of thanks to the honorary secretary, Dr. Hayes Newington referred to the valuable co-operation of this Association with the Medico-Psychological Association and the Parliamentary Bills Committee of the British Medical Association in the endeavour to obtain assured pensions for public asylum workers.

A cordial vote of thanks to the Chairman, proposed by Dr. Outterson Wood, and seconded by Dr. Elkins, closed the proceedings.

MEDICAL NEWS.

THE order for the muzzling of dogs has been revoked in Breconshire, Carmarthenshire, and Glamorganshire.

THE opening lecture of the summer session of the Hospital for Consumption and Diseases of the Chest, Brompton, will be given by Dr. Theodore Williams on Wednesday, May 23rd, at 4 P.M. The subject will be the Relation of Pleurisy to Pulmonary Tuberculosis.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.—The annual general meeting of members of the club will take place in the Royal Hotel, Edinburgh, on Thursday, June 7th, at 6.30 P.M. The fourth annual dinner will follow at 7.15, when Dr. Yellowlees, the President of the Club, will occupy the chair.

CONFERENCE ON MEDICAL ORGANISATION.—In the list of societies represented at the Conference on Medical Organisation at Manchester the name of the Wood Green and District Medical Society was accidentally omitted. It was represented by Dr. R. F. Tomlin, Senior Vice-President.

EDINBURGH HARVEIAN FESTIVAL.—The 118th Harveian Festival will be held in the Hall of the Royal College of Physicians, Queen Street, on Friday, June 15th. The Society will meet at 6 P.M., when the President (Mr. Annandale) will deliver the Harveian Oration on Transfusion.

TWO INTERESTING PRESENTATIONS.—On the occasion of the recent severance of his official connection as medical officer of health with the county borough of Stockport, Dr. C. Porter, the newly-appointed County Medical Officer for Shropshire, was entertained at supper by the staff of the health department, and presented by them with a very handsome smoking cabinet. On a subsequent date Dr. Porter was the guest of the Corporation of Stockport at a complimentary dinner, during which the Chairman of the Sanitary Committee handed him a beautifully engrossed testimonial on vellum, bearing the common seal of the Council, and setting forth, in very appreciative terms, his special services to the borough during his seven and a-half years' tenure of office. A few days later Dr. Porter was similarly entertained by the Stockport and District Medical Society, those present including most of the medical practitioners of the town, as well as the Mayor, the Chairman of the Sanitary Committee and the Town Clerk. The President (Dr. W. B. Bale) referred to the cordial professional and personal relations that had existed between Dr. Porter and the members of the Society, and as a token of regard and of good wishes for his future welfare, presented him, on behalf of a number of his medical colleagues, with a very beautiful silver rose bowl, richly chased and suitably inscribed, together with a handsome pair of opera glasses for Mrs. Porter, and an ornamental scroll bearing the names of the subscribers. In thanking them for this final mark of the unvarying kindness and goodwill extended to him by his medical brethren, Dr. Porter said that in his opinion medical men were the salt of the earth, and exerted a most important influence on the sanitary welfare of the community, their mission being educational and preventive as well as curative. He hoped they would take an increasingly active personal interest in municipal affairs, and that more of them would enter the Council, where he knew they were appreciated. It is interesting to add that Dr. Meredith Young, who has resigned the post of medical officer of health for Crewe to succeed Dr. Porter, has been the recipient of a testimonial from the officials of the sanitary department and from the hospital staff. At a meeting over which Dr. Hodgson presided the presentation was made by the Town Clerk and suitably acknowledged by Dr. Young.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRKENHEAD BOROUGH HOSPITAL.—Visiting House-Surgeon. Salary, £75 per annum, with board, lodging, and washing, and certain fees. Applications to the Chairman of the Weekly Board by May 21st.

BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL DISPENSARY.—Three Resident Locums for two or three months' engagement. Terms 4 guineas per week, with furnished apartments. Applications to the Secretary by May 28th.

BIRMINGHAM: GENERAL HOSPITAL.—(1) House-Surgeon. (2) Two Assistant House-Physicians. Appointments for six months. Board, residence, and washing provided, but no salary. Applications to the House-Governor by May 26th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright Street.—Clinical Assistant. Applications to the Secretary of the Medical Committee by June 4th.

BRECON INFIRMARY.—Resident House-Surgeon; unmarried. Salary, £90 per annum, with furnished apartments, board, etc. Applications to the Secretary, Bulwark, Brecon, by June 7th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) House-Physician. Salary at the rate of £50 per annum. (2) Resident Pathologist. Salary at the rate of £40 per annum. Board, washing, and residence provided in each case. Candidates must be unmarried and under 30 years of age when elected. Applications to the Secretary by May 30th and 23rd respectively.

BRISTOL ROYAL HOSPITAL FOR SICK WOMEN AND CHILDREN.—House-Surgeon. Salary, £120 per annum, with rooms and attendance, not board. Applications, endorsed "House-Surgeon," to be sent to the Secretary by May 23rd.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN.—Pathologist. Applications to the Secretary.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

COLCHESTER: ESSEX AND COLCHESTER HOSPITAL.—Resident House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to the Secretary by May 25th.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £130 per annum, rising to £150. Applications to the Medical Superintendent.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House-Surgeon. Salary, commencing at £100 per annum, with board, residence, and washing. Applications endorsed "House-Surgeon," to the Secretary by May 23rd.

DURHAM COUNTY ASYLUM.—Second Assistant Medical Officer. Salary, £170 per annum rising to £220, with rooms, board, laundry, and attendance. Applications to the Medical Superintendent.

EDINBURGH: CRAIGLOCKHART POORHOUSE AND HOSPITAL.—Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk of the Parish Council, Castle Terrace, Edinburgh, by May 21st.

GATESHEAD UNION.—Assistant Resident Medical Officer. Salary, £150 per annum, with furnished apartments, rations, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to the Union Clerk, Poor-law Offices, Prince Consort Road, Gateshead, by May 29th.

GLASGOW UNIVERSITY.—Examiner for Degrees in Medicine, with special qualifications to examine in Practice of Medicine (Systematic and Clinical). Salary, £50 per annum. Applications to the Secretary of the Glasgow University Court, 91, West Regent Street, Glasgow, by May 23rd.

GREAT NORTHERN CENTRAL HOSPITAL.—(1) House-Physician. (2) Junior House-Physician. Appointments for six months. Salaries at the rate of £60 and £30 per annum respectively, with board, lodging, and washing. Applications to the Secretary by June 18th.

HALIFAX: COUNTY BOROUGH OF.—Medical Officer of Health for the Borough. Must be D.P.H., and between 35 and 45 years of age. Salary, £500 per annum. Applications to the Town Clerk by May 31st.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £140 per annum, increasing to £170, with rooms and attendance. Applications to the Secretary.

KILBURN, MAIDA VALE, AND ST. JOHN'S WOOD GENERAL DISPENSARY.—Vacancy on the Honorary Medical Staff. Applications to the Honorary Secretary 13, Kilburn Park Road, N.W., by May 26th.

LEAMINGTON: WARNEFORD HOSPITAL. House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications on forms provided to be sent to the Secretary by May 26th.

LEEDS: HOSPITAL FOR WOMEN AND CHILDREN.—House-Surgeon, non-resident. Appointment for six months, but eligible for renewal. Salary at the rate of £125 per annum. Applications to the Secretary of the Faculty.

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent, The Lawn, Lincoln.

LIVERPOOL DISPENSARIES.—(1) Head Surgeon. Salary, £200 per annum. (2) Four Assistant Surgeons. Salary, £100 per annum each, with board and apartments in each case. Candidates must be unmarried. Applications to the Secretary, 31 Moorfields, Liverpool, by May 24th.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer. Unmarried, and age not to exceed 26 years. Salary, £100 per annum, with board, lodging, and washing. Applications, endorsed "Assistant Resident Medical Officer," to be addressed to the Chairman of the Port Sanitary and Hospitals Committee, and sent under cover to the Town Clerk by May 28th.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House-Surgeon. Salary, £70 per annum, with residence and maintenance. Applications to the Chairman by May 24th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary.

MAIDSTONE: KENT COUNTY OPHTHALMIC HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to Mr. M. A. Adams, F.R.C.S., Honorary Surgeon, Trinity House, Maidstone, by May 25th.

MANCHESTER: ANCOATS HOSPITAL.—Junior House-Surgeon. Salary, £50 per annum, with board and washing. Applications to the Secretary.

MIDDLESEX HOSPITAL, W.—Dental Surgeon. Applications to the Secretary-Superintendent by May 24th.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Lecturer on Chemistry. Salary, £150 per annum, with special fees and allowance. Applications to the Secretary to the Council by May 31st.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Pathologist. Honorarium, 50 guineas. Applications to the Secretary by May 31st.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) House-Physician. (2) House-Surgeon. (3) Two Assistant Anæsthetists. (4) Three Clinical Assistants. Candidates must be fully-qualified medical women. Applications to the Secretary by May 30th.

NORTH-WEST LONDON HOSPITAL, Kentish Town Road.—Resident Medical Officer and Assistant Resident Medical Officer. Appointments for six months; the Junior is eligible for election to the Senior post. Salary at the rate of £50 per annum attached to each. Candidates to attend meeting of the Medical Committee on May 21st.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £85 per annum, with board, residence, and washing. Candidates to state whether they would be willing to accept the Junior post at £70 per annum. Applications to the Honorary Secretary by June 4th.

PONTEFRACT DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary commencing £150 per annum, with furnished rooms, etc. Applications to the Secretary by June 9th.

PORTSMOUTH: ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board and residence. Applications to the Secretary by May 23rd.

PRESTWICH: COUNTY ASYLUM.—Assistant Medical Officer. Unmarried, and under 35 years of age. Salary commences at £125, rising to £250, with board, apartments, washing, etc. Applications to the Superintendent.

READING: ROYAL BERKS HOSPITAL.—(1) House-Surgeon. Salary, £60 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by June 4th.

RIPON DISPENSARY AND COTTAGE HOSPITAL.—Resident House-Surgeon and Dispenser; unmarried. Salary, £100 per annum, with board and lodging. Applications to the Honorary Secretary.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications, marked "House-Surgeon," to be sent to the Secretary by May 25th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—(1) Two Examiners in Dental Surgery. (2) Hunterian Professors. (3) Erasmus Wilson Lecturer. (4) Arris and Gale Lecturer. Applications to the Secretary by June 4th.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William Street, W.C.—Clinical Assistants. Appointments for six months. Applications to the Secretary by May 26th.

ST. GEORGE'S UNION.—Second Assistant Medical Officer at the Infirmary, Fulham Road, S.W. Salary, £70 per annum, with board, residence, and washing. Applications to Dr. H. W. Webster at the Infirmary.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch, Salisbury.

SHEFFIELD: JESSOP HOSPITAL FOR WOMEN.—House-Surgeon; unmarried. Salary, £50 per annum, with board, lodging, and washing. Applications to Dr. Martin, Claremont Place, Sheffield, by May 22nd.

SHOREDITCH, PARISH OF ST. LEONARD.—Second Assistant Medical Officer for the Infirmary, Hoxton Street, N. Appointment for six months. Salary at the rate of £80 per annum, with rations, washing and furnished apartments. Applications on forms provided to be sent to the Clerk, 213, Kingsland Road, N.E., by May 21st.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but capable of renewal. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHPORT INFIRMARY.—Resident Senior House-Surgeon. Salary, £80 per annum and all found. Applications to the Secretary by May 23rd.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by May 23rd.

SURREY COUNTY ASYLUM, Brookwood.—Third Assistant Medical Officer. Unmarried, and under 30 years of age. Salary, £120, rising to £150, with board, lodging, attendance, and laundry. Applications to the Medical Superintendent.

THREE COUNTIES ASYLUM, near Hitchin.—Second Assistant Medical Officer, under 30 years of age, and unmarried. Salary, commencing at £150, with board, apartments, washing, and attendance. Applications to Mr. F. C. Butler, Clerk to the Visiting Committee, St. Neots, Hunts, by May 21st.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Unmarried. Salary, £75 per annum, with board and residence. Applications to the Honorary Secretary by June 2nd.

VENTNOR: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Clinical Assistant. Board, residence, and laundry provided. Applications to the Secretary, 34, Craven Street, Strand, London, W.C.

WANDSWORTH AND CLAPHAM UNION INFIRMARY, St. John's Hill.—Junior Assistant Medical Officer. Salary at the rate of £80 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—House-Surgeon; unmarried. Salary, £75 per annum, with board and residence, and allowance for washing. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith, W.—Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent by June 6th.

WESTMINSTER HOSPITAL, S.W.—Resident Obstetric Assistant. Appointment for six months. Board and lodging provided. Applications to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee.

YORK LUNATIC ASYLUM.—Assistant Resident Medical Officer. Salary, £130 a year, with board, washing, and attendance. Applications to the Committee by May 22nd.

MEDICAL APPOINTMENTS.

BAILEY, Reginald Threlfall, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Physician to the Liverpool Royal Infirmary.

ELAMBY, James, M.R.C.S.Eng., appointed Medical Officer for the Penrhyn District of [illegible] vice R. G. Jones, M.R.C.S., L.R.C.P., resigned.

CAMPBELL, J. Munro, M.B., C.M.Glasg., appointed Certifying Factory Surgeon for Pollokshaws District, co. Renfrew.

CHRISTIE, B. R. Craig, M.B., C.M.Edin., appointed Resident House-Surgeon to the Glasgow Royal Infirmary.

DYKES, C. R., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Evercreech District of the Shepton Mallet Union, *vice* J. T. Hyatt, L.R.C.P.Edin., M.R.C.S.Eng., resigned.

HARRIS, J. H., M.R.C.S.Eng., D.P.H.Camb., appointed Medical Officer of Health to the Dartmouth and Totnes Port Sanitary Authority, *vice* R. W. Soper, M.R.C.S.Eng.

HENNESSY, D., L.R.C.P., L.R.C.S.Edin., L.P.P.S.Glasg., appointed Certifying Factory Surgeon for the Bandon, Kilbrogan, and Brinny Electoral Divisions, co. Cork.

HIGGINSON, C. G., M.R.C.S., L.R.C.P., L.S.A., M.A.Lond., appointed Assistant Medical Officer to the Birmingham Infirmary.

KINSELLA, J. J., M.B., B.Ch., B.A.O.R.U.I., appointed Certifying Factory Surgeon for the Edenderry Poor-law Union, King's County.

KIRKBY, W., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Maesteg Urban District Council.

OWEN, R., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Llandwrog District of the Carnarvon Union, *vice* J. T. Griffith, L.R.C.P.Edin., L.F.P.S.Glasg., resigned.

POTTER, E. Furniss, M.D., appointed to the Senior Staff of the London Throat Hospital.

ROSSER, John Samuel, M.D.Glasg., D.P.H., F.P.S.Glasg., appointed Certifying Factory Surgeon for the Llandovery District.

SCOTT, Kenneth, F.R.C.S., appointed Ophthalmic Surgeon to the St. Mary's Children's Hospital, Plaistow.

VERNON, C. M., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Workhouse of the West Ashford Union, *vice* J. H. Mitcheson, L.R.C.P.Edin., M.R.C.S.Eng.

TINDAL, Andrew Stewart, M.D., appointed Assistant Physician to the Victoria Infirmary, Glasgow.

WHILLIS, Samuel Short, M.D., B.S.Dunelm, appointed Honorary Surgeon to the Fleming Memorial Hospital for Sick Children, Newcastle-on-Tyne, *vice* Walter Ridley, F.R.C.S., resigned.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Society of London, 8.30 P.M.—Annual Conversazione: Reception by the President. 8.45 P.M.—Oration by Dr. J. Kingston Fowler: Science and Medicine in the Eighteenth Century.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Colcott Fox: Consultation. (Skin.)

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent: Consultation. (Medical.)

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. Clinton T. Dent and Sir William Mac Cormac will deliver addresses on The Wounded in the Present War. The addresses will be illustrated by lantern slides and an exhibition of specimens showing the effects of various forms of bullets.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Dr. Buzzard: Syringomyelia.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. O. Hawthorne: Consultation. (Medical.)

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Dr. C. Theodore Williams: The Relation of Pleurisy to Pulmonary Tuberculosis.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Mr. S. H. A. Stephenson: Eczematous (Phlyctenular) Affections of the Eye. Post-Graduate Course.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.) 3 P.M.—Dr. Harrison Low: Class: Roentgen Rays. Demonstration II.

Charing Cross Hospital Post-Graduate Course, 4 P.M.—Dr. Abercrombie: Medical Cases.

Dermatological Society of Great Britain and Ireland, 20, Hanover Square, 4.30 P.M.—Annual meeting. Dr. A. J. Harrison, President, will deliver an address, and Mr. William Anderson will introduce a discussion on Seborrhœic Diseases of the Skin, the Associated Constitutional Conditions, and the Treatment. Dr. Radcliffe Crocker, Dr. Stephen Mackenzie, and others will join in the discussion. Cases will be exhibited as usual.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Mr. Bernard Pitts: Demonstration of selected Cases.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Holmes Spicer: Consultation. (Eye.)

Clinical Society of London, 8.30 P.M.—Annual general meeting. Election of officers. Papers: Mr. Arthur E. Barker: A Case of Gastroenterostomy followed by Pylorectomy: Recovery. Dr. W. P. Victor Bonney (introduced by Dr. Abercrombie): A Remarkable Case of Obscure Septicæmia treated by Anti-streptococcus Serum and Nuclein. Dr. W. Pasteur: Conclusion and Post-mortem Notes of a Case of Graves's Disease in which Bradycardia supervened (shown at the Society, April 20th, 1898).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

SQUIBBS.—On May 5th, at 15, Church Street, New Lenton, Nottingham, the wife of R. E. P. Squibbs, L.R.C.P., of a son.

MARRIAGES.

BOND—LAWRIE.—On May 12th, at Holy Trinity Church, Worcester, by the Rev. Alfred Bond, Rector of Icomb, assisted by the Rev. George Fred Hough, Charles Hubert Bond, M.D., D.Sc., Heath Asylum, Baldwyn's Park, Bexley, to Janet Constance, only daughter of Fred. R. Lawrie, of Worcester.

STEDMAN—WHEWAY.—On Tuesday, May 8th, at St. Thomas's, Stepney, E., by the Rev. E. Bray, M.A., assisted by the Rev. W. Muirhead, Sevignac Bell Stedman, M.R.C.S., L.R.C.P., of Binbrook, Lincolnshire, to Jane Grace, younger daughter of the late George Wheway, of Nuneaton, and niece of Mrs. G. A. Rogers, 401, Commercial Road, E.

DEATHS.

HARPER.—On May 14th, at 25, Rosary Gardens, South Kensington, after a brief illness Helen Watson, the loved and loving wife of James Harper, M.D., aged 38.

SINCLAIR.—On May 8th, at Oakfield, Garstang, George Gunn Sinclair, L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., late of Esk, Durham, aged 69 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, I.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 3; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females. W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children) 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th. 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

Queries, answers, and communications relating to subjects to which special departments of the BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

J. H. S. asks whether the "nitropropiol" test for sugar in urine is reliable.

C. F. asks whether it is possible and practicable to insulate needles for electrolysis oneself, and, if so, the best way of doing it.

E. A. wishes to know where he can obtain coloured diagrams of (1) the base of the brain, showing the superficial origins of the nerves; (2) ditto, showing the deep origin of the nerves; and (3) the medulla oblongata and cord, showing the arrangement and course of the nervous strands.

[PHOTOGRAPHERS' ECZEMA.

W. asks for a reference as to the pathology and treatment of "photographer's eczema." The condition appears as seen by him to be hypertrophy of the horny layer of the epidermis and is difficult to get right.

SOLID THIRST QUENCHERS.

J. T.—The most convenient preparation for allaying thirst is a compressed tablet of sodium bicarbonate and tartaric acid. Potassium chlorate or potassium chlorate and borax, in compressed form, would probably also prove useful, but should be used with caution.

MEDICAL EXAMINATION OF SCHOOL TEACHERS.

A. T. R would like to know the fee usually given by a School Board for a certificate of health given after medical examination of a candidate for the post of school teacher (male or female). Several questions having to be answered, namely, as to length of time candidate has been known, opportunities for judging as to state of health, eyesight, etc. After sending in claim of 5s. fee 2s. 6d. has been offered, which "A. T. R." does not consider sufficient.

THE PREVENTION OF LACERATION OF THE PERINEUM.

QUERIST asks for information as to the best methods of preventing laceration of perineum in primiparæ. I have tried, he writes, (1) supporting perineum, (2) dilating perineum, (3) pushing head under pubes through finger in rectum, etc., (4) a combination of the above. All these methods act when the pains are not too violent and the perineum is not too rigid. In other cases, however, they seem to me almost if not quite useless. Are lateral incisions in the perineum any good?

TEXTBOOKS OF PRACTICAL GEOLOGY.

DEPECHEZ wishes to be recommended a textbook that would serve as an introduction to anyone taking up practical geology as a hobby. One relating to field work and the practical distinction of the different strata would be desirable.

*** Apart from the ordinary general textbooks of geology, the most suitable books would be *Outlines of Field Geology*, by Sir A. Geikie, 4th edition (London, Macmillan and Co., 1891, 3s. 6d.), and *Textbook of Field Geology*, by W. H. Penning, 2nd edition (London, Baillière, Tindall, and Cox, 1894, 7s. 6d.).

HOME FOR IMBECILE CHILDREN.

DERBYSHIRE asks for information of any institution where an idiot boy, aged about 4 or 5 years, could be received. He is of rather dirty habits though he varies in this matter. His parents are poor people, and could only afford a small payment at present.

*** The Earlswood Asylum (Secretary, W. Howard, Esq., 36, King William Street, London Bridge, E.C.) would probably be most suitable for the case mentioned, but the boy would have to be elected. No special provision for idiots has been made in the Midlands by the county authorities, except in connection with the Northampton County Asylum, where there is a block for idiots, to which admission might be obtained through the local Poor-law authorities.

WORKHOUSE MEDICAL OFFICER would be glad to know of an asylum or home for a girl, aged 8 years, mentally deficient but not hopelessly, not paralytic though there is slight dragging of one leg. She has had no fits during last eighteen months, though she is said to have had attacks previously. The cost of her maintenance would be defrayed by the Board of Guardians. Her admission to the Royal Albert Asylum has been refused, presumably on account of previous history of fits.

*** Miss Dendy, Honorary Secretary to the Lancashire and Cheshire Association for the Permanent Cure of the Feeble Minded, might be able to advise in this matter. Her address is 13, Clarence Road, Withington, Manchester. Homes are about to be established by this Society.

ABATEMENT OF INCOME TAX.

SOUTHSEA asks whether, as a medical practitioner, he can claim a deduction of income-tax in respect of the cost of new surgical and other instruments required professionally, as the local surveyor of taxes refuses to allow this, and states that he is only entitled to claim for repairs to and renewals of existing instruments, and not for new ones.

*** The question is one not for the opinion of the surveyor of taxes, who is merely counsel for the Crown, but for the decision of the Commissioners, who have to pronounce whether the expenses incurred have been wholly and necessarily expended in the exercise of his profession. The Income-tax Repayment Agency, to whom we have referred the question, contend that the cost of instruments is such an expense.

ANSWERS.

CARTHA.—The English translation of Professor Schenk's book on the *Determination of Sex* is published by The Werner Company, 13A, Cockspur

Street, S.W. An analysis of the book was published in the BRITISH MEDICAL JOURNAL of May 7th, 1898, p. 1224.

BONE CONDUCTION OF SOUND.

THE fact noted by Dr. MacRae—namely, that in bone conduction sound is best appreciated (with exceptions) by the ear opposite to the source of sound, as, for example, that a tuning fork placed over the right parietal eminence is best heard by the left ear—is familiar to most aurists, and has been published in Burnett's *Textbook of Diseases of the Ear*. It is true only of the neighbourhood of the parietal eminence, and not of the mastoid region where the bone conduction tests are made.

VARICOSE ULCERS OF THE LEG.

DR. T. CHARTERS WHITE (Belgrave Road, S.W.) writes in reply to "L.S.A." to say that, after a trial of every recognised remedy for twenty-five years, a patient, aged 65, has been thoroughly cured by the use of ichthyol ammoniæ—50 drops in 1 ounce of cold boiled water. A piece of soft linen rag is saturated in this lotion and laid on the ulcer and kept in place by a bandage. No water used for ablution should be allowed to come near the ulcer, but the lotion alone. After about a week's application the excavated edges of the ulcers are seen to be closing in, and will continue to do so till the wound is healed.

THE GONOCOCCUS.

INQUIRER.—Nearly all bacteriologists agree in stating that the gonococcus cannot be found in a normal urethra "which has never been contaminated." The micro-organism will only grow on very special artificial media, and it dies very quickly when dried, or allowed to remain at a temperature below about 30° C. It is almost impossible, therefore, that it should gain an entrance into the urethra except by direct or indirect contamination. Nearly all the work on this subject has been published in the several volumes of the *Centralblatt für Bakteriologie und Parasitenkunde*.

SIMPLE TEST FOR ANIMAL FAT.

DR. CARSTAIRS DOUGLAS (Glasgow) writes: In reply to "I.M.S.," the simplest efficient test for distinguishing between butter fat and the animal and vegetable fats is probably the "acetic acid test." It depends on the fact that butter fat and strong acetic acid mix and form a clear mixture when heated at a much lower temperature than do animal or vegetable fats and the acid. Take a test tube and measure into it 5 c.cm. of water by a pipette, mark on the tube with a file scratch the water level, add 3 more c cm. and mark again; empty and dry the tube; pour in first the fat (melted) up to the first mark and then strong acetic acid (99 per cent.) up to the second; warm in hot water up to say 80° C. A clear mixture is formed whichever fat be present. Remove from the hot water, place a chemical thermometer in the test tube, and with it stir gently. Now as the tube cools note the precise temperature at which the first point of turbidity appears in the clear mixture. If the fat be margarine turbidity will appear at 75° C. as near as may be. If it be genuine butter fat it must be cooled to nearly 36° C. for turbidity to appear. Mixtures of the two will grow turbid at intermediate temperatures. All the apparatus requisite consists of a few test tubes, a 3 c.cm. pipette, a chemical thermometer (Centigrade), and some 99 per cent. acetic acid.

THE M.D. DURHAM.

L.S.A. (LOND.) writes, in reply to "Phys. and Surg." (BRITISH MEDICAL JOURNAL, May 5th): It is not necessary to go up before the examination, but it is a good thing to do, as one goes over the pathological and micro- work, and gets many other useful hints. The questions in the *viva-voce* examination would take up too much space, but any subject the examiners get on is threshed out thoroughly. I was shown lobar pneumonia, third stage, and infarct of lung. Microscope: Cancer of stomach; interstitial nephritis; section of artery from granular kidney; crystals of phosphate of lime and uric acid; fatty cast and sarcinæ. Medical wards: Aneurysm of aorta, and about ten specimens of urine. Surgical wards: Hernia testis (tuberculous); carcinoma (floor of mouth); un- descended testicle with herniæ, and every kind of truss, surgical instrument and appliance ever invented since the days of Noah. The examination is very fair, and the examiners treat one well, but a man must know his work.

NOTES, LETTERS, Etc.

DR. THOMAS MYLES, OF DUBLIN.

MR. W. J. GREER, F.R.C.S.I., asks us to state that at a private meeting of some friends of Dr. Thomas Myles, who will attain the presidential chair of the Royal College of Surgeons in Ireland next month, it was decided to give his old pupils and others an opportunity of congratulating him and of acknowledging their indebtedness to him. With this object a subscription list has been opened. The Honorary Secretaries of the fund are Dr. R. Lane Joynt, 84, Harcourt Street, Dublin; Mr. W. J. Greer, 2, Chepstow Road, Newport, Mon.; and Dr. R. F. MacCraith, 2, Langdale Road, Sefton Park, Liverpool; and the Treasurer is Mr. W. J. Corrigan, F.R.C.S.I., Cloughmore, Splott Avenue, Cardiff.

THE UNION HOSPITAL, MIDDLESBROUGH.

MR. J. J. DALES, Clerk (Poor-law Offices, Municipal Buildings, Middlesbrough) writes: Adverting to a letter from Dr. L. G. Davies, Workhouse Medical Officer and Medical Officer of the Children's Homes of this Union, which was referred to in a recent issue of the BRITISH MEDICAL JOURNAL (April 28th, 1900, p. 1071), I am instructed by the guardians of this union to enclose copy of a letter which they directed me to write Dr. Davies, and to request you to be kind enough to insert same in your next issue.

Copy.

"May 3rd, 1900.

"Sir,—I am instructed by the guardians of this Union to state that their attention has been drawn to a letter which you have written to the Editors of the *Lancet* and BRITISH MEDICAL JOURNAL containing several most misleading statements with reference to the position of Workhouse Medical Officer and Medical Officer of the Children's Homes of this Union, and to inform you that if any attempts are made by you to prejudice the guardians of this Union in the minds of any intending applicant, the guardians will take such proceedings against you as they may be advised.

"Yours obediently,

"J. J. DALES, Clerk.

"Dr. Davies,

"The Workhouse, Linthorpe."

IRISH DISPENSARY DOCTORS AND GUARDIANS.

DR. W. CALWELL, Honorary Secretary of the North of Ireland Branch of the British Medical Association, 1, College Square, N. Belfast, writes to acknowledge the following additional subscriptions which have been received on behalf of the Dr. Moses Henry "Legal Expenses" Fund, particulars of which were published in the BRITISH MEDICAL JOURNAL of March 31st, p. 804:

	£ s. d.		£ s. d.
To amount already acknowledged	11 2 0	Dr. Creery (Coleraine) ...	0 10 6
Dr. McArthur (Greyabbey)...	0 10 6	Dr. Martin (Portrush) ...	1 1 0
Dr. R. Todd Huston (Tynan, co. Armagh)	1 1 0	Dr. Gaussen (Dunmurry), promised	0 10 6
Dr. Jos. McDonnell (Roscommon)	0 10 6		£15 6 0

CHANGE OF ADDRESS: A WARNING.

ANOTHER VICTIM writes: I should like to endorse the warning to others mentioned in a letter from "Victim," in the BRITISH MEDICAL JOURNAL of May 5th. I have had a similar experience, my name having been removed from the *Register* unknown to me, owing, as stated by the Registrar, to my not answering a letter which I never received relating to change of address. I may say that I have lately seen one of these letters, addressed to another medical man, and they are simply a notice enclosed in a halfpenny wrapper, and very likely to be consigned to the waste-paper basket without being opened. Surely the General Medical Council ought to register such important communications. In my case I had rather more annoyance and trouble than "Victim," inasmuch as the omission of my name from the *Register* was discovered by a Local Government Board inspector on a periodical visit to the Board sittings of the union. My first intimation of anything amiss was a letter from the Local Government Board and another from the Clerk to the Guardians, informing me that my name not being on the *Register* my appointment of medical officer was void, and would have to be refilled. I must admit that my name was immediately restored on my explaining the facts, but I have had to pay nearly £1 for that privilege. I have had to waste nearly a day in appearing before a notary and swearing an affidavit, and I have also had to be re-elected medical officer for my district.

LETTERS COMMUNICATIONS, ETC., have been received from

A Mr. R. B. Anderson, London; Mr. P. Abbott, London; A. T. R.; W. M. A. Anderson, M.B., London; Mr. W. R. Ackland, Clifton; A. F. H. **B** Dr. G. B. Batten, London; Mr. A. de W. Baker, London; J. H. Bailey, M.B., Manchester; Dr. J. G. Blackman, Portsmouth; Mr. E. Brice, Walsall; J. J. Bucan, M.B., Motherwell; Dr. H. T. Bulstrode, London; F. M. Blumer, M.B., Stafford. **C** Dr. A. K. Chalmers, Glasgow; Club Doctor; Mr. W. J. Corbett, London; Dr. F. G. Clemow, London; C. F.; Dr. W. Calwell, Belfast; Messrs. Cassell and Co., London; Carthr. **D** Commander W. Dawson, R.N., London; D. A. Davies, M.B., Swansea; Dr. C. Douglas, Glasgow. **E** Enquirens; E. A.; Enquirer. **G** Mr. J. Greenhalgh, Northallerton; Mr. W. J. Greer, Newport, Mon.; Mr. E. Gray, Armagh; Dr. A. E. Giles, London; Mr. S. Gross, Barnsley. **H** Mr. B. Hamilton, London; Mr. C. Holthouse, Richmond, Surrey; Humanitas; Dr. F. Hinds, Worthing; T. E. Hayward, M.B. Haydock. **J** J. H. B.; Dr. A. B. Judson, New York; J. H. S. **K** Mr. G. J. Knight, London; Dr. R. L. Knaggs, Leeds; Dr. Keiffenheim-Trubridge, Hoo. **L** Dr. W. G. V. Lush, Weymouth; Dr. A. W. W. Lea, Manchester. **M** A. E. Maylard, M.B., Glasgow; A. Murchison, M.B., Greenock; Member; Dr. C. J. Morton, Walthamstow; Dr. C. F. Marshall, London; M.D.; D. P. F. Moline, M.B., London; Dr. R. W. Marsden, Manchester. **O** Mr. J. Orton, Foleshill; Observer; One of Lord Lister's Dressers; Orthodox. **P** Pater; Mr. H. C. Phillips, London; Dr. E. F. Potter, London; Dr. R. J. Probyn-Williams, London. **Q** Querist. **R** R.A.M.C.; Dr. J. Robertson, Dumbarton; Mr. T. F. Raven, Broadstairs; G. A. Reid, M.B., Southsea; Messrs. Radcliffe and Co., Leeds; D. Richmond, M.B., Rochdale. **S** Mr. H. B. T. Symons, Como; Mr. P. W. Squire, London; Mr. C. G. Stuart-Montieth, London; A. M. Saunders, M.B., Hopeman, N.B.; "Saint Christopher Gazette," The Editor of the, St. Kitts, W.I.; Mr. W. H. Stephenson, Manchester; Mr. G. P. Shuter, London; Mr. W. W. Stocker, London; Mr. E. A. Steele, Southend-on-Sea. **T** Mr. H. G. Turner, London; Dr. S. W. Thompstone, Old Calabar; Mr. R. F. Tomlin, London; Mr. G. A. Tyacke, Chichester; Tyke; Mr. J. Thrussell, London; T. A. B. **V** Village Missionary. **W** Dr. A. L. Wolbarst, New York; Mr. T. C. White, London; Dr. R. Wyse, Polmont Station; Workhouse Medical Officer; Mr. C. Ward, Pietermaritzburg; Dr. R. Willson, Oxford; F. C. Wallis, M.B., London; Dr. F. Willcocks, London; Mr. J. C. Wilson, Haworth, etc.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

A CLINICAL LECTURE
ON
PUERPERAL INGUINAL PARAMETRITIS;
OR THE COMMON KIND OF PELVIC CELLULITIS.

Delivered at the London Hospital.

BY G. E. HERMAN, M.B., F.R.C.P., F.R.C.S.,
Senior Obstetric Physician to the Hospital.

GENTLEMEN,—My subject to-day is the common kind of pelvic cellulitis, or puerperal inguinal parametritis.

WHY PUERPERAL CELLULITIS IS OFTEN INGUINAL.

Cellulitis after delivery is usually inguinal, because during pregnancy the cellular tissue at the side of the uterus becomes looser, and the peritoneum is raised above the brim of the pelvis, so that at the end of pregnancy there is loose cellular tissue extending from the side of the uterus to the groin. Hence inflammation of pelvic cellular tissue after delivery tends to spread up to the groin. Apart from pregnancy the cellular tissue is not so loose, the peritoneum is not raised up towards the groin, and so cellulitis is seldom inguinal. Puerperal inguinal cellulitis is commoner than any other kind.

HISTORICAL.

It was first described by Mauriceau in 1740. Before him these cases were either called abscess of the womb, or the nature of the disease was not recognised. Mauriceau was the first to describe the abscess as not situated in the womb, but at the side of the womb. For a long time the pathology of the disease was not understood. These swellings were supposed to be due to reabsorption of the lochia or to reabsorption of the milk, and were called "milky deposits." You will find little that is clear about this condition in the books written before the second half of this century, because the older authors classed together every kind of pelvic abscess whether in the ovary, or the tube, or in the peritoneum; whether arising from disease of the bowel, or of other parts of the pelvis; the situation of the disease was not defined. For that reason there is difficulty in getting a clear idea of pelvic cellulitis from any book written before the middle of this century. About that time attention was drawn to the frequency with which inflammation and suppuration in the pelvis was not in the cellular tissue but in the peritoneum, and depended upon disease of the tubes or ovaries. This led to such an over-estimate of the frequency of peritoneal inflammation that even during the last ten years operators have opened the abdomen and been surprised to find that the disease was not in the peritoneum but in the cellular tissue outside the peritoneum. There was a good excuse for the older authors failing to distinguish between cellulitis and peritonitis, because in severe cases the two are combined. In the most acute cases of cellulitis after delivery the inflammation rapidly spreads to the peritoneum. In cases of tubal inflammation and pelvic peritonitis which has existed long, there is generally thickening of the cellular tissue. Even in cellulitis not of the most severe type the peritoneum is often affected. But in the slighter forms the peritoneum is not affected. In the cases I shall describe there is no affection of the peritoneum unless from some exceptional complication. Even after pelvic cellulitis was known, and its symptoms and signs understood, the student found considerable difficulty in getting a grasp of its common symptoms, because in most of the books the common and rare forms of cellulitis are described together.

THE COMMON FORM OF PUERPERAL CELLULITIS.

There is one form of cellulitis commoner than all the rest put together, and I shall describe to-day this form and no other; it is that in which the inflammation spreads into the inguinal region. It forms a swelling in the groin. Sometimes it ends in absorption, sometimes in suppuration. When it suppurates it commonly points above the middle of Poupart's ligament. I refer not now to cases which burst in unusual places, are complicated by unusual features, or run an exceptional course. All the cases may be alike etiologically, but if they run an exceptional course and are complicated by exceptional features they are clinically different.

ETIOLOGY.

There are two main causes of cellulitis—namely, (1) childbirth, and (2), apart from pregnancy, injuries to the cervix. The majority of cases are puerperal. Most of the patients are young, simply because most puerperal women are young. I have gone through my hospital records during the last seven years, and I find that during that time 63 cases of this common kind of cellulitis were admitted; of this 63:

23	were aged	between	20 and 24
15	,,	,,	25 ,, 29
15	,,	,,	30 ,, 34
9	,,	,,	35 ,, 39
1	was aged	over	40
63			

This shows you that while puerperal cellulitis may occur at any age, it is more common in the younger child-bearing women. With regard to the labours it was

the 1st	in 19	of them	
,, 2nd	in 10	,,	
,, 3rd	in 7	,,	
,, 4th	in 4	,,	
,, 5th	in 5	,,	
,, 6th	in 3	,,	
the 7th	in 5	of them	
,, 8th	in 2	,,	
,, 9th	in 3	,,	
,, 11th	in 1	,,	
,, 13th	in 2	,,	

These figures show an undue proportion of women having their first children.

It is believed that puerperal cellulitis, like most inflammations, is produced by micro-organisms, but we know little as to how those organisms act. The streptococcus, the staphylococcus, and the bacterium coli have often been found in the pus of pelvic cellulitis. The streptococcus produces widely different effects—sometimes a slight local inflammation, sometimes the one-hundred-millionth of a cubic centimetre is enough to produce death. When the effects of different specimens of apparently the same organism differ so much as this, we cannot say that we know much about it. We know not in what circumstances the streptococcus, when introduced into the female genital canal, produces inguinal cellulitis. Attempts have been made to produce this disease in animals by injecting staphylococci and streptococci into their cellular tissue, but these attempts have failed to produce a disease running anything like the course of pelvic cellulitis. An inflammation has been produced resembling that caused by injecting these organisms into other parts of the body, not one taking the course of pelvic cellulitis. The bacterium coli, in its native haunts, seems to be innocuous. After operations about the rectum, or after colotomy, where the wounded surfaces must be soiled by the bacterium coli, which abounds in these neighbourhoods, no harm appears to result from its presence. We know not the circumstances under which inflammation of the cellular tissue is produced by micro-organisms. From the fact that it follows childbirth, it is believed that the action of the organisms must be favoured by damage to the tissues produced by childbirth, but at the present time we have no knowledge of what the special injuries are which render the pelvic cellular tissue liable to become a nidus for these organisms. Whether cellular tissue which is compressed, displaced, and stretched during parturition is thus made a suitable food for micro-organisms we know not. I think the disease is caused in that way rather than by direct inoculation, because if it were by the latter the symptoms would immediately follow inoculation; they do in the most severe cases, but in the majority the inflammation does not begin until some days or weeks after delivery. That leads me to think that the part is first damaged, and that then the damaged tissues form a nidus in which the organisms multiply and so change their characters as to become capable of producing this pelvic inflammation.

It has been stated that laceration of the cervix is a cause of pelvic cellulitis. But deep laceration of the cervix is often found in a patient who has no sign of past or present cellulitis, and in many cases of pelvic cellulitis the injury to the cervix is slight, so that laceration of the cervix uteri is not necessary for the production of the disease. It is believed that cellulitis may be due to a wound of the vagina or to effusion of blood into the cellular tissue, but these injuries have not been identified with the frequency necessary to establish that view. It is difficult to get information as to the antecedent conditions of cellulitis, because it is not usual to examine puerperal women during the first few days of their lying-in, and unless this is done no

one can say what injuries may or may not have been present. And then, again, the symptoms at the beginning are usually slight; often the patients get up at the usual time. The result is that we have little information as to the local conditions antecedent to pelvic cellulitis.

Some think that gonorrhœa may cause puerperal cellulitis. This is supported by the fact that experiments have shown that gonorrhœa is capable of producing inflammation of cellular tissue, as is clinically seen in gonorrhœal stricture of the urethra. But although inflammation of the cellular tissue may be produced by the gonococcus, in the common cases of pelvic cellulitis there is no evidence of gonorrhœa. When gonorrhœa in women spreads, it extends up into the uterus and along the tubes: it is exceptional for the cellular tissue to be affected. If the cellular tissue is inflamed by the presence of the gonococcus, that inflammation does not run the clinical course of ordinary puerperal parametritis. Chill is invoked as a cause of pelvic cellulitis, as it is for a great many other inflammations. It may be that chill so lowers the vitality of the tissues as to render them more prone to suffer from the invasion by micro-organisms. But the number of cases of inflammation of all sorts that are attributed to chill is decreasing. Many effects were formerly attributed to chill, as to which we are now sceptical. I think chill has little to do with pelvic cellulitis.

In many cases there seems to have been nothing abnormal with the labour. Of my 63 cases, I have information as to the labour in 23 which ended in suppuration and 25 in which there was no suppuration. Of the 23 cases which suppurated, in 16 there was no difficulty with the labour; it was said to have been "easy" in 9, "normal" in 2, "good" in 2, and "premature" in 3. On the other hand, the labour was said to have been "difficult" in 1, "lingering" in 2, forceps were used in 2, 2 were "instrumental"—not stated what instruments were used—in 1 there were twins born dead; that makes 7 abnormal cases. You will observe that in two-thirds there was no difficulty with the labour.

Of the cases which did not suppurate, in 11 there was no difficulty; in 7 it was "easy," in 3 "natural," in 1 "premature." In 14 there was some difficulty in the labour. It was "slow" in 1, "not so easy as former labours" in 1, "long" in 1, "bad" in 1, child born dead in 1, labour was finished by version in 2, was "instrumental" in 3, ended by forceps in 3, adherent placenta had been present in 1. Thus, taking both sets together, there are 27 in which there was no difficulty with the labour against 21 in whom there was a difficulty of some kind.

There is a fact about which it is easy to invent explanations. The disease occurs more frequently on the left side than on the right. I shall not quote figures published in textbooks, but they all show this fact. In the cases—both suppurating and non-suppurating—I have investigated, 35 were on the left and 21 on the right side.

Onset.

The illness does not, as a rule, immediately follow delivery; generally there is an interval. I find that 29 of my cases were taken ill within a week of delivery, namely:

	Cases.
Dating from delivery	12
Second day from delivery	3
Third " "	7
Fourth " "	2
Fifth " "	2
Sixth " "	1
Seventh " "	2

Seventeen were not taken ill until after the first week, namely:

Eighth day from delivery	1
Tenth " "	2
Twelfth " "	3
Fourteenth " "	5
Sixteenth " "	1
Eighteenth " "	1
Twentieth " "	1
Three weeks "	1
Four " "	1
Five " "	1
Seven " "	1

The figure shown at the fourteenth day, I think, simply means the end of the second week, not a special liability on that day.

Here is an important fact about the disease. Of the cases which were taken ill within a week, 21 ended in resolution and only 8 went on to suppuration. Of those in the second week, 7 ended in resolution and 6 in suppuration. All but 1 taken ill after the fourteenth day suppurated. Four of them were taken ill after the twentieth day; all these suppurated. These figures show that the later the illness comes on the greater is the liability to suppuration.

Symptoms: Pain.

The prominent symptom is pain, referred to the affected side, which often, but not always, is so severe as to keep the patient awake at night. The pain is commonly described as a burning or shooting pain. In 58 cases pain was present in all but 1. In 1 it did not come on till the thirty-third day; this patient had kept her bed since delivery. One, who had a rigor on the fifth day, said she had no pain till six weeks after delivery. In another, who dated her illness from the day she got up, twelve days after delivery, pain was not felt till three weeks after. One patient had pain on the second day, got up on the thirteenth day, and dated her illness from the fourteenth. In all the rest pain was present from the beginning of the illness.

Shivering.

Rigors occurred in about one-fourth—in 15 out of 58 cases. In 5, or one-twelfth of the cases, it is expressly stated in the notes that the patient had not shivered. In the others it was not mentioned whether the patient had shivered or not. In 2 the rigor occurred on the second day, in 2 on the third day, in 1 (several rigors) on the fourth day, in 2 on the fifth day. In the others the date of the rigor is not given. One, who shivered on the fifth day, dated her illness from the third day on which the pain began. In the others with dated rigors it was the beginning of the illness. Seven of the 15 suppurated, 8 not. Rigors seem more frequent in the cases which come on early, and they modify not the prognosis. The average illness in the non-suppurated cases was sixty-six days; in those of them that had rigors, sixty-one days. The average illness in the suppurated cases was ninety-three days; in those that had rigors, eighty-five days. It seems from that as if the persons who had rigors had a shorter illness; but I think the explanation of it is that the rigor enabled the date of the illness to be fixed.

Weakness.

I mentioned that in many cases the patients get up at the usual time and have to go to bed again afterwards. "Weakness" is the reason commonly given why they have to go to bed again. I have information on this point in 20 of those which did not suppurate.

7 had not left their beds
1 got up on the seventh day
1 " " eighth day
1 " " ninth day
5 " " tenth day
1 " " twelfth day
1 " " fourteenth day
1 " " eighteenth day
1 at the end of three weeks
1 " " six weeks.

Of 19 that suppurated

2 had not left their beds
1 got up on the fourth day
1 " " seventh day
1 " " ninth day
4 " " tenth day
1 " " eleventh day
" " " thirteenth day
4 " " fourteenth day
2 got up in the third week
1 got up after four weeks
1 " " five weeks.

Fever.

Besides pain, weakness, and sometimes shivering, there is fever. The maximum temperature while in hospital in the non-suppurating cases was from 99° to 106°. This latter temperature, which occurred in one case, was only an isolated rise, and was probably due to some temporary cause other than cellulitis. The highest temperature due to cellulitis was 105°, and the average maximum temperature while in hospital 101.9°. The highest temperatures in most cases were near the average. I think the temperature may have been higher in the beginning of the disease, before admission; but as to the initial temperature I have no record, nor do I

know of any that have been published. The maximum temperature while in hospital was:

Under 100° F. in 4.
From 100° to 101° in 8.
From 101° to 102° in 11.
From 102° to 103° in 8.
Over 103° in 7.

In the suppurated cases the fever ran a little higher. The maximum temperature while in hospital was from 98.5° to 104°5.

The average maximum temperature while in hospital was 102.1°.
In 3 it was under 101°.
In 9 from 101° to 102°.
In 14 from 102° to 103°.
In 2 over 103°.

PHYSICAL SIGNS.

Before there has been time for coagulable lymph to be thrown out, there are no physical signs, but, as the disease advances, the cellular tissue becomes swollen and infiltrated with lymph, and the swelling makes its way by the side of the round ligament to the front, and spreads up between the transversalis fascia and the peritoneum. It spreads up as high as the loose cellular tissue between the transversalis fascia and the peritoneum extends. At a certain point in the abdominal wall the peritoneum becomes firmly adherent to the sheath of the rectus muscle, so there is no loose cellular tissue between them, and when that point is reached the swelling goes no higher. Therefore in inguinal cellulitis you find a swelling which almost always has the same characters. The swelling, starting from the anterior superior iliac spine, rises to within one or two fingers' breadths below the level of the umbilicus; then runs horizontally inwards to within about 2 inches from the middle line; then slopes downwards, reaching the level of the symphysis about half an inch beyond the middle line. When you examine bimanually you find that the inner part of the swelling is the uterus. You may get a case when the swelling is in the process of absorption, and then it will not be so large. By the vagina a firm swelling is usually felt on the same side as the inguinal swelling. Early in the case this feels as if it were continous with the uterus at the level of the vaginal insertion; but later on it may be so high up as only to be reached with difficulty.

When these cases are kept at absolute rest in bed, if the inflammation is not going to suppurate, the fever subsides and the swelling disappears. The average duration of fever after admission to hospital in the non-suppurating cases was sixteen days.

EFFECT OF EARLY TREATMENT.

Early treatment is one of the most important influences which modify the course of the disease. The essential treatment consists in absolute rest. The patients we get here, who are poor, cannot get that rest at their own homes. That is clearly shown in this way. The period after delivery at which each patient was admitted varied from two days to four months. Of those admitted within a fortnight after delivery, none suppurated. Of those who were admitted less than a month after delivery, only 3 suppurated, 18 did not. Of those that were admitted more than a month after delivery, 24 suppurated, and 17 did not. This might be accounted for by the fact that the cases coming on late seem more prone to suppurate. But I shall give you other figures, not to be so explained, which show the effect of treatment.

LENGTH OF ILLNESS.

The following table shows the average length of time in hospital and length of illness in the cases which did not suppurate. The shortest illness was 23 days in the case of a patient admitted on the second day of the illness. The longest illness 149 days; this patient had been ill 112 days before admission. The shortest times spent in hospital were 5, 8, and 13 days; these patients had been ill 77, 28, and 12 days respectively before admission.

The average length of the illness from the beginning till they left the hospital well, in cases which did not suppurate, was 67 days.

The following table shows the number above and below the average:

Under 30 days	2
30 to 50 ,, ...	5
50 to 80 ,, ...	18
80 to 100 ,, ...	8
Over 100 ,, ...	2

Shortest 23 days
Longest 149 ,,

If the case suppurates, the swelling, instead of getting smaller, bulges, becomes softer, and at length fluctuation is felt above the middle of the level of Poupart's ligament. While this is going on, fever keeps up, and the patient gets thinner and weaker. Then, if properly treated, the abscess is opened. In the cases on which I found these statements the average day after admission on which the abscess was opened was the twelfth. Among those which suppurated the average length of the illness was 93 days. The earlier the patients were admitted the longer was the time after admission before the opening was made; obviously because in those who were admitted late the abscesses were riper for opening than in the others. But the difference in this respect is not so great as to be due entirely to that cause.

Cases which Suppurated.

Date of Opening.	Opened.	In Hospital.	Total Illness.
1 case ill a week only before admission (symptoms either exceptionally slight or error in report)	2nd day	20 days	27 days
	Average Date of Opening.	Average.	Average.
8 cases ill under one month (average 22 3 days)	15th day	44	67
9 cases ill from one to two months (average 47 days)	12th day	43	90
6 cases ill over two months (average 95.8 days)...	9th day	39	135

Average date of opening 12 days.
Average length of illness 93 days.

Cases which did not Suppurate.

Ill Before Admission.	Days in Hospital.	Length of Illness
Under 10 days (2 cases)	27.5	34
10 to 30 days (13 cases)	32	52
30 to 50 days (10 cases)	25	63
Over 50 days (8 cases)	30	104

The figures above given, showing the length of illnes before admission and the length of stay in hospital go to show that, so long as the patients are not being treated, and are getting about, trying imperfectly to do their household work, so long the disease does not tend to get well. When the patients are in the hospital there is little difference in the length of illness between those who have been ill a long time and those who have been ill a short time.

The following figures briefly summarise the length of the illness:

Non-suppurated cases:
Stay in bed ... ... 5 to 47 days.
Average ... ... 23 ,,
Stay in hospital ... ... 5 to 56 ,,
Average ... ... 29 ,,
Suppurated cases:
Stay in bed... ... ... 14 to 67 ,,
Average ... ... 32 ,,
Stay in hospital ... ... 18 to 88 ,,
Average ... ... 43 ,,

I gave you the average duration of the fever (16 days) in the non-suppurating cases, but I did not mention that of the suppurating cases, because the effect of opening the abscess is on the next day or in two or three days to bring down the temperature. When the pus has escaped, the swelling rapidly diminishes and the patient improves.

FLEXION OF THE THIGH.

Sometimes the inflammation invades the psoas muscle, either by invading the substance of the muscle or by suppuration spreading between the psoas muscle and the os innominatum. When this happens the tension of the psoas muscle, when the thigh is extended, becomes intolerable to the patient, and she keeps her thigh bent at nearly a right angle, and held there fixed.

In the 63 cases which I have investigated, flexion of the thigh existed in 6. The cases with flexion of the thigh are generally those which suppurate, but sometimes it occurs without suppuration. The duration of illness before admission in these cases was 83 days, their average stay in hospital 57 days, and their total illness 140 days. Five of them suppurated. The length of time in hospital before the abscess was opened was from 15 to 47 days. Their maximum temperature was from 100.5° to 104.5°, the average being 102.8°. From these figures you will see that flexion of the thigh implies that the illness is severe.

Albuminuria.

The late Dr. Matthews Duncan reported some cases in which, with pelvic cellulitis, there was albuminuria, but nothing to account for it—no casts and no pus. This existed during the cellulitis, and ceased when the cellulitis got better. In 58 cases in this hospital the urine was examined, and out of the suppurating cases in 5 there was albumen, but it was a trace only. Out of 30 non-suppurating cases, there was a trace of albumen in 9. In 1 the urine was not drawn off with a catheter, and the albuminuria may have been due to admixture of menstrual blood.

Treatment.

In the treatment of these cases the essential thing is to keep the patient at rest, and to maintain her strength by suitable food, while relieving her pain by narcotics if necessary. This is all that is essential. There is no drug that has been proved to have any influence on the absorption of pelvic cellulitis. You can please the patient, perhaps relieve her pain, and certainly do no harm, by applying fomentations made with sedative drugs to the part. It is possible that the fomentation may hasten the absorption, but we have no evidence of it. When suppuration has taken place, the important thing is to let out the pus as soon as you can. In some cases relief can be given by making an incision, and so relieving the tension even before pus is discovered. But in the inguinal region it is not prudent to do so on account of the nearness of the peritoneum; because if you have to search for pus, you may open the peritoneum, and then, if there is only a small quantity of infective pus, that may find its way into the peritoneum, and set up peritonitis. In other parts than the inguinal region that practice can be carried out more safely, but I speak not in this lecture of such cases. The important thing in the case of suppurating cellulitis is to open the abscess, and let out the pus as soon as possible, and then keep the patient quiet while the abscess is healing. Few effects of surgical treatment are more striking than the rapid improvement in cases of parametritis when the pus has been let out.

Let me repeat that in this lecture it has not been my purpose to describe all the clinical features that parametritis may present, but only those of the common cases, which far outnumber the rare exceptional forms.

TWO CASES OF EXTIRPATION OF THE UTERUS FOR EXCESSIVE HYPERTROPHY AND PROLAPSE.

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The terms "hypertrophy" and "prolapse" are not a complete pathological description of the condition present in the two cases which are here reported, but represent the two most prominent clinical features, for in both there were excessive growth of the uterus and extrusion of the cervix with the anterior vaginal wall, part of the bladder, and the urethra through the vulvar cleft; the posterior vaginal wall was not extruded, the posterior fornix remaining apparently about its normal level. The term "prolapse" should, strictly speaking, be limited to cases of herniation of the entire pelvic floor, where there is unfolding and protrusion of both anterior and posterior vaginal walls, between which the uterus hangs, as it were, in a sac. In these cases the operation of hysterectomy has been tried and by many found wanting, for the removal of the displaced uterus does not of itself cure the hernia of the remaining portion of the pelvic diaphragm; it has therefore, it seems, been almost abandoned by some operators, at least, in favour of other operations, for example, plastic operations on perineum and vagina, coupled with suspension of the uterus to the anterior abdominal wall or vaginal fixation; on the other hand, some operators have gone so far as to excise not only the uterus, but also the whole or part of the vagina, so as to produce obliteration of the genital canal; such a radical measure, however, can only be suited to a small number of cases. In such a condition, namely, simple prolapsus, I have obtained very satisfactory results by repairing the perineum and stitching the fundus of the uterus to the anterior abdominal wall, one patient so treated having gone through a subsequent pregnancy and normal labour (at full term) without prolapse recurring. On the other hand, one very occasionally meets with a condition of extreme hypertrophy of the uterus without any herniation of the pelvic floor, as in the case of a virgin, aged 20, upon whom I operated about three years ago, and in whom the cervix protruded through the vulvar orifice, whilst the fundus remained at its normal level, and the vaginal fornices and perineum were practically intact. In this case, after ligature of the uterine arteries, the cervix was excised above the level of the vagina, with good result.

The two cases which I now report belong to a class which stands midway between the two classes to which I have just alluded; in both there was great hypertrophy of the uterus itself, especially of the cervical portion; with protrusion of the lower part of the cervix through the vulvar opening, together with the anterior vaginal wall and portion of the bladder and the urethra, the latter apparently having been dragged downwards by the advancing cervix. In both cases the fundus uteri was to be felt behind the symphysis pubis, and in both the posterior vaginal fornix existed, and apparently stood about its normal level. In the one case the sound passed 6½ inches, and the lower part of the cervix was hugely hypertrophied, so much so that when I saw it the cervix could not, on account of its bulk, be replaced within the vulvar aperture, and was much congested and ulcerated. The patient, a multipara, aged 47, said she had herself been unable to "get it back" for about a year. She had had six children, the youngest having been born ten years ago; there was some "prolapse" (probably of the anterior vaginal wall) after the first confinement 29 years ago. Menstruation had been regular every four weeks, but excessive, and for some months there had been urinary trouble.

In the second case the sound passed 5½ inches; the lower portion of the cervix was not so greatly hypertrophied, but a large part of the bladder was outside the vulva. In this case, also, as in the other, the fundus was to be felt behind the symphysis, and the posterior vaginal fornix seemed to be about its normal level. This patient was 52 years of age, and complained of "the womb coming down" since the birth of her last child six years before. The perineum had been repaired four or five years before, and I had myself done a colporrhaphy and perineorrhaphy about three years before, with only slight and temporary benefit.

It was a question in both cases as to whether amputation of the cervix above the vagina would be sufficient, or if hysterectomy would give a better result. The question of whether to open the peritoneal cavity was not practically a matter of choice, for in both cases it would have been impossible to remove even the cervix without so doing, as the posterior peritoneum reached an unusually low level (reaching outside the vulva), so low, indeed, in the first case that the circular vaginal incision around the cervix at once brought peritoneum into view. It was therefore decided to remove the uterus, afterwards carefully closing the peritoneal cavity in the usual way, broad surfaces of peritoneum being brought together by a fine continuous silk suture; at the same time the cut ends of the various uterine ligaments were bunched together by ligatures and fixed in one central knot. By means of buried sutures the large raw area of connective tissue covering the bladder was diminished, and the bladder wall folded upon itself. The cut edge of the anterior vaginal wall was then brought up to the level of the posterior vaginal incision, and a broad raw area on both flaps brought together, the effect of

this being to draw up the bladder well within the vulva; at the same time the top of the vagina was fixed to the peritoneum and to the "central knot" formed by the firm attachment of the cut ends of the uterine ligaments.

At a second operation the perineum was repaired, and the vaginal opening narrowed, the anterior edge of the new perineum being brought well forward so as to support the urethra and lower part of the anterior vaginal wall. The results have been very satisfactory, both patients being able to get about as they wish, with no urinary inconvenience, and without pessaries.

Hysterectomy for prolapse has been objected to by some operators, who have found that the patient continues to suffer from a prolapse of the vaginal walls. As I have said, the mere excision of the uterus cannot be expected to cure the hernia of the rest of the pelvic floor. This object, however, may be obtained by careful attention to the steps of the operation subsequent to the actual excision of the uterus, namely:

1. The drawing together of the peritoneal surfaces and the cut ends of the uterine ligaments.
2. The making of a broad union between the anterior and posterior vaginal walls, and their fixation to the "central knot" formed by the remains of the various uterine ligaments.

If these points are attended to the operation should meet with the desired success.

ON VAGINAL HYSTERECTOMY FOR UTERINE PROLAPSE.*

By R. C. CHICKEN, F.R.C.S.,
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It may be assumed that there are cases of prolapse of the uterus so severe and confirmed that hysterectomy alone gives any hope of a good result, even then recurrence sometimes following. Within this field there are three points worthy of consideration:

1. The reason that even hysterectomy fails to cure the prolapse.
2. The anatomical conditions which are the cause of this.
3. An operation specially modified to meet the difficulty.

As far as my experience enables me to judge, I find that vaginal hysterectomy for prolapse is practically the same as that for cancer. The method of operation and the incisions are the same, and the details of the various steps are not modified by the essential difference of the object to be attained. This, in my opinion, is wrong technically; for although when performed on the usual lines it may at times be attended by success, this is chiefly due to the floor of the pelvis having become tightened by the casual corrugation and folding of the vaginal flaps.

In removing the uterus for cancer, our great object is to completely excise the growth and its surrounding parts, without impairing the functional activity of the neighbouring organs. In hysterectomy for prolapse, the object is not so much to get rid of the uterus and those structures which promote prolapse. Although there are many points in common in the two operations, there is one fundamental difference. The one demands that the whole of the uterus be removed, as possibly containing isolated cancer cells; the other admits of voluntarily leaving behind any part of the uterus which, in the opinion of the operator, may assist in preventing the recurrence of prolapse. It is not within my scope to discuss the plastic operations that have been proposed, such as those of Freund and Baldy; they are well known.

The first step in designing an operation for inveterate prolapse is the recognition of the causes of prolapse and the nature of the structures on which the strain falls after the uterine ligaments have relaxed. The burden practically falls on the broad ligaments, which are bound to stretch under the continual application of strain. The uterus has no definite short firm attachment except to the base of the bladder, which is, however, itself so freely movable that the gain is fictitious.

The object then of an operation is to give a firm rigid attachment which will form a new pelvic floor; but if we cannot do this to remove the uterus and fix the apex of the vagina firmly by a short broad pedicle to a point as near its normal position in the pelvis as possible, so that it will be enabled to bear the strain required.

The loosest attachment is that connecting the neck of the uterus with the posterior vaginal wall, and unless this is specially considered no operation can ensure success. The second consideration is that any modification introduced should admit of easy and quick performance, offer as little risk as possible to the neighbouring structures. Beyond the slight support afforded by the vesical folds, the uterus is rather helped to fall than hindered by its connection with the bladder. The posterior vesical attachments are necessarily very loose, and this allows of the easy descent of the uterus. In fact functional dilatation of the bladder demands that alteration of relative position should be physiologically possible; and if physiologically therefore pathologically also. The posterior attachments of the uterus are equally unstable. The roof of the posterior vaginal fornix forming the floor of Douglas's pouch has no rigidity whatever, so that assuming that the lateral and other attachments of the uterus have been relaxed by pregnancy, there remains but very slight hindrance to stretching of the upper pelvic supports.

Is it possible now to strengthen the pelvic floor by making the summit of the vagina a fixed point that is more certain and solid than a chance adhesion? The entire removal of the uterus is ineffectual unless the cut surface at the base of the bladder happily forms peritoneal adhesions high up instead of to the raw edge formed by the posterior primary incision. The plan I recommend is:

1. The removal of a part only of the uterus.
2. The removal of the unattached portion of the posterior fornix.

In the state of complete prolapse the relationship of the bladder, ureters, and uterus is changed. The fundus of the uterus by its descent carries the posterior half of the bladder and the ureters with it, so that the posterior wall becomes the anterior. In complete prolapse the anterior uterine surface and sides are covered by bladder and ureters. To guard against any accident in operating produced by this abnormal anatomy a sound is passed backwards and downwards into the bladder as it lies exposed in front of the uterus. The continual dexterous manipulation of this by an assistant shows the limits of the bladder. By means of scissors the bladder is dissected off the sides and cervix of the uterus, the incision being in uterine tissue; the points are now turned sharply backward and the uterus cut across at the level of the cervix into Douglas's pouch. Two fingers of the left hand are passed through into the peritoneal cavity, the fundus of the uterus seized, retroverted, drawn down, and amputated at the point of peritoneal reflection on its anterior surface, the broad ligaments having previously been seized with forceps and ligatured.

There is now left attached to the base of the bladder a solid piece of uterine tissue. On the breadth and firmness of union which this is able to make will partly depend the success of the operation by resisting downward pressure in micturition and defæcation; in short, it acts as a buttress in forming a new pelvic floor. The next step is to make a posterior fixed attachment for this stump. We find at this stage that there is left the cervix and os uteri hanging on to a long flap of mucous membrane and peritoneum which is the stretched and useless posterior fornix; this is cut off by a pair of scissors close to the base. To this raw surface at the back of the pelvis the stump of uterine tissue is easily brought in contact after bleeding has been stopped. The parts are retained in position by gauze tampons.

By these means not only is there a broad, firm union of two fixed inelastic tissues, much preferable to a narrow casual adherence of thin, stretched membrane, but it gives a fixed support to the neck of the urinary bladder much preferable to the very thin walls which are left after the operation of vaginal hysterectomy for cancer.

The only part which requires special care is the dissection involved in separating the displaced bladder.

The points for which advantage is claimed are:

1. The leaving behind of a solid piece of uterine tissue,

* Abstract of paper read before the Nottingham Medico-Chirurgical Society, March 7th, 1900, at which specimens illustrating the operation were shown.

2. The transverse cut across the uterus allowing of easy retroversion of fundus and facility of applying ligatures to vessels.

3. The removal of the whole of the floor of Douglas's pouch.

4. The incision in the posterior fornix being made as far back as possible; the resulting scar admitting of no "play" between the bony pelvis and the neck of the bladder.

A CASE OF PUERPERAL SEPTICÆMIA: TREATMENT BY ANTISTREPTOCOCCUS SERUM: RECOVERY.

By HARCOURT GERVIS, M.D.Brux., M.R.C.S., L.R.C.P.Lond.,
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On Christmas Day, 1899, I was asked by another medical man to see a woman for him, who had been confined by a midwife on December 19th, and who he feared, from what her husband said, was probably suffering from puerperal fever. As I had on the previous day been called to see a patient moribund from general peritonitis who had been attended by the same midwife on December 17th, I had little doubt as to the nature and cause of the disease in the present case.

On visiting the patient I found her in bed, with an anxious look on her face. The temperature was 101°, pulse 100; tongue dry and furred. There had been diarrhœa, the nurse told me, in the night, and she had been restless and light-headed. On examination the abdomen was somewhat distended; the uterus was enlarged, and tender on palpation. There was a very small amount of offensive discharge. I was informed that the patient, who was aged 37, had been confined on the 19th, and had first seemed ill on the 21st, but no medical advice had been obtained until I saw her. Having washed out the uterus with perchloride of mercury (1 in 2,000), I gave 10 grains of quinine, and ordered 5 grains to be given every four hours. I also put the patient on brandy (8 ounces in the twenty-four hours), milk, beef tea, etc.

In the evening the temperature was 101.2°, pulse 120. Having obtained a supply of antistreptococcus serum (Burroughs and Wellcome), I injected 10 c.cm. beneath the skin of the abdomen. As the patient complained of noises and singing in the ears I stopped the quinine during the night.

December 26th. The patient was much worse. She had a rigor in the early morning, and was sweating profusely; temperature 105.5°, pulse 144. She was quite conscious, and complained of no pain whilst lying still. The abdomen was slightly more distended and more tender on palpation. There had been no further diarrhœa since the previous day. I injected 10 c.cm. of antitoxin, and washed out the uterus with chinosol 1 in 2,000. The quinine was resumed every four hours. In the evening the temperature was 103°, the pulse 144. The abdomen and general condition were much the same as in the morning, and the patient was taking nourishment well. A further 10 c.cm. of antitoxin were injected.

December 27th. Patient was better; temperature 101°, pulse 120, tongue furred. The abdomen was still full but not so tender; there was, however, a good deal of tenderness over the uterus, and also in the region of the spleen, which was enlarged. The bowels had been moved; the uterine discharge had almost ceased. Ten c.cm. of antitoxin were again injected and the uterus washed out with chinosol. On account of deafness no more quinine was given.

In the evening the temperature was 100°, pulse 100. Patient said she "felt beautiful"; she had been dozing a good deal. Antitoxin was again injected.

December 28th. The improvement continued; temperature 100.8°, pulse 96. The abdomen was quite lax, the uterus being enlarged, and still tender. The uterine discharge was small in amount, and not offensive; lactation had not been interfered with from the first. Antitoxin was injected, and a uterine douche administered.

At night the antitoxin was repeated, and 2 grs. of calomel given, as the bowels had not been open for two days.

On the following day the temperature came down to 99.8°, and on the evening of December 30th it was 99°. I still continued washing out the uterus, however, using perchloride of mercury 1 in 4,000, and injecting 10 c.cm. of antitoxin each morning.

On January 1st, one week after beginning treatment, I stopped both, and for the next five days the patient made steady progress, the temperature keeping below 100°, and the pulse about 90. The abdomen was quite lax, but there was still a good deal of tenderness over the uterus and in the region of the spleen. The patient was taking food well, being allowed to have pretty much what she liked. The bowels were kept regular with an occasional aperient.

On January 6th the patient did not seem quite so well; the temperature was 100°, and the pulse 100, but there was nothing fresh to be detected in the condition of the abdomen.

On January 7th the temperature was 101° and the pulse 120. On vaginal examination I found that the uterus was still enlarged and the os patulous. Thinking there might be some septic matter retained, I introduced a curette and scraped the uterine walls well, following this with a douche of perchloride 1 in 4,000. A good deal of shreddy, unhealthy-looking material came away. In the evening the temperature was 100.8°, and the pulse 108. Patient said she felt better, but had had some pain after the curetting.

On the following day, January 8th, whilst the general condition was no worse, the temperature had gone up to 103.2°, and the pulse was 120. Fearing that there might be fresh septic infection, I resumed the injection of antistreptococcus serum, giving 10 c.cm. morning and night for the next three days, and washing out the uterus once daily. The temperature remained between 102° and 104°, and the pulse about 120. There was very little constitutional disturbance, however, and the patient took nourishment fairly well. The abdomen remained lax, but there was a definite sense of resistance on the right side of the uterus. *Per vaginam* this was felt as a thickened mass filling up the right side of the pelvis, and the uterus was found to be somewhat fixed and at the same time pushed over towards the left. The examination caused a good deal of pain. The patient at this time complained of some pain in the lower part of the abdomen on passing water, and especially if the bowels had not acted. She did not lie with her legs drawn up. As I considered that the maintenance of the temperature was most likely due now to local inflammation, probably some pelvic cellulitis on the right side, I discontinued the washing out and injections of serum from this date (January 11th) onwards. On the following day the temperature was still higher—104.2°—and pulse 132, but the general condition remained fairly satisfactory. After this, however, there was a gradual fall of temperature, accompanied by an improvement in the pulse-rate. The mass on the right side of the pelvis also became less marked and not so tender, but the patient still had some pain on passing water, the pain beginning some little time before the act of micturition, and quite disappearing after the bladder had been emptied.

On January 17th the temperature had fallen to 99°; there was another rise to 101° on the 19th, due possibly to constipation, but it fell again, reaching the normal on the 21st. Since that date convalescence has gone on uninterruptedly, and at the time of writing (February 15th) the patient gets up for some hours every day, and says she feels very well, and has not the slightest pain anywhere.

In reviewing the case I think one may safely say that the actual process of septic absorption came to an end after the fifth or sixth day of treatment, the temperature having then come down to 99° F. and the pulse to 88. The rise again at the end of another week (January 7th) was probably due to the onset of some local trouble in the way of pelvic cellulitis. That being so, I now think that it was unnecessary to use the curette as I did, although there was some slight discharge at the time. At any rate, I should not feel inclined to do so in a similar case again, but should content myself with washing out the uterus. Similarly the second series of injections I gave at this period were probably not wanted and did no good, but I thought it only right to use them, lest it should be the case that there was some fresh streptococcic infection.

In conclusion, seeing that the other patient, attended two days earlier by the same midwife, had died of acute general peritonitis, it is reasonable to suppose that this case would also have proved fatal had it not been for the treatment adopted. Further than this, it is impossible to say how much of the success was due to the use of antitoxin, and how much to the uterine douches, etc. At least I think we may conclude that the serum treatment does no harm. From first to last, in a period of eighteen days, I injected into this patient 170 c.cm. of antistreptococcus serum, and, as far as I can tell, she had no unfavourable symptoms whatever, either local or general, as a result of it. Of course, the strictest antiseptic precautions were observed, the syringe and needle being boiled before and after use, and the skin carefully cleansed with soap and water, ether and carbolic lotion 1 in 20.

My own view of the matter is that no one should be satisfied, when treating a case of puerperal fever, unless, in addition to the ordinary methods of treatment, he employs also the use of the antistreptococcus serum, beginning it of course at the earliest possible date.

[Since writing the above I have been interested to read in the BRITISH MEDICAL JOURNAL of February 17th, p. 378, the reports of two cases of puerperal septicæmia treated by the injection of antistreptococcus serum. With reference to the statement by Dr. Anderson that he found the serum "a most potent remedy with a powerfully depressant effect on the circulation," I can only repeat what I have already said, that in the present case, so far as I could tell, no bad symptoms whatever, either local or constitutional, resulted from the injection of the antitoxin. Beyond the actual discomfort of the needle the patient did not seem to mind the treatment at all, and she certainly never showed any signs of faintness or cardiac depression.]

THE FIRST SEASIDE SANATORIUM IN PORTUGAL.—Thanks to the persevering efforts of Dr. Jose de Almeida, a seaside sanatorium for scrofulous children has recently been established in Portugal. Dr. Almeida induced the Government to hand over to him for the purpose the dismantled fort of Junqueiro, and with the assistance of a number of charitable persons, including one of our countrymen, he has had it fitted up as a sanatorium with accommodation for twenty-four children. In connection with the sanatorium there is a separate building for the isolation of cases of contagious disease.

HÆMATOMETRA IN RIGHT HORN OF AN UNDEVELOPED DOUBLE UTERUS,

SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

By F. W. N. HAULTAIN, M.D., F.R.C.P.E.,
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CASES of absence of fusion of the Müllerian ducts to a greater or less extent are of comparative frequency, and as might be expected give rise to almost endless varieties of anomalous conditions. These are of great interest, not only on account of their anatomical peculiarities but more particularly from a clinical standpoint, as the pathological effects of arrested development tend frequently to extremely grave consequences, and at the same time are often surrounded with difficulties of diagnosis by no means easy to elucidate.

In many instances duplicity of the genital tract in whole or in part may give rise to no symptoms whatever, and the owner may go through the functions of maternity unembarrassed, but frequently other developmental complications are coincident, and give rise to occlusion of the canal. Atresia may occur at any part of the tract, and may be either bilateral or unilateral, and thus when menstruation occurs we have a series of retention cysts which vary according to the seat of obstruction, and form an almost indefinite number of types of hæmatometra and hæmatokolpos. The following case forms an interesting example of the condition:

B. M., aged 24, consulted me in February last, and complained of having for the last seven years suffered from irregular but very severe pain in the right side. On one occasion two years ago she had a severe attack of general peritonitis which was thought to be due to appendicitis. Menstruation had never appeared. On bimanual examination of the pelvis, the cervix was felt to be small and conical, and through the right fornix an ill-defined boggy mass about the size of an orange was distinctly palpable. The sound passed 1 inch into the uterine cavity. Through the left fornix an extremely tender matted condition of the pelvic organs appeared to be present. From the experience of a similar condition the case was diagnosed as one of enlarged and inflamed appendages with an atrophic uterus, and their removal by abdominal section was undertaken.

The abdomen, when opened, showed evidence of previous general peritonitis from the adhesion of the omentum and intestines to the surrounding structures. The pelvic swelling proved to be the horn of an undeveloped uterus distended with tarry material, which had ruptured the original sac and extravasated between the layers of the right broad ligament. From the external aspect of the thinned and ruptured uterine horn there arose the round ligament and impervious Fallopian tube. The ovaries on both sides were much enlarged and showed signs, from the large number of blood cysts and extravasations in their substance, of intense congestion. They were embedded in the pelvis by strong inflammatory adhesions. By careful dissection they were enucleated and removed along with the distended uterine horn. The extravasated blood between the layers of the broad ligament was washed out, and the edges of the ligament stitched together. The operation was prolonged and tedious, but the patient, a strong, healthy woman, recovered without an untoward symptom.

The case is of much interest from several aspects, particularly in so far as there has been a total absence of external menstruation, the patent horn being atrophic, while the occluded horn was to a certain extent functionally active. Several cases have been cited by Hegar, Emmet, Leroy, and others, of unilateral retention in a rudimentary horn, but in all the patient menstruated regularly from the functionally active horn. In the case described, from the extremely irregular paroxysms of pain there can be little doubt that the uterus as a whole was poorly developed. The rupture of the distended horn, at first evidently intra-peritoneally, giving rise to general peritonitis as in tubal extrauterine gestation, is also of much interest, as it would appear that the adhesions thus formed prevented future extravasations of blood into the peritoneal cavity.

As regards treatment I should strongly recommend that all such cases should be treated by laparotomy and removal of the uterine sac. Vaginal incision and evacuation of the contents is prone to be followed by septic infection and subsequent pyometra and peritonitis. Of 11 deaths recorded by Wells[1] in a series of 32 collected cases, 9 followed puncture of the sac and were due to septic peritonitis. The diagnosis must at all times be difficult, but is usually to be suspected if a boggy, somewhat cystic pelvic tumour can be felt, with a history of periodic paroxysms of pain at the menstrual periods should menstruation be present, or at regular periodic intervals should the menses be in abeyance. In the case mentioned, however, the irregularity of the paroxysms and the absence of menstruation rendered the diagnosis practically impossible. Exploratory abdominal incision alone remained, therefore, for its elucidation.

REFERENCE.
[1] *Amer. Journ. of Obstet.*, 1900, p. 364.

THE TREATMENT OF PUERPERAL ECLAMPSIA BY DIURETIC INFUSIONS.

WITH A TABLE OF TWENTY-TWO CASES.

By ROBERT JARDINE, M.D., ETC.,
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PUERPERAL eclampsia is a subject of absorbing interest to obstetricians. Although many theories have been advanced we are still in the dark regarding the cause or causes of this exceedingly fatal disease. At present all that one can say is that the convulsions seem to be caused by a toxic substance which the organs of excretion have failed to remove from the system. The nature of this toxin is unknown. The marked diminution in the amount of urine, the presence of blood in many and of albumen in nearly every case point to the kidneys being out of gear. The liver also seems involved.

Taking it for granted that we have a poisonous substance circulating through the system, how are we to counteract its effect or get rid of it? If we knew what it was we could use an antidote, but as we are ignorant of its composition we can only hope to turn it out of the system through the natural channels of excretion. The channels through which a poison can be best got rid of are the kidneys, the bowels, and the skin. In the treatment of eclampsia the importance of free action of the bowels and skin has always been recognised; but it seems to me that sufficient attention has not been paid to the importance of securing prompt action of the kidneys during the actual attacks. In cases of threatened convulsions proper dieting and the prompt administration of diuretics and saline cathartics will, in the vast majority of cases, prevent the fits. In the actual seizure diuretics by the mouth are too slow in action. For the last three years I have been giving saline infusions consisting of sodium chloride and potassium bicarbonate or sodium acetate. As I have now had experience in 22 cases, I desire to place the results before the profession.

The principle of the treatment is to try to control the fits by one or other of the drugs in use, and to secure free action of the bowels, skin, and kidneys. In controlling the fits, chloroform, tr. veratrum viride, chloral and bromide, and morphine have all been used. If the pulse is quick and tense, tr. veratrum viride (mx or mxv hypodermically) acts well. Morphine I have given up, as it seems to have the effect of lessening the excretion of urine. Chloral and bromide in large doses are certainly very useful. In plethoric patients bleeding may be resorted to. For clearing the bowels enemata are only useful to unload the rectum. Croton oil is very uncertain. I have given mv without the least effect. If there is œdema of the tongue and pharynx, it may increase this and cause œdema glottidis. I have seen this in 2 cases, one of which proved fatal. Magnesium sulphate I am now using entirely, giving from 4 to 6 tablespoonfuls in warm water. If the patient cannot swallow, it should be given through a tube. Chloral and bromide may be given along with it. To keep the skin acting a hot pack or steam bath is most useful. Great care must be taken to prevent the patient being blistered. It is surprising how easily this may happen when the patient is comatose. A hot bottle must never be allowed to touch the bare skin. Pilocarpin is a drug I have never tried. Œdema of the lungs is present in most of the cases, and the risk of increasing this is too great.

What I consider the most important part of the treatment now comes to be considered—namely, that directed towards getting the kidneys to act. When the patient is having convulsions diuretics by the mouth are too slow in acting. As soon as the patient can swallow they should be given to keep up the action. All our cases were given large amounts of Imperial drink and milk for several days. To insure prompt action of the kidneys I have given saline infusions under

No.	Age.	Married or Single.	Para.	Month of Pregnancy.	Dilatation of Os.	Amount of Œdema.	Albumen in Urine.	Treatment.	Method of Delivery.	No. of Fits. Before.	No. of Fits. After.	Length of Coma.	Result. Child.	Result. Mother.	Remarks.
1	17	S	1	F. T.	Dilated	Slight	Loaded	$CHCl_3$, chloral and bromide, 20 m tr. verat. viride 20 oz. (saline pot. bicarb 1 part, and sod. chloride 2 parts) hot pack; croton oil	Forceps under CHCl	1	5	2 days	Alive	Alive	The infusion was given two days after delivery; urine not collected first day, but on second, 96 oz.; and on third 180 oz.
2	28	M	1	7th	Slight	,,	Solid	15 m. tr. verat. viride; 20 oz. saline (pot. bicarb. and sod. chloride) infused twice; croton oil; hot pack	*Accouchement forcé* under $CHCl_3$	3 in hospital, but many before admission	6	40 hours	Dead	,,	29 oz. urine 24 hours after first infusion, but much lost with motions; 69 oz. after second infusion in 12 hours, and 115 next 12 hours; urine quite thick with urates.
3	22	M	1	6th	None	,,	Nearly solid	15 m. tr. verat. viride; 20 oz. saline (pot. bicarb. and sod chloride); croton oil	Natural; $CHCl_3$ towards end of second stage 7 days after the fits	3	6	None	,,	,,	12 oz. of urine in 12 hours, but much lost; 60 oz., 130 and 210 during next 3 days.
4	23	S	1	F. T.	Dilated	,,	Loaded	½ gr. morphine; 30 oz. saline (pot., bicarb. and sod. chloride) infused, and 40 oz. into rectum; free stimulation with brandy and ether	First child naturally; second forceps under $CHCl_3$	2	6	,,	Alive	,,	Had severe *post-partum* hæmorrhage; 104½ oz., 140½ oz. 92 oz. and 83 oz. urine following 4 days.
5	27	M	1	,,	,,	Considerable	Nearly solid	20 oz. saline (pot. bicarb. and sod chloride); hot pack; ½ gr. morphine after delivery; croton oil	Forceps under $CHCl_3$	6	1	24 hours	Dead	,,	68½ oz. urine second day, and large amount lost with motions.
6	30	M	4	8th	Size of shilling	Marked	Loaded	½ gr. morphine, 24 oz. saline (pot. bicarb. and sod. chloride equal parts) calomel and jalap; 30 oz. saline 12 hours later and bromides; hot pack	Natural and practically painless 30 hours after seizure	3	6	None	Alive	,,	Child weighed 3¼ lbs; urine 27 oz., and 3 motions; 25 oz. and 5 motions; 53 oz., 134 oz. each 24 hours. The morphine seemed to lessen excretion.
7	19	S	1	7th	None	Slight	,,	30 oz. saline (equal parts pot. bicarb and sod. chloride); hot pack; 24 oz saline (equal parts pot. bicarb. and sod. chloride); hot pack after delivery	Forceps under $CHCl_3$	14	6	2 days	Dead macerated	,,	Albumen although fœtus macerated; 30 oz. and 5 motions; 90 oz. and 2 motions; 145 oz. and 1 motion.
8	27	M	2	,,	,,	Excessive	Solid bloody	40 oz. saline (equal parts pot. bicarb. and sod. chloride); bled; hot pack; ½ gr. morphine; ¼ gr. morphine 3½ hours later; 12 hours later 30 oz saline; croton oil; calomel and jalap 24 hours later 21 oz. saline; digitalin and strychnine; hot packs	*Accouchement forcé*; perforation	8	6	Profound until death; 44 hours	Dead	Dead	Only 11½ oz. urine excreted in 44 hours; could not get bowels to act; necropsy showed double pneumonia; numerous ulcers in stomach; patches of hyperæmia in intestines; kidneys hyperæmic; liver apparently sound.
9	26	M	2	8th	Size of shilling	Slight	,,	½ gr. morphine; 40 oz. saline (pot. bicarb. and sod. chloride equal parts); free stimulation; brandy and strychnine	*Accouchement forcé*; version	Large number	6	Very deep	,,	,,	Died 5 hours after delivery; pupils pinpoint, and she looked exactly like a patient dying from morphine poisoning; no urine excreted; no necropsy.
10	27	M	1	7½th	None	,,	,,	20 oz. saline (pot. bicarb. and sod. chloride equal parts); calomel and jalap	Forceps under $CHCl_3$ 18 days later	2	6	None	Alive	Alive	There was a suspicion of scarlet fever in this case; some desquamation; child weighed 3½ lbs.
11	27	M	4	8th	Size of florin	Considerable	Solid; bloody.	20 oz. saline (pot. bicarb. and sod. chloride), chloral and bromide.	Dilatation and version under $CHCl_3$	8	0	3 hours	Dead	Dead	Child's arms were rigid; mother died 2 hours after delivery; hopeless case; no necropsy
12	23	M	1	6th	None	Marked	Loaded	10 gr. chloral hypodermically hourly for 5 hours; 30 oz. saline (pot. bicarb. and sod. chlor.), and 6 hours later 40 oz. (sod. acet. and sod. chlor.), 1 drachm each to pint; croton oil, calomel, and salts; hot pack.	Delivered by incision of the cervix under $CHCl_3$	Very many	0	12 hours	Dead	Alive	Œdema glottidis 24 hours after delivery, caused great embarrassment of breathing; she had had fits for 12 hours before admission, and was sent in as hopeless; 5 m. croton oil had no effect on bowels.
13	23	M		8th	Size of shilling	Considerable	,,	Hot pack; 45 oz. saline (acetate and chloride of sod.); 30 gr. chloral in three hypodermic doses; salts; 40 oz. saline 12 hours later; 24 hours later bled 20 oz. and transfused 20 oz normal saline into vein; hot packs every 4 hours; 24 hours later 20 oz. saline	Dilatation and forceps 12 hours after admission under $CHCl_3$	Many	1	5 days	Dead; macerated	Dead	Died on seventh day; necropsy revealed perforation of duodenum large enough to admit one finger; kidneys healthy; she was cured of the eclampsia; the duodenum perforated without any indication of disease; no previous history of pain; Although the fœtus was macerated, the urine was loaded with albumen.
14	29	M	7	F. T.	Size of florin	Slight	Nearly solid; bloody	Tr. verat. viride (10 m); salts, 50 oz. saline (acet. and chlor.); hot pack	*Accouchement forcé*; bipolar version under $CHCl_3$	,,	0	24 hours	Alive	Alive	Had kidney disease; dropsy, with last confinement, but no fits; epithelial and granular tube casts; left side of cervix torn; stitched after allowing considerable bleeding.

15	38	M	2	6th	Size of florin	Considerable	Nearly solid	Tr. verat. viride (10 m); salts, 50 oz. saline (acet. and chlor.); hot packs	*Accouchement forcé* under $CHCl_3$	Many	0	12 hours	Dead	Alive	Pneumonia on third day, but recovered; 16 years since first child.
16	28	M	1	F. T.	Dilated	Marked	About ½	60 oz. saline (acet. and chloride), hot pack, salts	Embryulcia	1	0	0	,,	,,	Conj. vera 2½ in.; attempts to deliver with forceps before being sent in; took a severe fit on admission; difficult craniotomy, and had to break up body also; she took pleuro-pneumonia, but recovered.
17	20	M	2	8th	Size of shilling	Slight	Solid	40 oz. saline (acet. and chloride), chloral 10 gr. hypodermically (3), hot packs; 12 hours later 40 oz. saline 10 m tr. verat. viride; 4 days later 40 oz. saline and 10 m tr. verat viride; milk, brandy, and meat juice through tube 3 times	*Accouchement forcé* under $CHCl_3$	10	18	24 hours; fifth day, deep for 24 hours	,,	,,	Deeply comatose on fifth day; kidneys and bowels acting freely; albumen merely a trace; during second coma urine loaded with bile pigment.
18	17	S	1	F. T.	Size of crown	,,	Considerable	½ gr. morphine before admission; salts, 60 oz. saline (acet. and chloride); 10 m tr. verat. viride; hot pack	Dilatation and delivery under $CHCl_3$	10	4	—	Alive	,,	Had dry pleurisy for a few days.
19	16	S	1	F. T.	Dilated	None	About ½	60 oz. saline (acet. and chloride), 10 m tr. verat. viride, salts, and hot pack	Forceps	2	4	0	,,	,,	Prolonged labour; pelvis slightly contracted; fits came on during second stage without any warning.
20	22	S	1	F. T.	Size of florin	Considerable; labia swollen	Considerable	Puncture of labia; salts, 40 oz. saline (acet. and chloride), 10 m tr. verat viride; hot packs; 24 hours later 60 oz. saline and 10 m tr. verat viride	Dilatation and craniotomy	10	5	24 hours	Dead	Dead	Conj. vera 3½ in.; before death left arm and side of face seemed paralysed; conj. deviation of eyes to left; died on the third day; was passing urine very freely; necropsy revealed nothing in the brain; kidneys practically normal; liver markedly degenerated.
21	20	M	1	F. T.	—	None	Mere trace	60 oz. saline (acet. and chloride), salts, bromide, and chloral; hot pack; 10 m tr. verat. viride 16 hours later	Delivered by forceps without $CHCl_3$ before admission	0	11	48 hours	Alive	Alive	Fits came on four hours after delivery.
22	23	M	1	F. T.	Dilated	,,	Considerable	45 oz. saline (acet. and chloride), salts bromide, and chloral; steam bath	Delivery by forceps in Walcher's position	5	0	0	,,	,,	Conj. vera 3½ in.; very difficult delivery in Walcher's position: urine had been tested four months before, and no albumen found.

the breasts or into the abdominal wall or axilla. Under the breast is the most convenient place. A medium-sized trocar and cannula, with a few feet of tubing and a funnel, is all that is required. The puncture should be covered with adhesive plaster. Messrs. Gardiner and Co. have made up a convenient apparatus enclosed in a metal box. The solution used in the first 12 cases consisted of pot. bicarb. and sod. chloridi, at first 1 to 2, and later equal parts, a drachm being used with each pint. In the last 10 cases sodium acetate has been substituted for the bicarbonate of potash, using 1 drachm of it along with 1 drachm of the chloride to the pint. One to 3 pints may be used at a time, and this may be repeated if necessary. The solution runs in quickly, and absorption is rapid. Sterilised water should be used at a temperature of about 104° F. to ensure its being about 100° when it enters the tissues. Aseptic precautions must be rigidly adhered to. I have never yet had any sloughing or abscess formation, although I must have done at least 200 infusions, including those from hæmorrhage, etc.

Several of my critis have maintained that the infusions produce no diuretic effect. On account of the profuse evacuations of the bowels, and also on account of most of the patients passing the urine unconsciously, we have never been able to estimate the exact amount of urine excreted. In a report published in the *American Journal of Obstetrics* of three cases treated by normal saline solution by Dr. Allan, he claims to have secured a diuretic action on the strength of from 25 to 29 ounces of urine having been excreted during the first twenty-four hours. In some of my cases from 60 to over 100 ounces were measured, while a good deal was lost. If he got a diuretic effect, surely I am entitled to claim the same on the strength of an excretion of three times as much.

In several of the cases Dr. Carstairs Douglas kindly analysed the urine before and after infusion, and in all he found a marked increase in the urea and uric acid after the infusion. The diet of the patient could have had nothing to do with this, because none of them had had any food except milk, and very little of that. What else may have been carried out of the system I do not know.

The obstetric treatment has varied according to the condition of the patient. No hard-and-fast rules can be laid down. If there is no indication of labour, I prefer leaving the uterus alone, unless the fits continue in spite of treatment, when I think the uterus should be emptied as quickly as possible. If dilatation by bougies and the hand is difficult, the cervix should be freely incised. Cæsarean section has been practised in such cases, but to my mind it seems an unjustifiable operation. The results have been anything but good. If the os is soft and dilatable or fully dilated, I prefer immediate delivery under chloroform. *Post-partum* bleeding should be encouraged, but in the majority of cases it is unfortunately only slight. In bad cases the blood which comes is usually very dark in colour. In some I have seen it almost black.

The accompanying table gives the 22 cases treated. Very few of them have been what might be called slight, and some of them were very severe. With one exception they have all been treated in the Glasgow Maternity Hospital. I have not selected them, but have taken them as they came. If I had selected them, three of the fatal ones might have been left out, as they were hopeless from the very first. Several of the successful ones were sent in after they had been having fits for a long time, and the medical men in attendance had given up hope of saving them.

Of the 22 cases, 5 died, but one of the deaths was due to a perforating duodenal ulcer, and occurred on the seventh day after the eclamptic condition had been cured. In another of the cases the *post-mortem* examination revealed double pneumonia, multiple ulcers in the stomach, and patches of acute enteritis. Omitting the ulcer case, as I am quite entitled to do, we have 4 in 22, which, considering the nature of the cases and the fact that many of them had been convulsed for hours before we saw them, is a result one need not be ashamed of.

Of the 23 children 10 were alive and 13 dead. In 2 cases they were macerated; craniotomy, embryulcia, and perforation were performed on 3 others, while 3 were too premature to live. Of the 10 full time children all were saved except the two on whom craniotomy was performed. In 2 cases I

was fortunate enough to obtain a specimen of urine from the child, and in both there was a considerable amount of albumen. Once before I was able to make the same observation, so that I am inclined to believe albumen will always be found in the child's urine.

In one case a dead child was delivered with both its arms perfectly rigid. In a fatal case of eclampsia I once before delivered a child in a condition of rigidity all over as if rigor mortis had set in. In one instance I have known convulsions occur in a child for a day or two after delivery. The toxin seems to affect the child's kidneys in the same way as it does the mother's, and it may not only cause convulsions but also the death of the child. It has been maintained that on the death of the child *in utero* the albumen quickly disappears from the mother's urine. In 2 of my cases the children were macerated, yet in both of them the urine was loaded with albumen. My experience therefore goes to disprove this assertion.

I sincerely hope that this method of treatment will be tried by others. I believe in it, and shall continue to use it until a better is brought forward. I have tried all the others, and none of them has given me as good results as this.

A CASE OF UTERUS BICORNIS ACCIDENTALLY DISCOVERED AFTER THE PATIENT'S FOURTH PREGNANCY.

By C. HUBERT ROBERTS, M.D., F.R.C.S., M.R.C.P.,

Physician to Out-patients, Samaritan Hospital for Women, London; late Demonstrator of Practical Midwifery, St. Bartholomew's Hospital.

The following case may be of interest to some as illustrating the difficulty in diagnosing the condition, and in the fact that pregnancy had occurred with normal delivery from one half of a uterus bicornis several times before the condition was discovered.

The patient, I. L., aged 23, first came under my notice as an out-patient at the Samaritan Hospital in May, 1899, for a swelling in the anterior wall of the vagina and difficulty with micturition. Her own medical attendant, Dr. Dods, wrote saying that the swelling had caused great difficulty in delivery at her last confinement, owing to the fact that it had obstructed labour low down, presenting before the head at the vaginal orifice; delivery was eventually effected by powerful traction with the forceps. The swelling was cystic, and very oedematous. At one time perforation of the head was thought necessary, owing to failure in delivery by forceps; but eventually these were successful. She made a good recovery from her confinement. This was her third full-time child, and was born on December 15th, 1898. Her two previous pregnancies had been fairly normal, but instrumental.

The swelling subsided more or less after her confinement, and gave her little trouble up to May, 1899, when she came to the hospital. It was then rather painful, and caused difficulty with micturition, and as it presented at the vulvar orifice she thought her womb was down.

On examination a rounded tumour was found occupying the anterior vaginal wall about the size of a bantam's egg, lying in close proximity to the urethra, just beneath symphysis pubis, and covered by normal vaginal mucous membrane. It was cystic, but was lying deeply beneath the vaginal tissue, and had evidently very thick walls. On pressure its contents could not be emptied into the bladder or urethra; a sound in the bladder found the swelling between it and the examining finger. The urine was alkaline, and the last drops of urine withdrawn by a catheter from the bladder contained ropy pus. The swelling was exactly in the middle line of the anterior vaginal wall and a curious median raphé or ridge of vaginal tissue extended right up from this to what appeared to be a normal cervix, suggesting an attempt at a double vagina. The colour of the vagina and cervix suggested pregnancy. There was a history of amenorrhœa of three months' standing, and the breasts were active. A swelling occupied the right iliac fossa which on bimanual examination felt like the pregnant uterus at three months.

She attended off and on during the next three weeks as an out-patient, and was finally admitted on June 23rd, 1899. The diagnosis was made of vaginal cyst or urethral diverticulum, and as it had caused so much trouble at the previous confinement it was decided to remove it. It was known that she was probably pregnant.

The operation was performed on June 25th. My colleague, Mr. Corrie Keep, assisted me at the operation. Under the anæsthetic the cyst was more clearly felt, and the longitudinal fold of vaginal tissue extending up to the cervix from this was well seen and very well marked. The cervix was closed, and appeared normal and single. The swelling in the right iliac fossa was carefully examined, and although it was thought probably to be the pregnant uterus, it rather puzzled us to account for its marked right-sided obliquity, and though mobile if displaced, it returned at once to its original position. The swelling felt like pregnancy, but it was very elastic, and the question of parovarian cyst was raised, considering that the occurrence of parovarian cysts with vaginal cysts was well known to occur in relation to abnormalities of Gartner's duct.[1] A smaller swelling could also be felt to the left of the larger one; but, as pregnancy was thought probable, no sound was passed.

The removal of the vaginal tumour was difficult, and after the vaginal tissues had been divided a large swelling of the size of a hen's egg was exposed; it had very intimate relations with the base of the bladder and urethra; it was gradually enucleated, freed from its surroundings, and came away easily except for a deep attachment to the urethra, as demonstrated by the bladder sound. This attachment was of the thickness of the little finger, and on finally dividing it the urethra and a small portion of the base of the bladder were opened up, just admitting the tip of the finger, urine at once escaped. The hole was carefully examined and closed without difficulty by six or eight fine silk sutures, over which the vaginal flaps were now sutured; the bladder was tested, and proved to be completely watertight on injecting fluid into it.

The tumour removed was found to be an inflamed pouch or abscess attached to the base of the lower one-third of the urethra; it was very thick-walled, and contained a large, ragged cavity filled with phosphatic concretions and foul alkaline purulent urine. It communicated by a small orifice with the base of the urethra at the place where so much difficulty had been found in freeing the tumour from the urethral tissues.

We formed the opinion that the tumour was probably of congenital origin and that injury of confinements and frequent attacks of inflammation in the sac had increased its size, and that from time to time it communicated with the bladder, discharging its contents and leading to attacks of cystitis. It was not a dermoid.[2] It was impossible to avoid opening the urethra and base of the bladder during the removal, but these were at once repaired. (Some operators allow them to granulate up if cystitis be present.) Subsequently the patient did very well and the cystitis rapidly cleared up and she passed her water naturally after the first ten days (during which the catheter had been used). There was never any leaking of urine or incontinence. She left the hospital three weeks after the operation.

While the patient was in the hospital the swelling in the right iliac fossa gradually increased in size, and there was little doubt that it was a pregnant uterus, as other signs and symptoms of pregnancy were now marked, still it was not quite like an ordinary uterine condition even with marked right uterine obliquity. There had never been any hæmorrhage or discharge *per vaginam*, but the swelling was at times painful. Several of my colleagues saw her with regard to the swelling in the abdomen, and Mr. Doran, who saw her on July 15th, suggested tubal gestation, but thought that the right fornix was freer than usual for that condition. He did not advise operation unless severe abdominal symptoms occurred. The alternative diagnosis was normal pregnancy or parovarian cyst complicating pregnancy.

As the hospital closed in the middle of July I decided to send the patient home, as she lived quite near to the hospital. I heard nothing further of the case till August 1st (about three weeks after leaving the hospital), when Dr. Dods asked me to see the case again, as she had been losing a little blood *per vaginam*, and for the last few days the loss had been severe, and there had been pains in the abdomen like labour pains.

On examination I found that she was losing considerably, and that the cervix was now relaxed and soft, and easily admitted a finger, which passed into a cavity to the left, in which was discovered a mass like decidua, the sound passed 4 inches into this cavity to the left, the swelling to the right of this was larger than when she was in the hospital, and it was now quite clear that another cervical canal, which was closed, could be felt belonging to the larger swelling, and that there was a common cervix with a double uterine body (the finger now easily entering the left half, in which decidual tissue was felt) and that the right-sided swelling was certainly a 4½ months' pregnancy.

Mr. Doran saw the case with me, and agreed in the diagnosis of uterus bicornis unicollis, pregnant four and a-half months on the right side, and that the left half was now discharging a decidual cast. The left half was emptied, and several pieces of fœtid decidual tissue removed. The finger in the left (now empty) half found it quite mobile and distinct from the other enlarged pregnant side.

As she had suspicious pains in the abdomen we both feared that she would miscarry from the right side very shortly. This proved to be correct; during the night of August 4th she miscarried from the right half, and a normal fœtus about four and a-half months was passed. I saw her on August 5th, and finding the greater part of the placenta still *in utero* I removed it under chloroform.

The curious uterine condition was now quite apparent. There was a common cervix immediately above, which was a well-marked median septum, the finger passing on either side of it into one or other half of a uterus bicornis, the right half of which was well developed and in which this pregnancy (and probably the three previous full-term pregnancies) had developed. The walls of the right half of the uterus were of normal thickness and texture, and contracted well when the placenta had been removed; the left half was small and ill-developed, and felt like a long finger-like process. The halves of the uterus above the external os were quite distinct, and could be moved separately from one another. No recto-vesical fold could be made out between the two cornua.

The tissue removed from the left (smaller) half was carefully examined microscopically, but no villi were found; it had the appearance of an ordinary decidual cast. The tissue from the right larger half exhibited normal placental tissue under the microscope. The patient was rather ill for the first two or three days after the operation, chiefly from troublesome vomiting; she lost very little blood, and rapidly improved. The involution of the uterus appeared to take place normally. About a fortnight after the operation she had trouble with the bladder and another bad attack of cystitis, passing urine under her which was very foul. One night a supposed calculus the size of a large pea was passed, composed of phosphatic concretions which on being opened contained three or four fine silk ligatures probably from the original operation. After this the cystitis cleared up completely, and when I last examined her on September 5th she was quite well, and was going abroad for a holiday. There was nothing abnormal in the pelvis and the cicatrix of the bladder wound was quite sound, and she had perfect control of her water. The bilobed condition of the uterus was quite clear, but the cervix had closed up and appeared normal. Nothing of the septum could now be felt.

Remarks.

The case is of interest, not perhaps on account of its rarity, but that the condition should have been only found out by

accident at her fourth pregnancy, which terminated in a miscarriage at four and a-half months, and it was due to this and during the manipulative interference necessary to remove the retained placenta and cast that the condition was discovered. Three full-time children had been born without the condition being suspected. In each case the pregnancy had probably formed in the better-developed right side.

The difficulty experienced in the hospital with regard to coming to a direct diagnosis of the nature of the swelling, which eventually proved to be the pregnant right horn, could thus be explained, and it is a thing to be thought of in the diagnosis of extrauterine gestation, and in a way it much resembles it; in fact, the diagnosis of this condition from interstitial and rudimentary horn pregnancies before the abdomen is opened is very difficult. The three conditions may be represented in the following diagrams:



Pregnancy in one half of uterus bicornis unicollis. Pregnant right half is well developed.

Interstitial pregnancy (Taylor).

Rudimentary horn pregnancy (Taylor).

In the diagnosis of the last two conditions the recognition of the point of insertion of the opposite Fallopian tube is of value, being low down in interstitial and relatively higher in rudimentary horn pregnancy; also the rudimentary horn pregnancy is sharply bounded everywhere, though connected by a band to the uterus, while in interstitial pregnancy the uterus is distended at one angle only.[3] In this particular case quoted the diagnosis of extrauterine pregnancy was raised, and the true nature of the case was not discovered till the patient miscarried.

A point which should have led, perhaps, to a correct diagnosis was the occurrence of the well-marked raphé along the anterior vaginal wall from the vestibule to the cervix, suggesting a doubling of the vagina and consequent probable division of the uterine body, as of course the uterine septum could not be seen or felt till the cervix dilated during the miscarriage.

The urethral diverticulum was only an accidental coincident peculiarity, congenital or acquired. Abnormalities of the uterus are very manifold, and a great many variations in type exist, for which textbooks may be referred to. All deformities of the uterus are due to want of development of the ducts of Müller. Generally, during the first eight weeks the ducts are separate, at the end of the twelfth week the septum is absorbed, and at the end of the twentieth week the horned shape of the uterus disappears, the arbor vitæ can be seen, but the vagina is smooth. At birth the vagina is rugose and the uterus more or less rounded and firm.

Herman[1] makes two classes of uterine deformity: (1) Those due to defect in the growth of the uterus; (2) those due to imperfect union of its lateral halves.

A complete summary of the subject would be out of place in the present article, but generally speaking uterine deformities may be classified somewhat as follows:

1. Absence of the uterus.
2. Rudimentary uterus—a mere nodule, from which fibrous bands run out laterally to the sides of the pelvis, partly horns and partly tube, the division being marked by the insertion of the round ligament as first pointed out by Virchow.
3. Fœtal and infantile uterus, probably the commonest developmental defect, in which the body is very small in proportion to the cervix, or the uterus is all too small, or too thin, or there is no cavity to the uterine body, or the vaginal portion is very small and the body normal.
4. Absence or deficiency of one half (uterus unicornis).
5. Double uterus, of which there are three types.

(*a*) Uterus diadelphys—two halves quite separate, vagina double always.[5]

(*b*) Uterus septus or bilocularis (uterus normal externally but with two cavities). If septum between there is incomplete uterus subseptus.

(*c*) Uterus bicornis—union below but uterus double above; one horn is often better developed than the other, as in present case. A similar case is reported by Blondel[6] of a case of uterus bipartitus unicollis and double vagina, which was only accidentally discovered after her second child was born. In this case there was a complete septum only at the lower part of the vagina; diagrams are given (p. 304).

In the *Archiv für Gynäk.*, vol. li, part i, 1899, another very interesting case is reported by Halban of uterus bicornis bicollis in Schauta's clinic, in which the fœtus, developed in the left uterus, forced its way through the uterine septum, and was delivered through the right os. The empty cavity of the right uterus had been dilated with a laminaria tent, and scraped about the second month of the pregnancy in the left uterus without the least sign of threatened abortion following this treatment. During labour the lower edge of the torn septum was pressed by the fœtal head on to the middle of the right os, which was taken for two, the true left being taken for a third os. The error was detected during involution, when the right os was seen to be torn, the "third os" found to be simply the left, whilst the middle os had disappeared; the laceration of the septum was now discovered.

1. With double cervix (bicollis).
2. With single cervix (unicollis).

With all these abnormalities of the uterus itself are combined defects in the vulva, vagina, ovaries, and tubes, which may be very complex.

It is to be remembered that defects in the uterus need not necessarily prevent uterine function; in the case mentioned in this paper pregnancy occurred four times.

Double uterus itself may give rise to very important complications, such as obstruction to delivery of the displaced empty half, obstruction due to the vaginal septum, double vaginitis or endometritis (one-half being overlooked), curious cases of alternating menstruation from each half with or without unilateral atresia and retained menstrual products, retained and undiscovered products of conception in one half in cases of double pregnancy, etc.

It is worth remembering that when pregnancy occurs in one half a decidua forms in the other; this was shed in the case related above before the miscarriage took place from the pregnant half.

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MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

TWO CASES OF BROMOFORM POISONING: RECOVERY.

CASES of poisoning by bromoform are somewhat rare, and as this drug is frequently used in the treatment of whooping-cough the following may be of interest:

A number of children in the same house, and of nearly the same age, were being treated by me for whooping-cough with half-minim doses of bromoform three times a day, suspended in mucilage of tragacanth. When called to two of the children about 12.30 P.M. I found them unconscious, lying side by side, with breath smelling strongly of bromoform, with faces pale, eyes closed, pupils contracted, and limbs flaccid. The respiration was feeble in the elder child (aged 4) and stertorous in the younger (aged 2); about 12.40 P.M. respiration ceased in the younger child, and artificial respiration was resorted to, and a few minutes later artificial respiration had to be resorted to for the elder. I gave each of the children about half a teaspoonful of brandy hypodermically, and then three injections of strychnine each at intervals of 15 minutes, to the elder $\frac{1}{30}$th of a grain and to the younger $\frac{1}{60}$th of a grain each time. I thoroughly washed out their stomachs two or three times with hot water, followed by strong coffee, some of the latter being allowed to remain in the stomach. The younger child rallied first, and began to breathe spontaneously after an hour and a half's artificial respiration. The interval was about the same in the case of the older child, but he remained drowsy and stupid for some hours. According to the nurses's account the children had their doses about 8 A.M., but these were the last in the bottle. Shortly after this they were put to bed, and on being awakened about 11 A.M. they were giddy and confused, and staggered in their gait. From this time onwards the symptoms gradually developed until 12.30 P.M., when I arrived.

The bromoform must have accumulated at the bottom of the bottle through its not having been properly shaken up

each time: but even on this hypothesis it is hard to see how the children could have had more than 3 or 4 minims each of pure bromoform in a dose of a teaspoonful.

Chard, Somerset. C. E. STOKES, B.A Camb., M.D.Dub.

INFECTIOUSNESS OF ACUTE RHEUMATISM.

As instances tending to support or destroy this theory are interesting I give the following in support.

Last June a healthy page boy in a hotel here bathed in the river, and had a moderate attack of tonsillitis. A week later, after being up and about for a couple of days, he developed acute rheumatism, from which he slowly recovered. His companion in an adjoining bed, the boots of the hotel, a very strong man, with no rheumatic family history, ten days after the page boy's first breakdown was attacked by tonsillitis. He recovered from this, but about ten days later he also developed acute rheumatism, and was ill for six weeks. Both cases subsequently developed serious cardiac symptoms, the page boy very soon, his companion, notwithstanding great care and almost absolute rest for three months, at the end of that time, and not till then, showed signs of a damaged aortic valve.

Whether both contracted the disease from the same cause, the bathing not being a factor, or one gave it to the other, it would still suggest an infectious origin; it could scarcely be a coincidence.

Against my preconceived ideas I begin to be persuaded that some cases at least are of infectious origin.

Gilsland, Carlisle. C. W. LAWSON, M.A., L.R.C.P.and S.Edin.

CHRONIC ECZEMA CURED BY AN ABSCESS.

A., male, aged 31 years, had a patch of chronic eczema for eight years, as big as a crown piece, situated in the popliteal region, over the biceps femoris tendon. He had tried various treatments: Arsenic and dieting, abstaining from alcoholic stimulants entirely for a time; "complete" rest and change of air, but treatment seemed of no avail. The patch slowly increased in size; and the skin became cracked and fissured. One day the patient scratched it; an acute abscess formed, accompanied by a good deal of cellulitis and lymphangitis. The abscess was opened, and he was well in a week. A month later the patch of eczema was found to have entirely disappeared.

I attribute the cure to the increased vascularity of the surrounding area, produced by the inflammation. This of course does not apply to the cicatrix. I venture to suggest that counter-irritation of the skin, by increasing the vascular supply, might prove a beneficial method of treatment.

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REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

RADCLIFFE INFIRMARY, OXFORD.

A CASE OF ACUTE INTUSSUSCEPTION: LAPAROTOMY: REDUCTION AND RECOVERY.

(By G. W. FARMER, M.A., M.B., M.Ch.Oxon., F.R.C.S., Surgeon to the Infirmary.)

THE high mortality of intussusception treated by laparotomy justifies me, I think, in recording the following successful case:

S. D., a male child, aged 10 months, was admitted on the evening of November 30th, 1899, with the following history. The child had enjoyed very good health up to the previous morning (November 29th) when, at about 9.30 A.M., the mother noticed that it looked "pinched," and cried as if in pain. Shortly afterwards it vomited. During the whole of that day the child vomited from time to time, and the bowels, which had previously been very regular, became confined. A powder was administered that evening. On the following morning a motion was passed "mixed with blood." The child became rapidly worse, was noticed to keep its legs drawn up. A doctor was sent for, who at once sent up the child to the infirmary with a diagnosis of intussusception.

The following note was made on admission: "Child well nourished, pale, with sunken eyes. Lies on its back with knees drawn up. Gives short cries at frequent intervals. Abdomen distended. Distinct resistance felt in the right inguinal and lumbar regions. Pulse very rapid, scarcely perceptible. Respiration 30 per minute, shallow; temperature 98°. Almost directly after admission mucus and blood were passed *per rectum*."

I saw the child very shortly after admission. Its condition struck me as being so critical that I determined to perform laparotomy without delay. Chloroform was administered, and the abdomen opened in the middle line below the umbilicus, under the strictest aseptic precautions. On introducing two fingers into the peritoneum, and exploring the right iliac fossa and lumbar region, a typical sausage-shaped mass could be felt, extending from the site of the ileo-cæcal junction upwards into the ascending colon. This mass was about 2 inches in length, convex to the right. The ascending colon had no mesentery. On gently kneading the mass from above downwards the intussusception was felt to slip down gradually, and finally disappear. The abdomen was then sutured with sterilised silk, and an aseptic dressing applied. The effects of the operation were almost instantaneous. The pulse improved; vomiting ceased. A fæcal motion free from blood was passed about two hours after the operation. The child made a rapid and uneventful recovery. Sutures were removed on the seventh day, the wound having healed by first intention.

REMARKS.—It is, I think, of first importance to bear in mind that success in the operative treatment of intussusception depends almost entirely upon the duration of the condition before operation. In the present case the symptoms appeared at about 9.30 A.M. on November 29th, and the operation was performed at about 9.15 P.M. on November 30th, making an interval between the onset of symptoms and the operation certainly not more than thirty-six hours. The credit of the happy result in this case is primarily due to the promptitude of Dr. Prall, of Bampton, who first saw the child, in diagnosing the trouble and sending the patient for operation without delay. The operation itself presented no difficulties. One point of interest is worth noting, however. The type of intussusception was that known as ileo-colic, an uncommon form as compared with the ileo-cæcal, the former constituting only 8 per cent. of all cases of intussusception, the latter 40 per cent. I determined this point by carefully feeling the cæcum, which, with regard to form and position, was normal. In the ileo-cæcal variety this could not have been the case. An ileo-colic intussusception is also more acute than the ileo-cæcal. I did not feel justified, after reduction, in drawing out the ileum and examining the condition of the reduced gut. Such a procedure would have prolonged the operation and added to the shock; besides, the ease with which the reduction was accomplished was a sufficient indication that the gut was not beyond recovery. Lastly, there arises the question as to whether such measures as inflation should not first have been tried before resorting to laparotomy. I performed laparotomy at once in preference to other means, upon the following grounds: (*a*) The child's condition demanded rapid relief: (*b*) inflation is uncertain, and may leave one in doubt as to whether the intussusception is completely reduced or not: it is said also that intussusception is more liable to recur after reduction by this method; (*c*) laparotomy under strict asepsis, carefully performed, is absolutely free from risk, and, when unattended by the unnecessary pulling about of intestines, free from shock. The high mortality of laparotomy in intussusception is simply due to the fact that the patient comes too late in most cases.

MOSCOW BACTERIOLOGICAL INSTITUTE.—According to a recently-published report, the Bacteriological Institute of the University of Moscow, which is under the direction of Dr. Gabritschewski, has in the last five years sent out about 100,000 flasks of therapeutic serum, of which 88,805 contained antidiphtheria serum. In 1899, 6,000 flasks of antidiphtheria serum were distributed gratuitously to the municipal hospitals and to necessitous patients in Moscow, and about 8,000 to provincial hospitals. The institute, which was founded by private efforts, has received since 1896 a subsidy of 8,040 roubles from the Ministry of Education, and since 1895 one of 8,500 from the Municipality of Moscow. In addition to these sources of income the institute has an annual revenue of 11,000 to 12,000 roubles from the sale of serums. Besides manufacturing serums, the institute gives instruction in bacteriology to to medical practitioners.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. PAVY, M.D., F.R.C.P., F.R.S., President, in the Chair.

Tuesday, May 22nd, 1900.

THE WOUNDED IN THE PRESENT WAR.

THE discussion on this subject was resumed by Mr. CLINTON DENT.

Temporary and Extemporised Hospitals.

Mr. CLINTON DENT said, with regard to the accommodation of the wounded in the base hospitals, that, considering the climate of South Africa, tent hospitals were better than those of wood or galvanised iron, for they permitted what was practically the open-air treatment of the wounded. The sand and dust storms certainly made life in a tent rather worse than in a hut, and neatness was not possible to the same extent, but on the whole the wounded did better in the tent hospitals. On the high veld the possibility of shifting the whole hospital quickly was an advantage in favour of the tent. At first the amount of ventilation seemed excessive, but if chilling were prevented nothing but good resulted. Churches and schools were ill-adapted for hospitals. In the first place, if a church were used, all the patients had to be put in one ward. There was not in churches enough light, and cross-ventilation was not possible. The square marquee used in some of the hospitals was, on the whole, more satisfactory than the oval or round marquees. The bedsteads were, as a rule, much too wide, taking up too much of the hut space or tent space. In any case there should be some sort of flooring. The wards might well be of canvas, but the operating theatre should be of more permanent material, with efficient top-lighting.

Antiseptics.

The circumstances under which the Medical Department had worked in this campaign had been exceptionally fortunate, as he had elsewhere pointed out. The climate had done more than carbolic acid. Under worse conditions, in another war, results would probably fall short of those obtained in this present campaign.

Bullet Wounds.

The aspect of questions relating to the extraction of bullets had been changed on account of the smooth sterile bullets and the use of the Roentgen rays. Usually the embedded bullets had struck bone and were deformed, but a straight course was wonderfully maintained. If bone were struck much of the spin was lost, and proportionately energy was lost and the tendency to be imbedded increased. The arrest of the spin gave rise to a jar. If there were deformation of the bullet the greater was the suddenness of the arrest of the spin. If the rifling of the bore became worn with use, this added to the probability that the bullet would be imbedded. The grounds for the removal of imbedded bullets were said to be irritation and the psychical factor, but these were of more apparent than real importance. A case was related in which a bullet had gone right through the head, and lodged in the helmet on the other side. The bullets should be removed when subcutaneous, or if pressing on nerves, or if deformed, or if the mantle of the bullet were split, or if it were likely to interfere with the proper union of the bone which had been fractured, or if there was suppuration; and generally shrapnel bullets should be removed. Apart from the skull, drilling was seen in the ilium, the patella, the lower end of the femur, and even in the tarsal bones and sternum. The long bones were very seldom drilled. Some expanding effect was usually produced, and radiating fissures were generally present. Large fragments were often detached and rotated. The shortening of the limb was less than would have been expected from civil practice. The rotation of the fragment made reduction of the fracture difficult. But the periosteum retained its vitality, and a large amount of callus was thrown out, which might lead to involvement of nerves. Consolidation of the fractures was slow, but even in cases in which, after long transport, suppuration had occurred, recovery was more rapid than would have been expected.

Bullet Wounds of Nerves.

Gunshot wounds in which nerves were involved seemed more common than was formerly the case. Possibly this depended on their implication in the large amount of callus. They might be injured by the expansion of the bone. If a small-bore bullet passed at high velocity close to a nerve without touching it, the function of the nerve might suffer. Complete division of the nerve was rare. If nerves were involved in cicatricial tissue the pain was very disproportionately great. The element of neurosis was not always sufficiently taken into account. The neurotic element was, he thought, greatly increased by the amount of morphine which was early injected to relieve the pain. In the great majority of the head cases trephining was urgently indicated, particularly in grooving and gutter fractures of the skull. The proportion of head wounds was large in this war, as it usually was when the fighting was mainly from trenches. Injuries of equal extent of the frontal region were the least serious according to his experience.

Sir WILLIAM MAC CORMAC remarked that so far, as statistical returns had not been received, no definite conclusions could be formed.

Bullet Wounds.

The Lee-Metford and Mauser wounds in the present war were extraordinarily mild as compared with other gunshot wounds he had seen. This result depended mainly on the small size of the bullet, but its high velocity and aseptic character had influence; the wounds had more of the nature of incised than of contused wounds. Carrying in of clothing was now as rare as before it was common. Lodgment occurred in a larger proportion of cases than would have been expected from experiments, and the terrible explosive effects had not been seen as had been anticipated.

Abdominal Wounds.

Perforating abdominal wounds were surprisingly innocent, but successful abdominal operations were infrequent; 50 cases he had seen recovered without any operative interference, and but few had recovered after operation in the present war, and none had occurred in the Cuban war. The rule in future should be to give the patients a chance of recovery before operation were undertaken. In the field hospitals the conditions were inimical to success; after an action the pressure on time was at its highest. The immunity was probably due to the smallness of the bullet, the emptiness of the alimentary tract, the rapid closure of the intestinal wounds by adhesions, and the early application of a first antiseptic dressing.

Wounds of the Chest.

In the case of chest wounds, non-operation could be equally strongly urged. The number of cases which returned to war was remarkable. There was not the free bleeding that had been expected. Cases were referred to in which it seemed as if the heart must itself have been injured or the great vessels at its base.

Wounds of Extremities.

Fractures, particularly of the femur, rarely required amputation; the chief complications leading to amputation were gangrene, septic infection, or the results of long transport. Gunshot injuries of joints recovered remarkably well with ordinary antiseptic treatment and in many free joint movement was obtained. No formal resections had been practised by our surgeons in this war. Good results after perforation of the knee might now be taken as a matter of course, providing primary occlusion were obtained, and the same thing was seen in Cuba. This seemed to indicate that the good results were not a matter of climate, inasmuch as the hygienic conditions of Cuba were very bad. The number of lodged bullets was considerable; the proportion of 10 or 15 per cent. in the Cuban war must have been greatly exceeded in the present war. Skiagraphs were not always a very certain guide. If a bullet were causing irritation, or producing severe pain, it should be excised, if this could be done without undue risk. But if it were occasioning no discomfort it should be left alone. Any subjective reason for removing bullets must be held to be insufficient.

Women Nurses.

The place of women nurses in the field was in the hospitals and they should never be allowed within the zone of fire.

Medical Attachés.

Governments should send to the seat of war accredited medical *attachés* to observe and record experience that would be useful for their respective countries. A medical *attaché* would find a welcome from his brother medical men, and nothing would be concealed from him.

Classification of Wounds.

Of the total number of wounded in the present war 27 per cent. were damaged by shell fire, and 73 per cent. by rifle fire. Never before had there been so large a proportion of recoveries and return to duty of the wounded as in the present war, even after injury to important structures. A mortality of 5.34 per cent. was very small indeed; among officers it was 2½ per cent. greater than among the men. At Netley, of 92 cases of knee-joint injuries 26 were returned to duty; of 154 chest wounds 73 were sent out fit for duty; of 76 abdominal wounds 26 were discharged as fit for duty. The diminishing evil effects of wounds in war did not seem to indicate a cessation of war, even if such cessation could be regarded as an unmixed benefit to mankind, which he doubted.

Cases at Netley.

Major W. Dick, R.A.M.C. (Netley) referred to cases of injury to nerves. In one case of musculo-spiral palsy in which it seemed that the nerve must have been divided an operation proved this not to have been the case. Deflection of small-bore bullets was probably more common than was thought. The cases of perforating abdominal wounds in Netley Hospital were all healed; these had had no jolting or transport, and all were fasting at the time of receiving the injury. In one case in which a laparotomy had been performed there was a very pendulous abdomen, and the man would be invalided out of the service.

BRITISH GYNÆCOLOGICAL SOCIETY.

W. J. Smyly, M.D., President, in the Chair.

Thursday, May 10th, 1900.

Indications for Removal of Uterine Appendages.

A paper on this subject by Dr. J. Macpherson Lawrie (Weymouth) was read. The author pointed out that the former practice of extirpating ovaries and tubes upon the slightest provocation had given place to a reaction in favour of extreme conservatism. He believed that the tendency was a healthy one, but had gone too far. He offered a contribution to the question, based on an experience of 43 cases in which the appendages had been removed for various causes during the last four years. The full notes of all the cases had already been given in two papers read before the British Medical Association, in 1897 and 1898. He treated of the following indications for the removal of the appendages: (1) Non-suppurative salpingitis; (2) chronic ovaritis; (3) small cystic ovaries; (4) pyosalpinx; (5) suppurating ovarian cysts; (6) uterine fibromyoma; (7) tubal pregnancy. The first three conditions were often found associated, as were also the fourth and fifth. This gave four groups of cases in which he had operated, as follows:

(*a*) For salpingitis, ovaritis, and cystic ovaries ...	32	cases.
(*b*) For pyosalpinx and suppurating ovarian cysts ...	6	,,
(*c*) For uterine fibromyoma	3	,,
(*d*) For tubal pregnancy	2	,,

There was only 1 death among the 43 cases, and this was in the first group, in the case of a patient who was very enfeebled, the operation having been delayed too long. In the first group of cases the principal symptoms were great pain of several years' duration, dysmenorrhœa and dyspareunia, profuse and constant leucorrhœa, sterility, pallor and emaciation, and general ill-health, incapacitating the patient from attending to her employment or household duties. He had always tried palliative measures for a longer or shorter time, but had never found them efficacious. Several arguments had been used against operating on these cases; some said that these patients were hysterical and that no operation would cure them, others considered that time was all that was necessary to effect a cure. Some argued that the condition was not one that destroyed life, and that therefore no operation was warranted. Lastly, it was urged that the ovaries and tubes in these cases were not unhealthy, and therefore ought not to be removed under any circumstances. All these arguments were reviewed in detail and their fallacies exposed. Conservative methods of surgery had been recommended in these cases, but the author contended that in most cases nothing short of removal of the offending organs was of any avail. In the second group the point at issue was not as to the propriety of operating, but as to the best method. He shared the view of some authors that some cases were best approached by the vaginal route, but contended that in the majority of cases the abdominal route answered best in dealing with pyosalpinx. With regard to the third group, he believed that in spite of the progress of hysterectomy there were still cases in which fibromyoma was best treated by the removal of the appendages. Such cases fell into two classes. First, cases in which the tumour was small and the appendages were unhealthy; secondly, cases in which the patient was in a very enfeebled condition through profuse hæmorrhage. The latter indication had been dwelt upon in a recent paper by Mr. Furneaux Jordan. If a second operation were required later on this was better than to do a more brilliant operation in the first instance and lose the patient. He did not enter upon the question of neurosis as an indication for operation, for the simple reason that he did not consider it to be such. It was the practically unanimous experience of a large body of operators in former years that the operation was not only ineffectual for the cure of neuroses, but actually harmful.

The discussion on the paper was postponed.

Specimens.

Dr. William Walter (Manchester) showed a specimen of myoma uteri removed by enucleation after colpotomy and section of the uterus.—Dr. Fred. Edge (Wolverhampton) showed two specimens of myoma uteri removed by vaginal hysterectomy.—Dr. F. Winson Ramsay (Bournemouth) and Dr. Arthur Giles showed (1) a uterus with polypoid fibro-cystic tumours invading the broad ligament; (2) a specimen of ovarian papilloma invading the uterus through the Fallopian tube.—Dr. Herbert Snow showed a uterus removed by vaginal hysterectomy for cancer of the cervix. In the discussion on these specimens the following speakers took part: Dr. Cuthbert Lockyer, Dr. Macnaughton-Jones, Mr. Charles Ryall, Dr. William Walter, and the President.—Dr. Herbert Snow read the notes of two cases of recto-vaginal excision for cancer. Remarks in discussion were made by Mr. Charles Ryall and Dr. Winson Ramsay.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Section of Pathology.

Professor A. C. O'Sullivan, M.D., President, in the Chair.

Friday, March 23rd, 1900.

Exhibits.

Mr. Arthur Benson showed a case of congenital polycoria in both eyes in a man, aged 40. In the right eye there were, in addition to the normal pupil, eight other openings, and in the left eye one extra opening in the iris. The openings were, for the most part, slit-like defects, through which the fundus could be illuminated. The man had also chronic glaucoma, for which (and not on account of the polycoria) he sought relief.—Mr. R. C. B. Maunsell showed the right lobe of a thyroid gland which he had removed from a girl, aged 18. A moderate uniform enlargement of both lobes had existed without marked symptoms for 18 months, but within the last month the right lobe rapidly enlarged and became tense, causing paroxysms of dyspnœa on exertion and stridor on deep inspiration. The specimen demonstrated one of the dangers of even a small bronchocele, as it contained a very tense blood cyst as large as a goose egg. The growth was removed by Kocher's transverse curved incision, and the result was most satisfactory, both in the relief of symptoms and in appearance.

Case of Human Actinomycosis ending Fatally, with Pathological Report.

Dr. H. E. Littledale reported the case of a patient admitted to Sir P. Dun's Hospital, under care of Professor Bennett, on March 8th, with swelling on the back of the neck and at the angle of the left jaw.

There were several discharging sinuses and a fluctuating abscess, which was opened subsequently and the pus examined. Streptothrix threads, like convoluted chains of streptococci, were found in the pus but no clubs. No results from aërobic cultures; anaërobic not made. Microscopically the lesions were granulomata, breaking down into pus, which contained ring-like masses 0.15 mm. in diameter, composed of streptothrix threads, but no clubs were present. The lung apices were also affected with the streptothrix and tuberculosis, but tubercle bacilli, found *post mortem*, could not be detected during life. The lungs were affected from the skin, as during life there was communication between the skin of the

back and right lung. No further lesions, except extensive amyloid change in all abdominal viscera. The patient died on November 28th from prolonged suppuration, which all surgical treatment, such as scraping out the sinuses and irrigation, failed to control. The patient positively stated that, though in attendance on cattle, there was no disease of any kind in the cattle of the district.

The PRESIDENT had examined the pus in this case microscopically, and had discovered nothing in the way of clubs or threads. In the only other case he had seen the clubs were very obvious structures. It was probable that there were various types of this organism, and this was not the type described by most textbooks. As to its growth, the culture he had in the laboratory of actinomycosis grew quite freely in the air or any medium. In this case he tried cultivation twice, and in the first attempt nothing grew, while in the second almost everything grew.

Dr. BENNETT said that the suppuration as presented to him clinically was unlike anything he had seen before, and the only loophole by way of exclusion was the suggestion of actinomycosis. There was another element in the diagnosis—namely, that this patient was a cattle-man, but he insisted, however, that none of the cattle in his district was ever known to have been diseased. In the treatment it was dangerous to use the potent injections, such as carbolic and perchloride of mercury solutions, so he adopted the compound tincture of benzoin as being least likely to poison. This, diluted with water, was passed into the area between the scapulæ, and the diluted tincture, which could not be mistaken, was expectorated by the patient, so that there was no doubt in this case of communication with the thoracic cavity. The suppuration extended to both sides of the sacrum, to the very lowest attachment of the spinal muscles.

Dr. WALTER SMITH congratulated Dr. Bennett on diagnosing the first case occurring in human beings in Ireland. He was interested in the remarks on the possible cereal origin of the disease, and he thought that this was also, perhaps, the origin of the tubercle bacillus. The difficulty in classifying the actinomycosis fungus was not restricted to it because the classification of all the minute organisms was in a state of chaos. The question was whether there was not more than one fungus producing the disease. With regard to the appearance of these so-called clubs, he was under the impression that these were degeneration processes of the fungus, and, therefore, not unlikely present in other fungous diseases. He found it difficult to accept the statement of a leading authority on the disease, that it was often cured by large doses of potassium iodide, and that the injection of it would cause the destruction of the fungus locally.

In reply, Dr. LITTLEDALE said that Crookshank believed the clubs to be spore-containing structures. The point against their being degeneration processes was that, as Professor Weigert had told him, the clubs disappeared exceedingly soon *post mortem*; but, on the other hand, they did not disappear in cattle even in old sections. In reply to Dr. KNOTT, he said the patient came into hospital on March 8th, 1898, and died on November 24th, 1898, and he had exceedingly bad colliquative diarrhœa, due, he thought, to the extensive amyloid degeneration of the intestine.

COMBINED SCLEROSIS OF THE SPINAL CORD.

Dr. W. G. SMITH and Professor O'SULLIVAN showed a case.

Professor O'SULLIVAN announced that they had a second case of a similar kind which they would refer to as well.

Dr. KNOTT asked if there was any suspicion of an alcoholic or neurotic history in connection with either case.

Dr. DOYLE also made remarks, and Dr. W. G. SMITH, in reply, said he could not vouch for the personal habits of the two patients, but, as far as he knew, they were temperate. One of the patients was a woman, so that the prostatic idea Dr. Doyle had referred to would not apply there.

The PRESIDENT said it would be impossible to account for the degeneration of the posterior columns by the slight sclerosis occurring in the posterior roots of the lumbar nerves, as the degeneration in the cervical region was extreme.

SPINAL DISLOCATION (FORWARDS).

Mr. M'CAUSLAND read the following notes of a case:

A man, aged 50, previously healthy, except for bronchitis and asthma, was admitted to Steevens's Hospital on February 12th, 1900, under Mr. M'Causland, patient having fallen 14 feet off a ladder on to back and shoulders. On examination there was complete paralysis and anæsthesia and loss of reflexes in lower limbs. The abdomen was distended and tympanitic, respiration diaphragmatic, inspiration being short, expiration being lengthened. There was typical musculo-spinal paralysis on both sides, but the organs of sight, hearing, smell, and protrusion of tongue were all normal; no difficulty in swallowing, and no swelling or irregularity in the pharynx. Rotation and movement of the head from side to side caused no pain nor crepitus. Examination of the back showed no irregularity, or prominence, or depression, and no crepitus over any of the vertebral spines. The upright position was most easy for the patient, as he became breathless and cyanotic on lying down. No priapism, emission of semen, or involuntary passage of urine and fæces. Urine acid, 1,022 specific gravity, lithates abundant, trace of albumen and phosphates. *Treatment.*—Complete rest, easily digested nourishment, ice-bag to spine, attention to bladder and rectum, and belladonna and ergot internally. Patient died in three hours' time, twenty hours after the accident. *Post mortem* there was found a dislocation forwards of cervical vertebræ, with laceration of the cord and membranes. The bones were so locked that reduction would have been utterly impossible.

SECTION OF OBSTETRICS.

Friday, April 20th, 1900.

A. V. MACAN, M.D., President, in the Chair.

ROUND-CELLED SARCOMA OF BOTH OVARIES.

DR. KIDD, after reviewing the literature of the subject, drew attention to the extreme rarity of these tumours, having failed to find any account of a similar tumour being brought before that Section, and also failing to find any authentic record amongst the proceedings of the older Obstetrical Society, or amongst the *Transactions* of the old Pathological Society.

The patient was 39 years of age, much wasted, the wasting extending over twelve months, although she only noticed the enlargement of the abdomen. When the left ovary was being removed there was quite alarming hæmorrhage from the pedicle, owing to its cutting through with the ligature. The tissues were infiltrated with disease, although there was no naked-eye extension to the uterus. Finally, after great difficulty, the pedicle was secured. The difficulty of dealing with the right ovary was not so great. The peritoneum and pelvic glands were found infiltrated with the disease. The abdominal wall through which the incision was made was not ½ inch thick, and no sign of muscle could be detected, owing to emaciation and probably separation of recti. She recovered well enough to be able to sit up for a day or two, but gradually sank from extension of the disease in abdominal cavity and a large gland at the base of the neck on the left side.

Dr. Kidd performed the operation with the hope of affording the woman some relief from her desperate condition, and the fact of the wound being found perfectly united on the tenth day after the operation was, he thought, an indication that the operation did not in any way hurry the unfortunate end. The ovaries, of which photographs were exhibited, as well as a microscopic preparation, were of the following dimensions:—Left ovary: Length = 8 ins., breadth = 4½ ins., thickness = 3¼ ins. Right ovary: Length = 7¼ ins., breadth = 3¼ ins., thickness = 3¼ ins.

Remarks were made by Dr. SMYLY, Dr. COLE-BAKER, and the PRESIDENT; and Dr. KIDD replied.

PORRO'S OPERATION FOR RUPTURED UTERUS.

Dr. COLE-BAKER read a paper on Porro's operation (extra-peritoneal) for ruptured uterus complicated by myoma and five and a half months pregnancy. The patient, who was seen in consultation with Dr. Furlong, was 38 and had been married two years. She had an abortion (about third month) in February, 1898. General health always good. Menstruation normal, but suffered more or less from constipation from time to time. She was now pregnant (for the second time) from five and a-half to six months. She had been taken ill with vomiting and (?) "cramps" four days previously. Her pulse and temperature were normal. Dr. Furlong had sent for Dr. Cole-Baker because on making a *per vaginam* examination of the patient he had failed to discover a cervix uteri or os externum. On examination Dr. Cole-Baker came to the conclusion that he had to deal with a case of retroverted and "incarcerated" gravid uterus (posterior sacculation), with labour pains present, and that prompt action was necessary or rupture of the uterus must ensue sooner or later. A few days later, without any warning or labour pains, the patient was delivered of a male fœtus about 5½ months, with the membranes intact. On the morning of the second day after delivery she had been rambling during the night, and had had three slight rigors. She looked thoroughly septic. Temperature at 9 A.M. 100.8°, pulse 104. Within a few hours the temperature was 105°, pulse practically countless, delirium had set in—she was in fact moribund. With Dr. Kidd's kind permission and assistance Dr. Cole-Baker performed an abdominal hysterectomy by Porro's extraperitoneal method. The appendages were removed with the uterus. In

three hours and a half the temperature had fallen to 97.4° and pulse to 90. Convalescence was complete in twenty-six days; the sutures were removed on the ninth day, and stump separated on twelfth day. The patient was seen by Dr. Cole-Baker nearly five months later, when the cicatrix was perfect, and much diminished in length and breadth. No traces of the stump having been brought into the lower angle of the wound remained. The patient was fat and well, and said she never felt better in her life. On resuming marital relations she at first felt considerable pain, but it was then practically *nil*. There was no vesical trouble whatever. The tumour after removal revealed a condition of things that the operator had not suspected. The diagnosis of a myoma was correct; but it was found that this myoma (which was about the size of a fœtal head at term) had caused a rupture of the uterus at the fundus between the two orifices of the Fallopian tubes, and that the myoma was sitting in the uterine wall much as an egg does in an eggcup. There had been no hæmorrhage whatever into the abdominal cavity, and all one noticed was some congestion of the blood vessels on the surface of the portion of the myoma that protruded through the rent in the uterus. Dr. Cole-Baker submitted temperature and pulse chart, as well as a photograph of the tumour, to illustrate his case.

The case was discussed by Dr. KIDD, Dr. SMYLY, and the PRESIDENT; and Dr. COLE-BAKER replied.

EXHIBITS.

Dr. FLYNN exhibited a specimen of ovarian tumour without any uterine attachment at the time of operation. Remarks were made by Dr. SMYLY and the PRESIDENT.—Dr. GLENN showed a uterus removed by retro-peritoneal hysterectomy for persistent hæmorrhage. Dr. Glenn, in reply to Dr. TWEEDY and the PRESIDENT, said he selected the abdominal method because of the inflammatory condition. Taking everything into account, he thought it was better that the operator should be able to see what he was doing. He did not employ atmokausis because he found it never cured myoma.—Dr. KIDD exhibited a specimen of fibroma springing from the ileum, forming a tumour in Douglas's pouch, removed by cœliotomy, a pure fibroma which sprang from the muscular layer of the ileum. The patient made a very good recovery. A slide under the microscope showed the tumour to be a pure fibroma. Dr. TWEEDY made remarks, and Dr. KIDD replied.

OTOLOGICAL SOCIETY OF THE UNITED KINGDOM.—At a meeting on May 7th, Sir WILLIAM DALBY, President, who was in the chair, announced that Professor Politzer of Vienna had been elected an honorary member by the Council.—Mr. CHARLES BALLANCE showed a case of epithelial grafting of the labyrinth after removal of the semicircular canals.

A woman, aged 54 years, had had discharge from the left ear since childhood. On May 7th, 1898, she was admitted into St. Thomas's Hospital with a large masto-squamous abscess, foul otorrhœa, and extreme vertigo. The old mastoid operation was performed, but discharge from the ear and vertigo still persisted and deafness was absolute. On February 6th, 1900, Mr. Ballance found a sinus leading into the petrous portion; the semicircular canals were in part removed, and the vestibule opened, the remaining cavity being repeatedly swabbed out with absolute phenol. For several days the patient was very sick and giddy. On February 17th the cavity was grafted, no giddiness or sickness occurring after the grafting. On removing the plug on February 22nd, the patient at once said she could hear well. When shown at the meeting the wound was soundly healed, the hearing was good, and the patient could run, being free from giddiness and also from tinnitus.

Mr. Ballance pointed out that the case illustrated the boundless possibilities of epithelial grafting when applied to the labyrinth for the cure of deafness. The PRESIDENT thought that Mr. Ballance's procedure opened up an enormous field for the future. Dr. WILLIAM MILLIGAN thought the procedure could be adapted to cases of dry catarrh of the middle ear, and for certain cases of post-suppurative fixation of the stapes; he had accordingly operated on three cases of advanced dry catarrh in which long previous treatment had been tried. He first performed the complete post-aural operation, and then endeavoured to remove the stapes, or if the foot plate was too ankylosed for removal, he burred through it and the adjacent part of the promontory, thus exposing the vestibule and providing a path for the direct transmission of sonorous vibration to the internal ear. The final measure consisted in grafting, as in Mr. Ballance's suppurative cases. In one case the hearing had been somewhat improved. The marked tinnitus had been to a great extent relieved. Mr. HUGH JONES, Mr. ARTHUR CHEATLE, Mr. ERNEST WAGGETT, Dr. URBAN PRITCHARD, Mr. CUMBERBATCH, Dr. DUNDAS GRANT, Dr. MACNAUGHTON-JONES, and Mr. FAGGE joined in the discussion.—Dr. JOBSON HORNE exhibited the specimens and read the notes of a case of septic thrombosis of the right lateral and the superior longitudinal sinuses occurring with broncho-pneumonia, associated with pus in the middle ears, the membrane being intact; the diplococcus of pneumonia and pyogenic organisms were cultivated from the clot in the sinuses and from the middle ear. It was suggested that the infection of the sinuses had occurred by way of the petro-squamosal sinus (which was very marked) from the middle ear. Mr. ARTHUR CHEATLE alluded to Dr. Still's investigations on the presence of infective pus in the intact middle ears of infants; he thought that if pathological changes in the lining membrane were present the condition could not be considered normal, and showed a drawing and specimen of an illustrative case. Mr. BALLANCE stated that the middle ear of every child under 5 years contained muco pus, but was not prepared to say that the presence of infective organism was normal.

Mr. BALLANCE showed a case in which an alveolar sarcoma had involved the petrous bone, paralysing the seventh, eighth, ninth, tenth, eleventh, and twelfth nerves, and on which he had operated with success. The patient was a woman, aged 32.—Mr. ARTHUR CHEATLE showed (1) a case of epithelioma of the meatus which had involved the middle ear and the parotid region. (2) A case of chronic middle-ear suppuration, with loss of the head of the malleus, the incus, and crura of the stapes.—Mr. C. H. FAGGE showed (1) a case in which healing had occurred after ossiculectomy; discharge had been present for eighteen years; (2) a case of functional nerve deafness.—Mr. DUNDAS GRANT showed a case of old-standing perforation healed by the application of trichloracetic acid. Dr. MACNAUGHTON-JONES showed a case of contracted meatus arising out of chronic otitis media.

SOCIETY OF ANÆSTHETISTS.—At a meeting on May 4th, Dr. J. W. F. SILK (President) in the chair, Mr. CARTER BRAINE read notes of three cases of failure of respiration under anæsthesia.

The first patient, a man, aged 59, was operated upon for very extensive disease of the tongue, mouth, etc. Chloroform was given throughout, and the patient struggled violently during the induction of anæsthesia, but subsequently became quiet. Before the operation was commenced the breathing ceased very suddenly. Owing to the fixation of the tongue it could not be drawn forward. Compression of the chest and hyper-extension of the neck produced practically no result, and tracheotomy had to be resorted to. The operation was subsequently abandoned. In all probability the cessation of respiration was due to œdema of the larynx. The second case, a male, aged 65, with marked senile changes—for example, tortuous arteries, arcus senilis, etc.—was anæsthetised with nitrous oxide and ether. While the colour and pulse remained good, the respirations gradually faded away, but were re-established by artificial respiration. This failure of respiration occurred in the same way every now and then during the course of the operation, which lasted over an hour. The third case, a man, aged 45, a thick-set, stout, flabby-looking man, was operated on for the radical cure of a hydrocele. Nitrous oxide and ether were administered from a small Clover's inhaler, the patient struggling and becoming blue during the induction. The lividity gradually increased, the mouth became tightly closed, and breathing ceased. After much difficulty, owing to the clenched teeth, the mouth was opened, and rhythmic tongue traction employed, and the patient recovered.

Dr. DUDLEY BUXTON thought that with regard to the first case it would have been better if the surgeon had performed tracheotomy earlier. He had met with cases similar to the second, and the condition was sometimes preliminary to vomiting. Rhythmically jerking the jaw upwards improved the respirations. Cases of spasmodic closure of the jaws were difficult to deal with, but he did not think that laryngotomy was often called for under these circumstances. The PRESIDENT suggested that the anæsthetist should urge the performance of preliminary tracheotomy in cases such as the first of those mentioned by Mr. Carter Braine. He did not think that spasmodic closure of the jaw, etc., called for such a severe measure as laryngotomy. Messrs. LLOYD, EASTES, CROUCH, and STARLING also discussed the cases; and Mr. CARTER BRAINE replied.—This meeting was followed by the eighth annual meeting, at which the following officers were elected for the ensuing year:—*President:* J. Fredk. W. Silk, M.D. *Vice-President:* F. Woodhouse Braine, F.R.C.S. *Treasurer:* George Eastes, F.R.C.S. *Elected Members of Council:* E. H. Grant Morris, M.B.; W. G. Copestake, M.R.C.S. (Derby). *Secretaries:* R. J. Probyn-Williams, M.D.; Harold Low, M.B. *Auditors:* Mrs. F. M. Dickinson Berry, M.D.; F. W. Cock, M.D.

THE SURGEON-GENERAL OF THE UNITED STATES ARMY.—A Bill has recently been introduced into Congress by which the Surgeon-General of the United States Army is given the rank and pay of Major-General.

REVIEWS.

The Hygiene of Transmissible Diseases: their Causation, Modes of Dissemination, and Methods of Prevention. By A. C. Abbott, M.D., Professor of Hygiene, etc., University of Pennsylvania. London: Rebman, Limited. 1899. (Demy 8vo, pp. 311. 14s.)

This is a handsome volume, which embodies the subject matter of a portion of the author's lectures on general hygiene. There is a preliminary section dealing with the predisposing and exciting causes of disease. In the second section each of the chief diseases caused by bacteria or by other parasites is discussed in some detail under the following chief headings: Cause, geographical distribution, mode of dissemination, portals of infection, and prophylaxis. Then follows a section dealing with prophylaxis in general against infectious diseases, in which vital processes and disinfection by various means are discussed; while in a final section methods of isolation, treatment of the infectious sick, and quarantine are discussed. A large number of photomicrographs and diagrams are introduced into the text, many quite original. The information under all the above heads is accurate and fairly up to date, though somewhat more sketchy than is customary in a serious textbook. This would have made the original lectures all the more valuable, as lectures overloaded with detail are seldom effective. The medical student or practitioner wishing to obtain a clearly written and accurate conspectus of the subjects enumerated above will find this volume very useful.

Practical Hints on the Analysis of Water and Sewage. By Sidney Barwise, M.D., D.P.H. London: Rebman, Limited. 1899. (Demy 8vo., pp. 60, 21 illustrations. 2s. 6d.)

This small manual of some 50 pages includes an introductory chapter, a description of the apparatus required for water analysis, the preparation of the standard solutions used in water analysis, the methods of water analysis, the interpretation of the results of water analysis, and the bacterioscopic examination of drinking water. It will be evident to those who are conversant with the subject that the author has crowded a great deal into his small space. It is mainly in this respect that he has exposed his work to adverse criticism, for the technical matter is correct and the views expressed and advice given are sound and scientific. By the author's own admission the book has not been exclusively designed for those who have gone through a practical course of laboratory instruction, yet those who have not done so will find many instances in which the information should be more explicit and complete.

Dr. Barwise very properly denounces the practice of laying down chemical standards of purity to which certain constituents of all waters, irrespective of their source, are asked to conform. Even the Rivers Pollution Commissioners showed a tendency to dogmatism in this respect with reference to their chlorine figure of 5 parts in 100,000. As is here pointed out, the question of the purity of a water supply involves a variety of considerations, and requires before it can be answered several distinct kinds of knowledge. The most carefully-made analysis may mislead if the results are not interpreted with a knowledge of what has been termed "the pedigree" of the water. A knowledge of the locality from which the water is collected is essential as bearing upon the geology of the district and the risks of pollution which the water has run, and the results of an analysis of water should always, therefore, be interpreted by someone, such as the medical officer of health, who possesses a knowledge of all these facts.

House Drainage and Sanitary Fitments. By Gerard J. G. Jensen, C.E. London: The Sanitary Publishing Company, Limited. 1900. (Cr. 8vo, pp. 257. 5s.)

The greater part of this book has already been published in a series of articles contributed to the *Sanitary Record*, and many who noted the clear, concise, and practical manner in which the writer dealt with his subject in these articles will welcome the fact of their appearance in a handy volume. To those engaged in "sanitary work" the book appeals more directly, but the subject of house drainage is one in which the householder is taking an increasing interest, as befits its importance: and here is a work which he can read and comprehend with facility, and by which he can acquire the knowledge of whether the drains and sanitary fittings of his house conform to a proper standard.

The writer states that in "no department of human industry is scamped work so common," and he might have added—so generally disastrous to health and comfort; and even a so-styled "sanitary engineer" may still occasionally be found who is either so ignorant or dishonest that his work may require constant supervising and directing to ensure that it is carried out with proper materials and apparatus and by proper methods.

The book bears the stamp of having been written by one who has had much practical experience, and the clearness of description aided by copious illustrations, make it one of the best expositions of what to do and what not to do in the drainage arrangements of dwellings that has hitherto appeared. The only point calling for adverse comment which we have noticed is contained in a footnote on page 3. There alone does Mr. Jensen, in his effort towards simplicity and conciseness, mislead the reader. He states that "within the meaning of the Public Health Acts a 'drain' means any drain of and used for the drainage of one building only, or premises within the same curtilage." Has Mr. Jensen never had to deal with Section xix of the Public Health Acts Amendment Act, 1890, and the amendment therein contained of the above definition of drain in its application to combined drains?

NOTES ON BOOKS.

The *Dentists' Register* for 1900 (London: Spottiswoode and Co., pp. 241. 3s. 4d.) shows that the licentiates in Dental Surgery now constitute 37 per cent. of the total number now registered, as against 34 per cent. in the previous issue. No fewer than 274 names have been removed from those registered without qualification, in virtue of having been in practice prior to 1878. As this amounts to more than 8 per cent. of this class, it is probably in excess of the deaths for the year, and is to be attributed to extra efforts to make the *Register* correct, an inference strengthened by the fact that in 1898-99 only 48 names disappeared. The additions to the number of licentiates fall short of the removals, but this is of no present importance, owing to the notorious fact that a very large number of persons with no proper claim originally, and indeed for some years subsequently, obtained admission to the *Register*. We notice that the tables of accounts have disappeared alike from the *Medical Register* and *Dentists' Register*; in the former a table supplies the number of new registrations for the year, but this important information cannot now be obtained at all from the *Dentists' Register*, though formerly it was shown in the accounts. This should be rectified in future issues.

The new edition of Dr. Handsell Griffiths's well-known *Lectures on Prescriptions and the Art of Prescribing* (London: Macmillan and Co. 1899. Fcap. 8vo, pp. 148. 3s. 6d.) has been adapted to the *British Pharmacopœia* of 1898. It remains one of the best of those books specially dealing with prescription writing. In addition to an account of the grammatical construction of the prescription, it contains valuable instruction on the pharmaceutical principles of prescribing with particular reference to the subject of incompatibility. Besides being useful to the student for examination purposes, it is a valuable corrective of the rule-of-thumb prescribing developed by a too exclusive use of hospital pharmacopœias. The tendency of its teaching is in the direction of originality in the selection and combining of drugs.

The fourth edition of the *Prescribers' Pharmacopœia* (Bombay: Kemp and Co. 1899. 12mo. pp. 421. Rs 4.8.) has been brought into accord with the *British Pharmacopœia, 1898*, a large number of new remedies have been noted, and a further addition of Indian drugs made. The matter is alphabetically arranged, reference is easy, and the information given is of such a character as will be found useful to the prescriber.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 190

NOTES.

At the Opening of the Summer Session of the General Medical Council two new members were introduced. Mr. W. H. Power, F.R.S., Principal Medical Officer of the Local Government Board, has succeeded Sir Richard Thorne, to whose valuable work on the Council the President paid a just tribute; the other new member is Sir Hugh R. Beevor, M.D., nominated by the Society of Apothecaries of London to succeed Mr. Brudenell Carter. The President made a graceful acknowledgment of Mr. Carter's services, praising his ability, his tact, his ready speech, and regretted that the Council would lose in its debates "his bright intelligence and fertile resources of expression." These concluding words appeared to cause some little amusement even in the sober atmosphere of the Council Chamber, for many members had a vivid recollection of the fertility of resource in matters of expression displayed by Mr. Carter so recently as the last session of the Council. Mr. Carter then exceeded the bounds usually placed upon debate: and it is a little surprising that the President should have used an expression which must inevitably recall circumstances which many would be glad to forget.

Reciprocity with Foreign Countries was one of the topics to which the President referred in his opening address. The matter has arisen, it will be remembered, in consequence of legislation proposed in Italy which would have the effect of preventing British medical men from practising among their own countrymen in Italy. Sir William Turner said that the question has now entered upon a new phase. It cannot be said that this new phase is altogether satisfactory, for the proposal entertained by the Privy Council would appear to be that the Italian doctors should have the right to unrestricted practice in the United Kingdom, while British medical men in Italy would be restricted to practice among British subjects. There is one sentence in the President's reference to this matter of which we should be very glad to have a fuller explanation. He said: "We are further informed that at the proper time the Privy Council will be prepared to apply Part II of the Medical Act, 1886, to Italy." Does this mean that the Duke of Devonshire is prepared under Section XVII of the Act to recognise Italy as a "foreign country which in the opinion of Her Majesty affords to the registered medical practitioners of the United Kingdom such privileges of practising in the said ..... foreign country as to Her Majesty may seem just"? We sincerely hope that the sentence which we have quoted from the President's address does not mean that he feels some apprehension that the Privy Council may be making ready to establish an unequal reciprocity with Italy behind the back of the General Medical Council. This would be a most serious matter, since it would establish a precedent which might in the future react most injuriously upon the profession in this country. The question has arisen with regard to Italy, where the conditions are no doubt such that a minimum of injury can arise, but this argument must not be allowed to influence the decision upon the principle involved. The whole matter will come up before the Council for discussion, and it will no doubt be considered in all its bearings, and not merely in its application to the particular case of Italy.

A Bill to Give Additional Disciplinary Powers to the Council was submitted by the President on the first day, and accepted without debate. As it will have the support of the Parliamentary representatives of the Universities of Oxford, Cambridge, London, Dublin, and of the Scottish Universities, it will be introduced under auspices which are likely very strongly to commend it to the favourable consideration of both Houses. It will give the Council power in certain cases to erase from the *Medical Register* the name of a registered medical practitioner for a limited period, and to restore such name. It will give to every medical authority, whether a university or corporation, the power, if it think fit, to revoke, suspend the use of, or cancel the medical diploma of such medical authority held by any person whose name has been erased from the *Medical Register* by order of the General Medical Council for infamous conduct in a professional respect, and to restore such medical diploma. The Bill will also remove the anomaly to which Mr. Horsley was, we believe, the first to call attention, under which, in the metropolitan area, fines and penalties recoverable under the Medical and Dentists' Acts are paid to the Receiver of Police and not to the General Medical Council. The law undoubtedly requires amendment in all these points, but many will doubt the policy of the piecemeal reform of the Medical Acts, when, as has been abundantly shown by the British Medical Association, a comprehensive amending Bill is urgently needed.

The Solicitor to the Council having retired, the question of the appointment of a successor comes up for consideration at this session. The conduct of the legal business of the Council has lately been subjected to much adverse comment, and the result of the recent prosecution in the case of Alabone will confirm the impression that an infusion of new blood is required. The President's generous panegyric of the retiring solicitor will be regarded by many as inspired by an amiable feeling akin to that which led to the production of those flattering epitaphs of which our indulgent forefathers were so liberal.

New Standing Orders to regulate the course of debate, which it was stated were largely based upon those in force at the London County Council, were proposed and adopted. Hitherto there has been no means of closing a fruitless debate except by moving the previous question, which debarred the Council from voting upon the question before it. The introduction of a form of closure may be expected to economise the time of the Council, and it can only be hoped that the power thus given to a majority will be used with discretion. By another new Standing Order it will be possible to postpone a debate without the Council having to adjourn. This was not previously provided for, and appears to be a distinct improvement.

The Mode of Election of Representatives of the Universities and Corporations was raised by a communication from the County of Durham Medical Union, in which it was urged that these representatives should be elected by a poll of the medical graduates of each body. The answer suggested by the Executive Committee was to the effect that this could not be done without a change in the law. This form of answer was objected to on the ground that it was a legal opinion, and went beyond the facts, though it was true certainly of some, perhaps of all, of the Universities. Dr. MacAlister pointed out that in the University of Cambridge the electorate now consisted of all graduates and not of medical graduates alone, and that this arrangement could not be altered by the University itself. Eventually the communication was merely received by the Council without any specific answer being sent, and it is to be regretted that those who drafted the resolution should not have informed themselves of such easily ascertainable facts before sending in an opinion thus capable of being set aside.

REPORT OF PROCEEDINGS.

Tuesday, May 22nd.

Sir WM TURNER, President, in the Chair.

THE sixty-ninth session of the Council was commenced at the Council Chamber, Oxford Street, on Tuesday, May 22nd, at 2 P.M.

The PRESIDENT announced that Sir Wm. Thomson, who was in command of the Irish Hospital at Bloemfontein, and Dr. Leech, through severe illness, would not be able to attend the meetings of the Council.

NEW MEMBERS.

Sir Hugh Beevor, representing the Society of Apothecaries of London, was introduced by Dr. Pye-Smith to the Council in place of Mr. Carter. Mr. Power was introduced by Mr. Bryant in succession to the late Sir Richard Thorne.

PRESIDENT'S ADDRESS.

The PRESIDENT then delivered the following address:

Changes in the Council.

During the past winter some important changes have taken place in the *personnel* of the Council. The sudden and lamented death of Sir Richard Thorne has removed from a great department of Government and from this Council a member of our profession when in the prime of life and activity. Although he had not quite completed the period of five years for which he was appointed in 1895 by Her Majesty in Council, he had discharged with great efficiency various duties which he had been asked to undertake. As chairman of the Standing Committee on Public Health he had given the Council valuable advice and information bearing on our statutory relations to public health diplomas, and as chairman of the Special Committee to watch legislation on the subject of midwives his administrative experience and tact had been of great value in our deliberations. He also took a vivid interest in other branches of our work, and we shall miss his readiness in debate, his courage in the expression of his opinions, and his attractive personality. His death has deprived me, and I know other members of Council also, of a much esteemed personal friend.

Her Majesty in Council has appointed in place of Sir Richard Thorne, Mr. William Henry Power, F.R.S., who has also succeeded to the post of Principal Medical Officer to the Local Government Board. By this appointment the relation between this Council and the department of State more especially concerned with public health has been continued. I feel confident that I am stating the opinion of my colleagues in giving to Mr. Power a cordial welcome, and in expressing the hope that he will assist and guide our deliberations on those branches of our work to which so large a portion of his life has been devoted.

Mr. Brudenell Carter had been a member of the Council since February, 1887. He was appointed by the Society of Apothecaries immediately after the Medical Act of 1886 came into force, and at a critical period in the history of the Society. It will be remembered that this Act deprived the medical and surgical corporations generally of the right to grant singly a qualification to admit to the *Medical Register*, but required them to combine with each other, or with the Universities, for the purpose of conducting a qualifying examination and granting a diploma which should confer the right of registration. The Act, however, contained a provision that if any of these corporations were unable to enter into the necessary combination, it should be lawful for this Council, should it think fit, to appoint examiners to enable the body to confer a registrable diploma. When the Society of Apothecaries, having failed to effect a combination, applied to the Council to appoint the examiners which it required, the application met with considerable opposition, and it will be in the memory of the Council that it was largely due to the ability and tact displayed by Mr. Carter that the examiners were granted, and the Apothecaries' Society continued as a licensing body. The position which Mr. Brudenell Carter gained on that occasion as a clear and ready speaker he retained during the whole period of his appointment, and we shall lose in our debates his bright intelligence and fertile resources of expression.

The Society of Apothecaries has appointed as its representative Sir Hugh Reeve Beevor, Bart., M D. and F.R.C.P., who takes his seat to-day, and to whom we shall look for assistance in our deliberations.

At the beginning of the year the Council's solicitor, Mr. F. W. Farrer, wrote to inform me that his age and the state of his health would compel him to make an early retirement from active business, and that he would have to cease to act as our professional adviser. I reported this to the Executive Committee, at whose request Mr. Farrer kindly consented to perform the duties of solicitor till the present session. The firm of which Mr. Farrer is the head has transacted the legal business of the Council since 1859. My memory as a member of Council takes me back to the time when his senior partners, Mr. Ouvry and Sir Wm. J. Farrer, whose advice and opinion were highly valued, acted as solicitors to the Council. I know how much importance my more immediate predecessors in this chair attached to the services rendered to the Council by Mr. F. W. Farrer, and the confidence which they reposed in his judgment. I wish to express my indebtedness to him for his unfailing courtesy, and for the assistance which he has on many occasions ungrudgingly given to me in the consideration of questions, often difficult and complicated, which required to be answered and disposed of. The Council will have to arrange during this session for the appointment of a solicitor.

Improvements in Standing Orders.

The experience which I have gained as your President during the past two years has led me to think that improvements might be made in the Standing Orders which regulate procedure during our debates. After consultation with the Chairman of the Business Committee amendments have been framed, the object of which is to give more specific instructions for the conduct of business, both as regards motions and amendments. An additional Standing Order has also been proposed on which I desire to give a few words of explanation. By our present Orders we can carry a motion, or decline to carry it, or amend it when under discussion, or, if the Council does not wish to vote on the question, we can pass to the next order of the day. We have, however, no specific order to enable the Council to close a debate and at the same time to take a vote on the subject under discussion, for though the "previous question" closes a debate, it also precludes the Council from expressing an opinion on the merits of the question then before it. You will be asked, therefore, to take power to close a debate either on a motion or an amendment, and that the proposal for the closure shall be made and seconded without debate, and shall, unless the President or Chairman shall rule otherwise, be put forthwith; should the proposal be carried, the motion or amendment shall at once be voted on. The proposed amendments in the Standing Orders were submitted to the Executive Committee in February and recommended by it to the Council. They were embodied in the minutes of that Committee, have been in the hands of members of Council for more than two months, and time has thus been given for their consideration.

Penal and Disciplinary Powers.

A report on the steps that I have taken since our last session towards obtaining additional powers for penal and disciplinary purposes, both for the Council itself and for the medical authorities represented on it, will be placed in your hands. In conjunction with our legal advisers a short Bill has been prepared to carry out the object which the Council has in view, and in which are embodied the clauses as adjusted in consultation with the medical authorities and submitted to and approved by the Council in December last. Acting on a suggestion made to me through the Privy Council, the representatives of the Universities in the House of Commons have been requested to support the Bill. I am happy to state that members for the Universities of Oxford, Cambridge, London, Dublin, and of the Scottish Universities have acceded to my request. A copy of the Bill will be supplied to each member of Council.

The Midwives Bill.

The Midwives Bill introduced into the House of Commons early in the session, has passed the second reading and been amended by the Standing Committee on Law. Your committee appointed to watch legislation on this subject has held two meetings and has submittted amendments to the Lord President of the Privy Council for his consideration. A report of its proceedings has been prepared and will be brought before you.

The Reciprocity Question.

The question regarding practice in Italy by British practitioners, to which your attention has been called on former occasions, has entered on a new phase.

The Lord President of the Privy Council has intimated to the Council that a deputation of British practitioners resident in Italy has communicated with the British Ambassador in Rome, and has assured him that in their opinion the privileges afforded them in Italy in regard to practice are just and reason-

able. Following upon this communication the British Ambassador has asked the Foreign Secretary to ascertain if the President of the Privy Council would be prepared to admit Italian doctors in Great Britain to reciprocity of medical practice.

We are further informed that at the proper time the Privy Council will be prepared to apply Part II of the Medical Act, 1886, to Italy.

It will be observed that in the correspondence the expression reciprocity of medical practice as between foreign doctors and our countrymen has been employed. It should, however, be kept in mind that the word reciprocity does not occur in Part II of the Act. There is, indeed, nothing in the Act to show that in the arrangements to be made between this country and a foreign country identity of privilege should be provided for. It is left to Her Majesty in Council to decide if the foreign country has accorded to British practitioners such privileges of practising in that country as to Her Majesty may seem just, and to declare by Order in Council that this part of the Act is to apply to a particular foreign country. After the Order is issued, and before registration on the Foreign List can be effected, the Act requires the General Medical Council to decide (*a*) whether the diploma to be registered furnishes a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of medicine, surgery, and midwifery; and (*b*) whether the applicant is of good character, and is by law entitled to practise in the foreign country whose diploma he possesses.

The Council will recollect that Mr. Muir Mackenzie has already advised that practitioners who obtain the registration of their names in the Foreign List of the *Medical Register* become entitled to all the privileges which are possessed by British medical practitioners, and that there is consequently no power to restrict their practice in the United Kingdom to their own countrymen.

In view of the present position of this question and of the difficulties which surround it, the Council will probably desire to express an opinion on the matter as it is now presented to us.

Death Certificates.

The possibility of obtaining an amendment in the law regarding death certification has not been lost sight of. The lamented death of Sir Richard Thorne suspended for a time communications which had been begun on this subject; but we are assured that before the next session of Parliament the deputation appointed by the Council will be given the opportunity of stating our case to the Government.

Preliminary Examinations.

In accordance with a resolution of the Council of December last, the Education Committee has obtained from the experts engaged by the Council to assist the Committee in their inquiries into the preliminary examinations to be passed by intending medical students, an elaborate report which sets out in full the reasons which had guided them to the conclusions to which they had come in their previous report. We shall expect to receive from our Committee a communication on this subject, and on the recommendations made by the experts for reform in the conduct and standard of these examinations.

Registration of Medical and Dental Students.

In December last I communicated to the Presidents of the Royal Colleges of Physicians and Surgeons in London the resolution of the Council to adhere to its regulation of June 7th respecting the registration of medical and dental students, and invited the Colleges to take the matter again into consideration. A few weeks ago I received from the Colleges replies to my letters, in which they intimated that they adhere to the resolutions previously adopted by them and communicated to the Council (Minutes, December 4th, 1899). They have forwarded copies of a memorandum prepared by the Committee of Management of their Conjoint Examining Board for the information of the Colleges, in which they review the claim made by the Council that the universities, schools of medicine and scientific institutions recognised by a licensing body should be approved by the Council. Through the courtesy of the Colleges, I have been able to supply each member of the Education Committee with a copy of the memorandum. The Council awaits a further report by the Education Committee on this matter.

The Apothecaries' Hall of Ireland.

The Examination Committee will have before it reports on the Examinations of the Apothecaries' Hall, Dublin, held in October, 1899, and January, 1900, by our Inspector, Dr. G A. Gibson. In view of the satisfactory character of these reports, as well as of that held in July of last year, the Committee will perhaps advise the Council whether it is necessary that our inspector should attend in the future each examination, seeing that the Council is represented on the Examining Board by two assistant examiners in surgery.

Personation.

The report of the Personation Committee, the consideration of which was adjourned from last session, will come before you.

The Pharmacopœia Copyright.

The question of the infringement of the copyright of the *Pharmacopœia* by certain publications was brought before the Executive Committee in February, and it was resolved to ask the Chairman of the Pharmacopœia Committee, along with two other members, to prepare a statement and report to the President. I received a few days ago the statement, which recommends that the opinion of counsel should be taken on several questions of importance; the Executive Committee have acted on this recommendation. The Council will join with me in deeply regretting that the state of Dr. Leech's health will prevent him from attending this meeting and presenting in person the report of the Pharmacopœia Committee.

Medical Aid Associations.

The Committee on Medical Aid Associations will report on the steps which they have taken towards obtaining the establishment of a Board of Conciliation.

Penal Cases.

Several cases under the penal and disciplinary sections of both the Medical and Dentists Acts will occupy your attention. One of these, a charge of covering an unqualified person, will doubtless take up some time. In one of the dentists' cases a registered practitioner has been, for I think the first time, summoned for systematic advertising.

From this summary of our work the Council will be in a position to recognise that subjects of much importance both to individual practitioners and to the profession generally call for its careful consideration during the session. I would express the belief that as earnest men of business, actively engaged in the duties of our profession, conscious of the value of time and words, we shall apply ourselves to the work which is before us, and not indulge in the academic discussion of questions which are not ripe for a practical solution.

VOTE OF THANKS.

Dr. MACALISTER moved, and Dr. PETTIGREW seconded, that the President be thanked for his address, and that he be requested to allow it to be entered on the minutes. This was carried unanimously.

BUSINESS COMMITTEE.

Sir DYCE DUCKWORTH moved, and Mr. TEALE seconded, and it was carried unanimously, that the Business Committee should consist of Dr. MacAlister (Chairman), Mr. Bryant, Sir Philip C. Smyly, and Dr. Bruce.

TABLES OF RESULTS OF EXAMINATION.

Tables showing results during 1899 of (*a*) Professional Medical Examinations, (*b*) Examinations for D.P.H., (*c*) Professional Dental Examinations, (*d*) Preliminary Examinations, (*e*) of exceptional cases in regard to length of study; (*f*) and of the competitions in February, 1900, for commissions in the R. N. Medical Service, (*g*) commissions in the R.A.M.C., and (*h*) commissions in the I.M.S., were received and entered on the minutes and votes of thanks were accorded to the Directors-General of the Navy, Army, and Indian Medical Services.

(*a*) Medical; (*b*) Public Health; and (*c*) Dental Examinations. The following figures have been extracted from these tables. The percentages of rejections have been added.

(a) Medical.

Anatomy and Physiology.	Rejected.	Passed.	Percentage Rejected.
Conjoint Board, England ...	226	342	39.78
Conjoint Board, Scotland ...	112	135	45.34
Conjoint Board, Ireland ...	89	79	52.97

Final Examination.	Rejected.	Passed.	Percentage Rejected.
Conjoint Board, England ...	311	513	37.74
Conjoint Board, Scotland ...	224	224	50.00
Conjoint Board, Ireland ...	61	76	44.52

Totals for all Universities and Corporations.	Rejected.	Passed.	Percentage Rejected.
First Examination	1,287	1,697	43.13
Second Examination ...	1,400	2,094	40.06
Final Examination	1,371	2,488	35.52

(b) D.P.H.

—	Rejected.	Passed.	Percentage Rejected.
First Examination	48	110	30.37
Second Examination ...	23	117	16.42

(c) Dental.

	Rejected.	Passed.	Percentage Rejected.
Total	85	168	33.69

(*d*) *Preliminary Examination.*—The following are the more important statistics in this table:

England and Wales.

—	Rejected,	Passed.	Percentage Rejected.
Oxford University:			
Junior Local	1,359	3,037	30.9
Senior Local	621	1,281	32.6
Cambridge University:			
Junior Local	2,189	5,773	27.4
Senior Local	611	1,567	28.0
Durham University:			
Preliminary Arts (Medicine and Science) ...	40	44	47.6
London University:			
Matriculation	2,027	1,854	52.2
Victoria University:			
Preliminary	203	244	45.4
University of Wales:			
Matriculation	208	117	60.9
Oxford and Cambridge Schools' Examination:			
Higher Certificate ...	935	1,205	43.7
Lower Certificate ...	425	535	44.3
College of Preceptors:			
Ordinary Certificate ...	798	572	58.2
Special Medical Examination	296	118	71.5
Central Welsh Board:			
Senior Certificate ...	146	285	33.9

Scotland.

—	Rejected.	Passed.	Percentage Rejected.
Edinburgh University:			
Medical Preliminary ...	140	139	50.1
Aberdeen University;			
Preliminary	56	45	55.4
Glasgow University:			
Medical Preliminary ...	105	92	53.3
St. Andrews University:			
Medical Preliminary ...	9	6	60.0
Educational Institute ...	115	116	49.8

Ireland.

—	Rejected.	Passed.	Percentage Rejected.
Dublin University:			
Public Entrance... ...	31	224	12.16
Royal University:			
Matriculation	310	680	31.3
Royal College of Physicians and Surgeons	68	78	46.6
Intermediate Education Board:			
Junior Grade	1,469	2,808	34.3
Middle ,, ...	258	781	24.8
Senior ,, ...	127	388	24.9

AMENDMENT OF THE STANDING ORDERS.

Dr. MACALISTER, as Chairman of the Business Committee, then brought forward a series of amendments to the Standing Orders which had been thought desirable owing to some doubt which existed with regard to the rule for moving "the previous question." He said that the Committee, after careful consideration, framed their amendments on the lines adopted by the London County Council, which were regarded by many similar institutions to be of a model character. He moved:

That Chapter IV, page 10, of the Standing Orders be amended by inserting 19 and 20 instead of the present 19; 19 provides that when a motion is under debate no further proposal shall be received except (1) an amendment, (2) postponement of the question, (3) adjournment of the debate, (4) adjournment of the Council, (5) closure of the debate, (6) the previous question; 20 provides that when an amendment is under debate no further proposal shall be received except (1) adjournment of the debate on the amendment, (2) adjournment of the Council, (3) closure of debate on the amendment, (4) the previous question as to the amendment—that is, that the debate on the original motion be resumed.

Mr. BRYANT seconded the motion.

The CHAIRMAN entirely concurred in the proposed amendments, and thought if they were adopted the Council would be able to transact their business in a thoroughly regular way without questions arising, which had been rather difficult for the Chairman to give a ruling upon.

The motion was carried.

Dr. MACALISTER then moved and Mr. BRYANT seconded:

That Chapter IV, page 10, of the Standing Orders be amended by inserting 21 to 26 of the proposed amendments: 21 provided that the proposal for postponement may be to a date, or *sine die*; 22 that if the adjournment of the debate be carried, it shall be resumed at the next ordinary meeting; 23 that if the adjournment of the Council be carried, the question under debate shall be dropped from the *Programme of Business*; 24 that before the adjournment of the Council is put, the President or Chairman may take the opinion of the Council whether before rising it will transact unopposed business; 25 that the closure shall be moved and seconded without debate, and "shall, unless the President or Chairman shall rule otherwise, be put forthwith," and that if carried the motion or amendment under debate shall be at once voted on; 26 that the previous question shall be moved and seconded without debate and put forthwith, and that, if carried, the motion or amendment to which it applies shall be dropped from the *Programme of Business*.

The motion was then put and carried after a brief discussion.

PUBLIC HEALTH COMMITTEE.

On the motion of Dr. MACALISTER, seconded by Mr. TEALE, Mr. W. H. Power was appointed a member of the Public Health Committee.

PENAL AND DISCIPLINARY POWERS.

The PRESIDENT then asked the Council to receive his report on the further steps taken by him to secure increased penal and disciplinary powers, both for the Council and for the medical authorities represented on the Council.

The report stated that in accordance with the resolution adopted by the Council on December 2nd, 1899, the President had communicated with the Privy Council, and the Lord President had caused him to be informed that a measure embodying the provisions proposed by the Council, if introduced into Parliament on the responsibility of the General Medical Council and the representatives of the Universities in the House of Commons, would be entitled to the favourable consideration of Her Majesty's Government. It was pointed out in the same communication that as Clause 3 proposed to take away from the Chief Commissioner of Police the right to retain all penalties recovered in the Metropolitan District, it was desirable that the General Medical Council should communicate on that subject with the Secretary of State for the Home Department. The position of the question was accordingly explained to the Home Secretary, who, having considered the proposals of the General Medical Council, had intimated that, subject to certain verbal amendments, he did not propose to offer any opposition to Clause 3, which related to the allocation of penalties. On February 26th, 1900, the President reported these facts to the Executive Committee, when he was authorised to instruct Mr. Farrer and Mr. Muir Mackenzie to prepare a Bill in accordance with clauses submitted to and approved by the Council on December 2nd, 1899. Acting on the suggestion contained in the Lord President's letter of December 23rd, 1899, the President had sought the co-operation of the Parliamentary representatives of the various Universities of the United Kingdom. Answers have been received from Sir Wm. R. Anson, Bart., the Right Hon. J. G. Talbot, Professor Jebb, Sir Michael Foster, K.C.B., the Right Hon. W. E. H. Lecky, Sir John Batty Tuke, and Mr. J. A. Campbell, representatives respectively of the Universities of Oxford, Cambridge, London, Dublin, and of the Scottish Universities, all of whom have assented to support the Bill. It is intended to have the Bill introduced into the House of Commons at the first convenient opportunity.

MEMORANDUM.

MEDICAL ACTS, 1858 TO 1886.

The principal objects of this Bill are as follows:

First, to give the General Medical Council power to erase from the *Medical Register* for a limited period the name of a registered practitioner who has been guilty of a crime, or who has been adjudged guilty of infamous conduct in a professional respect.

Secondly, to enable the medical authorities summarily to deprive a practitioner whose name has been erased from the *Medical Register* of the medical diploma obtained from that authority.

Thirdly, to provide that the fines and penalties recoverable under the Medical Acts shall be paid in all cases to the General Medical Council, to be applied in aid of the expenses of executing the Medical Acts.

The effect of the first of the above-mentioned changes in the law will be substantially to extend to medical practitioners the law which is already in force with regard to dentists under the Dentists Act. At present if a registered medical practitioner is convicted of a crime, or is found guilty of infamous professional conduct, the General Medical Council has jurisdiction to erase the name of the practitioner from the *Medical Register*, but there is no power to erase for a limited period. There is thus no power at present to inflict that punishment which is equivalent to a suspension from practice, such as is possessed by the Law Society and the High Court in relation to solicitors. The amendment of the law is required so as to enable the General Medical Council to deal with cases which can be satisfactorily met by the moderate punishment of suspension from practice, but which are not of sufficient gravity to require the severe punishment of total deprivation of the right to practise legally.

The second change in the law is rendered necessary by the circumstance that the medical authorities who grant registrable diplomas do not all of them possess the same powers of depriving a practitioner of his medical diploma. Thus under the present law it sometimes happens that a medical practitioner whose name has been erased from the *Medical Register* for disgraceful conduct is enabled to continue to use his medical diploma. The proposed change in the law will in no way interfere with the existing powers which the medical authorities already possess, but will enable every medical authority to take away his medical diplomas, either altogether or for a limited time, from a practitioner whose name has been erased from the *Medical Register* for misconduct.

The reason for the proposed third change in the law is as follows: The Medical and Dentists Acts create certain penalties which are incurred by persons who commit breaches of the provisions of the Acts and in particular penalties are imposed upon unqualified and unregistered persons who falsely assume medical registrable titles. The 42nd Section of the Medical Act, 1858, provides that the penalties when recovered are to be paid to the General Medical Council in aid of the expenses of executing the Medical Acts, but in cases in which the penalties are sued for before magistrates of the police courts of the metropolis, the penalties which are awarded are claimed by the Receiver of Police under Section 47 of the Metropolitan Police Courts Acts, 1839, which provides that penalties recovered under any Act of Parliament before the magistrates of the metropolis are to be paid to the Receiver of Police. The object of the third clause of the Bill is to clear away all doubt on this subject, and to give effect to what was the manifest intention of the Medical Act, 1858.

The other clauses are purely formal.

DRAFT OF A BILL TO AMEND THE MEDICAL ACTS 1858 TO 1886.

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. *Names of Registered Medical Practitioners may in Certain Cases be Erased from the Medical Register for a Limited Period and Restored.*—Where a person registered under the Medical Acts has been convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or has, after due inquiry, been judged by the General Medical Council to have been guilty of infamous conduct in a professional respect, the General Medical Council may, if it thinks fit, by order direct that the name of the person shall be and remain erased from the *Medical Register* for a limited period, and may from time to time, by order, vary such period, and at the expiration of the period limited by such order or subsequent order the Registrar shall, if the person shall then possess a medical diploma, and unless otherwise ordered by the General Medical Council, restore the name of the person and his then existing medical diplomas to the *Medical Register*. Provided that the powers conferred on the General Medical Council by this section shall not prejudice or curtail the powers of erasing a name from the *Medical Register* conferred on the General Medical Council by the Medical Act, 1858.

2. *Medical Authorities may deprive a Medical Practitioner whose Name has been Erased from the Medical Register of his Medical Diploma.*—(*a*) It shall be lawful for each of the medical authorities, if and when such authority thinks fit, to revoke, suspend the use of, or cancel the medical diplomas or diploma of such medical authority held by any person whose name has been erased from the *Medical Register* by order of the General Medical Council for any of the causes mentioned in Section XXIX of the Medical Act, 1858, and subsequently to restore such medical diplomas or diploma to such person, without his being required *again* to pass a qualifying examination. (*b*) Nothing in this Act shall prejudice or affect the powers already possessed by any medical authority of depriving a member of his medical diploma or diplomas, or of striking off members from its lists or rolls.

3. *Fines and Penalties Recoverable under the Medical Acts and Dentists Acts to be in every Case Paid to the Treasurers of the General Medical Council.*—Notwithstanding anything contained in any Act now in force, or hereafter to be passed, all fines and penalties recovered under the Medical Acts, or the Dentists Act, 1878, whether recovered before a magistrate of the police-courts of the metropolis or elsewhere, shall be paid to the Treasurer of the General Medical Council.

4. *Interpretation.*—In this Act "General Council" means the General Council of Medical Education and Registration of the United Kingdom. "Medical authorities" means the Universities and bodies within the United Kingdom entitled to grant medical diplomas conferring on the holder the right to registration under the Medical Acts. "Medical diploma" means a medical diploma as defined in the Medical Act, 1886, and entitling the holder to be registered in the *Medical Register*.

5. *Short Title.*—This Act may be cited as the Medical Act, 1900, and shall be construed as one with the Medical Acts.

The phraseology of the Bill, with one or two exceptions, was precisely what was put before the Council at the November meeting. It would be seen in Clause 1 that the words which had originally appeared in the print "registered practitioner" had been changed to "person registered." This had been done in consequence of a suggestion of Mr. Muir Mackenzie. The last sentence of Clause 1 was also not in the original print, but when the Bill was being drafted he had called the attention of Mr. Muir Mackenzie to the fact that it might be a question how far the section without the words in the last sentence preserved to the Council the right that it had under the existing Act to erase a name altogether. He thought it desirable that the Council should preserve the power given to it under the existing Act of 1858 to strike a person off altogether. The Council would thus retain their existing power, and have in addition the power of limitation, which they did not possess by the original Act. Clause 2 was exactly as it appeared before, except that in the last line they had put in the word "again." In Clause 4 certain words had been introduced so as to make the definition of "medical authorities" more clear. At the meeting of the Executive Committee on May 21st a motion was passed that he should approach the members for the Universities of Oxford and Cambridge, and request them to take charge of the Bill in the House of Commons. He had not done so yet on account of the meeting of the Council that day, but he intended to take action at once, so as not to waste any time.

Dr. MACALISTER moved, Dr. MCVAIL seconded, and it was agreed that the report be received and entered on the minutes.

Dr. MACALISTER then moved that the steps taken by the President, as set forth in the report, be approved by the Council, and that he be requested to continue his efforts with a view to procuring the enactment of the amended Bill if possible.

Dr. GLOVER seconded, and the resolution was carried.

RESTORATION OF NAME.

[The Council then proceeded to discuss *in camerâ* a report from the Executive Committee in regard to the restoration of names to the *Medical Register*.]

On readmission the CHAIRMAN announced that the Council had resolved to restore the name of Mr. Samuel Frederick Murphy to the *Medical Register*.

ADJOURNMENT.

In accordance with a resolution come to at an earlier portion of the proceedings the Council adjourned at 4 o'clock for the purpose of attending various Committees.

Wednesday, May 23rd.

Sir WILLIAM TURNER, President, in the Chair.

THE minutes of the previous proceedings were confirmed.

The PRESIDENT, in the name of the Council, congratulated Dr. Hector Cameron on receiving the honour of knighthood, and Sir HECTOR CAMERON expressed his thanks to the Council.

The Council then resumed (*in camerâ*) the consideration of the report from the Executive Committee in regard to the restoration of names to the *Medical Register*.

REPORT OF MIDWIVES BILL COMMITTEE.

Dr. GLOVER moved, Mr. BRYANT seconded, and it was agreed:

That the Interim Report of the Midwives Bill Committee be received and entered on the minutes.

Interim Report by the Midwives Bill Committee.

"At their meeting on February 26th, 1900, the Executive Committee had their attention called to copies, sent by Mr. Humphreys, Secretary of the Midwives Bill Committee, of an amended Midwives Bill which was being promoted by that Committee, and as the consideration of this Bill by Parliament was then impending, and it appeared that some action should be taken earlier than the Midwives Bill Committee of the Council could be called together, the following resolution was adopted:

Resolved: That as the Midwives Bill now before Parliament does not make the provision as advised by the General Medical Council (see Report in Minutes, Vol. XXXVI, page 501) for requiring the licensed midwife to apply for qualified medical assistance in every case attended by a midwife which presents symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn child, the Executive Committee would again represent to the Lord President that in its opinion such a provision is one of imperative necessity for the safety of lying-in women, and they would urge that the Bill should include such a provision.

"This resolution was forwtarded to the Government, and the views of the Committee were further explained by the President, who called in person at the Privy Council Office. The following answer to this communication was received on March 6th:

Privy Council Office,
London, S.W.
March 5th, 1900.

Sir,—I have submitted to the Lord President of the Council your letter of the 1st inst., with reference to the omission from the Midwives Bill, now before Parliament, of a provision requiring a licensed midwife to apply for qualified medical assistance in certain cases; and I am to inform you that, in His Grace's opinion, the best means of providing for the object desired would be by a rule, which must be approved by the General Medical Council under Clause 4, I (*d*) of the Bill.

I am, Sir,
Your obedient servant,
A. W. FITZROY.

Sir Wiliam Turner, M.B., etc.,
President of the General Medical Council.

"The reference of the question in the House of Commons to the Grand Committee on Law, etc., afforded an opportunity for calling together the Midwives Bill Committee, which met on March 21st, 1900, when this reply of the Privy Council was taken into consideration. Thereupon the Committee passed the following resolutions:

1. That in the opinion of this Committee the important matter of a midwife being compelled to seek the assistance of a registered medical practitioner in all cases of difficulty, abnormality, or of disease on the part of the mother or the newborn child, cannot with safety to the public be left to be regulated by a rule of the Central Midwives Board, and that therefore it is essential that a special clause should be inserted in the Bill dealing with the matter.

2. That the following amendments be made in the Bill as at present drafted:

(1) That Section II, Subsection (v) be arranged so as to read as follows:
"The certificate under this Act shall not confer upon any woman any right to attend cases of abnormal labour, or of disease of or danger to the mother or the child, nor any right or title to be registered under the Medical Acts, or to assume any name, title, or designation implying that she is by law recognised as a medical practitioner, or that she is qualified to grant any medical certificate, or any certificate of death or of stillbirth."

(2) That Section III be amended so as to provide that no woman shall obtain certification under the Act unless she produces to the Central Midwives Board evidence of good character satisfactory to the Board.

(3) That in Clause IV, I, after Subsection (*d*), the following new subsection be inserted:
(*d*[1]) "Requiring midwives to procure the attendance of a legally qualified medical practitioner in cases of abnormal labour, or of disease of or danger to the mother or the child."

"These resolutions the Registrar was directed to forward to the Government, and to state that the Midwives Bill Committee desired to press on the Lord President the importance of the amendments they had drafted, and trusted that his assistance would be given in bringing them before the Grand Committee on Law, and in procuring their adoption. At the same time it was intimated that members would be pleased to attend the Lord President in person should he desire further explanations. On Monday, March 26th, Dr. MacAlister, Mr. Horsley, and Dr. Glover, on behalf of the Committee, had an interview with the Solicitor-General in the House of Commons, when they represented the importance of securing—

(*a*) An amendment of subsection (5) of Section II, making it more clear that a midwife is not authorised or entitled to attend cases of abnormal labour.

(*b*) That by a clause in the Bill the midwife, in cases of abnormality, danger, or disease affecting mother or child, shall apply for the attendance of a registered medical practitioner.

(*c*) That under Section III evidence of good character shall be required from all applicants for licence as midwives, whether they already hold certain specified certificates or not.

"The Solicitor-General discussed these points at length with the deputation, and promised to give them consideration. On March 27th, 1900, the following further communication was received from the Privy Council Office:

Privy Council Office,
London, S.W.,
March 26th, 1900.

Sir,—I am directed by the Lord President of the Council to acknowledge the receipt of your letter of the 22nd instant, on the subject of the Midwives Bill, now before Parliament, and to state, for the information of the General Medical Council, that His Grace will give his best consideration to the suggested amendments before the Bill reaches the House of Lords; but, in regard to the last of these, he sees no reason, as at present advised, to depart from the opinion already expressed, that the proper way of giving effect to the views of the General Medical Council is by a rule under Clause 4 (1) (*d*). Indeed the Lord President believes that any other course would be not only unnecessary but inconvenient, and, in support of this view, His Grace instructs me to point out that the terms of Clauses 2 (5) and 4 (1) (*d*) imply the necessity for the observance of some such regulation; and that, as no rules can be made for the purpose of bringing the Bill into operation without the approval of the General Medical Council, they will be in a position to obtain the adoption of any reasonable rules that may, in their judgment, be sufficient for the purpose.

I am, Sir,
Your obedient servant,
A. W. FITZROY.

The Registrar of the General Medical Council.

"For the consideration of this communication, and of the Bill as it had emerged from the Grand Committee, the Midwives Bill Committee again met on April 28th, and after giving careful attention to the subject, resolved:

That in view of the communication from the Lord President of the Council, and of the amended Clause 14 (1) by which the Lord President was empowered to determine questions on which the Midwives Board and the General Medical Council might not be in agreement, the adoption of Amendment 1 of March 21st as a clause in the Bill should not be pressed.

"Mr. Horsley desired that his dissent should be recorded.

"As a necessary consequence the proposed amendment of March 21st, 2 (3) (*d*[1]), was also not pressed, but the Committee were of opinion that the amendment set forth 2 (1)—which recommended the rearrangement of Section II, Subsection 5—and that in 2 (2)—which provides for the production of evidence of good character—should still be pressed as amendments of importance that ought to be adopted. The Committee were further of opinion that the definition clause (18) of the Bill should be amended by the substitution of the following:

Midwife means a woman certified under this Act, who undertakes for gain to attend women during the lying-in period.

"At the request of the Committee the President undertook to bring these resolutions before the notice of the Lord President, and the members of the deputation who had previously interviewed the Solicitor-General undertook to see him again. The President also acceded to the request of the Committee to undertake the duty of Chairman so far as it might be possible for him to do so."

Dr. GLOVER then moved that the proceedings of the Committee as recorded in the report be approved by the Council.

Mr. BRYANT seconded.

Dr. GLOVER said that the attention of the Committee had

been chiefly confined to seeing that the points which were considered by the Council as important were duly secured in the Bill.

Dr. McVAIL asked if the Business Committee had arranged that the Council should consider this Bill, or was the discussion on the report to be the only consideration that the Bill was to get from the Council?

The PRESIDENT stated that the position, as he understood it, was that the Council appointed some months ago a Committee to watch legislation, and that Committee had been doing so very carefully. It had had two meetings, and had had communications both with official members of Parliament and the Privy Council, and now reported to the Council what it had done.

Dr. McVAIL asked whether, supposing they approved the report, it was open to any member of the Council to have the Bill considered.

The PRESIDENT said that the question of the Midwives Bill was before the Council. If an amendment was brought forward which was relevant, he had no doubt the Council would agree to consider it.

Dr. McVAIL thought that under the circumstances it would be much better if the Council went into Committee on the Bill, and then Dr. Glover could move a resolution.

The PRESIDENT ruled that Dr. Glover was in possession of the Council, but that if he chose to move that the Council went into Committee for the consideration of the report, it was in his power to do so.

Dr. GLOVER remarked that Dr. McVail would have an opportunity of bringing forward his views later on. The view the Council took when the Bill was fully discussed was formulated in April, 1898, and the Council had then agreed on ten points which it was considered essential to embody in the Bill. It had now to be considered how far the Bill as it stood fulfilled the tests. Unless certain things were secured they had no business to give their sanction to the Bill, and if at any late stage in the House of Commons any essential points which the Council had insisted on were tampered with or were endangered, he held that the report would go, and the support of the Government would follow it. There were several things which were most important: One was that women should be protected from ignorant and unskilful midwives. Another was that the condition under which licences were granted should include the production of satisfactory evidence as to character, and of training and experience in the conduct of natural labour. There was another point which raised a controversial element, and that was that the regulations under which licensed midwives would be required to practise should include provisions securing that they should immediately seek qualified medical assistance in every case which presented symptoms of difficulty, abnormality, danger, or disease on the part of the mother or of the newborn infant. The question was how far the Bill met these points. He confessed that he felt strongly on this point, and for a time he was not satisfied with the Bill because it did not give the necessary security. Mr. Horsley was still not satisfied on this point. He himself, however, was now satisfied that the Bill did give sufficient security. The letters which appeared in the report from the Lord President with regard to this particular question showed that he had given every consideration to the strong feeling of the Council in this matter. No one could deny that those letters contained very important matter. The second letter showed that the Lord President took precisely the same view as the Council as to the importance of limiting the attendance on labour, and as to the importance of taking precautions to secure the calling in of a medical practitioner. He (Dr. Glover) thought, therefore, that the Council had every right to feel satisfied that there was every power in the General Medical Council to withdraw approval of the rules if they did not include these regulations, with the further knowledge that if there was any doubt about the rules or any conflict between the Midwives Board and the General Medical Council as to the insertion of them, they had the judgment of the Lord President in favour of their view. He therefore thought they were secure, and that the Midwives Committee, with the exception of Mr. Horsley, were right in withdrawing their opposition. He had every reason also to believe that the other points insisted upon by the Council and pressed by the Midwives Committee would have the earnest consideration of the Lord President. He considered that the definition clause in the report was better than that in the Bill, which he thought was a most mysterious, misleading, and unintelligible definition. He thought, therefore, the Committee might ask the Council to accept the report.

Mr. VICTOR HORSLEY was opposed to the adoption of the report, and would justify his dissentient vote by reminding the Council that in April, 1898, they adopted certain penal conditions which they considered should be embodied in the Bill. The principle was that, in a difficult or abnormal labour, the midwife should be compelled by the statute to send for duly qualified medical assistance. That condition had in the course of the negotiations been whittled down, and the Midwives Committee, which had to watch legislation, had become the unfortunate instrument in the whittling-down process. Since the Council's last meeting the Committee had written to the Privy Council with reference to the point with the result that they were informed by the Lord President that the Council could in effect compel the Midwives Board to prepare a rule embodying the principle for which they had consistently fought. That was true. But there was nothing which showed that the General Medical Council could insist on the Midwives Board carrying out the rule. He thought that, unless the Council insisted that this principle should be embodied in the text of the Act, there was no guarantee that, say, ten, fifteen, or twenty years hence, it would be observed and carried out. He then referred to the various objections which had been urged against the adoption of this principle and stated that in his opinion the position taken up in 1898 was the correct one and he hoped the Council would not go back on it. It had been pointed out that the alteration of the definition of the word "midwife" would give a statutory position to the midwife as an independent practitioner in midwifery. It had been asserted by the promoters of the Bill that the alteration was made in order that there should be no confusion with the functions of the so-called monthly nurse; but there was no such confusion, and he would like the Lord President's attention called to the fact that this new definition was an absolute contradiction in terms. The fact was the Council was too easy-going with regard to this matter. It was all very well to say that its conclusions received the earnest attention of the Government, but the officials of the Government did not receive the suggestions with that cordiality which he thought the Council was entitled to expect. Earnest consideration was one thing, acceptance was another.

The PRESIDENT asked Mr. Victor Horsley to put his objections in the form of an amendment.

Dr. MACALISTER (as a member of the Midwives Committee) stated that he yielded to no one in his opinion as to the importance of the points which had been submitted to them by Dr. Glover. He, like Mr. Horsley, had thought that it would have been desirable to have got a clause inserted in the Bill as to the calling in of a medical practitioner in the case of abnormal labour; but as a matter of drafting they were assured that it was inconvenient, undesirable, and unnecessary, and that it would be more conveniently and more effectively introduced in the shape of a rule which the Council would have to sanction. The Lord President of the Privy Council first pointed out the difficulty of embodying it in the statute, and consequently the Grand Committee on Law by a new clause—namely, Clause 14—made the Lord President of the Council the arbitrator in any dispute between the General Medical Council and the Midwives Board; and the Lord President of the Privy Council had already beforehand announced to them that if they insisted upon the effective carrying out of this particular rule, he was in favour of giving his decision on their side. Therefore he thought that Clause 14 answered Mr. Horsley's objections entirely. He felt under those circumstances that it would have been pedantic to insist further against the opinion of the Lord President himself, because all they wanted to meet their requirements was a rule which could be changed from time to time rather than that the principle should be crystallised in the form of an Act which could not hereafter be changed. He found that it was a good rule, in going to Parliament for legislation, to get Parliament to give some responsible body a power to enforce a principle rather than lay down, in so many words, a particular law; because

if Parliament gave a particular body power to improve, strengthen, and alter from time to time existing arrangements, it was much better than having a particular enactment.

Sir CHRISTOPHER NIXON, as the remaining member of the Midwives Bill Committee, said that Dr. MacAlister expressed the same view which he entertained as to Mr. Horsley's objection to the draft report. They were all as anxious as Mr. Horsley was to get this put in a very specific way in the Bill, but it was distinctly pointed out to them by the Lord President of the Council that it was an inconvenient thing to do, and it was not a practical way of dealing with the matter; and that they were only likely to set up the backs of the Government against them in the matter. After careful consideration of the subject, it had seemed to them that they would be fighting about a thing that was not really worth fighting about, because the General Medical Council had a power of directing the Central Midwives Board to frame rules, and one of those rules was a rule regulating, supervising, and restricting, within due limits, the practice of midwifery. Was it possible to conceive any rule made in accordance with that regulation which would not touch upon the attendance of these women in abnormal labours in which they would be compelled to seek the service of a registered practitioner? It therefore appeared to him that the object which they desired was fully secured, namely, the attendance of a medical practitioner in that class of case.

The PRESIDENT read Mr. Victor Horsley's amendment to the motion for the adoption of the report, as follows:

To add to Dr. Glover's motion the following words: "with the exception of the conclusion of the Committee on April 28th, namely, that the first resolution of March 21st should not be pressed upon the Government."

The practical working of this amendment would be that the Council should continue to press that resolution upon the Government.

Dr. HERON WATSON wished to know whether it was not rather a rider to the resolution than an amendment.

The PRESIDENT was of opinion that, inasmuch as it excepted a certain part of the report from their approval, it was an amendment to the motion.

Mr. GEORGE BROWN, in seconding the amendment, said he was afraid that if the Bill did not enact that there should be such a regulation as that decided upon on March 21st last year, it would be contended that the Midwives Board had no power to put forward such regulations. Mr. Johnstone, M.P., who was one of the sponsors to the Bill, had pointed out that it was one thing to frame regulations to compel a midwife to call in medical aid in case of abnormality, but it was another thing to impose penalties upon her if she did not. It was all very well to say that the midwife was to send for medical aid; but how was she to send for it when she had the patient under her care?

Dr. ATTHILL thought it would be dangerous to push forward the resolution, which originally he had supported strongly. He did not at all like the Bill, but he thought it the best Bill they could pass, and probably the least injurious to the medical profession.

Dr. MCVAIL thought the difference between the motion and the amendment was very great. The only disqualification of midwives in the Bill was that they were not to attend cases of abnormal labour, yet it was not provided what they were to do when the case became abnormal. He did not think the needs of the case would be met even by Mr. Horsley's amendment; but as between that and Dr. Glover's resolution he thought the Council should adopt the former.

The PRESIDENT entirely agreed as to the great importance of the subject, but Parliament could not be expected to go into such questions as the definition of natural labour and abnormal labour; but it delegated certain duties to the Central Midwives Board, which, acting in conjunction with the General Medical Council, should lay down certain rules to regulate and restrict the practice of midwives. Were they to say the Lord President was not competent to give an opinion as to what the real meaning of this Bill was, and how they were to interpret the signification of these particular subclauses to which he had called attention? It seemed to him that the desired safeguard was in the Bill, and that more need not be asked for. He agreed with the majority of the Midwives Bill Committee that it was not necessary to press this resolution which had been come to at an earlier meeting; and, having that feeling, he intended to express his opinion by voting against the amendment.

The amendment was then put, when 5 voted for, 21 against, and one did not vote, and it was declared lost. At the request of Mr. VICTOR HORSLEY the names were taken down. The resolution was then carried as follows:

That the proceedings of the Midwives Bill Committee, as recorded in the report, be approved by the Council.

Mr. GEORGE BROWN obtained leave to move that:

The Council represent to the Lord President of the Privy Council that Clause 4, Subclause 1, relating to the constitution of the Central Midwives Board should be altered so as to read as follows: "Five registered medical practitioners, two to be appointed by the Royal College of Physicians of London, two by the Royal College of Surgeons of England, and one by the Society of Apothecaries of London."

By the clause as it stood in the Bill the Midwives Board of seven persons might contain only four registered practitioners, and the Incorporated Midwives Institute was simply a club.

Mr. VICTOR HORSLEY seconded the motion. There were a number of points in the Bill which ought not to be passed by, but the Council had passed by them on previous occasions, and appeared now prepared to take no notice of them.

Dr. HERON WATSON moved the previous question.

Dr. ATTHILL seconded, because he thought the debate was useless.

The previous question was then put and declared lost.

Dr. MACALISTER reminded the Council that on June 15th, 1899, this matter was before the Council on a report of the Midwives Bill as it then stood. That report contained a recommendation as to the constitution of the Midwives Board, which was carried by a majority of 1 in Committee. When the matter came before the Council, the late Sir Richard Thorne, in a very able speech, pointed out that it would be a mistake to take up a position hostile to the Midwives Institute, as its labours deserved recognition. He (Dr. MacAlister) then moved an amendment that that part of the report should be omitted, which was carried, and the report as amended was sent to the Privy Council as an answer to its request. It would be extremely unwise for the Council to turn so completely upon itself as to pass this motion.

Sir CHRISTOPHER NIXON wished to know if when the Council adopted the interim report of the Midwives Bill Committee they did not adopt the Bill which was now before Parliament.

The PRESIDENT said what the Council did was to adopt a series of resolutions which were forwarded both to the Lord President and also to the persons concerned in framing the Bill, and the Lord President asked the framers of the Midwives Bill to bring their Bill into harmony with those resolutions. The question was how far they had done so. He believed they had done so to a large extent, but he could not say whether they had done so entirely. In his opinion, therefore, the Council was committed to those parts of the Bill which did embody the resolutions which were adopted by the Council.

The motion was then put, when 4 voted for, 18 against, and 5 were absent.

At the request of Mr. BROWN the names were taken down.

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, it was resolved:

That the President be requested to transmit to the President of the Privy Council a copy of the report and to inform him that the Council has approved the steps taken by its Committee.

At the request of Mr. BROWN the names were taken down, when it appeared that 24 voted for and 3 against.

PERSONATION.

Mr. VICTOR HORSLEY moved:

That counsel's opinion be taken on the possibility of preventing, either by legal action [under the existing law] or, if necessary, by amendment of the Medical and Dentists Acts, fraudulent personation of registered medical and dental practitioners.

The Council had forwarded two cases of fraudulent personation to the Treasury with the suggestion that the Director of Public Prosecutions should prosecute the persons. The Director of Public Prosecutions had written fully to the Penal Cases Committee stating that, in his opinion, persona

tion of a registered practitioner was not a criminal offence. He suggested that a person committing a fraud of that kind should be attacked indirectly, and he informed the Penal Cases Committee that such was not his province. They had no precise legal opinion on personation, and he asked that counsel's opinion should be taken on the point. It would be observed that he had framed his motion first with regard to the existing law; and, secondly, if counsel thought that was inadequate, how an amendment of the Act could best be obtained.

The PRESIDENT suggested that it would be better to insert after "legal action" the words "under the existing law," and Mr. VICTOR HORSLEY consented.

Mr. TOMES seconded the motion, which was carried.

Mr. VICTOR HORSLEY asked as a matter of business, as they had no solicitor, what solicitor would draft the questions?

The PRESIDENT replied that Mr. Farrer was acting until the end of the present meeting, in accordance with a suggestion by Mr. Victor Horsley.

It was arranged that Mr. Farrer should be requested to prepare a case and submit it before it went to counsel.

The Council went into Committee to consider the report by the Committee on the Prevention of Personation, adjourned from December 4th, 1899.

Mr. VICTOR HORSLEY, as he was Chairman of the Committee, said that the report rested on the following considerations: first, that the existing method of registration included no real means of identification; and, secondly, that even the means of identification of a person by his diplomas was of no value, because 90 per cent. of the registrations were effected from the lists of candidates furnished by the examining bodies. The Committee advised the Council to institute a regulation whereby an identification should be procured by means of handwriting, a method which had already been resorted to since the drafting of the report by the English Branch Council and by the Registrar himself. That could be done with a very slight alteration of existing application forms for registration by the person entering for himself in his own handwriting his status. The next point was as to restoration. No official regulation instructing the Registrar how to administer Section XIV of the Medical Act 1858 had been made. The Committee proposed that the restoration to the *Register* should be brought back to the position laid down in Section XIV of the Medical Act of 1858, in other words, that the procedure should follow the terms of the Act. The Committee recommended a new Standing Order, and a form of statutory declaration to be furnished by the person requesting restoration. The Registrar had informed the Committee that restoration had become almost an unavoidable formality on receipt of an application. The Committee considered that that imposed on the Registrar a responsibility which was not contemplated by the Act. The method recommended would involve a little delay in re-registration, but the Committee submitted that the Council was bound by the terms of the Act. Sir Richard Thorne had suggested that this hardship could be to a certain degree removed if the Council would direct, when the officials were about to erase a practitioner's name from the *Register* in consequence of the letter of inquiry not coming back, that the Registrar should address a registered letter containing a stamped envelope to a registered practitioner resident in the same district to inquire whether the practitioner from whom no reply has been received was or was not resident in the neighbourhood. The Committee thought that suggestion was a practical one, and would remove to some extent any hardship. The last point of importance was the existence of certificates of registration. The Committee felt that the existence of those certificates constituted the greatest danger to the *Register*: they were documents which might be taken by persons intending to impersonate a practitioner, and the Council had before it the fact that the person who was now serving a term of penal servitude did so obtain the certificate of a practitioner, and succeeded in defrauding a large number of practitioners by representing himself to be a qualified assistant. These certificates seemed to have been a kind of growth in the office as a matter of convenience and had never been actually authorised by the Council. The Committee found that in 1863 the then Registrar of the Irish Branch Council had given such certificates of registration and the Irish Branch Council ordered that no certificates of registration should be issued to any person whose name and full registrable qualifications had been printed in the *Medical Register*. The Committee thought that was a logical position the Council should adopt, but that if the Council came to the conclusion to support the original action of the Irish Branch Council and abolished the bad certificates of registration, certain hardships would be inflicted on persons who were registered but whose names did not appear in the bound volume. It had been the habit of the office to furnish them with a certificate of registration, but in view of the danger of that certificate the Committee sought for some other means, and suggested to the Council that the hardship would be entirely removed if a letter were addressed by the Registrar of the Council in the form given in the report addressed to a body, for example, seeking to appoint a medical man, but not knowing whether he had been registered or not, stating as follows:—

Dear Sir,—I hereby certify that the following is a true and correct copy of the entry in the *Medical Register* of the current date, and this certificate is only valid until the next annual issue of the *Medical* or *Dental Register*.

That document, if it got into the hands of any unscrupulous person, could only be used for at most a few months. If the Council accepted the alterations in the procedure for registration which the Committee suggested it was obvious there must be some general instruction to the Registrar, and therefore the Committee concluded with a recommendation that a complete set of resolutions governing the registration be drafted by the Council.

The PRESIDENT said that when he saw this question of registration, both as regarded students and also as regarded practitioners, was under consideration, as the matter was very largely a technical one, he asked the General Registrar and the Scotch and Irish Registrars to write memoranda on the subject for the use of the Committee.

Mr. VICTOR HORSLEY stated that the recommendations of the Registrars were received and considered by the Committee.

The PRESIDENT ventured to say that although the Committee might have considered them it had not altogether adopted certain of the points that were especially brought forward.

Mr. VICTOR HORSLEY thought the criticisms of the Registrars were chiefly destructive criticisms as to the handwriting. He did not recollect that there was any specific recommendation that the Committee did not adopt.

The PRESIDENT remarked that the question of identification by handwriting was a very serious matter.

Mr. VICTOR HORSLEY said that the Registrars' observations on those points were really destructive criticism, and those were duly considered by the Committee.

Mr. BROWN submitted that the criticisms of the Registrars ought to be before them if they were to be considered by the full Committee.

The PRESIDENT said his feeling was that he did not want to go behind the Committee and circulate the documents among members of the Council, and therefore he limited the circulation to members of the Committee.

Mr. VICTOR HORSLEY thought that the members of the Council ought to see them.

The PRESIDENT then put it to the Council as to whether they wished to be furnished with the prints. This was agreed to, and the discussion was adjourned in order that the printed documents might be furnished to the members of the Council.

The Council ceased to sit in Committee.

APPOINTMENT OF SOLICITOR.

The PRESIDENT said he had been asked to move from the chair:

That it be remitted to the Executive Committee to consider the question of the appointment of a solicitor to the Council in succession to Mr. F. W. Farrer, and to report to the Council during its present session.

The Penal Clauses Committee had taken into consideration at the suggestion of Mr. Horsley the position of the solicitor of the Council, especially in connection with the conduct of the penal cases, and had agreed unanimously on certain recommendations, which would come before the Council if the Council agreed to remit this question to the Executive Committee, which would of course have to take into consideration

the suggestions made by the Penal Clauses Committee. The one point remitted to the Executive Committee was the personality of the solicitor. The Executive Committee would have to make some recommendation to the Council. He mentioned this, because he wished the Council, if they approved of the reference to the Executive Committee, to bear in mind it was quite possible that the Executive Committee might make a recommendation on the question of who the future solicitor should be. It was for the Council to say how far they thought the Executive Committee should make a recommendation on the question of who the future solicitor was to be.

Mr. VICTOR HORSLEY inquired whether it would be open for any member of the Council to nominate to the Executive Committee. If the Executive Committee were going to consider the person to be selected, it would be proper that they should have more than one name before them.

The PRESIDENT stated that it would be open to members of the Council to send in a name to the President. He himself, living out of London, naturally felt that he had not that knowledge of London solicitors which those members who lived in London had, and of course the solicitor must be resident in London, and a London solicitor. The Executive Committee would be glad to have names submitted for consideration through him.

Mr. GEORGE BROWN suggested that there should be two solicitors, one appointed for the penal cases.

The PRESIDENT stated that this had been carefully considered by the Penal Cases Committee, and would be before the Executive Committee.

The Council approved of this course being taken.

ELECTION OF REPRESENTATIVES OF LICENSING BODIES.

Dr. MACALISTER brought up a "communication from the County of Durham Medical Union in regard to the method of appointment of the representatives of the licensing bodies on the General Medical Council." He then referred to the resolutions which had been received, and he begged to move that the recommendation of the Executive Committee with regard to that communication should be adopted.

Mr. BRYANT seconded.

Mr. VICTOR HORSLEY proposed as an amendment that the last part of the recommendation of the Executive Committee should be left out.

Dr. MACALISTER having stated, in answer to the PERSIDENT, that he would accept Mr. Horsley's amendment, the resolution was agreed to.

That the Registrar be instructed to inform the Secretaries of the County of Durham Medical Union that the resolution transmitted in their letter of March 14th, 1900, has been communicated to the Council.

COMMUNICATIONS FROM THE APOTHECARIES' SOCIETY.

Dr. MACALISTER brought up a communication from the Apothecaries' Society of London, acknowledging a resolution of the General Medical Council as to combination with the Royal College of Surgeons, and moved that it be entered on the minutes.

Mr. BRYANT seconded the resolution, which was carried.

Sir HUGH BEEVOR moved, and Dr. BRUCE seconded, and it was carried:

That Mr. A. Marmaduke Sheild, F.R.C.S., be appointed an Assistant Examiner in Surgery to the Society of Apothecaries of London for a period of four years, *vice* Mr. Bilton Pollard, who retires by rotation.

The Council then adjourned.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE fifth triennial session of the Congress of American Physicians and Surgeons was held at Washington on the first three days of May. Throughout the session the mornings were devoted to the work of the various component societies and associations, which include the Association of American Physicians, American Surgical Association, American Gynecological Society, American Pediatric Society, American Association of Genito-Urinary Surgeons, American Climatological Association, American Laryngological Association, and the American Neurological Association. In the afternoons the general meetings of the Congress were held. We are indebted to the courtesy of Dr. George M. Gould, editor of the *Philadelphia Medical Journal* for advanced proofs of many of the communications, abstracts of some of which are here given.

BACTERIOLOGY IN HEALTH AND DISEASE.

The subject on the programme of the first general meeting was Bacteriology in Health and Disease. The discussion was opened by Professor THEOBALD SMITH (Boston), who dealt with the adaptation of pathogenic bacteria to different species of animals. The infectious diseases which man shared with animal life or in which the latter entered as a necessary factor were divisible into groups as follows:

1. Diseases common to man and certain animals, and presumably transmissible from animals to man, and *vice versâ*. (Bubonic plague, tuberculosis.)
2. Diseases common to man and animals, but not known to be transmitted. (Actinomycosis, tetanus.)
3. Diseases transmitted from animals to man, but not as a rule communicated from man to man, owing to interfering conditions. (Anthrax, glanders, rabies, vaccinia, foot-and-mouth disease, meat poisoning, psittacosis, possibly also infections due to pus bacteria.)
4. Certain specific symbiotic relations requiring two hosts for the complete life cycle of the micro-organisms. (Malaria, trichinosis, tapeworm infection.)

The range of infective power seemed, to a certain extent, to coincide with the readiness with which the bacteria could be artificially cultivated on various substrata, or, in other words, with their degree of saprophytism. Two main facts stood out among the phenomena of bacterial adaptation: (1) The direct passage of infectious agents from animals to man and from one animal species to another; and (2) the adaptation of the same stock to different species leading to certain more or less profound modifications of this stock into recognisable varieties or races. An important problem arising from the second proposition was the extent to which such races were capable of vicarious infection of different hosts. A problem that presented itself to human medicine was, How far did Nature utilise animals as a workshop for preparing bacteria to act in a pathogenic *rôle* upon the human race? Another question was the fluctuation in the virulence of pathogenic organisms and the bearing of this upon the appearance of infectious diseases in epidemic form. The commonly accepted view of the gradual self-limitation of epidemic diseases was the exhaustion of susceptible material. The recrudescence was similarly ascribed to the reappearance of a young susceptible generation. But this explanation, though it might be true for many diseases, might not be true for all. The passage through a series of individuals of the same species might lead to the attenuation and gradual extinction of the virus. If the pathogenic bacteria had but one habitat—the one in which they produced a specific infectious disease—the probabilities were in favour of a gradual mitigation of the type of disease. A continuation of this process might eventually make the microbe of secondary importance, which then acted only when other agencies prepared the way, as was probably the case with croupous pneumonia in man and various types of pneumonia in animals; or else the disease became greatly prolonged, as in leprosy, syphilis, and tuberculosis, which were in reality mild types of parasitism when compared with the virulence of cholera or the plague. On the other hand, the bacteria might have another habitat in which they recruited their virulence. In this case the diseases might be expected to appear at times in epidemic form, when transmission from individual to individual was possible. He was inclined to think that the great specific energy of many disease germs was acquired in earlier geological ages, possibly in animals of very different type from those now living. But it was not improbable that the process of making pathogenic bacteria was going on now in the animal world, to be noticed only when these bacteria had been transported by some accident from their unseen habitat to species which happened to be susceptible. It was difficult to explain the incidence of certain animal diseases, especially the explosive septicæmia, in any other way. The sum total of bacteriological knowledge pointed towards certain still unknown conditions which favoured a restoration or a maintenance of virulence, and which differed from those which were currently reported as in action.

Dr. S. J. MELTZER (New York) discussed the physiological methods and means employed by the animal organism in its continued struggle against bacteria for maintenance of life and health. In the struggle against bacteria the defence of the body was not carried on exclusively or chiefly by a single

element. The following was a sketch of the plan of defence throughout the body: Some of the entrances into the body cavities were provided with sphincters, like the orbicularis oris and orbicularis palpebrarum, which hindered to a degree the free ingress of the bacteria thronging the corresponding cavities. From the nasal cavities a part of the invaders were thrown out by the ciliated epithelia; into the mouth the main invasion occurred during eating and drinking, when a good part of the invading organisms were carried down with each deglutition into the stomach, where they were subjected to the prolonged destructive effects of the gastric juice. The tears, mucus, and saliva also did some destructive work in their respective cavities by means of their bactericidal properties. The legions of germs in the intestinal canal were probably not very seriously affected by the loss of 12 to 13 milliards a day by defæcation. It was, however, a more important fact that in this canal the pathogenic bacteria were decimated by the overgrowth of the less dangerous group of the colon bacilli. Of the fate of the toxins—which presumably were abundantly present in the intestinal canal—very little was as yet known. It might safely be assumed that the removal of the bacteria with the secretions was one of the many factors co-operating in the work of the defence. Moreover, there was a general consensus of opinion that the toxins were freely excreted with the bile, urine, and sweat. The significance of the latter, a constant companion of all crises and reactions, was perhaps not fully understood. He mentioned two new factors, which—in his estimation—were capable of assisting in the work of the destruction of bacteria within the body. One of these was the process of plasmolysis. When cells having membranes was placed in a salt solution more concentrated than that to which they were accustomed, by the osmotic interchange of salt and water the latter left the cells, and the protoplasm receded from the membrane. The same was true of bacteria. Even in the same class of animals the body fluids of different species—or even subspecies—had a different osmotic pressure, and what was isotonic for this species might be hypotonic for one and hypertonic for another species. As there was no good reason for the assumption that the blood and other fluids of the animal body were isotonic with the protoplasm of the bacterial cell, might it not be assumed that the fluids were hypertonic, and therefore plasmolytic, for bacteria which got into them? And as the organisms remained in the hypertonic animal fluid for some time, the state of plasmolysis became permanent, and the bacteria succumbed easily either to the effects of the plasmolysis itself, or to some insignificant accidental injury. The second factor which he believed to have a regular place in the lines of the defence, was the vibrating effect of the heart impulse. He had been led to the conclusion that the relations of life were similar to those of temperature. A certain minimum was indispensable to all forms of life, a certain maximum could not be overstepped by anyone, and there was a certain optimum for everyone. Every species of cells had its individual minimum, optimum, and maximum. The suggestion which he wished to make was that the vibrations emanating from the heart-beat of the animal were more than a maximum for all the bacteria invading the interior of the animal body, especially in the injured state into which they were placed by the other influences of the body—for instance, by the plasmolysis. The observations of Adami and others had practically established the fact that the interior of the adult body was regularly invaded by a number of bacteria, which, however, were sooner or later destroyed. What effect did this constant invasion and destruction have on the body? If bacteria were introduced by some artificial method into the interior of an animal this animal was immunised. Why should it be otherwise when bacteria invaded the body by natural ways? He believed that the regular, moderate invasion of the interior of the body by bacteria was a means of immunisation, at least against the evils of an invasion of the same kind of bacteria in numbers larger than usual. The immunisation was of course not strong enough to show the presence of antimicrobic serum within the blood, neither was it equal to meet the emergencies of extraordinary invasions. But it might be due partly to the perpetual immunisation that disease was such a rare exception.

Dr. Harold C. Ernst (Boston) followed with a paper on Flagella and Serum Reactions. Experiments and observations had convinced him that the agglutinative property was in no way connected with the flagella of the bacteria concerned; secondly, that agglutination was not to be accepted as a specific property connected with a condition of immunity; thirdly, that the homologous nature of agglutination could not be considered a positive characteristic; fourthly, that no universally applicable explanation of agglutination had yet been offered. The most rational theory seemed to be that there was an agglutinating agent, perhaps an agglutinin, acting upon an agglutinable substance, the nature of which was not yet determined, and that this reaction occurred not only with bacteria, but with many other elements, casein and precipitates of various kinds.

Dr. Richard C. Cabot (Boston) discussed The Relation of Bacteriology to Medicine in Regard to Etiology, Diagnosis, Symptomatology, Prognosis, and Treatment. Under the last head he classified the curative agents as follows: (*a*) Antitoxic or protective serum, which he placed in the order of their efficiency, as follows:

I. *Markedly curative.*—Antidiphtherial serum. Antispirillum serum (relapsing fever).
II. *Efficient as protective.*—Anticholera serum. Antiplague serum.
III. *Limited utility in selected cases.*—Antitetanus serum. Koch's tuberculin (strictly a toxin, not an antitoxin).
IV.—*Doubtful but hopeful.*—Antityphoid serum. Antidysenteric serum.
V. *Probably inert.*—Antistreptococcus, antipneumococcus, antiamarillic (yellow fever).

(*b*) Under a slightly different heading came the treatment of inoperable cases of malignant disease by the injection of the toxin of erysipelas, which appeared to have a distinct though very limited field of usefulness. He believed that the greatest help was got from bacteriology only when the bacteriological tests were made by the clinician himself, or by someone familiar with the clinical aspects of the case in question; otherwise, the wisdom of the laboratory and the wisdom of the bedside failed to connect with and to reinforce one another.

Next came Dr. Edward R. Baldwin (Saranac Lake) with a paper on Bacterio-Therapeutics, with especial reference to tuberculosis. After enumerating the varieties of tuberculin and similar extracts that had been used, he pointed out that a long list of substances was now known to produce, like tuberculin, local and general reactions in tuberculous subjects, and similar general disturbances with fever in healthy persons when large doses were employed. In general they were digestion products such as albumoses and their ferments; also certain alkaloids such as physostigmin, pilocarpin, atropin; certain acids, as cinnamic, cantharidin, and especially nucleic acids and their combinations as found in bacterial proteids; and finally, abrin, ricin, and similar irritant bodies. Tuberculin and allied irritants caused leucocytosis, or at least stimulated the secretion of ferments by leucocytes and other cells, particularly those which surrounded the bacilli as a wall. This ferment attacked both the injected irritant and the similar poisons that had been slowly accumulating in the tubercles during the life cycle of the bacillus. The general fever reaction now came on because of the toxin set free, altered by or combined with the enzyme. The local and general reactions became less and less as more tubercles were exhausted of toxin, while the dose required to produce them increased because of less toxin in the tubercles, and also because of the now lessened sensitiveness of the whole organism, or toxin immunity. Whether or not tuberculins of any sort should be favoured for limited therapeutic employment in the light of present knowledge he would not presume to decide, but that they could favourably influence a pure, localised pulmonary tuberculosis and lupus in a well-nourished and afebrile patient, seemed to him proved by clinical experience coupled with animal experiments. Obviously their use should be confined to institutions, and the patients observed through a series of years. Serumtherapy was in an experimental stage at present. Thus far no tissue had been found to have special affinity for the bacillus toxin, as in tetanus and diphtheria. It might, however, be expected from what had been learned about the mechanism of the tuberculin reaction that a bacteriolytic property might be obtained in serums or tissue extracts of immunised animals. If present, the practical value of such a serum might be limited by its inability to get at the bacillus in the caseating tubercles, unless, like laparotomy in tuberculous peritonitis, it could cause their complete absorption.

(To be continued).

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, MAY 26TH, 1900.

INCOMPATIBILITY IN PRESCRIBING.

THE decline in the art of prescription writing, now so frequently to be observed in various ranks of the profession, but perhaps especially amongst physicians attached to large hospitals, has often been lamented. The increasing prominence given to the study of pathology and bacteriology and the constant employment in private practice of ready-made preparations of the tablet class have induced a condition of atrophy of disuse which has blighted the capacity of the average physician to evolve and indite a really good prescription free from technical errors.

Dr. Walter G. Smith, Professor of Materia Medica in Trinity College, Dublin, has performed a useful service in again drawing attention to this lamentable state of affairs. He has published a series of essays on *Incompatibility and some of its Lessons*,[1] so replete with information and so thoroughly practical that they should be read not only by every medical practitioner but by every medical student.

Incompatibility may be defined as "any unintentional change which notably interferes with the elegance, usefulness, or safety of a prescription," and it may be physical, chemical, or therapeutical. The golden rule in prescribing is to avoid as far as possible any chemical action amongst the ingredients of a mixture unless such action is deliberately desired. It would not be difficult to find examples of the unintentional infringement of the principle. A physician wrote a prescription for a child containing potassium chlorate, syrup of iodide of iron, simple syrup, spirit of chloroform, and water. The mixture gradually darkened, and in a few hours deposited iodine in abundance. In this condition it was given to the patient, with the result that serious symptoms set in and terminated fatally. It is sometimes forgotten that most alkaloids are practically insoluble in water and that they do not readily form carbonates, so that they should not be prescribed with alkaline carbonates or hydroxides, for example, morphine acetate with sodium bicarbonate, or liquor strychninæ with the aromatic spirit of ammonia. A mixture was once ordered containing potassium bicarbonate, solution of strychnine, and compound infusion of gentian. The bottle was finished up to the last two doses and laid aside for a fortnight. A sediment was then noticed, and after taking the last dose the patient suffered severely from strychnine poisoning. A lady lost her life by taking a mixture of strychnine and potassium bromide. The last dose contained all the strychnine. A patient died not so very long ago as the result of taking a mixture containing liquor arsenicalis and liquor strychninæ, and the physician was indicted for culpable homicide. One of his prescriptions contained liquor arsenicalis, liquor strychninæ, tincture of strophanthus, and tincture of capsicum.

Speaking of the insolubility of alkaloids in water, it is as well to remember that in the case of effervescing medicines the solution of the alkaloid should always be added to the acid bottle. Another point often forgotten is that basic salts, such as bismuth subnitrate, slowly decompose alkaline bicarbonates, especially in a warm room. A chemist dispensed a prescription containing sodium bicarbonate, bismuth subnitrate, aromatic spirit of ammonia, spirit of chloroform, and water. After the bottle had been put aside for an hour it burst. Some combinations are not only chemically incompatible, but form true explosive compounds. When liquid ammonia or compound camphor liniment is added to tincture of iodine the colour of the iodine is discharged and a black precipitate forms—the so-called iodide of nitrogen. This is a most unstable substance, and when dry is highly explosive. Chromic acid, if concentrated, will set fire to glycerine or alcohol. A lotion was ordered containing half a drachm of chromic acid in four ounces of glycerine. The dispenser dissolved the chromic acid in a little water, added the glycerine, and shook up the mixture, with the result that the flask was shattered by a violent explosion. Accidents have frequently occurred in dispensing potassium permanganate, and an unfortunate pharmacist had to dispense a mixture of ten parts each of permanganate and alcohol and fifteen parts of distilled water. Scarcely had the bottle been corked when an explosion took place, spurting the boiling liquid into his face. He nearly lost the sight of one eye, and was disabled from work for more than a month.

These are some of the inconveniences which follow the neglect of the study of pharmacy by physicians. Dr. Walter Smith's papers are full of examples of this description, and he has done well in calling attention to them.

[1] *Incompatibility and some of its Lessons.* By Walter G. Smith, M.D., Ex-President, Royal College of Physicians of Ireland; Physician to His Excellency the Lord-Lieutenant; King's Professor of Materia Medica and Pharmacy, School of Physic, T.C.D. London: Cassell and Co., Limited (pp. 36. 1s.).

THE MODERN TREATMENT OF GONORRHŒA.

IN some recent lectures on this subject,[1] Professor Finger, of Vienna, draws attention to the marked change which has taken place in the treatment of gonorrhœa since the introduction of certain preparations the solutions of which are not precipitated by albumen which act purely as disinfectants, and have no irritating or astringent effect on the mucous membrane of the urethra. Not long ago, Professor Finger remarks, it was the rule in Vienna to avoid injections of any kind during the acute stage, whilst at the present time it is the rule in all uncomplicated cases to begin local applications at once. The drugs available for the local treatment of gonorrhœa are divided into three groups: (1) Simple disinfectants,

[1] *Wiener Klinik*, Heft 1, 1900.

protargol and largin; (2) antiseptic astringents, among which are silver nitrate, argentamin, and argonin; (3) simple astringents, including such drugs as zinc sulphate, potassium permanganate, and alum. Of these it might appear at first sight that the second group, being both bactericidal and astringent, ought to satisfy all the requirements necessary for the treatment of gonorrhœa. In practice, however, they have been found to be ineffective in the acute stage. It must be remembered that at this time the gonococci are deep down in the epithelial layer, and even in the subepithelial connective tissue, as well as in the urethral glands and lacunæ, while the preparations of this group merely produce a white albuminous coagulum on the surface of the mucous membrane. Within this coagulum, it is true, epithelium, pus cells, and gonococci are destroyed; but beneath it the proliferation of gonococci goes on as before. Protargol—a chemical compound of silver with a protein substance—is the most suitable drug to begin with, and of this a 0.25 per cent. solution is injected into the urethra with an ordinary syringe holding 12 c.cm. every eight hours, each injection being retained for ten minutes. After five or six minutes Professor Finger finds that the external sphincter relaxes and the fluid reaches the posterior urethra, but when this effect is not desired three separate injections of three or four minutes each may be made instead.

After three or four days of this treatment the discharge and the scalding on passing water have usually diminished to such an extent that the strength of the injection can be increased to 0.5 and afterwards to 1 per cent.; or, what is better, according to Professor Finger, a solution of largin[2] of similar strength may be used in place of protargol. Largin, however, has a slightly alkaline reaction, and its use, unlike that of protargol, is not quite painless. On the other hand, it has more penetrating power, and consequently its destructive action on the gonococci is more energetic. By these means at the end of about a week the acute stage has usually been cut short, so that during the second week it is generally possible to use astringents with advantage as well as the simple disinfectants, the gonococci having by that time become superficial.

But although the unirritating properties of protargol and largin allow of their use in acute gonorrhœa, and although their bactericidal effect suffices to reduce the number of gonococci to a very great extent, still a considerable number of the organisms always remain beyond the reach of these or any other known remedies, and consequently a rapid cure cannot at present be expected, and an ideal remedy for gonorrhœa has yet to be discovered. Still much has been gained, for besides the rapid subsidence of pain and inflammation, it would also appear that extension of the morbid process to the posterior urethra occurs much less frequently under the newer method of treatment. Thus Professor Finger states that when acute gonorrhœa is allowed to run its ordinary course the posterior portion of the urethra becomes affected in from 70 to 80 per cent. of the cases; when protargol is used in about 40 per cent., and when largin is used in only 27 per cent. On the other hand, it is important to note that although the first or acute stage can be shortened, the total duration of an attack of gonorrhœa remains much as it was under the older modes of treatment, for the average duration according to Professor Finger is still five or six weeks, even under careful management. In addition to local measures it must be added that Professor Finger also administers internally sandal oil or a substance prepared from it called gonorrol from the beginning of the disease, wherein he differs widely from Professor Fournier,[3] who is of opinion that balsamics should not be used before the close of the fourth week.

[2] British Medical Journal, March 17th, 1900, p. 622.

THE MIDWIVES BILL AND THE GENERAL MEDICAL COUNCIL.

The report of the Midwives Bill Committee of the General Medical Council led to a short but interesting debate on May 23rd. The Council had originally insisted that the text of the Bill should distinctly place upon the midwife the obligation to send for qualified medical assistance in any case of abnormality. The report of the Committee abandoned this position in consequence of a letter from the Lord President of the Council expressing the opinion that the object in view would be better attained through rules to be drawn up by the Central Midwives Board, which rules would not be valid without the sanction of the Medical Council. It was urged that this suggestion ought to be accepted because the Bill (Clause 2, Subclause 5) would by implication secure the framing of some such rule, inasmuch as the midwife is there declared not to be authorised to attend cases of abnormal labour or of disease of or danger to the mother or the child. Mr. Horsley, who was a member of the Committee, dissented from its report, and divided the Council upon this point, but the report was carried by a large majority.

One effect of this surrender by the Council will be that failure by a midwife to seek qualified medical assistance in cases of difficulty or danger will not be an offence which can be dealt with locally by a court of summary jurisdiction. If a local authority shows a *primâ-facie* case, the decision as to whether an offence has been committed would have to be remitted to the Central Midwives Board, a body which we may assume will sit in London at somewhat long intervals. The Board will have no power to summon witnesses, to administer oaths, nor to inflict any punishment other than the removal of the midwife's name from the Roll. No doubt there would be a certain advantage in having the facts investigated by an expert body rather than by a magistrate, but if the offence occur in a remote district it may be exceedingly difficult to arrive at the full facts, since essential witnesses may refuse to attend, and the Board will have no power to compel them to do so. The cost of such proceedings also must be considerable, and this alone will, it is to be feared, go a long way to make the provision nugatory. Moreover, the probability that there must often be a long delay between the commission of the alleged offence and the inquiry before the Board, and the further fact that the inquiry will not be held in the locality—thus tending to prevent the decision becoming generally known in that locality—must often combine to be the cause of practical injustice in one direction or the other.

The most important recommendation now made by the

[3] Epitome of the British Medical Journal, February 3rd, 1900, par. 97.

Council is with regard to the definition of midwife; the Council objects to the definition as it stands at present in the Bill, on the same grounds as those expressed by the British Medical Association in the memorandum presented to the Solicitor-General, which was published in the BRITISH MEDICAL JOURNAL of May 19th, p. 1237. The definition which the Council proposes is that the term "midwife means a woman certified under this Act who undertakes for gain to attend women during the lying-in period." Why the words "natural labour" have been omitted it is not very easy to see, nor do we think that the definition is thereby improved.

The discussion of points of the Bill not dealt with in the report of the Midwives Bill Committee was not ruled out of order, but some impatience was exhibited, and in the result no practical decisions were arrived at.

THE UNIVERSITY OF LONDON.

WE understand that some delay has been occasioned in giving the Royal Assent to the University of London (Reconstitution) Act, due partly to the removal of the Court to Balmoral, and partly to the presentation of a petition to Her Majesty to withhold such assent. Nevertheless, the various bodies whose duty it will be to appoint representatives in the new Senate have been advised to take the necessary steps towards such elections. It is gratifying to learn that the Inns of Court have at the last moment decided to fall into line, and have agreed to appoint members of the new Senate. The teachers of certain interested colleges have, we understand, agreed upon a list of names which will be put forward for some of the Convocation seats, and the newly-formed University of London Graduates' Association, which has already enrolled more than a thousand members, is preparing to bring out a list of candidates, 16 in number, to solicit the suffrages of Convocation in the faculties of arts, science, law, medicine, and music. It is probable that the old Senate will continue as the executive of the University at South Kensington until the autumn, as it will be almost impossible to bring the new Senate together before the Long Vacation.

ANTISEPTICS AND UNIVERSAL PEACE.

THE resumed discussion of the subject of the wounded in the present war at the meeting of the Royal Medical and Chirurgical Society on Tuesday elicited some interesting opinions and raised questions of wide importance. We may allude to two or three matters of more general interest. First, in regard to the question whether the good results in bullet wounds should be attributed to antiseptics, or, as Mr. Clinton Dent has contended, largely to the special climatic conditions of the country in which most of the fighting has taken place, Sir William Mac Cormac pointed out that the good results which were in a similar degree apparent in the American war in Cuba, where modern methods were employed, could hardly be due to a phenomenally pure atmosphere, because of such there was none—nay, more, epidemic disease was abundantly rife among the combatants, not only typhoid, but also yellow fever and other zymotic diseases. The same argument applies, in perhaps a less degree, to the hygienic conditions of our war in South Africa. A climate which permits typhoid fever, dysentery, and epidemic diarrhœa to attack so large a proportion of a force must be under shrewd suspicion of not having been the main cause why so many of our wounded recovered so quickly and smoothly, particularly in view of the fact that the antiseptic treatment of wounds was in a large measure thoroughly and skilfully carried out. A wide question raised by Sir William Mac Cormac is that of the effect of the comparative slightness of the wounds in modern warfare on the theory of universal peace as propounded recently by M. Bloch. Probably neither the slightness nor the severity of wounds will either accelerate or retard the adoption of general arbitration, any more than the Czar's Rescript will lead to speedy reductions of armaments. The question of war or no war is neither a matter of wounds nor expense; both are mere accidents. If the achievement of science is to be that the bulk of the world's soldiers who are shot shall neither be killed nor permanently crippled, it is not easy to see how this will in any way disturb the principle of the ratio between opposing forces upon which the chances of war so largely depend. Meanwhile, as universal arbitration is at present a counsel of perfection, we would cordially endorse Sir William Mac Cormac's views in regard to Government medical *attachés*.

DR. JACOBI'S JUBILEE.

MORE than four hundred friends, professional associates and admirers of Dr. Abraham Jacobi, of New York, celebrated his 70th birthday by a dinner at Delmonico's on May 5th, given in recognition of his services during a career of almost 50 years as a physician, educator and civic worker. Dr. Joseph D. Bryant, late President of the Academy of Medicine, was in the Chair, and among those present were: Dr. John S. Billings, Dr. William Osler of Johns Hopkins University, Dr. W. H. Thomson, President of the Academy of Medicine, Dr. W. H. Welch of Baltimore, and Professor Chandler of Columbia. Numerous letters and telegrams from well-known scientists and physicians from all parts of the world were read, and an original poem by Dr. S. Weir Mitchell of Philadelphia was recited. Addressing the venerable *Jubilar*, the poet said:—

> No honours hath the State for you whose life
> From youth to age has known one single end.
> Take from our lips two well-won titles now,
> *Magister et Amicus*—Master, Friend.

After painting Dr. Jacobi's climb along the rugged path to the gray summit of attainment, with graceful references to his struggles in the cause of freedom for which he suffered imprisonment, his *vates sacer* went on:

> We gave you here a home; you well have paid
> With many gifts proud freedom's generous hand
> That bade you largely breathe a freer air,
> And made you welcome to a freer land.

A *Festschrift* containing scientific contributions by fifty-three medical men of note, representing two continents and eleven nations, was presented to Dr. Jacobi in honour of the occasion. Some notes of his unusually full life may not be out of place. He was born in Westphalia on May 6th, 1830, and studied in the Universities of Greifswald, Göttingen, and Bonn, taking his degree in the last named. When the revolution of 1848 broke out, although only a boy of 18, he joined the Young German Party and enlisted in the army. At Berlin in 1849 he was arrested, together with Marx, Freiligrath, and Becker. He was tried for treason and imprisoned at Cologne, remaining in durance for eighteen months. When, after much cruel treatment, he was released, he was again tried and acquitted, but immediately afterwards was rearrested and sentenced to six months in Bielfeld Castle for an alleged insult to the Crown. In 1853 Dr. Jacobi left the Fatherland, and proceeded to try his fortune in the New World. He became lecturer in infantile pathology in the New York College of Physicians and Surgeons, and in 1860 was appointed to the Chair of Children's Diseases in the New York Medical College, the first established in America. In 1870 he became Clinical Professor of Diseases of Children in the College of Physicians and Surgeons. In 1898 the University of Michigan bestowed on him the degree of LL.D. He has served in many New York Hospitals, has been an officer in the prominent medical societies, written several well-known works, and has been made Honorary President of the International Medical Congress of 1900 in Paris.

THE EFFECT OF EXPERIMENTAL CEREBRAL ANÆMIA.

AT the meeting of the Royal Society on May 17th a paper was read on cerebral anæmia and the effects that follow ligature of the cerebral arteries, which described observations of Dr. Leonard Hill. He found that when hutch rabbits were fixed in the erect posture convulsions and death from failure of respiration occurred in from ten to twenty minutes. This he attributes to the collection of blood in the abdominal veins permitted by the laxity of the abdominal walls which leads to emptying of the heart and arrest of the blood flow through the brain. That this is the probable explanation was shown by the fact that pressure on the abdomen applied with a bandage or by means of a water bath prevented these symptoms, and also that in wild rabbits and other animals with tense abdominal walls these effects were only produced after the lapse of some hours. In any case when the animals were returned to the horizontal position they speedily recovered, with the exception, perhaps, of a slight degree of paralysis, which eventually disappeared. The author has produced in himself one-sided clonic spasms by compressing the carotid artery of the opposite side, and he states that the only way in which consciousness seemed to him to be affected was indirectly by the stimulation of the sensory nerve endings in the muscles by the contractions produced. After the arterial supply of the brain had been arrested in dogs by ligation of the carotid and vertebral arteries, although some blood still reached it by way of the superior intercostal and anterior spinal arteries, the brain became pallid and the animals demented, anæsthetic, and paralysed. Because the "motor cells" still reacted to electrical stimuli the author argues, but not quite convincingly, that the paralysis is due to a block in the sensory nerve mechanisms in the brain. It is a fact that very profound blocks in the cerebral sensory conduction paths may be produced by disease without any concurrent paralysis. Interesting results were also described in regard to the effect of the injection of absinthe after ligation of the cerebral arteries. Extensor rigidity was alone produced, but on relieving the obstruction convulsions ensued, showing that these were almost certainly cortical, and the rigidity subcortical and probably cerebellar. The late effects which followed ligation of the four cerebral arteries were shown to be mainly those of asphyxia. Two of the practical deductions which were drawn from the research were, first, that the cerebral circulation of man in the erect posture depends on the tone and activity of the skeletal and respiratory muscles; and, secondly, that the functions of the brain may continue after a great diminution in its blood supply. The latter conclusion the author believes to be adverse to the anæmic theory of sleep. Dr. Hill has also investigated experimentally the influence of increased atmospheric pressure on the circulation of the blood, and finds that it is practically *nil*; he therefore contends that the theory by which caisson disease or diver's palsy is attributed to the raised atmospheric pressure driving the blood from the periphery to the central nervous system is untenable.

AN ARCHIEPISCOPAL INTERDICT OF SPITTING IN CHURCHES.

THE reckless spitter is too much with us. He voids his foul and often infective rheum in omnibuses and in railway carriages, fearing not the policeman neither regarding the gentle appeal of the Association for the Prevention of Consumption which whispers to him like the still small voice of sanitary conscience. But he does not as a rule pollute the church with his secretion—perhaps because, as we would fain believe of one so deficient in the love of his neighbour, he is *parcus et infrequens* in his attendance there. On the Continent, however — and particularly in the Latin countries — the church appears to be regarded as a suitable place for the shooting of rubbish from the air passages. The priests spit about the altar steps and the people spit everywhere, till one might be tempted to think the procedure was regarded as a symbolical ejection of the evil spirit. We are pleased to note as a sign of grace that the Archbishop of Siena, at the instance of Professor Simoneta, has directed that in all the churches of his diocese a notice to the following effect shall be put up in a conspicuous place: "Out of respect for the house of God, and in order to prevent the propagation of contagious diseases, do not spit on the floor." Affixed to the notice is the official seal of the See, which, it is to be hoped, will ensure its being respected by the clergy as well as the laity. We venture also to express a hope that the example of the Archbishop of Siena will be widely followed by other ecclesiastical authorities.

THE PERSIAN BATH.

DR. G. H. PASCHAYAN, of Tauris, on whom, by the way, the Shah of Persia has just conferred the honour of the Order of Knight of the Schiri-Kourchid, gives in the *Archives Orientales de Médecine et de Chirurgie* for April an account of the Persian bath which is hardly calculated to make the use of that luxury very fashionable in Europe. The late Mr. David Urquhart, who introduced the Turkish bath among us, was vehement in his declaration that the Turks are a cleanly people; and as far as the mere *cura cutis* goes the statement is doubtless true. But if Dr. Paschayan's description of the bath as indulged in by his countrymen is to be accepted, we do not think that the most fanatical admirer of persons and things Oriental would apply to the Persians the character for cleanliness given by Mr. Urquhart to the Turks. Dr. Paschayan tells us that the Persian bath consists of a bathing tank 100 metres square, in which the water comes up to the level of the bather's shoulder. The tank is filled from a cistern, and the water is heated by a furnace placed under the water, the fuel of which is continually renewed. In this bath people of all sorts and conditions disport themselves together. Decency is indeed so far observed that men and women bathe at different times. They bathe, however, in the same water, and sanitary decency is totally neglected. Children bathe with the women, who in addition to the ordinary ablutions wash their heads with water taken from the bath in copper cups which they take with them for the purpose. The water thus removed is replaced from the cistern, and it would appear that otherwise it would never be renewed at all. The condition of the water, as may easily be imagined, is filthy almost beyond description. It is thick with the dirt from the skin and the epidermic refuse of the vast numbers of the human beings who use it. Morever Dr. Paschayan discreetly hints that the bath is considered a suitable place by many of those who use it for the deposit of excretions of various kinds. The filth accumulates at the bottom of the tank, where it forms a layer of unspeakable composition 30 to 40 centimetres in thickness. This is removed once in six months, and the opportunity of this ceremony is taken to renew the water in the bath. In these circumstances it is hardly to be wondered at that, in the words of Dr. Paschayan, "the Persian baths, instead of being aids to cleanliness and health, have become foci of infection, unhealthiness, and contagion." He states as the result of his own observation that in Persia the majority of diseases of the skin—favus, alopecia areata, erysipelas, scabies, eczema—besides syphilis are disseminated by means of the public baths. He further solemnly assures us, as a known fact, that maids and widows become impregnated in these baths by casual spermatozoa floating about in search of their elective affinities. Here, however, we must decline to follow the learned doctor, for as Othello says, "that's a fable." Dr. Paschayan appears to

combine a low opinion of the morals of his countrymen with a touchingly simple faith in the virtue of his countrywomen.

THE LONDON WATER QUESTION.

THE London County Council last Tuesday devoted two or three hours to a vigorous though somewhat belated debate upon the London water question. The occasion was the report to the Council by its Parliamentary Committee upon the ill-fated Bills for the purchase of the water companies, and the bringing of an addition water supply from Wales, and their rejection by Parliament. Attention was called to the fact that while the Purchase Bills of the Council were rejected in 1896 by a majority of 162, the adverse majority had shrunk in 1897 to 135, and this year to 79. Moreover, in 1895, prior to the election of the present Government, these Bills passed the second reading by a majority of 38, and the dissolution found them in the Committee stage. As the Government has not as yet given any indication of an intention to initiate legislation on the subject in accordance with the report of the Royal Commission which it caused to be appointed in 1897, and which has now reported in favour of purchasing the water companies, the question remains in a highly unsatisfactory position. The fate of Lord James's Bill, which proposed to set up a body having some affinity to that suggested by the Royal Commission as the metropolitan water authority, is doubtless not without influence in the mind of Her Majesty's Government. While admitting the gigantic nature of the task, we are still indisposed to think that the municipalisation of the water supply, which has been satisfactorily accomplished in so many instances in the provinces, would be otherwise than beneficial in London. Such a primal necessity of communal life as water should not continue in the hands of profit-seeking companies. The difference in the case of London from that of other towns is one of degree and not of kind. If the Government do not deal promptly with the question grave responsibility will attach to those who are answerable for a policy of delay.

DIET A PREDISPOSING CAUSE OF YELLOW FEVER.

WE have received a communication from M. Eugene Ackermann, Director of the Chemical and Bacteriological Laboratory of the Sanitary Commission of Para, Brazil, in which he gives his views, the result of considerable experience, on the relation of diet to the incidence of yellow fever. He has observed that meat eaters are more liable to the disease than those who live on a vegetable diet. This he attributes to three main causes interworking with what he considers established facts, that the toxin of the bacillus icteroides is to a great extent elaborated in and absorbed from the intestinal canal, and that it only produces the disease when its elimination cannot keep pace with its production. The three causes are the accumulation in the blood of poisons either extrinsic, from the action of bacteria on animal food outside the body, or intrinsic, from the formation of toxic substances by imperfect digestion of nitrogenous substances; the impairment of the elimination by the kidney and bowel of these toxic substances; and a denudation of the gastro-intestinal epithelium that follows on disorder of digestion, which is avoided by a vegetable diet. A factor in this intoxication is the inactivity of the liver which is apt to result, in hot countries, from the use of too much nitrogenous food; the function of the liver as a destroyer of poisons (among which must be ranked peptones) absorbed from the intestinal tract is one doubtless of extreme importance not always sufficiently recognised. What our correspondent points out in regard to the native and naturalised Brazilian is true, and has an application to the inhabitants of all tropical countries, whose diet is, as a rule, at once small in amount and largely vegetable. How much of this state of things is due to accumulated experience and how much to a process of natural selection is an interesting abstract question. Mr. Ackermann, though not an uncompromising advocate of vegetarian diet, expresses the opinion that it would be better for the newly-arrived European—and the disease mainly attacks the "newly arrived"—if he had been at home of the "vegetarian" persuasion. Statistics on this point, if available, would be decidedly interesting. He urges that an important factor in the harmfulness of animal food in Brazil is the difficulty there is in obtaining it free from bacterial changes, a difficulty which does not apply to anything like the same extent to vegetable food. He therefore recommends the use of fruits; and, if purely nitrogenous food is considered indispensable, vegetable albumens as obtained from the leguminous articles of diet, newly-laid eggs (but not preserved eggs), fresh milk (it may be remarked, by the way, that the bacillus icteroides does not coagulate milk), fish (but not salted or dried fish), and poultry rather than beef or mutton, pork or game. He recommends also barley, rice, and potatoes, and he especially praises sugar as an article of diet in the tropics. It seems that in Para, a town of 100,000 inhabitants, like, we imagine, many other tropical towns, it is very difficult to obtain fresh green vegetables. Nothing more than watercress and lettuce is ordinarily there procurable, and consequently those who can afford it live largely on tinned vegetables. Hence his appeal for the cultivation of such vegetables as sorrel, spinach, leeks, beetroots, carrots, tomatoes, celery, and radishes. He strongly advises, for Europeans and others, several light meals rather than a few heavy ones, and that the bulk of these should be taken in the earlier part of the day.

A MOTOR CAR AS A SURGICAL DRESSING BOX.

FROM communications which have recently appeared in the *Gazette Médicale de Paris*, it seems that the days of the "one-hoss shay" in country practice are numbered. It appears that Dr. Klein, while careering in his automobile along the roads in the neighbourhood of Sablé, suddenly came upon a gossiping crowd surrounding a road-mender who was writhing and vomiting by the side of the road. On dismounting he at first sight diagnosed an epileptic fit, but after having had the sufferer carried to a neighbouring farmstead, he discovered a right strangulated hernia. The symptoms having existed for some eighteen hours, and every ordinary method of reducing the rupture having failed, there was no resource but operation. The patient could not be removed on account of his weakness, and as his condition was becoming critical there was no time to return for anæsthetics and antiseptics. The surgeon, who had nothing with him but his small pocket-case, was inclined to despair; but, on looking at his motor car, it suddenly occurred to him that in it lay the solution of the difficulty. He took from it some "essence" (probably the so-called "petrol"), and washed the field of operation; he drew off some water that had been condensed in the cylinders of the automobile, and was therefore presumably sterile; he took some of the alcohol carried for the lamps, with which he disinfected his hand, and in the flame of which he sterilised his instruments and commenced the operation. After making an incision over the abdominal ring just large enough to admit the tip of his finger, he cautiously passed along it the blade of a bistoury, with which he made a few small cuts, and dilated the parts with the other finger; the hernia was then successfully reduced. The wound was closed with an ordinary needle and thread sterilised in alcohol. How to make an antiseptic dressing again brought our ingenious *confrère* to the verge of despair; but again the automobile provided what was needful. He

took some of the cardboard and cloth which was carried to repair the joints of the water-pipes of the motor car made these into a pad which he boiled in the "essence," and, after it had cooled, applied to the wound and kept in position with a towel. Two days later he returned to his patient to find the wound healed by first intention; he then removed the sutures, applied a conventional dressing, and recommended a bandage. After deliberation, we are inclined to think that the nature of Dr. Klein's carriage is of secondary importance, and that he could probably conjure surgical material even from the remains of a "one-hoss shay."

THE MIDWIVES QUESTION IN NEW YORK.

ATTENTION has more than once been called in the BRITISH MEDICAL JOURNAL to the fact that the medical profession in New York is also confronted with the vexed and most vexatious question of the legal recognition of midwives. The Committee on Legislation of the Medical Society of the State of New York has issued the following circular, which may be taken to represent the views of the profession on the subject: "A Bill has passed both Houses of the Legislature of this State authorising the creation of a Board of Examiners in Midwifery in this city, composed of the assistant sanitary superintendents of the Board of Health. As representing the medical profession of the State, we have protested against the enactment of this measure, for the reasons, first, that the practice of midwifery, being a part of the practice of medicine, should be restricted to registered practitioners of medicine; the legalising of this practice by others will tend to perpetuate a system which we hope in time to succeed in having abolished; and, secondly, if by any train of circumstances it should be considered advisable to legalise this practice by other than registered physicians, we believe any Act of Legislature with this object in view should apply to the whole State, and not be restricted to one city or county. We believe, if midwives are to be examined and licensed, the work of examining them should be placed in the hands of the State Board of Medical Examiners. We request you to write to the Mayor of the City of New York, urging him to disapprove of this measure, and also to Governor Roosevelt, asking him to withhold his signature should the Mayor give the measure his approval. There is need of immediate action in this matter, and we therefore ask you to act without delay."

VOLUNTEER MEDICAL ASSOCIATION.

THE annual dinner of the Volunteer Medical Staff was held at the Trocadero Restaurant, London, on May 22nd, when the chair was taken by Surgeon-General Evatt, P.M.O. Western District, who, in giving the toast of the evening, congratulated the Volunteer Medical Association on the considerable progress which had been made since its formation some sixteen or seventeen years ago. He insisted that the organisation for giving medical aid in war must be considered as a whole. In the present war the numerical deficiency in the Army Medical Corps had been supplemented by officers and men drawn from the Militia, the Yeomanry, and the Volunteer Medical Services. He looked forward to the time when all would be organised upon a basis similar to the territorial basis of ordinary regiments. Then there would be the present Royal Army Medical Corps corresponding to the regular battalions of the regiment, the Militia Medical Staff Corps corresponding to the militia battalion, and the Volunteer Medical Staff corresponding to the volunteer battalion. The Militia and the Volunteer Medical Staffs must be brought into the Royal Army Medical Corps, they must bear the same name and the same titles, and thus such cumbrous titles as Brigade-Surgeon-Lieutenant Colonel would disappear. He thought, also, that the medical students who joined should be organised into a special cadet corps, so that they might at once begin the special training which he hoped would result in many joining the regular service. The toast was acknowledged by Brigade-Surgeon-Lieutenant-Colonel Andrew Clark, V.D., who spoke of the difficulties which were encountered by brigade-surgeons in raising brigade bearer companies, and the discouragement which offers of assistance had received from the War Office at the beginning of the war. The toast of "The Visitors" was given by Brigade-Surgeon-Lieutenant-Colonel Danford Thomas, V.D., who said that, partly by good fortune, he had been able to organise a bearer company in the South London brigade, and that not a few officers and men under his command were now serving in South Africa. The toast was acknowledged by Dr. Dawson Williams. The toast of "The Imperial Forces" was given in an excellent speech by Brigade-Surgeon-Lieutenant-Colonel Raglan Thomas, V.D., of Plymouth, and acknowledged by Lieutenant-Colonel Tytheridge, V.D., officer commanding the Civil Service Volunteers. The toast of "The Chairman" was given by Surgeon-Lieutenant-Colonel James Cantlie, who recalled the large part which Surgeon-General Evatt had taken in the formation of the Volunteer Medical Association, and acknowledged by Surgeon-General Evatt, who appealed to his hearers to recognise that the army medical officer was one with themselves, and one with the whole body of the profession, but specialised in certain directions. Surgeon-Major Valentine Matthews gave the toast of "The Honorary Secretary, Surgeon-Lieutenant L. A. Bidwell," who briefly acknowledged the compliment.

EPIDEMIC CEREBRO-SPINAL MENINGITIS IN DUBLIN.

THE epidemic form of meningitis which has within recent times been so prevalent in America has lately, we learn from the *Dublin Daily Express*, broken out in the City of Dublin. Already some 6 cases have proved fatal. The disease, in consequence of the outbreak, has been included by the Dublin Public Health Authority among the diseases which must be notified under the Notification of Diseases Acts. Hitherto it has only attacked young people and those mainly of the poorer classes whose surroundings have been insanitary. Its earlier symptoms have been headache with vomiting and restlessness. The case mortality has, so far, ranged between 30 and 40 per cent. Of the cases which have been treated at the Meath Hospital during the last few months 2 were discharged cured, 2 died, and 6 remained under treatment and are making satisfactory progress. At the Cork Street Fever Hospital of 3 cases received 1 died and 2 remain in the hospital. In the Hardwicke Hospital also there are one or two cases. A very severe epidemic of this disease raged in Dublin nearly forty years ago and caused many deaths. The present visitation, however, is looked upon as comparatively slight and it is believed that the epidemic is well under control.

"DEATH WITH HYGIENIC TREATMENT."

UNDER the heading of "Death with Hygienic Treatment," the *Evening News* of May 21st reports the evidence given at an inquiry at Walthamstow into the cause of death of Dorothy Cole, aged 19 months, the child of a gas-fitter. The medical evidence was that, in the absence of any symptoms of organic disease, it could only be concluded that the cause of death was malnutrition. The mother stated in evidence that the child had been fed from its birth entirely on "Dr. Allinson's Food and cow's milk." The inventor, who gave evidence, testified that his food was composed principally of pearl barley. It would appear that on the morning of the day in which the child died, the mother took her to "Dr." Allinson's house at the West End of London, and the jury censured the mother and father for their neglect, and "Dr." Allinson "for undertaking the care of a child at so great a distance," and directed the attention of the N. S. P. C. C. to the case. The General Medical Council some years ago removed "Dr." Allinson

from the *Medical Register*. Under the present law it could do no more, but the person removed has continued to practise with impunity, and, when censured by a coroner's jury, the censure only takes the form of a reprimand "for undertaking the care of a child at so great a distance."

WEST LONDON POST-GRADUATE COLLEGE.

THE dinner of the past and present post-graduate students of the West London Hospital was held at the Trocadero Restaurant on May 21st, under the chairmanship of Dr. Donald W. C. Hood. There was a numerous attendance and the speeches were followed with great interest. Mr. C. B. Keetley's remarks in reference to the toast of "The Imperial Forces," which he proposed, were received with enthusiasm, and Surgeon-General Hamilton, who replied, contended that the services of the Royal Army Medical Corps had not been sufficiently recognised in the campaign in South Arica. As an instance, the case of Major Babtie was given, which went to show that unless his gallant conduct had been noticed in the columns of the BRITISH MEDICAL JOURNAL and unless that paper had found its way to the Cape the gallant officer would not have been awarded the distinction of the Victoria Cross. The Chairman proposed "The West London Hospital" and paid a tribute to the memory of Sir William Priestley. He pointed out that the West London Hospital had been used as a stepping stone for further appointments, and that the time had now arrived when it should not be used for such a purpose. Mr. McAdam Eccles acknowledged the toast, and that of "The Post-graduates" was given by Mr. L. A. Bidwell, who said that the West London was the only general hospital whose practice was preserved alone for post-graduates, and the College the only institution for post-graduate teaching attached to a general hospital. He was afraid last year that they were going to suffer from the establishment of the Polyclinic, but he had found, on the contrary, that their numbers had increased. Dr. Arthur (Uxbridge Road) made a humorous reply. The toast of "The Visitors" was proposed by Dr. J. B. Ball and acknowledged by Dr. A. Hillier. The evening concluded with a vote of thanks to the Chairman, proposed by Dr. Seymour Taylor.

THE CENTENARY OF THE ROYAL COLLEGE OF SURGEONS.

THE centenary of the Royal College of Surgeons of England will be celebrated, as already announced, at the end of July. Committees are now actively engaged in making the necessary arrangements. It is expected that a *conversazione* will be given at the College on the evening of Wednesday, July 25th. On Thursday morning Professor Stewart, F.R.S., the Conservator, will give a demonstration in the Hunterian Museum. On the afternoon of the same day a general meeting will be held in the theatre of Burlington House, when the President, Sir William Mac Cormac, will deliver an address, and Honorary Fellowships will be conferred. In the evening a festival dinner will be held in the great hall of Lincoln's Inn, which has been kindly placed at the disposal of the College by the Benchers for this purpose. On Friday morning Professor Stewart will again give demonstrations, and on the evening of that day a *conversazione* will be given by the Lord Mayor at the Mansion House.

THE LEAGUE OF MERCY IN WHITECHAPEL.

ON May 16th a meeting of more than 500 persons was held in the Board room of the Whitechapel District Board, under the presidency of Mr. Harris, J.P., C.C., to establish a branch of the League of Mercy in Whitechapel. It will be remembered that this League was inaugurated last year under Royal Charter, and had in view the promotion of the Prince of Wales's Hospital Fund by placing that Fund upon a geographical basis and making an appeal to the small subscriber. Dr. Collins, one of the trustees to the League, explained its objects, and stated that over £4,000 had been collected in the seven months of its first year of life. The claims of the war funds, he argued, should not act detrimentally on such a fund as this. No fewer than 380 beds had been promised by the London hospitals to the War Office for use by sick and injured soldiers from South Africa. Moreover, the one entirely satisfactory feature of the South African campaign had been the medical service which had been largely recruited from physicians and surgeons trained in the London hospitals. A resolution to support the League in Whitechapel was moved by Canon Barnett and carried unanimously. The offices of the League are at 29, Southampton Street, Strand, W.C.

EXPEDITION FOR THE INVESTIGATION OF YELLOW FEVER.

THE Liverpool School of Tropical Diseases is showing a good lead to the country in the matter of investigating exotic maladies. The second of its expeditions is at the present time investigating malarial disease at Old Calabar in South Nigeria, and now a third expedition is about to be organised and despatched to South America for the purpose of investigating yellow fever. The members of the expedition will probably go first to Baltimore, to visit the pathological department of the Johns Hopkins University, before proceeding to Para and other places on the South American coast and on the Amazon. Three shipping firms —Messrs. Elder, Dempster and Co.; Messrs. Alfred Booth and Co., and Messrs. R. Singlehurst and Co.—have shown an admirable imperial instinct as well as individual generosity in giving special facilities for the transport of the expedition.

THE MERCURIAL TREATMENT OF LEPROSY.

DR. EHLERS, of Copenhagen,[1] reviews the subject of the mercurial treatment of leprosy, and gives some curious and interesting historical details which need not detain us in this place, with the exception, perhaps, of a passing reference to the Icelandic practitioner, Jon Pjétursson, who in 1769 wrote a book in Danish to explain his treatment of "Iceland scurvy," that is, leprosy, by means of mercurial preparations given by the mouth. Coming to the more recent attempts to deal with leprosy by intramuscular injections of perchloride of mercury, made by Radcliffe Crocker and Haslund, both of whom have had encouraging results up to a certain point (the former in several cases, the latter in one only), Ehlers states that Bjarnhjedinsson and Björnsson in Iceland have also obtained satisfactory results on these lines. This is further confirmed by Neish in his report on the Lepers' Home (Jamaica, 1899), who has applied Radcliffe Crocker's method to 66 selected cases of leprosy, those suffering from nephritis or cardiac complications being excluded. Neish is reported as stating that in every case the effect has been most strikingly beneficial, and in his conclusions briefly summarises the results observed as follows: Restoration of sensation, disappearance of the nodules, rapid cicatrisation of ulcerations, improvement in the general mental attitude in the direction of cheerfulness, etc. Neish proposes to pursue the experiment.

DR. BUZZARD has been elected a member of the Council of King's College, London.

MRS. PHŒBE A. HEARST has presented to the University of California a complete equipment for the department of pathology, which it is said will make that department equal to, if not greater than, that of any university in America.

[1] *Lepra*, vol. i, Fasc. 1 and 2, March, 1900 p. 43

Lord Strathcona and Mount Royal will take the chair at the dinner of the London Medical Graduates' College and Polyclinic, which will take place at the Trocadero Restaurant on Thursday next, May 31st, at 7.30 P.M.

We are informed that, in addition to the candidates mentioned in the British Medical Journal of May 19th, Mr. Golding-Bird, Surgeon to Guy's Hospital, and Mr. Clutton, Surgeon to St. Thomas's Hospital, intend to offer themselves for election to the Council of the Royal College of Surgeons of England.

The annual dinner of the Indian Medical Service will take place at the Hotel Cecil, London, on Thursday, June 14th, at 7.45 P.M., Sir Trevor Lawrence, Bart., in the chair. Officers intending to be present are requested to communicate with the Honorary Secretary, Mr. P. J. Freyer, 46, Harley Street, W.

The annual *conversazione* of the Medical Society of London was given in the Society's rooms in Chandos Street on the evening of Monday, May 21st. A reception was held by the President, Dr. Frederick Roberts, after which Dr. J. Kingston Fowler delivered the customary oration, taking for his subject Science and Medicine in the Eighteenth Century. The remainder of the evening was spent in social enjoyment, to which some good music rendered by the Bijou Orchestra greatly contributed.

The British Balneological and Climatological Society will give a *conversazione* at the house of the Royal Medical and Chirurgical Society, 20, Hanover Square, London, W., on Wednesday, May 30th, when Sir Joseph Fayrer, Bart., K.C.S.I., M.D., will deliver an address on The Hill Stations of India as Health Resorts. The annual general meeting will be held on the same day and at the same place at 6 P.M. and the annual dinner at 7 P.M. at Limmer's Hotel, when the President, Dr. J. Ivor Murray, of Scarborough, will take the chair.

MEDICAL NOTES IN PARLIAMENT.

[From our Lobby Correspondents.]

The Shops (Early Closing) Bill met with defeat in the House of Lords on Tuesday, when Lord Avebury (Sir John Lubbock) moved the second reading. In doing so, he pointed out that the House of Commons had repeatedly sanctioned the principle of the Bill, and he quoted a petition signed by 300 medical men in London in its favour. Lord Lister, in supporting the second reading, gave weighty testimony on health grounds for some such measure, and advocated legislation also on account of the moral disadvantages caused by long and late hours, amounting in some cases to as much as eighty-four hours per week. All this, however, availed not, for the Prime Minister would have none of the Bill. It interfered with the right of the grown man to dispose of his labour as he liked; it would cause inconvenience to the consumers who made late purchases, especially the working classes, and it offered to an active section of traders in a district an opportunity of getting a two-thirds majority, so as to interfere with the business of their neighbours. Lord Salisbury, in short, opposed the Bill very much as he did the Shop Assistants' Seats Bill last year. The Bishop of Winchester gave very earnest support to the second reading, but it was all to no purpose, and the Bill was defeated by 77 to 16.

The Factory and Workshops Bill, which the Home Secretary has introduced, is meeting with a good deal of opposition. Already there are some half-dozen notices of motion to reject it on the second reading, and working-class organisations are very active in canvassing members against the measure. As the Bill is not now likely to be read a second time before Whitsuntide, its prospects of passing this session are not very good.

Child Labour in Mines Bill, which has already passed the Commons, prohibiting boys under 13 from working in coal mines, was read a second time in the House of Lords on Tuesday last. It may be extended to metalliferous mines also, but the limit of 14 years, which many desire as the minimum age for underground workers, is not likely to be adopted, as it would excite much opposition.

The Youthful Offenders Bill gave rise to quite an old-fashioned debate in the Commons on Monday last, which lasted from before 8 to midnight, when the Bill was talked out. The proposal to extend the powers of flogging children and young persons excited much opposition, and even supporters of the Bill advocated the presence of the divisional surgeon or a medical officer at the punishment. The profession is likely to be spared this unpleasant duty, as the Government will hardly press a Bill which was attacked so strongly as this Bill on Monday last.

The Red Cross Flag and Badge.—In a recent letter to the British Medical Journal, Sir William Thomson pointed out that the Red Cross flag and the badge are often indistinguishable at a distance which modern rifle fire covers. Captain Norton called attention to this point on Tuesday last, and the Under-Secretary for War stated that the matter was under the consideration of the authorities, we hope with a view to devise some more visible emblem.

The Isolation Hospitals (Amendment) Bill, which last year passed the House of Lords, has again come down from that House, only to find difficulties once more in the House of Commons. Unless the Government give it facilities, which at present they do not seem inclined to do, the Bill will not have much chance of passing. As the Bill would certainly help to provide for isolation, and encourage local authorities in providing hospitals, this is to be regretted in the interests of public health.

The Rating of Hospitals.—A Select Committee was appointed late on Tuesday night to consider the operation of the law by which hospitals and other institutions for the care and treatment of the sick, or of those afflicted in mind or body, are liable to local rates, and to report whether under any and what conditions it is for the public interest that such hospitals and institutions, or any of them should be exempted wholly or in part from such liability in the future. Mr. Bonsor, Dr. Farquharson, Mr. Hayes Fisher, Sir C. Gull, Sir J. Maclure, Mr. McCrae, Mr. Pickersgill, Mr. Round, Mr. T. W. Russell, Mr. Tomlinson, Mr. Lawson Walton, Mr. Warr, and Sir James Woodhouse constitute the Committee.

The Medical Officers of Health and Sanitary Inspectors Bill, when called on Wednesday afternoon after half-past five, was postponed to June 22nd. Mr. Galloway and Sir Albert Rollit had blocking notices down upon the paper. The Parliamentary Committee of the Corporation of Nottingham have issued a formidable document entitled Observations on this Bill and on Mr. Percy Thornton's Public Health Bill, which has much the same objects in view. The Nottingham Committee urge that Dr. Farquharson's Bill would entirely alter the relationship now existing between town councils and their officers of health. They fear that the health officer would become either careless or aggressive when he had security of tenure, and they express strongly the opinion that public health work would be seriously injured if the control of the local authorities over health was in any degree lessened. Other municipalities are supposed to hold similar views and the Bill is therefore sure to meet with considerable opposition.

The Railway (Prevention of Accidents) Bill is to be considered on Monday next, and as there are a number of amendments on the paper it may occupy the whole sitting. Should this be so, the Lunacy Bill and the Companies Bill will be driven over till after Whitsuntide; and as several other Government Bills will be in the same position, the Companies Bill will be in danger of being dropped once again.

BIRTHDAY HONOURS.

The following honours have been conferred on members of the medical profession in connection with the celebration of Her Majesty's birthday:

Sir Hector Cameron.

The honour of knighthood has been conferred upon Professor Hector Cameron, of Glasgow. He was born about 55 years ago in the West Indies, and was educated at St. Andrews, and subsequently in the old Glasgow University or College in High Street. His career as a student was distinguished, and he graduated M.B., C.M. with honours in 1866. Immediately afterwards he became Lord Lister's private assistant, and acted in that capacity until Lord Lister's removal to Edinburgh. In 1874 Dr. Cameron was made full Surgeon to the Glasgow Royal Infirmary, a post which he retained until his appointment to a similar position in the Glasgow Western Infirmary in 1881. He proved himself to be a most successful lecturer on Clinical Surgery, and only a couple of months ago was unanimously appointed by the University Court to fill the Chair of Clinical Surgery rendered vacant by the retirement of Dr. George Buchanan. He is the President of the Faculty of Physicians and Surgeons in Glasgow and the representative of that body on the General Medical Council. He has been for some years a member of the Glasgow University Court, and has been President of the Pathological and Medico-Chirurgical Societies. The honour now conferred upon him has been received in Glasgow and the West of Scotland with general satisfaction, and is regarded as very well deserved.

Sir William Bisset Berry.

South Africans of all classes will read with pleasure of the honour of knighthood having been conferred upon the Honourable W. Bisset Berry, of Queenstown. Dr. Berry, who graduated M.D. in the University of Aberdeen in 1861, is well known to the profession in South Africa as an enlightened and skilful physician, and on the eastern frontier of the Colony there is no one whose medical opinion is more highly valued. He practised medicine first at Burghersdorp and afterwards at Queenstown for a period of thirty years, and a few years ago was returned as Member of the Legislative Assembly for Queenstown. He is a man of wide culture and owns one of the best private libraries in South Africa. He has an intimate knowledge of public affairs, having been for many years Mayor of Queenstown, and he is an accomplished and attractive speaker. The House of Assembly soon learnt the true value of his knowledge, wide experience, and natural talent, and during a period of an exceptionally trying character he has held the position of Speaker with distinction to himself and advantage to that House. Dr. Berry has many friends, and perhaps in politics some enemies. But we question whether, even among his political opponents, anyone would be found to begrudge him the recognition which his public work has brought him. The public life of South Africa has produced many interesting men, but among them are few more striking than this upright and distinguished Scotchman.

Sir John William Moore.

The honour of knighthood has been conferred on Dr. John William Moore, President of the Royal College of Physicians of Ireland. Dr. Moore, who is a graduate of the University of Dublin and Senior Physician to the Meath Hospital, became a teacher of medicine early in his professional career—first in the Cork Street Fever Hospital, then in the Meath Hospital, where he succeeded the illustrious Stokes, in the Chair of the Practice of Medicine in the Carmichael School, and later in the school of the Royal College of Surgeons of Ireland. He has taken an active interest in the Dublin Branch of the British Medical Association, has filled the office of President, and has been for some years its representative on the Council of the Association. He has always shown a strong interest in public health questions, and was a member of the Commission which recently investigated the causes of the high death-rate of Dublin. He is the author of a *Textbook of the Eruptive and Continued Fevers*, and of a *Textbook of Meteorology*, and since 1873 has been Editor of the *Dublin Journal of Medical Science*. As Registrar for many years, and now as President of the Royal College of Physicians in Ireland, he has brought to these responsible official positions a strong sense of duty, consideration for others, and a fair-mindedness which have won him popularity and esteem, while his high sense of honour in all dealings with his professional brethren has earned their confidence.

Sir David Palmer Ross.

Dr. David Palmer Ross, C.M.G., upon whom also the honour of knighthood has been conferred, is Surgeon-General, British Guiana. He graduated M.D.Edin. in 1863 and entered the Army Medical Service in 1864; he was attached to a West Indian Regiment, with which he served under Sir John Peter Grant during the rebellion of 1865. Shortly afterwards he retired, and commenced private practice in Spanish Town, Jamaica. In 1869 he was appointed Surgeon to the Public Hospital, Kingston, where he superintended the carrying out of many alterations and the improvement of the sanitary arrangements. While holding this office he commenced the open-air treatment of putrid diseases and fevers which has proved highly successful, and has been extended to the treatment of leprosy. In 1884 he was appointed Colonial Surgeon of Sierra Leone, and a member of the Executive Council of that colony. Here, also, he reorganised the hospital, improved the condition of gaols, and by the introduction of a full nitrogenous diet brought about a great diminution in the mortality from beriberi. In recognition of his executive and administrative services he was made C.M.G in 1890, and 1895 was appointed Surgeon-General of British Guiana. In 1896 he was President of the British Guiana Branch of the British Medical Association, an office previously held *ex officio* by the Surgeon-General, a custom which he considered it advisable to break through in order that other members of the Branch might have the opportunity of attaining that honour. Sir David Ross married the daughter of the Hon. Alexander Heslop, Attorney-General of Jamaica, whom he had the misfortune to lose less than two years ago.

The Order of the Bath.

Surgeon-General Henry Skey Muir, who is made Companion of the Bath (Military Division) is Deputy-Director-General of the Army Medical Service. He received his medical education at the University of Glasgow and Guy's Hospital, and took the degree of M.D.Glasg. in 1863. In the following year he entered the army as Assistant-Surgeon, was promoted Surgeon in 1873, Surgeon-Major in 1876, Brigade Surgeon in 1888, Surgeon-Colonel in 1893, and Surgeon-Major-General in November, 1896. He served in the Afghan war of 1878-80 (action of Shahjui; mentioned in despatches; medal). He was Principal Medical Officer in Egypt 1897 98, and though he was not present at the actions in the Soudan, was responsible for the medical arrangements made for the campaign.

Lieutenant-Colonel Benjamin Blomfield Connolly, Surgeon-Lieutenant-Colonel, late Army Medical Staff, who is also made C.B. (Military Division), entered the army in 1871. He was promoted Surgeon 1873, Surgeon-Major 1882, and Lieutenant-Colonel 1891. He retired on half pay in 1891. During the Franco-German war of 1870-71 he was present at the battle of Beaumont, and battle of and capitulation of Sedan, and received the German steel war medal. He served throughout the campaign against the Jowaki Afridis in 1877 78 (medal with clasp). He was Secretary and Statistical Officer of the Principal Medical Officer, Lines of Communication and Base in the Zulu war of 1879, and in the subsequent operations against Sekukuni (medal); and he served in the Egyptian war of 1882, and was present at the battle of Tel-el-Kebir (promoted Surgeon-Major, medal with clasp and Khedive's star). He served in the Soudan Expedition under Sir Gerald Graham in 1884 as P.M.O. of the Cavalry Brigade, and was present in the engagements at El Teb and Tamai (mentioned in despatches, Fourth Class of the Osmanieh, and two clasps). He served with the Nile Expedition in 1884 85 in command of a Camel Bearer Company, and was present at the attack on the wounded convoy on February 13th, and was mentioned in despatches.

Order of the Indian Empire.

Lieutenant-Colonel Aylmer Martin Crofts, who is made Companion of the Order of Indian Empire, entered the Indian Medical Service as Surgeon in March, 1877. He was appointed Surgeon-Lieutenant-Colonel in 1897. He is in medical charge of Kotah and Jhalrapatan Political

Agencies. Lieutenant-Colonel Crofts served in the Afghan war of 1878-80 at Kandahar and with the Khyber Brigade, and received the medal. He served in the Egyptian war of 1882, and was present at the battle of Tel-el-Kebir, and received the medal with clasp and Khedive's Star. He served also with the Zhob Valley Expedition in 1884.

KAISER-I-HIND MEDAL FOR PUBLIC SERVICE IN INDIA.

The new Indian decoration, created by a Royal Warrant, dated May 11th, 1900, "the Kaiser-i-Hind Medal for Public Service in India" is designed to reward important and useful services to the Indian Empire in the advancement of the public interests of that Empire. It is open to persons without distinction of race, occupation, position, or sex who may have rendered important and useful service in the advancement of the public interest in India. There are two classes, the first class awarded by the Crown on the recommendation of the Secretary of State for India, and the second class awarded by the Governor-General of India. The medal is an oval-shaped badge or decoration, in gold for the first class, and in silver for the second class, and is to be suspended on the left breast by a dark blue ribbon.

By an order, dated May 23rd, 1900, the Queen has granted the gold medal (first class) to the following officers of the Indian Medical Service:

Lieutenant-Colonel ROBERT NEIL CAMPBELL, M.B., who is Civil Surgeon of Shillong. He was appointed Surgeon, October, 1877, and attained the rank of Surgeon-Lieutenant-Colonel October, 1897. He served in the operations against the Naga Hill tribes in 1879-80, and was present at the assault of Konoma, and received the medal and clasp. He served with the Akha expedition in 1883-84.

Captain CHARLES HENRY JAMES, Indian Medical Service, is Plague Medical Officer in the Jullundur and Hoshiarpur District. He entered the service in January, 1891.

The silver medal has been conferred upon the following:

Captain JOHN WEMYSS GRANT, who entered the Indian Medical Service as Surgeon-Lieutenant on July, 1894, and was appointed to the rank of Surgeon-Captain in July, 1897. He is employed on plague duty in Rajpootana.

Miss CHARLOTTE ADAMS, who qualified as L.R.C.P., L.R.C.S.Edin., and L.F.P.S.Glasg. in 1895.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THERE has been a considerable diminution in the death-rate for the whole of India during the week ending May 5th, the mortality being 2,498, against 3,365 in the previous seven days.

In Bombay city the subsidence of the epidemic has not been so great, but the mortality fell to the extent of 52, the actual number of plague victims being 421. The hot weather, therefore, although it has brought an abatement, has not coincided with so marked a decline in the plague mortality as the experience of previous years would have led us to expect.

In Calcutta the number of plague cases and deaths on April 25th, 26th, 27th, 28th, 29th, 30th, and 31st were: fresh cases, 57, 38, 33, 36, 49, 30, and 42; deaths, 45, 35, 29, 38, 44, 29, and 46 respectively, or 256 deaths during the week from plague—a considerable abatement.

In Karachi from 40 to 50 fresh cases of plague occurred daily during the last week of April, and from 30 to 40 deaths from the disease.

In Lucknow the attendance at the hospitals has fallen off to a very great extent owing to a scare amongst the people that if seen to be unwell at all they will be taken to the plague camp. There is no severe outbreak, but the community are in a state of alarm.

In the Mysore province only 4 indigenous cases of plague were reported during the week ending April 20th.

ADEN.

At Aden 86 deaths from plague occurred during the week ending May 1st.

EGYPT.

At Port Said during May 14th, 15th, 16th, and 17th, 10 fresh cases of plague occurred. In all 31 cases of plague are reported to have occurred at Port Said, with 15 deaths from the disease. The finding of numerous dead rats and mice in the city and at the wharves of Port Said seem to presage a widespread infection. The destruction of rats and mice has been determined upon by the authorities. There is considerable local distress amongst the labouring population of Port Said owing to the quarantine regulations which has almost stopped all work at the wharves. Certain French newspapers are protesting against the imposition of quarantine on the grounds that the disease is not plague but a similar disease with another name. This is a most dangerous doctrine, and on the face of it untrue.

In Alexandria one case of plague occurred on May 16th.

THE WAR IN SOUTH AFRICA.

WITH THE NATAL FIELD FORCE.

[FROM AN OCCASIONAL CORRESPONDENT.]

ENTERIC FEVER.

FOLLOWING almost immediately on the relief of Ladysmith, a sharp outbreak of enteric fever has occurred amongst the troops of the relieving force. This is the more to be regretted, as up to the final attack on the Boer position the force was practically free from the disease. When, however, we consider the conditions to which the troops were exposed during their attack on Pieter's Hill, the wonder is, not that enteric fever has broken out among them, but rather that the outbreak has been so limited. During the seventeen days that the final attack lasted, the men slept in the open without a vestige of cover. As the Boers were driven back, our men took shelter in their trenches. These trenches had been occupied by the enemy for many weeks without the faintest attempt at sanitation. Their condition was indescribably filthy. There was no help for it, however, and our troops had to occupy them for days together. At the same time it was often impossible during the daytime to send up drinking water to the troops in advanced positions, as every approach was swept by the Boer fire. The men, therefore, drank from every pool in their neighbourhood, whether it was contaminated or not. There can be no doubt that enteric fever existed amongst the Boer forces, and that our men contracted the disease whilst occupying the trenches which they had captured from the enemy.

Most of the cases I have seen in Natal present the classical symptoms of enteric fever, with this exception, however—that tympanites appears to be a somewhat rare condition. As yet I have not noted those hybrid cases to which the name typho-malarial has been applied in tropical countries. In Natal at least the rash is usually very profuse and well defined. On the whole the cases are of moderate severity, but a very large percentage, far exceeding the average, are attended by intestinal hæmorrhage. This, no doubt, is due to the fact that on field service it is impossible for patients to have the absolute rest and freedom from excitement which is so important a part of the treatment in permanent hospital. The treatment at present in vogue in Natal is almost exclusively by intestinal antiseptics, the only variation being in the reagent used. Some prefer salol, some carbolic acid, some again Burney Yeo's chlorine mixture.

DYSENTERY.

Dysentery is also very prevalent. Some at least of the medical officers with the force attribute the disease to irritation of the intestinal tract set up by particles of sand, dust, etc., which are accidentally swallowed with food or water. With this opinion, however, I cannot agree. It is easy by close observation to satisfy oneself that the dysentery from which the troops are now suffering, and similarly all or almost all dysentery on field service, is due to constantly-recurring abdominal chills contracted during sleep. Owing to the difficulties of transport only one blanket for two men and one waterproof sheet for each man can be carried. With this slight covering the men sleep on the ground in all weathers. Under these circumstances the nightly-recurring chills sooner or later bring on dysentery in those who are at all predisposed to the disease. Sand, dust, impure water, and indigestible food increase the liability to an attack by exciting local irritation, but they cannot directly cause it. In Natal the disease is seen in two forms, namely:

1. *Catarrhal.*—In this, which is really a catarrhal colitis, the motions consist largely of opaque mucus, which is often slightly blood-stained. There are few symptoms beyond an uncomfortable feeling of flatulence and distension with frequent calls to stool. If the patient is warmly wrapped up at the beginning of the attack it may pass off without any further treatment. If neglected the attack may develop into the second and graver form. It is in this, the catarrhal form, that a saturated solution of magnesium sulphate is found so useful.

2. *Ulcerative.*—This, which is much rarer and graver than the first variety, is usually the final stage of the neglected catarrhal form. It may, however, be a primary affection, at

least in some cases. It is accompanied by marked depression and by all the graver symptoms of dysentery. As the cases advance the motions contain more and more blood, until finally they consist almost wholly of long black shreddy coagula. When this form of dysentery is fully established, treatment at least in the field is practically hopeless. Every known remedy and combination of remedies, including rectal injections of boric acid, tannic acid, and silver nitrate, have been tried and have signally failed.

HOSPITAL ADMINISTRATION.

Since the relief of Ladysmith the Royal Medical Corps have had to face a most difficult situation, the difficulties being much increased by the fact that in Natal there are practically no public buildings which can be taken over to meet a sudden emergency of this kind. What it meant when 2,500 sick and wounded were suddenly released from Ladysmith and added to the already huge list of sick and wounded belonging to the relieving force may be imagined. Under the circumstances it was well that the corps in Natal had at its head two such experienced and able officers as Colonels T. J. Gallwey and W. B. Allin. They have met the emergency with such energy and resource that all difficulties are rapidly disappearing and it is confidently expected that in a few days the medical arrangements will again be working with their original ease and smoothness. None, however, who are not on the spot can realise the difficulties which the Royal Medical Corps have had to contend with owing to reduced establishments and limited accommodation. For years past the pruning hook has been vigorously applied to the Corps. Under its use the strength of both officers and men has been reduced to such a degree that before the war commenced the establishment was insufficient to perform the duties which devolved upon it even in times of peace. The deficiency has, of course, been made up by employing civilians, but the great drawback to this system is that there is no reserve of trained officers and men to meet the numerous casualties which have already occurred. At the present moment there is not a single field hospital in Natal which has its full complement of officers and men, most of them having lost from 20 to 40 per cent. of their establishment from sickness and other casualties. The Medical is the only unit which has to work under such a disadvantage. Regimental casualties are made up as rapidly as possible by drafts from England. The Royal Medical Corps, however, having no reserve to fall back upon, cannot be dealt with in this way.

Several changes in the distribution of field hospitals have recently taken place. The Fifth and Sixth Brigades, which now form the Tenth Division, have gone round to the Cape to join the force under Lord Roberts. At the time of their departure their field hospitals were so full of sick that they could not move. They had, therefore, to be left behind. The Fifth Brigade Field Hospital under Major G. H. Younge, which has been present at each of Sir Redvers Buller's battles, has joined the newly-formed Eighth Brigade, so that it will no longer be known by its original number. As the Fifth Brigade Field Hospital I hear that this unit has treated over 1,000 cases of gunshot wounds and about an equal number of sick, which is probably a record in field hospital work. The Sixth Brigade Field Hospital, under Major C. W. Thiele, has joined the Seventh Brigade.

CONTAGIOUS DISEASES.

The present campaign has once more brought to the front the question of contagious diseases, and has shown how urgently some stringent measure is needed to check the spread of these diseases in the army. It is only during a campaign that one can fully realise the ravages which result from venereal diseases. Men who are the subjects of constitutional syphilis may continue to perform their routine duties during peace time. Send them on field service, however, and they almost at once break down and develop the worst and most loathsome sequelæ of the disease. Large numbers of these men have reached South Africa only to flood the hospitals and occupy the accommodation which has been prepared for their wounded comrades.

THE estate of the late Dr. William Chapman Grigg, who died at Wynberg of enteric fever, has been proved of the gross value of £84,951 19s. 6d., including personal estate, and the nett value of £44,945 10s. 10d.

SURGICAL NOTES FROM THE MILITARY HOSPITALS IN SOUTH AFRICA.

[FROM OUR SPECIAL WAR CORRESPONDENT.]

Capetown, March 20th, 1900.

SECOND THOUGHTS—(*Continued*).

WOUNDS OF THE THORAX.

THERE is little that calls for remark concerning the surgical treatment of wounds of the thorax. The question of extracting the bullet in some of these cases will be dealt with later on. The ordinary penetrating wound seldom required any operative treatment, unless it were the removal of loose splinters of fractured ribs or sternum. Hæmothorax was a very common sequel. As a rule, the condition subsided spontaneously. Occasionally, if the breathing was much embarrassed, it was thought necessary to aspirate the pleural cavity. This is an unsatisfactory proceeding at the best for hæmothorax, for the rule is a sound one that in dealing with a large effusion of blood it is best to leave it alone if the blood and clot cannot be most thoroughly evacuated, a condition that is seldom possible in hæmothorax. Sometimes the elevation of the temperature led to the suspicion that pus was forming. But the temperature in almost every case of hæmothorax rises two or three degrees above the normal in the early stages, gradually sinking to the level of health in the course of a week or so if the case proceeds favourably.

It may be a mistaken impression, though I think it is one that will subsequently be borne out by the returns, when I say that in the earlier part of the campaign trouble but seldom followed those aspirating or exploratory punctures, whereas later on empyema which was not revealed by the puncture occasionally followed. Certainly in the later stages of the campaign, in the months of February and March for instance, and in the more trying, damp, and enervating climate of Natal, cases of empyema occurred with more frequency, wholly apart from any accidental infection other than that of the original wound. These were treated in the ordinary way, a portion of rib usually being removed. A case of suppurating pericarditis, the collection of pus being very extensive, was also, I understand (for I did not see this patient), treated with success by simple incision.

WOUNDS OF THE HEART.

While on the topic of thoracic wounds, mention may be made of injuries of the heart. Judging by the wounds of entrance and exit, and the direction, there seemed little or no doubt that recovery took place in some cases in which the heart was wounded. There is, of course, nothing very novel or surprising in such cases, and no very profound disturbance need be anticipated from a small, clean bullet passing at high velocity through the muscular substance of this organ. In one case, at least, in which the bullet passed through the cavity the effect was not immediately fatal, the patient surviving for a week or two. The diagnosis of heart wound was verified, but unfortunately I am unable at present to furnish precise details; I trust they may be forthcoming.

EMPYEMA.

The cases of empyema did well for the most part, the progress in the men being more like that seen in children. There was, however, a tendency (possibly the criticism is prompted by prejudice) to the overuse of drainage tubes, a tendency that might be defended as regards cases of empyema, but was decidedly well-founded, as a general rule, with respect to deep suppuration. Over and over again cases were met with in which convalescence was retarded and not promoted by the routine employment of drainage tubing. The best surgical practice has been modified considerably (and with great advantage to the patient) in this detail of late years, and it seemed rather an anachronism to find in some of the wards that almost every opening that could accommodate a tube had got one in it. Few surgeons now, I imagine, in our civil hospitals think it necessary to put a drainage tube as a routine practice into an amputation. Such wounds out here are more favoured in the matter of healing than at home, but they were seldom allowed the chance of healing absolutely throughout by immediate union. In the same way the practice, too often followed, of stuffing gauze into any

form of what German surgeons call "cavernous" wounds was far too frequent. It is difficult, as a rule, to get a satisfactory explanation of the benefit supposed to be derived from this procedure. The removal of the gauze twenty-four or forty-eight hours later, when firmly adherent to the walls of the cavity, is painful and liable to start fresh bleeding, or lead to effusion of lymph—an even better pabulum than blood clot for the cultivation of toxic organisms, and when removed the walls of the cavity remain rigid, and the wound, which, after the evacuation of the pus, the removal of the sequestrum or what not, might have fallen together naturally and closed quickly, is left gaping and open.

Head Injuries.

With regard to the surgical treatment of head injuries, little need be added to what has already been said on the subject. There is little or no divergence of opinion. In the great majority of cases operation was advisable, and in a large proportion was imperatively called for. In none, perhaps, was trephining more urgently indicated than in the "gutter fractures"—injuries which, though apparently slight as regards the skull, and not seemingly involving the contents of the cranium nor setting up at the outset cerebral symptoms, yet demanded early and free exploration. The extent to which the inner table was usually broken up in these cases was very striking, and it seldom happened thas some of the sharp fragments were not found sticking in the dura mater or penetrating this membrane and wounding the brain substance.

In one such case in which the gutter fracture was slight and the scalp wound had healed readily trephining was, most properly, performed. A crown of bone was removed not involving the whole thickness of the skull. It was then found that a piece of the inner table and part of the diploe of an oval shape was entirely detached and lay loose in the dura mater. The loose fragment was so much larger than the trephine opening that a second crown had to be removed before the separated fragment could be cut up and removed.

Often the fracture of the inner table was so extensive that the whole of the fragments were not revealed and removed at the first operation, and it was only at a later stage, when symptoms indicative of meningeal or cerebral irritation had begun, that further investigation was undertaken.

The peculiarities of these gutter fractures are, of course, familiar enough to all who have studied this subject of gunshot wounds of the head. But it is as well to emphasise the fact that the injury to the internal table is even more marked in wounds caused by modern rifle bullets than with the older weapons, while the scalp wound heals so readily that the significance of the case might the more easily be overlooked.

In not a few instances permission to operate was refused. These cases were instructive. In several of them all went on perfectly well for a greater or less length of time. Then, especially if the men were exposed to the sun, symptoms gradually began, such as persistent headache or mental disturbance. Typical instances of sunstroke are not very common, either on the high veld or in the more moist and closer atmosphere of Natal. Heat-stroke, associated with abdominal symptoms, loss of appetite, raising of temperature, and great prostration is a much more common trouble in Natal. But the troubles that were exceedingly prone to follow exposure to even a mild sun in cases of recent head injury of all kinds were exactly of the nature that those familiar with sunstroke in tropical climates would expect, such as severe headache coming on in the evening or late at night, increase of temperature, delirium, and so forth.

In perforating wounds of the cranium trephining was constantly called for, and it was but seldom that the operation failed to be fully justified. When the direction of the bullet was oblique the breaking up of the skull was likely to be extensive, and the free removal of fragments was remarkably successful. Whether extruded portions of brain tissue were cut away or not, the patients usually did remarkably well, and in the good air—and the abundance of good air—there was very little tendency to hernia cerebri or to septic complications.

There is no need to dwell at any length on the operative treatment of the head injuries met with, for the chief interest of these cases is really not surgical at all.

Yet it is well to point out here again that the unquestionably good results were not solely due to the "humane" small-bore bullets and not entirely to be accounted for by the perfection of the asepticity preserved either in the operating theatres or during the dressings in the wards, but were in great measure to be ascribed to the fact that the cases were treated throughout in an atmosphere that was practically sterile as regards the graver forms of toxic organisms. In a war conducted in a country favoured by less advantageous climatic conditions, while the surgical practice would not alter and might even in its operative aspect be extended—and amended—with advantage, the results would, almost certainly, not be so good. Unless the enormous extent to which the purity of the atmosphere has favoured the surgical practice in South Africa is fully recognised we shall really be entering into a fool's paradise, and if, surgically, we are still abiding there when military hospitals are next needed in the field disaster will follow.

Surgical Instruments Supplied to Hospitals.

It may not be out of place to mention here that the number of trephinings and head operations did not appear to have been contemplated by those who were responsible for the selection of the instruments in the regulation cases. The stock of instruments, indeed, was as a rule meagre, and the variety by no means abundant. The quality may have been good enough, and no blame attaches to the makers for supplying what was ordered. But it was hard on the surgeon to compel him to work with an equipment which fell far short of the standard that should be aimed at in a modern operating theatre, and it was by no means to the advantage of the patient. The deficiencies were especially marked in the list of instruments for cranial surgery. For instance, the specially tempered bone-cutting forceps adapted for enlarging a trephine opening were seldom to be seen in the theatre cases unless supplied by the medical officers themselves. Trephines of large diameter were not to be seen. Useful instruments such as Hoffmann's bone-cutting pliers were not available. The regulation cases contained no sharp spoons for scraping out cavities. On the other hand, the larger sizes of amputating knives, prodigious in weight and portentous in length, were supplied almost in profusion. But the trephines were worn out by fair wear and tear, while the long knives were not even once taken out of the boxes. The methods of amputating high up the thigh or at the hip joint have altered of late; but the outfit remains the same. Surgeons are not likely to revert to the operation by transfixion at the hip-joint any more than they are likely to depend on a Nélaton's probe for detecting a bullet when *x* rays are available, and when, it may be added, the bullet is in all probability nickel sheathed. Yet the ingenious porcelain-ended probe is still to be met with. It is true that on the proper requisition being made any special instrument will ultimately be provided, or societies like the Red Cross Society will supply at short notice what is needed. But nevertheless the indifferent equipment of the instrument cases strikes the onlooker unfavourably, and seems the more singular when the costly surgical dressings are given out in such a lavish manner. The judicious supply often for themselves many of the instruments they want.

Amputations.

As might be expected, from what has already been said on the general nature of the bullet wounds and the ready healing, amputation has probably been far less frequently resorted to than in previous campaigns. Conservative surgery has indeed, and very properly, been carried far. When a limb has been completely smashed up by a shell, large or small, amputation of course has been necessary. Wounds from expanding bullets of various types may have led to injuries demanding similar treatment; but though it is beyond all question that divers bullets forbidden in civilised war have been used against our men, the extent to which these improper methods have been adopted is not very great, and has, as is not surprising, been very much exaggerated. Possibly, too, they were less used in Natal than in the western seat of war. The unauthorised bullets, at any rate, if they were employed extensively, found their billets for the most part elsewhere than in the objects at which they were presumably aimed. The number of limbs condemned to primary amputation will, it will be found, work out

to a small proportion, while the number of limbs in which the idea of amputation must have been seriously entertained, but which yet were ultimately saved, was certainly unusually large.

In the early part of the campaign amputation for septic complications following compound fractures was rarely necessary. Even when cases were admitted into the base hospitals with free suppuration the trouble generally subsided. But the unpleasant truth must be told that sepsis has been of late much more common among this class of case. Into the causes I need not now enter, being for the moment more concerned with the operations practised than the conditions for which they were performed.

AMPUTATIONS OF THE LOWER LIMB.

In a certain number of cases—probably not very large—Syme's amputation was practised. This operation does not appear to me to be very suitable for traumatic cases, and the resulting stumps were not, invariably, all that could be desired. The condition of the foot in these traumatic cases, and of the tissues about the heel from which the main flap is formed, were very different from those met with in tuberculous disease of the tarsus, which is, I imagine, by far the most common condition for which Syme's amputation is practised. Sloughing of the flap sometimes occurred, necessitating amputation higher up. It may not be, perhaps, too invidious to remark that the success of a Syme's amputation depends perhaps more than that of any other on attention to very careful detail in the matter of operating on the part of the surgeon. The personal equation, in short, counts for much. I saw no instance in which subastragaloid amputation was practised, though in not a few cases it appeared to me that this admirable operation might very properly have been employed. There is decidedly less demand made on the vitality of the tissues in subastragaloid amputation than in Syme's method, while the additional inch and a-half or so that is gained by preserving the astragalus is a very great boon to the patient. Moreover, subastragaloid amputation can be performed in various ways, all of which seem to give equally good results, whereas in Syme's method it is really impossible to depart from the lines laid down by Syme himself in fashioning the flaps. English surgeons, generally speaking, appeared to me to be rather too limited in their methods of operating on the foot, and they have a good deal to learn from their French colleagues, who have done much in this branch of operative surgery.

Most of the amputations of the leg that I saw were in the upper third of the leg, or at the seat of election, and were performed for fractures that had done badly or were extensively comminuted. Some of these wounds were due probably to expanding bullets, but many to shell wounds. The "pom-pom" shell is extremely destructive to the limb, and there is little chance of saving a leg that has been at all badly hit by one of these dreaded missiles. In not a few instances amputation at the seat of election was performed by lateral flaps. I do not recall any very satisfactory stumps obtained by this method, which appears to me to have very little to recommend it. The best stumps that I saw were those made after Farabœuf's method, though of course the cases in which this operation can be adopted were not very numerous. Amputation through the knee-joint may have been performed pretty frequently, but I cannot recall a single case that came under my notice.

In one instance in which Sir William Stokes amputated through the condyles of the femur by his own method a very admirable stump resulted. This patient had a compound fracture of the leg. The bone was extensively splintered, exposed, and necrosing; the patient was losing ground fast from profuse suppuration. Although the tissues were œdematous above the level of the knee, the stump healed kindly and gave no trouble at all.

Of amputations of the thigh there is little to be said. Removal of the limb high up or at the actual hip-joint must still be regarded in military surgery as a very formidable proceeding indeed, though it must certainly nowadays be included in the list of justifiable operations. The extreme obliquity of the fractures and the extensive splintering of the bone so often caused by the Mauser bullet, even when it does not strike the shaft of a bone like the femur obliquely, made these amputations high up very serious, for after the limb was removed it often became necessary to dissect out large loose pieces of bone, thus prolonging the operation.

AMPUTATIONS OF THE UPPER LIMB.

There is very little to say about amputations of the upper extremity, and all that I saw did as well as might have been expected. As usually happens in the case of amputations for gunshot wounds, minor troubles such as neuralgia of the stump, painful twitching, and the like were rather common.

EXCISIONS.

Excisions were very rarely performed save of separate bones, as of the tarsus or carpus. In a good many instances the propriety of excising the elbow-joint was discussed, but the advice generally given was to leave these patients alone. The elbow-joint itself very rarely ankylosed, even when it had been traversed by bullets, and the stiffness was generally due to fracture of the ends of the bone in the neighbourhood of the joint and the extensive throwing out of callus. It seemed possible that some of these cases would improve greatly in the course of time. No doubt many of them will be seen in our hospitals at home.

In one case that I saw arthrectomy was performed and with a very successful result. The patient had a wound in the head of the tibia, probably from a shrapnel bullet. Suppuration occurred in the head of the tibia and communicated through a small opening with the knee-joint. The whole joint was freely laid open by a transverse incision through the patellar ligament and the synovial membrane, which was much thickened and inflamed, was dissected away most successfully and thoroughly. This patient was at No 4 General Hospital at Mooi River, and therefore under very favourable climatic conditions. I heard of him some weeks after and the wound was reported to be then nearly healed. It seemed possible even that the man might regain some amount of mobility in the knee-joint. In a case such as this the limb would certainly have been sacrificed by most military surgeons in former times, and indeed there were some who counselled this proceeding at the time of the operation. Formal excision of the knee-joint was also suggested, but the objection to this lay in the fact that the head of the tibia was extensively damaged, and a large slice of bone would have had to be removed before two healthy bone surfaces could have been brought together.

CLINTON T. DENT.

THE USE OF EXPLOSIVE BULLETS BY THE BOERS.

MR. H. BRAXTON HICKS (Lymington, Hants) writes: I notice that Mr. Clinton Dent states that there have been no really explosive bullets used on either side in the present war. I beg to state that in our sorties outside Kimberley we have not only picked up one here and there but bandoliers full of bullets, with a cap of fulminate of mercury let into a small hollow on the nose of the bullet (Mauser's). I have only just returned invalided from there, where I served during the whole siege, so I speak as one who knows and has seen, and not by mere hearsay reports. The bullet that killed Colonel Scott-Turner was evidently one of those, as his head was fearfully torn about, more than an ordinary bullet would do of the ordinary Mauser make; and I heard no Martini bullets where I was, and I was in the same alignment as the colonel.

GALLANTRY OF OFFICERS OF THE R.A.M.C.

MAJOR SUTTON, R.A.M.C.

MAJOR DENHAM F. FRANKLIN, R.A.M.C., of Field Hospital 14th Brigade South Africa Field Force, Orange Free State, writes: Amongst the numerous cases of devotion to duty which has been noticed in the press amongst the officers of the R.A.M.C., I have not seen the name of Major Sutton, R.A.M.C., mentioned. In charge of the Lincoln Regiment at Paardeberg this most popular officer was shot through the thigh, the bone just escaping. He was in the act of attending a wounded man when he himself was shot, and gallantly and unflinchingly he proceeded with his work as if nothing had occurred. Knowing his services were needed during the active operations at Paardeberg, he declined to come to hospital until matters had quieted down, and only then did he come in though he had been pressed to do so at once. As Major Sutton is naturally disinclined to make anything of his wound, it is only fair for others to notice his gallantry.

LIEUTENANT H. B. ONRAET, R.A.M.C.

A CORRESPONDENT in Ladysmith has sent us the following particulars of the death of Lieutenant H. B. Onraet, R.A.M.C., of whom an obituary notice was published in the BRITISH MEDICAL JOURNAL of March 10th, p. 605: Lieutenant H. B. Onraet, R.A.M.C., was shot dead by a Mauser bullet through the head at Pieters Hill on February 27th, on the last day of the fight in the relief of Ladysmith. He was attending the wounded right in the middle of the field where the fight was thickest,

and where there was no shelter. He had been dressing the wounds of a number of Royal Scots Fusiliers, and when shot was kneeling down attending a wounded man. He was much liked by the officers and men of the Royal Scots Fusiliers, to which he was attached. He was buried on the next day in the same grave with three other officers of the regiment. General Barton and all available officers of the Sixth Brigade attended the funeral, while the pipers of the regiment played a lament. His grave is on a pretty spot between two trees, on one of which the names of the four officers have been cut, to mark the site for a permanent tombstone. In another grave near the spot lie the men of the regiment who were killed on February 27th.

THE R.A.M.C. SOUTH AFRICA FUND.

THE HALF-CROWN SUBSCRIPTION LIST.

THE following additional subscriptions to the Half-Crown Fund have been received down to and including May 23rd since our last list:

	Half-Crowns
Mr. G. A. Phillips (Walsall) ...	2
Inspector-General H. Macdonnell, C.B., R.N., retired (Southsea)	2
E. F. A.	4
Surgeon S. Osborn (Boshof, South Africa)	8
Dr. Cochrane (London)	1
Mr. E. Bartlett (London) ...	2
Per Mr. T. Vincent Jackson (Wolverhampton):	
Dr. Morton (Wolverhampton)	1
Per Brigade-Surgeon-Lieutenant-Colonel Maconachie (Aberdeen):	
Mr. A. Milne	3
Per Dr. E. A. Fox (Warrington):	
Dr. Naden	1
Per Dr. F. H. Tinker (Hyde):	
Dr. Beecroft (Hyde)	1
Dr. Bennett ,, ...	1
Dr. Daniels ,, ...	1
Dr. Howard ,, ...	1
Dr. Infield ,, ...	1
Dr. Kisby ,, ...	1
Dr. Robey ,, ...	1
Dr. Scott ,, ...	1
Dr. Smith ,, ...	1
Dr. Tinker ,, ...	1
Dr. Wallwork ,, ...	1
Dr. J. A. Watts ,, ...	1
Dr. T. Watts ,, ...	1
Per Dr. J. Harper (London):	
Dr. E. Baker ,, ...	2

The amount received for the Half-Crown Fund, down to and including Wednesday, May 23rd, by the Editor, is £549 5s. 9d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

THE CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION, BIRMINGHAM.

AT length, under the above title, the Birmingham Consulting Institute has been launched by the issue of a lithographed circular, a pamphlet, and a large advertising card to the various factories and firms in Birmingham.

The circular is as follows:

THE CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION, BIRMINGHAM.

COMMITTEE.

Chairman: ARTHUR CHAMBERLAIN, J.P.

J. S. NETTLEFOLD, J.P. — GEORGE HOOKHAM, J.P.
Alderman COOK, J.P. — W. T. SMEDLEY.
JOHN BEDFORD. — GEORGE COWLEY.
H. A. GARNER. — J. L. TOUGH.

Honorary Secretary:
W. S. ASTON.

Offices: Newhall Street, Birmingham.
April 27th, 1900.

Dear Sir,—I am pleased to inform you that the Committee have completed the preliminary arrangements and that this Institution will begin operations on Monday, the 21st May, when Dr. Ward Irvine will be in attendance to patients requiring medical advice.

First class consulting rooms have been taken on the ground floor of Cornwall Buildings, Newhall Street, where patients should attend between the hours specified on the notice which I am sending you herewith.

As a great deal of interest is being taken in the founding of this Institution, the establishment of which it is believed will supply a very general and long-felt want in the city, may I ask you to be good enough to display the enclosed bills in prominent places in your establishment and also hand the enclosed pamphlets to those employés of your firm who are most likely to take an interest in the matter, and if further copies are required I shall be glad to forward same to you upon hearing from you.

Yours truly,
(Signed) W. S. ASTON,
Honorary Secretary.

The "enclosed bill" is a card which measures 22 by 14 inches, and is supplied with a string by which it is evidently intended to be hung upon the walls of the factories and offices in Birmingham.

THE CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION, BIRMINGHAM.

OBJECTS:

To lessen the strain upon Hospital Charity by providing, on terms within and under conditions suitable to their pecuniary means and positions, Medical and Surgical Aid to those who would otherwise seek it gratuitously or be unduly taxed by paying the usual consultation fees.

COMMITTEE:

Chairman: ARTHUR CHAMBERLAIN, J.P.
JOHN BEDFORD, ALDERMAN COOK, J.P., GEO. COWLEY,
H. A. GARNER, GEO. HOOKHAM, J.P., J. S. NETTLEFOLD, J.P.,
W. T. SMEDLEY, J. L. TOUGH.

Consulting Physician:
HENRY WARD IRVINE, M.D., B.A., B.Ch.

Consulting Rooms:
Cornwall Buildings, Newhall Street.

THIS INSTITUTION WILL BE OPENED
ON
Monday, May 21st, 1900.

Consulting Hours:
10 A.M. to 12 noon, 1 P.M. to 4 P.M., and 6 P.M. to 8 P.M.
Saturdays: 10 A.M. to 12 noon, 1 P.M. to 4 P.M. only.
Sundays: No attendance.

There will be a uniform
CONSULTING FEE OF HALF-A-GUINEA.

Further information can be obtained from the
Honorary Secretary: W. S. ASTON, Newhall Street, Birmingham.

In addition displayed advertisements have appeared in the *Birmingham Daily Post* and *Birmingham Daily Gazette*. In the former, by the way, the advertisement stands immediately over that of a "Polypathic Medical Institute."

There can be therefore no doubt, as was long ago foreseen, that the promoters intend to puff their enterprise by the boldest advertisement.

We commend this matter to the notice of the General Medical Council, which has already issued a warning respecting the methods by which medical aid societies seek to gain practice at the expense of the rest of the profession.

THE MIDWIVES BILL.

DR. SIDNEY DAVIES, Honorary Secretary of the Woolwich, Plumstead, and Charlton Medical Union, desires to state that at the meeting on May 16th it was resolved:

That this meeting disapproves of the Midwives Bill now before Parliament.

A correspondent sends us the following copy of a letter which he has addressed to the M.P. for his district. He thinks it may serve as an outline for others contemplating a similar course of action:

[Copy.]

Dear Sir,—It is with the concurrence of every medical practitioner in X. that I venture to address you on the subject of the Midwives Bill.

The medical profession has accepted the principle of a Bill for the registration of midwives and for the regulation of their practice, never doubting that due weight would be attached to the opinion of the profession in the framing of the various clauses. But the Lord President has declined to receive a deputation representing the medical profession, although he has received a deputation from the promoters of the Bill. In the Standing Committee on Law the amendments proposed at the instigation of the Council of the British Medical Association have been rejected. The Bill in its present form has not the confidence of the medical profession. Medical men are forbidden to employ an assistant to practise midwifery unless he be fully qualified in medicine, surgery, and midwifery.

The Bill creates an inferior order of practitioners of very inferior training, and of one sex only, and allows them to practise without sufficient restrictions and penalties. I do not wish to burden you with details, but I send you a page—1189-90—from the BRITISH MEDICAL JOURNAL. The opinion of the medical members of Parliament will be found pretty unanimous, and I ask, on behalf of X., that you will so far as you can support any amendments and opinions they may express in the House of Commons.

I am, dear Sir, etc.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE election of President, Vice-President, and Council of the Royal College of Surgeons in Ireland, which takes place on Monday, June 4th, will be productive of an extraordinary amount of interest.

For the Presidency there are two candidates in the field, Mr. Thomas Myles, who secured the Vice-Presidency in 1898 by a majority of six votes over Mr. C. B. Ball, the Regius Professor of Surgery in the University of Dublin, and Mr. Henry

Fitzgibbon, who has been a Member of Council for nineteen years, and was President of the College in 1888. Mr. Fitzgibbon has at the last moment involved Mr. Myles in an unusual contest, and announces as his sole reason for so doing that Mr. Myles has allowed a public announcement to be made at a meeting of the United Irish League in Limerick to the effect that he intends in June next, as President of the Royal College of Surgeons, to receive the Freedom of the City of Limerick from the Mayor and Corporation, who propose to confer this honour upon him. Mr. Fitzgibbon considers it would be derogatory to the honour and dignity of the College for the President of the College as such to have his name mixed up in party politics.

For the Vice-Presidency two candidates have been long in the field: Mr. F. T. Heuston, Senior Surgeon to Adelaide Hospital, and a member of the Council of the College since 1888; and Mr. L. H. Ormsby, Surgeon to the Meath Hospital, who has held his seat on the Council since 1897.

The election of Mr. Wm. Stoker on the Examining Board, and the candidature of Messrs. Fitzgibbon, Heuston, and Ormsby will leave four vacancies to be filled up on the Council. The outgoing President will succeed to one of these, and the following gentlemen, in addition to the present Councillors, will offer themselves as candidates: Mr. J. D. Hillis, Mr. C. B. Ball, Mr. R. H. Woods, Mr. Graves Stoker, Mr. F. S. Morrison, Mr. T. E. Gordon, and Mr. Conway Dwyer. Sir William Stokes and Sir William Thomson, both of whom are still with the British army in South Africa, will be elected to the Council as a matter of course, but should they fail to take their places on the Council within one month from the date of election, their seats will be declared vacant and a further poll required.

CONTRACT MEDICAL PRACTICE.

THE PUBLIC MEDICAL SERVICE, COVENTRY.

DR. W. RICHARDSON RICE, B.A., M.D., Honorary Secretary Public Medical Service (Coventry) writes: In the interests of reform in medical contract work I desire to lay before the profession some information regarding the work of this organisation. We have just held our eighth annual meeting, and from the facts at our disposal we may claim to have achieved a great measure of success. Started with the object of attacking some of the anomalies of contract societies, and bringing this kind of work as far as possible under professional control, we have succeeded far beyond our original dreams. We have fairly staggered the medical aid societies, and have absorbed into our service the bulk of these patients. Some have absolutely ceased to exist, and the remaining one is officered by a man who is ignored, not being amenable to professional opinion. The abuses of the Coventry Dispensary are somewhat mitigated as a result of our sustained attack, and we still hope for the powerful influence of the Association in urging further reforms. Many problems affecting the profession have attained a certain measure of solution. Our policy has been to a great extent of a constructive nature. It was urged as a possible source of weakness that we did not admit the lay element on our Committee of Management. We have found no difficulty here; the working is smooth with practically no complaints. The competition existing amongst medical men is sufficiently keen to act as a regulating force in this direction. If men neglect their patients a natural consequence follows, and no lay committee seems necessary to manage our affairs, sitting in judgment, and often harassing us with petty tyrannies. Charging higher terms than the dispensary, we have on our lists the bulk of the mechanical labourers. We have now on our books 8,886 names; our receipts last year amounted to £1,818 0s. 7d. The increase in our collection over previous year was £200 5s., which compares well with the report of the dispensary, which announces an increase only of £75. The Coventry Public Medical Service stands prominent as an object lesson to practitioners, and other towns are adopting a similar plan. We have proved by experience that practitioners by combination can get a fair measure of control over their own work. Such a course must give them a greater dignity in the eyes of the public. There will not be the same necessity to place themselves under the control of laymen, who have a contempt for professional combinations, and whose institutions largely depend for their success on the existence of an overstocked medical market.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.—The annual meeting of this District for the election of officers will be held at the Royal Forest Hotel, Chingford, on Thursday, May 31st, at 6 P.M. At 6.30 P.M. the members will dine together. Tickets 7s. 6d., exclusive of wine. Morning dress. Members intending to be present and to introduce friends are requested to inform the Honorary Secretary on or before Saturday, May 26th.—C. J. MORTON, 56, Orford Road, Walthamstow, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH: WEST LONDON DISTRICT.—A meeting of this District for the election of officers, namely, Vice-President, Member of Council, Honorary Secretary, and District Committee will be held at 26, Colville Square, W. (by kind permission of the Vice-President, Dr. Pickett), on Tuesday, May 29th, at 5.30 P.M. The report to the Council of the Branch will be read.—THOMAS DUTTON, M.D., 13, Holland Park Avenue, W., Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—The annual general meeting of this Branch will be held at the Hotel Cecil on Tuesday, June 19th, at 6 P.M., when the report of the retiring Council and of the Treasurer will be received, and an address delivered by the incoming President, Mr. George Eastes. At 7 P.M. the members will dine together, the President being in the chair.—H. BETHAM ROBINSON, M.S., 1, Upper Wimpole Street, GEORGE ROWELL, 6, Cavendish Place (*pro tem.*), Honorary Secretaries.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.—The next meeting of this District will be held at the Worthing Infirmary on Saturday, May 26th, at 4.30 P.M. Mr. G. B. Collet (Worthing) will preside. Dinner at the Royal Hotel at 6.30 P.M.; charge, 6s. Agenda: To decide place of next meeting, and to elect a chairman to preside thereat; to elect an honorary secretary. Papers:—Professor H. R. Spencer (London): On the Diagnosis of Pregnancy—a lantern demonstration. Mr. Milbank-Smith (Worthing): The Advisability of Circumcision, with a note on the operation. Members having communications to make, or specimens or cases to bring forward, are requested to give notice to FRANK HINDS, M.D., 14, The Steyne, Worthing, Honorary Secretar

STAFFORDSHIRE BRANCH.—The third general meeting of the session will be held at the Victoria Hotel, Wolverhampton, on Thursday, May 31st. The President, Dr. Spence, will take the chair at 4.30 P.M. Agenda: Ballot for New Members; Correspondence; Exhibition of Living Cases. Papers:—Dr. McAldowie: Notes on Forty-two Cases of Inoculation for Typhoid Fever. Dr. Malet: Remarks on Some Cases where Hypodermic Treatment is Necessary. Dr. Codd: Exhibition of Local Electric Bath. Pathological Specimens, etc.—F. MILNES BLUMER, Stafford, Honorary Secretary.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—The annual meeting will be held at the Medical Institute, Edmund Street, Birmingham, on Thursday, June 21st, at 4 P.M. An address will be given by Dr. Milner Moore, President-elect. The annual dinner will take place at the Grand Hotel, Colmore Row, at 6.30 P.M.—WILLIAM F. HASLAM and J. T. J. MORRISON, Honorary Secretaries.

SOUTH-WESTERN BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 20th, in the Museum of the Torquay Natural History Society, Babbacombe Road, Torquay, at 3 P.M., when Dr. Jackson will resign the chair to Mr. Karkeek, who will deliver an inaugural address. The Branch Council will meet at 2 P.M., and will afterwards present their annual report to the meeting. Mr. George Jackson will ask the opinion of the meeting as to the desirability of transacting business, especially in matters of interest to the profession at large (not for the reading of papers on medical or surgical topics or showing cases or specimens) at the annual meeting. In the event of the meeting agreeing to that arrangement, it will be asked to sanction a special meeting in order to alter the by-laws to give effect to the same. A communication from the General Secretary of the Association with reference to the Midwives Bill, at present before Parliament, will be read. Luncheon, by kind invitation of the President-elect, will be held at 1 P.M. at the Museum, and the annual dinner will take place at the Bath Saloon at 6.30 P.M. Tickets (exclusive of wine), 6s. After the meeting tea will be served in the Museum. On Thursday, June 21st, the Torquay members have kindly arranged an excursion by sea to Dartmouth, up the river Dart to Totnes, at which place luncheon will be held, and by coach from there to Berry Pomeroy Castle, and home. The Honorary Secretary will be glad if members will inform him, on or before June 16th, whether they will be present at (1) the dinner, (2) the excursion, so that further arrangements may be made.—H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

EDINBURGH (LOTHIANS AND FIFE) BRANCH.—The twenty-fifth annual meeting of this Branch will be held in the Hall of the Royal College of Physicians, 9, Queen Street, Edinburgh, on Tuesday, June 5th, at 4.30 P.M. —JAMES HODSDON, 6, Chester Square, Edinburgh, R. W. PHILIP, 4, Charlotte Square, Edinburgh, Honorary Secretaries.

BATH AND BRISTOL BRANCH.—The seventh ordinary meeting of the session will be held at the Medical Library, University College, Bristol, on Wednesday, May 30th, at 7.30 P.M., A. J. Harrison, M.B., President. The following communications are expected:—Dr. H. Waldo: Is Bright's Disease Curable? Mr. E. W. H. Groves: Case of Stenosis of the Small Intestine in an Infant; with specimen. Dr. H. S. Ballance: Accidental

Swallowing of a Needle; removal by Laparotomy. Dr. H. Elwin Harris: Derangement of Deglutition (? functional) in a child aged 15 months; case to be shown. Dr. P. Watson Williams: (1) Illustrations of Koplik's Spots; (2) Case of Hypochondriasis with Agoraphobia; to be shown. Dr. J. Michell Clarke: (1) Erb's Juvenile Dystrophy in a boy (case to be shown); (2) Case of recovery from Malignant Endocarditis under use of Antistreptococcus Serum.—J. MICHELL CLARKE, Clifton. W. M. BEAUMONT, Bath, Honorary Secretaries.

SOUTH MIDLAND BRANCH.—The forty-fifth annual meeting of this Branch will be held at Wolverton on Thursday, June 14th, under the presidency of Dr. Symington. Gentlemen wishing to bring forward papers on cases are requested to communicate with the Hon. Secretary without delay. The following papers have been promised:—Mr. Percival: A few Cases of Abdominal Operations. Mr. Nash: A Case of Pancreatic Cyst in a Child, treated by drainage. Specimens: (1) A multilocular cyst of paradidymis and loose body from tunica vaginalis; (2) fragments of renal growth passed in the urine. Mr. Hailey: The Provision of Isolation Hospitals to Rural Districts. The following gentlemen will be proposed as new members of the Branch: C. H. Miles (Stantonbury), E. Sexton (Bedford), Chas. H. Perram (Bedford), E. P. Norman (Yardley Hastings), Arthur D. Hughes (Dunstable), A. H. Collins (Riseley), A. A. Hope (Byfield); Geo. Kimball Jones (Northampton). It is hoped that time will allow of a visit by the members to the London and North-Western Carriage Works.—C. J. EVANS, Northampton, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of this Branch will take place at the General Hospital, Nottingham, on Thursday, June 14th, at 2.15 P.M. Agenda: Minutes. Report of Branch Council. Election of representatives of Branch on General Council. Election of representatives of Branch on Parliamentary Bills Committee. Election of Branch Council and officers. Election of President-elect for 1900-1901. President's address. The following cases will be shown and papers read:—Mr. C. J. Bond: Two Cases of Spina Bifida, treated by Excision. Dr. G. Lorimer: Some Observations on Gonorrhœal Rheumatism. Dr. E. Mansel Sympson: A Case of Recto-vesical Fistula in a boy 5 years old, with Colotomy Operation. Dr. Pope and Dr. Astley Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks on the possible Connection of the Two Diseases. Dr. H. Handford: Three Cases of Cerebro-spinal Meningitis. Dr. W. B. Ransom: Notes on, and Specimens of, a Case of Syringomyelia. Dr. H. Michie: Intestinal Resection for Cancer. Members are requested to bring cases and specimens for exhibition. Luncheon will be provided by the President-elect at the Albert Hotel, Derby Road, at 12.45 P.M. The annual dinner will take place at the same hotel at 6 P.M.; price 7s. 6d., exclusive of wine.—FRANK M. POPE, 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.—A meeting of this District will be held at 5, Pembroke Road, Portsmouth, on Tuesday, May 29th, at 9 P.M., when Mr. C. P. Childe will read a paper on Some Gynæcological Cases, with specimens.—J. G. BLACKMAN, Poplar House, Kingston Crescent, Portsmouth, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

A MEETING of this Branch was held in Aberdeen on May 16th, Professor FINLAY in the Chair.

Confirmation of Minutes.—The minutes of last meeting were read and confirmed.

Summer Meeting.—The Council reported that it had been arranged to hold the summer meeting at Cruden Bay on Tuesday, June 19th.

Congress of Royal Institute of Public Health.—The following gentlemen were appointed delegates to the Congress of the Royal Institute of Public Health to be held in Aberdeen in August: Dr. J. O. Wilson, Dr. Scott Riddell, Dr. George Williamson, Dr. Edmond, and Dr. Thomas Milne.

Communications.—Dr. ASHLEY MACINTOSH read notes on cases of disseminated sclerosis.—Dr. RIDDELL showed a boy who had been shot ten days before, a revolver bullet passing from the front of his left ear through both upper jaws, and removed from the antrum of the right upper jaw after it had been localised by skiagraphy.—Dr. LEVACK read notes on treatment by the electric bath. He described the methods employed, and mentioned the diseases most likely to be benefited by this treatment.—Dr. MCKERRON read a paper on, and cited cases of, obstruction of labour by the shoulders.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE last meeting of the session was held at the London Temperance Hospital on May 16th, Dr. MORTON in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Election of Officers.—The officers for the next session were elected as follows: *Vice-President:* Dr. Hooper May; *Representative on Branch Council:* Dr. H. J. Macevoy; *Honorary Secretary:* Dr. Dysart McCaw: *District Committee:* Drs. and Messrs. Cubitt Lucey, A. W. George, A. Greenwood, Winslow Hall, H. J. Macevoy, T. Morton, Wynn Westcott, and Hugh Woods.

Occupation Neuroses.—Dr. T. D. SAVILL opened a discussion on occupation neuroses, and exhibited cases. He dwelt upon the frequently curable nature of these cases. The following cases were shown:

(1) A man with scissors palsy, who for a year had weakness of the right hand, especially involving the thumb. There was marked emaciation of the thenar eminence, with numbness, and diminished faradic contractility. Continuity of action in repeated movements was the important factor rather than force of movement in such cases in bringing about palsy. (2) A woman, aged 28, with machinists' tremor and palsy. Her right hand had been weak for fifteen months. There was wasting of the ulnar muscles of the forearm and flexors of the thumb, and tremor of the thumb and two outer fingers. (3) A woman, aged 32, with pianists' cramp. Her right hand was weak for all movements. When beginning to play the piano she noticed forcible flexion of the middle finger and extension of the index finger. These three cases were advanced cases, and therefore obstinate to cure. (4) A woman, aged 27, with telegraphists' cramp, especially involving the right shoulder-muscles. The right arm is weak.

The prognosis in these cases depended on many circumstances, such as duration of the affection, heredity, general health. When paralysis was present the case was more severe than when there was only cramp or spasm. Wasting was a bad sign. As regards treatment, Dr. Savill attached importance to rest, good feeding, sedatives, and galvanism. Cod-liver oil proved very useful in his hands; strychnine apparently did no good. Bromides, hyoscyamus, and chloral were the most suitable sedatives. There was a discussion, in which the CHAIRMAN and others took part.

Votes of Thanks.—Votes of thanks were passed to Dr. Savill for his interesting paper, and for his kindness in bringing forward his cases, and to the hospital authorities for their kind hospitality.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE annual meeting of this District was held at Bethlem Royal Hospital on May 17th, Mr. CHARLES SANGSTER in the chair.

Election of Officers.—Vice-President of District: Mr. Charles Sangster. *Representative on Council of the Branch:* Dr. J. W. J. Oswald. *Honorary Secretary:* Dr. Maurice Craig. *Committee:* Dr. J. H. Bryant, Mr. R. Capes, Dr. Cooper Cripps, Dr. Durno, Dr. Theo. Hyslop, Dr. Quarry, Mr. H. Taylor, Mr. Bramley Taylor.

Communications.—Dr. SAVAGE read a paper on Cases of Unsoundness of Mind not Certifiably Insane. He pointed out that there were a number of persons who were mentally unsound but who could not be classed as lunatics, and who could be treated equally well although still retaining their liberty. Dr. BEEVOR, Dr. MAURICE CRAIG, and Dr. H. CORNER joined in the discussion which followed.

Cases.—Cases of clinical interest from the wards of the hospital were shown and demonstrated on by members of the staff.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

A MEETING of this District was held at Croydon on May 10th, Dr. JOHN REDFERN of Croydon in the chair.

Confirmation of Minutes.—The minutes of the Upper Norwood meeting were read and confirmed.

Next Meeting.—On the proposition of Dr. OLDMAN, seconded by Mr. MACILWAINE, it was resolved that the next meeting should be held at Reigate on Thursday, October 11th, and that Dr. J. Walters be invited to take the chair.

Communications.—Mr. C. WRAY showed two cases: (1) Glioma of each eye; and (2) new eyelid with almost perfect movement after removal of the upper lid for rodent ulcer.—Dr. JOHN REDFERN showed a case of splenic leukæmia.—Dr. GUSTAVE SCHORSTEIN read a paper, The Treatment of Gastric Ulcer.—Mr. FREDERICK EVE a paper on The Treatment of Hernia in Adults and Children, especially in regard to Radical Cure.—Dr. PHINEAS S. ABRAHAM a paper on the Treatment of Some Common Diseases of the Skin.—Mr. S. W. MACILWAINE a paper on The Future of the Profession and of the Association, which will be published. The discussion on the paper was postponed until the next meeting.—BURROUGHS, WELLCOME and Co. showed some of their recent and improved productions.

Dinner.—After the meeting 22 members and visitors dined together, amongst the latter being the Mayor of Croydon.

BORDER COUNTIES BRANCH.

SECTION FOR THE COUNTIES OF ROXBURGH, BERWICK, SELKIRK, AND PEEBLES.

A MEETING of the Section was held in Earlston, in the residence of Dr. Young, on May 11th, Dr. BLAIR presiding.

Case.—Dr. YOUNG showed three cases of epithelioma of the lip after operation.

The first shown was 83 years of age, operated on twenty years ago. The cure was complete. The second was operated on fifteen years ago; cure also complete. The third was operated on four days ago. Cocaine was used, and the operation was painless. The wound had united completely.

All three were smokers; the last, however, had not smoked for twenty-five years. These cases favoured the view of a local and not a constitutional origin of cancer. A discussion followed, in which Drs. BLAIR, STURROCK, MARR, FLEMING, TYRELL, and CALVERT took part.

Specimens.—Dr. MARR showed a mummified fœtus which came away with the placenta in what otherwise seemed a normal labour. Most probably it was an arrested development at the fifth month of one fœtus in a twin pregnancy. —Dr. CALVERT showed (1) a cartilaginous tumour he had removed from the fauces under cocaine; and (2) a complete ovum at the second month.

Tea.—Dr. and Mrs. YOUNG entertained the members at tea, and their hospitality was much appreciated.

NORTH OF IRELAND BRANCH.

HOLIDAYS OF DISPENSARY MEDICAL OFFICERS.

A SPECIAL meeting of this Branch was held in the Young Men's Christian Association, Belfast, on Tuesday, May 22nd, to consider the advisability of passing a resolution urging the Local Government Board to amend Article 28 of New Dispensary Regulations in Ireland. The Council has decided to invite all dispensary medical officers in Ulster to attend.

Dr. GRAY (Newcastle), Honorary Treasurer of the Branch, occupied the Chair in the absence of the President of Branch, Dr. Martin (Portrush). There were 74 members and visitors present and the Secretary had received apologies from 43 gentlemen, all of whom expressed sympathy with the object.

The following resolutions were brought before the meeting:—

1. Proposed by Dr. W. A. MCKEOWN (Belfast), seconded by Dr. F. P. MACLAUGHLIN (Strangford), and carried unanimously:

That, in view of the interpretation placed upon Article 28 of the new Dispensary Regulations in Ireland, given by the Court of Queen's Bench, this meeting of the North of Ireland Branch of the British Medical Association desires to express its opinion that the rule as it stands will inflict an injustice and a hardship on the Poor-law medical officers, will prove detrimental to the proper and efficient discharge of their responsible and practically unceasing duties to the sick poor, and will tend to be a constant source of friction between the Boards of Guardians and their medical officers.

2. Proposed by Professor WHITLA, seconded by Dr. TORRENS (Belfast). Amendment proposed by Dr. MCKEOWN (Belfast), seconded by Dr. AGNEW (Lurgan) and Professor BYERS. Amendment accepted by proposer. Passed unanimously.

That this meeting, therefore, urgently prays the Local Government Board to take such immediate steps as may be necessary to make Article 28 so clear that there should be no doubt as to its intention as already avowed by the Local Government Board.

3. Proposed by Dr. JAMES GRAHAM (Belfast), seconded by Dr. GRAY (Armagh), and carried:

That a deputation to the Local Government Board be appointed to lay these views before them, and report to this special meeting, adjourned, if the deputation consider it necessary, otherwise to the annual meeting in July. The deputation to consist of the President, Treasurer, and Secretary of the Branch; the President and Secretary of the Ulster Medical Society; Dr. Magennis (Lurgan), Dr. Gray (Armagh), and Dr. Coats (Belfast).

EAST ANGLIAN BRANCH.

A SPECIAL meeting of this Branch was held at Ipswich on May 18th, to consider the Midwives Bill now before Parliament, the PRESIDENT (Dr. E. L. Fenn) in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Apologies for Non-Attendance.—Letters of apology were received from Dr. Beverley, Dr. Thresh, and Dr. Combe.

New Members.—The following members of the British Medical Association were elected members of the East Anglian Branch: H. L. Craig, M.B., B.Ch. (Bury St. Edmunds), W. Alexander Gibb, M.B., C.M. (Ipswich), Arthur Greene, M.D. (Bury St. Edmunds), Frederic A. S. Hutchinson, M.B., B.C. (Dunmow), Eustace W. Sumpter, M.B., B.S. (Cley-next-the-Sea), Daniel W. Thomas, M.R.C.S., L.R.C.P. (Harwich), Robert Tidbury, M.D., M.Ch. (Ipswich), Sidney V. H. Underhill, M.R.C.S., L.R.C.P. (Bury St. Edmunds), and Hugh Webb-Ware, M.R.C.S., L.R.C.P. (Saxlingham Nethergate.)

Midwives Bill.—The Midwives Bill was considered clause by clause, and the following resolutions were carried, in each case by large majorities: "That the amendment of Clause 2, Subsection 11, of which notice has been given by Colonel Milward to omit the words 'or shall habitually and for gain attend women in childbirth,' is extremely undesirable." "That the amendment to Clause 2, of which Mr. Lloyd-George has given notice, to insert at the end of Subsection 5 the words, 'and if any woman certificated under the Act shall do, or purport to do, anything which by this Subsection it is declared that her certificate does not confer upon her a right or a title to do, she shall be liable on summary conviction to a fine not exceeding five pounds,' be approved." "That the words 'from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be,' be omitted from Clause 3." "That in Clause 4, Subsection 1, all the words after 'practitioners' be omitted, and the following words inserted instead, 'to be appointed by the General Medical Council as follows: One practising in the London and South-Eastern Registration Divisions, one practising in the South-Western, West Midland, or Welsh Registration Divisions; one practising in the Eastern, North Midland, or South Midland Registration Divisions; and one practising in the Yorkshire or Northern Registration Divisions; as from time to time defined by the Registrar-General.'" That Clause 9 be amended by substituting the following words for the opening sentence—namely, "Every county council of any administrative county or county borough throughout England and Wales shall, on the passing of this Act, appoint a committee of not fewer than three registered medical practitioners, two of whom shall not be teachers nor examiners of midwives, as the local supervising authority over midwives within the area of the said county." "That the definition of the word midwife in Clause 18 read as follows: The term 'midwife' means a woman who undertakes for reward to attend women in natural labour, and during the lying-in period, but not in cases which present abnormality, danger, or disease on the part of the mother or of the newborn child." "That the new clause to be proposed by Sir George Pilkington providing for the inspection and certification of premises in which pregnant or lying-in women are received be approved." "That the East Englian Branch of the British Medical Asscciation is of opinion that the Midwives Bill as amended by the Grand Committee of Law, and at present before Parliament, if it became law without considerable modification would be a direct danger to the public safety." "That the General Secretary of the Branch be instructed to send copies of these resolutions and suggested amendments to the members of the House of Commons representing constituencies within the boundaries of the East Anglian Branch."

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of this Branch was held at Bexhill on May 10th. The chair was taken by Dr. WILLS.

Confirmation of Minutes.—The minutes of the Brighton meeting were read and confirmed.

Next Meeting.—It was decided to hold the next meeting at Eastbourne about the end of September or the beginning of October, and to ask Mr. O'Brien Harding to take the chair.

Cases.—The following cases were shown:—Dr. MARSHALL: A case of spleno-medullary leukæmia.—Mr. OSWALD: (*a*) Fibrocystic tumour of parotid region of thirty years' standing; (*b*) a boy, aged 12 years, in whom measles and diarrhœa a year ago were followed by enlargement of liver and spleen and a pale sallow tint of the skin, (?) splenic leukæmia.—Dr. WILLS: A

man, aged 55, with warty growth of lip of four years' duration now undergoing epitheliomatous changes.—The SECRETARY (for Mr. H. R. MANSELL): Skiagraphs of hip-joints showing osseous deformity in a case of impacted fracture of the neck of the femur.

Glandular Fever.—Dr. MURDOCH, who opened a discussion on this subject, gave an account of 19 cases recently under his care, comparing the symptoms exhibited with those described by Dr. Dawson Williams in *Allbutt's System*. The chief symptoms noticed by Dr. Murdoch were: Sudden onset with *malaise*, furred tongue, anorexia, vomiting. These were followed by stiffness of neck and tenderness in anterior triangle (second day). Only 3 cases were free from throat lesion. Slight pharyngitis and tonsillitis was usually present. Patients whose tonsils were already enlarged suffered more severely. On the second or third day of illness there was marked enlargement of the glands of the anterior triangle on the left side of the neck. The gland at the bifurcation of the carotids was always perceptibly enlarged. Enlargement of the glands was always followed by a similar affection of the glands on the right side and in the posterior triangles. The glandular swellings took nearly a fortnight to disappear, the subsidence being rapid when once started. The axillary and inguinal glands were not affected, neither were the mesenteric. Fever was proportionate to the glandular lesion. Three cases ran an apyretic course. Complications: Nephritis, otorrhœa, suppuration of gland (one case of each). Incubation period was under a week; in one case it was three days; young children were chiefly affected, but adults were not exempt. The abdominal symptoms mentioned by Dr. Dawson Williams were absent in all cases. There was no tenderness, constipation, mucoid stools, enlargement of mesenteric glands, liver, or spleen. Dr. WILLS had seen enlarged axillary and inguinal glands in three cases. Dr. HILLS JOSEPH had seen six cases (three without fever); pharyngitis was present in all. There was slight tonsillar exudation in one case. In another case there was enlargement of the breast. Dr. HALSE-FRANCIS said that a similar affection was prevalent last winter among the dogs in the vicinity. The veterinary surgeons called it "influenza with glandular enlargement." Other members mentioned isolated cases of similar type which had lately occurred in their practice.

Pharmaceutical Preparations.—A representative of Messrs. Bayer showed specimens of their new pharmaceutical preparations before the meeting.

SPECIAL CORRESPONDENCE.

PARIS.

The Fight against Alcoholism: Prohibition of Alcohol in Military Canteens: The Insertion of Alcoholism in the Weekly Statistics.—Preparations and Arrangements for the International Medical Congress.—The Pasteur Institute.

THE Minister of War, General de Galliffet, has addressed the following circular to all the commandants of army corps in France, forbidding in military canteens the sale of alcoholic liquors other than fermented liquors:

My dear General,—With the view of defending the troops placed under your command against the dangers of alcoholism, the military chiefs some time ago initiated various measures with regard to the sale of alcohol in barracks; of these, some measures of a purely restrictive nature, consist in forbidding the sutlers to sell *eau-de-vie* or analogous liquors at certain hours of the day, or else consist in a selection of certain spirituous liquors the sale of which is tolerated; other measures deal with the absolute interdiction of the sale of alcohol in canteens.

It is important, from both the hygienic and disciplinary points of view, to put a stop to these divergencies, to have a uniformity in the rules regarding the prophylaxis against alcoholism, and to extend to the entire army a beneficent action which should not be localised to certain bodies of troops.

Consequently I have decided to forbid absolutely in the canteens the sale of any *eau-de-vie* or other liquor with an alcoholic basis, or any of the numerous preparations known under the name of "*apéritifs*."

This restriction will apply to all canteens in barracks, quarters, camps, and fields of manœuvres. In barracks the sale alone is permitted of fermented drinks, wines, beer, cider, perry, and of all the usual beverages (such as coffee, tea, milk, chocolate, etc.) containing no alcohol.

I invite you to take the necessary steps that these restrictions, which shall be posted in the canteens, may be immediately put into execution.

GALLIFFET.

At a recent meeting of the Académie de Médecine, MM. Bergeron and Laborde, while calling attention to the above circular as one of the most important events in the annals of modern social and national hygiene that has occurred in the official sphere of the public authorities, proposed that the following congratulatory address should be voted to the Minister of War:

The Académie de Medecine has the honour to address its congratulations to the Minister of War, appreciating as it well deserves, in view of both the public interest and health, the interdictory measure ordered and emitted by the circular of May 3rd.

The Académie moreover expresses the hope that this first tutelary measure may as soon as possible be followed by its indispensable complement by the interdiction of alcoholic liquors in the other services of the State. And that the public authorities may be inspired by this example, as far as it applies to them, to realise such interdictory measures as may also combat the incessant progress of alcoholism in the civil population.

This address was unanimously voted.

At the previous meeting of the Académie de Medecine, on the motion of M. Fernet, the proposal was carried that in the future the weekly statistics published by the Municipalities of France should include the number of deaths which can be ascribed to alcoholism. It was pointed out that in the case of scarlatinal nephritis the death was ascribed to scarlet fever and not to kidney disease. From a prophylactic point of view it was essential to know the primary cause of disease and death much more than the organic lesions, which were secondary causes. Medical men should mention on the death certificate the alcoholic origin of the disease when this origin was known (alcoholic cirrhosis, etc.). Such deaths would then be placed under the heading of alcoholism in the statistical tables. If each week the number of deaths imputable to alcoholism were published in the municipal statistics, and more especially if this mention was made in the summary drawn up by the head of the statistical department, and reproduced by the daily press, it was to be hoped that this point, recurring week after week, would strike the public eye and imagination and give food for reflection.

The General Committee of the International Medical Congress has decided that the general meetings shall be held on August 2nd, 5th, and 9th in the large amphitheatre of the Sorbonne. The sectional meetings will be held in the main building of the Faculty of Medicine, which is nearing completion, in the Medical Practical School, in buildings of the Faculty of Law, in the École de Pharmacie, the Collège de France, the Sorbonne, the Pasteur Institute, the amphitheatre of the Assistance Publique, and in the military hospital of Val-de-Grâce. The Section of Ophthalmology will meet in the Hôtel Dieu, the Section of Dermatology and Syphilography in the St. Louis Hospital, the Section of Urinary Surgery in the Necker Hospital; these two last will have special exhibitions. Each foreign member of the Congress will at the frontier have his railway pass checked. On his arrival in Paris he will go to the bureaux of the Congress in the Practical School of the Faculty of Medicine; on showing his member's card to the janitor, he will be directed to the special bureaux of his nationality, under the arcades, where he will find a secretary who speaks his own tongue. This official, after stamping his railway pass, will hand to the member his card (of a different colour for each nationality), the programme of the Congress, the insignia, the invitation cards to the receptions, the *soirée* at the Luxembourg, etc., and the indications where the sectional meetings will be held. Each member will receive in addition the following volumes:—*Paris: Assistance Médicale et Enseignement*, the gift of the Municipal Council, with full information regarding the Assistance Publique and medical education in Paris; a volume on the *Mineral Waters and Baths in France*; and *A Guide to Paris and the Exhibition*. The Municipal Council of the city of Paris has voted 20,000 francs (£800) to the International Medical Congress, and 10,000 francs (£400) to the International Congress of Hygiene.

The annexe to the Pasteur Institute, which comprises a hospital and laboratories for biological chemistry, is now complete.

LIVERPOOL.

Public Meeting for the Formation of a Local Branch of the Society for the Prevention of Consumption.—Importation of Small-pox into Cheshire from Russia.

A PUBLIC meeting was held in the Town Hall on May 18th to

establish a local branch of the National Society for the Prevention of Consumption and other forms of Tuberculosis. The Lord Mayor presided and about 500 were present, including Lord Derby, Mr. Malcolm Morris (London) and Dr. Ransome (Bournemouth). A letter of apology for absence was received from the Bishop of the diocese. The Lord Mayor in opening the proceedings gave a sketch of the origin of the Society, and the methods which it employed in carrying on its work. He described what had been none in recent years in other countries for the prevention and cure of tuberculosis, and pointed out that Liverpool was taking the lead in England by establishing a charitable sanatorium in Delamere Forest, and a Poor-law sanatorium on the banks of the River Dee. Further, the municipal authorities were doing all in their power to lessen the danger of tuberculosis arising from infected food supplies and insanitary dwellings. Lord Derby moved: "That a branch of the National Association for the Prevention of Consumption and other forms of Tuberculosis be formed for the city of Liverpool." He said that he understood that they had met, as it were, to take stock of a movement which had already been in progress for some time—for a longer time, to our shame, abroad than at home—but a movement which he hoped had now possessed itself of the brain and heart of the country, and which, if it proceeded in the course marked out for it, would produce an effect on our population perhaps greater than any which medical science had produced up to the present time. He considered that it was desirable that sanitary authorities and Boards of Guardians should take up this question as part of their regular duty, and hence it was that it had been decided to build a combined Poor-law hospital in which the poor of the city would be treated. The building of hospitals, large or small, however, was not all that lay before them. There were many insanitary conditions which contributed to consumption which they could do something to alleviate. By co-operation and throwing themselves heart and soul into the movement they could do something to help the efforts of those who were trying to help themselves. Lord Derby paid a special tribute to Dr. Nathan Raw, Medical Superintendent of the West Derby Union Hospital, who had been especially concerned in the movement against tuberculosis in Liverpool, and to whom the proposal to establish sanatoria was largely due. Dr. Ransome, in seconding the motion, gave an account of the modes of propagation of tuberculosis, and said that insanitary and filthy surroundings were the main causes of the development and spread of the disease, and that it was only by removing such conditions that the danger of infection could be obviated. Liverpool in this respect was one of the most enlightened corporations in the kingdom, the building by-laws being an example and a model to the rest of the country. He had visited the site of the new sanatorium at Delamere Forest, and was greatly pleased at its situation. In a decade consumption destroyed more than the whole white population of South Africa. He trusted that the citizens of Liverpool would cordially support the aims and objects of the National Association. Mr. Malcolm Morris, in supporting the resolution, said that the doctrine which the Association must teach was the doctrine of the open window; fresh air was the great desideratum; windows should be kept open night and day. An endeavour should be made to instil into the minds of everybody that spitting was not only an unnecessary, but a filthy and dangerous, habit. He was not in favour of compulsory notification of consumption cases, but thought that voluntary notification to the medical officer would be more satisfactory, especially if the medical officer gave advice as to the best way of treating the disease. The following were elected Vice-Presidents: the Lord Mayor, the Bishop of Liverpool, the Roman Catholic Bishop; the Mayors of Birkenhead, Bootle, Chester, Wigan, Warrington, St. Helens, and Southport; Sir John Hibbert, Sir John Brunner, Bart., the Members of Parliament for Liverpool, and Mr. William Rathbone. A Council and Executive Committee were also appointed, with Dr. Nathan Raw as Honorary Secretary, and Dr. T. R. Bradshaw as Honorary Treasurer.

A remarkable case of importation of small-pox from abroad has just been brought to the notice of the Cheshire County Council. A man belonging to Stalybridge, who had been erecting machinery for a large firm in Russia, left Moscow on April 18th suffering from confluent small-pox, the rash being out at the time. He travelled by way of Warsaw, Berlin, and Flushing, arrived at Queenborough at 6 A.M. on April 20th, and reached Stalybridge on the afternoon of the same day. The man was so ill that he had to be carried to his home; he was seen at once by a doctor, who ordered his removal to hospital, and he died at 8 A.M. the following morning of apoplexy. Everything was done at once to prevent the disease from spreading, but two cases are known to have since occurred in Stalybridge. One is a man who travelled with the first case from Manchester. Three men travelled with him from London, and they have got the disease—one at Bolton, one at Oldham, and one at Carlisle. It seems to be an extraordinary circumstance that it should have been possible for the case to escape detection at the port of landing and the many railway stations through which he had to pass. The system of inspection in force with regard to ocean-going steamers is perfectly efficacious for dealing with cases of infectious diseases arriving from abroad, but there seems to be no corresponding machinery for dealing with cases arriving by the various Channel steamers.

CORRESPONDENCE.

CUTTING DOWN SALARIES.

SIR,—Your correspondent "Observer" seems to me to view hospital appointments from an entirely wrong standpoint. Granted that the salaries he quotes are low, does he suppose that the men appointed find their only remuneration in the money paid them? On such a supposition one would expect to find unpaid appointments, such as the house appointments in the London hospitals, going begging; but instead of this being the case, there is always keen competition for them, and the most able young practitioners are always glad to get them. If "Observer" had ever held one of these appointments, either in London or the provinces, he would have learnt that the experience gained in diagnosis and treatment, the self-reliance in emergencies, etc., are of such a value that the appointments would still be worth having if there were no salary attached to them.

The concluding remark in "Observer's" letter shows, I am afraid, some want of observation. He says that "registered practitioners are not to be had at about half their market value," whereas it is common knowledge among those who have applied for these appointments that if the governors of the hospitals wanted them they could get ten times as many residents as at present at the same salaries.—I am, etc.,

Mossley, Lancs., May 22nd. A. W. HARRISON.

SIR,—In the BRITISH MEDICAL JOURNAL of May 19th you published a letter, signed "Observer," bearing on the subject of the small salaries offered to medical men as house-surgeons, etc. It is quite time that the matter should be looked into. To expect a qualified man to accept a small honorarium after six months' service is too bad. At one hospital they have the impertinence to advertise for a clinical assistant who shall be a qualified man, and who shall pay for the privilege of doing all the minor work connected with diseases of women and the work ordinarily done by a clinical clerk. If a freshly-qualified man at first be scarcely worth his salt in an institution, only a few weeks need pass before he is quite *au fait* with his work. At the London hospitals men obtain resident appointments, and, owing to the valuable teaching they therein obtain, these men find it worth while to pay for their board, as they have to do in many places. But in the provincial hospitals and infirmaries the house-surgeons are practically masters of their institutions, and get plenty of worry and responsibility, and very scanty teaching as a general rule. They ought to be better paid. Lay committees are for ever complaining that house-surgeons stay with them for such short periods. Let them make it worth a doctor's while to remain, then, by paying him well. £100 a year and everything found is none too much remuneration for the valuable services that a good house-surgeon renders to his institution, to patients, and in the training of nurses. £50 a year for a house-physician is disgraceful—less than £1 weekly. I have not overlooked the practice obtained in resident appointments. I only maintain

that after an expensive curriculum lasting five years, a man should be well worth £100 a year (and everything found) in any institution whatever.—I am, etc.,

London. X. Y. Z.

SIR,—in reply to "Observer's" criticisms in the BRITISH MEDICAL JOURNAL of May 19th, I should like to remark upon his observations. I do not doubt his assertions for a moment, but he has omitted to mention the extra fees a house-surgeon gets in the way of coroners' inquests and in police-courts. I happened to hold one of the posts as house-surgeon that he quotes, and my salary was almost half as much again by means of these extra fees, and he does not appear to take into consideration the excellent experience he gains as a house-surgeon, which he will always find of the greatest value to him when he gets into practice for himself, to say nothing of the valuable credentials he takes with him which cannot be otherwise than the greatest use to him at any future time should he seek a senior appointment as a medical officer of health, or honorary physician or surgeon to a hospital. Now "Observer" appears to think he ought to find himself planted in a bed of roses as soon as his name appears on the *Medical Register*; and I would remind him that this will come in all good time, and for his future benefit he should try and obtain a house-surgeoncy, and be thankful for small mercies.—I am, etc.,

May 20th. A HOUSE-SURGEON TWELVE YEARS AGO.

MEDICAL CO-OPERATION AS APPLIED TO MEDICAL AND SURGICAL REQUIREMENTS.

SIR,—Will you kindly allow me to call attention to a matter of no small importance to the profession—namely, the enormous sum we annually spend, or rather waste, on middlemen's profits and travellers' expenses?

It must have occurred to everyone that the army of travellers who almost daily besiege our surgery doors are not only an unmitigated nuisance to the busy practitioner, but add immensely to the cost of the drugs and instruments they supply.

There is unfortunately a widely-prevalent idea that, though these visits and the waste of time and money they involve are an evil, they are a necessary evil; but a little reflection will show that this is by no means the case. All we require to do to prevent this waste of time and money is to practise what we all believe in—namely, to buy in the cheapest market.

This is only possible by co-operation. If we employ an experienced manager, buy direct from the manufacturers, and distribute through a central depôt direct to the members, we entirely eliminate the middlemen, who are alone responsible for the prices charged to the profession for articles which, at the ultimate sources of supply, are really very cheap. The history of the Civil Service Supply Association furnishes a most instructive precedent. This Association, whose original shares cost 10s. and now sell for over £200 each, began with the purchase and division by a few post-office clerks of a single chest of tea; some of these clerks still survive to see their Association turning over more than three millions of pounds' worth of goods annually.

In both life insurance and sickness insurance we have parallel instances. Why should we not extend this principle to surgical appliances and drugs?

Probably a large majority of medical men are compelled by force of circumstances to dispense their own medicines, and it is almost certainly an underestimate to say that if all of these adopted the co-operative plan it would mean a saving of at least half a million pounds annually—surely no trifling matter to a profession many of whose members find it hard enough work to make ends meet.

An attempt to effect this object is being made by about 600 medical practitioners who have formed themselves into a limited liability company for the supply to members direct from the manufacturers of drugs, instruments, stationery, and sundries. The members are scattered over the country from the North of Scotland to Cornwall and the Isle of Wight. So far the system is working well, but it stands to reason that the saving to the members increases in direct ratio to their numbers and their loyalty to the principle of co-operation.

After a year's experience of the advantages of this co-operative system, I wish to call attention to it in the hope that others will be induced to avail themselves of the great saving of time, trouble, and money which it effects. Full details of this co-operative system will be supplied to any medical man by the Secretary, Surgical Supply Association, 35, Market Street, Manchester.

To secure the greatest possible saving, not only is an extended membership required, but it is essential that every member should support the Association to the utmost of his power. Those who live within easy distance of Manchester need have no other account for drugs, instruments, stationery, bottles, or other sundries; even those who, like myself, live at a great distance, can with a little forethought obtain nearly all they require without appreciable delay.

In conclusion, it cannot be too clearly understood that this is no speculative or dividend-earning concern; it is a *bonâ-fide* combination of medical men, and of medical men only, formed for the sole purpose of preventing what is an entirely needless expense. Any profits that accrue are the sole property of the members, and are divided according to the amount of business done, not in proportion to the number of shares held.

Young medical men about to begin practice on their own account can save on an outfit alone the initial expense of membership.—I am, etc.,

A. M. SAUNDERS, M.B., C.M., D.P.H., M.A.

Hopeman, Moray, N.B., April 7th.

MALARIA PARASITES IN DEW.

SIR,—In your report of the meeting of the British Balneological and Climatological Society on April 26th, Dr. Laing Gordon is quoted as saying that the malaria parasite is found on the ground and in the grass in Rhodesia. Of course numerous species of minute organisms are to be detected on the ground and in the grass everywhere; but the identity of any one of these species with the organisms which cause malarial fever in man can be established only by the most laborious experiments. I should like to ask where the experiments on which Dr. Laing Gordon bases his statement are recorded. What is the appearance of the malaria parasites in the grass? How were they isolated? How were they proved to be capable of setting up infection in man?

At the same meeting Dr. Alfred Hillier, while expressing himself as being convinced regarding the truth of the mosquito theory, thought, with many others, that there may be another route for infection. In favour of this view he quotes the argument that hunters and others are often prostrated by malaria in uninhabited localities, and refers to the scantiness of the population in Rhodesia as being opposed to the idea that the disease is carried only from man to man. It seems to me that both these arguments may be criticised. In order to reach an uninhabited locality one must generally pass through inhabited, and often extremely unhealthy, villages *en route*, in which the disease may be easily acquired. Again, sportsmen and travellers are generally accompanied by native servants, one of whom, if infected, may infect the whole party if *Anopheles* be present—as, for instance, in a rest camp. Arguments based on the scantiness of population in a malarious area always appear to me to be rather doubtful arguments, because, however scanty the population, men still live as a rule in company with other men; however few the inhabitants, they still tend to congregate in farms, villages, and settlements, in any one of which a person may acquire the disease as readily as, or more readily than, in a large city.—I am, etc.,

Liverpool, May 21st. RONALD ROSS, D.P.H., M.R.C.S.

MEDICAL ETHICS AND THE ANNUAL MEETING.

SIR,—At the spring meeting of the North of England Branch of the British Medical Association, held at South Shields on April 16th, it was unanimously resolved to petition the Council of the Association to set apart one day at the annual meeting at Ipswich for the discussion of medical ethics and medico-political subjects. I hope that other Branches will take steps to support this and make a similar request.—I am, etc.,

Durham, May 21st. EDWARD JEPSON.

A SUM of 8,000 lire has been set aside in the Italian Budget towards the expenses of the International Physiological Congress which is to be held in Turin in 1901.

OBITUARY.

WE greatly regret to have to announce the death from enteric fever of Captain WILLIAM FLEMING HOPKINS, B.A., M.B., B.S., who was born at Maryborough, Victoria, Australia, on October 15th, 1864. He was "a son of the manse," his father being the Congregational minister in that town. His early education was received at the Gleneig Grammar School and at the St. Peter's Public School, South Australia. After taking the arts course in the Adelaide University, which he entered as university scholar, he graduated Bachelor of Arts in 1884. He was equally successful as student and athlete; he won both the John Howard Scholarship in English literature and many medals in rowing contests. For three years he acted as Senior Classical Master in one of the large schools in Victoria, and then commenced the study of medicine in the University of Melbourne. He took the degrees of Bachelor of Medicine and Bachelor in Surgery at that University in 1891. Almost immediately thereafter he was appointed Medical Officer to the Stawell Hospital, which post he held up to the time of his death. In his official work he was sympathetic and energetic, and the institution has lost a valued officer. While at Melbourne he served a year in the now extinct University Company of Militia, as Surgeon-Captain, and after settling in Stawell he became an enthusiastic volunteer, being made Surgeon-Captain to the A Company Rangers in May, 1892. In due course he was accepted for service in South Africa. He won for himself at the front an honourable name. Lieutenant Staughton, referring to the desperate fight at Rensburg, wrote: "Dr. Hopkins was in the thick of it the whole time, dressing the wounded. Under very heavy fire he carried out a lot of poor fellows on his own horse, and if any man should get a V.C. it is he." After having worked under small shell fire, under sniper's fire, under rifle fire from large bodies of men in a big engagement, and close to large shell fire, Captain Hopkins contracted enteric fever, and the attack proved fatal. It has been said of him that he was lovable as well as brave. He remains a fine type of a heroic non-combatant, of whom Australia and the whole Empire may be proud.

CAPTAIN HENRY ESMONDE DOWSE, of the Royal Army Medical Corps, second son of the late Henry James Dowse, Esq., of H.M. Dockyard, Portsmouth, and grandson of the late Richard Dowse, M.D., Inspector-General of Hospitals, died at Bloemfontein on May 5th of remittent fever at the age of 32. He received his professional education at Westminster Hospital, was admitted L.R.C.P.Lond. and M.R.C.S.Eng. in 1889, and on January 31st, 1891, was appointed a Captain in the Army Medical Corps. In 1895 he served with the Chitral Relief Force, under Sir Robert Low, for which he received the medal with clasp.

WE regret to have to record the death of Mr. WALTER CLEGG, M.R.C.S., J.P., which occurred at Boston on April 16th last from bronchitis. He was born at Keighley in Yorkshire on October 10th, 1822, and was the son of a Wesleyan minister. He was educated at Woodhouse Grove School and at Wesley College, Sheffield. The earlier part of his medical training was obtained at the University of Edinburgh, and the later part at Guy's Hospital, where he won the Queen's medal and other important prizes. He took the diploma of M.R.C.S. in 1843, and that of L.S.A. in 1844. In 1845 he commenced practice in Boston. He was not only a popular practitioner, but also an energetic participator in the affairs of the town. In 1854 he founded the *Boston Guardian*. On the outbreak of war in the Crimea he volunteered as a surgeon, and was attached to the 2nd Battalion Rifle Brigade. At the same time he acted as war correspondent for the *Illustrated London News*. In 1862 he became Coroner for the borough and district, and he discharged the duties of the post skilfully and sympathetically for thirty-eight years. He was a town councillor of Boston for many years; he was also alderman, and in 1868 he was elected Mayor. He had been placed on the Commission of the Peace for the borough in the previous year. In 1873 he was elected Medical Officer of Health for the urban and rural districts and for the port sanitary authorities, which post he continued to hold until 1895. His remains were cremated at Woking, and his ashes were brought back to Boston for burial. Few men in the town were so well known or so highly respected.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following distribution of Army Medical officers is shown in the monthly Army List for May:

Distribution in the May Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks: Seconded.
Surgeon-Generals ..	5	1	4	—	10	—
Colonels	7	9	11	—	27	3
Lieutenant-Colonels...	17	32	61	1	110	3
Majors	23	191	166	2	382	4
Captains	11	78	96	—	185	6
Lieutenants	1	101	35	—	137	4
Total	64	412	373	2	851	20

The total establishment (851) is one less than the April list, from Lieutenant Irvine having been killed in action at Bloemfontein Waterworks. The Home list (64) shows an increase of 1 executive officer; the South African list (412) is exactly the same, for the death of the above-named officer is balanced by the addition of a captain (78).

Sir Redvers Buller, therefore, did not get the 50 additional medical officers he was said to have asked for. The very sufficient reason no doubt was that there were none to send him.

The list at other foreign stations (373) is unaltered; but the unposted has sunk to 2, officers presumably on sick leave, a marvellously small number in such a large total list.

It will be noticed that the rank of Lieutenant-Colonel has increased by 36, moved up from the rank of Major, by automatic promotion on completion of 20 years' service.

The number seconded shows an increase of 1.

The number of retired medical officers employed is 123, and of retired quartermasters, R.A.M.C., 16.

ROYAL NAVY MEDICAL SERVICE.

THE promotion of Staff-Surgeon Beadnell, R.N., for his distinguished services with the Naval Brigade of the *Powerful* in Lord Methuen's advance to the Modder River is as unprecedented as it is deserved. He was present at the action of Modder River, which he described in our columns, proceeded with Lord Roberts's force to Bloemfontein, and was mentioned in despatches for services under fire with the Canadians at Paardeberg. Not only has this young and distinguished naval medical officer so admirably performed his duty in the service of his country, but his professional zeal led him to aid the combatants in the Philippine war when on leave from the *Powerful* at Manila, a labour not without risk, as a companion was shot beside him ere he withdrew from the action. The precedent now established will furnish an incentive to zeal to his brother officers of all seniorities.

Surgeon JAMES G. FOWLER, who joined the *Powerful* in March, 1898, is noted for early promotion. He was at Ladysmith with the Naval Brigade during the siege of that place.

ROYAL ARMY MEDICAL CORPS.

SURGEON-CAPTAIN ROBERT POLLOK, 3rd Volunteer Battalion the Highland Light Infantry, is granted the temporary rank of Captain whilst serving in South Africa, May 19th.

Sergeant-Major FREDERICK CROOKES is appointed Quartermaster, with the honorary rank of Lieutenant, to complete the establishment, May 23rd.

Major PERRY MARSH is reported as lying dangerously ill at Bloemfontein from enteric fever.

The following are among those reported from South Africa as having been discharged from hospital to duty: Majors FRANKLIN and IRVINE, Captains PHILLIPS and HODGENS, Lieutenants SHUTE and MERRY, all of the R.A.M.C.; Civil Surgeons WALKER, ADAMS, HIBBERT, and CHOWDER, of the Base Depôt Staff; and Civil Surgeon MCRAE.

Captain RUPERT FAWSSETT, attached to the 2nd Life Guards, died of dysentery at Bloemfontein on May 7th, aged 31. He was gazetted Lieu-

tenant, July 29th, 1895, and Captain three years thereafter. He was attached to the 2nd Life Guards in September, 1897, and accompanied the detachment of that regiment sent to South Africa in November last.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL C. H. JOUBERT, M.B., Bengal Establishment, is promoted to be Colonel from March 29th. He joined the department as Assistant Surgeon, March 30th, 1872, and was made Brigade-Surgeon-Lieutenant-Colonel, October 1st, 1896.

Surgeon-General CHARLES E. MCVITTIE, Honorary Physician to the Queen, Madras Establishment, has retired from the service from April 1st. He was appointed Assistant Surgeon, March 31st 1866, and became Surgeon-Major-General, April 1st, 1895. He was in the Afghan war in 1879-80 (medal), and in the Burmese campaign in 1886-88, for which he was mentioned in despatches and received the Frontier medal with two clasps. He is in receipt of a reward for distinguished service, granted him in May, 1894, and was appointed Honorary Physician to the Queen in March, 1898.

Colonel JAMES C. G. CARMICHAEL, M.D., Bengal Establishment, retires from the service from May 2nd. He joined as Assistant Surgeon, April 1st, 1868, and became Surgeon-Colonel, March 29th, 1895. He served with the Mahsood Wuzeeree expedition in 1881; in the Egyptian war of 1882, being present at the battle of Tel-el-Kebir (medal with clasp and Khedive's star); with the Burmese expedition in 1886-87 (mentioned in despatches, medal with clasp); and in the campaign on the North-West Frontier of India in 1897-98 with the Malakand Field Force and Buner Field Force as Principal Medical Officer, including the capture of the Tanga Pass (twice mentioned in despatches, medal with clasp).

Lieutenant-Colonel RICHARD N. STOKER, Bengal Establishment, has also retired, from April 2nd. He was made Assistant Surgeon, September 30th, 1874, and Surgeon-Lieutenant Colonel twenty years later. He was in the Afghan war in 1879, and with the Sikkim expedition in 1888 (medal with clasp).

Deputy Surgeon-General WILLIAM CENTER, M.B., Bengal Establishment, died at Ealing on May 16th. He was appointed Assistant-Surgeon, October 2nd, 1865; became Brigade-Surgeon, April 19th, 1889; and was granted the rank of Lieutenant-Colonel, October 2nd, 1885. He retired from the service, April 2nd, 1893. From 1871 he served in the Punjab as Chemical Examiner and Professor in the Lahore Medical School. In 1882 he was Statistical Officer in the Sanitary Department of the Government of India, and afterwards received the appointment of Civil Surgeon, Lahore, and Superintendent of the Lunatic Asylum. From 1888 until his retirement he held one of the chairs at Lahore Medical College.

Captain A. W. T. BUIST, M.B., Bengal Establishment, on being relieved at Jhelum, is transferred to Amritsar, and has assumed charge of the civil medical duties of that district.

THE VOLUNTEERS.

THE under-mentioned officers are borne as supernumerary whilst serving with the R.A.M.C. in South Africa, dated May 23rd: Surgeon-Captain F. W. GRANT, M.D., 1st Banff Artillery; Surgeon-Captain S. LINTON, M.B., 1st Fifeshire Artillery; Surgeon-Lieutenant W. M. TAYLOR, M.B., 1st Midlothian Artillery.

Supernumerary Surgeon-Lieutenant-Colonel A. GRACE, Gloucestershire Yeomanry (Royal Gloucestershire Hussars), resigns his commission, retaining his rank and uniform, May 23rd.

Surgeon-Captain T. M. DAWSON, 1st Lancashire Artillery, is promoted to be Surgeon-Major, May 23rd.

Mr. THEODORE R. W. ARMOUR, M.B., is appointed Surgeon-Lieutenant in the 1st Cheshire Engineers, May 23rd.

Surgeon-Lieutenant T. SMITH, 1st Devonshire and Somersetshire Engineers, resigns his commission, May 23rd.

The undermentioned Surgeon-Lieutenants are promoted to be Surgeon-Captains, dated May 23rd: G. A. HAWKINS-AMBLER, 1st Lancashire Engineers; A. P. SWANSON, 2nd Volunteer Battalion the Royal Welsh Fusiliers; H. STEDMAN, M.D., 1st Volunteer Battalion the Northamptonshire Regiment; J. N. MARSHALL, M.D., 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders).

Surgeon-Lieutenant-Colonel P. M. DAVIDSON, 5th Volunteer Battalion the Cheshire Regiment, resigns his commission, May 23rd; he retains his rank and uniform.

Surgeon-Lieutenant JAMES DUNBAR BRUNTON, 2nd Volunteer Battalion the East Surrey Regiment, resigns his commission, and is appointed Second Lieutenant (supernumerary), May 23rd.

Mr. THOMAS J. MATTHEWS, M.D., is appointed Surgeon-Lieutenant in the 3rd (Cumberland) Volunteer Battalion the Border Regiment, May 23rd.

WOMEN NURSES IN AMERICAN ARMY HOSPITALS.

ON 'April 24th the United States Senate Committee on Military Affairs, by a vote of 6 to 5, ordered an adverse report on the Bill providing for the employment of women nurses in military hospitals of the army.

SALISBURY PLAIN CAMP.

MAJOR J. E. V. FOSS is Senior Medical Officer at Salisbury Plain. A staff of officers, non-commissioned officers, and men are also to leave Aldershot shortly for the Plain to do duty with the stationary hospitals that are being supplied for the use of the troops there.

SURGEON-GENERALS.

A CORRESPONDENT points out that in the large *Army List* surgeon-generals' names appear after major-generals', but not in the monthly lists, as they ought. The same correspondent considers that the new forage cap for surgeon-generals is unsatisfactory: its gold badge much resembles that of an army schoolmaster. Why not, he asks, make it similar to that for a general officer? There could be no confusion, for the latter has a red band and the surgeon-general a black band in his cap. The new facings for the R.A.M.C. are, he adds, practically the same as those for the veterinary officer.

MEDICO-LEGAL AND MEDICO-ETHICAL.

PROPRIETARY MEDICINES.

AT Lambeth Police Court on May 7th, before Mr. Hopkins, George Baldwin, who carried on the business of a herbalist at Rye Lane, Peckham, was summoned by the Inland Revenue for selling medicine liable to stamp duty unstamped. We learn from the report in the *Law Journal* that counsel who appeared in support of the summons stated that the law was that any medicine which was held out either by the label or by a public notice or advertisement as a specific beneficial to the cure of a disease or ailment, required a stamp. Evidence was given of the purchase at the defendant's shop of a bottle of mixture for a certain complaint. This had been advertised by a card exhibited in the shop window. The defendant, who appeared in answer to the summons, claimed that the bottle did not require a stamp, as the mixture, which had been on the market for years, was not claimed as a proprietary preparation. The bottle had been submitted, with many others, to the authorities at Somerset House some years ago, and they were satisfied that a stamp was not required. He also said that if Somerset House had said that the label was liable to stamp duty a stamp would have been affixed. Mr. Dennis, in reply, said that the label had to be considered in connection with the notice in the window. Mr. Hopkins came to the conclusion that the defendant had acted *bonâ fide* in the matter, and imposed a nominal penalty of 20s.

PROCEEDINGS UNDER THE LUNACY ACT.

THE *Western Mercury* of May 19th contains the account of an action against Dr. Arthur William Llewellyn Jones, of Paignton, by the Commissioners in Lunacy, for having a person of unsound mind under his paid charge in an unlicensed house. It was not suggested by the prosecution that the house was in any way improperly conducted, or that the patients in it, who were suffering from simple nervousness or depression, were not being excellently treated, but that, in the opinion of an expert who was authorised to visit the house in March last, two of the patients were beyond the border line separating actual insanity from slighter mental disturbance. It seemed that the patient in question had come under the care of Dr. Jones two years previously, when a certificate of mental unsoundness was refused by a justice of the peace. When the expert referred to visited the house the patient had, in his opinion, ceased to be a borderland case, and Dr. Jones's technical offence consisted in the fact that he had neglected to have the patient re-examined, and had thus remained in ignorance of her changed mental state. Had he been aware of it he would, of course, have had her sent to an institution. The Bench ordered payment of £10 10s. by Dr. Jones towards the costs of the action, and two other cases were withdrawn on his paying the court fees.

PROSECUTION BY THE GENERAL MEDICAL COUNCIL.

WE learn from a report in the *Surrey Advertiser* that on May 9th, 1900, Albert Palmer was summoned before the Guildford Borough Bench for that he "did take and use the name and title of dentist, and also the titles, additions, and descriptions following, implying that he was a person specially qualified to practise dentistry, namely, surg on dentist and and registered dental surgeon, not being registered under the Dentists Act of 1879, and not being a qualified medical practitioner on April 21st." The defendant pleaded guilty.

Mr. Dunlop Hill said he appeared in support of the summons, which had been instituted by the General Medical Council. As the scale of charges put forward by the defendant in his advertisements was very low, the persons most affected by this class of offence were working people. The proceedings were taken under Section III of the Dentists Act of 1878, under which the defendant was liable to a fine not exceeding £20. He had taken the name and title of E. J. Smith, of 7, Market Street, in the borough, who had for years carried on the practice of a dentist at these premises, but he died in June of last year, and the place had been kept going by the defendant ever since.

In the *Dentists' Register* for 1899 appeared the name of Edward James Smith, dentist, of 7, Market Street, but in this year's *Register* the name did not appear. In neither year did the name of the defendant appear.

Albert Henry Booker, canvasser, stated that in November last the defendant gave him an order for the renewal of the advertisement "E. J. Smith," appearing in *Lasham's Directory*, and defendant gave him instructions to add the words "surgeon dentist," which did not appear in the previous advertisement.

Mr. R. B. Wells, who appeared for the defence, stated that Mr. Palmer had for the last 15 years been the manager of Mr. Smith, at 7, Market Street. He stated that, as a matter of fact, his client really opened it for Mr. Smith in the first instance, and carried it on as manager down to the time of his death. It was therefore evident that he had some expert knowledge. On Mr. Smith's death the business was continued, and several of the advertisements which had previously appeared were altered, but some had not been altered. Palmer therefore had felt himself obliged to plead guilty to the charge. For the future he would do all in his power to see that no such advertisements appeared.

The Bench imposed a penalty of £5, and 15s. 6d. costs.

CLUB APPOINTMENTS.

DOUBTFUL asks for advice under the following circumstances: A surgeon, A, is selling his practice, and introducing a successor. In his practice is included a club, the headquarters of which are situated at a distance of seven miles from the village where he resides. Many of the members of the club are desirous of having as their surgeon B, who resides only four miles away. Would it be contrary to the usages of the profession for B. to apply for the vacant post?

*** It would be contrary to the custom of the profession for B. to apply for the post, but if on the vacancy occurring, the club decided to hold a general election, there is nothing to prevent B. from becoming a candidate.

DEATH CERTIFICATES AND FRIENDLY SOCIETIES.

J. H. B., the resident medical officer of a union infirmary, writes that he is often requested by friendly societies to furnish particulars as to the cause of death of patients dying in his institution, such patients having been insured in the said societies. He states that either no fee is offered or a nominal one such as half a crown. Would he be justified in refusing to give any report unless the societies paid a minimum fee of half a guinea?

*** There can be no doubt that reports of this kind ought to be paid for, but it is not so easy to fix the scale of payment. If our correspondent's institution is a Poor-law infirmary it is not likely that many of his patients would be heavily insured. If the amount assured is hardly more than burial money, a fee of half a guinea would certainly seem excessive to the public. Where, however, the amount assured is £50 or more, at least half a guinea should be paid. Many insurance offices pay half a guinea for reports where the sum assured is over £50, and one guinea where the sum exceeds £100.

THE REGISTRATION OF DEATH AND MEDICAL CERTIFICATES.

J. R. states that he was called to see a child, and on arrival found it to be dead. The parents informed him that it had recently suffered from measles, but, as our correspondent had never attended the child during life, he declined to give a certificate stating the cause of death. The parents were informed by the registrar that the doctor should have certified the cause, and that he had received certificates where no doctor had attended during life.

*** We are of opinion that our correspondent did quite right to decline to certify in the case mentioned; and we feel sure that, had the registrar been resident in England instead of Scotland, such certificates as those mentioned would have been referred to the coroner before registration of the death.

THE CORONER AND MEDICAL WITNESSES.

A MEMBER writes to complain that in a recent case in which he was called in to see the deceased immediately after death the coroner summoned the police surgeon to give evidence, and he inquires if this is the usual course.

*** As a rule the coroner usually summonses as medical witness the medical practitioner who last attended the deceased or who may have seen the body first after death, but it is in the discretion of the coroner to decide to whom he may send the *post-mortem* order and summons to give medical evidence. We would advise our correspondent, should similar circumstances occur, to forward a report direct to the coroner instead of verbal intimation to the local police.

THE PROHIBITION OF TOUTING.

R. G.—The touting forbidden by the General Medical Council which our correspondent read of in a speech by Dr. Glover at the Conference on Medical Organisation at Manchester can be seen from the context to refer to medical aid societies, and has so far not been extended to any other bodies or persons.

THE COMMENTS OF THE PRESS.

E. B.—The information conveyed in the paragraphs to which our correspondent draws our attention is obviously of interest to the readers of the newspapers in which they appear; and as there is nothing to show that the medical practitioners in question had anything to do with their insertion, we should be very unwilling to suggest that they are to blame. It is obviously out of the power of the medical profession to prevent the insertion in newspapers of matters relating to the medical profession which are deemed to be of interest to newspaper readers.

DOCTORS' SIGNS.

TYRE.—1. The use of a lamp with red or otherwise coloured glass is a matter of taste. 2. When a house is situated as described, there can be no actual impropriety in putting a plate at the corner of the thoroughfare. 3. It is quite allowable to arrange with a chemist to do all dispensing, provided that the doctor pays the chemist, but to share any profit with the chemist or to receive commission from him is wrong. 4. The best means of ascertaining the usual fees would be from those already in practice, but in all probability the fees to be charged do not differ from those obtainable elsewhere.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

University of Sydney.—The Special Board for Medicine have recognised the University of Sydney as a medical school for the purposes of medical study away from Cambridge.

Pharmacology and Therapeutics.—Professor Bradbury announces a special course of lectures and demonstrations on this subject to be given during the Long Vacation, beginning on July 6th.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND.

Licences and Diplomas.—At a stated business meeting of the President and Fellows held on Friday, May 11th, 1900, the President admitted as a Licentiate in Medicine, H. M. Eustace, M.D., B.Ch., B.A.O.Univ.Dub., and as a Licentiate in Midwifery, F. P. Vieyra, L.R.C.P.Lond., M.R.C.S.Eng. A letter was read from the Secretary of the Committee of Management of the Conjoint Scheme with the Royal College of Surgeons in Ireland, informing the College that P. C. Walker, M.D.Univ.Dub.; G. Q. Lennane, L.R.C.P. and S.I.; and J. C. M'Walter, L.R.C.S.I., L.A.H., had passed the examination for the Diploma in Public Health. John Brown, L.R.C.P.I., 1863, was granted admission to the Membership. The President admitted W. J. Anglim, R. A. Campbell, B. McM. Coffey, J. E. Hannigan, D. L. Harding, P. J. McGinn, J. H. O'Connell, J. F. Smyth, E. R. Townsend, and H. G. Westropp to the Licences in Medicine and Midwifery.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At an extraordinary Comitia of the Fellows held on Thursday, May 17th, the President, Dr. W. S. Church, in the chair.

ADMISSION OF FELLOWS.

The following Members, nominated by the Council and elected at the preceding Comitia, were admitted to the Fellowship: Clement Dukes, M.D.Lond.; Robert Bridges, M.B.Oxford; Seymour Taylor, M.D.Aberd.; Amand Routh, M.D.Lond.; Charles M. Handfield-Jones, M.D.Lond.; Richard Thomas Williamson, M.D.Lond.; Leonard George Guthrie, M.D.Oxford; Frederick Foord Caiger, M.D.Lond.; Herbert Morley Fletcher, M.D.Camb.; Henry Albert Caley, M.D.Lond.; Henry Head, M.D.Camb.

INTERNATIONAL CONGRESS OF HYGIENE.

A communication was received from the President of the tenth International Congress on Hygiene and Demography, to be held in Paris from August 10th to 17th next, inviting the College to send a representative. Upon the nomination of the President, Dr. W. H. Corfield was appointed as the representative of the College.

CONJOINT BUSINESS.

A letter from the Secretary of the Royal College of Surgeons was read reporting the proceedings of the Council of that body of date May 10th. A report dated May 7th from the Committee of Management was received and adopted. The Committee recommend that the following institutions, all of which have been visited by a member of the Committee and reported on as fulfilling entirely the requirements of the Board, be added to the list of institutions recognised by the Examining Board in England: (1) Berkhamsted—Berkhamsted School; (2) Blackburn—Stonyhurst College; (3) Bolton—Central Higher Grade Board School; (4) London—Merchant Taylors' School. The Committee of Management also recommend that the University of Manitoba be added to the list of recognised universities at which candidates may complete the curriculum of professional study for the examinations of the Board, and whose graduates may be exempted from the First and Second Examinations of the Board.

AMENDMENT OF BY-LAWS.

Upon the motion of the Registrar, seconded by the Senior Censor, By-laws LXV B and XXIX B, for the election of representatives of the College in the Senate of the University of London, were read and enacted for the second time. By-laws XIII and XXVIII were also amended and re-enacted or the first time.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Dental Examination.—The following gentlemen having passed the necessary examination, have been admitted Licentiates in Dental Surgery of the College: A. L. Harrison, T. A. Rae, G. M. Sterling, and W. Wood.

UNIVERSITY OF BRUSSELS.

M.D. Degree.—The following practioners satisfied the examiners at the examination in May, and obtained the above degree, namely: K. de R. Bell, Miss Cotineau, G. Stead, Mrs. C. Hawkes, Miss Chase, R. C. McCleod, D. W. L. Soutter. There were seven candidates.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

THE following gentlemen, having passed the requisite examinations, were, at a meeting of the College held on May 16th, elected ordinary Fellows: A. Campbell, M.R.C.S.Eng., L.R.C.P.Lond.; W. H. Hunter, M.B., C.M.; J. B. Jamieson, M.B., C.M.; J. W. Leech, M.B., Ch.B., M.D,; and C. A. Owen, M.R.C.S.Eng., L.R.C.P.Lond.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, MAY, 1900.—The following candidates passed in:—

Surgery.—W.P. Allen, Birmingham and London Hospital; R. H. Birtwell, London Hospital; H. Greenwood, London Hospital; J. E. Howroyd (Section II), Leeds; C. Johnson (Section II), Durham and London Hospital; J. Jones, Edinburgh and London Hospital; J. H. Kellgren (Section I), Cambridge and St. George's Hospital.

Medicine.—W. Archer, Leeds: A. St. J. Bateman (Section II), King's College Hospital; R. H. Birtwell, London Hospital: R. Brookes (Section II), Westminster Hospital; T. Burdekin, University College Hospital; P. J. Fitzgerald, Dublin; J. E. Howroyd (Section II), Leeds; F. S. Leech (Sections I and II), University College Hospital; C. A. C. Salmon, Guy's Hospital; C. V. Smith, University College Hospital; S. Southam, Westminster Hospital; T. R. Wilshaw (Section I), Birmingham.

Forensic Medicine.—W. Archer, Leeds; R. H. Birtwell, London Hospital; M. A. Curry, Bombay; F. S. Leech, University College Hospital; C. A. C. Salmon, Guy's Hospital; C. V. Smith, University College Hospital; S. Southam, Westminster Hospital.

Midwifery.—R. H. Birtwell, London Hospital; M. A. Curry, Bombay; E. N. de V. Dawson, St. Thomas's Hospital; P. J. Fitzgerald, Dublin; W. P. A. Hardwicke, Durham; F. A. Hort, Middlesex Hospital; J. Hunter, Toronto and Westminster Hospital; R. A. Jones, St. Mary's Hospital; J. H. Kellgren, Cambridge and St. George's Hospital; S. Southam, Westminster Hospital.

The diploma of the Society was granted to W. P. Allen, R. H. Birtwell, R. Brookes, H. Greenwood, J. E. Howroyd, J. Jones, F. S. Leech, C. A. C. Salmon, and S. Southam.

IT is stated in the American journals that Professor Edwin Klebs has resigned the teaching appointments which he has held from some years in Chicago, and intends to return to Germany.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,808 births and 4,043 deaths were registered during the week ending Saturday last, May 19th. The annual rate of mortality in these towns, which had declined from 23.0 to 17.8 per 1,000 in the six preceding weeks, rose again last week to 18.2. The rates in the several towns ranged from 10.3 in Croydon, 10.5 in Cardiff, 11.9 in Swansea, and 12.1 in Burnley, to 23.3 in Sunderland, 24.6 in Salford, 25.3 in Liverpool, and 26.9 in Manchester. In the thirty-two provincial towns the mean death-rate was 19.4 per 1,000, and exceeded by 3.1 the rate recorded in London, which was 16.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London this death-rate was equal to 1.8 per 1,000, while it averaged 2.0 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.7 in Bristol and in Blackburn, 2.8 in Manchester, 3.3 in Sheffield, 3.4 in Oldham, and in 3.7 in Leeds. Measles caused a death-rate of 1.4 in Bristol, in Derby, and in Oldham, 1.5 in Huddersfield, 1.6 in Leeds, 1.8 in Sunderland, and 2.0 in Plymouth; scarlet fever of 1.0 in Derby; whooping-cough of 1.0 in West Ham, and 1.4 in Norwich, in Liverpool, and in Oldham; and "fever" of 1.7 in Wolverhampton. The 69 deaths from diphtheria in the thirty-three towns included 22 in London, 9 in Leicester, 9 in Leeds, and 8 in Sheffield. One fatal case of small-pox was registered last week in Oldham, but not one in any other of the thirty-three large towns; and only 3 small-pox patients were under treatment on Saturday last, May 19th, in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,660 and 1,693 at the end of the two preceding weeks, had risen to 1,733 on Saturday last; 221 new cases were admitted during the week, against 170, 176, and 203 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 19th, 990 births and 602 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 21.7, 20.5, and 17.7 per 1,000 in the three preceding weeks, rose again to 19.5 last week, and was 1.3 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.2 in Leith and 15.1 in Aberdeen to 24.6 in Paisley and 30.4 in Perth. The zymotic death-rate in these towns averaged 2.8 per 1,000, the highest rates being recorded in Glasgow, Greenock, and Perth. The 290 deaths registered in Glasgow included 1 from small-pox, 10 from measles, 5 from scarlet fever, 4 from diphtheria, 23 from whooping-cough, 2 from "fever," and 10 from diarrhœa. Five fatal cases of measles and 2 of diphtheria were recorded in Edinburgh; 3 of measles in Dundee; and 4 of whooping-cough in Aberdeen.

ZYMOTIC MORTALITY IN LONDON.

[SPECIALLY REPORTED FOR THE BRITISH MEDICAL JOURNAL.]

THE accompanying diagram shows the prevalence of the principal zymotic diseases in London during the first or winter quarter of this year. The fluctuations of each disease and its fatal prevalence, as compared with that recorded in the corresponding periods of recent years, can thus be readily seen.

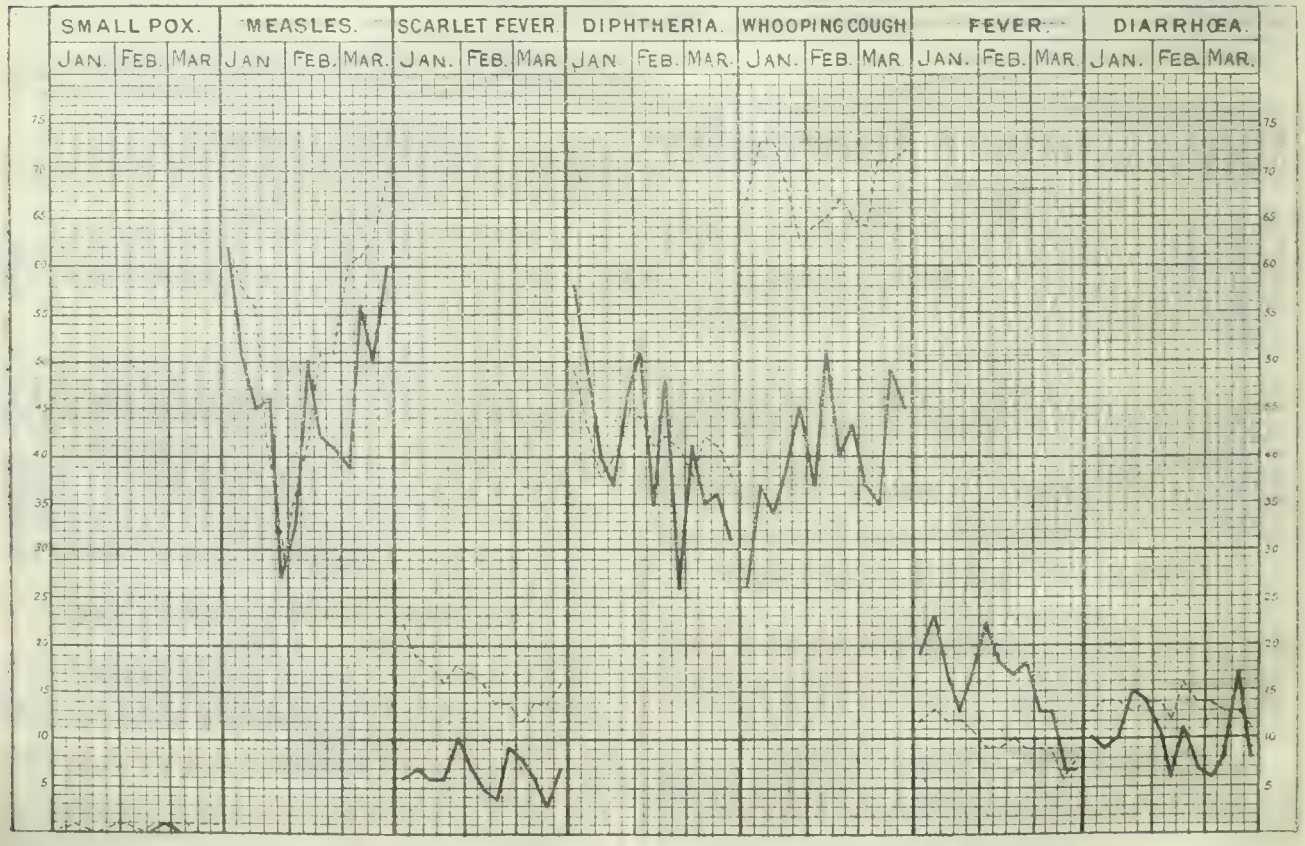
Small-pox.—One fatal case of small-pox was registered in London last quarter, the corrected average number in the corresponding periods of the ten preceding years being 8; 29 small-pox patients were admitted into the Metropolitan Asylums Hospitals during the quarter, and 3 remained under treatment at the end of March last.

Measles.—The deaths referred to measles, which had been 530 in each of the two preceding quarters, rose to 602 during the three months ending March last, but were 76 below the corrected average. Among the various sanitary areas of the metropolis measles showed the highest proportional fatality in Hammersmith, Fulham, Chelsea, Newington, St. Olave Southwark, and Rotherhithe.

Scarlet Fever.—The fatal cases of this disease, which had increased from 84 to 131 in the three preceding quarters, declined again to 84 during the three months under notice, and were as many as 123 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas this disease was proportionately most fatal in Stoke Newington, Hackney, Clerkenwell, Shoreditch, Limehouse, St. George Southwark, and Woolwich. The number of scarlet fever patients in the Metropolitan Asylums Hospitals, which had been 2,836 and 2,797 at the end of the two preceding quarters, had further fallen to 1,654 at the end of March last. The number of new cases admitted into these hospitals, which had risen from 2,880 to 4,011 in the four preceding quarters, declined again to 2,160 during the quarter ending September last.

Diphtheria.—The deaths referred to diphtheria in London, which had

DEATHS FROM ZYMOTIC DISEASES IN LONDON DURING THE FIRST QUARTER OF 1900.



NOTE.—The black lines show the *recorded* number of deaths from each disease during each week of the quarter. The dotted line shows the *average* number of deaths in the corresponding weeks of the ten preceding years, 1890-99.

increased from 357 to 696 in the three preceding quarters, declined again to 533 during the three months under notice, and were slightly below the corrected average number. Among the various sanitary areas this disease showed the highest proportional fatality in Poplar, St. George Southwark, Newington, Bermondsey, Rotherhithe, and Lee. The number of diphtheria patients in the Metropolitan Asylums Hospitals at the end of March last was 1,236, against 1,273, 1,479, and 1,679 at the end of the three preceding quarters; 2,192 new cases were admitted during last quarter, against 1,953, 2,651, and 2,980 in the three preceding quarters.

Whooping-cough.—The fatal cases of this disease, which had declined from 681 to 216 in the four preceding quarters, rose again to 518 during the three months ending March last, but were 365 below the corrected average number in the corresponding periods of the ten preceding years. Among the various sanitary areas whooping-cough was proportionately most fatal in Clerkenwell, St. Luke, Bethnal Green, Poplar, St. Olave Southwark, and Bermondsey.

Fever.—Under this heading are included deaths from typhus, enteric, and simple and ill-defined forms of continued fever. The deaths referred to these different forms of "fever," which had increased from 88 to 381 in the three preceding quarters, declined again to 204 during the three months ending March last, and were 76 above the corrected average number. No death either from typhus or from simple continued fever was registered during the quarter under notice. Among the various sanitary areas the "fever" death-rate was highest in St. Pancras, Stoke Newington, Mile End Old Town, Poplar, St. Saviour Southwark, and Battersea. The Metropolitan Asylums Hospitals contained 263 enteric fever patients at the end of March last, against 105, 252, and 406 at the end of the three preceding quarters; 498 new cases were admitted during last quarter, against 228, 452, and 816 in the three preceding quarters.

Diarrhœa.—The 132 fatal cases of diarrhœa registered in London during the three months ending March last were 42 below the corrected average number; this disease showed the highest proportional fatality in Fulham, Holborn, St. George Southwark, St. Olave Southwark, and Lewisham sanitary areas.

In conclusion it may be stated that the 2,074 deaths referred to the principal zymotic diseases in London during the first, or winter, quarter of this year were 545, or nearly 21 per cent., below the average number in the corresponding periods of the ten preceding years, 1890-1899. Among the various sanitary areas, the lowest zymotic death-rates were recorded in Paddington, Hampstead, Stoke Newington, St. Giles, St. Martin-in-the-Fields, and Strand; and the highest rates in Fulham, St. Luke, Bethnal Green, Poplar, St. Olave Southwark, Bermondsey, and Botherhithe.

VEXATIOUS PROSECUTION OF A WORKHOUSE MEDICAL OFFICER.

A CASE of interest not only to Poor-law medical officers, but also to the profession generally, has recently come before the Kingsclere (Hants) Magisterial Bench, and so far as we are able to understand the facts from a report in a recent issue of the *Reading Mercury* and from other sources, they appear to be as follows:

Dr. Maples, Medical Officer to the Kingsclere Workhouse, had claimed £3 from the guardians of the Union for professional attendance on three midwifery cases in the workhouse, this being in accordance with a contract existing between him and them which entitled him to a fee of £1 for attendance at, or immediately after, each case of childbirth occurring in the workhouse.

Dr. Maples having in the usual way made a claim for these three fees was charged with attempted fraud for having done so, and the prosecutor, who conducted the case himself, was a Mr. Steed, lately a clerk in the employ of Mr. Barnes, solicitor, of Kingsclere, Clerk to the Board of guardians of that Union. Mr. Barnes declined to give evidence in support of the charge when called upon by Mr. Steed to do so, on the ground that he was the professional adviser of the Board.

The contention of Mr. Steed in support of the charge was that, as Dr. Maples was not actually present on either of the cases in question at the time of the birth of the child, a fraud had been attempted on the Guardians by making a charge for his professional attendance on these cases.

Mr. Holding, the Chairman of Board of Guardians, and a magistrate of the Kingsclere Bench (not acting as such in the case) was called as a witness, and stated that the medical account presented by Dr. Maples had been passed by the House Committee, and that no authority had been given by the guardians for the present prosecution.

The case for Dr. Maples was conducted by Mr. St. Serrans, barrister, who, when about to speak in defence of his client, was informed by the Bench that it was unnecessary for him to do so, as they had decided to dismiss the charge. The learned counsel, however, notwithstanding this decision in favour of his client, expressed a wish to address the court, and then proceeded to denounce the prosecution as most unfounded and unjustifiable. He asked the Bench to condemn the informer in costs. This was done, but these costs Steed refused to pay, saying he should prefer seven days' imprisonment at Winchester.

This case shows the facilities which exist for bringing charges against members of our profession, but we have no recollection of any similar charge having been made as that put forward by the prosecution in this case.

It is generally admitted in private medical practice, and expressly sanctioned by Poor-law regulations, that the usual fee for midwifery is fairly earned if professional attendance is given during labour, or as soon as possible after the birth of the child, and this would appear to have been done in all the cases for which Dr. Maples claimed remuneration, as Mr. Steed's attempted proof to the contrary completely failed.

That a lawyer's clerk, without instructions or any authority whatever, should have been able to institute such proceedings is to us a matter of no small surprise, but beyond this, the fact that any magistrate should on such an application as that made by Steed have been induced to grant a summons for Dr. Maples to be charged with an attempt of fraud, is quite incomprehensible.

DISTRICT MEDICAL OFFICER AS PARISH COUNCILLOR.

A. C., who is a Poor-law Medical Officer and Public Vaccinator, asks whether he is disqualified from acting as a Parish Councillor in the same union.

*** He is not disqualified. This question has been definitely settled.

RETURN OF CONTRIBUTIONS PAID UNDER SUPERANNUATION ACT, 1896.

B. S., who has just voluntarily resigned his appointment as a district medical officer, after two years' service as such, writes to ask "whether he is entitled to have the amount of the deductions for superannuation refunded to him."

*** By Section VII of the Superannuation Act, an officer who resigns forfeits all claim to superannuation, but the guardians may, if they see fit, return to him all or part of his contributions under the Act. It is doubtful whether guardians would make any return after two years' service only, and we should not recommend an application for any return under such circumstances.

MEDICAL NEWS.

THE annual dinner of the Association of British Postal Medical Officers will be held at the Whitehall Rooms of the Hôtel Métropole, London, on Thursday, June 21st.

AMBULANCE AND HOME NURSING.—The Rev. Stewart Headlam, Chairman of the Evening Continuation Schools Committee of the School Board for London, informs us that the fee for lectures on ambulance and home nursing in Evening Continuation Schools has now been raised from half a guinea to one guinea an evening.

THE Guy's Hospital biennial dinner will take place on Friday, July 6th, at the Whitehall Rooms, Hôtel Métropole, at 6.30 P.M. The chair will be taken by Mr. Charles Higgens, F.R.C.S. Past and present students wishing to attend are requested to communicate with the Honorary Secretary, Mr. Charters Symonds, 58, Portland Place, W.

PRESENTATION.—On May 15th an illuminated album with a service of plate, and a purse containing 50 sovereigns was presented to Dr. Alfred Duke, of Whitley, who is leaving the town after five years' residence to practise elsewhere, by his former patients and friends. The album contains an inscription expressing their appreciation of his kindly and skill, and their good wishes for his future.

PROFESSOR SCHENK AND THE VIENNA INSTITUTE OF EMBRYOLOGY.—The Austrian Ministry of Education has accepted the resignation of Professor Leopold Schenk, Director of the Embryological Institute of the University of Vienna. He has been granted a pension beginning from May 1st. Till a new director is appointed the duties of the office are to be discharged by Dr. Josef Schaffer, a pupil of the well-known histologist, Professor Ritter von Ebner.

MEDICAL VACANCIES.

The following vacancies are announced:

BATH EASTERN DISPENSARY.—Resident Medical Practitioner. Salary, £130 per annum, with furnished apartments, etc. Applications to the Honorary Secretary, 10, Darlington Place, Bath, before May 31st.

BIRKENHEAD BOROUGH HOSPITAL.—Resident Junior House-Surgeon. Salary, £75 per annum, and sum of about £25 is usually obtained by police and notification fees. Applications to the Chairman of the Weekly Board.

BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary, £130 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM GENERAL DISPENSARY.—Three Resident Locums for two or three months' engagement. Terms 4 guineas per week, with furnished apartments. Applications to the Secretary by May 28th.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by June 4th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright Street.—Clinical Assistant. Applications to the Secretary of the Medical Committee by June 4th.

BIRMINGHAM: QUEEN'S HOSPITAL.—Resident Physician. Appointment for one year. Salary, £50, with board, lodging, and washing. Applications to the Secretary by June 20th.

BRECON INFIRMARY.—Resident House-Surgeon; unmarried. Salary, £90 per annum, with furnished apartments, board, etc. Applications to the Secretary, 6, Bulwark, Brecon, by June 7th.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) House-Physician. Salary at the rate of £50 per annum, with board, lodging, and residence. Unmarried and under 30 years of age when elected. Applications to the Secretary by May 30th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CARDIFF INFIRMARY.—Assistant House-Physicians. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary by June 5th.

CARLISLE DISPENSARY.—House-Surgeon. Salary, £150 per annum, with apartments not board. Applications to the Honorary Secretary, 23, Lowther Street, Carlisle.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn Road.—Assistant Anæsthetist. Applications to the Secretary.

CHELSEA HOSPITAL FOR WOMEN.—Pathologist. Applications to the Secretary.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Junior Assistant Medical Officer; unmarried. Salary, £130 per annum, rising to £150. Applications to the Medical Superintendent.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence, £80, with board, residence, and washing. Applications to the Secretary.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.C.—Two Assistant Dental Surgeons. Applications to the Secretary by June 11th.

DINORWIC QUARRY HOSPITAL.—Resident Dispenser and Surgical Dresser. Knowledge of Welsh essential. Applications to Dr. E. W. R. Jones, Llanberis, Carnarvonshire.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Physician. Board, residence, etc., provided, and honorarium of £25 on completion of six months' approved service. Applications to the Secretary by June 9th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk to the Parish Council, Castle Terrace, Edinburgh, by June 11th.

GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary, £130 per annum, rising to £160. Applications to the Secretary by June 9th.

GATESHEAD UNION.—Assistant Resident Medical Officer. Salary, £150 per annum, with furnished apartments, rations, and washing. Applications, endorsed "Assistant Medical Officer," to be sent to the Union Clerk, Poor-law Offices, Prince Consort Road, Gateshead, by May 28th.

GREAT NORTHERN CENTRAL HOSPITAL.—(1) House-Physician. (2) Junior House-Physician. Appointments for six months. Salaries at the rate of £60 and £30 per annum respectively, with board, lodging, and washing. Applications to the Secretary by June 1st.

HALIFAX: COUNTY BOROUGH OF.—Medical Officer of Health for the Borough. Must be D.P.H., and between 35 and 45 years of age. Salary, £500 per annum. Applications to the Town Clerk by May 31st.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum.—Applications to the Secretary of the Faculty.

LONDON (CITY OF) ASYLUM, near Dartford.—Assistant Medical Officer for three months during the summer. Salary, £3 3s. per week, with furnished apartments and board. Applications to the Medical Superintendent.

LONDON COUNTY ASYLUM, Banstead.—Junior Assistant Medical Officer, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by June 8th.

LINCOLN COUNTY HOSPITAL.—Assistant House-Surgeon. Appointment for six months, but eligible for re-election. Board, residence, and washing provided, and honorarium of £25. Applications to the Secretary.

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent, The Lawn, Lincoln.

LIVERPOOL INFECTIOUS DISEASES HOSPITAL.—Assistant Resident Medical Officer. Unmarried, and age not to exceed 26 years. Salary, £100 per annum, with board, lodging, and washing. Applications, endorsed "Assistant Resident Medical Officer," to be addressed to the Chairman of the Port Sanitary and Hospitals Committee, and sent under cover to the Town Clerk by May 28th.

MANCHESTER ROYAL INFIRMARY.—Temporary Honorary Assistant Surgeon. Applications to the Secretary by June 9th.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Lecturer on Chemistry. Salary, £150 per annum, with special fees and allowance. Applications to the Secretary to the Council by May 31st.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—(1) House-Physician. (2) House-Surgeon. (3) Two Assistant Anæsthetists. (4) Three Clinical Assistants. (5) Resident Obstetric Assistant. Candidates must be fully-qualified medical women. Applications to the Secretary for the first four by May 30th, and for the last by June 11th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Pathologist. Honorarium, 50 guineas. Applications to the Secretary by May 31st.

NORTHAMPTON GENERAL INFIRMARY.—Qualified Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium £20. Applications to the Secretary by June 12th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £85 per annum, with board, residence, and washing. Candidates to state whether they would be willing to accept the Junior post at £70 per annum. Applications to the Honorary Secretary by June 4th.

PONTEFRACT DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary commencing £150 per annum, with furnished rooms, etc. Applications to the Secretary by June 9th.

PRESTWICH: COUNTY ASYLUM.—Assistant Medical Officer. Unmarried, and under 35 years of age. Salary commences at £125, rising to £250, with board, apartments, washing, etc. Applications to the Superintendent.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by June 5th.

READING: ROYAL BERKS HOSPITAL.—(1) House-Surgeon. Salary, £60 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by June 4th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—(1) Two Examiners in Dental Surgery. (2) Hunterian Professors. (3) Erasmus Wilson Lecturer. (4) Arris and Gale Lecturer. Applications to the Secretary by June 4th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTH SHIELDS: INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £50 per annum, with board and residence. Applications to the Secretary.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Unmarried. Salary, £75 per annum, with board and residence. Applications to the Honorary Secretary by June 2nd.

WESTERN GENERAL DISPENSARY, Marylebone Road, N.W.—House-Surgeon; unmarried. Salary, £75 per annum, with board and residence, and allowance for washing. Applications to the Honorary Secretary.

WEST HAM HOSPITAL, Stratford.—Junior House-Surgeon. Salary, £75 per annum, with board, residence, etc. Appointment for one year, but eligible as Senior at £100. Applications, marked "Junior House-Surgeon," to be sent to the Secretary by May 30th.

WEST HAM UNION.—Resident Lady Assistant Medical Officer for the Workhouse and Schools. Salary, £100 per annum, with usual residential allowances. Applications, on forms provided, to be sent to the Clerk, Guardians' Offices, Union Workhouse, Leytonstone, N.E., by May 30th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician; (2) House-Surgeon; (3) Assistant Physician. Must be F. or M.R.C.P. Lond. Applications to the Secretary-Superintendent for (1) and (2) by June 20th, and for (3) by June 6th.

WOOLWICH UNION.—Resident Assistant Medical Officer for the Infirmary at Plumstead. Salary, £100 per annum, rising to £130, with apartments, rations, and washing. Applications on forms provided to be sent to the Clerk by June 6th.

MEDICAL APPOINTMENTS.

BAXTER, Stephen Edward, M.R.C.S., L.R.C.P., appointed Certifying Factory Surgeon for the civil parishes of Irchester, Wollaston, Great Doddington, Strixton, Bozeat, and Eastern Mundit in Wellingborough Rural District.

BEVAN, T. Webb, L.R.C.P.Lond., M.R.C.S., appointed Certifying Factory Surgeon for the Nantyglo and Blaina Urban District, Monmouth.

BOAKE, S., L.R.C.P., L.R.C.S.Irel., appointed Medical Officer of Health for the Chard Rural District, *vice* E. Stephens, L.R.C.P.Edin., M.R.C.S.Eng.

BORTHWICK, Thomas, M.D Edin., appointed Medical Officer of Health of Adelaide.

BUCKLEY, T. W., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Thrapstone District.

CROMMELIN, Charles E., M.D., appointed Government Medical Officer and Vaccinator at Campbelltown, New South Wales, *vice* Dr. C. N. Simmons, resigned.

DANAHER, E. H. J., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Rainham District.

GARSON, W. R. J., M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Bebington District.

HAYS, A. G., L.R.C.P., L.R.C.S.Edin., appointed Certifying Factory Surgeon for the Woodford District.

HENRY, C. D., M.B., B.C.Camb., appointed Honorary Visiting Physician to the Wellington Hospital, N.Z.

MAIDLOW, W. H., M.D.Durh., appointed Medical Officer of Health for the Ilminster Urban District, *vice* E. Stephens, L.R.C.P.Edin., M.R.C.S.Eng.

MALINS, Herbert, B.A.Oxon., M.B., C.M.Edin., appointed House-Surgeon to the Royal Maternity and Simpson Memorial Hospital, Edinburgh.

MORETON, Frederick, M.R.C.S., L.R.C.P., appointed Medical Officer to the Warrnambool Hospital, Victoria, *vice* Dr. H. L. Miller.

PLAYFAIR, Hugh J. M., M.D., F.R.C.S., M.R.C.P., appointed Obstetric Tutor to King's College Hospital.

RITCHIE, R. H., M.B., appointed Health Officer for the Shire of Arapiles, Victoria.

ROSEBY, Edmund Rupert, M.B., Ch.M., appointed Assistant Resident Medical Officer at the Parkside Lunatic Asylum, and Medical Officer to the Adelaide Gaol.

RYGATE, C. D. H., M.R.C.S., L.R.C.P.Lond., appointed Government Medical Officer and Vaccinator at Wellington, N.S.W.

STRETTON, J. Lionel, L.R.C.P., M.R.C.S., appointed Medical Referee under the Workmen's Compensation Act for the Kidderminster Division of the County Court Circuit, No. 23.

TRAGUE, D. G. M., M.B., C.M., appointed Medical Officer of the Mount Garnett Hospital, Chiliagoe District, Queensland.

THWAITES, J. S., M.B., appointed Health Officer for the United Shire of Newham, Victoria.

DIARY FOR NEXT WEEK.

MONDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation. (Skin.). 5-7 P.M.—Mr. R. Lake: Class: Practical Otology. Demonstration III.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. J. B. Ball: Throat and Nose Cases. Lecture I.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Furniss Potter: Examination of Ear.

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. C. T. Williams: Consultation. (Medical.)

Pathological Society of London, 20, Hanover Square, W., 8.30 P.M.—Dr. Morley Fletcher: (1) A Hypertrophied Brain weighing 73 ounces; (2) Tumour of Posterior Mediastinum probably originating in the Sympathetic System. Dr. Morley Fletcher and Mr. Waring: Two Cases of Sacro-coccygeal Tumour, one with Recurrence after Operation. Dr. Smith: Acromegalic Skull. Dr. Rolleston: Sarcoma of Œsophagus. Dr. Cautley: Combined Anencephalia and Hydrocephalus. Mr. Edmunds: Thyroid of Puppy of Thyroidless Bitch. Dr. Saunders: A Duck with Webless Feet. Mr. Shattock: Anatomical Rarities. Dr. Fawcett: A case of Fibroid Lung following Bronchpneumonia. Dr. Fawcett and Dr. Hale White: Fatty Heart in a boy aged 17 years. 9 P.M.—Annual general meeting for election of officers, report of Council, etc.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Dr. James Taylor: Cerebral Diplegia.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Sir W. H. Broadbent: Consultation. (Medical.)

British Balneological and Climatological Society, 20, Hanover Square, W., 6 P.M.—Ordinary meeting, to be followed by general meeting. 7 P.M.—Annual dinner (Limmer's Hotel), 9 P.M.—Conversazione.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Mr. F. Willcocks: Medical Cases. Post-Graduate Course.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Waterhouse: Surgical Cases.

Hospital for Sick Children, Great Ormond Street, W.C., 4 P.M.—Dr. Still: Meningitis in Children.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. J. B. Ball: Throat and Ear Cases. Lecture II.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. H. Tilley: Consultation. (Throat.)

West London Medico Chirurgical Society, West London Hospital, Hammersmith Road, W., 8.30 P.M.—Cases and specimens will be shown by Mr. G. Pernet, Mr. S. Paget, Mr. Bidwell, Mr. McAdam Eccles, and Dr. Ball and Dr. Abrahams.

Laryngological Society of London, 20, Hanover Square, W., 5 P.M.—Cases and specimens will be shown by Messrs. Butlin, Lake, Walker Downie, Lack, Parker, Steward, and Waggett.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BONNER.—At Aberdovey, N. Wales, on 19th inst., the wife of Thomas Irvine Bonner, M.A., C.M., M.B., of a daughter.

PEARSE.—On May 10th, at 110, Cathedral Road, Cardiff, the wife of Athol S. J. Pearse, M.A., M.B.Cantab., M.R.C.S., L.R.C.P., of a daughter.

DEATHS.

NIVISON.—On May 15th, at Woodlee, Castle Douglas, N.B., John Nivison, M.D.Edin., and J.P. for the county of Kirkcudbright.

THOMAS.—At Kirkbrae, Selkirk, N.B., on May 12th, James Thomas, M.D., aged 58.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

INCOME-TAX.

W. P. asks should income-tax be paid on resident patient's pay of £90 per annum for residence, maintenance, laundry, and constant medical treatment, thrice daily throughout the year?

*** Income-tax should be paid on the net profit, not on the gross amount of £90 a year. After rent of room, wear and tear of furniture, maintenance, laundry, and proportion of house expenses, such as attendance, fire, lighting, etc., the balance of profit must be very small. Professional attendance is not an allowable deduction.. The Income-Tax Repayment Agency, 6, Chichester Road, W., advises on such matters.

ANSWERS.

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided.

VILLAGE MISSIONARY.—We understand that the form which our correspondent enclosed is merely an administrative form, in order that lay officials may have some general knowledge of what is being done in dispensaries. We are also informed that every dispensary maintains a register in which the disease of each patient is entered. An examination of such registers would no doubt supply information as to the prevalence of cancer in various races in India which would be of great value and interest.

THE NITRO PROPRIOL TEST FOR SUGAR IN URINE.

IN answer to "J. H. S.," Dr. Saundby asks us to draw attention to his letter upon this subject in the *Lancet* for March 24th of the present year, in which he gives reasons for regarding this test as not trustworthy.

THE PROPHYLAXIS OF RUBELLA.

R.W.—It is, with our present knowledge, wise to regard rubella (German measles) as possibly infectious for forty-eight hours before the rash appears. The incubation period is rarely, if ever, longer than eighteen days from the time of (which may differ from the date of exposure to) infection. Hence, as in all cases of exposure to any infectious malady, the prime importance of securing the disinfection of both person and fomites at the beginning of the period of "quarantine." Assuming that this necessary precaution has been adopted, the course followed by our correspondent would be justifiable. A second attack of rubella is uncommon.

MEDICAL REQUIREMENTS IN CANDIDATES FOR MILITIA COMMISSIONS.

A CORRESPONDENT inquires what these requirements are—a question more easy to ask than to answer definitely. We believe them to be broadly as follows: The standards of general health, stature, vision, are much the same as in an infantry recruit; but the nearer they approach those laid down for candidates for commissions in the regular forces the better. Officers seeking commissions in the regular forces through the militia, are subjected to the same physical tests as those obtaining direct commissions—*Vide* Regulations for the Army Medical Services, 1897.

THE MODIFIED EXAMINATION OF THE PHARMACEUTICAL SOCIETY.

MATERIA MEDICA.—On the passing of the Pharmacy Act, 1868, all chemists and druggists in business on their own account were placed upon the *Register*, and assistants could obtain registration by passing a special examination termed the Modified Examination. It was necessary for those persons eligible for this examination to register for the same on or before December 31st, 1869. Those who failed to do so can only become registered by passing the Minor Examination.

DISSECTION IN HOT CLIMATES.

SCALPEL.—Major R. Havelock Charles, M.D., Professor of Anatomy in the Calcutta Medical College, has described the means by which bodies are preserved for dissection as follows: "We use glycerine, alcohol, and perchloride of mercury, injected by hydrostatic pressure. The bodies, after the usual cleansing and shaving, get frequent coats of crude carbolic acid externally. A good body treated thus dries up, but never decomposes." *Vide* BRITISH MEDICAL JOURNAL, September 30th, 1899, p. 844.

VARICOSE ULCERS OF LEG.

DR. ERNEST A. T. STEELE (Southend-on-Sea) writes: In answer to your correspondent "L. S. A.," who asks for suggestions as to the treatment of varicose ulcers of the leg, I recommend the following method which has proved highly successful in my hands in a considerable number of cases which I have treated systematically. I must point out, however, that all the details must be faithfully carried out to ensure success. The method is as follows: Wash the leg from toes to knee with spirit soap (℥iv sapo viridis dissolved in ℥iv sp. vin. meth.), shaving the leg for 4 inches round the ulcer. Then wash the leg thoroughly with 1 in 30 carbolic lotion. Next go carefully over the surface of the ulcer with a glass rod dipped in pure carbolic acid. This is a painless proceeding if the skin edges are not touched. Apply a cyanide gauze dressing large enough to overlap the ulcer on all sides by 2 inches. After this is done paint the whole leg and foot with the following mixture applied hot: Gelatine 10 parts, zinc oxide 10 parts, glycerine 40 parts, water 40 parts. This may be made in quantity and kept for use, being melted in a water bath as required. A small crystal of thymol should be added if it is to be kept any length of time to prevent the growth of moulds. When the gelatine mixture has been applied, bandage the leg from the toes to the knee with a butter muslin bandage 6 yards by 3 inches applied evenly. Then give another coat of gelatine paint and bandage as before with another similar bandage. This first application may be left on two days, at the end of which time it should be removed and the ulcer dressed with cyanide gauze, the leg being washed again in the carbolic lotion. The second dressing is applied in the same manner as the first and may be left till discharge comes through. The dressings are applied in the same way until the ulcer is healed. If the patient can give the legs rest for the first week so much the better, but this is not absolutely necessary. When healing is complete, which generally takes place in two or three weeks, unless the ulcer is of great extent, I generally complete the cure by tying the internal saphena vein, a proceeding which is easily done under cocaine or eucaine anæsthesia.

TEXTBOOK OF PRACTICAL GEOLOGY.

DR. G. C. TAYLOR (Stoke Newington, N.) writes: In reply to "Depechez." I have found Horace B. Woodward's *Geology of England and Wales* (G. Philip and Son, 22s. 6d. (?)) of great value as a guide in practical field work; besides containing a good map and numerous sections, the volume is well indexed so that one can readily refer to the notes on any district. If resident in the metropolis, *Geological Rambles round London* (published by Fisher Unwin in his Half-holiday Handbook Series, 9d.) and *Guide to the Geology of London and Neighbourhood* (by W. Whitaker, Geological Survey Memoir, 1s.) will be found useful.

DR. LOUIS E. STEVENSON, F.G.S. (Temple Sowerby, Penrith) writes to recommend "Depechez" to read first of all *Geology for Beginners*, by W. W. Watts, a lucid and delightfully written introduction to this charming science. It is published by Macmillan and Co., London, 1898. The volumes recommended by the BRITISH MEDICAL JOURNAL are also good. Should "Depechez" desire a more intimate knowledge of the structure of rocks he will find it in *Petrology for Students*, by A. Harker, one of the Cambridge Natural Science manuals (7s. 6d.). For the study of the Igneous Rocks in particular he knows of no better guide than F. H. Hatch's *Textbook of Petrology* (London: Swan Sonnenschein and Co.).

MOTOR CARRIAGES.

DR. STEWART IRWIN (Olveston, Tockington, Glos.), in reply to several correspondents, sends an account of his experience of a motor car in practice:—

I bought a Daimler car, 5½-horse power, from the Motor Manufacturing Co., of Coventry, in October, 1899, and the experiment has been a success in every way, an economy both in money and time.

The car has done the work of two horses at an average cost of running of 9s. per week. I formerly employed a groom at £1 per week. I have now a boy at 8s. a week, whom I find equal to cleaning, lubricating, and starting the car. The sundry repairs done by the village cycle agent about equal my saddler and shoeing smith's account.

As to economy in time, I can start on my rounds within 3 minutes of opening the coachhouse door; I can do a journey in one-half the time I formerly did with horshflesh, for needless to say I do not keep to the 12 miles an hour limit.

I never take a groom, as the car requires no attention when stationary; in night work the country medical men will appreciate this point.

Of course it is absolutely necessary for the owner to thoroughly understand his car, not only the driving but also the mechanism, so as to be able to detect and put right anything which may go wrong, and I may say it does not require the skill of a mechanic to do this.

The car will climb anything a horse can drag a dogcart up. With regard to skidding on a greasy road, I have no trouble in this respect: solid tyres and heavy cars are far superior to pneumatics and light cars. Wet weather and muddy roads make very little difference to the speed. Snow when over 3 inches deep is a drawback, as the wheels fail to grip in hill climbing, but next winter I hope to remedy this by attaching sand boxes in front of each driving wheel.

Dust is the greatest nuisance, as the speed of the car causes a vacuum, and the dust envelops the occupier of the back seat, consequently I cannot too strongly recommend a hood. I have run 120 miles in one day, and 60 miles without a stop.

NOTES, LETTERS, Etc.

THE UNION HOSPITAL, MIDDLESBROUGH.

DR. L. G. DAVIES (Histon, Cambridge), late Medical Officer, Union Hospital, Middlesbrough, writes: In the BRITISH MEDICAL JOURNAL of May 19th I see a copy of the letter written to me by the guardians. I shall not attempt to discuss their charge that my statements were "most misleading," as you could not, probably, spare me the space for this purpose. Any gentleman interested in the matter, however, may judge from the terms of their letter how enviable is the position of a medical man serving under this Board. He will also, no doubt, be able to correctly assess the value of the threat their letter holds out.

CHANGE OF ADDRESS: A WARNING.

DR. R. E. BURGES (Chester) writes: Seeing some letters about removal of names from the *Medical Register*, I may tell an experience I had some years ago. I wrote to the Registrar for Ireland giving him notice of change of address and then got a letter stating that my name had been removed because I had not answered a letter of inquiry (which had not been sent to me), and that I must send 5s. in stamps to have the name restored. I wrote again, sending the stamps, and saying that no letter of inquiry had been received by me, to which I got answer that they had made a mistake, the letter had not been sent to me, and returned the stamps—less one penny, which they had the impudence to deduct for postage.

"A WARNING TO DOCTORS."

UNDER this heading the *Financial Times* of May 18th publishes an article in which it is stated that doctors in the north of London are being approached by a person who invites them to fill up a typewritten form of application for a life appointment as Physician to "The Old Bank National Deposit Assurance Corporation." The fees offered vary from

half a crown for small assurances in the industrial branch, to three guineas when the amount assured is £500. The *Financial Times* states that the doctor thus approached is informed that he is expected to take up some shares "payable in full on application." Our contemporary thinks "it would be advisable for doctors in the neighbourhood of the Finsbury Park Road to put on foot careful inquiry to test the *bona fides* of this concern, and, until these result satisfactorily, the medical profession ought to be warned to stand clear."

IRISH DISPENSARY DOCTORS AND GUARDIANS.

DR. W. CALWELL, Honorary Secretary of the North of Ireland Branch of the British Medical Association (1, College Square, N. Belfast), writes to acknowledge the following additional subscriptions which have been received on behalf the Dr. Moses Henry "Legal Expenses" Fund, particulars of which were published in the BRITISH MEDICAL JOURNAL of March 31st, p. 804:

	£	s.	d.
To amount already acknowledged	15	6	0
Dr. J. C. Taylor (Brookeboro')	0	10	6
Dr. Wallace (Ballymoney) ...	0	5	0
Dr. Stewart (Portglenone) ...	0	5	0
Dr. Fitzgerald	0	5	0
Dr. Stewart (Ballymena) ...	0	5	0
Dr. Brownrigg (Moira) (second subscription) ...	0	5	0
Dr. Taylor (Tandragee) ...	0	5	0
Dr. Marshall (Markethill) ...	0	5	0
Dr. Annesley (co. Fermanagh)	0	5	0
Dr. Cromie (Clough)	0	5	0
Dr. Orr (Ballylesson) ...	0	5	0
Dr. McMaster (Broughshane)	0	5	0
Dr. Brownlees (Glenwherry)	0	4	0
Dr. Henry O'Neill (Belfast)	0	5	0
Dr. Chas. O'Neill (Belfast) ...	0	5	0
	£19	5	6

CAMBRIDGE APPOINTMENTS ASSOCIATION.

MR. W. A. J. ARCHBOLD, Secretary (73, Trumpington Street, Cambridge), writes: Will you kindly give publicity to the fact that this Association is frequently invited to supply the names of those who are willing to act as medical officers for passenger ships, and that we should, therefore, be very glad to receive the names of Cambridge medical men who wish to take a voyage in such a capacity? We have also on our books the names of a number of very highly-qualified men, who have been trained in the laboratories here, and who are anxious to obtain positions as analysts, medical officers of health, and the like. You will render us a great service if you will call attention to the means which this Association supplies of introducing such men to those responsible for making appointments. We ought perhaps to add that this Association charges no commission in respect of appointments given or received.

PREVENTION OF LACERATION OF THE PERINEUM.

DR. P. O'CONNELL (Stillorgan Castle, co. Dublin) writes: In the BRITISH MEDICAL JOURNAL for May 19th, p. 1271, "Querist" asks: "Are lateral incisions in the perineum any good" as a preventive against laceration? I have frequently made such incisions in slim—*petite*—primiparæ, when it became evident that otherwise the perineum must suffer extensive laceration. I make an incision on each side nearly half an inch long, and directed slightly backwards 1 inch or so above the fourchettes. These incisions become lacerations over an inch long, give ample room for the passage of the head, and require no sutures. With the contraction of the tissues their sides fall together and unite kindly and quickly. Only twice after making such incisions have I seen any injury to the central perineum, but on each occasion it was so slight that it required no attention. The result of this practice in my hands was always most satisfactory, and often saved me the labour of suturing a lacerated rectum as well as a lacerated perineum.

PERINEUM GUARD.

DR. ALEXANDER DUKE, F.R.C.P. (Cheltenham) writes with reference to the description and illustration of a perineum guard in the BRITISH MEDICAL JOURNAL of May 5th, page 1092: I beg to say that while Assistant Master to the Rotunda Hospital several years ago I have used a metal shoe-horn bent at angle as a retractor of the perineum. During the exit of the head I found it act well in some few cases, but did not always succeed in preventing a laceration. However, I found a much better plan by drawing the perineum downwards and backwards during each pain with fingers alone, a plan for which I claim priority, and which has never failed me (if done in time) in any case in which I have employed it. I observe my claim for priority has been recognised in Neale's *Medical Digest*, and also in Parvin's *Science and Art of Obstetrics*, 1887. I feel sure if my plan were better known and practised there would be much fewer perineorrhaphy operations, more especially on primiparæ.

THE PRINCIPLES AFFECTING THE CONDUCTION OF SOUND BY THE BONES OF THE HEAD.

DR. WALTER COLQUHOUN (Glasgow) writes: I read the abstract of Dr. Gray's researches on this subject appearing in the BRITISH MEDICAL JOURNAL of April 28th with great interest, and I thought it very gratifying that the British Medical Association should be found ready to encourage such work. On some points, however, I would like to be enlightened. Dr. Gray fixed the handle of the malleus in a normal ear by means of a probe, and, finding that the patient then asserted that the tuning fork sounded louder in that ear, attributed the increase of sound to better conduction of vibrations from the margo tympani to the malleus by the stretched fibres of the tympani membrane. Now it seems to me that fixation by the probe prevented the malleus from answering to any vibrations of the tympanic membrane. Is it not the case rather that he converted the chain of ossicles into a rigid system which conducted the vibrations from the walls of the middle ear direct without allowing those vibrations to expend themselves on the tympanic membrane? It seems to me that fibrous filaments are not to be compared to rigid substances in their power of conducting sound vibrations with minimum loss. A freely moving membrane would seem to be a positive disadvantage for bone conduction. Is it not the case that in nearly all diseases of the middle ear the chain of ossicles approaches more nearly to a rigid system, and that, where the labyrinth is unimpaired bone conduction is increased even when the membrane is partially destroyed? Slight pressure would help to fix the membrane, whereas increased pressure by flattening the membrane would tend to again release the ossicles. I had a difficulty concerning the alleged inward movement of the apex of the cone formed by the tympanic membrane on the application of slight air pressure by closing the ear. Why should the apex move inwards before definite flattening of the membrane occurs? Can it be asserted that closing of the ear does not cause the tensor tympani muscle to act at once? I must confess that I could not perceive the object of Dr. Gray's mathematical investigation nor find what was proved. We use the series he employed when we wish a result to a close approximation and are sure of our premisses. I could not find that it was legitimate to consider sections of half the tympanic membrane as arcs of circles, or to take the centres of curvature in either case on the line representing a section of the tympanic wall, or consequently that the quantity z should be the same in equations (1) and (2).

CONFERENCE ON HOSPITALS AND DISPENSARIES.

DR. T. GARRET HORDER (Cardiff Medical Society, Queen Street, Cardiff) writes: I have some copies of the papers read at the Conference on hospitals and dispensaries held last year, and shall be glad to send them to anyone interested in the subject.

LETTERS COMMUNICATIONS, ETC., have been received from

A A. W. T.; Mr. W. R. Ackland, Clifton; Another M.D., M.S.; Another M.D. Anxious Enquirer. **B** Mr. F. S. Barnett, London; Professor R. Blitz, London; Mr. W. J. T. Barker, London; Messrs. Burroughs, Wellcome, and Co., London; Mr. P. Bigelow, London; Mr. W. Berry, Wigan; Dr. R. E. Burges, Chester; Dr. J. G. Blackman, Portsmouth; Dr. T. Beattie, Newcastle-on-Tyne; Berkefeld Filter Company, Manager of, London; Mr. G. F. Blake, Dublin; Dr. E. G. Barnes, Eye; J. W. Batterham, M.B., St. Leonards-on-Sea; Mr. L. A. Bidwell, London; Mr. J. H. Blakeney, Birmingham. **C** Hon. S. Coleridge, London; Crux; Mr. W. E. E. Coles, London; Civil Practitioner; Cambridge Scientific Instrument Company, Manager of, Cambridge; Dr. L. Casper, Berlin; Constant Reader; Dr. W. M. Campbell, Liverpool; Dr. W. H. Calvert, Melrose; Mr. A. Cheatle, London; Dr. W. Calwell, Belfast; Mr. W. J. Corbett, London; Dr. J. M. Clarke, Bristol. **D** Dr. De Valcourt, Paris; Dr. A. Duke, Cheltenham; Dr. S. Davies, Plumstead; Dr. T. Dutton, London; Dr. L. G. Davies, Histon; Mrs. Dowse, London; Mr. P. J. Damania, London; Doubtful. **E** Mr. H. J. Edwards, Banbury; D. Ewart, M.B., Chichester; England; Dr. J. F. H. Ellerton, Leamington; Dr. W. Everett, Chartham. **F** Dr. P. J. Freyer, London. **G** Dr. A. E. Giles, London; Mr. T. P. Gostling, Worcester; Dr. W. Graham, Middleton; Mr. B. Gordon, London; A. R. Galloway, M.B., Aberdeen; P. R. Griffiths, M.B., Cardiff. **H** H.; C. D. Henry, M.B., Wellington, N.Z.; Dr. G. Heaton, Birmingham; H. K.; House-Surgeon Twelve Years Ago; Dr. A. W. Harrison, Mossley; Mr. H. B. Hicks, Lymington; Dr. T. W. Hime, Bradford. **I** Ichabod; Inquirer. **J** Dr. E. Jepson, Durham; J. McC. **K** Dr. W. W. Keen, Philadelphia; Dr. E. D. Kirby, Birmingham. **L** L.S.A.Lond.; H. E. Littledale, M.B., Dublin; Dr. A. Longhurst, London; Mr. C. W. Lawson, Gilsland; Mr. R. G. Lund, London; Mr. M. Lomax, Leamington Spa. **M** Mr. W. Marriott, London; J. McGowan, M.B., Grangemouth; Materia Medica; M.B.Lond., F.R.C.S.; Dr. H. J. Macevoy, London; Mr. E. R. Morgan, Morriston; Mr. P. Molony, Beaufort West, S.A.; Member; Dr. A. S. Myrtle, Harrogate; Member of the Association; Mr. R. Maples, Kingsclere; Dr. R. W. Marsden, Manchester; Dr. P. Macgregor, London; M. O. Lincs.; Sir C. R. McGrigor, Bart., and Co., London; Dr. T. K. Monro, Glasgow; R. C. Macdonald, M.B., Foyers. **O** Dr. P. O'Connell, Stillorgan. **P** Mr. J. E. Prichard, Bristol; Mr. H. J. Prangley, London; Dr. E. F. Potter, London; Mr. G. Packer, Clifton; Dr. A. R. Parsons, Dublin. **Q** Quærens. **R** Mr. A. Renshaw, Sale; Dr. W. B. Ransom, Nottingham; Mr. J. Reid, Redhill; Dr. E. J. Reid, London; Mr. J. Robertson, Edinburgh; J. S. Riddell, M.B., Aberdeen; Mr. S. Ringer, London; Mr. J. Robertson, Edinburgh; J. S. Riddell, M.B., Aberdeen; Mr. E. J. Reid, London; Dr. G. D. Robinson, London; Mr. W. R. Rice, Coventry; Dr. W. Robinson, Sunderland; Dr. W. Reeve, London. **S** Dr. H. Snow, London; Mr. E. Smith, Whitley; Scalpel; S. B. H.; Mr. W. Stewart, London; Mr. R. J. H. Scott, Bath; Senior H.-S.; Dr. S. Sunderland, London; L. E. Stevenson, M.B., Penrith. **T** Mr. H. H. Tidswell, Cardiff; T. E. E. R.; G. C. Taylor, M.B., London; Mr. A. Thomson, Maiden head. **W** Dr. H. W. Webber, Plymouth; Dr. F. J. Waldo, London; Dr. L. Williams London; Dr. F. Willcocks, London; E. B. Waggett, M.B., London. **X** X. Y. Z., etc.

BOOKS, ETC., RECEIVED.

Lateral Curvature of the Spine. By G. Steele-Perkins, M.D. London: Bemrose and Sons.

Die Prophylaxe der Sterilität. Von Dr. E. H. Kisch. Munich: Seitz and Schauer. 1900.

Die Prophylaxe in der Psychiatrie. Von Dr. W. Fuchs. Munich: Seitz and Schauer. 1900. M. 1.50.

Climat et Eaux Minérales d'Angleterre. Par Dr. A. Labat. Paris: J. B. Bailliere. 1900.

Eaux Minérales d'Italie. Par Dr. A. Labat. Paris: J. B. Bailliere. 1899.

Encyklopädie der Geburtshülfe und Gynäkologie. Herausgegeben von Dr. M. Sänger und Dr. O von Herff. Lief 2. Leipzig: F. C. W. Vogel. 1900. M. 2.

Weekly Day and Night Chart. By C. A. P. Osburne, F.R.C.S.E. London: Jarrold and Sons. 1s.

How to Learn a Foreign Language. By W. Pulman. London: G. Philip and Son. 6d.

The Anatomy of the Central Nervous Organs in Health and in Disease. By Dr H. Oberstenner. Second Edition by Alex Hill, M.A., M.D., M.R.C.S. London: Charles Griffin and Co. 1900. 30s.

*** In forwarding books the publishers are requested to state the selling price.

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N.B.—It is against the rules of the Post Office to receive letters at *Poste Restantes* addressed either in initials or numbers.

A CLINICAL LECTURE
ON
A CASE OF CHOLECYSTOTOMY.

BY JAMES SWAIN, M.S., M.D.LOND., F.R.C.S.ENG.,
Professor of Surgery at University College, Bristol; Assistant-Surgeon to to the Bristol Royal Infirmary.

I HAVE selected for our consideration to-day a case of enlargement of the gall bladder sent to me by Dr. Swinhoe, of Swindon, with the following history:

Miss H., aged 56, had been subject to attack of pain in the right hypochondrium for four years. The attacks of pain lasted sometimes a week, the longest interval of freedom from pain being ten days. These attacks of pain were never followed by jaundice, and there was no history of the passage of gall stones.

Eighteen months ago a "tumour" the size of a walnut was noticed in the right hypochondrium, and it has gradually grown to the size of a pear. At the time of examination there was a smooth, pear-shaped swelling in the right hypochondrium, extending along an oblique line passing from the ninth rib to a point below the umbilicus in the mid-line. The lower end of the swelling was more or less globular, and the upper end appeared to pass under the liver, and to be covered with a pointed process of the same (linguiform process). With ordinary respiration the "tumour" was felt to be about half an inch to the left of, and half an inch below, the umbilicus; but on deep inspiration it moved downwards for about an inch and a half, and then the sulcus between the swelling and the liver was more easily felt. The upper end of the "tumour" appeared to be fixed to the liver, and though the lower end was more or less free, the swelling as a whole could not be pushed down into the pelvis or into the right flank. There was no tenderness over the swelling. The liver was not enlarged, so far as could be made out by percussion, and over the greater part of the "tumour" there was some resonance.

In this case diagnosis was made of "distended gall bladder, probably, but not necessarily, due to gall stones," and an operation was advised. Let us see on what grounds this diagnosis was made and how far it was corroborated at the time of operation.

Tumours of the gall bladder nearly always enlarge in a direction downwards and inwards from the ninth rib to a point just below the umbilicus, exactly as appeared in this case. I have seen a dilated gall bladder reach nearly as far as the pubes, and such enormous dilatations have been mistaken for ovarian cysts.

With such a swelling as was met with in this case almost the only things that could easily resemble a distended gall bladder would be: (*a*) Movable right kidney; (*b*) tumours (especially cystic) of the right kidney; (*c*) tumours of the pylorus; and (*d*) tumours of the liver itself.

A movable kidney can often be pushed down towards the pelvis, and when released it springs back in the direction of the right loin; on bimanual palpation (with one hand in the loin and the other over the swelling) its typical shape can be made out; its range of movement is greater than that of a distended gall bladder, and it is generally distinctly overlapped by the colon. By attention to these points there is not often any likelihood of confounding a movable kidney with the comparatively fixed pear-shaped tumour with its long axis in a line drawn from the ninth rib to a point below the umbilicus as we find in a distended gall bladder, and which existed in this case. Too much stress, however, must not be laid on the existence of resonance over the swelling, for the gall bladder frequently forms adhesions (to which reference will presently be made) to the neighbouring intestine, and especially the colon.

Kidney tumours can generally be felt in the loin, and, although they may grow downwards and forwards, they do so at a lower level than the line which has already been indicated as that which is so typical of enlargements of the gall bladder.

Tumours of the pylorus were easily excluded in this case, for none of the gastric symptoms found in association with pyloric stenosis existed.

It is not always possible to diagnose a distended gall bladder from tumours of the liver itself; but, as has already been pointed out, it was quite easy in the case before us to feel a sulcus between the swelling and the liver. Moreover, there were no nodular enlargements felt in the liver, nor did any symptoms suggestive of malignant disease of that organ exist. The conclusion, therefore, that the swelling was due to distension of the gall bladder was inevitable, and it remained for us to form some idea of the nature and cause of that enlargement.

The smooth surface and feeling of tenseness made it fairly clear that we were dealing with a fluid enlargement, and the absence of local tenderness suggested the absence of any inflammatory mischief—empyema of the gall bladder, etc. The swelling was therefore due to a passive distension of the gall bladder with either bile or mucus, the former caused by some form of obstruction in the common duct and the latter by some obstruction in the cystic duct.

Obstructions in the common duct—whether due to gall stones, stricture, or growth from within, or malignant disease of the head of the pancreas from without—would be associated with jaundice, but of this there was, and had been, none. The obstruction causing distension was therefore in connection with the cystic duct, giving rise to a condition known as hydrops, or dropsy of the gall bladder. Such obstruction might be produced by gall stones, stricture, or growth from within; or by fæcal impaction in the colon, or the dependent position of the fundus of the gall bladder (aided, perhaps, by the dragging of adhesions) from without. Fæcal impaction could be excluded, for the bowels had acted regularly, and no swelling of the colon could be detected. Tumours of the cystic duct are mere pathological curiosities.

We were left, therefore, to choose between obstruction of the cystic duct by gall stones, by stricture, or by kinking of the duct from the dragging of adhesions on the gall bladder. It was scarcely possible to say which of these various conditions might be acting as the cause of the mischief, and this difficulty was increased by the fact that stricture is almost always caused by ulceration produced by the passage of a gall stone, and adhesions are also produced by the prolonged irritation of gall stones setting up sufficient inflammation to spread through the walls of the gall bladder to the adjacent peritoneum.

Against the theory of the passage of gall stones was the fact that the patient had never been jaundiced; and against the actual presence of a gall stone was the fact that, unless associated with some more or less acute inflammation of the gall bladder (which apparently did not exist in this case), cholelithiasis is not generally associated with so marked an enlargement as was found.

On the other hand, there were one or two points that made it probable that gall stones had existed at some time or other. One of these was the presence of the linguiform process of liver—Reidel's lobe, as it has been called—which could be felt over the enlarged gall bladder and which was seen at the time of operation. This is very uncommon except in association with cholelithiasis, and is probably caused by adhesions of the fundus of the gall bladder to the margin of the liver, so that when the gall bladder enlarges it drags a portion of liver tissue with it. Another point in favour of the presence of gall stones at some time or other—though this was not discovered till the time of operation—was the existence of very numerous adhesions between the gall bladder and the adjacent colon, for such adhesions are not usually found except in connection with gall stones.

Without operation, therefore, it was not possible to feel sure as to which of these various causes was effecting the blocking of the cystic duct; but that was of small moment as regards the treatment, for operation (cholecystotomy) is demanded in all such enlargements as we have been considering owing to the danger of inflammation or rupture of the distended gall bladder.

In discussing the diagnosis of the case I have been careful to avoid all reference to exploratory puncture—its dangers are great, and it only needs mentioning to be condemned as a method of diagnosis or treatment.

Operation was accordingly decided upon, and an oblique incision some 3½ inches long was made in the direction of the long axis of the swelling—that is, in a line extending from the ninth rib to a point just below the umbilicus. Numerous incisions have been recommended for the operation of cholecystostomy, but this one was chosen because it is practically parallel to the fibres of the external oblique muscle, and permits of easy separation of the fibres of the internal oblique muscle, which run at right angles to the line of incision. In this way the risk of the subsequent formation of a ventral hernia is diminished.

In such a case as we are considering there is no difficulty in deciding on the direction of this line of incision, but in cases

here there is no tumour we may take the tenth rib for a landmark, for, as Tillaux has pointed out, its tip can be felt to be prominent and movable, and a sense of grating is experienced when it is moved against the ninth rib, to which it is attached by a short ligament.

On opening the peritoneal cavity the fundus of the gall bladder presented, partly overlapped by a linguiform process of liver, and having numerous adhesions to the colon below. The significance of the linguiform process and of the adhesions has already been referred to. The forefinger was then passed along the ducts up to the foramen of Winslow, which could only just be reached, but as it was not necessary—for reasons already given—to make a thorough examination of the common duct, there was no need to enlarge the incision for this purpose. So far as the finger could examine the ducts, no stone was felt.

The gall bladder—after placing a sponge below it to prevent the escape of any fluid into the peritoneal cavity—was aspirated, and 7 ounces of an opalescent mucoid fluid were withdrawn. This fluid was alkaline, had a specific gravity of 1010, was not ropy, and showed no trace of bile. This last fact need cause no surprise, for in cases of blocking of the cystic duct (which we are considering) no bile can enter the gall bladder, and the distension of that organ is brought about by the gradual accumulation of the secretion of the mucous membrane with which it is lined.

After the withdrawal of the fluid the gall bladder was incised at the end of the fundus, this spot being chosen because the gall bladder is often considerably drawn up under the liver after it has been emptied of its contents, and unless the incision is low down there would be a difficulty in attaching the gall bladder to the parietal wound. The forefinger was then passed into the gall bladder to explore it, and the ducts were again examined outside, but no sign of stone could be detected except some slight brownish *débris* from the neighbourhood of the orifice of the cystic duct. A probe was passed through the opening in the gall bladder and along the cystic duct, and by this means it was made clear that there was no organic stricture.

It was probable, therefore, that the obstruction of the cystic duct had been brought about by the dragging on the gall bladder caused by the adhesions to the colon which have already been described. That these adhesions may have been caused by the existence of gall stones at some time or other is probable, though I could discover none at the time of operation.

The case then proved to be one of simple hydrops of the gall bladder caused by some kinking of the cystic duct from the adhesions between the colon and the gall bladder. I therefore determined to attach the opening of the fundus of the gall bladder high up in the parietal incision—to prevent, if possible, any further dragging upon the organ and a recurrence of the mischief. At the same time the gall bladder was drained in order to carry away any fluids that might collect after operation, and which might otherwise escape into the general peritoneal cavity. The gall bladder was sewn to the peritoneum and transversalis fascia only, by a running catgut stitch which when pulled tight fitted closely round the drainage tube which had been placed within the gall bladder. The opening in the gall bladder should never be brought up to the skin, as under such circumstances a fistula is likely to form and to necessitate an operation for its closure.

The rest of the wound was closed with silkworm-gut stitches in the ordinary way. The tube in the gall bladder was left long, so that its outer end might be conducted to a wide-mouthed bottle kept by the side of the patient. The wound itself was thus kept dry and free from the discharges from the gall bladder which escaped into the bottle through the tube. It is now four days since cholecystomy was performed, and bile-stained fluid has been flowing through the drainage tube ever since. This fact is most important, for it shows that the cystic duct is patent, and that the theory of kinking of the duct from the dragging of the adhesions on the gall bladder was probably correct.

You will notice that the patient presents a slight icteric tint. This came on the day after operation, and is already rapidly disappearing. It was doubtless due to the manipulation of the ducts during their examination at the time of operation.

The drainage tube will be kept in the gall bladder for about a week; when, if all goes on favourably as at present, it will be removed, and the fistula allowed to close gradually.

This case was a very ordinary one of distended gall bladder, but it was produced, as we have seen, by a most unusual cause. Almost all such cases are dependent upon the presence of gall stones in the cystic duct; but I have here a collection of twenty-eight gall stones which I removed from a patient a few months ago, and in which case one of the largest stones was firmly impacted in the cystic duct, from which it was removed with some difficulty. In this instance a lady 63 years of age had had a swelling of the gall bladder for nearly twenty years, but about three weeks before I saw her the swelling had begun to enlarge rapidly, and rigors and high temperature had supervened. In short, an inflammatory condition had been set up in the quiescent hydrops of the gall bladder, suppuration followed, and a condition known as empyema of the gall bladder was established. Such a condition, unless speedily operated upon, is fraught with danger, and the case serves to exemplify one of the risks of an apparently simple disease. After the removal of 9 ounces of thin pus and the twenty-eight gall stones the gall bladder was drained for eight days. The fistula itself healed in the course of a month, and the patient has been well ever since. Cultures from the pus in this case at the time of operation showed numerous colonies of the bacillus coli communis, which probably served as the immediate cause of the suppuration. It is interesting to note that in this case also the linguiform process of liver, to which reference has been made, was present.

[*Note.*—The tube in the case which forms the basis of this lecture was removed on the eighth day after operation. The patient got up on the fourteenth day, and went home with the fistula healed on the twenty-first day. Bile was discharged through the tube or wound for about a fortnight after operation. Some time later Dr. Swinhoe reported that the patient was continuing in perfect health.—J. S.]

REMARKS ON THE PATHOLOGY OF ACUTE YELLOW ATROPHY OF THE LIVER.

By JOHN WAINMAN FINDLAY, M.D.,

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THE following clinical note of the case of acute yellow atrophy of the liver on which this paper is founded is by Dr. D. C. McVail, Physician to the Glasgow Royal Infirmary.

Lizzie J., aged 15, was admitted to the Glasgow Royal Infirmary on September 16th, 1899. She had general dropsy—excluding the face—and ascites. She had always been delicate, and had had measles six years previously. In February, 1899, her eyes became "jaundiced" and her urine brown in colour. She had swelling of the feet at that time which disappeared in a few weeks, but returned again two months ago after a chill, and has remained till the present. Diarrhœa set in a month ago and has been severe. There is no history of rheumatism. Patient is the eldest of her family, of whom the others are healthy. Her father and mother living and well.

State on September 17th.—She is thin and very weak, but not suffering from headache or other pain; she is rather deaf, although she has never had aural discharge. She is slow at answering questions. Her tongue is red and dry; diarrhœa is frequent; she had twelve motions last night, all of which were small and fluid. Her urine is dark-coloured; the motions and urine are passed into the bed. There is no renal tenderness. There is considerable dependent œdema; the abdomen is distended with fluid. There is œdema of the chest wall, and there are dilated veins on the abdomen and chest. There is no œdema of the face. The conjunctivæ are somewhat yellow, but the complexion is pale. Her gums bleed slightly. There is no blood in the motions. The abdomen measures 29½ inches at its largest circumference; its surface blistered in two places from application of mustard. The lungs are resonant to percussion except at the bases behind, and later ally there is a curved line of fluid dulness on both sides, its highest point being at the level of the eighth dorsal spine. The respiratory murmur is deficient here, and also deficient over the whole of the right lung. There is no respiratory distress. The cardiac apex is in the fifth space; there is no murmur. The pulse tension is low; a tracing shows hyperdicrotism, with the respiratory curve plainly marked. The diarrhœa, under treatment, had lessened. No specimen of urine was obtained.

Vomited three times on the morning of September 18th. The abdomen was tapped and 67 ounces of clear, greenish yellow coloured fluid were withdrawn, containing a moderate amount of albumen, 5 per cent. of urea, and sufficient peptones to give the biuret reaction. No bile was present, but chlorides were abundant. The temperature on admission was 100°, but it sank to subnormal on the evening of the 18th, with a rising pulse and irregular breathing. At 9 P.M. on the 18th the patient was very grey-looking and cold; she had slight external strabismus of

the right eye. There were no twitchings. A vapour bath was given for twenty minutes, the temperature half an hour afterwards rose to 100°. Brandy was given hypodermically on account of gastric irritability. Death took place early on the morning of September 19th from respiratory failure.

The *post-mortem* examination was conducted thirty-two hours and a half after death. Permission was not obtained to open the head.

External Appearances.—The body is much emaciated. The pupils are dilated and equal. Rigor mortis has completely passed off, and there is considerable *post-mortem* lividity of the abdomen and the whole posterior surface of the body. There is well-marked œdema of the legs, and over their outer and posterior aspects is seen an eruption of purpuric spots, with much brown pigmentation. The abdomen is swollen. On reflecting the skin the subcutaneous fat in the chest wall and abdominal parietes is found to be in very small amount.

Thorax.—The pericardium contains about 1 ounce of clear yellowish fluid. The heart is small, weighing only 4 oz., and there is an entire absence of the normal subpericardial fat. There is no abnormality of the valvular orifices or curtains. The ventricles are somewhat dilated. The muscular tissue is flabby, shows slight "thrush breast" appearance, and on section is pale and distinctly greasy. The coronary arteries are normal. No hæmorrhages are seen under either the visceral or parietal layers of the pericardium.

The right lung weighs 11½ oz., and is in an extreme condition of œdema, with marked hypostatic congestion of its inferior lobe. This lobe is loosely adherent to the diaphragm and lowest part of the costal pleura by a recent gelatinous exudation. There is no fluid in the right pleural cavity. About 12 ounces of blood-coloured fluid are present in the left pleural cavity, and old adhesions bind down the lower lobe of the left lung to the diaphragm and chest wall. There are a few ecchymosed patches under the costal pleura. The upper lobe of the left lung—like that on the right side—is œdematous, while the lower is completely carnified and sinks in water. The left lung weighs 11 oz.

Abdomen.—Twenty ounces of a clear, yellow-coloured fluid are present in the peritoneal cavity. The spleen is enlarged, weighs 6 ounces, and is of firmer consistence than normal. Its edges are sharp and well defined, and the capsule appears somewhat thickened. The kidneys together weigh 6½ ounces. The capsules are very easily removed, and the surface is pale, mottled, and somewhat yellow. On section the cortex appears pale and granular, while fatty streaks and, here and there, small hæmorrhagic spots are seen. The medulla is deeply congested. The kidneys, in fact, present the features of an acute tubular nephritis. The bladder and pelvic organs are healthy. The stomach is dilated, and shows some congestion and swelling of its mucous membrane, and there is a considerable quantity of glairy mucus present. The duodenum contains bile-stained mucus, and pressure on the gall bladder readily permits the bile to flow along the common bile duct through the biliary papilla into the duodenum. There is no obstruction of the common bile duct, though the structures entering the portal fissure of the liver are surrounded by a considerable amount of dense fibrous tissue. About 1 ounce of dark-green bile of a syrupy consistence is found in the gall bladder.

The liver is much diminished in size, and weighs only 24½ oz. Its greatest transverse diameter is 5½ inches, while a slice taken through the middle of the organ shows at its greatest depth a measurement of a little over 3½ inches. The capsule is thickened and in places roughened and granular, while an old fibrous adhesion exists between the right lobe and the hepatic flexure of the colon. The liver is of very firm consistence, more tough to cut than normal, and its edges are unusually sharp. On section the organ is found divided into two portions, a red and a yellow. The left lobe is very small, and is throughout of a red colour, and penetrating this red area is a fine greyish-coloured network. The right lobe is much mottled, and presents in the main an orange yellow colour. The yellow is in the form of irregular patches dotted and streaked throughout with red spots and bands. When freshly cut the yellow parts stand out more prominently than the red, giving to the cut surface a coarsely granular look and feel. No distinct lobulation can be made out in this yellow area, though, where Glisson's capsule is not thickened, the fine lobulation can be distinctly seen as areas of a fainter or darker yellow separated by red lines. In that part of the right lobe which is continuous with the left there is a thin rind of this red substance just under the capsule of Glisson. On the under surface of the right lobe two yellow nodules, about the size of a horse bean, stand out above the general level. The portal vein is seen to be distinctly corrugated, and its larger branches show this same feature with considerable distortion of the lumen in places.

The pancreas is of firm consistence. The mesenteric glands are enlarged and firm, but show no caseous or calcareous areas. The intestines are normal in appearance, apart from a marked swelling and congestion of the Peyer's patches and solitary glands. No ulcers or cicatrices are seen.

Microscopic Examination.—The Heart: Portions from both ventricles show slight fatty degeneration. This condition is pretty general, though more marked in some places than in others. *The Spleen:* There is a fibroid change present, as evidenced by the thickening of the capsule, the trabeculæ, and the adventitial coats of the blood vessels. The walls of the pulp sinuses are thickened, and there is a large amount of hæmatoidin scattered throughout the organ. The kidneys show a very evident catarrh. The convoluted tubules, with scarcely an exception, contain swollen granular cells no longer capable of taking up nuclear stains, or only able to do so slightly. In transverse sections the convoluted tubules show a diminished lumen and the stellate fissure so characteristic of catarrh, while fatty granules and globules of small size are seen, on staining with osmic acid, in the basal parts of the secreting epithelium. The loops of Henle and the straight tubules have suffered much less than the convoluted tubes. It is to be noted, however, that, even in the medulla, many of the former show extensive fatty degeneration, as evidenced by the numerous small fatty granules distributed through the epithelial cells, and by a loss of nuclear staining. Hæmatoidin or biliary granules in considerable amount are found in the epithelium of both the secreting and conducting tubules, while desquamated epithelium and fatty *débris* are found in the lumina of both the straight and the convoluted tubules. The Malphigian bodies and the remaining healthy straight tubules stand out in marked relief from the other opaque and granular structures, and apart from a few fat granules in the epithelium lining Bowman's capsule and scattered through the glomeruli, these bodies are healthy. Already there is a commencing increase of the interstitial tissue, as shown by the larger numbers of nuclei in the glomeruli and between the convoluted tubules.

The Liver: The surface of the liver shows numerous microscopical elevations and depressions, caused by the contraction of the dense fibrous tissue composing the capsule. Beneath this thickened capsule are large numbers of thin-walled, and evidently new-formed, blood vessels, lying around and between which are many formative cells or fibroblasts with old and young fibrous tissue. Several recent small hæmorrhages are present (as, indeed, they are throughout the greater part of the red substance), and there are evidences of older hæmorrhages in the shape of small accumulations of hæmatoidin granules. Where a yellow patch abuts on the capsule, the liver is seen to be divided up into irregularly-shaped and differently-sized areas by tracts of connective tissue, which contain fully formed connective-tissue fibres, numerous connective-tissue cells or fibroblasts and round cells. The latter occur in little heaps or accumulations here and there in the region of blood vessels, but are never very abundant. This fibrous or granulation tissue is continuous with that of the capsule, and the little islets of hepatic tissue lying between these fibrous bands are found to be in a state of very advanced degeneration, and show extreme fatty changes. In not a single section, taken from any part of the liver, was a healthy liver lobule to be found; all, though in varying amounts, presented an extreme degree of fatty change. The hepatic cells, with few exceptions, contain fatty granules and globules, or may be distended beyond recognition with a single large globule of fat. The hepatic cells which have most retained their form are to be found along the margins of the lobules. In many cases the degenerate liver cell has broken down, and numerous fine fatty granules and small fat globules are seen lying free amidst the liver cells. It is to be noted that the fibrous tissue formation has followed no very definite plan, though the older and more dense connective tissue formations are in the region of the portal systems, as in the multilobular type of cirrhosis. In some places two or three lobules are isolated by the connective tissue, while alongside such a condition a single lobule may be found divided up into several portions.

There is a very considerable quantity of fully-formed fibrous tissue in the portal systems, leading to great separation of the artery, duct, and vein from one another, and often bringing about considerable distortion and narrowing of the vein. Inside this general thickening a special vestment of fibrous tissue surrounds each tube. In the case of the arteries this new connective tissue formation has occurred in the adventitial layer only, the intima and the media being perfectly healthy. The portal, interlobular or sublobular, and even the small central veins show, in addition to what may be termed an adventitial thickening, well-marked nodules projecting into the lumina of the vessels and composed of proliferated endothelial cells; there is here, in short, an endophlebitis. In some of the lobules a great dilatation of the capillaries passing to the central vein exists, giving rise to an imperfect type of the so-called "nutmeg liver," dependent, no doubt, on the narrowing of the central or sublobular veins. There is, however, no thickening of the capillary wall. Though surrounded by much dense connective tissue, the bile ducts themselves, with few exceptions, are quite healthy. Their layer of cubical or columnar cells is regular and perfect, and the lumen contains no foreign elements. Only very occasionally a duct is seen showing evidence of catarrh. In these cases—perhaps more frequent in the red than in the yellow substance—the lumen is filled with *débris* and desquamated epithelial cells of a globose or irregular form, while even at the basement membrane no cubical or columnar cells can be detected.

The small bile ducts in the interlobular spaces appear to be more numerous than normal at those points where the connective tissue is invading the lobule from its margin. Here it may be seen that the young

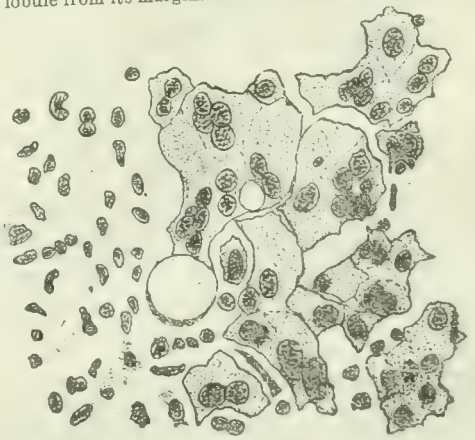


Fig. 1.—Proliferating hepatic cells from margin of a lobule.

connective tissue shaves off successive layers of hepatic cells, and small collections of these cells are found isolated from their lobule by fibrous tissue. It has already been shown that the healthiest cells exist at the periphery of the lobule, and from this point to the central part of the interlobular connective tissue—where true ducts are met with—there is evidently a gradual transition from these clumps of liver cells to the duct-like columns of hepatic cells or so-called new duct formations. At

the margin of a lobule, perhaps separated by only a single row of spindle-shaped connective tissue corpuscles, exists a small collection of hepatic cells. These cells are large and some contain many nuclei, two to five, while others exhibit a single large nucleus double the normal size. (Fig. 1.) There can be no doubt that these are proliferating hepatic cells. As we pass towards the centre of the interlobular space the cells, still proliferating as shown by abundant and double nuclei, arrange themselves in more definite columns, become smaller in size with smaller nuclei, but neither do they lose their original polygonal shape nor do they cease to be solid columns of cells. They may approach very closely the normal duct appearance, but invariably the polygonal shape of the cell and the large oval and more faintly staining nucleus suffice to distinguish these pseudo-ducts from the true ducts, which have smaller rounder and more deeply staining nuclei, and exhibit a more definite cubical shape (Fig. 2). Occasionally the lobule seems to be broken up

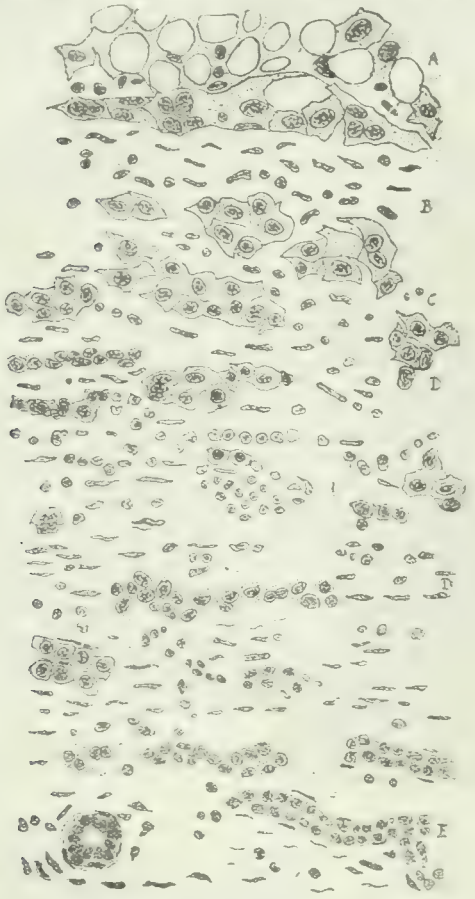


Fig. 2.—A, peripheral part of a lobule showing degenerated and fatty hepatic cells and at extreme margin healthy multi-nucleated cells; B, hepatic cells cut off from their lobule; C, columns of hepatic cells or so-called pseudo-ducts; D, columns of hepatic cells still more closely resembling bile ducts; E, true bile ducts.

into columns of hepatic cells by invasion of the connective tissue in a radial rather than in a concentric fashion, but the latter is decidedly the more common. In places numerous round cells are found insinuating themselves between the columns of hepatic cells, more especially when the latter are observed to be breaking down. These columns of hepatic cells may contain in their interior few and small fat globules, but never extreme fatty changes. Here and there a few fat globules are seen in the blood vessels lying in the interlobular connective tissue, while similar globules are observed in what I take to be lymph channels in the same area.

The red area, or "red substance of Zenker," merely represents a further stage of the condition found developing in the interlobular spaces between the degenerated and fatty liver lobules constituting the yellow area. Here practically all the fatty tissue has been got rid of, presumably that through the agency of the leucocytes. The fatty *débris* is not discharged by the bile ducts, since not even in tissues prepared by means of Professor Workman's gelatine method, to prevent the duct contents from being shaken out during the processes of cutting and washing after freezing, could fatty matters be observed in either the larger or the smaller bile ducts.

The connective tissue in the red area has still further increased, and, apart from a very occasional remnant of a degenerated and fatty lobule, there is no true hepatic tissue to be seen. Very few round cells are present here, but there are very numerous connective tissue corpuscles along with old and more recently formed fibrous tissue. Amidst this connective tissue are many large and thin-walled blood vessels, giving rise here and there to an angiomatous appearance. In places vessels are seen in process of formation from flattened endothelial or large fibroplastic corpuscles, and many of the large, thin-walled blood vessels are of this origin. Some of them, however, must be regarded as the original capillaries and vessels, which were seen in process of dilatation in the "nutmeg"-like portions of the liver in the yellow area, and which by an extension of the same process have assumed angiomatous characters.

If a portal system is examined, it is found to be surrounded by a very considerable amount of dense fibrous tissue, while just beyond this appear columns of hepatic cells, radiating out in all directions. These columns, however, though alike in the size and shape of their cells, are not of such simple structure as in the yellow portion of the liver. They are now seen to branch, and show at their extremities club shaped formations consisting of cells with dividing nuclei. Further, these cylinders have anastomosed with neighbouring columns of cells to form an irregular network, and from the cords of this network solid sprouts are again being given off. It may be mentioned that there is nothing here to suggest that these networks are really branching ducts; no basement membrane can be detected, while such a membrane can be demonstrated even in the most minute of the bile ducts. Apart from these columns of hepatic cells, though sometimes in continuity with them, are epithelial or hepatic cells arranged in an irregular fashion, while isolated hepatic cells are also to be recognised lying amidst connective tissue. No crystals of leucin or tyrosin were observed in sections of the liver, nor could these substances be obtained by evaporating down extracts of the liver substance.

PATHOLOGICAL CONCLUSIONS.

Most pathologists are agreed that in cases of this nature the principal lesion is fatty degeneration of the liver cells, following which is an increase of the interstitial connective tissue. While admitting that the degeneration of the hepatic cells occurs before the overgrowth of connective tissue, Levitski and Brodowski [1] maintain that there is, prior to the cell degeneration, a cell proliferation in parts of the liver parenchyma not yet degenerated. Distinct evidences of proliferation and division of the hepatic cells were noted by me in the peripheral parts of the lobule, but such proliferation is, in my opinion, a forerunner not of degeneration but of regeneration of the proper hepatic tissue. On the other hand, Winiwarter [2] thinks that the first change consists in an inflammatory process in the interlobular areolar tissue, which only secondarily causes fatty degeneration of the liver lobules. It seems to me clear that the fatty degeneration of the hepatic cells is the primary lesion, and that the connective tissue increase is secondary. There is not a single lobule in the liver free from advanced fatty changes, and yet many show a comparative freedom from the invading connective tissue. Moreover, inflammatory changes are only to be seen where there is work for the leucocytes to do in the shape of broken-down liver cells to be removed. These same round cells diminish in number with the laying down of the new-formed connective tissue, and are practically absent by the time that the granulation tissue has been converted into distinct fibrous tissue. I may allude here to the fact that this new-formed connective tissue is exceedingly vascular, and cannot therefore interfere with the nutrition of the liver cells, and, moreover, cannot exercise any great devitalising power by crushing the cells themselves, else we should never find proliferating hepatic cells and tubules in those very parts where the connective tissue is strongest and oldest, namely, at the periphery of the hepatic lobule. This contention is further supported by the observation that very acute cases only show fatty degeneration or yellow atrophy, while, according to Zenker,[3] a certain degree of chronicity is requisite for the development of the cirrhotic bands and patches. In a very rapid case, reported by Dreschfeld[4] the bulk of the liver was in a diseased state from fat infiltration, and nowhere was there embryonic connective tissue. It has been already pointed out that no sharp line can be drawn between the red and the yellow substance. The two conditions merge gradually into one another, and the widened interlobular areas in the yellow substance must be regarded as the red substance of Zenker in an early stage. But over and above the fatty degeneration and increase of connective tissue, there is distinct evidence of an attempt at regeneration on the part of the surviving liver cells. This is shown by the presence of solid columns of hepatic cells in the interlobular connective tissue, where the resemblance to glandular tubes is very marked. At one stage of development the liver in the embryo is a tubular gland, and these solid columns of hepatic cells must be regarded, as Obrzut and others maintain, in the light of reversions to the embryonic type. "As the process of development proceeds, however, an important change arises in that the cylinders unite and

anastomose with one another everywhere to form a close network."[5] This further stage can be followed in our case, and is the very evident explanation of the branching and complicated networks of hepatic cells in the red substance of Zenker.

The formation of these solid columns of liver cells, or so-called pseudo-bile ducts, from the surviving hepatic cells is, to me, quite apparent—a view already supported by Ziegler,[7] Obrzut,[6] Nicati and Richaud,[8] and others. These columns of cells are attempting to form a compound gland, and it is in places very clearly brought out from the apparent convergence of the cylinders towards a portal canal that the true centre of the lobule is, as Delépine[9] and Sabourin[10] hold, the portal canal and not the central lobular vein. These duct-like formations, moreover, are not the persisting excretory ducts which have survived the deleterious agent—whatever it may be—to which the more delicate secreting structures have succumbed, as Coats[11] has suggested. They are new-formed beyond a doubt. Further, they cannot be regarded as proliferating bile ducts (Cornil and Ranvier).[12] They are not ducts at all in the true sense, and it is not correct to talk of hepatic cells reverting to their embryonic or epithelial type to form ducts (Dreschfeld), for ducts they do not form. Nor are these columns of hepatic cells due to sprouts from the bile ducts, though "some observers attribute the new formation, after injury, to outgrowths of the epithelial cells of the bile ducts."[13] Occasionally even small bile ducts may be found with very short lateral branches, but there is no reason to regard these as other than normal. This new-formed hepatic tissue often grows into relation with the true bile ducts, and I have succeeded in demonstrating the connection of these columns of hepatic cells with unequivocal bile ducts. Dreschfeld[4] and Obrzut,[6] though obtaining a negative result, hold that such connection cannot be excluded. "Kelsch, Keener, and Brieger have observed such cells to pass gradually into the true epithelial cells of the biliary duct; and Dreschfeld himself has traced such a connection in the monolobular form of cirrhosis."[4]

It has been pointed out by Delépine[9] that, "in the development of the liver nearly the whole of the mesoblast becomes converted into veins full of blood. In other glands only a small portion of such tissue is transformed into veins, the greater part remaining in the shape of the interlobular and intralobular tissue. In the liver, therefore, the hepatic veins take the place of the greater part of the stroma of other glands. It is only around the oldest hypoblastic tubes, which become ultimately ducts, and at the periphery of the organ, that a little mesoblastic tissue becomes transformed into fibrous connective tissue (Glisson's capsule)." Now this peculiarity of the mesoblastic tissue of the liver in the embryo is a quality that the structure seems to possess throughout life, and, in my opinion, this particular faculty goes far to explain the extremely vascular condition of the new-formed connective tissue, and the persistent vascularity and angiomatous appearances amidst even fully-formed fibrous tissue, which in other structures and organs would have gone on to form a vascular or cicatricial tissue. Catarrh of the bile ducts was only seen in a few and widely separated instances, the majority of the ducts being perfectly healthy. This accounts for the complete, or almost complete, absence of jaundice in this case, and shows that the symptom of jaundice is an accident and not a necessary concomitant of yellow atrophy.

The macroscopic and microscopic appearances of the liver itself, together with the associated changes in the other organs throughout the body, make up a very complete pathological picture, and give sufficient justification for classifying this as an example of yellow atrophy of the liver. It might be called by some acute yellow atrophy, but, since the course of the disease was somewhat too long for an acute yellow atrophy, it seems more accurate to follow the precedent of Hlava and Eppinger, and designate it chronic yellow atrophy of the liver. But before going further, it may perhaps not be out of place to inquire if we really can justifiably term yellow atrophy of the liver a distinct pathological entity? I think not. In 1886 Obrzut[6] published a paper entitled "Chronische gelbe Leberatrophie oder acute Lebercirrhose," wherein he contends that all cases identical with his—as our case is—may be called acute atrophic cirrhosis, which title agrees best, not only with the histological appearances, but also with the clinical phenomena. He further points out that no difference in kind exists between his case, the atrophic cirrhosis of Laennec, and the hypertrophic cirrhosis of Hanot, Charcot, and Sabourin. This case of ours—as also Obrzut's—shows how slender is the basis (namely, the arrangement of the fibrous tissue) on which the different forms of cirrhosis are classified. Many pathologists refuse to accept any such classification, and, as Obrzut remarks, "quantitative differences no doubt exist, but quantitative histogenetic differences there are none."

When Dr. Lindsay Steven[14] supported these views the late Professor Coats objected that "it was not right to compare acute cirrhosis with acute yellow atrophy, because acute cirrhosis was specifically a disease of the liver, while the other was a general disease." That yellow atrophy of the liver is a general disease is insisted on by almost every writer on the subject,[15] but herein it differs in no way from ordinary cirrhosis, as shown most perfectly by the necropsies of those who have died from their cirrhosis, and not from some intercurrent disease. In this connection, too, it may be mentioned that for many years Professor Workman has taught that, in cases of cirrhosis of the liver, the liver is not the only organ in the body showing cirrhotic changes, and he frequently, indeed almost invariably, finds cirrhosis of the kidneys with fibrosis of the heart and lungs. In this case we already saw that there was a commencing, though very slight, increase of the connective tissue of the kidney, and perhaps also of the heart, associated with the marked fatty changes in these organs. Had time permitted—or, in other words, had this cirrhosis of the liver been chronic instead of acute—there seems no reason to doubt but that a cirrhotic kidney would have resulted. At the same time, it might be contended that alcoholic or ordinary cirrhosis is essentially a disease of the interstitial tissue, while yellow atrophy, as shown here, is primarily a morbid change of the hepatic cells themselves. Still, there remains considerable room for doubt as to whether or not cirrhosis of the liver really owes its commencement to connective tissue changes; and "the view that fibrosis is secondary has been supported by Wickham Legg, Charcot, and Gombault, Ackermann, Hamilton, and many others. Moreover, Lafitte has found in rabbits that alcohol directly affects the hepatic cell and leads to its atrophy, while Mertens has shown in rabbits caused to live in an atmosphere containing vaporised alcohol that the liver shows a marked increase of fibrous tissue if the animals live long enough (a year), and that in these cases the liver cells are but slightly altered. When the animals succumb after a few months there is no increase of connective tissue, but the liver cells are greatly degenerated."[16] Divergence of result is admitted, still Lazarus-Barlow[16] holds that the balance of evidence goes to show that agents such as alcohol, chloroform, ether, phosphorus, etc., act primarily on the cells, and that the fibrosis is secondary.

It must be admitted, I think, that all these facts and opinions go to support the contention of Obrzut that chronic yellow atrophy is nothing more than an acute cirrhosis of the liver, differing from other cirrhoses in quantitative histogenetic changes. In yellow atrophy the degeneration of the hepatic cell is more extreme than in the ordinary types of cirrhosis, tending more frequently to death than to recovery of the cell. The connective tissue formation differs little from what we find in other cirrhoses, but the regeneration of the hepatic tissue—as evidenced by the very numerous columns of hepatic cells—has gone much further than in ordinary cirrhosis, and has even outdone the so-called hypertrophic or biliary cirrhosis in what is regarded by some as its special feature.

MICRO-ORGANISMS.

Unfortunately no cultures were taken from the liver or other organs.

In a small branch of the portal vein, and lying between the hepatic cells in the yellow area, there were seen a few large bacilli, which stained deeply with thionine. Dr. McCrorie, to whom I submitted the specimen, thought that most probably this organism was the bacillus coli communis, which it resembled. In the kidney, numerous shorter rods or diplococci were found arranged in capillaries, and even inside the cells of the convoluted tubules. In the spleen

few short rods or diplococci were observed. I could find no evidences of organisms in the heart.

Klebs, Waldeyer, and Eppinger[7] have published papers on a micrococcus found in this disease, and Dreschfeld[17] has observed micrococci in one out of the three cases he has investigated. The majority of workers in this field have failed to satisfy themselves of the presence of any microbe in the liver, and I have been unable to find any record of a culture obtained from the liver. Hunter,[15] moreover, has expressed the opinion that "the widespread character of the liver change, and the rapidity with which it usually occurs, suggest the action of a circulating toxin rather than a local invasion by micro-organisms."

I do not know how much importance, if any, attaches to the finding of these bacilli in the liver, spleen, and kidneys; for during the thirty-two and a-half hours between death and the *post-mortem* examination, there was ample opportunity for the organisms to emigrate from the intestine, and to make their way into these organs along the route of the blood vessels. No unequivocal bacilli were seen inside the liver cells, though such were found in the epithelium of the convoluted tubules of the kidney. If these be really colon bacilli, it is not improbable, in the light of Adami's researches,[18] that the micrococci of other observers merely represent different forms of the same colon bacillus. Adami has found typical colon bacilli in the liver not only in cases of cirrhosis, but also in cases in which no cirrhosis could be detected. I could not see in the liver cells the diplococcus-like bodies staining deeply (modified form of the colon bacillus), though such was probably present in the kidney. Neither could I see the remains of dead or degenerate forms of dying bacilli which Adami has observed in the hepatic cell.

I take this opportunity of expressing my indebtedness to Professor Workman for allowing me to make use of this material, and must thank him for much valuable advice, ungrudgingly given, during the progress of my research.

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CHRONIC BRASS POISONING.*

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INTRODUCTION.

In large metal manufacturing centres like Birmingham a complaint is frequently to be met with which is apt to be not a little puzzling to a stranger. Its most prominent characteristics may be illustrated by the following clinical picture:

The patient is a young workman. As he enters the consulting room you notice that his expression is more or less anxious, his face thin and haggard, his complexion sallow, unhealthy, and consumptive looking. He complains of gradual loss of strength, with dry hacking cough, cold sweats, and possibly hæmoptysis. Pains in the chest, loss of appetite, and progressive emaciation in addition lead one instinctively to the suspicion of phthisis, but a careful examination of the chest fails to reveal any pulmonary lesions beyond, perhaps, those of a slight bronchial catarrh. A tentative diagnosis is arrived at, and the patient is sent away with a tonic or expectorant prescription, and instructions to return in a week. In due course he makes his appearance, with the statement that he is not a bit better, or only slightly so. This time the urine is examined, but no abnormality observed. The complaint is labelled "debility," and there the matter ends, with no advantage to the patient.

In the meantime other similar cases begin to crop up, and one is compelled to admit that there is something in the distinctive character of the symptoms requiring explanation. Inquiry into the occupation of such patients appears at first to afford little assistance, as they describe themselves variously—some as stampers, others as metal finishers, others as polishers, etc.; but further investigation elicits the important fact that the one feature common to the entire class is the metal in which they work—namely, brass. The large proportion of copper in this metal immediately suggests an inspection of the teeth, where we find the almost inevitable green line.

The mystery is now solved, and in course of time we become so familiar with the recital of grave general symptoms unaccompanied by correspondingly serious local signs, that we can almost unhesitatingly prophesy an occupation concerned in the manipulation of raw brass, and a green line at the bases of the teeth.

We now turn for assistance to the literature on this subject, and find it surprisingly scanty and unsatisfying. Practically the first investigation into the effects of brass was made by Dr. Headlam Greenhow nearly forty years ago, although some thirty years previously allusion was made to the subject by Thackrah in his *Essay on the Effects of Arts, Trades, and Professions on Health and Longevity*. Greenhow's conclusions supply the material of a paper on Brassfounders' Ague, published in the *Medico Chirurgical Transactions* (1862), in which he describes a form of ague that attacks the casters or founders, who work the metal in its molten state. His description is graphic and interesting, but, as shown by Dr. Simon and others, by no means accurate. There is no doubt that brassfounders do occasionally suffer from attacks exhibiting symptoms which, as Dr. Simon says, "are just such as would be caused by the ingestion of a quantity of an irritant metal sufficiently large to cause vomiting and its attendant depression:" but this is not the occasion, even if one had the necessary information, on which to discuss what is really a form of acute poisoning. Before leaving the subject, however, I should like to remark that this brassfounders' ague, of which so little is known, is just one of those conditions in which we must look for instruction from the private practitioner. The onset is so sudden, and the symptoms so evanescent, that the patient has no time to arrange for treatment at the hospital or dispensary, and presumably he sends for the nearest medical man. Are such cases common? And, if so, how many are correctly diagnosed?

Not until 1887 was any serious attempt made to describe the complaints affecting brassworkers not engaged in casting. In that year Dr. Hogben, of the Queen's Hospital, published in the *Birmingham Medical Review* an article on Brassworkers' Disease, which contains practically all that is known on the subject. The BRITISH MEDICAL JOURNAL of the following year has a contribution by Dr. Simon, of Birmingham (Remarks on Brassworkers' Diseases) discussing the conclusions of Greenhow and Hogben, with some original observations; while, later still, seven years ago, a summary of these appeared in the work of the late Dr. Arlidge, *On the Diseases of Occupation*.

SYMPTOMS.

A person may be employed for months or years filing, polishing, or otherwise manipulating brass, even under adverse conditions, without suffering any ill-effects, and many appear to enjoy a permanent immunity; but, on the other hand, there are individuals whose health begins to become affected almost from the commencement of their occupation, while others, again, exhibit symptoms only after many years. These symptoms are by no means uniform; and considerable difference exists between those manifested in the early stages of absorption and those of a more advanced period.

Early Symptoms.

I am convinced that in a large proportion of cases the first indication of poisoning is the existence of anæmia. The frequency with which anæmic patients, particularly young women, turn out to be brassworkers, and exhibit a green line at the bases of the teeth, suggests this, while the hypothesis is to some extent supported by the occasional state-

* Delivered before the Midland Medical Society.

ment of undoubted sufferers from brass poisoning that their illness was preceded by a condition of anæmia. This premonitory anæmia seems to be largely confined to young females and boys, being seldom seen in adult males. The usual accompaniments of anæmia—palpitation and dyspnœa on exertion, as well as dyspeptic symptoms, anorexia, and epigastric pains after food—are frequently present in some degree, although not generally very acute. Tachycardia I believe to be of fairly common occurrence, while nausea, vomiting, thirst, and colic are not infrequent. According to Hogben, constipation and diarrhœa are both included among the early symptoms, but the latter, so far as I have seen, is a comparatively rare complication, and probably belongs to the later stages of the disease. In the early stage, slight indefinite pains of a neuralgic character may be complained of, with headache, accompanied by a sense of weakness, *malaise*, and nervousness, greater than is generally to be found in ordinary cases of anæmia.

Even prior to the first symptoms of poisoning one may usually discern a green line upon the teeth. It is a mistake to regard this as diagnostic of brass or copper poisoning. It is merely an indication that the individual is in the habit of coming into intimate contact with the metal, and that the process of absorption has commenced. Not until a considerable quantity has been absorbed does the process of poisoning begin and toxic symptoms appear. The green line is very distinct and not easily mistaken. Instead of being situated on the gums, like the line in plumbism, as is erroneously stated by Arlidge[1] and by Taylor,[2] it forms a band of varying depth in front of the bases of the teeth just where they emerge from the gums, and most marked on the teeth of the upper jaw. The colour varies from a faint greenish in ill-marked cases, through brilliant green, to a very dark olive. In addition it should be noted that not infrequently a thin purplish congested-looking line is also visible on the immediately adjacent edge of gum, but this has no diagnostic importance.

Later Symptoms.

As the disease advances the subcutaneous fat gradually diminishes and a condition of progressive emaciation supervenes, which in course of time becomes one of the most marked features of the complaint. The wasting process may extend also to the muscles, which seem to undergo some amount of atrophy. Loss of strength is invariably evident, and muscular tremore are of very frequent occurrence, sometimes generally, throughout the body, but more often confined to the hands or the tongue. The knee-jerks are normal or exaggerated, except, of course, where an actual peripheral neuritis exists. Headache is almost always complained of, as well as pains, very variable in character and situation, neuralgic and myalgic, occurring most often in the abdomen, then in the legs, then the back, chest, and other parts.

As a rule there is dyspepsia, with loss of appetite and gastralgia, while sickness and even vomiting are occasionally met with. The tongue is generally furred, moist, and tremulous, the bowels normal, loose, or confined. There may be a dry tickling cough, sometimes accompanied by the expectoration of thick tenacious sputum, and occasionally by hæmoptysis. The pallor of confirmed brass poisoning is something different from the waxy whiteness of the early stage, the complexion now presenting the sallow, dirty, "unhealthy" aspect so often seen in phthisis, while sometimes it may have a greenish hue reminiscent of but by no means identical with chlorosis.

Symptoms of laryngeal or pharyngeal catarrh are not uncommon, with aphonia and sensations of dryness, discomfort, or constriction in the throat, and a metallic taste in the mouth. A feeling of oppression or nervousness, sometimes of a very intense character, is general among such patients, who complain also of repeated attacks of faintness or "sinking" sensations in the mornings or at work. Profuse sweatings, described as "frightful" or "cruel," are a prevalent source of annoyance, and there may be sensations of coldness possibly confined to one part, such as the knees, legs, or chest. These phenomena may be referred to vasomotor disturbance. The sweat is observed to be of a greenish colour by its staining the undershirt green, and the same colour may be noticed in the gray hair of old workmen and in the palms of the hands, as well as in the "chlorotic" complexion previously alluded to.

Itching skin eruptions, acneiform or eczematous, are found in various parts of the body, such as the face, neck, shoulders, interscapular region, abdomen, or legs, but itching may be complained of without any visible eruption.

Whether brassworkers are peculiarly liable to certain specific diseases is a question that can be settled only by wide statistical research. Phthisis, for instance, is said to be exceptionally common among this class of operatives, and this is possibly true; but there is no doubt as to the prevalence of pulmonary fibrosis, occurring as the result of the chronic bronchial catarrh from which nearly all the victims of brass poisoning suffer.

Writing in 1887, Hogben says:

> It has been asserted that brassfounders suffer from a definite form of paraplegia. The precise nature of this symptom I have been unable to ascertain, but I believe there is to be seen an unusually large number of nervous disorders among brassworkers.

The real nature of this paraplegia was probably described in the following year by Dr. Suckling in his notes on a couple of cases of ataxic peripheral neuritis.[3] These cases resembled locomotor ataxy without the Argyll Robertson phenomenon, and were shown by Dr. Suckling to be a variety of multiple neuritis in which paralysis is preceeded by inco-ordination. At that time Dr. Suckling had met with only four instances of this condition among brassworkers, and I am not aware if the experience of the last eleven years has enabled him to establish the theory that this is a form of neuritis indigenous to workers in brass.

In Hogben's time paralysis agitans was believed to be common amongst this class, but Hogben himself said he had never seen a case of true paralysis agitans in a brassworker.

DIAGNOSIS.

The main features in the diagnosis of chronic brass poisoning are, in the early stages, anæmia accompanied by excessive debility and nervousness, with neuralgic pains, occurring in persons engaged in brass occupations and showing a green line at the bases of the teeth; in later stages, emaciation, tremors, cold sweatings, cough, extreme weakness, and greenish pallor, with the aforementioned dental line, occurring in similarly occupied individuals.

I understand that not a few cases of lead poisoning are notified from Birmingham as occurring amongst brassworkers; and while it must be conceded that lead is occasionally used as an adulterant of brass, still it is hard to believe that its employment in this capacity is so general as to lead to a noticeable production of plumbism. One process in the "putting together" (of gas fittings, for instance) consists in the application of white lead to the joints to prevent leakage, and in this department it is probable that most of the true cases of plumbism arise; but it is not unlikely that occasionally illnesses are reported as due to lead, which in reality are instances of chronic brass poisoning. Symptoms of anæmia, colic, constipation, dyspepsia, and general emaciation are common to both, but the absence of the blue line upon the gums, and the presence of the distinctive green line on the teeth are sufficient to decide in which category the case must be placed.

CAUSATION.

Brass, as is well known, is an alloy of copper and zinc in the proportion of about 3 to 1. Why, then, should the toxic effects produced by the manipulation of this alloy be referred to as brass poisoning instead of specifying the particular element responsible? Simply because that element has not been conclusively ascertained. Greenhow, in describing the acute manifestation of "ague" occurring amongst founders, attempted to demonstrate the culpability of zinc, and in this he is supported by the French observers Blandet and Bouchut;[4] but a number of cogent reasons were adduced by Hogben, chief among them being that "the malady is not observed in operatives such as galvanised-iron makers, who work with molten zinc and are exposed to its fumes, clearly showing that the zinc is not the prime factor. He held strongly to the opinion that the offending ingredient was the copper, arguing from the close resemblance between the symptoms of poisoning by that metal and the symptoms of poisoning by brass, as pointed out by Thackrah and Claude Bernard. The copper hypothesis is accepted by Dr. Simon, Tardieu, Rayer, Grisolle, and Chevallier. Whilst admitting as a practical certainty that brass poisoning is essentially

copper poisoning, we must not commit the error of altogether ignoring the zinc. According to Stevenson there is a close relation between the effects of copper and zinc on the human economy, while both Bouchut and Schlockow (quoted by Arlidge) describe symptoms not unlike those of brass exhibited among the makers of oxide of zinc. It is quite conceivable, then, that the zinc may to some extent act as an adjuvant to the copper, or modify its action. The green line on the teeth has been ascertained to be due to the presence of copper, and in like manner the green colour of the perspiration may unquestionably be attributed to the presence of the same metal, as well as the peculiar "chlorotic" complexion, and it is probably also present in the urine and saliva.

Absorption seems to take place principally, if not entirely, through two channels: the respiratory and the alimentary. The atmosphere in which the artisan works is laden with finely divided particles of brass, which may be seen scintillating in the sunlight. The finest of these are constantly being inhaled into the bronchi, where, in course of time, probably by purely mechanical irritation, they set up a condition of chronic catarrh which may eventually end in fibrosis of the surrounding lung tissue. The larger particles of triturated brass, being arrested at their entrance into the respiratory passages, are deposited on the naso-pharyngeal and laryngeal mucous membranes, inducing a catarrh of those parts with a metallic taste; and thence, by the process of swallowing, they find their way into the stomach and intestines, become converted into soluble salts, and are absorbed through the lacteals into the general circulation. In addition, a fruitful source of alimentary poisoning is the handling and eating of food with unwashed, brass-contaminated hands.

Arlidge ascribes the eczematous eruptions to the contact of the skin with brass dust and sand, but I think they are just as likely to be caused by the copper salt or salts dissolved and excreted in the sweat. In one case of well-marked brass poisoning that came under my observation, the patient complained of an eruption in the interscapular region; examination of the part revealed a patch of artificial eczema which corresponded exactly in shape and situation to a green perspiration stain upon the undershirt. The irritative action of these salts upon the cutaneous nerve terminations is shown by the itching which is complained of, even when no eruption is visible.

Analysis of the occupations of patients goes to show that brass poisoning as a definite complaint is mainly to be found among persons engaged in processes bringing them into contact with brass dust, and that the degree of their liability is proportional to the amount of dust produced. Thus, we find that the victims are most frequently turners, polishers, and filers, whose occupation visibly permeates the air with fine metallic particles, whereas press-workers, chain-makers, etc., are by no means so liable. Casters are not exempt from the chronic form of the disease; they may contract it through repeated inhalations of the fine powder composing the "smoke" from the melted metal. It is puzzling at first to understand how individuals employed in the warehouse can be attacked, until it is remembered that "warehouse" is the term applied to the place where the unfinished articles fresh from the crude processes, and still more or less dusty, are stored.

Treatment.

As regards the administration of drugs, the first thing that suggests itself is to treat this condition, on the analogy of lead poisoning, with potassium iodide. This I had done for a considerable time without perceiving any appreciable benefit, and I afterwards learnt that Hogben had employed the same remedy on the suggestion of Dr. Suckling. I was further surprised to find in Dr. Simon's paper the following statement in reference to the various manifestations of brass absorption:

> There is nothing distinctive about any of these disorders except the obstinacy with which they resist ordinary methods of treatment, and the readiness with which they yield to the administration of iodide of potassium in combination with the other drugs indicated by the various conditions of ill-health.

Either my efforts were not sufficiently persevering, or my choice of adjuvants was unfortunate; but at any rate I found no salvation in potassium iodide, and cast about for something more effective, trying various agents but finding none satisfactory. At last an empirical idea occurred to me. Remembering that sulphate of copper is recognised as the antidote for phosphorus poisoning, I wondered whether phosphorus might in some way exercise an antagonistic influence on copper. According I began treating my cases of chronic brass poisoning with pills containing $\frac{1}{30}$ gr. of phosphorus three times a day. The results exceeded my expectations; the patients became rapidly well. In most cases it was not even necessary for the sufferer to desist from work; he could go on manipulating brass, and still under phosphorus administration speedily recover.

After a time I tried, for a change, dilute phosphoric acid—15 minims three times a day—and the results were even more encouraging. The only explanation I can offer for this is that phosphorus when ingested becomes converted partly into phosphoric acid, and it may be that only this part is effectual, so that a certain amount of economy is exercised in giving the acid direct. At the same time it must be admitted that cases occur which react better to the pure phosphorus than to the phosphoric acid.

Space does not permit a detailed account of the treatment of individual cases, but I may state generally that the results of this treatment have been remarkable, patients as a rule reporting at the end of a week that they are "much better," at the end of a fortnight "a great deal better," and in three weeks' time either quite well or nearly so. Under phosphorus or phosphoric acid the anæmia with its attendant discomforts gradually disappears, the digestion improves, the tongue becomes clean, and the headache, neuralgic pains, and nervousness pass away. The complexion assumes a healthier aspect, strength returns, and the patient begins to put on flesh. Even the cough and catarrhal symptoms subside; there are no longer troublesome sweatings, the skin eruptions clear up, and the green line on the teeth vanishes without the aid of a toothbrush. How far the treatment might succeed in the case of an ataxic neuritis I am not in a position to say.

When prescribing the pill it is advisable to order also some harmless mixture as a "placebo" to satisfy the well known craving of this class of patient for "a bottle of medicine"; the nature of this mixture is immaterial. When phosphoric acid is given it can be prescribed practically alone, with only a little compound tincture of cardamoms to colour and flavour it.

The only matter of diet that need be referred to is the importance of milk as a beverage, it having acquired a wide reputation as a corrective to the influence of brass.

Considering the difference in susceptibility of different individuals to brass poisoning, it is well to advise anyone who shows symptoms either to change his occupation entirely, or at all events to endeavour to get transferred to some other department of the works.

Prophylaxis.

The prophylaxis of brass poisoning is practically identical with that of plumbism, and to that end I think it would be a step in the right direction if this complaint were included among the diseases notifiable under the Factory Act (1895, Section xxix). Means could then be taken to ensure efficient ventilation, and to see that measures were introduced to enforce personal cleanliness and to prevent the consumption of food in the workrooms. Methods might even be invented to prevent the dissemination of brass particles through the atmosphere, and to provide that all water drunk on the premises should be acidulated with a small proportion of phosphoric acid.

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A Roman Professor's Silver Jubilee.—On May 3rd the completion of the twenty-fifth year of teaching by Professor Luciani, Rector of the University of Rome, was celebrated in the Physiological Laboratory of the University. The theatre was crowded with admirers of the well-known physiologist, conspicuous among whom was Professor Baccelli. An address was delivered by Professor Todaro, to which Professor Luciani, who was much moved, replied. Professor Baccelli also spoke, and ended by embracing Luciani, who was the object of enthusiastic congratulations from the assembly.

THE TREATMENT OF SMALL-POX BY SALOL.

BY

JOHN BIERNACKI, M.D. and P. NAPIER JONES, M.R.C.S., L.R.C.P.

DR. CHARLES BEGG has strongly advocated the treatment of small-pox by salol. This drug has of course been previously used, especially to check the diarrhœa of small-pox; but Dr. Begg claims for it the remarkable power of practically arresting the development of the rash in the vesicular stage, only a few pustules being formed when salol is administered in doses amounting to 60 grs. daily. As a subsidiary effect he has noted the absence of cutaneous irritation, which is one of the most distressing features of the disease. Dr. Begg attributes the efficacy of salol to its selective elimination by the skin, as proved by the odour emanating from patients who are taking it.

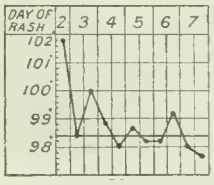
Admitting the cutaneous excretion of salol or rather some antiseptic derivative, it appears to us that in the vesicular stage of small-pox the conditions are favourable to the production of the effects mentioned above. No doubt the specific virus of small-pox is present in the vesicles; but the conversion of the vesicular contents into pus must be regarded as due, in part at least, to the action of secondary micro-organisms, especially staphylococci. It is reasonable, therefore, to look for some effect when salol is given, whereby the growth of secondary pyogenic bacteria is hindered or prevented. This is the more likely because a mere antiseptic, as against a germiciadal effect would be sufficient to produce such a result. Given the result, a proportionate amelioration of the secondary fever must follow, since the latter is attributable to the absorption of toxins from the pustules. This is of great importance, because in fatal cases death most frequently occurs during the secondary fever. Consequently, if salol can be relied upon to prevent extensive pustulation with the febrile disturbance and other toxic effects which it induces, the treatment is one which should save otherwise hopeless cases. A minor, but by no means inconsiderable advantage which must accrue from an absence of pustulation is diminished scarring. For while in the vesicular stage the middle layers of the rete Malpighii are mainly affected, the subsequent inflammatory process penetrates more deeply, and the degree of scarring depends on the depth to which it extends.

There is a disturbing factor which makes it difficult to estimate any arresting effect of salol on the development of the rash. In vaccinated subjects even the confluent form of the rash occasionally undergoes partial arrest in the stage of maturation, and in milder cases this tendency is both more marked and more frequent. Hence, if salol is administered to a patient having well-defined vaccination scars, it is necessary to weigh the clinical facts carefully before attributing any abortive manifestation to the treatment. Our cases indicate that in forming an opinion the rate of maturation is an important point. But, even if the benefit obtained from salol be restricted to the certain prevention of the intolerable irritation, much is gained. For not only does this symptom cause sleeplessness and nervous exhaustion, but, owing to the rubbing, scratching, and tossing about, many of the pustules rupture, so that the oozing of their offensive contents is an additional discomfort.

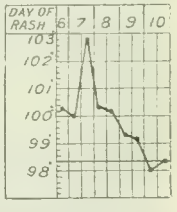
In light of the above considerations we recently adopted the treatment by salol, as recommended by Dr. Begg, in a considerable number of small-pox cases admitted to Dagenham Hospital. As pointed out by Dr. Begg himself, confirmation of his results was specially necessary, because his patients were treated in China—a difference of locality so great as to involve a possible alteration in the type of the disease.

Over a score of cases were observed at Dagenham Hospital. All but 8 of these, however, were greatly modified by vaccination, and, although they did well under salol, reference to them is omitted because such a result was almost certain apart from treatment. In one instance a patient complained of slight irritation, while in another the salol produced marked depression. The history of the 8 remaining cases is given in outline, only the salient facts being mentioned. For convenience in following the development of the rash the duration of the disease is generally calculated from the time of its appearance instead of from the day of onset.

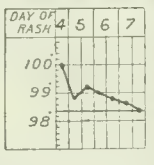
CASE I.—A. G., aged 30, was admitted on January 22nd. He was a man of athletic build, with an excellent past history. His temperature was 101.8° F., pulse 96, and respirations 24. The vital organs were healthy. He stated that he had been vaccinated in infancy, but no scars could be found. The rash was confluent on the face and distal portion of the limbs. It had appeared about forty-eight hours previously, and was becoming vesicular on the forehead. The prodromal symptoms had been very severe. The patient's mental condition was confused, with slight rambling and occasional excitement. Ten grains of salol were ordered four-hourly, and the treatment also included a suitable diet, a boroglyceride mask, and a cold creolin lotion sponge bath twice daily. Late on the second evening after admission the patient suddenly jumped out of bed and attacked a nurse with a coal shovel. He had now taken 60 gr. of salol, and the drug was stopped in case it should aggravate the delirium. From this time onwards a progressive improvement in the patient's mental condition was evidenced, and he gave little trouble. On the fifth day of the rash the vesicles were at their height. During the following two days it was noted with surprise that very little change had taken place in them, the majority showing only the faintest yellow tinge. It was evident that maturation of the rash was being delayed, although it appeared impossible that so marked a modification could be induced by a single drachm of salol. The subsequent history of the rash may be summarised in the statement that pustulation was restricted to a group of pocks on the forehead, while elsewhere only about half the vesicles attained a semi-pustular condition. At the time when the rash was at its acme the skin of the face was distinctly swollen, yet the irritation was inconsiderable. There was an entire absence of offensive odour. Apart from the patch on the forehead, the rash dried up and scaled off with exceptional rapidity. The course of the temperature calls for special attention. On the evening of admission it was, as already stated, 101.8° F. It fell during the next few days, and remained normal from the seventh day of the rash. The intensity of the primary attack was shown by the state of extreme exhaustion in which the patient remained for some weeks after convalescence. This fact, taken with the early nervous symptoms, makes it likely that the patient would not have survived the severe secondary fever which, in the ordinary course of events, seemed inevitable. We therefore consider that in this case, with a total dose of only 1 drachm, salol was of great benefit. It is impossible otherwise to explain the partial but striking arrest of maturation. Except for some distinct pitting on the forehead the scarring was very slight.



CASE II.—J. B., 35, a man of good physique, came under treatment on February 11th. He had not, apparently, been vaccinated. The rash was in the sixth day, typically confluent and vesicular. On the face the contents of the vesicles were turbid and there was slight swelling of the skin. The treatment adopted was similar to that in the first case, the salol being increased to 15 gr., four-hourly, and continued for a week. On the seventh day the rash was completely pustular on the face, while elsewhere it was semi-pustular. The skin of the face was markedly swollen. There was no irritation or offensive odour. The rash dried up with extreme rapidity and the patient was up on the 20th. As in the first case the course of the temperature was very striking. The secondary fever subsided as the rash developed. It attained the highest point (102.6° F.) on the seventh day of the rash, and was normal on the tenth day. There was no doubt that the salol had considerable effect in modifying this case. The scarring was slight, and it is doubtful if it will remain permanently visible.



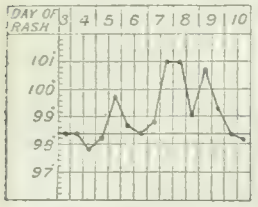
CASE III.—F. M., a boy, aged 6, was admitted on February 23rd. There was no evidence of vaccination. The rash, of four days' duration, was discrete on the face, fairly profuse on the extremities, and sparse on the body. The palms and soles were affected. The vesicles were large, typically umbilicate, and their contents had a yellow tinge. Ten gr. of salol were given four-hourly. Two days later a mild form of pustulation was general, there being a faint areola round the pocks on the face. There was no odour. Irritation was distinct, and the patient wore lint gloves. On the following day desiccation was apparent, and was rapidly completed. The temperature on admission was 100° F. It fell steadily while pustulation progressed, and was normal on the seventh day of the rash. This case evidenced the effect of salol in preventing odour, and apparently in modifying the secondary fever. It is doubtful to what extent pustulation was affected. The patient was slightly, but permanently, marked.



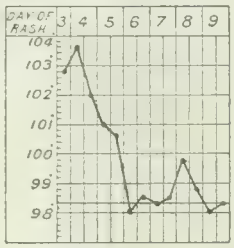
CASE IV.—Mrs. M., aged 22, was warded on March 4th. The case was of special interest, because the patient was in the seventh month of a first pregnancy. Her past history was good. Four faint scars from vaccination in infancy were found. The rash, which had been present for about twenty-four hours, was papular and discrete. It was most abundant on the body. The case was, in fact, a partly modified one. The temperature was 100.4° F. The patient appeared anxious and somewhat excited. The same treatment was adopted as in the previous cases, the salol being prescribed in 10-grain doses every four hours. On the third day of the rash it was still papular and just beginning to disappear. At 4 A.M. on this day a child was born. Beyond some delay in the expulsion of the placenta, the labour was normal and hæmorrhage was not excessive. The infant (not affected by small-pox) only survived a few hours. In the after-treatment the salol was continued, and a four-hourly douche of creolin lotion ordered. About the time of the confinement extensive subcutaneous extravasations, not unlike those seen in hæmorrhagic small-pox, appeared on the chest, back, and upper part of

the arms. From February 7th to 16th the temperature was irregular, never attaining the normal point or rising above 103° F. The patient was restless and semi-delirious at night. There was severe pain in the back over the sacrum, for which morphine hypodermic injections were given periodically. The vaginal discharge was scanty and only slightly malodorous. At first blood stained, it subsequently became dark and grumous. The history of the case from this time was that of localised pelvic cellulitis going on to recovery.

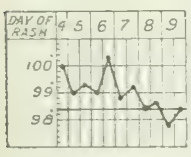
CASE V.—E. C., a robust woman, 29 years of age, came under treatment on March 9th. She had been vaccinated in infancy and three well-marked foveated scars were present. The rash (third day) was vesicular and of the semi-confluent type. The treatment already described was ordered. By the 12th the pocks were only semi-pustular on the face. On the 14th the rash was at its height. On the face nearly all, and elsewhere about half, the pocks were distinctly pustular. The skin of the face was considerably swollen and there was slight conjunctivitis. Irritation was absent and no fœtid odour could be detected. Desiccation was rapid during the next few days and the patient was up on the 20th. There was a rise in temperature on the 13th, 14th, and 15th, with 101° F. as the maximum. Beyond this there was no secondary fever. The most notable effect of salol in this case was the absence of irritation, even when there was distinct œdema of the face, and the mildness of the secondary febrile symptoms. Its influence on maturation was less obvious, although the latter appeared to be delayed. The patient was permanently but very slightly marked.



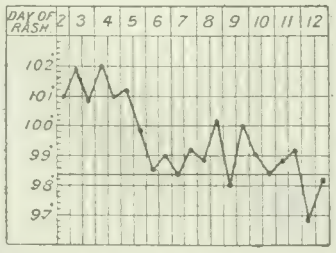
CASE VI.—J. W., a hale old man of 65, came under notice on March 9th. Vaccinated in infancy, he had three fairly distinct scars. The rash was vesicular and semi-confluent. It had appeared three days previously. During the first three days after admission the vesicles enlarged somewhat, and over half of them on the face and scalp became pustular. Twenty-four hours later a smaller proportion of those on the body and limbs had matured. The pustules were small and no irritation was felt. There was an absence of unpleasant odour. The rash now remained almost stationary for twenty-four hours, and then quickly dried up. On admission the temperature was 102.8° F., whence, after a slight rise, it fell to the normal point within three days. Excepting a rise to 99.8° on March 14th, it then remained normal. If this was the effect of the salol, an inference difficult to reject, the benefit obtained was substantial, since in a patient of advanced years severe secondary fever is especially dangerous.



CASE VII.—C. G., a female patient, aged 33, was first seen on March 9th. She had been vaccinated in infancy, three faint scars being left. There was nothing noteworthy in the patient's past history. The rash was in the fourth day, coherent on the face, and fairly profuse on the limbs and body. It was vesicular, but on the face the vesicles were in the earliest stage of pustulation. Salol was given in 10-grain doses four-hourly. The rash matured very slowly, and on its seventh day only about half the vesicles had become distinctly pustular. On the forehead and left angle of the mouth were confluent patches where the suppurative process was severe. The temperature for the first five days after admission was slightly raised and then remained normal. At one time there was trivial irritation, but never any offensive odour. The most noticeable feature in this case was the delayed maturation. Apart from the confluent patches permanent scarring appeared improbable.



CASE VIII.—Mrs. P., aged 38, a multipara, seven months pregnant, was admitted on March 12th. As a result of vaccination in infancy, three faint scars were just visible in a strong light. The rash was semi-confluent on the face and extremities. It had appeared thirty-six hours previously, and was still papular. Salol was given in doses totalling to 60 grs. daily. It is unnecessary to detail the subsequent history of the rash, as its development was typical, with almost unmodified pustulation. The secondary fever was mild. There was some offensive odour for forty-eight hours, but the patient did not complain of any irritation. There was severe pain in the palms and soles. The salol caused considerable depression of spirits, and towards the end of the treatment the urine was dark and scanty. The fact that the patient did not abort is interesting. It will be noted that in this case the conditions were specially favourable for treatment by salol. The rash was in its earliest stage, and the patient was able to take the drug until convalescence was complete. Yet no definite effect on maturation was manifest. It can, however, be said that the case ran an exceptionally favourable course, with mild secondary fever, no irritation, and a practical absence of scarring.



CONCLUSIONS.

It appears from the above series of cases that salol may practically avert general pustulation (for example, Case I), and even have a partial abortive effect when given after maturation has commenced (Case II). The influence of the treatment on maturation is, however, not constant in degree, and in one case was almost *nil*. Short of an abortive effect, it almost invariably hinders pustulation, so that the pustules form tardily, the process being imperfect in a much higher proportion than usual. The cutaneous inflammation is slight, and irritation commonly absent even in confluent cases. There is generally an entire absence of unpleasant odour. Scarring is inconsiderable and often absent, the scabs scaling off with great rapidity. The most remarkable effect of the treatment is its effect on the secondary fever, which, if not absent altogether, is as a rule of little importance.

These results appear to us to resemble, but exceed, those obtained by the red light treatment.

On the whole, the statement is justified that salol affords a means of treating small-pox superior to the methods in vogue.

THE RADICAL CURE OF FEMORAL HERNIA.

BY T. E. GORDON, M.B.UNIV.DUB., F.R.C.S.I.,
Surgeon to the Adelaide Hospital, Dublin.

MR. W. H. BENNETT, writing in 1893 of the radical cure of femoral hernia, says:

> The effectual treatment of the ring and canal is a problem which has yet to be solved.....The truth is that no plan for dealing with the aperture through which a femoral hernia comes will be found to be permanently good which does not include the essential detail of placing a barrier across the *upper* aspect of the femoral ring.....Unfortunately the detail alluded to can only be carried out by performing an abdominal section, by means of which in the cadaver it is quite easy to dissect up and stitch a mass of muscle, etc., across the ring. In the living this operation would, I think, be too severe and difficult to justify its performance.

With Mr. Bennett's dissatisfaction with methods at present in vogue directed towards the radical cure of femoral hernia I imagine many surgeons will be disposed to sympathise. The operation which is, I suppose, most commonly practised, aims at occluding the opening by a suture or sutures passed through the fibrous ring in front of and behind the crural canal. This method I believe to be wrong in principle and disappointing in practice. These ligamentous structures do not readily lend themselves to the process of union, and probably as a general rule separate as soon as the ligature material ceases to keep them in apposition.

Mr. Lockwood expresses himself satisfied with an operation which he is accustomed to perform; he brings together the ligaments of Hey and Cooper. But this is open to the objection just alluded to, and is, moreover, a striking example of closure of the lower—the wrong—end of the canal.

For a long time I have thought that a more rational procedure would be to expose the region above Poupart's ligament by a division of the aponeurosis of the external oblique. By this means only did it appear to me possible to satisfactorily occlude the upper end of the crural canal. I find that Tuffier in 1896 recommended this procedure, but the subsequent and essential step, the closing of the opening, he effected by a method which could have been accomplished nearly, if not quite, as well by operation from below.

I have from time to time tried different devices on the dead subject, and that which appeared to me to give most promise of success I carried out on April 24th at the Adelaide Hospital on a woman about 45 years of age. I was assisted by my colleague, Mr. F. T. Heuston.

The structure which is most at fault in cases of femoral hernia is probably Gimbernat's ligament, and I would describe the present method as a reinforcement of that structure.

The incision was commenced at a point about 2 inches from the pubic spine and ¾ inch above Poupart's ligament; thence it was carried inwards as far as the region of the hernia, and here it was curved to descend vertically over the sac. The aponeurosis of the external oblique was exposed in the first part of the incision, the sac of the hernia in the second. The sac was fully isolated from its surroundings. Next an opening was made above Poupart's ligament, in the direction of the fibres of the aponeurosis. The sac was now easily dislodged, and with the adjoining peritoneum pushed up from the region of the upper end of the crural canal. The fibres of the trans

versalis and internal oblique muscles and the conjoined tendon were now clearly defined, and the muscle fibres were drawn down by catgut sutures and placed against the pectineus muscle, from the surface of which the fascia had been in part removed. The muscle was also fixed to Poupart's ligament by sutures passed at a higher level than the first series. This was done so as to pack down as much muscle fibre as possible against the opening, and also to relieve any tension that might be thrown on the primary sutures. The sac was treated somewhat after the method of Kocher. Over all a continuous suture closed the slit in the fibres of the aponeurosis. The closure of the crural canal by this means seemed to me very satisfactory and it was effected with great ease.

There are two objections which may be urged against the operation. First, there is a danger of wounding the deep epigastric artery—and this, as a matter of fact, happened in the present instance. I do not regard this as an accident of any serious consequence. Secondly, a direct inguinal hernia may result. I do not myself think there need be much anxiety on this score, for very few fibres of the aponeurosis are divided, seeing that the opening is made in the direction in which they naturally run, and also because the conjoined tendon is well drawn down to protect this region.

I am not certain about the best method of dealing with the sac. It might be better to remove it altogether and stitch up the rent in the peritoneum.

A CASE OF ENTERIC FEVER OF THREE MONTHS' DURATION.

BY WILLIAM MURRELL, M.D., F.R.C.P.,
Physician to Westminster Hospital.

THE following case presents many points of interest:

C. S., a clerk, aged 28, was brought to the Westminster Hospital on an ambulance on November 18th, 1899, suffering from enteric fever. He had been ill since November 1st, and had been nursed at home. On admission his temperature was 103°, and he was in an extremely prostrate condition. No enteric spots were to be seen, and none appeared during the whole course of his stay in the hospital. No enlargement of the spleen could be detected, and although he had been a heavy drinker, the liver was normal in size.

At 8 P.M. on the night of admission the temperature was 103 6°, and he had passed a typical typhoid stool. The urine had a specific gravity of 1024, was acid in reaction, and free from sugar and albumen. Widal's reaction was obtained without difficulty. The patient was placed on 3 pints of milk, 5 ounces every alternate hour.

On the 21st the temperature fell suddenly to 99.8°, and a few hours later there was a profuse hæmorrhage from the bowel. During the following week the temperature ranged from 102° to 104°, and the patient remained in a semi-comatose condition, with occasional attacks of delirium. The bowels were open either once or twice a day, the motions being of the same character. He was now on 9 ounces of brandy in the twenty-four hours. On November 25th he was found to have some bronchitis, but there was no pneumonia. There was some expectoration, which was examined for tubercle bacilli, but none were found. On December 3rd—that is, on the thirty-third day of the illness—he had a sharp attack of diarrhœa and for the remainder of the week had from two to seven motions a day. The temperature rose to 104 8°, and he had to be sponged two or three times a day. His pulse was usually 130 and of poor quality, and his general condition was unsatisfactory. On December 6th, 7th, and 8th he was given an enema of 2 ounces of mucilage of starch with half a drachm of tincture of opium This was retained, but exerted no influence on the frequency of the motions. On December 9th he was ordered drachm doses of bismuth carbonate in milk and this checked the diarrhœa. During the following week the temperature ranged from 102° to 103°, and the bowels were open from four to six times a day. In the next week the temperature was slightly lower and the motions were less frequent. There was, however, no improvement in his general condition and he was evidently steadily losing ground. The only hopeful feature was that the three pints of milk and 9 ounces of brandy were taken with unfailing regularity.

On Christmas Day, the fifty-fifth day of his illness, he was watched with unusual care to make sure that nothing was given him by visitors to the wards. On the following day, however, his temperature rose to 103.2°. At noon on December 27th it was 103.4°. At 4 P.M. he was given 5 grs. of phenacetin. An hour later the temperature had fallen to 101.4°. At 8 P.M. he had a severe rigor lasting over half an hour, for which stimulants had to be given freely; the temperature fell to 100°, rising again to 102° at midnight. On December 28th at 4 P.M. the temperature was 102.2° and he was given another dose of phenacetin, 5 grs. This was followed by a prolonged and very severe rigor, and at 8 P.M. his temperature was 96°, a fall of 7.2° in four hours. At midnight, however, the temperature was 104.2°, showing a recovery of 8.2° in four hours. On January 1st, the sixty-second day of the illness, diarrhœa returned, there being from six to ten motions in the twenty-four hours. Again the starch and opium enema proved useless, and again drachm doses of bismuth carbonate were successful. On January 8th the patient was in an extremely critical condition and he was given champagne freely in addition to the brandy. Strychnine and digitalis were also administered from time to time. His temperature ranged from 102° to 103°, his pulse was almost imperceptible, and the motions were passed constantly under him. For many days he had been unconscious, only muttering to himself at intervals. He was given an enema of 2 drachms of Warburg's tincture in an ounce of milk, but it was not retained. On the following day 2 drachms were given by mouth, and there was some improvement. On January 11th Warburg's tincture was ordered in doses of 3 drachms twice a day, and almost immediately the diarrhœa was controlled, the temperature fell to 100°, and the pulse improved in quality.

On January 13th a more liberal dietary was adopted, and the patient was ordered, in addition to his milk, a teaspoonful of plasmon every alternate hour. This was taken without difficulty, there was no rise in temperature, and the bowels were moved only once in the twenty-four hours. This was practically the turning point in the patient's illness. The plasmon was continued for a week, and at the expiration of that time the patient was given solid food. It was not, however, until January 20th, the eighty-first day, that the temperature fell to normal. From this day his appetite became ravenous, and on January 23rd his dietary consisted of chicken and potatoes, beef tea (12 ounces), bread, four eggs, custard pudding, plasmon (6 ounces), milk (10 ozs.), brandy (4 ozs.), and port (4 ozs.). He was allowed up for the first time on February 8th, the one-hundredth day of his illness.

The long period during which the temperature was maintained is remarkable. It was not a question of relapse, for there was never any complete defervescence, and it was not post-typhoid pyrexia, for the diarrhœa with typical stools continued almost up to the end. The freedom from complications is a subject for congratulation, for, with the exception of a transitory attack of bronchitis there were none. There was never any dulness either at the apices or at the bases of the lungs, and the expectoration showed no trace of tubercle bacilli.

It is noteworthy, considering the large amount of fluid taken for so considerable a time, that there was no distension of the abdomen. There was never any doubt about the diagnosis, and Widal's reaction was obtained from the first. The case was practically one of the ambulatory type, for although the patient did not walk to the hospital, he was moved a considerable distance in the third or fourth week of the disease. We have taken November 1st as the date of the onset of the illness, but that was the day on which he took to his bed, and he had been ailing for many days previously. During the first eighteen days he was treated at home, and it is probable that the nursing was not of the best. He had been drinking heavily for a considerable period before the onset of the illness, and this is not a good preparation for passing through so grave a crisis.

This case illustrates several therapeutical points. The enema of opium is useful in checking many forms of diarrhœa, especially the diarrhœa of advanced phthisis, but it is useless in the diarrhœa of enteric fever; at all events in this case it proved of no avail. The carbonate of bismuth in drachm doses administered in milk gave excellent results, probably by its mechanical action, in covering over and protecting the ulcerated Peyer's patches. The maximum dose of bismuth carbonate given in the *B.P.* is 20 grains, but this is far too small, and there is not the slightest danger in giving drachm or even half-ounce doses. At one time this salt contained traces of arsenic and tellurium—indicated by the "bismuth breath"—as impurities, but this is a thing of the past, and the drug is now supplied in a condition of perfect purity, so that it can be administered freely, without fear of producing toxic symptoms.

Many authorities speak highly of the value of antipyretic drugs in the treatment of enteric fever, and when the temperature persistently remains above 103° recommend the administration of malakin, lactophenin, or phenacetin. Phenacetin, especially in from 10 to 15-grain doses, is said to be free from danger, but this is not my experience, and in this case on two occasions a single 5-grain dose produced a condition bordering on collapse, and undoubtedly endangered the patient's life.

The administration of Warburg's tincture at the most critical period of this man's illness was attended with the best possible results. It may be objected that it is inexpedient to use proprietary medicines, but the composition of this preparation is no longer a secret. As long ago as 1875 Professor W. C. Maclean, of Netley, with Dr. Carl Warburg's permission, published its formula and mode of preparation. It is a proof spirit tincture containing sulphate of quinine (1 in 50), aloes (1 in 40), opium (1 in 4,000), with rhubarb, camphor, myrrh, gentian, cubebs, zedoaria, boletus, and various other substances, chiefly aromatics. My first experience of it was in a case of pneumonia I saw many years ago with the late Sir Richard Quain. The patient was apparently moribund, but

the injection of half an ounce into the rectum produced profuse perspiration followed by a rapid fall of temperature, after which the symptoms cleared up with surprising rapidity. Since then I have frequently given it both in pneumonia and in enteric fever.

The question of feeding typhoid patients has of late attracted considerable attention, and the commonly accepted rule that no solid food should be given until the temperature has been normal for ten days may sometimes be departed from with advantage. In this particular case a high temperature was persistently maintained until some addition was made to the orthodox 3 pints of milk in the twenty-four hours. The selection of an appropriate food with which to commence is one which requires much consideration. White of egg is undoubtedly very useful, but for this purpose I think very highly of plasmon, an albumen preparation made from milk from which the fat has been removed. It is a colourless dry powder, free from odour and taste, and is undoubtedly a valuable nutritive agent. I usually give it in teaspoonful doses in five ounces of water every alternate hour. It is assimilated without difficulty, and produces no rise in temperature even in the early stages of typhoid. Dr. C. Virchow of Berlin finds that it is best prepared by adding one ounce of plasmon and one ounce of sugar to half a pint of boiling milk, and stirring thoroughly for a few minutes. A more complete solution may, however, be obtained by allowing the milk to simmer for a short time in a vessel of boiling water. It forms a useful addition to beef tea, soups, and other articles of dietary.

Another point of interest is the amount of alcoholic stimulant administered in this case. For nearly two months the patient took over three pints of brandy a week, with a very fair allowance of champagne and port. I am convinced that without the alcohol we should never have tided him over his illness. Of the quality of the brandy administered I know nothing, probably it was good of its kind but not the best. In private practice I should have adopted the hint given by Dr. Wm. Murray of Newcastle-on-Tyne in his *Rough Notes on Remedies*, and ordered liqueur brandy made from the finest grape, known as the champagne grape, grown in the Charente (Cognac) district. This old brandy is a most valuable remedy in cases of extreme exhaustion when the patient is sinking, in spite of all the food, medicines, and stimulants which can be given. It has quite a different action to the new coarse spirit commonly sold under the name of brandy. Age is of the utmost importance, and Dr. Murray recommends 40 years old brandy. This, however, is not the best that can be obtained, and I usually prescribe either the 1828 or the 1820 vintages, both of which are still procurable.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

CASE OF BROMOFORM POISONING: RECOVERY.

I think it right to record the following case owing to the rarity of its occurrence:

On the morning of April 6th, 1900, I was urgently called to J. H., a girl aged 6 years, who had, at 8.30 A.M., in her mother's temporary absence from the bedroom, swallowed ℥jss of pure bromoform. She had taken a liking for it through having 2 drops on sugar thrice daily for whooping-cough. Immediately after swallowing the drug the child was observed to walk to the parlour for breakfast as if intoxicated, and then suddenly become unconscious. The parents meanwhile, having smelt the bromoform in the breath, very properly administered ℥ij of mustard in half a cup of water, and as this had not the desired effect, ℥j of ipecacuanha wine was given.

When Dr. McCheyne Miller and I arrived shortly afterwards, we found the child extremely collapsed and almost moribund. We could feel no pulse at the wrist, but the heart was beating very irregularly, about 120. The respirations were very shallow, about 8 a minute, and the breath had a strong odour of bromoform. There was a marked lividity of the face and lips; both pupils were pin-point and did not react to light, and there was no conjunctival reflex.

We at once washed out the stomach by means of a No. 11 rubber catheter with tube and funnel attached. The fluid returned smelt strongly of bromoform, and we continued lavage with warm water and sodium bicarbonate for an hour and a half, until there was no longer any smell of the drug. We then washed out without Condy's fluid, and gave some strong coffee and sal volatile both by the tube and *per rectum*. Sinapisms had also been applied to the precordia.

The pulse gradually improved, and the heart became regular. The pupils appeared now more normal, and even at times dilated, but unless we kept rousing the child they were apt to contract again. At 11 A.M. there were signs of returning consciousness, but there was the greatest tendency to sleep. At 11.30 the child was able to answer questions, the words at first being drawled out very slowly. I was able to leave the child in the parents' charge by 11.45, but she had to be kept from sleeping during the whole day. Her stomach did not retain anything till evening. Next morning she was in her usual health, and able to enjoy her food.

Regarding the amount of the drug taken (℥jss), I can vouch for it myself, as the ℥ij bottle had been renewed the previous evening, and there was only ℥ss remaining in it.

Edinburgh. T. Brown Darling, M.D.

A CASE OF RIGID OS UTERI TREATED WITH COCAINE.

A multipara, aged 37, was taken in labour at 11.30 P.M. on December 17th, 1899. She had had seven children. Her previous labours had always been lingering, but there had never been any call for operative interference. The pains were severe, but not frequent, only one or two taking place in the hour. She remained in this condition until December 19th, when at 3.30 A.M. the "waters broke," and a midwife was sent for. The midwife examined and found the os about the size of a shilling, and then left the patient for another case.

At 11 A.M., December 19th, I was called to see her. I found her tired and rather worn out; the pains were severe, and coming every four or five minutes; her pulse was good and regular, and beating at the rate of 90 per minute. I found the os uteri dilated to the size of a half crown; the walls were thin and tense. No bag of membranes presented. The position of the occiput was in front and to the left. I waited for several pains, but finding that the os was very unyielding I decided to apply cocaine (a 10 per cent. solution) on a piece of cotton wool; the head came well down, and easily compressed the pledget of cotton wool between it and the walls of the os. After the occurrence of two pains I again examined the patient, and found the os fully dilated and the walls quite soft. I could easily sweep my finger round the presenting head (which was a small one) and between it and the pelvic walls, but to my surprise the head did not advance with the pains.

I now introduced my hand into the vagina, and found that the neck of the child was securely gripped by the lower part of the body of the uterus; the part below this situation, extending to the external os, was soft and flabby. I tried to pass my finger between the neck of the child and the band, but failed to do so. I now applied forceps (without an anæsthetic), and by steady traction on them for a minute or so overcame the resistance of the band, and the child was quickly delivered. The placenta was removed without any trouble, and the patient made an excellent and uneventful recovery.

I have now used cocaine in a good number of cases of slowly-dilating or of rigid os, and all cases so far have been most successful, this being the first case in which any difficulty arose.

Wotton-under-Edge. E. F. Clowes, M.R.C.S., L.R.C.P.

RESORCIN IN RODENT ULCER AND OPERATIONS FOR CANCER.

After reading the very interesting Lettsomian Lectures of Sir William Banks, I feel induced to record the following short experience, as it bears on the question of local infection of wounds in removing malignant growths.

In the year 1891 a patient presented himself with a typical epithelioma of the lower lip. This was removed in a London hospital in May of that year. In June, 1892, the growth recurred, but I was struck with the fact that it did not origi-

nate in the original linear scar, but about one-eighth of an inch off. This I removed with the usual V incision. In September of the same year there was a second recurrence, but I do not recollect its exact relation to the original scar. This I removed again, and remembering the action of resorcin on rodent ulcer, I put some of the powder into the wound. The result was that there was no immediate union, but delayed healing from a ragged ulcer with a better result than I anticipated. Since that date my patient has had no recurrence, and the cicatrix in the lip causes him no trouble.

There can be no doubt as to the value of resorcin in rodent ulcer. I have lately had a typical case, which was cured in five or six weeks by rubbing in the powder every night after removing the crusted covering and ceasing the application when the reaction was excessive.

Sevenoaks. JAMES E. BLOMFIELD, M.B.Oxon.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

STAFFORDSHIRE GENERAL INFIRMARY.

CASE OF JACKSONIAN EPILEPSY TREATED BY OPERATION.

(Reported by HERBERT MARSON, F.R.C.S.Eng., M.D., B.S.Durh., Surgeon to the Infirmary.)

H.S., aged 10, was admitted to the infirmary on December 5th, 1899, suffering from partial paralysis of the left arm and leg, and frequent epileptiform attacks. It appears that eight years previously he fell from a third-storey window, and was picked up unconscious. He sustained an injury to the right side of the head. It was afterwards noticed the left hand was kept clenched, and that there was considerable weakness of the left arm, and to a less degree of the leg. He was unable to put his hand to his head, and could only walk with difficulty. He continued in this condition until last September, 1899, when he had three fits in quick succession, after the last of which he was unconscious for an hour. The fits began with cramp in the calf of the left leg, and were confined to the left side; during the attack he was unconscious, and after it there was great exhaustion. The fits continued until admission, sometimes several occurring daily.

On admission there was found to be a slight depression of the right side of the skull, somewhat in front of the motor area for the lower limb. I decided to trephine in this position and remove the depressed bone. On removing the cranium, about two drachms of clear fluid escaped; on raising the bone the under-surface was found to be considerably roughened, and a cyst about the size of an olive was present adherent to the cranium. For some days there was a very large amount of discharge, the fluid being free from albumen. The day after the operation he had two slight seizures, each being marked by spasm of the right leg and fixation of the eyeballs; but this and the few subsequent attacks were not followed by unconsciousness or drowsiness. Three days later he had another slight attack, during which the arms and legs of both sides became rigid. The stitches were removed on the tenth day, when the wound was completely healed. The temperature never rose above normal. Previous to leaving the infirmary on January 11th he had one or two slight attacks, and he has only had three in the three months which have since elapsed. He has regained considerable power in the leg and arm, he walks much better, and is now able to put his hand on the top of his head and move the fingers more perfectly.

FEMALE MEDICAL INSTITUTE IN MOSCOW.—The statutes of the Moscow Society for the establishment in that city of an institute for the education of women for the medical profession have been settled. The Society proposes to collect funds for the establishment and upkeep of the institute by means of voluntary contributions, popular lectures, theatrical representations, concerts, balls, etc.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

A. PEARCE GOULD, F.R.C.S., Vice-President, in the Chair.

Tuesday, May 29th, 1900.

SPECIMENS.

DR. H. MORLEY FLETCHER exhibited (1) a hypertrophied brain. The specimen was obtained from a boy 10 years of age, whose head was unusually large in infancy, and who was subject to headache and fits. Mentally he was backward. His father's head was large in the frontal region. The actual weight was 73 ounces, which exceeded the heaviest recorded brains from adults. Histologically the enlargement was found due to an increase of neuroglia; the term "hypertrophy" was, therefore, not strictly correct; that of megalencephaly was not open to the same objection. No evidence of rickets was forthcoming. (2) Tumour of the posterior mediastinum. The interest attaching to this was the presence of nerve cells in it. The patient, a female, aged 32, was admitted suffering from pain in the chest and anæmia. The tumour, after death, was found to consist of a large bilobed mass infiltrating the bodies of the vertebræ and encroaching upon the spinal canal. Histologically the growth exhibited non-medullated nerve fibres, with mucous tissue and nerve cells. Its structure indicated an origin in the sympathetic ganglia of the thorax. The malignant element was sarcomatous; there was a metastatic sarcomatous growth in the right lung, but this contained no nervous elements. (3) Two cases of sacro-coccygeal tumour. One of these was a cystic innocent tumour, arising probably in connection with the neurenteric canal. The other was remarkable in its being malignant. The tumour was removed by operation from a male child, but recurrence ensued in the pelvic lymphatic glands and proved fatal. In structure it might be classed as an adeno-carcinoma. No visceral metastasis took place. The growth arose probably in the postanal gut.

CONGENITAL HYDROCEPHALUS.

DR. E. CAUTLEY described a specimen in which the prosencephalon was undeveloped, but in which the medulla, pons, crura, optic thalami and cerebellum were present. The prosencephalon was represented by a membranous bag distended with fluid which had accumulated in and dilated the ventricles. The child lived till the age of four months, and exhibited drowsiness and rigidity of the limbs, with retraction of the neck. There was much craniotabes.

THYROID OF PUPPY OF THYROIDLESS BITCH.

MR. W. EDMUNDS recorded a repetition of Halsted's experiment, who found that the thyroid of the newborn pups of dogs whose thyroid had been in part excised underwent hypertrophy; the thyroid glands of such puppies were about twenty times as large as normal, and microscopically showed an entire absence of colloid, and only rarely a trace of vesicles. The author had removed on one side the lobe of the thyroid with the parathyroids, and on the other side nearly the whole of the thyroid lobe, leaving one parathyroid and a small piece of thyroid attached. About four months later the bitch gave birth to a puppy; the thyroid of the latter showed an entire absence of colloid and a smallness of the secreting cells, the changes indicating presumably a compensatory hypertrophy to make up for the maternal defect. It had been said that the health of women suffering from either myxœdema or Graves's disease was much improved during pregnancy. These experiments suggested the explanation.

A DUCK WITH WEBLESS FEET.

DR. ARTHUR SAUNDERS exhibited the above. The bird was a tame, white duck of a mixed breed of the Aylesbury and Pekin strains, and was bred at Laleham-on-Thames, in Surrey. The deformity was congenital, and had occurred in this member only of the breed. The length and position of the toes were normal. There was, however, some deformity, probably acquired, the ends of the toes having a worn, thickened, and clumsy appearance, while the nails were distorted. The web was represented only by a small fold in the angles between the toes

and a few scales along the sides of the toes themselves. These rudimentary portions of the web presented large scales on the dorsal aspect and small scales on the plantar as in the normal structure. The duck was able to swim, but not well. The author had been able to find but two reported cases of the malformation.

Some Anatomical Rarities.

Mr. S. G. Shattock under this title exhibited: (1) The hand and forearm of a chimpanzee in which the tendons of the flexor profundus digitorum were ruptured near their insertions into the terminal phalanges; the tendon of the index was tied in a knot around the unruptured tendon of the flexor sublimis after having been completely withdrawn through the perforation in the latter. The rupture doubtless arose from a violent contraction of the muscle made to save a fall whilst the terminal phalanges of one hand alone supported the weight of the body. (2) Unilateral synostosis of the temporo-maxillary articulation, preceded by an unusual amount of destruction of the jaw, the condyle, neck, and portion of the ramus having been destroyed. The degree of destruction suggested a tabetic arthropathy. (3) The tusk of an African elephant presenting a sharp angular curvature. Its surface showed the results of superficial destruction associated with abnormal productions of cement, indicative of an alveolar periostitis. These changes explained the curvature. In consequence of a condition like that of pyorrhœa alveolaris in the human subject, the tusk had become loosened, and by its sheer weight had then undergone downward displacement; as the production of ivory proceeded from the persistent pulp in the base, the deeper or growing end of the tusk (formed, that is, after the occurrence of the displacement) had been developed in the normal axis. The author questioned whether the mobility of the tusk of the elephant commonly regarded as normal, was not really due to alveolar inflammation, for such observations related to animals living under the unnatural conditions of captivity. In man pyorrhœa alveolaris was known not only to induce premature absorption of the alveoli and exposure of the fangs of the teeth, but in extreme cases a tooth isolated by this disease might assume a horizontal position; were it furnished with a persistent pulp, the after-growth would be followed by a curvature as in the case of the tusk described. (4) Umbilical calculi. The first of these, about ⅝-inch in chief diameter, was removed from the pit of the umbilicus. It consisted of squamous cells and hairs, with needles of fatty acids, and came from a man under Mr. F. C. Abbott. Discharge from the umbilicus had been noticed for eight weeks; the abdominal wall around was indurated and tender. In the second case, under Mr. B. Pitts, a discharge had been noticed for five years. Suppuration had ensued, and sinuses were found on exploration to run in various directions in the abdominal wall.

Fibrosis of Lung.

Dr. J. Fawcett recorded an instance in which the above condition followed broncho-pneumonia. The pleura was thickened, and the lung in section showed hyperplasia around the vessels and bronchi. There was no tuberculosis.

Spindle-celled Sarcoma of the Œsophagus.

Dr. H. D. Rolleston exhibited a specimen in which such a tumour had grown from the posterior wall of the œsophagus, arising in the submucous tissue. The growth was flattened, widespread, and ulcerated. The patient was a male, aged 49.

Card Specimen.

Dr. F. Hawkins: Lympho-sarcoma of the thorax in a child.

CLINICAL SOCIETY OF LONDON.

Sir R. Douglas Powell, Bart., M.D., F.R.C.P., President, in the Chair.

Friday, May 25th, 1900.

Gastro-enterostomy followed by Pylorectomy.

Mr. Arthur E. Barker read a paper on this case.

A woman, aged 55, presented herself in March, 1899, at University College Hospital with very obscure symptoms of partial intestinal obstruction. There was a defined tumour to the left of the left rectus muscle under the border of the ribs. This was variously diagnosed, but the author held it to be a growth of the splenic flexure of the colon. The abdomen was opened on this hypothesis, also the left border of the left rectus. The tumour was found to be a carcinoma of the pylorus. Retro-colic gastro-enterostomy was at once performed, from which the patient made a rapid recovery. Five weeks later Mr. Barker removed the whole of the pyloric end of the stomach, and closed the resulting openings in it and in the duodenum. Recovery was rapid, and the patient put on flesh steadily, and went about as before, eating as a rule ordinary food. She died of recurrence one year to a day after the operation.

The first operation was done under local eucaine analgesia, the second under chloroform anæsthesia. Murphy's button was employed, and came away on the twelfth day. The operation was much facilitated by taking it in two stages.

Mr. Bidwell concurred with Mr. Barker in preferring the double operation, and quoted cases on which he had operated in that manner, all of which could be regarded as successful, though the growth had recurred later. In one case in which he had performed the operation in one stage, the patient died within ten days of the operation from the adhesions in the jejunum which resulted in a kink. To prevent this accident, the loop of the jejunum attached to the stomach should not be too close up to the duodenum. If it were, regurgitation of the bile into the stomach occurred. He advocated Halsted's method of suturing; in only one case had he had the slightest trouble afterwards. As to the interval of time between the two operations, he had allowed 18 days, and thought that was a suitable time. In regard to the diagnosis of the early stages of stricture of the pylorus, there was at first increased power in the stomach muscle, and therefore no dilatation; and the absence of dilatation of the stomach rendered the diagnosis difficult. The duration of life was not very great, but it was longer after the double operation than after gastro-enterostomy alone.

Mr. Barker, in reply, said the operation prolonged life, and the average duration of life was not seven years, but perhaps two or three years. Everything depended on an early diagnosis and the courage of the patient to undergo this operation. Pylorectomy should never be done for anything except malignant disease.

Obscure Septicæmia Treated by Antistreptococcus Serum and Nuclein.

Dr. W. F. Victor Bonney read a paper on this case.

The patient was a young man who was seized, without any history of previous disease whatsoever, with fever of a persistent type, associated with joint swellings, femoral thrombosis, and abdominal distension. On the forty-second day of the disease rigors began with a remittent temperature reaching nearly 107° on several occasions. He was treated by injections of antistreptococcus serum, receiving within a period of seventeen days 420 c.cm. in 42 injections. During this period the temperature fell, and the patient greatly improved. A relapse on the sixty-fourth day was treated by injections of nuclein, 1 per cent. solution in 2 c.cm. doses. He received nearly 30 c.cm. in eight days, during which period the temperature fell and the patient rapidly convalesced. He was now in complete health. The diagnosis, obscure at first, was divided between malignant endocarditis, enteric fever, and some germ of obscure pyæmia. The first was negatived by the absence of cardiac signs, the second by Widal's test twice applied. Several bacteriological examinations left the matter still unsettled, though Mr. A. G. Foulerton was suspicious of having detected the gonococcus in the blood, but could not, by a mishap, confirm it.

Reviewing the whole case, the likelihood that it was a gonococcal septicæmia was not probable. The serum used was that made by Mr. Bokenham, while Messrs. Burroughs and Wellcome kindly gave the nuclein free. No ill-effects followed the injection of either.

Mr. A. E. Barker hesitated to accept the view that the result was altogether due to the antistreptococcus serum. Some cases of the disease went wrong to the point of almost absolute exhaustion, and then suddenly recovered without any serum at all. He suggested that the bacteria grew until the soil was exhausted.

Dr. Bonney, in reply, said the recovery might have been a coincidence; but on two occasions his downward progress was arrested, and he quickly improved when the treatment was employed.

Graves's Disease with Bradycardia.

Dr. W. Pasteur communicated the conclusion and *post-mortem* notes of a case of Graves's disease with bradycardia shown at a clinical meeting in April, 1898.

The patient, a widow, aged 67, who had suffered from Graves's disease for twenty years, exhibited the disease in a typical form, with tachycardia, when first seen at the Middlesex Hospital in 1886. Under observation the enlarged thyroid dwindled and the tachycardia gradually gave place to marked bradycardia. The demeanour and facial expression were placid and almost apathetic. She said her voice had altered in quality. She had become very sensitive to cold and rather clumsy with her fingers. It was a question whether the bradycardia was associated with degenerative lesions of the heart, of which there was physical evidence; or whether

with other symptoms just mentioned, it indicated the supervention of myxœdema. The latter was the opinion generally expressed. The patient was readmitted to hospital in July, 1899, with acute symptoms of heart failure, from which she rallied for a time. In January, 1900, she returned in a critical condition, with signs of extreme tricuspid regurgitation, and died within twenty four hours of admission. The thyroid gland was rather small, but not atrophic to the naked eye. Microscopically, parts of the gland appeared fairly healthy, but others showed an extensive, round-celled infiltration of the alveolar structure. [These specimens were exhibited at the meeting.] There was hypertrophy and dilatation of the left ventricle of the heart, but little change was present at the valves and in the coronary arteries. The thymus was not persistent. There were no obvious changes in the brain or meninges.

Dr. Pasteur considered that the case afforded valuable pathological evidence of the occurrence of thyroid atrophy in the wake of Graves's disease. The case was of interest in presenting symptoms of the two diseases in combination. He was of opinion that the bradycardia was more probably related to the condition of the heart than to the thyroid cirrhosis.

Dr. A. MORISON said that his conclusion was that the bradycardia was in some way related to the condition of the thyroid. He inquired how the case was treated; whether by thyroid extract, and, if so, what effect the treatment had on the pulse. The degenerative changes in the heart were not sufficient to account for the bradycardia. The condition of the nervous system was not sufficiently investigated in these cases, especially the inferior cervical ganglion and the other nerves controlling the heart's action.

Dr. PASTEUR, in reply, said that a systematic investigation of the nervous system had not been undertaken, and that he did not consider the bradycardia was explicable by the myxœdematous changes. The results of treatment by thyroid extract were negative, which was not surprising to anyone who saw the microscopical sections. The case was a mixed one.

ANNUAL MEETING.

The business of the annual meeting was then transacted. The report of the Council was read by Mr. CHARTERS SYMONDS, the Senior Secretary. It stated that the Society was flourishing and numbered 582 ordinary members. The losses by death were five—namely, Sir J. Paget, Mr. Brodhurst, Dr. Southey, Dr. F. C. Turner, and Mr. Davies-Colley.

The treasurer's statement was presented by Mr. HOWARD MARSH, the Treasurer, who remarked that the finances of the Society were quite satisfactory.

Votes of thanks to the two retiring Vice-Presidents and six retiring members of Council were proposed by Mr. A. BARKER and by Dr. A. MORISON respectively and carried.

ELECTION OF OFFICERS.

The ballot for the election of officers and Council was held, and the following list, proposed by the Council, was adopted: *President:* Sir R. Douglas Powell, Bart., M.D. *Vice-Presidents:* S. Coupland, M.D., *S. Mackenzie, M.D., *W. J. Tyson, M.D., A. Pearce Gould, M.S., J. H. Morgan, H. W. Page, M.C. *Treasurer:* F. Howard Marsh. *Council:* *J. R. Bradford, M.D., F.R.S., *C. W. Chapman, M.D., J. K. Fowler, M.D., A. E. Garrod, M.D., *H. P. Hawkins, M.D., J. A. Ormerod, M.D., H. D. Rolleston, M.D., H. Sainsbury, M.D., R. Percy Smith, M.D., J. C. Uhthoff, M.D., *A. F. Voelcker, M.D., W. H. Battle, J. Berry, B.S., S. Boyd, B.S., L. A. Dunn, M.S., F. S. Eve, *R. Johnson, B.S., G. H. Makins, *J. D. Malcolm, C.M., S. Paget. *Honorary Secretaries:* Charters J. Symonds, M.S., Percy Kidd, M.D. The gentlemen whose names are marked with an asterisk were not on the Council or did not hold the same office during the year 1899-1900.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—At a meeting on May 11th, Dr. BARCLAY BARON, President, in the chair, Dr. JOHN MACINTYRE (Glasgow) gave a demonstration upon the use of the Roentgen rays in the diagnosis of diseases of the throat, nose, and neighbouring organs, illustrated by numerous lantern slides, photographs, and apparatus. After speaking of the most convenient source of electricity, and discussing the relative advantages of Wimshurst machines and coils for Roentgen-ray work he mentioned various forms of interrupter, including the Weknelt, and a form devised by himself. He also described various modes of controlling the vacuum in Crookes's tubes, and an ingenious automatic mercurial pump used by him when making his own tubes. Barium platino-cyanide was the salt that he found the best for screens. The potassium platino-cyanide, though more brilliant, was less durable. The use of the screen was gradually coming into greater prominence; but when photography was necessary, plates requiring only a very short exposure were now being used. Passing to the application of the foregoing principles to medical work, Dr. Macintyre spoke first of the application of stereoscopic vision to screen work and photography. He next showed how, besides the use of *x* rays in locating foreign bodies in the œsophagus, the larynx, the antrum, and the bronchi, fractures of the jaws could be seen, enlargement of the cardiac area recognised, and aneurysm rendered visible, when other means of diagnosis had failed. He had also observed enlarged mediastinal glands and the presence of fluid in the pericardium and pleuræ. One interesting point mentioned was the distinct shadow cast by phthisical deposits at the apex of the lung. Examination of the accessory cavities of the nose had also revealed important information; for instance, the presence of a probe passed through the infundibulum into the frontal sinus could be clearly verified. Finally, systematic examination of patients by the *x* rays was recommended. In many cases this method would only be supplementary to other means of diagnosis, but in a certain few instances he had been able thus to obtain valuable information which could not otherwise have been gained. A short discussion followed.

LARYNGOLICAL SOCIETY OF LONDON.—At a meeting on May 4th, Sir FELIX SEMON, M.D., in the chair, Dr. LOGAN TURNER showed a specimen of a larynx with acute œdema. The œdema had supervened suddenly in the course of phthisis, and caused death from asphyxia before surgical assistance could be obtained. Drs. WAGGETT, TILLEY, and WATSON WILLIAMS spoke of similar cases.—Mr. STEPHEN PAGET showed a case of compression of the trachea by an enlarged thyroid gland.—Mr. ACLAND, introduced by Dr. WATSON WILLIAMS, showed some new instruments for the treatment of empyema of the antrum; and Dr. WATSON WILLIAMS showed a new form of universal laryngeal forceps.—Dr. JOBSON HORNE showed a case of inflammation of the crypts in the mucous membrane of the roof of the naso-pharynx.—Dr. LAMBERT LACK showed (1) a curtain ring which he had removed from the pharynx of a child aged 9 years, who had swallowed the ring at the age of 9 months; (2) two cases of nasal polypi treated by a new radical method, together with microscopic sections of portions of the bone removed. One of the cases operated upon 18 months previously for unilateral polypi and purulent discharge had since remained free from all symptoms. The method of operation was discussed by Drs. SPENCER, WAGGETT, HILL, PARKER, SCANES SPICER, DUNDAS GRANT, PERMEWAN, and the PRESIDENT.—Dr. TILLEY showed (1) a case of chronic ethmoiditis simulating the so-called "cleavage of the middle turbinate"; (2) a case of external operation for chronic frontal sinus suppuration in an unusually large sinus.—Dr. EDWARD LAW showed a case of laryngeal ulceration, and Dr. POWELL one of ulceration of the epiglottis for diagnosis.—Mr. DUNDAS GRANT showed a case of enlarged gland in the neck associated with œdema of one arytenoid; also a case of laryngeal growth.—Dr. W. H. KELSON showed a case of laryngeal growth; Mr. WYATT WINGRAVE a case of double abductor paralysis with paresis of palate, etc.—Dr. DAVIS showed a case of enlargement of lingual tonsils in a woman suffering from secondary syphilis; Dr. FURNISS POTTER a case of pharyngeal and laryngeal ulceration, with microscopic sections of pieces removed; and Mr. PAGET a case of ulceration of the larynx and of the upper lip, probably tertiary syphilis.

A GENITO-URINARY SOCIETY IN NEW YORK.—The genito-urinary specialists of New York have organised a society to be known as the New York Genito-Urinary Society. It will meet once a month. Correspondence is invited with specialists in foreign countries, as well as in other parts of America. The following are the office-bearers:—*President:* Dr. Ramon Guiteras, Professor of Genito-Urinary Diseases in the New York Post-Graduate School and Hospital; *Vice-Presidents:* Drs. Winfield Ayres (Bellevue), and Otis K. Newell, formerly of the Harvard Medical School, now of New York; *Treasurer:* Dr. George W. Blanchard; *Secretary:* Dr. A. D. Mabie.

REVIEWS.

SOME RECENT WORKS ON MEDICINE.

Granular Kidney and Albuminuria.

Although Dr. West puts forward his work on granular kidney as "being the Lettsomian Lectures delivered before the Medical Society of London," this book is by no means a mere reprint. It is in effect a carefully-constructed treatise on the difficult subject with which it deals, in which theoretical propositions are skilfully dissected and illustrated by useful reference to the records of actual cases, and from which the "practical man" can gather information speedily and satisfactorily, owing to the manner in which the various phases of the subject are classified. Many parts of the lectures appear to have been rewritten and elaborated, while the inclusion of illustrative cases, impossible within the limits of a lecture, adds much to the readable interest and practical value of the work as a whole. Opening the subject with sections on statistical evidence as to etiological points, Dr. West attacks the question of the relationship between the parenchymatous and granular forms of kidney disease, and shows clearly how far our present knowledge carries us, making plain the fact that granular kidney as a result of acute nephritis is more easy to assume than to prove. Of the relations between granular kidney and cardio-vascular disease there is much to be said, and the outcome of a careful consideration of the facts leads to the conclusion that granular kidney must be looked upon as a disease in itself, and that it occurs in association with cardio-vascular changes of a recognisable type. Of the cardiac lesions, it must be allowed that they are most obvious when the disease in the kidney is most advanced; but of the vascular changes, the early occurrence of degeneration may be taken as a warning, if not as an actual indication, that renal changes are in progress. This view was strongly held by the late Dr. Mahomed, who laboured to prove that a "prealbuminuric" stage of granular kidney could be recognised, but to his mind the case presented itself somewhat differently, in that he looked upon the vascular changes as the result of the renal failure of function. The visible changes in the retinal arteries are brought into evidence in this work on account of their diagnostic and prognostic value, and a clear distinction is laid down between the degenerative forms usually associated with granular kidney and the exudative forms, which are generally inflammatory or œdematous, and are probably of actual toxic origin. The symptoms which are produced in the course of a case of granular kidney are discussed in groups. Those which are directly or indirectly due to hæmorrhage are of much interest, and are rendered more so by the relation of illustrative cases. The subject of hæmaturia might perhaps have been still further elaborated and more detailed description given of the diagnostic points in the history of those cases in which the hæmorrhage from a granular kidney has to be distinguished from that from a local lesion. Of uræmia in its acute and chronic forms, of the effects of granular kidneys upon the nutrition of other tissues, and of the prognosis of the disease under all its varying conditions the author writes with equal judgment and reserve, indicating clearly the difference between the facts that are known and those that have to be assumed. In dealing with the question of physiological albuminuria, he brings the reader to the conclusion that such a condition does not actually exist, but that a pathological cause must be at work. He quotes instances to prove that one such cause may be granular degeneration of the kidney, though it may not be indicated by any other sign. The work as a whole presents a most interesting picture of the disease, clear and concise in its theoretical parts and full of useful suggestions for the practical management of actual cases.

Raynaud's Disease.

Dr. T. K. Monro has written a useful book on *Raynaud's Disease*,[2] in which he sets out within a moderate compass the present state of knowledge of the condition described by Maurice Raynaud in 1862 as "Local asphyxia and symmetrical gangrene of the extremities." The essential nature of what has since been called Raynaud's disease is still obscure; it is not certain indeed that there is any one pathological condition which can be called by this name. It would be perhaps wiser to speak of Raynaud's symptom-complex rather than of Raynaud's disease. It is almost certain that many different types of morbid process are grouped under the one head, and when it is remembered that the group contains both the condition popularly known as "dead fingers," a condition so frequent in otherwise healthy people as to be considered almost within physiological limits, and the gangrene of parts of limbs associated with a peripheral neuritis, it becomes obvious that a severe discrimination is necessary. But it is equally probable that a wide inclusion is not less needed, for it is more than likely that the morbid condition underlying what may be termed the standard Raynaud's symptom-complex has closer affinities with such diverse clinical appearances as erythromelalgia, chilblain, erythema nodosum, angioneurotic œdema, and paroxysmal hæmoglobinuria than it has with some of the different varieties of the so-called Raynaud's disease itself. Dr. Monro does not add anything material to our knowledge of the pathology of the condition, but he has done very carefully and elaborately what he set out to accomplish. Perhaps the only fault of the book is an exaggeration of one of its good qualities—it is almost too elaborate. The perspective of the chapter on the relations between Raynaud's disease and other morbid conditions is not quite good. Reference is made to typhus fever, typhoid fever, measles, influenza, and, indeed, almost all the infective fevers, as diseases in association with which Raynaud's disease has occurred. For example, the author writes: "Gonorrhœa is rarely mentioned in the reports, and has probably no direct influence. But it may give rise to rheumatism, and this in its turn may favour the occurrence of Raynaud's disease." He then proceeds to mention the case of a man who developed the "vasomotor disease" "on a warm day in August" four years after a second attack of the local disease. A similar criticism applies to the bringing in on these lines, if even merely as coincidences, of "aphasia, vertigo, and paresis," "muscular atrophy," "interstitial keratitis," "albuminuric retinitis," "conjunctivitis" and "ringworm," and other conditions. Some useful observations are made in the chapter on treatment, and Dr. Monro's philosophical view of the possibility of eradicating the habit of vasomotor excitability is well worthy of perusal. He has brought together much material, both new and old, and to those at least who are prepared to make a selection for their own special purpose the book will doubtless prove eminently acceptable.

Visceral Ptoses.

Dr. Glenard's work *Les Ptoses Viscérales*[3] is the reproduction and consolidation of many papers published by the author during the last six years in the *Revue des Maladies de la Nutrition*. The theses put forward, elaborated, and defended by the author may be thus epitomised in the order of their evolution. There exists a morbid entity that may be defined as enteroptosis, which embraces a multiplicity of diseases classified as dyspepsia, neurasthenia, disease of the stomach, intestine, uterus, and so forth. Enteroptosis is primitive or idiopathic, and secondary or symptomatic. Primitive enteroptosis, when it arrives at the second period of its evolution presents the same aspect as secondary enteroptosis. Enteroptosis, primary or secondary, belongs to the same family group as the "maladies of nutrition," and is symptomatic of an affection of the liver. Such affections of the liver are hereditary or acquired. The existence of these affections, bequeathed from generation to generation, justifies the invention and adoption of the term "hepatic diathesis" or "hepatism." The idea of a specific diathesis, Dr. Glénard tells us, "was born of the clinical observation that certain diseases, apparently quite distinct, coincided with, succeeded to, or alternated with, one another in the same subject, and that one or other of these might be transmitted to one or other

[1] *Granular Kidney and Physiological Albuminuria.* By Samuel West, M.A., M.D.Oxon., F.R.C.P., Assistant Physician, St. Bartholomew's Hospital, etc. London: Henry J. Glaisher. 1900. (Demy 8vo, pp. 108. 7s. 6d.)

[2] *Raynaud's Disease (Local Syncope, Local Asphyxia, Symmetrical Gangrene): Its History, Causes, Symptoms, Morbid Relations, Pathology, and Treatment.* By T. K. Monro, M.A., M.D. Glasgow: James Maclehose and Sons. 1899. (Crown 8vo, pp. 251. 5s.)

[3] *Les Ptoses Viscérales, Diagnostic et Nosographie (Entéroptose-Hepatisme)* [Visceral Ptoses]. Par Dr. Franz Glénard, Médecin de l'Hôpital Thermal de Vichy. Paris: F. Alcan. 1899. (Royal 8vo, pp. 980, 224 figures and 30 synoptic tables. Fr. 20.)

descendant." In discussing the affections of each organ—liver, spleen, kidney, uterus, stomach, etc.—the most minute instructions are duly set forth as to the methods of examination best suited to investigate each particular organ. Many of these methods, for example *palpation néphroleptique* and *procédé de pouce*, are those elaborated by the author himself. The usual mobility, and all—even the most trivial—degrees of abnormal mobility, are fully discussed, and the attendant symptoms are analysed, tabulated, and explained. On the whole we fear that Dr. Glénard has over-elaborated his case. None but the most seasoned and hardiest of reviewers could plod, weary and with little compensation, through the thousand pages of this book. The immensity of this work is out of all proportion to the value of the observations. Nevertheless there are buried in this mine of words facts of undoubted value; but to dig them out, sift them, and weigh them is a matter demanding persistent labour and the freshest and most buoyant enthusiasm. The personal pride of Dr. Glénard in his work is quite refreshing in its simplicity and naïveté. His readers, however, would have learnt his message more readily and more certainly had it been conveyed to them in a volume of one-fifth the size.

NOTES ON BOOKS.

HELSINGFORS UNIVERSITY THESES.

Among the graduation theses (1898) of the University of Helsingfors, that by AXEL R. LIMNELL (*Patologisk-Anatomiska och Kliniska Studier ofver Ovarial Tumorer*. Akademisk Afhandling af Axel R. Limnell. Helsingfors, 1898, pp. 273, vol. lxxxviii, 3 plates) stands prominently forward as a model of what a thesis should be. It consists of a series of pathological and clinical researches on ovarian tumours. This thesis extends to over 350 pages of printed matter and is illustrated by 23 figures representing microscopical appearances. Clinical details of 250 cases of ovarian tumour treated in the Gynæcological Clinic at Helsingfors between the years 1872 and 1898 are given, and in the case of 50 exhaustive pathological descriptions are appended, setting forth the histological appearances. With regard to their morbid anatomy, 114 of the tumours were ordinary cysts, 81 were colloid cysts, 32 were dermoids, 8 were papillary cysts, and 15 were solid tumours. In 126 there existed adhesions, in 47 there was ascites, in 70 the other ovary was cystic, and in 35 there was torsion of the pedicle, amounting in one case to six turns. In 21 cases death followed ovariotomy (mortality 8.4 per cent.), and it is interesting to note that the mortality after operation, which in 1873-78 was 18.2 per cent., fell in 1894-98 to 5.6 per cent.; in 224 cases there was recovery (89.6 per cent.); and in 5 instances (0.8 per cent.) the results were incomplete. The thesis is full of interesting statistics, and there are also useful and interesting sections on the complications of ovarian tumours, on the pathogenesis of dermoids, and on the books and articles dealing with ovarian cysts which have been published in Finland. The writer has not only written a good thesis; he has by its publication let the medical world know that neither in the success of operations nor in the thoroughness of the working up of pathological material has the Helsingfors school anything to be ashamed of but much to be proud of.

J. J. KARVONEN'S thesis (1898) deals with the subject of renal syphilis. (*Die Nierensyphilis*. Akademische Abhandlung von J. J. Karvonen. Helsingfors, 1898, pp. 202, 2 plates). The author discusses the diagnosis of syphilitic renal diseases, and devotes a special section to syphilitic albuminuria, and another to paroxysmal hæmoglobinuria, in which he narrates several personal observations. He thinks that while renal disease is rarely recognised clinically in syphilitics, it is a common cause of death in such persons. The greater part of the thesis is devoted to the consideration of the affections of the kidney in congenital syphilis and in syphilis hereditaria tarda. With regard to the former group, it is evident that renal changes are rarely met with in the syphilitic fœtus, possibly because it perishes before they have time to develop; at the same time, developmental arrests, such as the persistence of fœtal renal characteristics into later life, may be found. Karvonen takes pains to distinguish between the normal appearances of the fœtal kidney and those due to syphilis. He details 5 cases of syphilitic renal disease in the congenital class and 2 in the late hereditary form, and gathers together a small number of cases from medical literature. It is evident that there is still need for research in this section of syphilography.

We have received the sixth edition of Professor ORTH'S *Pathologisch-anatomische Diagnostik* (Berlin: August Hirschwald. 1900. Pp. 730. M.16). The number of pages in this edition is almost the same as in the fifth, but all the articles have been subjected to revision. It is probably the most complete work of its kind in any language, dealing as it does with every department of practical morbid anatomy. After a section describing the instruments required for *post-mortem* examination and for microscopical study a section is given to the description of external appearances. In the remainder of the book—over 600 pages—the various systems and organs are taken *seriatim*, and the morbid appearances which may be encountered described and discussed. The work is especially adapted to meet the needs of those who are engaged in teaching morbid anatomy, or are called upon to make many *post-mortem* examinations. It will of course be equally valuable as a work of reference to those who may have only occasionally to make *post-mortem* examinations, for Professor Orth has brought his subject thoroughly up to date.

Professor LEJARS'S *Traité de Chirurgie d'Urgence* (Paris: Masson et Cie. 1900. Royal 8vo, pp. 920. Fr.25), the first edition of which was reviewed in the BRITISH MEDICAL JOURNAL of November 4th, 1899, page 1297, has already reached a second edition. The opportunity has been taken to add paragraphs on a number of subjects, including wounds of the head, face, and tongue, abscess of the mouth and throat, abscess of the prostate, on sutures, and so on. More space has been given to the surgery of the extremities, and especially to fractures. In addition 130 new figures have been introduced. In this way the bulk of the volume has been increased, but so also has its usefulness as a work of reference in emergency.

TRANSACTIONS AND REPORTS.

The *Transactions* of the twenty-first annual meeting of the American Laryngological Association held in Chicago in May, 1899, contains, in addition to the presidential address by Dr. Casselberry, some interesting communications. Dr. Farlow inquires, "Is the so-called American voice due to catarrhal or other pathological conditions of the nose?" and he answers the question in the negative. Dr. Arthur Watson reports the occurrence of accessory thyroid glands at the base of the tongue in two cases. Drs. Swain, Rice, Ingals, and Bosworth discuss the relation of the pathological conditions in the ethmoidal region to asthma. Dr. Woollen contributes a paper on Taking Cold, in which he attributes the causation to vasomotor influences neglecting the bacteriological factor, as some of the speakers who discussed his poper pointed out. Some new instruments are described which concern laryngologists particularly.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL AND SURGICAL APPLIANCES.

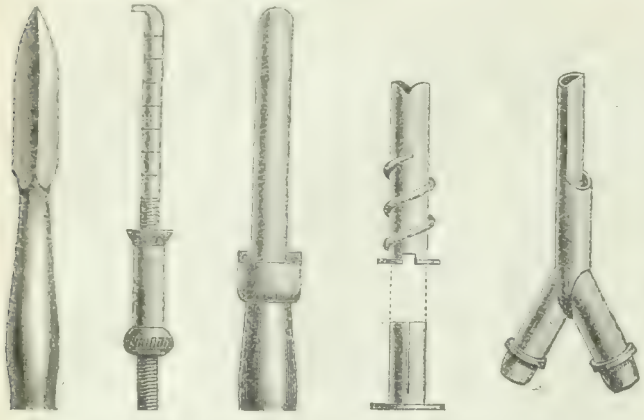
Instruments for the Treatment of Antral Empyema.—Mr. W. R. ACKLAND, M.R.C.S., L.D.S., Dental Surgeon to the Bristol Royal Infirmary, desires to draw attention to the following instruments which he has devised for the treatment of antral empyema. He writes: I generally choose to perforate through the alveolar ridge, and these instruments are intended for use in this method.

1. A borer, of special size and shape, which cuts the bone of the alveolus very readily when rotated forwards (that is, from left to right, like a screw), by reason of the fluting or grooving of its edges.

2. A measurer, used to ascertain the depth of bone tra-

versed before the antral floor is reached, so that if necessary the tube (No. 4) may be cut shorter.

3. The tube carrier, a modified screwdriver on which the antral tube (No. 4) fits, and by which the tube is screwed into the hole made by the borer (No. 1).



1. 2. 3. 4. 5.

4. The antral tube, silver gilt, which is intended to be screwed into the hole made by the borer. It has a screw thread in its outside, and a slot on its flanged end like a screw. In fact, it is a hollow screw, which is carried by the carrier like a cannula on a trocar. This tube is intended to be worn by the patient during the whole time of treatment, and is provided with a "split-pin" stopper to keep the food out. The length as supplied is found to be satisfactory for most cases, but in young subjects it may be necessary (after measuring the depth of bone with No. 2) to cut it shorter with a fine fret saw.

5. The two-way nozzle, which exactly fits the tube, and, having a longitudinal septum in it, provides an inlet and exit for the fluids used in washing the antrum. The inlet branch has a modified Higginson syringe attached to it, and the exit branch a bit of rubber tubing which conveys the fluid to a receiver.

My colleague, Dr. Watson Williams, and I have done several cases with this apparatus, and find it very successful. I have found it possible to extract a diseased tooth or root, bore the hole, and insert the tube under one dose of gas. The makers are Messrs. Ash and Sons, Broad Street, Golden Square, W.

LITERARY NOTES.

We understand that Messrs. Cassell and Co. have a second edition of Dr. Manson's *Manual of Tropical Diseases* almost ready for publication.

Messrs. L. Graefe and Sillem, of Hamburg, are publishing in parts a microphotographic atlas of human pathological mycology (*Mikrophotographischer Atlas zum Studium der pathologischen Mykologie des Menschen*) by Dr. Eugen Fraenkel. The first two numbers are now published and contain photographs of the lesions produced in man by the tubercle bacillus (Part 1) and by the leprosy bacillus (Part 2). There are to be two volumes, and the price of the first volume (5 parts) will be 25s.

Dr. George V. N. Dearborn, of the Physiological Laboratory, Harvard Medical School, Boston, Mass., has issued the following circular, asking for the experiences of persons under anæsthesia:

The psychophysiology of anæsthesia is a productive subject greatly in need of adequate investigation and discussion. Both pure science and practical surgery have doubtless much to gain from a deeper-going study of experiences under ether, chloroform, nitrous oxide, etc., than has as yet been made. Scientific literature has frequently contained accounts of isolated individual experiences reported most often because of their strangeness. A very large number of descriptions of the ordinary experiences is what is now desired, and to this end blanks have been prepared on which replies to certain simple questions may be written. All persons, and especially hospital surgeons, officers of medical societies, and instructors in medical schools, are respectfully requested to send to the undersigned for as many of these blanks as they care to distribute among persons who have been under an anæsthetic. These will be gratefully sent and received when filled out.

Readers of Oliver Wendell Holmes will remember his attempt to record his experiences while under the influence of an anæsthetic, or rather while recovering from its effects. He thought he had solved the riddle of the universe, but found that what he had written was of so cryptic a character that the secret remained unrevealed.

We are indebted to Dr. J. Harold Bailey of Pendleton for the following amusing extract from Vice-Admiral Sir William Kennedy's recently published book, entitled *Hurrah for the Life of a Sailor, or Fifty Years in the Royal Navy:*

In a small ship the captain knows all about his ship's company—their names, ages, and acquirements. The men look to him as a father, and follow his advice with touching simplicity, even changing their religion at his suggestion, and asking his opinion on every subject, sometimes a delicate one. One poor fellow came to ask my advice in the following interesting case: When we had been eighteen months from home some kind friend sent him word that his wife had been delivered of twins; and he said his messmates chaffed him about it. Things did seem rather mixed somehow. "Why," I exclaimed, "that's all right: your messmates are a set of fools. It's only nine months for each child." He went away perfectly satisfied, saying, "The captain says it's all right."

Stalwart opponents of vaccination that will have nothing to do with the Jennerian "rite" might perhaps be induced to try the method of safeguarding their progeny against small-pox, described in the following extract from the parish register of Vic-de-Chassenay, dated October 26th, 1778, and authenticated with the signature of the curé, M. Champagne:

Several physicians having announced that midwives ought to take the precaution of pressing between their fingers the umbilical cord before tying it, and so emptying it of the blood which but for this precaution remains between the ligature and the navel, where it becomes corrupt, and turned back into the blood vessels carries into them, they say, the variolous germ, asserting that by this means one would be for ever free from small-pox. I have advised the midwife to adopt this practice, which she has promised to do. Françoise Heliot is the first on whom the experiment will be made and I have thought it right to note this period in the registers that it may afterwards be referred to if need be.

Unfortunately there appears to be no record of the result of this interesting experiment.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1900.

NOTES.

The Disciplinary Decisions given by the Council during the present session involve some points of interest. In one case counsel for the defendant argued that the Council should not deal with an offence alleged to have been committed by a registered medical practitioner, on the ground that the act though indefensible was not an offence committed in a professional respect. In the case in question a medical man, after a brief acquaintance with a lady, had furnished to her an account of charges for professional services relating to a period antecedent to his first acquaintance with her. This he did, according to his own account, to enable the lady to obtain money from her husband with whom her relations were strained. The practitioner on short reflection, as it would appear, perceived the gravity of the indiscretion he had committed, but failed to obtain a return of the account. Counsel urged that as professional relations had not existed between the practitioner and the lady the offence was not committed by him in a professional capacity, and that therefore it did not fall within the purview of the Council as a professional tribunal. He argued, further, that as it had not been made the subject of proceedings in a court of law it did not come before the Council as a proved offence against the law, and that therefore the Council had no power to remove the name on this ground. These arguments were not accepted by the Council, which no doubt felt that none but a medical man could have committed this particular offence and that the professional position was therefore essential to the commission of the Act.—The Queensland Medical Board had made complaint against a practitioner registered on the *Medical Register* of the United Kingdom on the ground that he had been associated with an Anglo-Australian Medical Institute which issued advertisements and followed a system of advertising of such a character that it was discreditable in a

British registered medical practitioner to be connected with them. It seems strange at first sight that the Queensland Medical Board did not itself deal with the case, but on reference to the terms of the Colonial Act it will be found that it is required to place upon the Queensland *Register* any person who may apply by virtue of being duly registered in the United Kingdom. So long as a name remains upon the home *Register* the Queensland Board would appear, therefore, to have no power to remove it from the Colonial *Register*. In this case the Council directed the Registrar to erase the name from the *Medical Register* of the United Kingdom.—A charge of covering was preferred against a practitioner in the county of Durham on the complaint of the Gateshead Medical Association supported by the Medical Defence Union. It appeared that the defendant in this case (Mr. Alexander) had accepted a colliery appointment at the old rate of pay, but had subsequently received the higher rate, which the bulk of the profession in the county of Durham had demanded. Mr. Alexander had at first employed a qualified assistant, who, however, left him, it being alleged by Mr. Alexander, but denied by the complainants, that he was improperly influenced to do so. Mr. Alexander stated that he found it impossible to procure a qualified assistant, gave notice to the miners that he would employ an unqualified assistant, and engaged a Mr. Tait; it is admitted that Mr. Tait lived at a distance of two miles from his principal, but it was stated that there was a telephone between the two houses; it was also admitted that Mr. Tait made what were termed visits of policy and supererogation, and attended cases of trifling illness and easy midwifery. Mr. Alexander further stated that he believed himself to be entitled to have a pupil, even though this pupil was not registered as a medical student, and added that he had sent Mr. Tait to the Glasgow Maternity Hospital, though not as a registered medical student, and that he had been received there, and had seen twenty cases of midwifery. Sir Hector Cameron, who is a governor of the hospital in question, stated that it was contrary to the stringent rules of the institution to admit any but *bonâ fide* medical students, and Mr. Alexander appears to have suggested as an explanation that Mr. Tait was admitted as a pupil of his, but the point was not entirely cleared up. The Council found that the charge of covering was proved, but deferred further consideration of the case until the November session, the President warning Mr. Alexander that he would then be called upon to produce satisfactory evidence that he had ceased to employ an unqualified assistant.

Dental Advertisement has for the first time been brought before the Council in a concrete form. It will be remembered that in 1894 an official warning was given by the Council to dentists that advertisement might easily amount to disgraceful conduct in a professional sense. Hitherto no case has been brought before the Council in which it was asked to decide whether the offence had been committed. The Council has now held that the advertisements in the particular case submitted were of so objectionable a nature as to amount to disgraceful conduct in a professional respect, and ordered the removal of the name from the *Dentists' Register*. It came out incidentally during the inquiry that the defendant had made use of an American degree which he had obtained without examination, and without even having visited the country. The decision in this case may be expected to be productive of much good by showing that the Council is in earnest in its wish to give effect to its warning. In another dental case the facts were somewhat different. The defendant had published advertisements in which he made use of the letters R.D.S.E., followed by the words, in brackets, "Registered by the Royal College of Surgeons," thereby causing it to be inferred that he was connected with one of the Royal Colleges, which was not the case. His name was ordered to be removed from the *Dentists' Register*. In view of the defence set up in some cases that the person accused was not fully aware of the pronouncement of the Council on the subject, it was decided to issue to all dentists on the *Register* the resolution passed by the Council in 1894. Some objection was taken to this on the ground that the terms of the resolution might be so interpreted as to make it appear that the Council did not disapprove of advertisement unless it overstepped certain bounds. It was decided, however, that it would be undesirable to vary the terms of a resolution on which the Council had so recently taken action for the first time, though there appeared to be general agreement that its wording was not quite happy.

The Prevention of Personation Committee's Report contained a series of recommendations as to regulations for the guidance of the registrars with the object of rendering personation more difficult and more easy of detection than is now the case. At present each registrar interprets the registration clauses of the Medical Act according to his own reading, and follows more or less the particular routine which has become established in the branch office under his supervision. For instance, in Scotland the registrar has long been in the habit of requiring applications for registration to be filled up in the handwriting of the applicant, but this plan is not followed by the registrar of the English Branch Council. To many members of the Council the suggestion that all applicants for registration should fill in the forms themselves and sign them seemed to present many practical difficulties. Finally, after a long discussion, in which legal questions as to the power of the Council to frame regulations for registration under Sections XIV and XV of the Medical Act, 1858, were raised, the report was once again referred back to the Committee with instructions to take legal advice.

The Raising of the Standard of Preliminary Education of persons seeking registration as medical students was a subject of a further report by the Education Committee which led to a debate, in the course of which Dr. McVail drew particular attention to a paragraph in the joint report of the three educational experts called in to advise the Committee. They expressed the opinion that examinations in which a preponderating part of each paper, and in consequence the marks for that paper, were given for a knowledge of prescribed books were, *pro tanto*, comparatively worthless as tests of a good preliminary education. Dr. MacAlister, speaking from the private information at the disposal of the Committee, said that the objection would only apply to two, but Dr. McVail urged that the opportunity should be taken to reduced the long list of preliminary examinations accepted by the Council by erasing those which came under this condemnation. The Committee had received very little encouragement from the experts to make any drastic alterations, and the substitution of senior in place of the junior examinations at present accepted, at one time strongly urged by many of the Council, was abandoned in consequence of the reports of the experts. But two points have been gained, one that after next year no person shall be registered as a medical or dental student who has not attained the age of 16 years, and the other that the Education Committee has been authorised to carry out as far as possible the recommendations of their report, which they can do by insisting on improvements in the character and stringency of those junior examinations directly under the influence of the Council, and in the case of other examinations by endeavouring to provide that candidates shall obtain a higher standard than that of a simple pass, or by arranging that such modifications in the examination shall be made as may tend to this end. It is believed that in this way a substantial advance on present requirements can be made.

The Verification of the Claims of Candidates for Exemption from examination in particular subjects on the ground that they have already passed in these subjects before other licensing bodies arose in connection with the report of the Examination Committee on the examinations of the Apothecaries' Hall, Dublin. The Committee had reported that many of the candidates for the examinations of this body had passed parts of their previous examinations before other Boards, and Dr. Atthill contended that in this way the statement of a candidate that he had passed in physiology might be accepted, whereas, as a matter of fact, he might have passed only a preliminary examination in that subject. It was, however, pointed out that this liability to error was not peculiar to the Apothecaries' Hall of Dublin, and on the motion of the Chairman of the Examination Committee it was resolved to instruct the Registrar to inquire of the various examining bodies what evidence they required on this head.

REPORT OF PROCEEDINGS.

Thursday, May 24th.

Sir WILLIAM TURNER, President, in the Chair.

RESTORATION OF NAME.

AT the commencement of business the Council went into *camera*.

On the readmission of strangers, the PRESIDENT intimated that the Council had resolved to restore to the *Medical Register* the name of George Ingersoll Curragh, who possessed the Licence of the Society of Apothecaries of London.

DISCIPLINARY CASES.

The Council then proceeded with the consideration, adjourned from December 1st, 1899, of the charges proved against William Matthews Joyce, registered as of 25, Cattell Road, Small Heath, Birmingham, with the triple qualification of Scotland, 1889, who had been summoned to appear before the Council on the following charges:

(*a*) That he was, on July 10th, 1899, at the Warwick Borough Sessions, convicted of being drunk and disorderly.

(*b*) That he was, on November 13th, 1899, at the Warwick Court House, convicted of misdemeanour, namely, of assaulting and beating Ellen Simpson.

The PRESIDENT asked Mr. Joyce if he had sent in any certificate, and if he had anything to say. Mr. JOYCE replied that he had not, and that he stood there exactly as he stood before. The PRESIDENT inquired from Mr. Joyce as to his conduct since he was last before the Council. Had it been what it should be—altogether correct? Mr. JOYCE submitted with respect that the onus of proof rested on the Council. He adhered to what he said before: he had done nothing to bring him before the Council. The PRESIDENT said he must repeat the question: Had his conduct since he was last there been the conduct which he as a member of the profession ought to exhibit? Mr. JOYCE replied in the affirmative. It had been as his father recommended, and he was a medical man. Strangers were directed to withdraw. On their readmission, the PRESIDENT, addressing Mr. Joyce, stated that the Council had deliberated on his case, and had directed the Registrar to erase his name from the *Medical Register*. Mr. JOYCE inquired if there was any appeal. The PRESIDENT replied that he had told Mr. Joyce the decision of the Council.

The Council then dealt with the case of James Alexander Graydon, of 21, South Grove, Bow Road, E., registered in Ireland December 7th, 1872, as Lic. Fac. Phys. Surg. Glasgow, 1870, who has been summoned to appear before the Council in consequence of his having been convicted and fined for unlawfully assaulting his wife. A letter dated May 14th, 1900, was read from Mr. Graydon, in which he stated that he was intoxicated when he struck his wife, that he had become a total abstainer, and appealed to the consideration of the Council. A letter was also read from Mrs. Graydon, in which she asked the Council to deal leniently. In reply to the PRESIDENT, Mr. GRAYDON said that he was extremely sorry for what he had done, he had taken the pledge; he was not at present in practice. The Council having considered the matter *in camerâ*, on the readmission of strangers the President announced the decision of Council as follows:

That the further consideration of the case of James Alexander Graydon be adjourned till the November session of the Council.

The PRESIDENT admonished Mr. Graydon as to his conduct during the interval of adjournment, and also pointed out the nature of the evidence of good conduct which would have to be produced by him, and which should include certificates from responsible persons, at least one of whom should be a medical practitioner.

SOLICITOR'S ACCOUNTS.

The PRESIDENT mentioned that the Registrar had received a communication from Mr. Horsley, asking him to produce for his (Mr. Horsley's) inspection, the Solicitor's account for 1899. It was for the Council to say whether, in accordance with their Standing Orders, they should grant special leave to Mr. Horsley to inspect the accounts.

Leave was given.

MEDICAL DISCIPLINARY CASE.

The next matter the Council dealt with was the consideration of the case of Robert Herbert Foot, of 6, Elliot Road, North Brixton, S.W., registered in Ireland December 23rd, 1872, as Lic., Lic. Midwif., 1872, R. Coll. Surg. Irel.; M.B. 1872, M.D. 1874, Univ. Dubl.; who has been summoned to appear before the Council on conviction for misdemeanour.

Mr. BANKES, who appeared as counsel for Dr. Foot, said that according to his instructions Dr. Foot had been convicted under a wrong impression, and owing to the unfortunate condition in which he was, being apparently unnerved by the charge made against him, and the unfortunate determination on his part that he would not allow any communication to be made with his friends, so that he could be provided with legal advice. After hearing the various witnesses strangers were directed to withdraw. On their readmission, the PRESIDENT addressing Dr. Foot, said that the Council, having very carefully considered all the circumstances connected with his case, did not direct the Registrar to erase his name from the *Register*.

COMPLAINT PREFERRED BY QUEENSLAND MEDICAL BOARD.

The Council proceeded to the consideration of the case of Armitage Forbes, of 28, Charlotte Street, Ashfield, Sydney, New South Wales, registered in Ireland, February 12th, 1879, as Lic.R.Coll.Surg.Irel., 1878, Lic.R.Coll.Phys.Edin., 1879, on the complaint of the Queensland Medical Board, on the following charges formulated by the Council's solicitor:

1. That he was associated and connected with an institution calling itself the Anglo-Australian Medical Institute as one of its directing staff, which institute publicly advertises systems of medical treatment and remedies for particular diseases, and seeks to attract patients by the advertisement of such treatment and remedies, and that he was a party to the publication of the advertisements of the said institute and its treatment and remedies, and of his name, address, and qualifications as a British registered medical practitioner in connection therewith.
2. That the advertisements and the system of advertising to which he was a party were in themselves of such a character that it was discreditable in a British registered medical practitioner to be connected with them.
3. The advertisements above referred to were contained in pamphlets, cards, and leaflets purporting to be issued by the said Anglo-Australian Medical Institute, Queen and Edward Streets, Brisbane, and in issues of newspapers circulating in the Colony of Queensland named *The Queenslander*, *The Brisbane Courier*, and in the issues of other newspapers and in other publications in the said Colony.

Mr. Forbes did not appear.

Mr. FARRER read a letter from Mr. Forbes of February 14th, 1899, in which he stated that he held the position of physician-in-chief to the institute referred to; that the medical department was under his control, and that there was no quackery practised. In another letter he admitted that his name was attached to various pamphlets issued by the institute, and that that was wrong. He further stated that the institute would have ceased to exist before the arrival of his letter, and he trusted that under the circumstances the Council would not have recourse to such a serious measure as striking his name off the *Register*. He had informed the Queensland Medical Board that the institute had been closed, and all pamphlets bearing his name had been withdrawn from circulation and destroyed.

Mr. FARRER, in answer to the CHAIRMAN, said that no communication had been received from the Queensland Medical Board confirming this last statement.

The PRESIDENT thought that under those circumstances the better plan would be to send a copy of Mr. Forbes's last letter to the Queensland Medical Board asking them to inform the Council whether the statements in it were accurate, and for the Council to adjourn the case till the November session.

Mr. BRYANT was pleased to hear the President's proposal. The General Medical Council in Queensland were doing very excellent work in the Colony with the view of stopping these advertisements.

Mr. VICTOR HORSLEY thought the Council should adopt the President's suggestion.

Dr. MCVAIL was of opinion that the Council had quite sufficient materials before it to deal with the case.

The Council then went into *camera*. On strangers being readmitted, the PRESIDENT said: I have now to report that the Council has directed the Registrar to erase from the *Register* the name of Armitage Forbes.

DENTAL ADVERTISING.

The Council then proceeded to consider the case of Arthur Oglesby, in regard to whom the Dental Committee reported that on February 27th, 1900, the following parties attended

before it, and were duly heard, namely: Hugh Woods, M.D., B.A., the Hon. General Secretary of the London and Counties Medical Protection Society, Limited, the complainants, and the said Arthur Oglesby. The Committee find that the following facts were established by the evidence:

(1) That Arthur Oglesby was registered in the *Dentists' Register* on July 10th, 1891, as having been in practice before July 22nd, 1878, and his address in the *Dentists' Register* is 21, Cheapside, Barnsley.

(2) That Arthur Oglesby has systematically sought to attract professional practice by the issue of public advertisements of his name, address, appliances, and professional qualifications.

(3) That in particular he advertises himself as D.D.S. University Ill., which alleged diploma he admits that he obtained without visiting America or being subjected to any examination.

(4) That the public advertisements issued by Arthur Oglesby are highly objectionable.

(5) That Arthur Oglesby states that since the month of September, 1899, he has discontinued the issue of the advertisements which were brought before the Committee, but he continues to advertise himself by the issue of an objectionable card in the local newspapers.

Dr. Woods appeared as having originally laid the complaint. Mr. Oglesby appeared in person.

The PRESIDENT said that the Dental Committee had found the facts, and the Council must take the report as conclusive on the facts. The question was how would the Council deal with it. According to their Standing Orders the Council might determine whether or not the parties to the inquiry should be heard by the Council upon the report, or upon any question arising upon it; or the Council might, if it thought fit, forthwith proceed to deal with the report. He asked the Council whether they would adopt the first of these two courses.

Fifteen voted for and 2 against.

The PRESIDENT thereupon called on Mr. Oglesby.

Mr. OGLESBY said that before last September he had not the slightest idea that he was doing anything wrong in advertising as he did. The advertisements were simply of matters connected with dentistry. He had never received any caution or remonstrance from anyone before September, and he thought this was neither generous of his opponent nor of the General Medical Council. When he did get the notice that these advertisements were objectionable he ceased to issue them and simply used a card, and if that could be described as objectionable, then almost every advertisement in the land was. As regards the D.D.S. University Ill. diplome, he obtained that the same as nine people out of ten in this country obtained it—upon the proof of his skill and knowledge. It was an honorary degree.

The PRESIDENT inquired whether Mr. Oglesby did not receive the Council's notice.

Mr. OGLESBY said he did not receive a caution.

The PRESIDENT required an answer to his question. Did Mr. Oglesby receive a notice from the Council stating that the issue of advertisements by dentists was objectionable?

Mr. OGLESBY replied that he did, and that as soon as he received it he discontinued the practice.

In answer to Mr. TEALE, Mr. OGLESBY said he still had the words "Oglesby's Dental Surgery" painted on his house. Replying to members of the Council, he said he paid for the degree of D.D.S. Every degree that he knew of was paid for.

Dr. WOODS, in addressing the Council, said it was quite time that dentists were made absolutely certain whether or not advertising was infamous conduct. It was notorious that advertising by dentists had reached almost the lowest depths of advertising. He hoped the Council would not allow any consideration to interfere with a distinct pronouncement which should go forth definitely to the dental profession of their fixed determination, and that advertising was infamous conduct in a professional respect.

Strangers withdrew. On their readmission

The PRESIDENT, addressing Mr. Oglesby, said: "The Council have given very great consideration to your case, and they have come to the conclusion that your name is to be removed from the *Dentists' Register*."

Friday, May 25th.

Sir WILLIAM TURNER, President, in the Chair.

The minutes of the previous day's proceedings were confirmed.

DENTAL DISCIPLINARY CASE.

The Council then proceeded with the consideration of the report by the Dental Committee on the case of Mr. Owen McBreen, of 59, Mesnes Street, Wigan, a dentist, registered on November 28th, 1878. The complaint against Mr. Owen McBreen had been referred to the Dental Committee to ascertain the facts, and they reported as follows:

That Owen McBreen being a dentist registered in the *Dentists' Register* as in practice before July 22nd, 1878, and possessing no other registrable qualification, and not being a Licentiate or Member of the Royal College of Surgeons of England, Ireland, or Edinburgh, or any of such Colleges, habitually published advertisements in which he described himself as R.D.S.E. (registered by Royal College of Surgeons), thereby causing it to be inferred that he is connected with one of the Royal Colleges.

Mr. McBreen apologised for the offence which he has committed, and promised not to repeat it.

Mr. OWEN MCBREEN, in reply to the PRESIDENT, who asked whether he had anything further to say, said that the Council would remember that on the last occasion he laid the blame entirely on the printer. Since then he had received a letter from the printer in which the printer said that he probably had made the error of describing Mr. McBreen as R.D.S.E. The error had now been rectified, and he was very sorry for having made the mistake.—In reply to Dr. GLOVER, Mr. MCBREEN said that the letters "R.D.S.E." meant registered dental surgeon of England.—In reply to Dr. MACALISTER, he said he did not think he was registered by the Royal College of Surgeons.—In reply to the PRESIDENT, he said that he had carried out the promise which he had made to the Council not to repeat the offence.

Strangers were directed to withdraw. On their readmission the PRESIDENT, addressing Mr. McBreen, said: "After a very careful consideration, the Council has found the facts stated in the report of the Dental Committee to have been proved against you, and that you are guilty of conduct which is infamous or disgraceful in a professional respect, and I have further to state to you that, in consequence of this, the Council has directed the Registrar to erase your name from the *Dentists' Register*.

MEDICAL DISCIPLINARY CASE.

The Council then proceeded to the consideration of the case of Charles Louis Lumley, of 1, Jermyn Street, St. James's, S.W., registered in England June 7th, 1882, as Lic., Lic. Midwif., 1881, R. Coll. Phys. Irel., on the following charge, as formulated by the Council's Solicitor:

That he was guilty of practising a fraud upon a Mr. Balmer by sending in to him and demanding payment of an account of charges for medical attendance and services rendered to Mr. Balmer's wife, when, as a fact, he had not attended, or seen, or known Mr. Balmer's wife during the period, or any part of the period, included in the account; which account was sent in by him with the intention of deceiving Mr. Balmer into the belief that he had professionally attended upon his (Balmer's) wife, and in order to induce him to pay the amount of his pretended charges.

Mr. Muir Mackenzie appeared for the General Medical Council; Mr. Roskill appeared for Mr. Lumley.

It appeared that this case was the outcome of some proceedings in the Divorce Court. The transcript of the shorthand notes of Mr. Lumley's evidence given in the Divorce Court was read. The evidence showed that Mr. Lumley had been introduced to Mrs. Balmer and her sister. He had known them only a very short time, when Mrs. Balmer told him that she owed some money to doctors for their attendance upon her. He further stated that Mrs. Balmer had thereupon requested him to make out an account in his name to Mr. Balmer, which she would forward to her husband. Mr. Lumley then made out a bill to Mr. Balmer for £19 10s., and left this with Mrs. Balmer. The next morning he realised the serious nature of the act that he had committed, and immediately went to Mrs. Balmer, and asked her to return to him the bill. She said that she could not find it, and after several applications by Mr. Lumley to her she eventually said that she had destroyed it, and had not sent it to her husband. In the course of the divorce proceedings, when Mr. Lumley was in the witness-box, this document was put to him in cross-examination. He then admitted that he had never attended Mrs. Balmer professionally.

Mr. ROSKILL contended that this act of Mr. Lumley could not be regarded as "infamous conduct in a professional respect." He further contended that "infamous conduct" must be something either between a doctor and his patient, or between a doctor and his professional brethren, and that this case did not come within either of these categories. A report of the proceedings in the Divorce Court appeared in

the *Times* in July, 1897, and thereupon the Royal College of Physicians of Ireland, of which body Mr. Lumley was a Licentiate, wrote to him and asked for an explanation. He tendered the same and they censured him, and said that his conduct had been indiscreet. Since then Mr. Lumley had heard nothing more about the matter until the present proceedings were started.

Strangers were directed to withdraw, and on their readmission the PRESIDENT, addressing Mr. Lumley, said: The Council has given a very full consideration and inquiry to your case, and the resolution they have come to is that they direct the Registrar to erase your name from the *Register*.

Mr. LUMLEY asked if there would be any chance of his name being restored. The decision of the Council meant depriving him of his livelihood.

The PRESIDENT replied that that was a matter on which he could give no opinion then, but if Mr. Lumley would apply to the Registrar he would show him the Standing Orders in regard to the matter.

CHARGE OF COVERING.

The Council then proceeded to the consideration of the case of Andrew Alexander, of Blaydon-on-Tyne, registered in Scotland September 5th, 1885, as Lic. R. Coll. Phys. Edin. 1885; Lic. R. Coll. Surg. Edin. 1885; Lic. Fac. Surg. Glasg. 1885, on the complaint of the Gateshead Medical Association, on the following charge, as formulated by the Council's solicitor:

That, being a registered medical practitioner, he covered an unqualified person named Tait, whom he employed or purported to employ as an unqualified assistant, and whom he permitted and enabled to attend on and administer medical relief to patients, and carry on medical practice as if he were a duly qualified practitioner.

Dr. Bateman appeared in support of the charge on behalf of the Medical Defence Union and the Gateshead Medical Association. Mr. Horridge appeared for Mr. Alexander.

It appeared from the statement of Dr. BATEMAN that Mr. Alexander had had in his employment a duly qualified assistant. This assistant left him, and thereupon he proceeded to advertise for a qualified assistant, but did not succeed in obtaining one. He was then introduced to Mr. Tait, and entered into an arrangement by which Mr. Tait became his pupil and assisted him in his practice.

Witnesses were called in support of the charge, among whom was Mr. WILLIAM HENRY DAVIS, a medical practitioner of Low Fell, Durham. He said he had been in practice at Gateshead for many years, and that there was a considerable amount of feeling with the miners last year with regard to the question of fees paid to medical men. A large body of the medical men in the county desired that the fees should be raised, and he was one of these.

In cross-examination by Mr. HORRIDGE, the witness said that Mr. Alexander had interfered very much with his practice. This was on account of Mr. Alexander being content to charge the old fees to the miners, whilst he himself desired higher fees. It was quite true that he had said that Mr. Alexander was a blackleg.

In answer to Sir CHRISTOPHER NIXON, Mr. ALEXANDER said that a blackleg was a man who undersold others for the benefit of himself. It was a very common term in the North in the case of employees at large factories and mines.

Mr. JOSEPH CHARLES DOVER, a commercial traveller of Gateshead, stated that he called at the surgery of Mr. Alexander, and asked for the doctor. He saw Mr. Tait, who stated, in reply to his question, that he was not the doctor but the assistant. He complained to Mr. Tait of a pain in his back. Mr. Tait applied the stethoscope, and made up a mixture, for which he (Mr. Dover) paid half-a-crown. He asked for a certificate, which Mr. Tait supplied to him, and this was signed "Andrew Alexander." He went with the intention of finding out whether Mr. Tait was "practising" or not.

Mr. HORRIDGE, in addressing the Council, said that Mr. Alexander thought he was acting within the instructions laid down by the Council in engaging Mr. Tait as a pupil. Mr. Alexander had seen and produced an extract from a medical journal which led him to believe this. His client had endeavoured to engage the services of a qualified medical man by advertising in several different papers, but these difficulties, which were great before September last, had been intensified since then on account of the number of gentlemen in the medical profession who had gone to the war. His client wrote and stated the facts to the Medical Defence Union and also to the Registrar of the General Medical Council, who replied that he was not allowed to advise him. There had been no concealment in the matter whatever. His client was exceedingly popular among the working people in the district, and perhaps the best evidence of that was the fact that not one of them could be found to come forward and make a charge against him.

Mr. ALEXANDER was then examined, and, in reply to Mr. Horridge, said that he thought he was entitled to employ a pupil so long as he personally supervised him. The duties of Mr. Tait were dispensing and easy midwifery. He also made what Mr. Alexander called visits of policy and supererogation, and he also allowed him to attend trifling illnesses. Mr. Tait's duties were carried on in the surgery, which was two miles from Mr. Alexander's house. There was, however, a telephone, and, in the event of anything serious arising, Mr. Tait would communicate with him. Mr. Tait had attended women in labour with him. What knowledge Mr. Tait had had been obtained from the Maternity Hospital, Glasgow, where he saw 20 cases, and he also saw a number of cases with him.

In answer to Sir HECTOR CAMERON, Mr. ALEXANDER said that when Mr. Tait attended the Maternity Hospital he was not represented as a registered medical student. He believed that Mr. Tait represented himself as a pupil of his. He sent Mr. Tait to the Maternity Hospital. He was introduced to Mr. Tait by Dr. Maxwell Trotter, of Newcastle. This gentleman had on several occasions acted as his *locum tenens*, and, having heard of the difficulties he was in with regard to obtaining a qualified assistant, he suggested that Mr. Tait might be employed. Mr. Alexander said that he engaged Mr. Tait thinking he could legally do so. Mr. Tait was the brother-in-law of Dr. Trotter, and had done some work under his supervision. Dr. Trotter told him that Mr. Tait had dispensed for him. He did not know what Mr. Tait had been doing besides this. He acquiesced in Mr. Tait, who was 22 years of age, and who was without any medical knowledge or training, going to the Maternity Hospital in order that he might qualify himself for his work.

This was all the evidence called on behalf of Mr. Alexander.

The further consideration of the case was adjourned.

Saturday, May 26th.

Sir WILLIAM TURNER, President, in the Chair.

THE minutes of the previous day's proceedings were read, and, as amended, confirmed.

The Council resumed *in camerâ* consideration of the case of Andrew Alexander.

Strangers were directed to withdraw; on readmission,

The PRESIDENT announced that, after careful consideration, the Council had come to the conclusion that the charge had been proved to their satisfaction, but that the further consideration of the case be adjourned until the November session of the Council. Mr. Alexander would therefore be summoned to appear before the Council next session, when he would have to produce satisfactory evidence that he had ceased to employ an unqualified assistant, and that his conduct and character during the interval had been to the entire satisfaction of the Council.

SITTING IN CAMERÂ.

The Council then went into *camera* to receive reports from the Penal Cases Committee and the Special Finance Committee.

Strangers were directed to withdraw.

At 4 o'clock the Council adjourned without any announcement being made to the press.

Monday, May 28th.

Sir WILLIAM TURNER, President, in the Chair.

THE minutes of Saturday's proceedings were confirmed.

PREVENTION OF PERSONATION.

The adjourned consideration in Committee of the whole Council of the report by the Committee on the Prevention of Personation was resumed by

Mr. VICTOR HORSLEY, who moved that Recommendation (1) of the report of this Committee be adopted,

That in all cases where application is made for registration on the *Students' Register* or *Medical* or *Dental Registers* under exceptional circumstances, the facts of the case shall be furnished in the form of a statutory declaration.

The Committee thought that where an individual was seeking registration under exceptional circumstances his case ought to be set forth in the form of a statutory declaration.

Dr. BRUCE seconded.

Dr. MCVAIL inquired what class of cases Mr. Horsley meant to deal with by statutory declaration.

Mr. HORSLEY said the Committee had before them the case of persons who wanted to antedate their registration, and persons who under certain special circumstances wished to obtain registration on preliminary examination. When a long interval had elapsed between an individual qualifying and seeking registration, the Committee considered that that was an exceptional circumstance.

In reply to the PRESIDENT, Mr. VICTOR HORSLEY said that he referred to a qualified person and not a student.

Sir DYCE DUCKWORTH pointed out that the proposal included students. Were they to require a statutory declaration on behalf of every student, because they applied by hundreds every year?

The PRESIDENT expressed the opinion that the words did include students.

Dr. REID said it seemed to him a very cumbrous arrangement.

Mr. TOMES said that the Committee had in mind cases which came before the Registration Committee which the Registrar could not register as a matter of ordinary office routine. The object was to pin applicants down to a statutory declaration, so that if their statements were false they would be open to a charge of perjury. These cases were not very numerous.

The PRESIDENT suggested that the words "*Students' Register*" should be struck out of the recommendation. He quite agreed that, as regards the admission of practitioners, if there had been a considerable interval the re-registration should be surrounded with proper safeguards; but he could not see why the same form should be applied to the registration of students. The class of students who mostly applied to the Registration Committee were those who came from abroad to study their profession, and had passed their preliminary examinations out of this country. Was every student coming from abroad to be put in the position of having to swear to his certificates? Because it was to be borne in mind that each student applying under such circumstances had to go to the Students' Registration Committee. That was the sort of filter through which certificates had to pass. The Committee would inquire and satisfy itself that the certificates presented were *bonâ-fide* certificates. It seemed to him that it might give a student who came from abroad a most painful impression at his start in life if he had to go before a Commissioner, and take an oath that his certificates were true. He would be very glad if Mr. Horsley could see his way to leave out the words "*Students' Register.*"

Mr. VICTOR HORSLEY said he would do so if the Council wished it, but it must be understood that the Committee, in making that recommendation, wished to strengthen the hands of the Students' Registration Committee.

Sir DYCE DUCKWORTH could assure the Council that the work of this particular Committee was very carefully done, and he moved that the words "*Students' Register* or" be left out.

Dr. ATTHILL thought there was much more danger of personation at the examination than there was upon these certificates.

Dr. REID seconded Sir Dyce Duckworth's motion.

It was then put by the PRESIDENT that the words "*Students' Register* or" should be left out of Recommendation No. 1, and 16 voted in favour of and 2 against.

The PRESIDENT declared the amendment carried. Thereupon the clause in its altered form was agreed to.

Mr. VICTOR HORSLEY said the second recommendation of the Committee was:

With the view to identification of applicants for registration, all forms of application shall be filled up in the handwriting of the applicant, and in all cases for restoration to the *Registers*, the applicant shall furnish, in addition, a statutory declaration of his case, as well as a certificate of identity.

The only alteration suggested from the present condition of things was that every applicant should be compelled to fill up the application form in his own handwriting, and he thought that was a convenient moment to refer to the document which had been issued by the three Registrars on the subject.

The PRESIDENT asked how far the change that had been made in Recommendation 1 by the striking out of the words "*Students' Register*" affected No. 2. It seemed to him that No. 2 would not apply to "*Students' Register*," but only to "*Medical* or *Dental Registers.*"

Dr. MCVAIL thought the difficulty might be overcome by inserting the words "*Medical and Dental*" before the word "*Registers.*"

The PRESIDENT considered it would be better if the clause were divided, and that the first clause (A) should end at the words "filled up in the handwriting of the applicant." He thought they had better deal with that portion of it first.

Mr. VICTOR HORSLEY was quite content to accept this. He would like to ask the Registrar if he still objected that the handwriting of the student was not a useful means of identification.

The REGISTRAR replied saying that he thought the comparison of handwriting was very useful as corroborative testimony, but he failed to see how it could be used as a foundation of a system of identification. The chief objection was that there were three officers and there was a great deal of cross-registration. During the year 1899 there were 43 Scotch students who took their qualifications entirely in Scotland, but who ultimately were registered in this country.

The PRESIDENT inquired where they were registered as students.

The REGISTRAR said he had no means of ascertaining that, but some of them were registered as students in Scotland and some in Ireland. In such a case as that the means would not be available of comparing the handwriting.

Mr. VICTOR HORSLEY said that at present there was no means of identification, and the Committee thought the suggestion was at any rate an improvement. The Committee could not understand why there should be any hostility on the part of the Registrar of the Council, particularly when no objection was taken on the part of the Scotch Registrar. As the Scotch Registrar had found it useful, the Committee thought it would be useful. Identification by handwriting was the principle adopted by Government offices, and that was one reason why the Committee wished it to be adopted.

The REGISTRAR denied that he had any hostility to the suggestion. He personally would heartily rejoice in receiving any scheme which rendered personation less possible than it was at present. His only objection to the scheme as proposed was that it was not workable. If a man went to the office and produced his diploma he was entitled to be registered there. If they had to get evidence of the applicant's handwriting a man might lose an appointment by the delay. There were many cases where men came at the very last moment to be registered. If he in the exercise of his discretion had a doubt in the matter, and the man was not registered on account of that doubt, he would have grave cause of action against the Council, and in a court of law the doubt which he had in his mind would not be considered sufficient justification for his having refused the man registration.

Mr. GEORGE BROWN thought the objections raised by the Registrar were hypothetical and not real. If these recommendations were passed the whole system of registration would have to be modified, and the regulations would have the effect of relieving the Registrars of much of the responsibility which they now had, and which, if retained in the future, might cause difficulty in the working of these new recommendations. He thought it should not be possible for a man to rush in and apply to be registered at a moment's notice, but that the documents should be left at the office to be examined, and then inquiries might be made. He suggested that the documents should be deposited at least a week with the Registrar. To allow students to register as such in Ireland and in Scotland, and then after qualification to demand at a moment's notice to be registered in England as medical men, was to open the door to personation and other difficulties. If an individual was registered as a student in

Scotland, and had been through a course of education there, he should be registered as a medical man in Scotland.

The President pointed out that the Council had no power to make such a rule. By Section xv of the Act (1858) a person was entitled to be registered on applying to the Registrar of the Branch Council for England, Scotland, or Ireland, so that he could apply in either country.

Mr. George Brown said that the Council had power to make regulations.

Dr. McVail could not see why an applicant for registration should not fill up the application in his own handwriting. That had nothing to do with the subsequent acts of the Registrar.

Mr. Victor Horsley was rather surprised that the Registrar should be opposed to the recommendation, inasmuch as he understood the Registrar had, by means of this very method, recently discovered an apparent case of personation by a dentist.

The President stated that the examining authorities were in the habit of sending lists to the Registrar after the examinations, which contained the names of the persons who had passed. He asked the Registrar if he simply received the list and then registered the persons named in the list, with their qualifications.

The Registrar replied that the list was given under the signature and seal of the corporation or university, showing that A, B, or C had passed the qualifying examination.

Mr. Victor Horsley observed that the list was only a means of saving a man the trouble of producing his diploma.

Sir John Tuke remarked that a man's signature at the age of 21 or 22 was naturally not what it was when he was 16 or 17, and that would raise a doubt in the mind of the Registrar as to whether he was the proper person or not.

The Registrar did not remember a single case where a man was registered on the strength of a licensing body having sent in his name and address and qualifications. Personal application had been always required in addition.

Sir John Tuke pointed out that it was a question whether the words of Section xv of the Act of 1858 were not inconsistent with the proposed recommendations.

The President thought that this was an important point which had not previously been dealt with, and raised the question whether it would be lawful for the Registrar to interpose any hindrance to the registration. He thought that was a matter upon which they should be advised.

Dr. McVail said that although he had been prepared to vote in favour of the recommendation of the Committee, yet after what Sir John Tuke had pointed out he thought it would be quite absurd to vote against an Act of Parliament. He was very sorry, because he agreed with the object of the recommendation.

Sir Christopher Nixon took the same view as Dr. McVail. An applicant for registration might have his application entertained in two forms, first, by the production of his diploma to the Registrar; and, secondly, by the different examining bodies furnishing a list.

Mr. Victor Horsley put it to the Council if there was any difference of opinion whether Section xiv was in relation to xv or not, whether it would not be better, before they went further, to take a legal view on the point, because that really governed all the rest of the recommendations of the Committee.

The President agreed that it would really be necessary in view of the doubt which had been thrown upon the matter.

Dr. Bruce seconded Mr. Victor Horsley's motion with regard to recommendation No. 2 that Subsection (a) be adopted by the Council.

Mr. George Brown proposed as an amendment, and this was seconded by Sir Christopher Nixon:

That the report of the Committee on the Prevention of Personation be referred back to the Committee for further consideration, with power to take legal opinion in regard to the legal questions raised by their report and its recommendations.

This was put as a substantive motion and carried.

Reciprocity.

The Council then proceeded with the consideration of the communications from the Privy Council in regard to the practice of medicine in Italy by foreigners.

Communications and Documents Received from the Privy Council with regard to Medical Practice by Foreigners in Italy, and the application of Part II of the Medical Act, 1889, to Italy.

Privy Council Office, London, S.W.
April 6th, 1900.

Sir,—Referring to the letter from this office of the 29th instant, I am directed by the Lord President of the Council to transmit to you, to be laid before the General Medical Council, the accompanying copy of a translation of the Draft Law, referred to in that letter, respecting the position of foreign doctors in Italy.

I am, Sir,
Your obedient servant,
J. H. Harrison.

The Registrar of the General Medical Council.

Copy. Translation.

DRAFT LAW.

Sole Article.

For the last paragraph of Article 23 of the Law on Public Health of December 22nd, 1888, No. 5849, is substituted the following:

"From the present prohibition are excluded foreign doctors and surgeons expressly called in for special cases and in the exclusive service of a particular person or family, and those who, holding the diploma of some university or school of medicine abroad, practise their profession among foreigners only; in all cases, however, with the reserve that these latter belong to States which concede the same (*equale*) treatment to Italian doctors and surgeons."

Privy Council Office, London, S.W.,
April 27th, 1900.

Sir,—I am directed by the Lord President of the Council to transmit to you the accompanying copy of a despatch from Her Majesty's Ambassador at Rome, and of its enclosure, on the subject of medical reciprocity with Italy; and I am to request that, in laying these documents before the General Medical Council, you will inform that body that Her Majesty's Government will at the proper time recommend Her Majesty to apply Part II of the Medical Act to Italy.

A copy of the draft of a proposed Order for that purpose is enclosed herewith.

I am, Sir,
Your obedient Servant,
A. W. FitzRoy.

The Registrar of the General Medical Council.

(a) Despatch from Her Majesty's Ambassador at Rome.

Rome, April 14th, 1900.

My Lord,—On the receipt of your lordship's despatch, No. 26, of the 6th instant, I communicated with the deputation which has been charged by the English medical men resident in Italy to look after their interests; and I have now the honour to enclose a copy of a letter which they have addressed to me, declaring that they consider that the privileges enjoyed by them in Italy are just and reasonable, and would therefore justify the application to Italy of Part II of the British Medical Act of 1886, so soon as these privileges have been confirmed by the Italian law now under consideration on the basis of reciprocity.

I have to request your lordship to communicate this letter to the President of the Privy Council, and to ascertain whether he would be prepared, when the occasion arises, to act upon the recommendation thus made, and admit Italian doctors in Great Britain to reciprocity. If this were done the position of British medical men in this country would be secure so far as the new Italian law is concerned.

I have, etc.,
(Signed) Currie.

The Marquis of Salisbury, K.G., etc.

(b) Statement by a Deputation of Medical Practitioners at Rome to Her Majesty's Ambassador.

Rome, April 12th, 1900.

My Lord,—When we, as a deputation representing the English medical men practising in Italy, waited upon your Excellency yesterday, you communicated to us that, in the opinion of the President of the Privy Council, the moment appears favourable for the application of Part II of the Medical Act to Italy.

As this can only be done "if, in the opinion of Her Majesty, Italy affords the registered practitioners of the United Kingdom such privileges of practising in the said country as to Her Majesty may seem just," the deputation beg to draw prominent attention to the fact that they are unanimous in affirming that, not only in their own interests and in those of the other English medical men at the present time in practice in Italy, but also in the interests of their fellow-countrymen who may in future years elect to practise in Italy, they consider that just and reasonable privileges are afforded to them by Italy under the Italian law that allows them to practise among foreigners.

The deputation would further add that they had no desire to practise among Italian subjects, and that they would consider it a great hardship, not only to themselves and to those whose interests they represent, but also to those Englishmen who may at any future time desire to practise in Italy should the English Government refuse to grant reciprocity under the only terms that the Italian law can render it acceptable to the Italians.

In granting the full measure of medical reciprocity to the Italians we suppose that it would be fully understood that the reciprocity granted should only continue in force as long as the Italian law granting us our present privileges was not revoked.

The deputation would respectfully urge on your Excellency that though they beg that immediate action should be taken with regard to the granting of reciprocity of medical practice to Italy, it would be advisable to delay the publication of the measure until the draft Bill now before the Italian Parliament has passed into law.

We remain, etc.,
(*Signed*) T. Edmonston Charles.
John J. Eyre.
G. Sandison Brock.

His Excellency Lord Currie, etc.

(c) Draft of a proposed Order in Council.

At the Court at
The day of

Present:

The Queen's Most Excellent Majesty.

WHEREAS by the Medical Act, 1886, it is provided (amongst other things) that Her Majesty may from time to time by Order in Council declare that the second part of the said Act shall be deemed, on and after a day to be named in such Order, to apply to any foreign country which, in Her Majesty's opinion, affords to the medical practitioners of the United Kingdom such privileges of practising in the said foreign country as to Her Majesty may seem just, and from and after the day named in such Order in Council such foreign country shall be deemed to be a foreign country to which the said Act applies, within the meaning of the second part thereof, and that until such Order in Council has been made in respect of any foreign country the said second part of the said Act shall not be deemed to apply to any such country.

And whereas the Kingdom of Italy affords, in Her Majesty's opinion, to the registered medical practitioners of the United Kingdom such privileges of practising in Italy as to Her Majesty seems just.

Now, therefore, Her Majesty doth hereby, by and with the advice of Her Privy Council, order, direct, and declare that, on and after the day of , in the year of our Lord one thousand nine hundred, the second part of the Medical Act, 1886, shall be deemed to apply to Italy.

The PRESIDENT said the members would recollect that in the remarks he made at the opening of the session he called attention to this very important question, and it was now for the Council to say whether it wished to express any opinion. It seemed to him that the question of the Order in Council rested entirely with the Privy Council. What the General Medical Council had to do with was what would arise at a future stage supposing an Order in Council were made. It would then be for the General Medical Council to determine how far the institutions granting degrees in Italy could be regarded by it as granting those degrees after a satisfactory examination; whether the applicants possessed the degrees, and whether they were of good character. It seemed to him that really the whole of this machinery divided itself into two distinct stages—that which the Privy Council had to do was the initial stage, and that which followed the issue of the Order in Council had to be done by the General Medical Council.

It was moved by Dr. MACALISTER, seconded by Mr. BRYANT, and agreed, that the communication and documents be received and entered on the minutes.

Mr. VICTOR HORSLEY pointed out that the Privy Council was proposing to give away all the privileges of medicine here to Italians, whilst the Italian Government was only proposing to offer the privilege of practising among foreigners in Italy. The Council should not pass the matter by without some form of representation to the Privy Council as to the iniquity of the proposal. The Council were advised by Mr. Muir Mackenzie that it was practically impossible to restrict the practice of anybody who should be registered under Part II of the Act of 1886. In other words that meant that any Italian coming to this country would be enabled to practise among all members of the community, whereas English practitioners in Italy would be restricted to foreigners only. This Council had never voted in favour of the application of Part II of the Act of 1886, and therefore in writing the letter of April 27th the Privy Council had acted under a misapprehension. He moved:

That it be respectfully represented to the Privy Council that the application of Part II of the Medical Act (1886) to Italy at present would not provide the basis of equal reciprocity of practice between the United Kingdom and Italy as suggested in the despatch of Her Majesty's Ambassador from Rome of April 14th, 1900.

Dr. MCVAIL did not think it at all advisable for the Council to interfere in the matter, as the Privy Council had not sent the documents to them for their criticism or opinion in any way. He asked the President whether he had any information that the Privy Council expected the General Medical Council to take action at this stage.

The PRESIDENT replied that he had no other information than that contained in the documents.

Sir JOHN TUKE, in seconding the motion, fully endorsed all that Mr. Victor Horsley had said. He considered it one of the most important and serious questions in connection with registration that had ever come before the Council. He wished the Council to remember that it was not a matter of to-day or to-morrow; it was a matter for all time. It was true under the Act the arrangement might be rescinded, but they all knew perfectly well that any such action on the part of our Government could never be rescinded; and the possible consequences of it would be that they would have a flood of foreign practitioners over whom they had little or no control. Italy was a poor country whereas England was rich, and as soon as Italians knew that they could come here and have full privilege of practice in this country a large influx might be expected. This was to be done in the interest of some 35 or 40 English practitioners in Italy, and he could not see why they should run the risk of injuring the general profession throughout Great Britain in order to protect these gentlemen who might easily get out of their difficulty if they chose, because he understood that in Italy it was quite easy for a man who was fully qualified in England to obtain a qualification to practise medicine.

Mr. TOMES pointed out that this question had been agitated for a considerable time but it had never gained any great hearing. Some fifteen months ago there was formed in Italy an association which was called the *Ordine dei Medici*. It took up the question very actively. This body approached Professor Baccelli, who was Minister of Public Instruction, as well as Professor of Medicine at Rome; he had previously been opposed to the proposal, or had not taken very much interest in it, but he was converted, and it was from the date of his conversion that the question assumed an active stage. The Italian Parliament had recently been dissolved. The Chamber would meet at the end of June, and possibly there would be a new Ministry. At present, therefore, it was not known what the Italian Government would do. The least it should do was to grant a complete measure of reciprocity, but, as far as he could ascertain, the Italians wanted to control and limit the practice of foreigners in their own country, while the deputation of the British practitioners in Rome had expressed themselves content with the limited privilege.

Mr. GEORGE BROWN asked if the General Medical Council was to stand by and do nothing whilst the privileges of English practitioners were being bartered away? If Part II of the Act were applied to Italy, no doubt large numbers of Italian practitioners would come here and practise, not only among Italians but among English citizens. He hoped representations would be made to the Privy Council that it was not expedient at present to give complete freedom of practice to foreign practitioners in this country; that we should only give to them that which they were willing to give to us.

Dr. PETTIGREW said that the proposed Italian Bill was framed with a view to excluding English practitioners from Italy, because it provided that nobody was to be recognised who had not been a practitioner in that country for ten years; those who had been there a shorter period were to be removed. He quite felt the force of what Sir John Tuke had said, that it was done in the interest of a small number of British practitioners, but it would be unfair to British residents if there were no British medical practitioners.

Dr. MCVAIL observed that the Council had formerly received communications from the Privy Council which amounted to asking its opinion on the question of reciprocity, to which replies were sent, whereas on the present occasion an opinion was not sought. The Privy Council, having already obtained the opinion of the General Medical Council, now announced that it had come to a decision. Was the General Medical Council now to go over the whole ground again, and endeavour to fight the Privy Council? He proceeded to quote from the minutes in support of his observation, but

Mr. VICTOR HORSLEY pointed out that the communications referred to were from the Executive Committee, and not from the General Medical Council. His point was that the Privy Council had not received any communication direct from the General Medical Council at all. Some conversation took place as to whether the communications from the Executive Committee were sent on behalf of the Council, and in conclusion

Dr. MCVAIL said that if the General Medical Council thought the Privy Council had taken a step it ought not to have taken, then they ought to petition Parliament.

Dr. MACALISTER agreed with Dr. McVail, but he thought it could be put more emphatically. The General Medical Council was in the position of offering unrequested advice to the Privy Council. It had already advised the Privy Council as soon as the facts were known, and that Council had taken

no notice of the advice. The Privy Council had got the information desired, and had acted upon it without referring to the General Medical Council again, which was as good as saying, "When you are asked for advice you can give it;" and to offer advice when it was not asked for would damage the position of the General Medical Council.

Mr. TEALE thought this was a case in which silence did not give consent; but he agreed with Dr. MacAlister that to make representations now would not strengthen but would materially weaken the position of the General Medical Council.

Sir CHRISTOPHER NIXON said that the General Medical Council was a body established by Parliament to deal with the regulations affecting not only the registration but the education of medical practitioners in this country, and he thought that a time might come when in the interest of the profession at large, and in the interest of the public, there should be an appeal to Parliament against the autocratic ordinance of the Privy Council in protection of the rights which Parliament had conceded to the General Medical Council in the matter of medical education. It was a monstrous thing that for the advantage which would accrue to some 30 or 40 medical practitioners in Italy, Italians should be given the privilege of coming to this country to exercise the profession of medicine without the Council having any control over their practice or education, or over the bodies that gave them their diplomas. In self-respect a body like the General Medical Council, in fulfilling the duties imposed upon it by Parliament, ought to go a little beyond the mandatory orders of the Privy Council, and seek some redress in order to enable it to carry out the important work which had been entrusted to it.

Dr. GLOVER did not propose to offer any opposition to Mr. Victor Horsley's motion, but he proposed as an addition thereto:

That the Council would urge Her Majesty's Government to use its influence with the Italian Government in promoting legislation on this subject so as to secure for English practitioners such full privilege of practice in Italy as would be conceded by the law of this country.

He thought the Privy Council were as anxious to secure full reciprocity in regard to this matter as the General Medical Council, and that they were willing to help in every possible way; but they had a right, in view of this legislation, to make any reasonable suggestion to the Government on the subject in order that that legislation should be complete.

Sir WILLIAM GAIRDNER was of opinion, from the wording of Part II of the Medical Act, that it conferred on the Privy Council an absolute power to overrule the decision of the General Medical Council if they thought the interests of the country at large were prejudiced. The object of the intended legislation was to give patients within certain limits the power to see any medical man they liked in this country, and they could not expect the Privy Council to be hemmed in by questions of expediency and detail as to whether Italy gave us exactly the same privilege.

Sir DYCE DUCKWORTH thought Sir William Gairdner had taken the question out of the region of trades-unionism into which it had fallen. It was not for the relief of 30 or 40 medical men in Italy, but for the relief of hundreds, if not thousands, of English men and English women who on questions of health would not consult Italian medical men. He had not much faith in the contention that the Latin race would overrun this country, as the people did not care for them. The Council had the absolute power of saying who should come here and practise, because in order to be registered the applicant must satisfy the Council as to character, education, and so on; and that, surely, was sufficient protection.

As an amendment to Mr. VICTOR HORSLEY'S motion it was moved by Dr. MCVAIL, and seconded by Dr. HERON WATSON:

That, as the Privy Council has not asked for the opinion of the General Medical Council on the draft for the proposed Order in Council by Her Majesty, the General Medical Council do not deem it expedient to offer any opinion.

Mr. VICTOR HORSLEY asked the Council not to accept the amendment, as Dr. McVail, like the Privy Council, was under a misconception in regard to this matter. Its history was incomplete. The Executive Committee had told the Privy Council that they were prepared to see Part II of the Act of 1886 applied to Italy, and therefore the Privy Council could only assume that it was the wish of the General Medical Council, whereas the General Medical Council had never decided to recommend that Part II of the Act of 1886 should be applied to Italy.

The PRESIDENT said it was a provisional intimation by the Executive Committee which was associated with the resolution that all the communications were to be referred to the next meeting of the General Medical Council.

Mr. VICTOR HORSLEY pointed out that the Council did not arrive at a final conclusion last session. This was the first time that the members had been in a position to make up their minds on this great subject, and therefore they were perfectly in order in informing the Privy Council of their views on the subject. They did not give advice, as had been suggested, and were not likely to be snubbed. He should say that the Privy Council wished to act courteously towards them and would not be offended with the General Medical Council if it represented that this proposition was a very incomplete scheme of reciprocity. By so doing the General Medical Council would not lower its dignity in the eyes of the Privy Council, and there would be no necessity for going to Parliament.

Mr. GEORGE BROWN did not know why the documents were sent to the General Medical Council if not for an opinion, and suggested that they should apply to the Privy Council as to whether they wanted their opinion on the subject or not.

Dr. MCVAIL had no objection to that course, and if Mr. Brown would move it he would support it.

Dr. GLOVER hoped the amendment would not be accepted and then Mr. Brown's would not be necessary. It would be a curious attitude for the General Medical Council to take up. He assumed that the Council's opinion was asked for by the communication of the documents, and he was sure the Privy Council would listen to that opinion.

Sir JOHN TUKE regretted that Dr. McVail should have moved his amendment as it was playing into the hands of that section of the Council who desired to carry this scheme through under any considerations. If it was carried the mouth of the Council was shut for ever. The only reason given in its favour was that it was in the interests of some hundreds of English people in Italy; but that could be easily provided for if these 30 or 40 English practitioners would take up the last qualifying examination of some Italian university. He hoped Dr. McVail would not vote in a way which in his conscience he must know was contrary to the trend of the medical opinion of this country.

Dr. McVail's amendment was then put, when 7 voted for, 15 against, 5 did not vote, and 3 were absent, and it was declared lost.

Mr. Victor Horsley's motion was then put, when 15 voted for, 10 against, 2 did not vote, and 3 were absent, and it was declared carried.

Dr. GLOVER moved and Sir CHRISTOPHER NIXON seconded the following resolution:

That the Council would urge Her Majesty's Government to use its influence with the Italian Government in promoting legislation on this subject, so as to secure for British practitioners full privileges of practice in Italy, such as would be conceded by the law of this country to Italian practitioners.

The closure of the debate was moved by Dr. PYE-SMITH, seconded by Sir DYCE DUCKWORTH, as follows:

That the Council do now proceed to vote on the motion.

The closure, on being put from the Chair, was carried, and the original motion was thereupon put and lost.

The Council then adjourned.

Tuesday, May 29th.

Sir WILLIAM TURNER, President, in the Chair.

THE minutes of the previous day's proceedings were confirmed.

SITTINGS IN CAMERÂ.

The PRESIDENT stated that he had received an important communication, and suggested that the Council should consider it *in camerâ*.

Strangers withdrew.

FINANCES OF THE IRISH BRANCH COUNCIL.

When strangers were readmitted, the PRESIDENT said he had to intimate that the following resolution had been come to by the Council:

That having regard to the duties performed by the Irish Branch Council, and to the funds at its disposal, it is necessary for the purpose of the due execution of the Medical Acts that the General Council should, as part of its expenses, contribute to the income of the Irish Branch Council the sum of £500 in aid of the expenses of the Branch Council for the year 1900.

BUSINESS OF THE COUNCIL.

In reply to Mr. TEALE, the PRESIDENT said he wished he was in a position to give a definite answer to the question when the work of the Council would come to an end. He had thought that the business would have been ended on Wednesday, but the important communication which he had made to the Council that day was quite unexpected, and was not contemplated in the framing of the Council's programme. That had taken up a considerable part of the day, but he hoped the Council might finish its labours on Thursday. Those of the Council who had to attend the Penal Cases Committee by the time they had finished their labours would have been nearly a fortnight in town. It was a serious matter to be away from what he might call their proper business for so long a period. He hoped therefore that the Council would make up its mind to complete the work on Thursday. He had some experience, and he knew that when the Council did make up its mind to complete its work by a certain time it was within its ability to do so.

MEMORANDUM ON RECIPROCITY.

Mr. BRYANT moved:

That the memorandum on reciprocity of medical practice in relation with foreign countries as revised by the Executive Committee be received and entered as an appendix to the minutes and be approved for issue as one of the Council's publications.

Sir DYCE DUCKWORTH seconded.

Mr. TOMES proposed several alterations.

The PRESIDENT suggested that it would be better that Mr. Tomes should submit to the Executive Committee the changes that he proposed.

Mr. VICTOR HORSLEY said that when the memorandum was considered at the last session of the Council it was proposed that it should be translated into French. It was found that that was a dangerous precedent and the suggestion was withdrawn by the whole Council. But when the memorandum went to the Executive Committee this proposal appeared again on the agenda paper. He ventured to think when this memorandum was issued that it should not be accompanied by any translation in French.

Dr. MCVAIL agreed.

Dr. MACALISTER reminded the Council that when the suggestion was made the President had said that he would communicate it to the Executive Committee. It was quite true that it was not put on the minutes, because the whole thing was referred to the Executive Committee. As to the desirability of having a translation in French, the original object of the memorandum was to provide in a convenient form an answer to inquiries which were frequently coming to the office from foreign countries for a statement of British law. If the French translation were not added, the document would be deprived of its value.

The PRESIDENT stated that the impression produced on his mind in connection with this matter was that there was a general feeling in the Council that the statement should be translated, though that was not embodied in a motion. When the Executive Committee met, this was one of the things he brought before them, and they agreed to its being translated. If there was any mistake, he was responsible for it, but he was not prepared to say there had been a mistake.

Dr. PAYNE hoped the translation would be retained. The statement was for the information of the public.

Mr. TEALE thought that if it was a fact that foreigners wrote to this Council for information on the subject, it was only common sense that the information should be given in a language they could understand.

The PRESIDENT then put Mr. Horsley's amendment, which had been seconded by Dr. MCVAIL, that the translation into French of the statement be omitted from the memorandum on reciprocity of medical practice.

Two members voted in favour of the amendment, which the PRESIDENT declared lost.

The PRESIDENT pointed out that the revision of the memorandum as to what the law was in other countries had been made after communication with the Foreign Office. He then put the original motion, which he declared carried.

DENTAL EDUCATION COMMITTEE.

Mr. BRYANT proposed, Sir HECTOR CAMERON seconded, and it was agreed, that the report from the Dental Education and Examination Committee be received and entered on the minutes.

Mr. BRYANT said the first matter to be dealt with was an application from the Dental Board of Victoria, asking the Council for a full recognition of its diploma entitling the holder to registration here. The documents submitted had been carefully considered by the Committee, which found that the standard did not come up to that required by the Council, and he therefore moved:

That the Council is unable to recognise the diploma of the Dental Board of Victoria as entitling its holder to registration in the *Dentists' Register* of this country.

Mr. TOMES seconded, and the motion was carried.

Mr. BRYANT said that the next matter was an application from the Royal College of Dental Surgeons of Ontario. This was considered quite to come up to the required standard. The question, however, hardly had to be decided by the Council, but by the licensing bodies. If they liked to recognise the teaching of that school, then the Committee would be perfectly ready to accept that recognition. Therefore, he proposed:

That a copy of the report on the Royal College of Dental Surgeons o Ontario, be forwarded to the Dental Licensing Bodies for their information.

Mr. TOMES seconded the resolution, which was carried.

Mr. BRYANT stated that the Committee had received a copy of the Dentists Amendment Act of Western Australia, which had been sent for the information of the Council. The Committee was pleased to say that the Act seemed quite satisfactory.

APPLICATION FOR REGISTRATION AS A COLONIAL DENTIST.

The next business was an application from Mr. Edwin Lenthall Oldfield for registration as a Colonial dentist under Sections VIII and X of the Dentists Act, 1878.

Mr. TOMES said that Mr. Oldfield applied for the registration of the diploma just considered—namely, that of the Dental Board of Victoria. The Council had now decided that the diploma of that Board was not one that they could recognise. But Mr. Oldfield's application was made before that decision had been come to, and at a time when the Council had registered two gentlemen who held that diploma. That diploma, or rather its curriculum, was then better than at the present time. Mr. Oldfield made his application, therefore, in ignorance of the likelihood of the recognition of the Victoria diploma being refused. He was afraid that they could not accede to his request on the grounds stated, because to do so would be to land the Council in a whole series of difficulties. It so happened that Mr. Oldfield was one of the examiners who examined the two gentlemen whom they had registered. Mr. Oldfield came before the Council as a gentleman who had earned the respect of the profession; he had done a very great deal for dental surgery in the Colonies. He was no party to the falling off of the curriculum for the standard which it had formerly occupied. That had taken place while he was absent, and immediately he returned he would use his best endeavours to raise it up to the standard required by the Council. On the documents before the Council and on personal impressions he considered that Mr. Oldfield was a man to whom the Council should extend special consideration. As supporting his views Mr. Tomes proceeded to quote from the Minutes of the Council, when the PRESIDENT pointed out that as they were minutes of proceedings *in camerâ* it was not desirable that they should be discussed in public.

Dr. MACALISTER appealed to Mr. Victor Horsley if that was not so.

Mr. VICTOR HORSLEY remembered the circumstances, and agreed that further discussion on the subject should be *in*

camerâ, but that a full statement should be made in public on Mr. Oldfield's application.

Strangers were directed to withdraw; on readmission,

The PRESIDENT said he had to intimate that the Registrar had been instructed to enter the name of Mr. Edwin Lenthall Oldfield in the Colonial List of the *Dentists' Register*.

MEDICAL AID ASSOCIATIONS COMMITTEE.

Dr. GLOVER moved, Dr. BRUCE seconded, and it was resolved:

That the following report of the Medical Aid Associations Committee be received, entered on the minutes, and approved.

REPORTS.

The Medical Aids Committee met on Tuesday, December 5th, and considered several communications referred to them by the Executive Committee at its meeting on November 27th on the subject of Medical Contracts, in which the question of canvassing arises. These communications were, respectively, from Messrs. Graham and Shepherd, Joint Secretaries of the County of Durham Medical Union; from L. Cooke, Esq., Hon. Sec. of the Wigan and District Medical Guild, Wigan; and from the Ashton-under-Lyne Medical Society. The Medical Aids Committee suggest that these gentlemen should be informed that in any given case where the General Medical Council is desired to take action, facts and evidence of the implication of the particular registered practitioner complained of will have to be furnished by the complainants (in a statement attested by affidavit.)

Dr. GLOVER moved, Dr. BRUCE seconded, and it was resolved, that the following additional interim report from the Medical Aids Associations Committee be received and entered on the minutes:

On Tuesday, the 22nd inst., the Medical Aid Associations Committee of the General Medical Council held a conference with four members of a Committee of the Council of the British Medical Association, on the subject of the formation of a Conjoint Board for the promotion of a better understanding between the medical profession and the friendly societies. Sir William Turner presided, and the following gentlemen represented the Committee of the Council of the British Medical Association: Dr. F. M. Pope, Leicester; Mr. C. H. W. Parkinson, Wimborne; Dr. Dawson Williams, and Mr. Andrew Clark.

After a full and free discussion of the many points of difficulty in establishing a Conciliation Board, the deputation from the British Medical Association Council expressed themselves as having got considerable enlightenment on the subject, and stated that they would report to their Council the result of this meeting. The hope was expressed that at the forthcoming meeting of the Association in August the Association will be able to report its definite conclusions on this important subject to the General Medical Council.

The Council then adjourned.

Wednesday, May 30th.

Sir WILLIAM TURNER, President, in the Chair.

THE minutes of the proceedings of the previous day were confirmed.

Mr. GEORGE BROWN moved:

That the Registrar be instructed to send a copy of the resolution of the Council *re* medical aid associations of June 6th, 1899 (Minutes, vol. xxxvi. p. 64) to every registered practitioner residing in the United Kingdom.

He said that the resolution in question expressed the Council's strong disapproval of medical practitioners associating themselves with medical aid associations which systematically practised canvassing and advertising for the purpose of procuring patients. When practitioners had appeared before the Council to answer charges, it was often said on their behalf that they had not seen the particular resolution. Therefore, if this was not to be simply a pious opinion, he thought the resolution should be sent to every member of the profession, in order that they might not be able to plead ignorance if a charge were preferred against them.

Mr. VICTOR HORSLEY seconded.

Dr. HERON WATSON inquired if Mr. Brown had ascertained the probable cost of adopting this course.

Mr. BROWN did not think the question of cost should be considered.

The REGISTRAR remarked that he had anticipated the question, and the cost of a circular under ordinary circumstances would be £112, but as the Council would be sending out 7,000 or 8,000, in any case the extra cost would be £84.

The PRESIDENT pointed out that the resolution had on more than one occasion been sent out to individuals, and the attention of those who called at the office was sometimes drawn to it.

Dr. MCVAIL reminded the Council that when the resolution was passed, and it was proposed to send it out, the Council did not think it worth while. It was merely a pious opinion.

Mr. BRYANT agreed with Dr. McVail.

Mr. G. BROWN said he would like in connection with this matter to call attention to a pamphlet, which he had just received from Birmingham, which was now being circulated, touting for patients for consulting practitioners.

The PRESIDENT remarked that the document in connection with that matter had reached the office a few days before, and would be considered officially in due course.

Mr. G. BROWN stated that if the Council were not prepared to pass the resolution at once he was quite willing that there should be an opportunity of studying the document.

Sir JOHN TUKE thought that Mr. Brown would attain the object he had in view much better if he would withdraw his resolution and substitute next session a much more strongly-worded resolution.

Mr. G. BROWN, in deference to Sir John Tuke's superior judgment, was willing to withdraw it if his seconder would agree.

Mr. Horsley having consented, the resolution was, by permission of the Council, withdrawn.

EXAMINATIONS OF THE APOTHECARIES' HALL, DUBLIN.

Sir DYCE DUCKWORTH presented the reports of the Examination Committee on the inspection of the examinations of the Apothecaries' Hall, Dublin, held (1) in October, 1899, (2) in January, 1900, (3) in April, 1900. The gist of the reports was that the inspector, Dr. Gibson, was perfectly satisfied with the conduct of the examinations of this body in all respects, and there were no adverse comments to make upon them of any kind. He only wished to observe that the method by which some of the students obtained their qualification bit by bit was not one which was approved by the Examination Committee or which recommended itself to the Council. He moved:

That the reports be received and entered as an appendix on the minutes

Mr. BRYANT seconded.

[The report of the Examination Committee on the Inspector's report upon the examinations held in April, 1900, was as follows:

1. The Inspector reports that during the month of April there should have been meetings for the First, Second, and Third Examinations of this Board, but as there were no candidates for the First and Second Examinations, the Third alone took place. Only one candidate appeared, and he was admitted to an examination in the subject of Materia Medica, this single subject being alone necessary to complete his Third Examination, the other subjects having been passed in October, 1899. This candidate was rejected. The Inspector reports that he was quite satisfied with the conduct of the examination.

2. The Examination Committee desires to direct the attention of the General Medical Council to the fact that most of the candidates coming up for examination to this Board have already passed the whole or parts of their previous examinations, even in single subjects, before other Boards, sometimes in other divisions of the kingdom, and appear either to choose or to seek by this piecemeal system admission to the *Medical Register*.

3. The Examination Committee does not consider this practice desirable, or worthy of recognition by the General Medical Council.

4. The Inspector reports that the examination was sufficient, and that this Board is endeavouring to maintain its examination in such efficiency as to merit the confidence of the General Medical Council.

5. The Committee also desires to report to the Council that the number of candidates who have obtained their diplomas from this body has averaged nine per annum (including those passed by the College of Surgeons and Apothecaries' Hall Conjoint Board), or five per annum who have obtained the single Apothecaries' diploma.]

Dr. ATTHILL thought the question raised as to the transfer of candidates from one body to another in order to obtain a qualification was serious. As far as the bodies themselves were concerned they doubtless had no wish to keep them, because they almost invariably belonged to a class of students who if they did pass would do credit to no body. He then proceeded to criticise in detail the report, which seemed to indicate to him that there was some laxity in the conduct of the examinations of this body.

Mr. TICHBORNE said the Examination Committee were perfectly right to express their opinion on the examinations, but he did not think that what he should term an error should appear in their report, and he moved as an amendment in regard to the April 1900 examination:

To omit from paragraph 2 of the Report above quoted the words "the whole or" and the words "even in single subjects, before the Boards, sometimes in other divisions of the kingdom, and appear either to choose or to seek by this piecemeal system admission to the *Medical Register*."

As a matter of fact, he did not think there was a licensing body which did not do the same. The candidates of the

Apothecaries' Hall had been solicited to go to the Conjoint Board of Physicians and Surgeons in Dublin.

The PRESIDENT suggested that if after the words "previous examination" the words "before other Boards" were inserted, that that would meet the difficulty.

Sir CHRISTOPHER NIXON would like the paragraph to stand as it was, because it stated what he thought was a very grave objection, not only to the examinations that were held by the Apothecaries' Hall, but to those held by other bodies, and amongst them the Conjoint Board of the College of Physicians and Surgeons in Ireland. The great objection to these examinations was that of allowing students to pass by the piecemeal system.

Dr. MCVAIL thought the paragraph should be left out entirely. It was, however, very fortunate that it was put in, because it had raised a very important question. It was very desirable that some resolution should be passed by the Council asking the various bodies to inform them under what conditions they admit candidates, and so to bring before the Council full information of what the bodies do under these circumstances.

Mr. GEORGE BROWN considered the paragraph of a most invidious character. It was a reflection either on the examiners or on the students, and should not be in the report.

Sir JOHN TUKE proposed that Paragraphs 2, 3, and 5 should be omitted. He thought Paragraphs 2 and 3 should be left out because they appeared to him to be unjust, inasmuch as they gibbeted a body for an offence which was committed by almost every licensing body. The Council had nothing to do with the last paragraph. All the Council had to decide was whether the report of the inspector was a good one or not.

Mr. TICHBORNE having obtained the consent of his seconder, withdrew his motion in favour of Sir John Tuke's.

Sir DYCE DUCKWORTH said that the Examination Committee considered what information it had to lay before the Council. This examination of the Apothecaries' Hall was the particular child of the Council. It was put into their hands by the Privy Council to manage and be responsible for, and they were in more intimate relations with that examination than any other.

The PRESIDENT then put the amendment to the Council, when 12 voted in favour of it and 10 against.

The amendment was declared carried, and being put as a substantive motion was carried by 14 to 6.

CANDIDATES CLAIMING EXEMPTIONS.

Sir DYCE DUCKWORTH having obtained leave of the Council, then moved:

That the Registrar be instructed to inquire of the various Examining Boards what evidence they required to be produced by candidates who claim to be exempted from examinations in particular subjects on the ground that they have already passed in these subjects before other licensing bodies.

Sir JOHN TUKE seconded, and the motion was agreed to.

INSPECTION OF FINAL EXAMINATIONS.

The Council then proceeded to consider the following recommendation from the Examination Committee:

The Examination Committee desires to express its opinion to the General Medical Council that another cycle of inspections of the Final Examinations of the several Universities and Examining Boards should be begun during the present year.

Sir DYCE DUCKWORTH stated that no inspection had been held by the Universities or Examining Boards for seven years, and it was thought by the Examination Committee that the time had come when they should begin another cycle of inspections. The details would have to be left to the Executive Committee to carry out. They would have to appoint an inspector, and he hoped they would get to work next year. There were no special reasons why this matter was brought on now.

Dr. MCVAIL thought that as it was seven years since the last cycle ended, the time had now come when the Council should have a review of the final examinations of all licensing bodies.

Mr. VICTOR HORSLEY inquired how the expenses were going to be met, and what would be the cost per annum.

Sir DYCE DUCKWORTH said the average cost would be somewhat less than £400 a year.

Dr. GLOVER felt great reluctance in offering any opposition to any reasonable proposal coming from the Examination Committee on this subject. All knew, however, from the financial report that the Council was not very flush of money, and there was no reason why money should be expended unnecessarily. If Sir Dyce Duckworth had shown any reason to believe that the effects of the last supervision in the examination had failed, and that there was anything seriously wrong in the way in which they were conducted, he should have offered no opposition to the motion, but in the absence of any such proof he thought no harm would be done by postponing the measure for another year; and he moved this as an amendment.

Dr. BRUCE seconded.

Dr. MACALISTER stated that it would take some time to get the matter into working order, and therefore it was desirable to start it now. He regarded this not as a detective but as a stocktaking operation, and this inspection would no doubt be a great improvement on previous inspections. It was intended in 1891 that a cycle of five years should be followed by an interval of five years, and they were really following out that system.

Sir DYCE DUCKWORTH moved:

That on the recommendation of the Examination Committee arrangements be forthwith made by the Executive Committee under Chapter 23 of the Standing Orders for a systematic inspection and visitation of the final examinations of the several licensing bodies.

Mr. BRYANT seconded.

Dr. GLOVER moved as an amendment:

That the word "forthwith" be omitted.

Dr. BRUCE seconded.

The amendment was put by the PRESIDENT and declared to be lost. The motion of Sir Dyce Duckworth was then put and declared carried.

EXEMPTION PERMITTED TO FOREIGN STUDENTS.

The Council proceeded to consider the following report by the Education Committee on a motion moved by Mr. Horsley on December 5th, 1899:

That the Education Committee be requested to consider the circumstances under which at present foreigners obtain exemption from some of the conditions of education and study required by certain of the qualifying medical corporations under the curriculum determined by the General Medical Council.

The Committee reported as follows:

In the opinion of the Committee this reference is covered by the "communication from the Education Committee in regard to the admission of foreigners to examination for registrable British qualifications," received by the Council on December 4th, 1899 (Minutes, vol. xxxvi, p. 159). This communication stands as Appendix xvii of vol. xxxvi of the Minutes.

This document sets forth clearly the conditions of education and study required of foreign students by the various qualifying bodies in Great Britain and Ireland, and the Committee deem it unnecessary to reproduce the statements therein made.

The Council has always held each licensing body as primarily responsible for the conditions under which it admits to examination candidates for its qualifications; and whenever reasons have existed for believing that the regulations were not in accord with the Council's resolutions the attention of the body has been directed to them. So far as the conditions of the various bodies regulating the admission of foreign students are concerned, no specific case of inequality of conditions as between foreigners and British subjects has been brought under the notice of the Education Committee. Should any such representation on specific points be referred to the Committee, they are prepared to follow the usual course of sending the complaint to the body concerned, considering its reply, and reporting on the question to the Council.

Sir JOHN TUKE moved that the report be received and adopted.

Dr. MACALISTER, in seconding, said that the Committee had tried to get information as to specific cases, but had failed.

Mr. VICTOR HORSLEY said that he was prepared to accept the report.

The motion was carried.

REPORTS OF COMMITTEES.

Mr. TEALE moved, Dr. MCVAIL seconded, and it was resolved:

That the interim report of the Public Health Committee be received, entered on the minutes, and the recommendations contained therein be adopted.

The interim report was as follows:—

The Committee cannot meet without expressing their sense of the great loss sustained by the Council, but above all by the Public Health Committee, in the death of their most able and indefatigable Chairman, Sir Richard Thorne.

The Committee have considered the replies of the bodies which confer

diplomas in Public Health, with observations on the Recommendations of the Public Health Committee contained in their report of December 5th, 1899. Many of these replies contain carefully-reasoned criticisms or suggestions demanding serious consideration, for which the Council is greatly indebted to those bodies. These criticisms and suggestions, and the question whether the Recommendations in the report of the Public Health Committee should need modification, require more time than it has been possible to devote to their discussions during the present session

The Committee therefore recommend that the question should again be remitted to the Committee for final report at the November session of the Council.

Sir Dyce Duckworth moved, Dr. Bennett seconded, and it was resolved:

That the report of the Students' Registration Committee be received, entered on the minutes, and adopted by the Council.

Mr. Tomes moved, Mr. Victor Horsley seconded, and it was resolved:

That the report of the Companies Amendment Bill Committee be received and entered on the minutes.

Application for Registration.

A recommendation of the English Branch Council that an application for registration from Mr. William Raitt Scroggie, who holds the qualifications of Mem. R. Coll. Surg. Eng. 1882, Lic. R. Coll. Phys. Edin. 1882, Lic. Midwif. K. Q. Coll. Phys. Irel. 1882, a practitioner entitled to be registered under the Medical Act 1858, but who neglected to effect such registration until after the coming into operation of the Medical Act 1886, be granted, was accepted, and the name directed to be entered in the *Register*.

Dental Advertising.

Sir Dyce Duckworth moved:

That a copy of the resolution in respect of advertising, adopted by the General Medical Council on May 20th, 1894, be issued from this office to every dentist whose name is on the *Dentists' Register*.

[Resolution adopted by the General Medical Council on May 20th, 1894:

That the attention of the Council having been called to the practice of advertising by certain dentists, it is hereby resolved: "That the issue of advertisements of an objectionable character, and especially of such as contain either claims of superiority over other practitioners, or depreciation of them, may easily be carried so far as to constitute infamous or disgraceful conduct in a professional respect."]

He had been moved to recommend this course to the Council because during the present session they had been told by persons who had come before them that they were not aware of what the Council had done. If this were sent to every dentist on the *Register* there would be no mistake in the future as to what was meant by the Council.

Mr. Tomes seconded the motion.

Dr. Atthill suggested that the words "of an objectionable character" should be struck out, otherwise they might be referred to as clear proof that advertising was sanctioned by the Council. He had understood that they were endeavouring to put down general advertising among dentists.

Dr. MacAlister did not think unobjectionable advertising could be called "infamous conduct."

Mr. Horsley observed that that was not the point, and he supported Dr. Atthill's suggested amendment.

Mr. George Brown, on a point of order, thought that could not be done without rescinding the former resolution passed by the Council in May, 1894.

The President observed that the general opinion of the Council in 1894 was that they could not pass a resolution forbidding all forms of advertising, which was the reason the words now objected to were inserted. If the Council were now prepared to make their views more definite and more stringent they should not refer to this resolution, but should pass a new one.

Dr. MacAlister called attention to the fact that they could not immediately proceed to enact a new crime of this kind; they would have to give four or five years' notice of it.

Mr. Tomes pointed out that the Council had also acted on the resolution of May, 1894, and, however desirable it might be from a general point of view to amend its wording, this was not the proper time to do so.

Mr. Victor Horsley, adopting that line of reasoning, asked Sir Dyce Duckworth if it would not be better to withdraw the motion from the Council, wait two or three years, and then bring forward a resolution in the terms suggested by the President.

Dr. McVail was of opinion that if the resolution was issued in its present form it would be tantamount to saying that the Council consented to advertising so long as it was not objectionable.

The President said the reason for bringing forward the motion was that it was stated in a case of objectionable advertising recently before the Council that this resolution of May, 1894, had never been communicated to those on the *Register* by post, but only by advertisement. It was therefore thought desirable that every dentist on the *Register* should have a copy of the resolution sent to him, so that he should not appear before them and say he had not had an opportunity of reading it. He thought that a strong reason for supporting the present resolution.

Sir Dyce Duckworth, in reply, said the resolution was drafted under legal advice. The circulation of the resolution would only cost the Council about £17.

The motion was then put, when 13 voted for and 8 against, and it was declared carried.

The Standard of Preliminary Education.

On the motion of Sir John Tuke, seconded by Dr. MacAlister, it was resolved that the further report from the Education Committee on the question of raising the standard of preliminary examinations be received and entered on the minutes.

Sir John Tuke proposed, for the benefit of those who had recently joined the Council, to give a short history of the movement. Before the Council existed preliminary examinations were at a very low ebb, and, except with regard to one University, there was practically none at all. The Council, immediately after its inception, devoted its attention to the subject and a study of the various minutes and reports would show what a large amount of interest the Council had taken in the matter. The first important result of the action was the withdrawal by all professional bodies of the preliminary examinations, which had been placed in the hands of strictly educational bodies. The next important step was the laying down by the Council of its requirements on the subject of preliminary examination, which requirements were applied by the various examining bodies throughout the country. The Education Committee had watched very carefully the general effect of those regulations, and had gradually raised the standard of them. Later on the Council insisted that all parts of the preliminary examination should be taken at one time, which was a most important step. The effect of this action by the Council was very seriously felt both by examining bodies and by schools. It was perhaps the success of the action of the Council in this respect which led certain members to propose the bold step of cutting out all junior examinations. At the first blush this seemed an effective method of dealing with the subject; but the Education Committee carefully considered it, and found that it was surrounded by almost insuperable difficulties; the main difficulty that stood was the defective condition of intermediate education. They consulted the highest authorities who had the best knowledge on the subject, and they were assured that the difficulties of adopting such a radical change were insuperable; and, further, if it were adopted, the most serious consequences would result to the profession and to the public at large. These facts were laid fully before the Council by the Committee in their report; but the Council was not convinced, and the matter was referred to a large number of educational bodies, schoolmasters, and a certain number of private individuals for their opinion. The result was that overwhelming evidence was received that the Committee's conclusions were correct. The main reason cited was that intermediate education would not permit of it. Then it was suggested that there should be appointed an educational expert for each part of the kingdom; and after taking the advice of those best able to judge, three gentlemen were appointed whom they believed were thoroughly representative and thoroughly acquainted with the conditions of education in the three parts of the kingdom. Those gentlemen began their arduous work about a year ago, but they were unable to produce more than a provisional report last November. The Council, naturally desiring to have more extensive information on the subject, again appointed these gentlemen, and asked

them to prepare a full report. This they now presented to the Council, and he thought no one could say that it failed in presenting the matter in a most concise form. It was a very careful document, and was a valuable treatise on the whole subject of preliminary education as it affected the medical profession. Comparing the examinations in France and Germany with those which obtained in England, Sir John Tuke said that he failed to find that there was a much higher standard in those countries. Speaking for English practitioners, he failed to discern that want of culture amongst them which certain members of the Council had seemed to presuppose. They were not scholars, no doubt; but that was not their business, and those who had pressed upon the Council the necessity of raising the standard very much higher had overlooked one important fact—that a medical education was in itself a liberal education. A medical student, when he got to work, was brought face to face with problems which required a large amount of collateral reading, and his general education did not cease when he entered on his medical curriculum. His scientific education was as productive of mental training and of culture as literature. However that might be, the experts concurred in the recommendations which the Education Committee had from time to time laid before the Council. They had adopted in their report the general principle of those recommendations, that is, that the General Medical Council should insist upon a gradual improvement of junior examinations; in point of fact, they recommended a standard of examination which might be roughly taken to represent the meeting place of the Higher Junior and the Lower Senior Examination, a grade which also represented the standard applied by the great schools and examining bodies. They held this to be the test of a sound scheme of education, such as might be expected from boys between 16 and 17 years of age, and such as would avail them in entering upon scientific work. Certain people had held that uniformity of examination could best be obtained by the General Medical Council instituting an examination for itself, but it had very soon been found that such a thing was *ultra vires*, and further consideration showed that it might not be advisable to do so even if they had the power, because such an examination might complicate very seriously the school examinations. As a matter of fact, the committee of experts were content to work upon the machinery at present in existence, and had suggested a scheme by which the standard of junior examinations might be raised by demanding higher qualifications in these examinations. The Committee proposed to send the opinion of the experts to all the examining bodies in the kingdom in order that they might adapt themselves to the standard suggested. They had every opportunity of judging how these bodies would adapt themselves to it, because they had not only the opportunity of seeing the examination paper, but they had also the right granted to them of examining the answers given by the students. These were the general lines of the report, and if the Council agreed to accept the recommendations which the Committee proposed, the Council would find that it had got a solid ground on which to build in the future. The Committee asked the Council to have confidence in it and to commission it to carry out the scheme sketched in the experts' report. He assured the Council that if it did so the Committee would keep in mind the strong desire on the part of the Council to raise the whole character of the examinations, keeping in view the interest of the public, the interest of the profession, and, further, the condition of intermediate education throughout the country. He moved:

That from and after January 1st, 1902, no person shall be registered as a medical or dental student who has not attained the age of 16 years; and that for the purpose of ensuring the observance of this regulation every applicant for registration in the *Students' Registers* shall be required to produce satisfactory evidence that this age has been attained.

Dr. MACALISTER seconded the motion. He pointed out that the experts' advice was ambiguous, unless the Council decided that a medical or dental student should not be registered before the age of 16.

Sir DYCE DUCKWORTH observed that all would be glad if in a short time the age could be raised to 17.

The motion was carried.

Sir JOHN TUKE moved and Dr. MACALISTER seconded:

That the Education Committee be authorised to take all needful steps to give effect to the recommendations and suggestions for the improvement of preliminary examinations contained in the appended joint report of the expert advisers, and to report from time to time to the Council thereupon.

[The Committee stated that "a substantial advance on the present requirements can be made by insisting on improvements in the character and stringency of those "Junior" Examinations which can be directly influenced by the Council, and in the case of the others by requiring that candidates offering the corresponding certificates have obtained a higher standard than that of a simple pass."]

Dr. MCVAIL suggested that, before dealing with this resolution, the Council should take the recommendations in order, because the Council should know exactly what it was doing.

The PRESIDENT understood the mover and seconder were prepared to do that if the Council wished it.

Mr. VICTOR HORSLEY observed that the Committee asked the Council to afford them the opportunity of testing this scheme on its merits. It was suggested that it was a scheme which would have the effect of finding out which examinations were suitable for the purposes named, and to report later on that such and such examinations had complied with their requirements. It was generally recognised that the present schedule of examination was very imperfect. This Council expressed itself unfavourably with regard to some examinations on the last occasion, and still the schedule remained. It was, therefore, a question whether, after the recommendations had been passed, the schedule ought not to be entirely abrogated. Although he agreed that the recommendations formed a good working scheme, yet he could not see how it was going to be carried out except at considerable expense to the Council. The Council, if it adopted the scheme, must be prepared to pay for the working of it. The recommendations of the experts in many respects fell short of what might have been expected. The recommendations in the joint report were governed by several serious limitations, which went to show that the experts themselves felt there was an inherent difficulty in making them, and they certainly were conscious that there would be great difficulty in carrying them out. He did not think that was quite satisfactory. He thought that the report of Mr. Sharpe in some respects was not satisfactory; he said: "Or, if he (the student) has already passed in the Junior Local, it would be no hardship to prescribe that in the course of his medical studies he should pass in some one or more of the groups of subjects prescribed in the Senior Local." It seemed as if Mr. Sharpe was not fully aware of what the feeling of this Council was. It had been said that the information contained in the previous report of the Education Committee was confidential, and that it revealed a very serious state of things—namely, that intermediate education was so indifferent that if the Council were to insist on a better standard that would cause a considerable flutter in the dovecots of education. Was that strictly correct? Of course, as the information was given confidentially the members of the Council could not go behind it, but he took it that if they had any evidence from any association of head masters presenting a public document that was quite of equal value to the confidential documents they had received. He then referred to the annual report of the Association of Head Masters, and proceeded to say that he had been sent there by his constituents to speak in favour of a much higher examination, and he should always continue to do so; but if the Education Committee came to them and said, "Have confidence in us; let us try this scheme, say, for two years and see how it works," he could not see how that could be refused.

Dr. PAYNE wished it were possible in this country for medical students to remain at school entirely occupied in a liberal and general education until they were 18. If the Council laid down that the so-called senior examination was a necessary standard it would be fixing not only an educational but a social and financial standard, and would be laying down that parents of medical students ought to be able to afford to keep them at school till they were 18. It would be exceedingly difficult to lay down any rule that would oblige the medical student to remain at school till he was that age. After having gone into the question carefully, he had come to the conclu-

sion that what was now proposed was the utmost that at the present moment could be satifactorily carried out.

Dr. MACALISTER said he was sure he was expressing the feeling of gratitude on the part of the Committee at finding their labours, which had not been light, had been received so well by the Council. Dealing first with Mr. Horsley's point about the expense, he said that he did not think it would involve any considerable outlay. A grant had been made to the Committee of £100 for the year, and it had been sufficient for the preliminary work. With regard to Mr. Sharpe's report, it was to be observed that all the Education Committee said was that the recommendations in which the experts had agreed were to be regarded. The joint report was to be the basis of future work. As to the confidential reports there was nothing mysterious or sacred. They simply referred to details which the various examining bodies did not desire to be made public for the obvious reason that they might get into the hands of scholars and school masters too, and there might be a tendency on the part of the latter to work up to a particular standard and no higher. He did not think there would be any advantage gained in going through the various recommendations (page 29 of Report). They all hung together.

Sir CHRISTOPHER NIXON, as a member of the Education Committee, said that it must be evident that a great deal of care and attention had been given to the subject, and a great deal of information had been supplied by the experts. He had been associated with medical students for a number of years, and had got to know what their requirements were, and what were the special advantages of a certain degree of preliminary education, but he was bound to say the fixed ideas in his mind on this matter were somewhat disturbed by the expert reports. It was quite evident from the recommendations of the Committee that it was impossible to secure any uniformity of standard of preliminary education. The Council had to fix a mimimum standard below which they would not allow a person to register as a medical student. If they could accomplish that, and do it without any revolutionary measure, it would be a decided gain. For that reason he strongly urged the Council to pass this recommendation. Any measure of a violent character seeking to raise the standard of preliminary education too high or too rapidly, would diminish the number of medical students, and that would very seriously cramp the resources of the medical schools. The State was not generous in supporting scientific or professional education, and if a great number of men who presented themselves for preliminary education were to be shut out, the resources of the schools must be materially diminished.

Dr. MCVAIL said that the position appeared to him to be very complicated. He was in hopes that a good deal more might have been got. He had had the opportunity of talking with some persons who knew well the facts relating to the Scottish leaving certificates. The experts in this report regarded the senior leaving certificate as equivalent to any senior certificate in any part of the country. He was assured by men he could trust who had to do with these examinations that, so far as the state of education in Scotland was concerned, this Council could and would get the senior leaving certificate level with four or five years' notice. The President would remember what happened some six or seven years ago, when the Commissioners required that two of the subjects should be taken to admit a man to the science and arts classes in the Scottish universities. They all knew how the numbers dropped, because the Commissioners give no warning. He thought that what had actually taken place in connection with the Arts and Science Classes bore out what his friends had told him. This report made it hopeless to apply any such scheme to the United Kingdom. It seemed to him that while agreeing to the recommendations, and giving the proposed power to the Committee, the Council ought to indicate that the time would come very shortly when it would demand an examination of a much higher standard. It seemed to him that in addition to the two recommendations there ought to be a third, that there ought to be an instruction to the Education Committee to provide next November a list of the bodies with whose examination they could recommend the Council to be entirely satisfied. Without that all this discussion meant nothing.

The resolution was then put to the Council and declared carried.

The PRESIDENT said, having had the opportunity of knowing personally the great labour that the three experts had given to the consideration of this question, and also knowing what fees had been placed at the disposal of the Education Committee, he should like to say that those gentlemen had done a great deal more work than they had been paid for in money. Therefore he thought the Council would record its thanks for the work they had done.

Dr. LITTLE did not think it was becoming in them as a public body to employ three experts and not pay them properly. He would rather propose that they should receive a larger honorarium.

The PRESIDENT replied that these gentlemen, in undertaking the duty, did not do so in view of a money payment. Their desire was to help the Council in this important branch of its work.

Sir JOHN TUKE moved, Dr. MACALISTER seconded, and it was carried:

That the thanks of the Council be given to Mr. Sharpe, Dr. McGrath, and Professor McCormick for the valuable assistance they have given to the Council in relation to the question of preliminary examinations.

PHARMACOPŒIA COMMITTEE.

It was moved by Dr. MACALISTER, and seconded by Dr. ATTHILL:

That the report from the Phamacopœia Committee be received, entered on the minutes, and adopted, and that the thanks of the Council be voted to Dr. Leech, Mr. Bryant, Mr. Ekin, and Mr. Walter Hills for the valuable gifts of books which they have made to the Pharmacopœia Committee's collection.

The Council then adjourned.

GRANTS FOR SCIENTIFIC RESEARCH.

THE Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must include details of the precise character and objects of the research which is proposed, and must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C.

Reports of work done by the assistance of the Association grants belong to the Association.

RESEARCH SCHOLARSHIPS.

The Council of the British Medical Association is prepared to receive applications for two of the three Research Scholarships which are vacant, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Forms of application for the scholarships can be obtained from the General Secretary.

FRANCIS FOWKE, *General Secretary.*

429, Strand, May 10th, 1900.

BIRTHDAY HONOURS.—In addition to those mentioned last week, the following have received the silver medal of the Kaisar-i-Hind Order: Mrs. Henry Smith, who qualified as M.B., B.Ch. of the Royal University of Ireland in 1891, and M.D. in 1898; and Miss Susan Campbell, who qualified as L.R.C.P., L.R.C.S.Edin. and L.F.P.S Glas. in 1893.

A GARDEN PARTY will be held in the grounds of the North London Hospital for Consumption, Mount Vernon, Hampstead, on June 20th, at 3 P.M., on the occasion of the opening of the new open-air balconies by Sir Henry Harben.

A "Society of Kinesitherapy" has recently been founded in Paris. The Honorary President is Professor Marey, the Acting President M. Lucas Championnière, and the Vice-President Dr. Fernand Lagrange, author of well-known works on exercise and gymnastics.

REBELLIOUS MEDICAL STUDENTS IN TURKEY.—The students of the military medical school of Stamboul recently rebelled against the system of supervision to which they are subject. Ninety of them have been arrested, and will be brought before court-martial.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 2ND, 1900.

RECIPROCITY WITH FOREIGN COUNTRIES.

CERTAINLY the most interesting, and perhaps the most important, of the debates which have taken place during the present session of the General Medical Council was that raised by the action of the Privy Council, which has intimated its intention to issue an Order in Council applying Part II of the Medical Act, 1886, to Italy. This question has engaged the attention of the General Medical Council for some time past, and there was a debate upon it and upon the general question of reciprocity with foreign countries in the last session of the Council.

Under the existing Italian law, which in this respect has remained unchanged, foreign practitioners can, after compliance with certain formalities, including the submission of their diplomas, obtain registration in Italy, and thereby are authorised to exercise their profession, but only among members of the foreign community. It should be added, however, that some at least of the Italian Universities and Istituti di Studii Superiori, institutions very similar to the universities with the exception that they are commonly not equipped with the full number of faculties, have offered facilities to foreign graduates for obtaining an Italian diploma by accepting the curriculum when it corresponds sufficiently closely with Italian requirements, and have thus placed them in the position of sixth year students eligible for the final examination. Few, however appear to have availed themselves of this arrangement and the large majority of English medical men in Italy are practising under the limited permission already alluded to, and they, or at least a majority of them, express themselves as quite contented with the position thus accorded to them.

An agitation has been going on for some time past among Italian medical men which has for its object some curtailment of the privileges heretofore granted. A Bill has been introduced into the Italian Parliament which would limit the permission to practise amongst the foreign community to the medical graduates of those countries which concede reciprocal privileges to Italian doctors, and though the measure is more liberal than those which have been passed in France and in Switzerland, which practically exclude foreign medical men altogether, it has caused considerable anxiety to British practitioners in Italy, who have from time to time approached the British Minister in Rome upon the subject. As a result of their efforts the Italian Government has communicated to the British Ambassador a draft law which will continue to foreign practitioners the right to practise their profession among the foreign community in Italy, but with the proviso that the foreign practitioner must belong to a State which concedes the same treatment to Italian practitioners. This draft, with the dependent correspondence, has been communicated by the British Foreign Office to the Privy Council, which has now taken a step which seems virtually to pledge this country to some scheme of reciprocity with Italy. Under the interpretation which it would appear the Privy Council places upon Part II of the Medical Act, 1886, it considers itself authorised to put in operation Section XVII, which prescribes the manner in which reciprocity may be granted without consulting the General Medical Council as to the advisability of so doing. It is true that in this case frequent communications have passed between the Privy Council and the General Medical Council, and it seems unfortunate that the latter body has never as a whole made any very positive pronouncement for or against the propsal, although the Executive Committee, acting in the intervals between the plenary sessions of the Council, gave an opinion in favour of reciprocity with Italy. At its meeting on December 4th, 1899, however, the Council adopted a resolution, on the motion of Mr. Tomes, requesting the Privy Council to obtain further information in order that the General Medical Council might be enabled to decide whether it was or was not expedient that it should advise the Privy Council that the provisions of Part II, Section XVII of the Medical Act, 1886, should be made applicable to the kingdom of Italy. The Privy Council has so far complied with this request as to obtain the desired information, but has at the same time informed the General Medical Council that Her Majesty's Government will at the proper time recommend Her Majesty in Council to apply Part II of the Medical Act, 1868, to Italy, and has transmitted a draft order in Council to do this. As Part II can only be put in operation in favour of a country which grants reciprocal privileges to Great Britain, "the proper time" would apparently be when the new law has been passed by the Italian Parliament.

The Ordine dei Medici, a newly-formed Italian medical society, has pressed the matter, and has succeeded in enlisting the sympathies of the Minister of Public Instruction, Dr. Baccelli, Professor of Medicine at Rome, but the Italian Parliament has just been dissolved, and the fate of the measure in the next Parliament, in the present confused state of Italian politics, is difficult to predict. It may be that it will fall through altogether, or, on the other hand, it may be that some more drastic measure, less favourable to the foreign practitioner, will be brought forward.

The question, therefore, when it came to be discussed by the Council last Monday, was at once seen to have entered on a new phase, and it was maintained that nothing remained for the General Medical Council to do but to wait until the Privy Council had issued the Order, when the General Medical Council would find it its duty to decide how far the various Italian institutions granting medical degrees granted them after a satisfactory examination. On the other hand, it was felt by many members of the Council that the application of Part II of the

Act of 1886 would not provide a basis of equal reciprocity of practice between the United Kingdom and Italy. This view was very forcibly put by Mr. Horsley and Sir John Batty Tuke, and commanded a majority in the General Medical Council, which will now represent to the Privy Council that the application of Part II of the Medical Act, 1886, will not at present provide a basis for equal reciprocity. We must, however, face the fact that the Privy Council has received an assurance that British medical practitioners in Italy are satisfied with the unequal reciprocity proposed by the Italian Government, and that the Privy Council has apparently committed itself to a promise to put into operation the provisions of the Medical Act, 1886, as to reciprocity. It has, however, taken this step without the express approval of the full body of the General Medical Council, which, if ever reciprocity comes into practical operation, will have to determine what Italian qualification is deemed sufficient. We believe that in Italy there are no "bogus" qualifications, and the fact that the professors both of the Universities and of the Istituti di Studii Superiori are appointed by Government places the qualifying bodies, which are numerous (at least twenty), upon some sort of equality. But as there are no inspections, and the professors once appointed are left a free hand in the matter of examinations, differences in the severity of the examination test are believed to prevail, though in all cases the curriculum extends over six years, and is practically the same.

THE MEDICAL SERVICE AND THE WAR.

The sixth letter of the series on Our Wars and Our Wounded from the special correspondent of the *Times* at Capetown to which we have already referred, dealt chiefly with the immense amount of military administrative detail in a base hospital. It was alleged that to meet such detail the two chief medical officers thereof, the principal and his secretary (otherwise commandant and military registrar) are usually divested of professional work personally, from which separation of duties it is inferred that mere military administration must officially be considered superior to professional ability.

We before took exception to the legitimacy of that inference, and the correspondent now bears out our contention; for he aims at showing the large amount of administrative clerical detail which demands the constant supervision and guidance of the principal.

If the implied divorce between military administrative and professional duties be usual, it is not universal; for, as he now states, he found Colonel Wood, Principal of No. 3 Base Hospital, not only skilfully performing surgical operations, but in conjunction with his secretary, Major Keogh, running the surgical division himself. He adds that nothing but "a desire to vindicate the much assailed medical reputation of his corps could give one man the strength and will to face so heavy a task"! We do not know that the reputation of the Army Medical Service needs any vindication. The double "task," however, is much too "heavy" for any man, and is therefore very wisely not imposed by regulation. But this instance of double duty shows that administrative and professional work can be happily, if less effectively, combined and disposes of the implication that they are incompatible.

The correspondent devotes much space to criticising in trenchant fashion the many military details which it is declared "a rampant militarism imposes on" base hospitals. When this subject is discussed it too often seems to be forgotten that a soldier remains a soldier when he falls sick; that a base hospital is an important part of a military machine which must work in harmony with the military organisation in the field. It must maintain the military continuity and personal identity of every soldier patient. Such duties can be carried out only by officers and men specially trained.

We are not prepared to answer off-hand the comprehensive question "how much" of the special labour thus imposed "is necessary and how much more superfluous." Wide and important collateral issues are involved, and until these have been considered it is not wise to rail at large at the "demon of red tape," or dogmatically to assert that "nine-tenths of the paper material used for the returns ought to be crammed down the throat of the man who invented them." As a matter of fact, when the existing regulations for hospitals in the field were drafted some years ago, great pains were taken to minimise office work and simplify returns, and these endeavours have certainly not been unattended with success. How is the State, the army and the public, including thousands of anxious private individuals, to obtain knowledge of the condition of the sick and wounded at the seat of war if daily, weekly, and special returns such as those prescribed in Paragraphs 793 to 799 of the regulations for army medical services, (1897) are not forthcoming?

The Regulations (Paragraphs 758 to 764) on the conduct of the base hospitals include the following (Paragraph 758): "The organisation will, while closely corresponding to that of general hospitals in time of peace, be varied and adapted to meet the special exigencies of circumstances, locality, climate, etc." A latitude in dispensing with the less essential details is thus given to the principal, and if he does not act on the spirit of this rule he will assuredly fail in an obvious duty.

These remarks broadly relate to the general conduct of base hospitals. Let us glance at the more specific instances of "rampant militarism" which are alluded to. Take the very important question of the identification of a sick soldier in the field. That has to be maintained in two directions—first, the identity as an individual; secondly, as a fighting unit of a corps; and can only be done by correct check rolls and personal kit lists, passed from hospital to hospital, from front to rear, a duty demanding a trained administrative and clerical staff within the hospitals. Nobody will question the importance of identification, and the correspondent paints a grimly facetious picture of an imaginary Jones who arrives at the base too ill to give an account of himself; his number and Christian name are unfortunately lost, and only his regiment is known; he dies, and as there are many of the name in his corps, all the relations of all the Joneses in their uncertainty go into mourning; yea, even "four widows" may be plunged into grief by the announced decease of this one untraced man. Could the necessity of efficient hospital administration and a trained clerical staff be better enforced than by this not improbable illustration?

Or take the classification of diseases and of wounds into

"slight," "severe," "serious," "dangerous," etc. Think of the hopes and fears of thousands of loving hearts at home which centre in such a classification; consider the judgment and skill demanded of principal and executive medical officers in such a duty; picture the heartache and suffering which a mistaken diagnosis, or even a mere clerical error in the classification may bring to the relations of stricken soldiers!

Or, again, take what the correspondent calls the "terrible question of kits." It is a cardinal principle that kits, arms, and accoutrements of a sick soldier in the field shall, if they can be secured, accompany him wherever he goes. This is held to be the best way of keeping the men efficient as independent fighting units; moreover, in savage warfare, it enables the sick and wounded to defend the hospital if attacked. Where would the men in the hospital at Rorke's Drift have been without their arms? On the kit largely depends the potential efficiency of a sick or wounded soldier should he recover and pass again to the front; and the great majority of sick and wounded men recover, and many soon return to duty. It is estimated that 94 per cent. of the wounded in the present war recover, and quite a third speedily return to duty; hence the importance of kits, arms, and accoutrements being ready for such men, who may be hundreds of miles away from their corps. The care of kits must therefore be provided for in hospitals on the field. Without such provision a base hospital would soon be a scene of mere chaos and indiscipline, a hindrance instead of an important auxiliary to the army in the front. For such duties the hospitals must be equipped and administered under the full autonomy now wisely granted to them.

The correspondent talks of "wasted force" in the shape of broad-shouldered, able-bodied clerks employed in the hospitals who, he says, instead of wielding pens should be rushing kopjes, bayonet in hand; or at all events succouring comrades in the fighting line. Now, it must be understood that weaklings are not suited for the medical corps; they have been tried and found wanting. These athletic clerks have indeed a proper niche in the military edifice even as others in the fighting line; they are specially enlisted on account of educational and other fitness, and specially trained in the important duties for which they are suited, and which they efficiently perform; they cannot under our voluntary system be drafted to combatant duties. Why, then, should it be made a reproach to them that they do the work which they are put to do?

Unfortunately, many of the criticisms contained in this series of letters, and especially in the last one, are calculated to prejudice the public against army medical work, whether executive or administrative; and tend to resuscitate the exploded fallacy that medical officers cannot or should not administer their hospitals. If they mean anything they are intended as an argument for the reconstitution of the old and intolerable system of divided authority in military hospitals which was accountable for such disaster in former days. The War Office has shown itself capable of extraordinary fallibility of judgment, especially in the administration of the medical service of the army; but we cannot believe that it will be guilty of anything so foolishly retrograde as is suggested by this irresponsible writer in the *Times*.

LONDON UNIVERSITY.

ALTHOUGH the Royal assent has not yet been given to the statutes made by the Commissioners under the University of London Act, there are signs of activity in the direction of electing members to serve on the new Senate. The Royal assent, it is hoped, may be obtained by the third week in June, though unforeseen circumstances may occasion further delay. Of the fifty-four persons who, with the Chancellor and Chairman of Convocation, form the Senate four will shortly be appointed by the Crown. The present Chancellor, Lord Kimberley, it is understood, will continue in office, and Mr. Busk will become one of the new Senate as Chairman of Convocation. Lord Davey will not improbably be one of the four nominees of the Crown, and it is rumoured that another of the four may be a lady, while the remaining seat may be allotted to a Colonial representative. At its meeting last Tuesday the London County Council elected Dr. W. J. Collins, a member of the present Senate, and Mr. Sidney Webb, late Chairman of the Technical Education Board, as its representatives. Lord Macnaghten, P.C., Judge Martin, and Mr. Warmington, are spoken of as representatives of the Inns of Court, which have recently been aroused into taking an interest in the new University. Different names have been mentioned for the sixteen seats allotted to Convocation (voting in Faculties); but we understand that various sections in Convocation are now actively engaged in endeavouring to agree upon a strong representative list which shall fairly reflect the views of that composite body. The new Senate bids fair to be a powerful though somewhat unwieldy executive, and we trust that the 16 members to be elected by the faculties, and especially the medical faculty, will be an additional source of strength to the new University, which all must desire to see launched with every possible guarantee of academic and practical efficiency.

THE RIFT IN THE ANTIVIVISECTION LUTE.

THE great name of Harvey has at one time and another been a good deal in the mouths of antivivisectionists, who have endeavoured to make it appear that he made his memorable discovery without the aid of experiments on living animals. It is important, therefore, to note a remarkable admission on this point which has lately been made by Mr. Stephen Coleridge. It is well known that antivivisectionists are now divided into two great sects which hate each other with almost theological intensity. On the one hand, Miss Frances Power Cobbe will be satisfied with nothing less than the total abolition of vivisection; her motto appears to be, in a non-Voltairean sense, *Ecrasez l'infâme!* The Antivivisection Society, on the other hand, as represented by Mr. Stephen Coleridge, is less ambitious in its aims, and is content to take half a loaf as better than no bread; in other words, recognising that it is not likely that the Legislature can be got to forbid vivisection absolutely, it is striving to secure the imposition of restrictions which shall fetter experimental research to the utmost possible degree. The *Abolitionist*, which we understand is the mouthpiece of Miss Cobbe, in its issue of May 15th, has an interesting article which places the state of feeling to which we have referred in a somewhat fierce light. It appears that among Miss Cobbe's voluminous writings there is, or was, a pamphlet entitled *A Controversy in a Nutshell*. The nutshell has been crushed into dust long ago; but this is a day of literary resurrections, and it seems that some collector of controversial curios wished to have a copy of the pamphlet. He therefore applied to the National Vivisection Society, by which it was originally published, but instead of the tract asked for he got the following reply from the honorary secretary of this Society:

April 17th, 1900.

DEAR MADAM,—I have seen your letter asking for some copies of *A Controversy in a Nutshell*. In view of what Mr. Paget has said in his recent book, we have thoroughly gone into the question of Harvey and the cir-

culation of the blood, and there can be no doubt whatever that Harvey himself in his original Latin clearly states that his discovery was largely due to vivisection. As we feel bound to maintain a strict accuracy in all publications issued by us, we no longer distribute any pamphlet containing statements at variance with this fact. We gain nothing in controversy by making statements favourable to our cause that are liable to the accusation of being consciously inaccurate. I feel sure that you will entirely agree with this.—I remain, dear Madam, very faithfully yours,

STEPHEN COLERIDGE.

We are glad that Mr. Coleridge so frankly recognises a fact as to which there never was any kind of doubt in the minds of those who know Harvey's work at first hand; and we venture to express a hope that the Antivivisection Society will go with equal thoroughness into many of the matters as to which they now, doubtless in sheer ignorance, darken counsel. Their decision not to distribute any pamphlet containing statements at variance with facts is strongly to be commended, but we trust this new censorship will not be limited to the writings of champions who for any reason have fallen out of favour with the ruling powers of the Society. The situation as revealed by the *Abolitionist* is deliciously comic. For the Holy Office of Victoria Street to place Miss Cobbe's pamphlet on its Index Expurgatorius is, as Mr. Montagu Tigg would say, as tremendous and catastrophic an event as if the Pope were to ban and burn the *Summa* of the Angelic Doctor. Miss Cobbe evidently feels the thunderbolt that has fallen upon her, though she tries to carry the thing off bravely by throwing over Harvey and putting forward in his place such scientific authorities as Mr. Lawson Tait and Dr. Berdoe. Behind such formidable ramparts we may well be content to leave her undisturbed.

VILLAGE PLAYGROUNDS.

By an unobtrusive Act of the last session of Parliament the country parish may become the owner and protector not only of its own village green, but of lands handed over to it for the inhabitants "to walk abroad and recreate themselves." A couple of circulars calling attention to the provisions of this "Commons Act, 1899," have been issued by the Local Government Board. One is addressed to the clerks to the parish councils throughout the country (who by the way are not necessarily the gentlemen who lead the responses of the villagers on Sunday). The other, which encloses the first, is addressed to the clerks of county councils and informs them that their administrative counties are now possessed of all the powers as to open spaces possessed by the London County Council and by municipal corporations in the provinces. The council of an administrative county can also confer upon a parish council the powers we have already hinted at of acquiring and controlling open spaces for the village. This investment of the parish council with the powers possessed by district councils having been made by the council of the county, any trustees may sell open or waste ground to the parish, may transfer to the parish any burial ground or land left for recreation purposes, and the Charity Commissioners may sanction a scheme dealing for these purposes with allotments under enclosure Acts. Moreover, the council of any district may hand over to a constituent parish any public open space within the area of the latter, devolving the care of the same upon the parish. The parish can also beautify and improve any open space bought by or handed over to them, and make by-laws for the protection and regulations as to the use of these parks and recreation grounds.

EXOTIC AND INDIGENOUS DISEASE.

The late Sir Richard Thorne, when written to some years ago about the importation of small-pox—a patient having travelled from a southern port through London to a large manufacturing town in the north—lamented that the existing law gave so little power to port authorities over what may be distinguished as indigenous, as contrasted with exotic, infectious maladies. In the case mentioned, two artists had embarked at Alexandria in a ship which, calling at Gibraltar, took on board a troop of soldiers. One of the artists was taken ill *en route*, and when the troops were landed in England the ship captain insisted upon his also going ashore, telling his comrades that if the illness should turn out to be small-pox, the vessel might be detained at Liverpool. It was all the same, for the medical officer of health in the northern town wired at once to the port officer when he saw the patient. The fact remains, however, that these two men travelled 300 miles by rail—one of them with the eruption of small-pox upon him—and no effort seems to have been made at the port of entry to prevent it. Quite recently Hull has suffered from a considerable outbreak of the same disease, brought to it in the first instance by an infected crew from Spain; and only the other day, at Stalybridge, a man arrived home from Russia, having travelled from Moscow with the characteristic exanthem of variola manifest upon his face. His progress was: Moscow April 17th, Warsaw 18th, Berlin 19th, Flushing 19th, Queenboro 20th, London, Manchester, and Stalybridge 20th. Three men travelled with him from London, and all three have contracted small-pox—one at Bolton, one at Oldham, the third at Carlisle. Is there any reason why an officer of the port sanitary authority should not accompany every packet crossing the Channel? Even the Dover-Calais passage is long enough to enable a sufficient inquiry to be made to prevent such an accident as we have described from occurring. There is practically no examination of passengers themselves in any of the ordinary routes. If a ship comes from a country where cholera exists, every passenger's address is forwarded to the sanitary authority into whose district he proposes to travel, and if he be actually ill he is detained. When he has got small-pox, it almost appears that he may do what seemeth good in his own eyes.

CHRONIC BRASS POISONING.

The paper by Dr. Wm. Murray on chronic brass poisoning, published at page 1334, is opportune. Not only is the medical profession bestowing greater attention on diseases of occupation, but the public and the Legislature are looking to it for instruction in regard to them. In working men there is often considerable difficulty in tracing symptoms to their proper cause, and in the present instance this is particularly the case, for the workpeople describe their occupation differently—for example, stampers, metal polishers, etc. The one important point, however, is that they all work in brass. The literature of brassfounders' ague has been scanty, but the labours of Arlidge, Hogben, and Simon have made it easier for others to follow, and in vol. ii of Allbutt's *System of Medicine* many of the points discussed by Dr. Murray have been touched upon. It is interesting to observe how brass poisoning, like plumbism, hits young women and boys hardest. Anæmia, neuralgia, emaciation, dry throat, hacking cough, and hæmoptysis form a group of symptoms which, occurring in an artisan without any other explanation, should lead the practitioner to inquire into the work of the patient. The presence of a green line on the teeth, greenish-coloured perspiration, and hair dyed the same colour would suggest this form of metallic poisoning; but since brass is an alloy of copper and zinc, it is difficult to say which of these two is the culpable metal. Most authorities lean to copper, but Dr. Murray thinks zinc cannot be altogether excused. It seems on the whole probable that copper is the more poisonous of the two metals. The green line on the teeth is known to be a deposit of copper, while the dye of the perspiration and the elimination of copper by the skin suggest that this is the metal that is causing the symptoms. Milk, personal cleanliness, and well-ventilated

workshops are regarded as prophylactics, and in Dr. Murray's experience phosphorus in small doses, or phosphoric acid, has given satisfactory results.

PREVENTION AND CURE OF "CAPE HORSE SICKNESS."

AMONGST other matters brought into prominence by the war in South Africa is the disease of the horse known as "Cape horse sickness." As the nature of the operations renders mobility essential, and the transport of men and material depends on the health of the horses employed, the subject is of special interest and importance at the present time. Though the morphology of the causal factor has not yet been satisfactorily demonstrated, and many points in the pathology of the disease remain for elucidation, it has been long known that the blood of an affected animal is virulent and retains its power of inducing the disease for long periods outside the animal body under apparently adverse circumstances. The disease is produced both by ingestion and subcutaneous inoculation of such blood, and it is fully recognised that certain localities are especially dangerous. Methods of prevention based on this knowledge have been adopted with varying success. It is now most commonly believed that if horses are not allowed to graze on the veld in the dangerous districts until the herbage has been dried by the sun they will probably escape the disease. Notwithstanding all that is known of prophylaxis, Cape horse sickness remains a matter of the utmost concern. The exigencies of warfare often render adoption of the ordinary preventive measures impracticable. Anything, therefore, which would render the horse's body an unsuitable soil for the virus would be a great desideratum, hence the announcement in the *Cape Times* of April 24th, 1900, by Mr. George C. Purvis, M.D., B.Sc., late Medical Assistant to the Bacteriological Institute, Graham's Town, of a method of preventing "horse sickness" and of "effecting a cure in the majority of instances" will be read with interest. Dr. Purvis alludes to the dangerous effects of fortified serum (derived from immune horses) and describes his single experiment on a horse. He states that "we started by injecting subcutaneously 20 c.cm. of serum; the next week the animal got 50 c.cm., the next week 75 c.cm., the next 100 c.cm., the next week 150 c.cm., and about a week after 200 c.cm. Fourteen days after, 1 c.cm. virulent blood was given, and the horse did not show any symptoms of horse sickness whatever." "The serum used was obtained from the blood of horses which had received a dose of virulent blood some five or six weeks, or even longer before the blood is drawn for serum." It is unfortunate that Dr. Purvis has not been able to publish more than a single experience of his method. This is hardly to be regarded as a solution of the fundamental question—does the injection of serum confer immunity? Until this point is settled by a much-extended experience it is scarcely advisable to consider the practicability of adopting it as a prophylactic measure. It is to be hoped that Dr. Purvis will subject his method to a much more convincing test than that now adduced, and that the publication of his results will mark a step in the advance of useful knowledge on this subject.

SIGNING BLANK MEDICAL CERTIFICATES.

A RECENT prosecution at Leeds for making and giving a medical certificate of the cause of death of an infant which was false, because it had been signed in blank by one practitioner, while the cause of death was filled in by another practitioner who had never seen the infant, is of some importance. The prosecution was instituted by order of the Registrar-General, and the following were the facts of the case: An infant died in Leeds fourteen days after it had been attended at the Leeds General Dispensary, and the mother, on application at that institution for a medical certificate, was furnished with one by the *locum tenens* of the medical officer of the dispensary, for which purpose he used one of several forms which the medical officer had signed in blank, and left for use during his absence. The local registrar, on the production of this certificate, elicited from the mother, who came to register the death, that the practitioner whose signature the certificate bore had not seen the child for fourteen days, and therefore reported the case to the coroner, who held an inquest thereon, at which the circumstances of the case were fully investigated. Subsequently the case was reported to the Registrar-General, who instructed the Superintendent for Leeds to prosecute for making and giving a false certificate in contravention of the provisions of Section XL of the Births and Deaths Registration Act of 1874. At the adjourned hearing of the case, the Leeds stipendiary magistrate, while recognising that the defendants had no improper motive in making and giving this certificate, expressed the opinion that the Registrar-General deserved the thanks of the public for instituting the prosecution. He decided, however, that the case would be met, as the Registrar-General did not press for heavy penalties, by fining the medical officer £2 for signing the blank form of certificate, and his *locum tenens* £1 for inserting the cause of death of the infant, whom he had never seen. The grave objections to the practice of leaving signed blank forms for medical certificates for use during the absence of the certifying practitioner it is unnecessary to dwell upon, and the result of this recent prosecution ought to be widely known.

THE HUMANE SIDE OF WARFARE.

DR. NICHOLAS SENN, in a recent number of the *Journal of the American Medical Association*, says that the most pleasing features of modern warfare are the efforts made in all civilised countries to make it more and more humane. The horrors of Sebastopol, Gettysburg, Solferino, Sedan, and other great battles during the present century will, he thinks, have no equal in the future. Governments and nations are beginning to realise more fully the importance of providing the soldier with food and clothing conducive to the preservation of his health, and bringing into effective action sanitary rules calculated to guard against preventable diseases. After referring to the beneficent work of the Red Cross and other philanthropic societies, he says that the neutral grounds near the line of battle on each side are the places where the humane side of modern as compared with ancient warfare is most vividly exhibited. He describes a few instances of the kind which happened during the late Spanish-American war during his service in the field as chief of the operating staff. A few days after the battles of El Caney and San Juan he was invited by Dr. Goodfellow to accompany him on a trip to El Caney, and from there to the Spanish line, as instructions had been received from headquarters to transfer a number of wounded Spaniards across the American line. The Spanish officers whom they met were well-educated and polished gentlemen. While waiting for the ambulances cigarettes were freely passed around, and all kinds of subjects outside the war were freely discussed in the shade of a group of palm trees. About the time the ambulances arrived a Spanish surgeon with 30 hospital corps men and the necessary amount of litters made his appearance According to Dr. Senn the Spanish compared very favourably with the American litters. He says that there can be no longer any question that the Spaniards respected the humane side of warfare, although during the war the American press frequently took occasion to state the contrary. It was asserted that the Spaniards did not respect the Red Cross, and that wounded and non-combatants under the protection of the Red Cross flags were frequently fired upon. Dr. Senn has reason to believe from what he saw during his service in Cuba and Porto Rico that these statements were made on altogether insufficient grounds.

It is true that medical officers, litter bearers, and wounded men on stretchers who were being conveyed to the rear were killed and wounded, but such accidents will occur during any battle as long as the first-aid dressing is carried out, as it should be, near the fighting line. The modern small calibre weapon sends the deadly missile a distance of three miles, and injuries to non-combatants within this range are unavoidable. He adds that the small Red Cross flags used in the field cannot be distinguished with the naked eye for anything like the distance travelled by the modern bullet. No gross violation of any of the articles of the Geneva Convention can, he affirms, be laid at the door of the Spaniards. Perhaps one of the best proofs that the Spaniards conducted the war on the most humane principles is to be found in what occurred during the first skirmish after the landing of the American troops in Porto Rico. A small Spanish force occupied the summit of one of the foothills and opened fire. The American troops charged, and a young private of one of the Pennsylvania regiments, in his enthusiasm, advanced far beyond his line. The day was extremely hot, and when he came within a short distance of the brow of the hill he fell unconscious. A Spanish surgeon immediately rushed forward to render first aid, administered stimulants, and had the soldier at once conveyed on a stretcher to the American line. Another very pleasing evidence of the humane nature of recent warfare came to Dr. Senn's knowledge at Mayaguez, Porto Rico. After a somewhat lively skirmish near the suburbs of this place the enemy retreated, and the wounded from both sides were conveyed to the same hospital. He found the Spaniards on one side of the large room and the Americans on the other, all of them being under the care of the same nursing sisters of a Spanish order, who in their ministrations made no distinction between friend and enemy. It was interesting to observe how the men, who but a few days before did their utmost to kill or wound each other, were now on the most friendly terms. They exchanged little articles of comfort, such as tobacco, cigarettes, fruits, and relics of the war in a manner that did not recall the experiences of a few years ago. It is pleasant to have such irrefragable testimony borne to the conduct of the Spaniards in the late war, for it may be remembered that certain of the American newspapers persistently held them up to the execration of mankind for their alleged disregard of the rules of civilised warfare. Such charges are sure to be made in the heated state of national feeling generated by a war. When the history of the present struggle in South Africa comes to be written in cold blood, even the Boer will doubtless be painted in less lurid colours than he now is by writers whose patriotic ardour makes them "see red" or yellow.

PROFESSIONAL SECRECY IN THE UNITED STATES.

The Newhaven Medical Association has lately had the question of professional secrecy under consideration. It appears that in a recent trial in the Superior Court of the State of Connecticut, a medical practitioner of good standing was compelled to answer, against his protest, a question relating to knowledge obtained by him in a professional communication from his patient. The decision of the Court was based upon the common law rule at present governing such cases in the State. According to this law, while the confidential communications of a client to an attorney shall be considered as privileged, and shall not be disclosed as testimony in the Courts, the confidential communications of a patient to a medical practitioner, or of a penitent to a priest or other clergyman, shall not be deemed privileged, and must be divulged in the Courts as testimony. The State of New York some years ago passed a statute over-ruling the common-law rule, and this statute has since been adopted, practically without change, by seventeen other American States and territories. The Code of Civil Procedure of the State of New York provides that "A person duly authorised to practise physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity." The Newhaven Medical Association, being of opinion that the discrimination against medical men and clergymen regarding confidential disclosures under the common-law rule is against the best interests of public policy and of society, urges that the rule of common law should be over-ruled by the enactment of a statute similar to that of New York State.

A REPENTANT SCHOOL BOARD.

The School Board for London have appointed Robert J. Collie, M.D., Medical Superintendent of the Board's Ambulance and Home Nursing Classes. The number of pupils who received instruction in ambulance and home nursing last winter was close on 10,000, and the Board has decided that all ambulance classes shall be taught by medical men assisted by the Board's teachers. Each course consists of twelve lectures given alternately by the medical man and the Board's teacher. As we announced last week, the Board—which for the last two years has offered only half a guinea for a lecture lasting one hour and a-half—has now advertised its willingness to pay one guinea a lecture. Whether this change of remuneration is due to the reported difficulty in obtaining registered practitioners at the smaller fee or to the recent appointment of a medical superintendent we cannot say, but it is a matter for congratulation that the London School Board has ceased to set so bad an example to other Boards. It must, at any rate, be admitted that the fee of one guinea is by no means too much when it is remembered that the lecturer has no allowance for travelling expenses, and probably has to spend about three hours in earning the remuneration offered. We are informed that until recently the pupils were presented for examination by the St. John Ambulance Association, but that the Board have now determined in future to grant their own certificate.

THE COLONIAL NURSING ASSOCIATION.

The report presented to the annual meeting of this Association at Stafford House on May 23rd, over which Earl Grey presided, showed that 56 nurses sent out by the Association are now at work in the Colonies; 39 in Government employment and 17 engaged in private nursing. The gain to the Colonies, more especially Crown Colonies, where hitherto natives, mostly coolies, have constituted the nursing staff, by introducing skilled British nurses, is wellnigh incalculable. Medical men in the tropics are hampered by the want of efficient nurses, and the good already done in providing nurses, although considerable, is but infinitesimal when the enormous field for their services is considered. Tropical ailments are often so sudden in reaching a crisis, that the medical man often finds that he is tied to the bedside of a single patient for a day or two, during which time he has both to treat the patient and to nurse him. The inconvenience caused to other patients, the detriment to the welfare of the patient, by the same person acting as doctor and nurse and the tax on the strength of the doctor is a serious matter in a district where perhaps no other medical man is within call. Sir George White, who was present at the meeting, strenuously advocated the provision of trained nurses for India and for the Colonies. We would, however, urge the importance of having nurses trained, even it may be partially, in nursing tropical ailments before leaving home. At the Seamen's Hospital, London, and at Liverpool a course of training for nurses about to proceed to the tropics is now given, and we have no hesitation in impressing upon the Colonial Nursing Association the advantages of drawing their nurses only from amongst those who have had such training. Of the £5,000 required £2,000 has already been

raised in response to the appeal made by Mrs. Chamberlain some twelve months ago, and there is no reason to doubt that the full amount will soon be forthcoming. During the past twelve months the following colonies and districts have been supplied with nurses: East Griqualand, Dominica, Singapore, Tokio, Cape Coast Castle, Old Calabar, North and South Nigeria, and Sierra Leone.

THE REGISTRATION OF UNTRAINED NURSES OR SICK HELPS.

A CORRESPONDENT sends us a letter which has appeared in a provincial newspaper announcing a scheme for the local registration of those nurses who are unattached to any institution. It is proposed that the local register shall include two classes: (1) Hospital trained nurses; and (2) sick helps, who, it is stated, although without hospital training, are accustomed to undertake the care of sick people. While there is much to be said for local registers of unattached nurses, we think it is undesirable, in the interests of the public as well as of the nursing profession, to register such an ill-defined class as those who would come under the second of these two categories, and we hope the promoters of the scheme will reconsider the matter.

THE IRISH LOCAL GOVERNMENT BOARD.

SINCE the introduction of the Irish Local Government Act of 1899 the new local bodies have been kicking against any sort of control on the part of the Local Government Board, and the debate on Supply a few nights ago afforded the Irish members a welcome opportunity of voicing the views of their constituents. The efforts of the Irish Local Government Board to improve the position of the dispensary doctors, and to give them holidays, was one of the principal charges brought against their administration. Mr. Gerald Balfour, in an able speech, defended the action of the Local Government Board, and as *ex-officio* President took upon himself the entire responsibility. We are pleased to see that he announced the intention of the Board to prepare a new Order in Council, which will have no ambiguity as to the right of dispensary doctors to their holidays.

CAMBRIDGE SUMMER SCHOOL OF MEDICINE.

SOME five years ago the professors and teachers in the medical school of the University of Cambridge believing that many medical men actively engaged in practice would be glad to have an opportunity of seeing the newer methods employed in clinical medicine, and of themselves carrying these methods out under skilled guidance, instituted a summer school of medicine for qualified practitioners. The expectations with which the scheme was formed were more than fulfilled, for in July, 1895, about 80 medical men went up to Cambridge and were for the most part accommodated with rooms in King's and Downing Colleges. The success which attended this first effort has encouraged its repetition, and another school will be held from Monday, June 25th, to Saturday, June 30th. Courses of lectures and demonstrations will be given to qualified members of the profession in the University and Addenbrooke's Hospital. The mornings will be divided between clinical work at the hospital and demonstrations in the physiological, pathological, and pharmacological laboratories. In the afternoons special demonstrations will be given on anatomical, pathological, pharmacological, and sanitary matters, and on two of the evenings formal lectures will be given, the one by Professor Clifford Allbutt on Angina Pectoris, and the other by Mr. Yule Oldham on the Factors which Determine Climate. Visitors will, it is expected, be given rooms in the colleges in order of application, and will breakfast, lunch, and dine in Hall. The school will begin on Monday evening, when Professor Sir Michael Foster will hold a reception in the Hall of Trinity College. On Wednesday afternoon Professor Allbutt will give a garden party, and on Friday evening a smoking concert will be held in King's College Hall. The course will terminate at midday on Saturday. These are the arrangements at present made, but they are open to revision. The fee for the whole course is £4 4s., a sum calculated to cover board and lodging in the colleges and out-of-pocket expenses in the laboratories. We are sorry to hear that on the last occasion these expenses were not entirely met by the fees received, and it is to be hoped that a more favourable result may be obtained this year, as it is not fair to expect the professors and teachers not only to give their time and skill but also to put their hands in their pockets. The teachers on the last occasion were much encouraged by the zeal with which the demonstrations were followed, and were thus repaid for the great amount of trouble taken, and we were assured at that time by some of those who joined the school that they had derived the greatest benefit from their attendance, and had been intensely interested in the work brought before them.

COLLECTIVE INVESTIGATION OF CANCER.

THE Committee charged with the organisation of a collective investigation of cancer in Germany, to which reference has already been mede in the BRITISH MEDICAL JOURNAL, is now fully formed. Professors von Leyden and Kirchner are the Presidents, and Dr. George Meyer the Secretary. The Congress of Internal Medicine has appointed Drs. Merkel, of Nürnberg, and Naunyn, of Strassburg, to represent it on the Committee. Professors Gusserow and Olshausen represent the German Gynæcological Congress.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS, AUGUST, 1900.

THE Paris Executive of this Congress give notice that the final prospectus is about to be issued. This prospectus will contain the titles of all communications, with the names of the authors, which have been sent to the Officers of the Congress, 21, Rue de l'Ecole de Médecine, Paris, before June 15th next. It is necessary, therefore, that all notices should be sent to Paris at once. The list of members will be closed on July 15th, and communications can be made until that date, but such belated notices will not appear in the final prospectus. The British Government has officially appointed the following gentlemen to represent Great Britain and Ireland at the forthcoming Congress: (1) Lieutenant-Colonel E. F. Drake-Brockman, I.M.S., delegate from the Indian Medical Service (Great Britain); (2) Brigade-Surgeon-Lieutenant-Colonel Alexander Crombie, I.M.S., delegate from the Indian Medical Service (Great Britain); (3) Fleet-Surgeon Gilbert Kirker, M.D., R.N., representing the Naval Medical Service; (4) Thomas Joseph Stafford, Esq., F.R.C.S.I., Medical Commissioner of the Local Government Board, Ireland. These appear to be the only delegates of which the General Committee at Paris have official cognisance at the present time.

WE regret to notice the announcement of the death of Mr. James Grosvenor MacKinlay, F.R.C.S.Edin., Ophthalmic Surgeon to the Royal Free Hospital, which occurred on May 25th.

THE Cavendish Lecture before the West London Medico-Chirurgical Society will be delivered by Mr. H. T. Butlin, Surgeon to St. Bartholomew's Hospital, at the Town Hall, Hammersmith, on Friday, June 22nd, at 8.30 P.M. The subject of the lecture will be the Application of Pathology to Surgery. A *conversazione* will be held after the lecture.

A MEETING to discuss the formation of a society for the advancement of the study of diseases of children will be held at the house of the Royal Medical and Chirurgical Society, London, on Monday, June 11th, at 5.30 P.M.

IN addition to the candidates whose names have already been mentioned, Mr. A. Pearce Gould, Surgeon to the Middlesex Hospital, and Mr. Jordan Lloyd, Surgeon to the Queen's Hospital, Birmingham, will offer themselves for election next month to the Council of the Royal College of Surgeons of England. We understand that Mr. Tweedy, one of the retiring members, has decided to offer himself for re-election.

WE regret to learn from the *St. Petersburger medicinische Wochenschrift* of the death of Dr. Valerius Idelson, who died lately at Bern, where he had lived for many years. Dr. Idelson was a Russian, and did much good service by making the scientific work published in Russian and Polish periodicals known to the rest of Europe by means of abstracts which he sent to French, German and English medical journals. He was also the interpreter to his own countrymen of the scientific work published in these languages. Dr. Idelson was for a long time a valued correspondent of the BRITISH MEDICAL JOURNAL, and we are therefore the more grieved to note that in spite of a life of strenuous labour he has left his family unprovided for.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Midwives Bill will come up again after the long Whitsuntide recess, but if the dissolution rumours prove true it will not have much chance of passing, as in that case the Government will want all the time to pass their own Bills and wind up the business of the session before the appeal to the country in July. There are a number of amendments down upon the paper, and a new clause stands first in the name of Sir George Pilkington, providing for the inspection of lying-in homes. Mr. Lloyd-George will move to substitute the title of "midwifery nurses" for "midwives," and also to inflict penalties for misconduct. Colonel Victor Milward seeks to protect the village "Gamps," while Dr. Farquharson has an amendment to give the General Medical Council powers to appoint the members of the Midwives Board from among registered practitioners in the chief divisions of England and Wales. Mr. Cohen comes last with a proposal to appoint and pay medical men to whom midwives can apply in cases of abnormal labour or other difficult conditions. The Home Office is likely to put down important amendments later on. So there are many material points likely to be raised, but none are already notified of sufficient substance to materially endanger the Bill if it gets a good long time for discussion. This, however, must be very doubtful, as it stands second on the paper for June 27th, having the Merchant Shipping Bill in front, and to this measure there are several amendments.

The Case of Dr. Cullen was raised in the debate on the Irish Estimates on Friday night, in connection with the Irish Local Government Board. It seems that Dr. Cullen, the Medical Officer of Health for the Castleknock District, had been retired by the Local Government Board in consequence of alleged negligence in connection with an outbreak of typhoid fever. Mr. Harrington argued warmly in favour of Dr. Cullen, and urged that the main outbreak at the Constabulary Depôt was not notified to him. It was consequently unjust to call upon him to resign for not reporting the cases. The Chief Secretary upheld the action of the Local Government Board, and said that an outbreak which caused 100 cases and some 12 or 13 deaths was too serious a matter to be passed over, especially as in one case, that of a dairyman, sufficient care had not been taken in investigating the case as to its causation and possible effects. Moreover, the Chief Secretary stated that Dr. Cullen had left for a holiday in the midst of the outbreak, practically ignoring the serious condition of things he had left behind him. It was not possible to let a case which had produced such serious results pass without the action the Irish Local Government Board had taken. Mr. Harrington made a stout fight for Dr. Cullen, but although the Chief Secretary admitted that Dr. Cullen might be otherwise employed, he would not admit that a mistake had been made, and on a division he was supported by 129 votes against 83.

The Future of the Invalided Soldiers sent home from South Africa in broken health is exciting a good deal of interest in the House, and members are anxious that something should be done for them on their return. On Monday the Under-Secretary of State for War said that the men will be paid and medically treated until they are discharged, their families receiving the ordinary allowances. After discharge their claims for pensions will be considered by the Chelsea Commissioners, whose powers have been recently increased in the direction of giving better pensions to men incapacitated by disease contracted while on service.

The Indian Famine was discussed, on the motion for the adjournment of the House, on Monday night, and Lord George Hamilton admitted that there were now 6,000,000 people receiving famine relief, and that in some districts there was not only terrible suffering but rising mortality. In the districts where famine had previously prevailed and the system of relief was known the mortality was little over that of normal years. The cholera outbreaks which had been reported were due to bad water, intense heat, and the consumption of unripe fruit. If at any time it was found necessary to supplement the numbers of officers, doctors, and nurses, the Government would draw to the utmost extent on the reserves available, and he should not hesitate to ask for help from the Chancellor of the Exchequer.

The Lunacy Regulation (Ireland) Bill, which was read a second time in the House of Lords on Friday last, introduced for Ireland some of the useful provisions which have been in operation in England for some years, and also gives the Lord Lieutenants power to order the conditional discharges of criminal lunatics. The Irish Lord Chancellor (Lord Ashbourne) has charge of the Bill, and he succeeded in passing it through Committee on Monday.

The Dangers of Water Gas were brought before the House by Mr. Steadman last week. He alleged that the 12 per cent. limit of admixture of water gas with coal gas, recommended by the Departmental Committee, was being exceeded by the London companies. He asked the President of the Board of Trade whether, under the circumstances, he would consider the desirability of legislating upon the subject. Mr. Ritchie, in reply, did not admit the full accuracy of Mr. Steadman's statements, and said there was no power of legislative restriction, and also that any legislation if undertaken would have to be general, and not for London alone. He could, however, make no promise.

Railway Accidents were the subject of a question addressed by Mr. Channing to the President of the Board of Trade, who said that the total number of fatal accidents in connection with the movement of vehicles on railways to railway servants and contractors' servants from 1895 to 1899 was 1,869. An inquest was no doubt held in each case. In 13 cases application was made by the coroner for a representative of the Board of Trade to act as assessor, and in 12 cases such appointment was made, while in the remaining case a sub-inspector was directed to attend the inquest and assist the coroner. The Railway Prevention of Accidents Bill, of which Mr. Ritchie has charge, passed the report stage on Monday night before the House adjourned for the holidays.

ROYAL NAVAL AMBULANCE RAILWAY CARRIAGE AND STEAM LAUNCH.

THE transport of foreign naval invalids from their port of arrival in England has hitherto been by ordinary railway carriages or small Government steamers, whence they have been transferred to hospital in naval cots if unable to walk. In some cases, as at Liverpool, it was necessary to transfer the more serious cases to local hospitals or sick quarters until they were pronounced fit to travel.

Under the present progressive naval medical administration, a notable advance with the times has been made at Southampton for the transfer of naval invalids to the Royal Naval Hospital at Haslar, some twenty-five miles distant.

At Southampton now may be seen an ambulance railway carriage built by the South-Western Railway Company for the Royal Navy in January last. It is somewhat the size of a Pullman car, about 55 feet in length, with bogey wheels, four in number, at either end of the carriage. Access to the ambulance is obtained at the sides of the carriage at the rear end by double doors opening outwards for the ready transfer of naval cot cases. On entering the ambulance on the rear end is noted a small locked cupboard, evidently for medicines, restoratives, etc.; forward of the doors of entry, on either side are American covered cushioned seats for convalescent patients, well shown in the illustration of the interior; in advance of this compartment, which can be screened off if desired, we find naval cot benches, four in number, two on either side, one above the other, presumably for officer patients.



Fig. 1.—Naval ambulance railway carriage, interior view.

The arrangement for the comfort of naval cot invalids in transit is most excellent; on each bench is a spring-supported flat wooden frame, corresponding in size to the cot frame to be placed upon it, and provided with brass "lugs" at each corner; the cot is thus secured, and the sick or injured inmate travels in the greatest comfort.

Immediately in front of this compartment is a smaller one, with a gas stove fitted to receive a kettle to boil water on one side, and a locker seat on the other side.

In advance of this is the main cot compartment, containing four naval cot benches on either side, two over two, with the special fittings previously described.

At the foremost end of the ambulance carriage is a small compartment, with window in front, in which on one side is a lavatory, on the other a watercloset.

The lighting is provided for at night with the ordinary gas lantern railway carriage lights, but attached woollen cowl extinguishers are provided for use if desired.

The ambulance carriage is built in the best style of the

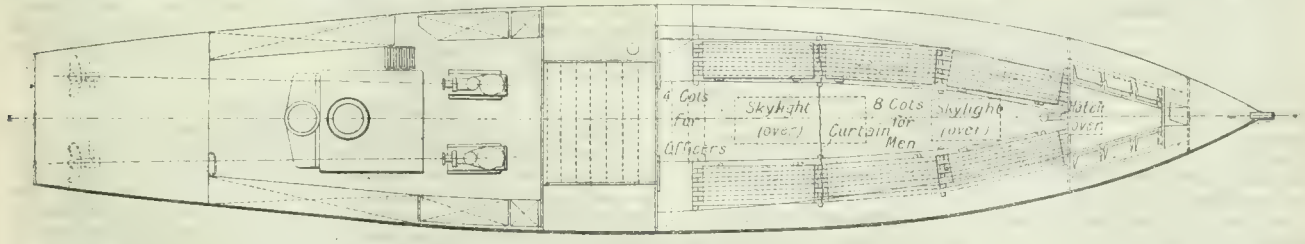


Fig. 2.—Naval ambulance launch, plan.

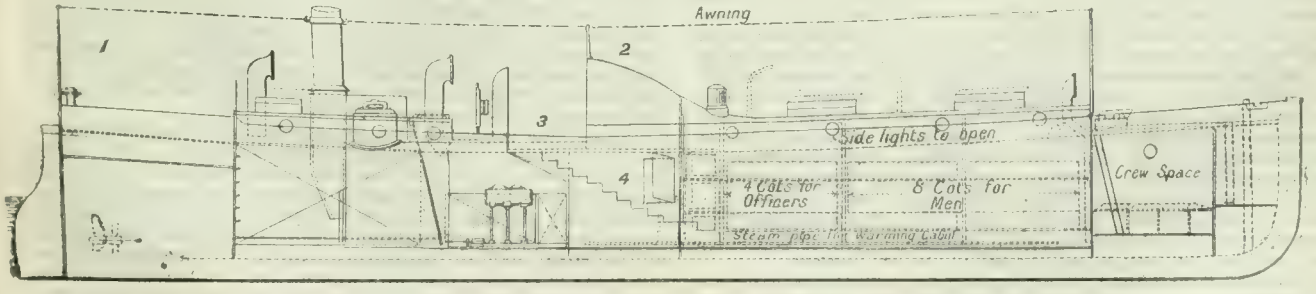


Fig. 3.—Naval ambulance launch, section; 1, seats for patients and space for baggage; 2, hood over staircase; 3, portable covering necessary in a sea way; 4, steam coil.

South-Western Railway Company's carriage works; the exterior is of a light-coloured polished wood, and is ornamented at the centres with the naval crown over the St. John Ambulance badge. Altogether this "medical (and surgical) comfort" reflects great credit on the naval medical administration, the designer, and the builder. The illustration (Fig. 1) shows the interior arrangements of this ambulance railway carriage.

The Royal Naval Cot.—Here the superior advantages of this long-established cot may be described; it consists of a flat wood frame of some 7 ft. in length and 2½ ft. in width; the frame is secured in canvas, which forms the bottom, sides, and ends; the latter, above the cot proper, are brought up to an apex, with suitable arrangements for slinging it to hooks on board ship, or to a ridge pole for hoisting it in or out of a ship; by the firm wooden frame it can be hand carried; the patient, if necessary, can be laced into it by the canvas sides; it would apparently be impossible to improve on it for the transport of helpless patients, and we have known of it being extremely valuable, if not indispensable, in removing a critical case from her bed at her residence to a mail steamer at a foreign port, the naval seamen and midshipmen in charge proving themselves perfect bearers in that case.

The Royal Naval Ambulance Steam Launch.

Cotemporary with the provision of a royal naval ambulance railway carriage, the naval authorities have established at Portsmouth two ambulance steam launches for the transfer of naval sick cot cases, and the more able-bodied from ships and transports at Spithead, as well as from the harbour ships at Portsmouth to Haslar Hospital, situated near a creek leading out of Portsmouth Harbour, and where a pontoon landing place is provided, with a covered way leading to the railway or tram carriage, fitted to transport these cots and more able-bodied sick to that hospital, distant about a-quarter of a mile from this landing.

This ambulance twin-screw steam launch was designed under the late naval medical administration, the arrangements were arrived at by the medical authorities at Haslar, and the constructor's department, Portsmouth Dockyard, who have achieved a long-desired reform in this matter.

Previously each ship sent its sick, including cot cases, to hospital in their own steam launches or larger boats, with no special provision for the purpose; this entailed a large expenditure of labour, and but little comfort to the sick. Now by the provision of two of these ambulance twin-screw steam launches the sick can be collected from all ships, at suitable hours and time of tide, and conveyed in comfort to Haslar. These ambulance launches work on alternate days, and thus secure a continuous system of efficiency.

The arrangement on board the ambulance steam launches will be readily seen from the sketches given (Figs. 2 and 3). They are 72 feet in length, and have 15 feet beam amidship, with a draught of about 3 feet. Owing to a comparatively flat bottom they roll somewhat in a seaway, or in the wash of steamers in the harbour; their length entails great care in piloting them up Haslar Creek, which might be advantageously dredged to render the hospital more accessible by the launches at all states of the tide.

In the fore part of the launch, on battened shelving, is accommodation for 12 naval cots in two tiers; the after cot spaces can be screened off if necessary from the foremost ones; the shelves are provided with steadying brass "lugs," but the spring frame-rests for the cots are not provided as in the railway ambulance carriage; these would be a desirable fitting.

The cot compartment is reached by a broad staircase with hooded covering; lockers are placed on the sides of the boat at the foot of the staircase and outside the sliding double doors enclosing the cot space. Abaft this cot compartment is the engine room and the twin screw propellers, and in the stern sheets space is found for seats for the more able-bodied patients and the patients' effects, bags, chests, etc. The cot compartment has two raised skylights overhead, fore and aft of it, for ventilation, with candle lamps on the sides for artificial light when requisite.

Eighty thousand dollars have recently been given for the purpose of building a new laboratory of physiology and anatomy in Cornell University.

THE WAR IN SOUTH AFRICA.

AT BLOEMFONTEIN.

By Sir William Thomson,
Surgeon-in-Chief, Irish Hospital, Field Force, South Africa.

The Move of the Irish Hospital to Bloemfontein.

The troops which entered this town after the series of victories by Lord Roberts were half starved and the horses were mere shadows. Before anything could be done in further operations it was necessary to get up food and general supplies, and what it meant to feed 50,000 men along a single line of rail 750 miles from the base may easily be imagined. At last orders came for our section, under Dr. Stoker, to return to De Aar, and that the portion with myself should march to Norval's Pont, and having joined there proceed by road to Bloemfontein. The tents and some of our baggage were conveyed by train, and this party and myself reached Bloemfontein on the morning of April 11th. The rest of the corps, with the exception of two orderlies with a waggon still detained in the Prieska district, arrived on April 21st after a trying march.

Colonel Stevenson, the P.M.O., assigned us a very pleasant camping ground on the slope of the principal hill which overlooks the town, and in a short time we were able to take in patients. A large number of these were suffering from enteric fever, and some were wounded. These unfortunate fellows had been lying on the ground in field hospitals, and had had long distances to travel. Two of them were insensible when they arrived, and, in spite of all the care we could give, never rallied. For others the evil day was only postponed, and in the first week we lost eight men. Later on other consignments arrived. Some of the wounded had been two days in bullock waggons, with but little to eat, yet bearing their distresses with characteristic bravery.

On the afternoon of May 2nd a convoy of wounded arrived in bullock waggons, after a march of forty-eight hours, in charge of Dr. Engelbach, civil surgeon. They were men of the 12th Lancers and other cavalry regiments who had been surprised while watering horses after a day's engagement. While they were clumped together in the water some guns, including a Vickers-Maxim, were turned on by the Boers with serious results. One man, a sergeant of the 12th Lancers, was struck on the right side of the head by a pom-pom shell. It carried away a large portion of the parietal bone, and brain substance was freely oozing out. He was quite insensible; the wonder was that he lived so long. An exploration with the finger discovered a cavity about the size of an egg, and lying near the petrous portion of the temporal a large fragment of bone. He lived until next day. It was then found that the vault was extensively fractured, and that it was only held in position by the scalp.

Wounds of the Knee.

A fine young fellow of the same regiment was struck in the very centre of the popliteal space by a fragment of shell. Dr. Engelbach said the hæmorrhage was so severe that he thought the artery had been ruptured. He had securely bandaged the part and controlled the vessel with a tourniquet. On exposing the parts I found an extensive penetrating wound occupying the popliteal space, and a large fragment of shell embedded in the soft parts anteriorly. The finger passed easily in from behind, and I then found fracture of the head of the tibia, the inner condyle broken off obliquely into the shaft, and general disorganisation. I accordingly amputated the limb. One of the large venæ comites was open for about an inch. The artery had escaped, but was thrombosed.

I have had two cases of gunshot wound of the knee-joint—one by a Mauser bullet, one by a Martini-Henry. In the first the bullet entered below the base of the inner condyle and passed outwards and upwards. There was much effusion, attended by starting pains. A radiograph by Dr. Friel showed that a large oval fragment about 3 inches long had been raised off the lower end of the shaft. There was a little fever, but the wounds healed without suppuration, and the patient has been sent to the Cape. In the second case the bullet was removed on the field by cutting down at the inner margin of the patella and a little below. The Martini-Henry bullet has

no nickel covering and is composed of lead, and in this case its extremity had spread and the cup-shaped expansion was filled with bone. Here there is some fever, but in spite of the severe wound I hope the case will do well.

WONDERFUL ESCAPES.

There are other cases of bullet wound of the limbs and thorax which are proceeding satisfactorily. Of the curiosities which one meets here I may mention two. Just a week ago a man of the 10th Hussars was shot through the nose. The bullet entered the left ala just above the margin, passed through the septum, and out through the right ala. No dressing was required after the fourth day, and the wounds are represented by two small upright lines.

A sergeant of the 12th Lancers was badly contused over the inner condyle of the left humerus. A pom-pom shell entered his haversack behind, traversed his notebooks and letters, and escaped in front. He had some extravasation of blood about the elbow and tingling along the ulnar nerve, but he was otherwise unharmed. Another man was knocked off his horse by a glancing blow of a "pom-pom" on the right side just above the zygomatic arch. Beyond an abrasion and much headache he is very well.

THE HOSPITALS IN BLOEMFONTEIN.

The stress and consequent exhaustion of the weeks of marching and fighting which culminated in the occupation of Bloemfontein have told their tale. To-day there are between 3,000 and 4,000 sick in this town, and of these 1,200 are enteric cases. This gives an idea of the amount of work to be done. The military general hospitals 8, 9, and 10 are crowded. No. 9 has already 1,500 patients. Several of the public buildings—the Raandzaal, Grey College, and others—are utilised for the accommodation of the sick, and in addition there are the Irish Hospital, the Portland, and the Langman. They are by no means too numerous; indeed, they are not by any means sufficient to relieve the strain, and one only hopes that the cooler weather and the rest which the troops have had may help to lessen the streams of sick which flow daily into the town.

THE AMBULANCES OF THE IRISH HOSPITAL.

The waggon equipment of the Irish Hospital (fifteen ambulances) has been found of inestimable advantage to the local medical authorities. No other hospital here, except the Australian, is supplied with such means of transport. We have carried hundreds of sick and wounded for the various hospitals which have no efficient means of conveyance.

THE SPECIAL HOSPITALS.

IMPERIAL YEOMANRY HOSPITAL.

WE learn from Mr. Alfred Fripp that the site at Deelfontein proves on further acquaintance to be very well adapted for the purposes of the hospital. In the middle of April it contained 550 beds, and it was the intention shortly to raise it to 750; this would be rendered possible owing to Surgeon-General Wilson having sent fifteen extra tents. In consequence of the great number of cases of enteric fever at Bloemfontein, numbering close upon 2,000, all surgical cases were then being sent, as soon as possible, to the various hospitals south of the Orange River; some went to the Scottish Hospital at Norval's Pont, others to the General Hospital at Naauwpoort, others to the Stationary Hospital at De Aar, which had 300 beds, and a considerable portion went to Deelfontein. The air of the place was beneficial to the wounded, who, as a rule, soon learnt to do justice to the products of the French cook, who produced admirable dishes from unpromising material. The hospital also contained many cases of enteric fever but the proportion was tending to diminish. The detachments from the St. John Ambulance and the London Fire Brigade had worked well, both in establishing the hospital and in tending the sick.

The Imperial Yeomanry Field Hospital under Major Stonham, spent some hours at Deelfontein before resuming the journey northward, and the staff were in hopes that it would be in time to be included in Lord Roberts's advance.

THE LANGMAN HOSPITAL.

By the request of the Principal Medical Officer at Bloemfontein, the Langman Hospital of 100 beds has been converted into one of 150, the necessary equipment for which has been provided by Mr. Langman, and despatched to South Africa. The medical staff has been increased by the appointment of Mr. W. W. Woolliscroft, M.R.C.S., late House-Surgeon to Charing Cross Hospital.

WITH THE NATAL FIELD FORCE.

[FROM AN OCCASIONAL CORRESPONDENT.]

SINCE the relief of Ladysmith the troops have been encamped at strategetical points along the Natal Government Railway, including Colenso, Ladysmith, Modder Spruit, and Elandslaagte. Most of the troops which formed the Ladysmith garrison are at present at Modder Spruit, and the men are rapidly regaining health and strength. The rainy season in Natal is now over, and the weather and climate are all that could be desired. The days are bright and pleasantly warm, the nights cool and refreshing. Dysentery is still very prevalent amongst the troops, but simple-continued and enteric fevers are rapidly diminishing.

RATIONS.

A greater variety in rations is now possible. For the time being tinned provisions are no longer in use. Fresh beef or mutton is issued daily, and vegetables are obtainable in fair quantities. Fruit, consisting of delicious oranges and pine apples, can be purchased in practically unlimited quantities. The only alcoholic drink obtainable by the men at present is beer, manufactured by the Natal Brewery Company. Most of the units in Natal have arranged for a supply of this, but the daily issue is wisely limited to 2 pints a man.

BRITISH RED CROSS SOCIETY.

This Society has now started a branch in Ladysmith, and is doing excellent work. The officials there, as elsewhere, are eminently obliging, and are always glad to see officers of any branch of the service at their office. They have large supplies of warm underclothing and medical comforts on which officers in command of units are allowed to draw to an almost unlimited extent.

FIELD HOSPITALS.

In one of his interesting letters from Chieveley, published in the BRITISH MEDICAL JOURNAL for March 24th, 1900. Mr. Frederick Treves, F.R.C.S., describes a visit to one of the field hospitals—hospitals whose officers have, as Mr. Treves justly observes, "the heaviest duties, the greatest share of hardships, and I am afraid the least credit for their splendid work." A brief description of the *personnel* and work of a field hospital will no doubt interest your readers. The *personnel* consists of 4 medical officers, a quartermaster, and 35 non-commissioned officers and men. Each hospital left England with this establishment complete. Since taking the field, however, numerous casualties have occurred amongst both officers and men until at the present moment many of the field hospitals are working with little more than half their original establishments.

Each hospital is equipped with its own transport, medical and surgical panniers and tents, calculated for 100 patients. In sudden emergencies, however, some at least of the field hospitals have treated as many as 300 sick and wounded at a time during the present campaign, obtaining additional tents from the regiments of the brigade to accommodate them. Under ordinary circumstances a field hospital has 40 tents, one square operating and 39 circular tents; 25 of there are for the accommodation of sick, the remainder are occupied by the *personnel*. surgery, office, packstore, etc. The hospital is pitched on a regulation plan with mathematical accuracy, the space occupied being 70 yards by 160 yards.

A field hospital is essentially a mobile unit, as it must accompany its brigade wherever and whenever it moves. When a march is ordered the hospital tents must be struck, and they and the equipment packed on the waggons by the hour appointed. The *personnel* and waggons then move off immediately in rear of the troops and in front of the brigade baggage waggons. On completing the march of, say, ten to fifteen miles or sometimes more, the men have to mark out a new camp on carefully-selected ground, to unpack the equipment, to pitch the tents, and to dig kitchens, ashpits, and latrines. The officers and men have then to commence

their duties of attending to the sick and wounded. Leisure is an unknown luxury to them, and the weekly or bi-weekly holiday enjoyed by other branches of the service is only known to them by name. If an action is in progress there may be a sudden and large influx of wounded. As each wounded man reaches the hospital he is examined; his name, with full particulars, is entered in the Admission and Discharge Book, and in addition on the "Return of Wounded;" and on the latter his wound is classified according to its degree of severity, its locality, and the projectile which caused it. Operations of emergency, such as removal of bullets, ligature of bleeding vessels, or amputation of badly-shattered limbs are performed. The wound is then dressed antiseptically, and the patient is ordered whatever nourishment and extras are considered suitable to his case.

The officers of the field hospitals are also responsible for the selection of cases for transfer to the base, and have to be careful to exclude all cases which are unfit to travel. When a large number are pouring into the hospitals this is no light duty. They also have to prepare the hundred and one returns which are required in the field, and must be ready at all times to answer queries about the wounded. If the action is severe or prolonged, they have to snatch food and sleep as best they can, the latter probably lying on the ground in clothes and boots, which may not have been changed for days.

From this it will be seen that Mr. Treves's reference to "the heaviest duties, the greatest share of hardships," is fully justified. Let us hope, however, that the latter part of his sentence about the "least credit" will not be justified in the present instance. The officers of the field hospitals have worked with the utmost courage, skill, and devotion, and they certainly merit a due share of any rewards which may be distributed. Their work is apt to be overlooked, as it is not done in the public view. It is, however, of the first importance, and the splendid results obtained in the stationary and general hospitals during the present campaign would have been impossible were it not for the care with which the field hospitals have carried out their important duties.

The work of a medical officer on field service is no doubt arduous, and the life is not devoid of hardships. Taking the rough with the smooth, however, campaigning in South Africa is full of variety, interest, and excitement, which cannot be equalled under any other conditions, whilst the experience gained is quite unique.

The Fifth and Sixth Brigade Field Hospitals, which were unavoidably left in Natal when their brigades proceeded to join Lord Roberts's forces in the Orange Free State, have now been ordered to rejoin their original brigades, much to the delight of all concerned.

THE VICTORIA CROSS.

The announcement that the Victoria Cross had been conferred on Major W. Babtie, C.M.G., for his heroism at the battle of Colenso, which reached Ladysmith on April 22nd, was received with universal satisfaction. In his capacity of Secretary to the P.M.O., Major Babtie has endeared himself to every officer of the corps in Natal. It is rumoured that at least two other medical officers with the Natal Field Force have been recommended for this coveted distinction for conspicuous bravery during the attack on Pieter's Hill, namely, Captain J. H. Campbell and Lieutenant E. T. Inkson. The case of Captain Campbell has already been referred to. Lieutenant Inkson has in reality earned the Cross on at least three different occasions. At the battle of Colenso he was in medical charge of the Royal Artillery, and was conspicuous for his disregard of danger, and for the coolness and constancy with which he exposed himself to the hottest fire whilst collecting and dressing the wounded. He was then transferred to the Royal Inniskilling Fusiliers, and with them was present at each of the subsequent battles. At the battle of Spion Kop he dressed the wounded for five consecutive days under the hottest fire from the Boer trenches. At the attack on Pieter's Hill he was in charge of the Inniskilling Fusiliers, and dressed the wounded wherever they fell. Finally, he was left alone in an advanced position with a wounded field officer. He brought the officer back unaided under a murderous fire from the Boer trenches.

THE ACTION AT TALANA HILL, DUNDEE.

WE are indebted to Major J. F. Donegan, R.A.M.C., Officer Commanding No. 18 British Field Hospital, for some notes on the wounds and injuries treated in that hospital after the action on October 20th, 1899. The total number of wounded was 105; of these 6 were dangerous (including 1 officer), 79 severe (including 13 officers and 3 hospital bearers), and 20 were slight. Of the slight wounds all had completely healed by October 23rd. By October 30th 30 of 79 seriously wounded men were available for duty, their wounds being either healed or in the stage of granulation. Up to the date of leaving Dundee (November 3rd) 5 patients had died, and 1 case likely to die (a wound of spine) was left behind, unfit to travel. The fatal cases were wounds of stomach and intestines, vault of skull and brain, and a severe wound of lung. They unfortunately included Major-General Sir William Penn Symons, K.C.B., who died on October 23rd, while the hospital was in the hands of the Boers. Throughout there was only one case where pus formed in the locality of wounds: a severe wound of the leg, with splintering of bone. When the hospital moved only four cases were left behind as unfit to travel, one officer wounded in three places, the case of spine and leg wound referred to, and also a wound through the hip-joint. They were progressing most favourably, with the exception of the spine case, which was considered mortal from the first.

One officer was wounded by three distinct bullets, 1 officer and 18 men were wounded twice with different bullets, there being an interval of time between the injuries in some cases, or when the first wound was not, in his own estimation, sufficiently severe to prevent the man doing his duty. This is an instance of the bravery and determination of the British officer and soldier in the attack on Talana Hill.

One man wounded through the lung and liver with unmistakable symptoms was able to sit up in bed ten days after injury, and on arrival at Ladysmith on November 4th, 1899, he had almost recovered.

Two men were shot through the neck, the bullet entering the mouth and injuring the soft palate and tongue. They suffered exceedingly for some days, but eventually recovered.

Three cases of penetration of the knee-joint did excellently, recovering without a rise of temperature. In two of these three stiff joints will undoubtedly result, but even this is satisfactory when compared with wounds of this locality in the North-West Frontier campaign, where there was hardly a recovery on record, the injury requiring amputation in almost all cases.

In 16 cases the bullets were lodged in the tissues; 14 of these were removed; 2 were left *in situ*, one in the lung appeared to do no harm, and the other, situated deep in the muscles of the buttock, could not be located without *x*-ray examination; only one amputation was performed—removal of fingers. Major Donegan attributes the favourable results to the following causes:

1. To the Mauser bullet itself, which is a merciful projectile at long ranges, only followed by fatal results in the case of injury to large arteries, vital organs, and intestines.
2. To the bullet being nickel-coated and therefore aseptic.
3. To its tendency being more to penetrate than to smash and destroy tissues at long ranges.
4. To the manner in which the wounded were dressed and attended to in the field, and also to their rapid removal to shelter. This necessitated the Indian bearers working under tolerably heavy fire, but, under the supervision of officers, warrant officers, British non-commissioned officers, and men attached to hospital, they carried out their duties in the most satisfactory manner, and, by availing themselves of all cover, escaped with only 3 casualties. At this date no wheeled transport had been supplied; on this account the removal of the wounded from the field had to be commenced the minute the infantry advanced, otherwise they would have been left out all night. In all about 241 wounded were removed by the dhoolie bearers from the field of action to the field and temporary hospitals. The battle lasted from 5 A.M. to about 2.30 in the afternoon of October 20th, 1899.
5. To the excellent and careful manner in which all cases

were attended to at the dressing station by Major Kerin, R.A.M.C. In many cases dressings applied there were not removed till the patient was completely recovered.

6. To the subsequent treatment of the wounded in hospital by the officers and assistant surgeons of No. 18 B. F. Hospital. This included the removal of bullets, rearrangement of dressings under the most trying circumstances, when the hospital was exposed to heavy fire on October 21st and 22nd, 1899, when shells frequently burst between tents where the staff were working.

With the exception of Major-General Sir William Penn Symons, K.C.B., and some men dressed in the field, the cases mentioned were under the professional care of Captain McDermott, Captain Erskine, and Captain Milner, R.A.M.C.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

(Continued from p. 1300.)

THE ETIOLOGY OF MALARIA.

DR. W. S. THAYER, of Johns Hopkins University, read a paper on Recent Advances in Knowledge concerning the Etiology of Malarial Fever. After reviewing the recent work of Manson, Ross, Grassi, Bastianelli, Bignami, and Celli, he said the conditions in Baltimore appeared to be essentially the same as those in Northern Italy. In that city they observed the main variety of mosquito, the *Culex pungens*, while in the suburbs they had found numerous examples of other *Culices* (especially the *C. tæniorhyncus* and the *C. triseriata*). Repeated feeding experiments with different *Culices* upon human beings and upon birds infected with *Laverania Danilevskyi* were without result. At Sparrows' Point, a most malarious district in the suburbs, and in a number of houses in the neighbourhood; beside the ordinary *Culices* there were found to be great numbers of the *Anopheles quadrimaculatus* (Say). This *Anopheles*, both in the markings upon its wings and in its gross appearance, was very similar to the *Anopheles claviger*. In several examples of this mosquito obtained from the room of a patient suffering with malaria, there were found in the stomach wall characteristic encapsulated refractive pigment-containing bodies corresponding in every way to the extracorporeal stages of the tertian parasite. In two examples of the *Anopheles quadrimaculatus* fed upon a patient whose blood contained full-grown tertian parasites, Dooley, in their laboratory, had been able to obtain similar bodies. In one *A. quadrimaculatus*, fed upon the blood of a patient containing crescentic bodies, there were found in the stomach wall, about thirty hours after feeding, two lanceolate pigmented bodies in every way corresponding to the earliest stages of the extracorporeal phase of the æstivo-autumnal parasite. The relation of the distribution of *Anopheles* to the prevalence of malaria had not yet been carefully studied in the United States. He concluded by saying that it might be considered as proved: (1) That the malarial parasite possesses an extracorporeal cycle which is completed in the stomach wall of mosquitos of the genus *Anopheles*; (2) that members of the genus *Anopheles* are capable of transmitting malaria from infected to non-infected individuals. There was reason to believe that if in any given region (1) proper measures for treating the spring relapses of malaria were adopted, and (2) efficient measures for destroying the dangerous mosquitos in their larval stage could be carried out, the prevalence of malaria might be materially controlled.

BACTERIOLOGY OF DYSENTERY.

Professor SIMON FLEXNER, who discoursed extemporaneously on this subject, said the attempt to establish a common etiological factor for all cases of dysentery had thus far failed. When one recalled the protean nature of other infectious diseases, among the most common of which were tuberculosis and typhoid fever, there could be no *a priori* objection to the hypothesis that the causative agency of dysentery need not necessarily vary for each of the many types of the disease that had from time to time been distinguished. That the lines of demarcation between the several clinical and pathological types should be inaccurate was not a matter of wonder. The terms "catarrhal," "tropical," "epidemic," and "diphtheritic" were far from signifying sharp-cut entities. The clinical manifestations and pathological lesions of the catarrhal variety occurred in all kinds of dysentery and in all places where the disease prevailed. The distinction between tropical dysentery, which was characterised by ulceration and thickening of the intestines—especially the colon, the lesions beginning in the submucous coat of the gut—from the epidemic disease in which a false membrane existed, usually associated with ulceration without any primary involvement of the submucosa, was far from sharp and constant. In the United States diphtheria had not been commonly observed in the ulcerative and amœbic form of dysentery, while in Egypt the two pathological conditions were not infrequently found together.

SOCIOLOGICAL STATUS AND EVOLUTION OF THE PHYSICIAN.

At the second general meeting Dr. William Osler's name was down for a paper on Modern Therapeutics, but the audience was disappointed of the promised treat, as the popular Baltimore Professor was unavoidably prevented from attending the Congress. Dr. CLARENCE J. BLAKE delivered an address on the Sociological Status of the Physician, and Dr. S. WEIR MITCHELL afterwards read a poem entitled The Evolution of the Physician.

THE MEDICAL SCHOOL OF THE FUTURE.

In the evening an address on this subject was delivered by Dr. H. T. BOWDITCH, of Boston. He said one of the most hopeful signs of the times in the field of medical education was the growing tendency of the better schools to ally themselves to universities, and of universities to establish medical departments. It might be expected in the near future to find a better class of medical schools under the ægis of a university, and they might reasonably hope that this change would be associated with a diminution of the total number of medical schools, now so greatly in excess of the needs of the country. It seemed to be evident that, in arranging a course of medical study, a distinction must be made between those subjects which it was essential that every student should know, and those subjects which it is desirable that certain students should know. In other words, provision must be made both for required and elective studies. Anyone familiar with existing methods of medical instruction was aware that in neary every department many things were taught which were subsequently found to be of use to only a fraction of those receiving the instruction. To indicate better the nature of the reform which he advocated he described a possible arrangement of a course of study in the department of physiology, with which he was more familiar than any other. An experienced lecturer would probably find it possible to condense into a course of about forty or fifty lectures all the most important facts of physiology with which every educated physician must necessarily be familiar. Attendance upon these lectures, combined with suitable courses of textbook instruction and laboratory work, would suffice to guard against gross ignorance of physiological principles. In addition to this work, all of which should be required, short courses of not more than eight or ten lectures each should be provided, giving advanced instruction in such subjects as the physiology of the special senses, cerebral localisation, nerve-muscle physiology, the internal secretion of glands the physiology of the heart, circulation and respiration, the digestive secretions, the reproductive organs, etc. These courses should be elective in the sense that no student should be required to take them all. Each student might, however, very properly be required to choose a certain number of courses, which, when once chosen, become for the student choosing them required courses leading to examinations.

A similar arrangement of instruction could be advantageously adopted in the departments of anatomy, histology, bacteriology, medical chemistry, pathology, surgery, and in the courses of instruction in the various special diseases, such as dermatology, ophthalmology, etc. In the existing state of medical education the introduction of the elective system in some form or other seemed to be an essential condition to any further important advance, for the curriculum of most schools was already so crowded that no considerable amount of instruction could possibly be added.

If it were urged that the elective system in medical educa-

tion would lead to the production of a class of physicians who, owing to the early specialisation of their work, would be inclined to overrate the importance of their speciality, it might be pointed out that this result was apt to be due not so much to early as to imperfect instruction in the work of a specialist, and that since the elective system tended to encourage thoroughness in special instruction, the evil might be expected to diminish rather than to increase. He proceeded to discuss how far the didactic and the laboratory methods of instruction were each adapted to secure these two objects of medical education, the distribution of the student's work, and the question of examinations.

In conclusion he said it might be expected that a medical school of the first rank would in the immediate future be organised and administered somewhat as follows: (1) It will be connected with a university, but will be so far independent of university control that the faculty will practically decide all questions relating to methods of instruction and the *personnel* of the teaching body. (2) It will offer advanced instruction in every department of medicine, and will therefore necessarily adopt the elective system of some sort, since the amount of instruction provided will be far more than any one student can follow. (3) The laboratory method of instruction will be greatly extended, and students will be trained to get their knowledge as far as possible by the direct study of Nature, but the didactic lecture, though reduced in importance, will not be displaced from its position as an educational agency. (4) The work of the students will probably be so arranged that their attention will be concentrated upon one principal subject at a time, and these subjects will follow each other in a natural order. (5) Examinations will be so conducted as to afford a test of both the faithfulness with which a student performs his daily work and of his permanent acquisition of medical knowledge fitting him to practise his profession.

The Work of the Component Societies.

The Association of American Physicians.—The President of this Association (Dr. E. G. Janeway, of New York) showed a commendable example of self-restraint by not delivering an address, or, as he himself put it, by not consuming such time by his introductory remarks as to infringe upon what was the moral right of the members. But for this, he said, he would have been tempted to touch upon the theme, Truth in Medicine. This could have been handled under such heads as truth in statistics, truth in diagnosis, truth in therapeutics, and truth in pathology. Among the papers read were A Communication on the Relation of Uric Acid Secretion to Epileptic Attacks, by Dr. James J. Putnam, of Boston, and Dr. F. Pfaff; one on Sanatorium Treatment of Pulmonary Tuberculosis and its Results, by Dr. E. L. Trudeau, of Saranac: and one on the Organism and Lesion of Actinomycosis, by Dr. J. H. Wright, of Boston. Pernicious Anæmia was dealt with by Dr. Richard S. Cabot, of Boston, who gave the results of a study of 110 cases; Dr. Frank Billings, of Chicago, who reported on the "blood-findings" in 19 cases, and Dr. F. H. Henry, of Philadelphia, who dealt with the clinical side of the question. On the third day Drs. F. F. Wesbrook, Wilson, and McDaniel discussed the varieties of the diphtheria bacillus; Dr. W. H. Park, of New York, read a paper on the Elimination of Deleterious Substances from Antitoxic Serums; Dr. W. W. Johnston, of Washington, presented a case of Addison's Disease under Treatment with Suprarenal Extract. Professor H. A. Hare, of Philadelphia, read a paper on the Attitude of the Physician and Surgeon to Appendicular Symptoms Complicating Typhoid Fever. The opinion was expressed that the absence of leucocytosis was an indication that a given case was not one of appendicitis, but it was not pathognomonic. Dr. Ira van Gieson, of New York, said he thought attacks of appendicitis were the result of the evolution of the species, providing for a race in which the appendix would be absent. Professor H. Welch was elected President for the ensuing year.

American Surgical Association.—The President, Dr. F. Weir (New York) delivered an address on Perforated Ulcer of the Duodenum. The surgery of the gastro-intestinal tract bulked large throughout the proceedings, indeed almost to the exclusion of any other topic.—A full-dress debate on the Surgery of the Stomach was opened by Dr. W. W. Keen (Philadelphia). —Dr. Roswell Park (Buffalo) was elected President for the ensuing year.

American Gynecological Society.—Dr. G. G. Engelmann (Boston), who presided, delivered an address in which he dealt with menstruation. He said many investigators had shown that the wealthy and the city-born were more precocious than their poorer or their country-bred sisters, but his own investigations more especially indicated the influence of mental stimulus. Thus, out of 2,315 patients who came under his observation in St. Louis dispensaries, the average age at which menstruation commenced was 14.24 years, while Dr. Chadwick of Boston had found much the same, for in his 2,500 cases the age was 14.3 years. In 697 cases from a consulting practice throughout the south-western States, country-bred women, the average age was 14.3 years. The average in 800 cases among Boston's highest class working girls was 14 years. Among the high and normal school girls, the 750 of whom statistics were collected gave the average of 13.8 years. In 1,200 college girls the average was 13.5 years. Neither birthplace nor parentage influenced the development of the girl and the appearance of puberty, as did the surroundings of childhood and early youth, which gave a variation of one year, as noted in the 5,000 cases which had been under oberservation. Among other matters discussed the results of conservative operations on the ovaries and tubes, a subject which was introduced by Dr. W. L. Burrage (Boston). His conclusions were that it is advisable to do conservative operations in all cases when the ovaries and tubes are not hopelessly diseased in all parts of their structure, except on patients who are near the menopause; on patients who have pronounced gonorrhœa of long standing, and in cases of malignant disease.—Dr. A. W. Johnston read a paper on the Internal Secretion of the Ovary. He said there was no proof that the ovary had any function other than the manufacture of eggs. It was in no sense a gland. The results produced by the administration of ovarian extract could be produced equally well by salt and soda, as hysterical patients were easily influenced. He condemned the practice of preserving a part of the tubes and ovaries as simply a postponement of trouble.—The Anastomosis of the Ureters with the Intestines was dealt with by Reuben Peterson (Chicago) and Dr. J. W. Bovée (Washington).—Dr. Thaddeus A. Reamy (Cincinnati) contributed a paper on Bronchial Disease not invariably a Contraindication for Ether Anæsthesia in Abdominal Surgery, based on an experience of 8,000 cases. The prejudice against the use of ether in the presence of acute, subacute, or even chronic bronchitis, was largely unfounded, provided proper conditions were observed in its administration. These conditions included proper preparation of the patient, that this anæsthetic be administered in the operating room, the temperature of which must be from 98° to 100° F., the chest and trunk of the patient lower than the pelvis and lower extremities, and the ether of pure quality.

American Pediatric Society.—Dr. Henry Koplik delivered an address on the Ambulatory and Hospital Management of the Gastro-intestinal Derangements of Infancy in the summer months among the poor of large cities.—Dr. Edward P. Davis (Philadelphia) presented a paper on the Treatment of Hydrocephalus by Craniectomy. He did not think the operation was curative, but perhaps it might be palliative, the child being more comfortable for the time being.—Dr. A. D. Blackader presented a paper on Enteric Fever in Childhood. The regular and systematic employment of the cool or cold bath in the treatment was of great value. He thought it might be employed regularly without too rigid adherence to the rule of Brandt of only using it when the fever reached 102.2°.—Dr. W. S. Christopher (Chicago) read a paper on the Measurement of Chicago School Children. The test consisted in lifting at each alternate second with the middle finger of the right hand a weight equal to 7 per cent. of the gross weight of the individual, and permitting them at the next second to return. Ninety seconds was the limit of the test, during which time this weight was lifted forty-five times, a metronome being used to beat the seconds. The ergogram indicated the degree of fatigue exhibited by the child during the ninety seconds. The work of the boys was better than that of the girls; the endurance of the girls up to 14 years of age showed a greater percentage than that of the

boys. The girls practically reached a maximum at 14, and from there on up to 20 years of age the limit of examination did not increase. The boys, however, continued to increase continuously up to 20, and the ratio of increase was greater than it had been previously. The amount of energy displayed by the girls at 20 amounted to very little more than half of that exhibited by the boys at the same age, so marked was the differentiation in the sexes at this time.

[Abstracts of the more important work presented at the meetings of these Societies and at those of the American Neurological Association, the American Association of Genito-urinary Surgeons, the American Climatological Association, and the American Laryngological Association will be published in due course in the EPITOME.]

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

THE annual general meeting of the Royal Medical Benevolent College was held on May 25th, Dr. HOLMAN, Treasurer, in the chair. The annual report stated that in spite of the war appeals the receipts, both from annual subscriptions and from donations for general purposes, were higher in 1899 than in 1898. Special thanks were due to the Honorary Local Secretaries for their efforts in obtaining annual subscriptions. Two special donations had been received—one of £500, generously given by a governor whose brother had intended to leave that sum, but had died before signing his will; and the other of £458, given by "A few old friends in memory of the late Miss Elizabeth Salmon, of Clifton." The scrutineers had announced the result of the voting as follows:

Pensioners Elected.—Annie Blick, John Charles Bonnett, Elizabeth M. Solly, William Dewsnap, Margaret Keith, Ellen Wilson, Anne Wineard Osborne.

Foundation Scholars Elected.—Edward R. L. Warren, Gerald Percy Adams, Charles R. Hamilton, Cuthbert W. Ellison.

Vacancies having arisen within the prescribed time, three foundation scholars had been admitted by the Council after the last election—Edward Chamberlayne, Alan H. Parson, and Robert H. Shillingford. A further sum of money having been received out of court for the Da Silva Foundation the Council had awarded another pension, so that there were now two pensioners on that foundation. The election that day brought the number of ordinary pensioners up to 50, of Pugh pensioners to 9, and of Morgan annuitants to 3. The Council had to regret the loss by death of two vice-presidents—Sir James Paget and Mr. John T. Mould—while Sir Edward Sieveking, who was the first honorary secretary, and had been for many years a member of the council, had resigned owing to advancing years and ill-health. The Duke of Abercorn had resigned the office of president, and the Council proposed the Earl of Rosebery for election in his place. The number of boys in the school was 238, and numerous successes had been obtained by boys leaving the school and by old boys during the year.

Dr. HOLMAN, in moving the adoption of the report, said: The policy of the Council has been to prepare students for entering the profession of medicine, and to give to all pupils, whatever the course intended for them, a sound all-round public school education, that they may be fitted to act not only as medical practitioners or otherwise, but also to hold their own socially in the neighbourhood in which they live. This is in exact accordance with the wishes and aims of the founder of the College. Epsom College is not a class school, but offers special advantage to the sons of medical men. The days of class schools are practically at an end, and it is desired to make Epsom College to all intents and purposes a public school with a medical foundation. Years since it was a common complaint by doctors that they were not given any social status either in private practice or in the public services. It was evident to anyone looking into the question that one cause was the frequent absence of general culture and tone in those who were complaining. The object at Epsom is to turn out well-educated gentlemen and students of good tone and high aims, and our experience is that by giving our students the widest education possible we are enabled not only to pass a large proportion through the stiffer medical examinations, but also to ensure their continuing to do well by the avoidance of any sort of cramming. We can often carry them further still, and secure University distinctions. I am referring mainly, of course, to those boys intended for the medical profession. Our average number of passes in the Matriculation and Preliminary Scientific Examinations of the University of London on which many, not all, of our valuable hospital scholarships depend will compare favourably with those of any other school. Of late years we have also gained constantly University Open Scholarships, won straight from Epsom. Between Founder's Day, 1896, and Founder's Day, 1899, ten open scholarships or exhibitions at the Universities have been gained. The two in 1899 were for mathematics. In the BRITISH MEDICAL JOURNAL of this morning (May 25th) are published the results of inquiries by the General Medical Council into the preliminary examinations in England and Wales by various examining bodies. At the matriculation examination of the University of London, the percentage of rejections among all candidates is given as 52.2, of candidates from Epsom College it was in round numbers 35 per cent. At the Oxford and Cambridge School examinations for the Higher Certificate the rejections are given as 43.7 per cent.; of Epsom candidates it was, in round numbers, 20 per cent. For the Lower Certificate the rejections are given as 44 3 per cent.; of Epsom candidates it was, in round numbers, 25 per cent. The general result is sufficient to show that our teaching is well up to the mark. Some little time since my attention was drawn to the fact that we could not fill up annually the nine free scholarships most generously given us by the Metropolitan hospitals. In all cases it was formerly a *sine quâ non* that the student should have passed both parts of the Preliminary Scientific Examination of the University of London, and in three hospitals the first division was required. From our school of under 250 boys, not all of whom enter the medical profession, we could not find 9 students out of some 50 leaving each year able to gain these valuable and much coveted honours on such conditions, and it is clearly too much to expect. The senior form has sometimes had less than 9 boys. This Preliminary Examination is composed of three subjects, two of which must be taken together, and one standing by itself. The candidates from all parts, and from many schools and hospitals, vary in age from 17 to 25 years and upwards. I found that by far the larger portion of these candidates took this examination in two parts, and the proportion passing in all three subjects at once was very small indeed, and is growing smaller each year. It is no part of my duty to ask why this should be the case; whether it be the result of stiffer examinations or the poorer mental calibre of the candidates, but this discovery gave an ample answer to our position with the hospitals; and when the whole question was laid before the Deans of the various schools they at once allowed their scholarships to be awarded to students who had passed a portion of this examination, on the obvious condition that the remaining subject or subjects be passed so soon as possible. That the Deans thought our application a reasonable one was clearly shown by their ready acquiescence with our request. That every year the candidates going up for certain examinations vary much in quality is the experience of all teachers, and that all candidates with the very best intentions, and every assistance from their masters, can be made to pass such examinations is again an assertion opposed to the experience of all schools. The estimation in which a Wrangler's degree is held by university men varies greatly, depending upon the class of men who are competing in each particular year. That our boys, as a rule, do succeed in these higher examinations is incontrovertible. In 1899 9 lads went up for the Preliminary Scientific Examination and 6 passed in all subjects, one in Division 1, whilst the two others passed in one part of the examination, and one failed. Two forms, 25 in number, were sent in bodily for the matriculation, and 16 passed. After much thought, and acting on the advice of our head master and other educational experts well qualified to advise, the whole form is usually sent in. A large percentage are expected to pass; the remainder get over the stage fright of their first interview with the examination papers, and also learn what subjects they are weak in, and to which they must give more attention. It is helpful both to teacher and taught, and a sure test of general efficiency. I wish it to be thoroughly understood that every boy intended for medicine is given the best possible attention and every chance of success by careful preparation and even (when necessary) by extra tuition, and I may also assert that boys

leaving us are so prepared as to be able to take up practically the position of second year students, to whatever medical school they go. I am also able to say that in only one instance of the scholars going to the London hospitals has any complaint on the score of industry or conduct been made during the past ten years, and then a little judicious advice and remonstrance restrained the student who hardly knew how to govern himself when first exposed to the freedom of London after the discipline of school life. Many of our boys obtain minor hospital appointments, and some eventually get posts on the staff of the hospitals. There are now eight old Epsomians who are teachers at the London hospitals. Epsom boys are welcomed at every hospital, and rarely fail to qualify in the allotted time. I should like it to be known as widely as possibly that with our new Junior School Buildings we can admit boys much younger than in past years. Boys entering college early are placed in a much better position to command success than those coming later, when too often the preliminary education has been of too cramped a character.

The motion was seconded by Dr. FELCE, and adopted.

The Earl of Rosebery was elected President, Sir Edward Sieveking Vice-President, and a vote of thanks to the Chairman, moved by Sir JOSEPH FAYRER and seconded by Mr. SMILES, brought the proceedings to an end.

THE MIDWIVES BILL.

MEDICAL OFFICERS OF HEALTH AND THE BILL.

WE learn that the Association for Promoting Compulsory Registration of Midwives is circulating the following petition:

To the Right Hon. Arthur J. Balfour, M.P., First Lord of the Treasury.

Sir,—The undersigned medical men, coroners, medical officers of health, and others interested in the welfare of the poor, very respectfully ask you as Leader of the House of Commons to facilitate the progress of the Midwives Bill, and enable it to become law in the course of the present session of Parliament.

We believe that such a measure is urgently needed for the prevention of much avoidable pain and suffering. It is widely supported in the country and in the House of Commons by members on both sides, and it carries out the recommendations of the Select Committee which reported to the House in 1893.

A paper is also being circulated containing the names of 134 medical officers of health who have given permission to the Association for Promoting Compulsory Registration of Midwives "to print and publish their names as in favour of legislation for the compulsory registration, training, and supervision of midwives;" and the paper adds "That the need of legislation is widely felt is clearly shown, for the districts represented are in all parts of England and Wales, and are both urban and rural."

How many "coroners, medical officers of health, and others" have signed the petition is not stated, but it should, we think, be clearly recognised that a coroner or medical officer of health may be "in favour of legislation for the compulsory registration, training, and supervision of midwives," and yet be strongly opposed to the Bill in its present shape. This point ought to be made clear by those who are circulating the list of names. In a leaflet circulated with the draft petition we find the following among other "facts showing the need of legislation:"

That puerperal fever, an absolutely preventable disease, is still terribly prevalent, and especially so in districts where untrained women attend.

That a large number of the women attending hospitals are suffering from ignorant treatment during their confinements causing years of ill-health and suffering, much of which can be shown to be due to the attendance of untrained women.

That three-fourths of the blind suffer this terrible calamity owing to want of care and cleanliness at the time of birth due to the ignorance and carelessness of the women who undertake the duties of midwife.

That infant mortality is enormous, reaching the annual total of 10,000, that if it were possible to obtain statistics of the so-called stillborn children whose lives might have been saved the numbers would be still more startling. That this mortality is mainly due to improper attendance at birth and during the first days of life is not to be denied.

The proposition contained in the last sentence is very open to question, but the others may be accepted. These evils are due in large measure to bad nursing after confinement and will not be cured, indeed it is doubtful if they will even be lessened, by authorising women certificated under the Bill to attend any case of childbirth "where no registered medical practitioner is engaged or employed." The British Medical Association, in the memorandum presented to Sir R. Finlay, has expressed the strong opinion that attendance after delivery should be compulsory: "The want of such a provision would allow the midwife to depute these duties to any uncertified woman who might be totally unfitted to carry them out, unable to recognise the onset of the disease (that is, puerperal fever), and over whom the Bill affords no provision for control." That many women might escape years of ill-health and that the lives of many infants returned as stillborn might be saved by more skilful management of the act of labour itself, no one will dispute, but it is not easy to understand how the Association for Promoting Compulsory Registration of Midwives, seeing this evil, can be willing to approve a Bill which does not make it compulsory for the midwife to obtain skilled assistance in cases of abnormal labour or of disease of or danger to the mother or the child.

We venture to hope that medical officers of health, before signing a petition which is practically a petition in favour of the Bill as it stands, will consider very carefully whether the measure is really the best which can be devised to attain the objects which its promoters have again and again declared they have in view—the diminution of the mortality and disease among women now traceable to childbirth, and of the mortality and disease among infants during the act of birth and the first days of life.

THE SOUTH MANCHESTER ELECTION.

On May 22nd a deputation from the medical practitioners of the parliamentary division of South Manchester, including Mr. Walter Whitehead, Dr. Ferguson, Dr. Nichol, Dr. W. B. Pritchard, Dr. Ritchie, and Dr. T. Arthur Helme, waited upon the two candidates (the Honourable W. R. W. Peel and Mr. Leif Jones) for the purpose of presenting the following memorial:

We the undersigned practitioners of medicine and constituents of the parliamentary districts of South Manchester, recognising the existence of evils in the present system of obstetric practice among the poor by midwives and being desirous that those evils shall be remedied, are of the opinion that the Bill for the Registration of Midwives now before Parliament would not remove those evils, but would, on the other hand, if it became law, be a direct danger to the public safety.

We accordingly request you, in the event of your election as member of Parliament for this division, to support the attitude of the British Medical Association towards the Midwives Bill, 1900, as defined in the accompanying memorandum, dated May 9th, 1900, and to oppose the third reading of the Bill unless amended according to the suggestions of that memorandum.

Mr. WHITEHEAD said that the Midwives Bill dealt with an important social matter, and it was solely in the interests of the public, especially the poor, whom this proposed legislation would chiefly affect, that the deputation had sought that opportunity of pointing out the deficiencies and dangers of the present Bill. There were 99 medical practitioners residing in the division, 93 of whom were voters. Of the 93, 14 were away from home, or for various reasons could not be seen, leaving 79 medical practitioners who had been asked to sign the memorial. Of these 79, 75 had signed, and 4 had declined to sign, 2 of whom, however, supported the attitude of the memorial. In addition, the 6 non-voters, 3 of whom were medical women, had also signed the memorial; so that it might be said that the medical practitioners of South Manchester were unanimous in their condemnation of the present Bill.

Dr. ARTHUR HELME explained the attitude of the British Medical Association towards the Bill, emphasising the fact that the Bill practically provided no control, and insisting on the necessity of having the limitation of practice and provision for penalties inserted in the statute.

After discussing the details of the Bill, both candidates expressed their sympathy with the objects of the deputation, and promised to support the amendments of the British Medical Association.

THE PRESIDENCY OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE candidature of Mr. Fitzgibbon, in opposition to Mr. Myles, for the Presidency of the Royal College of Surgeons in Ireland, which was announced in the BRITISH MEDICAL JOURNAL of May 26th, has terminated, and Mr. Fitzgibbon has not only withdrawn his candidature, but has tendered as well an unqualified apology to Mr. Myles, which has been accepted by him, and which has appeared in the public press. Mr. Fitzgibbon therein expresses regret for the publication and circulation of the two circulars and the reprint from an evening paper which he sent to the Fellows of the College, and for which he admits there was no justification whatever, in associating [Mr. Myles with the names or organisation

mentioned therein, and unreservedly withdraws all suggestions and imputations against Mr. Myles therein contained, and undertakes to indemnify Mr. Myles against all costs and expenses he may have sustained. Mr. Fitzgibbon has explained in a further letter to the public press how his mistake arose in mixing up two totally separate paragraphs in an evening paper, where an account of a meeting of the United Irish League was followed by a reference to the acceptance of the freedom of the city of Limerick by Mr. Myles, and has stated that as soon as he became aware of the error into which he had fallen, which he did through a report in the evening papers of an application for an injunction made by Mr. Myles, he at once tendered a complete apology.

It is a matter for regret that the elevation to a position which may fairly be regarded as the blue ribbon of the surgical profession, should have entailed so much publicity, but in answer to those who think that Mr. Myles might have quietly explained to Mr. Fitzgibbon the mistake he had made, it may be said that the latter did not acquaint Mr. Myles with the reason for his opposition until the circular containing the erroneous statement had either been posted or got ready for the post.

THE R.A.M.C. SOUTH AFRICA FUND.

THE Central Committee of this Fund has issued an interim report and balance sheet, dated May 19th. The Fund has sent out 8,223 parcels containing some 82,000 articles, and news has been received from Bloemfontein and Ladysmith that the parcels had been distributed. The men of all the divisions, of the 11 general hospitals, of the base and advance depôts, of the lines of communication, of the hospital trains and ships, had now been supplied, as well as those of the Militia and Volunteer Medical Staff Corps and the Indian dhoolie bearers. The gifts are now being repeated to the men serving in the eleven divisions at the front. The Committee, while expressing its thanks for the generous help it has received, states that it will continue the work for the present, and that gifts of money and warm clothing—woollen drawers and vests, flannel shirts, cardigans, handkerchiefs, cholera belts, and neck mufflers—will be most acceptable. Gifts in kind should be addressed to the Honorary Secretary, 77, George Street, Portman Square, London, W., who will answer all inquiries. The subscriptions are acknowledged as follows: Subscriptions through the BRITISH MEDICAL JOURNAL, £543 18s. 3d.; Birmingham Branch, £225; Leeds, £50; Scarborough, £38 12s. 6d.; other subscriptions, £1,241 18s. 4d.; making a total of £2,099 9s. 1d. A balance of £778 18s. 9d. remains in hand.

THE HALF-CROWN SUBSCRIPTION LIST.

The following additional subscriptions to the Half-Crown Fund have been received down to and including May 30th since our last list:

	Half-Crowns
Mr. J. C. Kennerby, J.P. (St. Mawes)	8
Miss Butterworth (for the late Dr. H. P. Butterworth)	1
Per Dr. Lamport:	
Lancaster Book Club	22
Per Dr. Hacking (Wilmslow):	
Self	4
E. H.	4
P. H.	1
C. H.	1
C. D. F.	1
Mr. G. Harrison (Chester)	2
Per Brigade-Surgeon-Lieut.-Col. Maconachie (Aberdeen):	
Miss Warrack (Aberdeen)	2
Per Mr. W. M. Beaumont (Bath):	
Mr. C. Gaine (Bath)	1
Per Dr. H. Peck (Chesterfield):	
Dr. Magee (Clowne)	1
Dr. Palmer (Whittington)	1
Dr. Frederick (Whittington)	1
Dr. B. J. Lee (Clay Cross)	1
Dr. Duncan (Clay Cross)	1

The amount received for the Half-Crown Fund, down to and including Wednesday, May 30th, by the Editor, is £555 15s. 9d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE FRIENDLY SOCIETY.

THE seventeenth general meeting of the members of this Society was held in the rooms of the Medical Society of London, Chandos Street, W., on May 17th. The chair was taken by Dr. DE HAVILLAND HALL, chairman, who congratulated the members upon an excellent year's work, but expressed disappointment that the increase in the number of members was still small. The net increase was only 69. The membership of the Society had not yet reached 2,000. In the early days of the Society he had hoped that by the present time their numbers would have reached at least 5,000, and he hoped that all the members in the current year would do their best to increase the members of the Society. In 1899 there had been a very heavy sickness experience. For some months it was considerably over the expectation, but for the whole year the sickness was within the expectation. The experience for 1900 was so far much more favourable. Influenza had done much to increase expenses and reduce reserves. Out of 547 claims in 1899, 164 were for influenza. If any proof were wanted of the great utility of the Society, a case which had recently come under his notice would supply ample proof. One of the original members had just died after having been on the funds of the Society for fifteen years and three months, suffering from locomotor ataxy. He paid in £123 4s., and he received in sick payment £1,708 12s. He had made an additional payment for an annuity, but taking that also into consideration he had received nearly £1,500 clear. A most important feature in the Society was the provision in cases of disablement when the applicant was unable to work at all. Mr. Upton, who for so many years had been one of their trustees, had resigned, on retiring from professional work. He was a very great loss, because he was at all times not only ready to do his work as trustee, but to give assistance in legal matters. That was especially the case at the inception of the Society, but fortunately of late years legal questions had not to be dealt with very largely. The Society had also lost its auditor, Mr. Jennings, who had died a few months ago. On several occasions during the illness of their late Secretary, Mr. Radley, he had assisted in the office work. The committee suggested certain alterations in the rules to ensure an even greater security in their investments. So far they had been exceedingly fortunate in their investments, but on going over the rules, especially in view of the appointment of a new trustee, the committee thought it desirable to make the investment rules rather more stringent than in the past. The second alteration referred to the question of audit. It had been found that a quarterly audit was an unnecessary expense and that a half-yearly audit would be as good or better. He concluded by moving that the report and accounts presented be received and adopted.

Dr. VINRACE said that by one of the rules (Rule 4) if a member allowed his premium to lapse more than six months he would not be entitled to any benefit from the Society. Some members might drop their payment on financial grounds, and he suggested that where it could be clearly shown that the member lapsed on financial grounds, the committee might afford an opportunity to pay up arrears.

Dr. GUBB said the Society must be run on business not philanthropic lines. A member who had lapsed could rejoin again if he showed a certificate of good health.

Mr. BRINDLEY JAMES thought the committee should have power to look into matters of the kind, and do what they thought necessary.

Dr. WALTER SMITH said that the business of the Society could only be conducted on strictly business principles. The alteration in the rules of the Society, whereby it collected only half-yearly, might render it necessary to consider whether it would be well to give a little more latitude, as men otherwise engaged might overlook the payment by accident.

Dr. BALL considered some limit necessary, say nine or twelve months.

The CHAIRMAN said he felt very strongly indeed that it was absolutely essential to the welfare of the Society to have a hard-and-fast rule. Three notices were sent out to a member who was behind with his payment, and the third notice was registered.

On the motion of Dr. VINRACE, seconded by Mr. BRINDLEY JAMES, a resolution was carried to reconsider Rule 4 as early as possible without calling a special meeting.

Dr. VINRACE said he wished to know why thirty-one members had retired from the Society.

The CHAIRMAN said it would be a very interesting thing to have at all the meetings a list of lapsed members, with the reason for their lapsing. Some present might know some of the members, and might ascertain their reason for lapsing.

The proposal by the Chairman that the report and accounts as presented be received was then carried.

On the motion of the Chairman, seconded by Dr. Pickett, certain alterations of the rules proposed by the Committee were adopted.

A resolution appointing the officers and Committee was carried, and a resolution of thanks to the Chairman, proposed by Mr. Brindley James and seconded by Dr. Vinrace was carried, and duly acknowledged by Dr. Hall.

THE PLAGUE.

Prevalence of the Disease.

India.

During the week ending May 10th, 1,771 deaths occurred from plague in India, as compared with 2,498 during the previous week. This encouraging decline has occurred in a fairly equal way in all the affected districts.

In the Bombay Presidency 507 deaths from plague were recorded, and in the city of Bombay 359. The mortality from all causes is, moreover, about 1,000 a week in excess of the mean of five years, and it is evident that the plague mortality is diminishing more rapidly than the general mortality. This may correctly represent the position of plague, or it may mean that there are many plague cases returned under other headings. The present epidemic is the fourth that has visited Bombay since 1896; it has lasted already 187 days, and is responsible for over 50,000 deaths in the Presidency. Satisfactory as the present abatement is, the mortality from plague is at present higher than at any corresponding period, and unless the decline of the epidemic is much more rapid than present figures would indicate, June will be well advanced before anything like a normal death-rate of, say, 60 per mille is reached. Cholera threatens to be severe this summer, but as yet there is nothing in the nature of a scare in the city of Bombay.

In Calcutta 252 deaths occurred from plague during the week ending May 10th; in the Bengal Presidency, exclusive of Calcutta, 357; and in the Patna District 284. In Karachi, in May 3rd, 4th, 5th, 6th, 7th, and 8th, 36, 28, 34, 24, 19 and 31 fresh cases of plague occurred, and 23, 20, 27, 23, 19, and 24 deaths from the disease respectively.

In the Mysore Province plague has practically disappeared.

Aden.

At Aden 64 deaths occurred from plague during the first week of May. Plague at this port is a serious check to trade, as steamers call at Aden for many other places besides those bound to or from India.

Hong Kong.

Our Correspondent in Hong Kong writes under date April 28th: It is to feared that again Hong Kong is to suffer from bubonic plague, the number of cases daily being on the increase. At present (April 28th) there are on an average six cases daily, with a very high mortality. The Sanitary Board have declared two health districts to be infected, and house-to-house disinfection is being carried out, six constables being set apart for that special duty. Since the crusade against rats was instituted 10,778 rats have been destroyed.

At the meeting of the Sanitary Board, held on April 26th, Dr. Clark, the medical officer of health, reported that there was no abatement in the spread of plague in the colony. When the subject of overcrowding was being discussed, the Sanitary Board found that it was powerless to prevent it. There seems an appalling want of municipal power in Hong Kong; every question has to give way to supposed military and executive considerations, and to such an extent, that Lieutenant-Colonel Ryan, R.A.M.C., told the Sanitary Board that the colony "had, through neglect of sanitary matters, been the cause of a plague which at one time threatened the British Empire, and was a disgrace to British rule."

Macao.

In this Portuguese possession, during the first week of April, 22 deaths occurred from plague. It would appear from what we know of Hong Kong and Macao that plague is thoroughly endemic in Southern China.

China.

Plague still prevails in the country around Swatow and in the hinterland of the Kwang-tung province. At the city of Chow-Yang, seven miles inland from Swatow, during 1899 some 40,000 people are said to have died.

Natal.

On May 24th a fatal case of plague occurred at Durban, and since then the quarantine regulations have been strictly enforced. The victim was an Indian, newly arrived at the port.

Australia.

Plague is declining at Sydney, and at none of the other Australian ports is the disease spreading. The question as to whether the disease threatening the country is typhus and not plague at all finds a few supporters. It must be remembered that in Hong Kong, in 1894, several cases exactly resembling typhus occurred concurrently with bubonic plague. These cases, in fact, justified the term of "Black plague," and it is possible that a few cases of this type have served to start the rumour in Sydney that the disease was of a character different to the general run of plague. A few cases resembling typhus, however, occurring during a plague epidemic, rather confirms the diagnosis of the disease being true plague.

Sandwich Islands.

Plague is officially declared to have disappeared from Honolulu and its vicinity.

United States of America.

Precautions against Plague.—Dr. Wyman, Supervising Surgeon-General, Marine Hospital Service, Washington, has prepared a memorandum on bubonic plague for the information of quarantine officers, health officers, and others. Much importance is attached to the necessity for the greatest care being exercised in the inspection at quarantine of vessels, even though they hail from non-infected ports, for they may carry passengers, crew, stowaways, or merchandise from plague-infected districts. Attention is also called to the ambulant form of the disease, which might readily escape detection by ordinary inspection, but may become as active an agent in the dissemination of disease as the more virulent form. A short history of plague in recent times is given, and the suggestion is made that possibly the great persistence and mortality of the plague in India and the East is due to the people being badly fed, their diet consisting mostly of rice and other grain, which compared with wheat, oats, Indian corn, and rye, give a very low protein standard. In regard to the treatment at quarantine of ships infected or suspected of infection with plague, it differs from that recommended by the Venice Convention in raising the period of detention to fifteen days, and in not resorting to medical surveillance.

ASSOCIATION INTELLIGENCE.

BRANCH MEETINGS TO BE HELD.

South-Eastern Branch.—The annual meeting of this Branch will be held at Reigate on Thursday, June 21st. Dr. Walters, of Reigate, will preside.—T. Jenner Verrall, 97, Montpellier Road, Brighton, Honorary Secretary.

South-Western Branch.—The annual meeting of this Branch will be held on Wednesday, June 20th, in the Museum of the Torquay Natural History Society, Babbacombe Road, Torquay, at 3 P.M., when Dr. Jackson will resign the chair to Mr. Karkeek, who will deliver an inaugural address. The Branch Council will meet at 2 P.M., and will afterwards present their annual report to the meeting. Mr. George Jackson will ask the opinion of the meeting as to the desirability of transacting business, especially in matters of interest to the profession at large (not for the reading of papers on medical or surgical topics or showing cases or specimens) at the annual meeting. In the event of the meeting agreeing to that arrangement, it will be asked to sanction a special meeting in order to alter the by-laws to give effect to the same. A communication from the General Secretary of the Association with reference to the Midwives Bill, at present before Parliament, will be read. Luncheon, by kind invitation of the President-elect, will be held at 1 P.M. at the Museum, and the annual dinner will take place at the Bath Saloon at 6.30 P.M. Tickets (exclusive of wine), 6s. After the meeting tea will be served in the Museum. On Thursday, June 21st, the Torquay members have kindly arranged an excursion by sea to Dartmouth, up the river Dart to Totnes, at which place luncheon will be held, and by coach from there to Berry Pomeroy Castle, and home. The Honorary Secretary will be glad if members will inform him, on or before June 16th, whether they will be present at (1) the dinner, (2) the excursion, so that further arrangements may be made.—H. W. Webber, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

Metropolitan Counties Branch.—The annual general meeting of this Branch will be held at the Hotel Cecil on Tuesday, June 19th, at 6 P.M., when the report of the retiring Council and of the Treasurer will be received, and an address delivered by the incoming President, Mr. George Eastes. At 7 P.M. the members will dine together, the President being in the chair.—H. Betham Robinson, M.S., 1, Upper Wimpole Street, George Rowell, 6, Cavendish Place (*pro tem*), Honorary Secretaries.

Birmingham and Midland Counties Branch.—The annual meeting will be held at the Medical Institute, Edmund Street, Birmingham, on Thursday, June 21st, at 4 P.M. An address will be given by Dr. Milner Moore, President-elect. The annual dinner will take place at the Grand Hotel, Colmore Row, at 6.30 P.M.—William F. Haslam and J. T. J. Morrison, Honorary Secretaries.

Stirling, Kinross, and Clackmannan Branch.—The annual meeting of this Branch will be held in the Royal Hotel, Stirling, on Tuesday, June 19th, at 3 P.M. Dr. Mackintosh will deliver his presidential address, and the annual business of the Branch will be transacted, including the appointment of office-bearers for the following year. Members who desire to exhibit cases or specimens will kindly intimate their intention to Dr. Moorhouse, 1, Glebe Avenue, Stirling, Honorary Secretary.

Edinburgh (Lothians and Fife) Branch.—The twenty-fifth annual meeting of this Branch will be held in the Hall of the Royal College of Physicians, 9, Queen Street, Edinburgh, on Tuesday, June 5th, at 4.30 P.M.—James Hodsdon, 6, Chester Square, Edinburgh, R. W. Philip, 4, Charlotte Square, Edinburgh, Honorary Secretaries.

Perthshire Branch.—The summer meeting of this Branch will be held on Saturday, June 9th, at Trinity College, Glenalmond. Conveyance from Perth at 11.45 A.M.—A. R. Urquhart, Murray's Royal Asylum, Perth, Honorary Secretary.

West Somerset Branch.—The annual meeting of this Branch will be held on Tuesday, June 26th, at 12.30 P.M., at the Lamb Hotel, Dulverton, under the presidency of Mr. G. F. Sydenham. Business:—Minutes. Report of Council. Treasurer's account. Election of members of Council and President-elect. Place of next annual meeting. Intermediate meetings. The President will deliver an address on The Vulgar Errors and Superstitions of West Somerset in their Relation to Medicine. Dr. Macdonald will make a short report on the Conference of Medical Ethics at Manchester.

Luncheon will be provided at the Lamb Inn after the meeting, price 3s 6d. per head, exclusive of wine. The President invites the members of the Branch to drive with him to the Harbourer's Cottage, Haddon Hill, where tea will be taken. Mrs Sydenham has kindly invited the wives of members to lunch at her house, and join the party at tea at Haddon afterwards. Members should write to Mr. Sydenham before June 20th, stating if they intend to be present, and if their wives accept Mrs. Sydenham's invitation.
R. LIDDON MEADE-KING, Taunton, Honorary Secretary.

SOUTH MIDLAND BRANCH.—The forty-fifth annual meeting of this Branch will be held at Wolverton on Thursday, June 14th, at 1 P.M., under the presidency of Dr. Symington. Gentlemen wishing to bring forward cases or papers are requested to communicate with the Honorary Secretary without delay. The following papers have been promised:—Mr. Percival: A few Cases of Abdominal Operations. Mr. Nash: A Case of Pancreatic Cyst in a Child, treated by drainage. Specimens: (1) A multilocular cyst of paradidymis and loose body from tunica vaginalis; (2) fragments of renal growth passed in the urine. Mr. Hailey: The Provision of Isolation Hospitals for Rural Districts. The following gentlemen will be proposed as new members of the Branch: C. H. Miles (Stantonbury), E. Sexton (Bedford), Chas. H. Perram (Bedford), E. P. Norman (Yardley Hastings), Arthur D. Hughes (Dunstable), A. H. Collins (Riseley), A. A. Hope (Byfield); Geo. Kimball Jones (Northampton); J. O. Harvey (Wolverton); Ernest Selby (Waddesdon). It is hoped that time will allow of a visit to the London and North-Western Carriage Works. The President invites the members to luncheon at 12 o'clock, and will be glad of the favour of a reply, sent to himself, not later than June 12th. Gentlemen are asked to introduce new members, and to show patients, specimens, drawings, skiagraphs, etc., and anything that may add to the interest of the meeting.—C. J. EVANS, Northampton, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of this Branch will take place at the General Hospital, Nottingham, on Thursday, June 14th, at 2.15 P.M. Agenda: Minutes. Report of Branch Council. Election of representatives of Branch on General Council. Election of representatives of Branch on Parliamentary Bills Committee. Election of Branch Council and officers. Election of President-elect for 1900-1901. President's address. The following cases will be shown and papers read:—Mr. C. J. Bond: Two Cases of Spina Bifida, treated by Excision. Dr. G. Lorimer: Some Observations on Gonorrhœal Rheumatism. Dr. E. Mansel Sympson: A Case of Recto-vesical Fistula in a boy 5 years old, with Colotomy Operation. Dr. Pope and Dr. Astley Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks on the possible Connection of the Two Diseases. Dr. H. Handford: Three Cases of Cerebro-spinal Meningitis. Dr. W. B. Ransom: Notes on, and Specimens of, a Case of Syringomyelia. Dr. H. Michie: Intestinal Resection for Cancer. Members are requested to bring cases and specimens for exhibition. Luncheon will be provided by the President-elect at the Albert Hotel, Derby Road, at 12.45 P.M. The annual dinner will take place at the same hotel at 6 P.M.; price 7s. 6d., exclusive of wine.—FRANK M. POPE, 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

LANCASHIRE AND CHESHIRE BRANCH.

A SPECIAL meeting of this Branch was held at Manchester on May 18th. The chair was occupied at first by Mr D. A. O'SULLIVAN (Southport), Vice-President, and later by Dr. CHARLES MACFIE (Bolton), President. Over sixty members were present.

The Midwives Bill.—Dr. T. ARTHUR HELME (Manchester) proposed the following resolution, which was seconded by Dr. THORNLEY (Bolton):

That the Lancashire and Cheshire Branch of the British Medical Association is of opinion that the Midwives Bill, as amended by the Standing Committee on Law, and at present before Parliament, if it became law would be a direct danger to the public safety, seeing that it violates the spirit of the Medical Acts, and does not provide for the following essential points:—1. Definition of midwife; this must (*a*) impose attendance after as well as during labour; and (*b*) restrict her practice to natural labour. 2. Statutory penalty for practice as well as for assumption of title by uncertified persons. 3. Statutory penalty for malpractice or misconduct. 4. Constitution of Midwives Board: necessity for direct (district) representation of medical practitioners. 5. Statutory obligation for midwife to summon medical aid in case of abnormal labour, or disease of, or danger to, mother or child. 6. Necessity of direct medical supervision of midwives. 7. Necessity for prevention of employment of uncertified substitutes during labour or the lying-in period. 8. Necessity for control over lying-in homes, as contained in the Memorandum of the British Medical Association of May 9th, 1900, and that copies of this resolution be sent to all members of Parliament, and to the honorary secretaries of the Branches of the Association.

In moving the resolution, Dr. Helme said: The effect of this Bill will be to create a new set of independent legally registered practitioners, who are to be certificated in one branch of medicine only after a very inferior training, and who would be practically under no control; for the Bill as it stood allowed a midwife to attend any labour, did not compel her to send for a doctor when necessary, and, further, allowed her to hand over her patient, after labour, to the care of an untrained woman. It had been said that these deficiencies could be met by stringent rules, to be framed by the Midwives Board; but he submitted that the Midwives Board, being a Board constituted under the Bill, could not frame rules which went beyond the scope of the Bill; but if those rules could be framed, the matter then resolved itself into this, What machinery is provided for the carrying out of those rules? And here the whole question of control breaks down completely, for what would happen if a midwife did what was wrong; and what, let us suppose for a moment, it was not intended that she should do? The supervising authority is to be the county council, which may depute its duties to the district council, which again may depute them to a committee. It must be noticed that all this supervising machinery is composed of laymen; there is no provision in the Bill for any medical representation. Further, none of these supervising authorities can do anything but "investigate and report" to the Midwives Board except in case of puerperal fever. Suppose, then, for example, a midwife performs the operation of version, and in so doing destroys the child, what might happen? She might be reported to the supervising lay committee, which can do nothing but report to the county council, which again can do nothing but report to the Midwives Board in London; and this august body, meeting perhaps three or four times a year in London, would have to sit in judgment upon a poor midwife practising perhaps in some out-of-the-way corner in the north of England, without the power to examine a witness on oath, or even to compel the attendance of a witness. Such is the "control" offered. The suggestion that the Bill affords any practical control whatever is simply a delusion. For the safety of the poor and for that object alone it is our duty to endeavour to get this terrible Bill altered or stopped; it is an essential matter that all this clumsy and useless machinery shall be swept away, and the way to do this is by introducing limitations of practice and penalties in the statute itself.—Dr. S. CRAWSHAW (Ashton-under-Lyne) moved the following amendment, which was seconded by Dr. WOLSTENHOLME (Pendleton):

In the second line to strike out all the words after the word "direct" up to and including the word "points" in the third line, and to substitute therefor the following—"infringement of the vested interests of the profession as secured to it by the Medical Acts, and inasmuch as it does not provide for the following essential points a direct danger to the public safety."

—A discussion followed, in which Drs. ROBINSON, RITCHIE, J. HOLMES, BROWN, COLIN CAMPBELL, BRASSEY BRIERLEY, and others took part.—On the amendment being put to the meeting it received the support of its proposer and seconder only, and was accordingly lost.—On the original resolution being put to the meeting it was declared to have been carried unanimously.—It was proposed by Dr. RITCHIE, seconded by Dr. WOLSTENHOLME, and resolved:

That the Lancashire and Cheshire Branch of the British Medical Association appoints the following deputation to wait upon the Right Hon. A. J. Balfour, M.P., for the purpose of presenting and supporting the Memorandum of the British Medical Association respecting the Midwives Bill and the resolution of this Branch thereon, together with a memorial signed by such members of the Branch as are constituents of the Parliamentary division of East Manchester.

—It was proposed by Dr. BRAZIL, seconded by Dr. SAWERS SCOTT, and resolved:

That the number of the deputation be limited to four, namely Drs. Woodcock, Helme, Ritchie, and R. Charnley Smith, and that the necessary expenses be paid out of the funds of the Branch.

—It was proposed by Dr. RITCHIE, seconded by Dr. PRITCHARD, and resolved:

That this Branch authorises the Honorary Secretary to arrange for the drawing up of a memorial to each of the present candidates for South Manchester requesting the candidate, in the event of his election, to support the attitude of the Branch and the British Medical Association towards the Midwives Bill, 1900, and to oppose the third reading of the Bill unless amended according to the suggestions of the memorandum of May 9th; and that the Honorary Secretary be authorised to arrange for a deputation of registered medical practitioners who are constituents of the South Manchester Division to wait upon each candidate for the purpose of presenting the memorial.

The Companies Bill.—It was proposed by Dr. PRITCHARD, seconded by Mr. COLIN CAMPBELL, and resolved:

That a Committee be appointed to consider the Bill and report to the next meeting of Council. That Drs. Pritchard, Westmacott, and Ritchie with the President and Honorary Secretary, form this Committee.

Reports of Council.—It was proposed by Dr. J. BRASSEY BRIERLEY, and seconded by Mr. COLIN CAMPBELL:

That this Branch condemns the action of the Council of the Association for its persistent refusal to publish correct reports of the discussions in Council, and its illegal action in suppressing matters of vital interest to all the members—notably counsel's opinion upon the obligation of the Council to the general meeting.

—After remarks from Drs. RITCHIE, HELME, and WOODCOCK, who strongly deprecated the attitude assumed by Dr. Brierley, the resolution was put to the meeting; it received the support of its proposer and seconder only, and was therefore declared to have been lost.

NORTH OF ENGLAND BRANCH.

THE spring meeting of this Branch was held at the Ingham Infirmary, South Shields, on May 16th. In the absence of the President, Dr. GOWANS was elected to the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Election of New Members.—The following gentlemen were elected members of the Branch: Dr. R. P. Ranken Lyle, Dr. A. H. Hobbs, Dr. George Foggin (Newcastle-upon-Tyne), Dr. W. Jaques (Washington, co. Durham). Dr. W. Knott (Middlesbrough-on-Tees) was transferred from Lancashire and Cheshire Branch to North of England Branch.

Midwives Bill.—Communications were read from: The East York and North Lincoln Branch and Hull Medical Society *re* (1) Midwives Bill, and (2) direct representation; the Wood Green and District Medical Society *re* (1) unqualified practice (midwives and opticians), (2) constitution of General Medical Council; and from the Joint Committee to oppose the registration of midwives. The following resolution was proposed by Dr. E. H. GIBBON and seconded by Dr. JAS. DRUMMOND:

That this Branch meeting of the British Medical Association, believing that some legislation on the subject of midwives' registration is inevitable, desires to support the endeavour of the Council to amend the Bill now before Parliament, as expressed in the resolutions printed in the issue of the BRITISH MEDICAL JOURNAL of March 30th.

The following amendment was proposed by Dr. ALFRED COX, seconded by Dr. MURPHY:

That this Branch of the British Medical Association protests against any legislation for the registration of midwives, but fearing the possibility of such legislation, cordially supports the amendments of the Association.

The amendment was carried with only two dissentients.

Direct Representation on General Medical Council.—It was proposed by Dr. E. H. GIBBON, seconded by Dr. ALFRED COX, and unanimously resolved:

That this Branch of the British Medical Association cordially supports the endeavour to increase direct representation on the General Medical Council, and instructs its representatives on the Council of the Association to support any amendments of the Medical Acts which will bring this about.

Vaccination and Revaccination.—A communication from the Council of the Association *re* revaccination and vaccination at school age was read and ordered to be affixed to the minutes.

Proceedings of Council.—A communication from the Lancashire and Cheshire Branch *re* Council of Association and Branches was read, and it was resolved, on the proposition of Dr. Cox, seconded by Dr. PEART:

That this Branch will support the Lancashire and Cheshire Branch in their endeavour to remove the restriction implied by the words "Private and Confidential" from the agenda papers, etc., of the Council.

The Manchester Conference.—Dr. PEART, President-Elect, gave a brief report of the Manchester Conference, at which he had been present, along with the President (Dr. S. Walker), representing the North of England Branch.

Branch Organisation.—A communication was read from the South-Western Branch *re* Branch Organisation, and it was resolved that this be acknowledged and it be stated that this Branch Council was already organised on the principle of district representation. It was proposed by Dr. Cox, seconded by Dr. HUNTER:

That a Committee be appointed to consider Branch organisation.

Notice of motion was given, and the discussion of this matter deferred to the annual meeting.

Medical Ethics and Politics.—It was resolved on the proposition of Dr. JEPSON, seconded by Dr. HUNTER:

That this Branch petition the Council of the Association to set aside, at their annual meeting at Ipswich, a day specially for the discussion of current ethical and political topics.

Cases and Specimens.—The members present were conducted over the hospital, and the following cases and specimens shown:—Cases: Dr. GOWANS: Two cases of molluscum contagiosum, morphœa, malignant disease of cæcum, double drop wrist from lead neuritis, Hodgkin's disease, tuberculous kidney, two cases of secondary sarcoma.—Dr. HUNTER: A case of thoracic aneurysm, a case of hyperidrosis. Specimens:—Dr. GOWANS: Multilocular cyst of ovary, abdominal sarcoma, tuberculous kidney.—Mr. A. M. MARTIN: Ununited fracture of bones of leg from a child.

Dinner.—After the meeting seventeen members from amongst those present remained to dinner at the Royal Hotel.

DUNDEE AND DISTRICT BRANCH.

A MEETING of this Branch was held in Dundee on May 25th, Dr. J. W. WEMYSS, President, in the chair.

Election of Officers.—The following were elected office-bearers for 1901: *President:* Alex. Campbell, M.D. (Dundee). *President-Elect:* Chas. Templeman, M.D., D.Sc. (Dundee). *Vice-Presidents:* G. C. Dickson, M.D. (Carnoustie); C. S. Young, M.R.C.S. (Dundee). *Council:* M. F. Anderson, M.B. (Dundee), elected 1898; J. S. Butter, M.B. (Downfield), elected 1898; J. G. Havelock, M.D. (Montrose), elected 1899; R. Sinclair, M.D. (Dundee), elected 1899; T. F. Macfarlane, M.B. (Dundee); G. O. C. Mackness, M.D. (Broughty Ferry). *Representative on Council and Parliamentary Bills Committee of the Association:* J. W. Miller, M.D. (Dundee). *Honorary Treasurer:* D. M. Greig, F.R.C.S.E. (25, Tay Street, Dundee). *Honorary Secretary:* R. C. Buist, M.D. (166, Nethergate, Dundee).

Report of Council and Financial Statement.—The SECRETARY reported the state of the funds and the work of the Council.

President's Address.—The PRESIDENT delivered an address on the Contrast between the Eighteenth and Nineteenth Centuries in Medical and Sanitary Matters.

CONJOINT MEETING.

A conjoint clinical meeting was then held with the co-operation of the Edinburgh and Perthshire Branches, when the following cases were exhibited:—Dr. G. T. GUILD: (1) Patient after excision of larynx; (2) case of middle-ear disease with septicæmia. Dr. G. HALLEY: case of pseudo-elephantiasis. Dr. SINCLAIR SMITH: The sequel to a shell explosion. Dr. J. S. Y. ROGERS: Congenital Spastic Cerebral Diplegia. Dr. M'GILLIVRAY: (1) Pigmentary degeneration of retina; (2) optical iridectomy with tattooing of cornea; (3) removal of lens for high myopia (two cases). Dr. W. E. FOGGIE: (1) Case of locomotor ataxy; (2) peripheral neuritis after influenza. Dr. H. E. FRASER: Case of lupus under *x*-ray treatment. Dr. MACKIE WHYTE: Case of cerebral tumour. Dr. ALEX. DON: Pott's curvature with compression, treated by laminectomy.

Demonstration in Wards.—The members were entertained to tea by the Directors, and afterwards visited the new (Caird) wards for gynæcology and obstetrics, where a demonstration of the direct visual examination of the female bladder (Kelly) was given by Dr. BUIST.

Dinner.—In the evening the members dined in the Queen's Hotel, when the toast of "The British Medical Association" was proposed by Professor STEPHENSON, of Aberdeen, and acknowledged by Dr. J. W. MILLER; and "The President" was proposed by Dr. BERRY HART.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE spring meeting of this Branch was held at the Asylum, Abergavenny, on April 26th. In the unavoidable absence of the President, Mr. W. W. Leigh, the chair was occupied by Mr. J. L. WARD of Merthyr. Between twenty and thirty members were present.

Confirmation of Minutes.—The minutes of the previous meetings (autumnal and clinical) were read and confirmed.

New Members.—Messrs. D. J. Jones, Blaenavon; F. G. Thomas, Swansea; D. Harris, Carmarthen; J. R. Armstrong, Treherbert; R. M. Foley and A. D. Tatham, Abergavenny, were elected members of the Branch.

The Coronership of Swansea.—The following resolution, moved

by Dr. SHEEN, and seconded by Dr. REDWOOD, was carried unanimously:

We heartily congratulate Dr. Rawlings on his candidature for the coronership of Swansea, and wish him every success. We further desire to take this opportunity of expressing our strong opinion that the public interests would be best served by appointing medical men to such offices as they become vacant.

Cases, Specimens, etc.—The following were shown: Dr. W. J. GREER: (1) Spindle-celled sarcoma of hard palate (drawings and photographs); (2) cystic sarcoma of kidney treated by nephrectomy (specimen).—Dr. W. MITCHELL STEVENS: (1) A case of acute perforation from colloid cancer at cardiac end of stomach; (2) a case of "sudden death": necropsy.—Dr. JOHN WILLIAMS: (1) Notes on a case of Cæsarean section: recovery of mother and child; (2) a case of panhysterectomy for uterine fibroid: recovery.—Dr. CORNELIUS A. GRIFFITHS: (1) A case of repeated fracture of patella, twice wired by open method: radiograph; (2) multiple adenomata of breasts.—Dr. P. R. GRIFFITHS: Intestinal obstruction from gall stones, with notes of two cases.—Dr. W. F. BROOK: (1) Remarks on five cases of perforated gastric ulcer, including two successfully treated by operation; (2) further report on a remarkable case of nephrolithiasis (specimen).

Votes of Thanks.—At the close of the meeting a cordial vote of thanks was passed to Dr. Gamble and to other local members and to the Asylum Committee for the welcome and hospitality shown to the Branch.

SPECIAL CORRESPONDENCE.

PARIS.

The International Exhibition: Exhibit of the Russian Army Medical Department: Exhibits of the French Red Cross Societies.

NOT far from the Pont de l'Alma, on the Quai d'Orsay, is situated the Palais des Armées de Terre et de Mer. In the Russian section, on the first floor, the Minister of War gives a very complete and interesting exhibition of the medical service of his department. Among the numerous apparatus on exhibition are the type of press adopted in the Russian army for compressing dressings; the steriliser of Dr. Raptchewski for sterilising dressings; a transportable disinfector for an army corps; the stationary disinfection for hospital use; an autoclave for disinfecting with formaldehyde; the saddles of a surgeon and an assistant surgeon, with leather cases and compartments for instruments and compressed drugs.

The outfit for the ambulance attached to a brigade of light infantry is shown, arranged for a waggon with one and with two horses; the outfit for the ambulance of a battalion alone or other troops with an effective force below 1,000 men. The two wooden wicker-covered cases which form the public health laboratory in the field are also shown, as are the regulation glass and nickel instrument cupboard, with instruments as used in military hospitals and the model used with the ambulances. The first field dressing is also shown; it consists of two squares of sterilised sublimated wool (1 per cent.) folded in sterilised sublimated gauze (1 per cent.), a bandage, and a safety pin. The pharmacological department is represented by large glass cases showing the various drugs used, the majority in compressed form. On the walls are various statistical tables regarding the health in the Russian army during the last ten years, while on revolving stands are numerous photographs showing the process of drying sublimated wool, the rooms where dressings are impregnated with antiseptics, the packing up of sterilised dressings, the presses for cutting compresses, the cutting of bandages—the machinery being under glass—and photographs of bearer companies at work, loading ambulance waggons, etc.

Not far from the Russian section is the little pavilion of the French section of the Red Cross, subdivided into three portions, occupied respectively by the exhibitions of the Association des Dames Françaises, the Société Française de Secours aux Blessés Militaires, and the Union des Femmes de France. These societies, which are supported by voluntary contributions, are under the medical department of the War Office. The centralisation of these organisations allows of very complete arrangements being made throughout the whole of France for the wounded in time of war.

The Union des Femmes de France is composed of 35,900 members, paying an annual subscription. The society possesses the equipment for 166 auxiliary station hospitals with 7,102 beds ready and provision for 10,813 beds, in addition to 18 auxiliary field hospitals for the field, with provision for 1,800 beds. The society exhibits the *matériel* of one of these auxiliary hospitals, surgical instruments, etc., complete. All the wooden cases and their contents are according to regulation pattern, and thus are interchangeable with those belonging to the State. The society gives free public courses of lectures on hygiene and first aid, and now has on its lists a number of nurses and bearers holding the diploma of the society.

The central section of this pavilion is occupied by the Société Française de Secours aux Blessés Militaires. This Society possesses 26 auxiliary hospitals for the field. Each of these hospitals provides 100 beds, and the complete outfit of one of them is here exhibited, consisting of 5 wooden boxes for drugs and surgical instruments, 20 baskets of linen, bedding, dressings, and kitchen utensils, 5 bales containing 100 blankets, 4 regulation stretchers, and 37 nurses' uniforms for hospital. This Society has exclusive charge of the railway station infirmaries, the 69 nurses at each such point having to take care of and revictual the trains of 1,200 wounded. This department consists of 138 doctors and 1,104 nurses. Among the exhibits are bandages, splints, instruments, an instrument steriliser (at 140°C. for 20 minutes being used), a disinfector, etc.

The Association des Dames Françaises exhibits the model of their large hospital at Auteuil: the type of bedstead used in the hospital, the spittoons, etc.; an ambulance waggon with stretchers in position, inside a splash board is a reservoir to hold 60 litres of cold boiled water; an operating table for the field; the hot and cold canteens, which are very light, each containing four flasks made of aluminium, capable of holding a litre and aluminium goblets in a nest.

Since the Peace Conference at the Hague voted the extension of the Geneva Convention to naval warfare, France now possesses two hospital ships, or rather sea ambulances, which will each be able to bring back to land 500 wounded from the scene of a naval battle. For the Mediterranean squadron, one of the vessels of the Compagnie des Transports Maritimes, and for the Channel squadron a vessel belonging to the Compagnie des Chargeurs-Réunis, have been placed by the Admiralty at the disposition of the Union des Femmes de France. These vessels are requisitioned and chartered by the State, the arranging and fitting up being shared equally by the State and the Society.

A decree of May 5th, 1899, has assigned to these Societies the duty of transporting the wounded from the railway stations to the auxiliary hospitals. In Paris the stations of the Orleans and Moulineaux lines, as well as the Ecole des Beaux Arts, which will be the head office of the Union des Femmes de France in time of war, are situated on the banks of the river. The Society has therefore studied the means of transporting the wounded by the waterways, rivers or canals; and as a type of a rapid transformation of one of the Seine passengers' boats for this purpose, we may see such a boat, flying the Red Cross, lying off the Palais des Armées de Terre et de Mer. This boat is capable of holding 40 wounded, 26 being in cots or hammocks.

LIVERPOOL.

Ambulance Work and First Aid by the Police.

FROM the annual report for 1899 of the Police Establishment of Liverpool, it appears that the system of having horse ambulances stationed at the general hospitals controlled by the police dates from April, 1898, and the present is therefore the first annual report which deals with a year's work. Six ambulances fully equipped are in use, four being stationed at the Royal Infirmary, the Royal Southern, the Northern, and the Stanley Hospitals respectively. When called to a case the ambulance is accompanied by a surgeon. One ambulance, which is only used for night service, is stationed at

the Central Fire Station, and another, for the outlying districts, is stationed at the Old Swan Police Station. The number of turns-out amounted to 2,339 in the year.

The total strength of the police force amounts to 1,804, and of these 1,650 hold certificates from the St. John Ambulance Association, and 824 hold medallions in addition. First aid was rendered by the police in 803 times, and in 484 instances the service rendered was especially commended by the doctor receiving the cases. The police also rendered assistance other than first aid to 3,032 persons in cases of accident or sudden illness by removing them to hospital, etc., making a total of 3,835 persons assisted. These figures include 49 rescues from fire or drowning.

Instruction classes in connection with the Life-Saving Society have been recently formed, and, as a result of the examinations, 105 constables and others have received certificates from this Society of their efficiency for the rescue of drowning persons.

CORRESPONDENCE.

THE SOCIETY OF APOTHECARIES OF LONDON.

Sir,—The President of the General Medical Council, in his recent address, implies that the Society of Apothecaries might, under certain circumstances, have ceased to exist as a licensing body. This is incorrect.

If the General Medical Council had on the occasion to which he refers decided not to grant assistant examiners to the Society, the Society would have appealed to the Privy Council, as the Apothecaries' Hall of Ireland did, and obtained the same relief.

The interpretation put by the Privy Council, and particularly by Lord Macnaghten, on the Medical Act of 1886 completely reversed the impression previously existing of the powers of the General Medical Council in granting or withholding assistant examiners.

I never before heard that the General Medical Council seriously thought of withholding assistant examiners from the Society, but only that there was some opposition to the application which Mr. Brudenell Carter successfully combated.—I am, etc ,

James R. Upton.

Society of Apothecaries of London, Blackfriars, London, E.C., May 29th.

MR. LONG AND RABIES.

Sir,—Our own time, at least, has furnished no more striking instance of the prevention of disease than the effect of Mr. Long's muzzling measure in stamping out rabies. The apparrent extinction of the disease in this country is the obvious and direct result of the proceeding, and he deserves the highest praise for his perseverance with it in spite of the obloquy with which it has been received by a certain mistaken class of the community. Yet abuse is still showered upon him for his wise action, which has certainly resulted in saving many lives and intense suffering both in animals and mankind.

Would it not be well for the members of the medical profession, who can estimate better than others the good that has been done, to unite in presenting to Mr. Long a memorial expressing their sense of the value of his successful action? The organisation of the British Medical Association affords the best means of making such a memorial effective. From veterinary surgeons a similar memorial might also fitly come. —I am, etc.,

Queen Anne Street, W., May 29th. W. R. Gowers.

CHANGE OF ADDRESS AND REMOVAL FROM THE *REGISTER*.

Sir,—It is to be hoped that the present protests against the methods adopted by the General Medical Council to verify its *Register* will result in a change being made. A week or two ago I received the usual notice, unsealed, with a halfpenny stamp, and having a form enclosed to be returned with a similar endorsement. Not considering, however, such a procedure as satisfactory, I enclosed it in an envelope and properly prepaid it, adding to my reply that, considering the magnitude of the interests involved, I did not consider a penny an extravagant sum to pay in postage. Briefly, however, what ought to be done is this: If no reply is made in two months to the ordinary circular a registered letter ought to be sent to the same address, and if no reply within a month then the name might be erased as at present, but to remove a name, with all its attendant disadvantages, on the mere non-acknowledgment of a halfpenny circular, in these days of cheap postage, when one is inundated by circulars of all descriptions, is not fair. To cover the cost of the registered letter a shilling might be charged if the previous letter were not answered.—I am, etc.,

Leigh, Lancashire, May 26th. B. Jones, M.D.

Sir,—I have noticed numerous complaints about erasure of names from the *Registers* lately in the British Medical Journal. May I (a dentist) be allowed to air my grievance in your paper? A few months ago I had a registered notice that, not having replied to the first notification, my name would be erased unless I replied within a certain time. Twelve months previously I had notified the Council of the change of my address. I do not believe a notice was sent me before the registered one, and does it not show a bit of carelessness to send me a notice at all?—I am, etc.,

May 30th. Dentist.

CUTTING DOWN SALARIES.

Sir,—Both "Observer" and "X. Y. Z." seem to think that passing examinations and thus legally qualified they are necessarily fully equipped with knowledge, and are worth their weight in gold. It would be interesting if they gave us their real monetary value.

It is well known that most men who qualify have had previously little practical experience, especially since the old-fashioned, but in many ways good and useful, apprenticeship has been done away with. The most sensible apply for appointments at their own hospitals, or, failing this, at some provincial town. The salary is not meant to pay, but just to cover, their personal expenses. No man keeps the place of house-surgeon, etc., longer than he just wants it for additional experience, or for a time necessary to work up for the Services. It would be much better if all who qualify could obtain these appointments, for there would be less ignorance and more confidence amongst all of us.—I am, etc.,

Southsea, May 26th. C. H. Newby, F.R.C.S.

MEDICAL CO-OPERATION AS APPLIED TO MEDICAL AND SURGICAL REQUIREMENTS.

Sir,—Having read the article by "M.D., M.S.," in the British Medical Journal of May 12th, it appears to me that any gentleman arguing in this way is one who has either very little consideration for the particular benefit of his patients, or has not improved with the advantages constantly being developed in connection with pharmaceutical products and instruments. If it were not for the gradual development towards perfection of both methods of administering medicines and instruments for operating that are being carried out by various enterprising firms of manufacturing pharmacists and surgical instrument manufacturers, under the directions of our advanced physicians and surgeons, the condition of pharmacy and of surgery would be to-day exactly the same as it was during the first year of the nineteenth century. Supposing, for instance, a surgeon should observe after actual experience some obvious defects in certain instruments, and go to the manufacturer of instruments asking for such-and-such an improvement to be carried out, and the surgical instrument manufacturer were to say in reply that the same instrument had been good enough for all other surgeons from time immemorial, and ought to satisfy him, it would undoubtedly prevent the advance towards perfection of the sciences of both surgery and medicine. The distinguished President of the Royal College of Physicians (Dr. Church), speaking at the dinner of the Pharmaceutical Society, said that "Every practitioner of medicine had reason to be grateful to the pharmacists for the purity, accuracy, and portability of the drugs of the present day." Like many other manufacturing chemists, the firm with the German name that your correspondent refers to address samples of their new products direct to the medical profession in order to show

what they are like, and we should have some sense of appreciation of their enterprise.

Advertisement in our medical journals is a good way of reaching the profession, but personal calls and samples are also necessary, and even I might say educational.—I am, etc.,

May 22nd. M.D.

SIR,—In reply to to your correspondent, "M.D., M.S.," in reference to chemists' travellers, I would venture to suggest as a remedy exclusive dealing with the Surgical Supply Association, Manchester, which has about six hundred shareholders, and is prepared to meet the requirements of the general practitioner in regard to drugs, sundries, bottles, stationery, etc., without employing the aid of travellers, and with a consequent saving of time and money to the busy practitioner.—I am, etc.,

Manchester, May 19th. WILLIAM GRAHAM.

SIR,—One cannot help thinking that your correspondent's letter at page 1320 *re* Medical Co-operation supplies the remedy for which "M.D., M.S.," at page 1263, asks.

Apart from the saving in one's drug and instrument bill (to the general practitioner at the present time no trivial matter) the system introduced by this Association makes it quite possible for one to entirely dispense with travellers and touting agents of all sorts. "No travellers need apply" must be our formula, and we must resolutely destroy or return all samples, circulars, and the like. The remedy is in the hands of the profession, if only it chooses to take united action.—I am, etc.,

Whitby, Yorks, May 27th. A. J. SHARP.

NEWSPAPER PARAGRAPHS.

SIR,—My attention has been called to various paragraphs which have appeared in the lay press with reference to the case of a private patient of mine. Will you allow me to say that they have been inserted without my knowledge or consent, and that they have caused me much annoyance?—I am, etc.,

Harley Street, W., May 30th. G. ANDERSON CRITCHETT.

OBITUARY.

LANDON CARTER GRAY, M.D.,

New York.

DR. LANDON CARTER GRAY, who died on May 8th, was the son of a prominent lawyer and was born at New York in 1850. He came of an old Virginian family. He matriculated at Columbia College, but was compelled to abandon his studies on account of progressively failing vision, which had followed an attack of scarlet fever. Upon leaving Columbia he went to Europe, and, his eyesight improving, he entered the University of Heidelberg, where he remained three years. Returning to New York he began the study of medicine, taking his Doctor's degree at Bellevue Medical College in 1873. He began practice in New York, but within a year or two moved to Brooklyn, where he began to give special attention to neurology. At the age of 32 he was filling with distinction the Chair of Neurology in the Long Island Hospital College of Medicine. A few years later he accepted the professorship of mental and nervous diseases at the New York Polyclinic, of which he was one of the founders. He returned to New York in 1886, where he continued actively at work as a consultant in nervous diseases and a medico-legal expert until within two or three months of his death.

Dr. Gray was Visiting Neurologist to St. Mary's Hospital in Brooklyn, Consulting Neurologist to the Hospital for the Ruptured and Crippled, and President of the American Neurological Association, of the New York Neurological Society, of the Neurological Section of the Academy of Medicine, of the Society of Medical Jurisprudence, and of the New York County Medical Society. For nine years he held the position of Chairman of the Executive Committee of the Congress of American Physicians and Surgeons. He was the author of many valuable contributions to neurology and psychiatry. He discovered and demonstrated the value of surface variations in the temperature of the scalp as a means of diagnosis in certain intracranial affections. He discovered and described a symptomatic entity among the convulsive disorders akin to chorea, to which he gave the name "palmus." He published valuable observations on syphilis of the nervous system, melancholia, and the muscular atrophies. He was the author of a treatise on mental and nervous diseases which has passed through several editions. Dr. Gray's opinion and advice were in constant demand, and as a medico-legal expert he was described by a distinguished judge as the very model of what a medical witness ought to be. In his personal character he was a man of the strictest integrity and the most delicate sense of honour.

LIEUTENANT EDMUND LEONARD MUNN, of the Royal Army Medical Corps, who died at Boshof on May 23rd, of enteric fever, was the son of Mr. David Munn, F.R.S.E., of 12, Danube Street, Edinburgh. He was one of four brothers in the medical profession, one of whom is now a civil surgeon with the army in South Africa. He was only 24 years of age, and was entirely educated in Edinburgh. Throughout his medical course he was a member of the University Artillery Battery. After qualifying he joined the army. He was attached as a mounted field surgeon to the First Division under Lord Methuen, and was in all the engagements of that general. He was much liked by a wide circle of friends in and out of the army.

DR. MATHIAS HIERONYMUS SAXTORPH, Professor of Surgery in the University of Copenhagen, whose death was recently announced in the BRITISH MEDICAL JOURNAL, was the son and the grandson of two famous obstetricians—Johann Sylvester and Mathias Saxtorph. He was born at Copenhagen in 1822, and studied his profession in the University of that city. After graduation, he travelled for some time, noting the methods of work and the practice in use among the professors of the healing art in other countries. On his return to Denmark, he was in 1855 appointed Reader in Surgery in the University of Copenhagen, becoming Ordinary Professor in 1862. From 1866 to 1885 he was Senior Surgeon to the Royal Frederik Hospital and afterwards Professor of Clinical Surgery. In 1884 an honorary degree was conferred upon him by the University of Edinburgh. Professor Saxtorph's most important work is a treatise on clinical surgery, published at Copenhagen in 1877-79, with supplements which appeared respectively in 1883, 1884-85, and 1886. It embodies the fruits of his acute observation and ripe experience.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Dr. Porfixicio Valiente y Delmonte, Chief of the Medical Department of the Cuban Army in the late Revolution, and at the time of his death Alcalde of the city of Santiago de Cuba: Dr. Van Millingen, of Constantinople, a well-known ophthalmologist; Dr. Oliver Payson Hubbard, formerly Professor of Chemistry and Pharmacy in Detroit College, and sometime President of the New York Academy of Sciences, one of the most distinguished geologists in America, aged 80; Dr. Amenille, formerly President of the Société Médico-Chirurgicale; Professor Rudolf Ritter von Limbeck, Physician to the Rudolfstiftung, Vienna, and author of contributions to medical literature on metabolism, the blood, etc., aged 39; Dr. G. Planchon, Member of the Académie de Médecine and Director of the Ecole Supérieure de Pharmacie, Lyons; Professor Bose, head of the Surgical Clinic of the University of Giessen, aged 60; Dr. Alphonse Milne Edwards, Professor of Zoology in the University of Paris, aged 62; Dr. Reinbold Long, of Berlin, one of the foremost medical jurists in Germany, aged 65; Dr. J. Chéron, former Professor of Zoology at Strassburg, and for the last thirty years Physician to the St. Lazare Infirmary, Paris, author of many contributions to medical literature on electropathy, the use of oxygenated water in tuberculosis, etc., and of a work entitled *Lois Générales de l'Hypodermie*, founder and for fifteen years Editor of the *Revue Médico-Chirurgicale des Femmes*, aged 66; Dr. Leopold Grossman, head of the Ophthalmological and Otological Department of the St. Johannes Hospital, Buda-Pesth. He was recognised as the

leading specialist in diseases of the eye and ear in Hungary, and was the author of numerous papers on subjects connected with these specialities; and Dr. Sergius Korssakoff, Professor of Psychiatry in the University of Moscow, aged 46.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL ARMY MEDICAL CORPS EXCHANGE.

The charge for inserting notices respecting Exchanges in the Army Medical Department is 2s. 6d., which should be forwarded in stamps or post office order with the notice, not later than Wednesday morning, in order to ensure insertion in the current issue.

A CAPTAIN R.A.M.C. is willing to exchange. For particulars address No. 2,[illegible], BRITISH MEDICAL JOURNAL Office, 429, Strand, W.C.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty: WILLIAM H. NORMAN, Staff-Surgeon, to the *Cormorant*, for Gibraltar Hospital, undated; NORMAN L. RICHARDS, Surgeon, to the *Cormorant*, for Gibraltar Hospital, Dockyard, and Naval Extension Works, undated.

General Buller reports that Staff-Surgeon F. J. LILLY, of H.M.S. *Forte*, has been discharged from hospital to duty.

ROYAL ARMY MEDICAL CORPS.

SURGEON-LIEUTENANT-COLONEL HENRY WRIGHT, 1st Volunteer Battalion the Lincolnshire Regiment, is granted the temporary rank of Major whilst serving in South Africa, May 29th.

Sergeant-Major RODERICK R. COWAN is appointed Quartermaster, with honorary rank of Lieutenant, on augmentation, May 30th.

Surgeon-Captains E. J. G. BERKLEY, 4th Volunteer Battalion the Queen's (Royal West Surrey Regiment), and R. POLLOK, M.B., 3rd (the Blythswood) Volunteer Battalion the Highland Light Infantry, are borne as supernumerary whilst serving with the Royal Army Medical Corps in South Africa, May 30th.

Lieutenant-Colonel AYLMER ELLIS HAYES, D.S.O., of Farnborough, died on May 19th at the age of 49. He entered the service as Surgeon, February 4th, 1877; became Surgeon-Major, February 4th, 1889; Surgeon-Lieutenant-Colonel, February 4th, 1897. He accepted retired pay, September 15th, 1897. He served in the Afghan war of 1878-80 (medal); in the operations near Suakin in December, 1888, including the action at Gemaizah (mentioned in despatches, medal with clasp, Third Class of the Order of the Medjidie, and Khedive's bronze star); and on the Soudan frontier in 1889, when he was present in the action at Toshi (mentioned in despatches, D.S.O., and clasp).

Lieutenant EDMUND LEONARD MUNN died of enteric fever at Boshof on May 23rd. His commission was dated July 28th, 1899. He went to South Africa in October last.

Major THOMAS ALFRED PERRY MARSH is also reported to have died from enteric fever at Deelfontein on May 22nd, at the age of 44. He was appointed Surgeon, July 29th, 1882, and Surgeon-Major twelve years thereafter. He was in the Burmese campaign in 1885-7 in medical charge of a battery of mountain artillery, and was present in several engagements near Singyan and Yenacthen, and in the latter place during its investment in February and March, 1886. He received the Frontier medal with clasp for this campaign. He proceeded to South Africa in October last.

The following officers have been discharged from hospital for duty: Captain R. D. JEFFSON, Captain H. J. PARRY, Captain F. W. BEGBIE, Captain N. TYACKE.

Civil Surgeons GOODMAN and A. BALFOUR are reported as dangerously ill in hospital at Estcourt.

MILITIA MEDICAL STAFF CORPS.

SURGEON-LIEUTENANT A. E. MADGE resigns his commission, May 30th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL C. J. H. WARDEN, Bengal Establishment, is permitted to retire, from June 4th. He entered the service as Assistant-Surgeon, March 31st, 1874, and became Surgeon-Lieutenant-Colonel, March 31st, 1894.

Colonel G. MCB. DAVIS, M.B., C.B., D.S.O., Bengal Establishment, is appointed to officiate as Principal Medical Officer, Punjab Command, with the temporary rank of Surgeon-General, from April 23rd.

Lieutenant-Colonel J. T. B. BOOKEY, Bengal Establishment, is granted the temporary rank of Colonel, from April 22nd, while officiating as Principal Medical Officer, Punjab Frontier Force.

Lieutenant-Colonel H. F. P. F. ESMONDE-WHITE, Madras Establishment, is granted the temporary rank of Colonel, from March 26th, while officiating as Principal Medical Officer, Bangalore and Southern Districts.

THE VOLUNTEERS.

THE Volunteer Officers' Decoration has been conferred upon the following officers: Surgeon-Lieutenant-Colonel SAMUEL JOHNSTON, M.D., 2nd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment); Surgeon-Lieutenant-Colonel ROBERT B. SMITH, 1st Volunteer Battalion the Leicestershire Regiment; Surgeon-Captain JOHN O. WILSON, M.D., 4th (Donside Highland) Volunteer Battalion the Gordon Highlanders; Surgeon-Major DUNCAN W. CURRIE, M.B., 7th (Clackmannan and Kinross) Volunteer Battalion Princess Louise's Argyll and Sutherland Highlanders.

Surgeon-Lieutenant P. MCK. TERRY, 2nd Hampshire Artillery (Southern Division Royal Garrison Artillery), resigns his commission, and is appointed Second Lieutenant, May 9th.

Surgeon-Lieutenants F. A. BROOKS, M.D., 1st Suffolk and Harwich Artillery, and E. C. MCCARTHY, M.B., 4th Volunteer Battalion the Cheshire Regiment, are promoted to be Surgeon-Captains, May 10th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated May 30th:—JOHN A. MASTERS, M.D., the Electrical Engineers; JAMES G. BAIN, M.B., 2nd Volunteer Battalion the Prince Albert's (Somerset Light Infantry); JOHN S. MCKENDRICK, M.B., 4th Volunteer Battalion the Cameronians (Scottish Rifles).

VOLUNTEER MEDICAL STAFF CORPS.

QUARTERMASTER AND HONORARY CAPTAIN N. H. NIXON, the London Companies, resigns his commission, retaining his rank and uniform, May 30th.

Mr. ARTHUR T. LAKIN, M.B., is appointed Surgeon-Lieutenant in the Manchester Companies, May 30th.

THE ROYAL ARMY MEDICAL CORPS STALL AT THE NATIONAL BAZAAR.

OF the Regimental and Corps stalls at the National Bazaar, held in the Royal Palace Hotel, Kensington, from May 24th to 26th, not by any means the least tasteful was the stall of the Royal Army Medical Corps. It was visited on the opening day by the Princess of Wales, who not only made some valuable and handsome contributions to it, but also purchased generously from the exhibits therein. The turnover at the stall during the three days of sale and on the auction day (Monday following) reached a sum not far short of £200.

THE CRETAN INSURRECTION.

IT has been pointed out to us that, in our review of the Army Medical Report for 1898, we did not notice the very admirable services of the army medical officers who repulsed the attack on the Greek hospitals in Crete. This was due to no lack of appreciation of the services rendered on that occasion, but to the fact that they were described in the BRITISH MEDICAL JOURNAL soon after the event. The forethought of Colonel Ryan, the senior medical officer, in arming the patients in hospital, and the bravery of Captain Clarke, and of Lieutenants Addams and Williams, undoubtedly prevented a general massacre. These officers received no due recognition of their services on that occasion.

AMBULANCE WORK IN WAR.

IN a paper read before the Royal United Service Institution recently by Major A. C. Yate, of the Indian Staff Corps, on The Knights Hospitallers and Ambulance Work in War, Major Yate dealt with the work of the ambulance department of the Order of St. John of Jerusalem in England, and especially dwelt upon the held the Order has been able to send to the front in South Africa. Although an Order of some 800 years' standing the practical and national benefits that it has been able to bestow had, he said, never been more pronounced than at the present moment. Apart from purely philanthropic work the Order was first brought prominently before the public as an educational body, when the late Colonel Duncan, R.A., under the auspices of the St. John Ambulance Association, in 1877-78, introduced the subject of "first aid." Since that date the Association has continued to teach the public how to render "first aid." The example set by the Association in Britain has been followed, not only in the British Colonies, but in every civilised country. The St. John Ambulance Association had organised also a brigade of bearers under the name of the St. John Ambulance Brigade, numbering at the present time 11,000. The bearers wear a distinctive uniform, undergo a careful training in first aid, in stretcher and ambulance carriage work, and had all the organisation of a volunteer military body. The spirit and enthusiasm which prevailed in the Brigade was best shown by the fact that some 900 of the members had gone to South Africa for service in the field and in the military hospitals. At present the St. John Ambulance Association and Brigade were working with the Red Cross Society (National Aid Society), the Army Nursing Reserve and the St. Andrews Ambulance Association (Scotland), under the auspices of the British Central Red Cross Committee, so far as service in South Africa was concerned. The Association, however, did its best work in civil life. No public gathering was held at which the members are not present officially. In the streets, in public assemblies, whether in-doors or out-of-doors, the men and women of the Brigade are seen ready and equipped to help in case of accident. Major Yate's eulogy of the work of the St. John Ambulance Association was well timed and deserved, considering the great help the trained bearers are in relieving suffering at the front in South Africa.

TEMPORARY COMMISSIONS TO CIVIL PRACTITIONERS.

ANOTHER M.D. writes: I quite agree with your conclusions that a civil practitioner placed in charge of a military hospital is an anomaly, and is, moreover, in a quite illegal position. The question, therefore, ought to be raised, Why civil practitioners placed in charge of military hospitals should not receive acting or temporary commissions? Those employed in South Africa will probably receive medals, etc.; we at home—nothing.

ALLOWANCES IN CAMP.

ENGLAND asks: To what would a surgeon-lieutenant-colonel (of Volunteers) of 25 years' service be entitled while camping for 14 consecutive days as a mounted officer in command of a bearer company?

*** Perhaps some of our readers who have had personal experience of the position defined may be able to answer.

PAY OF MEDICAL PROBATIONERS.

VISITOR writes: At a time when the Royal Army Medical Corps cannot attract sufficient candidates for commissions, would it not be wise to consider the position of those sent to Netley? The probationer receives £8 a month, of which £6 is absorbed in bare messing, and for the first month, with entrance fee, £8 10s. In addition he has to pay a servant, washing, and other necessaries. In the navy, otherwise, a pro-

bationer practically receives full pay. Why should the army candidates be for months a charge on his private means?

*** A surgeon on probation receives 8s. a day, according to Article 368 of the Pay Warrant, or in a month of thirty days, £12.

MEDICAL ESTABLISHMENTS.

IN ARDUIS FIDELIS writes from the seat of war: Army medical officers here are much struck with the absolute want of any adequate increase in the *personnel* of the R.A.M.C. in the Estimates. It is essential the officers should be increased to 1,200 if the sick and wounded are to receive due care. The employment of such large numbers of civil surgeons both at home and in the field is, as can be easily observed, not conducive to efficiency. They are most willing and do their professional work exceedingly well; but want of knowledge of discipline, military medical administration, and, above all, sanitation as applied to troops, renders their aid insufficient. They are handicapped by want of military training. The increase in men of the R.A.M.C. should be at least 500, enlisted for five years with the colours and seven years in the reserve. The auxiliaries from the St. John Ambulance Brigade and other bodies have earned high praise for work done, but likewise suffer from a want of military training and discipline, and of *esprit de corps* which so much enhances the value of the men of the R.A.M.C.

The Corps is grateful for the help it is receiving from its civilian brethren of all ranks, but none the less sees the necessity for its own ranks being numerically sufficient. An increased establishment of both officers and men is essential, and should be perseveringly advocated.

*** We have not hitherto neglected, nor are we likely to forget the advocacy of increased Army medical establishments. when Army reorganisation comes to be considered, as it is certain to do after the war has ended. Civilian aid must always be fallen back upon in big emergencies; but that is no reason why it should be so habitually relied upon. Untrained men may prove of high value as auxiliaries in such a country as South Africa, and with the Boer mode of warfare; but it might be very different had we to face a regular and highly-trained force. *Esprit de corps* is as necessary in a medical as in a combatant corps.

ARMY COMPOUNDERS.

PATER writes that the lot of the temporary compounder is not a particularly happy one; he is treated at Aldershot pretty much, as regards parades, leave, and discipline, as a private soldier. But why not? It is the lot of all enlisted men to be subject to military restraint. They obtain fairly liberal terms as remuneration to chemists' assistants goes, although we think that poor considering the special qualifications and responsible work of a dispenser of medicines.

MEDICO-LEGAL AND MEDICO-ETHICAL.

AN UNQUALIFIED PRACTITIONER.

SOCIETY OF APOTHECARIES v. PURDUE.

THE following account of this action, heard at the Bow County Court on Wednesday, May 23rd, before his Honour Judge French and a jury, is founded on that published in the *Eastern Post and City Chronicle*:

Mr. R. O. B. Lane, jun., instructed by Messrs. Upton, Atkey, and Co., appeared for the plaintiffs; and Mr. Schultess Young, instructed by Mr. Alabone Cheverton, for the defendant.

Plaintiffs' counsel explained that this was an action brought under the Apothecaries Act, 1815, to recover a penalty of £20 from the defendant for practising as an apothecary or general practitioner without possessing the statutory qualification. The facts are as follows: Defendant appeared to practise as a herbalist. He had a shop in Limehouse, but no recognised medical qualification of any kind. In February last a man named Jefferies, the father of seven little children, one or more of whom were suffering from what appeared to be sore throat, went to the shop and asked for ipecacuanha. Defendant asked what was the matter, and on Jefferies informing him said he would come round and see the children. He accordingly went round, examined the children and syringed their throats, adding that he would bring them medicine, which he did. He subsequently informed the father that the children were suffering from diphtheria. Jefferies paid him 5s. On February 5th the defendant called at the Limehouse Board of Works and notified the cases upon the usual forms, describing himself as botanic practitioner and "Fellow of the Council of Safe Medicine." Dr. Thomas, the Medical Officer of Health, thereupon visited the house and found four children suffering from diphtheria, and had them subsequently removed to the hospital.

Counsel then called Jefferies and Dr. Thomas, who gave evidence in support of the opening statement.

Counsel for the defence called Purdue, who described his treatment at length, and in reply to a question from the Judge as to why he had not called in a doctor, stated that he knew that nobody could improve on his treatment. Mr. Young, in addressing the jury for the defence, said that by an Act of Parliament of Henry VIII, a herbalist was entitled to practise so long as he did not infringe the rights of apothecaries, and he submitted that defendant had not done so.

The Judge, in summing up, said the case was the simplest he had ever had to deal with. Amongst the poor it was essential that proper safeguards should be taken in order to ensure that they should have properly-qualified practitioners. Defendant admitted that from Saturday night to Sunday night he had been doing doctor's work. The jury, after some discussion, returned a unanimous verdict for the plaintiffs, and judgment was thereupon given for the Society with costs.

In connection with the above proceedings, we understand that the Clerk of the Limehouse Board of Works has forwarded to the Society of Apothecaries a cordial expression of the thanks of the Board to the Society for their action in the matter. We think it desirable to emphasise the fact that these proceedings were undertaken by the Society of Apothecaries upon the initiative of the Board of Works, and to express our satisfaction at finding a local authority coming forward in this way to repress unqualified practice, thereby undoubtedly affording a great service to the community in general.

DOCTORS' SHOPS.

WE have received several communications which add to our information respecting the regulations of various licensing bodies in the matter of the sale of drugs by their diplomates.

Dr. Rivers Willson's letter was published in the BRITISH MEDICAL JOURNAL of May 19th, and Dr. Townsend Barker states that the Fellows of the Royal College of Surgeons of Ireland have to sign the following declaration: "I do not now practise the business or profession of an apothecary or druggist, or indirectly sell drugs or medicines; and I will not, so long as I shall be a Fellow of the said College, practise such business or profession."

The proprietors of the "Doctors' Shops" to which we referred would not admit that they came under the regulation of the Royal College of Physicians of London, which forbids its licentiates to dispense medicines "except for the patients under their own care." We did not mean to suggest that it is or was a common practice for doctors to keep shops for the sale of toothbrushes, etc., but that they keep or used to keep what is euphemistically called an "open surgery."

EMERGENCY CALLS.

BLACKPOOL.—When an accident happens and messengers, some authorised and some not, run in all directions to call in medical assistance, it is impossible to avoid the difficulty that more than one medical man may arrive upon the scene, and that probably only one has been called in by any authorised person. The best thing to do is to find out whose attendance is desired, and those not chosen should retire as gracefully as they can. If the people concerned have any manners they will thank each one for his attendance and offer a fee, but in many cases we have to be content without these solatia, as payment can be recovered only from the injured person, and he is not always in a position to pay. In the case put by our correspondent, if the boy is going to pay he has a right to choose his own medical attendant, but if the master is going to pay he would probably insist upon making the selection. We do not think it would be reasonable or right to suggest that the first comer has an indisputable claim to take charge of the case.

P. F. M.—It must be recognised that a patient is at full liberty to select his own medical attendant. In the case of an accident where immediate attendance is necessary, the first comer must, as a rule, do what is necessary, and the patient, not unnaturally, will often prefer that the medical man who saw and treated the injury at first should continue in attendance until recovery has taken place. In the incident submitted the patient appears to have definitely made his selection.

MIDWIVES' MIDWIFERY.

CRUX writes: I was called recently to a confinement for which I had been previously engaged. On my arrival I found the child's legs had been born, and the child dead and quite cold. The nurse said that its legs had been born about twenty minutes. The arms were extended over the child's head. I brought them down and delivered the woman without the slightest difficulty. I asked the nurse why she did not send for me sooner. She replied that until the legs were born she did not know that it was a breech presentation, and that, although she is a so-called trained midwife and supplied by a village nursing association, she had never been taught to examine. I told her that in my opinion the child's life might have been saved if the woman had received proper attention. I mentioned the matter to the coroner, who would have held an inquest but, as he remarked, he cannot inquire into the cause of death of what has never lived, so I gave a certificate on the usual form for stillborn children. I should be glad if you would tell me (1) what steps can be taken to compel the nurse or midwife to send for a doctor in difficult cases? (2) How she can be expected to diagnose a difficult case without proper training? (3) Supposing I am called to a similar case shall I again give a certificate? The nurse says that this is the first occasion on which a doctor had been present at a confinement with her, and that she had always managed quite well before, and that the ladies of her committee say that she ought not to require a doctor at a confinement.

*** (1) None, except such pressure as can be applied through the nurse's care for her reputation. (2) She cannot be expected to do so. (3) Our correspondent can do no more than he did in the case he relates. The ladies of the nurse's committee require education.

UNQUALIFIED ASSISTANTS.

A CORRESPONDENT sends us a copy of a letter received from the manager of an association for supplying medical assistants, who asks, "Are you open to take a man who has not yet got quite through his course, on modified terms, as we have one or two such men available who might suit you?" Our correspondent expresses the fear that this indicates that some members of the profession are willing to employ unqualified assistants. We hope this is not the case, and we do not see that it necessarily follows, as the General Medical Council has all along recognised that medical students may spend their fifth year with a medical practitioner.

A NOVEL DEFENCE.

AT the Altrincham County Court a case was recently tried of some interest to the profession. Dr. Adolph Renshaw, of Sale, sued Mr. Charles J. Waddell for £18 4s. for medical attendance, in the course of which he had made an affidavit that his patient was of an unsound mind. One of the chief defences relied upon by the defendant was that the doctor could not recover, because his patient being of unsound mind was not liable for

expenses he might incur while so afflicted. His Honour, Judge Gwynne James, thought otherwise, and found for the plaintiff for the amount claimed.

CORONERS' POWERS IN IRELAND.

N. Y.—(1) and (2) It would be unwise to raise the question. (3) and (4) The coroner has absolute discretion in his own court. The Coroners' Act reads: "Where any coroner shall hold an inquest upon any dead body, and shall deem the attendance of some medical witness to be necessary at such inquest, he shall summon as such witness any legally qualified medical practitioner being at the time in actual practice at or near the place where such death happened."

EMPLOYERS' LIABILITY.

J. C. W. writes saying that he was called to attend a Board School caretaker in consequence of an accident which occurred while following his employment under the Board. The patient had compound fracture of both bones of the forearm which necessitated surgical attendance for over three months. A claim for five guineas was made on the Board for this, which was disputed, as the amount claimed was considered to be excessive, though the Board's responsibility was admitted. The fee claimed was ultimately paid without any legal proceedings being instituted. Our correspondent asks our opinion in reference to the amount of the fee he claimed.

*** We do not hesitate to say that we regard the charge of five guineas made for this attendance as being a proper one, and we consider the Board showed good judgment in paying this amount and not allowing the case to go for trial by a county court.

THE COURTESY CALL.

MEMBER.—Undoubtedly the new comer has a right to expect that his calls should be returned, but he should make allowances for busy men, and if he is received otherwise in a friendly manner he should not stand strictly upon a point of etiquette.

NEW-COMERS AND OLD PATIENTS.

LLEWELYN.—A correspondent puts the following case: A. is a new-comer. B. a rival practitioner who has been resident some years. In the event of a patient of B.'s calling at A.'s surgery for advice, does etiquette demand that A. should notify B. of the fact that he has attended his patient? In the further event, should the patient happen to be a member of the club of which B. is the medical officer, does this further fact make it more incumbent upon A. to notify the fact of his attendance to B.?

*** We cannot say that an obligation lies upon a practitioner to whom a person applies for medical or surgical advice to find out the name of the patient's former medical attendant and communicate with him.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Examiners.—Mr. F. G. Parsons, of St. Thomas's Hospital, has been appointed an additional Examiner in Anatomy for the Second M.B. Examination.

Honorary Degrees.—Among the recipients of Honorary Degrees on June 12th are the following Fellows of the Royal Society: Lord Rosse, astronomer; Sir Benjamin Baker, engineer; Sir W. L. Buller, zoologist. The list also includes Professor S. P. Langley, Secretary of the Smithsonian Institution, and Professor Poincaré, of Paris, mathematician.

Summer School.—The arrangements for the summer school for qualified practitioners are nearly contemplated, and a provisional programme has been issued.

Degrees.—The following Medical Degrees were conferred on May 24th:

M.D.—C. P. White, M.A., Sidney, Sussex.

M.B.—W. M. Fletcher, M.A., Trinity; H. M. Harwood, M.A., Trinity; W. H. Maxwell, B.A., Trinity; D. P. Watson, B.A., Trinity; N. G. Bennett, B.A., St. John's; B. J. Collingwood, B.A., Caius; J. C. A. Rigby, B.A., Caius; A. Killick, B.A., Downing.

B.C.—O. F. F. Grünbaum, B.A., Trinity; W. Norbury, B.A., Trinity; G. R. Slade, B.A., Trinity; J. C. Matthews, B.A., St. John's; A. E. Bodington, B.A., Caius; B. J. Collingwood, B.A., Caius; J. C. A. Rigby, B.A., Caius; A. Whitmore, B.A., Caius; A. Killick, B.A., Downing.

UNIVERSITY OF LONDON.

M.B. PASS EXAMINATION.—The following candidates have satisfied the Examiners:

First Division.—H. C. Barlow, Westminster Hospital; J. T. Dunston, Guy's Hospital; A. G. Ede, St. Bartholomew's Hospital; A. T. Pridham, St. Bartholomew's Hospital.

Second Division.—Cornelia Bonté Sheldon Amos, London School of Medicine and Royal Free Hospital; T. Anstey-Chave, St. Bartholomew's Hospital; A. J. V. Betts, Westminster Hospital; Isobel Sarah Bryson, Royal Free Hospital; L. Cook, Westminster Hospital; D. L. Davies, University College; A. Fraser, Guy's Hospital; C. S. Frost, St. Bartholomew's Hospital; G. R. Harcourt, St. Thomas's Hospital; F. J. Hasslacher, King's College; E. W. Holyoak, St. Mary's Hospital; J. W. Hunt, St. Mary's Hospital; W. S. Inman, University College, Sheffield; D. T. C. Jones, University College; C. V. Knight, St. Bartholomew's Hospital; C. J. I. Krumbholz, University College; W. H. Lowman, King's College; M. T. Male, University College; E. A. Miller, B.Sc., Guy's Hospital; F. M. Morris, London Hospital; R. R. Mowll, King's College; H. R. Nutt, St. Mary's Hospital; G. C. Owsley, Guy's Hospital; W. P. Panckridge, Middlesex Hospital; T. Perrin, St. Thomas's Hospital; G. E. J. A. Robinson, University of Dublin and Royal College of Surgeons of Ireland; H. H. Scott, St. Thomas's Hospital; N. F. Stallard, University College; W. S. V. Stock, University College, Bristol; R. T. Thomas, University College; R. L. Thornley, St. Bartholomew's Hospital; S. G. Tippett, Westminster Hospital; F. D. Turner, Guy's Hospital; L. A. Walker, St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

FELLOWSHIP EXAMINATION.—The following candidates, having passed the necessary examination, have been admitted Fellows of the College: Mr. J. H. Conway, Mr. F. C. Crawley, Miss S. Gray, Mr. K. L. G. Gunn, Mr. S. H. Law, Mr. M. J. Madden, Mr. J. F. Mannix, Mr. L. R. More-O'Ferrall, Mr. M. O'Sullivan, and Mr. W. G. T. Posnett.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,230 births and 4,098 deaths were registered during the week ending Saturday last, May 26th. The annual rate of mortality in these towns, which had been 17.8 and 18.2 per 1,000 in the two preceding weeks, further rose to 18.4 last week. The rates in ths several towns ranged from 12.3 in Croydon, 12.6 in Cardiff, 13.4 in West Ham and in Birkenhead, and 15.8 in Swansea to 23.5 in Oldham, 23.8 in Salford, 25.5 in Manchester, and 27.4 in Liverpool. In the thirty-two provincial towns the mean death-rate was 19.7 per 1,000, and exceeded by 3.3 the rate recorded in London, which was 16.4. The zymotic death-rate in the thirty-three towns averaged 2.0 per 1,000; in London this death-rate was equal to 1.8, while it averaged 2.1 in the thirty-two provincial towns, among which the highest zymotic death-rates were 3.4 in Derby and in Blackburn, 3.5 in Salford, and 3.7 in Oldham and in Sheffield. Measles caused a death-rate of 1.1 in Cardiff, 1.2 in Leeds, 1.5 in Plymouth and in Huddersfield, and 2.9 in Derby; scarlet fever of 1.1 in Blackburn; and whooping-cough of 1.2 in Manchester and in Salford, 1.4 in Oldham, and 1.5 in Liverpool. The mortality from "fever" showed no marked excess in any of the large towns. The 81 deaths from diphtheria in the thirty-three towns included 29 in London, 9 in Leicester, 9 in Sheffield, 5 in Brighton, and 4 in Leeds. Two fatal cases of small-pox were registered last week in Liverpool, but not one in any other of the thirty-three large towns. There were 5 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, May 26th; and 3 new cases were admitted during the week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had risen from 1,647 to 1,733 at the end of the four preceding weeks, had further risen to 1,784 on Saturday last; 216 new cases were admitted during the week, against 176, 203, and 221 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, May 26th, 897 births and 606 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 17.7 and 19.5 per 1,000 in the two preceding weeks, further rose last week to 19.6, and was 1.2 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 10.6 in Leith and 14.9 in Dundee, to 20.5 in Edinburgh and 21.4 in Glasgow. The zymotic death-rate in these towns averaged 2.5 per 1,000, the highest rates being recorded in Glasgow and Aberdeen. The 306 deaths registered in Glasgow included 1 from small-pox, 6 from measles, 2 from scarlet fever, 2 from diphtheria, 28 from whooping-cough, and 9 from diarrhœa. Two fatal cases of measles and 3 of diarrhœa were recorded in Edinburgh; 3 deaths from diarrhœa occurred in Dundee, 6 from whooping-cough and 3 from diarrhœa in Aberdeen, and 2 from measles in Leith.

THE MANAGEMENT OF FEVER HOSPITALS.

THE *Ross-shire Press* gives prominence to a dispute which has arisen between Dr. Bruce, Medical Officer of Health for Ross-shire, and Dr. Adam, of Dingwall, with reference to the admission of fever patients into the Ross Memorial Hospital, Dingwall. This hospital apparently has attached to it a small fever hospital, into which fever patients from the burgh and county are admitted, the local authorities being responsible for the cost of treatment, and the patients being attended by the Dingwall medical men who admit them. At a recent meeting of the Managers it was agreed that in future no patients should be admitted except through Dr. Bruce. This is objected to by Dr. Adam and by some of the managers, one of whom has resigned.

The dispute entered another phase when Dr. Bruce, who is also Medical Officer of Health for the Burgh of Dingwall, in his annual report stated that "a case that has recently occurred will best illustrate the present unsatisfactory manner of dealing with infection. Two members of a family of the name of Rodgers, residing in Blackwell Street, were taken ill—one, I understand, in the course of the third week in January. They were both sent (and, I believe, properly sent) to hospital on January 22nd. On the 26th I received the notification that they were labouring under diphtheria and proper cases for hospital treatment more than a week after their removal to that institution. It is true the notification was dated the 26th, but even if it had been handed to me on that day the children had already been four days in hospital. Apart from my being kept in ignorance, and not having any voice in their being fit subjects for hospital treatment, nothing had meantime been done to stop the spread of infection—in any official and decisive way."

Dr. Adam, who is a member of the Board, and was present when this report was submitted, controverted Dr. Bruce's statement and said, "Dr.

Bruce wished them to insist that no single case of infectious disease be removed to hospital without an order from the Burgh Medical Officer of Health. They knew how often Dr. Bruce is away from home. Last week he (Dr. Adam) was under the necessity of putting in a patient to hospital. It was a case from the country. He notified the case to Dr. Bruce, and was informed that gentleman was in London. By the unfortunate decision come to by the managers of the hospital—which decision they were led to come to by Dr. Bruce, and by Dr. Bruce alone—it had been authorised that no fever case be sent into the hospital without Dr. Bruce's sanction. His (Dr. Adam's) notification was returned to him from Dr. Bruce's house with the statement that Dr. Bruce was away in London, and would not return for three days. The question then arose was he to leave the case in that little house, with a large number of little children living and sleeping in the same room, until Dr. Bruce returned from London to give the necessary sanction."

The result was that the Council unanimously passed a motion, "That Dr. Bruce's request 'that the Town Council insist that no single case of infectious disease be removed to hospital without an order from the Burgh Medical Officer of Health for the patient's admission there' be not granted, but that the present system, which in the past has proved so satisfactory, be adhered to."

Disputes between medical officers of health and general practitioners are always much to be regretted, and are not conducive to the best interests of the profession, and it is unfortunate that these disputes when they arise cannot be settled without finding their way into the lay press. The clause in the Public Health (Scotland) Act, which enables local authorities to arrange with the general hospitals for the treatment of fever patients is to the following effect: "Any local authority may enter into an agreement with any person having the management of any such hospital or house, or part thereof, on payment of such annual or other sum as may be agreed on."

Evidently an agreement has been entered into between the local authorities and the managers of the Ross Memorial Hospital, and this agreement could only be altered with the consent of all parties concerned, and it was quite irregular for the managers to alter it if they did not obtain that consent. Dr. Bruce was quite justified in recommending any alterations which he considered necessary for the public good, but it would have been better if these suggestions had been first of all brought before the local authorities interested, and, if approved by them, then before the managers of the hospital. Naturally those who pay the expense of maintaining the patients will claim to have a very decided say in the management, and distinct rules should be drawn up for the admission of patients.

SALE OF FOOD AND DRUGS ACT IN SCOTLAND.

THE Local Government Board of Scotland has issued an Order setting forth the regulations which it has framed under the Sale of Food and Drugs Act, 1899, with reference to the proof of competency necessary to be furnished by public analysts appointed under the Act. These regulations require that every person appointed on and after January 1st, 1900, to the office of public analyst shall furnish such proof as the Board may deem necessary of his competent skill in and knowledge of (*a*) analytical chemistry, (*b*) therapeutics, and (*c*) microscopy, and the Order proceeds to indicate the nature of the documentary evidence to be comprised in such proof. Such evidence of competency is to be furnished by the public analyst to the local authority by whom he is appointed, and to be transmitted to the Board, together with copy of his application to that authority when applying for the Board's approval of the appointment. Before approving the appointment the Board must be satisfied that the analyst is not engaged directly or indirectly in any trade or business connected with the sale of food and drugs in the place for which he is appointed.

With reference to those whom the Board may from time to time recognise as competent to confer the requisite qualification, the Board are prepared to accept as sufficient documentary evidence of the requisite qualification under the Act the diploma of Fellowship or Associateship of the Institute of Chemistry of Great Britain and Ireland, granted by the Institute after an examination conducted by them in therapeutics, pharmacology, and microscopy. The possession of a diploma registrable under the Medical Acts is sufficient proof of competency in microscopy and therapeutics, and in addition to this a person so qualified, if appointed as a public analyst, will only be required to furnish evidence of competent skill in and knowledge of analytical chemistry.

The Board recommend the appointment in the smaller burghs of the county public analysts in the interests both of economy and uniform action.

THE NOTIFICATION OF MEASLES.

LESS than 1 per cent. of the sanitary authorities of England and Wales have sought for and obtained the approval of the Local Government Board to the inclusion of measles in the list of diseases the notification of which is compulsory, and over one-third of those authorities have subsequently revoked the measure.

Quite recently the Newquay Urban District Council has decided to apply to the Local Government Board for consent to erase measles from the list of notifiable diseases, and the decision appears to have been arrived at out of regard to the fact that 149 cases of measles were notified during the month of April, and a not inconsiderable expense had been incurred in notification fees during the present year of epidemic prevalence. In the opinion of the councillor who proposed the removal of measles from the list, the notification was a waste of public money, and the arguments reported to have been advanced by the medical officer of health (Dr. Hardwicke) in favour of the continuation of the notification did not suffice to convince the majority of the Council as to the necessity or value of the measure.

One of the great arguments against the compulsory notification of the disease is that it is difficult or impossible, when an epidemic threatens to become established, to promptly visit the cases notified, and that as a consequence the action of the local authority often resolves itself into little more than the receipt and payment for the notification certificates, and the closing of the schools. The precaution of school closure, however, can be taken without compulsory notification of the disease; and the knowledge of when the measure is necessary can be gained from a frequent inspection of the lists of absentees from school, considered where necessary, with the information in the possession of the school-attendance officer, even more promptly and completely than by compulsory notification. Regarded in the light of past experience, the compulsory notification of measles certainly does not appear to have been a very valuable measure towards the reduction of measles incidence and mortality.

THE WILLESDEN BOARD OF GUARDIANS AND THEIR MEDICAL OFFICERS.

WE see in a published report of a meeting of the Willesden guardians held recently that one or two curious, and to us novel, questions cropped up, which appear to have given rise to considerable discussion. The first doubtful point was the proper method by which the Chairman of the Board for the ensuing year should be elected; it not being clear, whether the election of officers of the Willesden Board could only be decided by the votes of the majority of the guardians present at the meeting; or whether the election could be carried by a majority of those who chose to vote on the question. The next matter in doubt was whether the Chairman could properly be regarded as an "officer" of the Board. On these two points the clerk declined to give his opinion, and we gather from the report before us that the Local Government Board had also declined to advise the guardians in reference to them. It seems likely, therefore, that some legal action will have to be taken before these questions can be satisfactorily settled.

Other business of the meeting, with which we are more immediately concerned, is that some fresh medical appointments are about to be made. The need for this arises from the rapid increase of the population. In the year 1892 the parish of Willesden (then a part of the Hendon Union) was, for medical attendance on its poor, divided into two districts, each with its own medical officer (one of these being the public vaccinator for the whole parish). This arrangement lasted till the year 1896, when Willesden became separated from Hendon. Since then it has had its own Board of Guardians. About the same time Dr. Ring, who had been one of the district medical officers for some years, as well as public vaccinator, died. A resolution was then passed by the guardians that "The posts of medical officer and public vaccinator should in future be held by separate medical men," and that there should be one public vaccinator only for the parish. This proposal was carried by a small majority of the Board, but it rendered the district medical officers ineligible to contract with the guardians for the performance of public vaccination. It naturally created some dissatisfaction, as one of the latter who had held office for some years, had during the early period of his service under the Hendon guardians been led by them to believe that on the next vacancy the vaccination of his district would be assigned to him. This implied promise of the Hendon guardians the Willesden Board declined to regard as in any way binding their present action, and they now propose to divide the parish of Willesden, of which the population in the year 1891 was 62,000, but in 1900 had increased to 115,000, into three districts, instead of two, for medical attendance, and to contract with a fourth medical man to undertake the vaccination of the whole of it.

We have very serious doubts whether this proposal of the guardians is the best scheme for adoption. There are some obvious objections to it. The main one is that a large number of the poor will have their newly appointed medical officer residing at a distance of two miles from their homes, whereas if four medical districts were to be formed instead of three, as proposed, and the vaccination of each medical district entrusted to its respective medical officer, the great majority of the poor would have their medical attendant within one mile of them. As the population of the parish is still rapidly increasing, we do not hesitate to say that four medical appointments at least should now be made, and we believe that, if the guardians could arrange for their newly appointed medical officers to contract for the vaccination in their own districts, their appointments would then be better appreciated. Any plan which would have the effect of placing a poor population of 20,000, such as we believe exists in Kensal Green, at a distance of two miles from medical attendance, is in our opinion very far from perfect, and we sincerely hope to see something better than this designed to meet the future requirements of the Willesden poor.

THE VACCINE LYMPH OF THE LOCAL GOVERNMENT BOARD.

DR. J. PENN MILTON (Penzance) writes: In reply to a communication from "An old P. V." in the BRITISH MEDICAL JOURNAL of May 5th, p. 1137, I beg to send you the following information:

November, 1899, to March, 1900.

Number of Cases Vaccinated.	Number of Punctures made to which Lymph was Applied.	Number of Vesicles Obtained.
184	718	614

Number of Unsuccessful Cases (that is, with no Vesicles). 3

Cases with Four Vesicles Obtained.	Cases with Three Vesicles Obtained.	Cases with Two Vesicles Obtained.	Cases with One Vesicle Obtained.
123	23	22	9

Since March the result of the vaccinations have been in keeping with the above, the warmer weather not having yet made any difference. All the cases were vaccinated by lymph supplied to me, as public vaccinator, by the Local Government Board, and the period when the vaccinations were done extends from November, 1899, to March, 1900.

DR. CHARLES TERRY (Public Vaccinator to Nos. 1 and 3 Districts and Workhouse of Newport Pagnell) writes: In answer to the inquiry of "An old P. V." in the BRITISH MEDICAL JOURNAL of May 5th, p. 1137, I can emphatically state that at the present time the quality of calf lymph supplied by the Local Government Board is perfectly satisfactory, and quite equal to that supplied to us at the commencement of the new *régime*.

THE NOTIFICATION OF INFECTIOUS DISEASES IN DUBLIN.

THE occurrence of an extensive epidemic of cerebro-spinal meningitis in Dublin has led the municipal council to resolve that this disease shall become notifiable for the four months ending September 15th, 1900. The

medical superintendent officer of health has also made a communication to the medical practitioners in the Dublin district to the effect that although phthisis is not notifiable, it is desirable to disinfect the rooms in which persons affected by this disease have resided, and that notification of phthisis (which will be regarded as confidential) with the view of disinfection will be gladly received and acted upon. In the same circular attention is directed to a letter from the Local Government Board for Ireland, stating the evidence given in the supplemental inquiry concerning the recent outbreak of enteric fever at Blackhorse Lane and Castleknock appears to show that a rather lax system of notification exists in the county borough as well in the rural district of the North Dublin Union. The circular concludes as follows: "The Public Health Committee earnestly request the medical profession to carry out in both spirit and letter the excellent Notification of Infectious Diseases Act. They consider it most unfair to the medical practitioners who invariably notify that other brother professional men either fail to notify at all or do so only in a small percentage of their cases."

PROSECUTION UNDER THE NOTIFICATION ACT.

AT the Jarrow Police Court on May 18th, Dr. M. M. Bradley was summoned at the instance of the Jarrow Corporation for failing to notify forthwith a case of infectious disease. Dr. Bradley saw the case on the evening of April 2nd, and it was alleged for the Corporation that the notification had not been received until April 4th. It was proved for Dr. Bradley, who was defended by the Medical Defence Union, that the notification had been delivered on the morning of April 3rd

The Sanitary Inspector stated in cross-examination that he had requested Dr. Bradley to withdraw the notification, but he had declined to do so, and on the suggestion of the Chairman of the Bench, counsel for the Corporation admitted that the request to withdraw the notification was an indiscretion.

The Bench dismissed the case, and the Chairman observed that the Bench were of opinion that an endorsement should be made upon the notification form showing the date and time of receipt.

FEEDING AND CARE OF INFANTS.

A HANDBILL with this title, drawn up by Dr. Charles Porter, lately medical officer of health for Stockport, has been issued by order of the Sanitary Committee. It contains a series of very practical recommendations to mothers, and if they are carried out a general improvement in the infantile mortality ought to be produced. Most of the mistakes which are made by the mothers of the poor are due to want of knowledge rather than to want of care. The correction of these mistakes is rather disappointing work, but education of this kind is always a slow business. We believe that some effect has already been produced by the instructions issued by local authorities and by hospitals, and we feel confident that such handbills as those which Dr. Porter has drawn up are calculated to be useful.

THE SANITARY INSPECTORS' EXAMINATION BOARD.

WE are informed that at the examination for sanitary inspectors under the Public Health (London) Act, 1891, held recently by the Sanitary Inspectors' Board, 12 candidates passed, of whom 5 had received instruction from the Sanitary Institute, 3 from the National Health Society, 3 from King's College, and 1 from Bedford College for Women. The number of candidates is not stated.

THE MEDICAL OFFICER OF HEALTH FOR GLOSSOP.

WE are glad to observe that the salary of Dr. Mackenzie, medical officer of health for Glossop, has been increased, subject to the approval of the Local Government Board, from £50 to £100 per annum.

COMPENSATION FOR LEAD POISONING.

IN the Manchester County Court recently a brass finisher claimed damages against his employers for injury to his health in consequence of negligence alleged on the part of the defendants. He was first employed in the finishing shop and afterwards was sent by the foreman into the fitting shop, and after about six weeks employment he became ill. After two or three attempts to return to work, he had to cease work and put himself under treatment for lead poisoning. He was in bed for three weeks. The room he worked in was ill ventilated. In putting the brass joints together white lead was used; they were screwed together, and then the surplus lead wiped off, and to test them they were sucked by the mouth. A pump was used for larger fittings, but for the small fittings the mouth. Facilities for washing the hands were not sufficient, and a lead-burning machine was in the same room. Medical evidence was called to say the claimant was almost recovered. The Judge found for the plaintiff, £45 damages and costs, holding that sufficient lavatory accommodation had not been provided by the employers. This is an important decision, and one that ought to make employers very careful in providing proper washing accommodation and taking all other precautions to prevent injury to those who work with lead

CONDEMNATION OF UNSOUND FOOD.

IN the case of Thomas *v.* Van Os, which came before Mr. Justice Ridley and Mr. Justice Bigham on May 16th, the short point was whether it was necessary for a magistrate to have evidence before him that food alleged to be bad was intended for food of man before he had jurisdiction to order it to be destroyed under the Public Health (London) Act. The magistrate at the hearing of the case had refused to make an order for destruction on the ground that there was no such evidence before him. The Court came to the conclusion that it was for the medical officer to decide whether the fruit is exposed for sale, and that the function of the magistrate in such cases is purely ministerial.

In this case the principle laid down in White *v.* Redfern (5 Q B.D., 15), which was decided under the Public Health Act, 1875, is applied to similar cases arising under the Public Health (London) Act.

QUALIFICATIONS NECESSARY FOR POOR LAW AND OTHER APPOINTMENTS.

W.A.H. writes to ask what qualifications are necessary to enable him to compete for the appointments of Poor-law medical officer, vaccination officer, or medical officer of health. He wishes to know whether the M.D. of an English university is sufficient for the purpose.

*** 1. All Poor-law medical officers, public vaccinators, and medical officers of health, must before appointment produce evidence (by one or more degrees or diplomas) of being fully qualified to practise medicine, surgery, and midwifery. Many qualifications which were registered during the first thirty years after the Act of 1858 did not meet this requirement. All qualifications which have been registered since June 1st, 1887, in accordance with the Medical Act passed in the previous year, 1886, are fully qualifying, and consequently one only of these latter qualifications is necessary to hold the appointments of Poor-law medical officer or public vaccinator.

2. A medical officer of health of any county or of any single or combined district, with a population at its last census of 50,000 or more, or of any metropolitan district, or the deputy of any such officer, must be legally qualified for the practice of medicine, surgery, and midwifery, and also either be registered in the *Medical Register* as the holder of a diploma in Sanitary Science, Public Health, or State Medicine, under Section XXI of the Medical Act, 1886, or have been, during three consecutive years preceding the year 1892, a medical officer of the district or combination of districts in London or elsewhere, with a population according to the last published census of not less than 20,000, or have, before the passing of the Local Government Act, 1888, been for not fewer than three years a medical officer or inspector of the Local Government Board.

CERTIFICATION OF PAUPER LUNATICS.

S. M. C., who is a district medical officer, writes to ask whether a magistrate who is acting for the purpose of sending a pauper lunatic to an asylum can call in any other medical man in the neighbourhood to certify to the lunacy of the patient, thereby (as he says) putting aside the medical men appointed by the union for such purpose.

*** Any magistrate who authorises a pauper to be sent to an asylum as a lunatic is, by the Lunacy Act 1890, at liberty to call to his assistance to enable him to do this any medical practitioner. This may be the district medical officer or any other registered practitioner. No Poor-law medical officer is ever appointed for this purpose. His duty is to attend the poor in illness and to pay quarterly visits to pauper lunatics in the district who are not in an asylum, etc.

PUBLIC HEALTH APPOINTMENTS IN SCOTLAND.

A.M.—The Public Health (Scotland) Act, 1897, which makes it compulsory for all holding Public Health appointments, irrespective of the extent of the district, to have a diploma in Public Health, is undoubtedly unsatisfactory, especially in districts where the emoluments are out of all proportion to the expenses that would have to be incurred to obtain a diploma, and some alteration is to be desired. At the same time there is no reason that the remuneration should be reduced in the way our correspondent mentions. We understand that in the county of Inverness, in the parishes of South Uist and Barra, although the medical officers recently appointed there have not the qualification, the salaries have in no way been reduced.

HOSPITAL AND DISPENSARY MANAGEMENT.

A YEAR'S WORK IN A SCOTTISH FEVER HOSPITAL.

THE annual report of the Middle Ward Hospital of the town of Motherwell in the County of Lanark for 1899, written by Dr. John Buchan, the physician and resident superintendent to the hospital, is of considerable interest. From it we learn that 963 patients were under treatment during the year and that 810 of these were discharged well. As regards typhoid fever, 258 cases of which were under treatment, the mortality was 10.2 per cent.; 15 of the 24 fatal cases had grave complications which contributed largely to the fatal result; 5 deaths were ascribed to heart failure and 4 to toxæmia. The distinction drawn is that in the toxæmic cases death occurred early and the symptoms of general poisoning were severe from the beginning. Diarrhœa was present in 78 of the 201 recovered cases and in 18 of the 24 fatal cases, while constipation was present in 63 of the former and in 3 of the latter. A characteristic rash was seen in 145 out of 225 cases and a scarlatiniform erythema in 3 cases. Five cases of typhus fever were treated during the year, 4 coming from one house and the fifth being a playmate of one of the other 4. After an average duration of residence of 32 days all were discharged well. The cases of scarlet fever treated were 637 in number, among which the mortality was 3.6 per cent. Acute nephritis occurred in 26 cases, all of which recovered. Arthritis was noted in 16 cases, 2 of which were fatal. In 8 cases there was endocarditis and in 1 pericarditis. During the year 16 cases which were discharged as well (2, however, having a chronic suppurative discharge from the ear and 1 enlarged cervical glands) gave rise apparently to other cases afterwards. These return cases were least common in the summer months, when the convalescent patients spent the whole day in the open air. Of 22 cases of diphtheria treated 4 died, and in one of these tracheotomy had been performed. All were treated with antitoxin. In 1 case alone paralysis was noted as a sequel.

MEDICAL NEWS.

THE annual general meeting of the British Dental Association will be held at the Yorkshire College, Leeds, on Saturday, June 2nd; Monday, June 4th; and Tuesday, June 5th.

PROFESSOR PORRO, Senator of the Kingdom of Italy, as to whose state of health very grave reports recently appeared in the Italian press, has now completely recovered. This announcement will, we are sure, be received with satisfaction by the professional brethren of the distinguished gynæcologist throughout the world.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—Dr. Crochley Clapham, The Grange, near Rotherham, Honorary Secretary of the Northern and Midland Division of the Medico-Psychological Association, has issued an appeal inviting those assistant medical officers of asylums who have not yet done so to join the Association, and pointing out that assistant medical officers are represented on the council.

PAN-AMERICAN MEDICAL CONGRESS.—The first meeting of the Pan-American Medical Congress was held at Washington in 1893; the second at Mexico in 1896. It was there decided that the third should be held at Caracas in the Venezuelan Republic in 1898. The disturbed state of the political atmosphere in that region, however, made it necessary to postpone the Congress from one year to another, and now it has been officially intimated that it will be impossible to hold the meeting in December of the present year, as had been provisionally arranged. It is now proposed that the third meeting of the Congress shall be held at Havana in December, 1900.

BELGIAN ANTITUBERCULOSIS LEAGUE.—The National Antituberculosis League recently founded in Belgium is already receiving a gratifying measure of public support. Among those who have contributed to its funds are M. Lejeune, one of the Ministers of State: Baron Lambert de Rothschild; M. Mesdach de ter Kiele, Procurator-General of the Court of Appeal; and P. Janson, Member of the Senate. M. R. Warocqué has put down his name for an annual subscription of 100 francs, and has promised to the Hainaut branch of the League a fine site and the money required to build a sanatorium for the poor of that province.

THE YARROW CONVALESCENT HOME.—We have received the fourth annual report of the Yarrow Home for Convalescent Children of the Better Classes at Broadstairs. People of education and refinement who are not themselves wealthy may be assured that in this seaside home their children will receive sympathetic attention and meet other well-conditioned children. Of 938 admitted during the past year 684 returned to their friends thoroughly recovered, and most of the others very much benefited. In winter, when there is less demand for entrance, a few children are taken who need active treatment, and for those recovering from illness it is an ideal seaside home for that season. Particulars regarding admission may be obtained from the Secretary at the London office, 73A, Queen Victoria Street, E.C.

WOMEN DOCTORS UNDER THE POOR LAW.—The West Ham Board of Guardians are advertising for a female assistant medical officer for their workhouse and schools. This is said to be the first time that a lady has been advertised for in this capacity. Other Boards have merely signified that women were eligible. The new departure may be taken as proving that in the other Poor-law appointments which women have held they have done well. The first such appointment was that of Miss Agatha Porter, L.R.C.P.&S., at the Chorlton Union Hospital, Manchester, followed by that of Miss Christie, M.D., at Greenwich in 1896, of Miss Cruikshank, M.D., at Camberwell, succeeded by Miss Vaughan, M.D., Miss Meakin, M.B., and then Miss Garrett Anderson, M.B., and more recently Miss Stevenson, M.B., at the St. Pancras Workhouse.

ACCOMMODATION FOR HOLDING INQUESTS.—The London County Council has dealt vigorously with the powers under the Public Health Act for providing proper accommodation for the holding of inquests, the reception of dead bodies awaiting interment, and the provision of *post-mortem* rooms. The question of providing a central morgue was discussed some years ago, and postponed pending the consideration by a joint Committee of the County Council of the question how far the improvement of local provision of mortuary accommodation by local authorities would render such central morgue necessary or otherwise. The Committee in question, under the chairmanship of Sir George Harris, has done a large amount of useful work, and it was able recently to report the following striking figures to the Council. In 1896 no fewer than 583 inquests in London were held amid the desecrating surroundings of the public-house; in 1897 only 28 were held in licensed houses; in 1898 only 9; while last year not a single inquest in London was held in a public-house.

BIRMINGHAM MEDICAL BENEVOLENT SOCIETY.—At the annual meeting of this Society Mr. D. C. Lloyd Owen presided, and it was reported that 16 annuitants had been on the books of the Society at the the beginning of the year, 1 had withdrawn owing to improved circumstances, and 1 had died. The annual value of the grants ranged from £15 to £40, and the sum distributed during the year was £554 10s. The invested funds amounted to £15,347. Twenty-four members had joined during the year, 11 had retired, and 3 had died, making the total membership 395. On the proposition of Mr. Lloyd Owen, seconded by Dr. Rickards, Sir James Sawyer was elected President, and took the chair. Dr. Haynes (Leamington) was chosen president-elect; Mr. F. W. Underhill (Moseley) and Dr. F. S. Goulder (Dudley) were chosen vice-presidents, Dr. Savage and Mr. T. F. Chavasse were reappointed treasurers, Mr. W. F. Haslam hon. auditor, and Dr. Agar, Mr. Bennett May, and Dr. Simon directors.

MEDICAL VACANCIES.

The following vacancies are announced:

BIRKENHEAD BOROUGH HOSPITAL.—Resident Junior House-Surgeon. Salary, £75 per annum, and sum of about £25 is usually obtained by police and notification fees. Applications to the Chairman of the Weekly Board.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary £100 per annum, with board, residence, and laundry. Applications to the Honorary Secretary, 52, Grosvenor Road, Birkenhead, by June 25th.

BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Assistant House-Surgeon. Salary, £60 per annum, with apartments and board. Applications to the Chairman of the Medical Board by June 4th.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright Street.—Clinical Assistant. Applications to the Secretary of the Medical Committee by June 4th.

BIRMINGHAM: QUEEN'S HOSPITAL.—(1) Resident Physician. (2) House-Physician (3) House-Surgeon. Appointments for one year. Salaries, £50, with board, lodging, and washing. Applications to the Secretary by June 20th.

BRECON INFIRMARY.—Resident House-Surgeon: unmarried. Salary, £90 per annum, with furnished apartments, board, etc. Applications to the Secretary, 6, Bulwark, Brecon, by June 7th.

BRENTWOOD: ESSEX COUNTY ASYLUM.—Locum Tenens, not over 30 years of age. Terms, 3½ guineas per week, with board and residence. Applications to the Medical Superintendent.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary, £120 per annum, with rooms and attendance. Applications, endorsed "House-Surgeon," by June 13th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CARDIFF INFIRMARY.—Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary.

CARLISLE DISPENSARY.—House-Surgeon. Salary, £150 per annum, with apartments not board. Applications to the Honorary Secretary, 23, Lowther Street, Carlisle.

CARMARTHEN UNION.—Medical Officer and Public Vaccinator for the Conwil District. Salary, £60 and fees. Applications, marked "Conwil Medical Officership," to the Clerk, 7, Hasl Street, Carmarthen, by June 21st.

CHELSEA HOSPITAL FOR WOMEN.—Pathologist. Applications to the Secretary by June 11th.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Locum Tenens. Terms, £3 3s. per week, with board and residence. Applications to the Medical Superintendent.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence, £80, with board, residence, and washing. Applications to the Secretary.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.C.—Two Assistant Dental Surgeons. Applications to the Secretary by June 11th.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—House-Physician. Board, residence, etc., provided, and honorarium of £25 on completion of six months' approved service. Applications to the Secretary by June 9th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk to the Parish Council, Castle Terrace, Edinburgh, by June 11th.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. Salary at the rate of £50 per annum, with board, lodging, and washing. Applications to the House-Surgeon.

FULHAM PARISH.—Second Assistant Medical Officer at the Infirmary, Fulham Palace Road. Appointment for six months. Salary at the rate of £60 per annum, with board, furnished apartments, and washing. Applications to the Medical Superintendent by June 4th.

GATESHEAD DISPENSARY.—Assistant Medical Officer. Salary, £130 per annum, rising to £160. Applications to the Secretary by June 9th.

GLOUCESTER COUNTY ASYLUM.—Locum Tenens. Salary £3 . a week and all found. Applications to the Medical Superintendent.

GREAT NORTHERN CENTRAL HOSPITAL.—(1) House-Physician. (2) Junior House-Physician. Appointments for six months. Salaries at the rate of £60 and £30 per annum respectively with board, lodging, and washing. Applications to the Secretary by June 18th.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon: unmarried. Salary, £50 per [illegible] and washing. Applications to the Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon, [illegible] months. Salaries, £20, with board and [illegible]. Applications, on forms provided, to be sent to the [illegible].

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary, £85 per annum.—Applications to the Secretary of the Faculty.

LINCOLN HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary, £100 per annum. Applications to the Medical Superintendent, The Lawn, Lincoln.

LIVERPOOL STANLEY HOSPITAL.—Junior House-Surgeon. Salary, £70 per annum, with board lodging and washing. Applications, endorsed "House-Surgeon," to the Chairman, Medical Board, by June 8th.

LONDON COUNTY ASYLUM, Banstead.—Junior Assistant Medical Officer, between 23 and 30 years of age. Salary, £150 per annum, with board, furnished apartments, and washing. Applications, on forms provided, to the Clerk of the Asylums Committee, 6, Waterloo Place, S.W., by June 8th.

LONDON SCHOOL BOARD.—Medical Practitioners, to give lectures on First Aid and Home Nursing at Evening Continuation Schools. Fee, 6 guineas for 6 lectures. Applications, on forms provided, to the Clerk of the Evening Continuation Schools Committee, School Board for London, Victoria Embankment, W.C., by June 9th.

MANCHESTER: ANCOATS HOSPITAL.—Junior House-Surgeon. Salary £50, with board and washing. Applications to the Secretary.

MANCHESTER ROYAL INFIRMARY.—Temporary Honorary Assistant Surgeon. Applications to the Secretary by June 9th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Medical Officer. Salary, £60 per annum, with board, attendance, and washing. Appointment for six months, with prospect of re-election as Senior at £90 per annum. Applications to the Secretary by June 7th.

MONSALL FEVER HOSPITAL (Manchester Corporation).—Third Medical Assistant. Salary, £100 per annum, with board and lodging. Applications, endorsed "Appointment of Medical Assistant," to be sent to the Chairman, Sanitary Committee, Town Hall, Manchester, by June 9th.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Resident Obstetric Assistant: must be fully-qualified medical woman. Applications to the Secretary by June 11th.

NORTHAMPTON GENERAL INFIRMARY.—(1) House-Surgeon, unmarried, and not under 23 years of age. Salary, £125, with furnished apartments, board, etc. Assistant House-Surgeon is candidate and if appointed his office will be vacant at salary £100. (2) Qualified Assistant to the House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium of £25. Applications to the Secretary.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) House-Physician. (2) House-Surgeon. Appointments for six months. Salaries at the rate of £80 per annum, with board, residence, and laundry allowance. Applications to the Secretary, City Office, 27, Clement's Lane, Lombard Street, E.C., by June 18th.

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium £20. Applications to the Secretary by June 12th.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £85 per annum, with board, residence, and washing. Candidates to state whether they would be willing to accept the Junior post at £70 per annum. Applications to the Honorary Secretary by June 4th.

PONTEFRACT DISPENSARY AND INFIRMARY.—Resident Medical Officer. Salary commencing £150 per annum, with furnished rooms, etc. Applications to the Secretary by June 9th.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Assistant Resident Medical Officer. Appointment for four months. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Secretary by June 5th.

READING: ROYAL BERKS HOSPITAL.—(1) House-Surgeon. Salary, £60 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Board, lodging, and washing provided in each case. Applications to the Secretary by June 4th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—(1) Two Examiners in Dental Surgery. (2) Hunterian Professors. (3) Erasmus Wilson Lecturer. (4) Arris and Gale Lecturer. Applications to the Secretary by June 4th.

SALISBURY: FISHERTON ASYLUM.—Assistant Medical Officer. Salary, £150 per annum, with board, lodging, and washing. Applications to Dr. Finch.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House-Surgeon. Appointment for six months, but eligible for re-election. Salary at the rate of £50 per annum, with board, residence, and washing. Applications to the Honorary Secretary by June 9th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon. Appointment for six months, but renewable. Honorarium at the rate of £50 per annum, with residence, board and washing. Applications to the Secretary, 24, King Street, Southport, by June 9th.

WEST DERBY UNION.—Resident Assistant Medical Officer for the Workhouse. Salary, £140 per annum with first-class rations, apartments, etc. Applications to the Clerk, Broughton Terrace, West Derby Road, Liverpool, by June 12th.

WEST HAM HOSPITAL, Stratford.—Junior House-Surgeon. Salary, £75 per annum, with board, residence, etc. Appointment for one year, but eligible as Senior at £100. Applications, marked "Junior House-Surgeon," to be sent to the Secretary by June 6th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician; (2) House-Surgeon; (3) Assistant Physician. Must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent for (1) and (2) by June 20th, and for (3) by June 6th.

WESTMINSTER HOSPITAL, S.W.—Assistant House-Surgeon. Appointment for three months, followed by six months as House-Surgeon. Applications to the Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House-Physician. Appointment for six months. Honorarium at the rate of £50 per annum, with board lodging, and washing. Applications to the Chairman of the Medical Committee.

WOOLWICH UNION.—Resident Assistant Medical Officer for the Infirmary at Plumstead. Unmarried and not more than 30 years old. Salary, £100 per annum, rising to £130, with apartments, rations, and washing. Applications on forms provided to be sent to the Clerk by June 6th.

MEDICAL APPOINTMENTS.

ANDERTON, W. B., M.B., M.R.C.S., appointed Resident Assistant Medical Officer to the Crumpsall Workhouse, Manchester, *vice* A. T. Sissons, M.B., B.Ch Vict.

BENNETT, W. F. Cockayne, L.R.C.P., L.R.C.S Edin., L.F.P. and S.G., L.S.A.Lond., appointed House-Surgeon to the Staffordshire General Infirmary, *vice* F. W. Bonis, M.D., resigned.

BRADFORD P. P., L.R.C.P.Lond., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Bradford District.

COOPER, W. H., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Abbey Homes of the Kendal Union.

DICKINSON, Percy Vincent, M.D., M.R.C.P., appointed an Honorary Assistant Physician to the Italian Hospital, Queen Square.

EVANS, T. J., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the Third District of the Llanfyrnach Union.

FAIRBANK, E. W., M.B., Ch.M.Sydney, appointed Clinical Assistant to the Chelsea Hospital for Women.

FOSTER, M. B., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Braughing District of the Bishops Stortford Union, *vice* H. F. Ealand, L.R.C.P., L.R.C.S.Edin., resigned.

GOMES, Sidney, L.R.C.P., L.R.C.S.E., L.F.P., and L.F.S.G., appointed District Surgeon, British Borneo Government Service.

GORDON, J. J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer to the Sidney Road Homes of the Hackney Union.

HARRIS, J. H., M.R.C.S.Eng., D.P.H.Camb., appointed Certifying Factory Surgeon for the Dartmouth District.

JONES, F. Silva, M.B., B.S.Durh., appointed Medical Officer, for the Prittlewell District of the Rochford Union.

LUNT, D., C.M., B.A.Camb., L.R.C.P.I., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Lymm District.

LYS, G., L.R.C.P.Lond., M.R.C.S.Eng., appointed Medical Officer for the No. 4 District of the Blandford Union, *vice* F. D. Lys, M.R.C.S.Eng., resigned.

MESSITER, A. F., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Epworth District of the Thorne Union, *vice* H. W. Pullan, M.R.C.S.Eng., L.F.P.S.Glasg., resigned.

MORTON, S. Ernest, M.R.C.S., L.R.C.P., appointed Assistant Honorary Medical Officer to the Sheffield Children's Hospital.

NOLAN, H. F., L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the Charing District.

PALMER, J., L.R.C.P.Lond., M.R.C.S.Eng., appointed Certifying Factory Surgeon for the Sandland District.

PRESTON, C. H., M.D Lond., F.R.C.S.Eng., L.D.S., appointed Lecturer in Dental Anatomy and Physiology at Owens College, Manchester.

PRING, H. R., M.R.C.S., L.R.C.P., L.D.S.Eng., appointed House-Surgeon and Appliance House-Surgeon to the Dental Hospital of London.

PURSLOW, C. E., M.D.Lond., M.R.C.P.Lond., appointed Ingleby Examiner in the University of Birmingham for the current year.

RODDIS, T. E. E., M.B., C.M.Edin., appointed Medical Officer for the Snettisham District of the Docking Union, *vice* J. W. Hopkins, L.R.C.P., L.R.C.S.Edin., resigned.

SHEEN, A. W., M.D., M.S.Lond., appointed Honorary Surgeon to the Cardiff Infirmary, *vice* Alfred Sheen, M.D.St.And., appointed Consulting Surgeon.

STEWART, A. H., M.R.C.S., appointed Medical Officer for the Eighth District of the North Bierley Union, *vice* C. Yeoman, M.B.Camb., M.R.C.S.Eng., resigned.

THORNTON, R. G. C., M.B., B.Ch.&B.A.O.I., appointed Medical Officer for the Second District of the Wellington (Salop) Union, *vice* G. Hollies, M.D.Dub., resigned.

WYSE, T. F., L.R.C.P., L.R.C.S.Irel., appointed Certifying Factory Surgeon for the East Ilsley District.

LEEDS GENERAL INFIRMARY.—The following appointments have been made:

CURTIES, W. S., M.R.C.S., L.R.C.P., appointed Resident Medical Officer at Ida Hospital.

FORSTER, R., L.S.A., appointed one of the House-Physicians.

LUCKHOFF, J., M.B.Edin., appointed one of the House-Physicians.

MORRISON, W. H., M.B., Ch.B.Vict., appointed one of the House-Surgeons.

SELLING, W. Maxwell, M.B., B.S.Lond., appointed Resident Medical Officer.

DIARY FOR NEXT WEEK.

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. W. Ewart: Consultation. (Skin.) 5 P.M.—Dr. J. E. Squire: Class. Applied Anatomy. Demonstration 7.

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. Rickman Godlee: On Some of the Medical and Surgical Complications of Pyorrhœa Alveolaris.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Dr. Ferrier: Disseminated Sclerosis.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Mr. W. Rose: Clinical Lecture.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Mr. F. C. Abbott: On Acute Intestinal Obstruction in Children.

Obstetrical Society of London, 8 P.M.—Specimens will be shown. Paper. The President (Mr. Alban Doran): A Case of Extrauterine Gestation in which fœtal death occurred at the eighth month after spurious labour: abdominal section two months later.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Dr. Maguire: The Dynamics of the Circulation in Disease.

THURSDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Percy Dunn: External Diseases of the Eye.

Roentgen Society, St. Bartholomew's Hospital, 8 P.M.—Dr. Percy Jones will show an Influence Machine of American Design. Mr. J. Wimshurst, F.R.S., will give a short statement of his work in the Design and the Perfecting of the several forms of his Influence Machine. Dr. Rémy, of Paris, will show a new Localising Apparatus.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Murray Medical Cases.

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Lake: Consultation. (Ear.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

EWING-HUNTER.—At Duncairn, Helensburgh, on May 25th, the wife of J. Ewing-Hunter, M.B., C.M., of a daughter. Both well.

FOULDS.—On May 27th, at Ashlea, Droitwich, the wife of Francis H. Foulds, of a daughter.

LATHAM.—On May 23rd, at 2, Hemingford Road, Barnsbury, the wife of Denyer W. F. Latham, M.R.C.S.Eng., L.R.C.P.Lond., of a daughter.

TINLEY.—At Thorsgrip, Whitby, the wife of W. E. F. Tinley, M.D., of a son, on May 22nd.

DEATHS.

CLAREMONT.—On May 27th, at his residence at Bognor, from influenza and subsequent complications, in his 78th year, Claude Clarke Claremont, formerly of Millbrook House, Hampstead Road, London, surgeon.

CLEGG.—On May 24th, 1900, at 3, Sea View Villas, Upper Parkstone, Dorset, William Wheelwright Clegg, late of Hornsey, aged 43 years. Interred at Glasgow, May 29th, 1900.

DAVIS.—On May 21st, at Capetown, while on active service, Dr. David Davis, of the 77th Manchester Imperial Yeomanry, late of Builth and Southport.

ROBERTSON.—At Benview, Dumbarton, on May 23rd, Elizabeth McLean, wife of John Robertson, M.D., J.P. The only intimation.

TROUTON.—May 27th, at Glonskeagh, Rotherfield, Sussex, Charles Gardiner, only son of Gardiner Trouton, M.D., of bronchitis, aged 2 months.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, 1.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, 1.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, 1.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, 1.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, 1.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, 1.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, 1.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children) 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30 Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F., 2; o.p., daily, exc. S., 1.30; Ear, M. 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th. 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

R. H. W. asks where a lady can learn ordinary medical man's dispensing cheaply and in short time.

L.R.C.P. wishes to know of some simple appliance to prevent a child 2½ years of age from turning in its feet (pin-toed) when walking.

MOSQUITOS AND MALARIA.

DR. G. PARKER (14, Pembroke Road, Clifton, Bristol) desires to know whether the search for the *Anopheles* in this country suggested some time ago has been made and with what result.

ICHTHYOL POISONING.

MR. ARTHUR LOXTON, F.R.C.S. (Birmingham) asks to be referred to any literature concerning the poisonous symptoms which may be caused by the internal administration of ichthyol. If other causes can be rigidly excluded, is it fair to assume that loss of weight, sudden albuminuria, and tachycardia (120 beats a minute), with tendency to tremor of head and hands, are due to the ingestion of 3-gr. doses of ichthyol three times a day?

TREATMENT OF INFANTILE SUMMER DIARRHŒA.

QUERENS writes:—I should like, before the return of the season for infantile diarrhœa, to elicit views on some points of treatment. Authors are agreed as to the necessity for suspension of the use of milk, and substituting either carbohydrates, as barley water and whey, or albuminous food, as animal broths and solution of egg albumen. But they give no hint as to the indications which point to one or other of these classes of foods. Of the animal broths veal or chicken is recommended, but beef never. Why is this? Veal is often difficult to procure, and chicken is beyond the means of the poor, while beef can always be had. Valentine's meat juice is of much repute, but it is very expensive. I should be glad to hear of any experience with the cheaper meat extracts, as Bovril, also of the solution of egg albumen I have no experience. I should be most interested to hear from those who have used it. It is perhaps the most convenient and easily procurable of all the foods. It has also this advantage that by the addition of cream and lactose we may gradually return to a food having much the same composition as human milk, except that there is albumen instead of casein. It is, indeed, in this attempted return to a milk diet that the difficulty often lies. Most cases, in my experience, improve temporarily from the mere suspension of the milk. But however cautiously we attempt the return to a milk diet, the sickness or purging returns, and first one change is made and then another, the little patient becoming meanwhile more and more exhausted. With regard to drugs, I see that Goodhart in his last edition depends almost entirely on sodium salicylate. I should be glad to hear of any experience of this drug in infantile diarrhœa.

ANSWERS.

F. W. P.—It is of course quite absurd.

N. Y. L.—A good woollen fabric of the kind called stockinette would probably be most suitable.

T. C.—The Obstetrical Society of London publishes *Rules for the General Management of Infants*, which can be obtained from Messrs. Longmans, Green, and Co., 39, Paternoster Row, E.C., or at the Society's Library, 20, Hanover Square, W., price 1d. each, or by post 1½d.

THE NITRO PROPRIOL TEST FOR SUGAR IN URINE.

MR. BRYCE GORDON (Lee, S.E.) writes to say that he has experimented with the nitro-propriol test for glycosuria and considers it a good test, for if the reaction is obtained it is almost sure that it is due to sugar (one far-fetched exception only—aldehyde), whereas with Fehling's test the reduction may be due to many other things besides diabetic urine.

THE PREVENTION OF LACERATION OF THE PERINEUM.

A VETERAN PRACTITIONER writes in answer to "Querist's" letter in the BRITISH MEDICAL JOURNAL, May 19th, p. 1271: I think if he would leave the perineum alone he would get on better; but I have found benefit from free lubrication of the parts where there is rigidity. I have no doubt that young practitioners are frequently the victims of this accident from too early application of the forceps. When the head arrives at the perineum there is often a temporary lull in the pains, and this being interpreted by the patient's friends as a sign of the woman being "worn out," our youthful practitioner is tempted to apply forceps, with the result that the perineum not being sufficiently dilated, away it goes. I believe a great deal of unnecessary fuss is made about this accident. I live in a district where quite three-fourths of the confinements are attended by midwives, and in twenty years I have never once been called in to see a case of laceration, either at the time or afterwards; and although of course these must have occurred, it shows that they heal without trouble, and that the practitioner who possesses his soul in patience takes a leaf out of the midwife's book and is not so liable to have this accident befall him.

T. H. recommends the following method to prevent laceration of perineum: Wring a big towel out of boiling water, roll it into a ball, and dip it into a saucer of oil. Apply and keep in position with the hand; its action is pleasant. Do not touch the perineum with the hand.

VARICOSE ULCERS OF LEG.

DR. J. MCGOWAN (Grangemouth) writes to recommend "L.S.A." to try the following treatment: Put the patient in bed and insist on his or her remaining there until the ulcer is healed; wash the ulcer daily with a solution of hydrarg. perchlor. (1 in 1,000), and then dust on the following:

Xeroform and pulv. amyli, equal quantities, cover with pieces of lint, and bandage from toes upwards Let this be done daily, or night and morning at first if the ulcer is extensive or the discharge profuse. He has noticed that the edges of the ulcer under this treatment become hard and almost horny in appearance, unlike the usual appearances found in healing ulcers.

COST OF BATHS AT BATH.

BATH.—The cost of the baths at Bath is arranged to suit the pockets of all classes. A reclining or deep bath varies in price from 7d. to 2s. 9d. There is no difference in the water, the attendance, or the cleanliness in the lesser-priced baths, but the rooms are not so luxuriously furnished. An undercurrent douche at a temperature of 110° F. is very popular in cases of sciatica, etc., and can be obtained for an extra 6d. The Aix massage bath, including the service of one attendant, costs from 1s. 6d. to 4s. 6d.; the therapeutic value of the cheaper is also equal to that of the more expensive. A Nauheim bath (saline, without gas) is priced at 3s. 3d., with gas 4s. 3d., the odd 3d. being the attendant's fee. It is usual to take from 3 to 6 baths a week. Lodgings can be obtained at reasonable rates in all parts of the town. We are informed that Mr. T. R. Collins, who manages the baths for the Corporation, is always willing to answer any inquiries addressed to him.

NOTES, LETTERS, Etc.

ERRATUM.—In the answer to "Workhouse Medical Officer's" query as regards a home for an imbecile girl in the BRITISH MEDICAL JOURNAL of May 19th, p. 1271, the name of the Association mentioned was incorrectly given—the word "Cure" should have been printed "Care."

SERJEANT-SURGEONS.

DR. GEORGE C. PEACHEY (Brightwalton, Wantage) writes: With reference to the query and the editorial answer thereto in the BRITISH MEDICAL JOURNAL (April 28th, 1900, p. 1071), as to the identity of the Monsieur Ronjat, mentioned by Sterne as "the King's Serjeant-Surgeon," will you permit me to suggest that the name is possibly a Shandean anagram? Thus: Ron-jat—lat-ron—*ιατρον*.

THE LATE PROFESSOR ELLIS.

MR. BALMANNO SQUIRE (Weymouth Street, W.) writes: Permit me, as an old pupil and great admirer of the late Professor George Viner Ellis, to express my appreciation of the ably-written obituary notice in which you have embalmed his memory. I had the good fortune to obtain the second place in "Junior Anatomy," and the gold medal in "Senior Anatomy" under his teaching and examination, and this implied a constant and prolonged attendance in the dissecting room and frequent and intimate contact with Professor Ellis. The period of which I speak was about the year 1855, when he was at the zenith of his reputation and of his energy. At that time University College was pre eminently the best place for studying anatomy. This was owing to two causes. No other medical school had a dissecting room which could compare in convenience and suitability to its purpose, with the spacious, lofty, well-lighted and well-ventilated hall in which Ellis taught; no other school had a Professor of Anatomy who devoted literally his whole time to the subject. Elsewhere anatomy was invariably taught by one of the hospital surgeons. It must have been by one of the very rarest of accidents that University College found itself possessed of a man endowed with culture, zeal, energy, and considerable tact, who yet would devote his time all day and every day year after year for an indefinite series of years, at a moderate salary and without any hope that his occupation would ever lead to something better, labouring incessantly at so absolutely uninteresting a subject, and one which gives so little scope to the mind as the study and teaching of the naked eye anatomy of the human body unrelieved by any incursions into microscopical anatomy, physiology, comparative anatomy, pathological anatomy, or anything else whatsoever. Professor Ellis was a typical example of a man who having found something, however unpromising, for his hand to do, did it with his might, and thus, as you not too forcibly put it, his name became "a household word to students of anatomy throughout the whole English-speaking world." He threw himself into his disgusting avocation with a zeal worthy of a more inviting cause. I think he must have been buoyed up by the consciousness that he was grounding generations of practitioners in what is the very foundation of the healing art. I say "disgusting," because in those days it never occurred to anyone to arrest the putrefaction of the "subjects" by the injection of preservative fluid into the arteries in the manner that is done nowadays. Accordingly, the corpses that Professor Ellis demonstrated were invariably already in a very high state of decomposition long before the dissection of them was completed. As may be readily supposed, dissection could only be prosecuted during the winter months. During the summer months no one could have stood it. In these microbic days it may be perhaps imagined that the atmosphere in which Professor Ellis moved and had his being was not very favourable either to health or longevity, nevertheless he was always the very picture of ruddy health, and his age at the time of his death exceeded by some few years the traditional maximum of fourscore. It may be supposed that even the life he led was worth living, if it enabled him to spend the evening of his days in the pure air of the country, and afforded him the means of indulging in the most delightful diversion of old age—horticulture. But this was a piece of pure luck; a relative left him a small fortune. For some few years before his death he was absolutely blind; but there, again, the fates aided him; he was carefully tended by a devoted younger sister.

For my own part, I was one of those who, as you say, held him "in almost affectionate regard." He is one of the most pleasant recollections of my student days. His handsome face, his bright eye, his healthy complexion, his winning smile, his never-failing courteousness, his earnestness in his work, his admirable character, and the kindliness of his disposition gave him a most attractive personality. The secret of his "perfect command of his class" was, that "he was held in the highest respect by all." He was *sans reproche*, and therefore *sans peur*. If he was "not popular with the great body of students" (but I never knew that) it was because he took his duties seriously, and the medical student of those days was not quite so highly civilised as he has since become. A very notable proportion of the students of that time did not come so much for the purpose of learning as for the purpose of being "signed up." They had, it is true, another and ulterior aim—namely, that of "getting through," but for this they relied mainly on what might be acquired "in another place," namely in the rooms of a "grinder" who undertook to put almost anybody "through," after an agony of six weeks.

PILLS FOR THE PHILIPPINES.

THE magnitude of medical operations in the Philippines may be gathered from the fact mentioned in the New York *Medical News* that a recent requisition, among other items, contained a request for 5,000,000 quinine pills and 10,000 clinical thermometers.

LETTERS COMMUNICATIONS, ETC., have been received from

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BOOKS, Etc., RECEIVED.

Manual of Midwifery. By W. E. Fothergill, M.A., B.Sc., M.D. Second Edition. Edinburgh: W. F. Clay. 1900. 8s.

Cleft Palate and Adenoids, and other Papers. By W. A. Lane, M.S. Second Edition. London: Medical Publishing Co. 6s. 6d.

Treatment by Hypnotism and Suggestion; or, Psycho-Therapeutics. By C. L Tuckey, M.D. Fourth Edition. London: Baillière, Tindall, and Cox. 1900. 7s. 6d.

Transactions of the Twenty-first Annual Meeting of the American Laryngological Association, Chicago, 1899. New York: D. Appleton and Co. 1900.

La Scrofule et les Infections Adénoïdiennes. Par Dr. P. Gallois. Paris: Société d'Editions Scientifiques. 1900. Frs. 8.

The Medical Diseases of Children. By N. Oppenheim, A.B, M.D. London and New York: Macmillan and Co. 1900. 21s.

Diseases of the Genito-Urinary System. By E. Fuller, M.D. London and New York: Macmillan and Co. 1900. 21s.

The Cause and Prevention of Decay in Teeth. By J. S. Wallace. M.D., B.Sc., L.D.S.R.C.S. London: J. and A. Churchill. 1900. 5s.

A Manual of Surgical Treatment. By W. W. Cheyne, M.B., F.R.C.S., F.R.S., and F. F. Burghard, M.D., M.S., F.R.C.S. In six parts. Part III. London: Longmans, Green, and Co. 1900. 12s.

Mikroscopie und Chemie am Krankenbett. Von Dr. H. Lenharz. Dritte Auflage. Berlin: Julius Springer. 1900. M. 8.

Agricultural Botany. By J. Percival, M.A., F.L.S. London: Duckworth and Co. 1900. 7s. 6d.

Lehrbuch der Histologie und der mikroskopischen Anatomie. Von Dr. L. Szymonowicz. Lief III. Würzburg: A. Stuber. London: Williams and Norgate. 1900. M. 5.

Transactions of the Life Assurance Medical Officers' Association. London, for 1898 and 1899. London: 1900.

Atlas klinisch wichtiger Röntgen-Photogramme Herausgegeben von Professor F. von Eiselsberg und Dr. K. Ludloff. Berlin: August Hirschwald. 1900. M. 26.

Practical Gynæcology. By H. Smith, M.A., M.D. Second edition. London: H. J. Glaisher. 1900. 5s.

The Pharmacopœias of Thirty of the London Hospitals. By P. Squire. Seventh edition, revised by P. W. Squire. London: J. and A. Churchill. 1900.

A Textbook of Medical Treatment, Diseases, and Symptoms. By N. Tirard, M.D., F.R.C.P. London: J. and A. Churchill 1900 15s.

Commercial Organic Analysis. By A. H. Allen, F.I.C., F.C.S. Third edition. Vol. ii. Part II. London: J. and A. Churchill. 1900.

The Care and Treatment of Epileptics. By W. P. Letchworth, M.D. London and New York: G. P. Putnam's Sons. 1900. 16s.

Guide Pratique d'Electrothérapie Gynécologique. Par Dr. E. Albert-Weil. Paris: J. A. Baillière et Fils. 1900. F. 3.

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N.B.—It is against the rules of the Post Office to receive letters at *Postes Restantes* addressed either in initials or numbers.

AN ADDRESS
ON
THE HILL STATIONS OF INDIA AS HEALTH RESORTS.

Delivered to the Balneological and Climatological Society, May 30th. 1900.

BY SIR JOSEPH FAYRER, BART., K.C.S.I., M.D., F.R.S.,

I THINK I can hardly better fulfil the mandate of your esteemed President, Dr. Ivor Murray, to give an address to this Society than by inviting your attention to those mountain regions which play so important a part in the social and physical economy and well-being of our countrymen in India, and which, under the designation of hill stations, are familiar, by name at least, to all who have any knowledge of the conditions of life in that country.

POSSIBILITIES OF ACCLIMATISATION.

I propose to consider them, not merely in reference to the treatment of disease and convalescence, but also as resorts in which the European may preserve his health and avoid the physical deterioration which inevitably results from protracted residence in the plains, and where, indeed, it seems even possible that he may take root, thrive and propagate his race, a subject of ever-widening interest to our rapidly-increasing population, and for which there are grounds for belief that the prospects of success are not altogether unfavourable, though so far no conclusive proof is forthcoming. Past history shows, however, that colonisation by the unmixed European race in the plains of India is impracticable. In the very rare instances in which the third generation has been reached it had evidently attained its utmost desirable limits, whilst of the Portuguese who preceded us, no descendant unalloyed by native blood can be said to exist.

PHYSIOGRAPHY OF THE INDIAN PENINSULA.

Before describing the hill stations let me recall to you briefly some of the physiographical characters of the great peninsula in which they are situated, and the climatic and physical attributes which so largely influence the conditions of European life in India.

The geographical position of British India, part within the torrid, part within the temperate zone, with the Bay of Bengal on the east and the Arabian Sea on the west, its physical characters, comprising lofty mountain ranges rising in the north to the abodes of eternal snow, elevated plateaux and deserts, noble rivers and estuaries, vast plains formed by their basins and deltas, extensive forest tracts, jungles, and swamps invest it with peculiar interest from climatic and hygienic points of view, especially as regards the alien race who now control its destinies and to whom its future development and welfare seem to be committed.

India proper is a vast triangle with its apex at Cape Comorin and its base in the Himalayas. Its extreme length is 1,900 miles, its breadth at the base about 2,000 miles. It is situated between the 66th and 104th meridian of East longitude and the 8th and 35th parallel of North latitude. It is over 1,250,000 square miles in extent, contained within a coast line of about 4,000 miles and a land boundary of over 5,000 miles. The natural divisions are:

1. The Himalayan and Sub-Himalayan region.
2. The Indo-Gangetic basin and deltas.
3. The peninsula proper formed by the elevated plateau of the Deccan bounded on each side by the Ghauts and the littorals between them and the ocean.

The Himalayan range extends for about 1,750 miles, crescentially, N.W. and S.E., with a breadth of from 150 to 250 miles. The mean height is from 16,000 to 20,000 feet, and there are several high points, amongst them Kinchinjunga 28,176 feet, and Everest 29,002 feet, the highest measured peak in the world. The Sub-Himalayan region consists of ranges separated by broad valleys, bounded in part on the south by the Siwalik range and the Terai. It is in the lower ridges of this range of hills, at elevations up to 7,000 feet, that many of the hill stations lie.

The Indo Gangetic plain or Hindostan proper which separates the Himalayas from Southern India, forms the richest and most populous parts of the empire. The great rivers Indus, Ganges, and Brahmaputra water this region and contribute to its formation.

Tropical or Peninsular India is bounded on the north by the Vindhyan system of hills, consisting of various ranges from 1,500 to 4,000 feet, which extend for nearly 800 miles from east to west, and include also the Aravalli, Kaimoor, Satpura, and other ranges. The Eastern Ghauts form rather a descent from the plateau to the littoral than a distinct mountain range. They extend along part of the east coast with an average elevation of 1,500 feet and occasional high peaks, with broad tracts of level ground between them and the ocean. The Western Ghauts extend from near the Tapti river on the west down the coast to Cape Comorin, with an average height about 3,000 feet, ascending to between 4,000 and 5,000 feet, as at Mahableshwar. Between these three ranges the peninsula of India is raised into the plateau of the Deccan. It has an elevation of from 1,000 to 3,000 feet, a region of open valleys and easy slopes, with isolated peaks here and there, and ranges of hills, of which the most important are the Nilgiris, whose highest point is Dodabetta, 8,760 feet.

There are two great slopes of drainage, into the Bay of Bengal on the one side and the Arabian Sea on the other. The Bay of Bengal receives the Ganges, Brahmaputra, Mahanaddi, Godavery, Kistna, Cauvery, and others, whilst the Arabian Sea receives the Indus, Nerbudda, Tapti, and some others.

CLIMATE AND SEASONS.

These geographical and physical characters involve many varieties of climate, and between Northern and Tropical India, according to latitude, elevation, and other physical attributes, every degree of difference in temperature, humidity, or dryness is found.

There are three distinct seasons in India—the hot, the rainy, and the cold—which vary in time of setting in and in duration according to latitude, elevation, and other physical conditions. Approximately the cold season extends from November to March, the hot from March to June or July, and the rainy from that to October, these seasons being greatly influenced by the monsoons.

The monsoons, which do so much to determine the conditions of climate and health as well as the production of food, are the result of the northern flow of currents of air bearing moisture from the ocean, as the S.W. monsoon, and again their reflux, as the N.W. monsoon, which also brings rain to Southern India. In both cases they are more or less deflected or modified by the physical conditions of the country over which they pass. The S.W. monsoon is the great carrier of rain to the whole of India. Saturated with moisture, it deposits it in the form of heavy rain upon the Western Ghauts, where it first impinges and where the greatest amount falls; but passing over extensive tracts of desert land, it deposits very little rain until further north, when, on impact with the Himalayas a large fall takes place. For example, at Mahableshwar in the Western Ghauts 300 inches of rain fall in the few months of the rainy season; and again, on the N.E. frontier, in that prolongation of the Himalayas into the Aracan Yomas, on the plateau of the Khasia and Jyntea hills, at an elevation of 4,500 to 6,000 feet; at Cherra Poonji, 4,200 feet, the large amount of 600 inches falls, the largest rainfall known in the world; whilst at the corresponding latitude on the west, in the desert of Sind and Rajputana, there is almost no rain, not that the air is not charged with moisture, but that the conditions of condensation do not there exist.

HILL COLONIES.

In such a variety of climates and different elevations, with great swamps and deltas on the one hand, and arid, dry, sandy plains on the other, with an almost universal presence of malaria and great solar heat, all those conditions exist which give rise to the well-known forms of tropical disease, render the plains of India unsuitable to be the permanent home of the European, and emphasise the expediency of seeking sites in the more elevated regions where Europeans may find immunity from them. Many such stations have now become health resorts, of which the advantages are very great, not only in preserving the health of those yet unaffected by the climate of the plains, but for invalids who, without being the subjects of organic disease, have suffered from the

wearing effects of climate and work, and in some cases for those convalescent from certain tropical diseases, thus obviating the necessity for long and extensive voyages and prolonged absence from duties.

In considering the question of hill stations, it is to be remembered that the welfare of upwards of 100,000 Europeans is concerned. A very large number of these are destined to spend a great part but not the whole of their lives in India, and it is of the utmost importance for the preservation of their health and vigour to utilise those localities in which this object may be to so great an extent attained. The search for and adoption of others and the endeavour to improve by sanitation or by any other means the condition of those now existing, have always seemed to me worthy of the attention and consideration of all interested in the welfare of the community.

In some of the hill stations, more especially those to the south, at elevations between 4,000 and 7,000 feet, a certain number of Europeans have settled; but sufficient time has not elapsed to show how far this commencement of colonisation may develop and ultimately succeed. For those who have assured means of living and who are not solely dependent upon their professions or labours it seems probable enough that the results may be satisfactory. It also seems possible that the various industries connected with tea, coffee, and cinchona planting and minerals may afford the means of subsistence, notwithstanding the competition of native labour, and so in time European communities of considerable extent may arise and flourish, producing men fitted to carry on work in the plains, returning at intervals to their homes in the more elevated regions. But this remains to be proved.

The great proportion, however, of Europeans who live in India and conduct the commerce, government, and other public affairs would still have to be imported from Europe, and I do not say that the necessity for occasional return to Europe can ever be entirely obviated, for cases must occur in which this will be necessary, not only for recovery from disease or for the re-establishment of perfect health, but for moral and social reasons. Still, I am under the impression that full advantage has never been taken of these hill stations, and it is satisfactory to know that they are capable of considerable extension. I may here express a hope that those who are in a position to do so will endeavour to bring about the realisation of that which would certainly be of benefit to our race in India. I can hardly, indeed, imagine a more profitable subject for the consideration of a Society such as this, whose opinion would carry so much weight.

One obstacle to the progress and success of such colonisation would be found in the limited area of the elevated tablelands and their intersection by deep valleys, but this is not universal. There are regions more promising in this respect—for example, the Khasia and Jyntea Hills, between Bengal and Assam, where the elevated plateaux are broader and more extensive, with undulating ground, at a height that would be favourable to the European constitution. The late Inspector-General Maclelland, an observer of great scientific acumen, in discussing this subject, writes of these hills:

> The elevations, more about the centre of the tablelands, are broad and extensive downs, with favourable soil and plentiful supplies of water, with coal and other resources at hand suitable to the enterprise of Europeans, which seem to leave nothing to be wished for in regard to this locality, but greater facilities of communication in order to render it all to be desired.

In this I thoroughly concur, having known this part of the country, and being much struck with the general character of that between Cherra and Shillong, and its aptitude for this purpose. The greater facilities for communication in these days by rail and steam are gradually diminishing the objections at that time considered to be inseparable from its remote position. He says of another region:

> Proceeding from Hazaribagh further to the west, we have a range of high country parallel to the Ganges, presenting fine tablelands at Sohagpore, the elevation of which has been variously stated at from 3,000 to 5,000 feet. Again, in the district of Ramghur, in the Saugor and Nerbudda territories, are high tablelands, which had then been imperfectly explored, but the elevations were known to be from 3,000 to 5,000 feet. Here during the month of May the climate is truly delightful. Everything around is fresh and green, the air is elastic and buoyant, with dew falling every night. Fifteen or twenty days seldom pass, even in the dry season, without showers. Again, in the Mahadeo hills is the tableland of Pachmahri, in the Nagpore district, elevated 3,500 feet. The soil is light and sandy.

Of this it was written in 1839:

> In the month of May the climate has been known to be such as to suit the most delicate European constitution, while the cold season is intensely cold and invigorating.

This place has now become a station. The same writer remarks:

> A bracing climate, mineral treasures of unexplored value, rich and unappropriated lands, abundance of moisture for all agricultural purposes, beautiful scenery, and a vast variety of products of almost every description, are to be found in these tablelands, to which Providence has been so lavish in its gifts, but which man has not yet been taught to appreciate.

Although much has been done since Dr. Maclelland wrote, there is good reason to believe that in the vast mountain ranges and tablelands of India the physical and climatic conditions necessary for the preservation of health and perhaps even for the permanent colonisation of the European will be found to exist to a much greater extent than has hitherto been supposed.

For example, the late Colonel Warburton, who was Superintendent of the Khyber, has recently pointed out Tor Sapper, in the Khyber district, north of Landi Kotal, and 32 miles west of Peshawar, at an altitude of from 5,300 or 5,600 feet, which is capable of accommodating 1,500 soldiers, and also other elevated regions in the same district with equal advantages, which have all the conditions favourable to European health, and which he strongly recommends.

HILL STATIONS.

Considering, however, how little was known of the hill climates of India half a century ago, it is interesting to note the number of instances in which they are now resorted to, and to learn what service they have rendered both to the civil and military population. Since the late Sir Ranald Martin urged the attention of Government to the matter, and pointed out the importance of locating the European troops as much as possible at elevated regions, the number of hill sites at which the British army is stationed has greatly increased, and their vital statistics contrast favourably with those of India generally, the death-rates being respectively about 14 and 23 per 1,000 in 1897, an unusually sickly year, the latest officially reported. According to the last report of the Sanitary Commissioner with the Government of India, of the 68,000 European soldiers now in India, there are 3,000 in convalescent depôts and hill sanatoria, and 7,000 are stationed in the hills. I am inclined to think this number might be increased. The facilities of communication are now so much greater than they were, say, at the time of the Mutiny, that there would be little difficulty in getting at them in any sudden emergency.

Time does not permit me to do more than a brief description of a few of the typical hill stations of the Himalayas, of the Ghauts and Vindhyan range, and of those more southern regions where the two systems of the Ghauts unite, forming the great mass of the Nilgiri hills. The chief hill stations of popular resort are in the extra-tropical districts—that is, the Himalayas, Dalhousie, Dharmsala, Marri, Abbottabad, Thandiana, Simla, Missouri, Landour, Rainkhet, Naini Tal, Almorah, Darjeeling, Cherra Punji, Shillong, at heights of from 4,000 to 7,000 feet; in the Nilgiris, Utacamand, Conoor, Wellington, Kotagherri; Pachmarhi, in the Central Provinces; Mount Abu in Southern Rajputana, in the Aravallis; Mahableshwar, Matheran, and Khandalla, in the Western Ghauts, near Bombay. There are several others, but even of those mentioned I can only describe a few, and shall take as sufficiently illustrative of the extra-tropical Darjeeling, Naini Tal, Simla, and Mount Abu; of the tropical, Mahableshwar, Matheran, and the Nilgiris, for what is said of those applies to a great extent to the others.

The Tableland of Mahableshwar, latitude 17° 58′ N., longitude 73° 42′ E., in the Western Ghauts, about 290 miles *viâ* Poona from Bombay, is of considerable extent. Its mean elevation is 4,500 feet above the sea; it is rugged and undulating. It varies from eight to fifteen miles in breadth, and is seventeen miles from N.E. to S.W. The station occupies the north-westerly region of this tableland, having a south-west aspect, and is densely wooded; there are excellent rides and drives. It is composed of basalt, trap, and laterite. The mean annual temperature is 66°, daily range 8°, maximum of summer 89°, ordinary limit of winter cold 40°. The rainfall here, as I have already pointed out, is very great, the average being 229 inches, though frequently more; but

the natural drainage rapidly carries off this surplus water. The drinking water is good, the vegetation luxuriant. The headquarters of the Government of Bombay are established in this station, which is naturally the great hill resort from Bombay, as well as from many other parts of India. The elevation and position of this station afford a delightful climate. Malarial fevers do not occur, and cholera is said never to have originated here. The season extends from March to June, and the greatest heat is in March and April, when the thermometer may rise to nearly 90°, but the nights are almost always cool and refreshing. Winds are variable, sometimes from the east, but there is a daily sea breeze, which goes on blowing till the monsoon sets in. Thunderstorms are frequent after April, and in May the atmosphere becomes moister by day, while mist and cloud envelop the hill by night and in the early morning. Early in June the monsoon bursts and the rain falls in deluges, during which time the mean temperature is about 63°. In September the monsoon ceases, and by October the weather has become settled. The change from the heat of the plains now affords great relief; in November the air becomes cooler and drier, weather fine, mean temperature 62°; the greatest cold only produces slight hoar frost. The days are mild and genial, the atmosphere bracing and elastic, and the nights are cool. The periods both before and after the monsoon are those at which the place is desirable as a residence. The scenery—mountain, sea, and waterfall—is magnificent. Recovery from most maladies, except hepatic, dysenteric, or rheumatic, is accelerated, and to those jaded and exhausted by some forms of disease, long exposure, or hard work, the transition to the greater altitude and more elastic air is often very beneficial.

Mount Abu is in the native State of Rajputana, and is separated from the Aravallis, to which it really belongs, by the valley of the Western Banass River. It is situated in latitude 24° 35′ N., longitude 72° 53′ E., and is about 420 miles from Bombay. Its base is about 50 miles in circumference, and its average height 4,000 feet above sea level. It is very irregular on the surface, and the highest peak is over 5,600 feet above sea level. It is composed of granite, with a mixture of blue slate and quartz. The inhabited part is a basin perforated by ravines, studded with hills, and surrounded by higher eminences, from which gorges descend to the plains. The distant views are very picturesque; vegetation is luxuriant and semi-tropical; a lake about two miles in circumference is found on the western side of the station. The hill sides are well wooded, and at the beginning and termination of the monsoon it has its most charming aspect, green with vegetation and brilliant with flowers, and all the little valleys are filled with clear streams. The mean annual temperature is 70°, the average maximum in summer is 92°, the extreme 98°; in the winter the temperature is about 50°, but occasionally it freezes at night, and hoar frost covers the ground. The daily temperature is, on the whole, equable, and the station is sheltered from the winter east winds. The rainfall averaged during 10 years 64 inches, August being the most rainy month. It is often enveloped in clouds during the monsoon. Though the summer is warm it is a great contrast to the heat of the burning sandy plains below, and is generally tempered by refreshing breezes, the atmosphere is light and elastic, and the nights cool. It is raised above the hot winds, but is not altogether free from malaria, especially from October to the end of the year. The water is somewhat uncertain in quantity though good in quality. The advantages of this station as a dry, tonic climate, without great vicissitudes of temperature, are considerable, and are much appreciated. It is susceptible of further development, which doubtless will take place as time goes on. It is now the headquarters of the Rajputana Political Agency, one of the Lawrence asylums for European children, and a sanatorium for British troops. It is a great place of resort for those who are exhausted by climatic causes and hard work, and for convalescents after any ordinary maladies, except hepatic and confirmed forms of bowel complaint, or those who have suffered from severe malarial fever, and are liable to recurrences of it.

Matheran (latitude 18° 58′ N., longitude 73° 18′ E.). which rises abruptly from the plain, consists of trap rock and laterite, is very irregular in form, its central ridge is about a mile and a half long and half a mile in breadth, with spurs which are known by various names. Its proximity to Bombay (only about twenty miles as the crow flies) makes it of great value to that city. It can hardly be dignified by the name of a hill station, but as it illustrates remarkably the advantages of even 2,460 feet of elevation, in its cooler atmosphere, its pleasant breezes and proximity to the sea, it is worthy of mention. The rainfall is heavy, amounting sometimes to 250 inches in the season, when Matheran is not desirable as a residence, but it runs off quickly. In the cold weather, from the middle of October to the beginning of March, the temperature rarely reaches higher than 78° by day and 70° by night, but in March and April it may reach as high as 90° with a mean of 80°. The place appears to be free from malaria. Persons who have suffered from overwork and heat and who are convalescent after illness, other than malarial fevers or hepatic disease, will find it beneficial, and by resorting to it may sometimes avoid the necessity for more prolonged absence and change.

The Nilghiris.—In the south of India, in the Madras Presidency, a tract of mountain country lies between 11° 12′ N. latitude, and 76° 18′ and 77° 15′ E. longitude. These are the Nilgiris, the total area of which is 957 miles, the surface undulating, in some parts not much wooded, and the fall to the plains sudden and abrupt. In other parts of these elevated lands there are extensive forests. The general elevation of the tablelands varies from 6,000 feet to about 7,600 feet. There are several high peaks; Dodabetta, the principal, measures 8,761 feet. In the high lands some European settlers have already established themselves, and there are four European stations: Utacamand, 7,361 feet; Wellington or Jackatalla, almost exclusively military, 6,100 feet; Conoor, 5,886 feet; Kotagherri, 6,571 feet. These hill stations are justly in great request, and much frequented. Their elevation in that latitude, their relative proximity to the sea, and the influence exercised over them by the monsoon, produces a climate well suited to the European constitution, in which our race may maintain its healthful vigour, and where there is good reason to believe that, other accessories being favourable, a permanent home for the European race might be, and indeed is, established, though of course time alone can determine in what this attempt at colonisation will result. When compared with the elevated stations of the Himalayas, the distinctions arising out of differences of latitude, proximity to the sea in the one case and to the snowy range in the other, are expressed in the Nilgiris in the greater equability of the climate, neither the heat nor the cold being excessive; whilst the configuration of the country itself, with it long, undulating plains, renders it more suitable to the habits and constitution of the European. Time does not permit of my dwelling upon the physical aspects, and on the magnificent scenery presented by these mountain peaks, undulating plains, and rushing rivers; but let me say a few words about Utacamand, the chief station, and Conoor and Kotagherri, which seem to be so intimately associated with each other, invalids or others frequently finding a sojourn at one of these places a wise preliminary to that at Utacamand; whilst Wellington holds a high place in the medical annals of the British army, upwards of 1,000 men being in the convalescent depôt there.

Utacamand is situated in an elevated valley or basin surrounded by hills, and has a lake in the centre; there are few trees in its immediate vicinity. From its peculiar geographical position, it feels the influence both of the S.W. and the N.E. monsoon; the rainfall is heavy—according to Hunter 45 inches annually—though it varies in different parts of the Nilgiris, the highest fall being in June and July brought by the S.W. monsoon; this is the most unpleasant season. The N.E. monsoon sets in in October, and is also accompanied by rain; the months of November and December are showery, and the latter cold; the atmosphere after that becomes dry. January, February, March, and April are clear, with dry north and east winds. The mean annual temperature is 58°; in the hottest season it seldom exceeds 75°—it may drop at night to 54°—but the mean range seldom exceeds 9°. The hottest month is May, the coldest are December and January, when the freezing point is sometimes but very seldom reached at night. At this time the range between the hottest part of the day and the coldest part of the night is about 16°. In the cold season,

in the rarefied air, the sun's rays have great force, and even in this comparatively equable climate it is necessary to guard against sudden changes of temperature. From difference in altitude, locality, and physical characters generally, varieties of climate are within easy access.

Conoor is milder and less subject to these sudden changes of temperature, and therefore more suitable to delicate persons on first going to these hills. The climate generally of the Nilgiris is suitable for all conditions of depressed health, or after disease contracted in the plains, except, as in most other hill climates, those of hepatic or dysenteric nature. Conoor is not so high as Utacamand, but is much more beautiful, as the sides of the hill are wooded. The mean average temperature is 64°, of the summer 70°. It is more relaxing than Utacamand, and in the winter is more sheltered from the north-west, to which the latter is exposed. The waterfalls that occur during the monsoon are most picturesque, one at no great distance being 400 feet. At this elevation the tropical character of the vegetation ceases. Most of these remarks apply to Kotagherri, which is only a little higher than Conoor.

Darjeeling, latitude 27° 2′ N., longitude 88° 18′ E., about 400 miles from Calcutta, and easily and rapidly accessible by rail, is situated in a district of the Sikkim Himalayas, 138 square miles in extent, which was acquired from the Rajah as a sanatorium in 1835. The height of the ridge varies from 6,500 feet to 7,500 feet above sea level. Most of the houses are perched upon this ridge, others are on the side, with a S.W. aspect. Rather more than half-way up is the station of Kurseong at an elevation of about 4,500 feet, where it is sometimes better for Europeans to sojourn for a time before going to the greater elevation of Darjeeling. The geological formation is chiefly micacious shale and gneiss, with granite, sandstone, and slate. The S.W. monsoon produces a heavy rainfall averaging from 120 to 150 inches in the year. The humidity of the atmosphere is consequently considerable, especially during the fogs and rains of the monsoons. The climate, however, is very equable, in which it differs from other Himalayan stations. Snow falls in the winter to a much less extent than it does at Simla, and the winter is milder. The mean annual temperature is 56°, the maximum in July is 70°, in May 65°, in December 52°, the minima being respectively 59°, 51°, and 36°. The views from the station and the surrounding localities are very fine; the low valleys on the one hand, some with rivers flowing through them, and on the other hand range upon range of snow-clad mountains from 15,000 feet up to 28,000 are exceedingly picturesque and magnificent. The roads are numerous and well kept, sanitation is good, and the water supply fine and sufficient. The flora is very varied—fine trees, such as saul, magnolia, oak, chestnut, toon, coniferæ of all kinds, and rhododendrons, whilst ferns, creepers, and numerous flowers, such as orchids, abound, and the cinchona plantations—a recent but rapidly-increasing and important industry—not far distant, are most interesting. The climate in March and in May is like that of Europe. During the monsoon the rain is disagreeable, but there are frequent intervals in which the climate is pleasant enough. From October to March the weather is sunny, bright, and cheerful, the nights cold, clear, and sometimes frosty. Darjeeling is the summer residence of the Lieutenant-Governor of Bengal, and is resorted to by numbers, many of whom are planters in the Terai and neighbouring districts.

Though the Terai itself and the valleys are malarious, yet the fever never originates in the station, it being raised above malarious influences, and people from the Terai suffering from fever recover speedily at this station. Whilst diarrhœa is not infrequently found at other Himalayan stations, it is comparatively uncommon at Darjeeling, nor does there seem to be any special tendency to bronchial troubles. As a change, which is so necessary after long residence in the plains, where exhaustion and hard work have deteriorated the general health, and where there is no definite organic disease, and no complications, such as asthma, cardiac or cerebral disease, thought not to do well here, it is of the greatest value as a health resort. Delicate people and young children especially thrive almost as well as they would in Europe.

Naini Tal in Kamaon, in the N.W. Provinces, latitude 29° 22′ N., longitude 79° 29′ E., may be described as an amphitheatre surrounded by hills which are 2,000 feet higher except on the S.E., where it is open to the plains. Between the main range and a spur called the Ayapata is a valley with a pictureque lake or *tal*, probably an ancient crater, from which the place takes its name, about one mile long and a quarter of a mile broad. On the slope above this lake the present station is built, and at various elevations. The height of the lake above the sea is 6,400 feet, and the hills surrounding it rise to 8,500 feet, the ascent from the station being rather precipitous. From some ridges near the station magnificent views of the snowy ranges, including some of the higher peaks, are to be seen, with the intervening valleys and lower ranges gradually leading up to them. The scenery of the station itself and the views of the lake are most picturesque, while the flora is varied, consisting of rhododendrons, cypress, ash, and a variety of flowers and ferns. English vegetables and fruits are also produced in the cold season. The geological formation is clay, slate, and limestone, with light friable soil. In 1881 it was the scene of two serious landslips which destroyed many buildings and several lives. This station is the summer resort of the Government of the N.W. Provinces, and consequently is much frequented. The climate is bracing and invigorating except in the rains. The average rainfall is 70 inches, but in some years it is double that amount, and it rains more days in the year than at other places. During a period of seven years it was recorded that some rain fell in every month except October, but August is usually the wettest month. The temperature in summer rarely exceeds 80°, and in winter it may sink to the freezing point. The maximum and minimum are: in May 78° and 48°, in June 69° and 59°, in July 78° and 61°, in August 76° and 62°. Water is derived from springs and is good, and the sanitation of the place is carefully provided for. In the cold weather invalids and children may be out most of the day, though occasionally snow falls. February and September are said to be most disagreeable months.

This picturesque and beautiful station is very easily accessible by the railway to the foot of the hill and thence by good road, and there seems to be ample accommodation for any number of visitors. Those are most benefited who have been debilitated by long residence in the plains or who have suffered from frequent attacks of intermittent fever, or other diseases unattended with organic complications. As is the case with the hill stations generally, it is not so beneficial for hepatic or dysenteric troubles, and it is not free from occasional occurrences of so-called "hill diarrhœa," and indeed from rheumatism and neuralgia, due to its exposure to occasional cold northerly winds. Cases of bronchitis and croupy affections in children are also of occasional occurrence. Persons who suffer from any organic disease, cardiac or other, should not go there without medical authority, and as the transition from the plains to this greater elevation is sudden, delicate persons should not undertake it without the sanction of their medical adviser. There is here a convalescent depôt for European soldiers in which in 1897 there were 123 inmates.

Simla (latitude 31° 6′ N., longitude 77° 11′ E.), in the district of Simla, in the north-east corner of the Punjab, the largest and most important of the Himalayan stations, is on a ridge of the sub-Himalayan system, of a crescentic form, culminating in the east in the peak of Jakko, and in the west in another peak, Prospect Hill. From Jakko the ridge gives off another spur to the north called Elysium, and another to the east called Mahasu; it is, in fact, a series of ridges and spurs upon which the numerous houses are most picturesquely situated, on the north aspect of which is the snowy range, and on the west the plains at a distance of about 40 miles. The area of the whole district, obtained from the Patiala Rajah in the first quarter of the century, is about 18 square miles. It is approached by good roads, but the rail, which already reaches to the foot of the hills will no doubt, as in the case of Darjeeling, be extended nearer to the station. The scenery is very picturesque; to the north the mountain ranges on the other side of the Sutlej valley are covered with dense vegetation, whilst in the distance is the magnificent panorama of the snowy range. The valleys to the north and south are also beautifully wooded, whilst the Kussouli and Sabathu hills, at a lower level, which are military sanatoria, are seen, with the plains of Umbala, extending far in the distance. The hills generally about Simla are well wooded by oak,

deodar, and rhododendrons, which are very beautiful. These mountain ridges are composed chiefly of metamorphic rocks, shale and conglomorate, limestone and mica. The average height of the station is 7,100 feet, the fir-clad peak of Jakko rising to 8,000 feet. The average rainfall is 76 inches, but it varies, ranging from 50 to 100 inches, and during the rainy season there is much mist. The mean annual temperature is 60°; in the hot season it frequently attains to 85° or 90°, whilst in the cold it may fall to 22° at night. From the middle of March and in April the mornings and evenings are fresh and cool, the day bright and pleasant. In May it is warm and dry with a temperature from 70° to 80°. In June, the hottest month, the temperature may rise to 90°; in the middle of June there is a certain amount of rain, but in July the regular rains begin, which continue with intervals till the middle of September. During this period the atmosphere is damp and the station is often enveloped in clouds. Bright and bracing weather follows the rainy season, and in October the air is peculiarly bright and clear and the scenery is then very beautiful. Snow begins to fall in December, increases during January, and sometimes lies deep on the ground. The air is then dry, calm, and bracing, and very agreeable to persons in good health. *Chini*, another ridge, is well known for its dry elastic atmosphere and moderate rainfall, the climate being bracing and healthy like that of Switzerland. Complaints have been made from time to time about the sanitation of Simla and of overcrowding. The water supply is good, having been lately improved. Simla is the summer resort of the Viceregal Court, and is naturally a most popular station, and much frequented, not only during the season but also throughout the winter. The climate is beneficial in ordinary malarial diseases, if unaccompanied by structural changes, but, as in the case of other hill stations, it is specially useful after prolonged residence and hard work in the plains. Like the other, also, it is unsuitable in dysenteric, hepatic, cardiac, or lung complaints. Hill diarrhœa is not infrequently seen and requires special precautions, especially in those who have any tendency to bowel complaints or have just come up from the plains and are more than usually susceptible to alternations of temperature. Children thrive well here, but the question of their remaining during the winter may require consideration. At Sanower, close by, is the Lawrence Asylum for European children. Here also, as at Sabathu and Kussouli, a few Europeans resort. The climate of Simla, in 31° N. latitude, as compared with that of Utacamand in latitude 11° N., at about the same elevation, shows a considerable contrast in its extremes of temperature, both of heat and cold, and the greater equability of the climate is very frequently the reason why the more southern hill stations are preferable to the northern, especially in the case of certain diseases or constitutional peculiarities in which these are important considerations. Such questions can be best determined by medical authority on the spot, but it may be safely said of all, from 4,000 to 8,000 feet, in whatever latitude, that they are of exceeding benefit to Europeans, for here they are placed above those morbific influences which determine the forms of tropical disease and in an atmosphere not too rarified to be prejudicial.

Hill Stations as Health Resorts.

It is also worthy of consideration (and nowhere could this consideration be more appropriately given than by this Society) whether the hill stations of India might not be more resorted to by people from our own islands, when prolonged absence from this country is necessary and residence in a milder and more genial climate sought for. The evils of the winter in England might be avoided by residence in the plains of India or on the plateau of the Deccan, and if necessary that absence should be prolonged, the hot weather in India might be beneficially spent in one of the hill stations.

There are many other hill stations in India, and amongst them might be included the lofty valley of Cashmere, in which all the advantages resulting from altitude, pureness, and rarefaction of air, and removal from the various conditions which give rise to tropical diseases are found. But it is impossible for me in the short time at my disposal to enter into any description of these or other cognate subjects of the greatest interest.

I have endeavoured briefly to indicate certain points with regard to the hill stations of India which I thought might form the subject of profitable consideration in a Society such as this, so eminently qualified to estimate their value and importance, and it only remains for me to apologise for having treated the subject so cursorily.

[The address was illustrated by paintings of the Himalayas by the Right Hon. Sir R. Temple, Bart., late Governor of Bombay; by photographs lent by Mr. Birdwood, C.S.I., Bombay Civil Service; and by photographs and sketches lent by the India Office, and by the Royal Geographical Society.]

CLINICAL LECTURES
ON PNEUMONIA.

Delivered at the Liverpool Royal Infirmary, March, 1900.

By JAMES BARR, M.D.,

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Lecture I.—Etiology and Pathology.

Gentlemen,—I wish to rivet your attention on the subject of croupous pneumonia, as we have recently had many cases under our care; and the widespread prevalence and high mortality of the disease in this city should be sufficient to arrest the attention of every student of medicine.

Etiology.

True croupous, fibrinous, or lobar pneumonia is now generally looked upon as a specific disease due to the invasion of the air cells of one or more lobes of the lungs by pathogenic micro-organisms. There are some (such as Dr. Andrew H. Smith,[1] of New York) who hold that true croupous pneumonia is only produced by the diplococcus of Fraenkel, and they ascribe a different *rôle* both in causation and development of lung mischief by other micro-organisms; in fact, Dr. Smith draws a sharp distinction between pneumonia and pneumonitis. On the other hand some, such as Sir J. W. Moore,[2] President of the Irish College of Physicians, look upon pneumonia as a multiple infection. Sir J. W. Moore holds that the micro-organisms peculiar to erysipelas, to influenza, to tuberculosis, to enteric fever, to diphtheria, to malignant pustule, and other pathogenic bacteria, as well as the pneumococcus of Fraenkel, may give rise to a specific pneumonia or pneumonic fever.

Much of the difference of opinion is merely a war of words. I think that there are very few who would contend that the pneumococcus of Fraenkel was the only cause of the very large and varied class of diseases which, according to our present classification, we group under the generic head of pneumonia. Many of the cases differ very widely in their general characters, even apart from the predisposition or special constitution of the individual affected, and have very little in common except that they all involve an inflammation, more or less, of the lungs. Who can view a true croupous pneumonia, involving perhaps the whole of one lung, without much more nervous disturbance than that of sleeplessness, and a case of pleuro-pneumonia limited to the apex of one lung, and associated with wild and noisy delirium, without coming to the conclusion that there is at least a difference in the virulence of the poison in the two cases.

The pneumococcus is often sparsely disseminated in the expectoration, while staphylococci and streptococci may be found in much greater profusion. I recently saw with Dr. Moyles a severe case of pneumonia associated with phlegmonous erysipelas and abscesses in the leg. We found streptococci in the purulent discharge, and both the patient's lungs and his leg were cured by antistreptococcus serum. In surgical practice cases of pneumonia are not at all uncommon, and are generally ascribed to draughts from the window, whereas the true cause may be some infective pyæmic organism. In operations in the mouth and throat pneumonia is especially frequent.

No doubt the pneumococcus is often present in the mouth and upper air passages even in health, but in these low septic pneumonias of which I am speaking I do not think it is often the offending microbe. I have seen some very bad cases of

pneumonia arise in persons partially drowned in the Liverpool Docks; what the micro-organisms may have been in such cases I cannot say. Pneumonia is often associated with typhus, typhoid, diphtheria, measles, anthrax, glanders, and other infectious diseases; and in such cases the pneumonitis most probably owes its origin to the micro-organism of the primary disease, though in certain cases the pneumococcus may be also in action. An inflammatory process in the lungs or elsewhere may be started by a great variety of micro-organisms, but a true croupous pneumonia starting and ending abruptly is due to that short-lived organism the pneumococcus. I have seen pneumonia occur as a sequel to carbolic acid taken with suicidal intent. Again, we have the so-called ether pneumonia—probably a true pneumonia—and the hypostatic pneumonias associated with many debilitating diseases.

During the last ten years influenza with its frequent induction of pneumonia has further complicated our nosology. Here the inflammatory mischief is of a low congestive type, and often rapidly fatal; but the bacillus of Pfeiffer does not seem to lead to the marked consolidation of the lung which takes place in cases associated with the pneumococcus of Fraenkel.

I have no doubt that in a short time all these varied types which we now classify under the generic head of pneumonia will be arranged in proper classes; in fact already in our treatment of individual cases we are largely influenced by our knowledge of their nature and causes. However I quite agree with my friend, Dr. Nathan Raw, that for statistical purposes in the present state of our knowledge it would be a most reprehensible procedure to attempt to alter the classification of the Registrar-General, lest it should afford a strong incentive to some men to improve their statistics out of recognition—cases of recovery would be cases of pneumonia, cases of death would be cases of streptococcal or staphylococcal infection, which in the nature of things the public could scarcely expect to recover.

It is generally acknowledged that the pneumococcus may exist as a harmless organism in the air passages; what then are the predisposing causes which lead to its cultured malignancy in the air cells giving rise to a disease which occurs in all climes? A quarter of a century ago Jürgensen[3] showed that on an average 3 per cent. of all diseases in the whole population of the globe were due to croupous pneumonia, while the death-rate stood at 6.6 per cent. of the total mortality. This would show that the percentage fatality of pneumonia is more than twice as great as the average of all other diseases combined. During this quarter of a century matters have not improved, in fact since the advent of influenza in 1890, statistics show that the death-rate from pneumonia has considerably increased. In this city the percentage death-rate of pneumonia to deaths from all causes has risen from 7.6 in 1896 to 9.0 in 1898; and the death per 100,000 inhabitants in these two respective years shows the fearful rise from 172 to 206. Over the globe pneumonia stands next to tuberculous disease as a foe to human life, but in this kingdom bronchitis takes the second place, and pneumonia follows very closely in the third place.

The following table is compiled from the Registrar-General's report for 1896, and from information obtained from reports of the medical officers of health of Liverpool and Glasgow. Those further interested in the subject will find an excellent article on Pneumonia from a Public Health Standpoint, by Dr. Arthur Newsholme, in the *Practitioner* for January, 1900. In 1896 influenza was not a very disturbing element.

Death-rate from Pneumonia per 100,000 Inhabitants in 1896.

England and Wales.	Wales and Monmouthshire.	London.	Liverpool.	Scotland.	Glasgow.	Edinburgh.
115	[illegible]	102	177	114	185	113

Pneumonia occurs in all climes, and its incidence is as great in some tropical countries as in northern latitudes. In this respect it differs from bronchitis, which increases in frequency as we recede from the tropics. In this insular climate the disease reaches its maximum about December and January. It is about twice as frequent in the winter and spring months as it is in the summer and autumn. On the other hand, on the Continent, according to Jürgensen, it reaches its maximum from March to May. It is less prevalent in the country than in the cities, and less among those who lead an outdoor life than among those whose occupations confine them to close apartments. Exposure to cold seems to lead to catarrhal affections rather than to true croupous pneumonia; sudden variations of temperature may so depress the resisting powers as to become a markedly predisposing cause of the disease. It has been correctly asserted that exposure during sleep increases the predisposition to the disease, and this no doubt is due to the lessened resistance of the nervous system. Frequent draughts of alcohol are, in my opinion, a much more important predisposing cause than any cold draught of air, and this may, perhaps, to some extent account for its somewhat greater prevalence among men than among women.

The late Sir B. W. Richardson stated that pneumonia and influenza were more prevalent during conditions of the atmosphere when much ozone was present: this may possibly apply to catarrhal affections, but I think pneumonia occurs more frequently under conditions marked by the absence of ozone. A high barometric pressure is said to be inimical to the origin of pneumonia, and it is certainly of advantage in the treatment of the disease.

There is no age exempt from pneumonia. Statistics show, contrary to what is often supposed, that it is most common and most fatal during the first five years of life. The rate declines up to 15 years, then gradually increases up to 55 years, and from this age onwards there is a very great increment. It frequently attacks those of strong constitution, but rarely when they are in good health, while the weak and debilitated are very prone to the disease.

The female mortality from pneumonia is less than that of the male, in the proportion of about 7 to 10, but this arises from the fact that the incidence of the disease is greater among males, whereas it is generally acknowledged that the actual percentage death-rate in the number of persons affected by disease is greater among females.

SYMPTOMATOLOGY.

In a typical case of pneumonia the symptoms and physical signs are so pronounced that no one can overlook them, and I have no wish to overburden this lecture with diagnostic points which are best taught at the bedside. However, all cases are not typical, and errors in diagnosis are not at all uncommon. I have seen a considerable number of cases mistaken for typhoid fever, and it is well known that a pneumonia of the apex has occasionally been treated as a case of typhus fever. Moreover, I think the disease is frequently not so early recognised as it should be. In the young and aged errors most frequently occur.

In children there is often considerable difficulty in physical examination, and their resilient chest walls give a tympanitic note even when the lung beneath is fairly solid; the child is hot and restless; it may object to any interference, and cry when it is being examined, but it may not give any indication of local pain in the chest. You know that the child is very ill, but it often requires careful observation to detect the local manifestation of the disease.

Croupous pneumonia in children, as in adults, usually commences very suddenly, occasionally with a chill, but more often with vomiting or even convulsions. There is a great rise of temperature, often over 104°, and this is accompanied by stupor or delirium, flushed face, restlessness, and general tenderness. These symptoms point to cerebral disturbance, and the respiratory phenomena may not at this stage be at all pronounced, while physical examination of the chest may not detect much abnormality. However, a close observer will notice that even at the very earliest stage the respirations are short, shallow and catchy, while the frequency is increased out of all proportion to that of the pulse; the alæ nasi dilate, and often there is an arrest of the breathing for a second or two, and then it is resumed with great frequency, the expirations are rather sighing and apparently laboured. There may be no cough at first, and it is usually slight throughout unless the disease be complicated with bronchial catarrh; the expectoration is always swallowed, the tongue is coated with a thick creamy

fur, which often becomes dry and brown, the throat is congested, and the skin often red and patchy, so that you might imagine you had to deal with the commencement of scarlet fever.

Children's chests being very resilient lend themselves readily to palpation, and so if you run a hand carefully over each side of the chest you will detect a little increased resistance even at the very earliest stage of engorgement. On the other hand, this great resiliency makes it much more difficult to satisfactorily percuss the chest, because the walls themselves vibrate, and if you have a slight consolidation underneath this vibration of the chest walls gives a high tympanitic note, which might almost lead the manipulator, especially if he percuss rather heavily, to think that the diseased was the healthy side of the chest. In such cases I apply the whole of my left hand on the chest with my fingers spread out, and lightly percuss my middle finger. By this means I arrest all vibration of the chest walls, detect the slightest increase in resistance, and elicit the impaired note of the congested lung underneath. This method of percusslon is equally applicable to the very early stage of pneumonia in the adult, and elicits early and therefore very valuable information. In auscultation the inspiration is often feeble, and there may be a few crepitations, the expirations may be prolonged, but there is rarely marked tubular breathing till near the acme of the disease. For vocal fremitus and bronchophony you must trust to the crying of the child. There may be—and often is—some pleural effusion, but that the disease is primarily pneumonia is shown by the very acute character of the illness, and by the fluid giving rise to no displacement of other organs. When this fluid becomes purulent it much protracts the illness and demands the treatment of an empyema. Occasionally we get pericarditis or even meningitis, and bronchial catarrh is not at all uncommon. The latter complication often makes it difficult to distinguish this affection from broncho-pneumonia; but the history, progress, and termination usually solve the matter. Croupous pneumonia, both in the child and in the adult, being a truly infective disease, ends generally in uncomplicated cases by a crisis or rapid lysis.

In the aged it is occasionally overlooked because the fever is mild, the respirations quiet and not very quick, the cough slight, the expectoration scanty and not at all characteristic, but accurate observation will detect a slight hectic flush, the alæ nasi slightly expanding, the sterno-mastoids rather fixed, and the pulse respiration ratio markedly increased. A physical examination will now reveal the true state of matters.

While we retain our present method of classifying all lobar inflammations of the lung under the heading of croupous pneumonia, we must be prepared for considerable variations in the onset and progress of the disease. Many of the asthenic types of pneumonia which complicate other acute diseases are cases of true croupous pneumonia associated with the pneumococcus of Fraenkel; but many acute diseases such as typhus and typhoid fever, pyæmia, septicæmia, erysipelas, puerperal fever, and influenza are capable of setting up on their own account pneumonia, which often runs a very indefinite and fatal course. However, true croupous pneumonia as a rule begins with a sudden chill or rigor, frequently during the night or early morning, which may or may not have been preceded by a pharyngeal or nasal catarrh, and general *malaise*. Vomiting is not infrequent, the temperature rises quickly, and in a few hours may reach 103° or 104°. It remains high up to the crisis except so far as it is modified by treatment; the skin is at first hot and dry, afterwards moist and freely perspiring. A severe stabbing pain in the side and local tenderness owing to associated pleurisy may set in early, though this symptom is often absent. There is a malar flush of a more or less purplish hue, and there may be gradually increasing lividity with the progress of the disease, the alæ nasi expand, the breathing is quick, short, and shallow, and the frequency is relatively much more increased than that of the pulse, the expirations are often groaning and often laboured, while frequent interruptions in the breathing arise from a short, hacking, painful cough, which makes the patient hold his side or lie on the affected side to prevent movement. The pulse in sthenic cases is frequent, large, full, and strong, while in other cases even from the first it is frequent, small, weak, and of very low tension. The sputum at first consists of a little clear mucus, but soon becomes viscid and rusty. In unfavourable cases it may become copious, liquid, and of a prune juice character; a very tenacious scanty sputum of a rusty or slightly saffron tinge affords a favourable indication. He complains of headache, backache, general weariness, or pains in all his limbs; there is great thirst, no appetite, scanty high-coloured urine, constipation, though in children the bowels may be loose at first. The patient is very prostrate, does not like to be disturbed, has no restful sleep, and is often mildly delirious: or in drunkards, and perhaps most frequently when the upper lobe is involved, the delirium may be violent; as a rule, the higher the temperature the greater the delirium, until it reaches 105° or 106° F., and then the patient becomes stupid, muttering and comatose. In such cases the pulse becomes very quick, small, feeble, and very compressible, skin moist, the hands are tremulous, there is marked subsultus tendinum, and often carphology. In uncomplicated cases the crisis usually occurs between the fifth and eighth day, though it may not occur till the eleventh, any protraction beyond this is due to complications or further extension of the disease. The fall is often very rapid, and often the day before the true crisis there is a sudden fall followed by a rapid rise to the former level. The crisis is usually associated by profuse sweating, but this requires watching, as it is often followed by collapse, which not infrequently occurs in the night or early morning, the fall may be much more gradual and is then termed a lysis. This chiefly occurs in cases where there has been several extensions of the disease.

PHYSICAL EXAMINATION.

This is most important for the early recognition of the disease, but you must not rely too much on the signs described in the textbooks. Stokes taught that there was first harsh puerile breathing, which no doubt occasionally occurs when there is a very slight catarrhal or swollen condition of the mucous membrane; then we get the very fine dry crepitant *râles;* but the first sign is not often observed and the last only in about one-half the cases. These very fine crepitant *râles* are no doubt frictional in origin, but as the very fine layer of fibrinous lymph on the visceral pleura does not occur in more than half the cases, these *râles* are as often absent as present. When present they do not last more than a day or two because the lung becomes engorged, large, swollen, and pressed against the chest walls, so that there is no movement of the pleuritic surfaces. The respiratory sounds are often feeble, but after coughing, which clears the bronchial tubes, it is noticed that the vesicular murmur is defective, the expiration prolonged, and, where complete consolidation has taken place, the respiration is markedly tubular. These remarks apply in equal degree to the voice phenomena. I think that percussion affords earlier, and therefore more valuable, information as to the state of the lungs. If the chest wall be fixed as I have previously described and gentle percussion used, I am confident that increased resistance can be detected within the first twenty-four hours of an attack of pneumonia. When the lung is solidified one can find it out, but often at this stage of the disease it is better not to disturb the patient for the mere sake of discovering a phenomenon of the existence of which there can be no doubt. The patient lies on his back or affected side, and, when the breathing is difficult and painful, the head is raised bent forward, the body bent towards the affected side, and the spine rather curved to bring the ribs closer together, the nostrils expand, the cheeks rather purplish, and mucous membranes and finger nails purplish or livid. Herpes on the lips or nose is usually considered a favourable sign. The affected side does not expand so well as the other. If there be even a thin layer of fluid the respiratory and vocal phenomena are diminished. In the unaffected portions of the lungs there may be evidence of congestion and bronchial catarrh, such as a few crepitant and sonorous *râles*. During resolution the tubular breathing and bronchophony are replaced by moist crepitant *râles* and a return of the vesicular murmur.

The cardiac signs require much attention, there is usually considerable extension of the deep cardiac dulness to the

right on account of overloading of the right side of the heart, the second pulmonic sound is accentuated, the negative pressure within the chest is diminished and the breathing is shallow, consequently the heart does not get the usual respiratory assistance in carrying on the circulation. If there be any evidence of cardiac failure it is well to encourage the patient to take long deep breaths, and that very frequently.

The number of white corpuscles in the blood is usually increased, an absence of leucocytosis is said to be a bad omen, but a great excess does not portend a favourable issue, as such generally takes place in severe cases and during purulent infiltration. The liver and spleen are often enlarged, the urine is scanty, high-coloured, chlorides almost absent, and albuminuria due to congestion of the kidneys frequently present.

PATHOLOGY.

I have no intention of giving a lengthened disquisition on this subject, but a succinct statement of the pathological events taking place enables us to understand the clinical phenomena of the disease, and helps to a rational mode of treatment.

Dr. Andrew H. Smith,[1] who is a strong advocate of the specific nature of the disease, summarises the sequence of events taking place in an attack of pneumonia as follows:

1. The occurrence of some cause of depression, either local or general, which favours the germination of pneumococci, already present in some of the smaller tubes.
2. The formation of a colony that spreads until it reaches the group of air vesicles that are terminal to the tube in question.
3. The setting up of an irritation of these vesicles, causing a fibrinous exudation, an emigration of leucocytes, and a diapedesis of red cells from the functional capillaries.
4. The formation of a colony of pneumococci in the medium afforded by this exudate.
5. Arrest of the blood stream in the functional capillaries, followed by the accumulation of pneumic acid in the parenchyma of the affected area.
6. Overflow of exudate into neighbouring lobules, starting the process in them also.
7. Arrest of germ growth by exhaustion of the medium, and the accumulation of free acid in the tissue of the lung. Up to this time there has been a constant formation and absorption of toxin.
8. Retrogressive changes in the exudate preparatory to its removal by absorption.
9. Probably in this latter process formation of an antitoxic principle.
10. Entire removal of the exudate and restoration of the vesicle to its normal condition.
11. Resumption of the functional capillary circulation.

Dr. Smith holds strongly to the idea of a germ culture to the exclusion of an inflammatory process, but surely the one does not exclude the other; rather, I think, we should attribute to the pneumococci their true *rôle* in setting up a pneumonitis, just as the same organisms set up a pleuritis, a peritonitis, or a meningitis. In support of his contention, Dr. Smith says:

> The interalveolar septa seem to be but little affected by the enormously active process taking place within the cells. After a few days these cells are emptied of the mass of exudate with which they were filled, and the cell walls are found practically in their normal condition, having suffered at the most only a little loss of epithelium. Had this been an ordinary inflammation, as of the liver or the kidneys, accompanied by a corresponding amount of local change, we should expect to find such damage to the part as would require a long process of repair, if, indeed, complete recovery could ever take place. Vessels would be obliterated, new connective tissue would be formed, permanent indurations would remain, etc. Indeed, such changes are the usual accompaniments of chronic pulmonary inflammations, and sometimes remain after pneumonia of an aberrant type. That they do not occur in typical croupous pneumonia seems sufficient evidence that the process in the latter case is essentially different from inflammation in general.

It seems to me that the nutritive circulation of the lungs, which remains intact during an ordinary attack of pneumonia, and on which Dr. Smith himself lays particular stress, is sufficient to account for the difference between an inflammation of the lungs and that occurring elsewhere. Moreover, an attack of glomerular nephritis often rapidly disappears without leaving a trace of mischief.

In an inflammation of one or more lobes of the lung started by pneumococcal or other infection we get a stage of vascular engorgement accompanied by an exudation of fibrin, red cells, and leucocytes into the air cells. According to Ribbert,[2] the more abundant the fibrin the fewer the pneumococci, they being more numerous when the exudation is conspicuously cellular. About the end of the second or third day this exudation has led to solidification of the portion of the lung affected, though in some cases this process takes place more slowly. Stasis of the blood now takes place, so that you can stick an aspirating needle into the solid lung without drawing a drop of blood. As a rule the nutritive vessels of the lung are not involved, though in some cases they may be, and then necrosis, gangrene, or abscess may follow. The stage of red hepatisation usually lasts to the crisis, and then the soft clots in the pulmonary vessels rapidly disintegrate the pulmonic circulation is re-established, retrogressive changes take place in the exudate with rapid absorption by the capillaries and lymphatics. In some cases the cells are so packed with leucocytes undergoing fatty metamorphoses that the solid lung becomes quite grey, and during the process of resolution a large quantity of the exudate is expectorated. In some cases the infective process is so severe and migration of leucocytes so great that we get purulent infiltration. There are some who say that if the lung reach the stage of grey hepatisation and purulent infiltration the patient does not recover, but this is not in accordance with general experience. We may even have extensive gangrene or abscess and yet recovery.

LOCATION AND COMPLICATIONS.

In 169 cases of primary and secondary pneumonia under my care in the Northern Hospital the right upper lobe was affected in 16 cases, in 33 cases the right lower lobe, in 2 cases the right upper and middle, and in 2 cases the right lower and middle; in 10 cases the whole right lung, in 9 cases the left upper lobe, in 30 cases the left lower lobe, in 5 cases the whole left lung, and in 25 cases both lungs were affected, while in 37 cases the notes have been lost. The following complications were present: 10 cases were labelled pleuro-pneumonia, in 31 other cases there was pleurisy, mostly with effusion; in 5 cases empyema, in 5 cases simple pericarditis, in 2 cases purulent pericarditis, in 2 cases gangrene, in 1 case chronic bronchitis, in 2 cases heart disease, in 2 chronic Bright's disease with uræmia, in 1 case acute rheumatism, in 9 cases delirium tremens, in 3 cases hyperpyrexia, in 2 cases malaria, in 1 case peritonitis, in 2 cases meningitis, and in 1 case pyæmia. There were 12 cases of immersion in the Liverpool Docks.

Among other complications may be mentioned erysipelas, otitis media, jaundice (a case at present under my care, and also complicated with an extensive herpetic eruption involving the right cornea, nose, and lips), venous thrombosis, and cardiac thrombosis are frequent terminations in fatal cases.

PROGNOSIS.

The mortality is generally put down at 15 to 25 per cent., but it is difficult to arrive at any very accurate conclusion on the subject, as private statistics on a large scale are not available, and hospital statistics are often vitiated by circumstances over which the medical attendants have no control. A considerable number of cases are sent into hospitals actually dying, and whatever chances of recovery they had are thus taken away from them. In an admirable paper on pneumonia recently read at the Medical Institution by Dr. Nathan Raw, and based on a unique experience of 1,047 cases observed by himself, the death-rate was 24.8 per cent. Prior to his arrival in Liverpool his death-rate was only 16.5 per cent., but since then it has been 38 per cent., thus spoiling his previous statistics. Now we all know that at Mill Road the material on which he has got to work is especially bad, and about one-half the deaths occur within the first twenty-four hours of residence in hospital, and a certain number are actually brought in dead.

In my cases at the Northern Hospital the total death-rate was 24.2 per cent.; but if secondary and terminal pneumonias, and deaths within twenty-four hours of admission be excluded, the death-rate was only 16.8 per cent. At the Northern Hospital the cases are drawn from a low stratum of society, and from the complications which I have enumerated you will readily perceive that the cases were exceptionally severe.

Pneumonia attacks men more frequently than women, but the mortality is somewhat greater among the latter. Broncho-pneumonia is the form of the disease most common in early infancy, and during the first year of life the death-rate is very high. Over 60 years of age statistics show that the death-rate is over 50 per cent., and in very old age it is frequently a mode of dying. In drunkards and patients suffering from delirium

tremens the mortality is very high. The prognosis is unfavourable when such diseases as diabetes, chronic nephritis, advanced heart disease, and cirrhosis are pre-existent.

Apical pneumonia is generally looked upon as more serious than basal, and as a rule the greater the amount of lung tissue involved the more unfavourable the case. Herpes labialis is often looked upon as a favourable omen, but some of the worst cases I have seen have had this sign. When there is evidence of a thrombus in the heart it is quite the exception to get a recovery, but I have such a case at present under my care in this infirmary.

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[1] *Twentieth Century Practice of Medicine.* [2] BRITISH MEDICAL JOURNAL, 1898, vol. i. [3] *Von Ziemssen's Cyclopædia of Practical Medicine.* [4] *Twentieth Century Practice of Medicine.* [5] Quoted by Fitz in the *System of Medicine by American Authors.*

NOTES ON THE TREATMENT OF CHRONIC GOUT,

BASED ON EXPERIMENTAL AND CLINICAL INVESTIGATION.

BY WILLIAM BAIN, M.D., M.R.C.P.,
Harrogate.

IT is not my intention to discuss the treatment of chronic gout at any length, but to review certain points which seem to me worthy of consideration. Before inviting attention to these points it is advisable to glance at the pathology of this affection.

There is an excess of uric acid in the blood of gouty subjects, and biurate is deposited in their tissues. It is probable that the excretion of uric acid is slightly less in gouty than in healthy subjects, and that there is a marked nitrogen retention, which cannot be accounted for by the slight diminution in the excretion of uric acid. Upon these the only known facts regarding the chemical pathology of gout a number of theories have been constructed. The most plausible is that gout is due to defective elimination by the kidneys, which, owing to some functional or organic derangement, are unable to excrete the whole of the uric acid formed, so that a portion is retained and accumulates in the blood and tissues. It would be more in agreement with clinical experience if the advocates of this hypothesis were to regard the retention as periodic rather than continuous. While this theory is a useful guide to treatment, many facts tend to show that uric acid is not the predominant factor in the causation of gout. The safest course is to regard gout as an expression of perverted metabolism; in other words, the outcome of excessive formation or periodic retention in the organism of one or more of the intermediary or end products of nutrition.

Since uric acid at least plays an important incidental part in the pathology of gout, it is necessary to allude to its supposed antecedents and place of formation. There are three ways in which it is supposed to be produced:

1. By the liver conjugating the ammonium salts and lactic acid.
2. By the kidney synthetising urea and glycine.
3. By the decomposition of nuclein.

There is very little evidence in favour of the theory of the formation of uric acid by the kidney. Its supporters relied to a large extent upon the fact that hitherto uric acid has not been found in the blood of normal mammals; but as the methods employed for separating uric acid from blood are unreliable, this argument is scarcely valid. They have further argued that the fact of various observers having failed to detect uric acid in bird's blood lent considerable support to their hypothesis, but Dr. Chalmers Watson has recently demonstrated its presence in the blood of different birds. Schroeder maintains that uric acid cannot be formed in the kidney. He extirpated the kidneys in hens and snakes, the hens surviving the operation from six to twenty hours, and the snakes from five to ten days, and in both cases he demonstrated an excessive accumulation of uric acid in the tissues. The researches of Minkowski, on the other hand, show that in birds the greater portion of the uric acid is formed by the liver. He removed the livers of geese, and observed that whereas in normal geese the uric acid formed from 60 to 70 per cent. of the total waste nitrogen, in those experimented with the proportion fell to from 3 to 6 per cent. The waste nitrogen in these birds appeared as ammonia, and was accompanied by a large quantity of lactic acid sufficient to render the urine strongly acid. The experimental results in regard to mammals are not sufficiently conclusive as to the organ chiefly concerned in the production of uric acid.

The evidence as to the genesis of uric acid from nuclein or nucleo-proteid since Horbaczewski's classical researches has been gradually accumulating, and, although contradictory, points to the fact that nuclein is the mother substance of uric acid and alloxur bases; and as there are grounds for supposing that one or more of the bases may be a factor in the production of gout, their origin must have an important bearing on the dietetics of gout.

In treating chronic gout our aim should be to prevent the formation of abnormal proteid decomposition substance, and the accumulation of these and other waste products in the system; and to promote their elimination. *Diet.*—Unfortunately, there is considerable diversity of opinion concerning the most suitable articles of diet for gouty subjects. While I do not believe in any hard-and-fast rules for all cases, there is one which should not be forgotten, namely, moderation. In certain cases this and that may be forbidden, but until the total quantity is restricted no progress is made. In the gouty the very greatest importance should be attached to digestive troubles, and the diet should be carefully adjusted to the capabilities of the patient's digestive power. Gout being in all probability due to some error in metabolism, it is essential that any disorder of the alimentary tract and its annexa should be met by appropriate medicinal and dietetic treatment. The amount of exercise the patient habitually takes must be considered when determining the diet. As it has been shown that a diet consisting largely of peas and beans is capable of producing more alloxur bodies than one composed almost exclusively of animal food, gouty patients should be advised to partake sparingly of leguminous food, and foods rich in nuclein. Those who advocate a purely vegetarian diet in gout do not take a sufficiently broad and comprehensive view of its pathology and treatment. Proteids whether they be of vegetable or animal origin are absolutely necessary, and the essential point is to give the kind of proteid most easily digested, and just that amount which will be digested with probable certainty in the normal time. Carbohydrates have no influence on the uric acid excretion, but their liability to produce acid fermentation, and to retard proteid digestion is to be remembered. Fats should be curtailed, as they are prone to produce indigestion. A mixed diet is the most desirable, providing the digestion admits of it. If regular action of the bowels cannot be obtained without artificial means drugs having a cholagogue action should be used.

Regarding the deleterious influence of alcoholic beverages there is absolute unanimity; but the *rationale* of this pernicious effect is still conjectural. Although it is advisable as a rule for gouty patients to abstain from alcohol, there are a certain number of cases, chiefly of the asthenic type, where it is necessary to order a stimulant with one or more meals. The alcoholic beverages which are the least injurious are probably well-matured whisky and good sound claret, but individual idiocyncrasy has to be considered. Chittenden, Cameron, and Levison found that a moderate quantity decidedly increased the excretion of uric acid. My own experimental observations do not support that statement. During one series of observations whisky and port wine were tried, and on another occasion claret and port, without any effect on the uric acid output.

Exercise out of doors is of undoubted value in chronic gout, and during inclement weather indoor exercise is not to be despised. Levison's assertion that the uric acid excretion is markedly increased by exercise requires modification. If a man of sedentary habits takes a moderate amount of exercise the excretion of uric acid is increased for the first day or two, but if the exercise be continued daily the increase is not maintained. The stimulating effect of regulated exercise upon metabolism is an agent of considerable power in preventing the various manifestations of gout.

Sodium Salicylate.—If the retention theory be accepted, our object should be to diminish the production of uric acid in order to relieve the kidneys. It seems very inconsistent for some of the supporters of this theory to advocate the use o

sodium salicylate in gout, a drug which undoubtedly increases the excretion of uric acid both in health and in gout. Various theories have been propounded to explain this increase. Lecorché, Haig, and a number of other observers say that the drug eliminates from the blood and tissues the excess of sodium urate. If this explanation be correct, there must be an excess of urates circulating in the blood of healthy people, and that cannot be admitted. Further, the P_2O_5 and alloxur base should not show a corresponding increase if this view were correct, but as a matter of fact they are also increased. Luff thinks the drug increases the uric acid by transforming glycine into salicyluric acid, and that this in its turn combines with urea to form uric acid; therefore he disapproves of its use in gout. I have grounds for believing that it increases the uric acid at the expense of the leucocytes and other tissue cells, and if there is evidence of renal disease the drug should not be given. Of course this opinion is based on the assumption that the kidneys, when organically deranged, are unable to eliminate the whole of the uric acid formed in the body. Some think that so long as the excretion of uric acid is increased the patient must benefit, but though the increase may be beneficial, it may not. Pilocarpin increases the uric acid excretion, but no one, so far as I know, advises its administration in gout. It is true that sodium salicylate relieves the joint pains in gout—how we do not know—but as it increases the formation of uric acid we ought to consider whether its advantages outweigh its disadvantages before recommending it.

Colchicum does not seem to have an invariable effect on the excretion of uric acid, yet few doubt its beneficial action in acute gout, and it is also useful in some cases of chronic gout.

The Harrogate Old Sulphur Spring diminishes the excretion of uric acid, and this diminution is not due to retention, as evidenced by the increase in the leucocytes and the gradual rise to the original level after cessation of the waters. Whether this is the explanation of the salutary effect in chronic gout, or whether it is owing to its cholagogue action, I am not prepared to say, although I am inclined to think that it is due to its influence in accelerating hepatic metabolism. When given in conjunction with the massage douche, gouty patients experience considerable relief from their troubles. Doubtless there are some who may attribute the improvement to the douching with hot water and massage; but, having prescribed the sulphur water without baths or other adjuvants, I can testify to its beneficial influence in such cases. It may be remarked here that if the same routine form of treatment be meted out to all cases of chronic gout, disappointments are certain to occur—in gout the individual should be considered just as much as the ailment.

Potassium iodide is a drug of peculiar value in chronic gout. It appears to retard the development of cardio-vascular and renal changes, and in cases associated with albuminuria there is a diminution in the amount of albumen during its administration. Although it has no influence on the solvency of biurate, it is useful in reducing the inflammatory thickening around enlarged joints. It should be given cautiously, as some patients are very susceptible to it, and it is contra-indicated in advanced renal cases.

Quinine is supposed to diminish the excretion of uric acid, but in an experimental investigation I found a slight increase. Apart from any influence it may possess on the nitrogen excretion, it is an exceedingly useful tonic.

Guaiacum.—It is rather remarkable that Sir W. Roberts in his articles on gout does not mention guaiacum in connection with the treatment of this disease, though years ago Sir Alfred Garrod expressed a decided opinion regarding its prophylactic power, and other observers have since then testified to its efficacy in preventing acute paroxysms. It is not an uncommon experience to meet with patients who periodically take guaiacum on their own account with the happiest results so far as their arthritic attacks are concerned. As an eliminator of uric acid there is probably no drug to equal it. Guaiac resin should be taken in compressed form, in doses of 20 grs. twice a day for about a fortnight. After an interval it may be repeated if necessary. It is not advisable to continue its administration uninterruptedly for a prolonged period.

Alkalies.—A good deal of misconception has existed concerning the part played by alkalies in the treatment of gout. That they are of considerable value in the gastric and hepatic complications of gout must be admitted, but that they have any particular influence on the gouty diathesis, or that they increase the excretion of uric acid or the solvency of biurate must be denied. They may possibly have some indirect effect on gouty processes by their action on metabolism, but this is difficult or impossible to prove by experimental investigation. These remarks refer to alkalies in general, and not to particular alkaline salts. It was believed for some time that the alkalinity of the blood was markedly diminished in gout and alkalies were given in order to correct this, but we now know that the alkalinity of the blood is either normal or slightly increased. Hence the treatment of gout by alkalies is practically restricted to disorders of the alimentary tract. The deductions Sir William Roberts and Dr. Luff drew from their experiments regarding the alleged superiority of potassium over sodium salts in gout cannot be accepted without clinical corroboration. These deductions are based on the supposition that the administration of alkaline salts will alter the alkalinity of the blood, and, therefore, that the sodium salts will hasten the conversion of the so-called quadriurate into the gelatinous or crystalline biurate. I have used the words so called quadriurate advisedly, because it has not yet been proved that uric acid exists in the blood in this unstable form. It is possible that uric acid may enter into combination with some other constituent of the blood than the alkaline salts. On a dozen occasions I have prepared the sodium quadriurate according to Roberts's instructions, and no two samples reacted alike with his standard solution at the body temperature—in some the precipitation occurred in a few minutes—in others it varied from a quarter of an hour to an hour; therefore, experiments performed with such an unstable compound must be more or less unsatisfactory.

One of the most characteristic properties possessed by the blood is its uniformity of composition, and in no particular is this more marked than in the maintenance of its normal alkalinity. Sir Michael Foster states that the alkalinity cannot be increased by the administration of alkalies. If a large quantity of alkali is given to animals it is quickly excreted by the kidneys. Until it has been demonstrated that the alkalinity can be increased by medicinal doses of alkaline salts, it would be safer so far as particular salts are concerned to be guided by clinical experience, and it appears to me that the following sentence by Sir William Roberts supports that contention:

> I have repeatedly administered the bicarbonate and citrate of potash continuously for three or four years, and in sufficient doses to maintain the urine persistently alkaline, yet I have seen the arthritic attacks recur with unabated vigour.

Regarding biurate solvents I do not know of any one superior to pure water, therefore I strongly approve of gouty patients taking a moderately large quantity of water between meals. Dr. Tunnicliffe found from laboratory experiments that tartrate of piperidine had a marked solvent effect on sodium biurate, but I do not think it has been shown clinically to exhibit this effect.

In ascertaining the efficacy of a supposed biurate solvent it should be given both to a healthy and to a gouty individual, while on a fixed diet. If it has no effect on the uric acid in the healthy, but increases the excretion of uric acid in the other case, we are justified in assuming that the drug either eliminates the excess of urates in the blood or increases the solvency of biurate, and subsequently effects its elimination.

MUNICIPAL SANATORIA IN CANADA.—According to the *Canadian Journal of Medicine and Surgery*, an Act has been passed by the Ontario Legislature to provide provincial aid for the establishment of sanatoria for consumptives. It enables the councils of counties, cities, or towns separated from counties, to establish sanatoria for the treatment of persons suffering from consumption; provides for the management of the sanatoria by a Board of not more than five trustees; enables municipalities to combine for the purpose of establishing sanatoria, and authorises the Lieutenant-Governor in Council to make a grant not to exceed one-fifth of the sum expended on the site, and not more than 4,000 dollars altogether, for the purpose: the site and plans to be approved by the Provincial Board of Health.

PERSONAL EXPERIENCES OF GOUT TERMINATING IN ACUTE MYOSITIS OF ENTIRE LEFT LOWER EXTREMITY.*

BY A. S. MYRTLE, M.D.,
Harrogate

MEDICAL men seldom record their own experience of any ailment they may have suffered from. This is a matter for regret, as they might throw some new light on the symptoms and results of treatment of their own cases. It is with this impression I now offer the following remarks.

Many years ago a heavy hunter fell with me whilst crossing a pavement. My left knee was severely crushed between his body and the flags; since then the knee has frequently caused trouble in the way of constant aching, with effusion into the joint, and during the last four years has shown marked gouty symptoms.

In 1894 I had irritability of the bladder followed by prostatic mischief, leading speedily to the regular use of the catheter. In 1895 I suffered from ptomaine poisoning from eating a portion of partridge. For eighteen months after this I had persistent gouty dyspeptic trouble, acidity, flatulence, constipation, anorexia, and mental as well as physical depression. In October, 1896, I was seized with sudden pain in the neck of the bladder, micturition became frequent and painful, and only a few drops were passed at a time. My son pronounced it gout, a distinguished surgeon stone. He introduced a sound, but on very careful examination could find nothing. The pain caused by this was most severe, but in a very short time it left me and was followed by great relief, and I could pass water more easily and retain it for longer periods than I had been able to do for many months.

A few days after the introduction of the sound, cystitis set in. For three weeks I passed large quantities of mucous pus and occasionally blood. Injections of boric acid and the internal use of salol cured me of this, but from the time when my prostate began to trouble me I had not only to resort to the catheterism constantly, but in order to enable me to go on with my work and to relieve me of the intolerable nuisance of frequent micturition, I had recourse to hypodermic injections of morphine. After over a year's injections thrice in the twenty-four hours, they produced hard white nodes, very painful and persistent, so that my arms presented a conglomeration of hills and valleys making the use of the syringe impossible. I then took the morphine by the mouth, and have continued its daily use; I now consume 5 grs. in the 24 hours, not only without the slightest inconvenience, but the greatest comfort.

On November 7th, 1899, I went to bed in my usual health; at 4 A.M. on November 8th I awoke with a sharp pain in the left adductor longus; on rising to see what was wrong, the pain was so severe I had to resume the reclining posture at once. At 9 my son saw me; he found the entire left extremity from the hip to the ankle swollen, hard, and painful; there was no redness, no pitting on pressure, the swelling was tense, the skin on the stretch; there was nothing amiss with veins, lymphatics, or glands. I bore deep pressure over the course of all vessels, but the slightest on the muscles caused me to wince. He said he had seen nothing like it, nor had I. It was clearly an attack of gouty myositis. I was put on colchicum, lysidine, and potassium citrate; I took these regularly every 4 hours for three days, when the acute pain left me.

On the morning of November 12th I found great fulness of the left hip, from œdema. This extended from the crest of the ilium round to the spine, sacrum, and buttock, with deep pitting on pressure. The effusion could be traced down outside the thigh to the foot, but there was none on the inside of the limb. The muscles continued hard, painful on pressure or slightest movement. The whole extremity was found 3 inches larger in circumference than its fellow. There was no constitutional disturbance, and as long as I lay on my back I was tolerably easy.

I now had recourse to the Greville electric hot-air baths. I took three thigh and leg baths at 260° F. for thirty-five minutes, and then three full-length baths at 360° F. for the same time. The tension was then relieved, the hardness softened, and the œdema removed, thereby enabling me to move a little without pain. Eczema now appeared, with intense itching. Knowing something of hay-flower baths I took six in my own room (98° F.), as I could not go to our sulphur water baths, and remained in for thirty minutes. These caused profuse perspiration and completely cured the eczema; they also had a very marked influence in softening the muscular hardness of the hip and thigh, but below the knee matters remained the same as they had done for six weeks. I was now able to walk for a few minutes, but then all the muscles of my back and legs began to ache, ending in lumbago, threatening of sciatica on both sides, and acute pleurodynia on the right side. Various applications were used, and alkalies with potassium iodide and colchicum taken without much benefit. I then took antiarthrin, 16 grs., thrice a day; on the second day I found my face flushed, I had frontal headache, my heart intermitted, and I had a sense of sinking at the epigastrium, symptoms which I had observed on all occasions when any of the coal-tar preparations were taken. I reduced the dose by one-half. This dose was not followed by any unpleasantness, and relieved me very quickly of all pain. The thing that struck me most was its powerful action on the kidneys, and with this increase I noticed that my bladder was much less troublesome, and could retain a much larger amount and for a much longer period than it had done for years. I did not require the catheter at all during the day, and only twice during the night. Before taking this remedy I had to use the catheter at least thrice during the day and three or four times during the night, and now, after four months, I find, although I require the catheter during the night, I seldom need it during the day.

During my long illness the urine never showed any uratic deposit or crystals, and only on two occasions was it a little thick and cloudy. At first I was kept on low diet—slops, in fact. This did not suit me; it brought on acidity, with great flatulence. I therefore changed to animal diet, with dry toast, and had my usual allowance of whisky (three glasses a day). The dyspepsia now left me, and I began to pick up. One remarkable feature was that throughout I never showed any constitutional disturbance; my pulse never varied, my temperature was never taken. Early in February I found I had lost flesh; the arms, chest, and right leg were greatly wasted, but I was much astonished to find that I weighed 4 lbs. heavier than I had ever done; this was evidently from the condition of the left leg. Towards the end of February my thigh had diminished to such an extent as to permit of examination of veins and lymphatics, but all were perfectly normal; below the knee the muscles remained hard and swollen as ever. On getting up in the morning the leg was the same size as when I lay down at night. On attempting to walk all my muscles failed me. Not only was there loss of power, but they were very sore. I now went in for a course of electric baths (constant current), and these were followed by the interrupted current passed from spine to all affected muscles. It was interesting to note the behaviour of the muscles under the treatment; those of the left thigh and leg withstood a current that made me shout when applied to healthy muscle. Gradually the deadened fibres began to twitch, then contract and show signs of life. After ten baths I had lost most of the œdema, had gained power, could walk a mile, and considered myself well.

Dr. Eddison and Mr. Mayo Robson, of Leeds, Dr. Neville Williams, my son, and self agreed that we never had seen a similar case. Thrombosis, superficial and deep, and obstruction of lymphatics were discussed, but from the first no vein showed any sign of inflammation or obstruction, and there was no knotting of lymphatics or glandular complication. If the condition is to be attributed to obstruction of the vascular system, how is the position of the œdema to be explained, beginning as it did above the hip, passing round to the spine and down the outside of the whole of the thigh and leg to the foot, but not showing at all on the inner surface? For months before November 7th I felt uncomfortably hot, broke into sudden perspirations without cause, and could not get enough fresh air. My idea is that gout had been silently at work for four months, then it broke out with violence, invading the

* Read before the spring meeting of the Yorkshire Branch of the British Medical Association held at Bradford.

cellular and muscular structures of the entire left lower limb, but avoiding joints, tendons, and vessels. Had such a burst taken possession of any internal organ I have little doubt it must have proved speedily fatal.

A NOTE ON GOUT.

BY JAMES EDMUNDS, M.D., M.R.C.P.LOND.,
Consulting Physician, London Temperance Hospital.

FOR some years I have discarded sodium salicylate for the potassium salicylate. In doses of 10 grs. the potassium salicylate gives great relief in the acuter cases, and I never see any of the "cardiac depression" which is talked about in connection with the exhibition of potassium salts. The potassium salicylate must be of reliable quality. I always order potassium salicylate (puriss. Hopkin and Williams). If this preparation be used in reasonable frequency of repetition in doses of 10 gr., no unfavourable results ensue, the objections to the sodium salt are obviated, and much better results are obtained. It is most conveniently taken in wafer paper cachets containing 10 grs. each.

In chronic gout and rheumatism, so long as the urine becomes turbid by the deposition of urates on cooling, I use the old remedy potassium bitartrate. As a febrile drink there is nothing to match it, in barley water nicely made from Robinson's barley flour, and sweetened to taste with loaf sugar if the patient be of spare habit; perhaps, also, flavoured with a rub of lemon peel. But the cooking in, or infusion with, lumps of lemon peel spoils the preparation as a pleasant beverage. For the non-febrile chronic cases with turbid or scanty urine I give 20 grs. of the potassium bitartrate as a beverage at lunch or dinner, and sometimes also at bedtime. Twenty grains is a small saltspoonful. It should be put into a dry tumbler and the tumbler then filled up with Salutaris or other pure aërated distilled water. If palatable distilled water be not available the tumbler should be filled up with hot water that has been boiled for a few minutes, so as to make the water safe and throw out chalk. With persons of spare habit the bit of sugar may be added and, if longed for, the flavour of the lemon peel. The bitartrate beverage should be drank as hot tea is drunk. Its use rapidly clears the system of urates. With these two salts I find that I accomplish better than with any other substances all that can be done for the elimination of uric acid. And I find them extremely valuable. Ferric chloride dropped into the urine first throws down all the phosphoric acid as the white ferric phosphate and gives its measure; it then gives the brilliant violet tint which shows how far the system is still charged with salicylic acid, and serves as an end-pointer for the phosphoric acid.

As everyone knows, the potassium bitartrate is the purified argol which is thrown out from grape juice, as the transformation of its sugar into alcohol renders the bitartrate insoluble. It is therefore a pure grape salt, and comes to us with an adequate prestige. But I write purely from the chemical side. The potassium bitartrate gives a pleasant beverage, which is acidulous, and therefore goes well with the gastric juice during digestion. Absorbed as it is directly into the blood by the veins of the stomach, it is carried into the substance of the tissues, and there its tartaric acid is oxydised into CO_2 and H_2O, while nascent potassium bicarbonate is set free in the tissues in a state of perfect diffusion and almost infinitesimal dilution. Its use is therefore quite a different thing to the projection into the stomach of a crude alkali. I find that none of the remedies so impudently advertised for uric acid can compete with these very simple and inexpensive ones; 20 grs. of potassium bitartrate contain 5 gr. of anhydrous potash (K_2O).

As an aperient in such cases I use an old and favourite prescription, which consists of pulv. guaiaci, potass. bitart., sulphur precip. āā ʒj, pulv. trag. co. ʒij, m. ft. pulv. A teaspoonful at bedtime in a wineglassful of water or gruel.

LATIN-AMERICAN SCIENTIFIC CONGRESS.—The second meeting of the Latin-American Scientific Congress will be held at Montevideo from March 20th to March 31st, 1901. The work of the Congress will be divided among nine Sections, of which one (the sixth) is assigned to the medical sciences.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF PERSISTENT ADENOIDS IN A MIDDLE-AGED WOMAN.

MRS. R., aged 47, came under my observation a few weeks ago at the London Throat Hospital complaining of impaired hearing and difficulty of breathing through the nose. She stated that she had never been able to breathe properly through the nose and presented the typical facial appearance of a chronic mouth breather. On inflation of the middle ears through the Eustachian catheter, both tubes were found to be freely patent and the hearing was improved thereby. On examination with the post-rhinal mirror the post-nasal space was seen to be occupied by a considerable mass, which obscured the upper half of the septum, and extended across the vault from tube to tube. Considering the history, the facial aspect, and the fact that the patient's sister, three years older than herself, had well-marked remnants of what had been presumably adenoid growths, I formed the opinion that the case was one of adenoid growths which, instead of undergoing the usual process of atrophy, had persisted. I had some hesitation in forming this opinion as one or two cases of post-nasal growth in adults which had lately come under my notice had proved to be malignant. I showed the case at the British Laryngological, Rhinological, and Otological Association, and was supported in my opinion by the majority of the Fellows. One Fellow, however, said that the "local condition was not like adenoids," that "the age of the patient was against adenoids," and gave his opinion that the mass "looked like sarcoma." I removed the growths with forceps, under an anæsthetic, sections from which were kindly examined under the microscope by Dr. Jobson Horne, and pronounced by him to be "adenoid tissue which had undergone changes (inflammatory) covering some length of time." It is interesting, and I think worthy of record, that the patient's hearing in a week or two after the operation considerably improved, and she appreciates in a marked degree the comfort of being able to breathe freely through the nose. Although the age of 47 is considerably below the maximum at which adenoid growths have been found (on referring to the literature, I find that Luc has reported a case at 54, and Solis Cohen one at 70) still I am of opinion that cases at this age are sufficiently rarely met with to be worthy of notice.

New Cavendish Street, W. E. FURNISS POTTER, M.D.

MAGNESIUM SULPHATE IN DYSENTERY.

NOTING that there has been some correspondence in the BRITISH MEDICAL JOURNAL regarding the use of magnesium sulphate in dysentery, it may interest your readers to know that when I have had an opportunity of giving it a thorough trial in a large number of cases during the last four years, I have found the treatment of the greatest value in cases of acute dysentery, both in natives of India and in Europeans. I kept records of a large number of cases, and would have submitted these herewith, but unfortunately they were destroyed in the earthquake of 1897, in which I lost my house and everything in it. I have found that it is seldom of much value in really chronic cases, although I have tried it repeatedly in many instances. The prescription I am in the habit of giving is: Magnesium sulphate (a saturated solution) ʒj, dilute sulphuric acid ♏x, in water; to be given every two hours until the motions have become copious, fæculent, and free from blood and mucous.

Gaubati, Assam. J. L. DICKIE, M.B.,
Medical Officer, Assam-Bengal Railway.

CERTAIN USES OF COLLODION.

IN the BRITISH MEDICAL JOURNAL of November 21st, 1896, I called attention to the value of collodion in the treatment of pruritus ani, in which, I believe, it is always effective, at least temporarily.

In the after-treatment of mosquito bites I have found no application so satisfactory as that of collodion. A dewdrop of contractile collodion is spread on the raised red bite. The itching at once disappears, and with the contraction of the

collodion the swelling flattens down and becomes comparatively bloodless, the collodion soon being alone apparent.

In epistaxis, after plugging the anterior nares, the efficacy of the plug may be greatly increased in troublesome cases by sealing the nasal orifice with a little cotton wool and collodion. The plug thus supported is but little affected by coughing and straining.

Collodion has been employed in enuresis, the orifice of the meatus being closed by a film of collodion painted across it, compelling the child to wake to pass water.

For sealing a dressing and many other purposes the usefulness of collodion is well known.

Mentone. D. W. SAMWAYS.

CASE OF CEREBELLAR ABSCESS: OPERATION: RECOVERY.

THE patient, W. M., had been under my care in 1896 for what I then described in the BRITISH MEDICAL JOURNAL of March 21st, 1896, as "intracranial abscess, probably cerebellar." At that time a large abscess was evacuated from an opening in the skull 1¼ inch behind the meatus on the level of Reid's base line, and a drainage tube passed inwards 2¾ inches. He recovered completely, and has since developed into a well-grown lad, and has been earning good wages on the Great Western Railway as a cleaner. He was well till January 14th, 1900, when he began to have headache and vomiting. Three days afterwards I saw him. He complained of severe frontal and occipital headache, chiefly on the left side. He was drowsy and apathetic, taking a long time to respond to questions, though he understood them perfectly. He had been vomiting constantly since January 15th. His tongue was foul, and his bowels were constipated. The pulse was 60, the respirations were 17, and the temperature was 97° F. There was no paralysis. The pupils were equal and reacted to light and on accommodation. There was slight lateral nystagmus; while the right knee-jerk was slight the left was hardly perceptible. It was stated that there had been no discharge from the ear since the previous illness. There was no swelling or tenderness over the mastoid.

On January 21st he was removed to the Savernake Hospital. The drowsiness increased, but the vomiting ceased. He could move all his limbs, but was uncertain of direction. The nystagmus was very marked. He seemed to have difficulty in fixing his attention on anything, and in every kind of response to stimuli there seemed to be a long latent period. On January 22nd, at 11 A.M., although he took some notice on being roused, he was almost unconscious. The left ear was syringed, but only a little epithelial *débris* removed. He could move both arms, but the left seemed rather weaker than the right. At 4 P.M. he was quite comatose, breathing noisily. The left arm was quite limp; the left conjunctival reflex absent; and there was left-sided facial paralysis. The pulse was 56, and the temperature 97° F.

Operation.—An incision was made just behind the scar of the old mastoid incision. All the tissues were very adherent to the bone. There was no gap in the bone at the site of the old operation, but it was very irregular. No disease was found in the mastoid on opening it with a gouge. The incision was carried along the superior curved line, and all the tissues elevated from the bone behind the posterior border of the mastoid and below Reid's base line. A hole was made through the bone with a gouge and the opening enlarged to half an inch with forceps. The tense dura mater was incised crucially, the cerebellum bulging slightly. A hydrocele trocar and cannula were passed in, in a direction forwards, inwards, and a little downwards, and offensive pus welled up immediately on the removal of the trocar. The opening was enlarged with forceps and a half-inch rubber tube 2½ inches long was inserted, about 3 ounces of foul pus being evacuated. Immediately after the operation the pulse rose to 70 and the temperature shortly rose to 98°. He slept well and was quite conscious the next day. There was no return of power in the left arm, though sensation was present and the facial paralysis had disappeared. The knee-jerks were both present, but less brisk on the left side. The plantar reflexes were both present. Nystagmus was very marked. On January 24th there was slight return of power in the left arm. The large tube was removed, cleaned, and replaced. The tongue was beginning to clean. The bowels acted well. From this day he steadily improved and regained all power. There was a small collection of pus on February 17th under the old mastoid incision. This was let out, but the opening healed very soon. There was a slight discharge from the ear, which was syringed. On examining the eyes there were signs of double optic neuritis. The patient left the hospital on March 10th in good health with the wounds soundly healed.

T. H. HAYDON, B.A., M.B., B.C.Camb.,
Marlborough. Surgeon to the Savernake Hospital.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

RADCLIFFE INFIRMARY, OXFORD.

A CASE OF SUPPOSED FOREIGN BODY IN THE PHARYNX.

(By GABRIEL W. S. FARMER, M.A., M.B., M.Ch.Oxon., F.R.C.S., Surgeon to the Infirmary.)

E. W., aged 21, a farm labourer, was admitted on the afternoon of May 8th, 1899, complaining of having swallowed an ordinary pin a few hours previously. The pin, he said, had stuck in his throat and caused pain on swallowing. On referring to the seat of pain he pointed to a spot on the left side, immediately behind the angle of the jaw. Examination of the pharynx with a mirror and artificial light revealed nothing. On digital exploration, however, one could feel on the left side, close behind the posterior pillar of the fauces, an elongated body slightly less than an inch in length. It gave one the sensation of lying immediately beneath the mucous membrane of the pharynx, and lay obliquely from above downwards in a forward direction. When the finger was withdrawn the patient said that the pin had been touched. At the time I had not the slightest doubt that the body felt represented the pin which the patient had swallowed.

The pharynx having been anæsthetised by a solution of cocaine, and the mouth gagged on the right side, I introduced my left forefinger to a point directly behind the supposed foreign body, and with a sharp-pointed bistoury in my right hand made a half-inch incision directly over the middle, and in a line with the suspected pin. A pair of sinus forceps were then introduced, and the body seized. In attempting to extract it it broke, and a little more than the upper half came away. It proved to be a thin, tapering piece of bone, about half an inch in length, the upper end being tipped with hyaline cartilage. The lower fragment was then easily removed, and proved to be a similar piece with its lower end tipped with cartilage. On putting the two fragments together, I found it to be a spindle-shaped bone, cartilaginous at both ends, measuring about 1 inch in length. Its greatest diameter was at the centre, which was as thick as a medium-sized knitting needle. The broken surface showed an outer shell of compact bone with a cancellous centre. Further questioning of the patient revealed absolutely no evidence of his having swallowed any food containing small bones.

The nature of the body removed became suddenly obvious. It was an ossified stylo-hyoid ligament. I had, previously to operating, carefully explored the right side of the pharynx, and felt nothing abnormal. The whole thing, however, seemed so extraordinary that I repeated the examination of the right. Again nothing of a similar nature could be felt. Now, extension of ossification of the styloid process of the temporal bone into the ligament is not uncommon, and simply constitutes an abnormally long process. Also, extension of a similar kind occurs from the lesser cornu of the hyoid bone, so that the two processes may join in extreme cases. From the shape of the bone removed in this case, however, I have no doubt that a distinct ossification of the ligament had taken place. Another point in favour of this was the very considerable amount of mobility, both antero-posteriorly and laterally, exhibited by the body felt. A similar body felt on the right side would naturally have furnished a clue as to their real nature. Another point of interest was the very superficial sensation of the body, it apparently lying directly beneath the mucous membrane of

the pharynx. This is explained by the fact that the stylo-hyoid ligament is only separated in its lower part from mucous membrane by pharyngeal aponeurosis, which is exceedingly thin where it stretches between the lower border of the superior constrictor of the pharynx and the upper border of the middle constrictor. The anatomical relations of this important ligament are somewhat scantily, if at all, dealt with in the standard textbooks of anatomy.

No ill-effects whatever followed the operation, and the patient complained of no further symptoms on swallowing. My best thanks are due to Dr. Verdon Roe, late House-Surgeon to the Radcliffe Infirmary, who first saw the patient, and subsequently assisted me at the operation.

LEYTON, WALTHAMSTOW, AND WANSTEAD CHILDREN'S AND GENERAL HOSPITAL.

A CASE OF TETANUS TREATED WITH ANTITETANUS SERUM AND CHLORAL HYDRATE: RECOVERY.

(By C. H. WISE, M.D., Medical Officer to the Hospital.)

THIS case has been described as one treated with antitetanus serum and chloral, because I am convinced that, whatever may be the merits of the serum—and these one cannot but in this terrible disease fully and thankfully recognise—its action in this particular case was effectually supplemented by the chloral, and that it is still necessary so to supplement it.

C. W., aged 21, the wife of a cabdriver, was admitted under my care into the hospital on January 24th last.

About twelve days before admission the ball of her left great toe had been cut by a sharp nail projecting inside the sole of her boot. The wound had been very painful, and was still slightly inflamed, although almost healed. Four days before admission—that is about eight days after the injury to the foot—she had noticed some painful stiffness about the angle of the jaw, and found she could not open her mouth without difficulty. This stiffness increased, and on admission the teeth could only with difficulty be slightly separated, and the muscles of mastication were hard and tender. There were also pain and spasmodic contraction of the muscles at the back of the neck, the abdomen was quite rigid, with occasional painful contractions of the muscles in the abdominal wall, and she complained of pains and a feeling of stiffness in the limbs. Next day the occasional painful contractions were exacerbated, and the general rigidity extended to the back and limbs, the right arm being the least affected. The patient was able to separate her teeth just enough to take fluids, which were easily swallowed She passed urine naturally. Her breathing was laboured, and her face showed the typical risus sardonicus. She was ordered 20 grs. of chloral every four hours. At 4 A.M. on the next day (January 26th) she had a severe attack of tetanic contractions of the muscles of the trunk and limbs, preceded for half an hour or more by severe twitchings. There was no loss of consciousness, and she afterwards complained of general soreness all over the body, and especially in the masseters, and expressed a dread of a recurrence of the attack. At 6 P.M. there was another general prolonged muscular spasm, when opisthotonos and risus sardonicus were extreme. The respiration was very laboured, the face deeply congested, the eyes suffused, and the saliva forcibly blown through the clenched teeth with each expiratory effort. Consciousness was not lost. I increased the dose of chloral to 30 grs., and at 8 P.M. injected under the skin of the flank with antiseptic precautions 10 c.cm. of antitetanus serum obtained from the British Institute of Preventive Medicine through Messrs. Allen and Hanburys. After twelve hours' interval I injected a similar dose, and a third injection after another twenty-four hours, continuing the chloral every four hours—180 grs. in each twenty-four hours. There was no similarly severe attack of spasm after the first injection, but startings of the whole body were caused by every sound. All the muscles were firmly contracted, the abdomen was as hard as a board, and the limbs perfectly rigid except the right arm, which throughout she could move slightly. Risus sardonicus continued to be well marked, and the breathing was still laboured and noisy, especially during sleep, when there was some relaxation of the clenched condition of the teeth. There was retention of urine, rendering the use of the catheter necessary for several days. The temperature varied up to 102°, and the pulse was generally 120. On the third day a profuse, dark, morbilliform rash appeared on the abdomen, and gradually spread over the whole body, the blotches coalescing eventually into a deep purplish-crimson blush. I continued the full dose of chloral for four days, and then, as the patient gradually became very sleepy, and there was no return of spasm, I reduced the dose to 20 grs., which she continued to take for another week. By that time the rash had almost disappeared, leaving brown stains like those left after severe measles. Patient was now able to pass water naturally, but the abdomen, legs, and left arm were still quite rigid. The teeth could be separated to admit the little finger. The patient still jerked on being spoken to or on any sudden noise. On February 15th she slightly moved herself in the bed for the first time, but the abdomen and legs remained very rigid. From this time she slowly but steadily improved, the pain and stiffness having almost disappeared a month after admission, and she was discharged quite well on March 12th.

The ready toleration of the large doses of chloral suggested that its action was antagonised or neutralised in some way, just as morphine is tolerated in large doses during the continuance of acute pain. One felt that the convulsive tendency was being kept under control by the chloral, and that as this tendency subsided, destroyed as I cannot but believe by the serum, then the physiological effects of the chloral, being unantagonised, became apparent. The severity of the symptoms and their rapid progress led my colleagues who saw the case as well as myself to the conclusion that a fatal issue was probable, and we were most agreeably surprised at the marked effect of the injections of the serum.

In view of the well-known habitats of the bacillus the occupation of the husband is worthy of note.

MISSION HOSPITAL, DERA GHAZI KHAN, PUNJAB.

CONGENITAL INGUINAL HERNIA: OBSTRUCTION: RECOVERY AFTER TWO OPERATIONS.

(By W. F. ADAMS, M.R.C.S., L.R.C.P.)

AFTER reading your report of Mr. Moynihan's lectures on hernia, I thought a note on the following case would be interesting:

On February 1st, 1900, a Mohammedan patient, aged 27, was brought to the hospital with moderately severe symptoms of obstruction, which had lasted for three days. We found a right inguinal hernia, tense and tender, but not greatly so. Giving him chloroform, inversion and taxis were tried at first unsuccessfully. Then a partial reduction was thought to occur, but nothing more could be done. Gaining the friends' consent we operated at once. Making the ordinary incision higher than usual, I found the hernia was a congenital one, its sac continuous with the tunica vaginalis. Its contents were a large piece of omentum, purple in colour, and evidently recently strangulated, but the cause of the constriction was not to be detected. The external ring, with the conjoint tendon well marked on the inner side, was quite patent, and passing my fingers as far up as I could, that is, at least 3 inches, I discovered no constriction. Feeling bowel below and smooth peritoneum above, I imagined I must be in the abdominal cavity, and that the two rings had approximated and the taxis had relieved the strangulation, so I satisfied myself with ligaturing and cutting away the piece of omentum, returning the stump. The ring was sewn up and the wound closed. Having found no constriction I still felt doubtful, especially as a slight fulness remained in the groin, but was unwilling to search further, not having full confidence in our aseptic arrangements for abdominal surgery in this remote locality.

After the operation the patient was a little better for a while, but no full action of the bowels occurred even after enemata. Two days later his vomiting became stercoraceous, and we decided that his obstruction was unrelieved. The healing wound was opened with the finger and the stitches closing the ring removed, carefully dividing the abdominal wall for three inches from the ring along the line of the wound, I first came on the stump of omentum. This was well nigh black. Beyond this was a large knuckle of intestine, tense and chocolate-coloured, but still shiny. Both of these were constricted by a not very tight smooth ring, quite another inch above the limit of my incision. Slightly nicking this I returned the gut easily, and cutting away a piece of omentum dangerously near gangrene, I returned the stump. Leaving room for the cord I sewed up the whole length of the canal. The abdominal wall was then securely sutured, and lastly the external wound. Beyond a little fever, the patient made an uninterrupted recovery and the wound healed by first intention. Six weeks later he had shown no tendency to recurrence, though the testis on that side was a little drawn up.

It seems that the intestine and omental stump must have remained in an elongated and dilated inguinal canal until the second operation. But it is difficult to imagine that this secondary cavity was a result of the efforts at taxis, as neither the gut nor omentum showed any signs of undue force having been used. Being a hernia into the unclosed tunica vaginalis, it seems probable that the enlarged canal existed originally, together with the scrotal hernia, being an example of the congenital hour-glass variety.

REPORTS OF SOCIETIES.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual meeting of this Society was held on May 24th, when the following officers were elected for the ensuing year: *President:* A. J. Harrison, M.B., J.P. *Vice-Presidents:* H. A. G. Brooke, M.B., Alfred Cooper, F.R.C.S., H. Radcliffe Crocker, M.D., Sir George Duffey, M.D., Robert Liveing, M.D., J. F. Payne, M.D., J. H. Stowers, M.D. *Council:* P. S. Abraham, M.D., Alfred Eddowes, M.D., W. T. Freeman, M.D., Hope Grant, F.R.C.S.Edin., A. J. Hall, M.D., T. J. Hitchins, M.R.C.S., H. H. Phillips-Conn, M.D., H. Leslie Roberts, M.D., Arthur Shillitoe, M.B., H. Travers Smith, M.D., F. Rufenacht Walters, M.D., and Campbell Williams, F.R.C.S. *Treasurer:* George Pernet, M.R.C.S. *Honorary Secretaries:* C. Herbert Thompson, M.D., and E. Graham Little, M.D.—Clinical cases were shown by Dr. STOWERS, Dr. ABRAHAM, Dr. EDDOWES, and Dr. FREEMAN.—The PRESIDENT read an inaugural address on Erythema Nodosum. His experience had caused him to question its supposed causal

connection with acute rheumatism.—Mr. ANDERSON read a paper on the Chief Constitutional and Local Conditions Associated with Seborrhœa. Seborrhœa oleosa was a physiological condition, giving rise to disease only in so far as the increased secretion offered a nidus for the development of bacteria. Coronal baldness was usually due not to seborrhœa or parasitic invasion but to senile change. Alopecia areata was not in his experience associated with seborrhœa. Seborrhœa sicca was an inflammatory disease due to parasitic invasion; the baldness was usually in the first instance temporal. Seborrhœa sicca favoured the development of other diseases, such as acne vulgaris and rosacea, seborrhœic dermatitis, lupus erythematosus, pityriasis rubra, and influenced the distribution of other affections, such as lichen circinatus. The PRESIDENT, Dr. P. S. ABRAHAM, Dr. A. EDDOWES, Dr. STEPHEN MACKENZIE, Dr. RADCLIFFE CROCKER, Mr. G. PERNET, and Dr. W. WARDE joined in the discussion. Numerous drawings and photographs were exhibited, notably a collection of drawings shown by Dr. RADCLIFFE CROCKER and a series of photographs by Dr. ARTHUR HALL.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A general meeting of this Society was held at 20, Hanover Square, on Wednesday, May 30th, at 6 P.M., the PRESIDENT, Dr. Ivor Murray (Scarborough), in the chair. Dr. FORTESCUE FOX (Chairman of Council) read a report on the state of the Society, which showed a continuously successful career. On the same evening the Fellows entertained at dinner at Limmer's Hotel Sir Joseph Fayrer, Bart., K.C.S.I., and Dr. Robert Barnes, F.R.C.P., and after dinner a *conversazione* was held at 20, Hanover Square, which was largely attended.—Sir JOSEPH FAYRER delivered an address on the Hill Stations of India as Health Resorts, which is published at page 1393.—The PRESIDENT, Dr. Ivor Murray, himself a Crimean veteran and an old brother-officer of the lecturer when in India, proposed a vote of thanks to Sir Joseph Fayrer, which was seconded by Dr. ROBERT BARNES and supported by Mr. FREYER.—Dr. HEDLEY showed a telephone probe, and Dr. PAGE MAY (Helouan) showed meteorological charts relating to the climate of Helouan and other stations in Egypt.

REVIEWS.

SOME RECENT WORKS ON MEDICINE.

MOVABLE KIDNEY.

Quot homines, tot sententiæ. Of few things in medicine can this be so aptly and correctly said as of movable kidney. What degree of mobility shall be considered abnormal seems impossible, even with approximate accuracy, to define. Moreover, neither "movable" kidney nor "floating" kidney need of necessity cause any symptoms. If symptoms are caused, and if they are to be relieved by surgery, the operator is "full replete of choice." In fact, of everything connected with movable kidney there seems to be scope for a multiplicity of opinion. It cannot be said that the work by Drs. WOLKOW and DELITZIN,[1] although adding to our knowledge, will give final decision to any of the unsettled or disputed points. Everything bearing upon the condition of movable kidney is treated with microscopic accuracy, and one lays the volume aside rather with a sense of weariness and bewilderment than with any feeling of satisfaction that an involved, difficult, and obscure subject has been rendered simpler and clear. The book consists of three parts. In the first, consisting of 9 chapters, the theories of movable kidney and the statistics relating thereto are given in full. Three chapters are devoted to the topographical anatomy of the kidney, and its ligaments and fixation apparatus are fully described. Methods of investigation carried out on the dead body are explained with minute accuracy. This section of the work leaves nothing unsaid, nothing undescribed in the anatomy of the organ. In Part 2, consisting of 21 chapters, are discussed the many conditions of the individual organs, and of the abdominal organs as a whole, which are capable of influencing in any degree the mobility of the kidney. Especial emphasis is attached to the descriptions of the renal vessels and their abnormalities. Part 3 consists of an atlas of diagrams explaining the facts mentioned in the text. The reader of this work is almost overwhelmed by the abundance of the labour bestowed upon it. A certain academic interest attaches to literature of this kind, but its practical value is not very great. So much industry as the authors have displayed is worthy of a greater and more important result.

[1] *Die Wanderniere: Ein Beitrag zur Pathologie des intra-abdominalen Gleichgewichtes.* Experimentell-anatomische Studien. Von Dr. Med. M. M. Wolkow und S. N. Delitzin, Privat-docenten an der Akademie en St. Petersburg. Berlin: August Hirschwald. 1899. (Royal 8vo, pp. 366, atlas of illustrations. M.14.)

CANCER AND TUBERCULOSIS.

The question as to the relations of cancer and tuberculosis to one another have long been matters of interest. John Hunter and others, including Rokitansky, considered that there was a real antagonism between the two, and that such antagonism absolutely prevented the dual existence of these diseases. On the other hand, Virchow, Wagner, and others have asserted that a relationship between the two does not exist, that the one is entirely uninfluenced in any fashion by the other. Dr. HENRI CLAUDE has completed a careful record[2] of many cases which have been submitted to minute investigation. So far as the result of his labours is concerned, Dr. Claude is satisfied that there is presumptive evidence of some connection, subtle though it may be, between the two. The existence of both in the same patient and in the same organ is proved conclusively; the growth of the one side by side with the other is very well shown in a drawing from a microscopic preparation of a laryngeal growth. In some examples, the rarity of which is recognised by Crone and Baumgarten, an actual destruction of malignant tissue by a tuberculous invasion is clearly seen. In such a case the disease might be considered, as the author claims, a hybrid disease. The subject is one which will bear fuller and more extended observation, and this small volume of Dr. Claude's is certainly a useful and interesting contribution to the subject.

[2] *Cancer et Tuberculose: Hybridités Tuberculo-Cancéreuses.* Par Dr. Henri Claude, Ancien Interne des Hôpitaux de Paris. Paris: J. B. Baillière et Fils. 1900. (Crown 8vo, pp. 93. Three illustrations. Fr. 1 50.)

"ESSENTIAL HÆMATURIA."

Dr. ALBARRAN has written for Dr. RAPHAEL ROBINSON'S essay on *Hématuries Renales dites Essentielles*[3] a letter, the chief point of which is the wise condemnation of the term "*hématuries essentielles*" as applied to cases of hæmaturia in which no lesions of the kidney are present. Dr. Robinson has collected a certain number of cases of hæmaturia and hæmoglobinuria which he discusses at some length, without, we think, adducing much of clinical or pathological interest. In no case was a *post-mortem* examination made, so that the actual state of the kidneys remains uncertain. In most the hæmaturia appears to have been associated with some abnormal condition of the blood, but neither microscopical nor bacteriological investigations thereof are recorded. An interesting case is described of hæmaturia occurring twice in successive pregnancies in a woman apparently free from renal disease. Such cases as these Dr. Robinson regards, with other writers, as due to a toxic cause, possibly associated with some failure of the hepatic functions. The author recommends for the treatment of non-renal hæmaturia the administration of large quantities of fluids, either distilled water or slightly saline mineral waters, with the view of eliminating toxins, rather than of styptics or drugs having a vaso-constricting action.

[3] *Pathogénie et Traitement des Hématuries Rénales dites Essentielles.* Par Dr. Raphael Robinson. Paris: Jouve and Boyer. 1899. (Roy. 8vo, pp. 40.

TEXTBOOKS.

Of late years, with the progress of scientific knowledge, an inevitable gap has been widening between two main types of medical textbooks. On the one hand, there is the weighty and expensive collection of monographs, on the other, the concentrated compendium of those statements upon which alone the minds of examiners are popularly supposed to rest. The *Manual of Medicine*, edited by Dr. ALLCHIN,[4] is an attempt to bridge the chasm, and, to judge from its first volume, its scope will be essentially practical; it is stated in the introduction that the subjects of etiology and morbid

[4] *A Manual of Medicine*, Edited by W. H. Allchin, M.D., F.R.C.P., F.R.S.Edin., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital, etc., London: Macmillan. 1900. (Vol. i, pp. x., 442. With charts and coloured plates. Price 7s. 6d. net.

anatomy have been summarised, the various diseases being described mainly from the point of view of their clinical manifestations and treatment. Space is thus gained for the adequate presentation of purely medical facts. The first volume comprises a brief but excellent introduction and an account of the infectious diseases and those due to atmospheric influences. It consists of some fifty articles by twenty-two authors. Dr. Allchin's own contributions are limited to the introduction and the well-ordered section on diseases due to atmospheric influences, but the whole book affords abundant evidence of his careful and critical supervision. Most of the articles are of a high order of merit; some, indeed, are of quite exceptional distinction. Dr. Cayley's account of typhoid fever, for instance, is masterly; within the space of twenty-four pages is set down in clear and simple language every fact of importance relating to the disease. It is interesting to note that the author recommends the daily administration of an ounce of glucose to replace the waste of hepatic glycogen. Dr. Cayley also contributes an interesting article on typhus, the section treating of diagnosis being especially instructive. The subjects of diphtheria, scarlet fever, measles, rötheln and varicella have been entrusted to the capable and graphic pen of Dr. Caiger. The practical value of his clinical descriptions of the two first-mentioned diseases can hardly be over-estimated. Dr. Coutts contributes two clear and succinct essays treating of tuberculosis and inherited syphilis respectively. There are four admirable articles by Dr. Hebb, of which that on gonorrhœal infection merits particular attention, the misleading expression "gonorrhœal rheumatism" being here replaced by the proper conception of the disease as a general infection. A more explicit reference should perhaps have been made to the occasional occurrence of acute ascending myelitis after gonorrhœa. Another excellent series of contributions is that by Professor Sims Woodhead, who writes on the infections and on sapræmia, septicæmia, and pyæmia. His account of infection is succinct but clear and adequate, and illustrated by a series of beautiful coloured drawings of micro-organisms, the work of Mr. Richard Muir. It may be confidently asserted that for fidelity and artistic worth these have never been surpassed. Variola and vaccinia are described by Dr. Copeman, and except that a more detailed account might have been given of the prodromal rashes of the former, his essays are entirely praiseworthy. Dr. Goodall gives a useful description of mumps, and a brief but sufficient account of mixed infections; while Dr. Washbourn contributes four well-written articles, of which those on erysipelas and infective endocarditis are of most importance. Dr. Still has excellent articles on suppurative and posterior basic meningitis; and Mr. Tubby on acquired syphilis and boil and carbuncle. Other contributions claiming favourable mention are those of Dr. Colcott Fox on verrugas and frambœsia; of Dr. Bertrand Dawson on influenza; of Major Macpherson on yellow fever; of Dr. Penrose on whooping-cough; of Dr. Newsholme on epidemic pneumonia; and of the late Captain Hughes on Mediterranean fever. Dr. Newton Pitt has a good article on anthrax, but his account of tetanus is hardly quite up to date. We cannot but think also that Dr. Hale White's account of fever and Dr. Lees's of rheumatism would have been better had the authors been less anxious to maintain their own personal theories. The remaining articles are written by Mr. Cantlie (on various tropical maladies) and Dr. Bradford. Such is the scope of the first instalment of what promises to be a most valuable addition to medical literature.

The first edition of Dr. James Anders's *Practice of Medicine*[5] was reviewed in these columns on October 1st, 1898. That two editions have since appeared is a sufficient indication of the usefulness of the work. While the second edition did not contain either any alterations or any additions of importance, the third edition, now before us, contains both. The whole section on infectious diseases, has been revised, several articles have been rewritten, a few new subjects have been introduced, and substantial additions have been made in other sections of the book. Among the new subjects treated of are glandular fever, ether pneumonia, meralgia paræsthetica, and periodic paralyses. Among those virtually rewritten may be mentioned the plague, Malta fever, diseases of the thymus gland, and the different varieties of cirrhosis of the liver. As outstanding features of the work remain its clearness, its practical character, its freedom from superfluous matter, and the systematic arrangement of the parts dealing with differential diagnosis. Emendations and additions have been made in the chapter on nervous diseases, which indeed, as we pointed out in our review of the first edition, were urgently necessary. Six new illustrations have been added, all representing facts ascertained with the microscope, thus accentuating in an appropriate way its extreme value in clinical medicine. The bacteriological side of diagnosis is well represented, and the subject of treatment receives a fair share of attention; the directions given, although specific, are concise and not overburdened with detail. This, it must be understood, is in no way an exhaustive book—it is not meant to be such, but it is a clear and reasonably complete outline of general medicine arranged on a strictly clinical basis. It is a suitable book for the student's use during the first year of his work in the medical wards of his hospital, while from it the busy practitioner could rapidly obtain much information that would not be confusing on the more recent advances in clinical medicine.

[5] *A Textbook of the Practice of Medicine.* By James M. Anders, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College, Philadelphia, etc. Third Edition, Part I and II. London: Rebman, Limited. 1900. (Roy. 8vo, pp. 1292, 83 illustrations. 36s.)

Clinical Lectures.

Dr. J. Vires has printed an interesting series of clinical lectures[6] delivered before the senior clinical class of the Montpellier General Hospital during the year 1898-99. The greatest share of the space is given to exophthalmic goître, but paralysis agitans, syphilitic diseases of the cord, myxœdema, and gastric crisis also receive considerable attention. After a historical account of the disease follows a general description of its symptomatology and then individual cases are described. Excellent photographs of the particular patients are given, among which we notice some cases of exophthalmic goître with a one-sided enlargement of the thyroid. The theories of the pathology of the diseases are discussed in some detail. A noteworthy suggestion is made that the gastro-intestinal disturbance of Graves's disease is comparable to the gastric crises of locomotor ataxia. His idea that the symptoms of paralysis agitans depend on an excess of the muscle tonus will hardly commend itself to British neurologists. The chapter on the syphilitic diseases of the spinal cord appears rather closely to follow the lines of the small work by Dr. Gilles de la Tourette on the same subject reviewed comparatively recently in these columns. The book does not contain any important additions to our knowledge of the diseases of which it treats, but they are described in an admirably graphic and lucid style.

NOTES ON BOOKS.

The *Medical Reports* of the Imperial Maritime Customs of China are always interesting, and that for the half-year ending March 31st, 1899 (London: P. S. King; Shanghai, Hong Kong, Yokohama and Singapore: Kelly and Walsh. 1 dollar) is no exception to the rule. In Dr. J. F. Molyneux's report on the health of Chafoo it is noted that a case of confluent small-pox occurred in the settlement. The patient, aged 2, was unvaccinated. After a severe experience the infant made a good recovery: three other children in the family, all vaccinated, escaped infection. Three cases of scarlatina, all benign and uncomplicated cases, also came under treatment. Dr. McCartney at Chungking records that diphtheria occurs endemically every spring, but he has never known an epidemic of the disease, which, as he remarks, seems very remarkable, seeing that the natives expectorate everywhere and take no precautions against infection. The following cases in the same family illustrate this. The husband suffered from diphtheria and died. His two children contracted the disease, and, coming under treatment, recovered. An aunt who helped to nurse the children was likewise attacked, and returned to her husband's home, where she was

[6] *Leçons de Clinique Médicale, faites à l'Hôpital Général de Montpellier*, par Le Dr. J. Vires. Montpellier: Coulet et Fils; Paris: Masson et Cie. 1900. (Roy. 8vo, pp. 240, 6 plates. Fr. 7.)

seen on the ninth day of the disease. She died within a few days. No other member of the family contracted the disease, although during the woman's illness at least twenty children entered her room. It would appear that in China every condition is favourable to the spread of diphtheria, but still it does not spread. Dr. Hickin, of Ningpo, writes of influenza in Ningpo and in Hangchow. In the latter place it seems to have been of a severe type, many natives dying in a few hours; and when patients began to convalesce, relapses were not uncommon. The only feature common to these epidemics was dryness of the atmosphere. Dr. Stewart Ringer, of Canton, refers to the plague in that town. The disease in 1898 assumed the character of a serious epidemic, in all probability equal in severity to the outbreaks of 1894 and 1896. Great numbers of the well-to-do Chinese, in order to escape the terror of their surroundings, left the city with their wives and families, some to seek their country residences, others to occupy large and well-made house boats, many of which were to be seen anchored in various parts of the Canton river. In this connection it is worthy of note that the boating population of Canton is credited with a complete immunity from the disease, and in view of their cleanly habits and open-air lives there is every reason to accept this belief. The epidemic continued from March till the middle of July, when it began to subside. During the epidemic the sights around Shamieu were appalling; dead bodies in various stages of decomposition were frequently seen floating down the river. As in Hong Kong so in Canton an outbreak of rinderpest occurred in the early part of the epidemic. Dr. Thoulou describes an epidemic of bubonic plague observed by him at Ping-Shiang in May and June, 1898. Dr. Reygoudaud gives a report on the sanitary situation of Moagtze; and Dr. Macdonald reports on the health of Wuchow.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

DIETETIC AND MEDICINAL PREPARATIONS.

Brand's Nutrient Powder.—We have examined a sample of Brand's nutrient powder, which is described as having been prepared from raw meat by Dence's patent process, and as consisting of powdered muscle fibre, from which the moisture has been removed at a temperature below the coagulation point of the muscle proteids. The preparation consists of a fine powder of light brown colour, which microscopic examination shows to be mainly muscular fibre. The results of our analysis show that it contains 9.65 per cent. of moisture, 68.79 per cent. of total proteid matter, 4.34 per cent. of nitrogenous "extractives," 12.92 per cent. of non-nitrogenous "extractives," and 4.30 per cent. of total mineral matters. It is claimed that the powder is of value for the feeding of invalids, on the grounds that it can be easily assimilated and that it is free from the more indigestible portions of lean meat. The preparation is free from chemical preservatives, and has evidently been manufactured with care and judgment. We think that it may deserve the attention of the profession.

A NEW LAW AS TO FOUNDLING INSTITUTIONS IN ITALY.—The Committee appointed by the Italian Ministry of the Interior to examine into the condition of all the foundling hospitals of the kingdom has drawn up a scheme of legislation on the subject which has been submitted to Signor Pelloux. The scheme provides that all such institutions shall be under the direct supervision of the provincial Prefects, and that the managing bodies shall include one or more delegates of the Government. The Poor-law medical officers are to give the necessary professional attendance on the children gratuitously. They must visit the infants once a fortnight during the first three months; afterwards once a month to the age of 7 years; and they must send periodical reports on their condition to the authorities. Neglect of duty on the part of medical officers, nurses, and others having charge of the children is made punishable by various penalties.

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

SUMMER SESSION, 1900.

NOTES.

The Revolt of the Conjoint Board in England against the decision of the Council with respect to what should be recognised, for the purposes of students' registration, as the commencement of professional study came up for consideration on the last day on the report of a Subcommittee. The two Colleges—the Royal College of Physicians of London and the Royal College of Surgeons of England—take the position that what should be held as a fulfilment of their curriculum is a matter for them to decide; in other words, they adhered to their former position. A document too lengthy to be grasped at the moment, in which the Colleges had stated their views, had unfortunately not been circulated for the perusal of members of the Council, owing to its having been marked "Confidential," nor were there even a sufficient number of copies forthcoming to furnish one to each member round the table. After a considerable time had been devoted to a debate, it was perceived that the postponement of any final decision was inevitable. The time given to this debate was not, however wholly wasted. Apart from the question that students' registration is a thing instituted by the Council and not governed by any statute, so that the Council is free to make what regulations it chooses regarding it, the debate afforded Dr. MacAlister an opportunity to bring forward an aspect of the question which does not seem hitherto to have been presented. The student when he registers at the commencement of his professional studies does not declare and often does not even know to which of the licensing boards he will ultimately present himself. Hence, if the Council were to give way on this point it would probably be tantamount to imposing the views of the Conjoint Board in England upon other licensing bodies, some of which strongly entertain different opinions. On the other hand, if these other qualifying bodies took a similar view as to their independence and refused to recognise the courses which they disapprove as being the commencement of professional education, notwithstanding that the Council had registered them as such, students registering under these conditions would be subsequently limited in their choice of an examining body to the Conjoint Board in England. Hence the question would appear to be one which cannot, or, at all events should not, be decided by individual bodies.

The Right to the Title of Physician and Surgeon occupied the attention of the Council for a short time, and it was decided that its funds should not be employed, as suggested by the Society of Apothecaries, in defraying the expenses of a test case to determine whether a Licentiate of the Society of Apothecaries is or is not entitled to describe himself as physician or surgeon. The rejection of this proposal was only to be expected, but it is a grim comment on the futility of the Hunter appeal case, and it would be interesting to know what from first to last the Council expended upon that unfortunate case.

A New Medical Law of the States of Jersey, prior to its receiving the approval of the Lords of the Committee of Council for the affairs of Jersey and Guernsey, was submitted to the Council for comment. Leaving aside certain matters of detail, the most important feature of this Law was the explicit prohibition of unqualified practice, and the establishment of substantial penalties for the infringement of this provision. In this, as in all recent enactments in British Colonies, and as is the case also with the laws in force in most, perhaps in all, foreign countries, the sensible course of dealing with the act of practice has been adopted, and the United Kingdom stands practically alone in resting content with a futile law which deals with the assumption of title, with the shadow and not with the substance.

The Special Finance Committee, which has been instructed to report on the whole question of the funds of the General Medical Council and of the Branch Councils, consists of the Finance Committee—Sir Dyce Duckworth and Mr. Bryant (England), Dr. Heron Watson (Scotland), and Dr. Bennett (Ireland)—with the addition of the Trustees, who are not all at present members of the Finance Committee, nor, indeed, of the Council. The Committee is to report on the assets and liabilities of the Council and its Branches, on the relation of income to expenditure during the last ten years, and to suggest what should be done to place the finances on a satisfactory basis. Not only do the financial affairs of the Council require to be looked into, but the legality of its most important monetary operations during the last five years has been called in question, and this very serious consideration is one which will have to be reckoned with sooner or later. But inasmuch as the difficulties of the position have arisen from the methods of account-keeping prescribed in the Act of 1858, it is doubtful whether anything really satisfactory can be effected without going to Parliament.

The Committees of the Council were elected at the end of the session. Ballots were taken for the election of the Executive Committee and the Penal Cases Committee. The first resulted in the re-election of the existing members of the Committee, in which it may be remembered little change beyond that necessitated by changes in the membership of the Council itself has for a good many years taken place. Dr. MacAlister, who had been co-opted by the Committee in the interval between the sessions to fill the vacancy produced by the fact that Mr. Carter had ceased to be a member of the Council, was elected by the votes of the Council. Much may be said for the preservation of continuity in the work of the Executive Committee by re-election of its members to a large extent, but it is somewhat to be regretted that the introduction of new blood is so rare an event. The ballot for the Penal Cases Committee resulted in a tie between Mr. Teale, Dr. Payne, and Mr. Tomes. The two former having expressed unwillingness to act upon it, Mr. Tomes was elected. Mr. Carter having been a member of this Committee, and the other members having been re-elected, no former member of the Committee was displaced by the ballot. In the other committees, which are not elected by ballot, little change occurred. Mr. Power, as the successor of the late Sir Richard Thorne at the Local Government Board and on the General Medical Council, was, as a matter of course, elected to fill his place upon the Public Health Committee.

Appointment of Solicitor.—We understand that Mr. William Howard Winterbotham, a member of the firm of Waterhouse, Winterbotham, Harrison, and Harper, of New Court, Lincoln's Inn, has been appointed Solicitor to the General Medical Council. Mr. Winterbotham has since May, 1895, held the position of Official Solicitor, Royal Courts of Justice.

REPORT OF PROCEEDINGS.

Thursday, May 31st.

Sir WILLIAM TURNER, President, in the Chair.

THE minutes of the last meeting were read and, as amended confirmed.

THE FIRST YEAR.

On the motion of Dr. MACALISTER, seconded by Sir JOHN BATTY TUKE, it was resolved:

That the report from the Education Committee on certain communications from the Royal Colleges of Physicians and Surgeons, England, be received and entered as an Appendix in the minutes.

REPORT.

The report stated that the Committee had given careful and prolonged consideration to communications forwarded by the Royal College of Physicians of London and the Royal College of Surgeons of England with reference to the new Regulation for the registration of medical students. The Regulation, which came into force on January 1st, 1900, is as follows:

"No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council, and has produced evidence that he has commenced medical study at a university or school of medicine, or at a scientific institution recognised by one of the licensing bodies and approved by the Council."

This Regulation was made in consequence of the following recommendation made by the Education Committee:

"The licensing bodies should be informed that schools for boys and girls were not intended by the Council to be regarded as institutions at which the first of the five years of medical study may be spent; and the Council should require that before registration is effected a student should have commenced medical study at a university or school of medicine, or at a scientific institution recognised by one of the licensing bodies, and approved by the Council. If this were done the recognised institutions would not merely as now be reported to the Registrar, but would come in a regular and formal way before the Council for its approval. Attention could thus be drawn to any institution regarding which objection might be taken, and approval withheld if the evidence as to its status and efficiency were unsatisfactory. As registration is a matter over which the Council alone has control, this manner of dealing with the difficulty appears to be the least open to objection."

The Royal College of Physicians of London and the Royal College of Surgeons of England had alone taken objection to the Regulations, and had adopted a resolution affirming that they "fail to recognise any authority under the Medical Acts in virtue of which the General Medical Council may impose the conditions formulated in the Regulation in regard to the registration of medical students," and that "they decline to recognise the requirement that scientific institutions where medical study is commenced should be approved by the General Medical Council."

The Council by resolution on December 4th, 1899, adhered to its Regulation, and invited the Colleges to consider the matter further. The President of the General Medical Council had conferred with representatives of the Colleges, and the Committee of Management of the Conjoint Board had drawn up a report subsequently adopted by the two Colleges, in the course of which they stated that they were "unable to discover any grounds for altering the decision of the Royal Colleges," and appended a *Memorandum* setting forth the legal and other grounds for the view they had taken.

The Education Committee pointed out that three questions appeared to arise for the consideration of the Council:

"1. Whether it is in the interest of medical education generally that the first year of medical study should be taken at ordinary schools of higher elementary or of secondary education, even when these give good elementary instruction in science in addition to the other subjects of school study?

"2. Whether it is contrary to law or beyond the powers of the Council to impose the conditions formulated in the Regulations under which a student may be registered as having passed a suitable preliminary examination and as having entered on a course of medical study?

"3. Whether any one of the licensing bodies can legally require the General Medical Council to enter on the *Register* of medical students the name of a student who has not fulfilled the conditions prescribed by the Council itself?

"I. On the first question, the Committee maintain the opinion they have repeatedly expressed, that ordinary school education should be completed before the five years' medical curriculum is entered upon, and they believe that the regulation in question is the simplest practical method of ensuring this. They therefore recommend that the Council should continue to adhere to it.

"II. On the second and third questions the Committee recommend that the opinion of the Council's legal adviser be obtained before the next session of the Council.

"III. With regard to the individual applications for registration which have been received by the Registrar since January 1st, and which cannot be dealt with by him without further instruction, the Committee recommend that they be referred to the Students Registration Committee as exceptional cases to be dealt with on their individual merits."

Dr. MACALISTER said the Royal Colleges had apparently taken up the position that the Council had no legal right to lay down such conditions as they had laid down for the registration of medical students, thereby confusing the issue which had been before them—namely, what conditions the Royal Colleges might lay down for candidates for their diploma. The Council had always maintained that the registration of medical students was within its own power and control, but the course of study was a matter which was under the supervision of the licensing bodies, and one which the Council had no legal power to define beforehand or control. If they were dissatisfied with the actual course of study which the Colleges prescribed, they could only report the matter to the Privy Council as directed by the Act of 1858. He therefore desired to distinguish clearly between the registration of students, which was one thing, and the course of study prescribed by any particular body, which was quite another thing. No one could say they did more than to ascertain (1) that these bodies prescribed a course of study which, in the Council's opinion, was sufficient, and (2) that the students had *bonâ fide* commenced a five-years' course of study. The Royal Colleges claimed not to recognise the Council's right to do either of these things; but so far as he could ascertain there was no ground for suggesting that in claiming these two things the Council was acting either contrary to law or beyond its powers. It desired to have a voice in deciding whether the course of study which a student set out as having been entered upon by him was really a *bonâ-fide* study or not: the Council had the imperative duty of ascertaining whether the student had fulfilled the conditions which it had insisted upon. The *Students' Register* was the Council's

own creation; and it had a right to say what course of study the student should pursue before being entered upon it. The Royal Colleges raised the question whether the *Students' Register* was the Council's property or their property. They practically asserted that any student who had been to any college or school which they recognised should, without the Council having a word to say, be put upon the *Students' Register*. In his opinion there was no legal ground for such a proposition, but, as the question had been raised, the Council ought to obtain a legal opinion on the subject. Practically the position was that the Royal Colleges asked not only to control the Council but to control all other bodies; and the Council ought strenuously to resist it, because by giving way it would alienate all the other colleges. It was, in fact, a question between the Royal Colleges on the one hand and all the other bodies on the other. He moved that the first recommendation of the Committee be adopted:

Dr. PAYNE sconded. In doing so he felt in a somewhat difficult position, as he had been a Fellow of the College of Physicians for many years. Yet he was there, representing not that College, but the University of Oxford, to give an unbiassed opinion. His University never gave instructions to its representative as to the line he should take, but he was happy to say that he was supported in his views by the authorities of that University. The whole subject derived its importance from the simple question whether the regulations imposed by the Managing Board of the two Royal Colleges were good or not, and whether they were favourable to medical education. He then referred at some length to the methods adopted by various educational bodies throughout the country in order to satisfy the requirements of the regulations, which he thought pointed to an undoubted tendency to cut short the school education; that was to say, the general or liberal education which formed part of the medical curriculum. Such a policy would have a bad effect on medical education. The so-called technical and art schools and secondary schools were not fit places for teaching part of the medical curriculum; but he excepted from this class of school the Science and Art Department of South Kensington, because the science taught there was of a higher grade than by any institution throughout the kingdom.

Sir HUGH BEEVOR said the true issue appeared to be whether it was expedient that the last year of school should be spent, as it would be, in passing a science school examination, or whether it should be spent on such a science as would be required, for instance, for the London University examination. He considered that the evidence of the past, as regards the action of the different licensing bodies, confirmed what Dr. MacAlister had said would be the effect in the future.

Sir PHILIP SMYLY reminded the Council that the subject was first brought up by a petition from the Irish College of Surgeons complaining of the other Colleges having cut down the period from five to four years. That was shelved by the Council referring the matter to the Education Committee. The important question to their Colleges, and one they were looking with great anxiety to this Council to settle, was whether the education of the student was to be cut down from five to four years, because any such attempt would be a cutting down of the medical education. It was in a measure a pecuniary question. It was pecuniary with regard to the parents, to begin with, because four years must cost less than five. He reminded the Council of a statement made by Mr. Bryant at a previous session, that all the Colleges of Physicians and Surgeons wished to do was to lighten the programme of education, and, therefore, preliminary subjects were to be taken before the five years began; but they began with the five years and the preliminary education beforehand, which they found would not do. It was a competition downwards, and he thought the Council should be slow to encourage it.

Dr. PETTIGREW regretted exceedingly that the Royal Colleges should have put themselves into this position, which he thought was entirely a false one. The Council was the Council of Medical Education and Registration, and one of its primary duties was to regulate the curriculum of preliminary education. For that purpose they had framed certain regulations and recognised certain bodies for teaching, and the effect of that action had been to screw up the schools, so to speak, to give better education than they had been giving.

Sir CHRISTOPHER NIXON concurred in the recommendations of the Committee. He did not think the Council could be congratulated on the course it had taken in regard to the recognition of the whole of the scientific institutions which proposed to teach the elementary subjects of medical education. The Council recognised them wholesale on the distinct understanding that those institutions were recognised by the different corporations. Then, when it was pointed out that one of these bodies was considered by the College of Surgeons in Ireland to be a grammar school, the Council changed its attitude, and modified its regulation by adding the words "approved by the Council." It seemed to him that, if the Council made a specific regulation, and the Royal Colleges refused to accept it, the course was to tell them to follow out their own rules, to discharge their own obligations, to exercise their own powers, which had been given to them by Royal Charter, to enjoy the continuity of their dignified existence, but when they presented students for registration the Council would not register them. This was one of the most serious matters that could be brought before the Council, because it was a deliberate denial of its authority to make regulations for medical education. The Royal Colleges maintained that the Council was a purely administrative body; had no constructive legislative power; had no right to lay down any curriculum of study, and no right to schedule the different teaching institutions; in other words, that the Council had been acting all through on a false assumption of authority to which it had no right. Could the Council accept such a position as that? It must, in assertion of its own dignity and right, have the question decided. He urged the Council to take the most ample legal advice as to what its position really was.

Mr. BRYANT felt that the Council was not in a position to form any opinion upon the question until it had read the *Memorandum* forwarded by the Conjoint Board. It contained the case on behalf of the Royal Colleges, and all the points connected with it. It should have been appended to the present report, but owing to a misunderstanding as to its being confidential it had been omitted. In reply to Dr. Bennett he expressed the opinion that the Council were not in a true position to give judgment upon the matter without considering the *Memorandum*, and suggested that the consideration of the report should be adjourned to the November sessions.

Dr. MCVAIL objected to such a long adjournment, as the question was of such importance.

Mr. GEORGE BROWN thought it essential for the Council to have everything bearing upon the subject before giving their decision.

Mr. VICTOR HORSLEY pointed out that an adjournment to next session would not impair the position which the Council took up last November.

Sir WILLIAM GAIRDNER, having explained that on the last occasion when the subject was debated he had voted under a misapprehension, said that the Council would make a great mistake if it committed itself to any principle which prevented the secondary schools from introducing scientific subjects into their curriculum, or which permitted the five years medical course to be in any way diminished by the study of those subjects before the beginning of the five years. The Irish Colleges were in error in assuming that the five years were to be reduced to four.

Sir PHILIP SMYLY replied that the Irish Colleges did not wish the five years to be reduced.

Mr. BRYANT moved, Sir DYCE DUCKWORTH seconded, and it was resolved:

That the debate upon the motion be now adjourned.

Mr. VICTOR HORSLEY asked that the Council should be furnished with the opinion of the standing counsel to the Royal Colleges as an additional document with the *Memorandum*.

Mr. BRYANT said he would ascertain whether it could be done.

The PRESIDENT observed that if this was obtained he would send it together with the other documents, and ask Mr. Muir Mackenzie to give an opinion upon the whole question.

On the motion of Dr. MACALISTER it was resolved:

That the document handed in by the representatives of the Royal Colleges of Physicians and Surgeons, England, be received and entered as an appendix to the report of the Education Committee.

On the motion of Dr. MACALISTER, seconded by Sir JOHN

Tuke, the third recommendation of the Committee was adopted.

The University of Birmingham.

Sir John Batty Tuke moved, Dr. MacAlister seconded, and it was resolved:

That the report of the Education Committee on the Matriculation Examination of the University of Birmingham be received, entered on the minutes, and adopted.

The report recommended that the matriculation examination of the University of Birmingham should be added to the list of recognised preliminary examinations with the proviso that the certificate shall include all the required subjects at one time.

The Medical Law of the States of Jersey.

The Education Committee presented a report on the text of a law for the practice of medicine and surgery passed by the States of the Island of Jersey on February 22nd, 1900, which had been transmitted by the Privy Council with a request for observations by the General Medical Council. The law had been submitted to Mr. Muir Mackenzie for his opinion. The following are Mr. Muir Mackenzie's observations:

The effect of Articles 1, 4, and 5 of the proposed law, if they pass into law, will be that no person will be permitted to practise medicine and surgery in Jersey unless he has first obtained permission from the Royal Court, and a person who practises medicine or surgery in the island without having obtained the prescribed permission will be liable to fine and imprisonment.

So far as the proposed enactments will impose on registered medical practitioners the necessity of obtaining the permission of the Royal Court in Jersey as a condition of being allowed to practise in Jersey, they do not appear to go beyond what is authorised by the Imperial legislation in relation to medical practitioners who have been duly registered. By Section VI of the Medical Act, 1886, it is enacted that a registered medical practititioner shall (save as in the Act mentioned) be entitled to practise medicine, surgery, and midwifery in the United Kingdom, and (subject to any local law) in any other part of Her Majesty's dominions.

The words "subject to any local law" appear to confer on the local legislative of a part of the Queen's dominions, which is outside the United Kingdom, power to prescribe regulations as to the rights of registered practitioners which are to be observed within the jurisdiction of that legislature.

One of the principal objects of the enactment appears to be to prevent by stringent legislation unqualified persons from practising medicine and surgery in the island. In this respect the proposed legislation will be most beneficial.

As regards Article 2, I would suggest that the classification of titles to practise in the island is not quite convenient. If a person whose name has been removed from the *Medical Register* for infamous professional conduct is holder of a diploma which cannot be taken away from him by the Medical Corporation which granted it, such a person, notwithstanding the removal of his name from the *Medical Register*, might under the Article obtain permission from the Jersey Court to practise in the island.

I submit that it would be more convenient that Article 2 should run thus:

The Royal Court will only grant this permission to a person whose name, at the time of his application for permission to practise, is registered under the Medical Acts in the *Medical Register* of the United Kingdom. A copy of the *Medical Register* for the time being shall be evidence in the said Court that a person specified therein is registered according to the provisions of the Medical Acts.

The 11th paragraph of Article 2 is framed in language which might lead to difficulty, having regard to the provisions of Part II of the Medical Act, 1886. If the classification of titles to practise set out in Article 2 is to remain, I submit that it would be better if Paragraph 11 were in the following terms:

"Holder of a medical diploma as defined in the Act of Parliament 49 and 50 Vict. c. 48, granted in a British possession or foreign country to which the said Act for the time being applies, and which diploma has been recognised by the General Council established by the said Act."

Article 11 extends only to a person who has been condemned for an offence "the penalty of which is attended with ignominy." This definition of an offence is one which it might be difficult to apply in some cases; and the Article does not exclude from practice persons whose names have been erased from the *Medical Register* for infamous and disgraceful professional conduct. This appears to be a defect in the proposed law to which the attention of the Privy Council might usefully be called.

There are not in the proposed law any other points on which I can offer any further suggestions.

On the motion of Sir John Batty Tuke, seconded by Dr. MacAlister, it was resolved:

That the President be requested to communicate to the Lord President of the Privy Council the foregoing observations on the Jersey Act, and to ask on behalf of the Council that they may have the consideration of the Lords of the Committee of Council for the affairs of Jersey and Guernsey.

Dental Business.

On the motion of Dr. MacAlister, seconded by Mr. Bryant, a report from the Executive Committee, on the dental business transacted since the last session of the General Medical Council, was received and entered on the Minutes.

The Title of Physician and Surgeon.

Mr. Bryant presented the report of the Committee appointed on May 2nd, 1899, to consider the letter written by Mr. Upton, on the part of the Society of Apothecaries, on the subject of use of the titles physician and surgeon.

The letter had reference to the decision of the judges of the Queen's Bench Division in the Hunter case. Mr. Upton in his letter said:

"The Society contends, and is advised by eminent counsel, that the decision is 'erroneous,' and even if this be not admitted it will at least be allowed to be unsatisfactory.

"A perusal of the delivered judgment will show that the reasons assigned by one of the judges for his decision were based on most imperfect knowledge of the subject, while the other judge, whose observations during the arguments had apparently been favourable to the contention of the Society, eventually decided against it with doubt and hesitation.

"The decision was rendered still more unsatisfactory by the fact that the General Medical Council, having issued separate summonses against Mr. Hunter—(1) for calling himself a physician, and (2) for calling himself a surgeon—only proceeded in respect of the first of them; so that the case did not come before the Court in its entirety, and the right of the L.S.A. (1886) to call himself surgeon remains undecided.

"The Society has not considered it sufficient to take the opinion of Mr. Haldane, Q.C., M.P., to whom reference has already been made as advising that the decision of the judges is 'erroneous,' but has also taken the opinion of Sir Edward Clarke, Q.C., M.P., who advises the Society 'that the L.S.A. (1836) is entitled to describe himself as "Physician" or "Surgeon," or both, and that the Society of Apothecaries is justified in so advising their Licentiates, notwithstanding the decision in the case of Hunter *v.* Clare.'

"He is further of opinion 'that should the question again be raised in the Courts, the case of Hunter *v.* Clare would not of necessity be held to be a binding authority on this point, inasmuch as the conviction of the appellant was quashed on other grounds, and the opinions expressed by the Court as to the rights of the L.S.A. were under the circumstances immaterial to the issue.'

"In advising the Society as to the best means of getting the question properly settled, Sir Edward Clarke says:

"'I advise the following course, if practicable. An action should be brought by a medical practitioner (M.R.C.S. and L.R.C.P.) claiming an injunction to restrain a L.S.A. (practising in the same neighbourhood) from describing himself as "Physician and Surgeon," to the injury of the plaintiff's practice. The pleadings could be framed so as to make the defendant's right so to describe himself the only issue in the action, and the question might then be determined (if necessary) by the Court of Appeal or the House of Lords.'

"The General Medical Council will agree that no medical practitioners would be willing to adopt the suggestion made by Sir Edward Clarke unless guaranteed against all expenses.

"It would seem only reasonable, under all the circumstances of the case, that the General Medical Council and the Society should guarantee the expenses of the plaintiff and defendant respectively in the proceedings which are suggested, and that whatever the result may be each party should pay their own costs.

"If such an arrangement were made, a suitable case would soon be found and a friendly action instituted.

"A case was in fact suggested some time ago by the Solicitor to the Council, but until the principles on which any case should be tried had been settled between the General Medical Council and the Society, the Society decided that it was inexpedient to take proceedings.

"In conclusion, I am directed to state that the Society emphatically disclaims the idea of wishing to assist its licentiates to appropriate any title belonging exclusively to any other licensing body.

"What it desires is, with the co-operation of the General Medical Council, to get an authoritative exposition by Court of Appeal of Section XL of the Medical Act, 1858, and to permanently set at rest the vexed subject of medical titles."

The report of the Committee was as follows:

They are not prepared to recommend that the funds of the General Medical Council should be employed to guarantee, in conjunction with the Society of Apothecaries, the expenses of the plaintiff and defendant respectively in a test case to determine, by the Court of Appeal or the House of Lords, whether a Licentiate of the Society of Apothecaries is entitled to describe himself as physician or surgeon.

Mr. Bryant said that he felt quite sure this would commend itself to the Council and moved:

That the report be received, entered on the minutes, and adopted.

Mr. Victor Horsley seconded.

Sir Hugh Beevor mentioned that the Society would have been pleased if this question could have been taken on the higher plane of the Council assisting in the decision, but in the circumstances they would be content to take their own course.

The resolution was adopted.

Appointment of Solicitor to the Council.

The Council then went into *camera* to consider a report from the Executive Committee in regard to the appointment of a solicitor to the Council, and an opinion by the Council's legal adviser on the question of the copyright of the *British Pharmacopœia*.

Strangers were directed to withdraw.

On readmission the following resolution proposed by Sir Dyce Duckworth, seconded by Mr. Bryant, was agreed to:

This Council desires to record its warm appreciation of the services rendered to it for so many years by Mr. Frederick W. Farrer in his capacity

as standing solicitor, and to express its regret that the state of his health no longer permits him to assist the Council.

ELECTION OF COMMITTEES.

The following Committees were elected:—

Executive Committee.

Sir Dyce Duckworth, Mr. Bryant, Dr. MacAlister, Dr. Glover, Dr. Heron Watson, Sir William Gairdner, Dr. Atthill, and Sir Philip Smyly.

Penal Cases Committee.

Mr. Bryant, Mr. Tomes, Dr. Glover, Mr. Victor Horsley, Dr. Heron Watson, Dr. Bruce, Sir Christopher Nixon, and Sir William Thomson.

Pharmacopœia Committee.

Dr. Leech, Sir Dyce Duckworth, Dr. Atthill, Dr. MacAlister, Sir John Batty Tuke, Mr. Tichborne, Dr. Payne, and Dr. McVail.

Finance Committee.

Sir Dyce Duckworth, Mr. Bryant, Dr. Heron Watson, and Dr. Bennett.

Dental Committee.

The President, Sir Dyce Duckworth, Dr. Heron Watson, Mr. Tomes, and Sir Philip Smyly.

Dental Education and Examination Committee.

Mr. Bryant, Dr. Reid, Mr. George Brown, Sir Philip Smyly, Dr. Cameron, and Mr. Tomes.

Students Registration Committee.

Sir Dyce Duckworth, Dr. Cameron, Dr. MacAlister, Dr. Bennett, Sir John Batty Tuke, and Sir William Thomson.

The following nominations for the respective committees were, on the motion of Dr. MACALISTER, seconded by Dr. BRUCE, accepted by the Council:

Examination Committee.

English Branch Council.—Sir Dyce Duckworth, Mr. Bryant, Mr. Teale.
Scottish Branch Council.—Dr. Heron Watson, Dr. Pettigrew, Dr. McVail.
Irish Branch Council.—Sir Philip C. Smyly, Sir William Thomson, Dr. Little.

(*e*) *Education Committee.*

English Branch Council.—Dr. MacAlister, Dr. Glover, Dr. Payne.
Scottish Branch Council.—Sir John Batty Tuke, Sir William Gairdner, Dr. Reid.
Irish Branch Council.—Sir Christopher Nixon, Sir William Thomson, Dr. Bennett.

(*f*) *Public Health Committee.*

English Branch Council.—Mr. Power, Mr. Teale, Mr. Pye-Smith.
Scottish Branch Council.—Dr. Bruce, Dr. McVail, Dr. Hector C. Cameron.
Irish Branch Council.—Sir Philip C. Smyly, Dr. Bennett, Mr. Tichborne.

FINANCE COMMITTEE'S REPORT.

Mr. BRYANT moved, Sir DYCE DUCKWORTH seconded, and it was resolved:

That the report of the Finance Committee be received, entered on the minutes, and approved.

REPORT OF THE FINANCE COMMITTEE.

The report stated that the income of the General and Branch Councils for the year ending December 31st, 1899, was £10,405 11s. 6d.; the expenditure for the same period was £10,677 10s.; there was thus a deficit of £261 18s. 6d. "This is due to the fact that for the first time the solicitor's account for law expenses has been included as a liability for the year in which it was incurred, and therefore two years' law expenses are included in one year, which will not occur again. Had it not been for this there would have been a surplus of £350 4s.....The fees received by the Branch Councils show a considerable increase, for £449 17s. 6d. more was received from that source by England, £133 9s. 6d. more by Scotland, and £120 5s. more by Ireland, making a total increase of £703 12s. In 1897 there was a decrease from the previous year of £779 12s. 6d., and in 1898 a decrease of £114 5s. The net proceeds of the sale of the *Pharmacopœia* for the year were £1,365 10s. 1d., but there will probably be found to be a very considerable drop in this item at the close of the current year."

Amongst the items of increased expenditure the following are specified:

"(*a*) An increase of £113 6s. 6d. for various Committees' fees and expenses, chiefly caused by the fees, £94 10s., paid to the experts who assisted the Education Committee. Omitting this item, which, however, will appear again this year, the increase would have been only £18 16s. 6d.

"(*b*) An increase of £103 13s. 7d. in miscellaneous printing, which is more than balanced by the decrease in General Medical Council and Executive Committee printing.

"(*c*) An increase of £752 16s. for law expenses, which is explained above. Had the liability for 1899 been, as usual, omitted, the increase would have been £140 13s. 6d.

"(*d*) An increase of £43 10s. for interest on the mortgage, due to the amount spent on the recent alterations.

"(*e*) An increase of £215 12s. 6d. for the Sinking Fund, an item which will occur for forty-nine more years.

"On the other hand, a decrease may be noted:

"(*a*) In the fees to members of the Council and Executive Committee, amounting together to £698 7s.

"(*b*) In the *Pharmacopœia*

"(*c*) In the printing of the *Registers*, the great expense of setting up caused by the new contract being now met.

"(*d*) In miscellaneous expenses, those for 1898 having included the circular as to the employment of unqualified assistants."

The average yearly expenditure of the General Branch Councils for the seven years 1893-99 has exceeded the average yearly income by £677 16s. 9d.

In order to show the effect of excluding from the statement of comparative income and expenditure all payments and receipts for the *Pharmacopœia*, a special table has been compiled which shows that what may be called the normal expenditure of the Council has exceeded its income by £912 13s. 6d. The Committee proceeds to point out that this year money for the Sinking Fund, £215, which should come out of income, will have to be found, and that a sum of £500 will have to be paid over to the Irish Branch Council. In 1901 the election expenses, which in 1896 amounted to £488, will have to be met, and that the inspections and examinations will recommence. The Committee therefore recommended the Council seriously to consider whether it is not possible to reduce its expenditure to a very large extent, and points out that at present the Council is spending capital to the amount of over £600 a year.

In a special table it is shown that, whereas the receipts—those from registration fees being the chief source of income—are practically stationary, the expenditure has largely increased. This is attributed to the greater amount of work which now devolves upon the Council:

(*a*) Its sessions are perforce longer.

(*b*) Its Committees are more numerous, and most of them have programmes and reports tending to increase the cost of printing.

(*c*) Numerous reports on the inspection of the examinations of the Apothecaries' Hall of Dublin are printed.

(*d*) The legal business is greater.

(*e*) The premises have been enlarged to provide additional committee rooms at a cost of £2,979 2s. 10d. Altogether the Council has spent £25,485 18s. 11d. on the freehold, the buildings, and the furnishing of its central offices. The interest on the mortgage was £696 4s. and the Sinking Fund £215 12s. 6d., making together £911 16s. 6d. But, as the Council receives a rent of £250 for part of its premises, the net total practically expended on rent is £661 16s. 6d. Under the provisions of the Sinking Fund the Council will in forty-nine years be living rent free.

Dental Finance.—For the year ending December 31st, 1899, the Dental Registration Fund received £769 16s. 10d. and expended £1,101 10s. 7d.; but in this account also the legal expenses for two years were included, and had it not been for this the excess of expenditure would have been £217 7s. 8d.

Mr. VICTOR HORSLEY moved a resolution standing in his name which, as by leave amended, was as follows:

That the Special Finance Committee be reappointed and requested to consider and report on:

(1) The financial position of the Council and its Branches as regards assets and liabilities.

(2) The relations of the income and expenditure of the Council and its Branches for the last ten years.

(3) The measures that appear to be desirable to place the finances on a satisfactory basis.

He said that it would be scarcely possible to have a more terrifying report than that placed before them by the Finance Committee. The finances were in a hopeless state of confusion, and they did not know what their precise legal position was. They had a legal opinion that their chief financial operation was without legal basis; and at the present moment they were informed by their Treasurer that they were spending capital to the amount of over £600 a year. He then proceeded to criticise the accounts in detail, and concluded by expressing the hope that the Council would adopt his resolution, so that they should know exactly how they stood.

Dr. BRUCE seconded. He said they ought to take stock, so as to clear up their financial position to the satisfaction of the Council.

Mr. BRYANT reminded the Council that their accounts were drawn up as directed by the Medical Acts, and they had not a free hand in the matter. It was not a personal matter, but he could not see how they were to be more lucid than they were in the report.

The PRESIDENT observed that the resolution was of the widest kind. The Finance Committee would like to have a little more guidance as to what they were to do, and it was only fair to them that they should have it.

Dr. GLOVER thought there was no harm in accepting the resolution, because no member of the Finance Committee could say their financial position was good.

The resolution was agreed to unanimously.

VOTE OF THANKS TO THE PRESIDENT.

On the motion of Dr. GLOVER, seconded by Mr. BRYANT, it was carried unanimously:

That the best thanks of the Council be given to the President for his able services in the chair during this protracted session.

UNIVERSITY OF VIENNA.—The total number of students on the books of the University of Vienna in the past winter semester was 6,981. Of these 2,108 belonged to the Faculty of Medicine. The programme for the summer semester comprises 284 courses of lectures and practical instruction to be given by 29 ordinary and 39 extraordinary professors and 114 *privat-docenten* and assistants.

SEWAGE DISPOSAL AND RIVER POLLUTION.

In an interesting and instructive report presented recently to the Staffordshire County Council, Dr. Reid describes the works actually carried out for sewage purification and disposal by various sanitary authorities in the county since the time when the County Council began to exercise their powers under the Rivers Pollution Prevention Act. The report gives details of the schemes, which have been completed by twenty-one authorities, dealing with the sewage contributed by a total population of 512,218 (that is, nearly half the population of the county) at a total cost of £434,725. The authorities in question are partly rural and partly urban, including four large county boroughs.

The results which have been produced are remarkable not only in respect to the large amount of capital which has been expended, but also as regards the great improvements which have been generally carried out, the remarkably great purification of effluents (as testified by numerous analyses), and the consequent reduction of pollution. In addition, it is reported that, at the instigation of the Committee, authorities in other parts of the county are actively engaged at the present moment in perfecting schemes.

More than this, the beneficial influence of the Staffordshire Committee has been brought to bear upon large and powerful authorities outside the county. For instance, the river Tame, which arises in Staffordshire, passes into Warwickshire before returning again to Staffordshire. In the course of its flow through Warwickshire, this stream receives the effluents from the disposal works of the Birmingham, Tame, and Rea District Drainage Board, which deals with a population of about 700,000. From time to time the facts regarding the highly-polluted state of the stream as it emerges from Warwickshire have been set forth in various reports. At last, at the instigation of a Joint Committee of Staffordshire and Birmingham Councils, an exhaustive inquiry into the pollution of the river was made by Dr. Reid in conjunction with the City Engineer of Birmingham—the paramount authority within the Drainage Board area. As an outcome of this inquiry, certain undertakings were given by the Drainage Board, which it is believed will ultimately lead to a very great improvement in the existing conditions. Works are now being carried out by the Drainage Board which will involve an expenditure of over £400,000, of which sum about £250,000 has already been spent. In addition to this, a considerable sum is being spent in improving the sewers of Birmingham.

In the second report to the County Council of Staffordshire, dated March 13th, 1900, Dr. Reid gives an account of experimental plants constructed at the sewage outfall works of Burslem (population 35,000), Stone (population 6,200), and Willenhall (population 19,000), in order to test the efficiency of certain biological methods for disposal of the sewage of these districts. These experiments were undertaken at the suggestion of the Sanitary Committee of the County Council, by reason of the imperfect methods of sewage disposal at present in operation. At Burslem the sewage is treated by land irrigation, preceded by screening and simple subsidence; at Stone by filtration through "polarite" after chemical precipitation; at Willenhall by land filtration after subsidence. The sewage in each case is of the ordinary domestic character, excepting at Stone, where it is complicated by effluents from breweries. The results of the experiments on portions of these sewage outfalls by biological methods after about a year's trial are highly satisfactory.

The biological method used was that of continuous "filtration" after screening and subsidence. The improvements in the effluents, as gauged by the amount of "organic ammonia" and "oxygen required," and compared with the effluents from the systems at present employed in the three districts is very marked, varying from 26.5 up to 74.2 per cent.

The chief practical difficulty in the way of prevention of pollution in Staffordshire is not so much the complication caused by trade effluents in the sewage, as the fact that the streams which receive the trade effluents are comparatively very small. Consequently the standard of purification of sewage effluents must be very high. Nevertheless, it is Dr. Reid's opinion that the sewage of the three districts in question may be sufficiently purified by biological methods on the lines adopted in these experimental plants, provided that certain improvements and additions are made. There can be no doubt that these experiments will be of great service to the authorities by whom they have been carried out, and also to all other authorities in the county who have to contend with similar difficulties.

These two reports by Dr. Reid show how much may be done to remedy defective methods of purification and to prevent the pollution of streams and rivers through the agency of a special committee of a county council when guided and advised by a competent and zealous medical officer. The results thus produced under the ordinary statutes will probably compare not unfavourably with those obtained by special Rivers Boards armed and strengthened by special Acts of Parliament. In some districts no doubt (for example, in Lancashire and Yorkshire) it would have been impossible to deal with "the gigantic problem of pollution," excepting through the action of special Boards provided with exceptional powers for the protection of certain watershed areas. In other districts, however, it may well be advisable to entrust the supervision and control of sewage purification and the prevention of river pollution to special committees of the county councils, provided that such committees are fairly representative of all the local interests concerned (of councils and water companies, manufacturers and industries). Such committees must also be strong enough to resist the undue influence of local interests and local jealousies, and to overcome the *vis inertiæ* of ignorance and indifference. Their chief business should be to press for the improvements required or, if necessary, to administer the law promptly and without fear or favour for the protection of the streams and rivers within their district.

THE MIDWIVES BILL.

The Coroners' Society.

At the annual meeting of the Coroners' Society on May 31st the Midwives Bill was considered, and at the conclusion of the discussion the following resolution, proposed by Mr. C. H. W. Parkinson, M.R.C.S., D.P.H., Coroner for East Dorset (of Wimborne), seconded by Mr. D. B. Balding, F.R.C.S., Coroner for Hertfordshire, and supported by Dr. Danford Thomas, Coroner for Central London, was adopted *nem. con.:*

That this Society, while approving of the principle of licensing midwives, is of opinion that the Bill now before Parliament does not provide for the adequate control and supervision of midwives.

The majority of the Coroners' Society are lawyers and it is therefore very satisfactory to find that by passing the above resolution they have endorsed the views of the British Medical Association on this important matter.

GRANTS FOR SCIENTIFIC RESEARCH.

The Council of the British Medical Association desires to remind members of the profession engaged in researches for the advancement of medicine and the allied sciences that it is prepared to receive applications for grants in aid of such research. Applications for sums to be granted at the next annual meeting must include details of the precise character and objects of the research which is proposed, and must be made on or before June 15th in writing addressed to the General Secretary, at the office of the Association, 429, Strand, W.C.

Reports of work done by the assistance of the Association grants belong to the Association.

Research Scholarships.

The Council of the British Medical Association is prepared to receive applications for two of the three Research Scholarships which are vacant, each of the value of £150 per annum, tenable for one year, and subject to renewal by the Council for another year.

Forms of application for the scholarships can be obtained from the General Secretary.

Francis Fowke, *General Secretary.*

429, Strand, May 10th, 1900.

The St. Petersburg Military Medical Academy has established a new clinic for alcoholic patients, for which the Russian Ministry of Finance has granted the sum of 44,000 roubles.

ROYAL NAVAL HOSPITALS RECENTLY BUILT AND BUILDING.

I.—ROYAL HOSPITAL, CHATHAM.

THE present Melville Hospital, Chatham—which was previously a Royal Marine infirmary attached to the headquarters of the marine division at Chatham, receiving also naval patients from the ships at Chatham and Sheerness, as also some foreign invalids—was built in 1828. It had three pavilions, each with a sunk basement and three storeys over. About sixteen years ago it was changed to a naval hospital, though still affording accommodation for marine patients from the division; subsequently one-storey storerooms were placed in the interspaces between the hospital pavilions, already too limited in breadth, and these storerooms obstructed both air and light from the basement rooms and lower wards; the latter were also without through ventilation, as there were two wards, side by side, on each floor.

The accommodation for patients afforded by this hospital has for many years been inadequate for the requirements of this naval port, owing to the great increase of the naval and marine establishments; the necessity for increased hospital accommodation became therefore an urgent question. In 1896 it was decided that such accommodation must be provided, as it was recognised by the Lords of the Admiralty that not only was the building quite out of date, but its original efficiency as a hospital had been seriously impaired by the placing of the storerooms in the limited pavilion interspaces.

The question of a site for the new hospital presented many difficulties owing to the rapid increase of buildings in the immediate vicinity of the hospital. The local naval authority, on the one hand, desired that a hospital should be near the Medway so that it would afford ready access for patients from the ships and marine headquarters; the possibility of a naval action in the North Sea had also to be considered; the medical authority, on the other hand, considered a hospital as a first consideration should have a suitable site and environment.

The naval authority suggested various sites of ready access from the river, some on the north, one on its south bank; the former were represented by the medical authority as being difficult of access for patients from naval and marine establishments at Chatham on the south of the river, as also for supplies, patients' relatives, etc., and they would all have been on clay. The site suggested on the south bank was close to the river, its fogs, and low-lying ground.

Inspector-General Turnbull, then principal medical officer of Melville Hospital, suggested a site, some farm land on the chalk and adjoining the famous Chatham Lines, which would secure a permanent open space on that side, while the ground on another side fell abruptly, precluding any building operations there; on a third side the ground sloped gradually in the direction of New Brompton; on the fourth side it was bounded by Mill Lane, where a main sewer already had been laid.

This site is 230 feet above and 5,000 feet from the river, with its numerous cement works on its north bank, and 3,700 yards from the Royal Dockyard; the fumes from the former works and the smoke from the Dockyard are very objectionable at the present naval hospital.

The Lords of the Admiralty, on personal inspection of the suggested sites, adopted that adjoining the Chatham Lines, believed to be a hospital site unsurpassed in the country; the difficulties of access for patients from the naval and marine establishments and from the river they thought might be surmounted.

Some difficulty arose subsequently with the military authorities as to the land being taken as the site of a permanent hospital building, which it was considered might interfere with the arrangements for the defence of this naval port; this was surmounted, but on account of this and other difficulties, the building of the hospital has been greatly delayed.

The designs for this new hospital are on the lines of the latest Metropolitan Asylums Board's hospitals, which by a process of evolution are perhaps the best at the present date; it will, as now designed, accommodate 600 patients, but there is ample space for further extensions.

The plan here given will furnish a general idea of the arrangements of the buildings.

The buildings are of red brick, with Doulton stone dressings and slated roofs, and in the modern Renaissance style of architecture.



Reference.—*A*, administrative block. *F*¹, *F*², *F*³, *F*⁴, *F*⁵, and *F*³, pavilions. *G*, officers pavilion. *H H*, day and dining rooms. *J*, kitchen and store. *K*, dispensary. *L*, operating room. *M*, latrines. *N*, laundries and engine house. *O*, water tower. *P*, mortuary. *Q*, infectious wards. *R*, infectious officers' wards. *S*, infectious receiving and discharge rooms. *T*, coal pound. *U*, principal medical officer's residence. *V*, officer's residences. *W W*, steward's and dispenser's houses. *X*, sick-berth attendants' quarters. *Y*, police lodge. *Z*, married attendants' quarters. *B*, infectious kitchen. *C*, stairs.

The Administrative Block.—This is fairly central in the hospital grounds, with a southern frontage; it is in front of the general hospital pavilions, a one-storey building, with central raised dome over the entrance hall, which serves as a waiting-room also; in the dome provision is made for a hospital museum. In the south aspect of this block are (in the following order): On the right, a room for ophthalmic observations, a dental surgeon's room, a surgeon's duty room, a waiting room for patients under special examination, and a sick-berth attendant's room; on the left of the entrance hall, in the following order: an out-patients' room for seeing pensioners and others resident in the vicinity, a patients' visitors' room, a nursing sister's duty room, the inspector-general's clerks' office, and the inspector-general's office. Behind these rooms, with a corridor intervening, and to the right of the entrance hall are a room for the clothing of patients admitted, a dining room, a bath room, and the

receiving room for patients, with a covering for vehicles over the entrance; to the left are two board or survey rooms.

The Hospital Pavilions.—Provision is made for six pavilions on the north side of the hospital for general cases; of these, five only are to be built at present. These pavilions are two-storeyed, with a raised basement, rising 11 feet from the ground, with concrete flooring; the basement is to be utilised for stores. The eaves of the pavilions are 37 feet from the ground; the clear interspaces are 90 feet, or greatly exceeding the breadth considered essential. To the south of the hospital proper are two full-length pavilions, one on either side, and two shorter ones next in order for officer patients; next to these on the west side an operation theatre, on the east side the dispensary; next to these a day room and a dining room for convalescents—a valuable new provision in naval hospitals; behind these are latrines. A corridor separates the north from the south pavilions, on a level with the ground floor. The hospital kitchen with its store rooms is placed centrally to the north, and is connected with the hospital corridor by another corridor, as also with the latrines for the cook's staff behind the kitchen; an ice store is situated in the basement of the kitchen store rooms.

Wards.—These are 120 feet long, 28½ feet broad, and 14 feet high, with 28 beds placed in pairs between the windows on either side of the wards; the fireplaces or open stoves are central, two in each ward, with smoke outlet, and air inlet beneath the floor, with terrazzo around the stoves and over these inlets and outlets; the rest of the flooring is of polished teak; the windows opposite each other on the two sides of the wards have hopper upper openings, with hot water or steam radiators below them; the walls are double with air interspace, and are faced on their inside with Keen's cement. All angles in the wards are rounded according to the most modern ideas; at the distal end of the wards, at the two corners, are angle towers projecting from the building, the one providing ward lavatories, the other a stair escape in case of fire.

At the proximal end of each ward is the attendants' room on one side, with inspection window in front and behind; a bath-room, with one fixed and one movable bath; on the opposite side, behind the first, is a small two-bedded room for the isolation of patients; behind the second, the staircase, with lift for food, coals, etc.

The pavilions for infectious diseases, four in number, are situated at the north angle of the hospital grounds, at the authorised distance from the public roads; covered communication is provided from the receiving room to each pavilion, and to the kitchen appropriated to this block.

The officers' wards in this infectious hospital are to the north of the special infectious pavilions, and communicates with them by a covered way. These wards are all constructed similarly to those of the main hospital, and are without angle towers, but with central sanitary annexes at their distal ends, built out from the wards; the larger wards contain 8 beds; there are two with 2 beds and two with single beds. The total accommodation for infectious diseases is 102 beds.

A clock tower 130 feet high is situated in the centre of the main group of buildings, at intersection of corridors. The laundry and engine house are placed to the north of the main hospital with the water tower, 117 feet high, providing a reserve water supply in case of fire immediately behind, centrally; the smoke and steam from the laundry and engine house are carried up a central shaft, thus protecting the water tanks from frost, and discharging the smoke well above the hospital. The mortuary is to the north of the west end of the laundry. The coal store, with a storage capacity of from 1,000 to 1,200 tons, is situated to the north-east of the same block with an entrance from the outer road.

The officers' houses are ranged somewhat in a semicircle in the southern portion of the hospital grounds, and are from the west as follows: The nursing sisters' quarters, the surgeons' quarters for six officers, residences for two Deputy Inspectors-General and the Inspector-General; all are provided with garden ground, but no stabling, even for the principal medical officer.

Further to the east is a house for the steward and the dispensers, another for the sick-berth staff, a vast improvement to the ordinary provision for these male nurses in naval hospitals, where they are accommodated in the hospital proper, encroaching on the accommodation for patients, and consequently interfering with the legitimate recreation of these men.

The main entrance to the hospital grounds, with a house for the married attendants on one side and a police lodge on the other, opens from Windmill Lane, which bounds the hospital on the south-west side.

The wards, buildings, etc., are to be lit with electric light, gas being supplied for cooking only.

NOVA ET VETERA.

WAR SURGEONS OF THE PAST.

The war in South Africa was, till Lord Roberts *restituit rem*, marked more by muddle than by management. Though the loss of life has been insignificant as measured by the standard of former wars, the number of reputations which have found a grave is abnormally high. But there is one point in the organisation of the campaign on which we may with justice pride ourselves: by universal testimony the wounded and the sick have from the first been cared for in a manner to which no previous war affords a parallel. Our correspondents give week by week pictures almost cinematographic in their vividness of what passes before their eyes—and under their hands—on the field and in the hospital; and the evidence of these expert witnesses is fully confirmed by that of literary "impressionists" like Mr. Rudyard Kipling, and more matter-of-fact writers, who cannot be suspected of professional bias. The efficiency of our medical arrangements is all the more satisfactory in view of the pessimistic vaticinations of Mr. I. S. Bloch (the well-meaning author of *Is War Now Impossible?*) Professor Billroth, Professor Bardeleben, and others as to the impossibility of providing adequate assistance for the sick and wounded under the conditions of modern warfare.

A few sketches, taken from life, of surgeons at work on the battlefield in the past may perhaps help the stay-at-home reader to a better appreciation of what is being done in the present. They are not intended to be elaborate studies of military surgery at different periods; they are merely what may be called historical "snapshots," taken from sources which happen to lie near at hand, and set down without regard to order of time. Such as they are, however, they form instructive commentaries on the letters of our special correspondents at the seat of war.

I.

The French Wars of the Sixteenth Century.

Ambroise Paré, one of the greatest of the old masters of surgical art, was not a military surgeon in the strict sense of the term, for in his day the French army had no organised medical service. But few men can have seen more of war, and probably no surgeon has ever had more to do with wounds made in battle. He was surgeon to four Kings, and during a period of thirty-two years accompanied the armies of France on most of their campaigns. He saw life from the highest to the lowest social strata, and, owing to his intimate relations with those who held in their hands the destinies of his country he was "in the movement" of his day. Thus his own career is full of interest, not only to those who wish to understand the development of surgical art, but to historical students, and even to the general reader. The story of Paré's life has been charmingly told by Mr. Stephen Paget,[1] who, in addition to adequate knowledge, scientific and historical, brings to the task a sympathy for his hero which has evidently made the work to him a labour of love. As a literary production the book takes high rank in these days of hasty compilation and slipshod writing.

The author has spared no pains in searching out every detail of Paré's life and social environment, and he gives us a portrait of the man in an appropriate historical setting. A further aid to the reader in reconstructing the figure of the great surgeon in the surroundings amid which he lived is afforded by the numerous illustrations of old Paris, plans of the battlefields on which Paré dressed the wounds which in

[1] *Ambroise Paré and His Times.* G. P. Putnam's Sons. New York and London. 1897. 10s. 6d.

his own famous phrase God healed, the instruments which he used, portraits of the princes and potentates to whom he ministered and of himself at different periods, the house in which he lived, etc.

It would be outside the scope of this article to give a general survey of Paré's career; for that the reader must go to Mr. Paget's book. We are here concerned only with Paré as the surgeon on the battlefield, Fortunately he has left us a delightful account of his campaigns in his *Apologie et Traicté Contenant les Voyages Faicts en Divers Lieulx*, the quaint French of which Mr. Paget has with rare skill rendered into fitting English. From this record we extract a few passages, which will serve to give an idea of what Paré did for the wounded, and of the conditions under which he worked. It should be explained that he wrote his account of his "Journeys in Divers Places" in reply to an attack made upon him towards the end of his his long life by Etienne Gourmelen, Dean of the Paris Faculty of Medicine, with which Paré was often at war. As a vindication of his professional achievements, he reviews for the confusion of his academic adversary, who, he says, knows nothing else but how to chatter in a chair, his own life of practical work in constant contact with hard facts in the field and in the hospital.

How Paré learnt his Art.

Addressing Gourmelen, Paré says:

Moreover, you say you will teach me my lesson in the operations of Surgery: which I think you cannot do; for I did not learn them in my study, or by hearing for many years the lectures of Physicians: but I was Resident three years in the Hospital of Paris, where I was able to see and learn much of the works of Surgery upon an infinity of sick folk, with anatomy on a quantity of dead bodies: as I have often given good proof in public at the Schools of Medicine in Paris. And my good luck has made me see much more than this. For being called to the service of the Kings of France (four of whom I have served) I have been in company at Battles, Skirmishes, Assaults, and Besiegings of Towns and Fortresses: as also I have been shut up in Towns with the Besieged, having charge to dress the Wounded. Also I have dwelt many years in this great and famous City of Paris, where thanks be to God I have always lived in very good reputation with all men, and have not held the lowest rank among those of my estate: seeing there has not been found a cure, were it never so great and difficult, that my hand and judgment have not been required.....

I pray you, if you have a good mind to the Publick, to review and correct your Book so soon as you can, not to keep young Surgeons in error by reading therein, where you teach them to use hot Irons after the amputation of Limbs to staunch the Blood, seeing there is another way not so cruel, and more sure and easy. Moreover if to-day after some Assault on a City, where diverse Soldiers have had legs and arms broken and carried off by Cannon-shots, or Cutlasses or other Instruments of War, if you should use hot Irons to stay the flow of Blood, you would need a Furnace, and much charcoal to heat them: and the Soldiers would have you in such horror for your cruelty, they would kill you like a Calf.....

His First Campaign.

His first "journey" was to Turin in 1537, when, as he says:

The great King Francis sent a large army to Turin, to recover the towns and castles that had been taken by the Marquis du Guast, Lieutenant-General of the Emperor. M. the Constable, then Grand Master, was Lieutenant-General of the army, and M. de Montejan was Colonel-General of the infantry, whose surgeon I was at this time. A great part of the army being come to the Pass of Suze, we found the enemy occupying it; and they had made forts and trenches, so that we had to fight to dislodge them and drive them out. And there were many killed and wounded on both sides, but the enemy were forced to give way and retreat into the castle, which was captured, part of it, by Captain Le Rat, who was posted on a little hill with some of his soldiers, whence they fired straight on the enemy. He received an arquebus-shot in his right ankle, and fell to the ground at once, and then said, "How they have got the Rat." I dressed him, and God healed him.

A Short Way with Hopeless Cases.

Paré entered the conquered city with the victorious army, passing over the dead bodies and some not yet dead, "hearing them cry under our horses' feet, and they made my heart ache to hear them." He felt sorry he had left Paris to come amid such scenes of blood. He goes on to give us a glimpse of how cases past all surgery were dealt with in those days:

Being come into the city, I entered into a stable, thinking to lodge my own and my man's horse, and found four dead soldiers and three propped against the wall, their features all changed, and they neither saw, heard, nor spake, and their clothes were still smouldering where the gunpowder had burned them. As I was looking at them with pity, there came an old soldier who asked me if there was any way to cure them. I said no. And then he went up to them and cut their throats gently, and without ill will toward them. Seeing this great cruelty, I told him he was a villain: he answered he prayed God, when he should be in such a plight, he might find someone to do the same for him, that he should not linger in misery.

How Paré Learnt to Treat Gunshot Wounds.

It was here, on his very first experience of gunshot wounds, that Paré, then aged 27, gave proof of the independence of judgment which made him what he was. Some of the garrison had taken refuge in the castle, where they held out for some time. But Paré must be allowed to tell the story in his own way:

The soldiers within the castle, seeing our men come on them with great fury, did all they could to defend themselves, and killed and wounded many of our soldiers with pikes, arquebuses, and stones, whereby the surgeons had all their work cut out for them. Now I was at this time a fresh-waters soldier, I had not yet seen seen seen wounds made by gunshot at the first dressing. It is true I had read in John de Vigo, first book, *Of Wounds in General*, eighth chapter, that wounds made by firearms partake of venenosity by reason of the powder; and for their cure he bids you cauterise them with oil of elders scalding hot, mixed with a little treacle. And to make no mistake, before I would use the said oil, knowing this was to bring great pain to the patient, I asked first before I applied it, what the other surgeons did for the first dressing, which was to put the said oil, boiling well, into the wounds with tents and setons; wherefore I took courage to do as they did. [To this Paré himself appends the marginal comment *Expérience rend l'homme hardy.*—A. P.] At last my oil ran short, and I was forced instead thereof to apply a digestive made of the yolks of eggs, oil of roses, and turpentine. In the night I could not sleep in quiet, fearing some default in not cauterising, that I should find the wounded to whom I had not used the said oil dead from the poison of their wounds; which made me rise very early to visit them, where, beyond my expectation, I found that those to whom I had applied my digestive medicament had but little pain, and their wounds without inflammation or swelling, having rested fairly well that night; the others, to whom the boiling oil was used, I found feverish, with great pain and swelling about the edges of their wounds. Then I resolved nevermore to burn thus cruelly poor men with gunshot wounds.

When I was at Turin, I found a surgeon famed above all others for his treatment of gunshot wounds; into whose favour I found means to insinuate myself, to have the recipe of his balm, as he called it, wherewith he dressed gunshot wounds. And he made me pay my court to him for two years, before I could possibly draw the recipe from him. In the end, thanks to my gifts and presents, he gave it to me; which was to boil, in oil of lillies, young whelps just born, and earthworms prepared with Venetian turpentine. Then I was joyful, and my heart made glad, that I had understood his remedy, which was like that which I had obtained by chance.

See how I learned to treat gunshot wounds; not by books .....

Paré as General Operator.

He had the lion's share of the work, and right manfully he did it:

And if there were four wounded, I always had three of them: and if there were question of cutting off an arm or a leg, or of trepanning, or of reducing a fracture or a dislocation, I accomplished it all. The Lord Marshal sent me now here now there to dress the soldiers committed to me who were wounded in other cities beside Turin, so that I was always in the country, one way or the other.

M. the Marshal sent to Milan, to a physician of no less reputation than the late M. le Grand for his success in practice, to treat him for an hepatic flux, whereof in the end he died. This physician was some while at Turin to treat him, and was often called to visit the wounded, where always he found me; and I was used to consult with him, and with some other surgeons; and when we had resolved to do any serious work of surgery, it was Ambroise Paré that put his hand thereto, which I would do promptly and skilfully, and with great assurance, insomuch that the physician wondered at me, to be so ready in the operation of surgery, and I so young. One day discoursing with the Lord Marshal, he said to him [Paré, who had the guid conceit of himself for which the Scotch minister prayed, here makes the marginal note:—"Tesmoignage de la dexterité de l'Autheur." —A. P.]: "Signor, tu hai un Chirurgico giovane di anni, ma egli è vecchio di sapere è di experientia: Guardalo bene, perche egli ti farà servicio et honore." That is to say: "Thou hast a surgeon young in age, but he is old in knowledge and experience: take good care of him, for he will do thee service and honour." But the good man did not know I had lived three years at the Hôtel Dieu in Paris, with the patients there.

A Brilliant Bullet Extraction.

In 1543 Paré went campaigning with M. de Rohan as surgeon of his company. At Perpignan the enemy made a sally in which M. de Brissac, then grand master of the artillery, was hurt by an arquebus shot in the shoulder. This gave Paré an opportunity of what is vulgarly called "wiping the eyes" of some of his professional brethren, a circumstance which he records under the complacent heading, "*Addresse de l'Auteur.*"

When he retired to his tent, all the wounded followed him, hoping to be dressed by the surgeons who were to dress him. Being come to his tent and laid on his bed, the bullet was searched for by three or four of the best surgeons in the army, who could not find it, but said it had entered into his body.

At last he called for me, to see if I could be more skilful than they, because he had known me in Piedmont. Then I made him rise from his bed, and told him to put himself in the same posture that he had when he was wounded, which he did, taking a javelin in his hand just as he had held his pike to fight. I put my hand around the wound, and found the bullet.....Having found it, I showed them the place where it was, and it was taken out by M. Nicole Lavernot, surgeon to M. the Dauphin, who was the King's Lieutenant in that army; all the same, the honour of finding it belonged to me.

The "Wind" of a Cannon Ball.

In a campaign against the English in 1545 Paré came under

fire, and confesses that it made him uncomfortable. He also had an opportunity of observing the effects of the "wind" of cannon balls.

One day as I was going through the camp to dress my wounded men the enemy who were in the Tour d'Ordre fired a cannon against us, thinking to kill two men-at-arms who had stopped to talk together. It happened that the ball passed quite close to one of them which threw him to the ground, and it was thought that the ball had touched him, which it did not; but only the wind of the ball full against his corselet with such force that all the outer part of the thigh became livid and black, and he could hardly stand. I dressed him and made diverse scarifications to let out the bruised blood made by the wind of the ball; and by the rebound that it made on the ground. It killed four soldiers, who remained dead where they fell.

I was not far from his shot so that I could just feel the moved air, without it doing me any harm save a fright, which made me duck my head low enough; but the ball was already far away. The soldiers laughed at me to be afraid of a ball which had already passed.

A Terrible Wound.

Here, too, he had an opportunity of distinguishing himself. The incident gives a vivid idea of the rough surgery of those days:

Monseigneur the Duc de Guise, François de Lorraine, was wounded before Boulogne, with a thrust of a lance, which entered above the right eye, toward the nose, and passed out on the other side between the ear and the back of the neck, with so great violence that the head of the lance, with a piece of the wood, was broken and remained fast; so that it could not be drawn out save with extreme force with smith's pincers. Yet notwithstanding the great violence of the blow, which was not without fracture of bones, nerves, veins and arteries, and other parts torn and broken, my lord, by the grace of God was healed. He was used to go into battle always with his vizard raised: that is why the lance passed right out on the other side.

In 1552 he accompanied M. de Rohan to Germany. The King was with the army. Three diverse times on this expedition Paré thought to die of hunger because food was not to be got. A soldier in attempting to loot was badly hurt, and Paré cured him. His comrades rewarded him with a collection of crowns and half-crowns.

The Surgeon Smuggled into a Beleaguered City.

In the same year the French were besieged in Metz by Charles the Fifth, and there was such mortality among the wounded that it was thought that the salves with which they were dressed had been poisoned. Wherefore M. de Guise and the Princes begged the King if possible to send Paré to them with a supply of drugs. Paré did not believe that the drugs were poisoned, but that the severe cutlass and arquebus wounds and the extreme cold were the cause why so many died. An Italian captain was found who undertook—for a consideration—to get Paré into Metz. So taking of the drugs which he considered necessary as much as a post-horse could carry, Ambroise started on his dangerous journey.

When we were within eight or ten leagues of Metz, we began to go by night only; and when we came near the enemy's camp I saw, more than a league and a half off, fires lighted all round the town, as if the whole earth were burning; and I believed we could never pass through these fires without being discovered, and therefore hanged and strangled or cut in pieces, or made to pay a great ransom. To speak truth I could well have wished myself back in Paris, for the great danger that I foresaw. God guided our business so well, that we entered into the town at midnight, thanks to a signal the captain had with another captain of the company of M. de Guise; to whom I went, and found him in bed, and he received me with high favour, being right glad at my coming.

I gave him my message as the King had commanded me, and told him I had a little letter for him, and the next day I would not fail to deliver it. Then he ordered me a good lodging, and that I should be well treated, and said I must not fail next morning to be upon the breach, where I should find all the princes and seigneurs, and many captains. Which I did, and they received me with great joy, and did me the honour to embrace me, and tell me I was welcome; adding they would no more be afraid of dying, if they should happen to be wounded.

The Surgeon's Fees.

For mending the leg of a Lieutenant of His Majesty's Guards he received a pipe of wine bigger than a pipe of Anjou, with the promise of another when it was drunk. Throughout the siege he worked among the sick and wounded, that when he reported himself to the King His Majesty gave him two hundred crowns, in addition to a hundred which he had had before setting out, and said to him he would never leave him poor.

Carried to the Wounded "Like the Body of a Saint."

In 1553 Paré was sent by the King to Hesdin, where the French were besieged by the Emperor Charles. There he says he had no rest for dressing the wounded. For food they had nothing but beef of old shrunk cows seized in the neighbourhood of the town and salted and half cooked, so that he who would eat it must drag it out with his teeth, as birds of prey tear their food. The linen for dressing wounds was washed daily, and dried till it was as hard as parchment. They were in great want of water, and to drink what there was they had to strain it through napkins. So hard pressed were they that the question of surrender was discussed. Paré says:

A council was held, to which I was called, to know if I would sign the surrender of the town; with many captains, gentlemen and others, I answered it was not possible to hold the town, and I would sign the surrender with my own blood, for the little hope I had we could resist the enemy's forces, and for the great longing I had to be out of this hell and utter torture; for I slept neither night nor day for the great number of the wounded, who were about two hundred. The dead were advanced in putrefaction, piled one upon the other like faggots, and not covered with earth, because we had none. And if I went into a soldier's lodging, there were soldiers waiting for me at the door when I came out, for me to dress others: it was who should have me, and they carried me like the body of a saint, with my feet off the ground, fighting for me. I could not satisfy this great number of wounded: nor had I got what I wanted for their treatment. For it is not enough that the surgeon do his duty toward his patients, but the patient also must do his; and the assistants, and external things, must work together for him: *see Hippocrates, Aphorism the First.*

A King's Surgeon in Disguise.

When the surrender was decided on, Paré gave his velvet coat, a satin doublet, and a cloak of fine cloth trimmed with velvet to a soldier; who gave him in exchange a bad doublet, all torn and ragged with wear, a frayed leather collar, a bad hat and a short cloak. Further to disguise his quality he dirtied the neck of his shirt with water mixed with a little soot, rubbed his hose at the knees and at the heels with a stone as though they had been long worn. He did the same to his shoes "till one could have taken me for a chimney sweep rather than a king's surgeon."

The Surgeon taken Prisoner.

He was taken prisoner with a wounded officer of high rank who asked him to remain with him. The captors, with the object of holding the officer to a heavy ransom, asked if his wound could be cured. Paré replied that it was incurable. He then bethought himself that they would send physicians and surgeons to examine the wounded man; and he argued within himself if he ought to play the simpleton and not let himself be known for a surgeon lest they should keep him to dress their wounded, and in the end he should be found to be the king's surgeon and be made to pay a heavy ransom. On the other hand, he feared that if he did not show himself to be a surgeon and had dressed the officer skilfully they would cut his throat.

A Consultation.

He therefore made up his mind to disclose his professional character. In due course the men of art came to see the patient:

The Emperor's physician bade me declare the essential nature of the wound, and what I had done for it. And all his assistants kept their ears wide open, to know if the wound were or were not mortal. I commenced my discourse to them, how M. de Martigues, looking over the wall to mark those who were sapping it, was shot with an arquebus through the body, and I was called of a sudden to dress him. I found blood coming from his mouth and from his wounds. Moreover, he had a great difficulty of breathing in and out, and air came whistling from the wounds, so that it would have put out a candle; and he said he had a very great stabbing pain where the bullet had entered.....I withdrew some scales of bone and put in each wound a tent with a large head, fastened with a thread, lest on inspiration it should be drawn into the cavity of the chest; which has happened to surgeons to the detriment of the poor wounded; for being fallen in, you cannot get them out; and then they beget corruption, being foreign bodies. The tents were anointed with a preparation of yolk of egg, Venice turpentine, and a little oil of roses..... I put over the wounds a great plaster of diachylum, wherewith I had mixed oil of roses, and vinegar, to avoid inflammation. Then I applied great compresses steeped in oxycrate, and bandaged him, not too tight, that he might breathe easily. Next, I drew five basons of blood from his right arm, considering his youth and his sanguine temperament.....Fever took him soon after he was wounded, with feebleness of the heart.....His diet was barley water, prunes with sugar, at other times broth; his drink was a ptisane. He could lie only on his back.....What more shall I say? but that my Lord de Martigues never had an hour's rest after he was wounded.....These things considered, gentlemen, no other prognosis is possible, save that he will die in a few days, to my great grief.

Home from the Wars.

The patient died, but Paré had so impressed his captors that the General tried to induce him to enter his service, and was very angry at his refusal. After a time he was released, and reported himself to the King, who gave him 200 crowns to take him home, and he was thankful to be free "out of this great torment and thunder of the diabolical artillery and away from the soldiers blasphemers and deniers of God."

Nevertheless, Paré often again found himself within earshot of the diabolical artillery, for he went on many more campaigns before he finally gave up following the wars in 1569. Here, however, for the present at least, we must leave him.

BRITISH MEDICAL ASSOCIATION.

SIXTY-EIGHTH ANNUAL MEETING.

THE sixty-eighth annual meeting of the British Medical Association will be held at Ipswich on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1900.

President: JOHN WARD COUSINS, M.D.Lond., F.R.C.S.Eng., Senior Surgeon Royal Portsmouth Hospital.

President-Elect: WILLIAM ALFRED ELLISTON, M.D. Senior Surgeon East Suffolk and Ipswich Hospital.

President of the Council: JOHN ROBERTS THOMSON, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

Treasurer: ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery.

An Address in Medicine will be delivered by PHILIP HENRY PYE-SMITH, M.D., F.R.S., Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by FREDERICK TREVES, F.R.C.S., Surgeon Extraordinary to H.M. the Queen.

An Address in Obstetrics will be delivered by WILLIAM J. SMYLY, M.D., F.R.C.P.I., Examiner in Midwifery, Royal College of Physicians, Ireland.

The Scientific Business of the Meeting will be conducted in Thirteen Sections, as follows, namely:

A. MEDICINE.

President: THOMAS BUZZARD, M.D. *Vice-Presidents:* Mrs. E. GARRETT ANDERSON, M.D.; SAMUEL J. BARTON, M.D. *Honorary Secretaries:* FREDERICK WILLIAM BURTON-FANNING, M.D., 1 St. Faith's Lane, Norwich; THOMAS WARNER, M.D., 12, Museum Street, Ipswich.

The following discussions have been arranged:

Wednesday, August 1st.—Influenza as it affects the Nervous System. Dr. Judson S. Bury will open this discussion, and it is hoped that the following will take part in it: Sir Wm. Broadbent, Bart., M.D., F.R.S., Sir Peter Eade, M.D., Professor J. B. Bradbury, M.D., Dr. S. H. Habershon, Dr. James Taylor, Dr. J. S. Risien Russell, Dr. H. Handford, Dr. T. D. Savill, and Dr. F. M. Hope.

Thursday, August 2nd.—The Problem of Gastric Ulcer. This will be opened by Dr. J. F. Payne, and it is hoped that the following will take part in the discussion: Professor T. Clifford Allbutt, M.D., F.R.S., Dr. S. Martin, F.R.S., Dr. S. H. Habershon, Dr. Soltau Fenwick, Dr. R. Saundby, Dr. H. Handford, Dr. W. Gordon, Dr. G. Herschell, Dr. W. Calwell, and Dr. H. Walsham.

A list of papers selected for presentation to the Section will be published next month.

B. SURGERY.

President: HOWARD MARSH, F.R.C.S. *Vice-Presidents:* SAMUEL HERBERT BURTON, F.R.C.S.; THOMAS HERBERT MORSE, F.R.C.S. *Honorary Secretaries:* WALTER GEORGE SPENCER, M.S., 35, Brook Street, W.; HERBERT HENRY BROWN, M.D., F.R.C.S., 3, Museum Street, Ipswich.

The following discussions have been arranged:

1. Subdiaphragmatic Abscess. Introduced by Mr. Rickman J. Godlee, F.R.C.S. The following gentlemen will take part: Messrs. Mayo Robson, Charters Symonds, Musgrave, Jordan Lloyd, and Bidwell.

2. The Methods at present available for the Treatment of Simple (Subcutaneous) Fracture. Introduced by Mr. William H. Bennett, F.R.C.S. The following gentlemen will take part: Messrs. Keetley, Robert Jones, Eve, J. Hutchinson, jun., and Jordan Lloyd.

The following papers are announced:

BOYD, Stanley, M.B., B.S. Oöphorectomy in Cancer of the Breast with Results to Date.

BURTON, S. H., B.S. On the Removal of Large Stones from the Bladder, with notes of a case. (Mr. Reginald Harrison will take part in the discussion.)

ECCLES, W. McAdam, M.S. Hernia of the Large Intestine.

HUTCHINSON, Jonathan, jun., F.R.C.S. The Substitution (when practicable) of Subastragalar for Syme's Amputation.

PHELPS, A. M., M.D. On the Open Operation for Club Foot. (The following gentlemen will take part in the discussion: Messrs. Jackson Clarke and Tubby.)

ROBINSON, H. Betham, M.S. A Case of Obstinate Jaundice in which Cholecystotomy was performed with Complete Success.

ROBSON, A. W. Mayo, F.R.C.S. (Title not received.)

WALLIS, F. C., M.B., B.C. Stricture of the Rectum: its Causes and Radical Cure.

Members proposing to take part in the discussions or desirous of reading papers are requested to send their names at their earliest convenience to the Hon. Secretaries.

C. OBSTETRICS AND GYNÆCOLOGY.

President: WALTER SPENCER ANDERSON GRIFFITH, M.D. *Vice-Presidents:* MICHAEL BEVERLEY, M.D.; Mrs. MARY ANN DACOMB SCHARLIEB, M.D. *Honorary Secretaries:* JOHN DAVID MALCOLM, M.B., F.R.C.S.Edin., 13, Portman Street, Portman Square, W.; SAMUEL OLIVER EADES, L.R.C.P., F.R.C.S.Edin., Manor House, St. Peters, Ipswich.

The following discussions have been arranged:

Wednesday, August 1st.—Puerperal Fever in Relation to Notification. To be opened by Dr. Berry Hart.

Thursday, August 2nd.—The Natural History of Fibroids and Recent Improvements in their Treatment. To be opened by Mr. Alban Doran, F.R.C.S.

Friday, August 3rd.—*Post-Partum* Hæmorrhage, its Prevention and Treatment. To be opened by Dr. Dakin.

The following gentlemen have signified their intention of joining in the discussions: Dr. Herman, Dr. Boxall, Mr. Stanmore Bishop, Dr. More Madden, Dr. Purslow, Dr. George Elder, Dr. Byers, Dr. John Campbell (Belfast), and Messrs. Harrison Cripps, Skene Keith, and W. H. C. Newnham.

The following papers have been proposed:

CRIPPS, Harrison, F.R.C.S. The Surgical Treatment of Uterine Fibroids.

MADDEN, Thomas More, F.R.C.S.Edin. On the Modern Treatment and Prevention of *Post-Partum* Hæmorrhage.

NEWNHAM, W. H. C., M.A., M.B., M.R.C.S. Successful Removal of Fibroid, 13 lbs. 11 ozs., by Intraperitoneal Hysterectomy.

PURSLOW, C. E., M.D. An Account of a Case of Complete Inversion of the Uterus of Three Years' Duration.

SCHARLIEB, Mrs., M.D., M.S. The Method Used and the Results Obtained in 40 Cases of Abdominal Hysterectomy for Fibroids at the New Hospital for Women.

WILLIAMS, Wm. Roger, F.R.C.S. When are Radical Operations for Myoma of the Uterus Necessary?

D. PUBLIC MEDICINE.

President: JOHN CLOUGH THRESH, M.D., D.Sc., D.P.H. *Vice-Presidents:* HENRY HANDFORD, M.D., D.P.H.; HARRY COOPER PATTIN, M.D., D.P.H. *Honorary Secretaries:* GEORGE VINCENT, M.D., D.P.H., North Lodge, Anglesea Road, Ipswich; EDWARD PETRONELL MANBY, M.D., D.P.H., Local Government Board, Whitehall, S.W.

The following discussions have been arranged:

1. Can Modern Systems of Sewage Treatment be depended upon to Remove the Bacillus Typhosus and Allied Organisms?

2. The Provision of Cottages in Rural Districts, and its bearing upon Public Health.

3. What Action can be taken by Sanitary Authorities for the Prevention of Tuberculous Disease, apart from the Control of Milk and Meat Supplies?

4. Should Municipalities provide Common Lodging-houses and Workmen's Dwellings?

The following papers have been proposed:

BEEVOR, Sir H. R., Bart. Rural Phthisis and the Insignificance of Case-to-Case Infection.

WILLIAMS, W. Roger, F.R.C.S. The Prevalence of Cancer in different Countries and its Increase.

E. PSYCHOLOGY.

President: R. PERCY SMITH, M.D. *Vice-Presidents:* EDMUND LEWIS ROWE, L.R.C.P.; WILLIAM ALDREN TURNER, M.D. *Honorary Secretaries:* CECIL ANTHONY PERRIER OSBURNE, F.R.C.S.Edin., The Grove, Old Catton, Norwich; JAMES RICHARD WHITWELL, M.B., County Asylum, Melton, Suffolk.

The following discussions have been arranged:

Wednesday, August 1st.—The Bearing of Sexual Function

and Disease of the Sexual Organs on Insanity and Crime. Introduced by Dr. Macnaughton-Jones.

Thursday, August 2nd.—The Colony Treatment of Epileptics. Introduced by Dr. Aldren Turner.

Friday, August 3rd.—Organotherapeutics in Mental Disease. Introduced by Dr. Easterbrook.

The following gentlemen have intimated their intention to take part in the discussion: Dr. Crochley Clapham, Dr. Rayner, Dr. Robert Jones, Dr. E. M. Corner, Dr. Soutar, Dr. Lewis Bruce, Dr. G. E. Mould.

The following papers have been proposed:

CRAIG, Maurice, M.D. On Blood Pressure in Mental Disease.
JONES, Robert, M.D. Saturnine Encephalitis.
MACCORMACK, J. M., M.D. The Relation of the Lunacy Laws to Neuro-psychological Diseases.
NORMAN, Conolly, F.R.C.P.I. The Method of Keeping Clinical Records in Asylums.
PASMORE, E., M.D. Epileptic Insanity.
SMITH, Percy, M.D. Peripheral Neuritis and Insanity.
TURNER, John, M.B. The Pathological Histology of Acute Delirious Insanity. (With Lantern Demonstration.)
WHITE, Ernest, M.B. The Treatment of the more Acute Forms of Melancholia.

F. PHYSIOLOGY.

President: Professor WILLIAM DOBINSON HALLIBURTON, M.D., F.R.S. *Vice-Presidents:* EDWARD WILLIAM WACE CARLIER, M.D.; Professor CHARLES S. SHERRINGTON, M.D., F.R.S. *Honorary Secretaries:* W. H. THOMPSON, M.D., Queen's College, Belfast; WILLIAM LEGGE SYMES, M.R.C.S., Physiological Department, St. Mary's Hospital Medical School, W.

The following discussions have been arranged:

1. The Formation and Excretion of Uric Acid in Health and Disease. To be opened by the President. Professor Vaughan Harley, M.D., F.R.C.P., F. G. Hopkins, B.Sc., A. Haig, M.D., T. H. Milroy, M.D., W. J. Smith Jerome, M.D., etc., will take part in the discussion.

2. Muscular Tonus in Relation to Affections of the Nervous System. To be opened by F. W. Mott, M.D., F.R.C.P., F.R.S. Professor Victor Horsley, F.R.S., Professor C. S. Sherrington, F.R.S., J. J. Muskens, M.D., etc., will take part in the discussion.

The proceedings will also include papers and demonstrations on other branches of physiology and histology, among others the following:

COFFEY, Professor D. J. Histology of the Œsophageal Mucous Membrane.
GOODBODY, F. W., M.D. Influence of Sodium Salicylate on General Metabolism.
HARRIS, Professor D. F. The Inertia of Protoplasm.
MILROY, T. H., M.D. The *Rôle* of the Liver in the Metabolism of Nucleins.
SHERRINGTON, Professor C. S., F.R.S. Spinal Vascular Reflexes.
THOMPSON, Professor W. H. Anæsthetics and Urinary Secretion.
WALLER, A. D., F.R.S. Influence of Massage on the Retinal Response to Light.

G. PATHOLOGY.

President: EDWARD E. KLEIN, M.D., F.R.S. *Vice-Presidents:* WILLIAM MILLER CROWFOOT, M.B.; Professor ROBERT MUIR, M.D. *Honorary Secretaries:* ALEX. GRANT RUSSELL FOULERTON, F.R.C.S., Dunsdale, Mulgrave Road, Sutton, Surrey; SYDNEY HERBERT LONG, M.B., 37, St. Giles Street, Norwich.

The following discussions have been arranged:

Wednesday, August 1st.—The Pathological Distribution of B. Diphtheriæ, and the Bacteriological Diagnosis of Diphtherial Infection. Introduced by Dr. F. W. Andrewes.

Thursday, August 2nd.—The Pathology of Cirrhosis of the Liver in Adults and Young Children. Introduced by Dr. Arthur Voelcker. The following gentlemen will take part in this discussion: Drs. Lazarus-Barlow and Dr. Poynton.

The following papers have been proposed:

WALSHAM, Hugh, M.D. The Muscular Atrophy of Pulmonary Tuberculosis.
LAZARUS-BARLOW, W. S., M.D. On Lipomata of the Kidney.
WILLIAMS, William Roger, F.R.C.S. The Pathogenesis of Myoma of the Uterus.

Members proposing to take part in the discussions or desirous of reading papers are requested to send their names at their earliest convenience to the Honorary Secretaries.

H. OPHTHALMOLOGY.

President: WILLIAM ARTHUR BRAILEY, M.D. *Vice-Presidents:* HAYNES SPARROW ROBINSON, M.R.C.S.; HENRY WORK DODD, F.R.C.S. *Honorary Secretaries:* CHARLES DEVEREUX MARSHALL, F.R.C.S., 10, Devonshire Street, Portland Place, W.; WALTER WILLIAM SINCLAIR, M.B., 16, Museum Street, Ipswich.

The following discussions have been arranged:

1. The Treatment of Chronic Glaucoma. Introduced by F. Richardson Cross, F.R.C.S. Messrs. T. H. Bickerton, K. A. Grossman, G. Foggin, and John Hern, will take part in the discussion.

2. The Treatment of Lachrymal Obstructions. Introduced by George A. Berry, M.B., F.R.C.S.E. Messrs. T. H. Bickerton, K. A. Grossman, G. Foggin, John Hern, Kenneth Scott, and Ernest H. Cartwright, will take part in the discussion.

The following papers have been proposed:

BUCHANAN, Leslie, M.B. On a Case of Congenital Microphthalmos with Cyst.
FOGGIN, George, L.R.C.P. On Epicanthus.
GROSSMAN, K. A., M.D. (Title not received).

I. DISEASES OF CHILDREN.

President: FREDERICK TAYLOR, M.D. *Vice-Presidents:* RICHARD WILLIAM BROGDEN, M.B.; JOHN THOMSON, M.D. *Honorary Secretaries:* WILLIAM SOLTAU FENWICK, M.D., 8, Devonshire Street, Portland Place, W.; ALFRED M. GOSSAGE, M.B., 54, Upper Berkeley Street, W.

Wednesday, August 1st.—The Nature and Varieties of Pneumonia in Children. Introduced by Nestor Tirard, M.D. It is hoped that the following will take part in the discussion: More Madden, M.D.

Thursday, August 2nd.—On Lateral Curvature, Flat-foot and Knock-knee. Introduced by Arbuthnot Lane, F.R.C.S. It is hoped that the following will take part in the discussion: A. H. Tubby, M.S., J. J. Clarke, F.R.C.S., and Noble Smith, F.R.C.S.Edin.

Friday, August 3rd.—Enlargements of the Spleen in Children. Introduced by Samuel West, M.D.

The following papers have been promised:

LITTLE, Muirhead, F.R.C.S. An Analysis of a Series of Cases of Infantile Paralysis, with some notes on treatment.
NICOLL, J. H., M.B. (Glasgow). Congenital Hypertrophic Stenosis of the Pylorus, with an account of a case successfully treated by operation.
OVEREND, W., M.D. (Clacton-on-Sea). The Caloric Values of Certain Artificial Infant Foods.
PARKINSON, Porter, M.D. Some Abnormal Empyemata in Children.
THOMSON, R. S., M.D., and LOGAN TURNER, M.D. Congenital Laryngeal Stridor.

J. PHARMACOLOGY AND THERAPEUTICS.

President: Professor WALTER GEORGE SMITH, M.D. *Vice-Presidents:* EDWARD LIVEING FENN, M.D.; CHARLES ROBERTSHAW MARSHALL, M.D. *Honorary Secretaries:* ALAN REEVE MANBY, M.D., East Rudham, Norfolk; WALTER ESSEX WYNTER, M.D., 30, Upper Berkeley Street, W.

The following discussions have been arranged:

1. The Treatment of Internal Hæmorrhage. Professor Bradbury, M.D., Lindley Scott, M.D., James A. Lindsay, M.D., and Walter E. Dixon, M.D.

2. Serumtherapy. T. J. Bokenham, M.D.

3. Diet in the Treatment of Disease. Professor Bradbury, M.D., G. King Martyn, M.D., Thomas Dutton, M.D., Arthur P. Luff, M.D., Lindley Scott, M.D., James A. Lindsay, M.D., David Sommerville, M.D.

4. The Therapeutics of Open Air. F. W. Burton-Fanning, M.D., Lindley Scott, M.D., James A. Lindsay, M.D., C. Muthu, M.D.

The following papers have been proposed:

DIXON, Walter E., M.D., The Influence of Certain Drugs on the Vascular Mechanism of the Testis.
HERSCHELL, George, M.D. Demonstration of the Apparatus for Administering the Intragastric Shampoo.
JOWETT, H. A. D., D.Sc. The Chemistry of the Jaborandi Alkaloids.
JOWETT, H. A. D., D.Sc., and MARSHALL, Professor C. R., M.D. Remarks on Extract Jaborandi Liquidum (*B.P.*).
MARSHALL, Professor C. R., M.D. The Pharmacology of the Jaborandi Alkaloids.
MARTYN, G. J. King, M.D. The Treatment of Gouty Eczema.

K. LARYNGOLOGY AND OTOLOGY.

President: SCANES SPICER, M.D. *Vice-Presidents:* HERBERT TILLEY, M.D.; WILLIAM MILLIGAN, M.D. *Honorary Secretaries:* HARRY LAMBERT LACK, M.D., 48, Harley Street, Cavendish Square, W.; ARTHUR YOUNG PRINGLE, L.R.C.P., 64, St. Matthew Street, Ipswich.

The following discussions have been arranged:

The Indications for Intranasal Treatment in Ear Disease. Introduced by Dr. P. McBride, Dr. Edward Law, and Mr. Cresswell Baber.

The Pathology and Treatment of Toxic Paralyses of the Larynx. Introduced by Dr. Watson Williams and Dr. Herbert Tilley.

L. TROPICAL DISEASES.

President: Colonel KENNETH MACLEOD, M.D. (ret. I.M.S.). *Vice-Presidents:* Surgeon-Lieutenant-Colonel OSWALD BAKER, M.D., I.M.S.; Major RONALD ROSS, I.M.S. *Honorary Secretaries:* ANDREW DUNCAN, M.D., M.R.C.P., School of Tropical Diseases, Albert Dock, E.; GUTHRIE RANKIN, M.D., M.R.C.P., 4, Chesham Street, Belgrave Square, S.W.

On Wednesday the business will be introduced by a short address from the President, Colonel Kenneth Macleod.

The following subjects have been arranged for discussion:

Wednesday, August 1st.—Quinine: its Action and Modes of Employment in Malaria. The discussion on this question will be opened by Dr. Andrew Duncan, M.R.C.P. The following will take part in the discussion: Lieutenant-Colonel Stewart, I.M.S.

Thursday, August 2nd.—Ankylostomiasis. The discussion on this question will be opened by Major G. M. Giles, M.B., F.R.C.S.

Friday, August 3rd.—The Etiological and Pathological Relationships of Yaws. The discussion on this question will be opened by Mr. Jonathan Hutchinson, F.R.S., LL.D.

The following gentlemen have intimated their intention to take part in the discussions: Dr. Patrick Manson, Mr. James Cantlie, Colonel Kenneth Macleod, Deputy Inspector-General John Tyndall, Mr. Malcolm Morris, Surgeon-Lieutenant-Colonel Oswald Baker, Sir Wm. Kynsey, Major Wilson, Dr. Fielding-Ould, Dr. Alfred Hillier, Dr. James Watson, Dr. Sandwith (Cairo), Dr. Thin, Major W. J. Buchanan, I.M.S., Major F. P. Maynard, I.M.S., Lieutenant-Colonel Maitland, C.B., I.M.S.

The following papers have been proposed:

BASSETT-SMITH, Percy W., Staff-Surgeon, R.N. Abscess of Left Lobe of Liver, with Remarks, particularly referring to the Amœbic Causation.
BUCHANAN, Major W. J., M.B. Hot Weather Diarrhœa in India.
CANTLIE, James, F.R.C.S. Subhepatic Abscess.
DUNCAN, Andrew, M.D. The Diseases of Ghoorkhas.
MACLEOD, Colonel Kenneth, M.D. The Management of Lung Lesions consequent on Liver Abscess.
SAMBON, Louis, M.D. The Geographical Distribution and Natural History of Plague.
SMITH, W. Johnson, F.R.C.S. The Surgical Treatment of Hepatic Abscess.
THIN, George, M.D. A note on a case of Blackwater Fever, with Specimens.
WILLIAMSON, George A., M.D. The Cyprus Sphalangi and its Connection with Anthrax.

Members proposing to take part in the discussions or desirous of reading papers should communicate, without delay, with the Honorary Secretaries.

M. NAVY, ARMY, AND AMBULANCE.

President: Inspector-General BELGRAVE NINNIS, M.D., R.N. *Vice-Presidents:* Surgeon-General HENRY SKEY MUIR, M.D., A.M.S.; Brigade-Surgeon-Lieutenant-Colonel G. S. ELLISTON, V.D. *Honorary Secretaries:* JAMES HARPER, M.D., 25, Rosary Gardens, South Kensington, S.W.; FRANCIS AUGUSTUS BROOKS, M.D., St. Felix, Felixstowe, Suffolk.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 31ST, 1900.

9.30 A.M.—Meeting of 1899-1900 Council.
11 A.M.—Church Service.
2 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business.
3.30 P.M.—Adjourned General Meeting from 2 P.M. President's Address.

WEDNESDAY, AUGUST 1ST, 1900.

9.30 A.M.—Meeting of 1900-1901 Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Address in Medicine.

THURSDAY, AUGUST 2ND, 1900.

9.30 A.M.—Meeting of Council.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Address in Surgery.
7 P.M.—Public Dinner of the Association.

FRIDAY, AUGUST 3RD, 1900.

10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Address in Obstetrics.

SATURDAY, AUGUST 4th, 1900
Excursions.

ANNUAL MUSEUM.

THE Annual Museum in connection with the sixty-eighth meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments, comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary appliances and ambulances.

Two very good halls, practically adjoining each other, have been obtained for the Museum.

SECTIONS A and D will be held in the Public Hall, Westgate Street, a fine well-lighted and ventilated room. Length 119 feet, width 49 feet.

SECTIONS B and C will be held in the Old Museum Rooms, on the first floor, close to the Public Hall. Length of room, 71 feet, width 25 feet.

Both halls are very central.

Exhibitors (other than members of the medical profession) will be charged for table, floor, and wall space as follows: In Sections A, B, and C from 3s. 6d. per square foot, depending on the position of the table, tables 3 feet and 3 feet 6 inches wide being provided. In Section D 6d. per square foot for floor space (all fittings to be provided by the exhibitor). Wall space (where available) for advertisements will be charged for at 6d. per square foot.

Advertisements in Museum Catalogue.—A catalogue will be printed, and 2,000 copies distributed gratis to members of the Association. Prepaid advertisements, to be sent before June 20th, will be inserted. Further particulars will be sent on application.

The plans of the hall, and forms of application for space, will be ready early in April.

REGULATIONS.

1. All communications on general matters connected with the Museum, and all applications for space, should be addressed to Mr. C. K. Moseley, 14, Northgate Street, Ipswich, before June 1st. N.B.—No space will be allotted before that date.

2. A brief description of each exhibit for insertion in the Museum Catalogue must be in the hands of the Secretary before June 19th.

3. Space will as far as possible be allotted in the order of application and in proportion to the amount applied for, the Committee reserving power to give preference to *bonâ-fide* inventions and improvements not previously exhibited, and also to refuse any exhibit they may consider unsuitable.

4. In the event of more space being applied for than is actually available, the allotment will be made at the discretion of the Committee.

5. The Committee reserve to themselves the power to utilise any of the floor space set apart for Section D (if it is not all required for sanitary exhibits) for the erection of additional tables, or for any other purpose they may think fit.

6. All exhibits should be addressed to the Secretaries of the Museum, British Medical Association, Public Hall, Ipswich, with the name of the Section for which they are intended, with the exception of those for Sections B and C, which should be addressed, The Old Museum Rooms, Ipswich. Packages should not be addressed to a firm's representative at the Museum.

7. All exhibits must be delivered between July 26th and July 28th, and each package must bear a card showing the name and address of the exhibitor.

8. All exhibits must be placed in the allotted space by 2 P.M. on July 30th.

9. No signs or placards will be allowed in the hall which may interfere with neighbouring exhibits. No exhibit or placard on the central tables must reach higher than 2 ft. 6 in. from the table. The arrangements of signs, placards, exhibits, etc., will in every case be subjected to the approval of the Committee.

10. Intimation of the space allotted to each exhibitor will be sent as promptly as possible after June 1st, marked upon a plan. On receipt of cheque for the cost of such space, a card for the admission of the exhibit will be sent.

11. All cheques to be made payable to Mr. C. K. Moseley, 14, Northgate street, Ipswich.

12. No exhibits will be received except on the understanding that the above regulations are strictly complied with.

Railway Arrangements.

Arrangements have been made by which the railway companies of Great Britain and Ireland will issue to members and their friends attending the annual meeting at Ipswich *return tickets* at a *single fare and a-quarter*. These reduced tickets will be available from July 28th up to August 6th, both dates inclusive.

Those members and their friends desirous of taking advantage of this concession must produce, for the information of the railway booking clerk, a certificate signed by the General Secretary of the British Medical Association. A separate certificate will be necessary for each ticket required, and these certificates can be had on application to the General Secretary, 429, Strand, London, W.C.

Those members and their friends intending to travel from places where it is not likely that there will be through bookings to Ipswich, should give notice at the railway booking office a few days in advance, in order that the necessary application may be made to the head offices of the railway companies for the issue of through fares. It should be borne in mind that a separate certificate is necessary for every ticket required at the reduced rate.

LITERARY NOTES.

An American paper states that, from an examination of a newspaper directory, it has been found that the medical profession of the United States supports, directly or indirectly, 275 periodicals, of which 10 are issued weekly, 11 fortnightly, 225 monthly, 6 bi-monthly, and 23 quarterly, with a combined yearly circulation of 16,017,200 copies. These figures seem enormous, considering that the number of practitioners in that country and Canada is about 120,000, not more than two-thirds of whom, probably, subscribe to any medical journal.

The following extract from the report of a meeting of the Société de Médecine de Nancy, held on the first Frimaire, year VI of the Republic, one and indivisible, is a further proof of the fact that tuberculosis was looked upon as contagious by many members of the profession in past times:

> Citizen Simonin, Professor of Anatomy, treated of pulmonary phthisis. He regards it as contagious and expressed a wish that all Governments should promote the use of a precaution which medical art has oftentimes suggested, namely, the purification or destruction of all objects infected by the sufferer that might propagate the disease.

The Citizen Simonin here mentioned was probably Jean Baptiste Simonin, who was born at Nancy in 1750 and was Surgeon-in-Chief to the St. Charles Hospital in that town. After the closure of the College Royal of Nancy in 1793 he continued to give private lectures.

In a recently published book entitled *La Prothèse Dentaire dans l'Antiquité* Dr. Deneffe quotes a number of passages from the Latin poets which show that false teeth were in common use among the Roman ladies in the first century of our era. Several of Martial's epigrams refer to the subject. Thus in one he speaks of Ægle as having bought herself teeth of bone and ivory. In another Lecania's snow-white teeth are said not to be her own. In another we are told that Galla takes off her teeth just as she does her dress before going to bed. Lælia also has her bought teeth flung in her face. We venture to think, however, that in regard to another epigram addressed to Maximina Dr. Deneffe has misconceived the poet's meaning. The passage runs:

> Non dixit tibi, Tu puella non es
> Et tres sunt tibi, Maximina, dentes
> Sed plane piceique buxeique.

Maximina is brutally told that she is no longer a girl, and that she has but three teeth, and those like pitch and boxwood. The reference clearly is to the discoloration of the poor lady's teeth, not to the material of which they were made. Horace, in describing how the two witches ran away scared by the portentous flatulence of the god Priapus, says that Canidia's false teeth fell out, whilst Sagania dropped her borrowed locks. Dr. Deneffe is disposed to give the credit of the invention of artificial teeth to the Phœnicians. A set was found in the necropolis of Saïda (Sidon) by M. Gaillardot in excavating some tombs which are believed to date from six centuries before Christ. Certain objects found with the teeth suggest an Egyptian origin, and it is possible that the Phœnicians may have learned this branch of the dental art from the wonderful people who dwelt by the Nile. It is probable that the Phœnicians, who were great explorers and traders, introduced false teeth into Greece and Etruria, whence in due course they found their way to Rome.

Dr. George Skene Keith, author of *A Plea for a Simpler Life* and *Fads of an Old Physician*, has prepared a new volume dealing with sanitary subjects, which will be published by Messrs. A. and C. Black. The new volume is described as "unconventional" in its teaching. It is said that upwards of 10,000 copies of the *Plea for a Simpler Life*—which is really a plea for less eating and drinking and less physicking—have been sold.

Madame Péan, widow of the distinguished French surgeon, being anxious that the written record of her husband's work should be as complete as possible, entrusted his unpublished notes which he had made to Dr. de Lambert, who has, with some assistance from Dr. Albert Prieur, put them into shape for publication. Thanks to Madame Péan's pious care, two large volumes have just appeared, forming respectively vol. iv and vol. x of Péan's "Opera Omnia." The former is entitled *Du Diagnostic et du Traitement des Tumeurs de l'Abdomen et du Bassini*, the latter *Leçons de Clinique Chirurgicale professées à l'Hôpital Saint Louis*.

To the current number of the *Archives Générales de Médecine* M. Henry Meige contributes an interesting article on the "Urologists," who in the Middle Ages made a speciality of diagnosing and forecasting the issue of all diseases by mere examination of the urine. Some of them were bold enough to extend the powers of divination which they claimed to the prediction of all manner of future events. M. Meige traces the beginnings of uroscopy to the Father of Medicine himself, in whose works the significance of the various appearances of the urine is frequently pointed out. His aphorisms on the subject, though vague and obscure enough, have generally some kind of clinical basis, but by filtration through centuries of wild speculation and mere ignorance they had, by the fifteenth century, become a farrago of superstitious nonsense. This was especially the case in Germany, where mysticism was the spiritual atmosphere in which physicians, as well as theologians and philosophers, intellectually speaking, lived and moved and had their being. M. Meige refers to a work entitled *Fasciculus Medicinæ*, by Joh. de Retham, printed at Venice in 1500, which he saw in the German Museum at Nuremberg. It is therein laid down that according to the transparency of the urine the man of art might recognise successively *mortificationem*, *indigestionem*, *adustionem*, *excessum digestionis*, *perfectam digestionem*, *principium digestionis*, etc. Much importance was attached to the colour, the shades of which were differentiated with the finest discrimination—white, pale, palish, orange, reddish, ochre, etc.—each having its corresponding import, which revealed to the practitioner not only what was the matter with the patient, but what was to happen to him in the future. M. Meige gives some reproductions of quaint woodcuts illustrating old medical books, representing the physician reading with the eye of the seer the hidden meanings of the urine, and impressing the patient's mind with his powers of vaticination. The inspection of the urine, it is well known, is the chief means of diagnosis used by Chinese doctors at the present day, and in Europe it continued in use as supplying an indication of pregnancy until a period within living memory. One of Gavarni's plates, which, if we remember rightly, is entitled "His First Diagnosis," shows a medical student peering with anxious eye at a bottle presumably containing the urine of a too confiding *grisette* by his side. But even in the sixteenth century there were practitioners who took a sounder view of the clinical significance of the appearances presented by the urine. When Falstaff asks his boy, "What says the doctor to my water?" the familiar imp replied that the learned man had given this exceedingly guarded diagnosis: That the water itself was a good healthy water, but for the party that owned it he might have more diseases than he knew for.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 9TH, 1900.

THE FINANCIAL POSITION OF THE GENERAL MEDICAL COUNCIL.

THE General Medical Council reached the report of the Finance Committee only on the last day of the session, too late for any effective discussion, otherwise we might have hoped that more light might have been thrown upon the financial position. A study of the document itself, however, reveals the fact that the Council's expenditure is and has been for some years in excess of its receipts. Much complexity is produced by the fact that the Branch Councils hold funds, while the General Medical Council is without capital, a state of things arising out of the wording of the Act. For our present purpose this source of complexity may be put aside, and the finances considered as a whole. We may also leave out of consideration the Dental Fund, amounting to £8,330, as it is not available for the general purposes of the Council; but we note that its expenditure for the year also shows a small excess over its receipts.

We do not quite understand how the statement that the amount which the Council is expending out of its capital is over £600 a year was arrived at, for the annual deficit appears in reality to be greater. It is doubtless fair to deduct from its expenditure the sinking fund payment alluded to below of £215, but even after this is done the statement appears to be misleading and to require qualification.

The sale of the new *Pharmacopœia* has yielded a substantial profit in the past year, but this cannot be expected to continue, and the Committee recognised this fact by furnishing a table from which the expenses and the profits of the *Pharmacopœia* are eliminated. This table shows that upon the average of the last seven years the expenditure of the Council has exceeded its income by nearly £1,000 a year; as this excess of expenditure belongs to the later and not to the earlier years, the apparent average excess for the last three years amounts to no less than £1,800 a year. An estimated additional annual expenditure of £400 a year for five years has also just been incurred by the commencement of a cycle of examination inspections, and next year election expenses, probably approaching £500, will have to be met. On the other hand, the septennial period shows an almost infinitesimal growth in income (0.3 per cent.) and a growth in expenditure of 160 per cent., over 100 per cent. of this being in legal charges. It becomes interesting, therefore, to see what resources the Council stands possessed of in order to meet the heavy deficiencies which it seems certain that the next few years will show.

The total assets of the English and Scotch Branches, the Irish Branch having already more than exhausted its accumulated funds, stand at £43,146; the table does not clearly show how this is made up, but it may be gathered that of this sum £25,500 will, when the final instalment is paid to the builders, be locked up in the form of mortgage upon the freehold premises. Under the circumstances this is obviously not a readily realisable asset. However, if it could be realised it would involve a highly increased annual charge for rental, and it is generally recognised that it is an economy for the occupier to hold the freehold of his premises. On the other hand, it is probable that the premises are now worth considerably more than they stand at in the Council's books. Besides this there is a sinking fund established by an annual payment to an insurance office which is designed to provide for the repayment of £25,000 at the end of fifty years, but the payments upon this have only just commenced, so that this hardly amounts to an asset at present. There remains then about £17,600 of really liquid assets, readily available for meeting the annual deficiency, but, as has already been shown, the exhaustion of this sum is in sight. Hence, on this ground alone, the motion of Mr. Horsley, that a special Finance Committee be asked to furnish a report, seems not uncalled for. Though the report now presented is straightforward and candid, and supplies the material, the full gravity of the situation is left to be discovered by an examination of the figures more careful than they are likely generally to receive. The Committee, however, do point out "that the Council ought seriously to consider whether it is not possible to reduce its expenditure to a very large extent." The other alternative, that the income of the Council should be increased, does not appear to have been contemplated by the Committee, nor is it specifically mentioned in the instructions to the Special Finance Committee now appointed to report on the whole question, though the reference is undoubtedly sufficiently wide to authorise the Committee in considering it.

The financial difficulties of the Council are aggravated by the unfortunate position in which the Irish Branch Council finds itself. It is explicitly provided by the Act of 1858 that the several Branch Councils shall have their own treasurers, shall keep their own separate accounts, and shall apply the fees received by them severally to defraying the expenses incurred in the maintenance of the Branch registration offices, and to the percentage contribution which each Branch has to make to the general expenses of the whole Council. At the present moment the Irish Branch does not receive in registration fees an amount adequate to meet its expenses, whilst its accumulated resources are more than exhausted. For such a contingency the Act makes no provision.

As has already been pointed out, the General Medical Council has voted the Irish Branch Council an advance of £500 to meet current expenses, a sum which the Council has to all intents and purposes had to borrow from the English Branch, and which, so far as anyone can foresee, can never be repaid. Mr. Horsley contended that this

transaction is altogether *ultra vires*, and, looking to the words of the Act, it is difficult to see how his contention can be disputed. The work of the Irish Branch must, of course, be carried on, and this is, we imagine, one of the matters which he would wish to have placed "on a satisfactory basis." Probably the loan is, strictly speaking, illegal; but the position has an absurd side, for of the sum of £500 now advanced to the Irish Branch Council, over £400 must be immediately paid back again to the General Council in satisfaction of the annual Branch assessment, so that the Branch will have considerably less than £100 in hand out of the amount advanced.

GUNSHOT WOUNDS OF THE ABDOMEN.

AMONG the many lessons that we have learnt during the present campaign in South Africa, few are more unexpected, none are more striking in their novelty, than those which have reference to the surgical experience of gunshot wounds of the abdomen.

What may be called the regulation belief of all those experienced in this branch of surgery was explicitly stated in the discussion at the last meeting of the British Medical Association in Portsmouth. In a leading article in the BRITISH MEDICAL JOURNAL in October we summed up the various arguments adduced, and expressed the opinion that the final verdict seemed to be "that even if the most remote chance of wound of the gut exist, the abdomen should be opened at the earliest possible moment."

The unvarying experience of all surgeons at the front in the present war is precisely contrary to this. Sir William Mac Cormac has told us of the enthusiastic anticipation of much abdominal work that was exhibited by all when preparing for South Africa. This war was to be the first war in which modern abdominal surgery would be largely practised. No anticipations were ever less justified by results. In the leading article already referred to it was pointed out that, as Major Beevor had shown, the possibility of aseptic operation on the field in the Tirah campaign was not hopeless, and the confident belief was expressed that in future campaigns aseptic operations would certainly be carried out with little or no difficulty. How fallacious this hope was has been proved by the letters of all our correspondents. Water is almost impossible to obtain in quantity, and when obtained is little better than that available in Tirah. Dr. Jameson has said that water on the South African veld should be first boiled, then filtered, and finally thrown away, and his opinion has been acclaimed by more than one of the surgeons at the front. An ideal aseptic operation—by reason of the lack of water, of towels, and of many other needful articles, by reason of the plague of flies, the want of adequate help, and so forth—has been frankly impossible.

The first essentials, then, of abdominal exploratory operations are lacking, and it would seem inevitably lacking, in the field. But supposing them to be present, there is, despite the large provision made by the Medical Department of the War Office, the insuperable difficulty of attending to the cases at the precise moment opportune to success. The wounded are brought in in shoals, the medical officers, military and civil, are few, and a large number of cases cannot be quietly postponed that one solitary abdominal case may, with academic precision, be submitted to a prolonged operation. Such, then, were, as we knew, the difficulties in the Tirah campaign, and such still are the difficulties to-day. But fortunately experience has already definitely shown that operation for gunshot wounds of the abdomen is not often needed. In the early part of the campaign, before time or circumstance or opportunity had permitted any formulation of experience, some small number of cases were, as a routine, operated upon. In these it was seen that the puncture made by the bullet was small, so small and so insignificant indeed as to be difficult to recognise, especially after the lapse of a very few hours, and that the minute openings had not leaked to any appreciable extent. It was quickly recognised that the Mauser bullet wound of the intestine was different in all its details from anything to which we had been accustomed. The wounds were so small that one, or at the most two, Lembert sutures sufficed to close them, and extravasation of contents did not occur, either because of the "pouting" of the mucous membrane or because the gut was motionless. It has been suggested—and the suggestion is a remarkably happy one—that the impact of a swiftly moving bullet has the effect of inhibiting the peristaltic movements, of, as it were, "stunning" the intestine. A rapid closure of the bowel is especially likely to occur when the patient has been long without food, and it is in this condition that many of our soldiers have been when wounded. The majority then of gunshot wounds were best treated by the expectant method, and under such treatment, or lack of it, it is computed that 60 per cent. recover. This estimate, though not rigidly accurate, is sufficiently near, and is in striking—even amazing—contrast with the classic estimate of the 90 per cent. mortality of the American civil war.

It does not seem at present possible to say what are the indications for operation; it is easier to emphasise the circumstances which preclude it. It may be said that inaction is demanded if the wound is a transverse or oblique one, above the umbilicus, for it is then impossible to do all that is required. The openings in the bowel are many, the mesentery is likely to be pierced, and the liver may be wounded. If the bullet has entered the abdomen, and is there retained, there is no guide to its course, and operation would be purposeless. Wounds of the liver, kidney, and colon alone are considered unsuitable for interference by Mr. Treves, who further states that "most cases of wound below the umbilicus do well if left alone."

It is only possible now to show how completely our estimate of the circumstances of abdominal surgery has been altered by this war. When fuller and more extended experience is available, surgeons will, it is hoped, be competent to assert with greater accuracy and more definitely the attitude which ought to be held towards this most important subject.

SIGHT TESTS IN THE MERCANTILE MARINE.

IN accordance with Section XCII of the Merchant Shipping Act of 1894, every British home trade passenger ship when going to sea from any place in the United Kingdom, and every foreign steamship carrying passengers between places in the United Kingdom, must be provided with officers duly certificated as to competency for the respect-

ive duties of their rank. All candidates must pass tests in form vision, colour vision, and colour ignorance[1] before they can be examined for any certificate in seamanship. Application for sight testing must be made to the superintendent of a mercantile marine office, and a fee of 1s. paid. All persons serving or intending to serve in the mercantile marine are recommended in the "Regulations relating to the 'Examination of Masters and Mates" to take the earliest opportunity of ascertaining by means of these tests whether their vision is such as to qualify them for service in that profession. Every candidate who already holds a certificate of competency, and who desires to obtain a certificate of higher grade, must pass the sight tests again before he is admitted to examination in seamanship. If he fails to pass the vision tests, his failure is endorsed on any certificate he already possesses. A candidate who fails to pass the form vision test or the colour ignorance test can be re-examined at intervals of three months. Candidates who fail in colour vision cannot be re-examined, but it is open to any such to appeal to the Board of Trade, who may, if they think fit, remit the case to a special examiner in London for final decision.

The annual report on the sight tests used in the British Mercantile Marine for the year ended December 31st, 1899, has now been printed and presented to Parliament.[2] It follows the usual lines, and consists of a brief letter from the Assistant Secretary of the Marine Department of the Board of Trade to the permanent Secretary of the Board accompanying three tabular statements. Table I contains details of each case of failure reported. Table II shows the percentage of failures. Table III gives the nature of the colour defect.

Out of 4,642 candidates examined in form vision 21 failed, namely, 0.45 per cent. The only official comment is that "none of them were re-examined." Is there nothing more to be said? Before 1894 there was no form vision test in the Mercantile Marine. Its introduction was largely due to the action of the Committee of the British Medical Association on Railway and Marine Sight Tests. That Committee has persistently urged that all such tests should be applied to candidates at the very outset of their career in either service. The report under review amply justifies that recommendation, for out of the 21 candidates who failed in form vision, 15 were youths whose ages ranged from 12 to 19, and who, having had no previous service, were enabled at once to seek some other walk in life; but 5 of the other unfortunates were young men whose ages ranged from 17 to 27, and it does not appear that they were tested until they had already devoted from fifteen months to twelve years in sea service. The remaining candidate was a man, aged 68, who had been fifty years at sea. It would be interesting to know whether his failure was purely senile, or how long his vision had been in a defective state.

Of 4,621 candidates examined in colour vision, 43 failed, 13 were re-examined on appeal, and 4 of these passed, making the total failures 39, that is, 0.84 per cent. Nine of these were lads who presented themselves for examination before going to sea, and were discovered to be colour blind. They were thereby warned in time to seek some other occupation. Twelve were men who having neglected this precaution only discovered their congenital colour blindness at ages ranging from 21 to 43 years, and after periods of service varying from four to twenty-eight years. Sixteen others, whose ages ranged from 19 to 33, with sea services of from four to eleven years, had actually prepared for promotion, and were candidates for second mates' certificates before their colour defect was discovered and their careers shattered. Saddest of all, there must be added to the list two officers who had been previously certified by the Board of Trade to have good colour vision, for one already held a first mate's and the other a second mate's certificate, and each had put in more than eight years' sea service. What has become of all these rejected seamen and officers? If they remain at sea they have no possible hope of promotion, and they are conceivably a danger to the public, even though their defects are noted on their certificates. If they leave the sea it is to begin life over again after a false start. This has been pointed out again and again by Mr. T. H. Bickerton, of Liverpool. It is quite evident that the Board of Trade must once more be urged to make the sight test compulsory before it allows any lad to take out his apprentice papers. We are well aware that there are lads and men who go to sea without becoming apprenticed, but surely it should not be beyond the wit of the Board to devise some scheme whereby even these may be given timely warning of the rocks ahead.

It may be hoped, too, that the time is not far distant when the Board will cease to make any mystery about the standard of vision which it requires of navigators. Most of the public services openly state their requirements in this respect, so that any medical man possessed of a set of Snellen's type, and knowing how to use it, can advise a youth as to his fitness in form vision without (as in this case) putting him to the expense of a journey from the Hebrides to Glasgow, or from the Midlands to Hull, to find an ex-sea-captain installed in a mercantile marine office as a Government authority on eyesight.

Perhaps it is too Utopian to hope that the Board will soon appreciate the dictum of the Ophthalmological Society that an estimate of the "refraction" of the eye should be an essential part of every visual examination, but that necessity will certainly arise when some of those who have passed the form vision tests in youth fail to do so by-and-by, and the public wants to know the reason why.

[1] The object of this test is simply to ascertain whether the candidate knows the names of the three colours—red, green, and white—which it is important for every seaman to be acquainted with, and the test is confined to naming those colours.

[2] Cd. 116. London: Eyre and Spottiswoode; Edinburgh and Glasgow: John Menzies; Dublin: Hodges, Figgis and Co. 1½d.

THE LADY-HINDRANCE IN SOUTH AFRICA.

MR. ALFRED FRIPP, Assistant-Surgeon to Guy's Hospital, who is now chief surgeon of the Imperial Yeomanry Hospital in South Africa, in a letter recently received, enumerates the many advantages of Deelfontein, where that hospital is established—the absence of dust, the good water, the pure air, and the quiet so beneficial to sick and wounded men—and then goes on to mention one more blessing: "We enjoy," he writes, "an immunity from outside interference which will be readily appreciated by all those who are in a position to realise what an amount of hard work has to be got out of the staff, and how easily the harmonious working of a large volunteer staff, such as ours is, could be upset, or at least hampered, by the existence in our neighbourhood of any factors capable of still

further complicating the many interests which have to be considered in the running of such a hospital. Not a few ladies devoted to good works, but possessing no technical training, have come out to South Africa on purpose to 'help in any capacity' in the military hospitals, but the explicit instructions we have received from the Committee in London for whom we act, no less than the fact that there is not a room which they could hire for their accommodation within twenty-nine miles of us, has saved us from the unpleasant duty which might otherwise have devolved upon us of telling these willing but unwanted souls that after considerable experience of the value of their kindly-meant offers, and after the fullest consideration, we would very much rather have their room than their company." The Yeomanry Hospital and its skilled staff, male and female, has been more fortunate in this respect than some of the military hospitals. In too many instances the work of the hospitals has been hampered by the incursions of ladies who, while eager to pose as Florence Nightingales, have failed to make themselves acquainted with the most elementary rules of good nursing, and have even refused to obey strict instructions issued in the interests of the patients. Defeated at Capetown and repulsed from Bloemfontein, this "monstrous regiment of women" is now, it would appear, finding its way back to this country, and is commencing a campaign of vengeance against the medical authorities who have had to discharge the disagreeable duty of telling them that they were hindrances and not helps. What success they may have in this new enterprise it is difficult to foresee, but it must be obvious to every man and woman possessed of the common sense which these ladies seem plentifully to lack that the extreme measures which it was found necessary to take would not have been put in force, and the official warning which Sir Alfred Milner issued would not have been promulgated, had it not been found absolutely necessary to take strong measures for the protection of the sick and wounded men in the hospitals, who have a right to expect that they shall be saved from the unsolicited attentions of fashionable ladies in search of a new sensation.

OPIUM IN CHINA.

We have been favoured by a communication upon this subject from Dr. E. H. Edwards, who has had some fifteen years' experience of the interior of China. He writes most convincingly on the evils caused in China by opium smoking. He quotes from the writings of Chang-Chin-tung, the great Viceroy, and admittedly the most able man in China: "Assuredly it is not foreign intercourse that is ruining China, but this dreadful poison. Oh! the grief and desolation it has brought to our people. A hundred years ago the curse came upon us more blasting and deadly than the great flood or the scourge of fierce beasts, for the waters assuaged after nine years, and ravages of man eaters were confined to one place." Dr. Edwards, in a report of his medical mission work at Tai-Yüen-Fu, in Shansi, North China, states at page 9 the anxiety of opium smokers to get cured of their habit. What this craving is none but the victims know. "When describing to us their sufferings they can have no object in exaggerating, and yet many would rather die than suffer from the unsatisfied craving for this drug." Dr. Edwards also forwards "the report of the Royal Commission on Opium compared with the evidence from China that was submitted to the Commission" (1899). This consists of an "examination and an appeal" by the Rev. Arnold Foster, Hankow, China. In the author's preface he writes "that the ruin of China cannot be averted unless the opium habit now spreading with such terrible rapidity amongst the Chinese people can by some means be checked and overcome." He also adds, "The first reform to which Great Britain must invite China, if she wishes to save the Chinese Empire from falling into ruins is the abandonment of the opium habit, and the first step towards that reform must be the withdrawal of Great Britain itself from all participation in the opium trade." Here it is plain two questions are discussed, one the prevention of opium smoking in China, the other the participation of Great Britain in the cultivation and exportation of opium from India to China. The direct bearing of the consumption and the source of opium are not so evident as they once were, if ever indeed they even were closely affiliated. The Chinese can and do produce the great bulk of the opium they consume; the Indian trade is dwindling, and will probably cease at no distant date, the revenue of exported opium from India to China having fallen about 75 per cent. during the past twenty years. But the opium habit still spreads in China, and it is evident that the work of anti-opium societies will not cease when India no longer sends more opium to China. The keynote of the anti-opium advocates seems to be that it is impossible for British missionaries to speak convincingly to the Chinese on the subject whilst yet an ounce of opium is being exported from India to China. Commercial factors will soon settle this question, and when the trade in opium from India ceases the question of checking the opium habit in China will still remain. Opium can be grown by the Chinese themselves. It will be obtained more cheaply than when imported from India, so that those who desire the well-being of the Chinese, apart from the hackneyed subject of proving the criminality of the British and Indian Governments in allowing the production of opium, will have a herculean task before them. By all means let this subject be dealt with devotedly and earnestly, but the stoppage of the Indian trade in opium, the assumed root and cause of the evil, apart from the self-consciousness of performing what is held to be a national moral act, will have and can have but little effect in stopping opium smoking in China. The report of Mr. Arnold Foster deals largely with "statements of the Commissioners regarding evidence that are absolutely opposed to fact." Mr. Foster is of opinion that a wrong conclusion has been arrived at by the Commissioners, even when considering reports that are assumed to be in accordance with their own preconceived notions of the harmlessness of the opium traffic. The assumption always is that the Commissioners were prejudiced, and that the reports they received were untruthful. When the national spirit of Englishmen has fallen so low that they cannot judge without prejudice of evidence before them the country has fallen to a low point indeed. We have yet to learn that our public men are so degenerate and the calamity of such a slur, as anti-opium societies constantly imply, is far greater than were the national conscience saddled with an exportation of ten times the quantity of opium to China than at present obtains. We are proud of those of our countrymen who are attemping to correct the spread of opium smoking in China; but the small part that Great Britain plays in the trade has but little to do with the matter. Other means must be sought out than the mere war of words which ends in vilifying this country.

HYPNOTISM AND ELECTIONEERING.

WE do not know if among the manifold applications of hypnotism its political uses have yet been closely studied. We have seen more than one instance in recent years of the hypnotising effect which a sophistical orator may have on the great mass of the people, but in such a connection the expression is used, as Hamlet would say, "tropically." It appears, however, that there is scope for the exercise of this remarkable quality in a more direct and tangible manner as a means of gaining the suffrages of constituencies in elections. The *Journal des Débats* is a serious, even a

solemn paper, yet we find in it the following pen-and-ink sketch of Dr. Ferroul, Deputy for Narbonne: "As regards Citizen Ferroul, he is considered by the wise folk of the county as a dangerous *illuminé*. A doctor, he has devoted himself to the practice of hypnotic experiment, and it appears that his natural tendency to excitement has become exacerbated as the result of the experiments to which he has devoted himself. A violent orator, he inflames the minds of men; a fine talker, and full of sentiment, he is much listened to and much appreciated by the women whom he admits to his meetings; on one and the other he exerts a true hypnotic influence." We have not the advantage of a personal knowledge of Dr. Ferroul, and we are therefore quite unable to say whether the description we have quoted applies to him or not. The point that interests us is the possibility which it suggests of the use of a new force in political contests. If the secret of Dr. Ferroul's popularity is due to the occult cause suspected by the intelligent writer in the *Débats*, we may look for a large increase in the number of students of hypnotism. Politicians will strive to become adepts in the art, and the hypnotising faculty will be an indispensable quality in electioneering agents. Hypnotism may indeed be the means of obtaining for our profession the political influence which at present it lacks. But before the inspiring vision of a Parliament largely composed of doctors has had time to shape itself before us comes the chilling remembrance that but a few months ago a distinguished authority on hypnotism was beaten at a by-election. Possibly, however, this disastrous result is to be explained by the candidate having chivalrously forborne the advantage of his peculiar gift.

THE POSITIVE EVIDENCE OF TYPHOID CONTAMINATION.

Dr. Sidney Martin's observations, recorded in the recent Medical Report of the Local Government Board, and lately referred to in the British Medical Journal, show that the typhoid bacilli multiplying in soil succumb after a short interval of competition with the saprophytic organisms present in the same soil. What is true for soil appears to be true also for the water of our water supplies. The Maidstone typhoid epidemic serves as a good instance of a high degree of probability that a typhoidal contamination of the water supply has been the cause of the outbreak, while at the same time actual demonstration of the presence of bacillus typhosus in the water was not given. When it is remembered that such a careful bacteriologist as Professor Sims Woodhead, with others only less expert, failed to find, at any time, the bacilli in the water, the difficulty becomes at once apparent. Assuming that the *fons et origo* of the epidemic was one specific act of contamination, or but one period of short duration, the explanation is simple. It is estimated that the bacillus typhosus disappears when in competition with the saprophytic organisms of water in about two weeks, and the other link in the chain of explanation is of course that the incubation period of enteric fever is from ten days to three weeks. Lorrain Smith and J. W. Tennant, in investigating the conditions of the Belfast epidemic as recorded in the British Medical Journal (vol. i, 1899, p. 193), although they failed to find typhoid bacilli in the water supply, isolated many forms of the bacillus coli communis, some of which gave clumping reactions with the serum of typhoid patients, an observation which, while bearing on the difficulty in question, opens a wide field for surmise as to the origin of species in bacteria and the possible causes of enteric fever. In any case it may be taken that while the positive evidence of typhoidal contamination derived from the presence of typhoid bacilli in drinking water is of great value, the negative evidence from their absence is not of much value in its disproof.

THE STERILISATION OF MILK.

With the diffusion of knowledge on the subject of the causation of tuberculosis, and of the means by which the disease may be prevented, the question of sterilising milk for family use has become one of practical interest to many. The careful mother, no less than the family doctor, demands sterilised milk for the nursery. But whilst acknowledging the necessity for destroying any micro-organisms which may exist in the milk, many persons complain that milk sterilised by heat is rendered less palatable by the process; sterilised milk may be safer, but it is not the same as fresh milk. Milk which has been heated above 155° F. for fifteen or twenty minutes is altered in character as well as in taste; the cream will not rise as in new milk, and the whole appears more watery. This is due to the fact that the fat globules, which in fresh milk are aggregated into minute clusters, become uniformly diffused throughout the liquid under the influence of heat. This aggregation of the fat globules is not broken down if the temperature does not exceed 140° F., but at this temperature, according to Forster and de Man, it would require an hour to destroy the bacilli of tuberculosis. Some recent investigations by Professors Farrington and Russell at the agricultural experiment station of the University of Wisconsin, U.S.A., show, however, that with certain precautions, milk may be completely sterilised at a temperature of 140° F. in ten or fifteen minutes, and will then lose none of the characteristics of fresh milk. They found that the "scalded skin" or pellicle which forms on the surface of milk heated in a vessel at rest will protect the bacilli, so that they may escape destruction on a short exposure to the moderate heat. By agitating the vessel so that the "scalded skin" layer is prevented from forming, complete destruction of tubercle bacilli is ensured by a temperature of 140° F. maintained for about fifteen minutes. Further experiments are being made to determine the exact period of time necessary and the best method of carrying out the process under factory conditions. As the authors remark in their report, "the use of a temperature of 140° F. will do away with the only objection which has ever been urged against pasteurised products."

THE "DOG-DISEASE" OF SOUTHERN HERZEGOVINA.

Gabel[1] describes a disease which appears annually in three towns, and three towns only, of Southern Herzegovina, Mostar, Stolac, and Trebinge, and is known locally as the "dog-disease" (*Hundekrankheit*). These towns resemble one another closely in that all are situated in a narrow valley surrounded by high mountains and having a subtropical climate. Cases are met with first about the middle of June, when the temperature is rising after the rainy spring, and the number goes on increasing with the temperature, until the cooler days and the second rainy season, about the middle of September, arrests the disease completely. The temperature in the sun during this dry season often reaches 144.5° F., and in the shade 99.5°, the nights being but little cooler than the days. Nearly everyone is attacked during their first summer's residence in these towns, and is then immune in the following summers. The disease, it is said, never attacks the natives. Age and sex have no influence on the liability to attack. The clinical symptoms and course are also characteristic. After constipation for two or three days the disease is ushered in by general *malaise*, intense headache, anorexia, and prostration, without shivering. The temperature quickly reaches 104° F. or more, the face is flushed, and the carotids pulsate violently. The tongue is dry, and there is often nausea or vomiting. There is never herpes labialis. On the same evening on which these symptoms appear there is invariably great pain in the muscles of the lower extremities and the loins. After continuing during the next and sometimes during the second day, these

[1] *Wien. med. Woch.*, January 20th, 1900.

symptoms disappear suddenly, generally in the night, and always after a critical fall of the temperature. A feeling of weakness remains, especially in the legs, but apparent complete recovery follows in four or five days. After a variable time, two to five weeks, a relapse almost always follows, characterised by the same symptoms, but of greater severity, the fever continuing for four to six days. Convalescence is slower, ten to fourteen days elapsing before recovery is complete. It is not absolutely certain whether a third relapse ever occurs, but possibly cases which are met with simulating abortive enteric fever, but which do not give Widal's reaction, are examples. There are no complications, and the prognosis is uniformly good. The treatment followed is symptomatic, antipyrin being given internally, and liniment applied externally for the muscular pains. Prophylaxis consists in avoiding these three towns during the hot season. The disease resembles relapsing fever in many points. The following are the chief differences: (1) In the "dog disease" the first attack is shorter and milder than the second, which is exactly the opposite of what occurs in relapsing fever, in which the first attack usually lasts a week. (2) In the "dog disease" the relapse almost cercertainly depends on reinfection from without, since it can be avoided by removing to another neighbourhood. (3) In the "dog disease" the spirillum is absent, and no other micro-organism can be found in the blood.

LEPROSY IN SENEGAL.

Dr. Vergues has published recently (*Arch. de Méd. Navale*, No. 2, 1900, p. 81) an account of leprosy as he found it in and about Thies during his sojourn there. The disease is common in this district, and appears to be of fairly recent importation. It has increased since the French occupation, owing to the increased number of natives and traders going about from place to place. The author remarks that in the Thies region many villages are far from the sea and lagoons, and, further, that the natives never or very seldom eat fish. Further, leprosy has spread from east to west towards the coast, apparently by contagion. On this latter point the natives, although familiar with the disease, do not agree. Some tribes look upon it as hereditary and not contagious. Some tribes are not believers in contagion, and do not therefore keep their lepers apart, while others take the view that leprosy is very contagious and strictly segregate those among them suffering from the disease. There are but few if any lepers among the one tribe which lives in villages quite separate from the others. They are endogamous, and differ from the other inhabitants in customs, language, and religion. Vergues observed 20 patients, 8 of whom were males and 12 females. The disease was either of the anæsthetic or of the mixed type, and in the latter the anæsthetic symptoms preponderated. Contagion appeared to explain some of the cases.

HYGIENIC HANDKERCHIEFS.

The Swiss Assistance Publique has, it is said, sent an order to China for 3,000,000 paper handkerchiefs for the use of the poor people under its charge. It is delightful to see so striking a sign of sanitary grace in a public body. But was it necessary to go to Far Cathay for these hygienic appliances? There is surely enough superfluous paper in Europe that might be devoted to this necessary, if unromantic, purpose. The works of our minor poets are, it is true, generally printed on paper so thick that the nearest approach to a sanitary use that can be made of it is to "shave through" the volume, as an eminent critic is said to do. But the circulars of enterprising drug vendors would appear to be designed for nothing more useful than to dry the nose of honest poverty. Those who send them out would have the additional satisfaction of feeling that their peculiar literature had something of an educationa influence by giving the dullest witted pauper the means of transforming himself into a *homo emunctæ naris*.

THE PHYSIOLOGY OF CHANGE.

The institution on the East Coast of hotels or homes-of-rest for poor girls from our large cities, which is at present in embryo, is worthy of encouragement. It is painful to contemplate how much of the ill-paid work done by these and other town-dwellers is done at a disadvantage and with quite unnecessary effort on account of persistently indifferent health. It is a matter of every-day observation to see how easy it is for (say) an overworked ill-fed sempstress or Board-school pupil teacher to fall into a condition of lowered health, and how difficult in her town surroundings to rise again, even to the former level of energy. An estimate based on a Government Department inquiry reveals that about twenty days in the year are lost to working men and women living in overcrowded districts, from no actual illness but from mere exhaustion—from sheer inability to work. To call the underlying condition "neurasthenia" brings the remedy no nearer. How well we know the listless jaded air, the "nothing new, nothing true, and nothing signifying" tone, the silent plea of a spiritless *non possumus*. Under such conditions of debility, whether following acute illness or not, the physiology and therapeutics of change become of the first importance. It is probable that the least significant factor in a "change of air" as a remedial means is the air itself. A change of air is good—whether for the overworked, the weakling, or the convalescent. The active agents are doubtless, in most instances, the change of scene, of mental atmosphere—in a word, of environment. We are not prepared to say that a change in the ground air which, we are told, fills our houses, or of altitude and atmospheric pressure, or of the humidity of the air, is not potent for good, but the chief thing unquestionably is the relief from the monotony of accustomed surroundings. If a tardily convalescent person cannot have a change of place or house, even a change of room, or, if that be inconvenient, a change of the position of his bed, of the furniture in his room, or of the window curtains, will do something. The ideal set of conditions does not exist, but if such could be found they could nowhere exist for long; the aim, then, must be to vary the existing conditions. The good effect of the so-called change of air is, in short, nothing but a change of the *ego*. For the ordinary healthy individual it is wisdom at the annual exodus to exchange the ceaseless noise of the city for country quiet, or rural dulness for the "life" of a spa or "watering place," or the loose-stoned roads of a country practice for the asphalte and wood pavements of promenades, or the exactions of club patients for the society of healthy and bright people, or contact with the nervousness of society ladies for bucolic stolidity. All this is restorative. But change for the poor is costly, and even for those who are not poor it is scarcely without risk; for the poor girls of our cities, however big the proposed hotels, the drawbacks in both respects will be obviated.

AMERICAN HUMOURS OF PATHOLOGY.

America is proud of her humourists, and with good reason. Her deliberate maufacturers of fun have added much to the gaiety of nations, and though the quality of the jests is occasionally somewhat thin, that is the natural result of forced production. But greater than Artemus Ward, Josh Billings, and Mark Twain are America's unconscious humourists. Among these—and the name of them is legion—we think the palm should be given to the writers of certificates of disability for the veterans who think they have a claim on the gratitude of their country. Specimens of this remarkable variety of medical literature have more

than once been given in the BRITISH MEDICAL JOURNAL. But we have recently come across one which is so excellent an illustration of the scientific use of the imagination, and so interesting a human document in other ways, that we venture to quote it from the *Boston Medical and Surgical Journal*. The following certificate not long ago came before the Surgeon-General of the United States Army: "I find the present condition of his legs, as follows, to wit: the right leg commencing at the Top of foot clear up into Asending vena caba the entire venus sistem of leg is in A congested or Vericoste condition. I mean all the superficial and deeper ones are in sutch A state as would bee left from several attacts of fleebeetes as it has some 18 or 20 places where there has been ulcers and most all the surfice below the knee shoe that discolored and Indurated condition, from frequent ulsers that have come and are slow to heal and there is no time that he can dispence with bandaging the limb. Sometimes he is compelled for weeks at a time to take the bed and submit to constant treatment for that subacuit. Fleebeetes that from any slight cause does make its Apperance and likewise the Left Leg is in every resp as bad, and so he is compelled to bandage above the knee and so the same discoleration and old escars from ulceration—and on examing the Trunk the entire Venis sistem over abdoman and including the Glutiel muscles. Now his condition in my judgment of *each leg are equil to or grater* than the loss of A hand or foot." We sincerely pity this afflicted claimant, whose case is indeed a parlous one. His complicated pathological state, with the "Vericoste condition" of his "vena caba," his "fleebeetes" and the "discoleration and old escars" of his "Glutiel muscles," should soften the hardest official heart.

THE NOTIFICATION OF TUBERCULOSIS IN ITALY.

IN the brief report of the proceedings of the Congress on Tuberculosis recently held at Naples, which appeared a week or two ago in the BRITISH MEDICAL JOURNAL, it was stated that the Italian Government is about to promulgate a new law for the prevention of infectious diseases, which in its scope includes tuberculosis. It was inferred from this that the notification of tuberculosis was to be made compulsory. It has since been explained, however, by Commendatore Santoliquido, Inspector-General of Health in Italy, that it would be impossible to make such notification compulsory unconditionally for the following reasons: (1) It would oblige practitioners to violate professional secrecy; (2) it would injure the patient and prevent him from following any occupation for a livelihood, and ever getting married; (3) it would impose a burden on the communes which they could ill bear. In the law as drafted notification is made compulsory only in poor houses, foundling hospitals, dairy farms, tobacco factories, etc.

THE INVESTIGATION OF NEW DRUGS.

THE Medical Society of the State of New York recently passed a resolution urging that the interests of medical science require the establishment of a bureau of materia medica in order that "disinterested investigation" may be made into the character and value of new drugs. The Society recommended to the Decennial Convention of 1900 for the revision of the *United States Pharmacopœia* the creation of such a bureau by and under its authority, with the provision that it shall report annually upon the matters falling within the scope of its work.

MEDICAL INCOMES IN THE UNITED STATES.

IN an address recently delivered before the Sunset Club of Chicago, Dr. John M. Dodson said the average professional income of a medical practitioner in a large city of the United States is approximately 2,000 dollars (£400) a year, while in the smaller towns the average is about 1,500 dollars (£300) a year, and in country districts 1,200 dollars (£240). The largest income earned in America by the practice of medicine as far as he knows is about 80,000 dollars £16,000) a year. There are two practitioners in Chicago who make more than £50,000 dollars (£10,000) annually, ten who make from 10,000 to 20,000 dollars (£2,000 to £4,000) a year. Two or three New York physicians are said to make over 100,000 dollars a year, five or six about 50,000 dollars, but the average income, although rather higher than in Chicago and in other large American cities, does not greatly exceed 2,000 dollars. Dr. Dodson believes that the time is near at hand when the medical practitioner will be paid by his client not alone for the curing of disease, but for its prevention. This plan is, we believe, common in China, but we doubt whether among western "barbarians" faith in the powers of physic is sufficiently strong to make it likely that the system will be generally adopted here.

THE DIET OF AMERICAN NEGROES.

AN extensive series of investigations on the subject of food and nutrition are being carried out in America for the United States Department of Agriculture. Dietary studies have been made of various classes of the community and of the different races composing the population, under the superintendence of Professor W. O. Atwater. The results are published from time to time by the Department in a series of bulletins which afford some valuable facts and statistics as to diet and nutrition. A report on negroes' diet in the State of Virginia, forms the latest addition to this series. It gives an account of dietary studies made in the spring of 1897 and 1898 by Dr. H. B. Frissell, Principal of the Hampton Normal and Agricultural Institute, and Miss Isabel Bevier, Professor of Chemistry at Lake Erie College. They made a systematic examination into the nature, quality, and quantity of food, and general alimentary conditions obtaining amongst coloured families in varying circumstances; the districts in eastern Virginia chosen as likely to afford the most typical examples being the region, in Franklin County, bordering the Great Dismal Swamp, and the Elizabeth City County. The conditions of life of the people varied greatly according to their financial position and the extent to which they had come under the improving influence of the Hampton Institute. The poorer negroes obtain their living almost entirely from the soil, and live usually in small board cabins, very roughly built and sparsely furnished, but in one district a good many find employment in the various fishing industries and shipyards on the coast; and in the neighbourhood of towns many are engaged in various trades and professions. The food habits and methods of living among the agricultural coloured population are still very primitive. As a rule, each family rents a small tract of land, paying a part (sometimes as much as one-half) of their produce as rent. On the remainder of the produce, together with the income from such odd jobs as can be obtained, the family must be supported. The staple crops are sweet potatoes, cotton, corn, and peanuts, and are usually small. Drinking water, almost invariably obtained from shallow surface wells, is, as a rule, stagnant and brackish, and often muddy. Cooking and housekeeping are usually of the most primitive description; kitchen stoves are unknown among the poorer classes of negroes, and all cooking is done on an open fireplace, which also serves, in the majority of cases, as the only source of light at night. "Hog and hominy" literally form the larger part of the diet. "Side bacon" is the principal meat, and with some fish and a little milk constitutes the major portion of the animal food. In the districts where it can be easily obtained considerable quantities of fish are used, but fresh meat is a very uncommon article of diet. In the Great Swamp region, frogs, turtles, and even snakes, are not infrequently eaten by the people at certain seasons of the year. Some of the more

prosperous families keep cows, but even when this is the case butter is very little used, being exchanged generally for groceries. Wheat bread is very rarely taken by the negroes. "Unbolted" corn meal, containing a very large amount of bran, furnishes a large proportion of their diet. The coarse bran is removed by sifting, but the meal actually used still contains a large proportion. The bread is made simply of meal and water, without salt or leavening material, and is baked as a rule in the ashes of the open grate. The conclusions arrived at from these investigations are summarised in a table. The cost of food consumed daily by each individual varied from 4 to 21 cents.; the amount of proteid ranged from 55 to 169 grams; and the energy in the daily food from 1,880 to 5,350 calories. It is noteworthy that the average amount of proteid in the dietaries of these negro families is as large as, or larger than, the average amount found in the daily diet of white persons in moderately comfortable circumstances, and falls very little below the standard usually assigned for nitrogenous food in "normal" diets. The amount of fat consumed is considerably larger than that usually estimated as necessary in standard diet tables, and the quantity of carbohydrate material is fully up to the average. The reason for the larger amount of proteid is the fact that, owing to the proximity of the sea, fish is consumed to a considerable extent. The potential energy available from the Virginian negroes' diet is in excess of that usually estimated as derived from a normal diet, and greater than that resulting from the food of average white families in comfortable circumstances in America. Judging solely by the amount of nutriments, the negroes' diet is amply sufficient for their daily needs, even with active work, and obtained at very small cost. But its actual nutritive value is not of course so high as would appear from a mere statement of its physiological composition on account of the deficiencies in digestibility of some of the food stuffs and the rudeness of the culinary methods employed.

PHYSICAL BANKRUPTCY.

THE number of those who are verging on physical bankruptcy seems to be steadily increasing. Overdrafts on the bank of health are daily drawn with a callous indifference. Chronic invalidism among active members of society has two main types, and it is of practical importance clearly to distinguish between them. On the one hand there is the person, usually a woman, who has *enjoyed* indifferent health for many years—one of the genus "interesting invalid"; and on the other there is the person, as likely a man as a woman, to whom incapacity for exertion is torture. The one group, with rough justice, is popularly termed "hysterical"—its members are the subjects of a psychosis and a dead weight on the community; and the other is technically known as the "neurasthenic," and by its members the bulk of the world's work is done. That it is only the able in mind who accumulate energy sufficient to injure themselves we have on the high authority of Oliver Wendell Holmes. It is the latter group who will well repay the consideration of the medical men of to-day. The onset of their condition is often that while working at a high level of intellectual life there is suddenly superadded some emotional strain, with the result that all their reserve nerve energy is exhausted. Of two ways in which this contingency may be met, one is the better but more difficult; the other the worse, but easier, because more certain if not inevitable. The former is by a timely retrenchment, the other is by an out-and-out bankruptcy, followed by reform. Why the retrenchment method is so difficult seems to be that the nearer the subject gets to the border line the less easy is the recognition of the necessity for pulling up, and the less will-power is there available if the need be realised. The indications for such need, among others, are interference with the capacity for eating and sleeping, and the constant sense of effort in accomplishing ordinary routine work. If more energy is taken out by day than can be restored by night, an end is not far off. For those who have actually broken down a slow process of building up is the only resource. Means to this end are obviously absolute, and prolonged rest with change, extra feeding, and good air. The gospel of "fresh air and fatness" is eminently for such. But again and again the door of hope for these is at the end of the long valley of humiliation of an acute illness. During the recent epidemic of influenza it has been remarkable how often the general nutrition of the patient has been distinctly improved as a sequence of the illness; the same thing has often been noticed in regard to typhoid and other acute diseases. Much of the effect is probably due to the enforced rest, to the extra feeding, and to the relief from strain; but it would appear that no small part is due to what may be called an alterative action of the disease or of some of its concomitants, such as fever. For the trophic power of the tissues in many cases seems to be on an absolutely higher level after convalescence is complete than ever before.

THE INTERNATIONAL MEDICAL CONGRESS, 1900.

IN reply to many inquiries the Executive Committee of the thirteenth International Congress of Medicine has decided to admit as members of the Congress all dentists who are duly qualified in France or abroad, even though they are not qualified in medicine or surgery. Members of the dental profession who wish to join the Congress will be attached to the Section of Stomatology, and are requested to send their applications at once to the offices of of the Congress, 21, Rue de l'Ecole de Médecine, Paris.

DINNER TO SIR WILLIAM GAIRDNER.

THE friends of Sir William Gairdner, K.C.B., in the University of Glasgow and in the medical profession in the West of Scotland propose to entertain him at dinner on the occasion of his resigning the Chair of Medicine in the University. The dinner will take place on Tuesday, June 19th, at the Windsor Hotel. Early application for tickets (one guinea each) should be made to Messrs. James MacLehose and Sons, 61, St. Vincent Street, Glasgow, as the number of seats is limited.

THE annual dinner of the Brussels Medical Graduates' Association will take place at the Café Royal, Regent Street, London, on Tuesday, July 3rd.

WE regret to have to announce the death from acute pneumonia, after six days' illness, of Mr. G. E. Williamson, F.R.C.S., Ophthalmic Surgeon to the Royal Infirmary, Newcastle-on-Tyne. Mr. Williamson was the honorary local secretary of the annual meeting of the British Medical Association at Newcastle in 1893.

MR. R. CLEMENT LUCAS will offer himself as a candidate at the coming elections for members of Council, Royal College of Surgeons. Besides the two members who seek re-election there will possibly be ten or more new candidates. The latest day for receiving the necessary forms, duly signed, from intending candidates is next Monday, June 11th.

LORD LISTER will formally open the new clinical laboratories at the Westminster Hospital on Tuesday next, at 4 P.M. He will be received in the Board Room of the hospital by Sir John Wolfe Barry, Chairman of the House Committee, and among those who intend to be present are Lord Keivin, the President of the Royal College of Physicians (Dr. Church), the President of the Royal College of Surgeons (Sir William Mac Cormac), Sir John Burdon Sanderson, Bart., Sir Michael Foster, K.C.B., M.P., and Sir Joseph Fayrer, Bart., K.C.S.I.

THE WAR IN SOUTH AFRICA.

THE WOUNDED DURING THE SIEGE OF LADYSMITH.

WE are indebted to Major J. F. Donegan, R.A.M.C., Officer Commanding No. 18 British Field Hospital, for the following notes on that hospital during the siege of Ladysmith:

The hospital during the early part of the siege of Ladysmith was located in the Town Hall, and nearly all the serious cases were brought there, more particularly civilians wounded in the streets. Slight wounds, except in a few cases in which fragments of shell were completely spent, or in which the shrapnel burst too high in the air, were almost invariably caused by injuries from bits of stones, mortar, or fragments of substances near which the shell burst. The escapes from shells during the siege are far too numerous and miraculous to mention. I shall content myself with describing two which I saw.

While an artillery officer was riding along the road a 96-lb. shell, he thinks, judging from where it burst in front of him (about 18 or 20 feet), passed over his head. He was thrown from his horse, and suffered from severe concussion for four or five days, but eventually returned to duty.

While the local chemist was lying in bed a shell entered at the back of his room, passed right over the bed, smashing the end of it, and entering the floor without bursting. He was not injured.

In contrast to these cases I may mention some instances of particularly hard luck:

A fragment of shell which burst amongst the Imperial Light Horse killed a sapper in his lines at a distance of 280 yards.

On January 18th, 1900, a private of the 19th Hussars was admitted to hospital for a wound of chest and lung, from which he died the next day, caused by a fragment of shell which burst 328 yards away from where he was standing.

A man of the *Powerful* died from a wound caused by a solitary shrapnel bullet which is supposed to have ricocheted from a rock over 100 yards away.

To form some idea of the frightful injuries resulting from shell wounds, it is necessary to understand some minor details about the shells themselves. The 6-inch shells, popularly knows as "Long Toms," were of the following varieties:

1. Time shrapnel, which burst in the air ignited by time fuse.
2. Segment shell; an iron shell of about 2-inch thickness, with numerous segments of iron arrayed inside; also leaden bullets.
3. Common shells.
4. Percussion shrapnel.

The measurements were as follows: Length, 20 inches; circumference, 20 inches; and diameter, 6 inches. The weight was 96 lbs.; the bursting charge 6 lbs. of melinite; and the striking power about 42 tons.

There were also shells from the 4.7 inch gun, from the Maxim-Nordenfelt field guns, high velocity (2½ inch diameter), and a spherical shell from an antediluvian mortar.

Ths greater number of patients admitted were wounded by Long Toms. People who were injured by the direct shell before it burst were killed instantaneously, with one remarkable exception, which will be alluded to subsequently. Most wounds then were caused by fragments, and they included some of the most frightful injuries imaginable.

One poor fellow of the Gloucesters was admitted with the left thigh shattered to atoms, and the right thigh almost torn off at the hip-joint, the right radius and ulna pulverised, the chest wall smashed in on the right side, and the humerus of same side driven into the chest wall. He became unconscious soon after admission, and died in about three-quarters of an hour.

An officer's servant was admitted some days afterwards with a shell wound through the back, tearing out the stomach from behind. Needless to say, his case was also hopeless.

Unfortunately shell wounds, like other misfortunes, do not come singly. They are far more likely to be brought to hospital in batches of ten or more. This then leads me to state what I consider to be some important surgical axioms for warfare as far as shell wounds are concerned:

1. See all the patients together if possible, send to bed those who can wait, and also those that appear to be beyond help.
2. Take first the most serious cases likely to be saved by surgical interference.
3. The next great essential is speed, both in the interest of the patient and others injured.

In my hospital, if double amputations were required, officers did a limb each, so as to save time. In no case was this method followed by unfavourable results which could in any way be attributed to the system. Waiting till a steriliser is got ready is, in my opinion, unjustifiable. It must be remembered that the injured limbs are probably rolled up in dirty putties covered with mud and filth, that the operating tent is usually pitched on soil, that the operator's clothes are not immaculate, and that the patient's clothes are invariably filthy. The minute aseptic precautions of a London operating theatre are impossible. Soap and water, boiling water for irrigation, antiseptic solution and antiseptic dressings, are all a military surgeon can expect. Sterilisers, sprays, and such complicated appliances are most suitable for a base hospital, but out of place in a hospital on the field. I have seen capital operations done in my hospital in the Town Hall, when the shells were bursting outside the operating room in the street. On one occasion one of the hospital staff who was boiling water was killed by a fragment of shell. One of these operations happened to be trephining for a depressed fracture with open wound of scalp. From this statement some idea can be formed of the difficulties an army surgeon has to contend with.

The cause of death in almost all shell wounds was shock; no matter what the injury was, a fair prognosis could be arrived at by noticing the patient's general condition. In many cases in which amputations were performed immediately with very little loss of blood, the patient died about three or four hours after the operation. It therefore became a standing rule in my hospital not to operate when there was much collapse or shock. Active measures were postponed till the patient was strong enough to take chloroform.

All the double amputations done in my hospital and elsewhere during the siege were unsuccessful with the exception of the case of a sergeant of Royal Artillery which is worthy of record.

He was wounded on January 6th, 1900, in the attack by the Boers, being hit with a direct 6-inch shell, and fortunately he was brought to the hospital within half an hour of receiving the injury. On admission the left arm was found completely shattered up to within 6 inches of the shoulder-joint, and the left thigh and leg smashed up to within 8 inches of the hip. By temporary tourniquets the hæmorrhage had been stopped, and there was not much collapse or shock, strange to relate. I told him that a double amputation would be necessary, and he replied, "All right; do me as soon as possible, sir." Chloroform was administered; one officer removed the leg and the other the arm. In 38 minutes the patient was in bed and conscious after chloroform. His temperature was 100° F. on the evening of the accident, and 99° F. the next morning. It remained at this level till January 10th, when it fell to normal, and the stitches were removed as the wounds had begun to heal by first intention. He made an uninterrupted recovery, and 14 days after the accident both stumps were completely healed.

Had the most minute aseptic details been attended to this case would have been looked on as a triumph for antiseptic surgery, but in reality turpentine, hot water, and soap were all that was used, the instruments being absolutely clean but not sterilised. I attribute this man's recovery to his wonderful constitution and stamina, to his marvellous pluck and courage, and also to the dexterous and rapid manner in which the operations were performed by Captains McDermott and Erskine, R.A.M.C., followed by the most careful nursing on the part of the hospital staff. The way he rapidly regained strength was due to the excellent food, which he received from outside sources, particularly from officers; Colonel Dartnell, C.M.G., for instance, brought him eggs and custards every day when they were almost unprocurable in the garrison.

The subsequent treatment of amputations from shell wounds in no way differs from the treatment of similar operations from other causes. Flesh wounds from shell were invariably followed by severe constitutional disturbance and profuse suppurations from injury to surrounding tissues.

All shell wounds, even simple contusions, were followed by a rise of temperature, and superficial bruises were slow to recover, being followed by marked immobility and subcutaneous extravasation of blood. I am not aware of any other details of interest associated with shell wounds, and as the majority of cases were transferred to Intombi Camp, which was on neutral ground, the medical authorities there are more competent to judge of subsequent results and treatment than I.

In conclusion I must allude to the absolute terror of the report of a bursting shell on the part of a person once injured. As my hospital was located in buildings in the town the large majority of shells from Bulwana Heights passed over it. I have frequently heard the wounded cry out in terror at the report of a shell over the building, and yet I have seen the same men after recovery look on in casual indifference at shells bursting some yards off, which proves that their fright was not due to natural timidity.

We vacated the Town Hall on November 30th, 1899, when a

shell burst in the ward. Previous to that date we were fired on, regardless of the Red-Cross flag (which at one time reached the enormous dimensions of 28 feet by 16) on the tower.

THE IMPERIAL YEOMANRY HOSPITAL.

Sanitary Arrangements.

We are indebted to Mr. Alfred Fripp, F.R.C.S., Chief Surgeon of the Yeomanry Hospital, for further information as to the organisation of the hospital at Deelfontein. All the wards are on the west side of the railway line, and we gather that there is a gentle upward slope from the railway. The sanitary arrangements and drainage appear to have been carefully thought out with regard to this.

Drainage.—It has been possible to get the heads of the drains at the top of the slope, and the latrines as far as possible at the bottom beyond the railway line. The main drain, which discharges by a system of subdividing trenches on to a portion of the veld at some distance from the hospital, and on a good incline away from it, consists of 4-inch earthenware pipes. No solid matter is taken into it, so that practically it receives nothing but wash water from the sinks.

Latrines.—In the main latrines excreta are received into pails, and a special staff of natives is maintained to carry these pails to the dumping ground, and to keep the latrines, which have an inclined floor, thoroughly clean. At the dumping ground, which is far removed from the camp, there is a large tank of disinfectant in which the pails undergo a prolonged soaking and thorough cleansing before being taken into use again.

Typhoid Fever.—Cases of typhoid fever are treated in a special department consisting of four huts accommodating from 22 to 26 patients each. The nursing staff of the department is in charge of one the senior sisters, and the orderlies are in charge of special ward masters. This staff is kept entirely separate, has a special mess hut, and a special lavatory. In the centre of the department is a corrugated iron hut, divided into two parts. To one part all the bedpans and urine utensils, and all water in which patients have been washed, are carried by orderlies and emptied into large pails, containing a disinfectant. The utensils are then swabbed out with disinfectant, and put to soak in disinfectant solution in a separate set of receptacles until required again. This hut has a sloping concrete floor, and an intelligent native is constantly on duty to swab out the walls, floor, and shelves. The pails containing the excreta and disinfectant are taken by a special path to a special dumping ground, and then placed in a large tank of carbolic. The other part of the central hut referred to is used for the temporary storage of used linen and bedding.

Dysentery.—Two special wards have been reserved for cases of acute dysentery, and near by are four tortoise tents used for patients convalescent from dysentery. The dysentery department has a special disinfecting hut, managed on the same lines as in the enteric department.

Disinfection and Refuse Destruction.—The hospital has a Washington Lyons Disinfector, capable of dealing with nine mattresses, and many smaller articles in each batch. To this, which is on the east of the railway, all soiled linen, mattresses, etc., are removed every morning for disinfection. Close at hand is a refuse destructor through which all paper, straw, tins, and camp litter generally are passed; the ashes are then buried.

Water Supply.—The water is obtained from the railway works at the station. A second well has been sunk for use in an emergency, which, however, has not arisen. Water is laid on to standpipes outside the various wards, but all that used for drinking purposes is filtered through Pasteur-Chamberland filters established by Messrs. Defries on a sufficiently large scale to supply all that is required.

Wards.—The main body of the hospital for non-infectious cases consists of six huts, each accommodating 34 patients. Their walls consist of corrugated iron outside, wood inside, and felt between. They are well ventilated, and are pronounced by Mr. Fripp to be a great success. They have been supplied and put up by Messrs. Boulton and Paul, of Norwich.

Milk and Food.—The hospital has its own dairy, from which milk for the entire camp is supplied after sterilisation in several large Aymard sterilisers. The supply of milk is somewhat precarious, however; eggs are extremely scarce, and fruit and fresh vegetables, except potatoes and onions, are absolutely unobtainable.

Isolation Tents.—On the east side of the line, well away from the rest of the hospital, are a group of isolation tents, which have been found useful, as occasional cases of scarlet fever have occurred.

Number of Beds.—The hospital had its full number of beds in working order, and on occasion the number could be slightly increased by moving convalescents ready to be sent to Capetown into tents on the east side of the line. Urgent requests have this week been received for equipment to be sent out for 300 more beds owing to the large number of cases of sickness chiefly enteric fever, which were being sent in. It is reported also that one of the cooks has died of enteric fever.

Casualty.

In the list of casualties reported from Florida on May 29th appears the name of Lieutenant A. H. Benson, Surgeon attached to the Gordon Highlanders, as slightly wounded. Lieutenant Benson received a commission as Surgeon-Lieutenant in the Militia Medical Staff Corps in December, 1897.

LONDON MEDICAL GRADUATES' COLLEGE AND POLYCLINIC.

The annual dinner of this College was held at the Trocadero Restaurant on May 31st. The chair was taken by Lord Strathcona and Mount Royal.

The toast of "The Queen" having been enthusiastically honoured, Sir H. Burdett proposed that of "The Imperial Forces," and Surgeon-Captain Kingscote and Mr. R. H. Lyttelton, M.P., responded.

The Chairman, in proposing the toast of the evening—"The Medical Graduates' College and Polyclinic"—said that of all forms of charity that which promoted the health of the community was the most beneficent and the most economical. This institution did not compete with the hospitals. It furnished the opportunity to patients of obtaining the best advice, and of remaining with their own people at home; at the same time it sent those who required hospital treatment to the hospitals best suited for the illness. Moreover, it provided the graduates of medicine and surgery with opportunities of keeping up with the advancing knowledge of the day. No other science required such constant application for this purpose as that of medicine. The medical man had to be a student throughout his days. There were post-graduate classes for practitioners in Canada and the United States, which were well filled; others also on the Continent of Europe. The doctor was an angel of mercy to thousands and tens of thousands, and the world generally knew very little of these ministers. However perfect a man's ability in some of our colonies might be, he was not at present allowed to practise in this country. There ought to be an Imperial order in the profession, so that medical men might be able to practise in all parts of the empire.

Sir William Broadbent, President of the College, responded, and stated that Mr. Jonathan Hutchinson supplied the motor force of the institution. Medical men were students to the end of their days, and the object of the College was to give an opportunity for qualified practitioners to apply themselves to the attainment of new knowledge, and to complete their education by attending special classes in subjects which could not be thoroughly studied even during the five years' curriculum. An increasing desire had been shown by medical men to gain knowledge which made them more efficient for their life's work. The Polyclinic was at present in its infancy; he hoped in the course of time it might concentrate in itself the best men of the profession. The public was concerned, as it was interested, in all works for the improved health of the community. The family doctor should be in every sense efficient. He hoped that in the near future there might be a real polyclinic hospital, where medical men might attend and have consultations on their cases with the best men of the day.

Mr. Jonathan Hutchinson proposed "The Hospitals and Kindred Institutions," and remarked that there was no competition between the College and the hospitals. He said that during the last twenty-five years there had been no marked increase throughout London in the number of beds at the hospitals, because the whole profession was now competent to

treat disease in the patients' own homes. He hoped that an arrangement might soon be made by which students of the Polyclinic might procure instruction in the wards of the hospitals. At present they had not succeeded quite to their hearts' content in arranging such instruction in London. As children of the other London medical societies they desired to popularise their methods and principles.

The Hon. SYDNEY HOLLAND, in responding, said that he thought the hospitals might declare that in every way they desired to help the Polyclinic. Post-graduates perhaps would not like meeting students in hospital classes; but he thought this difficulty might be easily overcome.

Sir JOSEPH FAYRER proposed "The Guests," and Mr. BRUDENELL CARTER replied.

Dr. STEPHEN MACKENZIE proposed "The Health of the Chairman" in some highly appreciative remarks, and the toast was received with musical honours.

Lord STRATHCONA in response said that the College was at its commencement doing its best to alleviate the ills of humanity, and he hoped it would do more and more good as time went on.

Dr. SEYMOUR TAYLOR read a subscription list of £520, to which the Chairman had contributed £250, and Mr. Hutchinson 100 guineas.

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

DURING the week ending May 15th the number of plague deaths for all India amounted to 1,214, a drop of 352 as compared with the previous week.

In Bombay city the mortality from plague during the week ending May 15th was 342, and in the rest of the Bombay Presidency 215.

In Calcutta during the week ending May 15th 170 deaths occurred from plague, and in the Bengal Presidency generally, 239, including 144 deaths at Patna.

In Calcutta the cases and deaths from plague were distributed as follows: May 8th, 9th, 10th, 11th, 12th, 13th, and 14th the fresh cases of plague were 27, 32, 18, 24, 25, 22, and 26, and the deaths from plague were 24, 27, 19, 25, 27, 23, and 25 respectively.

At Benares on May 11th 15,000 Mahommedans met and resolved to memorialise the Government against the plague rules about to be introduced there, which they say are contrary to the words of the Prophet.

ADEN.

At Aden 59 deaths from plague occurred during the week ending May 15th.

AUSTRALIA.

At Brisbane 47 cases of plague and 16 deaths from the disease have occurred since the commencement of the outbreak. We are without actual figures relative to the number of plague cases in Sydney, but it is satisfactory to note that by the latest reports the outbreak of plague is subsiding.

EGYPT.

The excitement in Port Said has subsided, and the people are said to be behaving in a satisfactory manner. The disease is not assuming great proportions and the number of deaths to cases have been few. In Alexandria since the 2 cases which ended fatally on May 9th no fresh seizures have been reported.

SOUTH AMERICA.

At Rio de Janeiro from an official statement issued on May 29th we gather that 45 cases of plague occurred in the city during the month of May and 9 deaths from the disease. On May 29th 36 cases of plague were under treatment.

CONTRACT MEDICAL PRACTICE.

MEDICAL AID OFFICERS AND THEIR GOLDEN OPPORTUNITY.

M.A.O. writes: Under the above heading in the BRITISH MEDICAL JOURNAL of May 12th appeared a letter stating that now was the time for medical officers of aid associations to resign their appointments. Now I for one have resigned my appointment as such, and although I have signed a bond, we shall have to test the legality of such. If all other medical officers to such associations would do the same I am sure we could easily get up a fund to defend any legal action and to support them in their action.

THE R.A.M.C. SOUTH AFRICA FUND.

A MEETING of the General Committee of this Fund will be held at 5 P.M. on Tuesday, June 19th, at 84, Brook Street, London, W., by kind permission of Lady Broadbent. The Princess Christian will take the chair, and it is hoped that many members of Branch Committees will attend.

THE HALF-CROWN SUBSCRIPTION LIST.

The following additional subscriptions to the Half-Crown Fund have been received down to and including June 6th since our last list:

	Half-Crowns
S. Q. C.	6
Mrs. C. R. Walker (Hove)	4
Per Mrs. Horace Haynes (Evesham):	
Dr. E. Roberson (Ashton-under-Hill)	2
Per Dr. T. A. Helme (Manchester):	
Dr. G. E. Shuttleworth (Richmond)	1
Dr. Sinclair (Orrell)	1
Per Surgeon-Major-General Davis, A.M.S. (Southsea):	
A Friend	1
Mrs. Raes	1
Lieutenant-Colonel Macpherson	1
Lieutenant-Colonel McAdam	3
A Friend	1
A Friend	1
Per Dr. J. F. S. Fowler (Georgetown, British Guiana):	
British Guiana Branch of the B.M.A.	40
Dr. Duncombe-Honiball	4
Dr. C. J. Gomes	4
Dr. G. Ozanne	2
Dr. Fowler	1
Received by Dr. Martin (Blackburn), Local Secretary of the Lancashire and Cheshire Branch of the British Medical Association:	
Per Miss Beardsworth:	
Mrs. J. E. Fielding	8
Mrs. Eccles	4
Miss Higham	4
Mr. J. Parkinson	2
Mr. Aspinall	2
Mrs. Albert Birtwistle	1
Mrs. Dean	1
The Misses Beardsworth	12
Per Mrs. A. A. Corte:	
Mrs. Wm. Birtwistle	8
Mrs. Shutt	4
Dr. A. A. Corte	4
Per Mrs. G. H. Davies:	
Mrs. Whiteley	16
Mr. Pickop	[illegible]
Mrs. Stock	5
Mrs. Needham	8
Miss Stocks	4
Dr. G. H. Davies	3
Mrs. Stones	2
Mrs. Tom Hart	1
Per Mrs. Hunt:	
Dr. Ivatts	2
Per Mrs. Martin:	
Drs. Anderson and Butterfield	4
Mr. John Bracewell	4
Mrs. Fred Baynes	8
Dr. Brooks	4
Dr. Riley Cunliffe	4
Mrs. R. D. Coddington	4
Captain A. H. Carus	1
Dr. Clegg	1
Mr. Copperwaite	1
Mrs. Adam Dugdale	40
Dr. S. A. Davies	1
Dr. Farrington	[illegible]
Dr. Gray	4
Dr. Gifford	2
Dr. A. Y. Greenwood	1
Dr. Gunn	1
Mrs. Tom Greenwood	2
Dr. Heyliger	4
Lady Hornby	42
Miss L. Hoyle	1
Miss Jackson	1
Major Johnston	2
Major King	2
Dr. Loynd	1
Mrs. Henry Lewis	8
Dr. Morley	8
Dr. Nuttall	2
Miss Edith Palmer (per Sunday school class)	4
Mr. J. B Polding	1
Dr. Prebble	2
Mrs. R Parkinson	8
Dr. Patterson	1
Colonel H. J. Robinson	2
Major F. Robinson	2
Mr. T. Robinson	2
Mr. N. Smith	2
Dr. G. A. Thompson	2
Dr. R. G. Thomson	4
Dr. Tough	4
Captain Voyle	1
Mr. J. W. Walsh	2
Dr. G. R. Wilson	4
Captain Wesley	2
Dr. Wheatley	4
Mr. Harry Woods	1
Mr. A. Whalley	4
Mrs. Yerburgh	40
Per Mrs. Owen:	
Dr. Williams	2
Mr. R. F. Riley	4
Mr. E. S. Bellingham	1
Per Mrs. Robinson:	
Mrs. Robert Trimble	1
Dr. Elliott	4
Mr. J. Rakestraw	1
Mrs. R. Boyle	2
Mrs. Pollitt	1
Mrs. Fox	1
Mr. W. Greenwood	1
Mr. Cockbain	1
Dr. Robinson	4
Per Mrs. Watson:	
Mrs. Jackson	1
Dr. Watson	8
Per Dr. J. W. Wells:	
Mr. W. Lewis	1
Mr. W. Watkins	1
Mr. Green	1
Mr. Oddie	1
Mr. Ibbotson	1
Mr. Worsley	1
Mr. Croasdale	1
Mr. Stubbs	1
Mr. Tattersall	1
Mr. A. W. King	1
Mr. G. L. Bellingham	1
Mr. T. Brandwood	1
Mr. J. A. Watson	1
Dr. R. Pickard	1
Dr. J. W. Wells	1

We have also received from Dr. Martin the following, per Miss Beardsworth: £2 2s. from Mrs. Joseph Dugdale, £1 1s. from Mrs. Tom Hart, £1 1s. from Miss Almond, £1 1s. from Mr. R. Dugdale; per Mrs. A. A. Corte: 10s. 6d. from Mr. Bryan; per Mrs. G. H. Davies: £2 2s. from Mrs. G. Whiteley, £2 2s. from Mr. W. Ward, £2 2s. from Mr. R. Spencer, £1 1s. from Mrs. H. Whiteley, £1 1s. from Mr. J. Hargreaves, £1 1s. from Mr. Shutt, £1 1s. from Mr. Ramsbottom, £10s. 6d. from Dr. F. Stephenson, 3s. from Mrs. Tom Lewis; per Mrs. Martin: 10s. 6d. from Dr. Bowes, 10s. 6d. from Dr. A. B. Craig, 4s. from Dr. Baxter, 3s. from Captain E. L. Carus; £3 3s. from the Matron and Nursing Staff, Blackburn and East Lancashire Infirmary; 10s. 6d. from Dr. Foster, £1 1s. from Dr. Keighley, 4s. from Mr. A. T. Hope, 4s. from Mr. H. Y. Griffin, 3s. from Miss Annie Green, £1 1s. from Dr. J. Patchett, £1 1s. from Dr. Taylor, 10s. 6d. from Dr. R. Patchett; per Mrs. Owen: £1 1s. from Dr. Owen, 2s. from Miss Brewer; per Mrs. Robinson: £1 1s. from Mrs. Charles Trimble, £1 1s. from the Misses Lewis, £1 1s. from Mrs. Rakestraw, 10s. 6d. from Dr. Moffatt; and per Mrs. Watson: 10s 6d. from Dr. Cran Duthie. Dr. Martin also acknowledges gifts in kind from Colonel H. J Robinson, and through Miss Beardsworth, Mrs. A. A. Corte, Mrs. G. H. Davies, Mrs. Martin, and Mrs. Owen.

The amount received for the Half-Crown Fund, down to and including Wednesday, June 6th, by the Editor, is £645 13s. 9d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

EPIDEMIC PNEUMONIC FEVER.

Pandemics and Epidemics.

That pneumonia, or pneumonic fever, as we have called it above in accordance with its true pathology, may occur in epidemics, or even in pandemics, is well known to epidemiologists. In Hirsch's classical work many examples of such pandemics are given. Thus in the United States epidemic outbreaks of pneumonia in the early part of the present century were followed by "a pandemic of pneumonia, which extended during the period from 1812 to 1825 over a great part of the continent of North America, from Canada to the Gulf of Mexico, although, as in France the century before, its epidemic character did not come out except in winter and spring for all the years that it lasted."[1] In England epidemics on a comparatively small scale have been described at Middlesbrough and Scotter (Lincolnshire). Our national records seem to show that other parts of this country must have suffered to a very exceptional extent from pneumonia in certain years. Thus in 1887 the death-rate from this cause in England and Wales was 1,113, whereas in 1881 it was only 910 per million persons. It increased to 1,472 in 1891, but the disturbing influence of influenza may be read into the latter experience.

Epidemic Pneumonia in Middlesbrough.

The above facts give a special interest to the second epidemic of pneumonia from which Middlesbrough has been suffering during the last year. Its first epidemic occurred in 1888, embracing about 1,000 cases, of which 369 were fatal. This epidemic was described by the late Dr. Ballard, who claimed for the Middlesbrough disease a place among acute specific fevers as pneumonic fever. The facts of the present epidemic are well summarised by Dr. C. V. Dingle, the Medical Officer of Health of Middlesbrough, in his annual report. He shows how the death-rate from pneumonia has increased from 1.5 in 1881 to 4.2 per 1,000 in 1899. In Dr. Barr's lecture in another column (p. 1398) will be found statistics which show what an enormous excess of pneumonia there has been in Middlesbrough. Nor can this excess be more than partially explained by statistical transference from bronchitis to pneumonia. The death-rate per 1,000 living from these two diseases together has increased from 3.4 in 1888 to 5.6 in 1899. The recent epidemic has not been so severe as that in 1888, the death-rate per 1,000 living having been 4.3 as compared with 5.3 in 1888.

In January, 1899, the medical practitioners of Middlesbrough were asked voluntarily to notify for a period of six months cases of pneumonia occurring in their practice. Of 100 cases thus notified 36 died, and on this basis it is calculated that during the whole year 1,126 cases of pneumonia occurred in 1899. The 100 notified cases occurred in 93 houses. Three houses had 3 cases in each in quick succession, and two houses had two cases in each. Of the 93 houses, 78 were in good and 15 in bad sanitary condition. The largest number of cases occurred in the month of May, and this was an exceptionally wet month. The epidemic does not, however, appear to have had any marked relation to meteorological conditions. Nor can the dust from the Basic Slag Works have had, as was urged by some, much to do with the excess of pneumonia, as comparatively few of the victims were employed at these works, and this cause is in operation every year, while the epidemic prevalence of pneumonia fever is intermittent.

Evidence of Infection.

Dr. Dingle is of opinion, and is confirmed in this opinion by many practitioners in Middlesbrough, that a great many of the cases of pneumonia met with were highly infectious. More than a quarter of the 100 cases notified had been in close contact with a recent case or lived in houses in which there had been cases previously. A list of instances is given in which preceding attacks had occurred in the same house some months or one or two years previously, appearing to indicate that, as in diphtheria, the infection may remain dormant for considerable intervals, becoming active again under favourable conditions.

Auxiliary Factors.

The nature of these auxiliary factors is still almost unknown. The privy middens in the town probably favour the multiplication of the pathogenic microbe of pneumonia, but other towns with similar abominations enjoy a comparative freedom from this disease.

No facts seem to have been forthcoming during the present epidemic in Middlesbrough in confirmation of Dr. Ballard's conclusion that food can become contaminated with the material of the disease and communicate the disease to those partaking of it.

Need for Further Investigation.

Bacteriological evidence is somewhat deficient. This is very unfortunate. In the epidemic of 1888 Dr. Klein found bacilli in the morbid products from patients, which had differential characters of their own, having no relation to the microbes ordinarily associated with pneumania. Can this observation be confirmed in the present epidemic? We hope it is not too late to ensure a scientific investigation of this question and of the entire epidemic in exact detail. The data contained in Dr. Dingle's report form an admirable starting point for such an investigation. In the meantime there can be no difference of opinion that notification of all cases of pneumonia occurring in Middlesbrough is desirable, first, in order that the disease may be scientifically investigated in all its aspects; and secondly, in order that a certain measure of isolation may be carried out, and that sick rooms and their contents may be efficiently disinfected.

[1] Hirsch, *New. Syd. Soc. Transl.*, vol. iii, p. 125, *et seq.*

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A Meeting of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of July next, at 2 o'clock in the afternoon.

June, 1900. Francis Fowke, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

Meetings of the Council will be held on July 11th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

Election of Members.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

Francis Fowke, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

Metropolitan Counties Branch.—The annual general meeting of this Branch will be held at the Hotel Cecil on Tuesday, June 19th, at 6 P.M., when the report of the retiring Council and of the Treasurer will be received, and an address delivered by the incoming President, Mr. George Eastes. At 7 P.M. the members will dine together, the President being in the chair.—H. Betham Robinson, M.S., 1, Upper Wimpole Street, George Rowell, 6, Cavendish Place (*pro tem.*), Honorary Secretaries.

Birmingham and Midland Counties Branch.—The annual meeting will be held at the Medical Institute, Edmund Street, Birmingham, on Thursday, June 21st, at 4 P.M. An address will be given by Dr. Milner Moore, President-elect. The annual dinner will take place at the Grand Hotel, Colmore Row, at 6.30 P.M.—William F. Haslam, Edgbaston, and J. T. J. Morrison, Birmingham, Honorary Secretaries.

Stirling, Kinross, and Clackmannan Branch.—The annual meeting of this Branch will be held in the Royal Hotel, Stirling, on Tuesday, June 19th, at 3 P.M. Dr. Mackintosh will deliver his presidential address, and the annual business of the Branch will be transacted, including the appointment of office-bearers for the following year. Members who desire to exhibit cases or specimens will kindly intimate their intention to Dr Moorhouse, 1, Glebe Avenue, Stirling, Honorary Secretary.

PERTHSHIRE BRANCH.—The summer meeting of this Branch will be held at Trinity College, Glenalmond, by kind invitation of Dr. Simpson, on Saturday, June 9th, at 1 P.M. Business: Read minutes; election of member (Dr. Porter, Comrie); appointment of representative member; arrangements for special anniversary meeting, the Perthshire Medical Association having been founded in 1879; report of Committee *re* registration of deaths; any other competent business. To permit of arrangements being made, it is necessary that the Secretary should be at once informed by members of their intention to attend this meeting, which is conditional upon an attendance of ten members. A conveyance will be ordered to start from Messrs. Marshalls' George Street Office at 11.45 A.M. —A. M. URQUHART, Murray's Asylum, Perth, Honorary Secretary.

BORDER COUNTIES BRANCH.—The annual meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, June 29th, at 4.15 P.M. Members intending to read papers and gentlemen desirous of joining the Branch are requested to communicate as soon as possible with the Honorary Secretary, W. F. FARQUHARSON, M.D., Garlands, Carlisle.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held in Preston on Wednesday, June 27th, at 2 P.M. Members who wish to read communications, show patients, or propose new members are requested to write at once.—T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of this Branch, owing to the indisposition of the President-elect, is postponed to Thursday, June 28th, when it will take place at the General Hospital, Nottingham, at 2.15 P.M. Agenda: Minutes. Report of Branch Council. Election of representatives of Branch on General Council. Election of representatives of Branch on Parliamentary Bills Committee. Election of Branch Council and officers. Election of President-elect for 1900-1901. President's address. The following cases will be shown and papers read:—Mr. C. J. Bond: Two Cases of Spina Bifida, treated by Excision. Dr. G. Lorimer: Some Observations on Gonorrhœal Rheumatism. Dr. E. Mansel Sympson: A Case of Recto-vesical Fistula in a boy 5 years old, with Colotomy Operation. Dr. Pope and Dr. Astley Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks on the possible Connection of the Two Diseases. Dr. H. Handford: Three Cases of Cerebro-spinal Meningitis. Dr. W. B. Ransom: Notes on, and Specimens of, a Case of Syringomyelia. Dr. H. Michie: Intestinal Resection for Cancer. Members are requested to bring cases and specimens for exhibition. Luncheon will be provided by the President-elect at the Albert Hotel, Derby Road, at 12.45 P.M. The annual dinner will take place at the same hotel at 6 P.M.; price 7s. 6d., exclusive of wine.—FRANK M. POPE, 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

SOUTH MIDLAND BRANCH.—The forty-fifth annual meeting of this Branch will be held at Wolverton on Thursday, June 14th, at 1 P.M., under the presidency of Dr. Symington. Gentlemen wishing to bring forward cases or papers are requested to communicate with the Honorary Secretary without delay. The following papers have been promised:—Mr. Percival: A few Cases of Abdominal Operations. Mr. Nash: A Case of Pancreatic Cyst in a Child, treated by drainage. Specimens: (1) A multilocular cyst of paradidymis and loose body from tunica vaginalis; (2) fragments of renal growth passed in the urine. Mr. Hailey: The Provision of Isolation Hospitals for Rural Districts. The following gentlemen will be proposed as new members of the Branch: C. H. Miles (Stantonbury), E. Sexton (Bedford), Chas. H. Perram (Bedford), E. P. Norman (Yardley Hastings), Arthur D. Hughes (Dunstable), A. H. Collins (Riseley), A. A. Hope (Byfield); Geo. Kimball Jones (Northampton); J. O. Harvey (Wolverton); Ernest Selby (Waddesdon). It is hoped that time will allow of a visit to the London and North-Western Carriage Works. The President invites the members to luncheon at 12 o'clock, and will be glad of the favour of a reply, sent to himself, not later than June 12th. Gentlemen are asked to introduce new members, and to show patients, specimens, drawings, skiagraphs, etc., and anything that may add to the interest of the meeting.—C. J. EVANS, Northampton, Honorary Secretary.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Reigate on Thursday, June 21st. Dr. Walters, of Reigate, will preside.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 20th, in the Museum of the Torquay Natural History Society, Babbacombe Road, Torquay, at 3 P.M., when Dr. Jackson will resign the chair to Mr. Karkeek, who will deliver an inaugural address. The Branch Council will meet at 2 P.M., and will afterwards present their annual report to the meeting. Mr. George Jackson will ask the opinion of the meeting as to the desirability of transacting business, especially in matters of interest to the profession at large (not for the reading of papers on medical or surgical topics or showing cases or specimens) at the annual meeting. In the event of the meeting agreeing to that arrangement, it will be asked to sanction a special meeting in order to alter the by-laws to give effect to the same. A communication from the General Secretary of the Association with reference to the Midwives Bill, at present before Parliament, will be read. Luncheon, by kind invitation of the President-elect, will be held at 1 P.M. at the Museum, and the annual dinner will take place at the Bath Saloon at 6.30 P.M. Tickets (exclusive of wine), 6s. After the meeting tea will be served in the Museum. On Thursday, June 21st, the Torquay members have kindly arranged an excursion by sea to Dartmouth, up the river Dart to Totnes, at which place luncheon will be held, and by coach from there to Berry Pomeroy Castle, and home. The Honorary Secretary will be glad if members will inform him, on or before June 16th, whether they will be present at (1) the dinner, (2) the excursion, so that further arrangements may be made. H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

WEST SOMERSET BRANCH.—The annual meeting of this Branch will be held on Tuesday, June 26th, at 12.30 P.M., at the Lamb Hotel, Dulverton, under the presidency of Mr. G. F. Sydenham. Business:—Minutes. Report of Council. Treasurer's account. Election of members of Council and President elect. Place of next annual meeting. Intermediate meetings. The President will deliver an address on The Vulgar Errors and Superstitions of West Somerset in their Relation to Medicine. Dr. Macdonald will make a short report on the Conference of Medical Ethics at Manchester. Luncheon will be provided at the Lamb Inn after the meeting, price 3s. 6d. per head, exclusive of wine. The President invites the members of the Branch to drive with him to the Harbourer's Cottage, Haddon Hill, where tea will be taken. Mrs. Sydenham has kindly invited the wives of members to lunch at her house, and to join the party at tea at Haddon afterwards. Members should write to Mr. Sydenham before June 20th, stating if they intend to be present, and if their wives accept Mrs. Sydenham's invitation. —R. LIDDON MEADE-KING, Taunton, Honorary Secretary.

READING AND UPPER THAMES BRANCH.—The annual meeting of this Branch will be held in the Library of the Royal Berks Hospital, Reading, on Friday, June 29th, at 3 P.M. The President (Dr. Freeman) will take the chair, and the officers for the coming year will be elected, after which Dr. Noott, of Broadmoor Asylum (the President for the coming year) will take the chair. At 3.30 P.M. a combined scientific meeting of the Oxford Branch and the Reading and Upper Thames Branch will be held in the Library, Royal Beccles Hospital. Cases will be read and specimens presented, and the President (Dr. Noott) will read a short paper on the Alleged Increase of Lunacy, with a view to a discussion, in which members of both Branches are invited to take part. The annual dinner will take place on the same evening at 6 o'clock at the Great Western Hotel, Reading. The charge for the dinner will be 6s. per head, exclusive of wine.—H. H. PHILLIPS-CONN, Reading, Honorary Secretary.

BATH AND BRISTOL BRANCH.

A MEETING of this Branch was held at Bristol on May 30th, Dr. A. J. HARRISON, President, in the chair. Thirty members were present.

New Members.—The following were elected: Donald Ackland, M.R.C.S., L.R.C.P.Lond., L.D.S. R.C.S.Eng.; Forbes Fraser, F.R.C.S., L.R.C.P.Lond.; and Roland Cox, M.R.C.S., L.R.C.P.Lond.

Midwives Bill.—The HONORARY SECRETARY read the report of the Branch Council on matters connected with the Midwives Registration Bill, and on a communication from the South-Western Branch, which were referred to the Council at the last meeting.

Bright's Disease.—Dr. H. WALDO read a paper entitled Is Bright's Disease Curable? Using albuminuria in a clinical sense, and excluding cases of albuminuria after exertion, he emphasised the gravity of the condition where large amounts of albumen were passed, though a few cases might clear up. Albuminuria might occur at the menopause and clear up, but the prognosis in cyclical or postural cases was doubtful. Cases of post-scarlatinal nephritis were long-suffering, and often did well; in chronic Bright's disease he had seen albuminuria present for eighteen years in one case, but the general outlook was bad. Although if, as was probably the case, alcoholism led to albuminuria, the albumen should clear up on discontinuing alcohol, his experience of such cases was that few or none recovered. He alluded to the importance of an early diagnosis, which could often be made from the cardio-vascular changes; he had seen many cases benefited, but none cured, from residence in a warm climate. Potassium iodide was often useful in cases of contracted granular kidney, and where pilocarpin was useful the previous administration of a tabloid of renal extract increased its effect.—Dr. COOMBS said the estimation of the functional capacity of the kidney was of great importance in prognosis.—Dr. SYMES agreed as to the curability of post-scarlatinal cases and the difficulty of treating successfully chronic nephritis.—Dr. HARVEY mentioned a case in which albuminuria was cured by residence in Cyprus and in Egypt.—Dr. WATSON WILLIAMS mentioned the insignificance of albuminuria as a drain of proteid material, and very often as a symptom; and in treatment the importance of maintaining the high pulse tension, unless this were already excessive.—Dr. MICHELL CLARKE thought treatment and prognosis in well-marked chronic Bright's disease was unsatisfactory. Cases of contracted granular kidney might, however, by taking proper care, live a very long time. He mentioned a case still living in which albumen was found in the urine thirty-five years ago.

Congenital Stricture of Ileum.—Dr. E. W. H. GROVES read a paper on the case of an infant aged 13 months, who came under his care in an extremely emaciated condition, with visible peristaltic movements of the bowel.

The child was in constant pain, but there was no vomiting throughout,

and the bowels were regular until towards the end. *Post mortem* a hard fibrous stricture was found in the ileum, which only admitted a probe. He thought the stricture a congenital one, an example of an extreme degree of stenosis involving all the coats of the gut.

A similar case had been reported by Mr. Hudson in the Pathological Society's *Transactions*.—Mr. CARWARDINE referred to the importance in cases of stricture of the gut in this situation of the development of Meckel's diverticulum, to the recession of which a congenital stricture was often due.—Mr. MORTON gave an account of a case of congenital stenosis of the gut in an infant under his care.—Dr. A. J. HARRISON and Mr. WATHEN also discussed the case.

Pin in the Pharynx.—Dr. H. S. BALLANCE reported the case of a dressmaker, aged 25, from whom he removed a pin stuck in the pharynx.

She was in the habit of holding pins in her mouth. She next complained of pains in the abdomen, and passed two *per rectum* after a dose of castor oil. Examination by *x* rays (by the screen) at St. Thomas's Hospital showed one pin in position of cæcum and two in the lumbar region; castor oil brought away two. She returned well, but some months later again complained of abdominal pain and had a passing attack of ascites. Skiagraphs were taken, and one showed a pin in the abdominal cavity, but eight or nine others taken subsequently failed to show it, and operation was therefore postponed. As the pain continued she returned to the Bristol General Hospital, where the abdomen was opened by Mr. Morton, and a needle found which had passed half way through the wall of the gut in the region of the umbilicus. She remained well until two days ago, when she had again pains in the lumbar region with a rise of temperature.

—Mr. MORTON gave a short account of the clinical features of the case whilst under his observation, and of the operation which he performed for her relief.

The Early Diagnosis of Measles.—Dr. WATSON WILLIAMS read a paper in which he described the spots on the buccal mucous membrane, which were first pointed out by Koplik as occurring in the pre-eruptive stage of measles, and alluded to their importance as affording a means of early diagnosis. The paper was illustrated by coloured drawings, and was discussed by Dr. H. J. HARRISON and Mr. WATHEN.

Erb's Progressive Muscular Dystrophy.—Dr. MICHELL CLARKE showed a boy, aged 15, suffering from Erb's progressive juvenile muscular dystrophy. The disease had lasted four years, had slowly invaded most of the muscles of the trunk, shoulders, arms, and thighs, and in less degree those of the calves, feet, and hands. The face was spared. The muscles gave diminished but no degenerative reaction to electricity. There was also enlargement of both parotids.

Paper.—Dr. MICHELL CLARKE read a paper on a case of Malignant Endocarditis, in which recovery took place under use of antistreptococcic serum.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE 155th meeting (annual) of this District was held at the Kent and Canterbury Hospital on May 24th, Mr. W. K. TREVES (Margate) in the chair. Twenty-one members and visitors were present.

Confirmation of Minutes.—The minutes of the last meeting of the District and of the last annual meeting, were read and confirmed.

Accounts.—The accounts for the past year, duly audited, were passed.

Election of Honorary Secretary.—On a resolution from the Chair, seconded by Dr. PITTOCK, Mr. Raven (Broadstairs) was unanimously re-elected Honorary Secretary.

Forthcoming Meetings.—It was decided that the meeting to be held in September should take place at Broadstairs, and that the meeting in March, 1901, should be held at Faversham.

Chairman of the September Meeting.—Mr. Raven (Broadstairs) was appointed Chairman of this meeting.

Healthy Metabolism.—Dr. HOGGAN EWART (Folkestone) read a paper on Healthy Metabolism and Some of its Indications. After a brief sketch of normal metabolism, health was defined as perfect metabolic equilibrium of the tissues. Special stress was laid on the study of the variations consistent with healthy metabolism with the view of determining the earliest deviations from the normal standard. It was urged that the subject of inflammation was the most important clinical study. A better classification should be aimed at, the affix "itis" being a cloak for much ignorance in textbooks. Dr. Ewart believed that cancer began with an inflammatory molecular change, and that gout was a general inflammatory molecular change set up by excess of uric acid, as were also cirrhosis and diabetes, these being due to irritants, as alcohol in the former and sugar in the latter. Taking this view, diseases might be classified into (1) diseases not due to micro-organisms, (2) those due to micro-organisms or their toxins. The problems to be solved were: (1) When does healthy chemical change alter so as to constitute disease? This was best done by acquaintance with the standards of health and by knowledge of physical and mechanical principles. (2) What measures can be taken to retard chemical alteration? These preventive measures were divided into three—namely, (*a*) sanitation, (*b*) dietetics and regulation of work and exercise—special stress was laid on the latter—outdoor pursuits and systematic exercises in particular; (*c*) bacteriology. (3) When alteration has occurred, how is the normal equilibrium to be restored? This introduced the consideration of surgical and medical methods, both of which were successful in direct proportion to what was touched on under this heading—the knowledge of when the earliest deviation occurred. This was much easier for the surgeon; with the physician it was largely a matter of public education, for the uneducated man delayed until it was too late, while the educated man sought advice early as to preventive measures, when the physician could help him more efficiently than he could a patient with a temperature of say 103° F. In conclusion Dr. Ewart remarked that a knowledge of healthy metabolism was of primary importance, and reference must always be made to it in judging of the resections of the tissues, whether they were against external organisms, auto-intoxication, or physical or chemical agents.

Membranous Colitis.—Dt. ARMSTRONG BOWES (Herne Bay) read a paper on membranous colitis.

The condition known as dyspeptic membranous colitis was illustrated by a case occurring in a girl, aged 4 years, who had been the subject of it for eighteen months, and who during that time had had paroxysms when typical evacuations were passed, consisting of shreds, agglutinated masses, and tubular casts, with instant relief of pain. No cause of the disease could be discovered, but on one occasion the evacuation was accompanied with a convulsion. The chief points of special interest were that the patient was a child, and that her younger brother had once passed such an evacuation when not twelve months old; that the symptoms were mild considering the frequency of the paroxysms and the amount of membrane passed; two symptoms, abdominal pain and headache, were present only at night. The microscope revealed a structureless ground of the membrane, containing mucin, with many irregular degenerating epithelial cells and leucocytes embedded in it. The seven specimens shown from varying paroxysms exhibited differences in colour and thickness of the membrane.

The usual association of the disease with neurotic females, and the attendant symptoms, the microscopical characters of the membrane and the diagnosis were dealt with. Under etiology, the inflammatory, nervous, and mechanical theories were discussed. Prognosis was good as regards life, but unfavourable as regards cure. Many drugs had been unsuccessfully employed; external applications had failed, and treatment resolved itself into opium, diet, and hygiene. As a last resource, a right inguinal colotomy had been done with success, the artificial anus being left open for a sufficient length of time.

Partial Gastrectomy.—Dr. WHITEHEAD REID (Canterbury) showed a man, aged 35, from whom he had removed, a year ago, the pylorus and part of the stomach for ulcerating epithelioma. The patient returned to his work as a milkman seven weeks after the operation. The specimen was shown. Double rows of boiled silk sutures were used for sewing up to the stomach and attaching the duodenum thereto.

Dinner.—After the meeting, eighteen members and visitors dined at the County Hotel under the presidency of the Chairman.

SPECIAL CORRESPONDENCE.

BERLIN.

Medical Courts of Honour: Initial Difficulties.—Hygiene of Railwaymen.—Scientific Inspection of Barnum's Show.—A Day Sanatorium.

THOUGH medical courts of honour are by law theoretically an established fact in the Kingdom of Prussia, they are far as yet from being realised in practice. Dr. Becher, President of the Berlin-Brandenburg "Aerztekammer" (representative body of medical practitioners) and President-elect of the Court of

Honour for the same district, has declined to recognise the statutes as prepared by the "Cultusminister," or rather, one of the statutes, the paragraph, namely, that would bind the President of the Court of Honour to notify every case in which a doctor should fall under the court's jurisdiction to the "Staatsanwalt" (public prosecutor) of the court of law nearest to his district. This paragraph is arousing much comment and general discontent in the medical world. It is looked upon not only as vexatious, but as in direct contradiction with the spirit and scope of courts of honour as set forth in the preamble of the law on the subject. A minor difficulty, inasmuch as it involves no fundamental principle, but a difficulty none the less when it comes to actual work, is the amount of formalism and general "red tape" exacted by the Minister. Each meeting of a court of honour will have to keep and post up ten books (ten is the minimum number!) The statutes, in fact, are generally considered unsatisfactory, and one can only hope that the Minister may be induced to consent to their radical alteration before long.

At the last meeting of the Society for Public Hygiene, Dr. Braehmer read an interesting paper on The Scope of Public Hygiene in Railway Traffic, in which he stated that the Prussian railway department has decided to build two lung sanatoria for the benefit of the railway men, one in the Silesian hills (Riesengebirge), and the other in the neighbourhood of Cassel. Speaking of diseases of the gastro-intestinal system, to which it appears that railway men, stokers, engine drivers, railway guards, etc., are specially liable, on account of the irregularity and insufficiency of their meals, Dr. Braehmer strongly advocated adoption of the Swiss system, which provides well-prepared meals for the workers at fixed stations and at suitable intervals of time.

Professor Virchow, accompanied by about seventy other members of the Berlin Anthropological Society, inspected Barnum's "show" of human monsters a few days ago. The distinguished visitors, among whom were Leyden, Senator, and Lesser, examined several of the more curious "abnormalities" with the greatest interest, even using the stethoscope in some cases.

A novel kind of convalescent sanatorium, an establishment for "spending the day" only, without sleeping accommodation, has just been opened in a forest of fir trees close to Berlin. The Red Cross Society, to whom it belongs, has carried out the idea in the simplest and most practical manner. At about three-quarters of a mile from the station "Jungfernhaide" of the suburban railway a portion of the forest has been fenced in, two barrack sheds (Doecker's pavilions) erected, one of which contains the sitting and dining rooms, with a fair collection of books, newspapers, games, etc.; the other a small ambulance room for aid in case of accidents, the kitchen, and the manager's department; out-door games also are provided. The arrangements at present are for about a hundred visitors, but their capacity can, of course, be easily enlarged.

LIVERPOOL.

Prosecution for Selling Food containing Boracic Acid.—Resignation of Dr. John Cameron.—Major Ross on the Destruction of Mosquitos.

AT the City Police-court, before Mr. W. J. Stewart, stipendiary magistrate, a Liverpool dealer was summoned for selling margarine which contained 0.73 per cent. of boracic acid—that is, 51 grs. to the pound. Medical witnesses gave evidence both for the prosecution and for the defence, and there appeared to be a remarkable divergence of opinion on their part as to the effect of small doses of boracic acid on the healthy organism. The prosecution held that boracic acid was injurious if taken for a prolonged time; and, further, that as margarine made from fresh materials would keep indefinitely without the addition of an antiseptic, it might have been added to mask rancidity of the fat. Professor Boyce, in the course of his evidence, described the effect of giving kittens milk containing borax in proportions corresponding to those of the boracic acid in the margarine. These animals had violent diarrhœa, and lost 100 grs. in weight in five days, whereas other similar kittens fed on pure milk gained 100 grs. during the same time. On the other hand, Dr. Barron, Dr. Buchanan, and others maintained that boracic acid in small amounts was not injurious to health, one witness stating that it was a matter of indifference to him whether boracic acid was present or not in food which he consumed. Mr. Stewart said the issue was far too serious to be decided in favour of boracic acid in the limited area of a police-court. He preferred to look at the interests of the public generally, and everyone would admit that if they could get a pure article it was much better that they should, and they did know that these preservatives were made use of in order to make it possible to put on the market an article which otherwise could not be sold. He imposed a fine of £20 and £5 5s. costs. Notice of appeal was given. Two other dealers were fined 20s. and costs for adding boracic to cream. Notice of appeal was given in both cases.

Dr. John Cameron has resigned the office of physician to the Royal Southern Hospital, to which he was appointed more than half a century ago. Such a service must be almost unique in hospital annals, especially since Dr. Cameron did not delegate the duties of his office to younger men, but visited his wards regularly every day until he was laid aside by a severe attack of influenza, which was followed by extreme prostration, from which he is still suffering. Last year the Medical Institution celebrated the attainment by Dr. Cameron of the sixtieth year of his membership, and presented him with an address testifying to the esteem and regard in which he was held by his professional brethren. His colleagues who congratulated him then sympathised deeply with him in the illness which has led to his resignation at the hospital to which he has been so warmly attached, and trust he may be spared to take an interest in it for many years to come. His post as Physician at the hospital has been filled by the appointment of Dr. Charles J. MacAlister, who has been several years Physician to the Stanley Hospital.

Major Ronald Ross, of the Liverpool School of Tropical Medicine, recently gave a lecture by invitation at the Cambridge Pathological Laboratory on the Relation of the Mosquito to Malaria. Professor Sims Woodhead presided, and there were present Sir G. Stokes, Professor Clifford Allbutt, and a number of eminent medical men and zoologists. After describing the facts regarding the relation of mosquitos to malaria, which are now well known, Major Ross expressed his strong conviction that the country was not fulfilling the obligations which were incumbent upon it in regard to the destruction of mosquitos. This he considered to be a matter of extreme importance, not only on account of malaria, but also on account of the part which mosquitos had recently been proved to play in the propagation of the filaria sanguinis hominis. The high mortality from these diseases made it an obvious duty for us to do all in our power to diminish their frequency, and he held that it was imperative on all governments to include the destruction of mosquitos in the ordinary sanitary precautions which those responsible for the health of a community were required to carry out.

BIRMINGHAM.

The New Birmingham University.—The Inaugural Meeting of the Court of Governors.—Address by Mr. Chamberlain.

ON Thursday, May 31st, the inaugural meeting of the Court of Governors of the new Birmingham University was held at the buildings of the old Mason University College. The University, having received its Royal Charter, is now launched into existence, and the meeting held was a celebration, so to speak, of its birthday. Mr. Joseph Chamberlain, as Chancellor of the new University, presided, and there were present, in addition to the Lord Mayor and local members of Parliament, a large number of the Court of Governors of the University.

A resolution was first of all proposed by Mr. Chamberlain, and the following message despatched to the Queen at Balmoral:

The Court of the University of Birmingham, constituted under the Charter recently granted by Your Majesty, at its first meeting tenders its most hearty and loyal congratulations to Your Majesty on the capture of Johannesburg and Pretoria.

Mr. Chamberlain then gave an introductory address as Chancellor. He congratulated the governors on the realisation of a hope and an aspiration which had been entertained by the citizens of Birmingham for half a century. While they realised their aspira-

tion in name, they were still, perhaps, very far from the completion and final establishment of that great institution which they saw in the future. The further they went, in fact, the more gigantic their task appeared. So far they had accomplished the object for which they began to strive less than two years ago—that now they possessed a University which could control its education, could fix its own standards, and give its own degrees. It was his conviction that the governors would support them in maintaining the high standard of that degree, so that a diploma from Birmingham should be at least equal to that of any other teaching university. In the second place, they wished to create a great university in which all who came to them should find efficient and complete instruction in every branch of knowledge. Again, they desired that their University should be a school of research. In order to secure these objects they ventured to ask for a further endowment of a quarter of a million sterling. That day they were able to announce that they had already received promises of £330,000, the amount having been largely increased by the donations of Mr. Carnegie, of an anonymous donor, of Mr. C. Holcroft, and of Mr. George Kenrick. It was intended that their University should be a distinctive one. It was hoped that it would take some colour from its environment—that not only would it be a school of general culture, but that it would also practically assist the prosperity and welfare of the district by the exceptional attention which it would give to the teaching of science in connection with its application to local industries and manufactures. This portion of their task had turned out to be much greater and much more responsible than they had anticipated. The report of a Committee who had visited the various universities of the United States and Canada had opened the eyes of all of them. The report showed how behindhand we were in the preparation for that great struggle which must come, that commercial competition between nations, in which the weakest would inevitably go to the wall. They found in Canada and in the United States great institutions connected with a general university, with colleges of science fully equipped with proper buildings, with the most modern and complete machinery, and with laboratories for every conceivable scientific purpose. And in these great colleges was given a training, based as all education should be, upon a foundation of general culture, but specialised in its course, highly specialised, according to the particular and separate work which each student intended to undertake in life. For all these purposes further funds were needed. He himself was of opinion that another quarter of a million was the smallest sum which they would require to put this portion of their undertaking upon a satisfactory basis. In conclusion, Mr. Chamberlain made an earnest appeal to raise this further sum. He anticipated, he said, that they would get it from two sources in the main—partly from the small donations from the immense number of well-to-do citizens of Birmingham whoup to the present time have not contributed; and partly—as had been the case at Montreal, and at Toronto in Canada, and at Cornell, at Chicago, and at the Columbia University in America—from large generous donations from individual citizens who had amassed fortunes in commerce, and who were willing to devote considerable sums towards the promotion of higher education.

Having submitted the charter of the University, Mr. Chamberlain then proposed the Lord Mayor of Birmingham, Mr. G. C. Beale, as its first Vice-Chancellor. Mr. Alderman Clayton was appointed Pro-Vice-Chancellor and Treasurer. The Pro-Vice-Chancellor then presented a report dealing with the dissolution of Mason University College, and its absorption in the University.

DUBLIN.

The Report of the Committee on the High Death-rate of Dublin.—The Mortality of Dublin and London Compared.— Water-supply. — Intemperance. — Overcrowding. — Mortality from Phthisis and Respiratory Diseases.—Compulsory Notification.

The recommendations of the report of the Committee appointed in February last to inquire into the causes of the high death-rate in Dublin, which were published in the British Medical Journal of May 19th, p. 1258, were unanimous, and the report itself has already met with almost universal approval. It is not too much to say that the special knowledge in matters of public health possessed by the President of the College of Physicians of Ireland, and by Dr. Theodore Thomson, of the English Local Government Board, has been the prevailing element in securing a reliable and acceptable issue to the arduous work undertaken by the Committee.

The earlier portion of the report, which deals with the comparative mortality statistics of Dublin, is of the highest value. The following table for 1898 is worthy of reproduction:

Ages.	Dublin City.	London.	Ages.	Dublin City.	London.
0-1 year	245.8	189.0	15 years	7.3	2.8
1 ,, ...	100.5	64.7	20 ,, ...	9.4	3.7
2 years	41.0	24.5	25 ,, ...	13.8	6.0
3 ,, ...	27.3	15.0	35 ,, ...	20.7	11.6
4 ,, ...	19.8	9.9	45 ,, ...	30.6	19.2
			55 ,, ...	61.0	34.9
Under 5 years ...	89.5	63.3	65 ,, ...	101.9	61.7
			75 ,, ...	170.7	142.8
5 years	11.0	4.0	85 years and upwards ...	282.3	262.0
10 ,, ...	6.6	1.9			

It will thus be seen that the relatively higher mortality in Dublin occurs between the ages of 5 and 35. Then arises the question, To what disease is this higher death-rate during the healthiest periods in life attributable? It appears that, as regards zymotic diseases, while measles and diphtheria are more fatal in London, all the other constituents of the group give rise to a higher mortality in Dublin, and this applies more particularly to enteric fever and "other zymotic diseases," which heading includes influenza, septic diseases, and venereal diseases. In the group of "constitutional diseases," of which the main constituent is phthisis, the mortality in Dublin is more than double that of London, while among local diseases those of the respiratory system and of the brain and nervous system are accountable for almost a similar relative proportion to the disadvantage of Dublin.

The general death-rate of Dublin for 1899 was 33.6 per 1,000, as compared with 28.6 per 1,000 for the five years 1894-98. Nearly half of this excessive mortality was due to measles, while the remainder was mainly referable to increase in deaths from respiratory and constitutional diseases.

The report proceeds to point out that the Vartry water is pure and suitable for domestic supply, that it cannot properly be accepted that there is a relatively greater amount of intemperance in Dublin than London, and that undue stress was laid by several witnesses on the density of population as being detrimental to the public health.

Several conditions exist in Dublin which are wont to be associated with a high rate of mortality. Exceptionally noteworthy among these are the insanitary circumstances in which a considerable proportion of the population of Dublin lives. Large tenement houses, each room occupied by a separate family; the house itself in a state of dilapidation, water supply inconvenient of access, dirty common staircases, inadequate water accommodation in a foul state, back yards ill paved and littered with refuse and excrement are the conditions of life in Dublin which are frequently encountered in connection with the dwellings of the poorer classes. These conditions tend to the production of a state of lowered vitality favourable to the contraction of disease and to fatal results of disease when contracted. They also directly encourage the spread of maladies of the infective class, which include not zymotic diseases only, but also ailments such as phthisis and other forms of tuberculous disease which are excessively prevalent in fatal form in Dublin.

The high death-rate from enteric is not positively to be regarded as due to certain conditions of the soil, though the evidence on this point may be regarded as probably correct.

The excessive mortality from phthisis may be due to a multiplicity of causes, among which are the uncleanly homes, the lowered vitality from poverty, the resort to stimulants in the case of the badly fed, the conditions of the dairy yards and cowsheds, which favour tuberculosis in cattle and the resulting risk of dissemination by milk, and probably the use of meat derived from ill-kept private slaughterhouses, of which there are not a few in Dublin. The high death-rate from diseases of the respiratory organs may be in part attributable to the lessened resisting power caused by insufficient food and clothing; partly also to the home conditions among the poor, which favour the spread of infection, for no small share of the respiratory diseases follows upon attacks of

influenza and measles. Low vitality and the abuse of alcohol may be reckoned as aiding in the excessive death-rate from nervous diseases.

The recommendations for adoption with a view of improving the health of the city, which appeared in the JOURNAL of May 19th, p. 1258, may be regarded as reasonable, and on the whole easy of accomplishment. To carry out the ten which appear first on the list will require money, but the additional rates to secure the objects named will be cheerfully borne if the Corporation will proceed in a business-like fashion to do the work.

As regards the elementary schools, although many of the managers are opposed to the Corporation being granted the power to close day schools during an epidemic, if the National Board of Education were approached and through them the school managers, there is no reason why the system which obtains in London should not be established in Dublin.

It is hoped that the compulsory notification of infectious diseases will shortly be extended by the Government to the whole of Ireland, and district councils might reasonably be expected to adopt voluntary notification of phthisis. It is astonishing that no provision has been yet made in Dublin either for the treatment of small-pox in an isolation hospital or homes for convalescents from infectious disease. The recommendation to appoint an assistant medical officer of health is unlikely to be effected. There is no doubt that the Committee felt that the energetic Superintendent Medical Officer of Health for the city had more work to perform than a single individual should reasonably undertake, and hence their recommendations to have an assistant appointed and to have the engineering and architectural work relegated to the proper officials.

CORRESPONDENCE.

EPSOM COLLEGE.

SIR,—I have just read your report, in the BRITISH MEDICAL JOURNAL, June 2nd, of the annual general meeting of the Royal Medical Benevolent College at Epsom, and the admirable words of encouragement and advice spoken on the occasion by that wise and kindly friend of so many of us, Dr. Constantine Holman. It is not, I trust, too impulsive on my part to be moved to express, in your columns, the high appreciation I am sure we all of us feel of the devoted and invaluable services which Dr. Holman has given to Epsom College, to my knowledge for the last fifteen years, and I believe for a much longer time. To me it would seem to be little exaggeration, if any, to speak of Dr. Holman as a pillar, and a very strong pillar, of this successful school—successful since, in his wise and persevering way, he began to work for it, to appeal for it, and to guide its councils and operations. This, as I have said, we all feel; but it is as well that occasionally someone should give definite voice to the general feeling. That Epsom is now taking its place as an important public school, to the great relief and advantage of our profession, is due in great part to its broad-minded and indefatigable treasurer.—I am, etc.,

Cambridge, June 6th. T. CLIFFORD ALLBUTT.

MR. LONG AND RABIES.

SIR,—It is to be hoped that the happy suggestion of Sir William Gowers (contained in the letter which appears in the BRITISH MEDICAL JOURNAL for June 2nd) will meet with a prompt and hearty response from the medical profession. Hydrophobia is a dreadful disease, and truly "prevention is better than cure." The firm attitude and decided action of Mr. Long, which have been attended by such happy results, are worthy of hearty public recognition, and, as Sir William says, it becomes the medical and veterinary professions to lead the way in this matter.—I am, etc.,

Glasgow, June 2n JAMES W. ALLAN, M.B.

SIR.—It was with great pleasure that I read the remarks of Sir William Gowers on the above subject, expressing what I think we all must have felt.

Up to the present Mr. Long has received nothing but abuse, and therefore a memorial from those who appreciate his work would be something of a welcome change. Two years ago I had the opportunity of discussing the merits and demerits of the Muzzling Order with one of the officials appointed to carry out the same, and and was much struck with the following remark: "We should be pleased if the orders were more stringent; we don't think they go far enough."—I am, etc.,

Bournemouth, June 4th. C. B. D'EYNCOURT CHAMBERLAIN.

SIR,—I fully endorse the suggestion contained in the letter of Sir W. R. Gowers in the BRITISH MEDICAL JOURNAL of June 2nd, that the members of the medical profession should unite and present a memorial to Mr. Long expressive of their sense of the value of his successful action in maintaining the muzzling order for dogs until he was practically assured that the disease of rabies no longer existed amongst us.

We cannot be too thankful that, despite the pressure put upon Mr. Long to relax his order, and the abuse he received from so many who ought to have known better, he remained firm in his decision, with the most gratifying results.

If Sir W. R. Gowers will move further in this matter, either through the Metropolitan Counties Branch, or more directly through the Council of the Association, I feel sure that the memorial he has proposed should be presented to Mr. Long will be readily and gratefully adopted.—I am, etc.,

Hampstead, N.W., June 4th. GEO. DANFORD THOMAS.

CARELESS ERASURES FROM THE *REGISTER*.

SIR,—About a year ago I received a letter from the Registrar requesting an explanation of my practising in Kendal some eight or ten years after he had removed my name from the *Register* on account of my death. I answered that I was very much alive, and referred him for proof to Mr. Victor Horsley, Drs. Dawson Williams and H. Montague Murray, and to my brother, Mr. Rushton Parker. He merely expressed himself as satisfied, promised to restore my name (which had apparently been erased for eight years or more), and explained that he had seen my name erased from the New Zealand *Medical Register* on account of my supposed death. Some 15 years ago, while spending six months in New Zealand, I had taken the precaution to register myself there. The *Medical Directory* has kept itself accurately posted about myself for the last 20 years. I would suggest that, after the publication of so many complaints about the careless way in which the *Register* is kept up to date, the matter requires careful attention at headquarters.—I am, etc.,

Kendal, June 4th. WILLIAM RUSHTON PARKER.

THE RADICAL CURE OF FEMORAL HERNIA.

SIR,—In connection with the article on the Radical Cure of Femoral Hernia, by Mr. T. E. Gordon, of Dublin, published in the BRITISH MEDICAL JOURNAL of June 2nd, perhaps you will grant me this opportunity of recording a method I adopted in three cases of this condition, which, although unsatisfactory in its results, nevertheless presents some features of interest. Owing to the nature of the anatomical boundaries of the femoral canal it is found to be impossible to bring about its permanent occlusion by the approximation of its walls, either in an antero-posterior or in a lateral direction, and hence, if it is to be effectually closed, it must be by the introduction of some material into its lumen which will remain *in situ* and serve as a permanent plug. Acting on this principle, Salzer has utilised a flap from the pectineal fascia, Professor Watson Cheyne a flap from the pectineus muscle, and Trendelenburg has even turned a portion of bone and periosteum into the crural canal derived from the horizontal ramus of the os pubis or from the symphysis. It is contended that, although these various structures do not remain permanently unchanged in their new situation, and, in fact, are eventually absorbed, yet during the process they are gradually replaced by a firm fibrous tissue formation which subserves a similar function.

To me it seems difficult to comprehend how any of the above-mentioned structures can possibly undergo such a change. From their unirritating nature (being practically normal to the parts in question), it appears far more likely that their disappearance will be of the nature of a fatty degeneration without much accompanying replacement by fibrous tissue. I consider that any substance introduced into the femoral

canal with the object of permanently occluding it should be non-absorbable and capable of causing sufficient aseptic irritation to produce a firm fibrous support around it.

I have tried the insertion of glasswool, a substance analogous to cottonwool, but composed of very fine fibres of glass. This can be rendered absolutely sterile by boiling in water for any desired length of time, is perfectly non-absorbable, and is sufficiently irritating mechanically to ensure the formation of fibrous tissue around it and among its meshes. The operation performed in the 3 cases alluded to was briefly as follows: The sac was opened and its contents reduced, it was then separated and its neck ligatured as high up as possible, the two ends of the ligature being passed through the aponeuroses of the external oblique muscle, side by side, about ¾ inch above Poupart's ligament, and tied firmly together, so as to draw the stump of the sac well up away from the crural ring. The femoral canal was then packed moderately firmly with sterilised glass wool, and this was kept *in situ* by a stitch approximating Poupart's ligament to the pectineal fascia, and so temporarily closing the lower end of the canal. The wound was closed without drainage. All three cases healed by primary union, but in one only did the scar remain permanently sound, a sinus forming in the other two cases at periods of six weeks and eight weeks respectively, necessitating the removal of the glass wool before it could be induced to close. In none of the cases has there been any sign of recurrence of the hernia. Every possible antiseptic precaution was taken at the time of the operation, so that the disappointing result can only be attributed to the mechanical irritation of the glasswool being too excessive, and I do not propose to repeat its use further. Possibly sterilised gauze might meet with greater success.—I am, etc.,

ARTHUR H. BURGESS, M.B., M.Sc., F.R.C.S.,
Resident Surgical Officer.

Royal Infirmary, Manchester, June 3rd.

SIR,—My attention has been drawn to a paper by Mr. Gordon (Dublin) in the BRITISH MEDICAL JOURNAL of June 2nd, and I find that the operation is one I have carried out frequently during the past two years in the Victoria Infirmary, Glasgow. It may interest Mr. Gordon, as well as others, to know that I purpose giving the results of my operations, with a detailed description of the treatment of the sac, and the method adopted in fixing the conjoint tendon to the pectineus, in a paper to be read at the next meeting of the Association.

I may further remark incidentally that I hope to demonstrate that by the same route incision above or through Poupart's ligament we should relieve the bowel strangulated at the crural ring by drawing it up from the canal, aided by pressure from below rather than by dividing Gimbernat's ligaments. I usually make a semilunar incision, and raise a flap of skin upwards, thereby gaining access to the sac and to Poupart's ligament.—I am, etc.,

Glasgow, June 4th. R. H. PARRY.

HEREDITY AND DISEASE.

SIR,—In a previous letter to the BRITISH MEDICAL JOURNAL Dr. Archdall Reid, as an advocate for the theory of the non-transmissibility of acquired characters, challenges his opponents for facts which disprove it. As most known facts point against Dr. Reid's contention, it might be supposed that the *onus probandi* lay rather with him. Since, however, it is perfectly easy to show that this theory is one of the purest assumptions in the range of scientific investigation, I will, within the very brief limits allowed me, point out the biological reasons which justify this assertion. The whole of Weismann's theory of the non-transmissibility of acquired characters depends upon the supposed splitting-up by mitosis of the original idioplasm of the cell in two different ways. Assuming, with most modern biologists, that the chromatin of the nuclear network is the foundation substance of heredity, Weismann, following Roux and De Vries, further assumes that this chromatin, or germ plasm, is packed with an immense number of microscopically invisible pangens or biophors, grouped in a definite manner. These invisible groups of invisible germ units are further conceived to be aggregated into still larger, but equally invisible, assemblages of atoms, disposed in the following order, namely: (1) *Determinants*: (2) *Ids*, which are the visible chromatin granules; (3) *Idants*, which are identical with the chromosomes, or loops (*spireme thread*) of the chromatin granules aforesaid. By the process of mitosis these infinitesimal germ particles are supposed to be distributed to the daughter nuclei in two different ways, namely, quantitatively (*homoiokinesis*), and qualitatively (*heterokinesis*). Heredity, and the repair of lost parts, depend upon the former arrangement; normal cell development and differentiation upon the latter. It is an amazing and ingenious theory, and logically, no doubt, as Wilson observes,[1] it is perfect. The fatal objection to it is that it is opposed to all the facts we know. "Not a single phenomenon of cell division gives even a remote suggestion of qualitative division. All the facts, on the contrary, indicate that the division of the chromatin is carried out with the most exact equality..... The hypothesis is, in fact, as complete an *a priori* assumption as any that the history of scholasticism can show, and every fact opposed to it has been met by equally baseless subsidiary hypotheses, which, like the principal, relate to matters beyond the reach of observation." The experiments of Roux himself, as well as those of Morgan, Endres, Walter, and others, prove that so far from one determinant controlling one particular cell or group of cells, as Weismann's theory demands, it is possible from one blastomere of the two-cell stage (frog, sea urchin) to reproduce the entire embryo, and even from one blastomere of the sixteen-cell stage to obtain the same result, the dwarfs in the latter case being only one-sixteenth the normal size. Driesch obtained even more striking results by a series of pressure experiments to which he subjected segmenting eggs of the sea urchin, and thus obtained flat plates of cells in which the arrangement of the nuclei differed totally from the normal; yet such eggs, when released from pressure, continued to segment without rearrangement of the nuclei, and gave rise to perfectly normal larvæ. These facts disprove entirely Weismann's theory not only of the constitution and continuity of the germ plasm, but also that of the non-transmissibility of acquired characters which he founds upon it. This latter theory, however, is in reality only part of the larger question of variation and variability.

Upon this space forbids me to enter. I may remark, however, that the fact of variation is admitted on all hands. The evidence for it is overwhelming, and the whole process of evolution would be inexplicable without it. But the question is not so much one of the inheritance of useful variations, as of the transmission of those useless or abnormal variations which constitute disease. Take the case of hæmophilia, for example, which, as it is a disease of males only, transmitted in the female line, and apparently does not involve obscure questions of amphimixis, is particularly to the point. Even if we admit that disease is at bottom merely susceptibility, or vulnerability of tissue, surely in this case we have an acquired character, hostile, not useful, to the organism, clearly transmitted by inheritance. And since even useful variations can only be transmitted by the modification of the true reproductive elements (the "blastogenic cells" of Weismann)—otherwise the variation would only affect the "somatogenic cells," and would not, according to the theory, be inherited—it remains for Dr. Reid and his friends to prove that unfavourable variations—for example, susceptibility to disease, cannot be transmitted in the same way.—I am, etc.,

Leamington Spa, May 1st. MONTAGU LOMAX.

*** We should be the last to question the interest and importance of the subject matter of this correspondence, but must point out that the publication of very long letters is often impossible, and must nearly always lead to delay.

PREVALENCE OF TUBERCULOSIS IN DEVON AND CORNWALL.

SIR,—In an article headed "Public Sanatoria for Consumptives of the Poorer Classes" in the BRITISH MEDICAL JOURNAL of April 28th reference is made to the death-rate from consumption in Devon and Cornwall as higher than the average. If you will allow me, I will amplify this comparison with other counties. Dr. John Tatham, Superintendent of Statistics, General Register Office, writes in the general appeal of

[1] *The Cell in Development and Inheritance*, page 306.

the Royal National Hospital for Consumption, Ventnor, February 28th, 1899, as follows:

Taking, for example, the phthisis mortality in the several counties of England and Wales as published in the reports of the Registrar-General, in comparison with the average rate in the provinces (that is, England and Wales less London), phthisis showed in 1891-97 excessive mortality among both males and females in London and in the counties of Hampshire, Devonshire, Lancashire, the West Riding of Yorkshire and Northumberland, and also in North and South Wales. In addition to these there was excess in the phthisis rate among males only in Sussex, Cornwall, and Warwickshire; and among females only in Suffolk, Lincolnshire, Cheshire, Durham, and Cumberland. Of the above-mentioned counties showing phthisis mortality in excess of the average amongst both sexes in 1891-97 London and Lancashire had also experienced mortality from phthisis in excess of the average in each of the decennial periods ending with the years 1880 and 1890.

Further, it may be remembered as a factor in the mortality that among such Cornish industries as mining, quarrying, and clay working, tin mining has a "comparative mortality figure" during 1890-92 of 508, which heads the list of "occupations" death-rates,[1] or during 1880-81-82 of 690, according to Ogle.

In Devon, despite the efforts of sanitary authorities, "overcrowding" exists to a large extent, for example, in Plymouth. Until some form of notification of consumption is adopted, however, in the two counties (and supervised by a county medical officer of health) the disease cannot be accurately gauged, the necessary preliminary to dealing with it. On the other hand, veterinary surgeons state that tuberculosis is less prevalent here in milch cows than in other counties. The Branch report endorses the need for an institution for the accommodation of advanced cases of phthisis which spread infection. At the same time it is encouraged by the excellent results attending an open-air existence of early cases in Devon and Cornwall (possibly owing partly to the facilities afforded to such a life by the comparatively mild winter climate) to hope that a large percentage would be restored to health in a public institution or colony.

The Branch wishes to add in conclusion their belief that the most important educational step to be taken in the prevention of the disease is the inclusion of the primary laws of public and personal hygiene in the curriculum of elementary schools.—I am, etc.,

F. BUSHNELL, B.S.&M.D.Lond., D.P.H.Camb., etc.,
Honorary Secretary Devon and Cornwall Branch, National Association for the Prevention of Consumption and other Forms of Tuberculosis; Honorary Pathologist South Devon and East Cornwall Hospital.

April 30th.

MOSQUITOS AND MALARIA.

ANOPHELES IN SINGAPORE.

SIR,—It may be of some interest to record that *Anopheles* have been found here (Singapore). I first found specimens in September of last year at Tanglin Barracks, Singapore, where I was then stationed. These were, as far as I can judge, the same variety as those described by Dr. Thin as *Anopheles* (*pictus?*) from Java,[2] and what Major Giles pointed out were possibly *A. annularis*. I, of course, have only taken the appendages of the head and the spots on the wings into consideration when making the comparison.

Quite recently I have found another variety on Pulo Brani, a small island garrisoned by Royal Engineers about ¼ mile from the mainland, Singapore, of which I am now in charge. This variety closely corresponds to Dr. Thin's *Anopheles* from Shanghai (Fig. 3). Attention was directed in the first instance to the majority of specimens by their characteristic attitude at rest.

I have also found puddles, etc., containing larvæ, and hatched out the mosquito. I may add that Mr. Hanitsch, Ph.D., the Curator of the Napple's Museum, Singapore, has also found a single specimen of what he believed to be *Anopheles* (4) spotted variety. With this exception I do not know of any other or prior observations on the occurrence of *Anopheles* in Singapore. My friend Dr. Simon, Principal Civil Medical Officer, who has seen my specimens, agrees with me as to the probable correctness of their identification. I examined some hundreds of specimens before I found a single *Anopheles*, and must have examined nearly a thousand mosquitos altogether. The percentage of the occurrence of *Anopheles*, according to my observation, closely corresponds to that observed by Dr. Thin in the mosquitos from Java and Shanghai.

In conclusion, may I add how helpful the articles were which appeared on the Malaria Expedition in your columns last year?—I am, etc.,

OLIVER S. ROBINSON, Captain R.A.M.C.

Blakan Mati, Singapore, May 3rd.

[1] Supplement to Registrar-General's Fifty-fifth Annual Report.
[2] Fig. 4, BRITISH MEDICAL JOURNAL, February 10th, 1900, p. 307.

HABITAT OF ANOPHELES IN JAMAICA.

SIR,—In the numerous references to the breeding places of mosquitos which have appeared in the BRITISH MEDICAL JOURNAL, I have not noticed any special mention of the small collections of water found in the "tree pines"—tillandsias and other epiphytic plants, which grow so commonly on trees in hot countries. I formed the opinion some months ago that the *Anopheles* might in some cases breed in these plants, and that the difficulty which has been experienced in finding the breeding places in some localities might possibly be explained in that way. I have examined a large number of tree pines, but so far I have been unsuccessful in finding *Anopheles* larvæ in them; but in almost every instance, whenever there was any water, even a very small quantity, *Culex* larvæ were found in large numbers and of various species; and in this district I believe that the tree pines are the most common breeding places of *Culex*. It is, I think, well known that mosquitos are more common in woods and in the bush than on open cleared land. Besides the larvæ of mosquitos, I have found the larvæ of many other insects in the tree pines, from those of sand flies to the large larvæ of dragon flies.

I hope to investigate the matter further, but as every fact in connection with mosquitos may prove to be of some value, I venture to draw attention to the tree pines as breeding places of the *Culex* genus, and possibly, in some cases, of *Anopheles*.—I am, etc.,

W. H. VICKERSTAFF, L.R.C.P.E., L.R.C.S.E., L.S.A.

Bluefields, Jamaica, May 5th.

MALARIA PARASITES IN DEW.

SIR,—Major Ronald Ross will find in the *Lancet* of September 24th, 1898, a paper by Dr. Dunley Owen, of Enkeldoorn, Rhodesia, containing the statements to which I referred. I do not think, however, that the observations by Dr. Owen are set forth with such scientific precision as is necessary to satisfy the expert; although the condensed report of my paper to the British Balneological and Climatological Society may have made it appear that I considered them conclusive.—I am, etc.,

Honor Oak Road, S.E., May 28th. H. LAING GORDON.

CHRONIC BRASS POISONING.

SIR,—Dr. William Murray's valuable contribution to the literature of chronic brass poisoning, which appeared in the BRITISH MEDICAL JOURNAL of June 2nd, will be read with keen interest by all those who have much to do with this class of disease, and his clear exposition of the diagnosis and treatment will be welcomed by many who must have found therapeutic agents hitherto greatly disappointing.

Among the chaos of symptoms which is generally a signal for suspecting the influence of toxic agents, Dr. Murray appears to omit, or at least does not lay any special stress upon, a feature that I have thought to be frequently associated with advanced stages of chronic brass poisoning. I refer to a marked pulsation, either local or general, of the abdominal aorta. Dr. Murray suggests vasomotor change as the probable explanation of sweating in some cases, and it is easily conceived that such vasomotor influence might account for the effect on the abdominal aorta, more especially when it is remembered that abdominal pain is usually referred in the region of the solar plexus. I can recall one patient in whom the nerve change had apparently behaved in a similar manner to that where the intestine is locally affected in lead colic. The pulsation of a limited portion of the aorta had become so marked that the condition might easily have been mistaken for aneurysm. The same patient, in addition to the aortic symptom, had severe diarrhœa alternating with constipation, occasional melæna, excruciating abdominal pains, headache, and signs of pulmonary fibrosis; and, although I gave a prognosis that I thought would best tally with his symptoms,

yet his recovery was sufficiently good after a protracted illness to enable him to resume his employment.

I have not tried Dr. Murray's treatment by means of milk beverage, phosphorus, and dilute phosphoric acid, but shall do so when occasion next arises.—I am, etc.,

Wolverhampton, June 4th. T. DOBSON POOLE, M.D.

THE CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION, BIRMINGHAM.

SIR,—There is one point in connection with the Birmingham Consultative Institution on which I, and I am sure many others, would be glad to be enlightened. I want to know what value the impecunious citizen of Birmingham is to receive in exchange for the fee of 10s. 6d. he pays the institution? When the scheme was mooted I assumed that the institution proposed to maintain a staff of specialists who would be willing to advise on difficult cases for the reduced fee. We know what the profession thought of this plan, but can understand that it might have at least apparent advantages to the public. Now, however, I see that the institution is opening its doors, having appointed one gentleman as "Consulting Physician." I find on reference to the *Directory* that this gentleman has been qualified for just five years, and does not claim, at least in the *Directory*, any special professional distinctions. Alas, not all of us are so modest.

Are we really to understand that this gentleman in all the plentitude of his five years' experience is prepared to act as "consultant" in any and every case submitted to him? Is he really a universal specialist? If not, what more does the patient get for his half-guinea than he would by squandering half-a-crown on a humbler practitioner, who perchance might not be altogether "rusty," even though more than five years had elapsed since his student days? Can anyone from Birmingham explain?—I am, etc.,

Leigh, Lancashire, May 29th. FRED. E. WYNNE, M.B.

POST-MORTEM EXAMINATIONS IN CRIMINAL LUNATIC ASYLUMS.

SIR,—My attention has been called to a paragraph in the BRITISH MEDICAL JOURNAL of May 19th, under the heading of "Medical Notes in Parliament," in which it is stated:

> The Lunacy Commission came under discussion on the Estimates on May 11th, and complaint was made of the low percentage of *post-mortem* examinations in criminal lunatic asylums. It would be in the interests of science that in all these cases a record should be kept of the *post-mortem* state of the brain, and the attention which was called to the matter by Mr. Caldwell may be expected to bear fruit, especially as the Commissioners themselves have reported on the point.

I desire to point out that the statements contained in this paragraph are incorrect. The observations relating to *post-mortem* examinations on pages 8 and 9 of the Fifty-Third Report of the Commissioners in Lunacy do not apply to criminal lunatic asylums, and it does not appear from reference to *Hansard* that Mr. Caldwell's remarks were intended to do so.

In every case of death in this asylum a coroner's inquest is held as required by law, and it is the invariable practice to make a *post-mortem* examination, as may be seen by reference to Table 3, Appendix B, of the Reports of the Commissioners in Lunacy.—I am, etc.,

R. BRAYN,
Superintendent.

Broadmoor Criminal Lunatic Asylum, Crowthorne, Berks, June 2nd.

*** We are glad to publish this correction of an error into which our correspondent, in common with the reporter of the *Times*, fell.

REMARKS ON THE HOLMGREN WOOL TEST.

SIR,—As Mr. Bickerton does not mention my work in his article under the above heading, I think that I ought to point out that similar cases to those he mentions are described in my book on *Colour Blindness* in the International Scientific Series. I also state there that these cases show that the Holmgren test is inadequate. They may be readily detected by exhibiting lights, in a lantern, made up of the terminal red rays of the spectrum. A person, colour blind in the manner he describes, may look at a red light, dazzling in its brightness, and declare that the room is absolutely dark.—I am, etc.,

Hendon, May 5th. F. W. EDRIDGE-GREEN, M.D., F.R.C.S.

BUSINESS AT BRANCH MEETINGS.

SIR,—I have given notice that at the annual meeting of the South-Western Branch I would raise the question as to whether business of importance to the medical profession could or could not be entertained. It appears to me to be suicidal not to take advantage of the occasion to ascertain the views of the members present on matters of importance to them all, especially in view of the annual meeting, which will take place later on.

I wish through your columns to thank the Secretaries of those Branches who have kindly replied to my queries. I find without exception that all the seventeen from whom I have heard up to the present, inclusive of the principal Branches, transact any business brought before them, and apparently, with one exception, they generally have some topic—principally of a medico-political subject—to discuss. Several Branches adopt the plan of electing officers by voting papers sent out beforehand. This gives all members the opportunity to vote, whether able to attend the meeting or not, and causes more interest to be taken in the elections.—I am, etc.,

Plymouth, June 5th. GEO. JACKSON.

OBITUARY.

JAMES GROSVENOR MACKINLAY, F.R.C.S.EDIN.,

Senior Ophthalmic Surgeon to the Royal Free Hospital; Surgeon to the Royal Eye Hospital.

JAMES GROSVENOR MACKINLAY, F.R.C.S.Edin., who died on May 24th, at his residence, No. 15, Stratford Place, W., was born in 1844 at Isleworth. He was the eldest son of Dr. John Mackinlay, a surgeon in the Hon. East India Company's service from 1824 to the expiration of the Company's Charter in 1834, and afterwards in practice for 30 years at Isleworth.

He was educated at Epsom College, and studied at Charing Cross Hospital. Subsequently he became House-Surgeon, and for a few months held the post of Resident Medical Officer. On the somewhat sudden death of his father, in July, 1866, he was hastily called to give up his hospital appointment, and take up the practice at Isleworth.

His thoroughness in work, and in the knowledge of his profession, combined with great kindliness of heart and absolute straightforwardness, enabled him to build up a large practice, and greatly endeared him to his patients. To the poorer classes he was a warm friend, as well as a skilled adviser, and when a very serious attack of acute lung mischief compelled him hastily to throw up his practice in 1874, and (under the advice of the late Sir Andrew Clark and other medical friends) seek a doubtful restoration in the Antipodes, his loss was greatly and truly mourned. Two years later, in much restored health, he recommenced practice, but exchanged the wear and tear of general work for ophthalmic practice, which had had great attractions for him in his student days.

After filling the offices of Registrar and Clinical Assistant to the Royal Westminster Ophthalmic Hospital, to which he had been House-Surgeon in 1865, he was appointed Surgeon to the Western Ophthalmic Hospital, which post he held for five years. In 1879 he was elected Ophthalmic Surgeon to the Royal Eye Hospital, and in 1881 to the Royal Free Hospital, and held both these appointments at the time of his decease. He was an original Fellow and early Member of Council of the Ophthalmological Society, to the *Transactions* of which he made numerous contributions, and for many years he was a member of the British Medical Association. His health had failed considerably during the past three or four years, and for the last twelve months he had only on rare occasions been able to attend to any public or private work. By those who knew him intimately his memory will always be greatly cherished, and his premature death sincerely mourned. He leaves a widow to deplore his loss.

An old and intimate friend of Mr. Mackinlay writes: Some twenty-five years back J. Grosvenor Mackinlay found his health failing and his life threatened by tuberculous disease. He promptly gave up London and practice, and, trenching boldly on the capital he had inherited, travelled in luxury for twelve months, following, or rather accompanying, the summer weather round the world, and living an open-air life

of ease.....At the end of the first year of such travel he found himself so regenerated that he wisely determined on repeating the experience for a second twelve months, but with less luxury and at half the expense. Then he was so restored that he returned to London and cultivated an active but not an exacting practice as an ophthalmic surgeon.....He was very quick-tempered, very just, always courteous and quite an old-school gentleman, punctiliously particular in matters of etiquette, fees, and precedence. As an ophthalmic surgeon his work was painstaking and conscientious, and he most loyally did his utmost for his patients, even to the extent of transferring difficult operations to colleagues whom he believed more at home than himself in dealing with such.

Mr. Mackinlay took a great interest in the London School of Medicine for Women, and was very popular with its students. His geniality, his quaint dry humour, his fund of anecdote, his old-fashioned manner and dress combined to make an engaging personality. Among his patients were numbered many well known in art and literature.

MAJOR THOMAS ALFRED PERRY MARSH,

Royal Army Medical Corps.

WE regret to have to record the death of Major T. A. P. Marsh from enteric fever at Deelfontein Hospital, on May 22nd. He was the youngest son of the late Captain Henry Godfrey Marsh, J.P., of Winterbourne Park, Gloucestershire, and was born on February 23rd, 1856, at Blackwood, Mon. He entered as a student at the Bristol Medical School on October 1st, 1876, and subsequently migrated to St. George's Hospital, London. He was admitted a member of the Royal College of Surgeons, London, in 1881, and a Licentiate of the Royal College of Physicians in 1882. He also took the Diploma of Public Health, R.C.P. and S.Lond. in 1892. He was a member of the British Medical Association. His career at the Bristol Medical School was a distinguished one, for he was First and Third Year's Prizeman, Clerk Scholar in Surgery, Sanders Scholar in Medicine, and Huberfield Prizeman in Medicine, Surgery, and Obstetrics. On becoming qualified he was for a short time House Surgeon at Weston-super-Mare Hospital, but relinquished this for the Army, passing high in the list as probationary-Surgeon to Netley in 1882. He became Surgeon-Major in 1894. Major Marsh's first experience of active service was gained in the Burmese Expedition 1885-1887, when he was in medical charge of a battery of mountain artillery and present in several engagements near Nyngyam and Yemethen, in which latter place he was during the investment in February and March, 1886. For this campaign he received the medal with clasp. In October, 1899, he was ordered to South Africa to take charge of No. 3 Stationary Field Hospital, of which he personally superintended the equipment. He sailed on November 4th. This hospital was subsequently stationed at De Aar, where he was in command till his illness, and P.M.O. for this important camp and district. His duties here soon became very onerous, the hospital growing rapidly as requirements demanded from 100 to over 300 beds, and finally overflowing with the wounded from Graspan, Modder River, and Magersfontein, all of which battles were fought within a short time of his arrival at De Aar. As Lord Roberts's army invaded the Orange Free State the hospital became inundated with cases of enteric fever, and the onerous duties imposed upon Dr. Marsh by the care of so many sick and wounded told seriously upon his health, which had never recovered the exposure and privations of the Burmese campaign. To recoup he went to the hospital of the Imperial Yeomanry at Deelfontein, where it was found he had contracted enteric fever, from which, to the intense sorrow of his many friends, he died on May 22nd.

We may say, without fear of contradiction, that his was a life given in noble devotion to his duty and country, and that the Royal Army Medical Corps and the profession are the poorer by the death of a skilful and able surgeon. Major Marsh was a fluent speaker and brilliant conversationalist, and his work, *Magazine Rifles in War*, which was given as a paper at the United Service Institution, was of such high merit that it was published by the Institution in pamphlet form. His other works are *Antipyretics and the Rational Treatment of Fevers*, and *Young Soldiers in India*.

There are many of his former fellow-students resident in Bristol and the neighbourhood, and his untimely death at the age of 44 has come as a great blow, for they one and all have the kindest recollections of "Tap" Marsh.

Major Marsh married three years ago the daughter of Senor Don Vincent Bacquera, of Malaga, Spain, with whom much sympathy is felt. There is no issue of the marriage.

WE regret to announce the death of Dr. A. J. ADAIR, of Londonderry, which occurred last month on the transport *Aurania*, returning from South Africa with a batch of wounded soldiers. Dr. Adair graduated in the University of Dublin in 1891, taking his medical degrees in 1893. He subsequently became Surgeon on the Cunard line of Steamers, and was attached to the *Aurania* when that vessel was chartered by the Government as a transport. After several voyages to and from South Africa Dr. Adair contracted dysentery, and to this he succumbed. His remains were brought to his native city for interment, and much sympathy is felt for his bereaved relatives.

THE announcement of the death of Dr. ROBERT IRVINE, which occurred at Ladysmith on May 26th from enteric fever, has caused much regret in Londonderry and its neighbourhood, where the deceased, whose father was a clergyman, was well known. Dr. Irvine took the degrees of M.B. and C.M. in the University of Edinburgh in 1896. He was House-Surgeon in the Royal Infirmary for a year, and had become a Demonstrator of Anatomy in the Surgeons' Hall in Edinburgh. He offered his services as a Civil Surgeon to the Forces in South Africa, and being accepted, went out about three months ago, intending to return at the end of the war to take up his duties in Edinburgh. The death of this young and promising medical man is the third within a week which has been notified as having occurred among civil practitioners, natives of Derry, who had volunteered their services to the Government.

CAPTAIN RUPERT FAWSSETT, whose death from dysentery at Bloemfontein on May 7th was briefly announced last week, was the son of the late Rev. Robert Fawssett and of Mrs. Fawssett, of Upper Tooting. He was born at Coningsby, Lincolnshire, on March 4th, 1869, and received his medical education at St. Thomas's Hospital, where he entered in 1887. He obtained the diplomas of M.R.C.S. and L.R.C.P.Lond. in 1892. He passed into Netley in March, 1895, and was gazetted Surgeon-Lieutenant in July of the same year. He was attached to the 2nd Life Guards in September, 1897, and advanced to the rank of Surgeon-Captain in July, 1898. He went out to South Africa as Medical Officer with the Composite Regiment of Household Cavalry, was engaged with that Regiment in the operations under General French round Colesberg, and was present at the relief of Kimberley, and the capture of General Cronje and the surrender of Bloemfontein.

WE regret to have to record the death of Mr. CLAUDE CLARKE CLAREMONT, who for thirty-five years resided and practised in Millbrook House, Hampstead Road. He was a student of University College Hospital, and became M.R.C.S.Eng. in 1855 and L.S.A. in 1859. He was for forty years in the service of the St. Pancras Guardians, ten as District Medical Officer and thirty as Public Vaccinator. He gave up public work last year, and retired from practice to reside at Bognor, where his death occurred on May 27th. Three of his seven sons are in practice, one in London, one in Norwich, and the third is Dr. C. C. Claremont, of Southsea, who was one of the local Honorary Secretaries of the annual meeting of the British Medical Association last year at Portsmouth.

PROFESSOR JOHANN H. HOFMOKL, of Vienna, who recently died, was born at Breslau in 1840. He studied medicine at the University of Vienna, where he took his doctor's degree in 1865. In 1868 he became Assistant in the Surgical Clinic, and qualified as *Docent* in 1871. In 1873 he was appointed to the staff of the Hospital for Sick Children, and on that of the Rudolfspital in 1881. He was appointed Professor of Surgery in 1885, and in 1898 he succeeded Professor Dittel at the Allgemeine Krankenhaus. He contributed largely to surgical literature, and his numerous papers published in the Vienna medical journals prove his wide and profound knowledge of

surgery, his keenness as an observer, and his skill as an operator. The bibliography of his writing comprises about 200 papers on the most various subjects: Resection of the Maxilla, The Formation of Callus, Suture of the Bladder, Surgery of the Pleura, Surgery of the Bile Ducts, Resection of the Intestine, Cyst of the Mesentery, Deciduoma Malignum, Vesical Diverticulum, Foreign Bodies in the Bladder, etc.

We regret to have to announce the death of Mr. Daniel Ainley, M.R.C.S.Eng., L.R.C.P.Ed., Medical Officer of Health for Halifax, which occurred recently at Bournemouth, where he had gone to recruit from the effects of a cold. He was born in 1835, and was the son of the late Mr. George Ainley, mill manager. In his youth he was engaged in business, but in 1865 he became a medical student at St. Bartholomew's Hospital; in 1868 he took the diplomas of M.R.C.S. and L.M., and in the same year started practice in Halifax. In 1872 he was appointed Medical Officer of Health for the borough of Halifax (with a remuneration of £50 a year). The duties of this post he discharged in the intervals of general practice, until in 1893 it was arranged that he should give his whole time to his public work. The energy and zeal with which he filled the post, and particularly the admirable manner in which he fought a small-pox epidemic, and the assistance which he rendered in connection with the equipment of a fever hospital and in organising the town water supply, won for him a high reputation throughout Yorkshire and the neighbouring counties. On account of his kindly and honourable disposition he was highly popular. He was a good man and a conscientious, patient, and safe professional adviser.

We regret to record the untimely death of Dr. Frank J. Mathews, of Cavan, Ireland, which occurred recently. The deceased, who was only 29 years of age, met with a bicycle accident, which produced a lacerated wound of the leg. Tetanus supervened and proved rapidly fatal. Dr. Mathews was a Licentiate of the Royal Colleges of Physicians and Surgeons, Ireland, and succeeded his late father as Medical Officer of the Stradone Dispensary District. He had already gained an extensive private practice, and was greatly esteemed in his native town of Cavan.

We regret to have to record the death of Mr. Richard Parker Jeffreys, M.R.C.S., L.S.A., late of Chesterfield, which occurred suddenly from cerebral embolism, at Brighton, recently. He was born in 1841, and was consequently in his 59th year when he died. He commenced his medical education in 1856 as a pupil of the late Dr. Jones of Chesterfield, and received his subsequent medical training in Sheffield and London. He took the diplomas of Member of the Royal College of Surgeons and Licentiate of the Society of Apothecaries in 1865; and shortly afterwards commenced practice in Chesterfield. He was medical officer to the Industrial Schools, to the Brampton and Walton Local Board, and to several lodges of Oddfellows, and a member of the British Medical Association. He rendered valuable assistance to the town as Honorary Secretary to the local Cambridge University Extension Committee. After giving up practice in Chesterfield in 1883, he travelled in the United States, Canada, Egypt, and India. He subsequently practised for a short time at Ashover, and afterwards at Bromley in Kent.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Evelyn R. H. Pollard, Deputy Inspector-General to the *Victoria and Albert*, temporarily, May 31st; Sidney T. Reid, Surgeon, to the *Pembroke*, additional, June 4th.

ROYAL ARMY MEDICAL CORPS.

Messrs. George A. Benson and Thomas J. Jacomb are appointed Quartermasters, with the honorary rank of Lieutenant, to complete the establishment, June 2nd.

The following have been discharged from hospital for duty: Major A. Baird, Major R. Kirkpatrick, Captain W. A. Ward, Major T. G. Lowie, Lieutenant C. S. Smith, Lieutenant M. H. G. Fell.

Surgeon-Lieutenant A. H. Benson was slightly wounded in the Transvaal under General Ian Hamilton on May 29th.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel J. T. B. Bookey, Bengal Establishment, is promoted to be Colonel, from May 2nd. He was appointed Assistant Surgeon, March 30th, 1872, and Brigade-Surgeon-Lieutenant-Colonel, October 24th, 1897. He was with the 6th Punjab Infantry in the Jowaki Afreedee expedition in 1877-78 (medal with clasp), and in the Mahzood Wuzeeree expedition in 1881; with the Burmese expedition in 1886-88 (mentioned in despatches, two clasps); with the Hazara expedition in 1888 (mentioned in despatches, clasp); with the Miranzai expedition in 1891 (mentioned in despatches, clasp); with the Waziristan Field Force in 1894-95 with the 1st Battalion 5th Goorkhas (mentioned in despatches, clasp); and in the campaign on the North-West Frontier of India in 1897-98 with the Malakand Field Force (mentioned in despatches, medal with clasp).

THE VOLUNTEERS.

Surgeon-Captain H. W. King, M.D., 2nd Volunteer Battalion the Cheshire Regiment, is promoted to be Brigade-Surgeon-Lieutenant-Colonel on appointment as Senior Medical Officer to the Cheshire Volunteer Infantry Brigade, *vice* Brigade-Surgeon-Lieutenant-Colonel A. Hamilton, who resigns the appointment, May 30th.

Consequent on the division of the 1st Worcestershire and Warwickshire Volunteer Artillery into two corps, the undermentioned officers are to be considered as having received in their new corps commissions of the same rank and date as those previously held by them: Surgeon-Lieutenant A. C. Oldham, 1st Worcestershire Volunteer Artillery; Surgeon-Lieutenant S. P. Johnson, M.B., 1st Warwickshire Volunteer Artillery.

Surgeon-Lieutenant-Colonel H. Wright, 1st Volunteer Battalion the Lincolnshire Regiment, is borne as supernumerary whilst serving with the Royal Army Medical Corps in South Africa, June 6th.

Surgeon-Captain A. A. Watson, 2nd Volunteer Battalion the East Lancashire Regiment, is promoted to be Surgeon-Major, and to remain supernumerary June 6th.

Messrs. William Watson, Arthur T. F. Brown, M.B., and Herbert J. Bryan are appointed Surgeon-Lieutenants in the 4th Volunteer Battalion the Queen's Own (Royal West Kent Regiment), June 6th.

Surgeon-Lieutenant James N. MacMullan, 1st Herefordshire Rifles, resigns his commission, and is appointed Second Lieutenant (supernumerary), June 6th.

Mr. James Ratcliff-Gaylard is appointed Surgeon-Lieutenant in the 2nd Volunteer Battalion the Manchester Regiment, June 6th.

Surgeon-Captain Q. Chalmers, 5th (Glasgow Highland) Volunteer Battalion Highland Light Infantry, is promoted to be Surgeon-Major, June 6th.

Surgeon-Lieutenant J. J. Clarke, M.B., 19th Middlesex Rifles, resigns his commission, June 6th.

VOLUNTEER MEDICAL STAFF CORPS.

Mr. Horace S. Collier is appointed Surgeon-Lieutenant in the London Companies June 6th.

ALLOWANCES IN CAMP.

We are indebted to Captain Arthur Cary, 1st Devonshire and Somersetshire Royal Engineers Volunteers, Weston-super-Mare, for the following answer to the question from "England," published in the British Medical Journal of June 2nd, page 1284:

Provided 50 per cent. of the medical officers' unit attends camp for a minimum of fourteen clear, but not necessarily consecutive, days: also providing that the medical officer also attends for the same number of days, a volunteer surgeon-lieutenant-colonel, acting as a regimental medical officer (only one will be entitled to draw pay and allowances) will be allowed the following daily rates of pay and allowances:

	£	s.	d.
Pay	1	0	0
Mess allowance	0	4	0
Field ,, ...	0	4	0
Furniture ,, ...	0	2	0
Forage ,, ...	0	1	6
Total per diem	1	11	6

Authority—Memorandum of Instructions relating to Pay, etc., Volunteer Camps, 1900. Promulgated by Army Order 119, of 1900.

PAY OF CIVILIAN SURGEONS.

The Secretary for War has approved of pay at the rate of £1 per day being given to civilian medical practitioners in temporary military employ who are not receiving either fixed or capitation rates of pay from army funds. This rate is an advance on the £270 per annum—practically 15s. a day—lately frequently given to civil surgeons employed with troops. A daily rate is the most sensible way of remuneration for those temporarily employed, and for broken periods probably. It is, of course, a further departure from the objectionable club-like system of "contract rates" or head money, which it was impossible to calculate or assess in many many instances.

ARMY VETERINARY DEPARTMENT.

The Annual Statistical and General Report of the Army Veterinary Department for the year ending March 31st, 1899, though belated, contains much interesting material. It deals with the health of the horses and transport animals of the British Army in the United Kingdom, Egypt, and South Africa. An increase on the strength of the previous year of 500 horses and 10 mules is shown. The average inefficiency from disease and injuries was 0.59 less than in the period covered by the previous report. The number of animals admitted for treatment was 9,052.

GLANDERS.

It is highly satisfactory to note that no cases of glanders have occurred in army horses in the United Kingdom since 1888, as the fact goes to de-

monstrate that under efficient veterinary supervision glanders is a preventable disease. We learn that the average period of service of the army horse is 9½ years, and that the average price obtained for 624 horses and mules sold on account of old age is £8 6s. 3d. The report of the Senior Veterinary Officer in Egypt deals with 779 horses and 217 mules on the strength of the army of occupation, and shows the health and efficiency to have been very satisfactory. An outbreak of glanders amongst the horses and mules of the troops in the Soudan resulted in the loss of 17 animals. The disease is stated to have been introduced by a remount horse purchased in Syria. Mallein was employed in diagnosis and it is stated that arrangements have been made for all newly purchased animals to be so tested before they are allowed to enter Government stables. It is well known that this disease is prevalent in Alexandria, Cairo, and some outlying districts. A point of special interest in this report is contained in the reference to a disease known in Egypt as "sauraga" or "ulcerative lymphangitis" and before the introduction of mallein in diagnosis confounded with glanders. In the last Soudan campaign 64 horses were killed in action or for various reasons destroyed.

SOUTH AFRICAN HORSE SICKNESS.

The report of the principal veterinary officer in South Africa who acted "under special instructions to thoroughly investigate the causes of great mortality, and suggest measures that would avoid or minimise it in future," deals at some length with "horse sickness." Unfortunately, nothing appears to have been added to our knowledge of this destructive malady by this officer's investigations. It is satisfactory to note that though glanders was rife among the horses of private owners in South Africa, the army horse enjoyed a complete immunity. Several cases of anthrax are reported.

ARMY VACCINE INSTITUTE.

The Army Vaccine Institute at Aldershot is stated to have done good work. Lymph had been prepared for 76,362 persons at a total expenditure of £88 1s. 2d., or about a farthing a dose. The percentage of successful primary vaccinations is given—for home stations 94.44, and for foreign stations 70.14 per cent.

CLASSIFICATION OF EQUINE DISEASES.

The statistical returns contain much interesting and valuable matter, but it is to be regretted that in the tables such an antiquated arrangement and absurd nosology is retained. For example to pose "tussis (cough)" and "tussis chronica" as definite diseases of the respiratory organs, "scrofula" and "tuberculosis" as separate affections among general diseases as distinct from zymotic, under which are to be found "glanders" and "farcy" as though dissociated from each other, is evidence of the necessity for revision.

The necessity for increased mobility in warfare and the consequent augmentation of mounted troops and increase in monetary value of horses must add to the work and importance of the Army Veterinary Department, which owing to being considerably below its proper strength at the outbreak of the war in South Africa must have had its resources much overstrained.

THE R.A.M.C. IN INDIA FROM A LADY'S POINT OF VIEW.

THE following extracts from a letter addressed to us by the wife of a medical officer gives some information not often attainable. "Those who intend to join the R.A.M.C. should pause if they do not intend to remain bachelors. The formation of a Royal Corps has certainly not abolished all the evils of which medical officers complain.....When one marries a husband she at least expects his occupation will provide means of keeping a house over one's head, and the bringing up any children. My own husband is not without private means, or we should have been among the unfortunates with which the ranks of the R.A.M.C. positively teem.....To what has a doctor's wife (and her children) to look forward to in India? Life only on the plains in the hot weather, or living in the hills on next to nothing. In the cold weather her husband is constantly at manœuvres, marching, or out-station duties.....Another crying evil is the lack of the commonest consideration for one's comfort or convenience shown by those in authority over us. ..... It is the commonest occurrence to be ordered to a place, and just as one is settled down to be sent somewhere else at a moment's notice. One lives in daily dread of the 'official envelope' containing a moving order. ..... Those who dare to have children live in a constant purgatory. Many times our entire pay has been swallowed up in travelling and constant moves, for which the hot weather is considered a favourite time. ..... A railway journey with 110° in the shade is no joke; but it is ordered by the considerate gentleman on the hills with a temperature of 70° and a salary of Rs. 2,000 or more a month against our Rs. 370. ..... Our chief grievances are within the circle of our own branch, not outside or socially."

AN AMERICAN ARMY SURGEON ON THE GERMAN ARMY.

DR. J. M. WOODBURY (late Major and Chief Surgeon, U.S.V.), who as a United States Commissioner observed last summer's field manœuvres of the German army, has submitted to the War Department a report of the hygienic, sanitary, and medical arrangements of the Kaiser's military establishment. Dr. Woodbury found that the feet of soldiers are most carefully considered, each man's feet being inspected by one of his company officers at least twice a week in barracks, and oftener in active field manœuvres. At the same time each man's socks and boots are carefully inspected as to the condition of cleanliness. The entire body of each man is inspected every thirty days by both a company and a medical officer, careful search being made for heart lesions, hernia, venereal disorders, and skin diseases, etc. There is no sick call in the Germany army. The routine is as follows:

If an enlisted man falls ill, or is seemingly unfit for duty, it is reported to the first sergeant of his company; if the sergeant considers the man to be in need of medical care, if the case be in barracks, he is retained in quarters until the medical officer makes his daily rounds morning or afternoon; if on the field, he is picked up by a hospital bearer and taken to the field hospital. The record is kept by the first sergeant, and the man continues to be borne on the strength of the company but as "off duty"; when he is returned he is simply marked for duty on the company books. The time that he has been away is stated as "in hospital." The medium sick and convalescents receive an issue of claret equivalent to half a pint of burgundy twice daily; for the serious cases spirits can be obtained, but only on the medical officer's order. The total weight of each man's equipment, pack, and piece, is 60 lbs. The shelter tent is rolled and attached to the knapsack. No blanket roll slung from shoulder to hip is allowed. Each man carries his own cooking utensils, consisting of a tin canister in which provisions are packed. When the top or lid is removed the bottom may be used as a kettle and the top as a coffee pot. In the field two men usually mess together, one making soup in the bottom of his canister, while the other makes coffee in his, the tops being used as plates. There are no scraps and there is no waste. In the new equipment the provision canister is made of aluminium; it is carried on the knapsack top. There is no haversack. The quality of the food is excellent and the quantity sufficient, being ½ lb. meat daily per man, 1 lb. fresh vegetables, a ration of split peas or beans for soup, and 2 ozs. of coffee, chocolate, or cocoa. Tentage is small in amount, requisitioned quarters in the nearest village being always used. The Germans have a saying that the worst quarters are better than the best bivouac. They never use canvas when they can get a tight roof of a house.

THE R.A.M.C. AND THE WAR OFFICE.

A CORRESPONDENT writes: The BRITISH MEDICAL JOURNAL has several times commented on the differential treatment meted out to the Medical Service as compared with the so-called combatant branch. It will be remembered that retired-pay medical officers were not ordered but invited to rejoin, and we pointed out how this distinction would injuriously affect them: for example, they are not entered in the Army List in the R.A.M.C. list, consequently have to serve junior to all officers of the same rank; their promotion, though on full pay, does not go on, and as a consequence they lose increments of pay at present, and increased pension in the future. The last injustice is the withholding of the "outfit allowance" of £100 granted to all other officers recalled to duty. This has been laid down in a War Office letter to the Army agents, wherein it is stated that "these officers being employed at home with their own consent on non-combatant duties, are not entitled to outfit allowance." Now, here we have the cloven foot fully revealed. First, the War Office invites medical officers to return to duty, an invitation in the present emergency quite (morally at all events) equal to a command. The immediate result of this specious form of invitation we previously pointed out, and now the cunningness of the scheme is more fully shown in that these "invited" officers are deprived of the £100 outfit allowance granted to all other officers. Medical officers are styled "non-combatant" by the War Office. Still, though we have evidence enough of their right to higher consideration, but when this invidious term is used to deprive them of a considerable sum of money, and obliges them to provide themselves with uniform, camp furniture, a horse, saddlery, etc., out of their own pocket, it can only be said that the Secretary of State for War would have been better advised if he had behaved more generously, and treated them as all other officers similarly recalled.

** Does a so-called non-combatant not do duty in uniform, or need to provide himself with other military kit; or was it explained that "own consent" on an invitation practically amounting to a recall, involved the loss of an outfit allowance? Because, if not, then the services of a certain number of retired medical officers were obtained at an unfair disadvantage.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL LAW IN CAPE COLONY.

WE learn from a report in the *Cape Argus* that one Henry Tate, a coloured man, was recently charged at the Criminal Sessions of the Supreme Court of Cape Colony with a contravention of the Medical and Pharmacy Act, 1891, of the colony, by practising without a licence as a medical practitioner. He was charged on five different counts. He stated in his defence that he had been sent out by the American Baptist Society, and had formed a society of members to which he gave food as well as drugs. He stated that he confined his practice to members of the Society, and contended that he was not contravening the Act because he practised not as a medical man, but attended as a father might attend his children. His work was entirely philanthropic, and the money received from entrance fees and contributions went to the society. A person who described himself as the chaplain of the society gave evidence that it was a benefit society to feed the poor who belonged to it, and for the prisoner to visit them when sick. A woman who had paid £1 entrance fee and 2s. a week to the society, said in evidence that the prisoner had attended her sister; he told her she had cold in the blood, and gave her some medicine called the "Woman's Friend." The prisoner's contention that he was acting only in a fatherly manner to the members of this society was not accepted by the jury, who found the prisoner guilty on all five counts. He admitted a previous conviction for the same offence in July last, when he was sentenced to a fine of £50, or six months' imprisonment. The judge now imposed a fine of £25 or three months' imprisonment on each count.

It will be seen that the law in Cape Colony is much more effective than in this country, and affords an effectual means of checking the practice of quacks. It is, we believe, becoming more and more generally recognised that an amendment of the law in this country in the same direction is urgently required for the protection of the public.

The Section under which Tate was convicted is Number XXXV of the Cape Colony Medical and Pharmacy Act, 1891. The first part of the section deals with any person falsely using professional titles or implying that he is licensed or registered or qualified, and then continues as follows: "Any person who shall practise as a medical practitioner, dentist, or chemist and druggist, without such licence as aforesaid, shall be liable to a fine of not exceeding one hundred pounds for each offence, and in default of payment, he shall be liable to be imprisoned with or without hard labour for a period not exceeding six months, unless such fine be

sooner paid. And no person who is charged with a contravention of this section for practising as a dentist or a chemist and druggist without a licence shall be acquitted, by reason of the fact that he is in the employ of, or is agent for, a person duly licensed to practise as aforesaid, unless he is under the actual personal supervision and control of some duly licensed dentist, or chemist and druggist, as the case may be."

POLYPATHIC MEDICAL INSTITUTES.

We are informed that the attention of the Mayor of Plymouth having been called to certain lectures recently announced to be given in the Guildhall by a person described as "the World's Greatest and most Eminent Diagnostician," etc., of the Polypathic Medical Institutes, the Corporation has given instructions that no lectures of the like character are in future to be delivered there.

A DANGER TO MEDICAL CERTIFIERS.

A case recently came before the Lord Chief Justice and a special jury in which a fireman in the service of the London County Council brought an action against one of the Council's medical officers claiming damages for libel and negligence in that he had certified the fireman in question to be suffering from venereal disease. The man had resigned on the strength of the certificate, and having failed to secure an alteration of the certificate by the medical officer had brought this action. The case was, however, stopped by the Lord Chief Justice before the evidence of the medical officer was completed, and the jury found in his favour with costs.

The London County Council finding that this medical officer, in consequence of faithful discharge of his duty, had been put to considerable expense in vindicating himself, has now handsomely decided to pay his solicitor's bill of costs, amounting to £138 6s., subject to reduction by any amount he may recover from the plaintiff.

FEES FOR HOSPITAL CERTIFICATES.

Senior H.S.—Our correspondent complains that by a recent resolution of the Board of the hospital to which he is house-surgeon he has been deprived of the fees for filling up medical certificates under the Employers' Liability Act. If our correspondent accepted his present office upon the understanding that he should receive a certain salary *plus* these fees the Board has no right to deprive him of them, and he would be fully justified in respectfully representing this to them, but he must remember that the Board has doubtless reserved to itself the power to terminate his engagement after due notice at pleasure, and he must therefore conduct his negotiations in a diplomatic manner, and base his claim exclusively upon the fact that he was engaged upon certain terms, and that these should not be altered without proper notice. It is not probable that the Board has made this change without due consideration; and although our correspondent may succeed in obtaining these fees for himself during the remainder of his term of office, it is probable that his successors will have to be content with the salary. We may add, however, that hospitals are not finding it easy at the present time to obtain suitable candidates for their resident appointments, and that it is not likely that the present scale of remuneration will suffer any real diminution.

COVENANTS NOT TO PRACTISE.

Enquirer.—(1) We consider that A. would be breaking both the spirit and the letter of the bond if he were to prescribe for anyone who was a patient of the practice he has sold. (2) A. could not very well expect to come as medical officer and public vaccinator into the area of the practice he has sold without giving B. cause for complaint, but we suggest that he might be able to arrange the matter with B. Unless he can do so, we think B. would have both ethical and legal grounds of complaint.

ANÆSTHETICS FOR UNREGISTERED DENTAL ASSISTANT.

H. G.—We do not care to take upon ourselves to pronounce any positive opinion as to the view which the General Medical Council would take in the particular case described, but we may point out that the resolution passed by that body was to the effect that if a charge of covering were brought in connection with the administration of anæsthetics by a registered medical practitioner for an unregistered dental practitioner it should be entertained and investigated. In view of the position taken up by the Council with regard to the very close limitations under which an unqualified person can be legitimately employed by a medical practitioner, we should certainly advise that anæsthetics should not be administered for an unregistered dental assistant in the absence of his qualified principal.

THE CONDUCT OF CONSULTANTS.

T. H. G.—In answer to the questions submitted to us by our correspondent we should say:

1. That it is so much the custom for patients, even when they are sent by their own medical attendants, to write directly to the consultant to ask for an appointment, that the consultant would only be acting in the usual course by fixing the date and hour for a consultation without further inquiry.

2. Where the patient comes to the consultant without any letter from his medical attendant, the consultant is not bound by any ethical or professional obligation invariably to ask for the name or names of the practitioners who have previously treated the case. There are obviously circumstances in which he ought to do this, but there can be no absolute rule, and he must exercise his discretion.

3. No consultant should recommend a patient to place himself under the care of a particular practitioner without first inquiring who is his ordinary medical attendant, and he should do nothing to disturb any existing professional relations of doctor and patient. Where, however, there is no regular medical attendant, or these relations have been broken, and the consultant is unable to readjust them, he may be obliged to suggest the name of another practitioner.

4. The remedy in the hands of the general practitioners against conduct which offends them on the part of consultants lies in the power which they undoubtedly possess, and could exert to a much larger extent than they do at present, to recommend the consultant of their choice. Every consultant has therefore in his own interest the strongest motive for desiring to gain and preserve the good opinion of general practitioners. While not denying that there may be grounds of complaint in certain cases, we believe that consultants generally try to act fairly, and while doing their duty by the patients who consult them, they seek also to protect the interests of the general practitioner, but they are often placed in very difficult positions. Their sayings and doings, like those of other people, are liable to misrepresentation. The statements of many patients are no more to be absolutely relied upon as giving a correct account of what the consultant said than they are of what their own doctor said. There are general practitioners who systematically oppose consultations and resent them when they are suggested, so that their patients go to a consultant without their knowledge, and if the consultant inquires the name of their regular medical attendant they either refuse to give it, or beg that the consultants will not mention their visit in order to avoid giving the doctor offence.

THE EMPLOYERS' LIABILITY ACT.

A Correspondent who tells us that he is under a contract to give first aid to several hundreds of workpeople in case of accident, complains that a local employers mutual assurance company compels workmen who are claiming compensation under the Act to attend at the consulting rooms of its medical officer, and asks whether the company is legally entitled to do so.

*** We think the question is answered by Section xi of the First Schedule of the Act which reads as follows:

"Any person receiving weekly payments under this Act shall, if so required by the employer, or by any person by whom the employer is entitled under this Act to be indemnified, from time to time submit himself for examination by a duly qualified medical practitioner provided and paid by the employer, or such other person; but if the workman objects to an examination by that medical practitioner, or is dissatisfied by the certificate of such practitioner upon his condition when communicated to him, he may submit himself for examination to one of the medical practitioners appointed for the purposes of this Act, as mentioned in the second schedule to this Act, and the certificate of that medical practitioner as to the condition of the workman at the time of examination shall be given to the employer and workman, and shall be conclusive evidence of that condition. If the workman refuses to submit himself to such examination, or in any way obstructs the same, his right to such weekly payments shall be suspended until such examination has taken place."

We think this makes it quite clear that the company is acting within its right so long as the workman is able to travel, but where, in our correspondent's judgment, the journey would be prejudicial to his patient, he is quite entitled to give a certificate of inability, which would compel the company's medical officer to visit the workman at his own home.

HOSPITAL AND DISPENSARY MANAGEMENT.

MARY WARDELL CONVALESCENT HOME FOR SCARLET FEVER.

We have received the annual report of the Mary Wardell Convalescent Home for Scarlet Fever, situated at Stanmore, Middlesex. During the year 1899 the number of patients admitted was 193, and since the home was opened fifteen years ago no fewer than 3,200 persons recovering from this disease have been received. The Committee earnestly appeals for funds, particularly in order to meet the expenses of the reconstruction of the entire drainage system of the home, which was absolutely necessary.

HOSPITAL SECTION OF THE WOMAN'S EXHIBITION.

Charing Cross Hospital has arranged an exhibit at the Woman's Exhibition, Earl's Court, by way of making a special appeal for funds at a time when the public is interested in all that concerns the treatment of the wounded. It seems to be a popular feature at the exhibition, the surgical ward where eight dummy figures are arranged in Mackintyre splints, Salter's cradles, and so on, being especially crowded. The model operating theatre and anæsthetic room appeal rather less to the laity. The theatre is built with all due regard to aseptic requirements, the floor being laid so that its junction with the walls is a wide curve instead of an angle. The operating table, instrument tables, and instrument cupboard, shown by Maw, are of glass and metal, the table having a convenient pedal by which it can be raised on to wheels so as to be moved easily or lowered on to its feet when required. The same maker also showed an air-tight antiseptic dressing cupboard of glass and metal. The theatre washstand was furnished with a tap by which the stream of running water could be easily converted into a gentle spray for the hands (by Mr. George Davis, of the Westminster Sanitary Works) and the same apparatus was shown in the model lavatory for the cleansing of bed pans. Various materials for floors and walls were shown, the newest being "Pasteur's volcanic lava," so hard that it has to be cut with a diamond, and hydrofluoric acid has no effect on it. It can be cut in large slabs, so that only a few joints are necessary.

Dr. Mackenzie Davidson, who is in charge of the Roentgen-Ray Department at Charing Cross Hospital, has arranged a dark room in which the public can be initiated into some of the Roentgen mysteries; and this, like the rest of the exhibit, may prove useful in making plain to the ordinary layman that the great expenses of a large hospital are absolutely necessary to the proper treatment of disease.

The exhibit of inventions by nurses includes several cycle-baskets for the use of district nurses and midwives; and a simply-arranged "aseptic douche thermometer." The patients' lockers in the wards are ingeniously contrived to serve as bed-tables, chairs for friends, and medicine chests,

as well as lockers; the patients' clothes are sent (in this model hospital) to a special room well ventilated and warmed by pipes, on which grids for the clothes are placed.

A field hospital and "dressing station" are also illustrated. In the little handbook distributed to visitors it is well pointed out that it is to the civil hospitals, in the first instance, that our wounded owe the professional skill and the ingenious appliances, which help to render the present war so far more humane than previous wars have been.

UNIVERSITIES AND COLLEGES.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The College Centenary Celebration.

AT an Extraordinary Council held on May 31st, 1900, Sir William Mac Cormac, Bart., K.C.V.O., President, in the chair, the Centenary Committee submitted the following proposals, which were adopted by the Council:

PROGRAMME OF ARRANGEMENTS.

Wednesday, July 25th.

Conversazione at the College ... ... 9 to 12 P.M.

Thursday, July 26th.

Centenary Meeting in the Theatre of the University of London, Burlington Gardens.
Address by the President.
Conferring of Honorary Fellowships ... ... 3 P.M.
(Academic Costume, Uniform, and Orders.)
Festival Dinner in the Hall of Lincoln's Inn, by the kind permission of the Benchers ... ... 8 P.M.
(Evening Dress, Uniform, and Orders.)

Friday, July 27th.

Conversazione at the Mansion House, given by the Rt. Hon. the Lord Mayor ... ... 9 to 11 P.M.

In addition to these arrangements, Professor Stewart, Conservator, with Mr. S. G. Shattock, the Pathological Curator, and Mr. R. H. Burne, the Anatomical Assistant, will be in attendance each morning between 11 A.M. and 1 P.M. to conduct visitors over the Museum.

In the Library a collection of objects of interest in connection with the history of the College will be displayed, and Mr. V. G. Plarr, the Librarian, will be in attendance each morning to receive visitors.

At the Examination Hall, Dr. T. G. Brodie, Director of the Laboratories, will give lantern demonstrations of the work done in the laboratories.

Invitations.

The Committee have issued invitations to foreign and colonial surgeons, and have given directions for a list of them to be printed and circulated to the Council with this report. The Committee also propose to issue invitations to certain persons of distinction residing in Great Britain and Ireland.

As regards the Fellows and Members of the College generally, notice will be given by the publication of an advertisement stating that "the Centenary of the Foundation of the College by Royal Charter will be celebrated on July 25th, 26th, and 27th, 1900"; and that "Fellows and Members of the College, desirous of taking part in the Celebration, can obtain particulars respecting the programme of arrangements on application to the Secretary."

The Committee have prepared a short history of the College with eight illustrations, which it is proposed to present to guests invited to the Centenary.

Dinner and Conversazione.

A limited number of seats at the dinner will be reserved for Fellows and Members of the College, and the price of the dinner ticket will be two guineas. Tickets for the *conversazione* at the College and the inaugural meeting in Burlington Gardens (including admission for a lady) will also be sent to Fellows and Members subscribing to the dinner. As the number of applications may exceed the number of seats available, and it may be necessary to determine the allotment of seats by ballot, applicants are requested, if desirous of being present at the dinner, to apply to the Secretary not later than June 16th, but not to forward the subscription until they have been informed that a seat has been allotted to them.

Fellows and Members who do not desire to attend the dinner may apply for tickets for the *conversazione* and inaugural meeting.

THE following gentlemen having passed the necessary Examinations have been admitted Members of the College and have received their Diplomas:

R. G. Abercrombie, Cambridge University and St. George's Hospital; H. C. Adams, St. Bartholomew's Hospital; B. C. R. Aldren, Edinburgh University; T. S. Arbuthnot, New York and Edinburgh Universities and St. Bartholomew's Hospital; W. A. Bailey, University College and Royal Infirmary, Liverpool; E. G. Battiscombe, London Hospital; C. T. Baxter, Middlesex Hospital; J. C. Bell, University College Hospital; G. Black, St. Thomas's Hospital; H. Blakemore and C. H. Bradbury, Owens College and Royal Infirmary, Manchester; A. H. Bostock, St. Bartholomew's Hospital; J. Bradford and A. E. Carver, Cambridge University and St. George's Hospital; C. H. Bullen, Mason University College and Queen's and General Hospital, Birmingham; H. Breton, J. B. Christian, S. d'A. Corbett, St. George's Hospital; J. B. C. Brockwell and E. Cohen, Guy's Hospital; T. Burfield, Cambridge University and St. Thomas's Hospital; E. R. Clarke, Cambridge University and St. Mary's Hospital; A. Cubley, General Infirmary, Sheffield, and University College Hospital; D. L. Davies and C. M. Ekins, University College Hospital; H. B. Dismore and C. Edwards, Guy's Hospital; M. S. Doubble and J. M. Edwards, Charing Cross Hospital; W. C. Douglass, St. Bartholomew's Hospital; J. S. Dudding and S. J. D. Esser, London Hospital; H. St. C. Elliott, Cambridge University and St. Bartholomew's Hospital; C. H. Fennell, Oxford University and Charing Cross Hospital; C. Y. Flewitt and H. W. Freer, Mason University College and Queen's and General Hospitals, Birmingham; M. F. Foulds, Owens College and Royal Infirmary, Manchester; H. W. Fox and E. W. Goble, Guy's Hospital; W. B. Fry, St. Thomas's Hospital; S. B. Gadgil, Universities of Bombay and Calcutta and University College Hospital; J. M. Garman, London Hospital; F. J. Gomez, King's College Hospital; W. E. Gribbell, St. Mary's Hospital; L. H. Guest, Owens College and Royal Infirmary, Manchester and London Hospital; E. C. Hadley, Mason University College and Queen's and General Hospitals, Birmingham; D. G. Hall, Cambridge and Edinburgh Universities; J. E. Harper, Durham, Birmingham, Guy's, London, and Westminster Hospital; S. G. Harrison, Charing Cross Hospital; A. C. Haslam, St. Thomas's Hospital; C. S. Hawes, F. M. Howell, and H. W. Illins, St. Bartholomew's Hospital; S. Hey and W. M. James, Cambridge University and St. Bartholomew's Hospital; A. Hewetson, St. Mary's Hospital; T. Higson and J. Hoyle, Owens College and Royal Infirmary, Manchester; J. L. Holt and N. A. A. Hughes, Yorkshire College and General Infirmary, Leeds; A. D. Jameson, St. Thomas's Hospital; Iain M. Jefferiss, King's College Hospital; F. A. Johns and A. Jones, London Hospital; G. J. A. Leclezio, St. Bartholomew's Hospital; F. S Leech, University College Hospital; J. L. Lock, Cambridge University and St. Thomas's Hospital; F. W. Loughurst, St. George's Hospital; J. A. N. Longley, Mason University College and Queen's and General Hospitals, Birmingham; C. J. N. Longridge, Owens College, and Royal Infirmary, Manchester, and St. George's Hospital; W. J. Lord, University College and Royal Infirmary, Bristol; W. H. Lowman, King's College Hospital; F. J. McCann, Edinburgh University and King's College Hospital; L. C. Martin and E. A. Miller, Guy's Hospital; C. C. W. Mays, University College and General Infirmary, Sheffield; R. Milnthorpe, Yorkshire College and General Infirmary, Leeds; A. H. McN. Mitchell, St. Mary's Hospital; A. A. C. Möller, College of Medicine and Royal Infirmary, Newcastle-on-Tyne; R. J. Morris, Queen's College, Cork, and St. Bartholomew's Hospital; J. R. Morton, London Hospital; R. C. Mullins, Oxford University and Guy's Hospital; S. H. M. Neave, St. Bartholomew's Hospital; C. A. R. Nitch, St. Thomas's Hospital; T. C. Orford, Owens College and Royal Infirmary, Manchester; L. E. Orton and E. A. B. Poole, Mason University College, and Queen's and General Hospitals, Birmingham; W. P. Panckridge, Middlesex Hospital; E. M. B. Payne, C. R. Porter, and M. F. Reaney, London Hospital; S. J. Peake, King's College Hospital; T. M. Pearce, St. Bartholomew's Hospital; H. C. Pretty and A. I. Sheldon, University College Hospital; F. S. Rhodes, Owens College and Royal Infirmary, Manchester, and Middlesex Hospital; C. H. D. Robbs, St. Bartholomew's Hospital; F. J. F. Rooke and J. S. Smith, Middlesex Hospital; C F. Selous, St. Thomas's Hospital; H. F. Sheldon, Owens College and Royal Infirmary, Manchester; G. H. Simpson, St. Mungo's College, Glasgow, and University College Hospital; S. F. Smith and A. B. Soltau, London Hospital; H. E. Symes-Thompson, Cambridge University and St. George's Hospital; P. Tatchell and A. J. W. Wells, St. Bartholomew's Hospital; W. I. Taylor, Trinity University, Toronto, B. H. H. Tripp and H. V. Wells, St. Mary's Hospital; H. A. Upward, Cambridge University and London Hospital; F. P. Vieyra, Madras University; C. C. C. K. White, St. Bartholomew's Hospital; E. White, University College and Royal Infirmary, Bristol; T. Wood, Cambridge University and Middlesex Hospital; W. J. Young, University College and Royal Infirmary, Liverpool.

UNIVERSITY OF CAMBRIDGE.

Re-election of Vice-Chancellor.—Mr. Chawner, Master of Emmanuel College, has been elected Vice-Chancellor for another year.

Resignation and Appointment.—Dr. Sidgwick has resigned the Knightbridge Professorship on the ground of ill-health. Mr. L. R. Wilberforce has been appointed a University Lecturer in Physics.

The Balfour Fund.—Mr. J. S. Budgett has been awarded a grant of £50 from the Balfour Fund to aid him in his zoological researches.

Lectures in Public Health.—A course of instruction in the chemistry of air, water, and foods will be given by Mr. J. E. Purvis, of St. John's College, during the long vacation, beginning on July 6th. It will be open to candidates preparing for the Diploma in Public Health.

The Medical School.—A course in Osteology will be given by Dr. Barclay-Smith in the Anatomy School. A grace empowering the Medical School Buildings Syndicate to obtain specifications and tenders for the erection of the Downing Street wing will be offered to the Senate on June 14th.

Examiners.—Mr. B. Pitts, Professor E. Ward, Professor Chiene, and Mr. Golding-Bird are appointed Examiners in Surgery; Dr. Cullingworth and Dr. Freeland Barbour Examiners in Midwifery; and Dr. Lees, Dr. Isambard Owen, Dr. D. MacAlister, and Professor Greenfield Examiners in Medicine, for medical and surgical degrees.

International Congress of Hygiene.—Professor Allbutt and Dr. Collingridge will represent the University at the forthcoming International Congress of Hygiene and Demography to be held in Paris.

UNIVERSITY OF LONDON.

ROGERS PRIZE.

A SUM of £100 is offered by the University of London as the Rogers Prize, open for competition to all the members of the medical profession in Great Britain and Ireland, for an essay under the following regulation as to the subject and conditions thereof, namely:

An essay by any member of the medical profession in Great Britain and Ireland upon the Production of Immunity in Specific Infective Diseases generally, and with particular reference to any one disease on which the writer of the essay has made original investigations.

The essay is to be sent to the Registrar, University of London, South Kensington, S.W., on or before June 1st, 1901.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

ELECTION OF OFFICERS.

THE election of President, Vice-President, Council, and Secretary of the Royal College of Surgeons in Ireland took place on Monday, June 4th, and resulted as follows:

President.—Mr. T. Myles.
Vice-President.—Mr. L. H. Ormsby.
Secretary of College.—Sir C. A. Cameron.
Council.—Mr. A. H. Jacob, Mr. E. H. Bennett, Sir P. C. Smyly, Mr. R. L. Swan, Sir Wm. Stokes, Mr. H. R. Swanzy, Sir Wm. Thomson, Mr. Austin Meldon, Sir C. A. Cameron, Messrs. R. D. Purefoy, J. J. Cranny, H. G. Sherlock, C. B. Ball, J. B. Story, J. Lentaigne, Graves Stoker, Arthur Chance, R. B. McCausland, Conway Dwyer.

For the Presidency there was no contest, and Mr. L. H. Ormsby defeated Mr. F. T. Heuston for the Vice-Presidency by 37 votes. The outgoing councillors held their seats with the exception of Mr. Fitzgibbon, and the vacant places were filled by Mr. Swan, the outgoing President, Mr. C. B. Ball, Mr. Graves Stoker, and Mr. Conway Dwyer.

As previously noted the failure of Sir William Stokes and Sir William Thomson to present themselves within the succeeding month may lead to a fresh election of two councillors to fill their places.

MODE OF NOMINATION OF PRESIDENT AND VICE-PRESIDENT.

At the annual meeting of the Fellows of the College, held on Saturday, June 2nd, a resolution was brought forward with the object of putting a stop to the system of canvassing for the positions of President and Vice-President, in place of which an amendment was carried which has yet to receive the sanction or negation of the Fellows, that the Council should in the future select one candidate for the Presidency and one for the Vice-Presidency, although any outside names might be placed before the electors.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 6,932 births and 3,951 deaths were registered during the week ending Saturday last, June 2nd. The annual rate of mortality in these towns, which had been 17.8, 18.2, and 18.4 per 1,000 in the three preceding weeks, declined again to 17.7 last week. The rates in the several towns ranged from 11.0 in Gateshead, 11.1 in Croydon, 12.6 in Brighton, and 13.5 in Derby, to 22.1 in Blackburn, 22.2 in Swansea, 22.8 in Halifax, and 23.5 in Plymouth. In the thirty-two provincial towns the mean death-rate was 18.2 per 1,000, and exceeded by 1.2 the rate recorded in London, which was 17.0 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London this death-rate was equal to 2.0 per 1,000, while it averaged 1.9 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.9 in Wolverhampton and in Leicester, 3.4 in Sheffield, 3.8 in Blackburn, and 4.8 in Derby. Measles caused a death-rate of 1.3 in Cardiff, 1.5 in Blackburn, 1.8 in Sunderland, 2.6 in Plymouth and 3.9 in Derby; scarlet fever of 1.3 in Burnley; whooping-cough of 1.0 in Huddersfield, 1.4 in Salford, 1.7 in Wolverhampton, and 2.0 in Oldham; "fever" of 1.0 in Swansea; and diarrhœa of 1.1 in Blackburn. The 77 deaths from diphtheria in the thirty-three towns included 29 in London, 9 in Leicester, 9 in Sheffield, 5 in Birmingham, and 4 in Liverpool. No fatal case of small-pox was registered last week either in London or in any of the thirty-two provincial towns. There were 7 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, June 2nd, against 3 and 5 at the end of the two preceding weeks; 4 new cases were admitted during the week, against 3 in the preceding week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had risen from 1,647 to 1,784 at the end of the five preceding weeks, declined again to 1,739 on Saturday last; 194 new cases were admitted during the week, against 203, 221, and 216 in the three preceding weeks

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 2nd, 886 births and 575 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had increased from 17.7 to 19.6 per 1,000 in the three preceding weeks, declined again to 18.6 last week, but was 0.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 12.6 in Leith and 14.0 in Aberdeen, to 20.7 in Glasgow and 23.6 in Perth. The zymotic death-rate in these towns averaged 2.4 per 1,000, the highest rates being recorded in Glasgow and Perth. The 296 deaths registered in Glasgow included 1 from small-pox, 14 from measles, 3 from diphtheria, 21 from whooping-cough, and 13 from diarrhœa. Two fatal cases of diarrhœa were recorded in Edinburgh, 4 in Dundee, and 3 in Aberdeen. Two deaths from whooping-cough occurred in Aberdeen, and 2 in Perth.

THE SANITARY ORDERS BY THE LOCAL GOVERNMENT BOARD FOR IRELAND.

DISTRICT COUNCILS.

THE Local Government Board for Ireland has issued new Sanitary Orders to the Urban and Rural District Councils and to the Corporations of the County Boroughs in Ireland. As regards the District Councils, the present Order revokes and rescinds the Orders which were issued by the Board in 1879 after the passing of the Public Health (Ireland) Act, 1878, except in so far as such Orders may have related to the appointment of any of the existing sanitary officers, or to any proceeding taken or matters or thing already done in pursuance of such Orders. The principal point of difference between the new and former Orders is that the present one contemplates that no further appointments shall be made to the office of Consulting Sanitary Officer, but there shall be instead a Medical Superintendent Officer of Health appointed in each urban and rural district. For the latter office, only registered medical practitioners who possess a diploma in Public Health shall in future be eligible, but the rights of all existing medical superintendent officers of health and of consulting sanitary officers are fully preserved. After setting forth the regulations relative to the appointment and qualifications of the sanitary officers, their tenure of office, and their salary, the Order proceeds to classify and set forth in detail the duties which the different sanitary officers are expected to perform. These rules, it is pointed out, do not impose any new duties on the various officers, but are for the purpose of giving them a clearer conception of the work they are expected to perform. The Board, it may be noted, have not only put an end to the further appointment of consulting sanitary officers, but have also decided that a woman possessing the requisite qualifications shall be eligible for appointment as medical officer of health or as sanitary sub-officer.

COUNTY BOROUGHS.

The Order relating to the county boroughs of Cork, Limerick, Londonderry, and Waterford directs that in Londonderry one medical superintending officer of health shall be appointed, and that in the case of the others the existing medical superintendent officer of health shall continue to hold such office, but that all appointments to such offices made after the issuing of the present Order shall be from registered medical practitioners holding a diploma in public health.

DUBLIN AND BELFAST.

The Fourth Order relating to the county borough of Dublin and Belfast sets out the duties to be performed by the various sanitary officers, and must result in a clearer conception of the work which each individual officer will feel himself bound to accomplish.

COUNTY MEDICAL OFFICERS.

There can be no doubt that the Local Government Board for Ireland is endeavouring to institute a more effective administration of the sanitary laws throughout the country. It is now seen that the omission on the part of the Government to make provision in the Local Government (Ireland) Act, 1898, for the appointment of a medical superintendent officer of health over each county or a group of counties who would be independent of private practice was a serious defect. This the Board is at present making some attempt to rectify.

SALARIES.

It may be of some interest to note the expenses which the typical urban council is prepared to incur in the payment of its sanitary officers. A report is before us of a special meeting of the Carrickmacross Urban Council convened for the purpose of considering the new Local Government Board Order. Dr. Cullen, the existing officer, was appointed medical officer of health at a salary of £5 per annum. The salary of the executive sanitary officer was also fixed at £5 after proposals fixing it at £3 and £4 had been rejected. The question then arose as to the salary of the sub-sanitary officer, when "it was agreed to advertise for a competent person to act as follows at the salary named—subsanitary officer, £4; water inspector, £5; inspectors of dairies, £1; town sergeant, £8; inspector of lodging houses, £2; total, £20.

SANITATION IN ITALY.

Two volumes on *Births, Deaths, and Marriages in Italy* have just been published. They show in a very marked manner that the efforts of sanitarians have produced not only a distinct but a progressive effect upon the health of the Italian people.

In 1898, to which these reports refer, the percentage of births and marriages remains about the same, the rate deaths materially lessened. In 1898 the death-rate at all ages and from all diseases was 23.10 per 1,000 living. The rate in 1890 was 26.47 per 1,000; in 1880, 30.84; in 1870, 29.84; in 1862, 31.06.

This improvement is attributed, and justly, to the improved organisation of the sanitary services of the Government and to the efforts of local authorities to provide pure drinking water and hygienic dwellings.

A table showing the number of deaths from acute infectious diseases in 1887 and 1898 is worth recording:

Diseases.	Total Deaths. 1887.	1898.
Small-pox	16,249	420
Measles	23,768	5,429
Scarlatina	14,631	4,492
Diphtheria	28,206	7,808
Typhoid	27,800	17,412
Malarial fever	21,033	11,378
Coughs (*Tosse*)	11,140	7,420

As might have been expected the lessening of infant mortality took a leading part in the reduction of mortality. In 1898 the death-rate of children under 5 years was 71 per 1,000. The average rate of 1882-6 combined was 94 per 1,000.

THE WILLESDEN BOARD OF GUARDIANS AND THEIR MEDICAL OFFICER.

A CORRESPONDENT signing himself "X. Y. Z." traverses certain statements made in an article published in the BRITISH MEDICAL JOURNAL under this head (June 2nd, p. 1387). He states that the guardians never resolved that there should be one public vaccinator only for the parish but that at the meeting when the decision was come to to keep the offices of medical officer and public vaccinator separate, it was decided to appoint two public vaccinators, one for each district. He adds that the present proposal to divide the parish into three districts is not accom-

panied by the proposition to contract with a fourth medical man to undertake the vaccination of the whole. He states further that it was proposed to appoint an additional medical officer for the Harlesden Division of Willesden, and that this course meets with the approval of three out of the four of the present medical staff. He also says that there is no poor population in Kensal Green, as the houses range in value in that ward from £300 to £600, and are owned by the occupants in greater proportion than those in any other portion of the parish. He adds that when a new road now in course of construction is completed, this district will be within less than a mile from the residence of the present medical officer.

PUBLIC VACCINATORS AND PRIVATE PRACTITIONERS.

M.B.LOND., F.R.C.S., writes: In March I certified to the public vaccinator that two children (twins), patients of mine, would not be in a fit state for vaccination before May 10th. As previously arranged I called and vaccinated the babies on May 10th, and was surprised to hear that the public vaccinator had called on May 9th and offered to vaccinate the children free of charge. This seems to me to be very sharp practice, and unworthy of the dignity of a public officer.

*** Our correspondent should send a note to the public vaccinator, courteously asking for some explanation of a circumstance which, if left unexplained, might cause a certain amount of bad feeling. We can imagine two or three conditions which would render such a visit perfectly legitimate. If made wilfully, however, and with full knowledge, there is no excuse. It is not usual to certify to the public vaccinator; perhaps, however, our correspondent sent his certificate in the usual form to the vaccination officer.

REMUNERATION OF PUBLIC VACCINATORS FOR EVIDENCE GIVEN BEFORE MAGISTRATES.

PUBLIC VACCINATOR wishes to know what he ought to charge for attending and giving evidence in court against defaulters of the Vaccination Act. Should he charge per case or per batch of cases? He gave evidence on oath against two in one day, and soon will have to appear against five in one day. Attending at court and giving evidence is no part of his contract duties.

*** Our correspondent cannot fix his own charge for attendance before magistrates to support a criminal or quasi-criminal case, but we believe the law enables him to claim a fee of half a guinea or one guinea a day, according to local circumstances, for professional evidence in support of charges against defaulters under the Vaccination Act.

THE VACCINE LYMPH OF THE LOCAL GOVERNMENT BOARD.

DR. J. PRICE WILLIAMS (Public Vaccinator Swinton District, Barton-upon-Irwell Union) sends the following list of cases vaccinated between September 1st, 1899, and May 31st, 1900, with the Local Government Board lymph. All the vesicles produced were satisfactory in size, and in no case were there any untoward effects produced:—270 cases, 1,076 insertions, 1,047 vesicles produced, 9 cases failed in one insertion, 3 cases failed in two insertions, 2 cases failed in three insertions, 2 (same case twice) failed totally.

INDIA AND THE COLONIES.

INDIA.

Conservancy in Cantonments.—The Government has sanctioned the introduction of an Imperial conservancy system at Deesa, Deolali, Kamptee, and Nasirabad at an estimated cost of about Rs. 70,000.

Cantonment Hospitals.—Provision will be made in the Military Estimates for 1900-1901 of a sum of Rs. 2,34,000 for the purpose of assisting cantonment funds in the establishment and for the maintenance of cantonment hospitals during the year.

The Health Officer, Calcutta.—At the last meeting of the Calcutta Corporation it was proposed that the Health Officer should be paid Rs. 1,500 monthly, *plus* Rs. 100 horse allowance. An amendment that Dr. Nield Cook's salary should remain as at present was lost, and the original proposition was carried. The Corporation has done the right thing, but its way of doing it has not been conspicuously grateful.

JAMAICA.

THE annual report (1898-1899) of the Registrar-General for Jamaica shows that during the year the population of Jamaica and Cayman Islands was estimated to have increased by 12,358, the total population reaching 730,725. The birth-rate was equal to 38.1 per 1,000, which shows a slight decrease on the previous year. Of these births 63.4 per cent. were illegitimate. On this subject the Registrar General remarks that it is to be feared that legislation can do little except in so far as it may promote the material prosperity of the labouring population generally, whose average weekly wage is probably 3s. to 4s. The deaths recorded in the year numbered 15,290 (21.0 per 1,000). Of the total deaths 31.8 per cent. were children under 1 year of age, while 45 per cent. were under 5 years of age. Of the 15,290 deaths registered, no fewer than 11,856, or 77.5 per cent., were not medically certified. Matters are not improving; indeed, a backward tendency is exhibited for the island as regards the medical certification of the causes of death. The unnecessary waste of life with suffering which must arise from the lack of professional skill in time of sickness is, as the Registrar-General remarks, bad enough; but it tells also on the statistical work of the General Register Officer. So long as 80 per cent. of the deaths are recorded without any professional testimony as to the causes of death, it will be evident that little value can attach to the returns of causes of mortality as given for the island as a whole.

MEDICAL NEWS.

THE late Baron Adolf de Rothschild has left the capital sum of about 10,000,000 francs (£400,000) for the foundation and maintenance of a great hospital for eye diseases in Paris.

THE War Office, in consequence of representations made to it by the Lads' Drill Association to the effect that the tight-fitting tunic is unsuitable for growing lads, has sanctioned for cadet corps a serge uniform of neutral tint, with a Norfolk jacket having a roll and not an upright collar.

THE first periodical conference of delegates of branches of the National Association for the Prevention of Consumption and other forms of Tuberculosis will be held at the house of the Royal Medical and Chirurgical Society, London, on Monday, June 18th, at 4.30 P.M.

THE annual general meeting of the Society for Training Teachers of the Deaf and for the Diffusion of the German System will be held, by kind permission of the Earl of Egerton, at 7, St. James's Square, on Tuesday next, at 3.30 P.M., when the work of the Ealing Training College will be explained, and certificates and prizes will be presented by the Duchess of Buckingham and Chandos.

THE ROYAL MEDICAL BENEVOLENT FUND OF IRELAND.—The annual meeting of the Royal Medical Benevolent Fund Society of Ireland was held in the Royal College of Physicians on Monday, June 4th, Sir John W. Moore, P.R.C.P.I., in the Chair. The annual report of the Central Committee stated that the total amount distributed in grants during the year was £1,211. The number of applications considered during the year was 82, from widows 72 and from orphans 10. The reports from the county branches were on the whole disappointing, that from the County Antrim and Belfast Branch being the most encouraging. Dr. Hickson (County Kerry) stated that he considers it very hard that he is unable to prevail on many of the medical men to give even a small subscription; about £100 a year is distributed to widows and orphans and only £6 12s. is subscribed to the Fund by the medical men in the county. Dr. Ryan (County Cavan) considers that the county unit of collection is too large, and suggests the adoption of the Poor-law Union areas as a preferable unit. The Central Committee and Branch officers were elected. The Acting Secretary is Mr. Arthur H. Benson, F.R.C.S., 42, Fitzwilliam Square West, Dublin.

THE annual general meeting of the Society for Relief of Widows and Orphans of Medical Men was held on Wednesday, May 30th, at 5 P.M. Mr. Christopher Heath was elected President and took the chair. Mr. W. H. Bennett and Mr. Manley Sims were elected Vice-Presidents, and Mr. Borlase Hicks, Mr. Simmonds, Mr. L. Read, Mr. Julian Willis, Mr. Milburn, Dr. Buzzard, and Dr. Morison to fill the vacancies in the Court of Directors; the other officers were re-elected. From the report read by the Secretary, it was shown that the grants during the year had amounted to £3,007 10s., the expenses £243 3s. 1d. The receipts available for payments had been £3,353 7s. 7d., the grants and expenses £3,250 13s. 1d., leaving a balance of £102 14s. 6d. No legacy had been received during the year. Fourteen new members had been elected and 10 had died and one resigned. Three widows had been placed on the funds and 2 orphans; 4 widows had died and 1 orphan had become ineligible for further grants, leaving 49 widows and 11 orphans in receipt of grants. The deaths of Sir James Paget, President, and of Mr. Mould, Vice-President, were reported. A grant of £26 was made to a widow under By-law 78. A vote of thanks to the editors of the medical journals for their kind advocacy of the interests of the Society was passed. Mr. Christopher Heath returned thanks for his election as President, and the meeting closed. Particulars with regard to the Society can be obtained from the Secretary, 11, Chandos Street, Cavendish Square, W.

MEDICAL VACANCIES.

The following vacancies are announced:

BEDFORD COUNTY HOSPITAL.—Senior House-Surgeon. Salary, £160 per annum, with apartments, board, and washing. Applications to the Secretary by June 20th.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, residence, and laundry. Applications to the Honorary Secretary, 52, Grosvenor Road, Birkenhead, by June 25th.

BIRMINGHAM CITY ASYLUM.—Senior Assistant Medical Officer. Applications to the Medical Superintendent.

BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM: QUEEN'S HOSPITAL.—(1) House-Physician. (2) House-Surgeon. Appointments for one year. Salaries, £50, with board, lodging, and washing. Applications to the Secretary by June 24th.

BOOTLE HOSPITAL, Liverpool.—Junior Resident. Salary, £80 per annum. Applications to the Secretary.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary, £120 per annum, with rooms and attendance. Applications, endorsed "House-Surgeon," by June 13th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CARLISLE DISPENSARY.—Resident Surgeon. Salary, £150 per annum, with apartments, not board. Applications to the Honorary Secretary, 23, Lowther Street, Carlisle.

CARMARTHEN UNION.—Medical Officer and Public Vaccinator for the Conwil District. Salary, £60 and fees. Applications, marked "Conwil Medical Officership," to the Clerk, 7, Hasl Street, Carmarthen, by June 21st.

CHESTERFIELD BOROUGH.—Medical Officer of Health. Salary, £250 per annum. Applications, endorsed "Medical Officer," to the Town Clerk by June 23rd.

CHELSEA HOSPITAL FOR WOMEN.—Pathologist. Applications to the Secretary by June 11th.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

DENBIGHSHIRE INFIRMARY.—House-Surgeon. Salary to commence, £80, with board, residence, and washing. Applications to the Secretary.

DENTAL HOSPITAL OF LONDON, Leicester Square, W.C.—Two Assistant Dental Surgeons. Applications to the Secretary by June 11th.

EDINBURGH: CRAIGLEITH POORHOUSE AND HOSPITAL.—Resident Medical Officer. Salary at the rate of £100 per annum, with board and apartments. Applications to the Clerk to the Parish Council, Castle Terrace, Edinburgh, by June 11th.

FULHAM PARISH.—Second Assistant Medical Officer at the Infirmary, Fulham Palace Road. Appointment for six months. Salary, £60 per annum, with furnished apartments and washing. Applications to the Medical Superintendent by June 11th.

GREAT NORTHERN CENTRAL HOSPITAL.—(1) House-Physician. (2) Junior House-Physician. Appointments for six months. Salaries at the rate of £60 and £30 per annum respectively with board, lodging, and washing. Applications to the Secretary by June 18th.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House-Physicians. Appointment for six months. Honorarium, £25. Applications to the Secretary by June 28th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon. (2) House-Physician. Appointments for six months. Salaries, £20, with board and residence. Must be unmarried. Applications, on forms provided, to be sent to the Secretary by June 19th.

KENSINGTON DISPENSARY.—Resident Medical Officer: unmarried and under 35 years of age. Salary £125 per annum, with furnished apartments, etc. Applications to the Honorary Secretary, Mr. C. F. C. Ellis, 56, Bedford Gardens, Kensington, W., by June 30th.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Salary, £100 per annum, with furnished rooms, attendance, and board. Applications to the Secretary by June 13th.

NEW HOSPITAL FOR WOMEN, Euston Road, N.W.—Resident Obstetric Assistant; must be fully-qualified medical woman. Applications to the Secretary by June 11th.

NORTHAMPTON GENERAL INFIRMARY.—House-Surgeon, unmarried, and not under 23 years of age. Salary, £125, with furnished apartments, board, etc. Assistant House-Surgeon is candidate, and if appointed his office will be vacant at salary £100. Applications to the Secretary by June 14th.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) House-Physician, (2) House-Surgeon. Appointments for six months. Salaries at the rate of £80 per annum, with board, residence, and laundry allowance. Applications to the Secretary, City Office, 27, Clements Lane, Lombard Street, E.C., by June 18th.

NORTH RIDING ASYLUM, Clifton, York.—Senior Assistant Medical Officer; unmarried, age not exceeding 30 years. Salary, £125, rising to £175 per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent by June 25th

NORWICH: NORFOLK AND NORWICH HOSPITAL.—Assistant House-Surgeon. Appointment for six months. Board, lodging, and washing provided, and honorarium £20. Applications to the Secretary by June 12th.

NOTTINGHAM GENERAL DISPENSARY. — Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—Senior House-Surgeon. Salary, £85 per annum, with board, residence, and washing. Candidates to state if willing to accept the Junior post at £70 Applications to the Honorary Secretary by June 25th.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer: unmarried and not more than 30 years of age. Salary commences £125 per annum, with prospect of increase to £250, with furnished apartments, board, attendance and washing. Applications to the Medical Superintendent by June 20th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications, marked "House-Surgeon," to the Secretary by June 15th.

ST. OLAVE'S UNION.—Medical Officer of the Children's Home, Peckham Rye. Salary, £75 per annum. Applications, on forms provided, to be sent to the Clerk to the Guardians, Union Offices, Tooley Street, S.E., by June 18th.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.—Honorary Anæsthetist. Appointment for twelve months, but eligible for re-election. Applications to the Secretary by June 11th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Junior Assistant Medical Officer: unmarried. Salary commencing at £150 per annum, rising to £180, with furnished apartments, board, and attendance. Applications to the Medical Superintendent.

STROUD GENERAL HOSPITAL.—House-Surgeon. Salary at £80 per annum, with board, lodging, and washing. Applications to the Secretary by June 13th.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £50 per annum, with board, apartments, washing, and attendance. Applications to the Secretary by June 18th.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Salary, £50 per annum, with board, lodging, washing, and allowance. Applications to the House Committee.

TOWER HAMLETS DISPENSARY, White Horse Street, E.—Resident Medical Officer. Salary, £120 per annum, with furnished rooms, etc. Applications, marked "R.M.O.," to Dr Sequeira by June 22nd.

WEST DERBY UNION.—Resident Assistant Medical Officer for the Workhouse. Salary, £100 per annum, with first-class rations, apartments, etc. Applications to the Clerk, Broughton Terrace, West Derby Road, Liverpool, by June 12th.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician; (2) House-Surgeon. Must be F. or M.R.C.P.Lond. Applications to the Secretary-Superintendent by June 20th.

WHITTINGHAM: COUNTY ASYLUM. Junior Assistant Medical Officer; unmarried. Salary, £125 per annum, increasing to £250, with furnished apartments, board, etc. Applications to the Medical Superintendent.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon. Salary, £140 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by June 28th.

YORK DISPENSARY.—Resident Medical Officer: unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by June 19th.

MEDICAL APPOINTMENTS.

BERRY, T. P., M.B.Lond., M.R.C.S.Eng., appointed Second Assistant Medical Officer to the St. Saviour's Union Infirmary, *vice* J. W. Pridmore, M.R.C.S., L.R.C.P.Lond., resigned.

CARTWRIGHT, J. A. T., M.R.C.S.Eng., L.S.A.Lond., reappointed Medical Officer of Health of the Wigmore Rural Sanitary District.

CHEESEMAN, Edward R. R., L.S.A.Lond., appointed Public Vaccinator to No. 5 District of the Wells Union, *vice* G. O. Risdon, M.R.C.S., L.R.C.P., L.S.A., resigned.

HARBIJAM, E. T., M.R.C.S.Eng., L.R.C.P.Lond., appointed Medical Officer for the Second District of the Parish of St. George-in-the-East, *vice* E. M. Thuresson, L.R.C.P., L.R.C.S.Ed., resigned.

KELSON, W. H., M.D., B.S.Lond., F.R.C.S.Eng., appointed Honorary Surgeon in charge of the Throat, Nose and Ear Department, City Dispensary.

POMFRET, H. W., M.D.Vict., F.R.C.S.Eng., appointed Medical Officer for the Eighth District of the Ashton-under-Lyne Union, *vice* J. H. Wylde, L.R.C.P.Irel., L.F.P.S.Glas.

PRIESTLEY, C. E., L.R.C.P.Edin., M.R.C.S.Eng., appointed Medical Officer of the Thingoe Union Workhouse, *vice* C. S. Kilner, M.B., C.M.Edin., resigned.

ROBERTS, J. Lloyd, M.D., B.S., B.A., B.Sc.Lond., F.R.C.S.Eng., appointed Honorary Physician to the Liverpool Stanley Hospital, *vice* Dr. R. I. Richardson, appointed Consulting Physician.

STACK, M. T., M.B.C.M., appointed Medical Officer for the Wavertree District of the West Derby Union, *vice* Dr. Wearing.

STREET, A. F., M.D.Camb., appointed Medical Officer for the Children's Home at Westgate-on-Sea of the Parish of St. Luke, Chelsea.

ST. THOMAS'S HOSPITAL.—The following gentlemen have been selected as House Officers from June 5th, 1900:

House Physicians—E. W. Hedley, M.A., M.B., B.C.Cantab.; F. C. Eve, B.A., M.B., B.C.Cantab.

Assistant House-Physicians—H. M. Harwood, M.A., M.B., B.C.Cantab.; R. B. Kinloch, L.R.C.P., M.R.C.S.

Obstetric House-Physicians—(Senior) A. Bevan, L.R.C.P., M.R.C.S.; (Junior) B. F. Howlett, L.R.C.P., M.R.C.S.

Clinical Assistants in the Special Department for Diseases of the Throat—A. J. B. Adams, L.R.C.P., M.R.C.S.; C. F. Selous, L.R.C.P., M.R.C.S. Skin—G. Black, L.R.C.P., M.R.C.S.; C. A. R. Nitch, L.R.C.P., M.R.C.S.

Several other gentlemen who held office before have received an extension of their appointments.

DIARY FOR NEXT WEEK.

MONDAY.

Odontological Society of Great Britain, 40, Leicester Square, W.C., 8 P.M.—Annual General Meeting. Communications by Mr. Frederick Eve, Mr. W. R. Read, and Mr. W. R. Humby. Valedictory address by the President.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M. — Dr. Cathcart: Impaired Movements of Vocal Cords.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. Galloway: Consultation (Skin).

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Beddard: Food and Diet in Disease. (Lecture I.)

TUESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Goodhart: Consultation (Medical).

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M. — Dr. Ormerod: Paralysis Agitans.

Royal Medical and Chirurgical Society, 8.30 P.M.—Mr. R. J. Godlee: On Some of the Medical and Surgical Complications of Pyorrhœa Alveolaris.

WEDNESDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Berry: Surgical Consultation.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Mr. Denison Pedley: Practical Hints on the Treatment of Carious Teeth. (Post-Graduate Course.)

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M. — Dr. Perkins: Mediastinal Growths.

THURSDAY.

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Mr. Wallis: Surgical Cases.

Ophthalmological Society of the United Kingdom.—8 P.M., Cases and Card Specimens. 8.30 P.M., Papers: Mr. W. H. Jessop: Embolism of both Central Arteries of the Retina. Mr. C. Wray: The Development of Myopia. Mr. Simeon Snell: (1) Congenital Papilloma of Conjunctiva; (2) Periarteritis of Central Artery of the Retina: (3) Work of Forest Scenery, illustrated from paintings by an amateur artist who had previously undergone cataract extraction. Mr. Sydney Stephenson: A Case of Ophthalmitis associated with Basal Meningitis.

British Gynæcological Society, 8.30 P.M.—Specimens will be shown by Dr. Eider and Mr. Furneaux Jordan, and there will be a discussion on Indications for the Removal of the Uterine Appendages.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.) 8 P.M.—Dr. Harrison Low: Cases. Roentgen Rays. Demonstration 5.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. Beddard: Food and Diet in Disease. (Lecture II.)

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Holmes Spicer: Consultation (Eye.)

Ophthalmological Society of the United Kingdom, 8.30 P.M.—Mr. R. Marcus Gunn: The Bowman Lecture on Visual Sensations.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

M'CALL.—At 25, Great Hampton Row, Birmingham, on May 23rd, the wife of W. M'Call, M.B., C.M., of a son.

MARRIAGE.

LOGAN—CHAMBERLAIN.—On Wednesday, June 6th, at the Parish Church, Solihull, Warwickshire, by the Rev. H. B. St. John, Vicar of Holy Trinity, Ashby-de-la-Zouch, assisted by the Rev. Harvey Brooks, Vicar of the Parish, Roderic Robert Walter Logan, M.R.C.S., of Ashby-de-la-Zouch, son of the late Alex. C. Logan, of Great Valle Jamaica, to Frances Ethel, youngest daughter of George K. Chamberlain, of Leamington House, Malvern Wells.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.
CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.
CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.
CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.
CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.
CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.
EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.
GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.
GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.
HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.
KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.
LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.
LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.
LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.
METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.
MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.
NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.
NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.
NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.
ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.
ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.
ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.
ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.
ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.
ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2
ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.
ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.
ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females W., 9.30. *Operations.*—Tu., 2.30; Th., 2.
ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 1. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.
ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children) 2; S., 4. *Operations.*—W. F., 2.
ST. THOMAS'S. *Attendances.*—i.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Tu. 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.
SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.
THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.
UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.
WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 9.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.
WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

QUERIES.

CANTAB asks for experience of a "thermal chamber" heated by spirit lamp or gas instead of electricity.

INQUIRENS desires to hear of a home or institution where a respectable woman who has suffered from lupus vulgaris, causing loss of the nose, could be received. She could do some light work, and pay from 10s. 6d. to 15s. per week for her keep.

DR. O. TRAFFORD OWEN (Blackburn) asks for suggestions in the treatment of the following case: A fine healthy girl of 14 is annoyed by a disfigurement of the upper lip. When she smiles, a fold of the mucous membrane shows itself as a second upper lip, appearing as if there were a redundancy of the inner mucous layer.

THE COCKADE.

SURGEON (Retired from the Government Medical Service of an English colony, where he was also one of Her Majesty's Justices of the Peace) wishes to know if his coachman is entitled to wear a cockade in England.

*** On January 12th, 1895 (p. 113), we were enabled to publish the following opinion from Mr. G. Ambrose Lee (Bluemantle), of Herald's College, London: "I have to inform you that the opinion given by this College is that the privilege appertains and is confined to the naval and military services, including the militia, yeomanry, and volunteers, and that every officer whatever his rank, as long as he holds Her Majesty's commission, has a right to mount, in the person of his servant, a cockade. It would also appear that the use of a cockade by officers who have retired with rank and permission to continue to wear their uniform is both customary and justifiable." In a later issue (March 25th, 1899, p. 771) a correspondent who considered that Bluemantle's reply evidently alluded to the military cockade only, wrote: "The civil cockade may be worn by all magistrates placed on the Commission of the Peace by the Lord Chancellor. It is an open question at present whether those who are magistrates by virtue of their being chairmen of district councils, and thus magistrates by Act of Parliament, are entitled to use the cockade during their term of office."

ANSWERS.

MILES.—Application should be made to the Director-General, Army Medical Department, 18, Victoria Street, S.W.

DENTIST might communicate the facts to the British Dental Association or the London and Counties Medical Protection Society, but nothing can be done unless those who are acquainted with the facts will come forward as witnesses.

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided.

ZEPHYR.—(1) "Martin's Act" applied only to domestic animals. (2) The Brown Animal Sanatory Institution, founded by Mr. Brown and administered by the University of London, is an institution for the study of comparative pathology. (3) Absinthe is an alcoholic preparation of wormwood, as our correspondent might have ascertained by reference to *Squire's Companion*, which he mentions. (4) A copy of the Oath of Hippocrates was published in the BRITISH MEDICAL JOURNAL of February 25th, 1888, p. 441.

FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS OF IRELAND.

J. H. B.—We are informed that the following works are commonly read for the Final Examination for the Fellowship of the Royal College of Surgeons of Ireland: *A Manual of Surgery*, by W. Rose, M.B., B.S., F.R.C.S., and A. Carless, M.S., F.R.C.S., Second Edition (London: Baillière, Tindall, and Cox, 1899, 21s.); and *A Student's Handbook of Surgical Operations*, by F. Treves, F.R.C.S. (London: Cassell and Co., 1892, 7s. 6d.)

TREATMENT OF INFANTILE SUMMER DIARRHŒA.

DR. LANGFORD SYMES (Dublin) writes in reply to "Quaerens" to point out that in the *Transactions of the Royal Academy of Medicine in Ireland*, vol. xv, 1897, he has given a description of these diseases and their treatment in full by the most recent methods—calomel, gr. $\frac{1}{10}$, every half hour till 1 gr. has been taken; resorcin, gr. $\frac{1}{2}$-5; bismuth salicylate, gr. 1-3; benzol naphthol; sodium salicylate, gr. 2-4, every four hours; and many other directions are given.

MOSQUITOS AND MALARIA.

MAJOR RONALD ROSS, the Liverpool School of Tropical Diseases, writes: In reply to the question of Dr. G. Parker in the BRITISH MEDICAL JOURNAL of June 2nd, I beg to inform you that English *Anopheles* have long been known to be comparatively common. Mr. Theobald, of the British Museum, sent me two live specimens of English *Anopheles claviger* some weeks ago, and arrangements are now being made to breed the insects in various laboratories.

NOTES, LETTERS, Etc.

PREVENTION OF MOSQUITO BITES.

DR. A. A. BARCLAY (Bacup) writes: In the course of some experiences as a globe trotter it has been my unfortunate lot to fall a victim to the attentions of these little pests in various parts of the world. The mosquitos of India and Australia make sad havoc of the new-comer, but for downright bloodthirstiness commend me to their brethren in Southern

France and Durban (Natal). With an extensive acquaintance of the insect, I had congratulated myself on having become immune to the virulence of the bite. A visit lately to Natal, however, gave me a rude awakening. Many of us who on former visits to that port went scathless, at the end of last year were attacked with extraordinary energy. Mosquito curtains only imprisoned ourselves and our unwelcome guests. The time-honoured preventives ammonia, eau-de-cologne, eucalyptus, etc., were tried in the balance and found wanting. In a week we were reduced to pitiable spectacles. One evening we were discussing the aversion insects have to the castor-oil plant, when it was suggested by one of the company to try castor oil as a preventive. Daubing the feet, ankles, hands, wrists, and face succeeded wonderfully in making the insects preserve a respectful distance. Since then I have recommended the method to many people and in many places, and invariably found it successful. Some may think the cure worse than the disease, but this, I venture to think, will not be the opinion of any who have been the mosquito's prey.

Mr. Henry Grey (Constitutional Club) writes to recommend the following remedy which he has found useful: Hang a piece of juicy raw meat, about the size of an orange, 6 inches over your pillow, and on waking in the morning you will find it full of the tormentors gorged with the animal's blood instead of yours.

The Treatment of Pneumonia.

Dr. W. Blair Bell, (Linden, Wallasey) writes: I notice in the British Medical Journal of May 5th, p. 1084, that Lieutenant-Colonel Latchford gives his views on the therapeutic treatment of lobar pneumonia, and that he states that he has found the ext. ergotæ liq. useful in the initial stage to cause vaso-constriction and so diminish the blood supply to the alveoli. In the October number of the *Edinburgh Medical Journal* of last year, in a paper on spasmodic asthma in which I endeavoured to show that this condition is due to active vaso dilatation, I mentioned the fact that I had found that ergot and the derivatives—cornutin hydrochloride and ergotinin citrate—relieved the vaso-dilator spasm by stimulating the more powerful vaso-constrictors. I have employed ergot in spasmodic asthma for the last two or three years, and for the last year and a half I have extended its use to the initial stage of other forms of vaso-dilatation in the lungs, that is, in acute pneumonia (lobar and lobular), and bronchitis with the best results. I am glad that Lieutenant-Colonel Latchford has also proved by experience the value of this drug, It is worthy of more extended use.

The Prevention of Laceration of the Perineum.

Not a Veteran writes: I was amazed to read the statement made by "A Veteran Practitioner" in answer to "Querist" that "he would get on better if he would leave the perineum alone." This is altogether against my own experience. For years over 400 cases of midwifery have passed through my hands each year, and I can confidently assert that a medical man can save most perineums from rupture. If the perineum is left alone as advised, in eight out of ten rupture will occur. My plan—described in all textbooks—is simply to support the perineum with the left hand, a napkin intervening, and so manipulate the child's head with my right hand as to get the back of the child's neck well under the arch of the pubes. Thus the smallest possible diameter of the head is made to pass through the vulva. In my experience it is the shoulders or pelvis which as a rule rupture the perineum, and they should be dealt with much in the same way as the head. I have seen the placenta rupture the perineum, and several times have I seen it make a slight rent larger. The number of multiparæ who are ruptured is simply amazing, and someone must be answerable for them. When a perineum is unfortunately ruptured, it is the duty of the practitioner at once to stitch up the rent. One or two wire or catgut sutures will as a rule effect a good repair. Ruptured perineum is the cause of a good many ailments in women, and is, in my experience, the cause of a good deal of immorality and disease among married men. A ruptured perineum rarely heals unless stitched.

Dr. Alexander Duke (Cheltenham) writes: If "Querist" will take the trouble to draw the perineum downwards and backwards during each pain from the commencement of the second stage, and keep the patient's limbs in a line with the body when the head is on the perineum, he will have no laceration so far as birth of head is concerned. In my opinion the birth of the shoulders is more often a cause of laceration. The great point is to give sufficient time to dilatation (as Nature does with the os and cervix, but not with the perineum). Hot moist applications combined with inunction of belladonna will be found useful in addition in some few cases of exceptional rigidity of the parts.

Immunity of Right Side of Heart in Acute Rheumatism.

Dr. Oliphant Nicholson (Edinburgh) writes: In reference to the above interesting fact, Dr Burney Yeo suggested the probability of the endocardium on the right side of the heart being protected in some way by the condition of the blood. This seems a rational view, which would seem to be suggested by the reversal of positions in fœtal endocarditis, where disease is almost absolutely confined to the right side of the heart. In intrauterine life aërated blood goes from the placenta to the right side of the heart, while in extrauterine life it is sent to the left side of the organ. This is suggestive if taken along with the fact that certain micro-organisms can only exert their full virulence in oxygenated arterial blood, and in this circumstance there may be a clue to the immunity of one side of the heart in each case.

Ankylostomum Duodenale in Dogs.

Mr. Arthur Powell, B.A., M.Ch., (Kalain, Cachar) writes: Dr. Robert Gray, writing from Assam in the British Medical Journal, October 21st, 1899, p. 1107, on Ankylostomiasis in Dogs, says: A. duodenale is usually believed peculiar to man, and then proceeds to describe three cases in dogs in which he found "ankylostomata." As he adds no distinctive adjective, one might conclude that he was unaware how common two varieties of ankylostoma are in the dog.

I can confirm the statement that A. duodenale, in all respects similar to that of man, is occasionally found in dogs in Assam, but very rarely, as I have had only two cases. Ankylostoma trigonocephalum and A. stenocephalum are very prevalent here, and in Europe are said to cause "pernicious anæmia" or "epidemic epistaxis" among packs of hounds. I recently showed at the Lurma Valley Medical Society all three varieties of worm taken from one bull terrier.

A. stenocephalum is the smallest and thinnest, the female being, I think, always less than half an inch in length. It has no dorsal teeth, and only two lateral hook teeth, one on each side. It narrows considerably towards the head, and is prolonged in the female into an acute tail.

A. duodenale varies greatly in size, the female being from five-sixteenths to three-quarters of an inch. It tapers towards the head. The teeth are characteristic—a dorsal pair, one on each side of a median groove, four hook teeth, two smaller median ventral, sometimes hidden by a chitinous flap, usually with an indentation on the median edge, two larger hooks placed laterally.

A. trigonocephalum, commonest here in dogs, is the largest; the female is seldom under ½ inch, usually ⅝ inch in length, and does not taper towards the head. It has two dorsal teeth like A. duodenale, one hook on either side which terminates in three prongs, making six lateral "teeth" altogether.

I doubt if the dog is an important factor in the spread of A. duodenale. In Assam probably 75 per cent. of the human population contain the worm and are continually discharging the eggs.

It is a fact, not generally known outside India, that a Hindu considers it a grave insult to address anyone without washing the mouth after defæcation. Anyone who has travelled on the rivers of Assam is familiar with the sight of the banks in the early morning. Every riparian native defæcates at the water's edge, completes the "toilet of the perineum" in the river, and then rinses out his mouth from the same water, though he sees the whole bank studded with his fellows engaged in one or other stage of this operation.

LETTERS COMMUNICATIONS, Etc., have been received from

A J. W. Allan, M.B., Glasgow. **B** Dr. A. Bronner, Bradford; Mr. G. A. H. Barton, Morchard Bishop; Mr. R. Brayn, Crowthorne; Mr. W. Berry, Wigan; A. H. Burgess, M.B., Manchester; C. Begg, M.B., Edinburgh; Mr. G. F. Blake, Dublin; Mr. J. B. Blackett, London; Mr. L. A. Bidwell, London. **C** Dr. B. B. Connolly, London; Dr. W. Cotton, Clifton; Dr. A. E. Cooper, London; Dr. J. M. Clarke, Clifton; Mr. A. J. Cary, Weston-super-Mare; Mr. C. B. d'E. Chamberlain, Bournemouth; Dr. G. Crichton, London; Country G. P. **D** Dr. A. Duke, Cheltenham; Mr. E. A. G. Doyle, Trinidad; Mr. F. Deane, Barbados. **E** Dr. F. W. Edridge-Green, London. **F** Mr. C. E. S. Flemming, Freshford; Mr. C. H. Fagge, London; Dr. W. F. Farquharson, Carlisle. **G** Dr. A. A. Gray, Glasgow; Mr. F. G. Gardiner, Warwick; Dr. H. Groom, Wisbech; E. B. Garland, M.B., Bristol; A. E. Galloway, M.B., Aberdeen. **H** Mr. J. T. Hartill, Willenhall; Dr. T. A. Helme, Manchester; Mr. W. F. Haslam, Birmingham; Miss M. Hannan, Dublin; H. S. W.; Mr. R. A. Hollingsworth, Kyanksa; F. G. Haworth, M.B., Darwen; Hunterian Society, Secretary of, London. **I** Incredible; Dr. H. J. Ilott, Bromley, Kent; Income Tax: Inquirens. **J** Dr. E. Jepson, Durham; J. R. B.; Mr. G. Jackson, Plymouth; Junior Partner. **L** Mr. P. G. Lodge, Bradford; R. C. Lucas, M.B., London; Dr. J. Lennox, Kilrea; Dr. E. G. Little, London; Dr. W. S. Lazarus-Barlow, London. **M** Dr. J. P. McCarthy, Abbeyfeale; Dr. R. L. Meade-King, Taunton; Mr. E. G Mawbey, Leicester; Mr. W. Mawer, Tollesbury; Mr. J. H. Mummery, London; M.O.H.; M.B; Medical Aid Officer; Dr. C. F. Moore, Dublin; Dr. E. F. Maynard, Hove; Mr. G Michelmore, Tiverton; Mr. J. G. Murray, Scarborough; J. T. J. Morrison, M.B., Birmingham. **N** Mr. N. H. Nixon, London; Not a Veteran; Dr. H. T. Nixon, Liverpool. **O** O. T. Owen, M.B., Blackburn. **P** Poor Law; Dr. T. D. Poole, Wolverhampton; Dr. W. R. Parker, Kendal; Public Vaccinator; Dr. F. M. Pope, Leicester; Mr. R. H. Parry, Glasgow; Pub. Vacc. **R** Mr. G. Rendle, London; R. P. C.; Mr. W. H. Rowthorn, Rotherham; Mr. T. F. Raven, Broadstairs; Mr. E. J. Reid, London; Dr. J. Rennie, Coatbridge; G. A. Reid, M.B., Southsea; Dr. N. Raw, Liverpool; Mr. C. Ryall, London; Radius. **S** G. P. Shuter, M.B., London; Dr. J. A. Shaw-Mackenzie, London; Mr. H. Saunders, Deddington; Mr. W. L. Symes, Dublin; Dr. S. Sunderland, London. **T** Dr. F. S. Toogood, London; T. E. S.; G. Turner, M.B., Capetown; Mr. H. H. Tidswell, Cardiff. **V** Veritas. **W** F. E. Wynne, M.B., Leigh; Mr. W. B. Winston, London; Mr. C. H. Whiteford, Plymouth; Mr. R. B. Williams, Tring; Dr. J. P. Williams, Swinton; E. W. White, M.B., Dartford; Dr. W. H. White, London. **X** X; X.Y.Z. **Y** Dr. D. Yellowlees, Glasgow. **Z** Zephyr.

BOOKS, Etc., RECEIVED.

The Ophthalmic Patient. By P. Fridenberg, M.D. London: Macmillan and Co. 1900. 6s. 6d.

On Diabetes Mellitus and Glycosuria. By E. Kleen, Ph.D. M.D. London: Bailliere, Tindall, and Cox. 1900. 10s. 8d.

Recollections of My Life. By Sir J. Fayrer, Bart., K.C.S.I., etc. Edinburgh and London: W. Blackwood and Sons. 1900. 21s.

. In forwarding books the publishers are requested to state the selling price.

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REMARKS
ON
MAUSER BULLET WOUNDS AND AMPUTATION.

BY SIR WILLIAM STOKES, F.R.C.S.I.,
Surgeon-in-Ordinary to H.M. the Queen in Ireland; Consulting Surgeon to the Field Force in South Africa.

EARLY SIMPLE WOUNDS.

I FEAR that as our experience of the effects of Mauser bullet wounds during the present war increases, the necessity for a serious modification of the views in reference to their gravity formerly and, I believe, still held by many eminent authorities becomes apparent. On arriving in South Africa I was informed, and for the sake of our brave soldiers was not a little pleased to learn, that, as a rule, the wound inflicted by the Mauser bullet was of so comparatively trivial a nature that it was most unlikely that I should find any of the greater surgical operations, such as amputations, resections, or ligature of the larger vessels, indicated. I heard that the bones when struck were usually tunnelled, not split or pulverised; that penetrating brain wounds frequently gave rise to little inconvenience or trouble; that the bullet usually careered among arteries and veins without inflicting any very serious damage to either beyond the occasional formation of an aneurysmal varix, and that this condition was such a slight source of inconvenience that surgical interference was seldom called for; that nerves were sometimes bruised, but seldom if ever divided, so that any loss of power or sensation from such an injury was as a rule only a temporary trouble. It was impressed upon me that this "merciful" bullet is so easily tolerated by the tissues and so generally "harmless" in its disposition that its extraction was not, as a rule, a necessity, and in fact seldom indicated; and, lastly, that the muscular and other tissues were so little bruised and lacerated that primary union was practically uninterfered with.

Some of these views are held by high authorities. Sir William Mac Cormac, in one of his graphic reports of some cases he witnessed in the early part of the campaign, has emphasised the remarkable manner with which Mauser bullets penetrate bones and other tissues without inflicting any very serious damage. He observes:

> I saw a large number of injuries inflicted by the Mauser bullet, which is remarkable for the small external wound it produces. In three-fourths, if not a larger proportion, it was impossible to tell the exit from the entrance wound, they were so similar in appearance.

He mentions, also, several cases of perforating wounds of bones, of the chest and abdomen, from which the patients, as a rule, made surprising and rapid recoveries.

Mr. Treves, too, has given similar testimony, and in his interesting account of the battle of Spion Kop,[1] observes: "Very few amputations are required for Mauser wounds." Mr. Dent has written against the practice of bullet extraction, and I might also mention others who advocate the desirability of a "masterly inactivity" in this department of surgery.

LATER SEPTIC INFECTION OF WOUNDS.

My experiences acquired in the Maritzburg military hospitals and in the General Hospital, Mooi River, which latter has been the chief arena for my work, compel me to hold opinions on these questions which largely differ from the views above alluded to; and this I believe to be due to the fact that the character of the gunshot wounds in the earlier part of the campaign differed materially from those which I have observed of late, and the increased gravity of the wounds dealt with has been accompanied with increased difficulty in keeping them aseptic.

This change is probably due to two principal causes.

First, the frequent conversion by the Boers of the Mauser bullet into an expanding one, by either removing a small portion of the case from the apex of the bullet, thus converting it into a "soft-nosed" one, or by making longitudinal slits round the case. When recently at Ladysmith I got ample evidence of the means which were adopted by the enemy to increase the gravity of the wounds they inflicted.

Secondly, another cause for the greater severity of the wounds observed of late is that the ranges have been much closer than they were formerly, and it is clearly established that the closer the range the more serious is the injury likely to be.

I have been informed by Lieutenant-Colonel Crofton, who commanded the Royal Lancaster Regiment at the battle of Greenhill on February 23rd, an engagement which lasted 36 hours, that, especially during the fighting at night, the opposing forces were at very short distances, and consequently the wounds received on that occasion were of exceptional gravity. The difficulty of maintaining asepsis in the wounds which I have experienced of late is probably due not only to greater bruising and laceration of the tissues when wounds are inflicted at short ranges, but also to the fact that towards the end of a campaign the depressing effects of protracted exposure, cold, physical exhaustion, excessive heat, and often hunger, must militate largely against primary union.

It has not, I think, been yet distinctly proved that the Boers have employed explosive bullets. If they have done so it would largely account for the great severity of many of the wounds that I have recently observed, a condition not seen in the earlier period of the campaign. To discuss all the cases I have had under my care which would strengthen my contention that we must abandon the idea that the Mauser bullet is "harmless" and "humane," would clearly be beyond the scope of this communication. I shall confine myself, therefore, to some of the cases of Mauser bullet wounds which it was deemed necessary to treat by amputation.

CASE I. COMPOUND COMMINUTED FRACTURE OF THE FEMUR: AMPUTATION AT THE HIP-JOINT: RECOVERY.

Private N., of the Gloucester Regiment, was wounded in the left thigh during a sortie from Ladysmith at Waggon Hill on January 6th, 1900. The entrance of the wound was in front of the left thigh, about its middle. The exit wound was in the back of the thigh in its upper third. The bullet track was quite external to the vessels and passed through the femur. The patient was under treatment in the Intombi Hospital, near Ladysmith, until his removal to the Mooi River General Hospital on March 25th. On examination I found portions of the upper fragment displaced forwards and outwards, and communicating with the anterior wound, which was freely suppurating. The upper extremity of the lower fragment was protruding for fully an inch and a half through the posterior wound. The patient was in a state of extreme emaciation, and anæmia and hectic symptoms had developed. Notwithstanding the critical condition the patient was in, I thought an attempt might be made to save the limb, and that the ends of the bone at the seat of fracture might possibly be resected and sutured. I accordingly removed the upper extremity of the lower fragment, which was protruding posteriorly, but on enlarging the incision upwards to reach the upper fragment I found the comminution so extensive, extending to the cervix, the bone at that situation being literally pulverised, that I deemed any attempt to save the limb obviously out of the question. I removed the limb at the hip-joint by a modification of Furneaux Jordan's method of amputation making a somewhat racquet-shaped antero-external flap. The patient very nearly sank during the operation, but by means of hypodermic injections of strychnine and ether he rallied somewhat, and I was enabled to complete the operation. To my great surprise and pleasure the patient made a satisfactory and rapid recovery, the extensive wound healing by first intention. On the fifth day after the operation the temperature became normal, and continued so until his recovery was complete.

The result obtained in this case contrasts favourably with those obtained in two other cases in which I performed amputation at the hip-joint, both of which unhappily terminated unfavourably. The injuries in both of these, however, were inflicted by shells, and were of exceptional severity, and, in fact, the operations were nothing more than "last resort" procedures. I do not give the details of them, as the injuries having been shell wounds hardly bear on the subject of this communication.

CASE II. COMPOUND COMMINUTED FRACTURE OF BOTH TIBIA AND FIBULA: GREAT LACERATION OF SOFT TISSUES: SUPRA-CONDYLOID AMPUTATION OF THE THIGH: RECOVERY.

[From Notes by Sidney Hulke, F.R.C.S.]

Private R., of the Queen's Regiment, suffering from a severe gunshot wound of the left leg was admitted into hospital on February 12th, 1900. Both bones of the left leg were extensively comminuted, and the tissues, both on the antero-external and internal surface, extensively lacerated. His condition generally was very unfavourable; his temperature was 103.4° and the pain he suffered very great. He was quite unable to bear any manipulation of the injured limb without an anæsthetic. For a few days, in the hope of being able to save the limb, attempts were made to keep the fractured bone in position and get the wound into a healthier condition, but on February 17th it began to be clear that these efforts were unavailing. The position of the bones was found very unsatisfactory and pus was pouring from both wounds, which were rapidly coalescing. On February 20th I determined that amputation would give the patient the best chance of preserving life. As there was a suspicious blush of redness and sloughing spreading up the leg towards the knee, I at first thought that amputation above the knee at the lower third of the thigh would be the best operation to perform. But, strengthened by the opinions of the

eminent surgeons who kindly attended and assisted me at the operation, notably Colonel Clery, P.M.O.; Professor Watson, of Adelaide, Australia; Mr. Dent, of London; Major Freyer, R.A.M.C., and Mr. Hulke, F.R.C.S., who kindly undertook the after-treatment of the case, I performed a supracondyloid amputation and the result fully justified the selection of this method. On February 24th the wound was closed. The general condition of the patient was much better and the wound appeared healthy. On February 27th the stitches were removed. The wound was united except at one point. His general condition was very good and he felt no pain or annoyance of any kind. The wound had practically healed by first intention.

The result in this case was most satisfactory, and towards the end of March the patient returned to England in perfect health. I have rarely seen a more shapely stump or one better adapted for the subsequent adjustment of a mechanical prothetic appliance. The result was gratifying to me, as, so far as I am aware, it was the first instance in which this operation was performed in South Africa. Major Westcott, R.A.M.C., lately in charge of the Intombi Hospital, Ladysmith, has recently informed me that he had another similar case, the result of which was also most satisfactory.

The following case, in which amputation at the hip-joint was performed by Major Freyer, R.A.M.C., presents many features of exceptional clinical interest.

CASE III. MAUSER BULLET WOUND OF THE THIGH FOLLOWED BY THE FORMATION OF A LARGE ANEURYSMAL VARIX IN UPPER PART OF THIGH: LIGATURE OF THE COMMON FEMORAL AND SUPERFICIAL FEMORAL BELOW TUMOUR IN HUNTER'S CANAL: GANGRENE: AMPUTATION AT THE HIP-JOINT: RECOVERY.

Lance-Corporal W. R., 2nd Battalion Fusiliers, was wounded at Pieter's Hill on February 24th, and transferred to the General Hospital, Mooi River, on March 15th. In stooping to assist a comrade, he received a Mauser bullet wound, the bullet entering on the outside of the left knee-joint, and emerging on the inner side of the buttock, close to the ischial tuberosity. This was followed by the formation of an aneurysmal varix about the size of a hen's egg, about 1½ inch below Poupart's ligament, and rather to the outside of the femoral vessels. From the direction of the wound and the early symptoms the artery was supposed to be damaged at the upper end of Hunter's canal. Mr. Stanley Copley, F.R.C.S,, who had charge of the case in the first instance, operated, and placed a temporary ligature on the common femoral artery first, and then a ligature on the superficial femoral in Hunter's canal on the distal side of the tumour. On account of the close proximity of the tumour it was found impossible to reach the upper end of the superficial femoral, and so he had to close the ligature on the common femoral. I was much impressed with the care and skill that were displayed in the performance of both these operations. Next day I was unfortunately called away to Maritzburg to see and operate on an officer who had sustained a severe injury of the right hand necessitating amputation. While at Maritzburg I was grieved to learn that two days after the ligation operations above mentioned gangrene supervened, rendering amputation at the hip-joint necessary. This was done by a modified anterior racquet-shaped incision in consequence of the gangrene encroaching too much on the anterior and inner sides for flaps to be taken in those situations. It is most satisfactory to note that the patient has made an uninterrupted recovery. An examination of the amputated limb showed that the wound in the vessels was not at Hunter's canal, but much higher up, within ½ inch from the bifurcation of the common trunk. The deep femoral vein was also found opening into the varix.

CASE IV. EXTENSIVE COMPOUND COMMINUTED FRACTURE OF TIBIA AND FIBULA: TEALE'S RECTANGULAR FLAP AMPUTATION OF THE LEG: RECOVERY.

Lieutenant H. received a severe gunshot wound of the lower third of the left tibia and fibula at the battle of Spion Kop. He came under my notice on March 2nd, and a skiagraph, taken by Lieutenant Blackwell, R.A.M.C., exhibited not only the presence of a bullet, but also severe comminution of both tibia and fibula. On March 4th, assisted by Major Hackett, R.A.M.C., I succeeded in removing three pieces of a Mauser bullet, as well as several small pieces of bone. The patient was pale and anæmic, and of nervous temperament, but having regard to his youth, I thought at first that the limb might be saved. These hopes were, however, doomed to disappointment. Very profuse suppuration, notwithstanding the most diligent and careful antiseptic treatment which was carried out by Major Hackett, set in. As the case was becoming critical, and obviously going from bad to worse, amputation was, in my opinion, clearly indicated, and this, with the concurrence of Colonel Clery and Major Hackett, I performed on March 12th. At my suggestion the patient was removed from the officers' wards, a building formerly an hotel situated on the south side of the Mooi River, and brought over to the camp on the north side of the river and placed under canvas. I amputated the limb a little below the middle of the leg, adopting Teale's rectangular flap method. I had to make the long flap somewhat external in order to avoid the wounded tissues on the antero-internal aspect of the limb. The patient made a slow but, on the whole, satisfactory recovery, and returned to England on April 7th, travelling to Durban in the admirable ambulance train organised by H.R.H. the Princess Christian, and directed by Sir John Furley.

CASE V. SEVERE BULLET WOUNDS OF THE SHOULDER, THIGH, AND LEG: COMMINUTION OF TIBIA AND FIBULA: AMPUTATION AT THE "PLACE OF ELECTION": RECOVERY.

Lieutenant B. was wounded on February 23rd at Railway Hill. When he reached the summit he received a bullet on the top of his right shoulder, which passed backwards and downwards, emerging at the inner side of the scapula. While lying on the ground faint from shock and loss of blood he received a second bullet wound in the left leg about its centre, shattering both tibia and fibula. The range was about 250 yards. An hour afterwards he received a third bullet in the upper and external aspect of the thigh; this bullet has not been extracted. The unfortunate officer lay for thirty-seven hours on the battlefield, during the greater part of which the heat was intense and not a drop of water to be had. Some kindly-disposed Boers at last gave him some relief to his intense thirst, and shortly after he was brought to Hlangwane Field Hospital, where in an operation tent on the right bank of the Tugela several pieces of bone were removed. He was then brought to Colenso, and arrived at the hospital at Mooi River on February 27th. On his arrival he was, as might be expected, in a state of extreme exhaustion; and, although it was obvious, from the great comminution of the fractures, that the limb would have to be removed, I deemed it wiser not to operate at once but to wait till the following day. Accordingly, on February 28th, assisted by Major Freyer, R.A.M.C., I removed the limb at the "place of election," adopting the method known generally as Ferguson's by a short anterior and long posterior flap made by transfixion. The convalescence of the patient, owing doubtless to his previous exposure and suffering, his extreme prostration, debility, and nervous temperament has been very slow. He has suffered much also during the healing of the wound from periostitis of the upper part of the tibia; but, notwithstanding these complications, he has progressed steadily, and will leave shortly for England. In the limb that was removed I have seldom seen greater comminution. In truth pulverisation of the bone would best describe the condition.

CASE VI. COMPOUND COMMINUTED FRACTURE OF TIBIA AND FIBULA: AMPUTATION AT UPPER THIRD OF LEG: GANGRENE OF STUMP: REAMPUTATION OF THE THIGH BY TEALE'S RECTANGULAR FLAP METHOD: RECOVERY.

[From Notes by Dr. W. R. Kemp.]

Private B., King's Royal Rifles, aged 23 years, was wounded by a bullet on February 23rd at the battle of Pieter's Hill. He lay for two days on the battlefield, having no food and very little water. He was at last rescued from his perilous situation and brought to the 4th Brigade Field Hospital, where the injuries to both bones of the right leg were found to be of so serious a nature as to necessitate amputation at the upper third of the limb. On February 27th he was transferred to the General Hospital, Mooi River, where he arrived in a very critical condition. The flaps of the wound had suppurated, exposing a large sloughing surface, from which there was a most offensive discharge. The temperature was 102.6°, the tongue was furred, he had great headache and much pain in the stump, which was greatly aggravated at night. For three days attempts were made to improve the condition of the patient both locally and constitutionally. The wound was douched twice daily with warm carbolic lotion, dusted over with iodoform, and dressed with cyanide gauze soaked in carbolic lotion. Internally he was given mercury bichloride, quinine, and strychnine, diffusible stimulants, and a light nourishing diet. After three days of this treatment, there being no sign of improvement, I deemed it necessary to reamputate the limb above the knee-joint, which I did on March 3rd by Teale's rectangular flap method. The patient bore the operation well; there were no signs of septic changes taking place in the new flaps, and the temperature subsided to the normal standard three days after the operation. On March 13th I removed three stitches, as, owing to the usual retraction of the hamstring muscles, there was some tension and a slight discharge from the neighbourhood of the stitches. These were all removed on March 16th. From this date the patient's condition improved in every way without any intermission. The stump felt comfortable, and a more shapely one could not be seen, and the patient was able to leave for England on April 6th in good health and spirits.

CASE VII. COMPOUND COMMINUTED FRACTURE OF THE HUMERUS: MODIFIED CIRCULAR AMPUTATION OF THE ARM: RECOVERY.

[From Notes by Dr. A. Stoddart Maunsell.]

Private G. C., aged 30, of the Royal Dublin Fusiliers, was wounded at the battle of Pieter's Hill on February 26th, 1900. The bullet passed through his right arm, fracturing the upper part of the humerus in several pieces Two pieces of bone had already been removed in the field hospital at Colenso. On admission to the General Hospital, Mooi River, two open wounds were found, one on each side of the upper third of the arm. Both wounds were discharging freely, and the arm was greatly swollen. There being no evidence of any septic complication, an attempt was made to save the limb, but an admirable skiagraph was then taken by Lieutenant Blackwell, R.A.M.C., displaying such comminution of the bone that I decided the limb should be removed. It was a painful decision to be obliged to make, having regard to the fact that the injured limb was the right arm. On March 10th I amputated at the junction of the upper with the middle third of the arm, the operation I adopted being a modified circular method The condition of the tissues at the middle and lower thirds of the limb precluded the possibility of doing any lateral or antero-posterior flap method. The wound healed by first intention, and the patient left for England on April 6th.

CASE VIII. COMPOUND COMMINUTED FRACTURE OF THE HUMERUS; AMPUTATION AT THE SHOULDER-JOINT: RECOVERY.

[Under the care of Major Freyer, R.A.M.C.]

Private S., 2nd West Yorks, was wounded at the battle of Pieter's Hill on February 27th, and transferred to the General Hospital, Mooi River, on March 3rd. A Mauser bullet at a short range (500 yards) entered the left shoulder at the tip of the acromion and emerged at the inner and posterior surface of the arm at the juncture of its upper and middle third. There was great swelling and profuse suppuration from the wounds. Under the impression that a resection of the shoulder-joint might be performed, and the limb thus possibly preserved, a Langenbeck-Ollier straight incision 4½ inches in length was made midway between the coracoid and acromion processes, but the upper third of the humerus was found so pulverised by the Mauser bullet that resection was abandoned, and a large deltoid flap being made the limb was removed. It is pleasing to record that the patient made an uninterrupted recovery, and has returned to England perfectly well.

I might adduce many other cases in proof of the fact that

my recent experiences at all events tend to show that the Mauser bullet is not so "harmless," "humane" or "merciful" a projectile as some suppose it to be. But, for the present, the cases noted above illustrate my contention sufficiently well.

REFERENCE.

1 BRITISH MEDICAL JOURNAL, March 3rd, 1900,

NOTES ON GASTRO-ENTERITIS, DYSENTERY, AND ENTERIC FEVER.

[FROM THE IMPERIAL YEOMANRY BASE HOSPITAL, DEELFONTEIN, SOUTH AFRICA.]

BY J. W. WASHBOURN, M.D., F.R.C.P.,

Physician to Guy's Hospital; Physician to the London Fever Hospital etc.

THE diseases most prevalent during the present campaign, if we can judge from the experience of the Imperial Yeomanry Base Hospital, are gastro-enteritis, dysentery, and enteric fever.

PREVALENCE OF INTESTINAL DISEASES.

Almost everyone after arriving on the veld is attacked with gastro-enteritis; for instance, nearly the whole of our medical staff, nursing sisters, and detachments have at one time or another suffered, whilst the prevalence of enteric fever and dysentery is shown by the fact that of the first 630 medical cases admitted here 289 were cases of enteric fever and 158 of dysentery.

The primary lesion in these three diseases is situated in the alimentary canal, and they are without doubt caused by the ingestion of micro-organisms or their products with the food. We know that the bacillus of enteric fever is capable of multiplying in the soil, and it is probable that the same holds good for the micro-organisms causing gastro-enteritis and dysentery.

Flies and Dust.

In military camps it is difficult to prevent infection of the soil with the excreta, and particles of the infected soil or of the excreta themselves can readily gain access to the food by means of flies and dust. The flies are innumerable, and get into every article of food, and after a dust storm everything is covered with a thick layer of dust.

Water.

In addition to these modes of conveyance of infection the drinking water is frequently to blame, coming, as it does, from polluted rivers and surface springs. On the march it is not easy to boil the drinking water, or to prevent flies and dust getting into the food; nevertheless, one cannot help feeling that, if greater precautions were taken, the incidence of disease would be greatly diminished.

GASTRO-ENTERITIS.

The chief symptom of the gastro-enteritis met with here is acute diarrhœa, which is usually painless, but is sometimes attended with colic. In some cases, in addition to diarrhœa, there is severe vomiting. As a rule the temperature is not raised, but it may reach 103° F., though this is never maintained for longer than a day at the most. The majority of cases recover in a couple of days, but diarrhœa may persist for a week or two. The best treatment is a dose of castor oil and laudanum, the diet being restricted to milk. Although more than one attack may occur in the same person, immunity is ultimately established.

Exposure to chill is undoubtedly a predisposing cause, and the wearing of a cholera belt affords some protection. One can easily imagine that vasomotor changes in the intestine may favour infection with microbes or absorption of toxins. In some outbreaks—as, for instance, at Modder River, where the disease was so common as to go by the name of "Modders"—the materies morbi was probably conveyed by the drinking water. The water was badly contaminated, and so turbid that some people actually attributed the disease to the mechanical irritation of the particles of mud. In our own cases the water was not to blame, for two reasons. One patient was attacked between five and six hours after arrival, not having partaken of any water, while an adjoining camp supplied with the same water was not affected.

On the other hand, there was reason to believe that the fresh meat which we received from Capetown was responsible for, at any rate, some of our cases. One of our company who had never partaken of meat was not attacked, while detachments of soldiers some distance from us were exempt as long as they were eating "bully" beef, but were at once attacked when they were supplied with meat from the same source as ourselves.

DYSENTERY.

The dysentery met with here is not very fatal. We have had only 2 deaths out of 158 cases. These cases exhibit the usual symptoms of tenesmus with passage of blood and mucus. Up to the present we have had no case of hepatic abscess. I have examined the stools of a number of cases microscopically, using a warm stage, but have failed to discover amœbæ. In both the fatal cases typical dysenteric ulceration of the large intestine and peritonitis from perforation of the bowel were found.

During the acute stages—that is to say, when there is passage of blood or mucus—the symptoms usually yield readily to treatment with ipecacuanha or with magnesium sulphate.

Ipecacuanha is given in the following way: The patient is kept without food for a few hours. A small dose of laudanum or chlorodyne is then given, and this is followed within an hour by a dose of 30 grs. of powdered ipecacuanha. The patient is kept quite quiet in bed, and is told to endeavour not to vomit. The same dose of ipecacuanha is repeated in four hours.

Magnesium sulphate is administered in ℥j doses every hour until the motions become fæcal. After the acute symptoms have subsided the diarrhœa generally yields to treatment with opium and bismuth.

The following short notes illustrate the value of these modes of treatment:

CASE I. *Ipecacuanha.*—Private D., admitted April 7th, under the care of Dr. Handson, had been ill a fortnight with dysentery. The bowels acted at first about twenty times a day, and blood and slime were passed. On April 8th the bowels acted ten times, and there was blood in the motions. He was treated with ipecacuanha. On April 9th the bowels acted four times, and the stools contained no blood. On April 10th the bowels acted three times and on April 12th twice, and there was no blood. On April 16th the motions were becoming formed, and on April 20th he was discharged well.

CASE II. *Magnesium Sulphate.*—Private J. W., admitted on May 10th, under Dr. Elliott, had had two attacks of dysentery since landing in South Africa, and was admitted when his second attack had lasted a little over a month. The motions were frequent, contained blood and mucus, and were accompanied by abdominal pain and tenesmus. On May 10th the bowels acted seven times, and on May 11th ten times. On May 12th magnesium sulphate was begun in doses of 5j. Six consecutive hourly doses were given, followed by two others at intervals of two hours. This was followed by a bismuth and opium mixture. On May 13th the bowels acted five times, on May 14th twice, and on May 15th once. The patient stated that after the first dose the abdominal pain and "working" ceased, and in twenty-four hours there was neither blood nor mucus in the stools. There was no recurrence of the dysentery.

As a rule, no sequelæ have arisen after dysentery, but in the following case cerebral embolism occurred:

CASE III. *Dysentery, Cerebral Embolism.*—Gunner G., admitted March 26th under the care of Dr. Handson, had been ill six weeks with dysentery, with passage of blood and slime. On admission he was convalescent, but there was still some diarrhœa and passage of blood. This yielded to treatment with bismuth and opium. On April 2nd his temperature rose to 100.6° F., and continued at about this level till April 13th, when it rose to 103° F. On this day the liver was observed to be slightly enlarged and tender. An intermittent temperature, varying between 103° and 98° F., continued till the night of April 25th, when it suddenly rose to 105.8°, but fell within an hour to 97° F. He became collapsed, with feeble pulse, recovering on administration of brandy. Later, he grew restless, shaking his head from side to side, and for a time became semi-unconscious. On the morning of April 26th his temperature was normal, and he was very drowsy. Well-marked paresis was present in the right arm and leg, with slight blurring of the optic discs. From this time he gradually recovered, and there was no subsequent rise of temperature. At the present time (May 21st) he is walking about, but still has some loss of power in the right arm and leg.

ENTERIC FEVER.

The cases of enteric fever run a similar course to those at home. There is the same eruption, pyrexia, enlargement of the spleen, etc. The following short notes will serve as an example:

CASE IV.—Driver S., aged 23, admitted under the care of Dr. Elliott on March 20th, had had an attack of dysentery lasting ten days, from which he was convalescent on admission. The temperature was raised on admission, and after four days the diagnosis of enteric fever was made. The patient passed through a very severe attack, the chief symptoms of which were diarrhœa, active delirium, nervous prostration, and cardiac failure. The highest temperature was 105° F. There were copious spots, the spleen

was enlarged, and the abdomen markedly distended. The temperature reached the normal line on the thirtieth day.

The *post-mortem* appearances are also similar, as the following short notes of necropsies performed by Drs. FitzHugh and Handson demonstrate:

CASE V.—Trooper A. B., diagnosed as appendicitis followed by enterica. *Necropsy:* Typhoid ulceration of lower part of ileum. Appendix large, and surrounding area matted with adhesions. Some muco-pus in lumen of appendix. Spleen large and soft.

CASE VI.—Private H. B., diagnosed as enterica with perforation. *Necropsy:* Typhoid ulceration of ileum, towards the lower part of which was a large perforated ulcer. General suppurative peritonitis.

CASE VII.—Private G. W., diagnosed as enterica with broncho-pneumonia. *Necropsy:* Typhoid ulceration of ileum; broncho-pneumonia at both bases.

CASE VIII.—Private G. K., diagnosed as enteric. *Necropsy:* Typhoid ulceration of ileum; large spleen.

CASE IX. Private A. W., diagnosed as enteric, with suppurative parotitis. *Necropsy:* Typhoid ulceration of ileum; large soft spleen; pus in both parotids.

CASE X. Private E. T., diagnosed as enteric; hæmorrhages. *Necropsy:* Typhoid ulceration of ileum and cæcum; large quantity of dark blood in the intestines; towards the lower part of ileum a large ulcer, at the base of which was adherent clot; large soft spleen.

CASE XI. Corporal A. B., diagnosed as traumatic suppurative arthritis of knee followed by enteric. *Necropsy:* Typhoid ulceration of ileum; large spleen; suppurative arthritis of knee.

CASE XII. Private J. A., diagnosed as enteric, with pneumonia. *Necropsy:* Typhoid ulceration of ileum; broncho-pneumonia at both bases; large spleen.

Widal's Reaction.

In conjunction with Mr. Owen Richards I have also obtained in many cases typical clumping with a typhoid bacillus brought from England, and kindly given me by Dr. Eyre, of Charing Cross Hospital; for instance, in Case XI. In Case IV above quoted (Driver S.) a typical reaction was given with a dilution of 1 in 20.

Value of Inoculation.

It is, perhaps, premature to give an opinion with regard to the value of inoculation; but, as far as I can judge, it does not have a marked effect in mitigating the attacks. Two of our patients who died of enteric had been inoculated.

Dysentery followed by Enteric.

Several of our patients have suffered from dysentery and enteric fever, the latter immediately following the former.

"SIMPLE CONTINUED FEVER."

Many cases are sent to us with a diagnosis of "simple continued fever." Most of these are cases of enteric fever: nevertheless, now and then a case is met with in which the only symptoms are pyrexia and *malaise*, and which do not come into the category of any known diseases. It is possible that some of these are cases of influenza. The following is an example:

CASE XIII. *History.*—Private L., aged 20, admitted on May 1st under the care of Dr. Handson, had been ill for seven days. During this time he had had bad abdominal pain followed by diarrhœa; the stools were yellow. The temperature had been taken now and again, and had been found to range between 102° and subnormal.

Condition on Admission.—The tongue was furred, brown, and dry; the temperature was 101.6°. He had no headache; the abdomen was not distended; he had no abdominal pains or tenderness; the spleen could not be felt; there were no spots and no cough.

May 4th. The temperature was still raised in the morning but usually lower at night. It varied between 103° and 98.4° F. The bowels were somewhat constipated, the motions dark and hard.

May 9th. The tongue was still furred, white, but was now quite moist. Still there were no spots, the spleen was not palpable, and the abdomen not distended. The patient said he felt quite well, the bowels were still rather confined, and the temperature had been lower for the last few days.

May 12th. The temperature was normal and he felt quite well, and on May 21st it was noted that the temperature had remained normal. He had been on milk diet all along.

This patient never had any pain while in the hospital, and the only evidence of his illness were the furred tongue and the pyrexia. His blood was tested on May 9th but no clumping was observed.

ABSENCE OF MALARIA.

Dr. Saunders informs me that malaria is not infrequently diagnosed as arising in the Karroo, but that he has never met with a case in his own practice. We have had cases of malaria here in which the malaria parasites were present in the blood, but in all these cases the patients had previously suffered from malaria in India or elsewhere. We have, however, not met with a case of malaria arising in South Africa.

A RECENT OBSERVATION ON FILARIA NOCTURNA IN CULEX: PROBABLE MODE OF INFECTION OF MAN.

BY GEORGE C. LOW, M.A., M.B.EDIN.,
Craggs Scholar, London School of Tropical Medicine.

[WITH COLOURED PLATE.]

WHILE working during the last three months in the London School of Tropical Medicine under Dr. Manson on a series of filariated mosquitos (*Culex ciliaris*) forwarded to the latter by Dr. Bancroft, of Australia, I have been able to add some facts to our knowledge of the life-history of *Filaria nocturna*, facts which have special reference to the probable mode in which the human subject is infected by this parasite. They give also, if only indirectly, strong support to the inoculation theory of malaria, and add an additional argument, if such be required, for pushing forward the schemes now on foot for the protection of the human body from mosquito bite.

As is now well known, the filaria embryo, after being swallowed by certain species of mosquito, undergoes a metamorphosis in the thoracic muscles of these insects. In the stomach (Fig. 1) it casts its sheath. It then quits the stomach and enters the thoracic muscles (Fig. 2), in which it passes through various changes (Figs 3 and 4). These result in the acquisition of vastly increased size, a mouth and alimentary canal, and a peculiar trilobed caudal appendage (Fig. 7). Until Bancroft's recent observations it was supposed that the filaria on the death of the mosquito—an event which was generally believed to occur in the water on which the insect had laid her eggs for the first and last time—quitted the body of its defunct intermediary host, entered the water, and through this medium obtained access to the alimentary canal, and ultimately the lymphatic system of man. The principal reasons for this supposition were:

(*a*) That mosquitos confined in vessels after they had fed on human blood deposited their eggs about the end of a week and almost immediately thereafter died, and

(*b*) That the developed filaria on the completion of its evolution in the mosquito exhibited remarkable activity when placed in water, and a capacity for living in this medium for, at all events, several hours—an activity and capacity suggesting that water is its natural habitat at this stage of its life.

Ross, and subsequently Bancroft and others, have now shown that the female mosquito if fed can go on living and laying for many weeks after the meal on human blood and after depositing her first batch of eggs, provided she is supplied with nutriment, whether in the form of animal or of vegetable juices. It is manifest, therefore, that any filariæ she may contain must find some other means for quitting the body of their intermediary insect host, and of getting access to the tissues of the definitive human host. Bancroft made two suggestions—(*a*) that the filaria might be swallowed by man while still in the mosquito—a somewhat improbable as well as unnatural event; (*b*) that it might be stimulated to re-enter the œsophagus of a mosquito when the latter came to feed again on a human subject, and so creep along the proboscis by the natural channel and thus into human tissues. How near suggestion *b* is to the truth the following observations show:

To study the anatomy of the mosquito in reference to any possible migrations of the worms, sections of filariated mosquitos were cut after embedding in celloidin and stained. In serial sections of infected insects, killed at various times both before and after the final stage of the metamorphosis, it was found that the young filariæ, after reaching their highest stage of development in the insect, instead of lying passively in the thoracic muscles, leave that tissue, and, in the vast majority of instances, travel forward in the direction of the head of the mosquito, and pass into the loose cellular tissue which abounds in the prothorax in the neighbourhood of the salivary glands. Although the large majority of the filariæ take up this position very constantly, an occasional straggler is seen in the tissues between the thorax and abdomen, or in the abdomen itself even as far back as the Malpighian tubes, or in the neighbourhood of the ovisacs. The situations last named are distinctly unusual. If we disregard these exceptional stragglers it will be found that the worms, after a short stay in the prothorax, pass along the neck, enter the lower

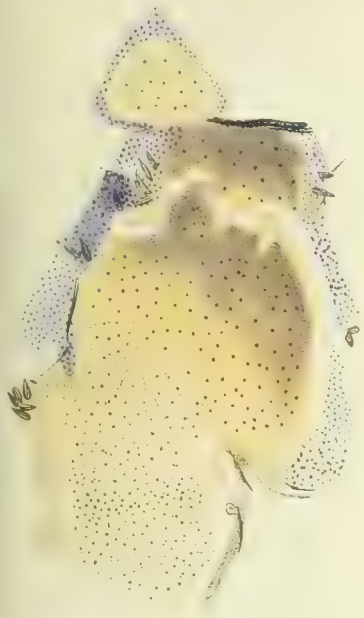


Fig. 1.



Fig. 1a.

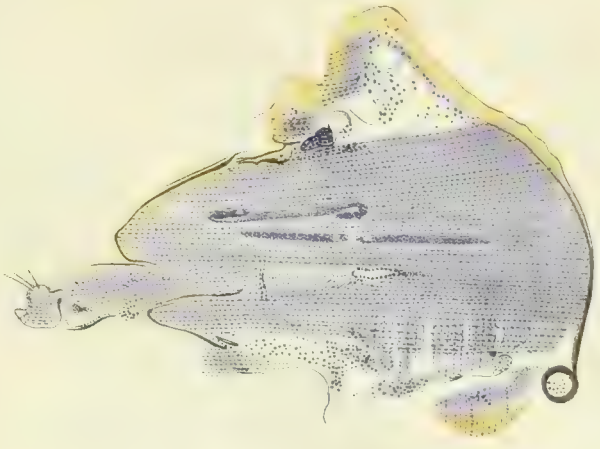


Fig. 4.

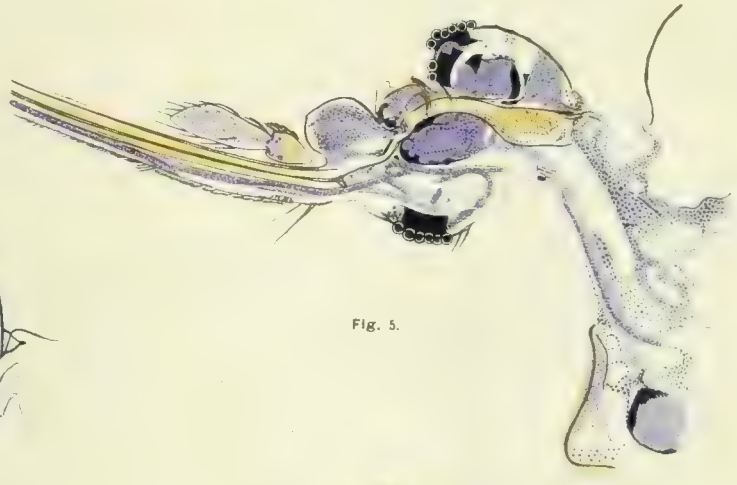


Fig. 5.

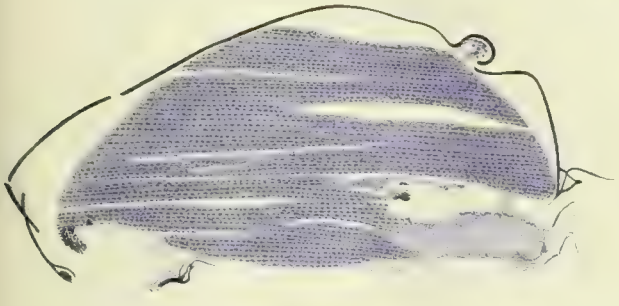


Fig. 2.



Fig. 2a.

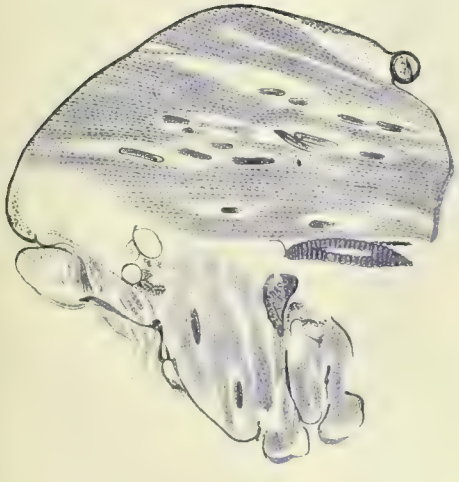


Fig. 3.

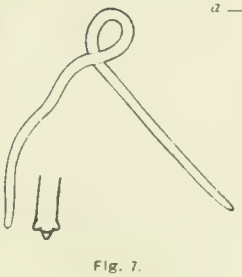


Fig. 7.

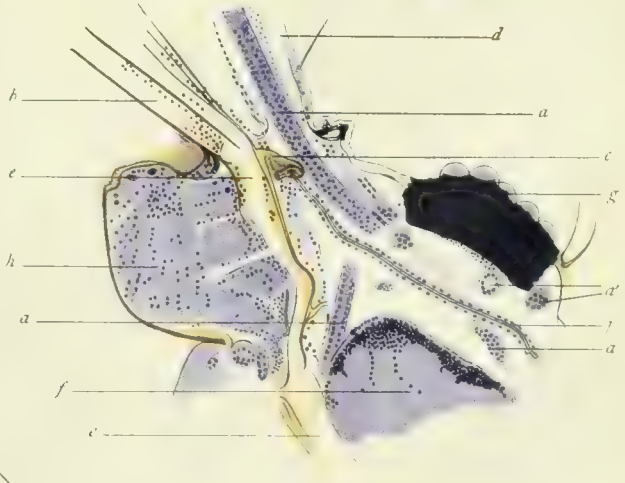


Fig. 6.

part of the head, and coil themselves up in the loose connective tissue immediately below the cephalic ganglion and the salivary duct (Fig. 5). Rarely are they found above the cephalic ganglion. From the head they can be traced, in fortunate sections, passing into the proboscis; not along the salivary duct as is the case with the malarial parasite, for this channel is manifestly too minute to accommodate a body relatively so gigantic as the filaria; not along the œsophagus or pharynx, as Bancroft suggested; but by making an independent passage through the base of the labium, and pushing forwards along the proboscis between labium and hypopharynx amongst the stilets. Here I have frequently found them stretching along almost the entire length of the proboscis, the head being invariably in advance (Fig. 5 and 6). Strange to say two worms nearly always lie together in the proboscis, their heads being, so to speak, *tête-à-tête*.

It is difficult to avoid the deduction that the parasites so situated are there normally, awaiting an opportunity to enter the human tissues when the mosquito next feeds on man. The sections when made on filariated insects at any period after the third week in every instance contained parasites either in the head, or in the proboscis, or in both.

It is interesting in connection with this fact to remember that these insects after their meal on human blood had subsequently frequently fed on fruit juices. To keep them alive for the necessary time to permit of the evolution of the filariæ this mode of feeding had to be resorted to. From this we may infer that the parasite has the power of discriminating between vegetable and animal juices. For did it not possess this faculty of discrimination our mosquitos would have shown no filariæ, as the parasites might have been expected to have passed out into the bananas on which they had been feeding long before the date at which they were killed.

Without actual and somewhat dangerous experiment it would be rash positively to assert that the filaria is inoculated directly into man by mosquito bite. Nor may we absolutely ignore the possibility of its gaining access to the human tissue through the medium of water or of vegetable into which it might have escaped by way of the proboscis, the cloaca, or along with the insects' eggs. But the evidence of design implied by the position taken up by the parasite in the proboscis, and its declining to quit this position when the mosquito feeds on vegetable juices, are suggestive, and almost prove that the mosquito bite is the natural and, probably, the constant and only opportunity for the filaria to enter upon its next and final stage of development in the definitive host.

It is interesting to note that although degenerative changes appear to be produced in the muscles of the mosquito, especially by the more advanced forms of the filaria, nothing of the nature of inflammatory change or of encystment, as in the case of trichina infection of vertebrate muscle, is ever observed. And, further, that the rate of development is not uniform; sometimes advanced forms are found as early as the eleventh day, or immature forms so late as the third week from the presumed time of infection.

Bancroft is enclined to doubt Manson's statement that the filaria casts its sheath before quitting the stomach of the mosquito; in several of my sections the empty sheath is plainly visible in the blood contained in the stomach, thus proving that ecdysis is not an artificial phenomenon.

DESCRIPTION OF COLOURED PLATE.

Fig. 1.—*Filaria nocturna* in the blood in the stomach of newly fed mosquito, × 60. Fig 1 a, the same, isolated, × 125. (Australia.)

Fig. 2.—*F. nocturna* lying in thoracic muscle of mosquito after quitting stomach; first day after feeding, × 60. Fig. 2 a, the same, isolated, × 125. (China.)

Fig. 3.—*F. nocturna* in thoracic muscle of mosquito 9 days after feeding. Great increase in size; commencing differentiation of alimentary canal. (Madras.)

Fig. 4.—*F. nocturna* in thoracic muscles 11½ days after feeding; development nearly complete. (Australia).

Fig. 5.—*F. nocturna* in head and proboscis of mosquito 20 days after feeding. Shows parasites coiled up below cephalic ganglion and extending along proboscis between labium and hypopharynx × 60; part of another filaria can be seen passing along the neck from the prothorax to the head. (Australia.)

Fig. 6.—High power view of another section showing exact route by which the filaria enters the proboscis. The salivary duct is seen entering base of hypopharynx. (*a*) Fragments of filaria; (*b*) labrum; (*c*) base of hypopharynx; (*d*) labium; (*e*) pharynx; (*f*) cephalic ganglion; (*g*) eye; (*h*) muscle; (*j*) salivary duct opening into base of hypopharynx. (Australia.)

Fig. 7.—Filaria dissected out of mosquito 50 days after feeding. The tail with its appendages shown more highly magnified. (Australia.)

A CASE BEARING ON THE PARASITIC NATURE OF MAMMARY CANCER.

BY A. MARMADUKE SHEILD, M.A., F.R.C.S.

As all evidence bearing upon the important question of the parasitic origin of cancer of the breast is of importance, I wish to place the following remarkable case shortly on record, for a reference to it may in future years be of utility.

In June, 1898, a married woman, aged 36, came to me with irritation and redness about the left nipple. The area affected was of trivial extent, about 2.3 cm. in diameter, and the symptoms had existed for six months. Some simple remedies were applied, and I watched the case for a few weeks, as I was by no means certain of the diagnosis. At length certain appearances of the well-known "raw" red character inclined me to the belief that the disease was of the nature of malignant dermatitis (Paget's disease). This view was shared by a full meeting of the Dermatological Society, and moreover the universal opinion was expressed that the nipple and adjacent skin should be freely removed. I may add that so-called psorosperms were found in scrapings of the patch, but there was no perceptible deep induration or signs of cancer present. Wishing, as I thought, to make sure of the prevention of cancer, I went further, and advised the patient to submit to removal of the whole breast. To this after much reluctance she consented, and the mamma and pectoral fascia, with a large area of skin, were removed. I did not remove the axillary glands, because I believed that carcinoma of the breast had not yet developed, and that I was exercising merely a precautionary measure.

The affected skin was kindly examined by Dr. Rolleston, who found the usual appearances of malignant dermatitis, but no evidence of carcinoma in the breast beneath. I may add that I made a special note that to the naked eye the mammary substance was quite unaffected.

All went well until the present year, when in the month of April the patient noticed a small "lump" in the skin near the sternal end of the scar. This swelling was hard, about the size of a large pea, and red in colour. I excised it freely in May. Examination shows it to be spheroidal-celled carcinoma, with much fibrous tissue. The sections are in the possession of Dr. Rolleston, and he informs me that they exhibit extreme vacuolation of the epithelial cells, appearances which have in the past often been described as psorosperms.

This disappointing but remarkable case shows that the infective nature of so-called malignant dermatitis of the nipple is very extensive and insidious, and takes place far more early than is generally believed. We can hardly doubt, in this instance, that there was a connection between the two affections. There was certainly no cancerous change in the mamma to be detected, and I can hardly believe that "cell proliferation" could have existed or spread so far. The mamma was very voluminous, and the distance from the affected patch of skin to the secondary nodule considerable, at least 6 to 8 inches. It is hoped that this case will be read and commented upon by those working at the subject of the parasitic origin of cancer.

MALARIA IN THE SUB-ALPINE REGION.—Professor Pagliani, President of the Piedmontese Society of Hygiene, has proposed the establishment of a propaganda for the prevention of malaria in the Sub-Alpine region. A meeting was held at Vercelli, at which Professor Bizzozero, Professor Bozzolo, and others were present.

AMERICAN THERAPEUTIC SOCIETY.—In pursuance of a proposal made by the Therapeutic Society of the District of Columbia, for the establishment of an American Therapeutic Society, a meeting was recently held in Washington, when the new Society was organised. Dr. Horatio C. Wood was elected President. Among the members of Council we note the names of Professor W. Osler of Baltimore, Professor H. J. Hare, Dr. J. V. Shoemaker, and Professor Tyson of Philadelphia. The Society will become affiliated with the Congress of American Physicians and Surgeons, which meets in Washington every three years. The meetings of the American Therapeutic Society will be held annually.

TWO LECTURES ON ANTENATAL DIAGNOSIS.

Delivered in the University of Edinburgh, February, 1900,

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Lecture I.

Gentlemen,—Diagnosis implies difficulty. The making of a successful diagnosis implies the overcoming of a considerable difficulty. It is true that by the elaboration of mechanical aids, and by the long training of the senses, it is possible to reduce the making of a diagnosis under certain circumstances to a very simple and a very rapid process. Then, however, it can scarcely any longer be called diagnosis: it has become recognition, and requires little if any mental effort. In dealing with antenatal morbid states it is diagnosis in its true and best and most interesting sense that is needed. There is no immediate risk that anyone will obtain such facility in the discovery of intrauterine conditions as to convert antenatal diagnosis into a dull and featureless and supremely easy procedure. It ought, therefore, for a long time yet to retain a special attraction for the diagnostician who rejoices in the meeting and overcoming of difficulties, and he is no true scientific physician who does not welcome with the relish of the epicure the truly intricate and obscure problems of his professional work. There is a feast ready for him in antenatal pathology.

Medical and surgical diagnosis began with the separation one from another of the external morbid states and of the injuries of the limbs; after many centuries it passed to the investigation of the pathological conditions of the organs contained in the three body cavities; and while some still alive can look back to the elaboration of the diagnosis of intrathoracic and of intra-abdominal diseases and injuries, many of us who have not yet become old in the profession regard with almost personal pride the development of intracranial diagnosis. All these advances have meant the overcoming of many difficulties, some of them not inconsiderable, some of them at first sight insuperable, but all of them yielding before the active brain of man. The brain itself has been the last to yield up its secrets. It is now full time that an energetic and sustained effort be made to carry the diagnosis of intra-abdominal pathological states further than it has ever been yet taken. The task is difficult, for we have to investigate the condition of things in a cavity within a cavity, we have to diagnose not merely intra-abdominal morbid states, but intrauterine intra-abdominal morbid states. The difficulty ought to be, is all the stimulus we need.

It is often concluded that by antenatal diagnosis is meant the recognition of antenatal morbid states during antenatal life or intrauterine existence—this and nothing more. The definition of antenatal diagnosis, however, is a wider one than that, for by it are understood the recognition and the separation one from another of all the pathological conditions which are produced during antenatal life, not only while that period of existence is still in progress, but also after the product of its pathology has been expelled from the uterus, and even during the time it is passing through the vagina on its way to the exterior. The birth of a diseased or malformed infant does not remove the necessity for a diagnosis of its particular disease or malformation, nor does it always clear away the difficulty in making it; even if the child be already dead it will be for the advantage of future treatment that the medical man make out the cause of death. It must therefore be kept constantly in mind that the diagnosis of antenatal pathological states may be made at three times—during antenatal life while the fœtus is still *in utero*, during the act of parturition or intranatally, and after birth or in post-natal existence. It is, of course, easier to make the diagnosis intranatally than antenatally, and much easier to do so postnatally; but with decrease in difficulty has come decrease in value, and the chance of successful treatment may have passed away. It is necessary, therefore, to give the first place to the discussion of antenatal diagnosis made during antenatal life, as well on account of its difficulty as of its value.

Antenatal Diagnosis.

Emphasis has already been laid upon the difficulties of diagnosing morbid states while the subject of them is still *in utero*, and it is true that while the facilities are few the difficulties are many; but it must not be forgotten that after all they are not more than impediments, they are not insuperable obstacles to the making of a diagnosis of intrauterine diseases and teratological conditions. Further, can the medical man declare upon "soul and conscience" that he makes in every case of pregnancy that comes under his care a full and searching effort to remove these obstacles? It is not that he does nothing: he listens for the fœtal heart, he notes the growth of the uterine tumour, he asks about the fœtal movements, and he examines the maternal urine for albumen, not once if he be wise, but several times. But he is content with little; he is satisfied with far less from his examination of the pregnant woman's abdomen than he would be, for instance, from the investigation of her husband's chest. In the case of an obscure lung complaint in the pregnant woman herself this same medical man would doubtless percuss and auscultate and palpate the thorax till he had cleared up the diagnosis, and would feel not a little guilty and ill at ease if he failed to do so; but I fancy there are few practitioners who would pay the same amount of attention to the examination of the abdomen and uterus if the patient complained of unusually active or unusually inactive fœtal movements, or of acute pain in the hypogastric region. Further, I have known a surgeon, on the hunt for an abdominal cancer, by careful abdominal palpation follow a hard lump of fæces up and down the colon for a couple of days, but I have yet to meet the obstetrician who was willing to devote as much attention to the palpation of the pregnant uterus. There can be no doubt that in antenatal diagnosis the means of clinical investigation at our disposal are seldom made full use of, and are too often nearly completely neglected. It may be urged that the medical man has little or no opportunity of examining pregnant women in such a manner as would enable him to form an opinion on the health or disease of their unborn infants, and it may further be stated that patients do not offer themselves for such an exhaustive examination and even refuse to allow it when it is pressed upon them. Now, for this state of affairs the medical profession is largely responsible; it has not demonstrated the value of such a procedure, and it cannot be expected that the public will follow where the profession does not lead. I doubt not the willingness of the pregnant woman to submit to examination, even to suffer to some extent in so doing, if it can be shown to her that she is thereby ensuring her own welfare and that of her unborn infant.

Antenatal diagnosis includes the discovery of normal pregnancy and of plural pregnancy, of fœtal death, of diseases and monstrosities of the fœtus, of hydramnios, and of morbid conditions of the placenta. All these matters must be kept in mind in examining a patient who may be pregnant, and in all of them there is at any rate an increasing probability that the diagnosis may be thoroughly well established under favourable circumstances and with care and skill.

The making of the diagnosis of the antenatal morbid state during antenatal life will best be accomplished by taking up the following lines of investigation in order. First, the previous medical history of the woman, both general and sexual, must be inquired into, for there are certain circumstances which may be regarded as commonly preceding the development of morbid states in pregnancy; secondly, the past history and present state of the father and the family history on both sides ought to be taken into account, for there are fœtal diseases and embryonic deformities which appear to be hereditarily transmitted; thirdly, the maternal symptomatology during the pregnancy which is in progress must be carefully investigated; fourthly, a very complete physical examination ought to be made of the maternal organs, and especially of the abdominal viscera; fifthly, the fœtus should be fully examined by the hands, by the ear, by the cephalometer, by the Roentgen rays, and by any other means of exact research that may yet be invented; and, finally, the maternal urine and blood should be subjected to chemical

and microscopical investigation, as it is beginning to be realised that the condition of the fœtus *in utero* is to some extent reflected in the composition and characters of the maternal excretions. The rest of this lecture will be devoted to the consideration of some of the diagnostic possibilities suggested by these lines of research.

MATERNAL MEDICAL HISTORY.

The investigation of the clinical history of the mother of a stillborn or deadborn or diseased or deformed infant must, in the first place, deal with certain purely medical questions. The bearing of these questions upon antenatal morbid processes may not in the meantime be very evident; but it is of importance in a subject of such complexity that all available information should be secured, and in other branches of medical diagnosis the physician is every day learning that details at one time considered of no value in the etiology of maladies sometimes take on a sudden and preponderating importance—for example, the precancerous phenomena. Reference is now made to the medical conditions of the mother existing prior to and apart from her sexual and obstetrical history, and the question that has to be solved is whether there are maternal medical states which predispose to, or at any rate precede, the morbid occurrences of reproductive life. Are there any facts which shall enable us to predict that in a given case the future will show either morbiparity or monstriparity or mortinatality? Can, in other words, a typical past medical history be looked for in the mother who gives birth to diseased, deformed, or dead infants? *A priori* it may be expected that women who have had a healthy childhood and girlhood, who have suffered not at all or but slightly from the maladies of early life, who show no signs of rickets or of congenital syphilis or of anæmia, and who are not the victims of evident cardiac, pulmonary, hepatic, renal, or nervous disorders, will give birth to healthy infants. On the other hand, it may be expected that women with a past medical history the very reverse of the foregoing will produce offspring dead or dying, or diseased or deformed. Now, it is not difficult to find cases which apparently contradict or disappoint these expectations, for perfectly healthy mothers whe have not suffered from severe illnesses in early life give birth occasionally to deformed offspring, and delicate and diseased mothers sometimes astonish everyone by bringing forth strong and well-formed infants; but such instances do not altogether prove that the past medical history of the mother is of no importance as a premonition of future reproductive irregularities, they simply remind the investigator that there is a second factor to be taken into account—the state of health of the father. But, even admitting the occurrence of contradictions to the expectation that a woman who has been previously healthy in other ways will be healthy also in the matter of reproduction, the past maternal medical history ought to be inquired into. I have been struck on several occasions by the frequency with which women who have had disastrous obstetrical histories have also suffered previously from neuroses of various kinds, from tubercle, from alcoholism, from syphilis, from kidney trouble, from rheumatism and gout. It does not necessarily follow that these medical conditions of the mother prior to her pregnancy have so altered the ova in her ovaries as to make them incapable of healthy development, nor does it even prove that her whole system has been so altered as to be unable to react in a healthy fashion on the contents of her uterus. It may be taken as supporting the idea that both the morbiparity and the bad medical history of the mother are results of a common cause, that they are both hereditarily transmitted to her; and this is, I think, the more correct way of looking at the question. Further, it gains support from the fact that the degenerative conditions, such as nervous diseases, insanity, arthritic developments, some neoplasms, tuberculous predisposition, and the tendency to take alcohol and other toxic agents to excess, are apparently governed by the same laws as to transmission, etc., as preside over malformations, morbiparity, mortinatality, pluriparity, abortions, congenital debility, and the other numerous phenomena of antenatal pathology. They show family prevalence very markedly, and they exhibit the form of heredity which has been called dissimilar. This association between the insanities, the nervous diseases, the arthritisms, the tumours, and the morbid phenomena of antenatal life has been strongly insisted upon by Féré in his most suggestive work, *La Famille Névropathique*.

It will, therefore, be of the greatest importance for the progress of antenatal pathology for observers to investigate the medical history of morbiparous and monstriparous mothers along the lines which have been suggested. So far as my own observations have proceeded, they tend to show the existence in the mothers of congenitally malformed or diseased infants of more than the ordinary amount of manifestation of nervous disease and even of insanity, of arthritic manifestations, and of tubercle, and syphilis and alcoholism. It must be repeated, however, that it by no means follows that all these medical states are the causes of the morbid phenomena of antenatal life; some of them may be, but others will be the associated manifestations of a common cause or causes which appear most evidently in the form of impaired nutrition of the tissues. Nevertheless their presence has a diagnostic value if it can be fully established that they are met with more often in women who give birth to dead or stillborn infants, to diseased or malformed fœtuses, to twins, or to congenitally weak children.

MATERNAL REPRODUCTIVE HISTORY.

The mother's previous reproductive history is of much more immediate value in the diagnosis of antenatal morbid states than is her purely medical record. Now the phenomena are closely associated; they are to a certain extent manifestations of the activity, physiological or pathological, of the same organs. There is a close connection between menstruation and ovulation and pregnancy; and there is a very close connection between successive pregnancies, for although it may not be correct to say, "*ab uno disce omnes*," yet there can be no doubt that the occurrence of one abnormal gestation greatly increases the chances of the supervention of others. The inquiry into the maternal reproductive history may be made along the following lines:

1. *The menstrual habit and type* ought to be ascertained, and any abnormal conditions, such as excessive or diminished flow, pain, etc., noted, for from such information something may be learned of the state of the genital organs and their fitness for the discharge of the reproductive functions. It will be of special importance to elicit the presence of symptoms pointing to the existence of endometritis, for it is well known that a diseased uterine mucous membrane predisposes to various forms of antenatal deviations from the normal.

2. *The condition of the mother as to marriage* must be inquired into. It will be well to ascertain whether she married at a very early age or late in life, for in neither of these circumstances are her pregnancies likely to be normal. Further, the fact that she has married a relative such as a cousin, and much more an uncle, must be referred to, for although the marriage of first cousins need not of itself lead to abnormal developments during pregnancy unless the heredity and individual health on both sides be bad, yet the fact is of importance; and certainly the marriage of relatives nearer than cousins—for example, uncle and niece, aunt and nephew, would seem to produce pathological results.

3. *The history of the previous pregnancies* of the patient may yield information of the very greatest value in the making of a diagnosis. As case after case of antenatal disease or disorder has come under my notice, I have been more and more impressed by the tendency of abnormalities in pregnancy to repeat. I do not mean that a given fœtal disease or embryonic monstrosity will occur several times in succession in the uterus of the same patient, although that also has been observed, and I have myself noted its occurrence in fœtal dropsy, in anencephaly, in polydactyly, in tylosis palmæ et plantæ, in absence of the radius, etc.; but I refer rather to the very commonly noted fact that pregnancies that are pathological—although not pathological in the same way—are almost certain to be associated. Over and over again there is the history of abortions, fœtal death, fœtal disease, stillbirth, congenital debility, twins, hydramnios, malformations, and possibly also monstrosities in the same mother, who may on this account be called morbiparous. Necessarily, these phenomena do not often all occur in one patient's history, but the appearance of any one of them ought to prepare us for the possible supervention of any other of them in a future pregnancy. Further, other pathological events of rarer occur

rence might be added to the list, such as the hydatid mole and extrauterine and extra-amniotic pregnancy. Yet, again, it is wrong to think that syphilis is the only morbid state that determines this long series of morbid developments. Alcoholism at least does so also, and possibly tuberculosis, lead poisoning, and other infective and toxic and toxicological states. Syphilis and alcoholism offer a striking contrast, in that, while the antenatal phenomena of the former tend to diminish in virulence as the reproductive history of the woman progresses, those of the latter morbid condition show a marked tendency towards intensification. This peculiarity of maternal alcoholism has been very strikingly brought out in a recent contribution by Dr. W. C. Sullivan in the *Journal of Mental Science* (July, 1899). Enough has been said to show the supreme importance of a knowledge of the mother's previous obstetric history in forming an estimate of the probable character of the gestations of the future, and it is unnecessary to do more than refer to the diagnostic aid that may be received from the record of previous confinements in which the size of the fœtus or its malformed or diseased state caused delay or danger, or both, or in which it was noted that the placenta or membranes were abnormal in any way. So well recognised is this tendency to repeat in antenatal pathology that the terms "habitual abortion, habitual premature labour, and habitual fœtal death" have been used to express it; but a more correct nomenclature would be "repeating abortion," etc., for the idea of habit is scarcely what is meant, and we ought to look not so much for the repetition of identical morbid phenomena as for the repetition of gestations abnormal in some way, but not necessarily in the same way.

Paternal Medical and Reproductive History.

In most cases of fœtal disease and monstrosity little or nothing is said with regard to the health of the father. This is unfortunate, for it seems to be certain that paternal morbid states acting through the spermatozoa are potent in inducing antenatal pathological conditions. It is a striking comment upon this line of inquiry that cases have been reported in which women have given birth to healthy infants by one husband and to diseased offspring by a second consort. I have myself seen several cases in which I believe I was justified in tracing to the father the origin of the antenatal malady or deformity of the infant; further, the condition of the father was not invariably syphilitic, although it is true that more is known of the paternal factor in syphilis than in any other morbid state which is capable of transmission to the fœtus. It is, therefore, necessary to take note of the age of the father when he begets his child, of his age in relation to that of his wife, of his habits especially in respect to alcohol, of his state of development, and of certain diseases such as syphilis, nephritis, diabetes, cancer, tubercle, malaria, lead poisoning, mental disorder, etc., from which he may be suffering or have suffered, for there is good reason to believe that any of these pathological states may have a direct and injurious effect upon the offspring engendered by him. It may also be that the morbid paternal influence is transmitted directly to the fœtus without the mother suffering from it save secondarily through the fœtus; this is believed in respect to syphilis, and there is some evidence that it holds also for malaria,[1] and probably for other diseases. The influence of paternal alcoholism has not yet been fully worked out, but one of the striking results obtained from Sullivan's contribution already referred to,[2] was that total abstinence on the part of the father did little, if anything, to improve the prospects of the unborn infant so long as there was still maternal alcoholism.

Family Medical History.

In forming a diagnosis of antenatal morbid states the observer cannot afford to neglect the family medical and obstetrical history, for such conditions are not infrequently hereditary. The heredity, further, may not always be of the same kind. Direct and similar heredity is sometimes met with, and when it occurs it is so striking that it seldom passes unnoted, thus the late Dr. George Elder and myself have recorded a case in which tylosis palmæ et plantæ—a condition of excessive formation of the epidermis of the palms and soles—had been handed down from mother to daughter and then to granddaughter and great-granddaughter with such regularity that it was expected and looked for at once when a female infant was born into the family. The same thing has been noticed in anomalies of the fingers and toes, and especially in polydactyly, in congenital cataract, in retinitis pigmentosa, in harelip, in cleft palate, in fistulæ of the lower lip, in nævi materni, in microphthalmus, in aural fistulæ, and in a very large number of other anomalies and congenital diseases. In other phenomena of antenatal pathology the same tendency is evident. I have, for instance, given striking statistics illustrating the heredity of twin-bearing and of large families[3] and the heredity of triplets has also been established by various records. The following case I cite from the contribution made to the Edinburgh Obstetrical Society to which I have just referred. Mrs. I. was one of a family of seventeen children, and one of her sisters has had twins while another sister has had triplets. She herself has had twenty-two children in eighteen confinements, four times twins and fourteen single births. The first confinement produced a boy dead born: the second, twin boys at the sixth month, both dead; the third, a boy, dead born; the fourth, a girl, who lived six weeks; the fifth, a boy at the eighth month, who died in ten days from umbilical hæmorrhage; the sixth, a boy and girl at the sixth month, dead born; the seventh, a boy, dead born; the eighth, a boy, still alive; the ninth, a boy, died in sixteen days from umbilical hæmorrhage; the tenth, a girl, still living, aged 10 years; the eleventh, a girl at full term, died shortly from convulsions; the twelfth, a boy, who died at the age of 1 year from wasting; the thirteenth, a boy, who died at six weeks from wasting; the fourteenth, a girl, who died at 18 months from whooping-cough; the fifteenth, a boy, still living; the sixteenth, twin boys at the sixth month, one of whom alone survived his birth, and that only for twenty-four hours; the seventeenth, twins, a boy and girl, of whom the girl soon died from wasting; and the eighteenth, a boy, who died at the age of 6 weeks.

Of course, teratological states which are incompatible with extrauterine life cannot be transmitted by direct and similar heredity; but dissimilar heredity may and does occur, and occasionally a parent with a minor malformation which permits the continuance of prolonged postnatal life procreates a fœtus with a monstrous condition which renders it quite non-viable. I have already in these lectures referred to a woman with malformed thumbs, the daughter of a woman similarly deformed, who gave birth to infants with anencephaly, hydrocephaly, and absence of radius and thumbs, a case in which there was both similar and dissimilar heredity. Dissimilar heredity also is very common in antenatal pathology, and in estimating its presence it is necessary constantly to bear in mind that the phenomena of antenatal pathology are not confined to one group of conditions such as malformations or fœtal diseases, but include also abortions, twin births, mortinatality, congenital debility, extrauterine pregnancy, and placental and membranous abnormalities. It has sometimes been said paradoxically that sterility is hereditary, and the statement is true if it be meant that a woman or a man in whose ascendants (for example, in aunts or uncles) sterility has been common, will also run a great risk of being sterile.

In the family history of morbiparous and monstriparous mothers it is not uncommon to find, very markedly, morbid predisposition to various diseases developed postnatally, but in all probability present potentially antenatally; in this group the neuroses find a prominent place, as do also susceptibilities to be acted on abnormally by such toxic agencies as alcohol, morphine, and tobacco.

References.

[1] Felkin, *Trans. Edin. Obstet. Soc.*, xiv, 71, 1839. [2] *Loc. cit.* [3] *Trans. Edin. Obstet. Soc.*, xxii, 29, 1897.

The Portuguese Geographical Society has decided to send this summer an expedition to Serra Nogueira in the Province of Traz-os-Montes. The expedition includes a medical section, which will study the medical hydrology of the district and local diseases.

Repression of the Spitting Nuisance.—According to the New York *Medical News*, Dr. Robert A. Black, chief of the Health Department of Brooklyn, is taking active steps to enforce the law against spitting on the floors of public buildings, ferry boats, or street cars. Several arrests have been made for breach of the law. The penalty for breaking this ordinance is a fine varying from 1 dollar to 250 dollars.

CLINICAL LECTURES
ON PNEUMONIA.

Delivered at the Liverpool Royal Infirmary, March, 1900.

BY JAMES BARR, M.D.,
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LECTURE II.—TREATMENT.

HISTORICAL NOTES.

I AM one of those who think that the treatment of pneumonia does not reflect much credit on the medical profession. It has been the battlefield of contending schools of thought for the greater part of the present century, and yet the death-rate has not decreased, and we seem almost as far off the solution of the problem as ever. If you have any doubts on these points read a few standard textbooks on the subject; read also some articles by eminent authorities in the *Practitioner* for January and February.

There must always be a distinction between the artist and the copyist, but the picture receives the same broad lines of treatment from both, so in dealing with such a definite disease as pneumonia everyone should know his line of action. In some respects our forefathers had the advantage over us in that they agreed to bleed, starve, or stimulate their patients; but now we have arrived at the "do as you please" period, so that there is no uniformity even in the same hospital. The excessive bloodletting in the early part of the century led to a revulsion in favour of the expectant and supporting treatment of Hughes Bennett, and the non-interference of Skoda and Dietl. Yet it is highly probable that the mortality during the active period of adult life was not greater under the antiphlogistic treatment than it is in the present day. In the presence of a disease with a high mortality, neither the public nor the profession were content to do nothing, and then followed the very pernicious system of Todd, who dosed his patients with huge quantities of alcohol, a practice which in a somewhat modified form has been perpetuated in this country, I regret to say, to the present day. Then came the antipyretic treatment, which, as carried out by Jürgensen, von Ziemssen, Liebermeister, and others, had definite objects in view, and was attended by a fair measure of success, but it involved too much trouble ever to become popular in this country. There are many men who have no hesitation in prescribing such noxious drugs as phenacetin, antifebrin, antipyrin, and other coal tar products, who would never dream of undertaking the trouble of administering a cold bath.

In the present day we have got the so-called antiseptic treatment of pneumonia, which is about as irrational as any which preceded it. The idea of attacking the pneumococcus is very self-satisfying to young physicians who pose as scientists, but who barely know the true meaning of the word science. I would strongly dissuade you against any such frontal attack, because the chances are 1,000 to 1 you won't succeed, but on the other hand you may succeed in killing your patient.

It is far more rational to try to increase the resisting powers of the individual, or to protect him against the ravages of the pneumococci or other pathogenic organisms and their toxins. Antipneumococcus serum has been prepared by the brothers Klemperer, Washbourn, and others, but hitherto this line of treatment has not been attended with success. It is highly probable that something may yet be done in this direction. As before stated I have seen one case of pneumonia where antistreptococcus serum proved successful. Where there is an abscess in the lung associated with streptococci this line of treatment should be adopted. In a case operated on for me by Mr. Robert Bickersteth a secondary streptococcal infection was quickly cut short by a few injections of the serum.

THE CAUSE OF DEATH IN PNEUMONIA.

In treatment our chief object is to cure our patients; to restore them to the *status quo ante*. In dealing with an acute and self-limited disease like pneumonia, we must always recognise the fact that a large proportion of cases get well without treatment, under any treatment, and in spite of treatment, so that in, say, 70 to 80 per cent. of our cases we must not take too much credit for any line of treatment which we adopt. Yet the almost universal death-rate is, in my opinion, far too high, and it seems to me that if we are to improve our treatment we must look at the question from a fresh standpoint, and ask ourselves why do so many persons die from an acute but short specific disease? When a patient dies it is a simple enough matter to find out sufficient reasons to account for his death, but it is much better to see the danger signals ahead, and try to steer the patient clear of them.

We will now consider the classes of patients who die from this disease. I have previously referred to the very heavy mortality which occurs during the first five years of life, and more especially during the first year. No doubt the vast majority of these cases included in the Registrar-General's returns are cases of broncho-pneumonia or capillary bronchitis, but yet after the second year true croupous pneumonia is not at all uncommon. You will not see many of these cases in this infirmary, but many of them will come under your care in private practice, and this must be my excuse for incidentally referring to the subject here. The case mortality is variously stated from 30 to 50 per cent., and I have a shrewd opinion that the bronchitis kettle is to a considerable extent responsible for this excessive mortality. In my opinion the man who invented the bronchitis kettle should have been hanged; death from strangulation would only have been a fair return for the number of deaths from drowning caused by his appliance.

But independently of treatment, many of these little patients, after a long struggle, gradually succumb from failure of the right side of the heart. Why should this be? These young hearts are healthy and particularly sensitive, so that they will not stop on a slight provocation. I have often demonstrated to you the effect of respiration in carrying on the circulation of the blood, and shown what assistance you can afford the right side of the heart by simply shutting the glottis and expanding the chest. Now if you observe a young child suffering from laryngeal diphtheria you will see that the resilient chest walls cannot expand against the atmospheric pressure; the diaphragm is pulled down, but the lower part of the sternum and the costal cartilages are pushed in, so that the heart gets comparatively little assistance from the respiratory pump.

In capillary bronchitis and pneumonia where there is little variation in the dimensions of the lungs between expiration and inspiration, the same conditions apply, though to a less extent.

The situation of the heart where the soft cartilages are easily pushed in by the atmospheric pressure prevents the blood-vascular cavity from obtaining much relief. Moreover, the stomach and bowels are frequently so much distended with gas, owing to too much food of an improper quality, that the diaphragm has got very little play, and thus the respiratory pump is still further thrown out of action. However, there is one point in favour of these young children, and even of those of less tender years, suffering from pneumonia: their inspirations may appear short, shallow, and catchy, but there is frequently a considerable pause between the end of inspiration and the commencement of expiration which enormously assists the pulmonic circulation.

In children after the age of 5 years with strong chest walls, and in young adults, the surplus vital capacity, even when a whole lung is involved, is usually sufficient to tide the heart over its difficulties until resolution takes place. In women—and especially in pregnant women—the vital capacity is less and the mortality is greater than in men. With advancing years and rigid chest walls there is a gradual failure in the respiratory pump, and a corresponding increase in the mortality. However, there is a great difference in individuals, and some spare men keep a good pump even up to old age. In very old people, as was pointed out by Sir William Gull, pneumonia is frequently a mode of dying, and they die as comfortably from it as from any other disease. In a case of a stout lady the relatives complained that her groans were most painful, I replied: "Let her groan; it will do her good." I had noticed that she would not take deep breaths on account of accompanying pleuritis, but her groans had a good effect in emptying the chest and this was followed by a corresponding inflation.

The big, plethoric, pot-bellied man succumbs rapidly to an attack of pneumonia. How is this? Such men are not particularly prone to the disease: the pneumococcus has no special predilection for fat; the disease is not more intense than in lean persons, except that the non-conducting layer of fat is apt to maintain a higher internal temperature. The typical John Bull is never ready for a fight of any kind, and although, as Lord Rosebery says, the Englishman generally tumbles on his feet, in this process of tumbling an enormous number go under the sod. These fat, flabby men cannot bear to be hit either under or over the belt, as their wind is easily knocked out, and a moderate attack of pneumonia throws the respiratory pump out of gear. The best treatment for these individuals is prophylactic; you should start months or years before the attack to reduce their "corporations" and strengthen their fat flabby right hearts.

There is another condition where the individual has got a fatty, degenerated right ventricle but a good respiratory pump. I have known many such cases going about their ordinary business for years with an extremely irregular pulse and barely appreciable first sound over the right ventricle. Of course such patients are apt to succumb to any acute illness, but it is sometimes marvellous how their good respiration carries them safely even through a mild attack of pneumonia.

Patients suffering from emphysema are not good subjects for an attack of pneumonia, but the right side of the heart is usually hypertrophied and does not stand in much need of respiratory assistance, so if there be no accompanying bronchitis it may suffice for a pneumonia of one lobe.

In diabetes there is frequently much emaciation of the chest muscles, a feeble respiratory pump and weak heart, conditions which favour a fatal termination.

In advanced kidney disease there is uræmic poisoning, a tendency to pulmonary œdema, indicative of right cardiac failure. Both acute and chronic alcoholism lead to cardiac asthenia, and the frequently associated abdominal distension interferes with the respiratory pump, so such cases are very liable to rapidly succumb from cardiac failure, accompanied by a large *ante-mortem* clot in the right side. The case is quite different with the gouty man; his heart is usually hypertrophied and healthy, and if there be no kidney mischief he stands an attack of pneumonia well.

There are certain cases which seem to fall victims to the intensity of the poison, but the vast majority of the deaths are due to cardiac failure arising from want of proper assistance owing to a defective respiratory pump. Mere carbonic acid poisoning is scarcely ever a cause. In bad cases of emphysema with bronchitis the patient is often more livid for weeks, but so long as the right heart does not fail there is no danger from the mere lividity. It is true that in carbonic acid poisoning there is a general rise of arterial pressure and secondary overloading of the right side of the heart, but in pneumonia this sequence is prevented by the vasomotor paresis. The overloading of the right side which takes place is due to failure of the heart and of the respiratory pump. At the very commencement of an acute pneumonia, with a severe stabbing pain in the side, the patient's face is often extremely purple and congested. This is not due to any obstruction in the lungs, as is shown by the large, full, bounding, relatively high-tension pulse, but arises from the fact that the patient cannot use his respiratory pump owing to the sharp pleuritic pain. These are the cases where the removal of 10 to 20 ounces of blood from the arm affords immediate relief, but, *cui bono?* A good dose of opium or opium and antimony has a similar salutary effect by relieving the pleuritic pain and enabling the patient to put his pump in action. I may here remark, though I shall later deal more fully with the subject, that nothing but good can accrue from a free administration of opium at an early stage of pneumonia.

THE REDUCTION OF HIGH TEMPERATURE.

Jürgensen says: "The danger in croupous pneumonia threatens principally the heart of the patient. Death results from insufficiency of the heart." This is a proposition which meets with almost universal acceptance. He looked upon the continued high temperature which leads to granular degeneration of the heart muscle as the chief cause of the cardiac exhaustion, and hence he taught that "the fever is the first point of attack for treatment." In carrying out this idea he used cold baths freely to control the temperature, which line of treatment was no doubt very successful under his able direction, but it never commended itself to my judgment, probably because it involved another line of action—namely, the free administration of alcohol, of which I do not approve. He says: "In the antipyretic treatment of pneumonia I regard it as a *conditio sine quâ non* that the patient should take light wine in amount suitable to his age and habits: for an adult say from a half to a whole bottle daily. The portion which is not used just before and after the bath may be mixed with water and drunk at pleasure during the day. I have no objection also to a good beer. There is no doubt that alcoholic drinks lower rather than elevate the temperature, and it is more than probable that alcohol acts as a direct preservative of the tissues." This is aptly described by my friend Sir Wm. Gairdner "a battledore and shuttlecock treatment," raising the blood pressure with cold baths and lowering it with alcohol. There is another great objection, in my mind, to the cold baths—they chill the extremities, which in some cases with feeble circulation it is often difficult to keep warm.

However, I am a firm believer in the danger of continued high temperature, and I have adopted many methods to control it. I have tried icebags applied to the affected side as recommended by Dr. Lees; but while they afforded great relief to the pleuritic pain they never seemed to me to efficiently control the internal temperature; but, on the other hand, I thought that occasionally they lowered the vitality of the affected part, and tended towards the development of empyema. I have never used the ice-cradle so strongly recommended by Dr. Fenwick in this disease, because I believe it to be a very unscientific proceeding. However, I have carried out some very careful experiments with it in the reduction of temperature, and I think demonstrated its inutility. As the ice does not come into contact with the patient's body the heat is abstracted by the process of radiation; this succeeds in chilling the surface and in making the patient uncomfortable, but it withdraws very little heat. In fact, Dr. Fenwick himself found that in order to obtain his object the air between the patient and the ice-cradle must be in motion. Now, if you wish to convey heat away from your patient by a current of air, there is no necessity for placing him in an ice chamber. Air is a very bad conductor of heat, and it chiefly removes it from the exposed surface by carrying the latent heat of evaporation, and having the vapour already in the atmosphere further heated by the warm body. A current of moderately warm dry air will abstract much more heat than a cold atmosphere saturated with moisture, and certainly be much more agreeable to the patient.

A large moist poultice, if the patient be lightly clothed and evaporation allowed to take place freely, removes a great amount of latent heat. My object is to cool the patient, not to keep the poultice warm. At a late stage of the disease, when the lung is hepatised, warm poultices are very serviceable, but at an early period I prefer cold sponging, with subsequent evaporation, which has also the advantage of rousing up the nervous system.

Dr. Pye-Smith says:[1]

> The most imminent danger in pneumonia is dyspnœa from extensive consolidation of the lung, overloading of the right side of the heart, and arterial anæmia. We are at present powerless, or nearly so, to limit the spread of hepatisation; all we can do is to help the patient to outlive the stress of the disease.....But in many cases of pneumonia the danger is not directly from suffocation; it is rather from the effects of a continued high temperature upon the heart, the impending weakness of the respiratory muscles, and exhaustion of the reflex activity of the nervous centres.

These are well-expressed truisms, but we cannot rest here; we should try to limit the spread of hepatisation, and if we cannot abort the disease, we should at least try to control the inflammatory process.

PREVENTION OF CARDIAC FAILURE.

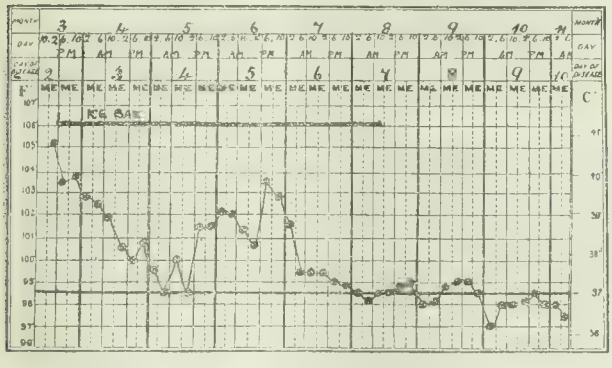
Cardiac failure is the proximate cause of all cases of somatic death; anyhow we would scarcely say the patient was dead until the heart failed to beat. What are the causes of cardiac failure in cases of pneumonia? A certain number of hearts have such degenerate coronary vessels and muscle walls that they fail under the slightest stress, or cease to beat under any marked inhibition. We are never likely to be able to prevent such deaths unless by prophylactic measures. The large

majority of hearts, however, make a desperate struggle for continued existence; the failure takes place from (*a*) granular degeneration of the muscular fibre induced by continued high temperature and by toxæmia; (*b*) low arterial pressure, which prevents proper nutrition of the heart and produces a syncopal condition; (*c*) the interference with the proper action of the respiratory pump from any cause leads to overloading and ultimate failure of the right side of the heart. Our indications for treatment, therefore, are (*a*) to lower the temperature and control the inflammatory process at the earliest possible period before stagnation of the blood and hepatisation have taken place, and thus preserve as far as possible the integrity of the respiratory apparatus; (*b*) to maintain fair systemic blood pressure; and (*c*) to keep the respiratory pump acting by lessening the frequency and increasing the depth of the respirations.

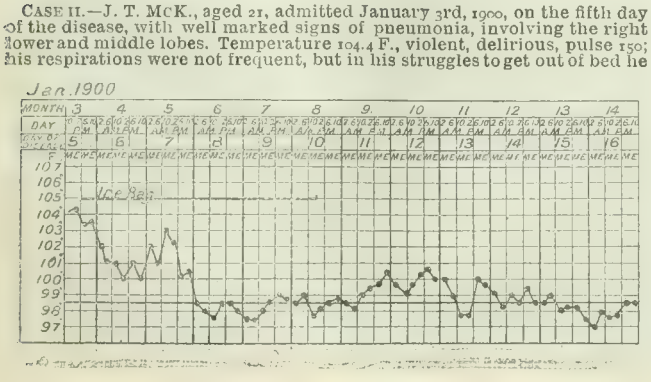
THE ABDOMINAL ICEBAG.

The abdomen affords a large cooling surface, and it occurred to me that one or more icebags sufficient to cover the whole abdomen would lower the temperature, and, from the action of the cold on the splanchnic area, would raise the general arterial pressure, and finally diminish the frequency and increase the depth of the respirations. This was no simple theoretical speculation, because I had times without number observed the above effects from the application of cold to the abdomen in cases of typhoid fever. Moreover, the abdomen is not very sensitive to cold, except the groins, which can be easily protected by a little cotton wool, and so this method of treatment is not particularly uncomfortable to the patient. I had thought this plan well out, and was quite ready to give effect to it when on January 3rd, 1900, my house-physician, Dr. Alderson, telephoned to me that he had admitted two severe cases of pneumonia, both of whom were so violently delirious that they could not be restrained in bed. I saw them immediately.

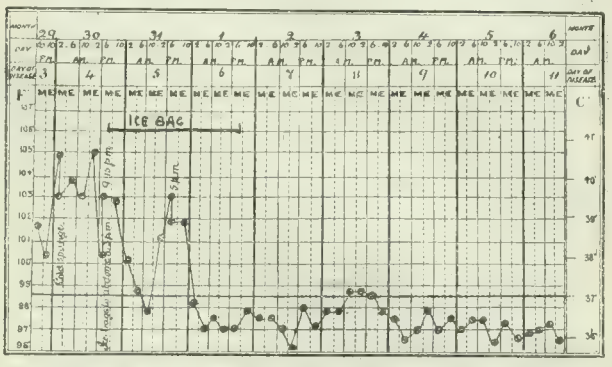
CASE I.—T. W., aged 25, admitted January 3rd, 1900, on the second day of the disease with well marked physical signs of pneumonia involving the whole of the left lung and the base of the right as high as the lower angle of the scapula. Temperature, 105.2° F.; pulse 132, small, feeble, and dicrotic; respirations 50, violent delirium. A very large icebag was applied to the abdomen and kept constantly applied till the seventh day of the disease—perhaps an unnecessary length of time. He made an excellent recovery and was sent quite well to the Woolton Convalescent Home on January 22nd.



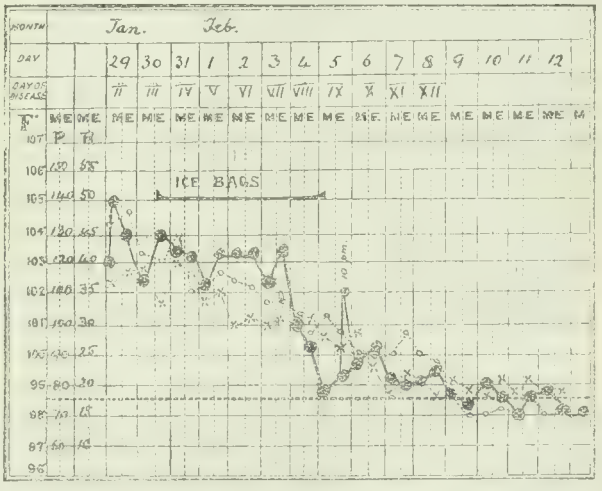
CASE II.—J. T. MCK., aged 21, admitted January 3rd, 1900, on the fifth day of the disease, with well marked signs of pneumonia, involving the right lower and middle lobes. Temperature 104.4 F., violent, delirious, pulse 150; his respirations were not frequent, but in his struggles to get out of bed he held his breath. A large icebag was applied to the abdomen and kept on till January 8th. There was a slight rise of temperature from the eleventh to the fourteenth day of the disease associated with discharge from the left ear. He made an excellent recovery, and was discharged on January 25th.



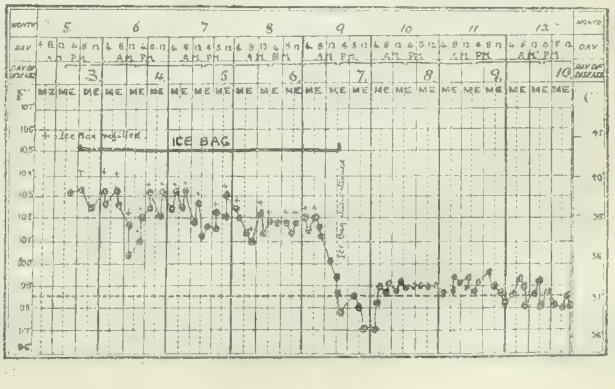
CASE III.—S. H., male, aged 13, admitted January 26th, on the third day of the disease, with pneumonia of the left lower lobe, on the following day his temperature rose to 105° F. A large icebag was applied to his abdomen for forty-eight hours. His temperature rapidly fell to normal and there was a pre-critical rise on the fifth day.



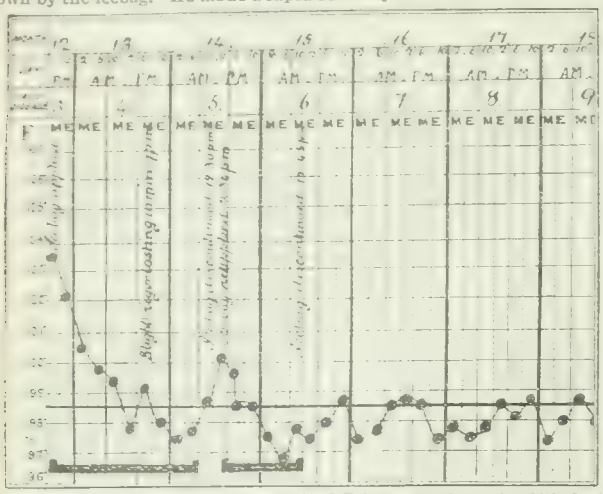
CASE IV.—M. F., female, aged 41, admitted January 29th on the second day of pneumonia involving left lower lobe. The icebags were applied the following day, and continued to the ninth day of the disease; when stopped there was a slight rise. The illustration shows how the pulse and respiration curves followed the fall of temperature. There was also otitis media dextra. She made a good recovery.



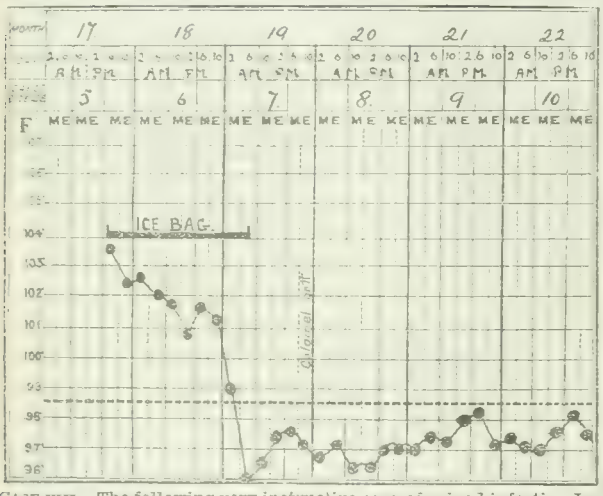
CASE V.—E. B., male, aged 23, admitted February 5th, on the third day of pneumonia involving the whole of the left lung. The icebag was continued to the crisis on the seventh day. There was also double pleurisy. He made a good recovery.



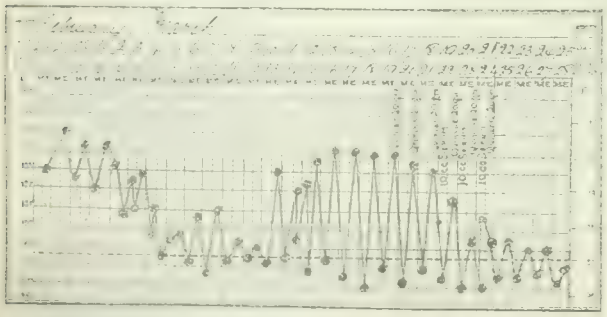
Case VI.—R. G., male, aged 21, admitted February 12th, on the third day of pneumonia of the left lower lobe. The temperature was rapidly brought down by the icebag. He made a rapid recovery.



Case VII.—W. S., male, aged 14, admitted February 17th on the fifth day of pneumonia. Icebag was at once applied and he made a rapid recovery.



Case VIII.—The following very instructive case of mixed infection I saw with Dr. Baines of Birkdale on March 3rd and 16th. On the first occasion I found the patient, a young lady of 18 years of age, in the sixth day of a severe attack of pneumonia of the left lung. On the 16th there was a large dull patch internal to the lower angle of the left scapula. Her breath was very offensive, but the expectoration was very scanty and consisted of a little clear mucus, the rusty tinge having entirely disappeared. We came to the conclusion that an abscess was about to form in the lung. I

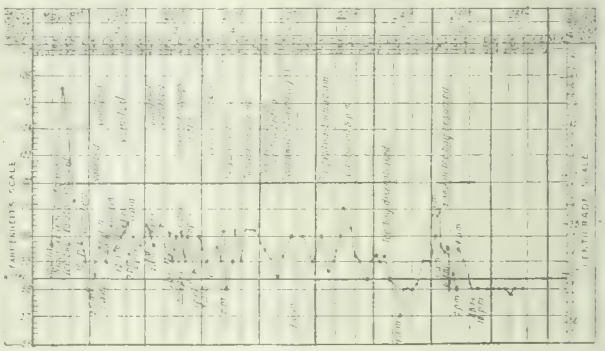


passed a trocar and cannula for three inches into the lung, which felt very friable, but even with the aspirator we could only get a few drops of sanious serum, which I collected in a vaccine tube. We ordered the patient 20 grains of quinine each evening when the temperature had attained its maximum. On examination of the serum I found large numbers of streptococci and a few diplococci. I then sent Dr. Baines three bottles of anti-streptococcus serum, which he used with the best results. The lung cleared up without the formation of an abscess, and the patient is now quite well. The accompanying chart contains a record of the lowest and highest daily temperatures, abstracted from a lengthy one supplied to me by Dr. Baines.

The following very interesting case I saw recently in consultation with Dr. Cregeen:

Captain W., aged 49, a plethoric, corpulent, and fairly muscular man, who has always lived well, and of recent years has taken insufficient exercise. About twelve years ago he suffered from albuminuria, but in any examination which was made during the last few years no albumen was found.

He was taken ill on May 15th, with an attack of appendicitis. I saw him on the 17th, and confirmed the diagnosis. His temperature ranged from 99° to 102° F. There was then nothing whatever the matter with his chest. I gave a fairly favourable prognosis, and did not expect to see him again during this illness. The following day Dr. Cregeen called for me, and told told me that our patient had a violent rigor at noon. He saw him three hours later, and found his temperature 105.4°, pulse 124, and respirations 36; the percussion was impaired, and there were fine crepitant *râles* over the whole lower lobe of the right lung. He had a violent headache, suffused face, and tongue thickly coated with a creamy fur. Dr. Cregeen applied an icebag to his head, another to the abdomen, and ordered others to be procured. I saw the patient with Dr. Cregeen an hour later, and found matters as reported. His abdomen was much distended with flatus, and there was still great tenderness over the cæcum. His breathing was short, shallow, and catchy; his pulse was large, soft, short, and collapsing; his urine contained a cloud of albumen. The percussion was much impaired over the right lower lobe, and the pneumonic signs were unusually pronounced, seeing that only four hours had elapsed since the rigor. We applied three large circular icebags, each 12 inches in diameter, to the abdomen, and continued the ice helmet on the head. He was ordered a chloride of calcium mixture. The question of phlebotomy was mentioned and discarded by myself, as his pulse was very collapsing. It was evident the patient was in for a violent attack of pneumonia, and it was equally plain that the conditions under which it occurred were very unfavour-



able, and he was an extremely bad subject for such a disease. It was, therefore, of paramount importance that the inflammatory process should be controlled at once. Within twelve hours the ice had reduced his temperature to normal, and had made an equally favourable impression on the pulse and respirations. Two large icebags were kept constantly on the abdomen during the rest of the illness, and these maintained the temperature at a low level. The progress of the case is well shown on the temperature chart. On May 20th, there was an extensive herpetic eruption on the lips and nose, which afterwards became very severe and troublesome. His tongue was now moist and almost clean, and the lung was beginning to clear up; in fact it never appeared to reach the stage of red hepatisation. The scanty, rusty mucoid expectoration swarmed with a pure culture of pneumococci. He was troubled a great deal with retching, vomiting, and hiccough; abdominal distension, pain and tenderness in the cæcal region, and other symptoms due to the appendicitis, which considerably protracted the illness. His lung was fairly clear by the fifth day. His diet throughout consisted of milk and barley water. He got no alcohol although he has been long accustomed to a fair daily allowance. The nursing was excellent, and all our instructions were religiously carried out.

It is not often that I see a case of pneumonia at such an early stage, but Dr. Cregeen is a keen diagnostician and a man of action, and I feel absolutely convinced that this patient owes his life to Dr. Cregeen's promptitude. Here we had a severe attack of pneumonia complicating a case of appendicitis in a very stout man. If the pneumonia had got one or two days headway no amount of ice to the abdomen would have had much effect on the temperature through a thick non-conducting layer of fat, or would in any way have controlled the inflammatory process; the disease would have extended, both lungs would have become congested and œdematous, and I feel confident that the patient would not have survived beyond the fourth or the fifth day of the pneumonia.

I am much indebted to Dr. John Hay for the photographs of the charts illustrating the foregoing cases. I might add several other cases, some of which are still under treatment.

I shall no doubt be told that this treatment is all very well for hospitals, but in private practice patients would not submit to it. In my experience patients will submit to anything which promises a reasonable amount of success. Moreover, icebags to the abdomen are not very uncomfortable if you keep them off the groins.

If you wish to apply ice do so early in the disease or not at all; there is no use in attempting to arrest an inflammation which has reached its height. If the lung be in a stage of grey hepatisation you should rather encourage resolution by warm poultices, which at this stage have a much better cooling effect than ice. I would also caution you against the use of ice in feeble old people and in those with degenerate hearts which cannot cope with much peripheral resistance. In very corpulent individuals the thick layer of non-conducting fat prevents the abstraction of much heat from the abdomen by ice. In such cases large moist poultices answer better.

General Considerations on Treatment.

When you enter into practice if a patient can be properly treated at home keep him there, but if not send him to a hospital at the earliest possible period, and do not allow him to be bundled off when the mere removal is sufficient to turn the scale against him. Successful treatment largely depends on early recognition of the disease, and in this respect the general practitioner has many advantages over the consultant; while in hospital cases the fate of the patient is often sealed before he arrives. We will now suppose that we are dealing with a case from its commencement. When you meet with a case of high fever of sudden onset without any definite localising symptoms, do not imagine that you have got a legitimate point of attack and begin to knock down the temperature by such drugs as antipyrin or phenacetin or by saturating the patient with sodium salicylate. You may in this way, for the time being, lower the temperature and make the patient quiet, but you thus mask the symptoms, put yourself in a fool's paradise, prevent the early recognition of the disease, and in no way modify its course, but perhaps do irreparable mischief to the patient.

The patient should be put to bed if he be not already there, and during the rigor and early premonitory symptoms he should be moderately warmly clothed. In a large number of cases the sharp stabbing pain in the side, the quick shallow breathing and high fever make the early recognition comparatively easy; but even apart from these pronounced symptoms I am of opinion that the vast majority of cases can be readily recognised by a diligent observer within the first twenty-four hours of the onset. Very careful physical examination should detect a very moderate degree of lung engorgement, and thus you can early localise the mischief. Now is the time to act, and I have no doubt that prompt treatment will often cut short an attack or lessen its severity. Now is the time for the application of the icebags to the abdomen, and a mustard poultice applied to the affected side for twenty to thirty minutes often does good, especially if there be any accompanying bronchitis. The nerve supply to the lungs is derived from the first six dorsal segments; if, therefore, you apply a mustard poultice to the cutaneous nerves of the upper part of the thorax on the affected side as low down as about the level of the eighth dorsal spine, you produce a reflex action on the nerves supplying the lung, and thus increase vasomotor tone. To be of any value this must be done at the very earliest stage; there is no use stimulating the nerves when the lung is solid and the mischief done. At this stage, however, good is often done if applied to other portions of the same lung or the opposite lung by lessening the collateral œdema which not infrequently occurs. A few leeches applied to a painful spot on the side acts in a similar way; there is a depletion of the whole of the vasomotor tract supplied by that segment of the spinal cord.

Venesection.

This leads me up to the question of general blood-letting, which was so universally practiced at the end of last century and the beginning of the present. I have no doubt that a moderate bleeding at a very early stage would do good in a sthenic case with a full bounding pulse and laboured respiration. It should never be adopted after the first forty-eight hours, and never at any time if the pulse be small, feeble, and compressible. Pneumonia in the female is often relieved by a commencing menstruation, and an epistaxis is occasionally beneficial. A profuse bleeding from the arm may apparently relieve the patient's distress, but it masks the symptoms, does not shorten the length of the disease, but, on the other hand, often weakens the patient and protracts his illness. Dr. Albert Robin has recommended small bleedings with the view of increasing metabolism, but his reasoning is faulty and possibly also his observations. He thus thinks that in the advanced stages you may relieve the right side of the heart and lessen pulmonary œdema. Now the most œdematous lungs I have ever seen were in a strong healthy man, who was stabbed and died in less than half an hour from hæmorrhage. Again, you cannot siphon the blood back from the right side of the heart to the arm, and all such bleeding is in reality depletion of the arterial tree. You cannot relieve the right side of the heart by emptying an unfilled arterial system when the blood cannot get through the lungs.

Antimony and Opium.

I have a very favourable opinion of antimony for moderating the violence of the inflammation. It should rarely be continued beyond the third day, and of course in asthenic cases had better be altogether avoided. I seldom give more than 10 minims of antimonial wine every four hours to an adult. It may be combined with liquor ammoniæ acetatis and one of the potash salts. If there be much restlessness small doses of opium should be added.

It is most important that the patient should have a fair amount of sleep from the very commencement; there is nothing lessens the patient's chance of recovery so much as the exhaustion of the nervous system from want of sleep. There is no objection to opium in the early stage, and two or three 10-gr. doses of Dover's powder during the night often answer admirably. In alcoholic subjects a combination of opium and antimony answers well. Recently Professor Waymouth Reid and Dr. MacDonald have shown that morphine lessens the nerve impulse travelling along the phrenic nerve; when, therefore, the lung is engorged and the right side of the heart handicapped, I would avoid all preparations of opium. At this stage I prefer chloral hydrate, but if this failed to induce sleep morphine, combined with strychnine, could be used. If sleep had been obtained in the early stages it is not difficult to induce it in the later. Sleep is absolutely necessary for the patient, and the sooner it is procured the better. A quiet restful sleep tends to lower the temperature, and on the other hand a high temperature is very inimical to sleep.

Ventilation.

If the patient have a comfortable night he will not require much sleep during the day. I do not believe in converting the bedroom into a dark chamber, which makes it difficult for the patient to distinguish day from night, and is apt to give him the impression that he is already cast into outer darkness. So long as a strong light or radiant heat from a fire is not playing on the patient, the more bright and cheerful the room the better. The room should be one of the best in the house, and if possible should contain at least 1,000 cubic feet for each occupant, and the whole air of the room should be changed three times every hour. Often we find the patient, a nurse, and one or more friends in a small room of about 1,000 cubic feet from which all fresh air is religiously excluded. How can a patient be expected to withstand such slow suffocation for a week? The physician may, perhaps, order 20 cubic feet of oxygen, which is equivalent to about 100 cubic feet of air, and may thus console himself that he is aërating the patient's blood. The air contains as much oxygen as the patient's blood can take up, and we have not merely to supply oxygen but to get rid of carbonic acid, which is best effected by an abundant supply of fresh air. Of what value are 20 to 60 cubic feet of oxygen compared with 72,000 cubic feet of air. I am pleased to think that the craze for cylinders of oxygen is dying out. There is no difficulty whatever in freely ventilating a room. Feverish patients do not catch cold, so that bugbear may be set to one side. Of course I would not recommend a draught of cold air to be played on

the patient, lest it should develop a catarrhal condition or set up rheumatic pains. Night and day a stream of pure air should be admitted without creating draughts. The temperature of the room should be maintained about 65° F. The ordinary atmosphere at this temperature is not saturated with moisture, and is therefore capable of holding the patient's exhalations, and there is not much risk of him drowning in his own excretions. I have never found the atmosphere in this climate so dry as to require any additional moisture.

Whatever means be adopted in dealing with the temperature of the patient it should be kept within moderate bounds, as high temperature leads to granular degeneration of the heart muscle, sleeplessness, delirium, and nervous exhaustion. It is often sufficient to keep the patient very lightly clothed, and thus allow free escape for the evaporation of the sweat, which thus carries off a large amount of latent heat. All eiderdowns, cotton wool, waterproofs, and every impervious covering should be avoided. If this be insufficient, cold sponging or the icebag should be adopted.

I occasionally use a warm poultice at a late stage to hasten resolution. If during convalescence the lung resolution be slow a revulsive agent, such as a mustard or fly blister, may be required. In my wards you have frequent opportunities of observing the great advantages which accrue from well-directed respiratory gymnastics.

Adjuvant Drugs.

If the illness begin with nausea or vomiting it is well to wash out the stomach with a few tumblerfuls of hot water; the bowels should be cleared with a brisk calomel purge. In sthenic cases I have referred to the value of antimony, but such cases are the exception rather than the rule. In no case should an acid mixture be given at the commencement. Quinine as an antipyretic agent has been very much overrated, but in hectic temperatures due to mixed infection it is a valuable agent in large doses, and during convalescence it is a good tonic in small doses. When the pulse is feeble and expectoration difficult, a mixture of carbonate of ammonia, citrate or nitrate of potassium, and citrate of caffeine answers admirably. If the pulse tension be very low, the expectoration liquid and profuse or prune-juice in character, a mixture of calcium chloride and perchloride of iron is suitable. If there be a tendency to cardiac failure, the best remedies are strychnine, caffeine, and digitalis. The latter drug has been vaunted as a specific in pneumonia, but I have never found it such, and very rarely prescribe it during the acute stage of the disease. I believe Maragliano has found that digitalin inhibits the growth of a culture of pneumococci, but it would require a good deal of credulity to imagine that any doses administered by the mouth or hypodermically could have any effect on a culture in a hepatised lung. An antidote for the pneumotoxin would be much more valuable than any of the antiseptics. If there be any danger of collapse with profuse perspiration, atropine should be administered.

If the lung pass into the stage of grey hepatisation, with purulent infiltration and profuse expectoration, there is no remedy like terebene or some other of the turpentine series. I have also found it invaluable in cases of abscess and gangrene of the lung. During convalescence tonics are required. The teeth, tongue, mouth, and even nose should be kept clean throughout the illness by some antiseptic.

I have at present under my care in one of the private wards of the infirmary a very distinguished physician who was admitted on February 17th, in an apparently hopeless state, on his return from a visit to America. He was then in the sixth day of an attack of pneumonia which had commenced with a rigor and severe stabbing pain in the right side. I made as minute an examination as his condition would permit, and diagnosed a large thrombus in the right auricle and ventricle, which apparently did not reach the pulmonary artery. His pulse was about 150, small, weak, and very irregular both in force and rhythm. He was jaundiced, the liver was large and pulsating, and there was also pulsation in the veins of the neck. The right auricle was very much distended, pushed the middle lobe of the lung towards the side, and the cardiac dulness extended over 3 inches to the right of the mesial line. His respirations were 48, but the amount of lung mischief seemed comparatively slight; there was an extensive herpetic eruption about the nose and mouth. I gave a very unfavourable prognosis; I ordered him 2½ minims of liquor ammoniæ fort. and 5 minims of spiritus chloroformi every hour, any omissions during sleep to be afterwards made up. This was continued for several days, and afterwards given at greater intervals. As is my wont, I did not order him any alcohol, but in dealing with a physician who might have his own views on the subject, I thought it well to put myself right with him, so on the second day I said that I did not know what his views on the alcoholic question were, but in my opinion at that stage of his illness any form of alcohol would be positively injurious. He replied that he was quite content to leave himself in my hands. On the third night after this, when the clot was breaking up and giving rise to secondary fever, he was particularly miserable, and he told me that he was always accustomed to a little stimulant at night, but he did not wish to influence my judgment in the matter other than simply to state a fact. I was still obdurate, and told him that I would rather not give what I believed would do harm.

The pneumonia seems to have started in the centre of the right upper lobe, and was not very extensive, but when the cardiac thrombus was breaking up we had for ten days or more extensive crepitant *râles* over the posterior surface of both lungs, without any dull percussion. These *râles* were no doubt due to capillary emboli; as originally ascribed by the late Sir B. W. Richardson,[2] who first introduced the ammonia treatment for fibrinous clots. To obtain sleep and relieve flatulent distension of the stomach our patient had each night two powders containing 10 grs. of Dover's powder and 10 grs. of salicylic acid in each powder. On two occasions the liquor ammoniæ fort. had to be discontinued on account of troublesome hiccough: this was quickly relieved by 10 minims of tincture of iodine, 1 drachm of glycerine, and 1 ounce of water every four hours. Another objection to the long-continued use of the strong solution of ammonia is the fact that it parches the mouth, tongue, and throat. In such cases as this I have occasionally tried the inhalation of ammoniated chloroform, also introduced by Sir B. W. Richardson, but it is also very irritating and somewhat difficult to administer.

Our patient is now convalescent except for a large herpetic ulcer on the right cornea, which I hope will get quite well under the care of Mr. Bickerton. His lungs have cleared up, his cardiac dulness is normal, and there is now no incompetence of the tricuspid valve; the enlargement and pulsation of the liver and jaundice have disappeared, and his urine, which was albuminous, is now quite healthy. His respirations 18 to 20; pulse 70 to 80, regular, good volume, and fair tension. For about ten days during the resolution of the thrombus his temperature ranged from 99° to 101°, and it still occasionally runs up to about 100° in the evening. However, he is now out of all danger; he is getting a tonic, and I hope enjoying the champagne which I have ordered with his luncheon and dinner. My colleague Dr. Caton saw the patient regularly with me, and is entitled to his full share of credit for the management and success of the case.

Stimulants.

The feverish blood is sufficient stimulus for the heart without alcohol, which is best reserved for convalescence. Alcohol does not increase the power of the cardiac muscle, but merely lessens the peripheral resistance by producing vasomotor paresis, an effect which cannot often be required, as the systemic blood pressure is usually too low without any assistance from alcohol. There are, however, certain cases when a small amount does good, such as cases where the pulse is small and irregular, and the vessels rather rigid. If cold applications produce too great an effect on the circulation, this can be counteracted by a little warm stimulant. If there be any pain in the abdomen, or other reflex disturbance or flatulent distension of the stomach, a little brandy does good. However, for the latter purpose there are many better antiseptics such as salicylic acid and Dover's powder, tincture of iodine and glycerine, etc. If it be thought advisable to give alcoholic subjects a stimulant, I think as a rule the best is a good light draught beer or stout, containing about 4 per cent. of alcohol. With this agent there is not much danger of over-stimulating. To see occasionally a drunken man struggling for existence is a painful thing. During convalescence, when the stimulus of

the heated blood has been removed, the blood vessels have contracted, the blood pressure has risen, and the enfeebled heart is scarcely able to meet the increased peripheral resistance; then alcohol does much good, and at this stage I prefer a good port wine or sound Burgundy.

Pneumonia complicated with delirium tremens is a very fatal malady. Unfortunately we see a good many such cases in Liverpool, but I think the alcoholic portion of the affection is usually left out of the death certificate. This practice is likely to continue so long as the certificates are given to the friends, and coroners are so foolish as to insist on inquests in all such cases. Moreover, it is often difficult to draw a distinction between the delirium of pneumonia and alcoholic delirium complicating pneumonia; and acute or late delirium, by which appellations the complication is known nowadays, is more euphonious than delirium tremens to the public ear. These cases are marked by active, often violent, delirium, delusions of sight and hearing, great tremor, instability of the nervous system, and the knee-jerks are generally absent. In such cases it is essential to keep the nervous system quiet and obtain sleep, but this is often a most difficult problem to solve, especially when the delirium tremens arises late in the pneumonic attack. There must be no mechanical restraint or any struggling with the patient, as thus fatal syncope is readily induced. Sir Douglas Powell's prescription of a large dose of alcohol followed by a hypodermic injection of morphine and atropine is very good. Personally I am in the habit of allowing about two pints of beer or stout in the twenty-four hours as a sedative. If necessary the occasional administration of chloroform to keep the patient quiet, and for a hypnotic I am largely influenced by the condition of the circulation. If the pulse be small but moderately firm, and the skin dry and not very moist, I order opium and antimony; if the arteries are lax and rather empty, with embarrassed respiration and very moist skin, I prefer a hypodermic of morphine and atropine, or morphine and strychnine. The temperature should be reduced by cold sponging or icebags to the abdomen.

FOOD.

Food should be liquid, light, and nutritious, such as peptonised bread and milk, broths, raw eggs, jellies, cocoa or coffee, and a few biscuits. It is a great mistake to worry the patient with much food during the first three days of the illness. If a gentle stimulant be thought desirable a little white wine whey is suitable. Scarcely any anabolic processes are going on during the febrile stage, so there is little use in troubling the patient with large quantities of nitrogenous food, which are not required and only apt to form poisonous ptomaines. Carbohydrates, and to a less extent fats, are necessary, and have not the objections which apply to proteids. There is a great tendency in the present day to overfeed, and the flatulent distension thus induced works mischief with the respiratory pump. The patient should be allowed as much cold water as he likes to drink.

REFERENCES.

[1] Clifford Allbutt's *System of Medicine*. [2] Some Practical Notes on the Diagnosis and on the Ammonia Treatment of Fibrinous Obstructions in the Vascular System; a clinical review of thirty-six years of observation. The *Asclepiad*, 1886.

MEDICAL USES OF THE *X* RAYS.—The editorial staff of the *Fortschritte auf dem Gebiet der Röntgenstrahlen*, published at Hamburg, have established an office in that city for the supply of information relating to the practical use of the *x* rays. Questions of a medical, physical, or technical character will be answered, and such as are of general interest will be published in the periodical above named. All questions should be addressed to Dr. Albers-Schönberg, Esplanade 38, Hamburg.

THE FIRST LADY DOCTOR IN SWEDEN.—On May 25th the degree of doctor of medicine was conferred by the Carolina Institute of Stockholm on Fraulein Anna Stecksen. This is said to be the first time that a woman has been admitted to the degree in Sweden. The subject of the lady's dissertation was Studies of Curtis's Blastomycete from the Point of View of the Etiology of Tumours. Fraulein Stecksen pursued her studies partly in the Pasteur Institute of Paris under Dr. Roux, and partly in the bacterioiogical laboratory of the Carolina Institute at Stockholm.

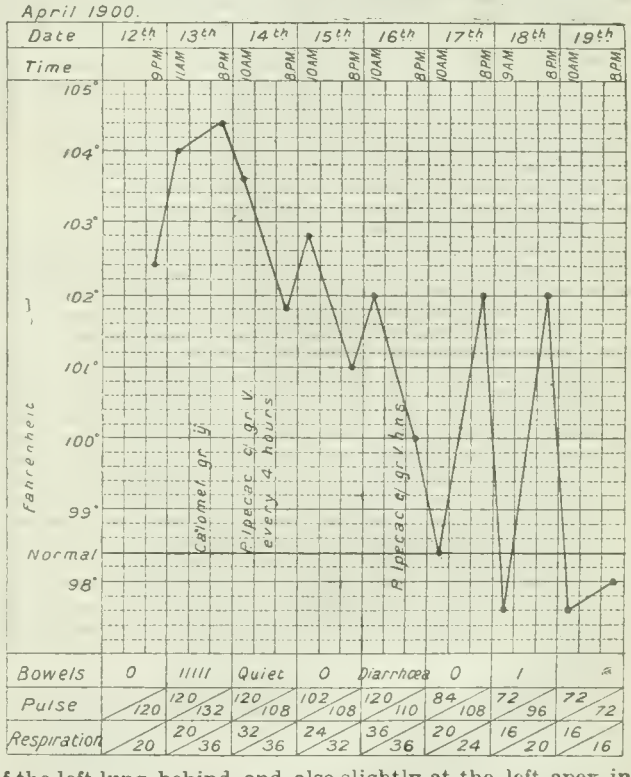
MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

THE TREATMENT OF PNEUMONIA.

IN reference to the memorandum by Lieutenant-Colonel Latchford in the BRITISH MEDICAL JOURNAL of May 5th, I think the following notes of a case of pneumonia in a lad, aged 13, may prove of interest:

I saw him for the first time on the evening of April 12th, 1900. He then complained of pain in the left side, more in the abdomen than in the thorax. He was stated to be a very delicate boy, and to have taken cold at a railway station when returning from school. He was very deaf, and had been so for two or three days. The only physical signs were some roughness of the respiratory murmur of the left base behind. I ordered a simple saline mixture of liq. amm. acet., spirit ether nit., and aq. camph. every four hours. On April 13th no further physical signs could be made out. The pain was somewhat easier. As the bowels were constipated 2 grs. of calomel were given, which acted very freely. On April 14th tubular breathing was heard in patches principally at the base



of the left lung behind, and also slightly at the left apex in front. He was sleepless and delirious. I ordered 5 grs. of Dover's powder every four hours. The result of this was magical. The delirium was quieted, the skin acted freely, and the general aspect immensely improved. As in the evening he appeared to be well under the influence of the opium, 2½ grs. of Dover's powder were ordered every four hours if awake, and this dose was continued till the evening of April 16th, when, as he had severe earache, 5 grs. were given at bedtime. The next morning, the temperature having fallen to normal and the patient being much better and free from pain, the Dover's powder was discontinued.

The sharp evening rise of temperature on this and the following day I cannot account for unless it was due to the ear trouble, but though the greater part of the affected lung had cleared by this time, there were still some patches where tubular breathing could be heard at the back, and from April,

19th it cleared rather slowly, though the temperature never rose and the patient was evidently better. There was some slight pleuritic effusion, but by April 28th everything had quite cleared up. On May 1st I syringed his ears and got out a pledget of cotton-wool which had become impacted in the right ear. When the temperature was subnormal quinine gr. j was given three times a day.

On May 3rd he went to the seaside. He had no alcohol during the acute stage, and only after the temperature fell a little port wine was given to stimulate the appetite. It will be noticed that after the Dover's powder was commenced the temperature never rose above 103°, whereas it was 104° the previous day. There was never any necessity for the administration of oxygen or strychnine.

I attributed the good results obtained in this case almost entirely to the Dover's powder.

A. de Winter Baker, L.R.C.P.Lond.,
Battersea Park, S.W. M.R.C.S.Eng.

AN EASY METHOD OF MOUNTING AND PRESERVING MOSQUITOS.

I am frequently asked by medical men interested in the mosquito question what is the easiest way to mount them; they usually explain that they are not expert at pinning out insects, and they rightly add that unless this is done properly there is little chance of the mosquitos arriving home in good condition.

The method we have been employing in the laboratory of the London School of Tropical Medicine is so simple and works so admirably that it seems worth while to bring it to the notice of those interested in this subject. All that is required are slides, round cover glasses, glass rings about one-sixteenth to one-twelfth of an inch deep, and seven-eighths of an inch in diameter, and xylol canada balsam. Kill the mosquito by placing in an ordinary killing bottle, or if this is not available a little chloroform or tobacco smoke will do as well; when dead turn it over on its back, separate the legs if they are together, place a large drop of thick xylol canada balsam on a slide, invert this gently on to the mosquito, and in this way it is picked up without any chance of injury; then with a fine needle spread out and arrange the wings and legs, and if necessary press down the thorax very carefully. Next pour on some thin xylol canada balsam; as this runs out it straightens the proboscis and antennæ, and they do not, as a rule, require to be touched. Put the specimen on one side to harden, and then chip off excess of canada balsam, place the glass ring on, and fill up the chamber that is thus formed with canada balsam. The upper surface of the canada balsam should be convex, so that when the coverglass is applied no air bubbles are included. Allow the specimen to harden before sending by post. If the glass rings are not at hand the specimen will keep quite well in the canada balsam alone, and the last part of the mounting may be completed after the specimen has been sent home. If the mosquito is intended for photographing great care must be taken in mounting it so that it lies as far as possible in one plane.

I would like to add that it is due to Dr. G. D. Freer, Colonial Surgeon, Penang, that I was induced to mount our specimens in this way. Dr. Freer recently sent to the school a collection of mosquitos caught in the Penang Hospital, and mounted them on slides with canada balsam, and they arrived in perfectly good condition, and the mounting has been completed.

D. C. Rees,
Superintendent and Medical Tutor, London School of Tropical Medicine.

A NEGLECTED POINT IN THE TREATMENT OF STRANGULATED HERNIA.

Given an advanced case of strangulated hernia, with intestines distended by foul liquid contents, and a small, rapid pulse, what treatment gives the patient the best chance? In the first place a local instead of a general anæsthetic should be employed, and hot saline solution with brandy or strychnine injected intravenously. The operator, as a rule, concerns himself chiefly with the condition of the strangulated bowel, which, if gangrenous, is either drained or resected, and if viable is pushed back into the abdomen. In the latter case the patient probably remains absolutely constipated, continues vomiting, and dies within forty-eight hours.

In these advanced cases the patient is suffering not so much from the nipping of a few inches of intestine as from an accumulation above the obstruction of liquid filth which is rapidly poisoning him. The point which is so frequently overlooked is that his chance lies in the direct evacuation of these intestinal contents. This can only be done by draining the distended bowel through a large tube for several days. A few cases of advanced strangulated hernia recover after reduction of strangulated bowel, by discharging enormous quantities of liquid fæces *per anum*, but the majority die with unemptied intestines. Drainage of distended bowel is simply the application to strangulated hernia of the principles involved in the treatment of obstruction taking place within the abdomen. To return a coil of intestine to an abdomen already crowded with distended bowel in various stages of paralysis, and with partial kinks occurring every few inches, and to expect intestines in such a state to empty themselves *per rectum* is unreasonable. It is quite difficult enough to get such intestines to drain directly through a large tube, without giving them the extra task of propelling large quantities of fluid for several yards past a succession of kinks.

C. Hamilton Whiteford, M.R.C.S., L.R.C.P.,
Plymouth.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

MILL ROAD INFIRMARY, LIVERPOOL.

CÆSAREAN SECTION AND EMBRYOTOMY IN THE SAME PATIENT: EXTENSIVE SURGICAL EMPHYSEMA: RECOVERY.

(By Nathan Raw, M.D., B.S., F.R.C.S.Edin., Medical Superintendent of the Infirmary; Consulting Physician of the Walton Workhouse, Liverpool.)

E. T., aged 27, a single woman, was admitted into the infirmary on February 15th, 1900, as an urgent case of labour. She had been a patient in Walton Workhouse for some weeks, and her labour had commenced twenty hours before admission here. The medical officer of the workhouse, finding it impossible to deliver naturally, transferred her for operation.

History.—Three years ago she was attended in her first confinement at home. After being in labour for three days the medical men in attendance were compelled to perform embryotomy on account of the contracted pelvis. Her recovery was slow, and she was then advised to avoid a future pregnancy if possible.

Condition on Admission.—The most noticeable feature about the patient was the extensive surgical emphysema, which almost obliterated her features; the eyes were nearly closed and the general outlines of the face distorted. The neck, chest, and face crackled everywhere on pressure, and she was unable to turn or move her head without great pain. She stated that after severe straining whilst in labour twelve hours before she felt something "give way" in her neck, and the swelling rapidly ensued. The emphysema extended down to the eighth rib on either side, and careful examination revealed no wound. She was worn out and exhausted, perspired freely; the pulse was 110, soft and regular, but the breathing was laboured and spasmodic owing to the emphysema. There had been no labour pains for four hours, and the membranes had been ruptured for sixteen hours. On vaginal examination the os was found to be fully dilated and lacerated. The presentation was a vertex, with a considerable depression of the right parietal bone, due probably to the continued pressure against the sacrum. No fœtal heart or movements could be felt, so that it was probable that the child was dead. On careful measurement the greatest conjugate diameter was found to be 2⅛ inches, so that embryotomy was out of the question, or at least was not advisable. The patient was short, but well developed, and very rickety with spinal angular curvature.

Operation.—She readily consented to operation, and I decided on Cæsarean section, especially as I had every possible assistance and a well-equipped operation theatre at hand. At 8.30 P.M., ether having been given, and the usual preparations made, I opened the abdomen by a long incision commencing 2 inches above the umbilicus and ending 2 inches above the pubes. After opening the peritoneum, every bleeding point was stopped, and then the large uterus was carefully steadied, whilst it was opened in the middle line for 6 inches in the middle and lower segments. The walls were found to be over ½ inch thick in places and bled freely, but this was easily controlled by digital pressure applied longitudinally to the incision. The membranes were quickly opened, and the child seized by a knee and rapidly extracted and handed to an assistant, who, after attempting resuscitation, pronounced it to be dead. The placenta was next seized from the posterior wall and forcibly dragged off; there was hardly any bleeding. The child was a very large one and weighed 10 lbs. The uterus refused to contract until it was severely handled and manipulated, and then only to a moderate extent. The uterus was now drawn quite out of the wound, and the abdominal cavity packed round it with gauze. Twenty deep silk sutures were introduced through the uterine wall to within ⅛ inch of its internal surface; these, after being accurately tied, were completely buried by a second layer of twenty-four sutures embracing only the peritoneal layer of the uterus. The surrounding parts being carefully cleansed, the uterus was dropped back into the abdomen, still only partially contracted, and the abdominal wall united with silkworm-gut sutures with no drainage. A strip of iodoform gauze was introduced into the uterus through the vagina for drainage, and the patient returned to bed, the whole operation only lasting 35 minutes.

After-History.—She had a little pain during the night, which was relieved by ¼ gr. of morphine, but otherwise she bore the operation well. There was the usual discharge from the uterus for a few days, the vagina being douched with 1-4,000 perchloride of mercury twice a day. The wound healed by first intention, and the sutures were removed in 10 days. The surgical emphysema was slowly absorbed and entirely passed away in three weeks, and the patient left the hospital in apparently good health.

REMARKS.—The points of great interest in this case are the occurrence of embryotomy and Cæsarean section in the same woman, and the presence of surgical emphysema during labour, which is an exceedingly rare complication; in fact, very few cases of this condition are on record.

THE LANGMAN HOSPITAL, SOUTH AFRICAN FIELD FORCE.

PERFORATING WOUND OF ABDOMEN: GANGRENE OF OMENTUM: RECOVERY.

(By CHARLES GIBBS, F.R.C.S., Senior Surgeon to the Hospital; Assistant Surgeon to Charing Cross Hospital.)

PRIVATE R., of K.O.S.B., was wounded at Karee on March 29th. He was lying down on his left side, and was probably shot at a range of 500 yards. The wound of entrance was a small punctured hole about 8 inches from the spine, in the left ilio-costal space at the level of the umbilicus; the wound of exit was about ½ inch to the left of the second lumbar spine, the track of the bullet being more or less horizontal.

A few days after the action the anterior wound was opened and some ounces of fœtid pus were evacuated; the posterior wound healed under a scab.

On April 12th the patient was admitted into the Langman Hospital; his general condition was good; he was on full diet and was defæcating regularly every day, and had done so since the engagement. On being dressed, the anterior wound contained a drainage tube about 6 inches long, passing horizontally across the abdomen in the direction of the umbilicus; though this tube was discharging very fœtid pus, the odour was not fæculent nor did it contain fæces; it was ordinary sour, thin, greenish-yellow pus, the odour reminding one of gangrene more than of fæces.

Next day the man was obviously not doing well, and the pus was not draining along this enormous tube; the tube was bent slightly by the sinus passing under the margin of the costal cartilages. The abdominal wound was slightly enlarged, and a forefinger introduced into the wound; the omentum could be felt, and on removing the finger the stench of gangrene was very bad; a pair of forceps was then passed into the wound, and the omentum very gently and very "easily" drawn up into the wound. This was so easily accomplished that a little traction seemed justifiable, when a large mass about 4 inches long, and as big as one's forefinger, slipped out of the wound; this mass of omentum was quite gangrenous, and weighed 2 ounces. After this piece had been removed, about 8 ounces of fœtid pus gushed out of the wound; there was no smell of fæces at all. On placing one's finger into the wound one could feel a large cavity reaching beyond the umbilicus, and bounded by adherent small intestine; a large short drainage tube was inserted; the cavity healed very rapidly.

From the position of the wound the descending colon must have been pierced in two places; it is remarkable that, being pierced, and the wound (anterior) becoming septic, the wound did not become fæcal afterwards. It is probable that the piece of omentum was damaged or cut off by the bullet in the first instance, as it was lying free in the wound. Another point of interest is that there was no melæna, and that the man's bowels acted a few days after the accident, and were regular after the first evacuation; probably the colon was perforated when it was empty (soon after breakfast), and, the coats being thick and very elastic, closed the hole naturally, until it was permanently blocked by a mass of lymph on the outer side, and the swelling of the mucosa on the inner side.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

F. W. PAVY, M.D., F.R.C.P., F.R.S., President, in the Chair.

Tuesday, June 12th, 1900.

A SPECIAL general meeting was held before the ordinary meeting. Various proposed alterations in the by-laws were explained. These were that the proceedings should not be published, but that all papers should appear in the *Transactions*. That all restrictions in regard to the publication of papers communicated to the Society in the medical and scientific journals should be abolished, and that the reports of the discussions on the papers communicated should find a place in the *Transactions* of the Society. Power was to be given to the Council to withhold the publication in the *Transactions* of any paper that, from any cause appearing after its being read, should be considered unsuitable.

ON SOME OF THE MEDICAL AND SURGICAL COMPLICATIONS OF PYORRHŒA ALVEOLARIS.

Mr. RICKMAN GODLEE read this paper. He began with a brief description of the disease, colloquially spoken of as spongy gums, and proceeded to state that, though not usually the source of serious trouble, it might give rise to symptoms that simulated those of more grave disorders. Of these three examples were given from the author's own experience, and one from that of Dr. Sidney Martin. They were as follows: (1) A copious offensive red expectoration occurred in a patient who had been the subject of pleurisy and some renal trouble. A few physical signs were present on the right side of the chest, giving rise to the suspicion of a basic cavity; the symptoms disappeared on the effectual treatment of the gums; (2) was a case of a very similar nature; (3) a patient who presented the disease in a very advanced condition was attacked by acute glossitis and stomatitis, with diarrhœa, which were apparently caused by the state of the gums; (4) Dr. Martin's case was one in which the symptoms of cancer of the stomach were apparently conclusive, but disappeared on the treatment of the gums. In the course of the paper the question of treatment was briefly discussed. It consisted in carefully removing all the tartar and then syringing the pockets methodically for some time with hydrogen peroxide or some other antiseptic or astringent substance.

Mr. DONELLAN referred to 2 cases. In one a gouty man, aged 64, the symptoms were only kept in check by a careful toilet of the gums every morning. In another a young man had en-

largement of the cervical glands when the condition was neglected and aggravated.

Dr. G. Herman alluded to a case in which the condition was noticed during an operation for pyosalpinx. The temperature, which was attributed to the disease, fell after the use of a sanitas mouth wash.

Mr. W. G. Spencer asked for a clearer notion as to the degree of sponginess of the gums with tartar and pockets which constituted the disease in question. The condition, especially in females, was often confounded with chronic pharyngitis. He suggested that the daily dressing of the teeth should be insisted on, and the question of extraction of particular teeth should be carefully considered as being a dangerous source of septic infection, especially in the absence of daily dressing.

Dr. T. D. Savill thought the condition gave rise in some cases to functional nerve complaints. He described a case of hysteria which made rapid improvement after this condition was treated. Also that of a medical man with mental symptoms, and the pyorrhœa not being treated the case ended in *felo de se*. A third case of trifacial neuralgia with pyorrhœa alveolaris improved greatly after the latter was treated.

Mr. Tomes thought that in an average case of pyorrhœa alveolaris there was no expectoration. There was usually at night the escape of bloody fluid staining the pillow. A case was considered one of pyorrhœa alveolaris if pus appeared on pressure on the gum. Germicides used as described in the paper would usually ameliorate the condition, but a permanent cure was very difficult. Dr. Riggs's treatment of scraping away the margin of the bone was very tedious and painful and gave merely temporary relief. The disease occurred in animals kept in confinement and in stall-fed animals. Numerous bacteria had been distinguished in the pus, mostly streptococci and staphylococci. If the tooth were extracted, the socket very rarely went wrong in the way of osteitis.

Dr. Wm. Ewart said that the consequences of the disease were far-reaching—in the way of dental toxins producing functional ailments. He drew attention to some serious results of the disease as related to the fluctuations in the fœtor of bronchiectatic conditions, and especially as a cause of malignant endocarditis, a source frequently overlooked. He alluded to three cases in which pyorrhœa alveolaris, or at any rate the associated dental caries, was the almost certain source of ulcerative endocarditis.

Mr. Wm. Hearn asked whether the condition had a local or constitutional origin. He thought it was often found in apparently healthy patients, and that it was usually of local origin. It often started from one particular tooth, particularly one which was least liable to be disturbed. It rapidly improved under local treatment, but not under constitutional treatment alone. Also if the tooth were extracted, the disease was at an end. The condition should be early treated, and thorough mechanical treatment, as by brushing or massage, was a valuable addition to antiseptic measures.

Mr. W. C. Paterson described a case of a patient who coughed up bloodstained mucus from the back of the throat for some years, which became less after treating the gums by careful swabbing of the sockets daily. The teeth were ultimately extracted and the condition cured.

Mr. Godlee replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Professor C. J. Wright, President, in the Chair.

Friday, May 4th, 1900.

Pregnancy after Ventrifixation.

Dr. Braithwaite read a paper upon two cases of ventrifixation in which, subsequently, pregnancy took place, and both of these were delivered at full term. In one there was a good deal of pain in the line of the incision, evidently from dragging of the enlarging uterus upon this fixed point. Nevertheless, all went well in the end, but there was inertia of the uterus towards the end of the labour, and forceps had to be used. In the second case the patient was practically without symptoms referable to the operation. Dr. Braithwaite emphasised the following points in this operation in order to ensure non-interference with expansion and mobility of the uterus during pregnancy: First, the abdominal incision must be made down to, but not through, the peritoneum; secondly, the peritoneum was to be opened in the upper part of the incision only; thirdly, the uterus was to be fixed to the peritoneum belonging to the lower half of the wound by about three catgut sutures. The point of attachment must be made as low down in the anterior surface of the uterus as possible, so as to just avoid the bladder. The peritoneum in the living body was extremely movable upon subjacent parts, and the uterus was thus not anchored firmly, but was allowed considerable amount of mobility. It might be supposed that when the operation was done in this manner the adhesion would not be permanent, but out of about thirty operations in only one did the uterus subsequently become free.

Complication after Gastro-jejunostomy.

Mr. W. H. Brown (Leeds) read notes of a case of unusual complication following gastro-jejunostomy: Dr. Churton, and Messrs. Littlewood, Moynihan, and Knaggs took part in the discussion, and Mr. Brown replied.

Treatment of Chronic Gout.

Dr. William Bain (Harrogate) read a paper entitled Notes on the Treatment of Chronic Gout, based on experimental and clinical investigation (see British Medical Journal of June 9th, p. 1401). Professor de Burgh Birch discussed the paper, and Dr. Bain replied.

Cases, Pathological Specimens, etc.

The following were shown:—Dr. West Symes (Halifax): A large fibroma of the ovary.—Dr. Wardrop Griffith: (1) A case of post-hemiplegic athetosis; (2) a case of scrofuloderma; (3) a case of angio-neurotic œdema; (4) a specimen of duodenal ulcer; (5) a specimen of congenital malformation of the heart with pulmonary and mitral disease.—Dr. Dimmock (Harrogate): A calculus weighing 188 grs. from a female bladder.—Dr. Barrs: (1) A case of inveterate tertiary syphiloderma; (2) a case of retroperitoneal growth.—Dr. Barrs and Mr. Cammidge: Specimens from a case of pernicious anæmia.—Mr. Constable Hayes: (1) Dermoids of both eyes; (2) a case of solid œdema of the lobule of the ear.—Mr. P. J. Cammidge: (1) Carcinoma of stomach and liver; (2) hydatid cyst of brain of a sheep; (3) a nævus of the liver; (4) microscopic sections.—Dr. Gordon Sharp: Some new drugs.—Mr. Lawford Knaggs: (1) Angioma of rib; (2) submucous lipoma of the small intestine, found and removed after the reduction of an enteric intussusception, of which it formed the apex; (3) arthritis of knee-joint.—Dr. Churton: (1) A case of juvenile tabes dorsalis; (2) an unusual case of hemiplegia.—Mr. Secker Walker: An intraocular growth.—Mr. Littlewood: (1) Two specimens of ovarian cysts; (2) a large calculus removed from a child aged 2 years; (3) enlarged bursa patellæ from a man.—Dr. Chadwick and Mr. Secker Walker: Specimen of sarcoma of the brain, thyroid body, and kidney.—Mr. B. G. A. Moynihan: Cystic testis (specimen and patient).—Dr. Trevelyan: (1) An unusual case of syphilis of the palate; (2) an unusual case of infantile hemiplegia; (3) paraplegia in a child aged 5, said to have come on after typhoid fever; (4) a case of tabes dorsalis with patches of anæsthesia: (5) a case of paroxysmal hæmoglobinuria; (6) a formalin lamp with an adaptation for the disinfection of plate cultures.—Professor Birch: A piston recorder which takes the place of a recording tambour for physiological experiments.

Election of Officers.

At the annual meeting, which was subsequently held, the following officers were elected for the ensuing year: *President:* Dr. Gordon Black. *Vice-Presidents:* Dr. A. G. Barrs, Dr. W. L. Hunter. *Treasurer:* Dr. J. E. Eddison. *Librarian:* Dr. Barrs. *Auditor:* Dr. C. M. Chadwick. *Committee:* Dr. H. J. Campbell, Dr. J. Liddell, Dr. J. Allan, Dr. T. Johnstone, Dr. Wardrop Griffith, Mr. Edwin Lee, Dr. Mouillot, Dr. H. J. Clarke, Mr. B. G. A. Moynihan, Mr. Secker Walker, Mr. C. J. Wright, Dr. F. Robinson, Dr. Gordon Sharp, Dr. S. Long, Dr. Priestley Leech. *Secretaries:* Dr. Trevelyan, Mr. Lawford Knaggs.

West London Medico-Chirurgical Society.—A clinical meeting was held on June 1st, Dr. J. B. Ball, President, in the chair, when the following cases were shown: Retroperitoneal abscess, by Mr. Stephen Paget.—Myxœdema in a child aged 5½ years, by Dr. Leonard Guthrie. The case was illustrated by three photographs, and was discussed by the President, Mr. McAdam Eccles, Mr. George Pernet, Mr. Rickard Lloyd, and Dr. Phineas Abraham. Dr. Guthrie replied.—Mr. L. A. Bidwell showed a case of arthrectomy of the elbow. Remarks were made by Mr. McAdam Eccles. Mr. McAdam Eccles showed: (1) Cases illustrating swellings in the digits; (*a*) tuberculous enlargement of the first phalanx of the thumb; (*b*) a cystic tumour of the middle finger; (2) cases of injuries about the elbow joint; (*a*) case of separation of the lower epiphysis of the humerus: (*b*) case of fracture of the olecranon. Skiagraphs of all these cases were shown by Dr. F. H. Low. Remarks were made by Mr. L. A. Bidwell and Dr. A. H. W. Clemow. Mr. Eccles replied.—Dr. Phineas Abraham and the President showed a case of tuberculous disease of the

skin and mucous membranes. Dr. ABRAHAM also showed a case of acute erythematous lupus. The cases were discussed by Mr. GEORGE PERNET, Mr. L. A. BIDWELL, and Mr. RICKARD LLOYD. Dr. ABRAHAM replied.—Mr. GEORGE PERNET showed sections of leprous nodules containing bacilli.

REVIEWS.

RECOLLECTIONS OF MY LIFE. By Surgeon-General Sir JOSEPH FAYRER, Bart., K.C.S.I., LL.D., M.D., etc. Edinburgh and London: Blackwoods. 1900. (Cr. 8vo, pp. 520. 21s.)

SIR JOSEPH FAYRER has led an interesting life; he has seen many men and many cities; he has taken part in several historical events, one at least—the defence of Lucknow—of first-rate importance, and he has kept a diary. It is therefore not surprising that he has been moved to give some of his leisure to writing his autobiography, and that he has succeeded in producing a book containing not a few episodes of more than ordinary interest. He did not finally make choice of the profession in which he was to earn so much distinction until after he had thought about engineering and actually tried the sea (he is the son of a naval officer). Once, however, his mind made up he lost no time. He entered at the Charing Cross Medical School, apparently at the commencement of the winter session, and passed the examination of the Royal College of Surgeons of England in July, 1847. A month later, through the introduction of Mr. Guthrie, he received a commission in the Royal Navy, and was almost immediately afterwards instrumental in obtaining for his friend and fellow-student, Thomas Henry Huxley, a commission in the same service. Huxley was soon appointed to the *Rattlesnake*, which was commissioned for a surveying expedition on the coast of Borneo, and thus commenced the scientific career which was to bring so much distinction to himself and to be so rich in services to biology. Much water had rolled under the bridge, and a good deal of history had been made before the two friends met again.

Fayrer was soon taken away from his duties at Haslar to act as travelling physician to Lord Mount-Edgcumbe, and presently found himself at Palermo during the revolt of the Sicilians against the Neapolitans. Here, for the first time, he came under fire in rendering assistance to the wounded. A winter in Rome was turned to such good account that he was able to take the M.D. degree after examination. He presently returned to England with Lord Mount-Edgcumbe, who obtained for him a commission in the Ordnance Medical Department, then a separate branch of the Army Medical Service. It is very clear that young Fayrer possessed the valuable and admirable faculty of making friends, which has never left him. In Italy he had made the acquaintance of Lady Malcolm, the widow of the distinguished General Sir John Malcolm, whose monument stands in the north transept of Westminster Abbey, and through her influence he was nominated an Assistant-Surgeon in the Medical Service in India in 1850.

Once definitely committed to an Indian career the young surgeon threw himself into his work with energy and enthusiasm. He was appointed at first to a hill station, but when the Burmah war of 1852 broke out he was selected for service with the field force, and greatly distinguished himself, not only by courage under fire, but in the organisation of hospitals and other medical arrangements. As a reward for these services he received the coveted appointment of Residency Surgeon at Lucknow, and thus within three years of reaching India he found himself on the high road to the best positions which the service had to offer.

The chapters which relate to events in Lucknow are the most interesting in the book. Fayrer reached that city while Sir William Sleeman was still Resident, but when it had become clear that the opinion of that great administrator, who thought that Oudh should not be annexed, was about to be overridden. Outram was sent to carry out the deposition of the King, and Fayrer, who had meanwhile been made Assistant Resident, and thus had political as well as medical duties, shared in the anxieties of that time. After the annexation he was in 1856 appointed Civil Surgeon and Superintendent of Charitable Institutions, a change of name rather than of duties. These duties were of the most varied kind—from superintending the post office to operating at the hospital, and even attending sometimes the ladies of the family of the King of Oudh. Thus he relates the following incident:

> It was reported to me that one of the queens, the third in position, was dangerously ill, and that the hakims despaired of her. I was requested by the king, through the Resident, to see the sick lady, and accordingly went to the Chutter Munzil palace, where I was received in great state, and was taken to the sick room. The chief eunuch, Bashir ud Dowlah, and others, with a number of female attendants, were present. A cashmere shawl was stretched across the room, behind which the Begum was seated. I immediately said that unless the purdah were removed, nothing could be done. They made no difficulty, as it was "hakim ka hukm," and there was the lady seated upon a silver charpoy, enveloped in shawls. This was no better than a purdah. However, I knew patience was necessary, so I took a seat by the figure, Bashir ud Dowlah talking to her telling her that without seeing her nothing could be done, she giving faint and muffled replies from the depths of the shawls. At last she put out her hand for me to feel her pulse, but, immediately I attempted to touch her wrist, she wriggled off the charpoy and waddled out of the room, wrapped up in her shawls. The interview was over for that day. Profuse apologies were made, and I was asked to make allowances for feminine weakness. The next morning I went again; the same scene was repeated, and the confusion of the attendants was extreme. Meanwhile I had arrived at the conclusion that the lady who was so very active could not be so very ill. On my third visit I made progress, and was allowed to see her face and her tongue, and to ascertain something of the nature of her case. The next time she laid aside her shawls and her veil, and we sat and talked face to face, she having got over her shyness. She was very loquacious, talked like a child, and seemed very pleased with her freedom. She was a nice-looking girl of 24 or 25. After this she was constantly asking me to go and see her. In a few days she consented to submit to an operation (paracentesis), which I performed. She got much better, and the hakims declared shortly afterwards that she had quite recovered.

The story of the defence of Lucknow is one which has been told many times, but Sir Joseph Fayrer adds many striking details, and his diary will be read with perhaps the greater interest at the present moment, when we have so recently been thrilling with apprehension for the defenders in two other sieges which will live in history beside Lucknow. The defenders of Lucknow had to contend against fearful odds. The bombardment and the rifle fire could not have been more persistent, and the handful of British cooped up in the Residency and the adjoining houses were open during the first part of the siege and until the arrival of Outram and Havelock to point blank fire. Sir Joseph Fayrer, whose house was in a very exposed position, relates many stirring incidents and many hair-breadth escapes, none perhaps more remarkable than the following:

> A shell entered my house on the city side and immediately exploded in the room where my wife was lying ill. The bed was in the middle of the small room, the window, as I have said, being barricaded with boxes of earth. She was lying on the bed, and Mrs. Boileau was sitting by her side. A crash was heard as the shell struck the corner of the door leading into the veranda on the right and much brickwork was knocked out. They had hardly realised this when a loud explosion took place; there was a rush of flame, with bullets and fragments of shell through the room, round them, and over them; the bedclothes were set on fire, but neither of them was touched. I rushed to the room; it was full of smoke and dust, with a smell of burning. The resai (quilt) was on fire. My wife immediately spoke to me out of the smoke and said she was not hurt, so did Mrs. Boileau. They were both perfectly composed and tranquil, though they had just been through an ordeal to which few women have been exposed. I carried her into an inner room where Mrs. Barwell and her baby were placed. The shell which had burst was a 9 lb. shrapnel full of bullets. These and pieces of the splintered shell were picked up about the room and on the bed.

When we come to the end of the defence of Lucknow we find that we have read about half the book, and it is inevitable that after that climax its interest diminishes. Neither the account of years of hard work as Professor of Surgery in Calcutta, nor the many important official matters in which the author was concerned during his long connection with the India Office in London, nor his diary of the tour of the Prince of Wales in India, throughout the whole of which the author was a member of the Prince's staff, interesting though many of the incidents are, can compare with the story of the long, hot months of the defence of Lucknow, when the enemy without was not the only enemy with which the residency surgeon had to contend, for small-pox, cholera, and dysentery showed themselves, though partly by good management and partly by good luck, for the sanitary precautions which could be taken were of the most rudimentary kind, never made headway.

The volume is illustrated by reproductions of a number of drawings of Indian scenes, among others, sketches of Sir Joseph Fayrer's house in Lucknow before and after the siege, and by portraits of Henry Lawrence and Outram, and an excellent portrait of the author, who we hope may long live

to enjoy the honours which he has received from the Crown, and the esteem of the profession which his character and his attainments have adorned.

Besieged by the Boers: A Diary of Life and Events in Kimberley during the Siege. By E. Oliver Ashe, M.D.Lond., F.R.C.S.Eng., Surgeon to the Kimberley Hospital. With 24 Illustrations. London: Hutchinson and Co. 1900. Globe 8vo, pp. 210. (3s. 6d.)

For some time past the British public has been bombarded with books about the war, but of most of them it takes as little notice as the garrisons of Kimberley, Ladysmith, and Mafeking did of the futile shells of the Boers. It is felt that literature of this kind is premature and necessarily incomplete, and till a full history of the struggle is possible the public is content with the record of passing events which it finds in the daily papers. The little work before us is, however, of a different character from the hasty accounts of the great racial struggle for supremacy in South Africa which have too obviously been manufactured, like Peter Pindar's razors, to sell.

Dr. Ashe is one of the leading medical practitioners of Kimberley, and is surgeon to the hospital there. He remained quietly at his post thoughout the siege, doing with his might the work that lay nearest to his hand, and withal finding time to note day by day what he saw and heard and felt. This diary was written, as the dedication of the book shows, solely for the eyes of his mother at home in England, without any notion of its being made public. Fortunately, however, it was lent to a well-known journalist, who was so struck by it that he strongly advised publication. There can be no doubt as to soundness of this advice, for the diary is a most interesting document of the class known to historians as *mémoires pour servir*. There is no attempt at "writing up" the scenes and sufferings, the incidents and emotions of the memorable siege. Dr. Ashe tells his story with a simple directness worth all the lurid word-painting of the literary impressionist. He tells us what the man in the street—and in the shelter—felt when shells were falling all about, wrecking houses and now and then killing someone, but luckily as a rule doing little beyond making a hideous noise. In reading the diary we seem to hear the bugle sound the alarm when a shell was coming and to see the people run to take shelter in the improvised forts which they had constructed in their back gardens, or crowding down out of harm's way into the bowels of the diamond mines. We share in the excitement of the hair-breadth 'scapes when shells strike a spot where someone has been standing a few minutes before, or go through the open window of an office just missing a man at work there, or fall under a sick woman's bed without exploding. We are moved by the tragedies which occur from time to time—babes killed in their mother's arms, children torn to pieces when sitting at breakfast, men slain in their bedrooms when dressing for dinner. As the siege goes on we become case-hardened like the inhabitants of the besieged town, and think little of such trifles as stray shells. Dr. Ashe owns that he was badly scared, but the work had to be done, and he felt that if a shell were destined to hit him it would do so whether he were indoors or out-of-doors, and whether in a shelter or not; and so, though he did not try to get hit, he went about his work as usual and never missed a single office hour or visiting a single patient on account of the shells. And he thinks all the other doctors did the same. All honour to them for staying at the post of professional duty when they might without the least reproach have gone away! We share with them in the gradually diminishing rations; we dine off joints of horse and make believe we like it; and we make salads of casual weeds which grow in our gardens left unwatered owing to the exigencies of the military situation. The "military situation," by the way, is one of the few things that disturbed the philosophical serenity of Dr. Ashe's temper. He chafed under the multitudinous and often seemingly meaningless restrictions imposed by martial law. Altogether he gives us a vivid picture of life in a beleaguered town. The reader comes to know the writer almost as a personal friend, and the quiet heroism and the pride in the devoted courage of his wife, who was with him all the time, which shine through the rough narrative can hardly fail to win the sympathies of the most stolid Briton.

Naturally enough, Dr. Ashe does not agree with Mr. Stead in looking upon the Boer as a brother; and he frankly rejoices when he is "potted." And it must be admitted that the Boer is not a heroic figure when seen at close quarters outside his entrenchments. He is treacherous and cowardly, firing at ambulance waggons regardless of the Red Cross, and not caring what havoc his shells may work among women and children. He is filthy in his habits, and even his boasted marksmanship is a delusion. He took care never to come within rifle shot of Kimberley, and can only fight at long range and from behind cover. One redeeming feature in him was the scrupulous observance of the Sabbath day. This gave the Kimberley folk a day of rest from shells. Dr. Ashe says the town is not composed of Sunday school superintendents, and is, as a rule, rather bored by Sundays, but it found the Boer method of keeping the day holy the reverse of boring.

We should like to say more of this delightful little book, but enough has, we hope, been written to give an idea of its contents. It can be read with interest even by those who care little for any but the lightest literature, and yet it has a permanent value as a living record of a thrilling incident in a war which will be one of the great landmarks in our rough island story. As such it will be indispensable to the future Carlyle of this historic struggle.

NOTES ON BOOKS.

A third edition of the pamphlet, *Reasons why the Office of Coroner should be held by a Member of the Medical Profeession*, by Mr. Frederick W. Lowndes, Chief Surgeon to the Liverpool Police, has been issued by Messrs. Churchill. It has been revised and shortened by the author, and is now published at the price of twopence in order that it may be of service to candidates for the office of coroner in the future. It contains a brief statement of qualifications required from a coroner or deputy coroner, of the law as to coroners, and as to the mode of election. The duties of a coroner are then described, and cogent reasons are given why these must be best discharged by a medical man. Brief accounts of several cases illustrating this point are given. The pamphlet hardly needs commendation, for previous editions have on many occasions served a most useful purpose in presenting within a short compass the main reasons why a coroner should be a member of the medical profession. In its condensed form, and at the very low price mentioned, a prolonged career of usefulness may safely be prophesied for it.

Successful Vaccination.—The grant for successful vaccination has been awarded to Dr. Richard Macartney (Cinderford), Public Vaccinator of the Fourth District of the Westbury-on-Severn Union.

The New York Pathological Institute.—Among the Bills passed by the New York Legislature just before its adjournment was included an item "For the Pathological Institute, twenty thousand dollars, or so much thereof as may be necessary, no part of which shall be paid for rent." The New York Pathological Institute has not, we believe, a house of its own, and it is hardly likely that it proposes to adopt the "no rent" principle as its rule of corporate life. It is suggested that the State Commissioners in Lunacy are taking this action as a roundabout way of paralysing the work of the Institute.

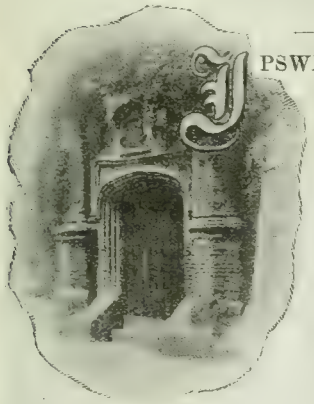
The London and Counties Medical Protection Society.—At the last monthly meeting of the Council of this Society the formation of a new division for Ulster was approved, with Dr. Alexander Dempsey of Belfast as President, and Dr. Alexander Allworthy as Secretary, and steps were reported to have been taken for the formation of a Yorkshire division. The Secretary reported that the General Medical Council had decided to erase from the *Dental Register* the name of a dentist who had been charged by the Society with advertising, this being the first instance in which the Council had so exercised its powers. It was reported that 166 new members had joined since the annual meeting in April.

SIXTY-EIGHTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

IPSWICH, 1900.



WOLSEY'S GATE.

IPSWICH, at which the sixty-eighth annual meeting of the British Medical Association will be held on July 31st, August 1st, 2nd, and 3rd, is the county town of Suffolk, and therefore one of the chief centres of East Anglia. The annual meeting of the Association has not been held within the borders of the East Anglian Branch since the meeting which took place at Norwich in 1874, and this will be the first occasion on which the Association has held its annual meeting at Ipswich. Every effort is being made locally to make the gathering a success in all respects. The British Association has already twice visited the town—in 1851 and in 1895, on both of which occasions Ipswich proved itself able to provide for all the needs of a great scientific body.

THE EAST ANGLIAN BRANCH.

The East Anglian Branch holds the honour of being the oldest Branch of the British Medical Association. Dr. Edgar G. Barnes, of Eye, who has been Secretary of the Branch since 1889, finally established this claim in a paper which he read at the jubilee meeting held at Stowmarket in July, 1893. The Provincial Medical and Surgical Association, which afterwards took the name of the British Medical Association, was formed at Worcester in 1832. It was three years later, in September, 1835, that some members of the medical profession of Suffolk, Norfolk, Essex, Cambridgeshire, Huntingdonshire, and Lincolnshire held a meeting at Bury St. Edmunds, and formed the Eastern Provincial Medical and Surgical Association on similar lines. This Eastern Society was the direct ancestor of the present East Anglian Branch. Towards the close of the following year, 1836, members of the Eastern Society were enrolled as a body with the original Association, and were recognised as a separate Branch under the name of the Eastern Branch of the Provincial Medical and Surgical Association. Very shortly afterwards similar Branches were formed at Bath, Wells, and Southampton, and the present system of Branches of the British Medical Association was established. Of the then 155 members of this Eastern Society 109 resided within the district of the present East Anglian Branch. At that time, for various reasons, the Suffolk members took the lead, one reason being that the Norfolk members had the Norwich Pathological Society as their more convenient centre. It thus came about that the Society was often spoken of officially as the Suffolk Branch, and in 1843 the first meeting of this Suffolk division was held at Stowmarket, the central point of the county. Dr. C. M. Durrant, who is still living in Ipswich, was the President at this first meeting, and he has twice since, in 1858 at Ipswich and in 1893 at Stowmarket, filled the same office. Of those present at the meeting in 1843, one, Mr. J. B. Pitt, for thirty-four years Secretary to the Branch, still survives; while Mr. G. Cordy Edwards, who was living in retirement at Felixstowe died there only last week. Sir George Humphry and others, bearers of well-known names, were present also, as was Dr. John Green Crosse, F.R.S., who acted as Secretary at the meeting and was afterwards President of the Association in 1846, when it held its annual meeting at Norwich. From 1843 onwards the annual meetings of the Branch were regularly held in the various towns of Suffolk, and occasionally in Norfolk, till in 1856, by a resolution passed at Beccles, the name of the East Anglian Branch was finally assumed, and the present territorial limits adopted. Twice in the history of the East Anglian Branch has the parent Association held its annual meeting at Norwich, in 1846 under the presidency of Dr. J. G. Crosse, and in 1874 under the presidency of Dr. E. Copeman. The East Anglian Branch now numbers 339 members, and ranks among the larger Branches of the British Medical Asscciation. A list of its Presidents includes the names of G. Bullen, A. H. Bartlet, Barrington Chevallier, C. M. Durrant, and W. A. Elliston, of Ipswich; of J. G. Crosse, W. H. Ranking, E. Copeman, W. Cadge, Peter Eade, M. Beverley, and Haynes Robinson, of Norwich; the Crowfoots of Beccles and the Jeaffresons of Framlingham. The whole history of this flourishing Branch, whose members are justly proud that it is the oldest of the Association, shows unbroken continuity and prosperity.



Fig. 1.—Christchurch Mansion.

THE INVITATION TO THE ASSOCIATION.

Though Norwich, the acknowledged capital of East Anglia, has twice been visited by the Association, for some reason or other the county town of Suffolk, where the Association has always had so strong a hold, has never hitherto been chosen as the place for an annual meeting. For the last few years it has been in contemplation to visit Ipswich, and at a private meeting presided over by Dr. W. A. Elliston last summer it



Fig. 2.—The East Suffolk and Ipswich Hospital; main entrance.

was resolved by the medical men of the town to invite the Association. Subsequently, at a meeting of the East Anglian Branch held at Colchester under the presidency of Dr. E. L. Fenn, an invitation was issued in the name of the whole Branch. This invitation was accepted by the Association at Portsmouth in August last, and its acceptance met with the warm approval of the Ipswich Municipal Authorities.

General Arrangements.

Officers.—The President-Elect is William Alfred Elliston, M.D., Senior Surgeon to the East Suffolk and Ipswich Hospital. Dr. Elliston was Secretary of the East Anglian Branch from 1877 to 1889, and has been a member of the Council of the Association since 1884. An Address in Medicine will be given by Philip Henry Pye-Smith, M.D., F.R.S., Consulting Physician to Guy's Hospital. An Address in Surgery will be delivered by Frederick Treves, F.R.C.S., Surgeon Extraordinary to the Queen, Surgeon in Ordinary to H.R.H. the Duke of York, Consulting Surgeon to the London Hospital, and lately Consulting Surgeon to Her Majesty's Forces in South Africa. An Address in Obstetrics will be given by William Josiah Smyly, M.D., sometime Master of the Rotunda Hospital, Dublin. The local Honorary Treasurers are R. W. Brogden, M.B., B.S., and R. K. Casley, M.D.; and the local Honorary Secretaries are Edgar G. Barnes, M.D., Eye, Suffolk, Secretary and a former President of the East Anglian Branch; and James F. C. Hossack, F.R.C.S.E., 126, Woodbridge Road, Ipswich.

Places of Meeting.

The general meetings will be held in the Central Hall of the Higher Grade Schools, and in this hall the general addresses will be delivered. The Presidential Address will be delivered at the Ipswich Lyceum on Tuesday evening, July 31st. The Higher Grade Schools, which are close to the centre of the town, will also accommodate eight of the thirteen Sections in its class and lecture rooms. Additional rooms in the same buildings will furnish a suitable place for the pathological museum and for microscopes, as well as accommodation for official purposes, for secretaries of committees, and for the Editor of the British Medical Journal. In the Town Hall a meeting place will be provided for one of the larger Sections, the handsome Council Chamber will make an admirable banqueting hall for the annual dinner of the Association, while other rooms will be available for the Council meetings, and for the General Secretary of the Association. The remaining Sections will be held in the near neighbourhood of the Town Hall and Higher Grade Schools. The Public Hall, situated in the main street of the town, together with the Old Museum Rooms, will be utilised for the Annual Museum. The Lecture Hall, which adjoins the central sectional meeting place, will be fitted up as a Reception Room, where cards of membership, the *Daily Journal*, the Official Guide Book, the Catalogue of the Museum, tickets of admission, and cards for entertainments and social functions, and all other information can be obtained. In this hall there will also be arranged postal and telegraphic conveniences. A special Reception Room for ladies attending the meeting will be provided at the High School for Girls, which lies on the opposite side of the Tower Churchyard, about one minute's walk from the Lecture Hall. At this reception room ladies will be able to obtain tea and light refreshment. An official guide book to Ipswich and the neighbourhood, with map and illustrations, has been brought thoroughly up to date, and includes two chapters specially written for the occasion by Mr. Rowley Elliston, B.A., LL.B., on "Ipswich History" and "Local Worthies."

Business of the Meeting.

On Tuesday, July 31st, the Council will meet in the Council Chamber of the Town Hall at 9.30 A.M. At 11 A.M. a special service will be held at the Church of St. Mary-le-Tower, at which the Right Reverend John Sheepshanks, Lord Bishop of Norwich, will be the preacher. The first general meeting will be held in the Central Hall of the Higher Grade School at 2.0 P.M., when the report of the Council will be presented. At 8 30 P.M. the Association will reassemble at the Lyceum Theatre for the delivery of the Presidential Address.

On Wednesday, August 1st, the first meeting of the Council for 1900-1 will take place in the Council Chamber, Town Hall, at 9.30 A.M., and the Sections will meet in their

appointed rooms from 10 A.M. to 1 P.M. At 2.30 P.M. the second general meeting will take place in the Central Hall, Higher Grade Schools, when the Address in Medicine will be delivered, and the general business of the Association continued.

On Thursday, August 2nd, the Council will meet at 9.30 A.M., and the Sections will continue their sittings from 10 A.M. to 1 P.M. At 2.30 P.M. the third general meeting will be held, and Mr. Frederick Treves will deliver the Address in Surgery at the Central Hall. At 7.30 P.M. the annual dinner of the Association will take place in the Town Hall.

On Friday, August 3rd, the Sections will meet from 10 A.M. to 1 P.M., and the concluding general meeting will take place at 2.30 P.M., when the Address in Obstetrics will be delivered in the Central Hall.

Throughout the meeting there will be garden parties and various local excursions after 4 P.M., and evening entertainments will be organised, of which full particulars will be published later on. On Wednesday evening, August 1st, a garden fête with illuminations and fireworks will be given by the Mayor of Ipswich (Mr. W. A. Churchman), in the grounds of Christchurch Mansion, the beautiful old Tudor house which, with its park, has of late years passed into the possession of the town. The illustration on p. 1473 (Fig. 1) shows the south front of the mansion as viewed from the lawn. During the time of the meetings short excursions by boat, bicycle, or carriage will be arranged for ladies, or means will be afforded for golf on Rushmere Heath, which may be reached by 'bus or tram. In this manner objects of interest in the near neighbourhood may be reached in an hour or two. Freston Tower, Woolverstone Park, Wherstead Park, Stoke Park, The Chantry, Sproughton Village, Shrublands, Red House Park, Playford Hall, with its old moat and pretty village, Orwell Park and the village of Nacton, and Brooke Hall, and last but not least Gainsborough's Lane with its lovely river peeps. All these pretty spots are within a four mile radius of the town and may be combined in two or more excursions. A longer ride might include Helmingham and its church and hall, the most perfect specimen of a moated house in the country, which received the honour of a royal visit from Queen Elizabeth.



Fig. 3.—The Ancient House.

THE EAST SUFFOLK AND IPSWICH HOSPITAL.

The hospital buildings, which stand on rising ground at the top of Berners Street, are a conspicuous object from every part of the town. The main front, with an imposing Ionic porch, faces south; to the north of the hospital grounds are the playing fields of Ipswich School, while on the west lies the parade ground of the Suffolk Militia Depôt. Despite, therefore, the growth of the town since the site was first selected in 1836, the hospital still continues to occupy one of the most open and airy positions to be found in the neighbourhood. The original building, as designed in 1836, provided accommodation for 40 patients, but subsequent modern additions have brought the total up to 128 beds. When the hospital was opened in August, 1836, it was a continuation of the Ipswich Public Dispensary, which from its published *Pharmacopœia*, edited by Dr. Williams and Mr. A. Bartlet, was certainly in existence in 1812. The first honorary medical staff consisted of Drs. Baird and Beck (as physicians), and Messrs. A. H. Bartlet, G. Bullen, C. C. Hammond, and G. G. Sampson as surgeons, of whom the four latter continued in office without change for 35 years. Subsequent physicians included Dr. Durrant, of whom mention has already been made, and the late Dr. Barrington Chevallier, uncle of Lord Kitchener of Khartoum. The present staff consists of two honorary consultants and seven ordinary members, with two resident house-surgeons. Since its foundation the additions to the institution have been as follows: In the year 1869 the main central block was erected, and in the work of urging on this much-needed additional accommodation Dr. Elliston took a leading part. The next addition, six years later, took the form of a children's wing used exclusively for the treatment of children under 12 years of age. In 1890 the beautiful little chapel was erected by public subscription at the back of the main structure. The next addition was the new wing for the accommodation of the nursing staff, which occupies a position on the west side of the main building and is approached by a corridor. It contains a large airy sitting-room with bedrooms above, lavatory, bathroom, and the usual offices. The latest addition is the wing erected on the east side as a memorial of the Queen's Diamond Jubilee by which twenty beds are added to the male side. The wards are continuous with the old male wards and are painted white, the walls up to the dado being lined with glazed tiles. The furniture, which is of the most modern construction, is the gift of Mr. Felix Cobbold, whose family have been great benefactors to the hospital. The operating theatre, by the generosity of an anonymous donor, has recently been thoroughly equipped with all the most modern appliances. The theatre has been floored with terrazzo and the walls lined with glazed tiles. The sinks and water taps, together with all the appliances for carrying out strict antiseptic treatment, are of the most approved description, and the operating theatre now compares favourably with any in the kingdom. The institution is in the main supported by voluntary annual contributions, but as the result of a recent special appeal many generous benefactors

have given sums of £1,000, which is the amount required to endow a bed in perpetuity. Our illustration (Fig. 2) shows the approach to the main entrance of the hospital, with the latest additions on the right of the picture. The children's wing, which lies on the left, is not shown.

Sanitary Ipswich.

One of the great features of Ipswich is its pure water supply, which passed under the control of the town authorities in 1892. The main system of drainage is by gravitation, the sewer, with an outfall some miles down the river Orwell, having been completed in 1881. The sewage is screened at the outfall, and after rough precipitation in tanks passes into the river without any other treatment. The Stoke and low-lying districts, which could not be drained by gravitation, are treated on the Shone system, which has so far worked very well. The Hermite system of deodorising sewage has been in operation since 1894. The Hermite fluid is obtained by passing a strong electric current through sea water, and it is found that the water which comes up to Ipswich Dock is sufficiently salt to give the most satisfactory results.

The Fever Hospital, which is under the charge of Mr. G. S. Elliston, medical officer of health for the borough, is situated to the east of the town on the dry sandy soil in the neighbourhood of Foxhall Heath. Till recently the hospital consisted of four blocks or pavilions, the central one being devoted to the administrative buildings and bedrooms for the staff. The three remaining pavilions are placed north, east, and west of the central block, and each consists of two wards, while all the blocks are isolated, the communications being a corridor open at the sides. These wards accommodate 30 beds, and there is also an iron building of two wards for 10 beds. In addition to the above a new block on the south side is just approaching completion, so that in the course of the present summer the isolation accommodation of the Fever Hospital will amount to 56 beds. The new wards are lined with glazed tiles, and heated by Boyd's hygiastic grates placed in the centre of each ward. The nursing staff consists of a matron, four charge nurses, and six probationers.

The Borough Lunatic Asylum is situated not very far from the Fever Hospital, and was erected in 1870 at a cost of £26,000. Recent additions and improvements have been carried out, and owing to excellent management by the Asylum Committee of the Town Council the debt has been entirely paid off, and the institution is now even a source of income to the borough. The building, which is pleasantly situated in 70 acres of grounds, contains accommodation for 275 patients, and patients are received from other localities at a fixed rate.

In the same neighbourhood are also situated the St. John's Home for Children, under the control of the guardians of the poor, and the new workhouse, with its splendidly-equipped modern infirmary. The latter institution will be well worthy of a visit, as it is a model of its kind, and is said to be one of the best in the country. The Ipswich Board of Guardians has issued an invitation to the members of the Association to visit all the institutions under its charge. As nearly all the public sanitary institutions of Ipswich lie near to one another at some distance from the centre of the town, a view of them may be combined in one visit.

Ipswich Antiquities.

Full information will be found in the local guide as to objects of interest within the town itself. The Ancient House (Fig. 3) is probably the oldest town house in the kingdom and was continuously occupied by the Sparrow family for over 300 years. The beautiful moulding of the front is well shown in the illustration and it will be noticed that the Royal arms of Charles II form part of the decoration, recalling the intimate connection of the Sparrow family with the Stuarts. Charles is even alleged to have lodged in this house after Worcester and a secret chamber is shown as his hiding place. Wolsey's Gate is the sole remaining portion of the great college Cardinal Wolsey planned to found in his native town. Visitors are particularly recommended to stroll round Fore Street, the Quays, and the older part of the town. On every side in their narrow winding thoroughfares are old oak corner posts, quaint carvings, and numerous existing specimens of mediæval domestic architecture. The old Ipswich inns alone are worth studying for their picturesque antiquity.

Hotel and Lodging Accommodation.

A register of lodgings suitable for members and their ladies is being prepared by the Local Committee from whom every information can be obtained. The chief hotels in Ipswich are the Old White Horse, famous for its associations with Mr. Pickwick's adventures, with Nelson, and a long line of royal visitors. A *facsimile* of this hotel was erected in the grounds of the World's Fair at Chicago. The Crown and Anchor is an old hostelry in the main street which has been faithfully restored and equipped with every modern convenience. The Grand Hotel is a modern erection, with ample accommodation, while there are other comfortable and unpretending hotels, and also a Temperance Hotel. Members who wish to go further afield, and combine sea breezes and bathing with their visit to Ipswich can find accommodation at Felixstowe, either at the Bath Hotel on the sea front, the Orwell Hotel by the station, the Ordnance Hotel, or at any of the numerous lodging houses; but as the Felixstowe season begins in July, early application should be made to secure rooms. The journey from Ipswich is twelve miles, and arrangements are under consideration for a late train during the meeting. At about the same distance from Ipswich are Dovercourt, Harwich, and Parkeston. At Harwich, right on the harbour, is the Great Eastern Railway Company's Hotel, the great resort of yachtsmen. At Parkeston, on the Stour, is another modern-equipped hotel with every accommodation that luxury could desire. Arrangements are being made for late trains to Harwich, Dovercourt, and Parkeston; while the twelve miles journey to Ipswich may be made up the beautiful Orwell by steamer in a little over the hour.

Golf.

Three separate golf links are situated within a twelve miles radius of Ipswich. The town links (eighteen holes) lie on the breezy uplands of Rushmere Heath at about three miles distance from the Cornhill. They may be reached by tram, 'bus, or train to Derby Road Station. The famous Felixstowe Links (nine holes and a ladies' course), with their unrivalled turf and trying bunkers, are just over the mile from Felixstowe Station; they are comprised within the peninsula where the River Deben joins the sea, and are as picturesque as any in the country. The Woodbridge Golf Club has a capital inland course on Melton Heath, which may be reached by train from Ipswich in half an hour. Members and their ladies desiring to play golf will have every facility afforded to them by arrangements to be made with the above clubs.

Excursions.

Saturday, August 4th, will be devoted to excursions, and the following trips have already been arranged or are in contemplation:

1. *Colchester*, the ancient stronghold of the Romans during their occupation of Britain, now the headquarters of the Eastern Military Division. The story of the besieged Romans at Camulodunum forms some of the most stirring chapters in *Tacitus*, and Colchester also played a part in the Civil Wars. Visitors will travel by train to Colchester (nineteen miles), and arrangements are being made for their reception, while facilities will be provided for their viewing the antiquities of the town.

2. *Great Yarmouth*, the quaint old fishing town and popular seaside resort with its magnificent sea front overlooking Yarmouth Roads. The church is said to be the largest parish church in the kingdom and the narrow streets of the old town, locally known as "rows" are quaint and interesting. Yarmouth is the starting point for wherry excursions on the Norfolk Broads. Final arrangements will be announced in due course.

3. *Norwich*, the historic capital of East Anglia, with its old castle containing collections of the Norwich School of Painting, its ancient Cathedral and Close, unrivalled in England for picturesqueness. It may be found possible to arrange an alternative boat journey by water to Lowestoft or Yarmouth, and return thence by rail. Final arrangements announced later.

4. *Bury St. Edmunds*, including a visit to its fine churche

and ruined Abbey, and thence to the University town of Cambridge.

5. *River Orwell.*—A combined rail and river trip down the Orwell, surrounded by five large parks, into Harwich Harbour, with a visit to the war and training ships, thence into the Stour, lying in the beautiful Constable country. Return by Felixstowe, now the favourite watering place of the county.

BRITISH MEDICAL ASSOCIATION.

SIXTY-EIGHTH ANNUAL MEETING.

THE sixty-eighth annual meeting of the British Medical Association will be held at Ipswich on Tuesday, Wednesday, Thursday, and Friday, July 31st, August 1st, 2nd, and 3rd, 1900.

President: JOHN WARD COUSINS, M.D.Lond., F.R.C.S.Eng., Senior Surgeon Royal Portsmouth Hospital.

President-Elect: WILLIAM ALFRED ELLISTON, M.D. Senior Surgeon East Suffolk and Ipswich Hospital.

President of the Council: JOHN ROBERTS THOMSON, M.D., F.R.C.P.Lond., Consulting Physician to the Royal Victoria Hospital and to the National Sanatorium for Diseases of the Chest, Bournemouth.

Treasurer: ANDREW CLARK, F.R.C.S., Surgeon to the Middlesex Hospital and Lecturer on the Principles and Practice of Surgery.

An Address in Medicine will be delivered by PHILIP HENRY PYE-SMITH, M.D., F.R.S., Consulting Physician, Guy's Hospital.

An Address in Surgery will be delivered by FREDERICK TREVES, F.R.C.S., Surgeon Extraordinary to H.M. the Queen.

An Address in Obstetrics will be delivered by WILLIAM J. SMYLY, M.D., F.R.C.P.I., Examiner in Midwifery, Royal College of Physicians, Ireland.

The Scientific Business of the Meeting will be conducted in Thirteen Sections, as follows, namely:

A. MEDICINE.

Art Gallery.

President: THOMAS BUZZARD, M.D. *Vice-Presidents:* Mrs. E. GARRETT ANDERSON, M.D.; SAMUEL J. BARTON, M.D. *Honorary Secretaries:* FREDERICK WILLIAM BURTON-FANNING, M.D., 1 St. Faith's Lane, Norwich; THOMAS WARNER, M.D., 12, Museum Street, Ipswich.

The following discussions have been arranged:

Wednesday, August 1st.—Influenza as it affects the Nervous System. Dr. Judson S. Bury will open this discussion, and it is hoped that the following will take part in it: Sir Wm. Broadbent, Bart., M.D., F.R.S., Sir Peter Eade, M.D., Professor J. B. Bradbury, M.D., Dr. S. H. Habershon, Dr. James Taylor, Dr. J. S. Risien Russell, Dr. H. Handford, Dr. T. D. Savill, and Dr. F. M. Hope.

Thursday, August 2nd.—The Problem of Gastric Ulcer. This will be opened by Dr. J. F. Payne, and it is hoped that the following will take part in the discussion: Professor T. Clifford Allbutt, M.D., F.R.S., Dr. S. Martin, F.R.S., Dr. S. H. Habershon, Dr. Soltau Fenwick, Dr. R. Saundby, Dr. H. Handford, Dr. W. Gordon, Dr. G. Herschell, Dr. W. Calwell, and Dr. H. Walsham.

A list of papers selected for presentation to the Section will be published next month.

B. SURGERY.

Masonic Hall, Ground Floor.

President: HOWARD MARSH, F.R.C.S. *Vice-Presidents:* SAMUEL HERBERT BURTON, F.R.C.S.; THOMAS HERBERT MORSE, F.R.C.S. *Honorary Secretaries:* WALTER GEORGE SPENCER, M.S., 35, Brook Street, W.; HERBERT HENRY BROWN, M.D., F.R.C.S., 3, Museum Street, Ipswich.

The following discussions have been arranged:

1. Subdiaphragmatic Abscess. Introduced by Mr. Rickman J. Godlee, M.S., F.R.C.S. The following gentlemen will take part: Messrs. Mayo Robson, Charters Symonds, Musgrave, Jordan Lloyd, and Bidwell.

2. The Methods at present available for the Treatment of Simple (Subcutaneous) Fractures. Introduced by Mr. William H. Bennett, F.R.C.S. The following gentlemen will take part: Messrs. Keetley, Robert Jones, Eve, J. Hutchinson, jun., and Jordan Lloyd.

The following papers have been proposed:

BIDWELL, Leonard, F.R.C.S. Pyloroplasty.

BOYD, Stanley, M.B., B.S. Oöphorectomy in Cancer of the Breast with Results to Date.

BURTON, S. H., B.S. On the Removal of Large Stones from the Bladder, with notes of a case. (Mr. Reginald Harrison will take part in the discussion.)

ECCLES, W. McAdam, M.S. Hernia of the Large Intestine.

GRIFFITHS, Joseph, F.R.C.S. Observations upon Injuries to the External Lateral Ligament and to the Internal Semilunar Cartilage of the Knee-Joint.

HUTCHINSON, Jonathan, jun., F.R.C.S. The Substitution (when practicable) of Subastragalar for Syme's Amputation.

PHELPS, A. M., M.D. The Open Incision for Club Foot; its Indications and Abuses. (The following gentlemen will take part in the discussion: Messrs. Jackson Clarke and Tubby.)

ROBINSON, H. Betham, M.S. A Case of Obstinate Jaundice in which Cholecystocolostomy was performed with Complete Success.

WALLIS, F. C., M.B., B.C. Non-malignant Stricture of the Rectum: its Causes and Radical Cure.

Members proposing to take part in the discussions or desirous of reading papers are requested to send their names at their earliest convenience to the Hon. Secretaries.

C. OBSTETRICS AND GYNÆCOLOGY.

High School for Girls, Ground Floor.

President: WALTER SPENCER ANDERSON GRIFFITH, M.D. *Vice-Presidents:* MICHAEL BEVERLEY, M.D.; Mrs. MARY ANN DACOMB SCHARLIEB, M.D. *Honorary Secretaries:* JOHN DAVID MALCOLM, M.B., F.R.C.S.Edin., 13, Portman Street, Portman Square, W.; SAMUEL OLIVER EADES, L.R.C.P., L.R.C.S.Edin., Manor House, St. Peters, Ipswich.

The following discussions have been arranged:

Wednesday, August 1st.—Puerperal Fever in Relation to Notification. To be opened by Dr. Berry Hart.

Thursday, August 2nd.—The Natural History of Fibroids and Recent Improvements in their Treatment. To be opened by Mr. Alban Doran, F.R.C.S.

Friday, August 3rd.—*Post-Partum* Hæmorrhage, its Prevention and Treatment. To be opened by Dr. Dakin.

The following gentlemen have signified their intention of joining in the discussions: Dr. Herman, Dr. Boxall, Mr. Stanmore Bishop, Dr. More Madden, Dr. Purslow, Dr. George Elder, Dr. Byers, Dr. John Campbell (Belfast), and Messrs. Harrison Cripps, Skene Keith, and W. H. C. Newnham.

The following papers have been proposed:

CRIPPS, Harrison, F.R.C.S. The Surgical Treatment of Uterine Fibroids.

MADDEN, Thomas More, F.R.C.S.Edin. On the Modern Treatment and Prevention of *Post-Partum* Hæmorrhage.

NEWNHAM, W. H. C., M.A., M.B., M.R.C.S. Successful Removal of Fibroid, 13 lbs. 11 ozs., by Intraperitoneal Hysterectomy.

PURSLOW, C. E., M.D. An Account of a Case of Complete Inversion of the Uterus of Three Years' Duration.

SCHARLIEB, Mrs., M.D., M.S. The Method Used and the Results Obtained in 40 Cases of Abdominal Hysterectomy for Fibroids at the New Hospital for Women.

WILLIAMS, Wm. Roger, F.R.C.S. When are Radical Operations for Myoma of the Uterus Necessary?

D. STATE MEDICINE.

Library, Town Hall.

President: JOHN CLOUGH THRESH, M.D., D.Sc., D.P.H. *Vice-Presidents:* HENRY HANDFORD, M.D., D.P.H.; HARRY COOPER PATTIN, M.D., D.P.H. *Honorary Secretaries:* GEORGE VINCENT, M.D., D.P.H., North Lodge, Anglesea Road, Ipswich; EDWARD PETRONELL MANBY, M.D., D.P.H., Local Government Board, Whitehall, S.W.

The following discussions have been arranged:

1. Can Modern Systems of Sewage Treatment be depended upon to Remove the Bacillus Typhosus and Allied Organisms? To be opened by Dr. Houston, and illustrated by lantern slides. The following will take part in the discussion: Professor Boyce, Dr. Grünbaum, Dr. Kaye, and Dr. Kenwood.

2. The Provision of Cottages in Rural Districts, and its bearing upon Public Health. To be opened by Dr. Tew.

3. What Action can be taken by Sanitary Authorities for the Prevention of Tuberculous Disease, apart from the Control of Milk and Meat Supplies? The following will take part in the discussion: Dr. Kenwood, Dr. Cameron, and Dr. W. Brown.

4. Should Municipalities provide Common Lodging-houses and Workmen's Dwellings? To be opened by Dr. Cooper Pattin. The following will take part in the discussion: Dr. W. Permewan, Dr. Herbert Manley, and Dr. Cameron.

The following papers have been proposed:

BEEVOR, Sir H. R., Bart. Rural Phthisis and the Insignificance of Case-to-Case Infection.

BERRY, William, F.R.C.S.I., D.P.H. Housing of the Working Classes.
BOYCE, Professor R. W., M.B. (Liverpool). The Construction of Sanatoria for Phthisis. (Illustrations by Lantern Slides.)
GRÜNBAUM, A. S., M.D. (Liverpool). Food Preservatives in Use on the Continent.
HARRIS, F. Drew, M.B. (M.O.H., St. Helens). Municipal Sterilisation of Milk: An Account of the Installation and Working of the System at St. Helens. (Illustrated by Lantern Slides.)
JONES, H. R., M.D., D.P.H. The Causes of Typhoid.
KAYE, J. R., M.B. (M.O.H. West Riding County Council). The Control of Milk Supplies.
MCWALTER, J. C., D.P.H. The Hygienic Aspect of the Use of Water Gas.
RAW, Nathan, M.D., D.P.H. (Medical Superintendent, Mill Road Infirmary, Liverpool). Rate-supported Sanatoria.
SCOTT, G. M., M.D. Cancer Mortality in East Anglia.
THRESH, J. C., M.D., D.Sc. (M.O.H., Essex County Council). Rural Water Supplies.
WALFORD, E., M.D. (M.O.H., Cardiff). The Etiology of Diphtheria.
WILLIAMS, W. Roger, F.R.C.S. The Prevalence of Cancer in different Countries and its Increase.

E. PSYCHOLOGY.

Class Room No. 9, First Floor, Higher Grade School.

President: R. PERCY SMITH, M.D. *Vice-Presidents:* EDMUND LEWIS ROWE, L.R.C.P.; WILLIAM ALDREN TURNER, M.D. *Honorary Secretaries:* CECIL ANTHONY PERRIER OSBURNE, F.R.C.S.Edin., The Grove, Old Catton, Norwich; JAMES RICHARD WHITWELL, M.B., County Asylum, Melton, Suffolk.

The following discussions have been arranged:

Wednesday, August 1st.—The Bearing of Sexual Function and Disease of the Sexual Organs on Insanity and Crime. Introduced by Dr. Macnaughton-Jones.

Thursday, August 2nd.—The Colony Treatment of Epileptics. Introduced by Dr. Aldren Turner.

Friday, August 3rd.—Organotherapeutics in Mental Disease. Introduced by Dr. Easterbrook.

The following gentlemen have intimated their intention to take part in the discussion: Dr. Crochley Clapham, Dr. Rayner, Dr. Robert Jones, Dr. E. M. Corner, Dr. Soutar, Dr. Lewis Bruce, Dr. G. E. Mould.

The following papers have been proposed:

CRAIG, Maurice, M.D. On Blood Pressure in Mental Disease.
JONES, Robert, M.D. Saturnine Encephalitis.
MACCORMACK, J. M., M.D. The Relation of the Lunacy Laws to Neuro-psychological Diseases.
NORMAN, Conolly, F.R.C.P.I. The Method of Keeping Clinical Records in Asylums.
PASMORE, E., M.D. Epileptic Insanity.
SMITH, Percy, M.D. Peripheral Neuritis and Insanity.
TURNER, John, M.B. The Pathological Histology of Acute Delirious Insanity. (With Lantern Demonstration.)
WHITE, Ernest, M.B. The Treatment of the more Acute Forms of Melancholia.

F. PHYSIOLOGY.

Class Room No. 1, Ground Floor, Higher Grade School.

President: Professor WILLIAM DOBINSON HALLIBURTON, M.D., F.R.S. *Vice-Presidents:* EDWARD WILLIAM WACE CARLIER, M.D.; Professor CHARLES S. SHERRINGTON, M.D., F.R.S. *Honorary Secretaries:* W. H. THOMPSON, M.D., Queen's College, Belfast; WILLIAM LEGGE SYMES, M.R.C.S., Physiological Department, St. Mary's Hospital Medical School, W.

The following discussions have been arranged:

1. The Formation and Excretion of Uric Acid in Health and Disease. To be opened by the President. Professor Vaughan Harley, M.D., F.R.C.P., F. G. Hopkins, B.Sc., A. Haig, M.D., T. H. Milroy, M.D., W. J. Smith Jerome, M.D., William Bain, M.D., etc., will take part in the discussion.

2. Muscular Tonus in Relation to Affections of the Nervous System. To be opened by F. W. Mott, M.D., F.R.C.P., F.R.S. Professor Victor Horsley, F.R.S., Professor C. S. Sherrington, F.R.S., J. J. Muskens, M.D., etc., will take part in the discussion.

The proceedings will also include papers and demonstrations on other branches of physiology and histology, among others the following:

CARLIER, Professor E. Wace. (1) Changes occurring in the Cell of the Newt's Stomach during and after Secretion. (2) Presence of the Ciliated Cells in Convoluted Tubules of Human and Mammalian Kidney.
COFFEY, Professor D. J. Histology of the Œsophageal Mucous Membrane.
GOODBODY, F. W., M.D. Influence of Sodium Salicylate on General Metabolism.
HARRIS, D. F., M.D. The Inertia of Protoplasm.
MILROY, T. H., M.D. The *Rôle* of the Liver in the Metabolism of Nucleins.
SHERRINGTON, Professor C. S., F.R.S. Spinal Vascular Reflexes.
THOMPSON, Professor W. H. Anæsthetics and Urinary Secretion.
WALLER, A. D., F.R.S. Influence of Massage on the Retinal Response to Light.

G. PATHOLOGY.

Chemical Lecture Room, Second Floor, Higher Grade School.

President: EDWARD E. KLEIN, M.D., F.R.S. *Vice-Presidents:* WILLIAM MILLER CROWFOOT, M.B.; Professor ROBERT MUIR, M.D. *Honorary Secretaries:* ALEX. GRANT RUSSELL FOULERTON, F.R.C.S., Dunsdale, Mulgrave Road, Sutton, Surrey; SYDNEY HERBERT LONG, M.B., 37, St. Giles Street, Norwich.

The following discussions have been arranged:

Wednesday, August 1st.—The Pathological Distribution of B. Diphtheriæ, and the Bacteriological Diagnosis of Diphtherial Infection. Introduced by Dr. F. W. Andrewes.

Thursday, August 2nd.—The Pathology of Cirrhosis of the Liver in Adults and Young Children. Introduced by Dr. Arthur Voelcker. The following gentlemen will take part in this discussion: Dr. Lazarus-Barlow, Dr. Poynton, Professor Simon Flexner, and Dr. Lister.

The following papers have been proposed:

FLEXNER, Professor Simon. The Bacteriology of Acute Tropical Dysentery.
LAZARUS-BARLOW, W. S., M.D. On Lipomata of the Kidney.
WALSHAM, Hugh, M.D. The Muscular Atrophy of Pulmonary Tuberculosis.
WILLIAMS, William Roger, F.R.C.S. The Pathogenesis of Myoma of the Uterus.

Members proposing to take part in the discussions or desirous of reading papers are requested to send their names at their earliest convenience to the Honorary Secretaries.

H. OPHTHALMOLOGY.

Class Room No 6, Ground Floor, Higher Grade School.

President: WILLIAM ARTHUR BRAILEY, M.D. *Vice-Presidents:* HAYNES SPARROW ROBINSON, M.R.C.S.; HENRY WORK DODD, F.R.C.S. *Honorary Secretaries:* CHARLES DEVEREUX MARSHALL, F.R.C.S., 10, Devonshire Street, Portland Place, W.; WALTER WILLIAM SINCLAIR, M.B., 16, Museum Street, Ipswich.

The following discussions have been arranged:

1. The Treatment of Chronic Glaucoma. Introduced by F. Richardson Cross, F.R.C.S. Messrs. T. H. Bickerton, K. A. Grossmann, G. Foggin, and John Hern will take part in the discussion.

2. The Treatment of Lachrymal Obstructions. Introduced by George A. Berry, M.B., F.R.C.S.E. Messrs. T. H. Bickerton, K. A. Grossmann, G. Foggin, John Hern, Kenneth Scott, and Ernest H. Cartwright, will take part in the discussion.

The following papers have been proposed:

BUCHANAN, Leslie, M.B. On a Case of Congenital Microphthalmos with Cyst.
FERGUS, A. Freeland, M.D. Some Forms of Optic Nerve Disease Probably of Sympathetic Origin.
FOGGIN, George, L.R.C.P. On Epicanthus.

I. DISEASES OF CHILDREN.

Class Room No. 14, First Floor, Higher Grade School.

President: FREDERICK TAYLOR, M.D. *Vice-Presidents:* RICHARD WILLIAM BROGDEN, M.B.; JOHN THOMSON, M.D. *Honorary Secretaries:* WILLIAM SOLTAU FENWICK, M.D., 8, Devonshire Street, Portland Place, W.; ALFRED M. GOSSAGE, M.B., 54, Upper Berkeley Street, W.

Wednesday, August 1st.—The Nature and Varieties of Pneumonia in Children. Introduced by Nestor Tirard, M.D. It is hoped that the following will take part in the discussion: More Madden, M.D.

Thursday, August 2nd.—On Lateral Curvature, Flat-foot and Knock-knee. Introduced by Arbuthnot Lane, F.R.C.S. It is hoped that the following will take part in the discussion: A. H. Tubby, M.S., J. J. Clarke, F.R.C.S., and Noble Smith, F.R.C.S.Edin.

Friday, August 3rd.—Enlargements of the Spleen in Children. Introduced by Samuel West, M.D.

The following papers have been proposed:

LITTLE, Muirhead, F.R.C.S. An Analysis of a Series of Cases of Infantile Paralysis, with some notes on treatment.
NICOLL, J. H., M.B. (Glasgow). Congenital Hypertrophic Stenosis of the Pylorus, with an account of a case successfully treated by operation.
OVEREND, W., M.D. (Clacton-on-Sea). The Caloric Values of Certain Artificial Infant Foods.
PARKINSON, Porter, M.D. Some Abnormal Empyemata in Children.
THOMSON, J., M.D., and LOGAN TURNER, M.D. The Causation of Congenital Stridor.

J. PHARMACOLOGY AND THERAPEUTICS.

Class Room No. 12, First Floor, Higher Grade School.

President: Professor WALTER GEORGE SMITH, M.D. *Vice-Presidents:* EDWARD LIVEING FENN, M.D.; CHARLES ROBERTSHAW MARSHALL, M.D. *Honorary Secretaries:* ALAN REEVE MANBY, M.D., East Rudham, Norfolk; WALTER ESSEX WYNTER, M.D., 30, Upper Berkeley Street, W.

The following discussions have been arranged:

1. The Treatment of Internal Hæmorrhage. Professor Bradbury, M.D., Lindley Scott, M.D., James A. Lindsay, M.D., and Walter E. Dixon, M.D.

2. Serumtherapy. T. J. Bokenham, M.D.

3. Diet in the Treatment of Disease. Professor Bradbury, M.D., G. King Martyn, M.D., Thomas Dutton, M.D., Arthur P. Luff, M.D., Lindley Scott, M.D., James A. Lindsay, M.D., David Sommerville, M.D., William Bain, M.D., Harry Campbell, M.D.

4. The Therapeutics of Open Air. F. W. Burton-Fanning, M.D., Lindley Scott, M.D., James A. Lindsay, M.D., C. Muthu, M.D., Ernest Kingscote, M.B.

The following papers have been proposed:

DIXON, Walter E., M.D., The Influence of Certain Drugs on the Vascular Mechanism of the Testis.
HERSCHELL, George, M.D. Demonstration of the Apparatus for Administering the Intragastric Shampoo.
JOWETT, H. A. D., D.Sc. The Chemistry of the Jaborandi Alkaloids.
JOWETT, H. A. D., D.Sc., and MARSHALL, Professor C. R., M.D. Remarks on Extract Jaborandi Liquidum (*B.P.*)
KINGSCOTE, Ernest, M.B. On Treatment of Asthma.
MARSHALL, Professor C. R., M.D. The Pharmacology of the Jaborandi Alkaloids.
MARTYN, G. J. King, M.D. The Treatment of Gouty Eczema.
ROSS, F. W. Forbes, M.D. Medicinal and Dietetic Treatment of Heart Failure in the Aged.

K. LARYNGOLOGY AND OTOLOGY.

Class Room No. 10, First Floor, Higher Grade School.

President: SCANES SPICER, M.D. *Vice-Presidents:* HERBERT TILLEY, M.D.; WILLIAM MILLIGAN, M.D. *Honorary Secretaries:* HARRY LAMBERT LACK, M.D., 48, Harley Street, Cavendish Square, W.; ARTHUR YOUNG PRINGLE, L.R.C.P., 64, St. Matthew Street, Ipswich.

The following discussions have been arranged:

The Indications for Intranasal Treatment in Ear Disease. Introduced by Dr. P. McBride, Dr. Dundas Grant, and Mr. Cresswell Baber.

The Pathology and Treatment of Toxic Paralyses of the Larynx. Introduced by Dr. Watson Williams.

The following gentlemen propose to take part in the discussions: Dr. StClair Thomson, Dr. Logan Turner, Dr. William Hill, Dr. Jobson Horne, Dr. Herbert Tilley.

L. TROPICAL DISEASES.

Art Room, Second Floor, Higher Grade School.

President: Colonel KENNETH MACLEOD, M.D. (ret. I.M.S.). *Vice-Presidents:* Surgeon-Lieutenant-Colonel OSWALD BAKER, M.D., I.M.S.; Major RONALD ROSS, I.M.S. *Honorary Secretaries:* ANDREW DUNCAN, M.D., M.R.C.P., School of Tropical Diseases, Albert Dock, E.; GUTHRIE RANKIN, M.D., M.R.C.P., 4, Chesham Street, Belgrave Square, S.W.

On Wednesday the business will be introduced by a short address from the President, Colonel Kenneth Macleod.

The following subjects have been arranged for discussion:

Wednesday, August 1st.—Quinine: its Action and Modes of Employment in Malaria. The discussion on this question will be opened by Dr. Andrew Duncan, M.R.C.P. The following will take part in the discussion: Lieutenant-Colonel Stewart, I.M.S.

Thursday, August 2nd.—Ankylostomiasis. The discussion on this question will be opened by Major G. M. Giles, M.B., F.R.C.S.

Friday, August 3rd.—The Etiological and Pathological Relationships of Yaws. The discussion on this question will be opened by Mr. Jonathan Hutchinson, F.R.S., LL.D.

The following gentlemen have intimated their intention to take part in the discussions: Dr. Patrick Manson, Mr. James Cantlie, Colonel Kenneth Macleod, Deputy Inspector-General John Tyndall, Mr. Malcolm Morris, Surgeon-Lieutenant-Colonel Oswald Baker, Sir Wm. Kynsey, Major Wilson, Dr. Fielding-Ould, Dr. Alfred Hillier, Dr. James Watson, Dr. Sandwith (Cairo), Dr. Thin, Major W. J. Buchanan, I.M.S., Major F. P. Maynard, I.M.S., Lieutenant-Colonel Maitland, I.M.S.

The following papers have been proposed:

BASSETT-SMITH, Percy W., Staff-Surgeon, R.N. Abscess of Left Lobe of Liver, with Remarks, particularly referring to the Amœbic Causation.
BUCHANAN, Major W. J., M.B. Hot Weather Diarrhœa in India.
CANTLIE, James, F.R.C.S. Subhepatic Abscess.
DUNCAN, Andrew, M.D. The Diseases of Ghoorkhas.
MACLEOD, Colonel Kenneth, M.D. The Management of Lung Lesions consequent on Liver Abscess.
SAMBON, Louis, M.D. The Geographical Distribution and Natural History of Plague.
SMITH, W. Johnson, F.R.C.S. The Surgical Treatment of Hepatic Abscess.
THIN, George, M.D. A note on a case of Blackwater Fever, with Specimens.
WILLIAMSON, George A., M.D. The Cyprus Sphalangi and its Connection with Anthrax.

Members proposing to take part in the discussions or desirous of reading papers should communicate, without delay, with the Honorary Secretaries.

M. NAVY, ARMY, AND AMBULANCE.

Gainsborough Hall, opposite St. Margaret's Church, Bolton Lane.

President: Inspector-General BELGRAVE NINNIS, M.D., R.N. *Vice-Presidents:* Surgeon-General HENRY SKEY MUIR, C.B., M.D., A.M.S.; Brigade-Surgeon Lieutenant-Colonel G. S. ELLISTON, V.D., V.M.S. *Honorary Secretaries:* JAMES HARPER, M.D., Surgeon-Captain V.M.S.C., 25, Rosary Gardens, South Kensington, S.W.; FRANCIS AUGUSTUS BROOKS, M.D., Surgeon-Captain Suffolk and Harwich V.A., St. Felix, Felixstowe, Suffolk.

It is proposed to hold discussions as follows:

Wednesday, August 1st.—The Medical Service of the Army, Militia, Yeomanry and Volunteers.

Thursday, August 2nd.—The First Aid and Transport of Sick and Injured in Civil Life in Large Towns.

Friday, August 3rd.—On Modern Small-bore Rifle Wounds, and other Medical and Sanitary Matters of which the War in South Africa has Increased our Knowledge.

The following papers have been proposed:

BEADNELL, Surgeon C. Marsh, R.N. On Modern Small-bore Rifle Wounds.
CANTLIE, Surgeon-Captain J. How to Link the Militia, Yeomanry and Volunteer Medical Services with the Royal Army Medical Corps.
CAVERILL, Surgeon-Major T. F. S. On Cavalry Ambulance Service.
COLBORNE, Staff-Surgeon W. J., R.N. On Infectious Disease on Board Ship.
BIRCH, Surgeon-Captain De Burgh. On the Organisation of the Medical Department of the Volunteer Forces.
DENT, Clinton, F.R.C.S. On Modern Small-bore Rifle Wounds.
ELLISTON, Brigade-Surgeon-Lieutenant-Colonel G. S. On Brigade Bearer Companies.
HAMILTON, Surgeon-General J. B., R.A.M.C. On the Past, Present, and Future of the R.A.M.C.
HUTTON, Surgeon-Major C. A., On First Aid and Transport of Sick and Injured in Civil Life in Large Towns.
JAMES, Major H. E. R., R.A.M.C. On Camp Sanitation.
MATHEWS, Surgeon-Major Valentine. On Cavalry Ambulance Service.
MARSHALL, Surgeon-Major de Zouche. On First Aid in Civil Life.
STEPHENSON, Surgeon-Captain F. L. On the Cycle in the Field for Medical Service.
RANKINE, Lieutenant-Colonel G. S., I.M.S. On Cavalry Field Ambulance.
SQUIRE, Surgeon Lieutenant-Colonel J. E., V.D. On the Augmentation of the R.A.M.C. for War.
TRIMBLE, Lieutenant-Colonel C. J., L.R.C.P., L.R.C.P. On the St. John Ambulance Brigade Organisation and Work.
WRIGHT, Professor A. E., M.D. On Anti-enteric Inoculation.

The following, amongst others, are expected to take part in the discussions: Surgeon General Sternberg, Director-General U.S. Army; Surgeons-General O'Dwyer, Skey Muir, C.B., and Evatt, A.M.S.; Lord Knutsford, Lieutenant-Colonel C. B. Maitland, I.M.S.; Majors James and Treherne, R.A.M.C.; Brigade-Surgeon-Lieutenant Colonel Hopson, V.D.; Captain Milburn, Messrs. Frederick Treves, Edmund Owen, M. K. Hargreaves, etc.

A Loan Collection of objects of special interest to the section will be formed in the anteroom off the Section meeting room, and on the lawn outside a torto se tent of the Military Equipment Company will be pitched, in which many specialities for the field will be seen.

PROGRAMME OF PROCEEDINGS.

TUESDAY, JULY 31ST, 1900.

9.30 A.M.—Meeting of 1899-1900 Council. Magistrates' Room, Town Hall.
11 A.M.—Church Service. St. Mary-le-Tower Church.
2 P.M.—First General Meeting. Report of Council. Reports of Committees; and other business. Central Hall, Higher Grade School.
8.30 P.M.—Adjourned General Meeting from 2 P.M. President's Address. Lyceum Theatre.

WEDNESDAY, AUGUST 1ST, 1900.
9.30 A.M.—Meeting of 1900-1901 Council. Magistrates' Room, Town Hall.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Second General Meeting. Address in Medicine. Central Hall, Higher Grade School.

THURSDAY, AUGUST 2ND, 1900.
9.30 A.M.—Meeting of Council. Magistrates' Room. Town Hall.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Third General Meeting. Address in Surgery. Central Hall, Higher Grade School.
7 P.M.—Public Dinner of the Association. Council Chamber. Town Hall.

FRIDAY, AUGUST 3RD, 1900.
10 A.M. to 1 P.M.—Sectional Meetings.
2.30 P.M.—Concluding General Meeting. Address in Obstetrics. Central Hall, Higher Grade School.

SATURDAY, AUGUST 4th, 1900
Excursions.

ANNUAL MUSEUM.

THE Annual Museum in connection with the sixty-eighth meeting of the British Medical Association will be arranged in the following Sections:

SECTION A.—Food and drugs, including prepared foods, chemical and pharmaceutical preparations, etc.

SECTION B.—Instruments, comprising medical and surgical instruments and appliances, electrical instruments, microscopes, etc.

SECTION C.—Books, including diagrams, charts, etc.

SECTION D.—Sanitary appliances and ambulances.

Two very good halls, practically adjoining each other, have been obtained for the Museum.

SECTIONS A and D will be held in the Public Hall, Westgate Street, a fine well-lighted and ventilated room. Length 119 feet, width 49 feet.

SECTIONS B and C will be held in the Old Museum Rooms, on the first floor, close to the Public Hall. Length of room, 71 feet, width 25 feet.

Both halls are very central.

Exhibitors (other than members of the medical profession) will be charged for table, floor, and wall space as follows: In Sections A, B, and C from 3s. 6d. per square foot, depending on the position of the table, tables 3 feet and 3 feet 6 inches wide being provided. In Section D 6d. per square foot for floor space (all fittings to be provided by the exhibitor). Wall space (where available) for advertisements will be charged for at 6d. per square foot.

Advertisements in Museum Catalogue.—A catalogue will be printed, and 2,000 copies distributed gratis to members of the Association. Prepaid advertisements, to be sent before June 20th, will be inserted. Further particulars will be sent on application.

REGULATIONS.

1. All communications on general matters connected with the Museum, and all applications for space, should be addressed to Mr. C. K. Moseley, 14, Northgate Street, Ipswich.

2. A brief description of each exhibit for insertion in the Museum Catalogue must be in the hands of the Secretary before June 19th.

3. Space will as far as possible be allotted in the order of application and in proportion to the amount applied for, the Committee reserving power to give preference to *bonâ-fide* inventions and improvements not previously exhibited, and also to refuse any exhibit they may consider unsuitable.

4. In the event of more space being applied for than is actually available, the allotment will be made at the discretion of the Committee.

5. The Committee reserve to themselves the power to utilise any of the floor space set apart for Section D (if it is not all required for sanitary exhibits) for the erection of additional tables, or for any other purpose they may think fit.

6. All exhibits should be addressed to the Secretaries of the Museum, British Medical Association, Public Hall, Ipswich, with the name of the Section for which they are intended, with the exception of those for Sections B and C, which should be addressed, The Old Museum Rooms, Ipswich. Packages should not be addressed to a firm's representative at the Museum.

7. All exhibits must be delivered between July 26th and July 28th, and each package must bear a card showing the name and address of the exhibitor.

8. All exhibits must be placed in the allotted space by 2 P.M. on July 30th.

9. No signs or placards will be allowed in the hall which may interfere with neighbouring exhibits. No exhibit or placard on the central tables must reach higher than 2 ft. 6 in. from the table. The arrangements of signs, placards, exhibits, etc., will in every case be subjected to the approval of the Committee.

10. Intimation of the space allotted to each exhibitor will be sent as promptly as possible after June 1st, marked upon a plan. On receipt of cheque for the cost of such space, a card for the admission of the exhibit will be sent.

11. All cheques to be made payable to Mr. C. K. Moseley, 14, Northgate street, Ipswich.

12. No exhibits will be received except on the understanding that the above regulations are strictly complied with.

RAILWAY ARRANGEMENTS.

ARRANGEMENTS have been made by which the railway companies of Great Britain and Ireland will issue to members and their friends attending the annual meeting at Ipswich *return tickets* at a *single fare and a-quarter*. These reduced tickets will be available from July 28th up to August 6th, both dates inclusive.

Those members and their friends desirous of taking advantage of this concession must produce, for the information of the railway booking clerk, a certificate signed by the General Secretary of the British Medical Association. A separate certificate will be necessary for each ticket required, and these certificates can be had on application to the General Secretary, 429, Strand, London, W.C.

Those members and their friends intending to travel from places where it is not likely that there will be through bookings to Ipswich, should give notice at the railway booking office a few days in advance, in order that the necessary application may be made to the head offices of the railway companies for the issue of through fares. It should be borne in mind that a separate certificate is necessary for every ticket required at the reduced rate.

During the meeting the Great Eastern Railway will grant to members and their friends return tickets at a *single fare* to all stations within a radius of fifty miles of Ipswich. To obtain this concession production of member's card will be necessary.

CONTRACT MEDICAL PRACTICE.

FIFE COLLIERY SURGEONS' ASSOCIATION.

THIS Association, which was formed at the end of last year, has already had convincing proof of the benefits to be derived from hearty and friendly co-operation within the profession. A short time ago the Association unanimously agreed to inform the Miners' Board, and through it the workmen, that for reasons stated the medical fees were quite inadequate, and that the aim of the Association was that a uniform rate of 6d. per fortnight exclusive of medicine should be adopted throughout the district. From the Miners' Board a recommendation was sent down to the several districts approving of the increase, and after opportunities had been given the men of expressing their opinion it was found that in almost all the collieries throughout the county overwhelming majorities were found to be in favour of the increased rate, many of the men showing commendable heartiness in their response, and in most places the new rate came into operation forthwith.

CLUB RATES.

A. P. C. asks the following questions: (1) If a man comes to me and asks for my card, and promises to obtain for me many members at the rate of threepence a week, if I am willing to start a home club, and I accede to his request, should I be acting unprofessionally, and be laying myself open to the censure of the General Medical Council? (2) If I succeed to a practice in which there is a large amount of club work, am I entitled to notify to such clubs that fact, and to ask that the members in my predecessor's name may be transferred to me?

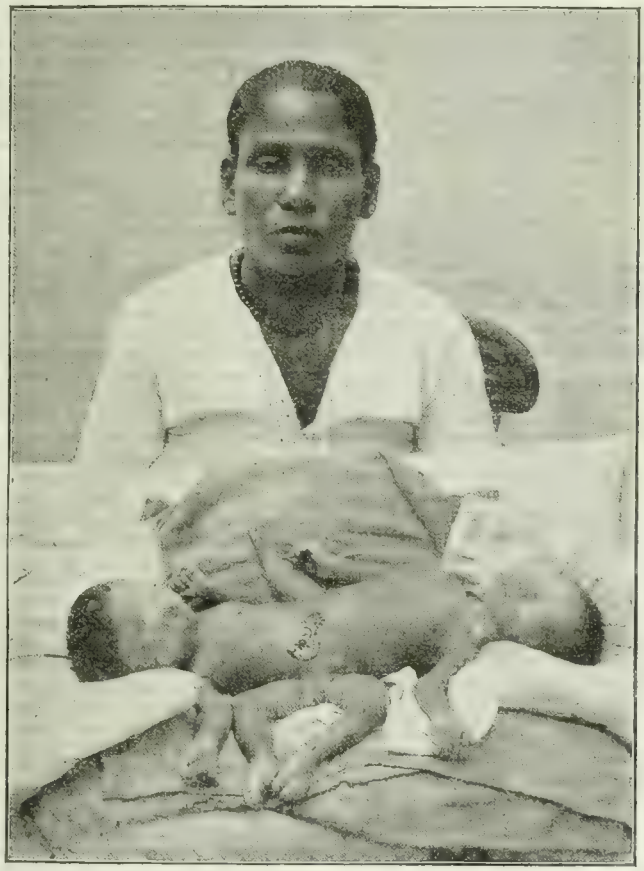
*** (1) Such a course cannot be recommended, and the General Medical Council has condemned canvassing. (2) Our correspondent is entitled to make such a notification to the officials of the club.

THE fourth Flemish Congress of Natural and Medical Sciences will open at Brussels on September 30th. The President of the Organising Committee is Dr. Borginon. Communications have been promised by a large number of University professors and prominent practitioners.

CASE OF DOUBLE MONSTER (ISCHIOPAGUS TETRAPUS) THAT LIVED SEVEN DAYS.

MR. C. HEYNSBERGH, L.R.C.P. and S.Edin., sends us the following account of a double monster born at Kalutara, Ceylon, at 6 A.M. on January 10th, 1900:

The labour, he writes, was of a normal character lasting eleven hours. The head of one child presented at first and the shoulders and arms of that child came progressively out but at the hip of the child there was some delay. Slight traction at the shoulder and armpits, already out, brought two lower extremities away on one side, and it was only when another lower limb on another side of the child came away that suspicion was aroused that a monster was being born. The length of the abdomen was soon perceived to be abnormal and the fusion of the two hip bones was discovered. The abdomen, chest, and arms of the other child quickly slipped out followed by the other head. The cord was single and fixed at the centre of the two bodies. An idea may be formed of this monster when one imagines two well-formed babies deprived of their lower extremities and fixed with their hips attached to each other at their lower ends, with a continuous abdomen and back. On the one side of these children projected two very movable lower extremities and between them was a fully developed female organ containing the urethra, behind it was the anus; excretions through these organs were normal. On the other side of the united twins was a single limb resembling in shape an old-fashioned wooden leg. There appeared to be a stout thigh with evidently two bones in it or a flattened broad bone and tapering down was what resembled an elongated big toe with a nail at its tip. This limb was also very movable and had a joint at its upper end.



The monster lived for fully seven days and three hours, death having been simultaneous in both at 9 A.M. on January 17th, 1900. The cord had not dropped and was inflamed and there was apparent extension of inflammation in the abdomen common to both children. While alive the children were fed by two wet nurses, they apparently had each a distinct set of nerves, for when one was feeling pain the other was fast asleep. They cried independently of each other when hungry, but apparently had sensations common to both when they felt inclined to micturate and defæcate. There were apparently two spinal cords one acting independently of the other excepting in the acts of micturition and defæcation.

The father is a fisherman during the fishing seasons of the year and a boatman plying along the Kaluganga river at other seasons. He is a healthy muscular man, aged 38 years and 8 months, of very active habits. He was married eighteen years ago to the mother of these united twins. She is 33 years and 2 months old and had seven previous conceptions and deliveries at full periods and in a normal manner. Five of her children, three males and two females, are still living. Her eldest is a young robust woman, 16 years and 2 months old, and the youngest now living is a boy, 2 years and 8 months old. The two dead were each 4 years old when they died. One was a boy who died of convulsions, probably a neglected case of worm complaint, and the other was a girl who died of marasmus, also probably from a similar neglect. The mother is a well-made woman of active habits, a chair-weaver. The girth round her hips is 32 inches, round abdomen 30 inches, and round the chest 31 inches.

The specimen is in Mr. Heynsbergh's possession. He has carefully removed the stomach and intestines of both children. The descending colons join in a common cloaca and terminate in one short rectum. There is one womb with ovaries on either side and Fallopian tubes.

[This is a typical example of the form of monstrosity best classified under Ahlfeld's group "Ischiopagus." Ahlfeld in his *Missbildungen des Menschen* (Text p. 82, and Atlas plate XII) demonstrates very clearly the transition from dicephalus to ischiopagus tetrapus, from drawings and dissections of cases already reported. Already in dicephalus tetrabrachius (head, arms, and thorax, double but separate, with a common abdomen and lower extremities) the axes of the separate portion of the double monster form a wide angle. In the least developed type of ischiopagus the axes are so widely separate that the trunk lies above the single pair of legs like the top of a letter T, with a head and arms at each extremity. In the more developed types of ischiopagus a third leg (ischiopagus tripus) then a fourth appear, till we have, as in Mr. Heynsbergh's case, a true ischiopagus tetrapus. See also Hirst and Piersol *Human Monstrosities*, pp. 154 to 160.

Ischiopagus must not be confused with pygopagus, where the twins are placed back to back united at the sacrum. Nor must it be classified with ischiopagus parasiticus where one twin is an ill-developed "parasite," consisting of arms and legs with no head and little or no trunk, appended to the lower part of the "autosite," and in no way connected with the spinal column of the latter.

MEDICAL STUDENTS IN GERMAN UNIVERSITIES.—According to Ascherson's *Deutsche Universitäts Kalender* the number of medical students in the various German-speaking Universities in the academic year 1899-1900 is as follows: Berlin and Munich have each 1,376; Vienna comes next with 1,270. Then follow in order Leipzig with 672, Würzburg with 626, Graz with 407, Erlangen with 387, Freiburg with 365, Kiel with 360, Geneva with 326, Strassburg with 315, Bern with 294, Greifswald with 288, Breslau with 260, Bonn with 254, Heidelberg with 253, Giessen with 251, Zürich with 248, Königsberg with 239, Halle with 225, Marburg with 224, Jena with 179, Tübingen with 171, Lausanne with 171, Basel with 140, Rostock with 105, Czernowitz with 6. The 20 Universities in the German Empire have together a total of 8,066 students of medicine.

NOVA ET VETERA.

II.—WAR SURGEONS OF THE PAST.

The Russo-Turkish War.

One of the most vivid records of the experiences of a war surgeon is contained in a book published two or three years ago by Dr. Charles S. Ryan, of Melbourne, who won distinction in the Russo-Turkish war both as a medical officer and as a combatant.[1]

Dr. Ryan had the good fortune to serve in the Ottoman army, where he was to a large extent unfettered by the rigid system of discipline which in some other armies reduces a junior surgeon to something little better than an automatic machine. He was able to act on his own initiative, and to do his work untrammelled by external authority to an extent undreamt of in the philosophy of our War Office. Hence he did many things which do not generally fall within the sphere of medical officers.

The result of this liberty of action is seen in his book, which from the first page to the last is full not only of interesting records of surgical experience but of moving accidents by flood and field that would supply matter for half-a-dozen novels of adventure. Dr. Ryan is an Australian, and took his degree at Edinburgh at the age of 21. After visiting Paris, Vienna, and other places in search of knowledge, he, on the outbreak of war between Russia and the Sublime Porte in 1877, obtained a commission as a military surgeon in the Ottoman service. He thus found himself, he says, engaged in a practice which included some 300,000 patients more or less, of whose language he was entirely ignorant, and of whose manners all previous impressions had taught him to be suspicious. He frankly owns that he found these suspicions groundless as regards the rank and file of the Ottoman army. The magnificent physique and robust constitution of the Turkish private soldiers he believes to be due mainly to two causes.

In the first place, they never touch alcohol; and in the second, the traditions of Turkish social life and the rigid guardianship exercised over Turkish women have effectually kept out the scrofulous taint which has so appreciably affected the populations of other European nationalities.

Dr. Ryan was gazetted at once as an army surgeon, with the rank of Colghassi or Major, and he was soon appointed to be regimental surgeon to the Kyrchehir regiment, and was at once sent with it to Sofia. He was soon moved on to Nish, the headquarters of the Turkish army. Here he performed his first operation on a foot-soldier whose knee had been shattered by a shell. The man refused chloroform, and Dr. Ryan amputated above the knee without any anæsthetic. No word was uttered by the patient, who smoked a cigarette all the time; and when the captain came round afterwards to take down the name, age, and regiment of the wounded man, the patient answered all the questions quietly and unconcernedly while the surgeon was stitching up the flap.

How the Turks take Physic.

The Turks took physic with equal stoicism. At Widdin Dr. Ryan had a trench dug outside his tent, and once a week servants—the paymaster's servant and his —went down to the swamp, and brought back barrowfuls of flowers, which were planted in the trench. There the orderlies made a great seat of turf, and every morning from 6 o'clock till half-past 9 the doctor sat there, like Æsculapius among the flowers, to receive his patients. Epsom salts formed a sovereign remedy for most of the trifling sicknesses, and his method of giving the physic was, he says, extremely primitive. As he sat on his seat of turf, he had a sackful of Epsom salts beside him, together with a bucket of water and a pannikin. When the patient had swallowed a handful of the salts, Dr. Ryan presented him with a pannikin of water to wash down the nauseous mouthful. The men never complained, and accepted these simple ministrations with exemplary resignation.

The Giaour Operator and Mussulman Molars.

Although the Turks have as a rule excellent teeth, Dr. Ryan had a good deal of practice in tooth-drawing. Some of the Mussulman molars were dreadfully obstinate, and resisted every effort of the Giaour with fanatical determination. One man with a huge aching grinder in his upper jaw came to him three mornings in succession, for with the simple appliances at his disposal he was unable to extract it at one sitting. At last he made the patient sit down on the ground in front of him, and grasping the forceps in his right hand he braced his feet against the pit of the Turk's stomach and put forth every effort. There was a crunching, grinding noise, a sound of breaking and rending, then a "plop" as when a recalcitrant cork comes out of a bottle of pale ale, and the operator was lying on his back in the trench among the arum lillies with the forceps and the molar in his hand at last. As for the Turk, he merely spat the blood out of his mouth, piously remarked that Allah was very good, and went back to his company.

Remarkable Recoveries.

On July 18th Dr. Ryan arrived at Plevna, where he soon had abundant opportunities of exercising his surgical skill. He says that he never knew men to exhibit such fortitude under adverse circumstances as the Turkish soldiers, nor had he ever met patients who recovered in so remarkable a way from terrible injuries. They were magnificent material for a surgeon to work on, their fine physique being unimpaired by drink or other excesses. There were isolated cases of intemperance among the higher officers, but he never saw a private under the influence of liquor. Many could have been saved by stimulants, but could not be got to touch alcohol. Many died also rather than submit to amputation, as they believed the loss of a limb would exclude them from Paradise. A man was struck in the abdomen by a piece of shell and about a foot of intestine projected through the wound. Dr. Ryan washed the intestine, enlarged the wound, replaced the bowel and stitched up the wound. In a week or two the man recovered and went back to his place in the ranks. Another remarkable cure was that of a man wounded by a Berdan conical bullet which pierced the left side of the skull about an inch and a-half below the crown and passed out in a straight line through the other side. It bored a hole clean through the upper part of the brain, but the man, though weak from loss of blood, was perfectly rational. Dr. Ryan put a syringe into the orifice and cleaned the lacerated portion of the brain with a solution of carbolic acid, afterwards dressing the wounds with an antiseptic pad and bandages. The man remained in hospital six weeks when he was discharged cured and went back to his regiment.

Finger Wounds.

Owing to the fact that the Turks fought mostly behind entrenchments, finger wounds were very frequent after the battle at Plevna. The wounded men tendered their maimed hands for operation without the slightest flinching. The stump of a willow tree which had been cut down stood near the bank of the stream, and there Dr. Ryan was accustomed to take his seat after providing himself with a basin of water from the stream, and a sharp knife. He put a little carbolic in the water, and with these simple preparations he was ready for his patients, who sat cross-legged in a row close by him. There was no anæsthetic, no nurse, none of the usual accessories of a hospital. The wounded soldiers patiently waited their turn, and a man with a thumb or finger mangled into a shocking pulp would hold up his injured hand as he sat on the grass at the surgeon's feet, and would look on calmly while he cut away the flesh and washed and dressed the bleeding stump. Dr. Ryan would do over a dozen such cases in one morning, and later in the campaign, when the fighting in the redoubts began, he amputated as many as twenty-seven fingers in succession.

Plevna Hospitals.

After Plevna was invested, his hospital work, which had previously proceeded on regular lines, with an encouraging measure of success attending his efforts, began to degenerate into a desperate single-handed struggle against wounds, want, filth, disease, and death. He was sent to take charge of a large building which had been converted into a hospital, and was already overcrowded with the most pitiable cases. There were about twelve large rooms, fairly high, well-ventilated and whitewashed; but more than half of them had no beds. At first he had 250 men to look after, and the task appeared

[1] *Under the Red Crescent: Adventures of an English Surgeon with the Turkish Army at Plevna and Erzeroum, 1877-1878.* Related by Charles S. Ryan, M.B., C.M., in association with his friend, John Sandes. London: John Murray. 1897. (9s.)

hopeless. There were 100 beds in the hospital, with a small supply of extra mattresses and blankets; many of the wounded, therefore, had to lie huddled up on the floor in the clothes in which they had been shot. They lay on the floor of the passages as well as in the rooms, and were packed so close that it was difficult to pick one's way through the hospital without treading on them. In one room, 15 by 15 feet, there were at one time sixteen men, all hideously wounded, dying on the hard boards. The bare, whitewashed walls were splashed with blood, which had turned to rusty dark brown stains, and the horrors of the place can only be faintly hinted at. Dr. Ryan was the only medical man on duty in that hospital, with a couple of *jarra bashis*, or dispensers, to assist in dressing, and a squad of Turkish soldiers as hospital nurses. He had chloroform, but no other drug of any kind; soon he saw with dismay that the stock of antiseptic dressings was giving out, and he lived in daily fear of finding himself face to face with hospital gangrene. In a room in which sixty men were lying, though there was not space for more than twenty, some on stretcher-beds, some on mattresses, and many on the floor; the boards were covered with blood and filth like a shambles. Round many of the sufferers pools of pus had formed on the floor and the smell was terrible. By-and-by the antiseptic dressings were completely exhausted, and Dr. Ryan had to fall back on coloured prints from the bazaars for bandages, and to plug the wounds with plain cottonwool of which there was a large supply. Naturally the wounds treated in this way could not be kept sweet. All that Dr. Ryan could do was to go round on his hands and knees from one man to another literally scraping the maggots out of the wounds either with his finger or an instrument. Often and often, he says, as he went round he has taken the plugging of cottonwool out of a gaping wound, and found underneath it a nest of maggots feeding in the flesh of the still living man, who would thank him with a look for the temporary relief. Pyæmia carried off the men "like rotting sheep." Hospital gangrene was soon rampant, and the situation became further complicated by outbreak of confluent small-pox and typhoid fever. The sufferings of the men were aggravated by a plague of lice. As Dr. Ryan spent some fourteen hours a day among them he also fell a victim to these obscene parasites.

BREAKDOWN OF THE SURGEON.

Overwork and the terrible depression caused by his surroundings at last undermined his health. His condition was made worse by a bullet wound in the neck, which suppurated and gave him a good deal of trouble till the skill of Mr. MacKellar, who providentially appeared on the scene, brought relief; but the misery all around overpowered even his high spirit, and when Osman Pacha seized the opportunity of the way being opened up to Sofia to send away the wounded, Ryan asked for a brief respite. He left Plevna intending to return, but before he could do so it was again shut out from the outer world. He was thus spared the sorrow of being present at the surrender of the place in which he had worked so well, and in the defence of which he had done his share.

Of his further adventures at Erzeroum and elsewhere we have no space to speak, except to say that in whatever circumstances fate and the fortune of war placed him Dr. Ryan always showed himself a war surgeon of the best type. He thoroughly enjoyed his work, and the adventurous life of a campaigner was evidently congenial to him. He seems to have with equal zest led a charge and extracted a bullet.

LITERARY NOTES.

THE literature of the present day is so realistically sanguinary in character that one is prepared for almost anything. We confess, however, that we were startled to read in the May number of the *St. Bartholomew's Hospital Journal* the announcement that "an old house-physician has sent the following extract from an officer at the front." We were relieved to find that the extract from the officer was nothing more gruesome than an account of an operation for the radical cure of hernia.

Much confusion is caused by the fashion of calling diseases by the names of their discoverers, real or supposed. But the method suggested, if we remember aright, by Mr. Jonathan Hutchinson some years ago, of naming rare or obscure conditions after the unfortunate sufferers who exhibited them was still worse. "Bunkum's disease" might be claimed for Windbagge by the partisans of the latter of those two great men, and for Dickmann, Levantard, or Druggemoff respectively by the countrymen of these learned professors. But "Mrs. Jones's legs" or "Mr. Smith's cheek" must be either meaningless or misleading to all but those who had had the privilege of seeing the patient. We note with regret, therefore, that this method of nomenclature has recently been revived or, rather, created anew independently, by Dr. A. Delpeuch, who in the *Presse Médicale* of May 11th describes what he considers to be a characteristic symptom of aortic insufficiency——namely, rhythmical shaking of the head synchronous with the pulse beat, under the name of "Musset's sign." He has found it recorded in the life of Alfred de Musset, written by his brother Paul, that in 1842 the great poet exhibited this symptom, and it is also stated that "a change in the aortic valves" was diagnosed by his physician. To great men the biographer must be a serious addition to the terrors of death; if their names are to be used as labels for symptoms or diseases, some of them may be driven to the desperate resource of the hero who threatened to prevent an injudicious admirer from writing his life by taking that of his would-be biographer.

Some idea of the vast output of medical literature at the present day may be got from figures recently published in the *Internationales Centralblatt für Laryngologie* as to the publications in one relatively narrow province of medicine which appeared in 1898. The total number of monographs, papers, etc., dealing with diseases of the nose, pharynx, larynx, thyroid gland and œsophagus given to the world in that one year is estimated at 1,592. Germany heads the list with 362, the United States stand second with 304; then come in order Great Britain with 273, France with 270, Belgium and Holland with 118, Austria-Hungary with 117, and Russia with 75. And these figures are by no means complete, for they do not include Italy and some other countries, and Russia is not fully represented. As regards subject, the nose is most prominent, no fewer than 422 publications being devoted to it; next come the larynx and trachea with 413, the pharynx being a bad third with 250. If this be in the green wood of a speciality, the literature of which only forty years ago would scarcely have filled a page of a library catalogue, what must be happening in the dry wood of general medicine, surgery, and midwifery?

At the banquet recently given in honour of his seventieth birthday, Dr. Abraham Jacobi, of New York, reviewed the general state of the medical commonwealth in 1853, when he became a citizen of the great Republic of the West. Referring to medical literature, he said it was then in its beginning in America. Drake had indeed long before written his *Principal Diseases of the Valleys of North America*, "an immortal work." Oliver Wendell Holmes had proclaimed the contagiousness of puerperal fever many years before Semmelweis; but such achievements were few. Original books were scarce. There were few journals, but some of these were of the best. Dr. Jacobi specially mentioned the "honest, scientific, and conscientious" *Journal of the Medical Sciences* and the "always noble and refined" *Boston Medical and Surgical Journal*. There were in New York the *Journal of Medicine*—since transformed into the *New York Medical Journal*—and the *American Medical Times*. Now the medical journals of the United States number more than three hundred. Of these Dr. Jacobi said:

> That some represent the finest flowers of intellectual research and keen observations, many more, however, the choicest rubbish accumulated by phenomenal ignorance and advertising impertinence, is simply a sad fact. Reduce them to forty; these forty will have a larger market, may be able to select their contributions and to pay the contributors, while at present they enrich the publishers only. The larger markets will enable professional men or corporations to follow and improve upon the example of the *Philadelphia Medical Journal*, and at least strike out for independent action, and finally found an independent press, not relying for its sustenance on the advertisements of proprietary articles, whose principal element is the barbarism of their names, or on so-called original papers which bear the unwritten signature of nostrum manufacturers on every one of its bold and shameless pages. Gentlemen, it is time things should take a turn.

Dr. Jacobi discourses most eloquent music. But will the promoters of the literary enterprises which he so justly condemns dance to his piping?

Under the heading "*Post-mortem* Advertisement," "Front Page" writes to us as follows:

> Is it not very unusual to continue the advertisement of a book by a well-known physician two or three years after the death of the author? Is it possible that, as in the case of the late landlord of the "Golden

Lion," obedient to the Heavenly Will, the son keeps on the business still?

We must leave to experts on medico-ethical casuistry the decision of the question as to which "Front Page" craves to be enlightened. His innocent inquiry, however, appears to suggest that in his opinion medical literature has no value save as an advertisement; *argal* it naturally follows that when a medical writer is absorbed into the infinite, his works should follow him. *Cessante causâ cessat effectus.* "Front Page" has given no clue to his identity, and we therefore do not know whether he has himself written books—or should we say trade circulars? But in any case he has made a very remarkable contribution to medical literature.

THE CLINICAL LABORATORY OF THE WESTMINSTER HOSPITAL.

As was stated some time ago, the Committee of the Westminster Hospital has recently placed the pathological department upon a new basis. It was resolved to put the pathologist of the hospital in charge of the clinical laboratory as well as of the museum and *post-mortem* room, and to appoint to the office a gentleman who is prepared to devote himself entirely to the work. Dr. Lazarus-Barlow has been appointed to this office, to which a salary of £250 a year is attached. As he is also the Lecturer on Pathology in the medical school of the hospital, we have here a pathological institute on a modest scale. As pathologist to the hospital, he can be consulted as to all cases in the wards in which questions requiring special pathological investigation arise. The pathological product, whatever it may be, comes to the clinical laboratory with a short note of the nature of the case, and an indication of the point upon which information is desired. When the examination is completed, this information is sent to the physician or surgeon in charge of the case, and at the same time a note is made in the clinical laboratory register, which is provided with a special index so that the reference can be looked up on any future occasion.

The clinical laboratory which has just been completed was formally opened by Lord Lister on Tuesday last; it has been built, as it were, on the roof of the hospital immediately adjoining the *post-mortem* room and close to the isolation wards for infectious cases. It is a rectangular building divided into two parts by a teak screen glazed in its upper part. The floor is of teak parquet. The walls are covered with brick glazed tiles, the dado being of a dull green colour, and above that an ivory white. The ceilings are covered with ivory-white tiles, made with a lap joint and screwed up. Round three sides of the rooms are teak benches 2 inches thick, of a total length of 60 feet, they are 3 feet high and 2 feet 3 inches wide, with cupboards and knee spaces, with drawers over alternately. Small sinks are fitted into the top of the benches at regular intervals, having lignum vitæ plugs to the wastes. Each sink has hot and cold water laid on to gun-metal taps of special design, the bottom of tap being 15 inches from the bottom of the sink. There are also two-way gas taps to each working space. On the walls between the windows are fitted glass shelves, supported on iron brackets. In addition to the benches around the walls there are three central benches similar in design to the side benches. There are two apparatus cupboards against the walls, fitted with shelves, the sliding doors glazed with plate glass and dustproof. There is a frame cupboard 3 feet 6 inches wide, 2 feet 3 inches deep, with glazed sides and front, sheet glass being used as it is found to stand better than plate glass; a slate shelf securely fitted into the wall, 10 feet long, 2 feet wide, and 2 feet 9 inches high from the floor, for incubators, has gas and water laid on to it, and above it a sheet iron hood the whole length of the shelf, with ventilator from the top direct to the outside. A lavatory basin and a large wash-up sink with hot and cold water supply are provided. The drainage from the sinks and lavatory is entirely disconnected from the rest of the hospital drainage. The sinks discharge into an open channel pipe of iron covered with vitreous enamel, which after experiment was found to stand acids the best. An electro-motor has been provided in addition to incubators and other apparatus.

The plans were drawn by the architect to the hospital, Mr. H. Percy Adams, F.R.I.B.A., in consultation with Dr. Lazarus-Barlow. The cost of building and equipping the laboratory has been nearly £2,000. Other work completed at the same time at the hospital comprises new isolation wards, and new nurses' quarters, also many improvements in the basement and new store rooms in connection with the operating theatre. The total cost of all the works, including new electric light installation, new boilers, and overhauling of all the heating apparatus, has been about £10,000.

Sir John Wolfe Barry (Chairman of the House Committee) said that the work to be carried on in the clinical laboratory would be for the elucidation of the diagnosis of difficult cases in the hospital, and so would be of great advantage to the suffering poor. The laboratory would not occupy the position of a place for general or independent research except so far as experiments might be necessary for obscure cases.

Dr. Lazarus-Barlow described the new department, and said that the work at the clinical laboratories would be inaugurated by Lord Kelvin setting in motion a motor to shake some tubercle bacilli with carbolic acid, and by Lord Lister making a cultivation from a strain of tubercle the direct descendants of the original tubercle cultivated by Koch in 1884. After Dr. Lazarus-Barlow had read a letter from Professor William H. Welch, of the Johns Hopkins University, Baltimore, wishing success to the new laboratories, the company proceeded to the clinical laboratory.

On returning to the Board-room Lord Lister in a short speech pointed out that by means of the new department the most advanced pathological knowledge and the most refined methods of investigation would be brought to bear on many cases that otherwise would be obscure. Correct diagnosis stood in direct relation to successful treatment. The work would not only benefit the patients in the hospital, but it would also unfailingly extend the boundaries of knowledge and promote the advance of pathological and therapeutical discoveries. The laboratory would be a means of affording sound practical experience to students. There was a tendency to look askance at medical schools connected with hospitals and to grudge money spent on their maintenance, but he could not conceive it possible for a greater mistake to be made. The Governing Body of Westminster Hospital was to be congratulated, and the public owed them a debt of gratitude for having so wisely devoted a large sum of money to the creation of the new laboratories. Before many years were passed it would be recognised that laboratories of that kind were among the most important means of rendering good service to the community.

The President of the Royal College of Physicians (Dr. Church) said that speaking as a Physician of St. Bartholomew's Hospital he could say that he would not be in a position properly to treat his patients unless he had the advantage of the work carried out in the clinical laboratory at that hospital, which though it did not compare in completeness with the one they had just seen, still compelled everyone freely to admit its usefulness. A great charity, if by that word was meant doing good to the whole world, would be to afford facilities for the investigation of diseases which would lead to decrease in sickness and in the number of hospital beds required.

The President of the Royal College of Surgeons (Sir William Mac Cormac) considered that a wise expenditure had been made in the erection of the laboratories. By instituting a similar system at St. Thomas's Hospital five years ago the utmost good had been done to the hospital, and the greatest possible advantage had accrued in the treatment of patients, the accuracy of diagnosis helping materially to increase the success of treatment.

Lord Knutsford proposed a vote of thanks to Lord Lister, who, he said, had been honoured by their Sovereign for his beneficial work towards the happiness and health of her subjects.

Dr. Allchin, speaking in the name of the medical staff, seconded the vote of thanks, which was supported by Mr. W. G. Spencer on behalf of the surgical staff.

Lord Lister replied, and the proceedings terminated.

Algiers Pasteur Institute.—From November 1st to December 31st, 1899, 1,836 persons have undergone the course of antirabic inoculation in the Pasteur Institute at Algiers. Of the whole number, 9 died, being a mortality of less than 0.49 per cent.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 16TH, 1900.

THE BRITISH MEDICAL ASSOCIATION.

THE sixty-eighth annual meeting of the British Medical Association will be held this year at Ipswich from July 31st to August 3rd. In another column we publish details of the arrangements made for the conduct of the meeting and of the Sections, and some account of the historic town of Ipswich, which long before Napoleon had perverted one of the declarations of the French Revolution into the dictum that every French soldier carried a marshal's baton in his knapsack, had afforded a striking example of how in this country the highest offices of the State may be open to a man of humble origin. For many generations after Wolsey had planned to found his College there, Ipswich remained a quiet country town fortunate in its position at the head of the navigable waters of the Orwell, but not looking much beyond the trade of the immediately adjacent parts of East Anglia. Within recent years it has begun rather rapidly to extend, and the district possesses various manufactures, while the town itself is a grain-distributing centre of some importance. It still possesses, however, much that will interest the antiquary, while its increased commercial importance has led to its being brought into easy communication by rail, not only with London, but with the North.

The arrangements for the general and scientific business of the meeting are now sufficiently advanced to render it certain that very many matters of first-rate interest will be brought forward. The address in Medicine will be given by Dr. Pye-Smith, of Guy's Hospital, that in Surgery by Mr. Frederick Treves, of the London Hospital, and that in Obstetrics by Dr. W. J. Smyly, of Dublin. There will be thirteen Sections, of which one, that of Navy, Army and Ambulance, is new. Among the subjects selected for discussion in the several Sections will be found a majority of those in the various departments of practice which are at the present time exciting most interest or are most debatable. There is every reason to believe that the sixty-eighth annual meeting will be found by those who take part in it not less valuable and instructive than those which have gone before.

The British Medical Association owes its existence to the desire for union and organisation. Its founders had to deal with a condition of professional affairs in many respects far less hopeful than that which now exists. When they began their work there was no *Medical Register*, giving a right to practise throughout the United Kingdom, no power in any body to enforce uniformity or completeness of qualification, but a multitude of charters and Acts giving local privileges or imposing local penalties. The varying standard of knowledge required by different licensing bodies permitted, if it was not actually calculated to encourage, corresponding differences, social and intellectual, between consultants and general practitioners. It is therefore not to be wondered at that in the early days there were some who desired that there should be an association of general practitioners alone, but happily a policy which might have resulted in dividing the profession against itself was, as we have recently been reminded by Mr. Jones Morris and Dr. Lardner Green, deliberately set aside in favour of the broader and more statesmanlike conception of an association embracing all the members of the profession willing to work together for the common good of the profession and of the public. The Association had a large share in obtaining the enactment of the Medical Acts of 1858 and 1886, which have done so much to raise the position, social and scientific, of the profession. In common with nearly all legislation in this country the terms of these Acts, and especially that of 1886, were the result of compromise. A good deal was sacrificed to get what at that time appeared most essential and most likely to be attained. The law did not become what the Association wished to see it, but a step was made in the right direction. Under it we have seen the formation of Conjoint Boards in England, Scotland, and Ireland, great strides towards a uniform and improved minimum standard of medical education and examination, and a very distinct advance in the internal discipline of the profession, so that the employment of unqualified persons in substitution for registered practitioners, and the covering of such unregistered persons by registered practitioners, have been, if not entirely stopped, at any rate enormously diminished, while every practitioner who does such things at the present day knows that he is in peril of seeing his name erased from the *Register*. The more active exercise of the disciplinary powers conferred on the General Medical Council by the Act of 1858, is, we believe, in large measure due to the influence of the direct representatives, elected under the Act of 1886, who have been able to show the need for such action in the interests of the public as well as of the profession.

There is, it is to be hoped, no real danger of the mistake avoided at the middle of the nineteenth century being committed at the beginning of the twentieth. We must not have divisions within the profession pitting one class against another. The aims and interests of all are really identical, although different sides of the shield may present themselves to different men.

It is the aim of the British Medical Association to foster this feeling of common purpose throughout the profession by affording a meeting ground for all good citizens of the medical commonwealth. Its object is defined in the Memorandum of Association to be "the promotion of medical and the allied sciences, and the maintenance of the honour and of the interests of the medical profession." It has, then, from the first been recognised that the Association should seek to attain its object in two ways: first, by encouraging the acquisition and the diffusion of knowledge; and, secondly, by affording, through the Branches

and the BRITISH MEDICAL JOURNAL, opportunities of discussing the social and political questions affecting the profession and so, by gathering up, comparing, and harmonising the opinions of many men of various experiences, rendering it possible to go to the public and to the Legislature with a settled policy.

"I hold every man," said Lord Bacon, "a debtor to his profession," and no member of the profession has the right to say that he takes no interest in what are called "medical politics," by which we understand the maintenance of the honour and of the interests of the medical profession and the consolidation and extension of its influence on public opinion, and on the course of legislation in matters touching the public health and the scientific and social interests of the profession itself. The real source of many of the disadvantages under which the medical profession in this country still labours is traceable to the apathy of many of its members, who cannot be roused to take a share in the determination of matters which lie a little outside the absorbing calls of actual practice or of clinical work. The numerical strength of the Association is great, but it ought to be still greater. Its Branches are doing a great work in bringing men together, and in affording opportunities for conference and discussion, but they might be still more useful in these respects if members would take more interest in their meetings and attend them more regularly. Modifications in the arrangements for these meetings and in the organisation of the larger Branches have been made from time to time, and others may be found desirable. If so they can be made without difficulty, for it should always be remembered that the Association is still a growing organism. For many years past it has grown steadily in numbers and in adaptability to the needs of members, and it will, we believe, go on growing in both respects. Justification for this hope is found in its past history, and we may well look forward with confidence to the future. May we not then, fairly appeal to those who are still outside its ranks to study the aims and methods of the British Medical Association, and to satisfy themselves whether they may not approve the one, and whether therefore they should not support, or perchance lend their aid to improve, the other?

PROFESSOR LOMBROSO ON THE BOERS.

FROM a study of certain writings of Professor Lombroso we had derived the impression that in his eyes the whole human race is more or less degenerate, or, at any rate, that in any given civilised country the members of the population presenting none of the signs which in his opinion indicate degeneracy are rare exceptions. We gather, however, from an article by him which appeared in a recent number of the *Nuova Antologia* that he has found one nation which fulfils his ideal of perfect manhood. To his mind the Boers are the coming race; even now they are the salt of the earth. We know that the Boers look upon themselves as the chosen people, and they will doubtless think highly of the judgment of the Turin Professor who shares that belief.

In the opening words of his article Professor Lombroso boasts that from the very beginning of the war he maintained that in spite of their enormous inferiority in numbers they would be victorious. This belief it appears was largely founded on the fact that they are fighting for a "just cause which attracts to them the sympathies of the whole world translated into men, money, and perfected arms." Then they are patriots, and therefore of much greater value than the English "mercenaries." Apparently the foreigners who represent a part of the translated sympathies aforesaid fight for sentiment! Other points in the Boers' favour are that they can live on "bilitony" *(sic)*, and that they are habituated to a climate fatal to Europeans. "Bilitony" is an instance of the deformations of foreign words and names with which readers of Professor Lombroso are painfully familiar, and the remarkable statement about the South African climate gives a measure of his accuracy as to facts. The poet says, "Thrice is he armed that hath his quarrel just;" but Professor Lombroso puts the multiplying power of a just cause still higher, for he says it quadruples the number of the Boers. Among their other advantages we are told that they enjoy a Government exactly suited to their character—a statement which strikes us as a doubtful compliment, as the Krugerite oligarchy can hardly be regarded as a model of political virtue by anyone who knows what honest statecraft means. Professor Lombroso describes it as an "absolutely free Government;" but to those who have lived under it, the freedom of the Government has seemed to be exercised chiefly in administrative wrongdoing. He speaks of the Boers as a "meek" people, and, although he does not generally go to Holy Writ for support of his opinions, it may be on that ground that his prophetic soul leads him to foresee that they shall inherit the earth.

When midway through his article, the Professor appears suddenly to have awakened to the fact that the Boers have not been fulfilling his predictions of victory. But after all that is only a fact, and what is fact against so pretty a theory as he has framed about the glorious destinies of Mr. Kruger's burghers? Professor Lombroso's faith in the triumph of the Boers remains unshaken because "the power of liberty can conduct a chosen people like the Boers to victory even against forces forty times greater." We have already seen that the justice of their cause, combined with the sustaining properties of "bilitony," quadruples their fighting strength; now defeat, combined with Professor Lombroso's faith in liberty, is to make them forty times stronger. As he assures us that the said faith is indestructible, it becomes an interesting arithmetical problem to determine what higher multiple of four will represent the fighting strength of the Boers when they are finally crushed. So rooted is his belief in his conclusions, that he says that even if England after one or two years of warfare came out victorious, he would not change them. Whatever their losses may be, Professor Lombroso assures the world that the Boers are certain to win in the long run, because they carry out the biblical precept, "Increase and multiply," so successfully that they must ultimately form a nation which will "stagger humanity" by its valour and virtue. With characteristic incapacity to see things as they really are, Professor Lombroso takes no account of the effects of British rule, which, when the time of blood and iron is overpast, will transform the Boers into British subjects as loyal as the people of Canada.

The only defect he sees in his chosen race is an undue tenderness in the treatment of their conquered foes. This tenderness, we are given to understand, is not reciprocated by the brutal Briton. Here, again, we are inclined to agree with the professor, for we think that such exhibitions of amiable weakness as shooting British soldiers under the white flag should be dealt with by hanging rather than by protests.

Professor Lombroso forsees a dismal future for England, for victory, even if fortune favours her army, is sure to end in her ruin. Carried away by the reactionary force of Imperialism, she will prefer to industrial progress and to the increase of her trade the barbaric crown of military glory. She will bow the knee before her victorious warriors, who as soon as they set their conquering foot on their native shores will set themselves to upset the Constitution. These Cassandra-like vaticinations will move the British people to laughter rather than to alarm. May we remind Professor Lombroso that we have won battles and conquered nations before now, and none of these doleful consequences which he sees to be in store for us have come about? There is not, we venture to think, the slightest danger that Lord Roberts will go down to the House of Commons and order the Serjeant-at-Arms to take away the "bauble" which it is the privilege of that functionary to carry; and we doubt if even at the height of his present popularity General Baden-Powell would be permitted to seize Windsor Castle and proclaim himself king.

Rapt into future times the Italian seer beholds rising in a majestic vision before his mind's eye the United States of Africa. These are to divide the world with the United States of America, while the mouldering thrones and effete tyrannies and superstitions of degenerate Europe crumble into dust. He is indeed fain to admit that Mr. Kruger has sometimes shown an "ultra-conservative tendency," while Great Britain is a most important centre of civilisation and internal liberty. But, alas! she has in recent years forsaken the glorious traditions of Gladstone, and as a consequence entered upon a period of decadence, as Venice did before her. She finds it necessary to bind her colonies to her by the bonds of militarism, and for this reason Professor Lombroso cannot find it in his heart to bless her. Well, as was said of Italy by a famous countryman of his, Great Britain *farà da se*, a phrase which for our present purpose may be taken to mean that she will try to do without the blessing of Professor Lombroso.

THE THEORY OF IONS.

ONE meets with much reference to ions in modern chemical literature, and a few words about the so-called "Ionic Hypothesis" or the "Electrical Dissociation Theory" may therefore be of interest.

We all know that when an electric current passes through such a liquid as a solution of hydrochloric acid, the dissolved substance is decomposed into components (in this case hydrogen and chlorine) which are set free at two quite distinct points in the liquid—namely, the electrodes or places where the current enters and leaves the solution. Since the hydrogen and chlorine are not given off at the same place, it appears that one or both of these elements must have wandered through the liquid from the place at which it was liberated to the electrode at which it is set free.

An element or group of elements in this wandering state divorced from the rest of the original molecule is called an "ion" from the Greek word meaning "going.' Some elements or groups of elements, such as hydrogen, the metals, and ammonium, are always set free at the negative electrode, and these were called by Faraday "cat-ions" because they "go down" the positive current, while other elements or groups of elements, such as chlorine, oxygen, sulphion (SO_4) and nitrion (NO_3) always appear at the positive electrode, and were called by Faraday "an-ions" because they "go up" against the current.

If we assume the cat-ions to be all charged with positive electricity, their attraction by the negative electrode is explained, while at the same time the an-ions must be supposed to bear charges of negative electricity, which they discharge on the positive electrode. If we further assume that every atom of hydrogen, and the equivalent amount of every metal, bear exactly the same electrical charge, we can at once deduce Faraday's well-known electrolytic law that the quantity of the ions set free at the electrodes in an electrolyte depends solely on the amount of electricity that has passed through. In fact the ions are the carriers of the electric current, and each ion can only carry a fixed quantity of electricity.

The question that now arises is this: Are these ions free only while an electric current is passing through the liquid or do they exist in all liquids? The "ionic hypothesis" asserts that all liquids that are capable of being decomposed by electricity contain free ions, even when they are not being subjected to electric influence, and that the more dilute a solution the greater the percentage of dissociation of the dissolved substance into its constituent ions. The ions are seldom, if ever, capable of existing apart from oppositely charged ions. Thus the hydrogen ion is held to consist of one atom only, while free hydrogen consists of molecules each of which contains two atoms. Thus a solution of hydrogen and chlorine in water contains molecules of each of these elements, while a solution of hydrochloric acid contains atoms of each of the elements. Nascent hydrogen may perhaps contain hydrogen ions (or atoms) at the moment of liberation, but they quickly pair off into molecules.

There must always be an equal number of atoms of sodium and chlorine in a solution of sodium chloride in order that the positive charges of electricity on the sodium atoms may, when added together, be held bound by the negative charges on the chlorine atoms. If by any means the number of chlorine atoms be increased beyond this number, the extra chlorine atoms will combine in pairs, forming ordinary chlorine gas. Thus ionic dissociation does not alter the percentage composition of a salt.

Many of the ions are supposed to have a complicated structure, thus all the sulphates are assumed, in solution, to contain sulphion (SO_4), which is not known in the free state, but when liberated at an electrode in presence of water immediately yields oxygen and sulphuric acid. In like manner all acetates are supposed to contain the highly complex ion "acetoxyl" ($C_2H_3O_2$), which of course is not known as an independent substance.

If the ionic hypothesis be true, then metallic salts in very

dilute solutions must be looked upon as being completely split up into their ions, so that all the properties of these solutions must be the sum of the properties of the separate ions. This is, in fact, found to be the case, and a few examples may make clear what is meant by such a statement. All dilute cupric solutions are blue, hence we conclude that the copper ions, in solution, are blue, and we find, as the theory would indicate, that in dilute solutions the depth of colour depends only on the amount of copper present, and in no way upon the other part of the salt (whether acetate, chloride, or sulphate) as long as this is colourless. In concentrated solutions this is not found to be the case, for much of the salt is then in the undissociated state. Even the absorption-spectra of dilute solutions of salts containing the same coloured ion are identical, as long as the other ion is colourless.

As another example, we may take the ordinary qualitative tests. These may be viewed as tests for ions and not for chemical compounds. Indeed, since all silver salts contain, when in solution, free silver in the ionic condition, it is natural that they should all give the same precipitate of silver chloride when mixed with a chloride. A soluble chloride is thus a test for silver ions, not for silver in a salt. If potassium cyanide is added to silver nitrate till the precipitate first formed is redissolved, the two ions will now be potassium and Ag Cy_2, and neither of these can form an insoluble chloride, so that the liquid, though still containing silver, can no longer be precipitated by a soluble chloride.

Again, the fact that all sulphates when in solution are precipitated by barium salts, indicates that they all contain the same ion (SO_4). The difference between ferrous and ferric iron may be explained as due to differences in the electrical charges borne by the ions. An atom of ferric iron must contain 1½ time as great a charge of positive electricity as an atom of ferrous iron. These differences are shown by the amount of chlorine with which these atoms can respectively combine.

It will be seen that a difference in electrical charge produces very great difference in the properties of an ion.

A similar difference is seen in comparing potassium manganate (K_2MnO_4) with the permanganate ($KMnO_4$), the ion MnO_4 having double the charge of negative electricity in the green manganate compared with its charge in the red permanganate.

It will be seen that the hypothesis of dissociation into ions gives an entirely new explanation of most of the well-known properties of salt solution. It may be applied in like manner in the consideration of electrical conductivity, of heat developed in chemical reactions, of phenomena occurring in neutralisation of acids by bases, and of a great many other phenomena, in all of which the dissolved substance may be viewed as having been split up into ions by the act of solution, but it is impossible in a short article to follow the doctrine into all its applications.

London Hospital Medical College.—The prizes and certificates will be distributed to the students and probationers this year on July 19th, at 3.30 P.M., in the library at the College by Mr. Frederick Treves, F.R.C.S., Consulting Surgeon to the London Hospital. At the same time the new students' rooms, garden and fives-court will be declared open.

THE REMOVAL OF NAMES FROM THE *MEDICAL REGISTER.*

When the *Medical Register* was instituted by the Act of 1858, a provision was inserted to the effect that every Registrar of Deaths in the United Kingdom shall send notification of the deaths of registered persons to the Registrar of the General Medical Council, and may charge the expense of so doing as the expenses of his office. But there is no penalty for omitting to do this, and, as a matter of fact, it is often not done, so that the names of a considerable number of deceased persons are known to remain. A further provision for the rectification of the *Register* and for keeping addresses correct, is found in Section 14, which authorises the Registrar to write a letter to the registered address inquiring if the practitioner has ceased to practice or has changed his address, and if no answer be returned within six months it is lawful for the Registrar to erase the name. In the Dentists' Act passed later (1878) the improper accidental removal of names is safeguarded by the Registrar being required, if within three months he has received no answer, to send a registered letter. If these letters or one of them come back through the Dead Letter Office, or if no answer is received within three months of sending the second (registered) notice, the name may be erased. Under these clauses batches of letters are we believe sent out from time to time either in chance groups or because something has drawn attention to a name. Within the last few weeks we have received several letters from practitioners complaining that their names have been erased without their knowledge and citing the various inconveniences that have arisen therefrom. One gentleman had a death certificate declined by a coroner; another was informed that his office of medical officer to a Board of Guardians was void, and had as a consequence to submit to re-election, which happily was accomplished without difficulty, though it might have been otherwise. A third gentleman received a letter from the Registrar inquiring how it was that he was practising in Kendal some eight or ten years after his decease, but on his replying that he was very much alive and offering proof thereof, the name was restored. In this particular case the Registrar's letter appears to indicate that efforts are being made to keep the *Register* correct. The facts were that the gentleman in question had, during a temporary sojourn in New Zealand, registered there; having left the colony, the authorities assumed that he was dead, and his name was removed from the Colonial *Register*. The English Registrar becoming aware of this removal, took the name off the British *Register*. The correspondence has brought out the fact that the letters of inquiry prescribed by the Act take the form of notices in a half-penny wrapper, a kind of document which does not look important, and of which most of us receive a more than ample supply. At all events, several of our correspondents do not appear to have been aware of having received the notice, while one received it shortly after notifying the Registrar of his change of address. The half-penny postage rankles in the minds of some, who hold that it would not be extravagant to expend a penny in sending a notice of such importance, while most, knowingly or unknowingly, advocate the course of procedure prescribed in the Dentists' Act—that the first intimation should be followed up by a registered letter. The matter was taken up by the committee of the General Medical Council appointed to inquire into the means of preventing personation, which it is surprising to learn is not an offence under the common law of England. The Committee advised the use of a registered letter, and suggested that it be followed up by a letter of inquiry addressed to some neighbouring registered practitioner in case no answer was received. But the report of this Committee has now been twice shelved, though it will come on again at the next session of the Council. The trouble has originated because the Act of 1858 allows the removal of

the name after the single half-penny notice has remained unanswered. The removal of the name is then in accordance with the letter of the law, but in view of the serious inconvenience which may accrue to the individual it would certainly be well that the Council should give instructions to the Registrar to take further steps than those prescribed by the letter of the law before proceeding to erase a name. This, we trust, will be done without much more delay. The inconveniences pointed out by the rigid exercise of the present routine may easily lead to evils greater than those they are intended to remedy, although it must not be forgotten that the names of deceased persons lingering upon the *Register* undoubtedly afford an easy means of personation. There is reason to suspect that this has been practised to a considerable extent, though the actual detections have been few.

THE UNIVERSITY OF LONDON.

We have not yet received intimation that the Royal Assent to the statutes framed by the Commission as appointed under the University of London Act has been obtained. The petition which it was stated had been presented against the statutes is not likely to occasion serious delay; we understand it had reference to the establishment of a theological faculty, and was submitted by a graduate of the University, who considered himself aggrieved. Those bodies which have already nominated representatives to the Senate would appear to have acted prematurely, and the old Senate is likely to carry on the work of the University in its new abode, at any rate for the present. The Inns of Court, it is alleged, are still exhibiting some hesitation as to their position in the reconstituted University. The native hue of resolution which, under a certain amount of pressure, appeared a few weeks ago to characterise their intentions, has, it is alleged, been somewhat sicklied o'er by subsequent deliberation, and although the names of their proposed nominees for the Senate were freely mentioned it is still possible that the reluctance of the Inns of Court to participate in the University which has uniformly characterised their past policy may again predominate. Nine members of the present Senate, in addition to the Chairman of Convocation, Mr. Busk, were elected to that body by Convocation—namely, Sir Joshua Fitch, Sir Philip Magnus, Sir Samuel Wilks, Professor Carey Foster, Dr. Collins, and Messrs. Anstie, Napier, Osler, and Moulton. These, though retaining their Fellowship for life, will cease to be members of the new Senate unless elected thereto. Some of the nine will not improbably present themselves as candidates for some of the sixteen seats allotted to Convocation under the Act. No steps have yet been taken to call together the "Faculties" or electoral colleges, consisting of the teachers of the University, as scheduled by the Commissioners. It is clear from the final report of the Commission that the question of preliminary scientific teaching for medical students will be one of the earliest to engage the attention of the University, and the smaller medical schools will do well to bear this in mind in electing, through the Faculties, representatives on the new Senate.

"A GRAVE METROPOLITAN SCANDAL."

Under this somewhat sensational heading the *Morning Post* (June 9th) refers to a circular letter which has been sent by the Clerk to the Guardians of the Parish of St. Pancras to each of the justices of the peace accustomed to make orders in lunacy in that parish, warning them that as a result of inquiries instituted by the Chairman of the Out-Relief Committee it appears to have been a common practice of the parochial relieving officers to receive a portion of the fee from those medical practitioners called in to assist the justices of the peace in the examination of persons of unsound mind, and that in addition these officers received sums of money varying from two pounds to ten shillings a patient in respect of lunatics sent for admission to licensed houses, the larger sums being paid where and when the cost for maintenance was charged at the rate of two guineas a week. As the fee to the medical expert is payable in any case, whether the justice makes the order of removal or not, the relieving officers were always sure of their commission, and in the opinion of our contemporary these payments constituted "an unwholesome stimulus to a species of official activity which the world will stigmatise as a scandal to the administration of justice, a danger to the poor, and an injury to the already heavily-burdened ratepayers." This is not the first time public attention has been drawn to such practices. In April last an inquiry upon oath was made by the Local Government Board Inspectors, Mr. Lockwood, Dr. Downes, and Mr. N. Hervey into certain allegations against the relieving officers of the Bethnal Green Board of Guardians. We have hitherto refrained from commenting upon this question because it seemed desirable to wait for the report of the inspectors, but we have no wish by our silence to appear to condone the part played in these transactions by members of the medical profession. We are exceedingly sorry that such charges can be made upon what are apparently good grounds, for although the relieving officers, as the receivers, have to bear the chief condemnation, those medical officers and proprietors of asylums who have taken part in the system cannot be held blameless. We are glad to see it stated that there were medical officers who refused to pay these commissions. These honest gentlemen, it is said, were in consequence deprived by the relieving officers of a fair share of their opportunities for certification. It is also stated that one private institution was falsely reported by the relieving officers to be unwilling to accept parish patients, presumably, we may hope, because the proprietor was unwilling to accede to the demands of these land sharks. The expense to which the parish of St. Pancras has been put by this system is deduced from statistics laid before the guardians' meeting on June 7th by the Chairman of the Out-Relief Committee. He showed that the proportion of lunatics chargeable in St. Pancras per mille of population reached the high figure of 6.9, whereas in the neighbouring parish of Islington it was only 3.1, and that the total cost to the parish was £14,488 for the year as against £5,547 in Islington, though the population of Islington is quite one-fourth larger than that of St. Pancras. Much public indignation must be expected when it is learnt on official authority that the increase of lunacy of which so much has been heard is, at least in some places, in part attributed by local authorities to a system of commissions involving relieving officers, medical practitioners, and the proprietors of lunatic asylums. We must repeat our expressions of regret that members of the medical profession should have placed themselves in a position to justify in any degree such a charge. We trust that all members of the profession will set their faces steadily against any form of commission or payment to either relieving officer, coroner's officer, midwife, monthly nurse, instrument maker, or chemist.

MEDICAL ADMINISTRATION IN SOUTH AFRICA.

It has more than once been stated in the British Medical Journal that considerable dissatisfaction has been caused in the Royal Army Medical Corps by the unwillingness of the War Office to grant the Principal Medical Officers of the various forces now in South Africa temporary local rank corresponding to the authority which they have to exercise and to the weight of responsibility which their position thrusts upon them. Combatant officers in the field are freely granted such rank because it is rightly considered that this is necessary in the interest of the service; but it is equally necessary for the administrative efficiency of the medical service, and it is not only an

anomaly but an indignity—and what is from the public point of view much worse, a serious inconvenience—that officers who have to do the work and bear the responsibilities of Surgeon-Generals should not have the title corresponding to the duties which they are called upon to discharge. That officers holding such positions as those so admirably filled by Colonel Stevenson, Colonel Townsend, C.B., Colonel Supple, and Colonel Gallwey, C.B., should be denied the local rank which is given as a matter of course to commanding officers whose sphere of authority is *de facto* much more restricted, must be puzzling to anyone who does not know the sullen and obstructive jealousy of the Medical Service which has apparently become rooted in the official mind. Our readers have had ample opportunities of knowing the magnificent services rendered by Colonels Gallwey and Stevenson. If Colonel Supple has come somewhat less prominently before them it is because, like Lord Kitchener, he has been largely engaged in work of a kind which, though of the highest importance, comes less under the eye of the observer who is interested mainly in the direct medical and surgical treatment of our sick and wounded soldiers. Colonel Supple was Principal Medical Officer at the Cape before the war began, and in that capacity had to make all the medical arrangements for Natal and Cape Colony, including all the outposts up to Mafeking and Salisbury. He arranged for the removal, by ambulance trains which he himself designed, of the wounded at Graspan, Belmont, Magersfontein, and other places, to the hospitals at Capetown, which were pronounced by Sir William Mac Cormac to be absolutely perfect. On Colonel Supple's shoulders fell all the labour connected with the landing of nearly 180,000 troops in Capetown, the treatment of their sick, the responsibility of a great deal of their medical equipment, the sending home of sick (numbering several thousands), and many minor details involving continuous heavy work every day for many months. He has now been relieved of the charge of the line of communications—which he took over when Colonel Stevenson was appointed Principal Medical Officer with Lord Roberts—by Colonel McNamara, C.B., and it is to be hoped will have an opportunity afforded him of giving further proof of his administrative capacity in some more conspicuous field. It would be a graceful act on the part of the War Office if even at this eleventh hour the temporary rank and title of Surgeon General were to be granted to him and the other officers whom we have named.

GUNSHOT WOUNDS OF THE ABDOMEN

WITH reference to an article on this subject published in our issue of last week, Sir William Mac Cormac has favoured us with the following observations: I had formed the opinion that the circumstances of war rendered a good prospect for abdominal operations exceedingly uncertain. Before going to this war I had frequently expressed myself to that effect. The experience of the war has abundantly justified the opinion I had previously entertained that laparotomy for gunshot injuries to be successful must be done very shortly after the infliction of the wound, and therefore in the front lines, where the conditions for performing operations of this kind are exceedingly unfavourable and perfect asepsis almost impossible to realise. Moreover, the needful time for the performance of operations necessarily protracted is seldom available amidst the great pressure of urgent cases that obtains immediately after a battle. This opinion had been formed from previous experience, and consideration of the subject. A surgeon attached to one of the most distinguished generals in the campaign told me that he had made up his mind to perform instant laparotomy in case his chief was wounded in the abdomen, and I advised him to think twice and most seriously before he attempted such a thing. He replied, "What am I to do?" I said, "It may be best to do nothing." In the same article published last week to which reference is made above the following passage occurred: "It has been suggested—and the suggestion is a remarkably happy one—that the impact of a swiftly-moving bullet has the effect of inhibiting the peristaltic movements of, as it were, 'stunning' the intestine." We are indebted to Dr. W. D. Calvert, of Brighton, for the following apposite quotation from John Hunter's work on gunshot wounds (1793). After relating a case of bullet wounds through the duodenum and jejunum followed by death in twenty-four hours, Hunter wrote:

> This case admits of several observations and queries. First, the lowness and gradual sinking with the vomiting, without blood, bespoke wounded intestines, and those pretty high up. It shows how ready Nature is to secure all unnatural passages according to necessity. Query—what could be the cause of his having no stool even from the clyster? Were the intestines inclinable to be quiet under such circumstances? Would he not have lived if the immediate mischief had not been too much? I think that if the immediate cause of death had not been so violent, Nature would have secured the parts from the secondary, namely, the extravasation of the fæces. What is the best practice when it is supposed an intestine may be wounded? I should suppose the very best practice would be to be quiet and do nothing except bleeding, which in the case of wounded intestines is seldom necessary.

"In what respect," Dr. Calvert asks, "has the surgical experience gained during the present war afforded any fresh suggestion in the treatment of such cases?"

AMERICAN MEDICAL ASSOCIATION.

THE annual meeting of the American Medical Association opened in Atlantic City on June 5th, under the presidency of Dr. W. W. Keen, of Philadelphia. The President delivered an interesting address, in which he said the Association now numbered about 9,000 members—a number large in itself, but small in proportion to the 100,000 regular practitioners of the United States. The *Journal* of the Association had 15,000 subscribers, a number undoubtedly in excess of that of any other medical journal in the United States, and he suspected only surpassed by the BRITISH MEDICAL JOURNAL. Referring to the Antivivisection Bill now before the Senate, the President said he had taken the most active steps to prevent its becoming law, and he bore emphatic testimony to the enthusiasm and unanimity with which the profession throughout the States had supported his efforts. Passing to the scientific proceedings of the meeting, Dr. Keen urged that the trustees and the Editor of the *Journal* should use great care and the best judgment in publishing in full the more important papers, and only presenting the less important in longer or shorter abstracts. The example of the BRITISH MEDICAL JOURNAL might well, he considered, guide them in this matter. The President then made an eloquent appeal for the endowment of medical schools. Vast sums of money were bequeathed and given for charitable purposes in the United States, the amount in 1899 reaching nearly 80,000,000 dollars (£16,000,000), of which only a small portion had been bestowed on medical schools. As a consequence of the broadening and lengthening of the medical course of study, the cost of medical education had enormously increased. The public at large did not at all understand this changed condition, and even the members of the profession itself who had graduated many years since scarcely appreciated the difference. President Eliot of Harvard had said: "There is no branch of education which more needs endowment. Medical education is very expensive, because it has become, in the main, individual instruction. Large lectures and crowded clinics are seen to be of really very limited application, so that year by year the medical teaching becomes more and more costly." But the function of the medical school should not be limited merely to the imparting of existing knowledge. No school was worthy of the name that did not provide for research work. The endowments of medical schools might be classed in three categories: (1) The

endowment of professorships; (2) the endowment of laboratories; (3) the endowment of post-graduate scholarships and research fellowships. Dr. Keen expressed a hope that in the near future the American Medical Association would set a fruitful example by giving each year "scientific grants in aid of research." The first object of the Association must be, necessarily, to place itself on a strong financial basis. It should own its own building, its printing and publishing plant, and, as soon as possible, have a reserve fund of considerable proportions. Nothing conduced to the stability and conservativeness of any institution like a good bank balance. The American Medical Association had made a fair start with a surplus of over 27,000 dollars last January, and it might be hoped that it would before long assume a rank second only to the British Medical Association.

MEDICAL DUELS.

A DUEL was fought on June 10th by M. Pozzi, the distinguished French surgeon, and Dr. Devillers. The quarrel, which was political in its origin, was forced on M. Pozzi by his antagonist. Fortunately it had no worse result than most French duels. M. Pozzi was slightly wounded in the wrist, and it may be presumed that honour was satisfied. Apart from the inherent absurdity of the duello as a means of settling differences of opinion among gentlemen, the code of "honour" that compels a man like M. Pozzi to risk his life in a wager of battle against any fireater who chooses to insult him, certainly does not make for the greatest good of the greatest number. When challenged M. Pozzi might, as Professor Virchow was said to have done on a similar occasion, have declined to set his life against one that was not of equal value to mankind. While congratulating him on his escape, we venture to express a hope that in future he will be content with more strictly professional methods of venesection. Duels between medical men are still unhappily common on the Continent. Not long ago Dr. Boutard challenged to mortal combat a journalist who had written an article which he considered offensive; they fought with pistols, and both were wounded. An article was also quite recently the cause of a hostile meeting between Dr. Jean Charcot, son of the famous neurologist, and Dr. Lagelouze; the former was wounded in the thumb. For a like *teterrima causa* Dr. Denoix, Senator for the Dordogne, sent his seconds to an unfriendly critic. In Germany a few months since, a well-known practitioner who is medical superintendent of a thermal establishment had a dispute with a professional brother. On the latter sending him a challenge, he pleaded a conscientious objection to the duel. Both parties being medical officers of the army reserve, the military authorities took cognisance of the affair, and the practitioner whose religious principles forbade him to fight was by an order under the hand of the Emperor dismissed the service. In this country army doctors, as may be gathered from the proceedings of the truculent Dr. Slammer of the 97th and the nose pulling Dr. Payne of the 43rd, recorded in *Pickwick*, were in the earlier part of the present century as ready with the pistol or the sword as with the lancet. The last duel between doctors in England of which there appears to be any record took place near Exeter on May 10th, 1833, the combatants being Sir John Jeffcott and Dr. Hennis. The latter received a wound of which he died. A more famous medical duel was that between Mead and Woodward, Professor of Physic at Gresham College. Mead disarmed his antagonist, and invited him to beg for his life. "Never till I am your patient," replied the undaunted professor. Matthew Baillie in his hot youth challenged Barrowby, one of the Censors of the College of Physicians, in order to avenge the indignity of a "pluck" which he had suffered at the hands of that learned body. Barrowby pleaded that he was only third Censor, and offered to meet the unsuccessful candidate when he had killed the President, Sir Hans Sloane, and the two senior Censors. Dr. Brocklesby, who attended Dr. Johnson in his last illness, took the field against an antagonist, but the fight did not come off, as the seconds could not agree as to the distance at which the men were to be placed. Is it possible that this incident suggested the famous utterance of Bob Acres, that "forty yards is a good distance?" Mark Akenside, poet and physician, challenged one Ballow, but no blood was spilt, because one of the champions made it a rule never to fight in the morning, and the other had made up his mind never to fight in the afternoon. There is something, to our mind, particularly ridiculous in duels between men whose business it is not to make wounds but to heal them. If their outraged feelings can be soothed only by inflicting bodily suffering on the offender, let them try on each other the effects of the last new pharmaceutical specialities or patent foods. This would slake the thirst for vengeance in a satisfactory manner, and at the same the combatants would have the sense that they were advancing science.

HYGIENE IN CHURCHES.

ECCLESIASTICAL authorities in Italy appear to be waking up to the necessity of the Church moving with the times in the matter of sanitary progress. The Vatican is said to be considering how it may take an active part in the campaign against tuberculosis. In the meantime, ecclesiastical authorities in various parts of Italy have already taken the field. It has already been mentioned in the BRITISH MEDICAL JOURNAL that the Archbishop of Siena has fulminated against spitting in churches. Now it is announced that the Archbishop of Pisa, Count Ferdinando Cappone, has charged all parish priests within his sphere of jurisdiction to see that the water in the fonts of their churches is hygienic as well as "holy," and to post notices in the sacred edifices forbidding people to spit on the floor. The Bishop of Reggio Emilia has favourably received proposals submitted to him by a local committee of an Italian league against tuberculosis. He has sent to the clergy of his diocese a pastoral letter in which he recommends the adoption of the following hygienic regulations in churches: (1) In all churches, after festivals and other occasions when there has been an extraordinary crowd of people, the floor should be carefully disinfected with sawdust steeped in a 3 per 1,000 solution of corrosive sublimate. At ordinary times the churches should be swept frequently after previous sprinkling with water so as to avoid raising clouds of dust. (2) Every week, and oftener if need be, all the benches and confessionals should be dusted with sponges and cloths damped with plain water. (3) Every week, and oftener if need be, the gratings of confessionals should be washed with boiling suds, and afterwards polished. (4) The holy water fonts should be emptied every week and oftener when there is occasion, afterwards washed out with boiling suds and finally rinsed with boiling water, or with a 1 per 1,000 solution of corrosive sublimate. We note that nothing is said as to the disinfection of the pulpit, which in Italy is generally a kind of rostrum in which the preacher walks about as the spirit of his eloquence moves him, addressing now one part of his audience, now another, and too often punctuating a telling passage with expectoration. Nor is any censure expressed of the possibly pious but too probably pernicious practice, which is indulged in by the faithful all over the south of Italy, of kissing the floor of the church at the entrance to the sanctuary. But it is something that spitting has been condemned; in time we may hope that Italian churches will become true temples of Hygiea. May we hint that ecclesiastical authorities at home might in certain particulars follow the example set them by Italian prelates? English people are not universally giving to spitting in churches, but the condition of the baptismal font is not always all that in a sanitary sense it should be. We have ourselves

found the mortal remains of a defunct bat in the font of the parish church of a prosperous country town in Somerset. And when the pulpit, drum ecclesiastic, is beat with an earnest preacher's fist, does not one often see rising from the cushion clouds of dust which may perchance carry disease and death among the congregation? If in all countries the Church were to be careful to set an example of hygienic perfection, we should perhaps hear less of the decay of its influence.

A HEALING SPRING FOR LOVESICK MAIDS.

In a recent number of the *Siglo Medico*, Dr. Martinez Reguera gives an account of a spring in Spain, the water of which, according to him, has the property of curing the pangs of despised love. This wonder-working well is situated at Alanje, and is held in great repute for hysteria and neuroses of all kinds, but it appears to be a specific for the intangible cardiac lesions which are said to follow disappointments of the tender passion. Naturally, therefore, this watering place is largely frequented by lovesick maidens, and many marvellous cures are reported. Young ladies as distracted as Ophelia are said to have recovered their senses and become decorous members of society of the primmest "prunes and prisms" type, after going through a course of treatment at Alanje. Dr. Reguera, with all proper gravity, gives details of some cases. One of the patients was a pretty Sevillian, a dark, nervous girl of 17, with an expressive countenance, who, on account of a quarrel with her betrothed, took such a dislike to him that the mere sight of him threw her into a violent frenzy in which she spoke wildly and incoherently, refused food, and could not sleep; finally she fell into a profound melancholy. In this state she was taken to Alanje, where she had a bath every morning, with shower baths and douches on the back morning and evening for fifteen days. When halfway through the course a favourable change was observed, and shortly before her return to Seville appetite and sleep returned; she spoke rationally, and began again to show affection for her betrothed. A further course of baths and douches completed the cure. Another young lady of 20, described as dark, with an Arabian countenance, and brilliant black eyes, was attacked by hysteria which took the form of talking constantly, without intermission, and rolling on the floor, where her mother had thoughtfully placed a mattress. With a good deal of trouble she was taken to Alanje. She had twenty baths with powerful douches on the spine and head. This treatment calmed her excitement to a certain extent, but she was not completely cured till after a second course of treatment. The third case was that of a pretty girl of 15 who was caught by her mother sweethearting with a young man of the class known, we believe, to London Society mammas as "Detrimentals." The mother, who seems to be a lady of masterful temper, punished her severely, and even threatened her with death. The result was that the poor girl was bereft of her senses, and took to running through the streets with her hair undone, addressing remarks to the passers-by of a character hardly to be expected from a young lady who had been religiously brought up. She was taken to Alanje and was bathed and douched on the head and spine for a fortnight, but went home in the same condition as she came. Some time later Dr. Reguera received a call from a quiet young person who with tears begged his pardon for having given so much trouble a month or two before. It was the refractory patient of some weeks before, now clothed and in her right mind, and so changed that it was with difficulty he recognised her. A still more remarkable cure was that of a young country lass of 20 with whom the course of true love was running smoothly till a military cousin came on the scene and made trouble. The girl lost her appetite and became furiously hysterical with attacks of destructive mania, which made it necessary to place her under restraint. After this state of things had lasted some months she was taken to Alanje, but at first it was impossible to do anything with her as she struggled so violently that five people could not put her into the bath. The doctor, however, managed to obtain some influence over her, and eventually with a bath in the morning and douches and shower baths in the evening she began to improve, and left Alanje at the end of the treatment restored to her senses. Soon she got married, and let us hope lived happily ever after. We gather that the water of this miraculous well contains nothing more remarkable chemically than bicarbonate of lime. We are inclined to think, therefore, that its curative virtue lies less in the spring than in its tutelary medical deity. In any case, we congratulate Dr. Reguera on his success in treating an affection generally held to be beyond the resources of medical art, and we are glad to have an opportunity of calling the attention of anxious mothers of lovesick daughters to the heart-healing waters of Alanje. It would be interesting to know if the water has any effect on young men suffering from the same disease, but Dr. Reguera says nothing about them. Why should not the remedy be tried on them? And for the scientific elucidation of the matter, why should not experiments be made on animals? Material is not wanting, for we have it on the authority of Sheridan that an oyster may be crossed in love. Perhaps a special licence would be required, and some frivolous person might suggest that a special licence is often in itself one of the most potent remedies for lovesickness.

PYORRHŒA ALVEOLARIS.

At the ordinary meeting of the Royal Medical and Chirurgical Society on Tuesday, Mr. Rickman Godlee read a paper on this subject, which was proved by him and by those who took part in the subsequent discussion to have a wide bearing on the health of the community. The condition, usually spoken of as spongy gums, is in part characterised by swelling and thickening of the mucous membrane of the gums, its detachment from the neighbouring teeth, and the formation of small, pocket-like abscesses between the bared tooth and the gum. At a later date, osteitis of the socket leading to shedding of the teeth probably occurs. The chief influence that the condition has on the general health depends on the ingestion of the pyogenic and other organisms which have been cultivated in these pockets, for, as Mr. Tomes pointed out, in the majority of the cases of slighter degree there is no expectoration of the discharge. The principal objective evidence, indeed, of its presence is the bloodstained pillow of the subject of the condition. All the powerful arguments advanced in support of the position that the cavities due to dental caries should not be allowed to remain untreated apply with equal force to the diseased condition under consideration. They and other similarly-acting causes—such, for example, as the habit of biting the moustache, tend to cause grave results by introducing living organisms into the stomach, with which the antiseptic gastric juice may not be sufficiently powerful to deal. As to whether or not the condition is to be considered as a constitutional or as a merely local one, much may be said. One of the speakers at the meeting strongly maintained the view that it was local. On the other side, such arguments may be advanced as that it occurs in wild animals under confinement; Mr. Tomes said it is frequent in the lemurs and in monkeys, while Mr. Bland-Sutton has observed that it is very common in association with rheumatoid arthritis in animals. It is said to be an almost constant phenomenon in glycosuria, and it may be that the loss of the teeth so common in this condition is due to pyorrhœa alveolaris as a proximate cause. Besides

all this, the facts that the condition is apparently hereditary, and that it is frequently symmetrical, point strongly to its constitutional nature.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

JUNE 11TH was the latest day for receiving applications of candidates for election to the Council of the Royal College of Surgeons of England, so that the list is now complete. There are no fewer than thirteen competitors for the four vacancies. Mr. Tweedy, who has served his full term, and Mr. Alfred Cooper, who was elected in 1895 as substitute for Mr. Durham, elected in 1892, both seek re-election. A former member of Council, Mr. Ward Cousins (Southsea) is again a candidate. In 1895 he was elected as a substitute member for Mr. Hulke, holding the place for two years, when in 1897 he was again elected, and served as substitute for Mr. Rivington till 1899; last year he was not re-elected. The remaining candidates are: Mr. Bloxam (Charing Cross Hospital), Fellow since 1871 and Member since 1864; Mr. Clement Lucas (Guy's), Fellow since 1871, Member since 1868; Mr. Golding-Bird (Guy's), Fellow since 1874, Member since 1872; Mr. Walsham (St. Bartholomew's), Fellow since 1875, Member since 1871; Mr. Morgan (Charing Cross), Fellow since June, 1876, Member since July, 1872; Mr. Clutton (St. Thomas's), Fellow since June, 1876, Member since 1875; Mr. W. H. Bennett (St. George's), Fellow since June, 1877, Member since July, 1873; Mr. Pearce Gould (Middlesex), Fellow since June, 1877, Member since July, 1873; Mr. Jordan Lloyd (Birmingham), Fellow since 1880, Member since 1878; and Mr. Bland-Sutton (Middlesex), Fellow since 1884, Member since 1882.

THE ADELAIDE HOSPITAL.

IT will be recollected that some three years ago serious difficulties arose between the Government of South Australia and the Board of Management and the Honorary Medical Staff of the Adelaide Hospital, and that having forced them to resign, and having failed to secure the services of any adequate successors, the Government obtained from England two gentlemen who were found willing to brave the disapproval of the medical profession not only in the Colony but in the Mother Country by accepting the vacant posts. It will be further remembered that these gentlemen received a very strong expression of the opinion entertained of their conduct by being expelled from the British Medical Association after a very full inquiry into the merits of their case, the Government of South Australia even going so far as to instruct the gentleman who is now Mr. Justice Bucknill to appear before the Council of the Association to argue the point. We gather from an announcement in the *Australasian Medical Gazette* of April 20th that at length the Government has given way, that the old staff has been reappointed, while the intruding gentlemen from England would seem to have been provided for elsewhere, as their names do not appear in the list of those recently appointed to the hospital by the Governor on the nomination, as it would seem, of the University. We congratulate our colleagues in Adelaide upon the ultimate triumph of their just cause. The same paper contains a letter of resignation from a young Edinburgh graduate who has been Junior House-Surgeon to the hospital. He complains that he was induced to take the appointment on the assurance that all friction was at an end, and that the old staff were about to be reinstated. He complains that this has not been done, and that the staff of the hospital was boycotted by the whole of the medical profession outside the hospital; that there were no facilities for the simplest clinical work; that the hospital work generally was not done in as efficient a manner as it should be; and that the management of the institution was bad in the extreme. In spite of rumours of a hitch, we hope that with the restoration of the old staff the troubles have come to an end, and that the Adelaide Hospital may resume its former career of useful public service.

THE BRITISH DENTAL ASSOCIATION.

THE twenty-first annual meeting of the British Dental Association was held at Leeds on June 2nd, 4th, and 5th, in the Yorkshire College. The proceedings commenced with a meeting of the Representative Board, followed by a general meeting of the members, and the retiring President, Mr. J. H. Mummery, delivered a valedictory address. The chair was then taken by Mr. George Brunton, of Leeds, the newly-elected President, who called on the Secretary and Treasurer to read their respective reports, after which the Association was welcomed to the town by the Lord Mayor in an appropriate speech. The President then delivered his address, in which he said statistics showed that the school children of Leeds had no less than 85 per cent. of their teeth decayed. He alluded to the probability of a dental department being organised in connection with the new buildings of the Leeds Public Dispensary, and urged that it should receive financial support both from the employers of labour in the district, because as one of its results there would be less broken time, and from the employees themselves because there would be less suffering. In the afternoon some interesting papers were communicated, and in the evening a reception was given by the President and Council of the Midland Counties Branch of the Dental Association, at which over 200 guests were present. On June 4th several papers dealing with questions of conservative dentistry were read, and a discussion on the Teaching of Mechanical Dentistry in Dental Schools was held. In the afternoon of the same day there was a meeting of the microscopical sections. Practical demonstrations were given, and there was later a reception by the members of the staff of the Leeds Medical School. At the annual dinner of the Association, which was held the same evening, among others present supporting the President were Mr. T. Pridgin Teale, F.R.S., Mr. Mayo Robson, Professor de Burgh Birch, Professor Trevelyan, Mr. C. S. Tomes, F.R.S., Mr. L. Matheson, Dr. Barrs, Dr. J. B. Hellier and Dr. Churton. On the concluding day an interesting paper was read by Mr. Norman G. Bennett on the need for the recognition of dental surgery by the War Office and the Admiralty. It has been decided to hold the next annual meeting in London in August, 1901, and Mr. S. J. Hutchinson, Consulting Dental Surgeon to University College Hospital, has been chosen President-Elect.

BRISTOL MEDICO-CHIRURGICAL SOCIETY: PRESENTATION TO MR. L. M. GRIFFITHS.

THE excellent medical library at University College Bristol, has been formed to a great extent through the *Bristol Medico-Chirurgical Journal*, and on the retirement of Mr. L. M. Griffiths from the post of assistant editor, the Society determined to express its indebtedness to him for the large share he had taken in the work of the *Journal*, and in the origination and fostering of the library during the last seventeen years, by the presentation of a testimonial. The sum of £135 16s. was rapidly subscribed by members of the Society, and at the last meeting of the session, on May 9th, the presentation was made. Dr. Shingleton Smith, the editor of the *Journal*, who spoke in the highest terms of Mr. Griffiths's work, stated that it had been decided to spend some of the money subscribed in a bookcase, suitably inscribed, containing the *International Library of Famous Literature*, a silver bowl, an illuminated address in a handsomely-carved Florentine frame, and a bookplate designed by Mr. W. V. Collette. Further tes-

timony to the great value of Mr. Griffiths's services was borne by Dr. J. E. Shaw, Chairman of the Committee of the Bristol Medical Library. Dr. J. G. Swayne, Mr. Nelson C. Dobson, Dr. Steele, and Mr. F. H. Cross having spoken, the President (Mr. W. H. Harsant) in making the presentation, remarked that Mr. Griffiths's industry and devoted labours had contributed largely to success the *Journal* had attained. Mr. Griffiths, in acknowledging the testimonial, briefly reviewed the history or the *Journal*, which, he said, was fortunate at the beginning in having in the person of its first editor Greig Smith, one who *con amore* placed at its disposal his commanding and masterly genius. It had also in Mr. Arrowsmith a publisher who took far more than a commercial interest in its welfare. From the first it was a financial success, and it was chiefly due to its accumulated funds that it was possible to start a library in 1891; its large exchange list had also fed the library with valuable periodical literature. He had felt all along that the life of a district was the richer for a journal which worthily gave expression to that life. To that end he had laboured, and it was peculiarly gratifying to receive the commendation of those who had been close observers of his work.

THE TOMB OF AVICENNA.

A Russian explorer, Dr. Chaniavsky writes in a recent number of *Vratch*. that on the way from Teheran to Bagdad he passed by Hamadana, the ancient Ecbatana, which was formerly the capital of Media. Of the old city nothing remains but heaps of stones and dust. The tomb of Avicenna, the greatest of the Arabian physicians, is still, however, venerated by the inhabitants of the country. It is mentioned by Reclus in his *Géographie*, 1887, ix, p. 213, and was pointed out to Dr. Chaniavsky by Dr. Holmes, an American medical missionary, who has lived for many years at Hamadana. On the left bank of one of the streams which run through the town from south to north, behind an old disused graveyard, there is a brickfield in which stands a small mausoleum surmounted by a cupola of clay. A small doorway affords entrance to the interior, where under the cupola there are two large stones covered with Arabic inscriptions. Under one of these lies Avicenna, known to the ordinary folk in the district as Ibn-Cina, and to the Dervishes as the Sheik Bon-Ali-Ibn-Cina; the other marks the resting place of the Sheik Abdul-Ceid-Abdul-Cheir, who is venerated as a saint, but is otherwise unknown to fame. The tomb of Avicenna is guarded by three Dervishes and it is interesting to learn that every day it is visited by numbers of sick persons. The knowledge and skill of most practitioners of the healing art are interred with their bones, and the famous Arabian physician must be almost unique in his power of continuing to attract crowds of patients a thousand years after his death.

THE NATIONAL SOCIETY FOR THE EMPLOYMENT OF EPILEPTICS.

The annual meeting of this Society was held on June 11th, under the presidency of Mr. E. Montefiore Micholls, at the office of the Society, 12, Buckingham Street, Strand. The principles which are followed at the Chalfont Colony are the removal of epileptics from the town to the country; their suitable employment under direction in a well ordered and regular mode of life with avoidance of excitement and abstinence from alcoholic liquors. The honorary medical officers report that in the majority of instances a marked improvement has been evident both in regard to the general state of health of the colonist and to the disease itself. The recommendation of young persons with only a brief history of fits and with little if any mental impairment is especially invited, as these cases are the most promising in respect of relief or cure. The good influence of the colony system among the adult colonists has been especially obvious, as in the previous year, among the women. The report of the Executive Committee contains an appeal for financial support from a wider constituency, in view of the fact that there are scattered throughout the country many thousands of epileptics who need such treatment as the colony can afford, while they assert that until every one of these is provided for the ultimate goal will not have been attained.

THE SCATTERGOOD MEMORIAL.

At the time of Mr. Thomas Scattergood's death last February a project was on foot to present him with his portrait as a recognition of his long and valued service to the Medical Department of the Yorkshire College, Leeds. The portrait, which was painted by Sir George Reid, President of the Scottish Academy, is regarded as an excellent likeness, and on June 11th was, on behalf of the 108 subscribers to the fund, presented to the family of the late Mr. Scattergood by Mr. Arthur Lupton, Chairman of the Council of the Yorkshire College. Mr. A. K. Scattergood, on behalf of the family, handed back the portrait to be hung in the medical school, according to the original wish of all associated with the movement. At the same time an inlaid wood and silver tray was presented to Miss Scattergood, and to each member of the family a bound copy of the resolution passed by the Council and by the Medical Board, recording the high esteem in which Mr. Scattergood was held by his fellow workers. The surplus of the fund will be devoted to founding a prize in the medical school, to be called the Scattergood Prize.

Dr. F. W. Mott will deliver the first of his series of Croonian Lectures on the Degeneration of the Neurone at the Royal College of Physicians on Tuesday, June 19th, at 5 P.M. The second will be delivered on Thursday, June 21st, at the same hour.

The fiftieth anniverary of the foundation of the Epidemiological Society of London will be celebrated on Friday, July 13th, when a commemoration dinner will be held at the Grand Hotel, Trafalgar Square.

The third of the biennial Huxley Lectures, founded in commemoration of the late Professor Huxley in connection with the Charing Cross Medical School, will be delivered by Lord Lister, President of the Royal Society, on Tuesday, October 2nd.

Dr. Thomas Barlow will give an address on Raynaud's Disease and its Allies to the Bradford Medico-Chirurgical Society on Thursday next at 6 P.M. The meeting will be held at the Midland Hotel, and medical men who are not members of the Society will be welcomed.

The Ingleby Lectures for this year will be given at Mason University College, Birmingham, by Dr. O. J Kauffmann on Wednesday, June 27th, and Wednesday, July 4th, at 4 P.M. The subject selected is the Commoner Neuroses of Childhood, their Pathology and Treatment.

At a meeting held in London on June 11th it was resolved to form a Society for the Study of Diseases of Children, and a provisional Committee, of which Mr. Sydney Stephenson, 33, Welbeck Street, is Honorary Secretary, was appointed to draw up a constitution and make the other arrangements necessary.

The third biennial conference in connection with the International Catalogue of Scientific Literature has been held at the house of the Royal Society during the present week. The catalogue, which has been planned by the Royal Society upon a system already explained, will include general biology, botany, zoology, human anatomy, physical anthropology, physiology (including experimental psychology, pharmacology, and experimental pathology), and bacteriology. The foreign delegates were entertained on June 13th at a dinner, over which Lord Lister presided.

THE WAR IN SOUTH AFRICA.

A VISIT TO THE GENERAL HOSPITAL, LADYSMITH.

By Sir William Stokes, F.R.C.S.I,
Surgeon-in-Ordinary to H.M. the Queen in Ireland; Consulting Surgeon to H.M. Forces, South Africa.

May 19th, 1900.

On May 15th I left Mool River General Hospital for Ladysmith, having been summoned there to see a case of gunshot wound of the head that had been received so far back as January 6th. Trephining and evacuation of a large lacteal abscess had been performed by Major Westcott, R.A.M.C., the able Principal Medical Officer of the hospital, and with so much benefit that an ultimate recovery was confidently anticipated. Recently, however, symptoms of cerebral pressure supervening, Major Westcott requested me to see and if necessary operate on the case. This I did, and hope I may later on publish details, as well as the result of the second operation.

I reached Ladysmith at 6.30 A.M., and proceeded to the Royal Hotel, well known to all who have followed the fortunes or misfortunes of this war, more especially in connection with the tragical fate of the eminent naturalist, Dr. Stark, who, while standing in the hall, was killed by a shell which, penetrating the roof, ricocheted from one of the side walls and smashed both his thighs, the injuries being so severe as to necessitate immediate amputation of both lower limbs. The shock, however, was more than he could bear, and he died within an hour after the operation.

The "Tin Camp" Hospital being between two and three miles distant from Ladysmith, I drove out in a hired waggon drawn by mules, and through one of the dustiest, most desolate, and inhospitable regions I have ever been in. Not a blade of grass or a green tree to be seen, the principal vegetation being the aloes, which here reach an immense size, the plant apparently flourishing best in situations that are most dry and dusty. The so-called road was full of ruts and holes, driving over which was not attended with any very pleasurable sensations. After a drive lasting about three-quarters of an hour the General Hospital, or "Tin Camp," came into view.

It is situated on a plateau close to "Observation Hill," from the summit of which an extensive panoramic view can be had of all the surrounding country, including many places that are now historic. The camp covers a large area, and from the absence of canvas presents the appearance rather of a small town. The view across the country is very extensive, for the most part flat and singularly devoid of vegetation. Coarse gravel, stones, and clouds of dust alone are to be seen, and in truth a more inhospitable region it is hard to imagine. Major Westcott, R.A.M.C., who was in Ladysmith during the siege, and has happily escaped all the perils that attended that event, and who was so distinguished for his unceasing energy, for the conspicuous ability he displayed in hospital organisation and administration in the Intombi Hospital especially, occupied the responsible position of Principal Medical Officer. Under his guidance I inspected the hospital, and am glad to bear my testimony to the admirable arrangements I found had been made by him in every department.

The following details in reference to the organisation and equipment of this hospital are derived not only from my own observation, but also from information kindly supplied to me by Major Westcott. They are purposely stated in the briefest possible manner.

Water Supply.—One gallon per head is sterilised at the hospital.

Food.—There are four well-arranged diets, Nos. 1 and 2 include ½ lb. green vegetables and ½ lb. fruit. In addition to the supplies obtained from the supply depôt, two private contractors are engaged, and luxuries are supplemented by presents of fresh butter, fruit, cigars, etc., from the people of Natal and societies in England.

Washing.—This has been a difficult matter to deal with, the Government contract allows ten days, by which an impossible situation was created. The difficulty was solved by the engagement of a private contractor, who returns the washing in forty-eight hours.

Organisation.—The hospital is divided into separate divisions for enteric fever, dysentery, surgical, general, serious, and convalescent. In the acute wards, containing 24 beds, each having 80 superficial feet and 1,000 cubic feet; there is a trained nursing sister, 4 day male nurses, and 2 sanitary nurses, and by night 2 male nurses, and 1 sanitary nurse, and 1 nursing sister to each division. There is also an assistant ward master for every 48 beds, and a chief ward master for each division. Infected linen is put outside the wards and constantly removed by coolies, who parade the lines to the disinfecting depôt.

The Circulating Library is in charge of the Rev. T. Murray, and there is a constant change of literature. Reading and writing room is open all day, and there is a supply of notepaper and envelopes free.

The Hospital Post Office is perfectly organised, and is in direct communication with Pietermaritzburg and other stations. Daily rolls are sent in at 12 noon daily from each ward, and the letters are distributed at 4 P.M. Letters can also be registered. There is a tailor's shop and a barber's shop.

Gifts.—Sister Noble is in charge of the store of presents, and is assisted in distribution by the medical officers, nursing sisters, and the clergy. Fifty cigarettes are sent to each ward daily for the use of those able to smoke.

Sanitation.—The cleanliness of the camp was remarkable, and it was impossible to realise that one was surrounded by over 800 cases of enteric and dysentery. A duplicate system of buckets is in use in the latrines, so that those returned are always clean. They are cleaned twice daily.

Cooking.—Highly-qualified Indian cooks are employed.

The Wards are large, light, and ventilated through the ceiling. The wards are carpeted and well equipped, the red screens and white mosquito curtains give an air of brightness to the wards. There have been nearly 1,200 sick treated at one time in the hospital, and until quite recently Major Wescott was the only commissioned officer.

The Operating Theatre is a large and bright room with a floor well protected with impervious linoleum, and all the arrangements for asepsis were complete. Operations are performed by Major Wescott daily at 2.30 P.M. The nursing sister in charge is Sister Bond, who acted in this capacity during the siege and assisted at many hundreds of operations.

The X-Ray Apparatus is prepared for work. Major Wescott is in charge. He dealt with over 100 cases during the siege.

Nurses and Orderlies.—The Medical Staff Corps discharge their duties with the highest efficiency. The Imperial Hospital Corps are a mixture of very good and very bad. The latter have been eliminated. The St John Ambulance Brigade, though their only qualification is five lectures on nursing, are a promising lot. The nursing sisters work admirably. There is a fine concert hall, and variety entertainments are given weekly for the convalescents.

THE HOSPITAL SHIP "NUBIA."

[From a Correspondent.]

The *Nubia* is a P. and O. ship, about four years old, and had previously been used as a troopship on the Indian Service. She is about 6,000 tons in size, with unsurpassed height between decks, and natural ventilation by ports, supplemented by steam exhaustion. She was ready to receive patients on January 5th, and the following was the staff appointed:

Lieutenant-Colonel F. W. L. Hodder, M.B., A.M.S., R.P., Senior Medical Officer in Administrative and Military Charge.

Dr. A. Bensusan, Lieutenant Thornycroft's M.I., who had previously been fighting with his corps at Colenso and elsewhere.

Dr. T. Kerr-Bell.

Dr. T. Pitt.

Dr. A. Campbell.

Dr. G. Ashton.

Seven nursing sisters, one sister (Binney) being superintendent, but as hard a worker in the wards as any of the others, and with numerous other duties.

Two dispensers.

Forty civil orderlies as ward attendants, a few of whom had been in the Maritzburg Ambulance Corps for a short period. In addition there was a sergeant-major, staff-sergeant and corporal R.A.M.C., appointed for stewards' and quartermasters' work, office, and pack store.

The majority of the civil surgeons, nurses, and attendants were refugees from the Transvaal. The ship was fitted up as a hospital in about ten days, under the orders of the Naval Transport Department, Captain Van Koughnet, R.N., being the senior, and Commander Holland, R.I.N., being the assistant, but the hospital ships were fitted out under the special supervision of the latter officer. The Admiralty undertook the dieting, bedding, cooking, etc., and a portion of the cleaning, such as cleansing of walls, latrines, urinals, etc. The medical department undertook the nursing, medical attendance, cleansing of wards, clothing, etc. A special second officer was employed to superintend the work of the crew appointed to assist (Mr. Williamson), and the willing assistance always given by Captain Hemming the commander, and the deck officer was invaluable. When the ship was first fitted up the wards were as follows:

A ward, 100 convalescents, in hammocks.
B ward, 26 cots.
C ward, below B, 32 cots.
D ward, amidships aft of B, 200 convalescents in hammocks.
E ward, 28 cots.
F ward, 30 cots, swinging.
G ward, 20 cots, swinging.
Officers' ward, 10 cots.
Cabins for officers, 32.

It will thus be seen that the total capacity for non-com-

missioned officers and men was 436, 136 being in cots, 300 in hammocks, which with 42 beds for officers made 478, or very nearly the accommodation of a general hospital at the base (500 beds).

It was, however, found that the convalescent wards were a mistake, as it was difficult to send the proper kind of cases for hammocks from the numerous hospitals up-country. It was then decided to convert the convalescent wards of all the hospital ships into wards with fixed cots, and to put additional cots into the wards previously fitted with cots. The wards then held the following numbers all in cots—A 30, B 38, C 50, D 55, E 40, F 39, and G 20, total 272, which with 42 officers made 314 beds. It should be mentioned that the beautiful little yacht, *Golden Eagle*, owned by Sir S. Scott, Bt., was attached to the *Nubia*, and accommodated 3 or 4 officers, who were kindly looked after by Lady Sophie Scott and her maid, a trained nurse. When Colonel Gallwey, C.B., the able Principal Medical Officer of the Natal Army, formed the idea of fitting up hospital ships, he hit on the only way out of the tremendous difficulty which had to be faced by the rapid development of what was thought would be a short campaign into a very serious and big war. There was great difficulty in establishing land hospitals not only by reason of the impossibility of getting buildings, cooks, etc., but also the feeding and supply, which could much more readily be arranged on board transports with full establishments than lying idle in the roads. The rush of wounded and sick was so great at times that it was absolutely necessary to find means of evacuating the field and base hospitals further up.

The *Nubia* received wounded direct from the battlefields on several occasions—from Spion Kop, Potgieters, Pieters, and from the fighting into Ladysmith. After relief she received many of the sick from that town, and took some home. She was at the Durban base from January 5th to March 31st, when she left for England with a full load of wounded and sick. Some idea of the work done can be gathered when it is mentioned that during the above period about 1,500 non-commissioned officers, men, and officers passed through the ship. Of these, one officer and six or seven men only died, chiefly from enteric fever and dysentery contracted in the field. Large numbers of both sick and wounded passed up to the front again, having recovered rapidly; a considerable number were invalided, being shattered by the hardships of the campaign. Nothing could have exceeded the cleanliness of this magnificent ship, and it is a pleasure to feel that from first to last everyone pulled together with the greatest concord. Dr. Bensusan, in addition to a full share of ward work, manipulated the *x*-rays apparatus with signal success, numerous bullets, pieces of shell, etc, having by this means been detected and removed.

The following hospital ships were fitted up in Durban: *Lismore Castle*, *Nubia*, *Avoca*, *Orcana*, *Dunera*, all in a very short time. The *Maine* was here, the *Spartan* and *Trojan*, and numerous transports have constantly been despatched home with invalids more or less convalescent, showing the important part taken in this campaign by hospitals afloat.

THE MEDICAL ASPECTS OF THE WAR.

By a South African Campaigner.

XXIII.

The Winter Climate of the Transvaal.

The climate of the Transvaal is at the present season cool and bracing, although on the high veld, which our forces now occupy, the cold at night is often severe. That the present season is winter and not summer in the Transvaal is still more fortunate for the health of the Boer forces and those British prisoners whom they have removed into the low country north of Pretoria. From Pretoria northwards the country falls away to the valley of the Limpopo or Crocodile, which forms the northern boundary of the Transvaal. The country is broken by spurs of mountain and deep valleys, and is largely covered by bush of a semi-tropical character. Through the winter this district is healthy, and the climate mild and delightful. It is the low veld of the Boers, and is resorted to every winter by farmers dwelling on the high veld, who, with their flocks and herds, their families and waggons, periodically migrate to the low veld during the winter months. In moving to this district at the present time of the year the Boers are therefore merely following their usual practice, although the conditions are materially altered.

The Lydenburg District.

In the early days of the settlement of the Transvaal, Lydenburg was made the headquarters of the emigrant Boers, and the Lydenburg Republic was one of the first Governments which existed in these territories. Fastnesses to the north end of the Drakensberg in the immediate vicinity of Lydenburg offered ideal natural fortresses to which the Boers could retire after engagements with the surrounding Bantu tribes. I once spent a few months in these mountains at the end of the winter and the beginning of the summer. My tent was pitched on high ground, and the entire camp of settlers around me were healthy, but I can well recollect, even so early as September, seeing many virulent cases of malaria among men who had been prospecting for gold in the surrounding deep valleys on either side of the mountain range. As a matter of fact, during the summer under existing circumstances the large portion of the country intervening between Pretoria and Lydenburg is unhealthy to Europeans, and the amount of malaria which occurs is considerable. It is the fever of the summer months which has made the exploitation of the gold fields of the Zoutpansberg, a north-western spur of the Drakensberg, both hazardous and costly. Among these mountains is to be found one notorious laager known from the earliest days as the Ohrigstadt laager. This interesting and fertile valley, shut in in the mountains, was described a few weeks ago by a correspondent of the *Times of Natal*, who predicts that the old Bechuanaland freebooters, Adrian De la Rey, Van Pittin, and others, will eventually retire there to join Abel Erasmus, the Transvaal native commissioner in that district. Here, it is anticipated by this correspondent, the last stand will be made. On the merits of this programme from a strategical point of view it is not our province to comment, but it must be borne in mind that such situations as these are surrounded during the summer months by large belts of terribly unhealthy country. The Boers will thus be cut off from the outer world unless they are prepared to face malaria whenever they sally forth.

Water Supply and Sanitation on the Rand.

Typhoid, which has played such havoc among our troops in the various camps, is unfortunately only too common under what have hitherto been normal conditions in Johannesburg, and at the various mines along the course of the main reef. As the deep level mines are opened up, and the population of Johannesburg increases, the question of an abundant and pure water supply, not only for Johannesburg, but for the whole course of the reef, will have to be faced. One of the commonest causes of typhoid fever has hitherto been the continuous use of water from wells and other small local supplies, as springs, liable to pollution by surrounding surface drainage and by dust. There can be little doubt that an abundant water supply from one end of the mines to the other would very materially reduce the high death-rate from typhoid fever. The sanitary system in vogue in Johannesburg itself does not differ materially from that employed in Kimberley and the majority of other South African towns. It is what is known as the pail system, and one of the chief objections to it is the nuisance of the night service, The huge waggons which are driven through the streets with an attendant train of natives during the small hours of the morning are foul things to encounter. The other and perhaps the more serious objection is the question of the disposal of slops, which are too often distributed indiscriminately over the back yard if there be one, or the adjoining street if there be not. Theoretically this system is held to be safe, but it is undoubtedly disagreeable, and for those who object to a waterborne system of sewage, Johannesburg and Kimberley offer enterprising communities and new scenes for the sanitary experts' devices.

Casualties.

Among the deaths from enteric fever reported from Bloemfontein are Lieutenant C. H. B. Adams-Wylie, I.M.S., who died on June 2nd, and Civil Surgeon H. Bryant, who died on June 7th. Lieutenant Adams-Wylie received a commission in the Indian Medical Service in January, 1899. Surgeon-Captain Dun, of the 5th Imperial Yeomanry, was slightly wounded at Kheis.

A MILITARY GENERAL HOSPITAL.

OUR correspondents with the field force in South Africa have on many occasions described the general constitution of the base hospitals, and we published recently an interesting account of the General Hospital at Mooi River, Natal, from the pen of Sir William Stokes. Some little time ago Sir William Thomson gave a short description of No. 6 General Hospital at Naauwpoort, and we are now able to reproduce a photograph which we have received from him (Fig. 2) showing the general disposition of the hospital.



Fig. 1.—Operating theatre, No. 6 General Hospital, Naauwpoort.

The hospital is capable of accommodating in its marquees and tents 650 patients with the necessary staff. The marquees are of the usual army pattern, but recent experience appears to show that they are not so well adapted for the purposes of a stationary hospital as are some other forms of temporary wards. The objections are not on the score of the comfort of the patients, for the floors are boarded and the beds are of iron with wire-woven mattresses and other conveniences, but because for size and weight the marquees do not supply as much accommodation as some other temporary structures.

At all the base hospitals special care has been taken in the fitting out of the operating theatre, and Fig. 1 shows that attached to No. 6 General Hospital. As will be seen, it is a building of corrugated iron, well lighted, and fitted with the necessary operating table, and tables for instruments, sterilisers, and dressing boxes, the whole in the charge of one of the army nursing sisters, who is responsible for the good conduct of the theatre and its instruments, and takes a great pride in keeping everything in apple-pie order.

The Principal Medical Officer of No. 6 General Hospital is Lt.-Colonel Somerville Large, R.A.M.C., and the Registrar is Major Jennings. Lt.-Col. Falvey is in charge of the medical, and Major Osburne of the surgical, divisions. During the last two or three months, a large proportion of the patients have been suffering from typhoid fever and dysentery. Sir William Thomson is, however, able to state that up to the time he wrote 500 cases had been treated on the surgical side without a death.



Fig. 2.—No. 6 General Hospital, Naauwpoort.

THE MIDWIVES BILL.

THE BECKENHAM AND PENGE MEDICAL SOCIETY.

THE fifth annual dinner of the Beckenham and Penge Medical Society took place on May 31st, at Beckenham, and was well attended by members and guests. Among the latter were Dr. J. G. Glover, direct representative on the General Medical Council, Dr. Handfield Jones, and Mr. Arbuthnot Lane, and among the letters and telegrams of regret was one from Mr. Victor Horsley. Dr. R. M. H. Randell, Vice-President of the Society, occupied the chair.

Mr. Frank Sturges, in proposing the toast of "The General Medical Council," spoke of the work of the Council generally in terms of praise, and claimed for his Society and kindred associations the credit of having by their work impressed upon the Council a clearer idea of what was expected from it as the governing body and the mouthpiece of the profession. That the Council was now alive to its responsibility was shown by its energy and public spirit which in the last few years had become so increasingly apparent. Alluding to the Midwives Bill, Mr. Sturges said the Beckenham and Penge Medical Society were now of opinion that some legislation was necessary and even desirable, but they trusted to the Council to continue to use all its influence against any Bill which went further than simply to replace the present midwife—a danger to life and society—by a class of well-trained women of good character, properly instructed as to where their duties began and ended. Referring to the proposed Conciliation Board, Mr. Sturges expressed the opinion that in such a way the club difficulty could be overcome. He was proud of the action of his Society on this question. Charity had nothing to do with it. The more important friendly societies were wealthy and powerful organisations, and that they should pay properly for medical attendance under proper regulations was simply a matter of business into which sentiment had no right to enter. In coupling the toast with the name of Dr. Glover, Mr. Sturges said how completely they disapproved of the way the remnant of the Cannon Street meeting had treated their direct representative. The Society had actively assisted the promotion of that meeting because they disliked much in the present Midwives Bill and believed the profession should speak out. But the methods of the promoters were distasteful to them, and in future the Society would act independently. He trusted the vote of sympathy and confidence unanimously carried at a large meeting of the Society was some slight consolation to Dr. Glover.

Dr. Glover thanked the Society on behalf of the Council. He quite agreed as to the necessity for the restriction of the functions of the midwife, as distinguished from the medical practitioner. He especially insisted that any legislation of the sort must, in the interest of poor lying-in women, stop the practice of unlicensed midwives; otherwise it would be quite valueless and should be resisted. He was glad to know that the proposal of a Conciliation Board had the strong approval of the Society. In conclusion, Dr. Glover thanked the Society for their words of personal kindness and support.

Rev. Henry Arnott, F.R.C.S., Rector of Beckenham, in proposing the toast of "The Beckenham and Penge Medical Society," spoke of the value of such societies in increasing professional knowledge and promoting fellow feeling and a kindly spirit one to another, but urged the Society to follow in the lines of the Medico-Chirurgical Society and the Pathological Society of London and leave medico-political questions to be dealt with by the General Medical Council and the British Medical Association.

Dr. Randell, in his reply for the Society, maintained it was part of their duty to take an active interest in all public questions vital to the profession, that knowledge was gained and opinion formed by debate, and that those in authority could act with far greater force if they knew the voice of the profession was with them.

LOCAL SUPERVISION OF MIDWIVES.

Dr. Rentoul, of Liverpool, writes to point out that under Clauses VIII and IX of the Midwives Bill as amended by the Standing Committee on Law, which authorise county or district councils to appoint special committeees as local supervising authorities, upon which committees women might serve, it would be open to such councils to appoint midwives. He states that he is told that this is the real intention and aim of the promoters of registration who argue that just as medical men, solicitors, and others manage their own affairs, so should midwives. He urges that "each who cares for the public health and public safety should write forthwith to their M.P.'s asking them to oppose the Bill."

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THE deaths in all India during the last week from plague were only 975, against 1,214 in the previous week. In Bombay city 268 of these occurred, being the greatest number in any one city or locality. In the Bombay Presidency, exclusive of the city, 156 deaths from plague occurred. Coincident with this improvement there is a general decline in the deaths from all diseases except cholera. Diarrhœa and dysenteric ailments are, however, also declining in virulence.

In Calcutta 107 deaths from plague occurred during the week ending May 19th, distributed as follows: On May 14th, 15th, 16th, 17th, 18th, and 19th the fresh cases of plague numbered 26, 21, 11, 23, 32, and 16: and the deaths from the disease 20, 21, 10, 24, 28, and 16 respectively. In the Bengal Presidency 191 deaths occurred exclusive of those in the metropolis. It would thus seem that in the capital cities of the two northern presidencies the death-rate from plague is in each instance higher than throughout the whole of the surrounding presidencies. At Karachi the plague outbreak is subsiding, and the native merchants have petitioned the authorities to abolish the detention camp in the interests of trade.

ADEN.

At Aden 23 deaths from plague occurred during the week ending May 21st

AUSTRALIA.

In Queensland, Rockhampton seems to be threatened rather seriously by plague; in other parts of Australia plague is diminishing. At Rockhampton 3 fresh cases of plague were reported on June 7th. A death from plague is reported from Melbourne on June 7th.

HONG KONG.

A few cases of plague continue to occur in Hong Kong, even although the hot weather is far advanced. Dr. Clark, the medical officer of health, at the meeting of the Sanitary Board on May 10th, stated that 3,648 rats had been destroyed during the previous fortnight, making a total of 13,834. The experiments on rat poisoning in sewers which have been conducted for some time past has proved inadequate. A compound of potassium cyanide and sulphuric acid was used for poisoning them, but the results have not been satisfactory. The Kowloon district, on the mainland opposite Hong Kong, has been declared infected.

MACAO.

In this Portuguese possession, situated some thirty miles by sea from Hong Kong, during the last three weeks of April, the deaths from plague were 39, 50, and 32 respectively.

FORMOSA.

At a meeting of the Sanitary Board of Hong Kong on May 12th, a report of plague in Formosa by H.B.M. Consul at Taiwan stated that 282 cases with 201 deaths had occurred.

MAURITIUS.

A fatal case of plague occurred in Mauritius during the week ending June 7th.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on Wednesday, the 11th day of July next, at 2 o'clock in the afternoon.

June, 1900. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on July 11th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before each meeting—namely, June 21st and September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.—The annual meeting of this Branch will be held at the Infirmary, Hereford, on Monday, June 18th, at 4 P.M.—GEO. W. CROWE, Foregate, Worcester, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.—The annual general meeting of this Branch will be held at the Hotel Cecil on Tuesday, June 19th, at 6 P.M., when the report of the retiring Council and of the Treasurer will be received, and an address delivered by the incoming President, Mr. George Eastes. At 7 P.M. the members will dine together, the President being in the chair.—H. BETHAM ROBINSON, M.S., 1, Upper Wimpole Street, GEORGE ROWELL, 6, Cavendish Place (*pro tem.*), Honorary Secretaries.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.—The annual meeting will be held at the Medical Institute, Edmund Street, Birmingham, on Thursday, June 21st, at 4 P.M. An address will be given by Dr. Milner Moore, President-elect. The annual dinner will take place at the Grand Hotel, Colmore Row, at 6.30 P.M.—WILLIAM F. HASLAM, Edgbaston, and J. T. J. MORRISON, Birmingham, Honorary Secretaries.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.—The annual meeting of this Branch will be held in the Royal Hotel, Stirling, on Tuesday, June 19th, at 3 P.M. Dr. Mackintosh will deliver his presidential address, and the annual business of the Branch will be transacted, including the appointment of office-bearers for the following year. Members who desire to exhibit cases or specimens will kindly intimate their intention to Dr. MOORHOUSE, 1, Glebe Avenue, Stirling, Honorary Secretary.

BORDER COUNTIES BRANCH.—The annual meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, June 29th, at 4.15 P.M. Members intending to read papers and gentlemen desirous of joining the Branch are requested to communicate as soon as possible with the Honorary Secretary, W. F. FARQUHARSON, M.D., Garlands, Carlisle.

LANCASHIRE AND CHESHIRE BRANCH.—The annual meeting of this Branch will be held in Preston on Wednesday, June 27th, at 2 P.M. Members who wish to read communications, show patients, or propose new members are requested to write at once.—T. ARTHUR HELME, M.D., 3, St. Peter's Square, Manchester, Honorary Secretary.

MIDLAND BRANCH.—The annual meeting of this Branch, owing to the indisposition of the President-elect, is postponed to Thursday, June 28th, when it will take place at the General Hospital, Nottingham, at 2.15 P.M. Agenda: Minutes. Report of Branch Council. Election of representatives of Branch on General Council. Election of representatives of Branch on Parliamentary Bills Committee. Election of Branch Council and officers. Election of President-elect for 1900-1901. President's address. The following cases will be shown and papers read:—Mr. C. J. Bond: Two Cases of Spina Bifida, treated by Excision. Dr. G. Lorimer: Some Observations on Gonorrhœal Rheumatism. Dr. E. Mansel Sympson: A Case of Recto-vesical Fistula in a boy 5 years old, with Colotomy Operation. Dr. Pope and Dr. Astley Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks on the possible Connection of the Two Diseases. Dr. H. Handford: Three Cases of Cerebro-spinal Meningitis. Dr. W. B. Ransom: Notes on, and Specimens of, a Case of Syringomyelia. Dr. H. Michie: Intestinal Resection for Cancer. Members are requested to bring cases and specimens for exhibition. Luncheon will be provided by the President-elect at the Albert Hotel, Derby Road, at 12.45 P.M. The annual dinner will take place at the same hotel at 6 P.M.; price 7s. 6d., exclusive of wine.—FRANK M. POPE, 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

SOUTH-EASTERN BRANCH.—The annual meeting of this Branch will be held at Reigate on Thursday, June 21st. Dr. Walters, of Reigate, will preside.—T. JENNER VERRALL, 97, Montpellier Road, Brighton, Honorary Secretary.

SOUTH-WESTERN BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 20th, in the Museum of the Torquay Natural History Society, Babbacombe Road, Torquay, at 3 P.M., when Dr. Jackson will resign the chair to Mr. Karkeek, who will deliver an inaugural address. The Branch Council will meet at 2 P.M., and will afterwards present their annual report to the meeting. Mr. George Jackson will ask the opinion of the meeting as to the desirability of transacting business, especially in matters of interest to the profession at large (not for the reading of papers on medical or surgical topics or showing cases or specimens) at the annual meeting. In the event of the meeting agreeing to that arrangement, it will be asked to sanction a special meeting in order to alter the by-laws to give effect to the same. A communication from the General Secretary of the Association with reference to the Midwives Bill, at present before Parliament, will be read. Luncheon, by kind invitation of the President-elect, will be held at 1 P.M. at the Museum, and the annual dinner will take place at the Bath Saloon at 6.30 P.M. Tickets (exclusive of wine), 6s. After the meeting tea will be served in the Museum. On Thursday, June 21st, the Torquay members have kindly arranged an excursion by sea to Dartmouth, up the river Dart to Totnes, at which place luncheon will be held, and by coach from there to Berry Pomeroy Castle, and home. The Honorary Secretary will be glad if members will inform him, on or before June 16th, whether they will be present at (1) the dinner, (2) the excursion, so that further arrangements may be made.—H. W. WEBBER, M.S., 4, Woodland Terrace, Plymouth, Honorary Secretary.

WEST SOMERSET BRANCH.—The annual meeting of this Branch will be held on Tuesday, June 26th, at 12.30 P.M., at the Lamb Hotel, Dulverton, under the presidency of Mr. G. F. Sydenham. Business:—Minutes. Report of Council. Treasurer's account. Election of members of Council and President-elect. Place of next annual meeting. Intermediate meetings. The President will deliver an address on The Vulgar Errors and Superstitions of West Somerset in their Relation to Medicine. Dr. Macdonald will make a short report on the Conference of Medical Ethics at Manchester. Luncheon will be provided at the Lamb Inn after the meeting, price 3s. 6d. per head, exclusive of wine. The President invites the members of the Branch to drive with him to the Harbourer's Cottage, Haddon Hill, where tea will be taken. Mrs. Sydenham has kindly invited the wives of members to lunch at her house, and to join the party at tea at Haddon afterwards. Members should write to Mr. Sydenham before June 20th, stating if they intend to be present, and if their wives accept Mrs. Sydenham's invitation.—E. LIDDON MEADE-KING, Taunton, Honorary Secretary.

READING AND UPPER THAMES BRANCH.—The annual meeting of this Branch will be held in the Library of the Royal Berks Hospital, Reading, on Friday, June 29th, at 3 P.M. The President (Dr. Freeman) will take the chair, and the officers for the coming year will be elected, after which Dr. Noott, of Broadmoor Asylum (the President for the coming year) will take the chair. At 3.30 P.M. a combined scientific meeting of the Oxford Branch and the Reading and Upper Thames Branch will be held in the Library, Royal Beccles Hospital. Cases will be read and specimens presented, and the President (Dr. Noott) will read a short paper on the Alleged Increase of Lunacy, with a view to a discussion, in which members of both Branches are invited to take part. The annual dinner will take place on the same evening at 6 o'clock at the Great Western Hotel, Reading. The charge for the dinner will be 6s. per head, exclusive of wine.—H. H. PHILLIPS-CONN, Reading, Honorary Secretary.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.—The summer meeting of this Branch will be held in the Hotel, Cruden Bay, on Tuesday, June 19th, at 2 P.M. Light refreshments will be served on arrival at the hotel. Business: Minutes; nominations, etc.: election of Representative on Council of Association. The dinner will be held after the meeting (5s. per head, exclusive of wines).—J. SCOTT RIDDELL, J. F. CHRISTIE, Aberdeen, Joint Honorary Secretaries.

BATH AND BRISTOL BRANCH.—The annual meeting of this Branch will be held on Wednesday, June 27th, at 4.30 P.M., in the Medical Library, University College, Bristol, when Dr. A. J. Harrison will resign the chair to Dr. A. W. Prichard, President-elect, who will deliver the Presidential address. The business of the meeting will be to receive the report of the Council; to elect the officers of the Branch; to transact the necessary business; and such subjects connected with the interest of the Branch and of the profession as may be brought before it. Members having any communications for the meeting are requested to give notice to the Secretaries not later than June 16th. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. There are three vacancies in the Local Council for the Bath District, and two for the Bristol District, the retiring members being ineligible for re-election for one year. The attention of the members is called to the mode of voting for the Local Council, whereby they will vote only for the vacancies in their own District. Each member is requested to write the names of those he wishes to ballot for, and to return the voting paper to the Secretary of his District on or before Saturday, June 23rd. Members who have not paid their subscriptions are requested to do so immediately to the Local Secretaries. The dinner will be held at the Clifton Down Hotel, at 6.45 for 7 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. The wines will be served at moderate charges. The Bristol Secretary particularly requests that members will inform him by Monday, June 25th, whether it is their intention to be present at the dinner. The Secretary cannot undertake to provide places for members at the dinner without notice beforehand.—J. MICHELL CLARKE, Clifton, and W. M. BEAUMONT, Bath, Honorary Secretaries.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—*Preliminary Notice.*—The annual meeting of this Branch will be held at Cardiff on July 3rd.—A. SHEEN, Cardiff, Honorary Secretary.

PERTHSHIRE BRANCH.

A MEETING of the Branch was held in Perth on June 8th. Dr. TROTTER in the chair.

Confirmation of Minutes.—The minutes of last meeting were read, approved, and signed by the Chairman.

New Member.—Dr. F. Porter, of Comrie, was elected a member of the Association and of the Branch.

Representatives on Council and Parliamentary Bills Committee.—Dr. Niven was appointed representative on the Council of the Association, and Dr. Urquhart was re-elected representative on the Parliamentary Bills Committee.

Special Anniversary Meeting.—It was unanimously agreed to hold a special anniversary meeting at the usual time in November, to mark the twenty-first year of the Perthshire Medical Association, now known as the Perthshire Branch of the British Medical Association.

Registration of Deaths.—The report of the Committee *re* Registration of Deaths was read, to the effect:

That all deaths should be certified by duly qualified medical men; and, further, that if no such certificate is presented to the Registrar he should be bound to give immediate notice thereof to the Procurator-Fiscal, who shall thereupon be bound to make an investigation, and to obtain a medical report for the purposes of registration.

The Committee recommended that this resolution should be laid before the Branch in order that their representative may bring it before the General Council of the Association.—Dr. PARKER STEWART reported that on inquiry he had ascertained that the local police authorities were willing to pay a fee on a night call not exceeding 7s. 6d., and on a day call not exceeding 5s., to any medical man claiming the same, provided his attendance had been called for by the police. On the motion of Dr. KENNEDY, seconded by Dr. NIVEN, this report was received and unanimously adopted.

The late Dr. Buist.—Dr. TROTTER referred to the death of

the late Dr. Buist, and the Secretary was instructed to convey to the family of Dr. Buist the respectful sympathy of the Branch.

Attendance on Families of Soldiers and Sailors in South Africa.—The SECRETARY intimated that twelve members had undertaken to attend gratis the families of sailors and soldiers engaged in the South African war. He also read a letter of thanks from Mr. Masterson, the local secretary of the Perth South African War Fund, relative to this matter.

The Work of the Branch.—An informal discussion took place in reference to the work of the Branch. It was suggested by Dr. PARKER STEWART that more frequent meetings should be held for the reading of scientific papers and the discussion of medical topics.—Dr. KENNEDY also proposed that a book club should be formed.—Dr. NIVEN proposed and Dr. KENNEDY seconded a motion to the effect that Dr. Taylor of Perth be asked to aid Dr. Urquhart in these matters until the annual meeting, so that a programme for the coming winter might be drawn up.—Dr. TAYLOR undertook to act as indicated.

Vote of Thanks to Dr. Urquhart.—Dr. NIVEN proposed a vote of thanks to Dr. Urquhart for his services as representative member for the past eleven years. This was passed with acclamation.

STAFFORDSHIRE BRANCH.

THE third general meeting of the Session was held at Wolverhampton on May 31st, Dr. SPENCE, President, in the chair. Thirteen other members were present.

Confirmation of Minutes.—The minutes of the last general meeting were read, approved, and signed.

New Members.—E. Smallwood Savage, M.A., M.B., F.R.C.S. (Birmingham), and Sidney R. Dyer, M.D., M.R.C.S., L.R.C.P. (Stafford), were elected members of the Branch.

Communications.—The following letters were read: (1) From General Secretary, enclosing one on "revaccination and vaccination at school age"; (2) from General Secretary, enclosing resolution of Council *re* Midwives Bill, and also proposed amendments to the Bill; (3) letter from Joint Committee to oppose midwives' registration. It was unanimously resolved:

That the Secretary write to the Staffordshire members of Parliament asking their support for the proposed amendments.

Cases.—Dr. DEANESLY showed the following cases:

1. A married woman, aged 45, with scirrhus of both breasts of over three years' duration. On admission to the Wolverhampton General Hospital five weeks previously the left breast was already ulcerated, and on the right side the skin was adherent to the growth and on the point of ulcerating. The axillary glands were implicated on both sides. The general health remained good, except for considerable loss of flesh. The patient had not reached the menopause. Removal of the breasts appeared contraindicated by the advanced state of the disease; both ovaries were therefore removed, and the patient put on full doses of thyroid extract. Since leaving the hospital she continued to take from two to three thyroid tabloids daily. The ulcer of the left breast was treated by applications of formalin, by which the bulk of the growth appeared at present to have been destroyed. The right breast, which received no local treatment, already—five weeks after the operation—showed marked shrinkage of the growth, and the adhesion of the skin over it had almost disappeared. Dr. Deanesly hoped to show the patient again at a later date.

2. A case of nephrectomy for tuberculous kidney in a man aged 31. The symptoms closely simulated calculus, and the operator was still further misled by finding two small calcareous concretions embedded in the substance of the kidney. After removal of these the kidney was sutured and replaced. The wound healed by primary union, although there was high irregular pyrexia for three weeks after the operation. Three months later patient was readmitted with a sinus in the loin and caseous infiltration of the parietal wound. The discharge showed abundant tubercle bacilli. The wound was reopened and the kidney enucleated with great difficulty, owing to the extension of inflammation to the perinephric tissue. To obtain sufficient room the incision had to be extended both forwards and upwards with section of the eleventh rib. Even then it was difficult to draw out the kidney, and one of the silk ligatures employed to tie the pedicle slipped off after the kidney had been cut away. A large clamp which had been applied as an additional precaution also slipped off, and the pedicle fell back into the depth of the wound bleeding profusely. The operator managed to pick it up with his fingers and with difficulty ligatured it securely. The patient though much collapsed revived after saline infusion in the basilic vein and slowly recovered. The peritoneum and pleura were found to have been rather freely opened, but were closed with silk sutures, and this circumstance gave rise to no troublesome symptoms either at the time of the operation or during convalescence.

3. A young man with an unreduced dislocation of the sternal end of the right clavicle produced together with fracture of four or five ribs some weeks previously. He had been dragged under a two-horse roller while leading the horses. The dislocation was complete anteriorly, but there was little or no displacement upwards, owing apparently to the interarticular or the costo-clavicular ligament having escaped rupture. There was no apparent interference with the use of the arm and shoulder, and no operative or other measures were proposed.

Papers.—Dr. M'ALDOWIE read a paper on forty-two cases of inoculation for typhoid fever. The inoculations were performed in the North Staffordshire Infirmary on volunteers before leaving for active service in South Africa. None of the men had as yet (May 16th) been attacked by typhoid.—Dr. MALET read a paper on some cases in which hypodermic medication was necessary: (1) unconsciousness, where administration by the mouth was hardly possible; (2) persistent vomiting, where drugs given by the mouth were rejected; (3) profound asthenia, where absorption by the stomach was doubtful; (4) urgency, where absorption of the stomach was too slow; (5) cases in young children, where drugs by the mouth were refused and struggling was to be avoided. The paper was illustrated by account of typical cases.

Exhibits.—Dr. J. A. CODD showed local electric baths for both upper and lower limbs, for use in cases where it was desirable to apply the electric current over a larger area than could be done by using ordinary electrodes.—Mr. GEORGE HEATON showed a specimen of a ruptured kidney which he had removed by abdominal section for severe hæmorrhage. The kidney showed a transverse rupture on its anterior surface with a tear of the peritoneum covering it. The boy from whom it was removed was also suffering from a rupture of the liver, which was packed with gauze at the operation. The patient made a good recovery.

QUEENSLAND BRANCH.

THE sixth annual meeting of this Branch was held in Brisbane on February 2nd; the Hon. W. F. TAYLOR, M.D., M.L.C., in the chair.

President's Address.—The PRESIDENT delivered an eloquent address.

Union of Societies.—The occasion was one of more than ordinary importance, since it was the first meeting as one of the two medical societies—the Medical Society of Queensland and the Queensland Branch of the British Medical Association—the union having been resolved upon during the past year.

Election of Officers.—The election of office-bearers for the year 1900 resulted as follows: *President:* Dr. John Thomson. *Vice-President:* Dr. Alex. Francis. *Council:* Drs. Byrne, Hardie, Connolly, and Taylor. *Auditors:* Drs. Orr and Macnamara. *Treasurer:* Dr. P. Bancroft. *Secretary:* Dr. A. B. Brockway. *Local Editor Australasian Medical Gazette:* Dr. Turner.

Medical Attendance on Families of Men Serving in South Africa.—It was unanimously resolved to accord to the dependents of the men who have volunteered for service in South Africa gratuitous medical attendance upon the same lines as are followed in Great Britain.

SYDNEY AND NEW SOUTH WALES BRANCH.

THE annual meeting of this Branch was held at the Royal Society Room, Sydney, on March 30th, Dr. E. T. THRING, President, in the chair. Forty-five members and one visitor were present.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

New Members.—The PRESIDENT announced the election of the following new members: Drs. Sands, Cleland, West, Willis, Lamb, Cargill, Fullerton, Cope, Ponder, Rutherford, and Lester.

Scrutineers and Auditors.—Drs. Sinclair Gillies and Jarvie Hood were appointed scrutineers, with Drs. Maitland and Clarence Read as assistants. Drs. Jarvie Hood and Todd were elected auditors.

Vote of Thanks.—A vote of thanks was accorded to the scrutineers.

Report of Council and Balance Sheet.—The HON. SECRETARY read the report of the Council.—The HON. TREASURER read the balance sheets, and moved the adoption of the report and balance sheets.—Dr. QUAIFE seconded the resolution, which was carried.

President's Address.—The PRESIDENT (Dr. E. T. Thring) read his address.—Dr. QUAIFE proposed a vote of thanks to Dr. Thring for his address. The vote was carried by acclamation.

Election of Officers.—The PRESIDENT announced the result of the ballot for the officers and Council:—*President:* Dr. W. H. Coutie; *Vice-President:* Dr. Foreman; *Councillors.*

Drs. Hankins, Crago, Abbott, Clark, Thring, Rennie, Knaggs, Worrall, Neill, Blackwood, Brady, and Jamieson.

Introduction of New President.—Dr. Thring then vacated the chair, and introduced Dr. Coutie as the President for the ensuing year.—Dr. COUTIE thanked the members for his election as President.

CEYLON BRANCH.

A MEETING of this Branch was held at Colombo, at 2 P.M. on April 15th, Surgeon-Major PERRY, P.C.M.O., in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and confirmed.

Annual Report.—From the annual report it was seen that there were 119 members at the end of last year, being an increase of seven during the year. Two deaths of members were recorded. Five ordinary meetings had been held in addition to meetings of the Committee. At these meetings several important and interesting papers were read.

New Member.—Mr. Cyril H. Dickman, L.C.M.C., was elected a member of the Branch.

Election of Officers.—The PRESIDENT (Dr. Perry) having vacated the chair proposed Dr. W. G. Van Dort, M.D. (Aberdeen) as the President for the current year. The following officers were also unanimously elected: *Vice-Presidents:* Dr. T. F. Garvin, M.B., Dr. G. P. Schockman, M.B. *Council:* Dr. Harvey Hilliard, M.R.C.S., Dr. H. Marcus Fernando, M.D., B.Sc., Dr. H. G. Thomasz, F.R.C.S.E., Dr. P. S. Brito, M.B., M.R.C.S. *Honorary Treasurer:* Dr. M. Sinne-Tamby, M.D., F.R.C.S.E. *Secretary:* Dr. W. H. de Silva, M.B.

Vote of Thanks to Retiring Officers.—A vote of thanks was proposed to the retiring office-bearers, which was acknowledged by Drs. PERRY and DE SILVA.

Papers.—A paper on superfœtation was read by Dr. HEYNSBERG, of Kalutara, which evoked a deal of discussion, in which the following took part, namely, Miss Dr. SHARMAN, Drs. SINNE-TAMBY, HILLIARD, FERNANDO, PAUL, and the PRESIDENT. Another paper was read by Surgeon-Major PERRY on gonorrhœal ophthalmia, with records of several cases. This paper also gave rise to a discussion, the following taking part: Drs. HILLIARD, DE SILVA, THOMASZ, FERNANDO, and the PRESIDENT. Dr. PERRY having replied, a unanimous vote of thanks was passed to the readers of both the papers.

Specimens.—The following were exhibited: (1) A pathological specimen of tumour of pons; (2) a specimen of ischiopagus; (3) a specimen of arrested development of a fœtus; (4) large vesical calculi.

GRAHAMSTOWN BRANCH.

Election of Officers.—At the last meeting of this Branch the following officers were elected: *President:* Dr. Drury. *Vice-President:* Dr. Robertson. *Honorary Secretary and Treasurer:* Dr. Bays. *Members of the Council:* The above-named *ex-officio*, and Drs. Greathead, Greenlees, Fitzgerald, Jones, Conry, and Pearson.

Paper.—A paper was read by Dr. EDINGTON on Inoculation for Horse Sickness.

MALTA AND MEDITERRANEAN BRANCH.

A MEETING of the Branch was held at the Station Hospital, Valletta, on March 15th, Surgeon-General T. O'FARRELL, M.D., P.M.O., President, in the chair.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

Milk Poisoning.—Dr. T. ZAMMIT, Analytical Chemist to the Government, read a paper on the sudden gastro-intestinal attacks amongst several persons of the same family occurring at intervals in different localities in Malta, and due to the presence of the bacillus enteritidis sporogenes described by Dr. Klein. A discussion followed.

Plague.—Staff-Surgeon DALTON, R.N., read a paper describing the epidemic of plague at Hong Kong in 1896, as observed by himself. He discussed the probable predisposing causes and manner of infection; described the symptoms; said that a definite diagnosis, particularly in mild cases, could only be arrived at by means of bacteriology, and finally spoke of the treatment, which was more or less symptomatic.—A discussion followed, during which Dr. CALLEJA, recently returned from a trip to Japan, said that attacks of plague having been attributed there, amongst the carriers, to scratches in their feet being inoculated by the bacillus in the street dust, the authorities supplied them with boots, after which no more cases occurred amongst them.

Votes of Thanks.—Votes of thanks were proposed to Dr. Zammit and Staff-Surgeon Dalton for their practical papers by the PRESIDENT, and, having been seconded by the SECRETARY (Surgeon-Lieutenant-Colonel L. Manché, M.D.), were warmly accepted by all present.

BRITISH GUIANA BRANCH.

THE second quarterly meeting was held at Georgetown on April 26th, Dr. DUNSCOMBE-HONIBALL, President, in the chair. Eight members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and confirmed.

The Suppression of Illegal Practice.—The PRESIDENT explained the deficiency of the law *in re* prosecution for illegal practice; and it was decided to approach the Governor on the subject to have same amended.

Papers.—Dr. DUNSCOMBE-HONIBALL (President) read a paper on an obscure case of fracture of the base of the skull, for which a hearty vote of thanks was proposed by Dr. GOMES, seconded by Dr. CONYERS, and duly carried.

R.A.M.C. South African Fund.—It was proposed, and carried unanimously, to contribute £5 of the funds of the Branch to the R.A.M.C. Fund.

SPECIAL CORRESPONDENCE.

PARIS.

The Report of the Malaria Commission.—Cocaine Anæsthesia in Major Operations.—The Restriction of the Sale of Alcohol in the Navy.

M. LAVERAN at a recent meeting of the Académie de Médecine read the report drawn up by the Commission, consisting of Drs. Vallin, Kelsch, Railliet, and Professor Blanchard. This report, which is in the form of a Scheme of Instruction for the Prophylaxis against Malaria, was adopted by the Académie. It consists of:

1. An introduction describing briefly the part played by mosquitos in the propagation of malaria.
2. Indications as to the measures that should be adopted to render malarial districts healthy, such as drainage and cultivation of the soil, and the use of a mixture of petroleum oil and tar which is poured on the surface of the water, and kills the larvæ of the mosquitos which come to the surface to breathe; 10 c.cm. of the mixture being used for each square metre of water surface. This operation should be performed in the spring, and repeated every fifteen days, till the return of the first cold weather.
3. Personal prophylactic measures, such as the choice of a proper site for the dwelling house, the use of mosquito curtains, punkahs, and the value of quinine as a preventive, 4 gr. of the sulphate being the daily dose, or 8 gr. every other day.

Dr. Tuffier presented three patients who had been operated on by him, the anæsthetic used being cocaine injected into the spinal canal. The cases were laparotomy, amputation of the leg in a man, and nephrectomy. One centigramme of cocaine hydrochlorate was injected, the resulting anæsthesia lasting for an hour to an hour and a-half. The seat of election for the injection was the interval between the third and fourth or fourth and fifth lumbar vertebræ. Dr. Tuffier has performed over eighty operations under this anæsthetic; the first injections were made low down in the lumbar region, but he is now gradually injecting at a higher level, and thinks it probable that eventually he may be able to operate on the liver, stomach, and even the intrathoracic organs by this means. The needle of the empty hypodermic syringe is plunged into the spinal canal at the selected spot, and if the cephalo-rachidian fluid wells up into the piston of the syringe, the injection of the cocaine solution is slowly proceeded with; the needle is then withdrawn and collodion spread over the spot. The first symptoms the patient notices are subjective—sensations of pricking, pins and needles, then numbness of the lower limbs, followed by a sensation of cold and weight. The sensibility to pain disappears first, followed

by loss of sensibility to heat, and lastly by loss of sensibility to touch. The motor system is then affected; the limbs are not paralysed, but there is a loss of muscular sense. The anæsthesia, which reaches up to the umbilicus, is complete in about 10 minutes after the injection of the cocaine. The above sensations disappear in the inverse order.

Following the recent decree by the Minister of War forbidding the consumption of alcohol in military canteens, M. de Lanessan, the Minister at the head of the Admiralty department, has recently addressed a letter on this subject to the vice-admirals, commanders-in-chief, and the maritime prefects. M. de Lanessan does not believe that there is occasion absolutely to forbid the use of alcohol in the navy. The bluejackets and marines are generally men who have been re-engaged after several years' service, and are thus less exposed than young recruits to the evil. The Minister is of opinion that the sale of alcoholic drinks should be regulated, but not forbidden. Fermented drinks (beer, cider, perry) and the usual non-alcoholic beverages, such as coffee, tea, milk, and chocolate, are permitted. The sale of drinks with an alcoholic basis will be tolerated, but under the watchful eye of the corps-commandants, who must especially eliminate those drinks which are known to be injurious, such as absinthe and all spirits of inferior quality. The daily consumption of spirits must be arranged not to exceed a maximum which shall be fixed after considering the number of the forces and the number of re-engaged men in the station. The corps-commandants are instructed to close for one or more days any canteen where a case of drunkenness shall have been remarked, without taking into consideration the kind of beverage consumed.

PHILADELPHIA.

The Medical Societies of Philadelphia.—Fire at Jefferson Hospital.—Death of Dr. Amy Barton.—Philadelphia County Medical Society.

IN looking over the scientific work done in Philadelphia during the past season, it was something of a surprise to find so many societies actively at work. Of course, the Philadelphia County Medical Society, with over 800 members, leads easily in point of numbers, although in excellence of work it has a hard time keeping up to the standard set by the College of Physicians and its various subsections. The latter organisation dates from 1796, and prides itself not a little on its record. It bears the same relation to the profession as do the Academies of Medicine in the different large cities of our country. The special societies outside of the College are the Philadelphia Obstetrical, the Neurologic, the Pediatric, and the Pathologic Societies, all hard at work. Especially is this so of the Neurologic Society; but with such a secretary and energetic promoter as Dr. Wm. G. Spiller (Editor of the *Journal of Nervous and Mental Diseases*) it could hardly be otherwise. Among the younger societies the North-Western stands out in character of work. In fact, it is the only up-town society making a steady struggle toward the best. The infusion of a lot of young blood in the past year will only add to its usefulness. True, it is much smaller in numbers than the Medico-Legal Society, but the latter is, strangely enough, neither medical nor legal. It is but fair to say that it does manage to get a paper read before it once or twice a year; but the spirit animating the society is largely carnal. Still, in promoting fellowship among almost 150 physicians in North Philadelphia who gather about its banquet board six times a year, it discharges a very important function. To bring the profession into closer social bonds the Philadelphia Medical Club was organised about seven years ago. Its meetings are held four times a year in the parlours of some one of the prominent hotels. Many medical men of renown have been its guests in time gone by. The club has now a snug bank account, and hopes some time soon to house itself in a cozy home somewhere in the centre of the city. One of the humorists of the club suggests that over the portals of the club quarters that are to be there be graven in letters of enduring marble these words: "Leave ye all shop behind who enter here."

Jefferson Hospital and College were seriously threatened by fire recently. A terrific explosion of chemicals in an adjacent blue print works set fire to the rear of the fourth floor of the hospital given over to the chronic surgical cases. Consternation reigned among the patients, but the cool heads of the nurses and resident physicians averted any calamity. Although the fire raged for several hours about the rear of the building no special damage was done to the structure save by water.

By the death of Dr. Amy Barton there passes from Philadelphia's guild the first woman who won distinction in ophthalmology in this city. For many years she held the Chair of Ophthalmology in the Woman's Medical College, and was a prominent factor in the conduct of that institution. Her lay as well as her professional relations were always stamped with that lofty ideal which is witness to the higher life wherever encountered.

The early March meeting of the Philadelphia County Medical Society was given over to a symposium on the menopause. During the evening Dr. John G. Clark (recently called from the Johns Hopkins College to the Chair of Gynæcology in the University of Pennsylvania) showed himself a coming man in his paper on the anatomical basis of the menopause. The paper really amounted to a lecture, and was made intensely real by a lengthy series of stereopticon pictures. They were no ordinary lantern slides, but a collection of remarkable pictures based on the author's studies at Leipzig and elsewhere on the Continent. In the course of his talk Dr. Clark advanced the theory that ovulation was brought about by the raised blood pressure within the ovary, due to the tremendous filling of all its internal vessels. In this way the ovum is forced toward the periphery of the ovary by the intraovarian blood pressure, and the area of ovarian periphery lying over the most peripheral ovum is thus, by pressure from behind, cut off from its normal blood supply, favouring the necrobiotic changes necessary to rupture and escape of the ovum into the tube. The paper was given an enthusiastic reception.

MONTREAL.

Small-pox on the Lower St. Lawrence.—Mildness of the Epidemic.—Probable Origin.—Cases of more Virulent Type in Montreal and Winnipeg.—The McGill University.

THE epidemic of small-pox at present existing in the Lower St. Lawrence presents a number of interesting features. Since January 1st about 500 cases which seem to have originated from two different foci have occurred. The cases in the small towns and outlying country districts probably started from one patient who had contracted the disease in some unknown manner. This patient while suffering with small-pox went begging from house to house about the county of Kamaraska. He was afterwards proved to be insane. A number of cases of small-pox have thus originated in this and adjoining counties.

The character of the disease in this epidemic seems to be quite mild. Of the 500 cases 2 only have died. One of these died from a complication probably not connected with the disease, while the other was a very debilitated subject. On the other hand, the cases are highly infectious. In fact, this type of the disease is the same as that which has occurred throughout the central portions of the United States, where, owing to its great mildness, proper isolation of the sick has been almost impossible of accomplishment. Secondary fever rarely occurs; the pustules dry up more rapidly than in typical small-pox, but the eruption passes through the classic grades of papule, vesicle, pustule, crust, and umbilication. The similarity to chicken-pox is great, the pocks occurring in successive crops, often on the back. The explanation of the mild character of the disease is probably that suggested by Surgeon-General Sternberg of the United States army. It seems that the epidemic in Cuba at the time of the Spanish-American war was of the same mild type. The constant return of both soldiers and travellers from this infected area has given the disease a foothold in America. In the province of Quebec there have been 230 cases.

There have been, as well, 4 cases in the City of Montreal and several in Winnipeg, which seem to have arisen from a different source. The Winnipeg patients took the disease from a traveller, who had probably contracted it from some Japanese labourers. On his arrival at Winnipeg it was recog-

nised that he was suffering from small-pox, and he was sent to the Winnipeg Hospital, where he afterwards died. Down to May 28th 5 deaths from small-pox had occurred at Winnipeg, but the occurrence of new cases there has practically ceased, owing to the active efforts of the Municipal Board of Health.

One of the travelling companions of the first Winnipeg patients, a gentleman from Rossland, came to Montreal, and although not feeling well managed to go about transacting his business. At this time he was staying in one of the hotels in Montreal. He was seen by a physician, who diagnosed his disease as small-pox. This diagnosis was confirmed by the news of the death from small-pox of the Winnipeg case. The case in Montreal was now transferred to the Civic Hospital, the hotel was practically quarantined, and every effort made by the members of the Board of Health and the hotel authorities to limit the spread of the disease. Three cases have since occurred in Montreal among the servants of this hotel. Of these, the only unvaccinated person has since died, and the other two, previously vaccinated, had the disease in a mild form and are now convalescent. No other cases have occurred in Montreal.

The type of the disease in these Winnipeg and Montreal cases seems much more virulent than in the country epidemic, both from its much higher mortality and from its attacking vaccinated people. The fact that three weeks have passed since the last case in Montreal renders it highly probable that the greatest danger has passed and that the efforts of the Board of Health to prevent contagion have been successful.

McGill University is in the throes of annual examinations which are the final proceedings of the academic year. Friends of the University are thankful for a year of considerable success, the past session having marked a number of distinct advances. The scientific spirit of the University is surely bettering. The number of original publications from the pens of University teachers has increased greatly, and the standard of work done by the students has been slowly but surely lifted from a plane of pure professionalism to one of earnest participation in scientific and scholarly achievements.

The recent generous gift of W. C. McDonald of 200,000dols. for the scientific departments of the University has made available for all the students the excellent accommodations in the chemical buildings. This, added to the 100,000dols. for new laboratories in the medical department, puts the finances of the University in most excellent condition.

SYDNEY.

The Bubonic Plague.—Inoculation with Haffkine's Prophylactic.—The Carrington Convalescent Hospital.

THE extension of the plague to Sydney is causing a considerable amount of alarm as well as much disturbance in business. Up to date 61 cases have been reported, with 20 deaths. The number of cases has rapidly increased within the last few days, in spite of extensive organised efforts at disinfection and destruction of rats. Last week a large block of wharves and warehouses was quarantined, and this has been thoroughly disinfected. This is one of the oldest parts of the city, and serious defects in drainage and general sanitation have been revealed. The steam ferry and coastal traffic has been diverted to other parts of the harbour. A serious difficulty has arisen from the fact that the quarantine hospital is now full, and no more patients can be accommodated there. The Coast Hospital—a hospital originally built as a small-pox hospital, but in recent years used as a general hospital for infectious diseases and chronic cases—has been declared closed against all ordinary cases, and it is presumed it is to be used now as a plague hospital. This leads to a very serious state of things at the other large city hospitals, which are already taxed to the utmost to accommodate the urgent cases, and cannot possibly provide for the large number of cases which are usually sent to the Coast Hospital at Little Bay. The plague cases so far have all been of the glandular type; some few have proved rapidly fatal, the others being milder in character. No case of plague pneumonia has occurred as yet.

About 8,000 persons have been inoculated with Haffkine's prophylactic; and amongst the patients who have been attacked some two or three had been inoculated some few days previously.

The ninth annual report of the Carrington Convalescent Hospital was presented to the annual meeting of subscribers held in March. This hospital was the gift of the late Mr. W. H. Paling, and named the "Carrington" after Lord Carrington, who was at that time Governor of New South Wales. It is situated near Camden, in a bracing and salubrious part of the Colony. During the year over 1,000 patients had the benefit of the country air and treatment in the hospital, of whom over 900 completely recovered their health. Only 2 deaths occurred—one from heart disease, and the other from phthisis. The daily average number of patients in hospital was 75, and the annual cost per bed was £35 5s. 10d.

INDIA.

The Distribution of Anopheles Larvæ.—Plague Measures in Bengal.—The Pasteur Institute for India.—The Famine.

THE data steadily accumulating regarding the malarial-bearing mosquito is rapidly proving the great importance of our recent advance in the knowledge of the etiology of malaria; and although the evidence appears to be increasingly in favour of the view that the actual inoculation of the organism is the usual, or at least a very frequent cause, of the disease, yet the vital question as to whether this is the only way in which infection takes place remains to be settled, and the possibility of the mosquito taking the parasite back to water, by which medium it gains access to the body, requires most careful consideration. Ross's method of freeing towns or places from malaria by seeking out the breeding pools of the *Anopheles* larvæ and destroying them with kerosene oil is now being tried by Dr. Neil Cook, the health officer of Calcutta, and the number of pools in which the larvæ have been found have so far been very few in number. On the other hand, another observer working in a suburb of Calcutta has found these larvæ in from one-third to half the tanks examined in spite of their being inhabited by numerous fish, and this at the very time of the year when malarial fevers are at their minimum, and are, indeed, not easy to find. These observations, confirming those of Captain James, I.M.S., in Madras, support the view of the last-named worker that the extermination of the *Anopheles* in malarious and waterlogged parts of India will be by no means an easy matter. It appears as if in this country we shall have to fall back on the well-tried methods of lowering the water level by drainage, by which means the number of breeding pools will be greatly decreased, unless it should turn out that the water supply is after all an important etiological factor, in which case there may be still some hope of improving the health of such intensely malarial tracts as Lower Bengal. In towns, on the other hand, Ross's method deserves a careful trial, and Dr. Cook's experiment in Calcutta will be watched with great interest.

Attention has already been drawn in an earlier letter to the rapid increase of plague in Bengal, more particularly in the Patna division and in Calcutta itself, an increase which has been continued during the past month, more especially in the last-named place, where upwards of 100 deaths from plague are occurring daily, and the total mortality is double that number. The policy which the local government has adopted in Calcutta for a long time past is to interfere as little as possible with the domestic affairs of the people. Inquiries are made by civil medical officers in charge of given areas as to each death which occurs, and each house in which a suspicious death has occurred or when any case has become convalescent is disinfected. No pressure whatever is used to get cases sent to hospitals, and the large buildings which were erected for the reception of cases remain untenanted, although a certain number of cases are brought voluntarily to some of the old-established and popular hospitals, such as the Medical College, Mayo, and Sealdar institutions. This system has at least one advantage, that it does not give rise to any panic and consequent flight of a large proportion of the inhabitants, with the result of the disease being spread all over the province. On the other hand, no decrease of the disease in the city can be expected to follow such measures, and it is not therefore surprising that the usual annual increase of the disease, which always has occurred at this time of the year in Calcutta, should have taken place to a far more

marked degree than in previous years, and has resulted in an exodus of people, although not to anything like the extent that occurred in previous years. The inspection at the railway stations of outgoing passengers has recently been more thoroughly carried out, and although this measure cannot be expected entirely to prevent the spread of the disease to the districts, yet every case that is detained or deterred from attempting the journey will lessen the number of foci, and render the task of stamping out the disease in the affected villages easier. In the districts, however, a much more vigorous policy is being pursued; only unfortunately owing to concealment of the earlier cases by the villagers the disease had got a firm foothold before any measures could be taken. On account of some local opposition the earlier order for carrying out strict segregation and evacuation of infected houses was modified so as to allow those who objected to moving out being quarantined in their own houses under a guard, with all the abuses and certain failure of such a measure—a pandering to ignorance which is costing dear. On the whole, however, it would be rash to say that the measures which have been adopted in Bengal are not the logical outcome of a bitter experience in earlier attacked parts of India, but it is to be hoped that the Plague Commission's report will not be much longer delayed, and will lay down a definite policy of an intelligent and practical nature, which will serve as a sound guide to the solution of this very complicated and difficult problem. Possibly now that the Plague Commission have reported in favour of Haffkine's method of inoculation, while Lustig claims to have made a vaccine which does away with the disadvantages attending the use of that of the former worker, more may be accomplished in the way of prophylaxis.

At last the perseverance of Surgeon-General Harvey has overcome all the obstacles which have for so long delayed the establishment of a Pasteur Institute in India, in spite of a large sum of money having been subscribed by the public for this object as long as five years ago. The site which has been selected is the hill cantonment of Kasauli, which is 6,332 feet above sea level, and only nine miles by a good tonga road from the railway terminus of Kalka, a little off the first portion of the road to Simla. The Institute will be managed by the Committee which raised the funds, and will be under the medical control of Major D. Semple, R.A.M.C., who was for several years Assistant Professor of Pathology at Netley, and whose selection will be a guarantee for the efficiency of the Institute. The only weak point of the arrangement is that Major Semple takes up this work in addition to his ordinary duties at the station hospital, but this will probably have to be reconsidered as the work increases, as it is pretty certain to do when the natives learn to appreciate its advantages.

The numbers on the famine relief works are mounting somewhat more slowly, but they number little short of 5,000,000, although there was a slight decrease last week, which is attributed to the occurrence of the Holi festival—a singular testimony to the slight degree of suffering which a large number of the applicants for relief have undergone before they flocked to the works. It is further worthy of note that some of the railway companies have addressed the Government on their difficulty in obtaining labour on account of men preferring the light task and steady pay of the relief works, which are open to abuse owing to the famine code not allowing anyone to be refused admission, no matter what his condition may be. Such abuse, however, must be exceptional, and the ready response to the famine fund appeals both in England and in the Colonies is most gratifying to India, and the subscribers may rest assured that their generous gifts will be well applied by the able and experienced Committee who are administering the fund.

HONG KONG.

Report on the Health and Sanitary Condition of the Colony for 1899.—Plague, Small-pox, Beri-beri.—Insanitary Property.—Constitution of the Population.—The New Territory.

THE report states that of a population estimated at 259,310, the birth-rate was 4.3 per 1,000, and the death-rate 23.8 per 1,000. "Excluding the deaths from plague, the death-rate would have been 18.3 per 1,000." The death-rate among the Chinese population was 24.4 per 1,000, while in 1898 it was 22.54, the increase being due to the greater number of deaths from plague. The Principal Civil Medical Officer, referring to the measures adopted for the extermination of rats, states that the West Point District of Hong Kong, where the plague was especially severe in 1899, had never been so free from rats as just before plague appeared, and that it was more probable that rats caught plague from men rather than that men were infected through rats. From March to the end of September plague was prevalent in Hong Kong, 25 cases having occurred in March, 101 in April, 421 in May, 514 in June, 263 in July, 86 in August, and 57 in September. That plague tends to recur in the same houses in spite of all disinfection is shown by the fact that 11 per cent. of the cases in 1899 occurred in houses previously infected in the 1898 outbreak. The maximum mean monthly temperature was reached in July, after which the number of plague cases rapidly decreased.

There were only 69 cases of small-pox in 1899, as compared with 199 in the previous year.

Beri-beri was very prevalent during the year. There were 44 cases with 7 deaths in the Government Civil Hospital, 279 cases with 123 deaths in the Tungwa Hospital, and 2 cases and 1 death in the Victoria Gaol Hospital. Dr. Atkinson makes a practical suggestion by recommending that beri-beri should be included among the notifiable diseases.

Dealing with the sanitary condition of the Colony reference is made to the "Insanitary Properties Ordinance, 1899." This ordinance is intended to enforce "the provision of open spaces at the rear of every building of this Colony," and also makes provision for regulating and modifying the "cubicle system" which hampers every other measure taken by the Sanitary Board for the health of the Chinese community. Dr. Atkinson remarks: "It is unfortunate that the habits and manner of living of the Chinese necessitated the existence of cubicles in domestic buildings; however, the provisions of the ordinance will go far to render these domestic buildings more healthy in every way in the future. To remedy the great evil of overcrowding, it appears to me that it will be necessary to facilitate the Chinese living away from the densely-populated parts of the city by encouraging the construction of tramways to the east and west; another means would be a cheap launch service to the newly-acquired land on the new territory immediately across the harbour, and the erection of cheap buildings there." The present system of disposing of refuse is so unsatisfactory that the Sanitary Board has strongly recommended the erection of a refuse destructor.

Some idea of the relative numbers of Europeans, Asiatics, and Chinese which make up the population of Hong Kong and of the changing population among the Chinese is obtained from the following table:

Return of the Statistics of Population for Year 1899.

—	Europeans and Whites, including Portuguese and Army and Navy.	Africans, East Indians and Malays.	Chinese.	Total.
Number of inhabitants in 1899 ...	13,060	2,760	243,490	259,310
,, births	204	76	862	1,132
,, deaths	163	78	5,940	6,181
,, immigrants	—	—	110,448	110,448
,, emigrants	—	—	61,075	61,075
,, inhabitants in 1898 ...	12,486	2,704	239,210	254,400
Increase	574	56	4,280	4,910

A few notes are given on the medical aspect of the New Territory. There were many cases of malaria among the police, but it is hoped that the number of cases will be greatly diminished when permanent brick buildings replace the present temporary buildings. Dr. Ho Hai Hop, a Licentiate of the College of Medicine for Chinese in Hong Kong, is resident at Taipo, treats all minor ailments, and visits the various police stations from time to time. The Principal Civil Medical Officer issued instructions to the police for guarding against malaria, pointing out the necessity of filling up and turfing any pools of stagnant water near the

station, the advisability of wearing sun hats when exposed to the sun, and the value of quinine, 5 grs. every morning before breakfast during months May to September. Mr. Ford, Superintendent, Botanical Department, who has made tours in the New Territory, reports that a large number of pits and sites have been prepared and planting of trees and seeds will soon begin. A superior kind of pineapple from Ceylon has been introduced, also improved varieties of sugarcane from Java and other places. The Colonial Secretary has issued a proclamation that all large trees are to be preserved in the New Territory.

CORRESPONDENCE.

THE CANNON STREET HOTEL MEETING AND DR. GLOVER.

SIR,—With the permission of the Chairman of the Beckenham and Penge Medical Society, I forward the following correspondence for publication. Trusting you will kindly find room for it, I am, etc.,

Highbury Place, N., June 10th. J. G. GLOVER.

Beckenham and Penge Medical Society,
Oakwood Avenue, Beckenham.

Dear Dr. Glover,—At a recent meeting of the Beckenham and Penge Medical Society Dr. Sturges, who was present as one of the delegates of the Society at the meeting held at the Cannon Street Hotel to protest against the Midwives Bill at present before Parliament, reported what had taken place at that meeting, and referred in terms of strong disapproval to the general management of the meeting, and in particular to the motion which was brought forward by Dr. Lorimer Hart with reference to yourself, just before the close of the meeting, when only a few gentlemen were present.

This Society assisted the Corporate and Medical Reform Association and other societies in organising the Cannon Street meeting, and our delegates went prepared to submit some very carefully considered alterations in the Midwives Bill, which they hoped might render it a useful measure, and one which would safeguard the public and be acceptable to the general practitioner.

In consequence of the manner in which the meeting was conducted, the Beckenham and Penge Medical Society have under consideration the desirability of severing their connection with the Corporate and Medical Reform Association, and this they will doubtless do at their next general meeting.

Meanwhile I am directed to express to you the deep regret we all feel at the action taken at the meeting with regard to yourself, and to assure you of our continued confidence and esteem.

I remain, dear Dr. Glover,
Yours very truly,
F. ALEX. BARTON,
Hon. Sec.

25, Highbury Place, N.,
June 8th, 1900.

Dear Mr. Barton,—I am much obliged to you and your Society for the expression of your views touching the Cannon Street Hotel meeting and its action towards myself. It is impossible that we should agree on all details of a question so complicated as that of midwives. But I believe the agreement is deeper than is thought, and it will be much promoted by generously construing each other's views of the best way to attain the end we all aim at—the saving of the life of poor lying-in women, and securing for all serious midwifery the advantage of medical attendance. Kindly convey to your Society my best thanks, and believe me,

Yours very truly,
J. G. GLOVER.

F. Alex. Barton, Esq., B.A., L.R.C.P.Lond., etc.

NON-POISONOUS (SO CALLED) ANTISEPTICS.

SIR,—An antiseptic known by the name of salufer (silicofluoride of calcium) is extensively used in this neighbourhood. It is put up by Messrs. Reynolds and Branson, chemists, Leeds, and the metal case containing it has enclosed a reprint from the BRITISH MEDICAL JOURNAL by Mr. A. W. Mayo Robson, from which it would be concluded that the article is not poisonous.

On the 8th of this month I held an inquest at Sowerby, near Thirsk, on the body of John Parker Doasworth, aged 2 years, whose death resulted from salufer, and it may interest those who use this drug to know of its injurious nature. I give you briefly the facts as given at the inquest. The box containing the salufer, which is in the form of cubes weighing 40 gr. each, was picked up by the deceased. It then contained two cubes. The mother found that the child had one, and had put the second one into its mouth. This would be about 3 P.M. She at once sent word to the doctor who had supplied the same, who sent word that the drug was not injurious, and that a dose of castor oil was to be given at once. He followed the messenger, and arrived at the house about 3.45 P.M., and found the child in a state of collapse—pulse feeble, appreciable, and regular, breathing laboured and slow, with occasional laryngeal spasms, heart sounds normal but feeble, pupils equal and of medium size, reflex normal, no insensibility, skin cold, no perspiration. There had been vomiting and diarrhœa. The child died about 5.50 from collapse.

This antiseptic appears to have up to now been considered non-poisonous, and is so described on the label and literature enclosed with it.—I am, etc.,

J. S. WALTON, M.D.,
Northallerton, June 11th. H.M. Coroner for Yorkshire.

CONTAGIOUSNESS OF CONSUMPTION FROM THE HISTORICAL POINT OF VIEW.

SIR,—To the contagionists referred to in the interesting article in the BRITISH MEDICAL JOURNAL of May 19th should be added Richard Morton, the best seventeenth-century student of phthisis.

In the well-know *Phthisiologia* (1689), speaking of the causes, he says:

(Page 70), "*Nond*, Contagium etiam hunc morbum propagat," etc.;
And (page 264), "*Dominus Luff*, filius *Reverendi Clerici* jàm ante memorati, atque incola plateae dictae *Milkstreet*, postquam matrimonium contraxerat cum virgine Phthisicâ (quae etiàm (si benè memini) vitam intra annum a matrimonio completo finiit, cum colliquatione universali, et reliquis Phthiseos pulmonaris funestae symptomatis) in Phthisin etiam, ex contagio, uti mihi videbatur, post paucos menses elapsos incidit.

I am, etc.,
Baltimore, Md., May 29th. WILLIAM OSLER.

BERI-BERI AT ASCENSION.

SIR,—In commenting upon "The Health of the Navy for 1898" in the BRITISH MEDICAL JOURNAL of March 31st, it is remarked, with reference to the cases of beri-beri among the Kroomen employed in Ascension, that it is reasonable to suppose that the spead of this disease is due to the fact that the quarters have become infected. This is certainly at first sight the easiest and most obvious explanation of the matter, but when all the facts of the case are taken into consideration, it cannot, I venture to think, be deemed in the least degree satisfactory.

Dr. Manson, in Davidson's *Diseases of Warm Climates*, mentions three conditions as necessary for the development of the beri-beri germ—dampness, high temperature, and possibly contamination of the soil by animal matters. Of these conditions, only the second can be said to have any real existence in Ascension.

As regards the quarters occupied by the Kroomen, the first and most important condition, namely, dampness, is and always has been totally absent. In the first place, the soil is not in the least adapted for retention of moisture, being solid volcanic rock with a thin covering of sand and ash, baked all day in a hot sun, and continually swept by the constant and strong south-east trades wind. The almost invariable difference between the wet and dry bulbs is 10°, rarely less. There is no regular rainy season. The total rainfall for the year in 1898 only amounted to 2.15 inches. Last year (1899) the amount was just over 13 inches, being an exceptionally high record.

The quarters are also by no means favourable to the retention of moisture. The original quarters were built of stone and concrete, with solid cement floors. When the disease developed in 1897 to a serious extent the men were removed from these quarters and put under canvas on a site well away from Georgetown, and about 300 feet above sea level. Here they remained until about the end of 1898, when the present quarters were ready for occupation. These are huts with galvanised iron walls and roofs, with solid concrete floors, and with provision for ample ventilation which cannot be obstructed.

Sanitary regulations are strictly enforced and carried out. There is no fouling of the ground about the quarters by any refuse. This has always been the case, and all the different quarters have been thoroughly open to sun and air throughout the day. There has never been any question of overcrowding except in the way of herding closely together—two, three, or even four, in an ordinary service hammock.

The disease itself—and, indeed, anything that in any way

resembles it—was, so far as I have been able to find in the hospital records—quite unknown until about the middle of 1897, when three or four sudden deaths occurred and a large number of cases appeared. The disease was mostly among the batch of Kroomen which had arrived in the island the previous December, and included 100 extra men for work on the new fortifications. There were cases among the older residents, including one man who died in August, 1897, who had been in the island for two years and a-half. The disease has been almost constantly present since that time, at times no cases would be observed, and at others several would occur: these recrudescences seem to bear some relation to the arrival of new batches of men from Sierra Leone three times a year.

It is on these grounds that I have ventured to question the reasonableness of the supposition suggested as to the infection of the quarters, for, in the absence of the most important factor, dampness, it is difficult to conceive how soil (or place) infection can obtain any footing in Ascension.

In many cases the disease may be, and probably is, a long-delayed reappearance or a very much postponed development of infection originally acquired in Sierra Leone; but this can by no means be applied to all the cases, for some must have become infected here, and as I have sought to show that place infection is at least improbable, one is forced to the conclusion that personal infection must take some part in the spread of the disease.—I am, etc.,

PHILIP N. RANDALL, M.B.Lond., Surgeon R.N.
Royal Naval Hospital, Ascension, May 9th.

DIPHTHERIA IN MAN AND "GAPES" IN BIRDS.

SIR,—Allow me to reply to Drs. Allen Mcfadyen and Sharp, who have been good enough to comment upon my letter of April 7th. Both would very properly point out that a worm Sclerostoma syngalus, or syngamus trachealis, causes a disease in fowls, etc., known as gapes. I was perfectly well aware of this fact; indeed, I was looking for the parasite in 1882, when I came across my first instance of a diphtherial disease amongst birds. I assume that the two names are synonymous, as I am not acquainted with the second. I used the word "gapes" because it is popularly applied to the diphtherial disease which is also known as roup, and in Hertfordshire, at all events, as snicup.

I am also aware that there are bacilli which strongly resemble the Klebs-Loeffler, and, therefore, although personally I have no doubt of the identity of the bacillus I isolated I guarded myself by using the phrase "morphologically similar."

I do not and never have contended that all avian throat disease is diphtherial. I should as soon make the assertion with regard to human throat affections. I only contend that fowls, etc. (not ducks or geese), suffer from a disease communicable to men, and that this disease in the human subject clinically resembles diphtheria. I will admit also that I have no doubt it is actually diphtheria. I do not base my opinion solely on the morphological similarity between the organism separated from the throats of human beings and of birds, but upon the following facts as well:

1. That I have conveyed diphtheria from human being to fowls.
2. That during a period of nearly twenty years I have on very numerous occasions found the diseases running concurrently.
3. That very frequently I have every reason to believe fowls have communicated the disease to human beings.
4. I would point out that a bird suffers from paralysis following the throat affection.

In my experience the paralysis has always been noticed in the legs. I cannot say whether the wings are ever similarly affected. Naturally the paresis of the leg muscles is more readily noticed, and the animals not infrequently die because they are unable to find their food.

I do not think that the question will be successfully settled in the way usually attempted. To my mind a conclusive result would more likely be reached if the following course were adopted: Watch for instances in which there is reason to suppose that fowls or other birds have infected human beings, the human disease being shown conclusively to be due to the Klebs-Loeffler bacillus, then obtain one of these birds suffering from the disease at an early stage, isolate the bacillus, and with the cultures try to manufacture an immunising serum. Should this be accomplished the question will be settled once for all.

To take indiscriminately any case of throat affection amongst fowls would most probably lead to a waste of time and to erroneous conclusions, and it is evident that we cannot experimentally communicate the disease from fowls to human beings.—I am, etc.,

GEORGE TURNER.
Colonial Secretary's Office, Local Government and Health Branch, Capetown, May 16th.

ELECTION OF BRANCH REPRESENTATIVES.

SIR,—About this time of year the various Branches usually choose their representatives to serve on the Central Council, and it appears to me to be a fitting time again to draw attention to the too perfunctory method of election of their representatives. It has become a habit to look on the appointment as practically a life appointment, and whether a member attends the Council, or whether he in any way represents the feelings of the Branch, appears to be quite immaterial in so far as his re-election is concerned; in fact, there seems to have been an inclination to elect the men who will be quietest or most agreeable, and least likely to disturb the harmony of the Council.

Now, it has been suggested on several occasions, and I would like to put forward the suggestion again, that to obviate this state of things no representative should be eligible for re-election for more than five consecutive years. The rule of the Association requires election every year, but a Branch could, I assume, make for its own use such a regulation as the above without requiring the alteration of the Association rule, a matter of considerable difficulty probably.

Unless some such regulation is made—and this is merely a suggestion, and very possibly not the best—the discarding of members who have served a long time will be a very invidious matter.—I am, etc.,

Bath, May 30th. CHAS. E. S. FLEMMING.

MEDICAL CO-OPERATION AS APPLIED TO MEDICAL AND SURGICAL REQUIREMENTS.

SIR,—I read your correspondent's letter on the above subject with interest, and I can sympathise with him in his complaint. The circulars, and drugs, and specimens one can put up with, but for years I, like "M.D., M.S.," have had my time wasted and temper tried by the calls of travellers, who never seem to come at a slack time or a disengaged moment. One usually finds them in the house on returning from a long round late for a meal (it is often an exaggerated compliment to call it a meal), with many people waiting for medicine. One does not care to be discourteous or curt with gentlemen who have to make their living, but I often think they might not come in consulting and dispensing hours. A year or two ago I joined the Surgical Supply Association of Manchester, which has no travellers, and which tries to divide among its shareholders the immense saving effected by dispensing with such expensive agents. When they call now I simply tell them that I am a member of this association, and send all my orders direct to the head office, and if they like to send their drugs and chemicals there I can order them through the manager. This generally has the desired effect, it saves my time, and many of these firms have now their drugs distributed by the Association, drugs which are in most cases daintily got up, pleasant to take, and very effective. I can strongly recommend "M.D., M.S." to follow the course which I have done.—I am, etc.,

May 21st. ANOTHER M.D., M.S.

THE "WELL QUALIFIED" UNQUALIFIED ASSISTANT.

SIR,—The General Medical Council has stopped the male unqualified assistant. We are however threatened with the unqualified assistant under the guise of the female "nurse," "dispenser," "midwife," etc. The following advertisement appeared in a Manchester paper of the 13th inst.: "Nurse wanted; dispensing; midwifery, etc.; well qualified. Apply to Dr. ——, etc." A midwife with a "diploma" would no doubt be considered "well qualified."—I am, etc.,

Bacup, June 13th. JOHN BROWN, M.D.

THE LATE DR. G. F. CROOKE.

SIR,—Will you kindly allow us to state what has been done regarding the Crooke Fund? The total amount subscribed is £219 14s. 6d. This we are handing over to Mr. J. T. J. Morrison, who was fellow-resident with Crooke at Guy's, and Mr. Arthur H. Foster, solicitor, of this city, who was his personal friend as well as legal adviser. They have consented to act as trustees, and we have not thought it wise to limit their powers except by the general instruction that the money was subscribed on the understanding that it would be used for the nurture and education of Crooke's only child, a little boy.—We are, etc.,

(Signed) A. FOXWELL, Treasurer.
GILBERT BARLING } Secretaries.
J. T. J. MORRISON }

Birmingham, June 4th.

OBITUARY.

GEORGE EDWARD WILLIAMSON, M.A., F.R.C.S.,

Surgeon to the Royal Infirmary, Newcastle-upon-Tyne.

THE College of Medicine, Newcastle-upon-Tyne, and the profession in the North of England were last week deprived by death of the services of a well-known and much respected surgeon. Within the last twelve months the Newcastle College of Medicine has lost by death three well-known men, none of whom could well be spared—Dr. Nesham, the gifted Lecturer on Obstetrics; Dr. Arnison, the Professor of Surgery; and to-day it mourns the loss of Mr. Williamson.

The announcement of his death will be read by many of his friends with surprise, for although he was not gifted with a robust constitution, he was not known to have ever lost work through illness, and was at his post at the infirmary until within a week of his death. On May 31st he attended for the last time the Royal Infirmary. He had evidently not felt well that forenoon, judging from the inquiring remarks that he is said to have addressed to his house-surgeon. Shortly after luncheon he had a rigor, which was followed within two days by signs of pneumonia. From the first the symptoms were severe and the exhaustion great. He passed away on the morning of Wednesday, June 6th, at the early age of 48 years.

Mr. Williamson was a North countryman. He was born in 1851 at North Shields. After receiving his medical education at the London Hospital and the Royal Ophthalmic Hospital, Moorfields, he held the posts of House-Surgeon and House-Physician at the London Hospital, where he formed friendships with some of the distinguished members of the visiting staff of that institution. He became M.R.C.S.Eng. in 1874, and F.R.C.S. in 1878. In 1876 he was elected Senior House-Surgeon to the Newcastle Infirmary, a post which he filled with great ability, discharging his duties with a conscientiousness that gained for him the warm approbation of the Committee. The late Dr. George Y. Heath was at this time at the height of his reputation as a consulting surgeon and a successful and brilliant operator, and his opinion was much sought after on account of his special knowledge of diseases of the eye. Mr. Williamson became assistant to Professor Heath and eventually commenced practice on his own account as an ophthalmic surgeon in Newcastle in 1879. Shortly afterwards he was appointed Joint Lecturer on Physiology in the University of Durham College of Medicine, an appointment which he held until, by the death of his friend and colleague, Professor Arnison, he was invited to join Professor Page in the occupancy of the Chair of Surgery.

Until Mr. Williamson commenced practice in Newcastle the ophthalmic practice at the infirmary was conducted by all the Honorary Surgeons, but when he was appointed Assistant Surgeon to the institution in 1880 an outdoor ophthalmic department was created and placed under his care. The many patients treated thereat and the many medical practitioners now scattered far and wide, and who as students enjoyed the privilege of attending the department, can speak of the relief obtained and the high character of the instruction given. On the death of Dr. Luke Armstrong in 1888 Mr. Williamson was promoted to the full surgeoncy.

For more than a dozen years Mr. Williamson acted as the Honorary Secretary and Treasurer to the North of England Branch of the British Medical Association, and he sat as representative of the Branch on the General Council of the Association. When the Association last met in Newcastle (1893) he was the Honorary Secretary of the Branch. All in the North know how very carefully he made the preparations for that meeting, and how successfully everything went off. On that occasion he occupied the Presidential Chair of the Section of Ophthalmology, when he gave an interesting address on Refraction Testing and Medical Education in Ophthalmology. In 1888 the University of Durham conferred upon him the degree of M.A. by diploma.

As Secretary of the Branch of the British Medical Association he rendered signal service by the personal interest he exhibited in the proceedings, and by the methodical manner in which he discharged the Secretarial duties assigned to him. He enjoyed the local meetings thoroughly and the opportunities they afforded of coming into contact with members of the profession in the counties of Northumberland and Durham. By his knowledge of business and procedure he was of the greatest assistance to the several Presidents of the Branch who in succession held office during the tenure of his own appointment.

Mr. Williamson had an evenness of temper and an amount of self-restraint not frequently met with. As a consequence he never appeared extremely enthusiastic nor exuberant, and yet there was a constancy and intensity of purpose which enabled him quietly to accomplish a very great deal. His self-restraint was remarkable when he took part in discussion. He did not conceal his thoughts nor cloak them in words other than those suited to the occasion. Capable of expressing a strong and often adverse opinion, he was always fair and reasonable in argument, and persuasive.

His contributions to surgical literature were few. It was a matter of considerable difficulty, and certainly no attraction, to Mr. Williamson to sit down and put his thoughts on paper, and yet when at the meetings of the Branch or of the Northumberland and Durham Medical Society he had either a patient to show or a communication to make, he was always listened to with attention as some useful practical information was invariably imparted. This was always done in a simple and undemonstrative manner, and in language most appropriate.

As a Lecturer in the College of Medicine and at the Infirmary he was clear and terse, and, when the occasion required, he could rebuke an offending student with sarcasm that made the repetition of the rebuke unnecessary. He was a good all-round surgeon. As an operator he was extremely careful as to details, but it was in ophthalmic surgery that he showed to the greatest advantage. His neat-handedness and deftness especially qualified him for eye work, and it is in this capacity he will be most missed. As an ophthalmologist his services were much sought after, and both the profession and the public in Newcastle and neighbourhood are conscious of the greatness of the loss they have sustained by his death, while the students of the College of Medicine will miss a master of this particular part of the craft of surgery.

On June 9th, all that was mortal of Mr. Williamson was laid to rest in St. Andrew's Cemetery, close to the grave of the late Professor Arnison, with whom during life he was in the closest friendship. As it was the expressed desire of the relatives that the funeral should be rather of a private than a public character, the members and students of the College of Medicine took no formal part in the ceremony. At the preliminary service held in St. Andrew's Church and conducted in an impressive manner by his friend Canon Lister, there was a large assembly of relatives, friends, and patients, also of his colleagues, the resident staff and students of the Royal Infirmary and members of the medical profession. Despite the somewhat inclement weather a large number of friends and students waited at the cemetery gates.

Much deep sympathy is felt for the widow and her five young sons, for if Mr. Williamson was anything he was a devoted husband and a kind father, ever finding his truest pleasure in the bosom of his family.

At a meeting of the staff of the Royal Infirmary held on June 11th, the Chairman, Mr. Hume, in proposing the appended resolution of condolence with Mrs. Williamson, said: This meeting of the honorary staff has been called in consequence of the recent and unlooked-for death of one of

our number, in order that we may place upon our minute-book a record of our loss and of sympathy with the family of our late colleague. Little more than a fortnight ago Mr. Williamson was seated with us at this table, and I will not attempt to describe the shock which was caused by the news of his illness and its rapidly fatal ending. The blow has been aggravated by its suddenness. Only for the second time during my connection with the hospital has a colleague fallen in the ranks—that is, during the period of his active service. The other instance was that of Dr. Luke Armstrong, whom Mr. Williamson succeeded, and I think we have to-day a very painful sense of a gap left which will be difficult to fill. Mr. Williamson was a pleasant colleague. He was shrewd in counsel, and always kindly and temperate in the expression of his views. In the special work of the hospital he held a place which he himself had made, and he filled it well. No doubt someone will be found to fill the vacancy, but it will be long before Mr. Williamson's name ceases to be remembered in connection with the ophthalmic department in this hospital. But if the loss be great to us and to the infirmary, there are those whom his death leaves desolate, and we wish to send our message of sympathy to them. I therefore propose this resolution to be entered on our minutes and a copy sent to Mrs. Williamson :

The honorary physicians and surgeons of the Royal Infirmary desire to record their deep sorrow at the death of Mr. G. E. Williamson. They feel that they have lost a valued colleague and a much-esteemed friend, and that in being so suddenly deprived of his able and faithful services the hospital has sustained a grievous loss. The staff also desire to offer their heartfelt sympathy to Mrs. Williamson and her family in their sad and irreparable bereavement.

JULIUS ALTHAUS, M.D.

DR. JULIUS ALTHAUS, who died in London on June 11th, was born at Detmold in Germany in 1833, and was the son of a minister of the Reformed Church. After a short period of study at the University of Bonn, he commenced the study of medicine at the University of Göttingen in 1851 ; he afterwards passed to Heidelberg, and finally took the M.D. degree of the University of Berlin in 1855. After a short period of study in Paris, where he followed in particular the practice of Charcot, he settled in London, where Dr. Todd gave him opportunities of undertaking the electrical treatment of patients at King's College Hospital. From the first he devoted himself more particularly to diseases of the nervous system, and in 1866 he was mainly instrumental in the foundation of the Hospital for Epilepsy and Paralysis, Regent's Park, to which at the time of his death he was consulting physician.

Dr. Althaus was a voluminous writer, and published many books and papers on various aspects of nervous disease. His work on *Medical Electricity*, the third edition of which appeared twenty-seven years ago, had a considerable success, and was translated into French, German, and Italian. He became a Member of the Royal College of Physicians of London in 1860, was a Corresponding Fellow of the New York Academy of Medicine, and a Member of the British Medical Association. He held somewhat extreme views as to the value of electricity in the treatment of diseases of the nervous system, views which have not altogether been justified by experience. Personally he possessed a large circle of friends, and his skill as a musician was well known.

Dr. Althaus had been laid aside for the past three months by prolonged attacks of irregular gout. Death was brought about somewhat suddenly as a result of gouty phlebitis, followed by acute gastro-enteritis and peritonitis. This diagnosis was confirmed by *post-mortem* examination, which was held in compliance with a desire expressed by Dr. Althaus to his only surviving daughter.

GEORGE CORDY EDWARDS, M.R.C.S., L.S.A.

WE regret to record the death of Mr. George Cordy Edwards at his residence, Felixstowe. He had almost attained 81 years. He was one of the best-known practitioners in the east of England. He commenced practice in the early Forties at Ipswich, and resided there until about seven years since, when he abandoned work, and passed the last years of his life in pleasant retirement.

Mr. Edwards was a pupil, at the same time as the late Sir George Humphry, of Mr. J. G. Crosse, F.R.S., the eminent Norwich surgeon, and he subsequently entered at Guy's Hospital.

Mr. Edwards was an able surgeon, took great interest in his profession, and was an enthusiastic supporter of the British Medical Association. He served on the Council of the East Anglian Branch for many years, and was rarely absent from any meeting, and was usually accompanied by his friends Gorham, Howard and Caleb Rose. Mr. Edwards was a most genial and kind-hearted man, with a keen sense of humour, and his society was sought by all his brother practitioners. No medical meeting nor social function of his professional brethren was deemed complete without his presence. He was of so clubable a nature and his wit and humour were so appreciated that before and after his retirement a day rarely passed without three or four of his medical friends, always sure of a hearty welcome, spending a pleasant half-hour with him.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Dr. Tommaso Crudeli, Senator of the Kingdom of Italy, Professor first of Descriptive Anatomy, afterwards of Hygiene, in the University of Rome ; Dr. Karl Lange, Professor of Pathological Anatomy in the University of Copenhagen, and editor of the *Hospitals Tidende*, aged 66 ; and Dr. Karl Eigenbrodt, some time Physician-in-Ordinary to the Grand Duke of Hesse, and author of papers on typhoid fever, diphtheria, the purification of soil, etc., aged 74.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

THE UNDERMANNING OF THE ARMY MEDICAL SERVICE.

THE following distribution of army medical officers is given in the monthly Army List for June :

Distribution in the June Army List.

Ranks.	Home.	South Africa.	Other Foreign Stations.	Not Posted.	Total.	Remarks : Seconded.
Surgeon-Generals ..	5	1	4	—	10	—
Colonels	7	9	11	—	27	3
Lieutenant-Colonels...	17	32	60	1	110	3
Majors	23	192	164	1	380	4
Captains	11	76	94	—	181	3
Lieutenants	37	101	36	—	174	6
Total	100	411	369	2	882	19

The total strength (882) shows an increase of 31 during May; 36 lieutenants have been gazetted, and 5 deaths have occurred. Whereas there was only 1 lieutenant at home in the May List, there are now 37, a satisfactory augmentation, if it could only be similarly continued at short intervals.

The number of officers of all ranks at home are shown as 100, against 64 in May ; the numbers in South Africa and at other foreign stations show little change.

The seconded show a decrease of 1 ; 123 retired medical officers and 16 retired quartermasters R.A.M.C. continue employed.

THE INDIAN MEDICAL SERVICE.

On November 4th we published extracts from correspondence received on the I.M.S., but were careful to note that the statements made and inferences drawn were not our own, but those of correspondents. We were perfectly satisfied with the individual good faith of our correspondents : but could not but remark that their statements were mutually somewhat contradictory. From further correspondence, since received, we find our caution was both prudent and necessary, for, while some endorse, others deny and condemn the statements then and since made in our columns. We give the following

extracts, hedged about with the same caution as previously given:

FAIRPLAY writes: I regret I omitted, in my letter, summarised on November 4th, to allude to pension. Does it not seem absurd that a civil servant, after 25 years, should retire on £1,000 a year, and a medical on £500? As to your neglect of the I.M.S. in favour of the R.A.M.C., it is, I am afraid, a very common impression.

EYEMES writes (somewhat abusively): While expressing gratitude for your ventilation of the grievances of the I.M.S., you seem systematically to neglect their interests in favour of the R.A.M.C., and you have missed the whole "point of my letter" in your summary thereof. I endeavoured to show that, although Indian pay, translated into English money, seemed very good, yet the deductions in India are such as to leave the recipients really poor men. The pay of a captain, I.M.S., in the Civil Department, is Rs. 550 × Rs. 35 exchange allowance compensation, or a total of Rs. 585 monthly. The deductions are Rs. 150 9 9, leaving Rs. 426 for all expenses, including trips to the hills. The monthly charges for house rent, servants, and horse is not less than Rs. 207 a month, leaving Rs. 219 for actual living and all other personal expenses.

ANOTHER CORRESPONDENT writes: If Indian correspondents do make contradictory statements, it is because they have so little opportunity of arriving at mutual agreement among themselves; this can only be remedied by publicity such as you afford. I am not prepared to deny a certain ill-feeling between the I.M.S. and the R.A.M.C. There are 600 I.M.S. to 300 R.A.M.C. in India; do you think it right, therefore, the P.M.O. of the whole of India should always belong to the latter? Or do you think the latter entitled to half the P.M.O.'s of districts? Or, should the Chief Plague Officer of Poona belong to the R.A.M.C.? Let the latter stick to their own work with British troops, and the I.M.S. will cease to dislike them.

JUNIOR writes: I thoroughly agree with your correspondent of November 4th, that the pay of juniors I.M.S. is inadequate. Is it not strange that the officer in medical charge of a regiment should practically draw the same pay as a subaltern in it? Why should he not have railway carriage for his horse like the other officers in moving from one station to another? He cannot draw officiating allowance until he has passed in Hindustani, and the frequency of movements very seriously prevents its study. There is undoubtedly widespread dissatisfaction in the service, and had I known all I should have hesitated to enter it. I fear, in the language of one of your correspondents, it is "becoming entirely submerged."

From these pessimistic views we turn to a correspondent whose long experience and thorough knowledge of the I.M.S. is certainly second to none. He writes:

One might almost dispute the *bona fides* of your correspondent of November 4th from his gross misstatements and good example of imaginary grievances.

1. *Pay and Allowances.*—Your correspondent must know that the original rate of pay for a junior of Rs. 286 was increased to Rs. 317, and on April 1st, 1897, to Rs. 350 per month. His scale of living for a bachelor is absurd, and young officers have no right to marry unless they have private means. Any careful man can live well on his pay. If he passes in Hindustani, which he should do in six months, he is practically certain to get charge of a regiment, on Rs. 400, with probably another Rs. 100 for charge of the civil station. Hundreds of married men in India live on much less than Rs. 700 a month. The fall in the exchange value of the rupee should not affect young officers who do not remit money home; yet your correspondent omits reference to the exchange compensation allowances granted to all officers at about 5¾ per cent. on pay. The loss of extra allowances for charges is more imaginary than real; some gaol charges have through consolidation been lost; but in the main extra allowances remain much as they were. This is proved on examination of the official list of the North-West Provinces, which is practically the same elsewhere. Many of these official incomes are well known to be largely augmented through private practice.

2. *Position and Honours.*—The chief local authority must be the head of all branches of administration inclusive, and this is accepted by nineteen out of twenty men. As to honours, a fair share falls to the medical service; such names as Lethbridge, King, Thompson, Robertson, etc., attest this. The services never had a better social position, although that, it is obvious, must depend largely on the individual concerned.

3. *Leave.*—Plague, famine, war, coming together, seriously affected leave, but that cannot last. Some 30 officers in excess of the maximum number of 105 allowed were lately permitted to go on leave.

4. *Appointments.*—The plums of the service are numerous and filled by seniority tempered by selection; if juniors are selected, it is on account of strong and special claims; much care is exercised in the choice.

The following may be admitted:

1. It would be an improvement if the rates of pay suggested by your correspondent were sanctioned; but of that there is no prospect.
2. A good deal can be said on position and honours on both sides.
3. I concur on question of leave.
4. Appointments are gazetted as soon as possible; such as are delayed are antedated.

Exaggerated statements do harm. There are unsuccessful men in all careers, and all cannot be equally fortunate—perhaps through personal defects, which they are naturally slow to acknowledge. I feel sympathy with you in your embarrassment under opposing statements.

*** Anyone who reads the above will see the justice of the closing sentence. We absolutely disclaim partiality towards one branch of the service or the other; but our correspondents of the Indian service assail us in a way we never experience in the home service, as to publishing letters *in extenso*. That is simply out of the question in the great majority of cases; we must make summaries, and we can assure correspondents that this is done by most competent and conscientious hands entirely without bias. Some of our more impetuous Indian critics should at least give us more credit for impartiality. We entirely deprecate any real or imaginary differences between the two branches of the medical service; the services of the R.A.M.C. are necessary to India, and they have consequently a full right to a share in the good things of that portion of the empire.

NAVAL MEDICAL SERVICE.

THE promotion of three chief sick berth stewards to the rank of warrant officer, namely, head wardmasters, foretold in Mr. Goschen's introductory remarks to the Naval Estimates for 1900-1, has at length been announced, and are as follows:

Mr. G. W. Rumble, who has proved a most valuable chief sick berth steward at Haslar Hospital for some years past, where he has performed his onerous and responsible duties to the entire satisfaction of the inspectors-general and the other medical officers, as well as to the sick berth staff.

Mr. W. H. Bevis has had a similar appointment at Plymouth Hospital, and gained the high approval of all the medical officers and the sick berth staff of that important establishment. This officer won early promotion for his distinguished services at Majuba Hill.

Mr. S. H. Couch has had the same appointment at Chatham Hospital for a considerable period, to the entire satisfaction of his superiors and the sick berth staff with one exception, an exceedingly undesirable member, who a year or two ago savagely assaulted and seriously wounded him with a razor, endangering life.

This new departure in the recognition of the valuable services of these responsible sick berth staff members cannot fail to have the most beneficial results in male naval nursing.

ROYAL ARMY MEDICAL CORPS.

LIEUTENANT-COLONEL H. J. MICHAEL retires on retired pay in consequence of ill-health, June 9th. He entered the service as Surgeon March 6th, 1880; became Surgeon-Major March 6th, 1892.

Major J. McM. BOLSTER, F.R.C.S.I., from half-pay, is reappointed Major, with precedence next below C. J. Addison, *vice* T. A. P. Marsh, deceased, May 22nd. Major Bolster was placed on half-pay on account of ill-health March 4th, 1898.

Lieutenant-Colonel E. H. SWAYNE, D.S.O., who is serving in the Bengal Command, is appointed to officiate on the administrative medical staff of the Indian army, with the temporary rank of Colonel, from March 11th.

The undermentioned Surgeons on probation are appointed Lieutenants, dated May 30th: CHARLES HENRY CARR, M.D., EDMUND BENNETT, FRANCIS PIUS LAUDER, ARTHUR CHARLES ADDERLEY, JOHN TOBIN, GEORGE EDWARD LEARY, HERBERT ERNEST WESTON.

The following have been discharged from hospital for duty: Major G. HILLIARD, Captain A. E. SMITHSON.

Civil Surgeons R. W. JAMESON and ROBERTSON are among those returned as dangerously ill at Kroonstad.

Civil Surgeon H. BRYANT died of enteric fever at Bloemfontein on June 7th.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN W. J. HARNETT is promoted to Surgeon-Major June 9th.

Surgeon-Captain H. J. MACKAY, M.B., 2nd Volunteer Battalion the Wiltshire Regiment, to be Surgeon-Captain June 13th.

ROYAL MALTA ARTILLERY.

SURGEON-CAPTAIN A. MIFSUD is granted the temporary rank of Captain whilst serving in Egypt, January 3rd.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL ANDREW DEANE, M.D., Bengal Establishment, has retired from the service from April 4th. He joined the department as Assistant-Surgeon, October 1st, 1869, and became Brigade-Surgeon-Lieutenant-Colonel, December 4th, 1895.

Lieutenant-Colonel H. F. P. F. ESMONDE-WHITE, Madras Establishment, is granted the temporary rank of Colonel from March 29th, while officiating as Principal Medical Officer, Bangalore and Southern Districts.

Lieutenant-Colonel ARCHIBALD ADAMS, M.D., Madras Establishment, died at Mount Aboo, Rajputana, on May 20th, aged 49. He was appointed Assistant-Surgeon, March 31st, 1875, and Surgeon-Lieutenant-Colonel twenty years thereafter. While a Surgeon in the Royal Navy he served in the Ashanti war in 1873-74 with the Royal Marines, was mentioned in despatches, and received a medal with clasp.

Lieutenant C. H. B. ADAMS-WYLIE, Indian Medical Service, died at Bloemfontein on June 2nd of enteric fever. His commission dated from January 28th, 1899.

THE VOLUNTEERS.

THE undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated June 13th:—HERBERT FOX, M.B., 2nd Hampshire Artillery (Southern Division Royal Garrison Artillery); WILLIAM F. BYFORD, 1st Volunteer Battalion the Royal Welsh Fusiliers; HERBERT B. EMERSON, 2nd Volunteer Battalion the Worcestershire Regiment; WILLIAM B. ARMSTRONG, M.B., 1st Dumbartonshire Rifles.

Surgeon-Lieutenant H. J. C. GODFREY, 2nd Volunteer Battalion the East Yorkshire Regiment, resigns his commission, June 13th.

Surgeon-Captain W. DEANS, 2nd Volunteer Battalion the East Lancashire Regiment, is promoted to be Surgeon Major, June 13th.

Surgeon-Lieutenant P. F. SHAW, 1st Volunteer Battalion the Highland Light Infantry, is promoted to by Surgeon-Captain, June 13th.

VOLUNTEER MEDICAL STAFF CORPS.

Mr. MOWBRAY TAYLOR, M.B., is appointed Surgeon-Lieutenant in the Woolwich Companies, June 1st.

LIEUTENANT-COLONEL B. B. CONNOLLY, C.B.

IN noticing this officer's nomination as C.B., it should have been stated that he is M.A., M.D., B.Ch. of Cambridge, and F.R.C.S.I. A correspondent reminds us that Lieutenant-Colonel Connolly when at Cambridge was well known as an athlete. In 1866 he won the 100 yards' race against Oxford, and in the following year, having entered Guy's Hospital, won the 100 yards' race in the United Hospitals Sports in record time. At Cambridge he rowed in the Caius first boat, which then held a high position; one of the crew was the late Sir Frank Lockwood.

PAY OF CIVIL SURGEONS IN ARMY EMPLOY.

THE statement, taken from a contemporary, which appeared in the BRITISH MEDICAL JOURNAL of June 9th, that the pay of civil surgeons employed with troops at home had been raised to £1 a day, is, we learn, incorrect; it remains at the rate of £270 a year. The mistake, it is suggested, had probably arisen from the rate of pay in South Africa having been fixed at £1 a day.

CIVIL SURGEONS IN THE ARMY AT HOME.

M.D. writes: I have read with interest the remarks of your correspondents lately relative to the above. As a civil surgeon of several years' standing who has given up a lucrative practice to do army work during the late (I might say) crisis, I feel, after some considerable experience, that my position as a civilian is somewhat anomalous; that from every point of view, both to the service and to the individual, it would be immeusely better if during the time of our service we were granted temporary commissions. Many of us have the highest university qualifications, we are receiving the pay of surgeon-captains, and if there is any reason why we should not for the time hold a corresponding rank it is unknown to me. Perhaps I might presume to suggest that if the thousand and odd civil surgeons who are now doing army work would unite in petitioning the War Office on this subject we might be successful. It is very likely that our services may be required yet for a considerable time, and that the War Office will be very loth to part with men who are becoming *au fait* at military work.

CIVIL SURGEONS ENGAGED IN NATAL.

DR. F. H. HARGER writes from Pietermaritzburg, Natal, under date May 18th, as follows: The enclosed communication explains itself, but the various events that resulted in its being sent have probably not been submitted to your notice. At the beginning of the present campaign it was known that the Imperial authorities were engaging medical men in Britain as well as in the South African Colonies. Those engaged in South Africa naturally expected that no distinction would be made as regards pay and allowances, and were surprised to find after joining that their professional brethren from home were enjoying greater advantages. Here at Pietermaritzburg the question was discussed, and a letter practically similar to the enclosed was sent to the Principal Medical Officer in Natal. This occurred in January, 1900. No reply has yet been received. During March and April, 1900, several meetings were held by the civil surgeons employed here, and it was decided to again bring the subject forward. The civil surgeons engaged elsewhere in Natal were communicated with, all of whom were in sympathy with the movement. This resulted in several deputations to the Principal Medical Officers of Fort Napier and Natal, the latter advising the sending of the enclosed communication, to which no reply has yet been received.

We, the civil surgeons, have now been ordered to wear a nondescript uniform. Our position is altogether ridiculous. We receive the pay of a major (20s. a day), some of the allowances of a captain, a uniform closely resembling a Hindu dispenser, and treatment which is an insult to our noble profession. We have been officially informed that we are not officers, and the general disrespect shown us accentuates the fact. Were the treatment allotted to civil surgeons generally known, nothing but patriotism would induce members of the profession to offer their services.

"Pietermaritzburg, May 5th, 1900.

"Colonel Gallwey, C.B., Principal Medical Officer, Natal, Pietermaritzburg.

(Under cover, Lieutenant-Colonel Johnston, P.M.O., Principal Hospital, Pietermaritzburg, Fort Napier.)

"Sir,—As the representative of the civil surgeons employed in Natal by the Imperial Government, I have the honour to bring the following to your notice:

"The civil surgeons here are, as regards pay and allowances, working under certain disadvantages as compared with their professional brethren engaged in England. The former receeive twenty shillings (£1) a day, rations (or in lieu, one shilling and twopence farthing), and quarters (or in lieu, four shillings and sixpence). The latter receive (1) twenty shillings (£1) a day; (2) passage to and from England; (3) field allowance of a captain in the army; (4) the use of a Government horse and forage; (5) a soldier or civilian servant; (6) rations; (7) quarters; (8) bonus of two months' pay at end of campaign.

"The civil surgeons engaged in Natal feel that they should receive the same pay and allowances as the civil surgeons sent from England; their reasons being: 1. They are doing similar work. 2. Those engaged here are for the most part men who have resided for some time—in many cases several years—in the country and have consequently the advantage of knowing the climatic conditions and diseases particular to South Africa. 3. While working in perfect harmony with those from England they feel that an unfair distinction has been made.

"Your suggestion that we should lay our case before the General Commanding prompts the writing of this communication, and we trust that it will receive his kind attention.

"I have the honour to be, Sir,

"Your obedient servant,

"F. A. HARGER."

*** The proper course appears to have been followed in representing the facts to the Commander-in-Chief in Natal. The engagements were entered into there, and nothing appears to be known in this country as to the terms arranged between the military authorities and the civil surgeons engaged in Natal.

Another correspondent writing from Pietermaritzburg, who sends us a similar statement dealing with the above points, adds that the civil surgeons employed in connection with the hospitals in Natal are of opinion that they ought to have been in some way accorded rank in the army. We have on several occasions ventured to suggest that having regard to the nature of their duties and the exigencies of military discipline, it would have been wise to have given temporary local rank to all civil surgeons. No doubt there are difficulties in doing this, but they are not insuperable, and had a solution been found we have reason to believe that some of the friction which has unfortunately arisen would have been avoided.

THE WAR OFFICE AND THE VOLUNTEER MEDICAL SERVICE.

SURGEON-CAPTAIN R E. VOLUNTEERS desires to call attention to the injustice of the Departmental order with regard to the medical officers attending Volunteer camps during this season—namely, that one medical officer only to each battalion will be allowed regimental pay, and he must be on duty the whole of camp. Most Volunteer corps have several medical officers, who have spent time and money and done gratuitous work untold for the benefit of Volunteering quite as much as, or perhaps in many cases more, than the combatant officers; and now, at the first opportunity, they are to have a "slap in the face."

All combatant officers will receive regimental pay, and why not the medical staff I fail to see. If they were not wanted, they should not have been admitted.

Of course this regulation presses hardest on the seniors, who feel that if they attend the camp they will receive the pay, while if juniors are there they may be ordered to do the work; and a conscientious man would not like to put his brother officer in that position of ignominy, and so he has to refuse to attend the Volunteer camp, much to his chagrin.

I think it is a pity that the Association of Volunteer Medical Officers has not taken this matter up strongly, and I would even advise men to express their inability to attend their camp, and if this had been done generally the Department would have seen their mistake, and probably have remedied a great grievance.

MEDICO-LEGAL AND MEDICO-ETHICAL.

ANÆSTHETICS FOR UNREGISTERED DENTAL ASSISTANTS.

THE fact that the dentist, though unqualified, is believed to be skilful, does not really affect the issue, which is that of countenancing unqualified practice by consenting to administer anæsthetics for unregistered practitioners. It is conceivable that a particular bonesetter, or an unqualified assistant of the old type, might be a good practitioner in the matter he was undertaking, but that would not justify the registered practitioner in assisting in the carrying on of his unqualified practice. Nor would the patient's knowledge that the person selected was unqualified affect the question; the public must be taught that their only real safeguard lies in the employment of registered practitioners, and if they elect to do otherwise the medical profession must afford them no countenance in so doing.

LIABILITY FOR FEES.

EGERTON CRESCENT.—Our correspondent is entitled to charge for professional advice under the circumstances named, but rather a long time has been allowed to elapse without making the claim, and it might now be disputed. It would have been better to have had an understanding about the fee before the advice was given. Half a guinea would not be an excessive fee.

TITTLE-TATTLE.

A CORRESPONDENT complains that the assistant of a neighbouring practitioner has gone about the country saying that our correspondent's practice is being advertised for sale, and upon being spoken to explains that he had heard the rumour, and had merely asked people whether it was true. As our correspondent properly says, had he wished to know the truth he could have asked him, but we are afraid it is hopeless to expect to stop the tongues of foolish people. They can, however, be made responsible for their words, and if our correspondent suffers damage from such injudicious tattle he has his remedy against the offender, but we hope he will hear no more about it.

RIGHTS OF *LOCUM TENENS*.

QUERIST.—A correspondent asks (1) if a *locum tenens* engaged for two or three weeks on the usual terms, that is, salary, board and lodgings, and railway fare, is entitled to expenses for board and lodging where he has been discharged for no fault of his own before the time of his engagement expires? (2) Is laundry generally understood to be part of a *locum's* expenses?

*** Under such circumstances a *locum tenens* is entitled to his salary for the time engaged but to nothing else. (2) It is not usual to claim "laundry" expenses.

COURT FEES IN SCOTLAND.

T. R.—The full fee for a day's attendance for a medical practitioner at an ordinary sheriff court is two guineas. This also applies to the Sheriff Criminal Court, but if the attendance is only for a short time a smaller fee may be paid. There is no tariff of medical fees for the Small Debt Court or the J. P. Court. The fee is either arranged privately between the parties or fixed by the presiding magistrate.

BOND NOT TO PRACTISE.

A LOCUM TENENS asks whether it is usual to sign a bond not to practise within a radius of ten miles where the engagement is only for a short time, for example, a month.

*** Such a bond is not usual under such circumstances.

PROFESSIONAL RECIPROCITY.

DISABLED.—A veterinary surgeon as such has no claim to medical treatment free of charge.

QUACKERY.

INCREDIBLE.—It is possible that, as our correspondent suggests, the vendor of the marvellous rings might be proceeded against for obtaining money under false pretences. The difficulty under such circumstances is to induce any person to come forward and admit in open court that he or she has been so credulous as to purchase such a thing.

PARTNERSHIP AGREEMENTS.

JUNIOR PARTNER writes: A. takes B. into partnership on equal shares. A large portion of the practice is midwifery, the fees ranging from 1 to 5 guineas, but averaging 2 guineas. During the third year of partnership A. does 66 cases at 2 guineas and under, 4 at 3 guineas, and 1 at 4 guineas. At the beginning of the fourth year A. expresses his determination to take no midwifery cases under 3 guineas. B. protests against this, but there is nothing in the partnership deed relating to such a state of affairs, and A. persists in his determination. B. expresses himself willing to take any cases that can be transferred to him, but some will not be transferred, and the knowledge that A. has raised his fees is distinctly prejudicial to the practice. Has B. no remedy for this?

*** The question is a very difficult one. If there is any clause in the partnership deed stipulating that neither partner shall do anything to the prejudice of the practice, and B. can prove that his partner's action will inevitably prejudice it, he may have a remedy. As a general rule in the absence of special contract, one partner cannot dicate to another how he shall carry on the common business.

T. E. S. asks whether it is usual for the seller or the buyer of a practice to pay the solicitor for drawing up the agreement, or do they both share the expense?

*** Both sides pay their own legal expenses, but the purchaser has to pay for the deed of agreement.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Dr. G. H. F. Nuttall has been appointed University Lecturer in Bacteriology and Preventive Medicine, and Mr. G. F. C. Searle Lecturer in Experimental Physics. Dr. Humphry is nominated as Assessor to the Regius Professor of Physic. Mr. Hardy and Mr. Hopkins are appointed Examiners for the Gedge Prize in Physiology to be awarded next Michaelmas Term.

Raymond Horton-Smith Prize.—The first award of this prize has been made to Mr. Alan Baldrey Green, M.A., M.B., B.C., for his M.D. Thesis on Amyloid Disease. Mr. Green has made valuable researches into the nature and artificial production of the disease, and into the associated changes in the blood.

Arnold Gerstenberg Studentship.—This studentship, given for the encouragement of philosophical study by graduates in natural science, has been awarded to Mr. T. J. Jehu, B.A., of St. John's College, who also holds the degrees of M.B., C.M., and B.Sc. from the University of Edinburgh.

Vaccination.—The Local Government Board are prepared to arrange for a course of instruction in vaccination at Cambridge during the Long Vacation, provided a sufficient number of students undertake to attend. Students who desire to take the course are requested to communicate at once with Dr. Loane, 98, Tressillian Road, S.E.

Degrees.—At the Congregation on June 7th the following medical and surgical degrees were conferred:—M.D.: L. Falkener, King's; A. H. Thompson, Trinity; W. J. Harris, Christ's. M.B. and B.C.: J. G. Taylor, King's; W. P. S. Branson, Trinity; C. E. Marriott, Clare; E. Cox, Caius; W. M. Willoughby, Caius; H. G. Cooper, Emmanuel. M.B. only: N. J. McCaskie, Caius; E. A. Wilson, Caius; J. E. Linnell, Selwyn. B.C. only: L. Falkener, King's; T. S. Taylor, King's; W. L. Ascherson, non-collegiate.

UNIVERSITY OF LONDON.

THE *Calendar of the University of London for 1900-01* announces the transfer of the seat of the University to the Imperial Institute, though, as a matter of fact, the June Matriculation Examination has had to be carried on at Burlington House, as well as at South Kensington, which did not afford sufficient accommodation for the 3,000 candidates. The University authorities, true to their principle that "no disability shall be imposed on the ground of sex," have considerately sent the girls to Burlington House, while the boys went to South Kensington, where the refreshment difficulty has only just been surmounted. The *Calendar* makes very little reference to the new constitution of the University.

We note that time is gradually bringing down the percentage of women's successes to about the same as that of the men. It is only in such examinations as the D.Sc., the D.Lit., and the B.S., where only a few picked women enter at all, that their percentage of successes is higher than that of men. Thus only 12 women in all have gone up for the D.Sc., and 10 passed; 2 for the D.Lit., and 1 passed; while last year, of 13 candidates for the B.S., 12 passed. Of 893 Doctors of Medicine, 23 are women; of 63 Masters of Surgery 2 are women. Women have obtained every doctorate except those of laws and music. Among the Bachelors of Law, only three women's names appear—Miss Eliza Orme in 1888, Miss Reina Lawrence in 1893, and a certain "Daphne," but this is perhaps, the surname of a mere male flourishing A.D. 1881.

The only recognisable Hindu name in the M.B. list is that of a lady, Miss Susila Boperjee, in 1899. Two Hindus are Bachelors of Law, but only one is Doctor of Medicine, if we are to judge merely by the Oriental surname. There seem to be very few Indian Bachelors of Art (London), but this may be because a B.A. degree is easily obtainable in India, and often leads to nothing further than a subordinate Government clerkship. Have any of the gentlemen with the degree of F.B.A. ("failed B.A.") who are said to abound in India, once sat as candidates at Burlington House?

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Barker Anatomical Prize.—A prize of £21 is offered for competition, and is open to any student whose name is on the anatomical class list of any school in the United Kingdom. The prize is offered for a dissection of the fifth nerve, especially with reference to the Gasserian ganglion. The preparation must be sent before March 21st, 1901, to the Curator of the Museums, Dr. Arthur H. White, Royal College of Surgeons, Dublin, from whom further particulars can be obtained.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following gentlemen have passed the First Professional Examination for the Diploma of Fellow:

J. E. Adams, St. Thomas's Hospital; R. Y. Aitkin, M.D.Glasg., Glasgow University; K. Anderson, Guy's Hospital; C. T. Andrew, Aberdeen University; A. L. Badcock and E. Bayley, Charing Cross Hospital; E. A. Bell, King's College, London; P. S. Blaker, M.R.C.S.Eng., L.R.C.P.Lond., Calcutta Medical College and University College, London; H. Burrows, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., St. Bartholomew's Hospital; J. B. Byles, M.B., B.C.Cantab., M.R.C.S. Eng., L.R.C.P.Lond., Westminster Hospital; J. Cameron, M.R.C.S. Eng., L.R.C.P.Lond., M.B., Ch.B.Edin., Edinburgh University; J. A. Coupland, Yorkshire College, Leeds; M. A. M. Fitzmaurice-Kelly, St. Mary's Hospital; W. R. Gibson, M.R.C.S.Eng., L.R.C.P. Lond., and J. D. Hartley, M.R.C.S.Eng., L.R.C.P.Lond., St. Bartholomew's and King's College Hospital; D. Gray, Charing Cross Hospital; E. E. Henderson, M.B., B.C.Cantab., Cambridge University, Guy's, and King's College Hospitals; J. T. Hicks, Guy's Hospital; S. Hastings, G. S. Hughes, and W. W. James, L.D.S.Eng., Middlesex Hospital; R. Jacques, University College, Liverpool, and King's College, London; J. C. G. Ledingham, B.Sc.Aberd., Aberdeen University; W. A. Logan, M.B., Ch.B.New Zeal., M.R.C.S.Eng., L.R.C.P.Lond., New Zealand University, Dunedin and King's College, London; H. A. Lyth, University College, London; J. McClure, M.B., C.M.Glasg., M.R.C.S.Eng., L.R.C.P. Lond., Glasgow University; A. R. McLachlan, M.R.C.S. Eng., L.R.C.P.Lond., Guy's Hospital; T. H. Middleboro', M.D.Toronto, M.R.C.S.Eng., L.R.C.P.Lond., Toronto University, Canada, and Middlesex Hospital; H. Overy, Edinburgh and St. Andrews University; J. G. Pardoe, M.B., C.M.Aberd., M.R.C.S.Eng., L.R.C.P.Lond., Aberdeen University and King's College, London; J. H. Parsons, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., University College, Royal Infirmary, Bristol, and University College, London; C. H. Robertson and R. P. Rowlands, M.R.C.S. Eng., L.R.C.P.Lond., Guy's Hospital; P. W. G. Sargent, M.B., B.C.Cantab., M.R.C.S.Eng., L.R.C.P.Lond., Cambridge University and St. Thomas's Hospital; A. R. Schofield and H. B. W. Smith, London Hospital; W. E. J. Tuohy, Guy's Hospital; H. G. Tymms, M.B., B.S.Melb., M.R.C.S. Eng., L.R.C.P.Lond., Melbourne University, St. Bartholomew's Hospital, and King's College, London; S. J. Warcham, M.R.C.S. Eng., L.R.C.P.Lond., L.S.A.Lond., Charing Cross Hospital; N. E. Waterfield and H. V. Wenham, St. Bartholomew's Hospital; J. H. Watson, M.R.C.S.Eng., L.R.C.P.Lond., University College and Royal Infirmary, Liverpool, and King's College, London; M. T. Williams, London Hospital; B. S. Wills, M.R.C.S.Eng., L.R.C.P.Lond., St. Thomas's Hospital.

One hundred and thirteen gentlemen presented themselves for this examination; 44 passed and 69 were referred.

The following gentlemen having passed the necessary Examinations and conformed to the By-laws and Regulations, have been admitted "Fellows" of the College:

T. R. Mulroney (Major I.M.S., Bengal), M.D.Malta, L.R.C.P.&S.Edin., Bombay and King's College, London, date of membership January 19th, 1880; F. V. Milward, M.B., B.C.Cantab., L.R.C.P.Lond., Cambridge University and St. Thomas's Hospital, Member February 7th, 1895; H. M. Rigby, M.B., B.S.Lond., L.R.C.P.Lond., London Hospital, Member February 7th, 1895; J. S. Fairbairn, M.B., B.Ch.Oxon, L.R.C.P.Lond., Oxford University and St. Thomas's Hospital, Member November 14th, 1895; L. B. Rawling, M.B., B.C.Cantab., L.R.C.P.Lond., St. Bartholomew's Hospital, Member August 4th, 1896; S. F. Lynch, L.R.C.P.Lond., King's College Hospital, Member February 11th, 1897; M. G. Dyson, L.R.C.P.Lond., St. Bartholomew's Hospital, Member May 13th, 1897; D. J. Armour, M.B.Toronto, M.R.C.P.Lond., M.C.P.&S.Ont., University of Toronto, Canada, and University College, London, Member July 8th, 1897; M. D. Harmer, M.B., B.C. Cantab., L.R.C.P.Lond., St. Bartholomew's Hospital, Member August 2nd, 1898; W. J. H. Hislop, M.B., C.M.Edin., L.R.C.P.Lond., St. Bartholomew's Hospital, Member August 2nd, 1898; H. S. Clogg, M.B., L.R.C.P.Lond., Charing Cross Hospital, Member November 10th, 1898; L. H. McGavin, L.R.C.P.Lond., Guy's Hospital, Member November 10th, 1898; A. W. Jones, L.R.C.P.Lond., St. Thomas's Hospital, Member February 9th, 1899; T. H. Middleboro', M.B. Toronto, L.R.C.P.Lond., University of Toronto, Canada, and King's College, London, Member November 2nd, 1899; J. P. L. Mummery, L.R.C.P., St. George's Hospital, Member November 2nd, 1899.

Thirty-two gentlemen presented themselves for examination, 15 of whom passed, and 17 were referred.

THE Prince and Princess of Wales will visit Newcastle-on-Tyne on June 20th to lay the foundation stone of the Royal Infirmary.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 5,473 births and 3,748 deaths were registered during the week ending Saturday last, June 9th. The annual rate of mortality in these towns, which had been 18.4 and 17.7 per 1,000 in the two preceding weeks, further declined to 16.8 last week. The rates in the several towns ranged from 8.0 in Birkenhead, 11.4 in Swansea, 12.1 in Derby and in Burnley, and 12.3 in Croydon to 19.9 in Sheffield, 21.3 in Salford, 23.1 in Manchester, and 24.8 in Liverpool. In the thirty-two provincial towns the mean death-rate was 17.5 per 1,000, and exceeded by 1.6 the rate recorded in London, which was 15.9 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.7 per 1,000; in London this death-rate was equal to 1.6 per 1,000, while it averaged 1.8 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.7 in Blackburn, 3.4 in Derby and in Oldham, and 4.0 in Cardiff. Measles caused a death-rate of 1.1 in Bristol, 1.4 in Sunderland, 2.1 in Cardiff, and 2.9 in Derby; whooping-cough of 1.0 in Oldham and in Gateshead, 1.2 in Manchester, and 1.3 in Liverpool; and diarrhœa of 1.1 in Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 65 deaths from diphtheria in the thirty-three towns included 24 in London, 7 in Leeds, 6 in Leicester, 4 in Cardiff, and 4 in Sheffield. One fatal case of small-pox was registered last week in Oldham, but not one in any other of the thirty-three large towns. There were 11 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, June 9th, against 3, 5, and 7 at the end of the three preceding weeks: 4 new cases were admitted during the week, against 3 and 4 in the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,784 and 1,760 at the end of the two preceding weeks, had further declined to 1,754 on Saturday last; 203 new cases were admitted during the week, against 221, 216, and 194 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, June 9th, 1,030 births and 564 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.6 and 18.6 per 1,000 in the two preceding weeks, further declined last week to 18.3, but was 1.5 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 13.3 in Paisley and 15.8 in Aberdeen, to 19.9 in Glasgow and 21.5 in Greenock. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Glasgow and Paisley. The 285 deaths registered in Glasgow included 14 from measles, 4 from scarlet fever, 2 from diphtheria, 14 from whooping-cough, 4 from "fever," and 4 from diarrhœa. Four fatal cases of measles were recorded in Edinburgh, 2 of diarrhœa in Dundee, 2 of whooping-cough in Aberdeen, and 2 of scarlet fever in Paisley.

EPIDEMIC OF DIPHTHERIA IN EDINBURGH.

Sir Henry D. Littlejohn, the Medical Officer of Health, has made a report to the Public Health Committee of the Edinburgh Town Council, on the recent epidemic of diphtheria in the city of Edinburgh. The main facts are these: During the month of May 27 cases of diphtheria were notified. Towards the end of May the city was entirely free from diphtheria, but on May 29th 1 case, and during the next few days no fewer than 30, were reported. During the week ending June 9th 40 further cases were reported. They were mainly in the districts of St. Leonard's and Warrender Park. A quantity of the milk distributed to these districts came from one dairy in the Liberton district, where it was found that the family of the dairy-keeper were all more or less affected with sore throats, which did not unfit them from working in the dairy, or prevent the children of the family from going to school. In one of these cases the symptoms were so marked that a swab from the throat was examined bacteriologically, and the diagnosis of true diphtheria made. The milk supply from the farm was stopped on June 4th, and since then no cases have been reported in which the disease was contracted subsequent to this date. In all, nearly 50 cases have been reported, with 1 death. The county authorities have given the most cordial co-operation and assistance to the city officer in determining the source of the outbreak.

FREE SANITARY CONVENIENCES FOR WOMEN.

The provision of free sanitary conveniences for poor women seems to be a matter which might well be taken up by medical women. Such conveniences have increased both in numbers and in comfort during late years, but in London at least all of those intended for women make a charge of a penny, and we are told that ladies are fairly frequently stopped by poor women in the street who assert their inability to pay this. It is said that the attendants in charge have orders to allow such women as cannot afford the fee to use the conveniences gratis, but it ought not to be a matter of grace. The lack of free places of this sort bears very heavily on girls of the clerk class. They frequently work with men, and may (in spite of health officers) have no special closet set apart for their use, or possibly only one for twenty or thirty women; and as this is chiefly in demand during the short time allowed for dinner—a meal most of them have to find for themselves—outside, they commonly have recourse to a convenience near. They may have to use a station waiting-room on the way home, and possibly, if they have risen late, or are of a very nervous temperament, they may have had to use it on their way to office. Their expenditure may therefore amount to threepence a day, or eighteenpence a week, and this is a great tax on girls earning from fifteen to twenty-five shillings a week.

On Sundays and holidays there is special distress, as the confectioners' shops are shut, most of which provide a ladies' room for customers. The fact that many of these shops have found it necessary to impose a charge, at first a penny and recently raised to twopence, on non-customers shows in how great demand these lavatories are.

The return to the County Council on the underground conveniences in London shows that some 29 out of the total 106 yield a profit; these 29 are mostly in the great thoroughfares, Piccadilly Circus heading the list with a profit of £1,673, Charing Cross Road following with £981, Marble Arch and Tottenham Court Road giving some £350, and the other profits ranging from £20 to £190. As a great many have only recently been opened, the profits will probably increase as time goes on. This being so, it would surely be feasible to allot at least one closet in each convenience for people unable to pay a fee. It should be the attendant's duty to keep this as clean as the others, but women who are particular in these matters would know that the closet charged for was not used by people who, being unable to pay for the use of a convenience, are quite possibly habitually unable to pay for soap and hot water. In so doing the authorities would only be following the example of Continental cities, especially Paris, where different prices to suit more or less particular (or more or less impecunious) customers are charged. A similar arrangement might well be made by railway companies, whereas at present it seems to be thought that a free lavatory means lack of an attendant, with a consequent abuse of the lavatory which renders it frequently unusable by decent people. It may be questioned also whether a charge as high as twopence is absolutely necessary for the use of a basin, soap, and towel. While acknowledging that matters are much better than they used to be, much still remains to be done for the health and comfort of women whom the work of life calls daily away from home.

INSUFFICIENT VACCINATION.

A correspondent has sent us recently the most remarkable complaint we have received since the latest Vaccination Act came into operation. He writes:

> The public vaccinator of this district continually puts only two marks on his cases and occasionally one. I have not seen three on a single case of his since coming to the district. Not only does he do this, but if he finds the parents are patients of another man, he has told them to go to his surgery when he will attend them free of cost. It is seldom now that I get the chance of doing any vaccinations, and I know the other men in the district are in the same fix. To my knowledge this has gone on for the last year and a-half, and though I suppose the inspector comes to the place it still goes on.

We have had occasion over and over again to deplore the fact that there are men who endeavour by promises of one-mark vaccination to draw practice to themselves and away from public and private vaccinators who insist on doing the operation thoroughly if at all. But the reverse of this complaint, that a public vaccinator should himself enter on this downward competition, and endeavour by one-mark and two-mark vaccination, and by canvassing, to rob his medical neighbours of their private practice, is in our experience unique. The facts, of course, are not known to us, but if they can be established as stated in our correspondent's letter, then he and the other practitioners in his locality should have no hesitation in bringing the whole story before the Local Government Board, which would no doubt make inquiries.

PUBLIC HEALTH APPOINTMENTS IN SCOTLAND.

Ichabod.—The question whether a county medical officer who does not possess a qualification in public health, and who is only an official under the Local Government Act, and not under the Public Health (Scotland) Act, can be appointed to a district appointment under the Public Health (Scotland) Act, 1897, has not apparently been decided. We would recommend our correspondent to consult the Local Government Board of Scotland on the subject. The salary mentioned (£5) for medical officer of health in an extensive district is quite inadequate. A reasonable salary should be given to one of the medical men resident in the district, and qualified for the post.

HOSPITAL AND DISPENSARY MANAGEMENT.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN.

The Edinburgh Hospital for Women and Children at Whitehouse Loan, Bruntsfield Links, was formally opened on Wednesday afternoon, May 30th, by the Lord High Commissioner to the General Assembly of the Church of Scotland (the Earl of Leven and Melville). Invitations to the function were issued to a large number of people by the Countess of Moray, one of the Vice-Presidents of the Hospital, Miss Louisa Stevenson eulogised the work done by Dr. Sophia Jex-Blake, who began the hospital in a small hired house, with five beds, in Grove Street, in the year 1885. Now the hospital has been moved to Dr. Jex-Blake's former residence, which has been purchased and equipped. There is one large ward of ten beds, one or two double and single rooms, an operating theatre, a pathological room, and administrative rooms and offices. Other rooms are available, and can be transformed into wards as occasion demands. These latter, it is hoped, will be made use of by patients who are anxious for the services of medical women, and able to pay £1 1s. and upwards, but unable to meet the expenses of an ordinary nursing home. In the ordinary ward a charge of 5s. a week is made to patients who are members of the Provident Dispensary, while non-members pay 10s. and upwards. The balance is made up from the General Fund, to which subscriptions are desired, as well as donations towards the endowment of a bed. The Secretary is Miss E. C. Wright, 4, Glengyle Terrace, Edinburgh.

MEDICAL NEWS.

A MEETING of the Anatomical Society of Great Britain and Ireland will be held in the Medical School of Owens College, Manchester, on Thursday and Friday, June 21st and 22nd. On Saturday, June 23rd, there will be an excursion to the Lake District.

THE VATICAN AND THE WAR AGAINST TUBERCULOSIS.—It is said that the Vatican shows a disposition to join in the holy war against the "white plague." We learn from the Italian papers that there has been a meeting of cardinals and other ecclesiastical dignitaries to discuss the expediency of taking an active part in the movement for the prevention of tuberculosis.

AN ANTITUBERCULOSIS CONGRESS IN PORTUGAL. — The Council of the Portuguese National League against Tuberculosis has under consideration a scheme for the organisation of a National Congress in connection with the second Medical Congress on the subject, which is to be held Coimbra. It may be mentioned that the first Congress was held in 1895.

DR. AUGAGNEUR, Chief Surgeon to the Antiquaille Hospital, and Professor of Surgical Pathology in the Medical Faculty of Lyons, has been elected Mayor of Lyons. Dr. Augagneur, who is described as a Radical-Socialist in politics, succeeds another member of the medical profession, Dr. Gailleton, who had occupied the mayoral chair of Lyons for twenty-five years.

PLAGUE LABORATORIES IN GERMANY.—The Government of Baden, it is stated, proposes to establish special plague laboratories at Freiburg and Heidelberg for the diagnosis of any suspicious cases that may occur, and for the prosecution of researches as to the cause of the disease. The laboratories are to be in connection with the hygienic institutions of both the Universities. The cost of each is estimated at 10,000 marks, and the equipment at 8,000 marks.

A MEDICAL WOMAN IN SYRIA.—Dr. Mary Pierson Eddy, who is said to be the only woman allowed to practise in the Turkish Empire, recently returned to the United States from Syria. She is said to have founded the only ophthalmic hospital in Syria, and to have travelled from one end of the country to the other, penetrating far into the interior with only Syrian attendants, and rendering surgical aid to Bedouin encampments, Circassians, and Turcoman tribes.

A CHILDREN'S HOSPITAL AT ATHENS.—On the initiative of her Royal Highness Princess Sophia of Greece a hospital for children has recently been built in Athens. It is appropriately named "Saint Sophia." The hospital consists of twelve separate buildings, each destined for the accommodation of patients suffering from one form of disease. Four of these are set apart for contagious cases. The new hospital was lately formally opened in the presence of the whole Royal family of Greece, the high officers of State, and the municipal authorities of Athens.

A MEDAL FOR THE DISCOVERER OF THE "X"-RAYS.—The New York *Medical Record* recently stated that the Barnard Medal would be awarded to Professor Wilhelm Conrad Roentgen at the commencement of Columbia University on June 13th. The medal is of gold, and was founded by the will of Professor F. P. Barnard, a former president of Columbia University. It is awarded every five years "to such person, if any, whether a citizen of the United States or any other country, as shall within the five years next preceding have made such discovery in physical astronomical science to purposes beneficial to the human race as in the judgment of the National Academy of Sciences of the United States shall be esteemed most worthy of such honour." The first award of the Barnard Medal was made in 1895, when it was given jointly to Lord Rayleigh and Professor William Ramsay.

EDINBURGH ROYAL INFIRMARY RESIDENTS' CLUB.—The annual general meeting of members of the club was held at the Royal Hotel, Edinburgh, on June 7th. Reports were read and office-bearers elected for the ensuing year. Thereafter, at the fourth annual dinner of the club, the President, Dr. Yellowlees, took the chair. There was an attendance of about forty members. After dinner the President gave the toast of "The Queen" and of "The Imperial Forces," both of which were received with acclamation. Then, from the Chair also, followed the toast of "The Residentia," when Dr. Yellowlees in a most interesting speech recalled stories of the residency in the old infirmary, regarding Spence, Syme, Lister, Fox, Beddoe, Laycock, and others of the staff of those days. Dr. James then gave "The President," and Mr. Cotterill "The Secretary and Treasurer." Songs were given during the evening by Drs. Porter, Forsyth, Kennedy, MacKie, James, Mure, and Wedderburn.

MEDICAL VACANCIES.

The following vacancies are announced:

BEDFORD COUNTY HOSPITAL.—Senior House-Surgeon. Salary, £100 per annum, with apartments, board, and washing. Applications to the Secretary by June 20th.

BIRKENHEAD BOROUGH HOSPITAL.—Resident Junior House-Surgeon. Salary, £75 per annum, and about £25 is usually obtained from police-court and notification fees. Applications to the Chairman of the Weekly Board.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary £100 per annum, with board, residence, and laundry. Applications to the Honorary Secretary, 52, Grosvenor Road, Birkenhead, by June 25th.

BIRMINGHAM CITY ASYLUM.—Senior Assistant Medical Officer. Applications to the Medical Superintendent.

BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM: GENERAL HOSPITAL.—Pathologist. Salary, £100 per annum, with board and residence. Applications to the House Governor by June 30th.

BIRMINGHAM: QUEEN'S HOSPITAL.—(1) House-Physician. (2) House-Surgeon. Appointments for one year. Salaries, £50, with board, lodging, and washing. Applications to the Secretary by June 20th.

BOOTLE BOROUGH INFECTIOUS DISEASES HOSPITAL.—Resident Medical Superintendent; unmarried. Salary, £120 per annum, with board, washing, and apartments. Applications, endorsed "Resident Medical Superintendent," to the Chairman of the Hospital Subcommittee, Town Hall, Bootle, by June 21st.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary, £120 per annum, with rooms and attendance. Applications, endorsed "House-Surgeon," to the Secretary by June 20th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CAPETOWN: SOMERSET HOSPITAL.—Assistant Resident Surgeon. Particulars to be obtained from the Medical Officer, Cape Government Agency, 112, Victoria Street, S.W.

CARDIFF INFIRMARY.—Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary.

CARLISLE DISPENSARY.—House Surgeon. Salary, £150 per annum, with apartments. Applications to the Honorary Secretary, 23, Lowther Street, Carlisle.

CARMARTHEN UNION.—Medical Officer and Public Vaccinator for the Conwil District. Salary, £80 and fees. Applications, marked "Conwil Medical Officership," to the Clerk, 7, Hasl Street, Carmarthen, by June 21st.

CHESTERFIELD BOROUGH.—Medical Officer of Health. Salary, £250 per annum. Applications, endorsed "Medical Officer," to the Town Clerk by June 23rd.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

CITY OF LONDON ASYLUM, near Dartford.—Assistant Medical Officer for seven weeks. Terms 3 guineas a week. Applications to the Medical Superintendent.

CUMBERLAND AND WESTMORLAND ASYLUM, Garlands, Carlisle.—Locum Tenens. Terms, 3 guineas a week, and residence. Applications to the Medical Superintendent.

DUBLIN: CHILDREN'S HOSPITAL, Temple Street.—House-Surgeon. Salary 50 guineas per annum, with apartments, etc. Applications to the Hon. Secretary, Medical Board.

ESSEX AND COLCHESTER HOSPITAL.—Resident House Surgeon. Salary, £100 per annum, with board, washing, etc. Applications to the Secretary.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. Salary at the rate of £80 per annum, with board, lodging, and washing. Applications to the House-Surgeon.

GREAT NORTHERN CENTRAL HOSPITAL.—(1) House-Physician. (2) Junior House-Physician. Appointments for six months. Salaries at the rate of £60 and £30 per annum respectively with board, lodging, and washing. Applications to the Secretary by June 18th.

HALIFAX ROYAL INFIRMARY.—Third House-Surgeon; unmarried. Salary, £50 per annum, with residence, board, and washing. Applications to the Secretary.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Resident House-Physicians. Appointments for six months. Honorarium, £25. (2) Surgeon; must be F.R.C.S.Eng. Applications to the Secretary for (1) by June 28th and for (2) by June 27th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) House-Surgeon. (2) House-Physician. Appointments for six months. Salaries, £20, with board and residence. Must be unmarried. Applications, on forms provided, to be sent to the Secretary by June 19th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Ophthalmic Surgeon to Outpatients. Applications to the Secretary by June 30th.

KENSINGTON DISPENSARY.—Resident Medical Officer; unmarried and under 35 years of age. Salary £125 per annum, with furnished apartments, etc. Applications to the Honorary Secretary, Mr. C. F. C. Ellis, 56, Bedford Gardens, Kensington, W., by June 30th.

MIDDLESEX HOSPITAL.—Assistant Dental Surgeon. Applications to the Secretary-Superintendent by July 5th.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Medical Officer. Salary, £60 per annum, with board, attendance and washing. Appointment for six months, with prospect of re-election as Senior, salary £90. Applications to the Secretary by June 21st.

MONSALL FEVER HOSPITAL (MANCHESTER CORPORATION).—Third Assistant Medical Officer. Salary, £100 per annum, with board and lodging. Applications, endorsed "Appointment of Medical Assistant," to be sent to the Chairman, Sanitary Committee, Town Hall, Manchester, by June 23rd.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Registrar. Honorarium 50 guineas. Applications to the Secretary by June 30th.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road, N.E.—(1) House-Physician, (2) House-Surgeon. Appointments for six months. Salaries at the rate of £80 per annum, with board, residence, and laundry allowance. Applications to the Secretary, City Office, 27, Clements Lane, Lombard Street, E.C., by June 18th.

NORTH RIDING ASYLUM, Clifton, York.—Junior Assistant Medical Officer; unmarried, age not exceeding 30 years. Salary, £125, rising to £175 per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent by June 25th.

NORWICH: HEIGHAM HALL ASYLUM.—Assistant Medical Officer. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL DISPENSARY. — Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—(1) Senior House-Surgeon. Salary, £35 per annum. (2) Junior House-Surgeon. Salary £30 per annum. (3) Locum Tenens for one month at least. Terms, 4 guineas a week. Board, lodging, and washing provided for (1) and (2), and board and residence for (3). Applications to the Secretary.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary, £125, increasing to £150, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to Dr. W. H. Bowes, Medical Superintendent, by June 25th.

RAINHILL: COUNTY ASYLUM.—Assistant Medical Officer: unmarried and not more than 30 years of age. Salary commences £125 per annum, with prospect of increase to £250, with furnished apartments, board, attendance and washing. Applications to the Medical Superintendent by June 20th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications, marked "House-Surgeon," to the Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by June 25th.

ROYAL ORTHOPÆDIC HOSPITAL, Oxford Street.—House-Surgeon and Registrar, unmarried. Salary £100 per annum, with residence and partial board. Appointment for six months, but renewable. Applications to the Secretary by June 23rd.

ST. OLAVE'S UNION.—Medical Officer of the Children's Home, Peckham Rye. Salary, £75 per annum. Applications, on forms provided, to be sent to the Clerk to the Guardians, Union Offices, Tooley Street, S.E., by June 18th.

SHOREDITCH: PARISH OF ST. LEONARD.—Second Assistant Medical Officer at the Infirmary, Hoxton Street, N. Appointment for six months. Salary, £80 per annum, with rations, washing, and furnished apartments. Applications, on forms provided, to be sent to the Clerk to the Guardians, 213, Kingsland Road, N., by June 19th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTH SHIELDS: INGAM, SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House-Surgeon. Salary, £75 per annum, with residence, board, and washing. Applications to the Secretary by June 23rd.

ST. PANCRAS WORKHOUSE.—Junior Assistant Medical Officer. Honorarium £60, and residential allowances. Applications, on forms provided, to be sent to the Clerk to the Guardians, Vestry Hall, Pancras Road, N.W.

STAFFORD: STAFFORDSHIRE COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary commencing at £150 per annum, rising to £180, with furnished apartments, board, and attendance. Applications to the Medical Superintendent.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by July 10th.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £50 per annum, with board, apartments, washing, and attendance. Applications to the Secretary by June 16th.

TOWER HAMLETS DISPENSARY, White Horse Street, E.—Resident Medical Officer. Salary, £120 per annum, with furnished rooms, etc. Applications, marked "R.M.O.," to Dr. Sedgwick by June 22nd.

TUNBRIDGE WELLS: ROYAL NATIONAL HOSPITAL FOR CONSUMPTION.—Clinical Assistant. No salary. Board, residence, and laundry provided. Applications to the Secretary, 34, Craven Street, Strand, W.C.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by June 30th.

WANDSWORTH AND CLAPHAM UNION INFIRMARY, St. John's Hill.—Junior Assistant Medical Officer. Salary £70 per annum, with board, lodging, and washing. Applications to the Medical Superintendent.

WEST DERBY UNION.—Resident Assistant Medical Officer at the Mill Road Infirmary, Everton. Salary, £100 per annum, with rations. Applications to the Clerk to the Guardians, Brougham Terrace, Liverpool, by June 25th.

WESTERN GENERAL DISPENSARY, Marylebone Road.—(1) House Surgeon, unmarried. Salary £75 per annum, with board and residence, and 10s. a month for washing. (2) Honorary Physician, must be F. or M.R.C.P.Lond. Applications to the Honorary Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.—(1) House-Physician; (2) House-Surgeon. Appointments for six months. Board and lodging provided. Applications to the Medical Superintendent.

WHITTINGHAM: COUNTY ASYLUM.—Junior Assistant Medical Officer; unmarried. Salary, £125 per annum, increasing to £250, with furnished apartments, board, etc. Applications to the Medical Superintendent.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by June 28th.

YORK DISPENSARY.—Resident Medical Officer; unmarried. Salary, £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by June 19th.

MEDICAL APPOINTMENTS.

ALLEN, Y. F., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer for the Pentney District of the Freebridge Lynn Union.

ANDERSON, William, M.B., M.S.Edin., appointed Public Vaccinator for the District of Wairau, New Zealand.

BINNEY, E. H., M.B., Ch.M.Syd., appointed Honorary Surgeon to the Children's Hospital, Sydney, *vice* W. Chisholm, M.D.Lond., M.R.C.S.Eng., resigned.

BOWKER, C. S., M.R.C.S.Eng., L.R.C.P., appointed Government Medical Officer and Public Vaccinator at Dungog, New South Wales.

CAHE, Michael, L.R.C.P., L.R.C.S.Irel., appointed Health Officer for the Shire of Woorayl, Victoria.

COURTENAY, K. J., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health for the Wareham and Purbeck Rural District, *vice* F. D. Lys, M.R.C.S.Eng., resigned.

EADON, S. B., M.D., Ch.M.Aberd., appointed Health Officer for the Shire of Karkarooc, Victoria.

ELLIOTT, W. J., M.R.C.S., appointed Health Officer to the Donnybrook Local Board of Health, Western Australia.

FORSTER, Fredk. C., M.R.C.S.Eng., L.R.C.P.Lond., appointed Resident Medical Officer to the Royal United Hospital, Bath.

HAINS, George M., M.B., appointed Medical Officer for Gladstone and the Gladstone Gaol, South Australia.

HAY, T. W., M.B., C.M.Glasg., appointed District Medical Officer of the Newcastle-on-Tyne Union.

HEPWORTH, A. P., M.A.Camb., L.R.C.P., L.R.C.S.Edin., appointed Health Officer for the Shire of Tungamah, Victoria.

HERN, William, M.R.C.S., L.D.S.Eng., appointed Dental Surgeon to the Middlesex Hospital.

HARES, E. G., M.D., appointed Visiting Surgeon to the Police Gaol at Herberton, Queensland.

HORTON, Gavin, M.B.Syd., appointed Senior Medical Officer to the Hospital for the Insane, Gladesville, New South Wales.

O'KEEFFE-WILSON, George, L.R.C.P. and S.I., etc., appointed Honorary Assistant Visiting Physician to the Drumcondra Hospital, Drumcondra, Dublin.

PAGET, Owen, M.B., B.S., appointed Health Officer to the North Freemantle Local Board of Health, Western Australia.

PONDER, C. F., M.B., appointed Government Medical Officer and Vaccinator at Hillston, New South Wales.

PRICE, S. E., L.S.A., appointed Medical Officer for the Ninth District of the Bromley Union, *vice* C. N. Hamper, M.B., C.M.Edin., resigned.

SANGSTER, John I., M.R.C.S.Eng., L.R.C.P.Edin., appointed Medical Officer of Health at Koorinja, South Australia.

TREVOR-ROPER, G. D., L.R.C.P.Edin., L.F.P.S.Glas., appointed Medical Officer for the Massingham District of the Freebridge Lynn Union.

KING'S COLLEGE HOSPITAL.—The following appointments have been made, dating from May 1st:
Senior House-Physician.—P. C. Colls, M.R.C.S.Eng., L.R.C.P.Lond.
Junior House-Physician.—A. R. C. Parsons, M.R.C.S.Eng., L.R.C.P.Lond.
Assistant House-Physician.—Mr. F. B. Jeffriss.
Mr. Rose's House-Surgeon.—W. M. Sparkes, M.R.C.S.Eng., L.R.C.P.Lond.
Mr. Cheyne's House-Surgeon.—G. A. Roberts, M.R.C.S.Eng., L.R.C.P.Lond.
Mr. Barrow's House-Surgeon.—C. E. Fenn, M.B.Durh., M.R.C.S., L.R.C.P.
House Accoucheur.—J. M. Twentyman, L.S.A.Lond.
Assistant House-Accoucheur.—Mr. E. M. Saunders.

DIARY FOR NEXT WEEK.

MONDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Dr. Furniss Potter: Hoarseness and Aphonia.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Colcott Fox: Consultation (Skin).

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. A. E. Saunders: Diseases Connected with Insanitary Surroundings. (Lecture I.)

TUESDAY.

Royal College of Physicians of London, 5 P.M.—Dr. F. W. Mott: The Degeneration of the Neurone. (Croonian Lecture.) Lecture I.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Harry Campbell: Consultation (Medical).

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Mr. Victor Horsley: Surgery of the Nervous System.

London Temperance Hospital, 2 P.M.—Dr. Addinsell: Some Abdominal Tumours.

WEDNESDAY.

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Dr. Horton-Smith: Clinical Varieties of Phthisis.

Royal Microscopical Society, 20, Hanover Square, W., 8 P.M.

Royal Meteorological Society, 70 Victoria Street, Westminster, S.W., 4.30 P.M.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Dr. David Ferrier: Clinical Lecture. Jacksonian Epilepsy.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Dr. George Carpenter: Medical Cases. (Post-Graduate Course.)

THURSDAY.

Royal College of Physicians of London, 5 P.M.—Dr. F. W. Mott: The Degeneration of the Neurone. (Croonian Lecture.) Lecture II.

Neurological Society of London, 11, Chandos Street, W., 8.30 P.M.—Clinical evening. Dr. Head: (1) Four Cases of Muscular Atrophy in Young Women. (2) Case of Muscular Atrophy Accompanied by Trophic Areas on the Skin. Dr. Colman: Ophthalmoplegic Migraine. Dr. Lees: (1) Hæmatomyelia (2) with Partial Recovery. (2) Hysterical Contracture of Twelve Years' Standing. Dr. L. Guthrie: Myotonia. Dr. G. Newton Pitt: Insular Sclerosis. (Patients in attendance at 8 P.M.)

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Dr. A. E. Saunders: Diseases Connected with Insanitary Surroundings. (Lecture II.)

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. Amand Routh: Gynæcological Demonstration.

FRIDAY.

West London Medico Chirurgical Society, West London Hospital, Hammersmith Road, W., Town Hall, 8.30 P.M.—Mr. H. T. Butlin, the Cavendish Lecture on the Application of Pathology to Surgery. After the Lecture the President and Council of the Society will entertain the members and their friends at a conversazione.

London Temperance Hospital, 2 P.M.—Dr. Parkinson: Cases of Pericarditis and Others.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. StClair Thomson: Consultation (Throat, Nose, and Ear). 5 to 7 P.M.—Mr. J. Griffith: Class. Practical Ophthalmology. Demonstration 6.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

COUTTS.—At Croston Lodge, Chalmers Crescent, Edinburgh, on June 9th, the wife of Major George Coutts, Royal Army Medical Corps, South Africa, of a son.

MARRIAGES.

DIXON—HOLFORD.—On June 7th, at the Parish Church, Broxbourne, Herts, by the Rev. Canon Fox-Lambert, assisted by the Rev. J. Salway, Vicar of the parish, Montague Dixon, M.D., B.Sc., third son of the late Pierson J. Dixon, of Woodlands, Cheshunt, to Edith Goward, only daughter of Henry Hodgson Holford, of the White House, Cheshunt.

HENDRY—IVERACH.—At the Parish Church, Rowsley, Derbyshire, on June 6th, by the Rev. E. C. Parmenter, Alexander Hendry, M.B., C.M., Ballater, to Mary Elizabeth, elder daughter of the late John G. Iveragh, of Glen Orkney, Kirkwall.

ISAAC—THOMAS.—On June 5th, at Tabernacle Chapel, Morriston, Richard James Isaac, L.R.C.P. and S.E., elder son of the late Evan Isaac, Esq., Craigafon, Pontardulais, to Blodwen Mary, eldest daughter of the late Henry Thomas, Esq., Aberdare House, Pontardulais.

MARTIN—FURNER.—On June 6th, at Christ Church, Ealing, by the Rev. H. F. Martin, Rector of Killeshandra, Ireland, father of the bridegroom, assisted by the Rev. W. Templeton King, Vicar of Christ Church, Ealing, Robert Collins Martin, M.R.C.S.Eng., L.R.C.P.Lond., of Clifton, Bristol, to Angela Mary, daughter of Hamnett G. Furner, of Ealing, and granddaughter of the late Edmund Joseph Furner, F.R.C.S.Eng., of Brighton. Irish and Colonial papers please copy.

WOODHOUSE—NELSON.—On June 13th, at Esher Parish Church, by the Rev. A. Wake, Rector of Courteenhall, Northampton, assisted by the Rev. H. R. M. Hutt, of King's Lynn, Cecil Woodhouse, M.B., B.C.Cantab., of Homeside, Esher, to Norah Nelson, widow of the late Edward A. Nelson, and only daughter of Grinham Keen, Chadworth Cottage, Esher.

DEATHS.

EVERED-POOLE.—On June 4th, at Crendahr, Southampton, Fanny Kate Elliott, wife of Major Evered-Poole, late King's Royal Rifles (and younger daughter of Dr. Harland, of Ryde, I.W., formerly of Tunbridge Wells and Wadhurst), after only a few days' illness, aged 34 years.

MACHARG.—At Gibraltar, on June 4th, William Edgar Macharg, M.D., The Grove, Ibrox, second son of E. Simpson Macharg, C.A., Glasgow.

REES.—On June 9th, at Toronto House, West Bromwich, Robert Rees, M.B., C.M., aged 49.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Ro[illegible]n, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations,*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M. W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations* —Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 1; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children) 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30 Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th. 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W. C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ ***Queries, answers, and communications relating to subjects to which special departments of the*** BRITISH MEDICAL JOURNAL ***are devoted will be found under their respective headings.***

QUERIES.

SENEX would be glad to know how he could best dispose, by sale, of surgical instruments, such as amputation cases, midwifery instruments, etc., at a fair price, as he has no further use for them, having retired from practice.

GENERAL PRACTITIONER has been asked to state upon what terms he would be willing to attend the members of the staff—about 40 in number—in a hotel of the semi-private type in the City, (1) at so much a quarter, (2) at so much a visit (paid quarterly), and would be pleased to have the opinions of members who have experience of such matters.

INCOME TAX writes: Income under £400 per year allowed abatement of £150 with part of life insurance premium. In former years was allowed refund of income tax deducted from dividends. On making application this year for the latter was refused. Am I entitled to claim such—reason given being allowed £150.

***The Income Tax Repayment Agency, 6, Chichester Road, Paddington, informs us that if the total income, including dividends, is over £400 but under £500, the abatement on £150 is correct. If the income does not exceed £400 the abatement should be £160. But as an abatement is allowed, dividends are not exempt.

"THE HARVEST BUG."

PERSECUTED writes: I should greatly appreciate information as to reducing the prevalence of this in the garden in autumn, or preventing personal attack. Where can I find details of its natural history?

TREATMENT OF CONSTIPATION IN CHILDHOOD.

RADIUS asks for advice as to the treatment of habitual constipation in a boy aged 13 months, in whom various changes of diet have brought about no satisfactory result. No action of the bowels is obtained except by means of the daily use of a glycerine enema.

A QUESTION AS TO FEES.

"AN ORDINARY PRACTITIONER" asks what would be a suitable charge for visiting a patient who lives sixty miles away, the whole day being occupied owing to inconvenient trains. It is also asked what fee should be charged for sitting up for a night with a patient delirious from measles?

*** We are advised that for a patient of the ordinary class the charge for the journey might be fixed at 7s. a mile, and for sitting up at two guineas a night.

ADDISON'S DISEASE.

G. F. H. B. asks for reference to recent literature of Addison's disease.

*** A good account of the disease is to be found in Clifford Allbutt's *System of Medicine*, vol. iv., p. 540. The author of the article is Dr. H. D. Rolleston, whose Goulstonian lectures on the suprarenal bodies were printed in the BRITISH MEDICAL JOURNAL on March 23rd and 30th and April 6th, 1895; Sir Dyce Duckworth's article in the *Twentieth Century Practice of Medicine* might also be consulted, and an older work which might be serviceable is Dr. Headlam Greenhow's *Croonian Lectures* for 1875.

ANSWERS.

J. L.—The opening meeting of the International Medical Congress in Paris takes place on August 2nd at 2 P.M., and the meeting concludes on August 9th.

M. B.—The following may be recommended as suitable textbooks for a man reading for the M.D.Lond.: *The Principles and Practice of Medicine*, by W. Osler, M.D., LL.D., F.R.S., F.R.C.P., 3rd edition. (Edinburgh and London: Young J. Pentland. 1898. 24s.) *A Manual of the Practice of Medicine*, by F. Taylor M.D., F.R.C.P., fifth edition (London: J. and A. Churchill. 1898. 16s.

JENNER INSTITUTE OF PREVENTIVE MEDICINE.

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PREVENTION OF LACERATION OF THE PERINEUM.

EXPERIENCE writes: I would recommend the application in suitable cases of chloroform on lint covered with oiled silk to the perineum, carefully watching; if smarting should be produced, dilute the chloroform with rectified spirits.

DR. G. CRICHTON (Earl's Court, W.) writes: I attended three consecutive cases of midwifery; the first was an ordinary straightforward labour;

in the second, the child was born before I got to the house; the third was a short forceps case. In every one there was a ruptured perineum. First, then, I look upon this incident as in most cases inevitable, natural, and of little consequence. On a later occasion in which I used the forceps, the perineum was ruptured, requiring a stitch. The head was somewhat tightly held in the pelvis, and was delivered with a little difficulty and with a whole perineum. The after-coming shoulders, however, did the mischief. I conclude, in the second place, that very often the rupture is due not to the head but to the shoulders. It frequently happens that when there has been some difficulty due to disproportioned head, so soon as this is delivered—whether naturally or by forceps—the uterus after a pause makes an extraordinarily violent effort. I cannot see how a rupture so caused can very well be guarded against. Pressure on the perineum is, of course, unskilful midwifery. Rather relieve the pressure by pushing the forthcoming head upwards and forwards, giving the perineum a little more time for its natural vital dilatation. To incise the perineum laterally is a surgical iniquity.

NOTES, LETTERS, &c.

PUERPERAL SEPTICÆMIA AND ANTISTREPTOCOCCUS SERUM.

DR. ROBERT TURNER, M.D., F.R.C.S.Edin. (Bootle, Liverpool), in the course of a letter on this subject, writes: Anyone interested in the development of serumtherapeutics cannot fail to be struck by the apparent success following the use of such in the cases reported from time to time in the BRITISH MEDICAL JOURNAL, but we hear very little of the cases in which it has been used and has failed. Again, in some of the so-called successful cases, we can see that the serum has had no curative effect whatever. How great a share of the cure must be ascribed to quinine, uterine and vaginal antiseptic douches, plenty of good nourishment, and *vis medicatrix Naturæ*?

It may be argued that cases almost moribund have been saved by antistreptococcus serum. Reports of these are very plausible reading. But other cases (all attended in labour by midwives) have recovered when almost hopeless without the use of serum. In one, which had a temperature of 105° when first seen, a uterine douche, quinine, and an enema of turpentine, etc., brought the temperature to normal next day. The symptoms were quite characteristic. The serum was ordered, but did not arrive in time to get all the praise.

In another, first seen after a month's illness, a parametric abscess was discovered and emptied *per vaginam* by the aspirator. The temperature then fell from 104° to 99° in a few hours. Other medical measures of routine were also adopted, and recovery was rapid. Would early use of the serum have prevented the formation of pus? One has, therefore, to guard against apparent fallacies as regards every therapeutic agent.

THE PREVENTION OF SUMMER DIARRHŒA.

MR. WM. BERRY, F.R.C.S.I. (M.O.H. for the County-Borough of Wigan), writes: From a public health point of view this is one of the most important subjects which the medical officer of health is called upon to deal with—this is the cause of his great infantile death-rate, and it is in consequence of the remarks in the BRITISH MEDICAL JOURNAL of June 2nd, pp. 1388 and 1391, that I trouble you with the following:

First, on the lines of Dr. Porter and others I have had printed some suggestions as to the prevention of summer diarrhœa, which have been adopted by my sanitary authority; these are being distributed by the registrar of births and those in charge of the out-patient department of our infirmary, and others, and by this means I hope to assist in the education of the public on this important matter. I would like here to say that I am sure Dr. Harris, the medical officer of health for St. Helens, has done good practical work in getting his sanitary authority to supply to the public sterilised milk which at once enables the public to obtain suitable food for infants that are being hand-fed.

With regard to the treatment, the best thing to do, in my opinion, is to stop all milk, give a dose of castor oil or grey powder, and then any antacid—sodium salicylate may be good, but potassium bicarbonate with a carminative will answer as well and relieves the vomiting. The old-fashioned chalk mixture with paregoric also has a good effect, owing to its antacid and anodyne properties. Poultices over the abdomen and sponging with tepid water also relieves the patient. In the shape of diet, home made beef-tea or mutton broth, with a little brandy, seems to be the best, provided barley water or thin arrowroot made with water is given alternately, and, if there is any collapse, brandy and cold water in repeated small doses seems to act well. Condensed milk and beef-tea from extracts seems to keep up the ill-effects of an irritated intestinal mucous membrane. No doubt the proper thing is to remove the cause, and to prevent the cause is to educate those in charge of children who are likely to suffer.

THE VALUE OF RECTAL EXAMINATION IN OBSTETRICS.

J. T. H. writes: In those cases of midwifery to which we are so often called before labour has commenced, may I suggest that a rectal is more helpful than a vaginal examination? *Per rectum* in that stage one can more easily ascertain the presentation. I have not been able thus to tell a breech from a head, and this is of minor importance except for one's own time and comfort; but a hand or a foot can be more easily recognised through the walls of the rectum and uterus at an early stage than through the swollen cervix uteri.

CUTTING DOWN SALARIES.

MR. E. B. GARLAND, M.B. (Bristol), writes in the course of a note on this subject: I quite agree with "Observer" and "X.Y.Z." We may not, as Dr. Newby implies, be "fully equipped with knowledge and worth our weight in gold," but if not, we ought to be after five or six years of tremendous toil and expense. Whose fault is it? The medical corporations and authorities, who ought to teach us practice as well as theory, and not allow us through our examinations until we thoroughly master both. Surely we should not be given licences to practise for money until we are worth it. After that date no one should be so unfair to himself or his profession as to work for nothing or next to nothing. The parson does not work for practice after being ordained, but for money. Of course, one of our objects is to do good, but we must have money, and anyone is a hypocrite who pretends to be indifferent to it; he might as well be indifferent to air. If everyone made out that their work was such good practice (or advertisement) that they needed no pay, we should soon have all our workers moving towards the workhouse. There is a strong tendency this way in our profession. For it is not only the newly qualified that work for nothing. The bigwigs who have enough money accept gratis appointments which should be well salaried.

VACCINATION AND CONVULSIONS: A COINCIDENCE.

DR. R. H. PHILLIMORE (Cookshire, P.Q., Canada) writes: A case of smallpox having occurred in a village near here I was appointed public vaccinator. Very soon after I was called upon to vaccinate the child of one of my patients. During the process the girl, aged 11 years, nearly fainted, and I was about to leave the house when she was seized with a convulsion. The father not unnaturally inquired: "Do you suppose the fit was caused by the operation?" I replied in the negative. I may incidentally state that the child had suffered from convulsions until 2 years of age, so that indirectly the mental excitement consequent on the operation may have actually been responsible for the recurrence of the spasms. A few days later I was summoned to vaccinate another child, aged 6. I deferred my visit for several days owing to pressure of work, and when I did call at the house found the child absent. Last night the father hurriedly entered my office and asked me to come at once to his residence as his boy had just been seized with convulsions. "It was very fortunate for you," he remarked, "that you did not vaccinate the little fellow, for many people are publishing around the village that vaccination is productive of fits, and this case would materially have strengthened the prevailing impression." Possibly the reputation of many physicians has been imperilled upon less specious evidence than that to which I have drawn the attention of your readers.

LETTERS COMMUNICATIONS, ETC., have been received from

A Dr. J. Aikman, Birnam. **B** Dr. J. F. Briscoe, Alton; Dr. E. Blake, London; F. M. Blumer, M.B., Stafford; Beckenham and Penge Medical Society, Secretary of, Penge; Dr. H. T. Bulstrode, London. **C** Mr. W. D. Calvert, Brighton; Dr. H. J. Campbell, Bradford. **D** Disabled; Mr. H. A. Duffett, Sidcup; Dr. D. Drummond, Newcastle-on-Tyne. **E** Experience; Etiquette: Mr. W. S. Eccles, London; Dr. W. A. Elliston, Ipswich; E. W. N.; Mr. F. Edmunds, Chesterfield. **F** Messrs. Forwood Brothers and Co., London; Dr. W. S. Fenwick, London; Mr. J. W. Fry, Maidstone. **G** Messrs. R. W. Greeff and Co., London; Dr. J. G. Glover, London; General Practitioner; Mr. G. P. Gaskell, London; Mr. G. Goodman, Brigg; G. A. L. **H** Mr. S. J. Hutchinson, London; Mr. R. G. Hebb, London; Mr. B. Hamilton, London. **I** Dr. W. W. Ireland, Musselburgh; Insurance. **J** J. T. H.; J. M. T. **K** P. M. Kerr, M.B., Dumfries; Dr. A. Keith, London; Mr. J. Kitchin, Leven; Messrs. J. G. King and Son, London. **L** Mr. E. M. Little, London; Mr. R. Lake, London; Dr. J. Lawrence, Darlington; Dr. A. W. W. Lea, Manchester; Dr. P. Lacroix, Paris. **M** Mr. W. E. Miller, London; Mr. W. Mawer, Tollesbury; Dr. N. Macleod, Mitcham; Mr. F. H. Madden, London; Dr. A. S. Myrtle, Harrogate; M.D., J.P.; M.D.; Mr. H. Morris, London; T. W. Mitchell, M.B., Hadlow; Dr. A. Macfadyen, London; Mr. R. Macartney, Cinderford. **N** J. H. Nicoll, M.B., Glasgow. **O** Dr. W. Osler, Baltimore; Mr. F. Osborne, Dover; Obstetrical Society, Secretary of, London. **P** Dr. H. H. Phillips-Conn, Reading; A. I. Petyt, M.B., Longton; Dr. R. H. Phillimore, Cookshire, Quebec; Persecuted; Perdix; Dr. J. P. Parkinson, London. **Q** Querist. **R** Dr. G. D. Robinson, London; Mr. D. C. Rees, London; Mr. E. Ringrose, Newark-on-Trent; Dr. T. H. Redwood, Rhymney; G. A. Reid, M.B., Southsea; Dr. R. R. Rentoul, Liverpool. **S** Senex; Dr. J. A. Shaw-Mackenzie, London; Mr. H. A. Stonham, London; Mr. W. W. Stocker, London; Surgeon-Captain R. G. Vol; Mr. G. M. Smith, Clifton; Messrs. Street and Co., London. **T** Dr. E. G. Trevithick, Cheltenham; Mr. J. W. Thompstone, Old Calabar; Mr. R. F. Tobin, Dublin; Mr. R. Templewright, London; Dr. E. F. Trevelyan, Leeds. **V** Mr. W. H. Vickery, Newcastle-on-Tyne. **W** Dr. T. J. Wood, Bradford; Mr. C. F. Wightman, London; Dr. F. Willcocks, London; Dr. H. Woods, London; Mr. E. Wynstone-Waters, Makindu; J. W. Watterson, M.B., Morecambe; Dr. J. S. Walton, Northallerton; Mr. J. S. Watson, London.

BOOKS, ETC., RECEIVED.

Encyklopaedie der Therapie. Herausgegeben von O. Liebreich. Dritter Band, III Abtheilung. Berlin: A. Hirschwald. 1900.

Lectures on Clinical Medicine delivered in the Glasgow Royal Infirmary. By J. L. Steven, M.D. Glasgow: A. Macdougall. 1900. 6s.

Reasons Why the Office of Coroner should be held by a Member of the Medical Profession. By F. W. Lowndes, M.R.C.S. Third edition. London: J. and H. Churchill. 1900. 2d.

Atlas und Grundriss der Ophthalmoscopie und ophthalmoscopischen Diagnostik. Von Dr. O. Haab. Dritte Auflage. Munich: J. F. Lehmann. 1900. M. 10.

Die typischen Operationen und ihre Übung an der Leiche. Von Dr. E. Rotter. Sechste Auflage. Munich: J. F. Lehmann. 1900. M. 8.

A Treatise of Temperance and Sobrietie. Written by L. Cornaro. Translated into English by G. Herbert. Edited by G. S. Saunders, M.D., D.P.H. Eastbourne: Art Printing Co. 1900.

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THE CROONIAN LECTURES
ON
DEGENERATION OF THE NEURONE.

Delivered at the Royal College of Physicians of London

BY FREDERICK W. MOTT, M.D.LOND., F.R.S.,
Pathologist to the London County Asylums; Physician in Charge of Out-patients, Charing Cross Hospital.

LECTURE I.

MR. PRESIDENT AND GENTLEMEN,—Allow me to thank you for the great honour you have done me in asking me to give these lectures. I feel the responsibility all the more in lecturing upon the subject I have chosen when I look back upon the eminent neurologists who have given these lectures on previous occasions. I cannot hope to attain to the philosophy of Hughlings Jackson, nor the epoch-making researches of Ferrier, but I will endeavour to put before you some thoughts, experiments, and observations relating to degeneration of the nervous system which have occupied my attention during the past three or four years.

DEFINITION OF THE NEURONE AND THE NEURONE THEORY.

Before considering the neurone under pathological conditions it is necessary to define the term, to make a few general remarks upon the neurone theory, and to describe our present knowledge of the structure of the neurone. The term "neurone" was introduced by Waldeyer for the nerve cell and all its processes, including the protoplasmic processes or dendrons and the single axis-cylinder process, with its cone of origin, its collaterals or side branches, and its terminal arborisation. The theory of the neurone put forward by Waldeyer is that the nervous system consists of innumerable such anatomically independent nervous units in contiguity, but not in continuity. There is interlacing of the processes, but no nerve network.

THE NETWORK OF GERLACH.

In 1871 Gerlach, by the gold method of staining, showed an intricate network in the grey matter; he came to the conclusion that the protoplasmic processes of the nerve cells were all connected in a delicate network, and that out of this network strands of fibrils joined together to form fibres which passed out of the posterior roots and became sensory nerve fibres. For fifteen years this theory was accepted; then Forel and His, by their studies respectively of degeneration and of the development of the nervous system in the embryo, completely overthrew the doctrine of Gerlach. Forel pointed out the limitation of secondary degeneration; and by the Gudden atrophy method showed that degeneration or atrophy did not pass beyond a cell station when the fibres which arise from those cells are cut through; and he claimed that the nervous system consisted of independent cellular units. Forel also called attention to the remarkable work of Golgi, and although he opposed the diffuse nerve network theory put forward by that authority, yet he recognised the great value of the researches made by his new chrome-silver method.

About this time, also, Professor His published his researches upon the development of the nervous system, and he showed that the axis-cylinder and the other processes of the nerve cell were outgrowths of the cell protoplasm, and the apparent nervous network was really only an interlacing of innumerable cell processes.

The chrome silver method of Golgi was later adopted by Ramón y Cajal, Retzius, Kölliker, Lenhossek, Van Gehuchten, and many others, and their researches apparently demonstrated the fact that the whole nervous system consists essentially of independent anatomical units, and the neurone theory seemed indisputably established. No matter how multitudinous and complex the branches of the cell might appear, yet they never anastomosed with the branches of other cells; like the trees of a forest there is contiguity, but not continuity. Within the last few years, however, owing to the researches of Apáthy, Bethe, Dogiel, and Nissl, there is a tendency on the part of some authorities to go back to a diffuse network theory. Some important researches by Held also have been put forward to disprove the neurone theory. In my opinion, however, one can still accept the neurone theory and admit the truth of Held's observations, namely, that the terminal arborisation of the axis-cylinder process of one neurone forms protoplasmic concrescences by fusion with the cell body and dendrons of another. This of course implies continuity of the protoplasm of one neurone with another, but trophically and genetically the two are independent, and it is merely a question of degree of contact of the protoplasm of one with the other. Held agrees with other investigators that in embryonic tissues, and even in early life, the neurones are entirely independent of one another. This independence he can determine by a line of demarcation at the points of contact due to a difference in refraction. This refractive limiting line is, however, not demonstrable in the adult, and he comes to the conclusion that during the process of growth the protoplasm of related neurones fuses. Turner and Hunter, by the *intra vitam* methylene blue method, however, come to a different conclusion to that of Held, for they have shown that the terminal arborisations of the axons of one set of neurones end in a basket work around the cells of functionally related neurones, but do not form protoplasmic connections.

The neurone theory has always been opposed by Golgi, who maintained that his method demonstrates a diffuse network formed by the collaterals of the axons; but it is especially the work of Apáthy and Bethe which has led authorities such as Nissl to renounce the neurone theory. Lugaro, Lenhossek, Barker, Van Gehuchten, and many other authorities, on the other hand, maintain that the observations of Apáthy and Bethe do not warrant the general conclusion that nerve cells are connected with each other by means of their primitive fibrils. Moreover, Apáthy has only demonstrated a continuous network of elementary fibrils outside the nerve cells in invertebrates; such an arrangement has not yet been proved to exist in vertebrates; in fact, there is the strongest histological evidence that it does not exist. The study of the development of the nervous system and secondary degeneration to my mind show the genetic and trophic independence of the nervous units; and in spite of the opposition which the "neurone theory" has lately met with in some quarters it is still acceptable.

THE STRUCTURE OF THE NERVE CELL AS REVEALED BY THE NISSL METHOD.

The Nissl method is generally used for demonstrating the internal structure of the protoplasm of the nerve cell and its processes, but, before referring to pathological conditions as studied by this method, it is necessary to make a few remarks upon the method itself, and the appearance presented by normal nerve cells.

Nervous tissue, which has been fixed in 96 per cent. alcohol, formol solution, or corrosive sublimate solution, and of which sections have been cut and stained by basic aniline dyes—for example, methylene blue, toluidine blue, thionine, and by many other modifications of the original method, shows pictures of the nerve cells stained in a characteristic manner. If we take as a typical structure an anterior-horn cell stained by this method, we shall observe the following characteristics. The body of the cell is stained a deep blue, but not uniformly, for the staining presents a mosaic appearance, due to little stained polygonal areas disposed more or less concentrically round the nucleus, and separated one from another by an unstainable substance. Towards the periphery of the cell these polygonal stained areas become elongated, and upon the dendrons they are fusiform, their long axes being parallel to the processes. At one portion of the cell, if it is entire, a process—the axon—will be observed which does not possess any stainable substance; so that we see this method differentiates two substances—a chromatic stainable substance and an achromatic substance.

Researches, to be afterwards alluded to, have shown that the stainable substance is a nucleo-proteid—a substance which contains phosphorus, but in less proportion than the nucleic acid of the nucleus, and the fact that the stainable substance is found around the nucleus may indicate that it is a result of the active metabolism of the nucleus on the surrounding protoplasm. By some authorities it is considered to be a store of nutriment; by others, a store of energy; and on this account it has been termed by Marinesco "kinetoplasm." The changes which this substance undergoes, as studied by the

Nissl method, show that it has some important functional relationship to the metabolic activity of the neurone; it is, however, not the essential substance. The unstainable substance, on the other hand, is essential, and consists of an organised network of delicate fibrils, which extend into the dendrons, forming a network in the cell substance, and passing out again in the axis-cylinder process. Consequently there is probably a direct protoplasmic fibrillary continuity between the dendrons and the axons. This was originally stated to be so by Max Schultze. The nucleus is apparently of simple structure, and is permeated by irregular strands of karyoplasm, which form a coarse network. It is apparently situated in the centre of the cell, and contains a nucleolus or several nuclear bodies, which, together with the nuclear membrane, are stained with a basic dye.

The Significance of the Nissl Granules.

There is a vast amount of literature concerning the stainable bodies called "Nissl granules." They were at one time believed to be an essential constituent of the living cell, but the researches of Hardy have shown that there is a great difficulty in deciding to what extent structure demonstrable in the fresh or fixed state is the product of the chemical and physical changes which constitute the death changes, or due to the action of fixatives: moreover, Held has shown that the *intra-vitam* methylene blue method does not reveal Nissl granules in the cells. The stainable (chromatic or chromophilous) substance, therefore, is probably not present in the living cell in the definite form which we see it when the tissues are fixed and stained by the Nissl method. It must not, however, be assumed, therefore, that the method is unreliable as a means of studying the biochemical changes occurring in the protoplasm of the nerve cells, for providing certain precautions are taken, it has proved most valuable in demonstrating functional and organic changes occurring in the nerve cells as a result of injury of the axon or of toxic substances in the blood.[1]

The large motor cells of the cord and brain are the best to study the changes in the cell protoplasm, because in these structures the stainable substance appears in normal tissues as if it consisted of formed elements (Nissl granules) in the body of the cell and in the dendrons. I have always looked upon these elements as being due to a death change of the fluid plasm of the cell whereby the nucleo-proteid substance contained in it is thrown down as a fine precipitate, much the same as myosin is precipitated from myosinogen. If this substance is abundant in the fluid plasm it produces, when precipitated, these definite forms, because it fills up the spaces of the unstainable intracellular fibrillary reticulum.

Chromatolysis is the term which is frequently applied to designate the disappearance or disintegration of these Nissl granules, and there may be various stages of chromatolysis. Usually the process begins at the periphery of the cell and on the dendrons. The stainable substance may be greatly diminished or entirely lost in these situations; or, again, the granules may be seen to consist of fine particles, their definite outline being lost, and in advanced chromatolysis the whole cell may be so affected.

The condition and amount of the stainable substance may be an indication of the functional activity of the cell, and it is conceivable that diminution of the nucleo-proteid colourable substance is the expression of the diminution of the vital interaction of the highly phosphorised nucleus upon the surrounding cell protoplasm. I do not consider that chromolytic changes alone are indicative of cell destruction; for, as I shall show later, most marked chromolytic changes may occur in the cells of origin after section of a nerve, and yet the cells completely recover.

Changes of the cell in form and size may be recognised; for example, swelling or shrinking, due no doubt to an alteration of the vital osmotic reaction of the cell protoplasm to its fluid environment; likewise the nucleus may be clear and swollen, or shrunken—the nuclear membrane in the latter case being thrown into folds. Very frequently the nucleus becomes eccentric in position instead of being situated in the centre of the cell and owing to abnormal osmotic relations and protoplasmic change it may even be extruded, and this of necessity would cause death of the cell. Another indication of death of the cell protoplasm is revealed by uniform staining of the whole cell and its processes. It occurs in hyperpyrexia and in coagulation necrosis resulting from obstruction of the blood supply for a sufficient length of time to cause the death of the protoplasm.

The importance of the chemical and histological changes occurring in the myelin sheath in degeneration of the nervous system, the difference of opinion as to its origin, and the important discoveries which have been made by Flechsig, Bechterew, and others, with regard to correlation of structure and function necessitate a somewhat full account of the myelin sheath and the nucleated sheath of Schwann.

The Myelin Sheath and Nucleated Sheath of Schwann.

Nerve fibres are of two kinds, grey and white. The grey sympathetic fibres differ essentially from the white fibres by the existence in the latter of a complex phosphoretted fatty substance lying between the nucleated sheath of Schwann and the axis-cylinder process. The white fibres of the central nervous system differ from the peripheral white fibres by not possessing a nucleated sheath of Schwann; the myelin is probably contained in a neuro-keratin reticulum, and this reticulum is much more abundant in the white matter of the central nervous system than in the peripheral, for Kühne and Chittenden have shown that there is about eight times as much neuro-keratin in the white matter of the central nervous system as either in the grey matter of the central nervous system or the white matter of the peripheral nervous system. In 1884 Weigert introduced his hæmatoxylon method for staining the myelin sheath, and by means of this Flechsig and his pupils were able to show that certain tracts of fibres of the central nervous system were developed earlier than others. This method and its various modifications (Pal, Marchi-Pal, and Schäfer) have yielded the most valuable results. The different tracts of the posterior columns of the spinal cord were found to be myelinated at different periods, and it was owing to Flechsig's studies that those of endogenous origin (that is, arising from cells within the spinal cord) were differentiated from those which are exogenous (that is, have their trophic and genetic centres in the cells of the posterior spinal ganglia). The practical outcome of this research was the modern idea of the pathology of tabes, for it was shown that the exogenous fibres were alone atrophied in tabes, while the endogenous—namely, cornu commissural zone of Westphal and the median oval area of Flechsig—were spared, these tracts having their trophic and genetic centre in cells within the grey matter of the cord. These facts were recognised as being incompatible with the prevalent view that the degeneration was caused by a sclerosis or overgrowth of glia tissue in the posterior columns or by vascular changes; but they pointed especially to a nutritive failure in the trophic and genetic centre by which the outlying projections of the axis-cylinder processes and their myelin coverings underwent degeneration; in fact, a metamorphosis of the neurones occurred—the inverse of their development.

Correlation of Function and Myelination.

Again, the researches of Flechsig have demonstrated the different centres of the central nervous system in which tracts of nerve fibres have their origin or termination; and it is to the application of this method by Flechsig that we owe one of the most exact and one of the most valuable contributions to the structure and functions of the human brain. The method depends upon the fact that there is a correlation between the functions of systems, groups, and communities of neurones and the myelination of their axons; thus, in the brain and the spinal cord of the fœtus, the newborn child, and the developing infant, tracts of fibres are myelinated with definite regularity at successive periods of time, indicating ontogenetically their functional and structural development. The myelin sheath appears three or four months after the development of the axis-cylinder process; for example, a bundle of axis-cylinder fibres demonstrable by the Golgi chrome-silver method at the ninth month would not show a myelin sheath until three months or more after birth. When the myelination of a nervous system is complete, further information by a study of the condition of the myelin sheath can only be obtained by observations made upon secondary degenerations, produced either by disease or experimentally,

and to this subject I shall refer later on, with especial reference to the Marchi method. To return, however, to the process of myelination: in the central nervous system the afferent projection fibres are myelinated before the efferent, and it is a fundamental principle that bundles of fibres of different physiological functions are myelinated at different periods of time; the whole afferent tract conducting tactile, articular, muscular, and visceral sensations by the posterior columns, fillet, thalamus, and corona radiata, is myelinated at birth; and these bundles of fibres have already (while the fœtus was *in utero*) been exercised in conveying impressions to the appropriate receptive centres in the Rolandic region of the cortex—the stimuli being provided by contact of the teguments with the maternal structures, and as a result of reflex movements which commence at quickening; for every movement must necessarily be associated with alterations in tension of muscular, tendinous, and cutaneous structures, giving rise thereby to kinæsthetic impressions.

Moreover, the myelination commences first in those parts of the occipital lobe situated around the calcarine fissure, which we know corresponds to the function of vision; the relays of neurones which proceed to the cortex forming the afferent projection systems are earliest myelinated, as they are the first to be acted upon by stimuli which excite the nerve terminations in the skin, joints, tendons, and mucous surfaces of the developing fœtus. Thus, as shown in the diagrams, in the newborn child, only the lower centres of the spinal cord, medulla, pons, corpora quadrigemina, optic thalmus, and certain areas of the cerebral cortex are myelinated; the cortical areas, which are so myelinated, are situated around the primary fissures, and correspond to areas, which are the end stations of the afferent projection systems; for example, the tactile motor area is situated around the fissure of Rolando; the olfactory, gustatory, and auditory around the Sylvian; the visual around the calcarine. (See Figs. 1 and 2).

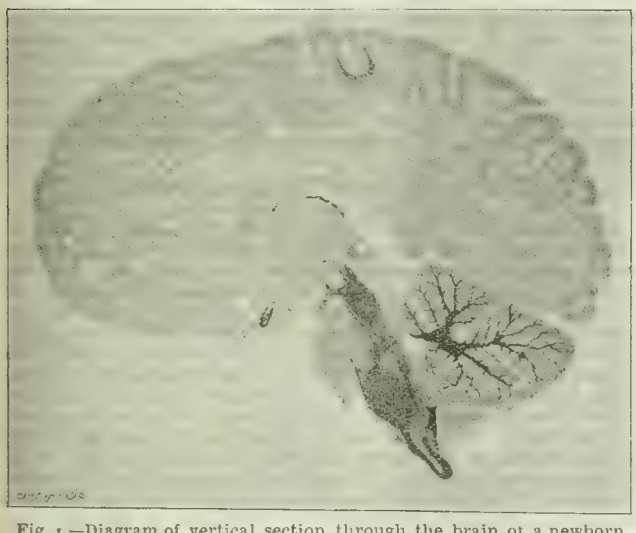


Fig. 1.—Diagram of vertical section through the brain of a newborn child stained by a special method to show myelination of the nerve-fibres. All the parts which are dark contain myelinated fibres. Attention is particularly called to the rather faint staining about the central fissure which corresponds to the tactile motor area. It will be observed that the association centres are not myelinated as in Fig. 2, nor is the pyramidal tract.

Flechsig has shown that at least two-thirds of the cortex cerebri consists of neurones of association; and, according to him—although this does not meet with general acceptation—these association centres possess no neurones belonging to the afferent or efferent projection systems. In the fœtus of eight months the pyramidal fibres of the motor-efferent system are still without myelin; but Ambron and Held have shown by a new method of examining the condition of the myelin—by the effect produced on polarised light—that the motor fibres of the anterior roots are myelinated earlier even than the posterior roots.[2]

In a second paper Held has shown the important influence stimulus has upon myelination, thus establishing still more fully the correlation of function and myelination. Cats, dogs, and rabbits (animals which are born blind), were experimented upon in the following way: Light was admitted for varying periods to one eye by opening a lid, the other remaining closed. Examination of the optic nerve on the two sides under the same conditions showed a more obvious myelination on the side exposed to light than on the other. The irritation, which might be produced by opening the lid, was not the cause of this difference, for an animal which had had the lid opened on one side and not on the other, but which was kept in darkness, showed no difference in myelination of the two sides. The obvious inference is that transmission of light impulses along the optic nerve had stimulated the process of myelination. This experiment agrees with the observations of Flechsig: that a child born at eight months showed at nine months more marked myelination of the optic nerves than a child born at full time. Still there must be a primary innate tendency of the axis-cylinder to produce myelin, for a dog kept absolutely in the dark had, on the eighth day, orange-tinted optic nerve fibres by the polarisation method, showing that myelination had commenced. Edinger states: The discoveries of Kaes show the cerebral cortex increases in richness of myelinated fibres for a long time, even to the fortieth year or longer but diminishes in old age. The correlation of function and myelination is proved both by positive and negative results; the myelin appears to be necessary for the functional activity of nerve tracts, at least in animals which possess a nervous system with myelinated fibres, for the development of the myelin along particular tracts of fibres in the central nervous system proceeds in a manner *pari passu* with the development of function. Atrophy and degeneration of the myelin sheath in pathological processes, whether due to disuse atrophy, or to primary or secondary degeneration, are associated with marked disturbances appertaining to the functions of particular systems, groups, and communities of neurones.

THE HISTOGENESIS OF THE SHEATH OF SCHWANN.

This has been studied by many observers, and a paper has recently appeared by Gürwitsch reviewing the work of previous observers, and giving his own observations upon



Fig. 2.—Diagram of vertical section of the brain of a child aged 5 months. The greater part of the brain now shows by the staining myelination of the white matter, showing development of the association centres. The corona radiata and the pyramidal tract are now well myelinated.

this subject. Küpffer, Beard, and Gegenbauer believed that the axis-cylinder is developed from a chain of cells of ectodermal origin arranged in a series. Such an idea would conform with the researches of Apáthy upon invertebrates, and is opposed to the axis-cylinder being an outgrowth of a nerve cell situated either in the anterior cornua or the posterior spinal ganglia. If this hypothesis be true, the three constituents of the nerve fibre—axis-cylinder, myelin sheath, and sheath of Schwann—must be formed by a differentiation of

protoplasm of these cells. If, however, it be admitted that embryological, morphological, and experimental researches have demonstrated that the axis-cylinder of a nerve fibre is a prolongation of a nerve cell, then the sheath of Schwann is genetically foreign and extraneous to the axis-cylinder; but the question arises, How, then, is the myelin sheath formed? Is it developed by the axis-cylinder, as in the central nervous system, where the sheath of Schwann is absent, or is it formed by the nucleated sheath of Schwann? Another alternative is that it is developed by a metabolic interaction of the axis cylinder upon the protoplasm of the series of mesoblastic cells which are wrapped round it.



Fig. 3.—Diagram to show reflex arc. A, skin with sensory endings. B, end organ, Pacinian corpuscle. C, end organ of tendon (Golgi). D, sensory nerve fibre. (Only one sensory nerve fibre is represented as conveying impulses from those above-mentioned structures, but it must be clearly understood that there are separate neurones for each.) E, cell of posterior spinal ganglion, with fine granules scattered through the body of the cell; these are the chromophil granules. Emerging from the capsules is the axis-cylinder process, forming a T. The central process passes to the spinal cord, and at F F the chain of tubular cells representing the sheath of Schwann ceases, but the axis-cylinder process is still covered with myelin; it breaks up at G into a terminal arborisation with H. H, the motor efferent neurone. The lower part of the cell is represented showing polygonal granules (Nissl); the upper part of the cell shows a fibrillary reticulum. The granules exist all over the cell and on the dendrons, except at the emergence of the axis-cylinder process; but they are not represented in the upper part, in order that the fibrillary reticulum of the achromatic substance may be clearly shown. The axon becomes coated with myelin; it acquires a sheath of Schwann on emergence from the spinal cord, and terminates at K in the motor end plate.

Ranvier and his pupil, Vignal, compared the formation of the myelin to the formation of fat within a fat cell. Vignal's description of the process of myelination is as follows: At a particular stage of development, when the nerve fibre consists of non-nucleated bundles of fibrils, mesoblastic cells migrate into the interior of the fibre, and apply themselves closely to single groups. Their cell protoplasm increases in length and in breadth, until some of the primitive fibrils are enclosed. The definite intervals in the enclosing sheath, corresponding to the nodes of Ranvier, coincide with the spaces between the ensheathing cells; consequently each internode represents a segment of the *continuous axis-cylinder* wrapped round by a mesoblastic cell. At the same time, according to Vignal, the myelin appears in the cell protoplasm, in the form of minute droplets; these become more numerous, and run together to form a general thin covering of the axis-cylinder. Vignal does not deny the possibility that the axo-plasm may share in the formation of the myelin, but in quite a subordinate manner. The observations of Boveri, which recently have been confirmed by Bethe, show that the sheath of Schwann is reflected inwards at the nodes along the axon; if this be true, there is (as in a serous membrane) a parietal and central layer, and between the two the myelin is contained. This would prove Vignal's hypothesis. Gürwitsch has studied the development of peripheral nerves in embryo sheep, fixing the sciatic nerve with Apáthy's solution, and employing various staining reagents used by that observer. He came to the following conclusions: (1) That the nerve fibre is a prolongation of the ganglion cell; (2) the sheath of Schwann arises from the surrounding mesoblast; (3) the myelin sheath has nothing in common with the sheath of Schwann, and probably arises only as a product of the metabolism of axo-plasm. Time will not allow me to give you more than this very brief outline, and to those who are further interested in the subject I would refer them to an admirable digest on the *Histology and Pathology of the Nerve Cell*, by Ford Robertson, or to the splendid new work of Barker on the *Nervous System*.

It would take too long here to describe the normal structure of the various forms of neurones, but, to make myself more clear in speaking of degeneration and the changes which occur in the nerve cell and its processes, I represent here diagrammatically a spinal reflex arc, showing a sensory and motor neurone (Fig. 3). Each portion has a brief description appended, so that I need not detain you further with the details. I would call your attention, however, to two facts—namely, (1) the difference in the myelin sheath as it surrounds the axis-cylinder process and its fibrils within the spinal cord, as compared with the myelin sheath outside the same—in the latter, the axis-cylinder is surrounded with a chain of tubular cells containing the myelin, whereas in the former there is simply a continuous coating of the phosphoretted fat; and (2) the different arrangement and appearance of the stainable substance in the motor and sensory cell.

The Degeneration of the Neurone.

Brief Historical Introduction.

New mothods of experiment, observation, and techniqu mark the successive stages in our knowledge of the structure and functions of the nervous system in health and disease. Fifty years ago Waller gave his memorable communication to the Royal Society, which was the commencement of our knowledge of the degeneration of the neurone. In his paper, Experiments on the Section of the Glosso-pharyngeal and Hypoglossal Nerves of the Frog, and Observations of the Alterations produced thereby in the Structure of their Primitive Fibres, he pointed out that Günther and Schön had ten years before stated that the primitive fibres, at the end of a week after division of the nerve, and when it had lost its irritability, showed changes indicating degeneration; likewise Nasse and Steinrück had described changes following division of nerves. Waller's researches showed that a change took place throughout the whole of the nerve below the point of section, extending to its terminal fibrils. Original pictures are here reproduced from Waller's monograph (Figs. 4, 4a, and 5. He concludes his paper with this very apposite statement: "We cannot suppose that this is a local phenomenon and that the nerves do not participate in similar alterations, and that the brain itself, composed in great part of tubular fibres, must be excluded. It is impossible not to anticipate important results from the application of this inquiry to the different nerves of the animal system; but it is particularly in reference to nervous diseases that it will be most desirable to extend these researches." How much light the extension of these researches during the last fifty years has afforded neurology can be best appreciated by reviewing the enormous strides which have been made in our knowledge of the anatomy, physiology, and pathology of the nervous system. Waller had anticipated that degenerative processes would be found to occur in the central nervous system as in the peri-

pheral nerves. He had not long to wait, for in 1852 Türck published a paper showing secondary degeneration of the spinal cord after a transverse lesion, and in 1854 he published his classical paper on secondary degeneration of tracts in the spinal cord and their prolongations in the brain, based upon 21 cases. As Waller's observations form the basis of our knowledge of secondary degeneration of the peripheral nervous system, so Türck's observations are the basis of our knowledge of secondary degeneration of the central nervous system. Waller extended his researches, and formulated the three following fundamental laws, which are given in italics in an appendix to the work quoted, consisting of fifty-two important statements bearing upon the results of his experiments.

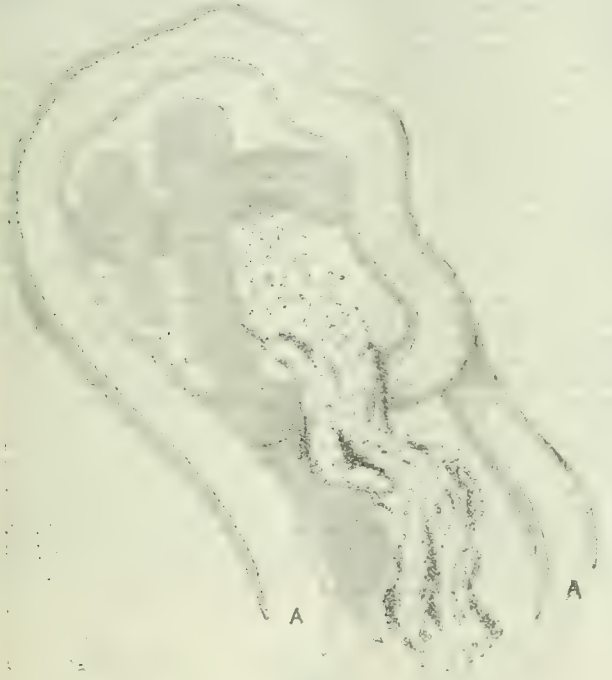


Fig. 4.

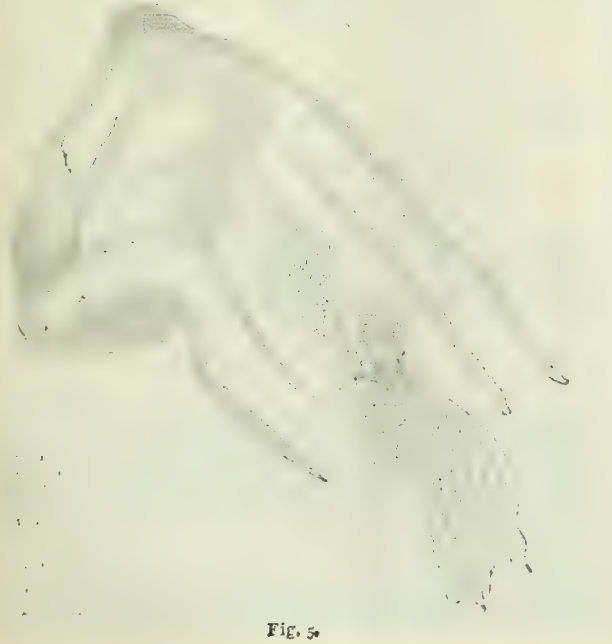


Fig. 5.

As a general rule the sensory fibres develop by starting from the peripheral and radical poles of the ganglion corpuscles, and extend from them into the peripheral organs, and in the spinal cord to a height undetermined.

The ganglion corpuscle is, in consequence, the central organ for the formation and nutrition of its peripheral and central fibres, and accordingly we shall call it the neurogenotrophic corpuscle, and the ganglion the neurogenotrophic body. (The neurone doctrine foreshadowed. F. W. M.)

Considering the ganglion in its simplest state as a bipolar corpuscle we are able to assert that every part of the radical and peripheral poles which is separated from the corpuscle disorganises, while the whole of the poles in connection with the corpuscle remains normal.

His son, Dr. Waller, gives on page 352 of his *Textbook of Human Physiology* an unpublished drawing of these very points.



Fig. 6.

Figs. 4, 5, and 6.—Drawings from the original monograph of Dr. Waller (*Phil. Trans.*, 1850) to show the degeneration of the terminal fibrils of the nerves in the papillæ of the tongue of the frog after section of the nerves.

Fig. 4.—Papillary nerve of frog six days after ligature.

Fig. 5.—Papillary nerve, three weeks after section, with muscular fibres in the interior of the capillary coil at the summit of the fungiform papilla.

Fig. 6.—Disorganised muscular nerve, from the inferior surface of the tongue, five days after section. The muscular fibre has been omitted in this drawing.

Numerous observers since have claimed that the law formulated by Waller that every part of a nerve which is separated from its cell origin undergoes degeneration whilst the central portion remains normal, although fundamentally true, may require some modification; and the first observer whom I find to suggest this is Dr. W. H. Dickinson, who in a very interesting paper on the Changes in the Nervous System which follow the Amputation of Limbs stated as a result of his observations that the posterior roots may atrophy, though still in connection with the ganglia; the anterior, though still in connection with the cord; and it appears that long disuse of a nerve is sufficient to lead to its atrophy, although those nervous structures which immediately regulate its nutrition are complete (Figs. 7, 8, 9). (Bérard in 1839 had noticed atrophy of the ventral roots in an amputation case). The degeneration described by Waller and Türck are degenerations *secondary* to injury, and that described by Dr. Dickinson and numerous other observers since may be looked upon as a *disuse atrophy*. A little later Gudden commenced his celebrated work upon atrophy of the cells of origin of a nucleus by tearing out the nerve in young animals, and this method threw great light upon the anatomy of the nervous system. It was adopted with striking success by Forel and von Monakow.

There is another form of degeneration which, accepting the

cellular theory of Virchow—that the whole organism including the nervous system is made up of an aggregation of cells, each cell being a living unit having an independent existence—is a *primary* degeneration of the complex nerve cell or neurone. Every cell of the body nourishes itself and is not nourished—

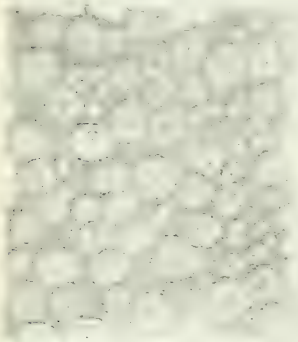


Fig. 7.—A transverse section of the normal sciatic nerve magnified 300 diameters. From an article by Dr. W. H. Dickinson, published in the *Journal of Anatomy and Physiology*. November, 1868.



Fig. 8.—A transverse section of the sciatic nerve from the stump of the same person 53 years after amputation, also magnified 300 diameters. From an article by Dr. W. H. Dickinson, published in the *Journal of Anatomy and Physiology*, November, 1868.

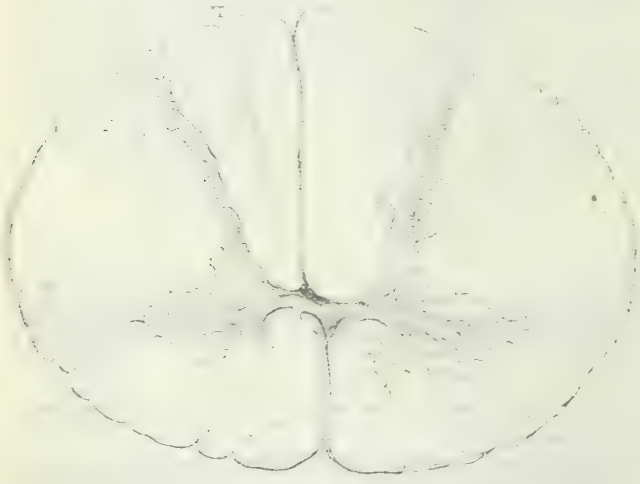


Fig. 9.—A transverse section of the cervical part of the spinal cord from a man whose left arm had been amputated twenty-three years before death. The left posterior column (L) is smaller than the right. From an article by Dr. W. H. Dickinson, published in the *Journal of Anatomy and Physiology*, November, 1868.

that is to say, every cell behaves as a unicellular organism, possessing a specific energy; and by the vital reaction of its protoplasm upon the lymph environment, metabolic exchanges, constructive and destructive, are continually taking place correlative with functional activity. We have no evidence to show that regeneration of nerve cells can take place in the higher vertebrates, but there is some evidence in favour of the view that all the nerve cells of the adult body are present in a rudimentary form at birth. The growth of the nervous system depends, not so much upon an increase in number of the nervous units, but of their size, by multiplication and complexity of the processes. Cajal (and I reproduce his diagram—Fig. 10) has shown that this growth in complexity during the process of development is not only true ontogenetically, but also phylogenetically. Wallerian degeneration proves that the nerve cell is the trophic centre, and the embryological researches of His have shown that it is the genetic centre. If then we admit the generally accepted view that the nerve cell in the higher vertebrates is incapable of regeneration when destroyed, the corollary is that every nerve cell of the human body is endowed with a specific durability, whereby in the healthy perfect organism every neurone possesses an equally adjusted vital energy, so that not only is functional equilibrium maintained in the physiological processes of active life, but also of decay, the regressive metamorphosis incidental to old age being manifested by a gradual and general enfeeblement of the functions of the whole nervous system. Lucretius says: "When the body has been shattered by the mastering weight of Time, and the frame has drooped, with its forces dulled, then the intellect halts, the tongue dotes, the mind gives way, all faculties fail, and are found wanting at the same time. It naturally follows that the whole nature of the 'soul' is dissolved like smoke into the high air, since we see that it is begotten along with the body and grows up along with it, and as I have shown breaks down at the same time worn out with age."[1] In contradistinction to this normal senile decay are premature pathological processes of decay, attacking groups, systems, or communities of neurones subserving special functions, whereby functional equilibrium is destroyed, symptoms of disease manifested, and according to the functional relations of the system selected characteristic symptoms are presented, constituting clinical groups. The neurones of a particular system die prematurely owing to *an inherited or acquired want of durability*, and the regressive process of decay may be looked upon as a nutritional failure on the part of the same cells to maintain that metabolic equilibrium essential and correlative to functional activity; consequently, *those parts most remote from the trophic and genetic centre of the complex cell (neurone) degenerate*. The process may be regarded as the inverse of development, the fine collaterals and terminal arborisations being the first to disappear. Dr. Hughlings Jackson in his Croonian Lectures, March, 1884, states: "I have long thought that we should be very much helped in our investigation of diseases of the nervous system by considering them as reversals of evolution, that is, as dissolutions." Morphologically, I conceive that the process of primary degeneration is an evolutional reversal, commencing in the structures latest developed, namely, the myelin sheath and the terminal arborisations and collaterals of the neurone.

Every point of the central nervous system is in physiological if not in anatomical connection with every other point, and resistance to the spread of excitation is variable,



Fig. 10.—Diagram after Ramón y Cajal to show the autogenetic and phylogenetic development of a psychomotor neurone. A, frog; B, newt; C, mouse; D, man. It will be noticed that as we rise in the zoological series there is an increase in the complexity of the neurone and in the multitude of points of contact, produced by an increase in the dendrons and side branches of the axon; *a*, *b*, *c*, *d*, *e* show ontogenetic development of a psychomotor cell in the human embryo.

The nervous system may be said to consist of three systems of neurones—afferent, efferent, and association systems (Fig. 11). Before entering into a detailed account of my own observa-

tions upon the degeneration of the neurone, which will occupy most of the other three lectures, I will give a few illustrations relating to the neurone theory as regards the transmission of impulses and certain physiological problems connected with variable resistance to transmission of the spread of excitation. Every excitation can spread over the whole nervous system, but it is difficult to understand how there may be a variable resistance to the spread of an excitation, if we accept the diffuse, continuous network theory of Gerlach or of Golgi, or how use may lead to opening up of paths so that the time occupied by transmission of impulses may be diminished by repetition. Facts seem to show that there is a delay in the transmission of impulses in the passage from one neurone to another in the central nervous system. Does this delay occur at the junction of the terminal arborisations at the axon of one neurone with the dendrons of another? or does the resistance occur in the protoplasm of the cell body?

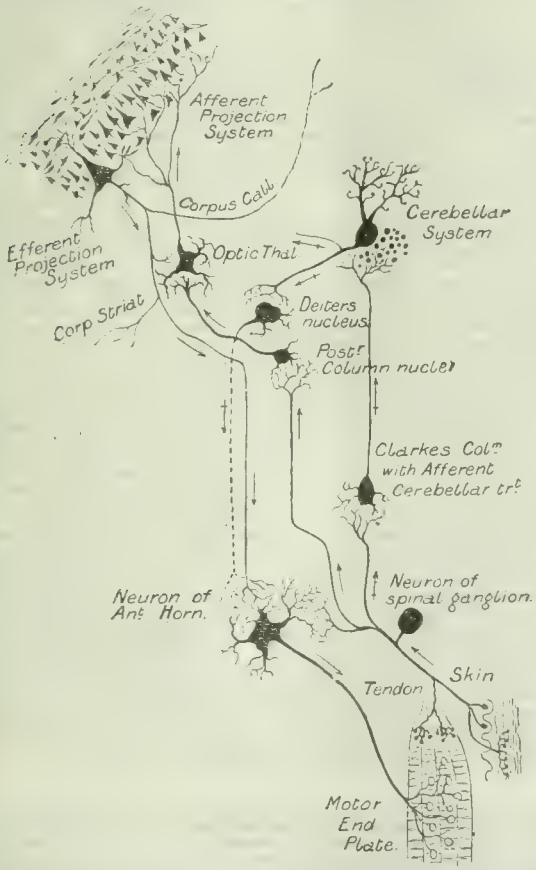


Fig. 11.—Diagram to show the three systems of neurones, illustrating the path of sensory impulses to the cerebrum and cerebellum, the path of outgoing impulses from the brain in a voluntary movement and the association of the afferent and efferent projection systems in the grey matter of the brain. This diagram also illustrates the path of a simple spinal reflex and of a psychical reflex.

Bubnoff and Heidenhain found that the strength of stimulus was related to rate of transmission in the central nervous system, for one stimulation of the cerebral cortex of the dog the reaction time is shortened by increase in the strength of the stimulus, whereas the peripheral nerves are influenced as regards rate of conduction only to a comparatively trifling degree by the same increase of stimulus.

It would therefore appear that a stimulus passes from the upper neurone to the lower more rapidly when the stimulus is strong than when weak—that is to say, the excitation in the upper neurone must reach a certain intensity before it is capable of flowing over and exciting the next in the series. Is the resistance to the passage of the impulses in the physiological junction of the upper and lower neurones, or in the protoplasm of the cell body? According to the neurone theory, it would be at the junction.

DIAGRAM.

A stimulus which is insufficient to rise into consciousness may, by repetition, lead to summation, and the opening up of a path (*Bahnung*) by breaking down resistance; thus Urbantschitsch has shown that very weak sounds, at first not audible, become so by repetition. This effect can be explained by the stimulus opening up the path to the auditory perceptive centre. The same effect can be produced by an effort of the will and concentration of attention, by which the auditory perceptive centre becomes more excitable. That an excitation may spread over the whole nervous system is not to be wondered at when we consider the length of some of the projection system neurones; for example, the posterior spinal sensory neurones, which have their cells of origin in the first sacral ganglion, extend from the nape of the neck to the sole of the foot. The central projection of the T-shaped process gives off a branch, which extends in the column of Goll the whole length of the spinal axis, and the peripheral portion as a sensory fibre extends to the sole of the foot. It is probable, therefore, that the central projection establishes connections by delicate collaterals with the grey matter of the whole spinal axis. The reason why excitations do not spread is probably dependent upon the condition of the bio-chemical stability of the neurones. In strychnine and tetanus poisoning the most localised peripheral excitation will cause general muscular spasm; in both toxic conditions the spread is probably due to a bio-chemical change in the protoplasm of the spinal motor neurones, to be referred to later on, whereby the excitability is greatly increased and a slight impulse is sufficient to fulminate the whole system of motor neurones. In epilepsy and other paroxysmal neuroses and psychoses it is possible that some altered condition of the blood associated with an inherited bio-chemical instability of certain groups, systems or communities of neurones may act as a *fulminating agent*. In neuralgia and local hyperæsthesia, the slightest general or distant local irritation suffices to produce pain; thus coughing, the vibration of a passing train, or a slamming door may produce pain by the stimulation of the hyperexcitable neurones.

If a skin reflex is increased on one side of the body, then sometimes a slight excitation on the normal side is sufficient to produce the crossed reflex, while perhaps the excitation is not sufficient to bring about the normal reflex on the sound side. It sometimes occurs that associated sensations (in part of a painful nature) arise from pressure upon spots which cannot be explained upon any known anatomical basis. This condition can be understood only by supposing that certain groups of neurones are in a state of hyperexcitability, and that the neurones which are stimulated have fortuitously opened up the connection by association neurones, and it has been fixed and made easier by each successive stimulation. The excitation spreads, but is not of sufficient intensity to arise into consciousness, except in the hyperexcitable area. (Goldscheider.)

Besides hyper-excitability, there may be diminished excitability affecting groups, communities, and systems of neurones having special functions. It will be seen later that this lowered excitability is usually the result of the selective action of various poisons producing either functional depression or degeneration, whereby paralytic or other symptoms of loss of function arise in certain definite functionally related systems of neurones, thus causing correlative groups of clinical symptoms, due, on the one hand, to perverted function or loss of function, and, on the other hand, producing other groups of symptoms, as pointed out by Hughlings Jackson, "due to over-activity of nervous arrangements which are perfectly healthy." This disturbance of the functional equilibration of the neurones may best be studied by a consideration of the nervous mechanism concerned in voluntary movement. Fig. 11 shows that three nervous circles—spinal, cerebral, and cerebellar—are engaged, and all three systems of neurones take part, for in every voluntary movement impulses are passing up the afferent channels and down the efferent, and these two systems are brought into physiological harmony by the association systems.

DISTURBANCE OF THE FUNCTIONAL EQUILIBRATION OF THE NEURONES.

The perfection of a voluntary movement is brought about by the association and equable adjustment of systems and communities of neurones presiding over groups of correlated antagonistic muscles in such a way that the desired movement is produced with the least expenditure of nervous and muscular energy. Interference with the functions of any one system will disturb the normal functional equilibration that must of necessity exist in the action of the whole.

Dr. Hughlings Jackson emphasises the fact that the symptoms of nervous disease are due as much to normal physiological functional activity, imperfectly applied, as to the actual loss of function occasioned by the disease. He pointed out that in paralysis of the external rectus, strabismus caused less trouble to the patient than the double vision occasioned by the physiological activity of the two retinæ, upon which the images were prevented by the paralysis from falling upon corresponding points. Again, the importance of the integrity of one set of neurones having a specific function upon all the rest of the functionally related neurones was strikingly shown in some experiments by Sherrington and myself; for we found that if the upper limb were rendered *apæsthete* by section of a number of the posterior roots (third cervical to third dorsal inclusive), not only was the limb of the animal rendered insensitive, but it was unable to perform the finer voluntary movements; although stimulation of the cerebral cortex in appropriate regions produced every movement, showing that the efferent path for voluntary movement was still open, but the animal was unable to ideate the movement. Another marked effect of section of the posterior roots was the immediate loss of tonus in the muscles, showing that peripheral stimulation is the important reflex agent in its production.

Again, the experiments of Bubnoff and Heidenhain show the intimate relation which exists between the functionally related neurones. They found that a weaker stimulus was required to produce a movement of the limb by faradisation of the cortex cerebri if the limb were gently stimulated, thus showing that not only in a movement do impulses pass from the cortex to the periphery, but that each successive movement and alteration in tension of the skin, muscles, tendons, and articular ligaments cause a transmission of kinæsthetic impulses (Bastian) from the periphery to the cortical centre with an increase of its excitability; thus there is a continuous molecular vibration occurring in all these circles, and this is of importance with regard to the metabolic exchange and nutrition of the neurones themselves; for stimulus is essential to function and bio-chemical action.

In discussing later the changes which occur in motor nerve cells, when their axons are cut, we shall better appreciate the changes which take place by remembering that if a muscle is paralysed changes in tension of the related structures, namely, muscle, tendon, skin, ligaments, etc., cannot occur, and that normal succession of kinæsthetic stimuli which travel up the afferent system *pari passu* with the stimuli that travel down the efferent no longer take place. Warrington, indeed, has shown that section of posterior roots causes chromolytic changes in the anterior horn cells of the same side, indicating that this loss of stimulus produces a depression of the metabolic functions of the spinal motor cells, a fact quite in accord with the physiological results above described.

ANATOMICAL CORRELATION OF ASSOCIATED SYSTEMS OF NEURONES.

The correlation of associated functionally related systems, groups, and communities of neurones finds an anatomical proof in regressive associated atrophy of correlated structures. A good instance of this has lately been investigated in my laboratory by Mr. Tredgold, the Technical Scholar. Cases have previously been published of a similar nature, but there are some points in this case which have not previously been noticed. The man suffered with right congenital hemiplegia, affecting especially the hand and foot. The lesion was primarily in the optic thalamus on the left side; it caused atrophy of the left hemisphere, the right half of the cerebellum, and the spinal motor neurones of the cervical and lumbar enlargements, and descending degeneration of the right crossed pyramidal tract and the left antero-lateral tract. We thus see, referring to the diagram, that all the functionally associated efferent tracts of the three nervous circles engaged in voluntary movement had undergone atrophy in consequence of the disuse occasioned by the primary lesion preventing the development of that normal association of correlated neurones necessary for perfect voluntary movement. There are certain very interesting points in this case which will be fully published in next number of *Brain*.

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NOTES.

[1] Since the method is a comparative one great care must be exercised in practising the same details of method of fixation, cutting and staining the morbid tissues and the normal tissues, with which they are to be compared. Again, it is absolutely essential that the tissues examined should be fresh and free from any chance of *post-mortem* decomposition.

[2] This method is a very ingenious one; as it is not generally known I will describe it a little more fully: Method—Held and Ambron take nerves of newborn animals, tease them in normal saline solution, and examine them in the following manner with polarised light: They place the two prisms at right angles and put the nerve in the same line as the "quartz plate," when it gives a purple colour. The myelinated nerve will appear red, orange, or yellow, according to the stage of myelination (red being the most advanced)—these are the subtraction colours; whereas non-myelinated nerve and connective tissue give the addition colours, violet, indigo, and blue. In this way they have examined all the nerves, and have arrived at the conclusion that the peripheral motor nerves are more advanced in myelination than the sensory at early periods of development. Flechsig has shown, as I have remarked, and they confirm this, that the reverse is the case for the central nervous system. They offer no explanation, but possibly it may be found phylogenetically that in the evolution of specialised reflex acts in the zoological series the motor fibres have acquired first the myelin sheath: or it may be that the sensory bundles are made up of fibres having different functions, and that these are myelinated at different periods of time; again, we know that a large number of fibres entering a muscle (Sherrington) are afferent in function.

THE German Anthropological Congress will hold its annual Congress this year at Halle from September 24th to 27th.

TWO LECTURES ON ANTENATAL DIAGNOSIS.

Delivered in the University of Edinburgh, February, 1900,

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LECTURE II.

MATERNAL SYMPTOMATOLOGY.

IN making an antenatal diagnosis of morbid intrauterine conditions, the closest scrutiny must be given to all the details of the pregnancy. It ought to be our object to elicit from the mother all that she can remember of her symptoms during both the early and the later months of her gestation; too often we repress such information, partly because we do not wish to make the patient nervous about herself, and partly because we desire to avoid long tales about maternal impressions. Therein doubtless we err; for although the mother's speculations regarding her sensations may be worthless, and worse than worthless, for the formation of a diagnosis, the same cannot be said for the definite information she gives as to the occurrence of her sensations. Her theoretical opinions may be of no value, but her statement of facts is of great importance; we must therefore endeavour to direct her flow of information along the line of facts, and not in the current of theories.

In the first place we inquire into the symptomatology of pregnancy itself, for it is not altogether a truism that before we can diagnose an abnormal pregnancy we must diagnose that there is a pregnancy. Further, the very ease with which we recognise that there is the normal symptomatology of gestation is indirect evidence that intrauterine affairs are progressing in a natural way, for it is the abnormal gestation that is difficult to separate from conditions which are not connected with the presence of a fœtus *in utero*. The very fact that the diagnosis of pregnancy is not easily made is presumptive evidence that there is an abnormal pregnancy. If then it be found that in the history of the case the symptoms upon which we rely in diagnosis, such as suppression of the menses, morning sickness, frequency of micturition, quickening, mammary fulness, nervous phenomena of a reflex type, abdominal enlargement, etc., show deviations which make us doubt the existence of pregnancy, we may almost unconsciously have made the first step in the diagnosis of a case of antenatal morbid change. The patient herself will often sum up the symptomatology for us in the remark that she does not feel in this pregnancy as she did in previous ones, that in fact she doubts if she is really in the family way at all. By this she generally means that one or several of the symptoms upon which she has learned to rely for the detection of pregnancy have deviated so much from the usual that her opinion has been shaken, while the presence of other of these symptoms in a natural way has prevented her altogether abandoning the notion that she is pregnant.

Some of the symptomatological deviations which are met with may be referred to. There is, for instance, the occurrence of more or less regular and more or less sanguinolent discharges from the vagina—the persistence of menstruation in an erratic form. In the early months this may indicate a threatened abortion or a hydatid mole, and in the later months it may point to a low implantation of the placenta, or to premature separation of the after-birth. It may also point to the existence of an antenatal morbid condition of the uterus itself, such as bicornate or septate organ, or to the presence of a tubal or tubo-abdominal pregnancy. Along with these hæmorrhages, however, there is a continuance of the other phenomena of pregnancy, and the patient becomes alarmed about her dubious condition. A case illustrating this uncomfortable state of matters came under my observation quite recently. It was that of a woman, aged 41, who had been eleven times pregnant. At a date when she thought she was four and a half months pregnant for the twelfth time she was suddenly attacked by flooding, and passed from the vagina a mass of blood and clot along with a sac about the size of the palm of the hand, which she compared to a little india-rubber balloon with water in it and a small solid body. She concluded, and I think her conclusion was justified, that she had aborted; but as weeks passed by her abdomen continued to enlarge, and soon she felt fœtal movements.

I saw her when nearly three months had elapsed after the abortion, and there was no doubt in my mind that she was pregnant about seven months. The conclusion must be drawn that it was originally a twin gestation, and that one twin had come away while the other had gone on developing. It may be stated generally that we do not yet know the exact significance of irregular menstrual discharges during pregnancy, and the same remark applies with still greater force to the occurrence of hydrorrhœa gravidarum. In a recent paper, P. C. T. van der Hoeven[1] has given details of three cases of hydrorrhœa in pregnancy, in all of which the infants were born alive and healthy, but premature, and from the chemical and microscopical examination of the fluid it did not appear that it was either liquor amnii or a transudation through the membranes from the liquor amnii. J. A. Macdougall in 1885 gave details of 7 cases of marked hydrorrhœa gravidarum, and I note that in at least 5 of them the fœtus was small, puny, and poorly developed.[2]

Again, the patient may complain of deviations from the normal in the symptomatology of quickening. The fœtal movements may have been felt very early or unusually late in pregnancy, or they may have been very strong or very weak, or they may have been very frequent or have occurred only at long intervals, or, finally, they may have shown different deviations at different epochs in the gestation. Sometimes fœtal death has been indicated by unusual activity of the fœtal movements, followed by complete cessation of them. In cases of maternal malaria the mother has occasionally described attacks of fœtal quivering and shaking either synchronous with the ague fits in herself or occurring at other but at regular times; it has been concluded that there was fœtal malaria, but not always of the same type as the maternal. Fœtal movements of a kind very different from the normal have been described under the name of fœtal singultus. The details of a case of this sort were communicated to me some time ago by my friend Dr. T. B. Darling. It was that of a woman, 29 years of age, a 4-para, who had in each of her four pregnancies and always about the seventh month suffered from convulsive movements of the fœtus which were quite unlike the usual "kicking" sensations. They were regarded by her as due to hiccough or singultus of the fœtus, and they occurred most markedly at night. Her belief received considerable support from the fact that all her infants suffered from hiccough for a few days after birth and that the movements were very similar. It is interesting to note that in the first two pregnancies the vertex presented in the L.O.P. position, that is, with the fœtal abdomen anterior; in the third and fourth gestations, however, the position was the R.O.A. It has recently been affirmed that these peculiar movements are not very rare, although it is likely that they are not often so marked as to attract special attention from the mother; but this point will be referred to again under the head of the physical examination of the abdomen in pregnancy.

The symptomatology of morbid pregnancy has also to do with abnormalities in the degree and rate of abdominal enlargement, in the mammary sensations, and in morning sickness, dysuria, headache, neuralgia, etc. The patient may, for instance, assert that she is larger or smaller than she ought to be for the supposed date of pregnancy, circumstances which may on the one hand indicate hydramnios, hydatid mole, twins, a dropsical fœtus, a double monster, and on the other hand, oligohydramnion, poorly developed fœtus or monstrosity by defect such as anencephaly. Of course, it may mean nothing more than that she has made an error in her estimate of the age of her pregnancy. Again, she may state that she has a sensation of weight or of coldness in the lower part of the abdomen, that the abdominal enlargement has ceased to grow, that the breasts have stopped swelling, and that certain neuralgias or other reflex phenomena which she has come to associate with the continuance of gestation have ceased; and from these symptoms she may draw the conclusion that the fœtus *in utero* has died, and it may very well be that she is quite right.

In the second place we must inquire into the symptoms which have been present in pregnancy which have nothing to do with pregnancy as pregnancy. For instance, she may have suffered from an infectious fever, and have had its typical symptoms, or she may simply have been exposed to the infection without herself showing its manifestations. It does not of course follow that the diagnosis of fœtal infection can be certainly made under such circumstances, but it makes it a probability, and it ought also to make the observer think of fœtal death, of premature labour, and of congenital weakness or other indication of toxinic poisoning of the unborn infant. Further, there is evidence that an infectious condition in the mother may be connected with an apparently entirely different morbid state in the fœtus, as in Bidone's case of erysipelas in the mother with streptococcic endocarditis in the fœtus, or in Moncorvo's record of repeated lymphangitis in the mother as the result of traumatism, with infection and congenital elephantiasis in the infant. Although apparently unconnected, the fœtal state may nevertheless be the result of the maternal infection, for allowances must be made for differences in environment and in physiology. Reference may here be made to the occurrence of traumatism in pregnancy; this should always be noted, for it may have a direct bearing upon fœtal injuries, death and even deformities. Here also it may be well that maternal impressions be recorded, their nature, and the date of gestation at which they took place, if for no other purpose than to disprove the efficacy of these impressions in the production of monstrosities. Further, the fact that the mother during her pregnancy has had for any reason to take powerful or poisonous drugs ought to be referred to in the formation of a diagnosis of fœtal disease or death; the toxicology of intrauterine life is a large and as yet almost unworked field. The commencement or continuance of habits of intemperance during the gestation must be noted; and, finally, the supervention of symptoms of disorder in any of the great systems, such as the circulatory, respiratory, digestive, urinary, cutaneous, or nervous, must not be passed over in silence, for such may throw light, often quite unexpectedly, upon morbid intra-uterine states.

It may be that in this enumeration of the symptoms of morbid gestation I have referred to conditions which have little apparent diagnostic value, but the antenatal pathologist is not yet in a position to say what is and what is not of importance in this matter. It is only by the careful recording of all such circumstances that we can ever hope to build up a system of fœtal symptomatology. If the truth be told it is not excess of zeal in recording the phenomena of morbid pregnancies that it is to be deplored or feared, but the reverse.

Maternal Physical Examination.

After the history and symptomatology of the pregnancy have been ascertained, it will be necessary to proceed to an exhaustive physical examination of the maternal and fœtal organisms, and in the case of the mother it will be important to examine not only the reproductive organs, but also the other bodily systems.

1. Physical examination of the maternal circulatory, respiratory, and other systems (except the reproductive). The discovery of a serious diseased condition of any of the maternal systems does not, of course, enable the observer to declare that the fœtus is suffering in the same organ, and in the same way *in utero*. Antenatal diagnosis is not so easy as that. At the same time it makes it possible, and with some maladies even probable, that the fœtus is affected with the same pathological change as the mother, and it nearly always enables the observer to predict that the infant unborn is suffering in some way or other, and that the pregnancy will be in some way or other abnormal. The structures in the uterus do not reflect as in a mirror the state of the maternal organs; but it is doubtful whether there can be anything far wrong with the mother's economy without the fœtus or embryo suffering in one way or another, and it occasionally happens that it suffers in the same way. For instance, the discovery of grave maternal cardiac disease (namely, a state of mitral incompetence and stenosis of recent origin, and without compensation) will be an undoubted warning that abortion, or premature labour, or fœtal death may be looked for; and it may, especially when the maternal valvular lesions can be traced to acute rheumatism, mean that the infant will be born with a malformed heart, and possibly with a murmur caused thereby. Again, the existence of pulmonary tuberculosis does not often carry with it phthisis of the fœtus, or even evident tuberculous changes in any of the organs or in the placenta; but it may and often does carry with it deviations from the normal progress of gestation, such as premature delivery, and the infant may, as has been pointed out by Hanot and others, show malformations—for example, stenosis of the pulmonary artery. Septic pneumonia of the mother may occasionally produce septic pneumonia of the fœtus; it cannot be doubted that it nearly always interferes in some way with the pregnancy which it complicates. Similarly renal mischief in the mother produces changes in the fœtal tissues, which are sometimes localised in the kidneys, but more often they are found in the other organs and very often in the placenta, which is, after all, the kidney of the unborn infant. Marked maternal dropsy often means simply placental lesions and a puny badly-nourished fœtus; but sometimes, as I pointed out several years ago,[3] the fœtus which is born shows general anasarca; out of 36 cases of marked fœtal dropsy there was also maternal dropsy in 16.

After having examined the maternal circulatory, respiratory, and urinary systems (I omit for the present a reference to the testing of the urine), the observer should turn now his attention to the other systems. The osseous and locomotor structures should be examined, for women with achondroplasia have given birth to achondroplasiac infants; and congenital rheumatism, although rarely recognised, has now and again been noted in the offspring of mothers who have suffered from rheumatic fever in pregnancy. Nervous diseases, in addition to being distinctly hereditary, produce effects in other ways upon the products of conception. Goître in the mother has sometimes been found in her fœtus, and Demme, of Berne, found that in 53 cases of congenital goître 23 had mothers suffering from the same malady.[4]

The physical examination of the mother must include the search for congenital anomalies in herself, such as nævi, minor malformations, and muscular peculiarities, for such are now and again to be expected in her infant. It must include the taking of her temperature and the inspection of the skin, for in nearly all the infectious maladies such as small-pox, scarlet fever, typhoid, measles, varicella, and erysipelas, the possibility, and, indeed, the strong probability, is that there is a transmission of the morbid agency through the placenta to the fœtus with results which may not always exactly resemble those existing in the mother but which are, nevertheless, due to them. Jaundice in mother and fœtus has been noted, so has hæmorrhagic purpura, so has epidemic cerebro-spinal meningitis. Even if the fœtus escape the disease in its ordinary manifestations, it may fall a victim to the increased maternal temperature, or the toxins arriving in the placenta may cause disease of that structure, or may pass on to the fœtus and cause pathological changes in it.

There is another aspect to this subject. It is possible, and indeed probable, that morbid states in the fœtus may cause changes in the maternal organs which are capable of being recognised by the observer. Fœtal death, for instance, may be followed by the disappearance of varicose veins, by shrinking of the thyroid enlargement, and by a freer condition of respiration; when the fœtal death is accompanied by putrefactive changes *in utero*, maternal vomiting, hectic, high temperature, and other signs of blood poisoning will occur. It is also very probable that a diseased fœtus may react upon the maternal system; but this is a matter upon which we have little information, and the cases which might teach us something about it—such as instances of fœtal small-pox in an immune mother—are very rarely noted. At the same time there is reason to believe that a high temperature in the fœtus, with excess of waste products passing to the placenta and so into the mother's system, may sometimes determine eclampsia, or albuminuria at least.

2. Physical examination of the maternal reproductive system. It goes almost without saying that in diagnosing intrauterine conditions it must be from the examination of the uterus and its contents that the facts of the greatest value will be obtained. The examination of the maternal organs of generation now falls to be considered.

The inspection and palpation of the mammary glands may

reveal retrogressive changes which point to fœtal death; so may the fading of the purple discoloration of the vulva and vagina. The inspection of the abdomen may show at a glance that it is larger or smaller than the calculated age of the pregnancy warrants it being, and this observation may be corrected and confirmed by careful mensuration. Periodic mensurations may show that the abdomen is not enlarging in a steady fashion, or is not enlarging at all. Palpation may discover a uterus more cystic in feeling than is normal in gestation, a circumstance which will suggest hydramnios, or may, indeed, cast grave doubts upon the existence of pregnancy at all. Here it may again be said that when we are in doubt about the existence of pregnancy it will be well for us to suspect the existence of an abnormal pregnancy. Percussion of the abdomen may serve to mark out more clearly the uterine outlines and to eliminate pseudocyesis from the diagnostic possibilities; and auscultation may make known irregularities of the uterine *souffle*, pointing to anomalies in the growth of the uterus.

Physical Examination of the Fœtus in Utero.

The physical examination of the unborn infant can hardly be separated from that of the mother's uterus and vagina, either in theory or practice. As a matter of fact, the two procedures are carried on simultaneously.

Abdominal inspection can scarcely do more than suggest that the fœtus is very large or very small, or not alone *in utero*; abdominal palpation, on the other hand, may be made a diagnostic means of the greatest importance and value. Nowadays, when so much stress is laid upon the recognition of presentations and positions by abdominal without vaginal manipulation, it must follow that obstetricians will feel better able to appreciate deviations from the normal in the size and form of the fœtus. Further, the widening of practice in the sphere of abdominal surgery must have given most of us a more distinctly erudite touch than we ever possessed before. It is largely, I believe, want of utilisation of our powers in this respect that has interfered with the more frequent making of an antenatal diagnosis. Let us examine the abdomen of the gravid woman with the same care that we would employ if we were anticipating the performance of an ovariotomy or a hysterectomy. Further, let us not forget to use both hands, either both outside the abdomen, or one outside and the other inside the vagina, in order to get the help which the bimanual method always gives. Anæsthesia may yield as valuable results in the examination of the fœtus *in utero* as in any other department of medical practice, and there are some emergencies in antenatal pathology which fully justify us in putting the mother under chloroform.

By abdominal palpation, either with or without anæsthesia, it may be possible to make out the irregular fœtal outlines and the indistinct crepitus associated by Negri [5] with fœtal death, to diagnose provisionally that there are twins *in utero* or a double monstrosity, to ascertain the presence of excess or of absence of liquor amnii, and possibly also to hazard the speculation that the fœtus is small or large, or grossly malformed. Peculiarities in the fœtal movements, such as their great strength, or frequency, or character (for example, singultus), may be detected by the hands, and the difficulty or ease with which *ballottement* can be elicited has a diagnostic value. In cases of hydramnios, where it is usually very difficult to palpate the fœtus, and where it is particularly important to be able to do so, it has been recommended to put the patient in the genu-pectoral position so as to allow the fœtus to gravitate towards the abdominal part of the uterus, where it can be better felt, but care must be taken that the mother does not faint or have very grave dyspnœa during the process, and I fancy the same result in aiding palpation will be obtained by putting the patient on the side or in the semi-prone position. An unusually cystic feeling in uterus, with the existence of the other symptoms and signs of pregnancy, ought to make the observer suspect hydramnios, and along with it a monstrous condition of the uterine contents or the presence of twins, for if there is one fact in antenatal pathology that is well established it is the association of teratological conditions, twinning, and hydramnios. The scarcity of the liquor amnii is also a sign of intrauterine morbid changes, especially of multiple malformations, congenital dislocations, fractures, and ankyloses. Doubtless in the future the palpation of the fœtus *in utero* will be much more widely practised than it has been in the past.

Auscultation of the abdomen to detect the presence of the fœtal heart is a common, indeed a constant, practice with the careful obstetrician, but there seems to be no doubt that the observant ear ought to be able to make out more from this method of investigation than the diagnosis of pregnancy. Some years ago a colleague showed me a series of regular daily estimations of the fœtal heart-rate taken by himself in the case of his pregnant wife; he had made them with the hope of arriving at a conclusion regarding the sex of his unborn child, and his method had been to make dots with a pencil on paper as he listened over the abdomen with the stethoscope for a period of half a minute or a minute as determined for him by the patient. The procedure was a little difficult, but it struck me at the time that it had possibilities in it which could scarcely be overestimated; it might, for instance, be valuable in giving warning both of disease and of impending death in the fœtus, and it might be used as a clinical means of determining what drugs when given to the mother passed through the placenta and produced a pharmacological effect upon the infant *in utero*. In a recent case of pregnancy which was under my charge during 1899 I was impressed by the fact that the mother, a primipara, who had not been strong during girlhood (threatened hip-joint disease), during the latter half of gestation rapidly put on flesh and weight; synchronous with this improvement in the maternal condition there was a marked slackening in the growth of the fœtus and a weakening and slowing of the fœtal heart, with an almost entire absence of fœtal movements; it seemed, to put it into ordinary language, as if the mother were being nourished at the expense of the offspring. At any rate, I diagnosed a small infant with very little liquor amnii and possible placental changes. The event proved me to be right, for the infant—a male—was puny and had a senile appearance, was brought through the first weeks of life only with the greatest care; and the placenta was small, of the marginate variety, and diseased; there was scarcely any liquor amnii.

The character of the fœtal heart sounds may also give diagnostic indications, and the number of cases in which fœtal heart disease or malformation was found out before birth is every year being added to. Within the past few years Bellot,[6] Padgett,[7] Nazaroff,[8] and Hall[9] have all diagnosed fœtal heart murmurs, and confirmed the diagnosis after the infant was born. Hall in his communication gave details of cases by Barth, Hennig, and Christopher; in the example reported by himself, the lesion seemed to have been a roughening of the lining membrane of the ductus arteriosus, for the murmur which affected the first sound disappeared ten days after birth. It has been affirmed by Giglio[10] that the presence of an anencephalic fœtus *in utero* may be suspected from the weak, uncertain, distant, and frequent beat of the heart, characters which may be due to the absence of cerebral and spinal centres having to do with the innervation of the heart. In such cases, and on account of the above-named peculiarities of the fœtal heart beat, it is often supposed to be absent unless very carefully listened for; this apparent absence, when associated with active fœtal movements (and with signs of hydramnios), may point, therefore, to anencephaly.

The absence of the fœtal heart sounds, especially in a case where they have been previously well heard, and in which their disappearance has been preceded by a slowing of them, points strongly to fœtal death; but it must always be remembered that absence of the fœtal heart is a negative sign, and therefore never of the same diagnostic importance as, for instance, presence of it is in the estimation of pregnancy and fœtal life.

Other sounds *in utero* detected by the stethoscope have been referred to by authors. Thus bubbling sounds due to intrauterine decomposition and alterations in the uterine or placental *souffle* have been described in cases of fœtal death; but their diagnostic value is most problematical. It seems, however, that the early fœtal movements may be heard even before they are felt.

Mensuration of the fœtus *in utero* is a well-known means of forming an idea of the age of the pregnancy, especially in connection with the induction of premature labour; but it is a method which seems to have been little if at all employed in

the diagnosis of anomalies in the size and form of the unborn. It may be carried out with the aid of a pair of callipers, or, better, with the special modification of them known as the cephalometer of Budin or Perret;[11] by means of this instrument certain of the fœtal cranial diameters have been determined with a degree of error rarely amounting to more than 5 mm. There seems to be no reason why this instrument should not be used for the detection of abnormalities in head and body measurements.

The graphic representation of the fœtal movements is another way in which mechanical methods may be made to help the obstetrician in his attempt to find out the state of the unborn infant. Fœtal movements are chiefly of four kinds: revolutionary; extensions and flexions of the limbs; extension and flexion of the spine, especially of the cervical part of it; and rhythmical movements of the trunk, and particularly of the thorax, which have been ascribed to fœtal singultus, to swallowing, and to intrauterine respiration. These movements, as also the fœtal heart beat, may be represented as tracings by the ordinary, although slightly modified, apparatus known as the cardiograph. Pestalozza, in a case of twins, succeeded in getting a tracing of the fœtal heart, but the conditions were peculiarly favourable, and not likely soon to occur again. Ferroni,[12] however, has shown that it is quite feasible to get good tracings of the two kinds of rhythmical movements which have been ascribed to fœtal singultus and to respiration, the former being abrupt, with an apex, and of a rate of from fifteen to thirty-four per minute, the latter being undulatory, without interruptions, and at a rate of from forty to seventy per minute. Ferroni also got fœtal tracings in a case of maternal typhoid and in another of malaria. There is some justification for the hope and expectation that ere long this method of investigation of the infant *in utero* may be expanded and made of use. When it is borne in mind how much we can learn from the movements and attitude of the newborn and young infant, there is surely reason for trying to learn something about these same movements and attitude in the fœtus. It is a fact, but not perhaps a recognised fact, that the symptoms and signs of disease in the fœtus will more closely resemble those of the infant than those of the adult or child. *Verb. sap.*

Skiagraphy will no doubt also play a part, perhaps not an unimportant part, in the antenatal diagnosis of the future, but in the meantime the results obtained by Varnier[13] have been exceedingly unsatisfactory as regards the fœtus. For this various reasons are forthcoming. Among these may be named the deep shadow thrown by the mother's pelvis and spinal column, the imperfectly ossified fœtal skeleton, the thickness of the maternal structures, the impossibility of getting the sensitive plate in the same relation to the abdominal and pelvic part of the pregnant uterus, and perhaps the respiratory maternal and the irregular fœtal movements. To meet some of these difficulties Varnier has proposed to take a skiagraph with the patient in the lateral and another with her in the ventral posture, but he has not overcome the technical obstacles in the way.

There is yet another means of diagnosis of fœtal conditions which has scarcely at all been employed, and which might yet be made use of. I mean the detection of changes in the chemical composition of the maternal excretions and in the microscopical appearances of the blood. Progress in this direction is in the meantime hindered by the fact that so little is definitely known about the physiological chemistry of pregnancy, and still less about its pathological chemistry. What a wide field of research, and not difficult research at that, there lies open in connection with such questions as the occurrence of albuminuria, of peptonuria, of acetonuria, of glycosuria, of hæmoglobinuria, and of urobilinuria in pregnancy. Some of these changes in the urine have been supposed to indicate the occurrence of fœtal death, but none of them can as yet be regarded as an infallible test, and in one case at least—namely, in albuminuria—the disappearance of the morbid product, and not its appearance, may point to fœtal death. Further, we know little of the effect of illness (short of death) of the fœtus upon the maternal excretions and blood. There are many problems. Why, for instance, should the ingestion of from 60 to 120 grams of glucose by the pregnant woman produce alimentary glycosuria, while the non-pregnant woman requires to take from 140 to 180 grams to bring about the same effect? Why should the toxicity of the maternal urine diminish during pregnancy? Why should Bunge's law (the weight of the ashes of the fœtus equals the weight of the ashes of the milk of the mother animal) not apply to the human fœtus and mother's milk? Whatever the answers to these and to other problems may be, there can be little doubt that from the chemical side will yet come diagnostic aids of no small importance.

INTRANATAL DIAGNOSIS.

Even when labour has commenced and is in progress, it is of importance to diagnose morbid states in the fœtus on its way through the maternal passages. It may be all-important to recognise, for instance, causes of delay in labour due to enlargement of the fœtal body or head, so that they may be dealt with ere the delay has become a danger: it may be well for the peace of mind of the obstetrician that the diagnosis of the presentation be made, and it will be an advantage for him to be able to forewarn at least the relatives of the mother of the arrival of a monstrosity or a dead fœtus, for it will at any rate save him from some of the reproach associated with the unexpected appearance of such an unwelcome little stranger.

The symptomatology of the labour must therefore be taken into account and deviations from the normal noted, such as excess of liquor amnii or dryness of the labour, the absence of fœtal movements and the like. Again the most careful abdominal and vaginal examinations must be made. It will now be more easy to palpate the fœtus through the abdominal walls, for the liquor amnii will, in part at least, have drained away, and the vaginal palpation will be facilitated by the opening up of the os and the exposure of the presenting part. It may be taken as a common occurrence for the malformed part of a monstrous fœtus to present at the os uteri—for example, the intestinal coils in exomphalos and the basis cranii in anencephaly. If the *tactus eruditus* fail to make out the presentation with ease the erudite mind ought to think of a monstrosity. It is a good plan for the obstetrician, when he gets a chance, to palpate the deformed part of a malformed fœtus so that he may recognise it again if he feels it coming down the birth canal. The escape of meconium-stained liquor generally, but not always, forewarns of fœtal death; the feeling of the hydrocephalic head is characteristic, islands of bone in a sea of membrane; and the introduction of the hand well into the passages ought to detect the coming down of a distended fœtal abdomen (as in ascites) or the presence *in utero* of united twins. An interesting case of hydrocephalus with intestinal atresia diagnosed during labour was put on record by Salus in 1896; it was that of a breech presentation in which delay occurred after the birth of the body from the large size of the head; whilst the trunk was thus protruding from the maternal parts meconium of an earthy colour and devoid of bile was passed from the anus, and it was concluded that there existed an imperforate condition of the bowel in some part of its extent; the conclusion was confirmed after birth by *post-mortem* examination. Fœtal ichthyosis may also be recognised during labour. The presence of a hairy mole on the shoulder in, say, a transverse presentation, might prove misleading to a man who thought that hair only grew on the fœtal scalp. There are many other matters which might be referred to under intranatal diagnosis, such as the detection of fœtal anasarca or of fœtal rickets, from the inspection and palpation of a limb or limbs lying in the vagina, or the feeling of the bones of the cranium of a dead fœtus; but enough has been said to show the possibilities.

POSTNATAL DIAGNOSIS.

After the morbid or dead fœtus is born, the necessity for the formation of a diagnosis does not disappear; for if the infant be dead, it will be essential to discover the cause, so as to take measures to prevent its recurrence in a future pregnancy; and if it be diseased or malformed, it will be needful to make a diagnosis in order to institute the proper treatment. Now, however, the diagnosis will not differ in its details from that carried out by the pediatric or general physician, and it will have lost much of its difficulty. The disease or the deformity may be external, and need little more than recognition; on the other hand, it may be internal, for example,

congenital heart disease or pyloric stenosis or diaphragmatic hernia, and necessitate the most careful application of all our diagnostic methods. Finally, the placenta and membranes and cord ought always to be scrutinised, and when possible submitted to microscopical and bacteriological examination.

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EPIDEMIC CEREBRO-SPINAL MENINGITIS IN DUBLIN.*

BY

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CLINICAL REPORT BY DR. ALFRED R. PARSONS.

IRELAND has been free from cerebro-spinal meningitis in its epidemic form since 1886. The present outbreak commenced in the earlier months of this year; and I shall briefly refer in chronological order to the clinical records of the cases which have come under my observation at the Royal City of Dublin Hospital.

CASE I.—E. D., aged 28, a servant, was admitted to the ophthalmic ward on January 31st, complaining of seeing double. She was in good health till January 5th, when she had a shivering fit, followed by severe pain in the back of the head and vomiting. Her temper became irritable and uncertain. On January 23rd, as she developed diplopia, Dr. Flood, under whose care she was, asked Mr. Benson to see her. He found that in the right eye the vision was $\frac{6}{9}$; while in the left eye it was nearly normal. In both eyes there was optic neuritis, of a very intense character in the right, with œdema of the disc and retina, a large patch of white exudation above the disc, and great tortuosity and enlargement of the veins. There were no hæmorrhages in the retina. She was removed to the City of Dublin Hospital. I examined her carefully, but failed to find any symptoms or signs beyond those enumerated—headache, chiefly in back of head, vomiting, diplopia, slight strabismus, and intense optic neuritis. The temperature, Dr. Flood informed me, was never higher than normal, and the pulse, always quiet, about 80. While in the hospital all the symptoms gradually subsided, the diplopia disappearing about February 12th. She left on February 23rd, feeling nearly quite well, and with her sight greatly improved. After a rest she resumed work, and now feels in excellent health. She remembers very little of the earlier weeks of her illness.

On March 19th her eyes were again examined by Mr. Benson. She said she was perfectly well, but that she could not use her eyes for long without feeling them fatigued. There was a very slight haziness of both discs, most marked on the right. No exudation was visible in the retina above the disc where the large white patch existed on a former occasion. At no time was there albumen or sugar in the urine.

I was unable to arrive at any positive diagnosis in this case while she was in the hospital. The symptoms were, I thought, more suggestive of meningitis than of any other intracranial disease, but the complete recovery of the patient differed from any form of meningitis I had met. In the light of the subsequent cases there is little doubt, I think, that it was a mild attack of cerebro-spinal meningitis.

CASE II.—D. S., aged 7, residing in Booterstown, was also sent in by Dr. Flood. He was admitted on February 14th, a fortnight after the previous case. On Saturday, February 10th, he complained of a slight headache, and his stomach seemed out of order, but he did not vomit. On February 11th headache was much worse, but his mother did not think him sufficiently ill to be sent to bed. On February 12th at 6 A.M. he began to rave, and he was unconscious by 7 A.M., when he was seen by Dr. Flood. Later during that day he regained consciousness, and complained of seeing double, and then his mother noticed that he had a squint.

Previous History.—He was in the Children's Hospital in Harcourt Street two years ago, and is said to have been operated on for morbus coxæ. In his family there is no indication of any tendency to tuberculosis.

On Admission there was retraction of the head and rigidity of the neck muscles to such an extent that it was not possible to flex the head. There was extensive naso-labial herpes. The movements of the chest wall were normal, and there was perhaps slight retraction of the abdomen. The spleen was not enlarged; there were no spots, and I could detect nothing abnormal in the chest or abdomen. The temperature varied from 100° to 103° F. during the first week in hospital, and then gradually settled down, falling about 0.2° F. each day till it became normal on March 13th. It remained practically normal till the 22nd with one exception, when it rose rapidly to 104°, but fell in the course of eighteen hours to 98.4° again. On March 23rd and every second day till April 6th, the temperature rose some degrees, while o the alternate days it remained subnormal.

* Read before the Section of Medicine of the Royal Academy of Medicine in Ireland, May 18th, 1900.

Briefly, therefore, it may be stated that during the early weeks the course of the temperature was like that of typhoid fever, but during the later it simulated tertian ague. Since April 6th the temperature has been practically normal.

On March 12th Mr. Benson examined his eyes and found that the right disc was more vascular than the left, the edges everywhere slightly hazy, and the veins a trifle large and dark. The left disc was clear everywhere at the edge except above; there was thus very slight optic neuritis, more marked in right eye.

On March 13th Kernig's sign (see Fig. 1) was present. Any attempt at extending the limbs made him cry with pain.



Fig. 1.—Case II: Kernig's sign.

On March 15th his temperature ran up to 104°, and he vomited, moaned, and complained of his head, and passed a restless night, but the following day he was as well as usual. He became greatly emaciated during his illness, but since the temperature became normal he has gained flesh. He is now in excellent health, the strabismus has disappeared, and the reflexes, superficial and deep, are quite normal, and he left the hospital on May 19th. In this case there was constipation throughout, and the Widal test was negative.

CASE III.—G. McS., aged 20, a checker, was admitted about 9 P.M. on Friday, March 2nd in an unconscious condition.

Previous History.—I subsequently ascertained from his father and his employer that he was apparently perfectly well till the previous Wednesday morning, when during his work he complained of his head and a feeling of sickness. His employer recommended him to go home, to take some hot rum, and go to bed. On Thursday he heard he was better, but on Friday so much worse that Dr. Byrne was sent for, and he recommended his immediate removal to hospital.

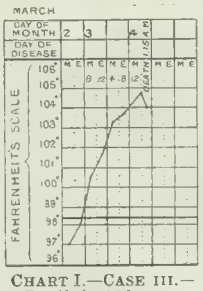


CHART I.—CASE III.—Death in 86 hours.

Condition on Admission.—He could be roused sufficiently to say that he had very violent pain in his head. He had no herpes, but there was retraction of his head and rigidity of his neck muscles. He had no indication of any pulmonary or abdominal disease, no cardiac hypertrophy, and no increased arterial tension. He had retention of urine and abolition of the knee-jerks.

After-History.—On March 3rd, while drawing off the urine in the morning, my resident pupil, Mr. Wilson, was surprised to hear the air whizzing into his bladder as the urine escaped. This rather rare phenomenon is due to the complete paralysis of the bladder. The urine was loaded with lithates, and contained a large amount of albumen. The course of the temperature is shown in the chart. On the night of March 3rd he was comatose, cyanosed, and bathed in perspiration, and he died at 1.15 A.M. on March 4th, twenty-eight hours after admission and about three and a-half days from the commencement of his illness. A *post-mortem* examination was not permitted, and I regret that I did not make a lumbar puncture.

CASE IV.—R. M., aged 22, a cook residing in Wellington Road, was admitted on March 2nd, complaining of severe headache and not feeling well.

Previous History.—She had a rigor the previous day at 4 A.M., followed by headache.

Condition on Admission.—When admitted some thirty hours later, at 9 P.M., March 2nd, her temperature was 102° F. She passed a restless night, and during the following day she was vomiting and suffered much from her head.

After-History.—On March 5th her headache was still very violent, and there was constant contraction and relaxation of the occipito-frontalis muscle. There was also pain and stiffness down the spine, and very abundant naso-labial herpes. On March 6th diplopia and convergent

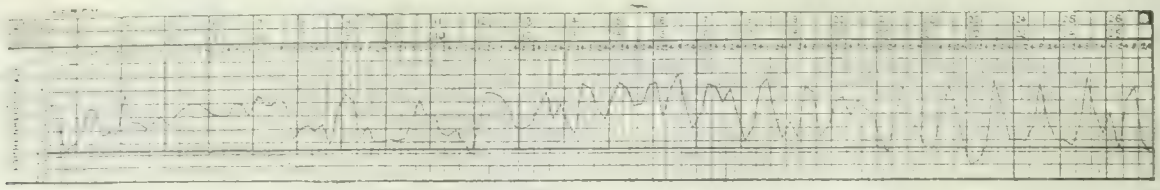


CHART II.—CASE IV.—At first irregular, later with daily elevation, subsequently normal. Recovery.

strabismus were present, and on March 7th retraction of the head and rigidity of the neck muscles. The pupils were slightly unequal, and there was some difficulty in breathing. On March 9th, the eyes were examined by Mr. Benson, who noted "slight œdema of the disc, left most marked, very considerable tortuosity and congestion of the veins, even out to their finer branches; no masses of exudation or haemorrhages anywhere visible: slight optic neuritis; venous congestion marked."

On March 13th there was complete loss of power in right external rectus. Kernig's sign was present; she had had severe pain in left shoulder for some days past. On March 17th the respiration was superficial, quick and snatchy. There was twitching of the occipito-frontalis, and the alæ nasi were working. The lips and tongue were rather dry, the pulse 102, the heart sounds good. There was stiffness and pain in left shoulder, and pain on pressure over the skin in the lumbar and dorsal regions. There was tremor in the lower extremities, but no loss of control over the bladder or rectum. There was no albumen or sugar in the urine, and no diminution of the chlorides. The temperature (see Chart II), which during the earlier days of her illness was fairly regular, varying from 101° to 103°, became distinctly remittent from March 20th till April 7th, when it became normal, and remained so. In the morning, during this remittent period, she felt perfectly well, but towards 1 or 2 P.M. the temperature commenced to rise, violent headache and vomiting set in, and persisted for some hours till the temperature became normal again. Throughout her illness her pulse rarely exceeded 100, and her respirations averaged 26. Double vision persisted after the temperature became normal, but she gradually regained power over the external rectus and when leaving the hospital had practically recovered full control.

CASE V.—A. B., aged 13, was carried into hospital in a very stupid condition about 4.30 P.M. on March 21st. He could give no account of himself. The temperature was 99.2° F., the pulse 88, and the respirations 28. His face was flushed, he was noisy and a little delirious. My resident pupil, Mr. Wilson, did not notice anything else abnormal. Within half an hour after his admission he suddenly became cyanosed, his pulse became weak, and he died at 5 P.M. When I saw the body at 11 P.M rigor mortis was present. There was well-marked *post-mortem* lividity, but no herpes. Dr. Littledale kindly obtained some blood serum tubes, which I inoculated with some fluid removed by lumbar puncture, and he kindly undertook the subsequent examination of them. The fluid I removed was straw-yellow in colour, and almost quite clear. Permission to make a *post-mortem* examination could not be obtained.

CASE VI.—M. Q., aged 16, was admitted on April 17th.

Previous History.—Her mother stated that on April 14th she began to suffer with headache, vomiting, and loss of sight. She was a little easier on that night, but on April 15th she vomited every time she took a drink, and lay all day on her face, with her head thrown back and her eyes in a fixed stare. She was restless and delirious at night. On April 16th she complained of severe pain in abdomen and back, had a very restless night, as she was vomiting and delirious, and was sent into hospital on April 17th



Fig. 2.—Case VI; retraction of head and strabismus.

Condition on Admission.—There was great retraction of the head (Fig. 2), marked opisthotonos, so that if put on her back she rested on the occipital and gluteal regions. There was abundant naso-labial herpes, weakness in both external recti, and double vision. Kernig's sign was not elicited till the limb was nearly fully extended. The knee-jerks were slight, marked flexion of lower extremities.

An April 18th there was tenderness on pressure along the spinal column. Kernig's sign was well marked in the left lower extremity. She was more sensible, and was asking for whisky and water to make her warm. The urine contained a trace of albumen, but no sugar. Chlorides were completely absent. She had been grinding her teeth a great deal.

On April 19th there was a very extensive herpetic eruption over the upper and lower lips.

On April 20th the albumen had disappeared and chlorides were present in the urine.

On April 26th she cried bitterly, complaining of pains all through her. The fundus of the right eye was examined, and it was found that the outline of the disc was almost invisible, and that the vessels were injected. Since admission she had frequently at night wakened up with a sudden shrill scream, at first "Oh, ma, ma," but subsequently it approached in its suddenness to a siren. During the next twelve days she suffered considerably from headache, pains in her back and extremities.

On May 8th large coarse involuntary movements occurred in the left arm and leg, while the right arm and leg were rigid and the latter extended. During the day she had fits of screaming. At 11.30 P.M. she was unconscious, but the conjunctival reflex was present, and the pupils contracted on exposure to light. She was very restless during the night, continued screaming till 2.20 A.M., when she went to sleep and slept for two hours. At 4.30 A.M. she took ʒv of milk, and then passed apparently into a heavy sleep, and has remained in that condition almost from that date to May 18th. The conjunctival reflex was generally absent. The pupils contracted on exposure to light. The teeth are firmly clenched, and a little milk introduced oozes out again. Not a particle of nourishment has been swallowed for the past ten days. If the skin be tightly pinched she moans a little and moves to a very small extent. Some foul-smelling fluid trickles out of her mouth. The evacuations are passed under her. She has been fed by nutrient enemata during these ten days. Her pulse has increased in frequency from 84 to 120, her respirations continue quiet, and her temperature is generally 101° in the evening and lower in the morning. For the past couple of days she has occasionally opened her eyes, but otherwise her condition is practically unchanged. There is well-marked strabismus, and knee-jerks are absent.

After the above note was written she remained in a semiconscious condition, apparently deaf, absolutely unable to swallow, and with partial right hemiplegia. Gradually becoming weaker and more emaciated, she died on June 15th.

CASE VII.—T. Q., aged 5 years, brother of the previous patient, was admitted on April 18th. He had been ill for two days before with headache, pain in the back of his neck, and vomiting.

Condition on Admission.—He had marked retraction of the head, and herpes was just appearing on his lower lip. He lay in bed turned three-fourths over on his chest. There was extreme retraction of head and arching of the back, and the thighs flexed on his abdomen. The pupils were equal, and their movements apparently normal. Kernig's sign was present. The urine contained neither sugar nor albumen, and chlorides were present.

On April 20th he was almost incessantly screaming. There was extreme retraction of the head, so that it formed an acute angle with the back, and the chin was pointing upwards. The thighs were flexed on the abdomen. An ophthalmoscopic examination showed a haziness of the outline of the disc, but no pronounced optic neuritis.

At times he has become pale, cold, collapsed, and looking as if he were dying, and in a few hours' time his colour has been good. His pulse is easily areated, and he is warm. He has not passed for any length of time into the unconscious condition of his sister. The temperature, which has been very irregular, is now, I think, settling down. He is sleeping well at night, and taking nourishment fairly well.

June 15th. He has made an excellent recovery.

I shall now briefly refer to a few points.

Etiology.—Numerous outbreaks have occurred on the Continent and America, while England has escaped to a remarkable extent. The outbreaks have generally appeared as waves passing over a district, and not returning for years.

Age.—The incidence is chiefly on children and young adults. It rarely occurs after 35.

Season.—It is most common in spring. It has been thought to follow in the wake of cholera and measles, and to be closely connected with pneumonia.

Bacteriology.—Evidence is steadily accumulating that its immediate exciting cause is the diplococcus meningiditis intracellularis. It has been suggested that this organism may be found in the nasal secretion, and that by this route it probably reaches the brain. I have examined the secretion in two cases; in one there were numerous diplococci, in the other

they were very few. I do not think they were the diplococcus intracellularis.

Diagnosis.—The onset is sudden and definite. The patient can fix to the hour the time that he was seized with the headache.

Temperature.—There is no constant type. In some cases it resembles typhoid, in others malaria.

Decubitus.—The patient generally lies on his side with his head retracted, chin pointed, and lower extremities flexed on the abdomen.

Kernig's sign has been present in all the above cases in which I have looked for it. I have tried patients with various other diseases, but never elicited it. I have noticed it as early as the third day, and it has been present even after convalescence has set in, diminishing as the patient got well. I have not been able to elicit a corresponding spasm in the upper extremity, though I looked for it in some of the cases.

Knee-jerk has been diminished or absent; never exaggerated.

Eruptions.—Four of the 7 had well-marked naso-labial herpes. In 2 of the remaining 3 death occurred almost too soon to allow of the eruption to appear, and 1 I did not see till towards the end of the illness. None of the cases had herpetic eruptions in other parts and none had the purpuric eruptions so common in the 1866-67 epidemic.

Eye.—Most of my cases had strabismus and double vision, always due to the external rectus being involved. In the 4 who have recovered, full control of the rectus has been regained. I have seen none of the purulent infiltration of the cornea, nor of the ophthalmia which so seriously affected sight in 1867. When the fundus was examined there was always some involvement.

Urine.—Albumen was present in 2 cases, and in 1 there was complete absence of chlorides for a short time—a point of some interest on account of the connection supposed to exist with pneumonia.

Lumbar Puncture.—Professor Osler speaks very highly of this as a diagnostic agent.

Prognosis.—This depends very much on the epidemic; 3 of the 7 cases died, and 1 is still in hospital. Dr. Grimshaw considered that children have a better chance than adults, at least many of the children admitted to Cork Street Fever Hospital under his care in the epidemic of 1866-67 recovered, while 80 per cent. of the young constabulary recruits sent to Steevens's Hospital, and also under his care, died.

Treatment.—I have applied ice to the head and evaporating lotions. Trional, bromides, and morphine have been used to relieve restlessness and procure sleep. Calomel has not been administered except as a purgative. The patients, when suffering pain in the trunk or extremities, have often expressed themselves as greatly relieved when rubbed with a chloroform and camphor liniment. If symptoms suggested a cardio-respiratory failure from pressure, I would resort to lumbar puncture with a view to diminishing the pressure by the removal of cerebro-spinal fluid.

PATHOLOGICAL REPORT BY DR. LITTLEDALE.

Dr. Parsons gave me a syringeful of fluid which he had drawn off *post mortem* from the spinal canal of one of his cases. This fluid was very limpid and only slightly turbid, the turbidity being due to the presence of a few polymorpho-nuclear leucocytes in a degenerate condition—that is to say, their cell protoplasm was broken up and they had lost their circular shape. Cover-glass preparations were made from the fluid and stained with carbol fuchsin.

These cover glasses showed the presence of diplococci composed of two hemispheres, with their flat surfaces in close apposition, so that with an intense stain like carbol fuchsin they may easily be mistaken for a single large coccus. They had no capsules as a rule, but what looked like a capsule was observed in two other cases. They were present in very small numbers, lying either inside the body of the polymorpho-nuclear leucocyte, or just as often free in the spinal fluid. Their size was very variable, being on an average the size of the gonococcus, but some of them were three or four times as large, while others were much smaller than the gonococcus. They stained feebly even with carbol fuchsin, and were absolutely decolorised by Gram, however long or intensely stained with the aniline-water violet.

Preparations from Loeffler's serum cultures two days' old showed a central blue granule in some of the cocci when stained with Neisser's acetic-methylene blue and Bismark brown. No other organisms could be detected in these preparations, which were stained in several different ways.

When the spinal fluid had been kept at 37° C. for twenty-four hours it showed a considerable increase of the organisms in the fluid. Cultures were made on the following media all under aërobic conditions:

1. Loeffler's serum (horse serum, three parts; 2 per cent. glucose broth, one part).
2. Hydrocele fluid glucose broth, inspissated (hydrocele fluid, three parts; 2 per cent. glucose broth, one part).
3. Plain inspissated hydrocele fluid.
4. Horse serum agar.
5. Glycerine agar.
6. Ordinary agar.
7. Ascitic fluid agar.
8. Glucose agar.
9. Ordinary beef peptone broth.
10. Glucose broth.
11. Glucose formate broth.
12. Litmus milk.
13. Liquid horse serum.
14. Ordinary gelatine.
15. Glycerine gelatine.
16. Wort gelatine.

Growths appeared on the first six media only, and in the same order of intensity.

Loeffler's Serum.—The first cultures were made by simply squirting several drops of the spinal fluid from the syringe on to the sloped surface of Loeffler's serum. These were put into the oven and kept at 37° C., but no sign of growth had appeared at the end of twenty-four hours. However, when examined again at the end of forty-eight hours, a copious growth was visible all along the line where the drop had run. All the inspissated serum used was perfectly white and opaque. The growth appeared as a glistening confluent streak, quite colourless—that is to say, the same white colour as the medium. Its notable features were the very intense lustre and absolute confluence, no isolated colonies being visible. It was extremely viscid, and could only be removed with difficulty with a platinum needle, pulling out into a long mucus-like thread. When stained it proved to be a pure culture of the same organism as that found in the spinal fluid, agreeing in every way—the variability of size and absolutely negative reaction to Gram. When these cultures on Loeffler's serum have passed through several stages of subculture they lose their viscidity almost entirely, and when such a growth has been several days in the oven it becomes a yellowish colour.

Hydrocele Fluid.—On inspissated hydrocele fluid and Loeffler's serum made with this, the growth was just the same, but more easily visible on the former, owing to the semitransluscency of the medium. There was never any liquefaction of the serum.

Glycerine Agar.—Subcultures on sloped glycerine agar also gave a thick confluent shining growth at the bottom of the streak, tapering off at the top to a few small isolated colonies. These colonies were also of a glistening character, perfectly circular with an opaque centre, spreading out to a thin transparent margin.

Agar.—On agar slopes the first attempts to grow the organism failed, but subsequently successful growths were obtained. It grew very feebly on agar, and even when a large quantity of a growth from Loeffler's serum was smeared over the agar surface, two or three colonies similar to those on the glycerine agar were all that ever appeared.

Serum Agar.—Serum agar plates gave a very luxuriant growth after twenty-four hours at 37° C. The colonies grew both superficially and in the depth of the medium. The surface colonies were precisely like the colonies described on the glycerine agar, and showed a tendency to spread out over the surface with a translucent margin, otherwise they presented nothing characteristic. The deep colonies, however, were very characteristic. They were either round or lanceolate, looking with Leitz Obj. 3 and Oc. 3 as if composed of coarse granules, but the chief feature was the presence of numerous small buds on the parent colony, giving it sometimes a mulberry appearance, at others like barnacles on a stone.

Glycerine agar plates failed on the first attempt, and subsequent plates only grew after forty-eight hours at 37° C. The colonies on these latter were precisely the same as those on the serum agar, but were much less numerous.

Other Media.—No growth could be obtained on any of the other media kept at suitable temperatures.

Inoculations.—Inoculations were made subdurally and into the spinal canal of rabbits by injecting a broth emulsion of a growth from Loeffler's serum, but no lesions were found in the only animal that died, nor could the diplococcus be recovered from the seat of inoculation. Intraperitoneal inoculation of a mouse had no effect on the animal.

Besides this case, I have assisted Dr. O'Sullivan in Trinity College Laboratory in investigating some five or six others which gave results precisely the same as the above in every case.

The same organism was always found and always quite pure, and there can be no doubt that it is the same organism as that described by Weichselbaum, who kindly sent us some cultures for comparison purposes, and more recently by Councilman, Malory, and Wright, and by Osler.

Attempts to isolate the organism from the nasal secretion of several cases failed, and examination of stained preparations of the nasal secretion from infected and healthy persons only showed what looked like the diplococcus meningitidis in one of the infected cases. They were hemispherical cocci decolorised by Gram and not lying in the polymorpho-nuclear leucocytes, and were only found after a long search.

It seems quite evident that the organism described has no relation to the diplococcus pneumoniæ, but it has a great similarity to the gonococcus in its shape, intracellular arrangement, and its growth on serum agar.

There is considerable difficulty in keeping this organism alive, but it can be done by transplanting it on Loeffler's serum every three or four days, and keeping it constantly at 37° C. Cultures on Loeffler's serum kept at 37° C. were alive after fourteen days, and grew on transplantation.

A CASE OF HÆMORRHAGIC PANCREATITIS.

BY

JOHN C. UHTHOFF, M.D.Lond., M.R.C.P., and EDWARD F. MAYNARD, M.D.Edin.

THE following case was read before the meeting of the British Medical Association held at Brighton in March of this year, but the details have not been published hitherto; as these cases are, however, being regarded with an interest only equalled by the increasing interest taken in all abdominal cases of recent years, it has been thought advisable to bring the following particulars forward.

The patient was a man, aged 77; very stout; his general health had been good, but latterly he had complained somewhat of symptoms of "indigestion." He was first seen on January 31st, 1900. He had felt well on getting up in the morning, and ate a bloater for his breakfast. The bowels acted as usual about 9 A.M. About 11 A.M. he was suddenly seized with pain in the abdomen, followed by sickness and collapse. The vomiting continued more or less constantly until death, the vomited matter consisting chiefly of "coffee grounds;" at first it was thought that the blackish particles might be portions of prunes which he had eaten the previous night. In the evening he was somewhat better; the abdomen was tender, but not distended; there was a slight hardness in the right iliac fossa, but no tenderness here, and the whole abdominal wall moved normally.

On February 1st the symptoms continued much the same. The abdomen was slightly distended. The possibility of intestinal obstruction was taken into consideration, but no surgical procedure was thought advisable. In the evening he became suddenly collapsed, but recovered again after two or three hours. The temperature was 99° to 100°; the pulse 120.

On February 2nd his condition remained unchanged, he having quite recovered from the collapse of the preving evening, but in the evening this recurred, and now he had a running, uncountable, and irregular pulse, with subnormal temperature and profuse perspirations.

He again rallied from this attack of collapse, but never completely, and during the following afternoon (February 3rd) he had a third attack of collapse from which he did not rally, and to which he succumbed during the night. No further abdominal symptoms than those already mentioned presented themselves. As regards treatment, nutrient injections were given and hypodermic injections of strychnine and digitalis.

Necropsy.—The abdominal wall was very fat, about 1 inch in thickness. On opening the peritoneum numerous small white flat spots (fat necrosis) about the size of two pins' heads were seen on the intestinal peritoneum and the surface of the omentum. No sign of peritonitis was encountered until the lesser sac of the peritoneum was opened, when some blood-stained fluid was found, and a large, bulging, dark purple, cystic-looking object was seen pushing the peritoneum forwards; this object was about the size of an orange, and was the head of the pancreas. The entire organ was firmly adherent to adjacent structures, and was with very great difficulty removed whole. Scattered over its surface throughout its whole length were small spots of fat necrosis; the organ was considerably enlarged, in thickness rather than in length, especially its head. On making a section the capsule was observed to be thickened and tough. One large hæmorrhage about 3 cm. in diameter was seen in the head of the gland, and smaller hæmorrhages were scattered throughout its entire length, with the exception of about 2 inches at its tail end; there was also a hæmorrhage on its inferior surface immediately under the capsule, this being most marked on the middle third of the body, and also another on the posterior aspect of the head. Deposits of yellow fat were found taking the place of normal tissue in many parts of the gland.

By an unfortunate mistake the specimen was not properly preserved for microscopical or bacteriological examination.

NOTES ON A CASE OF ACUTE PANCREATITIS COMPLICATING MUMPS.

BY HENRY W. JACOB, M.A., M.D.,
Great Malvern.

I HAVE recorded this case on account of the rarity of this complication of mumps.

J. S., aged 10 (schoolboy) is the only child of healthy parents. He has occasionally suffered from bronchitis, and had subacute rheumatism with slight endocarditis (?) in 1899, from which he recovered completely. On March 31st, 1900, he complained of sore throat, headache, and general *malaise*, accompanied by pain and stiffness about the angles of the jaw, especially on the left side. On examination the left parotid gland was found to be swollen and tender; there was also some tonsillitis. His temperature was 100°, and his pulse 90. On April 2nd the temperature was 101.4°; there was much more pain in the parotid glands, and the mouth could only be opened a little and with difficulty; both parotids were tender and considerably enlarged; the tongue was covered with a pasty white fur, and the skin was dry and hot. The diagnosis was sufficiently obvious from the boy's symptoms and appearance, but it may also be noted that several boys from the same school had recently been suffering from mumps.

On the morning of April 3rd he was sick, and continued to vomit at short intervals during the day. The vomiting was so severe that the smallest quantities of milk and water were rejected. During the day he complained of some pain in the stomach, and about 10 P.M. he was seized with a very violent pain in the upper part of the abdomen; the vomiting still continued, and after each attack the pain was slightly less for a brief period, but almost at once returned in its full intensity. On examination at 12 P.M. I found him lying on his back in a condition of evidently acute suffering; but the knees were not drawn up, and the abdomen did not appear to be much distended generally. The temperature had run up to 103.8°, and the pulse to 120; the tongue was covered with a thick, white creamy fur, the skin was very dry, and the face wore an expression of intense anxiety, especially when any attempt was made to examine the abdomen. The swelling of the parotids was now distinctly less than it had been on the previous day, and pressure over the parotid region did not appear to cause so much pain as before; the submaxillary glands were, however, quite tender and somewhat enlarged, a fact which I did not observe on previous examinations.

On examination of the abdomen no increase of liver dulness could be detected, although the edge of the liver could be felt and was tender to the touch. Below the liver a narrow area was clear on percussion, and was not markedly tender to pressure; below this clear area and separated by it from the lower border of the liver a sausage-shaped mass could be distinctly felt, which was exquisitely tender on pressure, and extended from within the epigastrium slightly upwards and to the left into the left hypochondrium, exactly in the position in which one would expect to find an enlarged pancreas. On pressing as firmly as could be borne over this mass a dull note was elicited by percussion, but when the finger percussed was only lightly laid on the surface a somewhat resonant note could be heard, indicating that the mass was in all probability situated behind the stomach.

The swelling did not move with respiration, but could be slightly moved between the hands. The right-hand termination of the swelling could not be well mapped out; in the right hypochondrium the note was clear on percussion.

There was no pain or tenderness in the lower region of the abdomen, and except for the tenderness noted in the lower border of the liver all pain and tenderness was strictly limited to the dull area beneath which the sausage-shaped swelling could be felt. I arrived at the conclusion that the mass was an enlarged pancreas which was undergoing so-called metastatic inflammation in the course of a case of mumps just as in certain cases the testis is similarly affected.

Turpentine fomentations were applied to the seat of pain, and one grain of calomel and three grains of Dover's powder given; the powder was administered in very hot water; a little later sips of hot water were given, a small quantity of bicarbonate of soda being dissolved in the hot water; the patient had no vomiting after the administration of the medicines until several hours later, when he vomited once: a diaphoretic mixture was given, and a dose of castor oil (half an ounce) was ordered to be given in the morning. This was done, and the patient had two free evacuations of the bowels that day, the motions being copious and offensive.

After the bowels had acted, the pancreatic swelling remained unaltered, but in consequence of diminution of tenderness it was possible to determine the outlines of the organ with certainty. The temperature had fallen to 100.2°, and the parotid glands appeared to be almost normal. The pain in the pancreatic region continued to be somewhal severe all day, but the vomiting did not recur.

On Thursday, April 5th, the pain had quite gone, and the temperature had fallen to 97.8°, but for several days after this the pancreatic enlargement could still be felt, and some tenderness elicited on pressure.

On April 10th (one week from the onset of the abdominal complication, and eleven days from the commencement of the attack of mumps) all tenderness had disappeared, and it was no longer possible to make out any abnormal condition in the abdomen. The urine was examined both during and after the attack, and it contained no albumen or sugar.

The boy made an excellent recovery, and is now (April 20th) apparently quite well, although slightly anæmic; his appetite is good, and his digestion does not appear to have suffered from the attack. It will be interesting to observe whether any symptoms indicative of atrophy of the pancreas occur in the subsequent history of the case. At no time in the course of the case was there any orchitis.

The case appears to me to be of interest for several reasons: First, the rarity of the affection; I cannot find any record of acute pancreatitis occurring as a complication of mumps. Secondly, the rapid onset and violent character of the com-

plication; also the premonitory vomiting. Thirdly, the subsidence of the parotitis with the development of the pancreatic affection. Fourthly, the absence of any apparent after-effects up to the present.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

GENERAL EMPHYSEMA COMPLICATING FRACTURED RIBS.

ON January 22nd, at 11 P.M., I was sent for to see a man, aged 80, whom I found in bed, suffering general discomfort, pain on the right side, and slight difficulty of breathing. His appearance was remarkable, the skin of the face, neck, and thorax being distended like a sausage. I was informed that the previous day (about thirty hours before my visit) he fell heavily against the corner of a table, and since then had been in much pain. The distension, however, which chiefly alarmed his friends, had attained its present dimensions only a few hours before my arrival.

I found a circular bruise, 4 inches in diameter, in the mid-axillary line, about the level of the sixth and seventh ribs, at which spot, apart from emphysematous crackling, I had no difficulty in detecting crepitus from fractured ribs; he had cough and slight difficulty of breathing, the respirations being shallow and quickened. There was no hæmoptysis nor pneumothorax. The pulse was 100 and the temperature normal. With the exception of the forehead and legs, emphysematous crackling and percussion resonance were everywhere present, the fingers sinking $\frac{3}{4}$ inch into the skin, and causing pain on pressure. The swelling was limited above by the superior occipital ridge and temporal fascia posteriorly and laterally, in front, by the brows, the forehead being free; below, it was bounded anteriorly by Poupart's ligament, and posteriorly extended to the sacrum; it was least marked on the abdominal walls and back, and most apparent on the face, neck, and thorax.

The ribs were treated in the usual manner by strapping, and morphine gr. $\frac{1}{4}$ was given hypodermically to relieve pain. I saw him daily, and with the exception of a slight rise of temperature (100° F.) and a few moist *râles* about the fourth day, there was no lung complication, and in ten days the emphysema had entirely disappeared. He made a good recovery from the immediate effects of his injury, but some weeks subsequently sank from general debility.

I regret that I was unable to take a photograph, but the limited dimensions of his room and the position of the bed prevented my doing so.

The infrequency of similar cases, together with the absence of some of the more prominent symptoms usually associated with perforation of lung by fractured ribs seems sufficient reason for noting the case. A somewhat similar case under the care of Mr. Bryant was reported in the BRITISH MEDICAL JOURNAL of January 26th, 1884, in which he punctured the skin in several places to relieve urgent symptoms, dyspnœa, etc., with success. This procedure, however, in the present case was uncalled-for.

Two points of interest about the present case are the absence of hæmoptysis and of pneumothorax. The former I am unable to account for, but as regards the pneumothorax it is possible its absence may be accounted for by the presence of pleuritic adhesions, as I had on two previous occasions attended him during attacks of broncho-pneumonia.

J. F. HEISE ELLERTON, M.D.Brux., M.R.C.S.Eng.
Leamington.

THE SO-CALLED "STAVE OF THUMB" OR BENNETT'S FRACTURE.

I WAS much interested in Dr. Beatson's paper on Stave of Thumb, or Bennett's Fracture, as he calls it, in compliment to the surgeon who first drew attention to it. I met with a similar accident to my left thumb just a year ago by a fall from a bicycle. It so happened that I had some time previously had the same hand radiographed for amusement, and a comparison of the two prints clearly shows the displacement of the



Fig. 1.—Uninjured.



Fig 2.—Fractured.

shaft of the bone. At first I did not diagnose it, on account of the swelling and the absence of crepitus, but the latter could be detected about a fortnight after the accident. As in the case of Mr. Beatson's patient, my chief inconvenience lay in the fact that I could not oppose the thumb to the other digits, but, as it was my left hand, I did not suffer so many discomforts. The power to oppose the thumb and fingers did not return for upwards of three months. Professor Bennett states that the injury in the large majority of the cases is to the right, and that it is rare on the left side. In my case the injury was practically untreated, and now that union has taken place in a faulty position, a characteristic deformity remains, that is, the proximal end of the shaft of the bone is drawn upwards and slightly forwards by its extensor tendon, and appears as a swelling in the space between that tendon and the tendon of the extensor secundi internodii, thus obliterating the hollow which was formerly, and perhaps is still, known as "the students' snuffbox."

Redland Road, Bristol. JAS. E. PRICHARD, M.B.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LIVERPOOL ROYAL INFIRMARY.

CASE OF HARE-LIP AND UNUSUAL TUMOUR OF PROLABIUM, ETC.[1]

(Under the care of Mr. RUSHTON PARKER.)

ON July 5th, 1899, Dr. G. C. Walker brought to me to hospital a male child, 12 days old, having double hare-lip and an unusual state of the parts involved in that defect.

In place of the appendage composed of prolabium and premaxilla usually found attached to the nose in cases of double hare-lip, there was a globular tumour in the same situation, covered with white skin, and in size about half the width of the mouth. The nose was pushed up and flattened, with the nostrils spread widely apart by the deep attachment of the tumour (Fig. 1).



Fig. 1.—Deformity at age of 12 days.

In order to repair the hare-lip the skin and mucous coverings of the growth were preserved, while the tumour itself was removed. Its composition was purely fatty, a firm, and granular, and after its removal there was a small triangular gap between the two bones of the upper jaw in front. In other respects the palate was complete.

The right cleft alone was closed on this occasion, and the child was photographed (Fig. 2) and taken home. A day or



Fig. 2.—Same day after first operation.

two later it became very ill, and nearly died, but got quite well after the bursting of an abscess at the side of the nose.

Nothing further was done till September 13th, when the child was nearly 12 weeks old and quite strong and well. Though its appearance was most unsatisfactory it had become less so than on completion of the first operation, and so the left lip cleft was closed. But the result was hideous and there appeared no prospect of acceptable improvement, as the prolabium was so bound down to the gap in the upper jaw. So eight days later, at the age of 12½ weeks, the whole prolabium was cut away and the outer edge of each original cleft refreshed with a suitable tail of red lip projecting to allow for contraction. Each side of the lip was widely freed from the upper jawbones and the excessive nasal frenum narrowed. Good healing took place and the infant's face became presentable, though still having far too much width of nose and separation of nostrils. A photograph taken a month later shows the condition exactly (Fig. 3). The child continued in



Fig. 3.—Result at 4 months, a month after third operation.

excellent health all the winter and manifested an intelligent

[1] Read at the meeting of the North Wales Branch of the British Medical Association, April 20th.

vivacity which amply compensated for the deformity. He was brought to me again on April 2nd, 1900, when his father begged me to do something to improve the nose (Fig. 4). This



Fig. 4.—Nose at age of 9 months. Showing first incision at fourth operation.



Fig. 5.—Result same day at end of fourth operation.

I did two days later by cutting out the central scar of the upper lip down to the nasal septum, freely encroaching upon the nasal frenum so as to leave only a narrow strip on each side, and by slitting the tip of the nose and paring the edges. When the gap was sewn up the nostrils came much nearer together, and the nose assumed an average width. The wound healed well and the child was taken home in a week. The photographs were taken for me by Mr. Thelwall Thomas.

RATS AND DISEASE.—According to the Philadelphia *Medical Journal*, the United States quarantine officers, the State health officers, and the local health officers of Astoria, Ore., have issued an address to the citizens of the Pacific Coast, in which they urge the necessity of poisoning all the rats about the homes of citizens as a precautionary measure to prevent the bubonic plague getting a foothold in that country. The address states that it has been found that rats not only catch this disease themselves, but are the most active agents of spreadin it abroad.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

ALBAN DORAN, F.R.C.S., President, in the Chair.

Wednesday, June 6th, 1900.

EXTRAUTERINE GESTATION.

THE PRESIDENT read a paper on a case of extrauterine gestation in which fœtal death occurred at the eighth month after spurious labour; abdominal section two months later.

The patient, aged 34, became pregnant for the fifth time, after an interval of four years, in February, 1899. Abdominal pains occurred early, diarrhœa caused trouble from July to the end of October, when labour pains and hæmorrhage set in, followed by septic symptoms. The outline of a fœtus could plainly be felt through the parietes. On December 12th it was removed by abdominal section. It was very fœtid, and had developed in the posterior layer of the right broad ligament. The sac was packed with gauze for a few days and then drained; the placenta came away in fragments. A fæcal fistula developed and discharged for a few weeks. For six weeks the patient did very well, then symptoms of chronic obstruction with great emaciation set in, and she died in the ninth week after operation, flatus passing to the last. Several coils of small intestine had been dragged upon by the contraction of the sac; the adhesions involved several surfaces of mesentery, which seemed to account for the emaciation, strongly marked in this case where there was but little vomiting or distension. The author dwelt on the infection of the sac, especially common in posterior tubo-ligamentary pregnancy (Taylor), on the diarrhœa observed when placenta is attached to intestine (Freund), and on the inanition caused by the changes noted in this case. As there was no true sac wall inferiorly in this form of ectopic gestation, complete extirpation of the sac seemed hardly possible. He dwelt on Dunning's case and on those collected by Jayle and Delherm, and expressed doubts as to the precise anatomical character of the sac in some of those cases. Finally, the author agreed with Taylor in preferring to pack and drain the sac, but did not know of any method of dressing which could obviate the dangers which followed the contraction of the sac wall.

Mr. BUTLER-SMYTHE said that in this particular case the fœtid contents of the sac would alone have prevented any attempt at enucleation. He considered that the patient's life had been prolonged owing to the treatment adopted by Mr. Doran, who repeatedly washed out the sac with a strong solution of iodine before closing the wound. Mr. Butler-Smythe, advocated this method in all similar cases.

Dr. C. J. CULLINGWORTH congratulated the President on his paper, and wished to endorse his opinion of the great value of Mr. J. W. Taylor's recent work on extrauterine gestation. He agreed that although the ideal method of dealing with the sac was to remove it, there were cases, such as the one under discussion, where such a procedure was impracticable. If the sac were left, free drainage was important, but he disapproved of packing the cavity with gauze, especially in the case of a necrotic gestation sac. Gauze packing was, however, useful for checking hæmorrhage, or for the prevention of secondary hæmorrhage. He considered that antiseptic irrigation of a necrotic gestation sac might temporarily deodorise but could not disinfect its walls. Moreover, irrigation had its dangers, and putrid matter might be carried through lesions in the continuity of the sac wall to adjacent structures. Irrigation as a routine practice in gynæcological surgery should be less generally adopted. He considered that Freund's view, which the author had adopted, that the diarrhœa in these cases was an indication that the placenta was attached to intestine was not always correct, and that the diarrhœa was partly the result of irritation from pressure, and was partly one of the symptoms of septic infection. This case bore out his opinion that spontaneous closure of fæcal fistulæ might always be reasonably hoped for when they were not too low down in the rectum, and when the subjects were free from tubercle or malignant disease. He did not believe that this patient's life could have been saved by any treatment.

Mr. J. D. MALCOLM had seen the patient before and during the operation, and thought that Mr. Doran had, if anything, understated her extreme emaciation and debility. The development of fæcal fistulæ within a few days of the operation proved that it would have been impossible to remove the sac. He agreed with Dr. Cullingworth that washing out the abdomen was done too frequently, but in this case, with a putrid cavity and much sloughing placental tissue on its walls, it was most necessary. As regarded the mode of death, judging by the alternate distension and flattening of the abdomen, he thought there must have been an escape of gas from the upper bowel as long as the patient lived. Thus the symptoms were not those of obstruction of the bowels, although

obstruction, with a fistula, actually existed, and death was due to exhaustion and malnutrition.

Dr. Robert Boxall had twice seen a fæcal fistula heal in the same patient when in a serious condition of ill-health from a suppurating dermoid tumour. It was an important fact that such fistulæ would sometimes heal even when the patient was seriously ill. He suggested that a rubber bag, like a child's balloon, might with advantage be substituted for gauze packing. By attaching a tube and funnel, and filling with solution, pressure could be regulated to a nicety. It could be emptied by siphoning out the fluid and easily refilled, thus avoiding the disadvantages of repacking.

The President noted that Tait's "abdominal pregnancy" was a tertiary change, as Taylor had ably demonstrated; a tubal sac burst in the first place, between the layers of the broad ligament, and afterwards this secondary intraligamentary pregnancy burst into the peritoneal cavity. Taylor distinguished a more frequent secondary form of abdominal pregnancy. The President's own case was one of the typical "posterior tubo-ligamentary" varieties of Taylor. He was relieved to find that the Society supported him in his opinion that no attempt should have been made to remove the sac. In his case the diarrhœa prevailed before the death of the fœtus, and the placenta was, in fact, attached to the rectum; these facts supported Freund's theory. Pure tincture of iodine, as Mr. Butler-Smythe observed, was an excellent application for an irremovable fœtid cyst wall. He was compelled to wash out the sac freely on account of the fragments of placenta and fæcal matter which it contained. Antiseptic lotions stimulated the exposed tissues and caused granulations to develop; yet ulceration or sloughing might occur in very sickly cases, as Dr. Cullingworth, who objected to lotions, implied. He had removed the packing within a few days. Dr. Boxall's suggestion that the sac might be prevented from too rapid contraction by means of an inflatable thin rubber bag seemed worth a trial. The fistula was low down in the rectum. In conclusion, the President feared that the operator must still depend more than he cared for on luck, as no certain method for preventing the dangers due to contraction of an irremovable sac of this kind was at the operator's disposal.

Specimens.

The following specimens were shown: Dr. W. S. A. Griffith: (1) Squamous-celled epithelioma of the cervix uteri in a very early stage; (2) squamous-celled epithelioma invading surrounding tissues like a columnar-celled variety.—Dr. H. Russell Andrews: Sarcoma of the uterus.—Dr. Hubert Roberts: (1) Large cystic fibromyoma of cervix uteri; (2) microscopical sections illustrating various forms of uterine adenoma.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Alexander G. Miller, M.D., F.R.C.S.E., President, in the Chair.

Wednesday, June 6th, 1900.

The Blood Pressure in Sleeplessness and Sleep.

Dr. Lewis C. Bruce read some observations on the general blood pressure in sleeplessness and sleep. The observations were made upon inmates of Murthly Asylum. The instrument used was Barnard and Hill's sphygmometer, and Hill's statement that "the normal general arterial pressure in the horizontal posture equals about 110 mm. Hg.," was assumed to be correct. The first points investigated were:

1. Are there any unusual conditions of blood pressure which are associated with sleeplessness in mental disease?
2. What changes occur in the blood pressure when sleep is induced in these cases by drugs?

The cases ranged themselves under two classes: (1) Sleeplessness with high blood pressure (anything above 130 mm. Hg.); (2) sleeplessness with low blood pressure (anything below 110 mm. Hg.). The drugs used to induce sleep in these patients were paraldehyde, sulphonal, trional, and potassium bromide. In (1) paraldehyde in large doses (℥ij) was found to be the most certain sleep producer. Sulphonal came next, followed by trional; potassium bromide was unsatisfactory. When sleep was induced by any of these drugs, the blood pressures always fell to 110 or below 110 mm. Hg. during sleep. In (2) paraldehyde in large doses of ℥ij acted as a brain excitant, tended to raise the blood pressure, and satisfactory sleep was never obtained. After small doses, however—15 to 30 minims—these same patients slept well. In this class trional in 20-gr. doses and then sulphonal were the most satisfactory drugs. Experiments were then made with erythrol tetranitrate in doses of 1 gr. per day in cases suffering from sleeplessness with high blood pressure, the object being to induce sleep by artificially lowering the blood pressure. Out of 9 cases, 3 were immediately and permanently benefited, 3 were very temporarily relieved, and in the remaining 3 cases the drug had no effect even in doses of 2 grs. per day. A second series of observations were made upon convalescent patients in order to throw light upon the following questions:

1. Is sleep possible with blood pressures of 130 mm. Hg. or higher?
2. What relation does the morning blood pressure bear to the evening pressure when a person is sleeping well?
3. Are there any differences in the blood pressure of the same person asleep under the action of drugs and sleeping naturally?

The results were as follows: (1) Sleep is possible with high blood pressure, but the pressure always falls to 110, or about 110, mm. Hg. after the condition of sleep is established; (2) the general blood pressure is, as a rule, higher in the morning than in the evening in a state of health, and the reverse of this holds good in some cases of sleeplessness; (3) in the drug sleep induced by paraldehyde the blood pressure falls at its lowest about 10 mm. Hg. below the habitual blood pressure of the same person when sleeping naturally. As the effect of the drug passes off the blood pressure rises again, and eventually passes to the blood pressure habitual to that person in natural sleep; in short, drug sleep does pass in some cases into natural sleep.

The paper was discussed by Drs. Clouston, Foulis, Kerr. Ronaldson, Cathcart, and the President; and Dr. Lewis Bruce replied.

Origin, Development, and Structure of the Umbilical Cord.

Dr. James Foulis read a paper on this subject. His chief object was to show that the cord itself had no covering of amnion at any period of its existence, and that the statements in the textbooks to the effect that the cord had a tubular investment of amnion were entirely wrong, the truth being that the cord proper was always within the sac of the amnion, and was a tubular prolongation of the somatopleure round the collapsed and shrivelled yolk sac. To make all these points clear it was necessary to trace from their very beginning the origin of the cord itself and of those structures enclosed in it. Dr. Foulis proceeded to show the connection between the amnion and the somatopleure folds by means of numerous microphotographs of sections of embryos of deer and sheep.

The amnion was everywhere continuous with, and an extension of, the somatopleure; and as the somatopleure itself was formed by the union of the epiblast with the somatic mesoblast, the amnion was itself an extension of those two membranes, and in the photomicrographs the amnion could be easily seen as a double-layered membrane as it passed round the dorsum of the embryo, as seen in section. Before the umbilical cord had an existence as such, the amnion could be traced as an outgrowth from the sides of the *Bauchstiel* of His, and from the somatopleure around the large umbilical foramen, now widely open. In the early embryo of the deer and sheep there was at first no such structure as the umbilical cord; but the vascular connection between the embryo and the uterus was in the form of the ventral string or the *Bauchstiel*. This *Bauchstiel* was an outward growth of mesoblast from the caudal end of the embryo towards the chorion. In its mesoblastic substance were to be found the two large umbilical veins, two umbilical arteries, with the allantois, which might be traced as a tubular outgrowth from the cloacal end of the primitive intestine, and lined with hypoblast. This *Bauchstiel*, as the analogue of the true umbilical cord, had a great share in the formation of the cord itself. To trace out the formation of the umbilical cord from the *Bauchstiel* was a difficult thing, unless the relation of the somatopleure to the amnion was constantly remembered. Transverse sections of the *Bauchstiel* showed that the somatopleure folds, of which for the most part it consisted, gave out on both sides the amnion membrane by simple extension of the somatopleure substance. The caudal fold of the somatopleure gave off the amnion just in the same way as the lateral folds of somatopleure gave it off. The whole dorsal surface of the embryo was thus enclosed within the amnion sac, which was thus attached to the sides of the *Bauchstiel* and to the margins of the large umbilical foramen round the collapsing yolk sac. It was important to notice that at the caudal end of the embryo the amnion was attached to or came off from the somatopleure at a spot between the under surface of the *Bauchstiel* and the anal orifice. At first the *Bauchstiel*, or ventral string, occupied an almost horizontal position as an extension of the caudal end of the embryo; but as soon as fluid began to accumulate within the amnion sac, the *Bauchstiel* was gradually raised up to an almost vertical position, the amnion coming off from its lateral margins being continuous with the amnion of the lateral somatopleure folds. The distal portion of the allantois gradually collapsed, while that part within the body cavity gradually became the urinary bladder.

As the result of the distension of the amnion sac in all parts by fluid, the amnion was gradually lifted off the embryo at all

parts except at the line of its attachment to the sides of the *Bauchstiel* and to the somatopleure folds round the umbilical foramen, which was now closing in round the shrunken yolk sac. The somatic mesoblastic surfaces of the somatopleure were everywhere opposed to each other; and, as they actually came in contact they adhered to each other round the yolk sac, thus shutting off the cœlom or body cavity from the false amnion sac; but it was most important to bear in mind that this closing in of the somatopleure and the adhesion of its opposed mesoblastic surfaces gave rise to a tube of the amnion sac, which was thus continuous with and an extension of the somatopleure tube thus formed round the yolk sac. No amnion at any time covered the cord or somatopleure tube thus formed; but it was always continuous with this somatopleure tube or umbilical cord at its distal end; and when the true amnion sac became more and more distended, the mesoblastic surface of the amnion at last became opposed to the mesoblastic surface of the false amnion to which it adhered slightly. The amnion thus invariably covered the fœtal surface of the placenta from which it could be easily stripped off; but, of course, it could not be stripped off the umbilical cord, because it was an extension of and part of the cord itself.

The paper was discussed by Dr. D. BERRY HART and others; and Dr. FOULIS replied.

CASES AND SPECIMENS.

Dr. JAMES CAMERON showed a case of adiposis dolorosa.—Mr. CATHCART showed (1) a patient after laparotomy for intestinal obstruction; (2) a patient after excision of gangrenous bowel after strangulated hernia.—Mr. CATHCART showed (1) a surgical operating case of polished zinc, of which the outstanding features were its compactness, portability, ease of sterilisation, convenience, and cheapness; (2) a portion of sigmoid flexure removed for new growth.

EDINBURGH OBSTETRICAL SOCIETY.

R. M. MILNE MURRAY, M.D., F.R.C.P.E., President, in the Chair.

Wednesday, June 13th, 1900.

NOMENCLATURE OF TRANSVERSE PRESENTATIONS AND VERSION.

DR. D. BERRY HART read a paper on the nomenclature of transverse presentations and of version, with remarks on the choice of the leg seized. The best nomenclature was that which divided transverse presentation into dorso-anterior and dorso-posterior positions, and each of these again into left acromio-iliac and right acromio-iliac, according as the acromion was to the left or right side. Position was the relation of the upper strait of the pelvis of that portion of the presenting part which should rotate to the front in internal rotation. In spontaneous evolution, if completed, the shoulder rotated to the front. It was better to name the positions from the acromion, as it was the presenting part often, and fitted in with the definition of position just given. The nomenclature "left scapulo-anterior," and so on, was concise, but had little else in its favour. The nomenclature of the varieties of version was very confusing, the terms applied being either descriptive of the method by which version was performed or its aim. There were three great varieties of version. The first was cephalic version, now seldom used in practice, and practically performed by external manipulation. Sir James Simpson was the first to impress the importance of aiding with the external hand. It would then be advantageous to apply the term "Simpson's combined version" to those cases where the internal hand was passed into the uterine cavity proper to seize a foot, the external hand being also used in the process. This was the method for fixed cases. Braxton Hicks, however, perfected version so far as the combined internal and external method was concerned. Barnes undoubtedly helped in this evolution by the valuable description he gave of it in his obstetric operations. Hicks's method, where the internal fingers did not pass beyond the presenting parts, while the external hand aided the manipulations, should be called "Hicks's podalic." Thus there were three clearly-defined varieties of version, as follows: Combined external—cephalic; Simpson's combined version—podalic; Braxton Hicks's bipolar version—podalic. In the second and third one might for shortness speak of Simpson's podalic and Hicks's podalic. As to the choice of leg seized, Simpson advocated the seizure of the further knee, that is, of the knee opposite the presenting shoulder. Galabin advocated the near foot as a rule, while Nagel had given by far the most complete discussion of that subject. The whole question, however, was not yet thoroughly threshed out.

Simpson's paper was written *apropos* of a case of transverse presentation delivered by him at the Edinburgh Maternity in 1845. The position was dorso-posterior, right acromio-iliac. Simpson seized the further knee, and delivered. He apparently delivered the head by the Smellie grip. He seized the further foot because he wished to rotate the body on a transverse axis as well as on its longitudinal axis. The latter rotation, he held, must raise the presenting shoulder, that is, turn the fœtus. A dorso-posterior transverse was the favourable one for the seizure of the upper knee. Simpson, in this paper, did not discuss the proper seizure in dorso-anterior positions. It was of some interest to note that Martin Barry was the house-surgeon, and that "during the labour the patient was bled and had an ounce of antimonial wine exhibited in drachm doses to promote the dilatability of the cervix uteri. Shortly before turning, ʒj of laudanum was exhibited in order to moderate the uterine contraction and facilitate the process of turning." This was two years before the discovery of chloroform.

The next important paper was by Galabin, of Guy's Hospital. His conclusions were as follows:

(1) The rotation of the fœtus on its antero-posterior axis by means of the lower leg is generally effected at a greater mechanical advantage, and therefore by a less force, than the combined rotation on its transverse and longitudinal axis by means of the upper leg; while it is sufficient to produce elevation of the shoulder, unless the fœtus is dead and flaccid or uterine rigidity extreme, and the upper leg may with no diminished advantage be afterwards brought down if required. (2) If the lower leg be taken and a noose placed upon the prolapsed arm, the operator has complete command of the anterior arm in the subsequent extraction. (3) By taking the lower leg the more usual dorso-anterior position is not converted by the version into a dorso-posterior position, a point of very minor importance, but one which may, in some cases, be worthy of consideration.

Galabin, like Simpson, practically considered the seizure of the leg in relation to the feasibility of version, and did not discuss the question of the mechanism of the breech after it was engaged. Galabin's excellent diagrams represented the fœtus as dorso anterior, again the more favourable position for seizure of the lower leg. Nagel's paper threw a good deal of additional light on the subject.

He indicated that one should seize the leg, whose half breech would pass sooner to the symphysis, thus taking the standpoint of the older observers (Baudelocque and Hohl), and of his own master (Gusserow). Galabin had found clinically that in dorso-posterior position the back was still posterior after version, but Nagel noted that in 19 cases of dorso-posterior or where where he seized the further leg, each became dorso-anterior after version.

Dr. Hart then discussed each position, given the leg seized, and summed up the controversy by saying that for dorso-posterior cases Simpson's advice was best, while for dorso-anterior cases Galabin's plan was right. Each of these observers, therefore, stated half the truth.

The paper was discussed by the PRESIDENT, Professor A. R. SIMPSON, and Drs. BARBOUR and MCVIE; and Dr. HART replied.

THE SET OF THE PELVIS IN THE BODY.

Dr. A. H. FREELAND BARBOUR read a paper on the set of the pelvis in the body (variations in the inclination of the brim apart from posture), and its obstetrical significance. In antero-posterior curvature there was a great range of variation in the inclination of the brim. This alteration in inclination was not a temporary change, but affected the set of the pelvis in the body.

Dr. Barbour showed a drawing of the pelvis of a woman who had never walked, an idiot, who had suffered from right hemiplegia in infancy; when she sat in a chair she tended to fall to the right side, so that for 29 years she was obliged to maintain the recumbent posture. Here, then, was a pelvis which had not been subjected to the weight of the body, and its high promontory and almost vertical brim had a special interest.

From a study of frozen sections from cases of pregnancy and labour, the direction of the brim was not definite, but varied greatly in pelves which might be considered obstetrically normal. The position of the promontory could be described by taking the distance that it stood back from the upper margin of the symphysis, and the distance that it stood above it. The significance of the set of the brim lay in the influence that it exerted on the engagement of the head and on the driving power of the uterus. The matter was of greater importance in multiparæ than in primiparæ. The importance of the relation of the abdominal axis to the pelvic axis had not been appreciated, because the conception of labour had been based on the study of the pelvis taken out of the body. The value of this mode of describing the pelvis was that one started from the long axis of the abdomen and described the pelvis in relation to it, instead of in relation to a horizontal plane which had no significance for labour, as the patient in the second stage was

usually on her back, and not erect. The conclusions on this point might be summarised thus: (1) The inclination of the brim, instead of being described in reference to the horizontal plane, may be described in relation to a perpendicular let fall from the upper margin of the symphysis on a line passing through the promontory in the direction of the long axis of the abdomen. The advantage of this method is that, instead of taking a plane outside of the body, which has no obstetrical significance, and to which the relation of the pelvis changes with every posture, a fixed line within the body is taken. (2) The angle of divergence of the plane of the brim (that is, the plane passing through the conjugate of the brim) from this perpendicular is necessarily the same as the angle of divergence of the axis of the brim from the long axis of the abdomen. The smaller this angle—that is, the more nearly the plane of the brim approaches in direction this line—the more does the long axis of the abdomen come into line with the pelvic inlet. (3) The range of divergence in pelves obstetrically normal is considerable, varying from 40° to 60°. While a mean may be taken of 55°, the variability of pelves from this within certain limits is a more important fact than the constancy of this angle, which the mention of a figure is apt to convey. (4) Though we are not in a position to gather up from clinical observation the results of this anatomical fact, owing to the difficulty of determining the size of this angle in the living subject, it is evident that its variability must exert a distinct influence on the engagement of the head and the driving power of the uterus in multiparæ. This method of regarding the inclination of the brim implied a different mode of describing it which might with advantage find its way into the textbooks. Instead of a diagram showing the pelvis only in the upright position, and referring its inclination to the horizontal plane outside the body, there should be a diagram including the lumbar portion of the spine representing it in the dorsal posture, and referring the inclination of the brim to a perpendicular let fall in the long axis of the abdomen, which was practically a horizontal plane passing through the pelvis. Further, the inclination of the brim should be marked not only by a line representing the mean, but also by a maximum and minimum inclination for pelves obstetrically normal. In regard to this question from the side of clinical investigation and not in the light of frozen sections, up to the time of Naegele, little more was achieved than to ascertain what the question at issue was, and any attempt at its solution was little more than a happy guess. A survey of the literature suggested its grouping into two periods, which might be thus characterised:—(1) The statement of the problem. With this period the names of Deventer, Müller, Smellie, Roederer, Levret, Camper, and Barry should be associated. (2) The various methods of solving it. This, which included the various attempts to solve the problem of pelvic inclination by observation on the living subject dated from Naegele, who gave the results of his own observations and survey of the literature up to his own time. The most important contributions of this later period were those made by Naegele himself, W. and E. Weber, Meyer, and Prochownik. Each adopted a different method. Prochownik, approaching the subject from the clinical standpoint, came to the same result as had been reached from the study of frozen sections. Frozen sections had opened up yet another line of inquiry. The chief contribution to the literature was the monograph by Fürst. Another important series of observations by Dr. Sandstein would shortly be published. Dr. Barbour, in conclusion, said that if he were to put in one sentence the outcome of these observations and his object in bringing them forward, it was that the observations of Meyer, by drawing attention to the variations in inclination due to posture, diverted attention from those due to the set of the pelvis in the body which a study of frozen sections had demonstrated.

Professor A. R. SIMPSON and the PRESIDENT spoke on the paper; and Dr. BARBOUR replied.

SPECIMENS.

Dr. BREWIS showed: (1) Uterus removed by subperitoneal hysterectomy after Cæsarean section at term; (2) gravid uterus removed by panhysterectomy at the fifth month for cancer of the cervix; (3) uterus removed by vaginal hysterectomy for cancer of cervix and body; (4) pyosalpinx removed by vaginal section.—Dr. HAULTAIN showed: (1) Ruptured extrauterine gestation where there had been post-decidual hæmorrhage; (2) fibro-adenoma of vagina with micro-photographs; (3) cyst from canal of Nuck; (4) ovarian cyst which was associated with 920 ounces of ascitic fluid.—Dr. J. W. BALLANTYNE showed iniencephaly, sympodia, knotted cord, etc.—Dr. HAIG FERGUSON showed a dermoid ovarian tumour from a patient four months pregnant.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

G. ANDERSON CRITCHETT, M.A., F.R.C.S.E., President, in the Chair.

Thursday, June 14th, 1900.

OCCLUSION OF BOTH CENTRAL ARTERIES OF THE RETINA.

MR. W. H. JESSOP read this paper:

The patient was a woman, aged 35, married nine years, who had no children living. She had had one miscarriage soon after marrying, and eight months ago she was delivered of a child at the ninth month which only lived a few hours. On October 24th, 1899, on awaking she found she could not see with the right eye, although she was quite well at the time and had no previous illness, except an attack of influenza nine years ago and epistaxis two years ago which continued for some weeks. On ophthalmoscopic examination the eye presented the symptoms of embolism of the central artery. V = doubtful P. L. The left eye was normal. On December 28th, 1899, she suddenly at 11.20 A.M. lost the sight of the left eye, and on examination all the signs of embolism of the central artery were present and V = no P. L. At the present time both optic discs were atrophied, the retinal vessels were reduced to mere threads, and in places there was a white thickened condition of the sheath (periarteritis). The vision of the right eye had improved to $\frac{6}{18}$, but that of the left was P. L. only. The patient had been treated with mercury by inunction and internally.

The interest of the case was in the arteries of each eye being affected and in the fact that the only symptom and sign pointing to embolus was the suddenness of each attack. No possible source of the emboli could be suggested. This rather pointed to a retinitis being the predisposing cause, and considering the great improvement of the vision under treatment it was probably of syphilitic origin. The changes seen in the vessels pointed to arterial degeneration.

MR. COLLINS described the case which he had shown before the Society in 1897. The patient also had epistaxis and amenorrhœa.

Dr. ABERCROMBIE asked if the patient had any uterine disease.

MR. DOYNE thought that after embolism the peripheral parts of the retinal vessels were usually somewhat larger than the central portion, and this not being the case in Mr. Jessop's case he thought suggestive of arterial disease, being the chief cause of the condition.

MR. JESSOP, in reply, said he agreed with Mr. Doyne, and also stated that there was no uterine disease.

THE ARITHMETICAL TRIANGLE IN OPHTHALMOLOGY.

MR. C. WRAY read a paper entitled the Arithmetical Triangle in Ophthalmology: How to Use It and What It Reveals. This method of investigation was a new one, and the author's plan of using it was as follows: Determine the maximum negative error of refraction, and assume provisionally, in accordance with the general law of error, that the positive errors will be equal in amount and frequency. The paper assumed the negative error + 11, that is, 1D under E, and this suggested the use of the 23rd line of the triangle, with the result E=15 per cent., M 26 per cent., H 59 per cent., and myopia over −6D 0.66 per 1,000, the minimum number found in any province of France being 1 per 1,000 (French Army Statistics). If the 25th line were used under the assumption the commonest refraction is E, then there would be E 13.2 per cent., M. 43.4 per cent., and H. 43.4 per cent. This would raise the myopes with over −6D far over 14.7, the very highest number that occurred per 1,000, and prove E as the commonest refraction impossible. It would appear as though the highest myopia transmissible was −11, and that the maximum grades were due to non-hereditary causes acting in addition. Mr. Wray deduced that there was no evidence that the effect of civilisation was so serious as it was usually thought, seeing an increase of 1D in the commonest or normal refraction was an impossible and unnecessary hypothesis. Indeed in that case there would be 3 cases per 1,000 with over 6D of myopia from heredity alone, not counting those classed as over 6D from such patients. Generally preferring a −6.5 lens spasm of accommodation, and anyhow seeing the maximum is 14.7, very little room was left for the causes that operate seriously in causing acquired myopia. As the details of the

paper were of an extremely technical character reference must be made to the Society's *Transactions*.

CONGENITAL PAPILLOMA OF THE CONJUNCTIVA.

Mr. SIMEON SNELL (Sheffield) related this case, which occurred in an infant, aged five months.

The tumour hung from between the eyelids, and fell over the lower lid at about its outer third, the lower part of the growth being enlarged into a rounded ball about the size of a small pea. It was attached to the conjunctiva about halfway between the corneal margin and the inner canthus, and somewhat broadened out at this attachment. The stalk measured about half an inch, but traction readily lengthened it to an inch. The growth was snipped off with scissors.

Mr. Treacher Collins kindly examined the specimen, and reported that its microscopical appearances were similar to those of a dermoid of the eye.

Mr. GRIFFITH thought that the case should really be called a dermoid tumour, and with this opinion both Mr. COLLINS and Mr. SNELL agreed.

PERIARTERITIS OF THE RETINAL ARTERIES.

Mr. SIMEON SNELL related a case, and exhibited an ophthalmoscopic drawing.

The patient was a woman, aged 43, and when first seen the sight in the right eye had been failing for about four months. On ophthalmoscopic examination one was at once struck with the peculiar appearance of the arteries on the optic disc, which were encased in a snowy white and somewhat glistening sheath. This appearance extended only a short distance beyond the optic papilla, and was confined chiefly to to the arteries on the expanse of the disc. V = $\frac{1}{10}$. There was only one small hæmorrhage in the retina, but now there were two others on the disc. In the left eye the appearances were very much less marked, but the disease was evidently commencing. V = $\frac{6}{9}$. The urine contained a trace of albumen, and there were granular casts. The arteries were rigid and tortuous, and there was hypertrophy of the left ventricle.

Reference was made to Mules's case recorded in the *Transactions* of the Society, vol. ii; but in the present instance, whilst the changes were confined to the optic disc and its immediate neighbourhood, they appeared to be much more pronounced.

Mr. JESSOP asked if the fields of vision were contracted, and, in reply, Mr. SNELL stated that such was the case.

AN ILLUSTRATED WORK ON FOREIGN SCENERY.

Mr. SNELL also exhibited an illustrated book on foreign scenery. The interest attaching to the work was that the illustrations, which were very numerous and of a high-class character, had all been executed by a gentleman, a patient of his, who had several years before undergone extraction of cataract in one eye. The other eye was useless for visual purposes, owing to complete cataract. The same gentleman, an amateur artist, had been a successful exhibitor at the Royal Academy, but before the operation his paintings had not been accepted.

OPHTHALMITIS ASSOCIATED WITH MENINGITIS.

Mr. SYDNEY STEPHENSON read notes of a case of ophthalmitis in a child of 7 months, associated with simple posterior basic meningitis.

An effusion of lymph into the anterior chamber of one eye was soon followed by closure of the pupil, diminution of tension, and shrinking of the globe. Death took place on the thirty-third day of the disease, which was characterised by retraction of the head, convulsions, progressive wasting, and fluctuating temperature. At the necropsy lymphopus was found on the medulla and surrounding parts, and could be traced along the crura optic tracts, and commissure to the left optic nerve. The meningeal exudation was found to contain several micro-organisms, including the diplococcus intracellularis meningitidis of Weichselbaum. Microscopically, evidences of inflammation were traced from the chiasma and along the optic nerve to the papilla of the inflamed eye. The essential pathological changes in the eyeball itself were neuro-retinitis along with diffuse inflammation of the uveal tract.

Mr. Stephenson concluded that inflammation passed from the cerebral meninges, along the optic nerve to the eyeball, probably by means of the perivascular lymph sheaths.

CARD SPECIMENS.

The following specimens were shown:—Mr. J. ROWAN: Sections of the healing stump of an optic nerve four days after enucleation.—Mr. J. HERN: (*a*) A case of essential shrinking of the conjunctiva; (*b*) persistent papillary membrane; (*c*) case of abnormally large cornea and deep anterior chamber.—Mr. H. E. JULER: Retinal detachment (?) intraocular growth.

HUNTERIAN SOCIETY.—At a clinical meeting held on April 11th, Dr. DUNDAS GRANT (President) in the chair, Dr. BUTLER HARRIS showed a baby with a sublingual swelling. Dr. FRED. J. SMITH thought the lump was probably a persistent thyroglossal duct, because of its position in the middle line, its soft, cystic feel, also because the veins in the floor of the mouth looked more like those disturbed by pressure than increasing by growth. He recommended excision. Dr. RAWES considered it a venous nævus from the presence of distended veins in the neighbourhood, and because the tumour could be easily compressed. Mr. TARGETT suggested that it was a nævoid growth on account of the increased size of the swelling when the child cried and the presence of numerous dilated vessels in the mucous membrane. The PRESIDENT considered it nævoid, and suggested treatment by means of electrolysis.—Sir HUGH BEEVOR showed a case of hemianopsia in an upholsterer, aged 49.

Dr. Moynihan brought the patient in September, 1897, a few days after a sudden attack, which left him with much loss of sensation of left side, slight left-sided paralysis, and impaired intelligence. In November, 1897, when under Dr. Ferrier's care, it was recorded that his family and personal history were good, except for syphilis seventeen years ago. A few months before he had noticed a sudden loss of sensation in the left side, and his eyes were so affected that he used to spoil cloth by not cutting it properly. The loss of power in the arm and leg had been increasing; he had no loss of consciousness at the time of the attack, and he had had no headache or vomiting. His taste and smell were normal, but hearing was less on the left side. He had complete left hemianopsia, loss of muscular sense, and there was analgesia in the left arm and leg, and tactile anæsthesia of the face, arm, and leg. He walked with a slight stagger and tendency to fall backward and to the right. The left grasp was weaker than the right. There was ankle clonus and exaggerated knee-jerk on the left side. The fundi were normal, and Wernicke's pupillary reaction was present. Cranial tenderness on deep pressure was elicited over the right parietal eminence.

In February, 1900, Dr. Moynihan reported vomiting and left-sided convulsion, with conjugate deviation of the eyes to the left, followed by paralysis of the left side and of the right external rectus oculi. For a few days he was semi-conscious. In a few weeks ocular movements became normal, and the patient's condition seemed little altered by his recent attack; the gait, perhaps, was more unsteady. Some increased deficiency in the movements of the left angle of mouth was apparent, and equally so in voluntary or emotional excitement. Dr. F. J. SMITH thought from the absence of neuritis and from the stationary nature of the symptoms for over two years, it was probably a softening either thrombolic or embolic. He was inclined to place the lesion at the hinder part of the posterior limb of the capsule. Sir H. BEEVOR thought there was probably more than one lesion, in view of the patient's gait, which could not be accounted for by impaired sensibility on one side; and that tumours were present from the recent attack, while pressure would account for the temporary paralysis of the right sixth nerve. Dr. GLOVER LYON suggested that the case might be functional, as there were no definite signs of organic disease. Dr. RAWES remarked that the symptoms were too well defined, too widespread, and the evidence of secondary degeneration too pronounced for a functional lesion. He thought the hemianæsthesia and hemianopsia which occurred two years ago might be due to a hæmorrhage in the posterior portion of the internal capsule, and the convulsive seizures, recently occurring, to a lesion of the cortex, probably gummatous.—Dr. F. J. SMITH, by permission of Dr. F. Warner, showed a probable case of Friedreich's ataxia.

A girl, aged 14, the eldest of four children, was quite well till the age of 7, when after an attack of measles she was noticed to have twitching of the limbs, which was diagnosed as chorea, and difficulty in walking. On examination, there was found general muscular weakness with some tremor of the fingers, and some blunting of sensation over the arms. She could not stand alone, and on closing the eyes she could not touch her nose with her finger or locate her limbs. There were no knee-jerks, and there was an extensor plantar reflex. The bladder and rectum were unaffected. The cranial nerves were unaffected, but her intellect was somewhat dull.

Dr. Smith remarked that he thought a provisional diagnosis of Friedreich's ataxy was most likely. Mr. TARGETT called attention to the marked degree of scoliosis present. Sir H. BEEVOR commented on the constancy of the pes cavus in these cases.—The PRESIDENT showed: (1) a case of syphilitic lesion of the facial, auditory, and spinal accessory nerves; (2) a case of rhinoscleroma.

Mrs. C., aged 26, came under observation on July 14th, 1897, on account of complete obstruction of both nostrils; the tip of the nose was hard and swollen, and the nostrils were completely blocked by a reddish growth of an almost fibrous consistence; there were fine symmetrical scales on the soft palate, and the uvula had completely disappeared. It was impossible to obtain a rhinoscopic view, but the finger introduced into the naso-pharynx enabled one to detect a firm, dense bar extending horizontally across the lower margin of the posterior nares. A microscopic preparation of a portion of the tissue, which was examined by Mr. Wingrave and Dr. St.George Reid, was typical of rhinoscleroma in showing the capsuled bacillus.

—Dr. W. H. KELSON showed a case of lupus of the nose, palate, and tongue.—Dr. J. H. SEQUEIRA showed (1) a case of birth palsy; (2) a case of lupus erythematosus.

BRITISH ORTHOPEDIC SOCIETY.—At a meeting held in Bristol on May 19th, Mr. TUBBY read a paper on the treatment of spinal abscess. He advocated the opening of the abscess as soon as it approached the surface by two incisions as far apart as possible, its thorough evacuation, and scraping or rubbing of the lining membrane, irrigation with iodoform solution, paroleine, or menthol, and closure of the incision. Mr. NOBLE SMITH advocated incision and drainage, and frequent irrigation. Mr. JACKSON CLARKE, Mr. HARSANT, and Mr. EWENS also spoke; and Mr. TUBBY replied.—Mr. CARWARDINE opened a discussion on the treatment of severe congenital equino-varus. He divided cases into four groups: (1) Severe at birth, (2) severe in childhood, (3) in adolescents, (4) in adults. Treatment should be begun early. Constant personal attention was required, and persistence in after-treatment. In rigid cases of the third and fourth degrees manipulation alone was not enough. Tenotomy and the gradual method with apparatus needed patience and perseverance for six or twelve months. Wrenching was suitable for cases of 5 years old and upwards, but it was unsurgical and its results were temporary. Free subcutaneous section was too severe for young children. The skin was usually too tight to allow of correction; Phelps's operation was therefore better. Phelps's original operation did not correct the deformity of the bones, and made a big wound which took a long time to heal, with subsequent contraction. The result of astragalectomy was immediate; little after-treatment was needed, but it had ended in suppuration and amputation in some cases. Cuneiform tarsectomy corrected the deformity, saved time and trouble and expensive after-treatment, but it was a mutilating method, and prevented the gradual method being afterwards employed; it shortened the foot and destroyed the arch, interfered with growth, and left a stumpy inelastic foot. It treated the effect on the outer side rather than the cause on the inner side of the foot. Phelps's latest operation had the following advantages: It saved time, bony mutilation was slight, plantigrade progression was immediate, the foot was not shortened nor its elasticity impaired, the ankle and tarsal joints were not interfered with, and their mobility was preserved. Being a less severe form of tarsectomy it was applicable to younger patients. It could not appreciably interfere with growth, and it treated the foot at the point of anatomical deformity. Mr. EWENS said that removal of the cuboid was not enough. He had found imperfect results in his earlier operations due to not removing enough bone. Mr. LITTLE had found in inveterate cases of club-foot that Phelps's earlier operation gave excellent results. He had operated on some twelve or fifteen feet, and had had excellent results and no trouble with the scar in any case. He had lately seen the two cases shown at a meeting of the Society in 1895. Those feet left nothing to be desired. In one of them he had filled up the gap by transplanting a flap of skin. The scar could now scarcely be detected. The sides of the open wound must be kept apart until healing was complete. The chord of the arc was broken completely by this operation, so that pes cavus could not be reproduced by contraction. He did not think that Phelps's operation should be done wholesale. Mr. WILLIAM THOMAS said that treatment by stretching should be begun from the first. Manipulation was not of much use. He was not in favour of wrenching. He preferred to do cuneiform tarsectomy. Mr. JACKSON CLARKE was satisfied generally with gradual methods. In old neglected cases he favoured Bradford's operation. Mr. TUBBY disapproved of Phelps's operation and of tarsectomy. In severe cases he preferred astragalectomy. Mr. NOBLE SMITH and Mr. HARSANT also spoke; and Mr. CARWARDINE replied.

CASES.

Mr. EWENS showed cases of tarsectomy for club-feet twelve years after operation, and of pes cavus treated by free subcutaneous section of plantar tissues.—Mr. CARWARDINE showed cases of: (1) Tarsectomy; (2) Phelps's operation for club-foot; (3) severe club-foot treated by the gradual method; (4) post-operation deformity treated by osteotomy; (5) shortening after osteotomy; (6) cured psoas abscess; (7) spastic paralysis. He also showed apparatus for treatment of congenital dislocation of the hip. Mr. NOBLE SMITH and Mr. JACKSON CLARKE showed photographs and skiagraphs.—Dr. BLAGG showed: (1) A cast of a case of defect of both tibiæ; (2) a case of infantile paralysis in which five years elapsed before improvement began, and in which there was an increase of length of the paralysed limb; (3) severe rheumatoid arthritis in a child of three years; (4) a new form of hammock for treatment of Pott's disease.

REVIEWS.

SOME RECENT WORKS ON BIOLOGY.

A PRINCIPAL object of Professor KARL PEARSON'S *Grammar of Science*[1] is to impress upon the minds of scientific men the thesis of Bishop Berkeley, that our knowledge of external objects is gained only through the medium of the senses, and that we have no right to assume the existence of anything except as a sense percept. Professor Pearson holds that physicists have forgotten this, and that the biologists have followed suit by adopting their language, and he urges that their manner of expression should be amended. Consequently he would pretty nearly expunge the word "explain" from the scientific vocabulary, and would define correct scientific aims to be the employment of what he calls a conceptual shorthand of phenomena. The fundamental proposition is of course incontestable, but we doubt whether the evils arising out of its partial neglect in scientific language are so serious as the author holds them to be, and whether the adoption of the phraseology he advocates is not a counsel of perfection, and indeed whether, if attained, it would not produce more confusion of thought than it would remedy. Of more direct interest, perhaps, to us are the biological chapters, which are a new feature in this edition. Professor Pearson has endeavoured to introduce a quantitative and mathematical element into the investigation of evolutionary problems, and here again, whilst possibly he pushes it somewhat far, he has unquestionably made important contributions to knowledge. Thus in relation to sexual selection in man he has shown that there is no evidence of preferential mating on the basis of stature; but on the question of eye colour it appears that blondes marry more than the dark-eyed. This may be due to a preference, or, on the other hand, to a stronger sexual instinct on the part of the blondes. Again, there is some evidence that like chooses like, husbands and wives being in certain respects more alike than uncles and nieces and than first cousins. In respect of death-rates he has shown that, taking a class with environments which may be assumed to be similar, amongst brothers the non-selective or general average death-rate obtains in 20 per cent., whilst 80 per cent. show a duration of life which is abnormal, and must be correlated with inherited tendencies. In these chapters much that is suggestive and valuable will be found.

Within its chosen limits, too, Mr. CONN'S *Story of Life's Mechanism*[2] is an excellent little book. It discusses in clear and popular language the question how far the phenomena of life are explicable (*pace* Professor Pearson) upon physical and chemical laws, at the same time observing scientific accuracy, and giving a lucid account of such phenomena as karyokinesis and the extrusion of polar globules from the ovum. The author concludes that whilst the whole organism is a machine, and the individual ovum or other cell is a machine, and that, whilst ultimately we arrive at the machinery of protoplasm the structure of which is now known to be more complex than it was at first supposed to be, we here come to a stand. We know of no simple protoplasm capable of living activities apart from machinery, that is, structure, and chemical and physical forces so far fail to elucidate the matter further. He suggests that though to-day we only know protoplasm as produced from protoplasm, the first protoplasm must have had a different origin. The secondary phenomena of life (with the exception of mental force), fall under the domain of various chemical and physical laws, and the living machine, like every other machine we know, neither creates nor destroys energy, but simply converts it; yet the fundamental problem of the activity and the origin of protoplasm is for the present, at all events, quite beyond our reach.

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[1] *The Grammar of Science.* By Karl Pearson, F.R.S. Second Edition. London: A. and C. Black. 1900. (Demy 8vo, pp. 566. 7s. 6d.)

[2] *The Story of Life's Mechanism.* By H. W. Conn. London: George Newnes. 1899. (Fcap. 8vo, pp. 215, 50 illustrations. 1s.)

Dr. ALEXANDER'S book on *Darwin and Darwinism*[3] may be described as an attempt at destructive criticism, while offering little in the way of suggestion. It is an attempt to belittle Darwin, because an epoch-making book such as the *Origin of Species* was not in every detail final and complete. As a matter of fact Darwin himself repeatedly made this remark after he had weighed the criticism and suggestions which it evolved. Dr. Alexander is evidently widely read in the subject, but his book is hasty and careless. Quotation marks are to be found at the commencement of a quotation but not at its end, so that it is impossible to tell where the author's comments begin; facts not generally known and accepted are given without authority, an article in the *Encyclopædia Britannica* is quoted as by C. C., when a moment's reference to the index would have enabled the writer's name to be cited, and countless examples of the same kind could be given. In criticising Mr. Darwin the author says "he resorts to the use of adjectival forms in front of it (that is, of a word) not very enlightening" (an adverb is referred to, but let that pass); but what will be thought of the author repeatedly speaking of "poor Darwin," "poor Weismann," "the great Mr. Grant Allen"? But there is worse than that. He says—again speaking of Darwin—"it would have been more to his honour if he had brought his earlier books into line before going on to manufacture more. But then, you see, the books went on selling, as they were, as they were" (*sic*). Such an insinuation will be felt as an unpardonable outrage, by those who had even a slight acquaintance with the simplicity and beauty of character displayed by the great naturalist.

Dr. EUGEN ALBRECHT has made a thoughtful contribution[4] to the discussion of those fundamental questions which lie at the root of biological knowledge. Du Bois-Reymond's well known remarks on the necessary limitation of human knowledge are, on the whole, agreed with. The points of view known as vitalistic, materialistic, neovitalistic, and psychological, are reviewed and criticised. There is much that the author disagrees with in all such theories, and no doubt no single one of them furnishes a clue to all our difficulties. The essay itself, though it will amply repay perusal, does not lead us very much further after all. In many parts it is far from lucid; this appears to be largely due to the habit of referring the reader to notes at the end of the volume, in order that he may consult the data on which an argument is founded.

Professor FARMER has been very successful in arranging the substance of an elementary textbook,[5] in the form of a book intended as a guide to the practical study of plants. These are treated first from a morphological, then from an anatomical and physiological, and lastly from a systematic point of view. By adopting this method the author has departed from the "type system" which has dominated the teaching of practical biology for so long a time, and which has had a somewhat narrowing effect, especially upon the study of cryptogams. We would welcome a further volume by the author, dealing in a like manner with the flowerless plants. In the book before us the plants for examination and comparison seem well chosen. They are easily obtainable, and illustrate very clearly those points in the anatomy and morphology of plants which it is most essential for an elementary student to know. Among the figures, most of which have been specially prepared for this book, we notice with pleasure the introduction of reproductions from photomicrographs of anatomical structure. This is a highly commendable innovation for an elementary textbook, as students are often puzzled by the difference between their own preparations and the idealised and diagrammatic figures of their textbook. Those students who may use Professor Farmer's book will now see figured the perfection they should aim at. We welcome also the introduction of some of the simpler physiological experiments, so easily performed and so essential to the proper understanding of the life of plants. Altogether this volume is based on broad and sound lines, and a student who conscientiously works through it will have gained a real knowledge of the structure and of the life of plants.

The avowed object of Professor SHUTE'S *First Book in Organic Evolution*,[6] is to provide medical students with a general knowledge of evolutionary problems, presumably early in the course of their studies, and to this end an endeavour is made to present the subject in a manner intelligible to the general reader. We may say at once that for such a purpose it is the best book with which we are acquainted, though we may have criticisms to offer upon minor points. For especial commendation may be singled out the account of the evolution of the brain, which cannot fail to supply the student with ideas which will render his conceptions of the human brain, when he comes to study its anatomy and its development, far more intelligent. From a brief description of selected unicellular organisms the reader is carried on to a description of karyokinesis (termed mitosis in the book), and to the changes in the ovum which govern the distribution of its germinal matter; it may be mentioned that, although this is afterwards definitely corrected in a subsequent sentence, the impression is at first conveyed that in man the ovum passes through an invaginated gastrula stage. Chapters on heredity with variation, on unstable environment, on the various forms of selection, and an outline of the progress in successive periods of geological time, lead on to the consideration of mental phenomena and of social evolution. So completely does the author accept the teachings of evolution, that he writes:

> It seems to us that every consideration of justice and humanity cries aloud for the destruction of the procreating glands in habitual criminals. Castration should go hand in hand with detention behind prison bars.

An instance is given of the history of the descendants of one vicious girl: in six generations 52 per cent. of the women were harlots, and 23 per cent. of the children were illegitimate; whilst amongst the men and the women there were respectively nine and seven times the proportion of paupers existing amongst the average population of the State. Like the majority of American naturalists the author leans to the belief that acquired characters may be inherited, though he does not pronounce so strong an opinion in this direction as some others. The book concludes with a glossary which requires some revision; under many words nothing beyond the derivation is given, even when the words—for example, mitosis—are not quite familiar, and this is sometimes worse than nothing. For instance, under Amia, we have only Gr. amia, a kind of tunny); from this entry the student could not fail to gather the very erroneous impression that this aberrant, partly air-breathing Ganoid fish was related to the tunnies. But such imperfections are only in matters of detail; on the whole, the book is clear, readable, and excellently adapted to its purpose.

[3] *Darwin and Darwinism, Pure and Mixed.* By P. Y. Alexander, M.A., LL.D, London: John Bale and Danielsson. 1899. (Cr. 8vo, pp. 358. 7s. 6d.)

[4] *Vorfragen der Biologie* (Fundamental Questions in Biology). Von Dr. Eugen Albrecht. Wiesbaden: J. F. Bergmann; and Glasgow: F. Bauermeister. 1899. (Roy. 8vo, pp. 92. 2s. 6d.)

[5] *A Practical Introduction to the Study of Botany.* By J. Bretland Farmer, M.A. Practical Elementary Science Series. London: Longmans Green and Co. 1899. (Cr. 8vo, pp. 282, 121 illustrations. 2s. 6d.)

[6] *A First Book in Organic Evolution.* By D. Kerfoot Shute, A.B., M.D., Professor of Anatomy in the Columbian Univsrsity. London: Kegan Paul, Trench, Trübner, and Co. 1900. (Cr. 8vo, pp. 275, 12 plates, 27 woodcuts 7s. 6d.)

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS AND THE ALLIED SCIENCES.

MEDICAL PREPARATIONS.

Nectrianine.—In a paper read to the Académie des Sciences[7] M. Bra reported that he had made cultivations of *Nectria ditissima*, the cause of the so-called canker of the appletree, in infusion of dried grapes, and that he had obtained in these cultures in addition to the conidia of *N. ditissima* small round spores, and that the whole closely resembled a fungus which he had cultivated from cancer in human beings. When grown in infusion of mammary gland the resemblance was still greater. In sections of tree-canker stained by Gram's method bodies similar to the spherules could be seen. He had also

[7] *Comptes Rendus*, t. cxxix, p. 118.

inoculated healthy trees—ash, wild cherry, elm, and others, and six months later these trees were found infected by canker. Rabbits fed with cultivations obtained from the fungus cultivated from human cancer developed round ulcers of the stomach, and similar ulceration occurred in rabbits fed with cultures obtained from tree-cankers. Filtrates from cultures of the fungus from human cancer killed animals when from 15 to 20 grams per kilo of body weight were injected into the veins; filtrates from cultures from tree-cankers when rather larger doses were used. After heating the filtrates were less toxic, but it was stated that they produced an elevation of temperature in persons suffering from cancer, but not as a rule in healthy persons. To a solution of the soluble products of a cultivation of *N. ditissima* MM. Bra and Mongour propose to apply the term nectrianine.[1] Subcutaneous injections of as much as 5 c.cm. of this liquid are stated to produce no effect in healthy animals, but in animals or human beings affected with cancer its injection is followed in two or three hours by a rise of temperature of 1° to 3° C. The fall of temperature, which occurs in a few hours, is accompanied by sweating, copious excretion of urine, and profound sleep. This reaction may fail if the cancerous affection is far advanced, and tends to decrease in severity after the first injection. The therapeutic action was tested in the wards of Dr. Durand in Bordeaux in patients suffering either from inoperable cancer or from recurrence after palliative operation. In 14 cases of uterine carcinoma the subcutaneous injection of 4 c.cm. daily was followed by arrest or diminution of the metrorrhagia and the pain was greatly relieved, but there was no improvement in the general condition, and as soon as the injections were stopped the symptoms which had been relieved returned. It was thought, however, that while the treatment was continued the tumour ceased to increase in size and become harder. Similar results were obtained in a case of epithelioma of the face. In 2 cases of cancer of the stomach the injections were followed by cessation of the hæmatemesis, the appetite improved, and the epigastric tumour diminished in size. None of the patients gained weight and one lost. MM. Bra and Mongour consider that they are entitled to say that the injections produced some beneficial effects upon the local condition. The treatment is therefore in the earliest experimental stage, but any person who wishes to employ it can, we are informed, obtain the material from Messrs. Zimmermann, 9 and 10, St. Mary-at-Hill, London, E.C.

[1] *Jour. de Méd. de Bordeaux*, February 25th, 1900.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The annual meeting of this Association was held on June 12th at the Examination Hall, Victoria Embankment, after a reception by the President (Professor Sims Woodhead) and Council of medical and scientific delegates to the World's Temperance Congress which was being held in the same building. The annual report, which was read by the Honorary Secretary (Dr. J. J. Ridge), showed an increase both of members and student-associates, the total membership being now 487 and 515 respectively. The report contained a suggestion that as it had been demonstrated that our soldiers could do harder and more continuous work without alcohol than with it, the rum ration should be abolished. It was announced that a Manchester branch had been formed, of which Dr. A. T. Wilkinson had been elected President, and Dr. Gray Clegg Honorary Secretary. Drs. Legrain and Boissier, of Paris, were elected honorary members of the Association. Previous to the meeting a demonstration, illustrated by lantern slides, was given by Dr. Ridge on the effect of alcohol on vegetable and animal cell life.

ROYAL ALBERT HOSPITAL, DEVONPORT.—On June 9th Princess Henry of Battenberg laid the foundation stone of the new wing of the Royal Albert Hospital, Devonport. The vote of thanks to Her Royal Highness was moved by Admiral C. Cardale, and seconded by Mr. J. May, F.R.C.S., Consulting Surgeon to the hospital.

A TAX ON MEDICAL PRACTITIONERS IN MISSISSIPPI.—The Mississippi State Legislature has recently passed a Bill imposing the following annual graduated tax on all medical practitioners in that State: Practitioners in towns of 3,000 or more inhabitants, 10 dollars (£2); in towns of less than 3,000, 5 dollars (£1); in country districts 2.50 dollars (10s.).

HOSPITAL REVENUES AND THE WAR EMERGENCY.

By Sir HENRY BURDETT, K.C.B.

IT gave me great pleasure to see Mr. Timothy Holmes's article in the BRITISH MEDICAL JOURNAL of March 10th. Mr. Holmes, after a most useful life as a hospital surgeon, on joining the consultant staff, rendered good service to his hospital, St. George's, by accepting the office of Treasurer, the duties of which he has filled with great distinction and benefit to that institution. I venture to think that it would be well for the hospitals if more medical men when they join the consultant staff on their retirement from active duty were to devote themselves to the administration of the affairs of the hospital where they have spent the best part of their lives.

The Reserve Funds.

Mr. Holmes's protest as to my statement with reference to reserve funds of the London hospitals as a whole is one which I had anticipated by writing a full statement concerning each of the London hospitals which is now in the printer's hands, and will be published immediately in this year's issue of my *Hospitals and Charities*. I have fully anticipated Mr. Holmes's criticism in the chapter referred to, and need not therefore pursue the subject further here.

Damaging Appeals.

Mr. Holmes next asks what do I mean when I say "that the financial position of the London hospitals can be made secure if the old bad system of making out a case by muddling the figures is given up of deliberate purpose by each institution." Mr. Holmes has misapprehended my meaning, which had nothing to do with the system on which London hospital accounts are now published, seeing that they are all kept upon the uniform system which is universally admitted to be the best form of account-keeping for hospitals. I was not referring to the accounts, but to the appeal literature which many hospitals issue every year as a part of the business of raising money from the public. I noticed, for instance, that on several successive years practically the same appeal, with the same figures, was issued by one large general hospital, although those figures had little to do with the circumstances of the hospital in certain of the years during which the appeal was made use of for the purposes of raising money. I want the public to understand, as the larger givers to hospitals I am thankful to note do now understand, that in examining an appeal on behalf of a particular hospital it is usually safe to set aside those which are appallingly heartrending in the urgency claimed for the imposing figures which they contain. In other words, the best hospital appeal today is undoubtedly one which contains a plain statement of fact to the effect that so much money has been received, so much money is asked for, and that if that money is forthcoming, then such and such work will be undertaken and carried through with the fullest efficiency. The reports of the various hospitals are sound enough nowadays, but the appeal literature of some of them should be suppressed in the best interests of the institutions to which they relate. I do not mention the few hospitals I have especially in mind, because my purpose is not to criticise individual institutions, but to try and persuade the conductors of every hospital to reform their appeal literature by calling to their aid the assistance of a few energetic men of business, and so to secure that they shall have a much better return as the result of these appeals in the future.

The Expenditure of St. George's Hospital.

Mr. Holmes next goes into an interesting dissertation upon the expenditure of St. George's Hospital. I have had the privilege and pleasure of inspecting that hospital twice in the last three years, and I am bound to say, as a result of those inspections, that I know no institution where money has been better laid out than it has been at St. George's, or where the net result is more satisfactory or creditable to those responsible for the expenditure upon new works and reconstruction. I should say that this expenditure at St. George's was absolutely justifiable, and that nobody with any sound knowledge of hospital affairs would question the truth of this statement. St. George's Hospital may be regarded as occupy-

ing an intermediate position between the super-economical and the relatively lavish institutions judged by their expenditure as a whole.

Taking the four main heads of expenditure which I quoted by way of illustration, we have first to deal with that of medical appliances, instruments, dressings, etc., denominated "Surgery and Dispensary" under the uniform system of accounts, including out-patient expenditure. The figures given below show that, whereas the expenditure under this heading per occupied bed at St. George's in 1893 was £10 10s., in 1898 it had increased to £13 10s.—an increase of about 30 per cent.—basing the calculation upon the average number of in-patients treated daily during each of those years. This increase is considerable, having regard to the fact that there appear to have been more out-patients treated at St. George's Hospital in 1893 than there were in 1898.

I give below, for the purposes of comparison, a table showing the average expenditure on "Surgery and Dispensary" per bed occupied at St. George's and five other hospitals with medical schools in the years 1889, 1893, and 1898:

Expenditure on Surgery and Dispensary including Out-Patients.

	Year.	Average Number of Beds Occupied	Number of Out-Patients.	Expenditure on Surgery and Dispensary per Bed Occupied.
				£.
St. George's	1889	316	26,459	11 3/4
	1893	323	34,406	10 1/2
	1898	308	26,371	13 1/2
Guy's	1889	419	42,031	11 1/2
	1893	411	53,649	13 1/4
	1898	424	105,672	12 1/4
King's College	1889	163	18,916	15
	1893	185	23,308	14 1/2
	1898	179	23,353	11 1/2
London	1889	622	109,839	13
	1893	656	125,094	14 1/2
	1898	656	176,786	17 1/2
University College ...	1889	179	36,417	15 1/2
	1893	186	47,003	18
	1898	158	44,806	20 3/4
Westminster	1889	175	24,774	8 1/2
	1893	176	24,217	11 1/2
	1898	179	23,991	12 1/2

From the foregoing figures it would appear that between 1889 and 1898 at Guy's Hospital the expenditure on these items has remained practically stationary, with an upward tendency at St. George's, although the out-patients of Guy's Hospital are very considerably higher in 1898 than they were in 1893, whilst at St. George's Hospital there has been a decrease. It will be observed that the largest increase has taken place at the London Hospital, where the expenditure has risen from £13 per bed occupied in 1889 to £17½ in 1898; the out-patients have, however, increased in 1898 compared with 1889 by no fewer than 67,000.

At King's College Hospital, where tremendous efforts have been made during the last few years with remarkable success to reduce expenditure without any decrease in efficiency, the expenditure per occupied bed was £15 in 1889, £14½ in 1893, and £13 in 1898, the out-patients having only increased by about 50 in the latter year compared with 1893.

At University College Hospital there has been an increase, but the figures are not fairly comparable owing to extensive structural alterations in recent years.

At Westminster Hospital the expenditure was £8½ in 1889, £11½ in 1893, and £12½ in 1898, the out-patients being about 200 fewer in 1898 than they were in 1893.

My suggestion in regard to the expenditure on surgery and dispensary and the waste referred to are matters within my own observation during my inspection of various hospitals, and where existent, can, I know, be stopped by the authorities if they will only take sufficient trouble to ensure that this is done.

The Increased Cost of the Nursing.

As to the increase in the nursing and the number of nurses employed, Mr. Timothy Holmes's figures show that the cost of the nurses at St. George's was under £4 per bed in 1869, and that it increased to £11 10s. in 1899, that is, an increase in the cost of nearly 200 per cent. I have not the figures in an identical form for other hospitals at hand at the moment, but some idea of the greater increase in the cost at certain hospitals may be gathered from the following statement:—At the London Hospital in 1878 the occupied beds there were 590, the number of nurses employed 152, or, roughly, 1 nurse to every 4 beds occupied. At the present time the occupied beds average 656 and the number of nurses 302, which is about 1 nurse for every 2 beds. At St. George's Hospital in 1878, with 299 occupied beds there were 76 nurses, or 1 for every 4 beds; in 1898 there were 131 nurses to 307 occupied beds, or 1 nurse to every 2¼ beds. At King's College Hospital in 1878 there were 175 beds occupied and 52 nurses, or 1 for every 3½ beds; in 1898 there were 179 occupied beds and 77 nurses, or one for every 2⅓ beds. At Guy's Hospital, with 500 beds occupied in 1878, there were 128 nurses, or one to every 4 beds; in 1898, with 424 beds occupied, there were 222 nurses, or one to less than 2 beds. At Guy's, it is curious to note, that whereas the probationers have increased three and a-half times, the number of nurses, including lady pupils, and also the sisters, are practically identical in the two years taken, although a period of 20 years has elapsed. At Westminster Hospital in 1878, with 140 beds occupied, there were 37 nurses, or one nurse to every 4 beds; in 1898, with 179 beds occupied, there were 66 nurses, or one nurse to every 3 beds.

It will be observed from the figures quoted that the increased cost of the nursing proper should not exceed 100 per cent. in view of the nurses employed, but, as Mr. Holmes points out, the modern nurse necessitates the employment of a troop of ward maids, entailing a large expenditure, which makes the growth in nursing expenditure something like 200 per cent. compared with what it was 25 years ago. I admit that much of this expenditure is necessary, because the sum allowed formerly for the nursing department was totally inadequate in every way. What I want settled, however, is an average maximum sum per occupied bed, as the recognised unit of expenditure upon the nursing department, and that this should be adopted by every well-regulated hospital, so as to prevent any further large increase in the sum devoted to nursing in the hospitals of this country. I honestly believe you cannot make nurses more efficient or more comfortable than they are on the whole at the present time, and it is well that this should be formally recognised by settling each year the sum which each hospital may properly devote to its nursing department.

A Misuse of Hospital Funds.

I must rigidly adhere to my fourth point, that "every well-administered hospital should refuse to devote any portion of the revenue and the funds which have been entrusted to its managers for hospital purposes to the purposes of medical education or the medical school." I question altogether Mr. Holmes's proposition that a medical school is a source of constant revenue to a hospital. A medical school means a constant change in the resident medical officers, and it is well known that it takes at least a year for any young medical man to learn how to economically manage his department, so that the hospitals with medical schools have to stand the racket of continuously teaching young qualified men their work, and especially their administrative work. I consider the arrangement in regard to St. George's Hospital mentioned by Mr. Holmes would be perfectly legitimate providing the medical school paid say 4 per cent. on the sum originally estimated as the cost of the building and upon all further sums which may be expended on improvements. This, with a sinking fund, would make the expenditure an ordinary investment, and I certainly think the school should pay a proper interest on all reserve funds which the hospital may invest as a matter of business in the erection of school buildings or the purchase of land.

The Expenditure on New Buildings.

As to Mr. Holmes's remarks on the expenditure on new buildings, I purposely referred to the hospitals of the Metropolitan Asylums Board because they represent the latest and most costly specimens of hospital buildings within the metro-

politan area. I did not intend to confine my remarks, however, entirely to London, and as the cost of hospital buildings and sites has gone up everywhere throughout the country, I am of opinion that it is essential that the whole question should be reconsidered on its merits, with a view to a large reduction on the sum now spent on new buildings for hospital purposes everywhere. My point has practically nothing to do with existing hospitals occupying old buildings and sites which have been devoted to hospital purposes for a century or more. I was merely dealing with the item of extraordinary expenditure on new buildings, especially where a hospital has to be rebuilt upon a new site. I need not, therefore occupy your space by labouring this point.

The Reconstruction of the Older Hospitals.

I do not think, having studied the expenditure in St. George's Hospital as I have already said, that any competent critic could reasonably object to any material part of it. It is one of the most gratifying facts connected with the metropolitan hospitals that the authorities of the older institutions have become alive to the necessity of reconstruction and refurnishing, and it would be an immense gain if the War Office could be induced to devote a reasonable sum to the redecoration, reconstruction and refurnishing of the military hospitals in the United Kingdom which at the present time strike an intelligent visitor with feelings of dismay owing to their shabby and neglected condition. Probably the shabbiest, worst-furnished, and most-neglected interior of any hospital building in these islands is that portion of old Greenwich Hospital occupied by the Seamen's Hospital Society. I know that some eminent gentlemen who recently visited the wards there were so shocked at the appearance they presented that they were unanimously opposed to a large sum being paid to its credit. The Trustees of Greenwich Hospital ought to pull down the present buildings, with the exception, perhaps, of Somerset Ward, and arrange with the Seamen's Hospital for the erection thereon of a modern hospital. The present state of affairs is becoming a scandal, and must ultimately bring discredit upon everybody concerned.

TROPICAL AND SUB-TROPICAL DISEASES IN CANADA.

Report by Professor Adami.

We have received from Professor Ray Lankester, F.R.S., Director of the Natural History Department of the British Museum, the following interesting report on the occurrence of malaria and other tropical or sub-tropical diseases in the Dominion of Canada, addressed to the Secretary of State for the Colonies by Dr. J. G. Adami, Professor of Pathology in McGill University, Montreal, on behalf of the Medical Faculty of that University :—

Molson Pathological Laboratory,
McGill University,
Montreal,
October 24th, 1899.

To the Right Honourable Joseph Chamberlain,
Secretary of State for the Colonies,
Downing Street, London, England.

Sir,—Copies of your circular letters addressed to the Government of this Dominion have by them been forwarded to the Medical Faculty of our University, and I am directed to have the honour to answer those circulars on behalf of our body.

Climate.

Naturally from its position in the North Temperate Zone, and stretching from that into the Arctic Region, Canada affords little opportunity for the study of the diseases termed "tropical." Nevertheless, while thus situated, it has to be remembered that the climate is what is termed "Continental," and that, while the mean temperature for the whole year is low, for some weeks, not to say months in summer, the temperature rises to a great height, much higher than is usual during the same months in Great Britain. It thus follows that certain of the diseases more characteristic of subtropical regions are not entirely prevented from affecting the more southern portions of the Dominion. As a matter of fact, however, these have never gained any foothold, nor can it be said that the incidence of disease in the Dominion to any appreciable extent varies from that met with in the Old Country.

Malaria.

With regard to malaria, in which you, Sir, manifest special interest; just as in Great Britain even to the middle of this century cases occurred with considerable frequency, more especially in the Fen district and in Lincolnshire (so that I have personally met with those in Cambridge who can remember the time when it was deemed unsafe to have the windows overlooking marshy land open of an evening for fear of malarial infection), so here in Canada during times within the memory of old inhabitants I am informed that malaria was not infrequent along the St. Lawrence, even in the neighbourhood of Montreal.

Now, however, it is only in the most southerly portion of Canada, namely in the peninsula of Ontario, between the Great Lakes, that malaria is met with, and there not to any great extent. So far as I can learn members of the genus *Anopheles* are still present; some other conditions, however, than the presence of the hosts of the malarial micro-organism would seem necessary for the persistence and propagation of the malarial germ. And when the extraordinary abundance of lakes and large bodies of water throughout eastern Canada is called to mind, and the relatively small proportion of the country that has undergone full drainage and full cultivation, the gradual disappearance of the disease becomes a problem difficult to solve. For myself, during the seven years I have been Pathologist to the two largest hospitals in Montreal in succession, I have come across but one case of malaria in one who had not been out of the country; this was in an old Red Indian who came from Ontario.

Taking into account the enormous numbers of mosquitos present throughout Canada during the early summer months, and the fact that the further north one goes into Labrador or into Alaska the greater becomes their number, until in some regions, during the months of June and July, it is almost impossible to live on account of them, Canada should supply a very good ground for the study of the relationship of mosquitos to the conveyance of more than one form of disease.

We have forwarded your communications, including the pamphlet on "How to Collect Mosquitos," to the Montreal Natural History Society, believing that certain members of that Society will gladly aid in collecting the various forms of Canadian mosquitos and forwarding them to the British Museum.

Dysentery.

Of other tropical diseases there is little to be said; we occasionally meet with cases of dysentery due to the amœba coli; I, however, know of only one case in which this disease occurred in a native who had not been outside the limits of the Dominion. It is possible that in the southern part of Ontario investigations will show this disease to exist.

Cholera Nostras.

Summer diarrhœa, or cholera nostras, is much more common and more fatal in the large towns in Canada than it is in the British Isles—a fact to be explained, I am inclined to think, by the rapid and very considerable rise of temperature in the summer months.

Typhoid Fever.

Throughout the northern part of North America typhoid fever is very prevalent; judging, however, from the relatively low rate of mortality in Montreal—namely, a little over 4 per cent.—either the treatment here is more efficacious, or the disease is of a milder type than that met with in Europe and in the tropics.

In the Rocky Mountains there are frequent epidemics of low febrile conditions, often possessing local names, such as Red River fever, and classified together under the term "mountain fever." Recent observations show that these, judging from the results of the serum reaction, are but forms of typhoid fever. That special form of disease of the American diagnostician—typho-malarial fever—has not made its entrance into Canada: in fact, it is now thoroughly discredited in the United States and recognised as being purely typhoid or enteric fever.

LEPROSY.

Another disease which, while developing in all climates, is at the present moment mainly tropical—namely, leprosy—occurs in Canada. In British Columbia its incidence is among the Chinese; in Nova Scotia it is interesting to note that apparently the disease was brought originally from Brittany during the last century, or yet earlier, and that it still propagates itself, although rarely, among the descendants of the old Breton fishermen. In connection with this, I may point out that my colleague, Professor Wyatt Johnson, of this city, has published a very ready means of diagnosis where the disease is cutaneous. His method consists of merely scraping the surface of one of the tubercles until a little blood or serum exudes, then spreading this upon a coverslip and staining by the special stains. If the disease be present, abundant characteristic bacilli are to be recognised.

MYCETOMA PEDIS.

A few years ago it was my good fortune, along with the late Dr. Kirkpatrick of this city, to report the first certain case of Madura foot or mycetoma pedis occurring in America. Of this disease, which is common in India, many cases have been reported from Algeria and a few from Italy, but none have occurred in the British Isles. My case occurred in a young French Canadian in the neighbourhood of Montreal who had never travelled. Since then some five other cases have been reported in the United States, two if not three of these from Texas and the more southern portions.

DISEASES OF CATTLE.

With regard to the diseases of cattle, there is the possibility of Texas fever occurring through the importation of animals from the Southern States. It has, however, been abundantly proved that this subtropical disease dies out so soon as it reaches the latitude of Massachusetts, the onset of winter surely killing off the ticks which are the means of conveyance of the parasites of this disease from one animal to another.

At the present moment there is a very localised epizoötic in British Columbia of a remarkable and ill-understood form of blackwater fever or hæmaturia among the cattle. This appears to be neither the ordinary hæmaturia of cattle nor the hæmaturia accompanying anthrax. Dr. Duncan McEachran, the Chief Inspector, is at present in British Columbia studying the disease, and it will be interesting to find whether this is due to the existence of any blood parasite. Other localised epizoötics of uncertain causation have been found peculiar to other strictly localised districts; these can, however, in no sense be regarded as allied to any special tropical disease, and need not here be mentioned.

If fuller information upon any individual disease be required, information based upon reports from various sections of the Dominion, I would suggest application to the Canadian Medical Association (Hon. Secretary, Dr. F. N. G. Starr, Toronto), which this July holds its meeting in Ottawa.

I have, etc.,

(Signed) J. GEORGE ADAMI, M.A., M.D., F.R.S.E.,
Professor of Pathology, McGill University.

While revising the proof of the above letter, I take opportunity to make this following additions (June 1st, 1900).

BERI-BERI.

It is interesting to note that just as cases of this disease have shown themselves recently in Dublin, so also here in one of the asylums outside Montreal there have been a few cases clinically unrecognisable from this disease.

BLASTOMYCETIC DERMATITIS.

Another disease first noted further south, namely, blastomycetic dermatitis (of which the peculiar yeast-like parasite was first isolated and studied by Dr. Gilchrist, of Johns Hopkins in Baltimore, Maryland, an old student of the Owens College Medical School), has evidently a wide range northwards, for several cases have been recorded from Chicago, and my colleague, Dr. F. Shepherd, has within the last few weeks studied and described two cases in "habitants" of the Montreal district.

RABIES.

Here it may be mentioned that just as rabies is unknown in Sweden and Norway, so is it unknown in the Province of Quebec, and peculiarly rare in the Dominion generally. Indeed, in the course of his long and wide experience, Dr. McEachran, the head of the Veterinary Department of the Dominion, has never seen a definite case of the disease. Of late years, however, isolated cases have been recorded in the peninsula of Ontario and crossing the border, immediately to the south; the disease is not uncommon in the State of New York.

HEALTH CONFERENCE IN AMERICA.

THE Conference of State and Provincial Boards of Health in North America was held in Atlantic City, New Jersey, on June 1st and 2nd under the presidency of Dr. U. O. B. WINGATE (Milwaukee).

The Construction and Ventilation of School Buildings.—The scientific work of the Conference began with a symposium on school hygiene, introduced by Mr. J. HORACE COOK, Architect and Supervisor of the Philadelphia Public Schools, who read a paper on this subject. He recommended class rooms for 50 pupils to measure about 24 by 32 feet with a height of 13 feet which contain about 10,000 cubic feet of air space. Such rooms might be divided by sliding partitions, and if the doors were filled in with slate they furnished blackboards for each room. The rooms might also be so arranged that four or five of them could by sliding the partitions be turned into one large hall for lecture purposes. Experiments in Philadelphia led Mr. Cook to the opinion that a perfect system of closet arrangements had yet to be devised. The dry closet, while theoretically perfect, had not been practically so, and has been abandoned.

Legislation for the Protection of School Children.—Dr. LEE thought one of the main reasons why the school children of Pennsylvania had been favoured with good school legislation was to be found in the clause of the Constitution adopted in 1873, which made it possible for women to become members of the School Boards.

The School Age.—Dr. MCCUTCHEON (Louisiana) read a paper on the Age at which Children should be set to Work in School. He said that in New Orleans children were admitted to the kindergarten between the ages of 4 and 6 years, and received instruction for two and a half hours a day (9 to 11.30) six days in the week. In the primary schools they were admitted between 6 and 10 years of age, and had five and a-half hours school work, with two intermissions. He advocated extending the kindergarten age to at least the seventh year.

A National Commission of Public Health.—Dr. WINGATE (the President), who delivered an address on this subject, expressed the opinion that some organisation separate and apart from any other service, devoting its entire time to a consideration of the public health, and presided over by a competent member of the medical profession, should be created by Congress.

School Closure.—On the second day the discussion of matters pertaining to school hygiene were renewed, special attention being given to the question of closing schools during outbreaks of endemic diseases. After discussion, Dr. LEWIS (New York) introduced the following resolutions, which were adopted by the unanimous vote of the Conference:

That, in the opinion of this Conference, the closing of schools upon the appearance of contagious diseases among the pupils is seldom necessary or advisable. That the medical inspection of schools is an absolute necessity in such cases. That the establishment of public health bacteriological laboratories is of such vital importance as a public-health measure that their establishment in every State represented in this Conference is hereby requested and urged.

State Vaccination.—Dr. SWARTS presented a paper on the question, Is it advisable for a State to Provide Vaccine Virus? He contended that if the State demands vaccination for the protection of its people, then the people should make no objection to paying for that protection. He believed that the State should provide such laboratories, and, where that was not possible, that it should take the necessary steps to make sure that it was securing the most reliable virus manufactured by the commercial bodies.

Education in Hygiene.—Dr. LINDSAY (Connecticut) discussed the Most Practical and Successful Ways of Educating the Public in the Principles and Practice of Sanitary Science. He considered the press the most powerful promoter of progress.

He thought every health officer should see to it that the prominent paper of his town should be well seasoned with health spices. Every local instance showing the effects of disobedience of sanitary laws should be used to instruct the people. An occasional lawsuit was also effective, and it was a good plan to prosecute violators of the laws. Epidemics were the most grievous and costly lessons for the public, but the most impressive. He advocated making the meetings of public health associations popular by inducing prominent citizens of the community to take part in them.

Dr. C. O. Probst (Columbus, Ohio) was elected President of the Conference for the ensuing year.

EDINBURGH HARVEIAN FESTIVAL.

THE 118th Harveian Festival was held in the Hall of the Royal College of Physicians on June 15th. The Society met at 6 o'clock, when the President, Professor THOMAS ANNANDALE, delivered the Harveian Oration on Transfusion.

Professor ANNANDALE, having first given a brief historical account of transfusion, and of the different suggestions, experiments, and methods employed from time to time, referred to the more recent experiments and observations made by physiologists and pathologists in connection with the subject, and discussed the results of the more recent studies upon the behaviour of the blood and its constituents af er it had been injected into a patient's circulation. He then described the various methods employed at the present time, and enumerated the advantages and disadvantages of each. As a result of his experience and consideration of the practice of transfusion, he suggested the following conclusions in regard to the operation, confirming these conclusions to cases suffering from loss of blood, as he was of opinion that at the present time transfusion for anæmia and other abnormal conditions of the blood did not rest upon any satisfactory basis, although from time to time a few successful cases of the kind had been recorded: (1) That it may be a valuable aid in saving life in the case of patients suffering from serious loss of blood, provided they show no signs of reaction after the ordinary means have been carefully tried; (2) that the best form of transfusion for ordinary use is the injection into a vein of human blood mixed with a solution of phosphate of soda and kept at the temperature of ordinary blood heat so as to prevent coagulation; (3) that if the former method cannot be properly carried out the injection into a vein of saline solution in considerable quantities is the next best procedure (sodium chloride 1 drachm to the pint of warm water is the most convenient solution); (4) that intraperitoneal injections of warm water or of warm saline solutions are most likely to be useful when the abdomen has already been opened by operation, for without such an opening there is always a risk of handling the intestines or other internal organs, with the inserted trochea and cannula; (5) that injections of warm water or of warm saline solutions into the rectum is a safe procedure which may be usefully employed in any sudden emergency. The importance of strict antiseptic precautions in connection with transfusion was strongly advocated, and the fact that Nature has a wonderful power in relieving even great loss of blood was stated in the following terms: "In considering the value of transfusion in saving the life of patients suffering from loss of blood from any cause, it must always be kept in mind that Nature has remarkable powers in overcoming loss of blood, and all have met with cases in which death seemed certain, but which have rallied and recovered. Transfusion, then, should not be lightly practised, and should certainly not be practised unless it can be performed at once and with all safe precautions."

The Orator was awarded a vote of thanks for his address.

Thereafter the Harveians to the number of forty-four dined together. After dinner the usual loyal toasts were given from the chair. The toast of "The Army and Navy" was replied to by Staff-Surgeon ANDERSON and Deputy Surgeon-General SEMPLE. Then followed "The Immortal Memory of Harvey," and "The Honorary Member," replied to by the Rev. Dr. JAMES MACGREGOR. Mr. JOSEPH BELL gave "The Guests," and the Rev. Dr. STEWART replied. Sir WILLIAM T. GAIRDNER gave "The Health of the President." The evening was made more enjoyable by songs, etc. Dr. Robert Farquharson, M.P., was nominated President, and Dr. Kirk Duncanson Vice-President.

THE R.A.M.C. SOUTH AFRICA FUND.

A MEETING of the General Committee of this Fund was held under the Presidency of Her Royal Highness Princess Christian at 84, Brook Street, by permission of Lady Broadbent, on June 19th. The Honorary Treasurer, Mrs. Charters Symonds, presented her statement as to the distribution of the funds. The total amount received was £2,266 8s. 4d. The suggestion of Surgeon-General Muir to open a half-crown subscription in the BRITISH MEDICAL JOURNAL had resulted in the addition of £645 18s. 9d. to the fund. The Committee formed in Birmingham sent £225, the Leeds Committee remitted £50, Scarborough sent £38 12s. 6d., and the Blackburn Committee contributed £80. The provincial Committees at Liverpool and Edinburgh had also sent contributions. The sum of £1,029 6s. was received direct from subscribers, and the bulk was collected by the ladies of the Committee and members of the medical profession. A large sum also was raised by the efforts of active and retired officers of the R.A.M.C. and the wives of several at present serving in South Africa. The Committee had spent £1,495 11s., and had in hand a balance of £770, of which about £170 would be wanted for various purposes, leaving a balance of £600, and one of the objects of that meeting was to consider the best means for utilising this sum for the benefit of the corps. The Honorary Treasurer's report was adopted on the motion of Sir Dyce Duckworth. The report of the Executive Committee was presented by Surgeon-General Muir: 9,000 parcels had been sent to South Africa, containing upwards of 100,000 articles. On the motion of Sir William Broadbent the report was adopted. A vote of thanks to the ladies and others who had given assistance was moved by Major Wilson, who said that till the medical profession had made the Royal Army Medical Corps their own it could have been said that the corps belonged to nobody. Sir William Broadbent offered the thanks of the Committee to Princess Christian, and mentioned that she had travelled from the North specially to be present. The vote of thanks having been acknowledged the proceedings terminated.

THE HALF-CROWN SUBSCRIPTION LIST.

THE following additional subscriptions to the Half-Crown Fund have been received down to and including June 20th since our last list:

	Half-Crowns		Half-Crowns
Dr. T. C. Meggison (London) ...	2	Per Dr. T. R. Bradshaw (Liverpool):	
Dr. E. Haward (London) ...	1	Dr. A. T. H. Waters (Liverpool)	4
G. H. F. (H.M.S. *Pelorus*) ...	2	Dr. J. C. Bradshaw (Liverpool)	1
Deputy-Surgeon-General R. Webb (Dublin)	8	Dr. E. L. Anderson (Liverpool)	1
Dr. F. J. Sawdon (Scarborough)	1	Per Mr. W. M. Beaumont (Bath):	
Dr. J. E. Norman (Hebburn) ...	1	Dr. Ellis (Bath)	2
Major W. A. Morris, R.A.M.C. (Fatehgarh, N.W.P.)	8	Per Dr. R. Harris (Southport):	
Per Mr. E. Mathews (Redditch):		Dr. O'Sullivan (Southport) .	1
Dr. Gaunt (Alvechurch) ...	2	Per Dr. C. W. Graham (Carlisle):	
Two Friends per Miss Willes	2	Dr. Tiffen (Wigton)	1
Per Dr. R. Anderson (Gateshead):		Dr. Murphy (Carlisle) ...	1
Dr. Sergeant (Gateshead) ...	1	Dr. Lockie ,, ...	1
Dr. Cox ,, ...	1	Dr. Burrows ,, ...	1
Mr. R. Strachan ,, ...	1	Dr. Fairlie ,, ...	1
Mr. F. J. Male ,, ...	1		
Dr. R. Anderson ,, ...	4		
Per Mr. C. V. Vereker (Woolton)	15		

We have also received £10 10s. from Mr. Frank Newcombe (Grantham) as the proceeds of a concert held at his house on June 4th; £1 1s. from Mrs. Appleby, per Dr. J. M. H. Martin (Blackburn); and 10s. 6d. from Lady Hunt-Grubbe on behalf of the Seaview, Isle of Wight, Children's Band of Hope, per Surgeon-Major-General J. Davis (Southsea).

The amount received for the Half-Crown Fund, down to and including Wednesday, June 20th, by the Editor, is £665 15s. 3d. Cheques and postal orders for the Half-Crown Subscription List, sent to the Editor of the BRITISH MEDICAL JOURNAL, should be made payable to the "R.A.M.C. South Africa Fund," and crossed "Holt and Co."

AT the meeting of the Council of the Pharmaceutical Society on June 13th, Mr. G. T. W. Newsholme, of Sheffield, was elected President in succession to Mr. Martindale.

BRITISH MEDICAL ASSOCIATION.
SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 23RD, 1900.

SOME ECONOMIC ASPECTS OF ANTENATAL PATHOLOGY.

A FALLING birth-rate and an increasing interest in antenatal pathology are matters which have come together, not quite fortuitously, at the dawn of a new century. Both are likely to play a not inconsiderable part in the immediate future, with bearings that are no longer recondite, but very practical and of economic and national importance. To the question of the falling birth-rate we need not now recur, as it was discussed recently in these columns. Its causes are fairly well understood, and the remedy for one of the most important of them is within reach when the national conscience shall have been awakened. In the meantime, what may be called the "scarcity in babies" has directed attention specially to the weaklings and to the unfit among them, not with a view to their extermination, but in order that their weakness and unfitness may be corrected postnatally, or, better by far, prevented or ameliorated antenatally.

Herein is the connection between the diminishing birth-rate and the increasing interest in antenatal pathology. If the fœtuses are to be few, let them at least be fine. If the number of children in a family is to be limited to two or three, it is evidently of vast importance that the two or three come into an independent and extrauterine life as strong and healthy as a normal intrauterine existence can make them. Antenatal pathology being the subject which deals with fœtal diseases, embryonic deformities, and germinal predispositions to disease and deformity must play an important part in any attempt to ensure antenatal hygiene. To prevent the production of the unfit it is manifestly necessary that we learn the causes of their unfitness and their mode of action. There are assuredly other reasons why, of late years, the subject has been attracting attention, such as its scientific interest, but this economic factor cannot be neglected. A higher motive for the increased study of antenatal conditions may be, and ought to be, the desire that the twentieth century may see the unborn infant enjoying the same medical and hygienic privileges as the child and the adult, but the less high motive of utility has had more power in bringing this consummation within the limits of possibility.

Along various lines there has been progress in antenatal pathology,[1] some of which are indicated in the two lectures by Dr. J. W. Ballantyne, of Edinburgh, published in our columns. There has been the gradual establishment of the right of the fœtus to his life, "an imprescriptible and sacred right" which cannot be taken from him by his father, his mother, his mother's medical attendant, or by the directors of a maternity hospital (*mirum!*). This is bringing in its train the checking of therapeutic fœticide, by which is meant the performing of obstetric operations, which either kill the fœtus or subject it to a grave risk in order to improve the maternal prognosis. Among such operations Pinard would include not only craniotomy upon the living infant, but also prolonged and difficult forceps or version cases and the induction of premature labour. There can be no doubt that sometimes a bad forceps case in a flat pelvis is simply embryulcia in disguise, and possibly it would be well if such cases were treated by symphysiotomy. Pinard hits hard at British obstetric practice when he condemns the induction of premature labour as fœticidal, yet antenatal pathology to some extent supports his conclusion, for to be born prematurely is often absolutely lethal to the fœtus when normal, and much more often so when diseased or weak. Nothing can be worse for a delicate or morbid fœtus than to be prematurely expelled from an environment which is nearly, if not quite, perfect into one which can only with great difficulty be made tolerable by such artificial appliances as the incubator—really a poor attempt to restore the conditions of intrauterine life. In place of these operations have been put symphysiotomy, pubiotomy, conservative Cæsarean section, or Porro's operation, and craniotomy only on the dead fœtus. But in this country at least there are great difficulties in the way of the popularisation of these procedures, among which the objection to the external abdominal incision is one. At the same time a maternal mortality which is smaller in Cæsarean section than in craniotomy upon the dead fœtus is a startling proof of what may be accomplished in this direction.

Antenatal pathology has also advanced lately in the sphere of the prevention of intrauterine death from what may be called natural causes, among which must be included the passage of microbes, toxins, and poisons from mother to fœtus. Nicloux[2] has shown experimentally that alcohol given to the mother animal and the parturient woman quickly finds its way in startlingly large amounts to the fœtus *in utero*; and Sullivan[3] has brought out by statistics that habitual inebriates among women give birth to a terribly high percentage of dead or diseased infants. The economic conclusion to which one is enticed is that inebriate mothers do the best thing for their offspring when they commit some offence in the first month of pregnancy on account of which they are condemned to spend the rest of the period of utero-gestation in prison, for it has been shown that the prison baby may under such circumstances be born not only living, but even healthy! The *vis medicatrix Naturæ* is at work during intrauterine life, and probably at no time can it achieve more surprisingly beneficent results.

Besides the prevention of the passage of noxious substances from the mother to the fœtus, recent researches have shown that the placing of pregnant women in

[1] The Progress of Antenatal Pathology, *Scott. Med. and Surg. Journ.*, May, 1900.

[2] *L'Obstétrique*, p. 97, March, 1900.

[3] *Journ. of Ment. Science*, July, 1899.

circumstances under which they can rest during the last two months of gestation is a means of ensuring the birth of strong and healthy infants.

For these and other reasons it may be concluded that antenatal pathology has come to be more than a matter of academic interest. Thus far it has been a somewhat neglected branch of obstetrics: in the future it may be an important part of public health. Possibly an adumbration of this result may be found in the fact that the two courses of lectures on antenatal pathology, given recently in the University of Edinburgh, were delivered in the class-room of Medical Jurisprudence and Public Health, and that their delivery was, as we understand, largely due to the initiative of the energetic medical officer of health of the city.

A VIGOROUS VESTRY.

THE Vestry of St. George-the-Martyr deserves well of all anxious to see demonstrated some of the inherent weaknesses of the Housing of the Working Classes Act, 1890. That Act was admittedly a Consolidation Act, but some thought they saw in it possibilities of carrying out certain needed sanitary reforms. Many medical officers on finding such a heading as "Buildings unfit for habitation" followed hard by another reading "Closing and demolition," began to suspect that the sanitary millennium might not prove after all a myth. Even when Section XXXIII was read in its entirety, the sanguine were still able to hope that a day was at hand when an uninhabited house, persistently left unfit for habitation, might, when it became a danger and a menace to the neighbourhood, be demolished forthwith.

But the uncertainties of the law and the rights of property have been too much even for the energies of the Vestry of St. George or its indefatigable medical officer. Many other health officers before Dr. Waldo have hoped many things from this section. Most of them have had their enthusiasm snubbed out of them by their town clerks or other legal advisers. It has been reserved for the Martyr's Vestry to screw its courage to the sticking place and yet to fail. It is, however, only by such failures that the absurdities and inanities of the Act can be demonstrated, and we congratulate the courageous vestry and its officers even upon their failure. Section XXXIII seems to the man in the street to mean that where a closing order has been obtained against the owners of an uninhabitable house, and where the owners have not executed the works necessary to render the dwelling fit for habitation, the local authority if satisfied (1) that such is the case, and (2) that due diligence is not being used to make the house habitable, and (3) that such house constitutes a danger to, or is injurious to, the health of the public or of the neighbouring occupiers, then the authority may pass a resolution that it is desirable to demolish such house. There is to be no haste—the law dislikes haste—in carrying such resolutions into effect. The authority must give notice to the owner of the resolution they have passed, and appoint a day at least a month later than their notice; that means in the case of a council meeting monthly some two months later for the further consideration of their resolution, and at this meeting the owner may attend and state his objections to the demolition. Having heard these the authority may (unless the owner undertakes forthwith to do such works as shall render the dwelling fit to live in), if it deems it expedient, order the demolition of the building. Should the owner undertake to do what is necessary and not do it within an allotted time it again may order the demolition, and if he does not take the building down may do so itself. There is, of course, an appeal, during the hearing of which the dangerous building must remain, however dangerous. Of what consequence is danger to health compared with the sacred rights of property?

What happened in Southwark was this, and it illustrates beautifully the carefulness of the legislation for the health of the lieges. After the usual inevitable notices and their consequent delays, the St. George's Vestry, in November, 1898, made a demolition order for certain premises in Red Cow Alley, Tabard Street, such premises having, in its opinion, not been rendered fit for habitation, and being dangerous, and injurious to the health of the inhabitants of the neighbouring houses. The order was appealed against, and the appeal heard on the 11th of January, 1899. The Court held that the buildings were dangerous, but that a "dwelling house" meant an inhabited dwelling-house. A case upon the legal point was stated, and heard in the Divisional Court on November 7th, 1899—a year, within a few days, of the time the vestry had ordered the demolition of the buildings as dangerous to health. The point was decided in favour of the vestry that the dwelling-house need not be actually inhabited at the time of the order, but the judges remitted the case to quarter sessions to determine the facts as to whether the whole or what part of the dwellings was dangerous to the health of the neighbourhood. Honours divided! On January 19th, Quarter Sessions again considered the facts. It was stated that certain things to lessen and obviate the danger to health had meantime been done, and an adjournment to February 16th, to enable the vestry's witnesses to examine into this was arranged. A readjournment was made to March 16th, on which day Dr. Louis Parkes declared that, the roofs being partly demolished, the interiors were rotten, and the rain passing into the filth between the floors, and into the filth-saturated ground, would in warm weather give off dangerous effluvia. Mr. Field, a sanitary surveyor, found no trace of saturation and smelt no smells. The buildings were unsightly and, were they his, would be pulled down, but not because they were dangerous to health. The Court decided to view, and took with it "a medical man who had been for some years a medical officer of health and a practical surveyor of large experience in London." The decision of the Court was that at the time of the order a part of the tenements was injurious to health, but that the cause of danger had been removed, and that the building was not, and was not likely to become, injurious or dangerous to health.

We have no doubt the learned Deputy Chairman of Quarter Sessions decided to the best of his ability according to the evidence laid before him. It seems unfortunate that after a period extending from November 29th, 1898, to April 11th, 1900, we should have a decision in this test case founded upon the opinion of two experts whose names have not been made public. Surely if the evidence was conflicting—if the evidence of the sanitary surveyor was of

equal value with that of Drs. Parkes and Waldo—the case which has dragged its slow length along for fifteen or sixteen months might have been adjourned long enough to have allowed the Court, whose action in calling in unbiassed experts we cannot too much commend, to have obtained the assistance of men whose names would have added weight to their expressed opinions.

The vestry, however, is ready to ride for another fall. It cannot appeal in the case we have mentioned, but we understand it intends to appeal against a decision given against it on its right to class as houses let in lodgings certain tenement dwellings which have for years been a cause of much anxiety to the officers of health. Should Mr. Slade's decision against the vestry be upheld, and the latter be unable to insist upon bringing the occupants of these rooms under the wholesome discipline of its by-laws, it might be well to consider whether an extension to the whole country of such powers as Glasgow possesses over the so-called "ticketed houses" is not desirable. We are all anxious to interfere as little as may be with the freedom of an Englishman to the enjoyment of his castle; but castles are not always healthy residences, and we have surely got beyond the days when their occupants had the right to be a sanitary danger and menace to their neighbours.

A PSYCHIC HOSPITAL.

IN a contemporary called—probably on the *lucus a non lucendo* principle—*Light*, a correspondent signing himself "An Anglican Clergyman" suggests the establishment of a "psychic hospital." His mind has, it would seem, been impressed by the vast number of invalids who have spent well-nigh all their means upon physicians and found that, in the classic words of the common or country churchyard epitaph, they "were in vain." Would psychic treatment be less vain? The "Anglican Clergyman" thinks it would, and anticipates "grand results" from a psychic hospital. The institute should, he urges, be unsectarian, "that is to say, it should be separate on the one hand from the ordinary medical school, and on the other from the antivivisection movement." He insists, however, on assurance being given that within its walls there shall be no "hacking up of either animals or human beings." The suggestion has already been taken up by several correspondents of the same luminous periodical. One of these enlightened persons is confident that something of the kind, where different methods of healing outside the orthodox might be proved, would do more for the cause of spiritualism than all the phenomena put together. As to this we have not the slightest doubt—if only the methods in question did heal. There's the rub. "Nurse Dora" also thinks the time is ripe for spiritualists to start a hospital where their mediums may work and show to the world their great power in restoring the sick to health in the natural way. Being a practical person, she proposes that a house be taken, that it should have public wards and private accommodation for paying patients, and that spiritualist doctors should be appointed. Unfortunately she does not say where the required supply of spiritualist doctors is to be found. Presumably, however, such a trifle need not stand in the way of the treatment, for "Nurse Dora" proposes to train probationers who have the gift of healing in mental science. She herself is a student of mental science, and hence is of course capable of teaching it. If any further testimonial is needed, is she not an associate of the London Spiritualist Alliance? We might hint with Falstaff's tailor that the lady must procure us better assurance than this; we do not altogether like the security. Besides her accomplishments in mental science "Nurse Dora" is a magnetic healer and gives clairvoyant diagnosis; but the most interesting thing to us is that she has a "powerful band of spirit doctors who were once earth's renowned physicians and surgeons, and who desire to accomplish a yet wider field of work through mediums." The staff of the psychic hospital would therefore consist of "Nurse Dora" and her band of spirit doctors. One wonders what terrible guilt these departed practitioners must have to expiate to be condemned after death to "cover" an unqualified magnetic healer. As there seems to be some secret affinity between this particular species of bunkum and blasphemy, it is hardly surprising that "Nurse Dora" concludes by claiming that she and an "ex-nurse," who she modestly thinks might "run the show" with her, have "been told by the Great Healer of old that they will be endowed with His power to heal the sick in large numbers." Mr. W. Heald, who appears to rejoice in the spirit name of "Sphaera," like Mr. Clennam at the Circumlocution Office, "wants to know." Is the institute to be simply a place for the healing of disease by psychic means? He is candid enough to say that those who know the rudiments of psychic law will make no such mistake as to labour under the impression that the mere placing of hands upon the sick person will heal disease. There must be training in the knowledge of spiritualist correspondences, whatever they may be. We gather that this knowledge is necessary "that effects may be treated from causes, and not, as hitherto, effects from mere effects, or from the inverted order of trying to deal with causes from effects which must always be unsatisfactory in its ultimate results." "Sphaera," it must be admitted, is not very illuminating; indeed, not to put too fine a point on it, he is decidedly obscure, but such is the way of oracles. Something, however, of the kind of treatment which he has in view may be gathered from the statement that a psychic hospital "involves that the doctors, the nurses or the healers, called by whatever names be decided, would need to be strong in their own spiritual life, so that through them as media counteracting spirit influence would be brought to bear directly upon the evil which is the primary cause of disease." "Sphaera" is evidently a disciple of Swedenborg. That remarkable *déséquilibré* professed to see all things in the heavens above and on the earth below, and in the waters under the earth, and therefore may be accepted as an authority on spiritualist pathology. The following luminous delivery on the general etiology of disease, which "Sphaera" quotes from the Swedish seer, may enlighten some darkened minds which now painfully grope after the truth in hospital wards and laboratories:

"Evil closes the smallest and quite invisible vessels, of which the greater ones, which are also invisible, are composed, for the smallest and quite invisible vessels are continued from man's interiors; hence the first and inmost obstruction, and hence the first and inmost vitiation of

the blood; this vitiation, when it increases, causes disease and at last death. But, if man had lived the life of good, his interiors would be open into Heaven, and through Heaven to the Lord, thus also the smallest and invisible little vessels *vascula* . . . hence man would be without disease, and would only decrease to ultimate old age . . . . and when the body could no longer minister to its internal man, or spirit, he would pass without disease out of his earthly body into a body such as the angels have."

But even this revelation leaves us in the dark as to the essential details of the "psychic" method of dealing with disease. Even if we grant that evil acts as an astringent of the vascular system, and that good "opens the interiors," we are not much advanced, for we are not told how we are to recognise either the one or the other. Prophets as well as philosophers have sometimes peculiar notions as to "good" and "evil," and before we can accept the Swedenborgian pathology as solving the riddle of disease we should like to have a definition of those terms.

UNIVERSITY OF LONDON.

THE occupation of the new University Buildings at South Kensington has not been accomplished without a considerable amount of inconvenience. Indeed, it is possible that in the not far distant future there may arise an urgent necessity for expansion. As already stated, the candidates for the matriculation examination this month could not all be accommodated at the Imperial Institute Buildings. Delay has occurred in providing a new dining-room and kitchen, and we understand negotiations are proceeding with the catering syndicate which has a monopoly of providing refreshments throughout the Imperial Institute Buildings. It seems remarkable that in the prolonged communications between the Treasury and the University Senate no reference appears to have been made to the existence of a contract which will not expire for a couple of years, whose terms compel the Senate to obtain exclusively from the syndicate in question such refreshments as are required by the undergraduates and examiners of the University.

MEDICAL MEN AND THE LUNACY ACTS.

THE two cases of Dowling *v.* Dods and Soper *v.* Gibson and Young—reports of which will be found elsewhere in this issue—present many features of interest to members of the medical profession. By a curious coincidence these two actions, both of which involved charges relating to documents addressed to relieving officers as to the alleged lunacy of the plaintiff, were heard at the same time in the Queen's Bench Division; but, whereas in the case of Soper *v.* Gibson the defendants obtained a verdict, Mr. Dods was mulcted in the sum of £100. A perusal of the facts in Dowling *v.* Dods, and of such portions of the evidence as our space has permitted us to publish, or a reference to the full report of the case which appeared in the *Times* of June 19th, 20th, and 21st will serve to show what scanty evidence is sufficient to convince a jury that a medical man has been guilty of negligence, malice, or what not. The learned judge who tried the case pointed out to the jury that in forwarding the certificate in question to the relieving officer the defendant had acted, not as a medical man, but as a member of the public. He also found that the occasion was privileged, his sole reason for leaving the case to the jury being that there was "evidence of malice." It is difficult to say where any malice (even in the legal sense of the term) is to be found, but the jury have found it as a fact, and we fear that Mr. Dods must abide by their decision. The lesson to be drawn from this case is one which cannot be too often emphasised. In every case of suspected lunacy the practitioner employed to make the necessary inquiry should take every precaution in order to protect his own interests in the future.

MR. LONG AND RABIES.

SOME few weeks ago Sir William Gowers suggested by a letter in our columns that the medical profession should express its sense of the value of the action taken by the President of the Board of Agriculture for the suppression of rabies. As is well known, Mr. Long has incurred the unlimited abuse of persons professing to be dog lovers because by the Muzzling Order he took the only effective means of preventing the dissemination of a disease which used formerly to cause many most painful deaths among dogs, and not a few among human beings infected by them. At the annual meeting of the Metropolitan Counties Branch of the British Medical Association on June 20th, Sir William Gowers, after pointing out that no case of rabies had occurred for six months, owing to the action taken by Mr. Long, moved a resolution expressing appreciation of the success of the measures adopted by Mr. Long for the extinction of rabies, of his firmness in maintaining them, and of the great service that he had rendered to the community by thus abolishing a cause of death and intense suffering to both man and animals. The resolution was seconded from the Chair by Mr. Bryant, was supported by Sir Samuel Wilks, and carried without a dissentient vote. We believe that this resolution expresses the general opinion of the medical profession, and it would, we cannot help feeling, be a graceful thing if further occasions were found to give expression to this belief. We are aware that there are some who consider that it would have been better had the Muzzling Order been more universally applied, but it must be remembered that the Order would seem to have produced the desired effect, and that by exercising discrimination as to the areas to which it was applied a certain amount of opposition was conciliated. It is true that, as we have said, there were some who resented the imposition of the order anywhere and at any time, and these people after the manner of such unreasonable agitators, made a great deal of noise which might have frightened a less courageous Minister. Mr. Long's firmness in disregarding this mischievous agitation deserves recognition from all who are acquainted with the serious nature of the evil with which he was called upon to deal.

MEDICAL OFFICERS OF SCHOOL BOARDS.

THE Swansea School Board, acting under the advice of its medical officers, has issued a leaflet of advice to parents which appears to us to be in every way admirable. It should be stated in the first place that this School Board has appointed two medical officers—Dr. Rhys Davies for the urban districts and Dr. E. Rice Morgan for the semi-urban districts, and that these gentlemen make a quarterly inspection and report to the Board. The leaflet contains some excellent advice expressed in clear and simple language on various matters as to which parents are apt to sin rather from want of attention than from design. Thus under the head of fresh air it is pointed out that children spend, or ought to spend, nearly one-half of their time in bed, and that, therefore, the ventilation of their bedrooms is a matter of the greatest importance, and the value of the open fireplace and the inexpensive ventilating bar to the window is pointed out. The necessity for proper clothing of the arms and legs, a matter often overlooked by mothers otherwise careful of their children, is insisted upon, as is also the importance of watertight boots, if boots are worn at all, for it is added, "far better go barefooted than wear boots out of repair." A few words are said as to guarding children from measles and whooping-cough, and it is pointed out that the earlier the age the

more dangerous are these diseases to life. Perhaps the most valuable section of the leaflet is that on "general cleanliness" which, we may observe, it required some courage to write, for there are few matters upon which mothers of the working classes are more sensitive than on such subject, and especially as to nits in the hair. It is pointed out that clean children are liable to have lice in the hair, for if one child in a school has it others may become infected, and we are not surprised to learn that a systematic examination by Dr. Rice Morgan revealed the fact that a very large proportion of all girls in the schools were infected. The leaflet also contains under this head observations on the necessity of attending to the teeth, a matter upon which it is usually more easy to influence parents, and upon the toilet of the nails. There is reason to believe that leaflets of this kind do a considerable amount of good, and what has been done in Swansea illustrates one of the directions in which medical officers of School Boards may render important services to the community.

THE FATAL FIELD DAY AT ALDERSHOT.

The evidence given at the two inquests held on the unfortunate men who died, and the answers given by Mr. Wyndham in the House of Commons, have now thrown as much light on the causes of this mishap as we are likely to be favoured with, for the result of departmental inquiries, even if made public—as is not necessarily the case—is usually to attempt to show that no one was to blame for what everyone outside official circles would probably admit to be a preventable as well as a most lamentable "accident." From the evidence given before the coroner, it appeared that two of the men who died were among the strongest in their regiment—a Highland one; and that a third, who belonged to an English regiment, had never been know by his sergeant to be ailing. *Réveillé* sounded at 5.30 A.M. on June 11th, and after a hasty breakfast of bread and tea, according to some, or bread and cheese, according to other witnesses, the men started at 6 A.M., taking no food with them, but carrying their haversacks, water bottles, side arms, and ammunition, a weight in all of about 14 lbs., and wearing on their heads a field service cap, of which one of the military witnesses remarked that any other sort of head dress would be better for such a day. According to the general orders in force for such occasions the duty of providing the men with light refreshments during the day lay with the regimental authorities, and the manner in which this duty was performed came out in the evidence given on the second inquest. In one instance the colonel, who was a stranger to Aldershot, consulted with his quartermaster, and ordered him to make the necessary arrangements. The quartermaster arranged with a contractor to follow the troops with refreshments in a cart, but as the contractor did not turn up, at the last moment the regimental authorities had hastily to provide a transport cart drawn by a mule to carry some necessaries. Owing to the driver of this cart not being acquainted with the ground to be covered, it got lost, and the water cart also went astray, and was never seen. In the early morning rain threatened, but phenomenal heat came on instead, and between tween 10 and 11 A.M. a halt was called, and shortly after the order to cease firing was given. Owing, however, to there being no field telegraph at hand, it was 11 45 before the whole of the troops engaged understood that the day's operations were over, and that the respective regiments were at liberty to return to their quarters, this news having to be carried by mounted orderlies over ten miles of rough country near the Fox Hills. The defective commissariat, and the unsuitable headgear of many of the regiments, had much to do with the disastrous results which ensued. A piece of bread and some tea, or even a biscuit and cheese, served at 5 A.M., are not much in the way of preparation for the hard work of a field day, involving a march of seven miles over hilly country. Nor can a water cart here and there, and a supply of soda water, even if it does not go astray, be described as a very substantial addition to this meagre fare, or as more than the very lightest of light refreshments. As a matter of fact the men on the way back fell out by twenties and thirties, till the road was literally lined with them. Two or three hundred had to be conveyed to hospital, and four of them died. The surgeon-colonel in charge of the hospital, who has had twenty-four years' experience in India, being asked by one of the jury his opinion as to holding a field day on such a hot day, replied that he had no opinion on the subject; the question must be addressed to his superior officers; he was not the principal medical officer, and had not been consulted on the subject. It seems to us that this answer, cautiously expressed as it was, really goes to the root of the matter, and that the disinclination of military authorities to consult the medical officers as to matters of food and clothing for the troops under their command, or to act upon medical advice if asked for, is primarily responsible for the suffering and deaths which resulted from this disastrous field day.

THE PREVENTION OF TUBERCULOSIS.

The meeting held at Oxford last month to form a local branch of the National Association for the Prevention of Consumption should go far to convince the more sceptical of the public that the movement is not merely the passing fancy of a few faddists, but is supported by the convictions of the most scientific and sober members of the medical profession. The Regius Professors of the sister Universities of Oxford and Cambridge spoke with all the responsibility of their office to an audience accustomed to recognise the authority of learning. They were able to state that the communicability of the disease of tuberculosis had been conclusively demonstrated, and that therefore the belief that it may be prevented is warranted. Sketching briefly but clearly the main facts as to the nature of the disease, Professor Clifford Allbutt indicated the principles on which preventive measures must be based. He epitomised the precautions as an active crusade against three D's—damp, darkness, and dirt; a crusade which, as he reminded his hearers, every individual could carry out in his own home. In getting rid of these evils they would at the same time be getting rid of many other pests besides tuberculosis, and they would be raising the standard of the general health to a much higher level. There is much wisdom in inculcating the general principles of hygiene in such public meetings, for general hygiene appeals most strongly to the mind when its application to a special evil is forcibly impressed. Sir J. Burdon Sanderson laid stress on the necessity for organisation. "Whatever they did they were not likely to accomplish anything very successfully unless they did it in a systematic way." From the Germans, he said, we might learn the value of organisation and intelligence in the application of it, but we should not necessarily imitate what was done in Germany. "Organisations were only successful when they were adapted to the peculiar circumstances of the place for which they were intended." To those who look below the surface the meeting at Oxford is an event of considerable importance, the influence of which it may be hoped will spread far and produce a powerful and lasting effect.

NICOTINE FEVER AND ANTINICOTINE FRENZY.

Men, however else they may be divided, are separable into two great classes—those who smoke and those who do not. Between these two sections of the human race there is a great gulf fixed. The worshippers of our Lady Nicotine are a peaceful folk who do not interfere with their neighbours, and only wish to be left to the undisturbed practice of their

ritual. The non-smokers, on the other hand, are mostly fiery zealots who rage against the cult as a thing savouring of Sheol, and who would be glad to burn all nicotinolaters with faggots made of the instruments of their superstitious devotion. Tobacco stinks in the nostrils of many worthy persons worse than incense in those of Mr. Kensit or Mr. Samuel Smith. In season and out of season we hear them denounce it; they speak of the prevalence of "nicotine fever" as if it were something more terrible than the plague. Nicotine fever may be bad for the body; but is not antinicotine frenzy even worse for the mind? One of the most characteristic symptoms of this affection is a remarkable kind of delirium in which all moral perspective is lost, and the mind is taken captive by delusions more fantastic than Don Quixote's windmill giants. Under the influence of those delusions the perfervid antinicotian sees in tobacco the cause of all diseases and of most moral evils, and would agree with James the First that its smoke is of the same chemical composition as that which issues from the bottomless pit. Such a one the Chief of the Weather Bureau at Washington appears to be. That enlightened functionary has, it is stated, forbidden his clerks to smoke cigarettes, not only during working hours, but even in their leisure time, and therefore presumably in the sanctuary of their own homes. He justifies an edict, which the Great White Czar himself might have a delicacy about issuing, by the plea that the cigarette makes his assistants less efficient in their work. Perhaps clerks of the weather are, from the nature of their calling, more volatile than ordinary men, and therefore need more paternal government; but in that case, why does this meteorological autocrat graciously allow them to smoke cigars, and even pipes? Doubtless because the cigarette is to him, as to so many of his countrymen, the incarnation of the evil spirit of nicotine. That boys should be forbidden to smoke, and even terrorised into obedience by the mailed fist of the law, is all very well; but the idea that healthy men are likely to be unnerved and otherwise damaged, intellectually as well as physically, by moderate indulgence in cigarettes is simply absurd. We are sorry to see that the antinicotine frenzy has spread to Japan. According to a Tokyo paper, the Educational Department has issued an order to the effect that all students—irrespective of their being in minority or majority—of the primary schools, middle schools, normal schools, and other schools of the same grade are positively forbidden to smoke. A law prohibiting "juvenile smoking," which passed the Diet in its last session, has lately come into operation, but with that we do not quarrel. It is the attempt to force such a self-denying ordinance on adult students that strikes us as not only foolish but futile. Dr. W. G. Grace has recently confided to an inquiring journalist the following "secret of health": "Live a natural, temperate life, get all the outdoor exercise you can, and don't smoke." The advice is excellent as far as it goes. Dr. Grace is a model of manly vigour at an age when for most men the love of cricket has become strictly Platonic; but is there any shadow of proof forthcoming that it is abstinence from tobacco that has made him the greatest of cricketers past, present, and perhaps to come? It is at least thinkable that, had he been a moderate smoker, he would have been greater still.

THE AMERICAN ACADEMY OF MEDICINE.

The twenty-fifth annual meeting of the American Academy of Medicine was held in Atlantic City on June 2nd and 4th under the presidency of Dr. G. Hudson Makuen, of Philadelphia. In his address, the President said that the American Academy of Medicine was instituted about a quarter of a century ago, its chief object being to promote the higher education of medical men. Although it had been suggested that there was no longer good reason for its continuance, never in the history of medicine, or in the history of the world, had there been so great a field for medico-sociological investigation. That the question of the treatment of the so-called defective, delinquent, and dependent classes had not been solved was shown by the fact that they were increasing in a proportion far greater than the increase of the population. Members of the Academy were formulating plans for a scientific process of selection, the essential features of which might be surmised to be a revision of the immigration laws and the laws regulating the marriage contract. For those who did not respect the law, another remedy—that of asexualisation—had been suggested. This, he thought, would with little doubt become a legalised practice during the early part of the next century. Indiscriminate dispensary service was probably the most depraving and the most demoralising of all indiscriminate charities. Following close upon the evils of indiscriminate charity were those of indiscriminate institutionalism. It was said that Philadelphia supported at an enormous cost a benevolent institution for every 10,000 of its inhabitants. If they would strike at the very root of crime, pauperism and mental deficiency, methods of education must be improved. The chief feature of the education in the Elmira Reformatory, which produced marvellous results, was manual training. It was reasonable to suppose that the highest cerebral development must come from a judicious combination of mental and muscle action. The Secretary read the report of the Special Committee for the Study and Formation of Principles respecting Specialism and respecting Advertising. The conclusions of the Committee as to specialism were that it is not only desirable but unavoidable, and that a specialist, as well as the general practitioner, may have a practice directly with his patients or indirectly through consultation. As to advertising, the Committee summed up its conclusions as follows: (1) No practitioner can escape advertising; (2) the true physician serves humanity first, the earning a livelihood being secondary; (3) any method of advertising reversing this order is not to be commended; (4) any method of advertising which only seeks to inform the public that the advertiser is ready for service is permissible; (5) the above principles are fixed; their application varies with the environment; (6) regulations restricting advertising should be equal in their action. The noble sentiment expressed in the second of these conclusions did not find favour in the eyes of some speakers. Dr. S. D. Risley was elected President for the ensuing year.

A SANATORIUM FOR LEPERS IN FRANCE.

It is estimated that there are about 400 lepers in France. They are scattered about in Brittany, in the Pyrenees, on the shores of the Mediterranean, and in Paris, where they number 150. Among the lepers there are missionaries and nurses who have fallen victims to their devoted care of sufferers in other countries, and officials and soldiers who have contracted the disease in the colonies. An anti-leprosy committee has recently been formed on the initiative of Dom Santon, a member of the Benedictine Community of Ligugé, who is also a Doctor of Medicine, for the care of the lepers in France and the prevention of the spread of the disease. Dom Santon has for many years past devoted himself to the study of leprosy, travelling for that purpose in many parts of the world. After conference with the Council of Hygiene he has acquired a property in the Vosges, where he proposes to establish an asylum for lepers to be called the St. Martin Sanatorium. The plans have been approved by the French Government.

THE COCKADE.

In reply to a correspondent we reprinted in the British Medical Journal of June 9th, 1900, the opinion from Mr. Ambrose Lee, Bluemantle, Herald's College, London, with regard to the use of the cockade, first printed some years ago. Mr. Ambrose Lee stated that in the opinion of

Heralds' College the privilege appertains and is confined to the naval and military services including the militia, yeomanry, and volunteers, and that the use of the cockade by officers who have retired with rank and permission to wear their uniform is both customary and justifiable. At the same time we reproduced the opinion of a correspondent that all magistrates placed on the Commission of the Peace by the Lord Chancellor were entitled to wear "the civil cockade." We are indebted to Mr. Vincent Jackson, of Wolverhampton, for the opportunity of seeing a correspondence which he has had with Mr. Ambrose Lee. Mr. Jackson doubted the existence of any civil cockade, and this doubt is confirmed by Mr. Ambrose Lee, who states that he has never heard of such a thing, and refers to a work entitled *Armorial Families* published in 1895 by Mr. A. C. Fox-Davies. Mr. Fox-Davies in his preface says that there is no law as to cockades, but that the custom which has regulated their usage is much more emphatic and pronounced than in the case of liveries. "The cockade," he continues, "originated in the 'brooch,' if I may so term it, or fastening of the old three-cornered hats. The black cockade of the present time is generally known as the 'black cockade of Hanover,' and its usage upon the hats of liveried servants dates from about the time of the Hanoverian succession. One hears about the white cockade of the Stuarts, but I am inclined to think it originated in contradistinction to the black cockade of Hanover, and I fancy has a greater existence in poetry and romantic chivalry than it ever had in actual life. It is doubtful if it had anything beyond an actual military existence. The cockade is purely a fighting badge, so it is essentially ridiculous for civilians or ladies to pretend to it. There are two shapes at present in general usage; the most usual is the one surmounted with a fan-shaped ornament. This is the military cockade. The oval shape without the fan is the naval one. The right to the military cockade is universally conceded to all officers holding commissions in the army, militia, and volunteers, and, by virtue of their military capacity, to lord lieutenants and deputy lieutenants, and for the same reasons to high sheriffs during their year of office. The right to the naval one is conceded to officers holding commissions in the navy or royal naval reserve. It is a moot point whether ex-officers, when no longer holding their commissions, are still entitled to make use of it. In my opinion it should be conceded, at any rate, to those who receive permission to continue to wear their uniform, but I cannot substantiate my opinion by any authority or settle the matter one way or the other. The royal cockade is circular and larger, and rather different in the form of its construction. This shape in a smaller size is adopted by many of the royal household for their private purposes, and I cannot help thinking that the usage of this shape by such persons and the usage of cockades by ambassadors are simply a matter of privileged concession to the holder of the office for the time being. . . . From the fact that the use of the cockade is conceded to deputy lieutenants—and the list of deputy lieutenants includes the great majority of those in a prominent social position—it seems to be considered by a large number of people that the placing of the cockade upon the hats of servants is nothing more than an indication of such social position on the part of their employers, and consequently the pretenders to this rank, with common consent infringe the privilege." It would appear, therefore, that the opinion of the Heralds is that Justices of the Peace or other persons holding civil commissions are not entitled to mount the cockade in the person of their servants.

THE INDIAN MEDICAL SERVICE.

IN accordance with a custom which now seems to have become established, the officers of the Indian Medical Service retired or on leave in the United Kingdom dined together on June 14th. The dinner was held for the first time in May, 1897, when the chair was taken by Surgeon-General Sir Joseph Fayrer, who again presided at the second dinner in June, 1898. The third dinner took place in June, 1899, when Surgeon-General Sir W. Guyer Hunter was in the chair. This year the dinner was held at the Hotel Cecil, and the chairman was Sir Trevor Lawrence, Bart., who was an officer of the Indian Medical Service from 1853 to 1863. The number who sat down, including guests, was about 65. Surgeon-General Sibthorpe, C.B., who gave the toast of "The Sister Services," referred to the cordial relations which he said had always existed between his service and that of the Army, and paid a warm tribute to the professional attainments of the officers of the Royal Army Medical Corps. The toast was acknowledged by the Director-Generals of the Royal Navy Medical Service and the Royal Army Medical Corps. Both gave expression to the cordial feelings with which the officers of their services regarded their brother officers of the Indian Medical Service; and Surgeon-General Jameson, C.B., said that his department now had in South Africa some 8,000 attendants on the sick. The organisation of the hospitals and of the medical service generally in South Africa had been a serious task, and the Royal Army Medical Corps was now confronted with the further task of providing for the sick and wounded sent home, who were arriving at the rate of about 2,000 a week. He also said that he had called for a report on the value of inoculation against typhoid fever as tested in Ladysmith. The results were rather difficult to understand. The statistics from Ladysmith appeared to indicate that the inoculation, while it afforded some protection against contracting the disease, rather increased the risk of death when contracted. But this only applied to the men, for the incidence as well as the case-mortality among officers both appeared to be increased by inoculation. He did not look upon the report as in any way conclusive, and regarded the question as still open. It was unfortunately true that there had been a great deal of sickness among the force in South Africa, but the rate—7 per cent.—was still lower than the rate in the last Afghan war, which was 8 per cent. The Chairman gave the toast of "The Guests," which was acknowledged by Dr. W. S. Church, President of the Royal College of Physicians. The toast of "The Indian Medical Service" was given by Dr. Frederick Roberts, President of the Medical Society of London, and acknowledged by Sir Joseph Fayrer, Bart., K.C.S.I., who expressed his pride in the Indian Medical Service, and referred to the great work which had been done in early days, before the formation of a distinct medical service, by medical men employed by the old East India Company and its forerunners in India. He concluded by proposing the health of the Chairman, who duly acknowledged the compliment, and proposed the health of Mr. P. J. Freyer, Surgeon-Lieutenant-Colonel I.M.S., retired, to whose efforts the arrangements for these dinners are mainly due.

INTERNATIONAL CONGRESSES IN PARIS.

THE number of International Congresses to be held in Paris this summer amounts in all, according to the lowest reckoning, to 128, but has been variously estimated in the foreign press at 178, and even 200. Some of them are already things of the past, the first of the series having begun on May 24th, and the stream having continued to trickle steadily ever since. Week by week it will gain volume till August, when it will be in full flood, not running dry till October. Of the whole number of congresses there are more than a dozen directly concerned with matters of medical interest, and several others which at one point or another touch the domain of medicine. The most important, of course, is the Thirteenth International Congress of Medicine, which will meet under the presidency of Professor Lannelongue on Thursday

August 2nd, and close on Thursday, August 9th. The work will be divided among twenty sections, whose collective programme covers the whole range of medical science. The International Congress of Hygiene and Demography will meet under the presidency of Professor Brouardel on Friday, August 10th, closing on August 17th. The other medical Congresses are as follows: Medical Press, under the presidency of Professor Cornil, July 26th to 28th; Professional Medicine and Medical Deontology, under the presidency of Dr. Lereboullet, July 23rd to 28th; Medical Electrology and Radiology, under the presidency of M. Weiss, July 27th to August 1st; Public Assistance and Private Beneficence, under the presidency of M. Casimir Périer, July 30th to August 5th; Dermatology and Syphilography, under the presidency of Dr. Besnier, August 2nd to 9th; Improvement of the Condition of the Blind, under the presidency of Dr. Dussouchet, August 5th; Deaf and Dumb, under the presidency of Dr. Ladreit de la Charrière, August 6th to 8th; Dental Surgery, under the presidency of M. Godon, August 8th to 14th; Pharmacy, under the presidency of M. Planchon, August 8th to 10th; Hypnotism, under the presidency of Dr. Voisin, August 12th to 15th; Aid in Time of War, under the presidency of M. A. Mézières, August 20th to 24th; Antitobacco, under the presidency of M. Decroix, August 20th to 25th: Pharmaceutical Specialities, under the presidency of M. Victor Fumonge, September 3rd to 4th. In addition to these, there is a Vegetarian Congress in progress as we write (June 21st to 23rd), under the presidency of M. Grand. A Homœopathic Congress will be held, under the presidency of Dr. P. Jousset, July 18th to 21st. Among the Congresses indirectly related to medicine are the following: Accidents to Workmen and Social Assurance, under the presidency of M. Linder, June 25th to 30th; Physical Education, under the presidency of M. Léon Bourgeois, August 30th to September 6th; Chemistry, under the presidency of M. Berthelot, August 6th to 11th; Ethnology, under the presidency of M. Block, August 26th to September 1st; Conditions and Rights of Women, under the presidency of Madame Pognon, September 5th to 8th; Acetylene, under the presidency of M. Sebert, September 23rd to 28th; Prehistoric Anthropology and Archæology, under the presidency of M. Al. Bertrand, August 20th to 25th; the Sunday Rest, under the presidency of M. Bérenge, October 9th to 12th; Bibliography, under the presidency of General Sebert, August 16th to 18th. In the Congress of Comparative History, to be held from July 23rd to 25th, under the presidency of M. Gaston Boissier, there is a section devoted to the history of science, in the programme of which we note such subjects as new documents on the history of hygiene in antiquity, the history of medicine in the Middle Ages, and documents relating to the history of medicine among non-European peoples. In the Congress of Popular Traditions, to be held under the presidency of M. Beauquier, September 10th to 12th, among the subjects to be discussed is popular medicine and magic.

THE INTERNATIONAL CONGRESS OF MEDICINE, PARIS, 1900.

The Executive Committee gives notice that the following entertainments will be provided for members of the Congress: On August 2nd, the day on which the Congress is opened, M. Lannelongue, the President of the Congress, will hold an evening reception in the name of the Government of the Republic. On August 3rd members will be invited to an evening *conversazione* by M. Lannelongue in his capacity as President of the Congress. On August 5th, the members of the Congress will be received in the evening by the President of the Republic at the Elysée Palace. On August 8th an evening fête will be held in the Palais du Sénat and the Luxembourg Garden, when the members will be received by the Executive Committee. The Municipal Council of Paris will be asked to entertain the members, and other *fêtes* will be organised by most of the sections. The wives, daughters, and sisters of members of the Congress will be invited to all the entertainments, and a Ladies' Committee has been formed to promote their interests.

THE ANTITUBERCULOSIS MOVEMENT IN FRANCE.

In consequence of the publication in the *Revue Générale des Sciences* of some articles by Dr. Romme on Sanatoria, he was asked not long ago to deliver a lecture at Versailles on the same subject to a number of foremen, tradesmen, and employees. So successful was he in impressing them with the practical importance of the question that they resolved to take immediate steps in the matter. They approached the Municipal Council, then on the eve of a new election, and the reply they got was that means would be sought for the creation of a district sanatorium for necessitous tuberculous patients. This reply being considered somewhat vague, 360 electors representing all shades of political opinion demanded a more explicit pledge, taking the precaution to make the demand public by placarding it all over the town. In deference to this wish the Council replied with a placard to the following effect: "Certain electors ask us to give formal promises on the question of a district sanatorium for tuberculous patients. Had it not been our intention to carry out the measure proposed we should have passed it over in silence. In promising to seek for means to realise it, we have as is fitting a firm intention of finding them; but a preliminary inquiry, for which we will without delay collect materials, is necessary." At the same time one of the political parties opposed to the outgoing Council expressed its adhesion to the manifesto of the advocates of the sanatorium, and the leading members of another local party, certain of whom had signed the manifesto, individually pledged themselves in the same sense. This is said to be the first time in France that the feelings of a municipal electorate have found expression on the question of sanatoria. It is to be hoped that the example of Versailles will be followed in other parts of France.

HUMAN HIBERNATION.

A practice closely akin to hibernation is said to be general among Russian peasants in the Pskov Government, where food is scanty to a degree almost equivalent to chronic famine. Not having provisions enough to carry them through the whole year, they adopt the economical expedient of spending one half of it in sleep. This custom has existed among them from time immemorial. At the first fall of snow the whole family gathers round the stove, lies down, ceases to wrestle with the problems of human existence, and quietly goes to sleep. Once a day every one wakes up to eat a piece of hard bread, of which an amount sufficient to last six months has providently been baked in the previous autumn. When the bread has been washed down with a draught of water, everyone goes to sleep again. The members of the family take it in turn to watch and keep the fire alight. After six months of this reposeful existence the family wakes up, shakes itself, goes out to see if the grass is growing, and by-and-by sets to work at summer tasks. The country remains comparatively lively till the following winter, when again all signs of life disappear and all is silent, except we presume for the snores of the sleepers. This winter sleep is called *lotska*. These simple folk evidently come within the terms of Touchstone's definition of a natural philosopher; and many whose lot is cast in places where men are breathless with the fierce race for power or glory or wealth would doubtless be disposed to say of them, *O fortunatos nimium sua si bona norint!* In addition to the economic advantages of hibernation, the mere thought of a sleep which knits up the ravelled sleeve

of care for half a year on end is calculated to fill our harassed souls with envy. We, doomed to dwell here where men sit and hear each other groan, can scarce imagine what it must be for six whole months out of the twelve to be in the state of Nirvana longed for by Eastern sages, free from the stress of life, from the need to labour, from the multitudinous burdens, anxieties, and vexations of existence.

A PORTRAIT of John Abernethy by G. Dance, R.A., has recently been purchased by the Trustees of the National Portrait Gallery.

WE are asked to state that the number of those who have signified their desire to attend the Cambridge Summer School of Medicine this year has been so small that the meeting will not be held.

MR. JOHN H. MORGAN has withdrawn his candidature for a seat on the Council of the Royal College of Surgeons of England, in consequence of his senior colleague having decided to come forward.

A *conversazione* will be held at the London Medical Graduates' College and Polyclinic on Wednesday, July 4th, when the museum will be inaugurated, and Professor Osler of Baltimore will give an oration on The Teaching of Practical Medicine.

THE foundation stone of the new buildings of what will in future be known as the Royal Infirmary, Newcastle-upon-Tyne, was laid by the Prince of Wales, who was accompanied by the Princess of Wales and Princess Victoria, on June 20th.

DR. JOHN WILLIAM WHITE, of Philadelphia, has been elected by the trustees of the University of Pennsylvania to the John Rhea Barton Chair of Surgery in that University. This Chair is, we believe, the oldest in the United States, and has been filled by men whose names are well known in the history of surgery in America—Shippen (1765), Wistar, Gibson, Agnew, and Ashurst.

THE second *conversazione* or ladies' night of the Royal Society was held on June 20th, when a number of interesting objects were exhibited, including large models of *Culex pipiens* and *Anopheles maculipennis* made by Miss Emmett for the Natural History Museum, and a new stereoscopic fluoroscope and rotatory mercury break, the invention of Dr. Mackenzie Davidson.

MEDICAL NOTES IN PARLIAMENT.

[FROM OUR LOBBY CORRESPONDENTS.]

The Midwives Bill.—When Mr. Balfour took the whole time of the House except June 20th and June 27th for Government business, the prospects of the passing of the Midwives Bill this session were seriously affected. It now stands third for June 27th, with a couple of pages of amendments to be considered, and with the Home Office to put down further amendments of a serious nature. The Bills in front of it are the Agricultural Workmen's Compensation Act (1897) Extension Bill, which will come on for third reading, and the Merchant Shipping (Liability of Shipowners and Others) Bill. Under these circumstances the Bill has little chance of passing, and some members are already talking of moving its postponement as soon as it comes on with a view of utilising the time for other measures which have a better chance of passing into law. The Temperance Party may possibly take this course in the interests of their two Bills, which are in the Committee stage. The promoters of the Bill have, however, not given up hope, and will do all they can to secure the passage of their measure.

The Indian Famine has been the subject of many questions since the House resumed after Whitsuntide, and it appears that 5,802,000 persons are on the relief works out of a population affected of 51 millions. In some parts the famine has been aggravated by the outbreak of cholera and small-pox, and the mortality is very heavy, while in others, where these diseases are not prevalent, the death-rate is hardly above normal. The Secretary for India said that he was not aware that the opinion of the medical authorities in India was against large relief works, though the disadvantages are obvious when there are outbreaks of disease. When cholera breaks out in the relief camps the people often disperse and seek their villages again, and so spread disease. As regards plague, it was stated by Lord George Hamilton that since 1896, when the epidemic began, down to last April, the number of reported deaths was 358,685, or about 1 death per annum to every 3,000 living. The plague mortality in Bombay is now smaller than it has been for three years.

Vivisection.—The usual annual return showing the number of experiments on living animals during the year 1899 was moved for by the Under-Secretary for the Home Office last week and will be ready shortly. Mr. J. E. Ellis made a protest against the late date on which the return is customarily issued, and asked for it in future before Easter. The anti-vivisection party think that the administration of the Act should be discussed, and the late appearance of the return places them at a disadvantage.

Grants for Universities and Colleges were discussed on June 15th, and a general plea made for more money. The cases of Manchester and Leeds were first brought forward, but that of Dundee seemed by far the strongest and hardest case. That college now receives £1,000 a year, but when the amalgamation with St. Andrews is completed this grant will cease, and Dundee College will not receive a penny of public money. The Secretary of the Treasury held out no hope of any immediate increase in the grants, which had been recently raised by £10,000 a year, and fresh inquiry would have to be made before anything further could be done.

The Deaths from Sunstroke at Aldershot have aroused a great deal of interest among members on both sides of the House. It would seem that some 18,000 men were paraded for the field day on June 11th, and that in consequence of the excessive heat no fewer than 28 men were received into hospital, of whom 4 died, while 29 others were injuriously affected. The troops covered in their march some 14 miles, and wore the ordinary field cap. This afforded insufficient protection, and the Commander-in-Chief has ordered that helmets should be worn in hot weather, and that troops unprovided with helmets are not to take part in exhausting operations, but Mr. Wyndham stated on Tuesday that a sufficient number of helmets was not available, and that light canvas slouch hats would be issued for the Militia and Royal Reserve. There were also regrettable defects in the provision of food and water for the men. The whole incident exhibits, members think, a lapse from common sense and ordinary prevision, which strong measures should be taken to prevent in the future. The men were kept for many hours on the march under a hot sun, with head gear that afforded little or no protection. Full inquiry is promised into the whole matter, and the results are awaited with unusual interest.

Cremation.—Lord Monkswell obtained the second reading of his Burial Authorities (Cremation) Bill in the House of Lords on Monday last. The Bill enables local authorities to provide and maintain plans and appliances for cremation under the control of the Home Office. As the law stands now a private Act has to be obtained in each case; this under the Bill would be avoided, and local authorities would be able to levy rates for the crematoria. The Lord Chancellor said the Bill raised very serious questions, and would have to be very carefully considered, so that the prospects of the Bill at this period of the session are not promising.

THE WAR IN SOUTH AFRICA.

THE MEDICAL ARRANGEMENTS IN SOUTH AFRICA.

General Hospitals at Bloemfontein.

General Hospitals Nos. 8, 9, and 10 have been established at Bloemfontein. No. 8 is under the command of Lieutenant-Colonel R. T. Beamish, M.D., R.A.M.C.; No. 9 of Lieutenant-Colonel F. E. Barrow, R.A.M.C.; and No. 10 under the command of Surgeon-Lieutenant-Colonel W. Wellington Lake, M.M.S.C.

No. 10 is distributed in various public buildings; No. 8 is established on ground near the Government buildings; while No. 9 is on sloping ground at the foot of Bloemfontein Hill—now called Naval Kop—which protects it from wind and dust storms. Details of the staff of these hospitals have already been published; but some idea of the work which has to be got through may be gathered from the statement of the *Bloemfontein Post* that, early in May, No. 9, which has 88 marquees and nearly 200 bell tents, contained 1,700 patients. This number was reduced to 1,533 patients by sending convalescents down the country. The hospitals at Bloemfontein have been largely occupied by cases of enteric fever contracted at Paardeberg and the Modder River. The enteric patients are isolated from others, and the greatest care has been taken to maintain the utmost cleanliness in the enteric wards. No. 9 Hospital has a staff of 20 nurses of the Army Nursing Service Reserve, under the superintendence of Miss Webb, of the Army Nursing Service.

The Imperial Yeomanry Hospitals.

The Imperial Yeomanry Field Hospital, which is under the command of Surgeon-Major C. E. Stonham (Surgeon to the Westminster Hospital), medical officer of the Middlesex Yeomanry Hussars, was in the actions at Roodeval on June 7th and 11th. Major Stonham reports all the staff safe and well.

Branches of the Imperial Yeomanry Hospital have been opened at Maitland (55 beds) and Johannesburg, and the Committee in this country sent out 10 additional ward orderlies on June 13th, and will send out 24 more orderlies and cooks at the end of this week.

The Welsh Hospital.

We regret to learn that information reached Manchester on June 20th of the death at Springfontein, of Professor Thomas Jones, F.R.C.S., Senior Surgeon to the Welsh Hospital in South Africa. When the fact that Professor Jones was ill became known to the Committee, Professor Alfred Hughes, of King's College, who has hitherto acted as Honorary Secretary of the Committee in this country, left for South Africa on June 16th to assist in the working of the hospital. Mr. Arthur Hughes, Hare Court, Temple, E.C., will act as Hon. Secretary in his absence.

We also regret to notice the announcement of the death from dysentery, at Springfontein on June 15th of Mr. Herbert Davies, M.B., B.Ch., one of the surgeons attached to the Hospital.

Treatment of the Sick and Wounded.

Sir William Mac Cormac was last week admitted to the honorary freedom of the Salters Company, and at a banquet given subsequently, in replying to the toast of his health, he said that never before had so small a percentage of loss from wounds and sickness been recorded as in the present campaign. In the Franco-German war the losses had been very much greater. The efficiency of the transport had contributed to this result, and when the arrangements for transporting the wounded had not been entirely satisfactory this had been attributable to the fact that transport was required for the fighting men, who must be considered first. There were in South Africa 475 officers of the R.A.M.C., and 380 civil surgeons. The number of female nurses was 666, and of male nurses 5,668. He testified to the devotion shown by the women nurses, who were incomparable in their place, but who could not be employed on the field, nor in doing much of the rough work—striking and raising tents, and so on—which had to be done in a military hospital at a moment's notice. The number of beds provided in South Africa was very large, and the whole had been admirably organised under the general direction of Surgeon-General Wilson.

MEDICAL OFFICERS OF THE FIELD FORCE.

Additional Appointments.

For the following list of medical officers who have recently proceeded, or are proceeding to South Africa, we are indebted to the courtesy of the Medical Department of the War Office:

Table showing the Personnel of Medical Units on the Lines of Communication.

Unit and Place of Mobilisation.	Names.	Remarks.
No. 13 General Hospital (Depôt, R.A.M.C., Aldershot).	*Royal Army Medical Corps.* Major W. T. Swan (a) Lieutenant T. Biggam " H. Richardson " W. L. Baker " B. R. Dinnis " J. S. Twigg " J. Powell " R. L. Argles " F. S. Walker " W. Bennett " P. G. Stock *Civil Surgeons.* Mr. W. Dick " T. H. Gardner " E. L. Mansel " V. E. J. McDonogh " W. J. Moir " W. J. Sweeny	145 non-commissioned officers and men (including St. John Ambulance Brigade).

(a) Secretary and Registrar, and to act as officer commanding the unit till its arrival in Natal.

The P.M.O., Natal, will arrange for a Lieutenant-Colonel, R.A.M.C., in South Africa, to be detailed as officer in charge of this unit.

THE TENURE OF OFFICE OF PUBLIC VACCINATORS.

By direction of the Council of the British Medical Association the following memorial respecting the compulsory payment of fees by Boards of Guardians to public vaccinators, and praying for a larger measure of security of tenure of office, was forwarded to the Right Honourable Henry Chaplin, M.P., President of the Local Government Board for England in February last. The receipt of the memorial was acknowledged, but Mr. Chaplin has not yet given any reply.

British Medical Association,
429, Strand, W.C.,
January 31st, 1900.

To the Right Honourable the President of the Local Government Board.

Sir,—We venture to appeal to you on behalf of a considerable section of the members of the British Medical Association, who have contracts with Boards of Guardians for the performance of public vaccination in England and Wales, in the hope that you may, without waiting till the end of the period covered by the Vaccination Act, 1898, be able to concede to them a larger measure of security of tenure than they at present enjoy.

At the present time it is within the power of Boards of Guardians who may have come to an agreement to pay their public vaccinators fees above the minimum fixed by your Board, to arbitrarily reduce those fees to the minimum, without any consideration of the work to be done. And, to our knowledge, one Board of Guardians actually declined to pay fees "determined on" by your Board, and persisted in their refusal when on appeal by the public vaccinator they were informed by your Board that "it was *incumbent* on them to pay the fees so *determined* on."

In such a case we are informed that the only way in which a public vaccinator can recover the fees he has earned is by process of law.

The present form of contract (First Schedule, Vaccination

Order, 1898), says: "It is mutually agreed that this contract may be put an end to by either of the parties thereto giving twenty-eight days' notice to the other party of the intention to put an end to the same."

Such a clause may obviously be used, and, we venture to say, has been used in a vexatious and inequitable manner by certain Boards of Guardians, which, even when they have not dismissed their public vaccinators, have used their power as a means of extorting compliance with unfair conditions of appointment, and inadequate rates of remuneration.

We recognise with regret that the Vaccination Bill was permitted to become law without the introduction of any clause constituting the public vaccinator an officer instead of a contractor with the guardians; and moreover, that there would be considerable difficulty in effecting such a change, should parliamentary action be deemed necessary.

It is needless to point out that your Board has, by its General Order (October, 1898), made considerable alterations in the form of vaccination contracts, and we are advised that it would appear to be within the competence of the Local Government Board "to prescribe a fresh form of contract between guardians and public vaccinators, containing a clause to the effect that such contract should only be determinable with the consent of the Board, or such other stipulation as should put public vaccinators in a position of greater independence than at present."

In order to protect the public vaccinator from the influence of prejudice and party feeling, we would respectfully but strongly urge the desirability of a further employment of the powers granted by Sections XV and XVI of the Vaccination Act, 1871, to "repeal, alter, and add to the forms contained in the Schedule to the principal Act," to the extent at least of securing to the public vaccinator an effective appeal to the Local Government Board in any case of determination of contract by the guardians, and so conferring greater independence in the discharge of the arduous duties imposed on him by the Vaccination Act, 1898.

As, according to Section IX of the Act of 1867, no "contract for vaccination entered into under the provisions of this Act shall be valid until the same shall have been approved of by" the Local Government Board, we respectfully request that it may be considered a corollary to insert in the form of contract that no determination of such contract shall be valid until approved of by the same Board.

We have the honour to remain, Sir,
Your obedient servants,
(Signed) J. ROBERTS THOMSON, M.D.,
President of Council, British Medical Association.
FRANCIS FOWKE,
General Secretary, British Medical Association.

PUBLIC VACCINATOR writes: In January, 1890, the public vaccinators of our union and the guardians fixed the vaccination fees for one year only. This year the guardians are reducing the fees considerably (to the minimum fees for cases within three miles from our houses, and 7s. 6d. for cases beyond three miles). Three of our number have accepted the guardians' terms, and two refused to accept. An appeal was made to the Local Government Board to fix the fees, but that Board has intimated that it is advised that its powers to fix the fees expired on January 1st, 1899, and requested the guardians and public vaccinators to "give the matter further consideration, with a view to agreement if possible?"

What can we do now? If we hold out can the guardians advertise for others to fill our places? We shall be glad to have your opinion.

*** We fear that the only course open to our correspondent is to submit to the terms of the guardians as gracefully as may be possible. There is no doubt that the guardians have the power to determine the contracts of public vaccinators if they do not comply with their wishes. There appears also to be no authority, now that the Act has been fairly launched, for the Local Government Board to intervene in the matter of fees. The case affords another forcible illustration of the need for security of tenure on the part of public vaccinators—a need to which public attention has already been called in the BRITISH MEDICAL JOURNAL of November 11th, 1899, p. 1372, and to which the attention of the President of the Local Government Board was drawn by the Council of the Association in the above memorial.

MISS SHELDON AMOS, M.B.Lond., has been appointed a Medical Officer at Suez under the Board of Quarantine. This is the fifth appointment of an English medical woman as a sanitary medical officer in connection with the plague in the East.

CONTRACT MEDICAL PRACTICE.

ODDFELLOWS AND THE WAGE LIMIT.

THE *Standard* of June 7th publishes a report of the sitting of the Annual Movable Committee of the Manchester Unity of Oddfellows. P.G.M. Stockall, Parliamentary Agent, in presenting his report, said that at a meeting of the medical profession recently held at Manchester it was decided to insist on a wage limit for members of friendly societies. To that wage limit the friendly societies would never agree. Brother Smith (Leamington) hoped the medical aid associations would have the support of the Annual Movable Committee in fighting the medical profession, who were making a most unreasonable demand.

If friendly societies are determined not to concede the wage limit demanded by the profession, it will be wise of those bodies to eliminate as far as possible medical benefit from their assurance, as it will be found more and more difficult for them to supply it. The profession rightly insists on a wage limit, and it is in its power to form provident dispensaries throughout the country in which that principle shall be enforced. Such dispensaries would tend everywhere to displace the present friendly society medical organisation, though the members of the latter would have the option of joining them, and those who objected to the wage limit might furnish themselves with medical attendance in any way they thought fit. Successful dispensaries of the kind above alluded to already exist, and with greater union the profession ought to have little difficulty in holding its own. It does not look as if the friendly societies were very confident of the strength of their position, when the only remedy they can suggest is to coerce the profession by compulsory legislation. It will be some time before Parliament will compel medical men to accept friendly society clubs at 3s. 6d. a member, or even to meet in consultation those of their brethren who show themselves unmindful of the dignity of their calling.

MEDICAL AID ASSOCIATIONS.

The *Walsall Observer*, in its issue of June 2nd, published a report of a Council meeting of the Walsall Friendly Societies, in which there was a discussion on the medical aid association question. One of the members contended that these associations were "most beneficial, because they had the control of the doctors, and also of the drugs, which were purer and better than were dispensed by private practitioners." Another suggested the advisability of an amalgamation of the medical aid associations for Walsall, Wednesbury, and West Bromwich, so that the services of a physician might be secured, "because physicians would not meet the medical aid doctor." The President scouted the notion that payment of the doctor at the rate of 3s. 6d. a member was "sweating" the profession, "for several large societies only paid a private doctor at the rate of 3s. a member." It was true he did not see how the doctor could be paid at that rate, but the extra 6d. made all the difference. Finally, a resolution was carried:

That it is to the advantage of friendly societies to belong to medical aid associations.

If the sentiments and reasoning of the Walsall Friendly Societies' Council afford an index to the attitude of the majority of provincial friendly societies towards medical aid associations, the prospect of good arising out of a Conciliation Board is discouraging. That men, shrewd and intelligent as many of the friendly societies' officials undoubtedly are should fail so utterly to grasp the gravity of the question is very lamentable. If medical aid associations are beneficial to friendly societies only for the reasons adduced by the Walsall Council, their utility rests on a very slender basis. That club members have ever suffered from the impurity of drugs supplied by club doctors there has never been any evidence to show; that the difference between the payment of 3s. and 3s. 6d. a member would have the slightest effect in conciliating the profession, or in refuting the charge of "sweating" made with only too much reason against friendly societies is almost childish; while the necessity felt for attempting to appoint a physician, because "physicians would not meet the medical aid doctor," shows clearly the unsatisfactory character of the medical attendance it is proposed to obtain for the rank and file of friendly society members. Such attendance is not

likely to be worth more than it costs, and the working men and artisans throughout the country willing to accept it cannot be congratulated on their medical assurance against sickness.

In our contemporary's issue of June 9th appears a letter on the subject from "A G.P.," and we heartily commend it to the good sense of the Walsall people. The writer points out in a trenchant manner the fallacies of the Walsall Friendly Societies' Council, and shows the impossibility of any proper medical attendance being furnished under such conditions. "Where," he asks, "does the beneficial effect come in? It is all very well for the well-to-do members of friendly societies, who can in times of critical illness fall back on private practitioners, but for the poorer members, who severed their allegiance with their former doctors in the false hope that they were bettering their prospects, the outlook is not very encouraging. They learn too late of their fatal mistake, and nothing to my mind is so inexpressibly sad as the pitiable plight in which some of these latter find themselves in cases of serious illness." He shows, too, how the "important factor in the treatment of disease, knowledge of the family history," is altogether wanting to the medical aid doctor, generally a young man holding office for a short time, who departs as soon as he can. "Finally," he says, "it affords striking testimony as to the real practical value of the suggested 'Conciliation Board,' and the amount of reliance to be placed on the carrying out of any honourable understanding arrived at by the provincial officials of medical aid institutions."

LITERARY NOTES.

L'Œuvre Antituberculeuse is the title of a new quarterly journal published by Carré and Naud, Paris. The subscription is 5 francs. The editors are Drs. Sersiron and Dumarest. The journal will contain accounts of the doings of the various societies formed to wage war against tuberculosis, reports from the sanatoria, and in general news relating to the progress of the struggle against the "white plague."

An appendix to the Austrian *Pharmacopœia* has recently appeared under the title *Additamenta ad Pharmacopœiæ Austriacæ Editionem VII.* The additions comprise in all 63 preparations.

With reference to the mention of Daniel Turner as the first to receive a medical diploma in North America, in an article on The Regulation of Medical Practice in America in the Last Century, which appeared in the BRITISH MEDICAL JOURNAL of May 5th, Dr. George C. Peachey, of Wantage, has sent us the following interesting communication:

William Douglass in his *History of North America* (vol. ii, p. 186) writes: "1723. Mr. Daniel Turner, of London, sent them (the trustees of Yale College) a collection of valuable books, 28 vols. in physick and surgery: the college conferred upon him a diploma of M.D."

Now Munk, in his *Roll* (vol. ii, p. 35), speaking of Daniel Turner, M.D., says, *inter alia*, that in 1711 he was admitted a Licentiate of the College of Physicians, and continues: Not long after his admission as Licentiate, he obtained the degree of Doctor of Medicine, but from what university I have not been able to discover." The above quotation may be taken as supplying the omission. And so much for "Dirty Old Daniel."

The following additional extract from Douglass is interesting as bearing upon the original subject, the year being about 1752: "In our plantations, a practitioner, bold, rash, impudent, a liar, basely born and educated, has much the advantage of an honest, cautious, modest gentleman. In general, the physical practice in our colonies is so perniciously bad, that excepting in surgery, and some very acute cases, it is better to let Nature under a proper regimen take her course than to trust to the honesty and sagacity of the practitioner; our American practitioners are so rash and officious; the saying in the Apocrypha, Ecclesiasticus xxxviii, 15, may with much propriety be applied to them: 'He that sinneth before his Maker, let him fall into the hands of the physician.' Frequently there is more danger from the physician than from the distemper. A country where the medical practice is very irregular is a good school to learn the lædentia, a good article in practice; but sometimes, notwithstanding male (*sic*) practice, Nature gets the better of the doctor, and the patient recovers. Our practitioners deal much in quackery and quackish medicines, as requiring no labour of thought or composition, and highly recommended in the London quack bills (in which all the reading of many of our practitioners consists), inadvertently encouraged by patients for the benefit of certain fees to some offices, but to the very great damage of the subject. How dismal is it to observe some apothecaries shops wainscotted or papered with advertisements recommending quack medicines for the profit of the shop but destruction of their neighbours? This is vending of poisons for gain. In the most trifling cases they use a routine of practice. When I first arrived in New England I asked G. P., a noted facetious practitioner, what was their general method. He told me their practice was very uniform—bleeding, vomiting blistering, purging, anodyne, etc.; if the illness continued there was repetendi and finally murderandi: Nature was never to be consulted or allowed to have any concern in the affair. I shall mention one remarkable instance of colony quackery advertised in the *New York Gazette*, December 16th, 1751. 'In July, 1751, was committed to the care of doctor Peter Billing, an experienced physician and man-midwife, and formerly in the King's service, the most extraordinary and remarkable case that ever was performed in the world, upon one Mrs. Mary Smith, single woman, sister to Captain Arthur Smith, on James River in the county of Surry in Virginia, aged forty-six: she had been upwards of eighteen years out of her senses (most of the time raving mad), eat her own excrements, and was completely cured by him in two months, contrary to the opinion of all that knew her, no doctor in the province daring to undertake her. N.B.—The contagious distemper so frequently happening to the bold adventurers in the wars of Venus, when recent, will be cured by him for three pistoles in hand, though the common price is five pound all over North America. And all other cases curable in physick and surgery proportionable according to the circumstances of people.' He has also other matters to publish, particularly an elegant medicine to prevent the yellow fever and dry gripes in the West Indies: this is incomparable, if we except a quack advertisement published in Jamaica (immediately after the last great earthquake) of pills to prevent persons or their effects suffering by earthquakes." (Douglass, *Hist. North America*, vol. ii, pp. 351-2.)

Captain Victor E. H. Lindesay, I.M.S., 4th Goorkhas, India, writing from Bakloh, under date May 15th, makes the following suggestion as to new editions:

How many of your readers are, like myself, frequently disappointed by finding that books recently purchased by them are being revised, and will shortly appear as new editions Last week, on glancing at your advertisement columns, I noticed that three expensive works, former editions of which I had sold in excellent condition for next to nothing in order to purchase the latest issue, were on the point of again appearing "thoroughly revised and greatly enlarged," one of them within eighteen months of my purchase of the seventh edition. Very few medical men can afford to buy each successive new edition of the chief textbooks, in addition to all the important new works that appear with such regularity, and I would suggest that if only authors or publishers would issue with each new edition a separately-bound copy of all the addenda and corrections at a reasonable price, the sale of the latter would be as advantageous to the pockets of the author and publisher as it would be to the completeness of their readers' libraries. I am sure that hundreds of medical men who cannot afford to spend 5 or 6 guineas a month on keeping their libraries up to date would gladly spend a fair sum in the purchase of appendices to editions of works already in their possession. The appendix should of course include all additions and corrections, with any illustrations that appear in the new editions, but the issue of such an appendix would cost the publishers very little, and the sale profits ought to be considerable.

Ambroise Paré has been often credited with the invention of the ligature for the arrest of bleeding. This, however, is a mistake, for the method is as old as Galen. What does belong to Paré is the substitution of the ligature for the cautery in order to check hæmorrhage in amputation wounds. For this purpose he used a good double thread with catch forceps. It is worth while to quote his own account of the matter in Mr. Stephen Paget's version as given in *Ambroise Paré and His Times* (p. 241):

Here I confess freely and with deep regret that formerly I practised, not this method, but another. Remember, I had seen it done by those to whom these operations were entrusted. So soon as the limb was removed, they would use many cauteries, both actual and potential, to stop the flow of blood, a thing very horrible and cruel in the mere telling. ..... And truly of six thus cruelly treated scarce two ever escaped, and even these were long ill, and the wounds thus burned were slow to heal, because the burning caused such vehement pains that they fell into fever, convulsions, and other mortal accidents; in most of them, moreover, when the scar fell off there came fresh bleeding, which must again be staunched with the cauteries, which, thus repeated, consumed a great quantity of flesh and other nervous parts. By which loss the bones remained long afterward bare and exposed, so that, for many, healing was impossible; and they had an ulcer there to the end of their lives, which prevented them from having an artificial limb. Therefore I counsel the young surgeon to leave such cruelty and inhumanity, and follow my method of practice, which it pleased God to teach me, without I had ever seen it done in any case, no, nor read of it

THE PLAGUE.

PREVALENCE OF THE DISEASE.

INDIA.

THE mortality from plague in India generally has markedly declined during the past week Throughout all India only 746 deaths were reported for the week ending June 2nd, compared with 975 for the previous week. In the city of Bombay 205 deaths occurred from plague, being the largest number in any single town or province of India. Throughout the Bombay Presidency generally, exclusive of the city, 162 deaths from plague occurred. In the city of Calcutta 167 plague deaths occurred during the week ending June 2nd. A sure sign that the epidemic is on the wane is afforded by the relative number of fresh cases to deaths, as on no fewer than three days during the week, the numbers were exactly identical—namely, 15, 28, and 18, and only on one day (May 28th) did the deaths exceed the fresh cases—11 and 10 respectively. During the week ending June 1st, 60 deaths occurred in Karachi, 23 in the Punjab, and 16 in Aden.

Plague Lessons from Satara.—The *Times of India* draws attention to the effective manner in which Major Faulkner, I.M.S., handled the recent

outbreak of plague in the city of Satara. Plague was introduced into Satara by a person who came to the city from an outlying village. It quickly obtained a hold in the most insanitary portion of the town where one of the principal features of the landscape is an odorous nullah. In ordinary times, it is stated, this nullah is a receptacle for indescribable filth. The drought accentuated its offensiveness, and it soon became a centre of infection, which was spread by rats and human beings to other parts of the city. Major Faulkner substituted the less irksome system of medical and volunteer surveillance for the usual stringent measures; he disbanded the minor officials and police guards, and had the camps of detention given up. People coming from an infected area were subjected to ten days' medical surveillance at the civil hospital; those arriving from healthy districts had to undergo surveillance at the hands of volunteers. The principle acted upon was that as no system of surveillance can be worked with complete efficiency, it was best to trust to the common sense of the inhabitants, which should lead them to report cases of plague. Although this implicit confidence would not be successful in many cases, it proved successful in Satara. Cases of plague were removed to the hospital except where the patient was in a comatose condition, and the persons living in the vicinity of the victim were placed in observation camps or sent outside into the fields. Their houses were unroofed, but at the end of ten days they were permitted to return under medical surveillance. Previous to reoccupation the houses were freely ventilated and the walls whitewashed and scraped; vermin were destroyed, and the floors were dug up to the extent of 1 foot deep, and the soil turned daily. No disinfectants were used. The epidemic disappeared in three months. The cost proved to be nothing like that in other localities where the results were no better. Major Faulkner claims for his plan cheapness and efficiency.

PERSIAN GULF.

At Kishm, a town on the Persian shore of the entrance to the Gulf, 18 cases of plague and 11 deaths from the disease occurred between April 30th and May 19th, 1900.

AUSTRALIA.

On June 13th a telegram from Brisbane was received in London to the effect that 2 deaths from plague had occurred there, and 1 death at Rockhampton.

MAURITIUS.

No cases of plague nor any deaths from the disease occurred in Mauritius during the week ending June 14th. With the exception of 1 case reported last week, Mauritius has been free from plague for four consecutive weeks.

EGYPT.

In a number of English papers plague has been reported from Cairo. It is satisfactory, however, to know that it is officially declared that no plague cases have occurred in the city of Cairo. Some papers even report the actual number of cases which have occurred since the outbreak in Cairo as 70. The mistake is easily explained. Official telegrams reporting plague are usually dated from the capital, whilst the plague cases mentioned occur in outlying towns. The 70 cases referred to in this instance indicate the extent of plague at Port Said.

BRAZIL.

We have been without news of plague in South America for some time. It seems, however, that it has been more severe in Rio de Janeiro than the absence of news would have implied, for although it is stated to be on the decline, there were 27 cases of plague and 13 deaths from the disease during the first week of June, 1900.

THE CASES ON THE "KILBURN" IN TABLE BAY.

DR. GEORGE TURNER (Colonial Secretary's Office, Local Government and Health Branch) writes from Capetown under date May 16th: In the BRITISH MEDICAL JOURNAL of April 21st there occurs (page 982) a paragraph referring to the cases of plague which recently reached Table Bay in the ship *Kilburn*, from Rosario, Argentina. I propose to let you have a full account of the cases and the steps taken to prevent the disease from spreading shortly. In the meantime I wise to correct some of the impressions to which your notice might give rise.

The *Kilburn* left Rosario on February 13th, and reached Capetown March 5th. Five days out the first case occurred, in the person of a lad who had been on shore at Rosario. The case was not severe. Next the carpenter was attacked; he, too, did not suffer severely. They both had buboes in the groin, and these buboes suppurated and were a long time in healing. On March 3rd, three days before reaching the Cape, the mate was attacked. He was severely ill when Dr. Gregory saw him, but an injection of Yersin's serum produced a rapid and favourable change. Before using the serum my colleague had examined serum taken aseptically from the bubo, and demonstrated the organism. The ship was ordered to Saldanha Bay, nine hours' steam, by a tug from Capetown. On the voyage a fourth case occurred, and on the following day, March 8th, a fifth. Both these last cases were severe; the latter had two buboes in each groin and an enlarged gland at the angle of each jaw. In these instances, too, the serum pulled them through in a remarkable manner.

The master did not die from plague; he suffered from none of the symptoms of any form of that disease; his death was due to another cause.

The Customs House officer, Mr. Gattey, did not board the ship *Kilburn* at all; the facts about his death are shortly as follows: When the *Kilburn* put into the Bay I was in bed suffering from influenza. The Assistant Medical Officer of Health, Dr. Gregory, boarded her, and made all arrangements for her removal to Saldanha Bay, together with the necessary attendants, tents, and stores, under the care of Dr. Mitchell. My colleague informed me of the occurrence by telegram, and I immediately got up and went to Saldanha Bay in charge. The unfortunate officer was sent to Saldanha Bay in charge of guards on Sunday, March 11th. I promptly sent them all back to Capetown, accompanied by a dozen rapscallions who had been already sent to the peninsula as guards, etc., retaining only four of the most respectable, who were absolutely necessary to carry on the work. I did not believe in unnecessarily multiplying the *personnel* of a hospital for infectious diseases, being persuaded that to do so multiplies the chances of infection. However, on Tuesday, March 15th, the officer and six guards, half a dozen Martini carbines, and 100 rounds of ball ammunition, were returned upon my hands, and I had to submit. They decorated the peninsula very tastefully with yellow flags, and, perched on sandhills and kopjes with rifles over their arms, kept guard over nothing in turn eight hours at a stretch. The officer, who had pneumonia in September, and had never properly recovered (poor fellow, he hoped a month or so under canvas would set him up), caught influenza from me. He was ill March 14th. On March 24th, as all the patients were doing well, I returned to Capetown by the *Kilburn*, and as Mr. Gattey was still very ill, in fact confined to his bed, I tried to persuade him to accompany me to Capetown on board the *Kilburn*, that he might be properly nursed at home. This I failed to do. After I left he got rather better, but was far from well. He still refused to return, however, and on the mornings of April 2nd and 3rd he took a cold bath in the open air, exposed to a chilling wind. He then took to his bed, which he never afterwards left. We received a telegram on April 6th saying that he was dying, and he expired on April 9th. He died of the pulmonary sequelæ of influenza and old heart disease. Of course the death was popularly attributed to plague, but both Dr. Gregory and I visited Saldanha Bay, and convinced ourselves to the contrary. Besides, Mr. Gattey never came into contact with the patients directly, and only indirectly, inasmuch as he messed in the same tent as Dr. Mitchell.

Another scare also arose in connection with this hospital; one of the guards, a man in no way connected with the patients, died. His death was caused by eating four white mussels. He consumed the bivalves between 12.30 and 1 P.M., was quite well until 2.30, and was a corpse 4.55 the same afternoon.

I am only waiting for the closure of the camp, kept up now for two patients with indolent buboes, the other three having long been discharged, to send you a full report on the subject.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF SPECIAL MEETING.

A SPECIAL meeting of the Council will be held at the office of the Association, No. 429, Strand, London, W.C., on Wednesday the 4th day of July next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

June 20th, 1900.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on **Wednesday the 18th day of July next, at** 2 o'clock in the afternoon; not on July 11th as previously announced.

June 20th, 1900. FRANCIS FOWKE, *General Secretary.*

NOTICE OF QUARTERLY MEETINGS OF COUNCIL FOR 1900.

MEETINGS of the Council will be held on July 18th and October 10th, 1900. Candidates for election by the Council of the Association must send in their forms of application to the General Secretary not later than twenty-one days before the latter meeting—namely, September 27th, 1900.

Candidates seeking election by a Branch Council should apply to the Secretary of the Branch. No members can be elected by a Branch Council unless their names have been inserted in the circular summoning the meeting at which they seek election.

ELECTION OF MEMBERS.

Any qualified medical practitioner, not disqualified by any by-law of the Association, who shall be recommended as eligible by any three members, may be elected a member by the Council or by any recognised Branch Council.

FRANCIS FOWKE, *General Secretary.*

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

MEMBERS are reminded that the Library and Writing Rooms of the Association are now fitted up for the accommodation of the Members in commodious apartments, at the office of the Association, 429, Strand. The rooms are open from 10 A.M. to 5 P.M. Members can have their letters addressed to them at the office.

BRANCH MEETINGS TO BE HELD.

Lancashire and Cheshire Branch.—The annual meeting of this Branch will be held in the Assembly Room, Public Hall, Lune Street, Preston, on Wednesday, June 27th, at 2.30 P.M. The chair will be taken by the retiring President, Dr. Charles Macfie of Bolton. After the usual business of the annual meeting, an inaugural address will be delivered by the newly-elected President, Dr. R. C. Brown of Preston, on Some of the Causes of Disease Considered in their Relation to Diagnosis, Prevention, and Cure Fifty Years Ago Compared with to-Day. The following communications will be given: Dr. T. R. Bradshaw: Myelopathic Albumosuria. Dr. Karl Grossmann: Note on a Cyst of Frontal Sinus. Dr. J. Dreschfeld: On a case of Hæmorrhagic Meningo-encephalitis Due to Influenza. The specimen will be shown. Dr. T. Arthur Helme: The Notes of two cases in which the Symptoms and Signs simulated Extrauterine Gestation (1) Pregnancy with Ovarian Cyst, (2) Chronic Metritis with Peritonitic Cyst. Dr. Nathan Raw will show a woman on whom Cæsarean section and embryotomy have been performed for successive pregnancies. The programme is as follows:—12 o'clock, reception in the Town Hall, Fishergate; 12.30 to 2.30, lunch in Council Room of Town Hall, Fishergate, kindly provided by the President and members resident in Preston; 12.30, Council meeting in Assembly Room of Public Hall, Lune Street; 2.30, general meeting in Assembly Room of Public Hall, Lune Street; 4.30 to 6.30, excursions: Harris Free Library, where there is a valuable collection of pictures and museum; the County Council Farm; the New Electric Tram and Waggon Works; the Preston Infirmary, to see the new operating theatre, the gift of the President (Dr. R. C. Brown); golf, the Preston golf course is a very sporting one and well worth a visit; 6.30, dinner in the Guildhall of the Town Hall, Fishergate. Tickets, 5s. 6d. (exclusive of wine). Exhibition of cases, etc., in Committee Room of Public Hall Exhibition of surgical instruments, drugs, etc., in Committee Room of Public Hall.—T. Arthur Helme, 3, St. Peter's Square, Manchester, Honorary Secretary.

North Wales Branch.—The annual meeting will be held at Denbigh, on Thursday, July 12th. Members having any new member to propose, paper to read, or case to communicate, should notify the same before June 30th.—W. Jones-Morris (Portmadoc), H. Jones-Roberts (Pen-y-groes), Honorary Secretaries.

South Wales and Monmouthshire Branch.—*Preliminary Notice.*—The annual meeting of this Branch will be held at Cardiff on July 3rd.—A. Sheen, Cardiff, Honorary Secretary.

Border Counties Branch.—The annual meeting of this Branch will be held in the County Hotel, Carlisle, on Friday, June 29th, at 4.30 P.M. A meeting of the Council will be held at 4.15 P.M. Order of business: Minutes of last meeting, election of new members, report of the Council, election of office-bearers and Council. To appoint places of meeting for the ensuing year. Presidential address by Dr. J. Highet, Workington. Communications by Dr. C. W. Graham, Carlisle, Dr. Maclaren, Carlisle, Dr. Ogilvy-Ramsay, Carlisle, Dr. J. W. Crerar, Maryport.—W. F. Farquharson, Garlands, Carlisle, Honorary Secretary.

Border Counties Branch: Section for the Counties of Roxburgh, Berwick, Selkirk and Peebles.—This Section will meet at the Roxburgh District Asylum, Melrose, on Thursday, July 12th, at 3.45 P.M., on the kind invitation of Dr. Carlyle Johnstone, the Medical Superintendent, who will conduct the members over the wards of the new hospital and introduce a discussion on What to do with the Insane Poor Man. Dr. Johnstone has most kindly offered to provide tea after the meeting. It is hoped there will be a large turn-out of members to show their appreciation of Dr. Johnstone's kindness and hospitality.—W. Hall Calvert (Melrose), Honorary Secretary.

North of Ireland Branch.—The annual meeting of this Branch will be held at Portrush, co. Antrim, on Thursday, July 5th. The annual report of council and annual statement of accounts will be considered. The report of subcommittee on nursing in Ulster will also be on the agenda paper, and several important professional communications have been promised. Members intending to read papers and gentlemen desirous of joining the Branch are requested to communicate as soon as possible with the Honorary Secretary, Dr. Calwell, 1, College Square North, Belfast.

Midland Branch.—The annual meeting of this Branch, owing to the indisposition of the President-elect, is postponed to Thursday, June 28th, when it will take place at the General Hospital, Nottingham, at 2.15 P.M. Agenda: Minutes. Report of Branch Council. Election of representatives of Branch on General Council. Election of representatives of Branch on Parliamentary Bills Committee. Election of Branch Council and officers. Election of President-elect for 1900-1901. President's address. The following cases will be shown and papers read:—Mr. C. J. Bond: Two Cases of Spina Bifida, treated by Excision. Dr. G. Lorimer: Some Observations on Gonorrhœal Rheumatism. Dr. E. Mansel Sympson: A Case of Recto-vesical Fistula in a boy 5 years old, with Colotomy Operation. Dr. Pope and Dr. Astley Clarke: Cases of Acromegaly and Cretinism occurring respectively in Father and Daughter, with remarks on the possible Connection of the Two Diseases. Dr. H. Handford: Three Cases of Cerebro-spinal Meningitis. Dr. W. B. Ransom: Notes on, and Specimens of, a Case of Syringomyelia. Dr. H. Michie: Intestinal Resection for Cancer. Members are requested to bring cases and specimens for exhibition. Luncheon will be provided by the President-elect at the Albert Hotel, Derby Road, at 12.45 P.M. The annual dinner will take place at the same hotel at 6 P.M.; price 7s. 6d., exclusive of wine.—Frank M. Pope, 4, Prebend Street, Leicester, Honorary Secretary and Treasurer.

West Somerset Branch.—The annual meeting of this Branch will be held on Tuesday, June 26th, at 12.30 P.M., at the Lamb Hotel, Dulverton, under the presidency of Mr. G. F. Sydenham. Business:—Minutes. Report of Council. Treasurer's account. Election of members of Council and President elect. Place of next annual meeting. Intermediate meetings. The President will deliver an address on The Vulgar Errors and Superstitions of West Somerset in their Relation to Medicine. Dr. Macdonald will make a short report on the Conference of Medical Ethics at Manchester. Luncheon will be provided at the Lamb Inn after the meeting, price 3s 6d. per head, exclusive of wine. The President invites the members of the Branch to drive with him to the Harbourer's Cottage, Haddon Hill, where tea will be taken. Mrs Sydenham has kindly invited the wives of members to lunch at her house, and to join the party at tea at Haddon afterwards.—R. Liddon Meade-King, Taunton, Honorary Secretary.

Reading and Upper Thames Branch.—The annual meeting of this Branch will be held in the Library of the Royal Berks Hospital, Reading, on Friday, June 29th, at 3 P.M. The President (Dr. Freeman) will take the chair, and the officers for the coming year will be elected, after which Dr. Noott, of Broadmoor Asylum (the President for the coming year) will take the chair. At 3.30 P.M. a combined scientific meeting of the Oxford Branch and the Reading and Upper Thames Branch will be held in the Library, Royal Beccles Hospital. Cases will be read and specimens presented, and the President (Dr. Noott) will read a short paper on the Alleged Increase of Lunacy, with a view to a discussion, in which members of both Branches are invited to take part. The annual dinner will take place on the same evening at 6 o'clock at the Great Western Hotel, Reading. The charge for the dinner will be 6s. per head, exclusive of wine.—H. H. Phillips-Conn, Reading, Honorary Secretary.

Bath and Bristol Branch.—The annual meeting of this Branch will be held on Wednesday, June 27th, at 4.30 P.M., in the Medical Library, University College, Bristol, when Dr. A. J. Harrison will resign the chair to Dr. A. W. Prichard, President-elect, who will deliver the Presidential address. The business of the meeting will be to receive the report of the Council; to elect the officers of the Branch; to transact the necessary business; and such subjects connected with the interest of the Branch and of the profession as may be brought before it. The Secretaries will be obliged if members will send them notice of any alteration in their diplomas or addresses. There are three vacancies in the Local Council for the Bath District, and two for the Bristol District, the retiring members being ineligible for re-election for one year. The attention of the members is called to the mode of voting for the Local Council, whereby they will vote only for the vacancies in their own District. Each member is requested to write the names of those he wishes to ballot for, and to return the voting paper to the Secretary of his District on or before Saturday, June 23rd. Members who have not paid their subscriptions are requested to do so immediately to the Local Secretaries. The dinner will be held at the Clifton Down Hotel, at 6.45 for 7 P.M. Dinner tickets, including ice and dessert, 7s. 6d. each. The wines will be served at moderate charges. The Bristol Secretary particularly requests that members will inform him by Monday, June 25th, whether it is their intention to be present at the dinner. The Secretary cannot undertake to provide places for members at the dinner without notice beforehand.—J. Michell Clarke, Clifton, and W. M. Beaumont, Bath, Honorary Secretaries.

Southern Branch.—The twenty-seventh annual meeting of this Branch will be held at the Council Chamber, Wilton, on Thursday, June 28th. The President kindly invites the members to luncheon at 1 o'clock at the Pembroke Arms Hotel, and to tea in his garden at 5. The general meeting will be held in the Town Hall at 2 o'clock. At this meeting the result of the polling for officers for the ensuing year will be declared. Members desirous of reading papers are requested to forward the titles to the Honorary Secretary at once. No communication must exceed seven minutes in length and no subsequent speech must exceed five minutes. An address will be delivered by Mr. C. R. Straton, President, on The Ethics of Professional Secrecy. Mr. Harcourt Coates will read cases, namely, (1) Encapsuled Ovarian Parasitic Cyst: Operation. (2) Double Ovarian Cyst: Operation. Mr. J. F. Bullar will relate some cases of mucous cysts of the orbit. During the afternoon opportunities will be given to visit Wilton House and grounds, Wilton Church, and other places of interest in the neighbourhood. Members intending to be present at luncheon are requested to communicate with Mr. C. R. Straton, Wilton, Salisbury, not later than June 25th.—H. J. Manning, Laverstock, Salisbury, Honorary Secretary and Treasurer.

EDINBURGH BRANCH.

The twenty-fifth annual meeting of this Branch was held in Edinburgh on June 6th, Dr. W. B. Dow (Dunfermline), President, in the chair.

New Members.—The following gentlemen were elected: Philip G. Borrowman, M.B. (Elie), and A. Hill Buchan, M.B. (Edinburgh).

Membership of the Branch.—It was reported that the members of the Branch number 255.

Election of Officers.—The following office-bearers were elected for the ensuing year:—*President:* W. B. Dow, M.D. (Dunfermline). *Vice-Presidents:* G. A. Gibson, M.D., and C. E. Underhill, M.B. *Honorary Secretaries:* James Hodsdon, F.R.C.S. Edin.; R. W. Philip, M.D. *Honorary Treasurer:* James Ritchie, M.D. *Council:* G. W. Balfour, M.D.; H. S. Calder, M.D.; James Carmichael, M.D.; F. Dendle, M.B.; G. H. M. Dunlop, M.D.; Mr. R. B. Graham; H. H. Littlejohn, M.B.; George Mackay, M.D.; J. S. Mackay, M.D.; R. Milne Murray, M.B.; D. Argyll Robertson, M.D.; T. R. Scott, M.D. *Representative on Council:* R. W. Philip, M.D.; Norman Walker, M.D. *Representative on Parliamentary Bills Committee:* Norman Walker, M.D.

Midwives Legislation.—The Branch unanimously resolved:

That the Edinburgh Branch of the British Medical Association is of opinion that if the Bill for registration of midwives now before Parliament become law, as amended by the Grand Committee, it would be a direct danger to public safety.

Proposed Vaccination Legislation.—The Branch unanimously resolved:

That this Branch reaffirms its already expressed views as to the necessity for legislation dealing with systematic revaccination; it considers the present time inopportune because of the probable near approach of dissolution of Parliament, and states its willingness to aid in the matter whenever it comes up again.

SOUTH MIDLAND BRANCH.

THE forty-fifth annual meeting of this Branch was held at Wolverton on June 14th, about thirty members and visitors being present. Dr. ALLISON, the President, was in the chair.

Confirmation of Minutes.—The report of the Committee of Management was read and adopted.

Honorary Treasurer's Report.—The Honorary Treasurer presented his annual report, showing a balance in hand of nearly £40.

Honorary Secretary's Report.—The HONORARY SECRETARY stated that during the past year 11 members had withdrawn, 2 had died, and 21 new members had joined. He pointed out that far more could be done in the matter of increase of membership by individual and personal application than by written invitations from the Secretary; and that there was still a large number of members of the parent Association who were unattached to the Branch, whom a little individual and personal effort might induce to join. He was pleased to note that some response to this had already been observed.

Branch Subscriptions.—The SECRETARY suggested, considering the large balance in the Treasurer's hands, that the subscription of the Branch to the Royal Medical Benevolent College, and the British Medical Benevolent Fund should be increased from one to three guineas annually. This proposal was unanimously adopted.

New Members.—The following gentlemen were proposed and elected new members of the Association and (or) Branch, namely: Stephen Edward Baxter (Wollaston), John J. Johnson (Selgrave), Ernest Selby (Waddesdon), J. Owen Harvey (Wolverton), Peter B. Giles (Bletchley), W. R. E. Williams (Stony Stratford), Arthur A. Miller (Northampton Infirmary), Geo. K. Jones (Northampton); of the Association and Branch: Edward M. Knott (Brixworth), Vincent Howard (Buckingham), F. B. Rockstro (Stony Stratford), A. A. Hope (Byfield), E. P. Norman (Yardley Hastings), Arthur D. Hughes (Dunstable), E. Sexton (Bedford), of the Branch only.

Autumnal Meeting.—It was resolved that the autumnal meeting be held at Stamford on September 20th.

Election of Officers.—The following were elected officers for the ensuing year:—*President-Elect for 1901:* Mr. A. P. Kingcombe (Towcester). *Representative on General Council:* Mr. R. H. Kinsey (Bedford). *Representative on Parliamentary Bills Committee:* Dr. W. Newman (Stamford). These gentlemen were re elected, with the thanks of the Branch for their services during the past year. The *Honorary Treasurer* and *Honorary Secretary* were also re elected.

Committee of Management.—In accordance with the rules, Mr. Midland and Dr. Harding retired for the Northants District, Mr. W. Gifford Nash for the Beds District, and Mr. Bull for the Bucks District. Their places were filled, by the ballot of the members present, by Dr. Buszard and Dr. Hollis, Dr. Waugh, and Mr. P. L. Benson for the three Districts respectively.

Soldiers' and Sailors' Families Association.—A letter was read from the Secretary of one district of the Branch, stating that a fee had been charged in the case of a confinement, and asking for an explanation or some guide by which to act in the future. The practitioner in question being present, made a statement, and the matter was fully discussed. It was resolved:

That in the opinion of the Branch midwifery attendance should not be included in the gratuitous service.

The Honorary Secretary was directed to intimate the same in the proper quarter.

Midwives Bill.—Letters were read from the Wood Green and District Medical Society, and from the East York and North Lincoln Branch and Hull Medical Society, on the subject of the Midwives Bill. Remarks were made by Drs. NEWMAN and KINSEY concerning the action of the General Council in the matter, also by Dr. JONES and others, and the SECRETARY stated he had urged the members of Parliament to support the amendment of the Bill adopted by the said Council.

Medical Reform.—Letter was read from the Lancashire and Cheshire Branch on this subject. Mr. KINSEY and others made remarks, and the letter was directed to lie on the table.

Manchester Conference.—Letters and papers were presented relating to the Conference on Medical Organisation held at Manchester. The Committee had decided not to appoint a delegate. The SECRETARY pointed out that out of forty or more Societies represented at the Conference, only six of the Branches had sent delegates.

Revaccination.—A circular was read from the General Secretary directing the attention of the Branches to the importance of the Government being urged to introduce a Revaccination Bill without delay; and the SECRETARY stated he had communicated with the Members of Parliament with that object in view. At this stage of the proceedings Mr. KINSEY addressed a few observations to the members concerning the action of the General Council and the general conduct of the business at the annual meetings of the Association.

Vote of Thanks to Retiring President.—Dr. Allison, who had up to this time occupied the chair, now retired, and a cordial vote of thanks was passed to him for his zealous and efficient services during his year of office.

Luncheon and Visit to Carriage Works.—An adjournment was then made for luncheon, kindly provided by the new President, Dr. Symington, a cordial vote of thanks being afterwards passed to him for his hospitality, and his health drunk with musical honours. The members then paid a visit to the London and North-Western Railway Carriage Works, being conducted by the Manager over the different departments, and having the privilege of inspecting the Royal carriages. This formed a pleasant break in the proceedings of the meeting, and was much appreciated by the members present.

President's Address.—On the resumption of business Dr. SYMINGTON occupied the chair, and delivered his introductory address, taking for his subject Chronic Lead Poisoning. He based his remarks on his experience at the railway works, the "body makers," including painters and carpenters, being the chief suffers. In the painters the affection assumed a rheumatic or gouty type. In his remarks Dr. Symington referred to the blue line on the gums, and to its long persistency; to colic, which generally affected the smaller bowel; to paralysis, pointing out various theories as to its etiology, and to the usual immunity of the supinator longus muscle.

Papers and Cases.—Mr. PERCIVAL read notes of a few interesting cases of abdominal operations for perforated gastric ulcer, appendicitis, tumour co-existing with pregnancy, etc.—Mr. W. GIFFORD NASH showed a skiagraph of ankle injury, specimens of decolorised blood clot passed in large masses in the urine; and a multilocular cyst of paradidymis with loose body from tunica vaginalis. He also related a case of pancreatic cyst in a child treated by drainage.

Votes of Thanks.—Votes of thanks were passed to the President for his interesting address, and for his conduct in the chair; to the readers of cases, and to the railway authorities.

SHROPSHIRE AND MID-WALES BRANCH.

THE spring meeting of this Branch was held at the Salop Infirmary on May 29th, Mr. ARTHUR JACKSON, President, in the chair. Thirty members were present.

Confirmation of Minutes.—The minutes of the last meeting were read and signed.

Representative on Council and Parliamentary Bills Committee.—Mr. J. D. Harries was unanimously re-elected to represent the Branch on the Council of the Association and on the Parliamentary Bills Committee.

New Members.—The following gentlemen were elected members of the Branch: Cecil A. Reynolds, M.B., D.P.H.Oxford; Rodolph de S. Stawell, F.R.C.S.Eng., M.B.Cantab.; Charles

Porter, M.D., R.U.I.; William Dyson, M.B.Vict., Broseley; Charles B. Crastown, M.B., Ludlow.

The late Dr. Nealor Thursfield.—A vote of condolence with the relatives of the late Dr. Nealor Thursfield, county medical officer, was proposed in feeling terms by the CHAIRMAN, who referred to the great loss the Branch had sustained in the death of one of the most distinguished members, and one who had contributed much to the success of its meetings. Dr. CURETON and Mr. TREDINNICK also spoke of the unvarying kindness and courtesy displayed by the late Dr. Thursfield in his relations with his professional brethren.

Diagnosis of Bladder and Kidney Diseases.—Mr. GILBERT BARLING read a paper on direct observation as an aid to diagnosis in diseases of the bladder and kidney. He described and demonstrated Kelly's tubes for the female bladder, and the electric cystoscope, and pointed out that each of these instruments had its own particular field of usefulness. The advantages of Kelly's tubes were first of all in diagnosis of diseases of the female bladder; secondly, in providing means for local treatment in such cases as require it; and, thirdly, in permitting catherisation of the ureters for various purposes. The last was rarely required, but Kelly's method appeared to be the most reliable for the purpose. With regard to the electric cystoscope in diagnosis, Mr. Barling described it as of higher value than Kelly's tubes because a larger experience was gained from it, as it was capable of being used in both sexes. The difficulties in the way of successful observation by the electric cystoscope were dealt with at some length, and its value in diagnosis of tumours of the bladder, ulcers, suppurations emptying into the bladder, and some rare conditions was discussed with illustrative cases and diagrams. Special stress was laid on the value of examination of the ureteral orifices as showing that both kidneys were present and acting, and as demonstrating the source of hæmorrhage when it came from one kidney. Stress was laid on the fact that in many cases of hæmaturia a diagnosis could only be made with the assistance of this instrument, the value of which in certain cases could not be over-rated.—The PRESIDENT, in thanking Mr. Barling for his most interesting and instructive paper, made reference to a few practical points raised therein.—Mr. T. LAW WEBB also spoke, and a hearty vote of thanks was accorded Mr. Barling for his address.

Wounds by Mauser Bullets.—Mr. PIGOTT showed three soldiers of the Shropshire Regiment wounded by Mauser bullets in the South African war. The wounds comprised (1) scalp wound with (in same subject) compound fracture of head of humerus; (2) fracture or perforation of pelvis, with tunnelling of abdominal muscles; (3) wound of forearm, with resulting contraction of fingers. All the bullets had been extracted, and all wounds had rapidly healed. Much interest was shown by the members in the examination of these wounds.

Epidemic Influenza.—Dr. CURETON read a short paper upon epidemic influenza, and gave his experience of the recent several appearances of the disease. He described typical characteristics and various modifications, and gave some valuable advice as to prognosis and treatment. In the discussion which followed, Drs. TREDINNICK, GARDNER, GORE, and the PRESIDENT took part, and Dr. CURETON briefly replied.

Malignant Disease of Thyroid.—The PRESIDENT showed a lad from whom he had removed a malignant growth of the thyroid gland, and read clinical notes of the case. Mr. T. LAW WEBB showed and demonstrated microscopical sections of the gland.

Tea.—The PRESIDENT kindly entertained members at tea after the meeting.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

A MEETING of this District was held at the Worthing Infirmary on May 26th, under the presidency of Mr. G. B. COLLET.

Next Meeting.—It was decided to hold the next meeting at Chichester, and to ask Dr. Arthur Buckell to preside.

Vote of Thanks to Retiring Honorary Secretary.—A vote of thanks was accorded to the retiring Secretary (Dr. Hinds).

Election of Honorary Secretary.—Dr. Morris, of Bognor, was elected Honorary Secretary unanimously.

Hodgkin's Disease.—Dr. EDGAR DUKE (Hove) showed a case of lymphadenoma (Hodgkin's disease) in a man aged 30.

The patient was strongly built and in other respects healthy-looking. He had been in good health till six months ago; glandular enlargement began then in the left groin, increased, and became painful. About four months later the glands in the neck began to enlarge, and a month later those in the right groin and axillæ. *Present Condition:* Groins, left side, a large hardened mass of glands in upper part of Scarpa's triangle; above this a chain a smaller glands along Poupart's ligament; right side, a similar condition on a much smaller scale. Axillæ, left side, a mass as large as a tangerine orange: right side, only a small enlargement. Neck, left side, the triangles up to the lobe of ear down to the clavicle, backwards almost to the spine, forwards to the jaw, are filled with glandular swelling; a solitary gland can be felt on the ramus of jaw, right side, filled in the same way; swelling extends even higher, but not so low, and is generally smaller. Neck measures 18¾ inches. There is no pain except in left groin and at times in left axilla. Patient feels generally well, appetite good, and has been at work until a month ago; is not breathless in walking; at apices anteriorly breath sounds are deficient. A few days ago temperature was 99.6°. Neither enlargement of spleen nor anæmia.

The patient was taking arsenic and had been ordered marrow daily.

Diagnosis of Pregnancy.—Dr. HERBERT SPENCER gave a lantern demonstration on the diagnosis of pregnancy.

Circumcision.—Mr. MILLBANK SMITH advocated a much more frequent performance of circumcision, on the grounds that more cleanliness could be obtained, that there would be less liability to venereal disease, to masturbation, and to hernia, and he urged that the operation should be performed in all cases of long prepuce. He reviewed the operation, and indicated the mistakes most commonly made. In operating himself he made a point of removing all but a very narrow ring of the preputial mucous membrane.

Demonstrations.—Mr. F. C. HAINES demonstrated the use of Petersen's inhaler by means of which anæsthesia by nitrous oxide for dental operations could be considerably prolonged.—The SECRETARY showed (for Mr. NODES) the bladder from a case of fatal hæmaturia.

An ulcer nearly as large as a shilling was found at the side of the left ureteral opening, and from this the bleeding had taken place. There had been intermittent attacks of severe hæmaturia for over two years. The man was aged 60. The left ureter was dilated.

The nature of the growth was undecided, as the report from the Clinical Research Society had not been received.

SPECIAL CORRESPONDENCE.

GLASGOW.

The Fever Hospitals.—The New Ruchill Fever Hospital.—Opening Ceremony.—Small-pox in the City.

AN important addition has just been made to the hospitals of Glasgow by the opening of the new Ruchill Fever Hospital on June 13th, and the City Corporation are to be congratulated on their wise forethought and enterprise in adding such a large and magnificently appointed hospital to those they already possess at Belvidere, Knightswood, and elsewhere for the isolation and treatment of infectious disease. Though small-pox has seldom to be reckoned with, and typhus is practically stamped out, with the rapid growth of the city, and in spite of the Notification Act the sanitary authorities have to deal in hospital with an increasing number of cases of scarlet fever and of the other specific fevers, and the growing confidence of the public in the administration of the city fever hospitals help to keep up this increase. Ruchill Fever Hospital gives the large and valuable addition of 440 beds, and allows the liberal supply of fully 2,000 cubic feet of air to each bed, so that the strain that has recently been put on the other fever hospitals will be relieved.

The new hospital is situated in the northern part of the city, and is within easy access from numerous districts that are occupied by an ever-increasing working-class population. There is an imposing administrative block in which ample provision is made for the medical staff, the matron, and about 200 nurses. The hospital proper consists of sixteen pavilions, twelve of which are large and have each beds for 30 patients, and four are smaller and each accommodates 20 patients. These pavilions have been constructed on the most modern principles, special attention having been devoted to the ventilation and the sanitary arrangements. The accessory buildings are all well designed, and a somewhat picturesque water tower—rendered necessary by the high altitude—is a prominent feature of the group of buildings, which as a whole form quite a little town. The entire cost of the hospital will probably not be less than £250,000.

The corporation and the citizens of Glasgow were honoured

by the Princess Christian graciously consenting to perform the opening ceremony, which took place in brilliant weather and in presence of a large and fashionable company on the forenoon of June 13th. At the hospital, and during the progress of the royal procession through the city, the Princess had an enthusiastic reception.

In Glasgow during recent years there has been remarkable immunity from small-pox for such a large and seaport town. However, during the last two months the disease has been introduced, and has gained such a footing that the importance of vaccination and revaccination is being impressed on the community. Dr. Chalmers, the medical officer of health, has issued a circular to the medical practitioners of the city urging on them the duty of encouraging the public to acquire that "complete protection which recent successful revaccination affords," and explaining the arrangements which the Corporation have made to remunerate the practitioners for vaccination or revaccination of persons unable to pay for that operation. The necessity for this action is shown by the fact that the disease, first introduced by a sailor, has spread till now there are over 40 cases under treatment, brought from almost all the districts of the city. As in previous outbreaks, the greatest obstacle to coping effectively with the disease is the occurrence of an extremely mild and modified form, which escapes recognition until secondary cases of a graver nature arise. Already in connection with the cases that have occurred evidence has been afforded of the protective value of revaccination, and the city authorities are anxious to encourage the community to acquire this protection even as a matter of simple prudence. "The Corporation believe that, if by any means they could obtain the revaccination of every individual in Glasgow above 10 years of age, and the primary vaccination of all who had never been vaccinated, any epidemic prevalence of small pox would be impossible within their jurisdiction."

LIVERPOOL.

Thompson-Yates Laboratories Reports.—The Yellow Fever Expedition of the School of Tropical Medicine.

THE first issue of reports from the Thompson-Yates Laboratories, University College, has just appeared in the form of two quarto volumes printed at the University press. The majority of the articles have been reprinted by permission from various other publications, but there are some that now appear for the first time. It is intended to issue these reports half-yearly, or oftener if sufficient material is ready for publication. The present volumes are a striking testimony to the good work which is being done in the laboratories, and are got up in a style which reflects the greatest credit on all who have been concerned in their production. The illustrations, many of which are coloured, are printed in a way which it would be difficult to surpass.

An important meeting of the Committee of the Liverpool School of Tropical Medicine was held on June 19th, Mr. Alfred L. Jones, Chairman of the School, presiding. The Honorary Secretary reported that the Government were co-operating with the School in the matter of the despatch of the Yellow Fever Expedition to America and Brazil, and that a letter had been received from the Marquess of Salisbury asking whether the Committee wished him to communicate with the British representatives in the countries to be visited by the expedition. The offer was gratefully accepted, and a further letter was received from Lord Salisbury saying that he had asked the British Ambassador at Washington and H. B. M. Consul at Para to obtain all possible facilities from the United States and Brazilian authorities respectively on behalf of the expedition. Official invitations for the expedition to visit Washington had been received from the heads of the medical departments of the U.S. army, and to visit Baltimore from the authorities of the Johns Hopkins University. As at present arranged, the expedition, which will consist of Dr. Durham (Grocers Research Scholar) and Dr. Walter Myers (John Lucas Walker Student), both of Cambridge, will sail by Messrs. Elder Dempster's steamship *Lake Megantic* on June 26th for Canada, and proceed direct to Washington and Baltimore. After conferring with the bacteriological experts there, the expedition will go to New York, and sail from that port to Para in the Booth or Singlehurst Line. Their subsequent movements will be guided by circumstances after reaching Para. Advantage will be taken of the opportunity to test still further the work of the School in malarial fever carried on by Major Ross, and the study of dysentery and other tropical diseases.

SYDNEY.

Hospital Saturday Collection.—Bubonic Plague.—Mortality Tables.—Sydney Hospital for Sick Children.

THE Hospital Saturday Collection has resulted in a record collection, for £3,997 4s. 3d. has been paid into the Bank of New South Wales up to date, being an increase of £110 on last year. This is the more gratifying considering the disturbance of business and trade which has resulted from the visitation of the plague.

In spite of all the efforts that have been made to check the spread of the bubonic plague, the disease still continues, and the total number of cases reported last week is in excess of any previous week. The total number of cases since the outbreak is 193, of whom 63 have died, and 99 still remain under treatment at the quarantine hospital. Isolated cases have also been reported from the seaports in the other colonies. With a view of stimulating the destruction of rats, a capitation grant of 2d. was offered, and this has recently been increased to 6d., with the result that a much larger number have been brought to the crematory. During last week over 4,000 were cremated, being nearly three times as many as in the previous week. Some germ has been received from the Pasteur Institute which is said to produce an infectious disease among rats, but to be harmless to other animals. This is now being tested by the Board of Health authorities. A further supply of Haffkine's prophylactic, and also some of Yersin's serum, has been received. A citizen's vigilance committee has been formed to assist the Government and the Board of Health in taking measures to stamp out the disease. Under their auspices a lecture on The Plague Past and Present was delivered to a crowded audience by Professor Anderson Stuart, M.D. A valuable paper on the same subject, illustrated by lantern views, was read to the last monthly meeting of the local Branch of the British Medical Association by Dr. Tidswell, the Bacteriologist to the Board of Health.

Some interesting mortality tables for the past three years have been supplied by the Registrar-General. The total number of deaths in the colony from all causes in 1897 was 14,264; in 1898, 16,661; and in 1899, 15,901. The year 1898 showed a specially heavy mortality from infectious diseases. From measles there were 509 deaths, as against 3 in 1897, and 209 in 1899; from scarlet fever 83 deaths, as against 79 in 1897, and 25 in 1899; from diphtheria 169, as against 124 in 1897, and 60 in 1899. Whooping-cough has been on the increase during the three years; in 1897, 13 deaths; in 1898, 241; and 1899, 487 deaths. Deaths from cancer have also increased from 686 in 1897 to 761 in 1899. Phthisis has also shown an increase from 964 in 1897 to 1,069 in 1899.

At the annual meeting of the Sydney Hospital for Sick Children it was stated that 393 patients had been admitted to the hospital, and 3,009 treated as out-patients during the year. In the diphtheria ward 95 cases were admitted and 85 discharged as cured, 6 only having died. In consequence of the expense of maintaining the diphtheria ward, and the large increase in the number of patients, the directors had proposed to close it altogether, but the Government had requested them to keep it open, promising additional financial assistance. The need for a large new building on a better site, removed from a crowded neighbourhood, was again emphasised, and Mr. Percy Faithfull promised to give £1,000 towards the building fund, on condition that £9,000 was subscribed by the next annual meeting.

INDIA.

The Plague Riots in Cawnpore.—Plague Policy.—The Famine.

IN my last letter I pointed out that the Bengal Government had adopted much milder measures against plague than those which had been used in other provinces, and stated that in view of the hostile attitude of the people it would be rash to say that their measures were not wise and based on

the accumulated experience of the failure of more vigorous measures in other places. Since that was written, serious riots have occurred in Cawnpore, in which several police in charge of the segregation camp were killed and burnt, together with the camp itself. This having been accomplished, the rioters, who mostly consisted of the low-caste *chamars*, who work on hides and leather, returned to the city without any attacks being made on Europeans, as was the case in the Calcutta outbreak. Fortunately Sir Anthony MacDonnell arrived on the spot next day, and after repeated conferences with the leaders of the native community fresh rules have been made which leave to the natives themselves the arrangements for the segregation of cases, and only if they are unable to provide suitable accommodation are the patients to be taken to the public hospitals. All power of action has been taken out of the hands of the police, to whose attempts to extort money by threats of removing cases of fever to the plague hospitals is attributed by some the origin of the riots. For some days all shops were closed, and an organised boycott made it very difficult even for Europeans to get sufficient food, fresh meat being quite unobtainable. The tact of the Lieutenant-Governor has overcome a very difficult situation, for the time being at any rate, as plague is said to be now absent from the city. A punitive police force has been imposed on the city, the cost of which will fall on the native population only, until the perpetrators of the crime of murdering the police have been brought to justice.

That vigorous measures are justified in order to prevent plague gaining a foothold in the North-West Provinces no one will deny, and it is to be hoped that the wise policy of enlisting the help of the people themselves to aid in its prevention, giving way to their prejudices with regard to hospital treatment without yielding to the essential point of early segregation, may be attended with the success it deserves. On the other hand, it is only right to add that the opinion of many who are competent to judge is very strongly in favour of withdrawing all plague measures from places which are already seriously affected, as there is no longer any doubt that in the Patna Division, for example, such mild measures as disinfection of plague-infected houses and more or less voluntary segregation are looked upon by the people as most oppressive, while they have really been persuaded that those cases who are removed from their houses are simple cases of fever, and that they are poisoned by order of the Government, while disinfectants are used to poison their water. So deeply rooted have these extraordinary ideas become that fear has been expressed in well-informed quarters that the people may even be led into something more than isolated rioting, and that a very dangerous position may even be brought about. The people cannot understand why they should not be allowed to die quietly of plague as of other diseases, and repeatedly say that there was no plague before the measures for its prevention were introduced. In short, it is an open question whether the good effects produced in the direction of limiting the incidence of the disease in places which are widely infected outbalances the irritating effect of the measures on the people, a question on which we are still patiently awaiting some enlightenment at the hands of the Plague Commission. There has been a marked decrease of the disease in Bengal and Calcutta, and a considerable increase in the Bombay Presidency and in Karachi, seasonal fluctuations in thoroughly infected areas such as will probably continue to occur for some years at least, there being no signs up to date of any tendency for the disease to die out of parts of the country of which it has once got a firm hold.

The numbers on the famine relief works continue to rise steadily, and they have now considerably exceeded five million souls, although there has been a slight decrease in the Punjab on account of recent favourable rains, while the good spring harvests in the North-West Provinces and Bengal have kept prices from rising further. Recent reports show that while the efforts of the Government to prevent loss of life in the territories for which it is directly responsible have been successful, yet in the Native States terrible privations and loss of life have occurred, a stern fact which will not be palatable to those gentlemen who have maintained that these States are much better off and better governed than the rest of India.

CORRESPONDENCE.

PRELIMINARY EDUCATION AND "CLASS SCHOOLS."

Sir,—Educational questions are now so pressingly brought to the front that I venture to draw your attention to the opinion expressed by H.R.H. the Prince of Wales on his visit to the Eltham schools. They are absolutely in agreement with the policy pursued by the authorities of Epsom College which on May 25th I had the honour to lay before the governors, and a report of which was given in the British Medical Journal of June 2nd. It will strengthen the hands of my colleagues if you can find space to reproduce the words of H.R.H. on class schools, and on the necessity nowadays of a good broad education on the lines of the public schools of this country. The Prince said:

It has been a great pleasure to me to be able to attend here to-day, and, by distributing the prizes, to show my interest in this school which was founded by my great-uncle, King William IV, in 1831, ten years previous to my birth. Although this is the first visit which, owing to a variety of causes, I have had it in my power to pay you, your progress and your welfare have often attracted my attention. From the year 1854 I have maintained a boy upon the foundation of the school by a donation to its funds, and I may therefore claim, in making a few remarks upon its history, to speak in some measure from personal knowledge. As you are probably aware, this institution, like many others which began their existence as purely class schools, dates from the period following the peace of 1813, a peace to which the co-operation of the navy with the army so powerfully contributed, and it has therefore a strong claim for support by the services. From the first it has proposed to itself and has consistently maintained the aim of giving to the sons of naval officers, and also, in recent years, to the sons of army officers and of civilians, a good public school education fitting the pupils for any future career which they might select at as small a cost as possible. The highest fee payable by civilians only is seventy guineas, while at the same time the instructional staff is relatively much larger than that at any other school. I should like to allude here to two misconceptions which I understand seriously hamper the proper development and position of the school. First, that it is restricted to the sons of naval officers. But this is by no means the case. Following the example of all educational institutions which were originally class schools, it has seen the wisdom of and has derived advantages from the admission of others than those in whose interests it was, in the first instance, founded. Secondly, that it is simply and solely a preparatory school for the navy. I am sure that this is not, and never has been, its object. Similarly as Wellington College does not restrict its training to boys desirous to become soldiers, or Marlborough to those who are intended for the Church, so does the Royal Naval School prepare its pupils for a variety of professional careers. This is clearly proved by the successes achieved by your old boys during the past year in the two services and at the universities, as well as by the long list of honours and promotions conferred upon them in various walks of life during the last twelve months. The removal of the school from New Cross, necessitated by the rapid growth of South London and the acquisition as freehold of its present site, the outlay upon the existing buildings together with the gradual rise in the cost of living, have made heavy demands upon its original endowment fund, at no times large. It is true that many have most generously come forward to meet these inevitable requirements, and, among others, I may mention "A friend of the school," who has recently contributed the munificent sum of £4,000 to its funds. But, in order to place the school upon a permanent and secure basis for the future, it is much to be desired that others should follow this splendid example.

The names under which Eltham and Epsom pursue their work are misleading, and too frequently induce the public to think that these institutions are only intended for a special class. It is true that in their inception they were intended to benefit a certain class, and all the original benefits attached to such classes are still preserved. But the education given is open to all, to the great benefit of the pupils who receive instruction within their walls. Our own name is sadly misleading, but our poverty alone bars our making any change. Undoubtedly no sooner can the future of the pensioners and foundation scholars be assured than a change of name, more truly descriptive of our aims, will be sought for, showing that we are a public school with a medical foundation.—I am, etc.,

June 17th. C. Holman.

THE CANNON STREET HOTEL MEETING AND DR. GLOVER.

Sir,—The protest published this week in the medical press from the Beckenham and Penge Medical Society regarding the conduct of the Cannon Street Hotel meeting contained in a letter of sympathy to Dr. Glover would not require an answer did it not contain the statement that the delegates of that society went there "prepared to submit some very carefully considered alterations in the Midwives Bill, which they hoped might render it a useful measure, and one which would safe-

guard the public, and be acceptable to the general practitioner."

Of these "carefully-considered alterations" we heard nothing either at the preliminary committee meetings or at the meeting itself. And how can this statement be made consistent with this society's delegates (including Dr. Sturges) having composed and signed the following, which is an extract from a letter which accompanied the invitation to the meeting?

It is the opinion of the large majority of medical men, and particularly of general practitioners, who see most and know most of the class of work the Midwives Bill is intended to legislate for, that it is a measure likely to effect incalculable harm. Even if it provided, as it does not, for restricting to natural cases of labour only the legalised attendance of midwives, the harm would not be guarded against, for a natural case of labour requires complete scientific knowledge to diagnose, and may become urgent and dangerous at any time between its commencement and completion. Since the study of midwifery has been changed, chiefly owing to the labours of the late Sir James Simpson and the Edinburgh School from a despised art to an honoured science, the saving of life and suffering has been immense (as statistics will show), and the genus Mrs. Gamp, so powerfully exposed by Charles Dickens, has been disappearing by the ordinary process of evolution. That being so, the evil which we all recognise to exist seemed to be gradually curing itself, but the effect of this legislation, we fear, will be to revive it in a more dangerous form than ever existed before.

The Medical Acts, which were drafted in the interests of the public, wisely ordained that medical men, who are licensed to practise in any one branch of medicine or surgery (including midwifery), must show a thorough knowledge in all. Going absolutely against this principle, the Midwives Bill will give a State-guaranteed qualification to women who can at most possess the little knowledge that is dangerous, which will deceive the public into thinking that in employing a midwife they are employing a properly qualified person to whom they are justified in entrusting their lives. We feel very strongly that this Bill has not been properly considered, or the effect it will have sufficiently weighed; and although we wish all who follow the calling of nurse to the sick could be properly trained, and even certificated by law, we are convinced that no measure which provides for the attendance of lying-in women without proper medical supervision can fail to be productive of a largely increased death-rate among women and infants, and also do much to encourage criminal practices.

This is the rational and consistent position which we still hold, and the one from which they have apparently been washed back by the dogmatic ground-swell of medico-political orthodoxy.

Sydenham, June 17th. F. LORIMER HART.

MEDICAL DUELS.

SIR,—In your note on "Medical Duels," in the BRITISH MEDICAL JOURNAL of June 16th, you refer to the duel between Dr. Mead and Dr. Woodward, the Gresham Professor, and quote Woodward's celebrated retort, which has appeared in very numerous versions. Perhaps it may interest your readers to see Woodward's own account of the duel, and his own version of the retort as given in the *Weekly Journal or British Gazetteer* for June 20th, 1719, a copy of which is in the library of this College.—I am, etc.,

J. F. PAYNE.

College of Physicians, London, S.W., June 18th.

Dr. Woodward's Relation of the Duel between him and Dr. Mead.

On the 10th instant, about eight in the evening, passing on foot, without a Servant, by the Royal Exchange, I there saw Dr. Mead's chariot, with him in it, and heard him bid his Footman open the Door. But Dr. Mead made no sign to speak with me, nor did I in the least suspect that he would follow me. I walked so gently that, had he intended to have come up with me he might have done that in less than twenty Paces. When I came to the College Gate, which stood wide open, just as I turned to enter it, I received a Blow, grazing on the Side of my Head (which was then uncovered) and lighting on my shoulder. As soon as I felt the Blow I looked back and saw Dr. Mead who made a second Blow at me, and said I had abused him. I told him that was false, stepped back, and drew my sword at the instant; but offered to make no pass at him till he had drawn, in doing which he was very slow. At the Moment that I saw he was ready, I made a pass at him; upon which he retreated back about four foot. I immediately made a second, and he retired as before. I still pressed on, making two or three more passes; he constantly retiring, and keeping out of the reach of my Sword; nor did he ever attempt to make so much as one single pass at me. I had by this time drove him from the street quite through the Gateway, almost to the middle of the College Yard; when, making another pass, my right Foot was stopped by some Accident, so that I fell down flat on my Breast. In an Instant I felt Dr. Mead, with his whole weight upon me. 'Twas then easy for him to wrest my Sword of my Hand, as he did: and after that gave me very abusive Language, and bid me ask my Life. I told him I scorned to ask it of One who, through this whole Affair, had acted so like a Coward and a Scoundrel: and at the same Time, endeavoured to lay hold of his sword, but could not reach it. He again bid me ask my Life. I replyed, as before, I scorned to do that; adding Terms of Reproach suitable to his Behaviour. By this time, some persons coming in, interposed and parted us. As I was getting up, I heard Dr. Mead amidst a Crowd of People, now got together, exclaiming loudly against me for refusing to ask my Life. I told him, in answer, he had shown himself a Coward, and 'twas owing wholly to chance, and not to any act of his, that I happened to be in his power. I added, *that had he been to have given me any of his Physick, I would rather, than take it, have asked my Life of him; but for his Sword, it was very harmless; and I was far from being in the least Apprehension of it.*

Gresham College, June 13, 1719.

J. WOODWARD.

(From the *Weekly Journal or British Gazetteer*, Saturday, June 20th, 1719.)

INOCULATION FOR TYPHOID FEVER.

SIR,—It is satisfactory to find so capable an observer as Dr. Washbourne giving his attention to this important matter. In the BRITISH MEDICAL JOURNAL of June 16th, p. 1456, he says, regarding inoculation, "So far as I can judge, it does not have a marked effect in mitigating the attack. Two of our patients who died of enteric had been inoculated." That is really what might be expected; for the foundation of the treatment is a hypothesis which is inconsistent with fact. The idea is that, as one attack of typhoid gives immunity from a second, temporary if not lasting immunity might be acquired by inoculation of an attenuated dose of the poison. But one attack of typhoid does *not* give immunity from a second. Second attacks of typhoid are as common as, by the ordinary doctrine of chances, they ought to be; more common, for instance, than second attacks of pneumonia, in about the same proportion that first attacks are more common. If one attack of the fully developed disease does not give immunity, inoculation with an attenuated dose of the poison can scarcely be expected to do so.

The idea being started it was right that it should be put to the proof. But do not let men be inoculated with the idea that they are thereby made proof against typhoid; for this false sense of security may tend to make them careless. It is moreover an unnecessary addition to the grief of those mourning the death of a son from typhoid to feel that if he had been inoculated he might have been saved. In one or two instances of late I have been able to take this edge off a parent's sorrow by stating my honest conviction that it would have made no difference. The explanation that one attack of the fully developed disease does not give immunity from a second is even to the lay mind an adequate reason why the slight ailment which inoculation causes should not do so.—I am, etc.,

Cadogan Place, June 16th. T. J. MACLAGAN, M.D.

NON-POISONOUS (SO-CALLED) ANTISEPTICS.

SIR,—I have read Dr. Walton's letter concerning a case o poisoning by "salifer" (silico-fluoride) with much interest but I do not think the case should prejudice the use of this drug in surgery. The symptoms described are as one would expect—those of extreme irritation of the mucous membrane, laryngeal and intestinal, with death from exhaustion. There are many drugs, properly styled non-poisonous, which would produce similar symptoms in a 2-year-old child if given in a dose of 80 grs. The fact that so large a dose had no direct effect on the heart or nervous system of this young child is a proof to me of the non-toxic nature of the drug. Solid salufer is extremely irritating to the tissues, and it is about as suitable for internal administration as powdered glass, but in a saturated solution, more or less diluted, I believe it to be the safest of antiseptics. I have frequently used it in uterine cases with the best results, and it is my favourite solution for the irrigation of the middle ear.—I am, etc.,

Coventry, June 20th. F. FAULDER WHITE.

THE "WELL QUALIFIED" UNQUALIFIED ASSISTANT.

SIR,—I am certain that a vast majority of the profession will feel not only pleased but indebted to Dr. Brown, of Bacup, for his letter which appeared in the BRITISH MEDICAL JOURNAL of June 16th.

The employment of nurses possessing no legal qualification (pharmaceutical or medical) for the purpose of dispensing is, to say the least, a gross abuse of the public confidence, and to employ them to assist in dressings, midwifery, or even occasional taking of temperature is sure to meet with the strong condemnation of the General Medical Council.—I am, etc.,

Earlstown, June 16th. WALTER LATHAM, L.R.C.P.Edin.

THE MIDWIVES BILL.

SIR,—In last week's issue of the BRITISH MEDICAL JOURNAL I pointed out that by Sections VIII and IX of the present Bill, the "local supervising authorities" could be composed of

midwives, and so the administration of such an Act would be placed in the absolute control of midwives.

I wish now to show that the proposed number of "local supervising authorities" proposed in the Bill is enormous. I am informed by the Local Government Board that there are now—

In England, 1,044 urban district councils, and 618 rural district councils.
In Wales, 84 " " " " 77 " " "

This means there would be a total of 1,823 "local supervising authorities," each administering and interpreting the Act as they thought fit. This would be especially so, as the present Bill makes no provision for the payment of the Central Midwives Board.—I am, etc.,

Liverpool, June 18th. R. R. RENTOUL.

CUTTING DOWN SALARIES.

SIR,—"Observer" apparently takes rather a distorted view of the matter. As far as my knowledge goes, in most of the hospitals mentioned the salaries within recent years have not only not been reduced, but have even been increased. He also fails to note that salaries may be augmented by extra fees. To give only one instance out of the list he has compiled, the salary at the Birkenhead Borough Hospital is stated to be £75; as a matter of fact the additional fees bring the year's income up to £100.

I presume that "Observer" has been misled by the present scarcity of medical men, which just now makes the remuneration apparently disproportionate. But the whole question of hospital appointments is one rather of the amount of experience and skill to be gained than of the actual amount of £ s. d.—I am, etc.,

May 27th. B. B. H.

DIPHTHERIA AND AVIAN "GAPES."

SIR,—I have read with much interest Dr. George Turner's letter in the BRITISH MEDICAL JOURNAL of June 16th. A few years ago a young lady patient of mine contracted diphtheria. She had been staying at a farmhouse where many of the poultry were dying with a mysterious throat complaint. She had nursed and even kissed one of the hens suffering from the disease. On her return home, after a few days' *malaise*, clinically typical symptoms of diphtheria supervened. To be sure of the diagnosis, I sent a portion of the membrane to the Clinical Research Association, and they pronounced the case as one of true diphtheria. The patient recovered, but persistent anæmia of several weeks' duration followed convalescence.—I am, etc.,

Hull, June 18th. A. C. DUTT.

OBITUARY.

JOSEF GRUBER, M.D.,

Professor in the University of Vienna.

PROFESSOR JOSEF GRUBER of Vienna, the distinguished otologist who died recently, was born in 1827 at Kosolup in Bohemia. He received his early education in the Gymnasium of Buda Pesth, and studied medicine at the University of Vienna, where he was a favourite pupil of Hyrtl and Rokitansky. He took his doctor's degree in 1855. From 1855 to 1860 he was assistant to the Allegemeine Krankenhaus. During this period he published several papers on surgical and dermatological subjects. At the same time he gave special attention to diseases of the ear which had then recently been raised to the dignity of something approximating to a science by Toynbee and von Tröltsch. Gruber was his own teacher, and devoted himself with enthusiasm to the study of the anatomy and pathology of the hearing apparatus. On the strength of original researches in this province he qualified as *Privat docent* of theoretical and practical otology in 1863. In 1867 he published an important monograph entitled *Anatomisch-physiologische Studien über das Trommelfell und d. Gehorknöchelchen.* In 1870 appeared his *Lehrbuch der Ohrenheilkunde.* About the same time, in conjunction with Voltolini, Rüdinger, and Weber-Liel, he founded the *Monatsschrift für Ohrenheilkunde.*

In the same year Gruber became Extraordinary Professor, and in 1873, together with Politzer, he was appointed Director of the new clinic for ear diseases of the University of Vienna. There in spite of poor accommodation he did splendid work as teacher and practitioner. Pupils flocked in thousands from all the leading countries of the world. Among them were many who are now professors and teachers in German and foreign universities.

Gruber was the first to grasp the importance of operative intervention in suppuration of the middle ear and its complications. He operated with great precision, and as his pupil, Josef Pollak, says in the *Wiener klinische Wochenschrift*, "Many hundreds of men have to thank him for their lives; many thousands for their hearing."

Gruber took a leading part in founding the Austrian Otological Society, of which he never missed a meeting till a few days before his death. In 1889 the title and rank of Ordinary Professor were conferred upon him in recognition of his work as a researcher, and his services as a teacher. When in 1898 he had to resign his chair on account of age, the Emperor showed his appreciation of his merits by giving him the Order of the Iron Crown (third class).

Gruber was a prolific writer, the number of his papers and smaller monographs amounting to about one hundred and fifty. He was a genial, kind-hearted man, a loyal friend, and straightforward in all his dealings.

FESSENDEN NOTT OTIS, M.D.,

New York.

WE regret to record the death of Dr. Fessenden Nott Otis, New York, whose name is well known in this country from his work in the domain of venereal diseases and genito-urinary surgery. He was born at Ballston, New York, in 1825, and took his degree at the New York Medical College in 1852. After some years of practice as a sea-going doctor he settled in New York. He was for some time President of the Board of Police Surgeons. He was also for many years a Professor in the Medical Department of Columbia University, and he was on the staff of several hospitals. He was the author of a well-known work on syphilis, and of numerous writings on the treatment of genito-urinary diseases. In this country his name was best known in connection with the treatment of stricture. He was the inventor of a number of instruments for the measurement and dilatation of the urethra, and other purposes belonging to his special sphere of practice. In addition to his medical writings he published *Lessons in Drawing* and *Studies of Animals and Landscapes* (1849-50), *Practical Journeyings* (1856), and *A History of the Panama Railroad and its Commercial Connections* (1860). He was a great lover of art and possessed a good collection of American pictures, many of which had been presented to him by the artists. Dr. Otis retired from practice a few years ago, and since then has spent his time in the country or in travel.

EDWARD MATTHEW SHIRTLIFF,

M.D.St. Andrews, M.R.C.S., L.S.A.

WE regret to have to record the death of Dr. E. M. Shirtliff of Newlands, Ryde, the Honorary Secretary of the Isle of Wight District of the Southern Branch of the British Medical Association.

Dr. Shirtliff was born in 1837. He studied at the London Hospital Medical School, qualified in 1858, and subsequently graduated at St. Andrews University. He commenced practice in 1861 at Kingston-on-Thames, and in 1892, his health beginning to fail, he retired to the Isle of Wight, where he renewed his strength and vigour, and thoroughly enjoyed his well-earned rest.

He was a man of many activities and of remarkable perseverance and energy. He held many local appointments. He was Medical Officer of Health of Kingston-on-Thames for twenty years, and to him was due the initiation of the Kingston Provident Dispensary, which gradually grew under his hands into one of the largest and most important institutions of the kind in the south of England. After his retirement from practice as his health improved, his energy found fresh outlets about his new home. He took an active interest in the Ryde Dispensary, he became a justice of the peace and a member of the Isle of Wight Board of Guardians. He was devoted to the interests of the British Medical Association, and shortly after he took up his residence there he was elected Honorary Secretary of the Isle of Wight District, a position which he filled with conspicuous ability. The conscientious-

ness with which he performed the duties of the post, and his urbanity and kindliness gained for him not only the goodwill but the respect and affection of the members.

He suffered from diabetes, and passed away after a few days' illness from pneumonia.

HUGH ARNOLD BRYANT, M.R.C.S.Eng., L.R.C.P.

WE regret to announce amongst the deaths at Bloemfontein from enteric fever on June 7th that of Mr. H. A. Bryant, aged 33, who had lately been serving in South Africa as Civil Surgeon with the Royal Army Medical Corps. He was the third son of Mr. Thomas Bryant, Consulting Surgeon to Guy's Hospital and Surgeon Extraordinary to H.M. the Queen, for whom and his family the greatest sympathy will be felt. Mr. Hugh Bryant received his medical education at Guy's Hospital, where he was Dresser to Messrs. Davies-Colley and Arbuthnot Lane; he was also Assistant to Mr. Pridgin Teale (Leeds), and a pupil at the Rotunda Hospital, Dublin. He qualified in 1892, became Clinical Assistant to the Royal London Ophthalmic Hospital, Moorfields, and House-Surgeon to the County Hospital, Durham. Some two or three years since he settled in practice at Shaftesbury, Dorset, where he was elected Honorary Surgeon to the Westminster Memorial Cottage Hospital, Surgeon to the County Police, and Medical Officer to the Fontmell District of the Shaftesbury Union. All these appointments he resigned when the call for surgeons to serve with the troops under Lord Roberts was made in the winter, and his premature death has caused great sorrow to a large circle of friends, who had anticipated for him a brilliant professional career.

He was a man of keen intelligence, an excellent surgeon. He had great charm of manner, and won the esteem and love of all with whom he was brought into contact. He was unmarried. One who was a fellow student with him at Guy's Hospital writes that "he was always most particular in his conversation, and was for this reason admired above his fellows.....But there is one consolation, in that he was doing his duty most nobly, not towards himself, but for his country and for freedom. And surely he has fallen with England's noblest sons in a good cause, for which he so unselfishly gave up good prospects at home. He was absolutely incapable of ever doing a mean thing, and most careful for the feelings of others." One who knew him well at Shaftesbury writes: "As a friend and a neighbour his genial social qualities endeared him to us; but as a professional adviser his promptitude of action and his variety of resource, conjoined with a large-hearted sympathy, gave confidence in the sick room, and made his visits welcome as those of a true friend."

ALFRED FISHER, L.R.C.P.Edin., M.R.C.S.Eng., Liverpool.

THE early and unexpected death of Mr. Alfred Fisher, of Liverpool, has caused the most profound regret to a large circle of friends and patients with whom he was deservedly held in the highest esteem. Mr. Fisher was a student of the Liverpool School of Medicine and of the Old Royal Infirmary, where his kindly disposition and his unassuming devotion to his work gained him many friends among his fellow-students and his teachers. He was for several years on the resident staff of the Northern Hospital, first as ambulance surgeon, and finally as Senior House-Surgeon. As ambulance surgeon he gained an exceptionally wide experience of casualty work, and his name became almost a household word in Liverpool. The reputation gained at the hospital followed him when he started practice, and he met with no small measure of success. He was Surgeon-Captain to the 1st Volunteer Battalion King's Liverpool Regiment, and was an excellent musician.

One of his fellow residents fifteen years ago at the Northern Hospital who knew him intimately at that time writes: As a colleague he was thoroughly loyal and most amiable. His devotion to his work at the hospital was beyond praise, and his kindly disposition and unfailing courtesy awoke an esteem and regard in the patients and all who were brought in contact with him that might without exaggeration be called affection. He died quite suddenly on the third day of an attack of acute pneumonia. He leaves a widow and one child.

LIEUTENANT-COLONEL ARCHIBALD ADAMS, M.D., F.R.C.S.I.,

Indian Medical Service; Administrative Medical Officer, Rajputana.

THIS able and distinguished medical officer died at Mount Abu, India, on May 20th, at the age of 50. After obtaining the degrees of M.D. and M.Ch. in the Royal University of Ireland in 1872, he joined the Naval Medical Service, and served in the Ashanti war of 1873-74, for which he obtained a medal. He entered the Indian Medical Service in 1873, and in 1881 was appointed Residency Surgeon of the Jodhpur Political Agency. He was subsequently promoted to the important position of Administrative Medical Officer, Rajputana, an appointment which was held with great distinction by the late Sir W. J. Moore, K.C.S.I. The assiduity and success with which he applied himself to the promotion of sanitation and medical relief in the Rajputana States is attested by the elaborate medico-topographical report on the Western Rajputana States, which was reviewed in the BRITISH MEDICAL JOURNAL of February 10th of the present year (p. 322). This work bore evidence of the ability and industry with which he applied himself to a study of the political, economical, and social conditions affecting the life and health of the inhabitants of these States. He worked among these people for eighteen years, and by his energy, enthusiasm, and personal influence he persuaded the rulers of these States to establish dispensaries and hospitals, advance sanitation and education among their subjects, and in many ways to ameliorate their habits and lives. When plague broke out in the Bombay Presidency in 1896-97, he instituted measures to protect Rajputana against the importation of the disease, which were successful. He was a man who took a broad view of the responsibilities and duties of his profession, and, like many members of the noble service to which he belonged, did not content himself with a routine practice of its more common avocations, but rather sought by widening the basis of observation and thought to bring information of every sort to bear on the great problems of the prevention and relief of suffering, and the bettering and prolongation of life.

WE regret to record the death of Dr. THOMAS FITZPATRICK, of 30, Sussex Gardens, Hyde Park, W. Dr. FitzPatrick was a distinguished graduate of Dublin University, where he obtained the M.D. degree in 1862, and the M.A. in 1864. He was admitted M.D. of Cambridge in 1867, and M.R.C.P.Lond. in 1868. In 1856 he was awarded the silver medal of the Pathological Society of Dublin for his work on *Chronic Diseases of the Liver*, and in the same year he became assistant surgeon in the service of the Honourable East India Company. His health, however, soon broke down in India, and after practising for some years in Ireland he settled to private practice in London. He became Fellow of the Royal Medical and Chirurgical Society, and was a member of its Council in 1894-95. He was a good linguist, conversing in Italian, German, and French, and read modern Greek, while his attainments as a classical scholar were far above the average. He possessed to a remarkable extent the faculty of winning the attachment of his patients, as well as the love and esteem of countless private friends. Unselfish almost to a fault, his thoughtfulness for everyone, and his generosity and kindness to all who required help were proverbial, and it may truly be said of him that his right hand never knew what his left hand did. His two books, *An Autumn Cruise in the Ægian, or Notes of a Voyage in a Sailing Yacht*, and *A Transatlantic Holiday*, proved that he wielded a facile and graceful pen. He was a brilliant conversationalist, and had a wonderful memory for reciting either prose or poetry. He was a steadfast and true friend, and a devoted husband. His wife, to whom he was married in 1865, was the daughter of the late Mr. W. Robinson, D.L., of Tottenham.

WE regret to have to announce the death of Mr. RICHARD TAYLOR MANSON, M.R.C.S., L.R.C.P., of Darlington, which occurred on May 31st. He was born in Liverpool in 1832 and received his early education in that town. His medical education he obtained at the University of Durham, and in 1870 he took the diplomas of M.R.C.S.Eng. and L.R.C.P.Edin. Shortly thereafter he commenced practice at Wilton-le-Wear;

subsequently he removed to Howden-le-Wear. In 1882 he settled at Darlington and speedily took a prominent position in the medical and municipal life of the town. He was a member of the North of England Branch of the British Medical Association and a Medical Officer of the Education Department. Among other local appointments he held were those of Medical Officer to the West and North-West Poor-law Districts, Medical Officer of the General Post Office, and Surgeon to the Darlington Division of the Durham County Constabulary. In 1886 he became a member of the Town Council and he remained in office almost to the last. He was a staunch and successful advocate for sanitary reform and alike as a member of the Board of Guardians and as Town Councillor he rendered signal service. He was a man of broad and philosophic mind. His literary aptitudes were not inferior to his scientific instincts, so that his published works, especially those on the geology of the district and on natural history are of no small merit. On account of his medical skill and amiable personal qualities he was highly esteemed, and his death is consequently greatly mourned in Darlington and the neighbourhood.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

CHANGES OF STATION.

The following changes of station amongst the officers of the Royal Army Medical Corps have been officially reported to have taken place during the last month:

	From	To
Colonel J. H. Moore	Bombay	Punjab.
Lieut.-Col. J. Martin	Londonderry	Aldershot.
,, G. A. Hughes, D.S.O., M.B.	Netley	Salisbury Pln.
,, W. H. Allen	Parkhurst	Hilsea.
,, P. J. Dempsey, M.D.	Bombay	Bengal.
,, R. O. Cusack	Bengal	Bombay.
Major F. H. Treherne	South Africa	Netley.
,, J. Meek, M.D.	Aldershot	South Africa.
,, W. T. Swan, M.B.	Jamaica	Aldershot.
,, M. L. Hearn	Aldershot	South Africa.
Captain G. E. Hughes	Bombay	Punjab.
,, F. A. Symons, M.B.	South Africa	Aldershot.
,, A. C. Fox	Bengal	,,
Quartermaster H. G. Hasell	Malta	,,
,, J. McClay	Aldershot	Bulford Camp.
,, F. Crookes	—	South Africa.
Lt.-Col. H. T. Chapman (retired pay)	Lincoln	Bodmin.
Surg.-Lt.-Col. H. N. Edwards (Militia Med. Staff)	Shrewsbury	Aldershot.
Surg.-Lieut.-Col. H. G. Budd	Worcester	,,
Major J. E. V. Foss (retired pay)	Aldershot	Salisbury Pln.

Of the recently appointed Lieutenants the following are stationed at Salisbury Plain:—A. D. Waring, M.B.; A. F. Weston; C. H. Furnivall; J. H. Robinson; and F. G. Fitzgerald. The others, namely, T. Biggam, M.B.; H. Richardson, M.B.; W. L. Baker; F. W. Cotton; F. M. Parry, M.B.; B. R. Dinnis, M.B.; J. S. Twigg, M.B.; W. J. P. Adye-Curran; J. Powell, M.B.; R. L. Argles; J. G. Foster, M.B.; E. G. Ford, M.B.; F. S. Walker; L. M. Purser, M.B.; W. Bennett, M.B.; P. G. Stock; H. B. Fawcus, M.B.; T. E. Fielding, M.B.; E. P. Sewell, M.B.; C. H. Straton; B. S. Bartlett; R. T. Brown, M.B.; G. Carroll; D. O. Hyde, M.B.; A. E. Hamerton, G. J. Houghton; J. G. Churton; T. H. Stevenson, M.B.; J. M. Cuthbert, M.B.; F. McLennan, M.B.; and J. Dorgan, M.B., are at Aldershot.

Lieutenant-Colonel R. Waters, M.B., C.B., and A. E. Hayes, D.S.O., both on retired pay, have relinquished the charge of troops at Canterbury and Aldershot respectively.

ROYAL NAVY MEDICAL SERVICE.

The following appointments have been made at the Admiralty: Montague H. Knapp, Surgeon, to the *Doris*, for disposal, June 12th: Sidney T. Reid, Surgeon, to the *Gleaner*, June 12th; John A. Keogh, B.A., M.B., Surgeon, to Hong Kong Hospital, June 22nd; James Mowat, Surgeon, to the *Northampton*, for the *Calliope*, June 22nd; Henry W. Hull, Surgeon, to the *Vernon*, for the *Chasseur*, June 22nd.

Surgeon Henry Peacock, retired, died at Bath on June 5th, aged 87. He was appointed Surgeon May 18th, 1839, and was Assistant Surgeon on the *Crocodile* in 1839-40, at that time engaged in the suppression of the slave trade. He was afterwards appointed Medical Officer at Chatham Dockyard, and was Staff Surgeon to the Royal Dockyard Battalion from its formation until his retirement from the service.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel G. A. Hughes, D.S.O., has been appointed Principal Medical Officer of the Salisbury Plain District, and has assumed duty at Tidworth House, *vice* Major J. E. V. Foss, M.D., retired pay, relieved.

The following have been discharged from hospital for duty: Lieutenant-Colonel Grier, Major Yarr, Captain Wade Brown, Lieutenant Ensor, Lieutenant Fuhr, Civil Surgeons Rook, Blackwood, Turton, and Roe.

Mr. Herbert Davies, M.B., a Surgeon of the Welsh Military Hospital, died of dysentery at Springfontein on June 15th.

Civil Surgeon R. T. Fitzhugh died of enteric fever at the Imperial Yeomanry Hospital, Deelfontein, on June 15th.

INDIAN MEDICAL SERVICE.

Captain W. W. Webb, M.D., retired, is granted the temporary rank of Major whilst Secretary of the Army Medical School at Netley, June 20th.

THE VOLUNTEERS.

Surgeon-Lieutenants C. Fleming, Nottinghamshire Yeomanry (Sherwood Foresters), and F. J. Grindon, 1st Bucks Rifles, are appointed to be Surgeon-Captains, June 20th.

The undermentioned gentlemen are appointed Surgeon-Lieutenants in the corps respectively specified, dated June 20th: Frederick W. W. Whyte, 2nd Volunteer Battalion the Northumberland Fusiliers; Robert Fielding-Ould, M.B., 4th Volunteer Battalion the King's (Liverpool Regiment); George W. O'F. Clark, 3rd London Rifles.

Surgeon-Captains J. J. de Z. Marshall, 3rd Volunteer Battalion the East Surrey Regiment, and W. H. Packer, M.D., 1st Volunteer Battalion the King's (Shropshire Light Infantry), are promoted to be Surgeon-Majors, June 20th.

Surgeon-Lieutenant-Colonel P. P. Smith, M.D., 1st Volunteer Battalion the Gordon Highlanders, resigns his commission, retaining his rank and uniform, June 20th.

VOLUNTEER MEDICAL STAFF CORPS.

Surgeon-Captain W. Coates, the Manchester Companies, is promoted to be Surgeon-Major (in command) on increase of establishment, March 27th.

Mr. Joseph F. Wright is appointed Surgeon-Lieutenant in the Manchester Companies, June 20th.

The London companies of the Volunteer Medical Staff Corps were inspected on June 16th in Hyde Park by Lieutenant Colonel Harrison, R.A.M.C. Though the corps has 78 of its number serving at the general hospitals at Bloemfontein and in the Yeomanry Field Hospital, it was able to muster 370 men, under the command of Surgeon-Lieutenant-Colonel J. E. Squire, V.D. The corps had 10 ambulance waggons on the ground, but only one of these was of the regulation pattern, the rest being ordinary train waggons, an object lesson which we may hope may not be lost upon Major-General Trotter commanding the Home District, who was on the ground. After the march past the companies went through evolutions, including the collection of wounded, and their transfer to a field dressing station. Some of the men were mounted upon bicycles, and served as mounted orderlies. The corps is prepared to send a further draft immediately to South Africa.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

The ninth annual meeting of this Association was held in New York on May 31st and June 1st. The President, Colonel C. H. Alden, Assistant and Surgeon-General of the United States Army, occupied the chair, and there was a large attendance, including Colonel W. McWalters, of the Royal Army Medical Corps, who is stationed at Halifax, N.S., and Major Narciso del Rio, of Vera Cruz.

The reports of the Secretary and Treasurer showed the Society to be in a highly satisfactory condition, the membership having been increased during the nine years of its existence from 68 to 484.

Colonel Alden, in his opening address suggested that the work of the Association might be rendered more efficient by the holding of State meetings, and the publication of a journal. A Committee was appointed to consider and report on the subject.

Captain Myles Standish discussed the question, What should be the standard of vision required of enlisted men in the United States Army? The standard for army officers was 15-20ths in each eye, and for navy officers 20-20ths in one eye and 15-20ths in the other, whilst for privates in the army it was 20 20ths in each eye. At the outbreak of the Spanish-American war so many applicants were rejected that the impression was produced on the public mind that they were largely cripples and invalids. Yet the fact was that a large proportion of them owed their rejection to the fact that they did not come up to the sight standard in each eye, the word "each" being in many cases the important point. He thought the requirement of 20-20ths in each eye was absurdly high. In Massachusetts, at the outbreak of the recent war, he had seen sharpshooters who had gained their marksman's badge by their records at the rifle ranges, rejected on account of defective vision, and men put in their place who had never before handled a rifle. In his opinion, as an oculist, 20-20ths in the right eye and 20-40ths in the other was more than was required in the American army.

Major J. M. Banister read a paper in which he expressed the opinion that military surgeons should at all events understand the general principles of refraction and be able to perform the simpler operations.

Camp sanitation was dealt with by Major Julian La Pierre, who urged that systematic plans should be adopted for the provision of one or more camps for military instruction. These camps should be carefully selected from the point of view of their natural hygienic conditions.

The Committee appointed to consider the feasibility of establishing a military medical journal reported that while they were agreed as to the necessity of such a journal and the possibility of making it a success, they recognised that time would be required to make the necessary arrangements for the publication, the selection of an editor and staff, etc., and therefore recommended that a Committee be appointed to formulate a plan for the establishment and conduct of the journal and to report to the next meeting of the Association. It was decided to act upon this recommendation, and a Committee was appointed accordingly.

Brigadier-General A. J. Stone was elected President of the Association for the ensuing year. It was decided that the next meeting should be held at St. Paul.

"INVITED" TO SERVE.

A correspondent suggests that, as the thirty or so medical officers who responded to the "invitation" to serve have now been doing duty for nine months, instead of the two or three originally contemplated, and as, owing to the very threatening condition of affairs elsewhere than in

South Africa, they may have to serve many months, or even years, more, the War Office should hasten to deal fairly and squarely by them, and allow their service to count towards promotion and increase of pension. These officers accepted service at much inconvenience and expense to themselves and families, and are surely entitled to the outfit allowance of £100 granted to all other officers under similar circumstances. Why not invite them to serve for a definite period—say three years—so that they may know what they are doing? Such fixity of tenure of employment would go some way to recoup them for having in many cases to keep up two establishments.

*** The War Office might well afford to be generous towards all officers and men—medical and other—who came to the assistance of the State in the late emergency.

MEDICO-LEGAL AND MEDICO-ETHICAL.

Replies in this column are limited to questions affecting the legal interests and privileges of the medical profession at large. The column is not to be used as a medium for affording legal advice in private or personal matters as to which the applicant ought to consult his own solicitor.

From communications which we have received recently it appears to be necessary to repeat that we cannot undertake to express any opinion upon medico-ethical cases submitted to us unless we have before us statements by both parties to the controversy.

THE JENNER INSTITUTE OF PREVENTIVE MEDICINE.

In the Court of Appeal on June 15th, the Jenner Institute appealed from an assessment at a rateable value of £834. The general objects of the Institute, which were of course brought to the notice of the Assessment Committee and the judges of the Queen's Bench, are well known; but it is necessary to state that a portion of the Institute has been, since May, 1898, under lease to the Local Government Board, and used by them for the preparation of glycerinated calf-lymph and investigations relating to vaccination. A matter which had a considerable effect upon the decision was that diphtheria antitoxin, mallein, and tuberculin are prepared for sale and sold by the appellants, but hitherto the sale has resulted in a loss. The Institute claimed exemption from parochial and other rates by virtue of the Statute 6 and 7 Vict., c. 36, s. 1, as being a society established exclusively for the purpose of science, and being supported in part by voluntary contributions. They had obtained a certificate under Section XL of the Valuation (Metropolis) Act, 1869. The Court, having heard the arguments of counsel, dismissed the appeal and upheld the rate.

In the course of his judgment, Mr. Justice Grantham said that the Institute was to be commended in every way, for in the absence of some such Society curative and preventive medicines of the utmost value, the making and preparation of which required the greatest skill, would not have reached their present state of perfection. But the Court must construe an Act of Parliament. The object of the Institute included the preparation and sale of medicines, and though the earlier cases had gone far in the direction of exempting scientific societies, none had gone so far as to justify the Court in exempting the appellants. Mr. Justice Channell delivered judgment to the same effect.

TWO ACTIONS FOR LIBEL AGAINST MEDICAL MEN.

Soper *v.* Gibson and Young.

This action was heard by Mr. Justice Phillimore and a Common Jury on June 29th. In this case, which was reported in the *Times* for June 20th, an action was brought by Mr. William Soper, a coachman, against Dr. J. Hill Gibson and Dr. W. M. Young, two medical men practising at Maida Vale, to recover damages for alleged professional negligence and false imprisonment. The defence was a denial of the negligence and the false imprisonment.

Mr. Moyses and Mr. Sidney Clarke appeared for the plaintiff; Mr. Jelf, Q.C., and Mr. Lambert Bond for the defendants.

According to the plaintiff's evidence it appeared that early in January of the present year the plaintiff, who was then feeling run down, consulted Dr. Gibson, his club doctor. After he had been seen once or twice by Dr. Gibson and once by Dr. Young, the relieving officer from Paddington came to his house, from which he was removed to the lunacy ward of the workhouse infirmary. After he had been detained there for three days he was discharged as perfectly sane. In cross-examination the plaintiff denied that he ever was insane. He also denied that he had threatened to commit suicide, or that he had told his wife on the day he was removed to the infirmary that that would be their last day. The defendants when called stated that in their opinion the plaintiff, at the time of his removal, was suffering from melancholia, with a suicidal tendency. They had acted upon statements made by the plaintiff's wife, who told them that her husband had threatened both her and her children. Apprehending danger, Dr. Young, who had had fifteen years' experience in a county asylum, carefully examined the plaintiff, who stated that he heard voices which prevented him from sleeping. It was in consequence of these investigations that the defendants gave notice to the relieving officer. Dr. J. F. Woods, medical superintendent of the Hoxton House Asylum, and Dr. William Rayner, visiting medical officer to the Marylebone Workhouse, supported the defendant's story, and further said that they had known cases in which acute suicidal mania had passed off rapidly through shock.

Counsel having addressed the jury, Mr. Justice Phillimore, in the course of his summing up, said: Even if the plaintiff has proved that he was sane at the time, that is not sufficient. He has to show that the defendants, acting on the knowledge and information which they possessed, did not act reasonably. The plaintiff's wife made certain statements to them. Were they not entitled to consider such statements? The question for you is whether, having regard to all that the defendants saw and heard from the plaintiff's wife, they were negligent in thinking that the plaintiff should be put under treatment.

The jury returned a verdict for the defendants, in whose favour judgment was accordingly entered, with costs.

Dowling v. Dods.

This action, which was heard by Mr. Justice Darling and a common jury on June 18th, 19th, and 20th, was brought by Miss Agnes Dowling, a nurse, against Mr. Louis Ferdinand Dods, L.S.A., practising at 246, Marylebone Road, for damages for libel. The defence was a plea of privilege, with an alternative plea of justification. The alleged libel, which was in the following terms, was addressed to Mr. C. B. Nichols, the relieving officer for Paddington:

246, Marylebone Road, London, N.W.,
November 20th, 1898.

I hereby certify to the best of my knowledge and ability that Alice (?) Dowling, aged 40 (about), of 53, Westbourne Park Road, to be of unsound mind. Whilst I was at 7, Westbourne Park Road she committed an assault on Mr. Farrer, of that address. She has hallucinations, and has sent several threatening letters to various people, some of whom go in terror of their lives. She states that she is bewitched and hypnotised, and writes to that effect. She has lately passed an examination as dispenser at the Apothecaries' Hall, and is now seeking a situation as such. In her present state of mind this might be a great danger to the community.

I have interviewed several people, who all agree as to her insanity, and are literally afraid of her. She is lodging at 53, Westbourne Park Road, and she has no friends in London. Mr. Farrer can give further particulars if required.

Louis F. Dods, L.S.A.Lond.

The above letter was sent to the relieving officer under the following circumstances. The plaintiff, who earned her living partly by nursing and partly by literary work, was versed in hypnotism, psychology, and telepathy. In January, 1896, she became an inmate of the Holy Cross Nursing Home at Ladbroke Square. Here disputes arose between the plaintiff and Sister Clare (Miss Ashby), who presided over the home. In October, 1897, the plaintiff commenced attending at a school of pharmacy conducted by Mr. Farrer. She continued the study of pharmacy until October, 1898, when she passed an examination in the subject at the Apothecaries' Hall. On November 20th she visited Mr. Farrer at his house and asked him to get her an appointment. At the time of her visit Mr. Farrer and the defendant were sitting together upstairs. Mr. Farrer saw the plaintiff in his consulting room. She said, "Can you give me ten minutes?" and laid her watch upon the table. She then tried to strike Mr. Farrer, and upon his going into the passage made another attempt to do so. Mr. Farrer detailed this incident to the defendant, and showed him a letter which he had received from Miss Ashby, in which she alluded to the plaintiff's strange behaviour, and asked him to take steps in the matter. At Mr. Farrer's request the defendant went with him to see Miss Ashby. He there saw two letters from the plaintiff, in one of which she talked of the kindness which she had received at Miss Ashby's hands, and in the other she spoke of Miss Ashby as having starved and tortured her. He then consulted certain persons named Grimbaum, who stated that they were afraid to open the door on account of the plaintiff. Under these circumstances the defendant addressed the letter complained of to Mr. Nichols, the relieving officer, who refused to take any action in the matter. The Paddington Board of Guardians and the Local Government Board also refused to act.

The relieving officer was the first witness called for the plaintiff. He admitted writing a letter in which he said "that the plaintiff was an evil-disposed, wicked, and malicious person, but that in the opinion of her friends she was not insane."

The plaintiff bore out the opening statement of her counsel. When she visited Mr. Farrer on November 20th, 1898, she had told him he was a lying and a dishonourable man. In cross-examination she admitted having written several letters, amongst which were following: "To Dr. Grimbaum,—I am sorry I sent you my black pussy, because I know you will not send him back. People are always bothering me to do what they like, and no one does what I want.....If I don't go to the asylum I shall marry Frank the stableman. The white cat advised me to. 'He would suit you down to the ground,' said the cat, 'as you are fond of horses, and I am sure he would be good to you, for he is always good to me.'" To Miss Grimbaum she wrote: "I had a vivid dream about my father which I interpret as a sign that I am about to return the 10s. your mother gave me." In a letter to Miss Ashby plaintiff called her a "vile, unjust, unholy woman." The letter continued: "You tried to take my soul from me with your diabolical practices." "You took possession of my mind; you could read my thoughts, and you threw me down in the street one day." The plaintiff also admitted having accused Miss Ashby of trying to hinder her religious duties "in order that she might retain her devilish influence over her." She admitted having served a subpœna on Sister Haughey at the Carmelite Church as she was praying, and on Sister Kathleen during a procession at the same place of worship. At a later stage of the case the witness also said that she heard the voices of persons who had hypnotised her.

Witnesses (Mrs. Conolly and Mrs. M'Bride) having been called to show that the plaintiff was sane at the time,

Mr. Firminger, on behalf of the defendant, submitted that the occasion upon which the certificate was given was privileged. He referred to the Lunacy Act, 1890, Section XIII, and contended that the defendant was protected by statute if he acted *bonâ fide*. He also contended that the occasion was privileged on the ground that the defendant had acted in the public interest.

Mr. Bevan having spoken upon this point,

Mr. Justice Darling said: I am of opinion that the defendant acted on a privileged occasion, but there is some evidence of malice. The case must go to the jury.

Mr. Firminger having opened the defendant's case, the defendant detailed the circumstances, to which allusion has already been made, which led up to his writing the letter in question. He had seen the letters which had been read out in court. He said that he was actuated only by feelings of humanity towards the plaintiff, and that he had written the letter in

the hope that the relieving officer would take up the case. In cross-examination, he said that he believed in hypnotism to a small extent, and admitted that in writing the letter to the officer he should have excepted Mrs. Conolly, who had not noticed anything wrong with the plaintiff.

Mr. Farrer, who was next called, spoke as to the plaintiff's strange conduct upon a number of occasions when she was his pupil.

Miss Ashby, the Superintendent of the Society of the Holy Cross, stated that when the plaintiff first came to the home her conduct was good. She had never hypnotised the plaintiff. While the plaintiff was at the home her (the plaintiff's) sister was removed to a convalescent home suffering from acute mania.

In cross examination, witness admitted that while the plaintiff was an inmate of the home a "Planchette" machine was sent there, and that she (the witness) was more successful in using it than the other nurses.

Dr. MacLeod was next called. He expressed the view that the plaintiff at the time (November, 1898) was not exactly of unsound mind, but that she had behaved in an extraordinary manner. He did not feel safe in her presence.

Dr. Forbes Winslow stated that in his opinion the plaintiff was of unsound mind within the Lunacy Acts.

Counsel on both sides having addressed the jury at considerable length,

Mr. Justice Darling summed up to the jury. In the course of his address he said: It is perfectly clear that the words used by the defendant and addressed by him to the relieving officer are capable of a libellous meaning. The defendant, in answer, says (1) that they are true; (2) that they were said without malice, and it will be for you to say, having considered all the circumstances of the case, whether they were said maliciously or not, for although the occasion is privileged, a person has no right to make use of a privileged occasion to do something dishonest. Therefore I shall have to ask you, When the defendant wrote this, was he seeking for some indirect motive to injure the plaintiff? This is not a case of a doctor signing a certificate of lunacy. The relieving officer cannot always get information with regard to all the lunatics in his district himself; he must trust to information being sent by other persons. Mr. Dods happened to furnish this information, as he was entitled to do, but the plaintiff could not have been placed in a lunatic asylum on the strength of it. Upon receiving this information, the relieving officer, acting as I think improperly, although he knew that Miss Dowling had assaulted Mr. Farrer, took no further step. You have to consider whether Mr. Dods was justified in making these allegations against Miss Dowling. She stated, and has admitted in the box, that "Miss Ashby is in league with the devil." You have seen Miss Ashby, and can say whether that was hallucination or no. The plaintiff accused Miss Ashby of creating a "thought body" to follow her in the streets. Are these sentiments and opinions which we expect to find expressed by a sane person at the present day? Such things were regarded as evidences of witchcraft in the reign of James I, and in the year 1665 two witches were tried before and sentenced to be executed by Sir Mathew Hale at Bury St. Edmunds for entertaining opinions of this kind. [By a juror: I hope your lordship will not ask us to decide whether Miss Dowling is a witch.] Continuing, his lordship said: You must remember that Dr. M'Leod speaks as to the plaintiff's extraordinary behaviour upon several occasions, and that her sister was in an asylum suffering from acute mania. The fact that Mr. Dods is only a licentiate of the Society of Apothecaries has no possible bearing upon this case. The issue whether this lady was of unsound mind then must be laid before you. It does not follow that she is still of unsound mind, but the main question for you to decide will be—Was the defendant guilty of malice in acting as he did?

His lordship left the following questions to the jury:

1. Did the defendant write what he wrote to the relieving officer without any malice, and in the honest belief that what he stated was true?
2. Were the words written by the defendant to the relieving officer true?
3. In what he did, did the defendant act in good faith and with reasonable care, and in order to bring the plaintiff's condition to the knowledge of the relieving officer?
4. What damages (if any) is the plaintiff entitled to?

The Jury answered questions (1) and (3) in the negative, and awarded Plaintiff £100 damages. With regard to the second question, they were at first unable to agree, but ultimately answered it thus: We find that the document was untrue in the following particulars: in stating that to the best of the defendant's knowledge and ability the plaintiff was of unsound mind; that the plaintiff had sent threatening letters to various people, some of whom went in terror of their lives; that she stated that she was bewitched; that in her present state of mind the possibility of her obtaining a situation as dispenser was a great danger to the community; and that the defendant had interviewed several people, who all agreed as to her insanity, and were afraid of her. The following statements were true: That she committed an assault upon Mr. Farrer; that she had hallucinations; that she stated that she was hypnotised, and wrote to that effect; and that she had lately passed an examination as dispenser.

Mr. Dickens, Q.C., applied for a stay of execution, which was refused.

THE CONDUCT OF CONSULTANTS

T. H. G.—With reference to our former reply in the BRITISH MEDICAL JOURNAL of June 9th under this heading, we desire to point out that the expression of opinion in paragraph 1 referred only to the case of a patient seeking an appointment at the consultant's own house. It would be in our opinion most improper for a consultant to visit at the patient's house without communicating with the usual medical attendant so as to secure his presence. As to the second point, it is not suggested that the consultant should exercise his discretion upon all points in connection with consultations, but only upon the single point whether he should inquire the name of the previous medical attendant and communicate with him about the case. This should of course be done in all serious cases, but exceptional circumstances may conceivable justify a departure from the rule in particular instances.

MEDICAL COUNTY COUNCILLORS IN IRELAND.

X. Y.—We are unable to find anything in the Statutes or Orders in Council which would prevent a medical practitioner who is a county councillor from being legally paid or receiving fees from a coroner for giving professional evidence at inquests. This view would seem to be in accordance with the general principles relating to questions of this kind. A county councillor by receiving fees for giving evidence at an inquest which he is bound to attend, cannot, we think, be held to be disqualified. It is not like holding office for profit under the county council.

CLUB CERTIFICATES AND UNREGISTERED PRACTITIONERS.

A. L. F., a surgeon to a friendly society, has been asked by a member who had placed himself under a bonesetter, to furnish the usual certificate to entitle him to sick benefit. He wishes to know whether he can visit this member, and give him the certificate, while the latter continues under the care of the bonesetter, without rendering himself liable to a charge of "covering" an unqualified practitioner.

*** No registered medical practitioner would be justified in giving a certificate under such circumstances. If he did he might lay himself open to a charge of covering.

ARRANGEMENTS WITH CHEMISTS.

E.D.K.—The question is not quite clear. There can be no objection to a doctor enjoying the usual advantage in price accorded to persons "taking a quantity" on condition that the articles are supplied to himself, but it would not be right that he should have an arrangement with a chemist whereby he received favourable terms on condition that he recommended the chemist to his patients.

DEATH CERTIFICATES FOR INSURANCE COMPANIES.

INSURANCE.—(1) No practitioner should fill up a death certificate for an insurance company without getting permission in writing from the representatives of the deceased, or he may find himself the defendant in an action for damages. (2) Having obtained this permission he should give the facts known to him without reserve, but he should abstain from expressing opinions about which there may be doubt.

THE CIRCULATION OF TESTIMONIALS.

ETIQUETTE.—We do not think it legitimate or consistent with the dignity of the profession for a medical man who has been in practice six months to send copies of his testimonials either to the persons he has attended during the last six months, or to the patients of his predecessor rom whom he acquired the practice.

FEES AT INQUESTS.

OMENTUM inquires if house surgeons are entitled to receive fees for giving evidence at inquests and making *post-mortem* examinations; and, if he refuses, what would happen?

*** The medical officers of hospitals, infirmaries, and all public medical institutions are not entitled to receive fees at the coroner's court in cases of inquests held upon deceased persons who have died in such institutions. Should our correspondent decline to obey the order of the coroner, without any reasonable excuse, he will subject himself to a fine or imprisonment for contempt of court, at the discretion of the coroner.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Natural Science Tripos.—This is now the largest Honours Examination in the University. Forty men and 3 women have gained first classes in Part I, and 14 men and no women appear in the first class of Part II. St. John's has 9, Sidney Sussex 8, and Trinity 7 firsts in Part I; Trinity has 4, and Clare 3 firsts in Part II.

Degrees.—At the Congregation on June 14th the following medical and surgical degrees were conferred:

M.D.—J. W. Cornwall, Trinity; W. E. Alston, Clare.

M.B.—E. W. Hedley, King's; R. S. Trevor, Clare.

M.B. and B.C.—W. S. Darby, Trinity; J. H. Tollent, St. John's; G. F. Lobb, Caius; S. P. Pollard, Caius; J. W. Malim, Christ's; T. Burfield, Emmanuel: D. G. Hall, Emmanuel.

B.C.—L. J. Paton, Caius.

FIRST EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:

Part II. Elementary Biology.—W. A. Alexander, Cai.; E. E. Atkin, Cai.; J. B. Banister, Jes.; E. Beaton, Cai.; H. Beckton, M.A., Cla.; A. E. Bellars, Magd.; T. R. H. Blake, Pemb.; C. W. Bowle, Trin.; W. T. Briscoe, H. Selw.; G. G. Butler, Emm.; A. F. Comyn, Pemb.; A. I. Cooke, Cai.; H. B. Corry, Cai.; D. V. Cow, Trin.; E. A. Crossley, Cla.; R. Davies-Colley, Emm.; E. F. de Clermont, King's; A. N. Dickson, Down.; J. N. F. Fergusson, Joh.; A. C. D. Firth, Trin.; R. L. Gamlen, Cai.; L. H. Goh, Emm.; G. W. Goodhart, Trin.; H. P. B. Gough, Sid. Suss.; W. B. Gourlay, Trin.; W. B. Grandage, Cla.; H. T. Gray, Trin.; G. F. Greenwood, Sid. Suss.; J. M. P. Grell, H. Selw.; H. S. Hall, Pemb.; E. F. Harrison, Trin.; G. S. Haynes, King's; A. W. Hayward, Joh.; R. A. P. Hill, Cai.; R. B. Hoisington, Christ's; C. W. Hutt, Trin.; R. S. Jenkins, Joh.; T. A. Jones, Cai.; W. D. Keyworth, H. Selw.; B. T. Lang, Trin.; H. M. J. F. de P. P. Leite, Cai.; C. Lillingston, Pemb.; J. W. Linnell, Joh.; F. P. Luard, Down.; S. G. MacDonald, Joh.; J. McIntyre, King's; A. W. Moore, Emm.; A. R. Moore, B.A., Cai.; H. F. G. Noyes, Cai.; G. G. Packe, Trin.; F. W. M. Palmer, B.A., Jes.; W. O. Pitt, Emm.; H. W. Pocock, Cai.; S. B. Priston, Joh.; E. S. Purkis, H. Selw.; A. C. H. Rothera, Emm.; D. W.

Roy, Sid. Suss.; F. S. Scruby, H. Selw.; R. B. S. Sewell, Christ's; P. H. Smith, Pemb; P. L. Stallard, Cai.; C. Strickland, Cai.; A. C. H. Suhr, Cai.; D. W. Tacey, B.A., Christ's; R. S Taylor, Down.; H. A. R. E. Unwin, H. Selw.; B. Wallis, Trin.; G. H. H. Waylen, King's; G. L. Webb, Cai.; H. B. Weir, Trin.; W. P. Williams, Down.; W. de L. Winter, Trin.; J. L. Wood, Trin.; L. Worrall, B.A., Christ's; H. N. Wyman, Cai.

Part I.—Chemistry and Physics.—W. A. Alexander, Cai.; E. E. Atkin, Cai.; R. L. Barwick, Christ's; H. Beckton, M.A., Cla.; A. E. Bellars, Magd.; P. Black, Cai.; C. W. Bowle, Trin.; R. Burgess, Cai.; G. G. Butler, Emm.; D. V. Cow, Trin.; F. C. Crew, Emm.; J. N. F. Fergusson, Joh.; A. C. D. Firth, Trin.; R. L. Gamlen, Cai.; H. P. B. Gough, Sid. Suss.; G. F. Greenwood, Sid. Suss.; J. M. P. Grell, H. Selw.; H. S. Hall, Pemb.; G. S. Haynes, King's; A. W. Hayward, Joh.; R. A. P. Hill, Cai.; W. H. Hodgson, Christ's; R. Hoisington, Christ's; C. W. Hutt, Trin.; T. A. Jones, Cai.; W. D. Keyworth, H. Selw.; F. P. Luard, Down.; A. Morris, Cai.; A. H. Owen, Cai.; M. Phillips, Cai.; W. O. Pitt, Emm.; S. B. Priston, Joh.; A. C. H. Rothera, Emm.; C. E. F. Salt, Pemb.; F. S. Scruby, H. Selw.; E. F. Skinner, Corp. Chr.; P. H. Smith, Pemb.; P. L. Stallard, Cai.; B. S. Taylor, M.A., Cla.; R. S. Taylor, Down; H. A. R. E. Unwin, H. Selw.; J. A. Venning, Trin.; G. L. Webb, Cai.; C. W. H. Weekes, Trin.; H. B. Weir, Trin.; W. de L. Winter, Trin.; H. N. Wyman, Cai.

SECOND EXAMINATION FOR MEDICAL AND SURGICAL DEGREES.—The following candidates have satisfied the Examiners:

Part I. Pharmaceutical Chemistry.—L. J. Austin, Sid. Suss.; A. L. Baly, Emm.; A. S. B. Bankart, Trin.; J. D. Barris, Cai.; E. Bell, Cla.; G. L. Cox, Christ's; L. G. Davies, Trin.; T. Drysdale, Jes.; N. C. Fletcher, B.A., Queens'; R. E. French, King's; F. M. Gardner-Medwin, B.A., Trin.; T. R. Glynn, Cla.; R. E. G. Gray, Pemb.; S. A. Henry, Trin.; R. F. V. Hodge, Emm.; W. G. Howarth, King's; E. C. Hughes, Cla.; C. L. Isaac, B.A., Joh.; C. King, Trin.; H. E. Kitchen, B.A., Sid. Suss.; R. Leslie, B.A., Pemb.; S. M. Mackenzie, Trin.; E. H. Mayhew, Emm; J. B. Mennell, Pemb.; S. H. Nixon, Emm.; W. H. Rayner, Trin.; W. H. Robinson, Down.; F. F. Shout, Cai.; G. C. E. Simpson, Joh.; P. S. Stephens, Trin.; W. H. E. Stewart, Cai.; F. P. Young, Christ's.

Part II. Human Anatomy and Physiology.—H. Ackroyd, B.A., Cai.; A. E. Barclay, B.A., Christ's; H. N. Burroughs, B.A., Trin.; H. J. Cardew, B.A., Cla.; R. A. Clapham, B.A., Emm.; J. G. Cooper, Trin.; J. S. Cooper, B.A., Jes.; W. B. Crowfoot, B.A., Emm.; C. W. Cunnington, B.A., Non.-Coll.; W. F. L. Day, B.A., Cai.; J. H. Donnell, B.A., Cai.; T. R. Elliott, Trin.; R. B Etherington-Smith, B.A., Trin.; J. E. Frere, B.A., Pemb.; F. Gayner, B.A., King's; H. U. Gould, B.A., Trin.; G. W. Greene, B.A., Down.; C. F. Hardie, B.A., Queens'; P. Hardy, B.A., Trin. H.; E. T. Harris, B.A., Christ's; N. G. Harry, B.A., Jes.; A. W. Harvey, B.A., Joh.; H. G. L. Haynes, Down.; W. H. Hills, B.A., Pemb.; B. Hudson, B.A., Cla.; J. Lambert, B.A., Down.; P. W. Leathart, B.A., Cla.; W. E. Lee, B.A., Trin.; R. C. Mott, B.A., Trin.; C. M. Murray, B.A., Pemb; P. K. Muspratt, B.A., Christ's; G. B. Norman, Joh.; P. N. Panton, B.A., Trin.; O. V. Payne, Joh.; J. S. Pearson, B.A., Trin.; H. I. Pinches, B.A., Sid. Suss.; C. A. W. Pope, B.A., Trin; G. R. Rickett, B.A., King's; R. H. Robbins, B.A., Trin.; J. N. Robins, B.A., Christ's; T. Sanders, B.A., Christ's; H. C. Sidgwick, B.A., Cla.; J. G. Slade, B.A., Cla.; T. D. Smith, B.A., Jes.; L. E. Wigram, B.A., Trin.; S. L. O. Young, B.A., Christ's.

UNIVERSITY OF BIRMINGHAM.

FIRST MEETING OF THE UNIVERSITY COUNCIL.

Appointment of Professors and Teachers.—At the first meeting of the University Council held last week all the existing professors and teachers on the staff of the Mason University College were appointed to identical positions in the University until the first day of October, when, under the Birmingham University Act, they all *ipso facto* come into possession of these positions.

Ordinances for Degrees.—The ordinances for degrees in Medicine, Surgery, Public Health, and Dentistry were passed. The degrees in Medicine and Surgery will be M.B., B.Ch., and M.D., M.Ch. In Public Health a B.Sc. and D.Sc. will be obtainable. Dental students of the University will, after taking a diploma from some qualifying body, be able to take the degrees of Bachelor and subsequently Master in Dental Surgery after an extended course of study.

Ingleby Lectureship.—Dr. W. J. Smyly, ex-Master of the Rotunda Hospital, Dublin, has been appointed to deliver the Ingleby Lecture in the year 1901.

Lecturer on Bacteriology.—W. D'Este Emery, M.D., Lond., has been appointed to this position.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Appointment of Examiners.—At the Ordinary Council on June 14th, 1900, Sir William Mac Cormac, Bart., K.C.V.O., President, in the chair, the following were approved by the Council for the ensuing year, as representing the College of Surgeons on the Conjoint Board:—Elementary Biology: P. T. Beale, F. G. Parsons, T. W. Shore, T. G. Stevens. Anatomy (Membership): S. Boyd, W. B. Clarke, A. Robinson, A. Thomson. Physiology (Membership): J. R. Bradford, G. A. Buckmaster, L. E. Hill. Anatomy (Fellowship): J. E. Lane, B. G. A. Moynihan, F. G. Parsons, A. H. Young. Physiology (Fellowship): T. G. Brodie, W. D. Halliburton, D'A. Power, W. H. Thompson. Midwifery: W. R. Dakin, W. S. A. Griffith, A. H. N. Lewers, H. R. Spencer. Public Health: Part I: C. Childs; Part II: S. A. M. Copeman.

THE LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE Helen Prideaux Memorial Scholarship of £50 will be awarded next month to a registered medical woman of not more than three years' standing, formerly a student of the London School of Medicine for Women. An essay must be submitted on or before July 15th. Further particulars can be obtained from the Secretary of the School.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns, including London, 7,006 births and 4,004 deaths were registered during the week ending Saturday last, June 16th. The annual rate of mortality in these towns, which had been 18.4, 17.7, and 16.8 per 1,000 in the three preceding weeks, rose to 18.0 last week. The rates in the several towns ranged from 9.4 in Cardiff, 11.3 in Norwich, 12.0 in Nottingham, and 12.7 in Croydon to 22.0 in Huddersfield, 22.9 in Sheffield, 23.7 in Liverpool, 24.8 in Salford, and 25.2 in Manchester. In the thirty-two provincial towns the mean death-rate was 18.4 per 1,000, and exceeded by 1.0 the rate recorded in London, which was 17.4 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.9 per 1,000; in London and in the thirty-two provincial towns this death-rate was also equal to 1.9 per 1,000; among the towns the highest zymotic death-rates were 2.5 in Huddersfield, 2.8 in Hull, 3.1 in Salford, 3.2 in Manchester, 4.3 in Derby, and 4.9 in Blackburn. Measles caused a death-rate of 1.1 in Leeds, 1.4 in Sunderland, and 1.5 in Huddersfield and in Hull; scarlet fever of 2.3 in Blackburn; whooping-cough of 1.0 in Oldham, 1.2 in Croydon and in Liverpool, and 2.3 in Wolverhampton; and diarrhœa of 1.0 in Huddersfield, and 1.3 in Burnley and Birkenhead. The mortality from "fever" showed no marked excess in any of the large towns. The 65 deaths from diphtheria in the thirty-three towns last week included 28 in London, 9 in Sheffield, 4 in Manchester, and 4 in Leeds. No fatal case of small-pox was registered either in London or in any of the thirty-two provincial towns. There were 15 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, June 16th, against 5, 7, and 11 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 4 in each of the two preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,784, 1,760, and 1,754 at the end of the three preceding weeks, had risen again to 1,766 on Saturday last; 210 new cases were admitted during the week, against 216, 194, and 203 in the three preceding weeks

HEALTH OF SCOTCH TOWNS.

DURING the week ending Saturday last, June 16th, 1,014 births and 616 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 19.6, 18.6, and 18.3 per 1,000 in the three preceding weeks, rose again last week to 19.9, and was 1.9 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 17.2 in Greenock and 17.9 in Leith, to 21.9 in Aberdeen and 27.0 in Perth. The zymotic death-rate in these towns averaged 2.5 per 1,000, the highest rates being recorded in Glasgow and Greenock. The 286 deaths registered in Glasgow included 14 from measles, 17 from whooping-cough, 2 from "fever," and 12 from diarrhœa. Four fatal cases of measles, 2 of scarlet fever, 2 of whooping-cough, and 2 of diarrhœa were recorded in Edinburgh.

NEW WORKHOUSE INFIRMARY AT WARRINGTON.

IT is always a cause of satisfaction to chronicle the opening of a new infirmary under the Poor Law, and that at Warrington would appear to reflect credit on its promoters. It is built in pavilions, that in the middle being for administration, those on either side being for male and female patients respectively. The plan provides for the addition of more blocks to meet further requirements, and we are glad to note that accommodation for the full staff can be found in the administration block when necessary. The total number of beds is 320, of which 184 are already provided. Electricity generated on the premises is used for lighting; the wards are heated by open fires supplemented by radiation and pipes. Each block has a lift for the patients, and the wards have bath rooms, lavatories, kitchens, and linen rooms. Covered corridors connect the administration block with the ward blocks. The infirmary is entirely separate from the workhouse and under different control; there is to be a resident medical officer and a lady superintendent.

THE BRIGG RURAL DISTRICT.

AT the last meeting of the Brigg (Lincolnshire) Rural District Council it was unanimously resolved, on the motion of the Chairman, to reappoint Dr. Godfrey Goodland, M.O.H., for a further period of two years, and to raise the annual salary from £80 to £100 on account of the increase of the work and the satisfactory manner in which he had performed his duties, especially in connection with the recent outbreak of small-pox at New Holland and Foxhill.

SMALL INFECTIOUS HOSPITALS.

G. writes: As medical officer of health I have been asked to make arrangements for nursing and caretaking in a newly-erected isolation hospital, which has accommodation for 4 male and 4 female patients. The hospital is situated in a rural district. It is possible that it may be without a patient for eight or even ten months in the year. The nurse's accommodation consists of one bedroom, one sitting room, and a kitchen. (1) Would it be advisable to endeavour to engage a suitable married couple to undertake the nursing and caretaking? (2) If not, what would be a suitable arrangement? (3) Should a medical man who lives close to the hospital be appointed at a yearly salary to attend all the patients in the hospital? (4) If so, taking the above particulars into consideration, what would be considered a suitable salary? The difficulty with regard to each medical man attending his own patients in the hospital is that one of the three villages for which the hospital is intended gets a great part of its medical attendance from a large town outside the rural district, five miles from this village and eight from the isolation hospital.

PERDIX.—We know of no rules in general use dealing with the administration of infectious hospitals, and as a rule it is found most satisfactory, even when there is not a resident officer, to give the medical charge of the hospital and patients to one medical man, who should be where possible the medical officer of health. In the smaller hospitals, as a rule, the practitioner is allowed to attend his patient if he or the relatives express a strong wish in that direction; but as a matter of experience the request is seldom made, for practitioners as a rule prefer not to have to visit the local fever hospital, and confidence is felt in the medical skill provided by the local authority.

CERTIFICATION OF PAUPER LUNATICS.

W. M. writes, with reference to the answer on this subject given at page 1288 of the BRITISH MEDICAL JOURNAL of June 2nd, 1900, that he was about to certify as insane a patient of his who would have been sent to asylum as a pauper lunatic, when the relieving officer informed the relatives of the patient that our correspondent's certificate would not be acted upon—that the certificate of the parish doctor would not be required. W. M. adds that the clerk to the guardians when applied to upheld the decision of the relieving officer. He asks whether these two officials were right in so deciding.

*** The answer to which W. M. refers really gives the law on this matter. It appears that he was about to certify to the lunacy of a patient who was to be treated as a pauper, and this without being requested by anyone in authority to do so. The custom is very general when an insane patient becomes a pauper, and the case as such is taken up by the relieving officer, for it at once to pass out of the hands of the previous medical attendant, and for the Poor-law medical officer of the district in which the patient is to be called upon to give the necessary certificate. This course is in accordance with law. It would also have been in accordance with law if our correspondent had certified to the lunacy of the patient, but at the request of the magistrate who acted in the case.

POSTPONEMENT OF VACCINATION.

C.E.R.—The law in regard to postponements is contained in the following passages:

A. Form of Vaccination Contract. First Schedule Vaccination Order, 1898. The public vaccinator contracts to visit and offers to vaccinate the children in H. List, "and if his offer is accepted will thereupon (*or after such postponement, if any, as may in his opinion be necessary*) so vaccinate the child."

B. Vaccination Act, 1867, 30 and 31 Vict., c. 84, Sect. XVIII. "If any public vaccinator or medical practitioner shall be of the opinion that the child is not in a fit and proper state to be successfully vaccinated, he shall forthwith deliver to the parent or other person having the custody of the child a certificate.....which certificate shall remain in force for two months, and shall be renewable for successive periods of two months until a public vaccinator or medical practitioner shall deem the child to be in a fit state for successful vaccination, when the child shall with all reasonable despatch be vaccinated, and the certificate of successful vaccination duly given if warranted by the result."

C. Vaccination Act, 1871, 34 and 35 Vict., c. 98, Sect. VII. modifies B to the extent of laying on the public vaccinator the responsibility of transmitting the certificate of postponement to the vaccination officer.

Section XIX of the Vaccination Act, 1867, is repealed by the Act of 1898, and this Section provided for the continuity of certificates of postponement, throwing the responsibility upon the parent or guardian of the child. There does not appear to be any legal requirement for the public vaccinator to make a second visit until "*after* such postponement, if any, as may in his opinion be necessary." As a matter of practice, it would seem to be wise in ordinary cases to visit on the expiration of the two months, and vaccinate or postpone again as then seems fit; but in such a case as that referred to by our correspondent we should advise that the widest interpretation should be put upon the legal phraseology, and that public vaccinator and vaccination officer should agree to let proceedings stand in abeyance until such a date "*after* such postponement" as may be convenient to each.

THE VACCINE LYMPH OF THE LOCAL GOVERNMENT BOARD.

DR. H. A. STONHAM, D.P.H. (Public Vaccinator Stepney Union) writes: My recent results with the Local Government Board lymph may be interesting. From October 1st to May 30th I performed 501 operations, 2,021 insertions, 1,991 vesicles produced, 10 cases failed in one insertion, 7 cases failed in 2 insertions, 2 cases failed in 3 insertions. Of the above 501 operations, 276 were performed from January 13th to May 30th: 1,121 insertions, 1,117 vesicles produced, 3 cases failed in one insertion. In these 276 cases, the lymph used was numbered from 332 to 514.

VACCINATION PAYMENTS.

PUB. VAC. writes: The guardians having for some years not enforced vaccination, there have been many children who have evaded it, and are now 4, 5, and 6 years old. Since the last Act, I have taken a great deal of trouble to get them vaccinated, and have had few refusals comparatively, but there are some few parents who object still. After sending a notification and calling at the house, I have been in some cases refused, and now the guardians and the auditor strike out the 1s. fee for sending notice in all cases where the child was born before August, 1898, basing their refusal on Art. 3, part 2. This is not conducive to getting up the arrears, and surely is shortsighted policy.

*** We have heard of one case in which the Local Government Board auditor is said to have passed the payment of this fee (a) in the case of children born before August, 1898, and therefore think our correspondent might very well communicate directly with the Board in the matter. It is claimed that this fee is payable in such cases, if the children are vaccinated. If not vaccinated successfully, then no fee whatever can be looked for.

CERTIFICATES OF LUNACY.

J. V. B. writes saying that a patient of his became insane, and that two medical practitioners on the spot were prepared to certify for removal to asylum, but that when the clerk to the magistrates had notice of the case he then on his own authority telegraphed to another medical practitioner to give one of the requisite certificates, thus putting the friends of the patient to an unnecessary expense. J. V. B. asks whether the law calls for such action by the clerk without any instructions from the magistrate.

*** It is not for the clerk to the magistrates to select the certifying medical officer for lunacy cases, and if the facts of this case are strictly as reported, we should certainly regard the action taken by the clerk as being in excess of his duty.

INDIA AND THE COLONIES.

HOSPITALS AND DISPENSARIES IN INDIAN PRESIDENCY TOWNS.

THE civil medical institutions located in Presidency towns are larger, better organised and equipped, and more specialised than those distributed throughout the country. Many of them also subserve important educational uses, and are employed for training nurses, midwives, dressers, and compounders. They supply the needs of the destitute sick in the towns, and also attract patients from the country who hope for greater benefits which larger experience and higher skill are reputed to confer, more especially in the treatment of ailments requiring surgical operations. These hospitals are made the subject of special reports to Government. The description and number of them in the three Presidency towns are shown in the following table:

Class of Hospital.	Calcutta.	Madras.	Bombay.
General	8	3	4
For women and children... ...	2	3	2
Ophthalmic	1	1	1
Police	1	—	1
Leper	—	1	1
Voluntary venereal...	—	1	—
Dispensaries	3	5	2
Total	15	14	11

The reports summarised in the following notes are for the year 1898:

CALCUTTA.

The year was a very healthy one. The death-rate of the town was 29.8 per 1,000, considerably below that of the four preceding years. The mortality of the large suburb of Howrah showed a corresponding abatement. There was a marked decrease in the prevalence of mortality caused by cholera, small-pox, and fever. The cholera deaths were fewer in both places than in any year since 1888. There were fewer admissions into hospital from these causes as well as from bowel complaints. There was a decrease of 5,223 indoor and 73,288 outdoor patients, the total treated being 211,250. This decrease was due partly to the healthier year and partly to the plague scare. Plague caused a mortality of 164 in the town; 135 cases were treated under special arrangements in the hospitals, of whom 116 died. There was some falling off in the number of operations performed, but the returns nevertheless indicate commendable activity and success in this respect. The death-rate among indoor patients (excluding eye cases) was 13.2 per cent., against 16.4 in the preceding year. The cost of these hospitals exceeded 10 lakhs of rupees, of which Government contributed over 7½. Large sums were spent on the reconstruction and improvement of the Presidency General and Medical College Hospitals, and constructive and administrative alterations were carried out in other institutions tending to add to their usefulness and comfort. The report, which is an able and exhaustive one, has been drawn up by Surgeon-General T. H. Hendley, C.I.E.

MADRAS.

The report submitted by Surgeon-General C. Sibthorpe, C.B., confirms the transactions of the three years 1896-7-8, and is detailed and interesting. The year 1898 was an unhealthy one; the death-rate of the town (44.8 per 1,000) exceeding that of the preceding decade by 5.1. Small-pox, cholera, and bowel complaints were in considerable excess. The attendance of indoor patients was slightly lower, and of outdoor patients much lower than in 1897. This was caused by the plague scare, preventing timid natives from resorting to the hospitals. Elaborate precautions were adopted to prevent the spread of the disease in the town. These seem to have been successful, for although 12 cases entered the town no indigenous seizures followed. Hospital accommodation suffices in Madras to meet demands, the available beds being 1,359, and the average sick 1,035. The death-rate among indoor patients was 8.02, a high figure in

excess of the two preceding years. This is attributed to the severity of the cases treated. The number of operations performed was large, and among them obstetric operations are conspicuous. The work done in the Government Maternity Hospital is of a high class, and the report submitted by Lieut.-Colonel A. J. Sturmer elaborate and able. The Government pays a well-deserved tribute to the long and excellent service rendered by Colonel A. M. Branfoot, C.I.E., in the charge of this institution, which is also a school for the training of midwives and nurses. The General and Mudellias Lying-in Hospitals assist in the work. Lieutenant-Colonel W. A. Lee, in charge of the Leper Hospitals, contributes a valuable note on recent observations regarding the causation, pathology, and treatment of leprosy. The financial condition of these institutions is satisfactory, Government contributing about three-fourths of their income.

BOMBAY.

The administration and progress report for the year 1898 submitted by Surgeon General G. Bainbridge, M.D., displays the transactions of the important hospitals which minister to the needs of the destitute sick and ailing of the city of Bombay in minute detail. The report in its present form is somewhat confused and exceedingly arithmetical and dreary. It might be made more interesting and readable by rearrangement and the infusion of life and interest into its statistical pages. In a record of medical relief during a trying and pestilential year, it seems reasonable to expect some information regarding the state of public health and the conditions in and around Bombay which have influenced sickness and mortality. It appears that 51,961 deaths occurred in 1898, and that, of these, 18,185 (out of 19,863 attacks) were due to plague; but excepting an arithmetical statement of the seasonal and local distribution of these totals as compared with the preceding year, the report is silent even as regards the relation of the facts so crudely stated to populations. Of the sufficiency of the provision of means of medical and surgical relief in ordinary times, there is no indication. Mention is made of special plague hospitals, but no details are given regarding their number, location, and work. Only 359 cases were treated in the general hospitals. The total number of patients treated in these eleven institutions was 83,019, an increase on 1897, but a considerable decrease on 1896. The death-rate among indoor patients was 12.5 per cent. The number of operations performed was 18,504, many of them of an important character and with a creditable ratio of success. Three-fourths of the cost of maintaining these hospitals is borne by Government. The review recorded by the administration on this report consists of a table of the cost of diets and a few remarks thereon.

THE WEST INDIAN ISLANDS.

WEST INDIAN MEDICAL OFFICERS AND THEIR APPOINTMENTS.—We have received a copy of an article from the *Saint Christopher Gazette* of April 23rd, 1900, in which we are taken to task for having cast the blame for some of the hardships which have been involved by the reduction of the medical service of the West Indies upon the local administrations, whereas the *Saint Christopher Gazette* considers the Colonial Office solely responsible. When we wrote of the action of local administrations we had in our mind a particular case in Jamaica in which the Colonial Secretary had interfered to protect the medical profession from the local administration, and we are unable to adopt the point of view of our contemporary, who is disposed to blame Mr. Chamberlain because he regards the reduction of the medical establishments as absolutely necessary. The Colonial Secretary pointed out that the financial condition of the island is such that they are already depending upon grants in aid—in other words, upon the British taxpayer—for a considerable portion of their expenditure. Under these circumstances it was considered necessary that there should be a reduction in the medical establishments of the West Indian Colonies, which were regarded as somewhat inflated. We believe the Colonial Secretary has done his best to mitigate the results of the financial crisis through which these colonies are passing, and which inevitably entails a certain amount of suffering upon all classes. We have the fullest sympathy for the troubles of our West Indian colleagues, and are extremely anxious to see prosperity restored to these Colonies; but Mr. Chamberlain cannot be expected to maintain the Colonial medical establishments upon their former scale at the expense of the British taxpayer.

NEW SOUTH WALES.

Vaccination.—From a reprint of an address read before the Australasian Association for the Advancement of Science by Dr. Frank Tidswell we learn that New South Wales is "the only province of the Australian group in which an enactment for compulsory vaccination does not exist, although strong representations in favour of such legislation have not been wanting. The Colony thus constitutes a danger and a menace to the other Colonies, of which the latter have just cause to complain." The vaccinations of children are steadily falling off: In the year 1895 the vaccinations (by Government vaccinators) were only 6 per cent. of the registered births, and in 1896 they were under 3 per cent. This is a lamentable state of affairs, partly due, it appears, to "the misguided reliance which is placed on our system of maritime quarantine." The Quarantine Act dates from the year 1832 and is still enforced. Both Victoria and New Zealand have established vaccine institutions, and the sooner New South Wales follows their example, at the same time making vaccination compulsory, the better it will be for the future of that Colony.

HOSPITAL AND DISPENSARY MANAGEMENT.

NATIONAL SANATORIUM FOR CONSUMPTION, BOURNEMOUTH.

THE report presented to the annual general meeting of governors of this institution showed that there was a debt of £655 for the building of a new sanitary wing at a cost of £1,000, and that the ordinary annual expenses had been increased to the extent of about £200, due mainly to the expenditure requisite for efficiently carrying on the open-air treatment, and that this further sum would be required to meet the expenses of the present year.

MEDICAL NEWS.

THE subject for the essays for the Howard Medal of the Royal Statistical Society, to be awarded in 1901, with £20 as heretofore, is the History and Statistics of Tropical Diseases, with especial reference to the bubonic plague. The essays should be sent in by June 19th, 1901.

PRESENTATION.—At a meeting of the members of the Ware Ambulance Association, the Chairman, Mr. A. G. Sandeman, presented Dr. A. J. Boyd with a pair of silver candlesticks and a penholder, and Mr. T. Barker with an easy chair, as an expression of the goodwill of the ambulance classes in connection with which they had successfully worked.

AT a meeting of the Council of Epsom College held on Saturday last the Elocution Prize was awarded to Colin Gifford, the senior prefect of the school. Subsequently the Wakley Prize of £20 was awarded to the same boy by the votes of his fellows of the Upper and Middle Schools. This prize has been given for some years for the best all-round boy in the estimation of his fellows, and is given from the proceeds of a fund raised to the memory of the late Thomas Wakley the editor of the *Lancet*.

EXEMPTION OF HOSPITALS FROM RATES.—The Select Committee of the House of Commons on the Exemption of Hospitals from Rates has commenced its inquiry under the presidency of Mr. T. W. Russell. Mr. A. D. Adrian, legal adviser to the Local Government Board, in stating the present position of the law, pointed out that the local authorities were bound to assess hospitals in substantial sums, although parks, churches, chapels, and voluntary schools, among other *quasi*-philanthropical institutions, were exempt. The London Hospital was exempt from the rates by a local Act.

CONFERENCE ON NURSING.—At a conference convened by the Matrons' Council, to be held at the rooms of the Medical Society of London at 3 P.M. on July 5th and 6th, the following questions will come under discussion: (1) A Poor-law Nursing Service; (2) the Necessity for a Nursing Department in all Governmental Offices dealing with the Nursing of the Sick; (3) the Celebration by Trained Nurses of the New Century; (4) the Nursing of the Sick at Sea; and (5) the State Registration of Trained Nurses. Tickets of admission may be obtained from the Honorary Secretary, Miss M. Breay, 46, York Street, Portman Square, W.

WHEN the guard of the Plymouth express which was recently in collision with a Windsor train at Slough emerged from his broken van he saw, as he describes, a gentleman in jacket and cap creep under the engine and render assistance to a passenger who was lying with his foot imprisoned under its flywheel. The fire was burning fiercely above, volumes of steam were escaping from the engine and playing on the man, large quantities of water were being poured on the fire by the Fire Brigade, and hanging above the passenger and his rescuer was the floor of one of the telescoped carriages which threatened every moment to fall. To his surprise the guard recognised Mr. Paul Swain, of Plymouth, who "worked as hard as any man could." After twenty minutes' exertions the man was set free, but with a fractured leg.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—Additional Examiner for Graduation in (1) Materia Medica, (2) Pathology, (3) Surgery. Applications to the Secretary by July 3rd.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.—House-Surgeon. Salary £100 per annum, with board, residence, and laundry. Applications to the Honorary Secretary, 52, Grosvenor Road, Birkenhead, by June 25th.

BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary, £120 per annum, with board, residence, etc. Applications to the Medical Superintendent.

BIRMINGHAM: GENERAL HOSPITAL.—Pathologist. Salary, £100 per annum, with board and residence. Applications to the House Governor by June 30th.

BOOTLE HOSPITAL, LIVERPOOL.—Junior Resident. Salary, £80, with board, washing and lodging. Applications to the Secretary.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary £80 per annum, with board and residence. Applications to the Secretary by July 13th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £80, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by July 3rd.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—House-Surgeon, unmarried and under 30 years of age. Salary £140 per annum, with board, residence and washing. Applications to the Secretary by July 4th.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Surgeon. Salary £120, with rooms and attendance without board; or £80 with board. Applications, endorsed "House-Surgeon," to the Secretary by June 27th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in both cases. Applications to the Secretary.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.—Assistant to the Bacteriologist. Salary, £120 per annum. Applications to the Clerk to the Joint Committee, Glamorgan County Office, Cardiff, by July 4th.

CARLISLE DISPENSARY.—House Surgeon. Salary, £150 per annum, with apartments. Applications to the Honorary Secretary, 23, Lowther Street, Carlisle.

CHELSEA HOSPITAL FOR WOMEN.—Resident Medical Officer. Post tenable for twelve months. Salary, £60 per annum. Applications to the Secretary by June 30th.

CHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

CITY ORTHOPÆDIC HOSPITAL, Hatton Garden.—Physician. Applications to the Secretary by July 14th.

ESSEX AND COLCHESTER HOSPITAL.—Resident House Surgeon. Salary, £100 per annum, with board, washing, etc. Applications to the Secretary.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—Junior Assistant House-Surgeon. Appointment for six months. Salary at the rate of £80 per annum, with board, lodging, and washing. Applications to the House-Surgeon.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—(1) Resident House-Physicians. Appointments for six months. Honorarium, £25. (2) Surgeon: must be F.R.C.S.Eng. Applications to the Secretary for (1) by June 28th and for (2) by June 27th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two House-Surgeons to Out-Patients. Appointment for six months, but renewable. Salary, 25 guineas each. Applications to the Secretary by July 10th.

HUDDERSFIELD INFIRMARY.—Junior House-Surgeon. Salary, £60 per annum, with board, residence, and washing. Applications to the Secretary by June 30th.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Second House-Surgeon, unmarried. Salary, £60 per annum, with board, lodging, and washing. Applications to the Secretary by June 26th.

ITALIAN HOSPITAL, Queen Square, W.C.—Honorary Ophthalmic Surgeon to Out-patients. Applications to the Secretary by June 30th.

KENSINGTON DISPENSARY.—Resident Medical Officer; unmarried and under 35 years of age. Salary £125 per annum, with furnished apartments, etc. Applications to the Honorary Secretary, Mr. C. F. C. Ellis, 56, Bedford Gardens, Kensington, W., by June 30th.

MIDDLESEX HOSPITAL.—Assistant Dental Surgeon. Applications to the Secretary-Superintendent by July 5th.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, W.C.—Registrar. Honorarium 50 guineas. Applications to the Secretary by June 30th.

NORTH RIDING ASYLUM, Clifton, York.—Junior Assistant Medical Officer; unmarried, age not exceeding 30 years. Salary, £125, rising to £175 per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent by June 25th.

NORWICH: HEIGHAM HALL ASYLUM.—Assistant Medical Officer. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—(1) Senior House-Surgeon. Salary, £85 per annum. (2) Junior House-Surgeon. Salary £70 per annum. Board, lodging, and washing provided for (1) and (2). Applications to the Secretary by June 25th.

PERTH COUNTY AND CITY ROYAL INFIRMARY.—House-Surgeon. Salary £60 per annum, with board. Applications to the Secretary, 33, Tay Street, Perth, by July 9th.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—Assistant Resident Medical Officer. Appointment in first instance for six months. Salary, £80 per annum, with board, residence, laundry, etc. Application to the Secretary by July 14th.

PLYMOUTH BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary, £125, increasing to £150, with furnished apartments, board, and washing. Applications, endorsed "Assistant Medical Officer," to Dr. W. H. Bowes, Medical Superintendent, by June 25th.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. House-£80 per annum, with board, lodging, and washing. Applications, marked "Salary, Surgeon," to the Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, City Road, E.C.—Assistant Surgeon; must be F.R.C.S.Eng. Applications to the Secretary by June 25th.

ST. GEORGE'S HOSPITAL, S.W.—(1) Surgeon; (2) Assistant-Surgeon. Must be F.R.C.S.Eng. Application to the Secretary by June 30th.

SALFORD UNION.—Assistant Resident Medical Officer at the Infirmary, Hope. Salary, £130 per annum, with furnished apartments and attendance. Applications, endorsed "Assistant Medical Officer," to the Clerk to the Guardians, Union Offices, Eccles New Road, Salford, by June 26th.

SALISBURY GENERAL INFIRMARY.—Assistant House-Surgeon, unmarried. Salary at the rate of £50 per annum, with apartments, board, and washing. Applications to the Secretary by June 26th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon. Appointment for six months, but renewable. Honorarium at the rate of £50 per annum, with residence, board, and washing. Applications to the Secretary, 34, King Street, Southport, by June 30th.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by July 10th.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £50 per annum, with board, apartments, etc. Applications to the Secretary by June 25th.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Application to the House Committee.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon, unmarried. Salary £80 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by June 30th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by June 30th.

WEST DERBY UNION.—Resident Assistant Medical Officer at the Mill Road Infirmary, Everton. Salary, £160 per annum, with rations. Applications to the Clerk to the [illegible] roughan Terrace, Liverpool, by June 25th.

[illegible] GENERAL DISPENSARY, Marylebone Road.—(1) House Surgeon, unmarried. [illegible] appointment for six months. Salary at the rate of £75 per annum, with [illegible] ence, and 10s. a month for washing. (2) Honorary Physician, must be F. or M.R.C.P.Lond. Applications to the Honorary Secretary.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon, appointment for six [illegible] salary at the rate of £75 per annum. Board, lodging, and washing provided in each case. Applications to the Chairman of the Medical Committee for (1) by June 25th and for (2) by July 12th.

MEDICAL APPOINTMENTS.

BLOMFIELD, A.B., M.R.C.S.Eng., L.R.C.P., appointed Medical Officer for the North Peckham District of the Camberwell Union, *vice* S. C. Phillips, M.R.C.S., L.R.C.P.

BROWNLEE, John, M.A., M.D.Glasg., and D.P.H.Camb., late Medical Officer of Health, Guernsey, appointed Physician Superintendent of Belvidere Fever Hospital, Glasgow.

CRIPPS, H. W., M.B., B.S., Assistant Medical Officer for the Capel District of the Dorking Union, *vice* J. E. Jardine, M.B., C.M.Edin., resigned.

CODD, A. F. G., M.B.Durh., F.R.C.S.Eng., appointed Certifying Factory Surgeon for the Bromley District.

COLLIER, James, M.D., B.Sc.Lond., M.R.C.P., appointed Pathologist to the National Hospital for the Paralysed and Epileptic, Queen Square, W.C., *vice* Dr. F. E. Batten, appointed Assistant Physician.

DEPREE, Sidney S., M.B., Ch.B., appointed Senior House-Surgeon to the Bootle Borough Hospital, Liverpool.

DE RENZI, Henry Carter Castriot, M.R.C.S.Eng., L.R.C.P.Lond., appointed Honorary Surgeon to the Wellington Hospital, New Zealand.

FAIRBAIRN, J. S., M.B., B.Ch.Oxon., F.R.C.S.Eng., appointed Pathologist to the Chelsea Hospital for Women.

FLINT, Thomas B., M.R.C.S., L.R.C.P.Lond., appointed Certifying Factory Surgeon for the Buxton District.

GOULDEN, H. E., M.R.C.S.Eng., D.P.H.Camb., appointed Medical Officer for the Fifth District of the Honiton Union, *vice* H. Steven, M.B., C.M.Edin.

HAINES, Wheeler, B.Sc.Lond., M.R.C.S.Eng., L.R.C.P., Lond., L.S.A.Lond., appointed Senior Medical Officer at the North Riding Asylum, Clifton, York.

HARRIS, J. H., M.R.C.S.Eng., D.P.H.Camb., appointed Medical Officer for the First and Second Districts of the Kingsbridge Union, *vice* R.W. Soper, M.R.C.S.Eng.

HUDSON, J. S., M.R.C.S., L.R.C.P., appointed Pathologist to the Infirmary for Consumption, Margaret Street, W.

HUNTER, David, M.A., M.B., B.C.Cantab., L.S.A.Lond. appointed Medical Superintendent of the new West Ham Borough Asylum at Chadwell Heath.

MITCHELL, A. M., M.D.Camb., D.P.H., appointed Medical Officer of Health for the Borough of Guildford, *vice* J. Morton, M.B.Lond., resigned.

MOWBRAY, Robert, M.D., M.Ch., L.M., appointed Medical Officer of Castlederg and Killeter No. 2 Dispensary District, *vice* Andrew T. Love, M.D., resigned.

MUIR, J. S., M.B., C.M.Edin., appointed Certifying Factory Surgeon for the Selkirk District.

NICHOLL, E. E., M.R.C.S.Eng., L.R.C.P., appointed Medical Officer for the Billinghay District of the Sleaford Union, *vice* J. H. Pim, L.R.C.P., L.R.C.S.

ROBERTS, C. Hubert, M.D.Lond., F.R.C.S.Eng., M.R.C.P., appointed Physician to In-Patients at the Samaritan Hospital for Women, London, N.W.

TURPIN, D. W. Mercier, L.R.C.P.I. and L.R.C.S.I., and L.M., appointed Medical Officer to the Alvaston and Boulton School Board.

LUKE, Thomas D., M.B., B.Ch., appointed Anæsthetist to the Deaconess Hospital, Edinburgh.

DIARY FOR NEXT WEEK.

MONDAY.

London Throat Hospital, 204, Great Portland Street, W., 4.30 P.M.—Mr. Waggett: Diagnosis of Chronic Deafness.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Swinford Edwards: Urinary Cases. (Lecture I.)

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. Malcolm Morris: Consultation (Skin).

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M. — Sir W. R. Gowers: On Neuritis.

Royal College of Physicians of London, 5 P.M.—Dr. F. W. Mott: The Degeneration of the Neurone. (Croonian Lecture.) Lecture III.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Sharkey: Consultation (Medical).

WEDNESDAY.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Mr. Walter Edmunds: Selected Surgical Cases. (Post-Graduate Course.)

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M. — Dr. Fowler: Thoracic Aneurysm.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Mr. W. A. Jacobson: Consultation. (Surgical.)

THURSDAY.

Royal College of Physicians of London, 5 P.M.—Dr. F. W. Mott: The Degeneration of the Neurone. (Croonian Lecture.) Lecture IV.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Mr. J. Hutchinson: Consultation. Surgical.)

Charing Cross Hospital, Post-Graduate Course, 4 P.M.—Dr. William Hunter: Pathological Demonstration.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Swinford Edwards: Urinary Cases. (Lecture II.)

FRIDAY.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Dundas Grant: Consultation. (Ear.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTH.

WARRINGTON.—On June 15th, at 69, Rodney Street, the wife of W. B. Warrington, M.D., M.R.C.P.Lond., of a daughter.

MARRIAGES.

SNELL—REID.—At the Roxburgh Hotel, Edinburgh, by the Rev. Alex. Badenoch, M.A., assisted by the Rev. Bernard J. Snell, M.A., B.Sc., Ernest Hugh Snell, M.D., B.Sc., of Coventry, to Mary Catherine, second daughter of the late William Reid, of Dunfermline, N.B.

MURRAY—SPENCE.—At the Parish Church, Dun, on the 13th inst., by the Rev. Robert Scott, M.A., Craig, assisted by the Rev. Alexander Anderson, Dun, William Murray, M.D., Hessle, East Yorks, to Barbara Maud, the second daughter of Andrew Spence, J.P., Glenskenno.

WROUGHTON—HAVERS.—On the 26th April, at St. James's Church, Tunbridge Wells, by the Rev. W. Scott, assisted by the Rev. A. R. Cronk, William Charles Haultain Wroughton, M.R.C.S.Eng., L.R.C.P.Lond., fourth son of Colonel W. N. Wroughton, Indian Staff Corps, to Rose Edith, only daughter of the late J. Cory Havers, Esq., of Joyce Grove, Oxon, and Mrs. Havers, Ferndale, Tunbridge Wells.

DEATHS.

EMBLETON.—On June 18th, at Swanage, of apoplexy, Dennis Cawood Embleton, M.D., M.R.C.S., L.R.C.P., of St. Wilfrid's, Bournemouth, age 46.

JONES.—On the 16th inst., at Springfontein, South Africa, Professor Thomas Jones, F.R.C.S.

NEWTON.—On June 21st, at Trevor Dene, Penarth, Georgina, the wife of Charles John Newton, Surgeon, aged 48 years.

WHEATLEY.—On the 14th inst., at the Grange, Loughton, William Henry Wheatley, L.D.S.Lond. and Glas., aged 46 years.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Roentgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Th., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations* —Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2, (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu. F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children) 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—I.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30; Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th. 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 2; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W. C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

SPA asks for a receipt for making "Zwieback" bread.

J. R. B. desires to hear of an institution, preferably in the North of England, where a poor patient suffering from rheumatoid arthritis could undergo a course of treatment by hot-air baths.

MILK DIET.

TONE asks for information as to some place on the Continent where a patient who is suffering from chronic diarrhœa could go for a course of milk diet, where the *régime* is fairly strict. Is Plombières such a place?

*** The choice of a resort must depend on the character of the case. Milk diet may be obtained at a number of places on the Continent—too many to mention. Many of the best known resorts for pulmonary affections have specially good arrangements in regard to milk, koumiss, etc. In some cases of chronic diarrhœa small doses of a water, like that of Carlsbad, seem to be useful, in addition to careful diet. Plombières, with its hot baths, is beneficial in some cases.

THE EXAMINATION FOR THE F.R.C.S. EDIN.

J. MCC. desires information as to the best books to read for the F.R.C.S. Edin. in the following subjects: (1) Surgery, (2) surgical anatomy, (3) operative surgery, (4) surgical pathology and morbid anatomy.

*** The following works may be mentioned:

(1) SURGERY.—Erichsen's *Science and Art of Surgery*, 2 vols., tenth edition (London: Longmans, Green, and Co. 1895. 48s.). Treves's *System of Surgery* (London: Cassell and Co. 1895-96. 48s.). Rose and Carless's *Manual of Surgery*, second edition (London: Baillière, Tindall, and Cox. 1899. 21s.).

(2) SURGICAL ANATOMY.—Article on surgical anatomy in *Quain's Anatomy*, Appendix, tenth edition (London: Longmans, Green, and Co. 1896. 6s. 6d.), and Anatomy in its Surgical Aspect, as found in *Gray's Anatomy*, fourteenth edition, edited by T. Pickering Pick (London: Longmans, Green, and Co 1897. 36s.), or Cunningham's *Anatomy*, second edition (Edinburgh and London: Young J. Pentland, 1896. 25s. should be read.

(3) OPERATIVE SURGERY.—Jacobson's *Operations of Surgery*, third edition (London: J. and A. Churchill. 1897. 34s.). Waring's *Operativ Surgery* (Edinburgh and London: Young J. Pentland. 10s.).

(4) SURGICAL PATHOLOGY AND MORBID ANATOMY.—*Manual of Bacteriology*, by Muir and Ritchie, second edition (Edinburgh and London: Young J. Pentland. 1899. 12s. 6d.). *Tuberculous Disease of the Bones and Joints*, by W. Watson Cheyne (Edinburgh and London: Young J. Pentland. 1895. 14s.). *Suppuration and Septic Disease*, by the same author (Edinburgh and London: Young J. Pentland. 1889. 5s.). *Tumours, Innocent and Malignant*, by J. Bland-Sutton (London: Cassell and Co. 1893. 21s.). Special articles on the various pathological conditions in any of the standard books above noted.

ANSWERS.

G. B. J.—The statement appears to be perfectly correct. Everybody, we presume, knows that other ladies have obtained the State licence to practise in Sweden.

TREATMENT OF CONSTIPATION IN CHILDHOOD.

DR. S. J. BAKER (Abingdon) writes, in reply to "Radius": I would refer him to a very interesting and instructive article on the subject which appeared in the BRITISH MEDICAL JOURNAL of July 7th, 1888, by Dr. Eustace Smith, which I have found of great assistance to me.

FORMIC ALDEHYDE AS A DISINFECTANT.

J. W. W.—The subject of formic aldehyde as a disinfectant has been treated in a long series of papers published in this country and abroad. The various methods of generating the vapours, and general considerations upon the value and suitability of the methods, together with a useful bibliographical summary, will be found in Dr. Henry Kenwood's paper on The Disinfection of Rooms by Formic Aldehyde (*Transactions* of the Sanitary Institute, vol. xviii). Dr. Rideal's work on *Disinfection and Disinfectants* (2nd Edition) may also be consulted with advantage.

NOTES, LETTERS, Etc.

ERRATUM.—In Dr. Dunscombe-Honiball's paper on Accidents and Injuries Caused by Lightning, published in the BRITISH MEDICAL JOURNAL of May 12th, the thirty-ninth line of column two, page 1154, should read "I noticed *no* abnormality of blood," etc., and not as printed.

THE PRINCIPLES AFFECTING THE CONDITION OF SOUND BY THE BONES OF THE HEAD.

DR. A. A. GRAY (Glasgow) writes in reply to Dr. Colquhoun's letter BRITISH MEDICAL JOURNAL, May 26th, p. 1328): I have only to say that in some points he appears to have understood me wrongly in regard to my views upon the conduction of sound by the bones of the head. The paper was an abstract and the fault may have been mine in com

pressing too much. The vibrations conducted to the chain of bones by the tympanic membrane I look upon as being parallel with the fibres, and not at right angles to them, as occurs in the vibrations conducted by the air. There is no doubt that by converting the relatively loose chain of bones into a more rigid system we also increase its sound-conducting power, and in pathological cases this is one of the causes of increased intensity of bone-conducted sound as suggested by Bezold. These conditions, as well as the conditions of perforation of the membrane, I intend to publish later, as stated at the end of my paper. The objection to Dr. Colquhoun's view that the rigid chain of ossicles is the cause of increased intensity of bone-conducted sound is to be found in the results of the experiment of rarefying the air in the meatus. In this case the head of the malleus is rotated inwards and firmly pressed against the body of the incus, and the chain made more rigid; nevertheless, the sound conducted by the bones is heard with less intensity than under normal conditions. Again, we would expect in old people to find that the chain of ossicles becomes more rigid, and we know that in general the membrane tends to become more relaxed and bone-conduction to diminish in intensity.

As regards the rest of his letter I have only to say that from my own observations and those of others the facts seem to be as I have stated them. I have made sections through the tympanic membrane *in situ* and found that in the horizontal direction each half of the membrane is sufficiently close to an arc of a circle to be considered as such. Moreover, such a view is coincident with that of Helmholtz. I did not take the centres of curvature of these arcs on a line representing a section of the tympanic walls as Dr. Colquhoun states, but on a line at right angles to the tangent of the arc to the fibre at its insertion into the tympanic ring. Since the movement of the tip of the malleus inwards is, I find, parallel to this line—z is a constant in equations (1) and (2). As I found the premisses sufficiently accurate for the purpose of the investigation I used the series referred to by Dr. Colquhoun.

In conclusion, I should like to thank Dr. Colquhoun for the interest he has taken in the subject.

RELATIVE IMMUNITY TO TYPHOID FEVER.

LIEUT.-COL. P. J. DAMANIA, late I.M.S. (London), writes: It has been always interesting to me to know, along with a good many others, why enteric fever is more common amongst British than Indian troops in India, more especially when the former are so well looked after as regards water, food, barrack accommodation, etc. As it is an acknowledged fact that the Eberth bacillus is the cause of the disease, there can be no doubt that hundreds of these bacilli must be entering into the system of the Indian to one into that of the British soldier. From what I had seen of both it had always occurred to me that immunity to a great extent in the former must be owing to the texture and colour of the skin. It may be asked, What has that to do with protection? Are not the skin and mucous membrane convertible and continuous with one another? If the skin is thick, mucous membrane is thick, and the pigmentation of the cells of the skin must have some effect on the cells of the lining membrane, about which we know nothing. In the excellent account of researches into the nature and action of snake venom in the BRITISH MEDICAL JOURNAL of May 12th, Captain R. H. Elliot, I.M.S., states that "the source of protection might perhaps lie in the action of intestinal epithelium during absorption. This idea was suggested by the fact that the epithelium of the serpent's venom glands has the power of so altering the fluid passing through it as to change it from an innocuous fluid into a highly poisonous one, might not the action of intestinal epithelium be to invert this process?" Although he abandoned the theory in his case, might not this theory account for the immunity to enteric fever to a great extent amongst the Indians? For an analogy in animals we find that the white rhinoceros is poisoned by the plant *Euphorbia candelabrum*, whilst the black one can eat it without injury.

THE LATE PROFESSOR ELLIS.

DR. C. F. MOORE, F.R.C.S.I. (Dublin) writes: In a notice of the late Professor G. Viner Ellis's excellent work in the teaching of anatomy at University College, London, by Mr. Balmanno Squire, in the BRITISH MEDICAL JOURNAL of June 2nd it is stated that ("about the year 1855") "in those days it never occurred to anyone to arrest the putrefaction of the subjects by the injection of preservative fluid into the arteries in the manner that is done nowadays."

Allow me to say that I was taught anatomy by the late eminent Professor Alcock, of Dublin, who in the forties (1840-1-2-3 and subsequently) used what Mr. Squire names "preservative fluid injections into the arteries," which enabled me and others to dissect in the early summer mornings as well as in the winter time.

THE TREATMENT OF DYSENTERY AND ENTERIC FEVER.

A. F. H. writes: Menthol, as we all know, is a disinfectant and vaso-constrictor, and tannic acid is an astringent, styptic and a neutraliser of the toxic products of bacterial activity. Why, then, should not these two substances be employed, in combination, in the treatment of dysentery and enteric fever? A pill containing menthol gr. 1 to 2, tannic acid 3 to 5, and coated with either salol or keratin would pass unaltered through to the stomach, but become disintegrated in the intestines where the specific properties of the respective drugs would have full scope for their action. It seems strange that greater use should not have been made of the property of tannic acid to turn soluble and therefore poisonous toxins into insoluble non-poisonous tannates.

PREVENTION OF LACERATION OF THE PERINEUM.

ANOTHER VETERAN writes: My somewhat extended experience agrees with that of "Not a Veteran," as explained in the BRITISH MEDICAL JOURNAL of June 9th. The following case may illustrate the value of properly supporting the perineum and manipulating the child's head during the exit. I attended a fine young woman with her first child, and delivered her with my usual precautions with a fine boy without the slightest fissure or tear. For her second child I was not in time, as it was born before the messenger reached me. On arrival I was concerned to find an extensive laceration of the perineum had taken place, although the child was a girl and not so fine as the former child. I put in a continuous catgut ligature, and the lesion healed after a time; but it was a great inconvenience, and very distressing to the patient.

THE NEW ORDER OF PRACTITIONERS.

DR. G. CRICHTON (Earl's Court) writes: In a suburb I shall not name a trained nurse attends all and sundry of the working classes at 5s.; a charitable society under the control of the vicar of the parish providing her with a salary likewise. From personal knowledge I have a small opinion of her as an obstetrician. She requires no Act to authorise her to practise. She would scorn to accept assistance from the humble doubly qualified mere man. Apparently there are to be two grades of midwives: (1) She who nurses with a fully qualified man taking the responsibility; (2) she who officiates on her own responsibility and is supposed to know when higher skill is required. Will it not be well to limit the licence of the second grade to those who have, say, for four or five years attended and nursed under medical men a minimum (50?) number of cases? But doctors without a subsidy cannot compete at 5s.

SUPERFŒTATION IN THE COW.

DR. J. IREDALE (Mablethorpe, Lincolnshire) writes: The following particulars of a case of superfœtation in a cow may be of interest to your readers. My patient's cow calved a she-calf on April 24th. She gave her milk as usual at first, but shortly became "dry." Seven weeks exactly from the birth of the first calf she gave birth to a very fine he-calf.

LETTERS COMMUNICATIONS, ETC., have been received from

A A. B. C.; Professor T. Clifford Allbutt, Cambridge; J. Anderson, M.B., Armadale. **B** Dr. J. Brown, Bacup; Mr. A. H. Baird, Edinburgh; Mr. W. M. Beaumont, Bath; J. P. Bullar, M.B., Southampton; Dr. F. G. Bushnell, Plymouth; Dr. F. M. Burnett, Sevenoaks; Mr. L. A. Bidwell, London; Miss M. Breay, London; Messrs. Burroughs, Wellcome, and Co., London. **C** Dr. G. W. Crowe, Worcester; Dr. J. M. Clarke, Clifton; Dr. W. A. Chapple, Wellington, N.Z.; Dr. W. H. Calwell, Belfast; Mr. R. P. Cooke, Birmingham; Candidate. **D** Dr. A. Duke, Cheltenham; A. C. Dutt, M.B., Hull; Mr. O Dunscombe-Honiball, Vreedenhoop; Mr. F. Deane, Barbados. **E** E. D. K.; Dr. W. A. Evans, Bradford; Etiquette; E. R. M.; Mr. C. J. Evans, Northampton. **F** F. J. A. B.; Mr. C. H. Fagge, London; E. R. Fothergill, M.B., Roche; Dr. W. F. Farquharson, Carlisle. **G** Dr. A. E. Giles, London; S. St.G. Gray, M.B., St Lucia. **H** Dr. F. Hinds, Worthing; R. G. Henderson, M.B., Haydock; Mr. W. H. Harland, East London, S.A.; Dr. A. C. Houston, London; F. J. L. Hart, M.B., London; Hampden; Mr. A. B. Henchley, Blagdon; Dr. T. A. Helme, Manchester; G. Heaton, M.B., Birmingham. **I** Ill-treated; Dr. A. Inglis, Maybole; Mr. J. Iredale, Mablethorpe. **J** Mr. A. F. Jeffreys, Bournemouth; Dr. N.B. Jenkins, Chicago; Miss G. B. Jacobi, London; J. V. B. **L** R. M. Leslie, M.B., London; Mr. R. Leigh, Liverpool; Lex; Mr. W. Latham, Earlestown. **M** Dr. E. F. Maynard, Hove; Dr. H. H. B. Macleod, Shrewsbury; Miss H. Morton, Richmond; Dr. T. J. Maclagan, London; Dr. H. M. Murray, London; Mr. J. H. Morgan, London; Member going to Ipswich; Mr. A. H. Milne, Liverpool. **O** Omentum. **P** Dr. A. E. H. Pinch, London; Dr. J. F. Payne, London; Mr. J. H. Potter, Porlock; Mr. J. D. Price, Dudley. **R** J. S. Riddell, M.B., Aberdeen; Dr. J. Reid, Redhill; Reader; Dr. R. R. Rentoul, Liverpool; G. A. Reid, M.B., Southsea; Mr. B. Rawlings, London; P. M. Ragg, M.B., Kingston, Jamaica. **S** C. C. Scott, M.B., Twickenham; Mr. C. R. Stratton, Wilton; Mr. W. W. Stocker, London; Spa; H. E. Smith, M.B., London; T. E. S. Sibbald, M.B., Stanley. **T** T. H. G.; Dr. J. C. Thresh, Chelmsford; Mr. A. L. Tireman, Hull; Tone; H. F. L. Taylor, M.B., Jalalpur-Jattan. **W** Mr. H. S. Wellcome, London; Mr. E. A. Wayne, Swansea; Mr. R. Wright, Liverpool; Dr. A. Warson, Llanymynech; Dr. F. Willcock, London; Mr. M. Westcott, London; Mr. F. A. Warner London; Mr. R. C. Worsley, Ramsgate; Dr. H. B. Williams, London; Mr. P. F. White, Coventry. **X** X.

BOOKS, ETC., RECEIVED.

Bradshaw's Dictionary of Bathing Places, etc. 1900. London: Kegan Paul, Trench, Trübner, and Co. 2s 6d.

La Goutte et le Rhumatisme. Par A. Delbeuch. Paris: G. Carré et C. Naud. 1900. 20 frs.

Encyclopædia Medica. Edited by C. Watson, M.B. M.R.C.P.E. Vol. IV. Edinburgh: W. Green and Sons. 1900.

Thompson-Yates Laboratories Report. Edited by R. Boyce and C. L. Sherrington. Vols. I and II. University Press. 1900.

The Risks and Dangers of Various Occupations and their Prevention. By L. A. Parry, M.D., B.S., F.R.C.S. London: Scott, Greenwood, and Co. 1900. 7s. 6d.

Histology of the Blood. By P. Ehrlich and A. Lazarus. Edited and translated by W. Myers, M.A., M.B., B.Sc. Cambridge: University Press. 1900. 5s.

Die Mimik des Menschen. Von H. Hughes. Frankfort-on-Maine: J. Alt. 1900. M. 14.

Surgery, its Theory and Practice. By W. J. Walsham, F.R.C.S., M.B., C.M. Seventh Edition. London: J. and A. Churchill. 1900.

With Methuen's Column on an Ambulance Train. By E. N. Bennett. London: Swan Sonnenschein and Co. 1900. 2s 6d.

Burdett's Hospitals and Charities. 1900. London: The Scientific Press. 5s.

Die specielle Chirurgie in 60 Vorlesungen. Von Dr. E. Leser. Vierte Auflage. Jena: Gustav Fischer. 1900. M. 20.

Sewage and the Bacterial Purification of Sewage. By S. Rideal, D.Sc. London: Robert Ingram. 1900.

Annual and Analytical Cyclopædia of Practical Medicine. By C. E. de M. Sajous, M.D. Philadelphia: F. A. Davis Co. 1900.

The Care of the Child in Health. By N. Oppenheim, A.B., M.D. London and New York: Macmillan and Co. 1900. 5s.

*** In forwarding books the publishers are requested to state the selling price.

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THE CAVENDISH LECTURE
ON
THE APPLICATION OF PATHOLOGY TO SURGERY,

Delivered before the West London Medico-Chirurgical Society, on Friday, June 22nd, 1900.

BY HENRY T. BUTLIN, F.R.C.S., D.C.L.,
Surgeon to St. Bartholomew's Hospital.

MR. PRESIDENT AND GENTLEMEN,—A good many years ago, while sitting waiting for practice in my consulting room, my mind was a good deal occupied with the question of a science of applied pathology, which should bear the same kind of relation to pure pathology as mechanics does to physics, or applied mathematics to pure mathematics. I set down various headings on various sheets of paper for the study of the subject, and intended to follow it up. But I got but a little way when my time began to be busily occupied, and the science of applied pathology was placed on the shelf, where it might still be lying, had it not been for the kind invitation of your Council, conveyed to me by Dr. Robinson, to deliver the Cavendish Lecture for 1900. Wondering what should be the subject of the lecture, my memory went back to the question of applied pathology, and I fetched down the dusty sheets and read them through again, and finally decided in their favour. For, although many changes have taken place since they were written, and many fine applications of pathology have been made, there is still no science of applied pathology, as I first thought of it, and as I still would have it.

DISCOVERERS AND INVENTORS.

As an introduction, it is almost necessary, and it certainly is not without interest, to know what pathology has done for surgery, and how and in what manner its applications have been made. In the short space of a single lecture I can, of course, only give certain examples; and if I had more time at my command I should be sorry to drag you through the long and tedious labour which attended my research, and which has forced me to learn more about general *inventors* and *inventions* than I ever thought to know.

First, let me say that I shall use the terms "discovery" and "invention" just as they are used in relation to other sciences and industries, and shall apply the former to surgical principles and the causes and nature of surgical diseases; the latter to the introduction or proposal of new methods of surgical treatment (not instruments). And I shall speak in the same manner of "discoverers" and "inventors" in relation to their work, and shall show, how in pathology and in surgery, as in other sciences and arts, the inventor and the discoverer may be one and the same person; or the discovery of the pathology of a disease and the invention of a method of dealing with it may be the work of different men.

PATHOLOGY THE FOUNTAIN OF SURGERY.

During the time I was house-surgeon at St. Bartholomew's Hospital, my master, Sir James Paget, said one day that he could not understand how men could say that a knowledge of pathology was of no use in surgery. He desired to impress on us, then and always, that pathology is the foundation of surgery; and of course we believed him. We believed everything which Sir James Paget said; and if he had made botany or mathematics the foundation of surgery, we might not improbably have equally accepted the statement. But the foundation of surgery on pathology seemed so reasonable a proposition as to be almost self-evident, and the more I thought of it the more I wondered, too, how surgeons could be blind to the advantages of a knowledge of pathology. When at a later period the science of applied pathology was before my mind, I began to consider the various relations of pathology to surgery, and in what various ways surgery may be indebted to pathology. Three relations instantly occurred to my mind. The knowledge of the pathology of a disease may explain the manner in which an operation acts. Or, it may lead to the development and improvement of an operation which has previously been practised by a kind of rule of thumb. Or, a thorough knowledge of the pathology of a disease may precede and lead to the deliberate invention of an operation or method of treatment for its relief or cure. The third of these relations is so much higher in its kind than the two first that I determined to collect striking instances of it. And to render the study more easy, I divided it into two periods of time, past and present, and carried the past up to, and the present back to, about thirty-five years ago. The period of the present almost coincides with my own recollections of surgery; but it was not on that account alone that the division was made. About thirty or thirty-five years ago, scientific training and methods began to be slowly appreciated and, in consequence, a great change of method and study gradually took place.

THE PAST.

Both years ago, and again lately, I read old books on surgery, and books on the history of surgery; and as my own time for such reading has of late been limited I obtained the assistance of Mr. Henshaw, who is admirably fitted for this kind of study; and I prepared, not only my mind, but my pen and paper to record the pleasant impressions I should receive from the account of the inventors and discoverers themselves, or of their trusty friends and biographers, of the manner in which new inventions and discoveries in surgery had been made, or in which inventions had been developed and improved. The subject would be likely to derive a special charm, which is seldom felt in the study of general inventions. There is no question here of patents and of large fortunes, only of honour and of the advancement of a noble profession, which performs its work for the benefit of suffering humanity. There would not, therefore, be such an exhibition of human selfishness and greed. And the inventors of surgical methods would but rarely be treated with the same cruelty which has, in all ages, been meted out to the authors of general inventions. What contemplation, then, could be more agreeable than that of the great surgeon of the past sitting in face of some weighty problem, working out slowly and with difficulty the pathology of some serious malady, and then building up his treatment against the disease? or founding a new and admirable operation for the relief of some terrible surgical malady on a knowledge of the pathology which had been worked out by other hands and heads.

Operation for Hernia.

Take, for instance, the operation for strangulated hernia and the use of ligatures to wounded vessels. Who invented them, how and when was the invention made, and what circumstances led the inventors to turn their attention, at a particular moment, to these admirable methods? Of all curious histories of surgery, that of operations for hernia is perhaps one of the most curious. The nature of hernia must have been ascertained at a very early period of the history of surgery, for operations for its radical cure were devised and practised by the ancients and through the Middle Ages, until they fell into disrepute about the seventeenth century, probably from the danger to life and the frequency with which they failed to effect a cure. The operation had probably always been largely practised by quacks; but, in its decline, it fell almost entirely into their hands; and they were generally itinerant; for a very good reason. Most of them made no attempt to preserve the testicle, in spite of a solemn promise to the patient or his friends. Dionis[1] at the beginning of the eighteenth century, gives an amusing account of the dexterity with which these men removed and concealed the testicle, under careful watching. He says: "We have known one of these operators who fed his dog with nothing but testicles, that animal always lying under the bed, or under the table near his master, waiting for the luscious morsel, with which he was regaled immediately after its extirpation, unknown to the spectators, who would have sworn that the patient had all his parts."

On the other hand, the operation for strangulated hernia was not practised in ancient times or in the Middle Ages; the disease was left to take its course, and the last condition of the patient, vomiting fæcal matter and dying with a mortified intestine, was called "*miserere mei*." It is scarcely credible that no operation for its relief was deliberately performed until the latter half of the sixteenth century, when it was recommended about the same time by Pierre Franco[2] and Ambroise Paré,

and was then only to be employed as a last resource, generally on a dying patient. There has been much discussion regarding the priority of the invention. Some attribute it to Paré, and some to Franco, and some people think it was adopted by both, and invented by neither. There are now no means of settling the dispute, a matter of comparatively some moment to us. Probably, the inventor himself thought but little of his own invention, for nobody claimed to have made it. And as nobody claimed it, so nobody tells what led to the invention of the operation. Yet that is what we should like to know. How came the operation for the relief of strangulated hernia to be recommended, or invented and recommended, by two surgeons who did not know the difference between femoral and inguinal hernia, who were ignorant of the coverings of a hernia and thought it came down through a split in the peritoneum, and who were so ill-informed of the pathology of strangulation that they thought it was due to the descent and condensation of fæcal matter and to the escape of ventosity? Their anatomy and pathology was the anatomy and pathology of previous centuries, yet they hit on the means of relief by operation, which nobody had previously suggested, and which they themselves only ventured to employ in desperate need. It was a great disappointment to me not to be able to attribute the invention of the operation to a study of the pathology of the disease.

Ligature of Vessels.

I thought I might be more fortunate in the history of the invention of tying bleeding vessels. It is a matter of common knowledge that we are indebted to Ambroise Paré for the introduction, or the reintroduction, of the ligature into surgery, and I wondered what had made him think of it, and by what process of reasoning or by what series of experiments he had preceded the use of the invention. Let the inventor tell the story. The 26th chapter of the 12th book opens with an apology by the author for ever having used the very horrible and cruel method of arresting hæmorrhage by means of the actual and potential cautery, and he proceeds to counsel the young surgeon to leave such cruelty and inhumanity and rather to follow his fashion of practice, of which it had pleased God to advise him, although he had never seen anyone do it, and had never read of it, unless in the 5th book of Galen, in which he writes that he ties the vessels towards their roots, which are the liver and the heart, in order to staunch great flow of blood. Paré says further that, having many times used this method of closing the veins and arteries in recent wounds, in which there was hæmorrhage, he had thought it might also be practised in the extirpation of a limb. Here is the whole story. Almighty God and the recollection of a passage in Galen inspire the invention, and the experiment is made on the living subject by a man who is absolutely ignorant of the course of the circulation of the blood. Here, again, pathology seems to have had no part in the invention.

It is possible to multiply these curious examples, but they cannot be multiplied indefinitely, on account of the absence of authentic history or even of reasonable romance regarding the origin of new methods of treatment in surgery.

Inventions in surgery have probably been made much in the same manner as general inventions; and have owed more to accident, to observation, to comparison, and to deduction than to pathology. Paré's invention of the ligature may be taken as an example of the influence of accident, if inspiration can be regarded as an accident. Pondering over the brutality of the arrest of hæmorrhage by the cautery, and having dimly in memory a sentence of Galen, his mind is suddenly illuminated with the idea of tying the bleeding ends of the vessels. A less bold surgeon would have shrunk from attempting the experiment on the human subject. Not so Paré. On the first opportunity he applies ligatures to the vessels in a recent wound. The experiment is a success; it is repeated, extended to the vessels cut in amputation, and is then recommended to the world of surgery.

Pott's Treatment of Angular Curvature.

The more elaborate operations have probably been the work of several or of many men, each of whom has added a little towards the perfection of the operation. A curious instance of this complex manner of invention of a new treatment is afforded in Mr. Pott's tracts on "Palsy of the Lower Limbs, with curvature of the Spine."[3] Pott introduced to the profession the method of treating this affection by means of copious discharge of matter from the adipose tissue at each side of the curvature. He formed a large issue on either side of the spine by means of caustic, filled the grooves left by the separation of the eschars with several peas, and even applied from time to time cantharides, ærugo æris, and other irritants, to maintain or increase the discharge until the patient had completely recovered the use of his legs. Pott was so convinced of the value of this method of treatment, that he wrote a second tract[4] in favour of it about three years after the first. With his characteristic sincerity he admitted that the idea was not his own, but had been recommended to him by Dr. Cameron, of Worcester, who said "that he remembered some years ago to have noted a passage in Hippocrates, in which he speaks of a paralysis of the lower limbs being cured by an abscess in the back or loins, and that taking the hint from this, he, Dr. Cameron, had, in a case of palsy of the legs and thighs, attended by a curvature of the backbone, endeavoured to imitate this act of Nature, by exciting a discharge near the part, and that it had proved very advantageous." In the same tracts in which he urges the employment of this very doubtful method of treatment, Pott gives an admirable description of the morbid anatomy and pathology of caries of the spine; so that here is an instance of what we should regard as a bad treatment, introduced by Pott, who was thoroughly acquainted with the pathology of the disease, and resting on a false deduction by Cameron, of the effects of the fact observed by Hippocrates!

Morgagni and Hunter.

About the middle of the eighteenth century, the French Academy seems to have appreciated the low condition of surgery, and proposed to raise it from a mere mechanical art to a science, on the basis of clinical observation, physical research, and experiment.[5] During the course of the century the memoirs of the Academy refer from time to time to experiments on living animals. But of pathology there is little said, for the very sufficient reason that even at that time, there was no science of pathology proper. There were, of course, scattered pathological observations, and there were accounts of *post-mortem* examinations for the most part imperfect. But there was no science of pathology. Professor Virchow assigns the foundation of pathology proper to Morgagni's work *De Sedibus et Causis Morborum*, which did not appear until the latter half of the century; and he pronounces John Hunter to have been one of the first to recognise the value of pathological anatomy, which Morgagni was the first to introduce, and which raised medicine to the rank of a natural science.

From this time the first examples occur of the foundation of surgical treatment on pathology, and of course the Hunterian operation for the cure of aneurysm was present in my mind at the beginning of my research. I intended to use it further as an example of the combination of the discoverer and the inventor in the person of one man; but I did not at first appreciate it at its true value. I regarded it as one example of circumstances connected with surgical invention which I expected to find tolerably frequently repeated. So far as I am aware it is not *one* example, *merely one* example; it is *the* one example, the *only* example, up to that time, of a deliberate surgical invention founded on the study of pathology by the man who made the invention. No wonder our Hunterian orators at the Royal College of Surgeons have referred to it again and again as a marvellous achievement!

In spite of Hunter's example, there are very few surgical inventions during the first half of the nineteenth century which can be shown to be founded on the principles of pathology. One of the best examples is the introduction of subcutaneous surgery by Stromeyer, on the foundation of experiments and observations made by Hunter half a century previously. The idea had occured to Delpech, but he does not appear to have carried it out. And Astley Cooper had divided the palmar fascia for the relief of Dupuytren's contraction. So that here we have once more an illustration of the influence of several minds in the invention of a new method of treatment. The idea occurs to Delpech, and he suggests it; Cooper applies it in a certain limited sense; Stromeyer puts together the pathology, the suggestion, and the limited application, and introduces to the world an admirable invention.

I confess to a great sense of disappointment at the fruitless result of my research. Nor was I more fortunate in finding examples of the first two relations of pathology to surgery; and I could now more easily understand how, five-and-thirty years ago, men who were disinclined to the study of pathology could make an excellent case in defence of the view that pathology is of no use in surgery.

THE PRESENT.

In the early years of the second half of the nineteenth century there was little change in the relation of pathology to surgery. There was little teaching of pathology; and it would have then seemed very improbable that a new system of surgery would shortly be founded on pathology. I have elsewhere sketched the condition of the study of pathology about the year 1850,[6] especially in Great Britain, and have shown how small a hold it had yet taken on the minds of teachers or students. Yet there were, even then, signs of approaching change, and the most advanced and enlightened teachers were beginning to found their teaching of medicine and surgery on a more scientific basis. I have little doubt this was part of a general movement in favour of scientific training which began about the Fifties and early Sixties, which questioned the propriety of the old methods of general education, and desired to see them replaced, either in whole or in part, by science teaching; and which has since found its expression in technical and science schools, in laboratories, in science scholarships and prizes. The art of medicine could scarcely fail to feel the influence of this general movement, but the new leaven would probably have been very slowly infused into the teaching of our profession had not an event occurred which revolutionised the practice of surgery, and did more in a few years to lay the foundation of surgery on pathology than had been done in as many previous centuries.

Antisepsis.

In the years 1867 and 1868 there appeared in the *Lancet* and BRITISH MEDICAL JOURNAL the first papers by Professor Lister on the subject of antisepsis, and his is the next great example, after Hunter's, of the discovery of a pathology and the invention of a treatment by one and the same individual. My own recollection of its early application in London is almost ludicrous. In 1868 I was house-surgeon to Mr. Paget (afterwards Sir James Paget). We happened to have in the wards a man, about 40 years of age, with caries of the spine and a large abscess in the back. The results of the treatment of such cases were in those days lamentable, and the man was left for some days in bed untreated. But one afternoon Mr. Paget came down and said he would try a new method of opening and treating the abscess, which had been suggested by a surgeon in Edinburgh called Lister. A few days later we opened the abscess under the direction of Mr. Paget through a piece of lint soaked in some antiseptic, and then applied a little mass of antiseptic putty, about half the size of my fist, over the opening, and a piece of sheet-lead upon the putty. That day and the following days the dressing frequently slipped down and was found half a foot or more below the wound. And in the course of a few days the cavity of the abscess became septic and the patient died, as many of those who were suffering from similar conditions did in those days.

I need not describe in detail the discovery of the causes of sepsis, or the invention of the earlier antiseptic methods; the failures and successes, the opponents and partisans, and the long series of years before the principles of antiseptic surgery were generally accepted. All these things have been described again and again and are common property. I have to do with the effect of the general acceptance of Lister's discoveries on the application of pathology to surgery. The relation of micro-organisms to sepsis naturally led to the suspicion that micro-organisms might be connected with diseases other than sepsis, and this suspicion was quite justified, for it was soon amply proved by Pasteur for some of the diseases of animals. From the investigations which were undertaken in connection with this subject, the vast branch of bacteriology grew up; and as parents sometimes derive new lustre from the achievements of their offspring, so did the parent-science of pathology become the object of greater consideration and of renewed study.

Surgery and Scientific Research.

At the present moment the value of pathology to surgery is no longer in question. The applications of pathology which have been made during the last fifteen years have been so numerous and so important that, from an absolute disbelief in the practical value of pathology, we are veering round to an implicit trust in pathological foundation. As soon as the cause and nature of a disease have been discovered, an appropriate treatment is looked for as a natural and immediate consequence; and if it is not forthcoming, disappointment is experienced both within and outside the ranks of our profession. As such disappointments may occur with some frequency during the next few years, and confidence in the use of pathology may thus be weakened—which would be very undesirable—it may be well to review for a moment the means which are now at our disposal for the application of pathology to surgery, whether those means can be improved, and how the improvement should be made.

In the first instance there are now research laboratories in different parts of the kingdom, and a good deal of money is annually expended on research. Some of this money is found by universities and colleges, some of it by scientific bodies, societies, and associations. In my former capacity of Treasurer of the British Medical Association it was a great pleasure to me to see so much money devoted every year to research, but I am bound to admit that it was not always voted with alacrity. The objects of the various researches often appeared to the members of the Association to have no practical bearing, and it was suggested from time to time that the funds had better have been applied to medical defence and other material purposes. Of course it is always difficult to appreciate the value of researches in pure science which appear at the moment to be of no more use, or likely to be of greater use, than the researches of the professors of Gulliver's Academy of Lagado. And I sometimes wondered myself whether the objects of research might not have been selected with a more direct view to their utility. I was, however, easily consoled by the recollection of the marvellous application of Faraday's discoveries of the relation of magnetism to electricity.[7] No discoveries could have appeared at the time, and for many years after they were made, less likely to have a great practical bearing. They seemed to belong to the realms of the purest science. Who would have dreamed that at this moment they would be applied to telegraphy, to lighting, to the movement of vehicles, and largely to the use of electricity in medicine? In the face of this brilliant example we have no right to assume that discoveries in pathology, which appear futile or of purely speculative interest, may not at some future time acquire an extraordinary practical importance.

This factor of time is in itself of large importance. It would not be easy to determine with precision the length of time which has elapsed between the invention of certain operations and their habitual performance. In the past this length of time must have been inordinately drawn out, even to centuries. Take once more the example of the operation for the relief of strangulated hernia; invented in the second half of the sixteenth century, it had become a recognised operation in France in the eighteenth century, and Petit had invented and regularly practised the operation without opening the sac in suitable cases. But it appears to have been much longer in gaining a firm foothold in this country. Pott, writing some time after Petit, is well acquainted with the anatomy of hernia, and with the fact that the peritoneum is not ruptured in the descent of the hernia; he is as well versed in the pathology of strangulation as Petit, and both surgeons describe it clearly, and quite differently from the great surgeons 200 years before. Pott describes the operation for the relief of strangulation,[8] and how the intestine and omentum should be dealt with according to their condition; but he would not resort to the operation until such means as bleeding, clysters, purgatives, and manipulation had been tried and failed. About the same time as Pott wrote, Hey began to practise in Leeds,[9] where the operation for strangulated hernia had never been performed. By 1814 Hey appears to have operated on five patients, and two of them had survived. To us the percentage of cures may seem very small; but in truth it was 40 per cent., and for a condition which, unrelieved, leads to death in almost 100 per cent. of the

cases. Think what an equal success for all cases of irreducible strangulated hernia during centuries would have meant; and how the principle of early resort to operation would have vastly improved the percentage of cures and have perhaps wiped out the name of "*miserere mei.*"

In these days the news of successful treatment travels fast, so fast, indeed, that a new method is sometimes accepted and adopted before it has been proved by the inventor. Such is the progressive spirit of the age, and so abundant and so excellent are the media of communication. Of course, these are great advantages, but there is still no trace of any distinct organisation for the application of pathology to surgery. Indeed, in some respects, things are likely to be worse than they were some twenty years ago. As pathology becomes more specialised, the surgeon and the pathologist must necessarily be more widely separated; and although the surgeon may make great use of the pathologist in his wards, they are no longer one and the same person. Problems in pathology and in the relation of pathology to surgery will arise in the minds of men who have not the time or the knowledge to work them out, and who know not how or by what means to get them worked out. On the other hand, those who work at research may know nothing of the questions which occupy the minds of surgeons. On this account many problems quite worth the working may be wholly neglected or their study long deferred.

If we are to remedy these defects, it can only be by some more perfect organisation, such as may perhaps be supplied by my science of applied pathology. Great attention has been devoted to pure pathology, and pains have been taken to educate and train discoverers. Laboratories for research are provided for them; materials and instruments are furnished; directors of distinguished ability and of approved skill in research are appointed. In consequence, the work of discovery proceeds amain. The more original and the abler workers choose their own subjects of research, and make their discoveries in their own way and in their own time. Those who are not so original and able are assisted in their researches by the directors.

The Making of Discoverers and Inventors.

But while our schools for discoverers are good and are improving, we have no school for inventors, for the men who are to make the applications of pathology in the future. It is on that account I venture to urge the importance of the science of applied pathology, which may prove a fitting school for inventors as the science of pure pathology is for discoverers.

I confess when it dawned upon me that my proposition would lead to a deliberate proposal to breed inventors, I was at first appalled at the daring of the suggestion. Discoverers can, I know, be made, not all equally good or equally able, and great discoverers are rare and priceless. But still, discoverers can be made, and we only discuss the proper means of making them, and of making them well and quickly. But what of the inventor; is it possible to make him too? Is he not, as he was formerly thought to be, heaven-born, a direct off-shoot of divine intelligence, though often poorly equipped for the struggle of life, and too often destined to fall a prey to the greedy maw of the seeker after wealth? Will mere training and education suffice to produce a mind which is not of earthly origin? In order to solve this question, I thought it well to make some inquiry into the lives of inventors, and as our profession can boast but few, I was thrown back on the lives of general inventors with the following result:

In the first place there can be no doubt that many men never would have invented had it not been for a chance (not always a happy chance so far as the inventor was concerned), and therefore might never have been known to the world as inventors. The overturning of a spinning-wheel suggested to James Hargreaves the idea of the spinning-jenny. The idea seems to have entered his mind like an inspiration, just as Paré said that his brain had received the inspiration of the use of ligatures to bleeding vessels. The attention of Cartwright, the country clergyman, was directed to the invention of the power-loom by an after-dinner conversation, and without any knowledge of weaving, and without ever having seen a loom at work, and without any correct notion of the principle or mode of its construction, he is said to have evolved out of purely mental processes the idea of the power-loom. There must be many such men as Hargreaves and Cartwright, of natural inventive genius, which has never been roused into action by accident or education, and who live their lives through to the end without even themselves being conscious of their talent. In medicine and surgery there are also undoubtedly such men, and if we are to use them we must discover and develop them.

In the second place, when once the inventor has been awakened to the knowledge of his talent for inventing, he seems not only to like to employ it, but to be possessed by a resistless impulse to invent. This has been shown in the lives of many inventors. And in the curious account I have of Cartwright, the book[10] says: "It would seem that the faculty of invention once aroused, its appetite for exercise is constant and insatiable.....An inventor he was, and an inventor he must continue till his eye was glazed, and his brain numbed in death.....Wool-combing machines, bread and biscuit-baking machines, rope-making machines, ploughs and wheel carriages, fire-preventatives, were in turn invented or improved by him."

Invention to Order.

In the third place, your inventor may invent better and with greater success if his mind has been trained in scientific pursuits. I think one of the best illustrations of this is to be found in the history of the invention of the miners' lamp. By a curious chance the safety lamp was invented during the year 1815 by two men working apart, neither of them knowing that the other was engaged on the invention, and each working out his invention from a wholly different point of view. Both Humphry Davy and George Stephenson were highly endowed by Nature. Both possessed the inventive faculty: Stephenson in a very high degree. But while Stephenson was what may be termed a natural mechanical and inventive genius, his education had, owing to his circumstances, been wholly neglected, and he had only such knowledge as he had been able to gather together in a long struggle against adversity. Humphry Davy, on the other hand, was a highly educated man of science, but his inventive ability was decidedly lower than that of Stephenson. The safety lamps produced by these two men resemble each other in many respects, and a comparison of them in our Museum of Inventions at South Kensington shows how little difference there is between them. Yet one of them was invented on chemical, the other on mechanical principles. Davy,[11] at the request of certain gentlemen, undertook to try and invent a lamp for the safety of the men employed in the coal-pits. He commenced his labour by an exhaustive study of the chemical properties of fire-damp (light carburetted hydrogen), the circumstances under which it exploded, and the proportions of air mixed with it which rendered it peculiarly dangerous. By a series of admirably devised experiments he discovered that the surfaces of small tubes prevented the explosion of the fire-damp, and that this depended on the cooling power of the tubes, and he finally found that the greatest hindrance to the inflammation of the gas was afforded by a large number of small tubes or apertures, such as is represented by the numerous tiny openings through a fine wire gauze. Such a covering rendered unnecessary the use of glass or any other fusible or brittle substance, in itself no small recommendation. Stephenson tells his own story[12] of the manner in which he came to his invention. He says he knew nothing of the chemistry at the time he was engaged in setting up some machinery in a coal-pit. In the intervals of work he amused himself with lighting one of the "blowers" in the pit. Holding his candle to the windward of the flame, he observed that it changed its colour. Two candles, drawing the flame towards them at a greater velocity, changed its colour still more, and caused it to grow duller. And when a number of candles were employed, the "blower" ceased to burn. Stephenson rightly attributed this effect to the velocity of the current caused by the heat of the candles to the windward of the "blower;"[13] and came to the conclusion that, if he could produce a current through tubes in a lamp equal in velocity to the current he saw passing along the roof of the pit-gallery, he would be able to make a lamp which might be carried into an explosive mixture without exploding externally. Repeated observation and experiment finally taught him that numerous tiny apertures afforded better protection than a small number of long

and deep tubes, and his third lamp was made by surrounding the flame with a metal plate, perforated by a vast number of tiny holes, so that it differed little from a wire gauze of the same material. Stephenson was so confident of the efficiency of his lamp that he tested it, at the risk of his own life, by entering a coal pit which had been first rendered as foul as possible by preventing the escape of the fire-damp. Davy's lamp was much more generally used than Stephenson's; but Stephenson's lamp was used for very many years in the Killingworth Pit, where he had been colliery enginewright at the time of its invention.

At the first sight it might seem that Stephenson's successful invention is but another proof that your inventor is born, not made; for here is a man without scientific knowledge and without even ordinary education, who invents a lamp almost precisely similar to, and as good against explosions as, that of the philosopher and scientist, Sir Humphry Davy. But, in truth, Davy's proved to be the better lamp. Not only was it lighter and more portable than Stephenson's; but it possessed the great advantage that it was not extinguished in thick fire-damp. Further, the experiments and observations of Davy, in the course of his research, served to render the world richer in the accurate knowledge which it afforded of the nature and chemical properties of fire-damp. If Davy's invention had proved a failure his work as a discoverer of the nature and properties of fire-damp would have far more than repaid the time and labour expended on the attempt to invent.

Again, Davy's invention proves that it is possible to invent "to order," for he deliberately set himself to invent the lamp at the request of a committee of gentlemen interested in the coal mines. I do not know whether we shall ever attain to that with our inventors of surgical methods. Yet a similar instance of a successful investigation and of the invention of a method of treatment, or rather of prevention, at the request of persons interested, may be found in the history of the discovery and prevention of silkworm disease by Pasteur.

Here, then, are found four important indications for the making and perfecting of inventors: That there are certainly many more inventors in the world than the world suspects, but their peculiar talent must be discovered; that when it is discovered they can scarcely help inventing; that scientific training, so far from impairing their inventive powers, will almost certainly improve them; and that men with the proper talent and opportunity may invent "to order." Further, it may be assumed that no man would be likely to make a specific invention unless he were acquainted with the need for such an invention.

Laboratories for Pathological Research.

From these indications it would seem that if we are to make surgical inventors, we must look for inventive minds among our students and young qualified men; that these men must be well-versed in surgical methods at present in use; that they must be thoroughly educated in science and in the methods of science, especially in experimental methods. They must also be well instructed in pathology and acquainted with new discoveries in pathology which may be of use in surgery. And they must either have the opportunity of testing their inventions or of observing and directing the trial of them. They must therefore have free access to the hospital wards and be in frequent or constant communication with them; they must have laboratory accommodation, and must be in touch with those men who are engaged in pathological research.

If these conditions are to be fulfilled in such a town as London, we shall require two species of pathological laboratory for research. The one for research in pure pathology, without any reference to its application, may be of vast size and thoroughly equipped for many workers, and need not be attached, so far as its site is concerned, to any hospital. The other for research in applied pathology, the laboratory for inventors, must needs be attached to the hospital; and those who work in it should have the freest access to the wards, even if they are not in charge of special wards, and should have every opportunity of observing what is done there and in the operating rooms. In order that they may be thoroughly instructed in the science of pathology, they should be taken from among the workers in the laboratory of pure pathology, and should be selected on account of their special aptitude for the work of research and for the originality they have exhibited. They leave the school of discoverers and the science of pure pathology for the school of inventors and the science of applied pathology.

At the time when the idea of a school of applied pathology first presented itself to my mind, the sketch I have made would have appeared to be the dream of an enthusiast. But now, so far from being a dream, it is in some respects actually approaching realisation. There are in this town at the present moment laboratories where researches in pathology are constantly carried out, and some of these laboratories are quite separate from and independent of the hospitals. There is an institution of preventive medicine where pure and applied pathology are studied, but this is also separate from the hospitals. During the last few years several of the hospitals have founded professorships of pathology, and have appointed to them men who devote to the science of pathology not merely the time they can spare from some other pursuit, but their whole time. These men are constantly in touch with the work of the wards, and furnish the greatest assistance to it by bacteriological and histological examinations. Speaking of my own hospital, the assistance rendered to the work of the wards by Dr. Andrewes and his predecessor Dr. Kanthack has been of inestimable value. Indeed, it is difficult to understand how we could have performed our work efficiently before the institution of the pathological laboratory.

But although the last few years have seen a very great improvement, much remains to be done. Money and organisation are necessary if great results are to be secured. The laboratories for research in pure pathology are too small and too scattered, and insufficiently endowed. The laboratories in the hospitals, which ought to be devoted to applied pathology, are used for every kind of microscopical and bacteriological examination and for teaching, so that research is crowded out. And pathological chemistry, from which vast things are to be hoped in future, has taken no proper hold upon the town.

Happily there is reason to hope that the changes which must take place in connection with the new teaching university will be greatly to the advantage of pathological research, especially in connection with the hospitals. The removal of the teaching of the preliminary subjects to large central establishments will afford space for the expansion of the pathological departments. And as the value of applied pathology becomes more evident, funds will easily be found in this rich town for its development.

The question has several times suggested itself to me whether a number of men thrown together in the laboratories for research and for invention are likely to do better or worse for coming into contact. So far as discovery is concerned there is every reason to believe that a community of workers is likely to do more and to do it more quickly than the same men working separately and in ignorance of each other's work. Assistance and suggestion must come from community. But the advantages of community for invention may be contested. We have been so much accustomed to the picture of the inventor working in solitude, and often in secrecy, that the idea of a number of inventors at work openly and in communion with one another seems almost repugnant. But there seems no reason to doubt that the advantages which discoverers might gain from community would be equally gained by the inventors, and there can be little doubt that the solitude and secrecy in which the inventors of methods and machines for industrial purposes have generally worked were imposed on them by the necessity of guarding their inventions from the public eye.

At the present time, I am told that the advantages of the community of workers in research are to be seen in the laboratories attached to some of the great industrial establishments in Germany, particularly to the colour industries. From fifty to a hundred chemists are continually employed in some of these establishments, where they work in magnificent laboratories, furnished with all the apparatus which is needed for original research, and presided over by the most distinguished professors who can be obtained. The laboratories are intended for research, and I understand that the scope of the research need not be restricted to the needs of the par-

ticular industry to which the laboratory belongs, but that original research of every kind in chemistry is encouraged. The cost of such laboratories is extremely large, for the salaries of the workers are said to be on a very liberal scale. And some of the researches (which occupy weeks or months of the time of the workers) and of the space and accessories of the laboratory, are of no direct use to the industry. Yet the industry, which is proprietary, and not the property of the State, or founded for the advancement of chemical science, derives so much advantage from a certain percentage of the discoveries and applications made in the laboratories, that the funds expended on them are well laid out. Those Englishmen who are familiar with these establishments tell me that this investment of funds in scientific research has served to place the German colour industry far ahead of our own.

We want something of the same kind for the advancement of medicine and surgery, a direct and organised scheme for research and the application of pathology to our art. Of the advantage which may be derived from it I have no doubt. And if we fail to obtain it is because our forces are too divided and our views are not sufficiently in harmony. To those who think that the necessary funds would not be forthcoming, the answer must be that very considerable sums of money have, during the last few years, been devoted to medical research, and that the public mind is gradually becoming alive to the advantage to the nation of good health and the preservation of life.

Notes and References.

[1] *Cours d'Opérations de Chirurgie*, Brussels, 1708. [2] *Traité des Hernies*, etc., par Pierre Franco de Turriers en Provence, demeurant à present à Orenge. A Lyon, par Thibauld Payan, 1561. [3] London, 1779. [4] London, 1782. [5] *Mémoires de l'Académie Royale de Chirurgie*, t. i, 1743; Préface, p. xlv; "Le plan que se propose l'Académie est d'élever la chirurgie sur les observations, sur les recherches physiques et sur les expériences." [6] Address on the Jubilee of the Pathological Society of London, October 20th, 1896, *Pathological Transactions*, vol. xlviii. [7] *Faraday as a Discoverer*, by John Tyndall, London, 1870. [8] *The Chirurgical Works of Percivall Pott*, a new edition, London, 1779. [9] Hey began to practise in Leeds in 1759. [10] *Triumphs of Invention and Discovery in Art and Science*, London, 1881. [11] *The Collected Works of Sir Humphry Davy, Bart., LL.D., F.R.S.*, vol. vi, London, 1840. [12] Evidence before the Committee of the House of Commons in 1833, Smiles's *Life of George Stephenson*, fourth edition, 1857. [13] The rushing of the fire-damp from fissures in the strata of coal is called a "blower."

The Life-Saving Society.—We have received the annual report of the Life-Saving Society, which is now in the ninth year of its existence, and are pleased to see that it is in a flourishing condition, and extending its useful work. It is, we believe, the only Society that organises systematic teaching of the various methods of rescuing the drowning and resuscitating those who are apparently drowned, and it has been the means of inducing many swimming organisations to make life saving an important element in their courses of instruction. By its instrumentality the subject has been introduced and successfully carried on by the aid of honorary teachers into many public and elementary schools and other educational bodies, and classes have also been formed in connection with the police, dock labourers, and Her Majesty's forces, the instruction given being theoretical and practical, on land and in the water. Another important branch of its work is arranging public demonstrations in various baths and docks, when large numbers of people, sometimes amounting to thousands, witness the graceful swimming and diving exercises practised, as well as the various modes of succouring and bringing safely to land the apparently drowning. This has perhaps done more than anything else to awaken a general interest in the work, and increase the demand for information and instruction. The Society, which has its central office at 8, Bayley Street, Bedford Square, London, W.C., is supported by voluntary subscriptions, and is well worthy of being brought into greater prominence.

Registered Medical Practitioners in the United States.—According to the *Medical Record*, the average number of registered physicians in the United States to the whole population is about 1 to 647. The proportion in the States varies greatly; California appears to be the State which is most liberally supplied, the proportion there being 1 physician to 420 inhabitants, while in Iowa nearly the same conditions prevail. On the other hand, in North and South Dakota and New Mexico, the proportion was respectively 1 to 1,285, 1,296, and 1,391 inhabitants.

THE CROONIAN LECTURES
ON
DEGENERATION OF THE NEURONE.

Delivered at the Royal College of Physicians of London

By FREDERICK W. MOTT, M.D.Lond., F.R.S.,

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Lecture II.

Mr. President and Gentlemen,—In my last lecture I briefly referred to the present position of the neurone theory. I gave some examples of its practical application, and I dwelt at some length upon a method which has been used for studying the bio-chemical changes which occur in the protoplasm of the nerve cell. Moreover, I pointed out the important evidence afforded by the development of the myelin sheath in proving correlation of structure and function: and that the formation of myelin depends upon three fundamental biological principles:

1. An acquired inherent tendency the result of evolutional differentiation of structure and function for certain systems, groups, and communities of neurones at successive periods of time to ensheath their axis-cylinders with an insulating and protecting structure, the myelin sheath, which in the case of the peripheral nerves is contained within, and partially formed by a chain of tubular mesoblastic cells.

2. Phylogenetically and ontogenetically stimulus from without is the determining factor in the bio-chemical change associated with the deposition of myelin.

3. Absence of stimulus as occurs from long disuse occasions a regressive metamorphosis back to the embryonic type.

The Effects of Injury of the Neurone.

Section of the axis cylinder or destruction of the nerve cell (speaking collectively), whether produced by direct trauma or by morbid processes occurring in the vascular and supporting structures of the nervous system, causes a simultaneous death change of a characteristic chemical nature affecting the myelin sheath and axon extending from the point of injury to its terminal fibrils. This is Wallerian degeneration, or secondary degeneration of Waller and Türck. Ranvier showed that the sheath of Schwann consists of a series of tubular mesoblastic cells wrapped round the axon, and that when a nerve is cut there is degeneration of the myelin and axon above the lesion as far as the next node. Each internode, therefore, represents a cell; and the fact that the degeneration does not extend upwards beyond the node allows the presumption that these tubular cells have some metabolic interaction with the contained axon and its surrounding myelin. But whatever that reciprocal metabolic interaction of the axon and its ensheathing structures may be, secondary Wallerian degeneration conclusively proves that it is controlled and determined by the nerve cell and its contained nucleus; indeed, it is possible to conceive that the metabolic activity of the nucleus is the mainspring of this trophic influence, by the production of some bio-chemical or bio-physical stimulus which pervades the whole complex neurone even to its far distant prolongations. The Nissl method has shown that section of an axon causes changes in the nucleus and cell protoplasm; these may be temporary and recoverable or permanent and irrecoverable, the result apparently depends very much upon the degree and extent of the injury. When a peripheral nerve fibre is cut through, the trophic influence of the cell is removed from the axon and myelin sheath which it generated. These die; not so, however, the independent tubular cells of the sheath of Schwann, for these, soon after the death change has commenced in the myelin, show signs of active proliferation; whether, as some authorities would have us believe, they can lead to regeneration of the nerve, or whether, as seems much more probable, they prepare the way for the down-growing axon, I shall not here enter into; but that they have an important function in regeneration is undoubted, seeing that regeneration in the central nervous system, where the sheath of Schwann is absent, does not occur. Tuckett has shown that when a non-me lullated sympathetic nerve is cut, the nuclei and sheath

like structures remain unaltered, while the axon alone degenerates; it would thus appear that the degenerating myelin may act as a formative stimulus, causing nuclear mitosis and cellular proliferation.

THE EFFECTS OF INJURY OF A NERVE UPON THE CELLS OF ORIGIN.

Only since the introduction of the Nissl method of staining has it become known that changes occur in the ganglion cells almost immediately after section of the nerve. Nissl, who first studied this, called it "*primäre Reizung*"; and Marinesco, who has made a special study of this subject, has shown that section of the hypoglossal nerve on one side is followed by three stages of change in the corresponding nucleus of origin.



Fig. A.—Hypoglossal nuclei of two sides. In the upper part of the figure are shown the swollen cells of the nucleus on the side of section during the phase of reparation (after Marinesco).

The hypoglossal nucleus is especially favourable for the study of this question, the nerve being purely motor. From the close proximity of the two nuclei, comparative observations of the nuclei of the two sides make very evident changes, which occur as the result of section of the nerve on one side.

Marinesco divides these changes which occur in the nucleus into three phases. The *reaction phase* occurs during the first month, and is characterised by a dissolution of the chromatophil elements, and a displacement of the nucleus towards the periphery of the cell. This change has also been recognised by many other observers—namely, Nissl, Ballet et Dutil, Lugaro, Flatau, Van Gehuchten, Sano, Erlanger, and others. The condition is not necessarily one of degeneration, as I shall show later on. It is important to bear this in mind, for a similar condition may be found affecting the anterior horn cells in peripheral neuritis, where disease has led to a destruction of the axis-cylinder process. In the *reparation phase*, the cell body increases in volume, the nucleus resumes its original position, and the cell shows a distinct pyknomorphic condition (abundance of stainable substance). About ninety days after the injury, the process of reparation has proceeded so far that the nuclear group of the injured side is only distinguished from the uninjured side by the increase in size of the cells and their processes. A little later the cells return to their normal appearance, in point of time corresponding to the regeneration of the nerve. We may consider this cell-hypertrophy as evidence of the increased physiological activity necessary for regeneration. If now the hypoglossal nerve be torn out, according to the method of Von Gudden, or if a large piece of the nerve be resected, or any other condition arise so severe that the regeneration process in the nerve is prevented, then the reaction phase proceeds rapidly, and instead of a reparation phase of hypertrophy, the cells undergo atrophy, and a *degenerative phase* ensues. The accompanying diagram (Fig. A) shows the changes in the cells of the hypoglossal nucleus which result from section of the nerve in which regeneration is possible. It differs from tearing out the hypoglossal nerve, in which regeneration is impossible. In the former case the return of the cells to normal is coincident with regeneration and return of function; in the latter, the degeneration and subsequent atrophy of the cell group is brought about by such an injury as to render repair impossible, and resembles, therefore, the effects of amputation of a limb. Recently, Schäfer has shown that hemisection of the spinal cord produces chromolytic changes in the cells of Clarke's column and subsequent atrophy, substantiating thereby the theory that these cells give origin to the dorsal and ventral cerebellar tracts; and Lloyd, a pupil of his, has also shown that the cells of Deiter's nucleus undergo similar changes, thus tending to support the observations of Risien Russell, Ferrier and Turner that the cells of this nucleus give origin to descending fibres in the antero-lateral region. We can thus see that this method has proved of the greatest value in determining the cells of origin of tracts of fibres. Some observers, Bregmann and Darkschewitz, have even found, after tearing out cranial nerves, a degeneration recognisable by the Marchi method, and demonstrating the course of the nerve in the medulla or pons by the black-stained myelin. I have, by the kindness of Mr. Victor Horsley, the opportunity of exhibiting a lantern slide of the medulla showing degeneration back to the nucleus after an injury made just at the point of emergence of the nerve.

Marinesco, in his admirable work on the effects of amputation, describes slow progressive changes in the myelin sheath, and says the normal refraction of the fat disappears, the colour reaction of the same tends to disappear, and following the changes in the myelin there is a change in the axis-cylinder. In addition, there appears a considerable nuclear proliferation of the sheath when the myelin has disappeared, the atrophied fibres bearing resemblance to non-medullated fibres. A recent observation by Noll, which I shall refer to later on, showed that the protagon diminished in the central stump of a nerve after section, though of course, not to such an extent as in the peripheral.

Barker, after referring to the above experiments, as well as to the studies of Von Gudden and his pupils, and the observations upon the nervous system following amputation, remarks: "We have seen that these observations have partially at least annulled the validity of Waller's doctrine of the trophic relations of the nerve cells, for after injury to an

axon, in addition to the degeneration in the axon, peripheral to the lesion there are demonstrable alterations in the cyto-proximal end of the axon, and especially in the cell body of the neurone itself." The changes which occur after the amputation of limbs are probably, however, due to regressive atrophy from lack of stimulus from the structures over which the neurones presided. The changes which occur in the cells of origin of a nerve after section undoubtedly prove that the whole neurone had suffered by the injury, but there is no evidence to show that a degeneration occurs (in the sense of the chemical change to be referred to later) except in the peripheral portions of the cut nerve, and in the central portion as far up as the next node of Ranvier, unless the injury is so severe as to cause such a shock to the neurone that it dies as a whole.

Diseases of the Nervous System as Distinguished from Diseases within the Nervous System.

The histological elements which make up the nervous system may be divided into two groups; (1) the nervous units or neurones; (2) the supporting, protecting, and nutrient tissues. Organic diseases may start in a primary degeneration of the nervous units or neurones, or the neurones may be affected secondarily by diseases starting in the supporting, protecting, and nutrient tissues; such are essentially diseases within the nervous system, and include diseases of the blood vessels, lymphatics, membranes, and special nerve connective tissue (neuroglia). These give rise to secondary degeneration, either by direct injury, inflammatory compression, or by cutting off the blood supply. The causes of pathological processes occurring in the nervous system may be considered under two headings, external and internal, but it may be remarked that in all cases except direct injury the two groups are more or less combined. The external causes depend upon the condition of the blood and lymph, by which the neurones are nourished, and the excess or deficiency of normal stimulation, or existence of abnormal stimulation. The internal causes depend upon the inherent vitality of the neurones themselves. In considering, therefore, the causes of degeneration of the neurone, it will be necessary to point out the result of (1) failure of the blood supply; (2) toxic conditions of the blood; (3) the effect of excess or deficiency of stimulation; (4) inherited defects in the nervous system as a whole, or in some particular groups or systems of neurones. To do this, however, in a satisfactory manner would necessitate my referring in a very superficial manner to all the diseases affecting the nervous system. I shall, therefore, limit myself especially to personal observations relating to some few causes of the degeneration of the neurone in each of those groups which I have studied.

Effects of Temporary or Permanent Failure of the Blood Supply upon the Neurone.

The effects produced by complete anæmia for varying periods of time upon the nervous elements of the spinal cord have been the subject of numerous experimental inquiries, but I am unaware of any systematic series of observations upon the effects produced by ligation of the cerebral arteries. Many clinical facts show that this is a subject worthy of attention, for the sudden loss of consciousness which results from syncope is explained by a failure of activity on the part of the nervous elements of the cortex cerebri, in consequence of default in the circulation in the hemispheres. Again, the sudden loss of consciousness in epilepsy, followed immediately by tonic spasms and then clonic spasms, has recently found a possible explanation in the series of very valuable experimental observations by Dr. Leonard Hill. He has found that artificial cerebral anæmia in cats and monkeys produced by ligation of the four cerebral arteries produces tonic spasm. If absinthe be injected, instead of causing clonic spasm, it increases the tonic spasm. Then, if the clamp or ligature be loosened on a carotid so that blood flows back to the hemisphere, clonic spasms almost immediately occur. This will again give place to tonic spasm on closing the artery: and again, on removing the clamp and allowing the blood to flow to the hemisphere, the clonic spasms supervene. He has, moreover, shown that if all four arteries in an animal be ligatured, in the dog recovery takes place; the explanation is that collateral circulation is restored soon enough to prevent destructive changes occurring in the nervous elements. With two carotids and two vertebrals tied the dogs are for some days paretic and demented, very much in the condition of the dogs which Goltz showed after having removed the cerebral hemispheres; however, as Sir Astley Cooper and numerous other observers have shown, these animals recover completely. Dr. Hill has been good enough to send me portions of the brains of twelve such animals operated upon, which, after ligation of the four arteries, were allowed to live for varying periods of time. I have examined the nervous elements with a view of determining the condition of the nerve cells when the dog is in a state of paresis and dementia, and when it has recovered so completely as to pass for a normal animal. The methods which I have adopted have been for this and all other experiments and observations referred to, the Nissl method, the Marchi, the Marchi-Pal, and rapid Golgi methods of staining. The changes observed in the brain by the Nissl method, are shown in the accompanying photomicrographs of the sections (Figs. 2, 4, 5). Before, however, speaking of the pathological changes, I will again call your attention to the appearances of the pyramidal cells of the cortex, medulla, and spinal cord of a normal animal, when examined by this method, for it is the most reliable we have at present for studying pathological changes by comparing the appearances presented with the normal cells (Figs. 1 and 3). You will observe that, first of all, the cells have changed their shape, they are swollen up, their edges have not straight or incurved sides, but are curved outwards, the nuclei are swollen and often eccentric, and in some few of the cells may actually be extruded; when this has happened, of course the cell has practically been destroyed, and with it the nerve fibre which contains its axis-cylinder projection. Another obvious sign of change, although not necessarily a destructive change, is the appearance presented by the chromophilous (stainable) substance. It no longer presents those definite figures which have received the name of Nissl bodies; sometimes it appears as a fine dust, sometimes arranged in long threads separated from one another. One of the earliest changes to be observed is the absence or diminution of the chromophilous substance of the dendrons; moreover, the edges of the cells and the processes present a ragged instead of a clear-cut outline. Generally speaking, the changes in the chromophilous substance only do not denote destruction, but should the swelling be so great as to produce an extrusion of the nucleus, the cell must necessarily die; and we can, if the animal be kept alive over ten days, determine how many psycho-motor cells have been destroyed by the temporary anæmia occasioned by the ligation of the arteries. We can do this by examining sections of the pons, medulla, and spinal cord by the Marchi method; the number of black degenerated fibres will indicate the number of pyramidal motor neurones which have perished as a result of the anæmia. These are usually comparatively few; we may consequently say that mere swelling of the cells, with very marked chromolytic changes, does not mean more than functional disturbance. Mere hydration—for thus I explain the swelling—without dislocation of the nucleus from the cell, even though the chromolytic changes are very intense, does not mean death of the neurone. This is an important fact in view of the association of pathological symptoms with changes in the nerve cell. Such microscopical changes are, for the most part, illustrated in the special plate by Figs. 2, 4, 5, 12. I would add in connection with this series of experiments that the tangential fibres were found in most cases intact in animals that had completely recovered. We must suppose, therefore, that collateral circulation in dogs is restored very shortly after ligation of four arteries. The experiments of Ehrlich and Brieger in 1884 proved that anæmia of the lower portion of the spinal cord could be produced by ligature of the abdominal aorta, and that if the circulation was cut off for not longer than a quarter to three-quarters of an hour, only a temporary paralysis of the hinder extremities resulted; but if for one hour permanent paralysis and destruction of the nervous elements were invariably the result. Numbers of other experimenters have produced anæmia of the lumbar spinal cord by this method; and Sarbo has given a full account of the changes which occur in the cells as a result of complete anæmia lasting for one hour to one hour and a half

after ligation; and the changes which he describes as occurring in the motor cells of the spinal cord as the result of complete occlusion of the circulation coincide very closely with the changes which I shall describe in other animals, especially monkeys and cats; also in dogs, which have died as a result of ligation of cerebral arteries, and in which collateral circulation was not soon enough established to prevent destructive changes. Sarbo found that ligature of the aorta for one hour in the rabbit caused a cell degeneration, which was manifested by a granular destruction of the stainable substance of the cell protoplasm, and a progressive homogeneous atrophic process, affecting the cell nucleus. The appearances presented by the degenerating cells, depended upon the time which was allowed to elapse between the ligation of the aorta and the killing of the animal—the longer the time the more evident was the cell destruction. He found no vascular changes indicating inflammations and no hæmorrhages.

The subject of cerebral anæmia is of clinical importance, as it is well known that in man, ligature of a carotid for aneurysm has been followed by hemiplegia, and I have examined the brain in one such case. Dr. Hill sent me a piece of the cortex from similar situations in both hemispheres, and asked me to decide by microscopical examination upon which side the patient was paralysed. This I correctly determined by the difference in the appearances of the cells of the two sides. We can understand also, how *temporary* loss of motor or psychical function, for example, transitory aphasia, monoplegia, hemiparesis, stupor, and dementia, or even hemiplegia, may occur in syphilitic disease of the arteries; for if collateral circulation be restored within an hour or so after the blocking of the artery, providing a thrombus does not spread to the small branches, the circulation may be restored in the part, and function may return in the course of a few hours or days.

In connection with the experimental anæmia of the spinal cord, produced by clamping the abdominal arteries, it is of interest to note two points. The exogenous fibres of the posterior columns, together with the pyramidal tracts—tracts, the fibres of which have their trophic and genetic centres respectively in the spinal ganglia and the cerebral cortex—do not undergo degeneration, whereas tracts which have for their trophic and genetic centres cells in the grey matter of the spinal cord, undergo degeneration. Munzer's and Wiener's experiments showed this, and recently I had the opportunity of examining a case of acute anterior poliomyelitis in an infant fourteen days after the onset of the disease; in this case also the degeneration was limited entirely to those tracts, the fibres of which arise from cells in the spinal cord, and I cannot help thinking that this case was of vascular origin. [A full account of this case is given in the *Arch. of Neurol.*, vol. i, p. 365.] Ballet and Dutil found from their experiments that complete anæmia of the lower end of the spinal cord for a few minutes (by clamping the aorta) produced chromolytic changes in the anterior horn cells. I have also found that swelling of the cells previously described with chromolytic appearances may come on within less than ten minutes after ligation of the four cerebral arteries, for occasionally one of Dr. Hill's dogs or cats has died from the effect of the anæsthetic very shortly after the four arteries have been ligatured. It may be said that this was due to the anæsthetic; It was not, however, so, for occasionally I have had the opportunity of examining the brain tissues of animals which have died from the anæsthetic before any of the arteries were tied, and these showed no changes (Fig. 3). We may therefore consider that the changes noted are due to the cessation of the circulation. Dr. Hill has shown that the cortex of these animals is readily excitable, and in some cases even hyperexcitable to electrical stimulations, epilepsy being produced; consequently this change in the appearance of the cells can be associated with increased electrical excitability, or perhaps more likely, increased tendency of stimulus to spread, a fact of considerable importance when put beside another fact, namely, that I have found in status epilepticus the cells presenting in many instances this swollen dropsical appearance, with marked changes in the chromophilous substance (Fig. 13). In general paralysis of the insane epileptiform seizures are of frequent occurrence, and when they do occur in the progress of the disease I have found invariably that in proportion to their frequency and severity, there is a large number of recent degenerated fibres in the pyramidal systems. Consequently we may assume that epileptiform seizures in this disease are associated with death of the cortical pyramidal motor neurones, due in some instances (I believe in great measure) to vascular disturbances of the cortex (Fig. 9). The disease itself is, I consider, primarily a progressive decay of the nervous elements, but owing to the establishment of a vicious circle numbers of neurones are destroyed by circulatory disturbances.

I will now pass on to the effects of experimental anæmia, produced by ligature of arteries in which collateral circulation was not restored soon enough to prevent destructive changes in the nerve cells. If cats or monkeys have all four arteries ligatured, or if instead of ligaturing both vertebrals and both carotids in dogs, a subclavian be tied instead of one of the vertebrals, a sufficient collateral circulation cannot be restored soon enough, and the animal dies in a period varying from a quarter to twenty-four hours. The time variation no doubt depends upon the effect produced upon the medulla by the anæmia. The changes observed in the cells of animals which have thus lived some hours are different entirely to those which have been previously described. There is not merely a physical change due to hydration; this may or may not be present, for sometimes the cells are not swollen, but are even shrunken. The staining reaction is also different, showing a bio-chemical as well as a bio-physical change; sometimes the whole cell stains uniformly, but not with a brilliant coloration (Fig. 7). If a double stain has been used, for example, methyl blue and saffranine, the whole cell may be stained a uniform dull purple, the processes, as well as the body of the cell, having a homogeneous instead of a differentiated action to the dyes, a condition which is similar to that met with in hyperpyrexia, and to the appearances described by Sarbo in the motor spinal neurones of the lumbar-sacral region after clamping the abdominal aorta. These animals prior to death, according to Dr. Hill's notes, generally had epileptiform convulsions. One animal—a monkey—presented the most instructive changes, because after ligature of both carotids and one vertebral it was paretic and demented, took no notice of anything, and behaved exactly like an animal with its higher cortical centres destroyed, which, indeed, they were. It was killed on the fifth day, and examination of the brain of this animal exhibited the following changes, which are shown in the photomicrograph (Fig. 8). The nerve cells and all their processes were uniformly stained a diffuse dull purple, and were readily discerned on account of the dilatation of the lymph space in which the neurone lies; scattered through the protoplasm of the cells was a fine dust of coloured particles; the apical processes of the cells were either destroyed or twisted like a corkscrew; in many the dendrites had disappeared, but in some of the cells the axis-cylinder could be traced with unusual distinctness, probably due to some swelling; and one cell was observed which is of interest, because the axis-cylinder process could be traced some distance, giving off lateral twigs that seemed to merge into a general network, supporting therefore the diffuse nerve network theory of Golgi (Fig. 6). Many of the cells were swollen up, as shown in Fig. 8, others were shrunken. Some could be seen with phagocytes sticking to them and devouring the dead cells. Although one observed these very marked changes in the cells by the Nissl and Weigert iron methods, yet by the chrome-silver method the cells appeared normal, showing the gemmules on their processes with unusual distinctness (photomicrographs 10 and 11). The brains of other animals, dogs and cats, were examined by similar methods with the same results. It may be that the chrome silver only stained those cells which had not undergone disorganisation; but none of the cells when examined by the methods I have alluded to exhibited normal appearances as regards their biochemical condition, nor was the animal physiologically normal. I have, therefore, come to the conclusion that the rapid silver method of Golgi, which stains only a few cells, although undoubtedly of the greatest value for anatomical purposes, yet for *acute* pathological findings is unreliable. Many of the statements which are made with regard to the effects of drugs, anæsthetics, and acute disease as represented by the appearances of the gemmules on the processes of the cells, as made evident by the chrome-silver method, are therefore open to serious objections. It is very probable that the method of Cox might be found of value in determining changes in the cells of

the cortex in chronic disease, and possibly also in acute disease. I have not mentioned that in most of these experimental brains a striking naked-eye feature was the distension of the veins of the cortex with blood, and frequently there was subpial hæmorrhage; also the perivascular lymphatics were usually distended with fluid; no doubt both the increase of blood in the superficial veins, the increase of fluid in the perivascular lymphatics, and the general œdema of the brain itself were proportional and compensatory to the diminution of the arterial blood: the arteries were generally empty, likewise the capillaries. In some cases the perivascular lymphatics and membranes were the seat of a marked cellular infiltration, resembling the condition found in general paralysis. Collateral circulation to the medulla, by which the respiratory centre is kept going, is essential to life. Such collateral circulation when established (and if the animal lives it must have been established) would be accompanied by blood supply to the choroid plexus; and the cerebro-spinal fluid, which functions as the lymph of the brain, would consequently be secreted in abundance and soon compensate the diminution caused by the failure of the arterial circulation; thus the increase of cerebro-spinal fluid would account for the œdema of the brain, the dropsical condition of the cells, and the dilatation of the perivascular lymphatics.

Some experiments which I made five years ago with Professor C. S. Sherrington, and which we have never found opportunity to continue and develop, are (although only few in number), I think, of sufficient importance to mention with this subject of anæmia. We found that compression of the spinal cord in the dorsal region, even enough to produce indentation, would not stop the passage of the impulses, generated by faradic excitation of the cerebral cortex, to the lower spinal motor neurones. Whereas in two animals—monkeys—upon compression with an eye removed from a rat immediately after death, fixed at the end of a glass tube attached to a horizontal lever in such a way that compression of the lumbar spinal cord could be made by this living tissue, and the pressure measured by means of a sliding weight—we found that extremely light pressure upon the lumbar spinal cord was sufficient to abolish conduction in one minute to a minute and a-half after the pressure was applied; and upon removing the pressure conduction, in a minute or two returned, because faradic excitation of the cortex was responded to by an appropriate muscular contraction. The experiment was repeated a considerable number of times, and I have do doubt that in these two animals we managed to produce an anæmia of the grey matter of the lumbo-sacral spinal cord by compression of the large artery that comes in about the third lumbar root, causing a physiological block in the synapsis formed by the terminal arborisations of the axons of the cortical pyramidal neurones with the dendrons of the spinal motor neurones.

Effects of Hæmorrhage.—Large quantities of blood may be lost to the body from hæmorrhage without producing any appreciable changes in the nervous elements. Voss has done a number of experiments on animals, endeavouring to produce degeneration of the spinal cord, by injections of pyridine sufficient to produce a severe anæmia, but without results. Likewise, numbers of cases of pernicious anæmia, leucocythemia, and exhausting blood disease, are not found associated with any noticeable change in the neurones. I have examined the nervous system in several cases of pernicious anæmia, in one of which the corpuscles had sunk to 500,000 per c.mm.; cases of very severe anæmia from hæmorrhage and exhausting disease; leucocythemia, in which the red corpuscles were reduced to one-fourth, and in which the whole of the brain and vessels showed congestive stasis and hæmorrhages; and yet the nerve cells of these cases of extreme anæmia showed little or no bio-chemical change, the Nissl granules appearing quite normal (Fig. 1); nor did sections of the nervous system in these cases show any degenerative changes by the Marchi method. It is therefore more than probable that those cases of combined sclerosis of the spinal cord, sometimes met with in pernicious anæmia, but more often accompanied by grave anæmia, are due to some other cause than the deficiency of red corpuscles; probably in the blood there is some neurotoxin which produces this primary systemic degeneration of neurones, with long axis cylinder projections, forming the long tracts in the spinal cord—or it possibly may be that those individuals who suffer from this nervous affection have an inherent defective vitality or lowered durability of the nervous system, which, in combination with the defect of the blood supply in quantity and quality, leads to degeneration. The fact that inanition, even extreme inanition, produces little or no loss of weight in the nervous system, and hardly any changes of importance in the microscopical appearances of the nervous elements, is of considerable importance, for it seems to show that the metabolic exchange that goes on in the nervous system, is either especially protected by the metabolism of the whole body being subservient to it, or that, however important the metabolic exchange in the nervous system may be, in amount it is not considerable. Those primary wasting diseases affecting systems, communities, and groups of neurones, associated one with another by functional relationship rather than by anatomical or vascular supply, insidious in origin and progressive in course, cannot be ostensibly due to anything else than a metabolic failure on the part of the neurones themselves (which, after all, are but complex differentiated cells) to assimilate from the blood the necessary materials to maintain their specific vital energy. They die in a manner the reverse of their evolution; the most distant parts of the tree, namely, the terminal twigs (collaterals) being the first to go, then the branches, and last of all the trophic and genetic centre itself, the cell body and its nucleus.

Dr. Watson in my laboratory has carefully compared the sections of experimental anæmic brains with a large number of sections of general paralysis; he has made drawings of cells which he considered presented similar appearances in the two conditions, and the result of his observations appears to show that whilst a large number of the cells exhibit changes indicating chronic atrophy, a considerable number of cells in general paralysis present acute destructive changes similar to those met with in cases of experimental anæmia from arterial occlusion, but they are not due to the same cause, for the arteries in this disease are seldom occluded, but congestive stasis in the arterioles, capillaries, and veins, even thrombosis in the latter is common, and this congestive stasis probably takes part in the destruction of the nervous tissue.

It is curious how general it is to find the brain atrophy in this disease limited particularly to the frontal and central convolutions, whereas the occipital and temporal lobes escape in great measure. Over the atrophied regions the pia-arachnoid membrane is thickened and adherent. Many observers, including Flechsig and Mickle, consider that the region of atrophy corresponds particularly with the area of distribution of the internal carotid arteries. I think, however, the area of atrophy and pia-arachnoid thickening more closely corresponds with the distribution of veins which open into the longitudinal sinus, and from a large number of observations made by myself and my assistants, I have come to the conclusion that venous congestive stasis in that portion of the brain plays an important part in the symptomatology and pathology of general paralysis. I shall, however, have occasion to refer to this more fully later on.

Mendel and many authorities believe that general paralysis is a primary inflammatory condition of the vessels and meninges, with secondary destruction of the nervous elements. In 1884, Mendel, who believed that the necessary factors were (1) diseased walls of vessels allowing transudation of plasma and leucocytes; and (2) hyperæmia of the brain, claimed to have produced this condition artificially by rotating dogs upon a table with the heads outwards. Fürstner repeated these experiments over a considerable period of time, causing degenerative changes in the cortex, with secondary descending changes in the cord. There are many reasons, however, which will be alluded to later, for considering general paralysis to be a primary progressive decay of the nervous elements, with secondary changes in the vessels and membranes.

ALTERED STATES OF THE BLOOD.

Hyperpyrexia.

The study of the lesions of nervous centres due to hyperpyrexia is of great interest from a theoretical as well as from a practical point of view; from the former, because the exact knowledge of the nature of the lesion might be able to throw some light upon the nature of the pathological process and the clinical symptoms which accompany hyperpyrexia; from the latter, because it would indicate the direction of treat-

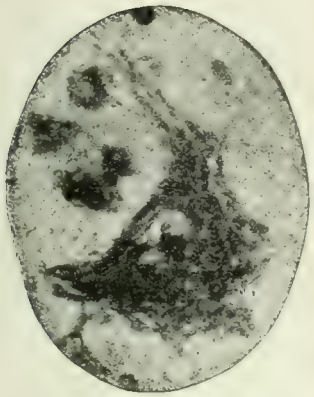


Fig. 1.

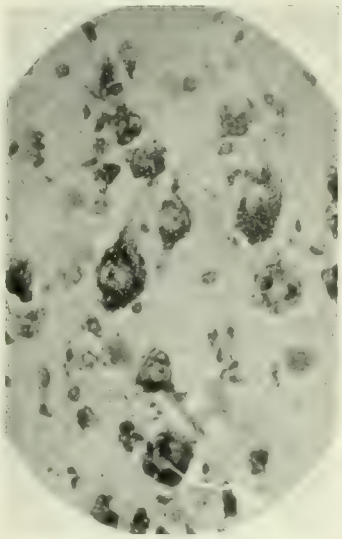


Fig. 2.

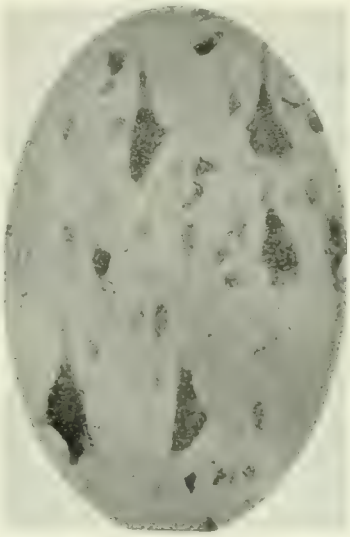


Fig. 3.

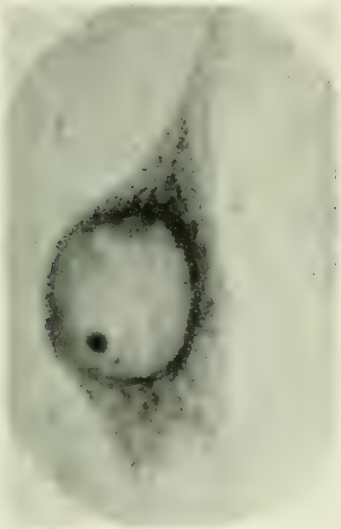


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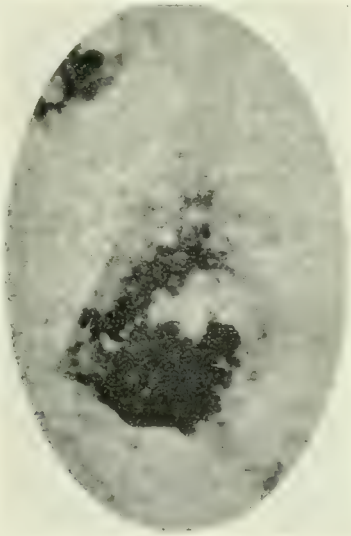


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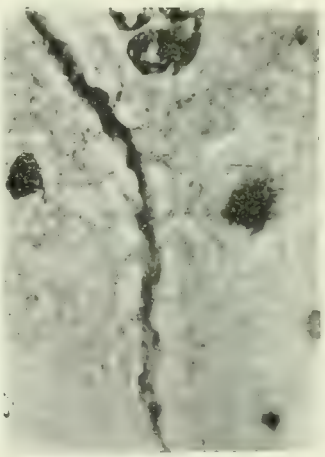


Fig. 6.



Fig. 7.

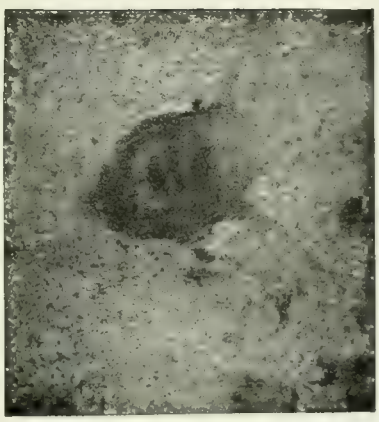


Fig. 8.

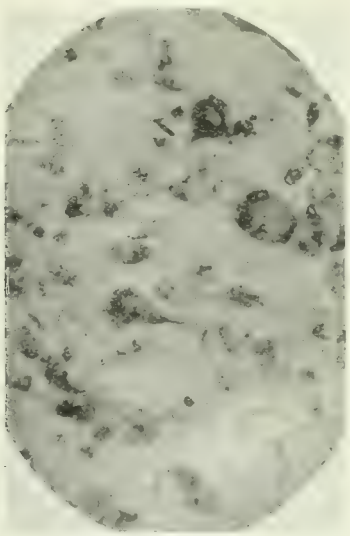


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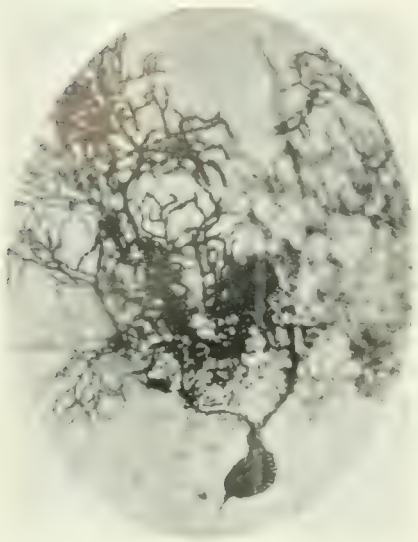


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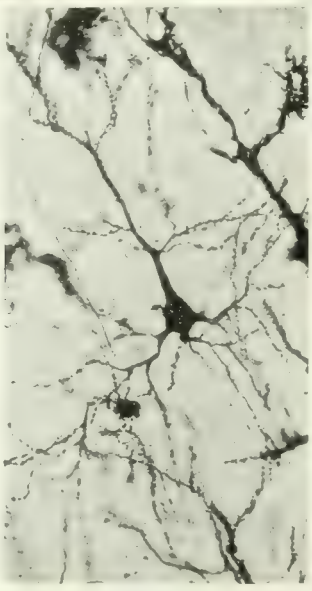


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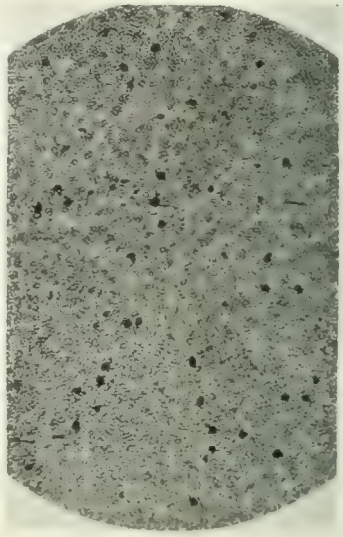


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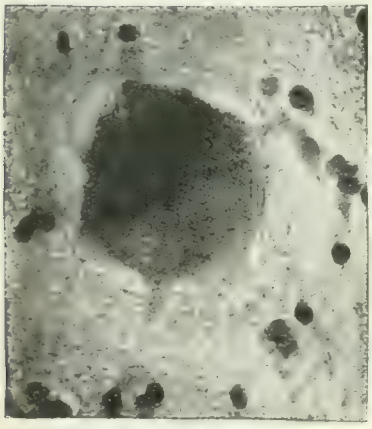


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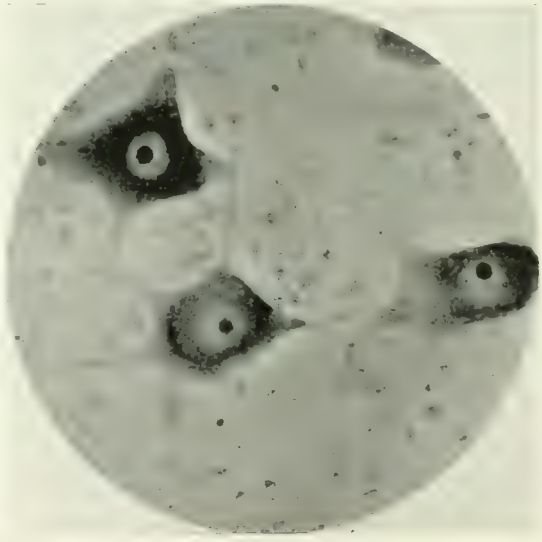


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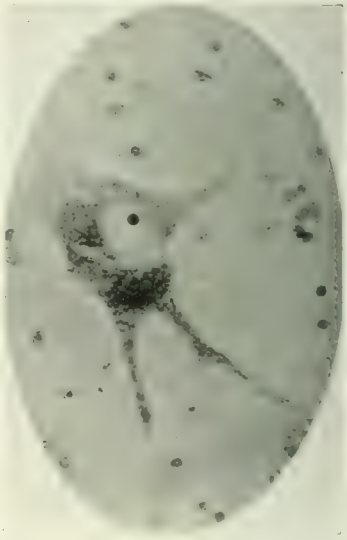


Fig. 15.

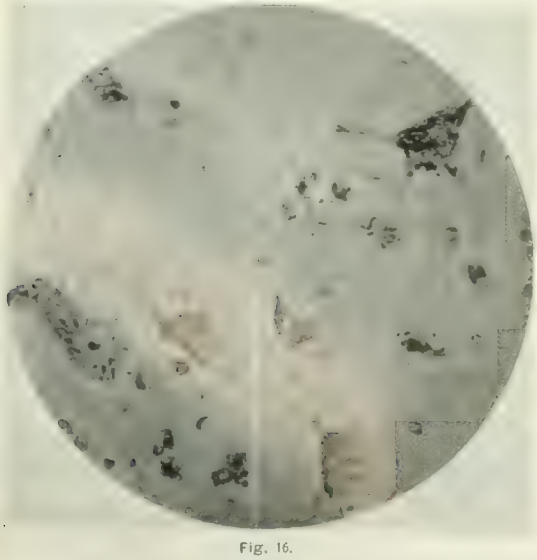


Fig. 16.

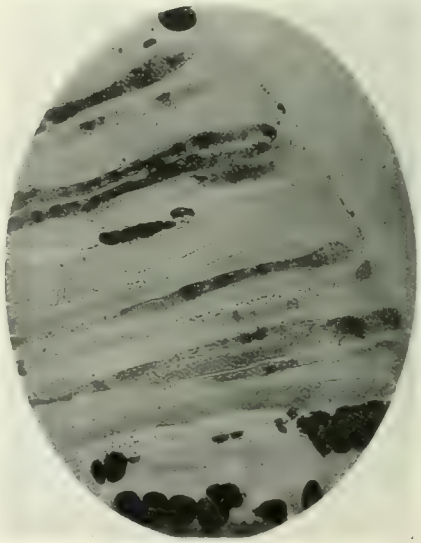


Fig. 17.

ment. Goldscheider and Flatau, who for the first time described lesions of the nerve cells in the rabbit, caused by experimental hyperthermia, came to the following conclusions:

1. If the temperature remained about 106 7° F. (42° C.), the cells of the spinal cord examined by Nissl's method presented no appreciable modifications.

2. If the temperature exceeded 109.5° F., (43° C.) the lesions of the nerve cells of the spinal cord were very definite, extending throughout the whole of the grey matter.

3. The duration of the experimental hyperthermia they showed to be a very important factor in the production of the lesions; for if the animal be kept for some hours between 107° and 108° F., the same effect on the nerve cells is produced as occurs in a much more rapid manner when the temperature is raised to 109.5° F.—namely, swelling of the cell and its processes, diffuse staining of the whole neurone with disintegration of the chromophilous substance, and around the nucleus the chromophilous elements may still persist to some extent as if the outer portions of the cell were more affected than the central. The nucleus has an irregular and often an angular appearance.

Marinesco has also done some valuable work on this subject. He found that if artificial hyperthermia in animals be produced, so that the temperature is raised to 116.6° F. in the rectum, the animal died in thirty minutes with characteristic changes in the nerve cells. He also remarked that these changes occur at a lower temperature when the duration is increased. In five cases of hyperpyrexia occurring in the human subject, which I have examined, and in which the temperature reached 109° F. or more, I have found the same bio-chemical change revealed by the Nissl method in all the cells of the central nervous system. I have, however, met with cases of status epilepticus in which the temperature was 107° to 107.5° F. for a short time without showing this change. Again, I have seen in one case a moderate degree of chromatolysis and diffuse staining in prolonged pyrexia, varying from 105° to 106.5° F. This was a case of typhoid fever, and it might very well be that the change was due to the influence of the toxin; in fact, in most of the human cases the changes could be ascribed to the conditions which produced the fever and not to the influence of the increased temperature of the blood; but some of the cases which I have examined were so sudden, for example, one was probable sunstroke, another was a case of hæmorrhage into the spinal canal and the base of the brain in general paralysis, another was a case of Congo sickness.

The photomicrograph shows three anterior horn cells from the last case. You will observe the diffuse staining of the processes and of the body of the cell (Fig. 14). Another case of Congo sickness, in which the temperature never went above 103 8° F., showed no change in the Nissl granules, and the cells presented a fairly normal appearance. I have examined the nerve cells in many cases of septic poisoning and other diseases, but I have never seen this change unless there was either hyperpyrexia or prolonged high fever. The fact that experimental hyperthermia in animals produces this bio-chemical change in the protoplasm of the cell indicates that it is the altered temperature of the blood which is the cause in the human subject of these changes. Another point is that if the sections are stained with methylene blue and saffranine, the protoplasm is stained a uniform dull purple, instead of being differentiated. Now we have seen that the healthy cell shows a differentiation of staining; the Nissl granules, which have been shown to be a nucleo-albumen, are no longer visible in hyperpyrexia; and there is no longer the differentiation of a stainable and an unstainable substance with basic dyes; there must, therefore, have been produced by the fever a profound modification of the protoplasm of the cell. There are two points to be considered in this—namely:

1. The fact that a temperature of 109.5° F. can bring about rapidly this coagulation process and death of the protoplasm, also that it affects first and most markedly the periphery of the cell.

2. That prolonged high temperature of 107° to 108° F. will produce this same coagulation process.

Halliburton has shown that there are three proteids in nervous matter—namely: (1) a neuroglobulin which is coagulated at 116 6° F. (47° C.); (2) a nucleo-proteid which is coagulated at 132.8° F. (56° C.); (3) a neuroglobulin which is precipitated at 167° F. (75° C.); and that these three bodies can be separated out by fractional coagulation. We see, then, how it is that Marinesco found that animals in which the temperature is raised to 116.6° F. (47° C.) died almost immediately with changes in the cells indicating coagulation in the protoplasm. No doubt this neuroglobulin is precipitated at once, and it occurred to me that if a solution of neuroglobulin were subjected to long heating, it would coagulate at a much lower temperature. I mentioned the matter to Dr. Halliburton, who was of the same opinion, and we have therefore made experiments upon this subject, and we find that prolonged heating for four hours, for example, will cause coagulation of the neuroglobulin at a temperature of between 107.6° and 109.4° F. (42° and 43° C.) Brodie and Richardson have shown that in frog's muscle the tissue loses it irritability at that temperature, at which coagulation is induced first in one of its constituent proteids. We have thus a chemical explanation of the cause of death of the protoplasm, also of the changes manifested by it as regards staining.

Goldscheider and Marinesco have shown experimentally that a certain degree of this coagulation change may take place without death of the cells, for if they produce artificially hyperthermia in animals for only a short time and then kill them, they find a commencement of this coagulation process to have taken place; but these animals would have lived had they not been killed for the purpose of examination, consequently we may suppose that a certain degree of bio-chemical change, associated with coagulation of neuroglobulin, may take place without destroying the protoplasm to such a degree as to render it incapable of recovery. I think this entirely coincides with and explains the remission of symptoms, the return of consciousness and the recovery, which often takes place in some forms of hyperpyrexia, when the cold-bath method is resorted to without delay.

It is matter of speculation whether structures later developed and functionally more highly differentiated, as the cells of the cerebral cortex, are more highly susceptible to fever, and succumb more readily under it. Possibly high temperature of the surrounding blood and lymph is more readily felt by the small cells of the superficial layers of the cortex on account of the increased surface exposed, and delirium followed by coma may be the result of this; although the vital centres in the medulla may still be able to perform their functions.

The diffuse staining of the cells indicates a diffusion of the nucleo-proteid through the substance of the cell body and its processes. We may suppose, therefore, that the essential achromatic fibrillary substance is killed, and that the nucleo-proteid which is normally contained in the reticulum of the cell in solution has soaked into the achromatic substance, and given the protoplasm the uniform staining, which when once general is quite characteristic of hyperpyrexial death, as I have been able to verify in several instances. These facts, pointing to an actual bio-chemical change involving the death of the protoplasm, when the temperature remains for some hours above 109° F., support Dr. Osler's view that cases of paradoxical temperature occurring in women, and termed hysterical hyperpyrexia, are frauds as a rule, although he states that other cases have to be accepted, the explanation of which is impossible under known rules; in fact, it is quite conclusive that temperature above 114° F. is incompatible with life, even for a short time.

TOXIC CONDITIONS OF THE BLOOD AND LYMPH.

The primary degenerative changes occurring in the neurone are usually the result of poisonous conditions of the blood and lymph. The poisons may be produced:

1. Within the body by perverted functions of the organs or tissues (auto-intoxication).

2. By the action of micro-organisms upon the living fluids and tissues of the body, whereby various toxic substances are produced either locally or generally, and by their escape into the blood cause degenerative changes.

3. The poisonous substance may be introduced into the body from without.

Just as we know that various alkaloids used in medicine have a specific affinity for particular portions of the nervous and muscular systems, so we find certain

poisons which produce degeneration and disease have a special selective influence. We know that strychnine, for example, has a special selective influence upon the spinal cord, increasing reflex excitability. Goldsheider and Flatau have shown that strychnine poisoning produces changes in the motor anterior horn cells, closely corresponding to those observed in tetanus poisoning; these changes may be observed as commencing three minutes after injection of the poison, if a sufficient dose be given. As in tetanus poisoning, there is no close relationship between the morphological change and the degree of functional disturbance. They have also shown that acute cell changes occur as a result of malonitril poisoning ($NC\text{-}CH_2\text{-}CN$); injection of sodium hyposulphite neutralises the toxic effects of this poison, and prevents the changes in the nerve cells.

Experiment has shown that curare poisons the motor end plates, and recently, in an interesting communication, Dr. Waller showed how a very slight difference—a molecule of water—will alter the action of an alkaloid. Thus he has shown that veratrin has a special selective toxic action upon muscle, while proto-veratrin acts especially upon nerve. These facts, together with others which I will cite in connection with degenerative changes produced by the selective action of poisons in the production of disease, indicate a special chemical affinity of certain protoplasmic structures for certain particular poisons, and the corollary is that probably the protoplasm of every nerve structure having a different function varies in some slight degree. There is a difference which is not to be detected by chemical methods, but the varieties of which are clearly shown by the difference in their physiological reaction to an altered environment. Perhaps one of the most striking demonstrations of this selective affinity of protoplasm for particular chemical compounds is shown by the *intra-vitam* methylene-blue method introduced by Professor Ehrlich, and which, in the hands of many investigators, has produced such marvellous revelations into the minute structure of the nervous system. Ehrlich found that only those aniline dyes which contained sulphur in their composition were suitable for yielding the reaction.

Examples of the special selective influence of the various poisons which produce disease are numerous. There is a whole class of poisons which affect specially the peripheral nerves; and it is a debatable point whether in peripheral neuritis the whole neurone suffers, or whether the changes which have been found in the cells of origin of the peripheral nerves, in the spinal cord and ganglia, are due primarily to the action of the poison; or whether they are secondary to the destructive effects of the poison upon the outgrowths of the cells—namely, the axis-cylinder processes of the peripheral nerves. Again, there are a number of poisons—diphtheria, botulismus, etc., in which the fatty degeration of the muscle is in excess of what could be reasonably attributed to the changes found in the nerves. Probably the vulnerable point of the neuro-muscular mechanism is at the junction of the nerve with the muscle. Comparative studies, however, which would show degenerative changes in the motor end plates, are extremely difficult; and it is rather by inference than direct observation that we must believe the poison to act upon this structure.

The effects of a poison in producing degenerative changes may be immediate or remote, even distantly remote. Thus some poisons on entering the system may produce sudden, or almost sudden, effects—for example, strychnine and absinthe. Others produce more or less remote effects—for example, rabies, tetanus, diphtheria; others produce distantly remote effects—for example, syphilis. Again, many poisons, in order to be effective, must accumulate in the system—namely, the mineral poisons lead and arsenic. Dixon Mann states that lead may exist in the brain in appreciable quantities in encephalitis saturnina.

Selective Influence of Poisons.

The most remarkable example of selective influence which I can cite is tetanus. The bacilli are found only in the wound; they must therefore be comparatively few in number, yet they elaborate a virulent poison which affects particular groups of neurones. The fact that lockjaw in man nearly always occurs first shows that the poison selects the motor nucleus of the fifth nerve. This, however, is not the case in animals when poisoned by the tetanus toxin. We do not know whether this selection is due to some anatomical condition which favours the absorption of the poison, or whether it is the result of a bio-chemical affinity of that particular group of neurones for the poison. It is remarkable that experiment has shown that the tetanus toxin, if mixed with an emulsion of nervous matter before injection into an animal, loses its toxicity, showing thereby its affinity for nervous matter. Goldscheider and Flatau, who have studied the changes in the nerve cells of animals that have been injected with the tetanus toxin, describe conditions which they consider characteristic of the action of this particular poison. Examination of the cells of the anterior horns of the spinal cord shows enlargement and pallor of the nucleus, swelling and crumbling of the Nissl bodies, and fine granular disintegration of the Nissl bodies, associated with swelling of the whole cell.

Marinesco maintains that in nerve cells subjected to the action of the tetanus toxin, two independent phenomena can be distinguished; one, the result of the chemical combination of the poison with the cellular protoplasm, and the other the wearing out of the cell from excessive functional activity. He agrees with the conclusion of Goldscheider that there is a chemical transformation exalting the excitability of the motor neurones. There is a general consensus of opinion among authors who have worked at this subject, including those named, that the injection of tetanus antitoxin retarded these cell changes, and caused a more rapid return to normal; it is only right to say that Courmon, Doyen, Poirot (ref. Ford Robertson), from experimental results of their own, deny that tetanus toxin produces any alteration in the cells of the anterior horns, and certainly, specimens of the medulla and pons from two cases of tetanus in the human subject, which I have had the opportunity of examining, showed no certain noteworthy change.

Another poison, probably of microbial origin, rabies, has a special selective influence on the medulla, although the whole nervous system is charged with the poison; pointing, therefore, to the fact that there is some special affinity of the neurones in the medulla for the poison. I have had the opportunity, through the kindness of Dr. H. Durham, of examining the medulla of a child, who died of hydrophobia in Guy's Hospital six weeks after having been bitten by a mad dog. The greater number of the cells of the motor nuclei of the medulla showed marked degenerative changes indicating a slow process of coagulation necrosis, namely, uniform diffuse staining with absence of Nissl granules; there was also a great deal of nuclear proliferation in the glia substance, denoting an irritative as well as a degenerative process. He was also kind enough to give me the nervous systems of three animals which had been poisoned with the toxin of "bacillus botulinus," a disease first described by Ermenghen, who discovered the organism in unsound meat and fish eaten by people who had died with a characteristic group of symptoms. Such a condition in this country would probably have been called "ptomaine poisoning." The changes which I have found in the nerve cells are similar to those described by Marinesco, who has specially studied this subject. There is a marked chromolytic change, some cells being much more affected than others; the poison is extremely virulent and, if a minute dose is given, so that the animal does not die before the end of a week or so, the changes in the nerve cells are not more marked than in an animal which died within 24 hours (Fig. 16). The most noteworthy change, however, which I have found in an animal which survived seven days, was the extreme fatty degeneration of the heart and striped muscles of the body (Fig. 17). The liver also had undergone extreme fatty degeneration. Seeing that the peripheral nerves showed no degenerative changes, one may conclude that the poison acted more particularly upon the muscle, or the nerve endings in muscle. As I have already had occasion to point out, chromolytic changes of themselves do not indicate death of the nerve cell, but rather functional depression; seeing that there were no changes in the peripheral nerves or in the cord, observable by the Marchi method, it is probable that the changes in the nerve cells were mostly related to functional depression rather than actual destruction, and might have arisen from circulatory failure in the central nervous system, due to paralysis of the heart. Marinesco noticed that the

chromatolysis generally occurred first, at the periphery of the cells; as the morbid process advanced there was destruction of the achromatic fibrils and formation of vacuoles. I have not observed vacuolisation, only extreme chromatolysis. Kempner and Pollak have found similar changes in the nerve cells, and have further observed the slow restoration of the cells to normal under the action of specific antitoxin. Somewhat similar changes have been described by several authorities in the anterior horn cells of the spinal cord and medulla of animals injected with diphtheria toxin. Sidney Martin separated the chemical toxin of diphtheria, and produced by its injection into animals marked fatty degeneration of the muscles, which he attributed to an associated change in the nerves. In 4 cases of diphtherial paralysis in man which I have examined I was able to find fatty degeneration of the heart muscle in all; in only 1 case could I find Wallerian degeneration of the peripheral nerves, and in only this one case could I find any chromolytic changes in the motor cells of the medulla.

Abrin and Ricin-Toxic Proteid Bodies.—Sidney Martin long ago showed that the seeds of jequirity contained a proteid body, which, if injected into an animal, profoundly modified the blood and caused its death. This body, abrin, together with a similar body, ricin, obtained from castor-oil seeds, were made the subject of a most valuable research by Ehrlich. Very small quantities of those poisons, injected into animals, cause profound modifications in the appearance of the nerve cells. The Nissl bodies disappear, the cells are stained uniformly, and show a fine, coloured dust all through the protoplasm of the cell and processes. All the nerve cells are affected, and the cause of these altered appearances would indicate a changed condition of the blood and lymph. By the kindness of Dr. Durham I have had the opportunity of examining the nervous system of two guinea-pigs, one which died forty-five hours after injection of 2 milligrams of abrus-globulin; the other after immunisation received in the course of a week an amount equal to 60 fatal doses. The former showed a marked change (shown in photomicrograph Fig. 16) in all the cells of the spinal cord and medulla; the latter showed marked chromolytic changes, but many of the cells showed Nissl granules and much less abnormal appearance. Although two observations are not of much value, it would point to the poison acting upon the nerve cells. Berkeley has studied the changes produced in the nerve cells by ricin.

Absinthe.—Dr. Hill, while making his experiments upon the cerebral circulation, had occasion to inject animals with absinthe. He sent me the nervous tissues of these animals, and I was greatly surprised to find that changes were discoverable in the cortical pyramidal cells of animals that had died in fits within ten minutes of the injection of 5 minims of the poison. The cells were, however, not all equally affected; some groups of cells showed marked chromolytic change, while others showed no change. Animals that had lived two hours after the injection of a smaller dose (2 minims) likewise showed unequal effects. The cortical pyramidal cells were, however, always more affected than the motor cells of the anterior horns of the medulla and spinal cord, and one therefore naturally asks, Can we account for this by supposing that the cells have each a specific vital resistance? That this may be so is perfectly clear from the fact that such poisons as abrin, botulin, ricin, etc., produce when injected much more marked effects on some cells of the same function than on others. In the case of absinthe, it must be remembered that we have to do with an oily fluid, and it is possible that really the fits may have been due to irritation caused by minute capillary emboli of an acrid and poisonous nature becoming lodged in the minute vessels of the cerebral cortex. The capillaries in the cortex are extremely small, and would favour such lodgment. Such an explanation seems possible, for if absinthe be injected subcutaneously, even in large quantities, fits are not produced (Hill). I am also indebted to Professor Horsley for the nervous system of a cat, which had received 2 minims of absinthe intravenously injected. The animal had three fits and survived two hours. The changes in the motor cells of the brain and cord corresponded to those above described.

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DESCRIPION OF PHOTOMICROGRAPHS.

1.—Normal pyramidal Bett's cell cortex cerebri, stained by Nissl method, preparation made from the brain of a man who died from an obscure septic affection after eight weeks' illness. Towards the end of life he suffered with severe hæmorrhages producing the most extreme anæmia, the blood containing a large number of nucleated corpuscles. There was a remittent pyrexia during the whole period; the fever, however, never surmounted 103.5° F. The body was extremely emaciated at death. He remained conscious to the end, and it is interesting that this combination of factors was insufficient to produce bio-chemical changes in the nerve cells. Magnification, 700 diameters.

2.—Section of the motor cortex of a dog after ligation of both carotids and both vertebrals. Magnification, 250.

3.—Section of the motor cortex of a cat that died under the influence of an anæsthetic prior to ligation of arteries. Normal appearance of the cortical pyramidal cells, stained by Nissl method. Magnification, 300.

4.—Pyramidal cell of a dog after ligation of two carotids, one vertebral and one subclavian. Great swelling of the nucleus, advanced chromotalysis most marked at the periphery of the cell. Magnification 700.

5.—Pyramidal cell of a dog after ligation of arteries showing extreme chromatolysis with commencing extrusion of the nucleus. Magnification 700.

6.—Axis-cylinder process from a large pyramidal cell the lymph space around which is distended and showing the collateral side branches apparently forming a diffuse nerve network. Magnification 1000.

7.—Pyramidal cell with diffuse staining from a cat after ligation of four cerebral arteries. Magnification 500.

8.—Pyramidal cell from monkey five days after ligature of two carotids and one vertebral, referred to in lecture, showing swelling in pyramidal cell, diffuse homogeneous staining owing to stainable substance being scattered through the protoplasm of the cell as a fine dust.

9. Section of the cortex of a case of general paralysis, showing acute cell changes. Magnification 250.

10.—Cell of Purkinje from the cerebellum of a dog twelve days after ligation of four arteries showing absolutely normal appearances.

11.—Pyramidal cell from cortex of monkey referred to in lecture stained by rapid Golgi method, showing gemmules on the dendrons, and all the external appearances of a normal cell. Magnification 150.

12. Section of pyramidal tract of spinal cord of monkey ten days after ligation of two carotids and one vertebral. A few scattered degenerated fibres are revealed by the Marchi method. These were more numerous on the side opposite to the hemisphere on which the vertebral was ligatured, but altogether not more than 60 in number, so that only an inconsiderable number of the psycho-motor cells had perished as a result of the anæmia. This quite conforms with the fact that the animal had returned to the normal physiological condition when it was killed with chloroform. Dogs with four arteries ligatured and kept alive over ten days frequently showed that a certain number of the psychomotor neurones had perished, but the numbers were inconsiderable.

13.—Swollen œdematous cell from the top of the ascending frontal convolution, with diffuse staining and absence of Nissl granules from a case of status epilepticus. Magnification 700.

14.—Section of the spinal cord of a case of Congo sickness with hyper pyrexia in which the temperature reached 109° F. prior to death. The whole of the cells throughout the central nervous system showed a diffuse homogeneous dull staining. The Nissl granules had entirely disappeared from the processes and the body of the cell, and the stainable substance had a fine dust-like appearance. The processes are unusually distinct on account of the diffuse staining, the nucleus is clear and swollen, faintly stained, and the nucleolus deeply stained. Magnification 400.

15.—Anterior horn cell of spinal cord from a guinea-pig which died 45 hours after injection of 0.2 mg. of abrus-globulin. All the cells showed this diffuse staining and absence of Nissl granules. Magnification 400.

16.—A section of the anterior horn of the spinal cord of a rabbit, 21 hours after injection of 0.01 c.cm. of botulismus toxin, which killed the animal, the whole of the cells throughout the central nervous system showed more or less a marked chromolytic change as indicated in the photomicrograph. Magnification 250.

15.—Section of the diaphram of guinea-pig, which died on the eighth day after injection of 0.0005 c.cm. of botulismus toxin, containing 2 per cent. of

solids. The muscle was stained by Marchi method, and shows that quite one half of the fibres have undergone acute fatty degeneration. The dense black masses are fat cells; but the degenerated muscle fibres are indicated by the diffuse black staining. The musculi papillares of the heart showed even more marked fatty degeneration.

Figures 1, 2, 3, 4, 5, 7, 8, 9, 13, 14, 15, 16 are photomicrographs of preparations stained by the Nissl method. Figure 6 was stained by the Weigert iron method. Figures 10 and 11 were stained by the rapid Golgi method. Figures 12 and 17 were stained by the Marchi method.

ON LEAD ENCEPHALOPATHY AND THE USE OF DIACHYLON AS AN ABORTIFACIENT.

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In the following paper I propose to record three cases of cerebral disease due to lead poisoning, two of which were caused by diachylon taken to procure abortion, and some other cases in which diachylon taken with the same object produced a different set of symptoms:

Case I.—A youth of 17 was sent into hospital for cerebral tumour.

History.—For three weeks he had suffered from headache, vomiting—chiefly after food—colicky pains in the abdomen and dimness of vision. The patient was a carriage painter who for 2 years had been engaged on fine work, but for the last three months had taken to coarse work in which much red lead was used.

Condition on Admission.—He was found to be well nourished but anæmic, lethargic, but complained of intense frontal headache. No paralysis, spasm, or anæsthesia. pupils and reflexes normal. Well marked double optic neuritis and a large retinal hæmorrhage in the left eye. Heart somewhat dilated, blowing murmur at the apex; soft, regular pulse. Urine: specific gravity 1012 to 1016, free from albumen and sugar. Bowels open, tongue moist, furred and tremulous. Slight blue line on the gums.

Treatment.—The bowels were kept open and potassium iodide and bromide, with an occasional dose of antipyrin, ordered. A fortnight later he was no better, and then digitalis was added to his medicine. Within a week he was better, and all his symptoms left him five weeks after admission. The vision improved and the optic neuritis became perceptibly less, but some yellow striæ developed round each macula lutea. A trace of albumen was found four times in the urine, the daily output of which increased under the use of digitalis from 30 to 50 ounces, while its specific gravity decreased to 1006 to 1010, with urea only 1 per cent. The blue line was not quite gone when he left the hospital.

In this case the brunt of the disease fell on the brain, but clearly the kidneys, alimentary tract, and heart also suffered. I am sorry not to have been able to trace the further history of this patient, who was under my care eight years ago.

Case II.—In April, 1899, I saw in consultation a married woman, aged 39, for brain disease.

History.—She was said to have had severe nervous symptoms and a mysterious abdominal pain a year ago, but these abated when it was proposed to send her into hospital. She had had two live children, the youngest 15 months old, and six miscarriages, but there was no history of a syphilitic rash. Apparently she had not been really well for a year, but had for four or five months suffered severely from headache and vomiting without relation to food. She had had three fits within the previous three months. A month ago she began to be unsteady on her feet, and had been confined to bed for three weeks. For a week she had been semi-delirious, having visual hallucinations. and for two days had had diplopia. No information as to her menstrual history could be obtained, either then or during her stay in hospital.

Anamnesis.—Only an imperfect examination was possible in the small dark room of her home. but we noted no paralysis, ataxy resembling that of cerebellar disease, and double optic neuritis. A week later she came into hospital, where in the well-lit ward I at once observed on her gums the most intense blue line I have ever seen. The notes say: "Patient is a stout, florid woman; intellect and memory poor, but she can answer some questions fairly; has some visual hallucinations at night; complains of severe headache on the vertex. She can sit up in bed, but can hardly stand or walk alone. tottering with the head craned forward and swaying from side to side. The ataxy is not worse when the eyes are shut. No muscular wasting or tremors, and no local paralysis of the limbs, though all are weak. No anæsthesia. Knee-jerks well marked. The pupils are of medium size, the left a shade the larger; they react normally. There is some convergent strabismus, as the left eye cannot be moved completely outward. There is occasional diplopia; no facial or lingual paralysis; speech normal. She can read ordinary type with ease; hears a watch at 5 inches from left ear, at 15 from right ear. The ophthalmoscope shows double optic neuritis. swelling of disc = 1.5 D. in each eye. There are hæmorrhages on and around each disc; no choroiditis or sign of syphilis. The urine contained a trace of albumen for the first two days only. The uterus showed no distinct sign of a recent miscarriage and was not enlarged.

Treatment.—The patient was put upon potassium iodide (gr. xv daily) and magnesium sulphate, and improved with wonderful rapidity. Within three weeks the headache had gone, she was quite rational, and could walk well and steadily. She left the hospital a month after admission with the weakness of the left rectus externus muscle nearly gone and the optic neuritis diminishing. The blue line had also nearly gone.

This patient admitted having taken diachylon in pills for the purpose of checking the course of pregnancy, but we could not ascertain from her exactly when or what quantity she had taken, or what the effect had been on the uterus. I called, however, to see Mrs. C. on March 20th, 1900, and found her in perfect health, and the proud mother of a three weeks old baby. There was neither blue line nor squint, she could read the local newspaper with ease, and the ophthalmoscope showed nothing abnormal but the faintest haze over the origins of the vessels in the optic discs. She must have conceived immediately on leaving the hospital, and did not repeat her experiments on ecbolics. The baby is, however, a puny creature, said to have "consumption of the bowels," but is not hydrocephalic, as the children of lead workers are at times. On interrogation, she now asserted that she had taken diachylon for a fortnight a year before I saw her, being then six weeks pregnant. Abortion took place at the end of the third month. She adhered to the statement that she had taken none since, although the symptoms of poisoning steadily increased up to her admission into hospital. I have no means of testing the truth of this statement.

Case III.—H. W., an unmarried girl, aged 22, was admitted in June, 1899, for pains in the stomach and head, of three or four months' duration.

History.—She had been treated outside for gastric ulcer and kept on milk diet, as solid food caused acute pain. There had also been some vomiting and some severe colicky pains. For the last month she had suffered from intense headache chiefly in the frontal and right occipital regions On interrogation, the patient admitted that in the March previous, having gone a week beyond her proper menstrual period, she had taken one day a half-pennyworth of diachylon, which she had made into two pills. She was positive that she had never taken any more. The period soon came on, and her menses had been regular since, but she began to feel weak and dizzy, within a week of taking the pills.

Anamnesis.—After admission she was found to be a pale and rather thin girl with features drawn with constant pain in the head. A distinct blue line on the gums. She is drowsy, and occasionally a little delirious. She can sit up, but not stand alone. the knees doubling under her, and the feet being dragged. Knee-jerks absent; plantar reflexes well marked. Arms rather weak, but not paralysed. Pupils, eye and face movements normal; no anæsthesia; well-marked double optic neuritis. Her vision was unfortunately not properly tested at this time, but she could recognise the doctors and nurses, and I think read large type.

After-History.—During the first fortnight after admission she was frequently sick independently of food, and paresis of the left external rectus muscle was observed. For a month she suffered from intense headache, and remained drowsy and apathetic. On August 28th the optic neuritis had subsided, and the discs were atrophic. She was blind, and hardly able to point to the direction of the window. The paresis of the left external rectus had gone, and the general muscular tone and balancing power were much better. On September 10th she could walk well, and had the complete use of all her limbs, was free from headache, sickness, or abdominal pain, and was plump and rosy. The eyesight was, however, unaltered. I visited this patient at her home in March, 1900, and found her in excellent general health, but still blind. The medicinal and general treatment was the same as in the last case.

These three cases illustrate most of the usual symptoms of lead encephalopathy, and show how closely this affection resembles cerebral tumour. One symptom only of this disease was not prominent in these cases, namely, epileptiform attacks, which Dr. Oliver states are a frequent and early symptom. The woman had had three fits, but the other cases had none. One satisfactory feature of the cases was that all recovered, only the poor girl being left seriously injured. The fact that the married woman was said to have shown severe hysterical symptoms a year before is of interest, for a "toxic hysteria" has been found in other cases to sometimes precede the severe and even fatal form of the disease, and to have obscured the diagnosis. Possibly some cases diagnosed as hysteria which have ended fatally may have been due to undiscovered lead or other poisoning.

It is very remarkable that such acute, severe, and prolonged disease should have been produced in the girl by a single dose of lead—namely, one halfpennyworth of diachylon taken at once. To get some idea of the amount of lead taken by this girl I bought a pennyworth of diachylon at a chemist's, and had it analysed by Mr. Trotman, the city analyst. The diachylon, which was in the form of a ball about the size of a walnut, contained 86 per cent. of oleate of lead and 46.7 grs. of lead, so that we may suppose the girl to have taken about 23 grs. of lead.

This case proves that the excretion of the metal must be very slow, as does also that of Mrs. C., if her story be true.

The treatment of these cases in addition to rest, milk diet, and good hygienic conditions, consisted mainly of moderate doses of potassium iodide with Epsom salts. It is curious that the iodide should have obtained such a reputation in the treatment of lead poisoning, for Dr. Dixon Mann's researches seem to prove that it does not increase the elimination of the metal, the greater part of which escapes by the fæces and not by the urine. It should be noted, however, that in the first case improvement did not occur until the heart had been

strengthened and the flow of urine increased by digitalis. Dr. Oliver thinks that the iodide may occasionally even do harm in acute cases by redissolving lead which was lying inert in the tissues. There was, however, no evidence of this in these cases, nor of it causing albuminuria, as Dr. Oliver has observed in a few cases. I incline to think Epsom salts, with light diet and generally tonic conditions, the most useful elements of treatment. Hot or electric baths and massage are, however, praised by some.

Lead poisoning, as is well known, occurs in four forms. First, the acute form of brain disease which we have described; secondly, the chronic affection of peripheral nerves, which most frequently affects the posterior interosseous nerve and causes wrist-drop; thirdly, lead colic, in which we have acute paroxysmal attacks of pain, associated usually with chronic constipation and some anæmia and gastric disturbance; fourthly, chronic plumbic cachexia, in which the symptoms of chronic Bright's disease, and sometimes of gout, are predominant. Though these groups of symptoms may be more or less united in an individual, yet they may, as the cases I have reported show, be remarkably distinct.

I now pass on to some cases in which lead taken to procure abortion produced other symptoms.

CASE IV.—One evening last year a woman was sent into hospital from the country, with a doctor's letter, saying she had intestinal obstruction and fæcal vomiting, and also that she was pregnant. I was asked to see her at 10 P.M. to decide whether immediate operation was necessary. We could not diagnose the cause of the obstruction, but as she was four months' pregnant, had had obstruction for three if not four days, and as the vomited matter was stated by a medical man to be fæcal, we decided not to postpone operation till the morning. However, when the abdomen was opened no obstruction could be detected. There was a normal pregnant uterus, and the coils of intestine seemed all empty and tightly contracted. So the wound was sewn up and the patient put to bed. Next morning a distinct blue line was seen on her gums, and the "obstruction" yielded to hourly doses of Epsom salts. She admitted afterwards that she had taken diachylon to procure abortion. She was discharged some weeks later, with the wound well healed, and the pregnancy still progressing.

CASE V.—About two years ago a respectable young married lady who had had two children came to tell me she feared she was again pregnant, having gone three weeks over her time, and to implore me to help "put her right," as she and her husband did not want any more children. On my declining and lecturing her as to the iniquity and folly of such a proceeding, she started to do it herself by long and rough bicycle rides and other violent exercises. Ultimately she brought something away, and was ill with severe colicky pains at home without seeing a doctor. When she came to see me again, she had some metritis and a blue line on her gums. She admitted having in despair resorted to diachylon. With rest and nursing she made a good recovery. In this case there were no brain, nerve, or kidney symptoms, and apparently not much colic.

CASE VI.—Another case was one which I saw four years ago in consultation with Dr. Cornwall in Sneinton. A married woman of 34, when six weeks' pregnant took a halfpennyworth of diachylon and aborted in a fortnight. When I saw her a fortnight later she was very ill with colic, vomiting, dizziness, and some headache. She had very slight jaundice and a well-marked blue line. The right kidney was felt to be rather large and tender. The urine was dark coloured, but contained no bile or albumen, but a large precipitate of uric acid. There was no paralysis, the uterus was normal for its condition, but had been swabbed out by the doctor after the miscarriage.

From my own experience, therefore, I have reason to believe that the use of diachylon as an abortifacient is a fast-growing evil. There is now in hospital a woman with wrist-drop from this cause, and Dr. Handford tells me that he has had in his wards three cases of lead encephalopathy and two or three others of less serious lead poisoning, all from taking diachylon. Two of these brain cases had to be transferred to the City Asylum. Inquiries I have made among medical men in one quarter of the town only—Sneinton—lead to the same conclusion. Thus Dr. Cole has sent two cases into hospital in the last year, and has seen several others. Dr. Dabell writes:

> I remember two cases of poisoning due to diachylon taken to procure abortion. One was mild, with no nerve symptoms; the other was more severe, and her peripheral nerves were affected. Both recovered. I am now visiting a patient in a fairly good position who, in addition to a large quantity of purgatives, took a pennyworth of diachylon in one day, but with no effect. It is not uncommon for women to ask me about this drug.

Possibly the purgatives taken by this lady saved her from the ill-effects of the lead. Dr. William Thomson says:

> I have had a good many cases of abortion due to lead poisoning from pills taken. Abortion usually occurs before nerve symptoms set in, although I had one case with severe anæmia, jaundice, albuminuria, colic, and slight wrist-drop. I think the practice is very common and on the increase, as I can recall half a dozen cases within the last year or two.

Dr. Cornwall writes:

> I have had several cases such as you mention, and found the brain always more or less affected, also the peripheral nerves. Jaundice was common.

Thinking it would be of interest to ascertain whether persistent weakness of the brain often ensued, I wrote to Dr. Powell, of the City Asylum, who replied:

> I have had two cases of insanity from the cause you name during the past year, both with melancholia, one having also active hallucinations of hearing. One recovered in three months, the other is now slowly recovering after a residence of five months, but there is much secondary mental enfeeblement.

These two cases were the two of Dr. Handford's already mentioned.

Dr. Moore Bennett, of Ruddington, lately told me the practice was common in his rural district, and kindly sent me brief notes of three cases in which the abortion was associated with lead colic due to diachylon. In one of these there was also wrist-drop and much tremor, in another coffee-coloured vomit, and in the other septic metritis. All recovered after severe illnesses. Dr. Bennett thinks that these cases usually suffer from septic mischief.

Dr. Cole also informs me that he has no doubt many women take the drug without ever coming under medical treatment for it, as he has been frequently told by patients that they have used it without the desired effect. He considers it a by no means certain abortifacient.

Turning to the medical journals of the last few years, I find several cases of poisoning by diachylon taken to procure abortion. Dr. Pope (Leicester)[1] records two cases which died with cerebral symptoms. The late Dr. Crooke (Birmingham)[2] described a similar fatal case, and expressed his belief in the common use of this drug. Dr. Bell Taylor[3] gives a case in which the drug had no other effect than to produce optic atrophy and permanent blindness in the left eye. Dr. Branson[4] relates the case of a multipara who took a pennyworth of diachylon in forty-eight hours when three months' pregnant. When seen a month later the uterus was empty, and she was suffering from severe colic. He adds that the Birmingham chemists told him diachylon is much used for this purpose.

There can be no doubt that diachylon is largely used by women of various classes to procure abortion. It is easily purchased. Anyone can go to a chemist's and buy a pennyworth of diachylon, as I have myself done, without being asked any question except as to whether the purchaser wants it spread or in the mass. Penny balls of the emplastrum plumbi are kept by the most respectable chemists ready wrapped in a handy drawer, and there is absolutely no restriction on its sale. For a penny a woman can buy enough lead not only to empty the uterus, but to cause grave disease of the bowels, the kidneys, and the brain, a disease which not rarely proves fatal. The drug appears to be an uncertain abortifacient, always endangers and often destroys life, or leaves permanent bodily and mental enfeeblement. It is a question whether something should not be done to restrict the indiscriminate sale of this drug and to class it with poisons. Of course, lead can be bought in other forms—as in paint or putty, but we might at least limit the evil, and reduce temptation by removing the present dangerous facility for manslaughter or suicide.

P.S.—The following case, seen as a hospital out-patient on May 11th, strikingly illustrates the subject of this paper:

CASE VI.—The patient, a married woman of 30, who had had three children, said she had been ill five weeks. For the first fortnight she had been in bed and actively delirious, seeing rats, devils, etc., in the room, and was treated by two medical men. She had now been out of bed for a week and was quite rational, but felt very weak and low, had some headache, and a good deal of abdominal pain (not colic); occasionally she saw double. She was thin and anæmic, showed some general tremors but no localised paresis. There was double optic neuritis and a well-marked blue line on the gums. When taxed with having taken diachylon, she said: "Yes, but that was only a penn'orth, thirteen weeks ago." She obviously did not connect it with her illness. It appeared that, having gone a fortnight beyond her usual month without menstruating, she, at the advice of another woman, took the diachylon, and a week later passed some clots, which she thinks may have been a miscarriage. Since then the menses are said to have been regular. The serious brain symptoms do not appear to have come on till seven or eight weeks later, although she gradually lost colour and flesh during the whole time.

REFERENCES.

[1] BRITISH MEDICAL JOURNAL, July, 1893. [2] *Lancet*, July, 1898. [3] *Ibid.*, September, 1898. [4] BRITISH MEDICAL JOURNAL, December, 1899.

A CONVERSAZIONE will be held at King's College, London, on the evening of July 3rd, when the prizes will be distributed by Professor A. V. Dicey.

NOTE ON A CASE OF LANNELONGUE'S CRANIECTOMY.

BY CHARLES WARD, F.R.C.S.I.,
Pietermaritzburg, Natal.

IN Treves's *Operative Surgery*, vol. ii, p. 721, it is stated that down to 1894 36 cases of Lannelongue's craniectomy (or slight modifications of it) had been performed, with 4 deaths. As I have no means of referring to the different papers on the subject by Messrs. Horsley, Keen, and others, I am unable to ascertain how long after operation death occurred in the fatal cases, what part complications may have played, nor for what condition the operations were performed. But as the subject seems to be of some interest to surgeons, perhaps the following brief notes may contribute to an estimation of the value of the operation as a curative or palliative measure.

The patient was a boy, aged 6 years, and several medical men having met in consultation it was decided that he was suffering from syphilitic hyperostosis of the skull; and we were pressed by the relatives to do something to relieve his sufferings, which were painful to witness. The chief symptoms were a large head for his age; hard, regular, symmetrical thickening of skull; a haziness of the cornea; profound symmetrical deafness; almost complete obliteration of postnasal fossæ; foul discharge from nostrils, and complete loss of speech. The limbs were thin and wasted, and the gait was tottering. He was very restless, and had sudden violent attacks like mania, rushing and biting at anything, with loud screams and struggling. He had been treated with thyroid gland substance, with no improvement. But it was thought that slight benefit had resulted from mercurial inunction and hyd. c. cret. internally.

On November 27th, 1898, at the Durban Sanatorium, I operated as follows: Commencing on the left side, a rectangular flap of scalp about 2½ inches wide was cut, extending the whole length of the parietal bone, and having its base close to the middle line of the vertex. This being reflected up and fixed, a trephine opening was made in the bone posteriorly, and then the bone was cut through forwards the whole length of the incision at about ½ inch from the sagittal suture, and about ¾ inch wide. The bone was very thick and of stony hardness, and required considerable force with a chisel and hammer to cut it, ordinary bone forceps making little or no impression on it. There was very free hæmorrhage. The dura mater bulged out considerably and was punctured, letting out about 2 ozs. of clear fluid. The boy's condition being reported as favourable, it was decided to continue, and the same proceedings were carried out on the right side. The wounds were treated in the usual manner.

The case was left in charge of my friend Dr. Birtwell, of Durban, and recovery from the actual operations was rapid and uneventful, mainly owing to the extreme care and attention he was good enough to devote to the case.

It was about three to four months before I could get an opportunity of seeing the case again, and then his condition was very much improved. The deafness was nearly gone, the cornea was clear and bright; speech had returned so far as to enable him to say a few words he had been accustomed to use when able to talk before. He "took notice," and would laugh at certain antics of play which the other children performed for his amusement. The screaming and maniacal fits had completely disappeared, as had also the nasal discharge; he slept and ate better, and his appearance generally was improved. But his legs were decidedly worse, and he could no longer walk; there did not appear to be any more wasting of the limbs, and sensation was little, if at all, affected. Altogether I had considerable hopes of him, and thought it possible specific treatment might yet prove of benefit. But on April 28th, 1899, five months after operation, and whilst still apparently improving, he was suddenly seized with a "fit," and was dead before Dr. Birtwell could reach him.

Unfortunately Dr. Birtwell was unable to make a *post-mortem* examination, and so the case remains incomplete. But I think that it was sufficiently encouraging to warrant similar proceedings should such a case ever occur to me again.

I had also the advice and assistance of the late Dr. Hall, of Durban, at the operation.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

PIN INTRODUCED INTO THE EAR PASSED *PER ANUM*.

THE following case appears to me to be worthy of record on account of its rarity: A man aged about 22 consulted me on the evening of May 21st. He had suffered from otorrhœa and deafness for many years, the deafness being more pronounced on the left side. Just before I saw him he had been trying to remove some cerumen from the right external meatus with an ordinary small pin, when it suddenly slipped inside. He came at once to see me, and I proceeded to get out a mirror and speculum, and lighted a lamp for the purpose of examination. Whilst I was making these preparations he exclaimed suddenly that "he felt it in his throat." I examined the throat, passed a probang, but found nothing. I then examined the ear most carefully with a speculum, but could find no pin.

The patient was still dissatisfied, so I advised him to see Mr. J. W. Langdon, Ophthalmic and Aural Surgeon to the Preston Royal Infirmary, early in the morning. He did so, and Mr. Langdon wrote to me saying he could find no foreign body, but there was a perforation of the right membrana tympani with a discharge.

On May 23rd I again saw the patient, who said he had no pain in the ear or throat, but wanted some medicine for a "pain in the stomach." A few days later he informed me that on May 24th, when he was about to have a motion of the bowels, he felt a slight pricking sensation. He examined the stools, and to his great relief and satisfaction found the missing pin.

ALLAN I. PETYT, M.A., M.B., B.C.Cantab.
Longton, near Preston.

OSSIFIED STYLO-HYOID LIGAMENT SIMULATING A FOREIGN BODY.

THE case recorded by Mr. G. W. Farmer in the BRITISH MEDICAL JOURNAL of June 9th, in which he removed an ossified stylo-hyoid ligament in mistake for a foreign body in the pharynx, reminds me of a case I had some four or five years ago, when I was House-Surgeon at the Chichester Infirmary. A man came to the infirmary one evening and said that whilst eating some hashed rabbit he had swallowed a piece of bone and that this was still sticking in his throat. I examined the pharynx with a mirror and could see nothing abnormal, but on exploring with my finger I felt an elongated hard substance beneath the mucous membrane on the left side behind and slightly below the posterior pillar of the fauces. The patient said that that was the place the bone was. Whilst wondering how the foreign body could have got beneath the mucous membrane without any laceration being seen and thinking of the best way of removing it, it suddenly flashed across my mind that the stylo-hyoid ligament was sometimes ossified, and on carefully examining again I came to the conclusion that the substance I felt was an ossified ligament. I satisfied the patient that there was nothing in his throat and he went home quite contented.

I also failed to feel any ossification in the ligament of the opposite side. It would be interesting to know if the ligament on the left side is more frequently ossified than that on the right. Quain and MacAlister are both silent on this point in their works on anatomy.

South Kensington, S.W. C. FRANK WIGHTMAN, F.R.C.S.Eng.

A METHOD OF MOUNTING MOSQUITOS IN GLYCERINE.

REGARDING Dr. Rees's article in the BRITISH MEDICAL JOURNAL of June 18th, p. 1468, allow me to give my own experiences, without in the least detracting from his valuable advice. In place of killing aphides, mosquitos, etc., I have by coaxing allowed them to get entangled in a drop of glycerine, and with fine needles have put them into the most advantageous position. Chemistry will explain how glycerine menstruum exhibits the structure of these animals better than a menstruum such as balsam, which refuses absolutely to mix with aqueous media. Care and patience are required to prevent injury and air bubbles in mounting. Glycerine jelly may be used in place of the pure glycerine, made with gelatine water and glycerine. Death in the menstruum seems to make the appearance more natural.

Redhill. JOHN REID, M.D.

A MILD CASE OF TETANUS: RECOVERY IN FOUR DAYS.

A GIRL, aged 8 years, received a long scratch from a pin on the outside of the left arm an inch or two above the elbow. The wound became painful and finally ulcerated. Four weeks after she had received the scratch, I was called to see her. I found her seated in a chair, evidently in pain, holding her head down on the right side. Risus sardonicus was present. I diagnosed tetanus and dressed the small ulcer

(about the size of two peas) with carbolic lotion (1 in 40) and ordered the child to be kept quiet in bed and to take 15 grs. of potassium bromide and 5 grs. of chloral every four hours. She passed a restless night and was much worse next day. She then had severe paroxysms of pain every half hour in the right temporal region and about the diaphragm. She swallowed liquids easily, but was distressed by any noise. On the third day she was much better, the stiffness of the neck and the risus sardonicus had subsided, but the movements of the neck were restricted. Towards evening she perspired freely. On the fourth day she could move her head easily and was free from pain. The wound healed and she got well slowly. I have never seen a case of this nature before, and I therefore think it worth recording.

Cardiff. H. H. TIDSWELL, M.R.C.S., L.C.R.P.

REPORTS
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

NORTH LONDON CONSUMPTION HOSPITAL, HAMPSTEAD.

OPEN-AIR TREATMENT APPLIED IN CASES OF INFLUENZA.

(By WILLIAM M. BERGIN, M.B., Registrar and Pathologist to the Hospital.)

FOR permission to publish the notes of the following cases I am indebted to the members of the honorary staff of the hospital, and in relation with the very widespread pulmonary complications which occurred in the influenza epidemic of this year, especially in the London district, some interesting points present themselves.

On January 2nd, 1900, an epidemic of influenza broke out in the hospital. The resident and nursing staff were first attacked, but symptoms soon appeared among the patients, the women suffering considerably more than the men. In all, 17 persons were treated, in addition to several others whose symptoms were not sufficiently severe to merit the diagnosis. The residents and nurses were treated in their own rooms, fires being kept up, and the ordinary amount of ventilation allowed, but the patients were all treated in full "open-air" wards, that is to say, those in which all the windows and ventilators were wide open day and night, so that although there was always a fire in the wards during the winter, the temperature in them was seldom more than two or three degrees higher than that of the atmosphere outside. The weather during the epidemic was not frosty, but the average temperature in the "open-air" wards was 42°, the range being 37° to 47°.

In addition to this difference of treatment it must also be noted that the patients, all of whom were suffering from pulmonary tuberculosis in one form or another, were sent to bed directly they complained, whereas the nurses concealed their indisposition until they were compelled to give in, several of them at this period having temperatures of 102° or 103°F. The symptoms were similar in all the cases, namely headache, pain in eyeballs, and severe pain in the back and limbs, without any swelling or tenderness of the joints. Abdominal symptoms were entirely absent. The medicinal treatment was practically the same in all the cases, small doses of sodium salicylate being given frequently with the ammoniated tincture of quinine, and gradually reduced as the pain subsided.

Of the 10 patients treated in the "open-air" wards 6 had all the above symptoms severely without their temperatures rising above 99°, whilst of the other 4 none had temperatures above 102°, and in no case did the fever last more than two days. Careful examinations in each case failed to reveal the signs of any complication, but in 1 patient the pulmonary lesion had distinctly increased during the fortnight after convalescence. Of those who were treated in the warm bedrooms the following is a summary:—

	Highest Temperature.	Period of Fever Days.	Complications.
J. W.	103.4°	4	Nil.
M. C.	103.6°	4	Slight broncho-pneumonia.
M. N.	102.6°	4	None detected, but there was a temperature of 99.0° to 99.6° for 10 days after.
M. R.	100.6°	4	Very slight bronchitis.
C. P.	102.0°	4	Bronchitis.
M. E.	100.4°	5	Nil.
P. B.	100.4°	3	Bronchitis and dry pleurisy.

From the foregoing it will be seen that those patients treated in the "open-air wards" had: (1) Lessened range of fever; (2) much shorter duration of fever; (3) freedom from complications. How much of this result must be apportioned to their immediate treatment, compared with the somewhat delayed treatment of the nurses, and what the effect would be upon those not already acclimatised, is impossible to say, but it seems to point strongly to the advantage of much more fresh air than is usually allowed to patients suffering from ordinary diseases. And surely many patients in our general hospitals would be greatly benefited if the ventilation were doubled, though this would of course entail the necessity of extra clothing and artificial heat.

REVIEWS.

TUBERCULOSIS, ITS NATURE, PREVENTION, AND TREATMENT, WITH SPECIAL REFERENCE TO THE OPEN-AIR TREATMENT OF PHTHISIS. By ALFRED HILLIER, B.A., M.D., C.M. London: Cassell and Co. 1900. (Crown 8vo, pp. 256. 7s. 6d.)

As Dr. HILLIER remarks in his preface, tuberculosis may be studied from many points of view. The study of its etiology takes us into the domain of public health as well as into the laboratory of the bacteriologist. There is already a voluminous literature dealing with prevention, and the views on treatment have become completely revolutionised within the past few years. To those who do not wish to make tuberculosis the subject of special study, "a concise manual dealing with all the hydra heads of tuberculosis in one volume" will be of great service. This is what Dr. Hillier has set himself to provide in the present work. The nature of the disease is explained by Koch's discovery of the tubercle bacillus, and the essential condition for the establishment of tuberculosis (the introduction of the bacillus into a suitable soil) is early insisted on. We could wish that more stress had been laid on the factors which tend to create a favourable soil in the human body, for the predisposing causes include many which may be prevented or removed. The different clinical forms of tuberculosis indicate the variety of situations in which the disease may manifest itself. This chapter, which is based on the classification given in Osler's *Practice of Medicine*, suffers from the necessity for compression.

Chapters upon the Communication from Man to Man and from Animals to Man lead up to the precautions which are necessary for prevention, whether they concern the details of everyday life or the regulations which may be framed by public bodies. In discussing prevention by legislation or by public bodies, Dr. Hillier uses the Reports of the Royal Commission on Tuberculosis to construct a scathing commentary on the inadequacy of present legislation in the prevention of tuberculosis.

The chapter on Treatment is almost entirely restricted to a description of the "open-air" treatment, and of various sanatoria where this treatment is carried out. Numerous illustrations give interest to the description of these institutions. In an appendix some of the leaflets published by the National Association for the Prevention of Tuberculosis are reproduced, together with the directions for applying the tuberculin test in cattle, and the recommendations with regard to meat and milk of the second Royal Commission on Tuberculosis.

The book appears at an opportune time, and will be useful to many who desire a summary of our present knowledge of tuberculosis, and of the methods recommended for its pre-

vention and cure. Both author and publishers may be congratulated on a little book which should have a wide circulation.

BURDETT'S HOSPITALS AND CHARITIES, 1900. (Being the Year-book of Philanthropy and the Hospital Annual.) By Sir HENRY BURDETT, K.C.B. London: The Scientific Press. (Crown 8vo, pp. 958. 5s.)

WE welcome each reappearance of this annual, whose worth is now so well known that it has become indispensable to those engaged in the management of old hospitals or construction of new ones. Each reissue, of course, follows the same plan, but each contains preliminary chapters dealing with the topics of greatest importance at the moment; and those prefixed to this volume treat of the great question whether the hospital system of London rests on a sound financial basis, or whether there is a near prospect of what is sometimes called "the municipalisation" of the hospitals.

On this subject Sir HENRY speaks in no uncertain tones. He divides the metropolitan hospitals into three classes: (1) those which have invested funds amounting to less than three years' ordinary expenditure; (2) those having such funds amounting to between three and five years' ordinary expenditure; and (3) those having more than five years' expenditure. These comprise all the hospitals except St. Bartholomew's, which is wholly and adequately endowed. There are thirty-five in the first or poorest class, none of them being hospitals with medical schools attached. After giving the main details of each, Sir H. Burdett thus speaks:

He would be a bold man who would be prepared to contend, after considering the facts we have produced in regard to this minority, representing the least prosperous of the London hospitals, that the support extended to the London hospitals under the voluntary system at the present time was so inadequate that there was no course left, if the needs of the sick and suffering were to be fully supplied, but to abolish the voluntary system, and make the whole of the London hospitals rate-supported. The only possible ground for any such contention, in view of the fact that wherever rate-supported hospitals exist they are frequently found to be the least efficient of institutions of the kind in the world, has been heretofore based upon a belief that the financial condition of the London hospitals was so unsound as to make it impossible for those responsible for their management to continue to keep them open, and to maintain them in efficiency. We have shown here already, and in former years, that the present condition as to the volume of charity as represented by the contributions to the metropolitan hospitals, despite all the set-backs of special funds and other claims in recent times, displays a continuous tendency to increase (p. 73).

In the second class, containing 21 hospitals, we find 6 out out of the 12 hospitals with medical schools: while the third and richer class numbers 18 only, and contains the remaining 5; St. Bartholomew's being, as above stated, excluded from the classification. This classification proves, in Sir H. Burdett's judgment, that—

A substantial majority (39) may be regarded as financially safe, when tested by the position which they occupy as permanent institutions, possessing an adequate protection in the form of invested funds (p. 77).

This is a most encouraging opinion from a man of such wide knowledge of hospital management. He goes on to argue that an accurate knowledge of the large reserve of capital at the disposal of the London hospitals—which he estimates at four millions—far from checking subscriptions will, on the contrary, stimulate the public to persevere in the support of these noble institutions. We hope our readers will understand that we give this view of the financial position of our hospitals not as our own but as that of an author of no mean capacity and experience. For ourselves we confess we should have put the level of financial security higher that the possession of three years' expenditure. But in one particular—and that a most important one—all workers in the cause of the hospitals will agree with Sir H. Burdett, namely, in urging "the value of precise statements" in appealing for funds. He says with undeniable force that

the most powerful appeal they (that is, hospital officials) can issue is one which shall confine itself to the briefest statement of the actual needs and circumstances of the moment, and which shall be audited as to figures so as to secure accuracy .....Let us have nothing but truth, freedom from exaggeration, precise statements of fact (p. 79).

We would most earnestly recommend these pages to the careful perusal and intelligent criticism of all hospital managers.

There are many other most interesting topics treated of in this work which our space forbids us to discuss here. We would first refer to the newly-founded "League of Mercy" in connection with the Prince of Wales's Fund. Every hospital subscriber is invited, in joining this League, to engage to find either twenty other subscribers of 1s. each or more, or at least one honorary member who will subscribe a guinea a year through the League. Further experience will show how far this idea can be practically carried out. There are no further references to the Prince of Wales's Fund.

Another very interesting chapter refers to the construction of hospitals. It seems that at Belfast the old attempt to dispense with natural ventilation, and to ventilate the wards by mechanical means only, is being repeated. This attempt proved so disastrous in past times (when, it is true, machinery was less perfect than at present), that very careful attention should be given to the results of the experiment.

The above are the most striking features of this year's issue of this most useful book. It has taken an assured position as a book of reference, and the present volume will worthily maintain that position.

ENCYCLOPÆDIA MEDICA. Under the general editorship of CHALMERS WATSON, M.B. Vol. II—Brachial Plexus to Digestion. Vol. III—Diphtheria to Food. Vol. IV—Foot to Hernia. Edinburgh: William Green and Sons. 1899. (Roy. 8vo. 25s).

THE second volume of the *Encyclopædia Medica* appeared with admirable promptness at its promised time, namely, three months after the first volume, and the third is now in our hands. The articles are largely contributed by members of the younger generation of practitioners, who are fully in touch with the most recent advances in the subjects in which they have already made their reputations. Thus, Mr. Herbert Allingham writes on colotomy, Dr. Risien Russell on the cerebellum and cerebral tumours, Mr. Tubby on deformities and on bursæ, Dr. R. T. Williamson on diabetes mellitus, Dr. Goodall on diphtheria, Dr. Glasgow Patteson on drug eruptions, Dr. Wilfrid Harris on electricity, and Dr. Eden on the fœtus.

On the other hand, the editor has enlisted the services of some of the seniors, especially from the Edinburgh School of Medicine, and a note of sadness is sounded by the recent death of Mr. John Duncan, who contributed the articles on capillaries and on electrolysis. There are a number of useful articles on the brain; Dr. Purves Stewart contributes a satisfactory account of chorea, and, in discussing the canine chorea produced by embolism of starch granules, points out that it is essentially a different disease from that met with in the human subject. Dermatitis repens is described by Dr. Radcliffe Crocker, dermatitis herpetiformis by Dr. S. S. Pringle, and capital accounts of dermatitis traumatica et venenata and of erythema are supplied by Dr. A. Whitfield. Another special department—ophthalmology—is excellently served by Messrs. Adams Frost, Hill Griffiths, Lang, Juler, Spicer, and Berry, who write on the choroid, cornea, and cataract respectively; while as contributors to the sections on diseases of the ear we find Drs. Logan Turner, T. Barr, McBride, R. M. Johnston, Milligan, and Messrs. A. H. Cheatle, Yearsley, and Jobson Horne. The articles in the fourth volume which deserve special notice are: that on diseases of the gall bladder and bile ducts by Mr. Mayo Robson and Dr. Farquhar, those on hæmatoporphynuria and hæmoglobinuria by Dr. A. E. Garrod, the clinical section of diseases of the myocardium and endocardium by Dr. Graham Steell, and that on heredity by Professor Arthur Thomson, of Aberdeen.

On the whole, the *Encyclopædia Medica* is fully redeeming its initial promises, and should therefore be a great success.

NOTES ON BOOKS.

THE thirty-sixth annual edition of *Herbert Fry's Royal Guide to the London Charities*, edited by Mr. John Lake (London: Chatto and Windus. 1899. Crown 8vo, pp. 330. 1s. 6d.), contains within a moderate compass a great deal of information of a miscellaneous kind. It includes among other heterogeneous "associations" the Additional Curates' Society, the Royal Society for the Prevention of Cruelty to Animals, the

National Antigambling League, the Sunday Society to obtain the opening of museums on Sundays, and the Sunday Rest Association, several antivivisection societies and the Incorporated Auctioneers' Benevolent Fund.

The Municipal Yearbook of the United Kingdom for 1900, which is edited by Mr. Robert Donald (London: Edward Lloyd, Limited. Crown 8vo, pp. 525, 2s. 6d.) gives much valuable information concerning the work of local authorities. Among other subjects dealt with are the supply of water, gas, and electricity throughout the country, the management of tramways, the erection of artisans' dwellings and of municipal lodging-house, technical education, slaughterhouses, and cemeteries. This *Yearbook* will be of value to all engaged in municipal work whether directly or indirectly.

We have received a portly and elegantly-bound volume, entitled, *Passmore Edwards Institutions* (London: Strand Newspaper Co. 1900. Demy 8vo, 93. 2s. 6d.), containing a description of their founding and opening ceremonies provided by Mr., Mrs., or Miss F. J. Macdonald. The accounts have been condensed from the reports which have appeared in the daily papers. There are 93 pages of letterpress and 74 illustrations, mostly full page, yet it is stated that "nothing exhaustive has been attempted but only a passing glance at what has been done." The volume is a remarkable handbook to one man's extraordinary benevolence.

REPORTS AND TRANSACTIONS.

The Transactions of the Life Assurance Medical Officers' Association for the Years 1898 and 1899 (London: 1900. Demy 8vo, pp. 226) collects in one volume many valuable papers and discussions on subjects connected with life assurance which have already been noticed in the BRITISH MEDICAL JOURNAL. We may mention as of especial interest the address on Heredity in Relation to Life Assurance by Sir Hermann Weber, the papers on the Influence of Heart Disease on Life Assurance by Dr. Theodore Williams, on Extra Rating of Healthy Lives by Dr. Heron, and of Unhealthy Lives by Dr. Symes Thompson, and on Life Assurance Inquiries respecting the Use of Alcoholic Stimulants by Sir Dyce Duckworth.

The Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital (London: C. Skipper and East. 1899. Demy 8vo, pp. 246) for 1898 and 1899 have been compiled by the Medical Registrars and the Surgical Registrar respectively. The volumes are certainly a monument of registrarial method, industry, and patience. Three whole pages in the later volume are given to the occupations of the patients, male and female. The rest is mainly a matter of tables and abstracts of cases. For example, two cases of spinal caries are recorded in some detail, in neither of which was there any material improvement.

The eleventh volume of the *Transactions of the American Pediatric Society* for 1899 (reprinted from the *Archives of Pediatrics*, 1899, demy 8vo, pp. 258) contains several contributions of general interest. Reference may be made especially to a preliminary communication by Dr. R. G. Freeman on the separation of bacteria from milk by a natural process, which depends on the tendency for the bacteria to be carried upwards with the cream (the author maintains that it contains 300 times as many as the milk), which is to be removed, sterilised, and afterwards returned to the milk. A study of 30 cases of congenital heart disease is made by Dr. C. W. Townsend. Dr. J. D. M. Miller treats of acute articular rheumatism in infants under 1 year, and Dr. F. A. Packard gives an interesting paper on urticaria of the mucous membranes (including, for example, angio-neurotic œdema of the larynx), especially in connection with asthma but having, as he thinks, a bearing on such conditions as so-called "stomach cough" and the "sore throat of indigestion."

AT the annual general meeting of the North London Branch of the London and Counties Medical Protection Society, Limited, held on June 22nd at Tottenham Training Hospital, The President (Dr. E. Hooper May) presiding, Dr. Charles Harris (Langford) read a paper on the Use of Motor Cars in Medical Practice, founded on his own personal experience. Dr. Hugh Woods then addressed the meeting on the working of the society, after which the members were entertained to tea in one of the rooms of the hospital.

THE "LIGHT TREATMENT" AT THE LONDON HOSPITAL.

A LIGHT Department for the treatment of lupus and other superficial local skin diseases that depend on bacterial influence has recently been organised at the London Hospital by Dr. Stephen Mackenzie. The methods and apparatus which he uses are almost identical with those of Professor Finsen of Copenhagen, which were lucidly described in the BRITISH MEDICAL JOURNAL of September 30th, 1899, by Dr. Valdemar Bie, of Professor Finsen's Medical Light Institut at Copenhagen.

It may be well before referring to the provision for carrying out this treatment at the London Hospital to recapitulate the principles on which it depends and those which govern the structure of the apparatus employed.

THE PRINCIPLES OF THE LIGHT TREATMENT.

These are mainly three:

1. That the chemical rays of the sun or of the electric light can produce an inflammation of the skin.
2. That they can produce an effect through the skin.
3. That they can kill microbes on, in, or close under the skin.

It will be remembered that if a beam of white light is focussed on a thin glass bulb containing a simple mixture of chlorine and hydrogen gases, the elements unite and the globe explodes with a loud report. If now the solar spectrum be used and the different rays be focussed on the globe, beginning at the red end, the red and yellow produce no effect, but the violet cause as before an explosion. Charcot, as long ago as 1859, expressed the opinion that sunburn or erythema solare was due to the ultra-violet and violet chemical rays. It has been a matter of constant observation among mountaineers that after a day on the snow-fields where there has been no excessive heat, but rather coldness, that severe symptoms of sunburn were felt on the following morning, not limited to the bridge of the nose and those parts on which the direct rays of the sun can fall, but under the chin and on other parts more or less protected from them. Wildmark has advanced evidence that this erythema solare is due to the action of the ultra-violet rays, and Finsen showed that this effect is shared, but in a less degree, by the other more refrangible rays of the spectrum, the visible violet and blue rays.

Godneff advanced a step further when he showed that these chemical rays can blacken silver chloride when placed in sealed glass tubes under the skin of animals, and Finsen demonstrated that this effect was more certain and greater quantitatively when the intervening tissues were rendered approximately bloodless. This he did by placing ordinary silver chloride photographic paper behind the lobe of an ear made comparatively anæmic by compression. Of course it has been for long known that yellow and red solutions can absorb the violet rays of the spectrum, and that if a thin layer of blood be examined with the spectroscope, the red end of the spectrum is visible alone, and so the observation that if the unaltered lobe of the ear be looked through with the spectroscope only a red band is seen, but if through the lobe emptied of blood all the colours are seen might have been anticipated.

That sunlight could kill microbes was first proved by Downes and Blunt, and this bactericidal power was shown to depend especially on the blue, violet, and ultra-violet rays. From the researches of Dr. Bie and others it is known that bright sunshine can kill the bacillus prodigiosus in thin plate culture in an hour and a-half, and that the light from an electric arc lamp of 25 ampères current can kill a similar plate culture at a distance of about 30 inches (75 c.m.) in eight or nine hours. But to produce a sufficiently vigorous effect of utilisable therapeutic value it is necessary to concentrate the bactericidal chemical rays and eliminate the burning rays. Concentrated chemical light, used after the manner of Finsen, it was then discovered, would kill most pathogenic organisms, when growing on a thin film of agar, in a few seconds.

THE APPARATUS AND METHODS OF THE LIGHT TREATMENT.

The problem, therefore, is how to bring to bear on the micro-organisms contained in the tissues of the skin a concentrated yet cool light, or more strictly the chemical rays of light, both

visible and invisible, freed from the heating and illuminating rays. In Finsen's apparatus the power of water is utilised to absorb the ultra red or most caloric rays, and that of blue substances dissolved in it to absorb many of the red and yellow rays. In the case of the sunlight, a hollow plano-convex lens, 8 to 16 inches in diameter, containing a bright blue ammoniacal solution of copper sulphate, is the essential part in achieving these objects. But the resulting light is still too warm for purposes of treatment, so a further cooling mechanism is requisite, and this is applied in the course of the rays just before they enter the skin. It is a hollow lens similar in shape to that just described, but only about an inch in diameter; it is provided with inflow and outflow tubes, through which cold water is kept constantly circulating; and that it may not only be used to cool the light and the skin, but also to exert pressure on the area of skin to be treated, and thus render it approximately bloodless, it is provided with four metal arms diverging from the brass rim to which elastic bands may be attached, so that they can pass across the head or other part, and exert constant traction on the pressure lens. If from any reason the use of sunlight is impossible, then an electric arc lamp of 50 to 80 ampères current (not an incandescent lamp) is used, as its light is very rich in chemical rays. It is necessary that the divergent rays from such a lamp should first be rendered parallel before being converged, concentrated into a focus, and cooled. Shortly described, the apparatus used is a telescope, the large end of which is placed next the lamp, having lenses made of quartz or rock crystal which itself can absorb heat rays, and between two such lenses a length of tube filled with distilled water (copper sulphate solution is not now needed, seeing that the chemical rays are so plentiful) around which cold tap water is made to circulate, in a sort of water jacket, that absorbs still more of the caloric rays. The selection of the source of the chemical rays, whether lamp or sun, depends on the following considerations. The local effects of the light from the electric arc lamp have been found from experience to have, if anything, rather greater therapeutic efficacy than those from the sun, and at the same time the rays have much less heat effect. But in summer when the sky is clear sunlight is preferred, partly because it is not costly, as the electric light certainly is, and partly on account of the beneficial general effects of the open-air during the lengthy *séance*, included in which is the psychical influence of the bright sunshine.

THE LIGHT TREATMENT AS CARRIED OUT AT THE LONDON HOSPITAL.

For the opportunity of inspecting the apparatus and methods of the Light Department, which has now been open at the London Hospital for about a month, we are indebted to the courtesy of Dr. Stephen Mackenzie, and to him and to his able assistant, Dr. J. H. Sequeira, the new facts which the present article contains are to be attributed. The room in which the indoor treatment of lupus is at present carried out is at the end of a substantial iron building, which contains relief wards required during structural alterations of the hospital. Both wards and the room proper to the light department are beautifully light and airy, and, although built of iron, being wood lined, and capable of being warmed by artificial heat, are well adapted for comfort in all weathers. The room, which is kept scrupulously clean, has arranged round its walls glass reservoirs of antiseptic lotions, basins for purifying the hands and arms of the nurses who administer the treatment, nests of pigeon holes for the reception of the dressings and towels of the individual patients, and forms for the convenience of patients waiting their turn. The electric arc lamp with its telescopic tubes hangs, suspended from joists, in the centre of the room. It is precisely similar to that figured in the BRITISH MEDICAL JOURNAL in illustration of Dr. Bie's article, and it bears an inscription that this, the first apparatus of its sort to be used in England, was the gift of H.R H. the Princess of Wales, who also presented the lenses necessary for the treatment by sunlight. In an adjoining building is a dynamo that cost some £200 by which the current supplied to the hospital is transformed from 480 volts to 55 volts, giving a possible current of 50 to 80 ampères, but, as a matter of expediency, a current of 50 to 55 ampères only is used. The whole installation cost about £500. The patients under treatment either recline on light movable iron couches or sit in light rocking chairs, which can be tilted to any desired angle by the simple expedient of placing a block of wood of any suitable thickness under the rocker. The plan which is found to be most expeditious is to focus, as it were, the patient to the light rather than the light to the patient. The nurses who administer the treatment are under the charge of a sister who has, we believe, herself visited the Finsen Institute. They all wear washable overalls and work with sterilised uncovered arms. One is allotted to each patient, and during the sitting she presses the cooling lens on the area of skin to be treated, sitting the while on a high stool. The cooling lenses, as well as the hands of the nurses, are carefully sterilised after each sitting.

For the sunlight treatment a portion of the hospital tennis ground is fenced off with a light scaffolding, on which canvas is to be stretched to give walls for privacy. Similar scaffolding intersects the area to carry water pipes for the cooling apparatus. A wooden table is to accompany each couch to carry the lenses for cooling and focussing the sunshine.

The patients are photographed before, during, and after treatment, and careful records are kept of the attendance of each patient, the duration of the treatment, with notes and diagrams of the particular cases. An analysis of these records, which are kept by Dr. Sequeira, will at the proper time be made public.

There are three sittings for hospital patients every morning, each lasting an hour, and a quarter of an hour is allowed before each in which the patients are arranged and the necessary preparations of the skin made. A diseased area of skin is selected for treatment by Unna's method, which consists in pressing on the reddened skin with a glass spatula, that renders the comparatively healthy tissue anæmic and reveals any yellow lupoid nodules that may be present. The skin is cleansed with oil of sesame, and the diseased area is ringed with an aniline blue pencil. A piece of moistened lint with a hole in its centre corresponding with the size of the blue ring is then applied to the skin, and the patient is ready to receive the concentrated light. A spot of light about the size of a sixpence (1.5 cm. or $\frac{3}{5}$ inch) is allowed to fall on the skin, so that a red ring is visible at the periphery when it is known that the more refrangible violet rays are focussed within it. Dark spectacles are used by the nurses while they keep the cooling lenses firmly pressed on these areas. Elastics are not much used at the London Hospital, as they tend in many cases to abrade other neighbouring diseased skin, and the keeping up of sufficient pressure by the hand gives the nurses no discomfort. It is obvious that before the patients can tolerate even the comparatively slight pressure all raw skin must first be healed by suitable ointments. The light as it reaches the patient feels, we were told by some of the patients, just moderately warm. After the area of skin selected for the day has received its hour's treatment, a dressing of zinc carbonate and lanolin is applied (but if suppuration should subsequently occur, as it very occasionally may, a boric ointment is used), and the patient is allowed to leave. There is at the time no redness, or swelling, or pain—in short, no heat effect; but from six to twelve hours later redness and swelling set in, but without pain, a reaction which is more marked in the skin of the younger patients. At the end of twenty-four hours the reaction is fully developed. Bullæ often form, and there is usually some serous weeping; but there is rarely pustulation, and never necrosis of tissue. The antiseptic precautions which have been described are taken chiefly to avoid the occurrence of erysipelas.

The plan adopted in attacking any diseased area of considerable size, is to begin at the periphery with a circle of rings overlapping healthy skin, and to work concentrically inwards. The tubercle bacilli are destroyed, but the healthy skin is unaffected; the redness persists for a rather long time, and then comes the process of contraction, which leaves a flat, smooth, soft cicatricial area. As continuity of treatment is of importance, and daily treatment extending to months almost imperative in severe cases, it was feared that the patients would not come sufficiently regularly, but that fear has proved to be ill-founded. The local treatment is supplemented by appropriate constitutional treatment; if the patient be anæmic iron is administered, and to every patient cod-liver oil is

given. As a matter of experience there is a gain in weight under the local treatment alone; how much, however, of this is due to the effect of hope and suggestion would be difficult to estimate. In no case has any pyrexia been produced.

The drawbacks of the method are its slowness, taking months; the impossibility of treating with it the affected mucous membranes because of the hitherto insuperable difficulties of focussing the rays to curved surfaces. The diseased mucous membranes are treated after the ordinary fashion by iodine or lactic acid and that treatment cannot with confidence be carried on with the lenses at present in use near the eye for fear of implicating the conjunctiva, but in practice the eye is protected by a pad of damp wool covered with a piece of brown paper.

The advantages of the method are that the results are better than by scraping; there is no pain, there is no scarring. Even if relapses occur the treatment may be quite easily and painlessly recommenced.

Facilities are to be afforded at the London Hospital for the treatment as private patients of that somewhat neglected class—the moderately poor or moderately well-to-do. They are required to bring a recommendation as to suitability from their medical attendant, and to attend daily between the hours of 2 and 5 P.M., and all must be approved by the medical officer in charge of the department.

POSSIBLE DEVELOPMENTS OF THE TREATMENT.

The treatment of lupus erythematosus has not in Copenhagen been nearly so successful as that of lupus vulgaris; only about a third of the cases have done well. The treatment of alopecia areata is, however, decidedly promising. It may yet become a recognised method of treating ringworm and favus. We were informed by Dr. Sequeira that epithelio-mata had been treated in Copenhagen with the modified light on the assumption of their parasitic nature, and that they had done well. It is quite within the bounds of possibility that microbic lesions of more deep-seated organs may be treated by some light modification—say by the Roentgen rays, as recently suggested in our columns.

During the month in which the Light Department of the London Hospital has been in action between 25 and 30 cases have been treated; the results will in due course be given to the profession. We may recall the fact that Professor Finsen has now treated patients in this manner for a period of three years, and in one case at least there has been no recurrence of the disease after a two years' interval succeeding the cessation of the treatment.

PROFESSOR KOCH'S INVESTIGATIONS ON MALARIA.

FOURTH REPORT TO THE COLONIAL DEPARTMENT OF THE GERMAN COLONIAL OFFICE.

THE *Deutsche medicinische Wochenschrift* of June 21st publishes a fourth report by Professor Robert Koch on the work of the German Malaria Expedition, of which he is the head. Translations of the second and third reports appeared in the BRITISH MEDICAL JOURNAL of February 10th, 1900, p. 325, and May 12th, 1900, p. 1183. The following is a translation of the fourth report, which is dated Stephansort, German New Guinea, April 28th, 1900.

THE PREVENTION OF MALARIA.

In my last report I stated that we had tried by the destruction of the malaria parasites in man to bring about the disappearance of malaria, and that in this way we had obtained very favourable results. I am now able to report that this result has not been transient, but has during the course of the last two months shown itself more and more markedly, as may be gathered from the figures given below.

Patients suffering from malaria were admitted into the Hospital for Coloured People at Stephansort as follows:

MALARIA IN STEPHANSORT.

	Chinese.	Malays.
January	13	6
February	6	5
March	3	2
April	1	1

Some sick Malays, almost all of them Ambonese, who had been sent to the hospital from other places, as to whom I shall have something to say later, are not included in these lists.

Among the Melanesians there were on the whole not many cases of malaria, but the number of sufferers fluctuated. In January it was 5, in February 1, in March, owing to the occurrence of some fresh cases among the coolies recently imported from New Hanover.[1] But in April there were no Melanesians in the hospital. Among the Europeans there occurred only isolated cases of relapse, which under appropriate treatment recovered in a few days. There were no instances of fresh contraction of the disease.

Malaria has therefore actually been reduced to a minimum in Stephansort, and this at a time of year which, according to the experience of former years, is most unfavourable in respect of malaria. With the beginning of the rainy season—that is, in November or December, malaria here as a rule increases. It continues to increase more and more, reaching its highest degree of prevalence in March and April, and subsiding in May. This year, owing to the measures recommended by us, malaria for the first time has exhibited an entirely different behaviour. Since the beginning of the present month we have been in the period of transition from the wet to the dry season. In March much rain still fell every day, but from April 1st fairly long intervals without a drop of rain alternated with others in which tolerably heavy falls of rain occurred. We are therefore just in the most dreaded time. There is also no lack of mosquitos, especially *Anopheles*: moreover, from time to time coolies come here from non-malarious districts. In spite of all this, malaria, instead of increasing, has steadily diminished. Moreover, the last cases which have come under observation are not instances of fresh infection, but almost without exception cases of relapse of the quartan type, which according to experience must be counted among the most severe forms and most tends to relapse.

Even these stray cases did not long resist treatment. We are, however, quite prepared for the occurrence of other isolated fresh cases in future from the continuous introduction of coolies from other parts and for the conveyance of infective material to and fro between Stephansort and the neighbouring village of Bogadjim, where nearly all the children suffer from malaria. But the knowledge once gained how malaria is successfully to be resisted, then it will be easy in future to keep the disease at the lowest level.

The condition of the children in Stephansort is particularly noteworthy. Formerly the children, if they were not immediately taken to other districts, were always killed off by malaria, and this was the real reason why families, especially Malays, were unwilling to engage for New Guinea. On our arrival we found only two children, who were both in a most wretched state as the consequence of malaria. Later there were three others who had come here with their parents, and in a few weeks also fell ill with malaria. The children were all placed under treatment. As the result of this, they recovered very quickly, and are now in excellent health.

PROPHYLACTIC USE OF QUININE.

The same measures that answered so brilliantly in the treatment of malaria have also proved very useful for purposes of prophylaxis, as the following instances show:

Of the coolies who came from the Gardner Islands, 47.7 per cent. were affected immediately after their arrival.[2] The sufferers were at once placed under treatment and completely recovered. Those who have remained well up to the present have been taking quinine prophylactically, and not one of them has contracted malaria.

In February a number of Ambonese came to Friedrich-Wilhelmshafen. It has been found by experience that these people are very susceptible in regard to malaria. About one half of them took quinine prophylactically while the other half did not. The former group remained well; of the latter, all fell ill of malaria with the exception of one woman. They were sent to Stephansort for treatment, where they very quickly recovered. At the present time all these Ambonese are in a good state of health.

The two members of the Malaria Expedition have regularly carried out the prophylactic use of quinine, and up till now (four months) they have remained free from malaria.

It is clear, therefore, that human beings susceptible to

[1] IV, 6, in the list given in the last report; see BRITISH MEDICAL JOURNAL, May 12th, 1900, p. 1183, Table I.

[2] IV, 5, of the last report; see BRITISH MEDICAL JOURNAL, May 12th p. 1183, Table I.

malaria in a malarious region can with certainty be protected against infection. I assume, however, that in future men will not trust to the prophylactic use of quinine alone, but will take pains as far as possible to destroy the malaria parasites. The less infective material there is about the less will men be compelled to submit to quinine prophylaxis, which is always somewhat troublesome, and for many people is extremely disagreeable.

CHRONIC AND MILD CASES.

I would draw special attention to a circumstance which revealed itself in our researches, and which is of the utmost importance for the successful fighting of malaria. There are in malaria besides the pronounced cases, which are easily recognised by the clinical symptoms, very many which are not at all or at least not certainly recognisable, and can be diagnosed as genuine cases of malaria only by the discovery of malaria parasites in the blood. Cases in the chronic stage of malaria are to be found in which, after a number of relapses, the familiar symptoms of malaria become gradually less marked. Pronounced attacks of fever occur only exceptionally or not at all. Patients of this description no longer feel themselves obliged to go to the doctor, so that the latter, if he does not make inquiries, generally learns nothing about such cases.

Besides these chronic cases of malaria, I am under the impression that I have also seen a number of others which from the beginning run so mild a course that they never reach the point of development of distinct clinical symptoms, and therefore can be diagnosed only by examination of the blood. In this respect therefore malaria behaves just like the specific epidemic diseases, cholera, plague, etc., and as with these it is precisely the slight cases which are found by experience to require the greatest attention in combating the scourge, so it is with malaria. If one confined one's attention to those patients who go of their own accord to the doctor, one would remove only a fraction of the malaria parasites. There remains therefore no other course than to subject all men who are in any degree liable to harbour malaria parasites, and above all children and recent immigrants, to blood examination from time to time in order as far as possible to discover all hidden cases and render them harmless. This is a very tedious and time-consuming undertaking, but I know not how otherwise we can proceed in order to suppress malaria quickly and certainly. We have worked here exactly on those lines, and I am convinced that it is only by this means that our efforts have been crowned with success.

After all these experiences I consider myself warranted in asserting that *we are in a position, by means of the procedure which I have described, to make every malarious region, according to circumstances, wholly or nearly free from malaria.* The only requisites are the necessary number of doctors and a sufficient supply of quinine. In the case of an intelligent and obedient population it will not be difficult to carry the struggle against malaria to a successful issue. It will be more difficult in uncivilised regions, where the natives know nothing of European medicine. Even in New Guinea the natives are not easily induced to take medicines, but I have often succeeded by persuasion and small presents to get them to allow quinine to be given to their children. I believe, therefore, that in time we shall attain our object with these people.

MALARIA-FREE DISTRICTS IN NEW GUINEA.

Towards the end of March the opportunity presented itself to me by a journey in the New Guinea Company's coolie ship *Herzog Johann Albrecht* of getting to know some other parts of the colony. I availed myself of this chance, and in the course of a few weeks I was able to collect a number of interesting observations concerning malaria, of which I will, in order not to be too prolix, present the following.

My conjecture that the whole coast of German New Guinea is malarious has been on the whole confirmed. In Finschhafen and all the Jabim villages lying to the south of it I found almost the same conditions as were described in the previous report as to the villages of Astrolabe Bay, Bogadjim, and Bongu. The same holds good of the tolerably thickly-populated coast of the Huon Gulf to Cape Parsee, to which the journey extended. But to the north of Finschhafen in the lands laid out in terraces where there is no virgin forest but only pasture, and which therefore have the appearance of steppes, I found on the coast a village which was entirely free from malaria. Probably there are other villages on that stretch of coast which are similarly exempt. This agrees with the experience of the New Guinea Company in regard to coolies engaged in those districts. They are much less resistant than the Jabims living to the south and the Bukauas of the Huon Gulf.

Going further in an easterly direction one much more finds non-malarious places. Thus the Siassi Islands (lying at the southern point of the large volcanic island of Rook) are probably quite free from malaria. Of Manlott Island, where there is a trading station, I can assert this with certainty; but likewise on Aramut Island, where I could procure only a small number of children for the purpose of blood examination, I met with no case of malaria. Nor was any case found on the north-west coast of New Pomerania opposite the Siassi Islands.

It looks, therefore, as though malaria had not yet reached those regions. They nowise differ in regard to climate, soil, vegetation, and water from the other islands, for instance the Tami Islands, there are very malarious. The conditions in the French Islands are peculiar. The largest of these—Merite—which has 1,000 inhabitants, is entirely free from malaria. From this island coolies were engaged a few years ago, and in the first half year most of them died of malaria. Therefore it has never happened since that coolies have come from that island. The coolies from the French Islands mentioned in the last report, who as the result of the examination in Stephanort shows, must have come from a malarious region, belong not to the island of Merite, but to Deslac Island, the most easterly of the group of the French Islands. On that island I found the children procured for examination almost universally suffering from malaria, and thus the diagnosis previously made at a distance was fully confirmed.

It is easy to see of what importance in relation to the engagement of coolies in New Guinea it must be to learn the distribution of malaria, so as to be able to act according to knowledge.

As this journey has been so fruitful, I propose within the next few days to proceed in the same ship to the eastern part of the Archipelago, principally to New Mecklenburg and New Hanover.

THE RADICAL FEDERATION AND THE PRINCE OF WALES'S FUND.

WE print below the report of the Executive Committee of the Prince of Wales's Hospital Fund upon a memorial sent to them by the Metropolitan Radical Federation. What connection there can be between any particular party in politics and any particular opinion about London hospitals passes our powers of understanding. Nor should we willingly attribute to any school of political thought the narrowness and ignorance which this memorial displays. The Radical party have good reason to complain of the memorialists for connecting them with so puerile a composition. The specific statements of the memorial—if such a term is applicable to these vague and half unintelligible utterances—are, however, so well dealt with, and their folly so completely exposed in the Committee's report, that we need not spend much space on them.

One thing only of any real importance seems to us to come out of the memorial—the obstinacy with which the vulgar, both educated and uneducated, cling to the idea that medical research must necessarily be cruel, and medical experiment unjustifiable. If this were so, of course medicine, which has been of late one of the most progressive of all the sciences, would be doomed to perpetual stagnation, for it is only by experiment that any progress can be made in any art or science. If a new medicine is tried, if a new operation is devised, the first trial of either is an experiment. Yet the sapient persons whose views the Radical Federation embody are animated by an undying hatred of our schools of medicine because they say physiological experiments are performed in them, and of our hospitals because, according to them, patients are "experimented on" by "medical doctors and students." There is no truth whatever in these statements—at least, in the sense which their authors mean them to convey. No physiological experiments are performed in

our schools, as far as we know, which involve any cruelty whatever; and certainly those who, like these memorialists, attack our schools, have never adduced a single fact to show that the humane provisions of the Act under which licences are granted have ever been violated. No experiments are ever performed in our hospitals by the medical officers, beyond the trial of new remedies or new operative procedures which they would be perfectly willing to have tried on themselves or those dearest to them in similar circumstances. As to the students experimenting on the patients, the very assertion is ludicrous, and shows how completely ignorant the person who makes it is of the matter about which he affirms.

The question how far the governors of a hospital are justified in spending some part of their funds on the medical school is one on which competent authorities differ. Those funds doubtless are contributed, not for the furtherance of medical education, but for the treatment of the sick. Yet the better treatment of the sick is the object of medical education, and most governing bodies perceive that the hospital, if deprived of a medical school, would, as has often been pointed out, be obliged to spend large sums on the salaries and maintenance of the resident medical officers now furnished by the schools. But it is clear that no considerations of this sort disturb the ignorant fanaticism of people like these memorialists. "Medical schools," they say, "are hotbeds of vivisection; Down with them! Every penny given to them is an outrage on humanity."

The Committee of the Prince of Wales's Fund will, we fear, find facts and good sense alike thrown away on the persons whom they directly address. But the general public will, we believe, take a different view of the matter from that which satisfies Mr. Stephen Coleridge and the Radical Federation.

Report of the Executive Committee of the Prince of Wales's Hospital Fund for London upon the Memorial to His Royal Highness the Prince of Wales, K.G., from the Council of the Metropolitan Radical Federation, dated March 17th, 1900.

The memorial (which incorporates an article in the *Contemporary Review* by the Hon. Stephen Coleridge), after stating that the Federation represents 40,000 to 50,000 members of working men's Radical clubs and other Radical organisations in London, and that the mass of the population, by reason of the dread of entering infirmaries caused by the social ignominy that it incurs, and by the social and political disqualifications that accompany it, are absolutely dependent on the London hospitals for the skilful treatment of their more serious diseases and accidents, sets forth two matters of complaint, which are summarised as "one of the gravest scandals of our time." They are as follows:

1. A widely-spread idea that there is too much a tendency nowadays on the part of medical doctors and students attending the London hospitals to regard the patients that come under their hands as so much material for experiment, and the memorial in this connection says: "It seems to be an axiomatic truth that if experiments must be made on a living subject, the proper subject must be the person of the patient himself." An inference is drawn that the popular suspicion is based on sufficient ground.

2. That grants of money from the general receipts of hospitals are devoted to medical schools: that since the inauguration of this Fund such grants have been increased; that certain hospitals in London in receipt of large sums of money from the Prince of Wales's Hospital Fund, allocate considerable grants of money from their general receipts, among which the contributions from the Prince of Wales's Fund figure, to the medical schools and to the medical training of the students attending the schools of those hospitals. And in the said article the writer, after referring to your Royal Highness's statement in 1897 that there was no intention of devoting any part of this Hospital Fund towards the support of the medical laboratories, says: "Upon the Committee of the Prince of Wales's Hospital Fund, therefore, there lies the heavy responsibility of disregarding His Royal Highness's clearly-expressed beneficent intentions."

With regard to the first allegation, the Executive Committee, under whose direction the hospitals have been recently subjected with their own accord to careful and expert inspection, are deliberately of opinion that it is unfounded in fact. No particulars are given which can be dealt with by evidence in detail. The charge is general, founded on an alleged "widely-spread idea," and on what "seems to be an axiomatic truth." The Committee from their knowledge of the hospitals doubt, and have reason to doubt, that any such idea is at all widely spread, and they are sure that, whether widely spread or not, it is erroneous and does grave injustice both to the medical doctors and the students. The axiom appears to them questionable, and the inference drawn from it unjustified. Upon this loose and somewhat scandalous charge against a great profession they do not consider they are called upon to say more.

The argument of the second allegation resolves itself into this. The Fund subscribes to a hospital, a complicated organisation, the main object of which is surgical and medical aid to the poor. The hospital comprises a medical school; therefore the Fund supports the medical school. The Executive Committee loyally adhered to your Royal Highness's statement in 1897 that there was no intention of devoting any part of the Fund towards the support of medical laboratories. The Honorary Secretary of the Metropolitan Radical Federation has already been informed by the Executive Committee of this Fund that no grant has been made from this Fund towards the support of medical laboratories either in the case of the Middlesex or any other hospital, and that all hospitals applying are considered according to their needs and merits as institutions for the relief of the suffering poor. The utmost that can be made of the charge is that some minute unascertained portion of a grant for general purposes may have percolated under the administration of the hospital concerned into a medical school or laboratory; but even this has been guarded against, and so far as the Committee can ascertain no such percolation has actually occurred.

The awards made by this Fund to the hospitals have been made with certain conditions, following as nearly as possible the recommendations of the visitors, who have inspected and reported upon them, and these awards and the objects for which they were made are stated in the annual reports of the Fund, and have also been published in the public press. In no case can there be found in these reports an award given for a medical school or laboratory.

Nor can it be fairly said that the hospital authorities have in fact used any part of such grants for medical schools and laboratories. It is alleged that certain payments in connection with the schools have been increased since this Fund was started, but even if this be so it by no means follows that such increases were made in consequence of the help given by this Fund to the hospitals in question. In three cases (Middlesex, London, and St. Mary's) out of the four quoted, the receipts of these hospitals, excluding any grant from this Fund, were considerably over £40,000 more in 1897 than in 1896. These hospitals had, therefore, much greater resources out of which larger grants could have been made to the schools quite irrespective of any grants from this Fund. In the remaining case, that of Guy's Hospital, where £116 is mentioned as being paid for the school in 1896 and £595 in 1897, the hospital's receipts, including £8,000 from this Fund, were less than those of 1896, thus giving a result antagonistic to the theory of greater funds, greater help to the schools. There is no reason for supposing that Guy's, any more than the other three hospitals, used the contributions from this Fund or any part of them for the purposes of the medical school or the laboratory.

It is to be observed that, accepting as correct the sum stated to have been for the benefit of the schools, they do not rise or fall in proportion to the grants from this Fund, and have from this point of view no correlation with such grants; indeed, it is quite clear that the amounts paid in connection with the schools, which bear only a very small proportion to the total annual expenditure of the hospitals, are determined by factors other than the receipts from the Fund. In none of the hospital accounts does it appear that any part of the grant from this Fund has been allocated to the schools. In the case of the Middlesex Hospital, which is given special prominence in the article, £600 is disbursed in 1897 in connection with the school, forming part of a total annual expenditure of £30,000. The grant from this Fund in 1897 is quoted in the article as £1,000, but as a matter of fact the amount was £2,925. Looking at the varied items of receipts, it is not fair and reasonable to infer that because money from this Fund is included in such receipts any part of it must necessarily have been used for the school, especially when it is shown that among the other receipts there are annual dividends of £6,615, of which £2,076 are for the Cancer Fund. It would be more fair and reasonable to assume that a portion of such dividends is properly available for school purposes, and this presumption is borne out by a recent statement in the public press by Sir Ralph Thompson, who refers to some bequests to this hospital, which are given not only for the cure and care of patients suffering from cancer, but also for the purpose of investigating and promoting a general knowledge of treating it.

In administering this Fund the Committee have endeavoured in all cases to aid the hospitals in the manner best suited in the case of each hospital to benefit the sick and suffering poor of London, and they have no reason to believe that the eminent authorities who are associated with the large and important hospitals that have medical schools have done otherwise than act to the best of their ability in promoting the highest interests of the hospital patients.

BANQUET TO SIR WILLIAM T. GAIRDNER.

SIR WILLIAM T. GAIRDNER, Professor of Medicine in the University of Glasgow, was entertained at a banquet on June 19th by his medical and other friends in the West of Scotland, on the occasion of his shortly leaving Glasgow to reside in Edinburgh. Principal STORY presided over a distinguished company, which numbered about 140.

The customary loyal and patriotic toasts having been honoured,

Sheriff BERRY proposed the toast of "The Medical Profession." After expressing his sorrow at parting with so old a friend as Sir William Gairdner, he went on to recall a curious comparison that had been made between the three so-called learned professions. Supposing the possibility of these professions going "out on strike," he considered that the world might be able to get on for a time without law, or even the Church, but they could not get on for a day without the medical profession.

Sir WILLIAM TURNER, of Edinburgh University, in responding, referred to a speech of Mr. Gladstone's in which the professions of medicine and politics were compared, and the former considered the superior. Proceeding, Sir William Turner referred to his long friendship with Sir William Gairdner, and to the great influence he had had on the medical profession of Scotland. There was no one who had worked at his profession from a higher standpoint than William Gairdner.

Principal STORY, in proposing the toast of "The Guest of

the Evening," referred to the number of changes that had recently taken place in the Senate of the University. Sir William Gairdner was going into retirement, but it was impossible to think of him as being inactive and unoccupied, and no doubt the evening of his days would be devoted to the benefit and enlightenment of many. No better representative of all that was best in Scottish medical science than Sir William Gairdner had existed, and when he left Glasgow the medical profession would lament the departure of their veteran leader, and the University the withdrawal of an illustrious member who had won for himself European fame.

SIR WILLIAM GAIRDNER was received with loud applause, and, in replying, pointed out that his connection with the University of Glasgow was almost exactly the middle milestone of his life. He had lived for 38 years before he was a professor, and he had lived for 38 years afterwards; and if he put to himself the question whether the former or the latter 38 years was the better and more fraught with agreeable associations and with real permanent feelings of happiness, he was somewhat puzzled to answer. On the whole, however, he rather thought he should prefer the latter period. At all events, it had been to him a period of singular happiness, peacefulness, and enjoyment, and even now he really did not feel that the toil or the infirmities of life were so pressing on him in any way as to make his life less enjoyable than it was before. He only remembered two things he had had to ask for—the one was his professorship, and the other was his wife; and all the rest had come to him, in spite of himself as it were. He most heartily believed that many people made themselves unhappy, and destroyed to a great extent the value of their lives, by going about perpetually asking for all sorts of things, and perpetually indulging in grudges because they did not get them. Lord Kelvin had said on the occasion of his jubilee that the chief impression left on his mind was one of failure. What he meant by that was, that if he compared his accomplished work with the ideal he had set before him, his work had been a failure. There was a principle at the bottom of that remark. Every man who had come to his (Sir William's) time of life, and who looked back upon his career, would pass exactly the same judgment upon it as Lord Kelvin did on his own. Most of them, perhaps, were in the habit of comparing themselves with their neighbours. That was a false position in which to place themselves, and could never lead to a satisfactory appreciation of their objects in life. The true measure was Lord Kelvin's measure. They must measure themselves not against their neighbours, but against the work God had given them to do. In conclusion, Sir William thanked the company for their kindly welcome. They were giving him a solace in his retirement that was not a little needed; for it was a great tearing up of the roots, a tearing away from the associations of nearly forty years.

THE MEDICAL DEFENCE UNION.

THE usual monthly council meeting of the Medical Defence Union Limited was held at the registered offices on June 21st, Dr. WALTER GRIFFITH, F.R.C.P., F.R.C.S., President, in the chair. An election of candidates took place, the total number of new members being 270.

The Granting of "Diplomas" to Midwives.—The GENERAL SECRETARY read a draft letter he had prepared in the matter of a report to the General Medical Council concerning the granting of certificates to persons other than medical practitioners by certain associations and lying-in institutions, which certificates were taken by the holders as qualifying them to practise as midwives. The Council adopted the letter, and ordered it to be forwarded to the General Medical Council, with a recommendation from the Union to the following effect:

That it is desirable, in the interests of the public that medical practitioners, either individually or collectively by associations should not be allowed to issue any document which in any way can be taken by the holder or the public as granting authority to practise, or which can be used to cover any practice of medicine, surgery, or midwifery, saving in the case of persons examined by duly appointed examining bodies under the supervision of the General Medical Council through their inspectors of examinations.

Directions were given to the Executive to call the attention of the Council of the Royal British Nurses' Association to the heading in their *Register of Nurses*, Appendix B, and also to the use of the words "Diploma London Obstetrical Society," etc., appended to certain nurses' names. The Union suggested to the British Nurses' Association that the heading referred to, namely, "List of nurses; members who have obtained certificates qualifying them to act as midwives"—that is, to practise midwifery—was likely to mislead the public into the belief that these nurses were duly qualified practitioners, and that an alteration was desirable in the title to the Appendix.

Lunacy Law.—A report drawn up by the solicitors of the Union *re* the present law relating to the keeping for gain of persons of unsound mind by registered practitioners who possessed no licence from the Lunacy Commissioners, was read and ordered to be entered upon the minutes. The report urged amendments in the Lunacy Law, with regard specially to the definition of a "lunatic," and steps were directed to be taken to bring the question before the Lord Chancellor.

School Board Certificates.—A report in reference to the admission by School Boards of certificates of ill-health of children signed by persons other than medical practitioners duly registered was ordered to be extended and dealt with later.

Other Business.—Owing to the numerous cases which were brought before the Council at each monthly meeting, it was decided to hold Executive Council meetings regularly every fourteen days, in order to shorten the sittings if possible. Action was directed to be taken in certain instances where members were threatened with writs for alleged negligence in cases attended. A report was made by the solicitors on a case of dispute between a medical member and a druggist in reference to the ownership of prescription books kept by the latter which contained solely the prescriptions of patients for whom the druggist had dispensed medicines at the instance and at the charge of the practitioner. A satisfactory settlement of the difference was reported, but it was decided to recommend medical men who handed their dispensing over to local chemists to use their own books, in which the prescriptions could be copied, in order to avoid any possible chance of dispute in future.

LITERARY NOTES.

PROFESSOR WHITLA, of Belfast, has presented to the Library of the British Medical Association a copy of the Chinese translation of his well-known *Dictionary of Treatment* by Dr. Duncan Main, of Hangchow. The translation was originally made for the use of native assistants and students in connection with medical mission work, but it seems to have found favour with a wider circle of readers in the Celestial Empire, for it has rapidly gone through two editions. The last English edition (the third), which was published in 1896, is already out print. We understand that nearly 12,000 copies of the work of have been sold in England and the Colonies, and that a very large American edition has been issued.

The August issue of the *Indian Medical Gazette* will be specially devoted to stone. Mr. P. J. Freyer and Dr. D. F. Keegan have promised papers, and several well-known operating surgeons in India will also send contributions.

We have received the first number of the *Centralblatt für Stoffwechsel und Verdauungs-krankheiten*, a new monthly journal which, as its name imports, takes disorders of metabolism and digestion for its province. It is edited by Professor Carl von Noorden, of Frankfort, who is recognised as an authority on diet and digestion. He is assisted by Dr. Ernst Schreiber, *Privat-docent* in the University of Göttingen. To judge from the first number the new *Centralblatt* will be a useful addition to periodical medical literature. It is published by Messrs. Vandenhoeck and Ruprecht, of Göttingen.

Staff-Surgeon W. Eames, R.N., H.M.S. *Theseus*, sends us the following interesting historical note on purgation in dysentery:

The treatment of dysentery on the principle of purgation would appear to have had its advocate in the seventeenth century. In a Spanish treatise on medicine dated 1700, lately acquired by me, the author, Dr. Don Francisco Suarez de Ribera, quotes a case of acute dysentery in which the treatment of continuous purgation by means of rhubarb in a decoction of "purslain" was adopted, with the best possible results, and in his commentary upon the disease states that the *rationale* of this form of treatment lies in the continuous removal of "decomposing and offensive substances which cause damage to the intestines by being allowed to remain in them." The treatise, which is entitled *El Tesoro Medico*, is dedicated by the author to Dr. Juan Higgins, at that time Physician to Philip the Fifth of Spain.

BRITISH MEDICAL ASSOCIATION.

SUBSCRIPTIONS FOR 1900.

SUBSCRIPTIONS to the Association for 1900 became due on January 1st, 1900. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to the General Secretary, 429, Strand, London. Post-office orders should be made payable at the General Post Office, London.

British Medical Journal.

SATURDAY, JUNE 30TH, 1900.

THE HEALTH OF THE ROYAL NAVY: PAST AND PRESENT.

IN its forty-fourth annual report the Missions to Seamen Society traces the progress of the health of the Royal Navy as revealed by the medical statistics since the Russian war, which became a turning point for the better in much that affects sailors. The report dwells chiefly on the influence of the improved moral habits of the officers and men, and thus raises an interesting subject for consideration.

That the moral habits of the *personnel* of the Royal Navy have vastly improved since the date mentioned, a naval associate, with long experience of that service, informs us is undoubted, and that though this has been advanced by the chaplains and Scripture readers, as also by the splendid work of Miss Weston and her fellow labourers, there have been other influences contributing to this improvement in the health of the Royal Navy. Among these temperance, improved clothing, diet, and water supply, the revolution in medicine and surgery, the system of recruiting, and the increased attention to sanitation in the naval service are to be noted. The great advance in temperance, in the community generally, has of necessity influenced the *personnel* of the Royal Navy, and afforded better ground for the action of such influences for the improvement of moral habits as we have specified. Our informant remembers, in the early Sixties, a frigate on a foreign station with a ward-room mess of about thirteen officers, five of whom might have been considered intemperate, three might have been classed as virtual dipsomaniacs, two convivial, one a solitary secret drinker, while one of the former had, ere leaving England, replaced a brother officer who had become epileptic from intemperance. The three virtual dipsomaniacs were men of high professessional attainments and ability in their departments, and of exceptionally fine physique. One of these convivial officers subsequently commanded a small vessel on the West Coast of Africa, on board of which, on one occasion, a palaver was to be held. The British representative and the native chiefs had assembled, and the latter "smiled" on the commander on his joining the party; to his mind (evidently alcoholically obscured) this was a personal insult; he "went for" them, they disappeared into the sea, and swam away. Thus ended the palaver, and soon afterwards that officer's career in the Royal Navy also terminated.

The secret drinker having fallen asleep at an Anglo-American club on shore, with his head in a cut ham as a pillow, the scandal was such that his captain decided he must leave the ship; he was therefore invalided home with a modified record of his "case," which reported that his extraordinary conduct on this occasion was due either to intemperance or to temporary insanity; he was therefore given the benefit of the doubt. His special attainments were so valued that his services were retained by the Admiralty; and though not a reformed inebriate, he served subsequently in boys' and naval cadets' training ships, among other appointments, and died long afterwards as an officer on the active list.

This experience was not a singular one by any means in the Sixties, but our informant states that in his later services he did not meet with similar experiences, and that now intemperance among naval officers may be stated to be almost a matter of history.

In the same ship the ship's schoolmaster, bandmaster, and several petty officers were inebriate when opportunity offered; while so little leave was then granted to the crew, that drunkenness among them when returning, or when brought off to their ship on the expiration of their leave, was very great, and considered unavoidable in those times. As regards leave for the crew, on the representations of some experienced and thoughtful admirals and other officers, the Admiralty, at a later date, sanctioned much more liberal and sensible regulations, which were followed by a speedy diminution of drunkenness while on leave, and now it is exceptional.

While it is doubtful if the naval ration has been actually altered since the Russian war, the quality of the supplies has been vastly improved, and "canned" provisions are provided as an alternative to the salt pork and beef, which is also superior to former times. The almost universal introduction of steam propulsion has also abolished the prolonged sailing passages of those days, and fresh provisions consequently are more generally issued. The Royal Navy system of money payments for the ordinary salt and other rations not "taken up" permits of the provision by the men, prior to prolonged cruises, of sea stocks of potatoes and so on, and the establishment of dry canteens in most ships of modern times renders it possible for men to purchase a varied diet from their "savings," or other funds.

Clothing has been mainly improved by the introduction of "cholera belts" for tropical service, while the men themselves indulge more in underclothing and flannel sleeping-suits.

The water supply has been completely revolutionised since the recognition of waterborne diseases. Watering from the shore or from the rivers in which the ship was anchored has now been virtually abandoned, and condensed or distilled water, attainable in a steam navy, is almost the universal source of supply for potable water, save when it is known that water from the shore is perfectly satisfactory. Such fatal outbreaks of cholera as those which occurred in some of the battleships at the time of the Crimean war, and the great mortality from dysentery, in China more especially, are now

matters of history. When these diseases do appear sporadically they can be fairly attributed to water and "mineral waters," locally manufactured, obtained on or from the shore in foreign ports with an impure and contaminated water supply.

In 1857 the ratios per 1,000 of the mean force on the East Indies and China station were: From dysentery and diarrhœa (not clearly differentiated, it is stated): cases, 478.8; invalidings, 17.1; deaths, 17.3: while in 1898, similar ratios were: cases, 12.30; invalidings, 1.2; deaths, 1.06.

The revolution introduced in medical treatment about the middle of this century by Professor John Hughes Bennet, of the Edinburgh University, and in surgical procedure by Lord Lister in the Sixties, combined with the great advance in the knowledge of diseases since the Russian war, have unquestionably largely contributed to the improved health of the Royal Navy. Cholera late in the Fifties was thought by some naval medical officers to be of malarious origin, while others considered that it was due, seeing it occurred chiefly in port, to fresh vegetables and fruit. Sloughing ulceration was by no means uncommon at the same time, in the crowded, ill-ventilated wooden ships, and the *Instructions to Naval Medical Officers* contained special directions for the prevention and treatment of such familiar outbreaks. In 1857, in the *Calcutta*, 84 gun line-of-battle ship, on passage to China, 177 of her crew (or about one-fifth) were attacked with this septic affection, which is stated to have proved prolonged and persistent. In the present day, and for many years past, owing to Lord Lister's discoveries and the vast advance of naval hygiene, such septic affections are unknown in the Royal Navy.

Great advance in general sanitation has taken place on Her Majesty's ships during the period under consideration. Sanitary matters are of general interest in these days ashore and afloat, and the naval commanding officers, as a rule, now support in every way their medical officers in their efforts for the sanitation of the ships of the Navy, and consequently the preservation of the health of the *personnel*. The construction of the ships and the provision of ventilation throughout has also vastly improved.

Great reforms have occurred also in the mode of recruiting since the middle of this century; the seamen class have been for many years all entered as boys or youths, and carefully trained not only for their special duties, but in their manner of life. They are not, as previously, entered largely as men from the merchant navy, or the shore with established habits as to cleanliness by no means conducive to health or easy to reform.

"Contagious diseases"—so-called—are unfortunately still a serious, if not the greatest, source of disease and disability in the Royal Navy, but the possibility of remedying this opens too large a question to be dealt with in this article. Could that source of disease be satisfactorily dealt with, the health of the Royal Navy would leave little to be desired.

INTESTINAL ABSORPTION.

SINCE the days of Lieberkühn it has been the desire of physiologists to prove that the absorption of solutions from the intestine can be explained upon some simple physical basis. Thus the processes of filtration, osmosis, and imbibition, either alone or in combination, have been in turns called upon as affording the requisite explanation. Such theories have alternated with others in which the physical cause has been either wholly or in part rejected as inadequate, and the deficiencies of the physical cause supplemented by the physiological action of the epithelial lining of the alimentary tract. The terms "vital selection" or "physiological action of living cells" are admittedly unsatisfactory; they afford no real explanation of the intimate nature of the process: they are provisional names for what cannot yet be brought into line with precise physical or chemical data, but that such processes do exist is undeniable, and so we must be content for the present with the way in which they are labelled.

The difficulty of the problem does not, however, entirely depend on the impossibility of accurately defining the term vital, but also on the complicated nature of the physical processes to which we have alluded. Since the days when Fischer and Dutrochet inaugurated our elementary knowledge of osmotic phenomena, a great amount of research has been expended in making that knowledge more accurate, and it has now advanced to such a pitch of perfection, and so complex has the study become, that it requires the acumen of a specialist in this branch of physics to grasp it fully in all its applications. It is rare enough to find a chemist and a physiologist combined in a single individual; the combination of a physicist and a physiologist is scarcer still. Even so eminent a man as the late Professor Heidenhain did not fully comprehend the nature of osmotic processes, and his epoch-marking work on absorption consequently suffers. The subject, however, has now been taken up by Professor Waymouth Reid, who has made a life-study of such phenomena, and the work which he has recently published must be regarded as authoritative. The paper is contained in vol. excii B (1900) of the *Philosophical Transactions of the Royal Society*, and its careful perusal will amply repay the thoughtful reader.

We do not intend here to follow Professor Reid into all the details of the history of the subject and the various theories which have from time to time been advanced. These are all described in an admirably lucid manner, and the physics of the subject are also clearly explained. Al we can do is briefly to summarise the methods employed and the results obtained by the author himself. The animals employed were dogs, and the material selected for absorption was the blood serum or blood plasma obtained from the same animals: the substances to be absorbed were thus of the same kind as those in the blood and lymph on the far side of the absorptive epithelium. The serum or plasma was analysed, introduced into an isolated loop of the gut, and at the end of a given time the contents of the loop were again analysed. The pressure in the loop and in the mesenteric veins was estimated manometrically during the progress of the experiment; control loops were employed where necessary; allowance was made for the secretion of intestinal juice; in fact, by these and many other precautions, pains were taken to make each experiment as complete as possible.

It was found that the absorption by an animal of its own serum or plasma takes place under conditions in which

filtration or osmosis into blood capillaries or lacteals, and also adsorption (or imbibition), are excluded. The active force must therefore by a process of exclusion reside in the physiological activity of the lining epithelium. The same conclusion was reached by another method, namely, that when the epithelium is removed, injured, or poisoned, the absorption either ceases or is markedly lessened, and this in spite of the fact that removal of the epithelium must increase the facilities for osmosis and filtration.

The activity of the cells is characterised by a slower uptake of the organic solids of the serum than of the water, and a rather quicker uptake of the salt than of the water. The numerical relations of the absorptions of these various constituents is variable in different regions of the intestinal canal. The state of nutrition of the cells is the main factor in their activity; and no evidence was obtained of the existence of specific absorptive nerve fibres, nor of the stimulant action of bile. Weak alcohol, however, stimulates the cells without apparently causing a concomitant increased blood supply. The absorption of water from the gut depends partly on the physical relation of the osmotic pressure of the solution in the intestine to that of the blood plasma, but is also influenced by the physiological regulation of this difference by the orienting mechanism of the cells. The orienting action of the cells upon salts in solution was first noted by Otto Cohnheim. In an intestinal loop with injured cells sodium chloride enters the lumen from the blood, though it is being actively absorbed from a normal control loop in the same animal. In all probability the cell activity which causes serum to pass into the blood is of the same nature as that involved in the orienting action of the cells upon salts in solution.

These are the most important of Professor Reid's results. He also records a number of experiments on the absorption of peptone and glucose, but these are not so thoroughly worked out, and are in fact a little outside his main object, which was to study as simple a case of absorption as possible.

If the cells have a selecting or orienting action which comes into play in the absorption of such simple materials as water and salts, it necessarily follows that in the absorption of organic substances similar influences are at work. It has long been known that peptones do not pass as such into the blood, but that the epithelial cells build heavy-moleculed proteids out of them. Similarly in regard to fat, the synthetic power of the columnar epithelium in making fat out of glycerine and fatty acid may be considered to have been proved by Munk. Professor Reid's conclusions with regard to the absorption of peptone and glucose are as follows:—The chief factor in the absorption of peptone is an assimilation (or adsorption) by the cells, while in the absorption of glucose, diffusion variable by the permeability of the cells (and so probably related to their physiological condition) is the main factor. By removal of the epithelium the normal ratio of peptone to glucose absorption is upset, and the value tends to approach that of diffusion of these substances through parchment paper into serum. Differences were also noted in various parts of the intestinal canal, but, without following up these smaller details, we think we have already said enough to indicate the great value of the research, and we hope also to stimulate those who are interested in such important problems to study the full paper for themselves.

PRACTICE BY COMPANIES.

THE Companies Bill has now reached a stage in the House of Commons at which representations from the Branches of the British Medical Association might, we believe, usefully be made to members of Parliament representing the constituencies within the area of each Branch. The Bill, which contains the clause prohibiting in definite terms the practice of medicine, surgery, midwifery, and dentistry by companies[1] passed its second reading on Tuesday night, and has been referred to the Standing Committee on Trade. The Government intimated that it hoped to pass the Bill this session, and that this would involve less delay than dealing with it in Committee of the whole House. As the Committee must meet at an early date, any representations to be effective should be made without delay.

In introducing the Bill the President of the Board of Trade remarked that "there were clauses dealing with the sale of drugs and also with the carrying on of a medical practice by a company. He did not think these provisions were really germane to the present Bill. He had no doubt whatever that in themselves the provisions, or something analogous to them, would be a beneficial alteration of the law; but, if they were to be dealt with, it was better that they should be dealt with in a separate Bill. It would be for the Committee to decide whether these provisions should be proceeded with, or struck out and relegated to some other Bill at some other time."

It is a material gain that the President should have expressed his adhesion to the principles of the medical clause, but it is clear that efforts will be needed to induce the Committee to retain it in the Bill, as otherwise there will not be any chance of its passing into law this year. It was included in the Companies Bill in consequence of a recommendation by a very strong Select Committee of the House of Lords. It had previously been introduced by the Lord Chancellor as the one clause of a separate Bill and if it is now dropped out it will have been delayed, if not actually prejudiced, by the action of the Government in including it in their measure. Indeed, if it be unfortunately left out by the Standing Committee, there would seem to be a strong claim that the Government should take it up and introduce it as a separate measure, and this alternative, though less favourable, should be pressed upon their attention.

The much-disputed pharmacy clause stands in the same position, and we notice that the Pharmaceutical Society, to the divided counsels of which we have several times alluded, have again referred this question to their Parliamentary Committee in the hope that they may be able to arrive at some agreement as to the exact lines which they would desire that legislation should take. This they have hitherto failed to do, but we hope that they may now succeed in doing so, for there appears to be a disposition

[1] *Companies not to Act as Doctors, etc.*—It shall be unlawful for a company to carry on the profession or business of a physician, surgeon, dentist, or midwife, and if any company contravenes this enactment it shall be liable, on summary conviction, to a fine not exceeding five pounds for every day during which the contravention happens.

on the part of Mr. Ritchie to group the two clauses together, so that the want of agreement among the pharmacists may indirectly influence the Standing Committee in the direction of leaving out both clauses.

NATIONAL ENTHUSIASM AND ALCOHOL.

THE national joy over the recent successes of our arms in South Africa is apt, as the records of the police-courts show, to express itself in an increased consumption of ardent liquors. Such a mode of showing patriotic enthusiasm may be gratifying to the Chancellor of the Exchequer, but we may be permitted to doubt whether this public-spirited consideration entered largely into the minds of the thousands who got drunk in honour of the relief of Mafeking and the capture of Pretoria. If these events caused such a copious pouring of libations of beer and whisky, it is easy to forecast what will happen when the final triumph comes. As regards the general population, doubtless the fundamental good sense of the British public may be trusted to prevail sufficiently to avert the danger of a pandemic of acute alcoholism. But there is a class of the community which, it is to be feared, will be subjected to very serious risk. Already complaints have found utterance that the sailors of the *Powerful* got too much to drink, although, as far as we know, there is no suggestion that they were appreciably the worse for it. It is to be feared that when the rest of our conquering heroes come home almost irresistible temptations to drink will meet them on every side. It may seem puritanical to seek to repress a very natural manifestation of feeling, and one, too, that is consecrated by national custom. Enlightened patriots however, as well as moralists and hygienists, will agree that the custom is more honoured in the breach than in the observance. Of all possible ways of showing our admiration for the courage and devotion of the men who have been fighting their country's battles, surely the very worst is to poison and brutalise them with drink. Popular enthusiasm often expresses itself in grotesque forms. Lieutenant Hobson, the hero of Santiago, was nearly kissed to death by wild women throughout the length and breadth of the United States, and one has heard of wounded soldiers feebly protesting against having their fevered brows fanned and their faces washed by relays of ministering angels every hour or so throughout the day. But after all, this excess of zeal is better than making heroes drunk and perhaps sowing in them the seeds of a vice that will spoil them as soldiers and ruin them as men. We venture to suggest that in all public entertainments that may be given to the soldiers and sailors after the war it would be well to follow the excellent example set by the Princess of Wales in the dinners provided by Her Royal Highness in honour of the Queen's Jubilee by excluding all intoxicating drinks. If private hospitality cannot be similarly controlled, we hope at least that all who are interested in the welfare of the men to whom is entrusted the guardianship of this great Empire will do all that lies in them to save our gallant defenders from being killed with alcoholic kindness. If they will help in this they will do a good work, not only for their country but for the brave men on whom she depends in her hour of need.

INDIAN PLAGUE COMMISSION.

PART of the minutes of evidence of the Indian Plague Commission has been issued in two large volumes. There is evidently another volume to follow, as these volumes include only the proceedings down to February 8th, 1899, the taking of evidence having been begun on November 29th, 1898. The volumes represent the views of over 150 witnesses, consisting mostly of Indian Medical Service men, a few of the Royal Army Medical Corps, some Civil servants, officers of the Indian Staff Corps, and a few natives who were connected more or less with either the treatment or the measures instituted for the control of plague. The first volume contains, in addition to the 300 pages devoted to minutes of evidence, some 220 pages of appendices. There are 24 appendices, all of which are valuable from one point of view or another. There are several reports on the preventive inoculation against plague in different communities, a note on the vaccination of animals against the plague bacillus and on serum obtained therefrom, by Professor A. Lustig and Dr. D. G. Galeotti. There are several excellent reports on plague, and numerous charts and plans instructive to those interested in the subject. The second volume also contains a large number of appendices, with useful maps and charts. Not the least interesting of these is a reprint of the report on Mahamari in Kumaon by Surgeon-Colonel C. Planck, with a note by Dr. Watson. A note on the steam treatment for the plague by a layman affords a glimpse of the straits to which the curative side of plague is brought. When compared by Dr. Twigg with the other forms of treatment it seems to have been as successful—or probably, with greater accuracy, as unsuccessful—as the rest. No doubt there is a vast amount of information, useful and otherwise, in these huge volumes, but the interest and value are lost in a measure from not being accompanied by the report of the Commissioners. Few will have the courage or the time to wade through the immense amount of matter that has been printed, especially without any guidance from the Commissioners themselves. The amount shows a commendable activity. We hope the Commissioners have not been overwhelmed by the quantity, and that we shall soon have the results boiled down into a report which which shall give us some insight into the epidemic of plague in India.

THE UNINHABITABLE METROPOLIS.

THE London County Council has often been accused of engaging itself with matters more strictly germane to the work of the Imperial Parliament that it is gratifying to find that, Cinderella-like, it is at present concerning itself with matters so proximate to our hearths and homes and the daily amenities of our streets as the removal of house refuse, the cleansing of dustbins, the prevention of avoidable litter, and the restriction of street cries. At a conference to which representatives of the present vestries—the embryo borough councils—were welcomed at the invitation of the Local Government Committee of the London County Council, the agenda paper dealt in minute detail with some of the commonest grievances under which Londoners groan and the responsibility for which the average ratepayer is rarely able accurately to fix. The conference was invited to consider the best method of constructing scavengers' carts and waggons; whether it is practicable to effect removal more frequently and at more convenient hours; what special regulations need be made for the removal of badly smelling trade refuse, and what arrangements should be made for the removal of manure from mews. Then, again, the collective investigation by vestrymen was directed to the question now far it is practicable to make a by-law for preventing the casting of paper, straw, and other objectionable and even dangerous substances on the public thoroughfares. Again, the conference was invited to consider the organisation and the methods of sweeping; the best material for making up streets, having regard not only to durability, but also to the facility afforded for the best way of sprinkling roads and the best arrangements for the expeditious removal of snow from streets and footways. In most of the nuisances indicated thus far some sort of legislation or by-law already exists with a view to the punishment of offenders, though in many instances the breach is more honoured than the observance, but the conference was also invited to direct attention to the more methodical regulation of street traffic which is said to be operated successfully in Paris, and the

representatives of local wisdom were invited to say what regulations should be made with reference to covered carts and vans so constructed that the drivers are unable to see passing vehicles; what should be done to strengthen the hands of the police in dealing with vehicles making a lay-by of streets to the obstruction of traffic, and with heavy traffic and empty cabs, etc., so as to relieve crowded thoroughfares, and generally whether it is practicable to train drivers of vehicles going slowly not to occupy the middle of the road. Doubtless between now and next November, when vestrydom at any rate in name will be abolished and twenty-eight new borough councils will be born, the zeal for vigilance in local government will wax warm. Without desiring any undue approach to "grandmotherliness" on behalf of our civic rulers, we are convinced that there is plenty of detailed administration, the successful and methodical discharge of which would contribute enormously to the amenities of the daily life of every citizen.

THE HOUSING QUESTION AND THE HOME OFFICE.

IT will be remembered that the London County Council recently endeavoured to proceed under Part I of the Housing of the Working Classes Act to deal with insanitary areas in Clerkenwell, Southwark, and Holborn. For this purpose it prepared schemes in accord with representations made under the Act by the medical officers of health for the areas concerned. It now appears that the cost of dealing with these veritable plague spots is likely to be very materially augmented as the result of the inquiries held by the Home Office in accordance with the provisions of the Act. In other words certain properties coloured red on the plans by the County Council as indicating that they are insanitary have been coloured blue by the Home Office to denote that they are regarded as sanitary. The change implies the addition of 10 per cent. to the value of the property to be acquired over and above its market value. A reference to Section IV of the Housing Act of 1890 seems to indicate that for the purposes of a "scheme" it is not essential that each and all of the properties included shall be insanitary in themselves, but that if "within a certain area" either there are "(*a*) any houses, courts, or alleys are unfit for human habitation; or (*b*) the narrowness, closeness and bad arrangements, or the bad condition of the streets and houses or groups of houses within such area, or the want of light, air, ventilation, or proper conveniences, or any other sanitary defects, or one or more of such causes" constitute a danger to the health of the inhabitants either of the buildings in the said area, or of the neighbouring buildings, the local authority shall, if satisfied, make a scheme for clearing the area. It would seem that the decision as to what is sanitary and what insanitary rests with the Home Office, after inquiry. It would, however, be well to have certain definite and easily ascertainable conditions upon which such decisions would be uniformly based, otherwise the local authority, having embarked upon a scheme well satisfied with the sufficiency of its resources, might at a later stage be unable to abandon a vastly more extravagant undertaking than it originally approved. There is some ground for thinking that recent Home Office decisions have been less favourable to the County Council than were some in the past, and we understand steps are being taken with a view to obtain a modification of the conclusions of the Home Office.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THURSDAY next, July 5th, is the day fixed, according to rule, for the election of members of Council. The voting paper system, which has proved of such service to the Fellows, has, on the other hand, taken greatly from "election day" its picturesqueness. Formerly crowds used to assemble to vote, to converse, and to inspect the annual display of specimens added to the Museum. Now few Fellows come to vote, and those are chiefly what the old journalism would have termed "residents in the metropolis and its immediate vicinity." It happens that this election is remarkable for the number of candidates. Mr. Morgan (Charing Cross Hospital) has gracefully retired in favour of a senior colleague, Mr. Bloxam. Hence there remain just a dozen candidates. Mr. Tweedy will, as a most active advocate of progress and a well-known hospital surgeon, probably be re-elected, and Mr. Alfred Cooper's claims to re election are high. Mr. Ward Cousins shows spirit in seeking for re-election as a full member to a Council on which he has sat twice as a substitute. Mr. Bloxam is the senior new candidate by date of Fellowship. Two members of the staff of Guy's Hospital (Mr. Lucas and Mr. Golding-Bird) are to the front. At present there are two surgeons from that institution on the Council, but the above-named gentlemen are, so to speak, contending for a third place, vacant through the death of their colleague, Mr. Davies-Colley. Of the five members from St. Bartholomew's one, Sir Thomas Smith, has retired; Mr. Walsham now comes forward as a representative of that hospital. St. Thomas's, represented only by the President, sends up Mr. Clutton, whilst St. George's, at present represented by Mr. Pick alone, presents Mr. Bennett as a candidate. Mr. Morris is the only surgeon to the Middlesex Hospital now on the Council, but two of his colleagues are candidates: first the distinguished surgeon and teacher, Mr. Pearce Gould, and secondly the junior candidate, Mr. Bland-Sutton, who, however, has strong claims, as one of the chief authorities on the surgery of the female pelvis, and as a former lecturer at the College. He is likely, we understand, to be well supported. It is somewhat surprising that, with all the facilities which voting-papers can afford there is but one provincial candidate—Mr. Jordan Lloyd. His claims will, no doubt, be considered by many Fellows. He is an excellent hospital surgeon, and his admirable treatise on Injury to the Pancreas: A Cause of Effusions into the Lesser Peritoneal Cavity, which was published in the BRITISH MEDICAL JOURNAL of November 12th, 1892, is recognised by surgeons all over the world as a great addition to their knowledge of an obscure but very grave kind of injury.

THE VALUE OF A UNIVERSITY DEGREE.

IN the Cambridge *Appointments Gazette* of June 1st Professor Clifford Allbutt offers some useful advice to medical students at Cambridge which may perhaps find a useful application outside that great seat of learning. He first points out that the students of medicine at Cambridge are prone to leave the University too soon. While thinking it well that students should go elsewhere where there are larger opportunities of clinical observation, he says that a university degree should signify something more than practical skill; it should also signify the grasp of principles. This grasp it is especially the function of a university to give. The student of medicine ought therefore, he holds, to stay at Cambridge until he has been trained in the principles of the departments of science ancillary to the art of medicine. Cambridge teachers expect from candidates for medical degrees not only a knowledge of clinical pathology and practical therapeutics, but also a substantial knowledge of the branches of science more immediately underlying both these applications. If it be objected that the longer residence suggested by Professor Allbutt entails additional expense, his reply is that many students are rejected in the final examinations for lack of the kind of knowledge referred to, and are thus put to no less expense with much additional vexation. Professor Allbutt has also something to say about the theses for the degrees of Bachelor and Doctor of Medicine. The quality of these

theses is now so satisfactory that the proposal to publish year by year selections from them is under consideration. To require a thesis for the degree of M.B. as well as for that of M.D. is the custom of Cambridge. One reason of this is said to be that Bachelors of Medicine of that University, in common with those of Oxford, have the courtesy title of "doctor," and the Cambridge act for M.B. justifies this custom. Referring to the M.D. theses, it appears that, owing to the exacting demands of practice, graduates find it hard to write a dissertation of adequate value. Professor Allbutt, therefore, urges those who wish to take the M.D. to perform the exercises before going into practice. There is a current misconception that these exercises cannot be performed until the candidate has sufficient standing to proceed to graduation. Professor Allbutt, however, points out that in the case of M.A. the exercises for M.D. may be undertaken and performed at any time after passing the Third Examination, or in the case of M.B. during any time after this graduation. If this be done successfully the degree will be conferred in due course, when the candidate is of proper standing. As to the quality of the dissertation required for the M.D., he says that it cannot be expected that the theses of many candidates will leave marks on the history of medicine or of the associated sciences, but every candidate is expected to give something personal and independent—something of his own. He concludes by urging that no student who is unwilling to fall into the practice of a mindless routine should fail to devote a short time, be it but a few months, to original research in some direction. The motive to this our academic forefathers intended the thesis to provide; and teachers of the present day look upon the provision as wise, and even in view of practice itself immediately fruitful. We are glad to have so emphatic a pronouncement on this subject from a man whose words justly carry so much weight as those of Professor Allbutt, as the thesis is in many quarters regarded as a useless superfluity, with something of the fustiness of mediævalism about it.

SANATORIA FOR CONSUMPTIVES OF THE POORER CLASS.

A MARKED result of the spread throughout the country of the propaganda of the National Association for the Prevention of Consumption and other Forms of Tuberculosis is the establishment of sanatoria for the treatment of early cases of consumption amongst the poorer classes. There can be no doubt that the provision of sanatoria is desirable as a means towards cure, and that incidentally they exert considerable influence in prevention. It is, perhaps, because these institutions appeal at the present time to the public sympathies that this portion of the scheme of prophylaxis is taken in hand. While we should like to see the establishment of more institutions for the accommodation of the advanced consumptives from amongst the very poor, efforts to place the early cases within reach of cure by the erection of public sanatoria, where those who cannot afford the expense of the private institutions may obtain the benefits of systematised hygienic treatment are highly commendable. We have recently referred to the establishment of sanatoria for Liverpool and for the county of Westmorland, the former under the auspices of the guardians, the latter due to private philanthropy. Another northern county has followed the lead of Westmorland. The Society for the Prevention and Cure of Consumption in the County of Durham has taken Horn Hall, Stanhope, for its purpose, and already twelve beds have been opened, which will be increased to twenty in the summer. One noteworthy feature of this sanatorium is that bodies of workmen subscribing regularly 3d. a man quarterly shall have the first claim on the beds for themselves and the members of their families to the full extent of their total subscription. The Devon and Cornwall Branch of the National Association for the Prevention of Consumption are seeking to establish a sanatorium, which it is suggested should be situated somewhere on Dartmoor. The necessary funds for the purpose have yet to be raised, but the Honorary Secretary of the branch is taking every opportunity of laying the project before the two counties at meetings held in different towns, and it is to be hoped that the fulfilment of the Committee's desire may not be long delayed. Passing from Devonshire to Yorkshire, we find the York Branch discussing, at its annual meeting on May 14th, the establishment of a sanatorium for the city and district. The principle that a sanatorium was desirable was affirmed by the branch on its formation eighteen months ago, but the difficulties of determining the scope of the institution and then of securing a suitable site have not as yet been entirely surmounted. The annual report of this branch very pertinently suggests that for the very poor the guardians and corporations should be urged to accept the responsibilities of dealing with sufferers from tuberculous diseases, and the provision of special places to receive them either with the object of cure or as a prophylactic precaution. Turning to Scotland, by the munificence of ex-Provost Moncur, who has given £10,000 for the purpose, Dundee will before long possess a sanatorium for consumptives. A site near the village of Auchterhouse was granted by the late Earl of Airlie, and the plans of the building have already been approved. This sanatorium will afford accommodation for thirty-four patients, with the necessary medical and nursing staff. Private charity is doing good work in thus providing for the treatment of consumptives, but there is much to be done towards the prevention of tuberculosis which can only be effectually undertaken by public bodies.

THE DROUET INSTITUTE.

Truth has during the last few months devoted a good deal of space to an establishment calling itself the Drouet Institute, and its number for June 21st contained an account at once amusing and instructive of an interview with the persons who carry on or are proposing to take over the business conducted at 72, Regent's Park Road, London, N.W. The name of this "Institute" must be familiar to most of our readers, for it has been pretty extensively advertised, especially during the last few months, and the character of the "Institute" as well as the value of its pretensions must have been obvious to them. A lay paper which takes up such a matter undoubtedly renders a public service, for it would appear that a considerable number of people must have been disposed to put trust in the promises held out to them. Experience shows that people who are foolish enough to believe the statements made in advertisements of this kind are foolish enough also to believe or pretend to believe that any unfavourable comments upon them by medical men or the medical papers are dictated by professional jealousy. We have before us a letter addressed to a person who had made inquiries of "The Manager." The inquirer is told that "the physician. . . . after a careful study of the particulars of the complaint from which you suffer, has arrived at the following diagnosis, 'Chronic Posterior Nasopharyngeal Catarrh.' The case is somewhat grave, but presents no symptoms of incurability, and the doctor advises you to follow the treatment indicated in the enclosed prescription, which has been thoroughly successful in similar complaints." This treatment requires the use of two boxes of some material, the name of which we cannot decipher, for inhalations and douche (4s. 6d. each); a "Jacob's nasal syphon" (4s.), and two bottles of "Phlegmagogue" (4s. 6d.), costing, with 6d. extra for packing and carriage, 18s. A few weeks later the inquirer, who had not, it would appear, responded to the first letter, received another, stating that if the expense appeared to be too great "our physician" would "use his

influence to obtain reduced terms." There is nothing very novel about all this, but it is interesting to observe its effect upon our contemporary's views as to the efficiency of the Medical Acts. "It is," says *Truth*, "a scandalous state of things that the Acts o Parliament, which profess to regulate the public practice of medicine and to protect the public against unqualified practitioners, do not provide a special means for the suppression of mischievous quackery of this type. The reform of the law on this subject is most urgently required." This is the conclusion at which the medical profession arrived long ago, and the British Medical Association has taken steps to prepare an amending Bill. It is, we say, interesting to see that an unprejudiced observer is brought without hesitation to the same conclusion. As to "our physician," *Truth* states that he is a member of the Royal College of Surgeons of England, but unregistered, and we understand that the Medical Defence Union, whose General Secretary, Dr. Bateman, has been associated with the editor of *Truth* in the inquiry into the *modus operandi* of the Drouet Institute, are taking steps to bring the matter to the notice of the College.

DOWLING *V.* DODS.

IT seems that we have not yet heard the last of this case, which resulted last week in a verdict of £100 damages being entered against the defendant. The peremptory refusal of Mr. Justice Darling to grant a stay of execution seemed to indicate that Mr. Dods would have to submit, and that even if he took the matter to a higher court he would do so without the moral support of the learned judge who tried the case. Mr. Justice Darling has reconsidered the matter, has granted a stay of execution, and has expressed considerable doubt whether he was right in saying there was any evidence of malice to go to the jury. Counsel for the defendant applied for stay of execution on two grounds: (1) that the verdict was against the weight of evidence; (2) that the relieving officer of Paddington (Mr. Nicholls), who was referred to in the case, had shaken hands with one of the jurymen. This application for a stay was adjourned until June 26th, in order to give Mr. Nicholls an opportunity of answering the charge. He explained by affidavit that all the jurymen were total strangers to him, and that he had not spoken to or shaken hands with any of them. He had shaken hands with one of the plaintiff's witnesses at the conclusion of the case. The juror in question was anxious to go into the witness-box to say that he never knew Mr. Nicholls. Mr. Justice Darling granted a stay. In the course of his remarks he said: "The case was a very unusual one. The application has been made on two grounds, (*a*) that I was wrong in ruling that there was any evidence of malice to go the jury after ruling that the occasion was privileged, (*b*) that one of the jurors was a friend of the plaintiff. With regard to the latter ground the matter is explained by Mr. Nicholl's affidavit, but as to whether the verdict was against the weight of evidence, I feel considerable doubt whether I was right in saying that there was evidence of malice. I therefore think that the verdict of the jury, and my ruling on the question of evidence of malice should be reviewed in the Court of Appeal." A stay was granted on the usual terms.

THE KHEDIVE'S ILLNESS.

THE illness of the Khedive has fortunately proved to be of a less serious character than was at first feared. We are indebted to Sir Felix Semon for some information as to the case, which, with the permission of the Khedive and the sanction of His Highness's physician, Dr. Anton Kautsky Bey, he has supplied. The Khedive, who had had symptoms of slight indisposition for a day or two, began to complain of soreness in the throat during the journey to this country. The soreness increased, and on arriving at Port Victoria on June 21st the local appearances were such as to arouse suspicion of diphtheria. In these circumstances Dr. Kautsky and Surgeon Reginald Bankart, R.N., of Her Majesty's yacht *Osborne*, agreed that His Highness ought not to proceed at once to London. Sir Felix Semon was summoned by telegraph, and found a somewhat puzzling condition suggesting a combination of follicular tonsillitis and aphthous stomatitis. Such a combination is in his experience extremely uncommon, and moreover there were local and constitutional symptoms pointing to the possibility of diphtheria. On the following day (June 22nd) the appearances were such that in prebacteriological days a diagnosis of diphtheria would have been made without hesitation. There could at any rate be no doubt that the process was septic in character. A prophylactic injection of 2,000 units of antidiphtheria serum obtained from the Jenner Institute of Preventive Medicine was given, and cultures from the throat and mouth were placed in agar-agar tubes and submitted to Mr. Shattock. That gentleman found no Klebs-Loeffler bacilli, but a number of staphylococci with some streptococci in the exudation, the result of the bacteriological examination thus fully confirming the clinical diagnosis, in which also Sir Richard Douglas Powell, who by command of the Queen met the other physician in consultation on June 22nd, entirely agreed. The illustrious patient steadily improved under treatment, and on June 25th he was definitely convalescent.

DAVIES-COLLEY MEMORIAL FUND.

THE irreparable loss which Guy's Hospital and Medical School have sustained, through the death of Mr. Davies-Colley while still in active work, has awakened a general desire to perpetuate his memory. It is felt that there are many who will be eager to testify, in some lasting form, to Mr. Davies-Colley's great ability, unvarying uprightness, and daily devotion to duty. To this end, at a meeting of the Medical School Staff, it has been decided to invite subscriptions. The form which the memorial shall take will be determined at a meeting of the subscribers to be held at a later date. Meanwhile, Mr. C. J. Symonds has been appointed treasurer of the fund; and subscriptions may be sent to the Honorary Secretary, Dr. T. G. Stevens, 8, St. Thomas's Street, London Bridge, S.E.

A MEDICAL PILGRIMAGE TO FRENCH BATHS.

ARRANGEMENTS have again been made this year for a party of medical men to make a tour of the baths in the south-west of France. The tour will begin at Luchon on September 2nd, and the party will afterwards visit Capvern, Bagnères-de-Bigorre, Argelès, Barèges, Saint Sauveur, Cauterets, Pau, Saint-Christau, Eaux-Bonnes, Eaux-Chaudes, Salies-de-Béarn, Biarritz, Cambo, Hendaye Sanatorium, and Dax, arriving at Arcachon on September 15th. The cost for all expenses, travelling, board, and lodging will be 300 francs, and railway tickets at a reduction of one half will be obtainable from any station in France to Luchon, and again for the return journey from Arcachon to any station in France. The tour will be under the scientific direction of Dr. Landouzy, Professor of Therapeutics in the Faculty of Medicine, Paris, who will give addresses on the uses of the mineral waters at the various baths. Foreign medical men and students of medicine can join the party, paying the same terms, and the wives of medical men can also join so far as the accommodation will allow, but owing to the fact that the local railways will not make the same reduction in charges for them as for their husbands, they will have to pay 50 francs more. Further particulars can be obtained from Dr. Carron de la Carrière, 2, Rue Lincoln, Paris, who asks that gentlemen will write their names plainly—a necessary warning. Last year the party visited the watering places in the centre of

France and in Auvergne, and the success of that expedition has led to the organisation of this fresh expedition this year.

THE PLAGUE IN AUSTRALIA.

Our special correspondent in Sydney, writing on May 22nd, states that in consequence of representations made to the Premier by a deputation from the New South Wales Branch of the British Medical Association, that gentleman has decided to allow the Board of Health to exercise their discretion in the matter of quarantining "contracts." The total number of cases of plague in Sydney since the outbreak has been 239, of whom 82 have died and 57 have recovered; 8 Chinese have been attacked, and 7 of these have died. Several fresh cases have occurred in Brisbane and other seaports in Queensland.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Royal Medical and Chirurgical Society has recently resolved upon several alterations in its regulations for dealing with papers. Hitherto a Fellow who read a paper before the Society had to face the possibility that, though the paper might be discussed, it might afterwards be returned as unworthy of a place in the *Transactions*. In future this will not occur, as every paper accepted for reading will be accepted also for printing in the *Transactions*. The Council has also provided that a paper read before the Society may immediately afterwards, that is before it has been printed in the *Transactions*, be published in any medical or scientific periodical, and thus contributions to medical science, instead of being kept back, as hitherto, for possibly twelve months and then interred in the *Transactions*, of which less than one thousand copies are issued, may be given to the world immediately.

POSTPONEMENT OF THE MALARIA CONFERENCE.

We are asked to state that the Conference on Malaria which the Liverpool School of Tropical Medicine had arranged to hold at the end of July, has been postponed on account of the date suggested clashing with the celebration of the Centenary of the Royal College of Surgeons of England and with other arrangements.

THE INTERNATIONAL MEDICAL CONGRESS, PARIS, AUGUST, 1900.

All members of the profession, including ladies and dentists, who wish to become members of the Thirteenth International Medical Congress, are requested to send their names by return of post to the Secretaries of the National Committee for Great Britain and Ireland (Dr. A. E. Garrod, 9, Chandos Street, Cavendish Square, London, W., and Mr. D'Arcy Power, 10A, Chandos Street, London, W.). The list of members in Paris will close on July 15th, and after that date it will be impossible to guarantee any of the privileges of the Congress to those who send in belated applications. A Ladies' Committee has been formed under the auspices of Mesdames Lannelongue and Brouardel, and a convenient room has been placed at their disposal. The list of entertainments is completed by the announcement of a grand *fête* to be given by the Town Council of Paris in the salons of the Hôtel de Ville on the evening of August 7th.

Mr. Malcolm Morris will give a demonstration to some members of the Medical Graduates' College and Polyclinic on Finsen's electric light treatment at the Studio, 1A, Berkeley Gardens, Church Street, Campden Hill, on Saturday next at 2.30.

A meeting of the Pathological Society of London will be held at the Pathological Laboratory, New Museums, Cambridge, this day, June 30th, at 4 P.M., on the invitation of Professor Woodhead. Papers and demonstrations will be given by Professor Woodhead, Dr. Dixon, Dr. Eyre, Mr. Griffiths, Dr. Nuttall, Dr. Cobbett, and others. Dinner will be served in Trinity Hall at 6.30 P.M.

Sir William Broadbent will formally open the new Clinical Museum at the London Medical Graduates' College and Polyclinic on Wednesday, July 4th, at 8.30 P.M. Professor Osler, F.R.S., of Baltimore, will afterwards deliver an oration on The Teaching of Practical Medicine, and this will be followed by a *conversazione* with music, smoking, and various scientific exhibits.

A monument has been erected to the memory of Dr. Jean Hameau, the obscure general practitioner of the Gironde who in 1836 published a study on viruses, in which he partly anticipated the discoveries of Pasteur. The statue was unveiled recently at La Teste de Buch, where Hameau practised. Addresses were delivered by Dr. Laude, the Mayor of Bordeaux and President of the Medical Syndicates Union of France, Professor Lannelongue of Bordeaux, and others. Hameau was born in 1779, and died in 1851. His claim to be considered a precursor of Pasteur has been publicly acknowledged by Professor Grancher.

We have received from a governor of the National Hospital for the Paralysed and Epileptic, Queen Square, London, a copy of a statement addressed to the Governors by the whole medical and surgical staff of the hospital. The statement reveals a long history of chronic difficulties between the staff on the one hand and the Board of Management and "the Secretary and General Director" on the other. These difficulties have had their root in that fertile source of difficulties of this kind, the fact that the medical staff is not represented on the Board of Management. At this hospital it would appear that the system of excluding the staff from any voice in the management of the affairs of the hospital has been carried to a more extreme degree than, so far as we know, exists in any other of the small minority of hospitals in which it is maintained at all. This is all the more remarkable in view of the fact that there is probably no hospital in the country which possesses a medical and surgical staff of greater eminence. We have received a letter from the Secretary and Director requesting that judgment should be suspended until the Board has had an opportunity of considering the document to which we have referred. It certainly appears to call for their very serious consideration, and we hope to be informed of the result of their deliberations without too much delay.

MEDICAL NOTES IN PARLIAMENT.

[From Our Lobby Correspondent.]

The Midwives Bill, true to its traditions to the last, came to a somewhat eccentric end on Wednesday. The manner of it was thus. The early part of the sitting was occupied by the third reading of the Bill to bring agricultural labourers within the scope of the Workmen's Compensation Act, and when that measure was happily passed the Merchant Shipping Bill came on for consideration. At first it seemed as if this might not occupy much time, but points of interest developed themselves, and the Irish members were full of concern lest the Port of Cork should be prejudiced, and so the debate went on till after half-past four. The friends and opponents of the Midwives Bill had for the last hour of the discussion been anxiously on the watch. Sir George Pilkington, Mr. Lloyd-George, Dr. Farquharson, and Sir John Tuke flitted in and out of the House, and from time to time stood at the Bar to take a sounding as it were to calculate how near the Merchant Shipping Bill was to port. Mr. Griffith-Boscawen and Mr. Heywood Johnstone, on the other hand, sat steadily in their

places, while Mr. Tatton Egerton watched nearer to the Chair. At last, at twenty minutes to five, the Merchant Shipping was safely harboured, and the Midwives Bill was called. Mr. Griffith-Boscawen at once rose, and moved that it be considered on this day three months, and supported his motion in a carefully-reasoned speech. The Bill was a bad Bill; it was clearly unfit to pass, and if not greatly amended would do more harm than good. Colonel Victor Milward seconded the motion in the interest of the village "Gamps," and amused the House by protesting against the craze for registration and examination, and said that considering their multiform duties and responsibilities it would be quite as proper to register country gentlemen, of which class the two chief promoters of the Bill were highly respected specimens. Then Sir John Tuke, the newly elected member for Edinburgh and St. Andrews Universities, rose and made his maiden speech in support of the Bill, the general principle of which he said was approved by the General Medical Council. After him followed Dr. Farquharson, who, while admitting the defects of the measure, gave it general support, and then Mr. Parker Smith made a strong speech in its favour, pointing out that as the vast majority of women were attended by midwives it was desirable in the interests of their health that such persons should be properly trained. He described the Bill as a very important one, and when he sat down Sir Walter Foster said it was that very importance which made it necessary to postpone a Bill which was so defective that a dozen or more amendments stood on the paper at this last stage in the name of the promoter (Mr. Heywood Johnstone). He approved of the education and registration of women to nurse women in childbirth, but the Bill did more; it repealed the Medical Acts and created a new class of practitioners, and was, therefore, a measure too large for a private member, and one which ought to be undertaken and carefully drawn by the Government. Then came the eccentric ending of it all. Sir Walter Foster finished about a minute and a half before half-past five, the magic hour at which business stops on Wednesday, leaving time for a division to be called, but Mr. Heywood Johnstone evidently did not want a division, and said he, too, thought the Government ought to take up the question, and so talked his own Bill out for the sitting—and for the session of 1900. With a surprise the Bill won its second reading. With a rapidity that surprised everybody it slipped through the Grand Committee, and on Wednesday the surprise culminated in its being talked out by its ablest friend.

The Companies Bill was read a second time on June 26th, and referred to the Grand Committee on Trade. In moving the second reading, the President of the Board of Trade said with reference to Clauses 2 and 3, which refer to companies trading as chemists and druggists and to companies "carrying on the profession or business of a physician, surgeon, dentist, or midwife," that he did not think these provisions were really germane to the present Bill. He had no doubt that the provisions, or something analogous to them, would be a beneficial alteration of the law, but if they were to be dealt with it was better that they should be dealt with in a separate Bill. The Grand Committee will therefore, it is expected, drop these two clauses after this very strong hint, and the Bill will in that case be lightened of two provisions which would have excited considerable contention, but which are really wanted as an amendment of the law. There was in some quarters a good deal of disappointment at the course pursued by Mr. Ritchie, but, on the whole, he had evidently the great majority of the House with him in leaving the medical profession, dentists, and druggists out of his Bill.

Inoculation for Typhoid was the subject of no fewer than three questions on one day this week, but in spite of the general anxiety to learn the results of the tests made on the troops in South Africa the Under-Secretary for War was unable to give any definite reply. He said that the information was being carefully compiled, but that so far the statistics were not enough to warrant conclusions. He further stated that no compulsion was used to induce soldiers to be inoculated, and that it was entirely optional with them. Members are anxious to learn whether there is any evidence of the protective character of the operation, whether it makes the disease run a milder course, and what proportion of those inoculated have recovered.

Rabies.—In the course of the discussion on the vote for the Board of Agriculture, Dr. Farquharson and others complimented Mr. Long on the success which had attended his policy of stamping out rabies, and on the courage he had shown in pushing unpopular provisions for getting rid of a terrible disease. The President of the Board of Agriculture acknowledged in graceful terms the support he had received from medical and scientific men in connection with his labours respecting rabies, and said he was glad to think the policy had been so successful that the disease has been practically exterminated.

The Aldershot Review.—Dr. Farquharson called attention to this matter on June 26th, and elicited from Mr. Wyndham that the total number of cases of sunstroke was 62, the duration of stay in hospital of those discharged was ten days, and 14 were still in hospital; 29 of the cases were considered severe. The general officer in command, it was admitted, did not consult the principal medical officer, and the Under-Secretary for War added that there was not ground for doing so, since exceptional heat was not anticipated.

The St. Pancras Scandal.—The Lunacy Commission vote on June 22nd gave Mr. John Burns an opportunity of calling attention to the gross scandal connected with relieving officers of the St. Pancras Board of Guardians in trafficking with the owners of private asylums to receive lunatics who ought properly to have gone to the London County Council Asylums. He referred to the admission of the five officers that they had received presents from private asylum owners. The Attorney-General, in reply, said that if the facts were correctly reported a very serious offence had been committed, and promised that the Lunacy Commissioners would investigate most carefully the management of any establishment where it was shown that such practices prevailed. In the Lords this week, Lord Russell of Killowen called the attention of the Lord Chancellor to the same subject, and said that this system of illegitimate commissions was not confined to St. Pancras, and that there had been cases in St. Matthew's, Bethnal Green. The relieving officers in St. Pancras, he said, it seemed had been in the habit of receiving 5s. for each medical examination, and the medical men who declined to make these payments were boycotted, that is to say, persons said to be insane were not brought to them. This form of corruption, as well as the payments received from the owners of private asylums, the Lord Chief Justice said he had reason to fear was more widespread than was generally conceived. The Lord Chancellor replied that the Lunacy Commissioners had called the attention of the Public Prosecutor to the Bethnal Green case, but that functionary found that the law would not reach the offenders, and so the Commissioners had prepared a draft clause dealing with the matter for insertion in the Bill amending the lunacy laws now before the House of Commons. It is to be hoped that the Bill with this clause inserted may yet become law before the session closes.

The Model Milk Clauses came on for discussion once again in connection with the Oldham Corporation Bill. An attempt was made to substitute for them the Leeds clauses, which require the order of two justices in petty sessions for the inspection of a dairy outside the borough when it is suspected to be a source of disease. The Model Clauses require only the order of one justice, and so facilitate inspection and shorten the proceedings. The House supported the Police and Sanitary Committee in inserting the Model Clauses without a division, and it is to be hoped once for all settled the question. The feeling was very strong that in a matter affecting the public health so seriously as a poisoned milk supply that the procedure should be short, sharp, and decisive both in the interests of the community affected as well as in the real interests of dairy trade. The House has now decided three times this session in favour of the Model Clauses, and so it is likely that all opposition to them will cease.

THE WAR IN SOUTH AFRICA.

THE PORTLAND HOSPITAL IN SOUTH AFRICA.

By Anthony A. Bowlby, F.R.C.S.,
Senior Surgeon to the Hospital; Assistant-Surgeon to St. Bartholomew's Hospital, London.

Bloemfontein, May 31st, 1900.

Site of the Hospital.

The Portland Hospital arrived here six weeks ago, having been sent up from Rondebosch as soon as the line was clear enough to allow it to get through, these difficulties of transit being due to the destruction of the Orange River bridges and the urgent necessity of sending supplies of food and clothing for the army.

We found an admirable camping ground about a mile to the south-west of the town on the slope of a hill, and near to excellent wells, the water supply being indeed the chief attraction, for much of the drinking water in the town itself was bad, and it had to be carted to very considerable distances owing to the occupation of the waterworks by the enemy, and the cutting off of the regular supply.

Enteric Fever.

The health of the troops was bad. They had been without proper tents or shelter, and the nights had often been pouring wet; the ground in many places was a swamp, and much of it had been fouled. Owing to the forced march from Kimberley many regiments were short of boots and clothing, and food had been scanty and men had frequently been on short rations. There was, therefore, plenty of reason for sickness, and diarrhœa and dysentery were common. There was unfortunately a worse enemy to come, and within a few days of their occupation of Bloemfontein enteric fever broke out in many camps and spread rapidly. It appeared to have been brought in by the men in many cases, but it is certain that in many other cases it was acquired through bad water or other local insanitary conditions, and various localities, such as Thaba-N'chu, acquired a bad reputation, which was very well deserved. At this time there were no general hospitals at Bloemfontein, and in spite of utilising many public buildings in the town the field hospitals rapidly became overcrowded, so that they had to accommodate three or four times the numbers for which they were equipped, and it became impossible to nurse or treat the patients satisfactorily.

As soon, therefore, as we were ready to take the patients the tents were filled with cases of enteric fever from field hospitals, and it became necessary to increase the hospital accommodation by the addition of more tents, so that we soon had 160 beds instead of 100. We put aside two large tents holding 18 beds each for the treatment of enteric alone, but unfortunately these were quite insufficient for all our cases of this class, which at one time reached nearly 100.

The Wounded.

The opening of Nos. 8 and 9 General Hospitals now enabled the field hospitals to empty, in part at least, and to join in the general advance, and a few days after we arrived our first wounded were sent to us, whilst within the next fortnight some 60 or 70 of them came into hospital. They were chiefly men of the cavalry and mounted infantry, and almost all were wounded by Mauser bullets, though one at least had been hit by an expanding bullet.

Among the first thirty-five men who arrived no fewer than six had been wounded in the knee-joint. In two of these the lower end of the femur was broken across and comminuted, and in two others it had been simply bored through without any transverse fracture. In another case the upper end of the tibia had been similarly perforated, and in the sixth patient the bullet had passed through the left thigh and lodged in the right knee. This man was also the subject of enteric fever at the time he was shot, but this made no difference to his wounds, which healed well on the left side at once, though the entry wound over the right knee did not close till the bullet was extracted after he had passed through a very severe attack of enteric fever. In the case of the patient shot through the tibia the joint remained painful and swollen for several weeks, and showed a decided tendency to contraction and ankylosis, though there was no tendency at all to suppuration and no pyrexia.

Another interesting case was that of an officer shot in the gluteal region two days before admission; the bullet had not perforated, and there was much stiffness of the hip-joint. The *x* rays showed the bullet lying close to the articulation, and an exploratory operation disclosed it embedded in the bone forming the upper part of the acetabulum, a position from which it required a good deal of force to extract it. This officer had previously been in the Portland Hospital for a wound through the right side, and he again returned to his regiment a fortnight after the bullet was removed from the neighbourhood of his hip joint.

At one of the numerous fights near the waterworks the regiment known as "Marshall's Horse" suffered severely, especially in officers. Of these one was killed, the major himself was shot through the left lung and three of his juniors were also hit. One of these had a slight flesh wound of the arm, but the other two were both severely wounded. In one of these the bullet had entered the middle of the third sacral vertebra and had emerged through the abdomen two inches above the spine of the pubes and two inches to the left of the middle line. There was no symptom of peritonitis, so no operation was performed. Recovery was uninterrupted save for a curious attack of localised pain with rapid pulse and pyrexia three weeks later, which, however, passed away in a day or two. A temporary incontinence of fæces suggested injury of the sacral nerves where the bullet had traversed the spine, but this trouble lasted only a few days.

Boer Bullets.

As to the bullets used by the Boers the majority are certainly Mauser, though not only have we seen several wounds caused by expanding bullets, but Mr. Cuthbert-Wallace found at Winberg a large number of expanding bullets of many varieties, and it is curious that in some commandoes at least the use of them is increasingly common. Shell wounds are very few.

Wounded Boers.

We have had six wounded Boers amongst our patients, all of them Free Staters from the De Wet's Dorp commando—large-limbed well-built men. One of them had a fractured femur, and another a bullet through the knee with partial paralysis of the parts supplied by the external popliteal nerve, but there was no appreciable difference between the wounds inflicted by the Lee-Metford bullets and the Mauser. Four or five men have had typhoid fever as a complication of their wounds, but the latter have done quite well in spite of this.

The Climate.

The climate at present is excellent. The days are bright, clear, and sunny, and the air is dry. The temperature falls suddenly directly after sunset, which is now at about 5 P.M., and the nights are cold and often frosty—we had half an inch of ice in our buckets last week. It is said by the people here that enteric fever always stops when the frost begins, so it is to be hoped that this will be the case again.

MEDICAL ARRANGEMENTS IN SOUTH AFRICA.

Mr. Burdett-Coutts's Allegations.

The *Times* on the June 27th published a letter, dated Capetown, May 29th, from Mr. W. Burdett-Coutts, in which he alleges that the medical arrangements in South Africa have failed to keep pace with the epidemic of typhoid fever, which has caused a very large number of cases of illness, especially among the troops in and about Bloemfontein. He gives a graphic and very distressing account of the overcrowded condition of a field hospital used as a stationary hospital in Bloemfontein.

The letter as it stands would certainly convey the impression and, as a matter of fact, has conveyed the impression, that the deplorable condition under which Mr. Burdett-Coutts described cases of typhoid fever to have been treated in this field hospital were typical of those to which the majority of the patients who have been treated at Bloemfontein have been subjected. Mr. Burdett-Coutts's allegations, the gravity of which he states he fully appreciates, undoubtedly demand the most searching examination. With no desire to condone or

excuse such deficiencies, as he alleges to have existed, we may point out that Mr. Burdett-Coutts's statements are in some respects contrary to information in our possession. He makes no mention, though his letter is dated May 29th, of the three large military general hospitals which, as we stated last week, were in full working order early in May, and had apparently been taken into use some time during the previous month if not earlier.

There is no doubt that there has been a great deal of typhoid fever in the army, especially among the forces engaged north of the Orange River. Mr. Fripp, the Chief Surgeon of the Imperial Yeomanry Hospital, in a letter dated June 4th, informs us that he had shortly before visited Bloemfontein and Kroonstad. In Bloemfontein there were at that time over 5,000 sick, most of whom were suffering from enteric fever; while in Kroonstad the three hotels, the Town Hall, and the church had been converted into hospitals, even the billiard tables being requisitioned to accommodate cases of enteric fever. He adds that as the railway had been opened the Surgeon-General was engaged in rapidly pushing up adequate hospital accommodation. The train in which Mr. Fripp returned brought down 241 sick to Bloemfontein, where they were admitted into one of the general hospitals, bringing the number of sick it contained "to the huge total of 1,800." Mr. Fripp describes the water supply all over the country as extremely bad. "Water," he says, "in the small streams at the bottom of the river beds is often very muddy. Dead horses are generally to be seen in the streams, and they are never above the strong suspicion of being typhoid infected. It is impossible for all water that is required for drinking purposes to be boiled; there is not fuel enough."

Sir William Thomson, writing from Bloemfontein early in May, stated in a letter published in the BRITISH MEDICAL JOURNAL of June 2nd that there were between 3,000 and 4,000 sick in the town, and that of these 1,200 were cases of enteric fever. He stated that the three general hospitals were crowded, that several of the public buildings were utilised for the accommodation of the sick, and that there were in the town in addition the Irish, the Portland, and the Langman Hospitals.

Died of Disease in South Africa.

Week Ending.	Officers.	Men.	Total.
February 17th	1	49	50
,, 24th	6	111	117
March 3rd	3	89	92
,, 10th	4	111	115
,, 17th	8	85	90
,, 24th	5	179	184
,, 31st	5	159	164
April 7th	3	167	170
,, 14th	9*	368*	377*
,, 21st			
,, 28th	9	197	206
May 5th	4	196	200
,, 12th	7	193	200
,, 19th	9	302	311
,, 26th	8	361	369
June 2nd	20*	538*	558*
,, 9th			
,, 16th	11	173	184
,, 23rd	2	203	205

* These figures are for the fortnight, April 7th to 21st and May 26th to June 9th. They were published as figures for the fortnight, no tables having been published for the weeks ending April 14th and June 2nd.

The amount of sickness in the forces in South Africa has been large, about 7 per cent., but this is less than in previous campaigns. The exact figures are not available, but the above table, compiled from the official returns issued by the War Office, shows the number of officers and men who have died of disease in South Africa from the middle of February to June 23rd. The number of deaths attributed to enteric fever is not distinguished, but there can be no doubt that a very large proportion have been due to enteric fever, and a large number also to dysentery. It will be remembered that Cronje surrendered on February 27th, and it will be seen that a sudden rise in the number of deaths from disease occurred between three and four weeks later. Mr. Watson Cheyne attributed the great amount of typhoid fever prevalent in Bloemfontein at the end of March and the beginning of April to infection by the polluted water of the Modder river, which the troops were compelled to drink during the time for which Cronje remained in his laager, and Mr. Bowlby, whose letter is printed above, appears to entertain a similar opinion, though he speaks also of other infected places. It will be seen also that there was another sudden rise in the number of deaths from disease in the weeks ending May 19th and 26th; this was some seven or eight weeks after the waterworks of Bloemfontein were occupied by the enemy and the water supply cut off. Whether these two circumstances are to be connected or not it will be as yet premature to conjecture.

LETTER FROM MR. TREVES.

We are indebted to Mr. Treves for the following letter which he has written in response to our request for his opinion:

SIR,—I have read Mr. Burdett-Coutts's letter in the *Times* of to day, and am shocked and surprised at the report he furnishes.

I left Natal in March, some time after the relief of Ladysmith, and the account I gave on my return to England of the work of the Army Medical Service in Natal was based upon my experience up to the period of my departure.

Mr. Burdett-Coutts comments upon this account as if it dealt with events which were to be in the future, rather than with events which have happened in the past.

To every word I have said as to the excellence of the army medical arrangements in Natal I adhere most absolutely.

It is difficult to believe that a department which stood with such credit the exceptional strain of the Natal campaign can have suddenly exhibited the alarming collapse depicted by the writer of the letter in question. My experience had induced me to think that the organisation of the Army Medical Service was sound and good, that the general scheme of work and of administration was efficient, and that the lavish arrangements planned by the Director-General were carried out by his subordinates in a liberal, thorough, and business-like manner.

There was no evidence of the intervention of red tape nor of hindrance by petty formalities, and the hospital work was not only not hampered by other departments, but was helped in every way with the heartiest readiness.

I cannot think that our sick have been treated with "neglect" and "inhumanity," as Mr. Burdett-Coutts asserts.

Instead of neglecting their patients the surgeons I met worked with heart and soul, sparing themselves in no particular, and of the untiring and unselfish devotion of the nurses I have already spoken.

This war has been a war of surprises. The casualties have been higher than the gloomiest ever dreamt of, and there was no reason to anticipate that the outbreak of enteric fever would assume the enormous proportions it has assumed.

The circumstances of war unfortunately render an immense amount of suffering and distress absolutely unavoidable, and the difficulties of furnishing adequate supplies from a far-distant base are extreme.

I left South Africa with the impression that nothing more could have been done to mitigate the sufferings of the sick and wounded than had been done when a temperate regard for the circumstances of war was kept in mind.

The Army Medical Service can lay no claim to the gift of prophecy, nor to the power of anticipating the future, but so far as any reasonable foresight can go the department seems to have done all that in fairness could have been expected of it. Mr. Burdett-Coutts will, no doubt, substantiate the points detailed in his report, but his preliminary account is conveyed in language which so savours of the theatrical that it fails to carry with it an overwhelming conviction.

Mobile field hospitals, if they have to do the work they are intended to do, cannot take beds with them. It is better for a typhoid patient to lie upon a blanket and waterproof sheet on the ground—as Mr. Burdett-Coutts describes—than to be hurried helter-skelter to the base.

No human being can tell how the progress of an epidemic may proceed, nor how the numbers of the sick will be distributed. Preparations may be made for 1,000, and the admissions may not reach 10. It is impossible to avoid overcrowding at times, and equally impossible to provide in every

detail for emergencies which no reasonable foresight could anticipate.

That our gallant soldiers should suffer is deplorable indeed, but the blame must fall rather upon the miserable fortunes of war than upon a department which has spared neither men nor money nor care nor devotion in a work which has assumed dimensions out of all proportion to that anticipated at the outset.

The seat of war is at least three weeks distant from the seat of supplies, and in those three weeks a region free from disease may become the seat of a desperate epidemic. The movements of the troops cannot be exactly foretold. It would be better for the country to be flooded with doctors and nurses rather than that the soldiers should suffer, but it is quite impossible that the medical arrangements can at a time of war overthrow all those circumstances of transport and supply upon which the conduct of the campaign depends.

Unfortunately in war the war comes first, but I should imagine that in no campaign has there ever been such solicitous and successful care for the sick.—Yours faithfully,

FREDERICK TREVES.

ASSOCIATION INTELLIGENCE.

COUNCIL.

NOTICE OF SPECIAL MEETING.

A SPECIAL meeting of the Council will be held at the office of the Association, No. 429, Strand, London, W.C., on Wednesday the 4th day of July next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

June 20th, 1900.

COUNCIL.

NOTICE OF MEETING.

A MEETING of the Council will be held in the Council Room of the Association at 429, Strand (corner of Agar Street), London, on **Wednesday the 18th day of July next**, at 2 o'clock in the afternoon; not on **July 11th** as previously announced.

June 20th, 1900. FRANCIS FOWKE, *General Secretary.*

BRANCH MEETINGS TO BE HELD.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.—The annual meeting of this Branch will be held on July 5th, at Royston, Mr. D. B. Balding, F.R.C.S., President, in the chair. Programme: 2.15 P.M., Luncheon at the Beeches, Royston. 3 P.M., General meeting at the Institute, Royston, for business, election of officers, etc. The following papers will be read: Dr. Joseph Griffiths: Notes on the History of the Branch for the First Fifty Years. Dr. Windsor: A Case of Hypertrophic Paralysis. The President: A Case of Painless Gangrene of Fingers. The President and Dr. Joseph Griffiths: A Case of Universal Ankylosis or Arthritis Ossificans.—E. LLOYD JONES, Trumpington Street, Cambridge, Honorary Secretary.

NORTH WALES BRANCH.—The annual meeting will be held at Denbigh on Thursday, July 12th. Members having any new member to propose, paper to read, or case to communicate, should notify the same before June 30th.—W. JONES-MORRIS (Portmadoc), H. JONES-ROBERTS (Pen-y-groes), Honorary Secretaries.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—The annual meeting of this Branch will be held at Cardiff on July 3rd.—A. SHEEN, Cardiff, Honorary Secretary.

BORDER COUNTIES BRANCH: SECTION FOR THE COUNTIES OF ROXBURGH, BERWICK, SELKIRK AND PEEBLES.—This Section will meet at the Roxburgh District Asylum, Melrose, on Thursday, July 12th, at 3.45 P.M., on the kind invitation of Dr. Carlyle Johnstone, the Medical Superintendent, who will conduct the members over the wards of the new hospital and introduce a discussion on What to do with the Insane Poor Man. Dr. Johnstone has most kindly offered to provide tea after the meeting. It is hoped there will be a large turn-out of members to show their appreciation of Dr. Johnstone's kindness and hospitality.—W. HALL CALVERT (Melrose), Honorary Secretary.

NORTH OF IRELAND BRANCH.—The annual meeting of this Branch will be held at Portrush, co. Antrim, on Thursday, July 5th, at 11.30 A.M., in the Town Hall. The business will consist of the annual report of council, annual statement of accounts, draft scheme of subcommittee on nursing in Ulster, report of deputation to Local Government Board, election of office-bearers for the ensuing year, and the following cases will be shown and papers read: The President (Dr. Martin): Portrush from a Medical Aspect, and show several specimens. Dr. Stafford Smith and Mr. Kirk: Notes of a Successful Case of Splenectomy. Mr. Kirk: Notes on the Successful Intra-abdominal Fixation of the Rectum for Complete Prolapse. Dr. Williamson: (1) A Case of Uterus Bicornis; (2) a Case of Acephalic Fœtus. Dr. Mitchell: (1) A Successful Case of Ligature of the Third Stage of Subclavian for Axillary Aneurysm; (2) Notes on Two Gastric Operations. Dr. E. C. Biggar: Some Points in the Treatment of Typhoid Fever. Dr. John M. MacCormac: Neurasthenic Dyspepsia. Dr. Calwell: (1) Notes of a Case of Gastroptosis (with Dilatation) due to Duodenal Stenosis: (2) Photographs of a Case of Onychogryphosis.—W. CALWELL, 1, College Square, Belfast, Honorary Secretary.

SOUTH OF IRELAND BRANCH.—The annual general meeting of this Branch will be held at 118, Patrick Street, Cork, at 4.30 P.M. on Saturday, June 30th, for the election of office-bearers and representatives, and to transact any medico-ethical business.—PHILIP G. LEE, 25, Patrick's Hill, Cork, Honorary Secretary.

METROPOLITAN COUNTIES BRANCH.

THE forty-eighth annual meeting of this Branch was held on June 19th at the Hotel Cecil, Mr. BRYANT in the chair.

Confirmation of Minutes.—The minutes of the previous meeting were read and approved.

Mr. Long and the Extinction of Rabies.—Sir WILLIAM GOWERS proposed the following resolution:

The members of the Metropolitan Counties Branch of the British Medical Association beg to express to the President of the Board of Agriculture their appreciation of the success of the measures he has adopted for the extinction of rabies, of his firmness in maintaining them, and their sense of the great service he has rendered to the community by thus abolishing a cause of death and intense suffering to both man and animals.

He pointed out that no case of rabies had occurred for six months owing to the action of Mr. Long.—The PRESIDENT seconded the resolution, which was supported by Sir SAMUEL WILKS and others, and carried without a dissentient vote.

Reports of Council and Treasurer.—Reports of the retiring Council and Treasurer were read and adopted.

Election of Officers.—The following list of officers were elected for 1900-1901: *President-elect:* Dr. Stephen Mackenzie. *Vice-Presidents:* Mr. Bryant, Mr. Andrew Clark, Dr. Farquharson, Dr. Oswald. *Treasurer:* Mr. George Eastes. *Honorary Secretaries:* Mr. Betham Robinson and Dr. Washbourn. *Ordinary Members of Council:* *Campbell Boyd, *George Brown, *Frederick Durham, Frederic Eve, *George Greenwood, *Major Greenwood, M.D., W. S. A. Griffith, M.D., *G. A. Heron, M.D., *J. Brindley James, *Hugh R. Ker, J. A. Masters, M.D., Isambard Owen, M.D., George Rowell, *W. Knowsley Sibley, M.D., *Crawford Thomson, M.D., Frederick Wallace, *Dawson Williams, M.D. *Representatives of the Branch on the Council of the Association:* *H. Radcliffe Crocker, M.D., *George Eastes, M.B., Victor Horsley, F.R.S., *Leonard W. Sedgwick, M.D., *C. S. Tomes, F.R.S., and the Senior Honorary Secretary. *Representatives of the Branch on the Parliamentary Bills Committee:* *George Brown, *Major Greenwood, M.D., *Victor Horsley, F.R.S., *Dawson Williams, M.D. *Members of the Ethical Committee of the Branch:* R. Percy Smith, M.D., C. Crawford Thomson, M.D., Frederick Wallace. (*Filled the same office during the past year.)

Installation of New President.—Mr. BRYANT then invited the new President, Mr. George Eastes, to take the chair.

Votes of Thanks.—Votes of thanks were passed to the retiring President and other officers.

President's Address:—Mr. EASTES gave his inaugural address upon "Our Numbers and Our Work at the End of the Century," which will appear in the BRITISH MEDICAL JOURNAL. A vote of thanks to Mr. Eastes concluded the proceedings.

Dinner.—Subsequently the members dined together, Mr. Eastes in the chair, being supported by Dr. Ward Cousins, President of the Association; Dr. Roberts Thomson, President of the Council; Mr. Andrew Clark, Dr. Stephen Mackenzie, Dr. Pavy, Dr. Dawson Williams, Mr. Butlin, Mr. Fowke, and others. After dinner a capital programme of music and recitations was given, and the following toasts duly honoured: (1) "Her Majesty the Queen and the other Members of the Royal Family;" (2) "The Imperial Forces," proposed by Dr. PAVY and responded to by Brigade-Surgeon ANDREW CLARK; (3) "The British Medical Association," proposed by Dr. RADCLIFFE CROCKER and acknowledged by Dr. WARD COUSINS, the President; (4) "The Metropolitan Counties Branch," proposed by the PRESIDENT OF COUNCIL, Dr. Roberts Thomson,

and responded to by the PRESIDENT OF THE BRANCH; (5) "The Visitors," given by Dr. HERON, and Mr. MOWER WHITE returned thanks.

SOUTH-EASTERN BRANCH.

THE fifty-sixth annual meeting of this Branch was held at Reigate on June 21st, Dr. WALTERS presiding.

Luncheon.—Luncheon was provided at the Public Hall by the kind invitation of the Local Committee.

President's Address.—The PRESIDENT gave an interesting history of Reigate from early times tracing the growth of the borough, and concluding with an estimate of its climate. He also alluded to the vital statistics referring to the neighbourhood.

Votes of Thanks.—Votes of thanks were accorded to the President for his address, and to the Council and several officers of the Branch during the past year.

Report of Council.—The following report was presented by the Council: "In the absence of any questions specially referred to the Branches, it is not necessary that your Council should draw up any lengthy report upon the past year. It is well, however, to point out that decision upon certain important matters must be arrived at in the near future. For instance, the perennial 'midwives question' has assumed a fresh aspect since the Bill before the House of Commons passed its second reading. It is possible to exaggerate the effect of this success, as the Government is alive to the opposition to the Bill in its present form, and is not likely to favour its further progress without amendment. At the same time it is shown once more that it is impossible, even if it were desirable, to prevent all legislation in this direction. Your Council wish to uphold the action of the Association Council and of its Parliamentary Bills Committee in attempting to mould the course of events by providing safeguards for the public and the profession, rather than in adopting a *non-possumus* attitude. The *Lancet* lately issued an inquiry to 20,000 members of the profession in order to ascertain the feeling as to legislation in the form now before the House, or as to legislation at all. The small number of replies and the very moderate number who object to all legislation, show that the objection, though strong where it exists, is not by any means universal; it may, perhaps, have been shown that the need for some satisfactory settlement is generally allowed. Again, it will be necessary to arrange, on a permanent and workable basis, the relation of the Central Council to the Association at large, and to prevent the very serious results which might arise from votes snatched by discontented members at sparsely attended general meetings. The Council will always consider to the fullest extent, and, if possible, carry into effect, any expression of opinion sent up to them; but, in the interests of the whole body of members, it will be necessary to strengthen the power of the Council to discriminate between that which is and that which obviously is not for the good of the members generally, not of a section only. Your Council appeal to all the Branch members to lend their support in this direction. Among the losses by death or resignation during the past year your Council note with regret the death of Dr. Waring, of Brighton, member of the Council and one of the auditors of the Branch. He had always taken a keen interest in Branch affairs and in all large questions in medical politics, such as hospital abuse, to which he had devoted special attention. The general prosperity of the Branch is maintained, largely owing to the exertions of the elected officers, to whom your Council offer, on behalf of the Branch, warm thanks."

Financial Report.—The Treasurers reported a balance of £169 13s. 9d., and from this grants of 25 guineas were voted to the British Medical Benevolent Fund and the Royal Medical Benevolent College.

Annual Meeting, 1901.—It was decided to select Worthing, and that Mr. W. S. Simpson should be requested to preside.

Officers and Council.—The following were elected officers for the ensuing year: *Branch Council:* Dr. Adeney, Tunbridge Wells; Dr. Allfrey, St. Leonards; Dr. Allen, Hastings; Dr. Bagshawe, St. Leonards; Dr. Bowles, London; Dr. Buchanan, Chatham; Mr. Chaldecott, Dorking; Mr. A. H. Dodd, Brighton; Sir J. Ewart, Brighton; Dr. T. Eastes, Folkestone; Mr. Hallowes, Maidstone; Dr. Hayman, Eastbourne; Dr. Hoar, Maidstone; Dr. Holman, London; Dr. Ilott, Bromley; Surgeon-General Jeffcoat, Surbiton; Mr. Kaye-Smith, St. Leonards; Mr. MacIlwaine, Redhill; Dr. Ogle, Reigate: Dr. Oldman, Blechingley; Dr. Parsons, Dover; Dr. T. W. Reid, Canterbury; Dr. Starling, Tunbridge Wells; Dr. Stowers, London; Mr. Sturges, Beckenham; Mr. Travers, St. Leonards; Mr. Treves, Margate; and Mr. Sidney Turner, Anerley. *Representatives on the Association Council:* Dr. Galton, Dr. Tyson, Mr. Verrall. *Representatives on the Parliamentary Bills Committee:* Dr. Bowles, Mr. Verrall. *Honorary Secretary and Treasurer:* Mr. Verrall.

STIRLING, KINROSS, AND CLACKMANNAN BRANCH.

THE annual general meeting of this Branch was held at Stirling on June 19th, under the presidency of Dr. MACKINTOSH, Stirling.

Minutes.—The minutes of the last general meeting were approved and signed.

Financial Report.—The report of the Honorary Treasurer showed a balance in favour of the Branch of £11 14s. 8d.

Officer-Bearers.—The following office-bearers were elected for the ensuing year:—*President:* Dr. Fergusson (Alloa). *Vice-President:* Dr. Joss (Denny). *Honorary Treasurer:* Dr. Ronald (Larbert). *Honorary Secretary:* Dr. Moorhouse (Stirling). *Members of Council:* Dr. Alexander (Denny), Dr. McGowan (Grangemouth), Dr. Mackintosh (Stirling), and Dr. Smith (Falkirk). *Representative on the Council of the Association:* Dr. Mackintosh (Stirling). *Representative on the Parliamentary Bills Committee:* Dr. McVail (Partick).

President's Address.—Dr. MACKINTOSH delivered an address on the subject of Head Injuries. He illustrated his remarks by the exhibition of a youth of 18 who had made a remarkable recovery from a severe cycling accident. There had been a depressed fracture of a considerable part of the vault of the cranium, with symptoms of compression of the brain for a fortnight. He had made a complete recovery without surgical interference; the depressed piece of bone had risen to the normal level, and at the date of the meeting—ten weeks after the accident—only the slightest irregularity of the bone could be felt. The symptoms of compression had been greatly relieved by the administration of potassium iodide.

Vote of Thanks.—A vote of thanks was cordially given to the President for his address, on the motion of Dr. Joss, seconded by Dr. SMITH.

Next Meetings.—It was decided to hold the next two meetings at Falkirk and Larbert.

SOUTH-WESTERN BRANCH.

THE annual meeting of this Branch was held on June 20th at Torquay, Dr. MARK JACKSON, President, in the chair.

Luncheon.—Previous to the meeting the members present, 30 in number, were hospitably entertained by the President-elect, Mr. Paul Q. Karkeek, Medical Officer of Health for Torquay.

Confirmation of Minutes.—The minutes of the last annual meeting at Barnstaple were read and confirmed.

President's Address.—The PRESIDENT resigned the chair to the PRESIDENT-ELECT, Mr. P. Q. Karkeek, who delivered his inaugural address, dealing with the subject of the preliminary general education of the medical student, and urging the necessity for an elevation of the standard of the examinations necessary for registration as such. At the close of the address, which was frequently applauded, Dr. D. THOMPSON moved a hearty vote of thanks to Mr. Karkeek; this was carried by acclamation.

Report of Branch Council.—This was read and adopted.

Place of Annual Meeting for 1901.—The meeting unanimously adopted the recommendation of the Council that it be at Devonport, and that Mr. George Thom be the President-elect.

Balance Sheet.—The Honorary Secretary reported a credit balance of £93 7s. 8d.

Representatives on Council and Parliamentary Bills Committee.—Drs. P. Maury Deas and John Rolston were re-elected for the ensuing year.

Honorary Secretary.—Dr. H. W. Webber (Plymouth) was re-elected.

Communication from the General Secretary of the Association re Midwives Bill.—This was read by the HONORARY SECRETARY, and copies of the proposed amendments to it were circulated.

Vote of Thanks to Retiring President.—Dr. J. WOODMAN moved a very cordial vote of thanks to Dr. Mark Jackson at the close of his year of office, and that he be elected a Vice-President of the Branch. This was carried unanimously.

Transaction of Business at Annual Meeting.—Mr. GEORGE JACKSON then asked the opinion of the meeting as to the desirability of transacting business, especially in matters of interest to the profession at large—not for the reading of papers on medical or surgical topics or showing cases or specimens—at the annual meeting. In the event of the members agreeing to the proposal, he should ask them to sanction a special meeting in order to alter the by-laws to give effect to the same. Dr. E. L. FOX seconded. Dr. RUSSELL COOMBE moved a direct negative as an amendment, giving as his reason the fact that he wished the annual meeting to be more of a social character than anything else. Dr. GRIMBLY seconded. Dr. EALES, supporting, pointed out that the by-laws were purposely framed to avoid such discussion, and intermediate meetings arranged at which professional matters could be dealt with. The amendment was carried by 39 votes to 6.

Afternoon Tea.—The meeting being concluded, the members took tea together.

Annual Dinner.—At 6.30, 43 members and guests dined together in the Bath Saloon, and a most pleasant evening was spent.

Excursion.—On Thursday, June 21st, the Torquay members very kindly provided an excursion to Dartmouth by sea, thence up the river Dart to Totnes, where luncheon was served. Some of the members drove to Berry, Pomeroy Castle, and Paignton; others, after visiting the church and Guildhall of Totnes, returned to Torquay by train. The arrangements, which where in the hands of Dr. G. Young Eales, were most ably carried out.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH.

THE annual meeting of this Branch was held at Hereford on June 18th, Dr. H. E. DIXEY, President, in the chair.

Election of Officers.—The officers and Council for the ensuing year were elected as follows:—*President:* Mr. E. Averay Jones, Fownhope, Hereford; *President-Elect:* Mr. H. G. Budd, Worcester; *Representative on Council of Association:* Dr. G. W. Crowe; *Representative on Parliamentary Bills Committee:* Dr. H. E. Dixey; *Council:* Re-elected; *Honorary Secretaries:* Dr. G. W. Crowe and Mr. Du Buisson.

President's Address.—The PRESIDENT gave a short address on the Midwives Bill now before Parliament. He said that legislation on the subject was necessary was proved: First, by the fact that this was the only civilised nation which had not yet made laws to regulate the practice of midwives. Secondly, that the second reading was passed by a large majority of the House of Commons, three-fourths in fact. Thirdly, that no one who had lived and practised among the working classes as he had done for thirty years as principal and assistant could shut his eyes to the fact that great cruelty, ignorance, and neglect of all sanitary precautions had characterised the relations of the old village "Gamps" to their unfortunate sisters who had gone through the pains and perils of childbirth under their mistreatment. There seemed to be an impression amongst a considerable section of the profession that it would be possible to prevent any legislation on the subject, and the only accoucheurs were to be the fully-qualified surgeons. This idea was too Utopian. The general public would continue to employ midwives, and they asked now that their practice should be regulated by law. It seemed to him therefore better for them to swim with the tide, to give in their adherence to the first principles of the Bill, and only endeavour, as had been done—and done well—by the Association, to modify such clauses as were likely to clash too much with their interests, and to prevent the creation of a new race of rival practitioners. This seemed to be the platform (to use an Americanism) of Dr. Glover, who was one of the direct representatives on the General Medical Council. As regards the effect of the Bill, if it became law, on the practice of the general practitioner, it could, he thought, only have a beneficial effect, not at first, for the young doctor would lose many possible guineas, which would pass over to the nurse or midwife of the future; but after a time the young practitioners would find that their social status had improved, that they would not hav to sit up half the night (or all) in a cottage waiting for labou pains, but would only be called in by the trained attendar when some surgical interference was necessary. It seeme necessary clearly to define the term "midwife" so as to ir clude a title that would show the duties of the female wh undertook such occupation, not only at the birth of the chil but also (which was of more importance) the proper nursin of the patient afterwards, and the restriction of such perso to attendance on natural labour only. There was also on great defect in the Bill as at present introduced, in that the seemed to be no legal process to prevent the practice, but onl one to hinder the assumption of any title implying that th practitioner was registered under the Act. There did n seem sufficient means of checking a woman registered und the new Act from attending abnormal as well as natur labour, or of compelling her to send for medical assistan under certain conditions or to ensure direct supervision of a midwives by the medical profession; that was they were n to act independently, but always under the control of son doctor. It was possible these and other points might b amended before the Bill became law. As regarded his ow experience of the obstetric art, he was for many years glad avail himself of the superior skill or experience of his senio to help him out in difficult cases, preferring rather to lo prestige among his patients than to have it on his conscien that he had caused the death of any poor woman in h greatest peril. For this reason he could not speak as one very great experience. He had attended possibly 1,0 labours in all. He had, however, never attended any labo unless he was engaged at least one month beforehand; th rule had, after years of opposition, worked so well that in h own neighbourhood he had suppressed the practice numerous would-be aspirants to obstetric fame. To a count doctor holding a Poor-law appointment this, he was afrai would not be practicable, but even in his case he might b able by insisting on the order for attendance being obtain some time beforehand, he could advise such or such nur being employed, and prevent the establishment of any th he knew wished to practise "on their own hook." The n Bill would practically carry out this principle—that of su pression. He should therefore, as far as he was concerne welcome the Midwives Bill as one of the greatest blessin to suffering humanity promoted by the present Government

Communications.—Dr. P. CHAPMAN made some remarks or form of simple diet, the only proteid used being the casein milk.—Mr. DU BUISSON showed a case of postanal gut in child aged 5½.—Mr. STANDRING read notes of a case of pu peral septicæmia treated by antistreptococcus serum unsu cessfully.

SPECIAL CORRESPONDENCE.

NEWCASTLE-ON-TYNE.

Laying of the Foundation Stone of the Royal Victoria Infirma —Address Presented by Professor Philipson.—Speech by Prince of Wales.—The Mayor's Luncheon.

WEDNESDAY, June 20th, was a most appropriate day laying the foundation stone of the new infirmary at Newcast upon-Tyne. It was the sixty-third anniversary of the Accessi of the Queen to the Throne, and as Her Majesty has e shown sympathy with suffering, the opportunity was afford her through the Prince of Wales of giving to her subjects the North of England practical demonstration of this fact. T new infirmary is the outcome of the beneficence of a mu respected townsman, the late Mr. John Hall, who ga £100,000 to the fund, and of the labours of the present Ma (Mr. Riley Lord) who as Mayor of the City during the Diamo Jubilee of the Queen, also succeeded in raising £100,000 subscriptions. It was the desire of the Corporation and t Infirmary Committee that the Queen should be invited to c charge the important function which she delegated to, a which was so graciously and successfully performed by, t Heir Apparent to the Throne. It gave considerable pleas to the dwellers in Newcastle and the adjoining counties wh it became known that the Prince of Wales was to be acc

panied by the Princess of Wales and her daughter the Princess Victoria. Nowhere could a welcome to Royalty be more cordial and enthusiastic than it was in the metropolis of the North. Seldom if ever has the city been so gaily decorated. In the early morning thousands of people thronged into the town. By midday immense but orderly crowds lined the streets. Beyond a short sharp shower of rain a few minutes before the arrival of the Royal carriage at the Leazes, upon ten acres of which the new infirmary is to be built, the weather though dull was not unfavourable. On the Royal platform were the Duke of Northumberland, Lord and Lady Ravensworth, the Hon. Mr. and Mrs. A. Liddell, Mr. Richard Clayton and Mr. James E. Woods (trustees of the new infirmary), Lord Durham, Earl Grey, Captain Lambton, the Bishop of Durham, the Dean of Durham, City Aldermen, Dr. Gibb and Mr. Page, Consulting Surgeons to the Royal Infirmary, Dr. Hume, Dr. Drummond, Dr. Oliver, Dr. Limont, Dr. George Murray, Mr. Rutherford Morison, Mr. Walter Ridley, Town Councillors and members of the Infirmary Committee, and the two architects, Mr. W. L. Newcombe and Mr. Percy Adams. Immediately following the macebearers in the procession to the dais came Professor Philipson, who was followed by the Mayor and Mayoress of Newcastle, the Sheriff and Mrs. Foster, Sir Matthew White Ridley, the Bishop of Newcastle, and others.

Professor Philipson, as Vice-Chairman of the body of governors of the Royal Infirmary, presented an address to the Prince of Wales. Those who know the Professor of Medicine of the University of Durham do not require to be told that this part of the ceremony was done with the grace and dignity becoming the occasion. The address itself was of the character usual on such occasions. In it allusion was made to the building of the present infirmary 150 years ago, while mention was made of the fact that the new hospital would accommodate 400 patients, and have a home for 100 nurses. From it the names of the two generous donors—the late Mr. John Hall and Dr. Heath—were not omitted.

The Prince of Wales, who replied in a voice which could be heard everywhere amongst the vast concourse of people assembled, spoke of the pleasure it gave him on behalf of the Queen to lay the foundation stone of the beneficent institution which Her Majesty had directed to bear her name in commemoration of the wisdom of the Corporation and freemen, and of the generous charity of the inhabitants of the North on the occasion of the Diamond Jubilee. It was a matter of gratification to the Princess of Wales and himself to have taken part in the inauguration of a hospital so extensive and well equipped, where the best resources of medical science and of skilled and efficient nursing would at all times be available for the benefit of the suffering. After a special prayer by the Bishop of Newcastle, the Prince of Wales was presented by the Mayor, as Chairman of the Building Committee, with a beautiful trowel and mallet, the gift of the architects. After laying the stone and tapping it with the mallet the Prince of Wales declared, in the name of the Trinity, the stone well and truly laid.

On the completion of the ceremony the Mayor entertained the Royal visitors and a large number of the citizens of Newcastle and people in the neighbourhood to luncheon in the St. George's Hall. The toasts were few. "The Queen" and "Prince of Wales" were both proposed in felicitous terms by the Mayor. In responding, the Prince of Wales proposed, in most appropriate terms, "The Mayor and Corporation of Newcastle." This was acknowledged by the Mayor, while the toast of "Prosperity to the New Infirmary," proposed by Earl Grey, was responded to by Dr. Hume.

LIVERPOOL.

The Liverpool School of Tropical Medicine.—Expedition to Investigate Yellow Fever in South America.—Banquet to the Members of the Expedition.—Foundation of a "Mary Kingsley" Memorial Hospital for Tropical Diseases in Liverpool.

ON June 25th a meeting was held in Liverpool to consider what action should be taken to urge upon the Government the necessity for the amelioration of the conditions of life in West Africa and other tropical countries, by improved sanitation, better water supply, separation of the Europeans from the native races, and other means. Mr. A. L. Jones, the Chairman of the School of Tropical Medicine, presided, and the attendance included Major Ross, Professor Boyce, Professor Flexner (Philadelphia), Professor Osler (Baltimore), and many prominent citizens who are connected with the trade of the tropics. The Chairman said that Liverpool was very much indebted to the members of the Liverpool University College, such as Professor Boyce and others, to Major Ross, and to the members of the expeditions who went out to West Africa. The Liverpool school had felt that it was only right that when the Brazils or Amazons asked for advice on the subject of malaria it should be ready to give it. Professor Boyce said that the Liverpool Tropical School of Medicine had been founded only about a year. It was not founded more than a month before it sent out an expedition with Major Ross to the West Coast of Africa. Shortly afterwards another expedition was sent out, and was at present working in West Africa. Now the School were about to send a third, this time to South America. The German Government had preceded ours in this matter, having voted £6,000 to send out a commission to study tropical diseases, and especially malaria. No sooner had the United States got a footing in Cuba and the Philippines than they despatched expeditions. The expeditions the Liverpool Tropical School had sent out had directly shown the cause of malaria, and by that means had made it possible that certain measures could be taken to prevent the spread of the disease among Europeans. It was to be hoped that the Government would see the importance of organising some systematised plan of medical supervision, whereby our Colonies in West Africa and elsewhere in the tropics might be rendered infinitely more healthy. Dr. Carter spoke of the great encouragement which the results of the researches undertaken from Liverpool gave them to submit a resolution to the Government, and moved two resolutions:

(1) That this meeting of the Liverpool School of Tropical Medicine an others, having heard the views of the experts of the School on the conditions for Europeans of life in the tropics, are strongly of opinion that steps should be immediately taken by Her Majesty's Government to improve those conditions in every possible direction by the segregation of Europeans, improved sanitation, better water supply, clearance of bush near towns, light railways to the mountainous districts, and such other means as science may direct. (2) That the Liverpool Chamber of Commerce be requested to co-operate with the School, and to ask the Government to receive a joint deputation on the subject.

Major Ronald Ross addressed the meeting on the subject of tropical sanitation, and made particular reference to malaria and dysentery. During the last fifty years many discoveries of the highest importance had been made in the field of tropical sanitation, but they were not followed up either in the laboratory or by practical action. It had taken us twenty years to grasp the elementary fact that malarial fever was caused by a parasite, although malaria was probably the greatest enemy which our tropical empire had to contend against. The parasite which very probably caused that other great scourge of the tropics—dysentery—had received no attention whatever from our country. He pleaded for the making of vigorous efforts toward rendering the principal settlements on the West Coast comparatively healthy and habitable for Europeans. Professor Flexner, of Pennsylvania, in seconding the proposition, said that he had recently returned from studying the medical conditions prevailing in the Philippine Islands. Humanity demanded of a Government that if it sent out its citizens to tropical countries it should use the best means it possessed to protect them from certain death, or from that which was more to be dreaded than death itself. Mr. Durham, a member of the third (yellow fever) expedition of the School, who, along with Dr. Walter Myers, proceeds to Brazil to-day, congratulated the Chairman on the success which had resulted from his activity in opening up a new era in the history of British medical research.

In the evening a dinner was given by Mr. A. L. Jones, in honour of the third medical research expedition of the School about to depart for the Amazon.

The Chairman referred to the high esteem in which the late Miss Kingsley was held by the West African natives, and stated that it was proposed to erect a hospital in Liverpool for the treatment of tropical diseases to perpetuate the memory of Miss Kingsley, the list for which he proposed to head with

a subscription of £1,000. He said that Mr. Blaize, of Lagos, a friend of Miss Kingsley, had given £500; and that in addition to the Liverpool Hospital to the memory of Miss Kingsley there was to be an industrial school in West Africa to which Mr. Blaize had promised to contribute liberally. He also intimated that Dr. Fielding Ould had promised £100 towards the Liverpool Miss Kingsley Hospital, and that Mr. Thomas Hughes (of Messrs. T. and J. Harrison) had also promised £100.

CORRESPONDENCE.

THE MIDWIVES BILL.

Sir,—As President of the General Medical Council I have been authorised and requested to state, in the event of certain amendments to the Midwives Bill, now under consideration in the House of Commons, being placed on the notice paper, that the Council at its last meeting carefully considered the bearing of the most important of these amendments, and passed the following resolution:

"That the Council request the President to represent to the Lord President of the Privy Council that the amendment of Clause 2 (2) of the Midwives Bill by the omission of the words "or shall habitually and for gain attend women in childbirth," would so completely destroy its efficacy as a measure of protection for lying-in women of the poorer classes that the Council could no longer approve of the Bill passing into law, and that accordingly they deem it unnecessary at the present time to express an opinion on the other amendments suggested."

As I understand that an amendment for the omission of the words referred to has been placed on the notice paper, I have to request that you will favour me by publishing this letter, so that the General Medical Council's position on this matter may be known.—I am, etc.,

Wm. Turner.

General Medical Council Office,
299, Oxford Street, London, W., June 26th.

SOCIETY OF APOTHECARIES OF LONDON.

Sir,—Subjoined is a copy of a resolution passed by the Court of Assistants of this Society on June 19th:

The resolution passed by the General Medical Council at its recent session, deciding not to employ the funds of the Council in defraying the expenses of a test case to determine whether the L.S.A. (1886) is or is not entitled to call himself Physician or Surgeon having been read:

Resolved, that in view of the opinions expressed by eminent counsel in favour of the Society's contention, and this Court considering that the decision of the General Medical Council ought not to operate to the prejudice of the Licentiates of the Society, hereby authorise all Licentiates of the Society qualified under the Medical Act, 1886, to call themselves Physician and Surgeon, and undertakes to defend them at the sole cost of the Society from the legal consequences of their adopting those titles.

Having regard to the great importance of the resolution to the Licentiates of the Society, I shall be much obliged if you will allow it to be published in your next issue.—I am, etc.,

June 26th. James R. Upton.

MEDICAL PRACTITIONERS AND THE LUNACY ACTS.

Sir,—Scarcely a year goes by without some member of our profession coming to grief over lunacy law. The Act of 1890 is often terribly hard on the medical practitioner, and its beneficial public effect is largely accomplished at his expense. There can be no doubt that greater protection has been given to the public by that enactment than was ever possessed before, but it should not be forgotten that that protection rests entirely on the co-operation of the profession in carrying out the law. As loyal subjects it is no doubt our duty to do so in most cases, but none the less a medical man owes a duty to himself and to his family not to allow himself to be put in a position which may often mean ruin. The recent case of Dowling *v.* Dods is in point. After reading the evidence impartially one cannot fail to believe that the defendant acted with perfect *bona fides*. Mr. Justice Darling himself said that he thought that such information as was given by the defendant ought to be privileged. The words of the learned judge in his summing up, as reported by the *Times*, ought to be carefully considered by every practitioner.

In order that a relieving officer should exercise his duties under the Act, it was necessary that he should receive information with regard to alleged lunatics, if when he received such information he handed it over to the representatives of the person about whom the information was given.

He then commented on the action of the relieving officer in showing a confidential statement such as that given by the defendant to the plaintiff's solicitor.

How could a relieving officer expect people to bring him information about lunatics, if when he received such information he handed it over to the representatives of the person about whom the information was given.

I contend that nothing in the judge's summing up implied that the defendant had done anything more than he conceived it his duty to do. I think, therefore, we should all note very carefully the bearing of these cases. Considering the important duty we have to perform, we are not adequately protected by the law. Every practitioner, unless by reason of his official position, or when directly called upon by a magistrate, should decline to have anything to do with lunatics. He will seldom regret his caution, as the medical certifier is only too likely to get more "kicks than halfpence" for the performance of this public duty, and no class of his patients are so apt to bring actions against their doctor. I admit that such a course carried out consistently by the profession might hamper the working of the Lunacy Acts, but charity begins at home, and I see no other way of drawing the attention of the Legislature to the great need of reform.

The Act of 1890 abundantly protects the public against the fraudulent signing of lunacy certificates by medical men. By Section cccxvii any "wilful misstatement of facts" is made a misdemeanour and punishable by fine or imprisonment. There is no reason whatever why the medical certifier should be liable to a civil action. The qualified protection against such a contingency afforded by Section cccxxx, which enacts that no one shall be liable to a civil action so long as he has acted in these matters "in good faith and with reasonable care," is altogether inadequate when it is left to a jury to say whether or not the defendant has shown reasonable care. Mr. Justice Darling said, "anyone who gives information as to a person showing signs of insanity ought to be protected from civil or criminal proceedings." Much more then ought a doctor. From a public point of view the necessity is greater, for it is foolish policy to make medical men afraid to give such information. Better by far that investigation be made into the conduct of many sane persons—who mostly deserve all the trouble they are put to by reason of their eccentric conduct—than that one dangerous lunatic should be left at large.—I am, etc.,

M. Greenwood, M.D.,
Barrister-at-Law.

Hackney Road, N.E.

NON-POISONOUS (SO-CALLED) ANTISEPTICS.

Sir,—Dr. Walton, in the British Medical Journal of June 16th, p. 1505, describes salufer as silico-fluoride of calcium, whereas it is a sodium salt. As many of your readers will not have the printed matter he refers to, we wish to point out that in the abstract (not reprint, as stated by Dr. Walton) of Mr. Mayo Robson's paper on the Use of Salufer (Silico-fluoride of Sodium) as an Antiseptic, in the Journal of May 19th, 1888, occurs the following: "That the powder is a strong irritant, even acting as a caustic if dusted on a raw surface, and is, therefore, in that form unavailable for surgical purposes."

It is also clearly stated, both in the abstract and in the original paper, that "salufer," when used as an antiseptic, is to be used in solution of about 20 grs. to the pint of water.

So far as we are aware, no ill-effects have been observed after the use of "salufer" when it has been used according to the directions on each label.—We are, etc.,

Leeds, June 25th. Reynolds and Branson, Ltd.

OBITUARY.

THOMAS JONES, M.B., B.S., F.R.C.S.,

Chief Surgeon to the Welsh Hospital, South Africa; Surgeon to the Manchester Royal Infirmary; Professor of Surgery in the Victoria University.

THE death of Professor Thomas Jones, of Manchester, Chief Surgeon of the Welsh Army Hospital, which occurred at Springfontein, in the Orange River Colony, on June 18th, is an event which has cause widespread and profound sorrow. The profession has lost an eminent surgeon in the prime of life, for he was only 49 years of age. He was the son of Mr. David Jones, of Derlwyn, Carmarthenshire, a well-to-do yeoman, and a fine type of the best Welsh Puritan stock, who took an active part in public life, was a Justice of the Peace, and did excellent service in initiating and promoting a better educational system in Wales. Professor Jones commenced his education at Derlwyn College, which was established by his father, and afterwards went to the Normal College, Swansea, from which institution he matriculated at the London University. He started on his professional career as resident pupil at the Northern Hospital, Liverpool, at the same time attending some of the classes of lectures at the Liverpool School of Medicine. Subsequently he entered at Guy's Hospital, where he remained six years, and distinguished himself more especially in Surgery. In the First M.B. Examination Mr. Jones obtained the Gold Medal in Chemistry and Materia Medica, and Honours in Anatomy; and he took the Degree of Bachelor of Medicine in 1872, gaining Honours in Medicine, and being "Worthy of the Medal" in Midwifery. In 1875 he became F.R.C.S.Eng., and in 1879 obtained the degree of Bachelor of Surgery, being placed First in Honours.



Professor Jones's career at Manchester is full of interest, and here his main life-work was developed and carried out. In 1872 he was appointed House-Surgeon to the Manchester Royal Infirmary entirely on his own merits, for he was quite unknown and had no friends there. Subsequently he became Pathological Registrar (from 1873 to 1876); Surgical Registrar (from 1876 to 1879), Assistant-Surgeon in 1879, and full Honorary Surgeon in 1880, which position he held until the time of his death. In 1880 he was appointed Lecturer on Practical and Operative Surgery at Owens College, and in 1890 was elected Professor of Surgery at this College, in connection with the Victoria University. From 1874 to 1880 Mr. Jones was also Surgeon to the Children's Hospital, Pendlebury, in which he took the keenest interest, and it was largely due to his instrumentality that this hospital has taken the high place it now occupies among the children's hospitals of the United Kingdom. On his resignation he was appointed Consulting Surgeon. Another post he occupied with unfailing activity was that of Surgeon to the Cancer Pavilion and Home. He served the office of President of the Manchester Medical Society, and was an active member of the British Medical Association.

It has been affirmed as a noteworthy fact that Professor Jones was one of the first amongst the members of the profession in Manchester to set up as a pure consulting and operating surgeon, and from the commencement he secured the perfect and complete confidence of his professional brethren. He soon gained an extensive and lucrative practice, and, when he left for South Africa, had probably one of the largest surgical practices in the provinces. He was generally acknowledged to be an excellent practical teacher, a careful and sound diagnostician, and a bold, skilful, and dexterous operator. Mr. Jones, though not a prolific writer, made numerous valuable contributions to surgical literature, but his best-known work is that on *Diseases of the Bones*, published in 1887.

Personally Professor Jones presented many attractive characteristics, and he was highly popular and greatly beloved by those who were his more intimate friends. He had a striking personality, which often could not escape observation; though he was quiet and unassuming in demeanour. He was thoroughly straightforward and open, kind-hearted, genial, full of sympathy, and most generous; at the same time he was energetic, persevering, and most trustworthy in every relation of life.

One who knew him well writes: "Whatever he undertook to do he did it thoroughly, and I consider 'thoroughness' was the most characteristic trait in his character." He devoted his best energies ungrudgingly to the various institutions with which he was associated.

Mr. Jones was a loyal and ardent Welshman, and always took a deep interest in the affairs of the Principality. He was a member of the Council of the University College of Wales at Aberystwith and a generous contributor to its funds. It was in great measure his devotion to his native country that constrained him to yield, after deliberate consideration, to the pressure put upon him to become Chief Surgeon to the Welsh Hospital and to proceed to South Africa without fee or reward. The self-sacrifice which this involved it would be impossible to estimate, not only in relation to his professional work and career, but also in leaving a loving home to which he was passionately attached. He went forth to try to help his suffering fellow-creatures under most trying circumstances, from the highest sense of duty and under the influence of the brave spirit of true patriotism. He was stricken down in a very short time after entering upon his duties in South Africa, and the news of his death came as a great shock to his many friends and admirers. His loss will be deeply felt by the profession, more especially by those in Manchester and its neighbourhood.

Professor Jones leaves a widow and one daughter, to whom we offer our respectful, heartfelt sympathy.

DR. FREDERICK ROBERTS writes:

Professor Thomas Jones, familiarly known to his students and friends as "Tom Jones," has been, I might almost say, a *protégé* of mine since the commencement of his professional career, and I have watched his progress with affectionate interest. Coming from the same county in Wales as myself, I was well acquainted with his family, and to this fact is owing his first start in the profession, which I feel sure had a great influence in turning his attention to surgery, and in

making him such a renowned and brilliant surgeon as he afterwards proved to be. After he had matriculated his father wrote to me asking my advice as to what he should do with him, as he thought him too young to go to London. I strongly recommended him to send the youth to the Liverpool Northern Hospital, to which I was at that time physician, as resident pupil, and he acted upon my advice. The surgical practice at that hospital has always been extensive and varied, and it is a splendid field for practical experience in this department, as I can personally testify. It so happened that the house-surgeons during the period of his residence were most proficient and skilful, especially one of them, and they took a particular interest in young Jones, teaching him the "art" of surgery, in the way of setting fractures, bandaging, treating wounds, etc., and even allowing him to perform operations of different kinds. The consequence was that when he left Liverpool and went to Guy's Hospital as a first year's student he was really what might be termed a fairly expert surgeon. At any rate, he knew a great deal more about surgery, and was more skilful practically, than the large majority of students are at the end of their career. He was then one of the neatest bandagers I have ever seen, and to watch him put up a fracture was a treat.

Professor Jones's career in Manchester is well known, and I have been much gratified at witnessing the progressive stages of his success. There can be no doubt as to his extreme popularity with his colleagues and students, with his professional brethren in that city and its neighbourhood, and with those holding public and prominent positions. He was also held in the highest esteem and respect, and in a memorial service which took place at Union Chapel, Manchester, with which he was connected, the Rev. Dr. Maclaren gave eloquent and appropriate expression to the universal sentiments entertained towards Mr. Jones in that city, and spoke with affectionate appreciation of the graces of his character. I am acquainted with some who were on terms of intimate friendship with him in Manchester, and by them he was greatly beloved.

It is with mingled feelings that I look back upon the social intercourse which I was privileged to hold with Tom Jones the week of his departure for South Africa. He spent an evening in my house, and was thoroughly genial and happy, notwithstanding the sad prospect that lay before him. Some friends who met him for the first time were deeply impressed with his personality, and took an immediate and strong liking to him. I am glad that I had the opportunity of seeing him once more as an intimate friend, but feel his death all the more keenly for having been thus associated with him so recently. Little did I anticipate or realise when bidding him farewell at Waterloo Station that those of us who are specially interested in the Welsh Hospital should have to mourn his loss so soon. With his widow and daughter we sympathise most profoundly.

I cannot conclude without paying a tribute of respect and admiration to Dr. Herbert Davies, who accompanied Professor Jones to South Africa as Assistant Surgeon, and expressing the deep regret we must all feel as a profession on account of his premature death. He also took part in our social gathering, and made a most favourable impression. I had not met him before, but I formed immediately a high estimate of his professional abilities and personal character, and I have no doubt whatever that what would have been a most useful and honourable career has been thus ruthlessly cut short.

HERBERT DAVIES, M.B., Ch.B.Vict.

Assistant Surgeon, Welsh Hospital, South Africa.

It is with extreme regret that we have to announce the death of Dr. Herbert Davies, which occurred on June 15th from dysentery, while on duty at the front as Surgeon to the Welsh Military Hospital at Springfontein. He was the son of Alderman Henry Davies, J.P., of Carus Lodge, Halton, Lancaster. He was born at Preston on May 31st, 1874, and was therefore in his 27th year at the time of his death. He received his early education first at the Preston Grammar School and then at the Shrewsbury Grammar School; his medical education he obtained at Owens College, Manchester. In 1898 he took the degrees of Bachelor of Medicine and Bachelor in Surgery at the Victoria University. Shortly thereafter he acted as Deputy House-Surgeon at the Stockport Infirmary; he then became House-Physician to the Brompton Hospital for Consumption and Diseases of the Chest and subsequently House-Surgeon at the Manchester Royal Infirmary. After a visit to Russia he accepted the post of House-Surgeon at the North Staffordshire Infirmary and Eye Hospital, and it was during his tenure of this office that he received an invitation from Professor Thomas Jones of Manchester to join the staff of the Welsh Military Hospital for service in South Africa. After obtaining six months' leave of absence from the governors of the North Staffordshire Infirmary, he left England on April 14th with the other members of the hospital staff for the front. He threw himself heart and soul into his work as Assistant Surgeon, and in spite of the trying nature of his duties and owing mainly, in all probability, to his fine physique he had excellent health until he contracted the attack of dysentery which proved fatal. The news of his death reached his relatives by cable as they were in the act of reading his latest letter, which was written in the happiest strain. Deep sympathy is felt with his family in their bereavement.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries who have recently died are Dr. Willy Kühne, Professor of Physiology in the University of Heidelberg, aged 64; Dr. Cadet de Gassicourt, one of the leading authorities on children's diseases in France, formerly Physician to the Hôpital Trousseau, Paris, and a member of the Académie de Médecine, aged 73; Dr. Maximino Teijeiro, Professor in the Medical Faculty and Rector of the University of Santiago; Professor Teodæio de Bonis, of the University of Naples, author of numerous works on pathology, aged 53; Dr. J. Icard, editor of the *Lyon Médical*, Librarian of the University of Lyons, and General Secretary of the Society of Medical Sciences; and Dr. Friedrich Brosin, a well-known gynæcologist of Dresden, aged 42.

UNIVERSITIES AND COLLEGES.

UNIVERSITY OF CAMBRIDGE.

Appointments.—Sir M. Foster has been appointed the University member of the Council of the Jenner Institute of Preventive Medicine. Mr. A. W. Hill, of King's, and Mr. L. Lewton-Brain, of St. John's, have been appointed University Demonstrators in Botany.

Degrees.—At the Congregation on June 19th, Mr. Hubert Nicholls, M.A., M.B., of St. John's College, was admitted to the degree of Doctor of Medicine. During the academical year just ended 15 Doctors of Medicine, 1 Master of Surgery, 53 Bachelors of Medicine, and 65 Bachelors of Surgery took their degrees.

Fellowships.—Mr. W. U. Shaw, F.R.S., has been elected a Senior Fellow of Emmanuel College, and Mr. C. T. R. Wilson, F.R.S., a Fellow of Sidney Sussex College.

THIRD EXAMINATION.—The following candidates have satisfied the Examiners:

Part I.—G. F. Barham, B.A., Cai.; A. E. Boddington, M.A., Cai.; A. R. M. Brenan, B.A., Trin.; J. M. Brydone, Jes.; F. J. Child, B.A., Christ's; H. N. Clarke, B.A., Cai.; J. S. Clarke, B.A., Cai.; J. G. Cooke, Sid. Suss.; K. E. Crompton, B.A., Cai.; G. W. Deeping, B.A., Trin. J. B. Dunlop, B.A., Sid. Suss.; W. E. M. Ede, B.A., King's; A. Emerson, B.A., Cai.; R. L. V. Foster, B.A., King's; T. B. Gilbart-Smith, B.A., Trin.; W. H. C. Greene, B.A., Corp. Chr.; E. B. Leech, B.A., Christ's; N. Maclaren, B.A., Trin.; A. S. Mellor, B.A., King's; C. H. Miller, B.A., Trin.; J. C. Newman, B.A., Trin.; G. H. Orton, B.A., Trin.; T. W. Paterson, B.A., Cai.; J. S. S. Perkins, B.A., Joh.; J. C. S. Rashleigh, M.A., Trin.; L. Reynolds, B.A., Trin.; H. H. Riddle, B.A., Pet.; J. C. A. Rigby, B.A., Cai.; E. W. S. Rowland, B.A., H. Selw.; L. B. Scott, B.A., Christ's; G. A. C. Shipman, B.A., Trin.; J. L. Timmins, B.A., Emm.; R. H. Urwick, B.A., Trin.; H. Walker, B.A., King's; T. H. E. Watts-Silvester, B.A., Cai.; R. F. Williams, B.A., Cai.; W. W. Wingate-Saul, M.A., Trin.; H. C. S. Woodward, M.A., Down.

Part II.—S. Bousfield, M.A., Cai.; J. Bradford, Emm.; H. P. Bradley, B.A., Cai.; G. V. Bull, B.A., Cai.; T. Burfield, B.A., Emm.; C. J. Coleman, B.A., Trin.; B. J. Collingwood, B.A., Cai.; W. S. Darby, B.A., Trin.; W. M. Fletcher, M.A., Trin.; J. H. P. Fraser, B.A., Jes.; O. F. F. Grünbaum, M.A., Trin.; J. Gutch, M.A., Christ's; D. G. Hall, B.A., Emm.; A. C. Hill, M.A., Trin.; T. E. Holmes, B.A., Cai.; G. F. Lobb, B.A., Cai.; J. L. Lock, B.A., Cai.; J. W. Malim, B.A., Christ's; H. N. Matthews, B.A., Joh.; J. C. Matthews, B.A., Joh.; F. J. Nicholls, Joh.; L. J. Paton, B.A., Cai.; A. C. Pearson, B.A., Sid. Suss.; J. H. Philbrick, B.A., Trin.; G. R. Slade, B.A., Trin.; J. G. Taylor, B.A., King's; T. S. Taylor, B.A., King's; R. A. Walker, B.A., Cla.; A. Whitmore, B.A., Cai.; W. M. Willoughby, B.A., Cai.

UNIVERSITY OF EDINBURGH.

University Court.—At a meeting on Monday, June 18th, the University Court appointed Dr. J. O. Affleck additional Examiner in Medicine in its Bearings on Public Health. On the recommendation of the Senatus a grant of £58 from the Earl of Moray Endowment was made to Dr. J. H. Milroy for purposes of research. Dr. John Gibson (Edinburgh) was appointed additional Examiner in connection with a thesis submitted by a candidate for the degree of D.Sc. A bequest by the late Professor Sir Douglas Maclagan of a marble bust of himself was announced. It was intimated that six large volumes of interesting and valuable drawings, chiefly by her father, had been made to the University Library by Miss E. A. Ormerod, LL.D.Edin., and that this—an additional gift by the same lady—had been suitably acknowledged.

UNIVERSITY OF BIRMINGHAM.

Appointment of Principal.—Her Majesty has been pleased to appoint Professor Oliver J. Lodge, D.Sc., LL.D., F.R.S., to be Principal of the University. For the last nineteen years Professor Lodge has been Professor of Physics in University College, Liverpool.

Election of Dean of the Faculty of Science.—Professor J. H. Poynting, M.A., D.Sc., F.R.S., has been elected to this position.

UNIVERSITY OF BRUSSELS.

At the June examination the following practitioners satisfied the Examiners and obtained the M.D. degree: W. Grantham Hill, London; B. Burnett Ham, London; J. L. Atkinson, London; W. Gilbertson, London; C. S. Davis, Bishops Stortford; T. E. Pallett, Earls Colne; G. H. Brand, Northampton; Collingwood Fenwick, London; H. Hipwell, London; S. Whitaker, London. There were 13 candidates.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Fellowship Examination.—The following gentlemen, having passed the necessary examination, have been admitted Fellows of the College: Mr. R. C. B. Maunsell, M.B., B.Ch., B.A.O.Univ. Dub., and Mr. H. J. Satchwell, L.R.C.P.I. and L.R.C.S.I.

SOCIETY OF APOTHECARIES OF LONDON.

PASS LIST, JUNE, 1900.—The following candidates passed in:—

Surgery.—J. M. Anderson, Aberdeen and Middlesex Hospital; J. R. Clemens, St. Thomas's and London Hospitals; R. V. Cowey (Section II), Edinburgh and St. Mary's Hospital; W. A. C. Cox (Section II), St. Mary's Hospital; H. J. De Saram, Middlesex Hospital; W. D. French (Sections I and II), University College Hospital; T. R. Griffiths, University College Hospital; J. H. Kellgren (Section II), Cambridge and St. George's Hospital; B. Lewitt, St. Mary's Hospital; A. H. L. Newstead, St. Mary's Hospital; W. P. R. Newth, St. Thomas's Hospital; E. C. Pratt, Birmingham; A. T. Spanton (Section I), Cambridge and St. George's Hospital.

Medicine.—E. A. Dunn (Section I), Royal Free Hospital; E. Evans (Sections I and II), Royal Free Hospital; A. W. H. Grant (Sections I and II), Charing Cross Hospital; J. H. Kellgren (Sections I and II), Cambridge and St. George's Hospital; J. Klein (Sections I and II), St. Mary's Hospital; B. Rowlands, St. Bartholomew's Hospital; M. H. Style (Sections I and II), Royal Free Hospital; T. Young (Section II), St. Bartholomew's Hospital.

Forensic Medicine.—E. A. Dunn, Royal Free Hospital; E. Evans, Royal Free Hospital; A. W. H. Grant, Charing Cross Hospital; J. H. Kellgren, Cambridge and St. George's Hospital; J. Klein, St. Mary's Hospital; G. R. Lucas, Charing Cross Hospital; S. Page, Birmingham; B. Rowlands, St. Bartholomew's Hospital; M. H. Style, Royal Free Hospital; T. Young, St. Bartholomew's Hospital.

Midwifery.—S. F. Cheesman, Charing Cross Hospital; W. T. Colyer, Cambridge; M. B. Dawson, Middlesex Hospital; E. Evans, Royal Free Hospital; F. J. F. Jones, Guy's Hospital; J. Klein, St. Mary's Hospital; A. H. L. Newstead, St. Mary's Hospital; A. T. Spanton, Cambridge and St. George's Hospital; M. H. Style, Royal Free Hospital; H. V. Swindale, Middlesex Hospital.

The diploma of the Society was granted to J. M. Anderson, H. J. De Saram, W. D. French, T. R. Griffiths, J. H. Kellgran, B. Lewitt, W. P. R. Newth, and T. Young.

ROYAL NAVY AND ARMY MEDICAL SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been made at the Admiralty:—JAMES BRADLEY, M.D., Staff Surgeon, to the *Galatea*, undated; WILLIAM E. HOME, M.D., Staff Surgeon, and ARTHUR GASKELL and JAMES D. S. MILLN, M.B., Surgeons, to the *Centurion*, June 21st; HERBERT P. SHUTTLEWORTH, Staff Surgeon, to the *Boscawen*, for the *Minotaur*, June 21st; JOHN P. H. GREENHALGH, Surgeon, to the *Prince George*, June 21st; ARCHIBALD W. CAMPBELL, Surgeon, to the *Lizard*, June 21st; WILLIAM G. JACK, Fleet Surgeon, and SYDNEY J. HAYLOCK, Surgeon, to the *Camperdown*, July 5th; JAMES MCC. MARTIN, Staff Surgeon, and RICHARD C. MUNDAY and NELSON J. ROCHE, Surgeons, to the *Centurion*, June 25th; W. P. WALKER, J. O'HEA, L. S. WHITWAM, H. R. H. DENNY, A. J. HEWETT, and G. M. EASTMENT, Surgeons, to the *Duke of Wellington*, for disposal, July 7th; R. W. G. STEWART, J. STJOHN MURPHY, H. J. ROGERS, A. C. RENWICH, W. P. DYER, and T. H. VICKERS, Surgeons, to the *Vivid*, for disposal, July 7th; R. R. FASSON, A. F. FRASER, and R. B. AINSWORTH, Surgeon, to the *Pembroke*, for disposal, July 7th; J. R. MUIR, A. S. FRANKS, and R. R. HORLEY, Surgeons, to the *Wildfire*, for disposal, July 7th.

ARMY MEDICAL SERVICE.

LIEUTENANT-COLONEL JAMES STEVENSON FORRESTER died at Capetown on June 19th, aged 46 years. He entered the service as Surgeon, September 30th, 1874, and was made Surgeon-Major and Surgeon-Lieutenant-Colonel, October 25th, 1894. He was appointed to the Royal Horse Guards, February 18th, 1885; made Surgeon-Major First Life Guards, October 25th, 1894: and Surgeon-Lieutenant-Colonel Royal Horse Guards, October 13th, 1897. He was in the Egyptian war of 1882, and was present in the engagement at Tel-el-Mahuta, in the two actions at Kassasin, and at the battle of Tel-el-Kebir (medal with clasp, and Khedive's bronze star).

ROYAL ARMY MEDICAL CORPS.

THE following are reported as dangerously ill:—Surgeon-Lieutenant-Colonel W. W. LAKE, Militia Medical Staff Corps, at Bloemfontein; Civil Surgeons R. W. JAMESON and A. ROBERTSON, at Kroonstad; Civil Surgeon W. W. BENNETT, No. 1 Stationary Hospital, Natal; Civil Surgeon W. H. STEELE, at Kimberley.

Major GREIG, R.A.M.C., and Civil Surgeon ASH, suffering from enteric at Heilbron, are reported as doing well.

Civil Surgeons SMALLMANN and HUNTER have been discharged from hospital to duty.

Major H. G. HATHAWAY was severely wounded in the abdomen in the fighting near Pretoria on June 11th; and Captain J. H. CAMPBELL was also severely wounded during the operations in Natal on February 24th.

Assistant Surgeon GEORGE FARR WHITE, F.R.C.S., late of H.M.'s 77th Regiment, died at Wimbledon on June 20th. He was appointed Assistant Surgeon, October 1st, 1860, and resigned the service December 18th, 1867.

Sergeant-Majors ARTHUR WHEELER and HARRY P. WAKEFIELD are appointed Quartermasters, with the honorary rank of Lieutenant, on augmentation, June 23rd.

ARMY MEDICAL RESERVE.

SURGEON-CAPTAIN T. MCC. FOLEY is promoted to be Surgeon-Major, June 27th.

INDIAN MEDICAL SERVICE.

LIEUTENANT-COLONEL C. H. JOUBERT, Bengal Establishment, is promoted to be Colonel from March 29th. He joined the department as Assistant Surgeon, March 30th, 1872, and became Brigade-Surgeon-Lieutenant-Colonel, October 1st, 1896.

The promotion of the following Majors to be Lieutenant-Colonels from March 31st, which has been already announced in the BRITISH MEDICAL JOURNAL, has received the approved of the Queen:—Bengal: C. P. LUKIS, R. R. H. WHITWALL, L. A. WADDELL, D. B. SPENCER, J. CLARKE, M.D., C. C. VAID, P. D. PANK, T. R. MULRONEY, M.D., T. R. MACDONALD. Madras: R. H. CAMA, W. B. BROWNING, C.I.E., C. M. THOMPSON, C. S. RUNDLE, J. W. EVANS. Bombay: H. P. DIMMOCK, M.D., C. B. MAITLAND.

The promotion of the undermentioned Captains to be Majors, which also has been previously announced in this JOURNAL, has likewise received the Royal sanction: D. G. MARSHALL, D. M. MOIR, M.D., H. F. WHITCHURCH, V.C., J. R. ROBERTS, F. W. GEE, KANTA PRASAD, P. W. O'GORMAN, W. H. GRAY, G. T. MOULD. Madras: A. E. GRANT, F. C. PEREIRA. Bombay: J. G. HOJEL, H. C. L. ARNIM, G. S. THOMSON.

Captain J. W. WOLFE, Bengal Establishment, has been transferred to

the half-pay list from May 20th. His commission dates from January 31st, 1891.

The retirement from the service of Lieutenant-Colonels C. J. H. Warden and R. N. Stoker, of the Bengal Establishment, and which have been already announced in the Journal, has received the Queen's approval.

Lieutenant-Colonel T. R. Macdonald, M.B., Bengal Establishment, retires from the service from June 20th. His commission as Surgeon dates from March 31st, 1880; that of Lieutenant-Colonel, March 31st, 1900. He was in the Egyptian war of 1882, and was at the battle of Tel-el-Kebir, receiving a medal with clasp and the Egyptian bronze star.

Lieutenant-Colonel A. S. G. Jazakar, Bombay Establishment, also retires from the service from April 23rd. He was appointed Surgeon, March 31st, 1875, and Surgeon-Lieutenant-Colonel, September 30th, 1887.

An examination for fourteen appointments to the Indian Medical Service is announced to be held in London on August 17th and following days

Lieutenant-Colonel George Frederick Bevan, Madras Establishment, died at Bangalore on May 12th, at the age of 45. He was appointed Assistant-Surgeon, March 30th, 1872, and Brigade-Surgeon-Lieutenant-Colonel, May 4th, 1895.

THE MILITIA.

Mr. Arthur E. Madge, late Surgeon-Lieutenant, Militia Medical Staff Corps, is appointed Captain in the 5th Battalion the Manchester Regiment, June 8th.

THE VOLUNTEERS.

Surgeon-Major W. Mason and Surgeon-Captain W. K. Bullmore, M.D., 1st Cornwall (Duke of Cornwall's) Artillery (Western Division Royal Garrison Artillery), are promoted to be Surgeon-Lieutenant-Colonel and Surgeon-Major respectively, June 27th.

Surgeon-Lieutenant J. Rowan, M.B., the Clyde Division, Submarine Miners, Royal Engineers (Volunteers), is promoted to be Surgeon-Captain, June 27th.

Mr. George A. Dickson, M.B., is appointed Surgeon-Lieutenant in the 8th Volunteer Battalion the Royal Scots (Lothians Regiment), June 27th.

Surgeon-Majors E. L. Freer, 1st Volunteer Battalion the Royal Warwickshire Regiment, and E. J. Lawless, 4th Volunteer Battalion the East Surrey Regiment, are promoted to be Surgeon-Lieutenant-Colonels, and to remain supernumerary, June 27th.

Surgeon-Lieutenant G. D. Logan, M.B., 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers, resigns his commission, June 27th.

Mr. James B. Roberts, M.B., is appointed Surgeon-Lieutenant in the 1st Nottinghamshire (Robin Hood) Rifles, June 27th.

Consequent on the division of the 1st Volunteer Battalion the Lincolnshire Regiment into two Volunteer Battalions, Major F. J. Walker, M.D., and Surgeon-Lieutenant J. Bruce, M.B., are transferred to the 3rd Volunteer Battalion, and their commissions are to be considered of the same rank and date as in the consolidated one.

MEDICO-LEGAL AND MEDICO-ETHICAL.

MEDICAL COUNTY COUNCILLORS IN IRELAND.

Dr. E. Magennis (Lurgan) writes: In reply to your correspondent "X. Y.," I have pleasure in informing him that I, a county councillor, have received fees from a coroner for giving professional evidence at inquests. I would advise "X. Y." to take the fees and raise no questions.

NOTIFYING CHANGE OF ADDRESS.

S. says he is about to change his residence, and wishes to know how this is to be brought under the notice of his patients. He does not think the suggestion of sending a lithographed circular to each patient would be satisfactory in a working-class practice, because (1) some of his patients may have changed their medical attendant, and (2) "new patients coming and finding the late residence unoccupied or inhabited by some one else in more or less urgent cases, rather than lose time in hunting one up, decide upon a substitute." He goes on to ask our opinion as to whether publication in the local press of such an advertisement as the following: "Dr. —— has removed to ——" would be considered "infamous conduct."

*** We do not think the first objection stated to the lithographed circular counts for much, as it should obviously be sent only to *bonâ-fide* patients, and the second objection is met by the usual expedient of affixing a notice plate to the old house stating the address to which the doctor has removed. Lastly, the publication of an advertisement has never been formally denounced as "infamous conduct" by the General Medical Council, but we cannot approve of the proposal.

MEDICAL FEES AT INQUESTS.

S. S. D.—The fees payable to medical witnesses at inquests are regulated by statute law: the Coroners Act, 1887, Sections xxii and xxiii, and such fees as are therein allowed are payable by the coroner immediately on the termination of the inquest. The medical officers of hospitals and other public medical institutions are not entitled to fees if the deceased person upon whom the inquest is held died in either of the institutions mentioned, but otherwise if called to give evidence a medical officer is entitled to the usual fees. We do not think that a coroner is entitled to demand a written statement from a medical witness previous to his giving evidence, but a written *post-mortem* report handed to the coroner at the time of the inquest often saves the time of the court and that of the witness. Except in a case of emergency we do not think that only three hours' notice to the medical witness to make a *post-mortem* examination is reasonable.

FEES OF MEDICAL WITNESSES.

Lex, who has been bound over to appear at the assizes as a witness, inquires what remuneration he is entitled to receive, and whether he can claim any compensation for loss of an engagement owing to his compulsory attendance.

*** The prescribed allowances to medical men are very meagre. For their trouble, expense, and loss of time they may be allowed for each day they necessarily attend the court to give professional evidence a sum not exceeding £1 1s., and for each night they may be necessarily absent from home 2s., and for travelling expenses a sum not exceeding 3d. per mile each way. No compensation can be obtained for loss of an appointment. If our correspondent is witness for the defence, he may perhaps be able to arrange for a more adequate remuneration.

MAKING A PRACTICE.

J. A.—We can suggest no means by which H.'s activity can be repressed.

C.—There can be no objection to putting the letters indicating the university degree after the name on a visiting card.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns, including London, 6,569 births and 3,325 deaths were registered during the week ending Saturday last, June 23rd. The annual rate of mortality in these towns, which had been 16.8 and 18.0 per 1,000 in the two preceding weeks, declined again to 14.9 last week. The rates in the several towns ranged from 8.0 in Birkenhead, 9.9 in Cardiff and in Nottingham, 10.0 in Norwich, and 10.2 in Portsmouth, to 20.7 in Manchester, 21.2 in Liverpool and in Sunderland, 21.8 in Oldham, and 22.4 in Salford. In the thirty-two provincial towns the mean death-rate was 16.0 per 1,000, and exceeded by 2.7 the rate recorded in London, which was 13.3 per 1,000. The zymotic death-rate in the thirty-three towns averaged 1.6 per 1,000: in London this death-rate was equal to 1.5 per 1,000, while it averaged 1.7 in the thirty-two provincial towns, among which the highest zymotic death-rates were 2.9 in Wolverhampton and in Manchester, 3.1 in Preston, 3.9 in Sunderland, 4.4 in Oldham, and 4.8 in Derby. Measles caused a death-rate of 1.0 in Plymouth and in Manchester, 1.5 in Huddersfield, 2.5 in Sunderland, 2.7 in Oldham, and 4.3 in Derby; whooping-cough of 1.0 in Oldham; and diarrhœa of 1.1 in Sunderland, 1.2 in Wolverhampton, and 1.8 in Preston. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 56 deaths from diphtheria in the thirty-three towns included 21 in London, 6 in Leicester, 6 in Sheffield, and 4 in Leeds. One fatal case of small-pox was registered last week in Wolverhampton, but not one in any other of the thirty-three towns. There were 13 small-pox patients under treatment in the Metropolitan Asylums Hospitals on Saturday last, June 23rd, against 7, 11, and 15 at the end of the three preceding weeks; one new case was admitted during the week, against 4, 4, and 8 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital, which had been 1,754 and 1,766 at the end of the two preceding weeks, had further risen to 1,810 on Saturday last; 219 new cases were admitted during the week, against 194, 203, and 210 in the three preceding weeks.

HEALTH OF SCOTCH TOWNS.

During the week ending Saturday last, June 23rd, 1,069 births and 510 deaths were registered in eight of the principal Scotch towns. The annual rate of mortality in these towns, which had been 18.3 and 19.9 per 1,000 in the two preceding weeks, declined again last week to 16.5, but was 1.6 per 1,000 above the mean rate during the same period in the thirty-three large English towns. Among these Scotch towns the death-rates ranged from 8.6 in Leith, and 10.6 in Paisley to 17.0 in Edinburgh, and 18.8 in Glasgow. The zymotic death-rate in these towns averaged 1.9 per 1,000, the highest rates being recorded in Glasgow and Edinburgh. The 269 deaths registered in Glasgow included 1 from small-pox, 11 from measles, 2 from scarlet fever, 3 from diphtheria, 16 from whooping-cough, and 5 from diarrhœa. Two fatal cases of measles, and 7 of diarrhœa were recorded in Edinburgh; 2 deaths from diarrhœa occurred in Dundee, and 2 in Paisley.

FOOD POISONING AT PLYMOUTH.

Another death has occurred in the Plymouth family which recently developed symptoms of poisoning after eating some roast pork. Evidence was brought forward at the inquest to show that the suspected pork was one of some forty pieces into which the meat had been cut before it was sold, and that in no other household had any untoward result occurred. The *post-mortem* examination, as in the previous case, showed no indication of metallic poisoning. Nine members of the family partook of the pork; eight suffered from symptoms of poisoning, two had died, and one escaped entirely. The suggestion was that the meat sustained microbic infection from the cellar in which it was kept after it had been bought, although the drains of the house were free from serious defect. The verdict found was that death had occurred from ptomaine poisoning, but that there was no sufficient evidence to show from what source the poison had been derived.

Professor Toldt has been elected Dean of the Medical Faculty of the University of Vienna for the academic year 1900-01.

MEDICAL NEWS.

WE regret to announce that Dr. Paul Gibier, Director of the New York Pasteur Institute, was killed in a street accident on June 10th. The horse in his carriage bolted and Dr. Gibier was thrown out and mortally hurt.

MILAN SANATORIUM FOR THE PEOPLE.—The contributions towards the establishment of a sanatorium for the people in the province of Milan now amount to 300,000 lire (£12,000). The sanatorium is under the patronage of the King of Italy.

LEPERS AT MOLOKAI.—The leper settlement at Molokai now comprises 1,100 infected persons, this being the largest assemblage of lepers in the world. Of these patients, 625 are males and the rest females; 984 are native Hawaiians, 62 are half-castes, 37 Chinese, 5 American, 4 British, 4 German, and 6 Portuguese. There are 716 buildings in the settlement.

BRUSSELS MEDICAL GRADUATES' ASSOCIATION.—The twentieth general meeting of this Association will be held at the Café Royal, Regent Street, W., on Tuesday, July 3rd, at 6.30 P.M. At 7.30 P.M. the members and their friends will dine together. Any Brussels medical graduates wishing to be present should apply to the Honorary Secretary, Dr. Major Greenwood, 243, Hackney Road, N.E. Dinner 7s. 6d., exclusive of wine.

COLOURED NURSES.—A training school for nurses was established in connection with the Coloured Home and Hospital in New York in 1898. It continues in successful operation, and the managers are now able to supply coloured nurses who have been well trained in surgical, obstetrical, and medical nursing. These nurses are specially adapted to care for people of their own race.

NEW YORK WOMEN'S MEDICAL COLLEGE.—The semi-centennial jubilee of this College was celebrated in connection with the commencement exercises in May. The College has made great advance during its fifty years of existence, a new annexe and a gymnasium being the most recent addition. The niece of a royal prince of India is now, according to the *Medical News*, a student at the College. Among the graduates are a large number of medical missionaries.

A SOCIETY OF MASSEUSES.—An application has been made to the Board of Trade for a licence to enable an Incorporated Society of Masseuses to be registered under limited liability conditions, but without the words being appended. Its avowed objects are to improve the status of masseuses, to institute a certificate to be granted after examination, etc., and to carry on clubs and institutes for trained masseuses, at which intoxicating liquors are not to be sold. There is a provision that no member shall undertake massage for men except at the special request of a registered medical practitioner, and that any infraction of this rule shall involve forfeiture of membership of the association. It does not appear how the certificate could be withdrawn from a member who violated this rule.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—The distribution of prizes at this school for the summer session 1899 and the winter session 1899-1900 took place on June 26th, Mr. Beerbohm Tree in the chair. The Dean, in his report for the current year, stated that the number of new students had been 88 as compared with 82 in the previous year. Among the changes in the teaching staff was the appointment of Professor Moore, of the Yale University, to the Lectureship on Biology. In the school buildings important improvements had been effected. A new staircase had been added to the museum, and the electric light had been introduced. Reference was made to the large number of past and present students now serving in South Africa, among them being Mr. Gibbs, one of the Assistant-Surgeons, who is now Senior Surgeon to the Langman Hospital. The Dean announced that the new academical year would open on the evening of October 1st with a conversazione given by the students' societies, that the Huxley Lecture would be delivered on Tuesday, October 2nd, by Lord Lister, and that the Old Students' Dinner would be held on the same evening at the Hotel Cecil. The renovations and additions to the hospital have been commenced, and in two years' time the Dean anticipates that a considerable portion of the new buildings would be ready for occupation.

BRITISH POSTAL MEDICAL OFFICERS' ASSOCIATION.—The annual dinner of the Association of British Postal Medical Officers took place on June 21st at the Hôtel Métropole, under the presidency of Dr. W. Dougan. The toast list was of great length necessitating the prolongation of the proceedings till a very late hour. Sir James Crichton-Browne proposed "The Imperial Forces," which was acknowledged by Sir Joseph Fayrer. Mr. Edmund Owen, in a speech enlivened by much wit and humour, proposed "The Houses of Parliament," which was responded to by Mr. Joseph Walton, M.P. Mr. Eugene Wason, M.P., proposed "The Postmaster-General, the Secretary, and other Executive Officers of the Post Office." This was replied to by Sir Robert Hunter (Solicitor to the Post Office). Dr. de Havilland Hall gave the toast of "The Board of Education and other State Departments," which was acknowledged by Sir George Kekewich (Secretary to the Board of Education), and Dr. J. Tatham (Superintendent of Statistics, the Registrar-General's Office). "Preventive Medicine" was proposed by Dr. Wood, and acknowledged by Professor Corfield. Dr. A. Whitelegge (Her Majesty's Chief Factory Inspector) gave the toast of "The General Medical Council," and remarked upon the efforts made by that Council to improve the training and education of students in the detection of infectious diseases. Dr. J. G. Glover, in replying to the toast, said that any fair student of the proceedings of the General Medical Council would conclude that with the limited powers it had under Acts of Parliament it did the best it could. As a slight proof of the right of the General Medical Council to feel that it had done some good for the medical profession, Dr. Glover referred to the question of infectious diseases, and said it had taken an active part in improving the education of students in that particular. It was possible for a man to be a most distinguished student, and yet never see a case of small-pox and possibly measles. He thought that the interests of the profession would be best promoted by more encouragement being given to the General Medical Council. "The Association of British Postal Medical Officers" was proposed by the Rev. Henry Belcher, and was replied to by the President. The toast of "The Guests" was given by Dr. H. Fitzgibbon, and was responded to by Sir Thomas Rowe and Mr. P. J. Freyer. The Honorary General Secretary, Dr. R. Ritchie Giddings, was accorded a hearty vote of thanks for his labours.

MEDICAL VACANCIES.

The following vacancies are announced:

ABERDEEN UNIVERSITY.—Additional Examiner for Graduation in (1) Materia Medica, (2) Pathology, (3) Surgery. Applications to the Secretary by July 3rd.

AMERSHAM UNION.—Medical Officer and Public Vaccinator for the Beaconsfield District. Salary, £43 per annum, and fees. Applications to the Clerk, Union Offices, Amersham, by July 16th.

BIRMINGHAM: RUBERY HILL ASYLUM.—Senior Assistant Medical Officer, unmarried. Applications to the Medical Superintendent.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary, £100 per annum, with furnished apartments, rations, etc. Applications to the Clerk to the Guardians by July 7th.

BRIDGWATER INFIRMARY.—House-Surgeon. Salary £80 per annum, with board and residence. Applications to the Secretary by July 12th.

BRIGHTON: ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Salary, £80, with board, lodging, and washing. Applications to the Chairman of the Medical Committee by July 3rd.

BRIGHTON: SUSSEX COUNTY HOSPITAL.—(1) House-Surgeon, unmarried and under 30 years of age. Salary £140 per annum, with board, residence and washing. (2) Assistant House-Surgeon, unmarried, and under 30 years of age. Salary, £30 per annum, with board and residence. Applications to the Secretary for (1) by July 4th, and for (2) by July 11th.

BRISTOL EYE HOSPITAL.—Locum Tenens for two months. Salary, £2 12s. 6d. a week, without residence. Applications to the Secretary.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House-Surgeon. Salary £120 per annum, with rooms and attendance without board; or £80 with board. Applications, endorsed "House-Surgeon," to the Secretary by July 12th.

BUXTON: DEVONSHIRE HOSPITAL.—(1) House-Surgeon. Salary, £100 per annum. (2) Assistant House-Surgeon. Salary, £50 per annum. Furnished apartments, board, and washing provided in each case. Applications to the Secretary.

CAMBERWELL: PARISH OF ST. GILES.—Locum Tenens at Constance Road Workhouse for four weeks. £5 5s. per week, and allowances. Applications on forms provided to the Clerk to the Guardians, 29, Peckham Road, S.E.

CARDIFF AND COUNTY PUBLIC HEALTH LABORATORY.—Assistant to the Bacteriologist. Salary, £120 per annum. Applications to the Clerk to the Joint Committee, Glamorgan County Office, Cardiff, by July 4th

CARDIFF INFIRMARY.—Assistant House-Physician. Appointment for six months, but renewable. Salary at the rate of £50 per annum, with board, washing, and apartments. Applications to the Secretary.

CARDIFF: UNIVERSITY COLLEGE.—(1) Demonstrator and Assistant Lecturer in Anatomy; (2) Demonstrator and Assistant Lecturer in Physiology. Salary in each case £120. Applications to the Secretary by September 8th.

OHORLEY DISPENSARY AND COTTAGE HOSPITAL.—House-Surgeon. Salary commencing at £80 per annum, with board and lodging. Applications to the Honorary Secretary.

CITY ORTHOPÆDIC HOSPITAL, Hatton Garden.—Physician. Applications to the Secretary by July 14th.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn Road, W.C.—Physician to the Out-patient Department. Applications to the Secretary before July 7th.

CORNWALL COUNTY ASYLUM, Bodwin.—Junior Assistant Medical Officer, unmarried. Salary, £100, rising to £120 per annum, with board, furnished apartments, etc. Applications to the Medical Superintendent by July 5th.

GLASGOW: ST. MUNGO'S COLLEGE.—Bellahouston Chair of Anatomy. Emoluments, £330 per annum. Applications to the Secretary, 93, West Regent Street, Glasgow, by August 7th.

HALIFAX ROYAL INFIRMARY.—(1) Senior House-Surgeon. (2) Third House-Surgeon. Candidates must be unmarried. Salary, £90 and £50 per annum respectively, with residence, board, and washing. Applications to the Secretary by July 11th.

HAMPSTEAD HOSPITAL, Parliament Hill, N.W.—Resident Medical Officer. Appointment for six months, but eligible for re-election. Salary at the rate of £120 per annum, with rooms, coal, and gas. Applications to the Honorary Secretary by July 10th.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Two House-Surgeons to Out-Patients. Appointment for six months, but renewable. Salary, 25 guineas each. Applications to the Secretary by July 10th.

KENSINGTON INFIRMARY.—Temporary Resident Assistant. Salary, £53 3s. per week, with apartments, board, and washing. Applications to the Medical Superintendent at the Infirmary, Marloes Road, by July 2nd.

LIVERPOOL INFECTIOUS DISEASES HOSPITALS.—Assistant Resident Medical Officer, unmarried, and not exceeding 26 years of age. Salary, £100 per annum, with board, washing, and lodging. Applications endorsed "Assistant Resident Medical Officer," to be addressed to the Chairman, Port Sanitary and Hospitals Committee, and sent under cover to the Town Clerk, Municipal Offices, Liverpool, by July 5th.

LIVERPOOL: STANLEY HOSPITAL.—Honorary Physician. Applications to the Honorary Secretary.

LONDON HOSPITAL, Whitechapel.—Assistant Surgeon. Applications to the House-Governor by July 13th.

METROPOLITAN ASYLUMS BOARD.—(1) Fourth Assistant Medical Officer for Darenth Asylum. Salary, £150 per annum, rising to £170. (2) Four Assistant Medical Officers at the Fever and Small-Pox Hospitals. Salary, £160 for first year, £180 the second, and £200 the third and subsequent years. Board, lodging, and attendance provided with each appointment. Candidates must be unmarried, and not exceed 28 years of age. Applications on forms provided to be sent to the office of the Board, Victoria Embankment, E.C., for (1) by July 4th, and for (2) by July 12th.

MIDDLESEX HOSPITAL.—Assistant Dental Surgeon. Applications to the Secretary-Superintendent by July 5th.

MILE END.—Assistant Resident Medical Officer at the Workhouse, and Assistant Medical Officer to the Workhouse, unmarried, and not over 30 years of age. Salary, £150 per annum, with board, lodging, and laundry. Applications on forms provided, to be sent to the Clerk, Guardians' Offices, Bancroft Road, Mile End.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich Road, S.E.—Junior Medical Officer. Salary, £60 per annum, with board, attendance, and washing. Appointment for six months, with prospect of election as Senior, salary £90. Applications to the Secretary by July 6th.

NEWCASTLE-UPON-TYNE ROYAL INFIRMARY.—Honorary Ophthalmic Surgeon. Applications to the Secretary by July 5th.

NORTH RIDING ASYLUM, Clifton, York.—Junior Assistant Medical Officer; unmarried, age not exceeding 30. Salary, £125 per annum, rising to £175, with board, furnished apartments, etc. Applications to the Medical Superintendent.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Unmarried. Salary, £140 per annum, with all found except board. Applications to the Secretary.

OLDHAM INFIRMARY.—(1) Senior House-Surgeon. (2) Junior House-Surgeon. Salary, £55 and £70 per annum respectively, with board, residence, and washing. Applications to the Honorary Secretary by July 9th.

PERTH COUNTY AND CITY ROYAL INFIRMARY.—House-Surgeon. Salary £60 per annum, with board. Applications to the Secretary, 38, Tay Street, Perth, by July 9th.

PLAISTOW: ST. MARY'S CHILDREN'S HOSPITAL.—Assistant Resident Medical Officer. Appointment in first instance for six months. Salary, £30 per annum, with board, residence, laundry, etc. Application to the Secretary by July 14th.

PORTSMOUTH BOROUGH ASYLUM.—Junior Assistant Medical Officer. Salary, £120 per annum, rising to £150, with board, lodging, and washing. Application to the Medical Superintendent.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House-Surgeon. House-£80 per annum, with board, lodging, and washing. Applications, marked "Salary, Surgeon," to the Secretary.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, W.—Demonstrator of Physiology. Salary, £150. Applications to the Dean by July 14th.

SALFORD ROYAL HOSPITAL.—Honorary Medical Officer for the Pendleton Branch Dispensary. Applications to the Secretary by July 7th.

SHREWSBURY: SALOP INFIRMARY.—Assistant House-Surgeon. Appointment for six months, but renewable. Salary at the rate of £40 per annum, with board and washing. Applications to the Secretary.

STAMFORD, RUTLAND, AND GENERAL INFIRMARY.—House-Surgeon. Salary, £100 per annum, with board, lodging, and washing. Applications to the Secretary by July 10th.

SWANSEA GENERAL AND EYE HOSPITAL.—House-Physician. Salary, £50 per annum, with board, apartments, washing, and attendance. Applications to the Secretary.

TEIGNMOUTH HOSPITAL.—House-Surgeon. Application to the House Committee.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon, unmarried. Salary £50 per annum, with board, lodging, and washing. Applications to the Honorary Secretary by June 30th.

VICTORIA HOSPITAL FOR CHILDREN, Queen's Road, S.W.—Resident Medical Officer. Appointment for six months. Honorarium £25, with board and lodging. Applications to the Secretary by June 30th.

WAKEFIELD: CLAYTON AND WAKEFIELD GENERAL DISPENSARY.—Junior House-Surgeon unmarried. Salary, £80 per annum, with board, lodging, and washing. Applications to the Secretary by July 12th.

WESTERN GENERAL DISPENSARY, Marylebone Road.—(1) House Surgeon, unmarried. Appointment for six months. Salary at the rate of £75 per annum, with board and residence, and 10s. a month for washing. (2) Honorary Physician, must be F. or M.R.C.P.Lond. Applications to the Honorary Secretary.

WEST HAM UNION.—Medical Officer for the No. 4 District. Salary, £130 per annum, rising to £180, and fees. Applications on forms provided to be sent to the Clerk, Union Workhouse, Leytonstone, N.E., by July 11th.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—(1) Assistant House-Surgeon. Appointment for six months. Salary at the rate of £75 per annum. (2) House-Surgeon. Salary, £100 per annum. Board, lodging, and washing provided in each case. Applications to the Chairman of the Medical Committee for (1) by July 12th, and for (2) by July 5th.

YORK DISPENSARY.—Resident Medical Officer. Salary, £110 per annum, with board, lodging, and attendance. Applications to Mr. W. Draper, De Grey House, York, by July 10th.

MEDICAL APPOINTMENTS.

N. W., M.B., C.M.Aberd., appointed Medical Officer for the Loughton District of the Epping Union, *vice* F. A. Organ, L.R.C.P.I., M.R.C.S.Eng., resigned.

BOWN, R. B., L.R.C.P., L.R.C.S.Edin., appointed Medical Officer of Health to the Howden Rural District, *vice* V. H. Fisher, M.D.Durh.

DAVIS, Henry J., M.A., M.B.Cantab, M.R.C.P.Lond., appointed Assistant Physician to the West London Hospital.

DEY, A., M.B., C.M.Aberd., appointed Medical Officer of Health to the Glendale Rural District, *vice* R. Walker, M.D.Aberd., resigned.

FARREN, J. T., L.R.C.S. and L.R.C.P.Edin., appointed Dispensary Medical Officer and Medical Officer of Health for Dungloe No. 1 Dispensary District of the Glenties Union.

FLANEGAN, H. J., L.R.C.S., L.R.C.P.Irel., appointed Medical Officer for the All Saints' District of the Northampton Union.

FOSTER, Percy, M.R.C.S.Eng., L.R.C.P.Lond., appointed House-Physician to the Sussex County Hospital, Brighton.

HOLLINSHEAD, F., M.D.St.And., appointed Visiting Medical Officer to the King's Norton Union Infirmary.

HORA, J., M.B., B.S.Lond., appointed Resident Medical Officer to the King's Norton Union Infirmary.

HULBERT, E. B., M.D.Durh., M.R.C.S., L.R.C.P.Lond., appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, *vice* E. Worley, M.R.C.S., L.R.C.P. Lond., resigned.

LONGFORD, J. M., L.R.C.P., L.R.C.S.Irel., appointed Assistant Medical Officer to the Cottage Homes of the Aston Union, *vice* A. Ingram, M.B.

MITCHELL, Arthur M., M.A., M.D., B.C.Cantab., D.P.H.Camb., appointed Medical Officer of Health for the Borough of Guildford.

RACE, J. P., L.S.A., appointed Assistant Medical Officer to the Gordon Road Workhouse, Camberwell, *vice* F. Friend, M.R.C.S., L.R.C.P.

ROBERTSON, J. A., M.D.Glasg., appointed Medical Officer for the Farcet District of the Peterborough Union, *vice* G. S. Payne, M.R.C.S.Eng.

STEDMAN, S. B., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer for the Swinhope District of the Caistor Union, *vice* J. B. O. Richards, L.R.C.P., L.R.C.S.Edin., resigned.

GLASGOW WESTERN INFIRMARY.—The following appointments have been made:
Galt, Hugh, M.B., C.M.Glasg., and D.P.H.Camb., late Extra Dispensary Physician, to be Dispensary Physician.
Carslaw, James, M.A., M.B., C.M.Glasg., late Extra Dispensary Physician, to be Dispensary Physician.
Morton, John, M.B., C.M.Glasg., late Extra Dispensary Surgeon, to be Dispensary Surgeon.
Edington, George H., M.D.Glasg., M.R.C.S.Eng., late Extra Dispensary Surgeon, to be Dispensary Surgeon.
Webster, Alfred, M.D.Glasg., Extra Dispensary Physician.
McKendrick, John Souttar, M.D.Glasg., Extra Dispensary Physician.
Macrae, Farquhar, M.B., C.M.Glasg., Extra Dispensary Surgeon.
McLennan, Alexander, M.B., C.M.Glasg., Extra Dispensary Surgeon.

DIARY FOR NEXT WEEK.

MONDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Keetley: The Diagnosis of and Operation for Diseases of the Breast. (Lecture I.)

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. James Galloway: Consultation (Skin).

TUESDAY.

National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., 3.30 P.M.—Mr. Marcus Gunn: Ocular Paralysis.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. J. F. Payne: Consultation (Medical).

WEDNESDAY.

Evelina Hospital for Sick Children, Southwark Bridge Road, S.E., 4.30 P.M.—Dr. W. Soltau Fenwick: On Diarrhœa in Children. (Post-Graduate Course.)

Hospital for Consumption and Diseases of the Chest, Brompton, S.W., 4 P.M.—Dr. Schorstein: The Forms of Dyspepsia in Pulmonary Tuberculosis.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 8 P.M.—Conversazione and Oration by Professor Osler of Baltimore on the Teaching and Practice of Medicine.

Obstetrical Society of London. 8 P.M.—Specimens will be shown by Drs. Hubert Roberts, Blacker and Fairbairn. Paper (Dr. Amand Routh): Porro-Cæsarean Hysterectomy with Retroperitoneal Treatment of the Stump in a Case of Fibroids Obstructing Labour, with Remarks upon the Relative Advantages of the Modern Porro Operation over the Sänger-Cæsarean in Most other Cases Requiring Abdominal Section.

THURSDAY.

West London Post-Graduate Course, West London Hospital, Hammersmith Road, W., 5 P.M.—Mr. Keetley: The Diagnosis of and Operation for Diseases of the Breast. (Lecture II.)

Roentgen Society, 20, Hanover Square, 8 P.M.—Annual General Meeting. Presidential Address by Mr. Wilson Noble.

Charing Cross Hospital. Post-Graduate Course, 4 P.M.—Dr. Mackenzie Davidson: Roentgen-Ray Demonstration.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 5 P.M.—Mr. J. Hutchinson: Consultation. (Surgical.)

FRIDAY.

Ophthalmological Society of the United Kingdom. Cases and Card Specimens at 8 P.M.—Chair at 8.30 P.M.—Papers:—Mr. F. M. Ogilvie: On one of the Results of Concussion Injuries of the Eye ("Holes" at the Macula). Messrs. Kenneth Scott and John Griffith: Alveolar Carcinoma of Eyelid. Mr. C. D. Marshall: Further Notes on a Case of Optic Nerve Tumour Previously Reported to the Society. Mr. P. Flemming: Three Cases of Ophthalmitis ("Pseudo-glioma") in Children; one Recovery, two Fatal from Meningitis. The Annual General Meeting will be held after the Ordinary Meeting.

Medical Graduates' College and Polyclinic, 22, Chenies Street, W.C., 4 P.M.—Dr. Tilley: Consultation. (Nose and Throat.)

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which sum should be forwarded in post-office order or stamps with the notice not later than Wednesday morning, in order to ensure insertion in the current issue.

BIRTHS.

BARENDT.—On June 20th, at 65, Rodney Street, Liverpool, the wife of Frank Hugh Barendt, M.D.Lond., F.R.C.S.Eng., of a son.

CROSS.—On June 19th, at The Limes, Wallwood Park, Leytonstone, N.E., the wife of Ernest W. Cross, M.R.C.S.Eng., L.R.C.P.Lond., of a son.

FORDE.—On June 18th, at 91, Central Hill, Upper Norwood, the wife of R. M. Forde, Colonial Medical Service, of a son.

HIGHET.—At Park Holme, Stirling, on June 21st, the wife of B. Campbell Highet, M.B., C.M., of a son.

LINDESAY.—On May 18th, at Bakloh, Punjab, the wife of Captain V. E. H. Lindesay, M.S., 1st Battalion 4th Goorkhas, of a daughter.

HOURS OF ATTENDANCE AND OPERATION DAYS AT THE LONDON HOSPITALS.

CANCER, Brompton (Free). *Attendances.*—Daily, 2. *Operations.*—Tu. W. F., 2.

CENTRAL LONDON OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily.

CENTRAL LONDON THROAT, NOSE, AND EAR. *Attendances.*—M. W. Th. S., 2; Tu. F., 5. *Operations.*—1.p., Tu., 2.30; o.p., F., 2.

CHARING CROSS. *Attendances.*—Medical and Surgical, daily, 1; Women, W., 1; S. 9.30; Skin, M. Th., 1; Dental, M. Th., 8.45; Throat and Ear, F., 9.30; Electro-Therapeutics, Tu. Th., 9.30; Children, Tu. F., 1; Röntgen, W., 9.45; Orthopædic, Th., 1. *Operations.*—W. Th. F., 3; S., 2.

CHELSEA HOSPITAL FOR WOMEN. *Attendances.*—Daily, 1.30. *Operations.*—M. Th. F., 2.

CITY ORTHOPÆDIC. *Attendances.*—O.-p., M. Tu. Th. F., 2. *Operations.*—M., 4.

EAST LONDON HOSPITAL FOR CHILDREN. *Operations.*—M. Tu. Th. F., 2.

GREAT NORTHERN CENTRAL. *Attendances.*—Medical and Surgical, M. Tu. W. Th. F., 2.30; Obstetric, W., 2.30; Eye, M. Th., 2.30; Throat and Ear, Tu. F., 2.30; Skin, W., 2.30; Dental, W., 2.30. *Operations.*—M. W. Th. F.

GUY'S. *Attendances.*—Medical, i.-p., M. Tu. Th. F. S., 1.30; o.-p., M. W. Th. F., 12; Surgical, i.-p., daily, 1.30; o.-p., M., W. Th. S., 12; Obstetric, i.-p., M. Tu. Th. F., 1.30; o.-p., Th. S., 12; Eye, i.-p., M. Tu. Th. F., 1.30; o.-p., M. Tu. F., 12; o.-p., Ear, Tu., 12; Skin, Tu., 12; Throat, F., 12; Dental, daily, 9.30. *Operations.*—Tu. F., 1.30; (Ophthalmic), M., 1.30; Th., 2.

HOSPITAL FOR WOMEN, Soho. *Attendances.*—O.-p., M., 9; Tu. W., 12; Th., 9; F. S., 12. *Operations.*—M. Tu., 2; Th. S., 9.30.

KING'S COLLEGE. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, daily, 2; o.p., daily, 1.30; Eye, M. W. Th., 1.30; Ear, Th., 2.30; Throat, M., 1.30 F., 2; Dental, M. Th., 10; Skin, M., 10. *Operations.*—W. Th. F., 2.

LONDON. *Attendances.*—Medical, daily, i.p., 2; o.p., 1.30; Surgical, daily, 1.30 and 2; Obstetric, M. Tu. Th. F., 2; o.p., W. S., 1.30; Eye, Tu. S., 9; Ear, W., 9; Skin, Th., 9; Dental, M. Tu. Th. F., 9. *Operations.*—Daily, 2.

LONDON TEMPERANCE. *Attendances.*—Medical, i.-p., M., 2.30; Tu. F., 3.30; Th. 2.0; O.-p., M. Tu. W. F., 1; Surgical, i.-p., M., 2; Th., 3; O.-p., M. Th., 1.30. *Operations.*—Th., 4.

LONDON THROAT, Great Portland Street. *Attendances.*—Daily, 2; Tu. F., 6. *Operations.*—Daily, 9.30.

METROPOLITAN. *Attendances.*—Medical and Surgical, daily, 2; S., 9; Obstetric, W., 2; Eye, M., 2; Throat and Ear, Th., 2; Dental, Tu. Th. S., 9. *Operations.*—Tu. W., 2.30; Th., 4.

MIDDLESEX. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, Tu. Th., 1.30; o.p., M., 9; W., 1.30; Eye, Tu. F., 9; Ear and Throat, Tu. F., 9; Skin, Tu., 4; Th., 9.30; Dental, M. F., 9.30; W., 9. *Operations.*—Daily, 1.30.

NATIONAL ORTHOPÆDIC. *Attendances.*—M. Tu. Th. F., 2. *Operations.*—W., 10.

NEW HOSPITAL FOR WOMEN. *Attendances.*—Daily, 2; Ophthalmic, W. S., 9.30. *Operations.*—Tu. F., 9; Th., 2.

NORTH-WEST LONDON. *Attendances.*—Medical, daily, exc. S., 2; S., 10; Surgical, daily, exc. W., 2; W., 10; Obstetric, W., 2; Eye, W., 9; Skin, F., 2; Dental, F., 9. *Operations.*—Th., 2.30.

ROYAL EAR, Frith Street. *Attendances.*—M. S., 3; Tu. F., 9; W., 2.30; Th., 7.30. *Operations*—Tu., 3.

ROYAL EYE, Southwark. *Attendances.*—Daily, 2. *Operations.*—Daily.

ROYAL FREE. *Attendances.*—Medical and Surgical, daily, 2; Diseases of Women, Tu. S., 9; Eye, M. F., 9; Skin, Th., 9.30; Throat, Nose, and Ear, W., 9.30. *Operations.*—W. S., 2; (Ophthalmic), M. F., 10.30; (Diseases of Women), S., 9.

ROYAL LONDON OPHTHALMIC. *Attendances.*—Daily, 9. *Operations.*—Daily, 10.

ROYAL ORTHOPÆDIC. *Attendances.*—Daily, 2. *Operations.*—O.-p., M., 2; i.-p., Tu. Th., 2.30.

ROYAL WESTMINSTER OPHTHALMIC. *Attendances.*—Daily, 1. *Operations.*—Daily, 2

ST. BARTHOLOMEW'S. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetric, M. W. F., 2; o.p., W. S., 9; Eye, M. Tu. W. Th. F. S., 2; o.p., M. Th., 9; W. S., 2.30; Ear, Tu. F. 2; Skin, Tu., 9 Larynx, M. Th., 2; Orthopædic, Tu., 1.30; Dental, Tu. F., 9; Electrical, M. Tu. Th. F., 1.30. *Operations.*—Daily, 1.30; (Ophthalmic), Tu. F. 2; Abdominal Section for Ovariotomy, W., 2.

ST. GEORGE'S. *Attendances.*—Medical and Surgical, daily; i.p., 1; o.p., 12; Obstetric, i.p., Tu. F. 1.45 o.p., M. Tu., 2.30; Eye, W. S., 1.30; Ear, M., 2; Skin, W., 2.45; Throat, F., 2; Dental, M. Tu. F., S., 12. *Operations.*—Daily, 1; Ophthalmic, W., 1; Dental, Th., 9.

ST. MARK'S. *Attendances.*—Fistula and Diseases of the Rectum, males, S., 2; females, W., 9.30. *Operations.*—Tu., 2.30; Th., 2.

ST. MARY'S. *Attendances.*—Medical and Surgical, daily, 1.45; o.p., 12.45; Obstetric, Tu., F. 1.45; o.p., M. Th., 1; Eye, Tu. F., 9; Ear, M. Th., 9; Throat, Tu. F., 3; Skin, M. Th., 9; Dental, W. S., 9; Electro-Therapeutics, W. S., 10; Children's Medical, M. Th., 9. *Operations.*—M., 2.30; Tu. W. F., 2; Th., 2.30; S., 10; (Ophthalmic), F., 10.

ST. PETER'S. *Attendances.*—M., 2 and 5; Tu., 2; W., 5; Th., 2; F. (Women and Children) 2; S., 4. *Operations.*—W. F., 2.

ST. THOMAS'S. *Attendances.*—1.-p., Medical and Surgical, M. Tu. Th. F., 2; o.p., daily, 1.30 Obstetric, Tu. F., 2; o.p., W. S., 1.30; Eye, Tu. F. 2; o.p., daily, exc. S., 1.30; Ear, M., 1.30; Skin, F., 1.30; Throat, Th., 1.30; Children, W., 10.30; Electro-therapeutics, Th. 2; Mental Diseases, Th., 10; Dental, Tu. F., 10; X-Rays, Tu. F., 2; Vaccination, W., 11.30. *Operations.*—Daily, 2; (Ophthalmic), Th., 2; (Gynæcological), Th., 2; (Throat), M., 9.30; (Ear), Th., 9.30.

SAMARITAN FREE FOR WOMEN AND CHILDREN. *Attendances.*—Daily, 1.30. *Operations.*—Gynæcological, M., 2; W., 2.30.

THROAT, Golden Square. *Attendances.*—Daily, 1.30; Tu F., 6.30. *Operations.*—Daily, exc. M., 10.

UNIVERSITY COLLEGE. *Attendances.*—Medical and Surgical, daily, 1.30; Obstetrics, M. F., 1.30; Eye, M. W., 1.30; Ear, M. Th., 9; Skin, Tu. F., 2; Throat, M. Th., 9; Dental, Tu. F., 9.30. *Operations.*—Tu. W. Th., 2.

WEST LONDON. *Attendances.*—Medical and Surgical, daily, 2; Dental, Tu. F., 9.30; Eye, M. Th., 2; Ear, Tu. F., 2; Orthopædic, W., 2; Diseases of Women, W. S., 2; Electric, M. Th., 3.15; Skin, Tu. F., 2; Throat and Nose, Tu. F., 2; S., 10. *Operations.*—Daily, about 2.30; F., 10.

WESTMINSTER. *Attendances.*—Medical and Surgical, daily, 2; Obstetric, M. Tu. F., 2; Eye, Tu. F., 9.30; Ear, Tu., 2; Skin W., 3; Dental, W. S., 9.15. *Operations.*—M. Tu. W., 2.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS FOR THE CURRENT WEEK'S JOURNAL SHOULD REACH THE OFFICE NOT LATER THAN MIDDAY ON WEDNESDAY. TELEGRAMS CAN BE RECEIVED ON THURSDAY MORNING.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 1, Agar Street, Strand, W.C., London; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Manager, at the Office, 429, Strand, W.C., London.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone, unless the contrary be stated.*

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Manager, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL, and not at his private house.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the MANAGER of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

M. desires to hear of a home for a student (medical) who is somewhat addicted to morphine habits. Terms must be very moderate.

PRACTICE IN SOUTH AFRICA.

ANXIOUS, who has a family and small capital, asks whether it would be wise for him to go to South Africa after the war with the view of settling for practice in a town.

*** We suspect that it would not be wise. A great many British practitioners expelled from the Dutch Republics have been and are acting as civil surgeons, and a great many civil surgeons have gone out from the United Kingdom, some of whom may have seen openings. How long it may take for the country to settle down no man can say.

LUMBAR COLOTOMY FOR IMPERFORATE ANUS.

L. M. asks for advice as to the best course to adopt in the following case: I was called to see a new born male infant on September 6th, 1899. I found the anus imperforate. The following day the usual operation (that is, cutting down on the position where the anus ought to be) was performed. But although very carefully sought for no gut could be found. Right lumbar colotomy was performed, and the child made an excellent recovery and is now an exceptionally healthy boy of 9 months old. It is now becoming very difficult to keep him clean, and he appears to suffer some pain during defæcation.

HYPODERMIC INJECTIONS OF PILOCARPIN FOR GALL STONES.

DR. R. BROOKS POPHAM, M.R.C.P.Edin., F.L.S. (Estcourt, South Africa), writes: Most remedies used for hepatic colic, such as the anæsthetics morphine, nitrite of amyl, and so on, are chiefly palliative, and those that are curative agents, as the perles of ether and turpentine and others, are certainly not conspicuous by their rapid action or final results. The drug I have lately seen used for gall stones and hepatic colic is pilocarpin, given hypodermically and in increasing daily doses. My attention was drawn to the usefulness of this drug by Dr. Mitchell, of Durban, in a severe case of the kind. I have since had opportunities of trying it in several cases in various parts of Cape Colony and Natal, where the relative number of cases appeared to me to be greater; the results were undoubtedly encouraging, and only once have I had unpleasant symptoms from its administration. As we know pilocarpin is a powerful sudorific and sialogogue, and as it causes secretion from various surfaces, it doubtless does so from the gall bladder and duct, lubricating and softening inspissated gall or stones, helping possibly in their expulsion, and appears to be far superior to morphine for the relief of pain; in fact, as Dr. Mitchell suggests, it is the most efficacious medicinal remedy we have up to the present. I am quite aware pilocarpin has been long since suggested for this affection, but I should feel pleased for any information on the subject, as I am ignorant as to its general appreciation and adoption.

ANSWERS.

WE would request correspondents who desire to ask questions in this column not to make use of such signatures as "A Member," "A Member B.M.A.," "Enquirer," and so on. By attention to this request much confusion would be avoided.

K. will probably find the following book useful: *Medical Partnerships, Transfers, and Assistantships*, by G. B. Stocker and W. Barnard (London: Stevens and Sons. 8s. 6d.)

A. W.—A stethoscope with flexible tube for use with one ear only can, we are informed, be obtained from any surgical instrument maker; it is advisable to make the choice in person, because it is essential that the ear-piece should fit the ear of the practitioner who intends to use it.

TREATMENT OF PEMPHIGUS.

DR. LESLIE PHILLIPS (Leamington) writes: If arsenic be combined with pepsine and cocaine, it has appeared to me to be less liable to produce gastro-enteric disturbance—an immense gain where, as in pemphigus, the therapeutic indication is to gradually increase and push arsenic. As a local treatment, benefit is derived from a dusting powder of emol and camphor. The following prescriptions have served me well: ℞ Liq. Fowleri, mviij; elixir pepsini, ʒss; cocainæ hydrochlor., gr. ½; aq. ad. ʒj t.d.s. ℞ Emolis. ʒiij; pulv camphoræ, ʒss; M. ft. pulv.

ZWIEBACK BREAD.

I. M. S. writes: In reply to "Spa's" inquiry for a recipe for making Zwieback bread, Dr. Tarleton Young gives the following directions for preparing it in his book on *The Carlsbad Treatment and How to Carry it out Anywhere*: "It can be effectively imitated by placing pieces of bread on a toast-hanger in the oven of a kitchen range until they become of a uniform yellow or brown colour all through their entire thickness, and so brittle they break on slight handling.....The essence of the process of preparation is that the heat should be slow, penetrating to the interior of the bread while not charring the outside."

MILK DIET.

M. D., D.P.H. writes: May I suggest to "Tone" that he cannot do better than send his patient with chronic diarrhœa to Plombières? I speak from experience, having been there twice and intending to go again next month. There is an elaborate system of internal and external douches in addition to the baths, and the results obtained in the treatment of diarrhœa, catarrhal enteritis, appendicitis, &c., are surprisingly good. The milk *régime* can be had there if necessary.

NOTES, LETTERS, Etc.

Railway Medical Officers' Union and the Ipswich Meeting.

Dr. G. H. Broadbent, Medical Officer to G.N. and G.C. Railway Companies (Ardwick Green, Manchester) writes: It will be a very great convenience and considerably aid organisation amongst railway medical officers if you will allow me to ask those who previously communicated with me as well as those who have not, if they will let me know as soon as possible whether they could attend a meeting at Ipswich during the session of the annual meeting of the British Medical Association, with a view of instituting a union for the protection and promotion of the interests of railway medical officers. I find that the medical officers of some railway companies are already organised, having had associations for some years. If they will attend the proposed meeting their experience will be of use not only in assisting the medical officers of other companies to form associations on their respective lines, but also in forming the national union. There is nothing revolutionary intended in the proposed union.

1. The first object is to promote unity and good fellowship.
2. To compare the rates of payment of the different staffs.
3. To consider whether there should be a separate payment for minor surgical injuries, as well as to consider the special fees for fractures, dislocations, etc.
4. To consider the question of gratuitous or paid ambulance lectures.
5. How we can protect each other from those who are seeking the appointments we hold.
6. Finally, to consider any other means which may be proposed from any member or staff likely to be for our mutual benefit.

If I hear from a sufficient number of medical officers I will make arrangements for a meeting at Ipswich, and shall be glad to know what day and hour during the annual meeting will be most convenient for each writer. I shall be glad to hear from those unable to attend a meeting at Ipswich whether they are favourable to the union, and will give it cordial support, in all cases stating what company they are attached to and any details connected with their appointment that may be of interest and utility to their colleagues. All communications will be regarded as confidential, facts being only made use of, not the names of the authors.

Irish Dispensary Doctors and Guardians.

Dr. W. Calwell, Honorary Secretary of the North of Ireland Branch of the British Medical Association (1, College Square N., Belfast), writes to acknowledge the following additional subscription which had been received on behalf the Dr. Moses Henry "Legal Expenses" Fund:

	£	s.	d.
To amount already acknowledged	19	5	6
Dr. William Rankin, Newton Cunningham, Derry	0	10	6
Total ...	£19	16	0

A cheque for this amount has been sent to Dr. Henry, and the fund is now closed.

Prevention of Laceration of Perineum.

Dr. F. G. Gardner (Warwick) writes: I should like to mention a simple procedure by which I think I have often prevented rupture of the perineum in primiparæ; at any rate, I frequently deliver primiparæ nowadays without getting a vestige of a tear unless the head is unduly large. When the occiput is engaged under the symphisis pubis and the face is sweeping over the distended perineum, I press with the fingers against the forehead in the direction in which the head will be carried by extension, thereby increasing considerably the last movement preceding the delivery of the head. If laceration seems very imminent I introduce two fingers inside the distended anal orifice, and, by hooking up the chin am able to increase very decidedly the extension, and also hasten the expulsion of the head; at the same time I support the distended tissues. The latter proceeding is not elegant and is not pleasant, but it is better than having a laceration with its discomforts and risks. I do not suppose this method has any originality, but in view of the fact that I have not seen it mentioned while incisions and guards are discussed, I have thought it worth passing notice.

St. Moritz Aid Fund.

Dr. P. R. Berry (Harley Street, W.) writes: I take the opportunity of being in London to suggest that the benefits of the St. Moritz Aid Fund might be extended to nervous and anæmia cases. St. Moritz is only suitable to chest cases in the early stages, and advanced cases get on much better at Davos, where they lay themselves specially out for them, and where the climate is milder; whereas there are many cases of "breakdown" from overwork or nervous strain, to whom a couple of months at St. Moritz, with its baths and bracing air, would mean restoration to health. The same remarks apply to cases of anæmia, the effects of the local iron waters being greatly aided by the invigorating air. I may mention that should my suggestion be adopted, my colleagues practising at St. Moritz and myself will be only too happy to give the patients sent by the Aid Fund Committee any medical advice or attention under the same conditions as existing for chest cases.

The Rôle of Education in the Prevention of Tuberculosis.

Dr. F. Bushnell (Hon. Secretary, Devon and Cornwall Branch, National Association for the Prevention of Consumption) writes: Education is the motto of the associations formed in this country to prevent the spread of tuberculosis. The Devon and Cornwall Associations Committee forwarded in May 1899 and 1900 letters to county councils and Boards of Education advocating instruction in "health laws or maxims" to scholars in elementary schools. It believes good may ensue by an appeal to the open mind of youth rather than, or as well as, to the prejudices of age. Mr. Adler in *Moral Instruction to Children*, recommends as moral "duties" lessons in personal and public hygiene. This he includes in (*a*) duties to one's self, (*b*) duties to mankind, (*c*) social duties. It is equally probable that a higher standard of morality might result from improved health. In any case instruction is necessary to counterbalance the effects of modern artificial conditions of life seen as tuberculosis. In Plymouth it is believed it may be taught at present under "composition," "writing" (copybook headings), and "domestic science." Perhaps a demonstration of defective hygienic arrangements and their results might be shown to the authorities as a practical illustration of the evils attending them.

Undecorated Distinction.

It is related of Lord Bacon that in the earlier part of his career at the Bar he was fain to ask for the honour of knighthood in order that he might no longer be in the anomalous position of being the only untitled member of his mess at Gray's Inn. Had he looked at the situation in the true light he would have seen that the very circumstance which he found so humiliating was for a man like him a higher distinction than any title. When Lord Castlereagh at the Congress of Vienna presented himself in a plain black coat amid the beribboned and bestarred throng of plenipotentiaries and diplomatic magnates, Prince Metternich said to him, "*Ma foi, Milord, c'est très distingué!*" A distinguished British officer disliked to have the initials of his order placed after his name, because, as he put it, "Everyone is a C.B. now." In France this is almost literally true as regards the Legion of Honour; it is difficult to find an undecorated individual, even if he is a doctor. There is a story that Professor Rostan once asked a patient admitted to his wards the name of the practitioner under whose care he had been before coming to hospital. The patient answered that it was a doctor with a decoration. To which Rostan replied: "If you had told me it was a doctor without one I might probably be able to identify him."

LETTERS COMMUNICATIONS, ETC., have been received from

B Mr. H. Buxton, Lancaster; J. F. Bullar, M.B., Southampton; Messrs. Blandy Bros., London and Birmingham; Dr. P. R. Berry, London; Mr. L. A. Bidwell, London; Mr. W. L'H. Blenkarne, Worthing; Mr. G. H. Broadbent, Manchester; Dr. W. Bruce, Dingwall; Dr T. Barlow, London; Dr. F. G. Binnie, Cambridge; **C** Dr. H. R. Crocker, London; Dr. C. W. Chapman, London; Cambridge Sentinel Manufacturing Company, Manager of, Cambridge; W. Colquhoun, M.B., Glasgow; Chelsea Clinical Society, Secretary of, London; Mr. H. Coates, Salisbury; Dr G. W. Crowe, Worcester; Dr. W. Calwell, Belfast. **D** Mr. S. S. Depree, Bootle; Dr. J. M. Day, Dublin; Mr. J. W. Davies, Ebbw Vale; Mr. H. Davies, Preston; Dr. A. Duke, Cheltenham; Mr. N. Devereux, Tewkesbury; Dispensary; Mr. A. E. Deane, London; Mr. W. F. Dearden, Manchester; Dr. S. Davies, London. **E** Eyemes; Etiquette; Mr. R. Ellery, Eynsham. **F** Messrs. B. Finch and Co., London; Mr. C. H. Fagge, London. **G** Mr. J. E. Godson, Droyles; Sir J. Grant, K.C.M.G., Ottawa; Mr. J. Gardner, Bolton-on-Dearne. **H** Mr. H. Hemsted, jun., Winchester; Mr. J. F. C. Hossack, Ipswich; Mr. T. G. Horder, Cardiff; Humber. **I** In Doubt; I.M.S. **J** Mr. W. Jameson, Pontesbury. **K** Kelpion Company, Manager of, London; K. **L** F. H. Low, M.B., London; Dr. E. Liveing, London; L. M.; Dr. W. J. Lawrie, Ayr; Mr. H. F. Lawrence, London; Dr. A. E. Larking, Folkestone; G. B. Leighton, M.B., Grosmont; L.R.C.P. and S.Edin.; Mr. P. G. Lee, Cork. **M** Mr. W. Marriott, London; Dr. R. Maclaren, Carlisle; Dr. A. MacGregor, London; Mr. E. R. Mansell, Hastings; Mr. J. H. Marsh, Macclesfield; Major I.M.S.; Dr. J. E. Moorhouse, Stirling; Dr. E. Magennis, Lurgan; Mr. M. Morris, London; M.B., D.P.H.; Mr. B. F. Meadows, Hastings. **O** On Two Commissions; Omega. **P** Captain A. E. H. Pinch, London; Dr. F. L. Phillips, Leamington; Mr. G. Pernet, London; Mr. R. B. Popham, Estcourt; Mr. F. W. Parsons, London. **R** Mr. B. H. Russell, Farningham; R. A. M. C.; Messrs. Reynolds and Branson, Leeds; Dr. W. Reeve, London; Mr. T. Ryan, London; R. M. **S** Sir W. Stokes, Mooi River; Mr. B. M. Smith, London; Subscriber; Dr. T. G. Stevens, London. **T** Mr. F. Treves, London; Twenty Years' General Practice; Sir W. Turner, London. **V** Mr. C. S. Vines, Newport, Mon.; Mr. T. J. Verrall, Brighton; Mr. S. Vantyn, Liége. **W** Dr. H. W. Webber, Plymouth; Wigan Medical Society, Secretary of, Wigan; Mr. T. M. Watt, London; Dr. F. Willcocks, London; Dr. A. A. Warden, Paris.

BOOKS, Etc., RECEIVED.

A Handbook of the Gnats or Mosquitoes. By Major G. M. Giles, I.M.S., M.B., F.R.C.S. London: John Bale, Sons and Danielsson. 1900. 15s.

Die Fermente und ihre Wirkungen. Von C. Oppenheimer. Leipzig: F. C. W. Vogel. 1900. M. 10.

Händereinigung, Händedesinfektion und Händeschutz. Von Dr. C. S. Hœgler. Basel: B. Schwabe. 1900. M. 5.60.

The Philosophy of Voice. By C. Lunn. London: Baillière, Tindall, and Cox. 1900. 5s.

My Diocese during the War. Extracts from the Diary of the Right Rev. A. H. Baynes, Bishop of Natal. London: G. Bell and Sons. 1900. 6s.

La Médication Ergotée. Par Dr. S. Bernheim. Paris: A. Maloine. 1900.

Before Good Night and from Door to Door. By G. H. R. Dabbs, M.D. London: C. W. Deacon. 1900. 2s. 6d.

Transactions of the Chicago Pathological Society from May, 1897, to June, 1899. Chicago: American Medical Association Press. 1900.

Die Kohlenoxyd-Vergiftung in ihrer klinischen, hygienischen und gerichtsarztlichen Bedeutung. Von Dr. W. Sachs. Brunswick: F. Viewig and Sohn. 1900. M. 4.

Les Albuminuries Curables. Par J. Tessier. Paris: J. B. Baillière et Fils. 1900. Fr. 1.50

*** In forwarding books the publishers are requested to state the selling price.

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AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(1) Ulceration of the Fauces and Palate in Typhoid Fever.

SCHAEFER has made this the subject of investigation (*Thèse de Paris*, 1899). Although deep ulceration of the pharynx and of the larynx has been recognised for a long time in typhoid fever, superficial ulceration affecting higher parts of the buccal cavity have not been fully described. Ulceration of a superficial character may appear on the soft palate and the pillars of the fauces at variable times in this disease, being occasionally seen during the first few days as lenticular reddish patches, or, and as is more often the case, during the second week of the disease. Later than this it is extremely rare. The site of the ulceration is peculiar, being almost always on the anterior pillars of the fauces at their junction with the soft palate. The lesion is sometimes single, sometimes it consists of a series of ulcerations having a somewhat symmetrical disposition. The patches vary in size from 6 to 20 mm. long by 4 to 12 mm. broad. The lesion is of a particularly superficial character. It sometimes shows a punched-out appearance, but this is not common, being in effect more apparent than real on account of the greatly injected character of the margins. Sometimes there is a zone of hyperæmia surrounding the ulceration. Its base is yellowish-grey, and almost always smooth, though at times it has a granular aspect. There is no false membrane nor as a rule any glandular enlargement. Sometimes however the submaxillary glands show some tumefaction. Generally speaking there is no symptom which draws attention to this condition, and it must be looked for in order to find it. The writer, however, records that occasionally there is some pain and tingling at the seat of the ulcers. Unless treated the ulceration increases for two or three days, becomes slightly deeper, but after this it does not seem to extend. It generally stops in the course of a few days, and in a fortnight from its first appearance no traces may be found, unless perhaps a very slight degree of opacity of the mucous membrane. The writer is unable to confirm the statement of some authors—namely, Tripier and Devic—who state that buccal ulceration follows a course parallel to that of the intestine. Whatever may be said as to their duration, these ulcers heal without complication, nor do they leave any paralysis of the palate. Ulcers similar in character may be found at the base and sides of the tongue, and Letulle mentions their appearance inside the lower lip. These, however, do not seem to be so frequent as ulcers of the palate and fauces. The writer states that the appearance of these ulcers is so typical that there seems to be little room for error in diagnosis. It seems, however, that thrush and aphthous conditions of the buccal mucosa have been diagnosed instead of typhoid ulceration. The situation of the latter is, however, quite different from that of aphthous ulcers. It has been suggested that typhoid ulceration may be mistaken for tuberculous conditions, *plaques muqueuses*, herpes, etc., but the various characters of all these should be so well known as to render mistake practically impossible, taking into consideration special situation, regular form, the superficial condition, the absence of slough and glandular enlargement. This condition may at times render service in the diagnosis of enteric in some obscure cases. As regards the frequency of the condition, it is perhaps more common than is supposed; 20 per cent. possibly of cases of enteric may show ulceration of the palate and fauces. Why it should occur in some persons and not in others is a problem. Men seem more liable than women. The appearance of this ulceration does not seem to be related in any way to the severity of the attack. So far Eberth's bacillus does not seem to have been found in them, It has been suggested that the dryness of the buccal cavity might in some measure conduce to the appearance of ulceration.

(2) Diseases Attributed to Cold.

W. FREUDENTHAL (*Zeitsch. f. diät. und phys. Therap.*, 1899, vol. iii, p. 457) of New York, thinks that too much illness is now attributed solely to infection, and too little to the effect of cold. The question is not merely of theoretical interest, but of practical importance, because in many cases, if the cause of the illness be recognised, it can be avoided. Nansen and his companions in the Arctic expedition were, of course, terribly exposed to cold. They could for a long time only clean themselves by scraping their skins. Their woollen garments were frozen hard during the day and thawed during the nights owing to the warmth when they lay enclosed in their sleeping sacks. In spite of all this they never caught colds. It must be allowed that the coating of the skin of these explorers was not like the actual varnish placed on the skin of a boy who was to be gilded so as to represent an angel, as Roehrig narrates, at the coronation of Pope Leo X; the boy died owing to the interference with the functions of the skin. The absence of bacteria in the Arctic air is not necessarily the reason why Nansen and his companions did not suffer from colds. This might depend on their good circulation and vigor. Some persons catch a cold or suffer from diarrhœa when they go for a day into the pure air of the mountains, but this kind of a cold apparently does not spread to others. A certain patient, if he sits a few minutes at the open windows in the morning, suffers from diarrhœa within half an hour, but if he first takes some good exercise on his bicycle he can sit the whole morning at the open window without getting any diarrhœa. In this case it is the condition of the circulation which prevents the "cold," and if the same patient has been taking active bodily exercise during one or several days he escapes the bad effects, even if he has neglected to take any exercise immediately before sitting at the open window. Freudenthal thinks that it is the habitual protection from clothes which makes the skin so sensitive to changes of temperature. As preventive against colds he lays stress on the proper use of cold bathing and the adaptation of the clothing, so that the surface of the body is kept properly ventilated, and at the same time protected from too great heat and too great cold.

(3) Meningitis and Pseudo-meningitis in Influenza.

SASSI (*Gl' Incurabili*, An. 14, F. 17 and 18) accepts the division of meningitis and pseudo-meningitis, based clinically on the fact that the bulk of the latter class of cases presenting meningitic symptoms recover and the former die, and pathologically on the absence of any marked microscopic or macroscopic changes. Both types may occur as the direct or indirect result of influenza. Infection may occur through the nose, pharynx, ear, or eye. It is not essential that Pfeiffer's bacillus should be found, as the same effects may be produced by the toxins of influenza. In attempting to differentiate an influenzal meningitis from other forms useful criteria may be found—(1) in Shelley's sign (the presence of a sago-like looking eruption on the palate and lips); (2) in the influenzal tongue, a peculiar opaline, bluish white, porcelain-like appearance which resists purgative treatment, and lasts throughout the disease; (3) in the study of the temperature, which presents irregular rises, each rise a little less than the preceding, and with marked oscillations between the morning and evening temperatures; (4) in lumbar puncture.

(4) Vanilla Poisoning.

AUDEOUD (*Rev. Méd. de la Suisse Rom.*, October 20th, 1899) observed an outbreak of poisoning among the women employed in a factory where the crude vanilla fruit was prepared for commerce. The symptoms were local and general. The local consisted of a papulo-vesicular eruption on the exposed parts of the skin (arms and face). The papules were raised, and occasionally became vesicles containing a clear fluid as in eczema. There was frequently dermatitis, with infiltration of the subcutaneous cellular tissue, the œdema being most marked on the backs of the hands, the eyelids, the lips, and the cheeks, so that the patients looked very much as though they had small-pox. The eruption, which caused moderate itching, disappeared in a few days, if the cause was removed, under simple local treatment, but relapses were common on work being resumed. All the workwomen were affected, but in most cases not sufficiently for them to suspend their work. The general symptoms were

excitement and insomnia, for which bromide of potassium was given, and menorrhagia, sometimes so intense as to cause syncope. In a woman, aged 44, who had not menstruated for two years, the periods returned. Vanilla, therefore, evidently acts as an emmenagogue. Poisoning by vanilla was first described by Layet, of Bordeaux, where there are a great number employed in the trade, in 1883, but has since been described by Jonathan Hutchinson and others. Layet says those who work in vanilla suffer from headaches, vertigo, lassitude, muscular pains, and irritable bladder; and though they have frequently to leave the factory to escape from vertigo and somnolence, at night they suffer from nervous excitement and insomnia. As a rule, they become rapidly immune, and poisoning is seen in beginners only, though some are obliged to abandon the work. Guérin describes also ocular symptoms, consisting in excoriations on the eyelids, simple and ulcerative conjunctivitis, and deep-seated radiating pain. Vision deteriorates progressively until there may be amaurosis. The optic disc is congested, and there may be chorio retinitis. When the work is abandoned, the eyes recover under antiphlogistic treatment, myosotics, and especially pilocarpin. The constituent of vanilla which produces most of the local symptoms is an irritant volatile oil called "cardol" which is present in the pods. The mildew which covers them may cause coryza and erythema, and the crystals of vanilline may give rise to a burning sensation. The nervous symptoms are due chiefly to the inhalation of the scent, which has all the properties of the aromatic aldehydes. Poisoning by vanilla, when used as a flavouring in food, has been described, though it is uncertain whether in these cases the vanilla or the food were the cause of the symptoms.

SURGERY.

(5) Radical Removal of Deep Pelvic Glands in Cases of Tuberculosis and Cancerous Infection.

Lennander (*Centralbl. für Chir.*, No. 37, 1899) describes an extensive operation he has lately devised for the removal of diseased glands from the pelvic cavity. The necessity for such a procedure has been suggested to him by the well-known clinical fact that after removal of a malignant growth of the integument of one of the lower extremities, or of the penis, together with extirpation of the inguinal glands on one or both sides, recurrence of the disease frequently occurs in the deep pelvic glands. This, he states, is to be explained by the free anatomical communication between the superficial lymph vessels and glands, and those extending along the course of the trunks and branches of the external and internal iliac blood vessels. The author attaches much importance to the probable existence of a free communication by means of lymph vessels between the glands seated over the lower parts of the external iliac vessels and the glands scattered over the trunks and branches of the obturator artery and vein. Still further importance from a surgical point of view is attached to the obturator lymph glands, as these very probably receive numerous lymphatics coursing in connection with the venous communications between the obturator veins and the deep dorsal vein of the penis, the pudendal plexus, and the branches of the internal circumflex vein of the thigh. If such communications really exist a malignant growth of the penis or of the inner portion of the thigh in the region of the adductor muscles may give rise to metastatic infection of both the inguinal and the obturator glands. The operation described by the author necessitates a free external incision extending from the symphysis pubis along the course of Poupart's ligament to the antero-superior spine of the ileum, and then carried to about the middle of the crest of the ileum. From this incision a second one is carried downwards over the femoral vessels. In the course of the operation the inner attachment of Poupart's ligament is cut through, the epigastric and circumflex iliac arteries are divided, and the abdominal muscles attached to the crest of the ileum are incised to the full extent of the outer portion of the external wound. On stripping away the peritoneum, together with the vas deferens and spermatic cord, from the iliac fossa and the deep parts of the pelvis, both the common iliac artery and the external and iliac arteries, together with the branches of the last-named vessel, are freely exposed. The vertical incision along the thigh affords access to the glands seated over the femoral vessels. This operation, which the author has practised with satisfactory results in two cases, is held to be indicated by the following morbid conditions: (1) In cases of cancer or sarcoma of the inguinal lymph glands provided the primary growth can be radically removed, and the patient is free from other glandular metastases that cannot be effectually attacked; (2) in cases of extensive tuberculosis of the inguinal glands, in which a severe operation is not contraindicated.

(6) Extirpation of the Gasserian Ganglion for Neuralgia.

Mugnai (*Il Policlinico*, July 15th, 1899) reports the case of a woman, aged 67, admitted into hospital on November 3rd, 1898, for incurable trigeminal neuralgia on the left side. About three years ago she suffered from severe infra-orbital neuralgia, for which the author excised the infra-orbital nerve, with complete success until recently, when the old neuralgic pains recurred, almost driving the patient into madness. All other remedies proving ineffectual, it was decided to excise the Gasserian ganglion. This was attempted by the Krause-Hartley method on November 18th, but after exposing the second and third branches of the fifth nerve the venous hæmorrhage became so troublesome that the author could not proceed with the operation; the wound was therefore plugged and temporarily closed: this operation lasted eighty minutes. On November 22nd (four days later) the wound was reopened, and the Gasserian ganglion exposed and removed without difficulty. The pains ceased immediately, and have not recurred. Some impediment in speech and left-sided ptosis presented for a few days after the operation. But when the patient was seen in June, 1899, there was no return of the pain, and the left side of the face had almost reacquired its sensibility. The second operation only lasted twenty minutes. The author attributes the success of the operation to its being done in two stages. By this method you can see better what you are doing, and so remove the ganglion in its entirety. There is a photograph of the patient after operation, and also of the excised ganglion. No gross changes were found in the ganglion itself.

(7) Submucous Pyloroplasty.

Koeppelin (*Lyon Méd.*, September 24th, 1899) reports a third case of the modification of Heineke and Mikulicz's operation known as submucous pyloroplasty. The horizontal wound along the pylorus is made through the two outer coats, serous and muscular, of the bowel, and through the cicatrix, if there be one. The exposed and unopened mucosa at once bulges like a hernia. The divided coats are then united vertically, as in ordinary pyloroplasty. All 3 cases of the submucous operation have proved successful. The first patient was a girl, aged 22, subject to spasm of the pylorus. The second was a woman, aged 60, with cancer. Marked relief followed. Ten months later she underwent gastro-enterostomy, with temporary benefit. Jaboulay, of Lyons, performed the third submucous pyloroplasty last June. The patient was a man, aged 42, who had suffered eight years previously from symptoms of gastric ulcer, followed later on by evidence of pyloric obstruction. He at length vomited incessantly, suffered from intense pain, which necessitated large doses of morphine, and became very thin. At the operation cicatricial stricture of the pylorus was discovered. Cure was complete. Koeppelin maintains that this modification is safer than the older pyloroplasty.

MIDWIFERY AND DISEASES OF WOMEN.

(8) Chorea Gravidarum.

Mastier has collected 239 cases of chorea gravidarum and has been able to deduce several interesting facts from his observations (*Thèse de Lyon*, 1899). As is well known chorea gravidarum usually appears in primiparæ from 18 to 24, but Mastier draws attention to a point not sufficiently emphasised, namely, that the chorea frequently appears in a patient who has suffered from the ordinary form on some previous occasion. Moreover chorea gravidarum differs from true chorea in several points notwithstanding its general resemblance.

It is also shown that the majority of those who as children were affected with chorea do not show the least involuntary movement during the first pregnancy, though they may show symptoms in succeeding ones. Moreover the neurosis of childhood may assume curious features under the influence of pregnancy. Thus a case is quoted in which a patient, whose mother was probably rheumatic, showed a considerable amount of "nervousness" during childhood, with gesticulations and hysterical spasms from the age of 7 and well-marked chorea at 15. During four pregnancies there was never at any time any tendency to chorea, but on the other hand there were well-marked attacks of hysterical syncope in the first and uncontrollable vomiting in the other three. In point of fact hysterical manifestations are extremely frequent in women during pregnancy who have suffered from chorea in childhood. Chorea gravidarum may come on gradually or suddenly, and in the latter case is not infrequently due to a sudden fright or emotion. An interesting point is that the onset of the chorea may be accompanied by globus and other symptoms with which we are familiar in hysteria. In some cases the movements are so intense that alimentation is impossible, and the cases may rapidly come to a fatal issue unless by some means the movements may be reduced. Many of these cases show extreme constipation, a point of prime importance in treatment. The author discusses the possible bearing of autointoxication in these cases. In the severer forms psychopathic symptoms are marked; there may even be maniacal delirium. Opinions differ as to prognosis, the author being inclined to think that chorea gravidarum is not the grave disorder that some medical writers would have us believe. This may possibly be due to the employment of intestinal disinfection.

(9) Landau's Treatment of Gonorrhœal Cervical Catarrh.

FEIGL (*Wien. med. Woch.*, November 4th and November 11th, 1899) has treated 50 cases of gonorrhœal cervical catarrh by the method introduced by Th. Landau, which is founded on the mutual antagonism between certain micro-organisms; in this case between the yeast fungus and gonococci. The author's results have not been so brilliant as those obtained by Landau (v, EPITOME, vol. i, 1899, par. 289), possibly because in all his cases the diagnosis of gonorrhœa was confirmed by a microscopic examination of the secretion, while in Landau's the diagnosis was made clinically; the cessation of discharge being no guarantee of the cure of the gonorrhœa. The treatment was carried out exactly as described by Landau, 10 to 20 c.cm. of ordinary fresh beer-yeast, mixed with a small quantity of beer, being injected every day or every few days into the vaginal fornix with a syringe. Before the injection the vagina is cleansed with a douche of hot water and dried with cotton wool, and after it is given is plugged with a tampon. The average number of injections given to each patient was 6, the greatest 21. Though a slight diminution in the number of times the gonococcus was found, when repeatedly looked for microscopically, was observed, the gonococcus did not finally disappear even in the cases treated the longest. In 23 cases, with scanty mucous or muco-purulent secretion, there was a clinical improvement, the discharge becoming more watery or altogether ceasing, but in more severe cases the treatment almost always failed, and had to be abandoned in favour of older methods. Some cases, especially when the injection was made only once every second or third day, became decidedly worse, with an exacerbation of the inflammatory symptoms. In one case the injections were followed by slight, in a second by severe parametritis, but in all the others were well borne. Feigl does not, therefore, consider the method to be any improvement on those previously in use, which consisted in rest and cleanliness for acute cases, in the application of some astringent on a Playfair's probe every few days, and the introduction of vaginal tampons soaked in tannin-ichthyol glycerine twice a day.

(10) Peptonuria in Pregnancy and the Puerperium.

MERCIER AND MENN (*Bull. de la Soc. Obstét. de Paris*, July, 1899), after careful research in a lying-in hospital, find that in pregnant women with albuminuria yet no eclampsia, peptonuria is constant when acid albumen is associated with serum albumen. In the course of puerperal eclampsia peptonuria is constant, whatever variety of albumen is detected in the urine. Peptonuria is not a sign of the death of the fœtus, nor can the authors find that it is a cause of abortion. They only observed it in half their cases where maternal syphilis undoubtedly caused abortion; hence it is not pathognomonic of syphilis in the mother. The theory of uterine involution is insufficient to explain the presence of peptone in the urine, especially when the frequency continues to term without any symptoms of premature delivery at any stage. As peptonuria is constant in the course of puerperal eclampsia, it must be of hepatic origin, whether from disintegration of hepatic glandular tissue or from suspension of the action of the liver on peptones.

(11) Cephalometry and Induction of Premature Labour.

PERRET (*L'Obstét.*, November 15th, 1899) considers that it is becoming more and more clear that the right treatment in contracted pelvis is to induce labour when the fœtus is sufficiently developed to survive birth, and not too large to be able to pass through the pelvic channel. He has devised a special external cephalometer, by which the fœtal head can be measured through the parietes of the abdomen. Matthews Duncan, he observes, believed in 1875 that there was a great future for internal cephalometry, but owing to self-evident mechanical difficulties it is not always possible to measure the fœtal head correctly, more especially when the pelvis is deformed. Perret claims great results from the use of the external method. It is a most important aid in deciding the operator when to induce labour. He publishes a series of observations on the use of this instrument, and he lays stress on one important point. The obstetrician is often deceived by the patient miscalculating the last menstrual period. If she dates it too far back he may diagnose pelvic contraction, and overrate the size of the fœtal head, and then conclude that the head is too large to be delivered without perforation or some graver operation. Systematic use of the external cephalometer has satisfied Perret that in many such cases the diameters of the fœtal head proves less than could be estimated after less precise investigation. Induction of premature labour then proves to be practicable and successful, and the child is found to be clearly younger than the mother suspected.

THERAPEUTICS.

(12) Therapeutics of Enuresis.

AMAT (*Bull. Gén. de Thérap.*, November 8th, 1899), putting aside all cases of nocturnal incontinence of urine due to objective causes, such as phimosis, adherent prepuce, calculus, etc., considers that the true neurotic type has several varieties demanding distinct treatment. He excludes the forms traceable to spinal disease, worms, and morbid urine. In his first variety the vesical muscular fibres are too sensitive to distension; the will masters them to a considerable extent during the day, but they contract just as the patient drops off to sleep. For this condition bromides, chloral, opium, and, better still, belladonna, atropine, and antipyrin are indicated. Broca twenty years ago and Martin of Colorado Springs have both advocated gentle mechanical distension of the bladder, but the result remains doubtful. In the second variety there is actual hyperæsthesia of the vesical and urethral mucous membrane, even when the bladder is almost flaccid. The catheter reveals this condition. It is improved or cured with bromides, valerian, asafœtida, and ammonio-sulphate of copper. The latter seems better than iron and nux vomica. In one case, where a single woman, aged 28, had been subject to enuresis ever since infancy, cure soon followed the administration of three or four drops of a solution of 20 centigrams of the ammonio-sulphate of copper in 15 grams of water. In a third variety, the ease with which the catheter can be passed through the membranous part of the urethra shows that the vesical sphincter is not irritable, but weak. Guyon lays stress on this variety of neuropathic enuresis. Strychnine, rhus aromaticus, and, above all, electricity are needed for its relief. There is a form of enuresis which seems to be purely mental; the

child in such a case must be awakened and made to dress and get up to micturate two or three times a night. Power's practice of applying a drop of collodion to the meatus at bedtime often proves efficacious. Physical exercise is much needed in these cases.

(13) Morphine in Tuberculosis.

Tedeschi (*Rif. Med.*, December 4th, 5th, and 6th, 1899) has made a series of experiments on guinea-pigs with a view to confirm or otherwise the clinical impression left on his mind of the value of morphine in checking the progress of tubercle. Clinically it seemed that cases treated rather freely with morphine lived longer. The resistance of the guinea-pig to morphine was found to be very high, much greater than that of men. Experiments devised to show the influence of morphine in preventing tuberculosis, and in checking it, all gave negative results, or rather positively bad ones, for the animals treated with morphine died more quickly from tuberculosis than those not so treated. Experiment on the more or less sudden demorphinisation of the guinea-pigs gave equally unfavourable results as far as tuberculosis is concerned.

(14) Suprarenal Extract in Epilepsy.

Charles Hill (*Bulletin of Mount Hope Retreat, U.S.A.*, 1899) deals with this subject, having been led to try suprarenal extract for the treatment of epilepsy owing to reasons of a chemical and physiological kind arising from his studies on the urine and on the metabolism of epileptics. Voisin in his monograph (*L'Epilepsie*, 1897) gives a very elaborate treatment, consisting of purgatives, lavage of the stomach, hydrotherapy, injection of artificial serum, with dieting and quiet country life, and bromide of sodium as sedative. Mairet and Bose (*Annales de la Société de Biologie*, 1896) have tried subcutaneous injections of suprarenal extract, and claim to have established its inutility if not harmfulness. Owing to its known effects on the tonicity of the blood vessels, and from the facts observed in some of Hill's experiments that it increased the elimination of urine, Hill was led to the trial of the drug. A glycerine extract of the fresh gland was prepared and found to be superior in the constancy of its effects to the dried extract. The formula was: Glycerine extract of suprarenal, ℥j; calcium chloride, gr. ij; sodium bromide, gr. v., t.d.s. The glycerine extract was made by adding 200 c.cm. of glycerine and 300 c.cm. of water for forty-eight hours to 1 oz. of the powdered gland, and $\frac{1}{10}$ gr. of mercury iodide was added to each grain of the gland powder. The mixture was filtered and water then added so that ℥j of the solution represented 1 gr. of gland. The calcium chloride was added to eliminate the carbamic acid in the gland, and the sodium bromide added to neutralise the carbonate of ammonium. Several cases were treated with favourable results, and Hill says: "In conclusion, after a year's experience . . . I would consider it a success compared with any and all other plans of treatment if there was nothing more in its favour than the striking improvement in the mental and physical condition of the patients," which was generally and favourably influenced.

PATHOLOGY.

(15) Bacteriology of the Accessory Sinuses of the Nose.

Pearce has examined bacteriologically the accessory sinuses of the nose, particularly the antrum of Highmore in 50 cases of diphtheria and scarlet fever (*Journ. Bost. Soc. Med. Sci.*, March, 1899). The writer points out that so far this important subject has not been sufficiently investigated, and he shows that inflammatory conditions of the nasal mucous membrane, such as coryza, acute and chronic rhinitis, tonsillitis, or pharyngitis, may involve the antra by direct extension. Should inflammatory conditions in these situations be specific, it follows that their extension to important localities, such as the antra, is an effect worthy of careful attention. The diphtheria cases on which the writer bases his investigations were all verified by bacteriological methods before being admitted to the series. The cases were divided as follows: diphtheria 39: diphtheria complicated by scarlet fever 5, complicated by measles 2, scarlet fever 4. The chief object of the investigation was to determine the position of the antra rather than of the other sinuses, while in regard to the frontal and the sphenoidal and ethmoidal, only those cases were accepted as conclusive in which there was a definite exudate, and in which the results obtained by smears and cultures were the same. In the 39 cases of diphtheria there were inflammatory changes present in both antra, 16; in both antra, sphenoidal and ethmoidal sinuses, 2; one antrum only, 5; sphenoidal sinuses only, 2. In these the exudate varied, being in some cases a thick yellow pus; in others a seropurulent fluid; in some a thick cloudy serous fluid; in 1 a purulent fluid, with membrane; in 1 a cloudy serous fluid with membrane; in 7 a thin mucoid fluid. The bacillus of diphtheria was present on both sides in all but 3 cases; in 1 of these latter a streptococcus only was found, and in the other 2 the bacillus of diphtheria on one side and the pneumococcus on the other. Staphylococcus aureus and albus were also present in some; the pneumococcus was present in 3, and the bacillus in 4. In those cases of diphtheria associated with measles streptococci were found associated with the diphtheria bacillus in both and in one of these cases both middle ears were purulent, and contained the same micro-organisms as the antra. In the 5 cases of diphtheria with scarlet fever the antra were unaffected in 3, but the other 2 showed inflammatory changes. Cultures from 1 of these showed a diphtheria bacillus associated with several unrecognised forms of bacteria, while the other showed streptococci and staphylococcus pyogenes aureus. The sphenoidal and ethmoidal sinuses also contained streptococci. In the 4 cases of scarlet fever the antral cavities were normal in 1; of the other 3, 1 showed a double empyema in which streptococci and various staphylococci were found. A thick greenish pus was found in both antra and the sphenoidal sinus in another, and in this case, in addition to the same organisms already mentioned, the bacillus pyocyaneus was present. Histological examination in many of these showed considerable inflammatory changes of the mucous membrane. The conclusions which the author draws are that infection of the antrum of Highmore is quite common in fatal cases of diphtheria and scarlet fever, and that the diphtheria bacillus is commonly found associated with pus cocci. The important point is whether infection takes place in cases which are not fatal. The opinion of the writer is that very probably there is such an extension in a great number of cases. He draws attention to the frequency with which the diphtheria bacillus is found in the air passages for varying periods after convalescence. He therefore suggests that in such cases, notwithstanding various applications made to the mucous membrane and mouth, these surfaces are again invaded by the organisms which are stored in the antrum of Highmore. The antrum drains slowly, and not until a considerable time would the organisms have died out. The importance of this as bearing on the question of contagion is great.

(16) Soft Chancre reproduced in the Monkey.

C. Nicolle (*Presse Médicale*, November 4th, 1899) reports that he has succeeded in producing two soft chancres after forty-eight hours' incubation on the forehead of a monkey. The animal, after the chancre had developed, scratched and picked the wound, and later on it inoculated itself with seven other chancres in various parts of the body. Bacteriological examination of all the sores thus produced showed numerous typical specimens of the Ducrey bacillus, the same as in human chancre. A second monkey of another species, resembling the first, was inoculated with pus from the chancres of the first one, with the result that typical chancres were reproduced. These were not, however, invariably obtained, and some of the chancres obtained also showed a tendency to heal, which was not noted in the first monkey. A third monkey of still another species proved completely refractory. Nicolle points out that this difference in the resistive powers of different species should be taken into account in an explanation of the negative results of inoculation as recorded by other investigators. Other animals, such as rabbits, guinea-pigs, and mice proved absolutely refractory to inoculation.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(17) Pyrexia in Cancer.

IT is generally supposed that cancer is an apyretic condition and the absence of fever has even been accorded some value in diagnosis. Fretel, however, points out (*Thèse de Paris*, 1899) that in certain cases there is pyrexia, and this in the absence of any complication. According to the author, it would seem that cancer, where acute or chronic, must be looked upon as a disease capable of causing elevation of temperature at any period of its course. It is possible to distinguish several varieties of pyrexia. There may, for instance, be an intercurrent attack of erysipelas, pneumonia or pyæmia or inflammations of neighbouring organs such as pericarditis in cases of malignant disease of the œsophagus, peritonitis in cancer of the intestine or suppuration, or ulceration of the mouth itself. These are instances of a merely septic pyrexia, but there is another variety which appears without any such cause. It is most frequent in cancers of rapid evolution and the writer thinks that miliary carcinoma is probably the form most likely to produce pyrexia. Observations of this kind are certainly uncommon, but would probably be more frequent if looked for. The writer draws attention to the fact that pyrexia in such cases may strongly simulate intermittent fever especially of the quotidian type. During the evening, after a period of *malaise* and headache, rigors appear; later during the night the skin becomes wet with perspiration. In the interval there may be complete apyrexia, but usually incomplete. This state of things may last for weeks, and even months. It is stated that there is no enlargement of the spleen, which would help to distinguish the case from one of malaria. It is at present impossible to explain the temperature of cancer. The most probable hypothesis is that auto-intoxication takes place, and the writer thinks that the presence of a specific organism may have much to do with the formation of a pyrogenic material.

(18) Perforation of Stomach in an Infant 7 weeks old.

T. M. ROTCH (*Amer. Journ. Med. Sci.*, cxviii, p. 442, October, 1899) relates the case of a male infant, 7 weeks old, who was brought into hospital with the history that four days previously his abdomen became suddenly distended, and he seemed to be suffering much pain. Pulse 165, temperature 101° F., respirations 35. Peritonitis was diagnosed, and it was decided to open the abdomen at once. This was done, and the whole intestine was examined without discovering any cause for the peritonitis, so the abdomen was irrigated and the wound closed. Three days later the infant died, and at the necropsy it was found that the stomach was extensively adherent to the diaphragm along its anterior surface, and at one spot a minute thread was seen coming from the gastric wall. This part of the wall was cut out, hardened, and sectioned; it was then discovered that there was an oblique passage from within outward through the entire thickness of the wall, and in it was a foreign body made up of a bundle of small structureless fibres staining with aniline dyes, but not with hæmatoxylin. It is suggested that this foreign body was possibly a piece of thread which might have been swallowed along with a needle, and the needle might have perforated the wall, leaving the thread behind. It might also have been a case of follicular ulceration into which the thread had worked its way.

(19) Morbid Blushing.

BRASSERT (*Neurolog. Centralbl.*, October 1st, 1899) records an interesting case and gives the probable cause. The case is that of a man of 38 years, who had always been of a nervous disposition. When a youth of the age of 17 he was struck on the head and a painful scar resulted from the injury. He always had a great fear of blushing, and this became manifest in the presence of strangers or when he met acquaintances in the street. Whenever he was directly addressed he became awkward and confused, stammered, and blushed furiously all over his face and scalp. An associated condition — flatulence — was also a troublesome symptom. He was relieved by engaging in any absorbing occupation by remaining in the dark or in artificial light. His condition was worse in summer and warm weather. There was no sign of degeneracy or of vasomotor insufficiency. He improved considerably under the employment of hypnotic suggestion. The conditions in this case are similar to that in one recorded by Bechterew, and another case was reported to Brassert by Windscheid—namely, a young man of 25 years with exactly similar symptoms.

(20) Peripheral Nervous Paralysis in the Region of the Neck.

A. HOFFMANN (*Neurolog Centralbl.*, No. 18, 1899) records cases with full clinical accounts, illustrated by figures, of isolated paralysis of nerves (hypoglossal, axillary), with the resultant muscular atrophies. Case I. Isolated affection of the left hypoglossal nerve in a person the subject of a chronic otitis media. There developed a cellulitis of the side of the neck and a pharyngitis, with a swelling of the local glands. The absence of bulbar and spinal symptoms showed that the involvement was peripheral, and the absence of pain and febrile reaction indicated the absence of an acute affection such as poliomyelitis, hæmorrhage, etc. The patient, a young woman aged 17 years, did not perceive or realise the paralytic condition of half of her tongue until after the hemiatrophy had made considerable progress. The sense of taste was intact. It is surmised that the pharyngitis above referred to was succeeded by cellulitis, which in turn communicated the inflammation to the local glands and the trunk of the hypoglossal nerve. The application of the electric current to the neck is able to provoke suitable (bilateral) movements of deglutition. There were fibrillary tremors in both sides of the tongue, and Hoffmann thinks it probable that all the fibres of the hypoglossal nerve were not affected. He points out further that in protrusion of the tongue the healthy half advances first, and thus the tongue shows a curve with its concavity to the paralysed side, and that in retraction of the tongue the paralysed part lags behind, and the curve is reversed. Case II. Isolated paralysis of the axillary nerve. A young soldier, aged 21 years, while practising lance exercise on horseback, fell down and hurt his arm. The lance penetrated to the left of the cricoid cartilage of the larynx, and its point came out at the back of the neck close to the spine. An isolated paralysis of the axillary nerve, affecting the deltoid muscle, was the result. Galvanisation somewhat improved the paralysis, but a permanent paresis remained for about three months. During the fourth month improvement was again noticeable, and a further diminution of the paresis was recorded. It is probable that the motor branch of the axillary nerve was divided by the lance blade without involvement of the brachial plexus.

SURGERY.

(21) The Surgery of Primary Cancer of the Common Bile Duct.

BRENNER (*Virchow's Archiv*, vol. clviii, Part 2, November, 1899) reports two cases, with a review of the recent literature of the subject. The first patient was a woman aged 65. She suffered for some time from radiating pains starting from the right hypochondrium, sharp attacks of pain as in gall-stone colic, and jaundice. Jordan of Heidelberg did cholecystotomy in August, 1898, suspecting gall stones, as the gall bladder was dilated. He removed 73 small calculi from the bladder, and a few more from the cystic duct. A cancerous gland was enucleated from the connective tissue close to the duodenum, and others could be felt. A piece of the gall bladder was excised and the edges fixed to the abdominal wound. As much bile with mucus flowed away, Jordan performed cholecystenterostomy about five weeks after the first operation with the aid of Murphy's button. An abscess containing pus with a fæcal odour was opened between the adherent gall bladder and the liver; this exposed a greatly dilated bile duct, from which much bile escaped. The surrounding liver tissue was friable and unhealthy. A gauze drain was thrust into the abscess cavity and the liver substance around it secured to the upper end of the wound. The cholecystenterostomy proved successful, but the bile from the duct

involved in the abscess discharged, and caused great annoyance, so that the patient begged that the fistula left by the draining of the abscess be closed. This was effected six weeks after the second operation. In separating the segment of intestine used for cholecystenterostomy from its adhesions to the abdominal wall, a hole, as wide as a shilling, was made in the gut; this was fixed to the edges of the opened and dilated bile duct in the liver, where the suppuration had been. A tough body could be felt, apparently in the head of the pancreas, so that cancer of that organ or of the pylorus was suspected. Death occurred on the second day, from purulent peritonitis, due to extravasation, apparently of a small amount of fæcal material. The intestines contained pale grey fæces without bile; the Murphy's button could not be found. The pylorus, pancreas, and pancreatic duct were free from disease, but a tumour of the size of a hen's egg in this region proved to be a great dilatation of the common duct containing a cauliflower cancerous mass. A few secondary deposits were found in the cystic duct and liver. This is the largest primary cancer of the common duct yet known. In the second case the patient was 58, and had suffered for two years from symptoms of gall-stone colic, and, more recently, from deep jaundice. Cancer of the liver was suspected. Cholecystenterostomy was performed; during the operation a mass was discovered and taken for a cancer in the stomach; Murphy's button was employed. The patient had an attack of hæmatemesis on the second day, and died of cholæmia on the fifth. There was a primary cancer of the common duct, with secondary deposits in the liver and lesser omentum.

(22) Pyloroplasty in Severe Cases.

MAURICE RICHARDSON (*Boston Med. and Surg. Journ.*, November 30th, 1899) reports three successful cases of pyloroplasty for stricture of the pylorus. In some cases of chronic cholecystitis and other inflammatory diseases near the pylorus peritoneal adhesions may produce great disturbance of nutrition, even though there be no organic disease of either pylorus or duodenum. Richardson relates a recent case in which Porter of Boston systematically liberated the pylorus from strong adhesions to the gall bladder. The pylorus itself was opened and carefully examined, but no lesion was found. Probably this detaching of adhesions accounts for some exploratory operations followed by unexpected cure of symptoms of pyloric stricture, when no internal obstruction was found. In Richardson's first case, a boy under 8 years old, the Heinecke-Mikulicz, or longitudinal incision made transversely, was found quite satisfactory. The second patient, a man aged 48, suffered from complete pyloric stricture due to hydrochloric acid poisoning. It was found very difficult to bring the ends of the longitudinal incision into close approximation. The tension was so great that the suture immediately tore out. The operator was obliged to begin with interrupted fine silk Lembert sutures half way between the ends of the incision; the change of direction from longitudinal to transverse was thus gradually attained without too great tension on any one suture. About a month later there was suspicion that the pylorus was contracting again; but six months after the operation the patient was quite well and at work as a shoemaker. The third case of pyloric stricture was in a man aged 54; it appeared due to cicatrisation of an old gastric ulcer, with old and firm adhesions to the gall bladder, etc. The pylorus was extensively thickened and tightly constricted. A longitudinal incision was made for 3 inches through stomach, stricture, and pylorus. The incision was converted into a lozenge or a broad V by removing a considerable portion of the cicatrix of the anterior wall of the pylorus. By bringing together the opposing surfaces of duodenum and stomach an abundant artificial lumen was procured. The mucous membrane was first united by a continuous suture, the peritoneum by an interrupted silk Lembert. The patient was in good health five months later. This pyloroplasty with partial excision seems the right practice in bad organic stricture. The dense tissue being cut away, the lozenge-shaped incision can be readily sutured so as to become transverse, whilst if a simple longitudinal incision is made through the tissue of a bad stricture, it is impossible to convert it safely into a transverse line of sutured wound, owing to the great tension if the two ends be made to meet in the middle. The third case proved this fact. Richardson condemns digital dilatation of benign stricture of the pylorus as unsatisfactory and useless.

(23) Treatment of Varicose Veins.

BIAGI AND BRUCHI (*Supplemento al Policlinico*, An. v, No. 42) in view of the fact that none of the methods for the radical treatment of varicose veins are satisfactory, have tried a new method suggested by Durante. This consists in the subcutaneous introduction of threads of prepared catgut into the lumen of the veins. Rigid antiseptic precautions are taken, and then 8 to 10 c.m. of catgut, previously soaked for twenty-four hours in Piazza's fluid, and then thoroughly dried, are introduced into the vein through a specially-prepared cannula with stilette. A thrombus soon forms, and in the three cases which are quoted cure followed in a very short time. In the third case some pulmonary symptoms followed, which might have been due to embolism, but could be explained otherwise. The authors made some experiments on dogs, and found that the thrombus was usually formed between the second and fifth day. They are convinced of the value of this new method of treating varicose veins.

(24) Treatment of Prostatic Ischuria.

BOTTINI (*Clinica Moderna*, An. 5, No. 39), continuing his lectures on the above subject, discusses the treatment by the galvano-cautery. This may be divided into two classes: (1) cauterisation simply; (2) incision by the cautery. The two operations have separate indications, and are not interchangeable indiscriminately. At one time the author believed more in cauterisation than in incision, but larger experience has taught him that incision by the galvano cautery has a wider application. The present lecture is chiefly concerned with the indications for cauterisation as distinguished from incision. They are as follows: (1) prostatic enlargement of the first degree in the supramontanal region or median lobe; (2) enlargement of one lateral lobe with initial hypertrophy of the median; (3) enlargement of median lobe with vascular engorgement and swelling of the ureteroprostatic mucous membrane. Cauterisation is also useful in spasm of the neck of the bladder and in certain forms of chronic cervical cystitis. The author finds a 1 per cent. solution of cocaine satisfactory as a local anæsthetic. The eschar begins to separate in small fragments about the eighth day, and is usually healed by the 20th or 25th day. Hæmaturia does not recur. If there is much difficulty in passing a catheter it is better to keep it in permanently. If there is much muco-purulent secretion, benefit is derived from washing with a 2 per cent. solution of sulphocarbolate of zinc. As a rule the good effects of the operation do not show themselves until the 20th or 25th day, that is, when the eschar has become completely detached.

MIDWIFERY AND DISEASES OF WOMEN.

(25) Amenorrhœa and Suppressed Lactation.

FEINBERG (*Centralbl. f. Gynäk.*, No. 48, 1899) publishes cases of persistent amenorrhœa after normal parturition and labour in women who do not suckle their children. A lady, aged 30, who had not suckled her two children, was delivered normally in January, 1898. Previously the period had appeared within seven weeks of the two labours, and also about the same time after an abortion at the third month. She could not suckle the third child, and began at once to suffer from headaches, sacral pains, and mental dulness; all increased when the period should have occurred. Whilst hardly a drop of milk issued from the nipples during the first weeks after birth, the breasts now were full at the sham period, and much milk issued from them for several days. The patient was at the same time much depressed. The phenomena were watched by Feinberg in April and May. Then the patient, after abdominal massage for constipation, went to Franzenbad and Switzerland; the normal period appeared when in the Alps, just six months after delivery. The second patient was a domestic servant, aged 32. When 27 she had borne her first child and put it out to nurse; the period

returned at once. Her second child was put out to nurse also; labour was spontaneous. For a year and a half there was amenorrhœa, with periodical headaches, sacral pain, and general weakness. The third patient was 24, and married. After her first child, which she did not suckle, the period returned, came on four times, and then the second pregnancy began. It ended at term. She did not suckle the second child. There was absolute amenorrhœa for four months, with no deterioration of health. Then attacks of headache, sacral pains, and constipation, always worst when the period was due, set in. Once albumen was detected in the urine. Under good feeding, kefir, tepid salt water baths, and mental occupations, the periodical exacerbations diminished, but when last heard of, nearly two years after delivery, the true period had not returned. In all three cases there was no definite local or constitutional disease, and the author found that the anæmia and debility in these patients were the effects, not the cause, of the remarkable pseudo-catamenial phenomena, the precise origin of which he cannot explain.

(26) The Treatment of Pus in the Pelvis.

HAYD (*Buffalo Med. Journ.*, vol. lv, p. 319, December, 1899) criticises the wholesale adoption of the vaginal route for the evacuation of pus in the pelvis as advised by some Continental gynæcologists. He thinks that vaginal operations in the pelvic cavity are more difficult to perform than through an abdominal opening. Vaginal surgery is necessarily less complete, and the dangers and risks of accident to important structures infinitely greater than in operation by abdominal section. For instance, the author has on several occasions delivered a large pus tube or ovarian abscess, and found that he had torn off the appendix vermiformis, or needed to remove it because it was so disorganised, and he had even found a long appendix adherent to the left tube or ovary. Further, the possibilities and necessities for conservative surgery of the tubes and ovaries were out of the question when the operative procedure was by the vaginal route. The consensus of the best surgical thought of to-day is to leave the uterus when possible to support the lower abdominal segment. Only such portion or portions of the ovaries or tubes are to be removed as are irreparably diseased, so as to continue as long as possible the function of menstruation.

(27) Typhoid Fever during Pregnancy.

THIS is a question which has excited a good deal of interest at various times, but that the opinions generally held may be inaccurate is shown by Penot, who has recently collected a series of statistics (*Thèse de Paris*, 1899). That pregnancy offers no immunity is the first deduction due to the author's investigations; secondly, it would seem that the prognosis is not so grave as has generally been supposed. Abortion takes place in a considerable number of cases, the writer finding an average of 65 per cent. On the other hand, this is not so high a proportion as in cases of pneumonia, small-pox, and scarlatina. It seems that the particular characters of the attack, according as it is slight or severe, have considerable influence on the probability of abortion, also the period of pregnancy at which typhoid supervenes, abortion apparently taking place during the first six months, but more especially during the third, fourth, and fifth. Certain epidemics seem to be more prejudicial to pregnant women than others. Pregnancy itself does not seem to render the prognosis of the typhoid fever any worse, the mortality being very much the same in cases of pregnancy and non-pregnancy. Generally speaking, abortion is followed by considerable improvement in the general symptoms, provided the case be not unduly severe. When, however, it takes place in very adynamic conditions the results may be grave; sometimes there is metrorrhagia, rigor, and collapse. From the point of view of treatment pregnancy does not seem to enter into consideration, the only point being that, should the patient be under cold-bath treatment, the latter had better be suspended for a few days should the patient have aborted.

(28) Sepsis and Intussusception in the Newborn.

HORN (*Monats. f. Gebürts. u. Gynäk*, September, 1899) exhibited before a German Society in July a specimen of intussusception of the ileum from the body of an infant, aged 6 days. The symptoms were remarkably confusing. The child sickened shortly after birth with every sign of septic infection from the stump of the umbilical cord. Icterus was marked, and then great distension of intestine occurred, presumably from pure paralysis of the muscular coat. The child died of exhaustion, and the absence of the usual definite signs of intussusception is explained by the unusually high position of the obstruction. As a rule it is the large intestine that is the seat of invagination in infancy, then violent colic, the passage of sanious mucus from the rectum, and the development of a palpable abdominal tumour are observed. In Horn's case the obstruction lay high up in an infant already exhausted, and nutrition was so much hindered that death occurred before any characteristic symptoms set in.

(29) Albuminuria in Pregnancy.

VALLOIS (*L'Obstétrique*, No. 6, p. 585, November 15th, 1899) reports 2 cases of slight and transitory albuminuria in pregnancy treated by absolute milk diet, and yet followed by fœtal death and premature expulsion of the infant, in one instance at the seventh month and in the other at seven and a half months. In both cases the puerperium progressed normally, and in both the placenta was markedly diseased (albuminuric placental changes). In one the placenta showed numerous old hæmorrhages, and in the other the placental substance was simply riddled with hæmorrhages varying greatly in size, in colour, and in consistence, one at least being as large as a hen's egg. It follows, therefore, that even a slight and passing albuminuria in pregnancy may produce characteristic lesions in the placenta, and that these may kill the fœtus. Further, these placental morbid changes may exist when the mother exhibits no other serious complications, and when her general health is good. From this it has to be concluded that albuminuria in pregnancy ought to be treated by absolute and continuous milk diet, even when it is slight and transitory, for the sake of the fœtus.

THERAPEUTICS.

(30) Antitussin in Whooping-cough.

MAX HEIM, of Düsseldorf (*Berl. klin. Woch.*, 1899, No. 50) reports most favourably of this preparation, an ointment containing 5 parts of difluordiphenyl to 10 of vaseline and 85 of lanolin. The neck, breast, and back between the shoulders having been washed with warm soapsuds and dried with a rough towel, this ointment to the size of a walnut is well rubbed into them. Of 16 cases in which he has so employed it successfully, 9 were already in the convulsive stage, and 3 of these between 3 and 18 months old, and in a dangerous condition. Even in the worst cases the convulsions were greatly mitigated after a few inunctions; the phlegm was at the same time so loosened as to be got rid of without difficulty. Even on the second day the frequency of the fits of coughing was diminished to one-half, and the diminution continued, so that this stage lasted almost a fortnight. Moreover, when the treatment was commenced early the convulsive stage was not developed. No injurious effects followed the use of antitussin in the above ointment, which is relatively harmless. Heim quotes Fischer and Beddies as having proved by laryngoscopic examination in men, and also by experiments on animals, that in other affections of the throat and pharynx it diminishes the provocation to cough and regulates the secretion, probably by acting after its absorption into the circulation, or the central or peripheral nerves connected with respiration.

(31) Hæmostatic Use of Gelatine.

J. B. NICHOLS (*Medical News*, New York, lxxv, p. 705, December 2nd, 1899) comments upon the fact that during the last four years the coagulating influence of gelatine upon the blood has been utilised, more especially in France, in various therapeutic directions. It has been employed internally in cases in which the seat of the injury or other lesion was not directly accessible. It cannot be safely introduced into the circulating blood in the veins, but it has been given by means of subcutaneous injections in internal aneurysms or in internal hæmorrhages, such as hæmoptysis, hæmaturia, intestinal hæmorrhage, and the

like. The results obtained in this group of cases are examined, but it is pointed out that there are dangers; in fact, fatal accidents have occurred, and that many precautions are to be taken; but it is of the local use of gelatine that Nichols chiefly speaks. He employs a solution of from 5 to 10 per cent. of gelatine, with 0.6 to 1 per cent. of calcium or sodium chloride in 100 parts of water. This may be sterilised by heating to 100° C. for fifteen minutes daily for two or three days. It has been used in epistaxis and after operations for the removal of vascular growths from the nasal fossæ. A good result has been reported even in hæmorrhage from a gastric ulcer, where the gelatine was given by the mouth (Polyakoff). No good effects, however, have followed its use in vesical hæmorrhages. Successes are reported in cases of bleeding from hæmorrhoids and in various forms of uterine hæmorrhage, when it was applied either in the form of intra-uterine injections or of gelatinised vaginal tampons. The writer has used it himself in a case of profuse hæmorrhage from an accidental wound in a man, aged 24 years, suffering from hæmophilia, from a fall on broken glass. The patient had received several gashes on the wrist and forearms, and the ordinary means of arresting hæmorrhage had all been tried without success, for after a week had elapsed there was still some continuous oozing from the wounded surfaces not to be checked even by the tourniquet, and death seemed near; finally a bacteriological culture tube of sterile 10 per cent. gelatine was melted and poured into the opened-up wound, then the new incisions were sutured, iodoform gauze packed in, and the wound dressed. Complete recovery followed.

(32) Sodium Sozoiodolate in Soft Chancre.

Grivzoff (*Berl. klin. Woch.*, No. 50, 1899) rejects dermatol and xeroform in the treatment of soft sore. On the other hand, he prefers europhen to iodoform, believing that the former is a more active specific. But he finds the sodium sozoiodolate, already much used in washing out the bladder, a better specific even than europhen. It is quite free from smell, and is not poisonous. At first it should be mixed with some inert power and it is apt to cause a smart burning pain when applied, but after a few days the affected part grows less sensitive, and the pure preparation may be applied freely.

(33) Uses of Formalin.

Ranelletti (*Suppl. al Policlin.*, December, 23rd, 1899) reports a case of moist gangrene of the leg due to popliteal embolism, which rapidly mummified and dried up under applications of a solution of formalin. Similar solutions of varying strengths were found useful in the palliative treatment of inoperable malignant ulcerating growths, more especially in uterine cancer. The author briefly reports cases illustrating the value of this treatment. He further recommends formalin as a cadaveric preservative, and records the case of a young man dying from phthisis whose body was kept without any visible alteration for twenty-six days after death, by means of an injection of formalin made twenty-eight hours after death.

PATHOLOGY.

(34) The Influence of Infectious Disease on Leukæmia.

Körmöezi, of Buda-Pesth (*Deut. med. Woch.*, 1899, No. 47) gives a full report of a case of myelogenous leukæmia of three years' standing, terminated by septic infection of the nasal cavities. The enlargements of the spleen, liver, and lymphatic glands underwent a remarkable decrease in the last days of the patient; these organs were found at the necropsy to contain very little blood, and in their capillaries the proportion of white corpuscles was not increased. Reviewing this case and the relevant literature, Körmöezi concludes: (1) On the occurrence of infectious disease in leukæmia, it is often found that the specific tumours become smaller, and that the white corpuscles diminish in number; changes to be explained by the destructive action of the bacterial poison on the tissues. (2) A qualitative change, due to the chemotactic action of the bacterial poison, in the blood may also take place; in this the lymphocytes take no part, but the polynuclear granulated cells increase while the other graulated cells diminish. (3) The chemotactic action of the bacterial poison is often, as in the case reported, more notable than the destructive. In this way it may happen in myologenous leukæmia that while the polynuclear cells increase and the other granulated cells diminish in number, the gross total of white corpuscles remains the same. (4) The influence of the bacterial poison upon the red corpuscles is not so important, and no notable alteration takes place save in certain severe cases in consequence of hæmorrhage, and it may be of hæmatocytolysis.

(35) Endocarditis due to the Influenza Bacillus.

Although a number of instances in which endocarditis has been associated with influenza are on record, the bacillus described by Pfeiffer has not hitherto been demonstrated in the anatomical lesions of endocarditis. The record of three cases by Austin (*Johns Hopkins Hosp. Bull.*, 1899, x, p. 194), in which bacilli were found in the lesions of the heart valves agreeing morphologically with the influenza bacillus, possess considerable interest. Anatomically all three cases presented the frequent association of a recent acute, in two cases ulcerative, endocarditis superimposed on old endocarditis, which had led to more or less valvular deformity. Cover-glass preparations made from the vegetations and sections of the diseased valves showed numerous small bacilli, straight or curved, staining uniformly or in a bipolar fashion decolorised by Gram's method, and lying free or contained within the protoplasm of leucocytes. Attempts to cultivate this organism met with no success. The presence of this organism in such marked predominance would seem to indicate its direct causal relation to the valvular lesions, yet it is unfortunate that its identity could not be more definitely determined by cultivation.

(36) The Meaning of Undigested Meat in the Fæces.

A. Schmidt, Bonn (*Deut. med. Woch*, 1899, No. 49) points out that lientery, formerly looked upon as a disease, is now hardly esteemed a symptom, as we know not only that it may be caused by diseases most different in themselves, but also that visible remnants of food may appear in the stools under normal conditions. Visible remains of meat are not, as a rule, consistent with normal feeding and healthy digestive organs unless they are small bits of tendon, ligament, or cartilage, of which he does not here take note. Connective tissue and muscular fibre are not discharged by healthy persons except after overeating, unsuitable preparations, or insufficient mastication of food, and are not then apparent if the fæces are not broken up. But in diseased conditions of the digestive organs it is not uncommon for large masses of unchanged remnants of meat to be discharged, consisting of connective tissue and fat, with very few if any muscular fibres. From a series of experiments Schmidt concludes that connective tissue incompletely cooked is digested by the gastric juice only, nucleated matter only by the pancreatic juice, though intestinal putrefaction may ultimately take a share in dissolving the nuclei; the appearance in the stools of remnants of connective tissue visible to the naked eye indicates some disturbance of the gastric digestion, and if visible muscular tissue is also present, the intestinal digestion is also impaired; if during the ingestion daily of 100 grams of minced meat visible muscular fibres without shreds of connective tissue are discharged, we have to do with some serious disturbance of intestinal digestion without indication as to whether this disturbance is one of secretion or of absorption.

(37) The Demonstration of Tubercle Bacilli in Fæces.

Rosenblatt (*Centralbl. f. inn. Med.*, July 22nd, 1899) gives tinct. opii in a case of suspected intestinal tuberculosis until the stools become hard and formed. If scrapings from their surface, or any muco-purulent secretion adherent to it are then examined, the bacilli, if present at all, will be found in the first specimen prepared. The reason for this is that the bacilli, situated on or immediately below the surface of the intestinal ulcers, adhere to and are carried down by the hard scybala, while they become lost in the volume of the ordinary liquid tuberculous stool, and are demonstrable, if at all, with the greatest difficulty.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(38) Acute Lead Poisoning.

ZINN (*Berl. klin. Woch.*, 1899, No. 50) reports a case of acute poisoning from a single dose of oxide of lead. A woman, aged 33, six hours after taking in mistake for carbonate of soda a powder containing 15 grams of oxide of lead and 5 grams of sulphate of baryta, was attacked with severe vomiting and abdominal pain, and frequent alternations of hot and cold fits. The mistake was not discovered for fifteen days, during which her symptoms did not greatly vary; constipation was persistent, and not being able to take much food, on account of the recurring vomiting, her increasing debility, and abdominal pain, brought her as a patient to the university clinic on July 29th, 1899, three weeks after taking the poison. The urine contained no albumen or sugar, was rich in indican, and by analysis of the quantity discharged in three days was found to contain lead; there was no lead in the fæces. The lead mark was distinct on the gums of the incisors, less so in the back of the mouth, absent from the cheeks. The pulse was 84, regular and tense. No nervous symptoms. After rest in bed, spare diet, and clysters, she was discharged free from her troubles on August 14th. A week later she aborted, and the colic and vomiting returned, and she was readmitted in a very anæmic condition on August 31st. The lead line was not so marked as before; there was constipation, but no lead in fæces or urine, and, treated as before, she soon recovered, without any affection of the nervous system. Though she had aborted eight times previously, the symptoms of poisoning recurring on the last occasion led Zinn to attribute some effect in this direction to the lead. He points out that symptoms of acute poisoning, apparently with fever, set in six hours after the ingestion of such an insoluble salt as lead oxide, and that the elimination was so slow that the metal was found in the urine passed twenty-two to twenty-five days afterwards. This is the only acute case among upwards of 200 of lead poisoning seen at Gerhardt's clinic since 1885.

(39) Rapid Tuberculisation of the Lung after Thoracocentesis.

PINQUET, working under the direction of Mollard, emphasises the fact (*Thèse de Lyon*, 1899) now gaining weight that the evacuation of pleuritic serous effusions is often followed by the outbreak of tuberculous changes in the lung. Notwithstanding that in a considerable number of cases thoracocentesis is not followed by any complication, there seems to be no guide in any given case as to what the result may be. The explanation offered is that the false membrane covering the two pleural surfaces is loaded with tubercle bacilli. Should the two pleural surfaces come in contact the bacilli appear to be aided in their invasion of the lung. Pleuritic effusion most effectually prevents this contact and friction, and keeps the inflamed surface in a state of absolute rest. The lung itself is similarly kept at rest and the effusion itself appears to have a most important bactericidal action. Under these circumstances the proper course is not to evacuate if such a course can be avoided. In the event of the patient requiring relief on account of pressure symptoms, as small an amount as possible should be withdrawn. Difficulties however arise when the fluid shows no sign of absorption, for then the lung may remain permanently collapsed and bound down. Mollard seems to think that this has received more attention than it merits, for *post-mortem* examinations show a considerable frequency of cases of pleural adhesion with almost complete integrity of the lung. On the other hand, chronic pleurogenic pneumonia is not common in the *post-mortem* room, and in point of fact such cases do not seem to be tuberculous. The author therefore pleads for wider views in the treatment of pleuritic effusion. Probably the greater number of primary pleurisies are tuberculous, and we have every reason for believing that pleural tubercle is eminently curable; thus resembling the peritoneal form. Thus the patient with pleuritic effusion should be looked upon as a patient suffering from tubercle.

(40) Essential Œdema.

TOSTI AND NAZARI (*Il Policlinico*, November, 1899) report the case of a boy, aged 7, of healthy parents who was admitted into hospital suffering from essential œdema. The child was well up to 2 years when he began to suffer from ascarides with which he had since been troubled off and on. At 4 years he had a slight attack of facial erysipelas cured in five days. At 6 he had what was probably an attack of scarlet fever, but there was no dropsy or sign of renal trouble. Three months later (August, 1897) he fell into cold water and had a severe fright, but no other consequences appeared to follow. About the end of December, 1897, his face began to swell. The swelling soon spread to the neck and upper part of trunk. The urine was normal and there was no disease of the heart or lungs. Some adenoids were discovered and removed, but without any benefit. The œdema gradually spread all over the body and considerable cyanosis appeared, and finally death occurred in May, 1898, from increasing dyspnœa and cardiac failure. Examination of the blood showed a certain degree of hyperglobulia, slight leucocytosis, some microcytes and macrocytes, slight polychromatic degeneration and an extraordinary large number of normoblasts and mononucleated and polynucleated megaloblasts. The yellow medulla of the long bones was turned into red. *Post mortem* the kidneys were healthy, the heart slightly dilated, without valvular disease, the lungs compressed and some old pleurisy on the right side; the spleen was small and hard. As to the etiology, the authors lay chief stress on the state of the blood, the mild attack of scarlet fever followed later by sudden chill, and the long-continued helminthiasis. There is a lithograph of the microscopic appearance of blood and medulla.

(41) Toothache from Insufficiency of Recti Interni.

NEUSCHÜLER (*Recueil d'Ophtal*, August, 1899) reports a case similar to one reported by his father ten years ago. The symptoms noticed on attemping to read were heat and pain about the internal and external angles of the lids, which gradually spread to the whole orbital cavity and thence to the superior maxilla, causing such irritation in the teeth that the patient (a medical student) had to stop reading. There was also contraction of the lids, eyebrow, and forehead. Glasses and nerve sedatives had given no relief. Right eye emmetropic, left myopic 1.25 D. He could read No. 2 of the test-reading type with each eye separately up to a distance of 45 cm. On fixing with both eyes a pencil at 30 cm. distance all the symptoms above detailed came on; a tendency to divergence could be elicited. Prisms of 2°, bases in, were ordered for near use. These have been used for more than a year without return of the symptoms. In the case reported by the father severe dental pain came on whenever the patient had to play from music at the piano; after some time it happened that insufficiency of the internal recti was found to exist, and on correcting this with prisms, bases in, the teeth symptoms entirely yielded.

SURGERY.

(42) The Indications for Surgical Operations.

GERSUNY (*Münch. med. Woch.*, October 31st, 1899), at the Vienna Doctors' College on October 24th, pointed out that the methods and safety of surgical operations have changed so much that the indications for performing them are materially altered. Paracentesis was the only operation formerly thought justifiable for ovarian cysts, but surgeons had gradually learned to operate on every ovarian tumour, and to look for cure even of those of a malignant nature. In the operative treatment of carcinoma the advance had been due not merely to the prevention of septic infection, but to more exact knowledge of the course of the disease and to the development of new methods which afford a better prognosis and justify more liberal indications. The proportion of permanent recoveries from mammary cancer has increased to almost a-half of all cases of operation, and might still further increase, since more and more cases are submitted to the surgeon before the axillary glands are materially or at all affected. A single symptom—for example, intestinal obstruction—might render necessary an operation which might disclose the nature of

the disease and the way it should be attacked. Operation used to be the last resource when all internal remedies had been exhausted, and the patient was almost *in extremis*, but it is now acknowledged that the most daring operation is less dangerous in such cases than delay, and more enlightened public opinion now makes it easier to recommend intervention. As regards perityphlitis, in the acute attack, the decision is closely connected in each case with the prognosis. Different surgeons have arbitrarily adopted different rules; one operates if the fever shows no abatement on the fifth day, another waits till the twelfth, a third for the formation of an abscess, etc., that is to say, waits till some fixed moment to correct his preconceived opinion. In the recurrent form of perityphlitis the question is easier, and the patient's mode of life and other independent circumstances may sometimes decide it. Similarly in the chronic catarrhal form, the miserable existence of the sufferer and the good prognosis indicate operation, since a bad result would be a misfortune not to be anticipated. For hernia radical operations have been much practised of late years in spite of the frequency of recurrence which improved methods are tending to obviate. The indication for operation is absolute when a hernia is irreducible and cannot be kept up by an appliance, but otherwise is often given by the patient himself and his environment, by his diminished capability, by the sense of bodily infirmity; in the poor, by the expense of renewed appliances or other circumstances. In the tuberculous, whose diseases may undergo spontaneous cure, but only after many years, youth is, in Gersuny's opinion, an indication to operate, in order to save the patients the fairest period of their lives, and the most important time of their development. He often performs operations that are merely palliative, if they will raise the unfortunate patient's spirits for a few months or even weeks, but has never done a false operation on merely suggestive grounds as several surgeons have done.

(43) The Surgical Treatment of Tumours within the Spinal Canal.

PUTNAM AND WARREN (*Amer. Journ. Med. Sci.*, October, 1899) publish 3 original cases of morbid growths of the spinal cord treated by surgical operation, and add to this record a table of 33 other cases of a like kind collected from various sources. Neither the authors' records nor the data afforded by their table leave a very favourable impression of the results hitherto attained by surgical intervention in a large majority of the cases of spinal tumour that have been submitted to such treatment. In 10, perhaps 12, of these cases the operation, it is stated, seems to have hastened death; in 9 cases the surgical treatment made little difference in the progress of the case. In 10 cases the operative treatment is reported to have led to recovery; but in 2 of these cases, according to the authors, the records are not sufficiently perfect to allow of verification of the statement. The first case reported by the authors is one of a distinct and easily removable intradural fibroma in the lower part of the dorsal region. The patient, it is stated, though greatly improved after the operation, and able to walk slowly without the aid of a stick, and free from any considerable pain, is yet far from well. In the other 2 cases, although the disease, which was malignant, involved the cord itself, and could not be removed, operative treatment, it is asserted, was followed by relief of pain and general improvement. At the end of their paper, however, the authors state that with regard to the favourable results which followed surgical treatment in these two cases it would be hazardous to assert that they were so clearly attributable to the operation as to justify repetition of the procedure in similar cases.

(44) Hæmostasis of the Liver.

TRICOMI (*Il Policlinico*, September 15th, 1899) gives the results of certain experiments on dogs with regard to the best method of stopping hæmorrhage in operations (hepatectomies or wounds) on the liver. The method selected by the author for trial was that of plugging with gauze; he found that in wounds 4 by 3 cm., plugging alone was sufficient. In hepatic resections (as a rule 30 to 40 grams were removed), plugging alone was not always a safe guarantee against hæmorrhage, but combined with isolated ligature of the vessel it was satisfactory. Digital compression of the hepatic hilus was useful as a temporary measure. In resection it is better to do the operation in two separate stages. In the case of wounds, after removing the plug, healing occurs until only a slight depression is left.

(45) The Operative Treatment of Transverse Fracture of the Patella.

VALLAS (*Rev. de Chir.*, October, 1899) holds that a bad result from transverse fracture of the patella is due not so much to non-union and wide separation of the two fragments as to laceration of the anterior and lateral portions of the capsule of the knee-joint. In the treatment of this injury closure of the rent in the capsule is regarded as good practice. It should always be carried out in cases in which the fragments of bone are sutured, for the indications for operation are presented only when the capsule has been torn. Suture of the capsule alone, it is stated, is superior to simple suture of the fragments of patella, as the closure of the rent in the ligamentous structures favours close union of the osseous fragments by a firm and narrow band of fibrous tissue, and, in some instances, by bony callus. The author thus formulates his conclusions on the treatment of recent transverse fracture of the patella. Fractures in which the bone alone is involved should be treated in the same manner as an uncomplicated hæmarthrosis of the knee, namely, by compression, massage, and early movement of the injured limb. Fractures of the patella which, on the other hand, are accompanied by laceration of the lateral portions of the fibrous capsule of the knee necessitate surgical intervention, the operation of election consisting in free exposure of the seat of injury by a crucial incision, removal of blood from the cavity of the joint by irrigation, and careful closure by suturing of the rents in the fibrous investment in front of the knee. In cases thus treated the application of a suture to the fragments of bone is held to be useless and unnecessary.

MIDWIFERY AND DISEASES OF WOMEN.

(46) Subperitoneal Suprapubic Panhysterectomy.

JABOULAY (*Lyon Méd.*, September 10th, 1899) has successfully employed an operation for the removal of myomatous or cancerous uteri, of which the following are the steps: (1) A median incision is made from below the umbilicus to the pubes, including all the layers of the abdominal wall except the peritoneum. (2) The peritoneum is peeled off the bladder until the hand of the operator reaches the structures contained in the broad ligament of one side. The ureter is recognised first and then the uterine artery; the latter is ligatured. The hand is next directed upwards towards the inferior surfaces of the ovary and Fallopian tube. The anastomosis of the ovarian with the uterine artery is looked for and ligatured. If the round ligament is found to interfere with these manipulations it may be divided subperitoneally, and freed from its connections with the inguinal canal, though this has never been necessary in Jaboulay's cases. Any veins which bleed should also be ligatured. To separate the uterus from the bladder completely it is necessary to penetrate between the layers of the broad ligament above the obliterated hypogastric artery, which should be held aside, forwards and downwards. The finger can then free the vagina, so that the *cul-de-sac* can be opened with the scissors, and the cervix loosened from its attachments, either wholly or in part. (3) The cervix is then drawn forwards and upwards with volsellum forceps, either in the middle line or towards the side on which the surgeon is standing. The rest of the uterus, together with its vessels, is gradually freed from its attachments, until it remains connected only with the appendages, which are ligatured and excised, and with the peritoneum covering its fundus. While this is being separated it may be torn transversely, so that the peritoneal cavity is opened and coils of intestine are seen. If the uterus is adherent to the omentum or elsewhere, it may become necessary to open the pelvic peritoneum, but this should be left to the last. Any transverse tear in the peritoneum should be sutured, the vagina forming an excellent drain. The advantages claimed for this procedure over others is that the peritoneal cavity and intestines are outside the field of operation, and that all hæmorrhage is immediately and definitely arrested. Even if the perito-

neal cavity should be opened, it occurs quite at the end of the operation when no further manipulations are necessary. The same method is suitable up to a certain point, when the appendages are to be removed with the uterus for inflammation or tumours, and it is found that the preliminary separation of the uterus and arrest of pelvic hæmorrhage greatly simplify the intra-peritoneal measures necessary for the removal of diseased tubes, ovaries, or the fundus of the uterus.

(47) Utero-Vaginal Diphtheria.

COIFFI (*Rif. Med.*, November 22nd-24th, 1899) reports a case of utero-vaginal diphtheria in the puerperal period. From the history, it would appear that the vitality of the diphtheria bacillus is considerably greater than is usually accepted, extending even to eighteen months and more (2½ years). The author also raises the question of reinfection in diphtheria after serum treatment. The time between a first and second attack after serum treatment seems to vary between eight and sixty days. As a preventive it is obvious, therefore, that one injection is not sufficient; and in view of the fact that serum-therapy is not absolutely harmless, the author believes that preventive treatment should be reserved for special conditions, for example, the presence of a severe type of infection, or of want of confidence in the people leading them to permit recourse to injections only at the last moment.

(48) Ruptured Tubal Gestation; Temperature in Internal Hæmorrhages.

ROUTIER (*Bull. et Mem. de la Soc. de Chirurg. de Paris*, November 14th, 1899) publishes notes of a typical case of ruptured tubal gestation. The patient, aged 24, married in December, 1898; the last period was in February, 1899. Some blood escaped in April one night, and shortly after great abdominal pain set in. On June 2nd the uterus was pushed to the left by a tumour of the size of a fist. As the temperature was over 102° and the pulse 110, Routier suspected suppurating hæmatocele. This rise of temperature occurred twice in six days, the tumour enlarging on each occasion. On June 8th it reached the umbilicus. Feeling convinced that there must be suppuration, Routier made a retro-uterine vaginal incision. Black blood and clot came away, followed by a fœtus over 19 inches long; as red blood came away the abdomen was opened, a mass of clot removed, and a ruptured right tube discovered. The right appendages were removed. The vaginal incision was drained. The patient recovered, and is now quite regular. There was much discussion over Routier's observation that this case showed that internal hæmorrhage did not cause a fall but a rise of temperature. Pozzi had noticed this fact in 1893 (De La Nièce's *Thesis*). In big hæmorrhages, when the temperature rises for some time, this rise may be due to absorption of ptomaines. Tuffier observed a rise of temperature in hæmothorax; on tapping, the blood was found quite free from septic germs, and spontaneous absorption of the blood occurred. Hartmann recorded that he had observed the same in gunshot wounds of the thorax, the blood proving aseptic. Marchant (*Ibid.*, November 21st, 1899) publishes precisely similar instances of rise of temperature in a case of hæmothorax, in a case of hæmorrhage into the knee-joint after a street accident, and in another case of hæmarthrosis, due in this instance to simple fracture of the head of the tibia. The patient was a man ased 57, in good health; the temperature on the third day reached 104.5°, and remained high for nearly a week without any evidence of inflammatory changes.

(49) Diagnosis of Tumour of Round Ligament.

ROSKINSKI (*Centralbl. f. Gynäk.*, No. 52, 1899) relates the case of a woman, aged 54, who, though five years past the climacteric, suffered from a bleeding fibroid and also from an oval swelling in the left groin, diagnosed as an inguinal hernia; it decreased in size when the patient lay down. It was fairly movable, about as big as a walnut, dull on percussion, and lay in the inguinal canal; it could only be made to diminish about one-half in size on pressure. An epiplocele or ovarian hernia was diagnosed; the fibroid was removed through the vagina, and the patient fared well till the seventh day, when the temperature rose and the inguinal swelling clearly became inflamed. It grew very hot and tender, and on exploratory puncture much serum escaped. A piece was snipped off the tumour, which proved to be a recently-inflamed cyst; deeper cutting was avoided, as a hernia was suspected. Six months later the swelling recurred and grew very tender and as big as a plum. The inguinal canal was laid open and a kind of Alexander's operation performed. The tumour had developed in the round ligament. Though freely exposed, its uterine end could not be reached, as it extended behind the internal ring as a spindle-shaped process, which could not be drawn up to the surface of the wound, apparently because the proximal end of the round ligament was inserted into the vaginal hysterectomy scar. A small piece was therefore unavoidably left behind. Both the portion excised at the first operation and the tumour removed at the second were examined, and proved to be an adenomyoma of the round ligament, cystic through lymphangiectasis. A year and a-half after the second operation there was no evidence of recurrence.

THERAPEUTICS.

(50) Chloral Hydrate in Nervous Dyspepsia.

ROSENBACH (*Therap. Monats.*, ix, 1899) directs attention to the value of chloral in the gastric disturbance of neurotic subjects, given in doses considerably less than those used when its hypnotic effect is desired. The patients in whom good results may be expected, allowing in the dosage and the application generally for differences in the age of the patients, in the severity of their gastric symptoms and in the degree of the coexisting neurasthenia, are those troubled with sensations of distension referred to the epigastrium, of oppression referred to the chest, of colic-like pain apparently due to spasm at the pylorus; also those suffering from nervous flatulence and from diarrhœa due to excessive peristalsis. He administers it in doses of 0.1 to 0.2 gram (1½ to 3 gr.) dissolved in a wineglassful of water three times a day from one to two hours after a meal. He has likewise found it useful for the nervous palpitation and irregularity of cardiac action common in dyspeptics, and also for the slighter forms of nervous depression.

(51) The Treatment of Acute Dysentery.

A. MARTIN (*Bull. Gén. de Therap.*, December, 1899) maintains that the treatment of acute dysentery in all its forms should be both dietetic and medicinal, and that its main object should be to produce, as nearly as possible, an aseptic condition of the alimentary tract. To this end means for evacuating the bowel are of the first importance, and particularly the use of saline purgatives, to which should be added ipecacuanha. The diet should consist of milk or lean meat only. Intestinal antiseptics occupy only a subsidiary position in the plan of treatment. Special symptoms afford special therapeutic indications, the pain should be alleviated by hot sitz baths and by hypodermic injections of morphine; for the frequent evacuations and for profuse hæmorrhages ergotin or ergotinin should be employed with hot sitz baths, and in addition cold rectal irrigations, either of simple water or of solutions of antiseptics such as beta-naphthol, potassium permanganate, or boracic acid; the prostration and collapse should be combated not only by ether and caffeine, but also by saline injections, which in children at least are of greater value. In no case at any stage of the disease should opium be given by the mouth or rectum, or subnitrate of bismuth, tannin, silver nitrate, lead acetate, or in short any agent which tends to arrest the activity of the intestinal glands. During convalescence great care must be exercised in the choice of suitable diet.

(52) Saline Injections in Mushroom Poisoning.

DELOBEL (*Presse Méd.*, September 30th, 1899) records the case of a man aged 52 years, who after eating a mushroom omelet suffered from serious symptoms of poisoning. On examination the patient was found covered with a cold clammy perspiration, breathing stertorously, and moaning at intervals. He shivered and trembled violently, the skin was cold, and the pulse feeble and almost imperceptible, and beating at the exceedingly low rate of 28 per minute. The pupils were widely dilated, and the patient was in a condition of collapse,

the respiration being of the Cheyne-Stokes type. He had eaten the mushrooms about four hours previously. To avert further progress of the collapse he was given two hypodermic injections of atropine sulphate and ten injections of ether, each injection amounting to 1 c.cm. A strong infusion of black coffee mixed with a little rum was given by the mouth, and hot water bottles were applied. The symptoms presently grew more grave in spite of the above measures. The tremors ceased, and the patient sank into a profound collapse, the pulse dropping to 24 per minute. As a last resource it was decided to inject normal saline solution, and, a litre of the liquid having been rapidly prepared, it was slowly injected into the thigh. A Roux syringe holding 40 c.cm. was used. Almost immediately a change for the better came over the patient. The pulse quickly improved in tension, and its rate rose to above 30 per minute in a quarter of an hour. The hypodermic injection was continued, and in an hour the pulse was 60 per minute. The respiration also improved in character; in the evening the patient was sufficiently improved to be pronounced out of danger. His heart-beat had now risen to 70 per minute. The temperature, which had before been subnormal, also rose to the normal level, and on the following day recovery was so far complete that the patient was able to follow his usual occupation. The mushrooms of which the patient had eaten were examined, and two poisonous species, *Agaricus phaloides* and *Boletus luridus*, were found among them. The patient had not suffered from vomiting or diarrhœa after eating the mushroom omelet.

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(53) Iodinepyrin.

Junkers (*Therap. Monats.*, November, 1899) has had practical experience of this new drug, iodinepyrin, first prepared by Ostermayer. He describes it as consisting of shining, colourless prismatic needles, which melt at a temperature of 160°. It crystallises in warm diluted alcohol and is insoluble in water. It is soluble in dilute hydrochloric acid, and is believed to be rapidly absorbed in the stomach. It is soluble also in cold alcohol or ether. It is tasteless and has no smell. Salts combined with acids do not keep well in watery solutions; in alcoholic solutions, on the other hand, the former are well preserved. Iodinepyrin hydrochlorate is yellow in colour. It contains 40 per cent. of iodine. Junkers has prescribed this drug in various conditions during the last eight years; he gives it in powder. The dose for adults is 1 gram every three or four hours. Children from 1 to 10 years of age can take 0.1 to 0.5 gram. Children above 10 years of age are given ½ to ¾ gram three times a day. The patients feel better soon after taking the drug; a profuse sweating ensues, accompanied by a fall of temperature. The pulse is diminished in frequency and the respiration slowed. He found that the antipyretic action of the drug was always prompt, and that it did not cause collapse. It was particularly useful in puerperal fever, and he suggests that the iodine may have had some antiseptic action on the blood. All forms of muscular rheumatism were greatly benefited by 1 gram of iodinepyrin three times a day. In acute articular rheumatism it had also an excellent effect, and he never found it necessary to give salicylates in order to remove the pain. The great advantage of iodinepyrin over salicylates in these cases is that no unpleasant after-effects are experienced. In some cases of chronic rheumatism signs of iodine poisoning such as redness of the conjunctiva, increased nasal secretion, and throat irritation were observed. Pain at the commencement of menstruation was relieved by suppositories containing ½ to 1 gram; the suppositories were used every two or three hours.

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(54) Salt Starvation in Epilepsy.

Richet and Toulouse announced, at a recent meeting of the Paris Academy of Sciences (November 20th, 1899), that their experience with 30 female epileptics has demonstrated the fact that depriving the nervous system of the usual amount of salt in the food renders the nervous tissue more susceptible to the absorption of medicinal salts which it takes up to a remarkable extent, thus rendering an extremely small dose effective. Thus 2 grams of sodium bromide a day, administered under the conditions referred to, arrested the epileptic attacks, sometimes in less than a week, no matter how frequent they had been before. Several patients had shown no recurrence for six months since treatment. Richet proposes to call this the metatrophic method, and suggests that it may possibly apply also to affections treated with quinine, digitalis, atropine, etc., as well as those in which the alkaline salts are administered. The saltless food has no bad effect on the patient.

PATHOLOGY.

(55) The Pathogenesis of Suppurative Hepatitis.

Bindo de Vecchi (*Lo Sperimentale*, An. 53, F. 3), as the result of a series of experiments upon animals, finds it possible to provoke the formation of hepatic abscesses by the introduction into the liver of pathogenic germs. It is necessary, however, first to weaken the physiological resisting power of the liver, and this can be done by obstructing the flow of bile. The anatomical lesions of suppurative hepatitis may be observed whether the germ is introduced through the bile duct, vena porta, or intestine; the intensity and distribution of the lesions, however, differ. In some of the animals the author found in the portal blood germs which had been introduced by the intestine, which help to support the contention that hepatic abscess may follow typhlitis, etc. Some proliferation of interstitial connective tissue was noticed in the liver after the introduction of certain germs into the intestine. Possibly this may throw light on the pathology of hepatic cirrhosis. The author's experiments point to the pathogenicity of the coli bacillus. The so-called bactericidal action of the hepatic cell is perhaps due rather to unimpeded flow of bile than to cellular activity. There is a bibliography of over 300 references at the end of the paper.

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(56) Prostatic Anomalies.

D'Ajutolo (*Mem. dell' Acad. delle Sc. dell' Istituto di Bologna*, S. v., T. 3) reports two cases of prostatic anomaly. The first in an old man of 70, who instead of having the three prostatic lobes common to old men, had four, two anterior and two posterior, converting the internal meatus into a long antero-posterior fissure. In addition to this anomaly the bladder was ectopic, three fingers' breadth above the pubes, and instead of being applied to the abdominal walls it was separated by about 4 cm., and a fold of peritoneum passed down in front of the bladder between it and the abdominal parietes. In the second case, a man of 75, the prostate had two lobes, which left uncovered posteriorly the whole prostatic urethra. Mercier's valve was present. Lithographic drawings illustrate the subject.

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(57) Anomalies of First Rib.

D'Ajutolo, in a communication read before the Academy of Science in Bologna (April 26th, 1899), records 8 cases of anomalous joints in the cartilages of the first rib. The joints in question were truly diarthrodial, and occurred for the most part in the centre of the cartilage. Out of 6 cases where the sex was noted, all were found to be male. The joints had true articular cavities containing synovial fluid. Pulmonary phthisis was noted in one case, but this was probably only a casual association. There was no history of fracture or injury. Probably the malformation is due to some defect in development through which the nuclei (perhaps two) which originally form the costal cartilage of the first rib remain separated from each other or from the neighbouring parts (sternum or rib). The paper is illustrated by lithographs of the anomalous joints.

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(58) Absence of Fibula.

Taylor, H. L. (*Pediatrics* viii., p. 297, October 1st, 1899), reports the case of a boy, 12 years of age, with absence of the left fibula. The total shortening of the left leg was five inches; there was good use of the hip and knee, but the foot was stiff and everted, and the fourth and fifth toes with their metatarsal bones were entirely wanting. The shortening of the leg was mostly below the knee. There was not much to be done surgically except to correct the position of the foot and the bowing of the tibia, probably best accomplished by an osteotomy of the tibia above the ankle.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(59) Internal Injury of Thorax.

KOLBE (*Deut. med. Woch.*, August 24th, 1899) relates a case of pneumothorax and cutaneous emphysema caused by internal injury to a healthy child of 7 years. The little girl had one evening fallen forwards on a grass plot while running away from a boy of about her own age after a push from his hand. She got up again at once, but as her chest hurt her went home to bed, and during the night the pain increased with violent coughing and dyspnœa. Kolbe was consulted on the sixth day, when there was right pneumothorax and cutaneous emphysema which in front extended from 5 cm. below the edge of the ribs over the right side of the thorax, neck, shoulder and upper arm, and crossing the middle line at the hyoid bone, affected both cheeks and the mouth and nose. Behind, the emphysema affected neck and shoulder down to the middle of the scapula. The left side was free and no bones were broken; the swelling had appeared about the third day in the right upper intercostal space, and the fossæ above and below the clavicle, and extended gradually, partly owing to the violent coughing. He bandaged the thorax over wool and gave ipecacuanha and codeia, with some benefit to the general condition and thoracic and facial emphysema, but the violent cough continued and the emphysema of the abominal wall remained. He therefore included the abdomen in the bandage, and after a few hours a violent fit of coughing, spasmodic in character, expelled a cherry stone embedded in mucus and clotted blood. From that time the child rapidly recovered. She had been eating cherries while playing, and this stone, drawn into the right bronchus by a forcible inspiration at the time of the accident, had probably, by blocking up the air in the lung, contributed to the rupture of its tissue and that of the pleura.

(60) Mercurial Poisoning.

J. K. MITCHELL (*Journ. of Nerv. and Ment. Dis.*, August, 1899) records an interesting case with rather unusual symptoms. The patient, a man of German parentage, aged 36, and by occupation a watch case engraver, was admitted to hospital, with the following history: In October, 1896, the patient, suspecting he had pediculosis, used a vigorous inunction of mercurial ointment, 2 ounces of which were rubbed in by him. The next day, not satisfied with this, he rubbed in 2 ounces more. Within 24 hours he was suffering from violent intestinal pain and furious diarrhœa, followed by vomiting, which continued for some days. In the course of the following five weeks he lost about 50 lbs. in weight. Two weeks after the mercurial inunction he began to notice a numbness in the hands and feet, and this was soon followed by violent pains in the forearms and lower limbs. The pains were of shooting, stabbing, and lightning-like character, with only the shortest intervals between. For several weeks (the patient says) he was scarcely without pain, and owing to the severity of these symptoms he entered hospital. There was at no time any affection of the mouth (stomatitis) or of the gums. About three weeks after the inunction there was noticed some weakness of the hands, and very soon afterwards of the lower parts of the legs. This increased until there was complete paralysis of the hands and feet, with foot-drop and wrist-drop. This condition had lasted for three months, when the patient was admitted to hospital. The thumb was much wasted, and could not be opposed to the fingers; the grasp was exceedingly feeble, and the forearm muscles were also wasted. There was slight tenderness in the nerves of the forearm, but not extending above the elbow. A similar condition was present in the legs. The foot could not be flexed at all, the leg muscles as far as the knee also shared in the atrophy, and the patient was quite unable to stand up. There was no history of any other infection or toxæmia to be obtained. The patient was a man of excellent character and habits, never given to constant or excessive use of alcohol or to any other form of undue indulgence. His hair was falling rapidly when admitted and he lost a good deal of it. At the same time there developed a mark like a brownish stain on the forehead, running diagonally from the middle of one temple to the upper part of the other, and also involving the skin of the eyebrows. It was very conspicuous on his fair skin. His improvement was very slow but quite constant under the treatment adopted, namely, daily massage, faradisation of the wasted muscles, and later, alternating applications of hot and cold water to the extremities. He recovered completely except for a slight weakness in the anterior tibial muscles. The interest of the case lies in the mode of infection, in the absence of the classical stomatitis and salivation of mercurial poisoning, and in the completeness of his recovery from the toxic neuritis. The pigmentation was also an unusual feature. (Pigmentation is noted in poisoning by other metals, especially arsenic.)

(61) Gastric Syphilis.

CAESARIS-DEMEL (*Arch. per le Sci. Med.*, vol. xxiii, f. 3) reports the case of a man admitted into hospital for gastric ulcer, who died suddenly from intraperitoneal hæmorrhage. *Post mortem* the abdominal cavity was found more or less filled with blood, the stomach, pancreas, and liver adherent, and the remains of a hæmorrhagic sac between the pancreas and stomach. The abdominal hæmorrhage had come from an ulcer which had dissected the coats of the stomach, opened into the old hæmorrhagic sac, and thence burst into the abdominal cavity. The gastric ulcer was 35 mm. by 18 mm., and was situated on the posterior aspect of the stomach. Macroscopically it looked like the ordinary round ulcer, but microscopic examination showed that it was the result of breaking-down gumma; around the ulcer there was diffuse gummatous infiltration, and in the arteries typical syphilitic changes. The pancreas was indurated (probably syphilitic) and some of its vessels thrombosed, and there were typical syphilitic scars on the liver. The prelumbar glands were indurated and caseous. As syphilis was not suspected during life, no history of that disease was noted.

(62) Williamson's Test in Diabetes.

LUCIBELLI (*Gazz. degli Osped.*, October 29th, 1899) has made a clinical and experimental examination of the above test, and finds it extremely delicate and trustworthy. By its means it is quite possible to detect sugar when no evidence is given by examination of the urine. The test consists in the admixture of a drop of blood with a warm alkaline solution of methyl blue (1 in 6,000). If sugar is present the solution becomes greenish or dirty pale yellow (almost the colour of normal urine). The author's experiments showed that in diabetes mellitus and in alimentary glycosuria Williamson's reaction could be observed even when the urine gave no reaction. In experimentally induced glycosuria (by floridzin) Williamson's test gave positive results much earlier and later than could be showed in the urine. In other words, it is more delicate, earlier, and more lasting than the usual urine tests. A calorimetric table could be compiled by observing the degrees of decolorisation corresponding to the amount of sugar. The reaction is manifest and complete in all the various forms of glycæmia.

SURGERY.

(63) Lesions of the Lateral Sinus in Association with Cranial Injury.

GANGOLPHE AND PIERY (*Rev. de Chir.*, September, 1899) publish a suggestive contribution to the study of lesions of the lateral sinus in cases of injury of the cranium. This paper is based on the case of a man, aged 55, who was picked up at the bottom of a staircase, in a condition of coma with complete hemiplegia on the left side and contractures of the right limbs. As no information could be obtained as to the circumstances attending the injury, and as there was but a slight scalp wound, and no indications were presented of fracture of the cranium, the case was regarded as one of cerebral hæmorrhage. At the necropsy, however, there was found a radiated but not depressed fracture of the occipital bone, which had opened the right lateral sinus thus causing an extensive effusion of blood between the dura mater and the bone, which had spread over and compressed the surfaces of a considerable portion of the temporal lobe, and also of

the second parietal lobe. A study of the clinical and anatomical details of this and of 7 previously-recorded cases of a similar injury, has led the authors to the following conclusions: (1) Lesions of the lateral sinus in association with head injuries, may be produced in one or other of two ways—by laceration caused by a fragment of bone or by a foreign body, or by rupture in consequence of disjunction of the fragments of broken bone. (2) Such lesions of the lateral sinus result in the formation of a blood clot between the dura mater and the inner surface of the cranium; the situation and extent of this clot are influenced on the one hand by the adhesions of the dura mater and, on the other hand, by the extent of the separation of this membrane from the bone caused by the fracture before the effusion of blood. With this hæmorrhagic effusion there frequently coexists an intra-arachnoid effusion forming a thin layer of semi-fluid spread over the surface of the hemisphere on the opposite and uninjured side of the cranium. (3) The symptomatalogy of lesions of the lateral sinus varies very much in different cases; it does not always present the typical phenomena of cerebral compression, and in some instances presents almost every feature of an attack of apoplexy due to cerebral hæmorrhage. (4) Not only is the diagnosis of wound of the lateral sinus in most cases impossible, but frequently the surgeon is unable to assure himself of the existence of an intracranial effusion of blood due to injury of a vessel; such difficulty occurs when the symptoms resemble those of cerebral hæmorrhage. (5) In dealing with cases in which it is difficult to decide between an apoplectic attack and the results of an injury to the head, the surgeon should act on the assumption that the case is one of intracranial effusion of blood of traumatic origin. (6) In a case of wound of the lateral sinus, whether certain or presumable, treatment should be carried out on the following lines: (*a*) If the injured sinus be exposed, the surgeon should plug the wound through the breach in the bone after having removed osseous fragments or foreign bodies; (*b*) if the sinus has not been exposed by the injury, trephining should be practised without delay. The crown of the trephine should be applied to the surface of the cranium at the seat of injury. The surgeon should not be influenced by the indications afforded by the cerebral localisations, as such indications may lead him astray and induce him to trephine at a part of the cranium completely outside the region occupied by the blood clot. After it has been exposed the wounded sinus should be plugged with iodoform gauze.

(64) Operative Treatment of Tuberculous Pneumothorax.

Drasche (*Wien. med. Blätter*, October 19th, 1899) has treated 29 out of 198 cases of tuberculous pneumothorax by simple puncture, sometimes conjoined with aspiration, and 1 case by resection of a portion of rib. Though expectant treatment is suitable for recent cases with no dangerous symptoms, puncture with a fine trocar should be resorted to as soon as such symptoms appear, whenever it is thought that the lung is capable of again expanding, the persistence of the communication between the lung and the pleural cavity being no absolute contra-indication. The general condition of the patient and the stage of the phthisis are of great importance in deciding whether to aspirate; when large cavities are present a cure is seldom possible. The author's cases treated by puncture lived on an average longer than those treated expectantly, and 4 were completely cured. Two of these were accompanied by effusion, and the permanent drainage employed completely restored the function of the lung. It is in these cases of hydropneumothorax that aspiration gives the best results. If puncture does not quickly remove the most urgent symptoms—the pain, dyspnœa, and cyanosis—the subsequent course is likely to prove unfavourable. Repeated punctures may be required before the increased pressure in the pleural cavity is lowered. Strict antiseptic precautions are necessary, and it is well to inject a large dose of morphine before performing thoracocentesis in order to obviate the cough due to pleural irritation. Small trocars are preferable to large, as the intrapleural pressure then sinks gradually. It is unnecessary to remove all the air.

(65) Implantation of Ureter in Bladder.

Boari (*Il Policlinico*, July 15th, 1899) continues his account of the above operation. He has collected 31 cases bearing on the subject, and the technique of the operation is illustrated by woodcuts. The ureter is implanted into the bladder (preferably near the top) by means of a button (devised by Boari) which may be extracted later through the dilated urethra. In case the ureter is damaged too high up to easily stretch to the bladder, the author suggests the dissection of a limb from the bladder and formation of a fresh canal round a sound kept in in permanence. If this cannot be done the ureter should be implanted into the intestine before having recourse to nephrectomy. The operation of selection is, however, uretero-cysto-neostomia (the name given by the author to this implantation of the ureter in the bladder). The operation may be performed extra-peritoneally or intra-peritoneally, but in any case the point of implantation should be extra-peritoneal.

(66) Nephropexy: Hammock Operation.

Bazy (*Bull. et Mém. de la Soc. de Chirurg.*, October 31st, 1899) claims excellent results from his method of operating for movable kidney, *néphropexie en hamac*, as he terms it. He has practised it since 1885, with, he assures us, the best results. After the usual lumbar incision the cellulo-adipose capsule is incised, and the bare posterior surface of the kidney exposed. Three catgut sutures are then passed transversely under the fibrous capsule of the kidney at a distance of about three-quarters of an inch from each other, the first at the middle point of the vertical measurement of the gland, the third close to its lower extremity, and the second midway between the two. The ends of the first suture are passed at a distance of an inch from each other through the eleventh intercostal space; in one case Bazy perforated the pleura, a whistling noise followed, but there were no evil results. The ends of the lower sutures are drawn through the muscles close under the twelfth rib; then all three are tied, the kidney now lying well under the ribs. A catgut suture is next passed through the muscles under the twelfth rib and into the cellulo-adipose tissue, which is drawn up and passed by a series of stitches under the kidney. Lastly, it is again passed through the muscles, and its two ends are tied. Thus the kidney is supported below by a kind of hammock of fat. The muscles and skin are finally closed.

MIDWIFERY AND DISEASES OF WOMEN.

(67) The Prevention of Fœtal Asphyxia during Labour.

Rapín (*Rev. Méd. de la Suisse Rom.*, No. 11, 1899, p. 688) had for some time thought of trying the introduction of air into the womb to obviate asphyxia of the child during labour. He was urged thereto by an experience in which a difficult breech delivery terminated in fatal asphyxia for the child. He put his ideas into practice in three cases which he reports. In all three the labour was very difficult on account of disproportion between the pelvis and the fœtal head, and want of development or immaturity of the children added an unfavourable element; one lived ten days, a second twenty-four hours, whilst the third, of the hemicephalic type, survived only a few hours. He publishes his results in the hope of inducing others to try the plan, for, though final success did not reward him in any one of the three, he considers that the results, as far as they went, were encouraging. Thus all the children (breech deliveries) were born alive, and so far from any inconvenience appearing to arise, it was noted that the children had not their respiratory passages obstructed by mucus or liquor amnii, a fact greatly in restoration in cases of partial asphyxia, because artificial respiration is rendered so much easier. As regards the mothers, the procedure employed affected neither the pains nor the expulsion of the child; nor did it act in any way unfavourably on the course of the subsequent puerperium. The plan he adopted was as follows: A gum-elastic catheter was connected by means of 2 to 3 feet of rubber tubing with a syringe holding about 200 c.cm. With aseptic precautions the catheter was introduced into the uterus, passing anteriorly to the fœtus. The syringe was filled with air

drawn through aseptic cotton wool held in the hand. About 500 to 600 c.cm. of air may be injected. The two main objections that have been urged are the danger of sepsis and gaseous embolism by entrance of air into the uterine veins. The first may be prevented by ordinary means. The second objection is lessened by the fact that the air is introduced into the amniotic cavity, and is in consequence not in direct contact with the uterine walls. The plan is indicated specially in cases of prolapse of the cord and in breech presentations when there is some obstruction to a normally rapid delivery. Centurier (*ibid.*, p. 716) records a fourth example, also treated at the Lausanne Maternity. There was a shoulder presentation with prolapse of the cord. Version was performed, and as soon as a foot was drawn down air was injected into the uterus. Thereafter twelve minutes elapsed before the delivery of the head. The child when born had no mucus or liquor amnii in the mouth, pharynx, or larynx. It revived readily, and left the hospital in good condition with the mother.

(68) Kraurosis Vulvæ.

DUHROWALSKI (*Przegladlekarski*, No. 20, 1899) observed a case in a woman, aged 60. Her last child was born when she was 43; moderate "show" had always been observed about once a year after the climacteric, but for two or three years it had become more frequent and copious. For 20 years leucorrhœa had been present. For seven months the patient had suffered from an intolerable sensation of tension in the vulva, with sharp pains, which kept her from sleep, and interfered with walking and sitting. The urine was albuminous, On examination kraurosis was detected; the labia minora were chiefly involved. The curette was applied to the uterus; then the labia minora were excised, and the wound closed with catgut. The scrapings indicated the presence of glandular endometritis. The labia showed total atrophy of their glands and absence of fat: but little elastic fibre remained. The papillary bodies and epidermis were much involved, and only on a few pearl-grey marble-like patches were the later stages of kraurosis observed.

(69) Placenta Prævia and the Tampon.

HENROTAY (*Journal d'Accouchements*, Liége, Nov. 19th, 1899) believes in the tampon, though Pinard has condemned it as inefficacious, and far inferior to hot injections, rupture of the membranes, or dilatation with the bag. He watched the fourteenth pregnancy of a woman, aged 38; the usual symptoms of placenta prævia set in during the eighth month. He plugged the vagina firmly, removing it on the next day. A week later a severe hæmorrhage occurred. The cervix admitted the tip of the forefinger. The tampon was again applied; it was removed, and replaced on the two succeeding days. Then the plug was applied to the cervix as well as to the vagina to hasten dilatation. Henrotay watched the patient through the night; the pains were weak and occurred at long intervals, the flooding moderate. In the morning he could reach the edge of the placenta, high above the left border of the os. When he felt certain that the head presented he ruptured the membranes widely. A fair amount of hæmorrhage followed but stopped directly the waters had ceased to flow. Massage of the uterus failed to stimulate its slow and weak contractions. Ergotine was therefore injected. Strong pains set in, and two hours later a healthy female child was born. The placenta was delivered a few minutes later; there was no flooding, and the uterus contracted firmly. One more injection of ergotine was given. The puerperium was normal and the child was reared. Henrotay insists on the tampon in placenta prævia when the hæmorrhage is not excessive and can be checked by plugging. But the plug must consist of sterilised iodoform gauze; then, as in his case, there need be no fever, no fear of sepsis. The old "kite tail" row of plugs along a piece of string should be discarded. Henrotay has removed many such plugs introduced into the uterus for hæmorrhage after abortion; they were nearly always fœtid. Iodoform gauze is easy to procure in these days. Henrotay did not think that the case was severe enough to require version, which would have greatly endangered the child. In short, when the bleeding is not very severe in placenta prævia, plugging and careful watching is the best line of treatment in the interests of mother and child.

(70) Gastric Ulcer in Pregnancy and Hysteria.

MAYET (*Lyon Méd.*, December 3rd, 1899) reports a case where very severe symptoms of gastric ulcer set in during the seventh month of pregnancy. Characteristic sharp attacks of pain occurred with vomiting, hæmatemesis, and melæna. The patient, nearly at term when the case was reported, was distinctly hysterical, and the ulcer had appeared in a neuropathic subject, favourable for the development of that disease. Mayet notes that though Gilles de la Tourette and others have for long noted the frequent relation of gastric ulcer and hysteria, they say nothing about the relation of the ulcer to pregnancy. It seems very rare during gestation, but the matter demands close investigation. Does pregnancy check, as a rule, the advance of the ulcer?

THERAPEUTICS.

(71) Subcutaneous Injections of Quinine.

NEUMANN (*Therapeut. Monat.*, October, 1899) gives some practical experiences of the value of subcutaneous injections of quinine. In the same periodical (April) various methods were described for making solutions of the hydrochlorate of quinine by the addition of urethan or hydrochlorate of phenocoll. The chemical combination of quinine with urethan or phenocoll used by Professor Gaglio of Messina is practically identical with that used by the author. The preparation is extremely hygroscopic and is soluble in equal parts of water. The solution keeps well. Before injection the author always heated it in a test tube and used it when partially cooled. The author has never seen a case in which abscess followed injection. He usually employed a solution of 5:10, and injected 1 c.cm. as often as four times during the twenty-four hours. Excellent results were obtained in cases of malaria, where the drug could not be absorbed by the stomach. Injections of 1 gram of quinine solution were given in the space of one hour to patients who usually could not tolerate the drug. Nothnagel gives injections of quinine chloride in pneumonia. The drug has a powerful effect in reducing the temperature in this disease and improving the general condition. Subcutaneous injections were often successful in those cases in which baths combined with quinine given by the month had no effect in reducing the temperature. In cases in which the temperature reached 40° C., two injections were usually given morning and evening containing 0.3 to 0.5 gr. of quinine.

(72) The Treatment of Pneumonia.

A. H. SMITH (*N. Y. Medical News*, December, 1899) argues that the treatment of pneumonia should be directed to its cause—the pneumococci in the lungs. He has had good results from the use of the salicylates, but considers that they depress the heart's action and disorder digestion more than is desirable, and consequently prefers the carbonate of creosol. In addition he would stimulate the organs of excretion to remove the toxin as it is formed, while sustaining the strength of the patient, using stimulants and vasodilators in the presence of cyanosis rather than digitalis, and as special indications arise venesection, together with inhalations of oxygen and means whereby excessive pyrexia may be reduced, particularly the application of cold to the surface.

(73) Iodine in the Tissues.

P. A. LEVENE (*Arch. of Neurol. and Psychopathol.*, 1899, No. 3) attempted to find out whether new iodine compounds are actually formed, and, if so, in what tissues after taking potassium iodide. Drechsel was the first to find iodine in the keratin of hair after potassium iodide had been taken; and Winternitz found an iodo-fatty substance in the bones of animals given potassium iodide; while Baumann similarly found it present in the thyroid gland (iodothyrine). For the present research the salt was administered to laying hens, 1 gr. daily for a week, and then 2 gr. daily being the quantity given. To test for iodo-proteids the eggs laid by the hens were extracted with cold and hot alcohol, and the residue fused with sodium carbonate and potassium nitrate, and tested for iodine. The alcoholic extract was evaporated and the residue extracted with ether, the ethereal extract then evaporated, and its residue saponified

with alcoholic soda and then tested for iodine. Four eggs were taken for each experiment. Only iodides could be detected, but no iodo-fatty compounds were found. The results remained the same for three weeks; then the hens ceased laying for two weeks, when they resumed laying. The eggs collected in the sixth and seventh weeks showed the presence of iodides, but no iodo-proteids. Some of the hens were killed, and the following tissues examined: nervous tissue, glandular tissue, muscular tissue, bones, adipose tissue and skin, gastro-intestinal tract. Iodides were found in nearly all the organs, and in greatest amount in the intestinal tract (probably the part not yet absorbed) and in the bones. No iodo proteid could be detected in any of the organs. The bones showed an iodo-fatty substance. It should be mentioned that another observer (Holmes) had found iodine combined with the keratin part of the hair, and though Levene examined for it in the nervous tissue, the results were negative.

(74) The Application of Cold in Heart Disease.

Robardet (*Thèse de Paris*, 1899) believes that the indications for the use of ice applied to the precordium in affections of the heart are pericarditis, endo-pericarditis, endocarditis, and more particularly myocarditis, pseudo-angina, and certain forms of tachycardia may also be benefited. The contraindications are a previous aortitis, atheroma, aneurysm or thinning of the aortic wall from any cause. The crushed ice may be applied in a bladder or in an india-rubber bag. The quantity of the ice should not be so great as to incommode the patient by its weight, and a layer of flannel should be interposed between the receptacle and the skin. To obtain the best results there should be continuous application of cold, but the patient must be carefully watched at the beginning of the treatment, as the individual reaction is variable. Cases are quoted in which it has been employed with success in valvular disease, tachycardia, and in various cardiac irregularities. A regular action of the heart was obtained in the large majority of the cases from a single application.

(75) Sparteine as a Cardiac Tonic.

Thomas, of the University of Geneva (*Rev. Méd. de la Suisse Rom.*, December, 1899), has made observations on the action of sparteine (using the sulphate which is very soluble in water), in view of the diversity of opinion as to its mode of action on the blood pressure, although almost all experimentalists and clinicians are agreed that it slows the action of the heart. His experiments were performed on rabbits, the animals being anæsthetised with ether and chloroform. His conclusions are that sparteine in an average dose (of 25mg. to 29mg. per kilo. of bodyweight or roughly $\frac{1}{6}$th to $\frac{1}{7}$rd grain for every two pounds) given to a healthy animal raises the blood pressure and diminishes the frequency of the heart beats. If the action of the vasomotor centre be abolished by section of the cervical spinal cord the same phenomena are produced, but a larger dose, 38mg., is required. If choral be injected into the arteries the blood pressure falls and the heart quickens in spite of the action of the sparteine. Section of the vagus or its paralysis with atropine did not antagonise the effect of sparteine, noticeably leaving its retarding action on the heart unaffected. The effect of sparteine in slowing the heart is due to a direct action on the myocardium, as Cushny and Mathews have recently maintained, and all other causes may be excluded. Much of the effect on the blood pressure is due to the same cause, but a vasomotor effect cannot be completely eliminated.

(76) Chloride of Sodium in Detachment of Retina.

Giulio (*Gazz. degli. Osped.*, October 29th, 1899) reports 4 cases of detached retina treated by subconjunctival injections of chloride of sodium. In each case considerable benefit followed the treatment. The first patient had 45 injections, after which he was able to get about and do a certain amount of work, whereas before treatment he was unable to get about unattended. The second and third cases began to improve after four injections, and the fourth after five injections was able to count fingers at 2 metres as against a few centimetres before treatment.

PATHOLOGY.

(77) End of Needle Trocar in the Heart.

Ophuls (*Occidental Medical Times*, August 15th, 1899) publishes a case of a needle trocar found in the heart of a man who died of phthisis with diffused tuberculous disease of other organs. There was absolutely no evidence that the foreign body caused or even hastened death. Most likely some physician thought it advisable to make an exploratory puncture of the pericardium. By some mishap, the needle glancing off from one of the ribs, or through a sudden unexpected motion of the patient, the instrument was driven in too far, and in the attempt to withdraw it quickly, it was broken off. The heart was small and flabby, but without valvular disease. In the middle of the upper part of the intraventricular septum, three-quarters of an inch below the right anterior semilunar valve, a metallic point was seen projecting for about an eighth of an inch into the cavity of the left ventricle. It was surrounded by white scar tissue. The near end of the needle was buried in the tip of one of the papillary muscles of the tricuspid valve. The foreign body consisted of a central solid piece of brass surrounded by a hollow tube of another metal. No definite track could be detected in the anterior wall of the right ventricle and adjacent pericardium through which it must have passed before it snapped off. This case deserves to be added to the long series of cases of wounds of the heart and pericardium recently published by Loison in the *Revue de Chirurgie* (Epitome, September 2nd, 1899). Ophuls notes that tapping of the pericardium is not unattended with the risk of severe wound of the heart and of snapping of the fine trocar, as this case testifies.

(78) Specific Weight of the Grey and White Matter of the Brain.

Agostini (*Rivista Sperim. de Freniatr.*, vol. xxv, f. 2) has made a series of researches on the comparative specific weight of grey and white substance of the brain in various parts, in the healthy and the mentally diseased, and in certain mammals. The specific weight of the brain of the insane is on the average higher than that of the sane, and reaches its highest level in the alcoholic and epileptic types of insanity. In the healthy brain the specific gravity increases from before backwards, the occipital lobes being the heaviest. Comparing homonymous parts of the two hemispheres no great variations were noted, but on the whole the specific gravity of the right hemisphere was rather less than that of the left. In the brain of the newborn all these differences are much less marked, and this applies still more to the brain of mammiferæ, so that the author feels this can be used as a test of the degree of evolution of a brain. The greater the difference in specific gravity between different parts of a brain and between the grey and white substance, the more highly evolved the brain.

(79) The Pathogenic Action of Casein Ferments.

Jemna (*Rif. Med.*, December 15th, 16th, 1899), as the result of a series of experiments, finds that the bacilli which act as casein ferments belong to the group B. subtilis, and are without pathogenic action as far as the usual laboratory animals are concerned. Amongst the ferments belonging to the group B. mesentericus vulgatus, there are some which prove pathogenic to the intestinal mucous membrane when swallowed in very large quantities, whilst inoculated into the peritoneum they have no bad effect. The B. butyricus (Höppe) and its varieties is always non-pathogenic. The practical importance of the author's research lies in additional negative value it gives to the boiling and sterilisation of milk.

(80) Congenital Anophthalmos.

Van Duyse (*Soc. Belge d'Ophtal.*, April, 1899), from a case which he has examined, concludes that anophthalmos (in which condition no eye can be seen or felt in the orbital cavity) is only an exaggerated microphthalmos; that probably in most, if not all cases, as in his, the rudiments of an eye could be demonstrated microscopically. In his case the rudiment was composed of sclerotic and choroid, its size being 1 mm. transversely and 5 mm. in length.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(81) Nervous Complications of Measles.

Stow of St. Petersburg records (*Journ. de Méd.*, November 25th, 1899) some unusual complications of measles affecting the nervous system. The first case was that of a child aged 12 months, who was in good health up to the time of contracting measles. The attack itself was not severe, but a month after the beginning there was a considerable amount of weakness and a tremor was noticed, localised at first to the members of the left side and the head, but later it became generalised. It diminished during sleep, and the child was unable to walk or stand. At the end of a month the tremor somewhat decreased, and in four months' time it had almost completely disappeared, the fingers alone showing any trace. The family history was negative. As regards the tremor there were five to six oscillations a second; it resembled the tremor of paralysis agitans or senility. Measles is not the only infectious disease which may produce tremor, as different observers have noticed it as the result of influenza. The second case was that of a child aged 4 who contracted measles, with marked convulsions, loss of consciousness, and other severe symptoms. These subsided in about two days and the disease ran an ordinary course; but after some days marked mental symptoms appeared, there being much excitation, insomnia, and convulsions, with periods of stupor. After this had lasted about three months, the child was removed in the same condition by its parents and no further history was obtained. The writer quotes other instances—about 10 in all—of severe psychoses supervening after measles. The third case was that of a child, aged 9, who three weeks after measles complained of progressive loss of vision, so that at the end of a week there was merely perception of light. It had been noticed that after the subsidence of measles the patient complained of headache and vomiting. There was also pain in the hands and feet. There was no sugar or albumen in the urine, no casts nor any sign of nephritis, but examination showed the existence in both eyes of a retinitis, presenting all the characters of that met with in renal disease. Notwithstanding a prolonged sojourn in hospital, there was no improvement in the eye condition, and the pains in the limbs also remained. At times hyperesthetic areas were found in different parts of the body.

(82) Erythema Nodosum and Swelling of Joints in Diphtheria.

Schütze (*Deut. med. Woch.*, December th, 1899) reports a case which occurred in the Institute for Infectious Diseases in Berlin. The patient was a woman, aged 25, who complained of sore throat, headache, and general weakness. The clinical and microscopical examination showed that she was suffering from diphtheria. After lying in bed for a week and using a gargle of potassium chlorate, the local and general condition had greatly improved. On the third day, after the temperature had become normal and the throat symptoms had disappeared, the patient began to complain of pain and swelling in the right ankle, and the left ankle soon became similarly affected. During the next day the knee-joints began to swell, and also the left elbow and hand. Coincidently with the swollen joints, a red papular rash made its appearance on the anterior surfaces of both legs. The rash did not disappear on pressure. The papules at first were the size of a cherry but rapidly enlarged. The patches were very tender when touched. The temperature rose to 38.8° C. In eight days time all pain and stiffness had vanished. There was never any albumen in the urine. In this case the symmetry and position of the lesions were identical with those observed after serum injections. Similar lesions following diphtheria have been recorded by other observers in cases where no antitoxin was used. In view of the more extensive application of serum-therapeutics, it will be important to determine whether the above symptoms are really due to diphtheria or to antitoxin. Baginsky described painful, infiltrated patches on the skin following a diphtherial attack long before serum treatment was thought of.

(83) Glandular Fever.

Fiori (*Gazz. degli Osped. e dell. Clin.*, January 7th, 1900) reports 5 cases of sudden fever and enlargement of the cervical glands. The temperature generally rose suddenly, with rigors and painful swelling of the cervical glands (more often on the left side). In addition to the local symptoms, constipation, anæmia, and furred tongue were present. The fever lasted from three to eight days, and as soon as apyrexia occurred the glands began to diminish in size, and resumed their normal state in from fourteen to twenty-five days. The suboccipital were the most commonly affected of the various glands in the neck; the suprahyoid lateral glands were always affected, the axillary and inguinal never. Amongst the less common symptoms the author noted severe headache, inflammation of the salivary and submaxillary glands, enlargement of the spleen, erythema of the hard palate, and slight jaundice. Recovery was complete in all the cases. No infectious diseases were prevalent at the time. Most of the patients were adults.

(84) Calcareous Infiltration of the Skin.

Leon Derville records an observation of this curious condition (Congrès de Médecine de Lille, 1899). The patient was a man, aged 39, without apparent visceral lesion, but very emaciated and almost cachectic. For the last three years he had noticed the appearance of hard *plaques* occupying the cutis, and having begun as a small hard swelling, showing slow progressive extension. Although painless in the beginning these areas became somewhat tender when pressed upon. They were situated in the left cheek (2 by 4 cm.), the left gluteal region (15 by 5 cm.), the outer aspect of the left thigh, the anterior portion of the right thigh, and the gluteal region. Under the administration of arsenic and general tonic treatment the patient recovered as regards his general health, but without alteration of the local condition. Microscopic examination of fragments removed showed that the lesion consisted in cystic degeneration of the sudoriparous glands, with calcification of the contents of the neighbouring tissues. So far there is no explanation as to the etiology of this lesion.

(85) Polyclonus and Chorea.

Nussi (*Il Policlin.*, November and December, 1899), in the course of an elaborate study of this subject, with an account of two cases, believes that the nosological distinctions between the various forms of polyclonus, tic, and chorea, do not correspond to any essential differences. They probably all have a common origin in some disturbance of the Rolandic zone. The fact that some lesions of this zone are followed by paresis or paralysis instead of chorea, depends on the gravity of the lesion. For the production of chorea and its allies, it is essential that the excitability of the nervous elements should not be lost or destroyed. Hence the lesions to be expected are very small and easily overlooked. Sydenham's chorea must, however, be considered as a type *sui generis*, due to some alteration in the Rolandic zone as yet unknown, and confined to early childhood.

SURGERY.

(86) The Surgery of Abnormal Ureter.

Benckiser (*Zeit. f. Geburtsh. u. Gynäk.*, vol. xli, part 3, 1899) reports two new cases of abnormal ureter in the female. In the first the patient had been subject since youth to incontinence of urine. One ureter opened a little externally and posteriorly to the meatus. The patient objected to thorough investigation, so that it was not clear whether the ureter was supernumerary or a normal ureter with an abnormal opening. A distinguished authority intended to transplant the ureter into the bladder, but was only permitted to perform the earlier steps of the procedure. The abnormal opening was closed with three ligatures, the patient remained free from any dribbling of urine for five days, with no sign of retention of urine in the ureter. Then the abnormal orifice was partly excised and partly closed with sutures; the sutures were removed in seventeen days. After a time incontinence of urine recurred, the ureter

now opening in the upper third of the vagina. The second patient was aged 28, and had borne a child to term three years before observation. She had for long suffered from incontinence of urine, and after delivery the infirmity increased. The anterior vaginal wall became prolapsed. The meatus was patulous. The urine was found to drip from a second orifice immediately behind the meatus. A very fine sound could be introduced; this passed upwards and to the left in front of the vaginal wall. The abnormal orifice was sutured; soon a fusiform dilatation of the ureter was felt in the vaginal wall, then sharp pains in the left side set in. The orifice was split; on further careful research the abnormal canal was found to be a second left ureter functioning normally. Benckiser dissected away the orifice of the ureter, passed a catheter into the bladder, and then cut down on its point through the anterior wall of the fusiform dilatation, and sewed the vesical mucosa to the edges of the wound in the anterior wall. To do this the posterior or vaginal wall of the ureter was previously slit up from the meatus nearly to the cervix. Finally this vaginal wound was closed with continuous catgut. On the ninth day a fistula developed, its edges were vivified and it was closed, a month later, with silkworm gut. Nearly two years later the patient was free from incontinence of urine and from any other urinary trouble. The dilatation in the ureter above its orifice facilitated operative manœuvres. Benckiser notes 10 other cases of operation for abnormal opening of normal or supernumerary ureter.

(87) Removal of Intestine in the Operation for the Radical Cure of Hernia.

Monprofit (*Rev. de Chir.*, November, 1899) reported at the last meeting of the French Congress of Surgery a case of very large irreducible inguinal hernia in a man aged 42 years, in which, on operating for radical cure, he found that he had to deal with a large mass of both large and small intestine adherent on all sides. As it was impossible to liberate the hernial contents, and also to reduce the mass into the abdominal cavity, the author decided on resecting the protruded portion of intestine. The removed mass, the weight of which was a little more than 3 lbs. 10 ozs., consisted of a portion of small intestine measuring 7 feet 6 inches, and about 32 inches of large intestine. It was made up of ileum, the cæcum, the ascending colon, and the right half of the transverse colon. The separated ends of the intestinal canal were closed by a double suture, and the communication re-established by lateral anastomosis. The patient made a good recovery, and when last seen by the author was in a satisfactory condition, although unable thoroughly to digest a meat diet.

(88) Extirpation of the Tonsil for Malignant Disease.

Jonnesco (*Bull. et Mém. de la Soc. de Chir. de Bucarest*, March, 1899) describes the successive stages of a new operation which he has recently practised with success in the extirpation of a large malignant growth involving the tonsil and the posterior pillar of the fauces on the right side. This operation, which is preceded by superior tracheotomy is carried out in seven stages: (1) Two cutaneous incisions are made; one about 4 inches in length carried downwards behind the vertical ramus of the mandible to the level of the upper margin of the larynx; the other extending from a point a finger's breadth below the chin, outwards below the horizontal ramus to terminate in the first incision; (2) the external carotid artery is exposed and ligatured; (3) the portion of mandible exposed in this incision is detached from its muscles, divided by a chain saw between the first and second molars, and then dislocated outwards at the temporo-maxillary articulation; (4) the outer wall of the pharynx is now divided by careful dissection and the diseased tonsil is exposed and, together with surrounding diseased tissue, is removed, an attempt being made to save, if possible, the anterior pillar of the fauces; (5) if the excision of the diseased structure has not produced too great a loss of substance the bucco-pharyngeal cavity should be closed by sutures applied to the divided lips of the pharyngeal wall; (6) the luxated fragment of mandible is now replaced and fixed to the root of the bone either by an osseous suture or by a wire carried around the separated molar teeth; (7) the external wound is closed by sutures, a gap being left near the angle of the mandible to allow of drainage. In some days after the operation the bucco-pharyngeal cavity is kept plugged by antiseptic gauze, and the cannula is not removed from the trachea until after complete cicatrisation of the seat of operation. The author claims for this procedure the following advantages: (1) The two incisions, one vertical the other horizontal, enable the surgeon to perform on the same wound ligature of the external carotid artery and extirpation of the diseased tonsil, and also to remove any enlarged submaxillary or carotid glands that may be found; (2) division of the mandible and luxation of its ascending ramus affords free access to the seat of disease without causing any subsequent deformity. The results of forcible luxation at the temporo-maxillary articulation, the author states, are far from serious, as any stiffness will readily yield to massage and to active or passive movements of the bone after union of its two fragments has been effected.

(89) Congenital Hypertrophic Stenosis of the Pylorus.

W. Abel (*Münch. med. Woch.*, November, 1899) records the first case successfully treated by gastro-enterostomy. The patient was a male infant, 8 weeks old, with healthy family history. At the commencement of the fourth week the mother noticed rumbling sounds in the child's belly, mostly half an hour after feeding; a tendency to vomit directly after meals first showed itself at the end of the fourth week. Bile was never present in the vomited material. Constipation was very great, and the child wasted rapidly. At the operation the stomach was found much dilated, and the pylorus formed a smooth, roundish, very hard tumour, about 3½ cm. in length, and about the same in breadth; its lumen could not be traversed by a sound 3 mm. in thickness. The muscular walls of the stomach were thickened, and the mucous membrane was slightly swollen; the serous coats of the stomach and bowels were very delicate and thin. The operation of gastro-enterostomy lasted fourteen minutes, and was performed after Wölfler's method, with a piece of jejunum about 35 to 40 cm. in length. The whole operation lasted forty minutes. No symptoms of collapse occurred. One hour after the operation the child was given a few teaspoonfuls of milk, and did not vomit afterwards. On the day following the operation there was no vomiting. The stomach was washed out twice, and on both occasions was found empty. Enemata of glycerine were given. It fed eagerly from the bottle, which was offered it at intervals of two hours and a half. Towards the evening of this day there was much flatulence, and some greenish-black fæces were evacuated. Afterwards progress was quite normal; the child gained weight, and had natural spontaneous action of the bowels and no vomiting. It was given a wet nurse, and about a fortnight after the operation it left the hospital. Very little time has elapsed since then, and it is too early to speak of ultimate results, but everything seemed to promise the best.

(90) Hernia caused by Peritonitis.

Patel (*Lyon Méd.*, January 7th, 1900) exhibited, at a medical society, a man aged 43. A month previously he had been seized with violent abdominal pains, with distension. Jaboulay operated, suspecting strangulated hernia, as there was a rupture in the groin. Abdominal section proved, however, that the pain and swelling were due to general peritonitis, probably arising in the vermiform appendix. The attack had caused the sudden escape of a coil of gut, much distended with air, into an open funicular process. The operation was concluded by draining the peritoneum after radical cure of the hernia.

MIDWIFERY AND DISEASES OF WOMEN.

(91) Progress of Hysterectomy.

Terrier (*Ann. de Gynéc. et d'Obstét.*, December, 1899) recently opened an instructive discussion on abdominal hysterectomy. For fibroma the mortality was now very low; for cancer the results were, as to after-history, absolutely deplorable, as in all intervention for cancer; for pyosalpinx his mortality was 17 per cent. Bouilly had since 1898 preferred supravaginal to panhysterectomy. In 27 cases he had had two deaths, neither from septicæmia.

Quénu at present performed abdominal hysterectomy for all fibroids, preferring it to the vaginal operation. He did not like panhysterectomy or any "combined" method. In certain cases of advanced inflammatory disease of the appendages he removed the uterus as well. Gross, of Nancy, thought the operation, in a case of fibroid, must depend on the nature and complications of the tumour; he therefore did supravaginal hysterectomy, panhysterectomy, or vaginal hysterectomy according to circumstances. Richelot insisted that vaginal hysterectomy in the early stage of cancer was almost free from mortality, and gave 10 per cent. of long survivals. Faure preferred panhysterectomy for large fibroids, and thought that in future it would probably be the best for cancer; it was usually preferable to the vaginal route in cases of suppurating appendages. Routier used catgut ligatures only in hysterectomy both for fibroma and for suppurating appendages. He has frequently modified his practice in accordance with recent improvements. Bazy considered that panhysterectomy was suitable for cancer, fibroids, and septic affections of the uterus and appendages. Phocas (Lille) favoured supravaginal hysterectomy on Howard Kelly's principles. Delagénière laid stress on a principle not always kept in view. The mere removal of the fibroid was seldom difficult; the aim of the surgeon was to ensure hæmostasis and to maintain the pelvic floor. In panhysterectomy he not only tied the utero-ovarian and round ligament arteries, but also the internal iliac near its bifurcation; then the tumour was removed. Monprofit (Angers) thought panhysterectomy preferable to the supravaginal operation, unless the cervix were long, deep, difficult to reach, and clearly in a sound condition. He believed little in clearing the pelvis and dissecting round the ureters in advanced cancer, and would leave such cases alone. Legueu preferred the abdominal to the vaginal operation in cancer as well as in fibroids. Picqué and Mauclaire considered that the existence of glandular infection should be determined in every case of uterine cancer. In abdominal hysterectomies they found enlarged glands along the iliac arteries in several cases in which the history of cancer was short. Jonnesco (Bucharest) did abdominal hysterectomy for limited cancer, and when the disease was advanced he relied on scraping and ligature of the uterine arteries. In fibroids he preferred the supravaginal operation. In diseased appendages that operation was even safer than in fibroids. Drainage should always be vaginal, never abdominal, and was indicated when the bleeding surfaces could not be covered completely with peritoneum, and whenever asepsis was uncertain. Hartmann laid stress on intelligence in hysterectomy. Trendelenburg's position enabled the surgeon to see what he was doing. Vessels must be tied separately, and the pelvic floor must be restored. Several other authorities spoke; altogether there was much difference of opinion even among the experienced.

(92) Labour Complications after Vaginal Fixation.

Rühl (*Cent. f. Gyn.*, 1899, No. 51) calls attention to the severe labour complications which may follow both vaginal fixation of the uterus and ventri-fixation. The predisposition is greatest in the vaginal operation when the top of the uterine body is fixed to the anterior vaginal wall; and in the abdominal operation, when the fundus itself is immovably fixed close above the symphysis. The obstruction to labour may be so serious that although the pelvis be of normal dimensions, Cæsarean section may be required. In passing he calls attention to the fact that Cæsarean section, when performed for this cause, has been attended with a very high mortality, amounting to 50 per cent. In a normal pregnancy at the fortieth week the long axis of the uterus lies exactly at right angles to the plane of the pelvic inlet. In the pathological conditions under consideration the fundus is fixed much lower than it should be, whilst the cervix is drawn up and retroposed, with the result that the uterine axis may make an angle of only about 40° with the plane of the inlet. When the uterine contractions occur under these conditions, the tendency is for the presenting part of the child to be driven backwards against the sacrum, instead of downwards and backwards in the pelvic axis. The cervix may be drawn so far up and back as to lie above the level of the sacral promontory, and the true pelvis may be bridged over by the anterior wall of the uterus and vagina in such a way as to leave between the anterior lip of the cervix and the sacrum no room for the passage of the child or for the manipulations necessary for artificial delivery. In these cases the author advocates an anterior utero-vaginal section, consisting of an incision passing through the anterior lip of the cervix, the anterior uterine wall, and vagina. Special care is needed to avoid injury to the bladder. As much natural dilatation of the cervix as possible should be obtained before making the incision.

(93) Contracted Pelves and Nationality.

Whitridge Williams (*Obstetrics*, vol. i, No. 5 and 6, 1899) read before an American Society in April, 1899, a monograph on the Frequency of Contracted Pelves in the First Thousand Women delivered in the Obstetrical Department of the Johns Hopkins Hospital. He tabulates 79 cases of generally-contracted pelves, 20 of rachitic pelves, 25 of simple flat pelves, and 7 of irregular types of contraction. He compares his statistics with those of French, German, and Austrian authorities. His own percentage (13.1) corresponds closely with the general average of contracted pelvis observed in Germany. This is due, in great part, to the presence of a large black population in Baltimore, whence the statistics are derived. Four hundred and sixty-nine out of the 1,000 cases, or nearly half, were in coloured women; now it happens that contracted pelvis is 2.77 times more frequent in black than in white women. Crossen and the author agree that contracted pelvis is observed in about 7 per cent. of American white women. This proportion is about the same as in Rostock, Breslau, Bâle, and Paris, and higher than in Vienna. As every fourteenth white and every fifth coloured woman possesses a contracted pelvis, the necessity for routine pelvimetry becomes apparent.

THERAPEUTICS.

(94) New Saline-injection Mixture.

A. Schieking (*Therap. Monats.*, December, 1899) points out that the addition of calcium and other salts to physiological saline solutions, as shown more especially by Sydney Ringer, has a favourable effect on cardiac action, but he also draws attention to a fact of equal importance, namely, that the ideal saline-injection fluid should contain among its constituents a substance capable of taking up into chemical combination the carbon dioxide present in excess in the blood and lymph bathing the tissues. Normally, of course, this is accomplished by the presence of an alkaline globulin compound in the circulating blood, which in the presence of carbon dioxide forms an alkaline carbonate and a free globulin. Premising that it is not likely that these unstable compounds would maintain their integrity during the process of transfusion of blood from one individual to another, and realising that the heart would be probably weakened and handicapped in its action owing to the liberation of potassium salts, resulting from the breakdown of a considerable number of blood corpuscles (such as always takes place in transfusion), Schieking was led to devise a really effective saline mixture. He states that it may be impossible at present to reproduce artificially the complex globulin compounds of the blood, but he has found in sodium saccharate a drug which seems to possess valuable properties of the needful kind. This salt is a gelatinous substance of somewhat bitter taste, and freely soluble in water, and in presence of carbon dioxide it readily undergoes decomposition, forming sodium carbonate and sugar. The free carbon dioxide is thus, by its agency, at once taken up into stable combination, and its toxic power thereby neutralised. His early experiments with this fluid on frogs and on warm-blooded animals in a state of collapse or of partial animation gave the most favourable results, and he was therefore led to try it on suitable patients. The clinical use of this drug bore out all the expectations formed, and no deleterious effects were ever noticed. Good results were obtained even where the use of the usual normal saline solution failed to improve the condition of the patient. The solution for use contained 0.03 per cent. of the sodium saccharate, and 0.7 per cent. of sodium chloride. Care had to be taken that the mixture contained neither free

sodium hydrate nor sugar, in other words, that the sodium saccharate was pure.

(95) Dialysed Digitalis.

Bosse (*Centralbl. f. inn. Med.*, July 8th, 1899) has had good results with a preparation of digitalis obtained by dialysis by the process of Golaz. It is obtained from the freshly-plucked plant, one part by weight of the dialysate corresponding exactly to one part of the plants. The fresh plants are probably more active than the dried. Other advantages are that all strong reagents are avoided during the process of extraction of the active constituents, whose percentage is exactly estimated, so that the preparation is a standard one. This feature is important, and is not shared by the ordinary preparations of digitalis. Jaquet's experiments showed that in activity it stands between Merck's digitoxin and true digitalin, and that it probably contains both glucosides. He believes that the maximum daily dose should be fixed at 80 to 100 drops, 6 to 10 drops being the usual single dose for an adult. Bosse found that it relieved all cardiac symptoms quickly, and that its diuretic effect was particularly marked and persistent. No toxic symptoms were observed. Like other preparations of digitalis its action is often not apparent for two to four days.

(96) The Soft-Soap Treatment of Local Tuberculosis.

Haussmann (*Therap. Monats.*, October, 1899), who was one of the pioneers in the use of inunctions of soft soap in the treatment of local tuberculous processes, first recommended by Kapesser in 1878, states that the method seems to have been almost forgotten until its recent revival by Hoffa, of Würzburg. A tablespoonful of the brown soft soap of commerce is rubbed into the back, from the neck to the flexor surfaces of the knees, twice a week just before bedtime, with a piece of soft flannel and tepid water; it is left on for ten minutes and then washed off with warm water. (1) In local tuberculous processes, especially in enlarged glands which have not caseated, the inunctions alone may effect a cure; (2) in tuberculous arthritis it is of decided benefit, and, though ordinary surgical treatment cannot be dispensed with, is a great aid to it; (3) though chiefly of use in local processes, it occasionally benefits fever, pleurisy, or more rarely diarrhœa in tuberculosis; (4) the mode of action is uncertain; some have suggested that it acts on the tubercle bacilli by raising the alkalinity of the blood from absorption of the free carbonate of potassium contained in it. Massage alone is incapable of explaining it, since the diseased parts are avoided while rubbing the soap in.

(97) Indications for Balsamics in Gonorrhœa.

Fournier, at a recent clinical lecture at the Hôpital St. Louis (*Journ. of the Amer. Med. Assoc.*, December 23rd, 1899) said that in administering balsamics (copaiba, cubebs, santal-oil, etc.) in gonorrhœa the following rule should be observed in order to gain successful results. (1) As an abortive treatment the employment of balsamics is always attended with failure. (2) The treatment of gleet, or of a small amount of discharge in the morning (morning drop) by balsamics is equally inadvisable. (3) They should not be given during the acute inflammatory stage of gonorrhœa, and if they are administered at this stage one of two conditions may result: either there remains a light discharge consisting of a few drops during the day, or there remains the "morning drop." But now if their administration be discontinued, the discharge reappears with its former abundance. The untimely employment of balsamics is the cause of 80 per cent. of blenorrhœa or gleet. (4) Balsamics should not be employed before the close of the fourth week of the disease. At about this time the discharge is three-fourths lessened, has lost its greenish tinge, and is light yellowish. The timely administration of balsamics is followed in the great majority of cases by recovery. The inflammatory period, however, must be over, and there must be absence of pain on micturition, absence of chordee, and diminution of the discharge, while the discharge should be yellowish and ropy. (5) Balsamics must be given in large doses—for example, a mixture of 10 grams (2½ drachms) of cubebs and 3 grams (47 grains) of copaiba, to obtain good results. Sandal wood and other preparations are equally good. It is important to begin with large doses and to continue them for ten or twelve days, and then gradually to diminish the dose. A sudden stoppage of the medicine would be followed by a return of the discharge. (6) The medicine must be taken thrice daily during the entire treatment. The amount of fluids drunk by the patients should be limited, in order to avoid too great a dilution of the balsamic eliminated. (7) There is no advantage in alternating the balsamics. The one that has been selected is to be continued. If at the end of ten days the discharge is not almost entirely checked, the remedy should be discontinued for from eight to ten days. At the end of that time it should be given another trial.

PATHOLOGY.

(98) Bacteriology and Anatomy of Scarlet Fever.

Pearce contributes a careful series of observations on the bacteriology of scarlet fever (*Reports of the Boston City Hospital, 1899*). While he has been able to verify the investigations of others as to the presence of different forms of bacteria, he has, like them, been unable to demonstrate any specific organism. He mentions that a streptococcus which cannot be differentiated from the streptococcus pyogenes is one which is extremely prevalent, and is found in the throat, false membrane, and in various other sites, but there is no proof so far that it causes scarlet fever. The other organisms present are the staphylococcus pyogenes aureus and pneumococcus. The writer says the only constant gross change met with is a hyperplasia of, with in some places a hæmorrhage into, the lymphoid tissue in every part of the body. Another striking feature was the inclusion of lymphoid cells in large endothelial cells lying loosely in the sinuses of the lymphoid glands. Acute broncho-pneumonia is, as a rule, present. In many cases acute pleuritis, sometimes abscess of the lung, ulceration and abscess formation in the upper respiratory tract, myocarditis, pericarditis, and endocarditis were all met with. Acute inflammation of the middle ear, with or without extension to the mastoid cells; inflammation of the antrum of Highmore and of the sphenoidal sinus were found in considerable proportion. In 8 out of 23 cases otitis media was met with, being in all instances, with one exception, double; in 3 the antrum of Highmore was affected, both cavities being filled with abundant purulent fluid in 2 cases. Histological examination of the glands, tongue, mucous membrane of the mouth, and pharynx shows the presence of inflammatory cells and vasomotor changes, the blood vessels being congested, the lymphatics dilated, and the epithelial and subepithelial tissues infiltrated with polymorphonuclear leucocytes. The liver shows accumulation of phagocytic cells in the capillaries leading to occlusion of the vessels and necrosis of the liver cells. Distinct fatty degeneration is fairly frequently met with. In addition to these changes a well-marked necrosis of the liver cells in the centres of the lobules is described, a process called central necrosis by Mallory. In the spleen the changes consist of a proliferation of the endothelial cells lining the blood sinuses. The Malpighian bodies are enlarged and the centre sometimes is pale and necrotic. The pulp shows infiltration with plasma cells and mitotic figures were also common. The kidneys show cloudy swellings and in some instances acute interstitial nephritis. Sometimes hæmorrhages could be made out. Microscopically a considerable degree of epithelial change was found in the tubules, but glomerular changes were not present in any of the author's cases. This may be explained by the fact that they were all, with one exception, examined before the sixteenth day, glomerular changes occurring late in convalescence. The bone marrow (femur) was very cellular, the eosinophile cells were exceedingly numerous; giant cells and nucleated red corpuscles were also seen. Of all these changes the author considers the production of plasma cells in the spleen lymph glands and lymphatic tissue generally as the most characteristic. Next to that possibly is the production of phagocytic cells in lymphoid tissue, generally specially from the endothelium lining the sinuses of the lymph gland, and the blood vessels of the spleen and liver. The writer thinks that probably this proliferation of plasma and endothelial cells is due to the toxin of scarlet fever.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(99) "Tracheal Tugging" in Aortic Aneurysm.

Hall (*Amer. Journ. Med. Sciences*, January, 1900) points out the value of this sign in the differential diagnosis of intrathoracic growth and aortic aneurysm. It must not be confused with an up and down pulsation of the trachea which normally occurs in many healthy individuals and accompanies other diseases. In such, however, there is not the distinct diastolic shock (due to the transmission of, or originating at the time of, the closure of the aortic valves) which, traversing the aneurysm, is manifested by a distinct sharp impulse following the tracheal tug at the same interval as that between the apex beat and the closure of the aortic segments. Four cases are given in which the sign was clearly present, and in which necropsy or after-events proved the diagnosis to be correct. The writer asks for further records of this diastolic shock following the tracheal tug, and thinks that such observations will be useful to emphasise the importance of this frequently neglected but distinctly present sign in aortic aneurysm.

(100) The Value of Bremer's and Williamson's Tests in Diabetes.

Schneider (*Münch. med. Woch.*, June 20th, 1899) records observations which tend to show that Bremer's test which depends on the colour reactions of normal and diabetic blood and urine to certain aniline stains (*vide* Epitome, vol. ii, 1897, pars 157 and 313, and vol. i, 1898, par 411) is not reliable in the diagnosis of diabetes. (1) The staining of normal human blood when fixed on a cover-slip after being brought in contact with urine or distilled water depends solely on the acidity of the fluid, other conditions, such as the thickness of the layer of blood, the time allowed for the stain to act, and its concentration being equal. The fact that the test usually gives a positive result in diabetes is therefore due to the fact that diabetic urine is generally highly acid. (This statement is directly opposed to the results of Bremer's own experiments). (2) It is probable that a positive reaction obtained with normal or diabetic blood, not previously brought into contact with acid fluids, is also due to an abnormal acidity, or rather low alkalinity of the blood. The writer obtained a positive reaction in the normal blood of two healthy individuals. (3) It is possible that the method may prove of use in determining the degree of alkalinity of the blood. Müller (*ibid.*) has employed Williamson's test, which is based on the same principle as Bremer's, in many cases. To 20 c.cm. of diabetic blood in a test tube are added 40 c.cm. of a 6 per cent. caustic potash solution and 1 c.cm. of a 1 in 6,000 watery methylene blue solution. The same procedure with normal blood controls the experiment. On warming both tubes in a water bath, the mixture with diabetic blood becomes decolorised, and takes on a characteristic yellow tint within a minute and a half to five minutes, while the normal blood mixture remains unaltered unless heated for a long time. Müller has employed the test in a great variety of diseases, and has obtained a positive result in non-diabetic cases but twice, once in a case of amyloid kidney, and once in a case of beri-beri. He therefore considers the test to be useful in diabetes, and especially in cases of diabetic coma where no urine is present in the bladder. It may also be obtained in the urine of diabetic patients after it has been freed from sugar by treatment, but becomes less and less marked the longer the urine has been free from sugar. Conversely it may be obtained a few hours prior to the return of the sugar, after an error in diet. These observations agree with Pavy's discovery that blood always keeps a certain reducing power even after all sugar has disappeared from it.

(101) The Relation between Tuberculosis and Neuropathies.

Rossi (*Gazz. degli Osped.*, December 17th, 1899), with the object of examining this question, has collected some 200 cases of tuberculosis (chiefly pulmonary) and neuropathies taken from the clinic of Professor Renzi between 1882-95. There were 111 cases of tuberculosis and 85 of nervous disease. In the first group some neuropathic relationship was established, and in the second some tuberculous lesion either directly or indirectly. The 196 cases were selected out of a total of 1,000. It is maintained that there is a certain amount of relationship between the two affections. The phthisics showed some family neuropathy in 28.6 per cent., and the neuropaths some preceding family tuberculosis in 22.6 per cent. of the cases. The explanation of this relationship is probably to be found in vasomotor or trophic disturbances, and particularly in some alteration in the vagus, which has a notable influence on the nutrition and function of the lungs. The author's figures do not support the belief that there is any marked antagonism between cerebral hæmorrhage and pulmonary tuberculosis, for cerebral apoplexy was seen in the families of phthisics in 9 per cent. of the cases, and of the 111 cases of tuberculosis with preceding neuropathies 31.7 per cent. had cerebral apoplexy in the family history.

(102) Acute Chorea of Rheumatismal Origin.

De Buck and Van de Weghe (*Belgique Méd.*, December 7th, 1899) record the case of a girl, aged 14, suffering for the third time from acute rheumatism affecting both the upper and lower limbs, and complicated by bronchitis and endocarditis of a transitory kind. Delirium and then stupor supervened; there was incontinence of urine and fæces, the tendon reflexes were abolished, the temperature rose to 41 C.°, and the whole body became agitated by involuntary and inco-ordinated movements. From this time the articular rheumatism improved, but the stupor and choreic movements continued for five days. Then the nervous phenomena markedly began to improve, and in little more than a month the convalescence was complete. About three months later the patient had another attack of general chorea and of endocarditis, with manifest muscular hypotony, but with the entire absence of psychical phenomena; the patellar reflexes were diminished, but the ankle clonus persisted. She also recovered from this attack, although the patellar reflex remains weak. The case shows the infectious nature of chorea and its relation to rheumatic fever. The abolition of the patellar reflex and the muscular hypotony would point to cerebellar insufficiency.

SURGERY.

(103) The Bacteria of Wounds made under Aseptic Precautions.

Döderlein (*Münch. med. Woch.*, June 27th, 1899) thinks statistics as to the aseptic condition of wounds drawn from the fact of healing by first intention to be valueless. He has made a number of experiments in cases of laparotomy by scraping the peritoneum and the wound before, during, and at the end of the operation with a sterile platinum loop and making cultures from it in Petri's dishes, and has found that the number of colonies which develop are directly proportional to the length of the operation, and the amount of manipulation of the abdominal contents. In spite of the constant presence of bacteria the operations ran a favourable course. The chief source of these organisms is the operator himself, as is proved by the failure of every device to prevent the bacteria in the air from entering the wound to make any great difference in the number of colonies. Döderlein now believes that it is impossible to render the hands sterile. Even if the surface is made so temporarily, there is a constant desquamation of epithelium during the operation which brings to light the uninjured organisms in the deeper layers. In this way he accounts for the great number of bacterial colonies obtained from originally sterile linen-thread operation gloves. The following experiment is another proof that these organisms come chiefly from the operator's hands: If at the operation thin rubber gloves are worn under the thread gloves, and cultures are made from the latter, very few colonies will develop. Luckily, the unavoidable contamination of wounds with non-pathogenic bacteria is of no importance, and the wearing of rubber gloves at operations is only necessary if the surgeon's hands had been in contact with septic matter, and there is a danger of introducing pathogenic organisms.

(104) Acute Traumatic Gangrene.

Hitschmann and Lindenthal (*Sitzungsberichte der k. Akadem. d. Wissensch.*, Vienna, January-March, 1899) have written a very complete treatise on Gangrène Foudroyante. They have endeavoured to throw light on the bacteriology of this disease. It is caused by infection of a wound with earth or foul dust, and is distinguished by steady necrotic changes and primary development of gases. The poison spreads quickly along the lymph channels and kills by intoxication. The spleen does not swell. The soft tissues are soaked in a bloody exudation; the muscular fibres necrose rapidly. The disease is quite different from a phlegmon; there is no suppuration nor any distinct sign of inflammation, but mixed infections have been observed and then pus may appear. Acute traumatic gangrene itself seems due to a uniform infection, but not from any one specific germ. Bacteria are not detected in the blood directly after death; the germs which are known as the exciters of this disease are the bacillus of malignant œdema, the staff-like microbes which Fraenkel, Welch, and Flexner have detected, and which were found by Hitschmann and Lindenthal in their own investigations, the bacterium coli commune in cases associated with diabetes, and the proteus of Hauser. Clinically this disease is very deadly; only a few cases have been saved by amputation. It seems certain that incisions into the tissues, so beneficial in phlegmon, are useless in acute traumatic gangrene.

(105) Hæmostasis of the Liver.

Tricomi (*Il Policlinico*, October 15th, 1899) says that in superficial wounds of the liver the thermo-cautery acts as an efficient and rapid hæmostatic; in deeper wounds suture of the edges is better, and in very deep wounds plugging is the best treatment. In 49 cases of hepatic wounds the mortality after plugging was 19 per cent., after suture 30 per cent. With regard to resection of the liver intrahepatic ligature, combined with ligature of the bleeding vessels, gives a safe hæmostasis, but isolated ligature of the vessels, combined with plugging, is better. One of the best ways of avoiding hæmorrhage is to do the operation in two stages. The author briefly examines the record of 63 cases of hepatectomy; in 23 of these the stump was treated extra-peritoneally. Intraperitoneal treatment is better if hæmostasis can be assured; it is chiefly indicated in pedunculated and small tumours of the liver. Resection in two stages is especially advisable where the tumour is of large attachment, and where there is likely to be much hæmorrhage. The author relates more or less fully 5 cases of hepatectomy with 1 death; 2 were syphilomata, 2 adenomata, and 1 echinococcus cyst.

(106) Thyroid Extract in Ununited Fracture.

Potherat (*Bull. et Mém. de la Soc. de Chir. de Paris*, December 5th, 1899), in a report on two cases under the care of Tronchet of imperfect consolidation of fracture treated and cured by the administration of thyroid extract, refers to several previously recorded cases, the results of which, together with those of the instances here specially noticed, favour a recourse to this treatment in certain cases of ununited fracture. Whilst in some few of the cases collected by Potherat the use of thyroid extract altogether failed, in the majority this agent produced very prompt and striking results. This treatment, it is stated, is more likely to prove successful in cases of retarded union than in those of actual and confirmed pseudarthrosis. It is pointed out, however, that much caution is needed in dealing thus with ununited fracture, as the thyroid juice is really an active poison capable of producing serious, and even fatal, results, as for instance digestive and circulatory disturbances, muscular weakness, somnolency, coma, paralysis, and convulsions. In one of the cases communicated by Tronchet the administration of thyroid extract in moderate doses was followed by an attack of aphasia associated with impairment of both sensation and mobility on the right side. The clinical features of this attack indicated, in Potherat's opinion, the action of a toxic agent rather than the results of ordinary cerebral hæmorrhage.

(107) The Treatment of Varicose Ulcers.

Paczauer (*Wien. klin. Rund.*, August 6th, 1899) recommends a radical operation for those cases of various ulcers which, owing to extensive disease of the veins, resist treatment by ordinary dressings (iodoform, airol, xeroform, etc.), or which after healing relapse. The only successful radical treatment is to ligature the internal saphena vein (Trendelenburg's operation), and then, after thoroughly cleansing the surface of the ulcer, to cover it with transplanted flaps of skin.

(108) Laminectomy in Cases of Angular Curvature.

Trewdelenburg (*Centralb. f. Chir.*, No. 27, 1899) at a recent meeting of the German Surgical Society advocated the performance of laminectomy for the cure or relief of paralysis due to angular curvature of the spine. The results of his experience of this treatment applied in the course of the past four years to eight patients have led the author to recommend resection of the arches of the affected vertebræ in cases of fully developed and passive spondylitis with paralysis of the lower extremities, in which there is reason to believe that the pressure on the cord is produced by a small purulent or caseous deposit or by narrowing of the spinal canal at the spot where the curvature is most marked. This last condition occurs more frequently, the author holds, than is generally supposed. In cases of fresh and active spondylitis and those in which there is still some tenderness in the spine, the operation is not to be recommended, and indeed it is likely in such circumstances to do harm. A long persistence of the paralysis, so long as such paralysis is not complete, would not contraindicate the operation. The good results of this treatment may not be manifested until after an interval of six months from the date of operation. In 2 only of the 8 cases referred to by the author did laminectomy fail. In 4 cases the treatment resulted, it is stated, in complete cure, and in the remaining 2, which are still quite recent, the prospects are reported to be favourable.

MIDWIFERY AND DISEASES OF WOMEN.

(109) Peroxide of Hydrogen in Uterine Hæmorrhage.

Platon (*Marseille Médicale*, No. 1, January 1st, 1900), after referring to the well-known antiseptic and disinfectant properties of peroxide of hydrogen, points out that it is also possessed of marked hæmostatic powers. It was employed for hæmostatic purposes by him in two cases of uterine hæmorrhage, and with distinct success. In the first there was profuse bleeding from an anteverted and infantile uterus in a married woman, aged 24, who had suffered from genital infection soon after marriage. There was also cellulitis and parametric effusion. Under pelvic massage the swelling round the uterus disappeared but the hæmorrhagic metritis remained, and, since the patient refused operative interference such as curettage, it was determined to give an intrauterine injection of peroxide of hydrogen. Accordingly, on two occasions 4 c.cm. were injected after dilatation with a laminaria tent, a vaginal douche was given, and the vagina packed with antiseptic gauze. The cure was almost complete, only a little dysmenorrhœa being left. The second case was one of abundant metrorrhagia in a very stout patient near the menopause. Examination revealed no organic lesion to account for the hæmorrhage. After ergot, erg tinine, hot douches, and perchloride of iron had all been tried without success, and as the patient objected to curettage, it was resolved again to inject the peroxide. This was done, and the woman, who had become markedly anæmic, is now well, and no longer suffers from uterine hæmorrhage.

(110) Non-Puerperal Genital Atresia.

Otto Engström (*Finska Handlingar*, 1899) reports the following cases: (1) Atresia vagina with hæmatokolpos, treated by incision and vaginal tampons, complete recovery, and after delivery of three children without difficulty. (2) Atresia vagina and intermittent hæmatokolpos; incision and continued dilatation led to recovery. (3) A peasant, 43 years: vaginal atresia, hæmatokolpos and hæmatometra; had never menstruated. (4) Atresia of the external os, with hæmatometra; treated by perforation of the atresia by trocar and dilatation; menses regular afterwards. (5) Atresia of the internal os, with hæmatometra and bilateral hæmatosalpinx, in an unmarried peasant woman of 21 years. As it was impossible

to forcibly open into the uterus *per vaginam* in this case laparotomy was performed. The cavity was found full of dark blood, and there were many hæmorrhages under the serous coat in Douglas's and the utero-vesical pouch. The contents of the uterus were removed, the internal os incised, and iodoform tampons passed through into the vagina. The tubes were both thickened, the right ovary and tube being matted together, and each contained a collection of blood-coloured fluid. These appendages were removed, the left remaining. Recovery was uninterrupted, and five years after the patient was quite well, and menstruating regularly. She had not done so previously, but had complained of considerable pain in the hypogastrium every few months. The writer comments upon Case v, remarking upon the much enlarged tubes and their bloodlike contents, and discusses the origin of the blood. Dismissing any possibility of menstrual flow from the tubes and reflux from the uterus through somewhat enlarged ostia, he suggests that the condition may be due to a general fluxion in the genital organs (as instanced by the hæmorrhages under the serous coats of the uterus, and in the substance of the ovary) due to the presence of hæmatometra.

(111) Past Pregnancy Tested by the Microscope.

Opitz (*Zeitschrift f. Geburtsh. u. Gynäk.*, vol. xlii, Part I, 1900) has prepared a valuable monograph on the recognition of past pregnancy through the examination of pieces of the uterine mucosa removed by scraping. He illustrates this work with fine coloured engravings and woodcuts, and draws up a table of evident, probable, and doubtful appearances associated with suspected pregnancy. As regards what may be reckoned as fœtal relics, he classes well-preserved fœtal elements, such as chorionic villi, columns of cells with a covering of syncytium and syncytium buds (placental giant cells) as reliable evidence, and adds serotinal giant cells, which, however, he shows are not always confirmatory of previous pregnancy. As regards the maternal tissues Opitz includes certain evidence of pregnancy, decidua cells of from 20 to 50 micromillimetres grouped in distinct ways, and also uterine glands as modified by pregnancy; but he insists that many appearances which seem at first sight conclusive are not always reliable. There are fallacies about fragments of uterine glands when signs of repair of tissues are detected on a piece of uterine mucosa; they may indicate previous pregnancy but the observer must be sure that they do not represent restoration of structures involved in a simple abrasion.

(112) Therapeutics of Non-Puerperal Mollities.

Littauer (*Münch. med. Woch.*, January 9th, 1900) reports 2 cases of mollities ossium or osteomalacia treated by phosphorus. One patient had been cured and free from recurrence for two years, the other had been three months under treatment and was steadily improving. He admits the value of total removal of the ovaries. Before this practice, but 20 per cent. of cases of mollities were cured by treatment, now castration cures 83.1 per cent. of reported cases. Treatment by phosphorus is neither so free from disagreeable effects nor so certain as castration, which cuts short the generative faculty with which mollities is intimately associated. But it acts well if it can be tolerated for a prolonged period in large doses. When this drug fails to cure, castration can always be practised, whilst in some cases where the operation has failed phosphorus has succeeded, and the patient has thus escaped what after all is a mutilation.

THERAPEUTICS.

(113) The Treatment of Morphinomania.

Joffroy (*Gazz. Hebdom.*, December 10th, 1899) points out that in treating morphinomania it is not enough merely to prevent the patient from taking the drug, but it is necessary also to put him into a condition in which he can tolerate its withdrawal. These patients often take a much larger quantity of morphine than is necessary to satisfy their cravings, and the first step should be to ascertain what is the minimal dose which will prevent the physical symptoms of abstinence from the drug, particular attention being paid to the state of the heart and circulation, the alimentary tract and the urinary apparatus. An important object is to place the organs by which the drug is excreted in as perfect working order as possible, giving tea, coffee, and moderate doses of sparteine to stimulate the functions of the kidney, and using hydrotherapeutic measures to increase the activity of the skin. The patient should, of course, be placed under the best hygienic conditions possible. When this preparatory treatment is complete he must then be absolutely isolated, so that it is impossible for him to obtain morphine. The gradual method of suppressing the drug should only be employed in patients who show a marked morphine cachexia. The abrupt method may be used when a medical man is at hand to administer a dose of the agent in case of serious collapse, and is suitable for cases that are not of long standing, or in which the patient is young and free from cardiac or other visceral lesions. In most cases an intermediate method, that of Erlenmeyer, is advisable—a rapid method, but not abrupt, combining the safety of the gradual method with the quickness of the other. The patient must first be put into a condition to sustain the process of demorphinisation, and then each day a half of the daily dose may be cut off: when the dose has become very small the drug may be altogether discontinued. For severe cases, eight to ten days are usually sufficient; for slight cases, six to eight days. The advantage of this plan is that, while allowing a sufficiently safe withdrawal of the morphine, affording a protection against collapse and sudden death, yet a long time is given for convalescence. In whatever way the deprivation is brought about, the patient may be greatly relieved by counteracting the excessive acidity of the gastric contents. This follows on the withdrawal of the morphine, which, being in great part excreted by the gastric mucous membrane, has inhibited the secretion of the gastric juice. This hyperacidity is not improbably the cause of the vomiting, diarrhœa, insomnia, lumbar pains, etc. The desired object may be obtained by causing the patient to drink Vichy or other alkaline water. If the pulse should become irregular and very weak, morphine must be injected. But good feeding, with coffee and milk, should be sufficient in most cases to prevent collapse. Care must be taken in employing other hypnotics, such as chloral, bromides, sulphonal, and in using alcohol or cocaine, lest another habit should be substituted for the morphinomania. To lower blood tension and favour elimination, serum may be injected subcutaneously. Prognosis should be reserved, and prophylaxis is always more hopeful than cure.

(114) Therapeutics of Cholelithiasis.

Herrmann (*Mittheil. aus dem Grenzgeb. d. Med. und Chir.*, vol. iv, Pt. 2, 1899), who writes as Director of Hospitals at Carlsbad, expresses his opinion as to when cholelithiasis is a medical and when a surgical disease. In the typical and uncomplicated form, where life is but seldom threatened, medical treatment is excellent, a regular course of mineral waters proving sufficient to cure most cases. In complicated cases mineral waters act favourably as cholagogues, which are always indicated; they seem to reduce the calculi to a latent condition, which is beneficial in some respects. Hermann admits, as a physician, that there is no evidence that any mineral water dissolves calculi, or causes by any means their expulsion. As to operation, Hermann would feel more certain of its value were clear evidence at hand that recurrence of cholelithiasis was rare after cholecystotomy and allied procedures.

(115) Yeast Enemata in Infantile Gastro-enteritis.

Thiercelin and Chevrey (*Gazz. des Hôp.*, January 9th, 1900), great believers in beer yeast as a therapeutic agent, now employ it for infants with gastro-enteritis. After submitting the patient to aperients and water diet, the intestinal canal is thoroughly washed out. A teaspoonful of dry yeast, or a dessertspoonful of fresh yeast, is dissolved in tepid water, previously boiled, and thrown up the rectum by an ordinary ball-enema syringe. The nates must, of course, be held together for a few minutes, lest the enema be rejected. The yeast is administered twice or three times daily; the intestinal tract must always be washed out first, and the patient kept on water diet. When the fever has subsided, solid diet may be allowed; the yeast enemata should be

continued as long as diarrhœa persists. Excellent results are claimed from this treatment.

(116) Nirvanine.

BOLOGNESI (*Bull. Gén. Thérap. Méd.*, December, 1899) states that this new local anæsthetic, so called after the nirvana of the Buddhists, is a hydrochlorate of methylic ether and ethyl-glycocol-amido-benzoic acid. It is a variety of orthoform, and was discovered by Einhorn and Heintz in 1898. It occurs in the form of a white powder which crystallises from absolute alcohol in prisms; it melts at 185° C., is without odour, and has a saline and slightly bitter taste, something like the taste of potassium iodide. It is not caustic, and is said to be not toxic even in large doses. It is soluble in water and slightly so in ether. As a local anæsthetic, in a 10 per cent. solution it produces analgesia at the place of injection in five minutes. The duration of the anæsthesia varies with the degree of concentration of the solution. Even in a 1 per cent. solution it is an efficient antiseptic. The toxic dose for a man of 8st., according to Luxemburger, Joannin, and Reynier, is about 165 gr., but Braquehaye recommends that in surgical practice $\frac{3}{4}$ gr. should not be exceeded. It has been used successfully in operations on cysts, fatty tumours, neuromata, epitheliomata, hernias, and in dental surgery. In the latter it may be used as an injection or as a direct application to the mucous membrane. In solution it has relieved the pruritus of a long-standing eczema which had resisted all other measures. It has also proved of use in operations on the eye and on the bladder. As compared with cocaine it should be used in stronger solutions and larger doses, its toxicity is much less, and its anæsthetic power is less, but by increasing the dose the same anæsthetic efficiency can be obtained with, it is asserted, a much greater degree of safety.

(117) Silver Salts in the Treatment of Acute Pneumonia.

CACCIANIGA (*Boll. dell. Assoc. Sanitat*, Milan, An i, N. 9) has collected 60 cases of acute lobar pneumonia in which treatment by silver nitrate seemed to be clearly beneficial. Of the 60 cases 3 only were fatal, the rest recovered. The dose was from 0.10 gram in children (8 to 10 years) up to 0.25 to 0.30 gram in adults, given in pill or suspension. In cases of urgency a 0.50 per cent. sol. of protargol was injected hypodermically. Beyond some vomiting no ill effects were observed from the treatment either by silver nitrate or protargol. The most marked effect of the silver salt was the reduction of the temperature, which began in the first twenty-four hours and was noticed in all the cases. Apyrexia occurred by crisis in 48 cases, by lysis in 12. When small doses were given apyrexia generally occurred by lysis, with larger doses by crisis. In the defervescence due to silver the pulse did not come down at the same time but later. Resolution under the silver treatment was somewhat prolonged and unaccompanied by redux crepitation. The author is so satisfied with his results that he pleads for a more extended trial of this mode of treating acute pneumonia.

(118) Sun Baths in the Treatment of Tuberculous Joints.

MILLIOZ (*Thèse de Lyon*, 1899), unlike Finsen of Copenhagen, who used the ultraviolet rays of the spectrum in the treatment of lupus, has employed all the rays of sunlight to act on tuberculous joints. He disapproves of the systematic fixation of the limb in which the tuberculous lesion is situated. The patient is placed on a suitable couch in the sunniest part of a garden or other open place, with the affected joint fully exposed to the rays of sunshine. To protect the head of the patient some sort of sunshade may be improvised. If the upper limb is the seat of the disease the patient may preferably be allowed to walk about in the garden. The duration of the sun bath should be several hours a day. During the intervals the joint is covered with wool, and rather firmly bandaged. Sometimes after the first or second bath the joint becomes more painful, but this soon passes away in most cases, but if it should continue it may be necessary to intermit the treatment for several days. Rapid pigmentation of the skin by the sun's rays has been noticed to coincide with comparatively quick recovery. The joints are said to become smaller, the skin healthier looking, the discharges, if such be present, less purulent, and the fistulæ close. Such results, however, may require months of treatment.

PATHOLOGY.

(119) Bacteriology of Bile.

IN view of the increased frequency of surgical interference in biliary affections Fraenkel and Krause (*Zeit, f. Hyg. u. Infectionskr.*, 1899, xxxii. s. 97) have endeavoured to obtain more definite information as to the bacterial relations of human bile. With this object they have examined the contents of 130 gall bladders—128 *post-mortem*, 2 at operations—and further have tested the possibilities of bile as a nutrient substratum for pathogenic bacteria. In the first series of experiments the gall bladders were sterilised, opened, and the contents received into sterilised vessels. Glycerine-agar plates were immediatly smeared with the bile and incubated for 24 hours at 36°C., if they remained sterile a second and even a third plate were similarly treated. In 15 cases anaërobie cultivation was also tried. Record of the colour, clearness, reaction and consistency of the bile was made. The reaction was generally neutral, in a few cases alkaline, never acid. The degree of turbidity of the fresh bile was no indication of its bacterial contents. Of the 130 cases examined, the bile proved to be sterile in 105 and to contain bacteria in 25. The cases included 35 of acute infective disease, 36 of tuberculosis, the remainder being comprised of cases of malignant tumours, heart, kidney, lung and brain disease. As regards the possibility of *post-mortem* bacterial invasion of the bile, no definite relation could be ascertained between the length of time which elapsed after death and before the examinations were made and the percentage of sterile and non-sterile specimens. Among the acute infective diseases bacteria were cultivated in 4 cases only, a result which has led the authors to conclude that the bile does not afford the medium in which specific bacteria are excreted from the system, except in those cases where the morbid process is essentially localised in the alimentary canal, as in cholera and typhoid. The bile in morbid conditions of the liver was examined in 23 cases, in 7 cases of cirrhosis it proved to be sterile, in 16 of cholelithiasis bacteria were found in 11 cases, namely: Bacillus coli in 5, diplococcus lanceolatus in 1, streptococcus pyogenes in 2, a non-motile bacillus in the others. A large percentage of infected biles were further found in cases of peritonitis; in 7 cases of purulent inflammation bacteria were found in 4, a pure culture of streptococci being obtained in 1. Among 8 cases of death after abdominal operation the bile contained bacteria in 3, namely, steptococcus pyogenes 1, bacillus pyocyaneus 1, bacillus coli 1. Results of special interest were obtained from the 36 cases of tuberculosis; by cultivation 2 only were found to contain bacteria (bacillus coli and non-motile bacilli), but the intraperitoneal inoculation of guinea-pigs with 11 of the specimens showed that 5 contained the virus of tuberculosis in an active form. These 5 cases in which the liver showed no macroscopic tubercles (not examined microscopically) included 2 of miliary tuberculosis, 1 of caseous pneumonia, 1 of caseous peribronchitis, 1 of pulmonary and intestinal tuberculosis. The absence of intestinal lesions in all but one of these cases indicates that the tubercle bacilli must have come from the liver, and suggests another method of intestinal auto-infection other than that of swallowing infected sputum. In the second series of experiments tubes of sterilised bile were inoculated each with a loop of a pathogenic bacterium inoculated at 36° C., and examined after twenty-four hours and on succeeding days by means of glycerine-agar plate cultures. By this method it was found that the bacillus typhosus, the bacillus coli, the bacillus pyocyaneus, the vibrio choleræ, and staphylococci, flourished well in their new medium, and remained alive for a considerable time. Other organisms as streptococci, bacillus diphtheriæ, diplococcus lanceolatus, succumbed more or less rapidly. The authors experimented with the bacillus typhosus and the bacillus diphtheriæ, and found that cultures in bile, twenty-four and seventeen hours old respectively, were more rapidly fatal to guinea-pigs on intraperitoneal inoculation than bouillon cultures of a similar age. Pure sterile bile, alien or not, produced but slight changes on intraperitoneal inoculation.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(120) Endocarditis in Tonsillitis.

PACKARD (*Amer. Journ. of Med. Sci.*, January, 1900) discusses the relation of affections of the cardiac valves and acute inflammation of the tonsils. Among several cases he records that of a child, aged 4, whom he had seen on various occasions for ordinary slight ailments, and whose heart he had frequently examined without finding any abnormality. He subsequently attended the child for acute tonsillitis, and then ascertained the presence of a systolic murmur at the apex. This was present as a blowing systolic murmur at the apex a year afterwards well transmitted to the left anterior axillary line with accentuation of the pulmonary sound, but with the apex beat in the normal position. Somewhat similar cases are also recorded together with others in which the writer could not be so certain as to the absence of any cardiac condition previous to the tonsillitis, although there was every reason to suppose that none such existed. In all the author's cases careful inquiry into the past history failed to reveal any articular pains, and careful examination showed no present signs of joint trouble. Granting that these are truly cases of endocarditis, the author shows that their exact position becomes a matter of considerable importance. There are two explanations, one being that the cases are rheumatic, the only manifestations being tonsillitis and endocarditis; the other that the tonsillitis itself is a primary condition independent of rheumatism and the cause of the endocarditis. The author says that the former is by no means satisfactory as in his cases and probably in a large number of others, but there was no other manifestation of rheumatism at any period. On the other hand he believes strongly that there are cases of acute tonsillitis and pharyngitis having no connection with rheumatism, and in which endocarditis may arise either as a direct consequence of infection of the endocardium by micro-organisms gaining admission by way of the tonsils, or else due to inflammatory changes brought about by the action of toxins on the valves, and produced by micro-organisms present in the throat and absorbed. The writer quotes cases where staphylococcus aureus has been found both in the tonsil and in vegetations on valves. While many works refer to tonsillitis as one of the rheumatic series, and possibly occurring without any articular manifestations, little reference is made to the possibility of acute tonsillitis being itself the cause of the endocarditis, independently of acute rheumatism. This occurrence is, however, noted by a few writers, for example, Osler, Dupré, R. C. Cabot, and Ruault, all quoted by the author of this paper.

(121) Reduplication of the Second Sound in Mitral Stenosis.

VILLANI (*Il Policlinico*, May 1st, 1899) contributes the first part of a somewhat extensive examination of this question, with a record of four cases of mitral stenosis, with necropsy. The author examines fully the various explanations put forward to explain the reduplication of the second sound in mitral stenosis; for example, the suggestion that it is due to asynchronism or to alterations in pressure on the pulmonary and aortic systems, etc., and finds none of them satisfactory. His suggestion is that it is due to a second vibration of the disease-altered mitral valves due to possible impact of blood, this vibration occurring in the first part of the diastole immediately after the second diastolic sound. This reduplication sound is heard before the murmur; hence it cannot be due to a vibration of the valves from the *vis a tergo* of blood driven against the parietal surface of the valves, for in that case the reduplicated sound would only be produced when the blood was already in the ventricle, that is, after the murmur.

(122) Pseudo-hypertrophy in Two Members of a Family.

F. SCHÜLTZE (*Deut. Zeit. fur Nervenheilkunde*, 1899, Bd. iv, Heft. 5) records two interesting cases illustrative of this condition. A boy, at the age of 2, had pseudo-muscular hypertrophy, the calf muscles being especially hard and big. The skeleton was normal. At the age of 19 he died of respiratory paralysis, and at this time the spinal column was kyphotic and scoliotic. The brain and spinal cord appeared normal. The bones, particularly the long bones of the extremities, showed an extreme degree of atrophy, with contraction of the medullary cavities. Microscopically the muscles showed the well-known change of atrophy and of degeneration (fatty fibroid changes and hyperplasia). The spinal cord cells were normal with Nissl's method. Schültze thinks a congenital disease of the bones can be excluded in this case, and looks upon the osseous dystrophy as a separate event. It is also interesting to note that an elder sister of the patient suffered at the age of 27 from stiffness of the spinal column, which grew severe, and eventually involved the neck, hip, and knee-joints, so that the patient was reduced to a condition of helplessness from bony ankyloses of these joints. The spinal column assumed the position characteristic of rhizomelic spondylosis, and the bones became atrophied. This course of symptoms suggested the possibility of the hereditary origin of the osseous changes in the two members of the family.

(123) Loss of the Knee-jerks in Gross Lesions of the Prefrontal Lobe.

R. T. WILLIAMSON (*Glasgow Med. Journ.*, November, 1899) draws attention to the little-known fact that in tumour and abscess of the prefrontal lobe of the brain the knee-jerks are sometimes lost, just as in cerebellar tumour. In such cases there is usually nothing to account for the loss of the knee-jerks except the lesion of the prefrontal region. The knee-jerks were lost in three out of five cases of tumour or abscesses of the prefrontal region recorded previously (*Brain*, 1896, Parts LXXIV and LXXV, p. 346). In a case of tumour of the second left frontal convolution, recently recorded by Gordinier (*American Journal of the Medical Sciences*, May, 1899) it was stated that "the most careful reinforcement failed to elicit the presence of patellar tendon reflexes." Yet at the same time there was no other affection of the legs. The necropsy revealed nothing to account for the loss of the knee-jerks except the prefrontal tumour. In tumour or abscess of other parts of the brain, loss of knee-jerk is exceedingly rare. In tumours and growths involving the Rolandic or kinæsthetic region of the brain, the knee-jerk on the side opposite to the lesion is generally increased. Thus, in 30 cases of tumour of the Rolandic area of the brain, taken for comparison with 30 cases of gross lesion of the prefrontal lobe, the knee-jerks were both present in all except one, and in this one case the growth was very extensive and had invaded the basal ganglia.

SURGERY.

(124) Acute Osteomyelitis of the Temporal Bone.

MOURE (*Travaux de la Clinique des Maladies du Larynx et des Oreilles*, Bordeaux, 1899) draws attention to the importance of recognising cases of acute osteomyelitis of the temporal bone, a condition which, together with panotitis and labyrinthitis, may be caused by influenza. In these cases there is more or less pyrexia and general symptoms pointing to an important infection, while the local symptoms may not be marked in the neighbourhood of the temporal bone, nor is there anything in connection with the ear itself which would lead one to believe that a severe inflammation was in progress in the substance of the mastoid. In cases, of influenza or allied diseases, therefore, the writer points out that some intense mastoid pain rendered worse by slight pressure would indicate the necessity for immediate operation without waiting for the appearance of external swelling. As the external wall of the apophysis is much more resistant than the internal, it is quite possible there may be a serious extension of inflammation long before the appearance of external signs. Early operation in these cases is a simple procedure, and may have the effect of at once reducing the virulence of the inflammatory condition in exactly the same manner as occurs in other bones; and as there may be even the formation of a small amount of pus after operation, the author suggests that these cases are a form of osteomyelitis, the bone possibly being infected *viâ* the middle ear,

the organisms apparently gaining in virulence after invading the mastoid cells, etc.

(125) Arterial Ligatures in Removal of the Tongue.

Duvoisin, in a recently published pamphlet (Steinheil, Paris), an abstract of which is given in the *Centralbl. f. Chir.*, No. 46, 1899, states that his study of the blood supply to the tongue, the floor of the mouth, and the adjacent parts of the pharyngeal wall have led him to the conclusion that in radical operations in cases of lingual cancer ligature of the lingual artery does not afford a satisfactory degree of hæmostasis. To render the operation a bloodless one it would be necessary to tie also the facial and superior thyroid arteries, or to apply a single ligature to the external carotid. This latter procedure is advocated by the author, who states that it has been practised by Quénu in several cases without any bad results. As the seat of operation is thus rendered almost quite bloodless, the surgeon is given much facility for closely examining, and, if necessary, for carefully removing the adjacent glands. The margins of the wound in the stump of the tongue may be brought together by sutures, and the risk of wound infection be thus much diminished. Ligature of the external carotid, it is held, is in many cases an easier operation than that of the lingual artery. This latter operation, indeed, may be found impracticable in some instances of cancer of the tongue.

(126) Preputial Calculi.

Zuckerkandl (*Wien. klin. Woch.*, No. 1, 1900) reports a series of cases of urethral, ureteral, and preputial calculi. A peasant, aged 63, suffered from a swelling at the end of the penis of the size of a small apple, hard and creaking when pressed; the skin was normal, the orifice of the prepuce admitted a sound. There was no cystitis, but considerable difficulty in micturition. Twenty years earlier he had trodden on a wasps' nest, and the insects had flown under his clothes, and stung him badly on the penis. Phlegmonous erysipelas of the prepuce followed, and it underwent cicatricial contraction. The prepuce was slit up, and three calculi, each as big as a pigeon's egg, removed; two lay uppermost, fitting each by a facet on to the third, which lay under the glans. The calculi had caused remarkable flattening and atrophy of the gland, with chronic inflammation of its mucosa.

(127) Sterilisation of the Hands with Spirit of Soap.

Mikulicz (*Deut. med. Woch.*, June 15th, 1899) states that the best method of sterilising the hands known till recently is, after thoroughly washing them with a sterile nailbrush in hot water which has been previously boiled, to rinse them in alcohol. Many surgeons wash them afterwards in some antiseptic lotion, but this is of doubtful value. The disadvantages of the method, which are felt most in work among the poor or in military surgery, are the number of basins and the time required. Döderlein states that ten to twenty minutes' washing is necessary. Mikulicz, in order to obviate these difficulties to some extent has combined the two stages by mixing the water, soap, and alcohol together. For this purpose Hebra's spiritus saponis kalinus was tried but gave unsatisfactory results. The official spiritus saponitus of the German *Pharmacopœia* acted, however, excellently. It consists of 6 parts olive oil, 7 parts caustic potash, 30 parts alcohol, and 17 parts water. Experiments with the staphylococcus aureus proved that this spirit soap has a greater bactericidal power than 1 in 1,000 perchloride of mercury solution. Previous washing with water inhibits rather than increases this power. The following is the exact method employed in the Breslau surgical clinic: (1) If the hands are evidently dirty they are rubbed with sterile cotton wool soaked in the soap spirit until they appear clean; (2) the nails are cleaned with a Braatz's nail cleaner; (3) the hands are scrubbed with the soap spirit and a nailbrush, sterilised by boiling, for five minutes. The soap spirit, like lysol, makes the hands slippery. Mikulicz finds this no disadvantage, as he operates in sterile linen gloves, but if these are not employed the hands may be dried with sterile wool. The same method is equally useful for sterilising the field of operation. Besides the time saved, soap spirit has the following advantages over other methods: (1) It is odourless, non-poisonous, and, compared with other disinfectants, unirritating; (2) It appears to penetrate the epidermis for some depth, as the hands remain sterile under thread gloves longer than with any other method, including that with alcohol and perchloride of mercury; (3) it is cheaper than the use of pure alcohol after washing with soap.

(128) Recurrent Perityphlitis.

J. Henrichs (*Norsk. Mag. f. Laegevidensk*, lx, 943, July, 1899) has met with a case in which a male, aged 17½ years, who had had three attacks of appendicitis in as many years, was found to be suffering from a fluctuating swelling above Poupart's ligament on the right side. An incision was made, a drain inserted, and a little pus came away. At the end of fifteen days a fæcal calculus, the size of a haricot bean, was extracted. The patient recovered, but a fistula persisted for five months.

MIDWIFERY AND DISEASES OF WOMEN.

(129) Washing out the Uterus in Metritis.

Gesna (*Thèse de Paris*, 1899) has collected 120 cases of metritis treated by free intrauterine injections. It has been employed with success in all varieties of the disease—simple, complicated, acute, or chronic. He admits that in exceptional cases it has caused uterine colic, serous discharge, menorrhagia (moderate or severe), and sometimes a "slight peritoneal reaction." Gesna holds that these complications, which he is certainly right to note as a warning, are of little importance. Inflammatory lesions of the appendages are not, in his opinion, contraindications to this treatment, unless they are suppurative, then the pus must be evacuated before the injections are commenced. The collected cases treated, all with perfect success as far as the metritis common to all was concerned, are thus classified: Simple acute or chronic metritis, 21 cases; hæmorrhagic metritis, 24; metritis with diseased appendages, 45; metritis with uterine displacement, 20; and metritis with pelvic abscess, 10 cases. Blondel, in a review of this thesis, adds that the author should have added acute gonorrhœa as an absolute contraindication to washing out of the uterus; the treat has in suitable cases, besides those collected by Gesna, been largely adopted with success of late years (*La Gynécologie*, December 15th, 1899).

(130) Uterine Fibroids Complicating Pregnancy.

Rosenwasser (*Amer. Journ. of Obstet.*, November, 1899) reports 4 cases of this complication, and presents abstracts of some others recently published. He takes occasion to summarise the rules of practice when the case is seen before delivery, as follows: (*a*) In the interests of mother and child—(1) Non-interference: Whenever, on account of its location, the tumour will not interfere with delivery, or when its moderate growth will admit of delay till after the viability of the child, a conservative course is clearly indicated. (2) Myomectomy: This operation for pedunculated fibroids is as safe in its results as is ovariotomy under like conditions, but enucleation of fibroids has been followed by abortion in about 40 per cent. of cases, and its indications are therefore limited before delivery. (3) Porro's Operation: After viability of the child, or at term, if the tumour obstructs delivery and if the uterus must be sacrificed, Porro's operation has hitherto proved the safest procedure. (4) Vaginal Cæsarean Section: A successful case has been recorded by Dührssen, who bisected the cervix in its antero-posterior diameter, and who proposes a like delivery in certain cases of myoma low down in the uterus; his advice has not yet been followed. (*b*) In the Interest of the Mother—(1) Induction of Abortion: If the child must be sacrificed, the choice lies between this and hysterectomy. The writer holds that the accidents attending hysterectomy can be more readily controlled than the complications of an abortion, in which the hæmorrhage may [illegible] and [illegible] among cases reported as having aborted the death-rate has been 12 per cent. (2) Hysterectomy: This may be required as an emergency operation in cases of intolerable [illegible] from abdominal distension or pressure, or from interference with vital functions. After delivery the question of operation must be decided as in the case of ordinary fibroids.

(131) Resuscitation of apparently Dead Newborn Infants.

FRONCZAK (*Buffalo Med. Journ.*, lv, p. 418, January, 1900) brings forwards records of 4 cases of deep asphyxia of the newborn in which Laborde's method (rhythmic traction on the tongue 20 per minute) succeeded after other methods had failed. The importance of his observation is seen in the demonstration it gives of success even when no heart beat was apparent. In two of the instances the Schultze method had been used without exciting respiration.

(132) Vaporisation of Uterus: Effect on Uterine Tissues.

CZEMPIN (*Centralbl. f. Gynäk.*, No. 2, 1899) publishes an important report of a uterus removed with a myoma and a tubo-ovarian cyst two months after the patient, aged 33, had undergone treatment by injection of steam into the uterine cavity. He exhibited sections of the uterus before a German Society. The vaporisation had, it appears, been carelessly applied, and to the naked eye it was clear that the mucosa of all the cervix and the greater part of the uterine cavity was reduced to cicatricial tissue, but there was a small excavation in the uterus of doubtful nature, which seemed as though caused by a myoma. On microscopical examination the cicatricial atrophy became more evident, but at the excavation the mucosa had been restored, though in a remarkably lower type. The epithelium had been replaced, but the subepithelial tissue was very scanty, contained but few vessels, and had lost all its glands. Czempin suspects that this condition of the endometrium exists in subjects where vaporisation has been practised till the uterus has become atrophied and menstruation permanently stopped, yet the uterine cavity remains viable for the sound.

(133) Two Cæsarean Sections on the Same Patient.

MCCOY (*Amer. Journ. of Obst.*, October, 1899) delivered a patient, aged 19, of her first child, by craniotomy, as the head could not be engaged with axis-traction forceps, and version could not be performed. External measurements of the pelvis were as follows: Sp. il., 7½ ins.; cr. il., 8¾ ins.; ext. conj., 5 ins. Time occupied in delivering the child and repairing the damage done to the parts was about three hours. Ten months later McCoy was again called to the patient in labour. Cæsarean section was advised to save the child; the parents stipulating that no organs should be removed unless absolutely necessary. The operation, deliberately performed on the following morning, [illegible] over a great part of the [illegible] child weighed 8½ lbs. Mother and child left hospital on the twenty-first day. Six months later there was a discharge at the lower part of the wound; it resembled that found in endometritis, and a probe could be readily passed through the abdominal fistula into the cavity of the uterus. The view that this was an abdomino-uterine fistula was confirmed when, seven months later—two months after weaning the child—a bloody discharge from the abdominal sinus occurred, coincident with the menstrual period. This bloody discharge appeared with each recurring menstrual period, and was much brighter in colour than that which passed the vagina. It was observed that the blood from the sinus usually appeared a day earlier than that from the vagina. The patient became pregnant again, and the discharge from the abdominal sinus ceased. At full-term Cæsarean section was again performed. It was found that the uterus was intimately adherent to the abdominal wall over a space of 2½ inches, and on either side of the old uterine scar were bands of adhesions extending along the entire length of the organ. The field of operation was thus shut off from the peritoneum, except at the fundus. The uterus was therefore not drawn out through the abdominal wound. The incision in the uterus was made along the line of the old wound, and no trace of the silk sutures introduced at the time of the first operation could be found. The tubes and ovaries were removed. The child weighed 7⅛ lbs., and mother and child went home well at the end of four weeks. They then both contracted diphtheria, to which the child succumbed. The author discusses the relative indications in this case, and concludes that symphysiotomy would not have allowed of sufficient space for the birth of a living child; and that Cæsarean section, performed in a healthy woman, before her resisting powers have been lowered by a prolonged labour, is, under favourable surgical conditions, fraught with little if any more danger to the mother than embryotomy. He thinks it would have been better in the second operation to have divided the tubes between double ligatures rather than remove them and the ovaries.

THERAPEUTICS.

(134) Salt Water Infusion.

HÄBERLIN, Zurich (*Münch. med. Woch.*, 1900, No. 2) reviewing the present position of salt water infusion, points out that (1) in acute anæmia, whether surgical or puerperal, there is no other remedy which, while absolutely harmless, so rapidly and powerfully invigorates the heart's action. The injections have, moreover, a hæmostatic action which might be utilised in internal hæmorrhage, in climacteric hæmorrhage, and in menorrhagia of chlorotic, bilious, or gouty origin. Used by Cantani in the cholera of 1865, it was extensively and successfully employed in the late Hamburg epidemic, and its effects in replacing the fluids abstracted from the body have proved still more favourable in the acute diarrhœa of children. In chronic diseases of the alimentary canal with deficient resorption the balance of indispensable moisture in the system may be upset by slight hæmorrhage, diarrhœa, or vomiting, or by some sudden diminution in the limited amount of nourishment ingested. Infusions are therefore often indicated after operations on the stomach and intestines; indeed the custom of Kocher's clinic of commencing such infusions before operations of this kind is worth imitation. (2) As a means of improving the condition of the blood in intoxication or infection, the experiments of physiologists show that, to arrest intoxication, the injection should be made soon after the poison, and is beneficial only when the poison does not act directly upon the nervous centres controlling the blood vessels or the heart. It is only injections immediately after pyæmic rigors that can be used in this way. In all other stages treatment must be by washing the poison out of the body, diluting the poisoned blood, stimulating the action of the heart, and promoting the vegetative processes. Infusion of salt solution is indicated whenever the heart's action requires more blood, when the system is depleted of fluids, or where the fluid intake is unduly limited, and when the blood and tissues are loaded with poisonous matter, cardiac energy impaired, glandular activity diminished, and the nervous centres benumbed. (For abstract of articles by Sahli and Lejars, quoted by Häberlin, see EPITOME, 1896. ii, par. 11.)

(135) Treatment of Localised Tuberculosis by a Glycerine Extract of the Fresh Liver of the Cod.

GUERDER (*Rev. de Thérap.*, January, 1900) points out that the good effect of cod-liver oil in tuberculosis is due to its being a fatty body, to its containing biliary principles which stimulate nutrition and the secretions, and to the action of certain ferments which it contains. He concludes from his experiments on animals and observations in the human subject, that while pure cod-liver oil cannot be given by subcutaneous injection on account of the severe pain which it causes, the aseptic injection of the glycerine extract of the fresh liver is not only practicable but quite harmless. He recommends, however, that at first it should be given in small doses and diluted with sterile salt solution. Locally its injection produces a reaction, which he believes to indicate a collection of phagocytes in the diseased tissues. He maintains that it produces a removal of tuberculous tissues comparable to the softening and detachment of the false membrane of diphtheria brought about by the injection of antidiphtheritic serum, differing, however, in being slower. It also produces a general effect in improving the nutrition of the animal body, shown in phthisical patients by a distinct amelioration of their symptoms, and shown by a diminution of the suppuration from the local lesion. The ordinary doses in which the extract is given are from 8 to 16 minims.

(136) The Action of Hypnotics associated with Diuretics on the Renal Function.

PIROCCHI (*Il Policlinico*, January 1st, 1900), as the result of a series of experiments on rabbits, found that chloral added to

caffein or arbutin constantly increases their diuretic action, sometimes but not always that of diuretin and nitrate of potash; it has no effect in conjunction with nitrate of soda. Other hypnotics, for example, curare, paraldehyde, and sulphate of duboisin, have been found to increase the diuretic action of most of the diuretics. The author says that most of the diuretic action attributed to caffein is really due to the reinforcing action of the narcotics adopted for convenience in the course of experiment. Caffein in ordinary medicinal doses has only a weak and uncertain diuretic effect of itself. The same applies to the nitrates of soda and potash, to arbutin, and in part to diuretin, although this last drug has a strong action on renal secretion.

(137) Treatment of Renal Concretions of Uric Acid with Glycerine.

Herrmann, of Carlsbad (*Medical Chronicle*, January, 1900) has obtained favourable results in nephrolithiasis by the administration of glycerine by the mouth. He gave it in the first instance on theoretical grounds based on the facts that glycerine is a solvent of uric acid, and that when given *per os* it is excreted in large part with the urine. The good effects he has observed he does not now attribute to any solvent action of the glycerine on the uric acid, but to physical changes produced in the urine. When given in the large doses he employs, it causes the urine to become somewhat oily in consistence, and to its lubricating action he believes the good results are to be ascribed. Rosenfeld, who has also praised the method, believes it to give relief by raising the specific gravity of the urine and thereby producing a change in the position of the calculi in the pelvis of the kidney. It is given in quantities of from 1 to 4 ounces, dissolved in an equal quantity of water, and taken as one dose, between two meals, and repeated two or three times in a period of several days. He has used it in 115 cases of nephrolithiasis, and in 60 per cent. of these it proved efficacious either by removing concretions or by relieving the pain associated with the disease. Ortner and Kugler have confirmed the stone-expelling power of glycerine, while Casper and Rosenfeld speak of its anodyne effect as simply astounding. Given in the doses named, the only unpleasant effects observed were headache in 12 nervous patients, and diarrhœa in 3 cases where the digestive organs were not healthy. In all the 15 cases these effects ceased in the course of a few hours. In such patients, and indeed in others, it is recommended that the initial dose should be smaller than the minimum dose named, and that it should be gradually increased. The presence of albuminuria does not contraindicate the employment of glycerine, the amount of albumen was never increased, and in one case, after three doses of the agent, the previous albuminuria completely disappeared. In 6 cases of the 115 hæmaturia occurred, and this he ascribes to the concretions changing their position either spontaneously or owing to the glycerine.

(138) The Insolubility of Trional.

Pouchet (*Bulletin Général de Thérapeutique*, December 8th, 1899) refers to the inconvenience arising from the sparing solubility of trional in hypnotic doses, and suggests that the usual plan of giving it in cachets is responsible for the inconstancy of the results obtained with it. He states that it is soluble in oil of sweet almonds in the proportion of 1 in 20 at ordinary temperatures (20° to 25° C.). From this an emulsion can be prepared, and so the dose, and consequently its hypnotic effects, easily regulated. He suggests that it may be given in the following combination: Trional 1 part, oil of sweet almonds 20 parts, sugar 8 parts, gum arabic $\frac{1}{8}$th part, tragacanth $\frac{1}{8}$th part, orange flower water 10 parts, and cherry laurel water 2 parts. The emulsion is to be given in water or milk. The proof that the trional is completely dissolved is that none remains behind when the preparation is filtered. Another way of administering the drug is trional $\frac{1}{2}$ to 1 part, oil 10 to 20 parts, with the yolk of one egg and 150 parts of water.

PATHOLOGY.

(139) Intertrigo, and its Causation by Microbes.

Max Meyer (*New York Med. Journ.*, December 16th, 1899) describes and gives microphotographs of a new micro-organism which causes erythema intertrigo, namely, micrococcus intertriginis. It is well known that want of cleanliness, irritability of the epidermis, and profuse sweating favour the development of the disease. The epidermal surface becomes rough or excoriated, redness and hyperæmia occur, and the erythematous areas afford a suitable soil on which micro-organisms can grow, or into which they can penetrate, and thus give rise to various affections. The micrococcus above mentioned enters the skin and penetrates into its deeper layers, excreting an irritative, cheesy, ill-smelling, white material, after which further progress with suppuration and even ulceration may be the result. Cultivations from the small cheesy spots were made in gelatine. Colonies of micro-organisms resulted, which were spherical in outline and light yellow in colour, with finely serrated margins. The gelatine was liquefied, forming first a shallow depression which gradually grew funnel shaped, leaving in its concavity the liquefied gelatine, which, mingled with the colonies, now gave off a disagreeable odour like that of rotten cheese. Stab cultures grew similarly, but sent out threads penetrating the medium in all directions. On agar the cultures only grew on the surface in colonies of a slight yellow colour. In serum the growth was rapid and formed a light yellow membrane. On potatoes a yellowish-brown spot appeared, from which the colonies spread, the margins being of a lighter colour than the centre. Milk was not coagulated or acidified, and the indol reaction was not observed. The organism was a micrococcus of from 0.5 to 0.9 micromillimetres in diameter, without flagella or spores. It is aërobic, and in the hanging drop it does not reveal any independent movement. It stains well with the aqueous aniline dyes, and decolorises with Gram's method. The disease could be reproduced in animals in forty-eight hours, and cultures from the seat of inoculation reproduced the same germs. These were found to be virulent even down to the tenth generation. They grew best at the body temperature, and at temperatures above 70° C. and below 10° C. they were destroyed. A $\frac{1}{2}$ per cent. solution of formaldehyde was found most efficacious in killing them. In honour of his teacher, the late Professor Rossbach of Jena and Würzburg, the name "micrococcus intertriginis Rossbach" is given by the author. Eighteen excellent microphotographs accompany the paper.

(140) The Morphology of the Heart in Mitral Stenosis.

Ferrannini (*Arch. Ital. di Med. Int.*, v. ii, f. 3-6) has made a study of this question, with especial regard to the condition of the left ventricle. This by many authors is said to be atrophied until it becomes a mere appendage of the left auricle. Others have found it hypertrophied even in uncomplicated cases of mitral stenosis. Ferrannini examined the condition of the left ventricle during life by Rummo's volumetric method in 29 cases of mitral stenosis (complicated and uncomplicated with other cardiac mischief), and found a constant enlargement of the left ventricle. This was so in but 17 cases of simple uncomplicated mitral stenosis. The records of 27 *post-mortem* examinations in addition furnished corroborative evidence of the frequency of this hypertrophy of the left ventricle. The explanation is possibly to be found: (1) In sympathy with the hypertrophy of the right ventricle, the two muscles not being so widely separated as used to be taught; (2) in the attempt to cope with the increased peripheral resistance due to the diminished capacity of the arterial system resulting from the mitral stenosis; (3) on the myocarditis which commonly accompanies this as other forms of cardiac disease.

(141) Bacillus Icteroides.

A. Bruschetti describes (*Centralbl. f. Bakt. Parasit. und Infektionskrank.* December 23rd, 1899) some experiments on animals with the bacillus icteroides. In these he shows that the virulence of the microbe can be heightened by its passage through animals. He also states that in laboratory animals the infection with the bacillus icteroides represents a process so characteristic and so different from disease in the usual experimental types of disease of a bacterial nature that it lends itself excellently to the study of the problems in regard to immunity.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(142) Typhoid without Intestinal Lesions.

Picchi (*Lo Sperimentale*, Anno 53, fasc. 4) has collected the records of 21 cases of typhoid infection without any internal lesion (*post-mortem*). To these he has added 2 cases of his own. A critical examination of the reported cases leads the author to reject some, as the evidence of freedom from intestinal lesion of a typhoid character was not decisive, but in 14 of the 23 cases the evidence was decisive in favour of the existence of a typhoid infection without intestinal lesion. These cases probably "do better" than the ordinary typical case, for they escape the group of dangers due to intestinal ulceration. Even in these non-intestinal cases it is probable that infection takes place through the intestine, even although there are no manifest lesions to be found. The 2 cases reported in detail occurred in two sisters who came from a house where typhoid was prevalent. One died from bronchopneumonia and gangrene of the lung, the other from pulmonary embolism. In each case there was strong bacteriological evidence of typhoid, but the intestines were normal and showed no sign of typhoid infection.

(143) Dermatomyositis and Acute Hæmorrhagic Polymyositis.

J. Bauer (*Deut. Arch. f. klin. Med.*, 1899, vol. lxvi, p. 95) thinks that among the various cases of myositis two forms may be distinguished, namely, dermatomyositis (Unverricht) and polymyositis hæmorrhagica, which are probably closely allied affections, though they differ from each other in some respects. According to H. Lorenz, dermatomyositis generally begins with prodromal *malaise* of several days' duration, associated with rheumatoid pains, stiffness in all the limbs, and, later on, with fever. Amongst objective signs œdema in the face is usually the first to be noted. Then come swellings in the limbs with severer muscular pains, and dermatitis spreading over a large area of the surface of the body. The hard œdema which accompanies the muscular disease is very characteristic, and causes deformity of the extremities. Profuse sweating is very troublesome. The spleen is generally enlarged. The disease extends continuously or by bounds over a great part of the musculature, and often involves the muscles of respiration and the pharyngeal and laryngeal muscles. In most cases the disease causes death. In a lesser number of cases the severest symptoms either remain absent or disappear again; the disease may quiet down and show occasional exacerbations, the affected muscles becoming more or less atrophied. Cases have been distinguished as acute, subacute, and chronic, and a chronic case may last for one or two years or even longer, during which period fresh muscles are occasionally attacked; a case described by Loewenfeld lasted two years and a half. The affected muscles show macroscopic changes, and may present a uniform pale-reddish or pale-yellowish coloration, or there may be yellowish-grey or diffuse reddish stripes. The microscope shows an interstitial cellular infiltration with atrophic changes in the muscular fibres. According to Lorenz, hæmorrhagic polymyositis is a form of the same affection, but characterised by hæmorrhages in the muscles and by involvement of the heart. The skin is generally affected, and may present exanthemata, more particularly hæmorrhages. With a single exception cardiac troubles have been noted shortly after the commencement of the disease—palpitation, tachycardia, cardiac insufficiency. Of six cases, five ended fatally by cardiac failure. The disease was always found to last a long time (several months). In the chronic stage the muscles may show newly-formed connective tissue patches (containing remnants of blood pigment) and atrophic changes in the muscle fibres between them. Another and more benign form of polymyositis has been described, which occurs in association with erythema multiforme, and often with arthritis. It has been suggested that these cases are due to the same cause as acute rheumatism. Bauer narrates the case of an apparently healthy man, aged 39, who was treated at the Munich Hospital for acute hæmorrhagic myositis, and died suddenly from cardiac syncope about ten weeks apparently after the commencement of the illness. At the *post-mortem* examination hæmorrhagic and inflammatory changes were found in the affected muscles; especially noteworthy was the great accumulation of leucocytes between the muscle fibres at some spots and the fact that pure cultivations of staphylococcus pyogenes were obtained. The heart was involved in the morbid process, and there was a rather large hæmorrhagic patch in the wall of the left ventricle. The spleen and liver were both enlarged. In this case there was no œdema of the subcutaneous tissue, and no exanthema was noted except some patches of pigmentation.

(144) Rheumatic Albuminuria.

Parkes Weber (*Ed. Med. Journ.*, January, p. 48) reports the following case: A man, aged 41, had an attack of acute articular rheumatism. A mitral systolic murmur was present. The urine contained albumen and casts. With the usual treatment, he recovered in three weeks. Six days later a relapse occurred. Subsequently, two others followed, making four attacks in all. In each of these there was albuminuria, and with the decline of the rheumatic symptoms its amount always diminished. The heart complication was only temporary. Dr. Weber regards the articular symptoms, the pyrexia, and the renal attack, as a rheumatic-trio or rheumatic "sympton-complex." Amongst other varieties, slight albuminuria sometimes occurs, with diarrhœa and intestinal catarrh. Its disappearance under doses of bismuth subnitrate may be due to the removal of intestinal contents, whose absorption leads to irritation of the kidney cells, which may be equally affected by rheumatic toxins.

(145) Progressive Ankylotic Rigidity of the Spine.

Sachs and Fraenkel contribute a paper (*Journ. of Mental and Nervous Disease*, January, 1900), accompanied by records of cases under their own observation. The main features of this condition are more or less immobility of the whole or part of the vertebral column without any special pain on percussion. The cervical region shows some kyphosis, the head being bent forward and downward. There is some paralysis of the muscles of the trunk, neck, and extremities, with slight atrophy of some special shoulder groups. Sensation may be diminished within the depression of the cutaneous branches of the back and neck. In the lower part of the back and extremities there may be pain. In another type of this condition the shoulder or hip-joint may be involved as well, occasioning more or less difficulty in walking. The disease appears to be a progressive one, and affects the male sex chiefly. There have been certain observations made *post mortem*, showing chronic lepto-meningitis, ossification of ligaments, hypertrophy, and ankylosis of joints. The lepto-meningitis may even involve the cord. The exact position of spondylitis is uncertain; in many cases there is nothing suggestive of rheumatic history. The writer discusses the relation between this condition and arthritis deformans.

SURGERY.

(146) Treatment of Osseous and Articular Tuberculoses in Infancy.

Kirmisson (*Bull. et Mém. de Chir. de Paris*, December 5th, 1899) advocates conservative treatment rather than resection as a rule in cases of tuberculous diseases of bones and joints in infants. For such patients, as they have not the same social obligations as their elders, time is not of much importance. In children, moreover, there is a great capacity for reparation after tuberculous disease, even when there has been suppuration, as is shown by the extreme deformity due to the severe and extensive osseous lesions of spinal caries. There can be no doubt, the author states, that abscesses associated with both spinal caries and hip-joint disease may be spontaneously absorbed. The dangers of tuberculous generalisation are less threatening in the child than in the adult. In the former certainly there is always a possibility of tuberculous meningitis, but pulmonary tuberculosis is infinitely less frequent in childhood than in later periods of life. The treatment preferred by the author consists in a prompt opening of abscesses and a

methodical injection of iodoform. With regard to resection of the hip in young patients, it is held that this operation is a serious one, that its results are not certain, as is indicated by the frequent persistence of sinuses, and that its results from an orthopædic point of view are inferior to those of conservative treatment.

(147) Plastic Operation for Hour-Glass Stomach.

Camston (*New York Med. Journ.*, December 9th, 1899) operated on a single lady, aged 47, subject to symptoms which led him to diagnose stricture of the pylorus. When the abdominal cavity was opened by a Langenbuch's incision on the left side the pylorus was examined and found normal. At about the junction of the lower and middle third of the lesser curvature of the stomach lay a circular stricture 2¾ inches in diameter, united to surrounding structures by a few tough adhesions. The proximal two-thirds of the stomach were much dilated. Camston operated as in pyloroplasty. An incision over 4 inches long was made on the anterior surface of the stomach and in its long axis, the middle of the incision cutting through the stricture. The stenosed portion was found to allow the passage of three fingers. The borders of the wound were brought together so as to make it transverse to the long axis of the stomach. Fourteen interrupted silk sutures were used, but only through the muscular coat. Then the peritoneum was closed over the row of silk with catgut used as a Lembert's suture. The parietes were closed in layers without drainage. The patient vomited half-digested clots on the evening of operation. On the sixth day she was fed by the mouth. The operation was done in November, 1898. The pain and vomiting for which the patient had sought medical relief never returned, and on June 8th, 1899, she reported herself as in good health and free from all her old troubles.

(148) Cervical Lymphoma.

Jessen, of Hamburg (*Centralbl. f. inn. Med.*, September 2nd, 1899), draws attention to the connection of enlargements of the glands at the angle of the jaw and along the sides of the sterno-cleido-mastoid muscle, with affections of the tonsils, pharyngeal and palatal, and gives brief histories of the complete and rapid disappearance of all swelling after the removal of adenoid growths, even when the existence of the latter had not been betrayed by the ordinary symptoms—impeded nasal breathing, snuffling, etc.—and also some remarkable instances of the closure, a week or two after the extirpation of adenoids, of fistulæ left after the surgical removal of the glands. He holds that in the cervical lymphoma of children the microbes which lead to the swelling and, in case of tuberculosis, to the caseation of the glands, find their entrance through the pharyngeal or palatal tonsils, or less frequently through carious teeth, and that all such glandular affections should lead to a search for adenoid growths and their immediate removal if present. Soft polypoid, non-obstructive growths more frequently cause this cervical lymphoma than more extensive and harder enlargements which are betrayed by the "adenoid" countenance and open mouth.

(149) Surgery of the Biliary Passages.

Alessandri (*Il Policlinico*, July 15th, 1899) publishes a further contribution to the above subject. In operating on the ductus choledochus, if possible the duct should be isolated, especially near its duodenal end. The author recommends a modification of Boari's button—as used in implanting the ureter upon the bladder—for the implantation of the gall duct into the duodenum. The attempt to join the severed ends of the duct is far too risky to be likely to succeed. It is easier and safer to fix the end in the duodenum. The difficulty of getting at the hepatic duct has made the record of the surgery of this duct rather scanty. The safest operation is hepatecotomy where possible. The author refers to the common danger of hæmorrhage in operating on these cases, perhaps due to some alteration in blood, and uses it as an argument for early operation before the disease has had time to induce severe blood changes. With regard to the external incision, there seems no uniformity. Tuffier recommends a lumbar incision in certain cases, which gives a view of the vertical part of the duodenum. Sometimes a cholecystitis induces symptoms of pyloric obstruction from the spread of the inflammatory processes on to the pylorus and adjacent structures.

(150) Nephrectomy for Wound of the Kidney.

Schmidt (*Berl. klin. Woch.*, November 6th, 1899) was called in to a youth, aged 18, who had fallen from a first-floor window and impaled himself on an iron hedgepole, the point entering the loin. The wound was small and appeared as though superficial. On passing a catheter, bloody urine was drawn off. An abdominal section was performed, and, to the operator's surprise, the wounded kidney was found torn across transversely. The glandular substance was so extensively bruised that suture was impossible, so the kidney was removed. Recovery was uneventful.

MIDWIFERY AND DISEASES OF WOMEN.

(151) Hæmaturia of Pregnancy.

Treub (*Centralbl. f. Gynäk.*, No. 1, 1900) notes that this condition must be distinguished from hæmorrhagic nephritis and from hæmorrhagic cystitis. He reports one case under Iterson and two in his own practice. Case I.—Patient, 31, free hæmaturia at the end of her fifth pregnancy, ceasing immediately after confinement. After two years of perfect health the hæmorrhages returned. Blood and tubercle (?) bacilli but no renal casts were detected. Left kidney tender. Exploration by Iterson. The suspected kidney was healthy; the right kidney, however, was removed as it appeared to be cystic. The pelvis and calices were dilated, but there was no trace of abscess, tuberculosis, or other disease. Case II.—Patient, 30. Hæmaturia appeared in the fifth month of her sixth pregnancy. There was polyuria and no dysuria. Epithelium and casts were detected; the blood diminished in proportion after rest and milk diet. Pregnancy was uninterrupted. Treub admits the possibility of renal disease. Case III.—Patient, 25. Second pregnancy. When 12 she suffered from enuresis. Under medical treatment hæmaturia set in, and left off when the treatment was discontinued. In the first pregnancy hæmaturia appeared and ceased in five days. On this occasion the symptom was noted in the fifth month; blood corpuscles abounded in the urinary deposit without any epithelium or casts. There was a systolic murmur at the base and much anæmia. Close upon term labour was induced by rupture of the membranes, yet did not actually occur till twenty days later; but four days after the rupture (a great quantity of liquor amnii escaped) the hæmaturia ceased.

(152) Post-partum Hæmorrhage: Its Prevention and Treatment.

E. Davis (*New York Med. Jour.*, January 13th) says the chief causes are local and general exhaustion. Less common are genital lacerations, blood diseases, and placental adhesions. Prophylactic treatment should always be carried out. Each case of pregnancy should have individual attention, and tonics given if necessary, the woman being scientifically prepared for her "labour." During labour, in its first stage, the patient should have plenty of liquid food, and loss of sleep should be specially avoided. To prevent it, chloral hydrate gr. x should be given every three hours. Sometimes am. bromide gr. xx or trional gr. x will give better results. In the second stage "posture" is of primary importance. If it is instrumental the writer always prefers ether as the anæsthetic, and slightly continues it during the third stage, in order to repair any lacerations. Tears in the anterior vaginal wall near the urethra frequently cause hæmorrhage, which becomes worse from pressure of vaginal tampons. On recovery from the the anæsthetic, ergot should be given. The pressure on the uterus should be exerted only upon the anterior and posterior walls, and not at the fundus. If there is danger from relaxation, $\frac{1}{30}$ gr. of strychnine should be administered and a rectal injection of freshly made coffee. For after-compression of the uterus three towels made into firm rolls 8 inches long and 3 inches diameter may be applied under the binder. The uterus is brought well down and forward, and one roll is placed above and one on either side of it. The strychnine may be repeated if relaxation continues. During actual hæmorrhage the writer employs hot

saline injections 104° F. to 110° F. and packs the uterus with gauze. After 24 to 36 hours the gauze is removed and the uterine cavity douched with salt solution. Ergot ℥xx and strychnine sulphate $\frac{1}{30}$ gr. are given every six hours for several days. The writer always in writing instructs his obstetric nurses to massage the uterus, administer a douche of two quarts of previously boiled water at 110° F., and give two teaspoonfuls of ergot (fluid extract) directly profuse hæmorrhage occurs and until he arrives.

(153) Rash after Antistreptococcus Serum Injection.

Feuchtwanger (*Monats. f. Geburtsh. u. Gyn.*, December, 1899) reports the recovery of a patient after this treatment; but just twelve days after the injection a diffuse morbilliform rash broke out over the whole body. It itched and lasted for six days, with fever once attaining 104.4°. In a second case, where the serum had been injected into the skin of the thigh, an annular rash appeared around the puncture six days later; after twelve days it diffused itself all over the trunk and limbs. Feuchtwanger attributes the rash to the action of serum rather than to specific antitoxin influence.

(154) Epispadias of Female Urethra.

Wojriechowski (*Przeglad Lekarski*, No. 19, 1900) was consulted about a girl, aged 21, subject since birth to incontinence of urine. The clitoris at first sight seemed absent, the labia imperfectly developed. At the site of the clitoris was a quadrilateral surface, dry, smooth, and shiny, bearing in its centre a depression with somewhat elevated borders. Below the smooth surface was an oval urethal orifice of the calibre of a lead pencil; urine issued from it from time to time. When the lesser labia were held apart, the surgeon's forefinger could be passed without stretching into the imperfect urethra. The prepuce was also completely split. The patient admitted that she had had frequent connection through the urethra. The inner genitals seemed normal. The urethral canal was dissected up, a wedge-shaped piece cut off the free edge on each side, and the vivified edges then united by suture. Lastly, on Gersuny's now well-recognised principle, the sutured urethra was twisted 90° and fixed, a self-holding catheter being left in its canal. Some of the sutures cut through and the twisted urethra resumed its old position, but the patient for the first time in her life, could hold up to about half-a-pint of urine for several hours.

(155) Plexiform Neuroma of Vagina: Death after Operation.

Schmanch (*Zeitschr. f. Geburtsh. u. Gynäk.*, vol. xlii, part i, 1900) publishes a unique case where a tumour was removed from a primipara, aged 26, as it hindered labour. The patient died of sepsis. Both labia were found swollen and livid, especially the left, which was very firm, and at its base, just inside the vagina, was a swelling as big as a walnut. From it firm cord-like structures were traced, passing on to smaller swellings, so that the entire left side of the vagina was taken up with a network of cords and lumps. The cavity left by the operation wound was bordered by a plexus of the cords, which, with the swellings, lay under the vaginal mucosa, not adherent to the latter. The patient had died of gangrenous pelvic phlegmon and peritonitis; the uterus was noted in the *post-mortem* report as "puerperal," but it is not distinctly stated whether sepsis and death were due to the operation or to some other and more common puerperal complication. The tumour, or rather collection of neuromata, united by cords of nerve tissue, was identical with the "plexiform neuroma" or Ranken-neurom, described by Bruns in *Virchow's Archiv*, vol. l, 1870; in that case the tumour grew over the right malar and temporal bones in a man, aged 28. Plexiform neuroma has also been observed in the back, on the shoulder, and in the brachial plexus.

THERAPEUTICS.

(156) The Treatment of Cardiac Sclerosis.

Huchard (*Journal de Praticiens*, December 23rd, 1899) divides the treatment of cardiac sclerosis into three stages: That of the excessive arterial tension, with vaso-constriction—the presclerosis stage; that in which the vessels of the myocardium have become implicated—the cardio-arterial stage; and that in which there is failure of compensation—the mitro-arterial stage. In the first or presclerosis stage the treatment consists of milk diet, the avoidance of all stimulating beverages as tea, coffee, and alcohol, also of all foods containing ptomaines; the reduction in the amount of liquid drunk, except that the diuretic mineral waters are advocated, with a small dose of lycetol—the tartrate of dimethyl piperazine. Gymnastic exercises are also indicated, with general and abdominal massage. At this stage digitalis should never be used, although diuretics generally are indicated. The salts of potassium, too, are unsuitable; among the best diuretics are caffeine and theobromine. Purgatives, and especially saline purgatives, are valuable in this first stage. Occasionally small doses of nitroglycerine, 3 drops of a 1 per cent. solution, three to five times a day on ten or fifteen days in each month are of service, but iodide of potassium is useless. The following should be stringently interdicted: all agents capable of increasing the arterial tension—such as ergot, digitalis, atropine, and caffeine in large doses; all agents tending to diminish the purification of the blood by the kidneys, such as antipyrin, atropine, and morphine; all sulphurous and highly chlorinated waters and baths containing compressed air or carbolic acid gas, while dwelling in high altitudes, is contraindicated. Tobacco and all stimulating drinks must be avoided. The treatment of the second or cardio-arterial stage consists in continuing the dietetic and hygienic measures of the first, and in addition the administration of moderate doses of the iodides, particularly the iodide of sodium with medium doses of nitroglycerine. If symptoms of heart failure should supervene recourse must be had to cardiac tonics as digitalis and the sulphate of sparteine. In the third or mitro-arterial stage the treatment is that of failing compensation, a strictly milk diet, diuretics, especially theobromine, and large doses of digitalis or digitalin. To combat the dyspnœa due to the absorption of toxic material from the alimentary tract and secondarily the insomnia of this stage, a rigidly milk diet is necessary and theobromine should be administered. If the dyspnœa be due to cardiac asystole, digitalis should be given; if due to cardiac thrombosis, rest, digitalis, and small doses of opium are to be prescribed; if due to acute œdema of the lung a copious venesection should be practised, and if from pleural effusions paracentesis should be performed. It is useless to treat the arrhythmia of myocardial weakness with digitalis. In the first or presclerosis stage it is possible by the measures described to check and even to cure the disease.

(157) The Treatment of Gout, Rheumatism, and Neuralgia.

Hirschkron (*Wien. med. Presse*, August 6th, 1899) states that sodium salicylate, though the most useful drug in acute rheumatism, generally fails in chronic cases. Large doses of salipyrin or salophen sometimes succeed when sodium salicylate fails. In acute gout colchicum allays the pain only if it acts as a sudorific and diuretic; in old or feeble patients it causes vertigo, bradycardia, and nausea, and its use should be limited, therefore, to young and active subjects. In acute trifacial neuralgia almost all antineuralgic drugs may succeed, though the quickest results are obtained with repeated 15-gr. doses of sodium salicylate, or 7½-gr. doses of quinine. In chronic trifacial neuralgia better results are obtained by certain combinations of drugs, such as phenacetin with quinine, cannabis indica with salicylic acid, chloral hydrate with morphine, and the bromides with morphine or belladonna. In occipital and brachial neuralgia probably the only antineuralgic drug which is of any use is phenacetin, and in sciatica salipyrin. Cutaneous neuralgia is uninfluenced by drugs. The lightning pains of locomotor ataxy yield most promptly to 7½-gr. doses of antifebrin. In intestinal neuralgia ordinary antineuralgic drugs are useless, and narcotics must be employed. External methods of treatment consist in massage, electricity, and baths. In acute rheumatism these are of secondary importance. Massage is indicated in chronic rheumatism, sciatica, and gout, in which diseases electricity has very little analgesic effect. Electricity often does good, however, in neuralgia. All kinds of liniments act only through the rubbing. The treatment by applications of mud and "moor" baths is valuable.

The best of these is the recently introduced ichthyol-moor mud. When dry it is a fine powder, and before use must be mixed with warm water. It is then boiled and wrapped in a linen bag, in which the painful part is packed, or is mixed with the bath water. It allays the pain of chronic processes in a wonderful way, and at 86° to 104° F. causes the absorption of inflammatory deposits. In chronic gout the best results are obtained when the mud is applied at lower temperatures, not exceeding 77° to 80.6° F. The writer obtained very good results also in chronic neuralgia, the lightning pains of tabes, and pelvic inflammation, the pain being suppressed and the inflammatory deposits absorbed. The analgesic action can be raised by spreading a 30 per cent. ichthyol ointment over the part before applying the mud. On an average thirty to forty "packings" were required in each case. The mud appears to cure partly through the action of the ichthyol on the cutaneous vessels and partly as a fermentation. The treatment is simple clean, free from odour, and fairly cheap.

(158) A Substitute for Inunction in Mercurial Treatment.

Blaschko (*Berl. klin. Woch.*, November 13th, 1899) has used the method first employed by Merget of impregnating the garments of patients needing mercurial treatment with some preparation of mercury. Welander used a powder consisting of 40 per cent. of mercury, with zinc and aluminium in amalgam. Blaschko has used a modification of this method for two years among his out-patients with good results. A coarsely woven cloth is impregnated with a salve containing 90 per cent. of mercury. The cloth (made by the firm of Beirsdorf in Hamburg) is known as "mercolint." The manipulation is so exact that neither the salve nor the mercury is to be detected. Shirts made from the medicated mercolint are worn by the patients next the skin by night as well as day. In about four weeks their grey colour changes to white, when it is concluded that all the mercury has been absorbed. Each shirt contains from 10 to 50 grams (2½ drachms to 12½ drachms) of mercury. After the use of this method mercury appears in the urine and stomatitis with salivation is produced. Blaschko has found the method of therapeutical value in the different lesions of syphilis. It has marked advantage in obviating the inconveniences of fumigation and inunction, and it is as energetic as the injection method. He recommends it particularly in weakly patients, in those suffering from syphilitic anæmia, in gravid women, and for infants.

(159) Local Applications of Tuberculin in Lupus Vulgaris.

Apparently favourable results have been obtained by Unna in lupus vulgaris (*Sem. Méd.*, No. 43, 1899) by means of a soap made up of lard incompletely saponified by caustic potash, and containing 5 to 20 per cent. of tuberculin. A small quantity (*circa* 25 mg' per square centimetre) is rubbed on to the affected part with the finger (protected by a glove) until the area becomes dry. The wetted finger is then applied and the part rubbed until the soapy application gives rise to a lather. This is repeated so as to make the soapy ointment penetrate well into the superficial epithelial layers. The percentage of tuberculin varies with the area dealt with. For small areas 20 per cent. may be used, for larger ones 5 to 10 per cent. Œdema and hyperæmia result, leading to scale and crust formation. These inflammatory symptoms subside in the course of a few days, leaving the affected areas pale, flattened, and smooth. The foci can then be more readily seen and dealt with by cauterisation and other means. The tuberculin application is therefore really introductory. It is not stated which kind of tuberculin is used, old or new.

(160) Creolin Soap.

Tonzig (*Gazz. degli Osped.*, January 14th, 1900) has made a series of experiments with creolin soaps of various strength and manufacture. Most of the common disinfecting soaps have been found by experimenters to be less efficacious for purposes of disinfection than the simple soaps. With regard to the creolin soaps, the author tested their germicidal power on a species of cholerigenic vibrio, and found that with one exception (a resinous soap containing 20 per cent. of creolin) they were all less active as germicides than simple soaps of the same nature, but minus creolin. Five different kinds of soap containing creolin in various proportions were tried. In the author's opinion the chief benefit in adding creolin to the soap is derived by the manufacturer, for it adds nothing to but rather detracts from the disinfecting power of the soap.

(161) The Hypodermic Injection of Carbolic Acid in Tetanus.

Nietert and Amyx (*St. Louis Med. Rev.*, December, 1899) record 4 cases of tetanus treated by the injection of a 2 per cent. solution of carbolic acid under the skin in the neighbourhood of the wound. The 3 former died and the last, in which larger doses of the drug were used, recovered. The first was given 21½ gr. in 3½ days, the second 11¾ gr. in 30½ hours, the third 8 gr. in 16 hours, and the last 267 gr. in 8 days, 99 gr. of which were given in the first 24 hours without producing untoward effects of any kind. In each case potassium bromide and chloral were given simultaneously in large doses. The authors explain the freedom from ill results of the injection of so large quantities of carbolic acid on the hypothesis that the toxins of the tetanus bacillus and the carbolic acid neutralise each other.

PATHOLOGY.

(162) The Urine of Epileptics.

Edwin G. Klein (*New York Medical Journal*, December 30th, 1899) reports the results of examinations made on the urine of 23 patients who were subject to epileptic attacks. The urine was in each case collected as soon after an epileptic seizure as possible. There was but little polyuria, and a faint trace of albumen was met with in 15 of the 23 cases. One case showed more than a trace of albumen, and this in sufficient quantity to be detected by Heller's cold nitric acid test, and by the test of boiling after faint acidification, and in this case there was evidence of chronic nephritis. The occurrence of a convulsion was followed in this patient by a slight increase in the amount of albumen. The history of this patient was instructive. He had been admitted to hospital 15 years previously suffering from an attack of nephritis which was of comparatively recent origin, and without any obvious assignable cause. At that time he was in good general physical condition. He had suffered from fits shortly before, and it was suspected that the renal trouble had its beginning as a functional albuminuria associated with epileptic seizures. In 3 of the 23 cases the urine showed the presence of albumose, and this was regarded as an evidence of defective metabolism. Chlorides were present in excess in 14 out of 21 cases examined after a convulsion, In 6 out of 10 patients examined in the intervals between the epileptic seizures the chlorides of the urine were found to be present in normal quantity, and in the remaining 4 they were diminished. Careful examination failed to reveal the presence of sugar (glucose) in any of the samples of urine examined. Klein points out that although a marked glycosuria can be readily produced, and may even be present in epileptics, it is not considered to be of so grave and serious a nature as in true diabetes mellitus.

(163) The Influence of Sight in Walking after Removal of the Cerebellum.

Roncali (*Il Policlinico*, November 15th, 1899), with a view to determine this question, has carried out a series of experiments on dogs: (1) After completely blinding the animal, total or partial removal of the cerebellum; (2) after partial or total decerebellation, enucleation of the eye or tarsorrhaphy; (3) after decerebellation, extirpation of the occipital lobe or of the parietal, or of both these lobes. That there is some close connection between the cerebellar functions and the visual power seems clear from the fact that dogs first rendered blind and then deprived of their cerebellum were unable to maintain their equilibrium sixty-three days after the cerebellar extirpation; whilst dogs with visual power intact recovered their equilibrium nine or ten days after removal of the cerebellum (median lobe). Not that the cerebellum is in any true sense of the word a sensorium or a centre for any special kind of sensation, but rather an organ which makes use of various sensations to fulfil special physiological objects — for example, maintenance of equilibrium.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(164) The Excretion of Urea by the Skin in Health.

When the kidneys are disabled, the practitioner has frequently to rely upon the skin for the removal of metabolic products normally eliminated by the urine. The favourable influence of free sweating in uræmia led Easterbrook (*Scottish Med. and Surg. Journ.*, p. 120, 1900) to infer that in health the skin plays more than its usually accorded *rôle*. In confirmation, he conducted a series of experiments upon himself. The value of the results obtained is perhaps slightly lessened because of their relation to one individual only, but they are none the less interesting and are certainly important. For nineteen days a fixed mixed diet was taken. During this period the urinary urea excretion varied with several circumstances. Daily exercise of stated amount decreased and non-exercise increased the quantity. Five hours' dancing caused a marked diminution in the next day's urea percentage. Cold north-east wind and snow led to an increase, which, however, was not so apparent when walking exercise was taken under the same conditions. The variations in the urinary urea seem therefore to coincide directly with the functional activity of the skin. Urea was found to be absent or present only in negligible quantities in the fæces. A damp piece of linen drawn across the brow when sitting quietly, yielded "traces" of urea; the same after muscular exercise or hot bath showed a considerable quantity present. To obtain the percentage of urea excretion by the skin the writer sat in a hot bath (105° F. or 40° C.) immersed to the shoulders, and collected 5 c.cm. of sweat from the brow by allowing the drops to trickle into a thin glass test tube. The morning estimation gave 0.1 per cent., the evening 0.2 per cent. of urea. These percentages are in harmony with the kidney urea excretion, which as a rule reaches its highest point between 2.30 and and 10 30 P.M. After the sweating, the urinary urea always fell from the level maintained before the bath. During severe muscular exercise the percentage of sweat urea was increased, that of the urine normal, but the following thirty-six hours saw a rise in the urinary, a fall in the sweat urea. The evident close and definite quantitative relationship existing between the urinary and cutaneous urea is thought to be the proof of an increase in proteid metabolism during exercise, as instanced by the rise in sweat urea during muscular work. The cutaneous urea is always increased by exercise, the urinary amount being generally unaffected at the time, though increased for a day or two afterwards.

(165) The Abdominal Muscles in Hemiplegia.

Sicard recorded at a recent meeting of the Société de Neurologie of Paris (*Arch. de Neurol.*, December, 1899) the results of careful clinical observations made in the wards of MM. Raymond and Brissaud, on this subject. It had hitherto generally been supposed that the abdominal muscles were spared in hemiplegia, as it was believed that one part (right or left) of the spinal cord could innervate the muscles of both sides, as these muscles habitually acted together (synergised) in ordinary life. Twenty-two patients suffering from hemiplegia of organic origin, and therefore exclusive of cases of *grande hystérie*, were examined by careful and repeated palpation, both during ordinary respiration, during the act of coughing and of deep breathing, etc., and particular attention was paid to ascertaining the condition of the inguinal orifices (external abdominal rings). As a result of these examinations it appeared that a distinct paresis of the abdominal muscles could be ascertained on the hemiplegic side.

(166) Tetany due to Influenza.

Gomez (*Rif. Med.*, January 23rd, 1900) records the case of a child of 7, who during an epidemic of influenza which had attacked five people in the same house, developed fever, coryza, severe pains in the back and limbs. The next day the muscles began to stand out under the skin, walking became difficult owing to spastic contractions. Slight opisthotonos set in later. There was also a certain amount of trismus. Strong contractions of the face muscles followed percussion over the external angle of the orbit. The knee-jerks were exaggerated. There was no clonus, no history of injury or digestive trouble, and no evidence of rickets. Sodium salicylate with intestinal antiseptic treatment was tried for three days without benefit. Then copious injections of a physiological solution of salt were given hypodermically (250 grams). After four or five days of this treatment improvement set in and the child was discharged cured.

(167) Pyrexial Crises in Locomotor Ataxia.

Pel (*Berl. klin. Woch.*, June 26th, 1899) records the case of a glass polisher who, after suffering from symptoms of locomotor ataxia for about two years, was seized on about four occasions with attacks which began with a feeling of chilliness, pain and cramps in the limbs, vomiting and sweating. Later there was photophobia, orbital pain, and epiphora with great conjunctival congestion. The attack observed by Pel began at 11 30 A.M. on February 6th, and the temperature rose abruptly to 104 4° F. The next morning it was 101°, and then gradually fell to normal; on February 8th all the pain had disappeared, and the patient was in his usual condition except for great prostration. On February 7th there was an outbreak of herpes labialis. The spleen was not enlarged. These attacks were evidently tabetic crises, and the order in which the symptoms of irritation appeared is of interest. The vasomotor and thermotaxic centres were first stimulated, then the lower spinal (pain in legs) and upper spinal (pain in arms and hands), the vomiting centre, and the fibres of the trigeminal nerve, in the order named. The rise of temperature must have been due to a sudden increase in the production of heat; this stimulation of the thermotaxic centre has probably not been described previously, though pyrexia in tabetic crises has doubtless been observed by others.

SURGERY.

(168) Surgery of the Pancreas.

Israel (*Centralbl. f. Chirurg.*, No. 15, 1900) describes a movable, tense tumour detected in the left hypochondrium of a woman, aged 39. When she lay on her right side it moved to the middle line; when she stood up it fell back yet further to the left. She suffered from headache, vomiting, and colicky attacks. An incision was made in the middle line; the tumour was found under the greater curvature of the stomach; it sprang from the pancreas, its pedicle was transfixed and tied, then divided. The tumour consisted of fibrous tissue with traces of glandular substance. In a second case a pancreatic tumour was taken for a hydronephrosis, intermittent in character. Rigors occurred. The tumour could be pushed from the left side to the epigastrium, and became hard to detect when the stomach was distended. At the operation it was found to be covered by the gastro-colic ligament, the segment of omentum between the greater curvature and the transverse colon. It burst during enucleation; its edges were sewn together. Its contents had not amylolytic properties. Israel does not state whether either of the above cases died or recovered. His third patient was a man aged 51, subject for fourteen years to abdominal pain and vomiting. An epigastric tumour, as big as a man's head, developed. At the operation it was found closely incorporated with the stomach and colon; the wound was therefore closed. Twelve days later this tumour was punctured, the needle passing through the stomach into the cyst cavity. A pint and a-half of ochreous-coloured fluid escaped. The result was satisfactory; the cyst did not fill up again, the pains disappeared, and the colicky attacks, which before were very frequent, now only occurred about once a month. A fourth case was an abscess due to peripancreatitis; it lay under the liver, and communicated with the pancreas through the foramen of Winslow.

(169) Operation for Ruptured Liver.

Mailland (*Lyon Méd.*, January 14th, 1900) reports a case in Delore's practice. A man was admitted in a state of shock following two kicks from a horse, one on the thorax, the other on the abdomen; the pulse was thready, the breathing stertorous, the abdomen tympanitic and extremely

tender. Intense pain was complained of; it was referred to the base of the thorax as well as to the whole of the abdomen. Abdominal section was at once performed. About 3½ pints of blood were found in the peritoneal cavity. Blood continued to well up, whilst the whole intestinal tract, omentum, bladder, spleen, large vessels, and the kidneys were being reached and inspected. All these structures were intact; it is remarkable that before operation the left flank was the point most tender to touch, though there was no injury in that direction. At length the operator's hand detected a laceration of the anterior border of the right lobe of the liver. The median incision was closed after the insertion of a Mikulicz drain, then a second incision was made just below the right hypochondrium, and the liver drawn up to its level. The laceration was extensive, and its edges so contused that suture was impossible; it was therefore plugged with a Mikulicz drain. The patient seemed moribund at the end of the operation, but was revived by means of a saline injection. On the third day all signs of traumatic and operative shock had passed away, but symptoms of peritonitis set in and the patient died three days later. After death two more lacerations were noted, the lobulus Spigelii was almost torn off, and there was a wide rent on the convex surface of the liver. Delore traced the peritonitis to simple paralysis of the intestine marked by steadily increasing flatulent distension, and consequent reabsorption of toxins.

(170) Surgical Treatment of Hæmorrhage from Gastric Ulcer.

ANDREWS AND EISENDRATH (*Annals of Surgery*, October, 1899) deal with the history, indications, and prognosis of surgical intervention in cases of serious bleeding from gastric ulcer. Two cases treated by the first-named author are reported, and the results are given of experiments made to test the value of this surgeon's method, which consists in median laparotomy, vertical incision of the anterior wall of the stomach, and constriction of the region of the ulcer, which is drawn upwards so as to form a cone, by means of a strong ligature. The authors conclude their paper with the following statements: (1) The results of the practice of the best modern surgeons warrant the conclusion that nothing short of operative interference can save the lives of patients affected with bleeding ulcer of the stomach, if no improvement is afforded by medical treatment. (2) Surgical intervention is to be recommended; first, in small repeated hæmorrhages; secondly, in severe bleeding occurring more than once, especially if more than 500 c.cm. are lost at each attack. (3) A single copious hæmorrhage is not necessarily an indication for operation. (4) In cases of ulcer at or near the pylorus pyloroplasty is indicated by such treatment, rendering local treatment possible, and giving all the benefits of gastro-enterostomy. (5) Cauterisation and curetting of the ulcer should give place to resection whenever the ulcerated portion of stomach wall can be attacked from without. (6) If the ulcer be seated on the posterior wall of the stomach and bound down to the tissues beyond, or if it be found near either end of the stomach, cauterisation, curetting, and ligature *en masse* are the best substitutes for excision. (7) Ligature *en masse* has been shown by experiments to endanger perforation, except when associated with external sutures.

(171) The Operative Treatment of Simple Stenosis of the Pylorus.

LAMBOTTE (*Ann. de la Soc. Belge de Chir.*, No. 4, 1899) is opposed to the operations that have hitherto been recommended and practised with the object of relieving the gastric troubles due to simple stenosis of the pylorus. Loreta's treatment by forcible dilatation is held to be both dangerous and uncertain, and pyloroplasty, if it does not result in perforation and fatal peritonitis, is apt to be followed by cicatrical contraction and consequent recurrence of the stenosis. Czerny's operation of cuneiform resection of the anterior wall of the pylorus, though superior in some respects to pyloroplasty as practised by Mikulicz, has the same disadvantages. These objections to both simple and cuneiform pyloroplasty have led the author to advocate as a systematic method of surgical treatment complete excision of the pyloric ring with reunion by circular suturing of the stomach and duodenum. This operation, it is stated, is so simple that it may be completed in from 20 to 30 minutes. The sutures can be readily applied; the two orifices are equal in extent, and their walls are thick. The communication thus reestablished between the stomach and the intestine is a free one, assuring a ready evacuation of the gastric contents, and placing out of question any reproduction of the stenosis. From a physiological point of view this operation is regarded as a much more rational one than gastro-enterostomy, as it does not affect the form of the stomach, and is not likely to lead to the development of adhesion that might interfere with peristaltism. There can be no doubt, the author asserts, as to the efficacy of the operation. However pronounced the gastric dilatation, regular evacuation will be re-established and the stomach will regain its normal volume. It is pointed out that the only condition contraindicating this operation would be the existence of perigastric adhesions. The author has applied this treatment in 7 cases of simple stenosis of the pylorus with complete success.

MIDWIFERY AND DISEASES OF WOMEN.

(172) True Labour Pains in the Tube.

VAN STRANCH (*Centralbl. f. Gynäk.*, No. 42, 1899) claims to have detected evidence that the gravid tube in extra-uterine pregnancy actually contracts in order to expel its contents, whilst the prevalent and erroneous idea is that it plays a passive part, either bursting or letting the ovum slip out of the ostium. A patient suffered from rupture of the gravid tube in the fifth month, the live fœtus escaped into the peritoneal sac, the placenta remaining in the tube. She refused operation. But for 18 months she was harassed by labour-like pains, which came on daily and lasted for several hours. Van Stranch is positive that the contraction of the tube could be plainly felt on bimanual palpation and distinguished from the action of resisting abdominal muscles. He operated and found a mummified fœtus encapsuled in omentum. The whole placenta lay in the very thick-walled tube; the ostium was dilated widely enough to admit a finger. In a second case the patient was 35, and her last labour was ten years past. She had been sickly ever since. After cessation of the period for two months two severe attacks of pain and syncope came on within a week. The pain was localised to the right iliac fossa. Van Stranch operated and removed a large gaping tube; the ovum lay half in and half out, whilst its inner limit was held down to the interior of the tube by a thick pedicle. An external depression on the surface of the tube corresponded to the insertion of this pedicle; evidence in Van Stranch's opinion that the tube had actively contracted to expel the ovum. The passive weight of the ovum or the escape of blood into the dilated tubal canal could not have produced this depression. The muscular coat of the tubal wall was greatly hypertrophied.

(173) Tumour of Round Ligament.

ENGELHARDT (*Virchow's Archiv*, vol. clviii, Pt. 3, December, 1899) describes a case of adenomyoma of the round ligament. The patient was a married woman, aged 30, her last confinement five years past. Six months later a swelling appeared above the right groin; it was of about the size of a small apple; it disappeared in eighteen months after the application of iodoform ointment. For two years another growth had been noticed just below the former. It was soft at first; after a time the skin over it grew red, and the tumour became tender during the period; later on the pain was constant, so that the patient begged for its removal. It was of the size of a plum, very tender, and lay in the fold of the left groin; its upper end was prolonged into a kind of cord which could be felt entering the abdomen. There were enlarged glands in both groins. Engelhardt admits that no definite diagnosis was made. The tumour was removed with a piece of adherent skin, its pedicle was the inner part of the round ligament. It was full of glandular elements,; the microscopical appearances are carefully described.

(174) The Treatment of Incontinence of Urine in Women.

ZIEGENSPECK (*Deut. Aerzte-Zeit.*, November 15th, 1899) has employed four methods in the treatment of dribbling of urine in women, when it it indepen-

dent of the presence of fistulæ, parametritis, pelvic peritonitis, or cystitis, in which the treatment should be directed to the primary cause. (1) Thure-Brandt's method of massage of the sphincter vesicæ is carried out by exercising energetic vibratory pressure on the urethra and neck of the bladder between the forefinger in the vagina and the symphysis pubis, twice to four times on the right of the urethral swelling, and the same number on the left. Two or three applications are generally sufficient to effect a permanent cure, or at least, great improvement. If these fail it is useless to continue the treatment. When the massage is painful the prognosis is good. The other methods are more severe, and are to be used only if massage fails. (2) The sphincter vesicæ may be stretched by passing a metal catheter, and moving it forwards, backwards, and from side to side (Sänger's method). This succeeded in only two cases, and may cause considerable hæmorrhage. (3) A temporary suture may be carried round the sphincter with a view to irritating its tissue and forming a circular cicatrix. A bulbous-headed sound is passed, and the neck of the bladder and sphincter located by gently withdrawing it. The spot where the bulbous head meets with resistance is noted, and a silk suture is passed from the vagina round the urethra and sphincter. The points of entry and exit should be as close together as possible. A fine catheter is passed into the urethra, and the ends of the silk are knotted firmly. The suture is left in for eight or ten days and then removed. Ziegenspeck cured two out of three cases in this way. (4) Since incontinence may be due to paresis or dilatation of the sphincter, the writer has excised a segment in one case with good results. The neighbourhood of the sphincter is determined by the bulbous-headed sound, the patient being anæsthetised and in the lithotomy position. A vertical incision is made over the sphincter, which is dilated by a full-sized metal catheter. Arterial hæmorrhage is arrested by torsion, venous by pressure. The sphincter is then pulled out of the wound with volsella forceps, and a piece one-fifth of an inch long is resected. The muscular fibres which retract on either side of the catheter are brought together over a narrower catheter by catgut sutures. The vaginal wound is finally closed with button sutures. The method is simple and quite as safe as any other.

(175) Treatment of Uterine Inertia and Subinvolution.

STOVER (*Am. Journ. of Obstet.*, November, 1899) dwells on the importance of treatment during the puerperal period to prevent pathological sequelæ of childbirth. The causes that interfere with the normal involution of the uterus may be included under two heads: First, and principally, failure of uterine muscular contractions; secondly, and somewhat dependent on the first, interference with the normal circulation of the blood. In the presence of these obstructive conditions, inertia and subinvolution result, the first during labour, and the latter after its completion. Inertia should be treated in the first stage by securing sleep, for which purpose chloral is best; in the second stage, by strychnine ($\frac{1}{30}$ to $\frac{1}{15}$ gr. doses), by faradism applied over the abdomen and the spine, or by instrumental delivery; in the third stage by ergotine hypodermically, the intra-uterine douche, and the faradic current. The writer warmly commends the value of the latter in securing uterine contraction; and he advises its use also during the puerperium, in cases of deficient uterine contraction and passive hyperæmia. At this time hot vaginal douches and boroglyceride tampons may be used with advantage; medicinally, ergot combined with hydrastis; strychnine when there is faulty innervation; iron in cases of anæmia. Tait's treatment by means of ergot and citrate of potash is well spoken of as fulfilling the indications of contraction of the musculature of the uterus and the elimination of retrograde products. Saline cathartics are advised for depletion of the pelvic veins; whilst the importance of lactation in stimulating uterine contraction is to be borne in mind.

THERAPEUTICS.

(176) Dangers of Caffeine.

ZENETZ (*Wien. med. Woch.*, December 9th, 1899) believes that caffeine is a drug the action of which has been insufficiently investigated. At present different observers have obtained diametrically opposite results, and until the indications for its use are clearer it should be entirely abandoned in clinical medicine. In cardiac and renal disorders the author has found its effect to be usually as follows: With doses of 3 to $4\frac{1}{2}$ gr. two or three times a day, the blood pressure rises steadily, but very slowly, as shown by Basch's sphygmomanometer on the radial artery, and the quantity of urine is increased. Œdema is lessened, but very slightly. Between the fourth and the sixth day the patients begin to complain of a sense of constriction in the chest, dyspnœa, and restless nights, owing doubtless to the high blood pressure. In some cases it can be made out by auscultatory percussion that the heart has diminished in size in all its diameters; this is a sign of impending tetanus of the cardiac muscle, and the caffeine must be at once omitted. On substituting sodium bicarbonate the blood pressure falls, and the pulse is softer to the touch, though its rate is unaltered. The quantity of urine diminishes. Caffeine continues to be excreted in the urine for at least ten to fifteen days after the last dose is taken; this proves that, like digitalis, it is stored up in the body, and is excreted slowly. It is therefore quite possible for a toxic dose to collect, and the view that caffeine has no cumulative action is erroneous. The more the kidneys are diseased, the slower it is excreted, and the greater is the danger. Caffeine acts exactly like strychnine on the spinal cord, the striated, and especially the cardiac muscles. It follows that it is absolutely contraindicated (1) in all renal diseases, (2) in arterio-sclerosis and atheroma and all cardiac diseases secondary to them. Another danger of caffeine is that the experimentally-fixed toxic dose varies enormously with the individual. Zenetz relates 3 cases as examples, in his opinion, of sudden death caused by caffeine. In all, the heart *post mortem* was found so strongly contracted that it could be cut with difficulty. The first was that of a young and healthy woman who contracted the habit of taking $4\frac{1}{2}$-gr. doses of caffeine. The second was that of a young man with croupous pneumonia of moderate severity, who, after taking 3 gr. of caffeine three times a day died suddenly on the third day. The third was that of a woman with chronic parenchymatous nephritis, anasarca, and double pleural effusion, who had been taking small doses of caffeine with apparent benefit for some time intermittently, when sudden and fatal syncope supervened, and the heart was found to be contracted in the way characteristic of caffeine poisoning.

(177) Treatment of Lupus Vulgaris by Roentgen Rays.

HIMMEL (*Arch. f. Derm. u. Syph.*, vol. i, Heft 3, p. 523) has obtained favourable results in the treatment of lupus vulgaris by means of *x* rays. The following are the details of apparatus used: Electrical energy of accumulators = 21 volts and 2 amperes; maximum length of spark = 40 centimetres; distance of patient (diseased area) from tube = 18 to 20 centimetres. First series: 3 cases. One of these (a woman) had to return home and was lost sight of, so that the final result is not forthcoming. In all they were subjected to about twelve exposures. In a second series of cases two of the men previously treated underwent a second course. To these must be added a fresh case (a man). There were fourteen exposures of half an hour each, under the same apparatus conditions as in first series. The sittings were apparently carried out on consecutive days, and a good deal of œdema, some pain, and the formation of bullæ were noted. The author was favourably impressed by the result, the scars being soft, elastic, shiny, and free from lupus. A heaping up of pigment at the periphery of the treated patches was observed, but it gradually disappeared as the desquamation process advanced. Himmel compared the histological appearances of the lupus areas before and after the *x*-ray treatment, and also with portions of adjacent rayed normal skin. On this point, he concludes, that the rays exert a greater and deeper action on the lupus tissues than on healthy skin.

(178) Resuscitation after Coal-Gas Poisoning.

IN experiments upon animals P. W. Farrah (paper read before Philadelphia Pathological Society, November, 1899) found blood transfusion give good results. Dogs were used for the purpose.

The CO in illuminating gas forms a stable compound with hæmoglobin, and a state of asphyxia is thus induced. When compelled to inhale the gas animals show dizziness, tottering, and inability to walk: temperature falls, the pulse becomes rapid, but consciousness is maintained until the last. The operator used two dogs for each experiment, one for observation purposes, the other as "control." The blood for transfusion was taken from the carotid artery of a healthy normal dog (about equal in weight to the animal affected), and allowed to flow into the jugular vein of the one rendered almost lifeless by the gas. About one-fifth to one-seventh of the total amount of blood was taken. During the transfusion the heart's action and respiration improved quickly and markedly. Recovery of the dog transfused, with death in a few hours of the control dog, resulted in all the 11 cases. Six dogs were running about and well within one hour, 2 within two hours, 2 presented no symptoms after five hours, and the remaining 1 showed nervous disturbances in the hind legs. Saline solutions were tried but were only of temporary benefit. Hydrogen peroxide in intravenous and subcutaneous injections yielded entirely negative results.

(179) Aortic Aneurysm Treated by Gelatine Injections.

Geraldini (*Gazz. degli Osped.*, February 4th, 1900) records four cases of aortic aneurysm treated by subcutaneous injections of a 2 per cent. solution of gelatine. The injections cause a little temporary burning, which, however, soon passes off; no ill-effects were observed. In the first case (innominate aneurysm) 45 injections were given, with the result that the neuralgia and dysphagia completely disappeared; pulsation ceased in the tumour itself, which became much smaller. The patient was on ordinary diet, and not kept strictly lying down. The second case (aortic aneurysm) had 60 injections between April 1st and June 7th, 1899, and left the hospital on June 20th very much relieved. After the twenty-ninth injection some slight albuminuria was noted, so the injections were suspended for four days. The third case (aneurysm of the arch of the aorta) had 40 injections, and was so much relieved that he refused to go on with the treatment, and left the hospital. In the fourth case (abdominal aneurysm) similar relief was given. The gelatine becomes absorbed and increases the coagulability of the blood. The beneficial results are seen in the gradual diminution and final disappearance of the subjective symptoms and the lessening in size and pulsation of the aneurysmal sac.

(180) The Relief of Pain in Tabes Dorsalis by Posture.

Linderström (*Boston Med. and Surg. Journ.*, January 11th, 1900) describes a method of alleviating the lightning pains of tabes dorsalis without endangering the general health, as is done by the use of the synthetic analgesics. It consists in stretching the sciatic nerve by posture, namely, by flexion of the thigh and extension of the leg and foot. After keeping each sciatic nerve in a state of tension for two minutes, numbness of the feet and discomfort in the region of the popliteal space were noticed, with a slight increase of the ataxia. After five applications of this method with an interval not longer than forty-eight hours, the patient gained almost complete freedom from pain. There was never employed any medication for the relief of the pain in the case quoted, and the relief persisted for nearly a year, and it may be longer.

(181) Induction of Artificial Hyperæmia for Therapeutic Purposes.

Bier (*Münch. med. Woch.*, 1900, s. 1598-1649) points out that the essential difference between active and passive hyperæmia, whether the hyperæmia be arterial or venous, is that passive hyperæmia leads to the proliferation of the connective tissue of the affected region; but there is an important distinction to be drawn between the use of arterial and venous hyperæmia for therapeutical purposes. To induce arterial hyperæmia, Bier employs a wooden box adapted to enclose the affected part and fitted with a tube to conduct into the box air heated by a spirit lamp. The temperature is in this way raised to 100° or 150°C. The thumb and fingers, if not affected, are protected by cotton wool. Much benefit is obtained in this manner in chronic articular rheumatism and in stiffness of the joints due to past tuberculous disease, but active hyperæmia is contra-indicated while such disease is in progress. Venous hyperæmia is induced in the usual way by an elastic band which does not interfere with the supply of arterial blood; it is used in pseudo-arthrosis and tuberculous disease of the joints and also, alternately with arterial hyperæmia, in chronic arthritic rheumatism. By relieving the affected part from atmospheric pressure, a mixed hyperæmia may be brought about; for small areas a cupping glass may be employed, for a limb one of Junod's boots, from which the air can be partially removed by a suction pump. Bier has not yet succeeded in devising apparatus to suit the several joints, though he thinks this the most effective method for chronic articular rheumatism.

PATHOLOGY.

(182) Primary Phlebitis Obliterans of the Large Trunks of the Hepatic Vein.

Chiari (*Beiträg. z. path. Anat. u. z. allg. Path.*, 1899, xxvi, S. 1) records three cases of this rare condition. The first case occurred in a female, aged 28 years, who had always enjoyed good health. The first manifestation of the condition consisted in transitory pains over the liver and stomach, and loss of appetite. Later the pain became more severe, violent vomiting set in, and the patient succumbed some fourteen days after the onset. The second case also occurred in a female, aged 59 years, the symptoms being loss of appetite, general weakness, swelling of the abdomen, and dilatation of the cervical and superficial abdominal veins, enlargement of the liver and spleen. Collapse occurred suddenly some four weeks after the onset, and the patient died. In the third case, the subject was a male, aged 29 years. He complained of pain and a feeling of tightness in the region of the liver, progressive swelling of the abdomen, loss of appetite, vomiting, and insomnia. The liver and spleen were enlarged, and there was considerable ascites. Coma supervened, and death occurred two months from the date of onset. In all three cases the pathological conditions found were practically the same. The liver was more or less enlarged, dark in colour, the capsule smooth and not at all or only slightly thickened; on section the parenchyma appeared markedly congested, and had a dark, mottled appearance from the presence of numerous deep purplish-brown spots. The larger branches of the hepatic veins contained thrombi, and in the first case thrombi were also seen in the branches of the portal vein. The cause of this intense venous hyperæmia was found to be stenosis of the various openings of the large hepatic vein trunks into the inferior vena cava. Some of these were entirely obliterated, others were reduced to extremely small orifices. This stenosis, on minute examination, was seen to be due to a very marked increase in the thickness of the internal coat of the veins of a proliferative type, and in the first two cases limited to the orifices of the veins; in the third case a similar change was also present in some of the larger intrahepatic branches. In the first case the endophlebitis was also associated with a similarly localised proliferative periphlebitis, but in none of them was there any indication of changes in the neighbouring tissues which might be regarded as primary nor of previous thrombosis. It would appear, then, that the lesions represent a curiously localised proliferative endophlebitis tending to obliteration. The changes in the liver itself consisted in very intense passive congestion associated with atrophy of the liver cells in the inner parts of the lobules, with dilatation and thrombosis in the hepatic veins. The portal veins were also the seat of passive congestion, as evidenced by the ascites and enlarged hyperæmic spleen, and in one case thrombosis had also occurred in these vessels. The hepatic thrombosis and the portal thrombosis were secondary to the stenosis of the orifices of the hepatic vein trunks, and, by the extremely severe disturbances of the circulation induced, led to a fatal issue. As regards the nature of this primary phlebitis obliterans, Chiari does not look upon it as a disease *sui generis*, but rather as having a syphilitic basis, and would place it in the same category as the endarteritis obliterans syphilitica described by Heubner.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(183) Muscular Atrophy and Pulmonary Phthisis.

CARCASSONNE has made a series of observations on the wasting of special groups of muscles in the course of tubercle of the lungs (*Arch. Gén. de Méd.*, February, 1900). This wasting of the muscles is manifested more or less by deformity, alteration of function, together with modifications in their mechanical and electrical excitability, with at times hyperæsthesia. This atrophy of the muscles is more marked in the scapulothoracic group, and seems to coexist with the evolution of the pulmonary condition, being unilateral in the cases where one lung is affected, and always most marked on the side which shows the most advanced disease in instances where both lungs are involved. This phenomenon may be early, and the writer remarks that it may therefore possess considerable value as an indication of adjacent tuberculosis of a lung. The pathogenesis of this form of amyotrophy is similar to that met with in arthropathic tuberculous forms of atrophy. The alteration of the nerve fibres to the pleura reacts upon the cord and causes certain changes of degenerative character of the cornual cells. These changes consist in disappearance of the chromatophillic elements with displacement of the nucleus to the periphery of the cell. There seem to be subsequent changes in the nerves themselves. How these changes are brought about is a moot point. It has been suggested by Raymond that the action is a reflex one, while others believe it is merely an instance of retrograde degeneration.

(184) The Temperature in Psychopathic States.

HARALD HOLM (*Norsk. Mag. f. Laegevidensk.*, R. 4, Bd. xv, p. 1, January, 1900) points out how temperature anomalies (temperature the same evening as morning, or lower in the evening than in the morning; or the same in the rectum as in the axilla, or lower in the rectum than in the axilla) are commonly met with in hysteria, and may be regarded as a symptom of it. From statistics he goes on to show that these anomalies are characteristic also of non-hysterical insanities, even of imbecility. Further they could not be traced to any particular occurrence, such as insomnia, the taking of narcotics, or gain or loss in weight. They may, therefore, be of some medico-legal value in diagnosing between mental and non-mental maladies.

(185) A New Test for Bile in the Urine.

BIFFI (*Gazz. degli Osped.*, February 11th, 1900) after trying all the various tests, came to the conclusion that any new test must be based on the precipitation of bile pigments, as of the various methods now in use, those based on this gave the most satisfactory results. The author's method is as follows: Take 150 to 200 c.cm. of urine, strongly acidify with H_2SO_4, then add drop by drop 5 per cent. solution of BaCl (30 drops to every 100 c.cm. of urine). Drain off the liquid urine, and pour the soft precipitate on a piece of absorbent wool. Spread the precipitate evenly over the surface of the wool, and place upon it a crystal of bichromate of potash. If bile is present a green ring will appear round the crystal, changing later to blue, and then red. Instead of bichromate of potash a drop of fuming HNO_3 may be used. But this reaction is neither so delicate nor so rapid as the bichromate. A small quantity of albumen does not disturb the reaction. If there is much, the author recommends a saturated solution of Na_2SO_4 instead of H_2SO_4.

(186) Intermittent Claudication.

KARL GRASSMANN (*Deut. Arch. f. klin. Med.*, 1899, vol. lxvi, p. 500) adds another case to the literatnre of the affection first described in horses by H. Bouley, jun. (1831), and named by him *claudication intermittente*. Charcot in 1858 described analogous symptoms in a man, and since that time several authors in France and elsewhere have paid attention to the subject. Grassmann's patient was a man about 60 years of age, who contracted syphilis when he was about 20 years old. He was a great rider, a great smoker, and had been inclined to excess in alcohol. The intermittent claudication of the extremities was typical. The symptoms noted were the following: Sometimes, but only when walking, he was seized with severe pains in the legs, which quickly disappeared when he rested. He had cutaneous paræsthesiæ, and more or less disturbance in the circulation and nutrition of the peripheral parts of the legs. In other respects the nervous system appeared to be normal: decided symptoms of arterio-sclerosis; radial arteries thickened and tortuous; pulse occasionally irregular. No albumen or sugar detected in the urine. At one time he suddenly developed symptoms of arterial thrombosis in the left leg, but the circulation in the limb recovered, and after twenty days the pulse could be again felt in the bend of the knee. One year and a-half before this thrombosis the patient had suffered from a sudden attack of pain in the left thigh followed by an affection of the left knee, with swelling of the joint, which got better after some months, and may possibly have been of gouty origin. One year after the commencement of the intermittent claudication in the left leg the same symptoms appeared in the right leg. Treatment (by iodide of potassium, careful massage of both legs, and electricity) was followed at first by decided improvement, which, however, was not permanent. As yet (two and a-half years since the attack of thrombosis) there have been no signs of commencing gangrene.

(187) Arsenical Paralysis with Tabetic Symptoms.

DONETTI (*Rif. Med.*, January 24th, 1900) reports the case of a young girl aged 16, of good family history, suffering from anæmia, for which she had been treated in the ordinary way without much success. Hypodermic injections of citrate of iron, arseniate of soda (1 mg.) and strychnine were therefore given (33 injections in all). About the eighteenth or twentieth day the patient began to complain of severe pains in the lower limbs, tingling pains in the toe and sole of the foot, difficulty in standing or walking, and some hyperæsthesia; about a week later these sensations were more exaggerated, girdle pains set in, transitory incontinence of urine, headache, and some amyotrophy. There was no rash. Similar symptoms came on in the upper limbs. Later, the knee-jerks were lost and a certain amount of inco-ordination was observed. Reaction of degeneration was found in the extensors of the foot and a quantitative modification in some of the muscles of the leg, thigh, and forearm. All these symptoms were more marked on the right side On cessation of the treatment, massage and galvanism cured the patient in a month and a-half. It is hardly likely there could be any true myelitis in this case, probably either owing to direct toxic action or as a secondary reflex effect of the neuritis some dynamical alteration takes place in the cells of the cord.

SURGERY.

(188) Post-Operative Hæmorrhage from Stomach and Duodenum.

VON EISELSBERG (*Arch. f. klin. Chir.*, vol. lix, Part 4, 1899) describes 8 cases of this complication observed within the last three years in Königsberg. In 6 hæmatemesis occurred, in 2 hæmorrhage into the stomach was detected after death. Case I. Man, aged 43, radical operation for a large inguinal hernia. Free hæmatemesis night after operation; recovery. Case II. Fat woman, aged 59, strangulated umbilical hernia, radical operation; hæmatemesis second day; recovery. Case III. Very fat woman, aged 60, operation for strangulated umbilical hernia, numerous hæmorrhages in mesentery. Hæmatemesis night after operation; recovery. Case IV. Man, aged 60, intemperate. Excision of cancerous rectum; no hæmatemesis; no vomiting; death fifth day; free hæmorrhages from gastric mucous membrane, blood in contents of small intestine. Case V. Man, aged 50, strangulated inguinal hernia, patient almost moribund cæcum laid open; for three days fæces passed freely from artificial opening: no hæmatemesis; no vomiting; then death; diffuse purulent peritonitis; about thirty recent erosions; bleeding freely in gastric mucous membrane, two as big as a sixpence; duodenum normal. Case VI. Man, aged 42, operation for strangulated inguinal hernia; omentum deeply ecchymosed; vomited over a pint of blood on the second day; death shortly

afterwards; recent ulceration of duodenum and stomach. Case VII. Man, aged 43, excision of cancerous rectum; hæmatemesis second day; tarry motions ninth day; then death, rather sudden; duodenal ulcer, the floor of which was the lesser omentum; hepatic artery perforated. Case VIII. A doctor, aged 29, malignant disease of palate, tonsil, and cervical glands; free excision; ligature of external carotid artery; sudden collapse on the eighth day; tarry stools and vomiting of bright arterial blood, so that slipping of the ligature on the carotid was suspected; death; recent duodenal ulcer opening into gastro-duodenal artery; two cicatrices of old ulcers; no diffusion of malignant growth.

(189) Gummata of the Ciliary Body.

VOLLARO (*Giorn. dell. Assoc. Napolet. di Medici e Natur*, An. 9, f. 6) reports 7 cases of early gumma of the ciliary region, with fully details and histological examination. One of the most striking features in the history of the cases was the early appearance of the gummata; with the exception of the fifth case, which occurred five years after the appearance of syphilis, the others all appeared within a year of the first manifestation of syphilis. Early gumma runs a much more rapid and destructive course than when it appears late in the disease. In these cases the chief difficulty in diagnosis is to differentiate from syphilitic papule. The gumma, however, is more destructive to sight, less amenable to constitutional treatment, generally preceded by an initial iritis, and later by the projection of a yellowish mass into the anterior chamber, with increased temperature and rapid diminution or abolition of sight.

(190) Tuberculous Kidney Diagnosed by Catheterism of Ureter.

ALBARRAN (*Bull. et Mém de la Soc. de Chir. de Paris*, October 11th, 1899) recently exhibited a scrofulous kidney, which he had removed on the previous day. The patient was a man aged 34, with no history of tubercle in his family. Eight years ago his pleura was tapped for empyema, and about two years earlier he suffered from gonorrhœa. Only four months before the operation frequent micturition and dysuria set in, and the urine became turbid. He was treated for cystitis, which really existed, the bladder was tender and could not hold more than 120 grams of liquid. The bacillus of Koch was found in the urine, which contained pus and shreds of false membrane. The testicles and prostate were healthy, the ureters were not tender to touch, nor were the kidneys tender; those organs did not appear enlarged, the right seemed low down. The cystoscope showed inflammation of the bladder, with a villous appearance around the orifice of the left ureter. On catheterising the ureters the urine from the right was found clear and free from microbes or albumen, its specific gravity was only 1003, but it contained a fair amount of urea. The urine from the left ureter was purulent, and contained diplococci, the colon bacillus, and, it was believed, Koch's bacillus. It was albuminous, its specific gravity 1006, and it was very deficient in urea. The left kidney was therefore removed, with 4¾ inches of the ureter, which was much inflamed though free from visible tuberculous changes. The renal disease was almost limited to the upper quarter of the kidney, which contained a tuberculous mass as big as a chestnut. Partial nephrectomy was out of the question, as the kidney was the seat of advanced nephritis, nor does Albarran consider it justifiable in tuberculous kidney. Twenty-four hours after the operation the urine, freely secreted, was perfectly clear. Thus catheterism of the ureter revealed what could not be diagnosed by palpation; indeed Albarran never suspected disease of the kidney until the cystoscope demonstrated a suspicious appearance around the ureteral orifice.

(191) Pseudo-Tuberculosis of Peritoneum from Tænia.

HELBIG (*Deut. med. Woch.*, February 1st, 1900) reports the result of the examination of a piece of omentum removed during an operation for perityphlitic abscess. The patient had been watched for four weeks and the disease seemed to be of tuberculous origin. A few small tuberous deposits in the serous coat of the cæcum were snipped off to be examined with the omentum, which had been excised on account of adhesions. The omentum and tubercles showed the naked-eye appearances of caseating tubercle and microscopic sections displayed giant cells which seemed almost to prove what was reasonably expected. But after very careful staining and section cutting the giant cells were found to surround bodies which proved to be the ova of the tapeworm. The histological changes around the ova, seen in different grades of development, are minutely described by Helbig. The ova evidently had entered the peritoneum, with particles of fæces, through a perforating ulcer of the vermiform appendix. Helbig reminds us that Miura of Tokio reported in 1889 a necropsy where, quite accidentally, on examining some apparently tuberculous deposits in the peritoneum, he found that they surrounded ova, which seemed to be those of the liver-fluke (*Distoma hepaticum*.) The fact that pseudo-tuberculosis resembling in all respects true tuberculosis of the peritoneum, as far as naked-eye appearances can aid us, may be caused by the entry of parasites into the peritoneal cavity is a matter of much importance.

(192) Local Anæsthesia.

CUSHING (*Annals of Surgery*, January, 1900) states that in the Johns Hopkins Hospital 24 herniotomies with cocaine or eucaine have recently been performed in young men, practically without pain, and that in operations for strangulation and for the radical cure of hernia this method of anæsthesia has become the method of choice. A table of 32 herniotomies performed under local anæsthesia by cocaine includes cases in which, in consequence either of advanced age, extreme prostration, or other unfavourable conditions, the administration of a general anæsthetic would have been attended by great danger. The author points out the following as decided advantages of local anæsthesia: There is an avoidance of unpleasant or dangerous sequelæ; there is no vomiting or retching; urinary disturbances are less likely to occur and catheterisation is rarely necessary; there is no necessity for a change of diet; the dressings may be applied originally to suit the comfort of the patient, which is of great importance to old people; above all is the advantage gained by the surgeon in being able to operate with comparative safety in patients who would incur immediate risk in submitting to general anæsthesia. The disadvantages of local anæsthesia are comparatively trivial. More time is taken up in the operation, and there is necessarily some distraction to the surgeon. The operation is certainly more difficult and some pain is inflicted, the degree of which, however, depends on the surgeon's familiarity with the steps of the operation and his knowledge of the sensory nerves of the region concerned. On many occasions no actual pain whatever need be experienced, and, should there be some, it is a slight trouble in comparison with the discomforts following the administration of ether. The greater difficulties with which the surgeon has to deal during the operation are more than compensated for by his subsequent freedom from the anxiety which, in cases of hernia, attends the actual administration and the subsequent effects of a general anæsthetic.

MIDWIFERY AND DISEASES OF WOMEN.

(193) The Time of Operation for Ectopic Gestation at Term.

DUNNING (*Am. Journ. of Obstet.*, November, 1899), in reporting a case in which he operated successfully for ectopic gestation five weeks after the death of the child, opens the question whether, when the child is alive, operation should be undertaken at or near term with a view to saving the child; or whether it should be postponed till after the latter's death. He quotes the generally-accepted rule that by waiting the operation is safer for the mother; but, in view of the statistics which he has collected, he is disposed to question this rule. As regards operations during the viability of the fœtus he has found 25 recorded cases, namely, 13 in Harris's tables, 7 in those of Ayers, and 5 collected by himself; of the 25 mothers 15 recovered and 10 died, the percentage of recoveries being 60; of cases operated on after the death of the fœtus, Ayers collected 16 and the writer 17 during the years 1894-96; this gives 33 cases, in which 19 mothers recovered and 14 died, the percentage of recoveries being 57.7. He recognises the fact that the ectopic fœtus is often a

deformed and otherwise unsatisfactory individual, whose lease of life is usually short; and so, if the maternal mortality were increased by trying to save the child, he would not advocate the plan. But in view of the results obtained from his statistics, he holds that in the majority of cases the operation should be undertaken while the child is still living, as he considers that it can now be safely affirmed that this is the safer course.

(194) Labour with Double Uterus and Vagina.

BALIN (*Centralbl. f. Gynäk.*, 1899, No. 48) records 2 cases of this complication. In the first case the presence of an abnormality was suspected, owing to the fact that at one time, on vaginal examination, the breech was plainly felt, the membranes having ruptured, whilst at another time the breech felt as if covered by a rather tough membrane. Inspection of the external genitals led to the discovery of a double vagina. Labour was delayed by inertia, and was at length concluded by manual extraction of the breech. The vagina was not torn in the process. He did not deem it advisable to explore further at the time, but three weeks later he was able to determine that the two vaginæ were completely separate, that a cervix presented in each, the right one being virginal, and the left parous and patulous. The two bodies were quite separate from one another, the condition being thus one of uterus didelphys. An examination made two months later during menstruation showed that the two uteri menstruated equally and simultaneously. In the second case the writer was not able to make complete observations. He was called when the patient was in labour, and on examining found the child's head presenting, but apparently covered over by a membrane continuous with the vaginal wall. On examining the external genitals nothing abnormal was visible; closer scrutiny showed that within the left labium minus was a narrow oval opening, within which was a hymen, as of an intact virgin. Introducing the finger with some difficulty a cervix was reached, within which the head could be felt, and the sutures and fontanelles distinctly made out. The labour proceeded naturally, under the charge of the attending midwife, the child being born through the left vagina. Balin had no later opportunity of examination to determine the condition of the uterus.

(195) Rupture of Uterus: Great Detachment of Peritoneum.

BAR (*Bull. de la Soc. d'Obstét. de Paris*, July, 1899) was called in to a patient in labour where the right shoulder presented. Two attempts at version had failed. He performed embryotomy and extracted the fœtus and placenta. On passing his hand into the uterus he detected a big rent on the right side; it led into a wide space full of blood and clots. Coils of intestine seemed to lie in the deepest recesses of this space. Abdominal section was performed, and then it was found that the peritoneum was intact, but completely peeled off from the right side of the uterus and the right parietes as far upwards as the kidneys. The clots were cleared as much as possible out of the bleeding space; then, whilst an assistant kept his eye on the parts through the open peritoneum, Bar packed the subperitoneal space with iodoform gauze up to the kidney; the end of the tampon was left hanging through the uterine wound and vagina; then the uterine cavity and vagina were plugged. The abdominal wound was then closed. The latter tampon was removed on the second day and replaced. The tampon in the space was retracted day by day from the third to the sixth, by which time all had come away. The patient was doing well three months later; the body of the uterus was movable, the cervix drawn to the right. Bar dwells on his mistake, but after he had made an abdominal incision the perineum being detached from the parietes was not opened and the packing of the subperitoneal cavity was undertaken under the most favourable circumstances, so that nothing was done in the dark. Budin, in discussing Bar's case, believed that in many instances where drainage or plugging had been successfully used in rupture of the uterus the peritoneal cavity had really remained intact, hence the total absence of any serious symptoms after the checking of hæmorrhage. Bar, it happened, had verified this condition by opening from above. Budin related a case of fatal rupture in a rachitic woman; he found, after death, the uterus pushed to the right, the fœtus delivered through a rent in its left side had forced itself under the peritoneum, which was quite intact. In a second case under Budin spontaneous rupture occurred in a labour with shoulder presentation. No intestine protruded into the uterine wound, so he washed out the cavity into which a part of the fœtus had passed and plugged the cavity and the uterus. The patient recovered.

(196) Delivery after Hysteropexy and Amputation of Cervix.

KEIFFER (*Bull. de la Soc. Belge de Gynéc. et d'Obstét.*, 1899-1900, No. 7) succeeded in following up a pregnancy and delivery in two cases of abdominal hysteropexy, one for retroversion and adhesion in a nullipara, the other for retroflexion without adhesion in a primipara. As small a surface as possible of the uterus near the fundus was fixed to the parietes. The pregnancy advanced without pain, dysuria, or motor troubles of the uterus in either case. Both labours ended well; in the first case the forceps was applied, as the child was big, and weighed 8½ lbs. The labour in the second case ended spontaneously in two hours. Keiffer could satisfy himself by palpation that the utero-parietal adhesion did not influence the contractions unfavourably. The same writer amputated the entire cervix for hypertrophy and glandular endometritis in a young woman subject to phthisis. Two years later, when the pulmonary affection had abated a little, pregnancy came on. The lower part of the uterus representing the cervix underwent steady widening and softening during gestation, and dilated perfectly during labour, which ended spontaneously in three hours.

THERAPEUTICS.

(197) The Treatment of Hiccough.

J. NOIR (*Progrès Médical*, January 6th, 1900) refers to the frequency of hiccough as a dangerous and even fatal accompaniment of certain diseases. He looks upon it as a series of convulsive seizures due to toxic causes. Allusion is made to Erb's method of treating it by faradisation applied to the epigastrium; to the method of galvanisation or faradisation of the phrenic nerve; to the method of passing a galvanic stream transversely between the mastoid processes; to Leloir's method of compressing the left phrenic nerve, to Nothnagel's method of forcibly elevating the hyoid bone with the fingers, and particularly to the method of Laborde, of vigorous traction applied to the tongue, an outcome of Lépine's observations on the effect of traction applied to the tongue upon the apparently dead. Noir has had several successes in treating persistent hiccough by Laborde's plan. In one, a very nervous girl of 6½, who had had violent hiccough for six hours and was so much exhausted that her relatives had given her up for dead; traction on the tongue for about a minute and a half calmed the malady as by magic, and it did not recur. In another case, where the patient was diabetic, tuberculous, and cachectic, the hiccough had been severe for several days, and was evidently toxic in origin. It had resisted all forms of medicinal treatment and absolutely prevented sleep. Traction on the tongue, continued for about two minutes, completely arrested the spasm; it, however, reappeared several days later, but again ceased on the patient practising the method on himself. The great advantage of the method is its simplicity, and that it does not require any electrical or other apparatus.

(198) Aneurysm of the Abdominal Aorta Cured by the Internal Administration of Gelatine.

J. BUCHHOLZ (*Norsk. Mag. f. Laegevidensk.*, R. 4, Bd. xv, p. 176, February, 1900) reports the case of a woman, 35 years of age, who had had seven children, and who was now the subject of vomiting, pains in the region of the stomach, constipation, tympanitic distension, and insomnia. The aneurysm was oblong, smooth, with thin walls, of the size of the fist, and situated in the epigastric part of the abdominal aorta. The heart's action was not interfered with and the sounds were pure; the pulse was weak. The patient was kept recumbent and an icebag was applied night and day; and a 10 per cent. solu-

tion of gelatine in normal salt solution was given by the mouth, as the circumstances were not favourable for giving it subcutaneously. Drugs were also given for the loss of appetite, for the insomnia, and for the tympanitic distension. After about two months the gelatine was given only every second day, and the icebag worn only for two hours a day; the aneurysm had gradually shrunk in size, and was now a little-resistant swelling. The use of the gelatine was continued for another month, and then the woman was able to return to her work. The cure is not attributed to the gelatine alone, but Buchholz considers that part of the good effect was due to the ice.

(199) Therapeutical Uses of Guaiamar.

This substance is the most recent derivative of the phenol group of chemicals. G. F. Butler (*New York Med. Journ.*, September 23rd, 1899) speaks very highly of it. Guaiamar is the glycerol-ether of guaiacol, and is formed by the action of anhydrous glycerine or pure guiacol. It is dry white crystalline powder with a bitter aromatic taste, and is soluble in about twenty parts of water at the ordinary temperature. It dissolves freely in alcohol, is neutral in reaction, and is compatible with quinine, malt, hypophosphites, cod-liver oil, and pepsin. It is antiseptic owing to the liberation of nascent guaiacol which takes place partly in the stomach, but chiefly in the small intestine, and glycerine is also set free at the same time. This decomposition occurs readily at the site of diseased tissues (ulcers, etc.), and in the healthy stomach there is practically no change. It thus does not interfere with normal digestion, while its bitter aromatic qualities give a tonic effect and improve appetite. Like other members of the group, it has a diuretic and diaphoretic action, and is possessed of antipyretic properties. The unbroken skin is capable of absorbing it, and for this purpose an ointment prepared with lanolin is serviceable. In digestive disorders where gastric fermentation (with dilatation of the stomach) is met with, it proves useful owing to the ready liberation of guaiacol under these circumstances, so that bacterial development is checked. Peristalsis of the bowel is also stimulated. The dose is from 3 to 15 gr., to be taken thrice daily. Patients suffering from typhoid fever have been treated with it beneficially, and the fever and local symptoms were diminished. Where the drug has been taken for several days the stools become odourless practically. The ointment of guaiamar with lanolin (2 drachms to the ounce) applied to painful joints in acute rheumatism greatly diminishes the pain; and as an adjuvant to belladonna ointment in cases of gonorrhœal rheumatism it has proved itself useful in allaying the pain and local inflammation. Its bactericidal and stimulative action have given good results in the event of local applications for bedsores which improved rapidly under treatment. The application consisted of guaiamar and balsam of Peru (aa, 1 drachm) added to 1 ounce of benzoated zinc oxide ointment. In aqueous solution it is non-irritating and can be applied as a lotion to wounds and lacerated parts. It is of interest to note that in the summer diarrhœas of children it has proved especially and immediately beneficial, especially in cases due to bacteria where the intestinal decomposition rapidly subsided and ceased after the use of this drug. Fœtid expectorations (as in bronchiectasis and in the early and middle stages of phthisis) have also distinctly improved under its administration.

(200) Treatment of Scabies by Nicotine Soap.

Marcruse (*Therap. Monats.*, December, 1899) has successfully treated 32 cases of scabies with nicotine soap. It is of a dark-brown colour, and may be scented with oil of bergamot. It consists of tobacco extract 5 per cent., precipitated sulphur 5 per cent., and over-fatty soap 90 per cent. The patient is washed with warm water night and morning, and is then anointed from head to foot with this soap, which is allowed to dry on. This process is repeated for three or four successive days, when the cure is complete, and then he is given a hot plunge bath. This ointment is free from unpleasant odour, and does not discolour the bed or body linen of the patient. He has also tried with good effect this treatment in tinea tonsurans circumscriptus, in urticaria, and in incipient prurigo. It had no special advantage in the treatment of pityriasis versicolor.

(201) Treatment of Prolapsus Ani in Children by Ice Tampons.

Hajeah (*Rev. Mens. des. Malad. de l'Enfance*, November, 1899 (records very successful results obtained by the use of ice tampons even in the gravest cases of prolapse of the rectum in children. The method consists in the introduction into the rectum of cone-shaped fragments of ice (suppositories) in the operation of reduction of the prolapse. The suppositories can be artificially frozen in moulds and should be 3 to 3½ inches in length and the diameter at the base should be 1 to 1½ inch according to circumstances. Such an iced suppository is enveloped in a piece of iodoform gauze, so that the latter covers it like the finger of a glove. The whole is then introduced into the centre of the prolapse and gradually and steadily pushed up till the prolapse is returned, the ice and gauze being carried up with the reduced bowel. Usually there is no pain experienced and the tampon is retained. It should be the rule to introduce a fresh ice suppository with gauze after each defæcation. The prolapse in this way becomes less and less in degree and eventually ceases altogether. The beneficial result attained is due partly to relief of venous congestion and of laxity of mucous tissue of the bowel, and partly to the increased contractility and tonicity of the muscular coat produced by the coldness of the ice and the mechanical contractile reflex proved by it before it melts. The ice-cold water acts for a longer time as a stimlant. This procedure has always been successful in Hajeah's hands and is strongly recommended by him.

PATHOLOGY.

(202) Vascular Lesions in General Paralysis.

Straub contributes a valuable study on this subject (*Neurol. Centralbl.*, October 15th, 1899), basing his paper on the pathological examinations of 84 cases of general paralysis of the insane. He found that vascular lesions were present in 69 of these cases, and that the lesions affecting the aorta were different from ordinary atheroma, being frequently present as a circular thickening of the internal coat (endarteritis) frequently involving the valves. It obliterated the finer vessels. No regressive process could be seen, and no fatty degeneration or calcification was met with. While these lesions were found in 69 out of 84 cases of general paralysis, they were, on the other hand, met with only in 7 out of 71 individuals who were not general paralytics, and each of the 7 was a syphilitic subject. Histologically in fact the lesions found in the cases of general paralysis alluded to seemed to resemble those of syphilis. The presence of syphilis in 82 per cent. of all the cases of general paralysis examined by Straub makes it evident that the vascular lesions in syphilis without general paralysis, and in syphilis with general paralysis were identical. The number of men was twice that of the women in regard to the causation of vascular lesions and of general paralysis. He points out that syphilis leaves more persistent lesions in men than in women. The vascular lesions of the brain in general paralysis differ also from those of ordinary atheroma, and resemble more closely those of syphilitic endarteritis. Straub does not claim that the vascular lesions described exist in every case of general paralysis, but he states that in all probability the cerebral degenerations which underlie the progressive paralytic dementia are closely connected with the vascular lesions, and that the latter may possibly be the starting point in the progress of cerebral degeneration.

(203) Cerebral and Spinal Shock.

Cavicchia and Rosa (*Il Policlinico*, December 15th, 1899) have made experiments on animals with reference to this matter. They conclude that, as regards cerebral shock, the chief factors, in the early stage, must be looked for in the vascular contraction, which they found constantly and in the functional torpor of the nervous elements caused by the vibration of the cephalic contents in direct response to the blow. In the later stages of shock a paralytic vasodilation sets in, and a certain degree of defective nutrition in the nervous elements themselves. Similar conclusions were arrived at as the result of experiments on spinal shock.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(204) A Method for the Detection and Estimation of Sugar in the Urine.

A. R. ELLIOTT (*Kingston Med. Quarterly*, January, 1900) describes a new modification of the copper test for the detection and estimation of sugar in the urine, which he claims to be more delicate and reliable than those previously employed. The reagents are also more stable. He employs two solutions. No. 1 consists of copper sulphate (27 grs.), glycerine (3 drachms), distilled water (2½ drachms), liq. potassæ (up to 4 ounces). No. 2 consists of a saturated solution of pure tartaric acid in distilled water. In applying the test 1 drachm of the copper solution (No. 1) is placed in a test tube, and heated to the boiling point. Then 3½ drops of solution No. 2 (tartaric acid) are added. The mixture is again boiled. Then the suspected urine is added drop by drop (the test tube being boiled after each addition) until a reduction of oxide of copper occurs, or until 8 drops of urine have been added. More than 8 drops of urine should not be added, since this amount will give a reaction if the urine contains any quantity of sugar of clinical importance. For the quantitative estimation of sugar 1 drachm of the copper solution (No. 1) is placed in a small glass flask, then 3 drops of the tartaric acid solution (No. 2) are added, and 1 drachm of liq. ammoniæ. Distilled water is added to raise the total volume of the mixed fluid to 1 ounce. This quantity of the mixed fluid is decolorised by one-tenth of a grain of grape sugar. The fluid is boiled, and urine added drop by drop from a minim pipette or burette. The number of minims of urine required to decolorise the solution contains one-tenth of a grain of sugar. In order to calculate the number of grains of sugar per ounce, it is necessary to divide 480 (the number of minims in 1 ounce) by the number of minims of urine required to decolorise the quantity of reagent above stated, and to again divide the quotient by 10. This gives the number of grains of sugar per ounce. If the urine has a specific gravity above 1028 it should be diluted with an equal volume of water before making the estimation, and of course the result obtained by the calculation just given must be then multiplied by 2. The estimation is readily made, and the results are stated to be sufficiently accurate for clinical purposes.

(205) Traumatism of Cauda Equina and Conus Terminalis.

A. SOUQUES (*Rev. Neurol.*, December 30th, 1899) records a case in which the anæsthesia following injury to the cauda equina was limited to the sensory distribution of the fine sacral nerve roots, and other features of importance were present. Lesions limited to the cauda and to the conus terminalis were decidedly rare, and of 113 cases collected in Dufour's work (*Thèse de Paris*, 1896) 55 were attributed to traumatism. The present case is that of a young woman, aged 19, dressmaker, who fell accidentally into the river-bank from a height of 8 metres. She did not lose consciousness, but on attempting to rise found her lower limbs helpless and had to be carried home. There was an acute pain in the lumbar region, and the legs were completely paralysed. The bladder was paralysed and the urine had to be drawn off by catheter. There were numbness and tingling of the legs. During the three days following the accident the fæces passed involuntarily and freely. Constipation then supervened, rendering purgatives necessary weekly. On the fifteenth day retention was replaced by incontinence of urine which passed involuntarily. The paraplegia gradually diminished, so that in a month and a-half she could rise and take a few steps. The lumbar pain had disappeared long before, and the paræsthesia was now disappearing. No trophic changes occurred. Eight months after the accident she could walk, but became fatigued in a few minutes. The peroneal and calf muscles still showed the most perceptible degree of paralysis. Electrical reaction varied for the different muscles. Areas of anæsthesia (symmetrical) appeared on the buttocks and along the back of the thighs as far as the popliteal space, tapering thence to the centre of the calf. The heels and soles also were dulled in sensation, and the antero-external part of the dorsum of the feet was similarly affected. These areas were symmetrical. The knee-jerks were lessened on both sides, and the tendo Achillis jerks abolished. The plantar-reflex was abolished. The feet had the attitude shown in Friedreich's disease, and in the back there was a sharp protuberance due to fracture and partial dislocation of the first lumbar vertebra. Pressure here was painful. From a careful mapping out of the areas mentioned, it appeared that an injury had been inflicted on the conus terminalis and adjacent trunks of the cauda equina, but the favourable progress towards partial recovery negatived the advisability of surgical procedure.

(206) Diphtheria and Tubercle.

SINDING-LARSEN (*Norsk. Mag. f. Laegevidensk.*, R. 4, Bd. xv, p. 133, February, 1900) gives details of an epidemic of diphtheria in a hospital for scrofulous children. Twice there was a recrudescence of the epidemic after isolation seemed to check it, and in each instance bacteriological examination of the throats and noses of all the children revealed some latent cases. It is doubtless for this reason that the stopping of an epidemic of diphtheria is a matter of such difficulty. It is necessary to examine the nasal mucous membrane, for in several cases the bacillus of diphtheria was found there, even when the throat was free from it. It was clearly shown that the more advanced the tuberculous processes were from which the children were suffering the more prone they were to take diphtheria; the receptivity to diphtheria increased with the degree of the tuberculosis. During the epidemic 80 per cent. of the children with advanced tuberculosis took diphtheria, and only 16 per cent. of these with slightly marked tuberculosis.

SURGERY.

(207) The Differential Diagnosis of Intestinal Obstruction and Acute Peritonitis.

JEANNE (*Bull. et Mém. de la Soc. de Chir.*, February 13th), insists on the importance of two special signs in distinguishing between intestinal occlusion and acute general peritonitis. In the latter condition, he states, there is extreme sensibility of the recto-vesical or recto-uterine sac, while in the former intestinal contractility persists in a more or less exaggerated degree. Tuffier, in a report on this paper, states with regard to the first of these signs that though it does not possess a constant and absolute value in actual practice, it serves when present to give much help in cases of difficulty, and ought in such cases to be systematically tested. The peritoneal fold in question is that portion of the serous membrane which is most accessible to digital exploration, and the *cul-de-sac* receives the infective secretion from other parts of the inflamed peritoneum, and is usually involved in the inflammatory process. Intestinal contraction, manifesting itself by vermicular movements of distended loops which can be traced under the abdominal wall, as it is caused by the effort of the intestine to overcome an obstacle and is absent in cases of infective inflammation of the peritoneum, favours the diagnosis of mechanical obstruction. It may, however, fail to show itself in such cases; and thus, though it be a valuable sign when present, its absence cannot be regarded as conclusive.

(208) Resection of Cæcum and Ileum for Carcinoma.

F. W. JOHNSON of Boston (*Boston Med. and Surg. Journ.*, October 12th, 1899) performed this operation on a woman aged 65. There was a left inguinal hernia. Just above McBurney's point a mass of the size of a cocoanut was observed; it was nodular, movable, and sensitive on pressure. An incision was made directly over this mass, and after strongly adherent intestine had been removed, malignant disease of the cæcum in the neighbourhood of the ileo-cæcal valve was discovered. All the cæcum and several inches of the ileum were resected. The cut end of the colon was closed in the usual way, so that a new cæcum was formed. A button-hole incision was cut about 1 inch from the end of this new cæcum. The ileum was drawn into the button hole for an inch by traction threads and there fastened with silk. The omentum was carefully

spread around the anastomosis, and a gauze drain (which proved superfluous) was put in. A few infected mesenteric glands lay attached to the excised intestine, but no more could be found in the adjacent mesentery, nor was the omentum infected. The disease was an adeno-carcinoma as big as a hen's egg. Six days later the temperature was normal, flatus and motion passed freely, and digestion was good. Continued improvement was noted two months after the operation.

(209) Multiple Exostoses.

GROSSE (*Revue d'Orthopédie*, No. 5, 1899) gives the result of a study based on a case under the care of Kirmisson of multiple exostoses associated with arrest of development or deformities of the skeleton. Volkmann held that there is a direct connection between multiple osteogenic exostoses and rickets, exostoses, arrests of development, and incurvations of bone being so many rachitic manifestations, and the so-called *exostoses de croissance* constituting but a special form of rickets to which this surgeon gave the name of "rachitis nodosa." Other observers hold with Bessel-Hagen that multiple exostoses constitute a primary morbid condition of hereditary origin, and that there is a direct relation between the impaired development of the skeleton and the formation of the osseous growths, the production of the exostoses being the primordial phenomenon. The author from a careful consideration of Kirmisson's case, together with 12 other cases collected from different sources, is inclined to favour the theory of Volkmann and to regard multiple exostoses and the associated disturbances of osseous development as lesions of a rachitic nature. In 8 of the 12 cases given in this paper the subjects either presented decided indications of rickets or belonged to rachitic families. Rachitism, it is stated, is manifested in a large number of the subjects of multiple exostoses, and in most of those who do not present any well-marked indications of the former affection there are good grounds for suspecting its influence.

(210) Generalised Melanosarcoma.

DE BUCK AND VANDERLINDEN (*Belgique Méd.*, No. 45, p. 584, November 9th, 1899) describe the case of a married woman, aged 25 years, who had suffered for nine years from lupus of the face, and who was in a condition of advanced anæmia. Seven months previously she began to be affected with a swelling at the anus, which was now the seat of a considerable secretion. Examination revealed a large tumour of a dark black colour, painful to touch, and secreting an abundant ichorous, blackish secretion. There was also hardness and swelling of the inguinal glands, especially of the left. The lungs and heart seemed normal. Believing that they had to do with a mass of hæmorrhoids which had become gangrenous, the authors proceeded to extirpate them after the method of Whitehead. The wound healed well, but the glandular swelling increased, the labia majora became œdematous, and by rectal and vaginal examination it was found that there was an extensive hardness surrounding the rectum and uterus. The glands in the left groin enlarged much and became fluctuating; they were incised, giving exit to a blackish serum. The blood showed a slight leucocytosis, and there was melanuria. The incision in the groin did not close, and about ten weeks after her entrance into hospital the patient died of marasmus. At the necropsy, which unfortunately was incomplete, it was found that there was an abundant ascites of a brownish colour, the omentum was much increased in size and contained numerous large cysts with blackish fluid, and in the liver and spleen were similar cysts. Microscopic examination showed that the case was one of melanosarcoma of wide distribution. Probably the starting point of the whole process was in the anal tumour, but unfortunately it had not been preserved for microscopic examination.

MIDWIFERY AND DISEASES OF WOMEN.

(211) The Treatment of Eclampsia.

THIS question is made the subject of a "symposium" in the *Therapeutic Gazette*, for December 15th, 1899. Davis outlines the present view of the etiology of the condition, which results from poisons circulating in the blood of the mother and fœtus. These substances form in all pregnant patients and in the unborn child. In most cases they are excreted by the kidneys, liver, intestine, skin, and lungs. When they are retained they produce auto-intoxication, varying in degree, and reaching its greatest activity in puerperal eclampsia, followed by death. Diagnosis depends on the examination of the urine to determine the presence or absence, first, of solids; secondly, of kidney *débris*; and on the observation of clinical phenomena, especially frontal headache, melancholia, stupor, lack of proper secretion in the skin and constipation. Prophylaxis consists in the proper regulation of diet, clothing, and exercise; in securing activity of the skin by a warm tub-bath at night and a cool sponge in the morning, and in the maintenance of a regular action of the bowels. Treatment directed to this last point should aim especially at the proper emptying of the large intestine. This is best secured by salines in the morning, with or without cascara at night. Davis speaks highly of the value of calomel in repeated small doses of one-fourth of a grain, combined with bicarbonate of soda, and followed the next morning by some saline such as citrate of magnesia. Excretion can be greatly promoted by the proper use of water; the effect is increased by charging it with carbonic acid gas. Sparkling saline waters answer very well. The treatment of eclampsia itself falls under two headings: First, the control of convulsions; secondly, the establishment in the quickest possible manner of very free excretion. The first and less important indication is best met by the administration of chloroform; the balance of opinion is at the present time distinctly against the use of large doses of morphine, potassium bromide, or chloral. To establish free excretion, one of the first steps should be rapid emptying of the uterus; because it has been observed that immediately after labour the kidneys act more freely, perspiration commonly occurs, and vasomotor tension is relaxed. Moreover, the presence of the child in the uterus forms a decided source of irritation, unless the patient is in a comparatively early period of gestation, with the uterus entirely quiescent, and the child's movements not excessively violent. Davis believes that when the cervix is tightly closed, when efforts at elimination, promptly pushed and closely watched, meet with no response, and when œdema of the lungs has not supervened, the ideal method of emptying the uterus is by Cæsarean section. If, on the other hand, the membranes are tense, they should be ruptured; and if the uterus is contracting and dilatation is proceeding slowly, labour should be hastened by artificial dilatation of the cervix, followed by the application of forceps or extraction by version. To secure prompt elimination, as many organs as possible must be roused to activity. Thus the patient should be placed in a complete hot moist pack; the action of the bowels should be obtained by means of 5 gr. of calomel, or 2 drops of croton oil, followed, if necessary, by a soap and water enema and copious irrigation of the large intestine with from 1 to 3 gallons of normal salt solution. On the question of bleeding, opinions are divided; some advise its use when the blood tension is high, and recommend that the bleeding should be followed by the transfusion of normal salt solution. Others hold, with Davis, that the introduction of large quantities of saline solution by hypodermoclysis gives the best results. Pilocarpin is now generally given up; but veratrum viride given hypodermically lessens the pulse-rate and arterial tension, promotes relaxation of the cervix, and assists in controlling the patient. The most important point in after-treatment is free stimulation, by rectal injections of peptonised milk and whisky, and hot diluted coffee. Digitalis is often most useful.—Edgar summarises the treatment of eclampsia as follows: 1. Preventive treatment. For this the cases must be watched; perfunctory monthly or bimonthly examination of the urine is not enough, since non-albuminuric eclampsia occurs in from 9 to 16 per cent. of cases, and it appears to be as fatal as, if not more so, than an eclampsia accompanied by albuminuria. The general symptoms of overcharging of the blood with toxic material must be looked out for—high arterial tension, headache, gastric disturbances, physical and mental lassitude. The lines of treatment of this pre-eclamptic state should be: (1) To reduce the amount of nitrogenous food to a minimum, this is best done by an exclusive milk diet;

(2) to limit the production and absorption of toxic materials in the intestines and tissues of the body, and assist in their elimination by improving the action of (*a*) the bowels, (*b*) the kidneys, (*c*) the liver, (*d*) the skin, and (*e*) the lungs. Action of the first four is improved, in eliminative insufficiency, by giving twice weekly at bedtime a tablet composed of calomel, digitalis, and squill, each 1 grain, and muriate of pilocarpin $\frac{1}{20}$ grain. This is followed in the morning by a full dose of Villacabras water; (3) if necessary, to remove the source of fœtal metabolism and peripheral irritation in the uterus by the emptying of that organ. 2. The curative treatment. Edgar points out that the latest statistics from various parts of the world still place the maternal mortality at from 25 to 35 per cent. No single treatment suffices; many cases recover, no matter what the treatment, many die in spite of treatment, and others do well without any treatment at all. A combined treatment answers best, fulfilling the following indications: (1) To control the convulsions; (2) to empty the uterus under deep anæsthesia by some method that is rapid and that will cause as little injury to to the patient as possible; (3) to eliminate the poison or poisons which we presume cause the convulsions. For the first indication, morphine appears to be largely relied on, but Edgar believes it is harmful, and prefers chloroform, veratrum viride, and chloral in the order named. For emptying the uterus four plans have been adopted: (*a*) Cæsarean section; (*b*) mechanical dilatation of the cervix and the immediate extraction of the fœtus; (*c*) deep incisions which at once completely remove the barrier of the cervix; (*d*) a combination of *b* and *c*. Edgar believes the second is the best. Cæsarean section performed for eclampsia has a very high mortality (36.26 per cent., Charpentier). Elimination must be effected through all the usual channels. The drawing off of large quantities of toxic liquids in the form of blood or serum by means of venesection, catharsis, diaphoresis, diuresis, followed by the replacement of the same by intravenous, stomachic, rectal, or hypodermic means has thus far proved of doubtful value. But in cases of collapse with small compressible pulse, saline transfusion is of value. Oxygen acts as a general stimulant, assists in elimination from the lungs, and prolongs life in the post-eclamptic stupor or coma. Alcohol and strychnine are also of great value.—King employs first the hot bath or hot wet pack to promote diaphoresis; then in succession over the kidneys, cupping (dry or wet, as the patient may be respectively anæmic or the reverse) mustard plasters once only, then hot poultices of flax-seed meal and digitalis leaves. After relief of the renal congestion, he gives digitalis and citrate of lithium. The patient is placed in Sims's position, or any other that will divert the pressure of the gravid uterus towards the diaphragm and away from the pelvis. To control the convulsions he gives large doses of fluid extract of veratrum viride with morphine, hypodermically; and in anticipation of each convulsion, just as it is about to begin, a cautious inhalation of chloroform. Delivery should be effected as soon as possible; but if the convulsions can be kept in abeyance, and labour allowed to proceed by itself without interference, so much the better. All violent manipulations, with instruments or otherwise, should be avoided if possible. It is important to see that the tongue does not sag backwards during convulsions, and occlude the glottis. It should be drawn forward with forceps.—Reynolds insists, like the other writers, on the importance of prophylaxis and adopts much the same lines of treatment. He points out that if a mother be lost, the child is almost certainly lost too; prompt delivery immediately after the advent of convulsions usually saves the mother, while a temporising policy frequently loses both; he has, therefore, come to the conclusion that the probable loss of maternal and fœtal life due to temporising methods far outweighs the certain loss of some immature fœti by prompt delivery, and he now advocates immediate delivery under ether at one sitting for all cases of eclampsia in which one undoubted convulsion has occurred before the delivery of the child. After delivery, or during the puerperium he uses catharsis, obtained by calomel or croton oil if the patient cannot swallow well enough to take salines, diaphoresis secured by the hot-air bath, and diuresis obtained by the administration of the largest quantities of water the patient can swallow, fortified by citrate of potash or cream of tartar. All these are graduated according to the state of the pulse. He occasionally uses pilocarpin, $\frac{1}{8}$ grain, when he cannot get diaphoresis without it, but he is afraid of it, as he has seen it produce a watery secretion from the lungs rather than from the skin. For sedatives he uses large doses of bromides in cases with urinary suppression, or choral when the convulsions have come on with comparatively little renal disturbance. He does not advise morphine; he has not personally employed veratrum viride, but he has seen in consultation a good many cases in which it had previously been given without the good results so often claimed for it. He believes that little marked improvement in treatment will result until more is known of the pathological cause of the affection.—Norris, like Edgar, insists that the routine examination of the urine of pregnant women is not enough to determine the appearance of dangerous symptoms. The most important indications in all cases are to prevent, as far as possible, by diet, the formation of toxins; to aid the liver to destroy them, and the excretory organs to eliminate them. On the first appearance of untoward symptoms Norris modifies the diet, eliminating nitrogenous foods, and directing an abundance of milk and water, and a mild laxative. Calomel is of great value, because not only is it a laxative but it is probably the best intestinal antiseptic, besides acting on the liver. He also largely uses Epsom and Rochelle salts. On the whole, he prefers mechanical to chemical diuretics. With regard to the difficult question as to the necessity for terminating the pregnancy, Norris considers that if any single fact more than another can be our guide, it is that the toxæmia has developed steadily and slowly, and that the constitutional signs and analysis of the urine keep pace with each other in giving evidence of the accumulation of toxins; and if the patient's condition steadily grows worse, or after showing improvement manifests at intervals sudden relapses, the only safe course is to terminate the pregnancy. To control the convulsions he thinks chloroform preferable to morphine; whilst a drachm of chloral by enema, repeated three or four times if necessary in twenty-four hours, is always indicated. In primigravidæ, where the pulse is strong and full, the face cyanotic, and the patient herself full-blooded, he practises venesection; but in cases less sthenic, when the pulse is weak and running, veratrum viride in doses of 8 minims of fluid extract, hypodermically, repeated at intervals sufficiently often to produce a decided slowing of the pulse, is exceedingly useful. If the pulse be very weak, and the heart action feeble, strychnine and nitroglycerine may be necessary. The tendency in eclampsia to œdema of the lungs contra-indicates the use of pilocarpin. The chance of recovery is always increased when free purgation can be secured; 3 to 5 drops of croton oil in a teaspoonful of sweet oil or butter, placed upon the back of the tongue, will often prove efficient. With regard to delivery, Norris's practice is to rely upon a very aggressive medical treatment to combat the spasms and eliminate the poison; and then, after sufficient dilatation of the os has occurred, to rapidly deliver with forceps, and terminate the labour. His treatment of the case after delivery is similar to that advocated by Reynolds.

THERAPEUTICS.

(212) The Roentgen Rays in Lupus.

J. Hall-Edwards (*Edin. Med. Journ.*, February; abstracted in *Brit. Journ. of Derm.*, March) discusses the physiological and therapeutic effects of the Roentgen rays, with special reference to the treatment of lupus. Nikola Tesla, in the *American Electrical Review*, May, 1897, pointed out that if a tube with a platinum anticathode were employed at a short distance from the skin, after a few minutes' exposure tingling and a sensation of warmth were produced; this was followed by deep-seated pain, redness and swelling and acute inflammation set in; the hair was destroyed and the growth of the nails impaired. Tesla likened the effects to those of a burn with a red-hot iron. "In severe cases the skin was deeply coloured and blackened in places, and ugly, ill-foreboding, blisters formed." The apparatus employed by Tesla, however, was of a

higher voltage than that generally used, and these evil effects were only produced when the tube was at a short distance from the skin. An acute inflammatory reaction may easily be produced in healthy skin by the *x* rays, provided a strong current is employed at a short distance from the skin, and this bears out the view that the beneficial effect of the rays on diseased tissue is more of the nature of an *x*-ray cauterisation than any specific action or micro-organisms. Hall-Edwards reports three cases treated by *x* rays: (1) *Lupus vulgaris.* Boy, aged 14. Disease affected face, nose, various parts of body, particularly the legs and feet. A patch about the size of a five-shilling piece, situated on the instep, was chosen for treatment. At the time the patch was quiescent. Exposed on May 7th for fifteen minutes at a distance of 2 inches from a highly charged Crookes's tube (with platinum anticathode), a 12-inch spark, and a mercury interruptor being used. The unaffected skin was protected by a piece of sheet lead ⅛ inch thick. During the exposure the patient only felt a slight warmth. On May 10th this patch became red, and another similar exposure was given. On the 12th and 14th the exposures were repeated at a distance of 1 inch. On the 23rd the patch became inflamed and tender, and began to break down. On the 28th it had formed an irregular ulcer with ragged edges the size of the palm of the hand. This ulcer took twelve months to heal. The scar which formed was unlike the scar which results from other methods of treatment, being more red. It did not show any tendency to break down, though the case was not otherwise improved. (2) *Lupus erythematosus.* Girl, aged 15. "Butterfly" patch on face, and patch on anterior surface of right arm. The arm patch was chosen for treatment. The surrounding skin was protected by varnishing it with a solution of gelatine in water, into which powdered iodoform had been stirred when it was warm. The patch was exposed for fifteen minutes at a distance of 1 inch. Next day it was red, and a second exposure was given. Nine days after the first exposure there was slight inflammation and tenderness of the part, and in a few days the patch sloughed away, leaving a raw surface confined to the diseased skin. A week later the surface was covered with healthy granulations, and the wound showed every appearance of rapidly healing. The patient, however, was allowed to dress it herself, with the result that it broke down again and assumed an unhealthy diphtheritic appearance, and took two months to heal. Meanwhile the skin of the face, which had not been rayed, took on a healing action, and the disease disappeared from the face before the arm wound had healed. (3) *Lupus vulgaris.* Girl, aged 16. Tuberculous. Disease affected front of thigh. A patch, 2 inches in diameter, was twice exposed for fifteen minutes at a distance of 1 inch, the neighbouring skin being protected by iodoform-gelatine solution. Eighteen days after the exposure the patch sloughed away, leaving an open ulcer, which was healed with great difficulty, and which even twelve months afterwards presented a small ulcer about the size of a shilling. The rest of the patch had healed, however, and the lupus tissue was replaced by healthy scar tissue. The author considers that the unsatisfactory result obtained in Case 1 was due to the large number of exposures to the rays. He notes that a period of from fourteen to twenty-one days elapses between the exposure and the appearance of inflammatory symptoms. The third alone can be regarded as in any degree satisfactory.

(213) Drugs in the Treatment of Obesity.

H. Kisch (*Therap. Monatsh.*, February) states that while an occasional purge is beneficial in many cases of obesity, especially if there be hyperæmia of the abdominal organs, the constant employment of powerful purgatives will lead to malnutrition from lessened absorption of food from the bowels. Alkalies should not be used for a long time continuously. Vinegar, which is popularly believed to cause increased dissolution of fat, really produces cachexia from chronic poisoning. The same statement holds good in regard to iodine. Iodides are indicated only in advanced cases, when rapid reduction is required. Pilocarpin, which reduces fat by inducing diaphoresis, should be used very cautiously when the heart is fatty; vapour baths also require a sound heart and arteries. Thyroid extract is inconstant in its effect, and may cause fatigue, loss of muscular strength, and glycosuria. If given at all, it should be in small doses, and the patient should be carefully watched.

(214) Caffeine or Digitalis?

Huchard (*Méd. Mod.*, February 17th, 1900) discusses the special value of each of these agents in cardiac therapeutics. As a general rule it is advisable to feel one's way with the aid of digitalis; it is the safest guide on the first signs of failure of compensation such as anasarca, diminution in the quantity of urine, galop rhythm, hypostatic congestion of the lungs, whether or not albuminuria be present. If albuminuria from renal disease be present it diminishes the amount; if secondary to the cardiac disease the œdematous fluid is absorbed, diuresis is established, and dyspnœa is reduced. Except in the later stages of degeneration of the myocardium, digitalis is not contra-indicated; and many cases of so-called myocarditis are really due to simple dilatation of the heart. As a preparation for the exhibition of digitalis milk diet, rest, and purgation or venesection are advised, and the form in which it should be given 50 drops of a 0.1 per cent. solution of crystallised digitalis. If the myocardium is so much altered that it will not respond to digitalis, then caffeine, with benzoate of soda and distilled water, should be injected hypodermically. It exerts not only a tonic effect on the heart, but is also a diuretic and a general tonic. Although less powerful than digitalis, yet in virtue of its selective action on the renal epithelium it produces diuresis when digitalis fails; the one is a direct diuretic, the other indirect only through the circulation. It may also well be employed to continue the diuresis which digitalis has initiated. On the other hand, in the acute infectious diseases or in conditions of grave cardiac weakness, as shown by the fœtal rhythm, caffeine is superior to digitalis both in its action on the heart and on the nervous system. As an adjunct to the caffeine, and as a last resort, the subcutaneous injection of camphorated oil may be employed. In renal disease, although digitalis is not contra-indicated, yet caffeine is superior and in the acute uræmic conditions associated with injections of ether it will give substantial relief. In the later stages of interstitial nephritis, when heart failure has set in, and a fatal termination seems imminent, it is well to employ first the general tonic effect of caffeine for two or three days, and only then have recourse to digitalis.

PATHOLOGY.

(215) Congenital Tumour of the Little Finger.

R. Scholten (*Weekblad. van het nederl. Tijdschr. v. Geneesk.*, II for 1899, page 662, September 30th) describes a tumour, in form and appearance resembling a white grape, which had been removed from the left little finger of an otherwise normal newborn infant. The child was the seventh born to a healthy mother, and neither brothers nor sisters showed any malformation. The tumour was covered with normal skin, and was attached to the first phalanx of the little finger on the ulnar side by a narrow pedicle near the level of the first inter-phalangeal joint. It was ligatured and snipped off about forty-eight hours after birth. Its dimensions were 15 mm. by 11 mm. by 10 mm. It was marked by fine streaks like those on the finger-tip or on the palm of the hand; and on the part furthest away from the pedicle was a small irregular depression with a nail-rudiment in it. Microscopically, the tumour was found to consist mainly of œdematous connective tissue, with large thin-walled blood vessels and lymphatics in it: embedded in it was a harder nucleus, which was made up of columns of cartilage cells, and in its neighbourhood the connective tissue was more compact; the nail-rudiment was seen lying on a small nail-bed; the skin had fairly normal appearances, but the stratum corneum was little developed, and there were no hairs. From these characters it was evident that the tumour was not a fibroma or sarcoma (as had been at first thought), but a poorly-developed sixth finger. Scholten thinks that the theory of causation of this anomaly (polydactly) advanced by Ahlfeld and Lewin has much in its favour, the theory being that these rudimentary digits are due to adhesions between the amnion and the fœtal skin. There is a coloured microscopical plate.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(216) Mitral Stenosis.

Huchard, in a clinical lecture (*Journ. de Méd.*, February 10th), points out the importance of careful consideration as to the etiology of mitral stenosis. A woman, aged 27, presented a very marked degree of this affection, the existence of which, in its pure form, has been the subject of considerable discussion. In the first place the case illustrated that the influence of pregnancy on mitral stenosis is not so dangerous as has sometimes been supposed, as this patient had been pregnant twice without any complication. The chief point is that absolute rest and quiet should be enjoined from the fifth month onwards. Huchard discusses the statement of Potain that tuberculosis plays an important etiological *rôle* in mitral stenosis, especially in patients with a hereditary history. Without denying the possibility of this fact, Huchard is more disposed to consider that pure mitral stenosis is congenital, and of a hereditary syphilitic nature. The patient who was the subject of the lecture was a case in point, as there seemed to be a distinct history of maternal syphilis. The same author speaks to having met with a considerable number of such cases, and also affirms that other malformations will be frequently found. Thus he has met with congenital absence of the palate, mitral stenosis, and hare-lip; in another case mitral stenosis in one patient and a persistent foramen ovale in her sister. The mother of the last two patients had had five miscarriages, and had lost several children in early infancy. Huchard also points out that whether mitral stenosis be congenital or acquired, the auscultatory signs may sometimes be very slight, but even in such cases there may be hemiplegia. It is therefore important in all cases of hemiplegia with contracture in young women to remember its possible origin in a mitral stenosis, as well as in hysteria or in syphilis.

(217) A Rare Ocular Complication of Migraine.

Johan Holmström has published in the *Nord. med. Arkiv* (No. 21, 1899) a paper on glaucoma as a complication of migraine, and has illustrated it with an account of a case—the first on record of such a condition—an abstract of which from the Danish, is given by Dr. Paul Heiberg, of Copenhagen (*Rev. Neur.* December 30th, 1899). It was stated by Möbius in his monograph on migraine that an attack of that disease may possibly provoke glaucoma. The case now published by Holmström is as follows: Mdlle. A., aged 47 years, had suffered since the age of 32 from attacks of severe migraine every fortnight. During recent years the patient noticed that her sight grew dim during the attacks and she perceived rainbow-coloured circles around the flame when looking at a lamp. These visual troubles vanished before the close of the attack of migraine. At this time she did not suffer from any symptom which could be attributed to glaucoma, and the diagnosis made when the patient was seen was ophthalmic migraine. Three months after this the patient sought advice again and stated that at the attack of migraine following the above the sight of the right eye was very much obscured and that no improvement of this obscurity of vision took place at the end of the attack. On examination the right eye was found to show pronounced glaucoma, and on the following day iridectomy was performed with benefit. The patient has had attacks of migraine since the operation as she had had before. During these attacks the sight of the left eye grows dim and she then perceives rainbow-coloured fringes round the flame of a lamp. At the end of 18 months the left eye—whose visual troubles were temporary—became more seriously affected. The obscurity of vision during an attack of migraine now persisted long, and on the patient seeking advice it was found that this eye was also become subject to glaucoma. The indications for operation were favourable as the right eye had already been benefited by operation.

(218) Direct Observation of the Cardiac Movements in a Human Fœtus.

Rivalta (*Rivist. Crit. di Chir. Med.*, An. I., N. 8) reports the case of a five months fœtus extracted from the body of a woman suffering from hæmorrhage due to placenta prævia. The child was apnœic and exanimate. Its thorax was opened and the pericardial sac laid widely opened. For about the space of 8 minutes the heart was observed to be beating at first 24 times a minute, and later 17. Starting from the pause, the right auricle first contracted then (immediately after) the left, both from above downwards; after this there was a very brief pause and then the auricles, still being in systole, followed the contraction of the right ventricle and immediately afterwards that of the left ventricle. The contractions of the four cavities were therefore not isochronous. The cardiac impulse commenced with the ventricular systole and reached the maximum at the height of the systole, that is, when the ventricle was empty. Probably the amount of blood in the ventricular cavity has little to do with the production of the impulse; it is almost entirely an affair of muscular contraction of the ventricular fibres. In the fœtal heart in question, which was practically bloodless, there was the same impulse, the same rotation on its longitudinal and transverse axis, the same raising of the apex and dragging down of the conus arteriosus and base of the aorta, as if there were a full blood stream in the cardiac cavities. Owing to the fact that the condition of the mother demanded attention, the mode of cessation of the fœtal heart was not able to be observed.

SURGERY.

(219) The Dangers of the Total Exclusion of a Portion of the Intestinal Canal.

Von Baracz (*Arch. f. klin. Chir.*, Bd. lviii, Hft. 1) states that the results of a series of experiments he has lately made on animals prove that the procedure of cutting off and closing at both ends a portion of the intestinal canal is not free from risk in the human subject. This exclusion of a portion of intestine has been hitherto practised, especially in cases of chronic intestinal obstruction, in which resection of the diseased portion of intestine is rendered impracticable by the existence of firm adhesions. The continuity of the intestinal canal in such cases is secured, after division of the intestine above and below the seat of the disease, by bringing together, either by direct suture or lateral anastomosis, the cut ends of the healthy intestine, and finally by closing the cut ends of the disease and excluded portion. The excluded portion of intestine is likely in course of time to become distended by fæcal and other secretions, which favour the excessive growth of both pathogenic and non-pathogenic organisms. In consequence of overdistension, and also of adhesion of the excluded portion of intestine to other organs, the coats may become inflamed and ulcerated and give way. Moreover, the isolated intestine, being rendered physiologically weak, may offer diminished resistance to any tuberculous or other infective attack. If the surgeon find it impossible to avoid leaving the diseased portion of the intestine, he may prevent these sources of danger by establishing in the excluded loop a permanent fistula.

(220) Abdominal Section and Discovery of a Second Unexpected Disorder.

Homans (*Boston Med. and Surg Journ.*, February 22nd, 1900) publishes instructive notes on the advisability of a more or less general exploration of the abdomen when it has been opened for an operation. The notes are founded on three cases in his own practice. In all the second condition was gall stones. In the first case a tubo-ovarian cyst was enucleated, the operation was very difficult and permanent forcipressure was necessary. The gall bladder was found full of stones, 97 being removed. Over eighteen months later Homans opened the gall bladder again and removed seven calculi which had formed around the silk sutures applied to the old wound in the bladder in order to hold it to the parietes. In the second case the author removed a sacculated right kidney filled with pus and calculi. He detected gall stones and opened the gall bladder through the abdominal incision made for the removal of the kidney. One calculus had to be manipulated out of the common duct. The patient, a woman aged 42, recovered quickly. The third patient suffered

from dyspepsia and anorexia ascribed to a fibroid of the uterus. This tumour was removed, then a large gall stone was discovered and removed. The gall bladder was immediately sewn up. The patient recovered and regained her lost appetite.

(221) Omental Transplantations in Abdominal Operations.

K. G. LENNANDER (*Upsala Förhandlingar*, May, 1899) has for some time used pieces of omentum to cover the outer surface of wounds in abdominal operations. He considers the serous surface thus obtained to be of advantage. Fastened over uterine wounds, surrounding the contact margins in gastro-enterostomy, in duodenal or stomach perforations, in gall-bladder and gall-duct and in many gynæcological operations, a piece of omentum forms a ready and suitably useful covering. In a case of incarcerated crural hernia, in a woman aged 72 years, he placed some omentum around the much-bruised but not yet gangrenous bowel. Nine days later he had to again operate on the same patient for "volvulus." He found that the omentum used was quite fast to the intestine and its surface serous. The gut was not constricted. In cases where the peritoneal coats have been much bruised or torn in several places or on several aspects, the omentum has been transplanted so as entirely to surround such parts, and so diminish the tendency to adhesions with other coils of bowel.

(222) Endothelioma of Bone.

BERGER (*Rev. de Chir.*, No. 1, 1900) reports an original case of endothelioma of the humerus, and gives the results of a careful study of the scanty material at present available relating to the anatomical and histological characters, and the special clinical features of this ill-defined group of malignant growths. With regard to endothelioma of bone, the author, who seems to have made use of every possible source of information, has come to the conclusion that this subject is still in its infancy, and that further observations and researches are needed before there can be any possibility of establishing this as a well-defined group of tumours clearly distinct from other varieties of osteosarcoma. The chief difficulties in the way are the present want of a distinct histological type of endothelioma and the confusion between this kind of growth, which is often pulsatile, with other pulsatile growths of bone, such as angiosarcoma and plexiform sarcoma. With regard to clinical characters also, endothelioma of bone cannot be said to constitute a well-marked variety of morbid growths. The author dwells on the importance of pulsation, which in his own and in many other recorded instances was very evident and indeed violent. This pulsation, it is stated, constitutes an expansion analogous to that of an aneurysm, and is accompanied by a distinctly perceptible murmur, An interesting and important point in connection with this sign is that not only the primary murmur but also the secondary growths possess the same pulsatile character. Endotheliomata, like other malignant growths of the skeleton, produce destruction of osseous tissue, and often cause at an early stage, and before the tumour is well defined, spontaneous fracture of the affected bone. This form of osseous tumour, it is asserted, must be classed among the most malignant of morbid growths. Its evolution is usually very rapid, and the removal of the local disease, even by amputation of the limb, is often followed by recurrence and general infection. The development of a supposed single and primary growth may coincide with that of latent growths in different parts of the skeleton, and it is hinted by the author that the recorded cases of so-called "generalised osseous sarcomatosis" may really be instances of osseous endothelioma. Consideration of this tendency to an early and probably a coincident generalisation of the disease should in any case of a pulsatile tumour of a bone lead the surgeon to make a careful examination of the whole skeleton before resorting to amputation.

MIDWIFERY AND DISEASES OF WOMEN.

(223) Ovariotomy per Anum.

PETERS (*Wien. klin. Woch.*, No. 5, 1900) reports a remarkable instance of an ovariotomy performed by himself through the anus, whilst Hochenegg resected the rectum at the same sitting. The patient, 37 years old, had been subject to prolapse of the anus for nearly twenty years, and she had become emaciated. The anus was so dilated that half the hand could be passed into the rectum, 4 inches of which had prolapsed. There was no rectal hernia properly so-called. The uterus was retroflexed; the left ovary formed a cystic tumour as big as a fist. There were objections to doing an ovariotomy, and afterwards, or earlier, an excision of the rectum as two separate operations, nor was it thought advisable to do an abdominal or vaginal ovariotomy and an excision at the same sitting. Peters, therefore, waited till the lower part of the rectum was set free, detached from its connective tissue, and tied temporarily and drawn backwards out of the way by Hochenegg. Then Peters pressed the ovary against Douglas's pouch, punctured it, drew it out of the incision in the peritoneum, and carefully secured its pedicle. The incised peritoneum was then sewn to the serous coat of the upper part of the rectum. Peters found that this prerectal incision afforded a capital view of the pelvic organs and relations of the tumour. Finally, Hochenegg excised the detached rectum. Some incontinence of fæces ensued, but as far as the ovary was concerned all went well. All the three cases of ovariotomy *per anum* previously recorded occurred where the patient was subject to true rectal hernia. Kluiskens's and Aleksenko's cases were both associated with labour: the herniated rectal wall, with Douglas's pouch, was rendered prominent by the additional prolapse of a small ovarian cyst. The bowel and peritoneum were cut through, and the tumour removed. The first case ended fatally; the second, where the cyst was dermoid, recovered; in the third case (Stocks's) the cyst simulated a prolapse of the rectum until it was carefully examined. The rectal wall and peritoneum were incised, and a unilocular ovarian tumour removed; the pedicle was easily ligatured; the ends of the ligature were left hanging out of the rectal wound. This operation reduced, but did not entirely cure, the rectal hernia.

(224) Dietetic Treatment of the Menopause.

KISCH (*Zeitschr. f. diät. u. physikal. Therapie*, Bd. iii, Heft. 8, 1900) states that regulation of the diet has an excellent effect on the vasomotor troubles and the nervous excitability caused by the cessation of the internal secretion of the ovary. The quantity of food should be reduced to a minimum, represented by 2,100 to 2,400 calories for a woman of average weight (60 kilos), or 100 g. albumen, 60 g. fat, and 350 g. carbohydrates, and a copious allowance of water. The necessary albumen to maintain nitrogenous equilibrium, 1.5 gr. per kilo. of body weight, can be obtained from animal or vegetable albumen, but of the former all meat rich in extractives (kreatine and xanthine), nucleo-albumen or injurious products of metabolism, especially ptomaines, must be avoided. Thus boiled meat is preferable to roast or baked, and the flesh of young animals (veal and lamb) to that of old. Pork is unsuitable, and game on account of the products of decomposition produced while "hanging." All meat extracts, sausages, smoked meat and fish, and preserved meat should be avoided. Sweetbread, liver, brain, and kidneys are too rich in nucleins. Caviare must be abandoned as it excites the genital organs, and cheese because it is rich in decomposition products. Koumiss and kefir are objectionable for the same reason. Fresh fish is allowable. A mixed diet is most suitable, and should contain, compared with meat and fat, a large proportion of cereals, vegetables, and fruit, and practically no spices. From 35 to 55 ounces of pure water should be drunk daily, but no alcoholic liquors, especially if they contain a large amount of extract. Coffee and tea, if taken at all, should be much diluted. It is advisable to have four or five meals a day at regular intervals, so that but little is eaten at a time, the chief meal being between 1 and 2 In all cases it is necessary so to regulate the bowels that they do not become confined; hence all foods such as milk and vegetables, which contain much water, are good, and all those containing much indigestible matter, such as leguminous vegetables and chestnuts, bad. Modifications of the diet are necessary in certain cases. In full-blooded women who become corpulent at the menopause, the daily ration, as regards its hydrocarbon and carbohydrate constituents,

should be reduced to an average of 12 g. fat, 120 g. carbohydates, while the albumen is increased to 160 g., the total representing from 1,250 to 1,300 calories. Where the menses cease suddenly or at an early age, and the climacteric troubles therefore begin acutely, it is well to order a diet consisting entirely of milk, except for the mid-day meal, which may contain soup, roast white meat, young greens, and fruit. In most cases daily baths at 95° to 98.6° F., in which the patient remains for from ten to thirty minutes before bedtime, are indicated; they prevent the tendency to sweating by stimulating the function of the skin, are a sedative to the nervous system, and often produce quiet sleep. Cold baths, on the other hand, are contra-indicated.

(225) Total Closure of Uterine Cavity after Curetting.

SIEDLECKI (*Przeglad Lekarski*, No. 6, 1899) in commenting on the great frequency of curetting at the present day, dwells on three dangers which it entails, namely, perforation of the uterine wall, opening up of an old focus of inflammation, and cicatricial obliteration of the uterine cavity. The last accident has been known to follow when the curette is used with want of skill. The danger is particularly great when abortion has occurred, which is one of the conditions when practitioners are most ready to use the instrument. The uterine walls are then unusually soft and flaccid. The operator, eager to scrape away all trace of the placenta, may remove a considerable depth of the muscular coat, taking away the whole of the uterine glands necessary for regeneration of the endometrium. A multipara aged 28 complained of long-standing amenorrhœa after her last confinement. On that occasion the placenta was removed manually, and hæmorrhage set in. The tampon was applied to the uterine cavity; fever set in during the puerperium, then the uterus was syringed out and thoroughly scraped. Chronic inflammation of the left appendages and amenorrhœa from anæmia were diagnosed. The uterus was of normal dimensions and anteflexed. Drugs did no good; the amenorrhœa persisted, so the pelvis was more thoroughly explored. The uterine cavity was found completely closed; the finest probe could not be made to enter for over two-fifths of an inch. Siedlecki thinks that the fingers are usually sufficient for the removal of placental relics, and that when the curette is used the operator must be very careful about his manipulations.

(226) Painless Distension of Bladder in Women.

LANGSTAFF (*Amer. Journ. Obstet.*, January 1900) writes of a woman, aged 27, in the third month of her fourth pregnancy. She was quite healthy, and free from hysteria or from any neurosis. For twenty-four hours she had felt no desire to pass water, and it was only at the end of that time that she felt pain in the region of the bladder. On palpation the bladder was found distended, a No. 8 rubber catheter was passed into the bladder, meeting with some constriction, and 52 ounces of urine were drawn off. This retention had never occurred before. No definite cause for the retention could be discovered. The pregnant uterus lay in normal position. Potassium bromide and hyoscyamus were prescribed, but several more attacks occurred; in fact, for a few days retention, requiring the catheter, and voluntary micturition alternated. At the end of a few days abortion occurred. Bozeman, in a discussion on Langstaff's case, related another where painless and absolutely undetected distension occurred for some time. Ovarian tumour was diagnosed, and a fluid tumour was tapped posterior to the uterus. This tumour was the bladder so distended that it reached up above the fundus, and fell back over it. There was no displacement of the uterus. The catheter was passed, and a large basinful of urine drawn off.

(227) Attempted Abortion and Tubal Pregnancy.

L. S. ALEXANDER (*New York Med. Record*, March 3rd) writes that in many cases of tubal pregnancy he has, on close questioning, obtained a history of attempted abortion by drugs. The attempt is made almost immediately upon the non-appearance of the menstrual flow, conception being feared, to establish the catamenia by the use of oxytocic drugs. The action of this substance in contracting the circular muscular fibres prevents the descent of the fructified ovum, and tubal pregnancy, followed by rupture, results. In the South a favourite combination for this purpose is a mixture of cotton root and ergot.

THERAPEUTICS.

(228) Muscle Plasma in the Treatment of Tuberculosis.

J. HÉRICOURT AND C. RICHET presented a communication to the Académie des Sciences on February 26th (*Rev. Scient.*, March 10th) on the treatment of tuberculous infection by muscle plasma, a method to which they give the name of "zomotherapy" (from ζωμός, juice). They begin by recalling the fact that they showed some time ago (*Bull. de l'Acad. de Méd.*, November 28th, 1899) that an exclusive diet of raw meat gives remarkable results. Experiments proved that in infectious tuberculosis the mortality in animals so fed is only 50 per cent. at the end of a year, while in control animals it is 100 per cent. in four months. Their experiments were begun some three years ago, and were made on sixteen dogs, eighteen being used as controls. They had now carried the study of this therapeutic action further, and they have found that cooked meat has not the same effect as raw meat. Of two dogs fed with cooked meat, one died, and the other lost 16 per cent. of his weight in three months. They next separated the pulp or fibrin of the meat from the muscle plasma, in order to study the effect of these several elements separately. To 2 kilograms of beef carefully minced was added a litre of water, the meat being left in contact with the water for three or four hours. Next the mass was pressed so as to give up about 1,200 cubic centimetres of a liquid very red in colour, and coagulating firmly under the influence of heat. The undissolved pulp was exposed for twenty-four hours to a copious current of cold water; then, after a further period of twenty-four hours, it was again pressed. The authors call this product "washed meat." It was thus found that the muscle plasma alone was truly active, and they conclude that in regard to the purpose of the experiments the active part of the meat consists in the parts that are soluble in water. Even when the animals are in a condition of extreme distress and in imminent danger of death owing to the progress of the disease, raw meat is capable of calling them back to life. Six dogs were infected, three of which died, and on the twenty-sixth day the remaining three were in a deplorable condition. To two of them raw meat was given, and they got rapidly well and gained weight; the other was left untreated, and died on the thirtieth day. The authors hold that there is no question here of over-feeding; the mechanism of the action of the muscle plasma is, they believe, quite different. The proportion of nitrogen contained in 1,000 grams of the plasma is 5.30 grams, of which 3.98 grams is in the form of nutritive nitrogen (albuminoid) and 1.32 gram in nitrogen soluble in alcohol; this makes about 22 grams of albuminoid matter, a quantity quite insufficient to explain the effect. If it were a question of overfeeding, cooked or "washed" meat would have a greater effect than the plasma, but just the contrary is observed. The authors therefore hold that what takes place is an immunising action analogous to that of animal products injected into the veins or under the skin. They think there is reason to believe that, on the one hand, zomotherapy may be applicable to other affections besides tuberculosis, and that the treatment used prophylactically prevents the development of infection. The principal objection to feeding tuberculous patients with raw meat is the difficulty of its digestion. In the case of the muscle plasma, however, this obstacle does not exist, and a patient may without any trouble absorb a litre of this cold bouillon extracted from 3 or 4 kilograms of meat. The taste of it is not disagreeable; with the addition of salt and Liebig's extract a liquid can be made that is easy to take.

(229) Electrical Currents of High Frequency and Tension in the Treatment of Tuberculosis.

D'ARSONVAL recently reported to the Académie des Sciences (*Rev. Gén. des Sciences*, February 28th) that M. E. Doumer, Professor in the Medical Faculty of Lille, had obtained important results from the application of electrical currents of high voltage and

great frequency in cases of pulmonary tuberculosis. The method was tried in 17 cases representing different stages of the disease. In all the bacillosis was progressively attenuated to the degree, in some of them, of complete extinction. The first signs of improvement consisted in the disappearance of night sweating and evening rise of temperature; this occurred after a fortnight's treatment. Next followed diminution of cough and expectoration, and later of the number of bacilli in the sputum. In correspondence with these signs of amelioration the stethoscope revealed remarkable improvement in the condition of the lung tissue, and this improvement went on to cure. Among the patients thus treated, 5 have for two years been looked upon as completely cured, and have therefore not been under treatment during that period. At the present time auscultation proves that their lungs are perfectly sound, without a trace of the serious disease which affected them three years ago. D'Arsonval, while admitting that the basis of facts is too slender to build a general conclusion upon, holds that the results cited open up a new path in pathology and therapeutics.

(230) Splenic Extract in Typhoid Fever.

Carpenter (*Med. Rec.*, February 17th, 1900) says the absence of leucocytosis is a marked feature in typhoid fever. Functionally the spleen produces large numbers of leucocytes. By heating the splenic area Lépine diminished the effects produced by intravenous injection of typhoid toxins, thus probably stimulating the vitality of the organ. The drugs which have been found useless in typhoid treatment were those that hindered leucocytosis, whilst the ones now given probably act chiefly by promoting it. A return of leucocytosis heralds convalescence. On these factors Dr. Carpenter bases his treatment. He has found splenic extract ameliorate the symptoms, reduce the temperature, and hasten an uncomplicated recovery. In malarial fever he also obtained good results. It might be tried in tuberculosis and influenza. When the temperature has remained at 104° for some hours 5 gr. of splenic extract are given every three hours for twenty-four hours. After the temperature has fallen to 102° F., gr.v. t.d.s. Concurrently, hæmaturic preparations are used to maintain the percentage of red blood corpuscles and prevent a leukæmic condition. The period of convalescence is in direct ratio to the early or later use of the splenic extract after diagnosis. The "milk" diet is the one adopted.

(231) Treatment of Thrush.

De Rothschild (*Progrès Médical*, March 3rd, 1900) points out that the preventive treatment of thrush in infants is dietetic and hygienic. The possibility of a mother or nurse passing it from one infant to another in the process of suckling must be recognised and guarded against. The milk, if given to the infants from a bottle, must be absolutely sterile, while the bottle must be kept strictly aseptic, and the times of feeding with the amount at each must be carefully regulated. The curative treatment in the case of mild attacks is rapidly and completely effected by touching the affected portions of the buccal mucous membrane with some alkaline solution, as Vichy water, lime water, or a solution of sodium bicarbonate. This application should be made two or three times a day, and conveniently with the finger enveloped in absorbent lint. A cure is usually effected in from twenty-four to thirty-six hours. For the more severe and chronic cases the mucous membrane must be painted—using the finger surrounded by lint or a tampon—with a 1 in 1,000 solution of perchloride of mercury two or three times in the twenty-four hours; or a solution of perchloride of iron, as recommended by Comby, may be used instead; or a solution of potassium permanganate (1 in 25), as advised by Baginsky; or a 10 per cent. solution of sodium benzoate, as used by Tordeur. The infant must meanwhile be well fed, and at each feeding 1 or 2 teaspoonfuls of Vichy or lime water should be given. Baginsky has recommended that 3 or 4 teaspoonfuls of a 1 per cent. solution of resorcin be given in the twenty-four hours instead of the alkaline water.

(232) Treatment of Migraine.

Lyon (*Revue de Therap.*, February 1st, 1900) treats the attack with antipyrin (unless there is some coexisting renal disease) given in Vichy water, or in cachets with an equal quantity of sodium bicarbonate, or in the granular effervescent form. If there is gastric intolerance it may be given in solution as an enema. Sometimes a combination of antifebrin, phenacetin, and valerianate of quinine is more efficacious. Sodium salicylate, methylene blue, and caffeine, either alone or combined with sodium benzoate, are recommended. If caffeine be rejected by the stomach it may be given hypodermically. Aconitine may be tried in very minute doses. The prophylactic treatment is both dietetic and hygienic. The patient should eat moderately and abstain from all alcoholic drinks, taking indeed water only. He should avoid all indigestible articles of diet, and live principally on milk and vegetables. Tobacco should be interdicted and a sedentary life avoided. Errors of refraction should be corrected and massage with suitable baths tried. Alkaline baths are of especial value, such as those of Contrexéville, Evian, Vittel, and Martigny for the rheumatic and gouty. For the neurasthenic the use of phosphates alternating with arsenic, either with or without iron, is a promising plan of treatment.

PATHOLOGY.

(233) The Geographical Distribution of Cancer.

From the study of an extensive literature Behla (*Centralbl. f. Bakteriol.*, 1899, xxvi, S. 593) has endeavoured to construct a map showing the relative frequency of cancer in various parts of the world. Although necessarily very incomplete, several points of interest are brought out. In Europe cancer is generally met with over the middle and southern districts; in the northern parts, in Greenland and in the Faroe Islands it is rare or unknown. In certain parts of Southern Europe, as Greece and Turkey, cancer is curiously very rare. Thus in Turkey, Madame Messoni, in an extensive practice in Constantinople, met with only 20 cases of cancer of the uterus and 34 cases of mammary cancer during nine years. In Northern Asia the disease is unknown; in the south-west districts, in Arabia, Syria, and Persia it is but rarely met with. In China it occurs less frequently than in Europe. In India it is rare, in Further India more common, and in Japan as in Europe. In Africa the frequency of cancer is very small, it is more frequent in Algiers and Madeira, whilst in Abyssinia, Tunis, Egypt, and South Africa it is almost unknown. In Australia cancer is one of the three diseases which account for the majority of deaths, phthisis and enteritis being the other two. In Canada cancer is little known; also in South California it is rare, whilst in the United States it is more frequent, and particularly in the large towns. The tropical and subtropical districts and the West Indies are almost free from cancer. In Mexico and Puebla it is almost as common as in Europe. In Guiana cancer is rare, in Ecuador and Peru somewhat more frequent. In Brazil and the south generally it is extraordinarily rare.

(234) Necropsy of a Case of Acromegaly.

Pagniez (*Bull. et Mém. Soc. Anat. de Paris*, S. 6, vol. i, p. 942, 1900) gives the details of the necropsy of a case of acromegaly which had been recognised as such since 1893. The subject was a man who died at the age of 70. He had the typical characters of the malady—hypertrophy of the limbs, nose, lips, tongue, and supraorbital ridges, along with prognathism, deep voice, and cyphoscoliosis. During the last months of his life he had suffered from frequent attacks of dyspnœa with wheezing due to pachydermatic thickening of the vocal cords as determined by the laryngoscope. The necropsy showed considerable increase in the thickness of the skin, especially of the head, and in consistence it was lard-like. The bones of the cranial vault were very thick and the frontal sinuses abnormally developed; the pituitary body was three times its usual size; the thymus was looked for in vain; and the thyroid body was goitrous, the two lobes, but especially the right, being much enlarged. The heart was large, without valvular lesions, so was the great sympathetic, but the diameter of the large blood vessels was not sensibly increased. Microscopically the pituitary body showed in places small colloid masses, a very marked dilatation of the vessels and hypertrophy of the cells. The goitrous condition was of the fibrocystic kind.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(235) The Exanthematic Form of Infantile Typhoid.

This subject has been investigated by Boulin (*Thèse de Lyon*, 1899) and Weill and Lesieur (*Journ. de Med.*, February 10th, 1900), especially from the point of view of prognosis. This form of typhoid is remarkable for the extreme abundance of the eruption. Hence the designation given by the last two authors of "exanthematic." The rose spots appear extremely early, sometimes on the fourth day, and their dimensions are considerable. They may even be ecchymotic and papular. They may appear over the whole of the cutaneous surface, abdomen, epigastric area, thorax, neck, thighs, back, the arms and legs, and even the face and hands There does not seem to be any relation between the amount of eruption and desquamation. The intestinal symptoms are extremely slight, possibly absent in some cases; hence the object of the writers in using the term "exanthematic." There is no abdominal pain, no vomiting possibly, neither diarrhœa nor constipation. Should the former exist, it will be slight and disappear early, and of the two constipation is more frequently met with. There is no distension, and palpation fails to elicit any gurgling. The liver is not enlarged, and the spleen is either normal in size or very slightly enlarged. The tongue does not show the characters of typhoid. At the same time it must be kept in mind that cases may change in character: thus, in some, where abdominal symptoms are marked at an early date, they may practically subside on the appearance of a very marked exanthem. In some cases with very pronounced cutaneous signs, nervous symptoms are prominent, together with high temperature. There may be delirium, exaggeration of reflexes, and even epileptoid seizures. In all the cases under observation recovery has been the rule, except in one instance, where, together with an intense cutaneous eruption, there was violent diarrhœa, and the child died of enterorrhagia. *Post-mortem* examination showed the presence of tuberculous ulceration, which had apparently played an important part in the typhoid condition. The writers state that in from fifteen to twenty days recovery takes place, and generally the temperature has responded to cold baths in eight or ten days. The authors therefore state the following rule drawn from their investigations in these cases, "that an abundant eruption of lenticular rose spots indicates slight intestinal symptoms and a good prognosis."

(236) Miliary Tuberculosis of the Skin.

Nobl (*Wien. med. Presse*, No. 3, 1900, p. 106) goes into the question of tuberculosis miliaris seu propria cutis—so named by Kaposi, whose first case was described by Jarisch (1879). Of Kaposi's collected 22 cases (1879 to 1898), the skin alone was involved in 8 cases only; in 8 others both skin and mucous membrane were affected. The orificial mucous membranes—lips, alæ nasi, and so forth—are the seats of predilection. Tubercle bacilli may in some cases be found in abundance, but in others search for them may prove fruitless. Miliary tuberculosis of the skin commences as a small nodule or as an aggregation of small nodules which coalesce more or less, and break down more or less rapidly into an ulcer. The condition is often associated with tuberculosis of the lungs or of other viscera. Differential diagnosis consists, according to Nobl, in excluding carcinoma cutis (rodent ulcer) and lupus vulgaris. From the former it is distinguished by absence of rolled hard border, etc.; from the latter by absence of the characteristic nodules and infiltration. Nobl describes a case at length, the patient being a man, aged 27, with an ulcer on the lower lip, involving both mucous membrane and skin, slightly larger than a bean, squarish oval in shape, delicately sinuous at the borders, and fairly superficial. It began three months previously by pain about the part, with production of small vesicles. A hempseed sized nodule then formed, which ultimately enlarged to a bean in size, and broke down. In doubt about the lesion, local mercurial (plaster) treatment was tried, although the patient denied syphilis and the lesion did not look like a specific one. Both this and a trial of iodide of potassium internally gave no result. Cauterisation led to some cicatricial involution. Later, two or three small nodules appeared in the neighbourhood of the lesion; these gradually increased in size and coalesced. Although the patient was far from healthy in appearance, no evidence of visceral disease could be made out. No tubercle bacilli were ever found, either in the secretion from the local lesion or in the patient's sputum. Healing was ultimately obtained by the use of the actual cautery under cocaine anæsthesia, followed by appropriate antiseptic remedies. From histological examination of a small portion of the border removed before cauterisation, the conclusion arrived at was that the lesion was a primary tuberculosis of the skin. No tubercle bacilli were found in the sections.

(237) Blood Parasites in Non-malarial Fevers.

H. E. W. von Tunzelmann of Chefoo, North China, contributes (*Journ. of Pathol. and Bacteriol.*, February, 1900) a paper on this subject in reference to a febrile disease prevalent in China, as to the nature of which there is great diversity of opinion. During the last two or three years the disease has become much more prevalent in all the Chinese treaty ports. It is one of a mass of little known and hitherto undifferentiated fevers, and it would appear that what had been called dengue at Shanghai and aberrant typhoid fever in other parts are all varieties of one fever, which possesses distinctive characteristics, and is associated with a blood parasite. The following method after many trials was found to reveal the virus in the blood. Blood films are prepared on cover glass or slide in the usual way, fixed in absolute alcohol, and stained with undiluted carbol-fuchsin (Neelsen's stain) for half an hour to an hour. This reveals in the films one or more patches of a typical fungus, with branching hyphæ, laden with spores. In severe febrile cases the fungus growth is abundant, and in fatal cases it seems to be the main cause of death, the luxuriant growth producing occlusion and thrombosis of blood vessels. "In such cases hyphæ of all kinds are found in great profusion; some are easily visible in fresh blood preparations without any kind of stain," though they appear translucent and generally colourless, and therefore are liable to be overlooked. Another characteristic of the parasite is the abundant occurrence of plasmodial growths. If a dozen fresh blood preparations be made with aseptic precautions, carefully sealed and put aside in a warm place for a few days, in a large number of them one or more growing plasmodia will be soon visible to the naked eye. Spore formation now takes place in these masses. The spores are of three kinds, namely: (1) Zöogenidia or active mobile bodies of very varied shapes; the most common are like crenated red corpuscles, being of about the same size, of a reddish-brown colour, and sometimes almost or quite motionless. A ciliated germ spore may be detected in some, and around this orifice is a very mobile thickened lip, which, when expanded, is shaped sometimes like a Hodge's pessary. (2) The second variety is a simple tubular body open at each end, and capable of a worm-like wriggling motion. (3) The third variety comprises the zygospores, reddish-brown bodies, reniform in profile and circular in other aspects, and with a clear central space. The capsule of the spore eventually ruptures, and a flat leaf like or amœbiform mass can be then observed to issue forth. Reproduction is of two kinds—asexual, and sexual conjugation of spores, the latter being usually conjoined in pairs by their germ spores. The spores are extremely resistent to noxious influences. They will survive a temperature of 100° C. for half an hour at a time on three successive days; they grow and develop with freedom in a 1 per 1,000 solution of quinine, a 1 per 500 of carbolic acid, etc. Perchloride of mercury, 1 per 1,000, however. kills them instantly. Methylene blue is also fatal to them; a 1 in 400 solution kills them within an hour or two. They grow readily in bouillon, milk, Pasteur's fluid, and other artificial media. The febrile disorders in persons infected with this parasite vary from a mild febricula of a few hours' duration to others of great severity and lasting

weeks; some are short and sharp attacks like dengue, others of a mild chronic type persisting many months. Children are especially exposed to serious danger from this fever, and methylene blue (1 to 2 grains every two to six hours) gives the best results. Quinine has been found absolutely useless.

SURGERY.

(238) The Radical Cure of Inguinal Hernia in Infancy.

Fraenkel (*Centralbl. f. Chir.*, No. 47, 1899) advocates operative treatment for the radical cure of inguinal hernia in infants, and expresses it as his conviction that in the young subjects of this affection, as in those of hare-lip, the surgeon cannot intervene at too early a period. He opposes the practice followed by most surgeons of treating hernia in young subjects by truss pressure. Such treatment, it is stated, even when apparently successful, does not remove the tendency to a recurrence of the protrusion in later life, and, moreover, interferes very seriously with the moral and physical development, and also with the education of the young patient. In infants a speedy and operative treatment of hernia is held to be indicated by the local irritation caused by the truss, and by intestinal catarrh. Of 68 children on whom the author has operated for the radical cure of inguinal hernia, 16 were infants at the breast. The successful results of such treatment following operations for strangulated hernia in such young patients in 4 cases led the author to attempt a radical cure in 12 cases of reducible inguinal hernia in infants, the youngest of which was two months old. In each of these cases Bassini's method was practised. The risk of fouling of the seat of operation by fæcal matter and urine may be obviated by enclosing the lower part of the body in a fixed bandage, and by covering the anus and penis by impermeable dressings during the short period necessary under modern treatment for the healing of the wound. The author lays stress on the importance during the after-treatment of frequent change of position, and of the exposure of the little patient to fresh air. In a later number of the *Centralblatt* (No. 51) Karewski, whilst acknowledging that infancy does not contraindicate an operation for the radical cure of inguinal hernia, asserts that in most subjects of this affection below the age of 3 years truss pressure will bring about a complete and abiding cure. The only indications for operative interference in such subjects are: The persistence or increase of the hernia in spite of carefully applied truss pressure, irreducibility of the hernia, and repeated attacks of strangulation. When operative treatment becomes necessary in a very young subject it would be better, it is held, simply to dissect out and remove the sac than to carry out the more complicated details of Bassini's method. The former procedure has been practised by the author in the course of many years with very successful results with regard both to the safety of the patient and to the permanence of the cure. The subject of the treatment of inguinal hernia in children was discussed in the British Medical Journal, May 13th, 1899, by Eccles.

(239) Toothplate Localised by Radiograph: Œsophagotomy.

Segond (*Bull. de la Soc. de Chir. de Paris*, July 25th, 1899) removed a toothplate by left external œsophagotomy. The patient was a hospital nurse aged 57. In masticating, a piece of her toothplate, triangular, with each side about an inch long, was broken off and swallowed. An unsuccessful attempt to remove it was made by the house-surgeon. On the third day Segond operated, the position of the foreign body having been localised by *x* rays. It lay low down, almost below the level of the interclavicular notch, but was extracted without difficulty except that the metallic hook, which was on the fragment of the plate, had run into the wall of the œsophagus, and required some traction before it could be disengaged. The incision in the œsophagus was closed by a continuous catgut suture, including the muscular coat. Segond advocates this practice. In a case of œsophagotomy performed in 1893 he included the muscular coat, and the after-results have been satisfactory. The soft parts external to the œsophagus were closed by sutures, the lower angle of the wound was drained. The patient drank freely from the first day, but no solids were allowed till the tenth. The wound healed by first intention, and the patient was in good health three months after the operation. Segond believes that a good surgeon should always have recourse to the radiograph, above all when the foreign body has hooks or sharp edges. Attempts to extract it through the mouth are unsurgical and dangerous.

(240) Empyema after Typhoid.

Gerhardt (*Mittheilungen aus den Grenzgebieten der Medicin u. Chirurgie*, vol. v, part 1, 1899) observed, in a case of pleural effusion succeeding typhoid with pulmonary complications, that the effusion was serous. It became, however, as a later exploratory puncture proved, distinctly purulent. This pus contained pure cultures of typhoid bacillus. In about ten days all the purulent pleural fluid was reabsorbed, so that an operation was not needed. Thus it would appear that the prognosis of empyema after typhoid is specially good when the typhoid bacillus is the sole exciter of the suppuration. Fraenkel and Weintraud have both reported a case of spontaneous absorption of the purulent fluid in this complication. The specific bacillus tends to lose its property of exciting inflammation.

(241) Fatal Hæmatemesis after Operation and Fever.

Reichard (*Centralbl. f. Chirurg.*, No. 5, 1900) reports 3 cases, all in the Augusta Hospital, Berlin, where fatal hæmatemesis set in suddenly. In one case an abdominal section had been done a few days previously. The two others recovered absolutely spontaneously. In all three the stomach and the rest of the alimentary canal were carefully inspected, but no appearance accounting for the hæmorrhage could be detected. Ewald, in a discussion on Reichard's case, stated that a patient of his, a young man, aged 21, when recovering from typhoid fever, suddenly became collapsed and died with symptoms of bleeding from the stomach. No trace of ulcer or any other cause to explain the bleeding could be found.

MIDWIFERY AND DISEASES OF WOMEN.

(242) Cæsarean Section on Moribund Mother: Child Saved.

Prokess (*Centralbl. f. Gynäk.* No. 9, 1900) operated on a primipara, aged 25, admitted into hospital quite comatose after symptoms attributed to meningitis. She was deeply cyanosed, and showed signs of œdema of the lungs; the urine was free from casts or albumen. The child (eighth month) lay in the first position. The mother's pulse was 120, temperature 103.8°. The abdomen was opened and then the uterus was laid open by Fritsch's transverse incision through the fundus. The fœtus was removed by seizing the left foot. It cried out at once lustily. It was under 18 inches long and weighed not quite 5 lbs. A wet nurse took charge of it and it was living when the report was published about two months later. The uterine and abdominal wounds, after manual detachment of the placenta, were carefully closed and the mother returned to bed. She died eight hours later. At the necropsy a thrombus was found in the lateral sinus, there was also acute cerebral softening and universal œdema of the lungs. Prokess was surprised to find that the uterus contracted with great energy in this dying subject. The transverse wound made in the fundus involved part of the placenta near the right cornu, but there was little hæmorrhage.

(243) Cerebral Embolism after Ovariotomy.

Schramm (*Centralbl. f. Gynäk*, No. 9, 1900) removed a small malignant adenoma of the left ovary, which formed a cystic tumour of the size of a fœtal head, from a single woman, aged 44. The operation was performed with the pelvis elevated. On the next day facial paralysis set in, with paralysis of the left arm from embolism in a cerebral artery. Recovery was speedy and the paralytic symptoms completely disappeared.

(244) Hermaphrodite "Sisters" proved Males.

Chiarleino (*La Gynécologie*, February 15th, 1900) has published in the archives of the Medico-Chirurgical Society of Palermo a case of two males, brothers, who, until they were examined at the ages respectively of 15 and 17, were brought up as sisters. Their parents were healthy and free from malformation, and had other children who displayed no abnormalities of development. The "sisters" had well-formed

breasts, and the general development of the body was feminine; but both had complete hypospadias extending to the perineum and simulating a vulva. Both testes were arrested in descent close to the pubes. Chiarleino remarks that midwives, as well as doctors, should be instructed as to appearances liable to mislead the observer in determining the sex of a newborn infant.

(245) Total Absence of Uterus in Adult. Civatte (*Bull. et Mém. de la Soc. Anat. de Paris*, October, 1899) detected this condition in the body of a woman, aged 41, said to be married, but no history of her case could be obtained; she had been admitted into hospital unconscious from apoplexy, and died comatose. Besides softening in the left hemisphere there was, amongst other cardiac lesions, marked infundibuliform contraction of the mitral orifice, possibly Duroziez's congenital form, though other changes indicated rheumatism. On inspecting the pelvis, the cavity seemed deep and empty. The ovaries were of the usual size; the tubes made the characteristic fold running across the cavity, but between them was no uterus. The external parts were normal, but the vagina was represented by a shallow sinus which, on depression, formed a pit hardly an inch deep. The right ovary was undergoing cystic degeneration, the left was normal, with a supernumerary ovary attached to the tube. Both tubes bore a canal in their outer halves only. A nodule on the right tube formed the origin of a true round ligament. The left ended internally in a fusiform swelling over an inch and a-quarter in length. It was the sole trace of the elements of the uterus, being an ill-developed cornu, apparently with half of the body and cervical canal, as it contained a cavity showing below traces of an arbor vitæ. The fusiform swelling and the right tube did not join; each was lost in the retro-vesical cellular tissue, which was in contact with the third part of the rectum.

THERAPEUTICS.

(246) Cold Bathing in Typhoid Fever. J. C. Wilson and J. L. Salinger (*Phil. Med. Jour.*, March 3rd) give the results of 10 years' experience in the treatment of enteric fever by systematic cold bathing, based on 1,904 cases collected from four hospitals in Philadelphia. The mortality in the total number was 143, or 7·5 per cent., and the authors point to the remarkable coincidence between their figures and those of F. E. Hare, of the Brisbane Hospital, Australia, published in 1898. During the 10 years from 1887 to 1896 inclusive, there were treated by this method in the Brisbane Hospital a consecutive series of 1,902 cases, with 143 deaths. From an analysis of their cases the authors have been led to the following conclusions: (1) That the treatment by systematic cold bathing does not avert or diminish the frequency of hæmorrhage. (2) That the frequency of this occurrence of perforation is diminished. F. E. Hare, in 1,173 cases during the first three years of the bath treatment also observed perforation in 35 cases, less than 3 per cent. (3) That it diminishes the danger of complications, especially those relating to the respiratory and circulatory tracts. (4) That it is apparently attended by a somewhat increased frequency of relapse, though the general statistics in regard to relapses are entirely unsatisfactory. If relapses are more common in bathed cases the explanation is probably correct that owing to the reduction in mortality a large number of cases, which under other forms of treatment would have perished in the primary attack, survive to suffer the relapse. (5) That the treatment is attended by the occurrence of albuminuria in a large percentage of the cases. This albuminuria shows itself in two forms: (*a*) As a faint reaction without casts or other indications of renal disease; (*b*) cases in which albumen is present in considerable amounts with blood corpuscles and casts. The authors have been led to believe that both these forms of albuminuria are much more common in cases treated by cold bathing than those treated upon the expectant plan, and that the difference between the two forms is merely one of degree. Their observations, however, justify the assertion that in by far the largest proportion of the cases the albumen disappears from the urine during the course of the attack, and that at the end of convalescence the urine is entirely normal. (6) That it has no influence in increasing the danger of otitis media. In the civilian cases in the German Hospital in 1898 1 case of otitis media occurred in 209 cases—0.5 per cent. In the series of 1899 this complication was noted in 3 instances in 267 cases, or 1.1 per cent. The modifications of the method, as originally formulated by Brand, which have been gradually adopted as the result of the authors' experience in the service at the German Hospital, Philadelphia, are as follows: (1) The administration of purgatives early in the attack. Calomel is used for this purpose, sometimes in fractional doses, more frequently in doses of from 3 to 5 decigrams. If necessary, this is followed in the course of several hours by a mild saline aperient. The administration of these purgatives is usually repeated once or twice in cases that come in sufficiently early, but they are never administered to those admitted to the wards after the tenth day of the attack. (2) External applications. Cold compresses or icebags are applied to the abdomen in all cases of abdominal tenderness or spontaneous pain and in cases of hæmorrhage. In some instances of tympanitic distension of the abdomen turpentine stupes are applied at intervals in addition to the external use of cold. (3) Medicines. The treatment by systematic cold bathing is a routine method, and is instituted in all suitable cases. The contra-indications are the evidences of hæmorrhage, perforation, or peritoneal infection. Each patient, however, is closely watched, and appropriate medicines are administered in response to special indications; hence the quantity of alcohol varies in different cases, and such drugs as the aromatic spirit of ammonia or ammonium carbonates strychnine, caffeine, the bromides, chloral, opium, and its derivatives, and hyoscin are occasionally used. Inhalations of oxygen are sometimes employed. The proportion of cases requiring any medication whatever, except the early laxatives, throughout the attack is very small, not exceeding 10 per cent. On the occurrence of defervescence dilute hydrocloric acid is given for a short time, and later, if anæmia persists, some form of iron, usually Basham's mixture or one of the proprietary preparations of the organic salts of iron. (4) The temperature at which the bath is administered. During the whole course of the attack whenever, three hours after a bath, the temperature taken in the mouth or the axilla, as the case may be, reaches 101.4° F., the bath is repeated. (5) Continuation of the baths during convalescence. Until within the past year the baths were practically discontinued as soon as the temperature ceased to rise above this level. Every now and then, however, a patient whose temperature no longer rose to 101.4° F. requested to be bathed, saying that it made him more comfortable. In consequence of this they have adopted the rule of giving one or two plunges a day during the defervescence and a plunge every day, or every second day, for a short time after the defervescence has been completed. The result has been entirely satisfactory, and has appeared to them to hasten the convalescence. (6) The location of the tub with reference to the patient's bed. A stationary tub is placed at the end of the small fever wards. The severer cases are placed near the bath and are carried by the attendants from the bed to the bath and back. The milder cases and the improving cases are placed in the more distant beds, and walk to the bath with the assistance of the nurses. The fever wards are small, each containing six beds, the most distant of which in the men's ward is a little over 6 metres from the bath, the most distant in the women's ward being 5·75 metres from the bath. Adjacent to these wards are other small wards in which fever patients can be placed with separate tubs, but in all instances the improving cases and the milder cases are wrapped in a sheet, rise from their beds every three hours, and are assisted to the tub by the attendants, and returned in the same manner after the bath. In no instance have the authors seen any reason to believe that this modification has had unfavourable effects. On the contrary, it has exerted a very favourable influence upon the course and symptoms of the attack particularly upon the condition of the respiratory and circulatory functions. The method of Brand has been designated the treatment by systematic cold bathing. The measure of its success is largely determined by the period

at which it is instituted in any given case. The sooner the better. There is nothing specific in the individual bath. It is to the rhythmic repetition of the stimulation of physiological processes and of the modifications of pathological processes brought about by a succession of baths commenced early in the course of the attack that favourable results are to be attributed. It is also important to understand that the plan does not merely constitute an antipyretic treatment. The lowering of temperature is one of the incidents of treatment, not its only nor even its main purpose. Mere antipyretic measures, however efficient, cannot replace the hydrotherapeutic procedure.

(247) Cold Baths in the Typhoid of Children. COMBY read a paper on this subject to the Société de Pédiatrie (*Indépendance Méd.*) on February 21st. During the last five years he has treated 168 cases of typhoid fever in children from 2 to 15 years of age with cold baths. Of the whole number 12 died, or 7 76 per cent.; there were 42 relapses, relapse occurring in 8 of them twice, in 1 three, and in 1 six times. He always employed cold baths repeated every four to six hours, and lasting ten minutes. He never observed collapse. As accessories he used caffeine, sparteine, and strychnine, but the basis of the treatment was always bathing.

(248) The Treatment of Iritis for the General Practitioner.

NORBURNE B. JENKINS contributes a paper with this title to the *New York Medical Journal* (February 24th). He says when the affection is caused by constitutional diseases these should be treated. Hot foot baths, salts, and small doses of calomel are useful in nearly all cases. The local treatment consists in darkness, atropine, hot applications, and puncture of the cornea. One drop of a 2 per cent. solution of atropine should be placed in the eye, but not oftener than thrice a day. In some cases only 1 drop once or twice a week is required. If only one eye is affected, 1 drop of a 1 to 5,000 solution of atropine may be put in the other daily. The consensual influence of the sound eye over the diseased one is thus lessened, and the pupil of the diseased eye can be kept dilated with less atropine. The less the atropine is used to keep the pupil dilated, the greater the likelihood of saving the eye, especially in the aged. Keep the pupil dilated to its utmost. If one drop of a 2 per cent. solution three times a day does not keep the pupil dilated to its utmost, puncture the cornea, and thus relieve the intraocular pressure. If necessary, this operation may be performed on the same eye several times. When a large or irregular opening is made in the cornea, the aqueous humour flows out, leaving the cornea collapsed. The cornea after a few minutes resumes its shape. Increased secretion of aqueous humour always follows its withdrawal. Often, owing to a recent adhesion of the iris to the lens capsule, the pupil dilates but little or irregularly with a 2 per cent. solution of atropine. In this event a quantity of cocaine equal to the atropine may be added to the solution. This is put in the eye several times during the day until the pupil dilates. If this fails, if there is increased tension or excessive pain, puncture the cornea. Puncture of the cornea—a simple operation—is probably indicated a hundred times where it is performed once. Often the pupil can not be dilated with atropine. If the cornea is punctured, the aqueous humour flows out, the tension is reduced, and afterward, if atropine is used, the pupil dilates to its utmost. If atropine is persistently used and the pupil does not dilate, the eye will usually be destroyed. This applies especially to the aged. If puncture and atropine do not bring about immediate results removal of a piece of the iris is probably indicated. For congestion and pain use a 1 to 50,000 solution of corrosive sublimate as hot as can be borne. This should be applied to the eye on a large pad of cotton for half an hour, or longer, several times a day. If the iritis is acute and in one or both eyes, no ray of light should enter either eye except during examinations. These should be made in a dark room, with as little light as possible. The eyes are padded with wads of soft cotton wool. These are kept in place with strips of adhesive plaster. Cataract masks or shields, or the ordinary bandages, are then placed over the eyes to blind the patient completely. In the absence of the practitioner the blinds are to be removed only for the hot-water applications, and these are made in a darkened room.

PATHOLOGY.

(249) Micro-organisms in Tumours.

SJÖBRING (*Centralbl. f. Bakteriol.*, 1900, xxvii, s. 129) gives the results of an investigation on which he has been engaged since his first publication on this subject in 1890. Proceeding from the idea that the hypothetical virus of cancer must be a facultative parasite and capable of growth outside the animal organism, he has devoted his attention to the cultivation of the organism in question. As a medium he employed 8 per cent. peptone gelatine, to which was added 1.5 per cent. of a concentrated watery solution of potash soap prepared from human fat, 1 per cent. of cane or grape sugar, and generally 50 per cent. of sterile ascitic fluid, the medium being sterilised. Tubes of this medium were inoculated with pieces of fresh tumours (not ulcerating) removed aseptically and incubated for a week at 37° C., or at the room temperature. By this procedure he has succeeded in obtaining organisms from about thirty tumours of various kinds—namely, carcinomata of the skin, mamma, stomach, uterus, ovary, rectum, sarcomata, ovarian cysts, uterine myomata. The organisms from the different tumours grew with varying rapidity, from some an abundant growth, from others only a scanty growth was obtained. These organisms, which were to be seen only in fresh preparations of the culture, belong, the author affirms, to the rhizopods. The possibility of the appearances being due to lecithin, myelin, or other non-living organic matter, he refutes by the occurrence of amœboid movement and fission. The appearance of the organisms is very variable, but three varieties may be recognised—namely, amœboid forms, typical rhizopod forms, and involution (or resting) forms. The amœboid forms possess the greatest interest, and are divisible into the following types: (1) minute delicate vesicles with a thin wall and watery contents; (2) larger, spherical, transparent, or finely granular bodies, with eccentric homogeneous nuclei; (3) similar to (2), but as large as a tumour cell, some enclose a similar smaller cell in their interior; (4) rounded or sausage-shaped, greenish, shining bodies, with one, two, or more vacuoles, round which the protoplasm is concentrically arranged; (5) plasmodial forms, with pseudopodia and large nuclei; (6) encysted forms. The involution forms are found in cultures in which extraneous bacteria are flourishing. The fully developed rhizopod forms were only occasionally seen, and particularly in dilute media. Three types were encountered. In the same culture the type always remained constant. A series of eight mice were inoculated with such cultures; in four positive results were obtained. A culture from a mammary carcinoma produced on subcutaneous injection a cylindrical-celled cancer arising from the sweat glands and hair follicles after three months. In the second a less typical result obtained. In the third a culture from an ovarian colloid cystoma produced on intraperitoneal injection a colloid cystoma arising in connection with the epididymis. In the fourth a well defined tumour of an adenomatous nature arising from the sweat glands. In all the cases the parasitic forms found in the human tumours were to be seen.

(250) The Genesis of Lipoma.

AIEVOLI (*Il Policlinico*, January 15th, 1900) believes that the embryonic theory does not suffice to explain the presence of lipomata, especially those which are multiple and symmetrical, and which are probably due to some central trophic influence. Nor does the theory of Grasch—that they are due to alterations in the cutaneous glands—explain the matter satisfactorily. Some connection between the local lymphatic and vasal distribution must be sought for in the genesis of these tumours. Trophic influence would be exerted initially in modifying the distribution of the nutritive fluids. Possibly lipomata may begin as lymphangiomata, and, owing to some disturbance in the physiological equilibrium, the fat is no longer absorbed as before, and this, according to the author, is largely due to the distribution and function of the elastic tissue as affected by toxic or infective influences.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(251) Intestinal Hæmorrhage in Uræmia.
Hæmorrhages of various kinds are frequently met with in uræmia, a fact which is widely recognised. Fedou describes in particular intestinal varieties (*Thèse de Toulouse*, 1899). Intestinal hæmorrhage may be met with in the subjects of chronic Bright's disease who are subject to diarrhœa. The stools may be blood-coloured and mucous, evacuation being accompanied with violent colic and tenesmus. In other cases, uncommon it is true, there may be actual hæmorrhage from the mucosa, the blood being, however, mixed with other materials and having a meat-juice or tomato-sauce appearance. Coming from the large intestine, it does not show tarry characters indicative of hæmorrhage taking place high up in the small intestine. In some cases the hæmorrhage may be excessive when there is deep ulceration. Under these circumstances vessels of considerable size may give way and the result may be serious. The writer mentions cases in which there is no external hæmorrhage, the symptoms being shock, coldness of the extremities, small fluttering pulse, enlargement of the abdomen, and syncope. Hæmorrhages occurring early in the disease seemed to have a favourable influence on the condition of the patient. They take the place of therapeutic bleeding. On the other hand, enterorrhagias, especially when frequent or abundant and when occurring in the later stages of uræmia, are depressing, and rapidly bring about cachexia. It is generally in gastro-intestinal cases that intestinal hæmorrhage is met with; but it is well to remember that this form of hæmorrhage may occur in those cases of uræmia having nervous or respiratory manifestations. In such a case diagnosis may be somewhat difficult. The treatment should be that of intestinal hæmorrhage in general, it being borne in mind at the same time that depressing remedies must be avoided.

(252) Intestinal Indigestion and Pulmonary Disease.
Burr (*Boston Med. and Surg. Journ.*, February) says that in intestinal digestion thoracic oppression is frequently complained of. In respiration the diaphragm acts as the piston of a syringe, filling the pulmonary capillaries with venous blood on its down stroke and emptying them on its up stroke. Interference with this action will cause stasis in the lung vessels. If from the condition of intestinal digestion there is a systemic absorption of its toxic and also bacterial products, the thoracic oppression tends to increase the time such remain in the lung, and hence diminish the vitality of the capillary walls. Buchner in 1890 showed that blood serum possessed germicidal powers, and concluded they were due to the combination of NaCl with albumen. In pneumonia the chlorides disappear from the urine, probably being locked up in the lung exudate as a germicidal adjunct. In all pulmonary diseases, therefore, particular attention should be paid to the alimentary tract. Calomel and podophyllin give good results. Three or four movements of the bowel per diem do good rather than harm—the liver is stimulated, and the increased urea formation encourages diuresis. Sodium chloride favours osmosis and retards coagulation, and its use is followed by improvement. The writer endeavours to abort "pneumonia" if possible by giving a smart purge and phosphate of iron combined with tincture of aconite. In the later stages he hastens the resolution by injecting a pint of normal salt solution together with a few grains of pancreatin into the sigmoid flexure in the hope of digesting more rapidly the pneumonic exudation. In tuberculous lesions intestinal antisepsis always improves the general condition. Normal salt solution is warmly recommended. A patient, in the last stages of tuberculosis, had dyspnœa, cold sweat, dilated pupils, feeble pulse, temperature 101° F. Three grains of NaCl dissolved in ʒj of boiling water were injected under the skin. In a few moments breathing became easier, and half an hour later the pupils were normal, pulse regular, temperature 100° F. The daily use of salted milk and beer contributed to easy breathing and comfort during the aftermonths of life.

(253) Right-sided and Left-sided Hysteria.
F. Raymond and Pierre Janet, of Paris (*Rev. Neurolog.*, December 15th, 1899) summarise the results of many observations and of statistics regarding the various hysterical "accidents" presented by patients and studied at the Salpêtrière. In a previous publication (*Névroses et Idées Fixes*, ii, p. 447) reference was made to several curious instances of hysteria, of aphasia, of mutism, and of word-deafness in hysterics, and it was pointed out that these speech disorders were found in patients who had paralytic phenomena and troubles of sensibility on the right side of the body. The following observations were made with great care and precision so as definitely to decide the points alluded to, and for the last dozen years 388 cases were minutely studied. The cases were divided into three groups: (*a*) A group of patients who did not present well-marked localisation of symptoms of one half of the body; some of those had only slight or transitory troubles of sensation and of movement, and had hysterical attacks, attacks of sleeping or of vomiting, but without permanent stigmata on either the right or left side; the others had permanent stigmata, but these were distributed almost equally on the two sides of the body, and this included cases of total anæsthesia, paraplegia, etc.; (*b*) the second group had distinct disturbance and stigmata preponderating on the left side of the body, and some of these were of long standing—for example, paralyses, choreiform movements, contractures, etc., limited for years to one side; (*c*) the third group included patients whose disturbances of sensibility or of movement were located on the right side of the body. Group (*a*) contained 138 patients, group (*b*) contained 148, and group (*c*) contained 102 patients. The classical statement of Briquet—namely, "three anæsthesias of the left side for one of the right side" in hysteria should be restated "three of the left side for two of the right side" in the light of these newer observations. Among the three groups were 9 patients in the first group, 11 in the second (left-sided symptoms), and 5 in the third (right-sided), who suffered from attacks of uncontrollable vomiting. As regard aphonia, aphasia, and troubles of speech, such symptoms were present in 22.5 per cent. of the right-sided group, in 9.4 per cent. of the mixed group, and in 2.7 per cent. of the left-sided group. Respiratory disturbances were observed in 16 7 per cent. of the right sided group, 11.5 per cent. of the mixed group, and 1.3 per cent. of the left-sided group. Intellectual troubles were present in almost equal proportions (30.4 to 32.6) in each of the three groups. These differences are characteristic and significant. "It is probable that respiration is disturbed in the hysterical patient only in its most highly evolved portions in connection with the psychological functions of emotion and of attention.....and it is suggested that the left hemisphere has more influence on the mechanism of respiration than the right." The following table gives the percentages of the various disturbances:

	Mixed Group.	Left-sided Group.	Right-sided Group.
Attacks of sleep and of somnambulism, etc.	58	72	48
Disturbances of movement in limbs	39	38	71½
Anorexia and troubles of nutrition...	24	33	25½
Aphonia, aphasia, and troubles of speech	9½	3	22½
Cough, hiccough, and troubles of respiration	11½	1½	17
Fixed ideas, delusions, and intellectual troubles... ..	32½	30	31½

SURGERY.

(254) Urinary Complications in Appendicitis.
Duret (*Gaz. des Hôp.*, October 31st, 1899) finds that these complications are observed when the appendix, by certain well known anatomical conditions, lies in unusual proximity to the bladder. The disturbances are not purely reflex. Prolonged retention, dysuria, pyuria, and pyelonephritis have been noted even when the appendix did not communicate with the bladder. The latter is infected through intervening tissues.

Schwartz diagnosed abnormal position of the appendix in one case, on the ground of these urinary symptoms. A much graver class of complication is suppuration between the two structures. Operative measures become difficult and dangerous, and intractable fistulæ may develop. They not only run between a circum-appendicular abscess and the bladder, but also may communicate with intestine; a pyostercoro-vesical fistula is especially troublesome. The urine becomes turbid and fœtid, containing also foreign bodies. Timely resection of the appendix sometimes ensures cure, but the fistula often demands separate treatment. Lastly, extravesical calculi occasionally form in the site of the complication. Duret has collected cases where the calculus was of the true urinary type, others where it had formed around a nucleus of fæces, and others where it was purely stercoral.

(255) Operative Treatment of Gastroptosis.

STENGEL AND BEYEA record (*Amer. Journ. of Med. Science*, June, 1899) a case of Glénard's disease treated by operative procedure. The patient was a young unmarried woman, without history of traumatism, abdominal distension of any kind, or emaciation. At the time of observation, she had already undergone nephrorrhaphy which was followed by some general improvement. It was found, however, that the gastric symptoms remained much as before. Examination of the abdomen showed some sinking in at the epigastrium, and a protuberance at the umbilicus which was found to be stomach, the lesser curvature extending from 1½ inch above the umbilicus to a point two-thirds the distance from the umbilicus to the pubes, which was the greater curvature. The right border extended to the right of the umbilicus 1½ inch, the pylorus being slightly to the right of the middle line and a little above the umbilicus. No evidence of growth could be found. The digestive processes seemed slow. There was no lactic acid reaction. It was decided to operate, and the following was the procedure adopted: An incision was made through the linea alba midway between the xiphoid and umbilicus, exposing a small portion of the upper curvature and cardiac end of the stomach, the gastro-hepatic omentum, the gastro-phrenic ligaments, and the lower portion of the liver. At the beginning of the operation, the patient's shoulders were slightly raised, but at this stage the position was reversed to allow the stomach to fall back into position. The gastro-hepatic omentum and gastro-phrenic were exposed, separated from underlying structures, and interrupted sutures were introduced to shorten the gastro-hepatic omentum in the following manner: The first suture caught the gastro-phrenic ligament above at a point as near as possible to the diaphragm (a distance of about 2 inches from the diaphragm) and below, just above the gastric vessels. After this suture had been placed, the gauze sponges which had displaced the stomach were removed and the suture temporarily tightened so as to determine the height to which the stomach could be brought by this manner of suturing and the degree of support which would be furnished to the stomach. This having been determined to be satisfactory, the stomach was again displaced out of the wound, and the suturing continued. The second suture was introduced through the gastro-hepatic omentum opposite, and about one-fourth of an inch from the first one, followed by a row of eight or ten others introduced in the same way, to include the left three-fourths of the gastro-hepatic omentum. In order to be sure of gaining a wide surface of adhesion, particularly in relation with the gastro-phrenic ligament, three or four more sutures were introduced, which included the peritoneum above and below those already placed. The gauze sponges were again removed, and the first and then the second row of sutures were tied, forming a tuck in the gastro-hepatic omentum and gastro-phrenic ligament. After this had been accomplished the stomach was seen to occupy what was thought to be a normal position. All gauze sponges were then removed from the abdominal cavity and the table lowered until the patient was in a horizontal position. The patient made an uninterrupted recovery, leaving the hospital in two months and ten days from the time of the operation. Some months later examination showed that the lesser curvature was still well supported and that the greater did not extend more than 1½ inch below the umbilicus. Eleven months after the operation the woman was found better in every way; she had gained considerably in weight, was able to eat freely without discomfort, appetite and energy being distinctly good. The authors appear strongly inclined to recommend this operation in cases of gastroptosis in which there is abdominal pain, vomiting, and all the ill-effects due to the enlarged stomach and dilated digestion.

(256) Gastric Obstruction after Laparotomy.

VON HERFF (*Centralbl. f. Gynäk.*, No. 40, 1899) finds that ileus after operation may be caused by extreme distension of the stomach. The abdomen swells to a great size, and the outline of the stomach can be traced in many cases; it sometimes touches the pelvic inlet. On washing out the stomach great quantities of transuded fluid came away. The stomach pump is of service when there is no atony of the gut. This extreme distension of the stomach causes kinking of the duodenum. Von Herff thinks that damage to stomach and intestine may cause what is known as shock, and without sepsis, causing death where the heart is weak.

(257) Cancer of an Undescended Testicle.

KAEPPELIN (*Lyon Méd.*, November 5th, 1899) reports a case in the hospital practice of Jaboulay of Lyons. A cobbler, aged 40, had been subject for nine months to dull pains in the lumbar region, soon followed by the appearance of a tumour in the right iliac fossa which grew very rapidly. The inguinal glands were not enlarged, the right testicle was absent from the scrotum, there was œdema of the ankles and emaciation. Diagnosis was evident. The tumour was removed, and during the operation it was found that the lumbar glands were infected. The testicle was the seat of cancer of the epitheliomatous type. The patient recovered from the operation, the wound healing soundly, but cachexia soon set in, though the patient was still alive.

MIDWIFERY AND DISEASES OF WOMEN.

(258) Albuminuria in Pregnancy: Induction of Labour.

COUDRAY (*Thèse de Paris*, 1900) considers on the strength of recent experience that when a pregnant woman with albuminuria has not been already placed on appropriate diet, induction of labour must not be attempted. Such a step would provoke eclampsia if it were threatening. When she has been placed on a partial milk diet, it must be made stricter if the albumen increases before induction is practised. The diet must be exclusively milk and kefir. When after a week or so the albuminuria remains stationary or grows worse, labour must be induced should the uterus be well developed, above all when previous labours have been bad. The mother gains no further safety by remaining undelivered; the fœtus remains in great peril. When the uterus is not well developed the milk diet may be continued for a while; the chances of saving the child by any measure are small under these circumstances. But when the child is dead labour must not be induced, as the death of the fœtus puts a stop to the albuminuria of pregnancy.

(259) Pregnancy taken for Fibroid.

ROUTIER (*Bull. et Mem. de la Soc. de Chir. de Paris*, November 21st, 1899) reports a case under Psaltoff of Smyrna where a widow, aged 30, entered hospital for an attack of metrorrhagia. She had borne two children; during the past two years the period had, she declared, been suspended for eleven months, and returned for four, whilst for the last three months they had been absent. She was watched for thirteen days; as the metrorrhagia persisted an examination was made under chloroform. The uterus was found very bulky and movable; the sound passed 4¼ inches. The cervix was at once dilated with Hegar's bougies up to No. 14, and the uterine cavity was curetted and swabbed with chloride of zinc. The bleeding continued till ten days later, when it began to diminish. The chloride was again applied. The patient had denied that she had had connection since her husband's death. Eighteen days after the second swabbing hysterectomy was begun, interstitial fibroid being diagnosed. The uterus appeared congested and fluctuated; it was tapped, but nothing came away: the cannula proved to be plugged. A Tait's screw was

thrust into the uterus to draw it out of the wound. Then an assistant thrust a forceps into the vagina to push up Douglas's pouch close against the uterus. Psaltoff cut down on it, but when he had made an incision three-quarters of an inch long he found that he had cut into a gravid uterus. He at once sutured the incision, also the screw wound, and closed the abdomen. Abortion occurred in a few hours, then the patient rapidly recovered. Routier believes that the metrorrhagia was probably the beginning of an abortion wilfully induced. He insists that the speculum and the sound are now in disrepute; the former is used for dressings, not for examinations, whilst the sound should only be used in exceptional cases after due precaution. The length to which that instrument passed used to be registered with great precision, far more faithfully than the accidental abortions which it not rarely induced.

(260) Angioma of Placenta.

Lehmann (*Monats. f. Geburts. u. Gynäk.*, January, 1900) describes a labour where the patient, aged 37, had been seven times pregnant, and had aborted spontaneous two years since. On this occasion spontaneous birth occurred; the child was dead and putrid, the placenta thick, the decidua very thick and rough. There was but a trifling amount of liquor amnii. The third stage of labour proceeded normally. The placenta bore a tumour as big as an apple, which could readily be enucleated from its distinct capsule of connective tissue. It proved on microscopical examination to be a simple angioma.

(261) Non-puerperal Mollities Ossium.

Littauer (*Centralbl. f. Gynäk.*, No. 5, 1900) reports a case where the patient suffered from osteomalacia for fourteen years. She had always been regular and never been pregnant. She was in poor circumstances and lived in a damp basement. She had also been treated for gout and rheumatism. The pelvis was characteristically deformed. The patient derived great benefit from phosphorised cod-liver oil. At the end of eight weeks the bones of the forearm were still flexible. Two years ago Littauer had under his care a yet more advanced case quite unconnected with pregnancy, and no definite cause could be discovered for the bone disease. The patient was treated with phosphorised cod-liver oil and baths, and has been free from pain for over two years.

(262) Infantile Uterus with Large Fibroid of Cervix.

Keiffer (*Bull. de la Soc. Belge de Gynéc. et d'Obstét.*, vol. x, No. 8, December 23rd, 1899) removed a uterus by vaginal hysterectomy for a voluminous fibroid. The patient was 34 years of age, and robust; she suffered badly from hæmorrhages and pressure of the tumour on the bladder and rectum. It transpired, however, that menstruation had come on late, and had always been scanty; that the patient was sterile, and that the bleedings, which grew worse and worse, coincided with the development of the fibroid and ulceration around the os. The uterine cavity could not be accurately measured by the wound. At the operation the truth was made clear. As the fibroid was withdrawn from the vagina a very small uterine body was found on its summit, presenting all the characters of the uterus infantilis.

(263) Gauze Pad Two and a Half Years in Abdominal Cavity.

Buschbeck (*Monats. f. Geburts. u. Gynäk.*, December, 1899) states that a woman, aged 34, underwent abdominal section six weeks after her last period for suspected ruptured tubal pregnancy, and recovered. Whether a tubal sac was removed and adhesions to intestines were found we are not informed. Two years later the patient suffered from severe colicky pains in the right side. An irregular swelling was detected to the right of the uterus; it extended upwards to the abdominal wall. Fever set in, and after severe pain the lower extremity of the abdominal cicatrix gave way. The fistula thus developed discharged liquid fæces freely; it was dilated and a gauze pad came away; this foreign body had clearly been left in the peritoneal cavity at the time of the operation, and managed to find its way into the intestine. Stelzner operated, resecting nearly 8 inches of intestine adjacent to the perforation. The patient recovered. Meinert has removed gauze pads left behind in the periotoneal cavity three times, and Leopold reports similar cases.

THERAPEUTICS.

(264) Treatment of Epilepsy.

Bourneville and Chapotin (*Progrès Médical*, December 30th, 1899, and January 6th, 1900) have tried sodium eosinate in a number of epileptic children. Taken in progressively large doses, it produced such serious disturbances as to oblige them to discontinue its use. Sodium eosinate is derived from fluorescine; it is tetra-bromo-fluorescine. It contains about 40 per cent. of bromine, and on account of this richness in bromine Goff and Sainton advocated its use in epilepsy. It was tried in 23 cases of severe epilepsy. It sometimes reduced the number of fits, but in doses of over 30 grains it produced redness, followed by swelling, of the face and hands, and later serious trophic disturbances such as loosening of the nails, accompanied sometimes with a seropurulent exudation. It also produced erythema and impetiginous eruptions, with ulceration of the skin. The urine and dejecta were coloured deeply red. The urine was fluorescent, but did not contain albumen. The mucous membrane of the mouth was in a few cases greatly reddened and swollen, but there was neither salivation nor lachrymation. The detachment of the yellow crusts from the cutaneous ulcers revealed the presence of scars with a brown pigmentation which were very persistent.—Gianni (*Rif. Med.*, February 19th, 1900) has tried the value of an infusion of adonis vernalis in the treatment of epilepsy. To a series of twelve epileptics he administered adequate doses of the drug for a stated time, then a course of bromide, then a course of bromide and belladonna, and finally a similar period without any treatment whatever. Of the 12 cases, 7 had more attacks whilst taking adonis than under the expectant plan; in the remaining cases they were somewhat less frequent. Compared with the treatment by bromide alone or by bromide and belladonna, in two only was any diminished frequency noted under the administration of adonis. The author concludes that adonis has no influence on the recurrence of the attack, but in many cases (8 out of 12) it renders them milder and of shorter duration, so that those who attributed the success of Bechtheim's treatment by bromides and adonis to the bromides alone are not entirely right.

(265) Disinfection by Formaldehyde.

Gorini (*Il Policlin.*, March 1st, 1900) has made a series of experiments on the disinfection of surroundings by means of formaldehyde. The best method is a combination of Schering's (the burning of pastilles of solid paraform) and Flügge's (the evaporation of an 8 per cent. solution of formaldehyde). The author found it a particularly useful disinfectant for large unfurnished rooms or places with a considerable unbroken surface. It is not advisable where there is much furniture or many crevices, owing to its small penetrating power. It is useful where the infective material is likely to be widely distributed. As to the dosage, good results were obtained by 2 grams of formaldehyde to the cubic centimetre, used for twenty-four hours. The organism chosen as a test was the staphylococcus aureus.

(266) Linen Dressings in Dermatology.

Unna (*Monats. f. prakt. Dermat.*, February 15th, 1900) protests against the popular idea that linen is "good for the skin." The only pathological conditions where it is admissible are simple hyperæmia, œdema, and urticaria; in fact, inflamed states where the coolness of linen is grateful, provided that the skin is dry. If there is any discharge, as in weeping eczema or burns, linen, which has a greater power of absorption than absorbent cotton wool, soaks it up and becomes dry, stiff, and painful. In dry chronic eczema or psoriasis, if an ointment is ordered without full directions being given as to the method of application, in 50 per cent. of the cases the patients apply it on linen rags. Now it is just in these cases where linen counteracts the desired effect of the ointment by soaking it up, so that little or none reaches the disease. Nearly the full effect of the ointment is obtained if it is first rubbed on, and then covered with cotton wool, which is much less absorbent. Still better results are obtained if the part is covered with

flannel; the best, if protected by impermeable material, such as guttapercha tissue. The rules which apply to local lesions apply equally to universal; thus patients who are covered from head to foot with chrysarobin, pyrogallic acid, tar, or similar ointments, must wear pure wool next their skin, and completely abandon linen, which by absorbing the ointment both ruins their clothes and retards their recovery.

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(267) Quincke's Lumbar Puncture for Spinal Injury.

Albertin (*Lyon Méd.*, October 8th, 1899) showed a man to the Surgical Society of Lyons who had fallen out of a window on June 9th, striking first his knees and then the back. Paraplegia was the immediate result; the reflexes were absent, and there were large areas of cutaneous anæsthesia, but the sphincters were unaffected. As these symptoms were present a fortnight later, Albertin thought there might be a traumatic effusion, probably a hæmatoma, and therefore after incising the skin near the lumbar spine inserted a trocar about 2 inches towards the spinal canal, and drew off about 1 oz. of blood-stained fluid. The skin wound was sutured. The reflexes returned forty-eight hours later, though sluggishly, and the improvement was progressive, though slow. On July 13th he could walk with the aid of crutches. The improvement was probably due to the puncture, since it coincided with it. Albertin would not hesitate to puncture the spinal membranes in the case of fracture, which, indeed, in this case could not be excluded.

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(268) Pyramidon.

Klein (*Nouveaux Remèdes*, February 24th, 1900) has found pyramidon a good substitute for antipyrin as an analgesic in a migrainous patient who was extremely intolerant of that drug. In even very small doses the latter produced a persistent eruption, the swellings of which sometimes lasted for weeks. A dose of about 10 grains of pyramidon relieved the pain, and produced only a very slight and evanescent papular eruption. As an antipyretic, he found it effective in doses of 3 to 5 grains, reducing the temperature 3 or 4 degrees in two hours, producing profuse perspiration, and each dose keeping the pyrexia in check for four hours.

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(269) Methylium Salicylicum.

Barsky (*Vratch*, 39, 40, 1899) uses this preparation externally, wrapping up the anointed part hermetically. Its sole disadvantage is its penetrating odour. It is absorbed by unbroken skin, and is excreted in the urine as salicylic acid. It acts, without causing gastric irritation, as an anodyne in articular rheumatism, podagra, joint diseases associated with scarlatina and gonorrhœa, pleuritic, neuralgic, and tabetic pains, orchitis, and adenitis. It is likewise an anodyne for gall-stone colic, acting also in this case as a cholagogue.

PATHOLOGY.

(270) Pathology of Acute Myelitis.

E. F. Trevelyan (*Brain*, Winter, 1899) reports the case of a man, aged 37, who, as the result of severe cold and exposure in March, suffered from severe pain in the back for eighteen days. On the eighteenth day he had retention of urine and rapid loss of power in the legs two days later. The paralysis was complete and flaccid and the knee-jerks and sensibility of the legs were lost. Catheterisation was employed to draw off the urine; he ultimately grew unconscious and passed his fæces involuntarily, and died the same (eighteenth) day with symptoms of cardiac failure. There was a history of syphilis contracted fifteen years ago; anæsthesia of the lower trunk below the level of the sixth intercostal nerve. The diagnosis was acute myelitis. The necropsy revealed the following conditions: (*a*) The cerebral hemispheres and meninges were healthy; the spinal cord in its middle and lower portions was covered with a dirty-looking pus on the outer aspect of the dura; the pia mater appeared healthy; the cord was obviously softened, and in the lower dorsal region it was almost diffluent. (*b*) The muscles of the back were infiltrated with pus, and a small empyemal cavity containing offensive pus was present on the right side close to the spine. (*c*) Lungs, liver, and kidneys appeared practically healthy. (*d*) Cultures were prepared from the pus in the spinal canal and from the cord, and a large diplococcus obtained from both. (*e*) Microscopic section of the various segments of the cord showed patches of myelitis disseminated throughout the cord, irregularly from the level of the third thoracic to the third lumbar segment; There was intense involvement of the fifth, seventh, and eighth thoracic segments, so that the myelitis here was almost completely transverse. (*f*) The ganglion cells were largely destroyed in all the areas affected, and even in the lower lumbar region few healthy cells were seen. "Here the cells have lost their processes, have become rounded and translucent-looking, and the nucleus and nucleolus have disappeared. Neither vacuolation or pigmentation is seen." The axis-cylinders and myelin sheaths show swelling and breaking up, and in some places the nerve fibres have largely perished, leaving hardly anything more than the glia network. (*g*) The blood vessels were engorged, and appeared more numerous than usual, but with practically no perivascular infiltration. There was very little overgrowth of the neuroglia, the stress of the disease falling on the parenchymatous tissue. The bacteriological finding was suggestive of a toxic agent as the cause.

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(271) The Thyroid and Infectious Diseases.

Tossi (*Suppl. al Policlin.*, February, 1900), as the result of clinical and experimental investigation, finds that in infectious diseases, both acute and chronic, hypersecretion of the colloid substance, with marked epithelial proliferation, takes place. Also in chronic diseases or prolonged acute illness there is abundant new formation of glandular tissue. The colloid substance has the power of destroying micro-organisms, and both the epithelial proliferation and the increase of colloid substance are due to the toxic product of the infection, which may be formed from the destruction of the microbes by the colloid or reach them in the circulation.

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(272) The Vagus in Relation to Measles.

Cioffi (*Rif. Med.*, March 2nd, 3rd, 4th, 5th, 1900) believes the greater part of the more serious complications of measles can be best explained by supposing that the measles toxin exerts its chief action on the vagus and its branches. This supposition derives support from the cases of measles with intense suffocative catarrh without definite pulmonary lesion, from the prevalence of gastric symptoms: and, above all, from the very large preponderance of ear complications. Indeed, the author supposes that all the various complications of measles may be explained by supposing that the toxin attacks one or more of the branches of the vagus; even the renal troubles sometimes observed are credited to an affection of the vagus, the albuminuria being considered of the "nervous" type. The not infrequent development of tuberculosis after measles is attributed to the increased vulnerability of the lung due to the weakening of the trophic influence of the vagus.

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(273) A Notomelic Monstrosity.

M. Castro (*Revista de la Sociedad Medica Argentina*, vol. vii, p. 136, 1899) describes a case of the rare form of monstrosity known as notomely. It was that of a female infant, two days old, who presented in the middle line of the back and about the level of the third or fourth dorsal vertebra two limbs resembling arms and composed of two segments each, an apparent forearm and a hand. Below these was a rounded tumour about half the size of the infant's head, which was in part a spina bifida sac. There was a cephal-hæmatoma on the right parietal bone. The labour had lasted twenty-four hours, and the mother was a primipara. There was no syphilis. The spina bifida sac was tapped, and then the accessory limbs were afterwards removed by operation; but the child died on the seventh day, after having shown convulsions. The dissection of the accessory limbs and of the mass from which they sprung is described, and it may be noted that they contained bones corresponding to some of those normally present in the upper limbs (humerus, metacarpals, phalanges), but defectively developed. The cause of death was suppurative spinal meningitis and pulmonary congestion.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(274) The Prevention of Scurvy.

F. G. Jackson and Vaughan Harley (*Proc. Roy. Soc.*, March, 1900) consider that the prevalent idea of scurvy being due to the lack of fresh vegetables or kindred substances, such as lime juice, requires modification. To show that scurvy may become prevalent among people who are well cared for, abundantly supplied with salted or otherwise preserved meat and lime juice, they quote the Nares Polar Expedition, and among other instances that of six Russian priests whose religion forbade them to eat fresh meat, but allowed salted fish, who spent the winter in a hut with a peasant boy to wait on them, who ate fresh reindeer meat. None of them had vegetables. By the end of the winter all the priests were dead from scurvy, whereas the boy was in good health. To show that even with the greatest hardships and without lime juice, but with a sufficiency of fresh meat, scurvy does not occur, they quote the Leigh Smith Expedition, Nansen and Johansen, and the Frederick Jackson land party. To test the inference that scurvy is probably due to the ingestion of the ptomaines in salted or improperly preserved meat, they fed three batches of monkeys kept under similar conditions on rice and maize with respectively fresh meat, tainted meat, and tainted meat with fresh fruit. Scurvy appeared in the two latter groups, but not in the former. No hæmorrhages were found in the tissues, but there were bloody stools, spongy gums, and characteristic anæmia. These experiments, they believe, confirm the conclusions derived from arctic experience that the absence or presence of fresh vegetables or lime juice is not alone sufficient for the prevention or the cure of scurvy, but that the essential factor in its causation is the condition of the food in general, and especially the state of preservation of the meat.

(275) Pott's Disease followed by Tuberculous Infection of the Spinal Cord.

Philippe and Cestan, of the Salpêtrière, have recorded three cases of tuberculous infection of the spinal cord (myelitis) following on, or occurring in the later stages of, Pott's disease (Société de Neurolog. de Paris, December 7th, 1899). The following is a typical one: A man, aged 23 years, free from syphilis, suffered from lassitude and lumbar pains with fever. On admission (December 25th, 1898) there were pains in the trunk muscles, both spontaneous and provoked, paraplegia with abolition of the knee jerks, papillary inequality and diplopia. He suffered from constipation and pyrexia, and developed mild delirium. The illness lasted 23 days, when he died. The lungs showed tuberculous nodules in an early stage and there was a diffuse tuberculous meningitis. The spinal column was the seat of Pott's disease in an early stage. Case II: Youth of 18 years, free from syphilis. Onset of symptoms in March, 1898, with formication in the legs and pain in the dorsal part of the vertebral column. Subsequently paraplegia, with dulness to heat and to pain (pin-prick) below the level of the umbilicus. The paraplegia later became spasmodic, and sphincter troubles also appeared. There was a painful swelling in the region of the tenth dorsal vertebra. He died in December, 1898, the course of the disease occupying ten months. At the necropsy there were found a tuberculosis of the lungs, Pott's disease of the tenth dorsal vertebra, and a caseous pachymeningitis of the spinal cord, with a secondary myelitis in the dorso-lumbar region of the cord, which accounted for the late spasticity. Microscopical examination showed areas of destruction of nerve fibres, with sclerosis in the spinal cord, and perivascular increase of small round cells. This second case is regarded as an example of the form of myelitis following Pott's disease described by Charcot and Michaut, and characterised by pachymeningitis and myelitis.

(276) Injuries of the Kidneys and Parenchymatous Nephritis.

J. Yarrow (*New York Med. Journ.*, January 6th, 1900) points out that more cases of nephritis are due to injuries of the kidney than have hitherto been suspected, and reports the following instructive case of a boy, aged 7, who was run over by a coal cart, the wheels of which passed over the right leg and the right lumbar region. The latter situation was marked by signs of contusion. On catheterisation of the patient immediately after the accident, 2 ounces of perfectly normal urine were withdrawn. The patient did not complain of pain. Two hours later he passed (voluntarily) about 12 ounces of bloody urine, evidently derived from a lacerated kidney. A number of examinations of the urine subsequently passed were made thereafter, and blood (hæmaturia) was met with in each instance. This continued, and then gradually passed off as the blood clot or clots in the injured kidney were absorbed. The blood drawn from the body for microscopic examination gave indications of leucocytosis, which was attributed to his debilitated condition. The urine on the day of the injury was as follows: Reaction acid, specific gravity 1022, albumen amounted to 6.2 per cent., and microscopic examination showed a large number of red corpuscles and of leucocytes. Small amorphous masses of blood pigment (hæmoglobin or hæmatoidin) were found adherent to and within the bodies of the white corpuscles, while needles and tufts of needles of hæmatoidin were present in great quantity both inside and outside the leucocytes. A few hyaline casts and some blood casts were present. The condition of the kidney gradually improved with rest in bed, and six weeks after the injury the cure had so far advanced that the condition of the kidneys and of the urine could thereafter be regarded as normal and the patient was discharged as recovered.

SURGERY.

(277) Traumatic Stricture of Œsophagus: Sepsis from Sound.

Koeppelin (*Lyon Méd.*, September 17th, 1899), in exhibiting a specimen of acute œsophageal stricture, stated that the patient, a man, aged 34, swallowed some caustic potash by mistake on March 18th. He was admitted into hospital under Jaboulay on June 13th, in a state of advanced cachexia. For several days he had been unable to swallow anything more than a scanty draught of liquid. Jaboulay succeeded in passing a No. 12 œsophageal sound. The stricture was very narrow, but could be passed. Temporary progressive dilatation was practised. This was performed daily for a fortnight, with great benefit, the patient being able to drink three pints of milk daily. One evening he felt ill and went to bed early. He coughed a little, without expectoration. On auscultation Koeppelin detected absolute dulness over the lower part of the right lung. The patient died in the night. The stricture involved all the coats of the middle third of the œsophagus, and was very tight. The lower part of the right lung was hepatised, and contained an abscess of the dimensions of a small walnut, its wall sloughing and its pus fœtid. The patient clearly died of pleuropulmonary infection, arising from sepsis introduced into the unhealthy œsophagus by the sound. Jaboulay, in considering this case, believes that in a bad traumatic stricture, even if still permeable, gastrotomy should be done at once.

(278) Jejunal Fistula.

Cushing (*Johns Hopkins Hospital Bulletin*, x, 136, July, 1899) records the case of a man, aged 28, who eighteen years previously had received a razor cut across the abdomen, completely severing the intestine in one place, and opening into it in two others; he was now the subject of an intestinal fistula, and had on several occasions been nearly starved to death, because the food was so soon lost by the fistula after it had passed through the stomach. He was a tall man, but weighed only 93 pounds, and his abdomen and thighs were covered with acute dermatitis on account of the irritating discharge from the fistulous opening. He was put in a continuous bath, and fed with nutrient enemata. Some months later he was operated upon; the fistula was closed by a resection of the bowel and end-to-end suture over a Halsted inflated rubber cylinder; the adherent coils of intestine were freed from the sac with difficulty, necessitating another partial resection. Convalescence was uninterrupted. He now weighs 180 pounds. The fistula was evidently situated high up on account of

the irritating nature of the discharge. Its exact height was determined in a rather curious fashion; it was noticed that oysters were discharged from the opening a short time after ingestion practically unchanged, so a piece of ligature silk was sewed to one of these before it was swallowed, and three hours later the oyster appeared at the fistula, and on measurement it was found that 3 feet 11 inches of string reached from the patient's teeth to the fistula. This located the abnormal opening in the jejunum about one foot below the duodenum.

(279) Resection of Scrotum in Varicocele.

Lejars (*Bull. et Mém. de la Soc. de Chir. de Paris*, July 25th, 1899) freely excises the scrotum without using either a clamp or pressure forceps. The scrotum is drawn forcibly forwards; then a row of catgut sutures is passed through the skin of the scrotum, anterior and posterior. The line of suture is arched, with the convexity forwards and made close up to the testis. Each catgut suture is passed back again through the two layers of skin, then the two ends are tied; the next suture is made close to the preceding one but is not interlocked with it. The line of suture being complete, the scrotum is cut away about half an inch anterior to it, and the cut edges united with interrupted sutures. Lejars contends that this method is very simple, and, after several years' trial, has yielded excellent results.

(280) Measurement of Monocular Field of Fixation.

Eaton (*Ophthalmic Record*, August, 1899) has devised two instruments—the one a reflecting tropometer, the other an arc tropometer—by means of which one can more accurately measure the excursion of each eye relatively to each other. With these he can invariably detect the existence of hyperphoria and of overaction or underaction of the ocular elevators or depressors. He finds that the rotation upward is apparently a fixed quantity, for, while the boundaries in all other directions are uniformly extended by practice, upwards it remains unchanged. The instruments are figured and described and said to be comparatively inexpensive.

(281) Hernia of Vermiform Appendix.

Hill, of Montgomery, Alabama (*Med. Record*, August 26th, 1899), describes two cases in his own practice. The first patient was a negro, aged 60, subject for twenty-five years to right scrotal hernia, partly reducible. It suddenly became strangulated. Vomiting was continual, though not fæculent. Herniotomy was performed after the failure of taxis. On opening the sac the cæcum and vermiform appendix were exposed. The appendix was about 9 inches long, and firmly adherent to the sac, hence the irreducibility of the hernia. The operation was completed after the method of Bassini, and the patient made a good recovery. The second patient was a lady, aged 48. A reducible femoral hernia had been noted for three years: then it suddenly increased and became tender. Vomiting set in; the bowels moved freely after a dose of sulphate of magnesia. An incision was made over the tumour; 2 ounces of fluid came away, and a strangulated vermiform appendix was detected at the femoral ring. The constriction was so great and the adhesions were so extensive that it was necessary to incise Gimbernat's ligament before freeing the appendix. Drawing the healthy part of that structure into the wound, Hill ligatured it about a quarter of an inch from the cæcum and removed the diseased part. The stump, cauterised with carbolic acid, was reduced and the wound closed. The patient recovered. Hill concluded with observations on cases reported by others. It would appear that the vermiform appendix is found in about 1½ per cent of all hernias. In not quite 3 per cent. of these cases the appendix is detected in a left hernia. In children hernia of the vermiform appendix is relatively more frequent (a little over 2 per cent. of all hernias). No case is reported where the appendix was the sole occupant of a left femoral sac, or an umbilical or ventral hernia.

MIDWIFERY AND DISEASES OF WOMEN.

(282) Kraurosis Vulvæ.

Heller (*Monats. f. Geburts. u. Gynäk.*, January, 1900) describes a case of over ten years' standing. The patient was a maiden lady, aged 59, subject ever since her forty-seventh year to severe itching of the vulva. On inspection, the labia and clitoris were found to be shrunken and the epidermis covered with white, shiny horn-like masses; in short, there were all the appearances of Breisky's kraurosis vulvæ. Heller prescribed weekly cauterisation with formalin, painting of the vulva three times daily with ichthyol and water, and hot compresses kept on for an hour every day. The horny deposit came off and the itching ceased almost completely. Two diseased points as well as the clitoris were excised and examined. Heller did not find that there was evidence to support the prevalent theory that kraurosis was primarily hypertrophic, ending in a secondary atrophic stage. It appears to be a chronic inflammatory process beginning in the skin and extending deeply so that muscle, fat, and sebaceous follicles are damaged and undergo atrophy, whilst the more superficial structures, still nourished by superficial vessels, become hypertrophied.

(283) Rupture of the Membranes at Fifth Month: Pregnancy Prolonged to Eighth Month.

Keiffer (*Bull. de la Soc. Belge de Gynéc. et d' Obstét.*, 1889-1900. No. 7.) attended a woman, aged 30, who had already been five times pregnant, only once, it appeared going on to term, as three children were born between the seventh and eighth month, and abortion occurred once at the third month. Great care was therefore bestowed on her during her sixth pregnancy. A little bleeding without uterine contractions took place at the third month. At the fifth a single contraction caused the escape of nearly the whole of the liquor amnii. After a few days of complete rest the uterus seemed to be filling with fluid again. Delivery occurred at the beginning of the eighth month, and a well-formed child, weighing 4½ lbs., was born. There was no difficulty in delivering it, but during the expulsion of the placenta the membranes required manual separation from the anterior uterine wall, possibly at the spot where they had ruptured three months previously. Keiffer, in reply to a suggestion that an amnio-chorionic pouch existed, declared that he carefully examined the membranes in his case and found no pouch.

(284) Intestinal Obstruction in Pregnancy.

Münchmeyer (*Monats. f. Geburts. u. Gynäk.*, December, 1899) reports a case of obstruction at the seventh month of a fourth pregnancy. The patient was 30 years of age. The intestine was found obstructed by adhesions, and the affected segment was already sloughy. Entero-anastomosis was performed with the aid of Murphy's button. On the third day the child was spontaneously delivered. The mother died of acute peritonitis a day later.

(285) Calculus of Fallopian Tube.

Pestalozza (*La Gynécologie*, February 15th, 1900) reports an instance of this condition in a case of hysterectomy with removal of both appendages. The right tube bore at its ostium a calcified or ossified mass as big as a nut, at the site of the hydatid of Morgagni. The left tube was found to be much swollen, and felt as hard as stone. On cutting through them a brittle calcareous mass was exposed. Pestalozza insists that only one other case of tubal calculus has been described, the author being Polaillon, overlooking Cullen's case (*Johns Hopkins Hosp. Rep.*, vol. iv, pp. 367, 441, and drawing, apparently of another case, in Kelly's *Operative Gynæcology*, vol. ii, Fig. 376, p. 202).

(286) Fœtal Bladder in Adult.

Garrigues (*Amer. Journ. Obstet.*, December, 1899) describes a condition which must be remembered in relation to tapping for dropsy, the limits of a distended bladder, and incisions in the middle line. Garrigues removed a fibromyoma of the uterus in a virgin aged 45. After cutting through the aponeurosis of the recti he found an unusual amount of connective tissue with relatively little fat in front of the peritoneum. The hypogastric arteries were thick and solid, also tortuous. The usual triangular space which they formed by uniting at the umbilicus was almost completely filled up with the bladder, which nearly reached the umbilicus, to which it was united by a very short urachus. The peritoneal relations to the uterus and its fibroid were normal: the bladder was separated easily from its surroundings, tied at its uppermost limits, cut loose from the umbilicus,

and pushed down into the pelvis. The patient died of nephritis on the tenth day, and the relations of the bladder were then verified.

(287) Cancer of Abdominal and Vaginal Cicatrices.

OLSHAUSEN (*Centralb. f. Gynäk*, No. 6, 1900) exhibited in December, before the Berlin Obstetrical Society, a patient who underwent ovariotomy for a tumour of the right ovary in 1896, and a year later was operated on for a tumour, in this instance partly cancerous, of the left ovary. At present there was a large and quite inoperable secondary deposit in the parietes around the scar. Opitz recently exhibited a similar case. Olshausen also reported two cases of cancer in the cicatrix of a vagino-perineal incision made in both cases for extirpation of a cancerous uterus.

(288) Cancer of Left Cervix in Uterus Bicornis Bicollis.

CZERWENKA (*Centralbl. f. Gynäk.*, No. 7, 1900) recently demonstrated before a Vienna society a double uterus and double cervix with cancer of the left "portio" or vaginal portion of the cervix. This uterus had been removed by panhysterectomy from a woman, aged 35. The vagina was double, and coitus was practised in the left half, and it is significant that there was a left pyosalpinx. The uterine cavities were completely separated, the bodies were not parallel, but diverged upwards and outwards, whilst the cervices lay parallel, united by connective tissue, and each "portio" was complete. Whilst the left portio was cancerous there were two small myomas in the left body, and, as above noted, the left tube was obstructed and suppurating.

THERAPEUTICS.

(289) The Treatment of Lupus by Roentgen Rays.

HAHN AND ALBERS-SCHÖNBERG (*Münch. med. Woch.*, February 27th, 1900) have obtained good results by this method. To understand how the *x* rays cure a diseased part it is necessary to be familiar with their action on normal skin. The degree of reaction to the rays varies enormously with the individual, and in some, especially children, no unpleasant complications were noted, in spite of long and intense exposure. In three cases the hair fell out, but was rapidly regenerated. On normal skin the rays produce hyperæmia, which, according to the individual and the intensity and length of exposure, may become intense with œdematous infiltration. Still later vesicles form and burst, leaving a raw surface exactly like a superficial burn. The cutaneous pigment often leaves the central portions of the part exposed to the rays, which becomes abnormally white, and collects in the form of dark freckles round the periphery, where they have been mistaken for fresh nodules of lupus. These effects may begin directly after the first exposure, or may be delayed for as much as a fortnight after the last. In the same way with lupus: either the whole exposed skin, including the diseased patches and any intervening healthy part, becomes inflamed, or, in subjects whose skin is not naturally sensitive, the reaction is limited to the parts immediately surrounding the disease. In the former case a uniformly raw, moist surface results, in which no trace of the lupus nodules can be recognised. When this heals the skin is of normal appearance, and the lupus has vanished. In the latter case the skin between the nodules loses its eczematous appearance, and becomes normal, the lupus nodules being the more noticeable at first, but later becoming covered with a scab under which they gradually shrink and disappear. Rarely in the first stage the lupus nodules actually increase in size and become surrounded by a halo of hyperæmic skin; this, however, does not influence their final disappearance. Lupous ulcers healed rapidly under the rays, with firm and permanent cicatrices. Exceptionally the reaction of the lupous patches to the rays does not occur, even after repeated applications; this is the case most often when the disease is so situated that the rays cannot be made to reach it vertically. In lupus verrucosus it may be necessary to destroy the wart-like parts with electrolysis before the rays can effect a cure. The authors report 12 cases, all of which were greatly benefited, and 7 probably cured permanently, though the 9 to 18 months which had elapsed since are too short to exclude the possibility of relapses, which occur after this as after every form of treatment. In some of these cured cases the disease had existed for 20 years, had been constantly treated, and had nevertheless progressed to perforation of the nasal septum or deep destruction of parts. The number of applications of the rays varied between 5 and 58.

(290) The Treatment of Cutaneous Ulcers.

DAVID COUPER (*Glasg. Med. Journ.*, p. 81, 1900) says the essential elements indicated are cleanliness in its strict surgical sense and support of the circulation. Stimulants, soothing agents, etc., are simply subservient adjuvants. Every ulcer in its relation to healing processes may be placed in one of four classes. It may be either defective or excessive in action, peculiar (malignant, tuberculous, etc.) or healthy. Apart from the general treatment of each case the following local methods are recommended: Those due to malignant disease should be excised promptly upon confirmation of diagnosis. In soft chancre the sore needs thorough cleansing and dusting with a powder composed of equal parts of calomel and oxide of zinc. Tuberculous ulcers are well scraped and then dressed antiseptically, or a carbolic lotion (1 in 20 with 1 in 500 $HgCl_2$) is rubbed well into the entire surface (both healthy and ulcerated) and the limb well bandaged. Lupus yields easily to Brooke's ointment: Hyd. oleat. 2 per cent., acid salicyl. 10 to 15 gr., ichthyol 15 mm, ol. lavand. q.s. In the troublesome ulcers met with on the lower limb associated with long-standing congestion the chief indication is for continued rest. As this is so rarely possible, the writer washes the limb thoroughly once or twice a day with hot water. Soft soap is then rubbed into the skin of the limb, friction being continued with a piece of clean flannel until the blood appears in puncta. Clean cold water is employed to wash off the soap and suds, diachylon ointment applied on strips of lint, and the part bandaged from toe to knee. The circulation is thus stimulated; the thickening in the skin is reduced by the caustic action of the soap and antisepsis is secured. In exuberant ulcers astringents and $CuSo_4$ is indicated. In callous ulcers a most successful plan is to make a crucial incision across the ulcer, laying open its floor and borders so that it gapes. After a few dressings it exhibits the appearance of a healthy sore. Less heroic measures consist in rubbing the part with pure carbolic acid, avoiding pain by the use of cocaine. Couper has discarded iodoform as causing dermatitis, and now employs xeroform. When the contracting action is arrested strapping is most valuable.

(291) The Treatment of Trigeminal Neuralgia with Galvanism.

DUBOIS (*Bull. Gén. de Thérap.*, March 8th, 1900) refers to successes in the treatment of tic douloureux with the constant current recorded by Onimus, Legros, Niemeyer, Benedikt, and Dalby. His own patient began to have neuralgic paroxysms at the age of 40. For ten years he was treated with many different drugs, but without relief. At 51 he commenced to receive electrical treatment. The positive pole, divided into three terminals by means of a divided rheophore, was applied to the supraorbital nerve, the infraorbital nerve, and at the mental foramen. The negative pole was placed on the neck opposite the superior cervical ganglion. From 12 to 15 milliampères, as it is estimated, were passed for seven minutes. An amelioration of the symptoms at once commenced, and after a week's treatment he obtained absolute freedom from the attacks. The treatment was continued three times a week for a year. As a consequence, he has remained free from even the slightest paroxysm for twenty-six years. Besides the above case, three others have been treated by the same method. One, the subject of five surgical operations, was not relieved; in the other two an apparent cure was effected; at any rate, an extraordinarily long remission of the pain resulted.

(292) Effects of Benzoic Acid on the Urine.

WM. ASHURST, working in Professor Wood's laboratory at the University of Pennsylvania (*Phil. Med. Journ.*, February 24th, 1900) found that the administration of benzoic acid, both to dogs and to man, was followed by important results, which explain the value of this drug when administered internally in the cystitis of gout and other catarrhal

conditions of the bladder and urinary tract. Benzoic acid did not increase, or but very slightly, the normal acidity of the urine, but with both human and dog's urine it had a marked influence in indefinitely postponing the occurrence of alkaline fermentation. Of a number of samples kept exposed to the air of the laboratory for several days none underwent alkaline or ammoniacal fermentation. This explains the well-known effect of benzoic acid upon ammoniacal cystitis. It is not that the acidity of the urine is increased, but that the ammoniacal fermentation which would be going on in the residual urine (in subjects of gout, or those with hypertrophied prostates, or in senile debility, etc.), is prevented from taking place, and the urine thus retains its normal quality. It is also found that a distinct germicidal quality is present in the urine after benzoic acid. In ordinary healthy urine kept for several days exposed to the air, and in a faintly acid state various forms of bacteria would grow and thrive, whereas after benzoic acid is taken internally the urine gathered subsequently might be exposed for days, and under similar conditions, with but a very slight growth of bacteria in it. The decomposition of urea into ammonia and carbon dioxide is prevented, and the dangers of cystitis and its complications avoided by the administration of benzoic acid. The diuretic effect is slight and inconstant.

PATHOLOGY.

(293) The Blood in Diseases of the Cardio-vascular System.

STENGEL has made an extensive series of observations on this subject (*Proc. Path. Soc. of Philadelphia*, 1899), more especially in reference to the acute inflammatory lesions, atheroma and arterial degenerations, and, lastly, in cases of mechanical lesions, such as those in chronic valvular disease. In acute endocarditis of either type there is rapid reduction in the number of red corpuscles, even as much as 60 or 50 per cent. Leucocytes are generally increased in number, and polymorphous cells may be particularly abundant, reaching 98.5 per cent. Bacteriological examination frequently shows the presence of organisms, and the writer mentions the gonococcus as important. Examination of the blood in atheroma and chronic valvular disease does not always yield much information. Sometimes fatty particles and detritus have been observed. The writer draws attention to the curious fact that anæmia is often more apparent than real in some cases. In valvular disease there is a considerable variety of result obtained. Reduction of pressure sometimes seems to be followed by diminution in the number of red corpuscles, but the writer finds that this is by no means the rule, as in cases showing marked loss of compensation he sometimes obtained a high increase in the number of corpuscles, reaching in one instance 500,000 per cubic mm. It is very frequent to find a polycythæmia in cases of chronic cardiac disease with continuous slight inadequacy of circulation, and in cases of congenital heart disease the number of red corpuscles may be as much as 8,000,000 per c.mm. This has been explained by saying that disturbance of the distribution of water in the system is the cause of it on account of the continually reduced blood pressure and vascular dilatation, whereby there is a loss of liquid from the blood, especially through the lungs (Grawitz). Stengel does not incline to this view on experimental grounds, and he adds therefore that the rapid fluctuations or the failure of polycythæmia to occur in some cases in which all the conditions are present by evaporation or loss of fluid shows that this explanation is not adequate. The author's own view is rather that disturbance of the distribution of the corpuscles plays a more important *rôle*, and he quotes the known fact that the number of corpuscles present in the cutaneous vessels of the dependent parts is greater than in others, a fact which has been verified by the writer on previous occasions. He also quotes the observations of J. K. Mitchell on the influence of massage on the constitution of the blood, which shows that the number of blood corpuscles progressively increases after massage. This is apparently due to the introduction into the circulation of considerable numbers of corpuscles which had previously lagged behind in the tissues. The author shows how in chronic cardiac disease there are elements which would tend to cause the lagging of red cells in the peripheral arterioles or venules. Probably failing cardiac disease is an important factor here, but possibly evaporation, as Grawitz believes, may contribute to the result. The writer has himself observed the fact, which is possibly of importance, namely, that viscosity of the corpuscles increases in cyanotic conditions. This is markedly the case in blood drawn from a ligatured finger, and perhaps in the cyanosis of valvular lesions the same effect obtains. This would obviously tend to retain corpuscles in peripheral tissues. The leucocytes in chronic valvular disease also show increase in number, but the amount of leucocytosis is neither striking nor uniform.

(294) Pathological Importance of the Petro-Squamosal Sinus.

CHEATLE (*Jour. Laryng.*, January, 1900) has been led by examination of a large number of skulls to the conclusion that the remains of the petro-squamosal sinus are present in some form or other all through life. In infancy and childhood the sinus as a rule is well marked, opening into the lateral sinus behind by means of a valve-like opening, and in front joining the middle meningeal vein. In the adult it may be often found on careful search. On looking at the roof of the middle ear of a young subject in a fresh specimen after the dura mater has been stripped off, a network of rather large veins can be plainly seen immediately beneath the bone. From this network several veins pass through the petro-squamosal suture to empty into the sinus. It is therefore seen, the author points out, that there is a connection between the veins of the middle ear and those of the meninges, and occasionally at all events with those of the temporo-sphenoidal lobe, and through the meningeal coverings the middle ear is in communication with those of the middle and posterior fossæ. Under these circumstances the importance of the petro-squamosal sinus with its tributaries and connections from a pathological point of view is very evident, and explains how infection may spread from the middle ear to the meninges and brain without macroscopical evidence of the connection. This pathway will also explain the presence of a cerebral abscess without any apparent connection with the diseased middle ear.

(295) The Effect of Extravasation of Urine on the Peritoneum.

RIZZO has carried out a series of experiments with a view to ascertaining the effects of urine extravasation on the peritoneum in particular and the organism in general (*Il Policlinico*, January 15th, 1900). He finds that small quantities of urine, even acting continuously on the peritoneum, do not seem to produce any bad effects. Any higher dosage, reaching to one-fourteenth or one-thirteenth of the weight of the animal, does not produce any marked effect on the peritoneum, but seems to cause some uræmic manifestations. If the dosage is higher it causes death from uræmia. The presence of urine in the peritoneum renders this structure very liable to infection. Organising peritonitis which closes up the wound whereby the extravasation has taken place is not due to the action of the urine, but to the fact that the wounded surface is brought into contact with peritoneum.

(296) Malformation and Infection.

GHEORGHIU (*L'Obstétrique*, v, p. 63, January, 1900) at a recent meeting of the Société d'Obstétrique de Paris gave statistics obtained at the Maternité during 1897, 1898, and 1899, bearing on the question of infection of the parents and malformation of the progeny. He found that there was scarcely an infant which showed an arrest of development or a malformation which did not possess a mother or a father or both suffering from some infectious condition, such as typhoid fever, tuberculosis, scarlet fever, syphilis, measles, etc. The more intense the infection the more probable was it that the infant would show malformations. Multiple malformations generally pointed to a very marked maternal infection. The infants were generally born slightly premature and below weight. There was rarely a history of traumatism or maternal impression; and in only one instance was there consanguinity. Gheorghiu thinks that there is undoubtedly a relation of cause and effect between the infection and the malformations, but there are other circumstances which intervene.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(297) Cerebral Pachymeningitis.

Chas. W. Burr and D. J. McCarthy of Philadelphia report (*Journ. of Nerv. and Mental Dis.*, October, 1899) an interesting case of the above, with symptoms of pseudo-bulbar paralysis, followed by a detailed *post-mortem* investigation. A man, aged 43, occupation pedlar, was admitted to hospital on April 29th, 1898, on account of epileptiform convulsions. His family history was negative. Patient had acute articular rheumatism seven years previously, and had been for years a heavy drinker. Present illness began in July, 1897, with a general convulsion after a debauch. He was unconscious, and bit his tongue in the fit. The fits recurred at least once every week, and on the day before admission he had ten fits, and during the previous week three. No distinct aura, except momentary dizziness. Patient usually passes a large quantity of urine after a fit, and also has headache lasting some hours. Drinking aggravates the frequency and intensity of the attacks; he suffers from constant frontal headaches, at times so severely as to be unable to sleep. On admission patient appears pale, and staggers a little from weakness, but there is no ataxia. Can use his hands well. Knee-jerks are increased, but there is no ankle clonus. Sensibility (cutaneous) is normal over entire body and limbs. Touch is localised well. Speech is slow and hesitating. During the first week in hospital he had four fits, with unconsciousness. In a fortnight he became stupid and emotional, "crying pitifully whenever spoken to." Gait now became very feeble and uncertain, and he could not stand at all with the feet close together. The left arm was held in a paretic attitude, and the left grip was very poor. The saliva dribbled. At the end of the third week a facial paresis, involving the lower facial muscles of the left side, was noticed. There is now great general emaciation, with local stiffness in the left area and inco-ordination in both arms. Movements at the knees and ankles are very weak. The knee-jerks are much increased, and passive elevation of the legs from the bed causes a clonus in them. There is a spastic condition of both legs, and patella clonus is easily obtained. Superficial reflexes are preserved all over the body and sensibility is generally preserved. Swallowing is difficult, the tongue is almost entirely paralysed, as well as the whole of the left side (limbs and face). The right eye shows a moderate optic neuritis. The temperature was generally normal, but there were several periods of fever up to 103° F., lasting one to three days. He died on April 29th, 1899. The necropsy revealed the following conditions: (1) Calvaria normal; (2) dura mater adherent to entire convex surface of left pre-frontal lobe, and to an area 1 inch in diameter over the apex of the right prefrontal lobe. At the site of adhesion the dura was thickened at its inner surface by a fibrinous exudate (pseudo-membrane) $\frac{1}{8}$ inch thick. The rest of the inner dural surface was also covered by a thin fibrinous pellicle covering the left side entirely, but being limited to the frontal and parietal areas on the right; (3) the spinal dura from the upper cervical to the third thoracic segment showed a similar pseudo-membrane $\frac{1}{16}$ inch thick, and the first and second cervical roots were caught and compressed in it; (4) in the second left frontal convolution were several partially caseated tuberculous nodules varying in size from a barleycorn to a cherry; the rest of the brain showed no gross lesions; (5) the crus, pons, and medulla were asymmetrical, the left motor (pyramidal) tract being half the size of its fellow of the opposite side; (6) the spinal cord showed two sets of changes—an old-standing atrophy of the grey and white substance generally of the right side, and a recent acute degeneration of the pyramidal tracts on the left side—the latter could be traced right up to the internal capsule; (7) microscopic examination showed part of the pseudo-membranes to be fibrinous and partially organised, while the more recent were soft and highly vascular, with thin-walled capillaries and frequent hæmorrhages; (8) tubercle bacilli could not be positively detected in the nodules of the cortex owing to hardening with Müller's fluid, though rod-like bacilli, of the shape and form of tubercle bacilli, were found; (9) the subpial tangential glia layer was thickened, and there was a diffuse glia sclerosis in the cortex, both nerve cells and glia cells presented advanced pigmentary degeneration, staining black with osmic acid, there was much destruction of tangential nerve fibres in the first layer; (10) cells of the cerebellum and spinal cord presented similar advanced fatty-pigmentary change. The symptoms could generally be attributed to chronic alcoholism.

(298) Albuminuria and Diabetes.

Ferruccio Schupfer has investigated the causes and significance of albuminuria in diabetes (*Il Policlinico*, February, 1900). The conclusions which he draws are that albuminuria may be due to the excessive function of the kidneys, diabetic coma, cystitis, or pyelitis, the consumption of egg albumen; in some cases it seems to be due to nervous influences, in others to the presence of some microbic toxin, to hyperæmia and passive congestion; lastly, to parenchymatous nephritis. In cases of experimental pancreatic diabetes, a slight albuminuria may be present and does not seem to affect the percentage of sugar; but should the watery elimination be reduced the total quantity of sugar diminishes, and in cases where there is a large quantity of albumen there is a considerable reduction in the passage of sugar into the urine. In cases of experimental nephritis in dogs, more sugar is secreted by the kidney which eliminates the least amount of albumen. In cases of combined nephritis and diabetes experimentally produced the excretion of urea corresponds to that of the sugar. In pancreatic diabetes occurring in the human subject, albuminuria which does not surpass 1 per mille does not seem to have any influence on the sugar elimination. The writer is still uncertain as regards the effects of large quantities of albumen, but so far his observations go to show a similar condition to cases experimentally produced as above. Glycosuria in arterio-sclerotic diabetes is slight, and does not appear to be much influenced by renal lesions which are apt to occur in such cases. In gouty diabetes, glycosuria and albuminuria may increase or diminish *pari passu*; they may even alternate, or one may increase in correspondence to the diminution of the other, but it seems to depend on the state of the kidney and the diet. There may be considerable albuminuria with a high degree of glycosuria. Both seem to depend on the gouty condition. The writer also finds that when a gouty glycosuria does not disappear with a non-hydrocarbonous diet, it generally means that there is very considerable renal disease and albuminuria. It may also be said that grave renal changes occurring in a diabetic patient are evidence of a gouty origin. In pancreatic diabetes the existence of some albuminuria does not call for further change in the diet, but, on the other hand, in the diabetes of arterial sclerosis and gout, albuminuria indicates a diet and treatment directed to the vascular and gouty condition, avoiding all articles of food which are liable to augment the renal lesion.

(299) Malta or Mediterranean Fever in Dalmatia.

Brunner, of Trieste (*Wien. klin. Woch.*, February 15th, 1900), reports the case of a bricklayer, aged 27, who, while employed in the construction of a railway between Gabela and Trebinge, in Southern Dalmatia, during which time he slept, together with 50 other workmen, under a wooden shed on the bare ground, contracted Malta fever. Though the author's attention was called to the possibility of Malta fever occurring in the neighbourhood of Trieste in 1897, this is the first case he has met with, which was not imported from well-known endemic foci. The patient stated that many other workmen were similarly affected, though this could not be substantiated. The illness lasted from October 1st to December 25th, when the patient became apyretic, though he still suffered from night sweats. Malta fever is almost always mistaken at first for a typical typhoid or malaria. The spleen is constantly enlarged. The long duration, varying between 40 to 70 days on an average, though it may be as much as two years, is very characteristic. The average mortality is only 2 per cent. There are three chief varieties — the

malignant, which is rare, but rapidly fatal from hyperpyrexia; the undulating, in which the remittent temperature forms on a chart a series of waves; and the intermittent. The disease is caused by a very small oval bacillus, the bacillus or micrococcus melitensis, discovered by Bruce in 1887. The writer obtained pure cultures of this bacillus on glycerine agar, to which a third of its volume of ascitic fluid had been added by puncturing the spleen of his patient. This has succeeded during life in only two other cases, though *post mortem* the bacilli can always be found in sections of the spleen. Of more practical diagnostic importance is the fact (discovered by Wright, of Netley, in 1897) that cultures of the bacilli are agglutinated by the diluted serum of patients with Malta fever, though they are not by serum of healthy persons, or those suffering from other diseases, when in greater dilution than 1 in 10. The author obtained this serum reaction in his case, and his results were confirmed by Kretz of Vienna and Leishman of Netley. It is therefore certain that this disease may occur along the coast of Austria, as well as in Malta, Cyprus, the Levant, Naples, and other well-known endemic centres.

SURGERY.

(300) Burns caused by Industrial Electricity.

MALLY (*Rev. de Chir.*, March, 1900) gives the results of a clinical and experimental study of what he calls electric burns, implying by that term any circumscribed lesions of the skin and subjacent tissues produced by the direct contact of metallic conductors of electricity with the human body. Such injuries may be caused when the body or a part of the body intervenes either between two electric conductors or between a single conductor and the earth. The lesions thus produced present clinical characters absolutely different from those of ordinary burns. The chief specific characters of the former are freedom from pain, asepticity, and dryness. These characters may be explained by the physical conditions to which they are due, such conditions being a very high elevation of temperature, a very feeble quantity of heat, and a very brief duration of action. The quantity of heat, though feeble, being closely localised, as at the extremity of a platinum wire, may give rise to sufficient elevation of temperature to fuse the metallic conductor. In his description of the clinical characters of electric burns, the author dwells on their rounded form, the failure of reaction in the surrounding tissues, the slow and aseptic course of the lesion, and the absence of pain.

(301) Errors of Diagnosis in Cases of Supposed White Swelling of the Knee.

ELLIOT (*Med. News*, December 30th, 1899) at a recent meeting of the New York Academy of Medicine pointed out certain errors that might occur in the diagnosis of white swelling of the knee. In exceptional cases of this disease there may be an absence of pain, atrophy of the limb, and reflex spasm for long periods before the development of any pathological signs. Cases were brought forward by the author to show that two other affections may be mistaken for tuberculous arthritis. An instance was recorded of chronic arthritis, non-tuberculous in character, in which the symptoms, though they resembled very much those of white swelling, and seemed to indicate operative interference, rapidly disappeared under a treatment by rest and massage. There was also a possibility, it was stated, of mistaking sarcoma of the knee for white swelling, and in such event the delay in making out the true nature of the disease might cost the patient his life. It should be borne in mind, the author points out, that when fixation and extension of the affected limb give no relief, the disease is probably not a tuberculous one, and may be malignant. Constant pain, especially if of severe character and not merely occurring in spasms, also points to malignancy. The size is another pathological sign of sarcoma, but to wait for this symptom is practically to condemn the case to a fatal issue.

(302) Treatment of Entropion (with Trichiasis) of Lower Lid in Old People.

MALGAT (*Recueil d'Ophtal.*, August, 1899) finds in such cases, where operation for radical cure of the entropion is declined, that electrolysis applied to three or four of the roots of the lashes at a time causes some inflammatory swelling at each spot; the lid margin and remaining lashes are thereby slightly removed from the eye, and relief is obtained, and lasts, perhaps, two or three months, the time that the inflammatory swelling takes to fully subside, owing to the slowness of absorption in old people. The operation is then repeated on four more lashes, and so on, as required. The loss of lashes is willingly put up with. In the case of ladies the loss of the lashes may be objected to, in which case the needles are inserted between the lashes, so as not to injure the roots.

(303) Gastrectomy for Gastric and Pyloric Cancer.

POIRIER (*Bull. et Mém. de la Soc. de Chir. de Paris*, Jan. 2nd, 1900) lays great stress on removal of infected glands, as is universally practised in operations for cancer of the breast. The surgeon must remember Cuneo's researches, which demonstrated that glanular infection occurs very early in cancer of the stomach and pylorus. In only one case in a very large series did Cuneo fail to find infected glands, but in that same case the lymphatic vessels running from the tumour were already cancerous. Poirier operated in November on a man aged 56. He was in fair general health, and the cancer was limited to the pylorus and adjacent part of the stomach. He removed the infected part of the alimentary canal, taking care to include much of the lesser and great omentum in the neighbourhood. These peritoneal folds were found, on careful microscopic examination, to contain glands extensively infected with cylindrical epithelioma, the form of cancer which had attacked the pylorus. Hartmann, when Poirier's patient was exhibited at a society, laid stress on the removal of the part of the lesser omentum, adjacent to the cancer. Poirier was right, the disease nearly always spread in that direction, whilst the surgeon was more ready to resect the great omentum. Tuffier added that infected glands left behind were a direct source of danger. After a pylorectomy, the new pylorus was strangulated by infected glands; he performed gastro-enterostomy and the patient did well.

MIDWIFERY AND DISEASES OF WOMEN.

(304) Placenta Prævia: Air in Veins: Death.

HÜBL (*Wien. klin. Woch*, No. 5, 1900) publishes a short essay on air embolism in placenta prævia. In one case in Braun's wards last November death occurred during turning, and was reported by Hübl as death under narcosis, so that a very complete necropsy was made by police authorities. The patient, aged 40, was in labour in the eighth month of her fifth pregnancy. She had a flat rachitic pelvis and slight hydramnion. Bleeding had gone on for two days; the os internum was entirely occupied by the presenting placenta, the cervix and vagina were tamponed, and the plug was removed in forty-eight hours. Then turning was attempted under complete anæsthesia. The placenta was partly detached, the membranes reached and torn, and the excess of fluid let out. Just as the foot was drawn into the vagina the patient turned livid, and after two or three shallow inspirations breathing stopped. Artificial respiration, injections of camphor, inhalations of oxygen, and electricity proved unavailing. Kolisko conducted the legal necropsy. The left ventricle was flaccid, the right was greatly distended and resonant on percussion; it was in fact full of air, and contained only a few drops of blood. The undelivered fœtus measured nearly 16 inches. The placenta was placed quite centrally; the edge extended rather more to the left and anteriorly. On the upper aspect of the detached piece was a vein as thick as a crowquill, torn open and gaping widely. In a second case there was no necropsy, but the clinical history indicated air in the veins. The patient was a well-nourished Jewess, aged 36, at term in her fourth pregnancy. Several attacks of moderate hæmorrhage had occurred during the last fortnight before labour. There was, as in the first case, excess of liquor amnii. The pelvis was normal. The placenta prævia was central. Under the anæsthetic Hübl speedily broke through the placenta and brought down a foot. Eight hours and a half later a large dead fœtus was spontaneously delivered, the placenta followed. The uterus seemed uninjured. Very

little blood was lost. After irrigation the patient grew restless, the temperature rose over 102°, and a rigor occurred lasting for some time. Great lividity and dyspnœa set in, and the pulse was as high as 170. Temporary recovery followed, the patient seemed well for several hours, when a great attack of cyanosis and great rise of temperature occurred. The sensorium remained clear. The patient died 14 hours after delivery. Kramer, Kruckenberg, and Heuk have published similar cases.

(305) Ossification of the Uterus.

Miller, of New Orleans (*New York Med. Journ.*, March 3rd, 1900), states that a girl of 16, robust and well developed, was placed under the care of Dr. Ernest S. Lewis, of New Orleans, for amenorrhœa. The vulva was fairly developed, but on further examination it was found that the vagina was entirely absent. Through the rectum a peculiar mass, somewhat larger than the normal uterus, and very hard at some points, was detected. There was no evidence of retained menstrual fluid, though the molimen was well marked. The abdominal cavity was opened; occupying the site of the uterus and appendages was an anomalous mass, considerably larger than the normal structures, and attached by broad-ligament support only on one side; removal was accomplished without great difficulty by tying off in mass the short fold of broad ligament tissue which secured it. Recovery was rapid. The mass weighed under 6 ounces, and was pear-shaped. It was in part soft, and this portion seemed to include rudimentary tubal and ovarian tissue. The body of the uterus was hard, like bone; the cervix, intensely tough, seemed to lose itself in the hard mass, which was found to be composed throughout of compact bone structure, presenting all the histological elements and arrangement of normal bone.

(306) Accidental Hæmorrhage: The Hand better than the Bag.

Fieux (*Annales de Gynec. et d'Obstét.*, March, 1900) insists that in accidental hæmorrhage from detached placenta the obstetrician's hand is safer from the first as the delivery agent than Barnes's and Champetier de Ribes's bags. He relates a bad case, where the bleeding set in early in the eighth month. The patient was aged 35, she had already been pregnant twice, bearing the children to term, but both died during labour. Fieux found the patient dying from hæmorrhage. The uterus reached to the epigastrium, it felt as hard as wood all over; neither any tender nor any soft spot could be felt. Dark blood flowed from the vulva through a tampon. This plug being removed, the os internum was found impermeable, the cervix and os externum had undergone none of the changes characteristic of labour. Fieux injected saline solution (500 grams) under the skin. The patient was placed in obstetric position, then two fingers were introduced after a little manipulation through the os internum, the membranes were ruptured, and the dilating bag introduced. But after twenty minutes' application according to the usual method the bag proved useless for dilatation. Fieux therefore passed his hand, finger by finger, into the uterus. The breech presented, the anterior foot was drawn down, and the child delivered; the head gave trouble for a moment when passing the outlet. The placenta immediately followed. Behind it a big black clot over half a pound in weight came away, followed by much blood. Half an hour after the beginning of this obstetric operation the uterus was perfectly empty. The *post-partum* hæmorrhage, which was but slight, was entirely stopped by introduction of the hand combined with a hot injection. The patient soon got well. Fieux considers that manual dilatation is much superior to the bag in any case similar to this, where the patient has already lost much blood and the parts around the cervix are rigid. The uterus must be emptied by the quickest method, and the hand is quicker than the bag.

THERAPEUTICS.

(307) The Treatment of Chronic Tuberculosis.

Porter (*Jour. Amer. Med. Soc.*, March 3rd, 1900) points out that inasmuch as the immediate cause of death in most cases of pulmonary tuberculosis is heart failure, it is desirable to begin early to remove or prevent weakness of the cardiac muscle. This he is accustomed to do with small doses of strychnine and digitalis, and in some cases with arsenic in addition. He also insists on the necessity of keeping the lower portion of the alimentary tract in an evacuated state. This is one of the means of preventing auto-inoculation of the intestine with tubercle, the risk of which is obvious from the impossibility of preventing the entrance of the bacilli into the stomach in deglutition. He attributes some of the good effect of the internal administration of creosote, guaiacol, and kindred remedies to their destructive action on the tubercle bacilli that have been swallowed. The method he employs to attain his object is to give a mild saline at night, with a high enema in the morning, once or twice a week, together with nux vomica or strychnine to counteract the weakness of the muscular wall of the intestine.

(308) Thiocol and Sirolin in Pulmonary Diseases.

Frieser (*Therap. Monats.*, December, 1899) has had very favourable results with these preparations in the treatment of phthisis and catarrhal diseases of the air passages. Though sufficient time has not elapsed to show whether the improvement obtained in cases of phthisis is permanent or not, it is certain that in doses of 15 to 23 gr. three times a day thiocol increases the strength and weight of the patients often with surprising rapidity, without disordering the digestion or causing any unpleasant symptoms even when given for a long time. On the contrary, the appetite improves rapidly. Even advanced cases may be temporarily improved and relieved of obstinate cough. For chronic bronchial and laryngeal catarrh, emphysema, and putrid bronchitis, thiocol was given chiefly in the form of "sirolin," which is a solution of thiocol in syrup of orange, and with excellent results. Thiocol is an improved preparation of guaiacol, being potassium orthosulphoguaiacolate, $C_3H_8{<}^{HO}_{OCH_3}{>}SOK$. It is a white powder of not unpleasant taste, odourless, and readily soluble in water. This advantage makes it specially suitable for children, who take it readily, especially in the form of sirolin. Oelberg (*Wien. med. Presse*, February 25th, 1900) looks upon sirolin as the most valuable drug in all chronic diseases of the lungs, including phthisis, and as being superior to all other preparations of creosote, including guaiacol and creosotal. It is easily absorbed, and is well borne even by infants. The dose is from a teaspoonful to a tablespoonful, or more, thrice daily. The pleasant taste is a great advantage. Oelberg claims that sirolin is especially valuable in the treatment of phthisis among the poor who are unable to obtain fresh air and hygienic surroundings.

(309) Treatment of Pruritus Ani.

Tuttle (*New York Medical News*, January 27th, 1900) advises that every pathological cause of pruritus should be removed, such as oxyurides, hæmorrhoids, fistula in ano, rectal ulceration, and eczema, and the local application of hot or cold water, as suits best the individual patient, preparations of carbolic acid, black wash, salicylic acid, chloral hydrate, chloride of calcium, extract of conium, extract of strammonium, camphor, cocaine, and tar in different cases. He has found a combination of carbolic acid (10 to 20 per cent.), salicylic acid (2 to 10 per cent.), and boracic acid (5 per cent.), with glycerine and cold cream of especial service. Ichthyol in his hands has been of value, and in association with painful conditions conium and cocaine. For the rheumatic or lithæmic state underlying the condition he prescribes nitrogenous diet, alkaline diuretics, salicin compounds, and hot baths.

(310) Gelatine Injections.

Pensuti (*Gazz. degli Osped.*, March 4th, 1900) speaks highly of the benefits derived from hypodermic injections of a solution of gelatine, in various forms of subcutaneous hæmorrhage and also in dysentery. A case of dysentery so treated is briefly reported. The author uses a more concentrated solution than usual. He makes use of a 30 per cent. solution of gelatine in water containing a small quantity of carbolic acid (1 gr. to every c.cm. of solution); of this he injects 2 or 3 c.cm. once or twice a day into the nates. It is said to be painless. In hæmoptysis or hæmatemesis the author has got better results with gelatine injections than by the usual means, for example, ergotin.

(311) Desiccated Suprarenal Capsule in Acute Coryza.

Millener (*Buffalo Med. Journ.*, lv, p. 585, 1900) refers to the effect of suprarenal extract in producing anæmia of mucous surfaces. In consequence of this it may be applied in the form of an aqueous solution (20 grains of dried extract in half an ounce of water filtered through cotton) to the congested nasal mucous membrane in coryza. The nose and naso-pharynx should first be cleansed with an alkaline wash of sodium salicylate, sodium bicarbonate, and boracic acid. The solution is applied on pledgets of cotton. The author hopes it will take the place of the dangerous drug cocaine in the relief of congested mucous membranes, and he notes that in some operations on the nose it may be employed to prevent hæmorrhage.

PATHOLOGY.

(312) Condition of the Blood in Eclampsia.

M. Levinowitsch (*Centralbl. f. Gynak.*, No. 45, 1899) has published the results of a study on the blood in eclampsia which is of especial importance. Since Döderlein discovered micro-organisms in 8 cases of eclampsia, the blood of which had been bacteriologically examined by him, it has generally been believed that some cases of eclampsia have micro-organisms in the blood as the exciting cause. Levinowitsch made systematic examinations of the blood since May, 1898, in cases of eclampsia, and obtained the following results: (1) In fresh blood taken from 44 patients there were present large cocci of round or oval form, and extraordinarily mobile. They were often arranged in pairs (diplococci), the round cocci being smaller than the oval. (2) Cultures were made from the freshly-drawn blood of 28 patients, in bouillon, gelatine, and agar-agar, with the result that colonies and growths developed in 25 cases. The micro-organisms flourished freely at the body temperature, and also grew readily on sterilised fragments of placental tissue. Cultures when three or four days old showed the presence of the large oval cocci mentioned above, arranged in pairs and in fours. They stained with aniline dyes, and showed the presence of a mobile cilium or flagella. The above forms were met with in blood taken during the first eclamptic seizure, or within two days after an attack. (3) Older cultures showed involution forms of the coccus, as well as an umbilicated spore-bearing form and a dumb-bell-shaped form. These forms, excluding the last, were met with in the blood of patients two days after an attack. (4) The cultures were found to be pathogenic towards guinea-pigs, and in four weeks after inoculation the animal developed acute anæmia and hæmorrhagic endometritis. (5) In one instance the coccus was found in the blood of the mother who suffered from eclampsia, as well as in the blood of her newborn babe. In two other newborn children attacks of eclampsia were met with. Finally, Levinowitsch states that he has found the microbe in the blood of pregnant women who had not suffered from the fully-developed attacks of the disease, but who had nevertheless been suffering from headache, œdema of the ankles, and attacks of vomiting.

(313) Glandular Tumours in the Region of the Kidney.

Engelken (*Beiträge zur pathol. Anat. und zur allgem. Pathol.*, 1899, p. 320) records an interesting case of such a tumour in the renal region in a girl 4 years old, which had been wrongly diagnosed as a sarcoma of the liver. The liver was apparently enlarged, and showed two large nodular growths on its anterior surface. The tumour had grown upwards into the vena cava and extended into the cavity of the right auricle, and scattered metastatic growths were met with in the liver and peritoneum. The tumour was composed of sarcoma-like cells, with a stroma of connective tissue and blood vessels, and with glandular alveoli lined by one or more layers of cubical or cylindrical cells. The metastases showed the same structure as the tumour. Hæmorrhages were present in places, and a few necrotic areas containing old blood pigment were also met with. There were no metastases in the retro-peritoneal lymphatic glands. The author has searched the literature of the the subject, and collected and tabulated 28 cases of similar embryonal tumours. He divides them into three classes: for example (*a*) those with sarcoma-like masses, epithelial gland-like structures, and smooth muscle fibres; (*b*) those with striated muscle as well: (*c*) those containing other tissues such as cartilage. In most of the recorded cases the kidney tissue was destroyed or absent, and hence he concludes that the embryonic rudiment of the kidney was involved as well as the Wolffian body. Striated muscle and cartilage might arise from inclusions of portions of the vertebral plate, while rudimentary smooth muscle might also change into striated.

(314) Poisonous Mother's Milk.

Saunders and Fisch (*St. Louis Med. Rev.*, December, 1899) have made an experimental examination in 5 cases of the milk of mothers which was producing grave constitutional disorder in their infants. In 1 case an albumose was found that produced convulsions in guinea-pigs with a fall of temperature when injected subcutaneously. In a second an alkaloid was isolated (which was neither creatin nor creatinin, but probably belonged to their group) that produced convulsions with a rise of temperature in guinea-pigs, and caused death in a white rat. In this case and the two following the toxic symptoms in the children appeared on the re-establishment of the catamenia in the mother. In a third case an alkaloid was separated which produced convulsions and death in white rats, and also killed guinea-pigs. In a fourth case the milk gave negative results. In a fifth case the milk was at first harmless to guinea-pigs, and no toxic body could be isolated; but after some nervous disturbance sustained by the mother the child became more seriously ill, and then the subcutaneous injection of the milk in a guinea-pig produced convulsions, coma, and lowering of temperature. The authors believe that the changes in the milk were due to the nervous disturbance of menstruation. They point out that in selecting a cow for the supply of an infant's food, one that is pregnant should be chosen, for obvious reasons.

(315) Extravasation of Urine in the Peritoneal Cavity.

Rizzo (*Il Policlinico*, January 15th, 1900) found that 100 c.cm. of urine injected into the peritoneal cavity sufficed to cause uræmic symptoms, whilst it required 200 c.cm. to get the same results when injected hypodermically. When urine was allowed to enter the peritoneal cavity slowly, drop by drop, death sometimes occurred from septicæmia, sometimes no reaction followed, either local or general. Wounds of the intra-peritoneal portions of the urinary canal are closed by peritonitic adhesions which are not due to the action of the urine, but to the fact that a bleeding surface is placed in contact with the serous surface of the peritoneum.

(316) Multiple Internal Malformations in an Infant.

L. Nattan-Larrier (*Bull. et Mém. Soc. Anat. de Paris*, S. 6, vol. i, p. 981, 1900) describes the case of a male infant who succumbed two days after birth. The pregnancy of which he was the product had been complicated by hydramnios. He had begun to evacuate meconium and seemed to be free from malformations: but vomiting had set in and death had followed. At the necropsy it was found that the œsophagus was much dilated in its middle portion, being, therefore, fusiform in shape. The stomach had a normal looking mucous membrane. The pylorus was widely gaping; its orifice was marked by a distinct projection; beyond the pylorus was a large *cul-de-sac* 35 mm. in circumference, at the bottom of which was a very fine opening through which a catheter could not be passed, and the *cul-de-sac* did not communicate with the second part of the duodenum, from which it was separated by a mass of soft fibrous tissue 1 cm. in thickness. The second part of the duodenum was of normal calibre and was full of bile; it ended abruptly in a small *cul-de-sac*, the bottom of which was formed by the ampulla of Vater; when it was opened into it was seen that the hepatic and pancreatic ducts discharged into a common cavity 2 mm. in length. The hepatic duct was situated above and in front of the pancreatic; the rest of the intestine was normal. In the heart, which was normal in size, there was an opening in the interventricular septum 4 mm. in diameter, situated below the antero-internal sigmoid valve of the aorta. The orifice was circular, and it was partly curtained off by the tricuspid valve. The foramen ovale was patent but very narrow.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(317) Congenital Rickets.

F. Fede and E. Cacace (*Pediatria*, viii, p. 41, February, 1900) have made a series of measurements of the length of the body and of the cranial and thoracic circumferences in 500 newborn infants, with a view to the determination of the frequency of congenital rickets. They have also made observations on the state of the sutures fontanelles in these infants. A special measuring apparatus (named a brefomacrometer) was invented for the purpose and employed by the observers. Out of the 500 cases only 1 showed all the clinical features of rickets, and only 4 cases exhibited the condition of the skull known as craniotabes; further, since the authors do not admit that craniotabes in itself proves the existence of rickets, it follows that rickets is, contrary to the opinion which has been expressed by some pediatric physicians, exceedingly rare. Even if the 4 cases of craniotabes be included, it makes only 1 per cent. of congenital rickets in infants born in maternity practice. Irregularities in the sutures and fontanelles were not infrequently met with, but the authors did not regard these as signs of incipient rickets, but as evidence of a retarded or irregular development. It is noteworthy that the average measurements of the body length and circumferences were below those given by other observers. Thus the length of the body averaged 48.2 cm., the circumference of the head 33.3 cm., and the circumference of the thorax 31.7 cm. A long bibliographical list of articles on fœtal rickets is appended to the paper.

(318) Spontaneous Ecchymoses of Neurotic Origin.

G. Etienne has communicated two cases from the clinic of Professor Joffroy, both occurring in females. Case 1 (Soc. de Neurol. de Paris, December, 1899), a young girl, aged 13, overgrown, pale, had menstruated a few months previously. Her hands were habitually cold and bluish, and her nose cold. Three years ago she had curious hallucinations, felt an animal moving in her heart, and was cured by hypnotic suggestion. She suffered from frequent and repeated borborygmi, and at the close of December, 1896, there appeared on each arm a long strip of ecchymoses, which disappeared in two days, but was succeeded by other similar stripes. This continued for six weeks. Later there was an attack of epistaxis. On examination the forearm and arm were seen covered with linear series of spots and purpuric patches, 3 to 10 millimetres in diameter, of a violet colour arranged in slightly curved lines running from above downwards. Here and there the lines were broken up by clear intervals. There were slight subconjunctival ecchymoses also. The skin sensibility was not altered in these areas. Subsequently and where menstruation was proceeding with regularity these patches reappeared, showing a similarly bizarre distribution. There was no evidence of hysteria or hæmophilia in the patient, and the development of the ecchymoses could not be associated with catamenial periods, and the skin showed no special "dermographic" reaction. Case 11 was a neurasthenic adult woman, aged 32, a university student, who had syphilis six years previously, which followed the usual course and left no present symptoms. She was neurasthenic, had marked frontal headache and syphilophobia. On January 19th, 1898, she awoke with purpuric patches and a long hæmorraghic stripe, nearly 3 inches long and ½ inch wide, running horizontally on the right shoulder (over the deltoid), and a few smaller parallel stripes about the clavicle. The antero-internal side of the arm had a large purpuric punctate patch, and a similar one with discrete points appeared symmetrically on the opposite arm. Sensation was normal, and there was no history of trauma. This patient had a slight predisposition to purpura.

(319) Cerebral Toxæmia in Addison's Disease.

Klippel (Soc. de Neurol. de Paris, December 7th, 1899) records the case of a man, aged 57, the subject of bronzed skin and Addison's disease, and who had suffered for months from violent attacks of delirium (? epileptiform) convulsions, and eventually coma and death. Before admission to the hospital he had two attacks of cerebral excitement, at intervals of four days, each attack being succeeded by a loss of consciousness. In hospital he had a score of such attacks, and almost always at about 4 A.M. It commenced with a delirium with incoherent words and cries; he would then quit his bed to run about the room; then he was seized with a sort of convulsion, in which the arms contracted and twisted about, but this did not prevent him walking and uttering sounds in a high voice. His attendant was then obliged to put him to bed two or three times. After a while he would have a few convulsions and lose consciousness. The urine was always free from albumen. Later attacks were followed by coma, and though treated with bleeding and injection of (artificial) serum he died. The necropsy showed œdema of the cerebral meninges, pericellular and perivascular increase of leucocytes in the brain cortex, globules of myelin in the white substance, and disseminated sparse nerve degeneration in the posterior and lateral spinal cord columns. Klippel looks on a toxic agent resulting from the Addison's disease as the cause of the encephalopathy, and resulting in asthenia, mental depression, delirium, and convulsions.

(320) Hæmophilia in the Negro.

W. R. Steiner (*Johns Hopkins Hosp. Bull.*, xi, 44, February, 1900) comments on the rarity of hæmophilia in the negro, and put on record the second observed case. It was that of a negress, aged 14, whose great-grandmother, grandmother, mother, several grand uncles and aunts, and two brothers and a sister were all bleeders. She herself bled easily from the slightest scratch, and was when admitted to hospital very anæmic from recurrent epistaxis. In this case, as in that previously reported by Hadlock (in 1874), there was not pure negro descent, as the patient's great-great-grandmother was a Scotswoman. In the family history there was to be noted the remarkable fertility of bleeders, and also the early death of many of the children. Both males and females were in this family found to be bleeders, but only one (a male) died from the effects of the bleeding. The bleeding tendency in each instance was transmitted through the females. The treatment consisted in the administration of calcium chloride (15 gr. t.d.s.), and great improvement was reported.

SURGERY.

(321) Infective Generalised Psorospermiosis.

Posadas of Buenos Aires (*Rev. de Chir.*, March, 1900) reports an instance in the human subject of a chronic infective disease, which he has been led by a study of its cause and mode of development to designate as generalised psorospermiosis. The patient, whose nationality and place of residence are unfortunately not stated, was a middle-aged man whose general health before the beginning of this attack had always been good. The disease proved fatal after an evolution of seven years' duration. The first signs of the affection, which consisted in the development of nodular growths, were presented in the skin of the face and of the left thigh, and in the glands receiving the lymph vessels from these regions. This morbid condition gradually invaded other parts of the body, and near the end of the patient's life the whole extent of the skin was covered by the characteristic nodular tumours; all the groups of lymph glands were more or less involved, and many of the viscera were also affected. In the skin the disease was revealed by the appearance of nodules which were firm, pale, painless, and covered by sound epidermis, the primary seat of the new growths being the dermic connective tissue. These nodules, which varied in size, though as a rule were of the volume of a pin's head or a hemp seed, ran together and formed large growths, which finally ulcerated, and were converted into "cauliflower" masses of sprouting granulations. The affected glands and internal organs resembled very much structures attacked by diffuse miliary tuberculosis. The gradual and constant development of the disease was disturbed from time to time by attacks of rapid and excessive

growth, which attacks were associated with high temperature. In describing the histology of the growths presented in cases of this kind, the author states that a psorospermiotic nodule in its typical form is made up of a central giant cell containing the parasite, of a peripheral layer of embryonal cells, and of an intermediate zone of epithelial cells. The parasite is a protozoid, and belongs to the group of spirozoa. In its adult state it consists of a non-nucleated sphere of granular protoplasm enclosed within a thick cyst wall. It is very resistent to the action of putrefaction, and it preserves its vitality for months in fresh air. It dies at once when submitted to a temperature of from 85° to 90° C. It is subject to one or other of two modes of segmentation, to which correspond two forms of psorospermiosis; a segmentation called by the author vegetative or encysted which determines chronic forms of psorospermiosis, and an infective and invading segmentation which gives rise to acute attacks of the disease. That this parasite is the cause of the generalised infective malady, of which a clinical example is given in this paper, is held to be demonstrated by the following results of the author's investigations: its constant presence in the human lesions, the production of a like disease with similar lesions when it is inoculated in animals, the constant presence of the parasite in the animal lesions, the absence of any other micro-organism in the new growths; the fact that with the tumours of inoculated animals it is possible to infect other animals of the same and of different species.

(322) Exploratory Incision for Tuberculous Peritonitis.

EBSTEIN (*Thesis*, Breslau, 1899) has collected 227 cases of incision into the peritoneal cavity designedly for the cure of tuberculous disease, with after-histories. He concludes that the simple fact of incision is the most evident factor in cure in surgical proceedings of this class. Permanent cure after speedy disappearance of the local disease follows opening of the peritoneum without antiseptics, without washing out the peritoneal cavity, and without the aimless, useless, tedious, and therefore dangerous dissecting away of tuberculous nodules, Fallopian tubes, etc. This latter practice is specially bad, as by the nature of the case it must be incomplete, the whole or greater part of the peritoneum and many of the viscera being already extensively involved. Ebstein reports 15 unpublished cases in which simple opening of the peritoneum for tuberculous disease was practised at the Breslau clinic with the best results.

(323) Operative Treatment of Rectal Carcinoma.

SENN (*Phil. Med. Journ.*, September 30th, 1899) states that an extensive experience of Kraske's operation has convinced him that sacral resection is not only unnecessary, but absolutely harmful in all operations for malignant disease of the rectum. He holds that all legitimate and well-grounded indications for the radical removal of high rectal carcinoma can be met, and ample room for performing the operation secured, by a preliminary excision of the coccyx alone. Even this operation is regarded as superfluous in extirpation of the rectum below the peritoneal reflexion. Kraske's operation, it is hoped, will soon become obsolete. The author concludes his remarks with a few words in reference to the contra-indications to a radical operation for high rectal carcinoma. He holds that such treatment is contra-indicated in all cases in which the proximal limits of the tumour are beyond the reach of the index finger, and there is extensive infection of the retroperitoneal glands, with marked extension of the disease in the pararectal connective tissue. In the absence of such positive contra-indications, it is held to be probable that a radical operation can be performed without sacrificing any portion of the sacrum by limiting the resection of the posterior bony wall of the pelvis to removal of the coccyx.

(324) Inflamed Non-Strangulated Hernia.

DE FRANCISCO (*Beit. zur klin. Chir.*, vol. xxvi., p. 2, 1900) gives a full clinical report of 59 cases of this affection in Czerny's wards in Heidelberg. He classifies them as (1) inflammation of the empty sac, 6 cases; (2) abscess in the sac, 2 cases; (3) inflamed enterocele, 2 cases; (4) inflamed epiplocele, 15 cases; (5) inflamed hernia of vermiform appendix, 2 cases; and (6) inflamed adherent or irreducible hernia, 32 cases. Every single case was operated upon immediately after diagnosis, and not one case was lost. De Francisco insists that with taxis it would be otherwise; that proceeding is far more dangerous than operation, as it may cause the tearing off of a piece of omentum or serious damage to the vermiform appendix, ovary, or tube. Taxis is specially dangerous in cases of inflammation of the empty inflamed sac, when, above all, diagnosis is difficult. Inflammation may lead directly to strangulation; it is the cause of adhesion which involves irreducibility and increase of the contents of the hernia. By operation these results are prevented. There is no other treatment suitable for inflamed hernia.

(325) Perineal Urethrostomy.

PONCET (*Lyon Méd.*, No. 53, 1899) describes an operation for establishing a persistent urethral fistula in the perineum, which has been practised with good results in 23 cases. In this operation, the first stage of which is an ordinary external urethrotomy, the exposed urethra is cut across and then the margin of the perineal opening is united by sutures to the margins of the external wound and the distal opening is closed. This operation is indicated in cases in which a portion of the urethra has been hopelessly destroyed by injury or by some diffuse inflammatory affection. The author, after an examination of the 23 patients on whom this operation had been performed, has arrived at the conclusions that it is free from risk, and that the remote results with regard to micturition are good. There is no incontinence, and, according to the reports of those who have been subjected to this operation, the existence of a single outlet, and that in the perineum, causes but little inconvenience, and this abnormal condition does not constitute a real infirmity.

MIDWIFERY AND DISEASES OF WOMEN.

(326) Etiology of the Vomiting of Pregnancy.

EVANS (*Amer. Gyn. and Obstet. Jour.*, January, 1900), in discussing this question, recalls the physiological characteristics of the pregnant uterus, especially its sensitiveness, irritability, and contractility. Contractions occur regularly during pregnancy, and are most marked at the menstrual epochs; hence the greater liability to abortion at these times. They are also readily induced by irritation of the breasts, especially the nipples; probably any powerful cutaneous irritation can act in the same way. Evans believes that the purpose of these painless rhythmical contractions is to facilitate the circulation of the blood through the large venous sinuses, and that the surcharging of the blood in these relatively stagnant pools with effete material probably acts in some way as an irritant, and stimulates the uterus to contraction. On these physiological data, and on the observation of the phenomena presented by two cases of vomiting, he bases the hypothesis that rhythmical uterine contractions are the primary cause of the reflex irritation which results in paroxysmal nausea and vomiting. Both the patients were primiparæ. In the first, aged 40, nausea and salivation occurred throughout the period of gestation. Evans noted that the severer attacks of vomiting occurred at certain intervals, which he found to correspond with the menstrual epochs. On one occasion he precipitated a severe attack of vomiting whilst examining the breasts; on another occasion a vaginal examination produced the same result. In the second case the patient complained that the breasts were very tender, especially the left, and on examining this breast the patient was seized with a severe attack of vomiting. A vaginal examination produced the same result. Whilst talking to the patient, he noticed that the nausea occurred in paroxysms, separated by a considerable interval, in which she said that she was comfortable. In support of his hypothesis, Evans points out that the contractions of the non-gravid uterus which follow the introduction of the sound not infrequently result in reflexly inducing nausea and vomiting. Intrauterine applications are often followed by cramp-like pains, associated with nausea and vomiting. In dysmenorrhœa, nausea and vomiting sometimes occur, and Giles has found that

in the primipara there is a close and constant connection between the sickness of pregnancy and previous dysmenorrhœa. Vomiting is frequently noted in the first stage of labour, and usually occurs at the acme of uterine contraction. Other hollow viscera also may, in contracting, set up reflex nausea and vomiting. The occurrence of "morning sickness" is thus explained by the author. There is probably more or less accumulation of effete material in the maternal blood in the morning, which leads to increased irritability of the nervous centres. The effect of assuming an erect position is to bring about a determination of blood to the pelvis. This engorgement of the pelvic circulation probably leads to more energetic uterine contraction, which reflexly causes nausea and vomiting. When food is taken before rising it is probable that considerable blood is determined to the stomach, hence less will finds its way to the pelvis when the patient gets up, so that the uterine contractions are then apt to be less vigorous. The beneficial effect of nerve sedatives is probably due to their action in soothing the irritable nervous system, and thus controlling the reflex. The author sums up his conclusions as follows: (1) There exists more or less of a rhythm in the paroxysms of nausea and vomiting in pregnancy; (2) there must also exist a rhythmical exciting cause for these paroxysms; (3) there is a rhythm in the uterine contractions during pregnancy; (4) the essential exciting cause of the nausea and vomiting of pregnancy is frequently the physiological contraction of the muscular fibres of the uterus.

(327) Diminution in the Size of the Shoulders in Difficult Labour.

Bonnaire, (*Presse Méd.*, No. 21, p. 125, March 14th, 1900) describes two cases in which cleidotomy (division of the clavicle) was performed in order to extract the fœtal body after the head had been broken up by the basiotribe or cranioclast. In one case double cleidotomy was necessary, and in the other the unilateral operation sufficed. From five experiments upon dead fœtuses after birth, he found that the double operation reduced the bisacromial by from 9 to 10 cm.; thus in the state of repose it measured, say, 42 cm., and after double cleidotomy 33 cm.; in the same case the circumference with the arms pushed forward and approximated, but without the division of the clavicles, was 37 cm. Cleidotomy has as yet been performed only on the infant already dead, and it is indicated when the shoulders cannot be extracted by other and ordinary means, as in pelvic contraction, when they become impacted in the cavity after the head has been broken up, when the shoulders are excessively broad, and when it is necessary to reduce to a minimum the efforts at extraction as in rupture of the uterus. It is performed by means of a pair of strong scissors or with a perforator (cleidotripsy). When the operation is impracticable through the folding forwards of the shoulders or from other causes, Bonnaire recommends, and has successfully practised, another procedure called "supra-acromiotomy," or deep division of the soft parts over the anterior supra-acromial region. These operations are usually to be regarded as supplementary to cephalic embryotomy, but Bonnaire thinks that cleidotomy may be permitted even in the case of a living infant whose head has been born but whose shoulders remained fixed, for in the experimental cases the subclavian artery has never been wounded nor the subclavian muscle cut.

(328) Lactation among the Poor.

Blacker (*Med. Chron.*, February, 1900) gives statistics of 1,000 patients from the maternity department of University College Hospital, drawn up with a view to ascertaining what proportion of women amongst the poor in London are able to suckle their children. For the purposes of the inquiry a patient was considered to have suckled her child when she had fed it by the breast only for seven months or longer. He found that of the 1,000 women, 39 had never suckled; 961 had suckled some or all of their children. Of the 961, 747 had suckled all their children, whilst 214 had suckled only some. These 214 women had had 1,572 children, of which 986 had been suckled, whilst 586 had been fed artificially. The 39 women who had never suckled included 20 multiparæ, with 99 children, and 19 primiparæ. The reason given for non-suckling was in 24 cases a total absence of milk. Of these 24 cases 13 were primiparæ and 11 were multiparæ. The author points out that it may be justly inferred that the 13 primiparæ may be able to suckle their future children. He proceeds to analyse the 266 reasons given by the 214 mothers as to why they were unable to suckle some of their children. In 44 instances they were not allowed to or did not want to; in 31 the children were unable to suck or refused to take the breast; in 14 the mother had to go to work; in 85 the milk went away after a variable time; in 92 the milk was insufficient from the commencement. Blacker concludes that the fact that out of the total 1,000 women only 11 multiparæ were unable to suckle any of their children owing to their having no milk tends to confirm the view that amongst the London poor it is quite the exception for a woman to be prevented from suckling by an insufficiency of milk.

(329) Pyæmia in Puerperium; Recovery.

Opitz (*Centralbl. f. Gynäk.*, No. 12, 1900) encountered pyæmia in a woman, aged 27; the symptoms lasted from the fourth to the fifty-ninth day after delivery. No fewer than sixty distinct rigors were noted. Numerous deep subcutaneous abscesses developed. It is important to note that left parametritis developed very early, and disappeared entirely within three weeks. The maximum temperature attained on several occasions was 106.5°, the lowest 95.5°. The maximum variation in twelve hours was 9°. After cessation of all the pyæmic symptoms, the genital tract appeared absolutely normal on examination. Opitz quotes a case of Fischer where 70 rigors were noted after admission into a hospital. He considers, on the ground of clinical experience, that puerperal pyæmia, though serious, is much less deadly than the earlier forms of sepsis, and prognosis is favourable when the first month of the illness has been tided over.

THERAPEUTICS.

(330) Curability of Epilepsy.

W. P. Spratling, Medical Superintendent of Craig Colony (*Medicine*, February, 1900; abstract *Medical News*, February 24th) divides epilepsy in its initial stages into two groups: the false, which includes such cases as may be traced to a true physical cause, recent in origin; and the true, which includes cases which have congenital or acquired organic defect or deficiency of the brain. The former group includes many cases which are readily cured, and form the basis of the claims of eye specialists, gynæcologists, and others who cure some cases by trifling operations. The second group demand much attention, and a serious prognosis is always present. Spratling is emphatic in his disapproval of the use of bromides for all classes, especially in children; for the pronounced epileptic colony treatment is the best form. This treatment is as follows: (1) The colonising of the patient means that he is placed under such restrictions that at all times entire control of his acts is secured. (2) He is treated as an individual at first, on broad hygienic lines, for many come in poor general health, and the first requirement is that they be built up, reconstructed physically. (3) To do this a diversity of means is employed: medicines, systematic occupation, gymnastic exercises, baths, special feeding, and the use of such moral agencies as may be essential. (4) All the while he is being studied for aura; for the presence in the blood, urine, or other secretions of noxious substances that may cause, or help to cause, the disease. (5) He must eat only such food, and only in the manner prescribed for him; this is regarded as most essential. (6) He must not overeat, for by tradition founded on fact he is apt to gormandise. (7) He is not permitted to use alcoholic stimulants in any form or to any extent. Tea or coffee, if properly made, may be taken in moderation. Tobacco may be used in moderation. (8) At the colony every epileptic received is made to undergo a complete change of life. If he was of sedentary habits he is put out in the fields, under the sun and in the air—not abruptly, but gradually. His entire life, as far as can be, is thrown into new channels. If, when received, he is feeble, as many of them are who have suffered from long neglect, he is put into the hospital, fed on light nutritious foods, and every effort made to build him up. (9) If it is seen at any time that he fails easily under any mental strain, such as study or close reading, he is made to abandon such

pursuits, and use his body only. (10) If his body is big and strong, and he is weak intellectually, then the opposite course is pursued, the object always being the coequal development of the mind and body: no vitiation of one at the expense of the other. (11) If he has any natural bent or inclination in the way of study or work it is recognised and encouraged, for mental occupation in the treatment of epileptics is an important factor. Due heed to the foregoing over a sufficient time has cured from 6 to 8 per cent. of all cases that came to the Craig Colony.

(331) Treatment of Phthisis at High Altitudes.

Murat (of the Sanatorium at Aubrac) discusses some of the so-called contra-indications in the treatment of phthisis at high altitudes (*Arch. Gén. de Méd.*, February, 1900). Advanced cachexy is usually stated to be a contra-indication. The writer considers that this is by no means the case, and he gives instances of patients arriving at the sanatorium in very advanced conditions of weakness, loss of appetite, anæmia, etc., and who did extremely well. It is at all times important to ascertain the relation of the disease as regards heredity, duration, etc., to the degree of cachexia as in some patients the cachetic condition appears early and seems to be out of proportion to the phthisis. It would appear that such cases do not promise much amelioration. In others, again, it seems to be due to excessive pulmonary suppuration. The effect of the climate of Aubrac is to reduce pus formation and in such cases the writer reports a marvellous improvement. Under these same circumstances pyrexia cannot be considered a contra-indication, and it will probably disappear with the improved state of secretion. It is only in cases of profound cachexia, laryngeal and intestinal complication, that little result may be expected. The writer speaks highly of the treatment at Aubrac in the cases of incipient phthisis and the benefits derived by those showing a marked predisposition to the disease. Even the existence of extensive invasion is not considered a contra-indication by Murat, who records in the same article several instances where large cavities dried up with disappearance of adventitious signs and the patient was able to walk long distances without fatigue. Hæmoptysis, instead of being a contra-indication, is looked upon by the writer rather as an indication, and among the patients hæmoptysis is uncommon, though it may previously have been considerable. Laryngeal phthisis does not seem to do well at Aubrac, the air appearing to be rather too keen, and Murat does not recommend their being sent here. As regards emphysema, the question depends on circumstances. In many instances respiration becomes more difficult. Much depends upon the extent of the tuberculous lesions in these cases and to the coexistence of cardiac embarrassment. Cases of "florid phthisis" do not on the whole benefit much from high altitudes in the writer's opinion. There may be a slight amount of amelioration, but on the whole they make little or no progress. The acute forms of phthisis seem to do badly. Renal complication, tuberculous arthritis and rheumatism are contra-indicative and are likely to do badly.

(332) Treatment of the Weakness and Apathy following Influenza.

B. J. Bryne (*Jour. Amer. Med. Assoc.*, March 10th, 1900) refers to those patients who while convalescing from influenza appear to suffer from great feebleness and apathy and exhibit a subnormal temperature with a reduced pulse-rate. For the depressed and apathetic condition he records good results following the administration of strychnine sulphate (dose, $\frac{1}{20}$ grain three times daily) and brandy, the latter being given in doses of a tablespoonful 4 or 5 times a day. The use of the cold bath was attended with uncertain and sometimes with unpleasant results, and was not to be recommended. Rest from also exercise and exertion, mental and physical, is strongly advised, especially in those cases with symptoms of cerebral and nervous exhaustion. Complete rest in bed or in a chair was the most powerful adjuvant to the beneficial action of nerve tonics, and every case thus treated received benefit thereby.

(333) Largin in Blennorhœa.

Almkvist (*Archiv f. Dermatol. u. Syphil*, B. l., 1899) says the lids and conjunctiva are swabbed with "lotio borici" and dried with sterilised wool; 2 per cent. largin solution is then applied four times the first day and $\frac{1}{2}$ per cent. solution three times daily afterwards. When cases are seen early, eight to nine days' treatment brings the eye to its normal condition. If the disease has progressed largin markedly arrests extension, and may be relied upon to quickly benefit the condition. Of 10 cases treated at St. Goran's Hospital, Stockholm, during twelve months 3 were gonorrhœal and had invaded the lachrymal canal. All yielded to the treatment at once.

(334) Treatment of Neurasthenia.

Gray (*Medical News*, December 16th, 1899) considers that the treatment of neurasthenia consists of the removal or amelioration of the cause, of rest, and the use of tonics and electricity. The rest should be both mental and physical. From 10 to 12 hours of rest in bed out of the 24 is usually sufficient, but the patients should avoid fatigue when they are up. Iron with quinine and strychnine are the agents most generally useful where there is anæmia, conjoined with a large amount of meat and beef-tea and an abundance of fresh air. In the non-anæmic cases the best tonic is strychnine from $\frac{1}{30}$ to $\frac{1}{60}$ grain three times a day; in some milder cases moderate doses of Fowler's solution or of cinchona are useful. In gouty cases colchicum is indicated. In cases with lithæmia, Vichy or Giesshuebler water is of value, and sometimes the glycerophosphate of lime in doses of 5 to 10 gr. three times a day. If the neurasthenia be associated with marked dyspepsia, Weir Mitchell's plan of treatment should be adopted. Mental diversion is highly important, but the means employed for obtaining it should be adapted to the strength of the patient. Electricity is often of great value; about two milliampères of the galvanic current should be passed from the forehead to the nape of the neck for from 2 to 5 minutes daily, or a 5 to 10 milliampère current from the neck to the lower dorsal region for from 5 to 10 minutes. Where time is no object, general faradism is often useful, and also in many cases massage.

PATHOLOGY.

(335) Cortical Irritation and Epilepsy.

H. E. Hering records (*Wien. klin. Woch.*, No. 32, 1899) the results of an extensive series of experiments made on dogs and monkeys. The experiments were performed on 27 dogs and 20 monkeys, and the following were the results obtained with the monkeys: (*a*) After division of the pyramids in the monkey it is not possible to produce either isolated movements of the contralateral extremity or to inhibit a tonic spasm in the isolated extremity. (*b*) It is possible to produce a movement of the limbs on the same time or of the opposite side by strong stimulation of the cortex of one cerebral hemisphere. (*c*) While movements of the extremities referred to above in (*a*) are not possible after division of the pyramids, nevertheless movements of the ocular and facial muscles can be produced. (*d*) Movements of the head (and neck) are also obtainable under condition (*c*) just noted, and this is due to nerves which leave the spinal cord on the caudal side of the point of division of the pyramids. (*e*) After division of a pyramid, the animal makes apparently spontaneous movements of the extremity situated on the same side as the divided pyramid. (*f*) The experiments also show that the movements of closing and opening the hand are connected with the pyramids. (*g*) These experiments on monkeys go to prove that the pyramidal tracts are concerned in co-ordinated muscular movements (contraction and relaxation), and especially in the production of isolated movements in the contralateral extremity. The conclusions to be drawn regarding cortical epilepsy are as follows: Just as it is possible to produce homolateral movements, so homolateral clonic spasms may be produced. If the contralateral extremities participate their convulsive movements are less marked. Moreover, if only one pyramid is divided, and the cortex which belongs to the intact pyramid is stimulated, slight clonic convulsions of the contralateral extremities are produced. The extremities of the same side hardly ever participate. In monkeys the pyramidal tracts play a greater part in the production of isolated movements of the contralateral extremities than in the dog; in man this is still more marked.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(336) Hysterical Hyperthermia.

RENDU (*Lyon Médical*, March 11th, 1900) reports a very carefully observed case where hyperthermia, without hyperpyrexia, lasted for several days. The patient was a young lady, aged 21, physically well developed, of pleasing appearance, and given to great attention to dress and toilet. She was, it appears, of a romantic disposition. She talked about having exophthalmic goitre, but a doctor, she admitted, had made use of the term when examining her throat; the thyroid was slightly enlarged, and she seemed to make her eyes appear prominent. When 17 acute tuberculosis was suspected, and a year or two later a similar attack, with high temperature, occurred, and disappeared at a pilgrimage. After being in good health for a year she fainted at dessert, and for two days afterwards suffered from vomiting and diarrhœa. The temperature was carefully watched for a week, three thermometers were used, being always placed in the rectum. The period came on at this time. The temperature repeatedly exceeded 43° C. (109.4° F.), but oscillated in a strange manner. On the fourth day it was in the morning 99.5°, in the evening 109.4°; two days later it touched 110°; three days later it marked 108° in the morning and fell to 98.4° in the evening. The skin never felt intensely and pungently hot as in pneumonia and eruptive fevers; perspiration was free, and the pulse rapid. There was no physical or other evidence of tubercle or typhoid fever. After dropping suddenly at the end of a week the temperature rose two days later to 105° through excitement at a visit from a friend, and then fell to normal permanently.

(337) The Spleen in Acquired Syphilis.

COLOMBINE (*Arch. f Dermat. u. Syph.*, Band li, No. 2) in 1895 records his examination of 65 cases of acquired secondary syphilis in which he found splenic enlargement a constant factor in each case. The published results of other observers vary so much, that he now contributes details of 48 more cases. From these the conclusion is drawn that the enlargement of the spleen does not occur in the primary stage, but commences in the short incubation period before the "roseola" appears, and corresponds somewhat to the changes occurring in the lymphatic glands. In the late secondaries it has almost disappeared, and is never found in the tertiaries. The size averages about 14 to 17 cm. transversely, and 5 to 8 cm. vertically. The dulness does not pass the axillary line or rib border, but extends towards the spine. Under syphilitic treatment it recedes in size concurrently with the other manifestations. The writer thinks this sign should considerably aid diagnosis in the early secondary stage.

(338) The State of the Pupils in Pneumonia.

SIGHICELLI (*Gazz. Med. Lomb.*, February, 1900) has made a study of the condition of the pupils in pneumonia. He finds that bilateral mydriasis is almost always present, and that it is frequently asymmetrical, the greater dilatation being on the side of the affected lung. He believes that this mydriasis is due to the pneumonic antitoxin. The greater mydriasis on the paralysed side is due to reflex excitation of the superior cervical ganglion produced by inflammatory processes about the pulmonary branches of the vagus. Failure of this mydriasis is an unfavourable symptom, as it signifies an inadequate supply of pneumonic antitoxin. These pupillary symptoms may be an aid to diagnosis in cases where the pulmonary lesion is small and deep-seated, and not readily detected by auscultation.

(339) Coffee Intoxication.

COMBEMALE (*Echo Méd. du Nord*, March 11th, 1900) records the case of a man who was admitted under his care on account of giddiness, which came on suddenly in the street. The case was taken by the police for one of intoxication. On admission he was noticed to be extremely thin, and he suffered from vague pains in the limbs and loins, intense headache, generally worse at night, and most marked in the temporal regions, which he described as a heavy cap pressing on his head. It prevented his sleeping more than two hours or so in a night. He dreamed considerably, and stated that he always saw grotesque animals passing before him. Pressure over the calves elicited considerable pain of a muscular character. The reflexes appeared to be normal, and there was no alteration of sensibility. There was no tremor; the gait did not present any marked characters other than a slight heaviness. There was no Romberg's sign. The lungs showed slight degree of emphysema. There were no valvular lesions of the heart nor alteration of rhythm. The man was by trade a rag gatherer. This description corresponds with that given some years ago by Guelliot—namely, emaciation, paleness of the face, some tremor of the lips, muscular pains, and vertigo as occurring in cases of chronic caffeism. In this case the patient was in the habit of going from house to house where the contents of the coffee pot were reserved for him, which he was in the habit of consuming in large quantities. The literature on this subject is not extensive; in fact, the condition has not been widely recognised; but Combemale was able to quote references to the condition, especially those of Viaud (*Tribune Médicale*, 1897). He finds that intense vertigo, which may be mistaken for Ménière's disease, and very marked bradycardia, are characteristic of chronic caffeism. There is also ringing in the ears, a sensation of falling, and other evidences of alteration in the central nervous system. Mendel is also quoted by the writer as noticing general weakness, distaste for work, mental depression, insomnia, tremor, palpitation, coldness of the extremities, symptoms of dyspepsia, obstinate constipation, as present in this condition. The prognosis seems to be good, as, on avoiding the use of coffee, these various manifestations of intoxication rapidly disappear, though recurrence is common.

SURGERY.

(340) Osteotomy in the Treatment of Deformities of the Hip.

HOFFA (Reprint from the *Festschrift der Phys-Med. Gesellschaft Wurzburg*, 1899) publishes 32 cases to support his opinion that osteotomy of the femur in cases of coxitic and similar deformities of the hip is a very successful operation, and is capable of affording the best possible results in the shortest time. Similar treatment is recommended also in cases of unilateral congenital dislocation of the hip in patients beyond the age of childhood. In subjects of this deformity who have passed the age of 15 years, the author's open method of reducing the displaced head of the femur is no longer applicable by reason of the anatomical changes that have been produced in this portion of the bone. In such cases in which there is usually much deformity with marked adduction and considerable shortening of the limb, much good may result from oblique subtrochanteric osteotomy. The operation consists, after preliminary subcutaneous or open section of the contracted adductor muscles and of the fibrous band and the muscles attached to the antero-superior spine of the ilium, in a free exposure of the upper part of the shaft of the femur, and in oblique division of this bone in a direction from without downwards and inwards by means of a broad chisel. The limb is then abducted and extended, and retained in the restored position during the after-treatment by weight extension, which may be carried to the extent of thirty pounds. Oblique osteotomy is indicated also, the author holds, in those cases of coxa vara in which a conservative and mechanical treatment fails to do good, and in which the extent of the anatomical changes in the bone and the degree of deformity necessitate operative intervention.

(341) Diphtheritic Whitlows.

SEITZ (*Correspondenzbl. f. Schweizer Aerzte*, November 1st, 1899) has found genuine diphtheria bacilli in 1 case of whitlow out of about 200 cases of whitlow, abscesses, boils, and carbuncles which he has examined bacteriologically. A youth, aged 16, on July 29th, felt the middle finger of the right hand to be painful, and a small vesicle appeared on it which was ruptured by scratching.

The resulting wound became swollen and suppurated with lymphangitis and enlargement of the axillary glands. A superficial incision evacuated a small amount of pus and left an ordinary red wound. During the next few days the suppuration showed a tendency to spread under the epithelium, but the wound was soundly healed on the tenth day of the disease. Cultures were made and produced colonies of staphylococcus albus and streptococcus, and of short bacilli, which were thought at first to be pseudodiphtheria mixed with longer forms. Further cultures from these produced colonies of true Loeffler's bacilli in almost pure culture, and after being injected into an animal perfectly pure cultures of genuine diphtheria bacilli were obtained. Though the throat appeared normal cultures were made from the tonsils and produced genuine diphtheria bacilli. The youth, who had the habit of biting his fingers, had evidently infected one in this way.—Hau (*Lyon Méd.*, January 28th, 1900) made a necropsy on a child which had died of diphtheritic laryngitis on November 17th. The next day the most anterior and external part of the fold at the edge of the nail of the right ring finger was red and painful. On November 19th a small drop of pus was evacuated by the prick of a needle, but the process advanced until the nail became partially separated from the bed, and on the 21st there was a brawny swelling extending as far as the first phalanx with enlargement of the axillary glands. A free incision was advised, but refused, owing to a belief that there was no pus. Pressure on the nail caused a sero-purulent fluid to exude. Cultures were made from this, and produced colonies of Loeffler's bacilli and a few of streptococci. Treatment consisted in linseed meal poultices and sublimated baths. On the 23rd, when the bacilli were discovered, the temperature was 99.5° F. The urine contained no albumen. During the following week all the pain and swelling subsided, but cultures of the bacillus could be obtained from beneath the nail for some days later in spite of the use of various antiseptics. Rabot therefore advised that the finger should be exposed without any dressing to the bright sunlight. After the first day staphylococci were found together with the bacillus, and by December 5th the finger was sterile. Thus the acute stage lasted four days, the total duration being three weeks. On inquiry it was found that two of the nursing sisters were suffering from sore fingers. The epidermis was raised, and between it and the apparently healthy dermis was sero-purulent fluid, cultures from which produced colonies of Loeffler's bacilli mixed in the one case with streptococci, in the other with staphylococci. The sores had caused but little trouble, and had not prevented the sisters from doing their work owing to their superficial character. When the inoculation is deeper, as in Hau's case, the local lesion is exactly comparable to those produced experimentally in animals, and is quite distinct from cutaneous diphtheria with false membranes as met with on excoriations. From general symptoms being slight or absent it appears that man has considerable power of resistance to diphtheria when inoculated hypodermically. Most writers on diphtheria mention that slight whitlows are common in this disease, but that they may be due to the diphtheria bacillus has never before been proved. Surgeons who have pricked their fingers during tracheotomy for diphtheria have suffered from a local inflammation which in some cases has been followed by faucial diphtheria. In these cases it is much more probable that the throat became infected by the finger than through the blood, but hitherto no bacteriological researches have been made on this subject, the importance of which, especially as regards prophylaxis, is obvious.

(342) The Bone Coupler in Intestinal Resection.

Jacob Frank reported to the Chicago Medical Society on April 4th (*Med. News*, April 14th) a case of double pyosalpinx with tubo-ovarian abscess, complicated with such firm peritoneal and intestinal adhesions that resection of the bowel was necessary. The intestines were found to be very friable and infiltrated, so that it was decided to do an intestinal resection. The anastomosis was effected by means of the Frank decalcified bone coupler—1⅛ inch in size, was used, having determined the measurement by means of the Frank enterometer. The operation was completed by draining with a Mikulicz and a glass drain. The piece of rubber tubing was passed on the fifth day following the anastomosis. The patient left the hospital five weeks after the operation.

(343) Intussusception in an Infant.

Berchoux (*Lyon Méd.*, August 20th, 1899) relates a case where a female infant, aged 9½ months, was seized with symptoms of acute intestinal obstruction and died within thirty hours. On account of the patient's age and condition no operation was deemed justifiable. Part of the ileum and cæcum were found invaginated into the transverse and descending colon. There was no evidence of peritonitis.

MIDWIFERY AND DISEASES OF WOMEN.

(344) Puerperal Eclampsia.

Charles of Liége (*Journal d'Accouchements*, April 15th, 1900) notes that notwithstanding our knowledge and experience puerperal eclampsia still kills about a quarter of the women attacked and half the children. Subtracting from cases in general all deaths during delivery, which are relatively few, and all deaths after delivery, which are fewer still, Charles finds the proportionate mortality before delivery so high that a woman with convulsions at the seventh or eighth month is in as great danger as though she had Asiatic cholera. Treatment will probably save her, but the best line of treatment is not certain. Halbertsma, von Doederlein, Hubert of Louvain, and others advocate Cæsarean section as speedy thorough treatment. Not only is such treatment out of the question in many cases, but, Charles adds, it is supported by its advocates on questionable grounds; thus Hubert prefers it to induced labour because the cervix is unusually irritable, so that handling it excites fresh convulsions. Charles and others deny, on experience, that the cervix is dangerously irritable. Hubert successfully performed Cæsarean section in one case where no fits had occurred, mainly on the ground that blindness had set in and the urine was highly albuminous. Yet Charles recently treated a multipara, aged 35, who had been struck completely blind after œdema, albuminuria, and other premonitory symptoms of eclampsia had developed. As no fit had actually occurred, she was put on milk diet and closely watched. No convulsions set in, sight was restored, and after about a fortnight's treatment a macerated fœtus was expelled. Recovery was complete. Charles prefers for all cases medical treatment and then induction of labour. He publishes full notes of a single woman, aged 27, who at the seventh month had great anasarca, whilst the urine nearly solidified on boiling. No convulsions had occurred. Purgatives, milk and Vichy water, bromides, and chloral were administered. On the fourth day of treatment four fits occurred, four days later another fit, and as the albumen had increased labour was induced on the next day with bags, and a live female fœtus extracted. Not a sign of a convulsion was observed during these manipulations; the patient was kept quiet under chloroform since the day before labour, when a second fit threatened. She took about a pint and a half of chloroform altogether. She did well from the moment after the uterus was emptied, the œdema and albuminuria disappearing. Charles insists on medical treatment alone if no fit has as yet occurred, and urges the obstetrician not to fear to dilate the cervix and deliver when fits supervene.

(345) Fœtography.

Bouchacourt (*L'Obstétrique*, v, p. 137, March, 1900) under the name of intrauterine fœtography discusses the various attempts that have been made to obtain a good skiagraph of the fœtus *in utero*, both in the case of the cadaver and of the living woman. So far the results have been very unsatisfactory, a circumstance to be accounted for, according to Bouchacourt, in several ways. He has experimentally demonstrated that the liquor amnii to some extent prevents the passage of the rays; so do the living uterine wall and placenta. Further, most of the mothers made deep and sudden respiratory movements (due to fright at the novel procedure apparently), and these interfered with the making of a good skiagraph. The active fœtal movements, stimulated by the

Roentgen rays, also had a bad effect; so had the dark shadow thrown by the pelvi-vertebral skeleton of the mother. Finally there was the technical difficulty of getting the sensitive plate brought equally near to the different parts of the gravid uterus. So far it had only been found possible to obtain, by means of skiagraphy, the knowledge of the presence of a fœtal head in the pelvic cavity or of part of the fœtal skeleton in the abdomen in lean subjects, things which ordinary palpation would equally well elicit. The author makes some suggestions for modifying the apparatus with a view to overcoming some of these difficulties.

(346) The Fallopian Tube in Normal Pregnancy.

Janot (*Thèse de Lyon*, 1899; *La Gynécologie*, February, 1900) has published some observations which, if accurate, are of considerable importance. He finds that the cilia of the tubal epithelium disappear during pregnancy. Towards term the canal becomes very narrow and the plicæ are effaced. Janot further declares that the tubal mucosa assumes all the characters of the uterine decidua for about half an inch from the uterine orifice. Clarence Webster ascribed to this development of decidua, which he held to be abnormal, a prominent part in the establishment of tubal gestation. Janot finds glands in this tubal decidua. During the puerperium the epithelium is freely shed, and this destruction of a protecting agent accounts, in his opinion, for the frequency of salpingitis after labour with septic complications.

(347) Myomotomy for Calcified Fibroma in Age.

Schramm (*Centralbl. f. Gynäk.*, No. 9, 1900) removed a pedunculated fibroid, completely calcified, from a woman aged 71. The patient had been troubled for several years with retention of urine and painful defæcation. The uterus was completely atrophied, the pedicle short. The tumour was easily extracted by means of Doyen's myoma lever. Recovery was speedy.

(348) Puerperal Insanity: Status Epilepticus: Chorea.

Easterbrook (*Journ. Ment. Sci.*, January, 1900) reports the case of a woman, aged 22, with a family history of insanity, who, when 15 had an attack of melancholic stupor, followed two months afterwards by acute mania. At 16 and 19, maniacal attacks occurred, and she was now under treatment for acute puerperal mania. Ten days after admission several epileptic fits terminated in a status epilepticus, in which she remained for eight days. During such time the patient remained comatose and exhausted; temperature 102° F. On the average there were about twelve severe convulsions and many slighter ones in the twenty-four hours; large doses of chloral and bromide as enemata had to be given to permit feeding, and consciousness was only regained on the ninth day, when the mania was again manifest. Six weeks later chorea appeared. She had a previous attack of this when 14 years old. There was a distinct mitral systolic *bruit*. After two subsequent confinements, she each time suffered from mania. The occurrence of acute mania, epilepsy, and chorea in close succession favours the view that they have a common site in the cerebral cortex, probably the pre-Rolandic area. Being curable, they are essentially functional neuroses, dependent upon morbid molecular activity of nerve centres, and not upon gross nutritional or structural changes. The toxins which have been found are an expression of the morbid chemical activity or metabolism of nerve centres, rather than the cause of such conditions. The great incidence of these neuroses and insanities during the developmental and maturative periods of life strongly supports these opinions.

THERAPEUTICS.

(349) Treatment of Rheumatism in Hospitals.

In a discussion on this subject at the New York Academy of Medicine on March 20th (*Med. News*, April 14th) Hughes Dayton said that the first and most essential part of the treatment for acute rheumatism in the New York Hospital was considered to be rest in bed on a low diet consisting entirely of liquids. The drug treatment was begun with a thorough purgation by salines. The salicylates were then administered, the usual form being the salicylate of soda in 15-gr. doses every three hours, until the symptoms of fever and pain abated. If mental symptoms developed as the result of the fever, sodium bromide (30 gr.) was given with each dose of the salicylate. When the sodium salicylate was not borne well, salol was substituted. When sodium salicylate was not borne by the mouth, it would sometimes be absorbed by the rectum without giving symptoms of irritation. Of late this method of administration had been successfully employed several times in the New York Hospital. Locally the application of methyl salicylate afforded great relief from the pains. After the application of the methyl salicylate on a thin compress of gauze, it was covered with rubber tissue and bound on. Salicylic products could be noted in the urine thirty minutes after its application to the unbroken skin. If fluid persisted in the joints after the acute symptoms had subsided, a cantharides blister helped to disperse it. For hyperpyrexia large doses of sodium salicylate were given besides a cold bath at 65° F. For the stiffness that followed acute rheumatism hot-air applications were usually employed. For subacute rheumatism the salicylates were not pushed to the extent to which they were used in acute cases. The alkali treatment was found to be very useful in these cases. Locally applications of methyl salicylate and hot-air baths gave the most satisfactory relief of symptoms. For chronic rheumatism local hot-air treatment was employed and nutritious diet was provided; the alkali waters were given plentifully and the iodides freely prescribed. For muscular rheumatism salol and phenacetin were found to be of advantage, methyl salicylate was used locally, also belladonna ointment with good effect. It was in these cases particularly that counter-irritation did good.—L. A. S. Bodine said that, at the Mount Sinai Hospital, in acute articular rheumatism, first, calomel and salines were used to clear out thoroughly the intestines; then 15 to 20 grs of sodium salicylate were administered every four hours until the acute symptoms abated. Sodium bicarbonate was given in sufficient doses to make the urine alkaline and keep it so. Baths, at a temperature of from 75° to 90° F., helped to relieve the acute symptoms. If eruptions occurred and severe tinnitus aurium, the salicylates internally were replaced by external applications of oil of wintergreen, or by full doses of potassium iodide internally. For hyperidrosis, belladonna or its alkaloid was used. When the pain was very severe and persistent, phenacetin or antipyrin was employed. If sleep was much disturbed, trional and the bromides were indicated. The patient was kept on an absolutely liquid diet but was not limited to milk. All nitrogeneous food was avoided; the drinking of plenty of water was encouraged; the salicylates were always given well diluted and never on an empty stomach. The oil of gaultheria was employed for its local effect on the symptoms of the disease. When the effusion into the joints was extensive, tincture of iodine, firm pressure, immobilisation and, as far as possible, elevation of the limb were employed with very satisfactory results. For chronic rheumatism hot-air baths were employed, and potassium iodide prescribed in reasonably large doses. Passive motion and massage helped to restore mobility to the joints. For anæmia following an acute attack quinine, iron, and strychnine were given. After forty-eight hours' remission of symptoms, eggs and starchy foods might be allowed, but no meats until convalescence was well established. Chicken or turkey should be the first meats permitted. Out of 38 cases of rheumatism treated during the past year in the Mount Sinai Hospital, 29 were discharged cured and the remaining 9 were benefited.

(350) Treatment of Exophthalmic Goitre by Iodoform-Ether.

Pitres (Cinq. Congrès Français de Méd. Interne, 1899) states that injections of iodoform ether gives excellent results in exophthalmic goitre. It is a better and more effective method than the painting of tinct. iodi. The solution of iodoform in ether is injected into the substance of the thyroid, the dose being 1 c.cm. every eight hours, to be continued for a few months. The result has been satisfactory where the disease has advanced, even to the extent of

producing thyroid cachexia. The languor and weakness disappear after a few injections, sleep returns, and the exophthalmos gradually diminishes. For a considerable time patients continue to have a certain hyperexcitability of the heart, although the troubles of palpitation have disappeared. Pitres states that a sensible improvement has been obtained in patients as early as the third day of treatment, and recommends its use in preference to the ordinary iodine treatment.

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(351) Treatment of Chronic Local Eczema.

Spiegler (*Arch. f. Dermat. u. Syph.*, Band li, No. 1) gives the following method for treatment of that chronic form of local eczema, which, becoming papular and squamous, extends slowly year by year, heals and recurs again and again. The whole limb is well washed with soap and water, and then dried. The eczematous parts are energetically rubbed over with a swab dipped in 50 per cent. caustic soda solution. They are then washed with water, and painted with a 50 per cent. solution of "lapis divinus" or copper sulphate. A bandage is applied over cotton wool, and healing takes place under the layer of "caustic" in about two weeks. Should the rough upper layers crumble away they can be easily removed with 3 per. cent. boracic vaseline. One application is generally sufficient, but another will be needed if the soda solution has not been thoroughly rubbed in. Except with the "eczema circa anum" the process is almost painless. In this latter variety, the patient should lie in bed; in the former this is not at all necessary.

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(352) Treatment of Whooping-Cough.

H. Coggeshall (*Med. News*, March 31st) makes a suggestion for the treatment of some cases of whooping-cough, when the disease is particularly severe, and in cases occurring later than in early infancy. He had opportunities in 1883, and again in 1886, of observing epidemics of whooping-cough in the New York Infant Asylum, the disease being almost universal in the institution, which held more than 300 children. The impressions he had now were that no particular treatment of the many used was of much avail. The treatment he suggests is first to cocainise as much of the nasal mucous membrane as can be done by the use of a spray, followed by cotton-tipped probes wet with the solution, then an application of a 2 to 4 per cent. solution of nitrate of silver to the nose and naso-pharynx, to be followed by a mild alkaline and antiseptic wash by spray or by post-nasal douching. Such treatment could hardly be carried out in infants, but with children of three years or more it is perfectly practicable. The good effect of belladonna is, he thinks, partly due to its action on the nasal mucous membrane. He suggests the application of suprarenal extract applied to the nasal mucous membrane.

(353) Prevention of Influenza.

Laborde (*Bull. de l'Acad. de Méd.*, February 27th, 1900) recommends the following method as a preventive of influenza at once simple and efficacious. It consists in the constant daily use of a 1 in 200 to 1 in 300 carbolic solution as a mouth and nose wash. From a teaspoonful to a tablespoonful, according to the sensitiveness of the mucous membrane, in a large tumbler of water, as hot as can be borne, should be used for repeated gargling, rinsing out of the mouth, and sniffing up the nose. The pathogenic organism of the disease is thus attacked directly in the very points of entrance by which they penetrate into the body. Laborde feels warranted by long experience of this method on himself and on others in affirming its thorough efficaciousness.

PATHOLOGY.

(354) Relation of Fat Necrosis to Pancreatic Disease.

Wagner (*Beit. zur klin. Chir.*, vol. xxvi, Part 1, 1900) has studied the subject from cases in the Municipal Hospital, Carlsruhe. He concludes that it is pancreatic disease that is the cause of fat necrosis. Pancreatic necrosis follows wounds, hæmorrhagic and purulent pancreatitis, atheroma of the vessels, and sometimes (rarely in Wagner's opinion) from ulcerative disease in the neighbouring alimentary canal. Suppuration of the organ is usually secondary to the entrance of micro-organisms from the gut into the necrotic tissue. Of all pancreatic affections necrosis of the glandular tissue is the commonest cause of fat necrosis. The discovery, in any particular case, of bacteria in an area of fat necrosis does not warrant the theory that fat necrosis is of bacillary origin. Others have shown that, as a rule, the areas of necrosis are sterile. The action of the pancreas on the adipose abdominal structures outside it is either through direct contact with its secretion, or through some at present undefined relation between diseased pancreatic and normal fatty tissues.

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(355) Putrefactive versus Pathological Changes in the Nerve Cell.

Luigi Bardzky (*Riv. di Patol. Nerv. e Ment.*, February, 1900) has attempted to decide the nature and extent of putrefactive *post-mortem* changes in the nerve cell as distinct from the pathological changes of disease during life, a point of special importance in all researches on the finer cortical pathology of the human brain. After referring to the work of Schultze, Hutchinson, Trezebinski, and others, he gives the following results obtained by himself: (1) The coloration (chromophilia) of the achromatic substance of the nerve cell and its rarefaction are changes which are so subtle and shifting as to be impossible to recognise with certainty as due to morbid agencies occurring during the evolution of the putrefactive process; (2) that vacuolation of the fundamental substance (protoplasm) of the cell is a change belonging to the same category; (3) that chromatolysis or destruction and disappearance of the substance of Nissl's bodies, partial or total, has its peculiar and specific aspects which it maintains very constantly, so that these different characteristics can be recognised even where putrefactive changes are somewhat advanced; (4) that the initial stage of chromatolysis preserves a very constant appearance, which is characterised by a swelling and breaking up of the chromatic bodies; (5) that the cribriform condition of the cell body is clearly recognisable only in the initial stages of putrefaction, and this condition readily undergoes change into pulverulent state (dusty disintegration and dispersion of the chromatic substance) of the protoplasm, which is identical with the condition due to simple cadaveric decomposition; (6) that the pulverulent state of the chromatic substance is difficult to admit as being of pathologic nature and due to disease *intra vitam*, as both this and its precedent condition, the cribriform stage, are so readily produced under the influence of putrefactive agencies. The methods of Nissl were used in the above researches.

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(356) The Pathogenesis of Chorea.

Mircoli (*Rif. Med.*, December 19th and 20th, 1899) reports a case of chorea tending to support his view that chorea is sometimes due to pyogenic micro-organisms. Of 17 cases examined by him, 14 were found to have pyogenic germs, chiefly staphylococcus, and 3 the diplococcus lanceolatus. In the case recorded the staphylococcus aureus was found in almost pure culture. Staphylococci have also been found in the blood during life in chorea, and both chorea and rheumatic joint affections have been induced in rabbits by injections of staphylococcal toxins. Small cortical hæmorrhages were found in the author's case.

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(357) The Influenza Bacillus.

Cantani (*Rif. Med*, April 7th, 8th, 9th, 1900) has been studying the influenza bacillus. He has no doubt as to the specific nature of Pfeiffer's bacillus, and having examined many healthy subjects believes that it does not exist in any saprophytic form. The poison of influenza is probably contained in the bodies of the bacilli rather than in any toxin secreted by them. Two mg. of a culture of influenza in agar-blood injected into a healthy man (with his consent) caused symptoms of influenza in about two hours time. Some cases which clinically resemble influenza are due to other bacilli, for example, pseudo-bacillus. The author tried some experiments in agglutination on the lines of the Widal test, but no very satisfactory results were obtained. The bacillus is most easily found in the saliva and expectoration of infected subjects; it may cling about the naso-pharynx, especially if there is a condition of catarrh, for many weeks.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(358) Relations between Tuberculosis and Cardiac Disease.

THE association of pulmonary tubercle and heart disease is a question which has attracted attention at various times and has been stated in very different ways. The idea was formerly held, and is so still to a certain extent, that there is an antagonism between the two conditions. Potain has quite recently considered the matter in a clinical lecture (*Journ. de Méd.*, April 10th), and shows that not only may valvular disease of the heart and tubercle of the lungs coexist, but there is even a relation between certainly some forms of heart disease and tubercle. First, pulmonary stenosis, be it due to a primitive lesion of that vessel or from some cause of compression, seems to render the lungs very susceptible to tubercle. Secondly, mitral stenosis is not infrequently associated with tubercle, as very many patients the subjects of that disease show signs of the latter, and the author looks upon this combination as by far the most frequent, although he states that various other diseases of the heart may also be combined. In cases where pulmonary tubercle is pre-existent the heart may show disease in the three following forms: Tubercle may invade the myocardium itself, or, what is very rare, the endocardium; secondly, it may determine an ulcerative or infective endocarditis, due apparently to a secondary infection of the tuberculous areas by putrefactive organisms, as pneumococci and streptococci are certainly present, not tubercle bacillus; in the third form, according to Potain the most frequent, the form of heart disease is a sclerosing endocarditis. As a matter of fact, it is quite common to see small white spots on the endocardium of phthisical patients. This is the earliest manifestation of a fibrous transformation which may result in a mitral stenosis of the valve, and, according to Potain, a pure form of stenosis is produced, as no retraction of the cusps seems to take place, and thus there is no incompetence. This is contrary to what is met with as the result of rheumatism, in which there is thickening of the tissues as far as the base of the valves, and thus more or less retraction is caused, resulting in mitral incompetence. Although Potain argues for a causal relation between tubercle and pure mitral stenosis, he distinctly states that valvular disease is not met with in the more rapid forms of phthisis. It is rather the fibrosing varieties that are accompanied by sclerotic disease generally, a sclerosis which is not confined to the endocardium, as even the arterioles, liver, and kidney may be affected. Another point is that the subjects of this condition may be arthritic either in a hereditary or acquired form. It would seem that mitral stenosis is not infrequently overlooked in the presence of pulmonary disease, but careful attention to auscultation of the first sound with the presystolic *roulement*, together with duplication of the second, ought to demonstrate its presence. At the same time the auscultatory signs are very variable, and it may be necessary to examine several times. The course and prognosis vary. In some cases the condition of the patient seems to be stationary. In other cases it is progressive, and the patient becomes a case of heart disease and ceases to be one of tubercle, and the progression of cardiac lesion at times would appear to cause arrest of the tuberculous. Generally speaking it would seem that the pulmonary lesion becomes quiescent. From this it may be gathered that the cardiac disease is the one which calls for treatment, and although the sclerotic process seems to exert a beneficial influence on the lungs, it requires to be kept within bounds by using preparations of iodine and arsenic, together with strict attention to hygienic and general conditions.

(359) Diseases of the Throat and Nose in Relation to Life Expectancy.

AT a joint meeting of the Chicago Medical Society and Chicago Medical Insurance Examiners' Association held on April 11th (*Phil. Med. Journ.*, April 21st), W. E. Casselberry read a paper on this subject. He called attention to salient subjective symptoms and to signs under direct vision by which an astute examiner might distinguish between important and unimportant affections. Simple rhinitis, hypertrophic rhinitis, and atrophic rhinitis, when uncomplicated, had little or no influence upon life expectancy, unless the case was of extraordinary severity, or occurring in one of otherwise debilitated constitution. But these unimportant catarrhal affections were likely to be confounded with more serious nasal diseases which were prone to shorten the duration of life, and which the medical examiner should seek to discover. Prominent among these he mentioned chronic suppuration of the antrum of Highmore, or of the frontal and ethmoid sinuses. The significance of nasal polypus with reference to life insurance varied with the individual case. If single or small, and with little disposition to recurrence after removal, it might add but a trifling risk, but when multiple or large, and persistently recurrent, a conservative custom would be to exact a thorough removal of the polypi as a condition preliminary to acceptance. Polypi are a frequent accompaniment, and probably at different times both a cause and an effect of sinus empyema. Another symptom of nasal disease of which the examiner should take cognisance was fœtor. Diseases of the larynx should be closely analysed with regard to life expectancy, for this organ, the sole portal to the respiratory system, was a favourite site for obstructive conditions and for such progressively fatal affections as tuberculosis and cancer. Impairment of voice was an important symptom as to life expectancy.

(360) Purpura.

ODDO AND OLMER have carried out an extensive series of investigations on the subject of purpuric eruptions (*Arch. Gén. de Méd.*, February and March). Their conclusions are as follows: Purpura may appear without apparently any lesion in the viscera, but frequently lesions are evident, and may be anterior, contemporary, or consecutive to the purpura. Those preceding the condition are divided into two groups. In the first there is some disease which determines the mode of entry of some infective material, generally bacterial, and the organs which generally give admission are the bronchi, the lungs, the tonsils, and the intestine. Thus, purpura may follow bronchitis, pneumonia, inflammatory diseases of the intestine, or a simple tonsillitis. In the second series of cases the vesicular lesions appear to produce purpura by alteration of nutrition and by autointoxication. This group contains diseases of the liver, as cirrhosis and lesions of the kidney or nephritis. Cardiac disease, similarly, is one in which purpura is frequent, but in the author's opinion it is not a cause direct, but rather acts by producing lesions of the liver and kidney. In another group of cases the mechanism is much more complex, there seeming to be a prior vesicular lesion which predisposes the system to other causes of purpura. Under this head the writers group all the forms of cachectic purpuras. In that class of cases in which the vesicular lesions are contemporary there is generally evidence of toxic infection. The kidney plays a large part in such cases, but gastro-intestinal conditions, lesions of the liver (such as acute yellow atrophy), some cardiac pulmonary and splenic diseases, meningo-myelitis, are all cases in point. Under these conditions the vesicular lesions may themselves be hæmorrhagic. Vesicular lesions following purpuric conditions are very frequent, and consist in cerebral and meningeal hæmorrhages, as well as similar conditions of the kidney, lungs, gastro-intestinal tract, etc. Sometimes, though rarely, there seem to be definite sequelæ of the purpura. Thus, that form of cirrhosis of the liver, accompanied by intense pigmentation, and described by Hanot, has been recorded as supervening on purpura.

SURGERY.

(361) Removal of Adjacent Glands in Gastrectomy for Malignant Disease.

POIRIER (*Bull. et Mém. de la Soc. de Chir.*, January 2nd, 1900) reports an instance of successful removal for epithelioma of the pylorus together with adjacent portions of omentum which contained two glands in a state of advanced cancerous degeneration. This case is

brought forward to show the fallacy of the opinion held by some pathologists that cancer of the stomach is a localised disease, and has but slight tendency to invade the lymphatic system. The author, who is opposed to this opinion, refers to the pathological investigations of Cuneo, who in a great number of cases of cancer of the stomach has never failed to meet with glandular degeneration. It is necessary, therefore, in removing the pylorus for malignant disease, to take away also the adjacent portions of omentum and the included lymphatics. Special attention, it is stated, should be paid to the small omentum; and the primary seat of disease, together with the suspected portions of omentum, should be removed in one mass, as is done in excision of mammary cancer, so that none of the degenerated lymph vessels are left. The author believes that by such procedure surgeons may be the better enabled to attain lasting cures, and he quotes a statement made by Quénu that it is less difficult to remove the whole associated lymphatic region in cancer of the stomach than in some cases of cancer of the breast.

(362) Electrical Burns and their Treatment.

ELDER (*Montreal Med. Journ.*, January, 1900) has observed that electrical burns from contact with a "live wire" differ greatly in their behaviour from ordinary burns. At first the clinical picture is very much that of moist gangrene or that of severe frostbites. The pain is often very severe. The shock present is due both to the electrical contact and to the burn *per se*, being more severe the more extensive the burn and the more prolonged the sloughing. They require one and a half to three times as long for recovery as ordinary burns. The sloughing affects principally the muscles and blood vessels, and the blood does not appear to show any tendency to clot in these burns. The treatment he has found most efficacious is to keep the limb in a warm carbolic lotion bath of 1 in 100 strength, taking precautions against the possibility of the occurrence of secondary hæmorrhage. If secondary hæmorrhage occur, or when a definite line of demarcation has formed, the necrosed tissue must be removed. In many cases an amputation is necessary, but the skin flaps should not be closed, because large masses of muscles are sure to slough away subsequently, even, it may be, right up to their point of origin. The wound should be allowed to granulate, and subsequently be skin grafted. Immediately after the burn hypodermic injections of morphine (½ gr.) and strychnine (1/30 gr.) may be given alternately. To lessen the offensive odour the 1 in 100 carbolic lotion was in his cases replaced by a bath of 1 in 1,000 formalin, but this caused so much pain that 1 in 10,000 perchloride of mercury solution was substituted. In one case whisky was given, and to relieve the severe pain, in addition to the morphine, phenacetin, caffeine, chloral hydrate, and potassium bromide were administered together. The author asks why the burn should take place only at the points of entrance and exit of the electrical current, the intervening tissues apparently escaping; why a current of, say, 600 volts should in some cases prove fatal, and in others a current many times that strength should merely inflict severe burns; and why in some of the fatal cases there should be no indication of burning whatever and in other non-fatal cases the burning should be most extensive.

(363) Nephrectomy for Hæmaturia after Injury.

G. WINGE (*Norsk Mag. f. Laegevidensk.*, lxi, p. 313, March, 1900) relates how a woman, 25 years of age, was wounded by a large saddler's needle in the right lumbar region. The wound healed at once; but on the day following the accident there was hæmaturia, and with slight intermissions this continued for nearly a year despite treatment. Great anæmia developed during the year and much depression. Nephrectomy was then performed, the right kidney being removed. Afterwards there was a complete return to health and the hæmaturia disappeared. Nevertheless the most careful examination of the extirpated kidney showed nothing abnormal; and the author is driven to the supposition that the hæmorrhage must have been angio-neurotic in nature, and due, perhaps, to the wounding of some nerve connections by the needle.

(364) Hydatid Disease of the Kidney.

JEROSCH (*Centralbl. f. Chir.*, No. 38, 1899) adds to 11 cases of echinococcus of the kidney, not accurately diagnosed before operation, 2 recently under observation at Greifswald. In the first case there was much pus in the urine. The tumour was big and fluctuating; it was diagnosed as a pyonephrosis. Extraperitoneal nephrectomy resulted first in the escape of numerous echinococci and then in death on the third day from exhaustion. There was really pyonephrosis, converting the kidney into a sac. The other kidney was hypertrophied and fatty. The second case was diagnosed as renal tumour. The lumbar incision was made, and on exposing the kidney much pus, containing staphylococci and echinococcus cysts, came away. The sac which contained the cysts was removed with the kidney, which was adherent to adjacent structures, and much altered by chronic inflammation. Convalescence was slow but complete.

(365) Trachomatous Pannus cured by Intercurrent Erysipelas.

BÄCK (*Klin. Monatsbl. f. Augen.*, February, 1900) reports a case. The patient, a young woman, came under treatment at the Eye Hospital, Gleiwitz, in June of this year. Both upper and lower lids contained numerous medium-sized granules; the corneæ were covered with a thick gelatinous pannus, which spread over them from the ocular conjunctiva on all sides. In the midst of the pannus were several small ulcers. The patient was of a markedly strumous disposition. Treatment by expression, caustics, atropine, and cocaine had little effect. In October she suddenly developed erysipelas, beginning at the right nasal angle, where there were some slight excoriations which the patient had picked with her finger nails. It soon spread and involved the lids of both eyes, which could not be opened. In about a fortnight it subsided, and on the lids being opened it was seen that the pannus had almost completely disappeared from both corneæ, one or two tiny vessels remaining, and that the corneæ were strikingly clearer. This improvement continued, and the patient left the hospital with much improved vision, and the eyes free from any sign of inflammation.

MIDWIFERY AND DISEASES OF WOMEN.

(366) Hysterectomy in Puerperal Sepsis.

VINEBERG (*American Journ. of the Med. Sciences*, February, 1900) advocates that in every case of puerperal sepsis a thorough search for the site of the original infection, whether it be a wound of the perineum, vagina, or cervix, should be made, and that if found it should be treated by surgical measures, such as drainage, irrigation, and removal of *débris* by scraping. If by exclusion or otherwise it is decided that the site is within the uterus it should be subjected to a thorough curetting with the finger or preferably the sharp curette, and if then the temperature does not fall intrauterine irrigations should be employed. It is a good plan to use for this purpose two large indiarubber catheters, which if left *in situ* and changed every twenty-four hours act also as an efficient drain. 95 per cent. of cases of puerperal sepsis, even of the more serious type, yield to this treatment, which fails however in the other 5. In this case, and if no pelvic exudation is present to account for the increase of the septic symptoms, the abdomen should be opened at once. The further course of action is decided by the conditions found, but in most cases total hysterectomy is necessary. The chief arguments for this radical treatment are that the septic uterus is analogous to a gangrenous appendix, and that even if the organisms of sepsis have entered the blood recovery is possible when their breeding place is removed. The exact indications for the operation in any given case are difficult to determine, but it may be stated broadly that if, after curetting, drainage, and irrigation have been employed, the pulse goes beyond 130, and grows weak and small, hysterectomy should be performed. The writer reports 3 cases where this was done successfully, though the condition of the patients at the time appeared desperate, the pulse in one being 154, and the temperature 105.5° F. In the first case the interior of the uterus was full of fœtid discharge, and there was a piece of adherent placenta which could not be peeled off even after removal. In the

second the uterus was large and flabby, and the parietal peritoneum of a dirty grey colour. In the third the uterus was soft and flabby, and the external surface was studded with abscesses. As regards technique, it is advisable to drain from above and below, since no matter how far out on the broad ligaments the ligatures are applied, some of the infiltrated ligament must be left behind, and probably breaks down and suppurates. Abdominal is preferable to vaginal hysterectomy, since the uterine tissues may be so friable that the latter route is impossible. In a few cases after laparotomy a condition may be found which does not call for hysterectomy; thus in one case the right tube and ovary were found to be enlarged, swollen, and almost black, like a gangrenous appendix. They were removed, and the patient recovered. When large collections of pus form and are so situated that they can be readily reached either with a vaginal incision or one above Poupart's ligament, they should be incised at once. When, however, they are not so favourably placed, delay is advisable, in the hope that the pus may be ultimately evacuated without infecting the peritoneum.

(367) Ruptured Tubal Gestation: Should the Patient be removed to a Home or Hospital?

LOMER (*Centralbl. f. Geburts.*, No. 11, 1900) related before a recent meeting of the Hamburg Obstetrical Society a case where a patient with ruptured tubal gestation died when being taken to a neighbouring hospital, though in an official ambulance waggon. It appeared that the waggon in this instance was shaky. Stande concluded from previous experience that a case of ruptured tube ought never to be removed from home. Lomer noted how rapidly death followed rupture of the tube in some cases. In one the patient was a doctor's wife. She died before her husband could call in a colleague. In another the symptoms of collapse were mistaken for cholera; the patient died during transport to an isolation hospital. Seeligman doubted if, taking all sources of danger into consideration, it were best to treat and operate upon the patient in her own home. The risks of sepsis, avoidable in a hospital or nursing home, were considerable. The bleeding in Lomer's case, in which he made the *post-mortem* examination, would have been just as fatal had the patient been kept in bed. He himself knew of two such cases that were carefully transported to his hospital in an ambulance waggon. The journey in itself did not add to the risk. On one of the patients he operated successfully, whilst he succeeded in curing the other by rest.

(368) Typhoid in Pregnancy: Effect on Fœtus.

CHAMBRELENT (*Rev. Mensuelle de Gynéc., d'Obstét., et de Pédiat. de Bordeaux*, February, 1900) related two years since a case where typhoid fever in the mother was clearly transmitted to the child. Serum diagnosis applied immediately after birth was positive, and there were also clinical symptoms. Last autumn he observed a case where the result was quite the opposite. A woman, aged 26, became pregnant for the second time in April, 1899. On December 20th febrile symptoms set in; on the 24th labour pains began, and she was delivered of a living child spontaneously. There was no trouble with the placenta. By the 26th all symptoms of typhoid, including the rash, were marked; serum diagnosis gave a very positive result yet the puerperium was not much affected. The patient on January 8th, when the report was written, seemed to have passed the acute stage of the fever. The child, a male, weighed 7 lbs. 2 oz. at birth. It showed no sign of disease. On December 29th, five days after its birth, serum diagnosis was tried but with negative results. The infant was quite well on January 8th. Hence this infant, born when its mother was in the acute stage of typhoid, failed to contract the disorder.

(369) Tubal Menstruation: Hæmatosalpinx in Gravid Tube.

WEHLE (*Monats. f. Geburtsh. u Gynäk.*, December, 1899) reports a case of considerable interest. In a woman, aged 30, who had borne four children, the period was deferred for six days. Then constant pain was felt in the left side of the pelvis, and the tube could be detected, much distended. Severe crampy pains set in, and the tube emptied its contents, which consisted of blood, into the uterus. Wehle, in considering whether this symptom signified tubal pregnancy or tubal menstruation decides in favour of menstruation. Irritation from some inflammatory influence set the process going in the tube. Leopold, in making necropsies on women who had died during or directly after menstruation, had repeatedly detected hæmorrhages in the tubes.

THERAPEUTICS.

(370) The Contra-indications of Digitalis.

POTAIN (*Journ. de Méd.*, April 10th, 1900) in lecturing on the subject of digitalis, states that insufficient attention is paid to the selection of suitable patients for digitalis. He says it is a good rule that when inequality, irregularity, and insufficiency of the cardiac pulsations are not present, or when there is no dropsy of the cellular tissues and serous cavity, that contra-indications for digitalis exist. The lecturer does not look upon a permanently infrequent pulse as a contra-indication. He even considers that many indications of infrequent pulse are caused by a pulsation failing to reach the wrist, and that digitalis may therefore do good. A strong contra-indication against digitalis is the presence of myocardial lesions. In these cases, not only is the drug ineffectual, but it may be dangerous. Thus myocarditis, senile cachexia, fatty degeneration, etc., call for the very greatest care in the use of that drug. Potain looks upon aortic incompetence as generally speaking a contra-indication unless where in some few cases there may be undue acceleration of the beats. Dyspepsia very often causes digitalis to disagree, for under these circumstances patients bear it badly. Similarly, a cachectic condition is a contra-indication. As to the bad results of digitalis, the writer states freely they are not properly recognised. Some nocturnal delirium is one of the first to appear, and one of the most frequently overlooked. Pallor, coldness of the extremities, trembling, contraction of the pupil are important indications to suspend the use of the drug. Some patients die suddenly of syncope, others gradually. Death from digitalis is most frequently met with in Bright's disease, arthritic and anæmic subjects, and in persons of aortic incompetence or delirium tremens. Occasionally there are curious idiosyncrasies to be noted, such as melancholia and night terrors. As unusual results may be mentioned pulmonary apoplexy, especially where tricuspid incompetence is present.

(371) Anæsthesia by Injection of Cocaine into the Spinal Cord.

AT a meeting of the Cleveland Medical Society held February 23rd (*Phil. Med. Journ.*, March 31st) W. E. Lower reported a case of amputation at the middle third of the left leg, under anæsthesia, produced by injecting the spinal cord with cocaine. On account of advanced arterio-sclerosis general anæsthesia could not be used. This amputation had previously been performed by injecting the sciatic and anterior crural nerves with cocaine, but as recently some foreign surgeons had been injecting cocaine into the cord, he had thought this a good case upon which to test the merits of this plan. Between the last dorsal and the first lumbar vertebræ he injected a syringeful of one-fifth of 1 per cent. solution of cocaine. In about three minutes the man had complete anæsthesia of both foot and leg. Motion was not entirely abolished, but the amputation was performed without the least evidence of pain. Further than that, there was no shock, and the pulse did not vary beyond 64 to 72 throughout the entire operation. R. J. Wenner asked whether it were not true that Lower had injected the cocaine into the subarachnoid space rather than into the spinal cord. He thought that grave disturbance would be produced by injecting the substance of the cord, and that in adults, as the syringe was put in between the last dorsal and first lumbar vertebræ, it would be just about at the end of the cord. Lower said he did not think he had injected the cocaine into the cord, as it was done too low down. However he had injected into the cord of dogs, which had all recovered, and while there was afterwards found to be some change in the cord microscopically, it was not so pronounced as to affect the animal.

(372) Anæsthetics in Veterinary Practice.

FREDK. HOBDAY, in a paper read before the North Yorkshire and South

Durham Veterinary Medical Association (*Veterinary Record*, April 21st), said chloroform was indisputably the favourite general anæsthetic selected for the horse. The methods of administration were not at present as exact as they might be, but inhalers of some pattern or another were safer and better than merely giving it with the aid of a sponge and towel. The principles usually adopted were to put about an ounce on to commence with for an average-sized animal, and allow from five to ten minutes for anæsthesia to be produced. With the cow, pig, and sheep he had not had much experience; he had only used chloroform on about twenty of those animals altogether. They had, however, taken it satisfactorily. For the dog it had long been an idea, not only with veterinary surgeons, but also with physiologists and medical men, that chloroform could not be used with even an ordinary degree of safety. It was, however, a fallacious notion, and, with the object of helping to change that view, statistics had been published from time to time in the *Journal of Comparative Pathology* and the *Veterinary Record*. The dog was an excellent subject for chloroform. It was the method of administration and of securing which had been at fault for so many years. If chloroform were given on a sponge and towel whilst the patient was held struggling in the arms of one or two assistants, a large percentage of fatalities were certain to occur, but given rational methods of securing, with fair play allowed for the organs in the chest, and a rational method of administration, chloroform was an ideal anæsthetic for the dog, and the latter animal was an ideal one on which to demonstrate its effects. At the present time he had a record of over 800 consecutive canine chloroformisations, the majority of which had been done by students, all practically amateur anæsthetists, the animals being principally free clinic cases, not in any way prepared, and taken just as they came, some in good and some in poor condition. Methylated chloroform had been used always, and any left after use had been poured back in the bottle to be used over again. Many of the operations had been very severe, such, for example, as amputation of limbs, enterotomy, oöphorectomy, etc., and there had been only three deaths. In these latter cases *post-mortem* examinations were made in two instances, and on each occasion a thoroughly satisfactory explanation was found; unluckily, in the third case no necropsy was made. In dogs under six or seven months old, especially those of delicate breeds, one should always use greater care, and with the very small ones A.C.E. mixture was sometimes preferable. With the cat these statistics had not shown such fortunate results. He had now altogether records carefully made of about 300 consecutive cases anæsthetised with ether, A.C.E. mixture, or chloroform. For a long time when using chloroform entirely the list of cases accumulated without accident, but out of about 140 cases he had had 4 deaths: thus giving the somewhat large proportion of about 3 per cent. When using A.C.E. mixture or ether for cats, out of the first approximately 100 cases, no accident or untoward sequel occurred, but since then he had had one death and one case in which signs of danger were manifested, although the animal eventually recovered. He was convinced that these agents were safer for cats than pure chloroform, although he thought that even with them one must not get careless. Hobday summed up his experience in the statement that chloroform is the best general anæsthetic for the horse and dog, and A.C.E. mixture or ether for the cat and for dogs under six or seven months, especially those of delicate breeds.

(373) Dermatol in Gonorrhœa.

DOKOUTSCHAIEFF (*Medicinskoe Obosrenie*, No. 2, 1900) has used dermatol in 19 cases of acute and 11 of chronic gonorrhœa. In the acute cases, when the whole urethra is affected, that canal is first washed out with a tepid solution of boric acid or potassium permanganate 2 per cent. Then with an ordinary syringe or Guyon's instrument the following emulsion is instilled first in the posterior afterwards in the anterior part: R Dermatol 2 grams; powdered gum arabic 2 grams; distilled water 25 grams. The instillations are repeated every two hours, the emulsion is allowed to remain in the urethra for at least five minutes, and is then allowed to escape in drops. The patient is forbidden to pass water in the meantime. If it is the anterior portion of the urethra that is affected, the treatment should be begun by making instillation in that portion, and after thirty-four days they should be made in the posterior part. In chronic cases, after the urethra has been washed out, a bougie covered with the following pomade is introduced: R Dermatol 0.60 centigrams; lanolin 10 grams; white wax 2 grams. The bougie is pushed up to the neck of the bladder, the urethra is then massaged on the bougie for a certain time, the duration of this procedure being progressively increased. These manipulations should not last longer than twenty minutes, and should not be carried out oftener than twice a day. This treatment has given the author, on the whole, good results. The chronic cases were cured in nineteen to forty-three days, the acute in eight to forty-six. Epididymitis occurred as a complication in 3 cases. Of the 19 acute cases the process became chronic in 4; of the 11 chronic cases the treatment failed in 3.

PATHOLOGY.

(374) The Etiology of Tumours.

CARINI (*Il Policlinico*, April 15th, 1900) has conducted a series of experiments with a view to solving the so-called blastomycetic origin of cancer. Out of fourteen tumours removed from the living subject and examined with every possible aseptic precaution, not one gave any culture of blastomycetes. The fifteenth (received twelve hours later) gave a culture, but this was probably due to contamination from the surroundings. Injections of pure culture never gave rise to true malignant tumours. Out of forty-four tumours (mostly malignant) eighteen on histological examination showed the presence of blastomycetes or of Russell's corpuscles, which are morphologically the same thing. But these same bodies were found in many other non-malignant tumours, and even in normal tissues—for example, the prostate. The bodies described in tumours as parasites (for example, coccidia, sporozoa) for the most part do not stain in a manner characteristic of blastomycetes. The author's researches do not favour the blastomycetic origin of cancer. The article is furnished with a full bibliography of the subject and drawings of the histological appearances.

(375) Congenital Cystic Degeneration of Both Kidneys.

FIN HOLMSEN (*Norsk Mag. f. Laegevidensk.*, lxi, p. 411, April, 1900) reports the case of a 25-year old 2-para, who gave birth to a hydrocephalic infant with both kidneys in a state of cystic degeneration. The child was alive at the time of labour, but had to be craniotomised on account of the hydrocephalus. The two kidneys were considerably hypertrophied; one weighed 65 and the other 85 grams. They were made up of numerous small cysts with much intervening fibrous tissue. Very few renal tubules and glomeruli were found intact; the latter mostly showed an arrested development and were in an embryonic state. The cysts were lined with a low cubical epithelium. The connective tissue was markedly developed near the hilum and around the calices, which were partially obliterated. The ureters were narrow, one in particular, but they were not obliterated. Various theories of pathogenesis were discussed, but the author does not consider any one satisfactory.

(376) The Passage of the Tuberculous Poison from Parent to Offspring.

MAFFUCCI (*Riv. Crit. di Clin. Med.*, March 24th, 1900), from experiments on rabbits and guinea-pigs, concludes that the tuberculous poison passes more frequently from parent to offspring than the bacillus. This poison may pass with the ovum, the semen, or through the placenta. Embryonal intoxication may display itself as abortion, defective development, cachexia, and extra-uterine death. The embryonal tissues are opposed to the development of the bacillus, and may even destroy it. The children of tuberculous parents are not more susceptible to the virus than those of healthy parents. The greater frequency of tubercle in such cases is to be attributed to the daily contact and to the possibility of a germ traced back to embryonal life. The practical result of these researches is to encourage separation in tuberculous families and attention to hygienic conditions.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

TUBERCULOSIS CONGRESS AT NAPLES.

April 25th to April 28th, 1900.

THE following abstracts of papers read at the Congress on Tuberculosis held in Naples from April 25th to April 28th, are for convenience grouped together in this number of the EPITOME. The original papers are published in the *Gazzetta degli Ospedali*, the *Riforma Medica*, and the *Policlinico*.

(377) The Diagnosis of Tuberculosis.

BOZZOLO, of Turin, said that in the case of an individual presenting the tuberculous habit of body, one should always suspect the active presence of the bacillus. He emphasised the word "active," because in many cases the microbe might be there as a simple saprophyte. The latent seeds of disease might be quickened into active growth by some infectious disease, by injury, etc. He formulated the following criteria for the early diagnosis of tuberculosis: (1) Intermittent pretuberculous albuminuria, often alternating with phosphaturia; (2) tuberculous pseudo-chlorosis, which is distinguished from the true by the fact that there is less lowering of the hæmoglobin standard, slighter accentuation of the cardio-vascular phenomena, and by the presence of leucocytosis; (3) distubances of the digestive apparatus, anorexia alternating with voracious appetite, gastralgia; (4) afrebrile tachycardia, characterised by the greatest instability; (5) lowering of the blood pressure; (6) marked and permanent rises of temperature following active movement, and in women elevations of three to four-tenths each day before the oncoming of menstruation; (7) tendency to sweats, not only nocturnal but also following the slightest fatigue and emotion; (8) a sense of pain in the nuchal and supraorbital region, the upper part of the trunk, etc.; (9) inequality of the pupils, and, according to some, dilatation of both; this is rare; (10) appearance of herpes zoster in the area of the distribution of the fifth pair in meningeal, and on the thorax in pulmonary, tuberculosis; (11) the colour of the gums—red in those suffering from acute forms, bluish in chronic cases, and white in scrofulous individuals. (12) pretuberculous enlargement of the spleen; (13) amyotrophy of the thorax; (14) dyspnœa, cough, etc.; (15) hæmoptysis, when there is no other cause for it, but hysterical suggestion must be guarded against; (16) a sensation of resonance felt by the individual in talking; (17) percussion; this is of little importance, owing to the possibility of asymmetry, or insufficiency of air owing to marked atrophy; (18) auscultation: the bases also must be auscultated; harsh breathing at one apex should not always be taken as an indication of tuberculosis; (19) injections in guineapigs; (20) serum diagnosis after the Arloing-Courmont method; (21) fluoroscopy and radiography, but discount should be allowed for exaggeration; (22) injection of small quantities of physiological serum; this gives a febrile reaction in all grave anæmias, even non-tuberculous; (23) injection of tuberculin; this is the best criterion of all, but, as it may make a chronic process acute, it should be used only when it is absolutely necessary.

(378) Diagnosis of Incipient Forms of Pulmonary Tuberculosis.

SENATOR, of Berlin, said the best criteria for an early diagnosis are as follows: Analysis of the sputum; inoculation of it into animals; reaction to serum and to tuberculin; leucocytosis when it is possible to eliminate all other causes capable of producing it; auscultation and percussion when they reveal changes limited to the apex of the lung; different degrees of expansion of the apices; the artificial catarrh induced by the use of potassium iodide; tuberculous lesions of other organs; previous pleurisies; the *habitus phthisicus;* cough and sweating.

(379) Relations between Obsolete Tuberculosis of the Apex and Croupous Pneumonia.

VON SCHRÖN, of Naples, in a communication on this subject, said the obsolete focus was an old localisation of tuberculosis in which the process had become extinct and the reactive inflammatory phenomena were reduced to the lowest terms, so that the relations between the focus and the neighbouring parts seemed to be, and perhaps to a certain extent were, of the slightest. The most important anatomical features were the following: Slight cicatricial retraction; a slight degree of chronic emphysema; a slight chronic interstitial pneumonia; adhesive pleurisy, either complete or in the form of pseudo-membranes; a caseous residuum usually very small and either simple or calcified; pigmentation and desquamative alveolitis. The author stated that in thirty-five years of *post-mortem* work he had seen some 50 cases of croupous pneumonia of the apex, and he had been struck by the unusual localisation and the generally fatal issue. Death usually occurred on the ninth day, and the lung was found in a condition between grey and red hepatisation without having passed into the fourth stage. In all the cases the pneumonic area had been invaded by an enormous quantity of tubercle cells which were endowed with the highest infective and secretive power; besides he had found tubercle bacilli. The author considers the matter important from the point of view of prophylaxis, as it suggests that individuals in whom an obsolete focus exists should use every precaution to avoid pneumonia. In these cases death is not the result of asphyxia caused by the pneumonia, but of the aborption of a large quantity of toxins.

(380) Clinical Value of So-called Antagonisms in Regard to Phthisis.

F. FAZIO AND G. STEFANILE, from a critical examination of the state of knowledge on this point, and from the reports of cases—20 of aortic disease and 59 of mitral disease, associated in only 2 cases with tuberculosis, and 35 of emphysema, in only 1 of which was there such an association—have arrived at the following conclusions: (1) The so-called antagonisms in regard to pulmonary tuberculosis recognised by clinicians have no absolute, but merely a relative, value. (2) The conditions that most deserve consideration are lesions of the mitral valve and general emphysema of the lung. (3) The causes of the rarity of association of tuberculosis with pulmonary emphysema must be sought for in the emphysematous process and in the constitutional state of patients. (4) The factors in the emphysematous process are represented by insufficiency of inspiration and the exsanguine and atrophic state of the lung, both of which conditions are unfavourable to the transport of bacilli and to the development of tuberculosis. (5) The chief factor, however, consists in the constitution of the patients, who show a marked predisposition to catarrhal affections of the respiratory passages and little or none to specific tuberculous affections.

(381) Pneumographic Studies in Tuberculous Cases.

HIRTZ, of Paris, read a paper in which he said the graphic tracings in respiration in cases of lung disease had hitherto attracted little attention from the profession. The author made a series of researches in cases of tuberculosis with emphysema in 1878, and has more recently carried out investigations on a large scale in persons with healthy lungs and in others suffering from other pulmonary diseases. The tracings must be made in as many cases as possible, and in each individual case a series should be made. The result of his observations went to show that, whilst the tracings of normal respiration consist of four successive lines—namely, one of inspiration; a horizontal line for the period when the lung is full; one of expiration, and a second horizontal line for the period of emptiness. On the other hand, the tracings from the beginning of phthisis show only three lines. The line for the period of emptiness disappears; that of expiration is so much prolonged that it takes the place of the missing line; that of inspiration is sometimes prolonged, but sometimes normal, while the horizontal line of thoracic fulness often persists without change. This pneumographic formula of chronic pulmonary tuberculosis persists in all stages of the disease, often becoming more characteristic. The author has not met with it in any other pulmonary affection.

(382) Tuberculosis at Naples.

SPATUZZI stated that whilst the general mortality at Naples is greater than in other Italian and foreign cities, that from acute infectious diseases is much

less, and the situation goes on improving year by year. During a period of twenty-six years, whilst cholera, typhus, typhoid fever, small-pox, diphtheria, croup, measles, and scarlatina altogether caused 29,723 deaths, tuberculosis alone was responsible for 41,883. For the prevention of acute infectious diseases Naples has spent hundreds of millions of lire in sanitary improvements, has founded a special hospital and established a health office, and consequently it is now a healthier place of residence than many other Italian and foreign cities. Steps are being taken to establish the Ravavaschieri Sanatorium, to provide for the assistance and special education of the children of tuberculous parents and of those predisposed to the disease, to improve the hygiene of schools, and above all to regulate satisfactorily the hygiene of the food supply and especially of milk. It is not practicable to make the use of tuberculin compulsory, but the Health Office will grant a certificate to all owners of milch cows who will avail themselves of this safeguard. In the public abattoir only 1 per cent. of bovine animals are found to be tuberculous, and it is in contemplation to organise a still more rigorous supervision and to provide for the sterilisation of infected meat. Tuberculosis is more frequent among the inhabitants of Naples itself than among those of the rural communes living in the same climate but in better conditions; in Naples itself in poor families which crowd into the upper storeys than those who sleep on the ground floors and spend all the day in the street. Among the working classes those are most subject to pulmonary phthisis who work in ill-ventilated shops and in atmospheres charged with dust and irrespirable gases. The Health Office and the Technical Municipal Office have drawn up a scheme for a new industrial quarter; for the carrying out of this project, however, a considerable sum of money will be required.

(383) The Climate of Naples and Infantile Tuberculosis.

Gallo said that in early infancy tuberculosis spares no organ or tissue, and often spreads so extensively throughout the tissues as to produce a rapidly fatal form of disease—acute miliary tuberculosis—sometimes remaining latent to break out in adult life. Sucklings up to the age of three or four months appear to be spared, although true cavities of the lung may be produced in infants from four to six months old. Tuberculosis becomes common between 2 and 10 years. In regard to climate moderate elevations of 50 metres and upwards, and equable and calm climate are recommended. The intense light, rich vegetation, and balsamic air of the woods and seaside make these climates healthy. At Naples in the summer, especially in July and August, the village of Capodimonte, at a height of 151 metres above the sea level, is most useful to young children suffering from pulmonary tuberculosis, especially in the incipient stage. Owing, however, to moisture it is unsuitable in the autumn and winter months; the same may be said of Vomero (187 metres), Arenella (185 metres), Miano (116 metres) above sea level, Mianella, Marano, and Calvizzano. Certain forms of pulmonary phthisis do extremely well in the district of Ponti Rossi, the climatic characteristics of which are moderate humidity and a mild and singularly sedative air. The hill of Posillipo is more directly under the influence of the sea air. As winter stations Bagnoli and Possuoli were recommended.

(384) Influence of Climate on the Evolution of Experimental Tuberculosis.

Lannelongue, Achard, and Guillard, of Paris, presented a communication on this subject. The influence of climate on the evolution of tuberculosis has not yet been clearly determined. In certain regions the disease is rare, and its relative infrequency is attributable to the mode of life of the inhabitants and the absence of large agglomerations of human beings. The improvement which has been noted in patients who stay at certain health resorts which have a reputation for the cure of phthisis but which differ widely in climate, is due solely to the effects of the different methods of cure adopted, and cannot be attributed to change of regimen or place. The authors have studied the question experimentally. They inoculated tuberculosis in equal doses into the pleura in a very large number of guinea-pigs, which they afterwards distributed in places where the climatic conditions were different, everything else being as far as possible the same. In a first experiment, which dates from eleven months back, 150 guinea-pigs (males) were inoculated at the same time, and divided into three lots of 50. One lot was kept in Paris in the laboratory; a second was sent into the country to Valmont, and the third to Grandes Dalles, at the seaside. The curves of mortality show that those of the country lot was from the beginning the highest, while the other two kept for a long time at the same level; towards December, however, that of the seaside lot went up, the advantage remaining with the animals kept in the laboratory. In a second experiment, made nine months ago, also on 150 guinea-pigs, one lot was kept in the laboratory as before; another was sent to the mountains of the Haute-Loire, at an altitude of 1,000 metres; a third to the woods of the Isle Adam. The last lot was unfortunately partly destroyed by an accident, and cannot therefore be taken into account. As regards the other two, the curves of mortality show that the mountain lot was from the beginning slightly below the laboratory lot; then towards October it rose above it, remaining so thenceforward. It is suggested that the relatively favourable results observed in the laboratory may be due to the equability of the temperature. Thermometric variations were more marked in the country, and it is during spells of cold that elevations of the mortality curve are seen at the seaside and in the mountains. Some influence may also be attributed to the relative immobility to which the animals in the laboratory were necessarily condemned, this entailing comparatively slight waste. The authors point out that from these researches on guinea-pigs no conclusions can be drawn in regard to human beings. The purpose of them has been to place the question of climate on an experimental basis.

(385) Tuberculosis and Marriage.

Massalongo, of Verona, discussed this subject. His conclusions may be summed up as follows: (1) The inheritance of tubercle is extremely exceptional. What is inherited is the predisposition to tuberculosis. (2) Although contagion is the chief cause of the diffusion of tuberculosis, not all persons living within the sphere of infection contract the disease, but only those predisposed thereto. These in the majority of cases are descended directly or indirectly from consumptives. (3) It is time that the State should resolutely undertake the task of diminishing the disastrous consequences of marriages between persons with a tuberculous family history, and the Church should unite with the State by relieving the faithful from the inflexible ordinance *Crescite et multiplicamini*. (4) Besides popularising the knowledge of how phthisis spreads and of how contagion is to be avoided, the people should be instructed (*a*) as to the most serious dangers of marriage between persons themselves tuberculous or belonging to families in which the disease is hereditary; (*b*) as to the desirability of not marrying before a certain age; (*c*) as to the absolute necessity of making sure that the disease is cured, or at least that for two or three years there have been no symptoms, and that there are no tuberculous lesions, for which purpose the advice of a physician should be sought; (*d*) every precaution should be taken to make a union between persons with tuberculous antecedents childless.

(386) Individual Prophylaxis.

Maglieri expressed the opinion that an acquired proclivity to tuberculosis most often depended on certain pretuberculous diseases, especially those which were generally considered trifling, and for which medical advice was seldom sought, for instance, catarrh of the respiratory mucous membrane. By way of prophylaxis, therefore, such conditions, whether slight or serious, should be removed as quickly as possible, while the resisting power of the organism should be increased. For this double purpose the author had found sulphocarburetted hydrogen or sulphate of turpentine most efficacious combined with over-feeding.

(387) Mixed Infection in Tuberculosis.

Sata, of Tokyo, said the variety of forms of tuberculosis depended on the variety of the etiological factors. Various micro-organisms were found in the sputum, in the lungs, and in the blood of consumptives. The influence of mixed infection on the tuberculous process was

very great; the most important symptoms of it were atypical fever, abundant expectoration, extensive pneumonia. The broncho-pneumonia of consumptives was excited by mixed bacteria. The principal micro-organisms of mixed pneumonia were—streptococcus pyogenes, staphylococcus pyogenes, the diplococcus of Fraenkel, and the bacillus of influenza. Hectic fever and other symptoms of phthisis were generally produced by other bacteria; the expectoration contained numerous micro-organisms. The mixed infection may in certain cases exert a favourable influence on the tuberculous process. Climatic treatment, hydrotherapy, creosote inhalations have for their object the destruction not of Koch's bacillus but of the other micro-organisms.

(388) Tuberculosis among Nurses.

DEVOTO, of Pavia, presented a communication in which he stated that in the civil hospitals of Genoa there was a mortality from tuberculosis of over 20 per cent. among the male nurses. On the other hand, in one of the hospitals where there are no tuberculous patients the mortality from that cause is practically *nil*. He, therefore, urged that the greatest care should be taken in hospitals receiving tuberculous patients to protect the nurses from infection. They should not be obliged to sleep or to take their meals in the wards or in immediately adjacent rooms. They should be enjoined to practise rigorous disinfection; they should be frequently inspected and sent for a holiday in the country for a few weeks every year. Where it is not possible to separate tuberculous from other patients the nurse whose duty it is to clean beds, spittoons, etc., should have nothing to do with giving food, medicines, etc., to the patients.

(389) Prophylaxis of Tuberculosis on Railways.

SANARELLI, after pointing out the dangers of infection in railway carriages, especially on long journeys in *waggon-lits*, proposed the following resolutions on the subject: (1) It is necessary that the sanitary service should enact and enforce the observance of regulations adequate to guarantee the public against the danger of infective diseases, and especially tuberculosis in railway carriages. (2) Such regulations must include tuberculosis among the diseases for which the disinfection of carriages expressly allotted for the transport of contagious persons is considered compulsory. (3) Railway companies are invited to have put up in all waiting rooms, in the interior of stations, and in all passenger carriages notices intimating to the public that it is forbidden to spit anywhere but in the spittoons. (4) The stations and the most of the compartments of the *waggon-lits* should be furnished with spittoons containing liquid and easy to clean and to disinfect. In a certain number of these compartments supplied with spittoons smoking should be allowed; in the other compartments without spittoons it should be forbidden under penalty of fine to smoke and to spit on the floors. (5) The railway companies should be called upon to apply an efficient method of ventilation to all carriages intended for the conveyance of passengers. (6) Carpets and rugs of the first and second-classes should be replaced by impermeable coverings of linoleum of indiarubber easy to clean. (7) The wooden floor of the third-class should be smooth and polished and rendered impermeable so that it can be washed every day with the hose. (8) The materials now used for covering the seats and for curtains should be replaced by impermeable fabrics easy to clean with wet sponges, and not holding the dust. (9) The construction and internal arrangements of the carriages should be such as to render daily cleansing easy. (10) The old-fashioned system of footwarmers should as soon as possible be replaced by a system of central heating by means of steam.

(390) Surgical Tuberculosis.

CECCHERELLI, of Parma, dealt with this subject under three heads—infectivity and transmissibility of tuberculosis; in what cases this is more difficult to explain; possibility of cure. The first question has been settled by the researches of Villemin and Koch. Clinical observation proves that definitive cures may be obtained with much greater facility when aided by appropriate treatment or operation, and the soil, both general and local, in which tuberculosis grows is thus modified. There is a chain between scrofula and tuberculosis, the first link of which is constituted by local inflammation of the superficial parts of the body and the last by the general infection which causes death. Every scrofulous person is a candidate for tuberculosis. Reference was made to the researches of Lannelongue, which absolutely contradict the relationship between tuberculosis and injury maintained by Schuller, and on this ground it was contended that a cure may be obtained even in cases in which the operator removes nothing, but simply modifies the ground in which the bacillus has implanted itself, making it less suitable for the growth of the micro-organism. In connection with this the author referred to tuberculous peritonitis, of which he was the first in Italy to advocate the operative treatment (1887). In dealing with tuberculous foci surgeons often fail because the soil is too well adapted to the growth of the bacillus, but sometimes a lasting cure is possible. The principle which should guide the surgeon might be formulated as follows: Let us fight against scrofula, and we shall have fewer cases of tuberculosis and a larger number of cures.

(391) Muscular Tonicity in Tuberculous Subjects.

DE RENZI AND COOP reported that by experiments with the myotonometer of Mosso they found that the muscular tonicity is diminished in tuberculosis more than in any other disease, even nervous. It shows itself from the beginning, even in cases in which the muscular power and nutrition are in good condition. This the authors interpret as signifying that even in the first stages there is an intoxication which acts prejudicially on the organism and the nerve centres.

(392) Lesions Produced by the Specific Poison of the Tubercle Bacillus.

BOCCARDI, of Naples, gave a summary of his observations which form part of the work on the poison of the tubercle bacillus carried out during the last five years by De Giaxa. In this investigation Boccardi was entrusted with the anatomo-pathological researches on the numerous animals—guinea-pigs, rabbits, dogs, goats, and one horse—used for the purpose. His conclusions are as follows: (1) The virus isolated by De Giaxa, by a process fully described in his book, presents chemical properties which warrant its being counted among the new nucleins. Its action has been tested by means of injections—always in moderate doses—into the subcutaneous cellular tissue, the pleural and peritoneal cavities, the veins, and the trachea. (2) Injected into the veins in relatively considerable doses, it causes marked thrombosis, which may extend as far as the right heart, the pulmonary artery, and its branches. In such cases the animal dies very quickly by asphyxia. (3) The intravenous injection of smaller doses produces after a time minute capillary thromboses, especially in organs in which the circulation is slower (liver). The animals survive some days and sometimes recover. *Post mortem* there are found small pulmonary infarcts, sometimes due to embolism in the pulmonary vessels, but more frequently to evident vascular lesions, affecting not only the endothelium—thickening and desquamation—but also of the other coats. The infarcts set up an active process of resorption by means of migrated elements and pulmonary endothelia, which swell, proliferate, and come to form true globuliferous and hæmoglobiniferous giant cells. Where no infarcts are produced, disseminated patches of catarrhal pneumonia are found. In the liver constant and often marked fatty degeneration is met with; less frequently islets of necrotic tissue. In the kidney there is fatty degeneration, but to a much less degree than in the liver. Moreover there is frequent exfoliation of the glomerular endothelium with necrobiotic changes in the epithelium, especially in the tubuli contorti. (4) Lesions identical in kind if not in degree are met with in the liver, and to a less extent in the kidney when the virus is injected into the subcutaneous cellular tissue of the abdomen, the peritoneum, and the pleura. At the site of injection there are formed largish nodules of leucocytic infiltration. These nodules undergo caseous, more rarely fibrous, transformation. The neighbouring glands are more or less considerably

swollen. (5) Endotracheal injection of very small quantities produces numerous foci of catarrhal pneumonia; often in the air cells there are giant cells mingled with the numerous proliferated and migrated elements. In addition, one most frequently finds peribronchial and perivascular nodules which in their histological characters have all the appearance of true tubercles. (6) One may therefore infer that the substance isolated by De Giaxa is the most active, perhaps the specific, virus contained in the bacillus. This idea gains support from the important fact brought to light by De Giaxa—namely, that in the rabbits, goats, and horse subjected to the action of the virus, reaction to tuberculin was marked and constant in all the cases.

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(393) Presence of Tuberculous Antitoxin in the Blood Serum of Healthy Persons and Animals.

RONCAGLIOLO, of Genoa, gave an account of a series of experiments which he had made as to the antitoxic power of human blood to the tuberculous virus. The tubercle bacillus acts upon the animal organism by means of toxic substances of various kinds and of different, and, in a certain measure, opposite effects. These substances may be grouped in three categories: (1) Those contained in the body of the bacillus, and for the most part consisting of fatty substances; these have powerful necrosing, thermogenic, and dyscrasic effects. (2) Those contained in the capsule surrounding the bacillus, consisting mainly of hemicellulose, the effects of which are little known, and are in large measure confounded with those of the substances contained in the body of the bacillus. (3) In the vital products of the bacillus, which, as discovered by Maragliano, exist for the most part diffused in the culture fluid, and to a slight extent are contained in the bacillus itself. These are feebly necrosing, and have a marked hypothermic and dyscrasic action. For his experiments the author used the watery solution of protein as prepared by Maragliano, with a slight addition of glycerine as a preservative. This solution represents as far as hitherto known the most actively toxic substance obtained from the tubercle bacillus, inasmuch as its active principle kills in a dose of $\frac{1}{10000}$. The solution used certainly kills in the dose of 1 per cent., like that of Koch, and has the advantage of not producing local infiltration. Such infiltrations, besides hindering the absorption of the toxic substance, facilitate local infection by preparing a suitable soil for accidental germs. In such circumstances the animal may die from a cause quite other than specific intoxication. The guinea-pigs chosen for experiment were always from 300 to 350 grams in weight and normal in nutrition and in temperature. After death they were carefully examined, not only to ascertain the details of the process of tuberculinic poisoning, but also to make sure that there were no diseases or secondary infections of different nature. Before going on to researches with protein and serum, trial experiments were made with protein alone. He tested the serum of 18 persons then in the hospital, some with common and slight ailments, some with serious organic diseases, and some with infectious diseases. The first group, as well as healthy and robust persons, showed considerable antitoxic power in their blood, of which doses of 1 in 1,000 and and even 0.25 in 1,000 were sufficient to protect a guinea-pig from a lethal dose of tuberculin (1 per cent.). He infers that these serums contain from 1,000 to 4,000 antitoxic units, taking the gram as the unit. In alcoholic subjects the serum has a greater antitoxic power; serum from an alcoholic man aged 52 suffering from chronic alcoholism and hæmorrhagic pachymeningitis gave 10,000 antitoxic units. The author refers to the popular belief in the value of alcohol in tuberculosis and infectious diseases generally, and thinks his results afford some warrant for this belief. He further experimented on animals, and found that, while serum from dog, cat, rabbit, guinea-pig, fowl, pigeon, had no antitoxic power, that from the cow, the calf, and the goat had a varying amount, the goat showing the maximum (4,000 antitoxic units). These facts accord with what is known of the proclivity of bovines to tuberculosis, which runs in these animals an attenuated course, while the goat is very refractory to the disease. Summing up his results, he concludes: (1) That the healthy man has in himself in a marked degree means of defence against the poison of tuberculosis; (2) that the serum of alcoholics is endowed with the highest antitoxic power; (3) that such power is not possessed by all animals equally.

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(394) Tuberculous Antitoxin in Human Blood in Different Morbid Conditions.

RONCAGLIOLO has also made a large series of experiments by the same methods with the blood serum of individuals affected with the most varied diseases, including many cases of tuberculosis, with the object of determining their antitoxic power in regard to tuberculous proteins. The blood was taken from 42 persons, and the guinea-pigs used in the experiments numbered about 300. The experiments may be grouped as follows: (1) Convalescents from exhausting illnesses (typhoid fever, heart disease) whose serum was found to be endowed with a moderate degree of antitoxic power (from 250 to 500 antitoxic units). (2) Individuals reduced to a deplorable condition by weakness of constitution and by long-continued progressive diseases; their serum was absolutely destitute of antitoxic substances. (3) Tuberculous patients, of whom 30 were examined, for the most part presenting no microbic associations, and in fair condition. In no case did their serum show a high antitoxic power. In a few only was it found to contain from 250 to 300, and in only one case 666 units, and it is noteworthy that in that case the patient was an alcoholic. In the author's opinion these researches show that the antitoxic power of serum diminishes in proportion to the impairment of nutrition and the exhaustion of the organism.

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(395) Influence of Specific Serumtherapy on the Presence of Antitoxins in Tuberculous Persons.

RONCAGLIOLO has made similar experiments on tuberculous patients who had been subjected to specific serumtherapy during a more or less protracted period. The serum from seven patients was tried on 82 guinea-pigs, with the following results: (1) Strong injections of serum (25 to 40 c.cm.) made at one time and followed by bleeding within twenty-four hours, induce no appreciable changes in the antitoxic power of the serum. (2) Injections of small quantities of serum (1 to 2 c.cm.) prolonged for one or two months, cause a notable increase of antitoxic power, so much that it may reach the maximum of 10,000 units per c.cm. As showing its effects he cites the case of a man aged 37, suffering from bacillary-infection, with confluent broncho-pneumonic foci in the upper lobe of the right lung, Koch's bacillus in the sputum, and slight microbic associations. Before subjecting him to specific treatment a small bleeding was practised, and the blood serum tested in the usual way had been found to possess no antitoxic power in regard to tuberculinic poison. Four guinea-pigs, to which a dose of 4 per 1,000 was given, all died within twenty-four hours. After 32 injections of therapeutic serum had been given, the patient having improved so much that he wished to leave the hospital, a second bleeding was practised, and the serum protected a rabbit against fatal intoxication in a dose of 0.10 per 1,000, which means that from 0 antitoxic units it had acquired 10,000 per c.cm. Now the patient had received 32 c.cm. of Maragliano's serum, equivalent to 32,000 antitoxic units. Estimating the mass of blood at 4,500 c.cm. the patient's new serum contains 45,000,000 antitoxic units, or 44,968,000 in addition to those introduced. This calculation, however, is based on the hypothesis that all the serum injected had penetrated into the blood, and had neither been destroyed nor eliminated, a supposition which cannot be accepted, as the serum albumen quickly passes into the blood, and is eliminated by the kidneys. The figures given may, therefore, be at least doubled, and it may be calculated that the therapeutic serum had risen in passing through the organism from 32,000 to 90,000,000 antitoxic units. This extraordinary antitoxic power certainly does not belong to the small quantity of serum introduced, since nothing is known which warrants the belief that the organism has the power of so wonderfully increasing the antitoxic value of the serum introduced. It must therefore be inferred that the human organism takes part in the production of substances equivalent to the antitoxic substances introduced and in far greater number, or else produces substances differing from these, but much more active.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(396) The Sweat of Phthisical Patients.

DE RENZI AND G. BOERI reported at the Congress on Tuberculosis recently held in Naples that they have made researches on this subject, taking as their starting point an investigation by Salter (*Lancet*, 1898), in which it was shown that the sweat of phthisical patients contains tuberculin amongst the other toxic substances, and has therefore a curative action by eliminating notable quantities of toxins. From their own researches the authors have come to the conclusion that the sweat of consumptives differs from that of healthy persons only in being more toxic; it does not, however, produce a form of poisoning materially different. The sweat of consumptives, like that of healthy persons, produces a febrile reaction in tuberculous guinea-pigs; but, if the dose injected is excessive, it causes collapse and death. They hold that the febrile reaction is not attributable to tuberculin, because it is not peculiar to the sweat of tuberculous subjects, and because in a less degree it shows itself even in non-tuberculous guinea-pigs. The greater degree of pyrexia set up in diseased than in healthy guinea-pigs is to be attributed to the greater readiness with which tuberculous guinea-pigs become febrile from any cause. The pyrexia is not attributable to infection by micro-organisms in the sweat, since it persists after sterilisation. It is due to the chemical principles of sweat, even that of healthy persons, as to which principles the authors at present can only say that they resist heat. Nevertheless, they believe that within certain limits the sweating of consumptives, when it is not very profuse, is more or less curative, as may be gathered from its marked toxicity.

(397) The Clinical Thermometer as a Germ Carrier.

W. L. CONKLIN (*Buffalo Med. Journ.*, February) sounds a note of warning as to the danger of conveying infection by means of the thermometer. Assuming that the thermometer as well as the scalpel may be a germ carrier, does not the mouth furnish as favourable a medium for the development and growth of bacteria as the open wound? It has been asserted that the ordinary methods of cleaning a thermometer, such, for example, as holding it under the water tap, or wiping it with a damp cloth, are sufficient to rid it of bacteria. From careful measurements he estimates that a degree mark is wide enough to accommodate 100 tubercle bacilli, marching in single file, so to speak. Also that an area with the length and breadth of one of these marks would furnish room for the lodgment of 280 000 tubercle bacilli. Believing that a clinical thermometer should at all times be sterile, he has for some months carried his thermometer in an ordinary rubber case, filled with a 1 to 500 or 1 to 250 bichloride solution. All that has been necessary to prevent leakage of the solution was a piece of leather packing, but there was gradual shrinkage in amount, as each time the thermometer was withdrawn from the case a small portion of the solution adhered to it, and he found it necessary on this account to renew the solution once in three or four days. It was his custom to rinse the thermometer in a glass of water or under the tap before and after using it. While experimenting for the purpose of proving that a thermometer cleaned in the ordinary way was not necessarily sterile, he had at the same time sought for proof that a thermometer kept constantly immersed in a strong bichloride solution, as described above, was entirely free from micro-organisms. The results of bacteriological examination of six thermometers by Professor Dodge were as follows: Four had been washed but not sterilised. Micro-organisms of one or another variety were found on each of the four. Two had been washed, and then placed in a case containing bichloride solution. No micro-organisms were found on either. Conklin thinks these experiments furnish conclusive proof that the thermometer may be a germ carrier, if cleaned in the ordinary way; that by means of a very simple and inexpensive device it may be rendered sterile after each use.

(398) Arthropathic Changes in Traumatic Lesions of the Cord.

DELPRAT has made a series of observations (*Journ. de Méd.*, April 10th, 1900) on the subject of trophic changes of the joints as the results of traumatic lesions of the cord. Gunshot wounds, contusions with or without fracture, shock (as in railway cases) may all be followed by joint changes. The knee seems to be the most frequently affected, but several joints may be involved at the same time—as the knee, the hip, the elbow, etc. The affected joint is the seat of an effusion which varies in quantity. It may be straw-coloured or hæmorrhagic, but, in the latter cases, never to any very great extent. The writer quotes Alessandrini as recording the case of a man who sustained a fracture of the vertebral column at the level of the fifth and sixth cervical vertebræ. There was a unilateral compression of the cord inducing hemiplegia. The patient lived six months, and on *post-mortem* examination bloody effusions were found in the right knee and all the joints at the same side; but so extensive a case as this is quite an exception. The symptoms fall into two classes—one local and articular, the other pointing to cord lesions, such as bedsore, erythematous patches and vesicular eruptions. These arthropathic changes may appear at varying times after an accident. Forty-eight hours is quoted on the one hand, a fortnight on the other. There may be lightning-like pains, and the joint affected becomes the seat of considerable suffering, with burning sensations, etc., which precede by some hours the effusion. In other cases, again, this latter may come on quietly, without attracting the patient's attention, being masked by the other symptoms of the lesion. The joint is swollen, the synovial sac distended and fluctuating, the hollows are obliterated. In the cases of the knee the patella is raised. There may be some periarticular œdema and swelling. In any case the effusion is rapidly poured out. In three weeks or so the fluid begins to absorb, and gradually the articulation returns to a healthy state. The prognosis is not bad for, as a rule, the affected joints clear up perfectly, in which the condition differs from other arthropathic lesions, such as tabes, syringomyelia, in which spontaneous fractures, dislocations, etc., leave the member stiff and useless.

SURGERY.

(399) Pyloric Stenosis in Tuberculous Persons.

PATELLA at the Congress on Tuberculosis recently held in Naples said he had seen three cases of stenosis of the pylorus caused by fibrous peripyloritis developed in individuals who at least three years previously had presented symptoms of tuberculous lesions of the lung, which had passed into the phase of obsolescence. In two of the cases gastro-enterostomy had been performed by Colzi and De Pauli, with the result that the patients, who were in a state of extreme marasmus, regained weight and strength. In these cases, in addition to thickening of the pylorus there were found nodules of fibrous appearance: examination showed that these were not of tuberculous nature. The author affirms that the conditions found gave no ground for the belief that the peripyloritis was tuberculous; he thinks that they are examples of slow sclerosis dependent on tuberculous intoxication, the effect of which may, according to Potain and his school, become manifest in various parts, especially where (as at the pylorus) there is considerable movement. Whatever be the interpretation of the condition, he urges that in such cases surgical intervention should not be delayed.

(400) Skiagraphy in Cases of Fracture.

LUCAS-CHAMPIONNIÈRE (*Bull. et Mém. de la Soc. de Chir.*, January 2nd, 1900) in the course of a recent discussion at the Société de Chirurgie of Paris, pointed out that the information afforded by the *x* rays in cases of fracture is unreliable, and also that skiagraphy applied to such injuries by ignorant and incapable men may bring trouble on the surgeon. A skiagraph not only presents the mass of callus as being much larger than it really is, but sometimes seems to show considerable thickening of a bone where no callus exists, and where there has not been any fracture. A radiograph is the result not of a reflected image as a photograph is, but of the projection of opacities untraversed by the light.

The volume, the dimensions, and even the form of the projected shadows vary with the distance of the object from the plate, and also with the distance of the object from the source of light. A very slight displacement of the latter will cause a marked change in the form of the projected parts. Thus a supposed deformity due to callus may be readily exaggerated. An instance is recorded of a patient with a perfectly sound and useful lower limb, who, after complete recovery from the effects of a contusion of the thigh, was led by a skiagraph of the injured limb to believe that he was the subject of an overlooked and ununited fracture of the femur. A shadow in the upper part of the bone cast by the ischium and a clear band below this were supposed to represent the serious nature of the injury. Another case is alluded to in which a skiagraph gave a wrong and disquieting compression of the nature and extent of an injury to the wrist. Cases such as these indicate that skiagraphy, unless carefully and conscientiously practised, is likely to injure the reputation of the practitioner.

(401) Milky, Non-chylous Ascites from Syphilitic Cirrhosis of Liver.

Poliakoff (*Berl. klin. Woch.*, No. 1, 1900) reports the case of a robust woman, aged 48, who came to hospital for anasarca and ascites, with frequent diarrhœa. She had felt ill for about a year, and had suffered from nephritis and gall-stone colic. She denied having had any venereal affection; three pregnancies ended in abortion from causes which could be explained without the presumption of syphilitic infection, and she had also borne eight children to term. No tumour or diseased organ could be detected on account of the ascites, and paracentesis was performed, as the fluid increased greatly in quantity during the three weeks the patient was under observation. Over fifteen pints of a milk-white alkaline fluid were drawn off. It was alkaline, specific gravity 1009, and looked precisely like chyle. On analysis, however, no fat could be detected. Serum-albumen existed in great quantities. Ten days after tapping, the patient died. The liver was much contracted, and bore two large deep scars. It was universally cirrhotic, and had the characters seen in the syphilitic type of cirrhosis. The patient had been temperate. Poliakoff quotes three earlier cases of milky, but not chylous, fluid filling the peritoneal cavity. Lion, Achard, and Lainton describe them; in all three the primary disease was cancerous peritonitis. Hence Merklen assumes that this form of ascites is diagnostic of that disease. Poliakoff's case refutes that theory. The fluid in Poliakoff's case did not clear on the addition of ether, but became perfectly clear on boiling with glacial acetic acid.

(402) Pseudo-Chylous Ascites.

Micheli and Matterolo (*Wien. klin. Woch.*, No. 3, 1900) reports 4 cases, with a very careful analysis of the fluids. The first patient was a youth of 19: he had weak heart and dropsy, which proved fatal. There was adherent pericardium, cyanosis of the liver, normal thoracic duct and healthy peritoneum, but its cavity held 8 pints of milky fluid. It contained no fat but much albumen. The second was a case of cancer of the pancreas and peritoneum in a man aged 20, frequently tapped. There was very little fat in the ascitic fluid. The third patient, a man of 27, suffered from sarcoma of the abdominal glands involving the spleen. The ascitic fluid was very milky, but did not contain fat. The fourth patient, a man aged 60, had typical hepatic cirrhosis and chronic peritonitis, with ascites and hydrothorax. The pleural, as well as the peritoneal fluid obtained by tapping during life, was quite milky, but the amount of fat trifling. The authors dwell on the fact that in all four samples of fluid which they examined, lecithin was detected, yet the cases were all different in type. Hence, comparing the fluids with water mixed with similar proportions of lecithin they conclude that it is that compound which causes the milky, chyle-like turbidity of this variety of ascites.

MIDWIFERY AND DISEASES OF WOMEN.

(403) Influence of Hysteropexy on Subsequent Pregnancy and Labour.

Richelot (*Com. Rend. de la Soc. d'Obst., de Gyn. et de Péd. de Paris*) discussed this question at a meeting of the Society. He said that some retroverted uteri required no reposition, namely, those where the condition was due to and associated with inflammatory affections of the adnexa; here treatment should be directed to the causal condition. There were other cases where the malposition constituted the disease, and where, failing pessaries and massage, surgical intervention was required in exceptional cases. He divided operative procedures into two groups: (1) The open methods, where the peritoneum was opened, from above or below, the pelvic cavity was explored, an exact diagnosis made, adhesions or other unforeseen lesions dealt with; where, in fact, nothing was left to chance. (2) The blind methods, comprising Alexander's operation, which professed to correct the faulty position of the uterus, without seeing or touching either the uterus itself or the surrounding organs. Hysteropexy came under the first category. As to the efficacy of the operation he had no doubt; the disadvantages were that it created adhesions, immobilised the uterus, and placed the organ higher than its normal position. As to the influence of hysteropexy on pregnancy, he had seen the following results among his operation cases: 2 had normal pregnancy and labour at term; 1 was delivered at six months, with eclampsia; this was, of course, independent of the operation; and 1 had two miscarriages. Much depended on the technique of the fixation, which should involve the anterior surface of the uterus, and not the fundus. Nevertheless, he had not absolute confidence in abdominal hysteropexy. Vaginal hysteropexy might be said to be useful to the surgeon when he was not free to perform a laparotomy. It had the advantage of leaving the uterus in its normal position in the true pelvis. On the other hand, it was more difficult, and had been followed by graver obstetric complications. This was again largely a question of technique. He could not say that even with the best technique this and abdominal hysteropexy would never be followed by obstetric accidents. Turning to the "blind procedures," Alexander's operation was more rational from the obstetric standpoint, and left the uterus mobile; but he had an invincible objection to any plan of restoring the uterus without sight or touch. He would therefore greatly hesitate between his surgical predilections and the serious arguments of the obstetricians, were there not a solution of the question that satisfied all requirements. This was to be found in Doléris's procedure of intraperitoneal shortening of the round ligaments. This operation was easy and safe; it sought by the most direct route the most favourable portion of the round ligaments; it united the advantages of hysteropexy and of Alexander's operation while evading their drawbacks; it allowed of an exact diagnosis, as well as of the carrying out of any measures that might be necessary for the condition of the pelvic organs; and, lastly, it fastened the uterus in its normal position without damaging its tissues, without leading to abnormal adhesions, and without hindering its subsequent development. Legueu, at the same meeting, expressed the view that, whilst obstetrical complications after hysteropexy were not constant, they were frequent; placing the sutures on the anterior surface instead of the fundus minimised, but did not altogether remove, the after-risks. He had almost abandoned the operation in the case of patients who were still at the period of sexual activity. The majority of retro-deviations needing surgical intervention required it on the score of disease of the appendages, and he dealt with such cases according to the indication. But where a uterus required to be fastened in proper position on account of congestive or mechanical troubles due to the displacement itself, he preferred intraperitoneal shortening of the round ligaments to hysteropexy.

(404) Impression of Pelvis on Fœtal Head.

Saniter (*Centralbl. f. Gynäk.*, No. 15, 1900) recently exhibited before the Berlin Obstetrical Society two children of the same mother. One, 12 days old, had presented in the first vertex position, but turning was necessary as the pelvis was scoliotic and oblique, being narrowed on the right. The other child was a girl aged 4, quite healthy in mind and body. Both children bore a concave, spoon-shaped depression on the left parietal bone. Most authorities find

that 50 per cent. of such cases do well. Strassmann had observed similar marks on the cranium in five sisters, whose mother had a rachitic pelvis. In two the mark was on the right, in three on the left side. All were mentally well. In the elder girls the impression was becoming very shallow, and was hardly visible except for the absence of hair on the scalp over its sides.

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(405) Puerperal Mastitis.

BROUHA (*L'Obstétrique*, v., p. 51, January, 1900) gives details of a healthy primipara who during at least the last three weeks of her pregnancy carried out most conscientiously the prophylactic treatment advised by Rubeska for the prevention of mammillary abrasions and cracks; twice daily she washed the areola and the nipple with warm water and soap, and followed this with a fomentation of the parts, sometimes with alcohol and sometimes with glycerine. The labour supervened at term; the child presented by the breech, but was delivered without interference: but there was some *post-partum* hæmorrhage causing considerable anæmia. The same night there was some fever and a feeling of tension in the breasts. The infant was only once put to one breast. A mastitis developed, although no lesion could be discovered in the breasts; recovery took place. The author finds it difficult to explain how microbes reached the gland tissue, as the infant had not been put to the breast when the first signs of mastitis appeared. He considers that some of the microbes which are normally found in the lactiferous ducts had forced their way through the epithelium and reached the lymphatics; he thinks that the mechanical and chemical means employed to prevent the occurrence of abrasions may have weakened the vitality of the epithelium, and so made easy the entrance of the microbes and perhaps also have increased the virulence of these microbes.

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(406) Echinococcus Cysts of Pelvis.

GRÄUPNER (*Centralbl. f. Gynäk.*, No. 16, 1900) operated through the vagina on a patient, aged 39, in January, 1899. Eight years previously, in 1891, another operator enucleated from the left broad ligament a hydatid cyst as big as a man's head. A small piece of this cyst could not be removed. Parametritic exudation was detected on the left side during the fourth week, and it discharged through the vagina a fortnight later. Until 1893 the woman remained free from pain; then occasional crampy pains set in and disappeared. They returned towards the end of 1898. Gräupner detected a tense cyst, as big as a fist, in the left fornix, pressing forwards, but the cervix is described as lying close against the symphysis and the uterus as retroflexed and fixed. The history of the case induced Gräupner to make an exploratory puncture with antiseptic precautions. A clear fluid containing hooklets came away. Next day the left fornix and tumour were laid open by Paquelin's cautery. Much clear fluid and many daughter cysts came away. Part of the parent cyst was dissected away, the remainder sewn to the edge of the vaginal wound, and the cavity packed with iodoform gauze. This cavity contracted rapidly. In December, 1899, eleven months after the vaginal operation, the vaginal cicatrix felt sound, and there was no evidence of any fresh growth of hydatids. The uterus was still retroflexed and fixed. Gräupner purposely avoided not only an abdominal incision but also any opening of the peritoneum from below, lest the disease might be disseminated. The packing of the cyst, opened from below, ensured its total destruction. The previous experience of Schröder and Freund agree with what was seen in this case at the first operation—the location of pelvic hydatid disease in the mesometrium. This fact is a guide to the right practice for cure of the disease. Schröder's case was very similar to Gräupner's; during abdominal section the cyst emptied some of its contents into the peritoneal cavity. Recurrence occurred in four years; then Schröder opened the cyst through the vagina, drained it, and thus succeeded in curing the patient.

THERAPEUTICS.

(407) The Treatment of Tuberculosis.

AT the Congress recently held at Naples several communications on the treatment of tuberculosis were presented. De Renzi delivered an address on the actual state of the therapeutics of tuberculosis. He said that putting aside prophylactic treatment and treatment in sanatoria, the field of therapeutics of tuberculosis was now much restricted. Of pharmaceutical remedies, two only need be considered—creosote and iodine. The former had been given in the most varied forms and doses, but the only definite effect which it produced was the diminution of expectoration; this was not to be wondered at, seeing that to obtain complete sterilisation of a person of medium size in regard to Koch's bacillus, about 50 grams of creosote would be required, whereas the ordinary dose which could be given with safety was from 30 to 60 centigrams in the day. The substitution of guaiacol for creosote appeared at first to be a notable improvement, but it had been found to be more toxic than creosote, whilst not more efficacious as a remedy for tuberculosis. With regard to the other remedy which he had named, iodoform owed its reputation mainly to the large quantity (97 per cent.) of iodine which it contains. The sedative effect which it has on cough and the minition of bronchial secretion are manifest; but no radical effect on the tuberculous process can be expected either from it or from other preparations of iodine—iodide of potassium, di-iodoform, europhen, aristol, iodol, etc. With regard to other remedies, De Renzi said that Koch's tuberculin had a very remarkable diagnostic value which in some degree compensated for its want of curative effect. In slight cases Maragliano's serum might be useful. He thought it needless to say anything about injections of camphorated oil, igazol, etc., because they had all shown themselves of little service in tuberculosis; only somatose and sodium cacodylate had prolonged life a little. Pure air and abundant feeding were the two great remedies on which the modern treatment of tuberculosis should rest.—Roustan had tried sodium cacodylate in tuberculosis. The tolerance of the remedy varied in different individuals, some not being able to bear more than eight injections successively, whilst others could bear thirty to forty. The injections, the dose of which was 1 c.cm. in the day, should therefore be suspended from time to time for a period equal to that during which they had been carried out. As results, he had observed an increase of strength, often a diminution of fever, recovery of appetite, and in some cases improvement in the local lesions.—Gatti had tried various essential oils (myrtol, eucalyptol), certain camphors and antiseptics (phenol, thymol). He usually gave one injection a day for ten days continuously, this period of treatment being followed by five days of rest. As the results, he claimed decided and permanent increase of muscular power, mitigation of fever and sweats, diminution of cough, modification of physical signs, increase of appetite and body-weight, diminution in the number of bacilli.

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(408) Tuberculin as a Diagnostic and Curative Agent.

E. C. TRUDEAU (*Internat. Med. Mag.*, March) says that in his experience the tuberculin test, when applied to cases of suspected incipient tuberculosis, where the diagnosis cannot be made by the ordinary methods, has proved generally reliable, and has given positive information which could not be procured in any other way. From the evidence obtained by others, and from his own experience he would say that it is very generally correct. Before condemning it as unreliable in any case, it must be remembered that latent tuberculosis of so moderate an extent as not to give any positive symptoms probably exists in about 30 per cent. of individuals, who have no reason to suspect its presence. Suspectibility to tuberculin varies in individuals, and no stated dose can be relied upon to produce reaction in every case, one reacting readily to 1 mg., and another requiring 5, 7, or even 8 before reaction occurs, and that the various samples of tuberculin differ somewhat in strength. Occasionally advanced and recognised cases of the disease do not react, either on account of an individual habituation to the toxin, or owing to the profound cachexia of the individual or to the fibrous state of the lesions, which hinders the local reaction by interfering with the circulation around

the tuberculous tissue. The test should not be applied to such cases, since the diagnosis can be easily made by the usual methods. As to its safety, very little evidence can be found in the literature of the subject demonstrating that it is capable of scattering the bacilli through the body, or of producing a permanent and increased activity on the part of the disease. No experimental evidence with which Trudeau was acquainted has been forthcoming to prove the danger of the test, either in aggravating the disease or in scattering the bacilli to distant points. As to treatment of the disease by tuberculin and its modifications, if he confined himself to his own experience, he would say that tuberculin treatment is apparently injurious rather than beneficial in all these forms in which the disease is actively progressing, and where there is any marked fever or constitutional impairment. He has used tuberculin and all its modifications at the Saranac Sanatorium in treating tuberculosis, confining himself to early and apyretic cases, increasing the dose and lengthening the intervals between the injections very gradually, so as to avoid the production of constitutional symptoms, except perhaps occasionally a slight rise of temperature, and extending the treatment over several months, until no general reaction is produced even by large doses, the nutrition of the patient being closely watched, and the injections continued only so long as the weight is kept up and the nutritive condition remains at high standard. In other words, he attempts to produce repeated local reaction, and but slight or no general reaction, and gradual habituation to the tuberculin toxin. It has seemed to him that in cases where this form of tuberculin treatment is added to the open-air and climatic method, the recoveries are more permanent; that is, relapse is much less likely to occur during the following years, even when the patient returns to his former surroundings, than where an apparent recovery has taken place under the climatic treatment alone. Evidence bearing on this point is gradually being obtained, but it is apparent that a large number of cases are necessary before a positive conclusion can be reached. His experience has been similar to Petruschky's in so far as the necessity of repeating the injections for a certain length of time, after several months, when susceptibility to tuberculous reaction returns. When the apparent immunity to relapse is due to the production of a certain degree of constitutional immunity, or to more perfect healing of the local lesions brought about by the slight and long-continued local reactions, cannot as yet be determined. It is yet uncertain whether the various modifications are more efficacious than the original tuberculin, or whether they contain any immunising substances not present in the original tuberculin. Koch's latest claims for his TR. tuberculin, which he considers to contain more immunising and less fever-producing substances than his original product, have hardly been sustained by the clinical evidence as yet forthcoming. At present the tuberculin used at the sanatorium is made at the Saranac Laboratory, according to Hahn's method, from the undried virulent bacilli, crushed by hydrostatic pressure, the soluble substances thus obtained from the crushed bacilli being filtered through a porcelain filter before use. It is evident that the treatment of tuberculosis by tuberculin injections, which aims at producing a permanent immunity and healing of the lesions, is restricted as yet to a very limited number of cases, and it must be admitted that these cases are usually those which are likely to recover under ordinary open-air and climatic methods.

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(409) The Action of Antidiphtheria Serum.

PANE (*Rif. Med.*, March 15th, 16th, 17th, 1900) has conducted a series of experiments with reference to the above subject, chiefly with a view to settle whether the action was a chemical or a biological one. According to Ehrlich and his school some chemical neutralisation occurs as the result of the action of antidiphtheria serum on the toxin. Pane's experiments do not support this view; he believes that immunity, relative or temporary, is produced by awaking and exciting specific defensive powers in the cells, and not by any process of chemical neutralisation. There is no essential difference between this immunity and that produced by the injection of non-mortal doses of toxin, except that the latter is produced much more slowly and is more lasting.

PATHOLOGY.

(410) The Paths of Infection of Genito-urinary Tuberculosis.

POSNER of Berlin at the Congress on Tuberculosis recently held in Naples reported that 1,300 necroscopic observations made in Virchow's laboratory show that genito-urinary tuberculosis is much less rare than it is believed to be. It was found in 5 per cent. of all the necropsies, and in 30 per cent. of those made on tuberculous subjects. The bacillus reaches the deep organs mostly by the blood; the process is therefore one of metastasis from a primary focus to other organs; but in some cases the localisation in the genito-urinary apparatus is the primary seat of the disease. Even in these cases, however, an early diagnosis is important in view of the favourable results of surgical intervention.

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(411) Influence of Changes in the Vagus on the Development of Pulmonary Tuberculosis.

G. TRIA at the recent Tuberculosis Congress at Naples said that the abolition of the function of the vagi was followed by disturbance, permanent or transient, of the pulmonary innervation. Since 1893 it has been demonstrated that an increase of endopulmonary temperature follows division of one vagus. Dogs were used for the purpose. These animals possess a relative immunity in regard to tuberculosis, and cultures of tubercle bacillus in glycerinated agar were inoculated into the trachea, and sometimes into the jugular vein. In some experiments the result was negative, both in the dogs in whom the vagus had been divided and in the controls; the animals were killed after a time, and nothing was found *post mortem*. From other experiments important results were obtained, and the author thinks himself in a position to affirm the receptivity in regard to tuberculous affection is considerably augmented in dogs in which one vagus has been divided. The pulmonary parenchyma in general shows less resistance to the action of the pathogenic germs. Tria recalled the observations of Grasset and Tessier that influenza had sometimes brought to light tuberculous lesions previously latent, and which might have remained so; these observations he was able to confirm from his own experience. He considered that the explanation of such facts was that influenza, which often seriously damages the nervous system, both central and peripheral, renders the organism, and particularly the lung, less resistant, and thus opens the way to pathogenic organisms.

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(412) Diabetic Coma.

M. STERNBERG (*Zeit. f. klin. Med.*, Band xxxviii, Heft 1 and 2), after a careful discussion of the work done on the relation of organic fatty acids in the blood to diabetic coma, records the results obtained in a series of experiments in which he administered the various amido-butyric acids to animals. It appears that of the three amido-butyric acids the α and the γ acids were without poisonous or toxic influence, whereas the β amido-butyric acid, when given in doses of about 3 grams, caused profound symptoms of toxæmia closely resembling those of diabetic coma in human subjects, there being a profound comatose condition, with strikingly deep slow inspiration and a rise of blood pressure. It is important to observe that β-amido-butyric acid is one of the few fatty organic acids of its series which produces such a comatose toxic reaction, and it is also a striking fact that the blood in cases of diabetic coma has frequently shown the presence of β-acids of the organic fatty series. The author does not conclude positively that β-amido-butyric acid is the identical acid met with in the blood in diabetic coma, but believes it is highly probable that this substance, or one closely allied to it, is the toxic agent, and that it is possible by studying minutely the chemistry of these β-acids in the laboratory and on animals it may be possible to discover chemical substances which may neutralise or render innocuous the toxic character of these acids thus afford us with an efficient remedy for administration in cases of diabetic coma.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

AMERICAN MEDICAL CONGRESS.

May 1st, 2nd, and 3rd, 1900.

THE following abstracts of papers read at the Congress of American Physicians and Surgeons, held at Washington on May 1st, 2nd, and 3rd, have been prepared from a full report of the proceedings published in the *Philadelphia Medical Journal*. We have to express our indebtedness to Dr. George M. Gould, the editor, for early proofs of the reports.

(413) Specific Gravity of Diabetic Urine.

J. B. HERRICK, of Chicago, read notes on diabetes. He had noted the low specific gravity of saccharine diabetic urine, in some cases even below that of the normal urine. At any time in the course of the disease an interstitial nephritis might begin and the specific gravity might then fall. If in a case of diabetes the specific gravity became low, this condition should be looked for; quantities of water would lower the specific gravity. Cases had been reported in which urine containing sugar showed as low a specific gravity as 1002. These facts showed that it was not safe to exclude the occurrence of sugar from a given specimen of urine because the specific gravity was low. Casts were common in many cases of diabetes mellitus when there was an accompanying nephritis. But casts might also occur just at the time of development of coma in diabetic patients. The author had seen this in 3 cases. The sediment found in cases of diabetic coma was composed almost entirely of casts which were short, broad, and granular. They might appear long enough before the occurrence of coma to warrant preventive treatment. The pathological conditions causing the appearance of casts were unknown, but the condition might be due to toxic substances acting on the kidney.

(414) Infectious Diseases in Childhood.

A. C. ABBOTT, of Philadelphia, read a paper on the relative infrequency of acute transmissible diseases during the first year of childhood. He presented charts showing the mortality from measles, scarlet fever, and diphtheria in children under 1 year old, in children between 1 and 5 years, and in children between 5 and 10 years of age. The tables showed that the death-rate was greatest between the ages of 1 and 5 years; that from measles being 64.8 per cent., that from scarlet fever 63.9 per cent., that from diphtheria 63.6 per cent. British statistics divided the mortality periods in the first year of life into three classes—between 1 day and 3 months, between 3 months and 6 months, and from 6 months to 12 months. The following death-rate was seen in these periods, given in order: Measles 27 per cent., 7.7 per cent., 89.6 per cent.; scarlet fever 7.6 per cent., 12.3 per cent., and 80.1 per cent.; diphtheria, 83 per cent., 13.3 per cent., and 28.8 per cent. Thus there was a great increase in the death-rate in the third period. The author believed that the mother transmitted something to the child with the milk during the nursing period that acted as an immunising agent and prevented infection. He quoted Ehrlich's experiments with mice, in which he was able to show the transmission of immunity to certain micro-organisms from the mother to nurslings through the milk in support of his hypothesis.

(415) Acute Phlegmonous Gastritis.

KINNICUTT, of New York, showed a specimen from a case of acute phlegmonous gastritis. The patient was a man, aged 41 years. There was no history of syphilis, but the patient was an alcoholic. The disease followed a drinking spell, and was ushered in by vomiting, first of food, and later of a brownish fluid. There was abdominal pain, constipation, dry tongue, shallow respiration, 48 per minute, regular pulse, 108 per minute, restlessness, and an anxious expression. The temperature was 101° in the rectum. The physical examination was negative, except for a slight hypertrophy of the left ventricle. The abdominal walls were rigid and deep palpation was sensitive in the epigastric and left hypochondriac regions. There was crepitation beneath the left costal cartilages. The urine contained casts. The patient grew progressively worse, and surgical intervention was deemed inadvisable. At the necropsy the organs were normal, except upon the hypertrophy of the left ventricle of the heart, before alluded to. The peritoneum presented a slight serofibrinous exudate. The stomach wall was thick, especially at the pyloric end. The thickening was due to a purulent infiltration of the submucous coat with a yellowish exudate. There was a linear cicatrix on the posterior wall of the stomach, near the pylorus, on which was a necrotic area. The endothelium was desquamated on the serous coat. The muscle was invaded by mononuclear leucocytes. The submucosa was swelled to four or five times its normal thickness, and contained leucocytes and micro organisms. The lymphatics contained bacteria. The necrotic area in the scar had nearly exposed the submucosa, and was possibly the point of infection. The streptococcus was found throughout the stomach. The bacilli in the lymphatics were possibly of *post-mortem* origin. In the discussion, W. H. Welch stated that he had seen a similar case, in which there was a fibrino-purulent peritonitis. The patient was an alcoholic. The pus was found principally in the submucous coat of the stomach. E. G. Janeway had seen 3 primary cases and 2 secondary cases. One of the patients was not a drinking man, and the 2 secondary cases followed sepsis, and were local in their areas of involvement.

(416) Venous Thrombosis and Cardiac Disease.

WILLIAM H. WELCH, of Baltimore, read a paper entitled Venous Thrombosis as a Complication of Cardiac Disease. Distinct venous thrombosis was not usually recognised as a complication of cardiac disease. He recorded 4 personal observations, and had collected from the literature 23 additional cases. The location of the thrombus was in the veins of the neck and the upper extremities in the majority of instances. Of 23 cases in which the thrombosis affected the veins of the upper part of the body, 17 were in females and 4 were in males; in 2 the sex was not stated. The heart condition in 20 cases was a complication of mitral disease, and since this form of heart disease was more common in females than in males, the preponderance of female patients in whom this complication occurred might be explained. The age at which the majority of cases occurred was between 15 and 30. Rheumatism, while the underlying cause of the heart disease, was probably not the cause of the thrombosis. In the majority of cases the thrombosis appeared during the failure of compensation. The veins of the left side were affected in 21 out of the 23 cases. Usually the veins of both the neck and the arm were thrombosed. The case reported by the author was the only one in which micro-organisms (streptococcus pyogenes) were found. The prognosis was grave, mainly on account of the cardiac condition. The thrombosis was probably of micro-organismal origin.

(417) Pernicious Anæmia.

FRANK BILLINGS, of Chicago, showed charts to illustrate a report of cases of pernicious anæmia with special reference to the blood findings. In all 19 cases were reported, 11 in males and 8 in females. The average age of the patients was 46 years. No exciting cause could be determined except syphilis in 1 case. The lemon-yellow tint was constant, the body weight was preserved, cardio-vascular symptoms were common, the spleen was enlarged in 4 and the liver in 3 cases. The stools were negative in all cases except 1, and in that infusoria were present. The disease as a rule progressed rapidly. In 3 cases the hæmoglobin varied from 15 per cent. to 74 per cent.; the red blood corpuscles varied between 150,000 and 4,000,000; the colour index was above normal in 53 out of 66 examinations, sometimes it was low. The leucocytes were usually below the normal. The colour index diminished during the remission and increased during the exacerbation, as did the number of nucleated red corpuscles. Direct infusion of blood produced in 1 case very little effect. The myelocytes were most abundant when the patient was at the lowest ebb. The occurrence of megaloblasts were of importance in the diagnosis, and when the nucleus of the cells was irregular it indicated an increased degenerative change.—Richard C. Cabot, of Boston, read a paper on some of the conclusions reached after a study of 110 cases of per-

nicious anæmia. Of the 110 cases reported 57 were males and 53 were females. Of the cases occurring in the female subject 4 followed parturition, and in 1 of these in which a necropsy was had there was leucocytosis and diphtheritic endometritis. He had seen all the cases within seven years, and thought that the disease must be common in the neighbourhood of Boston. Many of the cases in the series were originally diagnosed as general tuberculosis. Hæmorrhage was probably a symptom and not a cause of the disease; it had been observed from the bowels, the nose, the gums, the stomach, and the ear. The symptoms were constant; in certain cases they were very mild; there was a lack of relation between the severity of the blood lesions and the severity of the symptoms, and it was not the lack of the corpuscles only that caused the symptoms. Muscular weakness, dyspnœa, gastro-intestinal symptoms, such as vomiting and diarrhœa, were seen. The latter train of symptoms was often paroxysmal. This fact was evidence against the hypothesis that atrophy of the gastric tubules was a cause of the disease. Hæmic murmurs were always heard, and occasionally a true regurgitant murmur was to be made out. The liver was enlarged in 30 cases, the spleen was enlarged in 13 cases. There were hæmorrhages into the retina in 36 cases, and 15 eye grounds were normal. In 66⅔ per cent. of the cases fever between 99° and 100° F. was seen. The urine was normal in 53 cases. In other cases albumen with hyaline and granular casts were seen. The urine was usually pale. There were nervous symptoms in one-third of the cases; nervous lesions might occur without giving rise to symptoms. In 106 cases the red blood corpuscles were below 2,000,000, and in 4 they were above that figure. The leucocytes in 72 cases were below 5,000, in 38 cases they were above that figure. The hæmoglobin in 79 cases was high, and in 31 cases normal or low. The red cells were usually increased in size, and megaloblasts were found at some time in 107 of the cases. In the 3 cases in which they were not found the blood was examined only once. The percentage of lymphocytes was in reality normal, and the polymorphonuclear leucocytes were decreased. Myelocytes were present frequently. In the periods of remission of the disease the red corpuscles usually rose and the hæmoglobin fell, resulting in a condition that resembled chlorosis. The leucocytes also increased during this period, the additional number of cells being polymorpho-nuclears. The megaloblasts disappeared, normoblasts took their place to disappear in turn. The symptomatology and course of the disease, as well as the result of the blood examination, were not at all like those of secondary anæmia. In those cases in which latent carcinoma had been found the carcinoma was not necessarily the cause of the pernicious anæmia. No case recovered. In mild cases diarrhœa was common. Twenty cases were progressive; in 69 cases 1 or more remissions were seen, and 21 of the patients went to work. Remission might take place in from ten to fourteen days. In 76 cases the duration of the disease was from one to three years. Treatment was hopeless, arsenic and bone marrow had no effect, but in some cases laxative treatment seemed to have done some good.

(418) A New Pathogenic Fungus.

L. Hektoen, of Chicago, read a paper on a new pathogenic fungus (*Sporothrix*, Schenck). The patient who furnished the text for the paper was a boy who presented multiple refractory abscesses on the arm, as the result of an injury to the hand with a hammer. The disease was of three months' duration and 24 operations had been done. The abscesses contained a thick viscid pus, culture of which resulted in the growth of a fungus. These cultures became brownish as they grew old. Plate cultures showed a mass of mycelium, and radiating from the periphery of the central portion masses of spore-bearing threads. The organism was pathogenic for mice and for white rats, producing chronic suppurative processes. After peritoneal inoculation tuberculous nodules developed that contained, at first, masses of coagulation necrosis with fibrin, and later, thick pus filled with spores, but no threads. Simon Flexner said he had no doubt that this fungus and the organism of Schenck were identical. He called attention to the fact that in small animals the organism of Schenck produced a scepticæmia with enlarged lymphatic glands, the latter containing micro-organisms. Hektoen said that he had not been able to produce a septicæmia in mice, and that that was the only difference between his organism and the fungus of Schenck.

(419) Suprarenal Extract in Addison's Disease.

W. W. Johnston, of Washington, presented a case of Addison's disease under treatment with suprarenal extract. The patient was a man, a farmer, in whom the symptoms had appeared suddenly with loss of flesh, weakness, and gastro-intestinal symptoms. Pigmentation appeared later and was accompanied by exhaustion, vomiting, purgation, and was progressive. The blood was apparently normal. The symptoms became worse in the summer and improvement was noted in the winter. The patient was being treated with suprarenal extract with rapid improvement. The author had collected 43 cases of the disease that had been treated with suprarenal extract; of these, 13 were improved, 9 recovered, 11 died, 3 showed no improvement, and the result was not recorded in 7. In answer to a question by Kinnicutt, Johnston stated that there had been slight enlargement of the liver, but no glycosuria. In answer to S. Weir Mitchell he said that the temperature had been subnormal, and that he had used 9 grains of suprarenal extract three times a day. In answer to McPhedran he said that at first the heart beat had been feeble and the tension low, but that later the heart beat had been stronger and the tension higher.

(420) Sanatorium Treatment of Phthisis.

E. L. Trudeau, of Saranac Lake, read a paper on the sanatorium treatment of pulmonary tuberculosis and its results. For him the pretuberculous stage of pulmonary tuberculosis was the first stage of the disease before the physical signs had developed. He used the *x*-ray apparatus and the tuberculin test before the physical signs had appeared in suspected cases. By the *x*-ray apparatus the diaphragm might be seen to be higher, or to be limited in its excursions on the affected side. The tuberculin test had not resulted in injury to any of his patients. In the treatment rest was essential, especially when taken in the open air. The patients at rest digested well, although taking no exercise. Tuberculin as treatment was injurious whenever the process was progressing. It should be used only in apyretic cases, and should be given in small and frequently repeated doses, carefully watching the nutrition and the temperature. The remedy probably stimulated the formation of fibrous tissue. During the past 15 years, of the 1,176 patients discharged alive one-half were living and one-half of these were perfectly well. In discussion S. S. Cohen asked Trudeau what method of diagnosis he employed before the disease was far enough advanced to give results by *x*-ray examination, and whether under the term "rest" he included local rest of the lung as well as general rest of the body? Trudeau said that he made the diagnosis in early stages of tuberculosis by the temperature record. If the evening temperature was between 99.5° and 100°, and there was a slight disturbance of health, he made the diagnosis. Tuberculin should be used only when necessary. Experiments with corneal lesions in rabbits, artificially produced, showed that tuberculin did not cause the spread of the lesion. He procured rest of the lung by rest of the individual.

(421) Poisoning by Vapo-Cresolene.

Samuel S. Adams, of Washington, reported cases of poisoning by vapo-cresolene, directly attributed to the fumes of a vapo-cresolene lamp. In one case he was told that the child had whooping-cough. He found it shut up in a small room and inhaling the fumes from the lamp. In another case the child he had been told was dying of pneumonia. He found the child with stridulous respiration and frequently crying. It was in a cold clammy sweat, with dilated pupils. The child had bronchitis and someone recommended the use of a vapo-cresolene lamp. At 12 o'clock that night the child refused food, and this seemed to be remarkable because it had been feeding pretty well. At 4 o'clock the child awoke, uttering a peculiar noise, and when picked up was found to be in a cold sweat. He ordered the child to be taken into another room and the windows thrown up to air the apartments. It appeared to get better, but when taken to

the sick room the symptoms reappeared, showing conclusively that the illness was due to the fumes generated by the lamp.

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(422) Perforating Ulcer of the Duodenum.

ROBERT F. WEIR, of New York, delivered a presidential address on this subject. He said the perforation was usually located within $1\frac{1}{2}$ inch of the pylorus, more commonly on the anterior wall. In 80 per cent. of the cases the ulcer was single, in 8 per cent. of the cases double, while in the remaining cases more numerous perforations occurred. The causes of ulceration were difficult to determine; it had been attributed to habits of life, to circulatory disturbances, to the naturally delicate condition of the mucous membrane, to sepsis, burns, etc. Lockwood had collected 138 cases of burns treated by modern methods, and duodenal ulcer occurred in only one case. The affection was comparatively rare, occurring in about 0.2 per cent. of all necropsies. The patients were of all ages, but it was more common between 20 and 50. In many cases healing occurred without serious results, but in some cases cicatricial contraction resulted. The symptoms were often vague, and might be entirely wanting. The patient's previous history was of great importance; there was usually pain and tenderness and vomiting; hæmatemesis, blood in the stools, and jaundice, might be present. Pain usually followed some time after eating; hæmatemesis was less frequent than with gastric ulcer; vomiting was of importance if combined with other symptoms; jaundice rarely followed cicatricial contraction. Blood in the stools generally gave them a tarry appearance, but in some cases the blood might be bright red. Great advances had been made in the diagnosis of such conditions of late, and Weir believed that the differentiation from gastric ulcer was not impossible. The symptoms of perforation were sudden acute pain, vomiting, and shock. Later the symptoms of localised or general peritonitis supervened. The obliteration of liver dulness was not of much value, as resonance might result from a distended colon. As in perforating gastric ulcer, the mortality depended much upon the time elapsing between perforation and operation. Of 13 cases operated upon over 30 hours after perforation, all died. In the earlier cases the perforation was often not found or sutured, but among later cases the perforation had been found and closed in 35 per cent. of the cases, and there was much less confusion of the diagnosis with various forms of intestinal obstruction, appendicitis, etc. The treatment of non-perforating duodenal ulcer was seldom surgical, although in some cases gastro-enterostomy might be considered. In operating, Weir advised a long incision along the edge of the rectus muscle, then the fascia was cut transversely. If the perforation was not discovered on the anterior wall after wiping away the exudate, the posterior wall should be examined. Methylene blue taken by the mouth might aid in the diagnosis. The perforation was closed by two or three rows of sutures. Excision of the ulcer was necessary. Closing of the perforation was but half the battle; the careful cleansing of the peritoneum was of the highest importance. If dilatation of the stomach or obstruction to the flow of bile resulted from cicatrical contraction, gastro-enterostomy might be performed. Weir had made a synopsis of 51 cases, including 1 case in which he personally operated, upon which he based his paper.

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(423) Methods of Closing Abdominal Incisions.

M. H. RICHARDSON, of Boston, advocated through-and-through suture as quicker, more convenient, less likely to leave dead spaces, which filled with blood and tended to produce infection, and he believed that there was no more tendency to hernia. After using various materials for suture, he had adopted silkworm gut for closing the abdominal wall and silk for all other ligatures and sutures. It was questionable whether union was any more secure after suturing like tissues than if the peritoneum were sutured to the fascia and fascia to muscles. The number of hernias through scars of abdominal incisions was insignificant. In five years only 9 such cases had come to the Massachusetts General Hospital though over 1,500 abdominal operations had been performed. In some cases interrupted buried sutures of the fascia might be inserted with advantage after through-and-through sutures had been first inserted and before they were tightened and tied. It was well first to thread both ends of the suture with a needle, and the needles were then passed through the abdominal walls on each side from within outward. Deaver, of Philadelphia, confined his incisions to the muscular wall of the abdomen, preferably through the rectus muscle, not through the linea alba or linea semilunaris. He also used silkworm gut and silk as suture material, never catgut. Weir, of New York, used the layer suture. The suture should not be drawn too tight so as to strangle the tissue and interfere with repair. He thought that the percentage of ventral hernias was greater than was estimated by some previous speakers. G. R. Fowler, of Brooklyn, used what he called the crossed suture, a kind of double figure of 8 which crossed twice in the tissues. The suture was easily inserted, easily removed and efficient, the skin ends were farther apart from the edge of the incision, and they were passed through a bolster of thick rubber tubing. Coley, of New York, favoured the layer sutures, and had used a catgut for buried suture material for nine years. Out of 150 hernia operations since he began using gloves, he had had but one infection, and that could be traced to imperfect sterilisation of the skin. He had seen many sinuses resulting from the use of silk. Mixter, of Boston, did not use either method exclusively. There were great differences in the way in which sutures were inserted. If through-and-through sutures were used, the different layers should be picked up with care, and they should not be drawn too tightly. Johnson, of Richmond, Va., after extensive trial of both methods, preferred through-and-through suture, as it destroyed dead spaces, and did not leave weak places in the abdominal wall. Nancrede, of Ann Arbor, Mich., said by repeated experiment it had been proved that catgut could be reliably sterilised by boiling in cumol, and if germs were found on the end of it, they were the same as those on the operator's hands. Carson, of St. Louis, preferred catgut as a suture material. Ransohoff, of Cincinnati, used continuous sutures in layers and fastened by the use of perforated shot. Richardson, in closing the discussion, stated that his objection to catgut was not that it could not be sterilised, but it did not tie well and was not permanent enough. Silk never gave trouble in aseptic wounds.

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(424) Surgery of the Stomach.

A DISCUSSION on surgery of the stomach was opened by W. W. Keen, of Philadelphia. Malignant disease of the stomach was of more importance at present than non-malignant disease, because of its greater frequency and because of the greater difficulties in diagnosis. During the past few years the specialist on gastric diseases had given the surgeon great aid in the diagnosis. Hemmeter had called attention to the fact that if the operation was to be successful it must be performed within the first three months of the disease, and if the specialist found any probability, or even a possibility, of this disease, exploratory operation was indicated. There was little danger in exploratory incision, but there was danger in late operation that one should be able to accomplish nothing. If a palpable tumour was present recurrence was almost inevitable. M. H. Richardson, of Boston, believed that all methods of diagnosis should be exhausted before exploratory operation was resorted to, but in case of doubt the abdomen should be opened as soon as possible in all surgical affections of the stomach. In case of hæmorrhage operation was not advisable unless medical means had failed. Perforation demanded immediate operation, but the diagnosis was sometimes difficult. In cases of carcinoma the time for operation was before the tumour was felt, but not one case in fifty was suitable for operation at the time it came to the surgeon. Total extirpation probably had a more limited field than was at first believed. Ransohoff, of Cincinnati, advised operation for malignant disease of the stomach in two stages—preliminary gastro-enterostomy, then about two weeks later pylorectomy. Nancrede, of Ann Arbor, Mich., reported a series of experiments which showed that infection with the colon bacillus was not ordinarily the cause of death, but if morphine was administered a fatal result was likely to follow. He em-

phasised the desirability of statistics as to the result of pylorectomies by the members of the Association. He did not believe that there was 90 per cent. mortality after this operation; if so it was not a justifiable procedure. Tiffany, of Baltimore, believed that pylorectomy was justifiable only in rare cases. He had operated in a number of cases referred to him by Hemmeter, and invariably found enlarged glands, which precluded further intervention. He called attention to the fact that by incising the gastro-colic omentum and passing the hand up behind the stomach, it was possible to turn the stomach practically inside out in examining the mucous membrane for ulcer. Weir, of New York, said that while a diagnosis was impossible we operated for the relief of such symptoms as pain, hæmorrhage, and dilatation. To the operation he personally preferred posterior gastro-enterostomy in combination with entero-enterostomy, using Murphy's button. During the past year he had operated upon 11 cases with no deaths. In exploratory operations cocaine anæsthesia might be much more frequently used. Armstrong, of Montreal, considered many cases of gastric hæmorrhage, such as capillary bleeding, to be amenable to medical treatment, but the severe hæmorrhage which arose from deep ulceration generally required operative treatment. Repeated hæmorrhages of considerable amount also demanded operative treatment. In operating a large opening should be made near the middle of the anterior wall of the stomach to give plenty of room for exploration.

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(425) Diagnosis of Cancer of the Stomach.

John C. Hemmeter, of Baltimore, held that the first symptoms resembled those of nervous dyspepsia or chronic gastritis. Such symptoms as pain, dyspepsia, and the appearance of blood were of little value, because found in other conditions. The absence of free HCl was an important symptom, but it might not be present even at the end of the disease. The presence of lactic acid was a sign of stagnation, and was not present till there was pyloric obstruction. It was present in about 84 per cent. of the cases of cancer. The Oppler-Boas bacillus was present in 53 out of 55 cases of carcinoma, but, like lactic acid, it might be present with benign growths. There was little hope of a diagnosis from gastroscopic examination, and it was not without considerable danger. The use of the x rays was futile, and electrodiaphany was of no value till there was great thickening. Curetting the stomach by the stomach tube gave positive evidence of carcinoma if the growth had disintegrated. The appearance of atypical and asymmetrical mitoses in the cells of tissue undergoing transformation, if present, was highly suggestive. Until a knowledge of the true nature of the disease was gained, early diagnosis and successful treatment would be impossible, and gastric surgery could only be palliative. In all cases of nervous dyspepsia or chronic gastritis, if there was no benefit resulting after four weeks medical treatment, if there was lessened peristalsis and no free HCl, if atypical mitoses were found, exploratory operation was indicated.

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(426) Perforating Ulcer of the Stomach.

J. M. T. Finney, of Baltimore, said that among 35 patients that had been treated in the wards of Johns Hopkins Hospital for gastric ulcer perforation had occurred in but one case, and death resulted before the operation could be completed. The affection was most frequently met with in young women of the lower walks of life; in men it usually occurred after 40. The site of the ulcer was most commonly the anterior wall of the cardia, next most frequently the pylorus, then along the lesser curvature, and finally the posterior wall. In about 20 per cent. of the cases there was more than one perforation. The severity of the symptoms arising depended on the size of the perforation, the amount and character of gastric contents, the variety and number of bacteria present. If the stomach were empty the chances of recovery were much more favourable. The stomach was capable of sterilising itself as the gastric acid killed many bacteria; but many might persist, buried deeply in the mucosa. There were no symptoms of impending perforation, but Finney believed that the blood count and the finding of leucocytes was of great diagnostic value. The less opium given the better in these cases. Early exploratory operation was urged in case there was doubt as to the diagnosis. Cocaine anæsthesia was sufficient in such cases. Cover-slip preparations and cultures might be taken, and the abdomen closed, provided no lesion was found. If necessary to continue the operation a general anæsthetic might be administered. The cause of death in these cases was usually sepsis, but there had been much improvement in the results of late. While the percentage of recoveries, which was now placed at 87 per cent., might be somewhat too high, it was a great improvement over the 5 per cent. of recoveries which followed without operation.

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(427) Operation for Primary Vaginal Carcinoma.

William R. Pryor, of New York, read a paper on an operation for primary vaginal carcinoma, applicable also to cancer of the rectum in women. Primary cancer of the vagina was a rare form of malignant disease. It was usually situated on the posterior vaginal wall and extended rapidly towards the rectum and perivaginal tissues. The cancer was prone to spread by invasion of the tissues having common sources of blood, and any successful operation must seek the removal of all the organs belonging to the vascular group in which the affected organ was placed. It also recurred locally. The operation of Olshausen consisted in a blunt dissection of the vagina from the rectum, which usually resulted in failure and early recurrence. Pryor reported 2 cases, the first cancer of the rectum and vagina, ulcerated and infiltrated, involving the posterior vaginal wall 1½ inch. The second, cancer of the vagina, occurring 1 inch below the cervix on the posterior vaginal wall. The operation employed by him had the distinct advantage of removing as thoroughly as possible all the diseased area. After the usual preparation of the patient an incision from the pubes to the umbilicus was made, and the internal iliac arteries and the obturator vessels were ligated with kangaroo tendon, the bladder was dissected from the anterior uterine wall, and the vagina opened anteriorly. The uterus and appendages with the entire rectum were later removed after the actual cautery had been used to clear the cancerous mass. After the excision of the rectum and periproctal tissue, an artificial anus was formed near the normal site. This radical operation had a surgical basis in the following principles: (*a*) The preliminary and preventive hæmostasis rendered the field of operation comparatively dry, and there was less danger of transplantation of cancer cells during the subsequent manipulations; (*b*) avoidance of injury to the cancerous field until hæmostasis was secured and the cancer charred; (*c*) there was removal of all organs in which recurrence was apt to take place from above downward; (*d*) establishment of an artificial anus near the normal site. In the discussion Munde said that he had seen only two cases of primary cancer of the vagina in his long experience; these cases were practically inoperable—only *curettement* and cauterisation were done, which relieved the symptoms temporarily. He did not consider that such a bloody and radical operation repaid, as the benefit to the patient was slight and the recurrence inevitable. Sutton, of Pittsburg, had seen but one case in thirty-four years' experience. He had little faith in the radical operations for malignant disease of the genitalia. He considered that the causation and pathology, rather than new methods of operating, should engage attention, as it was necessary to find the factor producing cancer in order to combat it successfully.

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(428) Hæmorrhage in Non-perforating Gastric Ulcer.

William L. Rodman, of Philadelphia, discussed the various operations which had been practised for hæmorrhage; gastro-enterostomy had been most commonly performed, and probably would continue to be because of the difficulty in locating the ulcerated vessels. In fifty-five necropsies the splenic artery was found to be ulcerated seventeen times. Excision of the ulcer was the ideal operation, unless there were strong adhesions, and the mortality in those cases in which this operation had been performed was less than that of gastro-enterostomy. Operation for acute hæmorrhage was advised with limitations, but operation for chronic hæmorrhage was always indicated.

AN EPITOME
OF
CURRENT MEDICAL LITERATURE.

AMERICAN MEDICAL CONGRESS.

May 1st, 2nd, and 3rd, 1900.

(Continued from page 88).

(429) Treatment of Uterine Fibroids.

HOWARD A. KELLY, of Baltimore, described the evolution of his technique in the treatment of fibroid uterine growths. There were three way of dealing with these tumours and meeting the complications: (1) By a median sagittal bisection of the uterus with the tumour; (2) by a coronal bisection of the uterus in the cervical portion; (3) by a bisection of the tumour alone. The situation and anatomical relation of the tumour should be thoroughly studied after the abdomen is opened, before beginning operation. The dangers to be avoided were brought about by atypical cases; the hæmorrhage might be excessive and uncontrollable; prolonged operation and injuries to the intestines and ureters might jeopardise the patient. In all these cases the principle of the operation was the same, and the best method of enucleation was to seek out first, isolate and ligate the ovarian vessls of one side, then to expose and tie the uterine vessels of the same side, then to cut across the cervix and clamp the opposite uterine artery, then the round ligament, and lastly the ovarian vessels.—A. Lapthorn Smith, of Montreal presented an appreciation of Kelly's method of removing fibroids of the uterus. He had formerly been strongly opposed to operative treatment for fibroids, because of the high mortality then prevailing among the best operators, but the ideal method perfected by Kelly had led him to adopt this as the method of preference. He considered that the great advantage was that there was much less danger of injuring the ureters. He laid great stress upon the importance of feeling for each individual artery, and tying it before cutting it, and then putting a second ligature on it, as the first might be loosened after the tension of the tumour had been removed. Chromicised catgut was employed. He opposed leaving the tubes and ovaries remaining after hysterectomy, and he believed that sooner or later they would cause trouble. Hysterectomy was far preferable to myomectomy, except in case of a single polypus. All fibroid uteri should be removed as soon as discovered, because the woman with a fibroid was liable not only to hæmorrhage but to suffer from reflex disturbance of digestion and circulation. Besides, every day its removal was becoming more dangerous, and the chances of its becoming malignant greater. The writer strongly condemned vaginal *morcellement*, as the operation was carried on in the dark and the ureters frequently wounded, while complications such as adhesions of the vermiform appendix and tears of the intestine, which were easily dealt with by the abdomen and with the patient in the Trendelenburg position, were almost impossible to manage when working from the vagina.

(430) Anastomosis of Ureter with Intestine.

REUBEN PETERSON, of Chicago, presented an historical and experimental research on anastomosis of the ureters with the intestines. The first part was devoted to a review of the literature on the subject; the second to a detailed account of his experiments upon dogs. The changes in the ureter and kidney had been thoroughly studied, and causes of death in many instances determined. In many cases Maydl's method of uretero-trigono-intestinal anastomosis was employed. The writer's general conclusions were as follows: (1) The primary mortality of uretero-intestinal anastomosis, both in experimental work on animals and in man, is exceedingly high. (2) The best technique is that requiring the least amount of suturing of the ureters themselves. (3) All efforts to prevent ascending renal infection in animals, as in man, when the ureter has been implanted without the vesical orifice have proved futile. (4) It is impossible to determine in advance the extent of the infection which will result from uretero-intestinal anastomosis. The patient may die in a few days of a pyæmia, or in a short time of pyelonephritis, or in rare cases may recover from the infection with resulting contracted kidneys. (5) Hence the operation is unjustifiable either for the purpose of making the patient more comfortable, as in exstrophy of the bladder, vesico-vaginal or ureterovaginal fistula, or for malignant disease of the bladder. (6) The results of uretero-intestinal anastomosis through the formation of vesico-rectal fistula have not been favourable up to the present time. (7) The success of Frank's experimental work in vesico-rectal anastomosis justifies the expectation that the future results of this operation will be more satisfactory. (8) The primary mortality of uretero-trigono-intestinal anastomosis is low for an operation of this magnitude. (9) While it cannot be denied that ascending renal infection may occur after this operation, the infection, as a rule, is of such a type that the chances of the individual overcoming it are good. (10) Hence the operation of implanting the vesical flap with its ureteral orifice into the intestine is a justifiable surgical proceedure. (11) There is no valve guarding the vesico-ureteral orifice, nor does the circular muscular layer of the ureter nor the bladder muscles themselves act as a sphincter. (12) It has been abundantly demonstrated by experimental and clinical work that the rectum tolerates the presence of urine and acts as a good substitute for the bladder, and that good control over the anal sphincter will be maintained.

(431) Remote Results of Conservative Operations on Ovaries and Tubes.

W. L. BURRAGE, of Boston, stated that he had had 137 operations, which were performed on diseased uterine appendages, with the object of preserving one or both ovaries, with their tubes, or as much of the tubes as were reasonably normal in appearance. In 85 of these reliable information as to the present condition could be obtained at least a year after operation, and the results were included in the tables accompanying the paper, the cases being divided into the more severe and the less severe. In comparing the two it was found that gonorrhœa and syphilis were more prevalent, and that the symptoms had resulted more frequently from difficult labours or abortions among the more severe, and that the tubes were closed in a majority of the more severe, whereas they were open in all but 4 of the less severe. Pregnancy followed operation in 4 of the more severe and in 11 of the less severe. In none of the cases when the closed tubes had been opened and new ostia formed did pregnancy follow operation. All the cases of subsequent pregnancy in both classes, except 2 of the less severe, had had previous pregnancies. Anatomical cure was recorded in 33 out of 57 cases who came under observation and symptomatic cure in 60 out of 85. The writer's conclusions were that it is advisable to do conservative operations in all cases when the ovaries and tubes are not hopelessly diseased in all parts of their structure, except on patients who are near the menopause; on patients who have pronounced gonorrhœa of long standing; and on cases of malignant disease. With the present methods of performing resection of the tubes, if both tubes are found closed, subsequent pregnancy is not to be expected. In severe grades of inflammation of the appendages, irrespective of causation, if the ostium abdominale of one tube is patent, the prospect of subsequent pregnancy after the preservation of a portion of ovary is about 1 in $4\frac{1}{4}$, or 23.5 per cent. In the less severe grades of inflammation under similar conditions of tube and ovary the prospect of subsequent pregnancy is about 1 in $2\frac{1}{4}$, or 44 per cent. In women who have borne children, in both classes, subsequent pregnancy may be expected in 35 per cent., whereas in previously sterile women it may be looked for in only 5 per cent. Emmet, of New York, advocated strongly conservatism in surgery of the uterine appendages, and cited an illustrative case in which pregnancy occurred when only a fragment of ovarian tissue had been left. He urged that as much as possible of the tube be permitted to remain. Dudley, of New York, had performed 138 consecutive operations on the appendages without a death, and reported a case of double pyosalpinx in which he had successfully transplanted a part of the ovary in the interior of the uterine wall after exsecting the tubes. He was certain that grafting had occurred, as the patient

was menstruating regularly, and had had a possible abortion since operation. Pregnancies had occurred in many of his patients after the conservative operations. He tried to save both the menstrual and procreative functions.

(432) Suture of Round Ligaments.

HIRAM N. VINEBERG, of New York, read a paper on the technique, indications, and ultimate results of suturing the round ligaments of the vaginal wall for retroversions and flexions of the uterus. Vineberg, by incision through the anterior vaginal fornix, sutured the round ligaments of the uterus to the vaginal wall. He had operated on 53 cases in four years, and detailed the results in these cases. The operation was indicated in the following conditions: (1) In all cases of mobile retroversions and flexions of the uterus in which a surgical procedure, for one reason or another, may be deemed necessary: (2) in the same conditions, when they are associated with prolapsus uteri of the first and second degree; (3) in all cases of adherent retroversions and flexion in which the uterus only is adherent; (4) in cases of retroversions and flexion, associated with moderate disease of the adnexa, such as cystic ovaries, catarrhal salpingitis, hydrosalpinx, and hæmatosalpinx, and pyosalpinx, when the latter is of moderate size, and not too firmly and extensively adherent; (5) it is the operation of choice in women with thin, lax abdominal walls, which would offer a poor support for the uterus. The same applies to the extreme opposite condition, in women with very fat abdominal walls, in whom a suprapubic operation constitutes a very serious affair.

MEDICINE.

(433) Analgesia of the Ulnar Nerve in Epileptics.

LANNOIS AND CARRIER (*Rev. de Méd.*, November 10th, 1899) found that in 130 epileptics, of whom 50 were males and 80 females, sensation to pressure on the ulnar nerve at the elbow was, as regards males, normal on the two sides in 27 out of 50 cases, normal on one side only in 4 cases; diminished or markedly obtuse on both sides in 11 cases, and diminished on one side in 6 cases. There was complete analgesia on both sides in 5 cases, and on one side in 4 cases. In other words the male epileptics showed ulnar analgesia in 14 per cent. of the cases, diminished sensibility in 28 per cent., and normal sensibility in 58 per cent. The 80 women gave the following results: Sensibility was normal on the two sides in 40 cases, and diminished on the two sides in 11 cases. Eleven cases showed a diminution of sensibility on one side only. There was ulnar analgesia on both sides in 14 cases, and on one side in 10 cases. The female epileptics thus showed ulnar analgesia in 24 per cent. of the cases, diminished sensibility in 20½ per cent., and normal sensibility in 55 per cent. The percentages in the two sexes were as follows: ulnar analgesia, 20 per cent.; diminished sensibility, 23½ per cent.; and normal sensibility of the ulnar nerve 56½ per cent. The authors conclude that ulnar analgesia may be regarded as a diagnostic sign of minor importance, but that it cannot be taken as a sign of value in differential diagnosis from hysteria, for example. Analgesia was present in a large number of cases after an epileptic fit, but any marked analgesia generally disappeared about twelve hours after the attack.

(434) Œsophageal Diverticulum Diagnosed by X-Rays.

VICTOR BLUM records (*Wien. klin. Woch.*, March 15th, 1900) a case where a diverticulum of the œsophagus was diagnosed after œsophagoscopy had failed. The patient had been subject to obscure symptoms of œsophageal disturbance with eructation of food. A tube filled with mercury and closed at one end was introduced into the œsophagus and arrested in its course before it reached the stomach; *x*-ray examination then showed the tube lying alongside the spine about 10 inches below the level of the teeth in such a fashion that a diverticulum was suggested. A sound filled with bismuth was then introduced with the aid of the fluoroscope, and the presence of the diverticulum made certain. On withdrawing the tube and sound it was possible to pass an india-rubber bag like a toy balloon filled with a solution of potassium bromide, which is opaque to *x* rays, into this diverticulum, and in this way the exact position, form, and size of the latter were ascertained. Blum considers this the best method for actually diagnosiug œsophageal diverticula.

(435) Gonorrhœal Psychopathy.

CASSELLA (*Rif. Med.*, April 5th, 1900) records the case of a young man of healthy parentage who presented well-marked mental symptoms in the course of four different attacks of gonorrhœa. The first attack was characterised by taciturnity, melancholy, confusion of ideas, stupor, and apathy, necessitating confinement in an asylum: with the cure of the gonorrhœa the mental symptoms disappeared. A second attack of gonorrhœa 5 months later was accompanied by similar mental symptoms. The third attack of gonorrhœa occurred 53 days later, and a fourth attack two years after. The last two attacks were associated with symptoms of a more active kind, namely, extreme restlessness, mania, and a chaotic delirium of ideas and actions. Recovery occurred after each attack.

SURGERY.

(436) Suprapubic Cystostomy in Advanced Prostatic Disease.

GARREL (*Gaz. des Hôp.*, August 24th, 1899) relates a case of successful suprapubic cystostomy for severe urinary septicæmia due to prostatic disease. The patient was a farmer, aged 70, quite healthy till a year previously, when he began to suffer from frequent micturition at night; sometimes he had difficulty in passing water. Twelve days before admission into hospital sudden retention occurred, and the catheter was passed without trouble. Then fever set in, and catheterism became more and more difficult and painful. At length no urine passed for twenty-four hours, the bladder reaching to above the umbilicus. The prostate was very large. The urine was very fœtid, and only dribbled out of the catheter; after over three pints had come away, the bladder was still much distended. The kidneys were enlarged and tender. Violent delirium set in, and the temperature rose to over 104°. Ascending pyelonephritis evidently existed. Delore performed cystostomy; the vesical cavity was enormous, and the atony from over-distension so marked that ten minutes after incision the bladder hardly showed any appreciable diminution in size. During the first week the temperature varied from normal to 100°. The delirium remained severe and the patient succeeded in soiling the wound with his hands. The bladder was freely irrigated with permanganate twice daily. After the first week steady improvement set in, and at the end of the third the patient was discharged with a hypogastric urinal which allowed of a fair amount of retention. He was in good health two months later. This case shows the importance of cystostomy in urinary infection where enlarged prostate exists. A retained catheter, as usual, proved useless in preventing the upward advance of the disease in the urinary tract. Legueu and Albarran have urged this operation, and in this case it saved a man when already in desperate condition.

(437) Prophylaxis in Chloroform Narcosis.

FEILCHENFELD (*Centralbl. f. Chir.*, No. 4, 1900) states that he has given much relief by the administration of small doses of strophanthus in cases of cardiac oppression, with palpitation and rapid pulse, due to mental excitement and dread. Such condition, though usually met with in cases of weak and dilated heart, may occur in subjects who are apparently quite healthy. To those predisposed to attacks of this kind under the influence of strong emotions, the anticipation and dread of an impending operation are likely to be serious factors with regard to the results of the administration of chloroform. It is very evident, the author states, that a patient of so-called nervous temperament, who after a sleepness night and without nourishment, for which there is no appetite, lies on the operating table in a state of intense anxiety and apprehension, is not well fitted for the administration, especially if this is likely to be prolonged, of a general anæsthetic. This condition of nervous cardiac disturbance merits more consideration in a patient about to undergo a serious operation than any cardiac lesion of long standing which probably has been well controlled by compensatory results. In cases of

this kind the author would give tincture of strophanthus in 5 or 6-drop doses on the last two evenings preceding the date of operation, and also on the morning of this event immediately after the last meal.

(438) Removal of the Shoulder-girdle for Sarcoma Scapulæ.

KÖLLIKER (*Münch. med. Woch.*, 1899, No. 2) on February 9th, 1899, performed this operation on a man, aged 56, with a sarcoma the size of an apple arising from the spine of the right scapula and filling the supraspinous fossa. The elevation of the arm was impeded and painful, and the axillary glands were swollen. An anterior skin flap was made by an incision from the middle of the clavicle over the acromion, and extending through the axilla to the lower corner of the scapula. The pectoralis major was divided, the clavicle cut through by a wire saw, and after division of the pectoralis minor and subclavius and the ligature of the A. transversa scapulæ, the subclavian vein and artery were ligatured behind the clavicle, and the latissimus dorsi was cut through. A posterior curved incision was made, uniting the extremities of the anterior one, and the posterior flap was detached as far as inner edge of the scapula. The trapezius was then detached from the clavicle and spine of the scapula, the serratus anticus from the scapula, then the rhomboid muscle, and finally the levator scapula. There was some bleeding from the A. transversa colli. The wound was closed, the entire operation under chloroform having taken 75 minutes; no collapse. The patient recovered rapidly in spite of an attack of delirium tremens, and six months later had influenza-pneumonia; no recurrence as yet. The tumour, a large round-cell sarcoma, had extended to the capsule of the shoulder joint and to several glands in the axilla.

MIDWIFERY AND DISEASES OF WOMEN.

(439) Vaginal Hysterectomy for Puerperal Infection.

C. MARIANI (*Arch. di Ostet. e Ginec.*, vii, p. 20, January-February, 1900) gives details of a case of septic puerperal endometritis in a woman, aged 24 years. Vaginal and uterine douching had proved insufficient, and the patient was sent into hospital thirty days after labour. Curettage was then carried out, but with difficulty, on account of the friability of the uterus. Still the temperature remained high, and there were signs of parametric involvement. An opening was made in the posterior vaginal fornix (posterior colpotomy) through which some pus escaped, and vaginal douching and washing out of the parametric pouch were continued. Some days later the patient had a feeling of laceration in the right side, followed by sharp pain and a rapid rise in temperature. There was tympanites, and the condition became serious; pulse 140, respirations 40. It was considered that a septic abscess either in the parametrium or in the uterus itself had ruptured into the peritoneal cavity, setting up acute peritonitis. The only indication was to remove the uterus and drain the peritoneum; and the method chosen was vaginal hysterectomy. The operation was carried out by the clamp method; large quantities of pus escaped during its performance, and great difficulty was experienced owing to the friability of the tissues. A vagino-peritoneal tampon of iodoform gauze was introduced, and a subcutaneous injection of normal saline solution was given. The patient made a good recovery.

(440) Imperforate Hymen at Birth: Speedy Fatal Results.

VITRAC (*Rev. Mens. de Gynéc., Obstét. et de Péd. de Bordeaux*, February, 1900) publishes a complete report of an infant born with œdema of the left leg and vulva. For two days it cried continually and refused the breast. Then the abdomen was found very distended, yet meconium passed freely. A tumour reached above the umbilicus; no urine had been passed. The vulva presented characters which misled the observer; the posterior vaginal wall (really it was the hymen) seemed to bulge forwards. The meatus was found, a catheter passed, and then much urine came away. There was clearly another tumour besides the now empty bladder, and it filled the pelvis. The urine was drawn off daily, but became purulent; broncho-pneumonia set in, and the child died just under 5 weeks old. There was general peritonitis from perforation of the pelvis of the left kidney. The tough imperforate hymen had caused the vagina and uterus to be greatly distended ("hydrometrocolpos") with mucus. These two structures made up the pelvic tumour, which compressed the bladder near its neck and greatly obstructed both ureters. The kidneys were much dilated; the left was suppurating.

(441) Vaginitis Verrucosa.

PIETRO (*Arch. di Ostet. e Ginec.*, vii, p. 1, January, February, 1900) describes a case of verrucose or warty form of vaginitis. The patient was 44 years of age, married; she had been eleven times pregnant, but the last three gestations had terminated in abortions. In the case of the last abortion (at the sixth month) the placenta had to be removed artificially and a purulent endometritis had followed with a sanguineous purulent vaginal discharge. Menstruation continued irregularly for a year and then the menopause occurred; for six years longer she suffered from a purulent vaginal discharge notwithstanding the use of douches, etc., and then in 1899 she came into hospital for treatment. The lower two-thirds of the vagina had a normal appearance and felt healthy to the touch, and there was no senile involution of the genitals. The upper third, however, felt hard, scabrous, and warty, and the fornices were filled up so that the cervix did not make the usual projection into the vagina. With the aid of the speculum it was noted that the vaginal fornices and upper part of the canal seemed as if filled up with a piece of skin; here and there in this were fissures and at its lower border there was a clear line of demarcation between it and the normal vaginal mucosa of the lower two-thirds. On the posterior and left lateral vaginal walls were some small isolated patches of the same skin-like tissue. Attempts were made by means of caustics and the curette to remove the abnormal tissue, but it quickly returned, and finally it was excised with the knife, and, after 5 months, there has been no return of the morbid state. Histologically the pathological tissue had the appearance of skin in a state of hyperkeratosis. The lesion is ascribed to the irritation caused by the flow of the purulent acrid secretion over the vaginal mucous membrane followed by intense inflammation.

THERAPEUTICS.

(442) Cure of Gangrene of the Lungs in the Course of Phthisis consecutive to Pneumonia.

CHAUVAIN (*Rev. Méd.*, January 31st, 1900) attended a man, aged 37, for an attack of lobar pneumonia in December, 1896. The convalescence was protracted, and in July, 1897, there were dulness and moist crepitations at the left apex, and his sputum contained tubercle bacilli. Under a treatment consisting of (1) hypodermic injections of 5 c.cm. of sterilised oil, containing 3 grs. of guaiacol, ¾ gram of iodoform, and 10½ grams of oil of eucalyptus, which were given every morning; (2) injections every evening, consisting of 10 c.cm. of an artificial serum containing sodium chloride, sulphate, and phosphate, with a minute quantity of carbolic acid; and (3) fresh air, full diet, and rest, he improved rapidly and appeared to be cured. Suddenly, however, in October, 1897, the temperature rose to 107.2° F. and the pulse to 155. The breath was extremely offensive; the sputum consisted of pus and elastic fibres, and there were the physical signs caused by breaking down pulmonary tissue. Circumscribed gangrene of the lung was diagnosed. With a drachm of sodium hyposulphite daily internally and inhalations of thymol, camphor, and guaiacol, and hypodermic injections of eucalyptus oil in sterilised olive oil, the gangrenous patch healed. During December, 1897, and January and February, 1898, the phthisis progressed slowly, without hæmoptysis or fever. In March, 1898, the hypodermic injections of guaiacol and iodoform were resumed and continued with intermissions until September. Steady improvement resulted, and in June, 1899, the patient appeared to be in perfect health and had become stout. There was still dulness at the left apex, but as there were no moist signs the disease had probably undergone fibrous transformation. As the pulmonary tuberculosis followed pneumonia and was complicated by gan-

grene, such an improvement or actual cure is very remarkable.

(443) Citric Acid for Ozæna in Atrophic Rhinitis.

Lewis Somers (*Therap. Gaz.*, March, 1900) refers to the innumerable remedies tried in this disease which is the *bête noire* of the rhinologist. Reliance upon any single remedy in atrophic rhinitis with ozæna invites failure, and this may be appreciated when it is understood that many cases are dependent upon pathological alterations in the nasal accessory sinuses, and that the atrophic affection is secondary, and hence that the local application of a powder, spray, or solution to the nasal chambers in ignorance of the sinus lesion will fail to give relief. After thorough and absolute cleansing of the nasal chambers with hydrogen dioxide and an alkaline solution, the intolerable and offensive odour will virtually disappear. Hamm published recently (*Münch. med. Woch.*, April 11th, 1899) a report of cases of atrophic rhinitis in which citric acid was found to give excellent results in relieving ozæna, and Somers having tried this has found, with few exceptions, that it did all its originator claimed for it. The method of application is to thoroughly cleanse the nasal chambers of all crusts and *débris*, and with a powder blower to cover the affected tissues with a powder composed of equal parts of citric acid and milk sugar finely triturated. This is repeated daily, and the odour is dispelled and may remain absent for several days without further treatment. It is best to use a powder containing 25 per cent. citric acid to start with and then to gradually increase the percentage as the patient gets habituated to the stronger powders, namely, 30 and 35 per cent. Care must be taken that the powder does not enter the pharynx or larynx, as severe irritation results. A cleansing of the nasal passages with hydrogen peroxide and an alkaline solution every alternate day should precede the application of the powder. The patient is then instructed to insufflate the powder into the nostrils thrice daily. By this means the fœtor is entirely overcome.

(444) Guaiacol in Epididymitis.

Christian, of the Philadelphia Polyclinic, reports (*Therap. Gaz.*, March 15th, 1900) excellent results obtained by the use of guaiacol in epididymitis. The treatment begins with a saline laxative early in the morning, and the application of one Swedish leech over the spermatic cord on the affected side when there is acute vascular engorgement. The continuous application of moist heat dressings and rest in bed for forty-eight hours is the next step preparatory to the following—namely, the local use of guaiacol. This remedy was used in 60 cases, and in 54 of these great relief from pain was obtained in the course of twenty-four hours, in many within a few hours of the application. The *modus operandi* was to gently massage the testicle with a small amount of guaiacol ointment (25 per cent. strength) made up with lanolin. Some of the ointment was then spread on lint, applied over the testicle, the whole of the scrotum enveloped in a layer of absorbent cotton, and over this a snugly-fitting laced suspensory bandage applied. The dressing was reapplied every alternate day. At the end of six days, when the inflammation and pain had entirely subsided, the following ointment was substituted as a dressing—namely, ung. hydrarg., ichthyol, lanolin, and ung. belladonnæ, aa, equal parts. Under this treatment the testicle returned to its normal condition in two to three weeks, and often less. This line of treatment had been followed for some time both at the hospital and polyclinic with most satisfactory results.

(445) The Treatment of Parasitic and Fungoid Diseases.

Bucknall (*New York Med. Journal*, February 24th) finds sapodermin very effective in these diseases. Sapodermin is a soap in which the bichloride of mercury is incorporated with triple refined stearin and glycerine, changing the bichloride into an albuminate. He instructs his patients to take baths once or twice a day, and anoint themselves freely with a 1 per cent. solution of sapodermin, leaving the latter *in situ* for 15 to 30 minutes. He has seen no evidences of absorption of the Hg. Cases of scabies, furunculosis, pediculosis, and pustular dermatitis recovered in from 10 to 20 applications.

PATHOLOGY.

(446) The Role of Toxins in the Production of Conjunctivitis.

Morax and Elmassian (*Ann. d'Oculist.*, August, 1899), after detailing their experiments, sum up the general results. By means of continued instillation into the conjunctival sac they have produced conjunctivitis in the rabbit with the living and dead cultures of the gonococcus, the bacillus of Weeks, the diplobacillus, and the staphylococcus; also with the filtrate of these cultures. These organisms never multiply in the conjunctival sac of the rabbit, and hence the inoculation of their cultures under ordinary conditions does not give a positive result; nevertheless the conjunctiva does react in the presence of the toxins of the above microbes, and in a manner very similar to the human conjunctiva; but, absorption being very slow, the contact must be prolonged. There is always an interval of at least two or three hours between the commencement of instillation and the onset of symptoms. In the case of the diphtheria toxin this latent period is at least twelve to twenty hours. This is comparable with what happens after the instillation of jequirity (abrine), but a single drop of the latter applied for a few seconds suffices to produce the reaction. The reaction which the toxin sets up may persist a long time (this is the case in diphtheria, and in the instillation of abrine or of snake poison), or very soon come to an end, as in the case of the diplobacillus and Weeks's bacillus. In the case of the gonococcus the reaction persists a little longer. The toxins elaborated by the gonococcus, Weeks's bacillus, and the diplobacillus have a much more feeble and limited action than the diphtheria toxin. Whilst in diphtheria the reaction produced may persist forty-eight hours or more after the disappearance of the diphtheria bacillus, in blenorrhœa, acute and subacute conjunctivitis the reaction strictly depends on the presence of the microbe, and ceases within a few hours of its disappearance from the conjunctival secretion.

(447) Syphilis of the Aorta as a Cause of Aneurysm.

Arnold Heller (*Münch. med. Woch.*, No. 50, 1899) points out, from the records of a considerable number of cases carefully observed and collected, that aneurysms of the aorta arising from syphilis exceed considerably those due to other causes, especially in young adults and in men in the prime of life. The characteristic microscopic lesions of the aorta produced by syphilis are a cellular hyperplasia following the course of the vasa vasorum and a destruction of the tunica muscularis or media, owing to accumulation of such elements and occlusion of the vasa vasorum. Later these cellular growths undergo contraction, and a fibrous tissue is the result, which is poor in cells. The occlusion and destruction of the nutrient arterioles may take place also in the tunica adventitia, while a thickening of the intima from patchy proliferation of the subendothelial tissue is also in progress. The net result is the destruction of the muscular and elastic tunic, and the formation of pit-like depressions in the intima, accompanied by irregular contraction and wrinkling. In the centre of such patches various degrees of tissue necrosis may be in progress. It thus happens that the loss of the muscular and elastic resiliency results in saccular and aneurysmal dilatation of the aorta. In view of the extreme gravity of the prognosis of advanced cases of aneurysm, Heller insists on the importance of making early diagnosis, in order to rectify the progress of the mischief by antisyphilitic treatment.

(448) The Thyroid in Infectious Diseases.

Tossi (*Il Policlin.*, April 15th, 1900) finds that in pneumonia there is an abundant hypersecretion of colloid substance as a rule; in some cases, however, increased epithelial proliferation is noted instead. In typhoid the most marked feature is the increase in colloid substance, but here, also, occasionally a marked proliferation of epithelium takes place. In some cases the interstitial connective tissue is increased. In three cases of septicæmia the thyroid showed increased activity either by epithelial proliferation, new formation of follicles, or increase in colloid substance. In tuberculosis, on the other hand, there is a noticeable increase in the formation of follicles and in epithelial proliferation.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(449) Stomach Conditions in Early Tuberculosis.

AT the Congress of American Physicians and Surgeons recently held in Washington, Boardman Reed, of Philadelphia, read a paper on this subject, which he summarised as follows: (1) In early tuberculosis the secretion of HCl is very frequently excessive, the peptic glands being in a condition of irritability which causes stimulating remedies of the creosote class to disagree and act injuriously. (2) Oils tend to depress the secretory function of the stomach, and in consequence cod-liver oil is likely to help the cases in which the creosote class of drugs hurt, but on the other hand hurts the cases in which the gastric secretion is inactive and the other ones in which creosote and its congeners often do good. (3) Therefore it ought to be the rule to ascertain the condition of the secretory function of the stomach before pushing either class of drugs. (4) When analysis of the gastric contents cannot be made, it is safer to combine creosote with cod-liver oil, so as to let one neutralise the other in its effect on the stomach. (5) The motor function is very generally depressed in tuberculosis, and must be restored before a cure can be effected. Drugs avail little in this direction, but diet, exercise, especially in the open air, faradism, and abdominal massage, except where hyperchlorhydria complicates it, are the most valuable means of effecting the result.

(450) General Paralysis and Tabes in Married Couples.

GENERAL paralysis in married couples is a subject which has recently been receiving much attention. Raecke (*Monats. f. Psych. und Neurol.*, H. vi, 1899) gives an account of 7 cases of general paralysis in husband and wife, and in 2 of these syphilis was present. The literature of the subject shows 69 cases on record (not including the recent papers of Crété and Gottschalk) of general paralysis in married couples, though probably many unrecorded pairs exist. Syphilis was present in 38 of the 69 pairs, and a history of probable infection is met with in 10 other pairs. General paralysis affecting both husband and wife was met with in 27 instances, general paralysis in the man and tabes dorsalis in the woman in 14 instances, tabes dorsalis in both man and woman in 22 instances, general paralysis in the woman and tabes in the man in 6 instances. The man is more liable than the woman to general paralysis, and is the first to show signs of it; thus, whereas in 24 cases the husband was the first to manifest it, in 9 cases the wife was the first. These cases go far to prove not only the importance of syphilis in the etiology of general paralysis and tabes, but also the fact that syphilis acquired from husband or wife in married life may also in predisposed subjects be the cause of general paralysis or tabes in both partners.

(451) Adiposis Dolorosa.

AT the meeting of the American Neurological Association recently held in Washington, F. X. Dercum read a paper embodying the results of the necropsy of a case of adiposis dolorosa, with microscopic examination. The patient was a woman, aged 51, a native of Ireland. There was nothing particular in the family history. She was in good health until she was 49 years old, and was probably addicted to alcoholic excess. She first noticed enlargement of the arms, accompanied with shooting pains in both shoulders, the side, and chest, but most marked in the upper arms. The skin was not thickened, and was not adherent to the adjacent tissues. The muscles were not involved in the swelling. There were slight quantitative and qualitative changes noticed in the muscles of the forearms. Cutaneous sensibility was diminished. There was no alteration of gait, but both knee-jerks were lost. In two other cases reported by Dercum there were likewise noticed a loss of knee-jerk. In the present case the face appeared pale, as was also the mucous membrane. The patient was intelligent in appearance, with well-formed features, dark and fine hair, but with dry skin. Examination of the eyes revealed little abnormal. The urine and blood were negative to examination and there was no leucocytosis. The patient was under observation for eleven years. Small nodules would make their appearance, and the enlargement involved likewise the abdomen, hips, thighs, legs below the knee; the feet and hands were not involved until the last. On several occasions the paroxysms of pain were severe, and the patient would be taken with vomiting, sometimes blood. She suffered from frequent attacks of bronchitis, accompanied by dyspnœa. At various times she exhibited cardiac trouble, which, in connection with adiposis dolorosa, led to her death. At the necropsy the hair on the pubes was scant, and there was none in the axilla. The intestines were distended with gas, but disclosed nothing abnormal except fatty infiltration. A microscopic study of the various changes did not exhibit anything significant, except the heart muscle, which was found very friable and of yellowish colour. The microscopic examination included a study of the subcutaneous tissues, peripheral nerves, spinal cord, pituitary body, and the thyroid gland. Earlier in the case small portions of the subdermal tissue were excised, and it was thought that the fat was embryonal in character, but such was not the fact; the fat revealed nothing peculiar. There was marked diminution and atrophy of nerve fibres. The spinal cord presented a decided change in the dorsal and cervical regions. The lumbar cord presented no change. There was likewise no change in the brain nor in the pituitary body. The thyroid gland was very interesting. Though not weighed it was quite small, and the microscopic examination proved it to be abnormal beyond all doubt. There was complete absence of colloid material. It was believed that the derangement of the thyroid gland caused certain substances of an abnormal character to be thrown into the circulation. In discussion Burr said that within the last six months he had had an opportunity of making a necropsy and examining a case of the same character. There was in association a new growth of the pituitary body. He thought that this was merely accidental, as he did not believe that disease of the pituitary body would cause any deposit of fat. There was distinct affection of the thyroid gland and interstitial neuritis within the muscles. There was degeneration of some of the voluntary muscle fibres.

(452) Typhoid Infection of the Gall Bladder.

IN an editorial on the above in the *Phil. Med. Jour.*, March 10th, it is pointed out that this complication is nearly always present in the course of enteric fever. Chiari made a bacteriological examination of the bile in 22 cases of enteric fever, and found the typhoid bacillus of Eberth and Gaffky present in 19. In a recent contribution Camac has collected 115 such cases (*Amer. Jour. Med. Sci.*, March 1899). Typhoid bacilli have also been found within gall stones and it has been suggested that colonies of the micro-organism by clumping together might furnish nucleus around which gall stones might be formed. In an interesting case recorded by Dr. Robert Morris (*N. Y. Med. Jour.*, January 28th, 1899) a patient who was suffering from enteric fever was suddenly seized with pain over the gall bladder, and on performing laparotomy the gall bladder was found distended with mucus and pus, while the peritoneum in the neighbourhood was inflamed. After the operation the local pain disappeared and the illness pursued an uneventful course ending in recovery. A case reported by Von Dungern (*Münch. med. Woch.*, 1899) is of special interest. After an illness due to the typhoid bacillus an abscess was formed about the gall bladder and from the pus a pure culture of the bacillus was obtained fourteen and a-half years after the primary fever. A still more extraordinary case has been reported by Droba (*Wien. klin. Woch.*, November 16th, 1899) in which he excised a greatly thickened gall badder containing gall stones from a woman who had suffered from recurrent attacks of cholecystitis for years. The gall bladder was opened under aseptic precautions with a sterilised knife, and cultures were made from the pus which yielded pure colonies of the typhoid bacillus, and this was seventeen years after the attack of typhoid

fever. The local mischief in the gall bladder resulting from typhoid infection may assume a variety of forms, such as cholecystitis, cholelithiasis, empyema, and abscess, ulceration, perforation or necrosis. The indications for surgical interference are not unlike those of similar diseases arising from other causes than typhoid infection, and on the whole the results of operation have been very satisfactory.

(453) Myxœdema and the Pituitary Body.

E. Ponfick (*Zeit. f. klin. Med.*, Band. xxxviii, Heft 1) records two cases of myxœdema in which characteristic changes were met with in the pituitary body. One patient died early in the course of the disease from intercurrent pneumonia, the myxœdema of itself being in a mild and early stage. The changes found in the thyroid gland were of two kinds—namely, interstitial inflammation and pure atrophy. In the above case there were found an atrophy of the gland (its size being three-quarters that of the normal) and a marked involvement of its blood vessels. Some parts of the thyroid gland showed a marked colloid change. On examination the pituitary body an almost complete loss of the glandular substance was found, together with marked induration of the fibrous stroma, and the resemblance between the pathological changes in the two glands was striking. The *post-mortem* examination in the second case also showed destruction of the glandular elements of the pituitary, and a growth in its stead of fibrous tissue. Ponfick observes that these and other recorded cases go far to show that in a good many cases of myxœdema, where a considerable portion of the thyroid may be found intact, the hypophysis is so changed and its glandular substance so much destroyed, that it seems probable that the morbid changes had begun in the hypophysis before there were any alterations in the thyroid body. It is possible, therefore, that these may be benefited by pituitary administration, while the more strictly thyroid cases would be better treated with thyroid extract.

SURGERY.

(454) Gastric Functions before and after Gastro-enterostomy.

At the meeting of the American Surgical Association recently held in Washington (*Med. News*, May 5th) Charles S. Fischer, of New York, presented the results obtained by him by following up for some years four cases in which gastro-enterostomy was performed for non-malignant conditions. The two functions of the stomach which were especially concerned were its secretion of hydrochloric acid and its motility. In one case in which gastro-enterostomy was performed for hyperacidity, pyloric obstruction, and dilatation, the immediate results were excellent. The hyperacidity, however, progressively increased, and two years after operation it was greater than ever. The motor conditions of the stomach were much improved, and the stomach was found empty upon lavage within the necessary time limit. A second case was similar up to the time of operation. This patient was also much improved by the operation, but fourteen months later it was found that the change in hyperacidity did not keep pace with his general improvement. In this case slight atony existed 14 months after operation, which could be traced to improper hygienic surroundings. In the third case the hyperacidity was purely functional. The pyloric stenosis and slight dilatation were secondary. After-operation examinations showed that hyperacidity sometimes came on as a result of mental excitement, and sometimes was absent. The fourth case was followed for four years prior to operation, during which time simple gastric dilatation, as a result of atony, developed. At first there was nervous dyspepsia with varying acidity and a tendency to gastroptosis. A year later the condition had changed to subacidity and atony began to show itself. From that time there was progressive weakness and dilatation of the walls of the stomach and relaxation of the abdominal walls, and the right kidney became movable. The patient's general health was much improved by the operation, but one year later the gastric dilitation still existed, and the subacidity had progressed to a fair state of achylia. The motor functions appeared normal. These cases represented three distinct types of benign chronic gastric trouble: Primary pyloric obstruction with secondary hyperacidity and dilatation (Cases I and II); primary functional hyperacidity with secondary pyloric spasm and dilatation (Case III); and primary neurotic atony with secondary subacidity and dilatation (Case IV). The consideration of these results, and especially of the results in the third and fourth cases, was of the greatest value, for there were cases in which operation is one of expediency and not of necessity. In Case III, after operation, there was a general improvement in health and a considerable gain in weight, and no dyspeptic symptoms. Yet in one year the changes in the mucous membrane progressed so far as to give a condition of achylia, which could not possibly be explained on the basis of continued irritation due to food stasis, for the stomach emptied itself properly. The conclusion was obvious that hypertrophic or atrophic changes of long duration might be progressive after operation. In those cases in which enlargement and impaired muscular activity were relative and due to obstruction, gastro-enterostomy, by removing the obstruction, gave the stomach on opportunity to return to its normal condition. Gastro-enterostomy had a beneficial effect on the action of the intestines. In the first three cases the constipation was due to the pain caused by the pyloric spasm—a reflex constipation. It was entirely relieved by operation. In Case IV the constipation was atonic, alternating with fermentative diarrhœa. In this case, after operation, the stools become normal and regular as a result of improved nutrition.

(455) Internal Torsion of Omentum: Symptoms of Strangulation.

Hochenegg (*Wien. klin. Woch.*, March 29th, 1900) operated on a gentleman, aged 41, who had been subject from youth to a right inguinal hernia. The right testis had descended slowly during childhood into the inguinal canal and the hernia had gradually drawn it out of the external ring, but it never entered the scrotum. The hernia pushed up a pouch of skin in the groin, as on account of the ill-developed condition of the scrotum to the right it could not descend from the external ring in the usual fashion. A truss was worn and the hernia remained reducible. Rather suddenly symptoms of strangulation and icterus set in, and a very tender resonant tumour developed in the right half of the abdomen above the groin. The hernial sac was full of fluid. Hochenegg made an incision along the convexity of the tumour, almost in Langenbuch's line. Two pints of bloody serum escaped from the peritoneal cavity. A livid tumour, made up of big veins and fat, was exposed; it was clearly the omentum. It was as big as a man's head, nowhere adherent to other parts, but evidently doubled up on itself and fused together. Some hard fatty masses in its substance probably represented that part of the omentum which had usually lain in the hernial sac. The tumour was attached above to a cord the thickness of a forefinger, it was traced to the remaining or uppermost part of the omentum, which was normal in appearance. This healthy portion was ligatured in three sections just above the twist and divided, then the tumour came away. The hernial sac was extirpated, the tender ill-developed right testicle removed, and the layers of the abdominal wall over the site united separately. The patient recovered and remains free from discomfort to which he had been constantly subject before the operation. The omentum was found twisted three turns at the cord-like point above the tumour.

(456) Intraosseous Lipoma.

Guéry (*Rev. d'Orthop.*, No. 2, 1900) publishes an interesting case of a very large tumour of the upper extremity of the left humerus in a male, aged 21 years. An exploratory incision exposed a friable, irregular, and almost soft mass, which was regarded as osteo-sarcoma. On subsequent removal of the affected limb at the shoulder, the growth was found to be made up of semifluid adipose tissue enclosed within delicate trabeculæ of bone. The whole thickness of the upper extremity of the bone had been invaded by the fatty mass, and it would have been impossible to have removed all the diseased parts without resecting the upper two thirds of the humerus, and so rendering the arm quite useless. The author states that in this case it would have been impossible to establish a sure diagnosis except by histological examination. With regard to

the clinical aspects, slow growth of the tumour, its freedom from pain, and the maintenance of good general health on the part of the patient indicated a benign growth, but, on the other hand, its large size, and a sudden accession of rapidity of growth, together with the appearances presented in a skiagraph and the macroscopic aspect of its structure at the time of the exploratory incision were very suggestive of osteo-sarcoma.

(457) Successful Removal of Osteo-Chondroma of Upper Vertebræ.

WALTHER (*Bull. et Mém. de la Soc. de Chir. de Paris*, July 25th, 1899) exhibited last July a patient on whom he had operated sixteen days previously. He removed a large tumour developed in the spinous processes and right laminæ of all the vertebræ included between the fifth cervical and the fourth dorsal. The wound had healed well and the muscles of the neck seemed to have recovered their functions, the movements of the head and neck being quite free. The tumour was a mixture of bone and cartilage.

(458) Hepatic Abscess in a Child.

MONCORVO (*Prog. Méd.*, September 23rd, 1899) traced this condition to a fall on the right hypochondrium two months before the child came under his care. There was no evidence of hydatid cyst, worms in the bile ducts, phlebitis of the umbilical vein, appendicitis, typhoid fever, or dysentery. The abscess was cured by incision after Little's method.

MIDWIFERY AND DISEASES OF WOMEN.

(459) Cervical Laceration and Stricture of the Ureter.

E. C. DUDLEY (*Boston Med. and Surg. Journ.*, cxlii, p. 215, March 1st, 1900) records the case of a woman, aged 37, who since her first confinement had suffered from menorrhagia, dysmenorrhœa, vesical irritation, and pain, often quite severe, in the left inguinal region. The uterus was enlarged but normal in position. The cervix showed a bilateral laceration, extreme on the left side, where it had extended far into the vaginal wall, and had healed by much cicatrisation. The perineum was lacerated as far as the sphincter ani and the uterine appendages were normal. The perineum was closed and the cervix repaired by Emmet's operation; in the repair of the cervix the stitches had to be passed deeply on account of the free bleeding from the cervical tissues. Nine days later dangerous hæmorrhage took place from the vagina, necessitating the passing of sutures deeply near to the uterus before it could be checked. Two days later urine began to be passed from the vagina, although some still came from the urethra. This was found to come from the left side of the cervix, where the laceration had been deepest; there was a uretero-vaginal fistula of traumatic origin on the left side, with obliteration of the part of the ureter situated below it. One of the sutures had evidently cut into the ureter either at the time of the Emmet's operation, or later when the hæmorrhage had to be checked. More than a month afterwards colpocystotomy was performed, and the vesico-vaginal fistula thus made was extended until the upper end of the ureter above the ureteric fistula could be reached. The tissue between it and the opening in the bladder was caught in the grasp of a pair of hæmostatic forceps; three days later the forceps came away as the result of pressure necrosis; then it was found that the uretero-vaginal fistula had been transformed into the more easily cured vesico-vaginal fistula. Twelve days were allowed to elapse, and then the vesico-vaginal opening was closed in the usual way. Complete cure resulted. Dudley is of opinion that in cases of deep laceration of the cervix with pain on one side unaccounted for by the lesions palpable, a series of graduated ureteral bougies should be passed on the side corresponding to the laceration to discover a ureteric stricture. In such a case the bladder ought to be opened by the vagina, and a new ureteral orifice established; that is, what happened accidentally in this case ought to be performed of set purpose.

(460) Spontaneous Rupture of Uterus: Hysterectomy.

WEISS AND SCHUHL (*Ann. de Gynéc. et d'Obstét.*, April, 1900) describe 2 cases of complete rupture of the uterus during labour; supravaginal hysterectomy was performed in both. In the first, flaps were made and sewn over the cervix; the abdomen was drained. The patient died. In the second the elastic ligature and pins were applied to the cervix and the uterus amputated. The patient recovered. In both, very severe lesions were found when the abdomen was opened, injuries which could not be diagnosed by palpation. Not only was much more blood and lochia (fœtid in the fatal case) effused than was suspected, but the detachment of big flaps of peritoneum was extreme, and there was in addition much subperitoneal hæmorrhage. All these conditions ensured septic infection. Weiss and Schuhl insist that the safest course in these grave cases is supravaginal hysterectomy, with fixation of the stump of the cervix in the wound. If the laceration of the uterus extends too low down, then panhysterectomy will be necessary. This operation, however, takes up time and causes much shock. Even when a complete rupture is found on examination to be of limited extent, it is best to open the abdominal cavity and suture the laceration from the peritoneal aspect, as the risk of abdominal section with proper precautions is slight, and it allows of the possible discovery of extensive laceration of peritoneum and other damage which may otherwise be overlooked.

(461) How Long Can an Anencephalous Monster Survive Birth?

ONODI (*Monats. f. Geburts. u. Gynäk.*, March, 1900) reports a case of some importance, the monster living for 61 hours. The mother was 20 years of age, and related to her husband; several members of her family had borne anencephalous monsters. She was delivered at term, the monstrosity was detected before delivery, the base of the skull presented, and was directed forwards. The face lay posteriorly, the head being flexed; this is not the rule in anencephalous monsters at labour. As labour was lingering the forceps was applied, and as the head was not very small delivery was easily affected. The monster was deeply asphyxiated, and as it was a monster no attempts were made to save it; yet it lived for over two days, breathed, showed reflex movements, and made grimaces. The medulla and pons were developed, but the cerebrum and cerebellum wanting.

(462) Ectromelic Monstrosity.

CLIVIO (*Clinica Ostetrica*, II, January 30th, 1900) reports the case of a female infant, born at term, with complete absence of the right lower limb. Death occurred a month later, and it was found at the necropsy that there were the following anomalies: Absence of the right ischium; incomplete development of the right iliac and pubic bones; presence of a single umbilical artery; absence of the right iliac vessels and kidney; presence of a uterus unicornis with entire absence of the right horn, tube, and round ligament, and cystic changes in the left ovary.

(463) Myoma of Cervix weighing 25 lbs.

AMANN (*Centralbl. f. Gynäk.*, No. 16, 1900) recently demonstrated before the Munich Gynæcological Society a myoma of the cervix 25 lbs. in weight. It had developed entirely in front of the peritoneum, and extended as high as the ensiform cartilage. It was enucleated without any opening of the peritoneal cavity, and its pedicle, as thick as a half-crown, was ligatured and tied. The uterus had to be removed as well, and not till its removal was the peritoneal cavity exposed.

THERAPEUTICS.

(464) Secondary Hæmorrhage after the Use of Suprarenal Extract.

AT the meeting of the American Laryngological Association recently held at Washington (*Phil. Med. Journ.*, May 5th), F. E. Hopkins presented a communication on this subject. He remarked that the universal use of suprarenal extract had caused its value to be so fully recognised, and he himself had been so strongly impressed with the fact that it enabled the performing of bloodless operations on the nose, and also to cut into the septum internasally, that he was unwilling to believe anything against it. Yet he had been forced by experience to acknowledge that there was danger of secondary hæmorrhages occurring, and he thought it his duty to call attention to this danger in order that it might be guarded against. These secondary hæmorrhages came on several hours after the operations, and were often so

profuse as to alarm the patient. At first he had supposed that the hæmorrhages might be due to too early removal of the packing, or to some exertion on the part of the patient; but he had come reluctantly to the conclusion that there was a likelihood of having more profuse secondary hæmorrhages after the use of cocaine and suprarenal extract than after the use of cocaine alone. This opinion was confirmed by the replies he had received to a circular letter he had sent out to other specialists asking their experience. Indeed, so thoroughly was the danger of these secondary hæmorrhages recognised by some operators that they always packed the part carefully before dismissing their patient. Swain said that, while he had not noticed any serious increase in hæmorrhages after such operations after suprarenal extract had come into use, he thought it natural that the greater contraction caused by a combination of cocaine and suprarenal extract should be followed by a correspondingly greater relaxation. There must always be some after-hæmorrhage, whether cocaine alone or combination of cocaine and suprarenal extract were used. J. W. Farlow had heard some of his assistants complain of these secondary hæmorrhages, but personally he had never had any of the trouble described. The fact that so many others encountered them made him think there must be something in the way of the preparation of the extract or in the treatment to account for the different results. A. W. Watson had found cocaine just about as useful as suprarenal extract. The reason for the hæmorrhages coming on later after the use of the latter was evidently that its action tended to defer the relaxation. He made it a point after administering cocaine always to keep his patients with him until the natural relaxation came on. Hopkins, in reply, repeated that he did not wish to discourage the use of suprarenal extract, but only to show the necessity of greater care in its use.

(465) Intrapleural Injection of Nitrogen Gas in Tuberculosis.

At the meeting of the Climatological Association recently held in Washington (*Phil. Med. Journal*, May 5th), H. P. Loomis, of New York, described how, after numerous experiments on animals with all sorts of fluids and gases, he at last found nitrogen to be the only one that did not rapidly absorb or cause some other trouble. He claims for the method that the injection of from 50 to 200 cubic inches of the absolutely pure gas will not be absorbed for from three to six months, will rapidly diminish expectoration, improve the appetite, increase the weight, and above all stop hæmorrhage, even where all other methods fail, but it seems to have no marked beneficial effect on the affected lung substance. It arrests the further progress of the disease. In discussion, H. L. Taylor said he had tried the method in over a dozen cases, and had obtained exactly opposite results from those given by Loomis. R. H. Babcock said the majority of cases treated in Chicago were fairly successful. He believed the treatment was of value in giving the patient an upward start towards health. Stubbert said the nitrogen treatment was only effective when the lung was absolutely compressed, and stated that he also had used it with advantage to stop hæmorrhage.

(466) Suprarenal Therapy.

Bates (*Medical News*, March, p. 441) says that suprarenal extract is soluble in water, insoluble in ether and alcohol. It reduces solutions of Fe_2Cl_6 and iodine, and yields an alkaloid "epinephrin." It is a local astringent, vascular constrictor, and powerful cardiac stimulant. *Nose and Throat:* Applied locally, it reduces congestion and is of especial benefit in rhinitis and hay fever. *Eye:* Local application lessens congestion in conjunctivitis, keratitis, and iritis, and hastens the absorption of inflammatory tissue. In lachrymal stricture and abscess the writer injects a solution of the extract through the "puncta." The vascularity is rapidly diminished, and any pus present may be expressed *viâ* the canal. *Ear:* Locally applied to the Eustachian tube, the congestion is reduced and deafness and tinnitus disappear. Its hæmostatic properties are well known, and it can be used thus with confidence, as no clots are formed. In Addison's disease and asthma it has given good results, and gr. ij of the dried extract internally in exophthalmic goître will lessen the heart rate and decrease the size of the thyroid. The normal *Heart* is not affected when given internally, neither the normal blood pressure nor pulse, but an intermittent pulse becomes regular, a weak pulse stronger, and feeble cardiac muscle remarkably stimulated. All the effects produced are only temporary, so that repeated applications are necessary. But in all forms of inflammation it is very useful in reducing tension and allaying pain.

(467) The Therapeutics of Urotropin.

At the recent meeting of the American Genito-urinary Association held at Washington (*Phil. Med. Journ.*, May 5th), E. L. Keyes (New York) read a paper on this subject. Several cases were detailed to show the satisfactory effects obtained by the use of urotropin. One case of persistent anuria following an external urethrotomy was relieved at once by the exhibition of urotropin, the symptoms again appearing when the drug was discontinued. He always used urotropin when urinary chill was present or was threatened. Urotropin seemed to be almost a specific in acute catarrhal pyelitis. Large doses might be necessary at first, these being followed by long-continued smaller doses. The centrifuge and the microscope might be necessary to detect the change in the urine following its use. Dysuria, etc., might be caused by irritation, and irritation might be caused by small doses in some cases. Urotropin has a valuable prophylactic against urethral chill. Good results follow its use after operations. Urine passed during its administration occasionally had an escharotic effect on wounds with which it came in contact. Bryson stated that in cases of tuberculous disease which had been operated upon, he had seen instances in which urotropin produced changes which retarded the healing of the wound. Otis had used cystogen a great deal because of its cheapness. He always used urotropin for several days before catheterising ureters if this was possible. In reply, Keyes said that he had given one patient 67½ grs. of urotropin daily for months. In that case an enlarged prostate became lessened in size, the amount of residual urine diminished, and the patient was made thoroughly comfortable. The fact of sloughing from the effects of urotropin having been questioned, he gave three instances in which weak solutions of formalin had produced such untoward effects, the wounds becoming healthy when the formalin was stopped.

PATHOLOGY.

(468) The Structural Alterations of Cortical Nerve Cells in Fatigue.

Guerrini of Bologna has investigated (*Rivista de Patolog. Nervosa e Mental*, January, 1900) the cortical cells of the brain in animals who had been put into the condition of physiological fatigue. Observations were mostly carried out on dogs who had travelled various distances. He invariably found certain minute changes in the cells of the motor areas which varied according to the amount of fatigue undergone by the animal. These changes are present in all portions of the cells. The protoplasmic prolongations show chromatolysis, presence of vacuoles, varicosity, and sometimes, though rarely, breaking down. The body of the cell shows increase of the pericellular lymphatic space, increase of leucocytes, shrinking of its dimensions, and irregularity of its contour. The cell even seems to be somewhat paler than normal, and there is diminution of the chromophilic substance and vacuolation. Sometimes, though rarely, there is disappearance of the chromophilic substance and fragmentation of the body of the cell. The nucleus is hypertrophied, vesicular, pale, excentric in position, and irregular in outline. The nucleolus usually shows hyperchromatosis, more rarely vacuolation, atrophy, or disappearance. These changes occur in both the cerebral and cerebellar cortex, but are much more evident in the former, and they are particularly marked in that portion of the cerebral cortex related to the special form of exercise undertaken by the animal. Comparing the results found on examination of the cortex of animals undergoing severe fatigue and those undergoing much less, the writer finds that up to a certain degree of fatigue no observable results could be ascertained, it being only after fatigue of some severity that the cortical cells seem to suffer.

AN EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

(469) "Glandular Fever."

HAINEBACH (*Deut. med. Woch.*, June 29th, 1899) points out that an attack of glandular fever may be prolonged for weeks owing to relapses; in such cases, about the middle of the first week, the liver and spleen very often become palpable, and a violent cough appears, which is probably caused by the irritation of enlarged bronchial glands. Even these cases, though convalescence may be prolonged, are very seldom complicated by abscess formation or otitis media. A most serious and not uncommon complication is acute hæmorrhagic nephritis, which may appear as early as the second day. Though no specific organism has been found the disease is almost certainly of an infectious nature, and the organisms probably enter through the pharynx or naso-pharynx. The author records a case complicated by hæmorrhagic nephritis and enlarged liver and spleen, in a boy, aged 8 years, who recovered only after a tedious relapse. Two days after the onset, a sister, aged 17, and three weeks later a brother, aged 12, became ill with follicular tonsillitis. Charlotte C. West has reported an analogous case, in which the two nurses of a boy, aged 2½ years, who was suffering from glandular fever, were seized with tonsillitis. It seems, probable, then, that glandular fever is not a disease *sui generis*, but that it is produced under certain unknown conditions by the same organisms which are found in follicular tonsillitis, that is, streptococci or staphylococci. Hainebach considers that this view is rendered more probable by the fact that his patient had had several attacks of tonsillitis previously, and so was predisposed to these organisms.

(470) Trigeminal Paralysis.

THE successful excision of the Gasserian ganglion has afforded opportunities for the physiological study of the trigeminal nerve. Sanger Brown (*Journ. of Nerv. and Ment. Dis.*, September, 1899) reports the following case. A druggist, aged 57, married, free of syphilitic history, family history good. He had some irregularity of the heart six years ago, but recovered under the Schott treatment. Five years ago he had severe left-sided sciatica, resulting in peroneal paralysis, with an area of anæsthesia of dorsum of left foot. Otherwise his health has been excellent. About two weeks ago, when brushing his teeth, he noticed a diminution or dulness of sensation in the gums of the upper jaw on the left side, and finally this spread over the whole side of the face, including the scalp up to the middle line, and backwards nearly as far as the ears. He had noticed that for the past day or two the cheek was slightly swollen, and the eyelids slightly stiff. He had not noticed any defective taste or difficulty in mastication. No local pain. Clinical examination showed a diminution of defect was greatest in the cornea, gums, sensibility to pain and touch over the distribution of the first and second branches of the trigeminal nerve. The mucous membrane of the cheek, and a circular area about the size of a half-dollar piece a little below the left eye. Elsewhere sensation was normal, except for the area in the dorsum of the left foot before alluded to. The skin and tendon reflexes were normal, there was no ataxia or Romberg's symptom. Taste on the left side of the tongue in its anterior part seemed dulled for bitter substances. The muscles of mastication acted equally on the two sides. The pupils were equal and react normally to light and accommodation, and vision appeared to be normal. Treatment: 5 g. of tr. iodide after meals, $\frac{1}{30}$ g. strychnine before meals, and galvanism (8 to 10 milliampères) to side of face three times a week and ten minutes at a sitting. Smell had been repeatedly tested, and did not appear to be much, if at all, affected, but the nasal septum on the left side was entirely anæsthetic. The patient complained of "soreness" on the left side of the tongue. General health and spirits excellent. A slight œdema of the left eyelids disappeared. The masticatory muscles of the left side were now noticed to be easily fatigued. The gums were still insensitive, and the cornea could be touched with the end of a penholder without producing any pain or reflex. The area in the cheek below the left eye was hyperæsthetic to the galvanic current—feeling it as pin pricks—but pressed with the finger it felt "as if there was a thickness of cloth" (about medium weight broadcloth) between the finger and cheek. Vision was noticed eventually to be getting dim, and diplopia followed. The latter was improved by the operation of advancement of the left external rectus. A sharp stinging sensation was occasionally felt darting through the eyeball like a needle. Atrophy of the left temporal muscle soon followed, and was extensive and almost complete, with partial atrophy of the masseter. Sanger Brown thinks the symptoms may be due to aneurysm pressing upon the nerve trunks of the trigeminal, and excludes tabes and intracranial neoplasm. The patient still follows his occupation, and enjoys good general health except for the inconveniences resulting from the symptoms above referred to.

(471) Desquamation and Typhoid.

REMLINGER has collected a series of cases of severe typhoid followed by desquamation (*Rev. de Méd.*, May 10th, 1900). In contradistinction to another series collected by Weill, who noticed desquamation in typhoid in children, Remlinger's series refers solely to that met with in adults. According to the writer when the temperature begins to fall, desquamation may be observed. It is not of a furfuraceous but scaly character. It is most noticeable on the lateral parts of the thorax and abdomen, and generally limited to the trunk. In several cases, also, there was alopecia. Two possible explanations are offered: one that it is due to sudamina, the other that it is a trophic lesion. There is certainly coincidence in many cases between desquamation and fall of temperature, and as a matter of fact sudamina usually appear at the end of the third week. Without denying these facts, it may be noticed that sudamina frequently appear even to a considerable extent without any desquamation, and the writer does not seem, on the whole, to regard the two conditions as related. He rather suggests that the occurrence of alopecia so frequently in connection with desquamation is strong evidence of the trophic nature of the two conditions. As regards prognosis, desquamation seems to be favourable, for although it does not mean a freedom from relapse, it is to a large extent indicative of the end of the disease.

(472) Measles and Appendicitis.

LE CLERC publishes a case (*Journ. de Méd.*, April 25th, 1900) showing some relation between infectious disease and appendicitis. The case a child aged 11, who had never previously been ill. For four days there had been symptoms of invasion of some specific fever, while from the first day of the illness there was pain and tenderness in the region of the appendix, especially in McBurney's point. The pain and tenderness disappeared on the appearance of a typical measles eruption. Other cases have been recorded recently of scarlet fever influenza, varicella, typhoid, and smallpox, in which there have been symptoms and signs of appendicitis. In some cases inflammation of the vermiform appendix has been discovered *post mortem*, and in the present instance the writer believes that there must have been some inflammatory swelling of the solitary follicles of the appendix equivalent to what is met with in other cases and as measles is known to affect lymphoid tissue the explanation is probably correct.

(473) "Worms."

DEMATEIS (*Rif. Med.*, October 7th, 9th, 10th, 1899) reviews Davaine's classical helminthology in the light of modern knowledge. The various nervous symptoms which have been attributed from time to time to "worms" are, in the adult, probably due to suggestion and possible irritation of hysterogenic points in the intestines. In children they may be due to reflex irritation. The emigration of worms into various organs and tissues of the body is believed by the author to be chiefly the result of increased activity due to elevation of temperature and not to the lowering of temperature which follows death. Intestinal hæmorrhage has been found to occur from the irritation of worms, especially if there is already any breach of surface—for example, an ulcer. The author insists that in most of the cases where worms have been

found in irregular situations it is due to the increased activity resulting from some sudden rise in the body temperature.

SURGERY.

(474) Resection of the Cervical Sympathetic Ganglia.

THOMAS JONNESCO recorded very satisfactory results following the operation of excision of the cervical sympathetic cord in glaucoma (vide EPITOME, No. 353, November 4th, 1899), and now summarises in the *Archives des Sciences Médicales* (September and November, 1899) a total of 61 cases, comprising various maladies, for which he had performed this operation. Seven of these were cases of glaucoma, 1 was glaucoma complicated with exophthalmic goître, 8 were cases of Basedow's disease, of which 5 were primary and 3 secondary; 43 were cases of idiopathic epilepsy, 1 of epilepsy with chorea, and 1 of epilepsy with Basedow's disease. The operation of total bilateral excision of the three cervical ganglia was carried out in 42 of the above cases. In 8 cases the operation was unilateral and included removal of all but the inferior ganglia. In 7 cases (glaucoma) the superior cervical ganglion was removed (6 being bilateral and 1 unilateral). Of the cases of epilepsy 6 died subsequently of the disease or from some intercurrent malady. No case succumbed under the operation. (*a*) In exophthalmic goître the operation of section of the cervical sympathetic cord in the neck had been already practised by Jaboulay on 3 cases during February, March, and April, 1896. In the following August Jonnesco performed his first operation of incision of the upper and middle cervical ganglia on both sides, for this affection, and since then the operation of excision has grown in favour. Considering that the superior cervical ganglion gives rise to nerve filaments for the eyeballs, that the inferior ganglion gives rise to vaso-dilator fibres and secretory fibres for the thyroid gland as well as to accelerator fibres of the heart, the operation to be successful should involve complete removal of both these structures. (*b*) In epilepsy one of the objects aimed at is to secure a modification of the cerebral circulation, to produce and maintain a steady and slight arterial hyperæmia so as to improve the nutrition of the nerve cells and to sweep away toxic substances. This result can be achieved either by simple section (Jaboulay), or by excision of the superior cervical ganglion (Alexander). It is to be noted that while excision of the ganglion destroys the vaso-constrictors of the carotid vascular area, excision of the inferior ganglion acts similarly as regards the vertebral artery, wherefore it appears that an excision of the total cervical cord and ganglia is needed to affect the intracranial circulation as a whole. (*c*) As regards the therapeutic value of the operation, Jonnesco records the following: In 10 cases of Basedow's disease 6 were cured and 4 obtained very marked amelioration of symptoms. All these were really primary cases of Basedow's disease, and 1 of these was complicated with glaucoma. The first phenomena noticed was the immediate disappearance of the exophthalmos, and on the day following operation there were noticed an absence of nervousness and of flushes of heat, and the sensation of a general feeling of well-being. The tachycardia, trembling, carotid pulsation disappeared gradually thereafter, the pulse sinking from 140 to 70 80 The swelling of the thyroid also gradually diminished. In 45 cases of epilepsy the operation was followed by complete cure in 10 cases, 5 of these having been free from fits for two years, 1 being free for nineteen months, 3 for eighteen months, and 1 for six months. In 6 epileptics there was a notable amelioration of symptoms, and in 2 there was no improvement. Six patients died of intercurrent illness or of the epilepsy some time after the operation. The marked improvement in cases of glaucoma has been recorded already in the EPITOME referred to and needs no special mention here.

(475) Omental Hernia: Torsion of Omentum in Abdominal Cavity.

VON BARACZ (*Deut. Zeit. f. Chir.*, February, 1900) publishes a case of omental hernia where some of the omentum had receded into the peritoneal cavity and become twisted. The patient was a railway porter, aged 42, the subject of left inguinal hernia. After lifting a big trunk he had symptoms of incarceration. The tumour grew larger, in three days flatus ceased to pass, and the abdomen was much distended. On passing the finger, with the scrotum pushed before it, into the left inguinal canal, a painful cord-like structure as thick as a little finger was detected. On opening the sac the cord was found to be omentum hard and twisted; the finger passed behind it and through the internal ring came in contact with a large tumour. The parietes were laid open, then the tumour was found to be a great mass of omentum as big as an ostrich's egg, twisted once on its own axis. Above the site of torsion the omentum was healthy, though very fat. It was divided after ligature; the diseased omentum, weighing over 2 pounds, came away. The sac, much thickened, was dissected away with the adherent cord of twisted omentum which it contained. A gauze drain was passed into the abdominal cavity as there was much peritonitis. The layers of the parietes were sutured separately. A few months later a considerable amount of pus came away from a suture track. The patient ultimately did well.

(476) Successful Removal of Stomach for Adeno-Carcinoma.

DELATOUR (New York *Medical Record*, February 3rd, 1900) performed this operation on a woman aged 26, suffering from vomiting, local pain, and great emaciation. The tumour occupied the pylorus, where it was over an inch in thickness, and nearly all the stomach except the cardiac end. After freeing the stomach from the greater and lesser omenta, a clamp was applied to the duodenum, and the intestine was cut across 1 inch from the pylorus. The œsophageal end was then severed, much fluid escaping from the stomach, but the field of operation was protected with gauze sponges. A few silk sutures in double layer were used to reduce the œsophageal opening, then it could be coapted to the cut end of the duodenum, to which it was sewn with fine silk. The operation, performed on May 2nd, 1898, took forty minutes. In September, 1899, the patient was in excellent health; she was in the seventh month of pregnancy. Delatour lost sight of her after September.

(477) Chancre of the Lip in a Seven Months Old Child.

L. D. BULKLEY (*Journ. of Amer. Med. Assoc.*, xxxiv, p. 542, March 3rd, 1900) records the case of an extragenital chancre in a child, aged 7 months, probably acquired from the feeding bottle. The mother was a primipara, and both she and her husband were free from any trace of syphilis. The child was large and robust, and but for an eruption was in perfect health. Four weeks previously the mother had noticed a soreness on the upper lip, and this had persisted, and was situated a little to the right of the median line. There was enlargement of the submaxillary and anteauricular glands of the same side, along with an almost universal macular eruption of a distinctly syphilitic nature. Palpation of the sore on the lip showed a distinct and well-defined hardness, rounded in outline, and it was evidently a chancre. It was considered probable that someone who had had charge of the infant, and who had mucous patches on the buccal mucosa, had been sucking the teat of the feeding bottle, and so led to infection of the infant's lip. The mother came from Finland, where syphilis from innocent causes is almost pandemic.

MIDWIFERY AND DISEASES OF WOMEN.

(478) Intrauterine Injections of Gelatine in Metrorrhagia.

BOURCART (*Rev. Méd. de la Suisse Rom.*, May 20th, 1900) summarises the results obtained with gelatine as a hæmostatic, since Lancereaux in 1897 recommended hypodermic injections of a sterilised 1 in 1,000 solution of NaCl containing 1 per cent. of gelatine, in the treatment of aneurysms, especially aneurysms of the aorta. Since then favourable reports have been made on the hæmostatic action of gelatine, given hypodermically, in hæmophilia, hæmoptysis, purpura hæmorrhagica, and cholæmic hæmorrhages after operation on the bile passage. Sireday was the first to employ gelatine as a local hæmostatic; he employed a 5 to 10 per cent. solution and obtained good results in epistaxis and in metrorrhagia, either by introducing tampons soaked in the solution or by injecting it directly into the uterine cavity. In other hands favourable results have been obtained in hæmateme-

sis, and rectal and vesical hæmorrhages by injecting the solution into the cavities of the viscera. Bourcart has no experience of the hypodermic method and would not use it, in spite of the many brilliant results obtained with it, until its harmlessness is completely demonstrated. In a case of hæmoptysis so treated in the Geneva Hospital thrombosis of the vena porta was found *post mortem*. In gynæcology, however, he has found a 20 in 1,000 solution of gelatine to be a most valuable hæmostatic when applied directly to the interior of the uterus. In a woman, aged 43, with chronic metritis and profuse metrorrhagia which had resisted two curettings and injections of iodine and chloride of zinc, and where plugging was required at each menstrual period, a single intrauterine injection of 10 c.cm. of the gelatine solution arrested the hæmorrhage completely. In a case of profuse hæmorrhage during parametritis and left ovaro-salpingitis, where the enlarged uterus was retroflexed and fixed, two injections were sufficient. In hæmorrhage in a case of retroflexion of a movable atonic uterus the injections arrested the hæmorrhage temporarily, although the position of the uterus was not rectified but required frequent repetition. The injections appear to be most valuable in cases of uterine fibroid tumours, where they may obviate the necessity for a radical operation. Thus, in a woman, aged 54, with a large interstitial fibromyoma and fungous endometritis in which further hæmorrhage would have probably proved fatal, two injections of 15 c.cm. of the gelatine solution, introduced through a small gum-elastic catheter passed to the fundus of the enlarged uterus, definitely arrested the hæmorrhage. The procedure should be repeated every month or as soon as hæmorrhage returns. Strict asepsis is necessary in carrying out the injections, and afterwards a vaginal tampon should be introduced and left in till the next day. The temperature at which the liquid gelatine is injected has no effect on its hæmostatic property, and may range from 68° F. to 104° F. For a few days after an injection tiny transparent masses, streaked with blood and evidently composed of gelatine, are passed. The writer has never met with pain, painful uterine contractions, pyrexia, or other ill-effects from the injections.

(479) Treatment of Uterine Fibroids in Pregnancy.

J. A. DOLÉRIS (*Gynécologie*, v, No. 2, p. 114, April 15th, 1900) summarises his views on the cases of fibroids complicating pregnancy which should be operated upon, making use of the statistics he has himself obtained and those from other operators. When one has to do with pediculated fibroids of the cervix uteri, the evident indication is to remove them quickly. When there are very prominent or pediculated subperitoneal fibroids situated on the fundus or body of the uterus, whether they are small or medium-sized, and, if they are recognised at the time, then the operation to be chosen is myomectomy if there be the slightest sign of the pregnancy being interrupted or of danger appearing. Rapid increase in size of the tumour is a further indication, especially as the maternal mortality (9 per cent.) is really very small and can be made smaller. What is to be done with multiple or large intramural fibroids of the uterine body or isthmus in pregnancy is a very difficult question to answer; but, taking all things into account, Doléris is inclined in these cases to make the pregnancy a matter of little import, especially if the patient be a multipara. Early operation has given the least mortality; every week that passes increases the danger, and the risks from early operation are nothing to the later risks to be encountered if the case be left alone. Between 1890 and 1900 there were 31 total abdominal hysterectomies with 1 death (maternal mortality of 3 per cent.). The cases to leave alone are those in which there is a single intramural fibroid of moderate size and giving little or no trouble; these are the *noli me tangere* cases. Under such circumstances the obstetrician must await developments. If at or near the full term or during labour serious conditions arise, then, and only then, surgical interference can be considered.

(480) Reflex and Electrical Excitability in Pregnancy.

TRIDONDANI (*Ann. di Ostet. e Ginecol.*, xxii, p 203, March, 1900) has made a series of observations on reflex and electrical excitability in pregnant and non-pregnant women. In the former he found that the superficial reflexes were sensibly diminished, with the exception of the abdominal one, which was a little increased in primiparæ; but the deep and the tendon reflexes were markedly increased, especially the patellar. The pharyngeal and pupil reflexes were weakened, and the latter showed a state resembling the Argyll-Robertson phenomenon. Electrical excitability was sensibly and constantly diminished in pregnancy. All these modifications were more marked in primiparæ than in pluriparæ, and late in pregnancy rather than early. The normal condition of affairs was re-established about ten days after labour.

(481) Ovarian Tumour in a Girl aged 3.

HÜLTL (*Monats. f. Geburts. u. Gynäk.*, March, 1900) recently reported in a Hungarian paper an abdominal section on a girl aged 3 suffering from hypogastric pain and swelling for several weeks. An ovarian tumour was discovered on the right side; it was as big as a man's fist, and weighed a quarter of a pound. It was removed; the opposite ovary was healthy. Recovery was rapid. The growth consisted of a serous and a dermoid cyst combined. The remains of the ovary formed a small prominence on the under-surface of the tumour. Dermoid elements are usual in ovarian tumours before pregnancy.

THERAPEUTICS.

(482) Serumtherapy in Croupous Pneumonia.

AT the recent meeting of the American Medical Association J. C. Wilson, of Philadelphia, read a paper on this subject in the Section of Practice of Medicine. He said croupous pneumonia was due to infection with the pneumococcus through the respiratory tract. Toxins might enter the circulation and produce a septicæmia. The serums produced up to the present were anti-infectious. In the German Hospital, in Philadelphia, the anti-pneumococcus serum was used in 18 cases of croupous pneumonia, but not to the exclusion of other treatment. The injections were given in the majority of instances immediately after admission to the ward. There were 2 women and 16 men in whom the treatment by injections of serum was used. They varied in age from 15 to 48 years. They were admitted to the ward from the first to the sixth day of the disease. The temperatures ranged from 101.2° to 105°; the pulse-rate varied between 90 and 128. Albumen was present in 15 cases, casts in 9, and blood in 1. There was leukocytosis in 13 cases. The pneumococcus was found in 15 of the cases. The serum, which varied between 7 and 53 days in age, was given hypodermically over periods varying from six hours to eight days. Total doses of from 22 c.cm. to 460 c.cm. were given. The effects seemed to be better when a recent serum was used. After the injections the temperature became lower, the pulse slower, the pain less, and the patient felt better. Four of the patients died. Defervescence occurred by crisis or by rapid lysis. The duration of the attack did not seem to be lessened or the defervescence hastened. In a series of 20 cases treated at the Pennsylvania Hospital at the same time without serum, 4 died. A. O. J. Kelly, of Philadelphia, reported the case of an alcoholic man, aged 35, who was admitted on the fourth day of an attack of pneumonia of the right lower lobe. The next day the left lower lobe became consolidated, and 20 c cm. of antipneumonic serum were given every three hours for seven doses. The leucocytes were at first diminished, but later increased. The necropsy confirmed the clinical findings. The serum was of no avail in this case. Rochester of Buffalo, gave serum from a blister on a patient that was convalescent from pneumonia to a patient ill with the disease. There was improvement for 24 hours. He thought that the evidence pointed to the future development of a therapeutic agent of value. Macfarland of Philadelphia regretted that up to the present time there was no method of measuring the strength of the serum. The serum was prepared by administering live cultures of the pneumococcus to horses. The organism was difficult to grow and the measure of the toxin was not accurate. The organism was kept virulent by growing it alternately on artificial culture media and in the rabbit. The nature of the

serum was uncertain; it might be antitoxic or antimicrobic, possibly the latter. It was probable that the serum may be used for other micro-organisms than the pneumococcus. He believed that the use of serum from convalescents was reliable. It was possible that the serum should be injected into the blood vessels in order to produce the desired result.

(483) Rectal Injections of Cod-liver Oil in Phthisis.

ZEUNER (*Therap. Monats.*, June, 1900) reports good results from the use of cod-liver oil enemata in cases of phthisis, particularly in one which had been sent back from Goerbersdorf as being too far gone for treatment there. He lays great stress on the composition and method of use of the enemata. They were not more than 4 ounces in quantity, and were administed once a day an hour after the rectum had been emptied by a simple enema or immediately after a natural evacuation. In order to ensure their prolonged retention they were warmed and injected very slowly, the patient being placed in the knee-elbow position; if this was done at night the injection was not evacuated, but remained in the rectum for twelve or thirteen hours. The cod-liver oil was previously digested for two hours with the following substances: Two parts of pure pancreatin, 0.2 of inspissated ox bile, 0.6 of sodium chloride, and 20 of water to each 100 of oil. Immediately before injection the emulsion was well skaken up, and three drops of eucalyptus oil added. The pancreatin is added to assist the absorption of the fat globules, and the bile to aid their passage through the intestinal wall, which is also furthered by the sodium chloride (Leube). Finally, the emulsion must be alkaline, or at least not acid.

(484) Diphtheria Antitoxin.

AT a meeting of the New York County Medical Association on March 19th, 1900 (*Med. News*, April 14th), W. H. Park, of the New York City Department of Health, said that in New York for twenty years before 1895 the actual number of deaths from diphtheria each year remained about the same, that is, despite the increase of population there was no actual increase in the mortality from diphtheria. There was a certain periodicity in its fatality. About every sixth year the number of deaths reached 3,000. The mortality ran down to about 2,000 in certain years and averaged about 2,400. The lowest mortality in one year was 1,600. In 1894, before the introduction of antitoxin, the number of deaths was 2,870. During these last four years the average number of deaths had been 1,300, that is, more than 1,000 less than the average of preantitoxin days. In Boston a similar decrease in the number of deaths had taken place, and the percentage of mortality from diphtheria was now less than 4 per cent. Not all the decrease in the number of deaths was due to antitoxin. A certain amount of the decrease in the mortality was due to better hygienic surroundings in the large cities. It was a very striking fact, however, that such a notable decrease in the death-rate from diphtheria should have occurred immediately after the introduction of antitoxin, and that this decreased mortality should have continued ever since. Last year in New York 2,500 children were injected with antitoxin. Of these 300 died. Without antitoxin the mortality would have been at least double what it was. The death-rate even in laryngeal diphtheria was only 22 per cent., while formerly this type of the disease was fatal in over 60 per cent. of the cases in New York. Six thousand five hundred children were immunised by injections of diphtheria antitoxin. Of these 28 cases developed the disease within twenty-four hours, and all of them recovered; 27 children developed the disease after the lapse of twenty-four hours, and all of these recovered with one exception in which scarlet fever complicated the diphtheria. All these children were directly exposed to contagion yet 6,400 failed to take the disease. As the result of the immunisation some rashes developed, and in a few cases some febrile reaction was noted, but nothing lasting supervened. A good deal of dispute has arisen with regard to the effect of diphtheria antitoxin at the Willard Parker Hospital. Before the introduction of antitoxin the mortality from diphtheria was 30 per cent.; since then it had been 22 per cent. The mortality of cases of intubation for the six months before the introduction of antitoxin was 85 per cent. During the last two years the mortality among these cases had been 52 per cent. In the summer of 1899 the crucial test was made of taking each alternate diphtheria patient that came to the hospital and treating one series with and the second series without the antitoxin. It was very clear to the whole staff that the children that received antitoxin did better than those that were treated without antitoxin. In Boston the hospital mortality from diphtheria was 12 per cent.

PATHOLOGY.

(485) The Pancreas in Cirrhosis.

E. LEFAS states (*Arch. Gén. de Méd.*, May, 1900) that sufficient attention has not been paid to the changes taking place in the pancreas in cases of hepatic cirrhosis. In the atrophic form of cirrhosis the pancreas shows increase in size, but on examination there seems to be atrophy of the body and head reflexly to the splenic end. The colour is yellowish grey with a slight waxy tint: the organ is firm, apparently from some cirrhosis. This deposit of interstitial tissue is intralobular and scattered. Several groups of acini appear to be isolated by it, and the fibrous tissue is always well formed. Proliferation seems to start from the blood capillaries and apparently surrounds them, while later both arterioles and veins show a similar involvement, their wall being thickened. No changes are observed in the ducts of the organ. Fatty degeneration is found in the cells of the gland, and sometimes a granular pigmentary appearance in the biliary hypertrophic form of cirrhosis. The pancreas has not been found increased in size, but the organ is firmer than normal, the intralobular connective tissue is increased in density, and fat contained between the lobules disappears. This change is chiefly met with round the secretory ducts, the outer coat of which shows a marked thickening. There is at the same time a certain amount of intralobular sclerosis, and in both situations numerous round cells are observed, and embryonic cells seem to penetrate the gland acini, and the epithelium of the pancreas shows no lesion. In so-called cardiac cirrhosis fibrotic change also takes place in the pancreas. Small sclerotic tracts observed scattered through the organ and a change similar to what has been described as neo-canaliculi in the liver has been noticed. Round the smaller arterioles and ducts there is connective tissue proliferation as well. In very advanced cases fibrous patches the size of the lobule may be noticed, and arteritis is also present. The epithelium of the ducts seems to be healthy, but the glandular epithelium may show fatty degeneration. Congestion of the organ is of course considerable. In that form of cirrhosis described by Hanot as hypertrophic pigmentary sclerosis of the pancreas is also met with. It is perilobular and peri-acinar. Considerable pigmentation is present between the cysts and connective tissue. Thus, taking the cases as a whole, the distribution of connective tissue in the pancreas is considerable. In alcoholic cases thrombosis of the intralobular capillaries seems to be the starting point. The cellular lesions are similar to those met with in the liver. The pancreas, therefore, seems to be an organ prone to undergo considerable change in the presence of alcohol. In cardiac cases the change seems to be inconstant, though presenting a predilection for the vessels. In the hypertrophic biliary form of cirrhosis the lesion is not unlike that met with in the liver, that is to say, it has an embryonic character, and apparently follows the distribution of the canaliculi.

(486) Gaseous Gangrene.

MUSCATELLO (*Rif. Med.*, May 21st, 22nd, 23rd, 1900) as the result of research on the above subject finds that gaseous gangrene may be produced by various micro-organisms, particularly, however, by the B. aërogenes capsulatus, which, without having a specific action, behaves in man as a toxin saprophyte upon tissues already seriously damaged. The B. coli communis with other germs may also cause gaseous gangrene. It is not essential that the patients should be diabetic. Clinically two forms may be distinguished (1) due to B. aërogenes capsulatus pure—this never shows inflamatory phenomena and exhibits little tendency to spread; (2) due to mixed infection. This is more inflammatory and tends to spread. In treatment, free opening, with early removal of all the dead parts and energetic disinfection, may in a good number of cases bring about a cure.

AN EPITOME

OF

CURRENT MEDICAL LITERATURE.

MEDICINE.

(487) The Attenuated Forms of Influenza. HUCHARD (*Bull. de l'Acad. de Méd.*, No. 9, 1900) divides attenuated forms of influenza into two groups, the apyretic and the febrile. (1) Cases belonging to the first are very apt to be overlooked or misinterpreted. They are characterised by neuralgia, aches and pains in various positions: in the muscles, the joints, along the course of peripheral nerves, in the vertebral column, and in the loins. Extreme prostration—physical, mental, and moral—is the result, and dangerous secondary complications, such as lobular or lobar pneumonia, are common, since the patient is generally allowed to continue his business because his temperature is not raised. In certain cases the pneumonia has a special origin, and is due to paralysis of the vagus nerve; the onset of consolidation is extremely rapid, and the whole lung may be solid within twenty-four hours, though no organisms may be found in the sputum, and the pain in the side and all febrile reaction are absent. In other cases the vagus paralysis has slight effects; respiration is weakened, and there is a certain amount of collapse of the vesicles, which is shown by the presence of numerous fine crepitations on deep inspiration, or of the vesicular murmur being so diminished as to suggest a slight pleural effusion. Sometimes an attack of influenza may simulate ordinary gastric catarrh or other intestinal trouble, and can be distinguished only by the great nervous asthenia which accompanies it. (2) In the second group headache and pain may be completely absent, and a sudden rise of temperature to 104° F. or more may be the only symptom. The pulse-rate, instead of rising with the temperature, may in these cases remain as low as 60 or 70. This variety is seldom followed by serious complications, and is often abortive. No specific for influenza is known, but the secondary infections so often associated with Pfeiffer's bacillus, if not the disease itself, can often be avoided by suitable treatment. During an epidemic everyone should gargle or spray their throat, nose and mouth with weak solutions of perchloride of mercury, formol (1 in 2,000), or carbolic acid (5 in 1,000). The skin should be kept scrupulously clean. It is most important to attend to the functions of the intestines, liver, and kidneys, so that the toxins of influenza may be excreted as rapidly as possible, and but few new toxins introduced in the food. For this purpose two pints of milk, which acts as a diuretic and lessens intestinal and urinary toxicity, should be taken daily, and the diet should be mainly vegetarian. The only drug of any value is quinine, and this should be given the moment there are any signs of influenza, even in the apyretic cases; 15 to 23 grs. of the hydrobromate should be given for not longer than one to three days, smaller doses are useless. Its tonic and vaso-constrictor action is sometimes heightened by combining it with ergot in pills. Antipyrin should seldom be ordered, as it diminishes renal excretion. When there is great nervous prostration the glycero-phosphates and strychnine are useful.

(488) Tumour of Pituitary Body. G. L. WALTON AND CHENEY (Boston) report a case of tumour of this region (*Journ. of Nerv. and Mental Disease*, August, 1899) which has acquired a new interest since the demonstration of acromegaly by Pierre Marie. Few authorities now deny that a relation exists between disease of the pituitary gland and acromegaly. The interest in these cases is threefold: (1) in their bearing upon the anatomy of the chiasma and optic tract; (2) in their symptomatology with reference to early diagnosis; and (3) in their pathology, more particularly with reference to the destruction of glandular function. The present case is as follows:—A physician, aged 28, first consulted Cheney in July, 1895, for migraine dating from early life and associated with temporal hemianopsia. He also complained of asthenopia. He was a large man, with broad nose and thick lips, a large tongue, very large lower jaw the teeth of which were somewhat separated, and large extremities (hands and feet). His gait was slow and heavy. The vision in the right eye was 7, left eye normal. The fundus showed nothing abnormal. His headaches became more frequent, and permanent temporal hemianopsia appeared in the left eye: optic atrophy ensued. In May, 1896, the vision in the right eye was reduced to 2, in the left eye to 5. Somnolence and mental apathy appeared and increased; he was still able to continue in medical practice. In September, 1897, there was general physical weakness, and at this time colour sense was found to be absent in the otherwise normal temporal field of the right eye. His speech was slow. The headaches grew more frequent, and the patient now gave up work, the somnolence and apathy increasing. Lack of sexual power was complained of throughout the case. The patient died in December, 1897. The necropsy revealed a tumour of the pituitary body, 2.7 by 3.5 by 3 cm., causing the disappearance of the olivary process and portions of the sella turcica. The growth was soft and granular, dark grey in colour, and with soft translucent light greyish colloid masses throughout its texture. Soft septs extended into the growth from the fibrous capsule. The growth consisted mainly of delicate blood vessels and of darker hæmorrhagic areas. A few tubules of normal pituitary glandular tissue staining with eosin were found. The tumour was an angio-sarcoma. The order of optic symptoms points to involvement of the right optic tract at its junction with the chiasma, the lesion extending so as to involve the whole optic tract, and finally produce hemianopsia. The amblyopia points to involvement of the macular fibres. The achromatopsia shows that colour sense may be impaired by peripheral as well as by central lesion. The lack of added symptoms of acromegaly was partly due to the patient having reached adult life, and partly to the preservation of some portions of comparatively healthy glandular tissue. The commonest form of new growth of the pituitary partakes of the nature of adenoma. In some cases the diagnosis between adenoma and sarcoma is difficult. Hippel asserts that all these growths start from the anterior lobe. Burr and Riesman argue that the lack of acromegaly in certain cases of tumour of the hypophysis points to the retention of a certain amount of healthy glandular tissue.

(489) Cardioptosis. FERRANNINI (*Centralbl. f. inn. Med.*, January 6th, 1900) reports 4 cases of primary ptosis of the heart, a condition which was first described by Rummo of Palermo in 1898. The heart, which may be of normal size, is situated lower, and rests more immediately on the diaphragm than it normally does. Hence the superficial dulness begins above at the third, or even the lower border of the fourth, rib, and may extend for nearly 2 inches below the junction of the ensiform process with the sternum. Synchronous with the systole there is marked epigastric pulsation. Obviously, the heart is displaced downwards, not enlarged, though exceptionally the two conditions may be combined. This displacement, for which no mechanical cause can be found, is a local variety of the general splanchnoptosis which is seen in Glénard's disease (enteroptosis), and probably like it depends on a congenital developmental weakness of connective tissue. In cardioptosis this weakness affects the elastic fibrous tissue of the whole cardio-vascular system of the great vessels at the base of the heart by whose elasticity alone the heart is supported, so that the organ sinks by gravitation on to the diaphragm, and of the peripheral vessels, so that a number of trophic defects, such as varices or sclerosis may be present. The truth of this theory is strongly supported by Ferrannini's 4 cases. In each there was mitral stenosis, which is now recognised as being frequently a developmental deformity. In each there were asymmetry of the skull with marked disproportion between the cerebral and facial portions, a remarkably poor skeletal development with stunted growth, deformities of the thorax and extremities, and in one case there was great mental weakness.

SURGERY.

(490) The Surgery of the Spleen. SUBBOTIC, of Belgrade (*Deut. Zeit. f. Chir.*, February, 1900) publishes a complete clinical report of the 8 operations on the spleen which he has performed during the past twelve years: (1) Malarial hypertrophy of a floating

spleen, splenectomy, recovery, and death two years later from Bright's disease of twelve months' duration. The patient was a woman, aged 35. (2) Malarial hypertrophy of a floating spleen, perisplenitis, ascites, splenectomy. On the tenth day, bursting of the wound; death from sepsis three days later. Patient a woman, aged 50. (3) Malarial hypertrophy of a floating spleen, twisting of the pedicle; splenectomy and recovery. Patient a woman, aged 34. (4) Malarial hypertrophy of a floating spleen, acute torsion of the pedicle; splenectomy and reduction of the volvulus; death within nine hours. The patient was a woman, aged 24. (5) Malarial hypertrophy of a floating spleen, perisplenitis, twisting of the pedicle. On the thickened capsule of the spleen were several villous outgrowths, some nearly 2 inches long, and ending in small cystic bodies. The spleen was removed. The patient, a countrywoman, aged 40, was very well two years later. (6) Perisplenic hæmorrhagic cyst; incision and drainage; recovery. The patient was a man, aged 30. No evidence of hydatid disease. (7) Perisplenic hæmorrhagic cyst; incision and drainage; recovery. The patient was a woman, aged 21. (8) Chronic hypertrophy of the spleen, which was fixed firmly to the pelvic inlet by inflammatory adhesions; pedicle twisted two complete turns; lymphatic cyst of hilum of spleen; splenectomy; recovery. This case is published in full for the first time, with photogravures; some of the others having already been noted in Servian medical papers. The patient was a woman, aged 30. Subbotic notes that only one of the patients was a male, and he had a cystic spleen. All the six women from whom movable or displaced (Case 8) hypertrophied spleens were removed had borne several children, and in all, save Case 8, the history of malaria was distinct. Out of the 6, death followed in 2, but in one of these (Case 4) there was acute intestinal obstruction, and the patient was very ill when operated upon, whilst in the other death was due to the patient's getting up without permission on the day that all the sutures were removed. The prolapsed intestine was cleaned and returned, and the wound carefully sutured, but sepsis proved fatal. Taken as a whole, the removal of a hypertrophied spleen is not very dangerous.

(491) Traumatic Rupture of the Bile Duct.

Garrett (*Annals of Surgery*, February) reports what he regards as an almost unique case of rupture of the common bile duct. The patient, a strong and muscular man, aged 21, while pulling down an old barn was struck on the shoulder by a heavy beam, and in falling came in violent contact with a beam on which he had been standing. The injury was followed by shock, and the patient complained of much pain on the right side of the abdomen, most marked at a point midway between the ninth costal cartilage and the umbilicus. On the second day after the date of injury there was considerable tympanites, which was gradually replaced by dulness and an intra-abdominal collection of fluid. On the eleventh day a large quantity (6 quarts) of yellowish-green fluid was removed by an aspirator. The patient at this time was slightly jaundiced. Four quarts of similar fluid were removed four days later, and again on the eighteenth day. On the twentieth day laparotomy was performed by the author. After the removal of a large quantity of fluid and flushing of the abdominal cavity with normal salt solution, the intestines were found to be more or less adherent to each other and to the anterior abdominal wall. There was pronounced bile staining of the abdominal contents. The gall bladder was empty and retracted, and both this organ and the cystic duct were intact. There was a profuse discharge of bile from the foramen of Winslow. The rent could not be exposed, but it was thought that it probably existed at the back of the upper part of the common duct, as it passes downwards and to the left between the two layers of the lesser omentum. As the patient had been under chloroform for a long time and was in an impossible condition for further operative measures, no attempt was made to expose and close the opening. A funnel-shaped tract down to the foramen of Winslow, and to the point from which the bile was discharged, was shut off from the general peritoneal cavity by means of plain gauze, a large drainage tube being also inserted. The discharge of bile, which in the early stages of the after-treatment was very profuse, gradually diminished, and the abdominal wound gradually closed. Late in the autumn—the operation had been performed on June 22nd—the patient was a stout healthy fellow, and the wound had quite healed.

(492) Operative Treatment of Œsophageal Diverticulum.

Depage (*Ann. de la Soc. Belge de Chir.*, No. 2, 1900) publishes a case of removal of a large pharyngo-œsophageal diverticulum from a female patient aged 64. The operation, though followed by intense shock, and subsequently by infection of the wound with profuse suppuration, at last resulted in complete recovery. This, the author states, is the fifteenth case in which an œsophageal diverticulum has been removed during life. The operation, it is pointed out, is not a very difficult one, and the risks attending it consist for the most part in the subsequent alimentation of the patient, which may, by causing infection of the wound, interfere with the process of healing. It is very necessary to obtain a complete closure of the œsophageal wound. With this end in view, Kocher gives no food by the mouth for some days after the operation, whilst other surgeons perform gastrotomy two or three weeks before the removal of the diverticulum. Depage holds that both of these methods are open to objection. As the subject of œsophageal diverticulum is usually much exhausted, it is necessary to supply nourishment as soon as possible after the operation. Gastrostomy, which is in itself a serious operation, does not, as has been proved by actual experience, ensure the patient against infection after removal of the diverticulum, and the development of a fistula in the neck. In the author's case the patient was fed by means of a naso-pharyngeal tube.

MIDWIFERY AND DISEASES OF WOMEN.

(493) Transplantation of Ovaries.

Knauer (*Wien. klin. Woch.*, December 7th, 1899) began his experiments in 1895, soon after his chief, Chrobak, had begun to give ovarian substance to women after bilateral oöphorectomy, in imitation of the thyroid treatment. They proved that in rabbits the ovaries could be transplanted from their normal position and live in others, such as a pocket made in the peritoneum, or between the fascia and muscles of the abdominal wall. These transplanted ovaries shrank and lost some of their tissue, but retained their function, so that when a second laparotomy was performed later well-developed Graafian follicles could be plainly recognised. In one case pregnancy and the birth of two well-developed young rabbits followed sixteen months after the transplantation. Later observations have shown that an ovary, when a considerable portion has become fixed in its new position, may continue active almost, if not quite, up to the time for the normal appearance of the menopause in rabbits; thus one transplanted ovary remained active for more than three years. The last 13 experiments were made with a view to settling the question whether ovaries could be successfully transplanted from one rabbit to another. Laparotomy was performed on two animals at the same time, and the ovaries of the one were exchanged for those of the other. In all but 2 no trace of ovaries could be found one year later, and the genitalia and mammæ were atrophied. In one animal normal ovarian stroma and numerous follicles were present three weeks after the operation; in another traces of ovarian tissue, but no follicles, were found among necrotic tissue eighteen months after. The writer thinks these cases prove that transplantation of the ovaries from one animal to another, though infinitely more difficult and uncertain than transplantation to another part of the same animal is possible.

(494) Forceps Delivery: Fracture of Lachrymal Bone of Fœtus; Orbital Suppuration.

Petit and Aubaret (*Rev. Mensuelle de Gyn., Obstét, et Pédiat.*, March, 1900) report a symphysiotomy after failure of forceps delivery. The instrument was again applied, with ultimate success, after much difficulty. The mother did well. The child weighed 9 lbs., the cranium showed advanced ossification. There were several ecchymoses around the inner canthus of the right eyelid, which disappeared, but on the third day

pus discharged from the right eyelids, which were much swollen. The eyeball was pushed forwards. The caruncle was œdematous, and, on palpation, fluctuation could be detected. Pus escaped from the right nostril in abundance. There was clearly pus behind the eyeball. An incision was made at the level of the outer border of the lower lid, where fluctuation was marked. A quantity of pus escaped, and on pressure not only did it come out of the incision, but it also ran out of the right nostril. On the next day the pus also escaped from the mouth. On examination a small fistulous tract was found to open above the gum on the right side. By the eighteenth day the child was doing well, after temporary loss of weight. The eyeball was almost in its place, the swelling of the lids trifling, but marked around the lachrymal sac. There was distinct asymmetry of the face. The injury which caused the suppuration seemed clear. In applying the forceps in the fronto-mastoid direction, the edge of the blade placed over the right frontal eminence slipped and fractured the lachrymal bone. There will probably be more complications in this case, in the eye and lachrymal duct.

(495) Intermenstrual Dysmenorrhœa.

STORER (*Boston Med. and Surg. Journ.*, April 19th, 1900) reports 20 cases of *Mittelschmerz* in his own practice, adding 25 published by reliable authorities. Without coming to any definite conclusion as to origin or treatment he finds that intermenstrual dysmenorrhœa appeared practically every month in the whole series except when pregnancy intervened. In 22 it always occurred on a definite day from the beginning of the last period. In 13 there was a variation of two days, and in 4 of four days. In 2 with irregular menstruation it occurred on a definite day before the next period. Thus *Mittelschmerz* is, as compared with normal menstruation, remarkably regular, or, more correctly speaking, Storer makes it out to be a disease associated with regular menstruation. In a large number of cases it was paroxysmal. The attacks sometimes came on at intervals of several hours, and lasted for from five to fifteen minutes. In other cases there was constant pain with marked exacerbations, often of the greatest severity and subjectively like labour pains. In about half the cases the pain resembled that of menstruation, in the rest the patients declared that it was quite different. In 9 cases of intermenstrual dysmenorrhœa there was no pain at the normal period. In 10 cases the pain lasted two days, in 9 three days, in 8 one day, and in only 4 over four days. It reached its maximum in the first or second day in most of the 45 cases. In 14 the pain was limited to one side, quite definitely with fairly regular alternations in 2 cases. In none of the cases was there any discharge like that of menstruation, although in 2, and only in 2, of the 45, it was slightly sanguineous, but in these two the patients suffered from bleeding fibroid, hæmorrhagic endometritis, and diseased appendages. In 10 there was a marked increase of leucorrhœa during the pain. In 2 of Storer's own cases there were bloody dejections during the pain. Storer concludes that *Mittelschmerz* is a phenomenon definite in the time of its appearance, character, and seat, quite unlike premenstrual congestive pain or the soreness that sometimes persists after menstruation, and lacking the irregularity of ovarian neuralgia. He admits that intermenstrual "dysmenorrhœa" is in no sense "dysmenorrhœa," as there is no menstrual discharge, and the pain is not like that of menstruation.

(496) Twin Labour in Uterine Cancer.

ZURALST (*Centralbl. f. Gynäk.*, No. 21, 1900), in a thesis presented last year at Kiel, relates two cases of labour where the uterus was cancerous. Both were in women who had borne many children. One, aged 33, was in her eighth labour, and sepsis and cachexia were advanced owing to extensive carcinoma of the cervix. A dead child was delivered spontaneously and the placenta expressed after Credé's method. Death occurred on the third day from sudden, severe hæmorrhage. The second case was very remarkable. The patient was 32; she was in her eleventh pregnancy, and suffered from inoperable cancer of the cervix. The waters escaped prematurely, the vaginal portion of the cervix dilated to a certain extent. Masses of cancerous tissue were cleared away with the finger, and the cervix was dilated manually. The forceps was applied and an asphyxiated child delivered; it soon died. The second child presented transversely; it was turned and delivered. The first placenta was expelled spontaneously directly after the birth of the first child. The second was removed manually after the turning. The posterior wall of the bladder was extensively torn; its edges were united with catgut sutures. The laceration of the cancerous cervix caused by the obstetric manœuvres extended into Douglas's pouch. The patient died about a twelvemonth later.

THERAPEUTICS.

(497) Suprarenal Gland in the Treatment of Hay Fever.

BEAMAN DOUGLASS (*N. Y. Med. Journ.*, May 12th) states that the first mention of the use of suprarenal gland for the relief of congestion of the erectile tissue of the nose appears to be in a paper by Cheatham published in the *New York Medical Journal* of August 15th, 1898, where it is said that orthoform combined with extract of suprarenal gland had been found useful in two cases of hay fever. H. L. Swain stated in the same journal that he had seen improvement follow the use of suprarenal gland in several cases of "perennial sneezing catarrh with large white swellings in the middle turbinate." Solis-Cohen (*Phil. Med. Journ.*, 1898) states that for twenty years he had suffered from hay fever during the greater part of June and July, and had found relief by taking suprarenal gland internally. Douglass himself states as the result of his own experience in the hay fever season of 1898 that the internal administration of dried suprarenal gland was a specific for the symptoms of hay fever. It controlled the vasomotor vessels of the nose; there was a marked reduction in the size of the turbinate bodies, with lessening of irritation and almost complete cessation of coryza and sneezing. An improvement in the conjunctival condition can be observed in less than 48 and sometimes within 24 hours, and under its continued administration the patient remains in comparative comfort during the remainder of the attack. Further experience had led him to believe that the principal remedies used in hay fever are inferior to suprarenal gland, which has the great advantage of leaving no after-effect. It produces its effects both systematically as well as locally, and controls the symptoms for a convenient length of time, without a very frequent repetition of the dose; the effects locally are not so harmful as those of cocaine; it has no dangerous sequels, and no toxic action. Douglass thinks it possible, however, that suprarenal gland, used locally and internally for a long time, might result in such a constant diminution of the normal blood supply to the nasal tissues that atrophy might result from its use. This effect is seen in simple cases where the symptoms are practically those of nasal and pharyngeal inflammation, together with conjunctival involvements. In patients in whom asthma usually occurred later as a complication, he found that by an early and persistent use of the remedy it was relieved, and frequently did not develop at all. Where it had already developed suprarenal gland was not so efficacious, although it acts beneficially sometimes, even in such cases. In cases in which nasal symptoms are prominent, and where there is much congestion, benefit is also marked. It acts well in cases dependent upon gouty or rheumatic diathesis. On the other hand, it is useless where there is a loss of vascular elasticity due to an atheromatous condition or in those conditions of blood vessels resulting from interstitial nephritis. The remedy is also useless in cases presenting degeneration of the cardiac muscle. The best results had been observed in patients with neuroses coupled with nasal lesions, and in neurasthenic patients with general vasometor disturbances. The administration of the drug is either internally through the stomach, or locally through the nasal tissue; or, better, internal may be combined with local treatment. If the drug is used locally, it should be applied either by means of a spray or upon pledgets of cotton saturated with solutions of the drug. A solution of 6 to 12 per cent. is made by shaking up the saccharated dried extract of the suprarenal gland with water, allowing it to stand for an hour or two, removing the clear solution from the top, and discarding the precipitate. This

solution may be used in the nose by means of a spray as often as every two hours, until the symptoms are controlled, and reapplied whenever symptoms of obstruction, coryza, and sneezing return. Internally, it is most useful given in tablet form. Five grains of the saccharated, dried suprarenal gland are administered at first every two hours, day and night, until some giddiness or palpitation is observed, or until the local examination of the nasal membrane shows that the remedy is controlling the vasomotor paralysis. After this has been accomplished, the same dose may be given at longer periods—every three hours, then every six hours, and then twice daily—and the administration of two tablets a day is continued throughout the hay-fever season. If disagreeable symptoms reappear because the dose is too rapidly diminished, the quantity may again be increased, returning to one tablet every two hours until the symptoms are controlled. Used in this way, in favourable cases, patients will remain in comparative comfort during the entire hay-fever period.

(498) Hæmaturia Treated by Gelatine Injections.

SCHWABE (*Therap. Monats.*, June, 1900) records a case of recurrent nephritis with severe hæmaturia treated by the subcutaneous injection of gelatine as used by Carnot and Lancereaux for aneurysm. He injected 25 c.cm. a 2 per cent. solution of pure gelatine in physiological saline solution beneath each clavicle. This was repeated next day, and followed by the oral administration of half a litre of 10 per cent. gelatine solution daily for a week. Although all previously tried hæmostatics had failed this line of treatment was speedily and permanently successful. Schwabe states that the pain of the injections was quite bearable, and that the alarming after-effects described by Boinet, Barth, and others (extensive thrombosis, gangrene, fatal emboli) were entirely absent.

(499) Allium Sativum in Pulmonary Tuberculosis.

G. CAVAZZANI (*Suppl. al Policlinico*, April 7th) states that he has for the last two years used garlic in the treatment of pulmonary tuberculosis in the civil hospital at Venice and in his private practice. Garlic, according to his investigations, may be given in the crude state or prepared. From 4 to 6 grams of the substance in a moderate state of desiccation may be administered daily. It should be given in divided doses, and in such a form as to remove the only possible cause of intolerance—namely, the taste. He continues the administration for a long time, but marked improvement in cases amenable to the treatment are manifested within the first month, sometimes within a few days. His own experience extends to more than 100 cases, and, with the data supplied to him by various professional brethren, his material amounts to more than 200 cases. Among them were examples of every stage of the disease. Leaving aside some quite exceptional cases, all were improved by the garlic. In some the amelioration was so marked as to induce hope of a cure, every morbid symptom recognisable by the most careful examination having disappeared. Incipient cases are, of course, the most favourable, but excellent results were frequently obtained even in cases presenting well marked symptoms of the second stage. These results were observed not only in hospital but in private practice, where the beneficial effect could not be attributed to improvement in hygienic conditions. In all Cavazzani's cases the clinical diagnosis was confirmed by the bacteriological examination of the sputum. The improvement begins with a diminution both in frequency and in quantity of the cough and expectoration within the first days of the treatment; often the sputum from muco-purulent becomes purely mucous on the second or third day, probably by the antiseptic action of the volatile oils in the garlic. In favourable cases expectoration ceases altogether after a time. The physical signs are modified with greater or less rapidity according to the more or less advanced stage of the disease and the extent of the morbid process. The temperature often becomes normal, night sweats cease and the appetite almost invariably improves; weight is gained and sleep becomes regular. Hæmoptysis in all the cases observed by the author and his friends had ceased without the use of any other remedy. The author has not found the garlic cause any disturbance of digestion.

(500) Alcohol as a Disinfectant.

SALZWEDEL AND ELSNER (*Berl. klin. Woch.*, June 4th, 1900) report the result of researches made by them in Koch's laboratory touching the value of alcohol as a disinfectant, particularly for the hands. They worked mainly with threads impregnated with virulent cultures of staphylococci. They claim that alcohol has a marked bactericidal action which is best exerted in strengths of 50 to 55 per cent. Stronger spirit has more coagulative power, and hence may fail to get at the micro-organisms. Much weaker solutions added to nutrient media delay the growth of bacteria in the same way as that of yeast. The authors hold that their experiments show that alcohol is of use in preparing the hands for operations, not merely because of its hardening effect on the epidermis, but also as an active antiseptic; in this respect they assign it a potency intermediate between those of carbolic acid and corrosive sublimate, though it is, of course, much less poisonous than either. They confirm Koch's observation of its comparative innocuousness in respect of dried bacteria, but find that its lipolytic qualities render it most efficacious in attacking micro-organisms enclosed in a fatty medium. They also state that its activity is increased by acidulation, but diminished by alkalisation or by heat, which reduces the concentration, owing to the rapid evaporation of the alcohol. They recommend that the hands, after washing with soap and water, be well soaked in 80 per cent. acidulated spirit (which is diluted to the proper strength by the water remaining on the hands) before the performance of an operation.

PATHOLOGY.

(501) Classification of Pathological Intramedullary Cavities.

PHILIPPE AND OBERTHUR (*Rev. Neurolog.*, February 28th, 1900), from a study of sixteen cases with necropsies made at La Salpêtrière, has found different histological lesions sufficient to serve as a basis for classification. Six cases were instances of syringomyelia characterised by macroscopic and minute lesions as described by Baümler, the cavities being always limited by a layer or wall more or less dense. The process of cavity formation begins either in a perivascular area or in the centre of a mass of proliferated neuroglia; occasionally a thrombosed area becomes the centre of a cavity or cyst. A hyperplasia of the central canal and epithelium in the forms of diverticula (solid or hollow) gives rise also to cavities, and with suitable staining it is possible to distinguish cells of ependymal nature in the walls. Cavities originally separate may thus unite. The wall is formed of bundles of neuroglia fibres sparse in cells the evolution of which has been arrested. Such tissue is liable to undergo cicatricial contraction. A spongy transformation of the peri-ependymal region of the central canal and of the base of the anterior cornu constitutes another variety; in this form the cord is thickened, enlarged, sometimes so much as to be adherent to the spinal canal, and there is a local pachymeningitis. The mere dilatation of the central canal constitutes hydromyelia, and is analogous to hydrocephalus of the brain.

(502) Leptomeningitis following Otitis.

VINCENZI (*Centralbl. f. Bakt.*, May 4th, 1900) describes a case of meningitis following otitis in which a hitherto undescribed diplococcus was found. The patient was aged 50 and had suffered from pain in the right ear and right side of the head for two months. The case was looked upon as probably typhus and there did not appear to be any indication for surgical interference. The temperature was 40° and remained at about this height; coma and hemiplegia preceded death. General leptomeningitis was found *post mortem*, the right internal meatus and the middle ear being full of pus, the membrana intact. A lancet-shaped diplococcus was present in the pus, and showed characteristic culture appearances. Mice died thirty hours after inoculation; in rabbits subcutaneous and intravenous inoculation produced only temporary indisposition, but subdural injection produced death in twelve to sixteen hours.

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